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MICRO PHOTO INC.
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PATENTS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

Pending Application Index; Access to Applications

The following amended rule is adopted, to take effect on publication. The text of this rule was, except in one particular, published in the Federal Register for May 20, 1961 (26 F.R. 4404), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed rule. The amended rule is adopted after consideration of all the material submitted. The rule departs from the published text in the particular addition in the final sentence of paragraph (a), after the word "Commissioner," of the words "and the Trademark Trial and Appeal Board." The added reference to said board is merely informational in character, and notes the significance its decisions have shared with those of the Commissioner since its establishment in accordance with the provisions of Public Law 85-609, approved August 8, 1958, 72 Stat. 540.

Sec. 2.27 is amended to read as follows:

§ 2.27 Pending application index; access to applications.

(a) An index of pending applications including the name and address of the applicant, a reproduction or description of the mark, the goods or services with which the mark is used, the class number, the dates of use, and the serial number and filing date of the application will be available for public inspection as soon as practicable after filing. Access to the file of a particular pending trademark application will be permitted prior to publication under § 2.81 upon the showing in writing of good cause for such access. Decisions of the Commissioner and the Trademark Trial and Appeal Board in applications and proceedings relating thereto are published or available for inspection or publication.

(b) After a mark has been registered, or published for opposition, the file of the application and all proceedings relating thereto are available for public inspection and copies of the papers may be furnished upon paying the fee therefor.

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6; sec. 41, 60 Stat. 427, 440, 15 U.S.C. 1123)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,
Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7556; Filed, Aug. 9, 1961; 8:46 a.m.]

Published in 26 F.R. 7215-7216, Aug. 10, 1961

New Applications Received During July 1961

Patents	7,054
Designs	369
Plant Patents	7
Reissues	30
Total	7,460

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

Appellant's Brief

The following amendment is made, to take effect on publication in the FEDERAL REGISTER. Notice and public procedure, and deferment of the time of taking effect, are deemed unnecessary in view of the nature of the amendment, which is procedural only.

The purpose of this change is to expedite the handling of requests for extensions of time for filing appeal briefs by providing that short extensions may be handled by the Board of Appeals, instead of by the Commissioner. Any extension to a date more than sixty days from the original expiration date must still be sought from the Commissioner, by request brought prior to the expiration of the time sought to be extended. Failure to file either the brief or an appropriate request for extension within the allotted time results in the appeal standing dismissed (37 CFR 1.192(b)) with the consequent abandonment of the application if no claim stands allowed (37 CFR 1.197(c)).

Paragraph (a) is amended by adding the following sentences at the end thereof:

§ 1.192 Appellant's brief.

(a) * * * The Board of Appeals may, for sufficient cause shown, extend the time for filing the brief to a date not later than sixty days after the original expiration date. Any longer or further extension must be sought from the Commissioner. All requests for extensions must be filed prior to the expiration of the period sought to be extended.

(Sec. 1, 66 Stat. 793; 35 U.S.C. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 134)

Dated: July 28, 1961.

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,
Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7328; Filed, Aug. 2, 1961; 8:49 a.m.]

Published in 26 F.R. 6983, Aug. 3, 1961.

Board of Appeals Decisions Rendered in the Month of July 1961

Examiner affirmed	206
Examiner affirmed in part	42
Examiner reversed	61
Total	309

Issue

Patents	635—No. 2,998,606 to No. 2,999,240, incl.
Designs	40—No. 191,257 to No. 191,296, incl.
Plant Patents	4—No. 2,085 to No. 2,088, incl.
Total	679

Notice—Re Rule 52

The Office has received many requests for clarification of the language used in the Notice initially published in 768 O.G. 2, dated July 4, 1961, concerning enforcement of the provisions of Rule 52(c).

For the information of the patent bar at large, the current practice is as follows:

Where alterations, including erasures, appear in the application papers being filed, and the provisions of Rule 52(c), as to initialing and dating by the inventor, are not complied with, the papers are inspected to determine (1) whether the alterations are of insignificant or minor character or (2) whether they are of such character that they may possibly affect the disclosures. The Application Branch refuses a filing date only in those cases falling in category (2).

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form." and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235. Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47. Interference; notice of taking testimony.

v. _____ Interference No. _____, 19____

(Name of opposing attorney)

(Address of opposing attorney)

SIX: You are hereby notified that on _____, 19____, at _____ o'clock in the forenoon at the office of _____ Street, _____, I shall proceed to take testimony on behalf of the party _____ in the above identified interference.

The witnesses to be examined are:

(Name of witnesses) (Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on _____, 19____, I served a copy of the foregoing notice of taking testimony upon _____, the attorney for the party _____, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:48 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,769,946, H. D. Brailsford, Oscillating commutatorless direct current motor, decided Apr. 25, 1961, Interference No. 88,949, claim 1.

Pat. 2,773,992, L. R. Ullery, Display amplifier and method of making same, decided July 24, 1961, Interference No. 91,537, claims 21 and 22.

Pat. 2,788,781, M. Frisch, Engine starting-aid system, decided Apr. 21, 1961, Interference No. 89,085, claims 1, 6, 7, 8, 11, 12, 13, 14, and 15.

Pat. 2,824,090, M. B. Edwards and H. J. Hagemeyer, Jr., Polymerization of α -olefins with a catalyst mixture of an orthotitanate and an alkyl aluminum halide, decided July 26, 1961, Interference No. 89,805, claims 1, 2, 3, 4, 5, and 14.

Pat. 2,838,675, C. L. Wanlass, Reversible current circuit, decided Aug. 7, 1961, Interference No. 89,782, claims 1, 3, and 5.

Pat. 2,879,412, H. H. Hoge and D. L. Spotten, Zener diode cross coupled bistable triggered circuit, decided Aug. 1, 1961, Interference No. 91,081, claims 1, 4, and 6.

Pat. 2,898,407, G. C. Foster, Electronic telephone system, decided Aug. 4, 1961, Interference No. 91,217, claims 1, 2, 3, 7, 8, 9, 10, 11, 12, and 14.

Disclaimer and Dedication

2,653,116.—Keith E. Whitcomb and Eugene E. Finch, Los Angeles, Calif. METHOD OF REMOVING SEALANT FROM FUEL TANKS. Patent dated Sept. 22, 1953. Disclaimer and dedication filed July 17, 1961, by the assignee, Cee-Bee Chemical Co., Inc.

Hereby disclaims claims 1 to 8, inclusive, and dedicates to the public the entire term of said patent.

Patents Available for Licensing or Sale

2,799,505. Game Apparatus. Norman D. Lyons, 5887 Village Plaza South Drive, Indianapolis 19, Ind.

2,955,801. Air Jack. Alfred Ploug, Jr., P.O. Box 707, Kingsville, Tex.

2,979,710. Automatic Measuring Apparatus. Contraves A.G., Zurich, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

2,984,110. Optical Vibrometer (for Measuring Amplitudes of Mechanical Vibrations). Jiri Simek, Prague, Czechoslovakia. Correspondence to: Richard Low, 1060 Broad St., Newark 2, N.J.

2,993,979. Heated Baby Carriage Blanket. Guyton E. Hornsby, P.O. Box 869, Washington 4, D.C.

The Upjohn Company is prepared to grant non-exclusive licenses under the following 11 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: The Upjohn Company, Kalamazoo, Mich., Attention: L. D. Harrop, General Counsel.

2,602,769. Oxygenation of Steroids by Mucorales Fungi.

2,649,400. Steroids.

2,649,401. Steroid Oxidation.

2,649,402. Steroids.

2,695,260. Process for the Oxygenation of Steroids With the Oxygenating Activity of Neurospora.

2,721,828. Process for the Production of 17-Ketosteroids. Steroids.

2,735,800. Preparation of 17-Keto Steroid by Penicillium.

2,762,747. 11a,17a,21-Trihydroxy-4-Pregnene-3,20 Dione and Esters Thereof.

2,861,088. 11a-Hydroxylation of Steroids by Sporotrichum.

2,877,162. Process for the 1,2-Dehydrogenation of a Steroid With Septomyxa.

2,902,410. Process for the 1,2-Dehydrogenation of a Steroid With Septomyxa.

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1961

Total number of pending applications (excluding Designs)	193,695
Total number of pending Design applications	5,248
Total number of applications awaiting action (excluding Designs)	90,838
Total number of Design applications awaiting action	1,572
Date of oldest new application	January 4, 1960
Date of oldest amended application	March 1, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS		6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		7, 11, 17, 27, 34, 35, 39, 53, 62.	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		5, 8, 20, 29, 33, 36, 40, 52, 66.	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		1, 4, 9, 10, 18, 22, 23, 28, 45, 47.	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE		3, 15, 19, 25, 30, 32, 49, 55, 67.	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		91, 92, 93, 94, 95.	
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working		12-8-60	12-2-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		1-9-61	12-15-60
3. (VII) MARMELESTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors		10-27-60	6-6-60
4. (VI) FALLER, E. A., Material or Article Handling		11-9-60	11-4-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics		6-7-60	7-8-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides		9-1-60	9-7-60
7. (IV) ANDERSON, E. G., Optics		11-2-60	11-2-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds		12-2-60	1-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines		12-6-60	10-18-60
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making		10-17-60	10-20-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits		8-9-60	8-9-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls		8-15-60	7-25-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning		8-16-60	8-23-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics		8-26-60	6-13-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus		2-2-61	2-1-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems		1-4-60	7-14-60
17. (IV) LEIGHLEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering		8-4-60	7-11-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors		1-3-61	1-3-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners		9-16-60	9-26-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors		1-16-61	1-16-61
21. (III) MADER, R. C., Textiles		11-7-60	10-10-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows		8-24-60	8-22-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters		10-3-60	10-3-60
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders		12-5-60	12-1-60
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making		10-3-60	10-3-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers		9-1-60	9-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush; Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids		10-21-60	10-19-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes		9-12-60	9-6-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings		10-7-60	9-30-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)		12-15-60	12-23-60

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12-23-60

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....	9-6-60	9-12-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....	9-19-60	9-27-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....	8-15-60	8-25-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....	10-3-60	10-6-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....	11-1-60	11-3-60
36. (V) EVANS, R. L., Measuring and Testing (part).....	8-10-60	8-18-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....	8-31-60	9-29-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....	7-5-60	7-6-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....	10-17-60	10-3-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....	1-11-61	1-10-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....	9-13-60	9-7-60
42. (II) SRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....	8-15-60	8-15-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....	7-6-60	8-12-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....	3-30-60	3-24-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....	1-11-61	1-11-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....	8-22-60	6-10-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education.....	11-15-60	11-18-60
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....	6-29-60	6-22-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....	8-30-60	8-8-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....	9-12-60	9-26-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....	7-11-60	6-27-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....	1-3-61	1-6-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....	12-6-60	12-6-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....	6-7-60	7-8-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....	10-4-60	10-3-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....	7-28-60	8-19-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....	9-15-60	9-1-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....	11-3-60	11-15-60
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....	9-15-60	8-29-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.....	9-6-60	8-15-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths; Weighing Scales.....	11-29-60	12-7-60
62. (IV) LOWE, D. B. (FULLER, E. E., acting), Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus.....	9-19-60	10-17-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....	9-12-60	9-20-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....	6-15-60	8-9-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....	8-12-60	7-21-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part).....	3-15-60	4-5-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....	10-19-60	10-12-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....	3-2-60	3-1-60
69. (III) MONCURE, J. A., Industrial Arts.....	3-2-61	3-6-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts.....	3-7-61	3-8-61
71. BAILEY, J. B. (KENT, A. P., acting), Ornamentation; Glass.....	9-9-60	8-19-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners.....	1-3-61	1-9-61
73. WAHL, R. A., Wire Working.....	1-30-61	1-12-61
74. BERLOWITZ, W., Gas Separation.....	10-4-60	10-10-60
75. REZNEK, J. (acting), Metallic Building Structures.....	10-4-60	10-4-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....	11-3-60	11-14-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 660. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....	Numbers 2,354,642 to 2,357,281, inclusive
Plant Patents.....	Numbers 635 to 637, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals District of Columbia Circuit

COMMONWEALTH ENGINEERING COMPANY OF OHIO AND
MALVERN J. HILER, APPELLANTS v. ROBERT C. WAT-
SON, COMMISSIONER OF PATENTS, APPELLEE

No. 16,243. Decided June 1, 1961

[— U.S.App.D.C. —; — F.2d —; 129 USPQ 338]

COMMONWEALTH ENGINEERING COMPANY OF OHIO AND
LEO J. NOVAK, APPELLANTS v. ROBERT C. WATSON,
COMMISSIONER OF PATENTS, APPELLEE

No. 16,244. Decided June 1, 1961

[— U.S.App.D.C. —; — F.2d —; 129 USPQ 338]

1. APPEAL TO THE U.S. COURT OF APPEALS—FINDINGS OF LOWER TRIBUNALS NOT CLEARLY ERRONEOUS.

"Our review of the record suggests that there was a substantial basis for the decision of the Patent Office. We agree with the District Judge that the new evidence offered in the trial court fell quite short of producing a 'thorough conviction' that the Patent Office had erred."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—DEXTRAN ETHERS AND MIXED ESTERS OF DEXTRAN.

The judgment of the District Court dismissing complaints on applications relating to dextran ethers and mixed esters of dextran on the ground that the claimed subject matter would be obvious to one skilled in the art in view of the cited references, the applications having a common assignee and the causes being consolidated, is affirmed.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

George W. Stengel (Harry A. Toulmin, Jr. and F. E. Drummond, of counsel) for appellants.

Clarence W. Moore (Jack E. Armore, of counsel) for appellee.

Before DANAHY, BASTIAN and BURGER, Circuit Judges
DANAHY, Circuit Judge:

This is a consolidated appeal from judgments in the District Court dismissing two complaints brought under 35 U.S.C. 145 which were consolidated and tried together. Appellants at trial had sought through the testimony of their experts to show patentability with respect to certain chemical compounds, derivatives of dextran.

The corporate appellant is the assignee of appellants, Hiller and Novak, respectively. Both Hiller and Novak had filed applications claiming invention for new products having novel, unexpected and beneficial properties and uses. The Hiller application related to dextran ethers, said to be useful for simultaneously conditioning textile materials and stabilizing them against shrinkage on washing and relaxed drying. The Novak application related to dextran esters which, when mixed, might be extruded in accordance with various dry-spinning techniques to form artificial fibers or to be cast to give durable and stable films, sheets and coatings. The Primary Examiner found that the respective claims must be rejected on the ground that they were unpatentable over the prior art. The Patent Office Board of Appeals affirmed.

In the District Court, the trial judge deeming the testimony to be "general" and "not sufficient," concluded that the appellants had not sustained their burden of proving that the action of the Patent Office was erroneous.¹

The District Judge found that the subject matter of the various claims would be obvious to one skilled in the art in view of the cited references. He concluded that there "is no invention in applying an old process to another and analogous material where there is at least a reasonable expectation of success." After a determination that the claims are unpatentable, judgment was entered dismissing the complaints.

[1] Our review of the record suggests that there was a substantial basis for the decision of the Patent Office. We agree with the District Judge that the new evidence offered in the trial court fell quite short of producing a "thorough conviction" that the Patent Office had erred. Since the appellants have failed to demonstrate to us that the findings of the District Court were clearly erroneous, Fed. R. Civ. P. 52(a), cf. *Esso Standard Oil Co. v. Sun Oil Co.*, 97 U.S.App.D.C. 154, 229 F.2d 37, cert. denied, 351 U.S. 973 (1956), we are bound to affirm.

[2] AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE ARTHUR J. GRINER

No. 6601. Decided February 21, 1961

[48 CCPA —; 287 F.2d 178; 129 USPQ 61]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS— MATTER BEFORE COURT—REASONS OF APPEAL.

Where appellant's argument that the basic reference did not disclose an operative apparatus, was not advanced before or considered by the Patent Office and was not stated in the reasons of appeal, *Held* that it was not properly before the Court of Customs and Patent Appeals.

2. PATENTABILITY—INVENTION—METHOD OF PACKAGING.

Upon considering the patentability of claims to a method of packaging blocks of biscuits stacked on edge in view of a basic reference disclosing a process applicable generally to the wrapping of blocks of any material which will maintain its shape while being wrapped, *Held* that "The packaging process is the same regardless of the specific nature of the articles being packaged, and mere substitution of one (rigid or solid block-like) article for another does not result in a patentable process."

3. SAME—SAME—SAME.

In connection with claims in appellant's application on a method of packaging biscuits calling for making the longitudinal seal in the wrapping material by placing the edges together and forming them into a V-shaped fold, and with reference to the fact that a prior patentee disclosed the progressive heat sealing of the edges of his wrapping material, *Held* that "It would be obvious to employ the well-known V-shaped fold in making such a seal."

¹ Appellants' trial counsel in his oral argument in the District Court stated his case thus:

"The whole issue, the legal issue here is: Because we use dextran and this is the first time this has been done with dextran, they say there is no invention because someone either has a product where he has used cellulose or he has used starch, but I don't find here any specific thing that employs any specific drugs that employ cellulose and starch that have the qualities and the pharmaceutical and medical advantages that we have when we use dextran."

4. SAME—CLAIMS—INTERPRETATION—MATTER BEFORE U.S. COURT OF CUSTOMS AND PATENT APPEALS.

In affirming the decision of the Board of Appeals as to claims 1 and 2 of appellants' application, *Held* that "While we think claims 1 and 2 may be allowable if limited to the interpretation which appellant has urged, their present wording does not clearly require this interpretation."

5. SAME—PARTICULAR SUBJECT MATTER—METHOD OF PACKAGING BISCUIT.

The decision of the Board of Appeals refusing claims to a method of wrapping biscuits is reversed as to certain of the claims on appeal and affirmed as to others.

APPEAL from the Patent Office. Serial No. 310,532. MODIFIED.

Bauer and Seymour (Dale A. Bauer, of counsel) for appellant.

Clarence W. Moore (George C. Roeming, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Primary Examiner of claims 1 to 8, inclusive, 11, 13, 14, 15, 16, 18, 19, 24, 25, and 26 of appellant's application for a patent on a method of packaging biscuit, on the ground that the method claimed would be obvious in view of prior patents. Claims 11, 14, 18, and 19 were originally included in this appeal but have been withdrawn and will not be considered.

Claims 1, 3, 6, 7, and 24 are representative of the appealed claims and read:

1. A method of wrapping biscuit which comprises continuously advancing a column of biscuit stacked on edge, metering predetermined quantities of said moving column of biscuit, separating said predetermined quantities of biscuit into spaced packageable groups, conjointly advancing a continuous web of flexible wrapping material lengthwise adjacent said separated columnar groups of biscuit and progressively folding said web of wrapping material about said groups, folding and sealing the free edges of said wrapper in overlapping relationship about the advancing groups of biscuit thus forming a continuous wrapping around the spaced groups of biscuit, and collapsing and sealing said wrapper intermediate said groups of biscuit by bringing opposed sides of said wrapping into contact with one another, thereby forming a series of interlinked successive packages.

3. A method of packaging biscuit which comprises continuously folding a web of flexible packaging material about a continuously advancing column of unit groups of biscuit stacked on edge, heat sealing the longitudinal free edges of said web while it advances to form a wrapper confining the stacked groups of biscuit therein, and collapsing and heat sealing said wrapper intermediate said groups to form a chain of packaged biscuit.

6. A method of wrapping biscuit which comprises continuously advancing a column of biscuit stacked on edge, separating predetermined quantities of said moving columns of biscuit into spaced apart packageable units, conjointly advancing a continuous web of wrapping material lengthwise adjacent said columnar units of biscuit and progressively folding said web initially about said columnar units in substantially channel shape becoming progressively rectangular in cross section with outturned [sic] marginal edges, progressively folding and heat sealing said marginal edges together adjacent to said biscuit, and collapsing and heat sealing said wrapper at said spaced apart points intermediate said unit quantities of biscuit by bringing opposed sides of said wrapping at said points into contact with one another while applying heat and pressure thereto, thereby forming a series of successive interlinked packages.

7. In a method of continuously wrapping packageable quantities of stacked biscuit in heat sealable packaging material the steps comprising folding a web of said material in substantially rectangular shape about said biscuit with the marginal edge portions of said web placed together and forming a lip extending outwardly from the biscuit, progressively from end to end forming said lip into a V-shaped fold, applying heat to said fold to effect hermetic sealing thereof, and then cooling and flattening said fold against the side of said wrapper to form a longitudinal seam.

24. Steps in a method of packaging biscuit, consisting in continuously feeding a web of packaging material in a horizontal direction, conveying a column of edgewise-stacked biscuit from a point remote from said packaging material, metering and segregating said biscuit into packageable groups,

feeding said groups of biscuit parallel and contiguous with said packaging materials, and thereafter enveloping said packaging material around said groups of biscuit and sealing it while said groups are in motion.

The references relied on are:

Smith et al., 420,743, February 4, 1890.

Prouty et al., 708,255, September 2, 1902.

Monaco, 2,358,413, September 19, 1944.

Denison, 2,600,216, June 10, 1952.

Appellant's application discloses a process in which the "biscuits," hereinafter referred to as biscuits or crackers, to be packaged are stacked on edge and in face to face contact with each other on a continuously moving horizontal conveyor belt. While the stacked crackers are in motion, predetermined numbers are successively separated from the forward end of the stack and moved forward in the form of blocks at a greater speed to a packaging device which surrounds them with a continuous web of flexible wrapping material which advances along with the biscuits and is progressively folded about them in the form of a tube. The longitudinal edges of the material are placed together to form a lip which is progressively formed into a V-shaped fold and heat-sealed. Thereafter the sections of the tube between the spaced blocks of biscuits are collapsed, heat-sealed, and severed, resulting in individually wrapped packages of biscuits.

The Denison patent, the basic reference, discloses a method of packaging articles such as blocks of oleomargarine or boxes of candy in which the articles are deposited in spaced relation on a continuously moving web of packaging material. As the web advances it folds about the articles in a tubular form, and the longitudinal edges are heat-sealed together, after which the sections of the tube intermediate the articles are pressed together, heat-sealed, then severed, also resulting in individual packages.

Appellant urges in his brief here that the Denison patent does not disclose an operative apparatus, particularly with respect to the folding and advancing of the web. [1] So far as the record shows, that argument was not advanced before or considered by the Patent Office and is not stated in the reasons of appeal. Accordingly, it is not properly before us. *In re Davis*, 26 CCPA 1249, 103 F.2d 922, 41 USPQ 674; *In re Goldberg*, 35 CCPA 1225, 168 F.2d 527, 78 USPQ 69.

Moreover, while Denison does not show all the details of his apparatus, it is clear how it is intended to operate and, in our opinion, the elements not shown could readily be supplied by a person skilled in the art. Even if that could not be done, Denison's web could easily be advanced and formed by hand.

The Smith et al., Prouty et al., and Monaco patents were cited as showing it to be old to stack crackers or biscuits on edge and to move the stack horizontally. However, those patents do not show separation or packaging of the articles.

It was the opinion of the Board that Denison's process is applicable generally to the wrapping of blocks of any material which will maintain its shape while being wrapped, and that it would be obvious to apply the instant process to blocks of biscuits stacked on edge. We agree with the Board.

Denison's packaging process is clearly independent of the specific nature of the blocks being wrapped and could be easily applied if so desired to blocks of biscuits stacked on edge. If the biscuits were of such

a shape that they tended to fall over it would be obvious to restrain them by tying or some other suitable manner. [2] The packaging process is the same regardless of the specific nature of the articles being packaged, and mere substitution of one (rigid or solid block-like) article for another does not result in a patentable process.

We think the Board correctly held that claims 3, 5, 15, and 16 define nothing more than the application of the Denison process to blocks of biscuits stacked on edge, and the Board's decision as to those claims is affirmed.

Claims 7, 8, and 13 are broader than claims 3, 5, 15, and 16 in that they do not specify that the biscuits are stacked on edge, but are narrower than the latter claims in that they call for making the longitudinal seal in the wrapping material by placing the edges together and forming them into a V-shaped fold, which is then flattened against the side of the wrapper.

The Board held that the V-shaped fold is an obvious method of folding commonly employed in closing the ends of grocery bags. Appellant did not dispute that holding and does not contend here that such a fold is new per se, but argues that the progressive making and heat-sealing of such a fold in the combination of steps set forth in claims 7, 8, and 13 is patentable. We are unable to agree with that contention. [3] Denison discloses the progressive heat-sealing of the edges of his material and, so far as the packaging process claimed here is concerned, it would be obvious to employ the well-known V-shaped fold in making such a seal. We agree that claims 7, 8, and 13 are unpatentable.

Claims 1, 2, 4, and 6 call for a process involving advancing a column of biscuits stacked on edge, separating metered portions of the column into spaced groups which continue to advance, and packaging and sealing the groups. Such a method presents definite advantages over that of Denison in which the blocks of material to be packaged must be separately formed and fed to the packaging means either manually or from a magazine. Appellant's idea of dividing continuously moving columns of biscuit into separated portions which continue in motion while being packaged, is not shown in or fairly suggested by the cited references and, in our opinion, is properly defined in claims 4 and 6. Those claims, therefore, should have been allowed.

[4] While we think a similar interpretation might be inferred as to claims 1 and 2, the language of these claims is susceptible to other interpretations. While we think claims 1 and 2 may be allowable if limited to the interpretation which appellant has urged, their present wording does not clearly require this interpretation. So for this reason only the decision of the Board is affirmed as to these claims.

Claims 24, 25, and 26 are similar to claims 1, 2, 4, and 6 in that they recite conveying of a column of biscuits stacked on edge. They are not limited, however, to the separation of the moving column into spaced portions, but merely state that the biscuits are metered and segregated into packageable groups which are fed parallel with the packaging material. Those requirements would be satisfied by manually selecting the desired number of biscuits from a moving column such as provided in each of the secondary references and placing them on the wrapping material web of

Denison, after tying them, if necessary, to prevent tipping. It seems to us, as it did to the Board, that such a procedure would be obvious to one skilled in this particular field and would produce no new or unexpected result.

Appellant contends that the step of feeding the biscuits parallel and contiguous with the packaging material in claims 24, 25, and 26 is not satisfied by placing the biscuits on the material, as in Denison. We do not agree with that contention. Moreover, it is immaterial so far as the claimed process is concerned, whether the concurrent movement of the biscuits and packaging material results from placing the biscuits on the material or is produced independently. For similar reasons the limitation in claim 25 that the web is fed by frictional contact with the biscuits is without patentable significance.

[5] The decision of the Board is modified, being reversed as to claims 4 and 6 and affirmed as to the remainder of the appealed claims.

MODIFIED.

KIRKPATRICK, J., with whom WORLEY, Chief Judge, joins, dissenting in part.

I have been as unsuccessful as the Examiner and the Board in finding any patentable subject matter in claims 4 and 6. I agree with the Patent Office, and with what appears to be the majority view, that it would be obvious to separate and remove packageable groups manually from the moving columns of edge-wise stacked biscuit of the Smith et al., Prouty et al., and Monaco patents and wrap such groups in the manner suggested by Denison. The recitations in claim 4 of "dividing said column of biscuit as it advances" and in claim 6 of "separating predetermined quantities of said moving columns of biscuit" do not patentably distinguish from manual separation of successive groups from the column. Insofar as the claims suggest that the separation of the biscuits be done without halting the column, they merely express the obvious desirability of a continuous flow of materials, a concept far from novel in modern production. Everything that is required by the claims is either anticipated or made obvious by the prior art. Therefore, I would affirm the Board as to all claims.

U.S. Court of Customs and Patent Appeals

MINNESOTA MINING AND MANUFACTURING COMPANY

v.

DUNLOP TIRE AND RUBBER CORPORATION

No. 6,641. Decided February 21, 1961

[48 CCPA — ; 287 F.2d 194 ; 129 USPQ 69]

TRADEMARKS—CONFUSING SIMILARITY—"UNIPAK" AND "UNI-PAC."

[1] In an opposition by the registrant of the mark "UNIPAK," for plastic bags used for resinous material having principal usage in electrical insulating and connecting, against a trademark application seeking to register the mark "UNI-PAC" for storage battery assemblies, wherein the Court found that the mark "UNIPAK" was applied by the opposer-appellant to the bag in which a particular resin was sold, the resin being identified by the registered mark "SCOTCHCAST," Held that "Opposer and applicant each use the marks in issue as secondary trademarks suggestive of the unit packaging of their goods on which their primary trademarks are used," that "In any event, we do not think applicant's use of its mark on its storage battery assemblies would lead purchasers to think they had the same source as opposer's plastic bags."

APPEAL
37,859.

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APPEAL from the Patent Office. Opposition No. 37,859.

AFFIRMED.

Carpenter, Abbott, Coulter & Kinney, Mark W. Gehan (Charles H. Lauder, of counsel) for appellant. Benjamin T. Rauber for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court:

Appellant-opposer owns the trademark "UNIPAK" for "Plastic Bags Used for Resinous Material Having Principal Usage in Electrical Insulating and Connecting." It opposes registration by appellee-applicant of the trademark "UNI-PAC" for "storage battery assemblies."

The Trademark Trial and Appeal Board dismissed the opposition (123 USPQ 233) and opposer appealed asserting the Board was in error in (1) considering opposer's "UNIPAK" product as a plastic bag container for "Scotchcast" brand resin, and (2) holding that the goods of the parties have "nothing in common with respect to their essential characteristics or uses," and that "the average purchasers thereof are not the same." Both assertions of error are directed to the reasons given by the Board for finding there was no likelihood of confusion, mistake or deception of purchasers as to the source or origin of the goods on which applicant uses its mark.

In here resolving the issue of such likelihood of confusion, mistake or deception, it is necessary, first, to determine the nature of opposer's mark, then to compare it with applicant's mark and finally to consider whether purchasers are likely to consider applicant's mark, as used on its goods as an indication of source or origin, is likely to cause confusion, mistake or deception.

Opposer's "UNIPAK" product is a two-compartment unit package formed of a plastic film and contains a resin in one compartment and a hardener for that resin in the other compartment. The resin and hardener are separated from each other by a rupturable inner wall which separates the compartments. When the product is to be used, the inner wall is broken and the resin and hardener are mixed together. After mixing, the bag is opened and the mixture is removed therefrom. The mixture cures within a few minutes into a solidified resin having electrical insulating properties. This two part plastic film package is said to prevent errors in measurement of the resin and hardener at the time of mixture as well as preventing premature contact of these materials. It is designed to provide an easy way to mix and dispense the material and is particularly useful for providing electrical insulation or vapor barrier seals for electrical cables during field installation or repair.

Applicant uses its mark "UNI-PAC" for a unitary package containing a dry charged storage battery of the wet cell type and separate plastic bottles which contain the sulphuric acid so that the electrolyte can

be added at the time of purchase to the previously dry charged cells of the battery.

It is opposer's position that the plastic bottles of electrolyte in applicant's packaged battery unit are similar to its two-compartment plastic bags in that both are plastic, both are used for packaging a pre-measured amount of liquid and both are disposable after being emptied of their liquid contents.

At the outset we are required to examine the present record to determine what, if any, factors are here present which were not before us in *Minnesota Mining and Manufacturing Company v. Sprague Electric Company* (1960), 47 CCPA 1067; 279 F.2d 281; 126 USPQ 240, and which involve the nature of opposer's mark.

In the Sprague case we said:

"UNIPAK" is used by appellant to identify and describe its container, not the source of its resins. Without exception, the many advertisements and other exhibits that appellant introduced in evidence show that "UNIPAK" modifies the container in which the resins are packaged, and that the resins themselves are identified by the mark "Scotchcast."

It is apparent that appellant is endeavoring to condition the purchasing public to recognize "Scotchcast" as the identifying mark of its resins and "UNIPAK" as the type of container used for them. We are not convinced that MMM's registered "UNIPAK" mark has been so used that it has acquired trademark significance with respect to the epoxy resins of its manufacture. And, although appellant sells various products to the electrical industry, we find nothing of record which satisfies us that those in that industry are, or will be led to associate appellant's "UNIPAK" mark with any of its products other than its plastic bags. As such, MMM's "UNIPAK" mark must be considered solely in the light of that for which it was registered, i.e., "Plastic bags used for resinous material having principal usage in electrical insulating and connecting."

Applicant here, as did appellee in the Sprague case, contends that opposer's mark is used for a plastic bag and that this fact is not changed by the recital in the registration of a usage for such a bag. Opposer took testimony by which it sought to establish that its trademark is not limited in the manner we found it to be in the Sprague case and to show that the mark is used by its customers to refer to the "fast cure" resin in the two part plastic bag.

We do not think the testimony supports opposer's position. Its own witness, Bollmeier, testified:

Q107. Does Minnesota Mining's trademark "UNIPAK" have a similar use? That is, does it go to describe more than just the container? A. No, it does not. In no case do we use the trademark "UNIPAK" to describe anything other than the two compartment package introduced in Exhibits 4, 5, and 6.

Q108. Does the trade, as you are familiar with it apply the word "UNIPAK" to other than the plastic bag of Minnesota Mining? A. No. Our action has been such as to prevent or oppose such usage, because the UNIPAK container of Scotchcast Resin No. 4 enjoys usage as an individual and separate item in addition to its inclusion in splicing kits which we manufacture and sell under another trademark.

Q109. Have you ever heard any customers of Minnesota Mining refer to these splicing kits as UNIPAK splicing kits? A. No, I have not.

Q110. It is possible that such usage has occurred and not come to your attention? A. It is possible.

Q111. But as far as you know, the Minnesota Mining trademark "UNIPAK" applies only to the plastic container? A. That is correct.

In the light of this testimony, we are unable to agree with the position in opposer's brief in discussing the differences between the present case and the Sprague case, that:

The evidence in this case is also different with respect to the use of appellant's trademark in connection with its product. Here the record clearly shows that appellant's trademark "UNIPAK" is associated with only one member of a "family" of nineteen different "Scotchcast" brand resins, and that it is only this one particular unique resin product which is ordered and referred to by purchasers only by the term "UNIPAK." The record shows that appellant's purchasers do not use the trademark "UNIPAK" to designate only the type of container in which resin No. 4 is sold. The purchasers and users of this unique product of appellant, a resin within a plastic container, know and specify that product as a "UNIPAK," and this well-known trademark has become very valuable to appellant.

¹ Registration No. 621,044, issued Feb. 14, 1956 on application filed Apr. 7, 1954. First use stated "at least as early as Jan. 15, 1954."

² Ser. No. 84,046, filed July 10, 1957. Jan. 10, 1957, is given as the date of first use.

We find, therefore, that here, as in the Sprague case, opposer's mark "UNIPAK" is applied to the two part plastic bags in which it sells one of its "Scotchcast" brand resins.

We pass now to a consideration of whether applicant's use of its mark "UNI-PAC" on its unitary package containing a storage battery and plastic bottles of electrolyte will be likely to cause confusion, mistake or deception of purchasers as to source or origin of the goods.

We found in the Sprague case, that the mark "UNIPAK," "is so highly suggestive of unit packaging as to be almost descriptive and is therefore not a strong origin indicator." This is also true here. [1] Opposer and applicant each use the marks in issue as secondary trademarks suggestive of the unit packaging of their goods on which their primary trademarks are used. Under such conditions of use purchasers will not attribute much significance to either opposer's or applicant's mark as indicating the source or origin of those goods. In any event, we do not think applicant's use of its mark on its storage battery assemblies would lead purchasers to think they had the same source as opposer's plastic bags.

We therefore affirm the decision of the Trademark Trial and Appeal Board.

AFFIRMED.

**In the United States Patent Office
Before the Board of Appeals**

EX PARTE HENKEL ET AL.

Appeal No. 122-19. Decided July 13, 1960

**1. PATENTABILITY—COMPOSITION OF MATTER—OBVIOUSNESS—
HOMOLOGS AND ISOMERS.**

Upon considering the issue of the patentability of certain claimed organic compounds over prior art adjacent homologs and position isomers, Held that " * * * appellants have made no comparative showing here establishing the distinguishing characteristics they allege which we might consider as evidence that the claimed compounds are unobvious"; and that "It is clear * * * that at least this much is necessary to establish patentability in adjacent homologs and position isomers."

2. SAME—SAME—SAME—SAME.

In determining the question of the patentability of certain claimed organic compounds over prior art adjacent homologs and position isomers, where the Board of Appeals held that it is at least necessary for the appellants to have made a comparative showing establishing the alleged distinguishing characteristics to establish patentability in adjacent homologs and position isomers, Held that "even if such a showing were present in the record, we are not convinced that it would warrant a conclusion that the claimed compounds are patentable"; and that "Patentability is not resolved conclusively even where unexpected or unobvious beneficial properties are established to exist in novel homologs or isomers, as the circumstances of the case may require a consideration of other factors."

APPEAL from the Examiner. Serial No. 570,217.

AFFIRMED.

Marshall, Johnston, Cook and Root for appellants.

Before DUNCOMBE and MAGIL, *Examiners-in-Chief*, and
MANGAN, *Acting Examiner-in-Chief*

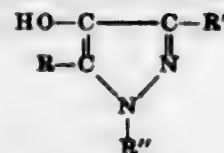
MANGAN, *Acting Examiner-in-Chief*.

This is an appeal from the final rejection of claims 11 and 15. Claims 1 to 9 have been indicated as allowable and the remaining claims 10, 12, 13 and 14 have been held to be withdrawn from further consideration

on the merits under the provisions of Rule 142(b), Rules of Practice, as not readable on the elected species. A proposed claim 16, reproduced in appellants' brief, has not been entered by the Examiner and is not before us for consideration.

The appealed claims, 11 and 15, are as follows:

- > 11. 1-phenyl-3-methyl-4-hydroxypyrazole.
15. A 4-hydroxypyrazole of the general formula



in which R represents a member of a class consisting of hydrogen and lower alkyl groups, R' represents a lower alkyl group and R'' represents a member of the class consisting of hydrogen, carbamido and phenyl groups.

The references relied on are:

Hughes (British), 681,376, October 22, 1952.

Bertho et al., Chem. Abstracts, vol. 21, page 3908 (1927).

Fricke, Chem. Abstracts, vol. 46, col. 7094 (1952).

The Examiner has rejected claim 15 "as being fully anticipated by the Bertho et al. reference" and he specifically applies the compound "3-isoamyl-4-hydroxypyrazole" of this reference to the terms of this claim. Appellants state that the 1 and 5 positions are not substituted in this reference, but since this claim itself permits both of these positions to be unsubstituted, that is, to remain as hydrogen, we see no error in the Examiner's conclusion and will sustain this rejection.

Claim 11 stands rejected and claim 15 stands further rejected as unpatentable over the Hughes British patent. This patent discloses on page 2, lines 20 to 22 and on page 8, lines 106 to 180, the compounds 1-phenyl-4-hydroxy-pyrazole and 3-phenyl-5-methyl-4-hydroxypyrazole. The Examiner regards the claimed compounds as unpatentable adjacent homologs of the former compound and as unpatentable position isomers of the latter, under authority of *In re Henze*, 37 CCPA 1009; 1950 C.D. 319; 636 O.G. 698; 85 USPQ 261; 181 F.2d 196, and *In re Jones*, 82 CCPA 1020; 1945 C.D. 304; 149 F.2d 501; 579 O.G. 148; 65 USPQ 490.

Appellants contend that the former compound of the reference, being devoid of substituents in both coupling positions, will not couple uniformly and that the latter, having substituents in both coupling positions, cannot couple at all. They argue that the instant compounds, substituted in but one of the coupling positions, possess particularly valuable properties as intermediates for the preparation of dyestuffs.

We are not impressed by appellants' arguments and will sustain the rejection on the Hughes patent. Claim 15 is inclusive of the compounds which are substituted in both coupling positions. [1] Furthermore, appellants have made no comparative showing here establishing the distinguishing characteristics they allege which we might consider as evidence that the claimed compounds are unobvious. It is clear from *In re Henze*, supra, and the authorities it cites, that at least this much is necessary to establish patentability in adjacent homologs and position isomers.

[2] However, even if such a showing were present in the record, we are not convinced that it would warrant a conclusion that the claimed compounds are patentable. Patentability is not resolved conclusively even where unexpected or unobvious beneficial properties are established to exist in novel homologs or

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isomers, as the circumstances of the case may require a consideration of other factors. *In re Henze*, supra; *In re Finley*, 36 CCPA 909; 1949 C.D. 284; 174 F.2d 180; 81 USPQ 383; 624 O.G. 363.

In this case we think such other factors are present with regard to the Hughes disclosure which render the claimed compounds obvious to one of ordinary skill in the art. The disclosure of Hughes specifically states that the compounds named are exemplary and not limiting (page 2, lines 6 to 10). Its examples of analogous compounds to the pyrazoles also indicate that the presence of a methyl substituent and the positioning of the phenyl and methyl groups are mere matters of choice or selection by any skilled chemist in carrying out its objectives.

We will not sustain the rejection of claims 11 and 15 on the Fricke reference. It is clear from the record that the listing of the compound of this reference as "1-phenyl-3-methyl-pyrazolone 4" under "2 pyrazolin-4-one" on page 18,629 of the index to vol. 46 of Chem. Abstracts is an error which arose through confusion of a superscript "4" referring to a footnote in the original Fricke article with numbers indicating the

position of substituents, and that the compound of that article is actually a pyrazolone-5 and not a pyrazolone-4. Nevertheless, such erroneous naming of a compound is a valid reference for a later claim which reads upon it. *In re Baranaukas et al.*, 43 CCPA 727; 1956 C.D. 107; 108 USPQ 228; 708 O.G. 668; 228 F.2d 413. Here, however, the Examiner has extended this holding to a situation in which the compound as named does not read fully upon the claimed compounds but is tautomeric therewith. He would, therefore, superimpose upon the *In re Baranaukas et al.* and similar holdings, a further holding that the compounds claimed are so closely related to the compound as named in the reference that they would be obvious therefrom to anyone skilled in the art, analogous to the decision in *In re Henze*, supra.

We have carefully considered the Examiner's position but are of the opinion that the situation before us distinguishes from the cited cases and we are unwilling to thus extend their doctrines. *Ex parte Sloan*, 73 USPQ 265.

The decision of the Examiner is affirmed.
AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,330,082, G. W. Daugherty, Spraying and dusting machine; 2,331,197, same, Spraying machine; 2,352,512, same; 2,422,006, same; 2,475,449, same; 2,476,999, same, Spraying and dusting machine; 2,547,937, same, Spraying machine; 2,593,575, same, Spraying and dusting machine, filed May 12, 1959, D.C., E.D. Wash. (Takima), Doc. 1415, Food Machinery and Chemical Corporation v. John M. Heater, doing business as Yakima Tank & Steel Works. Patents held valid June 13, 1961.

2,331,197. (See 2,220,062.)

2,352,512. (See 2,220,062.)

2,416,793, Winnek and Roblin, Jr., Sulfonamido pyrimidines, filed May 2, 1961, D.C., S.D.N.Y., Doc. 61/1571, American Cyanamid Company v. H. Reisman Corporation. Consent judgment; defendant enjoined July 19, 1961. Same, filed May 3, 1961, D.C.N.J. (Newark), Doc. 366/61, American Cyanamid Company v. Stanley Blackman Labs, Inc. Decree as above July 24, 1961.

2,422,006. (See 2,220,062.)

2,475,449. (See 2,220,062.)

2,476,999. (See 2,220,062.)

2,593,575, R. J. Horcilois, Dimethylaminoalkylamino antihistaminic compounds, filed July 12, 1961, D.C., S.D.N.Y., Doc. 61/2460, Merck & Co., Inc. et al. v. Herman Wittelshefer et al.

2,534,399, Schoene and Chambers, Cellulose treated with di-vinyl sulfone to shrinkproof, filed June 30, 1961, D.C., W.D.S.C. (Greenville), Doc. 2989, J. P. Stevens & Co., Inc. v. The Springs Cotton Mills, Inc. et al. Notice of dismissal pursuant to Rule 41(a) (1) (i) July 17, 1961.

2,547,937. (See 2,220,062.)

2,564,397, L. Rome, Disposable tissue container and support therefor, filed Mar. 7, 1960, D.C. Vt. (Burlington), Doc. 2049, Rutland Plastics, Inc. v. The Firestone Tire and Rubber Company. Order of dismissal July 15, 1961.

2,593,575. (See 2,220,062.)

2,593,575, E. E. Teubner, Method and apparatus for electrically disintegrating metallic material; 2,641,004, E. M. Williams, Automatic control system for the electrode of a spark-cutting apparatus; 2,836,785 (included by amendment May 20, 1958), same, Apparatus for spark machining, filed Nov. 24, 1956, D.C., N.D. Ill. (Chicago), Doc. 59c1864, Fifth Sterling, Inc. et al. v. Electrosize, Inc. et al. Consent decree; order and stipulation holding patents valid and

infringed; counterclaim dismissed with prejudice against Electrosize, Inc. and Elnox Corporation of Michigan July 18, 1961.

2,707,000, E. R. Ortman, Pump installation, filed July 12, 1961, D.C., E.D. Wis. (Milwaukee), Doc. 61c166, Earl R. Ortman, doing business as Advance Pump & Equipment Company v. Herbert W. Maass.

2,712,083, L. L. Krieger, Brassieres, filed July 11, 1961, D.C., S.D.N.Y., Doc. 61/2438, International Latex Corporation v. Stylform Brassiere Co., Inc. Same, filed July 19, 1961, same, Doc. 61/2548, International Latex Corporation v. Lowell Manufacturing Co., Inc. Same, filed July 13, 1961, D.C.N.J. (Newark), Doc. 555/61, International Latex Corporation v. Portform Brassiere Company.

2,731,355, Sin-Pih Fan and Kuchinsky, Multi-position beam tube; 2,764,711, S. Kuchinsky, same; 2,794,147, J. R. Bethke, Beam tube switching circuits; 2,804,503, S. Kuchinsky, Protective device for vacuum tubes; 2,874,339, H. J. Hampel, Indicating device; 2,878,497, J. Y. Engelman et al., Ion control means, filed June 16, 1960, D.C. Mass. (Boston), Doc. 60/411-S, Burroughs Corporation v. Baird-Atomic, Inc. Consent decree; patents held valid and infringed; defendant enjoined May 9, 1961.

2,764,711. (See 2,721,955.)

2,781,378, B. Harmon, Method of printing carbon transfer ink in a spaced design on paper, filed Nov. 7, 1957, D.C., S.D. Iowa (Des Moines), Doc. 3/835, Roto-Carb Corporation et al. v. Fry's Manufacturing Company. Order holding patent invalid and dismissing cause July 19, 1961.

2,787,670, D. H. Rowland, Hearing aid, filed May 17, 1961, D.C., W.D. Okla. (Oklahoma City), Doc. 9286, Douglas H. Rowland v. Beltone Hearing Aid Company. Cause dismissed July 17, 1961.

2,794,147. (See 2,721,955.)

2,804,503. (See 2,721,955.)

2,836,785. (See 2,650,979.)

2,841,004. (See 2,650,979.)

2,844,192, L. R. Marques, Seat cover, filed Sept. 24, 1959, D.C., W.D. Tenn. (Memphis), Doc. 3795, Atlas Specialty Manufacturing Company v. Farber Brothers, Incorporated. Order holding patent invalid and dismissing complaint July 17, 1961.

2,368,385, L. J. Froot, Electric furnace product, filed July 14, 1961, D.C., W.D.N.Y. (Buffalo), Doc. 9254, *Stewart-Warner Corporation v. Westinghouse Electric Corporation*.

2,367,734, Kenney and Barnes, Harrow frame, leveling device therefor, and disk assembly and mounting, filed July 14, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7664, *Columbus Iron Works Company v. Ford McCleskey Manufacturing, Inc.*

2,374,239. (See 2,721,955.)

2,375,435, L. Gilbert, Multiple electrical connector, filed July 14, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 912/61-K, *Continental Connector Corporation v. Houston Fearless Corporation*.

2,375,497. (See 2,721,955.)

2,390,349, E. H. Hopkins, Hinge means for a self-closing, gravity-actuated panel door, filed July 12, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 897/61-HW, *National Manufacturing Company v. Standard Brands Paint Co., Inc.*

2,390,489, C. R. Pattison, Water ski and swim belt, filed Jan. 25, 1961, D.C., N.D. Tex. (Wichita Falls), Doc. 1439,

American Tent Company, doing business as Jones & Yandell Division v. R. B. Scheurer, doing business as Texas Water Crafters et al. Dismissed with prejudice as to all parties July 14, 1960.

2,364,684, B. D. Osteen, Holder for punched sheets, filed Oct. 28, 1960, D.C., N.D. Ill. (Chicago), Doc. 6061674, *St. Regis Paper Company, doing business as Nifty Mfg. Co. v. Feldco, Inc. et al.* Consent judgment; patent held valid and infringed; defendants enjoined July 14, 1961.

2,375,925, G. M. Chambers, Container attachment for pop bottles, filed July 11, 1961, D.C., W.D. Wash. (Seattle), Doc. 5313, *Wender Products Company v. Hays Merchandise, Inc. et al.*

Doc. 189,308, G. Florian, Clock, filed July 10, 1961, D.C., N.D. Ill. (Chicago), Doc. 6161172, *Sundean Corporation v. Spartus Corporation*.

Doc. 189,379, G. J. Buzzitta, Desk, filed July 24, 1961, D.C., S.D.N.Y., Doc. 61/2603, *Stew & Davis Furniture Company v. The Scott Frederic Co. et al.*

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PLANT PATENTS

GRANTED SEPTEMBER 5, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,885

STRAWBERRY PLANT

Arnold E. Ulrich, 600 28th St. SW., Rochester, Minn.

Filed Apr. 14, 1960, Ser. No. 22,379

1 Claim. (Cl. 47—62)

A new and distinct variety of strawberry plant, substantially as herein shown and described characterized by the outstanding appearance of the fruit which has a medium red bright glossy color with substantially non-conspicuous seeds and having an axially curved rounded conical shape, the plant yielding substantially greater quantities of fruit than either of its parents.

2,886

LINDEN TREE

William Flemer III, Princeton, N.J., assignor to Princeton Nurserymen's Research Associates, Princeton, N.J., a partnership

Filed Nov. 7, 1960, Ser. No. 67,867

1 Claim. (Cl. 47—59)

A new and distinct variety of Linden tree (*Tilia cordata*), substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an exceptionally straight and upright habit of growth, even in the young stage, fine and attractive green foliage having especially good resistance to foliar aphids, with attendant absence of any "sooty" appearance in late summer, a symmetrical form with the branches equally distributed around the trunk and forming an upright oval shape without the need of pruning, strong crotches that are resistant to wind damage and breakage, and a rapid habit of growth.

2,887

LINDEN TREE

William Flemer III, Princeton, N.J., assignor to Princeton Nurserymen's Research Associates, Princeton, N.J., a partnership

Filed Nov. 7, 1960, Ser. No. 67,868

1 Claim. (Cl. 47—59)

A new and distinct variety of Linden tree (*Tilia europaea*), substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a straight habit of trunk growth, attractive and lustrous dark blue-green foliage and the habit thereof to remain green even in dusty locations, as well as a habit of retaining the dark green color during periods of drought, good resistance of the foliage to aphids, with consequent absence of a "sooty" appearance, a handsome and unusually regular narrow-upright head or crown which does not require pruning to achieve an attractive shape, and a moderate rate of growth.

2,888

ROSE PLANT

Raymond J. Masak, 10240 E. Big Ben Road, Kirkwood, Mo.

Filed Nov. 15, 1960, Ser. No. 69,533

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a prolific, strong and long-stemmed bush habit, the exceptional top quality of practically all flowers, the large size of both the flower buds and open flowers, the very stiff and well-proportioned flower necks on which the flower heads are borne, a distinctive, attractive and uniform Rose Red general color tonality of the flowers and attending prolonged uniform color retention thereof through out their life, a very hard petal texture, with attendant prolonged retention of the petals without dropping throughout the life of the flowers, and the exceptionally long keeping qualities of the flowers.

PATENTS

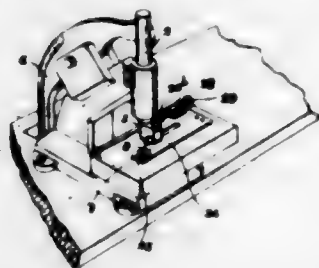
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GENERAL AND MECHANICAL

2,998,606

MEANS FOR ATTACHING PRONG-CARRYING DEVICES TO FLEXIBLE MATERIAL

Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Original application June 18, 1956, Ser. No. 592,094, now Patent No. 2,916,740, dated Dec. 15, 1959. Divided and this application Aug. 17, 1959, Ser. No. 834,997
2 Claims. (Cl. 1—325)

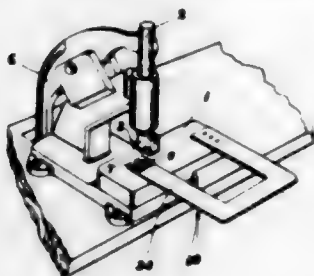


1. Means for use in attaching an external fastener member to the outside wall of a preformed doubled piece of a garment, said external fastening member being associated with a complementary back plate member and one of said members having attachment prongs adapted to be clenched to the other member, said means comprising, in combination, a clenching press having a base, an upper member for carrying the external fastening member, means for effecting relative movement of said upper member and base towards and away from one another to effect the clenching operation, a mandrel supported by said base of said press and comprising a flat plate having an elongated portion which is insertable into said doubled piece of the garment and is provided with a recess adapted to receive and locate in orientated position the back plate member, and a horizontal pivotal connection joining said mandrel to said base of said press, whereby said mandrel can be swung upwards to enable its said elongated portion which normally rests upon said base to be inserted into the doubled garment material.

2,998,607

MEANS FOR ATTACHING PRONG-CARRYING DEVICES TO FLEXIBLE MATERIAL

Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Original application June 18, 1956, Ser. No. 592,094, now Patent No. 2,916,740, dated Dec. 15, 1959. Divided and this application Aug. 17, 1959, Ser. No. 834,999
1 Claim. (Cl. 1—325)



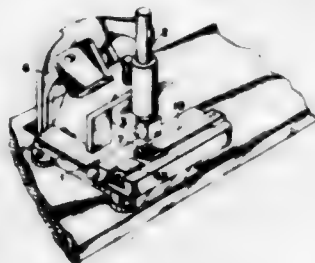
Means for use in attaching an external fastener member to the outside wall of a preformed doubled piece of a garment, said external fastening member being associated with a complementary back plate member and one

of said members having attachment prongs adapted to be clenched to the other members, said means comprising, in combination, a clenching press having a base, an upper member for carrying the external fastening member, means for effecting relative movement of said upper member and base towards and away from one another to effect the clenching operation, and a resilient U-shaped horizontally extending mandrel having one leg rigidly secured to said base and a second leg normally spaced vertically from the base of the press with an end portion under said upper member, said end portion having a back plate member receiving recess, thereby enabling vertical downwards movement of said outer end portion during the clenching operation, whereby it bears on and is supported by said base.

2,998,608

MEANS FOR ATTACHING PRONG-CARRYING DEVICES TO FLEXIBLE MATERIAL

Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Original application June 18, 1956, Ser. No. 592,094, now Patent No. 2,916,740, dated Dec. 15, 1959. Divided and this application Aug. 17, 1959, Ser. No. 834,910
3 Claims. (Cl. 1—325)



1. Means for use in attaching, by means of a clenching press, a device carrying prongs or the like to a pocket or sleeve formed of flexible material, comprising in combination with a base of the press having a movable supporting part, a mandrel consisting of a plate rigidly mounted and located in the press and having one end, insertable into said pocket or sleeve and adapted to be supported during the clenching operation of the press by said movable supporting part of the base of the press.

2,998,609

MEANS FOR ATTACHING PRONG-CARRYING DEVICES TO FLEXIBLE MATERIAL

Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Original application June 18, 1956, Ser. No. 592,094, now Patent No. 2,916,740, dated Dec. 15, 1959. Divided and this application Aug. 17, 1959, Ser. No. 834,911
1 Claim. (Cl. 1—325)

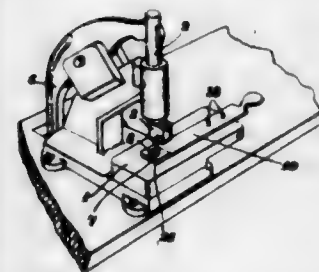
Means for use in attaching an external fastener member to the outside wall of a preformed doubled piece of a garment, said external fastening member being associated with a complementary back plate member and one of said members having attachment prongs adapted to be clenched to the other member, said means comprising, in combination, a clenching press having a base, an upper member for carrying the external fastening member, means for effecting relative movement of said upper member and base towards and away from one another to effect

SEPTEMBER 5, 1961

GENERAL AND MECHANICAL

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the clenching operation, a mandrel consisting of a flat elongated plate the outer end portion of which is insertable into said doubled piece of the garment and is provided with a recess adapted to receive and locate in oriented position said back plate member, a handle extension for manipulation on the inner end portion of the mandrel which is remote from the back-plate-receiving



recess, and co-operating pin and socket means on the inner end portion of the mandrel and on the base of the press, whereby said mandrel is mounted and located in a predetermined operative position on said base in a readily removable manner with its outer end portion which carries the back plate disposed beneath the upper member of the press and supported by said base.

ERRATUM

For Class 1—335 see:
Patent No. 2,999,037

2,998,610

SUNGLASSES

Harold A. Spero, 19149 Fairmount Blvd.,
Shaker Heights, Ohio
Filed Dec. 8, 1959, Ser. No. 858,183
3 Claims. (Cl. 2—13)



1. In spectacle frames of the type having two spaced and internally grooved lens retaining rims defining lens openings, a rim lock, comprising in combination, a substantially triangular tab formed integral with each rim and extending laterally of each of said lens openings, each of said tabs having a pair of opposed notches at its base end and a slit therebetween extending from the tab apex to the lens opening, defining two tab halves that can be flexed relative to each other to enlarge the lens opening, at the tab; a lens mounted in each of said lens openings in seated engagement within the groove thereof; and, a spring clip bent upon itself, having inwardly faced and opposed terminal fingers, adapted to compressively seat upon the periphery of the tab, with its terminal fingers seated in the tab notches, to compress the tab halves therebetween and thereby lock the lens within the lens opening.

2,998,611

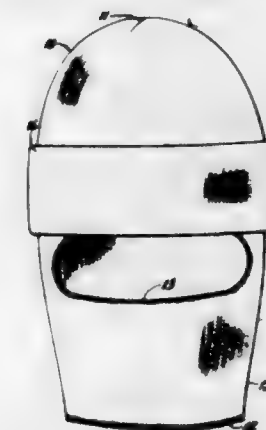
CUFFED CAP AND FACE HOOD AND METHOD OF FORMING

Walter E. Schuessler, Wilmette, Ill., assignor to Schuessler Knitting Mills, Inc., Chicago, Ill., a corporation of Illinois

Filed Mar. 23, 1960, Ser. No. 17,872
5 Claims. (Cl. 2—282)

1. A cap having a face hood and a cuff, comprising a top cap portion provided with a cuff, and a face hood

portion having an open lower end, a face opening thereabove, and a horizontal line of stitching securing said face hood within said top cap portion and inwardly of said

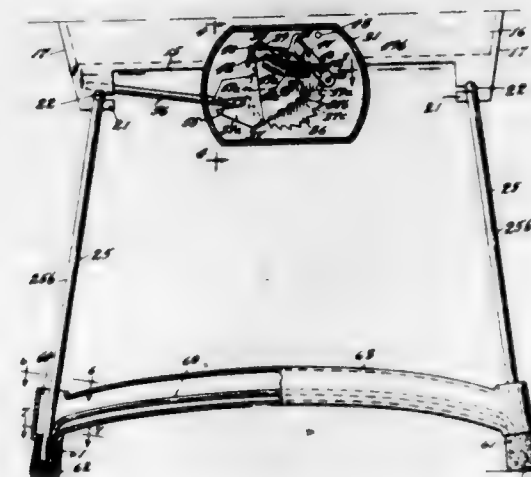


cuff-forming portion, whereby said face hood may be telescoped within said top cap portion or withdrawn therebelow into face protecting position with said cuff thereabove.

2,998,612

TOY CRADLES AND DRIVING MECHANISMS THEREFOR

David Saint, Rockledge, Pa., assignor to Grace Metal Products, Inc., Huntingdon Valley, Pa., a corporation of Pennsylvania
Filed June 16, 1958, Ser. No. 742,272
3 Claims. (Cl. 5—109)



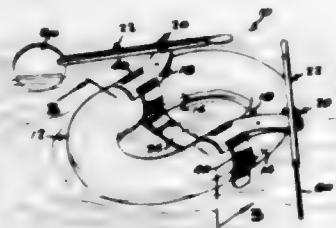
1. A cradle comprising a receptacle having opposite sides and ends, leg members pivotally mounted longitudinally with respect to said receptacle on horizontal pivots on the lower part of said receptacle and extending downwardly with respect to said receptacle in supporting relation thereto, the leg members at opposite sides being in downwardly diverging relation, the lower ends of the leg members providing fulcrums for engagement with a supporting surface, a power source, an escapement connected to said power source and to one of said leg members, and a resilient member transversely of said receptacle and connected to the lower ends of leg members at opposite sides of said receptacle and applying a restoring force thereto, said resilient member being a rod and having end portions extending downwardly along the lower ends of a pair of leg members below one end of said receptacle, and collars engaging said end portions and said lower ends.

2,998,613

PNEUMATIC BOAT

Gerald C. Lynn, 560 Bear Creek Drive, Bartow, Fla., and Thurman Gerald Lynn, R.R. 5, Box 397, Evansville, Ind.

Filed Apr. 3, 1959, Ser. No. 803,976
1 Claim. (Cl. 9-347)



A pneumatic row boat consisting of a longitudinally elongated inflated oval ring having parallel side portions, cinch straps secured around intermediate parts of said side portions, a single flexible strap extending across the opening of the ring and secured at its ends to the cinch straps, oar lock brackets mounted on the cinch straps having oar locks thereon, and oars swingably and pivotally mounted on the oar locks, said brackets comprising rigid horizontal plates extending forwardly from the cinch straps and having rear portions bearing upon the upper sides of the cinch straps, and forward portions which extend laterally outwardly beyond the cinch straps, said oar locks being mounted on said forward portions of the bracket plates, said rear portions of the bracket plates having slots therein through which the cinch straps are securely engaged.

2,998,614

HOLDER FOR A DISPOSABLE CLEANING SWAB

Allen Roy Winch, Westfield, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Filed Feb. 10, 1958, Ser. No. 714,132
12 Claims. (Cl. 15-210)



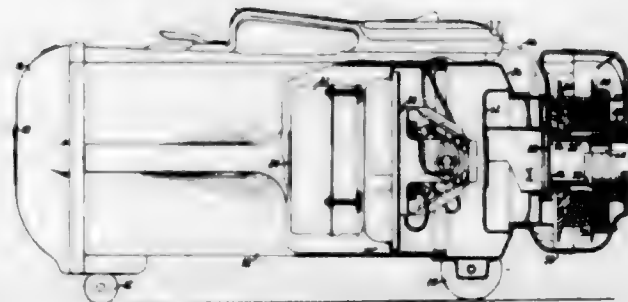
1. A cleaning device holder in the general shape of a spoon comprising a rigid handle and a separate head anchored to said handle and formed in two sections interconnected for closing movement to permit a cleaning swab in the form of a cover to be applied thereover and for expanding movement to rupture the swab for easy removal therefrom, both of said head sections being made of soft, flexible, resiliently deformable rubber-like material to permit the applied swab to be pressed into close conformance to the surfaces to be cleaned upon application of cleaning pressure applied to said head sections through the rigid handle, said rigid handle being provided with a rigid tang extending into and substantially throughout the length of one of said head sections to form a spinal reinforcement for that section, said tang being narrower than the width of said head section to leave the portions of said head section on opposite sides of the rigid tang free from reinforcement and thus easily deformable for insertion into restricted areas.

2,998,615

AIR DEFLECTOR FOR VACUUM CLEANERS

Michael E. Belicka, Greenwich, Harace W. Brundage, Stamford, and Allen P. Cawi, New Canaan, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,482
6 Claims. (Cl. 15-327)



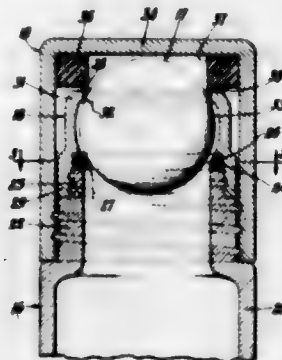
1. In a vacuum cleaner, a casing, means for producing flow of air through said casing, means for supporting said casing on a substantially horizontal surface, means forming a tubular exhaust passage from said casing extending substantially parallel to said surface and opening to the atmosphere, and air deflecting means within said passage comprising a hood member extending downwardly from the upper inner surface of said passage and thence substantially parallel to the axis of the passage towards the outer end thereof and terminating inwardly from said outer end, the peripheral extent of said hood member being limited to within the top 180° of the periphery of said passage.

2,998,616

BALL APPLICATOR DISPENSERS

Charles J. Gentile, Orange, N.J., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

Filed Oct. 21, 1957, Ser. No. 691,235
1 Claim. (Cl. 15-572)



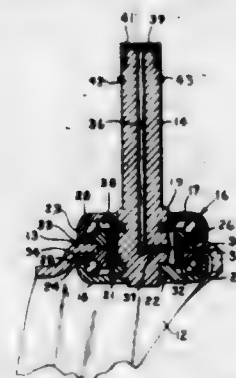
A fluid dispensing device, comprising a container having an open end, a spherical ball partially within said open end whereby a portion of said ball may be contacted with the contents of said container, means for rotatably supporting said ball partially within said open end, said means comprising a bearing surface disposed within said open end and rotatably supporting said ball by contact with an inner minor portion thereof, a ring having one extremity thereof attached to said container adjacent said open end thereof and another extremity thereof provided with an annular bearing portion encompassing an outer minor portion of said ball and retaining the same against movement outwardly of said open end, said bearing portion being spaced from said ball and defining therewith an annular fluid-discharge space of substantially constant and predetermined width between said ring and said ball, and a hollow sealing cap adapted for engagement with said container and provided with a closed end having an annular resilient skirt depending from the inner surface of said closed end, said skirt having a gen-

crally triangular radial cross-section adapted to project partially into said annular space and to be resiliently deformed into annular band sealing contact with the ball and sealing contact with the bearing portion when said cap is in sealing engagement with said container whereby said skirt closes said annular space and thereby prevents escape of fluid from said dispenser.

2,998,617

CASTER

Thomas H. Murphy, Kalamazoo Township, Kalamazoo County, Mich., assignor to Pence Wheel Company, Kalamazoo, Mich., a corporation of Michigan
Filed Dec. 16, 1957, Ser. No. 702,926
1 Claim. (Cl. 16-31)



In a swivel caster including a wheel and a yoke therefor, the combination comprising: a post having an annular ridge near its lower end; a pair of spaced bearing retainers secured to said post near said lower end thereof and on either side of said ridge; said retainer rings having peripheral flanges extending substantially toward each other and having a first pair of bearing surfaces on their opposing faces, annular support means embracing a portion of said yoke, axially aligned with said ridge and spaced radially outwardly therefrom, said annular support means supporting and defining a second pair of bearing surfaces on opposite axial sides thereof, said second surfaces respectively facing said first surfaces; a pair of sets of bearing balls disposed, respectively, between the corresponding and facing surfaces of said first and second pair of surfaces; annular sealing means between said annular support means and at least one of said retainer rings, said sealing means, the retainer rings, the annular support means and the adjacent portion of said post forming an annular, substantially closed, bearing compartment; a first passageway in said post extending from a point near said lower end thereof through the upper end thereof; and a second passageway through said post extending from said first passageway and communicating through said ridge directly with said bearing compartment.

2,998,618

SPRING HINGE

Leo Theodore Roy, South Attleboro, Mass., assignor to Craft, Inc., a corporation of Massachusetts
Filed Feb. 28, 1957, Ser. No. 642,991
9 Claims. (Cl. 16-184)

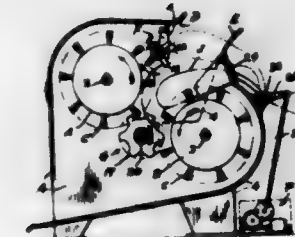


7. In combination, a hinge comprising a pair of relatively pivotal hinge plates, an opening in each of said plates, each of said openings being defined in part by an inner edge which is located adjacent to the pivot line of said plates, and in part by an outer edge located adjacent the outer extremity of its respective plate, the com-

2,998,619

FOWL PICKING METHOD

Andrew J. Toti, Modesto, Calif., assignor to Honolulu Oil Corporation, a corporation of Delaware
Original application May 22, 1953, Ser. No. 356,654, now Patent No. 2,910,722, dated Nov. 3, 1959. Divided and this application Mar. 31, 1959, Ser. No. 803,126
4 Claims. (Cl. 17-45)



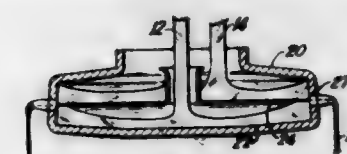
1. The method of mechanically defeathering fowl which comprises frictionally striking loose free fowl with fast rotary moving soft flexible frictional defeathering elements, while confining the loose fowl in a manner to be supported upon said elements, and tumbling the fowl about in every direction while applying intermittent forces to oppose free travel of the fowl with said elements and aid in so tumbling the fowl about, to permit said elements to reach every feathered portion of the fowl including under and over the wings, the neck, and between the legs, until the feathers are substantially all removed.

2,998,620

METHOD AND MEANS FOR CENTRIFUGING CURLY FIBERS

Charles J. Stalego, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Filed June 9, 1958, Ser. No. 740,922
7 Claims. (Cl. 18-2.6)



1. Apparatus for producing composite fibers of heat-softenable materials comprising a circular hollow rotor, having orifices distributed in its circumferential periphery, partitioning members dividing the interior of said rotor into separate zones for centrifugal distribution of different heat softened material introduced to the rotor, each of said orifices being partitioned in bisecting relation by said members for centrifugal projection of material distributed by each of said zones in composite relation with the material of the other of said zones.

7. The method of producing composite textile fibers of two dissimilar heat-softened glasses, comprising introducing two streams of said dissimilar glasses into a rotating spinner, introducing each stream into a separate distributing zone within said spinner, projecting said dissimilar glasses in side-by-side opposite relation as composite streams from common orifices under the influence of the centrifugal force of the rotating spinner, and attenuating said composite streams into fibers of small diameter suitable for textile purposes by subjecting them to

the forces of a gaseous blast, said blast being directed perpendicular to the path of emission of the composite streams from said spinner to redirect the path of attenuation of said streams.

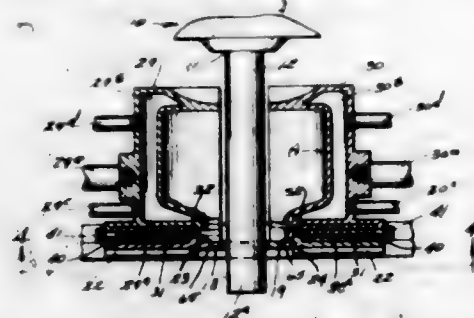
2,998,621

GUIDING MEANS FOR PLASTIC TUBING

Elmer L. Adams and Richard C. Gansire, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Original application Jan. 2, 1959, Ser. No. 785,736. Divided and this application Jan. 30, 1959, Ser. No. 790,099

8 Claims. (Cl. 18-5)



4. In an apparatus for forming a blown plastic article from a blowable plastic tube and including a pair of cooperating mold segments movable into abutment to enclose a portion of the tube and means to inject a blowing medium thereinto to inflate the mold enclosed portion of the tube against the mold cavity defined by the mold segments, the improvements of means to position the tube prior to closure of the mold segments thereon and including a positioning element carried by each of said mold segments, said elements projecting generally radially of the tube inwardly from the mold segments and having confronting faces provided with central notches and abutment surfaces to either side of said notches, initial tube-enclosing movement of said mold segments bringing said abutment surfaces of said elements into abutment with the tube confined by the registering central notches in alignment with the mold segments, and lost-motion means accommodating full closure of the mold segments while maintaining said element abutment surfaces in engagement and the tube confined by the notches.

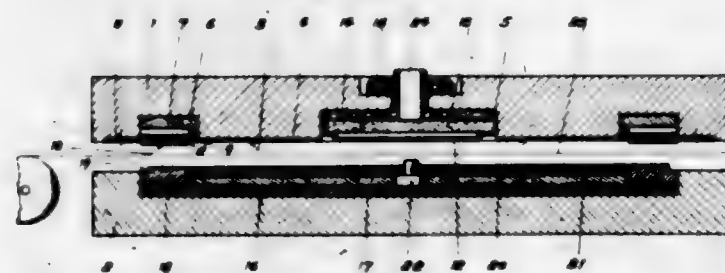
2,998,622

APPARATUS FOR PRESSING GRAMOPHONE RECORDS

Robert Albert Remoux, Paris, France, assignor to Societe d'Applications Industrielles Plastiques, Sartrouville (Seine-et-Oise), France, a company of France

Filed Oct. 28, 1958, Ser. No. 770,214

Claims priority, application France Dec. 23, 1957
12 Claims. (Cl. 18-5.3)



12. An arrangement for pressing gramophone records out of a film, comprising two mold sections, a die carried by one of said mold sections, means for feeding a film of thin plastic material between the two mold sections for producing a record in registry with the die, a sheet of deformable non-compressible material fitted without any clearance inside a recess formed in the other of said mold sections, die coating means supported on said sheet in registry with the location of the die, a retainer hoop

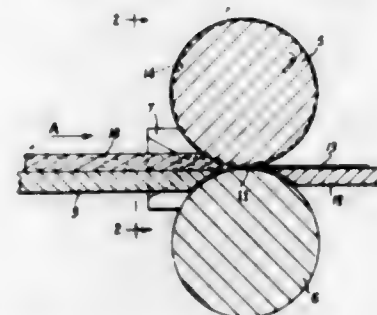
fitted about said means and resting on the sheet of deformable non-compressible material, and means forming a circumferential slot in said die carrying mold section into which said hoop rides when said mold sections are brought together whereby to effect cutting of said film into the shape of a record.

2,998,623

CHEEK PLATES FOR MILL AND CALENDER PRESS ROLLS

William A. Lawson, Cote St. Luc, Quebec, and William W. Harris, Hamilton, Ontario, Canada, assignors to Building Products Limited, Montreal, Quebec, Canada
Filed Feb. 25, 1960, Ser. No. 10,986

4 Claims. (Cl. 18-5)



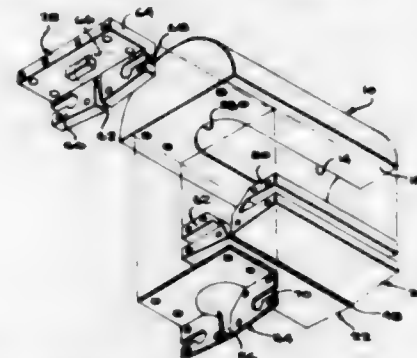
1. In a machine having a pair of press rolls together forming a nip for reducing a plastic material to a sheet having a predetermined thickness, width and density, at least one of said rolls having a pair of spaced apart annular grooves cut in its peripheral surface, and a pair of cheek plates associated with and projecting through the nip of said press rolls, the said cheek plates having their edges radiused to bear on the peripheral surfaces of said rolls at the location of said annular grooves, the said cheek plates having their opposing face surfaces tapered generally in a plane at right angles to the plane of the axis of the press rolls to form guideways of reduced width in the direction of the nip of the press rolls.

2,998,624

EXTRUSION ORIFICE END BLOCK

Ezra L. Ricketts, Rte. 1, Box 163, Laurelville, Ohio
Filed Oct. 16, 1959, Ser. No. 847,009

1 Claim. (Cl. 18-12)



In a film extrusion apparatus, an upstanding body member having a flat bottom, a pair of lip members arranged in confronting face to face relation positioned beneath and longitudinally of said flat bottom and abuttingly engaging said bottom with each of the complementary ends of said lip members being adjacent to and spaced inwardly of the adjacent end portion of said body member bottom, and means connecting said lip members to said body member for movement toward and away from each other to provide a longitudinally extending open ended extrusion orifice, the improvement consisting in a gasket member conformably shaped to extend over one of the complementary ends of said lip members, the adjacent end of said extrusion orifice, and the adjacent end portion of said body member bottom, said

gasket member being provided with a runway, said gasket member being positioned so as to abuttingly engage one of the complementary ends of said lip members and the adjacent end portion of said body member bottom with said runway facing and in registry with said extrusion orifice, and anchoring means embodying an L-shaped block having the short leg thereof provided with a slot extending from the junction of said short leg with the long leg of said block to the free end of said short leg, said block being positioned so that the short leg extends over said one complementary ends of said lip members with said slot embracingly receiving the runway in said gasket member and with said long leg extending over the adjacent end portion of said body member bottom, and securing elements extending through said end block, gasket, and into said lip members and the end portion of said body member bottom.

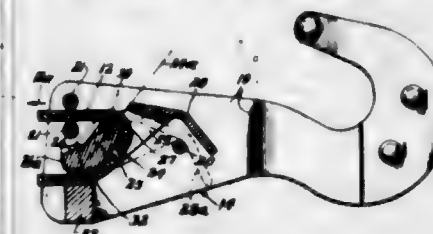
2,998,625

STRAP TYPE SECURING APPARATUS

John Richard Haber, Hollicong, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania

Filed Mar. 23, 1959, Ser. No. 801,214

1 Claim. (Cl. 24-134)



Securing apparatus having a strap member, an adjusting and load transfer device mounted on said strap member including a frame structure having side plates at each edge of the strap member, a clamp beam supported at each end in said frame structure, a clamp part having a pivot support in said frame structure, said clamp part having a strap engaging surface adjacent said clamp beam which surface is eccentric with respect to said pivot support and cooperative with said clamp beam to provide clamping action, a handle connected to the ends of said clamp part between said frame plates and defining a passage with said clamp part whereby said handle and clamp part lie on opposite sides of said strap, a stop attached to said frame structure located to limit the rotation of said clamp part in the release direction to a small angular motion just sufficient to allow free movement of the strap member, said strap member extending through said passage approximately 180 degrees with respect to said pivot support around said clamp part from the loaded portion of the strap to the clamping point defined by said clamp beam and clamp part, said clamp part having a portion remote from said clamp beam extending in a generally transverse direction with respect to said strap member and defining an acute angle with the loaded end of said strap member whereby rotational movement of said clamp part in the loaded direction produces an increase in clamping moment, said frame plates extending beyond said handle in all directions under strap clamping conditions.

2,998,626

STRAP BUCKLE

Ernest Prete, Jr., North Hollywood, Calif., assignor to Brown-Line Corporation, El Segundo, Calif., a corporation of California

Filed Aug. 10, 1959, Ser. No. 832,764

3 Claims. (Cl. 24-170)

1. A buckle for connection to one strap end and for releasable engagement with a second strap end, comprising: a frame structure including two longitudinal upright side plates and a plurality of transverse members rigidly

interconnecting said side plates; a first transverse member of said plurality being at one end of said frame structure for connection to one strap end; a second transverse member of said plurality being near the other end of the frame structure, said second member being relatively wide and being formed with a substantially flat upper surface and being canted to incline said upper surface, said second member having its inner edge curved over an extent of approximately 180°, a third transverse member of said plurality being positioned between said second transverse member and said other end of the frame structure whereby the second strap end may be passed over said third transverse member and under said second transverse member and curved back 180° to pass over the upper surface of the third transverse member, said third transverse member being positioned with its upper surface positioned above the lowermost portion of said second



member to orient the strap in an inclined direction conforming to the cant of the second transverse member, a gripping member pivotally mounted between said side plates above said second transverse member, said gripping member having an eccentric serrated gripping surface for rotation in one direction towards the upper surface of said second transverse member to grip said second strap end, said gripping member having an integral arm portion for manual rotation of the gripping member in its opposite release direction, said integral arm overhanging the space between said first and second transverse members in the gap between the two strap ends for freedom for release rotation without interference by either of the two strap ends, said side plates extending above the range of effective gripping positions of said gripping member to serve as guard means to avoid accidental release rotation of the gripping member.

2,998,627

FASTENING DEVICES FOR WEARING APPAREL

Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a company of Great Britain

Filed Mar. 19, 1958, Ser. No. 722,482

Claims priority, application Great Britain Apr. 3, 1957
3 Claims. (Cl. 24-227)



1. A sheet-metal fastening device cooperable with an eye member for connecting together overlapping parts of garment apparel, said device consisting of the combination of a flat plate constituting an elongated front tongue for applying to the outer face of the garment material and engaging the cooperable eye member, with a back-plate for applying to the inner face of garment material at the back of said front tongue, clenchable attachment prongs for securing together the front tongue and back-plate with the garment material interposed therebetween, and spacing means for elevating in the manner of a cantilever at least a portion of said front tongue above the garment material lying against the back-plate by a height suitable for receiving the eye member, said back plate extending at least partly under said cantilever-like portion of the front tongue when the device is attached to the

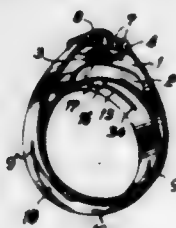
garment material, said spacing means forming a seating surface for contacting directly the garment material and also providing an abutment stop having a height substantially equal to said height of elevation of the front tongue, said stop being beneath the front tongue at a location intermediate its length, whereby inward movement of the cooperating eye member for the entire length of the front tongue is prevented, at least two-thirds of the length of said front tongue projecting forwards beyond said abutment stop and said spacing means to form a box-like space extending between the under surface of said front tongue and the garment material to which the device is attached, said space being entirely open and unobstructed along three sides for receiving the eye member, said spacing means and said attachment prongs being confined to an area substantially completely underlying the end portion of the front tongue which includes and lies behind said abutment stop, whereby the boundary edges of said front tongue represent substantially the confines of the entire fastening device.

2,998,628

TUBE OR HOSE BINDER

Karl Kling, Nuremberg, Germany
(Behnhofstrasse, Klingen, Italy)

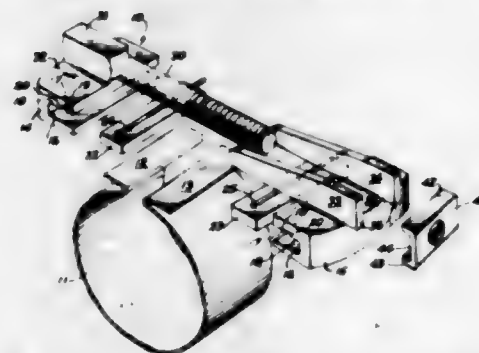
Filed Mar. 24, 1958, Ser. No. 730,831

Claims priority, application Germany Mar. 28, 1957
9 Claims. (Cl. 24-278)

1. A hose binder for securing a hose to a pipe comprising an elongated strip of material with an opening therein through which one end of said strip has been passed to form an inner and an outer loop for encircling the hose with the inner loop, a clip receiving and fastening the ends of said strip to each other and to said clip, a clamping segment mounted on and conforming to the shape of said inner loop of said strip, and a tensioning screw threaded into said clip and pressing against said clamping segment for pulling the inner loop tightly around the hose, said strip being apertured for increasing the ability of the strip to adjust in the transverse direction to tension in the strip and for reducing the tendency of said strip to buckle along said clamping segment, and having means on the ends thereof engaging the clip.

2,998,629

PIPE CLAMP

Telford L. Smith, 567 Magnolia Ave.,
South San Francisco, Calif.Filed Feb. 25, 1958, Ser. No. 717,493
13 Claims. (Cl. 24-279)

11. A pipe clamp, comprising a malleable band, a pair of lugs, each lug having means for clamping thereto the

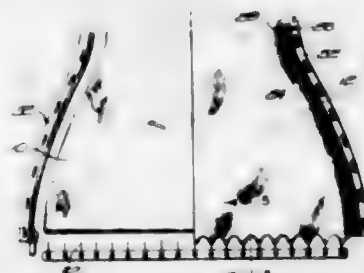
ends of said band, one said lug having a planar outer surface and means supporting bolt means projecting above said planar surface and the other a pair of guides for aligning said bolt means with lower edges engaging said planar surface to prevent bending of said bolt, the engagement of said lower edges with said planar surface being closer to the pipe than said bolt; a keeper follower movable on said bolt means to engage said guides and prevent relative rotation between said lugs; and a nut tightened on said bolt means against said follower.

2,998,630

METHOD OF AND MEANS FOR HOLDING
KNITTED SWIMSUIT BLANKS FLATEstephane D. Estephaneau, Worcester, Mass., assignor to
M.K.M. Knitting Mills, Inc., Manchester, N.H., a corporation of New Hampshire

Filed Nov. 30, 1960, Ser. No. 72,695

8 Claims. (Cl. 26-54)



1. The method of stretching a piece of fabric to a predetermined shape for the purpose of treating said fabric in stretched condition which comprises attaching along at least two edges of the piece a series of fastener elements, securing to a fixed support corresponding series of mating elements arranged in contours similar to desired contours of the fabric when stretched, and joining the series of elements on the fabric to the mating elements on the support.

2,998,631

PREPARATION AND USE OF TABS OR MARKING
LABELS CONTAINING YARNS OF PARTIALLY
SAPONIFIED CELLULOSE ACETATEPeter Meyer, London, and Victor Emmanuel Yarnley
and Witold Titow, Cheshington, England, assignors to
Polymark LimitedNo Drawing. Filed Nov. 20, 1956, Ser. No. 623,313
Claims priority, application Great Britain Nov. 22, 1955
15 Claims. (Cl. 28-73)

1. In a method for producing labels formed partly of cellulose acetate yarn and adapted for temporary attachment by heat and pressure to clothing articles for identification purposes during cleaning which are to be pulled from said clothing articles after cleaning, the improvement comprising partially saponifying said cellulose acetate yarns before attachment to the extent that substantially no residue remains on said article when said label is pulled therefrom and insufficient to adversely affect adhesion to said clothing articles.

2,998,632

PROCESS OF MAKING SPARK PLUG
ELECTRODE STRUCTURESDonald M. Yensel, Indianapolis, Ind., and Walter A.
Rumck, New York, N.Y., assignors to Union Carbide
Corporation, a corporation of New York

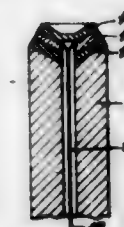
Filed June 10, 1959, Ser. No. 819,293

3 Claims. (Cl. 29-25.12)

1. Process of making spark plugs having concentric ring electrodes for internal combustion engines, which comprises the steps of electric arc spraying consecutive layers of refractory electrode metal, refractory insulat-

ing material and refractory electrode metal onto the end region of a suitable base member, and grinding away an

direction, and means associated with each carrier to position the cutting edges of the individual bits thereof above



end portion of the coatings to provide spaced annular electrode surfaces on the end region of the base member.

2,998,633

WIRE CUTTING, STRIPPING AND TERMINAL
ATTACHING MACHINEKarl H. Andrea, West Allis, Wis., assignor to Artos En-
gineering Company, Milwaukee, Wis., a corporation of
WisconsinOriginal application Oct. 14, 1955, Ser. No. 540,363, now
Patent No. 2,908,910, dated Oct. 20, 1959. Divided
and this application Aug. 17, 1959, Ser. No. 834,111
2 Claims. (Cl. 29-33)

1. In combination, a source of insulated wire stock, a terminal attaching device spaced from said source and having guides provided with separable wire directing sockets, cooperating wire severing and insulation cutting knives located between said source and said guides, means for actuating said wire severing knives to completely sever successive wire lengths from the stock while causing said insulation cutting knives to merely cut through the insulation definite distances from the point of wire severance, a wire feeding clamp movable longitudinally of the wire past said knives and being operable to initially pull the severed wire end away from said device to strip the cut insulation off of the leading end of each successive wire length and to thereafter advance each stripped end in the opposite direction toward said guides, means for positioning said sockets to provide a threading funnel for guiding and precisely locating only the advancing stripped wire ends within the terminal attaching zone of said device, and a stop cooperable with said guides for positively arresting the wire advancing movement of said clamp whenever a stripped wire end has been threaded through said socket funnel and precisely located within said terminal attaching zone.

2,998,634

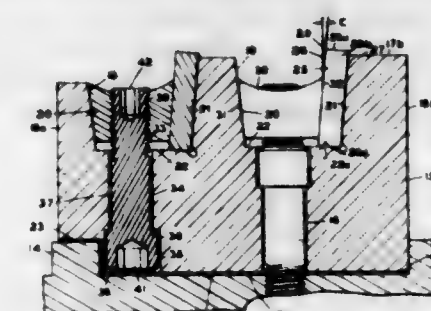
BROACHING TOOL

Emery C. Raehrs and Richard N. Clifton, Cincinnati,
Ohio, assignors to The Cincinnati Milling Machine
Co., Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 14, 1958, Ser. No. 728,404

4 Claims. (Cl. 29-95.1)

1. A broaching tool for machining a surface on a workpiece adapted for connection to a broaching machine for cutting movement relative to the workpiece, the tool comprising an elongated body extending in the cutting direction having a plurality of ridges defining shoulders on the top surface extending transversely to the cutting direction, the areas between the respective ridges on the top surface being at progressively greater elevations to define steps, a bit carrier detachably secured on each of said steps, a plurality of like bits each having cutting edges detachably secured to each bit carrier, the bits being arranged transversely to the cutting



the top surface of the carrier to take a single cut on the workpiece.

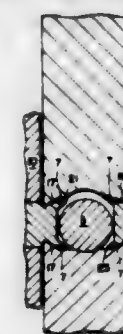
2,998,635

METHOD OF MAKING ROLLER BEARINGS

Silvius Barritt, Jr., Bensenville, and David H. Ellis, West
Chicago, Ill., assignors, by mesne assignments, to The
Oscar C. Rixson Co., Franklin Park, Ill., a corporation of Illinois

Filed Jan. 22, 1959, Ser. No. 788,466

1 Claim. (Cl. 29-148.4)



The method of making a roller bearing unit comprising the steps of stamping a metal blank to form a solid retainer having a plurality of laterally spaced and transversely extending openings therethrough, placing the blank between a pair of opposed staking punches each having stakes formed to deform inwardly the upper and lower lengthwise margins at each side of an opening of the blank, positioning an annular roller bearing in the blank opening with the bearing resting upon the lower of said staking punches in centered position relative to said opening and at an elevation relative to the lower punch stakes such that the bearing centerline will be midway between the upper lower faces of the blank when the opposed punches are closed against the blank at the completion of a staking operation, and then driving one punch toward the other to cause the stakes of both punches to deform the upper and lower margin of the blank opening inwardly and form opposed overhanging lip portions for retaining said bearing in said opening.

2,998,636

METHODS OF FABRICATING ANTI-
FRICTION BEARINGSThomas E. Spence, Wayne, and Francis R. Smith, Phila-
delphia, Pa., assignors, by direct and mesne assign-
ments, to SKF Industries, Inc., Philadelphia, Pa., a
corporation of Delaware

Filed Oct. 16, 1958, Ser. No. 767,676

5 Claims. (Cl. 29-148.4)

1. A new method of fabricating a ball bearing comprising the steps of producing an inner race component with a fully formed peripheral groove cross sectionally rounded for engagement by the balls, producing a larger outer race component having a partial raceway with but one fully formed inwardly annular axial thrust shoulder

at the bottom for the balls, and a circumferential bead projection surrounding the opening in the outer race component at the top at the side opposite the annular shoulder; applying a full complement of balls around the inner race component into the peripheral groove thereof; inserting the inner race component with the applied balls into the hollow of the outer race component until the

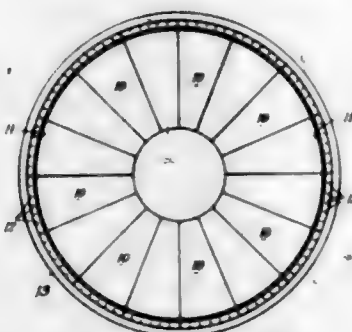


balls rest upon the inwardly extending shoulder internally of the outer race component; and finally simultaneously rolling, bending and forging said circumferential bead projection radially to securely enclose and partially surround the balls, whereby a permanent bearing assembly having a full complement of rolling elements is produced.

2,998,637 BEARINGS

Barnes N. Wallis, Effingham, England, assignor to Vickers-Armstrongs (Aircraft) Limited, London, England

Filed Aug. 3, 1959, Ser. No. 831,018
6 Claims. (Cl. 29-149.5)



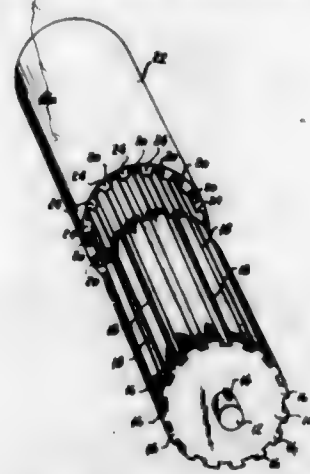
1. The process of making a bearing of double curvature, consisting of the steps of (a) cutting from strips of metal plate faced with PTFE upon a single surface a number of segments into elements so shaped that when formed to the required double curvature the boundaries are "lines of latitude and longitude," (b) incising on the metallic sides of said elements two intersecting sets of closely spaced lines, (c) forming each element to the requisite curvature by pressing or gently tapping with a soft mallet into a female carrier which has been accurately machined to the desired ultimate shape, (d) assembling the elements in the carrier and (e) bonding the metallic surface of the assembled elements to a shaped support by a suitable adhesive, in such manner that the PTFE faced sides of the elements constitute collectively the desired bearing.

2,998,638 METHOD OF MAKING INDUCTION-MOTOR SQUIRREL CAGES

Frederick B. MacLaren, New York, N.Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,753
2 Claims. (Cl. 29-155.53)

1. A method of making an induction-motor squirrel cage rotor including the steps of forming a plurality of longitudinally extending grooves along the inner surface of a metal tube, assembling a stack of laminations each having a number of teeth equal to the number of said grooves on an arbor with their teeth aligned, moving said tube over said stacked laminations with said teeth

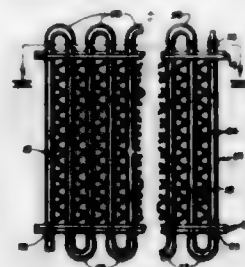
aligned in the tube grooves, spinning down the ends of said tube to form rotor end plates and reducing the cir-



cumference of said tube by removing metal from the tube wall to expose the edges of said lamination teeth.

2,998,639

METHOD OF MAKING HEAT EXCHANGERS
John J. Forst, Yonkers, and Huntly M. Campbell, White Plains, N.Y., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Mar. 3, 1959, Ser. No. 796,952
11 Claims. (Cl. 29-157.3)



1. A method for manufacturing a heat exchanger core which comprises providing a single length of elongated flat tube sheet containing an internally extending collapsed area of separation, bending said tube sheet in zig-zag fashion to form a plurality of spaced portions interconnected by bent-end portions, inserting secondary fin stock between the spaced tube portions of said tube stock, expanding said tube sheet to distend said tube sheet along said area of separation to effect intimate contact of said tube sheet with said fin stock, joining said tube sheet to said fin stock, and removing said bent-end portions.

2,998,640 METHOD OF FORMING A WALL FROM A PLURALITY OF TUBES

Andre Huet, 48 Avenue du President Wilson, Paris, France
Filed Mar. 4, 1957, Ser. No. 643,748
Claims priority, application France Mar. 8, 1956
2 Claims. (Cl. 29-157.4)



1. A method of producing an uninterrupted wall from a plurality of thin-walled tubes wherein each of said tubes has at least one longitudinal ridge extending outwardly from its exterior surfaces with the remainder of each tube being of substantially circular cross section which comprises, compressing inwardly circular tubes to form circular tubes of smaller diameter having at least

one integral longitudinal exterior ridge with a chamfered edge remote from said tube, disposing said tubes in axial parallel relationship by abutting the chamfered edges of the ridges of the tubes, and welding each ridge to the corresponding ridge of the next adjacent tube, whereby said uninterrupted wall is formed without damage to the tubes.

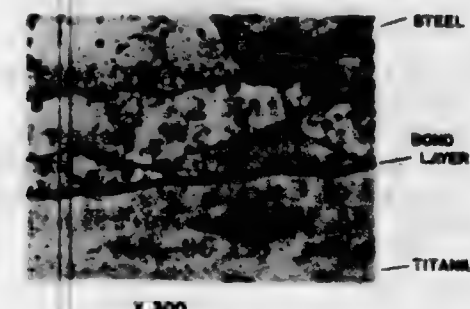
2,998,641

TITANIUM CARBIDE-SILVER COMPOSITIONS
Richard M. Atkinson, Reading, and Ames J. Shaler, State College, Pa., assignors to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 29, 1959, Ser. No. 789,774
9 Claims. (Cl. 29-182.8)

1. In a method of making a sintered body consisting essentially of silver and titanium carbide in which a premed body of 50 to 75 weight percent Ag and 50 to 25 weight percent of TiC powders is infiltrated with a separate portion of silver, the step of heating said body to about 1000° to 1100° C. in contact with about 1 to 7 percent by weight of TiH₂ in an atmosphere inert to TiC during said infiltration to decompose the TiH₂ and thereby wetting the TiC with unoxidized titanium metal.

2,998,642

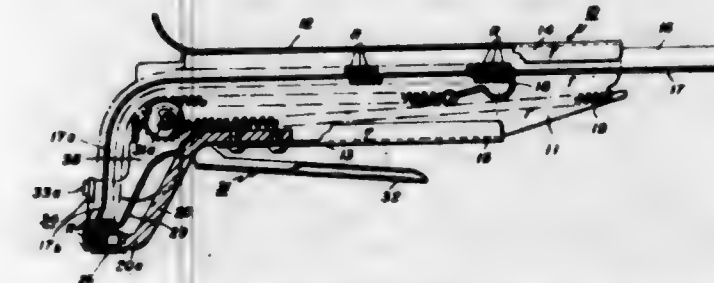
BONDING OF TITANIUM TO STEEL
Frank X. McCawley, Chevy Chase, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Jan. 16, 1958, Ser. No. 709,279
1 Claim. (Cl. 29-194)



A laminated article having a layer of steel, bonded to an alloy consisting of, 6-20% aluminum, less than .03% oxygen balance titanium welded thereto.

2,998,643

TOOLS FOR ASSEMBLING RETAINING RINGS
ON GROOVED SHAFTS, PINS AND THE LIKE
Hans Erdmann, Maplewood, N.J., assignor to Walde Kohlenoor, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 23, 1959, Ser. No. 808,376
12 Claims. (Cl. 29-229)



1. A tool for dispensing open retaining rings and for assembling them on grooved shafts and the like solely by its bodily movement toward said shaft comprising, in combination, an applicator blade having a working end provided with a substantially semicircular cut-out which opens through its end edge and has radius corresponding substantially to that of the outer-edge circle of said ring whereby it is adapted to accommodate a ring lowering thereto from above and said working end is adapted

to straddle the shaft on which ring assembly is to be effected, at least the rearward portion of the cut-out edge providing a push shoulder for the ring positioned in said cut-out, a stack rod for maintaining a supply of the rings to be dispensed and assembled in column formation above said applicator blade and having a flexible lower end portion disposed generally axially with respect to said cut-out while terminating just short thereof, means operative between the applicator blade and the upper end portion of the stack rod for connecting said parts together for movement in unison toward and away from said shaft, a retractable slide mounted on said working end and having a normal position in which it closes the cut-out from beneath and thereby provides a support for the ring column, means for translating flexing movement of the flexible end of the stack rod rearwardly with respect to the cut-out into limited rearward retracting movement of the slide from its aforesaid normal position, and hand-controlled lever means pivotally related to said applicator blade and including a movable arm disposed in proximity to said flexible lower end portion of the stack rod and adapted upon movement in one direction to impart rearward flexing movement to said flexible end portion, thereby to effect both rearward shift of the rings of the stack next adjacent the ring then positioned in said cut-out with respect to said ring and corresponding rearward retracting movement of the slide from its aforesaid normal position, as in turn results in the forward edge portion of said ring in the cut-out being exposed by an amount enabling it to serve as a tool-to-shaft guide means during the course of subsequent bodily tool movement towards the shaft.

2,998,644

SEAL DRIVER ASSEMBLY
Walter E. Thill, Grosse Pointe Woods, Mich., assignor to Federal-Mogul-Bower Bearings, Inc., a corporation of Michigan
Filed June 16, 1958, Ser. No. 742,083
2 Claims. (Cl. 29-275)



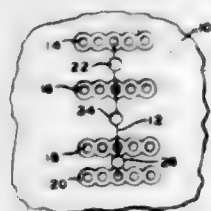
1. A seal driver assembly comprising a substantially circular driver plate, a handle member secured to said driver plate so that it extends substantially axially from one side thereof, a unitary adaptor member having substantially concentric annular portions one of which is a size to be frictionally supported on and extend about said driver plate and the other one of which extends axially from the opposite side of said driver plate when said first portion is supported thereon, said adaptor member having a substantially centrally disposed aperture being substantially coaxial with said handle member and being defined by a surface spaced radially outwardly from the periphery of said handle.

2,998,645

METHOD OF REPAIRING CRACKED OR
BROKEN METAL PARTS
David Dipestein, % United States Casting Repair Corp., 6432 Edmund St., Philadelphia, Pa.
Filed May 18, 1960, Ser. No. 29,904
5 Claims. (Cl. 29-402)

1. A method of repairing cracked or fractured metal parts comprising providing a series of overlapping blind holes extending away from a crack in a part at spaced

points along said crack, fixedly securing a lock in each series of overlapping blind holes, providing a hole in said part between said locks so that said hole overlaps a portion of said locks and said crack between said locks, se-

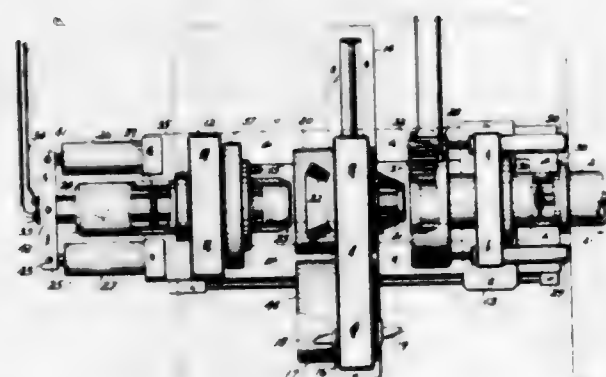


curing a tapered plug in said hole thereby pre-stressing said locks and filling the gap of said crack, and removing a portion of said plug which extends beyond the surface of said part.

2,998,646

METHOD OF JOINING METAL BY HIGH PRESSURE CONTROLLED TEMPERATURE DIFFUSION WELDING

Glenn L. Hitz, 1661 Bel Air Road, Los Angeles, Calif.
Filed June 18, 1958, Ser. No. 742,964
1 Claim. (Cl. 29-470)



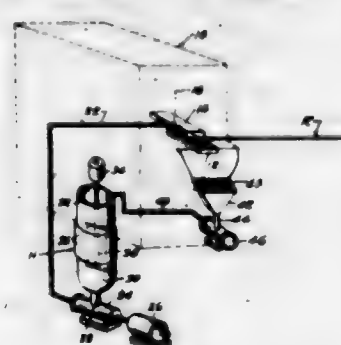
The method of joining and welding tubular sections of metal, particularly carbon steel, which can be cold worked and recrystallized by heating, while maintaining substantially uniform metal thickness, and attaining full bonding strength and smooth surfaces in the areas surrounding and at the joint, by preparing freshly bared tapered or beveled faces at the areas to be joined, cold working these faces by rolling threads thereon, wringing the two faces together into tight threaded contact, placing a member against the inside surfaces of the members being joined, at the joint, placing a restraining member around the outside surfaces of the members being joined, at the joint, applying heat to the inside tooling member causing thermal expansion and pressure against the inside surfaces of the members being joined and raising the temperature of the metal of the members being joined, at the joint, causing increased thermal activity therein, particularly at the areas of high residual stresses caused by the cold working previously done, and thus causing recrystallization, crystal recovery and atomic diffusion across the interface of the joint between the members being joined at a temperature substantially lower than would have been required if the faces had not been previously prepared by cold working, the recrystallization, crystal recovery and atomic diffusion cooperating to create an homogeneous grain structure and full strength bond across the interface, chilling the outside restraining member to cause thermal shrinkage and increased pressure against the outside surfaces of the members being joined sufficient to create controlled metal displacement in the joint area, resulting in smooth outside surfaces, and improving and stabilizing the bonding

action at the interface of the joint, the entire process being accomplished in an inert or reducing gas to avoid contamination, decarburization or oxidation of the interface of the joint.

2,998,647

ZINC COATING METHOD AND APPARATUS THEREFOR

Alan Behl, Aurora, Ill., assignor to Railloc Company, Inc., Plainfield, Ill., a corporation of Illinois
Filed Apr. 2, 1957, Ser. No. 650,240
3 Claims. (Cl. 29-527)

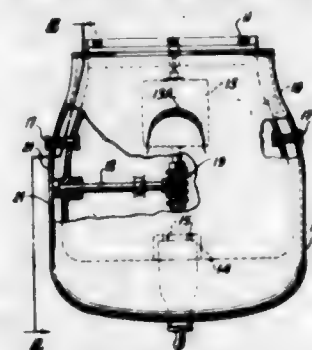


1. The method of zinc coating iron or other metal while the same is being deformed, which consists of introducing zinc dust held in suspension by a fluid to the area being frictionally heated and deformed, the zinc dust being thereby adhered or pressed on the surface of the metal at a sufficient heat to cause it to form a coating thereon, then rinsing the coated area with hot water and drying with a hot air blast.

2,998,648

ELECTRIC RAZOR PIVOTALLY MOUNTED IN AN OUTER CASING

William J. Barron, 2917 8th St. SW., Robert H. Barron, 4711 Charles Ave., and Richard H. Barron, 1004 Crescent Blvd., all of Calgary, Alberta, Canada
Filed Dec. 15, 1959, Ser. No. 859,639
5 Claims. (Cl. 30-43)



1. An electric shaver comprising an inner casing, an elongated hollow outer cutting head fixed to said casing, an elongated inner cutting head longitudinally slidable within said outer head, a motor within said casing connected to reciprocate said inner cutting head within the outer cutting head, an outer casing within which said inner casing is mounted on pivot means to swing relatively to said outer casing in a direction transverse to the path of travel of said inner cutting head, and power transmission means driven by said motor for periodically swinging said inner casing about said pivot means.

2,998,649

COMBINATION SUTURE CUTTING AND REMOVING INSTRUMENT

Alan S. Miller, 39 Auburn St., Brookline, Mass., and Arthur L. Sherman, 102 Garland Road, Newton, Mass.
Filed June 2, 1959, Ser. No. 817,671
5 Claims. (Cl. 30-131)

1. An instrument for the cutting and removal of surgical sutures, said instrument comprising a pair of tweezers

legs joined at one pair of ends, the other pair of ends being spaced apart from each other in a normal rest position, the second mentioned pair of ends having a cutter associated therewith, said cutter comprising an elongated blade carried by one of said legs, the other of said legs having a slot in alignment therewith, said blade being adapted to enter said slot along its entire length and shear the suture in between said blade and slot, said blade

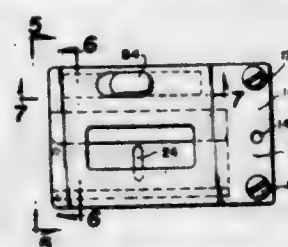


being composed of a flat plate having an inclined surface for gradually elevating the suture when one of said legs is inserted under the suture, said slot having substantially square side edges and said plate having correspondingly squared edges to shear the suture when said plate enters said slot, said inclined surface having an upwardly opening pocket therein to form a rest within which the suture is received when said legs are moved in a direction to enter said blade into said slot.

2,998,650

RAZOR BLADE HOLDER

James C. Latham, 9008 Fairview Ave., San Gabriel, Cal.
Filed Mar. 13, 1961, Ser. No. 95,313
2 Claims. (Cl. 30-162)



1. A razor blade holder comprising a generally rectangular sheath consisting of a front panel and a rear panel in side by side relation with their inner surfaces facing one another, said front panel and said rear panel being joined along one common shorter edge, leaving the three remaining sides of each panel unattached to the corresponding side of the opposite panel; at least one channel shaped groove in the inner face of said front panel and a similar groove in the inner face of the rear panel, opposite to the groove in said front panel, said opposed grooves, together forming a channel adapted to receive the thickened back portion of a single edge razor blade, said grooves extending transversely of said panels from the vicinity of the joined edges to the opposite unjoined edge; an access opening through one of said panels to said groove; means spreading said panels apart when said means is in one position and for permitting said panels to return to an unspread position when said means is in another position; and a pin in said front panel, adjacent the edge opposite the secured edge, and a hole in said rear panel, opposite said pin and of a size to receive said pin and to thereby secure a blade received in said sheath.

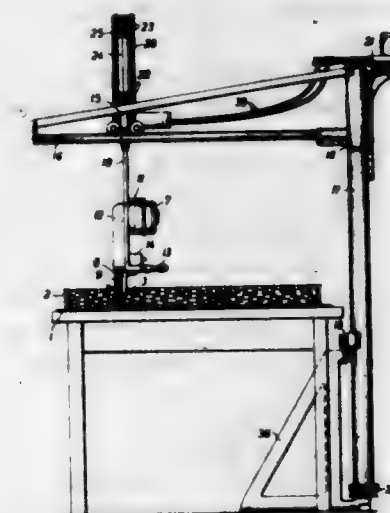
2,998,651

CUTTING MACHINE FOR CUTTING TEXTILE OR OTHER MATERIAL

Heinz Grossemeier, Bad Salzungen, Germany, assignor to Firma Emil Hoogland, Bonn-Nord, Germany
Filed Aug. 30, 1955, Ser. No. 531,370
4 Claims. (Cl. 30-272)

1. In combination in a cutting machine for cutting textile and similar material to pattern; a cutting table for

supporting the material to be cut, supporting means resting outside the material supporting surface of said table and provided with two vertically spaced runways extending in longitudinal direction of and near one longitudinal edge of said table, an upright column, roller means supported by said column and arranged for movement on said runways to thereby guide said column along said runways, a cantilever supported by and linked to said upright column so as to be turnable about the axis of said column, said cantilever being provided with a run-



way, a carriage movably mounted on said runway, a frame supported by said carriage, a vertical shaft vertically adjustably supported by said frame and rotatable relative thereto, block and tackle means connected between said frame and said vertical shaft and spring biased to support said vertical shaft, adjustable abutment means connected to said vertical shaft above said carriage for limiting the downward movement of said shaft, and cutting means supported by said vertical shaft for cutting material on said table.

2,998,652

ARCHERY BOW SIGHT

Edward J. Zielinski, 1006 Symes Ave., Royal Oak, Mich.
Filed Aug. 3, 1959, Ser. No. 831,229
4 Claims. (Cl. 33-46)



3. An archery bow sight device having multiple adjustable and reversible mounts comprising a track including a slide bar attachable to a bow; said bar having opposite front and back faces and opposite lineal edges; a carriage slidably mounted on said track bar including a sliding block having a channel slidably disposed on said bar defined by opposed grooved bottom ways enveloping said slide bar lineal edges; said block having a spring containing recess above said channel; a spring disposed in said block recess bearing against said block and against said bar frictionally positioning said block relative to said

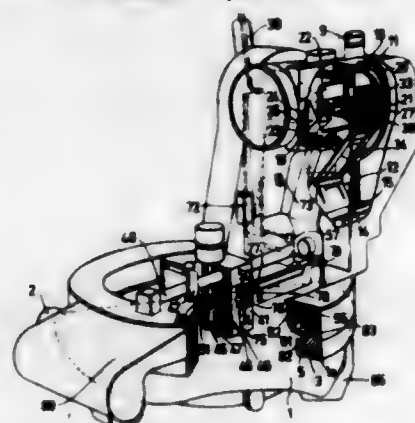
bar in any movably adjusted position; said spring being movable with said block relative to said track; said block having a top opposite said bottom ways, opposed ends and opposed sides above said ways, a central slot leading upwardly through said top; and at least one side to side transverse aperture leading through said block in the area of said slot; a jam head slidably disposed in said slot having at least one aperture axially aligned with said block transverse aperture, at least one sight supporting pin lying in said block and head aligned apertures; a bolt on said head leading through the top of said block, a nut on said bolt engaging said block top adapted upon tightening to develop draw force on said bolt and head outwardly of said block top jamming said pin between said head and said block fixing said pin relative thereto; said pin being slidably extensibly adjustable relative to said block by loosening said nut; and a curved index arm on said block leading sidewise outwardly therefrom so as to project beyond a bow on which the device is mounted; said arm having a downwardly curving end depending below said track so as to overlie the side of a bow on which the device is mounted so as to be accurately readable relative to index markings scribed on a bow.

2,998,653

GEODETIC INSTRUMENT PARTICULARLY MINE SURVEYING INSTRUMENT

Mats Haglund, Strana, Sweden, assignor to Trafikskolebolaget Grangesberg-Oxelösund and Luossavaara-Kiirunavaara AB, both of Gustaf Adolfstorg 18, Stockholm, Sweden

Filed Sept. 30, 1957, Ser. No. 687,092
16 Claims. (Cl. 33-49)



1. In a geodetic instrument for measuring the distance from the instrument to an object, said instrument having a stationary lower part adapted to be secured to a tripod, an upper part rotatably connected to said lower part about a vertical pivot axis, and a telescope pivotally connected to said upper part about a horizontal pivot axis normal to the axis of said telescope, the invention which comprises a plate substantially parallel to the vertical plane passing through the telescope, said plate being graduated with horizontal and vertical lines defining a Cartesian coordinate system having an origin, means connecting said plate to said upper part for guided movement parallel to itself, means for moving said plate relative to said upper part to cause the origin of the plate to be displaced along a line parallel with the optical axis of the tube from a zero position in the horizontal axis to a second position, the distance between said zero and second positions being a function of the distance between the instrument and the object, means for reading-off the magnitude of displacement of the origin of the plate from the zero horizontal axis position and for determining the components of displacement thereof, a paper record positioned on said lower part, and means for displacing said paper horizontally in a direction parallel with the vertical plane of the optical axis a distance proportional to the horizontal displacement of the plate.

2,998,654 MECHANICAL PERSPECTIVE DEVICE AND KIT

Barton W. Hancock, 57 Eagle Road, Springfield, Pa.
Filed Jan. 14, 1955, Ser. No. 481,794
4 Claims. (Cl. 33-77)



1. In a perspective device, a blade having parallel faces and a straight edge at one side thereof, a casing rigidly mounting said blade comprising a pair of opposed face plates disposed flush against the faces of said blade, each face plate having a flat face parallel to the faces of said blade, a pair of elongated arms each having stub shafts journaled in said face plates and pivotally mounting said arm therebetween, circular gear segments on said arms concentric with said shafts, the gear segment of one arm meshed with the gear segment of the other arm to effect simultaneous angular adjustment thereof, and means confined between said face plates to lock said arms in adjusted position comprising a trifurcated plate mounted with its central portion intermediate said stub shafts and its outer leg portions embracing said shafts, and locking means to bias said leg portions together to clamp against each of said stub shafts.

2,998,655

LEVELING SQUARE

Thomas J. White, 204 Hawthorne Road,
Linthicum Heights, Md.
Filed Mar. 24, 1958, Ser. No. 723,545
3 Claims. (Cl. 33-89)



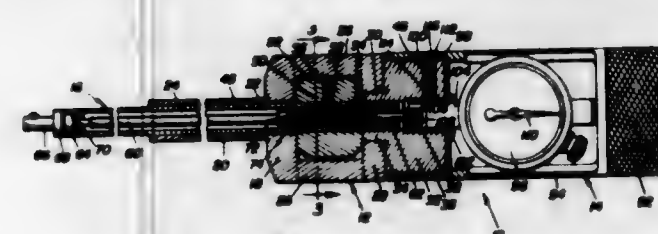
1. A leveling square arrangement, comprising, an elongated structure having three legs extending outwardly from the longitudinal axis thereof and angularly to each other and forming substantially plane surfaces, said legs of said structure being formed of a continuous piece of material, two of said legs of said structure being formed at 90° to each other, the other two angles between the legs of said structure being obtuse and substantially equal, said legs of said structure being of greater length than the width thereof, one of said two legs having at least two bubble levels mounted thereon and arranged at right angles to each other, with the outer edge thereof of said one leg being concave toward said longitudinal

axis of said structure and having graduated scales along its edges thereof, the third leg of said structure having a longitudinally extending slot formed therein and a handle offset from said third leg, with said slot being located intermediate said handle and said longitudinal axis of said structure.

2,998,656

HOLE LOCATION GAUGE

John P. St. Amour, 26514 W. Seven Mile Road,
Detroit, Mich.
Filed Feb. 27, 1958, Ser. No. 717,888
6 Claims. (Cl. 33-178)

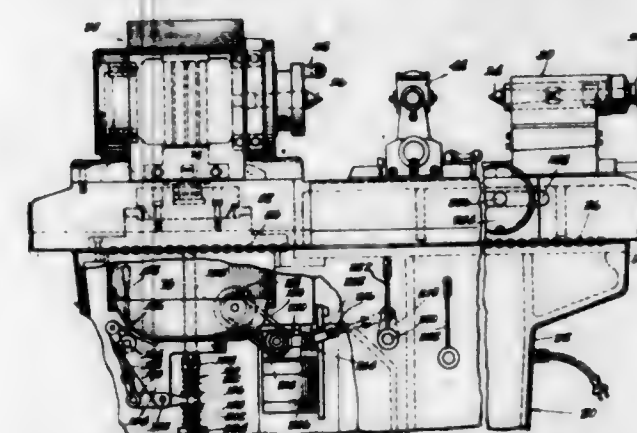


1. A hole location and concentricity gauge comprising a body having a chamber located therein, an elongated section of said body having a longitudinal bore therein communicating with said chamber, a vertical shaft slidably disposed in the bore of said section and the chamber in said body, a sleeve encircling said shaft, means connected to the end of said sleeve and movable transversely thereof for detecting the concentricity of a hole and transmitting longitudinal movement to said shaft upon movement of said detecting means transversely of said sleeve, a handle fastened to said body, an indicator attached to said handle and contacting the upper end of said shaft for indicating the amount of longitudinal movement of said shaft and therefore movement of said detecting means transversely of said sleeve, and means in said chamber for rotating said sleeve independently of said body.

2,998,657

SINE BAR ASSEMBLY

Leslie S. Pergande, Mount Prospect, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Aug. 2, 1957, Ser. No. 675,856
1 Claim. (Cl. 33-179.5)



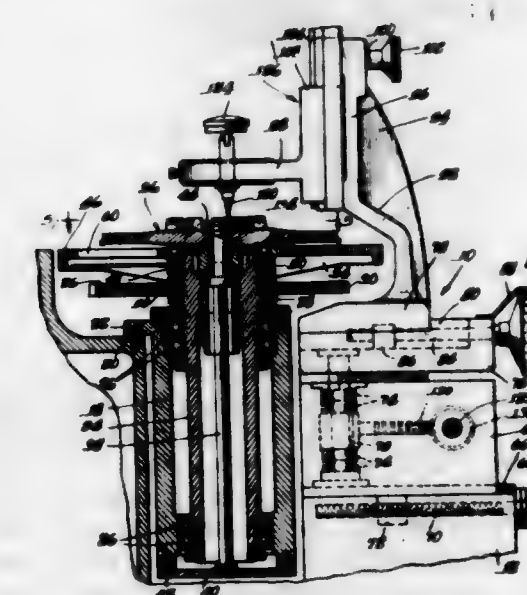
In a machine of predetermined length and having a mid-point for checking the lead of a helical surface, said machine having a front side, the combination of support means for rotatably supporting a helical surface defining object, surface position sensing means, movable means for effecting translation of said support means in a first linear direction relative to said sensing means, a sine bar, means supporting said sine bar for rotation about an axis perpendicular to both said sine bar and said linear direction, a sine bar follower mounted for translation in a second linear direction perpendicular to said first linear

direction, means for rotating an object in said support means, means interconnecting said object rotating means with said follower for operation by movement of the latter in said second direction, means connecting said movable means with said follower to move the latter in said first linear direction simultaneously with and proportionately to translation of said support means relative to said sensing means, a face type worm gear having an axis and connected to said sine bar to rotatably position the latter about the axis thereof, a rectilinearly and moderately tapered worm rotatably about a second axis having a plurality of complete thread convolutions of constant axial lead mating with said gear, said gear having teeth defining side faces which engage the thread of the worm throughout substantially the entire areas of the respective side faces, said worm having a root surface contiguous to a cone the apex of which is located at the side of a common perpendicular to the axes of said worm and gear opposite from the mutual engagement of the worm and gear, power means for rotating said worm about said second axis, means on said front side of said machine for selectively controlling said power means, a manual actuator located on said front side of said machine for rotating said worm about said second axis, said second axis of the worm being located closer to the midpoint of said machine than said axis of said face gear, a graduated scale associated with said worm for indicating the angular position of said sine bar, and a graduated scale associated with said gear for indicating the angular position of said sine bar, optical reading means including a hairline on said front of said machine for indicating the angular position of said gear, releasable locking means accessible to and located on the front of said machine for selectively locking said sine bar in desired position after adjustment thereof, said worm being the sole adjustment for locating the position of said gear and sine bar, and the axis of said worm being so arranged such that the manual actuator for rotating said worm about its axis is readily accessible by an operator standing adjacent to the midpoint of said machine.

2,998,658

MACHINE FOR CHECKING CURVIC COUPLINGS AND THE LIKE

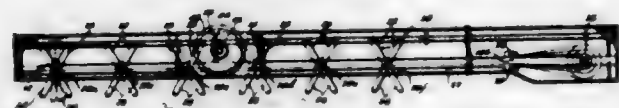
Leslie S. Pergande, Mount Prospect, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Aug. 27, 1957, Ser. No. 680,443
8 Claims. (Cl. 33-179.5)



4. A machine for checking workpieces comprising a base, means for mounting a workpiece on said base, a sub-base, slide means mounting said sub-base on said base for movement toward and away from said workpiece, means for moving said sub-base along said slide means,

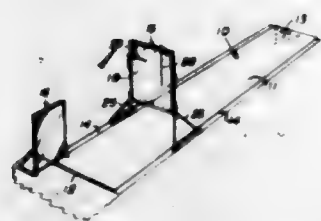
a bed, pivot means mounting said bed on said sub-base, gear means associated with said pivot means for pivoting said bed relative to said sub-base, a support, slide means mounting said support on said bed for movement generally toward and away from said workpiece, means for moving said support, a slide base, means mounting said slide base on said support for pivotal movement about an axis generally transverse of said workpiece, a testing member holder, slide means mounting said testing member holder for movement on said slide base toward and away from said workpiece generally axially thereof, a testing member mounted on said holder engageable with said workpiece, and error noting means operated by said testing member.

2,998,659
APPARATUS FOR MEASURING FABRIC FOR DRAPERIES
John Yaworsky, 13335 S. St. Andrews Place, Gardena, Calif.
Filed June 8, 1959, Ser. No. 818,737
16 Claims. (Cl. 33—180)



1. In a device to measure off pleating zones and intervening spacing zones on fabric in preparation for making drapery, the combination of: a series of pairs of indicator elements spaced apart with the distance spanned by the two elements of each pair the same throughout the series and with the distance between the successive pairs the same throughout the series, one of said distances representing the dimension of said pleating zones, the other of said distances representing the dimension of said intervening spacing zones; first means mechanically connected to all of said pairs of elements to vary the equal distances spanned by the pairs; and second means to cause relative movement among all of the pairs simultaneously at different rates to vary the equal distances between the successive pairs.

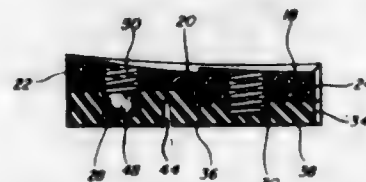
2,998,660
BOWLING PRACTICE METHOD AND APPARATUS
Henry V. Hickey, 327 Southside Road, Virginia Beach, Va.
Filed Sept. 8, 1960, Ser. No. 54,772
7 Claims. (Cl. 35—29)



1. A bowling instruction device comprising in combination a plano mirror having a vertical edge and a top horizontal edge, support means movably positionable along a bowling alley intermediate the foul line and the pits of the alley for supporting said mirror in a generally vertical attitude transverse to the length of the alley and in spaced relation above the alley with the face of the mirror facing a bowler, said support means including adjusting devices to orient said vertical edge perpendicular and said top horizontal edge parallel to the surface of said alley, an adjustably positionable horizontal marker member supported from and adjustably positionable along said vertical edge of the mirror to extend over a portion of the face of the mirror, and an adjustably positionable

vertical marker member supported from and adjustably positionable along said horizontal edge of the mirror to extend over a portion of said face, said vertical marker positionable to indicate in the mirror and to the bowler the plane of swing of the ball delivering arm of the bowler and said horizontal marker positionable to indicate in the mirror and to the bowler the shoulder line position of the bowler as the bowling ball is delivered down the alley.

2,998,661
CUSHIONED SHOE HEEL
Samuel Israel, Minneapolis, Minn., assignor, by mesne assignments, to York E. Langton, as trustee, St. Louis Park, Minn.
Filed Aug. 11, 1958, Ser. No. 754,472
7 Claims. (Cl. 36—38)



1. A cushioning device adapted for mounting on the lower rear end of a shoe upper, comprising a member composed of resilient material formed with a flat lower surface, said member containing a kerf that extends upwardly from the lower surface and which commences adjacent the rear inner lateral limit of said member and extends diagonally forward beneath the area covered by the calcaneus to the opposite lateral limit of said member forming a forwardly extending portion and a sector on the rear outer side of said member having a hinged relationship at said kerf with respect to the forwardly extending portion, and a spring embedded in the sector portion and working between the shoe upper and the sector portion to resist the hinged movement of said sector portion on contact of said portion with a relatively hard surface during initiation of gait.

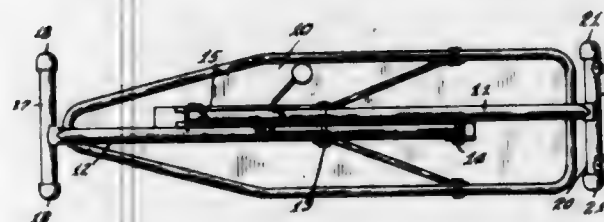
2,998,662
OPERATING MECHANISM FOR EJECTOR GATE AND APRON OF SELF-LOADING SCRAPERS
Vernon E. Rezabek, Palestine, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 4, 1960, Ser. No. 6,657
4 Claims. (Cl. 37—126)



4. In a self-loading scraper, a scraper frame, a load-carrying bowl on said frame, said bowl including a load-retaining apron forming a forward portion thereof and liftable from a lowered load-retaining position to a load-dumping position, an ejector gate retractable into a rearward portion of the bowl and being advanceable forwardly from such rearward portion to discharge a load from the bowl when the apron is raised, a spring anchorage means movable forwardly and rearwardly with respect to said ejector gate, connecting means connecting said spring anchorage means to said apron to raise the same during rearward movement of said anchorage means and said spring anchorage means being movable forwardly during lowering of said apron by gravity,

an ejector gate return spring connected between such gate and said spring anchorage means, said spring being stressed attendant to advancement of the gate relative to the anchorage to increase the force with which the spring retractively urges said gate, said stress in said spring being decreased during rearward movement of said spring anchorage means, means for moving said spring anchorage means rearwardly comprising a first sheave unit connected to said gate, said first sheave unit including a plurality of first sheaves, a second sheave unit positioned on said spring anchorage means, said second unit including a plurality of second sheaves having a greater number of sheaves than the sheaves of said unit, a line reeved between certain of said second sheaves and said first sheave unit to provide a plurality of flights, a third sheave means disposed between said first and second sheave units, and reeved around said third sheave means and certain of said second sheaves whereby during take-up of said line said reeving and said sheaves and sheave means provide a force differential with respect to said spring anchorage means and said gate whereupon said spring anchorage means is moved initially and the distance between said first and second units is decreased and whereupon continued take-up of said line said ejector gate is then moved forwardly.

2,998,663
COLLAPSIBLE IRONING TABLE
Lester R. Boardman and David J. Stambaugh, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Sept. 25, 1957, Ser. No. 686,200
7 Claims. (Cl. 38—121)

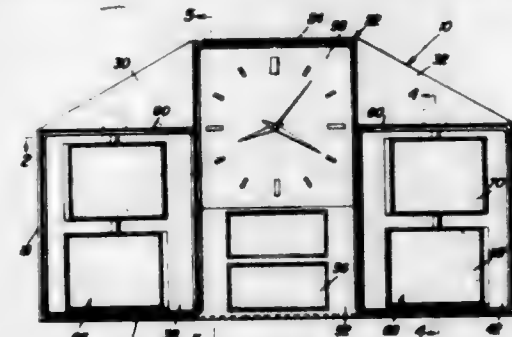


1. In a table, a top, a pair of crossed, pivotally interconnected legs, means associated with each leg for holding its upper end in fixed position on said top, one of said means being adjustable along the top to vary the angle between the legs, first and second pairs of wheels mounted on the lower end of said legs, the first pair of wheels having a common axis parallel and transverse to said top, the second pair of wheels lying substantially in a common plane generally parallel to the associated leg and being rotatable about spaced, parallel axes substantially perpendicular to the plane of the top when said associated leg is in collapsed position and oblique thereto when said associated leg is in extended position, said two pair of wheels being so angularly disposed with respect to each other and the table that when the table is in erected condition said first pair of wheels will be in contact and said second pair of wheels out of contact with a horizontal supporting surface and that when said legs are collapsed against the top and the top is in vertical position the second pair of wheels will be in contact with and said first pair of wheels out of contact with a horizontal supporting surface.

2,998,664
ADVERTISING CLOCK
Andrew N. McIntire, 406 S. Sequoia St., Roswell, N. Mex.
Filed June 8, 1959, Ser. No. 818,769
3 Claims. (Cl. 40—33)

1. In an exhibiting device, a cabinet having upper and lower walls, side walls and partitions extending between the upper and lower wall and forming compartments

having open fronts, a rotor mounted in each compartment, each rotor comprising a vertical shaft located near and spanning the front of one of said open front compartments, a pair of ad displaying panels mounted on said shaft and arranged at right angles to each other and located in such relationship that said panels occupy different planes spaced longitudinally of said shaft, resilient shock absorbing means between said panels and on said shaft for urging said panels apart, abutment means fixed to the shaft above and below said panels, said resilient means urging said panels into driving engagement with



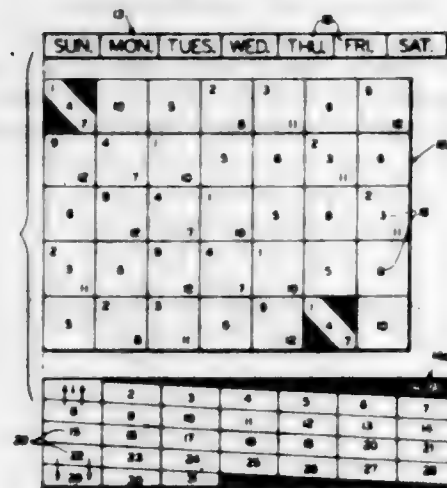
said abutment means, said panels being of a length greater than the depth of the associated compartment and having end portions which pass through the open front of said compartment in response to rotation of said shaft due to the disposition of said panels on said shaft and the location of said shaft with reference to the open front of said compartment, a lower bearing carried by said lower wall and supporting the weight of said shaft and panels by having the lower end of the shaft mounted in said lower bearing, and a motor connected to the upper wall and drivingly connected to the upper end of said shaft for rotating said shaft.

2,998,665
COUPLING STRUCTURE FOR SLIDE PROJECTOR TRAYS
William D. Diemer, 5132 Greenwood, Chicago 15, Ill., and Robert A. Skyer, 1709 Greenleaf, Chicago 26, Ill.
Filed Oct. 30, 1957, Ser. No. 693,335
4 Claims. (Cl. 40—79)



1. In combination, a pair of elongated slide trays each having a series of pockets for containing film slides and having end walls provided with peripheral flanges, the peripheral flanges at one end of one of said trays being adapted to abut the corresponding peripheral flanges at one end of the other of said trays to provide a cavity between the adjacent end walls, said flanges being interrupted along the top and bottom edges of said end walls to permit movement of an ejector arm into and out of said cavity, and connecting means for detachably securing said corresponding flanges in abutting relation and for holding said trays in longitudinal alignment to provide a rigid multiple tray unit for use in connection with a slide projector, said connecting means comprising a detachable spring clip having spring arms engageable with the adjacent end walls of said trays for clamping said flanges in abutting relation and being engageable with the side walls of said trays for preventing relative lateral displacement thereof, said clip being provided with at least one upstanding pressure member for slidably engaging the tunnel roof of a slide projector.

2,998,666
CYLINDRICAL PERPETUAL CALENDAR
 Maurice N. Stern, Philadelphia, Pa.
 (123—60 83rd Ave., Kew Gardens 15, N.Y.)
 Filed Nov. 27, 1959, Ser. No. 855,674
 2 Claims. (Cl. 40—114)



1. A perpetual calendar based upon a twenty-eight year solar cycle, comprising a first cylindrical chart divided into a plurality of individual frames arranged in seven vertical columns and a plurality of horizontal rows intersecting said columns, there being seven such frames in each horizontal row, each of said seven frames occupying a different vertical column, said seven frames being marked with the twelve months of the year, and each horizontal row of seven frames representing corresponding years in the twenty-eight year solar periods, a second cylindrical chart mounted co-axially with the first chart, the two charts being adapted to rotate relative to each other in either direction, said second chart being divided into seven frames situated side-by-side and adapted to register with the seven columns of the first chart, said seven frames on the second chart being marked with the seven days of the week, the significance and relationship of the markings on the two charts being such that, when they are properly set relative to each other, for any given year represented by any horizontal row on the first chart, the first day of any month designated in said horizontal row corresponds to the day of the week designated in the registering frame of the second chart, and a third cylindrical chart provided in co-axial relation to the first two charts, said third chart being mounted for both rotary and axial movement relative to said first two charts and being divided into a plurality of individual frames arranged in seven vertical columns and a plurality of slightly inclined horizontal rows forming a helix and intersecting said columns, there being seven such frames in each such inclined horizontal row, each of said seven frames occupying a different vertical column, all of the frames of said third chart being marked with the days of the month, the seven columns of the third chart, the seven columns of the first chart and the seven frames of the second chart being adapted to register with each other, said first cylindrical chart being provided on a cylindrical container which is closed at one end and open at the opposite end, said second cylindrical chart being provided on a cylindrical cap adapted to be rotatably mounted on said cylindrical container at its open end, thereby closing said cylindrical container.

2,998,667
MESSAGE CONVEYING APPARATUS
 Joseph W. Darnell, Whittier, and Richmond D. Vellines,
 Los Angeles, Calif.
 Filed June 5, 1958, Ser. No. 740,022
 4 Claims. (Cl. 40—132)

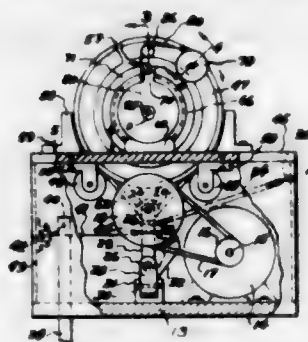
1. Sign display apparatus comprising a light-tight housing having an open front wall, a source of illumination

in said housing adapted to be selectively operated, a screen mounted in said open front wall having a plurality of approximately horizontal louvers inclined downwardly and forwardly at an angle of at least approximately 17° from the horizontal, and a light transmitting panel fixed in said housing between said screen and said source,



said panel having translucent and opaque portions co-operating to define a sign and to contrast sharply with each other when said source of illumination is operative, said translucent and opaque portions being substantially non-contrasting when said source of illumination is non-operative.

2,998,668
EVERGREEN ROPING AND WREATH-MAKING MACHINE
 George Gackelberg and Donald G. Fouracre, both of
 P.O. Box 108, Birmingham, Mich.
 Filed Nov. 2, 1959, Ser. No. 850,290
 5 Claims. (Cl. 41—3)



5. In a machine for making evergreen roping and wreaths, a housing including an apertured top wall, spaced pairs of roller supports on said housing, an upright winding pulley ring above said top wall extending into said aperture rotatively mounted peripherally upon said roller supports, a pair of parallel spaced upright apertured guide bushings overlying said aperture and supported upon said top wall from opposite sides of said aperture, one of said bushings spaced within said winding ring, a spool of wire extending laterally of and journaled upon said winding ring, said winding ring and bushings being transversely slit therethrough to permit the introduction of a wire ring thereinto, with portions of said wire ring adapted for positioning axially through said winding wheel and bushings, and adapted to have manually mounted thereon within said bushings pine boughs to be secured thereon, the free end of said wire being secured to said wire ring, said wheel progressively wrapping wire from said spool around said wire ring and boughs as said wire ring is manually rotated in a substantially horizontal plane.

2,998,669
FISHING RIGS
 Alvin Lee Shook, Grayson County, Tex.
 (Box 112, Pottsboro, Tex.)
 Filed Aug. 11, 1959, Ser. No. 833,049
 1 Claim. (Cl. 43—43.4)

In a fishing rig, the combination of a fish hook having a shank and a pair of barbs disposed on the sides of said shank, respectively, said shank and barbs lying in a

common plane; a V-shaped member consisting of a resilient wire fixed on said shank in said plane, and comprising a pair of spring arms diverging from said shank, said member being adapted to prevent tangling or snag-



ging of said barbs; and a pair of circular members embracing said shank and adapted to receive therein a live fish as bait, the outer ends of said spring arms being fixed on the peripheries of said circular members, respectively.

2,998,670
FISHHOOK EXTRACTOR
 Cyrus L. Edwards, Box 561, Angleton, Tex.
 Filed Nov. 30, 1960, Ser. No. 72,677
 1 Claim. (Cl. 43—53.5)



A fishhook extractor comprising an elongated shank, a handle on one end of said shank, and a blade projecting longitudinally from the other end of said shank, said blade tapering in width from the free end to the point of juncture with said shank and in thickness from the point of juncture with said shank to the free end thereof, said blade being provided in the free end with a notch having straight walls diverging from the free end of said blade to the bottom of said notch, said notch bottom being straight and parallel to the free end of said blade.

2,998,671
MINNOW BUCKET WITH AERATING MEANS
 Champ C. Hinton, 3216 Greenwood Road,
 Fort Smith, Ark.
 Filed June 6, 1957, Ser. No. 663,945
 6 Claims. (Cl. 43—57)

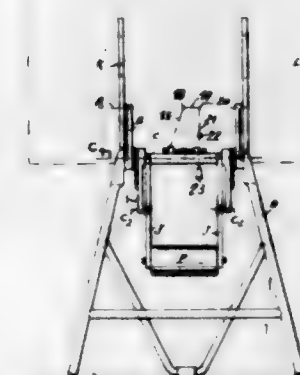
2. In a circular minnow bucket having a receptacle portion and usual cover and handle means; an improved water circulating device comprising a space spanning partitioning wall for installation in the receptacle portion in a manner to divide said receptacle portion into main water and minnow compartment and a constantly dry auxiliary compartment, a channel-shaped member of a cross-section less than the area of said partitioning wall and of a height corresponding to the height of the partitioning wall and having an open channel side facing the partitioning wall with edges of the longitudinal walls thereof secured to a median portion of the partitioning

wall, the bottom of said channel-shaped member being adapted to be secured to the interior of the bottom of the bucket to close said bottom and to define a water lifting and circulating well, the lower median portion of said partitioning wall having intake ports in communication with the well, the upper median portion of said partitioning wall having a screened opening in communication with the well, the upper portion of said channel-shaped mem-



ber being provided with a splash plate situated in a position below the open top of the channel in a position just above the upper marginal edge of the screened opening, and a motor supported atop the partitioning wall in alignment with the channel and above the splash plate, said motor having a shaft depending into the channel, passing through said splash plate and provided below the splash plate with a propeller occupying a position in alignment with said screened opening.

2,998,672
DRAWING TABLE
 Lucien Emile François Sautereau, 9 Blvd. du Temple,
 Paris, France
 Filed Sept. 24, 1959, Ser. No. 842,013
 Claims priority, application France Oct. 10, 1958
 10 Claims. (Cl. 45—131)

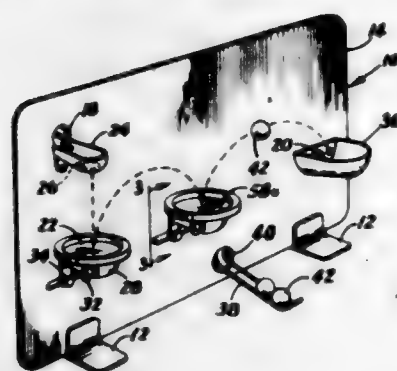


1. A drawing table of the type having deformable parallelograms of which two parallel arms are articulated to the drawing board, and comprising a shaft on which are mounted two of the adjacent arms of each said parallelogram, said shaft being rotatably mounted in bearings on the foot system, one of said adjacent arms being rigidly fixed to said shaft and the other freely mounted on said shaft, on which are provided between the two said arms three sets of friction plates axially free with respect to said shaft, the first set being fixed to said foot system and the other two sets are respectively fixed to the two said arms, the plates of the last two sets being interleaved one by one between the plates of the first set, so that a pressure applied on said freely-mounted arm in the direction of the nearest foot presses said plates against each other and the last plate against the arm rigidly fixed to said shaft, thereby immobilizing the plates secured to the two said arms by frictionally engaging same with said first set of plates which are stationary and thereby holding the drawing board in any selected position.

2,998,673

AMUSEMENT DEVICE

Charles K. Rhodes, 1129 Acton Road, Columbus 24, Ohio
Filed Apr. 5, 1961, Ser. No. 100,894
4 Claims. (Cl. 46-43)



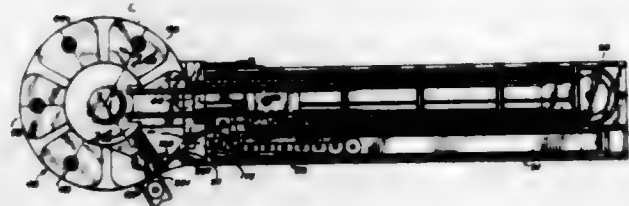
4. An amusement device comprising an upright member having a front face and a rear face, a first substantially horizontally disposed resilient platform disposed forwardly of and spaced from the front face of said member and supported on said member, a cup provided with a discharge opening in the bottom thereof arranged in lateral spaced relation with respect to said platform and supported on the front face of said member, a trackway on the rear face of said member adapted to hold a plurality of game pieces arranged in a row, said trackway sloping toward an opening in said member positioned above said platform, a discharge chute connected in communication with the cup opening, and trip means operatively connected to said member operable upon being struck by a game piece moving on said chute to release the lowermost game piece of said row of game pieces into said opening, said means embodying a rod slidably mounted on said member and having each end thereof disposed in the path of movement of a game piece on said chute and trackway respectively.

2,998,674

APPARATUS FOR MOUNTING TREES IN STANDS THEREFOR

Louis A. Pazandak, Minneapolis, Minn., assignor to Halvorson Trees, Inc., Duluth, Minn., a corporation of Minnesota

Filed Mar. 30, 1960, Ser. No. 18,766
15 Claims. (Cl. 47-1)



1. An apparatus for mounting the trunks of trees in stands therefore each consisting of a hollow body having a collar thereon, comprising a frame, an injector on said frame adjacent to a location where the hollow body of each stand is to receive liquid, an assembly rigid with said frame, a head portion mounted on said assembly for rotative movement about an axis, circumferentially spaced constricting mechanisms supported on said head portion in surrounding relation to its axis adapted to be successively situated at each of initial, intermediate and final stations, means mounted with respect to said frame for conveying the stands, one by one at spaced intervals, successively first to said location and then into each of said constricting mechanisms while at said initial station, means mounted with respect to said frame for accomplishing step by step rotational advancement of said head por-

tion at spaced intervals the same as those at which the stands, respectively, are conveyed to said location and said initial station thus to situate each stand successively at each of said initial, intermediate and final stations, and devices mounted with respect to said frame for actuating said injector when each stand is at said location to cause a quantity of liquid to be deposited into the stand, for actuating each constricting mechanism when at said intermediate station to cause the collar of each stand to be grasped upon the trunk of a tree and for actuating each constricting mechanism when at said final station to cause each stand with assembled tree to be released therefrom.

2,998,675

GLASS BODY HAVING A SEMICRYSTALLINE SURFACE LAYER AND METHOD OF MAKING IT

Joseph S. Olcott, Painted Post, and Stanley D. Stooker, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
No Drawing. Filed July 1, 1959, Ser. No. 824,178
3 Claims. (Cl. 49-77)

1. The method of making a glass body with a high modulus of rupture having on its surface a thin, compressive, semi-crystalline layer of the same oxide composition as the glass, which comprises heat treating a glass body comprising by weight 65-72 parts of SiO_2 , not less than 4 parts of Li_2O , 22.5-30 parts of Al_2O_3 , the weight ratio $\text{Li}_2\text{O}/\text{Al}_2\text{O}_3$ being not more than about 0.3/1, the total SiO_2 , Li_2O and Al_2O_3 being at least 100 parts by weight, and at least one crystallization catalyst in the indicated amount selected from the class consisting of 0.1-3.5 parts of TiO_2 , 0.1-5 parts of B_2O_3 , 0.4-2 parts of Na_2O and 0.5-10 parts of PbO , the total SiO_2 , Li_2O , Al_2O_3 and crystallization catalyst being not more than 110 parts by weight by heating it at a temperature at which its viscosity is between 10^7 and 10^{10} poises for a time ranging from about 1 hour to about 40 hours respectively until microscopic and submicroscopic crystals of beta-eucryptite are formed within its surface.

3. An article comprising a glass body having in its entire surface a thin, compressive, semi-crystalline layer containing a multiplicity of microscopic crystals of beta-eucryptite and having a linear thermal expansion coefficient substantially lower than that of the glass body, the oxide composition of the article being substantially the same throughout and comprising 65-72 parts of SiO_2 , not less than 4 parts of Li_2O , 22.5-30 parts of Al_2O_3 , the weight ratio $\text{Li}_2\text{O}/\text{Al}_2\text{O}_3$ being not more than about 0.3/1, the total SiO_2 , Li_2O and Al_2O_3 being at least 100 parts by weight, and at least one crystallization catalyst in the indicated amount selected from the class consisting of 0.1-3.5 parts of TiO_2 , 0.1-5 parts of B_2O_3 , 0.4-2 parts of Na_2O and 0.5-10 parts of PbO , the total SiO_2 , Li_2O , Al_2O_3 and crystallization catalyst being not more than 110 parts by weight.

2,998,676

PRECISION LAPPING DEVICE

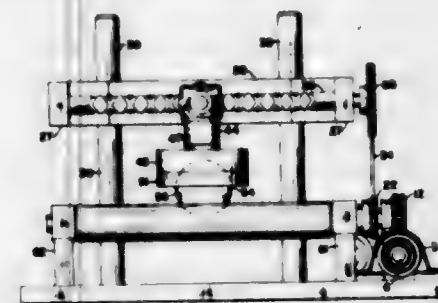
Charles A. Hawkins, 3505 Ridgcrest Ave. SW., Huntsville, Ala.

Filed Apr. 29, 1960, Ser. No. 25,801
10 Claims. (Cl. 51-45)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A lapping device comprising: a support; a pair of rollers on said support, one being a driven roller and the other an idler; a substantially spherical element, whereby lapping of said element or said indented means can be accomplished rotatably supported by said rollers; concavely indented means adapted to partially receive said element; means, secured to said support, for imparting transverse movement to said indented means; means for driving said driven roller and said means for imparting

reciprocatory transverse movement to said indented means; whereby said element is rotated in one direction by said



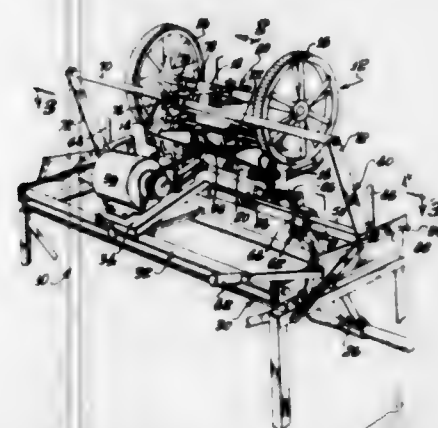
driven member and at the same time is reciprocated by said means for imparting transverse movement.

2,998,677

LAWN MOWER MOUNT FOR LAWN MOWER SHARPENER

Fred J. Machovec, Pasadena, Calif., assignor to Foley Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota

Filed June 23, 1958, Ser. No. 743,555
4 Claims. (Cl. 51-48)



1. In a lawn mower sharpener provided with a supporting structure, a mount for a lawn mower having a frame, laterally spaced wheels carried by the frame, a tie bar forming a part of the frame and extending between the wheels, a bed knife carried by the frame rearwardly of the wheels, a reel carried by the frame between the wheels and having blades engageable with the bed knife, and a roller carried by the frame rearwardly of the bed knife, said mount being engageable with the lawn mower at only three points all spaced from the roller and including the combination of: lower mounting means carried by the supporting structure and engageable with the lawn mower frame at two points respectively adjacent the ends of the roller; and upper mounting means carried by the supporting structure above said lower mounting means and rigidly engageable with the tie bar at a third point, the upper and lower mounting means being spaced apart a distance substantially equal to the distance between the roller and the tie bar.

2,998,678

METHOD AND MACHINE FOR GRINDING GEARS

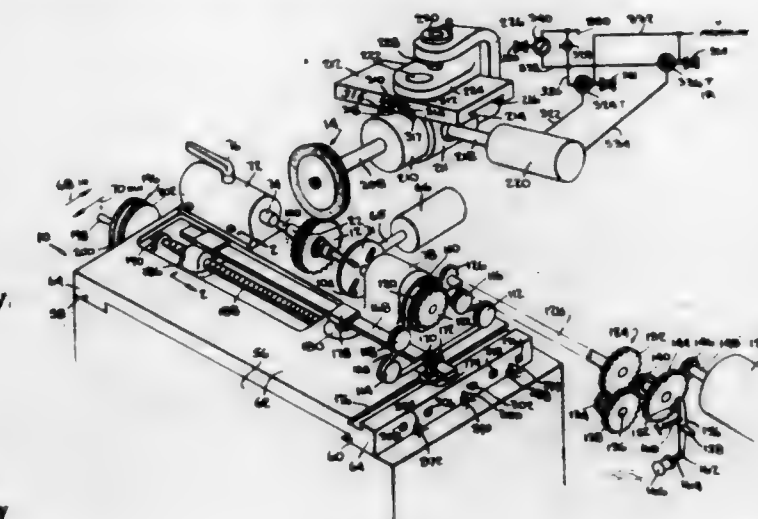
Harry D. Belock, Great Neck, and John W. Tone, Roslyn, N.Y., assignors to Belock Instrument Corporation, College Point, N.Y., a corporation of New York

Filed June 7, 1955, Ser. No. 513,746

14 Claims. (Cl. 51-52)

3. An apparatus for grinding a gear blank, said apparatus including means rolling a gear blank without slipping on a line tangent to its pitch circle, a grinding wheel having an axial edge profile constituting plural basic rack tooth forms spaced at intervals equal to the pitch of a

basic rack of the same diametral pitch as the gear blank, the tooth forms being of successively different effective heights and having their tips successively closer to the axis of the wheel, means rapidly spinning the wheel about



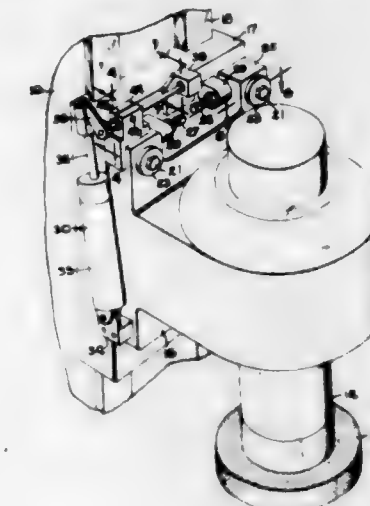
its axis, and means rapidly reciprocating the wheel in a direction transverse to the direction the gear blank is rolled and with the pitch line of an endmost tooth form tangent to the pitch circle of the gear blank.

2,998,679

GRINDING MACHINE

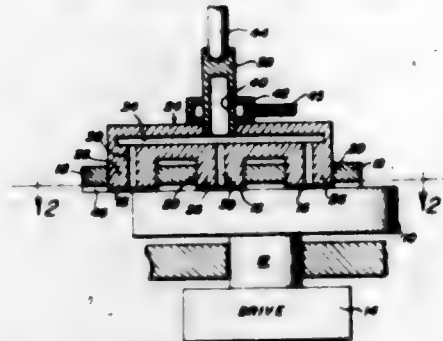
Arthur M. Mattison, Rockford, Ill., assignor to Mattison Machine Works, Rockford, Ill., a corporation of Illinois

Filed Sept. 4, 1959, Ser. No. 838,253
5 Claims. (Cl. 51-109)



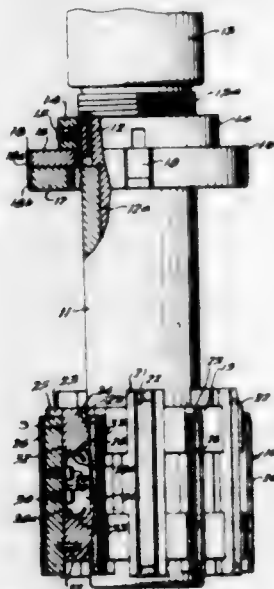
1. In a grinding machine, the combination of, a base, a work support adapted to hold a workpiece and mounted on said base to move in a horizontal plane, an upright column rigid with said base, a tool support pivotally mounted on said column to turn relative thereto about a horizontal axis, a spindle journaled on said tool support and adapted to carry a grinding wheel, coaxing abutments rigid with said column and said tool support respectively and engageable to dispose said spindle horizontally, a screw and nut connection coupling said column and tool support and operable upon turning of the screw relative to the nut to turn said tool support about said axis, a cylinder, a piston sliding in said cylinder and connected to said screw to turn the screw relative to said nut thereby to move said abutments into and out of engagement with each other, and means for selectively admitting pressure fluid to one end or the other of said cylinder and dispose said spindle in a position perpendicular to said plane or at an angle thereto.

2,998,686
LAPPING MACHINES
 Morton S. Lipkins, Malverne, N.Y.
 Filed July 21, 1958, Ser. No. 749,923
 11 Claims. (Cl. 51—131)



1. Lapping apparatus including a rotatably mounted flat-topped lapping member, a flat-bottomed relatively thick nest embodying a pattern of wafer-surrounding apertures, said nest being in face contact with said member peripherally of said apertures, and a rigid pressure member having a series of projections extending into said apertures, the bottom surfaces of said projections lying in a common plane and said pressure member being vertically movable relative to said nest for allowing the projections of the pressure member to descend progressively deeper into the nest apertures and bear against wafers in said apertures as the wafers are reduced in thickness, said pressure member also being rotatably mounted and the axes of said lapping member and said pressure member being offset in relation to each other, and rotary drive means connected to one of said members.

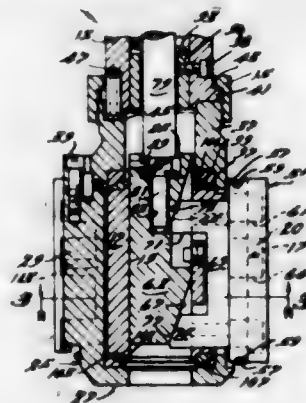
2,998,681
GUIDE MEANS FOR HONING TOOLS
 Glen M. Calvert, Detroit, Mich., assignor, by mesne assignments, to Jes-Cal Company, Fraser, Mich., a corporation of Michigan
 Filed Feb. 28, 1958, Ser. No. 718,314
 1 Claim. (Cl. 51—184.1)



In a honing apparatus having a generally cylindrical hone body formed with a plurality of longitudinal slots therethrough, a plurality of annularly spaced elongated abrading elements disposed in alternate slots in said hone body, a plurality of elongated workpiece bore engaging guide members disposed in the remaining slots and in alternating relation to said abrading elements, a support for each guide member having a centrally located recess formed therein surrounded by a plane outer face, each guide member having a plane inner face mating with the

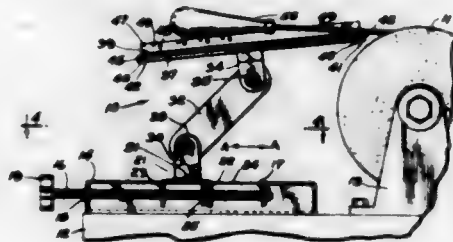
plane outer face of its support, said support having inwardly flaring walls at and defining the ends of said recess, a spring clip having a pair of inwardly curved ends and a central flat web intermediate said curved ends and smoothly engageable with said plane inner face of said guide member, and threaded means detachably securing said web to said guide member face and removable from said guide member with said clip to permit interposition of a shim between said guide member face and the contiguous face of said support, said clip projecting into said recess with its curved ends releasably engaging said flaring recess walls removably to hold said guide member inner face against the contiguous outer face of its support.

2,998,682
HONING TOOL HAVING FULL-FLOATING BODY
 John H. Greening, Oak Park, and Albin S. Czabak, Detroit, Mich., assignors to Micromatic Hone Corporation, Detroit, Mich., a corporation of Michigan
 Filed May 12, 1958, Ser. No. 734,520
 7 Claims. (Cl. 51—184.3)



4. A honing tool adapted to be rotated about a given axis including a centrally open body member having means for carrying a plurality of circumferentially spaced radially adjustable abrasive elements, an axially movable abrasive element expansion member disposed within the opening of said body member, a drive unit having bearing portions at opposite ends of said body member retaining and supporting said body member for limited universal movement about a center disposed on said axis, and a plurality of elongated portions interconnecting said bearing portions, and means for transmitting torque between said body member and at least some of said elongated portions at locations generally radially opposite said center.

2,998,683
TOOL HOLDING AND SHARPENING DEVICE
 Otto F. Wegener, 1701 Sedgwick St., Chicago, Ill.
 Filed May 13, 1959, Ser. No. 813,007
 4 Claims. (Cl. 51—216)



1. A tool holder comprising, a base member, a platform member, adjustable means for supporting said platform member from said base member, reciprocable carriage means mounted on said platform member, said car-

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riage means comprising spaced side walls each having a series of slots located at spaced intervals in the upper edges thereof, said side walls each further having a series of pin guide apertures located at spaced intervals therein, the slots and guides in one side wall being aligned with the slots and guides in the opposite side wall, a supporting element for engaging the under surface of a tool removably mounted in one pair of aligned slots in said side walls, and a retaining pin for engaging an upper surface of a tool removably mounted in and extending between a pair of aligned pin guides in said side walls.

2,998,684

METHOD AND MEANS FOR CONDITIONING SHAVING LATHER

Kenneth S. Corey, Fort Leavenworth, Kans.

Filed Sept. 22, 1959, Ser. No. 841,654

2 Claims. (Cl. 53-25)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of heat-conditioning an individual preformed portion of shaving lather extracted from an aerosol dispenser, which comprises contacting the mouth of said aerosol dispenser with the mouth of a resilient flexible-wall container while compressing said resilient container so as to deform it, actuating said aerosol dispenser and simultaneously releasing the pressure on said resilient container so as to suck a portion of preformed shaving lather into its interior, disengaging said aerosol dispenser, and heating said resilient container and its lather contents to a temperature suitable for shaving.

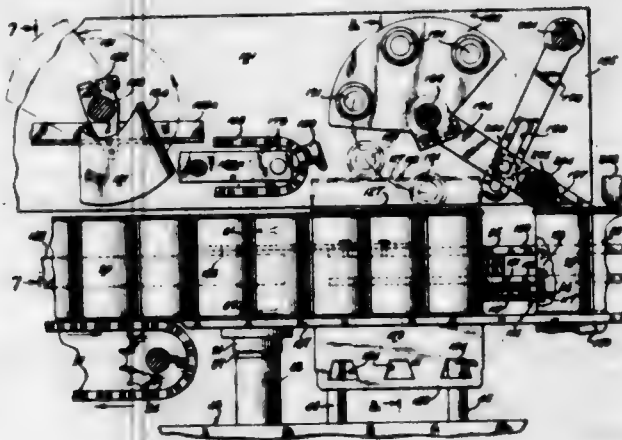
2,998,685

METHOD AND MACHINE FOR PACKAGING ARTICLES

Robert H. Gann, Hackensack, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Nov. 20, 1958, Ser. No. 775,243

18 Claims. (Cl. 53-32)



1. In a machine for applying a wrap-around carton to cans and the like arranged in rows, means for delivering the cans into the machine, means for delivering the carton blanks into the machine, means for segregating the

delivered cans for application of the carton blanks, means for folding the side panels of the carton blanks while the carton blanks are being conveyed by said means for delivering the carton blanks, means for dropping the folded carton blanks from said means for delivering the carton blanks onto the segregated cans, means for wrapping the folded carton blanks around the outside of the cans, means for conveying the carton blanks and cans through the machine as a unit, and means for closing the carton blanks around the cans.

2,998,686

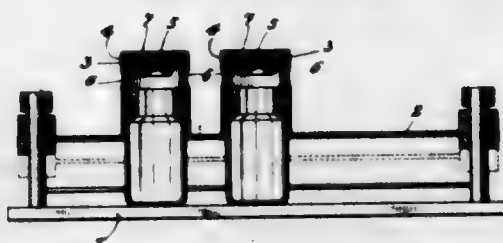
APPARATUS FOR THE CLOSURE UNDER HIGH VACUUM OF GLASS BOTTLES AND SMALL BOTTLES

Raffaele Pirro, 11 Via Don Minzoni Sesto S. Giovanni, Milan, Italy

Filed May 19, 1958, Ser. No. 736,380

Claims priority, application Italy Jan. 10, 1957

1 Claim. (Cl. 53-101)



In a device for sealing the opening of a plurality of bottles with a plurality of respective plugs, in combination, a support plate for supporting bottles; a perforated plate substantially parallel to and located above said support plate and formed with a plurality of openings therein for passage therethrough of bottles supported on said support plate; a plurality of plug holders resting on said perforated plate and corresponding respectively to said plurality of openings in said perforated plate, each plug holder having a guide portion for aligning said plug holder with a bottle passing through a respective opening, an abutment portion facing the corresponding opening of said perforated plate and said support plate, and a holding portion for frictionally holding a plug in abutment against said abutment portion; and means for moving said perforated plate to a higher position farther spaced from said support plate with the plugs located in the bottles and the bottles spaced from said support plate so that the bottles will separate from the plugs in a vacuum and fall onto said support plate while guided by said openings, and for moving said perforated plate to a lower position closer spaced from said support plate to permit said plug holders to press the plugs into the bottles.

2,998,687

PACKAGING APPARATUS

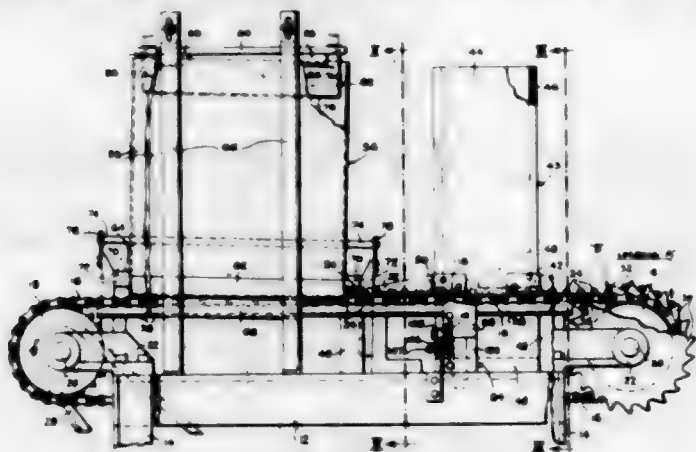
Carl Lenz, Packanack Lake, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 15, 1958, Ser. No. 767,454

10 Claims. (Cl. 53-236)

1. Apparatus for packaging elongated articles, comprising an article-supporting member provided with a corrugated surface for receiving the elongated articles from a source of supply with their longitudinal axes aligned in one direction, a container disposed above and along said article-supporting member and having an entrance to admit the elongated articles and the article-supporting member, said container being further adapted to amass the elongated articles therein and having an exit to permit the egress of the article-supporting member therefrom, said article-supporting member being in engagement with the mass of elongated articles within

said container between said entrance and said exit, and means for causing relative movement between said container and said article-supporting member, the force exerted by succeeding elongated articles introduced into the container on the mass of elongated articles already within such container being effective to cause such mass of elongated articles to rise thereby filling the container, and the relative movement between the container and the



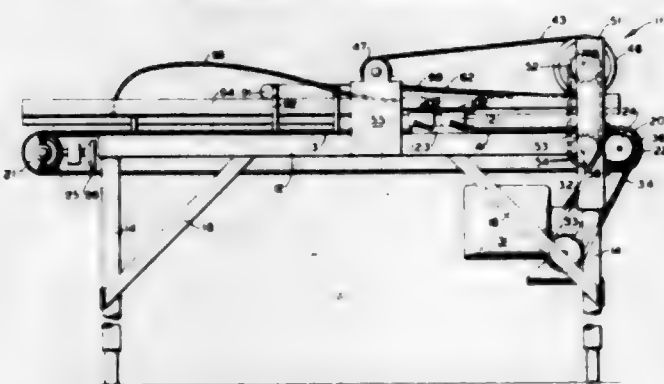
article-supporting member and the engagement of said corrugated surface of the article-supporting member with the mass of elongated articles being operative to reciprocate such mass thereby maintaining the mass in a rolling fluid state, assisting in the filling of the container and keeping such mass of elongated articles within such container with their longitudinal axes aligned in said one direction.

2,998,688

EGG CARTON CLOSING MACHINE

Arthur E. Randles, Jr., 3539 Oak Knoll Drive,
Redwood City, Calif.

Filed Sept. 11, 1958, Ser. No. 760,353
1 Claim. (Cl. 53—376)



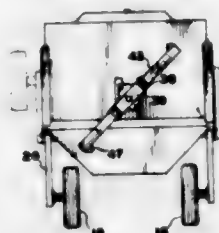
A machine for closing and locking the cover of an egg carton having a locking flap provided with a plurality of depending coplanar members and formed with a plurality of spaced locking tabs interspersed between said members and adapted to engage with a corresponding plurality of spaced locking gussets, said machine comprising: a conveyor belt adapted to advance an egg carton; a closing bar adapted to fold over said cover and said locking flap; means for progressively urging said locking tabs downwardly toward the underlying corresponding ones of said gussets; a block pivotally mounted on a vertical axis at a location adjacent said conveyor belt; resilient means attached to said block for urging one portion of said block toward said conveyor belt; and a star wheel pivotally mounted on said one portion of said block for rotation about a vertical axis, said star wheel including a plurality of radially projecting arms angularly spaced to clear said members and successively to engage and tuck inwardly said locking tabs out of the plane of said depending coplanar members.

2,998,689

ROTARY CUTTER

John C. Boesch, Jr., Albany, Ga., assignor to Lilliston
Implement Company, Albany, Ga., a corporation of
Georgia

Filed Apr. 3, 1957, Ser. No. 650,503
11 Claims. (Cl. 56—25.4)



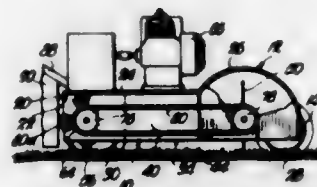
1. In a rotary blade for an agricultural apparatus, a cutting area on said blade, and means on said blade locating the center of percussion at the cutter area thereof.

2,998,690

POWER DRIVEN LAWN RAKE

John P. Ferris, Lincoln, Nebr.
(501 Ohio St., Oshkosh, Wis.)

Filed Dec. 16, 1957, Ser. No. 703,145
8 Claims. (Cl. 56—27)



1. In a lawn raker, a hollow, open bottom, wheel-supported housing having a top wall, a pair of spaced side walls depending from the top wall, and a discharge opening at the rear extremities of said side walls and below said top wall; an elongated shaft rotatably and substantially horizontally mounted within the housing transversely of said side walls and remote from said opening; a plurality of radially extending, longitudinally spaced pickup tines secured to a designated length of said shaft, the latter normally being disposed in a position to cause the tines to pass through the grass of the lawn during rotation of the shaft; an elongated brush rotatably and substantially horizontally mounted within the housing between said shaft and the opening in substantial parallelism with said shaft and normally positioned to engage only the upper part of said grass during rotation thereof; means on the housing and operably connected to said shaft and the brush for simultaneously rotating the same in one direction; and shoe means mounted on the housing and extending the length of said brush in proximity to the same therebeneath whereby, as the raker is advanced, loose material picked up from the lawn by said tines is confined within said housing, deposited on said upper part of the grass rearwardly of the shaft and subsequently discharged through said opening by the brush cooperating with said shoe means.

2,998,691

ROTARY RAKING WHEEL

Cornelis van der Lely and Ary van der Lely, Maasland,
Netherlands, assignors to C. van der Lely N.V., Maas-
land, Netherlands, a limited company of the Nether-
lands

Filed Feb. 3, 1954, Ser. No. 407,985
Claims priority, application Netherlands Mar. 2, 1953
8 Claims. (Cl. 56—377)

1. A rake assembly for use in a raking device for laterally displacing rakable substance lying on the ground

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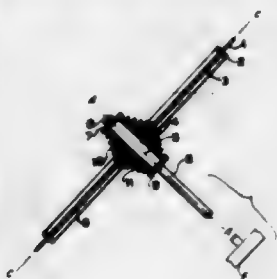
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GENERAL AND MECHANICAL

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comprising: a bearing shaft having the shape of a crank having an end constituting a crank pin; a rake wheel mounted for free rotation upon the end which constitutes the crank pin; and means having substantial resilience positioned between the end of said bearing shaft which



constitutes the crank pin and the other end of said bearing shaft, said resilient means permitting canting movements of said rake wheel whereby the relative position between the rake wheel and the other end of said bearing shaft is changed.

2,998,692 METHOD AND APPARATUS FOR FABRICATION OF PAPER TAPE INSULATED CABLES

Oscar G. Garner, Westfield, N.J., assignor to General Cable Corporation, New York, N.Y., a corporation of New Jersey

Filed July 2, 1959, Ser. No. 824,579

2 Claims. (Cl. 57-3)



1. In combination, paper taping heads for applying a plurality of overlying, helically wrapped paper tapes to a conductor, a caterpillar type capstan for pulling said cable through said paper taping heads, said capstan being aligned with said paper taping heads to maintain said cable in a straight line as it moves therethrough, a take-up reel having a hub, said take-up reel being aligned with said paper heads and said capstan so that said cable extends in a straight line into tangential relationship to said hub as cable is laid thereupon, means to move said take-up reel axially in a direction transverse to the straight line cable movement to lay said cable along said hub in a helix, and means to reverse the axial movement of said reel as said cable reaches the flanges thereof and in which the vertical position thereof is simultaneously adjusted so that the cable maintains its straight line relationship from the paper taping heads through to the take-up reel.

2,998,693 YARN CURLING APPARATUS

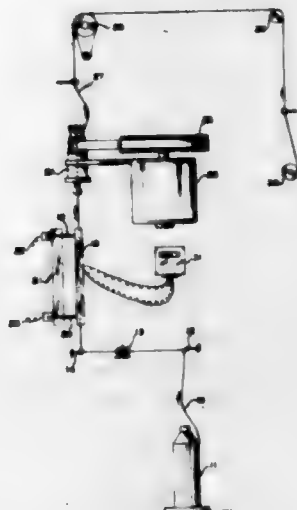
Pieter van Dijk, Velp, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 798,105

Claims priority, application Netherlands Apr. 1, 1958
1 Claim. (Cl. 57-34)

Apparatus for curling thermoplastic yarn comprising a twisting device for imparting curl to running lengths of yarn, an elongated metallic body constituting an electrical resistance element having a longitudinal opening presenting a smooth inner surface through which said curled yarn is passed, the diameter of said opening being not substantially greater than the diameter of the yarn to be

curled and the thickness of said elongated body between the longitudinal opening and the external surface thereof being in excess of said diameter by at least 75%, electrical means connected to said body for heating the same and



thereby setting the curl imparted to said yarn by said twisting device, and means for passing thermoplastic yarn longitudinally through said opening in contact with substantially all portions of said inner surface while imparting twist and vibration thereto with said twisting device.

2,998,694 CABLE TWISTING SYSTEM

Otto Haugwitz, La Celle Saint Cloud, France, assignor to Societe Anonyme Geoffroy-Delore, Paris, France, a French company

Filed Jan. 14, 1958, Ser. No. 708,802

Claims priority, application France Jan. 17, 1957
12 Claims. (Cl. 57-58.52)



1. In a system for producing a cable-like twisted assembly from a plurality of strands, means for feeding out said strands from stores thereof, a throwing frame rotatable about an axis, guide means on said frame defining a path for said twisted assembly including a portion extending radially away from said axis followed by a portion extending radially toward said axis, intermediate take-up means in said frame, input guide means for leading said strands in a first sense from the feed-out means to said frame along said axis thereof to be passed over said path on the frame to said intermediate take-up means, final take-up means exteriorly of said frame, output guide means for leading said twisted assembly in a second sense from said frame along said axis thereof to said final take-up means, and a draft unit reversibly operable to a selected one of two conditions for selectively applying a draft force to said twisted assembly to pass said assembly in said first sense to produce an intermediate twisted assembly on said intermediate take-up means, and in said second sense to produce a final twisted assembly on said final take-up means.

2,998,695 WRIST WATCH AND BAND PROTECTOR

Glenn Cornett, 64 Ashless St., Hazard, Ky.
Filed Dec. 11, 1959, Ser. No. 858,875
5 Claims. (Cl. 58-105)

1. A wrist watch and band protector comprising a watch-enclosing component having side flaps to be folded onto each other to enclose a watch, first separable

fastener means securing said flaps together, a band-enclosing component comprising sections having inner ends secured to related ends of the watch-enclosing component, said sections having free ends to be superimposed upon each other, second adjustable separable fastener means securing the free ends together, said sections having side flaps to be folded onto each other to enclose related parts of a band, and third separable fastener means securing the section flaps together.



posed upon each other, second adjustable separable fastener means securing the free ends together, said sections having side flaps to be folded onto each other to enclose related parts of a band, and third separable fastener means securing the section flaps together.

2,998,696 GRIPPING SURFACE FOR PREFORMED HELICAL RODS

Rodolphe Leo Payer, Waterdown, Ontario, Canada, assignor to N. Slater Company Limited, Hamilton, Ontario, Canada

Filed June 5, 1959, Ser. No. 818,385
Claims priority, application Canada Apr. 13, 1959
6 Claims. (Cl. 57-145)

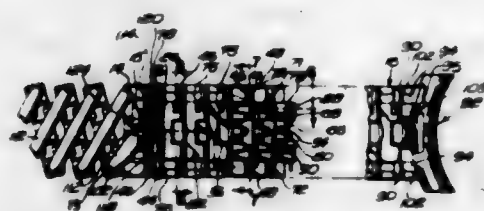


1. In a helically preformed resilient, electrically conducting element adapted to be wrapped in tightly gripping engagement coaxially about an elongated cable, the improvement comprising: means providing an improved gripping surface including spaced apart irregularities formed in at least a portion of the surface of said element in contact with said cable when wrapped thereabout, said irregularities extending transverse to the linear axis of same element, and extending at least partially across said surface to carry substantially equal and opposite cable tensile stress, whereby said gripping surface means co-operates to relieve the tensile stress on said cable and to improve the electrical conductivity between said element and said cable.

2,998,697 DETACHABLE SHEET METAL LINK AND LINKAGE FORMED THEREFROM

Karl C. Augenstein, Cranston, R.I., assignor to Spidel Corporation, Providence, R.I., a corporation of Rhode Island

Filed July 11, 1958, Ser. No. 747,876
8 Claims. (Cl. 59-84)



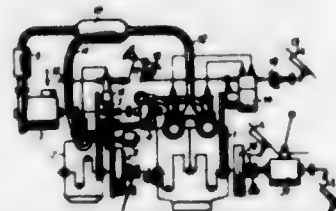
1. A hollow link for use in a band of links, said link comprising a strip of sheet metal bent in the form of a hollow loop open at its sides and the axis of which extends in a direction substantially transverse to the direction of the longitudinal center line of the band, a strip of metal extending outwardly in said transverse direction from the portions of the opposite open sides of said loop adjacent one end wall to form a pair of wings, each

of said strips forming said wings extending beyond said one end wall of said loop in the direction of the longitudinal center line of the band and then bending backwardly on itself to form a hinge loop at the bend thereof offset in said last mentioned direction from said one end wall and adapted to cooperate with hinge pins of a first adjacent member to provide a pivotal connection therebetween, the edges of said wings adjacent said open sides of said loop closing the portions of said open sides from which they extend, said wings forming with the remaining open sides of said loop adjacent the other end wall a pair of recesses, a spring element located in said hollow loop and extending in a direction transverse to the longitudinal center line of the band from one side of the loop to the other, said spring element comprising a resilient sinusoidal shaped mid-portion having hinge pins extending from the opposite ends thereof out of said open sides of said loop and into said recesses for cooperating with hinge loops of a second adjacent member adapted to be received within said recesses to provide a separable pivotal connection between said link and second adjacent member, said sinusoidal mid-portion of said spring element comprising a plurality of folds connected by cross pieces which extend in the general direction of the longitudinal center line of the band, said pins extending from the end cross pieces of said mid-portion, a slot in said loop extending in said transverse direction and exposing at least one of said end cross pieces whereby said sinusoidal portion of said element can be compressed to retract at least one of said pins into said loop and out of its recess and the hinge loop of the second adjacent member received within said recess to separate the pivotal connection formed by said pin and hinge loop, said end cross pieces abutting against the edges of said wings which close said portions of said open sides to prevent the spring from moving longitudinally out of the loop.

2,998,698 SUPERCHARGED INTERNAL COMBUSTION ENGINE WITH CONTROLS THEREFOR

Hermann Rieseler, deceased, late of Glasenstrasse 43, Neidlingen (Teck), Germany, by Helene Rieseler, nee Scherber, heir, Neidlingen (Teck), Germany

Filed May 20, 1955, Ser. No. 589,966
7 Claims. (Cl. 60-13)



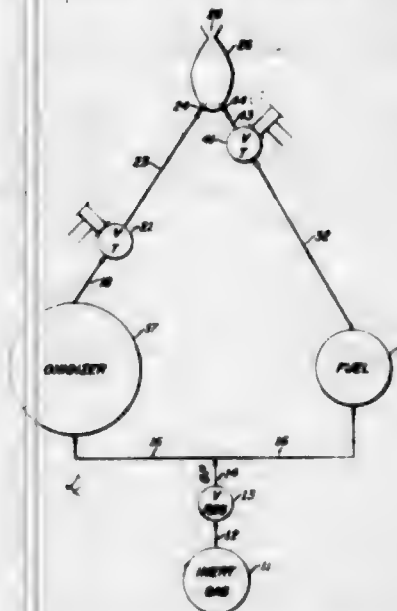
1. In combination with a main internal combustion engine having an air inlet and an exhaust gas outlet and also comprising a fuel injection pump and control means for controlling said pump: auxiliary internal combustion motor means having an air inlet and an exhaust gas outlet, fuel injection pump means associated with said auxiliary motor means for supplying fuel thereto, intermediate lever means interposed between and interconnecting said fuel pump and said fuel pump means, said lever means being adjustable to vary the output of said main internal combustion engine in conformity with the output of said auxiliary internal combustion motor means, high pressure compressor means, conduit means connecting said compressor means with the air inlet of said main internal combustion engine and of said auxiliary motor means to furnish air under high pressure thereto, an exhaust gas turbine, conduit means effecting communication between the exhaust gas outlet of said main internal combustion engine and of said auxiliary motor means with said turbine

for conveying actuating exhaust gases to said turbine, and means drivingly connecting said auxiliary motor means and said turbine with said compressor for conveying driving power to said compressor means.

2,998,699 ALIPHATIC ORTHOTHIOESTERS AS ROCKET FUELS

Don R. Carmody, Crete, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Feb. 25, 1952, Ser. No. 273,272
8 Claims. (Cl. 60-35.4)

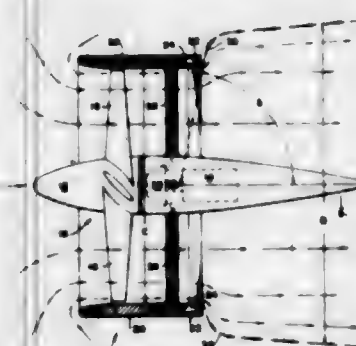


1. A reaction propulsion method which comprises injecting separately and essentially simultaneously into a combustion chamber a hypergolic fuel consisting essentially of an orthothioester having a generic formula, $R-C-(SR^2)_2$, wherein C represents carbon, S represents sulfur, R represents a member selected from the class consisting of hydrogen and alkyl groups, said groups containing not more than 3 carbon atoms and R^2 represents a member selected from the class consisting of alkyl groups and alkenyl groups, which groups contain not more than 4 carbon atoms and a nitric acid oxidizer which contains not more than 5 weight percent of non-acidic materials, said fuel and said oxidizer being injected in a ratio and at a rate sufficient to initiate a hypergolic reaction and to support combustion of the fuel.

2,998,700 JET DIFFUSER FOR SHROUDED PROPELLERS

Harvey R. Chaplin, Jr., 3507 N. Ottawa St., Arlington, Va.

Filed Apr. 29, 1959, Ser. No. 889,891
2 Claims. (Cl. 60-35.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



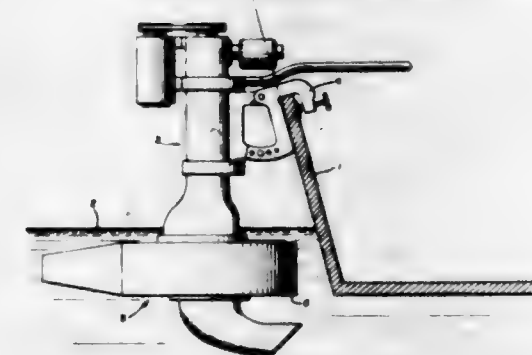
1. A jet diffuser for a shrouded propeller comprising a high speed engine having a relatively constant r.p.m., a fixed pitch propeller absorbing most of the power of said

engine for propelling a fluid into a fluid stream, a fluid compressor mounted between said propeller and engine for generating a high pressure fluid, a streamlined nacelle mounted around said engine and compressor and faired with said propeller for minimizing the wake of said fluid stream passing over said nacelle whereby effective diffusion may be achieved, a relatively short annular shroud mounted around said propeller for increasing the suction pressure of said propeller, said shroud having an annular chamber connected with an opening in the trailing edge of said shroud for forming a nozzle for exhausting said high pressure fluid from said compressor into said fluid stream for diffusing said stream to an area greater than said shroud whereby a large increase in effective thrust may be provided by the consequent fluid velocity reduction and increase in suction pressure at the leading edge of said shroud, a plurality of hollow supporting struts connected between said nacelle and shroud, and connecting means between said compressor and nozzle including said hollow struts for applying said high pressure fluid to said nozzle whereby the thrust of said shrouded propeller may be varied to effectively vary the advance ratio of said propeller.

2,998,701 ROTARY INTERNAL COMBUSTION JET ENGINE

John L. Curwell, 6504 Groveland Drive, Jacksonville 11, Fla.

Filed Sept. 6, 1960, Ser. No. 54,110
16 Claims. (Cl. 60-35.6)



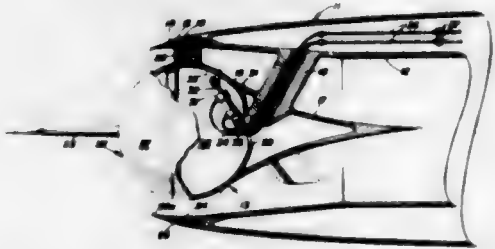
1. A rotary internal combustion engine for propelling a liquid jet which comprises a housing, a turbine impeller rotatably mounted in said housing and having a plurality of curved shrouded vanes defining therebetween a plurality of generally radial passages through said impeller, said impeller having inside of said vanes a hub normally blocking the inside of said passages, means defining a liquid inlet port, a combustible gas inlet port, an ignition port, and an exhaust gas port positioned along the path of rotation of said impeller to communicate successively with said passages as they pass said ports, said gas inlet and ignition ports being directed toward the radially inside portion of said passages, means to supply combustion gas through said gas inlet port, said housing forming a neck close to the radially outer edge of said impeller between said liquid inlet and gas inlet ports and being recessed from said impeller to define a space radially outside of said passages extending circumferentially from said gas inlet port past said ignition port so that liquid introduced into said liquid inlet port is carried in said passages through said neck and a portion of the liquid is moved by centrifugal force into said space to permit combustion gas to egress from said gas inlet port into the passages radially inside of the liquid, said recess diminishing in the vicinity of said ignition port so that the liquid is moved radially inwardly in said passages to compress the gas, and means to ignite through said ignition port the gas which burns in a combustion area, said housing having a jet nozzle communicating with said

combustion area and leading outside of said housing so that the liquid is propelled from said housing as a jet by expansion of the combustion gases, said vanes and said housing in the vicinity of said jet nozzle having a configuration so that the resultant force of combustion drives said impeller, said exhaust port being located so that the exhaust gases are forced therethrough.

2,998,702

RAMJET DIFFUSER

Everett J. Hardgrave, Jr., and Frank A. Dean, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 14, 1953, Ser. No. 367,808
9 Claims. (Cl. 60-35.6)

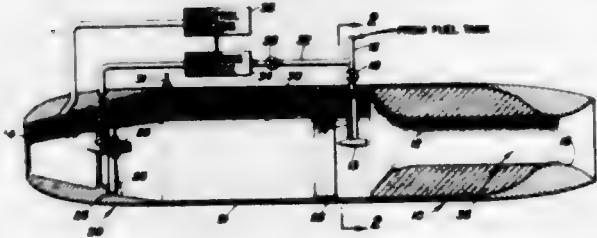


1. A diffuser for a ramjet missile, comprising a main body having a duct with an inlet, a body of revolution rotatably mounted within said inlet and having a pointed leading end disposed forward of said inlet, and means for rotating said body about an axis normal to the axis of said duct.

2,998,703

RESO-JET IGNITER

William C. Badders, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 11, 1953, Ser. No. 379,750
2 Claims. (Cl. 60-35.6)



1. In combination, a rocket having a central passageway, an oxidizer surrounding said passageway, and means for injecting fuel into said passageway; and a reso-jet igniter arrangement arranged in tandem with said rocket and, including a casing having a duct therein, said duct having an entrance and an exit into the passageway of said rocket, a combustion chamber in said duct, a seat at the entrance of said combustion chamber and having means located therein for controlling the admission of air into said combustion chamber, means for injecting fuel into said combustion chamber, and means for igniting the air-fuel mixture in said combustion chamber, whereby the products of combustion liberated due to the burning of said air-fuel mixture ignite and cause continuous burning of the fuel introduced in the passageway of said rocket.

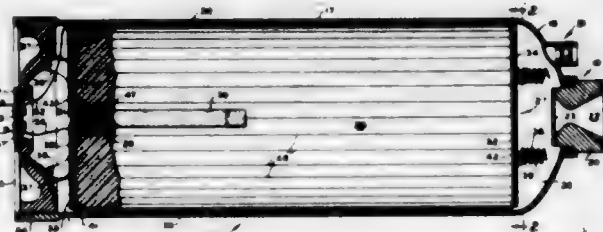
2,998,704

IGNITION OF SOLID ROCKET PROPELLANTS

Robert J. Brazil and Thomas L. Blasche, Jr., McGregor, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 13, 1956, Ser. No. 603,759
6 Claims. (Cl. 60-35.6)

1. An electrical igniting device for a solid propellant grain wherein it is desired to simultaneously, instantane-

ously, and uniformly ignite all of the burning surface of the solid propellant grain, said grain having an external burning surface and restricted ends, said device comprising a heating means, a pair of bus bar means adjacent either of said grain ends and adjacent said external burning surface, said bus bar means being connected to the terminals of said heating means, and means for supplying electrical current to said bus bar means, said heating

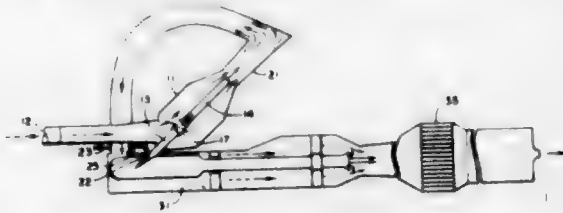


means comprising a plurality of electrically conducting exposed heating elements disposed substantially uniformly over the entirety of said burning surface and contiguous thereto, whereby upon the application of electrical energy to said heating means said plurality of electrically conducting exposed heating elements are heated and the combustion of the entire burning surface is thus simultaneously, instantaneously, and uniformly initiated.

2,998,705

PRESSURE GAIN VALVELESS COMBUSTOR

Carroll D. Porter and Mario A. Persechino, Chesapeake, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 29, 1958, Ser. No. 751,808
6 Claims. (Cl. 60-35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a valveless pulse jet engine comprising an elongated tubular structure having a closed forward end and an open end at the rear, a combustion chamber formed at said forward end, a combustion air inlet connected with said combustion chamber to admit fresh air into said combustion chamber, a housing secured about said combustion air inlet defining a plenum chamber, said housing including a main air inlet into said plenum and an air outlet, an inlet exhaust tube secured in said housing in axial alignment with said combustion air inlet and spaced axially therefrom with one end thereof adjacent thereto in end-to-end relationship, said combustion inlet tube operative relative to said inlet exhaust tube to permit a fresh air flow from said plenum directly into said combustion chamber and operative to eject combustion gases from said combustion chamber through said inlet exhaust tube and through said housing air outlet during use of the pulse jet.

2,998,706

SEED STRAND PLANTER

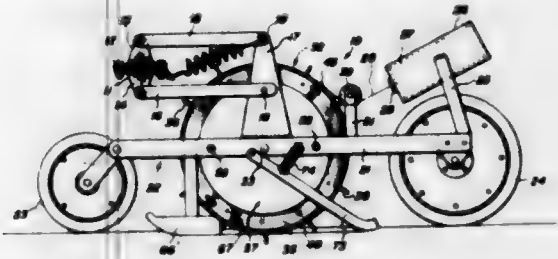
Ronald F. Zitko, Cicero, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Dec. 19, 1958, Ser. No. 781,732

5 Claims. (Cl. 61-72.6)

1. In a planter for seed tape and the like having a mobile frame and a source of continuous tape, a feed wheel adapted to receive the tape from the source having a main body and a rim on which the tape is wound for

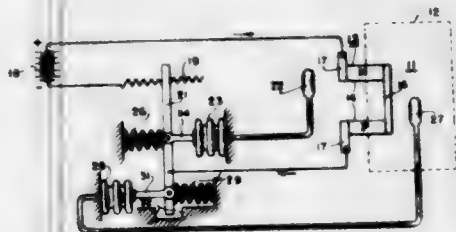
delivery to the ground upon rotation of the wheel, and clamping means for holding the tape to the wheel, comprising a guide member secured to the main body of the wheel, a clamping member mounted in said guide member



for reciprocating movement therein in a plane parallel to the plane of said main body, means on the frame operatively connected to said clamping member for reciprocation thereof, and an opening in said rim accommodating sliding movement of said clamping member therethrough.

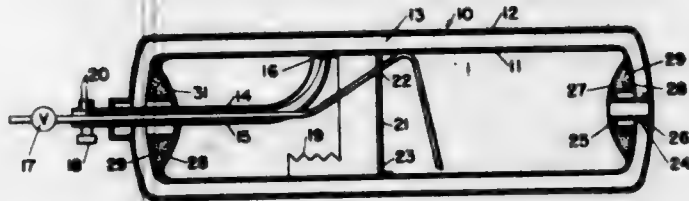
2,998,707
CONTROL APPARATUS AND METHOD FOR HEAT PUMPS

Jack D. Meem, Export, and Edsel W. Frantti, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 22, 1960, Ser. No. 16,885
5 Claims. (Cl. 62-3)



1. A method of operating a thermoelectric heat pump which comprises impressing a D.C. potential across said heat pump, continuously varying the amount of electric current flowing through the heat pump in accordance with the temperature of the heat dissipating portion of the pump to maximize the coefficient of performance of the pump and adjusting the varied current flow within predetermined limits in response to temperature changes at the heat absorbing portion of the pump.

2,998,708
CONTAINER FOR LOW TEMPERATURE LIQUIDS
Ransom P. Skinner, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,397
12 Claims. (Cl. 62-45)

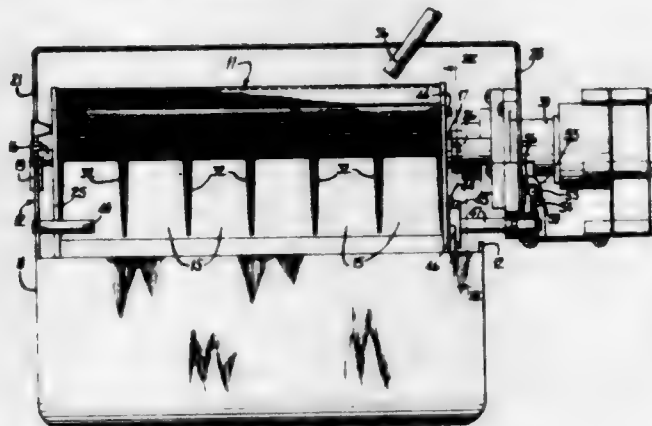


1. A container for storing low temperature fluids which comprises a storage vessel and a combination filling-vent-discharge means which enters the side of the storage vessel, such filling-vent-discharge means comprises a filling-discharge tube and a vent tube positioned so as to surround and be substantially concentric with said filling-discharge tube at the point where the combination means enters the side of the storage vessel, both the filling-discharge tube and the vent tube extend upward toward the top of the storage vessel, said vent tube terminating

near the top of the storage vessel and said filling-discharge tube being bent around to be directed toward and to terminate near the bottom of the storage vessel, such combination fill-vent-discharge means enables the storage vessel to be substantially filled and emptied without appreciable quantities of low temperature fluid passing out the vent line.

2,998,709
ICE MAKER

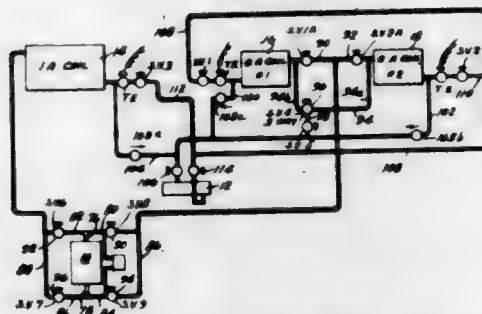
Carl C. Bauerlein, Lincolnwood, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Sept. 25, 1958, Ser. No. 763,254
12 Claims. (Cl. 62-135)



4. In an ice maker, a rotatable ice tray having a plurality of oppositely facing molds in heat transfer relation with respect to each other, a heat motor for turning said tray into position to accommodate the discharge of ice pieces therefrom and including an electric heater, a thermal element heated thereby having an extensible power member, extensible upon the heating of said thermal element, a motion converting drive from said power member to said tray to effect rotation thereon in one direction, means for filling the empty ice molds with water, and control means actuated by said motion converting drive for energizing and deenergizing said heater and operating said filling means to effect the filling of the empty ice molds with water comprising a single switch, and cam means controlling operation of said switch.

2,998,710
HEAT PUMP

Melvin C. Reese, Box 135, Warner Robins, Ga.
Filed June 5, 1959, Ser. No. 818,324
11 Claims. (Cl. 62-155)



6. In a heat pump apparatus having in series a compressor and a pair of heat exchanger means, usable alternately as evaporators and condensers, conduit means interconnecting said pair of heat exchanger means and compressor, one of said heat exchanger means comprising a pair of coil members arranged in spaced parallel relation with one another and adapted to function as evaporator means, means for automatically de-icing one of said evaporator means while continuing the functioning of said heat pump apparatus through use of the other of said evaporator means.

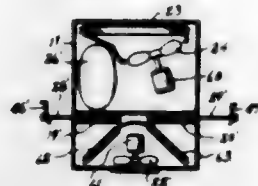
2,998,711

AIR CONDITIONER

Paul Komroff, Union, N.J., assignor to Emerson Radio & Phonograph Corporation, Jersey City, N.J., a corporation of New York

Filed July 28, 1959, Ser. No. 828,133

7 Claims. (Cl. 62-262)



1. In an air conditioner including means for conditioning air, the combination comprising a housing enclosing said air conditioning means, said housing being adapted to be located in a window or the like and having at least one vertically extending recessed portion formed therein adjacent a side of said window, said recessed portion extending laterally within said housing to a substantial depth, so that the recessed portion is adapted to telescopically receive a filler panel for sealing the window opening; a vertically extending filler panel telescopically disposed within said recessed portion; and means mounted on said housing for slidably mounting said filler panel within said recessed portion to permit movement of the panel in and out of the portion, so that said panel is adapted to be extended to engage said side of the window, to thereby with said housing seal the window opening.

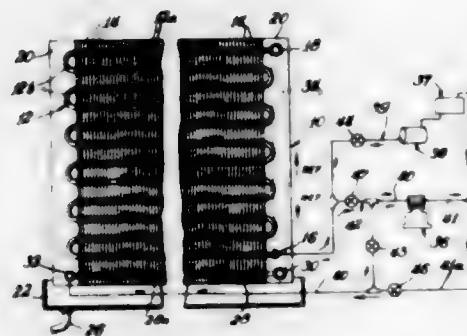
2,998,712

REFRIGERANT EVAPORATOR

John E. Watkins, 1311 S. 4th Ave., Maywood, Ill.

Filed Oct. 31, 1957, Ser. No. 693,668

4 Claims. (Cl. 62-278)



2. In a refrigerating system having a liquid refrigerant supply line, a suction line and a hot gas line, the combination comprising an evaporator including a plurality of cooling coils interconnected at their upper and lower terminal ends, a defrosting coil disposed beneath said cooling coils, a conduit interconnecting the upper ends of the cooling coils and one end of the defrosting coil, and valve means having alternative positions for supplying in one position thereof liquid refrigerant to the lower interconnected terminal ends of said cooling coils and thence by way of said conduit and said defrosting coil to the suction line of the refrigerating system for refrigerating operation, and in the other position thereof for interrupting the supply of liquid refrigerant, for connecting the other end of said defrosting coil to said hot gas line, and for connecting the lower ends of said cooling coils to the suction line of the refrigerating system whereby during defrosting operation hot gas is supplied first to said defrosting coil and thence by way of said conduit to said cooling coils.

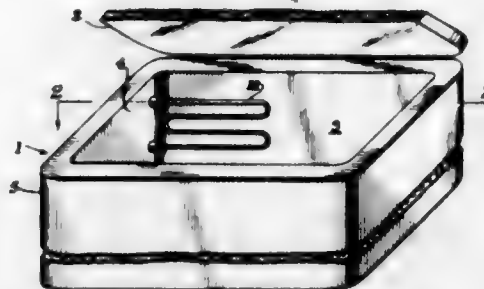
2,998,713

APPARATUS FOR DEFROSTING LOW TEMPERATURE STORAGE FACILITIES

Malvern J. Hiller, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

Filed May 1, 1959, Ser. No. 810,395

7 Claims. (Cl. 62-283)



1. In a low temperature storage structure, a storage compartment having an inner lining of heat-conductive material, a refrigerant evaporating coil surrounding said liner to maintain the storage compartment at a low temperature, said coil being formed from a material having a higher thermal conductivity than the material from which said inner liner is formed, and a condensation bar detachably mounted within said storage compartment and connected to said evaporator coil, said condensation bar having a higher thermal conductivity than the material from which said inner lining is formed for inducing the accumulation of frost on at least a portion of said condensation bar so as to prevent the accumulation of frost on the inner liner of said storage compartment.

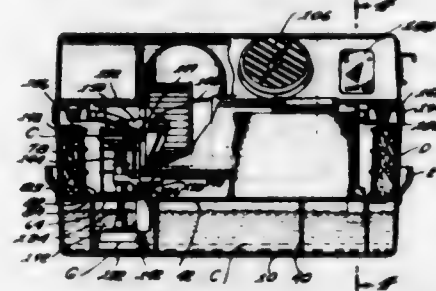
2,998,714

PORTABLE CAR AND BEVERAGE COOLER

Lawrence W. Bonzer, Long Beach, Calif., assignor to G & B Manufacturing Co., Inc., Long Beach, Calif., a corporation of California

Filed Feb. 15, 1960, Ser. No. 8,773

6 Claims. (Cl. 62-312)



1. In a cooler, the combination comprising: a cabinet including a lower walled section and a top section for closing the upper end of said lower section, said top section separately resting on the upper edge of the wall of said lower section; a deck mounted within said lower section in spaced relationship to a floor of said lower section and in spaced relationship to said top section, the volume of said lower section beneath said deck serving as a water tank and the space between said deck and top section serving as an ice chest; an electric motor secured to and depending from said top section to be positioned within said ice chest and drivingly mounting a blower arranged for exhausting cooled air through an outlet formed in said top section, the wall of said lower section being formed with an inlet to said ice chest for air to be cooled; absorbent material positioned at said inlet in said ice chest; a pump secured to and depending from said top section to be positioned in said water tank and drivingly connected to said motor by a means extending through an opening formed in said deck, said opening also permitting the passage of water from said ice chest

to said water tank; and conduit means supported by said top section and connected to said pump for conducting water from said water tank to said adsorbent material to provide water for the evaporative cooling of air entering said inlet.

2,998,715

SOLUTION DISTRIBUTION ARRANGEMENTS FOR ABSORPTION REFRIGERATION SYSTEMS

Lawrence S. Beresak, East Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Jan. 13, 1960, Ser. No. 2,271

8 Claims. (Cl. 62-476)



8. A solution distribution arrangement to be disposed in the generator of an absorption refrigeration machine for distributing weak solution in the generator of the absorption refrigeration machine which comprises a distribution pipe extending longitudinally in the generator having at least one outlet adjacent each end, the pipe being connected to weak solution supply means intermediate its ends and being inclined in a vertical plane to place the outlets in different horizontal planes so that upon a gradual decrease in solution flow to the pipe the quantity of solution distributed through one outlet is gradually decreased while solution is distributed through the lower outlet only.

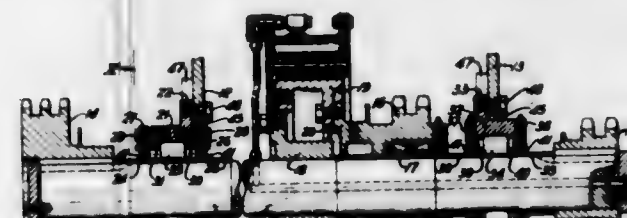
2,998,716

SHAFT MOUNTING

Michael L. Rizzone, Dallas, Tex., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Feb. 12, 1960, Ser. No. 8,304

8 Claims. (Cl. 64-1)



3. In a structure which includes a pair of relatively fixed spaced apart supports and a shaft journaled in said supports, the combination therewith of a mounting for said shaft comprising first and second bearing housings having integral flanges fixed to the respective supports, roller bearings mounted within said housings, spacers fixed to said shaft on opposite ends of said bearings and holding the bearings in fixed positions lengthwise of the shaft, inner and outer retainers having lips abutting opposite ends of the bearings within said first housing, adjustable screws attaching said retainers to opposite ends of said first housing, said screws being adapted to adjust the position of said retainers with respect to said first housing and thereby adjust the lengthwise position of said shaft with respect to said supports, and inner and outer retainers fixed to said second housing and having clearance from the ends of the bearings therein, whereby the bearings in said second housing are movable lengthwise with respect thereto as the shaft is adjusted lengthwise.

2,998,717

FLEXIBLE COUPLING DEVICE

Kurt Schwenk, Dusseldorf, Germany, assignor, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed July 18, 1958, Ser. No. 749,484

Claims priority, application Germany July 30, 1957

11 Claims. (Cl. 64-13)



5. A flexible coupling device for driven and driving shafts, comprising a rubber-like polyurethane body, said body having a plurality of anchor points, the cross-sectional thickness of said body between said anchor points increasing from the center towards the periphery, the cross-sectional thickness of said device at said anchor points being greater than the cross-sectional thickness at said periphery.

2,998,718

WRIST ATTACHED LIGHTER ASSEMBLY

Fred S. Sanchez, 2108 SW. 71st St., Oklahoma City, Okla.

Filed Apr. 10, 1959, Ser. No. 805,596

3 Claims. (Cl. 67-4.1)



1. A lighter comprising a housing having a bottom wall, an upstanding sidewall, a horizontal partition wall extending across the housing above said bottom wall and secured to said sidewall, a horizontal plate secured to said sidewall and spaced above said partition wall, a spark wheel located between said plate and said partition wall and journaled on said plate, said spark wheel having a ratchet wheel secured to its underside, a wick mounted on and rising above said partition wall at one side of the spark wheel, a flint support on the underside of said plate carrying a flint engaged with the spark wheel, guide means upstanding on said plate at a side of the spark wheel, a resilient shank adapted for sliding through said guide means, a ratchet dog on an end of the shank engaging the ratchet wheel, a link pivoted at one end to the other end of the shank, and a cover pivoted on the housing sidewall to which the other end of the link is pivoted.

2,998,719

SHOCK TUBE FOR STUDYING WARHEAD COMBINATION DAMAGE

Robert J. Rubin, West Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Sept. 21, 1955, Ser. No. 535,772

3 Claims. (Cl. 73-12)



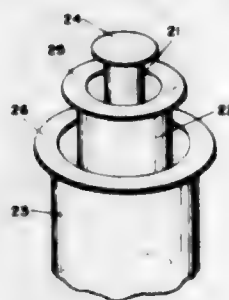
1. Apparatus for use in determining the damage to a target due to a blast wave and fragments from a warhead,

comprising, structure defining a shock tube having a closed end and an open end, a first frangible diaphragm located in said tube and dividing said tube for defining a compression chamber and an expansion chamber, an aperture located in the closed end of said tube, a second frangible diaphragm closing said aperture, two pairs of spaced windows located in the wall of said shock tube defining said expansion chamber, the windows of each pair of windows being positioned in alignment on opposite sides of said shock tube, means for supporting said target at the open end of said tube, means including a gun for firing a high velocity projectile through said second diaphragm and aperture to rupture said first diaphragm and strike said target, means including a schlieren optical system positioned in alignment with each pair of windows, an electrical circuit including a photocell associated with each schlieren optical system for generating signals corresponding to passage of said projectile and blast wave by each pair of said windows, and means for recording said signals so that the velocity of said shock wave as well as the velocity of said fragments from said warhead can be determined and utilized for determining the damage to said target.

2,998,720

METAL SKIN SIMULANT

Glenn Williams, Lexington, and Hoyt C. Hottel, Winchester, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 10, 1957, Ser. No. 701,943,
7 Claims. (Cl. 73-15)



1. A simulator for use in studying the temperature-time-depth conditions within a solid material that has been exposed to a burst of thermal energy comprising a metallic surface, a plurality of at least three parallelly disposed planar metallic members extending perpendicularly from one side of said surface, temperature insulating means for sealing off the air spaces between adjacent planar members and means for indicating the temperature on the surface of the central member at successively greater distances from said one side of said surface when the other side of said surface is exposed to a burst of thermal energy.

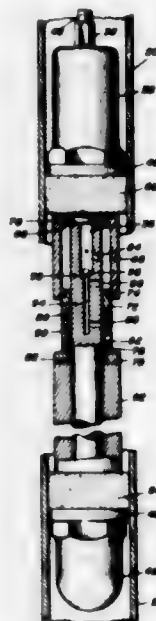
2,998,721

TOOL FOR DETECTING PIPE LEAKS

Paul A. Gawlik, Corpus Christi, Tex.
(P.O. Box 124, Falls City, Tex.)
Filed Dec. 27, 1956, Ser. No. 630,913
3 Claims. (Cl. 73-49.1)

1. A device for detecting leaks in pipes comprising an elongated body adapted to be inserted into a pipe, end members mounted on said body, a pair of longitudinally movable members mounted on said body, an expandable packer mounted between the outer end of each movable member and the adjacent end member for expansion into contact with the pipe at longitudinally spaced points when the movable members are moved longitudinally outwardly thereby sealing a section of the pipe, a fluid pressure line connected to said body, said movable members being actuated by fluid pressure and forming valve means for admitting fluid pressure be-

tween the expanded packers responsive to longitudinal outward movement of the movable members for pressurizing the section of pipe for detecting leaks by determining any pressure drop, one of said movable members being provided with a cylindrical portion concentrically spaced from said body, the other movable member having a cylindrical projection coaxial with the body and slidably and telescopically received in said portion, means communicating the fluid pressure line with the area between the longitudinally movable members, said last named means including a longitudinal bore extending into said body, a radial port communicating the bore with the interior of the cylindrical portion, said radial port being above the inner end of the cylindrical projection which forms a piston when in its innermost position thus urging the piston longitudinally outwardly of the cylindrical portion, said valve means being respon-



sive to outward longitudinal movement of the piston for admitting pressure into the area between the detecting device and the inner surface of the pipe, said valve means including an extension of the longitudinal bore in said body in sealed relation to the first mentioned longitudinal passage, a first radial bore communicating the extension of the bore with the area between the body and the cylindrical portion when the piston is moved outwardly on the body, a second radial bore communicating the extension of the bore with the outer surface of the body, and a radial bore in said piston in fluid communication with the second radial bore leading from the extension of the bore thus discharging fluid pressure into engagement with the inner surface of the pipe coupling after the piston moves longitudinally outwardly to uncover the first radial bore thereby providing fluid communication between the longitudinal bore and extension by communicating the radial port with the first radial bore.

2,998,722

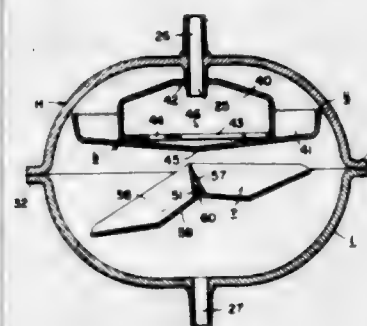
CONTINUOUS WEIGHING MECHANISM FOR FLUIDS

Burton K. Jaquith, Fort Lauderdale, Fla., assignor to Technical Industries, Inc., Fort Lauderdale, Fla., a corporation of Florida

Filed Jan. 9, 1957, Ser. No. 633,287
18 Claims. (Cl. 73-219)

18. The method of continuously measuring a variably moving fluid stream while advancing through a fixed path wherein is interposed a pivoted, gravity-operated, scale receiver, which comprises interrupting the stream flow during its movement through the scale receiver for accumulation therein of a predetermined amount of fluid sufficient to generate the requisite gravity force for operation of the scale receiver and discharge therefrom of

the fluid increment accumulated therein, and applying to the scale receiver a magnetic holding force supplementary to that of gravity, but in opposition thereto, to delay pivotal movement of the receiver until the amount of fluid accumulated therein is sufficient to overcome the

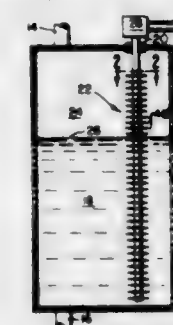


supplementary holding force and free the scale receiver for an accelerated gravity-operated pivotal movement wherein the flow rate effect is minimized, thereby to assure successive discharge from the scale receiver of fluid increments all of substantially uniform amount.

2,998,723

SONIC WAVE CONDUCTOR

Preston W. Smith, Jr., and Miguel C. Junger, Cambridge, Mass., assignors to Acoustica Associates, Inc., Plainview, N.Y., a corporation of New York
Filed June 15, 1956, Ser. No. 591,622
10 Claims. (Cl. 73-290)

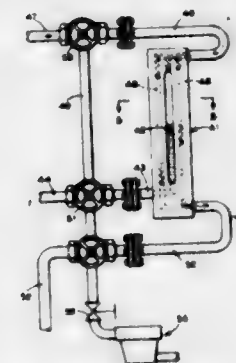


1. The combination of a sonic wave conductor having an elongated central core and a series of spaced fins attached to and extending outwardly from the core, the thickness of each fin in the axial direction of said core gradually changing from the core to the periphery of said fin, and means to vibrate an end of said conductor periodically in a direction to cause periodic displacements of said fins having substantial components parallel to said axial direction.

2,998,724

LIQUID LEVEL GAUGE

John C. Singleton, Lancaster, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 31, 1956, Ser. No. 619,470
10 Claims. (Cl. 73-323)



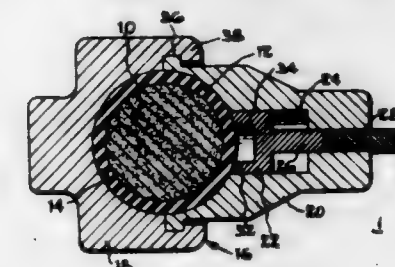
1. For use in a high pressure steam generator, a steam and water drum having a steam space and a water space,

said drum normally containing a water level therein and normally having steam and water mixtures discharged thereinto, a water gauge comprising a body having a sight glass for observing a water column, said body having a steam passageway adjacent the water column, a pair of spaced conduits connecting said gauge to said drum, one of said conduits conducting steam from the steam space directly to both the passageway and upper end of the water column and said other conduit connecting said water column in communication with said water space, a downcomer connected to said drum in communication with said water space, and a draining conduit connecting said steam passageway to said downcomer at a point sufficiently below the level of said water column so that said steam is free to flow by natural circulation through said passageway about the full length of said column for maintaining the density of the water standing in said column substantially equal to the density of the water in said drum so that the water level of said column is rendered a substantially accurate indication of the true water level in said drum.

2,998,725

THERMO-ACTUATOR

James F. Scherer, 206 Stanton Ave., Terrace Park, Ohio
Original application Apr. 8, 1954, Ser. No. 421,925, now Patent No. 2,810,290, dated Oct. 22, 1957. Divided and this application Aug. 1, 1957, Ser. No. 675,735
3 Claims. (Cl. 73-368)



1. A temperature responsive actuator comprising a body member having a recess formed therein, a cap member having a corresponding recess formed therein, means for securely fastening said cap member to said body with said recesses facing one another to thereby form a housing having a chamber therein, a piston mounted for sliding movement within a bore in one of said members with the inner end of said piston forming a part of the wall of said chamber, a shoulder formed on the wall of the bore, a stem projecting from a complemental shoulder on the outer end of the piston, an integral sealed capsule made of a material which becomes liquid at normal operating temperature of the device in said chamber, an expansible material in said capsule capable of undergoing a substantial change in volume with a change in temperature to effect movement of said piston, and means for sealing said piston to prevent the passage of liquid to or from said chamber.

2,998,726

TANK SAMPLER

Robert W. Peterson, Box 152, Dlx, Nebr., assignor of one-half to Dwain R. Madden, Dlx, Nebr.
Filed Mar. 13, 1959, Ser. No. 799,291
5 Claims. (Cl. 73-425.4)

1. In a tank sampler, an upright open ended housing, the lower end of said housing being shaped to a valve seat, a plug valve conformably shaped to fit within said seat positioned below and in axial alignment with said seat and normally out of seating engagement with said seat, a rod extending axially through said valve and having the portion adjacent the lower end below and exteriorly of said valve, suspension strap means embodying opposed straps exteriorly of said valve seat and op-

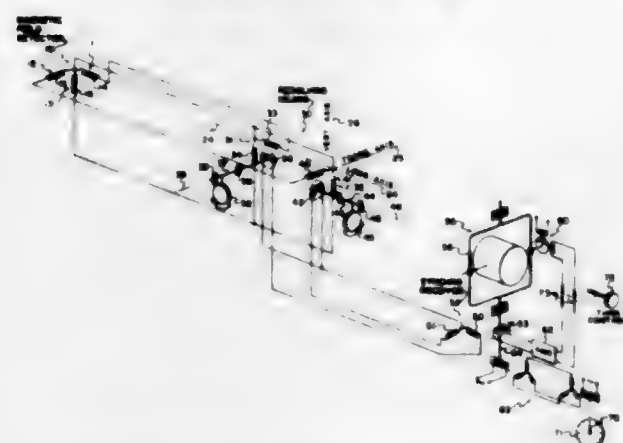
eratively connected to said housing, a ring carried by said strap connecting said valve to said housing for movement of said valve from the aforesaid position to



a position in seating engagement within said seat, and releasable latch means operatively connected to said valve for holding the valve in the out of seating engagement position.

2,998,727 HEADING REFERENCE SYSTEM FOR NAVIGABLE CRAFT

Donald H. Baker, Mount Vernon, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,611
13 Claims. (Cl. 74-5.4)



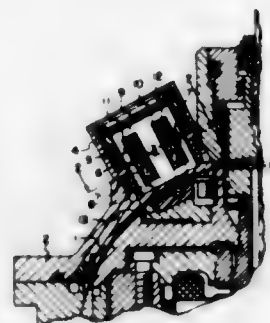
1. A heading reference system for navigable craft comprising detecting means mounted on said craft for producing first signals representative of the direction and strength of the earth's total magnetic field, resolving means mounted on said craft and responsive to said first signals for producing second signals representative of the direction and strength of the earth's magnetic field in a plane that is horizontal with respect to the earth, and means responsive to said second signals for producing a third signal representative of the heading of said craft.

2,998,728 PICK-OFF DEVICES

John Denzil Barr, Warrington, England, and Douglas McCutcheon Sloan, Montreal, Quebec, Canada, assignors to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain
Filed Feb. 3, 1958, Ser. No. 713,068
Claims priority, application Great Britain Feb. 7, 1957
5 Claims. (Cl. 74-5.6)

1. In a transformer type pick-off for a gyroscopic instrument having a closed container with a symmetrical internal surface configuration, a rotor case having an outer

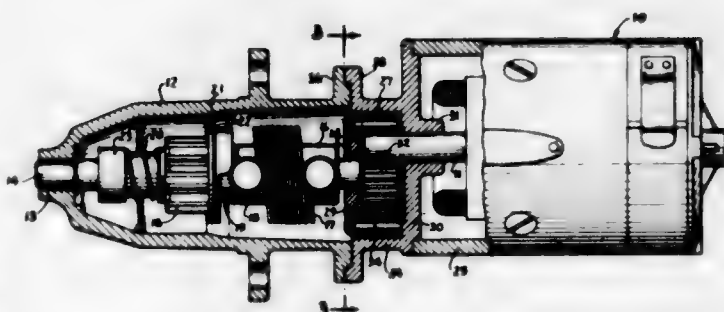
surface configuration substantially conforming to the internal surface configuration of the container, and an electrically conductive liquid filling the container and buoyantly supporting the case within the container with freedom about an axis with a gap of normally uniform width between the adjacent conforming surface configurations of the case and container; a wound magnetic core fixed to the container providing a closed magnetic circuit, a liquid filled U-shaped passage in said container looping the core and having spaced terminal openings at the internal sur-



face configuration of the container, an insulative insert in the case with an outer surface configuration conforming to the surface of the case having a channel therein filled with the conducting liquid, said core and insert being so arranged that the liquid in the container passage, the gap, and the channel in the case completes a single turn winding whose resistance changes with relative displacement of the case and container from a normal condition about the axis in a direction normal to the channel to vary the reluctance of the magnetic circuit.

2,998,729 ENGINE STARTING APPARATUS

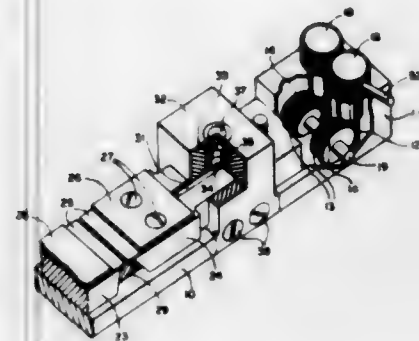
Arthur J. Warsaw, 306 Cooper St., Colfax, Ill.
Filed Aug. 8, 1960, Ser. No. 48,309
1 Claim. (Cl. 74-7)



A starter booster for an internal combustion engine starter device comprising a cylindrical housing, a first plate integral with said housing adapted to be secured to a starter motor housing and having a central opening therein adapted to receive a shortened drive shaft of the starter motor, a cup-shaped internal ring gear having an integral bottom web rotatably mounted in said cylindrical housing, bearing means disposed between said ring gear and said cylindrical housing, a pinion gear in mesh with said ring gear adapted to be fixed to the shortened end of the drive shaft, a starter shaft integrally secured centrally of said web and extending outwardly therefrom, a second plate having a central opening therein receiving said internal ring gear, said second plate being eccentrically mounted relative to said first plate and adapted for coaxial mounting on a Bendix housing with said starter shaft extending into said Bendix housing.

2,998,730 ADJUSTABLE SLIT

Nicholas M. Raskhodoff, Chevy Chase, Md., and Arthur G. Lowell, Washington, D.C.; said Lowell assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 30, 1960, Ser. No. 53,018
3 Claims. (Cl. 74-89)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An adjustable slit device which comprises an elongated base, a stationary jaw secured at one end on the upper surface of said base, an axially aligned linear slidable jaw slidably and pivotally mounted on the upper surface of said base relative to said stationary jaw, a groove in the upper surface of said slidable jaw, a bridge means secured to said base and across said slidable jaw for securing said slidable jaw on said base for pivotal and slidable motion relative to said stationary jaw, said means including a steel ball under pressure in a direction toward said base which rides in said groove in said slidable jaw, and a drive means secured to said base to impart slidable motion to said slidable jaw as said drive means is operated.

2,998,731 PULLEY HUBS

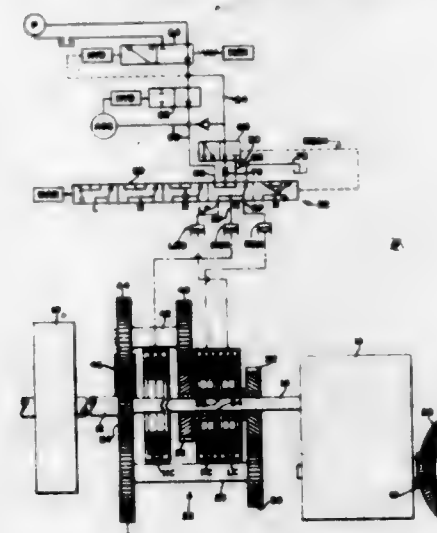
Elmer J. Renner, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois
Filed May 19, 1959, Ser. No. 814,203
7 Claims. (Cl. 74-230.8)



1. In a conveyor pulley, a substantially cylindrical rim, a pair of resilient, metallic end disks integrally attached peripherally to said rim near the ends thereof and having central mounting openings each defined by an inwardly facing edge wall, a supporting shaft extending axially through said openings and having such cross-sectional dimension and resiliency that when mounted in bearings outboard of the disks the shaft experiences substantial deflection between said end disks under heavy pulley loads, and means for securing each of said end disks to the shaft solely by radial frictional pressure exerted between the shaft and said edge walls of the disk, said disks being unrestrained in the area between their peripheral attachment to the rim and their pressure securement to the shaft whereby destructive flexing of the end disks due to shaft deflection is substantially avoided.

2,998,732 TRANSMISSION AND CONTROL THEREFOR

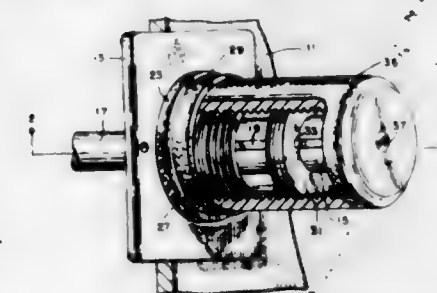
Roger J. Nelson, Cedar Falls, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,148
15 Claims. (Cl. 74-364)



1. A power transmission comprising: an input shaft; an output shaft; drive mechanism operative to connect the shafts and including a high-speed forward clutch, a low-speed forward clutch and a reverse clutch optionally individually engageable to drive the output shaft respectively at high, low and reverse speeds; control means connected to and for selectively engaging the clutches and operative in a high-low range to alternately engage the two forward clutches and operative in a forward-reverse range to alternately engage one forward clutch and the reverse clutch, said control means including a control member movable selectively in said two ranges, regulating means for controlling the speed of engagement of the clutches, and means interconnecting the regulating means and the control member and operative when the control member moves in its high-low range to effect relatively rapid engagement of the forward clutches and operative when said control member is in its forward-reverse range to effect relatively slower engagement of said one forward clutch and the reverse clutch.

2,998,733 CONTROL DEVICE

Kenneth W. Thompson, Red Bank, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 2, 1959, Ser. No. 817,695
2 Claims. (Cl. 74-553)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Means for controlling the rotational movement of a shaft through a predetermined number of rotations in either direction comprising a fixed elongated tubular shank portion, having axially aligned diametrically opposed external keys thereon, serving as a housing for said shaft, a hollow internally threaded knob encompassing said shank portion and engageable with said shaft for mutual rotation therewith, an independent externally threaded traverse slug including discrete first and sec-

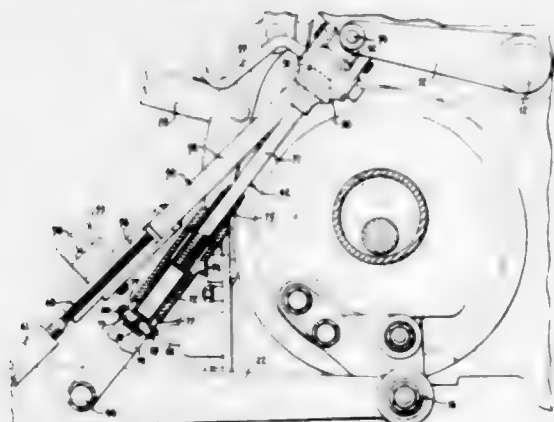
ond opposing flat end portions and having discrete diametrically opposed internal keyways, each of said keyways being in slidable engagement with the discrete keys on said tubular shank portion, said slug being engageable with the threads of said knob and slidable through a determinate linear sweep along said shank portion, means in direct opposing relationship with said first flat end portion of said slug for stopping the movement of said slug in one longitudinal direction, and means, in direct opposing relationship with said second flat end of said slug, comprising the inner end wall of said knob for stopping the movement of said slug in the other direction whereby the number of turns to which said knob can be rotated is limited by the linear sweep of said slug along the keys of said tubular shank portion.

2,998,734

TRACTOR DRAFT LINKAGE

Ernest V. Bunting, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland

Filed Apr. 16, 1959, Ser. No. 806,867
1 Claim. (Cl. 74-579)



A drop link for coupling the power lift mechanism of a tractor to a trailing draft link comprising, in combination, a hollow cylindrical member having a clevis portion at one end defining a transverse slot with a closed end, pivot establishing means at the outer end of said clevis portion for pivotally coupling said member to an element disposed within the end of said slot, a rod member slidably received within the hollow portion of said cylindrical member, said rod member having one end projecting into said slot and means at the other end for pivotally coupling said rod member to an element, a sleeve secured transversely through said one end of the rod member so as to fit closely and slidably within said slot, said sleeve thus preventing relative rotation between said cylindrical member and said rod member and also preventing withdrawal of said one end of the rod member from said hollow cylindrical member by abutting said end of the slot, a stop pin removably secured through apertures secured in said clevis portion so that the pin passes through said slot to block movement of said rod member from the position wherein said sleeve abuts said end of the slot, and said pin being slightly smaller than the internal dimension of said sleeve so that upon removal of the pin from said apertures it may be stored within said sleeve.

2,998,735

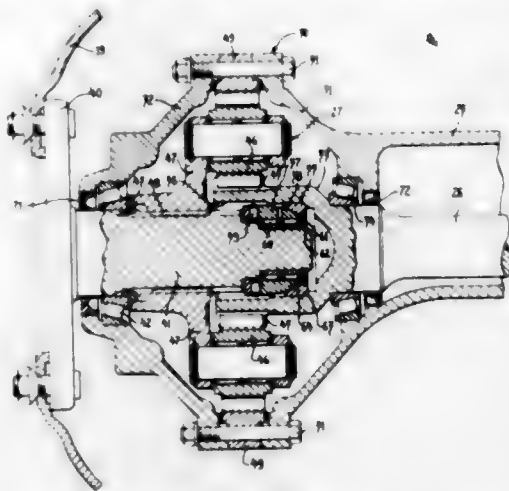
DRIVE AXLE GEARING ASSEMBLY

Lee E. Effes, Birmingham, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland

Filed Apr. 15, 1959, Ser. No. 806,693
4 Claims. (Cl. 74-801)

3. A drive axle assembly for a tractor or the like comprising, in combination, a hollow axle tube having a hous-

ing at one end, an axle journaled in said tube and having an end portion extending into said housing and fitted against a conical radial bearing seated in said tube, a wheel having a stub shaft extending into said housing and journaled in a second conical radial bearing, means operative between said second conical radial bearing and said stub shaft preventing withdrawal of the stub shaft from the housing, said stub shaft extending axially into a cylindrical socket formed in the end of said axle end portion, a sun gear formed on the outer surface of said axle end



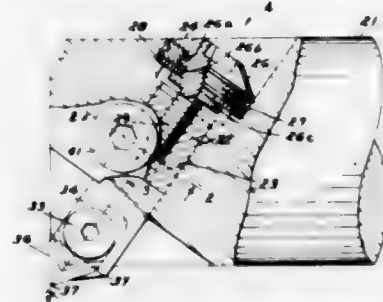
portion, a planet gear carrier splined to said stub shaft, planet and ring gears coupling said gear carrier and said sun gear, a bearing part having an outer spherical surface carried on both thrust and radial bearings at the end of said stub shaft, a second bearing part seated in said cylindrical socket and having a spherical surface in snug interfitting engagement with the spherical surface of said first part, said parts thus forming a self-aligning connection permitting relative rotation between the axle and the wheel.

2,998,736

TOOL MOUNTING FOR BORING BAR

Frederick J. Cloutier, Detroit, and Victor Milewski, Royal Oak, Mich., assignors to The Valeron Corporation, Detroit, Mich., a corporation of Michigan

Filed Nov. 4, 1960, Ser. No. 67,439
5 Claims. (Cl. 77-58)



1. A tool comprising a rotatable main body, a tool holder passage extending through said body having a pair of angularly spaced tool holder seating surfaces, a tool holder having a pair of complementary angularly spaced surfaces engageable with said seating surfaces throughout a range of adjustment for said tool holder in said passage, an indexible cutter element at one end of said tool holder, means for clamping said cutter element in any of a plurality of positions, a threaded hole in the other end of said tool holder extending in the direction of said adjustment, a rotatable calibrated adjustment screw engaging said threaded hole, means seated in said body fixing the axial position of said adjustment screw, and separate means for rigidly clamping said tool holder with both of said complementary tool holder surfaces in positive pressurized engagement against both of said seating surfaces, said means fixing the axial

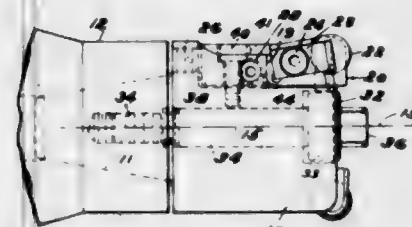
position of said adjustment screw includes a shoulder surface in said body, spaced shoulder surfaces in said adjustment screw, an annular retainer ring and a snap ring fitting closely within said shoulder surfaces in said adjustment screw and in fixed abutment with said body shoulder surfaces, said annular retaining ring being press fit in said body against said shoulder surface therein.

2,998,737

ADJUSTABLE DIAMETER CUTTER FOR BORING OPERATIONS AND THE LIKE

William Yogus, Birmingham, and John Donald MacPetrie, Huntington Woods, Mich., assignors to The Valeron Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 19, 1959, Ser. No. 847,139
16 Claims. (Cl. 77-76)



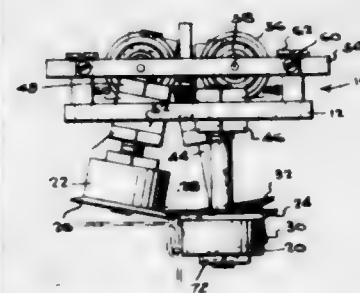
1. A cutting tool comprising a holder, a plurality of slots formed therein, each slot extending longitudinally inwardly from one end of said holder, in spaced relation around the circumference thereof and generally radially toward the longitudinal axis thereof; each of said slots having a bottom surface which is tangent to a circle drawn on said axis and a pair of side walls extending outwardly from said bottom surface in converging relation to each other; a plurality of cartridges each dimensioned to engage one of said slots with clearance between the side walls thereof and each having a cutting blade mounted thereon; means for adjustably defining the position of each cartridge individually in a direction longitudinally of its slot; means for securing each cartridge in its slot in engagement with the slot side wall which faces in the direction of cutting rotation of said holder; and means for adjustably positioning each cartridge individually in its slot in a direction radially of said axis.

2,998,738

SHEET METAL CORNER SEAM CLOSING TOOL

George L. Crine, Sr., 195 Goodview Ave., and George Adair, 889 E. Buchtel Ave., both of Akron, Ohio

Filed June 10, 1960, Ser. No. 35,260
3 Claims. (Cl. 81-15)



1. A sheet metal corner seam closing tool comprising a horizontally disposed plate having a forward end and a rearward end, a first pair of forming rollers each carried by a rotatable shaft positioned below said plate so that the rollers lie along and are spaced inwardly of the forward end of said plate and have their shafts carried by said plate, the shaft for one of said rollers being disposed normal to said plate and the shaft for the other of said rollers being disposed at an angle to the horizontal, a

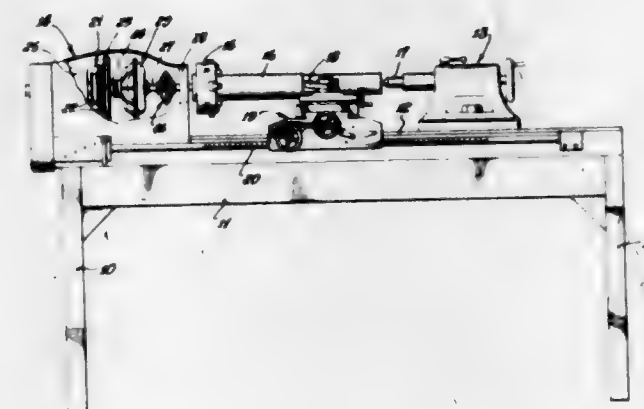
single forming roller carried by a rotatable shaft positioned below said plate inwardly of and spaced from the rearward end of said plate and having its shaft carried by said plate, said shaft of said single roller being disposed at an angle to the horizontal which angle is opposed to the angle at which said shaft for the other of said pair of rollers is disposed, a second pair of forming rollers each carried by a rotatable shaft positioned below said plate so that the second pair of rollers lie along a line parallel to said first pair of rollers and have their shafts connected to said plate for limited movement as a unit transversely of said plate, the shaft of one of the rollers of said second pair of rollers being disposed normal to said plate and the shaft of the other of the rollers of said second pair of rollers being disposed at an angle to the horizontal which angle is the same as that at which said shaft for said one of said first pair of rollers is disposed, and means on each of said rollers for engaging a portion of a sheet metal corner seam to be closed.

2,998,739

METHOD AND APPARATUS FOR CUTTING ROTARY WORK METAL

Ernest E. Martin, Glendora, Calif., and Ralph W. Walsh, 14352 Huntington Beach Blvd., Westminster, Calif.; said Martin assignor to said Walsh

Filed July 6, 1959, Ser. No. 825,266
4 Claims. (Cl. 82-28)



1. The method of operating a lathe cutting tool in rotary metal work, that includes forming comminuted chip-like cuttings and a cut-away zone at the work that is free of laid back edges by creating a rotational drive, transmitting the drive through a rotationally yielding medium and at a slower infinitely variable rate to rotate the work axially, creating continuous rotational slippage in said medium throughout 360 degree relative rotation of the drive and work whereby the work during cutting is maintained free for rotational pulsing, locating the tool in the path of the rotating work but at only one side of the work axis of rotation so that the tool cuts into the work at said side only, rotationally impulsing the work, and axially supporting the rotating work independently of the cutting tool.

2,998,740

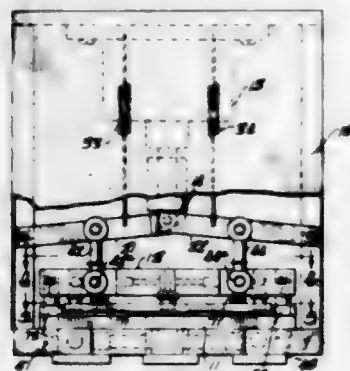
PUNCHING AND NOTCHING DEVICE AND LEVER OPERATED DRIVE MEANS THEREFOR

Ernest R. Gutzmer, Hinsdale, Ill., assignor to Intercompany Corporation, Chicago, Ill., a corporation of Illinois

Filed Sept. 14, 1955, Ser. No. 534,194
4 Claims. (Cl. 83-620)

1. In a machine for punching or notching sheets of photographic film, the combination comprising a female die plate, a male die plate aligned in parallel relation to said female die plate, means for advancing male die plate toward said female die plate while retaining parallel orientation with respect to the female die plate, said

female die plate including a set of four rectangular die plate components having accurately machined straight lateral edges and means for securing the components together to provide parting lines which are oriented along

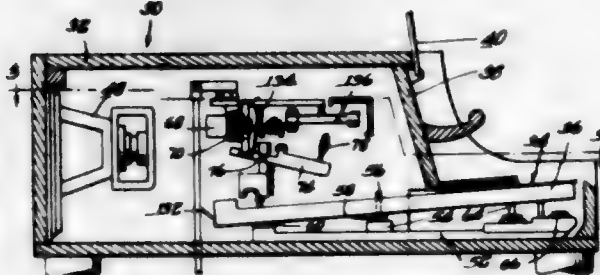


rectangular center lines, the components being so dimensioned and arranged as to define two pairs of notches having reference surfaces aligned with said center lines respectively, and members secured to said components for defining the third edge of said notches.

2,998,741

ELECTRONIC PIANO

Edward G. Thurston, Chicago, and Clifford W. Andersen, De Kalb, Ill., assignors, by direct and mesne assignments, to The Rudolph Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Oct. 29, 1956, Ser. No. 619,073
6 Claims. (Cl. 84-1.14)



1. An electronic piano comprising a case, a key movably mounted in said case for movement by the finger of a pianist, a tone generator mounted in said case and comprising a pair of electrically conductive vibratory substantially laterally flat reeds tuned to vibrate at substantially the same frequency, said pair of reeds respectively having tongues of similar size and configuration and both of substantially the same area, each of said reeds being continuous within its outline, said reeds having a common support and extending therefrom in the same direction and being electrically insulated from one another, the surfaces of said reeds being free, the reed tongues adjacent the free ends thereof and for a substantial distance back therefrom toward said support being flat, substantially parallel and in capacitive relation whereby the capacity between said pair of reed tongues varies upon vibration thereof, means adjacent said reeds and cooperating with said key for effecting vibration of said pair of reeds free of unnatural damping upon movement of said key, and translating means to which said reeds are electrically connected whereby changes in capacity between said reed tongues are converted into audible musical tones.

2,998,742

SPANISH GUITAR WITH MEANS FOR CONVERTING TO HAWAIIAN GUITAR

Francis L. Pratt, Rte. 1, Box 27, Glenwood Springs, Colo.
Filed Oct. 30, 1959, Ser. No. 849,923
10 Claims. (Cl. 84-267)

8. A guitar comprising a body having a trussrod secured at one end to the forward end of the body, a head

secured to the other end of said trussrod and provided with tuning keys and a string straining and suspending nut, said nut fixed to said head in prerequisite relationship, a neck interposed between the forward end of said body and nut and being joined at an inner end to the body and abutting and movably and adjustably connected at an outer end to said nut, said head, nut and trussrod being

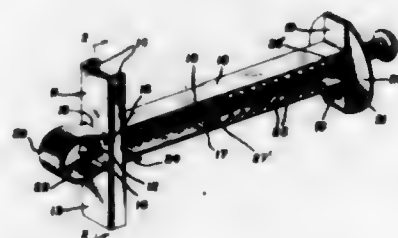


stationary relative to the body, said neck being made of flexibly resilient plastic material, said trussrod extending lengthwise through the neck, said neck capable of being flexed relative to the trussrod, being provided with a fingerboard, and an operating connection between the head and an adjacent end of the neck for flexing said neck.

2,998,743

TOGGLE BOLT

Alex A. Apfelzweig, 521 Ashbury Ave., Santa Rosa, Calif.
Filed Mar. 31, 1960, Ser. No. 18,897
3 Claims. (Cl. 85-3)



1. A toggle bolt comprising a screw element, an elongated channel-shaped toggle element having a central opening for screw-threaded engagement with the screw element and extending transversely of the screw element when engaged therewith on opposite sides of the same, generally U-shaped slots formed through the toggle element on opposite sides of the screw element and said opening, a pair of resilient sheet metal arms engageable through said slots and extending lengthwise of the screw element on opposite sides of the same, rows of teeth carried by the longitudinal edges of said arms for interlocking engagement with the sides of said U-shaped slots, an apertured head interconnecting corresponding ends of said arms and receiving the screw element, and a generally U-shaped loop carried by the other corresponding ends of said arms and engageable through said slots, whereby the toggle element may be pivoted upon said loop to lie substantially parallel to said arms, the resiliency of said arms and loop tending normally to hold the toggle element transversely of said arms and screw element.

2,998,744

OPTICAL SIGHT

Harold H. Wiese, Davenport, Iowa, assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 13, 1959, Ser. No. 806,198
4 Claims. (Cl. 88-1)

1. An optical gun sight for viewing a target comprising a semi-transparent mirror supported obliquely to the line of sight of the viewer, reticle means supported in a position to superimpose a reticle image on said mirror, said mirror and said reticle means being mounted for rotation on their respective supports, and connecting means comprising a link having opposite ends thereof connected respectively with said mirror and said reticle means, said

link being journaled for rotation interjacent the ends thereof, and being operable to effect angular movement

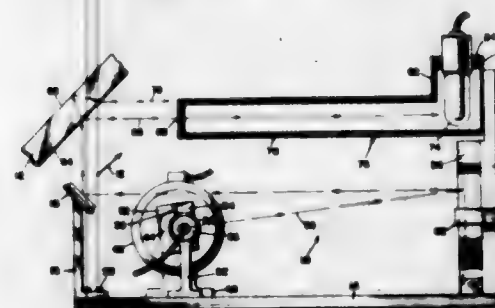


between said mirror and said reticle means in a 1 to 1 ratio.

2,998,745

OPTICAL-THICKNESS AND REFRACTIVE-INDEX METER

John F. McClellan, Stansbury Mill Road, Monkton, Md.
Filed Apr. 5, 1956, Ser. No. 576,273
12 Claims. (Cl. 88-14)



1. A device for determining a physical property of a body having spaced surfaces, comprising, means for producing a parallel beam of radiation, cyclical means for producing a parallel sweeping scan of said beam of radiation at an oblique angle onto said spaced surfaces of said body for displacement therefrom, and an electrical circuit including means responsive to the radiation of said scanning beam from said body and adapted to determine the displacements of said scanning beam from said spaced surfaces, within a given cycle, as a function of the physical property being determined for said body.

2,998,746

ANGULAR MEASUREMENT SYSTEM

John George Glevens, Rochester, Mich., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 13, 1959, Ser. No. 846,218
9 Claims. (Cl. 88-14)



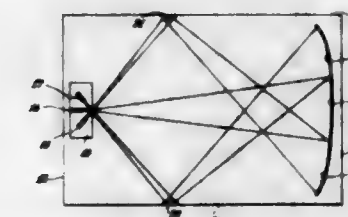
1. An angular measurement system comprising means for generating first and second planes of polarized light, said planes being displaced 90° and the intensity of said planes of light varying sinusoidally and differing by 180°, angular reference means receiving the output of said generating means for rotating said planes of light upon rotation of said angular reference means, light transmis-

sion means for accepting light polarized in one plane, said light transmission means being positioned to receive light from said angular reference means and being oriented with its plane of transmission 45° displaced from each of said first and second planes of polarized light, indicating means responsive to the output of said light transmission means and the output of said generating means for indicating the presence of sinusoidal variation in the output of said transmission means and the phase of such variation with respect to the phase of said output of said generating means.

2,998,747

VIGNETTING DEVICES

Russell H. McCullough, Los Angeles, Calif., assignor, by mesne assignments, to C-M Equipment Corporation, Los Angeles, Calif., a corporation of Delaware
Filed May 9, 1955, Ser. No. 507,067
3 Claims. (Cl. 88-16.6)

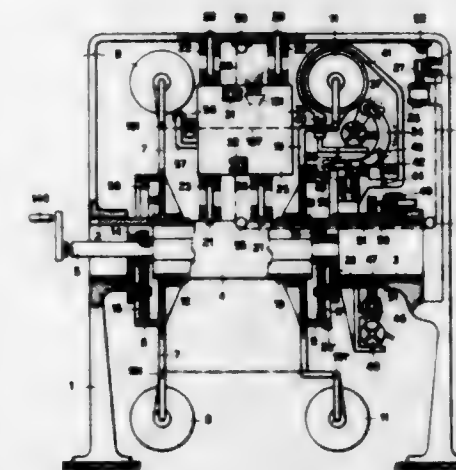


1. In combination with a motion picture projector including a film aperture and means for conveying film along said aperture to produce a screen image when a light beam is projected through said aperture, a vignetting device comprising a rotary barrel disposed adjacent one edge of said aperture along an axis of rotation which is parallel to said edge and including a plurality of planar blades extending radially therefrom and having a tortuous edge portion, and means to rotate said barrel at a rapid rate to cause said blades sequentially to mask the edge of said aperture to produce gradations in the margin of the projected image.

2,998,748

MACHINE FOR PROJECTIONS OF CINEMATOGRAPH FILMS CARRYING A PLURALITY OF SAID FILMS

Teresio Desilanti, Via Mazzini 4, Turbigo, Italy
Filed Dec. 22, 1958, Ser. No. 782,312
Claims priority, application Italy Feb. 27, 1958
4 Claims. (Cl. 88-17)



1. In a machine for projecting motion picture film, a pair of movably mounted plates, film driving means, a source of illumination and a projection system all mounted on said plates, means for moving said plates toward and away from one another to move them toward and away from operative projecting position, a pair of axially spaced

reel-holding members mounted at opposite ends, respectively, of said plates and rotatable together on a common axis, means for mounting a plurality of film holding reels in angularly spaced relation on said spaced members for rotation on parallel axes extending in a direction at right angles to said common axis, each reel on one of said members being paired with one reel on the other of said members to support a length of film therebetween, means for rotating said members together when said plates are in inoperative position to position a pair of reels so that a selected length of film will be in projecting position, means for operating said film driving means and said projection system when said plates are in operative position to rotate said selected pair of reels to move film through the projector from one reel of said selected pair of reels onto the other reel of said selected pair, means for rewinding the film onto said one reel after the projection of said film upon the movement of the plates away from one another, a supporting member for said rewinding means mounted to rotate on said common axis, means locking said rewinding means in operative position with said one reel to continue the rewinding of the film while said reel-holding members are being rotated to move the pair of reels which carry the film that is being rewound out of projecting position and to move another pair of reels into projecting position, a gear mounted to rotate about said common axis, a worm rotatably mounted on said supporting member and meshing with said gear, and means for disengaging said locking means and for locking said first-mentioned gear against rotation relative to said reel-holding members upon completion of the rewinding of the film on said one reel and for driving said worm to cause said supporting member to rotate relative to said gear to bring said rewinding means into operable position with one reel of the pair of reels which have been newly indexed into projecting position.

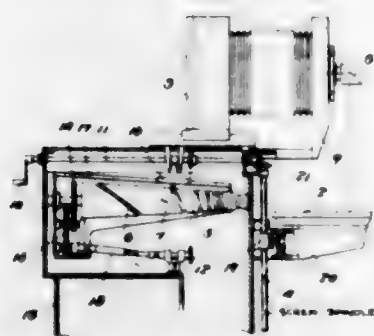
2,998,749

APPARATUS FOR FOCUSING A PROCESS CAMERA OR THE LIKE

Takashi Oji, Kita-ku, Kyoto, and Hiroshi Ijiri and Yukio Nishikawa, Sakyo-ku, Kyoto, Japan, assignors to Dainippon Screen Seizo Kabushiki Kaisha, Kamikyo-ku, Kyoto, Japan

Filed July 14, 1959, Ser. No. 826,966

Claims priority, application Japan Apr. 1, 1959
3 Claims. (Cl. 88—24)



1. An apparatus for focusing a process camera and the like comprising a base, a process camera fixed to said base, said camera having a movable part provided with an image plane, a guide rail fixed to said base, said movable part being slidably mounted on said guide rail, a vertically extending screw spindle journaled in said base, a movable support for carrying an object to be photographed, said movable support being movably mounted on said screw spindle, a horizontally extending spindle journaled in said base, bevel gear means interconnecting said horizontal spindle and said screw spindle so that rotation of said horizontal spindle will cause rotation of said screw spindle, a conical cam having a helical groove therein and journaled in said base, transmission means

interconnecting said horizontal spindle and said conical cam and a follower secured to said movable part and engaging said conical cam in said helical groove so that upon rotation of said horizontal spindle said movable part and said movable support are simultaneously adjusted.

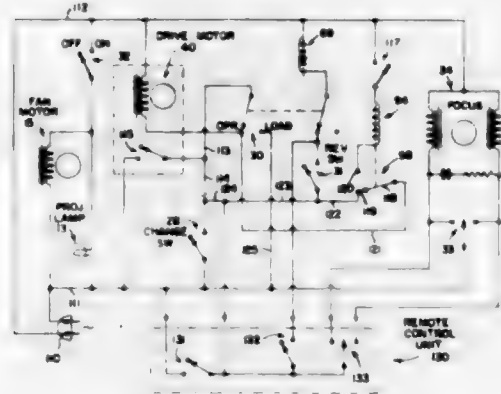
2,998,750

PHOTOGRAPHIC SLIDE PROJECTOR

William Roy King, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed June 29, 1960, Ser. No. 39,531

4 Claims. (Cl. 88—28)



1. An electrically operable photographic slide projector having a movable slide tray containing a plurality of individual photographic slides to be projected one at a time on a screen or the like, comprising: an electric motor, a movable control member including means to engage and move one of the photographic slides, means connecting said motor to said control member to control movement thereof, an initial energizing circuit for said motor including a manually operable normally open change switch, a motor holding circuit including a motor switch which is closed upon initial movement of said motor and is opened at the end of one cycle of operation of said motor to maintain said motor energized independent of said manually operable switch, said control member being effective during said cycle of operation to move a first slide from a projection position to a slide changing position wherein the first slide is returned to the slide tray and the slide tray is advanced to allow a second slide to be returned to said projection position at the end of said cycle, a further normally open switch controlled by said control member to be actuated to closed position as said control member moves to said slide changing position, a solenoid, an energizing circuit for said solenoid including in a series circuit said normally open switch and said motor switch, said energizing circuit being effective to energize said solenoid upon said control member moving to said slide changing position, means controlled by said solenoid when energizing to maintain said further normally open switch in closed position so long as said solenoid is energized, and a slide tray lock controlled by said solenoid to lock said slide tray upon energization of said solenoid and thereby prevent movement of said slide tray as the second slide is moved to the projection position, said solenoid being de-energized at the end of said cycle due to opening of said motor switch.

2,998,751

KERR CELL

Carl-Erik Granqvist, Lidings, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidings, Sweden, a corporation of Sweden

Filed Feb. 21, 1958, Ser. No. 716,614

Claims priority, application Sweden Mar. 9, 1957
2 Claims. (Cl. 88—61)

1. In a light modulator for modulating light passing therethrough in a predetermined direction, a Kerr cell

comprising a fluid-filled container, a pair of substantially plane electrodes immersed in the fluid, said electrodes being parallel to said predetermined direction and being spaced from the walls of said container, and means to



enable a flow of ionic fluid through said electrodes in a direction perpendicular thereto, said means including openings in the electrodes whereby a substantially homogeneous field is maintained within said cell with substantially no ionic flow parallel to the electrodes.

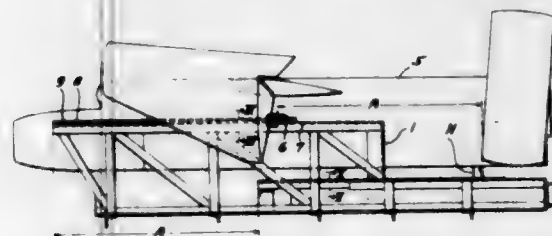
2,998,752

MISSILE LAUNCHING RAMP

Robert J. Counts, Akron, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 8, 1952, Ser. No. 275,500

1 Claim. (Cl. 89—1.7)



In combination, a self-energized missile, a pair of longitudinal short guide shoes positioned on the forward portion of the missile, one shoe extending laterally on each side of the missile, a third longitudinally-short guide shoe connected to the bottom of the rear of the missile, a launching ramp slidably supporting the missile and including a pair of parallel rails slidably supporting a pair of guide shoes, a third rail positioned midway between and parallel to the parallel rails but below the plane thereof and slidably supporting the third guide shoe, the third rail terminating in a forward direction short of the forward end of the parallel rails, the distance between the termination of the third rail and the points of termination of the parallel rails being equal to the distance between the pair of guide shoes and the single shoe whereby the pair of guide shoes leave the parallel rails at the same time as the single guide shoe leaves its rail so that no turning moment exists on the missile to turn it out of line when it is launched.

2,998,753

HOIST DEVICE FOR TRAINABLE MISSILE LAUNCHERS

Richard Z. Kaub, Bethesda, and Hilton H. Hammond, District Heights, Md., assignors to the United States of America as represented by the Secretary of the Navy

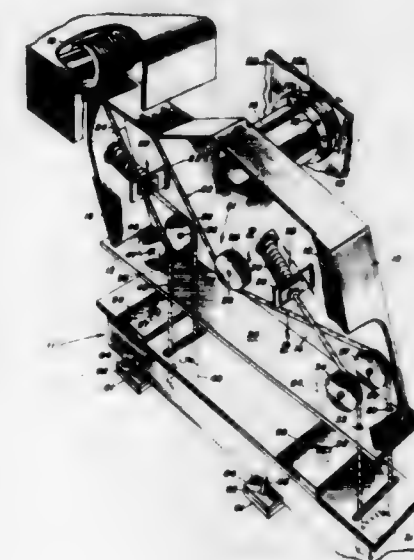
Filed June 30, 1955, Ser. No. 519,288

2 Claims. (Cl. 89—1.7)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A winch hoisting device connectable to and controllable by a missile launcher of the trainable type for supporting a missile in a loaded and firing position in accordance with the position of the launcher and comprising a housing having a pair of mutually spaced side walls, a bottom and a top wall in spaced relation with respect to each other and connecting said side walls, a tubular member carried by one of said side walls and having an apertured flange integrally formed thereon connectable to the launcher of the trainable type for

supporting the device upon the launcher such that the device is controlled by said launcher, a power winch supported by and on one end of said housing, a first pair of pulleys rotatably mounted on said side walls and disposed within said housing, a second pair of pulleys rotatably mounted on said side walls and disposed within the housing in spaced relation with respect to said first pair of pulleys, a guide pulley rotatably mounted on one of said side walls and disposed within the housing substantially centrally between said first and the second pair of pulleys, a movable lifting beam disposed beneath said bottom wall of the housing and having a pair of mutually spaced conical apertures formed therein, a first idle pulley mounted on said beam and cooperating with said first pair of pulleys, a second idle pulley mounted on said beam and cooperating with said second pair of pulleys, a first and second shock dampening device supported within the housing between said side walls, means carried by and secured to said side walls for supporting said first



and second shock dampening devices within said housing between the side walls, a flexible cable disposed about said power winch and having a pair of free ends disposed within the housing, one free end of the cable being reeved over said first pair of pulleys and the first idle pulley and secured to said first shock dampening device, the other free end of said cable being reeved over said second pair of pulleys, second idle pulley and said guide pulley and connected to said second shock dampening device, means carried by said first shock dampening device for connecting said one end of the cable thereto, means carried by said second shock dampening device for connecting said other end of the cable thereto, a pair of mutually spaced conical elements carried by said bottom wall engageable in said pair of apertures respectively for guiding and locking the beam to said housing as the beam moves into abutting engagement with said bottom wall through the medium of said power winch, pulleys and the cable, and means carried by said beam engageable with a missile for supporting the missile.

2,998,754

MISSILE LAUNCHER

Karol J. Bialy, College Park, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed May 29, 1959, Ser. No. 816,988

2 Claims. (Cl. 89—1.7)

1. In a missile launching device comprising a launching tube having longitudinal guideway grooves in the side walls thereof for maintaining alignment of the wings and fins of a missile being launched, a bearing assembly for reducing friction between said wings and fins and said guideway grooves comprising a contoured cap member

shaped to fit over the outer end portion of said missile wing or fin, a plurality of longitudinally aligned ball bearings in said cap member, an end wall in said cap member having a plurality of circular apertures therein and through which said bearings project to engage said guide-way grooves, the diameter of each of said circular apertures being less than the diameter of its corresponding bearing, a follower plate in said cap member parallel to



said end wall and contacting said ball bearings, and a plurality of springs in said cap member confined between said follower plate and the end surface of said missile wing or fin, whereby said bearing assembly reduces kinetic friction between said missile wing or fin and said launching tube and the entire bearing assembly is completely ejected from said missile wing or fin upon exit of said missile from said launching tube.

2,998,755

TRAVERSELY SWINGING GUN BREECH WITH OBTURATING SEAL

Robert J. Therry, Averill Park, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Filed Feb. 1, 1960, Ser. No. 6,076

6 Claims. (Cl. 89-26)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a gun having a tube member, a chamber member mounted to said tube member for pivotal displacement between an open loading position and a closed battery position, an axially flexible ring seal carried by said chamber member for forming a gas-tight seal between said tube and chamber member when said chamber member is in the battery position, a sealing surface disposed on said ring seal for sealing contact with said tube member when said chamber member is in the battery position, cooperating cam means disposed on said ring seal and said tube member for compressing said

ring seal to displace said sealing surface clear of contact with said tube member during pivotal displacement of said chamber member to and from the closed position, and means to permit forward expansion of said ring seal when said chamber member is in the battery position and thereby obtain sealing contact between said sealing surface and said tube member.

2,998,756

RAMMING DEVICE FOR FIREARMS

Carl Mauritz Christianson, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

Filed Dec. 11, 1958, Ser. No. 779,641

Claims priority, application Sweden Dec. 14, 1957

4 Claims. (Cl. 89-47)



1. In a recoiling automatic firearm pivotally supported upon a mounting for adjusting firing elevation thereof, said firearm having a main frame slidably supporting a ramming lug for retractable ramming movement in one direction by a spring force source acting between said lug and said main frame, a cross-bar slidably supported for reciprocating longitudinal movement upon said frame for moving said ramming lug in an opposite direction into a cocked position, abutment means carried by said cross-bar for driven movement by recoiling parts of the firearm in said opposite direction from an initial position, guide means carried by said frame effecting partial rotation of said cross-bar out of the path of movement of the recoiling parts of the firearm upon complete retraction of said ramming lug into said cocked position, limit stops carried by said frame in the path of return movement of said cross-bar in said one direction limiting the return movement of said cross-bar relative to said cocked position of said ramming lug, a buffer device carried by said cross-bar for impact by said ramming lug during said ramming movement in said one direction, and cam means acting between said main frame and said mounting for adjusting the position of said limit stop in response to an adjustment of the firing elevation of said firearm upon said mounting, said cam means adjusting the length of travel of said ramming lug toward said limit stops in direct proportion to changes in the firing elevation of said firearm.

2,998,757

CONTROL MECHANISM FOR AUTOMATIC FIREARMS WITH REVOLVER DRUM

Fritz Herlach and Erwin Hepperle, Zurich, Switzerland, assignors to Machine Tool Works, Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland

Filed Mar. 22, 1951, Ser. No. 216,881

Claims priority, application Switzerland Aug. 23, 1950

1 Claim. (Cl. 89-155)

In a large caliber gun, a casing, a drum rotatably mounted in said casing and having a plurality of cartridge chambers formed therein, a gas-operated slide mounted in said casing for longitudinal movement transverse to the direction of rotation of said drum, said slide having two grooves formed therein and having two overlapping ends and two curved ends extending in opposite directions,

whereby said two grooves form substantially a V, a plurality of rollers mounted circularly upon said drum, springs engaging said rollers, each of said rollers having a portion projecting radially beyond the periphery of said drum and fitting into any one of said grooves, and a stop piece fixed upon said slide in one of said grooves adjacent to the overlapping ends of the two grooves and having



a gradually inclined side portion facing the curved end of said one groove and an abruptly inclined side portion facing the other one of the two grooves to facilitate the movement of a roller projecting into the curved end of said one groove to said overlapping ends and into the other one of said grooves and to prevent the reentry of that roller into said one groove.

2,998,758

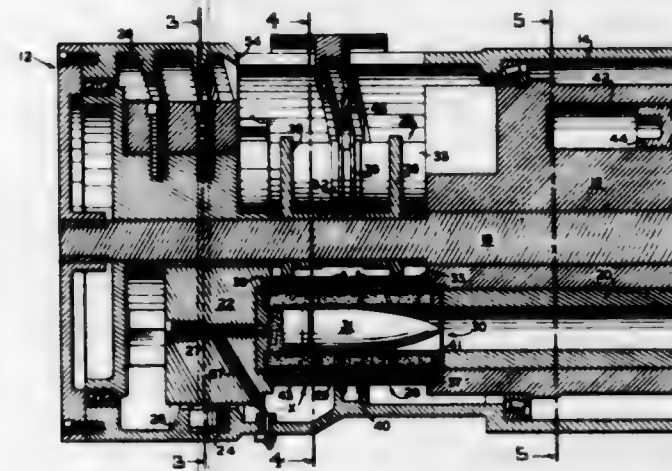
REVOLVING CAGE GUN WITH A PLURALITY OF BARRELS AND REMOVABLE CHAMBERS

Herve J. Ouellette, Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed June 19, 1957, Ser. No. 666,788

4 Claims. (Cl. 89-155)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a machine gun including a receiver for rotatably mounting a cage and a plurality of barrels mounted on the cage for successive rotation thereby through a firing station, the combination including sprocket means axially mounted relative to the cage rearward of the barrels and connected to the cage for rotation therewith, a plurality of firing chambers each inclosing a cartridge for discharge therein, said firing chambers being each encircled by a link having an integral flange, strap connectors for pivotally joining said firing chambers so as to form a belt engageable by said sprocket means and so that successive ones of said firing chambers are positionable thereby in axial alignment with successive ones of the barrels and are disposed for relative longitudinal displacement, a port in the receiver to permit entrance of said belt into the receiver and exit of said belt therefrom, a breechblock mounted in the cage rearward of each of the barrels for axial displacement relative thereto, a cam track formed inside of the receiver for sliding engagement by said flanges on said links when rotated by sprocket means in the receiver, said cam track being generated to displace said firing chambers forwardly into sealing engagement with the aligned ones of the barrels during rotation thereof to the firing station and rearwardly away from the associated barrels after passing thereby, a cam path

formed inside the receiver for sliding engagement by a follower provided on each of said breechblocks to provide longitudinal displacement thereof, said cam path being generated to displace said breechblocks forwardly into sealing engagement with the related one of said firing chambers after said firing chambers are moved into sealing engagement with the associated barrels and before reaching the firing station, and firing means disposed for discharging the cartridges when said breechblocks are forwardly displaced into sealing engagement with the associated firing chambers and rotatably displaced to the firing station.

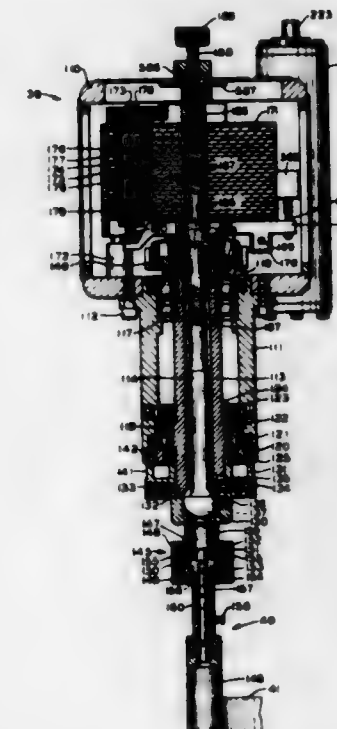
2,998,759

AUTOMATIC TRACING DEVICE

Thomas E. Dugle, Cincinnati, Ohio, and Loren J. Meyers, Garden Grove, Calif., assignors, by mesne assignments, to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Application Sept. 11, 1958, Ser. No. 761,377, now Patent No. 2,949,739, dated Aug. 23, 1960, which is a continuation of application Ser. No. 521,795, July 13, 1955, now abandoned. Divided and this application Mar. 21, 1960, Ser. No. 17,240

3 Claims. (Cl. 90-62)

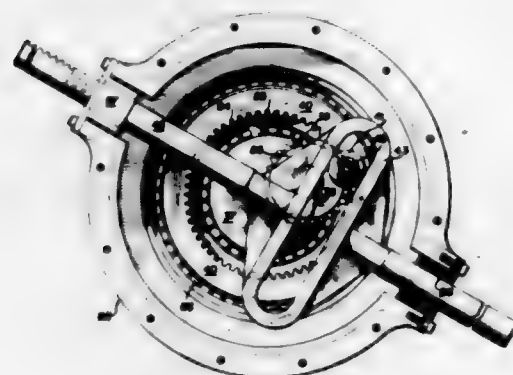


1. In a system for controlling a pair of transversely movable elements for effecting 360° relative movement between a tracer and a pattern carried thereby, the combination of a pair of reversible fluid motors for driving said elements, a tracing finger mounted on said tracer for rotation about its longitudinal axis and for pivotal movement by said pattern about a transverse axis, said finger being pivotally movable by said pattern from an undeflected position through a position of normal deflection to an overdeflected position, means for producing an electric signal of one character when said finger is underdeflected by said pattern and for producing an electric signal of another character when said finger is overdeflected by said pattern, means controlled by said signal for turning said finger about its longitudinal axis in one direction or the other depending on the character of said signal, a device for producing a pair of voltages bearing a sine and cosine relationship respectively, to the rotational position of said finger about its longitudinal axis, and means actuated by said pair of voltages for controlling the operation of said fluid motors to cause said tracer to move in such a direction relative to said pattern as to restore the tracing finger to its position of normal deflection.

2,998,760

**DRIVE FOR INTERMITTENTLY FEEDING A
PREDETERMINED LENGTH OF WEB MA-
TERIAL**

Claude V. Allen, Richmond, Va., assignor to The In-
Roto Machine Company, Inc., Richmond, Va., a cor-
poration of Virginia
Filed Mar. 25, 1960, Ser. No. 17,582
3 Claims. (Cl. 93—58.3)



1. In combination with a creasing and blank forming press and press operating means for closing and opening the dies of said press, a drive for intermittently feeding a predetermined length of web material, comprising a pair of feed rolls, a drive gear for said rolls, a drive shaft, an overrunning clutch connecting said drive gear and shaft to turn the gear in one direction only, a pinion on said shaft, a rack engaging said pinion for turning said shaft in two directions, a rotatably mounted ring gear, a planetary gear meshing with and revolvable around said ring gear, a crank on said planetary gear and drivingly connected with said rack, and control means engaged with said ring gear for normally retaining said ring gear stationary but enabling angular adjustment thereof to selectively vary the length of web material fed by each stroke of said rack, and including an arcuate rack affixed to said ring gear and a worm in mesh with said arcuate rack, drive means connecting said press operating means and said planetary gear to synchronize the feed of web by said feed rolls with the opening of the press dies, and means for automatically turning said worm to adjust the length of web feed to a predetermined length and including a lever frictionally secured to the worm shaft, a pair of solenoids arranged to move the lever in opposite directions, and photoelectric means disposed near said feed rolls at the entrance of the web to control operation of one or the other of said solenoids in accordance with the over or under length of web being fed to the press.

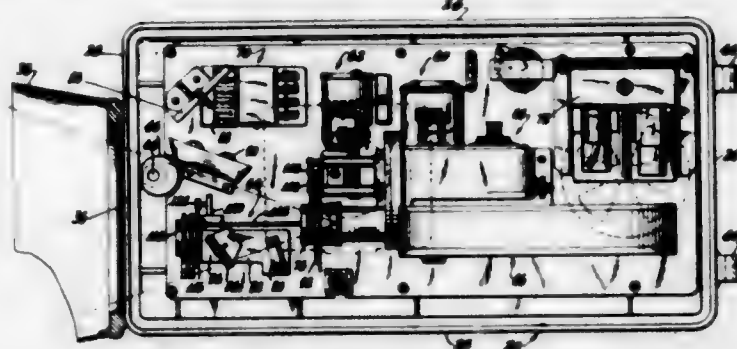
2,998,761

CAMERA

Benjamin Cooper and Albert Hohmann, Brooklyn, N.Y.,
assignors, by direct and mesne assignments, to Ameri-
can Electronics, Inc., Los Angeles, Calif., a corpora-
tion of California
Filed Mar. 20, 1957, Ser. No. 647,328
7 Claims. (Cl. 95—1.1)

1. In combination a camera having primary lens means including light controlling iris means, shutter means, film drive means, and means for concurrently actuating said film drive means and shutter means to expose riven film with an image focused thereon by said primary lens means, indicia means adjacent said camera, means including an auxiliary lens means prefocused to superimpose an image of said indicia means, on the image formed by said primary lens means on the driven film, and photoelectric means to control said iris means in accordance with the intensity of light on the object

forming the image formed by said primary lens means, electric means to illuminate said indicia means, and

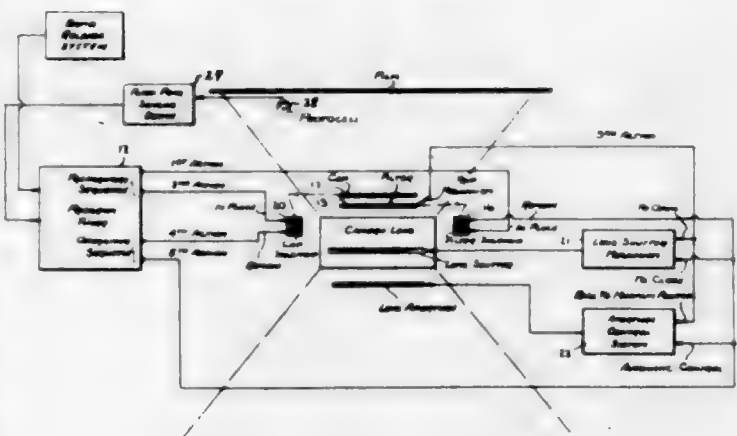


means controlled by said photoelectric means, to control said illuminating means.

2,998,762

**AERIAL AND GROUND PHOTOGRAPHIC EQUIP-
MENT FOR PHOTOGRAPHING NUCLEAR BOMB
EXPLOSIONS WITH AUTOMATICALLY CON-
TROLLED INTERVAL FILTER AND APERTURE
SETTINGS**

George W. Goddard, Chevy Chase, Md., assignor to
Bulova Research and Development Laboratories, Inc.,
Woodside, N.Y., a corporation of New York
Filed Aug. 20, 1956, Ser. No. 605,051
5 Claims. (Cl. 95—12.5)



1. An automatic control system for a camera adapted to photograph a nuclear bomb explosion, said camera including a lens, a shutter therefor, a heavy-density optical filter adapted to cover the lens, and an opaque capping plate adapted to cover the filter, said system comprising a program timer operatively coupled to said lens shutter, said filter and said capping plate, means to trigger said timer upon release of the bomb to effect a first preparatory sequence rendering said camera ready whereby said lens is covered by said filter, said filter is capped by said plate and said shutter is open, said program timer then effecting a second operating sequence commencing a predetermined interval after said bomb is released whereby said capping plate is removed to expose said lens through said filter, and photosensitive and other means responsive to the peak flash of the bomb explosion to release the shutter and thereby complete a first exposure.

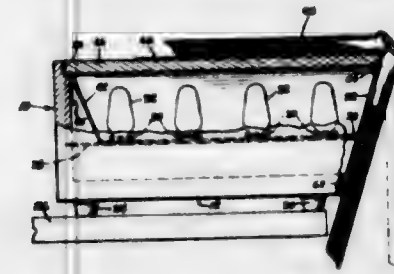
2,998,763

COPIER

Richard S. Brown, 3000 Surry Lane, Wayzata, Minn.
Filed June 20, 1958, Ser. No. 743,439
8 Claims. (Cl. 95—73)

1. A copier of the class described comprising a casing having an outwardly inclined opaque sidewall, a light conductive panel on said casing extending into juxtaposi-

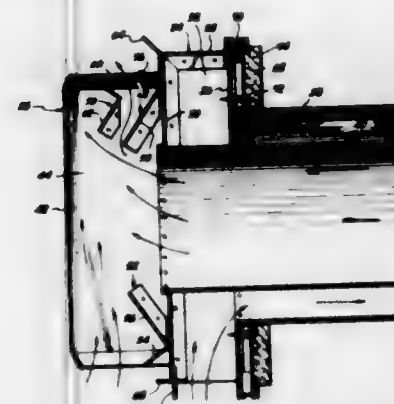
tion with the upper edge of said sidewall, and a light source beneath said light conductive panel for transmit-



ting light upwardly through said panel onto a photo-sensitized matrix placed on said panel.

2,998,764

SEALED HEATER VENTING SYSTEM
Karl L. Bedell, Pasadena, and Charles R. Fields, Arcadia,
Calif., assignors to Williams Furnace Co., Buena Park,
Calif., a corporation of Delaware
Filed Sept. 13, 1960, Ser. No. 55,748
7 Claims. (Cl. 98—62)



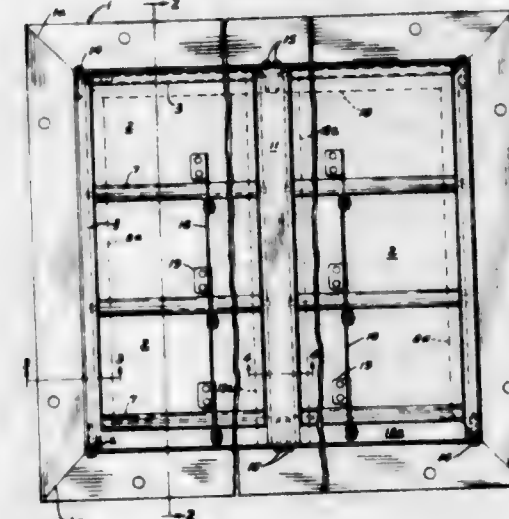
1. A combined inlet and outlet vent adapted to be mounted on the vertical exterior wall of a building to connect with concentric inlet and outlet openings of a sealed heater located inside the building and comprising a vented inlet box adapted to cover the heater inlet opening, the inlet box being substantially closed on its front and sides and having a relatively large duct extending horizontally from the rear thereof for connecting with said heater inlet opening, and a vented outlet box mounted at the front of the inlet box and adapted to cover the heater outlet opening, the outlet box being substantially closed on its front and sides and having a relatively small duct extending from the rear thereof through the inlet box approximately concentric with the relatively large duct for connecting with said heater outlet opening.

2,998,765

PIVOTAL LOUVER ASSEMBLY
John Spargo, 2738 W. Warren, Detroit 8, Mich.
Filed July 2, 1958, Ser. No. 746,280
4 Claims. (Cl. 98—119)

1. A louver assembly comprising a frame formed with a substantially rectangular opening and comprising a first pair of parallel bars defining opposite margins of said opening and a second pair of parallel bars defining the other two margins of said opening, fasteners rigidly interconnecting the first and second pairs of bars, a pair of slideways respectively formed in said first pair of bars, a pair of elongated parallel rods inserted in the slideways and terminally fitted between the bars of the second pair to restrain said rods from sliding, a plurality of spaced parallel pins fixed on each rod and projecting into said opening, said pins on each rod being paired and aligned with those on the other rod, a plurality of louvers disposed in said opening and pivotal to open or close said

opening, said louvers each rigidly carrying a tube and said tubes being disposed at corresponding margins of the louvers, said pins being inserted in the tubes and pivotally mounting the louvers; the rods, pins, and louvers form-

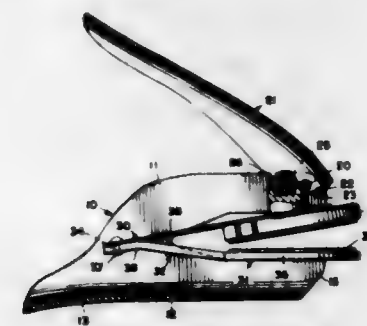


ing a subassembly for insertion in the slideways prior to applying one of the bars of said second pair to the frame, and means interconnecting the louvers for pivoting in unison on said pins.

2,998,766

SEAL PRESS

Charles Priesmeyer, Park Ridge, Ill., assignor to Meyer
& Wenthe, Inc., Chicago, Ill., a corporation of Illi-
nois
Filed Oct. 22, 1957, Ser. No. 691,646
6 Claims. (Cl. 101—3)



1. In a seal press, a U-shaped frame having two sides forming a hand grip and notched out to provide a lower arm having upwardly facing edges that are parallel with each other and an upper arm having sides defining upper edges spaced from said lower edges, a handle pivotally mounted between the sides of the upper arm, a roller, means in said handle rotatably supporting the roller above said upper edges and slightly above the level of the pivotal mount when in resting position, a unitary die holder assembly comprising a lower die support and an upper die support interconnected to carry dies in co-operating relationship, one of said supports being an elongated spring urging separation of the dies, a boss carried by the upper die support and receivable between the sides of the upper arm, said boss being offset in a vertical direction on the upper face to provide a saddle notch receiving said roller in releasable latching relationship under the influence of said spring to locate and center said unitary die holder assembly perpendicularly under said roller in working position, said supports being restrained against lateral movement when received between the two sides of the frame at the inner extremity of the notch but freely movable vertically and longitudinally within predetermined limits when the roller is received in the saddle notch, said cooperating roller and

saddle notch constituting the pressure transmitting means and sole means for releasably latching the unitary die holder in the frame.

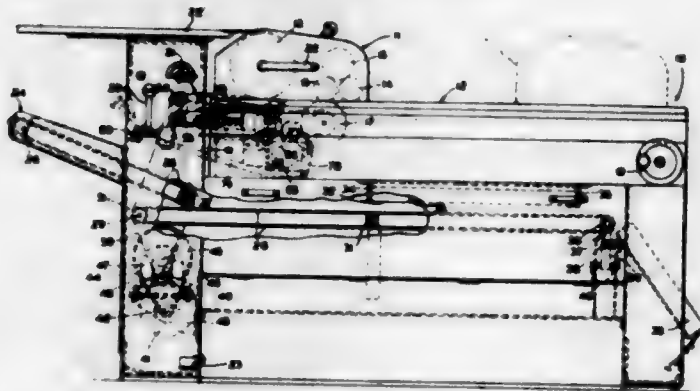
2,998,767

TEST OR PROOF PRESS

Edward O. Vandercook, Kenilworth, David D. Vandercook, Evanston, Fred A. Fesser, Chicago, and James Burton Roozee, Arlington Heights, Ill., assignors to Vandercook & Sons, Inc., Chicago, Ill., a corporation of Delaware

Filed Apr. 22, 1955, Ser. No. 503,105

1 Claim. (Cl. 101-269)



In a printing press or the like, a bed arranged to receive a printing form, at least one form roller for applying ink to said form, a carriage journalling said form roller and reciprocable longitudinally of said bed, an ink applicator roller in said bed for applying ink to said form roller, a vibrator roller for applying ink to said applicator roller, ink supply means including a confined ink-supply chamber and an outlet in communication with said chamber, a ductor roller movable under control of movement of said carriage between a position in engagement with said vibrator roller and a position for receiving ink from said outlet, and means controlled by movement of said carriage for reducing the volume of said chamber to supply a controlled quantity of ink at said outlet.

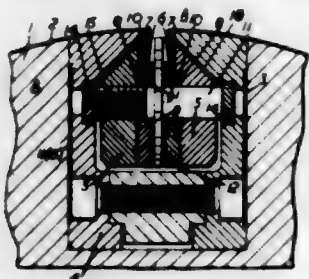
2,998,768

MECHANISM FOR CLAMPING FLEXIBLE PRINTING PLATES

Nils Norlin, Helsingborg, Sweden, assignor to Carl Allers Etablissement A/S, Copenhagen, Denmark

Filed Dec. 22, 1958, Ser. No. 782,183

12 Claims. (Cl. 101-415.1)



1. In a printing cylinder construction, a cylinder formed at its outer surface with a groove extending parallel to the cylinder axis for receiving the end portions of a flexible printing plate wrapped around said cylinder, which end portions are turned inwardly to extend into said groove and are formed at their extreme ends with lips extending oppositely and away from each other; two clamping bar structures mounted in said groove respectively between said plate end portions and the groove walls and having recesses for receiving said lips; ejecting means mounted within said groove for movements in predetermined paths from retracted positions to operated positions in engagement with said lips for ejecting

the latter from said recesses; and operating means mounted in said groove within the circumference of said cylinder and being operable in said groove for moving said bar structures relatively to each other and to the groove walls for tensioning the plate about the cylinder and for moving said ejecting means to operated positions.

2,998,769

ROCKET LAUNCHED NOISEMAKER

Ralph P. Crist, 1925 N. Calvert St., Apt. 203, Arlington, Va.

Filed Dec. 11, 1952, Ser. No. 325,497

3 Claims. (Cl. 102-7)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A flotation system for use with a submerged body, comprising a hollow cylindrical shell closed at one end and open at the other, a float having a central opening positioned in said shell, a rod secured at one end to the closed portion of said shell and arranged to extend through the central opening of said float, float releasing means secured in the open end of said shell, a longitudinal bore in said releasing means for receiving the other end of said rod, a portion of reduced diameter adjacent said other end of said rod, a lateral bore in said float releasing means, a locking pin in said lateral bore for engaging the reduced portion of said rod, and resilient means in said shell acting on said float releasing means for biasing said locking pin in frictional engagement with said reduced portion of said rod, said locking pin being movable and provided with means adapting it for disengagement of the reduced portion upon compression of the resilient means, whereby the float releasing means will be ejected from said shell.

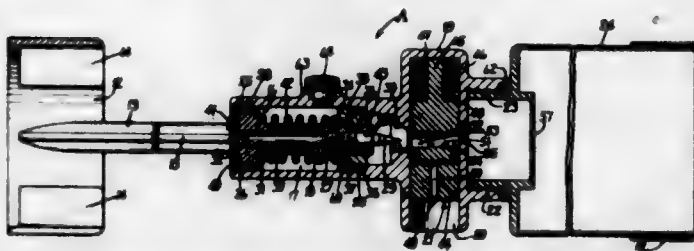
2,998,770

UNDERWATER EXPLOSIVE DEVICE

Samuel D. Bernard, Penhook, Va., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Nov. 24, 1958, Ser. No. 776,072

3 Claims. (Cl. 102-7)



1. An explosive device particularly adapted for underwater use, comprising a generally T-shaped housing having integral leg and arm portions, said leg portion having a variable diameter passage extending entirely therethrough and defining a firing chamber, said arm portion being open at one end only and defining an arming chamber communicating with said firing chamber, a firing mechanism in said firing chamber comprising a piston having a head portion normally located at one end of said passage in closing relation thereto and a tubular stem portion provided with a plurality of cir-

cumferentially spaced openings adjacent one end, an annular stationary collar slidably receiving said stem portion and spaced from the opposite end of said passage, a relatively slender firing pin slidably received in said stem portion and having an annular groove formed therein, a plurality of balls housed in said stem openings and said pin groove locking said pin to said stem to maintain said pin in a retracted position, first spring means bottoming at opposite ends against said piston head portion and collar maintaining said head portion in closing relation to said one end of said passage, second spring means within said tubular stem portion urging said firing pin toward said arming chamber, an arming piston slidable in said arming chamber and having a passage therethrough to receive said firing pin when said pin and said passage are aligned, third spring means bottoming at one end against the closed end of said arming chamber and at its opposite end against said arming piston for urging said piston toward said open end of said arming chamber and said piston into a non-arming position, and an explosive charge container attached to said housing arm portion, said arming piston first moving under action of a relatively low hydrostatic pressure to align the passage therein with said firing pin, and said piston head portion moving under action of relatively greater hydrostatic pressures to move said piston stem portion relative to said collar member until the openings in said stem portion are beyond the end of said collar member and the balls are cast into said space and out of locking engagement to permit said firing pin to be driven by said second spring means into the passage in the arming piston to detonate the explosive.

2,998,771

PROJECTILES

Lloyd G. Mosier, 19 Stevens Road SE., Glen Burnie, Md.
Filed Apr. 1, 1955, Ser. No. 498,785
1 Claim. (Cl. 102-50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A two-stage rocket comprising an elongated cylinder, a primary motor occupying the rearward portion of said cylinder for propelling said cylinder along a line of flight, a window in the side wall of the middle portion of said cylinder, at least one exhaust port in the middle portion of said cylinder diametrically opposite said window, a secondary motor occupying a middle portion of said cylinder for applying a propelling force through said at least one exhaust port, a single radiant energy sensitive cell in said cylinder behind said window for producing an electrical pulse in response to energy radiated from a target, an igniting mechanism for igniting said secondary motor, and means for rotating said cylinder about the longitudinal axis of said cylinder whereby said window and said single radiant energy sensitive cell are revolved in a spiral pattern.

2,998,772

PLASTIC BONDED EXPLOSIVES ROCKET WARHEAD

William E. Land, 921 19th St. NW., Washington, D.C.
Filed Sept. 2, 1955, Ser. No. 532,379
5 Claims. (Cl. 102-56)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A warhead for high-speed missiles, said warhead comprising a unitary block of high-strength explosive ma-

terial capable of withstanding flight and impact without appreciable deformation and of serving as the sole structural element connecting and supporting forward and aft elements of a missile without reinforcement, said block having a base member attached to the rearward end



thereof, said base member having means for effecting attachment to a missile body, said block having also a frontal cavity, a metal insert secured into said frontal cavity, said insert having means to effect connection with fuze means.

2,998,773

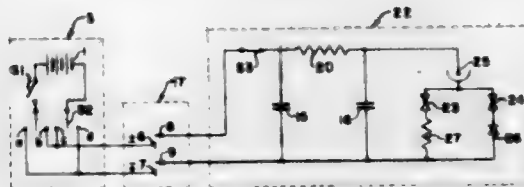
SELECTIVELY VARIABLE TIMING FUZE

Herbert E. Ruehle, 9409 Flower Ave., Silver Spring, Md.

Filed Oct. 15, 1954, Ser. No. 463,078

9 Claims. (Cl. 102-70.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a timing circuit, a capacitor, a polarity selective charging circuit for establishing an initial potential polarity condition on said capacitor, a first circuit including normally inactive electroresponsive means initially activated at a predetermined time with respect to a reference instant of time and discriminating means for passing only current of a preselected polarity through said first circuit, a second circuit including normally inactive electroresponsive means initially activated at a time greater than said predetermined time with respect to said reference instant of time, said second circuit being of such character as to present a conductive path to currents of said preselected polarity and of a polarity opposite to said preselected polarity, and a normally open switch operative at said reference instant of time to connect said first and second circuits across said capacitor whereby the electroresponsive means of said first and second circuit are selectively operated in accordance with the initial potential polarity on said capacitor.

2,998,774

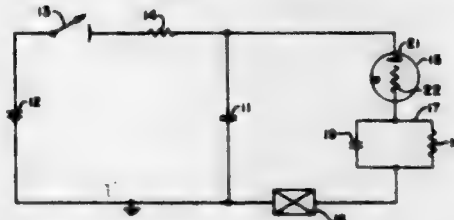
VIBRATION RESPONSIVE ELECTRICAL FUZE

Earl D. Gibson, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1955, Ser. No. 556,365

8 Claims. (Cl. 102-70.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)



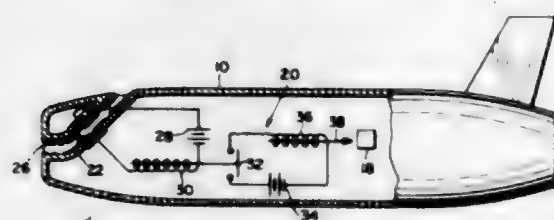
1. An electric fuze comprising a capacitor, a resistance, a source of unidirectional potential, means for connect-

ing said capacitor to said source through said resistor thereby to charge said capacitor to a potential at a predetermined charging rate, a vibration responsive tube connected to said capacitor, said tube being rendered conductive at a first breakdown potential level when unvibrated and being rendered conductive at a second breakdown potential level when vibrated, said second level being lower than said first level, an R-C network having a time constant characteristic preselectively longer than said predetermined charging rate connected to said tube for discretely discharging said capacitor through said tube when vibrated to a potential slightly less than said first breakdown potential level and in excess of said second breakdown potential level, and an electroresponsive detonator connected between said capacitor and said network, said detonator being ignitable by the potential applied thereacross from said capacitor through said tube when said tube has been vibrated.

2,998,775

PROXIMITY FUSE

John B. Craft, 11812 Lakewood Blvd., Downey, Calif.
(709 W. Atlantic St., Philadelphia 40, Pa.)
Filed Feb. 9, 1956, Ser. No. 564,588
4 Claims. (Cl. 102-70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A missile for sensing a jet propelled target aircraft creating an exhaust trail of ionized air, comprising a body portion, an explosive charge in said body portion, a primer for igniting said charge and a fuse for igniting said primer, a fuse circuit including a current source in the missile and an ion sensing means, said means energizing the circuit and arming the fuse when the missile enters the ionized trail, and said ion sensing means de-energizing the circuit to detonate the primer after the missile passes through the ionized trail.

2,998,776

RELIABLE BATTERY POWER SUPPLY

Paul B. Morgan, 8302 Rosette Lane, Adelphi, Md.
Filed June 26, 1958, Ser. No. 743,512
1 Claim. (Cl. 102-70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

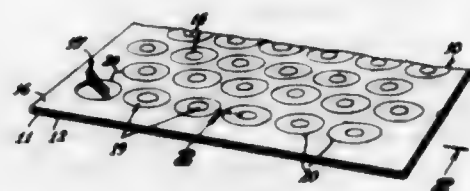


A battery power supply comprising; a plurality of batteries connected in parallel, a plurality of electrically initiated detonators each serially connected to a respective one of the batteries, normally open double pole, single throw switch means for discharging said batteries across the respective detonators, a plurality of unidirectional conducting devices, each connected in series with a respective battery between the battery and said switch means to permit electron flow only in a direction away from the negative terminal of its respective battery when said switch is closed and to prevent electron flow into the negative terminal of said battery when said switch is open, means for mutually interconnecting the inputs of said detonators upon closure of said switch thereby insuring initiation of every detonator.

2,998,777

PERCUSSIVE CAP STRUCTURE

John W. Ryan, 11027 Cashmere St., Bel-Air, Calif.
Filed Feb. 9, 1953, Ser. No. 791,983
4 Claims. (Cl. 102-86.5)

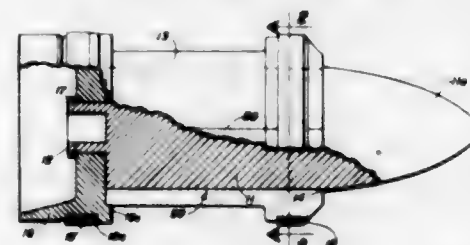


1. A percussive cap structure comprising: a carrier sheet; spaced charges of fulminating material on one face of said sheet; an exposed outside layer of adhesive on the opposite face of said sheet; and cuts extending through said sheet, each of said cuts substantially surrounding one of said charges and being spaced therefrom.

2,998,778

SABOT RETAINER

Charles E. Hablitzel, Albuquerque, N. Mex., assignor to the United States of America as represented by the Secretary of the Navy
Original application Aug. 2, 1945, Ser. No. 608,598.
Divided and this application May 7, 1953, Ser. No. 353,462
1 Claim. (Cl. 102-93)

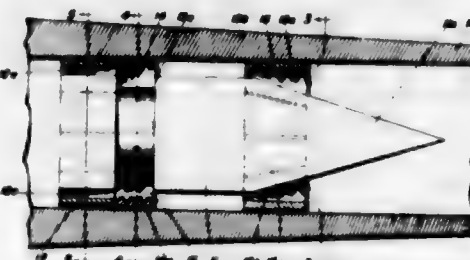


In a projectile having a sub-caliber core and a sabot thereon, a threaded appendage on said projectile extending loosely through said sabot and a split collar threaded upon said appendage to fix said sabot to said projectile, said collar having a weakened portion opposite the split on said collar and adapted to open under centrifugal force to release said sabot from said core.

2,998,779

PROJECTILE

Donald T. MacRoberts, Shreveport, La., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 10, 1944, Ser. No. 544,195
1 Claim. (Cl. 102-93)



A subcaliber projectile comprising a subcaliber cylindrical core having an ogival nose portion and an annular groove adjacent to its base, a pair of sleeves carried by the core and constituting a twin bourrelet to ride the lands of a rifled gun bore, one of the sleeves being mounted on the rear of the core in back of the groove, the other sleeve being mounted on the ogival nose, a sabot fitted in the groove and being abutted by the rear sleeve,

and a turning band affixed annularly of the sabot, being diametrically larger than the sleeve to be engraved by the grooves of the rifling.

2,998,780

HIGH VELOCITY, FIN STABILIZED PROJECTILE, RIFLED BARREL GUN SYSTEM

William B. Ansbacher, Ellis H. Scott, and Gilbert C. Bowen, Silver Spring, Joseph J. Redmond, Kensington, and Robert L. Detwiler, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 28, 1956, Ser. No. 587,910
6 Claims. (Cl. 102-93)
(Granted under Title 35, U.S. Code (1952), sec. 266)

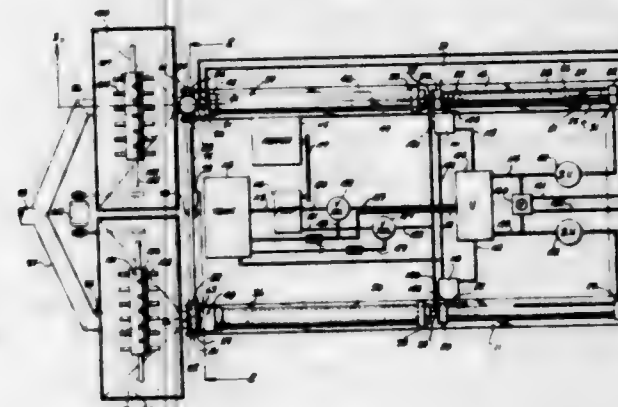


1. A sabot for a fin stabilized projectile having a diameter less than the bore size of a rifled gun from which it is to be fired, comprising a circular base plate having an annular bearing surface of circumference slightly less than the bore of the gun, a plurality of longitudinal members individually and coaxially mounted on said base plate in a manner to form a hollow cylinder adapted to receive a projectile, a plurality of metallic arcuate band segments carried by each of said members respectively to form an annular flange on said cylinder, said flange having an outside diameter substantially equal to the bore of the gun from which the projectile is to be fired, and an annular upraised soft metallic lip secured to said base plate and having a diameter slightly greater than the bore of the gun whereby upon firing of the gun said lip is swaged and sheared off thereby allowing the bearing surface to pass slidably within the bore of the gun without locking engagement with the rifling thereof.

2,998,781

PUMP FOR PLASTIC CONCRETE

Kenneth Bertron Triebel, El Monte, Calif., assignor to Giant Industries, Pico Rivera, Calif., a partnership
Filed Nov. 28, 1960, Ser. No. 72,239
8 Claims. (Cl. 103-49)



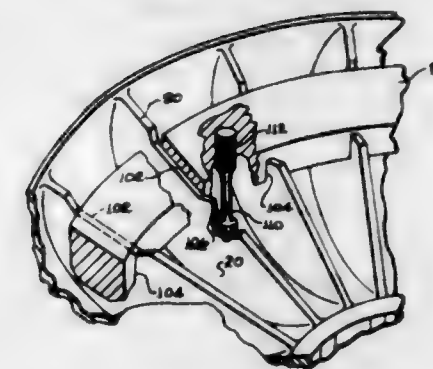
1. A pump for pumping plastic concrete comprising a first pump cylinder and slidable piston and a second

pump cylinder and slidable piston, each pump cylinder being fixed in position and opening at one end into a separate valve chamber, a pair of valve guides on each valve chamber, each pair of valve guides having spaced parallel surfaces and defining an inlet port and an outlet port each extending through the valve guides and through their parallel surfaces and communicating between the interior of the valve chamber and the exterior of the valve guides, the inlet and outlet ports in each pair of valve guides being linearly aligned along a common axis and spaced from each other along such axis, plastic concrete supply hoppers connected to the inlet ports in the valve guides exteriorly of the valve guides, plastic concrete discharge conduits connected to the outlet ports in the valve guides exteriorly of the valve guides, a valve slide disposed slidably between the spaced parallel surfaces of each pair of valve guides, said valve slide being slidable in a direction parallel to the axis of alignment of the inlet and outlet ports in the valve guides, each valve slide having parallel planar surfaces slidably engaging the parallel surfaces of the valve guides and being elongated over the inlet and outlet ports in the valve guides and defining a port extending through the valve slide between its parallel surfaces which is aligned with the axis of alignment of the inlet and outlet ports in the valve guides, means for intermittently sliding each valve slide alternately in opposite directions to align the port in the valve slide alternately with the inlet port and the outlet port in the valve guides associated with the valve slide and for simultaneously moving both valve slides in opposite directions relative to each other, hydraulic cylinders operatively connected to the pistons in the pump cylinders for reciprocating the pistons in the pump cylinders, means for synchronizing and phasing the reciprocative movement of the pistons in the pump cylinders so that such piston simultaneously move in opposite directions and in opposite phase, and means for synchronizing and phasing the movement of the pistons in the pump cylinders with the movement of the valve slides so that during movement of the piston in a pump cylinder toward the valve chamber associated therewith the valve slide associated with that valve chamber is positioned with its port aligned with the outlet port in the valve guides on that valve chamber and the other valve slide is positioned with its port aligned with the inlet port in the valve guides on the other valve chamber.

2,998,782

FLUID DRIVE ROTOR VANE TIE RING

Thomas J. Ryan, Detroit, and Richard M. Nelden, Birmingham, Mich., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,517
6 Claims. (Cl. 103-115)



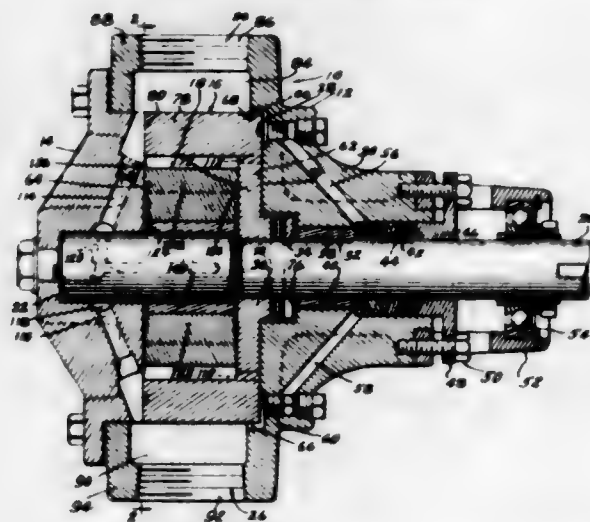
1. In a fluid coupling the combination comprising a fluid torque transmitting shell; vanes carried within said shell; and a tie ring having a series of slots receiving the vane free edges, with a slight clearance between the

not-forming surfaces and the vane faces so that a highly loaded vane is enabled to be deflected prior to transfer of load onto the tie ring.

2,998,783

PRESSURE-BALANCED GEAR PUMP

John C. Lee, 703 N. Elmhurst Ave., Mount Prospect, Ill.
Filed Apr. 25, 1958, Ser. No. 730,843
6 Claims. (Cl. 103—126)



1. An internal-gear pump comprising a housing having a chamber with axially opposite end faces, and an inlet passage leading to the chamber and an outlet passage leading therefrom, a rotor gear having a disc and axially extending teeth at its periphery, said rotor gear having passageways through said disc adjacent the innermost extreme of said teeth mounted for rotation in said chamber with its disc disposed adjacent one of said end faces, the space between said disc and the adjacent said face being of substantially uniformly sealing-effect dimensions entirely therearound, a drive shaft connected with said rotor gear and extending to the exterior, an idler gear within the rotor gear and having its axially opposite sides adjacent said disc and the opposite end face respectively, said gears having intermeshing engagement at one side throughout their axial extent and forming cavities therebetween into which fluid is drawn from the inlet passage and from which it is expelled into the outlet passage, the housing having elements in cooperation with the teeth of the gears closing the cavities to the inlet and outlet passages at intermediate points therebetween with the rotor gear engaging the idler gear so that said passageways through the disc are uncovered in all positions of engagement to prevent any blocking effect of the fluid in the cavities formed by the meshing of the teeth whereby said passageways provide communication between said inlet and outlet passages and the respective adjacent portions of said space, and between said cavity and the sealing space between the outer end wall of the disc and said one end wall of the housing chamber at all times during the engagement of said teeth for establishing substantially equal fluid pressures on opposite sides of said disc at all points therearound.

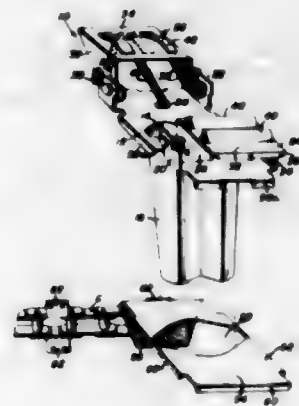
2,998,784

STICKHOLDER FOR CONVEYOR-TYPE FROZEN-CONFECTION-PRODUCING MACHINE

Robert T. Glass, 409 W. 6th St., Austin, Tex.
Filed May 29, 1959, Ser. No. 816,843
10 Claims. (Cl. 107—8)

1. A stickholder for a mold in a frozen-confection-producing machine comprising a base plate having a central aperture adapted to fit about the mouth of such mold, said plate having attached thereto a pair of pivot means disposed on opposite sides of said aperture respec-

tively, a stick-supporting member pivoted to each pivot means, each of said members having stick-engaging means said members adapted to pivot to a closed position wherein said stick-engaging means are adjacent and oppose each other over said aperture releasable means to hold the stick-supporting members in the closed posi-

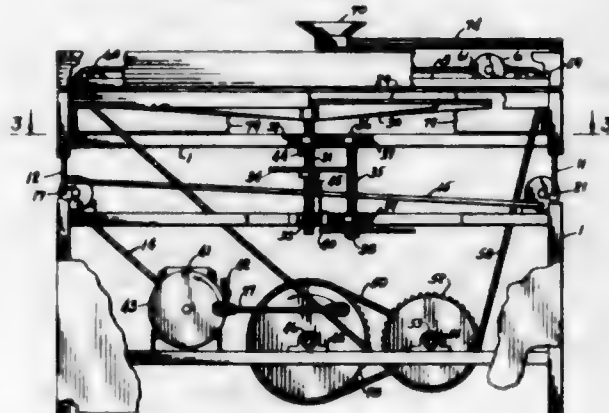


tion, said stick-engaging means being adapted to hold an upwardly extending frozen confection stick therebetween while said stick-supporting members are in such closed position, and said stick-supporting members are also adapted to pivot outwardly to an open position wherein said stick-engaging means are remote from each other.

2,998,785

DOUGH ROLLER

Robert F. Winter, 7221 N. Peoria Ave.,
Tulsa County, Okla.
Filed Aug. 6, 1959, Ser. No. 832,094
6 Claims. (Cl. 107—12)

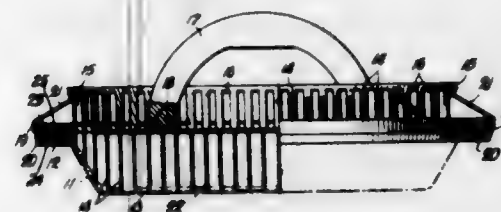


1. An automatic rolling machine comprising a frame; coaxing rolling elements including a rotary table supported by said frame and a roller disposed adjacent said table; guide means supporting said roller to roll about its own axis in planes parallel to said table; support means for movably mounting said guide means on the frame to select its position with respect to the table; roller drive means in the frame and coupled to the roller for cyclically translating said roller from a first position over the center of rotation of the table to a second position over the periphery thereof and then back to said first position; linkage means connected between said support means and said drive means for moving the guide means nearer the table while the roller is translating from the first to the second position and for moving the track means away from the table while the roller is returning to the first position; and means for adjusting the minimum spacing between said coaxing rolling elements.

2,998,786

PIE DOUGH PERFORATOR, FLUTER AND TRIMMER

Olive R. Sawaya, 130 S. Clark St., Salina, Kans.
Filed Feb. 6, 1957, Ser. No. 638,600
8 Claims. (Cl. 107—49)

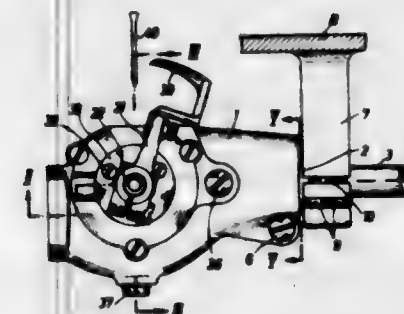


1. A perforator for a lower dough layer of a pie to be baked in a dough supporting surface comprised of a bottom wall bounded by an outwardly sloping side wall; the perforator composed of a plate member, having upper and lower surfaces with a handle secured to said upper surface, said plate member of a size and form adapted to overlie substantially all of said dough supporting surface when in operating position with respect thereto, a plurality of substantially equally spaced perforating elements, having sharpened lower ends, secured to and extending downwardly from said lower surface of said plate, said elements being distributed over the entire lower plate surface, said sharpened ends of said perforating elements which overlie said sloping side wall terminating at points lying along an imaginary slope coincident with the slope of said side wall, whereby said sharpened ends perforate at spaced intervals the entire lower dough layer of the pie.

2,998,787

LOOP TAKER MECHANISM FOR CHAIN-STITCH SEWING MACHINES

Konrad Pollmeier, Bielefeld, Germany, assignor to Dürkoppwerke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany
Filed June 22, 1959, Ser. No. 821,979
10 Claims. (Cl. 112—200)

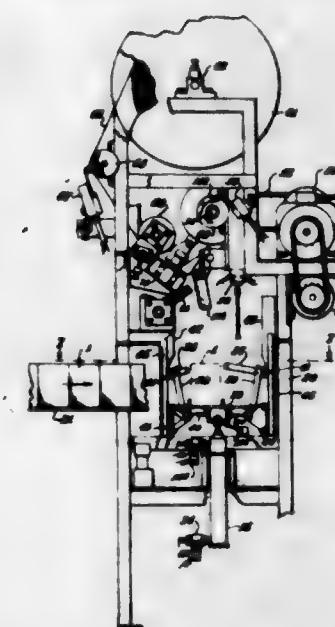


1. In a looper mechanism for sewing machines, the combination with a driving shaft, of a fixed bearing block, an elongate bush having one end portion secured in said bearing block, said driving shaft having an end rotatably supported in and extending through said bush, a fluid-tight casing having an end formed with a bore in which an opposite end portion of said bush is fitted, said shaft end terminating within said casing, a journal supported by and extending through a wall of said casing for rotational and axial movement on an axis perpendicular to said driving shaft, said journal having an outer end exteriorly of the housing, a loop taker carrier secured to the said outer end of the said journal, and mechanism within the housing forming an operative coupling between the said end of the driving shaft and said journal which is constructed and arranged to transmit elliptical swinging and lateral swinging movements from the driving shaft to said loop taker carrier.

2,998,788

DEVICE FOR FORMING AND APPLYING POURING SPOUTS TO CONTAINERS

Leonard Back and Robert G. Weatherby, Middletown, Ohio, assignors to The Interstate Folding Box Company, Middletown, Ohio, a corporation of Ohio
Filed Aug. 20, 1958, Ser. No. 756,195
17 Claims. (Cl. 113—1)



1. In a device for applying a pouring spout to an inside wall surface of a container, a supporting frame, a sealing anvil pivotally mounted on said frame, actuating means for moving said anvil from a spout receiving position to a spout applying position in which said anvil is juxtaposed to a body wall of the container, transfer means movably mounted on said frame for receiving a spout structure from a source of supply and depositing it on said anvil when said anvil is in spout receiving position, means for moving said transfer means in timed relation to the movement of said anvil, a container lift platform mounted on said frame beneath said anvil, said lift platform being movable from a container receiving position to a spout receiving position in which said anvil and the spout structure carried thereby enter the opened upper end of the container positioned on said lift platform, actuating means for raising and lowering said lift platform in timed relation to the movement of said anvil and said transfer arm, said anvil actuating means acting to move said anvil to the spout applying position subsequent to the movement of said container lift platform to the spout receiving position, said lift platform actuating means thereafter acting to return said lift platform to container receiving position upon movement of said sealing anvil away from its spout applying position, and container positioning means acting in timed relation to the movement of said lift platform for discharging from said platform the container to which a spout has been applied and delivering a new container to which a spout is to be applied.

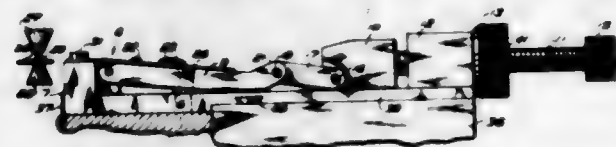
2,998,789

CONTACT SPRING HOLDING FIXTURE

Henry W. Schaufelberger, Union, N.J., and Edwin J. Welch, New York, N.Y., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 14, 1958, Ser. No. 754,990
5 Claims. (Cl. 113—99)

1. A fixture for accurately locating one of the ends of contact springs for welding electrical contacts thereto, said springs having at least one aperture therein uniformly spaced from the contact ends thereof and having a bend in an intermediate portion so that the two ends are angularly disposed to each other, which com-

prises a base member, guide members projecting upwardly from one end of the base for engaging opposite sides of a contact spring to orient the lateral disposition of the spring on the fixture, a contact spring support member having one end pivotally connected to said one end of the base and having a guide pin extending upwardly therefrom and adapted to engage the aperture



in the spring to orient the longitudinal disposition of the spring in the fixture so that the end of the spring extends from the fixture by a predetermined amount, and means connected to the other end of the support member for pivoting said support member in accordance with the particular bend in the spring to accurately control the angular disposition of the extended end of the spring.

2,998,790

NAVIGABLE SURFACE CRAFT

Russell I. Mason, Maple Ave., Barneveld, N.Y.
Filed Apr. 1, 1958, Ser. No. 725,766

18 Claims. (Cl. 114-61)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A navigable surface craft having maximum stability and which is seaworthy in rough sea conditions, which comprises a buoyant, vertically elongated hull having the general shape of a spar buoy, a depth below the water line of more than four times its largest horizontal dimension and approximately streamlined in horizontal cross section for the most of its hull portion below the water line, the horizontal distance between the leading and trailing edges of said hull being more than about four times the other crosswise dimension at its widest part, propulsion means carried by said hull and having a part on its exterior and well below the minimum water line on the hull, and operable, when activated, to cause horizontal movement of the hull, steering means on said hull below the water line thereon for controlling and selectively varying the direction of horizontal travel of the hull, and means within the hull for driving said propulsion means.

2,998,791

CONTROL APPARATUS FOR WATER CRAFT

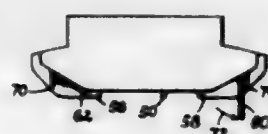
James W. Light, Greenville, Ohio, assignor to
William L. Tenney, Crystal Bay, Minn.

Filed Nov. 24, 1958, Ser. No. 775,903

8 Claims. (Cl. 114-66.5)

8. In combination with a relatively high speed water craft having a hull which tends to plane over the water

surface and to deviate in a lateral direction with respect to the longitudinal axis of the craft under the influence of centrifugal force when said craft is guided to negotiate turns, a plate-like control member, hinge means attached to said member adjacent one edge thereof defining a hinge axis about which said member can rotate, means mounting said hinge means on said craft located above the water line when said hull is in its planing attitude



and with said hinge axis located in a plane sloping rearwardly and downwardly, and stop means for said control member limiting movement thereof between an upper planing position extending laterally of said craft essentially above the water surface and a lower control position extending substantially vertically downwardly from said hinge axis to form an effective appendage from said hull resisting skidding motion thereof during turning maneuvers of said craft.

2,998,792

WATERBORNE VEHICLES

Herbert G. Hasler, Bursledon, England, assignor to Dracone Developments Limited, London, England

Filed May 4, 1959, Ser. No. 810,672

Claims priority, application Great Britain May 13, 1958

6 Claims. (Cl. 114-66.5)



1. In combination, a partly submerged flexible barge which is adapted to be towed or propelled, and surface piercing hydrofoil means mounted on the barge adjacent its bow portion and being shaped and inclined so that it exerts a lifting force on the bow portion of the barge as the barge is moved through the water sufficient to counteract the diving tendency of the barge.

2,998,793

FLEXIBLE BARGES

William Rede Hawthorne and John Christopher Shuldham Shaw, Cambridge, England, assignors to Dracone Developments Limited, London, England

Filed Sept. 10, 1958, Ser. No. 760,229

Claims priority, application Great Britain Sept. 18, 1957

9 Claims. (Cl. 114-74)



1. A flexible barge having means for preventing unstable lateral motions thereof when under tow, said means comprising a fin formed of flexible material such as fabric and flexibly attached to the barge in the region of the stern thereof and weighted to hold the fin depending from the barge.

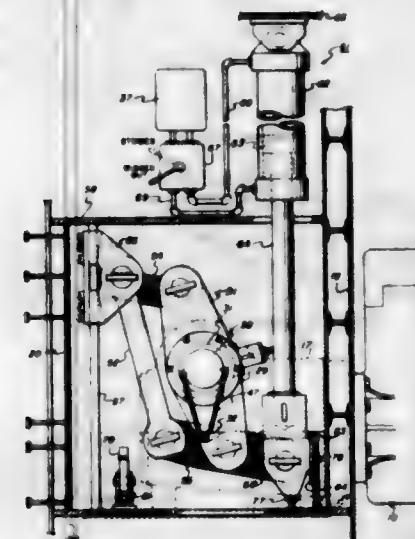
2,998,794

LIMITED ANGULAR MOTION MECHANISM

Lennox F. Beach, Sea CHZ, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed June 25, 1959, Ser. No. 822,770

11 Claims. (Cl. 114-126)



9. Means for angularly displacing an element about an axis with relation to a body between stored and operating conditions comprising a straight line parallelogram linkage mounted on the body having a yoke operatively connected to the element, a crosshead connected to the linkage constrained to move along a straight line in relation to the body to one side of the axis, a short guide mounted on the body with a ramp in the path of the line movement of the crosshead for receiving the crosshead with the linkage exerting a holding torque on the yoke with a force substantially normal to the guide, and means mounted on the body for transferring the element from a stored to an operating condition operable to move the crosshead across the ramp and on the short guide.

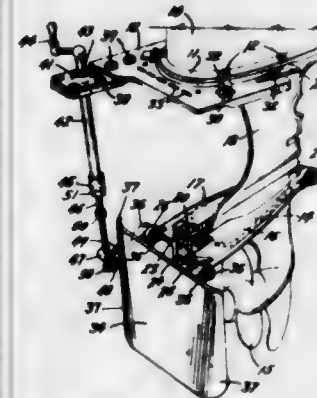
2,998,795

TROLLING ATTACHMENT FOR OUTBOARD MOTORS

Arthur Downie and Dalton W. Hasbald, Denver, Colo., assignors to Spinn-Co-Troll, Inc., Denver, Colo., a corporation of Colorado

Filed Apr. 6, 1960, Ser. No. 20,430

3 Claims. (Cl. 114-145)



1. Means for pivotally suspending a trolling plate rearwardly of a propeller of an outboard motor of the type having a propeller shaft housing with relatively thin anti-cavitation fins extending oppositely outward from the sides of said shaft housing above said propeller comprising: two relatively flat, hollow clamping members of sufficient length to extend forwardly and rearwardly of said anti-cavitation fins and being provided with openings in their inner edges to receive said fins into their

hollow interiors; means clamping said clamping members toward each other forwardly and rearwardly of said fins so that said members will completely enclose both of the latter; and a hinge device mounted on the rear extremity of each clamping member, said trolling plate being swingably suspended from said hinge devices rearwardly of said propeller.

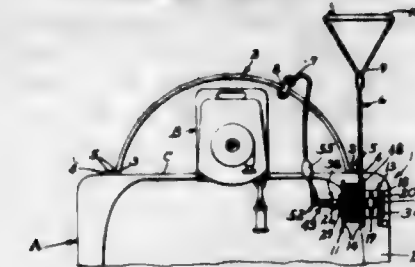
2,998,796

WATER SKI TOWING DEVICE

Herbert H. Whitrock, Box 372, Truman, Minn.

Filed Aug. 25, 1960, Ser. No. 51,964

4 Claims. (Cl. 114-235)



1. A water ski towing device for use in combination with a boat having a transom, said towing device comprising means on said transom for detachably securing a ski tow rope, a ski tow rope one end of which is secured to said means and the other of which is equipped with a handle, a tow rope keeping reel generally freely rotatably journaled within a pedestal mounting, said pedestal mounting including a base portion which is rigidly secured to the boat in the vicinity of the transom thereof, the axis of said reel being disposed generally transversely to the direction of travel of said boat, a spring catch-equipped bracket rigidly secured to said base portion of said pedestal mounting and disposed axially outwardly therefrom, the side of said reel adjacent said bracket defining a radially outwardly opening tow line receiving slot, a rigid section interposed in said tow rope in closely spaced relation to said one end thereof and adapted to be releasably received within the spring catch of said bracket, the portion of said tow rope intermediate the rigid section defined therein and said handle being adapted to be further releasably received within said slot in such closely spaced relation to said rigid section that sufficient slack remains in the last mentioned space thereof to allow revolution of said reel, the portion of said tow rope intermediate the said reception thereof in said slot and said handle comprising the convolutionable portion thereof, said reel being adapted to wind up, keep and release said convolutionable portion of said tow rope when the same is not in towing use.

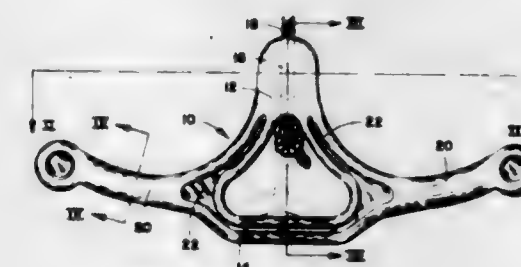
2,998,797

WATER SKI TOW HANDLE

Dale R. Rimey, 30 Woodlawn Ave., Utica, N.Y.

Filed Dec. 14, 1959, Ser. No. 859,476

3 Claims. (Cl. 115-6.1)



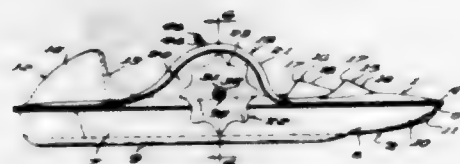
1. A tow handle for use in the sport of water skiing adapted to be secured to the end of a tow rope comprising a barrel portion having an axially extending hole for

securing the end of the tow rope therein, a central hand grip member spaced from but joined to the rearward end of said barrel, said hand grip member being symmetrically disposed on either side of the axis extended of said hole, and a pair of laterally extending hand and leg grip members symmetrically fixed on either side of said barrel and central grip portions and curving forwardly from either side of said central grip portion, said barrel and grip portions lying generally in the same plane and forming a generally T-shaped configuration whereby the skier may readily hold the tow rope with one hand, two hands, or the legs.

2,998,798

MANUALLY PROPELLED WATERCRAFT

John W. Love, 18530 S. Broadway, Gardena, Calif.
Filed July 18, 1960, Ser. No. 43,590
5 Claims. (Cl. 115-23)

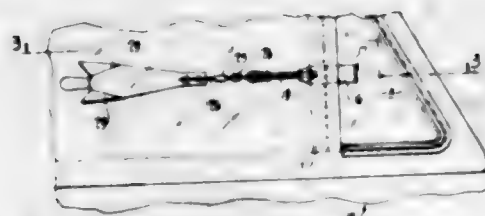


1. In a manually propelled watercraft, a monolithic hull formed from a molded plastic sheet bottom component having a bottom portion and a peripheral side wall portion terminating in a peripheral horizontal outwardly extending flange, a deck component also formed of molded plastic sheet secured to said flange portion of said bottom component, and a filling of hardened foam plastic completely filling said hull, a pair of paddle wheel housings formed integrally with said deck component and disposed one each at each side of said deck component outwardly of said bottom component and propelling means comprising a pair of paddle wheels and separate driving means therefor mounted one each on each of said housings.

2,998,799

ANTI-HYPNOTIC APPARATUS

Eugene W. Placek, Cleveland, Ohio, assignor to Genie Products Company, Cleveland, Ohio, a partnership
Filed July 6, 1960, Ser. No. 41,073
7 Claims. (Cl. 116-28)



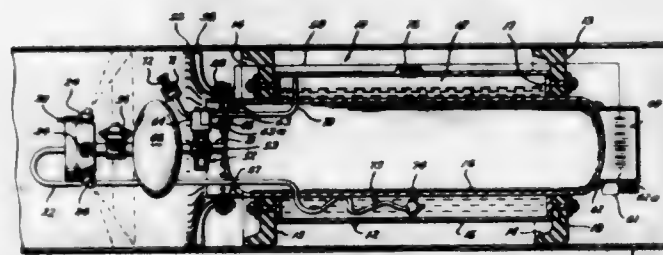
1. Anti-hypnotic apparatus for automobiles, trucks and other motor vehicles having a ventilator window and a rearwardly adjacent post against which the window closes, said apparatus comprising an attachment portion, a flexible connecting portion, a tail portion and a knocker portion, said attachment portion having a vertically flat, longitudinally extending exterior portion, an L shaped intermediate portion adapted to fit between said ventilator window and post, and a transversely extending handle portion adapted to extend away from said ventilator window into said vehicle, said flexible portion comprising a cord fixedly secured to and extending rearwardly from said exterior portion of said attachment portion and a swivel secured to the rearward end of said cord and having a rearwardly extending wire to which said tail portion is fixedly secured, said tail portion com-

prising a flat, lightweight body, said body having a truncated triangular shape with ends remote from said flexible portion, said ends being bent relative to said body and forming fins whereby said apparatus is actuated by wind, air currents and other stimuli to have random, irregular flight patterns, said knocker portion being secured to the rearward end of said body and comprising a truncated conical member of hard rubber having a rounded end, the maximum radius of said knocker being greater than the greatest distance by which any portion of said fins is displaced from the plane of said body.

2,998,800

PIPE COATING APPARATUS

Burton Vernoy, Tulsa, Okla., assignor to T. D. Williamson, Inc., Tulsa, Okla.
Filed Nov. 4, 1958, Ser. No. 771,917
16 Claims. (Cl. 118-8)

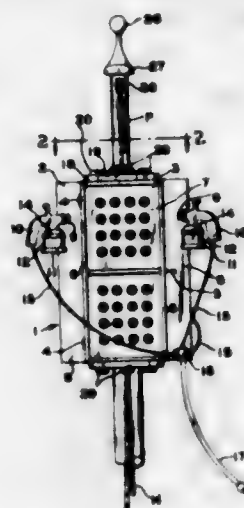


1. Apparatus for spot coating flaws on the coated inner surface of a pipeline, comprising a body movable longitudinally through the pipeline, flaw detecting means carried by the body, and means on the body for applying a pipe coating material to the flaw automatically in response to the detection thereof.

2,998,801

DEVICE FOR PAINTING FLAGPOLES, SUSPENSION CABLES AND THE LIKE

Arthur F. Edelberg, Cleveland, Ohio, assignor to Kamco Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 23, 1958, Ser. No. 743,592
9 Claims. (Cl. 118-108)

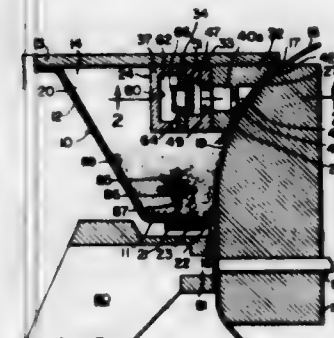


1. A device for painting flagpoles and the like comprising a hollow casing having a side wall portion adapted to be positioned in radially spaced relation around a flagpole and to be hoisted to the top thereof and thence lowered; spray means carried by said casing and operative to spray paint inwardly against the flagpole as the casing is lowered; and radially extending brush bristle sealing means at the top and bottom ends of said casing effective to retain spray dust within said casing.

2,998,802

ELECTROSTATIC DEVELOPING APPARATUS

George A. Harris, Malvern, and Elwood T. Montgomery, Drexel Hill, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 28, 1959, Ser. No. 789,725
6 Claims. (Cl. 118-637)

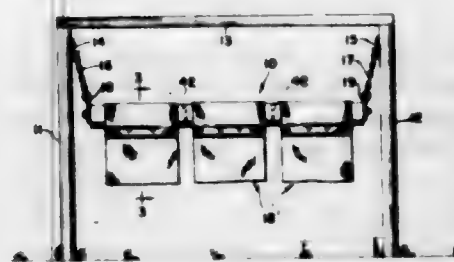


1. Apparatus for visibly developing images electrostatically recorded on one side of a recording medium comprising, a housing for holding a supply of inking powder, said housing having inlet and outlet openings through which said record medium may be passed through said housing, the electrostatically charged side of said recording medium being in contact with said inking powder as the record medium passes through said housing thus to develop the images recorded thereon, suction cleaning means within said housing, said suction cleaning means including a chamber having an opening extending across and closely adjacent said developed surface of said record medium, means for reducing the pressure within said chamber whereby air is drawn from within said housing to sweep across said developed surface of said record medium and into said chamber, thereby to remove excess ink from said record medium, and means for exhausting the air and the excess ink from said chamber into said housing.

2,998,803

CATTLE OILER

Floyd O. Worden, 115 E. 18th St., Grand Island, Nebr.
Filed Nov. 10, 1958, Ser. No. 772,867
23 Claims. (Cl. 119-157)

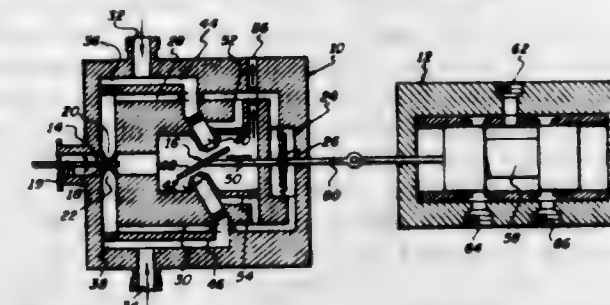


1. In a cattle oiler comprising a tubular body member having closure means at its opposite ends and receiving treating fluid therein, at least one opening formed through said body member, flexible means connected to said body member for rotatably suspending said body member in a substantially horizontal position with said opening normally disposed in the upper portion thereof and permitting an animal to lift, tilt and rotate the oiler freely, a layer of absorbent material disposed about said body member and having opposite edge surfaces, said layer including an intermediate portion extending through said opening into the interior of said body member for controlling the flow of treating fluid through said opening upon tilting movement of the body member.

2,998,804

TWO STAGE VALVE

Warren F. Clement, Glen Head, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,420
9 Claims. (Cl. 121-41)

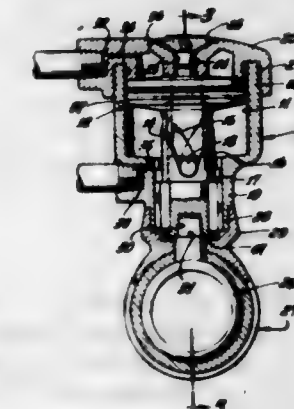


5. Valve apparatus comprising a first valve having first and second orifices, each orifice being adapted to pass a compressible fluid, said first valve being provided with means positionable relative to each of said orifices to vary the relative amounts of, and therefore the relative pressures of, the compressible fluids which flow through the orifices, means connected by conduit means to receive the fluid flowing through each orifice of said first valve, said means receiving the fluid flowing through each orifice being responsive to pressure differentials between the fluids flowing through the orifices and having connected to it a movable member, said member moving in one direction when the fluid flowing through one orifice has the higher pressure and moving in another direction when the fluid flowing through the other orifice has the higher pressure, a second valve having first and second orifices, each orifice being adapted to pass a compressible fluid, and means connected to said movable member, said means being positionable relative to said first and second orifices of said second valve to vary the relative amounts of, and therefore the relative pressures of, the compressible fluid which flows through the second valve orifices, the fluids flowing through the orifices of said second valve being connected by conduit means to said means responsive to pressure differentials, said means positionable relative to the first and second orifices of said second valve being moved by said movable member in a direction which applies the pressure differential between the compressible fluids flowing through the orifices of said second valve to said means responsive to pressure differentials to retard the movement of said movable member.

2,998,805

REMOTE CONTROL VALVE OPERATOR

Martin A. Ush, Costa Mesa, Calif., assignor, by mesne assignments, to Consolidated Thermoplastics Company, Stamford, Conn., a corporation of Delaware
Filed Apr. 24, 1958, Ser. No. 730,649
1 Claim. (Cl. 121-119)



In a valve operator for mounting on a valve unit to actuate the rotating stem of a valve, the combination of: a body having an enclosed cylinder cavity and a guide

cavity with a common axis, said body having axially spaced fluid inlet passages communicating with said cylindrical cavity adjacent the top and bottom respectively of said cylindrical cavity; a shaft mounted in said body for rotation about said axis relative to said body, said shaft having a first cylindrical portion positioned within said cylindrical cavity and a second cylindrical portion extending into said guide cavity; and a piston slidably positioned on said shaft within said cylindrical cavity for movement along said axis, said piston having a cam sleeve positioned about said second cylindrical portion of said shaft when said piston is in one of its extreme positions of movement and extending into said guide cavity, said sleeve and guide cavity having cooperating guide means for preventing rotational motion of said piston relative to said body, said cam sleeve having about a one-quarter revolution cam development, and said second cylindrical portion of said shaft having a radially projecting pin engaging said cam development whereby one stroke of said piston produces about one-quarter revolution of said shaft.

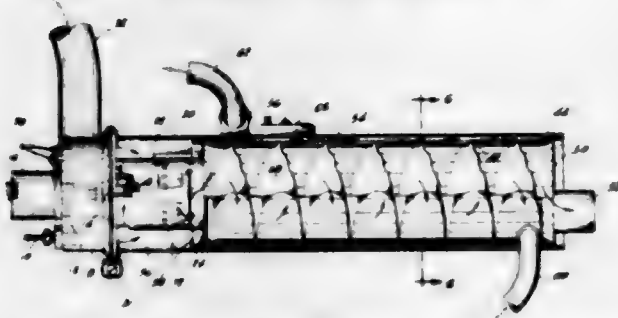
2,998,806

BOOSTER HEATER

Vernon N. Tramontini, Indianapolis, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed May 22, 1958, Ser. No. 737,152

5 Claims. (Cl. 122-136)



1. A combustion heater including a heat exchanger defining an annular liquid heat exchange passage and burner means coupled to the heat exchanger for heating the liquid flowing through the passage, the improvement comprising an external casing for the heater formed by an outer cylindrical sheet metal shell of uniform diameter which is part of the heat exchanger, an inner shell having a longitudinal center portion of less diameter than the outer shell, said inner shell located within the outer shell downstream of the burner means, and having flared ends bonded to the outer shell to provide the annular passage between the shells, the burner means including a combustion chamber tube of smaller diameter than said outer shell and having an integral, outwardly turned flange terminating in a laterally directed peripheral portion of a diameter slightly less than the diameter of said outer shell, said combustion chamber tube being inserted within said outer shell with said laterally directed portion of said flange contacting in sealing relation and adjacent the flared end of the inner shell to form with said outer shell an annular air supply chamber, air supply means to said chamber and air outlet means in said tube for passage of air therethrough.

2,998,807

WATER TUBE BOILER OR STEAM GENERATOR

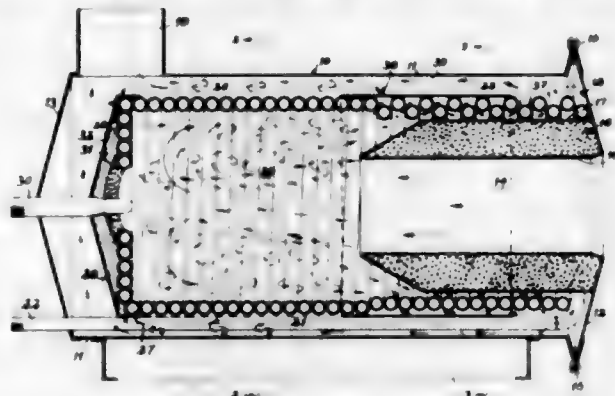
Alick Clarkson, Paul Spur, Ariz., and Donald W. Miller, Houston, Tex., assignors, by direct and mesne assignments, to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware

Filed Feb. 18, 1955, Ser. No. 489,060

7 Claims. (Cl. 122-249)

1. A boiler or steam generator including a tubular coil structure comprising a length of tubing wound into

a helix having a fluid inlet at one end and a fluid outlet at the other end and composed of a plurality of axially aligned groups of turns, one of said groups being composed of a plurality of turns disposed in contiguity to provide a closed wall portion of a combustion chamber and each turn of another group has a series of circum-



ferentially spaced apart surface portions in contact with surface portions of adjacent turns and also has a series of other portions offset radially with respect to said contacting portions at spaced locations circumferentially along each turn to provide discharge passageways for hot gases of combustion from the closed wall portion of the helix.

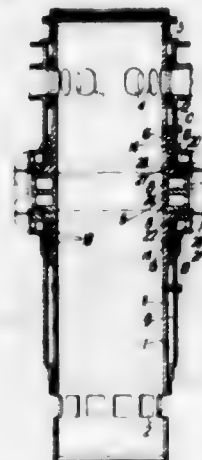
2,998,808

OPPOSED PISTON DIESEL ENGINES

Percy Jackson, Sunderland, England, assignor to William Doxford & Sons (Engineers) Limited, Sunderland, England, a British company

Filed Apr. 22, 1959, Ser. No. 808,121

6 Claims. (Cl. 123-41.72)



1. A water-cooled cylinder structure for an opposed piston two-stroke cycle diesel engine in which the cylinder is constructed in at least two parts with at least one gas-tight joint therebetween, each part having its own cooling water jacket forming therewith an independent water-tight unit with inlet and outlet openings which are external of the joint aforesaid, and at least one connection between an outlet opening in one jacket and an inlet opening in the other for water flow between the jackets which connection is jointed at a position external to and spaced from the gas-tight joint aforesaid to leave an open air space between the two joints.

2,998,809

IMPROVEMENTS IN MOTOR VEHICLE AUTOMATIC TRANSMISSION CONTROLS

Edward E. Thomas, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis., a corporation of Wisconsin

Original application Apr. 1, 1959, Ser. No. 803,388. Divided and this application Feb. 15, 1960, Ser. No. 8,794

2 Claims. (Cl. 123-179)

1. A control mechanism for the automatic power transmission of a motor vehicle comprising a support; a manu-

al control lever movably mounted on a face of said support and movable between first and second positions; connections extending to said control lever to be operated by movements of the latter; and an engine starter element movably mounted on said support for reciprocation in a path transverse to the path of movement of the control

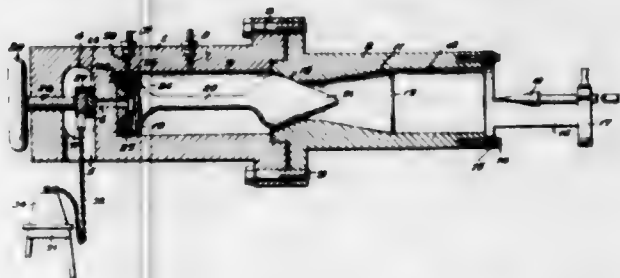
arrow rest comprising a housing, having a bottom wall which is adapted to be secured to a horizontal portion of the bow and having a vertical wall which is adapted to be secured to a vertical portion of the bow, said housing having a socket formed therein and a ball bearing rotatably mounted within said socket, a portion of said



lever, said engine starter element having a shouldered protuberance located adjacent the second position of the control lever, and the latter having a bifurcated portion to engage the shouldered protuberance and prevent reciprocal movement of the engine starter element when the control lever is manually moved to the second position.

**2,998,810
AIR GUN**

Harry G. Anastasia, Paramus, and James E. Bevin, Ramsey, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 4, 1960, Ser. No. 12,884
4 Claims. (Cl. 124-11)

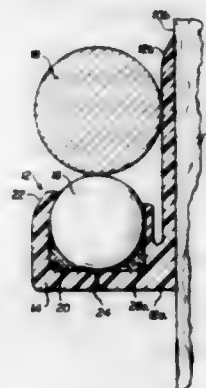


1. An air gun for projecting a disk into engagement with a target having a pointed end comprising a first cylindrical body having an axial bore therein and a passage providing communication between the end of said bore and the exterior of said casing, a second cylindrical body attached to said first cylindrical body, said second body being formed to provide a tapered valve seat aligned with the bore of said first body, said second body being further provided with expanding and uniform diameter passages aligned with said valve seat, said second body forming at the juncture of said expanding and uniform diameter passages a seat for the disk to be projected, a bracket connected to the end of said second body adapted to adjustably support said target with the point thereof facing inwardly of said second body, a piston slidable in the bore of said first body member, a valve head of smaller diameter than said piston rigidly attached to said piston and engageable with said valve seat, means to introduce pressure fluid on opposite sides of said piston and a manually controlled disk adapted to open said passage to release the pressure fluid on the side of said piston remote from said valve head to open the valve and project the disk against the target to be punctured thereby.

**2,998,811
BOW WITH ARROW REST**

August E. Sackmann, 291 Willis St., Bristol, Conn.
Filed June 4, 1959, Ser. No. 818,176
2 Claims. (Cl. 124-24)

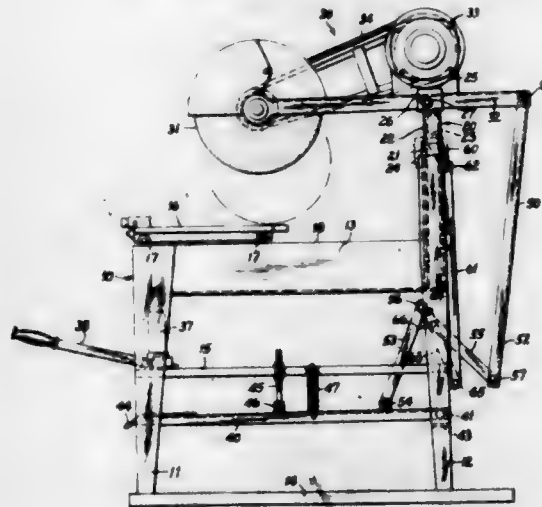
1. In combination with a bow, an arrow rest mounted on said bow and adapted to support an arrow, said



ball bearing projecting outwardly from said socket and serving as the bearing surface for an arrow, said vertical portion of the housing being provided with a vertically extending bearing surface for the arrow, said ball bearing surface and said vertically extending bearing surface cooperating to support and guide the arrow.

**2,998,812
CUTTING MACHINE**

William M. Cooper, St. Louis, Mo., assignor to Champion Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Jan. 4, 1960, Ser. No. 192
2 Claims. (Cl. 125-13)



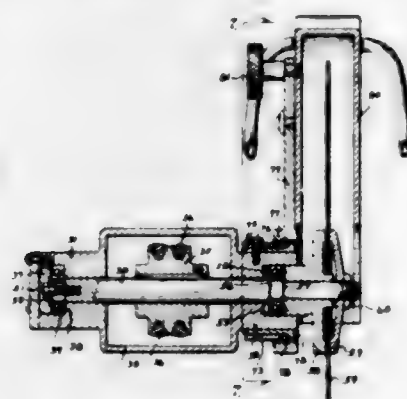
2. In a cutting machine, a frame, a work table mounted on said frame, a support mounted on said frame for vertical reciprocal movement, a cutting assembly provided with a cutting tool, means mounting the cutting assembly to the support about a horizontal pivotal axis for swinging the tool toward and away from said work table, a pedal pivoted about a horizontal axis to said frame, means for holding the pedal selectively in an initial position relative to its pivotal axis, a height adjustment bar pivoted about a horizontal axis to said cutting assembly, a lift link pivoted about a horizontal axis to said pedal, the lift link and adjustment bar extending toward each other, a rocker arm extending between the lift link and adjustment bar, the rocker arm having one end pivoted about a horizontal axis to the lift link and having the other end pivoted about a horizontal axis to the adjustment bar, a link stabilizer pivoted about a horizontal axis to said support, a floating link having one end pivoted about a horizontal axis to said frame yet fixed in a stationary position relative to said frame and having the other end pivoted about a horizontal axis to said stabilizer, pivot means intercon-

necting the rocker arm to said floating link about a horizontal axis, the pivot means being disposed between the pivoted ends of the rocker arm and the pivoted ends of the floating link, and means connected directly to said support for reciprocating said support to adjust the height of said cutting assembly, the link stabilizer and floating link being movable by said support and acting through said pivot means to move the rocker arm and said adjustment bar to maintain the cutting assembly in an initial position relative to its horizontal pivotal axis upon vertical reciprocable adjustment of said support while said pedal is maintained in its initial position.

2,998,813

MASONRY SAW

Harry R. Wilson, 327 Anthony, Waterloo, Iowa
Filed Oct. 1, 1959, Ser. No. 843,799
6 Claims. (Cl. 125-13)

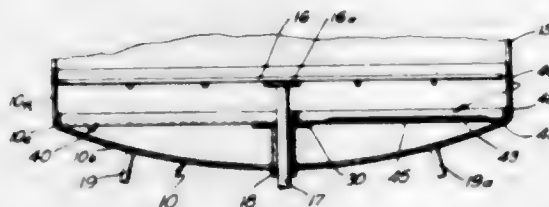


5. In a saw, a frame, a platform operatively hinged to said frame, means for moving said platform to various positions of its swing movement, a motor on said platform, a transmission housing extending from said motor, a bearing on the free end of said transmission housing, a shaft rotatably mounted in said bearing and adapted to be operatively connected to said motor, a circular saw blade on said shaft, a collar slidably adjustable on said bearing and having a flared portion forming one side of a ball bearing groove, a second collar slidably adjustable on said first collar and having one of its ends to form the other side of a ball bearing groove, a ring rotatably mounted around said two collars having a ball bearing groove, and ball bearings in said two ball bearing grooves.

2,998,814

BARBECUE FUEL TRAY MECHANISM

James C. Fornberg, 915 W. Highland Ave.,
Redlands, Calif.
Filed Sept. 3, 1958, Ser. No. 758,846
3 Claims. (Cl. 126-25)



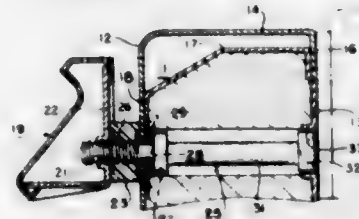
1. In a barbecue device having a circular bowl with an upwardly concave bottom merging with an upstanding rim to form a shoulder and having a central upstanding tube through which a vertically movable shaft projects and a grill supported on said shaft, the combination of a barbecue fuel tray mechanism comprising means resting upon said tube and surrounding said shaft for providing an extended support, and a tray having a sector-shaped bottom with an arcuate peripheral wall and converging radial walls upstanding therefrom, said tray con-

tiguous to said arcuate wall resting on said bowl on said shoulder and said tray contiguous to the convergence of said radial walls being clear of said shaft and resting on said means.

2,998,815

FASTENING DEVICE

Eugene J. Barnett and Leland Gayle Hopkins, Mansfield, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 17, 1958, Ser. No. 769,689
1 Claim. (Cl. 126-190)

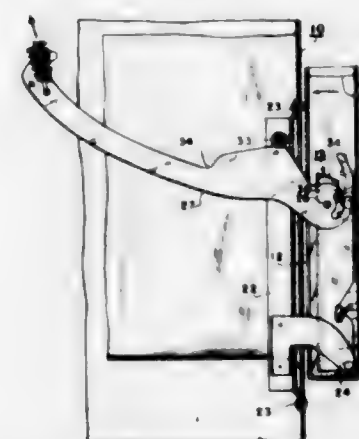


A door for an oven opening including widely spaced front and rear panels, said rear panel having at its upper edge a forwardly extending flange bridging the space between the front and rear panels and terminating in a downwardly-directed portion parallel to and abutting the front panel; a handle at the front side of the front panel; spacing structure between said handle and said front panel; said handle, spacing structure, abutting front panel and flange portion and rear panel having aligned openings therein, and retaining means comprising screws each having a shank portion extending through aligned openings of said flange abutting portion, said front panel and said spacing structure and threadedly received in a handle opening, and a head providing a forwardly-facing shoulder abutting the inner surface of the downwardly-directed flange portion, said head having an elongated rearwardly-extending cylindrical portion terminating in, and substantially closing, the aligned rear panel opening.

2,998,816

OVEN STRUCTURE

Leland G. Hopkins, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1959, Ser. No. 809,989
6 Claims. (Cl. 126-194)



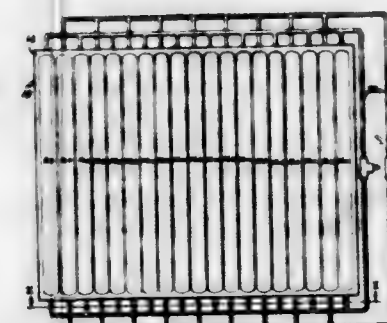
1. An oven structure or the like having an access opening disposed in a substantially vertical plane, a door for said access opening, and means for detachably mounting said door for movement between a vertical position where the door closes the access opening and a horizontal position where the door provides a shelf below said access opening, said mounting means including a pair of hinge mechanisms, each of said hinge mechanisms comprising a hinge link, means pivotally supporting said link at one end portion thereof from the oven structure, a hinge blade connected at one end to the

oven structure and pivotally joined, adjacent its other end, to the other end portion of said hinge link, a pin fixed to the door for support thereof, said link having a notch providing a seat for said pin, a second pin carried by said door, said link having a second notch providing a seat for said second pin, and non-resilient means carried by said hinge blade for retaining the fixed pin in the notch in which it seats.

2,998,817

INFLATABLE MASSAGING AND COOLING MATTRESS

Law L. Armstrong, 914 Canterbury Road, Raleigh, N.C., assignor of one-third to Gary Armstrong Stebbins, Rochester, N.Y., and one-third to Alice Armstrong Hohenberg, Selma, Ala.
Filed Aug. 7, 1959, Ser. No. 832,211
10 Claims. (Cl. 128-33)



1. A mattress for supporting and treating a body comprising a fluid-tight base member, and a cover member hermetically sealed along a plurality of lines extending transversely from one side of said base member to the other side of said base member to form a plurality of cells, said cover member being provided with a plurality of apertures which are small enough in area and in number to permit the pressure exerted by a fluid introduced into said cells to move said cells from a deflated position to an inflated body-supporting position, said apertures being large enough in area to permit a portion of said fluid to pass therethrough, thereby providing a positive fluid circulation over said body, conditioning said body and removing perspiration therefrom.

2,998,818

FACE PIECE

Carl J. Tabor, Afton, Mo., and Nicholas M. Esser, Roselle, Ill., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed May 1, 1956, Ser. No. 581,916
5 Claims. (Cl. 128-205)



1. A face piece for the administration of gases for inhalation purposes, comprising a unitary body open at the top and bottom and consisting of a substantially continuous wall of transparent lightweight material, strap means of preselected length for engagement with the

head of the wearer fastened to the unitary body for positioning it over the oral and nasal openings of the wearer with said open bottom directly below said open top and in substantial alignment therewith, a gas conduit, inlet means in the wall of said body for receiving an outlet end portion of said gas conduit approximately frontally adjacent the oral opening of the wearer so that substantial concentrations of gases from said conduit may be delivered immediately adjacent the oral and nasal openings of the wearer for inhalation, and means attached to said unitary body and engaging the face of the wearer cooperating with said strap means for positioning the wall of said unitary body containing said inlet means in spaced relation to the face of the wearer and for aligning said inlet means with the oral and nasal openings of the wearer, said face piece being positively ventilated by the face spaced wall and the aligned top and bottom openings preventing heat and exhaled carbon dioxide build-up within the face piece, heat readily escaping through the open top of said face piece by convection, and exhaled carbon dioxide immediately escaping downward through the open bottom of the face piece by force of the exhalation and gravity.

2,998,819

HEAT REDUCING CIGARETTE FILTER

William A. Snowden, Jr., 3216 Lakeshore Drive W.,
Tallahassee, Fla.
Filed June 2, 1958, Ser. No. 739,135
2 Claims. (Cl. 131-10)



1. A cigarette comprising a cylindrical shaped elongated casing structure of tubular formation having a lower portion thereof provided with smoking tobacco packed therein and having an upper portion provided with a filter disposed in the casing structure in spaced relation from the packed smoking tobacco to provide a chamber between the smoking tobacco and the filter, and quick heat transfer material mounted in said chamber and which material consists of metal foil in the form of relatively spaced vanes extending laterally and longitudinally in the chamber to permit free flow of smoke through the spaces between said vanes from the tobacco portion to the filter, said casing structure having lateral openings therethrough from said chamber and opening to the exterior of the cigarette and said vanes of metal foil extending through said openings and being exposed to the atmosphere externally around the casing structure for the purpose of dissipating heat from the cigarette to the atmosphere below the filter.

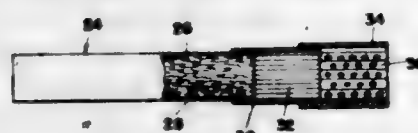
2,998,820

CIGARETTE

Viola G. Ades, 160 80th St., Brooklyn, N.Y.
Filed May 1, 1959, Ser. No. 810,443
2 Claims. (Cl. 131-10)

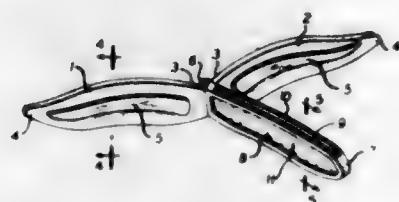
1. A cigarette comprising a cylindrical tube of cigarette paper, said tube being filled with tobacco, a cylin-

drical sleeve of heavier paper having one end fitting around and removably mounted on one end of said tube, a plain filter material within said sleeve abutting the tobacco in said tube, a second sleeve of the heavier paper having one end movably mounted on the outer



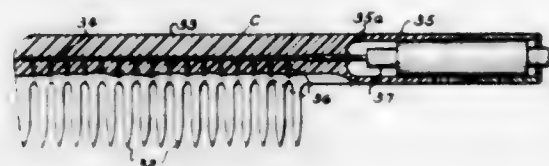
end of said first sleeve, and a flavored filter material within said second sleeve, said sleeves being selectively removable in a direction coincident with the longitudinal axis of said tube, whereby said tobacco may be selectively smoked with said plain and said flavored filters, with only said plain filter, and without either of said filters.

2,998,821
APPLICATOR FOR A PAINTED EYEBROW SHAPE
Thomas Donald Hardel, 42-29 Judge St.,
Elmhurst, N.Y.
Filed Sept. 30, 1958, Ser. No. 764,323
2 Claims. (Cl. 132-88.7)



1. An applicator for painted eyebrow shapes comprising two sheet-like applicator members, a hinge member connecting said sheet-like applicator members upon an axis extending through the planes of both said applicator members, so that each of said applicator members can fold upon the other, each of said applicator members having an embossed portion projecting therefrom and of a configuration identical with the area and shape of the painted eyebrow to be applied over the left eye and over the right eye, respectively, to the face of a person, and means for applying eyebrow fluid to the outer face of each of said embossed portions.

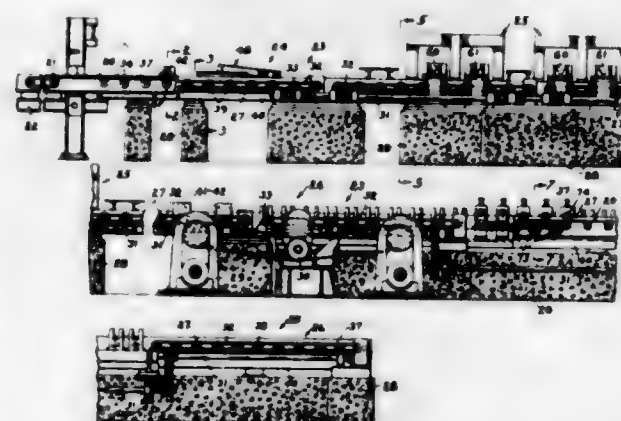
2,998,822
SELF-CONTAINED PUSH BUTTON APPLICATOR
Herbert M. Birch, 5605 Mintwood Road, Bethesda 14,
Md., and Daniel H. Gattone, 424 Lansdowne Ave.,
Drexel Hill, Pa.
Filed June 12, 1959, Ser. No. 819,964
6 Claims. (Cl. 132-116)



3. In combination, a comb having a head portion with a plurality of discharge ducts terminating between the respective teeth of the comb, a handle connected to said head portion having a chamber therein, an annular shoulder defining the juncture of the said head portion and said handle and a counterbored reduced conduit in said head portion extending from said shoulder to, and communicating with said discharge ducts between the comb teeth, and said ducts extending laterally with re-

spect to said counterbored reduced conduit, and a disposable pressurized container disposed within said chamber having a product to be discharged through said ducts outwardly between the comb teeth, said container having a valve with a hollow valve stem, said stem having a discharge outlet communicating with said reduced conduit and said ducts and means engaging said shoulder, said valve being normally maintained closed by means of a spring and the pressure in said container, said valve controlling the discharge of the pressurized product from the said pressurized container through said valve stem into the said comb discharge ducts, and a push button operatively associated with said container to move the same projecting from an opening in a portion of said handle, whereby the said valve may be opened against the resistive action of said spring and said container pressure by movement of said means on said container while said valve stem is engaged with said shoulder in the said head portion of the comb.

2,998,823
APPARATUS FOR CLEANING SURFACES
William E. McCown and James W. McAuley, Toledo,
Ohio, assignors to Libbey-Owens-Ford Glass Company,
Toledo, Ohio, a corporation of Ohio
Filed May 15, 1956, Ser. No. 585,987
6 Claims. (Cl. 134-46)

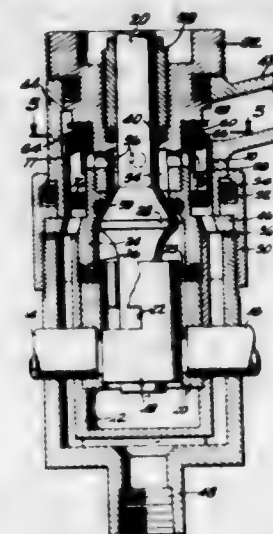


1. An apparatus for washing sheet glass comprising, a washing container for holding a washing liquid, conveyor means for conveying the sheet glass through the liquid, said conveyor means having supporting elements on which the glass is conveyed, vibrating means having vibrating surfaces disposed above and parallel to the path of travel of the glass being washed so as to impinge vibrations substantially normally onto said sheet, and a reflector shield disposed opposite said vibrating surface and positioned such that the sheet is conveyed between the shield and the vibrating surface and spaced from each, said shield being less than 0.10 inch from the surface of the glass being conveyed and disposed between the supporting elements of the conveyor means.

2,998,824
ANTISIPHON TRANSFER VALVE
Irving A. Ward, Los Angeles, Calif., assignor to Modern
Faucet Mfg. Co., Los Angeles, Calif., a corporation of
California
Filed Dec. 17, 1956, Ser. No. 628,730
6 Claims. (Cl. 137-119)

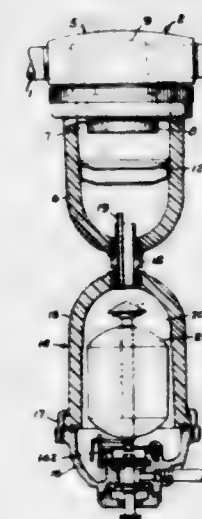
1. A transfer valve comprising: fixed means forming an annular chamber having two outlets and one inlet, a resilient check valve surrounding said inlet, said check valve closing said inlet in its relaxed state and being resiliently opened by flow from said inlet, a cage-like member movable in said chamber, an annular piston on said member movable in response to pressure in said

chamber, and a flexible element on said check valve adapted to flex and close off flow to one of said outlets



upon movement of said member in said chamber in response to flow through the other of said outlets.

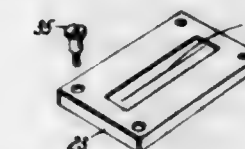
2,998,825
DEVICE FOR DISCHARGING ACCUMULATED WATER
Quin R. Gleason, Berkley, Mich., Theodore F. W. Meyer,
Delray Beach, Fla., and Robert D. Wiley, Detroit,
Mich., assignors to Master Pneumatic, Inc., Detroit,
Mich., a corporation of Michigan
Filed Jan. 30, 1956, Ser. No. 562,289
9 Claims. (Cl. 137-195)



9. A device for collecting and discharging fluid from a compressed air system or the like comprising, means forming a vessel adapted to be connected into a compressed air system and having an outlet for accumulated fluid, pressure operated valve means exposed on one side to pressure in said vessel and being operative responsive to said pressure to close said outlet, control means including means defining a pressure-containing chamber one wall of which effectively comprises the other side of said pressure operated valve means, said control means also including means providing a control valve operable to introduce vessel pressure into said chamber, means forming a float movable in said vessel independently of said control valve, movable control valve operating means operably interposed between said float and control valve, reversible biasing means in one position urging said operating means in a direction for closing said control valve to exclude vessel pressure from the other side of said valve means, said biasing means in another position thereof urging said operating means in a direction for opening said control valve, said float and operating means having means which interengage when said float rises to a given level and which resists further rising of said float

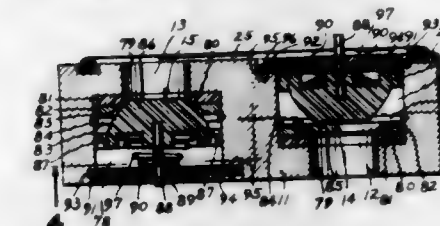
under the action of said biasing means in said one position thereof, said float being operative to exert increasing buoyant force on said operating means incident to continued rise of fluid level in said vessel, said force being sufficient when said fluid reaches a given level to overcome said biasing means and shift it to said other position to facilitate movement of said operating means for opening said control valve to introduce vessel pressure to the other side of said valve means, said valve means being operable responsive to pressure introduced at said other side thereof to open said outlet so that accumulated fluid in said vessel is discharged therethrough by said vessel pressure, said float incident to lowering upon discharge of fluid from the vessel being operable to shift said biasing means toward said one position thereof to facilitate return of said operating means for closing said control valve, whereby to close said outlet, and vent means for relieving pressure in said chamber.

2,998,826
ROTARY PUMP VALVE
Peter Sadler, Salford, England, assignor to N.G.N. Electrical Limited, Manchester, England, a British company
Original application Mar. 2, 1956, Ser. No. 569,004.
Divided and this application Oct. 28, 1959, Ser. No. 851,490
Claims priority, application Great Britain Mar. 4, 1955
1 Claim. (Cl. 137-512.4)



A valve unit comprising a valve seating having port means therein; valve means comprising a deformable sheet having a normally closed slit overlying the port means, and a rigid backing reinforcing the sheet and having an opening therein surrounding the slit to allow deformation of the sheet about the slit; and screws passing through the rigid backing and entering the valve seating to locate the valve means on the valve seating, said screws having elongated shanks to allow the valve means to freely move bodily off the valve seating.

2,998,827
VALVE CONSTRUCTION FOR FLUID PRESSURE PUMP AND THE LIKE
Ernest E. Cook and Harry J. Sadler, both % Hypro Engineering Co., 700 39th Ave. NE., Minneapolis, Minn.
Filed Apr. 14, 1958, Ser. No. 728,315
2 Claims. (Cl. 137-543.13)

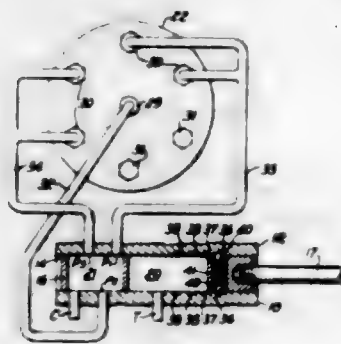


2. In a check valve for fluid pressure devices, means defining a fluid passage having an annular valve seat therein and an annular inwardly opening recess in axially spaced relation to said valve seat, a valve element including an axially extended guide stem, and means mounting said valve element for movements longitudinally of said passage toward and away from seating engagement with said valve seat and comprising a resilient member of greater length than the inner diameter of said annular recess extending diametrically across said passage and hav-

ing a central aperture slidably receiving said stem, opposite ends of said member being received in said annular recess, a wall portion of said recess defining a notch, one of said opposite ends of said member including a tooth received in said notch to positively anchor said member against rotation on the axis of said passage.

2,998,828 SLIDE PLATE TYPE VOLUME CONTROL VALVE

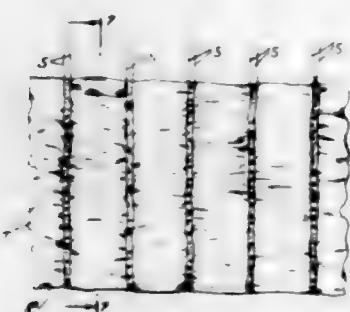
Richard C. Hare, Wauwatosa, Wis., assignor to Dynex, Inc., Pewaukee, Wis., a corporation of Wisconsin
Filed Sept. 8, 1958, Ser. No. 759,477
1 Claim. (Cl. 137-625.25)



A hydraulic fluid volume control valve comprising, a central plate having a rectangular opening therethrough, a side plate sealingly secured to each of opposite sides of said central plate to thereby define a valve body having a chamber therein, a series of fluid pressure inlet ports extending through said body and communicating with said chamber in alignment with one another, a load port extending through said body from said chamber at one side of said inlet ports, a tank port extending through said body from said chamber at the other side of said inlet ports, and a slide plate sealingly reciprocable within said chamber and having a pair of elongated porting slots therethrough which are in alignment with one another in respect to the direction of slide plate reciprocation, the arrangement being such that when said slide plate is at one limit of its travel one of said slots registers with all of said inlet ports and with said load port, and when said slide plate is at the other limit of its travel the other of said slots places said tank port in registration with all of said inlet ports.

2,998,829 WOVEN CURTAIN FABRIC

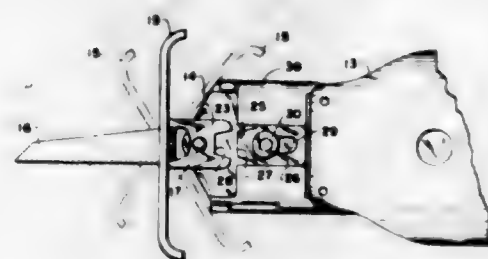
Harry Horowitz, 499 7th Ave., Summit, N.J.
Filed May 6, 1959, Ser. No. 811,391
5 Claims. (Cl. 139-384)



1. A woven curtain fabric comprised of a weave having interwoven warp and filler strands of relatively small diameter and spaced relatively heavy warp strands, to be drawn up in said weave to form a ruffled drape, said heavy warp strands consisting of two ends with an orgazine twist combined together and having an abraded surface so that it will hold itself frictionally in adjusted position.

2,998,830 UNIVERSAL SHOE FOR RECIPROCATING SAW

George E. Atkinson, Linthicum Heights, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed June 27, 1960, Ser. No. 38,965
1 Claim. (Cl. 143-68)



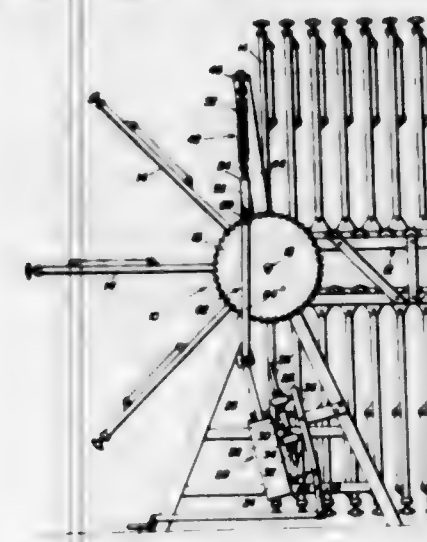
In a reciprocating saw of the character described, having a flat, elongated blade reciprocating parallel to the longitudinal axis of the saw and further having a housing including a forwardmost portion thereof, a universal shoe allowing said saw to be selectively used either as a sabre saw or as a scroll saw, comprising a shoe plate including a flat main portion thereof, said flat main portion of said shoe plate having a slot therein for the passage of the reciprocating blade therethrough, a U-shaped shoe bracket having a base secured to the rearward surface of said flat main portion of said shoe plate, said shoe bracket further having a pair of parallel legs extending rearwardly of said shoe plate at right angles to said flat main portion of said shoe plate and parallel to the plane of the blade, said legs straddling said forwardmost portion of the housing, one of said legs being slightly longer than the other of said legs and each of said legs having a hole formed therein, a pivot pin fixed in the forwardmost portion of the housing transverse to the longitudinal axis of the saw and having respective end portions projecting beyond the housing to seat within said holes in said legs, whereby said shoe plate may pivot about said pivot pin and parallel to the plane of the blade, the forwardmost portion of the housing having a guide slot formed on one side thereof, said guide slot being adjacent to and lying in the same plane as said longer one of said legs, a locking slide in said guide slot having a limited sliding movement therein parallel to the longitudinal axis of the saw, said longer one of said legs having a tapered keyway formed in the rear-most portion thereof, a corresponding tapered key formed on the forwardmost portion of said slide, the housing further having a tapped hole transverse to the longitudinal axis of the saw and parallel to and anteriorly of said pivot pin, said slide having a slot formed therein, and a screw having a portion thereof passing through said slot to engage said tapped hole, whereby said screw may be loosened and said slide moved in said slot so that said tapered keyway is disengaged from said tapered key and said shoe is allowed to pivot a predetermined amount with respect to the housing and about said transverse pivot pin to allow the saw to be used conveniently as a sabre saw, and whereby said tapered keyway may be engaged by said tapered key and said screw may then be tightened in said tapped hole to lock said shoe against pivoting with respect to the housing to allow the saw to be used conveniently either as a sabre saw or as a scroll saw.

2,998,831 FURNITURE GLUE PRESS ATTACHMENT

Emile Dolron, 40 Franklin St., Athol, Mass.
Filed May 1, 1959, Ser. No. 810,310
3 Claims. (Cl. 144-289)

1. In a furniture glue press of the type having an intermittently advancing conveyor with a rotating shaft drivingly connected thereto, a ratchet wheel mounted on

said shaft, and a reciprocating power means disposed on one side of and for movement in alignment with, towards and away from said ratchet wheel, an actuator assembly for said conveyor comprising a brace element, said brace element being secured to a stationary support on said glue press adjacent said ratchet wheel and on the side remote from said power means and having at least a portion thereof in alignment with the ratchet wheel, a spring having one end secured to said portion



of said brace element, actuating means secured to the other end of said spring, connecting means operatively connecting said power means to actuating means to reciprocate the latter, an actuator carried by said actuating means and releasably engaging said ratchet wheel, said actuating means comprising a generally inverted U-shaped element having a pair of depending legs straddling said ratchet wheel, said actuator comprising a pin secured between the lower ends of said legs and engageable with said ratchet wheel.

2,998,832 SEPARABLE AND ADJUSTABLE DOOR SUPPORT

Luther D. Lewis, Clover, Va.
Filed Oct. 3, 1958, Ser. No. 765,103
2 Claims. (Cl. 144-296)

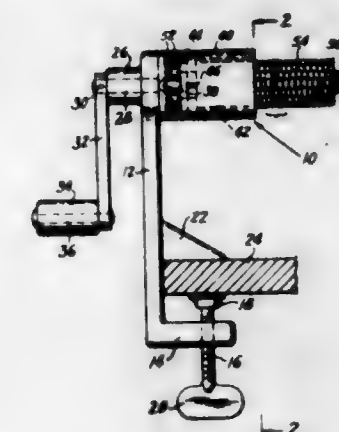


1. A buck for use in supporting doors, window sash, and blinds in positions for cutting recesses for hinge plates and locks comprising a longitudinally disposed beam, transversely disposed rails connected to the ends of the beam, posts depending from the beam and the rails, a first post extended upwardly from the beam and spaced inwardly from one end thereof, a door rest positioned on the lower part of the post extended upwardly from the beam, a clamp above said rest for retaining a door in an upright position with the lower edge of one end thereof positioned upon the rest on the lower part of said post, another rest spaced inwardly from the opposite end of the buck and positioned to receive the lower edge of the other end of a door, a pair of parallel vertically disposed posts extending upwardly from the ends of said rails, a bracket on the upper ends of each of said vertically disposed posts, and a horizontally disposed longitudinally

positioned foldable shelf mounted on the brackets at the upper ends of the vertically disposed posts at the rear portion of the buck.

2,998,833 CORN COB HANDLE FORMING DEVICE

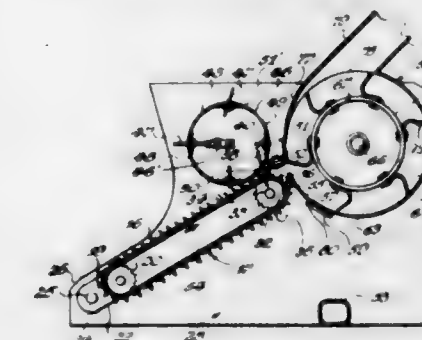
Charles F. Komerl, Shawnee on Delaware, Pa.
(Minkink Hills, Monroe County, Pa.)
Filed Mar. 30, 1959, Ser. No. 802,702
1 Claim. (Cl. 146-4)



A handle forming device for corn cobs, said device comprising a supporting bracket, a shaft journaled in said bracket, means for rotating said shaft, a hollow cylindrical sleeve open at its front end, a rear wall closing the opposite end of said sleeve and connected to said shaft, an annular drum mounted in said sleeve against said rear wall, said drum and said sleeve having a plurality of mating radially extending debris-discharging apertures, a knife supporting ring mounted in said sleeve against said annular drum, and a plurality of radially extending knives supported in said ring, whereby when the end of a corn cob is held within said sleeve and pressed against said knives as said shaft rotating means is operated, said knives will cut an annular recess into said end of said corn cob and form a cylindrical handle thereon.

2,998,834 FORAGE HARVESTER WITH UP-CUT CHOPPER AND BLOWER

Ernest C. Carlson, Wheaton, and Robert H. Witt, Hinsdale, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Continuation of application Ser. No. 628,478, Nov. 5, 1956. This application Oct. 16, 1958, Ser. No. 768,528
9 Claims. (Cl. 146-119)



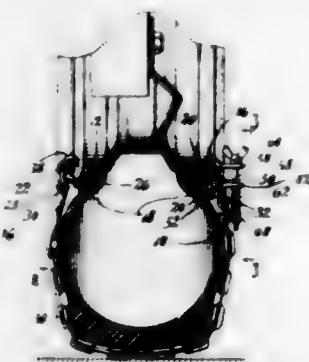
1. In a harvester, a support, an apron conveyor having intake and discharge ends and pivoted on the support at the intake end for vertical swinging movement at said discharge end, a chopper having a housing with circumferentially spaced inlet and outlet and said inlet disposed in receiving relation to said discharge end of the apron and said outlet disposed above the inlet, said hous-

ing having an arcuate wall below said inlet, means pivotally and movably mounting said conveyor on said wall to vary the area of the inlet, said inlet defined by an upper edge above the apron, a cutting element on said upper edge, and a cutter head rotatably mounted in said housing and having peripheral blades cooperating with said element, and means for rotating said head in a direction moving upwardly opposite the inlet, said outlet disposed above and behind said inlet.

2,998,835

AUTOMOBILE TIRE CHAIN SET

Antonio Di Fonzo, 614 Meadow Road, Lombard, Ill.
Filed Sept. 9, 1960, Ser. No. 54,873
2 Claims. (Cl. 152-236)

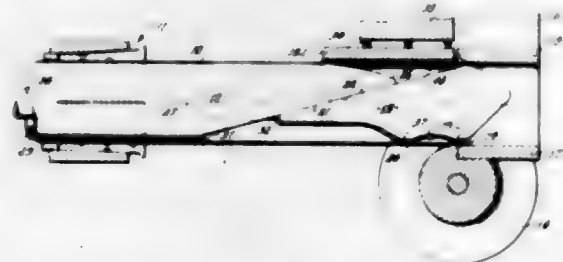


1. A skid chain set for use with automobile wheels having tires mounted upon rims that have an outwardly turned flange at each rim edge, said set comprising a pair of narrow rings each having an external diameter adapted to provide a tight fit with the internal diameter across each of said flanges and a smooth circular inner periphery, at least one anti-skid element comprising a chain adapted to extend across the tread of a tire on said wheel, means providing a hook adapted to engage the inner periphery of one of said rings at any position, means connecting said hook to one end of said chain, means providing a second hook adapted to engage the inner periphery of the other of said rings at a position opposite the first said position, means connecting said second hook to the other end of said chain, one of said connections including a resilient element, and one of said connections including means for adjusting the distance between said hooks.

2,998,836

APPARATUS AND PROCESS FOR BENDING SECTIONS OF TUBING

Gifford L. Hitz, 1661 Bel Air Road, Los Angeles, Calif.
Filed Feb. 28, 1958, Ser. No. 718,278
19 Claims. (Cl. 153-32)



1. The method of forming a turn in an axially elongated metal tube, that includes side loading beyond its yield point, the inside of the tube to offset laterally and substantially enlarge only that side portion thereof which is to become the inside of the tube turn, advancing the tube forwardly in the direction of axial elongation thereof, retarding metal advancement at one portion of the

offset angled away from said axis at said tube side to progressively offset the tube metal away from said axis during said advancement, side loading beyond its yield point and toward said axis the opposite outer side of the advancing tube at a location forward of said offset in said axial direction so that the tube is progressively permanently turned away from said axial direction with the retarded metal at the inside of said turn, and varying said side loading to control the enlargement of said tube side portion at a location along the tube at which said turn is to be merged with a length of the tube not having said turn.

2,998,837

ART OF STRAIGHTENING VEHICLE FRAMES

Alex H. Luedicke, Jr., Milwaukee, and William R. Chapman, Waukesha, Wis., assignors to Applied Power Industries, Inc., a corporation of Wisconsin
Filed May 20, 1959, Ser. No. 814,428
7 Claims. (Cl. 153-32)



1. A vehicle frame straightening device comprising, a generally horizontal main beam, and a generally upright force-applying arm attachable through a force transmitting element to a workpiece and pivotally secured to one end of said beam for swinging movement in a plane corresponding to the longitudinal axis of said beam, said arm having a stop cooperable with said beam for limiting swinging movement thereof in the event of rupture of said element.

2,998,838

PIPE BENDING RACK

Berry Lorenz Byrd, Jr., 808 1/2 15th St., Lipcomb, Ala.
Filed July 23, 1959, Ser. No. 829,010
3 Claims. (Cl. 153-32)



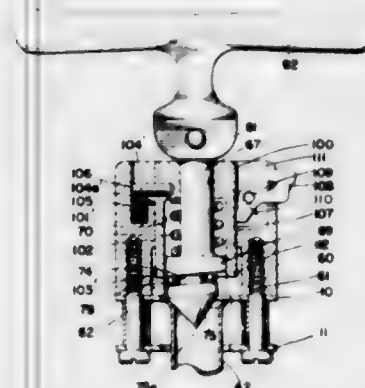
1. In a pipe bending rack comprising in combination with a longitudinal support frame having a planiform upper face, a longitudinal guide-way formed medially thereof, a pipe clamp slidably supported on said planiform upper face and having a depending rib disposed in said guide-way, upright plate means fixed to respective sides of the frame and arranged in parallel opposed relation; a substantially triangularly shaped cradle defined by front and rear legs, an upper integral head member and horizontal lower bars; a shaft positioned transversely of said plate means, the rear end of the horizontal bars being positioned between said upright plate means and pivotally

mounted upon said shaft to permit upward and downward movements of the cradle, a transverse shaft connected between said horizontal bars at the forward end thereof, each of said shafts having a grooved rotatable roller mounted thereon affording support of a pipe to be bent, means for selectively moving said pipe clamp toward and away from said cradle, means carried by the frame and positioned beneath said horizontal bars for adjusting the horizontal level of said forward roller with respect to said pipe clamp and a pressure unit mounted in said head member of the cradle and having a pressure foot movable at a right angle to the axis of said rollers for contacting engagement with a pipe secured in said pipe clamp and supported in said rollers.

2,998,839

FLARING TOOL

Carl H. Ingwer, Elyria, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio
Filed Dec. 3, 1957, Ser. No. 700,414
8 Claims. (Cl. 153-81)

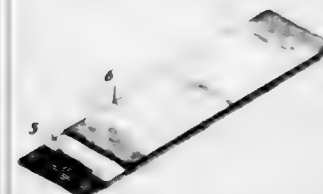


1. In a flaring tool having means for supporting a tube to be flared and having a seat for supporting the flare, and a single flaring element having a conical peripheral surface positioned to engage the inside of one end of the tube supported by said supporting means, the improvement which comprises means solely supporting said flaring element from its base with its axis extending at an acute angle to the axis of the tube, and means for turning said last-mentioned means about the axis of the tube to cause the conical peripheral surface on the flaring element to roll across the inside of said one end of the tube to flare said end of the tube outward and move it against said seat.

2,998,840

LAMINATED STRIP PRODUCT FOR ELECTRICAL PURPOSES

William J. Davis, West Reading, Pa., assignor to The Polymer Corporation, Reading, Pa., a corporation of Pennsylvania
Filed Feb. 28, 1957, Ser. No. 643,002
5 Claims. (Cl. 154-2.6)

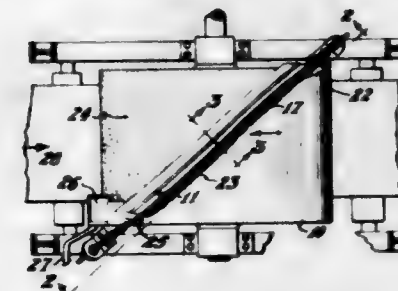


1. As a strip stock product, a laminated structure comprising an electrically conductive flexible metallic foil-type strip extended lengthwise of and bonded to one side of a flexible non-conductive tape composed of polytetrafluoroethylene having finely divided particles of magnetic material dispersed therein.

2,998,841

PROCESS AND APPARATUS FOR TREATING WEBS WITH RESIDUAL FILMS

William Wallace Rowe, Cincinnati, Ohio, assignor to Cincinnati Industries Inc., Lockland, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 16, 1954, Ser. No. 410,480
18 Claims. (Cl. 154-30)



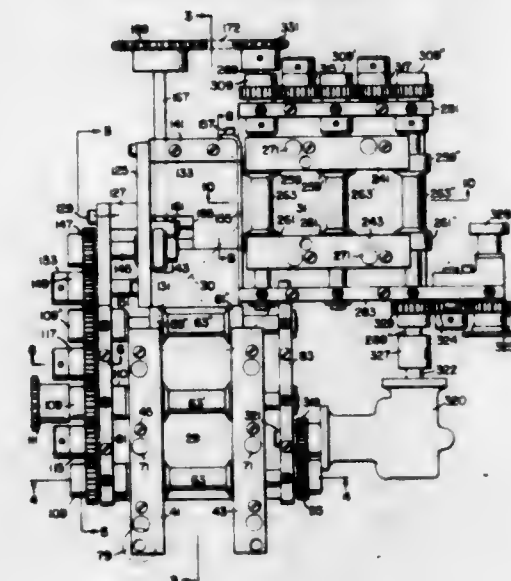
1. In coating apparatus, in combination, means presenting a moving surface on which a residual film is to be formed, doctor means having a reaction at an angle to the direction of movement of said moving surface, and coating with said moving surface to form a bite in which a coating substance may be maintained, means for delivering a coating substance to said bite at one end thereof, the said reaction of the said doctor means causing said coating material to travel along said bite across said moving surface to the other end of said bite, and means for removing from said surface the residual film thereof formed by said doctor means thereon.

2,998,842

BONDING MACHINE FOR PHOTOGRAPHIC MOUNTS

Paul J. Good, Rochester, N.Y., assignor to Dynacolor Corporation, Rochester, N.Y., a corporation of New York

Filed July 1, 1960, Ser. No. 40,338
11 Claims. (Cl. 154-42)



9. A bonding machine for sealing the edges of a double-layered photographic mount to which coatings of a heat sealing type of adhesive have been pre-applied, said machine comprising a primary roller unit through which the mount passes to seal a pair of its opposing edges and a secondary roller unit through which the mount passes subsequently to seal its other pair of opposing edges, said roller units each comprising a plurality of pairs of upper and lower rollers each spaced from one another, means for mounting said pairs of rollers and for rotating the upper rollers in one direction and the lower rollers in the other direction, means for guiding the mount between said pairs of rollers and for heating the mount

and rollers to simultaneously hot press the opposing edges of the mount while moving the mount along, and means located between said primary and secondary roller units for orienting and transmitting the mount so that the said other pair of opposing edges thereof are introduced into said secondary roller unit.

2,998,843

TAPE CLAMPING DEVICE

Horace S. Groom, Mount Prospect, and Nathaniel G. Kamen, Chicago, Ill., assignors to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,527
3 Claims. (Cl. 154-42.3)

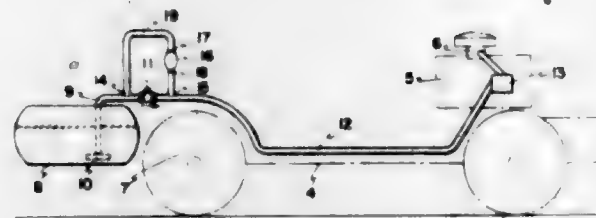


1. Apparatus for aligning a section of tape comprising a tape support, a tape guide mounted on said support, a lever pivotally mounted for movement from a normal position to a position overlying said tape support, a cantilever spring secured to said lever and having its free end extending obliquely from said lever to approach contact with said tape before said lever is pivoted into the position overlying said tape support, and a friction pad secured to said free end of said cantilever spring for frictionally engaging said tape to move it laterally to abut said tape guide when said lever is pivoted toward said tape support.

2,998,844

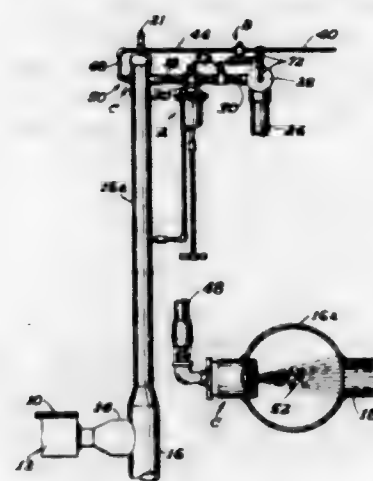
VAPOR LOCK REDUCTION DEVICE FOR AUTOMOTIVE VEHICLES

John M. Jordan, Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,432
7 Claims. (Cl. 158-36.3)



1. In an automotive vehicle having a front end and a rear axle and which includes a liquid fuel pump having a suction inlet, a main liquid fuel storage container having an outlet conduit which communicates with an intake device located within the main container, and a main fuel conduit communicating between said suction inlet and said outlet conduit, a fuel conduit bypass attachment comprising: an inverted U-shaped bypass fuel conduit rising in an upward direction above, and having each leg of the inverted U communicating with the main fuel conduit; uni-directional flow means located in the main conduit between the points of communication of the bypass conduit legs, with the main conduit whereby liquid fuel is allowed to flow from the liquid fuel storage tank toward the fuel pump; and a liquid fuel container having an inlet and an outlet communicating with and located in that leg of the inverted U bypass conduit which is located between the directional flow means and the fuel pump.

2,998,845
FOAM KILLING SPRAY SYSTEM FOR VACUUM CONTROL ASSEMBLY
Arthur E. Broughton, Glens Falls, N.Y.
Filed Feb. 10, 1960, Ser. No. 7,857
8 Claims. (Cl. 162-252)

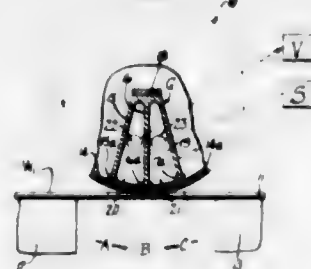


1. Apparatus for reducing foam in the moisture removing vacuum system of a paper making machine comprising a suction box positioned to remove moisture from an overlying layer of diluted paper pulp, a withdrawal conduit communicating with said suction box to permit the air and moisture drawn into said suction box to be removed therefrom, an upstanding water and air separation stand-pipe communicating with said withdrawal conduit and having an upwardly extending air withdrawal leg provided with an opening in the upper portion thereof, a suction conduit communicating through said opening with said stand-pipe, a regulator valve in said conduit controlling the vacuum maintained within said stand-pipe, and means for producing a vacuum through said valve, spraying means within said air leg disposed opposite the opening into said withdrawal conduit for introducing a fresh water spray into said air leg directed toward the opening into said withdrawal conduit to reduce foam formed within said air leg and prevent said foam from entering said vacuum control valve.

2,998,846

DANDY ROLL FOR HIGH SPEEDS

Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Aug. 23, 1957, Ser. No. 679,843
4 Claims. (Cl. 162-297)



1. In a high speed paper machine, a traveling forming wire having a horizontal forming reach carrying a stream of pulp for forming a paper web, suction means for drawing water through the wire, and a dandy roll structure above the wire, and dipping into the pulp on the wire in the region above said suction means, said dandy roll structure comprising a hollow cylindrical roll having a foraminous peripheral surface portion in the form of a fine wire screen mounted on heavier wire and radial fins and having a contact area of said foraminous surface extending along its axial length adapted to engage the

upper surface of a traveling web supported by a forming wire horizontally movable beneath the roll, and a gland within said roll defining an area of slightly super-atmospheric pressure extending radially outwardly from the interior of the roll and along the axial length of the roll at the off-running side of said contact area for urging web particles and water tending to remain on the foraminous surface back onto the web, and defining an area of slightly subatmospheric pressure along the axial length of the roll at the on-coming side of said contact area for preventing buildup of web particles and water on the outside of the foraminous surface.

2,998,847

FITLESS WELL ADAPTOR LOCKING PROPS

Herbert W. Mann, 10940 W. Congress St., Milwaukee, Wis.
Filed Feb. 8, 1960, Ser. No. 7,405
8 Claims. (Cl. 166-85)

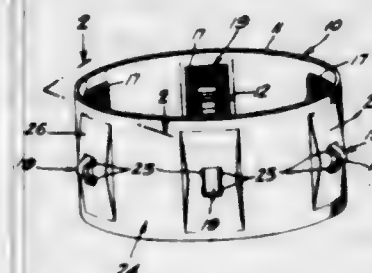


2. In combination, a well casing, a fluid pipe fitting removably anchored within said well casing, first and second telescopically associated members within the well casing and extending axially thereof, one of said telescopically associated members being carried by said fitting, a pair of lever arms, a pivot member directly pivotally connecting the lever arms at their outer ends and carrying an engagement element, the inner end of one arm being pivotally connected to the first telescopic member and the inner end of the other arm being pivotally connected to the second telescopic member, said arms projecting laterally of the axis of said well casing and being of a length to jack-knife upon relative telescopic movement of said telescopic members to a position wherein said engagement element is releasably wedged against an inner wall portion of the well casing to stabilize said fitting.

2,998,848

STOP COLLAR

Kenneth A. Wright and James R. Solum, Los Angeles, Calif., assignors, by mesne assignments, to B and W, Incorporated, Torrance, Calif., a corporation of California
Filed Nov. 4, 1957, Ser. No. 694,263
8 Claims. (Cl. 166-241)



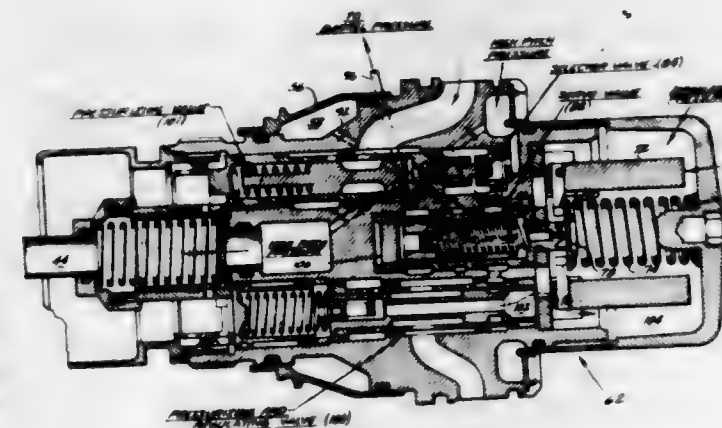
1. In a collar assembly for installation upon a well pipe, the combination of: a collar of substantially uniform

wall thickness having a series of circumferentially spaced pockets extending radially outwardly from the inner surface thereof the material of the collar overlying said pockets being substantially equal in thickness to the thickness of the remaining portion of the collar, each pocket having oppositely tapered internal surfaces and a window opening extending therethrough between said tapered surfaces, and a plurality of members positioned in said pockets, each member having two wedge elements connected by means protruding through each window opening, the wedge elements engaging the tapered surfaces, whereby said wedge elements may be moved away from each other along said tapered surfaces by applying a force against said protruding means and thereby anchor the collar upon the well pipe.

2,998,849

PITCH LOCK SYSTEM

Norman E. Newton, South Glastonbury, and Richard L. Fischer, Suffield, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 15, 1958, Ser. No. 767,308
8 Claims. (Cl. 170-160.2)



1. In a propeller having a hub, a plurality of blades carried by said hub and movable to a number of varied pitch positions relative to the hub, means for varying the pitch position of said blades including a servo motor and high and low pitch pressure lines connected thereto, governor means for controlling the position of said servo motor including connections to said high and low pitch lines, a pitch lock including one element movable with the blades and another element fixed against rotation relative to the hub, spring means urging said lock elements into an engaged position to prevent movement of the blades in a pitch decrease direction, fluid pressure servo means for urging said members into a disengaged position, a servo operated valve device for controlling said fluid pressure means, flapper valve means for controlling the position of said valve device, a speed responsive device for varying the opening of said valve means to regulate said servo device, and means connected to said high and low pitch lines for selecting the higher of the pressures in said lines and conducting the selected pressure to said valve device.

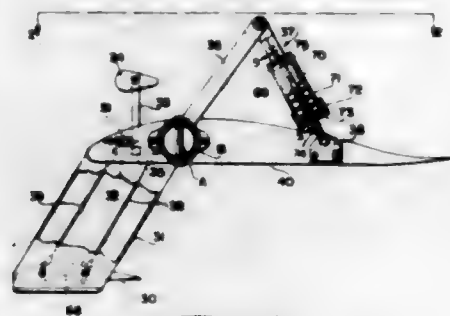
2,998,850

HELICOPTER CONTROL APPARATUS

Victor O. Armstrong, 13303 Debell St., Pacoima, Calif.
Filed Sept. 9, 1958, Ser. No. 760,009
8 Claims. (Cl. 170-160.16)

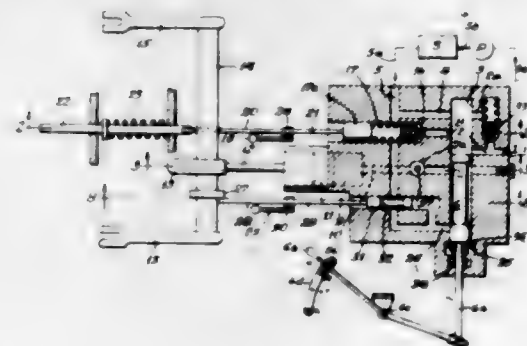
1. In a helicopter control arrangement for controlling the flight of a helicopter, in combination with a lifting rotor blade rotatably carried on the helicopter, a pilot airfoil pivotally secured in spaced relationship to the blade positionable to alter the blade plane of rotation to modify the aerodynamic lift forces developed on the blade, the

pilot airfoil having a leading edge maintained forward of the rotor blade to directly meet oncoming airflow, a parallelogram linkage operably connected between the blade and the airfoil to pivot the airfoil, a weight located exteriorly of the blade connected to the linkage and ef-



fective to change the angle of attack of the airfoil leading edge with respect to oncoming airflow via the linkage responsive to a change of the blade from a given angle of attack plane whereby the flow of air past the airfoil is altered which aerodynamically rotates the blade about its longitudinal axis.

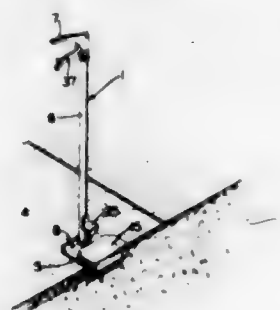
2,998,851
HYDRAULIC POWER LIFT CONTROL MEANS FOR TRACTORS
Robert Marindin, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 17, 1958, Ser. No. 722,001
Claims priority, application Great Britain Mar. 18, 1957
12 Claims. (Cl. 172-7)



1. In a tractor having an implement hitch means adapted to carry an implement and including a draft responsive member resiliently loaded so as to be movable in response to changes in draft load, hydraulic power lift means including a ram cylinder and a ram piston reciprocal within said cylinder, and a pump and a reservoir containing a fluid; a hydraulic power lift control means having a chamber with an inlet passage in communication with said pump and a by-pass return passage in communication with said reservoir and a conduit in communication with said cylinder, a manually operated selector valve reciprocal within said chamber, a relief valve means operatively connected with said draft responsive member and retained thereby and in communication with said chamber and said by-pass return passage and operable to intermittently dispel fluid to the reservoir in accordance with movement of the draft responsive member, a pre-set relief valve in communication with said inlet passage and said chamber, and a depth limiting valve means in communication with said chamber and said by-pass return passage and connected to the power lift means, said selector valve being movable into a first position permitting communication between said inlet passage and said conduit and said by-pass return passage for lowering said implement, and into a second position permitting communication between said inlet passage and said conduit and said relief valve means for adjusting the position

of the implement consequent upon draft forces exerted upon said draft responsive member, and into a third position permitting communication between said inlet passage and said conduit for raising said implement, and into a fourth position permitting communication between said inlet passage and said by-pass return passage consequent upon unseating of said preset relief valve for transport of said implement, and into a fifth position permitting communication between said conduit and said depth limiting piston valve means and said by-pass return passage for lowering of said implement whereupon movement of said depth limiting piston valve means terminates communication between said chamber and said by-pass return passage to prevent a further descent of the implement.

2,998,852
SIDEWALK EDGER
John Carl Hall, 120 Mohican Ave., Orrville, Ohio
Filed Feb. 26, 1959, Ser. No. 795,757
3 Claims. (Cl. 172-18)

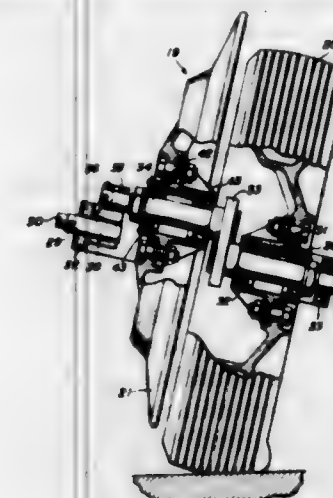


1. An edger for removing soil from the side of a sidewalk or the like, comprising a base plate horizontally disposed for placement on a sidewalk, the plate having a downturned flange for abutment with a side of a sidewalk, the flange having a lower tapered edge, a cutting blade pivotally mounted on the plate for movement between an upper non-operative position and a lower operative position, the blade having a cutting edge adjacent the flange in the lower operative position, the blade being spring biased toward the upper non-operative position, the blade also having an edge remote from the cutting edge and movable around the pivotal axis of the blade, trigger means for holding the blade in the lower operative position, an elongated vertical casing mounted on the plate, a handle mounted at the upper end of the casing, the handle having a manually movable portion operatively connected to the trigger means for releasing the trigger means, the trigger means including a lever having a catch surface in the path of rotation of and engageable with the edge of the blade remote from the cutting edge when the blade is in the lower operative position, and the base plate and downturned flange providing two sidewalk abutable surfaces for steadying the edger and for removing successive segments of sod of uniform configuration.

2,998,853
WHEEL SUPPORT FOR IMPLEMENTS
Uwe H. Martensen, Burlington, Ontario, Canada, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 25, 1958, Ser. No. 763,285
7 Claims. (Cl. 172-383)

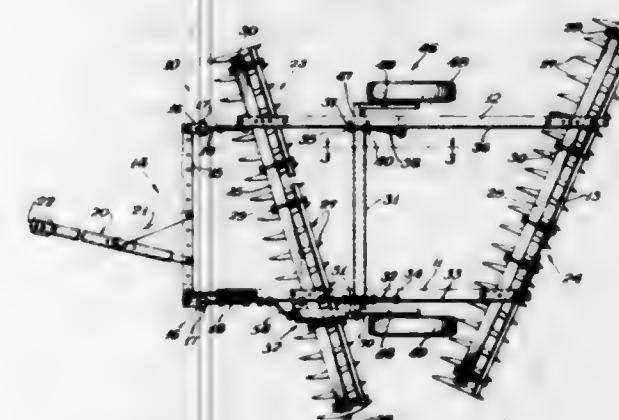
1. A furrow and transport wheel assembly for an implement comprising a support, a pair of separate coaxial main shaft sections mounted on the support, a wheel rotatably mounted on one of said sections, an auxiliary shaft section radially spaced from and spanning said main shaft sections, means for mounting said auxiliary shaft section on said main shaft sections for rotation in an orbit about the axes of the latter to effect movement

of said auxiliary shaft section relative to said main shaft sections, means for holding said auxiliary shaft section



in selected positions and a wheel mounted on said auxiliary shaft section.

2,998,854
DISK HARROW
James Morkoski, Des Plaines, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 19, 1958, Ser. No. 781,731
4 Claims. (Cl. 172-600)

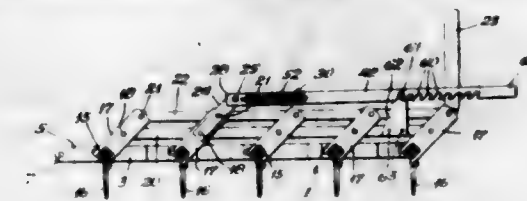


1. In an offset disk harrow having a frame including horizontal laterally spaced frame bars having laterally converging tandem disk gangs secured thereto and a hitch frame vertically pivotable relative to said frame bars for connection to a draft source, the combination of connecting means between said bars for holding them in spaced relationship comprising a rigid member affixed at one end to one of said bars and having a flange at its other end engageable with the other of said bars, and means in the connection of said rigid member to said other of said bars for twisting the frame to counteract the tendency of the forward end of each gang to penetrate more deeply than the rear end thereof, comprising a pivot member connecting said flange to the associated bar, a lever arm on said other end of said rigid member, and an adjustable connection between the lever arm and said other of said bars for angularly adjusting the latter relative to said rigid member.

2,998,855
HARROW WITH SHOCK ABSORBER DEVICE
Eugene J. Birkenbach, Des Plaines, and John E. Morgan, Chicago, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 31, 1958, Ser. No. 725,413
5 Claims. (Cl. 172-635)

1. A harrow comprising a pair of end rails, rockably mounted tooth bars carried thereby, an upstanding lever

on each tooth bar, a pair of upper and lower set bars pivotally connected to each of said levers at vertically spaced points, an extension on one of said levers projecting upwardly above said upper set bar, an upstanding bracket connected to the lower set bar and having a



transverse pin, and a spring-loaded adjusting bar assembly pivotally connected at one end to said lever extension and having a series of notches adjacent to its opposite end for selective engagement with said pin, said assembly disposed in substantial horizontal alignment with said set bars.

2,998,856
BOTTOM BRACE AND FOLDING PILE HAMMER LEADS CONSTRUCTION
Waldemar F. Larsen, Dover, and Leonard L. Frederick, Whippany, N.J., assignors to McKiernan-Terry Corporation, Harrison, N.J., a corporation of New Jersey
Filed Sept. 14, 1959, Ser. No. 839,858
4 Claims. (Cl. 175-154)

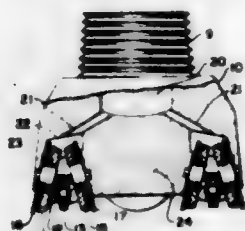


1. The combination with a crane boom, a leads guide swiveled on the head of the boom for universal swinging movement forward away from and back toward the boom and laterally away from the opposite sides of the boom and a leads frame guided for vertical movement up and down through said guide, of a longitudinally extensible bottom brace for holding the lower end of the leads frame out from the boom and for swinging said leads frame laterally to opposite sides of the boom, said extensible bottom brace having an inner end portion pivotally supported at the lower end of the boom for lateral swinging movement of the brace and an extensibly related outer end portion swiveled to the lower end of the leads frame, a longitudinally extensible and contractible motor diagonally related to the longitudinal axis of said brace, said motor having its inner end pivotally supported at the lower end of the boom for lateral swinging movement and its outer end pivotally connected with the inner end portion of the brace to impart lateral swinging movement to the brace and connected leads frame to one side on extension of the motor and swinging movement of the brace and connected leads frame laterally to the opposite side of the boom on contraction of the motor and variably

adjustable means for positively securing the bottom brace in the laterally shifted positions to which it may be swung by said motor.

2,998,857 DRILL BIT

Frederic H. Delfy, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Filed Dec. 11, 1957, Ser. No. 702,039
9 Claims. (Cl. 175—359)



6. An improved multi-cutter element rotary bit which comprises a body member having a plurality of sockets disposed in the lower surface thereof, each socket adapted to receive a separate cutter element and arranged in said lower surface to provide a working relationship between the cutter elements, each cutter element comprising a support member, two cutter shafts attached at one end to opposite sides of said support member and extending upward therefrom to supporting engagement with the surrounding socket, a disc-type cutter rotatably mounted on each shaft, a cylindrical cutter rotatably supported by said support member between said disc cutters and in a recessed position relative to said disc cutters, all of the cutters in each cutter element arranged such that the cutting contact points of the cutters fall in substantially a common plane with the longitudinal axis of the bit.

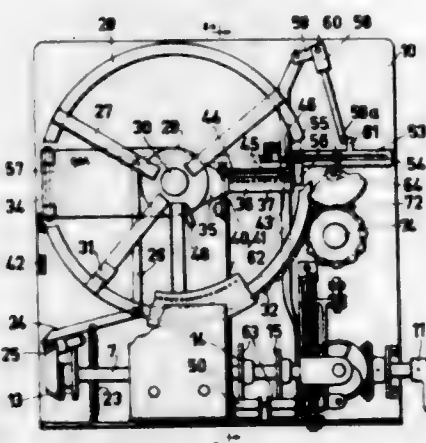
2,998,858

SCALE WITH AUTOMATIC CALCULATION OF PRICE

Heinz Adolf Dzaack, Eskilstuna, Sweden, assignor to Kooperativa Förbundet Ekonomisk Förening, Stockholm, Sweden

Filed Oct. 19, 1956, Ser. No. 617,154

Claims priority, application Sweden Oct. 21, 1955
3 Claims. (Cl. 177—2)



1. In a measuring apparatus, a device for determining the weight of a product and recording such weight in whole units of measure and proportional parts thereof comprising a first member movable a distance proportional to a weight and having first index means thereon, an array of spaced index members corresponding to the proportional parts of the weight movable from a fixed position to engage an index member with the index means, second index means on the first movable member comprising a plurality of abutments thereon spaced in

the direction of movement thereof and in a direction substantially transverse to the direction of such movement so that they are in staggered relation, each abutment corresponding to a whole unit of measure, a second member mounted for movement in a direction parallel to and also toward said first member, a plurality of aligned displaceable pins carried by the second member for displacement of a pin upon engagement with an abutment in register therewith when the second member is moved toward the fixed member, first movable means movable from an initial position to cooperate with an index member engaged with the index means for recording the proportional weight corresponding thereto, second movable means cooperating with a displaced pin to record the whole unit of weight corresponding to the abutment in register therewith, and means secured to the first movable means to move the second member together with the displaceable pins carried thereby parallel to the first member, the means secured to the first movable means being at a position thereon corresponding to one end of the array of index members, whereby ambiguities at a transition between a whole unit and a proportional part of a unit adjacent the whole unit are prevented.

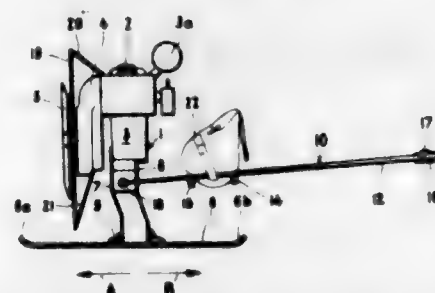
ERRATUM

For Class 177—203 see:
Patent No. 2,998,969

2,998,859

PROPELLER-DRIVEN SNOW VEHICLE

Josef Niklas, Dorfstrasse 11, Oberammergau, Bavaria, Germany
Filed Feb. 16, 1959, Ser. No. 793,350
Claims priority, application Germany Feb. 27, 1958
5 Claims. (Cl. 180—3)

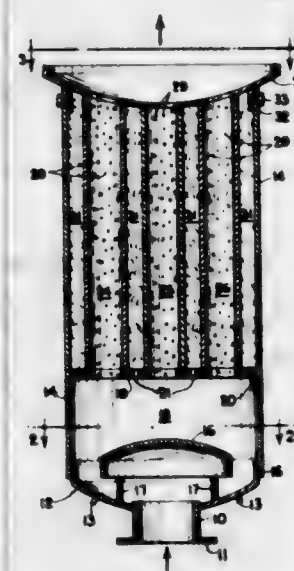


1. A pulling arrangement, comprising, in combination, a single substantially ski-shaped runner means having a substantially smooth bottom face and free of means adapted to drivingly engage a surface on which said ski-shaped runner means is placed; solely air-engaging driving means rotatable about a given axis of rotation and mounted on said ski-shaped runner means for moving the same forward in the longitudinal direction of said ski-shaped runner means; and an elongated rigid gripping member connected at one end to one of said means and turnable about an axis located at a level below the axis of rotation of said driving means and substantially transverse to the longitudinal direction of said runner means, said gripping member extending in a direction rearwardly from said runner means so as to be adapted to be gripped at the other end by the user of said pulling arrangement, the connection between said one end of the gripping member and said one means being such that said gripping member is held against lateral movement with respect to said runner means, whereby during operation of said driving means a user gripping the rear end of said elongated gripping member will be pulled in longitudinal direction of said ski-shaped runner means while simultaneously being in a position to vary the direction of pulling by moving the rear end of said gripping means in

lateral direction thus adjusting the direction of said ski-shaped runner means and simultaneously also adjusting the direction of pull exerted by said air-engaging driving means so as to coincide with the longitudinal direction of said ski-shaped runner means.

2,998,860 SOUND SILENCING AND FILTERING APPARATUS

Wilhelm S. Everett, 1349 E. Main St., Santa Paula, Calif.
Filed Feb. 14, 1958, Ser. No. 715,445
9 Claims. (Cl. 181—54)

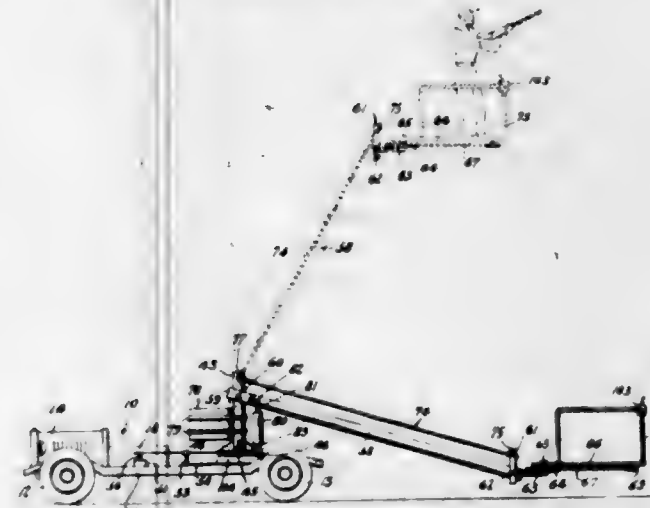


1. A device for attenuating noises from fluid flowing through an exhaust passage, said device comprising: an elongated casing having a closure at a first end; an inlet pipe extending through said closure; a first header within said casing proximate said closure; a second header at a second end of said casing; a plurality of perforated pipes each extending through both of said headers; and sound absorbent material in said casing between said headers and surrounding said pipes, said second header comprising an outwardly concave dish-shaped reflector for directing any noise issuing from said device in a single direction.

2,998,861

ORCHARD CRANE

Edgar A. Hotchkiss, Carlton, Wash.
Filed Dec. 6, 1957, Ser. No. 701,128
1 Claim. (Cl. 182—2)

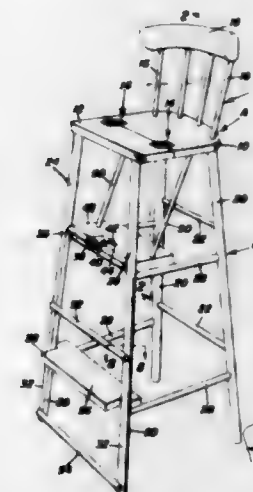


A crane comprising a mobile chassis, an elevated workman's platform, a boom extending between and connected to said chassis and said platform, a fork rigidly mounted to said platform having legs extending on opposite sides

of one end of said boom, a shaft extending through said legs and said boom, a fork integrally formed on the other end of said boom, a vertical post positioned between the legs of the second of said forks, a pair of levers pivotally connected to the boom, a leveling arm extending between and pivotally connected to said levers and said post to maintain said platform in a horizontal plane, said platform having a circular turntable rigidly secured thereto, said turntable having a groove on the peripheral edge thereof, a steel cable positioned in the groove in said turntable, a clamp connected to said cable, a double acting hydraulic cylinder having a piston therein that is connected to said clamp so that upon actuation of the piston in said cylinder said cable will operatively rotate said turntable and the platform connected thereto.

2,998,862 LADDER AND STOOL COMBINED

Walter D. Earley, 15 Reo Ave.,
Port Jefferson Station, N.Y.
Filed June 8, 1959, Ser. No. 818,814
5 Claims. (Cl. 182—33.2)



1. In combination, a horizontal seat embodying complementary front and rear sections normally coplanar and having adjacent cooperating edges hinged together and permitting the front section to be swung up and positioned atop the rear section, a leg frame positioned and mounted beneath said seat and embodying a pair of rear legs secured at upper ends to and depending from the rear seat section, a short back-rest fixed to and rising vertically above the rear section, a pair of main front legs commensurate in length with the rear legs and having upper ends fixed to a forward edge portion of the front seat section, said front legs depending from said main front section, the median and lower portions of said front legs having spaced rungs affixed thereto and adapted to serve as handgrips, a third rung fixed across upper portions of said front legs and provided on a median portion thereof with a pivotally mounted latch having a keeper hook, upper and lower ladder steps supported on said leg frame, said upper step being aligned with said third rung and having a keeper seat in which said keeper hook may be releasably seated, a pair of auxiliary front legs embodied rigidly in said leg frame and cooperating with the rear legs to support said seat and steps, said auxiliary legs extending from the level of the upper step to floor level and cooperating with the rear legs in supporting the seat and steps when the main front legs are elevated in conjunction with the front seat section to provide a safety-type support and steadying member for the user, said latch being also releasably engageable with an upper edge of the back-rest and serving to hold said steadying member in an upstanding position with portions thereof projecting above the back-rest.

2,998,863

FIRE ESCAPE LADDERS

Clayton E. Larson, Weston, Conn., assignor to White Metal Rolling & Stamping Corporation, Brooklyn, N.Y., a corporation of New York
 Filed Aug. 3, 1959, Ser. No. 831,176
 1 Claim. (Cl. 182-164)



A foldable fire-escape ladder adapted to be suspended along the exterior of a building comprising: a plurality of ladder sections, means for connecting said sections including a wall engaging member formed having two point-bearing foot portions on one end and two apertures on the other end, and means for engagement with said apertures for pivotal connection of said sections to said wall engaging member, said foot portions being spaced at a distance from each other greater than the distance between said apertures and each having a point which is defined by a pair of intersecting planes, both of said planes being disposed at an acute angle with respect to a bearing line established by said two foot portions and the planes defining said angle on one foot portion being oppositely inclined with respect to those of the other foot portion.

2,998,864

SUCTION CLEANER

Paul Emil Gaudry, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
 Filed Apr. 1, 1958, Ser. No. 725,728
 8 Claims. (Cl. 183-43)



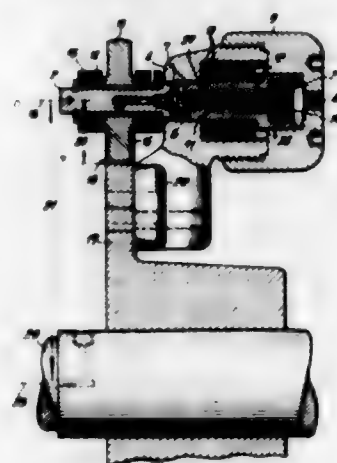
1. In a suction cleaner through which air is adapted to be moved, a casing having an open end, a longitudinally extending zone of the casing at its open end having an enlarged section to provide an outwardly extending shoulder on the casing which is spaced from the extreme end thereof, an end ring for said casing having an end wall and spaced apart outer and inner side walls extending

therefrom longitudinally of the casing to provide a groove having a closed end and spaced apart outer and inner wall surfaces, the end zone of the casing being disposed in the groove, sealing means in the groove to provide a seal between the end ring and the casing, an elongated open-ended member forming a compartment adapted to receive a dust bag for removing and collecting dust from air which is moved therethrough, the elongated open-ended member being disposed within the casing and having a bottom and side wall extending from the bottom toward the end ring, the side wall of the elongated open-ended member at the open end thereof having an outwardly extending flange at the shoulder of the casing, the elongated open-ended member being self-sustaining apertured for air to be moved freely therethrough, the inner side wall of the end ring projecting longitudinally within the casing toward the shoulder, and means including the inner side wall of the end ring for clamping the flange of the elongated open-ended member at the shoulder to support the latter at its open end.

2,998,865

LUBRICATING DEVICE

Joachim Geissler, Köln-Nippes, Germany, assignor to De Limon Fluhme & Co., Düsseldorf, Germany
 Filed Mar. 16, 1959, Ser. No. 799,701
 Claims priority, application Germany Mar. 20, 1958
 14 Claims. (Cl. 184-15)



1. In a lubricating head for lubricating an element of a chain drive: a lubricating piston reciprocally mounted in said lubricating head and movable from an ineffective position into an effective position for engagement with the element to be lubricated, conduit means extending through said lubricating piston for conveying lubricant therethrough to the element to be lubricated, fluid pressure operable control means normally occupying a first position in which it interrupts said conduit means to thereby prevent the passage of lubricant through said conduit means to the element to be lubricated, said control means being movable into a second position to thereby allow the flow of lubricant through said conduit means to the element to be lubricated, and means for admitting lubricant under pressure to said conduit means and to said piston and said control means to move said piston from its ineffective position into its effective position and to move said control means from its first position into its second position.

2,998,866

ELECTRICAL CONTROLS

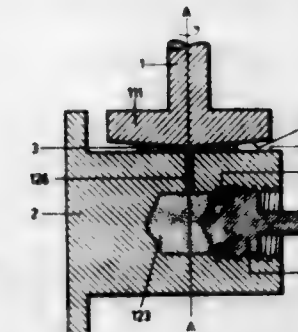
John R. Dimming, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
 Filed Aug. 5, 1959, Ser. No. 831,736
 28 Claims. (Cl. 187-29)

28. In an elevator system comprising a plurality of cars serving a plurality of floors, a dispatching floor

2,998,868

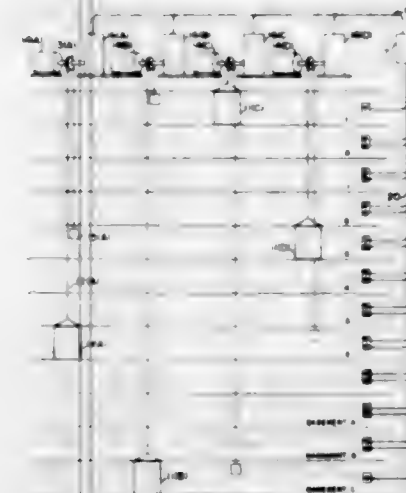
DAMPING DEVICE

Ghert Henri Meier, Zurich, Switzerland, assignor to Contraves A.G., Zurich, Switzerland
 Filed Nov. 17, 1958, Ser. No. 774,231
 Claims priority, application Switzerland Mar. 31, 1958
 16 Claims. (Cl. 188-90)



1. A damping device for damping oscillations of a rotary system, comprising in combination: a rotary member rotatable about an axis and having a damping surface extending transversely of said axis; a damping member having a damping surface extending transversely of said axis, facing the damping surface of said rotary member and adjacently spaced therefrom, said damping surfaces defining therebetween a continuous uninterrupted space extending about and through said axis and continuously increasing in axial thickness in a direction radially outward from said axis; and a body of liquid filling said space and held centrally between said surfaces by capillary attraction thereto regardless of the position of said damping device.

from which cars are dispatched in a first direction, a plurality of floors beyond said dispatching floor in a second direction opposite said first direction, means for assigning cars to serve said floors beyond, means for preventing operation of said assigning means in response to a

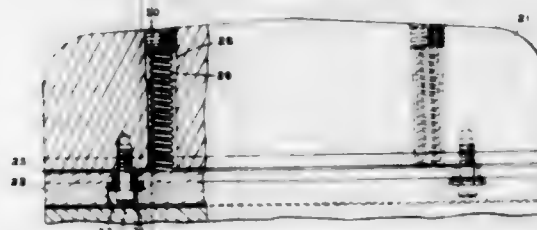


condition common to the cars while another car is assigned to serve said floors beyond, and means for enabling operation of said assigning means while another car is assigned to serve said floors beyond when no car assigned to serve said floors beyond initiates floor beyond service within a given interval.

2,998,867

VIBRATION DAMPER

Albert H. Dall, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
 Filed June 30, 1958, Ser. No. 745,724
 1 Claim. (Cl. 188-1)

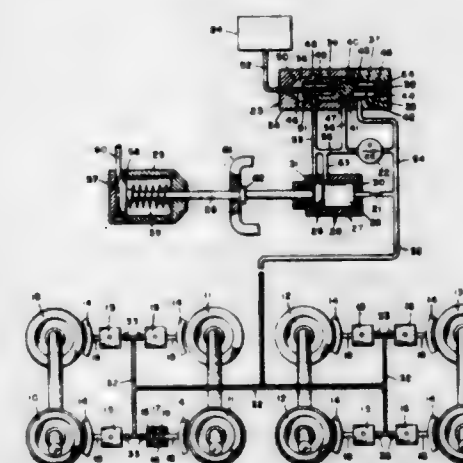


A vibration dampener for the spindle carrier of a horizontal milling machine comprising a mounting plate adapted to be secured to the top of the spindle carrier, said mounting plate being provided with a flat, horizontal upper surface, a damper element of substantial mass compared to that of the spindle carrier, said damper element being provided with a flat surface adapted to mate with the flat upper surface of the mounting plate, a sheet of friction material interposed between the flat surfaces of the damper element and the mounting plate and substantially co-extensive therewith, said sheet being secured to one of said surfaces and free to slide with respect to the other of said surfaces to thereby permit frictional sliding movement between one face of the friction material and its associated flat surface, spring means acting between said damper element and the spindle carrier for removing a portion of the weight of the damper element from said sheet of frictional material so as to permit the damper element to move independently of the spindle carrier and thereby damp out the horizontal vibrations occurring therein by virtue of the sliding friction between the friction material and its associated flat surface, and a lost-motion connection between said damper element and said spindle carrier for limiting the horizontal and vertical movement of the damper element relative to the mounting plate.

2,998,869

POWER OPERATED BRAKE OPERATING APPARATUS

Cecil E. Adams, Columbus, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
 Filed Mar. 10, 1959, Ser. No. 798,440
 2 Claims. (Cl. 188-152)



1. In a hydraulic brake master cylinder, a cylinder; a piston in said cylinder having a large and a small displacement area, one on each side thereof; externally operated means for moving said piston to create brake operating fluid pressure at the large displacement area side thereof; a fluid reservoir; valve means including a slide valve and a poppet valve connected in series and normally establishing communication between said small displacement area side of said piston and said reservoir and a slide valve normally preventing communication between the opposite sides of said piston, said valve means operating in response to a predetermined brake operating fluid pressure at the large displacement area side of said piston and including two areas adapted to be acted upon in succession by said fluid pressure for operating said valve means, one of said

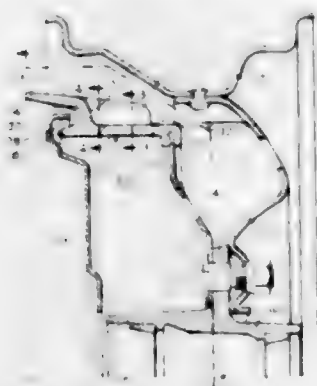
areas being effective to open said valve which normally prevents communication between the opposite sides of said piston, to close the slide valve between said piston and reservoir and to expose the other of said valve areas to said pressure, and means operative to control the rate at which said fluid pressure may be applied to said one valve area, said other valve area being effective to change the rate at which said valve means operates to close said poppet valve.

2,998,870

AIR COOLED BRAKE DRUM

Clarence A. Herman, Grosse Pointe Farms, and Leslie H. Kliner, Grosse Pointe Woods, Mich., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 4, 1954, Ser. No. 447,777
6 Claims. (Cl. 188-264)



1. A brake drum construction comprising in combination, a cylindrical braking drum having a base at its inner end secured to a wheel structure having a wheel rim surrounding the drum, the drum on its outer end having an annular shape to cooperate with a sealing plate, circumferentially spaced axially directed integral radial cross ribs on the outer surface of the drum starting from a point near the base or inner end and at their radially inner portions ending at a point near but short of the outer end of the drum, an integral annular radial rib surrounding the drum near but short of the end of the drum, said cross ribs for the height of said radial rib terminating against the side and being integral with said radial rib, and an integral annular generally axially directed but radially outwardly flared rib extending outward from the radially outer edge of said radial rib, the flared rib being disposed radially outside the drum and sealing plate, leaving an annular sealing groove between the inner end of the outwardly flared rib and the end of the drum, and the flared rib extending axially for a considerable distance beyond the sealing plate and end of the drum to stand exposed in the air stream past the sealing plate and drum.

2,998,871

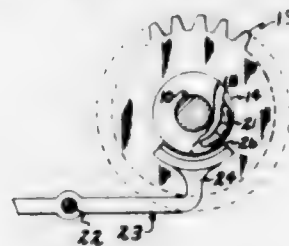
POWER TRANSMITTING DRIVE EMBODYING FRICTION CLUTCH

Thurman W. Horn, % Carbometer Inc., P.O. Box 671, Anniston, Ala.

Filed Oct. 21, 1959, Ser. No. 847,725
3 Claims. (Cl. 192-17)

1. In power transmitting apparatus, a shaft having an abutment thereon, a gear or the like mounted freely on said shaft adjacent said abutment and having one face in contact with the abutment, a thrust member secured to said shaft for rotation therewith and spaced axially from said abutment, a friction clutch element freely mounted on said shaft between said thrust member and said gear, said clutch element being in frictional contact with said gear and being spaced from the thrust member, wedge locking means interposed between said thrust member and said clutch element and adapted for forcing said

clutch element along said shaft into frictional locking engagement with said gear and for locking said freely mounted clutch element for rotation with said thrust member upon relative rotation of said thrust member and said clutch element in either direction of rotation, means to rotate said gear, relative rotation between said shaft and said gear forcing the clutch element through said

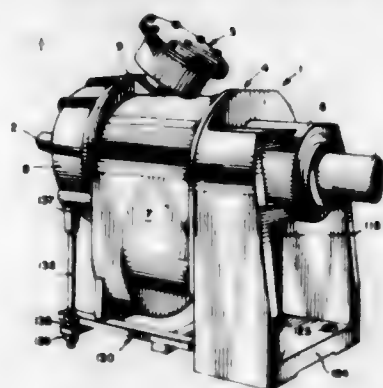


locking means into frictional locking engagement with said gear whereby said shaft and gear are operatively connected in driving relation to each other, and brake means operatively associated with said clutch element and effective when applied to retard rotation of said clutch element to thereby render ineffective the clutch engaging action of said wedge means whereby the gear may be rotated freely on said shaft.

2,998,872
CLUTCHES

Gordon M. Sommer, Hinsdale, and John K. Liu, Chicago, Ill., assignors to U. S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 2, 1958, Ser. No. 758,433
2 Claims. (Cl. 192-18)



1. A drive mechanism adapted to be mounted on the outside of a machine for driving the latter and comprising a housing, a drive shaft rotatably mounted in said housing, means for rotating said drive shaft, one driven shaft mounted in said housing in axial alignment with said drive shaft, a second driven shaft connected to said one driven shaft and rotatable thereby upon rotation of said one driven shaft, a sleeve member mounted on and rotatable with one end of said one driven shaft in outwardly concentric relation thereto, brake rings and clutch rings mounted on said sleeve member for rotation therewith, said rings being slidable on said sleeve member axially of said one driven shaft, other brake rings non-rotatably mounted in said housing and interleaved between said first mentioned brake rings, other clutch rings mounted on and rotatable with said drive shaft, said other clutch rings being movable axially of said drive shaft and interleaved between said first mentioned clutch rings, two abutment members mounted on said sleeve member on opposite axial sides thereof and of all said rings, said abutment members being slidable as a unit axially of said one drive shaft between one position, wherein they are effective to engage said first mentioned brake rings with said other brake rings and to disengage said first mentioned clutch rings from said other clutch rings to thereby hold said one driven shaft against rotation, and

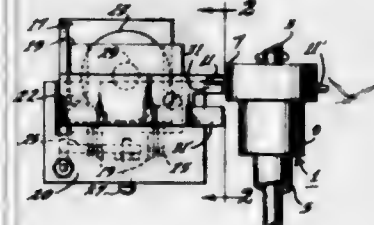
another position, wherein they are effective to disengage said first mentioned brake rings from said other brake rings and to engage said first mentioned clutch rings with said other clutch rings to thereby free said one driven shaft for rotation and operatively connect the latter to said drive shaft for rotation thereby, and means for selectively moving said abutment members between said one position and said other position, said last mentioned means comprising a rod connected to said abutment members and slidably mounted in said one driven shaft for reciprocation axially of the latter, a lever pivotally mounted in said housing and connected to said rod, another housing mounted on said first mentioned housing, a piston reciprocally mounted in said other housing and connected to said lever for oscillating the latter upon reciprocation of said piston, and means including a distensible diaphragm in said other housing for reciprocating said piston.

2,998,873

ESCAPEMENT MECHANISM

Albert Burstein, Drexel Hill, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Filed Nov. 27, 1957, Ser. No. 699,400
7 Claims. (Cl. 192-40)



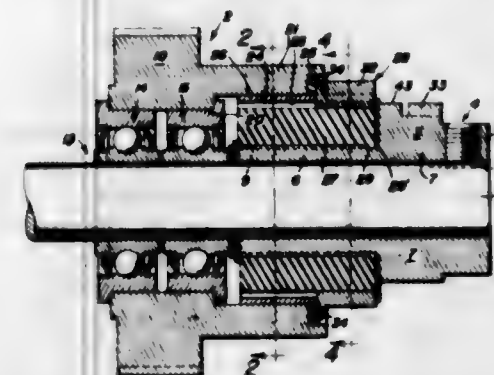
1. In combination with a movable member whose motion is to be controlled, an escapement mechanism including an arm having spaced fingers, said member having a plurality of spaced projecting lugs, adjacent ones of said lugs lying in a plane oblique to the path of movement of said member said arm being movable from a first position to a second position and vice versa, said fingers being located in and movable in a plane transverse to the path of said lugs, said fingers being separated by a space sufficiently large to pass said spaced lugs individually, each of said fingers being located to obstruct the path of a different one of said lugs for each different said position of said arm, and means for selectively moving said arm among said first and said second position, thereby to control said motion.

2,998,874

SELECTIVELY ENGAGEABLE CLUTCH

John H. MacNeill, Melbourne, Fla., assignor to Soroban, Inc., Melbourne, Fla., a corporation of Florida

Filed Feb. 24, 1958, Ser. No. 717,185
9 Claims. (Cl. 192-45.1)



1. A selectively-engageable, one-way clutch comprising a cylindrical driven member, a hollow cylindrical drive

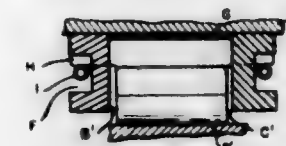
member coaxial with and rotatable about said driven member, a hollow cylindrical control member coaxial with and rotatable about said driven member, said driven member having a plurality of axially-extending grooves in radial alignment with at least a portion of said drive member and a portion of said control member, said grooves being spaced about the circumference of said driven member, a plurality of coupling members extending axially in said grooves in said driven member, said coupling members having a first axial portion subsisting between said driven member and said control member, said control member having means for engaging said coupling members, said coupling members having a second axial portion subsisting between said driven member and said drive member and having a radial length varying from shorter than to longer than the difference between the radius of the inner circumference of said drive member and the radii, with respect to the axis of said driven member, at the base of the grooves in said driven member, releasable means for maintaining said control member at a predetermined rotational angle with respect to the axial grooves of said driven members so as to maintain said coupling members out of contact with the inner circumference of said drive member, and resilient means for urging said control member in a direction to alter said rotational angle to bring said coupling members into contact with said drive member.

2,998,875

SPRAG RETAINER FOR ONE-WAY CLUTCHES

Thaddeus F. Zlotek, Detroit, Mich., assignor to Form-sprag Company, Warren, Mich., a corporation of Michigan

Filed June 2, 1958, Ser. No. 739,089
4 Claims. (Cl. 192-45.1)



1. A one-way clutch comprising a pair of annular, radially spaced inner and outer races, sprags having surfaces facing and engaging said races in the radial space therebetween and having trunnions projecting outwardly from opposite axial ends of the sprags, a retainer to retain said sprags in place, comprising a pair of parallel rings spaced axially from one another to receive the sprags radially in the axial space between said rings, and circumferentially spaced cross members extending axially between and fixedly connecting said rings to one another, said rings having slots extending only partially therethrough radially thereof and opening radially through a periphery thereof, said slots also opening axially inwardly to said space between said rings and receiving said trunnions axially outwardly of said respective sprag ends, said rings being further provided with axially facing grooves in the respective outer side faces thereof, which grooves circumferentially intersect said slots, and annular energizing means received in said grooves and acting against said respective trunnions to urge said sprags against a race toward which said slots open.

2,998,876

SPRAG FOR ONE-WAY CLUTCHES AND METHOD OF FORMING THE SAME

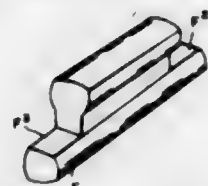
Thaddeus F. Zlotek, Detroit, Mich., assignor to Form-sprag Company, Warren, Mich., a corporation of Michigan

Filed June 2, 1958, Ser. No. 739,090
4 Claims. (Cl. 192-45.1)

1. A selectively-engageable, one-way clutch comprising a cylindrical driven member, a hollow cylindrical drive

1. A sprag for one-way clutches adapted to be assembled and retained in a circumferential series with other

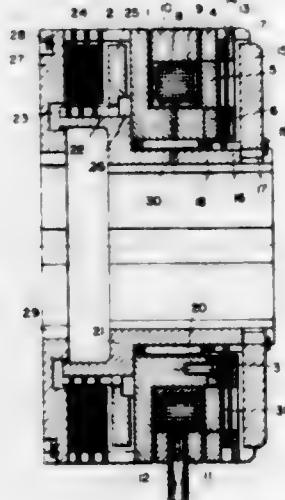
like sprags, comprising an axially extending bar formed in a radial cross sectional contour to provide a medial portion of restricted circumferential extent and radially extending end portions on either side of said medial portion presenting radially oppositely facing curved cam surfaces, said end portions each having opposed radially extending side surfaces adjacent said respective first named surfaces, at least one of which side surfaces is



of convexly outwardly curved contour across the radial dimension thereof, one of said end portions having integral extensions extending in opposite axial directions therefrom, said extensions affording trunnions for engagement with a suitable sprag retainer, said trunnion extensions each having a surface facing in the direction towards the opposite end portion of the sprag which is angled for radial engagement by an energizing spring to tilt and energize the sprag.

2,998,877

ELECTROMAGNETIC FRICTION CLUTCH
Anton Ryba, Bolzano, Italy, assignor, by direct and mesne assignments, to Zahnradfabrik Friedrichshafen, Friedrichshafen, Germany, a corporation of Germany
Filed Nov. 20, 1956, Ser. No. 623,387
Claims priority, application Austria Nov. 23, 1955
6 Claims. (Cl. 192-84)



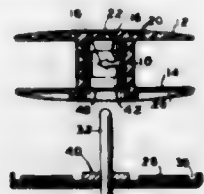
1. In an electromagnetic friction coupling for releasably coupling two aligned rotary parts, a first and a second coupling member rotatable about a common axis, the first coupling member comprising a first group of axially spaced coupling discs secured to said first coupling member for joint rotation therewith, and the second coupling member comprising a rotatable coupling sleeve axially displaceable in reference to said first coupling member, at least one magnetizable coupling disc and an armature secured to said sleeve at one end thereof and a second group of coupling discs secured to the sleeve at the other end thereof, the coupling discs of said second group interspersing the coupling discs of the first group and being frictionally engageable therewith to form a mechanical coupling array, a magnetizable disc rotatable about said coupling sleeve and fixed to the first coupling member for rotation in unison therewith, at least one magnetizable coupling disc secured to said magnetizable disc axially spaced therefrom and rotatable jointly therewith, said magnetizable coupling discs being interposed

between said magnetizable disc rotatable about the sleeve and said armature, said magnetizable coupling discs secured to the sleeve and the rotatable magnetizable disc respectively, said magnetizable disc rotatable about the sleeve and said armature being magnetically and frictionally engageable with each other to form an electromagnetic array, and energizing means for generating a magnetic field closing through said electromagnetic array to attract the armature toward said magnetizable disc rotatable about the sleeve, said attraction of the armature moving the coupling discs of the mechanical array into engagement with each other and the coupling discs of the electromagnetic array into engagement with each other and the rotatable magnetizable disc and the armature respectively, whereby each of said arrays transmits a portion of the total torque to be transmitted from one coupling member to the other.

2,998,878

RIBBON SPOOL

Henry J. Biedinger and John C. Kuchhoff, Syracuse, N.Y., assignors to The Syracuse Stamping Company, Inc., Syracuse, N.Y., a corporation of New York
Filed Sept. 9, 1960, Ser. No. 55,688
5 Claims. (Cl. 197-175)

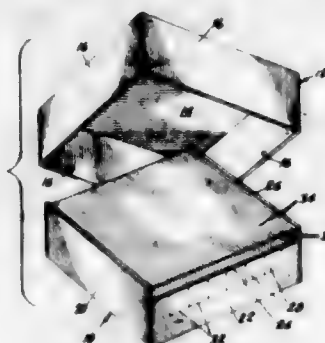


3. A plastic typewriter ribbon spool having a drum portion and integral upper and lower flanges, a central annular recess of less diameter than said drum portion in the underside of said lower flange, and a disc of magnetic metal press fitted radially within said recess, and lying substantially in the plane of the lower flange.

2,998,879

SLIDE CONTAINER

George H. Snyder, Jr., Wyncote, Pa., assignor to George H. Snyder, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed June 24, 1957, Ser. No. 667,523
3 Claims. (Cl. 206-1)



1. A container of relatively stiff material for glass slides, or the like, including a bottom and upstanding sides thereon, opposed ones of said sides having a plurality of contiguous bendable tabs in the upper portions thereof defined by substantially vertical cuts in the material, the upper ends of said tabs terminating in the planes of the top edges of said opposed sides, said tabs being adapted for bending inwardly into the interior of the container below said top edges to a self-retaining position extending substantially transversely of said opposed sides, each of said tabs on one of said opposed sides being substantially aligned respectively with one of said tabs on

the other of said opposed sides and being spaced therefrom in the transversely extending, inwardly bent position to substantially equally limit the longitudinal extent of said opposed sides for maintaining slides vertically arranged therein in upstanding position, the sides disposed between said opposed sides extending above the top edges of said opposed sides and being longitudinally unbroken.

2,998,880

STERILE SURGICAL INSTRUMENT AND ASSEMBLY

John W. B. Ladd, Ridgefield, Conn., assignor to Bard-Parker Company, Inc., Danbury, Conn., a corporation of New York
Filed June 19, 1958, Ser. No. 743,037
8 Claims. (Cl. 206-63.2)



1. In a substantially punctureproof, air-sealed package for a surgeon's blade having a cutting portion and a tang portion: an inner blade-receiving envelope comprised of two elongated superposed layers of tear-resistant material extending at least adjacent the cutting portion of said blade, said layers being bonded together adjacent their edges along said blade and across the ends adjacent the cutting portion of said blade, their opposite end zones extending across the blade tang portion; and an outer air-sealed envelope comprised of two elongated superposed layers of foil material strongly bonded together along a relatively narrow airtight line of sealing about a central area defining a compartment enclosing said inner envelope, the layers of tear-resistant material forming said inner envelope adjacent their end edges across the tang portion of said blade being bonded to the inner surfaces of the layers of said outer envelope whereby separation of the layers of both envelopes in the direction of the length of the blade may be effected by separation of the layers of said outer envelope.

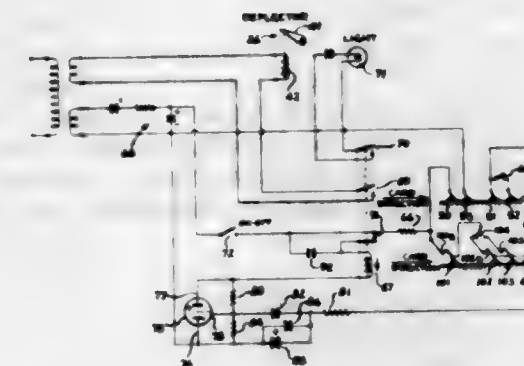
2,998,881

LENGTH SENSING DEVICE

James L. Quinn, Chicago, and James K. Duncan and James S. Mentzer, Park Ridge, Ill., assignors to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1957, Ser. No. 693,370
10 Claims. (Cl. 209-82)

1. In a business machine for handling business machine cards, the combination comprising, means defining a measuring station, means for conveying cards serially along a path past said station, first and second contacts at said station spaced along said path at a distance slightly less than the length of a standard card, a sensing circuit, means coupling said contacts to complete said circuit when both contacts are closed, a control circuit, a device

connected to the output of said control circuit, and means responsive to the momentary completion of said sensing

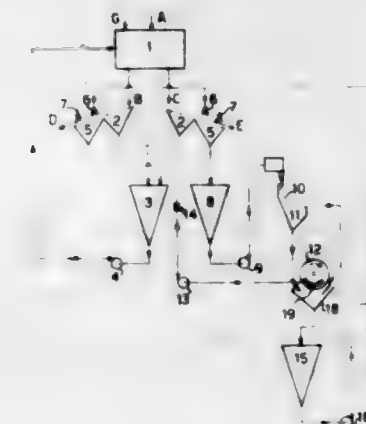


circuit for energizing said control circuit for a sustained interval required to operate said device.

2,998,882

PROCESS FOR PURIFYING A SUSPENSION OF FINE MAGNETIZABLE PARTICLES IN A LIQUID

Jan N. J. Leeman, Brunsum, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed May 15, 1958, Ser. No. 735,459
Claims priority, application Netherlands May 16, 1957
6 Claims. (Cl. 209-172.5)



1. Process of washing coal comprising the steps of separating raw coal into coal and shale fractions by means of a separating suspension of fine magnetizable particles in a liquid, recovering from said separated coal and shale fractions diluted suspension contaminated by particles of non-magnetizable material a large portion of which are coarser than the magnetizable particles, separating the contaminated dilute suspension into two fractions, one of said fractions containing mainly particles coarser than the magnetizable particles and the other fraction containing mainly the finer particles, subjecting both fractions to magnetic separation in a common magnetic separator to purify and concentrate said suspension, the respective fractions being fed to different sections of said common separator, and then returning the purified and concentrated suspension to the raw coal separation step.

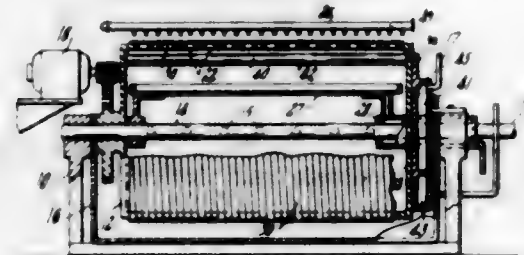
2,998,883

FILTER

John P. Rich, Nashua, N.H., assignor to Improved Machinery Inc., Nashua, N.H., a corporation of Maine
Filed Dec. 23, 1957, Ser. No. 704,775
5 Claims. (Cl. 210-404)

1. A rotary drum filter including a rotatably mounted cylindrical drum having openings communicating therethrough, said openings being arranged in a plurality of

axially extending series with one of said series in each of a plurality of angularly spaced positions around said drum, valve means positioned adjacent the inner end of each of said series of openings, means for applying a sub-atmospheric pressure to said openings through said valve means, means supported on the outer periphery of said drum defining a filter surface spaced outwardly from said drum periphery, said last-mentioned means providing a multiplicity of relatively short peripherally extending passageways of capillary dimensions between said drum and said filter surface communicating with said filter surface along



substantially their entire length and connected to and communicating with at least one of said series of openings, whereby sub-atmospheric pressure is applied at the portion of said passageways most remote from a connected series of openings, and means for operating said valve means selectively to open and close said valve means directly to connect and disconnect respectively said series of openings and connected passageways and filter surface to and from said means for applying a sub-atmospheric pressure respectively to collect on and discharge from said filter surface a material to be filtered.

2,998,884

COMBINED TABLE AND RACK

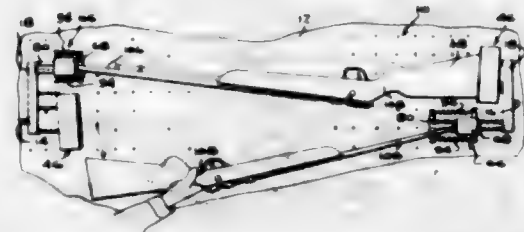
Edward Klein, Wilmette, Ill., assignor to Quaker Stretcher Company, Kenosha, Wis., a corporation of Wisconsin

Filed Aug. 12, 1960, Ser. No. 49,228
13 Claims. (Cl. 211-2)



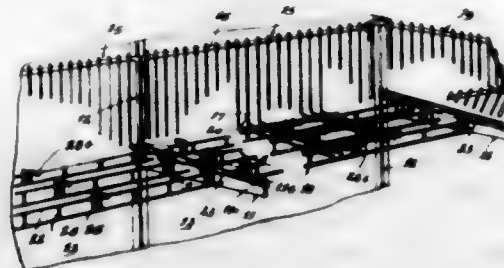
1. A unit selectively usable as a table and as a rack for supporting articles such as folded tray tables and the like, comprising first and second frame means pivotally connected together intermediate their ends and manually movable between a first relatively upright rack providing position and a second relatively inclined and spread apart table-providing position, one of said frame means including a laterally extending portion when said frame means are in said first position for receiving and supporting articles such as tray tables and the like, and table top means selectively connectable between said first and second frame means when said frame means are in said first position and when said frame means are in said second position.

2,998,885
GUN RACK
Gardner A. Surface, 1204 Washington, Ellis, Kans.
Filed Jan. 8, 1960, Ser. No. 1,227
11 Claims. (Cl. 211-46)



1. In combination, a support, a gun rack comprising a panel secured to a side of said support, a relatively stationary gun butt receiving boot mounted on and extending laterally from the panel, a gun barrel end receiving socket mounted on the panel and extending laterally therefrom and longitudinally spaced from the boot, and spring means biasing the socket toward the boot.

2,998,886
DISPLAY BIN AND SUPPORT THEREFOR
Harold I. Sides, % Tote-Cart Co., 226 W. Superior St., Chicago, Ill., assignor, by mesne assignments, to Harold I. Sides and Kitty Bell Sides, both of Chicago, Ill.
Filed July 20, 1959, Ser. No. 828,266
12 Claims. (Cl. 211-126)



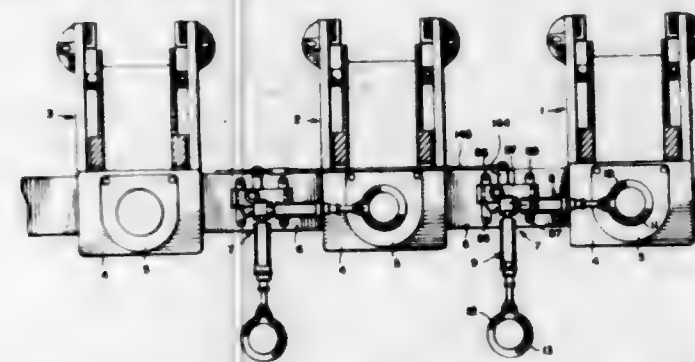
12. A display island, comprising a plurality of spaced parallel uprights, a plurality of spaced parallel shelf supports on the uprights each comprising, a horizontal arm having a generally U-shaped cross section including spaced parallel side portions with an upwardly opening channel therebetween, a plurality of bin supports mounted on the shelf supports each comprising an elongate rod spanning the space between adjacent shelf supports and including flat hooks at opposite ends of the rod each hook including a horizontal leg resting on one side portion of a shelf support and a downwardly extending leg in the adjacent shelf support channel, a plurality of wire display baskets positioned end to end on the bin supports, and a plurality of additional hooks on each rod releasably attaching the baskets to the rod.

2,998,887
TRANSFER MECHANISM
Gordon M. Sommer, Hinsdale, Ill., assignor to U. S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 14, 1956, Ser. No. 603,935
3 Claims. (Cl. 214-1)

1. Mechanism for transferring an object between work stations for the performance of successive operations thereon, comprising fluid operated elevating means including an upright rotatable and vertically movable shaft having a piston on the lower end thereof for movement upwardly and downwardly in response to increase and decrease of fluid pressure on said piston, said shaft having teeth spaced around a portion of the periphery thereof, an arm rotatably mounted at one end portion on

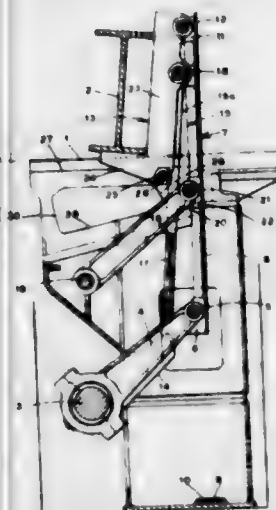
said elevating means for rotation therearound, means for longitudinally reciprocating said arm outwardly to pick-up position and inwardly to idle position, pick-up means on said arm adapted to pick up and retain an object thereon, means operable in response to outward movement of said arm to actuate said pick-up means to pick up an object and to actuate said fluid operated elevating means to elevate said arm to an upper position, means operable in response to the upward movement of said arm to rotatably index said arm to a successive station, said



last mentioned means including an elongated cylinder disposed substantially perpendicular to said shaft, and an elongated piston disposed longitudinally in said cylinder and having a rack extending longitudinally thereof in meshed engagement with said teeth on said shaft, said piston being reciprocable by fluid pressure in said cylinder to thereby rotate said shaft, and means operable in response to the indexing movement of said arm to actuate said fluid operated elevating means to move said arm to the lowermost position thereof and to actuate said pick-up means to release an object therefrom.

2,998,888
TURN-OVER GEAR FOR USE WITH ROLLING MILLS AND THE LIKE
Tom Alexander George Shinseld, Sheffield, England, assignor to Davy and United Engineering Company Limited

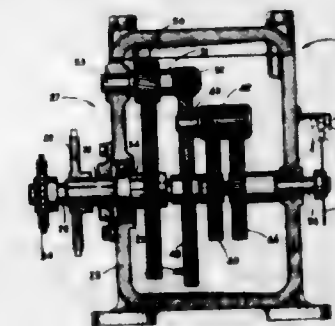
Filed Nov. 22, 1957, Ser. No. 698,248
Claims priority, application Great Britain Nov. 23, 1956
3 Claims. (Cl. 214-1)



1. Turn-up gear arranged to be located between skid rails which receive rolled sections to be turned comprising, in combination, a turning member having first and second limbs set at an angle to one another, means having a pivotal connection with said member for raising and lowering at least part of said member past the skid rails from an initial position in which said member lies wholly beneath said skid rails to a position in which the second of said limbs projects above the skid rails, a pivot at the free end of said first limb about which said

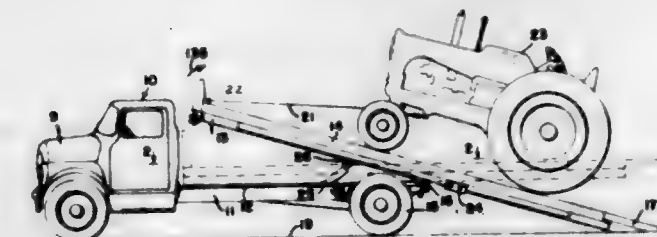
member swings upwards to cause the second limb to project above the skid rails, means operable after the operations of said raising means for causing said pivot to rise in a substantially vertical direction, and guiding the junction between said limbs to move substantially horizontally towards the vertical plane containing said pivot while said pivot is moving upwards, the section being located in the angle between said limbs by said upward swinging of said member and turned through substantially 90° of arc by said raising of said pivot and substantially horizontal movement of said junction, said pivot raising means including a bar carrying said pivot, and a pair of parallel arms freely pivoted respectively about two fixed axes, said bar being pivoted to said arms.

2,998,889
SYNCHRONOUS PULSE GENERATOR AND DRIVE
William G. Swansen, Westchester, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Aug. 5, 1960, Ser. No. 47,761
9 Claims. (Cl. 214-11)



1. In a conveyor system of the type in which a pulley-supported endless belt transports packages from a load station to one of a plurality of discharge stations, in which transfer mechanisms remove the packages from the belt at the discharge station and in which means including a pulse generator driven by the pulley selectively actuates the transfer mechanisms in timed relation with movement of the packages on the belt, in combination therewith a speed changing device interposed between the pulley and generator comprising a first gear train connected between the pulley and generator to drive the latter, and a second gear train connected between the pulley and a portion of the first gear train changing the speed at which the first gear train drives the generator by a relatively low value, whereby substantial changes in the speed of the second gear train effect relatively small changes in the generator speed.

2,998,890
TRUCK BED HOLD-DOWN LATCH APPARATUS
Elmer R. Schwartz, Lester Prairie, Minn.
Filed Dec. 7, 1959, Ser. No. 857,799
9 Claims. (Cl. 214-505)



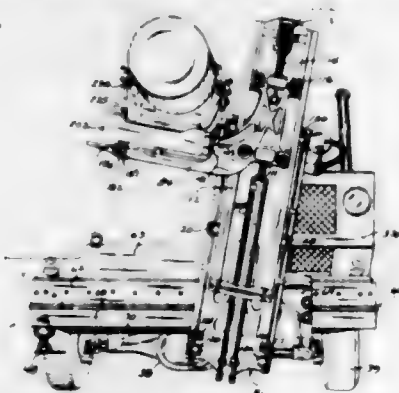
1. In a wheeled vehicle having a frame, a platform pivotally mounted on said frame for movement between an index position generally parallel to the frame and a tilted position, a first piston cylinder combination mounted

on the frame for moving said platform between the tilted position and the index position, latch means for releasably retaining the platform in an index position, said latch means including a second cylinder piston combination, and hydraulic means connected to the aforementioned piston cylinder combinations for activating the respective piston cylinder combination, said hydraulic means including a reservoir, a pump having a high pressure side and a low pressure side fluidly connected to the reservoir, and means for fluidly connecting the high pressure side of the pump to the head end of the second cylinder and the back end of the first cylinder, means forming a fluid connection between the low pressure side of the pump and fluid connection means between the high pressure side of the pump and the head end of the second cylinder and the opposite end of the first cylinder for bleeding off fluid from said ends of the cylinders, said bleed-off means including a restrictor for limiting the rate of bleed-off, valve means for alternately preventing fluid flowing through the restrictor to the low pressure side of the pump and permitting fluid to flow through the restrictor to the low pressure side of the pump, said valve means including a valve member constantly urged to a position preventing the aforementioned flow of fluid through the resistor and means on the platform for retaining said valve means in a position to permit fluid bleed-off when the platform is in an index position.

2,998,891

SIDE LOADING FORK LIFT TRUCK

Leslie L. Baur, Harvey P. Gardafec, Donald A. Kuester, Arne V. Larson, and Robert M. Putzer, Clintonville, and Royal C. Leeman, Shiocton, Wis., assignors to FWD Corporation, a corporation of Wisconsin
Filed Dec. 17, 1956, Ser. No. 628,583
4 Claims. (Cl. 214-621)



1. In combination, a fork lift truck, a portable platform, means to interconnect said fork lift truck with said portable platform comprising lift fork tines on said fork lift truck, and co-acting connecting means on said tines and said portable platform respectively, said means comprising a plurality of aligned universally pivotal joints between said tines and said platform, at least one such universal joint including parts slidable in a direction transverse to said tines, whereby said portable platform may remain secured to said tines despite independent movement of said tines.

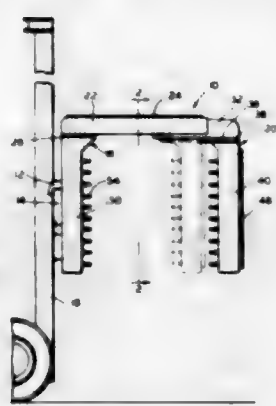
2,998,892

CLAMPING ATTACHMENT FOR INDUSTRIAL TRUCKS

Werner R. Menzel, Muelheim, and Matthias Willms, Eschweiler, Germany, assignors to Ruhr Intrans Hubstapler G.m.b.H., a German company
Filed Feb. 13, 1959, Ser. No. 793,066
4 Claims. (Cl. 214-655)

1. A clamping attachment for use with industrial trucks having an upright mast mounted at one end thereof comprising a fixed clamp portion mounted for elevat-

ing movement in the mast, a movable clamp portion telescopic inwardly and outwardly of the fixed clamp portion for engaging a load therebetween, each of said clamp portions including a downwardly depending clamp arm, at least one of which arms includes peripheral edge portions which define the lateral and lower boundary areas of the arm, a plurality of hydraulic holding devices mounted in said edge portions including piston



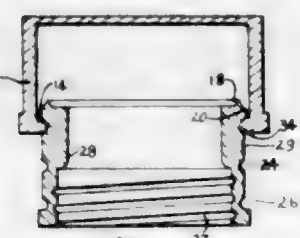
elements extending therefrom in facing relation to the other clamp arm, a cylinder element associated with each piston element, and pressure fluid conduit means interconnecting the cylinder elements of said holding devices for introducing equal pressure fluid in said cylinder elements, said piston elements being variably extensible outwardly of the respective cylinder elements for clamping load units of varying length between the clamp arms.

2,998,893

CLOSURE AND MEASURING DEVICE

Ralph H. Thomas, Rahway, N.J., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

Filed Jan. 29, 1960, Ser. No. 5,560
4 Claims. (Cl. 215-37)



1. A closure comprising a first elongated ring member closed at its upper end, a second elongated ring member open at both ends axially and slidably adjustable in pressure sealing contact within the first member and having screw threads at its bottom portion, said first and second member having a cooperating axial keyway and key to prevent relative rotation of the two members, said first member having a radially inwardly disposed projection at its lower end, said second member having an upper and lower indentation on its slidable surface wherein the first member inwardly disposed projection cooperates with said second member indentations to provide snap-on closure positions and wherein at least one member of the closure is constructed of a resilient material.

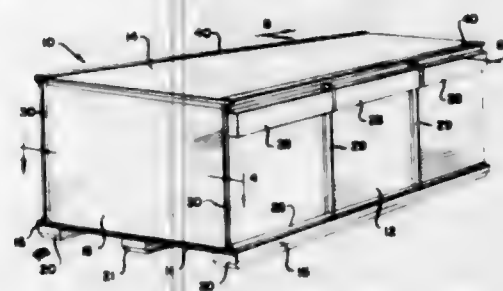
2,998,894

REUSABLE SHIPPING CONTAINER

Thomas G. Pilette, Jr., 10139 Harper, Detroit 13, Mich.
Filed Jan. 16, 1959, Ser. No. 787,184
3 Claims. (Cl. 217-12)

3. A shipping container comprising a base formed of a horizontally arranged, flat sheet having side edges and skid rails secured to its bottom face along its side

edges, and having F-shaped metal edge members embracing its side edges and the rails; a pair of flat sheet side walls, a pair of end walls, and a cover; the side walls being normally vertically arranged and having top and bottom angles secured at its top and bottom edges, the angles defining outwardly extending flanges at said top and bottom edges; channels formed on the vertical edges of the side walls for slidably receiving tongues formed on the vertical edges of the normally vertically arranged end walls for interlocking the adjacent vertical edges of the side and end walls against relative horizontal movement; the cover being a flat sheet having E-shaped metal edge members embracing its side edges; the lower cross bars of the F-shaped members being in contact with the top surface of the base, and being wider than the upper cross bar, the legs of the F-shaped members covering the side edges of the base and the skid rails and being secured to the rails; the two cross bars of each

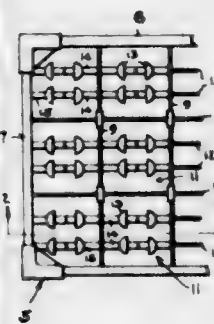


F-shaped member forming inwardly opening tapered channels, that is, opening towards each other, with the taper decreasing from their mouths towards their bases; the edges of the cover being permanently secured within the inwardly facing channels defined by the upper and center cross bars of the E-shaped members; the bottom cross bars of the E-shaped members being narrower than the center cross bars; the bottom flanges of the side walls being inserted and frictionally locked within the inwardly facing channels defined by the cross bars of the F-shaped members and rested upon the bottom cross bars of the F-shaped members, and the top flanges of the side walls being inserted within the channels defined by the lower and center cross bars of the E-shaped members and in contact with the bottom surfaces of the center cross bars, with the cover being removable by longitudinally sliding of the cover along the upper flanges of the side walls.

2,998,895

CUSHION MEANS FOR MILK BOTTLE CRATES

Samuel Perun, 2211 NE. 135th Lane, North Miami, Fla.
Filed Aug. 31, 1960, Ser. No. 53,285
3 Claims. (Cl. 217-35)



1. A bottle cushioning means for milk bottle crates of the type that have side and end walls and with the crate being divided into a plurality of bottle receiving cells by transverse and longitudinally extending wire partitions, the bottoms of the cells being defined by spaced apart rods that extend throughout the length of the crate and each cell bottom being spanned by a pair of such rods in spaced apart relation, yieldable cushion

devices connected to the rods in the bottom of each cell and with the devices upon each rod being held in spaced apart relation whereby to form a plurality of cushion devices upon which the bottom of the bottle is yieldably held against contacting relation to the bottom forming rods, the cushion devices being longitudinally slotted to have a snapping engagement with the rods, the cushion devices each embodying a semi-spherical cup having a pair of oppositely extending and axial arranged tubular stem portions, the cup and the stems being integrally molded from polyethylene, the opening of the stems being continuous in diameter throughout the cushion device and conforming in diameter to the diameter of the bottom forming rods, a pair of cushion devices being engaged upon each rod and with the cups of adjacent pairs being in opposed relation, certain of the stems being in abutting relation to hold the cups in spaced apart relation and the other stems engaging the partitions to maintain the cushion devices against sliding movement on the rods.

2,998,896
CONTAINER

John H. Miller, La Grange, Mo., assignor to Peoria Plastic Company, East Peoria, Ill., a corporation of Illinois

Filed Jan. 13, 1958, Ser. No. 788,544
1 Claim. (Cl. 220-4)



A hollow egg-shaped container being formed of a hard, flexible and substantially non-stretchable plastic material and being transversely divided into a pair of complementary sections having opposing circular openings, one of said sections having an inwardly-facing circumferential V-shaped groove along its inner surface adjacent the opening thereof, the other of said sections having an integral and flexible sleeve insertable into the opening of said first-mentioned section, said sleeve having a smaller external diameter than the internal diameter of said one section adjacent the opening thereof and having its outer surface spaced radially inwardly throughout the entire axial extent thereof from the internal surface of said one section when said sleeve is fully inserted therein, said sleeve being provided along its outer surface with a plurality of integrally-formed and circumferentially-spaced V-shaped projections having surfaces sloping towards and away from the sleeve's open end and being snugly received within the V-shaped groove of said one section for connecting said complementary sections together, said sleeve being provided between said projections with curved flexible portions adapted to flex outwardly into the space between the outer surface of said sleeve and the inner surface of said one section adjacent the opening thereof when said projections are urged inwardly during attachment and detachment of the sections.

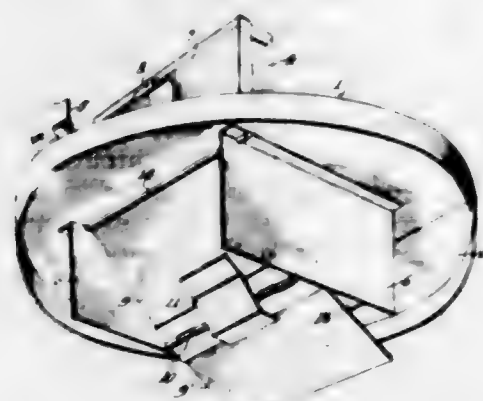
2,998,897

TAMPER-PROOF CONTAINER CLOSURE

Frank B. Redder, 329 W. Groveton St.; Leonard E. Simpson, 601 The Parkway; and Leonard G. Smith, Box 198, R.D. 6, all of Fairfax County, Va.
Filed Jan. 15, 1959, Ser. No. 787,891
4 Claims. (Cl. 220-24)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A tamper-proof closure for a container comprising a lid, an opening in said lid, an enclosure beneath said lid

communicating with said opening including side walls and an end wall, a door for said opening hingedly supported by said enclosure and having an extension beneath said lid, said extension including a lower section hingedly connected thereto, a hinge stop attached to said extension

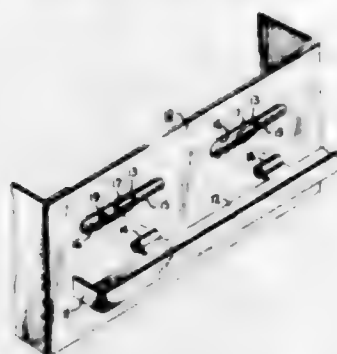


sion limiting the travel of said lower section relative to said extension, said end walls means forming a part of said enclosure coacting with said lower section to limit the travel of said lower section and means for securing said closure to a container.

2,998,898 HINGED ENCLOSURE

Morris Gerr and Robert S. Tillson, Bristol, Conn., assignors to General Electric Company, a corporation of New York

Filed Dec. 4, 1959, Ser. No. 857,397
4 Claims. (Cl. 220-31)



2. An enclosure comprising a generally rectangular box body having a bottom wall and upstanding side walls, a cover for said box body having a peripheral depending flange, one of said side walls having a pair of aligned spaced apart elongated intermediate portions each deformed outwardly of the general plane of said side wall, said deformed portions each being parted from the adjacent wall portion at the same respective end to provide an elongated groove in the inner surface of said wall having an opening to the outside of said wall, a pair of hinge pins each having a first portion seated in a respective one of said grooves and fixedly attached to a respective one of said deformed portion and a second portion projecting beyond said groove and extending adjacent the outer surface of said wall and in spaced parallel relationship thereto, said projecting portions of said hinge pins extending in the same direction, said cover flange having a pair of generally tubular hinge bearing portions disposed and arranged to be respectively received on said hinge pins by lateral movement parallel to the outside wall surface of said side wall, and a blocking screw threadably engaged in a portion of said side wall adjacent the free end of the second portion of one of said hinge pins, said blocking screw being retractable to a position substantially flush with said outer wall surface to permit the assembly of said hinge bearing portions on said hinge pins, said blocking

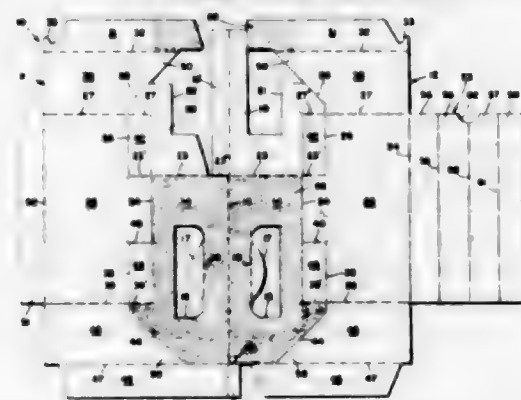
screw being movable to a blocking position following assembly of said hinge bearing portions to prevent removal thereof.

2,998,999
MULTIPLE COMPARTMENT CARRIER FOR BEVERAGE CONTAINERS
Donato Telesca, Old Forge, Pa., assignor to Consolidated Molded Products Corporation, Scranton, Pa., a corporation of Delaware
Filed June 9, 1958, Ser. No. 749,946
2 Claims. (Cl. 220-102)



1. A carrier for a plurality of containers comprising a pair of thin sheets of plastic in face-to-face relation, an integral flexible hinge connecting one edge of one sheet to one edge of the other sheet, each of the sheets having a plurality of substantially parallel openings therein of generally rectangular shape, said openings being spaced from said hinge and having a pair of opposite edges substantially perpendicular to said hinge means, the openings in one sheet substantially coinciding with the openings in the other sheet and molded pocket-forming members integral with each of said sheets and overlying said openings and extending outwardly from said sheets to receive containers, each pocket-forming member including an outer side wall of U-shaped cross-section having opposite ends and substantially parallel, straight side edges, said side edges of each wall being united with one of said sheets at said pair of opposite edges of an opening, each pocket-forming member also having a bottom wall united with said sheet at one end of said one of said openings and with the end of said sidewall remote from said hinge and means forming a hand hold for said carrier.

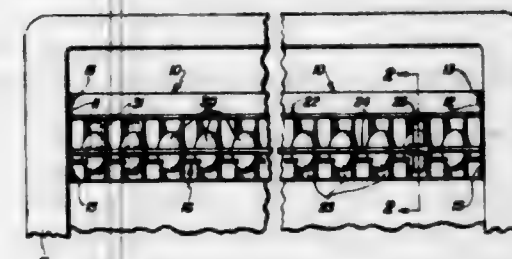
2,998,900
ACCORDION STYLE BOTTOM FOLD CARRIER
Glenn E. Struble, Hamilton, Ohio, assignor to Diamond National Corporation, a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,189
5 Claims. (Cl. 220-113)



1. A paperboard bottle carrier comprising, in the knocked-down condition thereof, a pair of side walls each having an end wall panel joined thereto at either end thereof, each of said end wall panels having an infolded tab joined thereto along a margin opposite the margin thereof that is joined to said side walls, a pair of similar

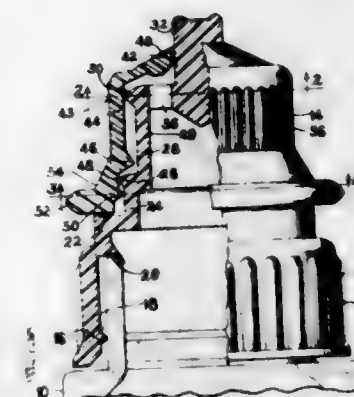
handle panel sections foldably joined to each other along their top edges and also joined to the upper margins of said side walls and said end wall panels, a pair of flaps forming inner panel sections between said handle panel sections and forming therewith a handle section, one of said flaps including an elongated portion folded substantially along and beneath the top edges of said handle panel sections, one pair of said tabs including a portion folded at the top edge of said handle panel sections and extending between said handle panel sections in alignment with said folded elongated portion of said one flap, said flaps and tabs forming in part a six ply handle section, a glue flap integrally joined to a bottom margin of one of said side walls, and a four section, accordion folded bottom joined to the bottom margin of the other side wall, one section of said bottom being glued to said glue flap, whereby to provide a five ply bottom for said carrier.

2,998,901
STORAGE AND DISPENSING DEVICE FOR REFRIGERATORS
Lloyd S. Arnold, Jr., W. Main St., Chester, Conn.
Filed Oct. 5, 1959, Ser. No. 844,334
3 Claims. (Cl. 221-88)



1. In combination with a refrigerator, an egg storage and dispensing device; comprising a frame secured to the inner wall of the door of said refrigerator, an egg supporting rack means secured to said frame, said rack means being formed so as to provide a plurality of laterally spaced open sided circular type apertures in which the eggs to be stored are respectively normally seated, a shaft mounted on said frame and being horizontally disposed adjacent the open sides of said apertures, a dispensing lever mounted on said shaft for pivotal movement about the axis on said shaft and for bodily movement longitudinally of said shaft, said lever having a bent off handle at the upper end thereof and a cupped egg engaging portion formed at the lower end thereof, the lower cupped lever portion normally gravitating to a position below the lower ends of the eggs seated in the apertures of said rack means so as to thereby permit said lever to be bodily moved along said shaft and to be selectively positioned in registry with a desired one of said apertures and its associated egg, said lever further being constructed and arranged so that upon downward pivotal displacement of the lever handle the said lower cupped portion of the selectively positioned lever will swing upwardly to engage and lift the desired egg out of its normal seated position and will thereafter pass through the associated open sided aperture in said rack means to a dispensing position wherein said desired egg is free to be moved into the hand of the lever operator, and a plurality of individual guide grooves formed in said frame and which respectively arcuately extend upwardly and forwardly from the rearward sides of the eggs respectively seated in said apertures, each of said guide grooves being shaped and located so as to laterally stabilize its associated egg when said egg is normally seated in its aperture and also when said egg is being lifted through a dispensing stroke by the pivotal movement of said lever.

2,998,902
CAPTIVE CAP DISPENSING CLOSURE
Ralph H. Thomas, Clark, and Morton B. Stall, Clifton, N.J.; said Thomas assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,220
4 Claims. (Cl. 222-499)

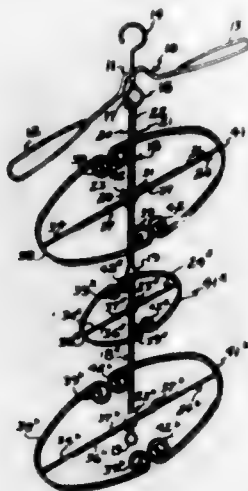


1. A self-contained interlocked two-piece dispensing unit for containers comprising a resilient and generally cylindrical stationary inner spout said stationary inner spout comprising an integrally formed base portion, neck portion and head portion, said base portion comprising a snap-on retention bead for attachment to a container, a sealing wall above the snap-on retention bead for sealing about the neck of a container and an inner shoulder above said sealing wall to limit the insertion of the container in the base portion, said stationary inner spout neck being above the base portion and comprising a lower tube, a locking flange above the lower tube, and an upper tube above the locking flange, said stationary spout head comprising an outer annular sealing flange above the stationary spout upper tube and webs integral with said sealing flange separated by openings supporting an integrally and centrally formed cylindrical sealing plug; and a resilient movable outer nozzle having a tapered top with a centrally formed annular orifice defined by a thickened annular rim and an inner annular sealing bead slidably receiving said sealing plug, an enlarged sleeve below the tapered top having an annular inner retention bead at its bottom portion snapped over the stationary spout sealing flange, an outwardly tapered skirt below said inner retention bead said skirt terminating in an outwardly disposed flange for push-pull manipulation of the movable nozzle, and a second sleeve below the movable nozzle retention bead slidably receiving said stationary spout locking flange in sealing engagement and inner locking projections below said second sleeve snapped over the locking flange, and wherein the unit can attain an open position by sliding the movable nozzle upwards on the stationary spout so that the orifice of the movable nozzle is unobstructed by the sealing plug, a closed position by sliding the movable nozzle downwardly to frictionally and sealably engage the sealing plug and a locked-closed position by sliding the movable nozzle further down on the stationary spout so that the locking projections of the movable nozzle snap over the locking flange of the stationary spout.

2,998,903
GARMENT DRYING HANGER
Gloria H. Day, 336 W. Magnolia Ave., Auburn, Ala.
Filed Jan. 26, 1959, Ser. No. 789,015
6 Claims. (Cl. 223-68)

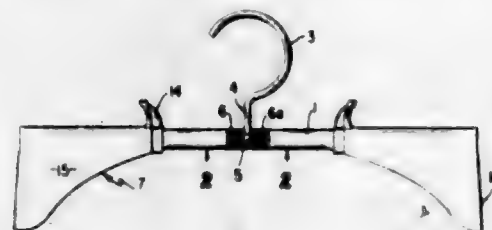
1. A garment drying hanger comprising an upper transverse member for supporting the shoulder portion of a garment, a generally rigid vertically extending member detachably connected at its upper end to said upper transverse member, a lower transverse member slidably connected to said vertically extending member and adapted

for vertical adjustment relative thereto at selected intervals, and an inwardly curved shaping member secured intermediate its ends to each outer end of said lower transverse member in position to engage the inner surface of a garment whereby the garment is held in the



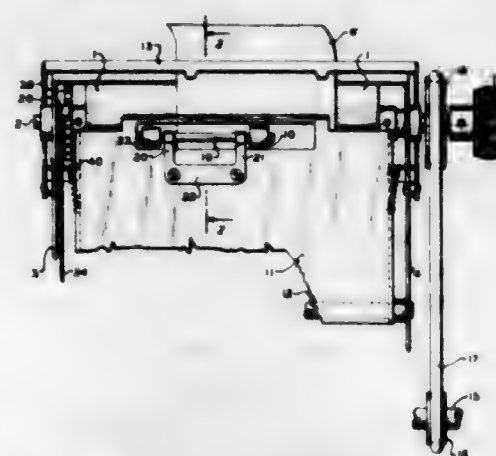
general shape as when worn, the free ends of the inwardly curved shaping members being in the form of inwardly disposed spirals of bendable material whereby the spirals of one shaping member are adapted to be adjacent the spirals of the other shaping member at selected adjusted positions.

2,998,904
GARMENT HANGER
Albert J. Bell, 2354 Glenwood Ave., Toledo, Ohio
Filed Apr. 17, 1959, Ser. No. 807,120
1 Claim. (Cl. 223-95)



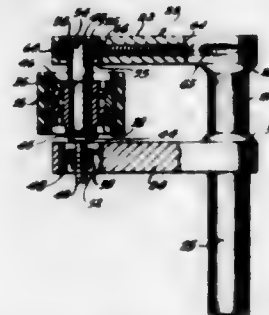
In a garment hanger, an elongate tubular hanger bar provided with an elongate slot in its under wall extending from end to end of the bar, a coil spring means disposed within said hanger bar, an end gripping member disposed at each end portion of the hanger bar fitting over same throughout its length and slidable thereon, each gripping member comprising a one-piece plastic member having an open ended tubular portion slidably fitting over the hanger bar, a post integral with the tubular portion and extending through the slot into the interior of the hanger bar for sliding movement therein, the connection between the post and the tubular portion being such as to slide freely in the hanger bar slot, an integral seat at the inner end of the post for the adjacent end of the coil spring means, a stop surface at the outer end of the post and integral therewith and arranged closely to said seat, a detent in the form of a lip struck down from the hanger bar and depending inside thereof to provide an abutment for said stop surface, said detent being at all times disposed within the gripping member and concealed thereby, a pair of parallel laterally spaced plates depending from and integral with each end gripping member, and a finger piece upstanding from and integral with the upper portion of the inner end of said tubular portion of each gripping member.

2,998,905
DOUBLE STRIP TALLY ROLL FEED
Charles E. Bieber, Roselle, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,498
3 Claims. (Cl. 226-187)



1. In an apparatus of the class described having a rotatable record feed platen for engaging a record strip which is wound in interposed manner with other record strips to form a multiple strip tally roll from which said strips are fed simultaneously during an operation of said feed platen; the combination therewith of auxiliary feed means including a drive roller frictionally rotated by engagement with said feed platen, a feed roller adapted for frictional engagement with a record strip remote from said platen by other of said record strips, an operating shaft interconnecting the said rollers for effecting a positive rotation of one by the other, resilient support means for said shaft including a first pair of resilient arms and a pair of resilient arms cooperating therewith for releasably holding said shaft, a rockable support plate for said resilient support means and adapted to yieldably hold the related said rollers respectively in constant engagement with the said feed platen and the said remote record strip, and wherein said drive roller is of smaller diameter than the diameter of said feed roller, and wherein an operation of said drive roller simultaneously with an operation of said multiple record strips by an operation of said feed platen will cause a positive related added movement from the drive roller to the said feed roller for advancing the remote record strip.

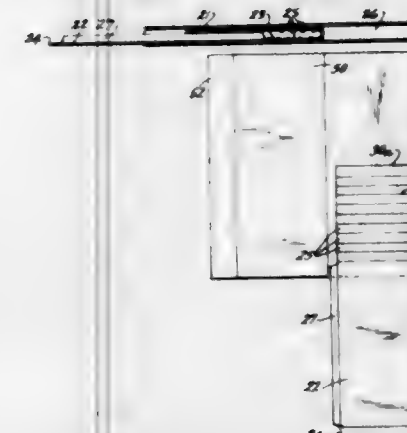
2,998,906
CAPSTAN IDLER ASSEMBLY
Charles L. Vice, Pasadena, William E. Dunn, Los Angeles, and Thomas A. Fowler, Torrance, Calif., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 776,110
12 Claims. (Cl. 226-187)



1. In apparatus for directing a travelling tape accurately along a particular path past a capstan, an idler provided with an annular configuration and constructed to press the tape against the capstan and rotatable to obtain a movement of the tape, an axle member extend-

ing through the idler in coaxial relationship with the idler, means disposed relative to the idler and the axle member for providing a support of the idler by the axle member and for providing for a rotation of the idler relative to the axle member, flexible means disposed at one end of the axle member for providing a support for the axle member and for providing for pivotal movements of the axle member in accordance with the forces applied by the capstan against the idler to maintain a uniform force between the idler and the capstan at different positions along the idler, and means disposed at the opposite end of the axle member from the flexible means for adjusting the axle member and the idler radially and tangentially relative to the capstan.

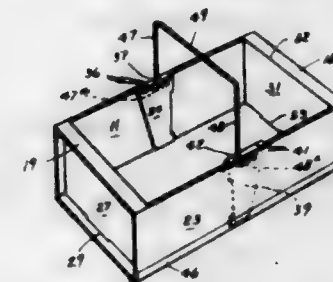
2,998,907
COLLAPSIBLE WRAPPED FOLDING BOX STRUCTURE
Ferdinand Lange, Minden, Westphalia, Germany, assignor to Werner Bahlmann, Hannover, Germany
Filed May 21, 1952, Ser. No. 289,122
Public Law 619, Aug. 23, 1954
Patent expires Mar. 9, 1970
4 Claims. (Cl. 229-20)



1. A composite blank adapted to be formed into a box comprising, in combination, an elongated substantially rectangular inner blank of relatively stiff foldable sheet material, said inner blank having two end portions and an intermediate portion between the same, said intermediate portion having a plurality of parallel transverse creases normal to the length of said inner blank and being spaced substantially equidistant from each other so that said end portions may be brought into such overlapping relationship with each other that said end portions are substantially parallel to each other and are spaced from each other a distance substantially equal to the distance which adjacent creases of said intermediate portion are spaced from each other, said inner blank, when said end portions thereof are in such overlapping relationship, forming a box at least a portion of one side wall of which box is constituted by one of said end portions, at least a portion of the opposite side wall of which box is constituted by the other of said end portions, and a base wall of which box which joins said side walls is constituted by a part of said intermediate portion which lies between two adjacent creases so that the box has a shape corresponding substantially to that of a rectangular prism the thickness of which is equal to the distance which adjacent creases of said intermediate portion are spaced from each other; and an outer blank of pliable material firmly secured to that face of one of said end portions of said inner blank which, when the latter is folded so as to form a box, is an outer face of such box, so that said outer blank may be wrapped about said inner blank when the latter is folded so as to form a box, and may entirely envelop such box.

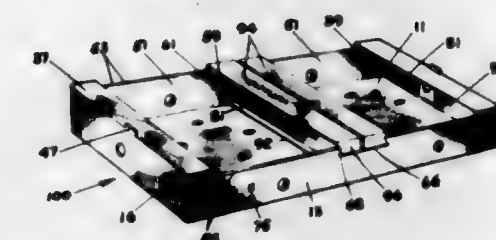
770 O.G.-7

2,998,908
PRODUCE BASKET
Robert M. Harvey, Indianapolis, Ind., assignor to Inland Container Corporation, Indianapolis, Ind., a corporation
Filed June 11, 1959, Ser. No. 819,645
3 Claims. (Cl. 229-24)



1. A bail-handled basket comprising a base panel having an integral side panel at one of its side margins and a slot adjacent each of its end margins, said base panel having locking apertures adjacent each of its side margins, marginal flange strips integral with and extending from the side margins of said side panel at opposite ends thereof, each of said strips being integral with a further side panel, an end panel integral with and extending from the inner side margin of each of said strips and having locking tabs at their free ends, reinforcing side flaps integral with and extending from the central portion of the opposite side margins of said side panels, said basket being formed by joining the free side margin of said further side panel to the free side margin of said base panel and disposing said end panels so that their free margin engages the inner face of said base panel with their locking tabs received in said slots in said base panel, said reinforcing side flaps being folded inwardly to overlie the inner surface of said side panels in said base panel, the area of juncture of said side flaps and said side panels being apertured, and a wire bail having its end portions extending through said apertures and provided with portions engaging the underside of the area of juncture of said side flaps and said panels, whereby said side flaps serve both as reinforcing members and a bail-anchoring means.

2,998,909
DOUBLE BOX CARRIER
Wilbur G. Anderson, Jr., and Robert J. Blett, Grand Rapids, Mich., assignors to Packaging Corporation of America, a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,811
2 Claims. (Cl. 229-34)



1. A double compartment box, comprising; a bottom wall having side and end walls connected to the sides and ends thereof, said end walls including side wall engaging flaps integrally associated therewith, divider walls received intermediate said end closures and including side wall engaging flaps, said divider walls having a partial cover wall connected thereto and locking ears provided on the ends of said cover wall, hinged flaps connected to the upper edge of said side walls between said end and said divider walls and received in overlapping relation to said side walls, said hinged flaps engaging said side

wall flaps of said end and said divider walls to said side wall and receiving said locking ears in locking engagement between said side walls and said hinged flaps, and means provided in said bottom wall for separating said double compartment box into two distinct and separate single compartment boxes with said divider walls serving as end closures therefore.

2,998,910
CONTAINERS
Edward D. Gillam, 911 Centennial Road,
Penn Valley, Pa.
Filed May 22, 1958, Ser. No. 737,076
2 Claims. (Cl. 229-44)

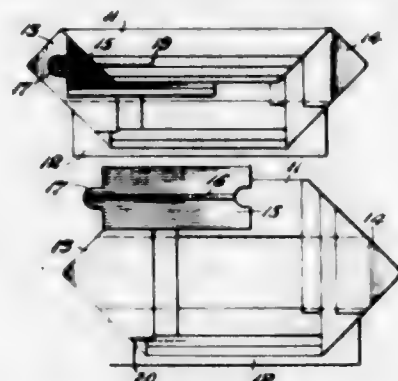


1. A container made of a single piece of sheet material and having an outer section and an inner liner section, the outer section having front, rear and side walls with a glue flap extending from one of said walls and in adherent engagement with the interior of the adjoining wall, said outer section having opposite bottom wall flaps secured to the bottom margins of the side walls and a bottom closure panel hingedly secured to the rear wall, said side walls having top closure flaps hingedly secured thereto and said front wall having a top closure panel hingedly secured thereto, at least one of said closure panels having a tuck flap carried thereby, said liner section having an interior front wall panel of lesser width than said front wall, said liner section having side wall panels integral with said front wall panel, said front wall having said front wall panel hingedly secured thereto along its lower margin by a hinge centrally disposed along said lower margin and terminating inwardly with respect to the side margins of the front wall, said front wall panel being in non-adherent contact with the interior of said front wall and said side wall panels being in non-adherent contact with the interiors of said side walls, and said inner liner section having an integral portion connected by gluing to the interior of the rear wall to retain the interior positioning of said liner section.

2,998,911
BAG OPENING DEVICE
William W. Hahn, New Hope, Ray H. Brodt, Nazareth, and George J. Kilmer, New Hope, Pa., assignors to Union Bag-Camp Paper Corporation, New York, N.Y., a corporation of Virginia
Filed Dec. 1, 1958, Ser. No. 777,243
2 Claims. (Cl. 229-66)

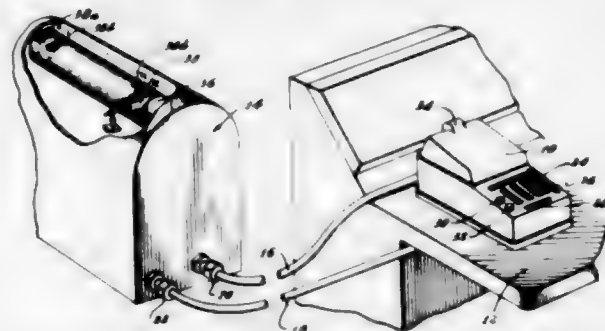
1. A bag comprising a body, one end having closure flaps formed from oppositely infolded portions of the bag wall, a tear tape attached to a longitudinal strip of material, said strip being secured to at least one of the flaps with said tape positioned beneath the strip, said strip and said tape extending from the narrow end of the bag interiorly of the bag, said strip and tear tape being positioned below each of said closure flaps with the flaps in closed position and said strip being spaced away from the longitudinal top folded edges of said closure flap, said strip and closure flaps being folded one upon the other and said strip and closure flaps being adhered

together to form the end quick-opening cover for said bag, whereby an outward pull on the tape will sever said



strip and said flaps above the tape to provide access to the bag.

2,998,912
INTERCOUPLING APPARATUS
Glenn E. Hagen, New York, N.Y., assignor, by mesne assignments, to General Instrument Corporation, Hawthorne, Calif., a corporation of New Jersey
Filed July 29, 1957, Ser. No. 674,766
21 Claims. (Cl. 234-18)

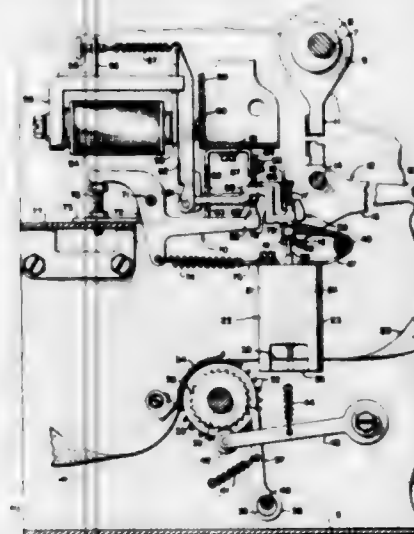


1. Apparatus for controlling the recording of data on an information storage card having a plurality of columns and for controlling such recording in accordance with coded information provided in successive columns on a control means to indicate the occurrence of different fields and the number of columns in each field and for controlling the recording of such information in accordance with information supplied by an accounting machine, including, means including a plurality of members responsive to the information supplied by the accounting machine to become positioned in accordance with such information, means operative upon the control means and the information card for initiating a sequential advance of the control means and the information card to successive columns, means responsive to each movement of the control means and the card to a successive column to obtain a recording of information in that column of the information card in accordance with the positioning of a particular one of the members and in accordance with the control information provided by the control means in that column of the control means, and means responsive to the recording of information in the different columns of each field on the information card for preparing the members for a positioning of the members for the recording of information in the different columns of the next field on the card in accordance with information from the accounting machine.

2,998,913
HIGH SPEED TAPE PUNCH
Ray Alouns, Skokie, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 2, 1957, Ser. No. 687,683
1 Claim. (Cl. 234-115)

A tape perforator comprising a constantly oscillating punch actuator bar, means for feeding a tape in timed

relation to the oscillation of said punch actuator bar, a plurality of punches aligned with said bar and disposed transversely of the path of movement of said tape, a plurality of interposer members individual to said punches slidably mounted for movement transversely of the path of oscillation of said bar into position to be actuated by said bar for actuating said punches, means for selectively moving said interposer members to position to be actuated



by said bar, a latch individual to each interposer member positioned to hold its interposer member in operative association with the bar upon movement of said interposer member to operative relation to the bar, and spring means normally holding said punches in a predetermined unactuated position and for moving said interposer members out of latching relation with their respective latches in returning the punches to their unactuated positions.

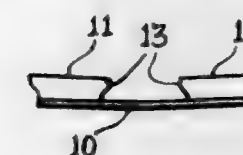
2,998,914
ACCOUNTING APPARATUS WITH AUXILIARY RECORDING ADJUNCT
James A. Thomas, Garden City, and William F. Milard, Plymouth, Mich., assignors to Barroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 6, 1956, Ser. No. 626,765
34 Claims. (Cl. 235-60.13)



25. The combination with a cyclically operable recording device having a plurality of selectively energizable recording elements and a cyclically operable data entry device having a movable carriage, a plurality of differentially positionable data racks and means for initiating a cycle of operation thereof, of an electrical power supply having one side connected to one side of each of said recording elements, read-out means for sensing the differential positions of each of said data racks, and control means connected between said devices in-

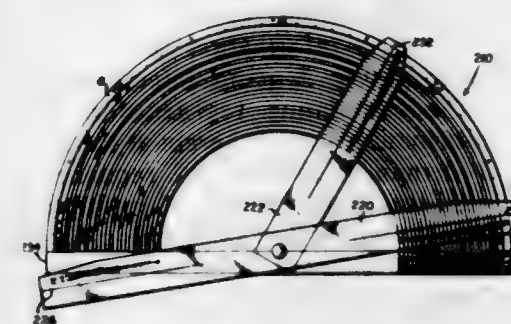
cluding first switching means operated at different carriage stop positions and prior to initiation of a cycle of operation of said data entry device affording a selection of any one of several different groups of selectively operable control circuit paths extending from the other side of said power supply through different ones of said sensing means to the other side of each of said recording elements, and second switching means operable from both said devices to complete in succession the individual circuit paths of a selected group of control circuits and to energize said recording elements through different ones of said sensing means in accordance with the differential positions of the data racks to be read in a selected carriage position of the data entry device.

2,998,915
SLIDE RULE
Chester H. Wickenburg, 329 Congdon Ave., Elgin, Ill.
Filed Sept. 3, 1958, Ser. No. 758,752
2 Claims. (Cl. 235-70)



1. A slide rule comprising an elongated base plate formed concaved transversely, guide frames of substantially identical shape secured to and extending along opposite long edges of the base plate in spaced relation with respect to each other and having overhanging shoulders along the opposite long edges thereof, a slide of substantially identical shape as the guide frames and slidably arranged in an inverted position therebetween, said base plate being flexed to a flat condition upon positioning of said slide between said guide frames with the overhanging shoulders of the guide frames positioned over opposite longitudinal edges of the slide to retain the slide between the guide frames.

2,998,916
TWO-DIMENSION SLIDE RULE
Andrew D. Frankenfield, 444 E. 88th St.,
New York 28, N.Y.
Filed Aug. 13, 1956, Ser. No. 603,563
1 Claim. (Cl. 235-84)

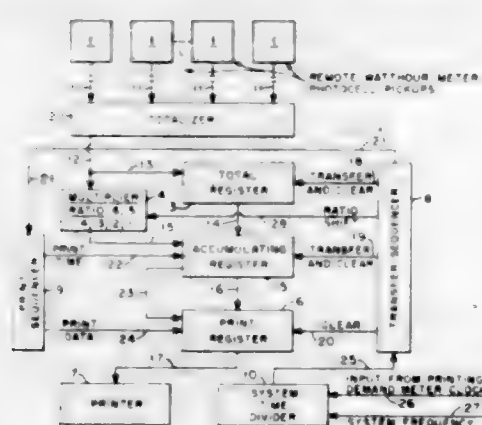


A slide rule comprising in combination a sheet, a plurality of concentric substantially semi-circular scale sections of a single continuous scale, disposed upon said sheet, said scale sections being equally and uniformly radially spaced apart and each terminating at each end along one of a pair of substantially opposite radii, an additional concentric scale, upon said sheet, bearing indicia of sub-divisions of each of said concentric scale sections, said sheet also having indicia along at least one of said opposite radii indicating the first two digits of the log in any particular concentric scale section, the last three digits of the log being observable on said additional concentric scale, and adjustable indicator means rotatably carried by said sheet having an axis of rotation concentric with all said scale

sections for providing an indication between predetermined ones of said scale sections, said adjustable indicator means comprising a pair of arms supported for rotation about said axis, said arms being relatively adjustable for simultaneous rotation about said axis in a predetermined angular relationship with respect to each other, both of said arms extending radially outwardly from said axis of rotation.

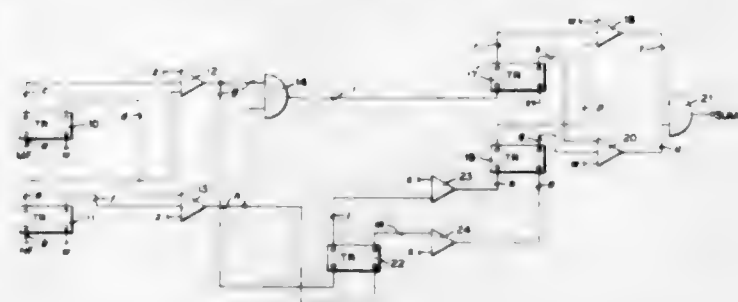
2,998,917 ELECTRICAL LOAD ANTICIPATOR AND RECORDER

John V. Werme, Palmesville, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 1, 1959, Ser. No. 817,424
3 Claims. (Cl. 235-151)



1. A power load anticipator and recording system for a plurality of power lines and for a preselected power demand interval, comprising a watt-hour meter connected in each power-line, an impulse generator associated with, and actuated by, each meter to provide an output proportional to the energy used on each line, a totalizer having a plurality of input lines and a single output line, means connecting the outputs of said impulse generators to the input lines of said totalizer, a total register, a multiplier provided with a plurality of selectable multiplier constants, one each for a plurality of equal demand sub-intervals, an accumulating register, means connecting the output line of said totalizer to said total register and to said multiplier, means connecting said multiplier to said accumulating register, means connecting said total register to said accumulating register, said total register including means for storing information received from said totalizer for said power demand interval, means connected to said accumulating register for periodically printing out information stored therein at the end of each of said equal demand sub-intervals, sequencing means connected to said total register, to said multiplier, and to said accumulating register and controlling, in sequence, the printing out of information stored in said accumulating register, the clearing of said accumulating register, the transferring of information stored in said total register to said accumulating register, and the changing of the multiplier constant of said multiplier at the end of each of said demand sub-intervals, said accumulating register's output at the end of each demand sub-interval representing the sum of the amount of energy already used during said demand interval, as derived from said total register, plus a projected power demand for the remainder of the demand interval, said projected demand being the power used during the instant demand sub-interval times the selected multiplier constant for said sub-interval, said sequencing means including means for clearing said total register and resetting said multiplier at the end of said demand interval to thereby begin a new demand interval.

2,998,918
FULL ADDER
Arthur L. Ferris, Syracuse, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 2, 1958, Ser. No. 706,839
4 Claims. (Cl. 235-176)

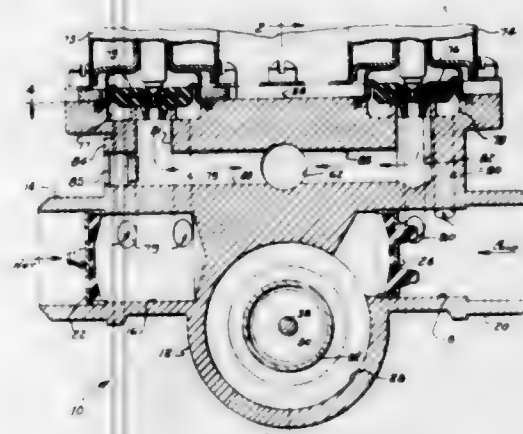


4. An adder comprising first and second storage means respectively connected to receive signals representing binary values for successive digit positions of first and second binary numbers, means connected to said first and second storage means for producing a first output signal when said first and second storage means are each storing a first binary value and for producing a second output signal when said first and second storage means are each storing a second binary value, first and second bistable means, each of said first and second bistable means having a pair of output conductors, said first bistable means being connected to receive said first and second output signals in a manner such that either will place the first bistable means in a predetermined one of its bistable states, a circuit means connecting the first named means to said second bistable means in a fashion such that said second bistable means will assume one of its stable states a digit time following said first output signal and will assume the other of its stable states a digit time following the occurrence of said second output signal, first and second coincidence gates, the output conductors of said first and second bistable means being cross-coupled to said first and second coincidence gates, the output conductors of said bistable devices leading to said first coincidence gate being concurrently energized in the same direction when both of said bistable means are in one of their stable states, the output conductors of said bistable devices leading to said second coincidence gate being concurrently energized in the same direction when both of said bistable means are in the other of their stable states, a mixing circuit, means interconnecting said coincidence gates with said mixing circuit, and means to periodically sample the condition of said coincidence gates each digit time whereby said mixing circuit produces an output signal when either of said coincidence gates are enabled.

2,998,919
THREE SOLENOID MIXING VALVE
James Clarence Budde, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1957, Ser. No. 683,485
3 Claims. (Cl. 236-12)

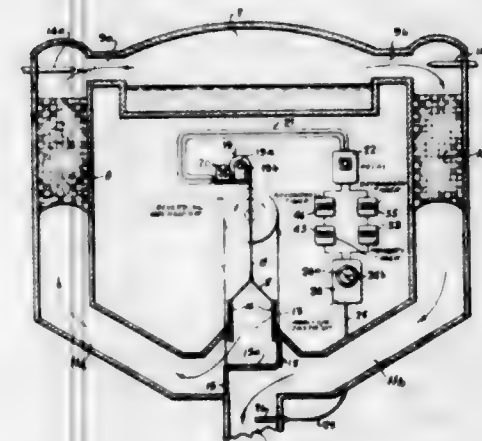
3. A mixing valve comprising a housing body formed from a block of metal; straight hot and cold fluid inlet passages formed entirely in the block and extending inwardly from opposite sides of said body in substantial axial alignment with one another; a cylindrical mixing chamber formed in the block and opening into one face of said housing body perpendicular to the straight hot and cold fluid inlet passages; a cover plate closing said chamber; first and second axially spaced annular recesses formed in the cylindrical surface of the mixing chamber; a straight passage formed in the housing block and extending from the hot fluid inlet passage to the first annular

recess; said cold fluid inlet chamber directly intersecting the second annular recess; a tubular slide valve within the mixing chamber having its opposite ends overlapping the recesses; thermostatic power means for moving the tubular slide valve axially to control the relative amounts of hot and cold fluid introduced into the mixing chamber; an outlet passage formed in said housing body; a first duct system formed in said body leading from the hot fluid inlet passage directly to the outlet passage; first solenoid-diaphragm means positioned on the housing body and



controlling fluid flow through said first duct system; a second duct system formed in said body leading from the cold fluid inlet passage directly to the outlet passage; second solenoid-diaphragm means positioned on the housing body and controlling fluid flow through said second duct system; a third duct system formed in said body leading from the mixing chamber to the outlet passage; and third solenoid-diaphragm means positioned on the housing body and controlling fluid flow through said third duct system.

2,998,920
AUTOMATIC AIR DAMPER POSITIONER CONTROL FOR FUEL FIRED FURNACE
Richard R. Brown, Alton, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Sept. 26, 1957, Ser. No. 686,302
9 Claims. (Cl. 236-15)



1. In a fuel fired furnace having air inlet and exhaust passages operatively connected to a combustion chamber where a combustible mixture of fuel is burned, and in combination therewith; an oxygen recording instrument adapted to indicate readings of oxygen content of the products of combustion, air intake regulating means associated with said air inlet passage positionable for regulating the amount of air intake, a reversible motor operatively connected to said last-mentioned means for adjusting its regulating position, electro-responsive control means actuatable alternatively to settings for operating said motor for either increasing or decreasing the air intake position of said regulating means, and timed means operated re-

sponsive to readings of said instrument to actuate said control means to one of its settings, comprising first and second sets of timers each consisting of a primary and a secondary timer, means operated by said instrument to maintain energized the primary timer of the first of said sets whenever readings are below the lower limit of the optimum range, means operated by this primary timer after it has been energized for a predetermined elapsed time to energize the secondary timer of the same set, means operated by this secondary timer while it is energized to actuate the control means to its setting for increasing air intake, and means operated by said instrument to maintain energized the primary timer of the second set thereof whenever the readings exceed the upper limit of the optimum range, means operated by this primary timer after it has been energized for a predetermined elapsed time to energize the secondary timer of the same set, means operated by this secondary timer while it is energized to actuate the control means to its setting for decreasing air intake.

2,998,921 THERMOSTATIC VENTILATION BUTTON FOR ORTHOPEDIC DEVICES

Martin H. Chester, 16000 S. Vermont Ave.,
Gardena, Calif.
Filed June 26, 1959, Ser. No. 823,254
6 Claims. (Cl. 236-49)



1. A thermostatically controlled ventilation button for use with orthopedic devices comprising a main support member fabricated of a material having low heat conductivity, a plurality of heat sink members having high heat conductivity mounted within said support member, said heat sink members having widened portions on opposite ends thereof, said widened portions protruding through opposite surfaces of said support member, a plurality of bimetallic strips, each of said bimetallic strips being fixedly attached at one end thereof to a separate one of said heat sink members, and a valve head fixedly attached to the end of each of said bimetallic strips opposite said one end attached to said heat sink members, said support member having a surface positioned opposite a surface of said valve head shaped to mate with said valve head to form a seat therefor, said main support member further having a portion shaped to form a wall surrounding said heat sink, said metallic strips, and said valve head.

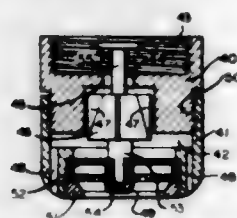
2,998,922
METAL SPRAYING
Glenn J. Gibson, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 11, 1958, Ser. No. 761,278
3 Claims. (Cl. 239-13)



3. The method which comprises positioning the exposed end of a first consuming electrode in coaxial rela-

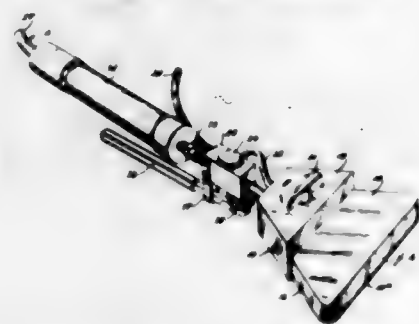
relationship with the inner surface of an annular non-consuming counterelectrode to form an arc gap therebetween, flowing an inert gas over the surface of the exposed end of said first electrode and the inner surface of said counterelectrode and through said arc gap to shield the said electrode surfaces and form an inert gas atmosphere in said arc gap, and establishing an arc across said arc gap at a current level of the order of 200 amperes or more to consume said first electrode while maintaining the said arc rooted at one end on said first electrode and at the other end on said counterelectrode while projecting the high temperature arc products axially with respect to said first electrode and out through the orifice formed by the inner surface of said counterelectrode into free space therebeyond.

2,998,923
EASILY CLEANABLE FLUID MIXING DEVICES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Feb. 12, 1957, Ser. No. 639,648
5 Claims. (Cl. 239-106)



1. A device for producing a coherent jet of water containing air bubbles comprising a chamber the inlet end of which is adapted for connection with the discharge end of a source of water under pressure, means including at least one orifice near the upstream end of the chamber for projecting a stream of water into the chamber with substantial velocity, an air port opening into the chamber through which air is induced by the stream of water, mixing means in the path of the stream after it has left the orifice and before the water is discharged from the chamber for finely breaking up the water in the stream and for offering sufficient resistance for thoroughly mixing it with air and for discharging the aerated liquid to form a coherent jet having small bubbles disseminated throughout the jet, said mixing means including a screen, the opening in said air port being larger than the holes in said screen and the air port extending from adjacent the upstream surface of the screen to a position outside the device at a level downstream the outlet of said orifice, and means for adjusting the size of said orifice to enable flooding of the screen and washing of any dirt on the screen out of the air port.

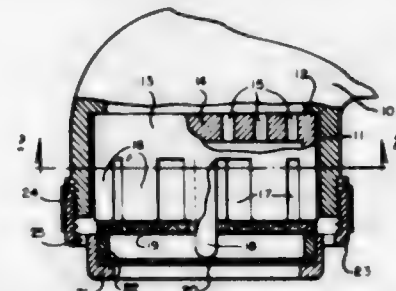
2,998,924
STEAM GUN
George A. Schaeffer, New York, N.Y., assignor to Steamaster Co., Inc., New York, N.Y., a corporation of New York
Filed May 5, 1961, Ser. No. 108,134
14 Claims. (Cl. 239-136)



1. A steam gun for use in refreshing materials, said steam gun comprising a body portion, said body portion

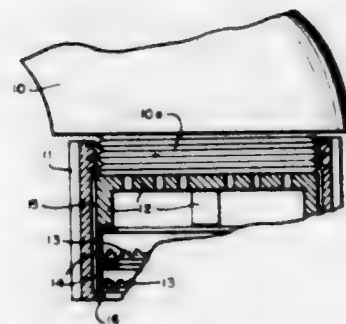
being divided interiorly into two chambers, an apertured partition separating said chambers, means for admitting steam into one of said chambers from an external steam source, means within the body portion for superheating the steam when in said aforementioned chamber, thus removing the moisture from said steam, means associated with the other chamber by discharging the superheated dry steam onto the material to be refreshed, and a supporting handle associated with said body portion.

2,998,925
AERATING FAUCET
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Apr. 30, 1959, Ser. No. 810,103
Claims priority, application France Nov. 29, 1949
5 Claims. (Cl. 239-430)



1. In an aerator, a tubular conduit adapted to be connected at its upstream end to a source of water under pressure, jet forming means in the path of the water for increasing the velocity of while decreasing the cross-section of the water, a tubular outlet element having smaller cross-section than that of the tubular conduit, the tubular outlet element being supported by the downstream portion of the tubular conduit with the downstream end of said tubular outlet element further downstream than the downstream end of the tubular conduit, mixing means spaced downstream of the jet forming means to thereby form therebetween a mixing space, said mixing means being at least partly located downstream of the downstream end of the tubular conduit and at least partly in the tubular outlet element and including means for finely breaking up the water from the jet forming means and mixing the broken water with air to produce a coherent stream laden with numerous small bubbles and to discharge such stream through the tubular outlet element, said tubular conduit and said tubular outlet element having at least one opening between them thereby providing at least one air inlet which enters the downstream end of the tubular conduit through the inlet between said conduit and said element, and enters said mixing space adjacent said mixing means.

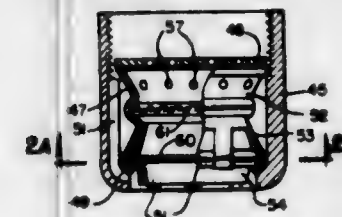
2,998,926
AERATOR WITH IMPROVED AIR SUPPLY
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 3, 1959, Ser. No. 831,185
8 Claims. (Cl. 239-430)



2. In an aerator, a hollow housing adapted to be attached at its upstream end to a faucet, said housing in-

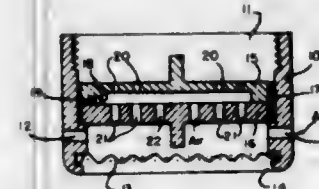
cluding means forming an air passageway along one wall of the housing and parallel to the axis of the housing, said air passageway at each end thereof being open to atmospheric air outside the faucet, jet forming and mixing means located at least partly in the housing for producing a coherent jet of aerated water at the output of the housing, said jet forming and mixing means communicating with said air passageway to thereby receive the air necessary for aeration.

2,998,927
FLUID MIXING DEVICES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Jan. 20, 1956, Ser. No. 560,299
Claims priority, application France Nov. 29, 1949
20 Claims. (Cl. 239-430)



1. An aerator comprising a conduit adapted to be connected at its upstream end to a source of water under pressure, jet-forming means in the conduit for increasing the velocity of flow, transverse means carried by the downstream portion of the conduit and extending transverse to the path of flow, said transverse means having a water discharge opening, said transverse means including mixing means for finely breaking up the water from the jet-forming means and mixing such water with air and for discharging through the entire area of said water discharge opening a coherent jet of aerated water laden with numerous small bubbles so as to block entrance of air through the water discharge opening, said mixing means being spaced downstream of the jet forming means to form a mixing space therebetween, said transverse means and the inside wall of the conduit defining an air passageway therebetween extending from the downstream open end of the conduit past the mixing means and communicating with the mixing space adjacent to the upstream side of the mixing means.

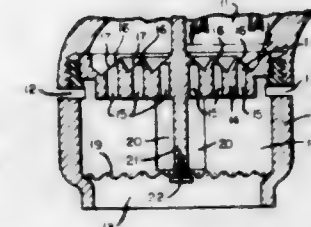
2,998,928
FLUID MIXING DEVICES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Nov. 30, 1956, Ser. No. 625,448
7 Claims. (Cl. 239-431)



1. An aerator comprising a casing having a liquid inlet, an air inlet, and a jet outlet, means disposed within said casing between said liquid inlet and said air inlet for providing a substantially enclosed preliminary fluid mixing chamber having air and fluid inlet means and fluid outlet means therein, said means providing said preliminary fluid mixing chamber comprising an apertured disc and a ring disposed in nested relation to one another, means for maintaining said ring and disc in spaced relation thereby to define at least one air port for the admission of air to the region between said disc and ring, a main fluid mixing chamber within said casing downstream of said preliminary fluid mixing chamber where-

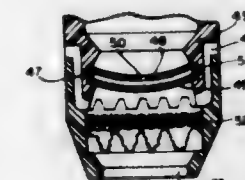
by partially aerated liquid is discharged from said preliminary mixing chamber into said main mixing chamber, and a mixing screen downstream of said main mixing chamber for further mixing said partially aerated liquid with air from said air inlet.

2,998,929
WATER AERATORS
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Feb. 18, 1957, Ser. No. 640,859
23 Claims. (Cl. 239-431)



3. A device for producing a jet of water which has the capacity to carry along with it a large amount of air comprising a conduit adapted to be connected at one end to a source of water under pressure, partition means across the conduit, the downstream side of said partition means being exposed to air, said partition means defining a chamber extending upstreamwardly from the downstream side of the partition means to thereby form a discharge opening for discharging the jet, said partition means defining at least one water entrance opening leading from the upstream side of the partition means into the said chamber and imparting turbulence to the water, the ratio of the cross-section of said entrance opening to the cross-section of said chamber, for a given height of said chamber, being such that water discharged from the discharge opening of the chamber forms a jet of impaired coherence which is whitish in appearance and swollen.

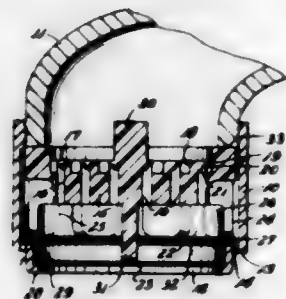
2,998,930
WATER AERATOR DIAFRAGMS
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Oct. 14, 1957, Ser. No. 690,030
4 Claims. (Cl. 239-431)



2. A water aerator comprising a conduit having a water inlet, jet forming means in said conduit comprising a pair of superposed adjacent apertured discs in spaced relation to one another and located across said conduit, each said disc extending from its periphery in a direction generally downstreamwardly and inwardly to its extreme downstream position at the axis of the conduit, mixing means spaced downstream from the downstream disc for finely breaking up the water from that disc and mixing the broken water with air to produce a coherent jet laden with numerous small bubbles, the space between the downstream one of said discs and said mixing means being in communication with air outside the conduit, the downstream disc and the conduit cooperating with each other and including means blocking entry of air into the space between discs during operation of the aerator, the perforations in the downstream disc being small enough to flood the space between discs.

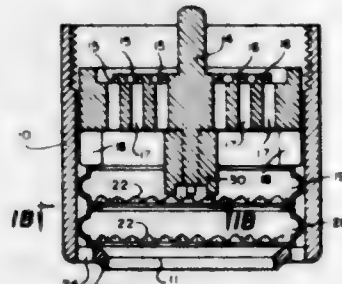
2,998,931 FAUCET AERATORS

Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 4, 1959, Ser. No. 831,588
23 Claims. (Cl. 239-431)



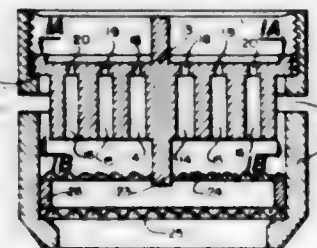
23. For use in a water faucet aerator, a perforated diaphragm for producing jet streams of water, the perforations in said diaphragm forming elongated passageways extending in a generally axial direction through said diaphragm, a rib in the upstream surface of said diaphragm, said rib having openings therein communicating the upstream ends of said passageways with the upstream side of said diaphragm, said elongated passageways flaring from their upstream ends outwardly to their downstream ends.

2,998,932
FRAMED MOVABLE SCREENS FOR USE IN
AERATOR DEVICES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Apr. 24, 1958, Ser. No. 730,568
12 Claims. (Cl. 239-432)



10. A mixing unit for use in a water aerator comprising a round screen element, a cylindrical tube having a diameter slightly larger than that of the screen element and a height substantially greater than the thickness of said screen element, said screen being positioned within the tube, and lips extending inwardly from the upper and lower ends of the tube to retain the screen within the tube, said screen element being the only one in said tube, whereby the screen element is substantially freely movable within the tube between the lips at the opposite ends of the tube.

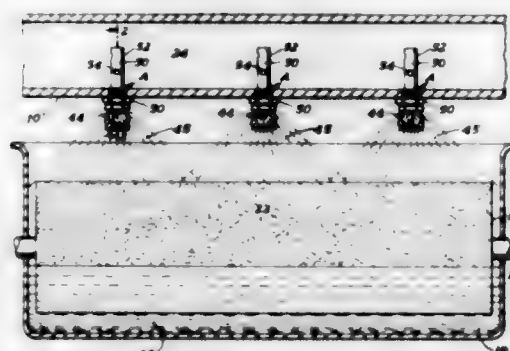
2,998,933
WATER AERATORS
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 1, 1958, Ser. No. 752,500
11 Claims. (Cl. 239-432)



11. A unitary structural member adapted to act as a fluid mixing structure, said structural member having a

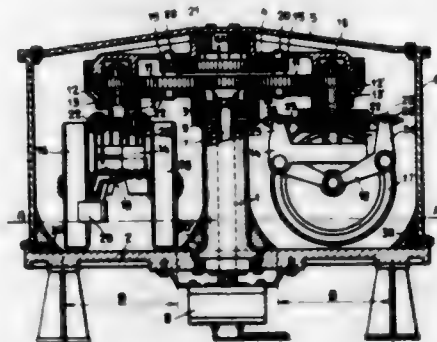
plurality of concentric annular openings each of which has a plurality of restricted spaced entrance openings at its upstream end, said concentric openings extending from said entrance openings to the downstream end of the member, said downstream end being exposed to air, said member consisting of a single molded plastic element which connects together the material forming the walls of the concentric annular openings, said openings being so restricted and spaced as to set up in the annular openings spaced streams, one for each entrance opening, that permit air to enter between the streams and aerate the water in the annular openings.

2,998,934
SPRAYING APPARATUS
Arthur E. Broughton, Glens Falls, N.Y.
Filed Dec. 18, 1959, Ser. No. 860,412
1 Claim. (Cl. 239-521)



A spray nozzle comprising a feeder pipe having side walls with inner and outer wall surfaces, an elongated intake element mounted through the side wall of said pipe having a longitudinal passage therethrough, said passage having an intake end and a discharge end and being of uniform diameter throughout its length except that its intake end is smaller than said diameter, means on said element for positioning the same within a feeder pipe with the intake end disposed a substantial distance inwardly of the feeder pipe wall and the discharge end disposed outwardly thereof, said intake element having a plurality of cross passages extending therethrough and communicating with and being of a smaller diameter than the longitudinal passage, the outer ends of said cross passages being smoothly counter-sunk and a liquid dispersing element disposed in opposed relation to the discharge end of said longitudinal passage to receive and disperse liquid discharged therefrom.

2,998,935
GRINDING-MIXING MILL FOR
FOUNDRY SAND
Italo Pellizzetti, 56 Corso Bramante, Turin, Italy
Filed July 14, 1959, Ser. No. 826,990
Claims priority, application Italy July 19, 1958
1 Claim. (Cl. 241-126)

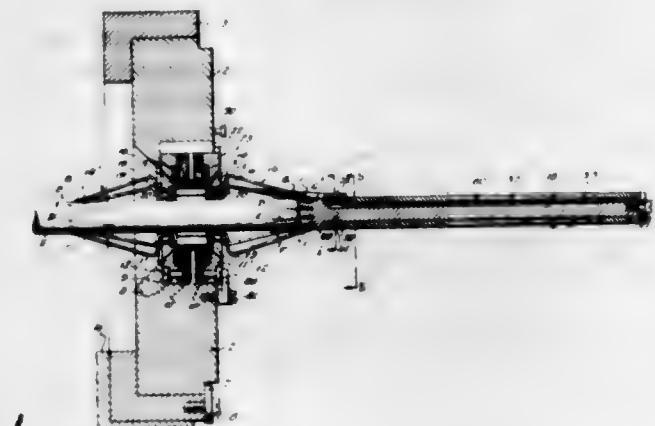


In a grinding-mixing mill a stationary vat having means defining a horizontal circular bottom, a stationary tubular column vertically extending from a central zone on said

2,998,937 WINDING APPARATUS FOR DYNAMO ELECTRIC MACHINES

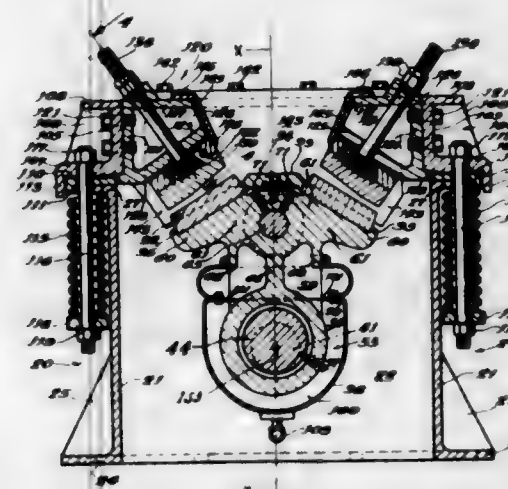
Francis M. Potter, Garden City, and George R. Achtmeyer, East Norwich, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Oct. 15, 1957, Ser. No. 690,352
6 Claims. (Cl. 242-1.1)



bottom, a vertical driving shaft arranged for concentric rotation in the column, a hollow spider rotatably supported at the top end of the column, said spider including two hollow radial arms extending in opposite directions, two vertical shafts rotatably depending from a respective one of said hollow arms and each disposed at a position eccentric to the driving shaft, an epicyclic gearing enclosed by the spider adapted to rotate the spider with respect to the column and the two eccentric shafts with respect to their respective arms on rotation of the driving shaft, for each eccentric shaft a cross member fixed on the lower end of a respective eccentric shaft, for each cross member a pair of bell crank levers fulcrumed at opposite ends of the cross member each having a first arm upwardly extending from the fulcrum and for each eccentric shaft a second arm extending towards the second arm of the other bell crank lever in the pair, a pin directed radially to the eccentric shaft on the free end of each said second arm, a circular grinding wheel rotatable on each pin, adjustable spring means operative between the first arms of the bell crank levers in the pair to deflect the pin-carrying arms towards the bottom of the vat, and adjustable stop means operative between each bell crank lever and cross member within a range including a condition in which the respective grinding wheels are adjacent to but out of contact with said bottom.

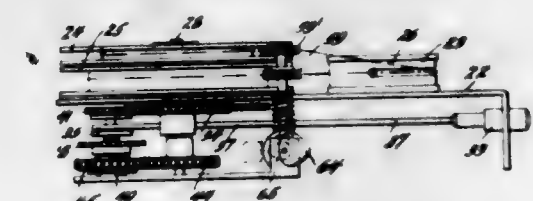
2,998,936
REDUCTION JAW CRUSHERS
Oscar C. Gruender, 1900 E. Capital Drive, Apt. 2,
Milwaukee 11, Wis.
Filed Apr. 19, 1961, Ser. No. 100,044
8 Claims. (Cl. 241-140)



6. A jaw crusher of the character described comprising, a frame, a yieldable jaw support mounted on top of said frame, dual stationary crushing jaws mounted opposite each other on said yieldable jaw support, a movable jaw head mounted in said frame, a pivot member in the jaw head to provide for limited vertical and oscillating movement of the jaw head at the pivot end of the jaw head, dual movable crushing jaws mounted on the said jaw head and underlying the dual stationary crushing jaws and forming dual crushing cavities therebetween, a single hopper located in said yieldable jaw support feeding material to the dual crushing cavities, resilient means to secure said yieldable jaw support to said frame while permitting limited movement of the jaw support to relieve excessive crushing pressures in the dual crushing cavities, and means to actuate said jaw head to produce simultaneous oscillatory and gyratory motion of the said dual movable crushing jaws whereby the high point of the crushing jaws advances progressively around the enter of the gyrating means.

770 O.G.-8

2,998,938
SPOOL DRIVE REVERSING AND BRAKING
SYSTEM APPARATUS
Paul E. Wattering, Frankfurt am Main, Germany, assignor to Almondo Annibale Marzan, Turin, Italy
Filed Feb. 14, 1956, Ser. No. 565,466
Claims priority, application Germany Feb. 15, 1955
7 Claims. (Cl. 242-55.12)



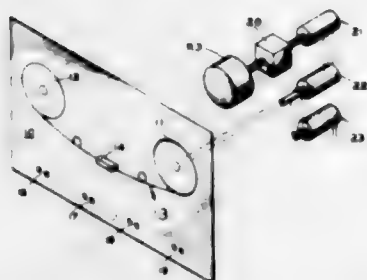
1. In a miniature, magnetic recording and reproducing apparatus, a recording and reproducing head, a pair

of coaxial shafts mounted in relative rotational relationship, a pair of spools each mounted on one of said shafts, braking means operatively associated with each of said spools, means for reversedly driving said spools, said means for reversedly driving said spools including a forward and reverse key, a pair of driving wheels rotatably mounted on a drive shaft in co-operative relationship with respective ones of said coaxial shafts, said key selectively controlling the connection between one of said driving wheels and said shaft, and a pair of conical braking means, actuating members mounted on said key for actuating said braking means, thereby applying a variable braking force to the spool which is being pulled.

2,998,939

AUTOMATIC TAPE TRANSPORTING AND POSITION SELECTING DEVICE

Raymond Scott, Manhasset, N.Y.
(140 W. 57th St., New York, N.Y.)
Filed Oct. 16, 1959, Ser. No. 846,835
15 Claims. (Cl. 242—55.12)



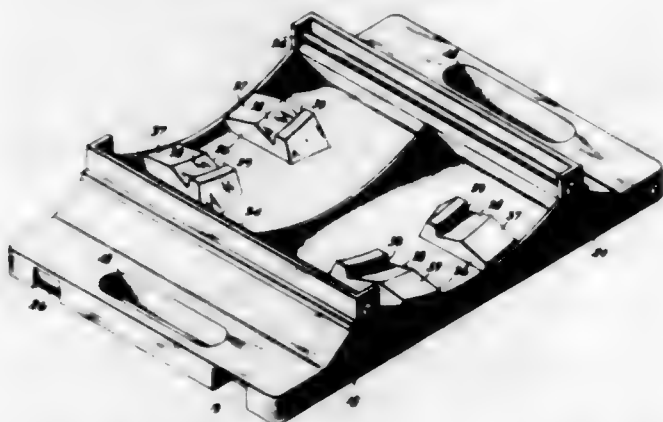
1. An improved apparatus for use with a tape transport device having a fast wind, a fast rewind and a slow forward control and for transporting said tape to a pre-selected point comprising means for generating a signal including a bridge network provided with a first resistor arm variable in accordance with said preselected point and a second resistor arm variable in accordance with the position of said tape, means responsive to said signal to alternatively actuate said fast wind or fast rewind control to transport said tape toward said pre-selected point and means actuating said slow forward control upon said tape reaching the vicinity of said pre-selected point.

2,998,940

REEL SUPPORTING PALLET

Albert L. Pizzi, Union, and Roger R. Wahlberg, Bloomfield, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Original application Mar. 9, 1959, Ser. No. 798,174. Divided and this application Feb. 23, 1960, Ser. No. 10,297

1 Claim. (Cl. 242—68.7)



A reel supporting pallet having a main portion, spaced integral members extending upwardly from the main portion

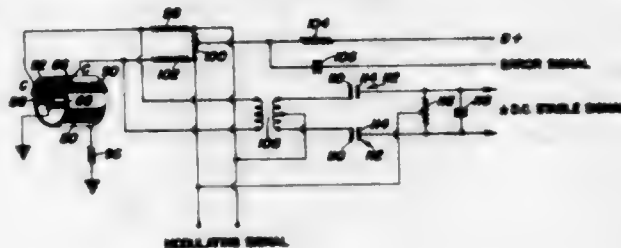
tion and having elongated parallel apertures therein open for portions of their lengths, rods rotatably supported in the apertures to support heads of a reel for rotation, means mounted on the main portion to engage the heads of the reel and thereby hold the reel on the rotatable rods, and stop engaging rollers rotatably supported by opposite ends of the main portion.

2,998,941

POLARIZATION DETECTOR

Gilbert Wilkes, Chevy Chase, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 25, 1952, Ser. No. 306,235
7 Claims. (Cl. 244—14)



7. An electron discharge device for use as a detector of microwave energy, comprising an evacuated envelope, an axially extending cathode supported centrally of said envelope, an electrode supported in spaced coaxial relationship with said cathode, said electrode being provided with a pair of longitudinally extending spaced choke slots, said cathode and said electrode being arranged to support transmission of electromagnetic waves axially therethrough in a forced $TE_{1,1}$ mode, a plate supported in spaced relationship to each of said slots, each of said plates extending over its respective one of said slots, and means for applying voltages to said cathode electrode and plates to establish a potential gradient therebetween, whereby changes in the orientation of the plane of polarization of waves passing through said envelope with respect to said plates will affect said potential gradient and modulate the flow of electrons in said envelope between said cathode and said plates.

2,998,942

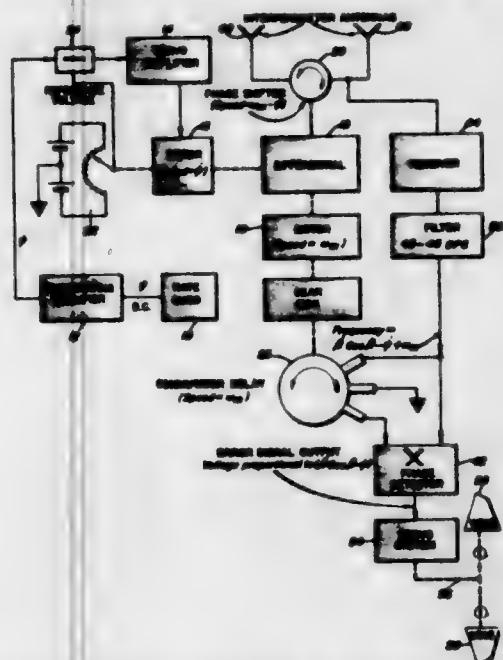
AUTOCORRELATION DISCRIMINATOR

John H. Kuck, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

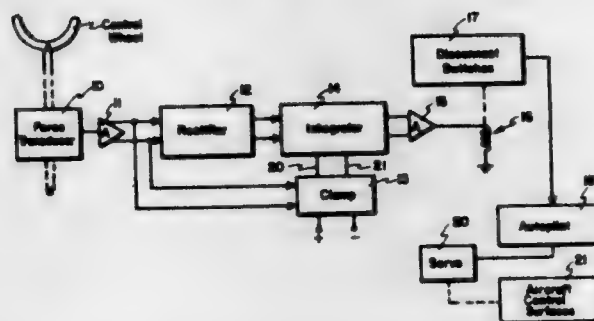
Filed Jan. 27, 1953, Ser. No. 333,555
9 Claims. (Cl. 244—14)

7. An autocorrelation discriminator for producing a direct current error signal proportional to the deviation of a modulation frequency from a fixed reference value, said discriminator including an electrostatic signal recording and removing device and a phase detector, said device including a moving memory track on which a modulation frequency signal is recorded at one point thereon and is removed at a point further along said track from the recording point to produce a delayed modulation frequency signal, said memory track being divided into a number of segments, with each segment being connected to ground through a capacitor, input and output brushes bearing on the surface of the memory track for successively contacting each of said segments, means for erasing the charge stored on each of said capacitors after said segments have rotated past said output brush, the phase between said delayed modulation frequency signal and the undelayed modulation frequency

means coupled to said shaft to control the rate of rotation thereof, a spring actuated plunger in contact with the rounded end of said rack and projecting a substantial distance beyond said rounded end to prevent movement of said rack, an arming bar lying on the outer surface of the missile and cooperating with the torpedo tube wall and with said plunger while the missile is in the torpedo tube to restrain said plunger in position, whereby said plunger is released and moves past the end of the rack when the missile leaves the torpedo tube, spring biasing means cooperating with said rack to move said rack and rotate the geared shaft when the plunger moves past the end of said rack, thereby rotating said shaft to initiate a suitable operation after the missile leaves the submarine.

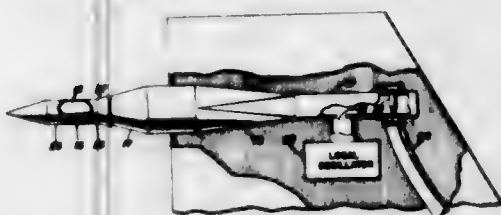


2,998,945
FORCE SENSING DISCONNECT SYSTEM
Raymond I. Meyers, Rockford, Mich., assignor to
Leair, Incorporated
Filed Apr. 21, 1958, Ser. No. 729,719
4 Claims. (Cl. 244-77)



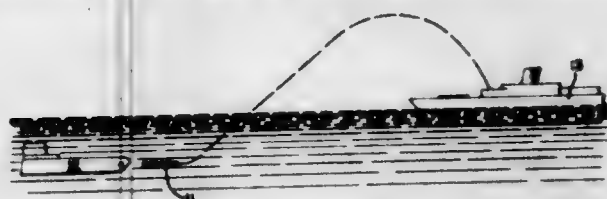
1. In a manned vehicle, a control wheel force sensing switch system comprising means for sensing force applied to said control wheel, said means capable of emitting an electrical signal proportional to the force applied to said control wheel, an integrator connected and responsive to said electrical signal and having an electrical output proportional to said electrical signal from said sensing means, means electrically connected to said electrical output for prohibiting said output below a predetermined level from said integrator, and a relay switch connected and responsive to signals from said integrator.

**Billy D. Dobbles and Angus C. Tregida, Silver Spring,
and George W. Luke, Jr., Rockville, Md., assignors to
the United States of America as represented by the
Secretary of the Navy**
Filed Aug. 12, 1954, Ser. No. 449,530
6 Claims. (Cl. 244-14)



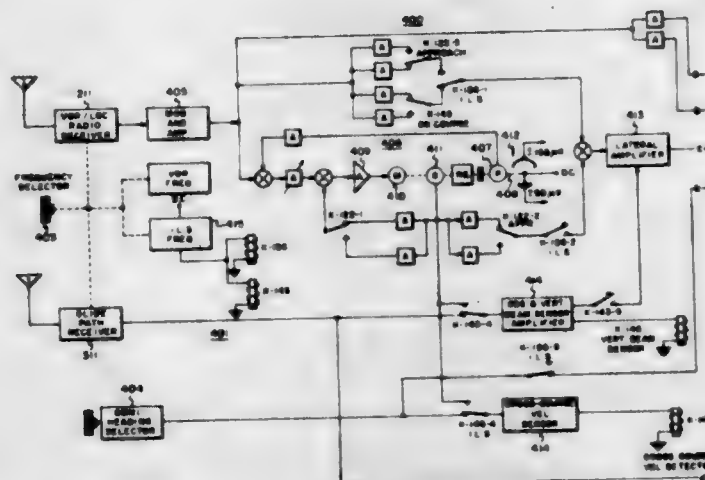
3. A protective device for attenuating the power of electromagnetic waves received by an aerial vehicle, comprising an antenna on the vehicle, and a metallic shield for the antenna and adapted for removal for exposing said antenna when attenuation is no longer required, said removal being accomplished by heat generated by friction incident to the passage of said vehicle through the atmosphere.

William Rimmer, University Park, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 15, 1958, Ser. No. 780,640
2 Claims. (Cl. 244—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



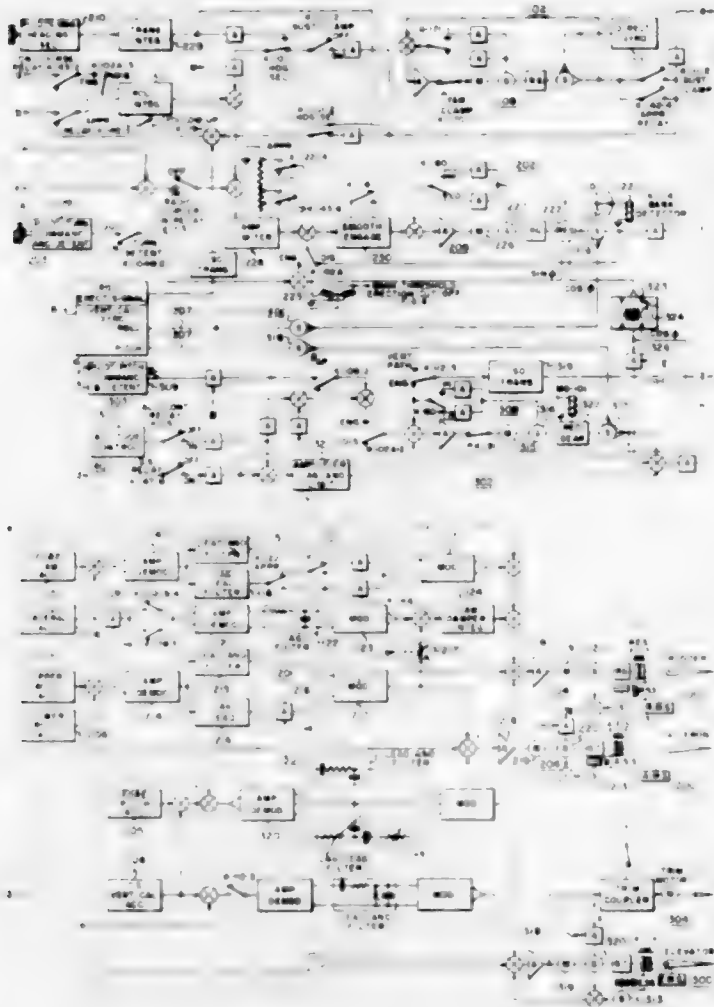
1. A delay mechanism for a submarine-torpedo tube-launched missile comprising: a rack having a toothed section along a portion of its length, said rack having an un-toothed beveled portion terminating in a rounded end, a geared shaft cooperating with the toothed section of said rack for rotation upon movement of said rack, escapement

George F. Jude, Fresh Meadows, and Harry Miller, Westbury, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,097
4 Claims. (Cl. 244-77)



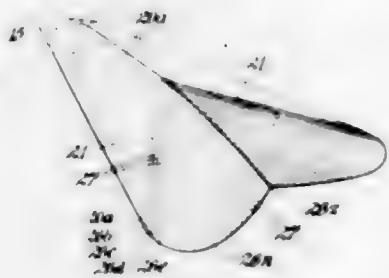
1. In a yaw damper for an aircraft having a rudder and servomotor means for controlling the rudder whereby

to control yawing of the aircraft, the combination comprising first accelerometer means for supplying a first signal in accordance with the acceleration of the aircraft about its yaw axis and a second signal in accordance with the lateral acceleration of said aircraft, second accelerometer means for supplying a third signal in accordance



with the angular acceleration of the craft about its roll axis, integrator means responsive to said second and third signals for supplying a fourth signal in accordance with the time integral of the sum thereof, and means responsive to said first, second and fourth signals for controlling said servomotor means in accordance with the sum thereof.

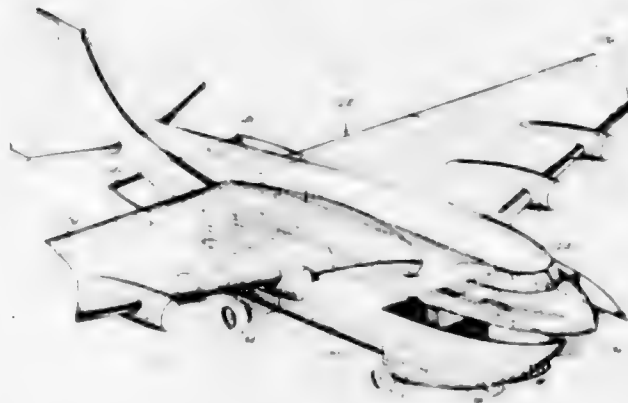
2,998,947
SUPERSONIC NARROW DELTA AIRCRAFT CONSTRUCTION
Alan Arnold Griffith, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 29, 1958, Ser. No. 758,161
Claims priority, application Great Britain Sept. 6, 1957
5 Claims. (Cl. 244—117)



1. A supersonic narrow delta aircraft having a forebody and an afterbody, whereof the forebody is a prism of substantially diamond section adjacent its junction with the afterbody, said prism having four plane surfaces, said

plane surfaces meeting in edges making angles to the fore and aft axis such that the ratio of the tangent of the angle to the tangent of the Mach angle is less than about 0.4, said forebody having a maximum thickness such that the ratio of the maximum thickness to the root chord is less than about 0.1, whereby the drag of the forebody is calculable by the linear theory, and the afterbody is defined by four corresponding plane surfaces continuing rearwardly from the plane surfaces of the adjacent portion of the forebody to a trailing edge of the aircraft, each plane of the afterbody intersecting the respective plane surfaces of the forebody in a corresponding ridge inclined to the fore and aft axis of the aircraft at the Mach angle, two of said plane surfaces forming the upper surface of the afterbody and meeting on a line extending from the intersection of the corresponding ridges to a point on the fore and aft axis of the aircraft, and the other two plane surfaces of the afterbody forming the lower surface of the afterbody and meeting on a line extending from the point of intersection of the corresponding ridges to said point on the fore and aft axis.

2,998,948
CARGO-CARRYING AIRCRAFT
Harold D. Sisk, Somerville, Mass.
(10 Baker Road, Arlington 74, Mass.)
Filed July 28, 1959, Ser. No. 830,069
4 Claims. (Cl. 244—137)

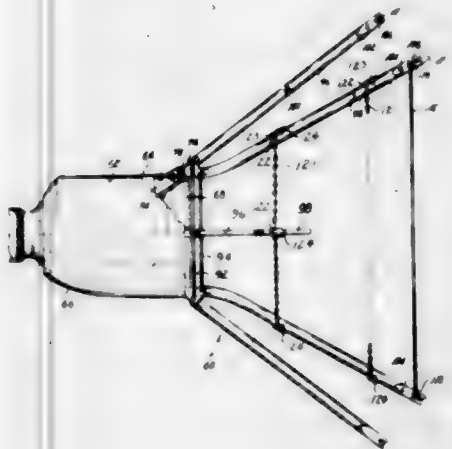


1. In a cargo carrying aircraft, a fuselage, a pair of upstanding elongated wall members arranged in lateral spaced relation positioned beneath said fuselage and having the upper ends dependently carried by said fuselage, at least two landing gear assemblies arranged in tandem spaced relation positioned beneath each of said wall members and rollably engaging a ground surface when the aircraft is on the ground and having each of said gear assemblies connected to the adjacent wall member for movement from the position engaging the ground surface to a nested position within said wall member, a pair of doors arranged in side by side abutting relation at each of the adjacent ends of said wall members and normally closing the space between said wall member ends and connected to the fuselage for movement from the closing position to a position in which said space is unobstructed for ingress and egress therethrough of a mobile ground vehicle having a cargo carrying body thereon, and elevating and lowering mechanisms arranged in opposed relation carried by said wall members, said mechanisms being each operable to engage a cargo carrying body when supported upon a mobile ground vehicle and positioned between said wall members and lift said cargo carrying body from said vehicle and support said cargo carrying body between said wall members and being operable to lower said cargo carrying body from the supporting position between said wall members to a position of support upon a ground vehicle when positioned below and between said wall members.

2,998,949

AERODYNAMIC DRAG DEVICE

Richard F. Patterson, 6912 Wish Ave., Van Nuys, Calif.
Original application Dec. 15, 1956, Ser. No. 553,276, now
Patent No. 2,823,881, dated Feb. 18, 1958. Divided
and this application Jan. 7, 1957, Ser. No. 632,880
7 Claims. (Cl. 244-145)



1. In a parachute canopy, inner and outer annular air foil panels having a ring shaped drag panel assembly between said inner and outer annular airfoil panels and spaced therefrom by narrow circumferential discontinuous slots. under dynamic conditions of airflow past the canopy the inner perimeter of the inner panel constituting its leading edge and the outer perimeter of the outer panel constituting its leading edge.

2,998,950

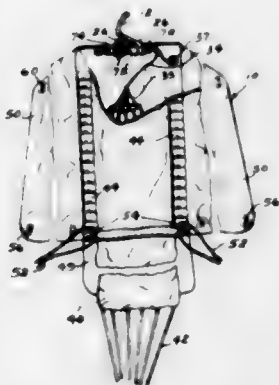
INTEGRATED PARACHUTE DEPLOYMENT PACK

Alfred G. Fritz, 1800 Belmont Lane, Redondo Beach, Calif., Alphons P. Weber, 1325 Mayapple Ave., Dayton 32, Ohio, and Robert L. Oakley, Yuma Test Station, Ariz.

Filed July 2, 1959, Ser. No. 824,753

9 Claims. (Cl. 244-148)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A locking device for attachment of a parachute pack and a parachute canopy to a static line and releasing said attachment when the deployment of said canopy from said pack has been completed, said device comprising a parachute pack casing, an upper end wall in said pack and integral therewith, a static line, an end loop on said static line, means on said upper end wall for releasably intruding the end loop of said static line through said end wall, a strap permanently attached at one end to the parachute pack and at the other end to the apex of a parachute, a loop of said strap being insertable through said static line end loop, the loop of said strap being detached from said end loop by the gravitational pull of said parachute and only when said parachute canopy has been completely deployed.

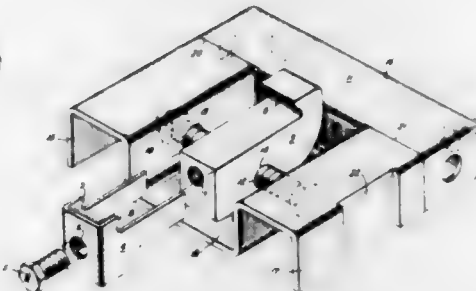
2,998,951

ADJUSTABLE BUS DUCT SUPPORT

Wayne Lee Roy Henderson, West Hartford, Conn., assignor to General Electric Company, a corporation of New York

Filed Dec. 23, 1959, Ser. No. 861,532

4 Claims. (Cl. 248-70)



1. A bus bar duct support comprising: a supporting bracket having a recess therein and including means for attaching said bracket to a mounting surface; a threaded member spanning said recess and supported for rotation on said bracket; and a jaw clamp adapted to grip the external surface of a bus duct and including a pair of opposed clamping members mounted within said recess upon said threaded member for adjustable movement therealong, rotation of said threaded member adjustably positioning said clamping members within said recess in a direction transverse of their direction of clamping action.

2,998,952

TRASH CAN AND SUPPORT ASSEMBLIES

Joseph C. Williams, P.O. Box 6711, San Antonio, Tex.

Filed June 26, 1959, Ser. No. 823,119

1 Claim. (Cl. 248-156)



An assembly comprising a perpendicular ground anchored post having a tubular open upper end, a trash can having upper and lower ends, laterally projecting hook means secured to the can intermediate the ends of the can, said hook means being downwardly and freely engaged in said upper end, and a fixed laterally projecting chock on the lower end of the can having a notch receiving said post, said hook means comprising a downturned hook element and a handle loop on which said hook element is centered, the handle loop being removably circumposed on the post.

2,998,953

PANHEAD

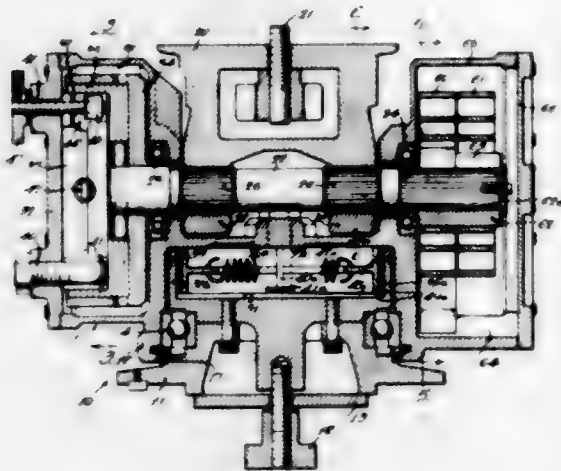
Chadwell O'Connor, 9862 Highland Ave., Alta Loma, Calif.

Filed June 21, 1957, Ser. No. 667,192

5 Claims. (Cl. 248-183)

3. In a panhead for supporting an instrument and having an axis about which the instrument can be swung.

a frictional drag device for insuring smooth scanning movement of the instrument comprising, in combination, a chamber defining a cylindrical surface concentric with said axis, an annular unit having an arcuate surface in close proximity to said cylindrical surface, said chamber and unit being mounted for relative rotation when the



instrument is swung about said axis, a viscous fluid disposed in said chamber between said surfaces to impose a smooth frictional drag against said rotation, and means for adjustably positioning said unit to vary the spacing of said surfaces so that the amount of said drag can be selected.

2,998,954

CLAMPING DEVICE

John Douglass, Jr., St. Louis, Mo., assignor to Shampaine Company, St. Louis, Mo., a corporation of Missouri

Filed Aug. 11, 1958, Ser. No. 754,192
10 Claims. (Cl. 248-229)

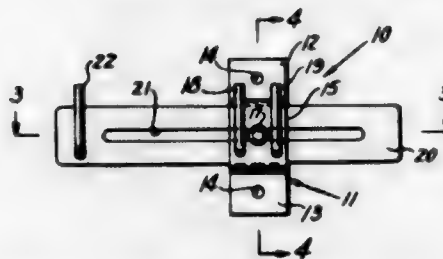


1. A clamping device comprising a bracket, mounting means secured to said bracket, an elongated member rotatably mounted in said mounting means, resilient means operatively interposed between the elongated member and the mounting means, socket-forming means mounted on said elongated member and being adapted to receive a rod-like member, said socket-forming means being shiftable along said elongated member axially thereof, and releasable locking means operatively connected to said elongated member for shifting said elongated member axially in opposition to the force of said resilient means and at the same time shift said socket-forming means along said elongated member toward said bracket, means interposed between the locking means and the socket-forming means for bearing against the rod-like member whereby to clamp the rod-like member against the elongated member and at the same time shift the socket-forming means into non-rotatable engagement with the mounting means.

2,998,955

ADJUSTABLE CURTAIN BRACKET

Allen C. Hertzog, West Collingswood Heights, N.J.
Filed July 23, 1959, Ser. No. 829,137
1 Claim. (Cl. 248-263)

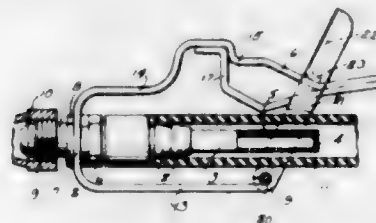


An adjustable bracket for supporting curtain and drapery rods comprising a mounting plate having upper and lower base end portions provided with openings therein to receive elements to secure said mounting plate to a support, a raised U-shaped portion intermediate said base end portion and integral therewith, a pair of parallel vertically disposed L-shaped hooks secured to said U-shaped portion, a rivet mounted in said U-shaped portion intermediate said L-shaped hooks, a horizontally disposed sliding plate having an elongated longitudinally extending closed slot therein which is slidably mounted on said rivet within the U-shaped portion of said mounting plate for lateral movement of said sliding plate, said rivet inseparably securing the sliding plate to said mounting plate, and said sliding plate having an L-shaped hook at one end thereof in horizontal alignment with said L-shaped hooks.

2,998,956

TOGGLE SHUT-OFF ASSEMBLY FOR FLUID LINES

Nicholas L. Etten, Cedar Falls, Iowa
Filed Aug. 27, 1958, Ser. No. 757,529
5 Claims. (Cl. 251-10)



1. In flow control means for a fluid line, a tubular coupling, a flexible hose having one end portion connected to said coupling, a shank on said coupling of less diameter than said hose extending freely inside said hose axially from the point of connection between the hose and coupling, said shank forming a conduit communicating with said tubular coupling and said shank having a closed end and an opening in the wall thereof, a member attached to said coupling and having a pair of resilient arms extending axially over opposite sides of said hose, and toggle means pivotally associated with said arms and arranged to selectively contract said arms and squeeze said hose against said shank and close the shank opening.

2,998,957

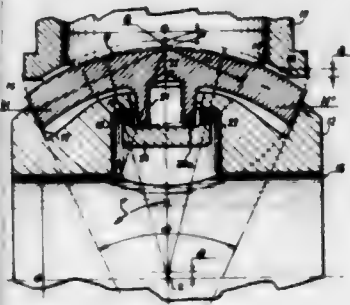
ARRANGEMENT FOR FITTING A SELF-CENTERING COVER WITHOUT ANY CLEARANCE ON VALVES AND THE LIKE PARTS

Paul Vuillez, 48 Route de Rouen,
Pont-Audemer, France

Filed Dec. 28, 1959, Ser. No. 862,369
Claims priority, application France Jan. 26, 1959
6 Claims. (Cl. 251-86)

1. A valve arrangement comprising a stationary valve seat having a fluid passageway therethrough, a movable valve core for controlling fluid flow through said passageway, a seating unit having a seating area cooperating with

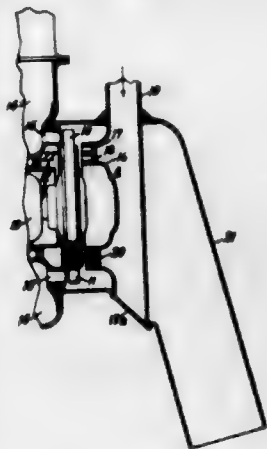
said seat, a cup-shaped depression in said core having an internal edge, said seating unit having its periphery girdled by said depression edge, said periphery and edge forming a first rotula-like connection between said seating unit and said core, a second rotula-like connection between said seating unit and said core having the same center as and



being of smaller radius than the said first connection, said center being located in front of said depression edge, both first and second connections forming a universal mounting connecting the seating unit to the core for moving the seating unit in opposite directions of movement toward and away from the seat upon such corresponding movement of the valve core.

2,998,958
COOLING STRUCTURE FOR TURBINE WHEELS

Joseph Savage Alford, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 276,134, Mar. 12, 1952. This application Sept. 26, 1956, Ser. No. 612,332
1 Claim. (Cl. 253-39.15)

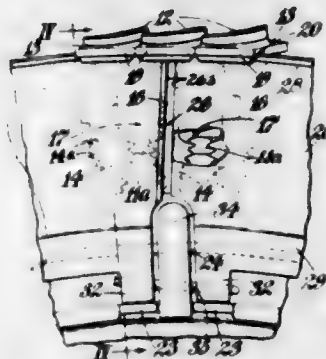


In combination with a turbine wheel, a cooling system for cooling said turbine wheel with a gaseous fluid comprising duct means for conducting gaseous cooling fluid from a source to said wheel, a pair of concentrically positioned U-shaped channels positioned adjacent said wheel near the periphery thereof with the open sides of said channels facing said wheel, means connecting the closed sides of said channels to said duct means, said connecting means being thereby supported by said duct means, and outlet means formed between said channels by radially spaced apart portions thereof to direct said gaseous cooling fluid against the side of said wheel in a direction substantially parallel to the axis of rotation of said wheel, whereby said gaseous cooling fluid impinges against said wheel at a radial position located between and immediately adjacent the open sides of said channels, said channels being thereby located along the radial flow path of said gaseous cooling fluid after it impinges on the wheel to trap portions of said fluid within said channels and recirculate same against said turbine wheel to provide prolonged contact between the cooling fluid and said turbine wheel.

2,998,959
BLADED ROTOR OF AXIAL-FLOW FLUID MACHINE WITH MEANS TO RETAIN BLADES IN POSITION ON ROTOR

Lionel Haworth and James Alexander Petrie, Littleover, and Frederick Moss, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Sept. 7, 1956, Ser. No. 608,458
Claims priority, application Great Britain Sept. 29, 1955
7 Claims. (Cl. 253-77)

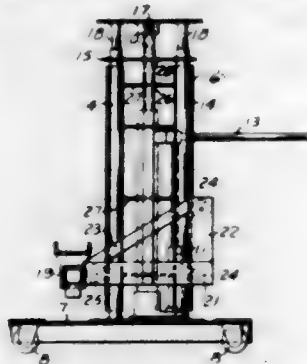


1. A rotor of an axial-flow fluid machine, the rotor comprising a disc having a rim with axially-facing surfaces, a plurality of blades, each blade having a root attachment portion provided with radially-facing shoulders, a plurality of slots extending in said rim between said axially-facing surfaces, each slot having radially facing shoulders complementary to the shoulders on the root attachment portions, said shouldered root attachment portions of said blades being engaged in said slots with radially-facing shoulders of the blades and slots interengaging to retain the blades radially in position, said rim having adjacent one of said axially-facing surfaces an annular radially-inwardly-facing channel coaxial with the rotor, said shouldered root attachment portions having adjacent said one of the axially-facing surfaces radially-inwardly-facing grooves which having a circumferential extent together to form a substantially continuous annular groove coaxial with the rotor and of greater radius than said annular radially-inwardly-facing channel, means to retain the blades in position on the rim comprising an annular plate of resilient material overlying said one of the axially-facing surfaces of the rim and the root attachment portions of the blades, said plate having a first edge engaging the grooves in the root attachment portions and also having thereon at a substantially smaller radius than said edge an annular flange engaging the annular radially-inwardly-facing channel on the rim, thereby to be positioned relative to the disc and root attachment portions and to retain the root attachment portions against axial displacement in their slots, said plate being split radially at a single angular position to form a pair of spaced radially-extending edges of the plate between which is a gap permitting contraction in diameter of the plate by closing the gap for engaging and disengaging the said first edge in the grooves and the flange in the channel, and radial abutment means provided between said annular plate and the rim and operative to prevent undesirable contraction and disengagement of the annular plate.

2,998,960
PORTABLE HYDRAULIC JACK
John H. Smith, 6452 Osage St., Allen Park, Mich.
Filed May 9, 1958, Ser. No. 734,265
2 Claims. (Cl. 254-2)

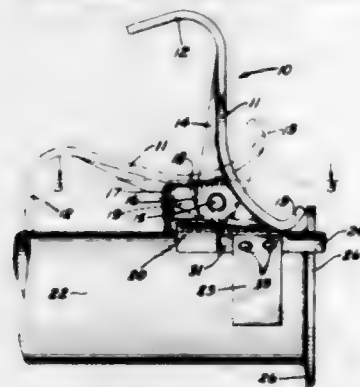
1. A hoist of the class described, comprising: a substantially square shaped base; a vertical tubular standard fixedly mounted on each corner of said base and extending upwardly therefrom; a frame fixedly connecting the upper ends of said standards; a horizontally disposed lifting plate positioned above said standards; a plurality of

rods secured to and projecting downwardly from said lifting plate; each of said rods being slideably mounted in one of said tubular standards; a hydraulic cylinder centrally disposed on said base; a piston rod operatively mounted in said hydraulic cylinder and being directly fixedly connected to said lifting plate for raising and lowering said plate; a hydraulic pump operatively con-



nected to said hydraulic cylinder; an engagement bar for engaging and lifting an object; means connecting said engagement bar to said lifting plate for movement upwardly and downwardly in unison therewith; and, roller members carried by said engagement bar and rollably engaging said standards for facilitating upward and downward movement of said engagement bar.

2,998,961
AUTOMOBILE BUMPER JACK SADDLES
Edward H. Schultz, 13801 W. Cardinal Parkway,
Milwaukee, Wis.
Filed May 2, 1958, Ser. No. 732,574
13 Claims. (Cl. 254-133)



1. A bumper saddle for use on an automobile service jack of the type having an elongated forwardly projecting horizontal lifting arm comprising a base adapted to be positioned in a predetermined position on top of said service jack lifting arm, means depending from said base detachably engageable with said lifting arm to maintain the base in said predetermined position, a saddle plate having a lower portion shaped to engage beneath the lower edge of a bumper, said plate being shaped so that another portion is adapted to engage a bumper at a location spaced above the lower edge, and means pivotally mounting said plate above said base for pivotal movement from a generally upright position to a rearwardly pivoted substantially horizontal position on said base.

2,998,962
CYLINDRICAL RADIATION RECUPERATOR WITH UPPER AND LOWER AIR DISTRIBUTOR
Friedbert M. Heyn, Krefeld, Germany, assignor to Industrie-Compagnie Kleinewefers Konstruktions- und Handelsgesellschaft m.b.H., Krefeld, Germany
Filed Sept. 8, 1958, Ser. No. 759,788
Claims priority, application Germany Sept. 10, 1957
13 Claims. (Cl. 257-246)

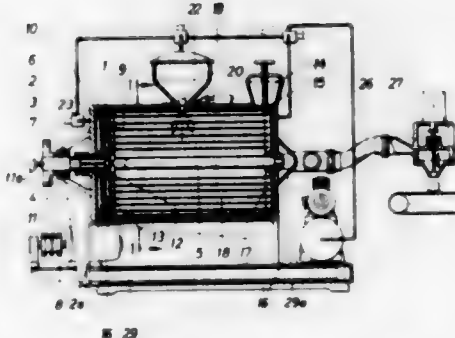
1. A tubular radiation recuperator, which includes: a first distributing container for receiving the gaseous me-

dium to be heated, a second distributing container for discharging the heated gaseous medium, said distributing containers being provided with an annular expansion through a substantially cylindrical member interposed between and connected to said first and second distributing containers, a plurality of spacer elements radially extending from the outside of said cylindrical member and substantially uniformly distributed over the circumference of said cylindrical member, said spacer elements having each substantially the same height and extending in the



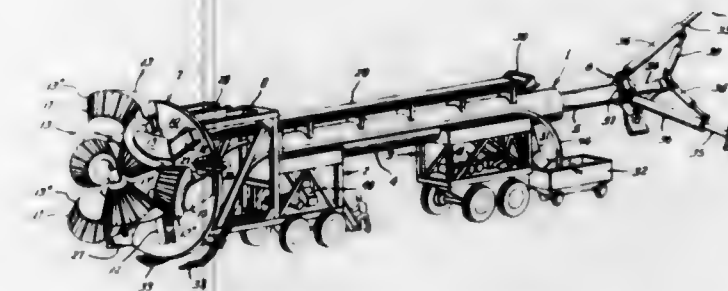
radial direction of said cylindrical member, a split tubular member elastically clamped about said spacer elements, and an expansion member in form of a fold extending over the split of said split tubular member along the length thereof and having its longitudinal marginal portions connected to the marginal portions of said split tubular member adjacent the split thereof thereby bridging and sealing said split, said distributing containers communicating with each other through the space confined by said cylindrical member and said split tubular member.

2,998,963
MACHINE FOR STIRRING, BEATING AND MIXING SOLID SUBSTANCES
Karl Rinderle, 56 Hauptstrasse, Staufen,
Breisgau, Germany
Filed June 26, 1959, Ser. No. 823,175
Claims priority, application Germany July 18, 1958
4 Claims. (Cl. 259-9)



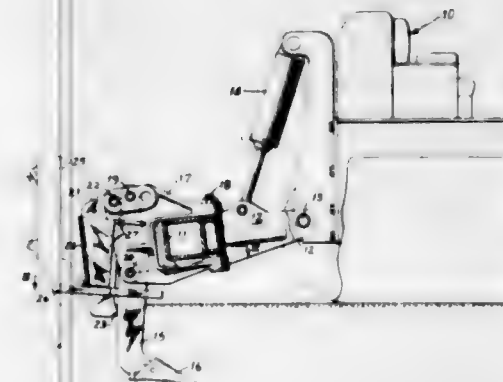
1. A mixing and dispensing machine comprising a stationary mixing bowl, a shaft journaled within the mixing bowl for rotation, means to rotate said shaft, a first implement carrier fixedly secured to said shaft near one end of the mixing bowl and rotatable with the shaft, a second implement carrier movably mounted upon said shaft in spaced relation to the first named implement carrier, releasable clutch means interconnecting the second implement carrier and shaft so that the second implement carrier may turn with the shaft or be released therefrom, a plunger slidable upon said shaft outwardly of the second implement carrier, means to introduce compressed air into the mixing bowl between the plunger and one end of the bowl to thereby shift the plunger and second implement carrier axially of the shaft toward the first named implement carrier, said plunger having an interlocking part engageable with said clutch to releasably lock the plunger to the shaft, and flexible mixing elements connected with the first and second implement carriers and extending between the same for rotation therewith when the plunger and second implement carrier are locked to the shaft by said clutch.

2,998,964
ROTARY TUNNELING DEVICE HAVING RADIAL-ADJUSTABLE CUTTERS
Erwin A. Morian, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Mar. 26, 1958, Ser. No. 724,162
4 Claims. (Cl. 262-7)



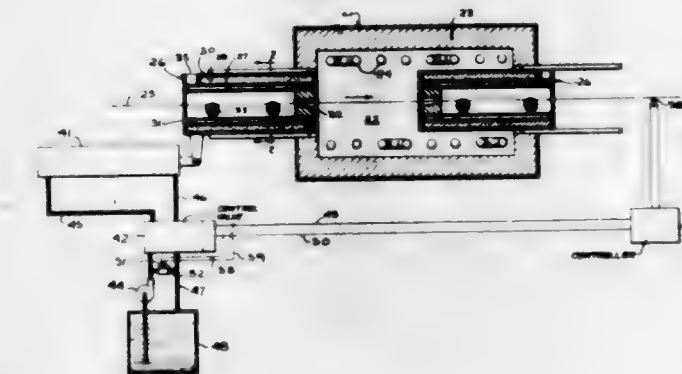
1. In an earth boring machine, a cutter head including a revoluble carrier having transverse dimensions substantially less than those of the borehole to be cut, a plurality of radially extending ways mounted on said carrier, a plurality of rolling cutters slidably mounted on said ways and having bore-forming positions to cut the full face of said bore, said cutters being disposed in at least two groups on approximately concentric circles about the axis of said bore, the outermost of said groups being thus disposed to cut the periphery of said bore and extending in said position beyond the periphery of said carrier, the sizes and dispositions of the cutters of any group relative to those of the adjacent inner group being such that the outer group may be moved radially inwardly only after the inner group is moved radially outwardly a distance sufficient to define spaces to accommodate the members of said outer group, means for thus moving the group of cutters adjacent said outermost group outwardly and means for thus moving said outermost group of cutters inwardly within the periphery of said carrier, whereby said cutter head may be axially retracted.

2,998,965
PUSH BLOCK FOR TRACTOR MOUNTED RIPPER
Donald J. Larson, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Mar. 23, 1960, Ser. No. 17,157
3 Claims. (Cl. 262-8)



1. A push block for a tractor mounted ripper which includes a ripper shank connected to a draft frame on the tractor by two vertically spaced pins comprising an elongated member disposed behind the ripper shank and connected to the draft frame adjacent its upper end and contacting the rear edge of the ripper shank only at a point below the lowermost of said two pins, and means at the rear edge of said member for engagement by a pushing element of a tractor.

2,998,966
HEAT-TREATING APPARATUS
Philip L. Knight, Toledo, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 2, 1957, Ser. No. 632,225
4 Claims. (Cl. 263-3)



3. A high thermal head furnace comprising: refractory means defining a chamber; heating means in said chamber for creating a temperature therein substantially above the final temperature desired for the work; openings in opposite walls of said chamber; a plurality of rails extending through said openings and said chamber; vertical support means in said chamber for supporting said rails; wall means defining an arcuate shaped space extending from adjacent the support means and adapted to extend around the upper portion of the work; a first inlet and a first outlet for supplying coolant through said space; and means for moving said wall means into and out of said chamber through one of said openings.

2,998,967
COIL SEPARATOR
William H. Dalley, Jr., and John J. Turin, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 4, 1957, Ser. No. 659,658
3 Claims. (Cl. 263-47)



1. A coil separator for insertion between the individual coils of a vertical stack of coils which are to be heated in an annealer employing an inner cover and a forcibly circulated atmosphere, comprising in combination: a plurality of longitudinally straight ribs aligned in a circular pattern, each of said ribs having a confronting face which is generally radially exterior of the separator and having longitudinally-extending faces which are directed generally toward an opening in the center of said separator in a direction which deviates from a radial plane of the separator, and each of the longitudinally-extending faces being exposed throughout its entire length to radiant heat emitted by the inner cover; and means for maintaining the ribs in spaced and assembled relationship to provide a series of passages for circulating gases and adapted for the straight line transmission of radiant heat from the inner cover toward the opening in the center of said separator.

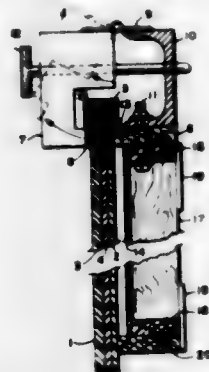
2,998,968

HEAT SHIELDING APPARATUS

Richard S. Hamner, Cuyahoga Falls, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware

Filed July 25, 1957, Ser. No. 674,245

2 Claims. (Cl. 263—50)



1. A heat shielding frame for supporting an unbalanced laminate sandwich of plastic sheets during a heating operation preparatory to a forming operation, said frame comprising a multiplicity of frame members each comprising a brace strip and a spacer strip adjustably mounted thereon, said members being arranged in end to end relation to define an enclosed area adapted to have substantially the size and shape of a sandwich, said frame members having sandwich-engaging margins in a single plane for engaging a face of a sandwich, clamping means along one of said frame members for clamping one margin of a sandwich thereto, a retaining and heat barrier strip hingedly secured along each of the adjoining frame members and adapted to be engageable over margins of a sandwich, said retaining members being arranged to retain but not to clamp the remaining margins so as to permit expansion and contraction of a sandwich, a heat barrier supported by said frame in uniformly spaced relation to the sandwich-engaging margins of the frame members, said heat barrier and said frame members together defining a closed dead air space adapted to retard heat transfer to an adjacent face layer of a sandwich.

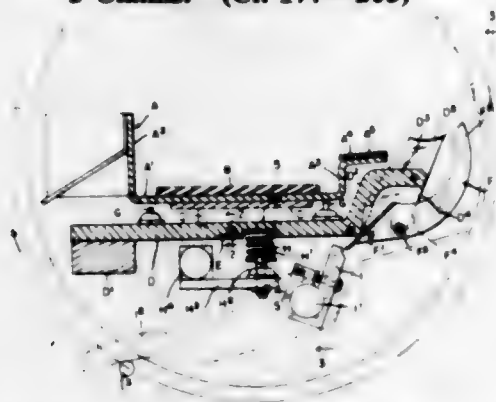
2,998,969

WEIGHING AND GRADING MECHANISM

Clarence Page and George A. Page, Detroit, Mich., assignors to Page-Detroit, Inc., Southfield Township, Mich., a corporation of Michigan

Filed Nov. 9, 1953, Ser. No. 391,084

3 Claims. (Cl. 177—203)



1. A plurality of apparatus for grading members of variable weights by predetermined minimum individual weights, each apparatus including a weighing device having a non-variable major reactance for exerting the greater part of the weighing force and also having an adjustable minor reactance for variably supplementing the weighing force, said plurality of apparatus having common means for adjusting all of said variable reactances simultaneously and equally to correspondingly change the weight setting of each weighing device, said

non-variable reactance for each of said weighing devices being a fulcrumed beam with a weight thereon a fixed distance from the fulcrum, said adjustable minor reactance being a helical spring bearing against said beam and against an abutment at its opposite end, said common means for adjusting all of said variable reactances simultaneously and equally consisting of a rock shaft, and arms on said rock shaft forming said spring abutments.

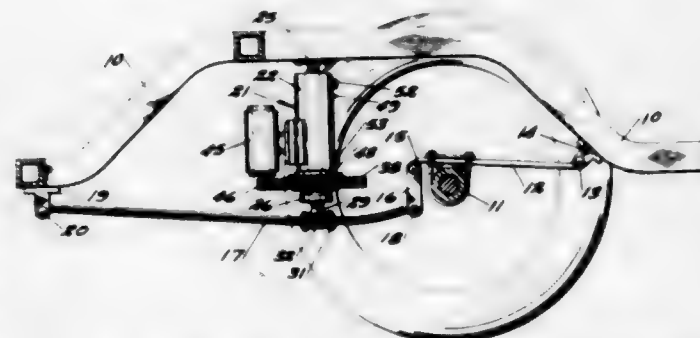
2,998,970

LOAD SPRING SUSPENSION AND LEVELLING DEVICE

Latta O. Davis, 1647 N. Bellevue Place, Indianapolis 21, Ind.

Filed Nov. 21, 1958, Ser. No. 775,645

2 Claims. (Cl. 267—19)



1. A load adjustable suspension device comprising a vehicle frame; a frame carrying axle; a radius bar fixed by one end portion to said axle and extending from one side thereof to said frame by its opposite end portion; means rockably engaging the said opposite end portion to said frame on a fixed axis; a load carrying leaf spring; means rockably interconnecting one end of the spring with said axle; said spring extending therefrom in a direction opposite from that of said radius rod; means rockably interconnecting the other end of said spring with said frame; one of said interconnecting means including a rockable shackle; a strut having one end fixed to said frame and its other end fixed to said spring in spaced position from each of said interconnecting means, the load on said frame being carried through said strut to said spring, the spring fulcruming under load about the strut; said strut consisting of a jack; and remotely controlled means varying the effective length of the jack.

2,998,971

BORDER WIRE ASSEMBLY FOR SPRING SEAT AND BACK ASSEMBLIES

Raymond D. Strout, 5807 Baker, and Lynn W. Staples, 1630 Brockway, both of Saginaw, Mich.

Filed Jan. 5, 1959, Ser. No. 785,047

11 Claims. (Cl. 267—107)



1. In a spring cushion construction having a group of spring elements arranged side by side: a border wire assembly comprising a first generally U-shaped frame element having a web portion of a length and extending in a direction to span one dimension of said group of spring elements, said first frame element having a leg portion at

each end of said web portion of a length and extending in a direction to span another dimension of said group of spring elements; a second generally U-shaped frame element having a central portion spaced from and generally paralleling said web portion of said first frame element and spanning said group of spring elements, said central portion having a leg portion at each end thereof extending parallel and lying adjacent to at least a part of the leg portions of said first frame element; and means securing said first and second frame elements to one another and to said group of spring elements.

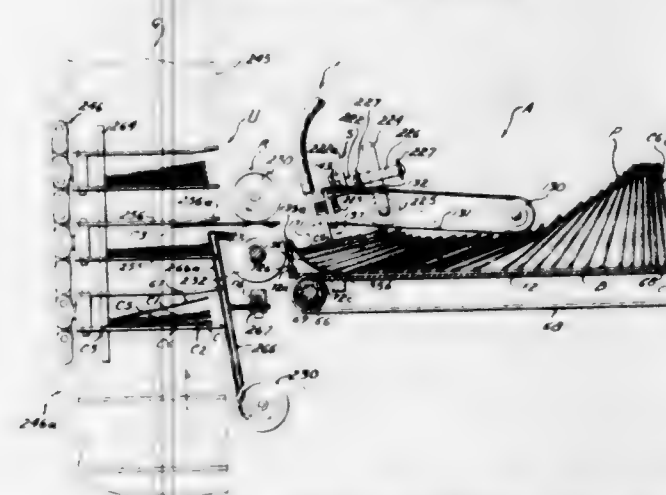
2,998,972

COLLATING MACHINE

Lewis C. Pearce, Berea, Ohio, assignor to American Greetings Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Sept. 20, 1955, Ser. No. 535,492

19 Claims. (Cl. 270—58)



1. In a machine, a sheet unit gathering and inverting means comprising a vertically traveling endless conveyor having opposite vertically traveling up and down runs for providing loading and discharge stations respectively with the units movable over the top in moving from loading to discharge, means for feeding sheets individually from a pack onto said sheet gathering and inverting conveyor including a suction type sheet feeder for suction engaging the outer one face of the end sheet, lifting its opposite other face off the next adjoining sheet of an associated pack, and feeding the sheet individually toward the loading run of the gathering conveyor, and means for discharging said sheet from said gathering and inverting conveyor with said other face of the sheet facing generally upwardly for display orientation.

2,998,973

GAME APPARATUS

William H. Schaper, Minneapolis, Minn., assignor to Schaper Manufacturing Co., Inc., Minneapolis, Minn., a corporation of Minnesota

Filed July 6, 1959, Ser. No. 825,252

9 Claims. (Cl. 273—1)



1. Game apparatus comprising a substantially flat deck formed of non-magnetic material and having a player-exposed surface and a player-concealed surface, said player-concealed surface having at least one barrier-retaining element extending therefrom and defining a plu-

rality of passages thereon, a barrier element removably secured to said barrier-retaining element and extending transversely of and completely traversing one of said passages, a pair of mutually attracted magnetic members one of which is magnetized, one of said members movably engaging said player-exposed surface and the other of said members movably engaging said player-concealed surface whereby movement of said one member along the player-exposed surface will cause corresponding movement of said other member along the passages of the player-concealed surface and whereby said other member will be disengaged from said player-concealed surface when moved against said barrier element.

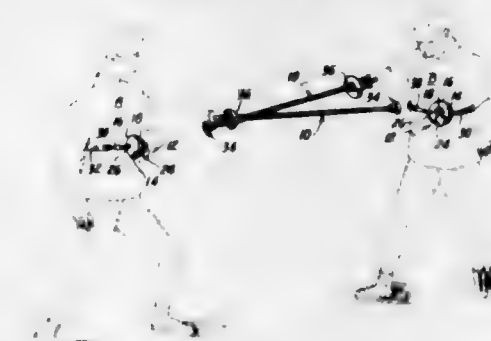
2,998,974

FENCING GAME

John K. Stafford, 41 W. Notre Dame St., Glens Falls, N.Y.

Filed June 19, 1959, Ser. No. 821,508

9 Claims. (Cl. 273—85)



1. In a fencing game comprising a set of fencing foils and a set of targets for the players, the combination comprising: a target holder, means for securing said target holder to the torso of the player, a magnet carried by said target holder, and a target of paramagnetic material held to said target holder by the magnetic attraction of said magnet and adapted to be displaced therefrom by a blow from the fencing foil of an opponent.

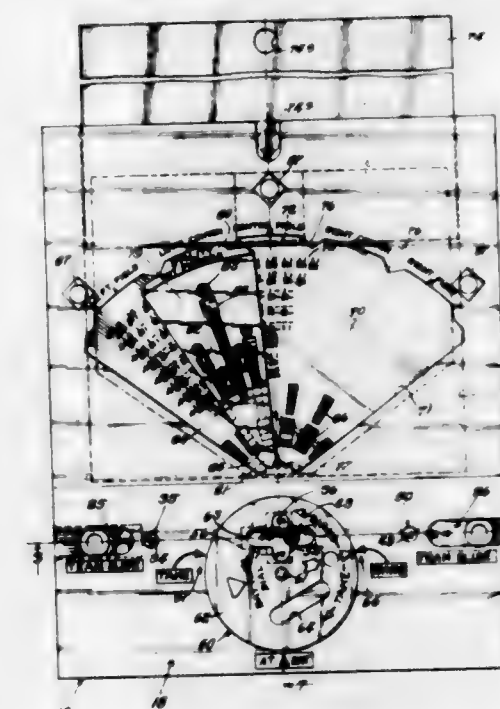
2,998,975

GAME

Robert J. Koch, Chicago, Ill., assignor to Cadaco-Ellis Inc., a corporation of Illinois

Filed Dec. 1, 1960, Ser. No. 72,949

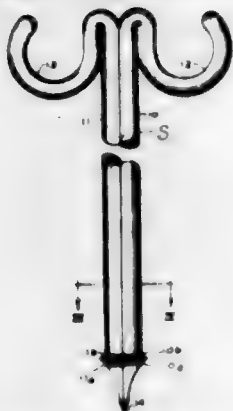
14 Claims. (Cl. 273—93)



1. A game comprising: first adjustable means for providing any one of a plurality of indications; second ad-

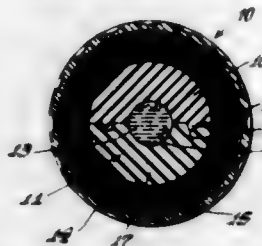
justable means selectively cooperating with said one indication for providing any one of a plurality of first designations; a plurality of indicators; and means for selecting one of said indicators as determined by said one designation for providing a second designation.

2,998,976
EQUIPMENT FOR A PITCHING GAME
 Thomas W. Lewis, 1204R Pattie Ave., Wichita, Kans.
 Filed May 16, 1958, Ser. No. 735,853
 2 Claims. (Cl. 273-149)



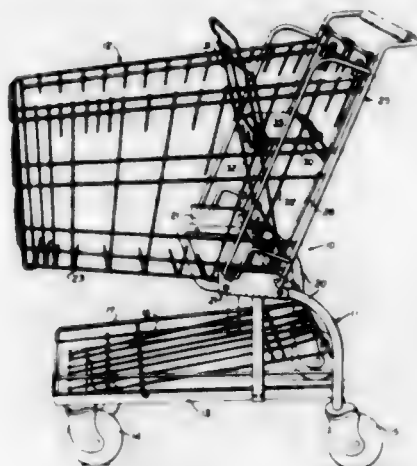
1. A scoring standard for a pitching game; said standard being made of a single piece of solid, half round malleable material; said piece of material being bent at its mid-portion and folded together to form two legs with the flat surfaces on each side of the bend lying each against the other to form a round shaft, the upper end portion of each leg being bent in an outward projecting hook-like formation; the lower end portion of each of said legs being bent outwardly to provide a diamond shape formation on the lower end of the scoring standard to prevent the standard from turning when the lower end of the scoring standard is positioned in the ground, the upper end portion of the said legs immediately preceding the hook formations providing a driving end by which the lower end of the standard may be driven into the ground.

2,998,977
GOLF BALL AND METHOD OF MAKING THE SAME
 Robert P. Molitor, South Hadley, Mass., assignor to A. G. Spalding & Bros., Inc., Chicopee, Mass., a corporation of Delaware
 Filed Jan. 16, 1959, Ser. No. 787,205
 5 Claims. (Cl. 273-225)



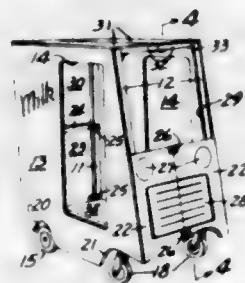
1. In a golf ball having a hollow, resilient, impervious spherical core member, a fluid under pressure therein, a tensioned winding on said core member and a cover disposed around the winding; the improvement wherein said core member comprises a pair of complementary hemispherical sections having opposed mating surfaces adapted to be bonded together, one of said sections having an integral annular ridge formed intermediate the mating surface thereof and said other section having an annular groove formed intermediate its mating surface in which said ridge is disposed and wherein the internal fluid pressure and the tensioned winding presses the walls of the groove into sealing relation with the ridge to seal said core and prevent leakage of fluid from the core to the windings.

2,998,978
SEAT STRUCTURES
 Harold I. Sides, 3934 N. Frontier St., Chicago 13, Ill.
 Filed May 5, 1959, Ser. No. 811,161
 1 Claim. (Cl. 280-33.99)



Seating means for use in connection with a cart provided with a frame on which is mounted a walled merchandise carrying compartment having a stationary bottom wall, side wall and front wall and a back wall hingedly connected at its upper end to the cart frame comprising: seat base means hingedly connected to said back wall a substantial distance above the bottom of the compartment and provided at its forward end with a transverse rod extending beyond the sides of said seat, a back rest means for an occupant of said seating means, said back rest being comprised of an inverted U-shaped rod the legs of which extend to and are pivotally attached to the cart frame adjacent the bottom of the back wall and being provided at its upper portion with wires forming the back rest, the portion therebelow being open to provide a storage space, the upper portion also being provided with rods parallel to but spaced from said legs to provide a slideway for the ends of said rod on said seat and stop means for said rod on said back rest, said stop means being positioned above said hinge connection for the seat base whereby the seat base when positioned on said stop means will incline downwardly toward the back of the cart, said back wall being formed with apertures through which the legs of a seat occupant may extend.

2,998,979
CHILDREN'S VEHICULAR TOY
 Donald M. Sandell, 2063 McMenemy, St. Paul, Minn.
 Filed Oct. 1, 1959, Ser. No. 843,818
 8 Claims. (Cl. 280-87.05)



1. A mobile vehicular toy comprising an upstanding wall structure defining a cab for seating a person therein, said wall structure including opposing side walls collapsibly interconnected by a front wall member for relative contracting movement between said side walls into collapsed side-by-side relationship, a seat member hingedly connected to one of said side walls adjacent the lower end thereof and adapted for folding against said side wall in side-by-side relation therewith in collapsed condition, and a dash panel hingedly mounted on said seat member and extending forwardly and upwardly between

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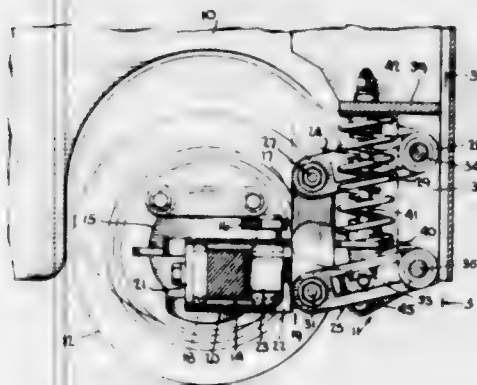
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said seat and said front wall member and adapted for swinging movement against said seat member in folded condition, said front wall member and said side wall members defining an opening facing in the normal direction of travel providing a window for said vehicle.

2,998,980

VERTICALLY MOVING AXLE FOR INDUSTRIAL TRUCK

Bronislav I. Uliniski, Flossmoor, Ill., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Feb. 3, 1959, Ser. No. 790,828
4 Claims. (Cl. 280-112)

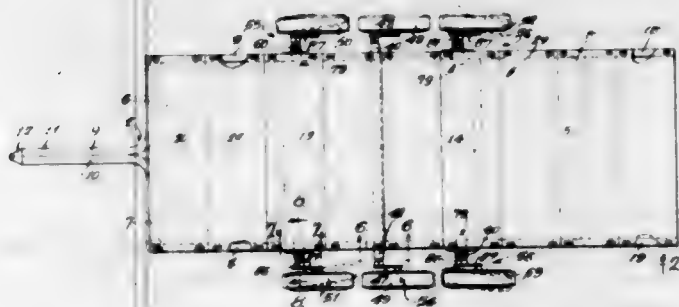


1. In a truck of the class described, an axle extending transversely of the truck and having a wheel mounted to rotate at each opposed end thereof, an axle mounting member at one side of said axle and also extending transversely of the truck, said member being narrow relatively to the width of the truck, a shaft extending from said axle mounting member in the longitudinal axis of the truck, said axle rocking on said shaft whereby the wheels move independently of one another in a vertical direction, upper and lower parallelogram links pivoted at one end thereof to each side of said mounting member and extending longitudinally of the truck, each of said parallelogram links being pivoted at its opposed end to the truck frame whereby to support the axle mounting member and axle for vertical movement bodily relatively to the truck, said links being positioned substantially inward of the wheels at the end of the axle, yielding means opposing said bodily vertical movement of the axle and axle mounting member, and said yielding means effective by yielding to facilitate vertical movement of the wheels separately and in unison as one or both wheels move over a relatively high obstructing surface on the ground.

2,998,981

VEHICLE RUNNING GEAR

Elmer B. Derr, Oak Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 11, 1957, Ser. No. 645,108
4 Claims. (Cl. 280-124)



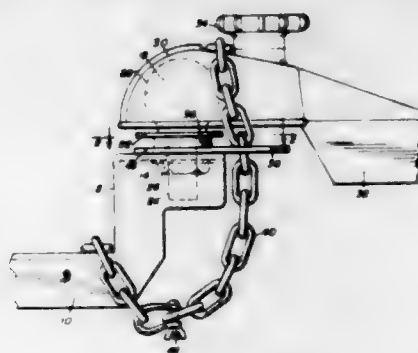
1. A wheel mounting comprising an outer tubular member and a coaxial inner member having inner and outer surfaces respectively transaxially spaced from each

other, resilient material interposed between said surfaces and formed and arranged therewith to yieldably resist relative rotation therebetween on a first axis, a housing having means for fastening to an associated vehicle frame and having a vertical opening, a spindle connected to said outer member and extending vertically through said opening, yieldable material interposed between said spindle and said housing and formed and arranged therewith to yieldably resist rotation of the spindle with said outer member on a substantially vertical axis said outer member having a vehicle running gear engaging surface for frictionally resisting said rotation of the spindle.

2,998,982

TRAILER HITCH SAFETY DEVICE

Clarence A. Brazil, 712 W. Jefferson, Pittsburg, Kans.
Filed May 31, 1960, Ser. No. 32,850
2 Claims. (Cl. 280-457)

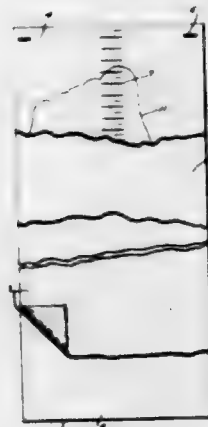


1. A safety device for a trailer hitch including mating, relatively rotatable tow bar and draft elements and locking mechanism for maintaining the hitch in coupled relationship, comprising a plate rotatably mounted on the tow bar element and concentrically with its mating element, a pair of slots formed in said plate at points spaced transversely of the hitch, and a chain tightly surrounding the mating element of the draft elements and having links engaged in said slots to prevent relative vertical movement between the elements.

2,998,983

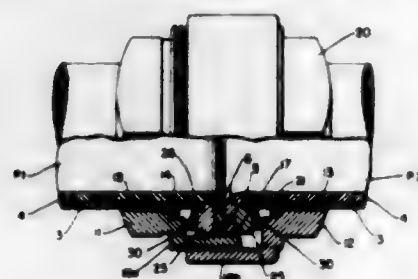
IMPRINTING DEVICE

James S. Digate, Melrose Park, Ill., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York
Filed Oct. 8, 1957, Ser. No. 688,956
8 Claims. (Cl. 282-1)



1. A foot imprinting assembly, comprising superposed sheets of flexible material including a base sheet having an upper surface of uncured latex, a protective sheet thereover, a cover sheet above said protective sheet, and a removable carbon sheet above said protective sheet for insertion between said base sheet and said protective sheet when an imprint is taken.

2,998,984
COUPLING FOR PLASTIC LINED PIPE
 Edmund Gressel, Schenectady 54, Aardorf, Switzerland
 Filed Nov. 4, 1957, Ser. No. 694,482
 4 Claims. (Cl. 285-55)



1. A joint for lined pipe comprising two sections of pipe each having a metal shell and a lining of non-metallic flexible material, an end portion of the lining of each section extending beyond the end of the metal shell and disposed flared radially outwardly to form an annular flange portion, coupling members surrounding adjacent end portions of said pipe sections respectively, means mechanically connecting each of said members to the shell of its respective section to transmit axial force from said member to said shell, means connecting said members with one another to provide a mechanical connection between the shells of said pipe sections, said coupling members defining an annular recess to receive said flange portions of said linings, resilient means in said recess acting between said coupling members and said flange portions to press said flange portions continually into fluid tight engagement with one another comprising backing rings movable axially relatively to said shells engaging said flange portions and spring washers acting between said rings and said coupling members, each of said backing rings having a portion overlying the end of its respective shell so as to be abutted by the end of the shell, and having a rounded, annular, peripheral corner surface over which the flange portions of the lining is curved to avoid concentration of stresses, and each of said rings having an inside diameter approximately equal to that of the shell.

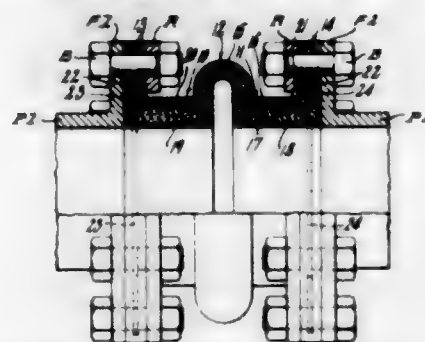
2,998,985
SHORT RADIUS, FIBRE, PIPE BEND
 Fredrick B. Burns, West Allis, and Edward M. Johnson, Oak Creek, Wis., assignors to McGraw-Edition Company, Milwaukee, Wis., a corporation of Delaware
 Filed May 2, 1958, Ser. No. 732,704
 2 Claims. (Cl. 285-179)



1. As an article of manufacture, a short radius, fibre, pipe bend formed from a straight section of fibre pipe, the material of the pipe having the ability to densify when wet, and having generally the shape of a segment of a toroid; said pipe bend being formed of a plurality of layers of cellulose fibre material which are held together by interlaminar fibre bonds, said fibre material being impregnated with a hardenable waterproofing material; said pipe bend further having a plurality of evenly spaced grooves formed in the surface thereof along the inner side of said bend, each of said grooves comprising a recess pressed into the surface of said pipe before bending thereof to thereby prestress and densify said fibres for a portion of the thickness of said pipe, each of said recesses having a depth of less than the thickness of said pipe, and a length of at least half of

the periphery thereof and extending for a uniform distance from each side of the line forming the shortest arc of curvature of said bend, whereby the axis of bending of said pipe is beyond the midpoint thereof; said pipe bend further having a plurality of radially directed compression creases, each of said creases coinciding with one of said grooves, said pipe having a substantially smooth interior and exterior surface, said grooves and the resultant densified portions controlling the compressive stresses within the wall of the pipe on the inner side of the bend to minimize weakening of the interlaminar bonds and to maintain an unimpeded internal flow dimension within the pipe.

2,998,986
EXPANSION JOINT
 Frank S. Buono, Garfield, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
 Filed May 28, 1959, Ser. No. 816,538
 2 Claims. (Cl. 285-229)



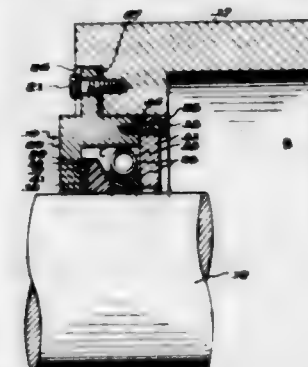
1. A flexible pipe joint adapted to be secured between two rigid conduit members, said joint being formed of plies of rubber and fabric and having cylindrical end portions provided with integral end flanges extending from the ends thereof, said flanges having bolt holes completely therethrough adapted to receive clamping bolt means for securing the joint to the flanged ends of pipes, said joint having the internal circumferential surface lined with inert material, said inert material also lining the outer faces of said flanges but terminating short of said bolt holes through said flanges, discs relatively thin with respect to said flanges embedded in said flanges substantially centrally of the width thereof and concentric therewith, said discs extending outwardly beyond said bolt holes and inwardly beyond the plane of the outer cylindrical end portions terminating short of the inner and outer radial extents of the fitting, reinforcing means comprising a layer of metal wires laid in side abutting relation to each other and disposed below the outer cover layer of each cylindrical portion and within the said plies of rubber and fabric and extending at one end in close proximity to one of said discs, a portion of said liner and the inner marginal edges of said discs being co-extensive, whereby bolting forces are transmitted to said liner and layer upon tightening of the bolt means, the liner being clamped against the flanges by the cantilever action of the disc and the layer being extended by the bolting forces applied through the disc, said reinforcing means tending to restrain axial bowing of the disc, said disc being of rigid material, whereby under maximum bolting pressure the elastic limit of said material is not reached.

2,998,987
TEFLON LIP SEAL
 Ernest J. Taschenberg and Theodore C. Kuchler, Baltimore, Md., assignors to Koppers Company, Inc., a corporation of Delaware
 Filed Jan. 30, 1958, Ser. No. 712,247
 4 Claims. (Cl. 286-11.16)

1. In a sealing assembly adapted to close the annular space between a pair of relatively rotatable machine ele-

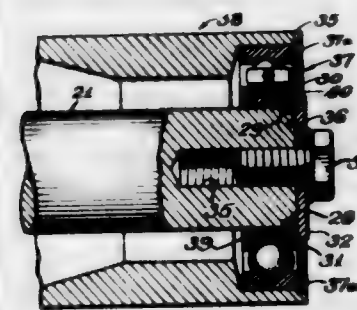
ments such as between a rotating shaft and its stationary housing wherein a biased sealing element is employed, the sealing element surrounding the shaft, being retained in an annular seal casing having radially-extending walls and being exposed to a relatively high pressure differential, the improvement comprising a sealing ring in the general shape of an annular ring having an annular lip portion projecting in an axial direction from the rear wall thereof toward the high pressure side of said sealing ring, said annular lip portion having a substantially cylindrical inner surface, the outer surface of said annular lip por-

ly abutting relation between the radially extending surfaces thereof and extending radially inwardly therefrom into abutting relation with the shoulder of said shaft to prevent axial displacement in one direction of said bearing relative to said shaft, and abutment means including a radially extending member detachably mounted against axial movement on said shaft and extending therefrom and into axially abutting engagement with the inner race of said bearing to prevent axial displacement in an opposite direction of said bearing relative to said shaft.



tion being a first right circular conical surface, said rear wall of said annular ring being a second right circular conical surface, the central cone angle of said first conical surface being less than 90° and the central cone angle of said second conical surface being greater than 90°, the front wall of said annular ring providing a planar sealing surface perpendicular to the axis of said shaft, and means to simultaneously provide radial loading to bias said annular lip portion into positive sealing engagement with said shaft and axial loading to bias said planar sealing surface into positive sealing engagement with a radially-extending wall of said seal casing.

2,998,988
RETAINING MEANS FOR PREVENTING RELATIVE AXIAL DISPLACEMENT BETWEEN MEMBERS
 Robert D. Barrett, Westchester, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
 Filed Aug. 27, 1958, Ser. No. 757,614
 5 Claims. (Cl. 287-53)



1. For use with an anti-friction bearing having an inner race mounted in close fitting relation on a shaft proximate an end thereof, detachable means for retaining said bearing against axial displacement relative to said shaft, including, having the inner race of said bearing provided with an annular recess disposed axially inwardly from an outer end surface of the race a distance substantially less than the axially extending distance of said race and fashioned to provide a pair of axially spaced radially extending and parallel surfaces therein and opening radially inwardly toward said shaft and having an annularly extending shoulder-like abutment formed by a reduced section portion of said shaft in close proximity to the end thereof extending into said bearing with a snap-ring interlockingly disposed in said recess in close-

2,998,989
HITCH DEVICE
 Walter H. Silver and Orey W. Oerman, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
 Application Oct. 15, 1956, Ser. No. 615,992, now Patent No. 2,914,342, dated Nov. 24, 1959, which is a division of application Ser. No. 377,134, Aug. 28, 1953, now Patent No. 2,795,178, dated June 11, 1957. Divided and this application Oct. 28, 1958, Ser. No. 770,175
 1 Claim. (Cl. 287-62)



In a hitch device, an adjustable link construction comprising a pair of screw threads associated relatively rotatable parts, said parts being subjected to forces tending normally to rotate one of said parts in a given direction relative to the other, a rigid detent member pivoted on one of said parts, a pair of lugs disposed adjacent one another on the other of said parts and extending radially outwardly therefrom in generally parallel planes that lie at opposite sides and generally parallel to the plane of swinging movement of said detent member, whereby said lugs are adapted to receive the outer end of said detent member therebetween whereby one or the other of said lugs serve to prevent said one part carrying the detent from rotating relative to the other part, one of said lugs being longer than the other and having at its outer end an overhanging portion extending toward the shorter lug for releasably holding said detent member between said lugs, said one lug having the overhanging portion being located relative to the other lugs so as to receive said rigid detent member under said overhanging portion when said one part tends under said forces to rotate in said one direction.

2,998,990
SWAB MANDREL
 Rodney L. Plattsmier, Odessa, and Morgan L. Crow, Dallas, Tex., assignors to The Gulferson Corporation, Dallas, Tex., a corporation of Texas
 Filed Aug. 4, 1958, Ser. No. 752,737
 10 Claims. (Cl. 287-103)

1. In a device of the class described; a body having a socket therein intersected by a passage and a slot, the passage being less in diameter than the socket and the slot being less in width than the diameter of the passage, the said slot providing an opening from the socket and the passage through the lower end of the body; a swab cup support; a head member forming a part of the swab cup support, the said head member having a width less than the diameter of the passage so as to pass through the passage and a length greater than the diameter of the passage, whereby the head member may be passed through the passage into the socket in one position but will not pass through the passage and slot in another position; a neck portion joining the head to the swab

cup support, said neck portion having one width less than the width of the slot so as to enter the slot, and



another width greater than the width of the slot whereby the neck portion will not rotate in the slot.

2,998,991 SEALING RINGS

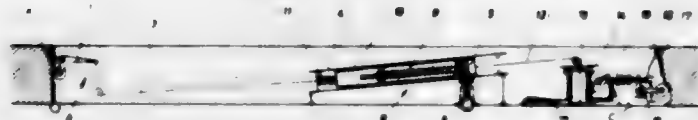
Harvey G. Spencer, La Mirada, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 25, 1957, Ser. No. 692,507
7 Claims. (Cl. 288-17)



1. A seal having a uniform coefficient of expansion throughout and being particularly adapted to prevent leakage of fluid past a pair of relatively movable members operating under widely varying temperature conditions, said seal comprising a plurality of annular plies of fibrous material bonded together in superimposed relationship with a common axis to form a tube having inner and outer peripheries formed by the inner and outer circumferences of said respective plies, a resilient halogenated polyethylene compound bonding said plies together, and an annular layer of said halogenated polyethylene compound bonded to at least one of said peripheries to form a tube having the same axis as said first mentioned tube, said annular layer being of sufficient thickness to provide a deformable layer in contact with said movable members to provide a continuous sealing contact therebetween.

2,998,992 MECHANISM FOR PULLING A LOCK HANDLE INTO A VEHICLE DOOR

Obrad Brankovic and Miodrag Brankovic, both of 12 Temisvarska St., Belgrade, Yugoslavia
Filed Mar. 15, 1957, Ser. No. 646,476
Claims priority, application Yugoslavia Mar. 22, 1956
5 Claims. (Cl. 292-1)

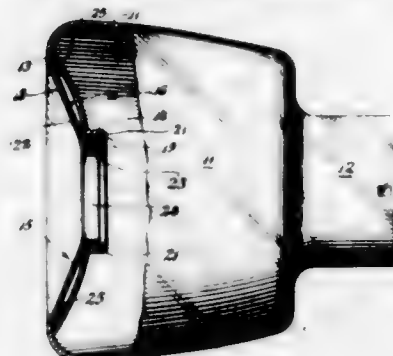


1. A mechanism for withdrawing a protruding lock handle on a door comprising a bell crank lever pivotally mounted within said door, said door having a slot therein

at one side through which one of the arms of said lever contacts the door frame when the door is closed, a lock handle mounted in said door, said door having a recess for receiving said handle, a first spring cooperating with said handle for projecting said handle from said recess, a flexible connection extending from the other arm of said lever to said handle maintaining said handle in said recess when said door is closed, a second spring tensioning said flexible connection, a separable connection interposed in said flexible connection comprising two elements, a fixed guide within said door for said elements, manually operable means for disconnecting said elements to permit said first spring to project said handle from said door, and means operated by said second spring coacting with one of said elements for uniting said elements when said door is opened so that said lever may pivot and project said first mentioned arm through said slot.

2,998,993 KNOB AND CAP ASSEMBLY

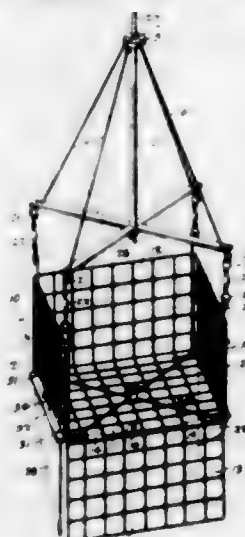
Edwin W. North and Carroll V. Spon, Rockford, Ill., assignors to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,464
8 Claims. (Cl. 292-347)



4. A knob and cap assembly comprising a knob having a recessed conical face having an opening and a cap assembly overlying said recessed face, said cap assembly comprising a face plate and a back plate, said back plate having a surface complementary to said recessed face of said knob, said face plate having a series of peripheral tabs folded over and clinched to the periphery of said back plate and means on said back plate for securing said cap assembly to said knob at said opening in the knob.

2,998,994 LIGHT WEIGHT LIFT

Alexander Karr, 406 Bond St., Bridgeport, Conn.
Filed July 16, 1959, Ser. No. 827,521
9 Claims. (Cl. 294-67)

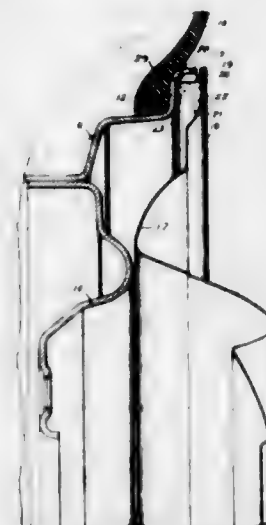


1. A lift comprising a platform container including a bottom and upright side walls of open mesh, one of said

side walls pivotally connected to the bottom at its lower edge to swing between an upright closed position and an open position depending below the bottom wall, releasable means for retaining said latter side wall in the closed position, suspending means for said container comprising two cross bars secured one on the other at substantially right angles to each other, depending supporting means at the outer ends of the bars connected to the container, an upright tube secured to said bars at the center thereof and extending upwardly therefrom, supporting connections from the upper end of the tube to the bars at points spaced outwardly from the tube, and a suspending cable in and extending upward from the tube and secured at the lower end thereof.

2,998,995 WHEEL STRUCTURE

George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 652,768
4 Claims. (Cl. 301-37)

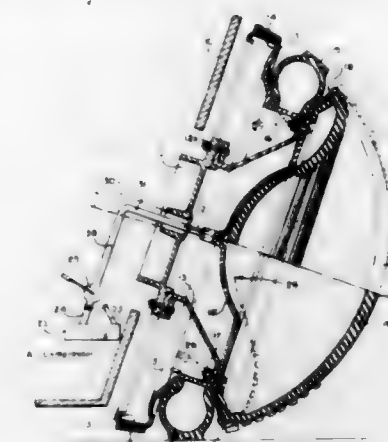


1. In a wheel structure including a tire rim having a radially inwardly facing flange, a cover for disposition at the outer side of the wheel including a margin for overlying the tire rim and especially said flange and having behind said margin a series of circumferentially spaced cover retaining fingers provided with terminals that project normally radially outwardly to a greater diameter than the inner face of said rim flange and engageable with said rim flange in gripping engagement accompanied by radially inward deflection of the fingers, the cover margin being resiliently flexibly deflectable in axial direction and having a prewarp therein normally providing an axially outward bowing of portions thereof aligned with the retaining fingers and axially inward bowing of the portions thereof between the retaining fingers, said prewarp being leveled out by axially inward drawing of the portions aligned with the fingers and axially outward deflection of the portions between the fingers incident to the radially inward deflection of the fingers in retained engagement with said rim flange.

2,998,996 VEHICLE WITH EXPANDABLE WHEELS

Elle P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed July 26, 1957, Ser. No. 674,429
5 Claims. (Cl. 301-41)

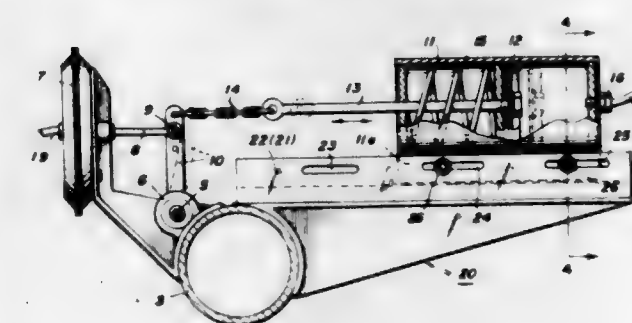
1. A vehicle having a vehicle frame and load-carrying rolling ground-contacting wheels disposed respectively on opposite sides of the vehicle, said frame including means maintaining the wheels with their axes pointing normally outwardly and downwardly with the inner lower ends of the wheels closer together than the inner upper ends, said wheels each comprising a ring-shaped rolling portion and also including on the outer side of said rolling



portion an expansible and contractable member which when expanded constitutes a supplementary rolling surface beginning immediately adjacent the periphery of

2,998,997 EMERGENCY AIR BRAKE EQUIPMENT

Maurice W. Shyne, 206 W. 24th St., and Joseph R. Cataldi, 316 E. 20th St., both of Chester, Pa.
Filed Aug. 24, 1959, Ser. No. 835,779
5 Claims. (Cl. 303-9)



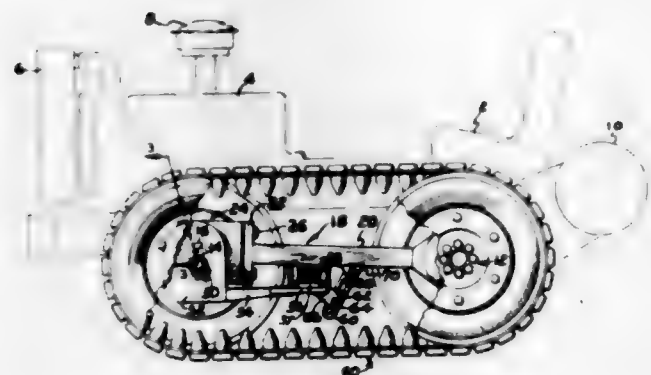
1. In a brake system having a fluid pressure actuated cylinder operatively connected with a brake lever associated with braking means located at a vehicle wheel mounted on an axle, a reservoir for storing fluid under pressure, the improvement consisting of a bracket attached to the axle in substantially the same vertical plane as the brake lever, said bracket holding an auxiliary cylinder having a spring-actuated piston and piston rod, said auxiliary cylinder having a flange on its exterior, fastening means securing said flange to the bracket, and direct straight-line connecting means for connecting the piston rod to the brake lever for actuating the brakes in the event of a pressure drop in the said reservoir by the spring pushing the piston to its extended position, the flange of the auxiliary cylinder and the bracket embodying a tongue-and-groove relationship and the bracket having slots in its groove portion to allow adjustment of the auxiliary cylinder.

2,998,998 LOAD RESPONSIVE TRACK TENSIONING DEVICE

John H. Hyler, Peoria, Walter E. Lott, Washington, and Ernst W. Spannhake, Peoria, Ill., assignors to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed Mar. 7, 1958, Ser. No. 719,838
14 Claims. (Cl. 305-31)

1. A land vehicle which may operate as a wheeled vehicle or as a track layer comprising a pair of axles,

means to mount the axes so that the distance between the axes thereof is variable, load supporting means associated with the axle mounting means to increase said dis-

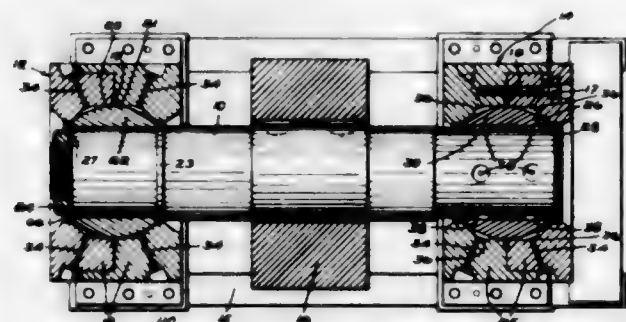


tance as the load is increased, wheels on the axes, and a flexible band track tightly engaging at least two wheels and opposing an increase in said distance.

2,998,999

SELF-ALIGNING SHAFT AND HYDROSTATIC BEARINGS ASSEMBLY

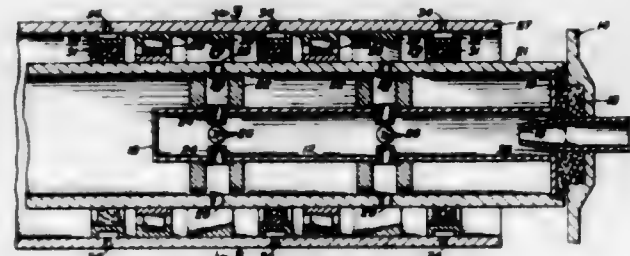
Calvin S. Morser, Wellesley, Robert E. Maloney, Stoughton, and Conrad H. Benoit, Dedham, Mass., assignors, by *mesne assignments*, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Dec. 5, 1958, Ser. No. 778,420
6 Claims. (Cl. 308-122)



1. A self-aligning shaft and bearing assembly comprising in combination, a shaft, a ball and socket hydrostatic bearing supporting one portion of the shaft and embodying a bearing member surrounding said portion of the shaft and having an internal spherical surface in minutely spaced relation from a like external spherical surface on a ball member fixed to said portion of the shaft, a second hydrostatic bearing supporting the shaft in spaced relation therealong from the first named bearing and embodying an internal spherical surface in minutely spaced relation from a like external spherical surface, means for supplying a metered flow of fluid to the clearances between said spaced internal and external spherical surfaces and in opposed relation about the shaft at said bearings, said second hydrostatic bearing further embodying means providing mating internal and external cylindrical bearing surfaces coaxial with the shaft and disposed to support the shaft and permit relative rotation and longitudinal movement of said cylindrical surfaces axially of the shaft, said internal and external cylindrical bearing surfaces being in minutely spaced relation, and means for supplying a metered flow of fluid to the clearances between said spaced internal and external cylindrical surfaces and in opposed relation about the shaft.

2,999,000 LUBRICATING ARRANGEMENT FOR CO-AXIAL SHAFTS

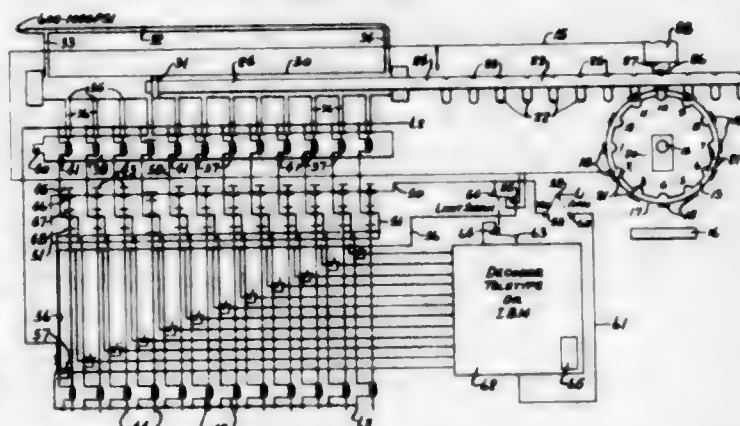
Melvin Spat, Salem, Mass., assignor, by *mesne assignments*, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 14, 1960, Ser. No. 22,375
7 Claims. (Cl. 308-187)



1. In rotating machinery having co-axial shafts with bearings mounted therebetween, means for supplying lubricant to said bearings which means comprises a rotary tube, a lubricating inlet ejecting into said rotary tube, a plurality of radial tubes extending from the peripheral wall of said rotary tube inwardly to the center of rotation, an inlet in the form of an orifice in each of said radial tubes near said center of rotation, the outlets of said radial tubes supplying lubricant to said bearings, said radial tubes minimizing the effect of centrifugal forces on the lubricant being supplied to said bearings, a bearing chamber, passage means fluidly connecting said radial tubes and said bearing chamber whereby lubricant is supplied to said bearings at approximately uniform flow rates so as to avoid cavitation starvation at the bearing surfaces during high speeds of rotation.

2,999,001

FLUID ACTUATED SERVO INDEX
Frank D. Gross, Pine Township, Allegheny County, Pa., assignor to The Pannier Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 22, 1959, Ser. No. 847,973
15 Claims. (Cl. 346-33)



1. A control for a fluid actuated piston comprising a fluid cylinder having a piston therein, a piston rod attached to said piston to provide a differential area and extending from one end of said cylinder to operate a member at fixed lineal positions, a series of spaced discharge ports in said cylinder at predetermined spaced relation to each other and commensurate with positions of operating said member, a fluid supply line connected to each end of said cylinder to supply fluid under the same pressure on both ends of said piston to move said piston to the piston rod end of the cylinder, valves closing said discharge ports, and operating means to open a valve controlling a selected port causing said piston to move and partially block said port to balance the forces on both sides thereof and thus actuate said piston rod to a predetermined position.

CHEMICAL

2,999,002

HOT VAPOR TREATMENT IN DYEING CELLULOSE TRIACETATE

Jack A. Dayvault and Fred Fortess, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,285
20 Claims. (Cl. 8-94)

1. A method of dyeing a polymeric polyester textile material selected from the group consisting of cellulose triesters and linear polyesters comprising impregnating said textile material with an aqueous suspension of disperse dye, drying said impregnated material and subjecting said impregnated and dried material to a vapor selected from the group consisting of a chlorinated benzene, a dialkyl ketone having at least 4 carbon atoms and an alkyl ether of an alkylene glycol.

2,999,003

LEATHER TANNING AGENT AND PROCESS

John Harris Haslam, Landenberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 6, 1959, Ser. No. 791,515
2 Claims. (Cl. 8-94.27)

2. Process for chrome tanning leather which comprises employing tris(hydroxyacetato) chromate as tanning agent.

2,999,004

TREATING FILAMENTARY MATERIAL

Stewart W. Morse, Jr., Chatham, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 21, 1957, Ser. No. 691,180
12 Claims. (Cl. 18-54)

1. Process for the production of filamentary cellulose triacetate which comprises extruding a solution of cellulose triacetate in a solvent therefor comprising methylene chloride into a spin bath comprising about 25 to 65% of methylene chloride and a lower aliphatic alcohol to form filamentary cellulose triacetate, and treating said filamentary cellulose triacetate with a liquid organic non-solvent for cellulose triacetate which is miscible with methylene chloride and boils below about 150° C.

2,999,005

PROCESS FOR THE PRODUCTION OF CALCIUM ALUMINUM HYDRIDE

John B. Conn, Westfield, N.J., and Robert C. Taylor, Fresh Meadows, N.Y., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 7, 1958, Ser. No. 719,752
3 Claims. (Cl. 23-14)

1. The process for producing calcium aluminum hydride which comprises reacting in one stage aluminum chloride and calcium hydride in a solvent mixture of tetrahydrofuran and diethylene glycol dimethyl ether in the presence of a catalyst of a metal aluminum hydride and iodine, and maintaining the mixture at reflux temperature to form calcium aluminum hydride.

2,999,006

PROCESS FOR PREPARING SUBSTANTIALLY DRY CRYSTALLINE DIAMMONIUM PHOSPHATE

William A. Hodges, Plant City, Fla., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Aug. 22, 1957, Ser. No. 679,779
4 Claims. (Cl. 23-107)

1. A process for preparation of substantially dry crystalline diammonium phosphate comprising: partially neutralizing phosphoric acid with ammonia to produce mono-ammonium phosphate; preparing a moist crystalline product of said mono-ammonium phosphate, said product containing from about 10 to 15% moisture; and further ammoniating said moist crystalline product with anhydrous ammonia to produce without further processing substantially dry crystalline diammonium phosphate.

2,999,007

PROCESS OF PREPARING ANHYDRITE OF IMPROVED WHITENESS FROM OFF-WHITE GYPSUM

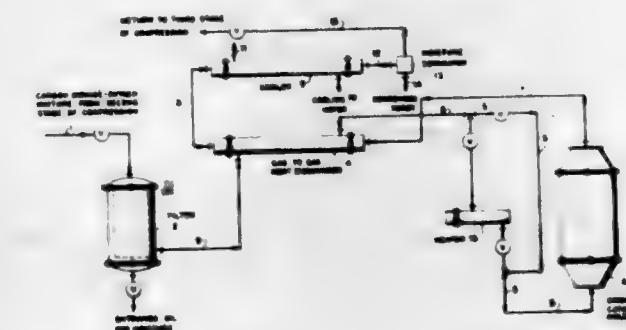
Herbert A. McKenzie, Amherst, and Alan Stanley, Lynchburg, Va., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 29, 1958, Ser. No. 751,649
7 Claims. (Cl. 23-122)

1. Process for manufacturing anhydrite of improved whiteness from gypsum rendered off-white by the presence of at least one metal cation selected from the group consisting of iron, chromium, vanadium, and columbium cations, in the crystal lattice thereof, which consists essentially in dehydrating said gypsum to anhydrite by heating said gypsum with substantially pure sulfuric acid under reducing conditions.

2,999,008

PURIFICATION OF CARBON DIOXIDE FOR UREA SYNTHESIS

Vincent B. Diebold, Cincinnati, Ohio, assignor to Vulcan-Cincinnati, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 20, 1957, Ser. No. 647,399
4 Claims. (Cl. 23-150)



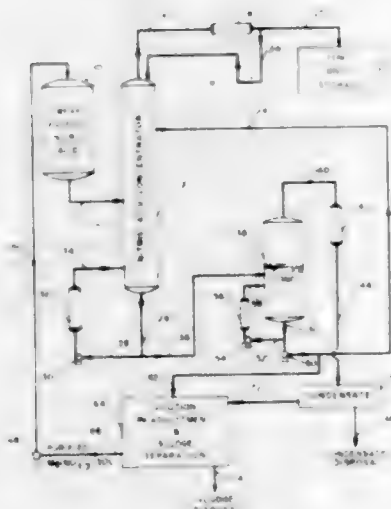
1. In a process of purifying substantially pure, gaseous, carbon dioxide containing hydrogen, carbon monoxide and methane as contaminants to obtain a pure carbon dioxide especially suitable for the production of urea from carbon dioxide and ammonia, the step of passing the impure carbon dioxide in admixture with molecular oxygen into contact with a catalyst of a metal selected from the

group consisting of platinum, rhodium and palladium at a pressure within the range from 100 p.s.i.g. to 300 p.s.i.g. and at an initial temperature within the range from 225° F. to 700° F. whereby the impurities are oxidized, cooling the reaction mixture to a temperature within the range from 40° F. to 150° F. to condense water and separating water therefrom, the amount of molecular oxygen admixed with the impure carbon dioxide being from 0.5 to 2.0 times that stoichiometrically required to convert the hydrogen to water, the carbon monoxide to carbon dioxide and the methane to carbon dioxide and water.

2,999,009

PURIFICATION OF MAGNESIUM NITRATE DEHYDRATING SOLUTION EMPLOYED IN NITRIC ACID MANUFACTURE

Robert J. Bechtel, South River, and Robert M. Brooks, Milltown, N.J., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Sept. 5, 1958, Ser. No. 759,280
7 Claims. (Cl. 23-160)



1. In the process of producing concentrated nitric acid from weak aqueous nitric acid by employing concentrated magnesium nitrate solution as the dehydrating agent, in which process nonvolatile impurities gradually accumulate in said magnesium nitrate solution to interfere with its dehydrating function, the improvement comprising withdrawing magnesium nitrate solution contaminated with nonvolatile impurities from the nitric acid concentration system, diluting the withdrawn solution with water to obtain a dilute magnesium nitrate solution containing not more than about 30% by weight of magnesium nitrate, adjusting the pH of the diluted magnesium nitrate solution to a value between 2 and 6, separating purified magnesium nitrate solution from the precipitate which forms in the resulting diluted magnesium nitrate solution of pH value between 2 and 6, and recycling the purified magnesium nitrate solution to the nitric acid concentration system.

2,999,010

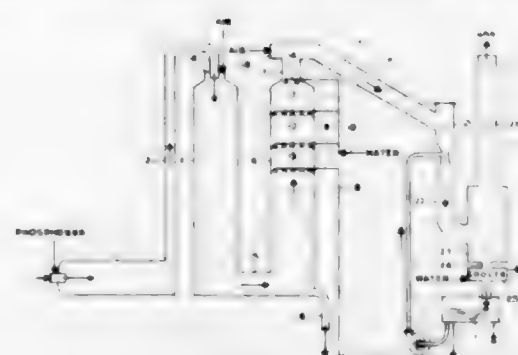
MANUFACTURE OF SUPERPHOSPHORIC ACID

Marcus M. Striplin, Jr., and David McKnight, Florence, and Ellis C. Marks, Sheffield, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Mar. 25, 1957, Ser. No. 648,445
2 Claims. (Cl. 23-165)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. An improved process for the production of superphosphoric acid which comprises the steps of burning phosphorus in air; passing the resulting hot vaporous phosphorus pentoxide mixture upward through a vertical hydration zone; introducing a relatively cool condensate of dilute phosphoric acid from a later-mentioned step

into said hydration zone as a spray of free-falling droplets; introducing a spray of water into said hydration zone at positions therein spaced vertically above the position of said acid introduction; adjusting the relative proportions of said acid and said water introduced so as to maintain a concentration of about 72% to 79% P_2O_5 in



collected droplets of the resulting superphosphoric acid; withdrawing said superphosphoric acid from a lower part of said hydration zone; withdrawing a hot, gaseous effluent from said hydration zone at an upper part thereof; condensing a more dilute phosphoric acid from said effluent; and returning the resulting relatively cool, dilute phosphoric acid to said hydration zone as a spray.

2,999,011

METHOD FOR BLEACHING HYDROUS TITANIUM DIOXIDE

Lester E. Olmsted, Afton, and Eckard J. Poetz, Jefferson Barracks, Mo., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 31, 1959, Ser. No. 863,215
4 Claims. (Cl. 23-202)



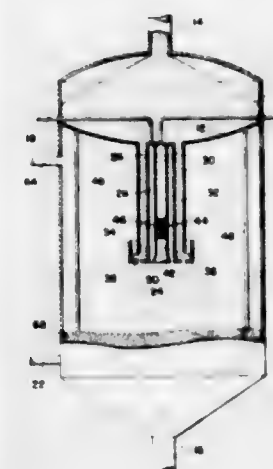
1. A method for treating a titanium hydrate slurry to remove iron as a colored impurity therefrom which comprises dividing said titanium hydrate slurry into a minor and a major portion, adding to said minor portion concentrated sulfuric acid in amount to provide a sulfuric acid concentration in said minor portion of from 16 to 40%, reducing and solubilizing most of the titanium values in said minor portion to the trivalent state at a temperature of from 30° C. to boiling to form a bleaching slurry, adding the bleaching slurry containing the reduced and soluble titanium values to the major portion to form a bleached slurry, the amount of sulfuric acid in said bleaching slurry being from 0.1% to 2.0% by weight, the amount of said reduced titanium values in said bleaching slurry being sufficient to reduce the iron in said major portion to a lower valent compound and to solubilize the same, and to maintain at least 0.05 gram per liter of trivalent titanium in said bleached slurry, removing the solubilized lower valent iron compound from said bleached slurry by filtering and washing said bleached slurry to produce a titanium hydrate substantially free from iron.

2,999,012

APPARATUS FOR CONTACTING HYDROCARBONS WITH SOLIDS

William L. McClure, Toledo, Ohio, assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Sept. 3, 1958, Ser. No. 759,379
3 Claims. (Cl. 23-284)

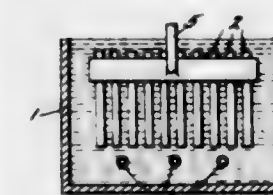


1. Apparatus for converting hydrocarbons which comprises: a conversion vessel; a central, downwardly extending conduit therewithin, adapted to convey fluid hydrocarbons downwardly with rotary motion, the lower end of the conduit being substantially unobstructed and communicating with a space which is laterally expanded relative to the conduit; means for introducing fluid hydrocarbons into an upper portion of the conduit; a conduit section secured to the lower end of said downwardly extending conduit, the inner sidewalls of said conduit section having angle with the horizontal which gradually downwardly decreases from 90° to 0°, the height of said conduit section being within the range from 0.1 to 1.5 times the major dimension of the horizontal cross section of said downwardly extending conduit; baffle means secured to the lower end of said conduit section and having a substantially horizontal, annular lower surface extending outwardly from the lower end of said conduit section; means providing an annular, downwardly extending conduit for granular solids surrounding the central conduit and having an annular construction at the lower end thereof, said vessel containing space for lateral movement of an annular stream of solids falling beneath the construction and space for downward travel of a compact bed of solids beneath the falling stream; and means for separately removing solids and fluid conversion products from the vessel.

2,999,013

METHOD OF MAKING GLASS NON-REFLECTIVE

Max Meth, 212 Atlantic Ave., Atlantic City, N.J.
Filed Nov. 3, 1959, Ser. No. 850,638
2 Claims. (Cl. 41-42)



1. The process of forming a non-reflective window glass surface which consists in roughening the surface of

a glass article to a depth of 1.5 to 2 mils in order to provide a heavy frosting thereof, in then immersing the roughened surface in an acid solution having a temperature between 100° F. and 130° F. and composed of 90%-50% by volume of hydrofluoric acid and 10%-50% by volume of sulphuric acid for a period of time ranging from 10 to 40 seconds thereby removing a partial amount but less than all of said frosting, in continuously subjecting said acid solution to substantial agitation by injecting a stream of air therein during the immersion whereby scum formed on said surface by said acids is continuously removed as formed, and in then removing said surface from said solution, and in thoroughly water rinsing it.

2,999,014

EXPLOSIVE COMPOSITION

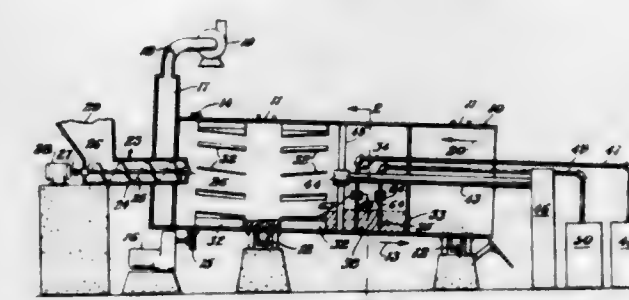
Hartwell Henry Fassnacht, Woodbury Heights, and Donald Louis Sagers, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 10, 1958, Ser. No. 741,004
3 Claims. (Cl. 52-11)

1. A dynamite composition having a density of 0.8-1.2 grams per cubic centimeter, an oxygen balance of $+6 \pm 4$, and a moisture content less than 1%, comprising 7-20% by weight of pentaerythritol tetranitrate as the sole organic explosive ingredient, 75-90% by weight of ammonium nitrate, and 3-10% by weight of a particulate, solid, carbonaceous fuel, the ratio of the particle size of the ammonium nitrate to the particle size of the pentaerythritol tetranitrate being essentially at least 4 to 1.

2,999,015

METHOD AND APPARATUS FOR USE IN THE MANUFACTURE OF MIXED FERTILIZER

Everett N. Mortenson, Chicago, Ill., and Ernest G. Wagner, Jr., Portland, Ore., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 22, 1957, Ser. No. 635,216
7 Claims. (Cl. 71-43)



1. In the manufacture of a mixed fertilizer using ammonia-ammonium nitrate solution as the source of nitrogen, the process comprising forming a stream of fertilizer solids flowing through a reaction zone, passing a flow of air in said zone counter-current to said stream of solids, introducing a concentrated mineral acid selected from the group consisting of sulphuric acid and phosphoric acid into said stream at an upstream point in said zone, and introducing ammonia-ammonium nitrate solution into said stream at a point downstream of the introduction of said acid, whereby a portion of the ammonia of said solution will be vaporized downstream and the vapors carried upstream by said countercurrent flow of air to partially neutralize said acid moving in said stream to form an acid salt and to heat the solids for the vaporization of ammonia at said downstream point, and said acid salt will move downstream and agglomerate said solids and react with another portion of ammonia from said solution to completely neutralize the acid salt to produce a normal ammonium salt.

2,999,016

DRAWING MATERIAL

Allan R. A. Beeber, Elizabeth, N.J., and Daniel S. Spechler, Brooklyn, N.Y., assignors to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 24, 1955, Ser. No. 496,602
29 Claims. (Cl. 96—75)

1. A dimensionally stable flexible sheet material for carrying a highly precise image which may be copied comprising a base film of oriented polyethylene terephthalate and an adherent over-coat of a film forming resinous material comprising a substantial proportion of an unsaturated fatty oil modified glycerol phthalate alkyd resin which is provided with a material opaque to actinic light whereby a dimensionally stable master can be obtained by treatment of the opaquing material to provide areas of different opacity for use in reproductions by actinic light processes in which the actinic light is affected by the difference in opacity resulting from the treatment thereof in different areas.

2,999,017

PROCESS FOR THE MANUFACTURE OF CHOCOLATE

Helmut Roederer, Hamburg-Volkendorf, and Hans-Heinrich Völker, Vahrenndorf, near Hamburg, Germany, assignors to Corn Products Company, a corporation of Delaware
No Drawing. Filed Jan. 12, 1959, Ser. No. 786,054
Claims priority, application Germany Jan. 23, 1958
7 Claims. (Cl. 99—23)

1. A process for the manufacture of chocolate containing dextrose hydrate as the sole sweetener which comprises subjecting cocoa beans to a grinding and heating operation to produce a cocoa mass, and then mixing dextrose hydrate with said cocoa mass while maintaining the temperature at from about 35° to about 45° C.

2,999,018

INSTANT OATMEAL

George W. Huffman, Lake Zurich, and James W. Moore, Palatine, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey
No Drawing. Filed Oct. 14, 1957, Ser. No. 689,772
7 Claims. (Cl. 99—83)

1. An instant-type food product which upon the addition of boiling water and without need for further heating acquires the flavor and texture characteristics of cooked oatmeal, said product comprising essentially quick-cooking rolled oats and an edible polysaccharide gum capable of hydrating rapidly with the addition of said water, said gum being present in an amount between about 0.1% and about 1.0% by weight of the rolled oats.

2,999,019

MEAT TENDERIZING COMPOSITION AND METHOD OF USING

Ervin W. Hopkins, Hinsdale, and Leonard J. Zimont, Addison, Ill., assignors, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 4, 1957, Ser. No. 643,515
12 Claims. (Cl. 99—107)

1. A method of tenderizing meat which comprises coating the meat with from about 3 to about 10 percent of the weight of said meat with an aqueous solution of sodium chloride and a pyrophosphate salt, said solution containing at least about 1 percent by weight pyrophosphate and at least about 10 percent by weight sodium chloride.

2,999,020

PROCESSES FOR THE TENDERING OF MEAT

Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California
No Drawing. Filed June 9, 1959, Ser. No. 819,003
5 Claims. (Cl. 99—107)

1. In a process for tendering meats treated with an antibiotic from 1 to 10 mg. per live weight pound for preserving the meat, the step of injecting the freshly slaughtered carcass while warm and flaccid before rigor mortis with an injection medium having approximately .02% mixture of the animal enzymes trypsin, pepsin present in the medium in proportions of 3 to 1 parts of trypsin to 1 to 3 parts of pepsin, and thereafter cooling and storing the meat.

2,999,021

PROCESS FOR TREATMENT OF FATS

Hjalmer E. Seestrom, William B. Guerrant, Jr., and Robert L. Campbell, Jr., Sherman, Tex., assignors to Anderson, Clayton & Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed Apr. 27, 1960, Ser. No. 24,888
8 Claims. (Cl. 99—118)

1. A process of treating fat comprising subjecting the fat to a modification reaction in the presence of from about 0.02% to about 1.0% of a modification catalyst and from about 0.3% to about 1.0% of glycerine, and promptly stopping the modification reaction upon completion of the formation of diglycerides by the action of the glycerine.

2,999,022

LIQUID SHORTENING METHOD

Emory T. Payne and Robert A. Seybert, Sherman, Tex., assignors to Anderson, Clayton & Co., Houston, Tex., a corporation of Delaware
No Drawing. Filed Mar. 26, 1957, Ser. No. 648,494
8 Claims. (Cl. 99—118)

1. In a process of preparing a liquid shortening comprised of a stable suspension of discrete particles of solid fats in oil in a temperature range of from about 60° F. to about 110° F., the improvement comprising the first step of melting all the solid fats and crystal nuclei contained in a base oil, said solid fats and crystal nuclei being in an amount sufficient for preparing said liquid shortening, the second step of cooling the base oil to a temperature slightly above the alpha melting point of the fats and maintaining the liquid shortening at said temperature for a period of time sufficient to form all crystals into relatively small beta prime crystals and beta crystals, the third step of heating the base oil to a temperature slightly above the beta prime melting point of said beta prime crystals and maintaining the base oil at said last-mentioned temperature for a period of time sufficient to convert substantially all said beta prime crystals to beta crystals of substantially the same size as said beta prime crystals, and agitating said base oil during said second and third steps at a rate sufficient to form said crystals as aforesaid.

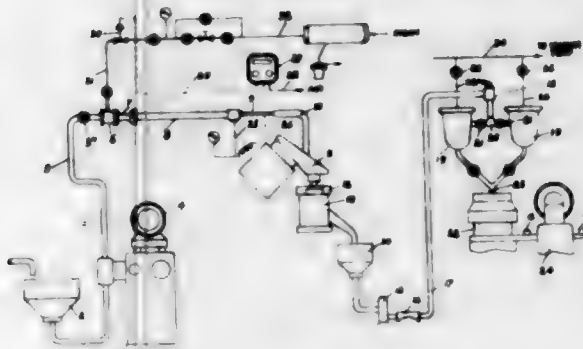
2,999,023

CONFECTIONARY COATING COMPOSITIONS

Vigen K. Babayan, Livingston, and George Newell Comes, Denville, N.J., assignors to E. F. Drew & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed May 8, 1959, Ser. No. 811,816
6 Claims. (Cl. 99—118)

1. In a confectionary coating containing a hard fat, the improvement which comprises the presence in said fat in dispersion of sucrose esters substantially pure and free from soap, said esters being of fatty acids having 10 to 24 carbon atoms, there being present from 1 to 8 esterifying acid radicals in said esters, said coating being intimately mixed with a substance taken from the class consisting of cocoa, cocoa butter, and flavoring.

2,999,024
METHOD OF PREPARING COOKED EGG YOLK AND COOKED EGG YOLK PRODUCT
 Robert H. Stimpson, Pittsburgh, and Inari J. Hutchings, Glenshaw, Pa., assignors to H. J. Heinz Company, Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Dec. 12, 1957, Ser. No. 702,424
 7 Claims. (Cl. 99-182)



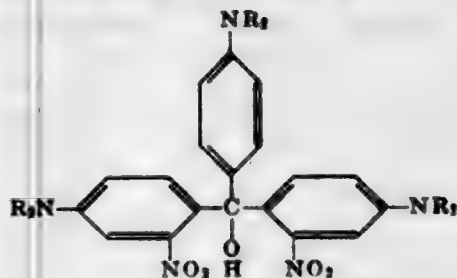
1. The method of preparing an edible food product from a mixture comprising egg yolks and water, which method comprises mixing the egg yolk and water before heating to produce a slurry, forcing the mixture at a predetermined rate into an atmosphere of steam moving at high velocity through a closed environment to a restricted discharge orifice to divide the slurry into a dispersion of fine particles while cooking the egg material in the surrounding atmosphere of steam, maintaining the steam in said environment at a temperature between 283° F. and 292° F. and thereby completely coagulating the protein of the egg and converting it to a liquid, straining and milling the cooked product at a temperature below the temperature in said environment but above 175° F., deaerating the product to a temperature of about 175° F., charging the product into containers, sealing the containers, and sterilizing the product within the containers.

2,999,025
CURING COMPOSITION FOR METALLIC COATINGS
 James B. Cox, Houston, Tex., assignor, by mesne assignments, to Rao Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
 No Drawing. Filed Dec. 15, 1958, Ser. No. 780,230
 9 Claims. (Cl. 106-12)

1. A composition for curing finely-divided metal-silicate coatings which consists essentially of from about 30% to about 40% by volume of glycol having 2 to 4 carbon atoms, from about 10% to about 20% by volume of phosphoric acid, and from about 50% to about 60% by volume of an aliphatic alcohol having 3 to 4 carbon atoms in the molecule, said composition having a pH of approximately 3.

2,999,026
NONSTAINING PIGMENTS AND THEIR USE
 Chester Davis, 415 E. 5th St., Newport, Ky.
 No Drawing. Filed Apr. 3, 1958, Ser. No. 726,044
 17 Claims. (Cl. 106-23)

1. A printing medium comprising the intensely colored colloidal silicate lake of a nonstaining triarylmethane dye base represented by the following formula:

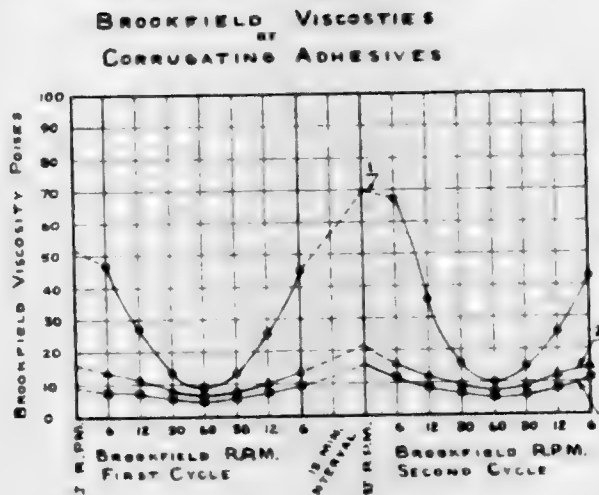


wherein R is a lower alkyl group, said lake dispersed in a suitable organic vehicle to form an intensely colored recording ink.

2,999,027
METHOD OF GLASS MANUFACTURE
 Joseph Jager, Jr., New Hyde Park, N.Y., assignor to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
 Filed May 17, 1954, Ser. No. 430,394
 14 Claims. (Cl. 106-47)

1. The method of forming a glass comprising arsenic and sulfur as constituent components, which comprises distilling arsenic disulfide, adding to the distillate as a further component at least one element selected from the group consisting of sulfur, selenium and tellurium, and homogeneously mixing the components in the liquid state.

2,999,028
NON-THIXOTROPIC FLOUR ADHESIVES AND METHODS THEREFOR
 James W. Horner, Jr., Minneapolis, Minn., assignor to Daniels-Midland Company, Hennepin, Minn., a corporation of Delaware
 Filed Sept. 16, 1958, Ser. No. 761,350
 5 Claims. (Cl. 106-150)



1. A non-thixotropic corrugating adhesive consisting of about 75-95% water and about 5-25% solids; said solids portion consisting of about 24-33 parts of a carrier material selected from the group consisting of gelatinized waxy starches and gelatinized waxy flours consisting essentially of 100% amylopectin, about 193-243 parts of an ungelatinized starchy cereal flour, about 4.9-10.4 parts of a caustic alkali, and about 4.9-7.4 parts of a borate salt.

2,999,029
OPTICAL CEMENT
 Donald E. Field, Arlington, Va., assignor to the United States of America as represented by the Secretary of the Navy
 No Drawing. Filed May 23, 1958, Ser. No. 737,455
 2 Claims. (Cl. 106-186)

(Granted under Title 35, U.S. Code (1952), sec. 266)
 1. A method for preparing a thermoplastic composition suitable for binding optical elements which comprises treating cellulose caprate in a solution of methanol and hydrochloric acid for a time sufficient to improve the shear test characteristics of said composition, washing the treated caprate free of methanol and hydrochloric acid and drying the washed caprate, mixing the dried caprate with poly- α -methylstyrene and N-cyclohexyl-p-toluenesulfonamide in about 20% by weight of the cellulose caprate, said poly- α -methylstyrene and N-cyclohexyl-p-toluenesulfonamide being present in weight ratios of from about 3:2 to about 4:1, respectively, and thereafter heating the mixture sufficiently to form a workable melt.

2,999,830

WATER RESISTANT ADHESIVE AND PROCESS FOR PREPARING SAME

Helmut Roederer, Hamburg-Volkendorf, and Walter Zinke, Hamburg-Berne, Germany, assignors to Corn Products Company, a corporation of Delaware
No Drawing. Filed June 4, 1958, Ser. No. 739,697
Claims priority, application Germany June 5, 1957
11 Claims. (Cl. 106—210)

1. Process for the production of a water-resistant adhesive for labels which comprises slowly adding to an aqueous slurry of gelatinized starch, a concentrated slurry of ungelatinized starch while heating and rapidly agitating said starches to gelatinize the ungelatinized starch; the final starch content being within the range of about 20 to about 35 percent, dry basis said starches being selected from those which show an A diagram in the roentgenographic test.

2,999,831

LIQUID LAUNDRY STARCH

Walter J. Katzbeck, Oak Park, Ill., assignor to Corn Products Company, a corporation of Delaware
No Drawing. Filed Sept. 5, 1957, Ser. No. 682,098
3 Claims. (Cl. 106—213)

1. A process for preparing a liquid laundry starch which is stable at temperatures ranging from below freezing to and including normal temperatures which consists of preparing an aqueous slurry of an ungelatinized modified starch selected from the group consisting of oxidized starches and hydrolyzed starches having a pH of at least 5 and a paste viscosity by Scott test not exceeding about 50 seconds per 100 ml. using 75 grams of said starch in 280 ml. of water, and a salt selected from the group consisting of sodium pentaborate and borax, said slurry containing from about 5 to about 10 percent of said modified starch based on the total weight of said slurry, said salt being present in said slurry in an amount of at least about 0.25 percent based on the total weight of said slurry to increase the pH of said slurry to the alkaline range, the pH of said resultant slurry being equal to that which is obtained by adding from 10 to 72 grams of borax to a neutralized dispersion of 333 grams of said starch in 1500 ml. of water, heating said slurry to within the range of 210° to 212° F. until said starch is gelatinized, adding cold water to cool said slurry and provide a stable liquid laundry starch product.

2,999,832

PROCESS FOR THE PREPARATION OF AMYLOSE SOLUTIONS

Adriaan Dekker, Deventer, Netherlands, assignor to Vanco Industries Corporation, New York, N.Y., a corporation of New York
Filed Jan. 27, 1959, Ser. No. 789,290

Claims priority, application Netherlands Jan. 29, 1958
8 Claims. (Cl. 106—213)

1. A process for preparing a solution of a member from the group consisting of: material consisting essentially of amylose, and mixtures of amylose and amylopectin, comprising the step of: dissolving said member at from room temperature up to 100° C. in an aqueous solution containing at least 6% by weight of a solute from the group consisting of: formaldehyde and glyoxal, whereby upon dissolution of said member, a clear, stable true solution is obtained.

2,999,833

POLYMERIC SUBSTANCES

Norman J. Bowman and Wayne A. Proell, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Sept. 30, 1957, Ser. No. 687,851
5 Claims. (Cl. 106—273)

1. A thermoplastic composition consisting essentially of (i) between about 18 and 40 weight percent of a

polymer selected from the class consisting of polyvinyl butyral, polyvinyl chloride, polyvinyl acetate, styrene-acrylonitrile, polystyrene, polyacrylonitrile and, asphalt, and (ii) a polymeric substance consisting of the product of the homopolymerization of a glycolic acid in the presence of between about 3 and 25 mol percent of an aliphatic alcohol containing from 1 to 6 carbon atoms.

2,999,834

METHOD OF MANUFACTURE OF LINE PLATES, SCALES, AND THE LIKE

Johannes Heidenhain, Egerer, near Chieming, Upper Bavaria, Germany, assignor to Fa. Wenzler & Heidenhain, Traunreut, near Traunstein, Upper Bavaria, Germany, a corporation of Germany
Filed Oct. 21, 1960, Ser. No. 64,202
7 Claims. (Cl. 117—5.5)



1. A method of manufacturing line plates, scales, and the like, by means of layers applied to a carrier plate in form of vapors in a high vacuum, comprising the steps of applying at least two superposed layers onto said carrier plate carrying a line base of a design complementary to that of the line plates to be produced, one of said layers being a layer of transparent inorganic material applied with a thickness corresponding with one-quarter of the wave length of the light at which the finished line plate is to be used, and the other of said layers being a layer of non-transparent metal material, and treating said two layers to remove the part of said line base of a design complementary to that of the line plates to be produced together with the portions of said two layers carried by said line base.

2,999,835

HEAT SENSITIVE REPRODUCTION SHEET, METHOD OF MAKING AND METHOD OF USING

Wilhelm Sahler, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Keuffel & Esser Co., Hoboken, N.J., a corporation of New Jersey
Filed Mar. 4, 1959, Ser. No. 797,009

Claims priority, application Germany Mar. 8, 1958
18 Claims. (Cl. 117—36)



14. A process for the manufacture of a heat sensitive reproduction material which comprises applying to a support a coating consisting of an N-substituted heavy metal dithiocarbamate, the heavy metal being selected from the group consisting of the heavy metals of the b-sub-groups and the transition group VIII of the periodic table having an atomic number of at least 26 and at most 83, and at least one heat sensitive substance selected from the group consisting of salts of amines and ammonium salts of readily heat-decomposable acids.

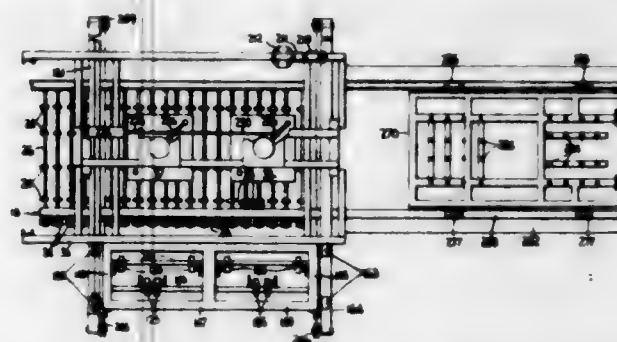
2,999,836

METHOD OF AND APPARATUS FOR STRIPING GLASS

William R. Clever and Harry O. Phallin, Lincoln, Ill., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 526,402, Aug. 4, 1955. This application Apr. 15, 1958, Ser. No. 728,747
26 Claims. (Cl. 117—43)

1. A method of applying a stripe of a liquid material to a sheet of glass bounded by at least two pair of oppo-

sited spaced edges comprising supporting said sheet by contact only with a non-marginal area of one of its major



surfaces, fixedly positioning said so supported sheet for striping, and applying stripes of a liquid material simultaneously to a pair of opposite spaced edges of said sheet.

2,999,837

HEEL-ATTACHING MACHINE

Ernst Eberle, 29 Hindenburgstrasse, Magstadt, Germany
Filed Mar. 13, 1961, Ser. No. 95,316
10 Claims. (Cl. 1—335)



1. A heel attaching machine for attaching different types and sizes of heels to a shoe in which the heel while being secured to the shoe is retained in place by means of a pressure member acting on the tread surface of the heel with a force directed substantially perpendicularly thereto and by means of a support member acting on the heel part adjacent to the heel portion of the shoe, comprising support means, heel retaining means including a pressure member and a support member, lowering means for lowering said members with respect to said support means, and means including first means pivotably connecting said support member and said pressure member individually to said lowering means and second means separate from said first means operatively connecting said support member with said pressure member for providing relative adjustment between said support member and said pressure member whereby the pressure member is accommodated to the tread surface of the heel upon actuation of said lowering means.

2,999,838

METHOD OF PRODUCING WET-STRENGTH PAPERS

Thomas J. Drennon, Philadelphia, and Louis E. Kelley, Wyncote, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Jan. 24, 1958, Ser. No. 710,877
7 Claims. (Cl. 117—155)

1. A method for producing a wet-strength paper which consists of the steps of impregnating a substantially dry paper prepared from fibers beaten to a Canadian freeness between 300 and 400 and having a basis weight of 10 to 60 lbs. per ream of 500 sheets having a size of 24" x 36" with an aqueous solution containing 2% to 10% by weight of an ammonium salt of a water-insoluble copolymer of a mixture of 25% to 60% by weight of an

acid selected from the group consisting of methacrylic acid, acrylic acid, and itaconic acid, and at least one other comonomer selected from the group consisting of acrylonitrile, esters of acrylic acid with an alcohol selected from the group consisting of cyclohexanol and alkanols having from 1 to 18 carbon atoms, and esters of methacrylic acid with an alcohol selected from the group consisting of cyclohexanol and alkanols having from 1 to 18 carbon atoms, the ammonium salt having a viscosity from 12 to 40 poises at 10% concentration in water and at 25° C., the paper and aqueous solution being free of any cationic agent, and subsequently drying the impregnated paper.

2,999,839

MARTENSITIC STEEL

Remus A. Lula, Natrona Heights, and Thomas H. McCann, New Kensington, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackearidge, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 14, 1959, Ser. No. 839,558
5 Claims. (Cl. 148—37)

1. A martensitic age hardenable stainless steel consisting of, up to 0.04% carbon, up to 2.0% silicon, from 0.25% to 3.0% manganese, from 7.0% to 12.0% chromium, from 1.0% to 6.0% nickel, from 0.5% to 1.75% aluminum, up to 5% of metal selected from the group consisting of molybdenum, columbium, tungsten, vanadium and titanium, up to 0.05% nitrogen, and the balance iron with incidental impurities.

2,999,840

TRANSPARENT LAMINATE OF IMPROVED STABILITY

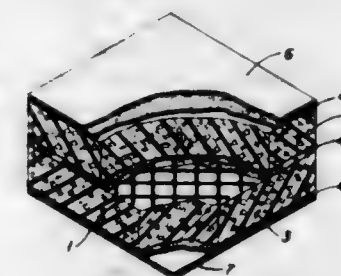
Duane F. Burdick, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed May 25, 1959, Ser. No. 815,309
1 Claim. (Cl. 154—2.71)

A laminate comprising a layer of (1) a transparent organopolysiloxane elastomer between two layers of glass, said elastomer being composed essentially of diorganopolysiloxane, said laminate having the edges thereof sealed with a composition consisting essentially of (2) a diorganopolysiloxane elastomer containing from 5 to 20 parts per 100 parts by weight polysiloxane of sodium dichromate and up to 30 parts per 100 parts by weight of polysiloxane of zinc oxide, said elastomer (2) being firmly bonded to the glass, to elastomer (1), and to any edge attachments affixed to said laminate.

2,999,841

REINFORCED TEAR-RESISTANT MATERIAL

Risto P. Lappala, Madison, Wis., assignor, by mesne assignments, to Griffolya Company, Inc., Madison, Wis., a corporation of Delaware
Filed Feb. 4, 1957, Ser. No. 637,983
3 Claims. (Cl. 154—46)



1. An article comprising two films of non-elastomeric flexible polymeric synthetic resin characterized by having an elongation of at least 20% before tensile failure, at least one grid of fibers interposed between said films to provide tear resistance, at least one layer of elastomeric

flexible polymeric foam material interposed between said films and adherent thereto, and a layer of adhesive between each of said films and the adjacent layer of said elastomeric foam material, said grid of fibers disposed within a layer of said adhesive.

2,999,842

METHOD OF PRODUCING PLASTIC SEAM

Albert A. Meister, River Forest, Ill., assignor to Bagcraft Corporation of America, Chicago, Ill., a corporation of Illinois

Filed Oct. 1, 1956, Ser. No. 613,334

2 Claims. (Cl. 154-116)



1. A method of heat sealing together two overlapped thicknesses of film-like thermoplastic packaging material, comprising: maintaining a first heat and pressure applicator at a temperature slightly above that needed to produce thermoplastic bonding of the material; maintaining a second heat and pressure applicator at a temperature above that of the first applicator and below a critical "burning" temperature for said material; and consecutively applying each of said applicators to the overlapped portions of said material in such a manner as to define effectively a single seam, incremental portions of which have been made by only one of each of said applicators.

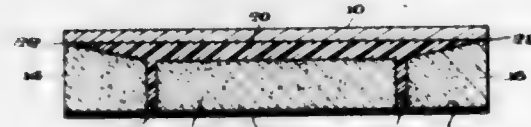
2,999,843

BUILDING FACING PANEL

Theodore W. Glynn, Kingsport, Tenn., assignor to American-Saint Gobian Corporation, a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,985

2 Claims. (Cl. 154-118)



1. A sealed, moisture-proof, building facing panel comprising a sheet of initially bowed, tempered glass, a thin rigid backing member, a plurality of cellular glass blocks disposed between said sheet and backing member, a foamed synthetic resin adhesively joining said glass sheet to said blocks and the edges of said blocks to each other, and a non-expandable adhesive joining said blocks to said backing, the blocks at the outside edge of the panel having an initial height at their exterior edges that is slightly greater than the desired spacing of said sheet and backing, whereby upon joining said glass, backing member and blocks with said adhesives under pressure, the edge surface of said blocks in contact with said sheet crushes slightly to conform to surface irregularities of the glass sheet and provide a moistureproof seal.

2,999,844

PRODUCTION OF PAPER PULP

Theron Telford Collins, Jr., Palatka, Fla. (804 Cedar St., Manistee, Mich.)

Filed Aug. 2, 1955, Ser. No. 525,883

5 Claims. (Cl. 162-30)

1. In the sulfate process for producing paper pulp from resinous wood wherein the black liquor as received

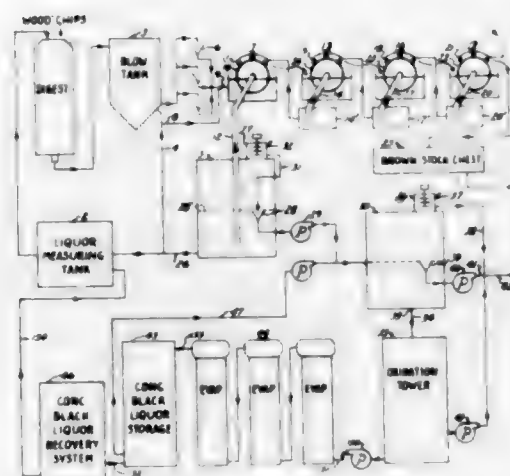
from the pulp washers is accompanied by entrained insoluble soap and entrapped air which cause foaming and clogging of equipment and wherein a major portion of the black liquor received from the pulp washers is recycled as dilution liquor and a minor portion of the black liquor received from the pulp washers is thereafter oxidized and subsequently treated in a chemical recovery system in which the oxidized liquor is subjected to processing steps which include the concentration of the oxidized liquor by evaporation and the burning of the concentrated liquor in a furnace,

the improved method of handling and treating the black liquor prior to the recycle of said major portion as dilution liquor and prior to the treatment of said minor portion in said recovery system comprising

continuously collecting the black liquor from the pulp washers in a tank in which the accompanying insoluble soap floats to the surface of the collected liquor in said tank and the entrapped air forms foam above said surface,

continuously withdrawing a portion of said collected liquor from said tank for recycle as said dilution liquor, the withdrawn portion being removed from below the surface of the collected liquor in said tank and thereby being relatively free of insoluble soap and foam,

continuously withdrawing another portion of said collected liquor from said tank and thereafter oxidizing the withdrawn other portion in an oxidation tower by therein contacting said withdrawn other portion with air, said other portion of said collected liquor constituting at least a part of said minor portion and being withdrawn



from said tank by skimming black liquor from the surface of the collected liquor in said tank, thereby simultaneously withdrawing said insoluble floating soap from the surface of the collected liquor together with said other portion,

continuously removing the foam from said tank and breaking the removed foam in a foam breaker to produce a liquid phase which includes partially broken foam,

continuously collecting said liquid phase and said other portion together with the withdrawn insoluble floating soap in another tank in which the withdrawn insoluble floating soap and partially broken foam float at the surface of the black liquor collected in said other tank,

continuously skimming the withdrawn floating insoluble soap and partially broken foam from the surface of the black liquor collected in said other tank and disposing of the skimmed insoluble soap and partially broken foam from said other tank externally of said recovery system,

continuously withdrawing black liquor from below the surface of the black liquor collected in said other tank, and thereafter passing the black liquor withdrawn from said other tank to said recovery system.

2,999,845

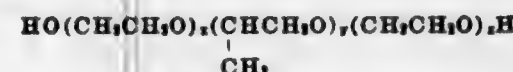
DERESINATION OF WOOD PULP

Reid Logan Mitchell, Shelton, and Paul Henry Schlosser, deceased, late of Shelton, by Elsie S. Schlosser, executrix, Shelton, Wash., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

No Drawing. Filed July 22, 1953, Ser. No. 369,714

4 Claims. (Cl. 162-77)

1. The process of producing improved high-alpha cellulose pulp which comprises washing a previously digested wood pulp with an aqueous liquor having incorporated therein from 0.01 to 0.3% by weight based on the weight of the bone dry pulp of a block copolymer represented by the formula



in which the average values of x are about 15.5 and the average values of y are about 28 and removing in the aqueous liquor substantially all of the natural resins and the block copolymer, leaving in the pulp not over 0.05% of the natural resins based on the dry weight of the pulp.

2,999,846

METHOD OF DESTROYING FUNGI AND NEMATODES EMPLOYING 2,2'-(p-XYLENE)-BIS-[2-THIOPSEUDOURA] DIHYDROCHLORIDE

Irving Rosen, Palmsville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,105

2 Claims. (Cl. 167-30)

1. The method of controlling fungus growth on plants which comprises contacting said fungus and plants with an active amount of 2,2'-(p-xylylene)-bis-[2-thiopseudouria]dihydrochloride.

2,999,847

BACTERICIDAL COMPOSITION

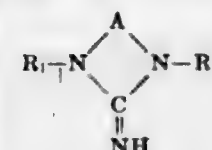
Ernst Model, Basel, and Jakob Bindler and Robert Zinkernagel, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,420

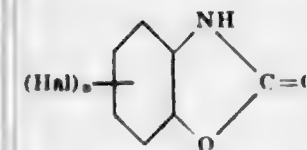
Claims priority, application Switzerland Sept. 8, 1958

5 Claims. (Cl. 167-33)

1. A biocidal composition of matter comprising the following active ingredients in the specified proportions by weight: 1 to 3 parts of a compound of the general formula



wherein A represents a bivalent saturated hydrocarbon radical which completes the heterocyclic nucleus selected from the group consisting of the imidazolidine and hexahydropyrimidine series, R_1 represents a C_{10} to C_{14} alkyl radical and R_2 represents a member selected from the group consisting of hydrogen, and lower alkyl radicals, and 1 part of a compound of the general formula



wherein Hal represents a member selected from the group consisting of chlorine and bromine, and n is an integer from 0 to 4 inclusive.

2,999,848

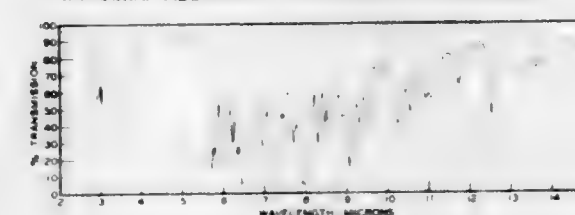
NANCIMYCIN, DIHYDRONANCIMYCIN, THEIR SALTS, AND METHOD OF MANUFACTURE

Richard Donovick, Westfield, Joseph F. Pagano, Bound Brook, and John Vandeputte, Milltown, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

Filed Dec. 18, 1957, Ser. No. 703,686

6 Claims. (Cl. 167-65)

INFRARED ABSORPTION SPECTRUM OF NANCIMYCIN



1. A substance effective in inhibiting the growth of gram positive bacteria, selected from the group consisting of nancimycin, dihydronancimycin and salts thereof, said nancimycin being an organic acid having the following elementary analysis: C=59.53%, H=6.31%, O=34.16%; empirical formula= $\text{C}_{23}\text{H}_{30}\text{O}_{10}$ that possesses a yellow crystalline structure in the pure state; has a specific optical rotation, as measured by the D line of sodium at 25° C. of -11.7 in butanol at 0.5% concentration; is quite soluble in methanol, ethanol, isopropyl alcohol, propyl alcohol, butanol, chloroform, ethyl acetate, amyl acetate, benzene, dimethyl sulfoxide, and dimethyl formamide; has an ultraviolet absorption spectrum measured in methanol with bands at the following wave lengths: 225, 305, and 425 millimicrons and respective extinction coefficients of 665, 305, and 230; an infrared absorption spectrum when suspended in hydrocarbon oil is solid form, as shown in the drawing; and a neutral equivalent when titrated as an acid of about 459; and said dihydronancimycin being the dihydrogenated derivative of the product with the immediately foregoing characteristics and being dihydrogenated nancimycin, an organic acid having the following elementary analysis: C=59.47, H=6.38%, O=34.15%; empirical formula= $\text{C}_{23}\text{H}_{32}\text{O}_{10}$ that possesses a light yellow crystalline structure in the pure state; has a specific optical rotation, as measured by the D line of sodium at 25° C. of -10.9 in methanol at 0.5% concentration; is soluble in methanol, ethanol, isopropyl alcohol, propyl alcohol, butanol, amyl alcohol, chloroform, ethyl acetate, amyl acetate, benzene, dimethyl sulfoxide and dimethyl formamide; has an ultraviolet absorption spectrum measured in methanol with bands at the following wave lengths: 222, 237, 303, 340 (sh), 425 millimicrons and respective extinction coefficients of 366, 336, 262, 70, and 148; and a neutral equivalent when titrated as an acid of about 460.

2,999,849

WARFARIN SODIUM AND HEPARIN SODIUM COMPOSITION

Karl Paul Link, Middleton, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,300

3 Claims. (Cl. 167-65)

1. A new composition of matter in dosage unit form consisting essentially of 10-100 mg. of warfarin sodium and 25-100 mg. of heparin sodium, said warfarin sodium being characterized by an alkaline color value, expressed in optical density, not exceeding 0.1 and being further characterized by being substantially free from (a) basic substances which bind heparin and annul the heparin effect and (b) phenolic and ketone bodies which counteract the heparin co-factor of plasma, and said heparin

sodium being characterized by having at least 110 U.S.P. units/mg. and by having a negative U.S.P. trichloroacetic acid protein precipitation test.

2,999,050 STABLE ETHAVERINE HYDROCHLORIDE SOLUTIONS

Elly T. Margolis, Los Angeles, Calif., assignor to Savage Laboratories, Inc., Bellaire, Tex., a corporation
No Drawing. Filed Oct. 3, 1958, Ser. No. 765,061
5 Claims. (Cl. 167-67)

1. As a new composition of matter, an aqueous solution of ethaverine hydrochloride and gentisic acid ethanolamide, said solution having a pH less than about 3.5, and said components being present in accordance with the ratios established by the following formula:

Water	ml.	100
Ethaverine hypochloride	grams	1.5-7.5
Gentisic acid ethanolamide	do.	1-5

2,999,051 METHODS OF PRODUCING L-TRYPTOPHANE

Bernard Malin, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,456
8 Claims. (Cl. 195-29)

1. A process for producing L-tryptophane which comprises fermenting an aqueous nutrient medium under submerged aerated conditions by means of an indole-converting L-tryptophane-producing strain of a species of organism of the sub-phylum Fungi, of the group consisting of the class Ascomyceta, the class Basidiomyceta, the class Fungi Imperfecti and the class Phycmyceta, adding 0.01 percent by weight of indole to said fermentation, and replacing said indole as it is utilized in the fermentation until an amount of uncombined extracellular L-tryptophane substantially in excess of 0.1 percent by weight has accumulated.

2,999,052 COMPOSITION FOR COLORIMETRIC TEST FOR SERUM ENZYMES

Harry G. Albaum, Brooklyn, N.Y., and Edward K. Harvill, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Mar. 16, 1959, Ser. No. 799,464
7 Claims. (Cl. 195-103.5)

1. A composition for the detection of diphosphopyridine nucleotide linked enzymes in biological fluids which comprises a substrate for said enzyme, diphosphopyridine nucleotide, diaphorase, a color indicator having an oxidation-reduction potential above that of the diphosphopyridine nucleotide-reduced diphosphopyridine nucleotide system and which is not subject to autooxidation, said composition being buffered to a pH of about 7.

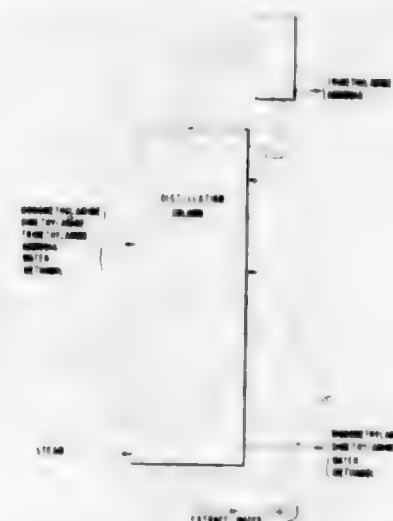
2,999,053 RECOVERY OF TRIMETHYLAMINE BY EXTRACTIVE DISTILLATION

Charles J. Kramik, Houston, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 18, 1959, Ser. No. 794,092
3 Claims. (Cl. 202-39.5)

1. A continuous extractive distillation process for removing trimethylamine in the presence of ammonia from a crude mixture containing from 30 to 70% of trimethylamine, 14 to 18% of dimethylamine, 4 to 8% of monomethylamine, 10 to 25% of ammonia and 10 to 25% of water, which comprises the steps of continuously feeding said crude mixture to a heated distillation column at an intermediate point thereof; concurrently feeding extract water continuously into said column through two inlets,

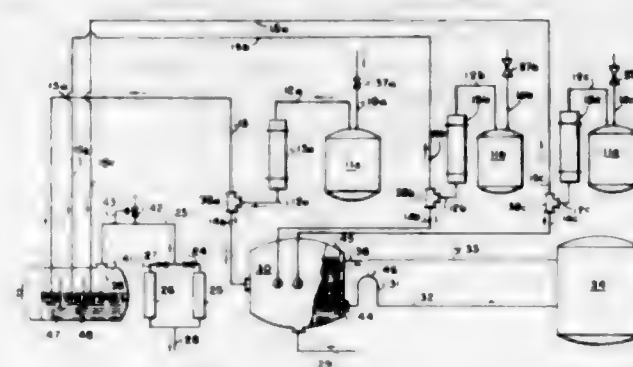
one inlet positioned near the top of said column and the other inlet positioned near the center of said column but below said intermediate point of feed of said crude mixture, said feeding of extract water through said one inlet and said other inlet being in an amount of 0.2 to 0.3 pound and 0.7 to 1.5 pounds respectively, for each one pound of said crude mixture being fed into said column; concurrently feeding open or closed steam continuously into the bottom of said column in an amount of 0.7 to 1.5 pounds for each one pound of said crude mixture being fed into said column; operating said column at a pressure of from 180 to 300 p.s.i.g.; maintaining the temperature within said column such that water below said other inlet in said column will be present in the vapor phase in an amount of at least 20% by volume,



and such that water immediately below said one inlet in said column will be present in the vapor phase in an amount of less than 5% by volume, and such that water in the portion of said column between said one inlet and said other inlet in said column will be present in the vapor phase in an amount between 0.5 to 10 mol percent based on the total material present in said portion of said column; withdrawing as vapors from the top of said column trimethylamine and ammonia along with less than 5% by weight of each of monomethylamine and dimethylamine based on the trimethylamine withdrawn; and withdrawing from the bottom of said column aqueous monomethylamine and dimethylamine along with minor amounts of ammonia, and less than 5% by weight trimethylamine based on the dimethylamine withdrawn.

2,999,054 PURIFICATION OF TETRAETHYLLEAD

Billy J. Lentz, James F. McElderry, Jr., and Frank A. McCoy, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 28, 1958, Ser. No. 718,276
4 Claims. (Cl. 202-69)



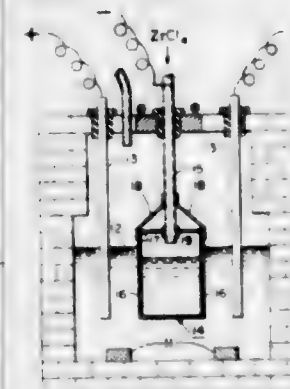
1. A process for treating and separating components from a plurality of batch distillation streams from tetra-

ethyllead reaction masses, said distillations being programmed on a staggered chronological starting schedule, and each of said streams having a time variant composition and being supplied at pressures varying during said distillation and further being characterized by having an initial portion predominating in ethyl chloride and a final portion predominating in water vapor, tetraethyllead, and containing also entrained fine lead solids and impurities, comprising; cooling each stream to a temperature insufficient to condense any ethyl chloride in the initial portion of said stream but sufficient to condense virtually all the tetraethyllead and water in the final portion of said stream, disengaging uncondensed vapors from said stream after said cooling, said vapors being obtained from the initial portion of the distillation stream and comprising substantially only ethyl chloride, and passing said vapors through an aqueous liquid seal, and cumulating said vapors with corresponding vapors from other distillation streams, and then cooling the cumulated vapors passed through said seal sufficiently to condense the ethyl chloride; accumulating the tetraethyllead and water condensed by said cooling of the final portion, with corresponding liquids from other distillation streams and forming a heterogeneous liquid-solid system including water, tetraethyllead, impurities and entrained solids, and stratifying the said system into a surmounting aqueous layer, an intermediate substantially solids free tetraethyllead layer, and a bottom layer including impurities and finely divided lead solids, said stratified layers having a constant total depth, and continuously withdrawing an overflow aqueous stream and a tetraethyllead stream and accumulating the bottom layer including impurities and lead solids, the interface of the aqueous-tetraethyllead layers being maintained at a substantially constant elevation.

2,999,055 ELECTROLYTIC METHOD AND MEANS FOR PRODUCTION OF REFRACTORY METAL

Leonard W. Gendvil, Staten Island, N.Y., and Oliver W. Moles, Watchung, N.J., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

Filed July 17, 1958, Ser. No. 749,280
2 Claims. (Cl. 204-64)



1. A method for producing zirconium metal in an electrolytic cell having a cathode, an anode and an electrolyte; said electrolyte being a fused salt bath and said cathode being a basket-like member having an impervious top-section and a perforated body-section, which comprises; immersing the basket cathode in said fused salt bath, introducing an inert gas and vaporous zirconium tetrachloride into the impervious top-section of said basket cathode above the surface of the salt bath in said basket cathode, maintaining sufficient gas pressure in the impervious top section of said basket cathode to displace the fused salt therefrom and provide a gas zone in said top-section in which gas zone said inert gas and gaseous zirconium tetrachloride are contained, said gaseous zirconium tetrachloride being dissolved in said fused salt bath from said gas zone, simultaneously passing direct

current between the anode and said basket cathode at a rate synchronized with the zirconium tetrachloride addition so that the amount of current is sufficient to reduce the zirconium tetrachloride to metal; and depositing the zirconium metal so formed as an adherent pervious mass of crystalline zirconium metal on the interior surfaces of the perforated body-section of said basket cathodic member, the electrolyte exteriorly of the basket cathode being maintained substantially free from zirconium values.

2,999,056 IRRADIATION BONDING OF ACIDIC COMPOUNDS TO SHAPED POLYMERIC STRUCTURES

David Tanner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 4, 1956, Ser. No. 613,984
16 Claims. (Cl. 204-154)

1. A process which comprises intimately contacting a solid preformed polymeric structure substantially insoluble in water with a material from the class consisting of an aliphatically unsaturated organic non-phenolic-acidic compound and the salt of an aliphatically unsaturated organic non-phenolic-acidic compound, subjecting the composition to high energy ionizing radiation wherein a radiation dosage between about 0.01 mrep. and that at which substantial degradation of the reactants occurs is employed, thereby causing adherence among the composition components.

2,999,057 HOMOGENEOUS NUCLEAR REACTORS

Henry J. Hilschman, Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 3, 1956, Ser. No. 596,133
10 Claims. (Cl. 204-154.2)



1. A heat producing nuclear chain reaction process comprising maintaining a critical mass of fluid nuclear fuel in a nuclear reaction zone, continually withdrawing a plurality of heated individual streams of said nuclear fuel directly from said nuclear reaction zone, removing heat from the fluid nuclear fuel so withdrawn and returning fluid nuclear fuel so cooled as a plurality of individual streams directly to said nuclear reaction zone and maintaining the rate of flow of said fluid nuclear fuel in said individual streams at a rate less than the minimum average rate of flow thereof in said nuclear reaction zone.

2,999,058 NUCLEAR REACTOR FUEL ELEMENT

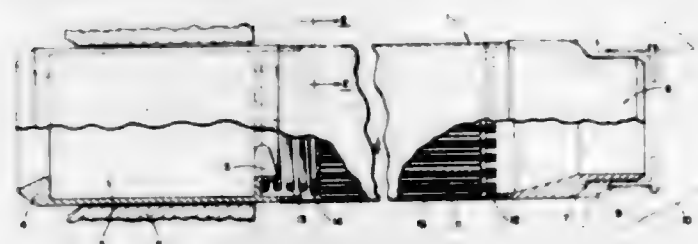
Clifford W. Wheelock, Canoga Park, and Ernest B. Baumelster, Malibu, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 28, 1958, Ser. No. 711,595

5 Claims. (Cl. 204-193.2)

1. A nuclear reactor fuel element comprising a plurality of rectangular fuel plates, each of said plates consisting of a plurality of individual sections, each of said sections having a core of fissionable material with cladding thereon and a plurality of spacer fins on each

face of said section, said spacer fins contacting the spacer fins of the adjacent section and defining a plurality of axial coolant channels along the faces of said sections, and

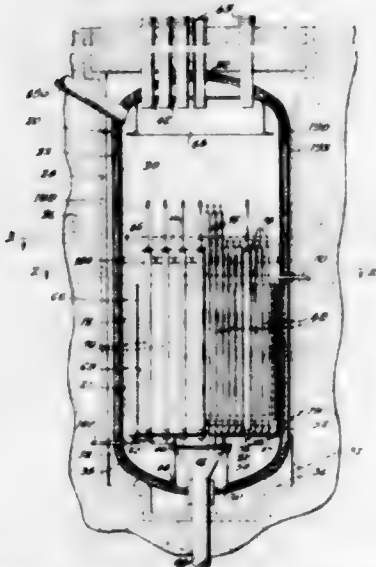


means for rigidly supporting said plurality of sections so that said spacer fins are maintained in abutting relationship.

2,999,859

NUCLEAR REACTOR

Michael Treshow, Downers Grove, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 4, 1958, Ser. No. 726,592
5 Claims. (Cl. 284—193.2)



1. A neutronic reactor comprising a pressure shell, a plurality of fuel elements containing thermal neutron fissionable isotopes supported between an upper grid and a lower grid within said pressure shell, a plurality of spaced control tubes supported between said upper and lower grids, said fuel elements hexagonally arranged in groups of six surrounding a control tube, a steam-forming coolant-moderator contained within the pressure shell and surrounding each of said fuel elements and control tubes, the volume ratio of said coolant-moderator to said fissionable isotopes being insufficient to yield a neutron multiplication factor of unity, a liquid control-moderator within each of said control tubes, means for controllably varying the amount of control-moderator within said control tubes, the volume ratio of said coolant-moderator and said control-moderator to said fissionable isotopes being sufficient to yield a multiplication factor greater than unity and a negative reactivity to core void coefficient when said tubes are filled with control-moderator.

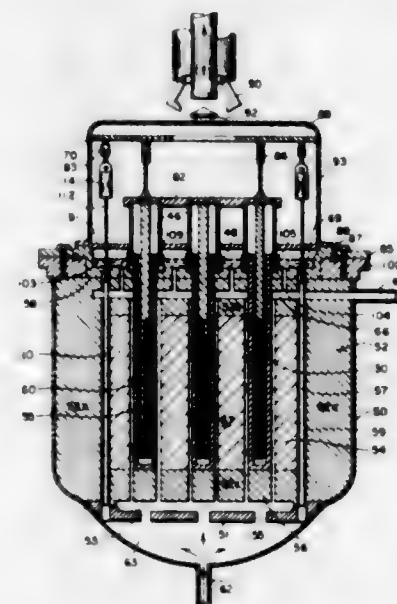
2,999,860

CONTROL MEANS FOR A NUCLEAR REACTOR

Robert J. Teitel, Midland, Mich., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 2, 1958, Ser. No. 739,446
3 Claims. (Cl. 284—193.2)

1. In a nuclear reactor containing an active core region including a neutron moderator, means for controlling the

critical configuration of said reactor comprising a plurality of vertically disposed, elongated tubular containers within said core region, a subcritical configuration of a liquid nuclear fuel filling a portion of said containers comprising a fissionable isotope selected from the group consisting of uranium 235, uranium 233, and plutonium 239 in a liquid bismuth solvent, and means for vertically displacing a portion of said liquid fuel in said containers



to change the fuel configuration therein from subcritical to critical, said means comprising a cylindrical plunger within and coaxial of each container and defining therebetween an annulus, and means for reciprocating said plunger from a raised position out of contact with the liquid fuel in the container to maintain the reactor in a subcritical condition and a lowered position wherein the plunger displaces fuel vertically into the annulus to produce a critical configuration of the liquid fuel.

2,999,861

BUTADIENE CONVERSION OF C₄ FRACTION OF UNSATURATED HYDROCARBONS

Charles L. Perry, Jr., Concord, Calif., assignor to Tidewater Oil Company, San Francisco, Calif., a corporation of Delaware
Filed Aug. 27, 1958, Ser. No. 757,593
1 Claim. (Cl. 208—67)



A process for substantially eliminating the amount of butadienes present in a stream of four carbon atom hydrocarbons high in butylene content but containing an

undesirable amount of butadiene, said stream being suitable for at least part of the charge to an alkylation operation wherein isobutene is alkylated with butylene to form a gasoline alkylate, comprising: thermally cracking a substantially residual oil at a temperature between 800° and 1000° F. to obtain substantial amounts of lighter hydrocarbons including substantial amounts of butylenes and necessarily including objectionable amounts of butadiene; catalytically cracking a gas oil stream under conditions to produce substantial amounts of lighter hydrocarbons including additional amounts of butylenes and no objectionable amounts of butadiene; fractionating from the products of the thermal cracking step a first C₄ stream containing the butylenes and butadiene resulting therefrom; feeding said first C₄ stream into the catalytic cracking step to mix with the gas oil vapors undergoing cracking, said first C₄ stream undergoing only the same amount of cracking as said gas oil vapors; and fractionating from the products of the catalytic cracking step a second C₄ stream containing butylenes resulting from the thermal cracking of the residual oil, said second C₄ stream containing no objectionable amounts of butadiene.

2,999,862

SCRUBBING FLUID COKING EFFLUENT

Hugh B. Henderson, Pleasant Hill, Calif., assignor to Tidewater Oil Company, San Francisco, Calif., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,634
2 Claims. (Cl. 208—102)



2,999,866

LUBRICANT CONTAINING A CALCIUM SALT-CALCIUM SOAP MIXTURE AND PROCESS FOR FORMING SAME

Clarence Liddy, Franklinville, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Dec. 28, 1960, Ser. No. 78,842
17 Claims. (Cl. 252-39)

1. A grease composition comprising: an oil vehicle and a mixture of a calcium salt and a calcium soap therewith, the mixture of said salt and soap being present in a grease forming quantity, a calcium salt of said mixture being a salt of a low molecular weight unsubstituted straight chain saturated monocarboxylic acid (I) having from one to six carbon atoms per molecule, a calcium soap of said mixture being a soap of an intermediate molecular weight unsubstituted saturated monocarboxylic acid (II) having from seven to twelve carbon atoms per molecule and having no side chain larger than a methyl group, and the molar ratio of said acid (I) to said acid (II) being from about 0.25:1 to about 10:1.

2,999,867

SYNTHETIC OIL ADDITIVE

Thomas F. Baigan, Jr., Walnut Creek, Calif., assignor to Tidewater Oil Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Nov. 27, 1956, Ser. No. 624,498
9 Claims. (Cl. 252-49.8)

1. A lubricant composition consisting essentially of a lubricant selected from the group consisting of diester lubricating oils and phosphate ester lubricating oils, and a sufficient amount to increase appreciably the viscosity index of said lubricant of a polymerized polypropylene glycol ester of an unsubstituted, low molecular weight dibasic organic acid having a glycol-to-acid mol ratio in the range of about 0.875 to 1.111 and having a viscosity of at least 250 centistokes at 210° F. and with at least seven oxypropylene units in the polypropylene glycol radical.

2,999,868

PERSONAL USE DETERGENT LOTION

Will Pilcher and Stanley L. Eaton, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,924
6 Claims. (Cl. 252-137)

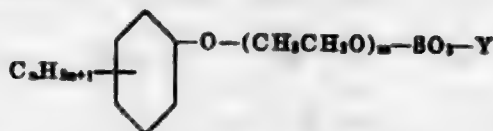
1. An opaque pearlescent liquid detergent composition having a lotion-like consistency consisting essentially of: (1) from about 6% to about 15% of a detergent selected from the group consisting of sodium and potassium alkyl glyceryl ether sulfonates having an alkyl radical ranging in chain length from 10 to 14 carbon atoms; (2) from about 2% to about 4% of said sulfonates having an alkyl radical ranging in chain length from 16 to 18 carbon atoms; (3) from about 1% to about 5% of an amine oxide having the formula $R_1R_2R_3N \rightarrow O$ in which R_1 is an alkyl radical ranging in chain length from 8 to 18 carbon atoms and R_2 and R_3 are each selected from the group consisting of methyl and ethyl radicals, at least about 50% of said amine oxide having R_1 12 carbon atoms in chain length; and (4) from about 0.05% to about 0.2% of a water soluble polymer selected from the group consisting of acrylamide polymers having a viscosity of at least 4 centipoises at 25° C. when dissolved at the 0.5% level in 4% sodium chloride solution adjusted to a pH of 5 to 6, and ethylene oxide polymers having a viscosity of at least 10 centipoises at 25° C. when dissolved in water at the 1% level, the ingredients being in an aqueous vehicle and the mole ratio of potassium to sodium being less than about 0.8.

2,999,869

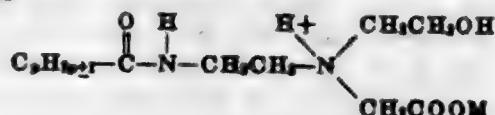
DETERGENT COMPOSITION

Joseph N. Masci, Metuchen, and Norman A. Poirier, South River, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Nov. 18, 1957, Ser. No. 697,290
24 Claims. (Cl. 252-152)

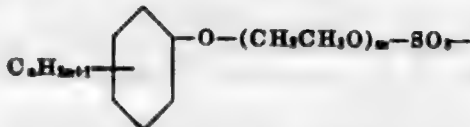
1. A substantially neutral aqueous composition consisting essentially of (I) a compound which is represented by the formula:



where Y is a member of the group which consists of the ampholyte



and a mixture of that compound ampholyte with the corresponding aminoamide in which the CH_2COOM is replaced by H, the molar amount of aminoamide in all cases being less than the molar amount of that ampholyte, and the ratio of Y to



being not over 1.2 to 1 and not less than 19 to 20, M is a member of the group consisting of alkali metals, triethanol ammonium, mixtures of an alkali metal with hydrogen, and mixtures of triethanol ammonium with hydrogen, n is a whole number from 0 to 9, inclusive, m is a number from 1 to 23, inclusive, and p is a whole number from 11 to 17, inclusive, and (II) a water soluble nonionic surface active agent comprising a polyoxyethylenated derivative of a hydrophobic base, said derivative being a member of the group consisting of:

- (a) 9-18 carbon atom fatty acid monoesters and diesters of aliphatic polyhydric alcohols, the polyhydric alcohols containing at least 3 hydroxyls, reacted with 10 to 98 moles of ethylene oxide and having a cloud point of at least 85° C. determined at 2% concentration in distilled water, and
(b) a member of the group consisting of the reaction products of 9-18 carbon atom alcohols, acids, amides and mercaptans, 12-24 carbon atom alkyl phenols and alkyl cyclohexanols, and polypropylene glycols having a molecular weight of about 800-2500, with 20 to 103 moles of ethylene oxide, said reaction products having a cloud point of at least 100° C. determined at 2% concentration in distilled water.

components (II) and (I) being present in a ratio of 2-600 parts of (II) per 100 parts of (I).

2,999,870

BLUE HALOPHOSPHATE PHOSPHOR

Henry W. Rimbach, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 1, 1954, Ser. No. 413,111
4 Claims. (Cl. 252-301.4)

1. A blue halophosphate phosphor consisting essentially of a matrix of halophosphate of alkaline-earth metal activated by from 0.3% to 2.0% by weight of Sb, wherein the halogen consists of mixtures of fluorine and chlorine, and the alkaline-earth metal is one of the group consisting of calcium and mixtures of calcium and strontium, the ratio of $(Cl_2 + F_2)/2P$ being from 0.79/3.00 to 0.86/3.00, the ratio of $(Ca + Sr)/2P$ being from 9.3/3.00

to 9.5/3.00, the ratio of Cl/F being from 0.210/1.00 to 0.143/1.00, and the ratio of Sr/Ca being from 0 to 0.200/1.00.

2,999,871

PROCESS FOR THE REACTIVATION OF ALUMINUM CHLORIDE-HYDROCARBON CATALYST
Frederick E. Frey, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 26, 1954, Ser. No. 425,760
13 Claims. (Cl. 252-415)

4. The hydrogenation of an aluminum chloride-hydrocarbon catalyst complex for a period from 0.5 to 10 hours in a hydrogenation zone in the presence of a minor proportion of a chloride of at least one of the metals selected from the group consisting of gallium, indium, thallium and tin, while maintaining said catalyst at a temperature in the range from 175 to 500° F., and at a pressure in the range from 500-4000 p.s.i.g., while supplying hydrogen to the hydrogenation zone in an amount effective to accomplish said hydrogenation and thereby producing an aluminum chloride-hydrocarbon catalyst complex of increased activity.

5. The process of claim 4 wherein hydrogen chloride is supplied to the said hydrogenation zone.

2,999,872

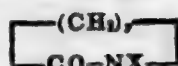
CATALYST FOR ACRYLONITRILE SYNTHESIS
Jack Rowbottom, Liverpool, England, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 17,204
21 Claims. (Cl. 252-429)

1. A non-aqueous catalyst composition comprising at least 5% by weight of cuprous chloride, an organic nitrile boiling above 78° C. at atmospheric pressure and thermally stable at 100° C. as the essential component for dissolving the cuprous chloride and, based on the weight of the catalyst composition, 0.2% to 30% of a carboxamide catalyst promoter having a boiling point of at least 100° C. at atmospheric pressure and wherein the carbonyl carbon is not a ring member.

2,999,873

SYNTHESIS OF ACRYLONITRILE
Charles R. Harris, Lockport, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 8, 1957, Ser. No. 695,193
3 Claims. (Cl. 252-429)

1. A liquid anhydrous catalyst comprising, by weight, 30 to 50% cuprous chloride, 30 to 60% liquid organic nitrile having a boiling point at atmospheric pressure above 100° C. and stable at 70° to 150° C. as the essential component for dissolving the cuprous chloride without addition of salt solubilizer for the cuprous chloride, and 2 to 30% of a promoter having the general formula



wherein X represents a substituent selected from the group consisting of hydrogen and methyl and y is a number from 3 to 6.

2,999,874

CATALYST COMPOSITIONS
Herman S. Bloch, Skokie, and Vladimir Haensel, Hinsdale, Ill., assignors, by means of assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Sept. 11, 1956, Ser. No. 609,089
14 Claims. (Cl. 252-442)

1. As a new composition of matter, a calcined and reduced composite of a refractory oxide containing chem-

770 O.G.—10

ically combined hydroxyl groups and from about 0.01% to about 2% by weight of a platinum group metal, said calcined composite being impregnated with from about 10% to about 100% by weight of an anhydrous Friedel-Crafts metal halide in which the halogen is selected from the group consisting of chlorine and bromine and said hydroxyl groups having been reacted with the metal halide in a reaction resulting in the elimination from the composite of at least 0.5 mol but not more than 2.0 mols of hydrogen halide per mol of Friedel-Crafts metal halide adsorbed thereon.

2,999,875

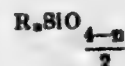
PROCESS FOR PRODUCING NICKEL AND COBALT HYDROGENATION CATALYSTS
Roy L. Pruett, Tonawanda, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed May 26, 1955, Ser. No. 511,429
5 Claims. (Cl. 252-472)

1. A process for producing a non-pyrophoric and storage-stable metal catalyst selected from the group consisting of nickel and cobalt in finely divided catalytically active form which comprises decomposing a member of the group consisting of organo-nickel and organo-cobalt compounds, wherein the organo moiety is a radical selected from the group consisting of bis(cyclopentadienyl) and bis(aliphatic-substituted cyclopentadienyl), by the action of hydrogen at a temperature from about 100° C. to about 400° C. until said decomposition is substantially complete as indicated by cessation of uptake of hydrogen.

2,999,876

ORGANOPOLYSILOXANE ELASTOMERS CONTAINING SILICA AND A CARBOXYLIC ACID SALT OF COBALT, CERIUM OR COPPER
Thomas D. Talcott, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Aug. 28, 1956, Ser. No. 606,550
11 Claims. (Cl. 260-18)

1. A heat curable organopolysiloxane rubber stock consisting essentially of (A) an organosiloxane of the average general formula



wherein R represents an organic radical selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals and n has a value of from 1.9 to 2.1, (B) a silica filler and (C) 0.001 to 0.40 part by weight per 100 parts of (A) of a metal selected from the group consisting of cobalt, cerium, and copper, said metal being added as the salt of carboxylic acid, and (D) an organoperoxide vulcanizing agent.

2,999,877

METHOD OF PREPARING ORGANOPOLYSILOXANE ELASTOMERS
Siegfried Nitzsche and Manfred Wick, Burghausen, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany
No Drawing. Filed Apr. 9, 1958, Ser. No. 727,276
Claims priority, application Germany Apr. 10, 1957
6 Claims. (Cl. 260-18)

1. A composition consisting essentially of (1) an organopolysiloxane copolymer of diorganosiloxane units of the formula R_2SiO where each R is an organic radical selected from the group consisting of alkyl radicals, aryl radicals, halogenated alkyl radicals and halogenated aryl radicals, and 0.1 to 2.0 mol percent of methylhydrogen-siloxane units, (2) a filler and (3) an organic tin compound selected from the group consisting of tin ricinoleate, dibutyl tin dilaurate and dioctyl tin diacetate.

2,999,078

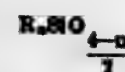
ORGANOSILOXANE COATING COMPOSITION OF IMPROVED THERMAL AND CHEMICAL STABILITY

John S. Delphonick, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed June 7, 1957, Ser. No. 664,156

5 Claims. (Cl. 260-22)

1. A composition of matter comprising a mixture of (1) a diorganosiloxane in which the siloxane units are selected from the group consisting of dimethylsiloxane units and phenylmethylsiloxane units, which diorganosiloxane can contain up to 20 mol percent diphenylsiloxane units and up to 1 mol percent siloxane units of the formula



where each R is selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals and n has an average value of 0 to 3 inclusive, (2) 10 to 100 parts by weight per 100 parts of (1) of a benzene soluble resin copolymer consisting essentially of structural units of SiO_2 , $\text{R}'_2\text{SiO}_{1/2}$ and up to $0.2\text{R}'_2\text{SiO}$ units per SiO_2 unit, in which resin each R' is a monovalent hydrocarbon selected from the group consisting of methyl, ethyl, propyl and phenyl, at least 90 percent of the total number of R' radicals are alkyl and in said copolymer the ratio of R' to Si has an average value of from 1:1 to 1.7:1 inclusive and (3) 80 to 250 parts by weight per 100 parts of (1) of a filler at least 80 parts of which is selected from the group consisting of metallic zirconate salts, metallic titanate salts, zirconium silicates, titanium silicates, metal fluorozirconates and metal fluorotitanates.

2,999,079

VULCANIZING BUTYL RUBBER IN THE PRESENCE OF HALOGENATED HETEROCYCLIC COMPOUNDS

James V. Fusco, Westfield, and Samuel B. Robison, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 29, 1957, Ser. No. 699,522

12 Claims. (Cl. 260-38)

5. A method of vulcanizing 100 parts by weight of a low unsaturation isobutylene-isoprene rubbery polymer having a Wijs iodine No. between 0.5 and 50 which comprises, mixing said polymer with 0.1 to 20 parts by weight of a halomelamine and a filler selected from the group consisting of carbon black, mineral filler, and mixtures thereof, heating the resulting composition for 10 seconds to 30 minutes at a temperature of 100° to 400° F., thereafter mixing the heated polymer-halomelamine composition with about 1 to 20 parts by weight of a polymethylol-p-C₆H₄-C₆H₅ hydrocarbon substituted phenol substance, and heating the resulting mixture to a temperature of about 250° to 400° F. to vulcanize the polymer.

2,999,080

MODIFIED KAOLIN AS A POLYESTER RESIN FILLER

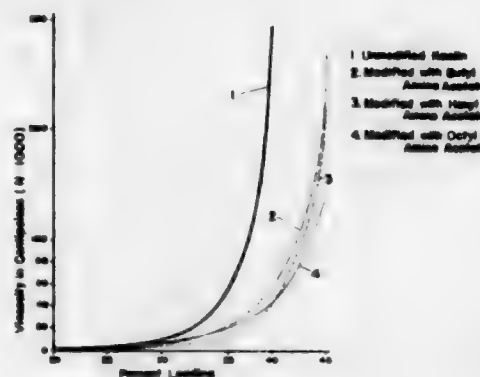
James R. Wilcox, Westfield, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

Filed Dec. 9, 1958, Ser. No. 779,255

9 Claims. (Cl. 260-40)

1. A process of preparing a modified kaolin clay suitable for use as a filler for polymerizable unsaturated

polycarboxylic acid-polyhydroxy alcohol polyester resin compositions comprising coating kaolin clay with an organic cationic material selected from the group consisting of primary alkyl amines having from 4 to 8 car-



bon atoms in the alkyl group and alkanolic acid salts thereof wherein the alkyl group contains from 1 to 17 carbon atoms, said organic cationic material being present in an amount sufficient to render the kaolin clay organophilic.

2,999,081

COMPOSITION COMPRISING PHENOL-ALDEHYDE RESIN AND HEAVY METAL HYDROXY HALIDE, AND PROCESS FOR THE VULCANIZATION OF RUBBER THEREWITH

David A. Stivers, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,852

25 Claims. (Cl. 260-43)

1. A process for the vulcanization of a raw conjugated diene rubber which comprises incorporating with said rubber a meta-substituted phenol-formaldehyde resin as a vulcanizing agent, stannous hydroxy chloride as a catalyst, and a normally liquid alkyl chloride as a hydrogen chloride donor, in an amount such that the vulcanizing agent is present in a weight ratio of about 1:100 to about 20:100 of vulcanizing agent to elastomer and the stannous hydroxy chloride catalyst and the hydrogen chloride donor are present, respectively, in an amount between about 1:10 and about 10:1 of vulcanizing agent to these ingredients, heating the resulting mixture at a temperature between about 250° and about 400° F. for a period of time of at least 5 minutes to vulcanize the rubber without substantial scorch.

2,999,082

PRODUCTION OF POLYCONDENSATION PRODUCTS

Hans Holtschmidt, Köln-Stammheim, and Erwin Müller and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,572

Claims priority, application Germany Sept. 7, 1957

14 Claims. (Cl. 260-79)

1. In the preparation of a condensation product containing nitrogen and sulphur bridges by condensing an amine with a bis-beta hydroxy alkyl sulphide, the process which comprises condensing an aromatic amine having at least one nitrogen atom attached to a member selected from the group consisting of hydrogen and an hydroxy substituted alkyl group with said sulphide at a temperature above about 120° C.

2,999,083

POLYMERIZATION OF UNSATURATED HYDROCARBONS

Robert F. Killey, Sarnia, Ontario, Canada, and Thomas E. Morimoto, Calgary, Alberta, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a body corporate

Filed Nov. 28, 1958, Ser. No. 776,942

10 Claims. (Cl. 260-85.3)

1. In the process for preparing copolymers of isobutylene with multiolefinic hydrocarbon compounds containing 4-14 carbon atoms per molecule wherein a major proportion of isobutylene and a minor proportion of the multiolefinic hydrocarbon compound, while dispersed in a non-reactive non-complex-forming volatile diluent which is a non-solvent for the copolymers, are contacted with a Friedel-Crafts catalyst in a reaction zone maintained at a temperature between +40° C. and -164° C., to effect incomplete conversion into copolymers thereof; and wherein the unreacted isobutylene and multiolefinic hydrocarbon compound and volatile diluent are recovered and fed to a fractionation system comprising a series of distillation towers to effect their separation into various fractions; and wherein the distillate from the first tower comprising a high purity fraction of the volatile diluent is recovered for reuse in the polymerization reaction; and wherein the undistilled fraction obtained from the bottom of the first tower is subjected to further distillation in a second tower from which most of the remaining portion of the volatile diluent, along with appreciable quantities of the isobutylene and close-boiling normal-butylenes usually associated with the isobutylene, is distilled and recovered for reuse in the polymerization reaction; and wherein the bottoms fraction from said second tower, containing the remainder of the volatile diluent, isobutylene, close-boiling normal-butylenes and the multiolefinic hydrocarbon compound is subjected to further recovery treatment; the step which comprises maintaining in the feed to the second distillation tower a minimum of 80 pounds of isobutylene per hour per square foot of tower area.

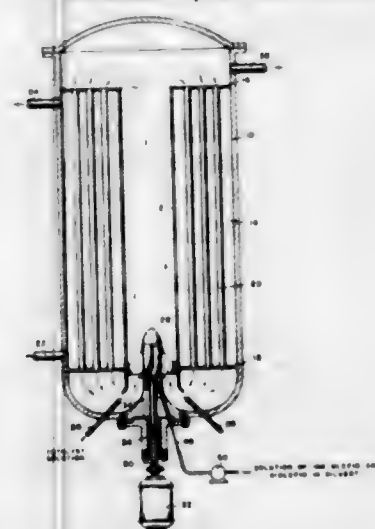
2,999,084

POLYMERIZATION METHOD

Henry K. Arnold, La Porte, and Earle R. Gurtler, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Mar. 25, 1959, Ser. No. 801,936

6 Claims. (Cl. 260-85.3)



4. In a continuous method for the low temperature polymerization of an olefin in solution in a circulating stream in a reactor with mechanical agitation, said polymerization being conducted in the presence of a catalyst, the improved method for inhibiting mass fouling within the reactor which comprises continuously injecting a solution of fresh olefinic feed stock into said circulating stream

immediately below the zone of mechanical agitation at an injection velocity equal to at least about 80% of the average velocity of the agitated reaction medium at said zone of introduction, said feed solution being introduced in a direction away from the zone of mechanical agitation and normal with respect to the direction of flow of said stream, whereby the flow of said feed solution opposes the flow of said stream, all of the solvent for said solution being introduced with said feed solution and with the catalyst.

2,999,085

COPOLYMERS OF MONOALLYLDIALKYL PHOSPHATES AND ACRYLONITRILE

Frederick Ernest King, London, and Victor Francis George Cooke and James Lincoln, Putteridge Bury, near Luton, England, assignors to British Celanese Limited, a corporation of Great Britain

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,175

Claims priority, application Great Britain Feb. 11, 1957

3 Claims. (Cl. 260-85.5)

1. A copolymer of acrylonitrile and a monomer of the formula $\text{R}'_{1-n}\text{P}(\text{O})(\text{OR})_n(\text{OR}')_n$ where R is a member selected from the group consisting of 2-chlorethyl and 2-bromethyl, R' is selected from the group consisting of allyl and methyl and n is selected from the group consisting of 1 and 0, the proportion of combined phosphorus in said copolymer ranging from about 2 to 10% by weight.

2,999,086

METHOD FOR PREPARING HIGHLY CRYSTALLINE POLYPROPYLENE

Egi Victor Fasce, Baton Rouge, Neville Leverne Cull, Baker, and Robert Joseph Fritz, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 22, 1957, Ser. No. 660,746

2 Claims. (Cl. 260-93.7)

1. A method of preparing a polypropylene polymer which comprises reacting a titanium tetrahalide with the theoretical amount of an aluminum trialkyl in the presence of a hydrocarbon diluent selected from the class consisting of naphthenic hydrocarbons and mixtures thereof with no more than 20 weight percent of isoparaffinic hydrocarbons, said diluent being substantially free of n-paraffins and aromatics and having a viscosity between 90 and 400 seconds at 37.5° C., a boiling point in the range of 250° to 500° C. and an API gravity of 28 to 32 to reduce the valence of said halide to the next lower level, slowly heating the reaction product to a temperature between 100 and 300° C. until it becomes crystalline, combining the reaction product with an aluminum alkyl activator and polymerizing the olefin with said activated reaction product under a low pressure in the presence of a hydrocarbon diluent as previously described.

2,999,087

POLYMERIZATION OF PIPERYLENE

Robert M. Thomas, Westfield, Lawrence T. Eby, Linden, and Charles W. Seelbach, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 13, 1956, Ser. No. 577,930

2 Claims. (Cl. 260-94.3)

1. A process for making solid polypiperylene having a Harris molecular weight of about 10,000 to 15,000 and an unsaturation of about 200 to 250 cg. of iodine per gram, which comprises contacting piperylene with a catalyst obtained by mixing titanium tetrachloride with an aluminum trialkyl of 1 to 20 carbon atoms in the alkyl groups in a ratio of about 3 moles of the aluminum trialkyl per mole of titanium tetrachloride, at a polymerization temperature of about 60° to 100° C. and a pressure of about 300 to 1000 p.s.i.g. in an inert diluent.

2,999,888

POLYMERISATION PROCESS

Donald Alexander Fraser, Sutton, and Alaric Louis Jeffrey Ramm, Toddington, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Aug. 26, 1957, Ser. No. 680,400
Claims priority, application Great Britain Sept. 15, 1956
11 Claims. (Cl. 260-94.3)

1. A process for the polymerisation of a conjugated alkene which comprises contacting the alkene in a liquid reaction medium with a polymerisation initiator system formed by mixing 1 molecular equivalent of lithium borohydride with from 0.3 to 3 molecular equivalents of a halide of a metal selected from the group consisting of titanium, zirconium and vanadium.

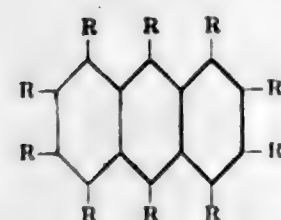
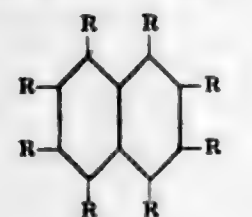
2,999,889

POLYMERIZATION OF CONJUGATED DIENES WITH POLYNUCLEAR HYDROCARBONS AS POLYMERIZATION PROMOTERS

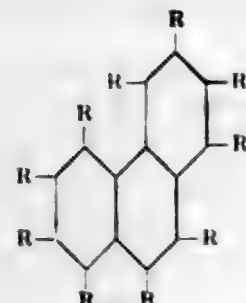
James N. Short and Ralph C. Farrar, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,141
17 Claims. (Cl. 260-94.3)

1. A method for polymerizing a monomeric material comprising a conjugated diene containing from 4 to 8, inclusive, carbon atoms to normally solid polymer which comprises contacting said monomeric material with a catalyst system comprising (a) a halide of a group IV metal containing from 2 to 4, inclusive, halogen atoms and (b) an organo metal having the formula MR_n where M is a metal selected from the group consisting of aluminum, gallium, indium, thallium and beryllium; each R is selected from the group consisting of saturated acyclic hydrocarbon radicals, saturated cyclic hydrocarbon radicals, and aromatic hydrocarbon radicals; and n is an integer equaling the valence of M, at a temperature in the range of -100 degrees to 100 degrees C. in the presence of an inert diluent which is liquid under the reaction conditions and a promoting amount of a polynuclear aromatic hydrocarbon having the general formula selected from the group consisting of:



and



where each R is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, and cycloalkyl, the sum of the carbon atoms in the molecule not to exceed 26 carbon atoms.

2,999,890

PREPARATION OF OXIDIZED HYDROXY-ALKYL STARCH

Kenneth C. Hobbs, Clarendon Hills, Ill., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Filed May 10, 1957, Ser. No. 658,242
2 Claims. (Cl. 260-233.3)

1. A process for producing a starch derivative which comprises hydroxyalkylating starch under non-gelatinizing conditions in aqueous slurry with lime as catalyst, adjusting the pH of the slurry to 2.0 and separating the resultant hydroxyalkyl starch therefrom, reslurrying the hydroxy-alkyl starch in water and adjusting the pH of the resulting slurry to at least 8.0 and oxidizing the hydroxy-alkyl starch with an oxidizing agent which releases chlorine at an oxidation-reduction potential of at least 700 millivolts, maintaining a pH of at least 8.0 during the oxidation reaction and recovering the oxidized hydroxy-alkyl starch.

2,999,891

3,9-DIAZABICYCLO[4.2.1]NONANE DERIVATIVES

Harold E. Zaugg, Lake Forest, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,235
12 Claims. (Cl. 260-239.3)

7. 9-methyl-3,9-diazabicyclo[4.2.1]nonane-4-one.

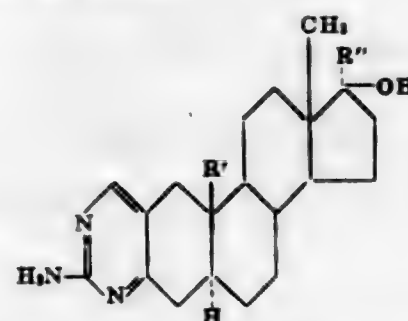
2,999,892

8-AMINO-1-HYDROXY-13a-METHYL-1H-CYCLOPENTA [5,6] NAPHTHO-1,2-g QUINAZOLINES AND PROCESS

Frank B. Colton, Chicago, and Ivar Laos, Skokie, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Nov. 20, 1959, Ser. No. 854,238
7 Claims. (Cl. 260-239.5)

1. A compound selected from the group consisting of compounds of the formula



and Δ^a compounds otherwise identical, R' in the formula being selected from the group consisting of hydrogen and methyl radicals and R'' being selected from the group consisting of hydrogen and lower alkyl radicals.

2,999,893

PREPARATION OF MELAMINE FROM CYANURIC ACID

John D. Christian, Memphis, Tenn., assignor to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed Nov. 17, 1959, Ser. No. 853,449
2 Claims. (Cl. 260-249.7)

1. In the method of making melamine comprising heating cyanuric acid as the sole melamine-forming reactant at atmospheric pressure the steps comprising (a) slowly heating the cyanuric acid initially at about room temperature to a temperature in the range of 350-400° C. over a period of at least 30 minutes; (b) continuing heating at 350-400° C. for at least 2 hours, whereby a reaction mass is formed comprising melamine cyanurate;

(c) treating the reaction mass with at least a stoichiometric amount of aqueous alkali to react with the melamine cyanurate and free the melamine therefrom; (d) and recovering melamine from the resulting solution.

2,999,894

QUINOLINE SULFONATION PROCESS

John O'Brochta, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Oct. 19, 1959, Ser. No. 847,398
3 Claims. (Cl. 260-289)

1. An integrated method for making nicotinic acid and 8-hydroxyquinoline comprising continuously supplying a feed of quinoline and oleum of high SO_3 concentration to a reaction zone, the weight ratio of oleum to quinoline being from 2:1 to 3:1, maintaining said reaction zone at a temperature of 120-180° C., continuously withdrawing from said zone a sulfonated mix comprising a solution of sulfonated quinoline in sulfuric acid at a rate sufficient to provide an average residence time for said feed in said zone of 1-6 hours, dividing said sulfonated mix into two portions representing from 30-50% and 50-70% by weight of said mix, adding to one of said portions a quantity of water at least equal to the weight thereof, thereby precipitating quinoline-8-sulfonic acid therefrom, separating said quinoline-8-sulfonic acid from its mother liquor, treating said quinoline-8-sulfonic acid with sodium hydroxide at an elevated temperature to form the sodium salt of 8-hydroxyquinoline, recovering 8-hydroxyquinoline from said salt, concentrating said mother liquor, blending the concentrate with the other of said portions of said mix to form a solution of sulfonated quinoline in sulfuric acid having therein between 10-30% by weight sulfonated quinoline, oxidizing the blend with nitric acid at an elevated temperature and recovering nicotinic acid from the oxidized reaction mixture.

2,999,895

8-HYDROXYQUINOLINE MANUFACTURE

John O'Brochta, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Oct. 19, 1959, Ser. No. 847,399
6 Claims. (Cl. 260-289)

1. Method of making 8-hydroxyquinoline comprising admixing quinoline-8-sulfonic acid with sodium hydroxide containing a quantity of water sufficient to maintain said sodium hydroxide in a fluid state at the selected reaction temperature between 270-315° C. until the completion of the reaction, the weight ratio of said sodium hydroxide to quinoline-8-sulfonic acid being about 0.5-0.75:1, heating the reaction mixture at a temperature of 270-315° C. in an inert atmosphere until a finely divided dry powder is formed, and recovering 8-hydroxyquinoline from said powder.

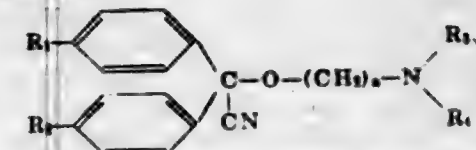
2,999,896

CYANO BENZHYDRYL ETHERS OF AMINO ALCOHOLS

Albert Schlesinger, Jackson Heights, and Samuel M. Gordon, Forest Hills, N.Y., assignors to Endo Laboratories, Inc., Richmond Hill, N.Y., a corporation of New York

No Drawing. Filed May 23, 1957, Ser. No. 661,048
6 Claims. (Cl. 260-294.7)

1. A member of the group consisting of compounds of the formula:



and the pharmaceutically acceptable acid addition salts thereof wherein: R_1 and R_2 are members of the group

consisting of hydrogen and chlorine, n is an integer of 2 to 3, R_3 and R_4 are members of the group consisting of: lower alkyl and when taken together constitute the terminal ends of a member of the group consisting of $-(CH_2)_n-$, $-(CH_2)_n-$ and $-(CH_2)_n-O-(CH_2)_n-$.

2,999,897

SELECTIVE HYDROGENATION OF CARBAZOLE

Hans Drexler, Pittsford, and Joseph C. Martini, Verona, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Oct. 2, 1959, Ser. No. 843,923
5 Claims. (Cl. 260-315)

1. Method of making tetrahydrocarbazole comprising contacting carbazole with hydrogen in an aqueous medium having a pH of at least about 11 in the presence of a nickel catalyst supported on an inert carrier at a temperature of 200-260° C. under a hydrogen partial pressure of about 100-400 p.s.i.g.

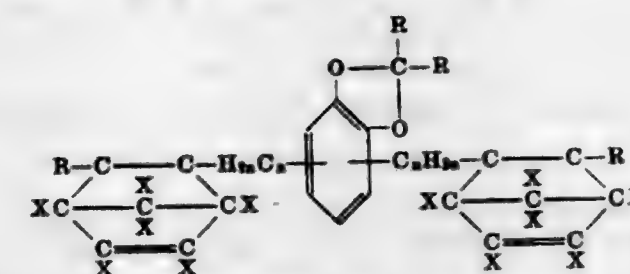
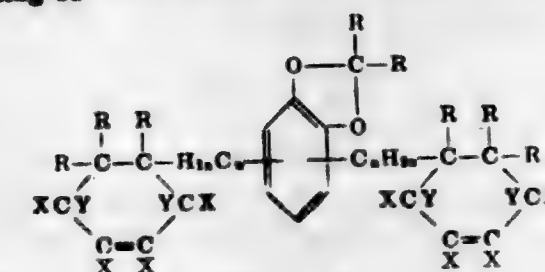
2,999,898

BIS-HALOCYCLOALKENYL DERIVATIVES OF ALKYLIDENEDIOXYBENZENES

Ralph B. Thompson, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Nov. 13, 1957, Ser. No. 696,019
5 Claims. (Cl. 260-340.5)

3. A compound of the formula selected from the group consisting of



wherein the R substituents are independently selected from the group consisting of hydrogen and alkyl radicals, the X substituents are independently selected from the group consisting of hydrogen, alkyl and halogen radicals, at least one X being halogen, the Y substituents are independently selected from the group consisting of hydrogen, haloalkyl and alkyl radicals, and n is an integer of from 0 to 8.

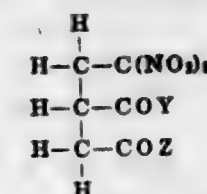
2,999,899

TRINITROETHYLSUCCINIC ACID AND DERIVATIVES THEREOF

Henry Feuer, West Lafayette, Ind., and Emil H. White, Baltimore, Md., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana

No Drawing. Filed July 22, 1958, Ser. No. 751,592
6 Claims. (Cl. 260-346.8)

1. The composition having the following structural formula



where Y is selected from the group consisting of OH,

OR, and X, R is lower alkyl and X is halogen and where Z is selected from the group consisting of OH, OR, and X', R is lower alkyl and X' is halogen when X is halogen and where Y and Z together can form the anhydride.
5. Trinitroethylsuccinic anhydride.

2,999,100

PREPARATION OF DIHYDROVITAMINS D₂

Fritz von Werder, Darmstadt, Germany, assignor to E. Merck, Aktiengesellschaft, Darmstadt, Darmstadt, Germany

No Drawing. Filed Dec. 2, 1957, Ser. No. 699,924

Claims priority, application Germany Dec. 7, 1956

6 Claims. (Cl. 260—397.2)

1. Method of isolating dihydrovitamins D₂ from mixtures of reduction compounds formed by the reduction of a member of the group consisting of tachysterol and vitamin D₂ which comprises esterifying the reduction compounds at a temperature in the approximate range of room temperature to 85° C. with a member of the group consisting of meta-nitrobenzoic acid, meta-chlorobenzoic acid and the acid chlorides of said acids in the presence of a member of the group consisting of pyridine and quinoline, separating the esters thus produced, and saponifying the said separated esters.

2,999,101

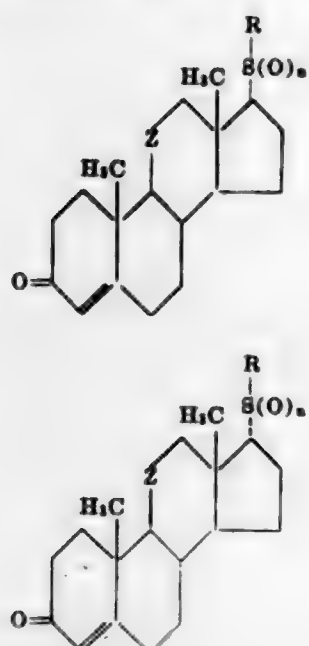
11-OXYGENATED 17-ALKYLSULFENYL- AND 17-ALKYLSULFONYLANDROST-4-EN-3-ONES

Raymond M. Dodson, Park Ridge, and Paul B. Sollman, Wilmette, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,372

10 Claims. (Cl. 260—397.3)

5. A member selected from the group consisting of compounds represented by the structural formulae



wherein Z is selected from the group consisting of carbonyl, α-hydroxymethylene, and β-hydroxymethylene radicals; R is a lower alkyl radical; and n is a positive integer less than 3.

2,999,102

BIS-(STEROID-21)-DICARBOXYLIC ACID ESTERS

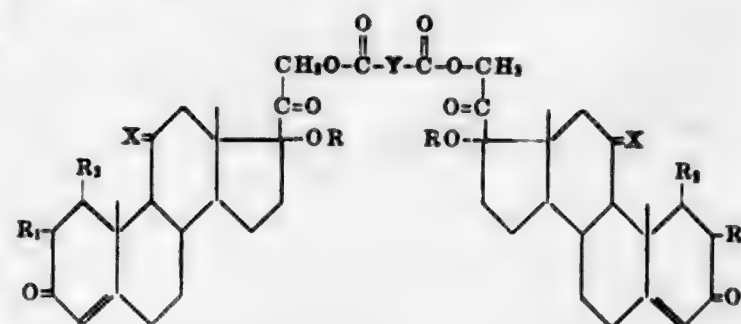
Joachim Heider and Dietrich Jerchel, Biberach, Germany, assignors to Dr. Karl Thomae G.m.b.H., Biberach an der Riss, Germany, a corporation of Germany

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,156

Claims priority, application Germany Oct. 14, 1959

14 Claims. (Cl. 260—397.45)

1. Bis-(steroid-21)-dicarboxylic acid esters having the formula



wherein X is selected from the group consisting of oxygen and



R₁ and R₂ are hydrogen and taken together form a double bond, R is selected from the group consisting of hydrogen and an acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms and Y is selected from the group consisting of a carbon-carbon bond, saturated and unsaturated alkylene radicals having 1 to 6 carbon atoms, cycloalkylene radicals, phenylene radicals, lower alkyl phenylene radicals and diphenylene radicals.

2,999,103

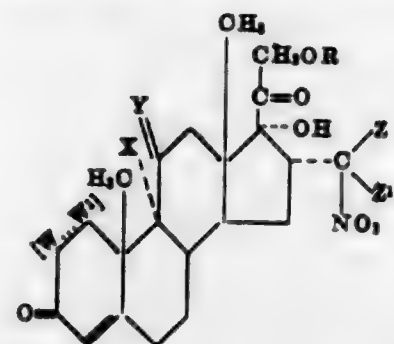
16-NITRO-ALKYL STEROIDS

Richard Ransner, Union, and Eugene P. Oliveto, Glen Ridge, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed May 1, 1959, Ser. No. 810,264

25 Claims. (Cl. 260—397.45)

1. A 16α-(n-nitroalkyl)-pregnene having the formula:



wherein [W . . . W'] is a member selected from the group consisting of —CH₂—CH₂— and —CH=CH—; Y is a member selected from the group consisting of O, (H,αOH) and (H,βOH); X is a member selected from the group consisting of H and a halogen atom, said halogen atom having an atomic weight of less than 125, and X is H when Y is (H,αOH); each of Z and Z' is a member selected from the group consisting of H and alkyl radicals; and R is a member selected from the group consisting of H and acyl.

2,999,104

PROCESS FOR SIMULTANEOUS ALCOHOLYSIS AND GASPROOFING OF TUNG OIL

Leo A. Goldblatt, El Cerrito, Calif., and Lucien L. Hopper and Eric T. Rayner, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application Apr. 10, 1959, Ser. No. 805,647. Divided and this application Jan. 8, 1960, Ser. No. 6,335

1 Claim. (Cl. 260—410.6)

A process for simultaneously alcoholizing and gasproofing tung oil without danger of gelation comprising heating 1 part by weight of tung oil with at least about 0.136 part by weight of trimethylolethane in the presence of an alcoholysis catalyst at a temperature of at least 565° F. for at least about 10 minutes.

2,999,105

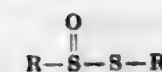
PROCESS FOR PREPARATION OF ESTERS OF THIOSULFINIC ACIDS

Rector P. Louthan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 20, 1957, Ser. No. 660,042

10 Claims. (Cl. 260—453)

1. The process of preparing an organic ester of the thiosulfinic acid having the formula



wherein R is selected from the group consisting of alkyl, cycloalkyl, and aralkyl hydrocarbon radicals comprising reacting a sulfonyl halide of the formula R—S—X wherein R is a radical above identified and X is a halogen selected from the group consisting of chlorine, bromine, iodine, and fluorine, with an alkali metal hydroxide, and recovering the thiosulfinate thus formed.

2,999,106

METHOD OF STORING 4,4'-METHYLENE-DIPHENYLISOCYANATE

Robert M. Prosser, Wilmington, Del., and Charles A. Seibert, Jr., Salem, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 17, 1959, Ser. No. 807,039

5 Claims. (Cl. 260—453)

1. A method of storing 4,4'-methylenediphenylisocyanate so as to substantially prevent the formation of insoluble residues therein which consists of maintaining the 4,4'-methylenediphenylisocyanate in a closed container in the liquid state at a temperature of between 40° C. and 50° C.

2,999,107

PREPARATION OF ADIPONITRILE BY HYDROGENATION OF 1,4-DICYANOBUTENES

Richard Vernon Lindsey, Jr., Hockessin, and Halsey Bidwell Stevenson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 9, 1959, Ser. No. 825,869

7 Claims. (Cl. 260—465.8)

1. A process for the hydrogenation of 1,4-dicyanobutene isomers in the liquid phase to adiponitrile which comprises reacting the said 1,4-dicyanobutenes with hydrogen under pressure in the range of 4 to about 1000 atmospheres in the presence of from about 0.0001% to about 1% by weight, based on the weight of 1,4-dicyanobutene, and calculated as metallic rhodium, a rhodium catalyst selected from the group consisting of rhodium halides, rhodium chelates, and rhodium carbonyl halides at a temperature of from 25° to 150° C., and recovering adiponitrile from the reaction mixture.

2,999,108

BARK TREATMENT PROCESS AND PRODUCT
Kenneth Russell Gray and Lloyd Eugene Van Blaricom, Shelton, Wash., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

No Drawing. Filed Oct. 7, 1957, Ser. No. 688,388

9 Claims. (Cl. 260—512)

1. The process of making a bark derivative containing water-soluble sulfonate salts of hydroxy aromatic polymeric compounds which comprises digesting a bark of the group consisting of Douglas fir, Amabilis fir, and southern pine in an acid water solution at a pH below 7.0 of a salt of the group consisting of sodium and potassium salt of sulfurous acid which is at least 50% alkali bisulfite at a temperature of from 105° C. to 200° C. while maintaining sulfurous acid salt in the reaction mixture, said heating being continued until a portion of the sulfurous acid radical of the inorganic salt is combined in the water-soluble derivatives of the bark, separating from the bark residue the water-soluble bark derivative which is practically free of saponified matter, and alkalizing the solution by the addition of a sodium compound.

7. A water-soluble product comprising alkali metal sulfonic acid salts of aromatic hydroxy polymeric compounds and inorganic alkali metal salts resulting from digesting a bark of the group consisting of Douglas fir, Amabilis fir, and southern pine in an acid water solution at a pH below 7.0 of a salt of sulfurous acid of the group consisting of sodium bisulfite, and sodium sulfite at a temperature of from 105° C. to 200° C. until a portion of the insoluble part of the bark is converted to water-soluble hydroxy aromatic alkali sulfonate compounds, separating from the bark residue the water-soluble composition which is practically free of saponified matter, and alkalizing the solution by the addition of a sodium compound.

2,999,109

PREPARATION OF CYCLOPENTADIENYL-SODIUM

John F. Nobis, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 5, 1958, Ser. No. 719,195

6 Claims. (Cl. 260—514)

1. A process for preparation of compounds from the group consisting of cyclopentadienyl sodium and methylcyclopentadienyl sodium which comprises reacting a diene from the group consisting of cyclopentadiene and methylenecyclopentadiene, at from about 0 to about 100° C. and in presence of an inert organic liquid from the group consisting of oxygen-containing aliphatic hydrocarbon ethers and hydrocarbons and mixtures thereof, with a dispersion of finely divided sodium in which more than about 90% of the dispersed sodium particles are substantially less than about five microns in size and the average particle size of the sodium particles is less than three microns in size, said reaction being carried out in a reaction mixture consisting essentially of said sodium, inert organic liquid and diene.

2,999,110

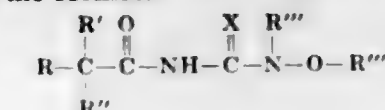
1-(SUBSTITUTED PHENYL ALKANOYL)-3-ALKOXY UREAS

William A. Lott, Maplewood, and Jack Bernstein and Barbara Stearns, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 5, 1959, Ser. No. 831,692

9 Claims. (Cl. 260—553)

1. A compound selected from the class consisting of a compound of the formula



wherein R is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl, phenyl halophenyl (lower alkyl), phenyl (lower alkoxy)phenyl, and phenyl(lower alkyl); R' and R'' are each members of the group consisting of hydrogen, lower alkyl, phenyl, halophenyl (lower alkyl)phenyl, and (lower alkoxy)phenyl; and together with the carbon to which they are joined R' and R'' is cycloalkyl of less than eight carbon atoms; and together with the carbon to which they are joined R, R' and R'' is a member of the group consisting of phenyl and pyridyl; R''' and R'''' are each members of the group consisting of hydrogen and lower alkyl and X is a member of the group consisting of O and S; and pharmacologically acceptable salts thereof with bases.

2,999,111

RECOVERY OF 6-DEOXY-6-DEMETHYL-TETRACYCLINE

Charles R. Stephens, Jr., Natick, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 30, 1959, Ser. No. 843,357
7 Claims. (Cl. 260-559)

1. In the method of preparing a 6-demethyl-6-deoxy-tetracycline antibiotic compound from a corresponding 6-oxy compound selected from the group consisting of amphoteric 6-demethyltetracycline, amphoteric 6-demethylchlorotetracycline and their acid addition salts by means of catalytic hydrogenation in a reaction-inert alcoholic solvent chosen from the group consisting of lower alkanols and lower alkoxyalkanols, the step which comprises recovering the 6-demethyl-6-deoxytetracycline antibiotic compound from said alcoholic hydrogenation liquor by contacting said compound in said liquor with at least an equimolar amount of concentrated sulfuric acid to form the corresponding acid sulfate addition salt and crystallizing the so produced 6-demethyl-6-deoxytetracycline acid sulfate addition salt from the alcoholic solution.

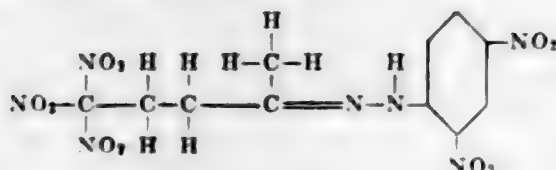
2,999,112

2,4-DINITROPHENYL HYDRAZONE OF TRINITROPENTANONE

Robert H. Saunders, West Chester, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed May 7, 1952, Ser. No. 286,605
1 Claim. (Cl. 260-566)

2,4-dinitrophenyl hydrazone of trinitropentanone having the following structural formula:



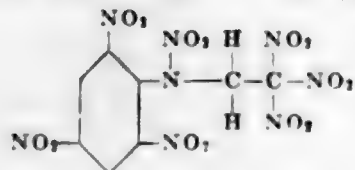
2,999,113

TRINITROETHYL TRINITROPHENYL NITRAMINE

Delore L. Kouba, Newport, Del., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed May 7, 1952, Ser. No. 286,596
1 Claim. (Cl. 260-577)

Trinitroethyl trinitrophenyl nitramine having the following structural formula:



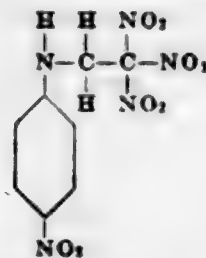
2,999,114

N(β-TRINITROETHYL)-p-NITROANILINE

Delore L. Kouba, Newport, Del., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed May 7, 1952, Ser. No. 286,597
1 Claim. (Cl. 260-577)

N(β-trinitroethyl)-p-nitroaniline having the following structural formula:



2,999,115

β-TRINITROETHYLPHENYLAMINE

Robert H. Saunders, West Chester, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed May 7, 1952, Ser. No. 286,602
1 Claim. (Cl. 260-577)

β-Trinitroethylphenylamine.

2,999,116

PROCESS FOR PREPARING PATCHOULIONE

Habib Emile Eschmazi, Montclair, N.J., assignor to The Glaxo Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 11, 1958, Ser. No. 741,218
3 Claims. (Cl. 260-587)

1. The process for making patchoulione, which comprises reacting trans-β-patchoulane-diol with a strong acid in the presence of an inert, water-immiscible solvent, under reflux, while removing the water of reaction continuously from the reaction mixture.

2,999,117

ALKYL DECABORANES AND METHOD FOR THEIR MANUFACTURE

Elmer R. Altwicker, Dayton, and Alfred B. Garrett, Columbus, Ohio, and Earl A. Wellmester, Kenmore, N.Y., and Samuel W. Harris, Oxford, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Mar. 28, 1955, Ser. No. 497,407
17 Claims. (Cl. 260-606.5)

1. A compound selected from the group consisting of monomethyldecaborane and dimethyldecaborane.

4. A method for the preparation of an alkylated decaborane which comprises reacting decaborane and an alkyl halide selected from the group consisting of alkyl chlorides, alkyl bromides and alkyl iodides having from 1 to 5 carbon atoms while the reactants are in admixture with an alkylation catalyst selected from the group consisting of the trichlorides and tribromides of aluminum, gallium, indium and thallium.

2,999,118

PREPARATION OF TRICHLORO NITRO ALCOHOLS AND TRICHLORO NITRO ALKENES

Gustave B. Bachman and Norman W. Standish, West Lafayette, Ind., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana

No Drawing. Filed Apr. 22, 1959, Ser. No. 808,018
4 Claims. (Cl. 260-633)

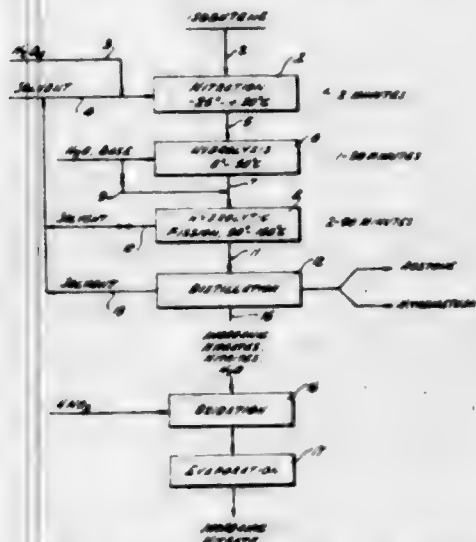
1. A process for the manufacture of trichloro nitro alcohols and trichloro nitro alkenes which comprises contacting vapors of 1-nitro alkanes with chloral at temperatures ranging from about 275° C. to about 400° C. in the presence of magnesium sulfate and from about 0.2 to

about 7.5 mole percent, based on the total weight of the reactants, of a tertiary aliphatic amine containing up to 6 carbon atoms,

atoms with nitrogen tetroxide at a temperature between about -25° and $+30^{\circ}$ C., the improvements which comprise (1) carrying out the nitration in the presence of an inert aromatic solvent and in the absence of any solvent containing an ether group, and (2) limiting the contact of nitrogen tetroxide with the initially produced olefin nitration products to a period of time between about 0.1 second and 2 minutes.

2,999,119
NITRATION OF OLEFINS IN THE PRESENCE OF AROMATIC SOLVENTS

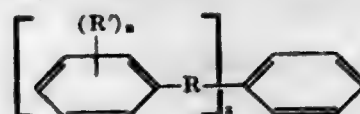
Art C. McKinnis, Long Beach, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California
Filed Dec. 19, 1955, Ser. No. 553,914
9 Claims. (Cl. 260-644)



1. In the liquid phase nitration of a tertiary mono-olefinic hydrocarbon containing between 4 and 12 carbon

2,999,120
VISCOSITY INDEX IMPROVING AGENTS
Doreen R. Wilgus, Richmond, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,176
4 Claims. (Cl. 260-668)

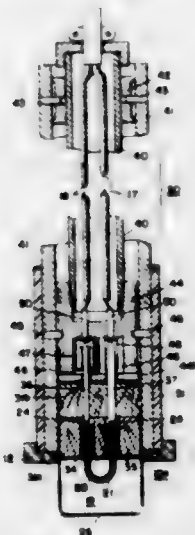
1. As a new composition of matter, a compound of the formula:



wherein R is a saturated hydrocarbon radical having from 6 to 12 carbon atoms, R' is a saturated hydrocarbon radical having from 1 to 4 carbon atoms, n is a number from 0 to 3, and x is a number from 2 to 6, wherein one of the benzene rings is attached to the alpha carbon atom of said R radical and the other benzene ring is attached to the omega carbon atom of said R radical.

ELECTRICAL

2,999,121
FAST ACTING TOTALLY EXPENDABLE IMMERSION THERMOCOUPLE
Harold G. Mead, Rosemont, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 14, 1958, Ser. No. 736,947
32 Claims. (Cl. 136-4)



1. An expendable thermocouple assembly of the immersion type for use in measuring the temperature of molten metals, comprising a thermocouple having elements of short length and small cross-sectional area joined together at one end to form a measuring junction, supporting structure of electrically non-conductive material having a high-temperature destruction point and a low heat transfer characteristic into which the free terminal ends of said elements extend, a heat-refractory electrically non-conductive sheath member enclosing all portions of said elements extending outwardly from said

structure and a portion of said elements extending into said supporting structure, a seal between said sheath member and said supporting structure to prevent ingress of molten metal into said structure, lead wires extending into said supporting structure and electrically connected to the free terminal ends of said elements in a region inwardly spaced from said seal, said region being in an immovable portion of said supporting structure, the diameter of said lead wires being large as compared with the diameter of said thermocouple elements and being several times greater for rapid absorption of heat to prevent a material rise in temperature at the points of said electrical connections between said lead wires and said terminal ends of said elements due to the flow of heat along said thermocouple elements upon immersion thereof in molten metal, and a fusible enclosure surrounding said measuring junction and the thermocouple elements extending therefrom to protect them during immersion into molten metal, said enclosure being rapidly fused or melted by the molten metal to expose the refractory-enclosed measuring junction to the molten metal, said enclosure delaying the exposure of said thermocouple to the molten metal during the time it is moved from the surface of the molten metal to a selected temperature-measuring subsurface level thereof.

2,999,122
THERMAL POTENTIAL PRODUCING CELL
John H. Zauner, Houston, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 28, 1958, Ser. No. 770,242
3 Claims. (Cl. 136-90)

1. A multi-unit battery comprising a plurality of thermal cell units serially connected to produce a voltage greater than the voltage of any of said units when the battery is heated, each unit comprising a length of wire

screen having a quantity of powdered magnesium tightly compressed into an end portion only thereof to form a thin anode and a quantity of V_2O_5 tightly compressed into the other end portion only thereof to form a thin



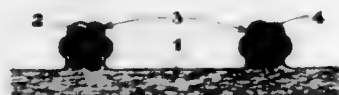
cathode, a plurality of pellets of solid fusible electrolyte, an anode of one of said screens and a cathode of another of said screens being arranged on opposite sides of one of said pellets and in intimate contact therewith.

2,999,123 SEPARATING PLATES

Ernst Koldehofe, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

Filed Mar. 17, 1958, Ser. No. 721,851

Claims priority, application Germany Mar. 16, 1957
12 Claims. (Cl. 136—145)



1. A method of making separator plates of glass fibers and a binding agent, especially for accumulators, which includes the steps of: performing a glass fiber plate, impregnating the glass fibers of said plate with a dispersion of a binding agent comprising polystyrene and an ammonium salt of a polymeric acrylic acid, and subjecting the thus obtained crude plate to heat of from 160° to 220° C.

2,999,124 ELECTRIC JUMPER BOND

Donald J. Burke, Tulsa, Okla., assignor to Continental Industries, Incorporated, Tulsa, Okla., a corporation of Oklahoma

Filed Sept. 26, 1958, Ser. No. 763,588

3 Claims. (Cl. 174—84)

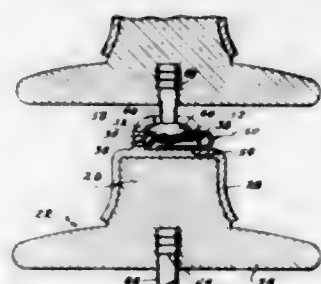


3. An electrical connection comprising a conductive body, a strip of conductive material positioned against a surface of said body and having an integral embossment protruding beyond that surface of the strip opposite to said conductive body, said embossment being of substantially frusto-conical shape and having an axial perforation therein, and solidified weld metal filling said embossment and overlying the rim thereof and being welded at its bottom directly to the conductive body and in its upper portions directly to the inside, rim and outside of the embossment whereby the strip is interlocked to the body.

2,999,125
CONNECTING MEANS FOR INSULATOR STRINGS
Raymond A. Young, Canton, Ohio, assignor, by mesne assignments, to James R. Kearney Corporation, St. Louis, Mo., a corporation of Delaware
Filed Feb. 27, 1959, Ser. No. 796,135
5 Claims. (Cl. 174—141)

1. In an electrical insulator string having a plurality of elements connected by pin-and-socket type connec-

tions, an anti-static locking clip comprising an electrically conductive generally U-shaped member, the legs of said U-shaped member being resiliently biased apart, one of said legs having a circular depression forming a clip retaining seat for receiving a round pin head end in firm electrical contact, and the other of said legs being adapted to rest against a portion of said socket opposite the pin



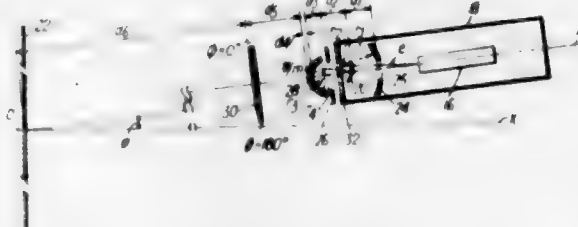
head end in firm electrical contact therewith, whereby the legs of said clip are compressed between the end of said pin head and the socket, said clip when compressed acting to hold the pin and socket engaged but permitting universal movement therebetween and between said seat and pin end and engagement of said seat with said pin end retaining said clip within the socket.

2,999,126 FACETTED CORRECTION LENS FOR MINIMIZING KEYSTONING OF OFF-AXIS PROJECTORS

John Henry Owen Harries, Warwick, Bermuda, and Walter Thompson Welford, Blackheath, London, England, assignors to Harries Television Research Limited, Hamilton, Bermuda, a British company

Filed May 19, 1959, Ser. No. 814,206

Claims priority, application Great Britain May 29, 1958
28 Claims. (Cl. 178—5.4)

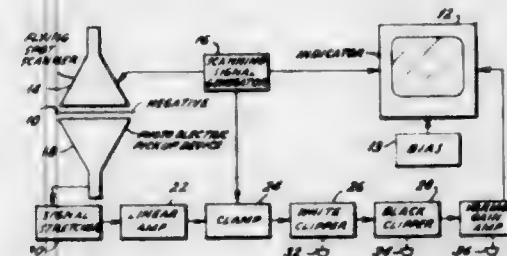


22. A colour television receiver including a plurality of display devices adapted to provide displays in different primary colours, all but one of said display devices having oblique optical projection systems, said remaining display device having an optical projection system with its axis normal to the image surface, whereby the displays produced by said display devices are superimposed at said image surface, said normal optical projection system including an aspheric correction device the gradients of which change in a continuous manner and are such that the points of arrival of the rays at the image surface of the system are displaced into positions such that axially symmetric distortions are substantially avoided, and said oblique projection systems each including a light-transmitting plate having at least one surface which varies in slope and which comprises a plurality of facets separated by lines of discontinuity of slope, the gradients of each facet being such that the paths of a bundle of rays from the object in the optical system which pass through that facet are modified so as to displace the points of arrival of the rays at an image surface in the optical system into such positions that keystone distortion and axially symmetric distortions in the images are substantially avoided.

2,999,127 AMPLITUDE SELECTIVE AMPLIFYING SYSTEM

Joseph F. Fisher, Wynnewood, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 14, 1957, Ser. No. 690,150
11 Claims. (Cl. 178—7.5)



1. In a signal processing system which includes a source of signals which undergo amplitude variations as a function of time, the combination comprising a non-linear amplifier means and first and second manually adjustable clipping circuits coupled in cascade in the order recited, said non-linear amplifier means including means for causing the instantaneous output signal amplitude versus instantaneous input signal amplitude characteristic to decrease in slope as a function of increasing instantaneous input signal amplitude for at least a limited range of amplitude values having one limit at approximately zero amplitude, one of said clipping circuits comprising means for passing only signal amplitude variations below a first selectable amplitude level, the other of said clipping circuits comprising means for passing only signal amplitude variations above a second selectable amplitude level, said first and second amplitude levels being independent of the average amplitude of the signal supplied by said source, said second selectable amplitude level being lower than said first selectable amplitude level, means coupled to said first and second manually adjustable clipping circuits for setting said first and second selectable amplitude levels, means coupling said source to the input of said non-linear amplifier means, and means for deriving an output signal from said second adjustable clipping circuit.

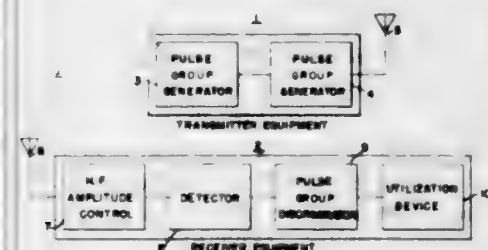
2,999,128 PULSE COMMUNICATION SYSTEM

Conrad H. Hoepfner, Washington, D.C.

Filed Nov. 14, 1945, Ser. No. 628,639

1 Claim. (Cl. 178—43.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)



A radio pulse signaling system comprising pulse group generating means for generating a pulse signal comprising a predetermined plurality of predeterminedly spaced radio frequency pulses within a predetermined interval of time, each of said pulses in said plurality being substantially identical and having a predetermined amplitude and a predetermined pulse width, the time spacing between pulses in said plurality being small with respect to pulse width such that said plurality is the maximum number of pulses which may be included in said predetermined interval of time, means for transmitting the out-

put of said pulse group generating means, means for receiving the transmitted output of said generating means including a gain controlled amplification channel, time constant circuit means incorporated in said channel selectively responsive to the amplitude of a received pulse signal of predetermined amplitude in such a manner as to block subsequently received signals of lesser amplitude for a predetermined period of time, means for detecting the amplified output of said channel, and pulse discriminator means including pulse width discriminating means and pulse group discriminating means connected in cascade, said pulse width discriminating means responsive to and adapted to pass pulses of said predetermined width, said pulse group discriminating means responsive to and adapted to pass groups of pulses of said plurality occurring within said predetermined interval of time, and utilization means connected to said pulse discriminator means for utilizing the output thereof.

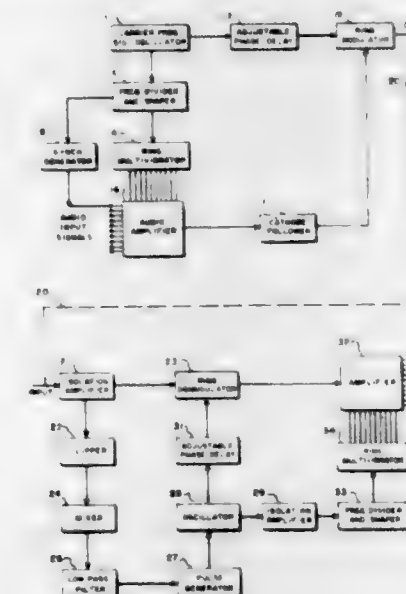
2,999,129 TELECOMMUNICATION MULTIPLEXING SYSTEM

Gerard Lynch, 608 N. Illinois St., Arlington, Va.

Filed July 23, 1957, Ser. No. 673,744

9 Claims. (Cl. 179—15)

(Granted under Title 35, U.S. Code (1952), sec. 266)

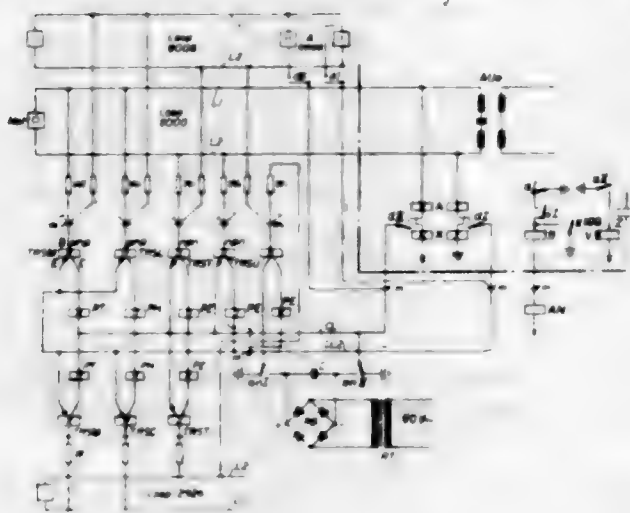


1. A telecommunication multiplexing system comprising a transmitter having generating means for producing a carrier signal, means connected to said generating means for sequentially sampling each of a plurality of audio-signal channels at a repetition rate equal to the carrier frequency divided by the number of audio signal channels being transmitted for a duration of time equal to one cycle of said carrier frequency signal, means connected to said last named means for forming a complex audio waveform, and means connected to said generating means for suppressed-carrier modulating said carrier frequency with said complex audio waveform and having as an output a complex suppressed carrier signal; and a receiver having means for producing a signal at approximately said carrier frequency, means for frequency and phase locking said last named means to said carrier frequency, detecting means for receiving said produced carrier frequency signal and said complex suppressed carrier signal and having as an output a complex audio signal waveform; and a sampling means for sequentially sampling said complex audio signal waveform at a repetition rate equal to the carrier frequency divided by the number of audio signal channels being transmitted for a duration of time equal to one cycle of said carrier frequency signal, and means connected to said sampling means for forming a plurality of audio signal outputs equal to the number of said audio signal channels being transmitted.

2,999,130 CIRCUIT ARRANGEMENT FOR LINE IDENTIFICATION

Helmut Stöbe, Ludwigshafen, and Herbert Heltmann, Stuttgart-Fieberbach, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed June 5, 1957, Ser. No. 663,680
Claims priority, application Germany June 15, 1956
7 Claims. (Cl. 179-18)



1. A circuit arrangement for selectively manifesting multi-digit numbers identifying subscriber lines in a telecommunication system, comprising a plurality of orders of different digit manifesting circuits, separate impedance means individually coupling the lines of a group having the same digit in an order of their numbers to the manifesting circuit for this digit in the corresponding order of the manifesting circuits, each line being thus coupled by a plurality of connected impedance means to a combination of the digit manifesting circuits, one in each order, to manifest the multi-digit number of the line, a common operating circuit for the identifying circuits, a source of electric potential for said operating circuit, and switch means controlled by a subscriber line sub-set and including a switch device common to a plurality of the lines for switching potential from said source to said operating circuit and further including a switch device individual to the line for applying potential from the operating circuit via the line and the connected impedance means to the combination of digit manifesting circuits coupled to the line so as to render this combination of digit manifesting circuits concurrently effective to manifest the identifying number of the called line.

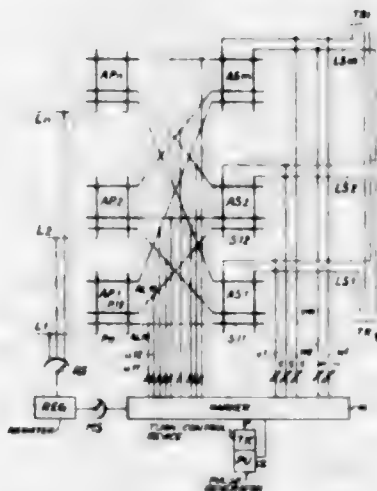
2,999,131 GROUP SELECTION STAGE FOR AUTOMATIC TELEPHONE EXCHANGES

Nils Herbert Edström, Hagersten, Sweden, assignor to Telefonaktiebolaget L. M. Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed June 6, 1957, Ser. No. 664,025
Claims priority, application Sweden June 21, 1956
2 Claims. (Cl. 179-18)

1. In an automatic telephone system, incoming lines (L1—Ln) and outgoing lines (LS1—LSm) belonging to different traffic routes; a group selection stage comprising primary and secondary cross-bar switches (AP1—APn, AS1—ASm) including operating bars (P11, P12, S11, S12) and links (AL11, AL12) connecting said switches, a plurality of markers (M . . .) each including a traffic route determining device (OM) and a selection means (VU1, TU1, R1 . . . VU30, TU30, R30), said selection means comprising a plurality of idle-link marking members (TU1—TU30) and an equal plurality of line selecting members (VU1—VU30); each connected with one of said idle-link marking members, a route marking means

(W, TP) in each marker for each traffic route, said incoming lines being connected to said primary switches and said outgoing lines being connected, one line from each route, to each of said secondary switches and to one of said route marking means; a time pulse generator (PU); a control device (TK) connected to said generator, said generator and said control device activating said markers, one by one, temporarily for selecting links and lines for setting up communications; a link testing conductor (u11, u12 . . .) for each link and each idle-line marking means (LS, LP in FIG. 3, LRR, LPR in FIG. 4, LS, LPR in FIG. 5 and T, e21, TSM in FIG. 6) including a testing conductor (d) for each outgoing line; connecting circuit means (RS, MS) for connecting a calling incoming line (L1) to an idle one of said markers (M); means (AT1, AR1 . . . ATn, ARn) in each of said markers for connecting the link testing conductors for all the links connectable to the respective calling incoming line to each one of said idle-link marking means to mark idle links during a subsequent selection for the marker; a testing conductor (v1—vm) for each secondary cross-



bar switch, each of said testing conductors being multiplied to a corresponding line selecting member in each of said markers and to the line testing conductor for all outgoing lines connected to the secondary cross-bar switch; a route marking conductor (w1—sq) for each traffic route, each of said route marking conductors being multiplied to the corresponding one of said route marking means in said markers and to said idle-line marking means for all outgoing lines belonging to the traffic route, said route determining device actuating said route marking means in response to a pulse from said pulse generator and said route marking means actuating the idle-line marking means for all idle lines in the respective route, said idle-link marking members in response to said actuation of the idle-line marking means actuating said line selecting members corresponding to idle links and the first line-selecting member becoming operated selecting the corresponding outgoing line and blocking the other line-selecting members, the respective marker setting up a communication between the calling line and the selected outgoing line through the link corresponding to the first operated line-selecting member.

2,999,132 IDENTIFYING SYSTEM

Henri Benmussa, Meudon, and Andre Mingaud, Paris, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,733
Claims priority, application France July 11, 1958
5 Claims. (Cl. 179-18)

1. A circuit for identifying a marked one of a plurality of points arranged in a coordinate array comprising a plurality of row wires divided into groups, there being

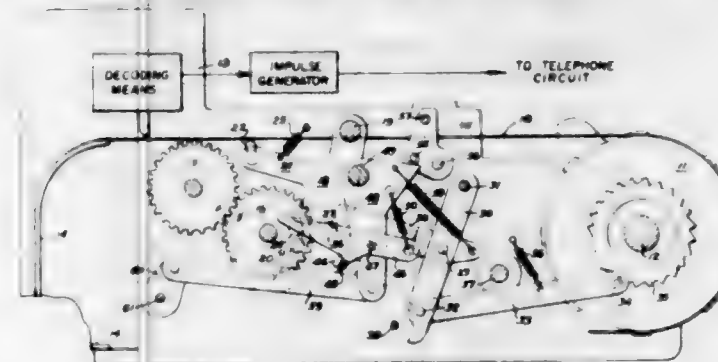
one row wire for each row of points, a first resistor at each point in a row connecting said point to said row wire, a plurality of column wires divided into groups there being one column wire for each column of points, a second resistor at each point in a column connecting said point to said column wire, an amplifying circuit comprising at least two stages of amplifying devices, there being one amplifying device in said first stage for each row wire and one for each column wire and a plurality



of amplifying devices in said second stage, means for respectively coupling said first stage devices to said wires so as to cause the device coupled to a wire to become conducting when a point connected to said wire over one of said resistors has been marked by the application of a predetermined potential, and means for coupling each device of the first stage to two devices of said second stage, one to represent the group of the wire to which said device is coupled and the other to represent the position of said wire in the group.

2,999,133 TAPE ADVANCER FOR AUTOMATIC TELEPHONE DIALER

James Kilburg, San Carlos, and William E. Thomas, San Francisco, Calif., assignors to James Kilburg Corporation, San Mateo, Calif., a corporation of California
Filed Aug. 16, 1957, Ser. No. 678,625
12 Claims. (Cl. 179-90)



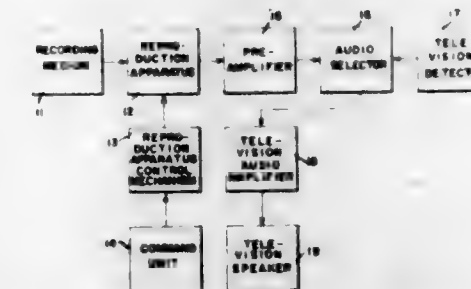
1. For combination with a machine which includes an advanceable tape having codes representing telephone numbers arranged thereon at separated positions throughout its length, decoding means for translating information represented by said codes to impulses in a telephone circuit, and means for adjusting the tape to present separate codes thereon to the decoding means, means operable in response to a separate code symbol on the tape to advance the tape to a second code position automatically upon completion of a decoding cycle of the machine.

2,999,134 AUTOMATIC STATION SELECTED INDICATOR FOR REMOTE CONTROLLED TELEVISION RECEIVERS

Harry Vorgan, 1252 S. Rimpson Blvd., Los Angeles, Calif.
Filed July 13, 1960, Ser. No. 42,532
10 Claims. (Cl. 179-100.1)

1. In a television receiver adapted for remote station selection, an apparatus for automatically and audibly

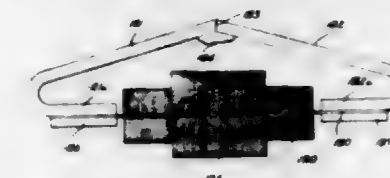
indicating the station selected in response to the remote selection thereof, said apparatus comprising a recording medium containing a plurality of pre-recorded messages each of which is informative of a television station that may be selected, means for reproducing said pre-recorded



messages, means for selecting for reproduction a predetermined one of said pre-recorded messages in response to the remote selection of a television station, and means for interrupting the received audio signal from a television station and substituting therefor said one of said pre-recorded messages.

2,999,135 FLUX GATE TRANSDUCER

David E. Wiegand, Villa Park, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed Mar. 3, 1955, Ser. No. 492,013
4 Claims. (Cl. 179-100.2)



2. Magnetic apparatus comprising magnetic core means providing a loop magnetic flux path, means for introducing a signal flux into said loop path, said path including an elongated strip of magnetic material of relatively small cross section in comparison to the cross section of other portions of said core means, means comprising exciting windings on said strip for producing opposed exciting fluxes in said strip, and output means on said strip and separate from said exciting windings and coupled to said exciting fluxes for producing an electrical output.

2,999,136 SPECTACLE HEARING AID

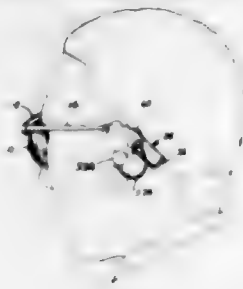
Norman H. Holt and Roger E. Erickson, St. Paul, Minn., assignors to Telex, Inc., St. Paul, Minn., a corporation of Minnesota

Filed Jan. 6, 1956, Ser. No. 557,717

17 Claims. (Cl. 179-107)

1. In a hearing aid, an elongated hollow housing which is longitudinally curved to conform generally to the back of the ear of the human wearer, said housing containing therein a microphone, an electrical amplifier, a power source, and a receiver assembly, an ear piece remote from

the housing for insertion in the ear of the wearer, and a tubular sound conduit connecting the receiver to the ear

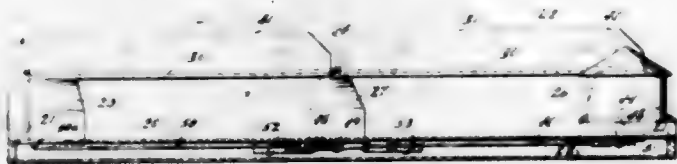


piece and adapted to extend over the ear of the wearer to suspend the housing directly and solely from the ear.

2,999,137

DRAW BRIDGES FOR MODEL RAILROADS

Michael Prokopik, 5209 N. Hope St., Philadelphia, Pa.
Filed May 26, 1958, Ser. No. 737,562
10 Claims. (Cl. 191-9)



1. A draw bridge for model electric railroads comprising a horizontally disposed hollow elongated base, spaced end abutments mounted on said base at opposite ends thereof and each having a central opening, a central abutment mounted on said base intermediate said end abutments, said base having an elongated space extending beneath said end abutments, a pair of bridge leaves having track rails thereon, said bridge leaves having inner and outer ends and said inner ends being engageable on upper portions of said central abutment, pivotal mounting members connecting the outer ends of said bridge leaves and said end abutments, each of said bridge leaves at its outer end having an actuating lever extending downwardly therefrom and movable within one of said end abutment central openings, an electric motor mounted on said base at one end thereof and having a vertical shaft, a crank disposed in said elongated space at one end thereof and connected to said shaft in driven relation, an actuating arm in said space intermediate said ends pivotally mounted on a vertical pivot for oscillatory movement in a horizontal plane, an actuating rod in said space connecting said crank and said actuating arm for oscillating said actuating arm, and links pivotally connected to opposite ends of said actuating arm and to said actuating levers and disposed in said space in said base for simultaneously raising and lowering said bridge leaves.

4. A draw bridge for model electric railroads as defined in claim 1 in which approach track sections are provided aligned with the opposite outer ends of the track rails of said leaves, and contacts are provided controlled by the movement of said levers for controlling the energization of said approach track sections.

2,999,138

TEASE-PROOF SNAP-ACTION SWITCH

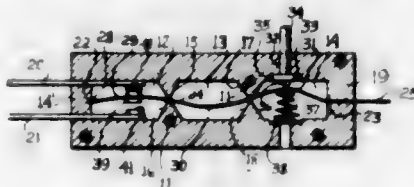
Charles A. Ball, Jr., Highland Park, Ill., assignor to
Cherry Electrical Products Corp., Highland Park, Ill.,
a corporation of Illinois

Filed Oct. 19, 1959, Ser. No. 847,204

1 Claim. (Cl. 200-67)

A tease-proof snap-action switch comprising identical sections adapted for facial abutment with respect to each

other to provide a housing and having transversely extending projections spaced from each other to provide an intermediate cavity and end cavities on opposite sides of the intermediate cavity, each projection being divided into an upper and lower section with each section formed substantially triangularly in cross-section and having their apexes disposed on a longitudinal line through the housing, the end walls of said housing having internal seats formed therein in line with said apexes, a flexible switch blade within said housing and extending between the apexes of said sections with opposite end portions seated in said seats, the length of said blade being greater than the distance between said seats whereby when said blade has its opposite ends seated in said seats the blade will



be undulated to provide alternate bowed portions located in said cavities, one end portion of said blade having a terminal extending from the housing, parallelly extending terminal plates in the opposite end of the housing and extending exteriorly thereof and having confronting contact heads located within the end cavity adjacent said end wall, and means for flexing successively the bows of said blade from the said one end of the housing in a direction toward said opposite end of said housing to bring the bowed portion of the blade in said adjacent cavity into alternate contact with said contacts of said terminals, said means including an actuator carried by the housing and engaging the bow of the switch blade within the cavity adjacent the other end wall of the housing.

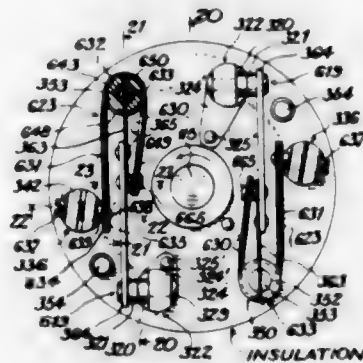
2,999,139

CENTRIFUGAL SWITCH DEVICES

Royal Lee, Elm Grove, Wis., assignor to Lee Engineering Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Feb. 6, 1958, Ser. No. 713,728

7 Claims. (Cl. 200-80)



1. In a speed-responsive device, a rotatable member, centrifugal means carried by said member including a centrifugally displaceable swingable arm, a stud rigidly secured to and projecting from said arm in the plane of swinging displacement of said arm and from a region of said arm between the opposite sides of said arm, said stud having an outer shoulder-forming head portion, biasing spring means including a resilient arm having an end portion with a keyhole slot releasably interengaged with said stud on said swingable arm to exert a biasing force on said swingable arm opposing centrifugal displacement of said swingable arm, said keyhole slot having an enlarged portion for admitting therethrough said stud head portion and a reduced portion normally engaged behind said stud head portion, and switch means

responsive to centrifugal displacement of said swingable arm, said arms being movable in a plane normal to the axis of rotation of said rotatable member.

insulating means connecting the other ends of each of said bimetallic elements, said first and second bimetallic elements having substantially identical thermal characteristics

2,999,140

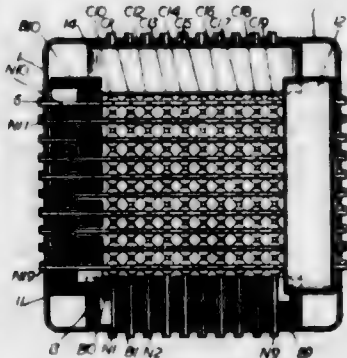
ELECTRO-MAGNETIC COORDINATE SWITCH

Claude René Jean Dumoussau, Neuilly-sur-Seine, and Emile Touraton, Paris, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 12, 1958, Ser. No. 773,441

Claims priority, application France Dec. 3, 1957

5 Claims. (Cl. 200-104)



1. An electromagnetic coordinate switch comprising a switch frame, a group of spaced horizontal magnetic bars supported on said frame and lying in a first plane in coordinate relation with a group of spaced vertical magnetic bars supported on said frame and lying in a second plane, each of said horizontal and vertical bars having an individual flux-generating coil means magnetically associated therewith and each of said groups of bars having a common flux-generating coil means magnetically associated with all of the bars in its group, a plurality of magnetic contact sets, means for supporting a separate one of said contact sets at each coordinate point of said horizontal and vertical bars and in flux-transfer relation therewith, the selective energization of the said individual coil means associated with any horizontal and any vertical bar causing the generated flux to traverse the associated bars and operate the contact set located at the coordinate points thereof, and the energization of the said common flux, generating coil means associated with each group of horizontal and vertical bars causing the flux generated thereby to traverse all of said horizontal and vertical bars to maintain the operated contact set in operated condition after the said individual coil means are de-energized.

2,999,141

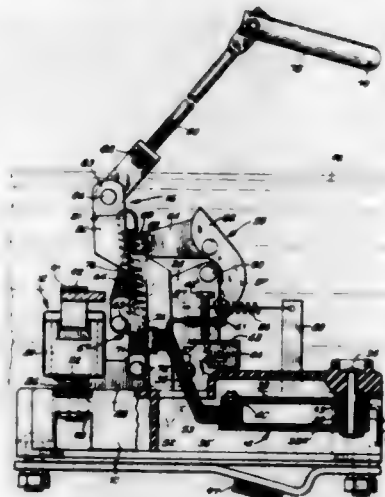
CIRCUIT BREAKER

William H. Nash and Raymond J. Bronikowski, South Milwaukee, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Dec. 17, 1959, Ser. No. 860,214

2 Claims. (Cl. 200-116)

1. In a circuit interrupter for protecting an electrical transformer immersed in dielectric oil, the combination of a base, fixed and movable contact means mounted on said base, latch means for holding said movable contact means in closed position, a first bimetallic element in circuit with said transformer and immersed beneath the surface of said dielectric oil, said first bimetallic element being secured near one of its ends to said base and having its other end coupled to said latch means and operable upon a predetermined deflection to release said movable contact means, a second bimetallic element secured at one end to said base and disposed beneath the surface of said oil in substantial parallelism with said first bimetallic element and electrically insulated therefrom, electrical in-



and being arranged for deflection in opposite directions, whereby the effect of said oil temperature on said first bimetallic element is substantially cancelled.

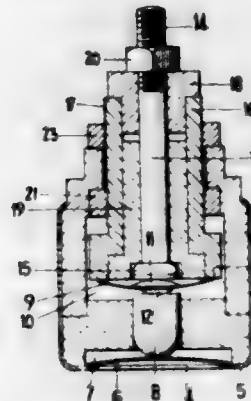
2,999,142

THERMALLY OPERATED BI-METALLIC ELECTRIC DEVICES

Philip Woodhall, Manchester, and Kenneth Hale, Eccles, England, assignors to The General Electric Company Limited, London, England

Filed Dec. 18, 1959, Ser. No. 860,473

10 Claims. (Cl. 200-138)



1. A thermally operated bi-metallic device comprising a bi-metallic element, a slave disc mounted adjacent to the element, said slave disc having a peripheral contact portion and a central contact portion, means to transmit motion or force from the bi-metallic element to the slave disc, the slave disc being so arranged as to resist the motion or force transmitted from the bi-metallic element, and electric contact means including a pair of concentrically arranged terminal contacts in a unitary assembly, said terminal contacts being electrically insulated from one another, the outer of the terminal contacts engaging the peripheral contact portion of the slave disc and the inner terminal contact being adapted to make and break contact with the said central contact portion of the slave disc.

2,999,143

COMPRESSED-GAS CIRCUIT INTERRUPTER

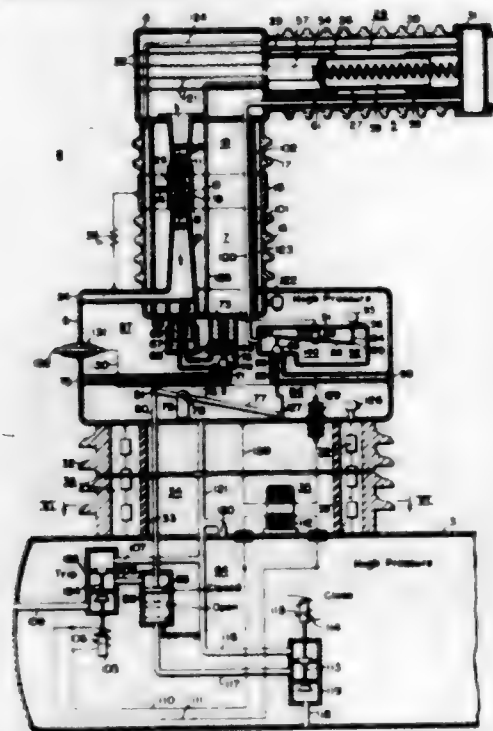
Benjamin P. Baker, Monroeville, Jack E. Schrameck, Pittsburgh, and Richard E. Kane, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 21, 1956, Ser. No. 623,567

26 Claims. (Cl. 200-148)

1. A circuit interrupter including an upstanding, cylindrical insulating support casing, an interiorly disposed

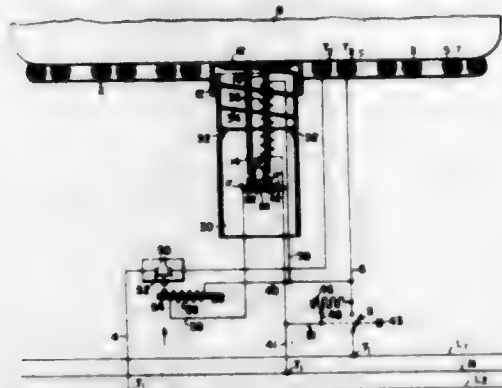
cylindrical insulating tube, interrupting means supported at the upper end of said upstanding, cylindrical insulating support casing, a potential device for measuring the potential between said interrupting means and ground



potential including a plurality of separate series capacitor elements disposed in the annular space between said cylindrical tube and said outer insulating casing, and means tapping off the voltage across the bottom capacitor element for voltage measurement.

2,999,144 CONTROL DEVICE

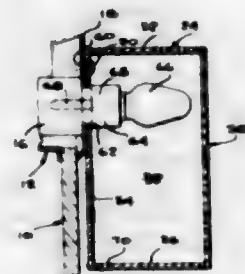
Vincent L. Carlsini, Fairfield, Conn., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 14, 1956, Ser. No. 628,384
12 Claims. (Cl. 219-20)



12. A control device for controlling temperature of a cooking vessel and its contents by means of controlling a heating unit therefor comprising, a pair of elongated bimetallic members each having one end fixedly supported with respect to a thermal conducting portion, at least one of said bimetallic members being thermally secured to said thermal conducting portion, each of said bimetallic members being movable in the same general direction when heated, contacts secured to said bimetallic members respectively, to be movable into and out of engagement with each other, electrical circuit means electrically connected to each of said contacts for controlling energization of a heating unit, an electrical resistance heater supported in heat transmitting relation with respect to one of said bimetallic members to cause movement thereof with respect to the other of said bimetallic members.

2,999,145 HEATED SALT STORAGE CABINET

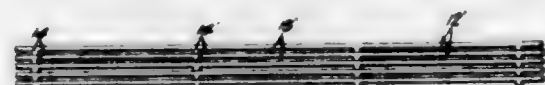
Donald L. Eschenbach, 1606 Young Ave., Clearwater, Fla.
Filed Sept. 11, 1959, Ser. No. 839,453
3 Claims. (Cl. 219-35)



3. In combination, a support, an electrical outlet fixed on said support, said outlet having a socket and a face plate through which said socket opens, an electrical heating element engaged in said socket and extending away from the face plate, a cabinet having a back wall provided with an opening through which the heating element extends into the cabinet, and mounting means securing said back wall to the face plate, said mounting means comprising a screw extending through said back wall and threaded into the face plate, said cabinet having an open front, and a door hinged on the cabinet for closing said open front.

2,999,146 FLUID-PERVIOUS SHEET MATERIAL

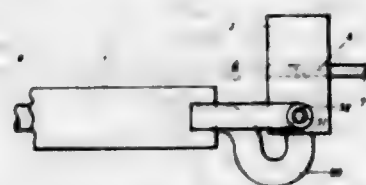
Leo I. Kaplan and Leo Horres, Sealand, Calif., assignors to Poly Industries, Inc., a corporation of California
Filed Dec. 4, 1957, Ser. No. 700,667
5 Claims. (Cl. 219-93)



1. That improvement in the method of manufacturing a boundary layer energizing material for use as a covering for aerodynamically-contoured surfaces which comprises rolling thin metal sheet material to provide low parallel ridges upstanding from the surface thereof a distance of approximately 1 to 2 mills in sheet material having a finished thickness after rolling of 1 to 2 mills, superimposing said sheets upon one another in echelon so as to leave an exposed strip along the outer lateral edge of said sheets, and securely bonding said strips together opposite said ribs to provide a fluid-pervious covering material suitable for application to aerodynamically-contoured surfaces.

2,999,147 ELECTRIC WELDING APPARATUS

Ewald Nelken, Alfredstrasse 93/95, Essen, Germany
Filed Apr. 21, 1959, Ser. No. 807,883
Claims priority, application Germany Apr. 21, 1958
7 Claims. (Cl. 219-143)

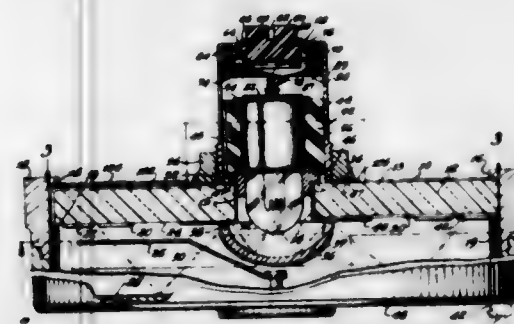


2. A welding electrode holder comprising, in combination, supporting means; non-conductive tubular electrode holding means at least slightly spaced from said supporting means; means for articulately connecting said

holding means with said supporting means; electric cable means having an insulated portion connected with said supporting means and an electrode-engaging bare end reciprocally received in said holding means; end spring biased retaining means reciprocally received in said holding means for maintaining the bare end in engagement with the electrode.

2,999,148 VARIABLE INTENSITY DIAL ILLUMINATOR

Julius Kay, Los Angeles, Calif., assignor to Industrial Glass Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 21, 1958, Ser. No. 756,406
6 Claims. (Cl. 240-2.1)



1. Means for mounting a lamp bulb having an axial contact and a peripheral contact in an aperture of a light transmitting panel for energization of the lamp bulb by a pair of conductors on the panel, said means comprising: a cylindrical metal shell having a closed outer end and an open inner end; means to removably mount said shell on said panel at said aperture with the outer end of the shell extending outward from the panel and with the inner end of the shell in electrical communication with one of said conductors; an arcuate resistor member fixedly mounted in the outer end of said shell; a manually operable rotary member journaled in the outer end of said shell to control the brightness of the lamp bulb; a wiper member carried by said rotary member in sliding contact with said resistor member; an annular member of conducting material inside said cylindrical shell and electrically isolated therefrom to seat said peripheral contact of the lamp bulb and to electrically connect the peripheral contact with the other of said conductors; and a spring member carried by said rotary member in electrical communication with said wiper member, said spring member extending from the rotary member against said axial contact of the lamp bulb thereby to press said peripheral contact against said annular member.

2,999,149 BOAT FLAG-LIGHT MAST

Herbert Alton Cook, Jr., 69 Pulzifer Drive, Auburn, N.Y.
Filed Nov. 14, 1958, Ser. No. 773,929
6 Claims. (Cl. 240-7.5)

2. In an apparatus of the character described for use with a motorboat having an outboard motor, a flag mast, an upstanding resilient support for said mast, said mast and support being hollow with the interiors thereof being in communication with one another, said mast extending upwardly from the upper end of said support in obliquely disposed relation thereto, said support being detachably secured to said mast at a point above the lower end thereof, a lamp mounted at the upper end of said mast, electrical conductors extending through said support and mast to supply current to said lamp, a base member for mounting said support on said outboard motor, said base member having a pair of angularly offset bores either of which is adapted to receive the lower end of said support, one of said bores being arranged to hold said support in

upstanding position in the tipped down position of the motor and the other of said bores being arranged to hold said support in upstanding position in the tipped



up position of the motor, and electrical connectors in both of said bores for connecting said support and mast conductors to a source of electric current.

2,999,150 ADJUSTABLY MOUNTED PANEL LIGHT

Allen Kallel, Los Angeles, Calif., assignor to Wemac Company, Inglewood, Calif., a corporation of California
Filed Aug. 12, 1957, Ser. No. 677,492
16 Claims. (Cl. 240-7.35)



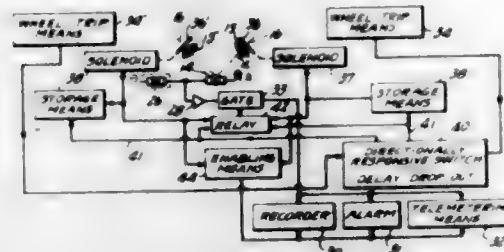
1. In a light fixture for installation in an opening in a vehicle panel, the combination of: a lamp housing; means to fixedly attach said housing to said panel at said opening with the housing extending rearward from the panel; a lamp bulb; means mounted on said lamp housing to hold the lamp bulb in fixed position relative to the fixed housing with the axis of the lamp bulb extending forward, said housing having a spherically curved concave surface concentric to a center inside the lamp bulb; means mounted on said lamp housing for connecting said lamp bulb to wiring for energizing the lamp bulb; and an assembly for positioning at said opening to direct light from said lamp bulb forward through the opening, said assembly having a spherically curved convex surface conforming to said concave surface and embraced thereby for swiveling of the assembly about said center to direct the light through a range of angles, said assembly including a light-directing means and a forwardly extending light shield, the interior of said housing being accessible through said assembly to permit replacement of said lamp bulb from the front of the panel.

2,999,151

BI-DIRECTIONAL HOT BOX DETECTOR

Bernard Rosett, Forest Hills, N.Y., assignor to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York

Filed Aug. 6, 1957, Ser. No. 676,646
1 Claim. (Cl. 246—169)



In combination, a length of railroad track accommodating alternately and from time to time traffic proceeding in each of two opposing directions, and an infra-red hot-box detecting device comprising a housing fixedly mounted alongside one of the rails of said track and below the level of passing journal boxes; said housing containing an infra-red radiation detector element producing an electrical signal in response to incident radiant energy, two separate optical systems within said housing, the first of said optical systems comprising an opening in said housing and fixed optical means in direct alignment with said detector element and oriented to continuously image said detector element through said opening on a first upwardly sloping axis and in a first general longitudinal direction along the track with the detector element imaged at substantially the plane of passing journal boxes, the second optical system including a second opening in said housing and fixed optical means in direct alignment with said detector element and oriented to continuously image said detector element through said second opening and on a second upwardly sloping axis directed generally in the opposite longitudinal direction of the track, each of said optical systems including a shutter device and separate actuating means therefor, means normally closing both said shutter devices, and actuating means including means responsive to the direction of passage of a train on said track in the vicinity of said detector and connected to open one of said shutter devices to the exclusion of the other in response to a detected first direction of train movement, said last-defined means being further responsive to detected train movement in the opposite direction to open the other of said shutter devices to the exclusion of said one, whereby a said single detector element may respond with a desired consistent viewing aspect on all passing vehicles regardless of the direction of train movement past said detecting device.

2,999,152

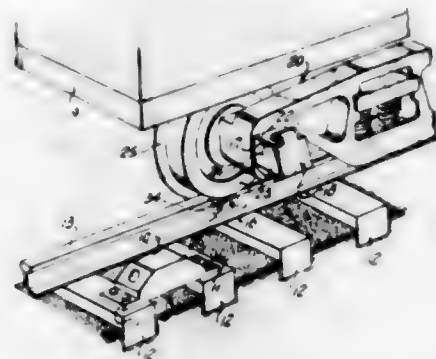
HOT-BOX DETECTOR

Cornelius A. Gallagher, Hicksville, and William M. Pellino, Garden City, N.Y., assignors to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York

Filed Oct. 28, 1958, Ser. No. 770,081
15 Claims. (Cl. 246—169)

1. In combination, a length of railroad track and hot-box detecting means fixedly mounted alongside a portion of said length of track, said detecting means including two separate heat-responsive cells on the same side of said length of track each of said cells producing an electrical signal in response to incident radiant energy, and optical means separately imaging said cells along separate axes each of which is inclined upwardly with respect to the track elevation and is directed generally in the longitudinal direction of the track, the respective inclines of said axes being directed in opposite directions, means to support shutters on said axes, separate shutters normally po-

sitioned on said imaging axes, means to selectively move each shutter out of alignment with said axes for protecting said optical means, two wheel operated trips mounted adjacent the track at longitudinally spaced locations to be actuated one after the other when a train wheel passes by, directionally-responsive relay means connected to both said trips and effective to develop a first output control for one of said shutters in response to a first order of



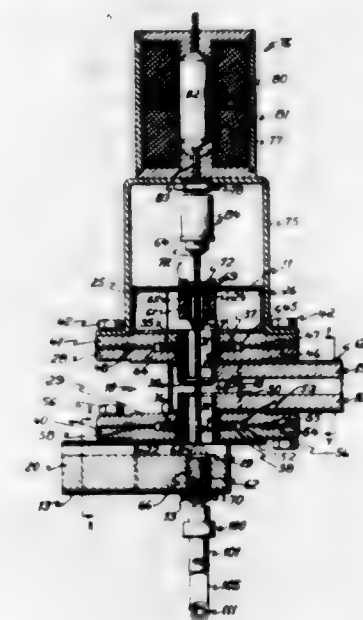
successively tripping said wheel-trips, said directionally-responsive relay means being further effective to develop a second output control for the other of said shutters in response to the opposite order of successively tripping said wheel-trips, whereby the cell exposed through an open shutter may always reflect viewing on the same directional aspect with respect to a passing train, regardless of the direction of passage of a train.

2,999,153

BROADBAND TRANSMIT-RECEIVE DEVICE

George J. Neumann, Bayside, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Dec. 30, 1954, Ser. No. 478,803
18 Claims. (Cl. 250—13)



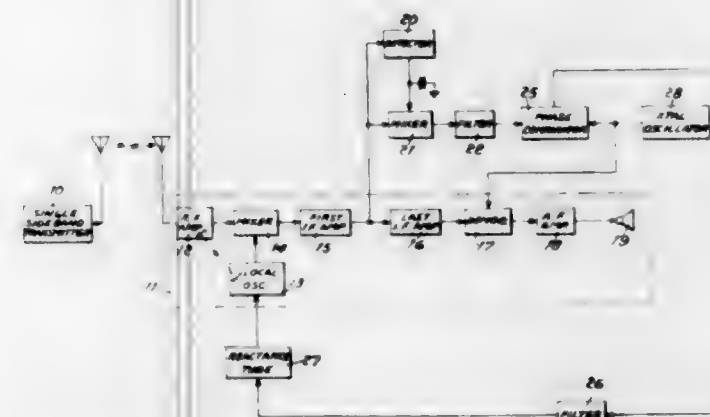
1. A wave guide switching device including, first, second and third wave guides, said second wave guide being between said first and third wave guides, each of said wave guides being constructed as a separate unit, detachable means for holding said wave guides in juxtaposition, two aligned openings respectively coupling said second wave guide to said first and third wave guides, a shaft extending through said openings, shutter means fixed to said shaft within said second wave guide, and a seat-insert for each of said openings detachably fixed to means integrally associated with said second wave guide, each seat-insert providing a seat for said shutter means.

2,999,154

SINGLE SIDEBAND RECEPTION

Irving A. Krause, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Oct. 22, 1957, Ser. No. 691,683
1 Claim. (Cl. 250—20)



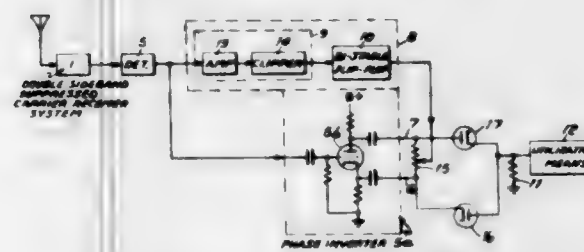
In a single sideband radio receiving system, the combination of a single sideband radio receiver including means to receive a single sideband suppressed carrier signal, a local oscillator, means to mix said single sideband suppressed carrier signal with the output of said local oscillator to derive a single sideband suppressed carrier intermediate frequency signal, means to detect from said intermediate frequency signal a characteristic fundamental frequency of the signal modulation, mixer means to combine said detected fundamental frequency with the single sideband intermediate frequency signal to produce a series of cross products, filter means to derive from said cross products an intermediate frequency carrier signal, a crystal oscillator for generating a fixed intermediate frequency demodulating signal, means to compare the phase of said fixed demodulating signal with the signal output of said filter means to produce a control voltage, means to apply said control voltage to said local oscillator to cause said local oscillator to generate a correct signal frequency which when mixed with the said single sideband suppressed carrier signal will result in said single sideband suppressed carrier intermediate frequency signal having a carrier frequency which bears a fixed frequency relation to said demodulating signal, and demodulating means to derive from said demodulating signal and the single sideband suppressed carrier intermediate frequency signal the signal modulation of said single sideband suppressed carrier signal.

2,999,155

SIGNAL RECEIVING SYSTEM

Martin Masonson, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed May 7, 1959, Ser. No. 811,735
18 Claims. (Cl. 250—20)



1. A demodulation system for double sideband suppressed carrier communication systems comprising a

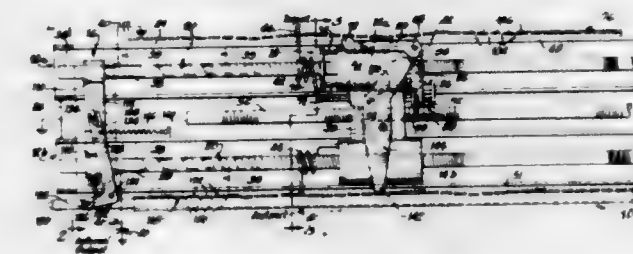
source of input signals containing positive and negative modulation envelope portions symmetrically disposed with reference to a suppressed carrier frequency, means coupled to said source to detect the undulations of both of said envelope portions having the same polarity, a pair of paths coupled to said detector means, one of said paths having the output signal of said detector means thereon and the other of said paths including means to provide a signal having a polarity opposite to the signal of said one of said paths, an output means, means responsive to the output signal of said detector means to alternately couple said pair of paths to said output means to produce a signal in said output means equivalent to one of said envelope portions and utilization means coupled to said output means to utilize said equivalent envelope portion signal.

2,999,156

RADIO FREQUENCY TUNERS HAVING VARIABLE TRACKING AND COUPLING MEANS

Francis G. Mason, Weston, and Harold T. Lyman, Milford, Conn., assignors to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois

Filed Jan. 14, 1959, Ser. No. 786,717
6 Claims. (Cl. 250—40)

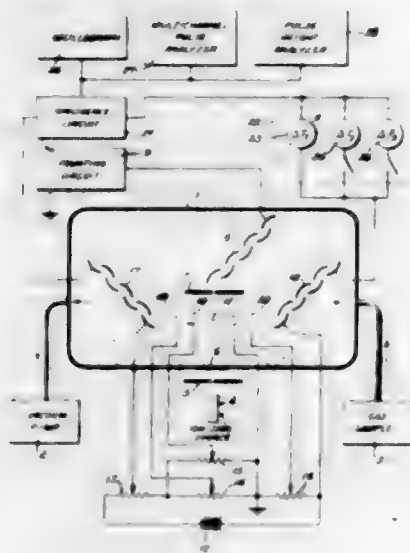


1. In a radio frequency tuner, the combination comprising first and second coils, first and second tuning sleeves movable along said respective coils, an operating member secured to said first and second sleeves, a lead screw in threaded engagement with said operating member for moving said sleeves along said coils, a tracking ring received around said first coil adjacent one end of said first sleeve, means mounting said ring on said first sleeve for axial movement relative thereto, a stationary cam-like cam plate extending generally parallel to the path of movement of said first sleeve, a cam follower engaging said cam plate, means connecting said follower to said tracking ring for moving said ring in response to movement of said follower, said cam plate having a large number of closely spaced fingers thereon extending transversely to the direction of movement of said first sleeve, each of said fingers being individually bendable for adjusting the position of said tracking ring when said cam follower is engaging said finger, a coupling member extending between said first and second coils and movable along said coils to vary the amount of coupling therebetween, a rotatable shaft extending substantially parallel to the paths of said sleeves, means connecting said shaft to said coupling member for moving said coupling member in response to rotation of said shaft, a second cam plate secured to said shaft and extending generally parallel to the paths of said sleeves, a cam rider secured to said operating member and engaging said second cam plate, biasing means for maintaining said second cam plate in engagement with said cam rider, said second cam plate having a large number of closely spaced fingers thereon extending transversely to the length of said second cam plate and disposed for successive engagement by said cam rider, each of said fingers on said second cam plate being individually bendable to adjust the coupling between said coils when said cam rider is engaging each of such fingers.

2,999,157

METHOD AND APPARATUS FOR IONIZATION INVESTIGATION

Henry M. Rosenstock, West Lafayette, Ind., assignor, by means assignments, to William H. Johnston Laboratories, Inc., Baltimore, Md., a corporation of Maryland
Filed Nov. 24, 1958, Ser. No. 775,938
30 Claims. (Cl. 250-41.9)

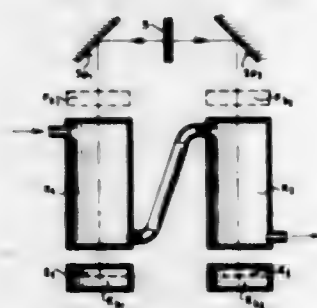


1. The method of investigating an ionization process which comprises directing an ionizing beam upon a sample to ionize atoms thereof, subjecting the resultant ion-pairs to an electric field to urge the positive and negative ions in different directions, and detecting the positive and negative ions of each ion-pair of ionized atoms of a predetermined mass in accordance with the difference in velocities caused by the difference in mass of the positive and negative ions.

2,999,158

GAS ANALYSIS BASED UPON ABSORPTION OF INFRARED RAYS

Gustav Schulz, Karlsruhe, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a German corporation
Filed Oct. 1, 1958, Ser. No. 764,694
3 Claims. (Cl. 250-43.5)

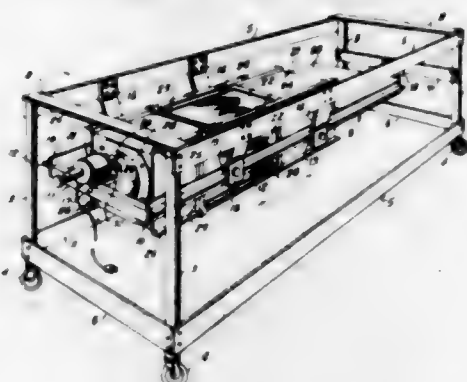


1. A device for determining the composition of gases based upon absorption of infrared radiation by the gas to be analyzed, comprising means forming two radiation paths which are continuously permeated by infrared radiation, each radiation path extending through a portion of the gas to be analyzed, means forming a receiver chamber aligned with each radiation path, one of said receiver chambers containing an amount of the sought-for gas and constituting a selective receiver for the radiation in the corresponding radiation path, and the other receiver chamber containing a neutral gas and constituting a non-selective receiver for the radiation in the other radiation path, each receiver chamber containing a metallic member which presents a relatively small area as seen in the direction of the respective radiation path and functioning as a sensing element responsive substantially solely to the temperature of the gas respectively contained therein.

2,999,159

CASSETTE CHANGER FOR FEMORAL ARTERIOGRAPHY

Charles L. Curry, 1000 Montgomery, Fort Worth, Tex.
Filed Feb. 24, 1959, Ser. No. 795,009
5 Claims. (Cl. 250-58)



1. Apparatus for use in femoral arteriography comprising, in combination with an X-ray table adapted to support a patient in position for taking X-ray pictures of his legs, automatic means for presenting in rapid succession, for predetermined time intervals, a series of cassettes in operative position below the table top, and below one of the patient's legs supported on the table top, the said automatic means comprising a rotatable polygonal drum carrying one of said cassettes on each planar side thereof and spaced longitudinally of said drum whereby the cassettes are adapted to be progressively exposed to the action of X-rays from a source positioned above the table and at different stations therealong.

2,999,160

APPARATUS FOR MEASURING THE WATER CONTENT OF SOIL

Don Kirkham, Ames, and John F. Stone, Boone, Iowa, assignors to Iowa State College Research Foundation, Inc., Ames, Iowa, a corporation of Iowa
Filed Aug. 26, 1955, Ser. No. 530,795
2 Claims. (Cl. 250-83.1)



1. In an apparatus for the quantitative measurement of the water content of soil, a vertically elongated tubular casing having an open lower end and providing a vertically elongated chamber therein, means supporting said casing above a soil surface with the chamber of said casing in communication and in axial alignment with a hole extending vertically into the soil, a vertically elongated detector tube for detecting slow neutrons telescopically mounted for vertical movement through the open lower end of said casing between a retracted position within said casing and an extended position within said hole below said casing, an emitter of fast neutrons having the shape of a narrow ring, said ring being externally and perimetricaly mounted upon said vertically elongated detector tube intermediate the upper and lower ends thereof and being movable with said tube between its retracted and extended positions, said tube having vertical dimensions substantially greater than said ring and having a major proportion

of its axial length disposed above and below said ring, and counting means operatively associated with said detector tube for directly counting the number of slow neutrons detected by said detector tube and for quantitatively measuring the moisture of the soil when said tube is in its extended position, said counting means including indicating means for indicating the actual number of slow neutrons detected by said tube.

2,999,161

METHOD OF AND MEANS FOR HORIZON STABILIZATION

Adolph Lovoff, Detroit, Mich.
(3517 A St. SE., Washington, D.C.)
Filed Oct. 10, 1945, Ser. No. 621,631
20 Claims. (Cl. 250-83.3)

(Granted under Title 35, U.S. Code (1952), sec. 266)

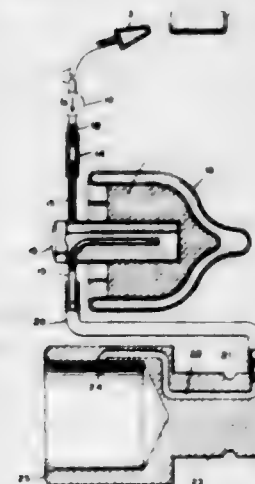


1. A device for stabilizing a table with respect to the horizon comprising a beam type heat detector device producing a characteristic uniform harmonic signal output when directed at a region of maximum vertical thermal gradient and uniformly oscillated vertically thereabout, a pivoted table to hold said detector, amplifier means to amplify the output of said heat detector device, power means operatively connected to said table angularly to position said table, electrical circuit energizing means for said power means, means connecting said energizing means in selective polarity to the power means during predetermined portions of said harmonic signal in response to deviations of the amplified signal from said uniform harmonic signal, said polarity of connection being determined by the sign of said deviations, whereby to angularly position the table and detector toward the region of said maximum signal gradient during said energization.

2,999,162

APPARATUS FOR LEAK TESTING

Robert E. Fearon, Tulsa, Okla., assignor to Electro Chemical Laboratories Corporation, Tulsa, Okla., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,617
6 Claims. (Cl. 250-83.6)



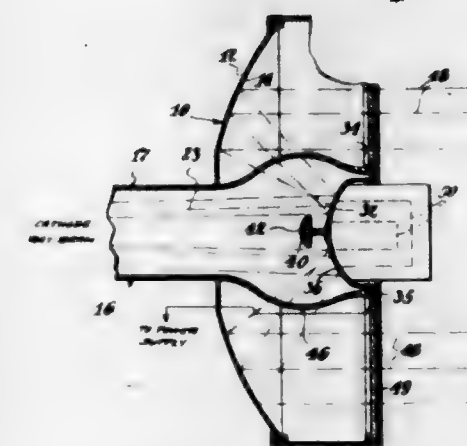
1. Apparatus for detecting leakages in a closed vessel containing an appreciable quantity of tritium gas at a pressure substantially in excess of the pressure in the space surrounding said vessel, comprising a pump, means interconnecting the inlet of said pump and said space sur-

rounding said vessel, a detecting device for detecting low energy nuclear radiations from a gaseous sample, and means interconnecting the outlet of said pump and said detecting device whereby tritium gas leaking from said vessel will be delivered to said detecting device.

2,999,163

COMMUNICATION SYSTEM

Norman C. Beese, Verona, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1953, Ser. No. 352,271
5 Claims. (Cl. 250-86)

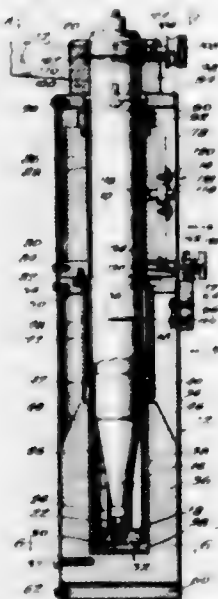


1. A modulated infrared radiation generating device comprising in combination, a double-ended evacuated envelope whose axis intersects said envelope ends, electrodes sealed within said envelope and adapted for forming a modulated electron beam, said electrodes comprising a cathode located substantially at one of the ends of said envelope and adapted for excitation for generating thermionic emission, a control grid axially displaced from said cathode and in operative proximity thereto and adapted to have a modulating signal applied thereto for modulating the thermionic emission from said cathode, an accelerating grid axially displaced from said control grid and in operative proximity thereto and adapted to have a potential applied thereto for accelerating said thermionic emission modulated by said control grid, an anode comprising the other end of said envelope having a substantially hollow spherical sector configuration with concave and convex surfaces and adapted to have a potential applied thereto for further accelerating said modulated thermionic emission accelerated by said accelerating grid, said electron beam being finally formed by the said modulated thermionic emission generated by said cathode as modulated by said control grid and accelerated by said accelerating grid and said anode, said convex surface of said anode being within said envelope and having an infrared emitting phosphor coated thereon, a coated electron deflector projecting from the approximate geometric center of the convex surface of said anode and into said evacuated envelope, said electron deflector coating having an electron secondary emission less than 1, a reflector located externally of said envelope and having the configuration of a hollow paraboloidal segment with inner and outer surfaces and with the axis of said reflector substantially coinciding with the axis of said envelope, said reflector inner surface being in receptive proximity to said anode convex surface for receiving infrared radiation emitted from said phosphor coating, said inner surface of said reflector being reflective for forming a substantially parallel infrared beam, and an infrared filter external of said envelope for intersecting all portions of said infrared beam.

2,999,164

STORAGE SHIELD FOR RADIOACTIVITY DEVICE

Robert L. Carver, Des Plaines, Ill., assignor to Nuclear-Chicago Corporation, Cook County, Ill., a corporation of Delaware

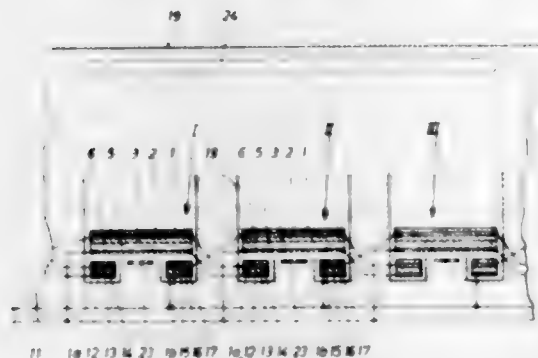
Filed Feb. 11, 1959, Ser. No. 792,596
12 Claims. (Cl. 250-108)

2. A shielded radioactivity source assembly comprising a member containing a radioactivity source, a pair of shield members each having a shielded cavity, means on the shield members responsive to the position of the source-bearing member to lock the two shield members together when the source-bearing member is partially within each, and means responsive to withdrawal of the source-bearing member from one of the shield members into the other shield member to unlock the locking means to permit separation of the shield members.

2,999,165

COUNTING DEVICE

Albert Lieb, Stuttgart-Bad Cannstatt, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 28, 1958, Ser. No. 757,825
Claims priority, application Germany Sept. 12, 1957
7 Claims. (Cl. 250-208)

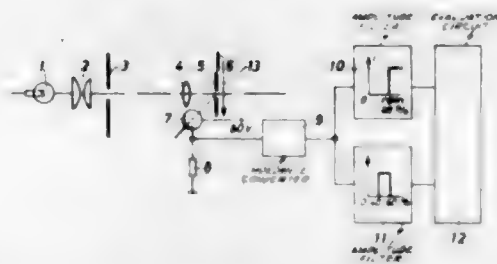
1. A pulse evaluation arrangement comprising a plurality of evaluation cells, each in turn comprising a transparent base plate having a plurality of successive layers thereon two of which are electrically conductive and optically transparent, at least one other is electroluminescent, and another is photoconductive, said electroluminescent and photoconductive layers being adjacent each other and between said electrically conductive and optically transparent layers, a first auxiliary assembly of two electrically conductive layers with a photoconductive layer between them, at least one of said electrically conductive layers being transparent, said first assembly positioned so as to receive light from said electrolumi-

nescent layer through said last-mentioned transparent electrically conductive layer, a second auxiliary assembly of two electrically conductive layers with a photoconductive layer between them, at least one of said electrically conductive layers being optically transparent, said second auxiliary assembly positioned so as to receive light from said electroluminescent layer through said last-mentioned transparent, electrically conductive layer, means for electrically connecting one of the conductive layers of the second auxiliary assembly of each cell to one of the conductive layers of the next succeeding cell, a source of electrical energy, means for electrically connecting said source between the other conductive layer of the second auxiliary assembly of each cell and the other transparent conductive layer of the next succeeding cell, a source of energy pulses to be evaluated, means coupling said source with the electroluminescent layer of each cell for exciting said layer when the conductivity of the photoconductive layer of the second auxiliary assembly of the preceding cell has been increased above a predetermined value, and means electrically connecting the electrically conductive layers of the first auxiliary assembly respectively with the first-mentioned electrically conductive layers of the preceding cell for extinguishing the excitation of the electroluminescent layer of said preceding cell when the conductivity of the photoconductive layer of said first assembly has been increased above a predetermined value.

2,999,166

METHOD OF MECHANICALLY DETECTING A MARK AFFIXED TO A DOCUMENT

Johannes Schünack, Berlin-Lichterfelde, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 27, 1957, Ser. No. 680,440
Claims priority, application Germany Sept. 21, 1956
4 Claims. (Cl. 250-219)

1. In apparatus for detecting a distinguishing mark on an object, said mark having predetermined remission characteristics different from those of the adjacent parts of said object, said apparatus comprising a photoelectric scanning device for scanning said object and including a photocell responsive to light remitted by both said mark and said object for providing electrical signals dependent in magnitude upon the amount of remitted light falling on said photocell, non-linear, signal amplitude responsive means connected to said scanning device for converting the photocell signals having a predetermined amplitude and corresponding to said mark into output signals and being unresponsive to the photocell signals having an amplitude less than said predetermined amplitude, and means connected to said signal amplitude responsive means and responsive to said output signals.

2,999,167

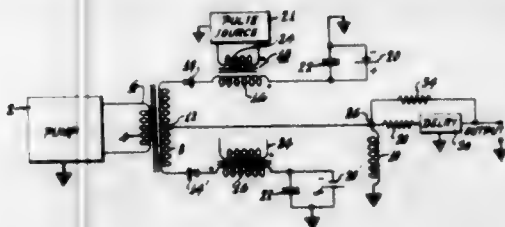
INFORMATION HANDLING DEVICES

Fred Sterzer, Monmouth Junction, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 20, 1959, Ser. No. 787,878
12 Claims. (Cl. 307-88)

1. In combination, an oscillator having more than one distinct phase of oscillation at one frequency, means for

applying pump signals to said oscillator to sustain oscillations at said one frequency, means for delaying a portion of the output of said oscillator for a selected period of

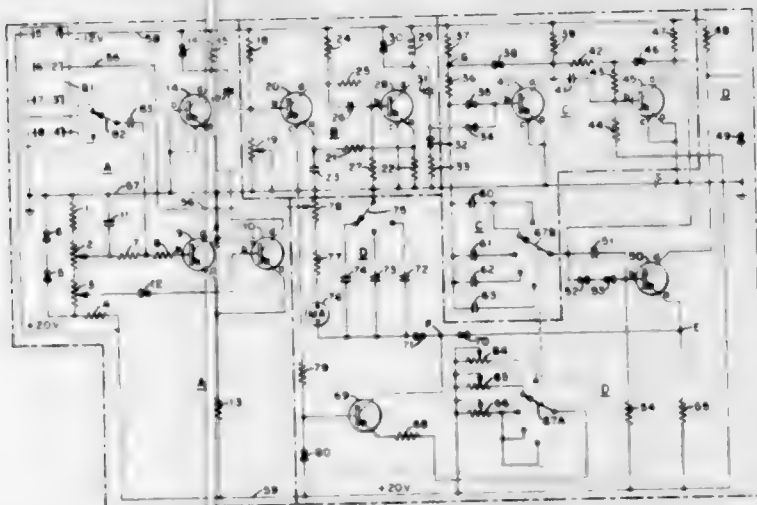


time and for feeding back the delayed portion to said oscillator, and means for intermittently damping said oscillations for a time interval.

2,999,168

LINEAR COUNT-RATE METER

John J. Henry, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 21, 1960, Ser. No. 44,484
7 Claims. (Cl. 307-88.5)



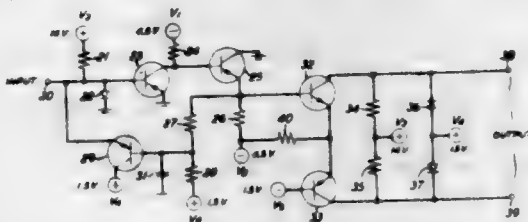
1. A linear radiation count-rate meter system for receiving and counting pulses at rates from one cycle per second to 100,000 cycles per second, comprising a pulse-height discriminator adapted to receive an input from a source of pulses to be counted and having an output, said discriminator including means which responds only to those pulses whose amplitude exceeds a selected minimum value, means for converting said input pulses to a series of randomly spaced output pulses of substantially equal amplitude, the width of the output pulses varying with the height of the input pulses, and means for providing a relatively wide usable linear range for said discriminator; a Schmitt trigger circuit having an input connected to the output of said discriminator and having an output, said trigger circuit converting the input pulses thereto, on a one-to-one basis, to positive output pulses of uniform width and amplitude, and feeding these positive pulses to the output of said trigger circuit; a one-shot multivibrator circuit having an input connected to the output of said trigger circuit and having an output, said multivibrator including means for converting the input pulses thereto to positive, square-wave output pulses, means for setting at a selected value the width of said square-wave output pulses, and means for controlling said square-wave output pulses such that they are a linear function of the value of the width-setting means; and a constant current metering circuit provided with an input connected to the output of said multivibrator circuit, said metering circuit including an averaging circuit, a source of selected constant current, and means for electronically switching said source of constant current to said averaging circuit in re-

sponse to each pulse received from said multivibrator circuit, the time interval the constant current is connected to said averaging circuit being controlled by said last named means and which is a function of the width of the pulse received from the multivibrator circuit.

2,999,169

NON-SATURATING TRANSISTOR PULSE AMPLIFIER

Alexander Felner, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1956, Ser. No. 631,132
8 Claims. (Cl. 307-88.5)

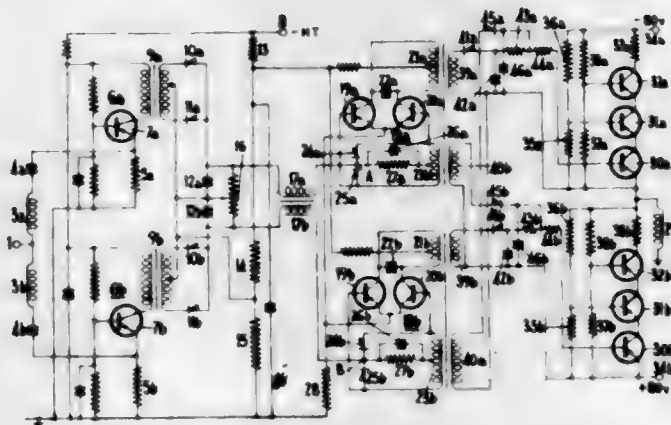


1. A transistor pulse amplifier comprising in combination a first transistor having a base, an emitter and a collector, a common reference point, means for interconnecting said emitter with said common reference point, an input terminal, means for interconnecting said base with said input terminal, an output for said amplifier, means for interconnecting said collector and said output, negative feedback circuit means connected between said input terminal and said output for transmitting an individual pulse to said input terminal responsive solely to each pulse in said output to prevent saturation of said transistor, a second transistor connected in said feedback circuit to control said feedback circuit, and bias means interconnected with said second transistor for blocking said feedback circuit when the output of said amplifier is below a predetermined level.

2,999,170

RECEIVERS FOR USE IN ELECTRIC SIGNALLING SYSTEMS

David Charles Tyler, near Rugby, England, assignor to The General Electric Company Limited, London, England
Filed May 27, 1957, Ser. No. 661,629
Claims priority, application Great Britain May 29, 1956
5 Claims. (Cl. 307-88.5)



1. A receiver for use in an electric signalling system of the kind in which there are transmitted electrical signals in which information is conveyed by the occurrence of one or other of a small plurality of discrete states of an electrical variable between which relatively rapid transitions occur as generated but which transitions become degraded during transmission, said receiver

including a receiving instrument, a switching arrangement comprising at least one junction transistor for controlling the operation of the receiving instrument, means for producing in response to application of the received signals, an output comprising at least one voltage of substantially rectangular waveform in which each transition corresponds to, but is appreciably more rapid than, a degraded transition between discrete states of the electrical variable in the received signals, means for applying the received signals to said means for producing the output, and means for applying the output to operate the switching arrangement.

2,999,171

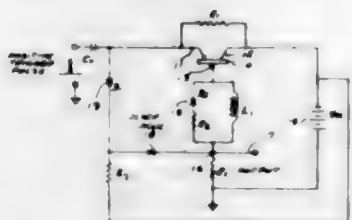
REGENERATIVE TRANSISTOR PULSE AMPLIFIER

David D. Ketchum, Falmouth, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 12, 1957, Ser. No. 695,998

3 Claims. (Cl. 307-88.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A negative pulse producing circuit comprising; a point contact transistor having an emitter, a collector and a base electrode, an inductive device connected in the base circuit of said transistor, a damping diode connected in shunt with said inductance, with its low resistance direction being in the direction away from said base electrode, a low impedance load connected in the collector circuit outside of the base emitter circuit of said transistor, means connected between said collector and said load for applying a negative voltage to said collector, means for applying a negative bias to said emitter, means for applying a positive trigger pulse to said emitter to drive the transistor into saturation and an output means connected to the end of the load impedance opposite that to which the voltage source is connected.

2,999,172

TRANSISTOR TRIGGER CIRCUIT

Watson A. Lawrence, Jr., Boonton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 20, 1957, Ser. No. 704,114

5 Claims. (Cl. 307-88.5)



2. A pulse generator including a transistor having a base, emitter and collector electrode, a transformer having a plurality of windings, a condenser connected to one of said windings, an input signal source adapted when operated to supply a signal to said base electrode, means connecting another of said windings to said collector electrode, means for supplying operating potentials to said emitter and collector electrodes, a first asymmetrically conducting device connected to said condenser, said asymmetrically conducting device being poled to be in the con-

ductive condition during the discharge cycle of said condenser, and a second asymmetrically conducting device joining said condenser to said base electrode, said second asymmetrically conducting device being poled to block the passage therethrough of signals from said input signal source.

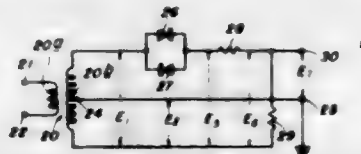
2,999,173

WAVE-CLIPPING CIRCUIT

Herbert C. Rack, Canoga Park, Calif., assignor to The Bendix Corporation, a corporation of Delaware

Filed Apr. 11, 1958, Ser. No. 727,956

11 Claims. (Cl. 307-88.5)



1. In combination with a source of alternating current: first means for deriving from said source first and second alternating potentials in phase with each other and the first substantially larger than the second; second means having a substantially constant threshold potential below which it is nonconductive and above which it is conductive and a substantially constant impedance when conductive; third means having a substantially constant impedance at all potentials; means for applying said first potential to said second and third means in series relation for deriving across one of said second and third means a third potential; a pair of output terminals; and means for applying said second and third potentials in series-opposing relation to said output terminals; the ratio of the said impedances of said second and third means being such relative to the ratio of said first and second potentials that said third potential differs from said second potential by a constant value when said second means is conductive.

2,999,174

SWEEP GENERATOR

Dominick Randice, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Jan. 30, 1959, Ser. No. 790,159

3 Claims. (Cl. 307-88.5)



3. A sweep generator comprising first and second transistors each having a base, collector and emitter, the emitter of said first transistor being connected to the collector of said second transistor, a two terminal source of potential, said emitter of said second transistor being connected to one of said potential terminals, two terminal impedance means, one of said impedance terminals being connected to the other of said potential terminals, and the other of said impedance terminals being connected to said collector of said first transistor, a resistor connected between said base of said second transistor and said other of said potential terminals, a capacitor one terminal of which is connected to said collector of said first transistor and the other terminal of which is connected solely to said base of said second transistor, and a binary-valued gating

signal source coupled between said base of said first transistor and said emitter of said second transistor, one of the values of said gating signal rendering the emitter-to-collector current path of said first transistor conductive and the other value of said gating signal rendering the emitter-to-collector current path of said first transistor nonconductive.

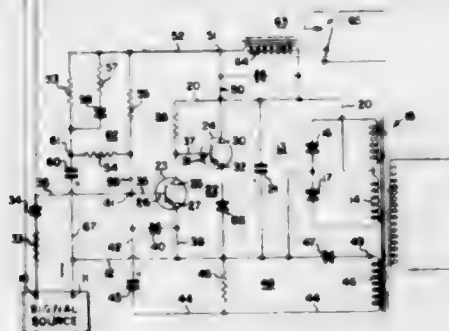
2,999,175

SEMICONDUCTOR CIRCUIT MEANS HAVING DUAL BIASING LEVELS

Balthasar H. Pinckaers, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 342,778

10 Claims. (Cl. 307—88.5)



1. Switching apparatus comprising: switching means having input and output terminals and being operable between a first and a second stable state; load means connected to the output terminals of said switching means, said load means being de-energized when said switching means is in its first stable state and energized when in its second stable state; a source of input signals connected to the input terminals of said switching means to activate said switching means from said first stable state to said second stable state; first biasing means connected to the input terminals of said switching means for providing a substantially constant bias and a further periodic bias, said substantially constant bias being of such polarity as to tend to switch said switching means to said second stable state, said further periodic bias being of such polarity as to switch said switching means to said first stable state; and variable second biasing means, said variable second biasing means being connected from the output terminals to input terminals of said switching means and being operable in response to the output of said switching means, said variable second biasing means controlling said switching means so as to insure activation of said switching means when the input signal varies from an initial predetermined activating magnitude to a subsequent lesser predetermined activating magnitude.

2,999,176

STATOR FOR DYNAMO-ELECTRIC MACHINES

Ernst Olof Lindström, Vällingby, and Anders Eric Osten Orrevad, Ballsta, Sweden, assignors to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

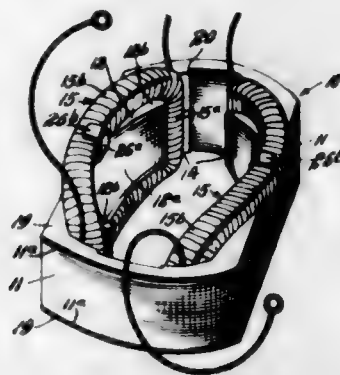
Filed June 28, 1957, Ser. No. 668,645

Claims priority, application Sweden June 30, 1956

3 Claims. (Cl. 310—215)

1. In a dynamo-electric machine, a magnetic field structure of annular form having a yoke and inwardly extending pole pieces which terminate in concave-shaped pole faces defining a bore adapted to receive a rotor, each of the pole pieces having leading and lagging pole tips which are spaced from the yoke to provide wall surfaces defining spaces, the pole pieces having field coils including first portions in the spaces and second portions intermediate the first portions which project beyond the end faces of the magnetic field structure, means comprising a pair of

preformed self-sustaining insulating elements which are disposed closely adjacent to one another and extend from one end face to the opposite end face of the magnetic field structure for insulating at least one of the coils from the field structure, each insulating element including a first wall section overlying an end face of the magnetic field structure to insulate the second portions of the coil therefrom, at least one of said elements having a plurality of second wall sections substantially perpendicular to its first wall section which are of generally U-shaped form and overlie the wall surfaces defining the spaces to insulate the



first portions of the coil from the magnetic field structure, the second wall sections of said one element being carried by the first wall section thereof and extending toward the first wall section of said other element, and means for holding the second portions of the field coil at the first wall sections of said insulating elements, said last-mentioned holding means including parts which project axially of the magnetic field structure and beyond the end faces thereof from the first wall sections of the insulating elements at the vicinities of the concave-shaped faces of the pole pieces.

2,999,177

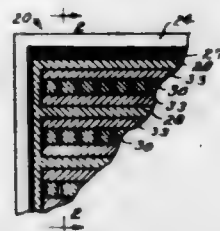
INFRA-RED-SENSITIVE MOSAIC

Fay E. Null, 2008 Oakridge Drive, Dayton, Ohio, and William D. Adams, 4737 Drexel Blvd., Chicago, Ill.

Filed Aug. 19, 1946, Ser. No. 691,648

14 Claims. (Cl. 313—66)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A mosaic, comprising a backplate made of an electrically conductive metal, a sheet of insulating material substantially covering one side of said backplate, a strip of infra-red-sensitive material on said insulating material, a strip of thin gold bordering one side of said infra-red-sensitive strip and in contact therewith, and a plurality of small plates of thin gold on the other side of said infra-red-sensitive strip, said plates being of substantially equal area and in contact with the infra-red-sensitive strip.

2,999,178

CODE SORTER PRINTER TUBE

Carlton H. Cash, 5050 Orcutt St., San Diego 15, Calif., and Willis R. Dawitz, 2667 Grandview, San Diego 10, Calif.

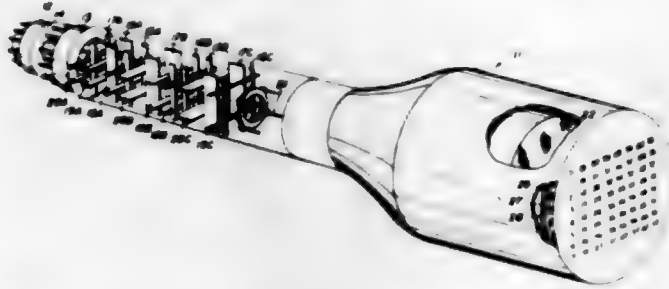
Filed Aug. 8, 1955, Ser. No. 527,182

5 Claims. (Cl. 313—77)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A code sorting and printing tube comprising a vacuum sealed envelope, electron beam receiving means at one

end thereof, electron beam projecting means opposite said receiving means, a plurality of sets of horizontal deflection means having external electrical connections thereto, each of said sets of horizontal deflection means axially disposed between said beam projecting means and said receiving means for deflecting said beam in a horizontal direction, a plurality of sets of vertical deflection means having external electrical connections thereto, each of said sets of vertical deflection means axially disposed between said beam source and said receiving means for deflecting said beam in a vertical direction, said plurality of sets of



horizontal deflection means and said plurality of sets of said vertical deflection means alternately disposed between said beam source and said receiving means, each of said sets having predetermined dimensions so that said beam is deflected a predetermined increment when a predetermined amplitude of control signal voltage is applied to said external connections and character forming means disposed between said horizontal and vertical deflection means and said receiving means, said character forming means having different characters each of said characters corresponding and responsive to a different combination of said horizontal and vertical deflection increments.

2,999,179

VIBRATION SENSITIVE DIODE

Renato Bianchi, Laurel, and Herbert E. Ruehlemaun, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed June 28, 1954, Ser. No. 439,940
8 Claims. (Cl. 313-146)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A gas filled diode tube of the class disclosed comprising an electroconducting envelope, a base to which the envelope is secured, and a resilient helical pendulous element disposed within said envelope and secured to said base for firing the tube as said pendulous element is vibrated.

2,999,180

ELECTRIC LAMPS

Donald Arthur Howles and John Willoughby Thomas Wright, Leicester, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company

Filed July 11, 1957, Ser. No. 671,359

Claims priority, application Great Britain July 16, 1956
6 Claims. (Cl. 313-318)

1. A capless electric lamp comprising a glass bulb, an external glass pinch sealed to close said bulb and having opposed flat surfaces and formed with a transverse notch on each of said opposed flat surfaces engageable by co-operating parts of a suitable holder for correctly locating said lamp within the holder, and a plurality of

relatively thick lead wires which enter said bulb through said pinch and which have external free end portions bent back against the flat surfaces of said pinch to

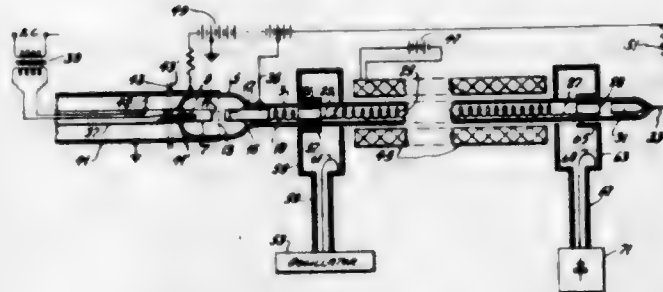


provide lamp contacts, the thickness of said lead wires being such that each of said contacts is firmly supported against a flat pinch surface solely from the point at which the respective lead wire enters said pinch.

2,999,181

TRAVELING WAVE TUBE AND CIRCUIT

John T. Mendel, Palos Verdes Estates, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application July 29, 1953, Ser. No. 371,125, now Patent No. 2,849,545, dated Aug. 26, 1958. Divided and this application July 8, 1958, Ser. No. 747,322
2 Claims. (Cl. 315-3.5)



1. In combination: a traveling wave tube comprising a wave-delaying wave guide, and an electron gun for directing a beam of electrons axially through said wave guide including a cathode and an accelerating anode, means for modulating said beam comprising a planar electron-emitting surface on said cathode and a planar grid mounted in immediate proximity thereto, a coaxial transmission line having an outer conductor connected to said grid and an inner conductor connected to said cathode, means for heating said cathode comprising an electrical heating element therein, and means for exciting said heating element comprising a slab section of transmission line interposed in said coaxial line including a pair of substantially parallel metal plates electrically continuous with the outer conductor of said coaxial line and an inner conductor divided into two parallel paths individually of substantially twice the characteristic impedance of the inner conductor of said coaxial line and electrically continuous therewith, said divided conductor forming a loop, an electrically continuous coil enclosed within said loop, a ferro-magnetic core having a leg extending through said plates and said loop, and a primary coil encircling said core externally of said slab line.

2,999,182

AMPLITUDE LIMITERS FOR HIGH FREQUENCY RADIO SIGNALS

Lester M. Field, Palo Alto, Calif., assignor to The Board of Trustees of the Leland Stanford Junior University, Stanford University, Calif., a legal entity with corporate powers of California

Filed Oct. 2, 1952, Ser. No. 312,745

9 Claims. (Cl. 315-3.6)

1. An amplitude limiter for high frequency signals, including a dispersive wave conductor with opposed sur-

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faces defining an interaction space of substantial extent transversely of the direction of wave propagation thereon, means adjacent one end of said wave conductor for producing a beam of electrons having a transverse cross section conforming substantially to said space, and projecting said electrons along said space in said direction of wave propagation with the velocity in each different filamentary element of said beam corresponding to the phase velocity of waves travelling on the corresponding element

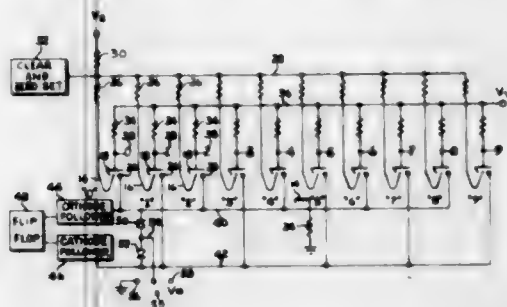


of said wave conductor at a different frequency; means for applying input signals which are to be limited to said one end of said wave conductor, and output coupling means spaced from the other end of said wave conductor in the path of said electron beam, and responsive to modulation of said beam by waves on said conductor to produce output signals similar to said input signals, each being individually limited in amplitude by the current density of the corresponding element of said beam.

2,999,183

COUNTING TUBE CIRCUITS

David Glaser, Middlesex, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 16, 1959, Ser. No. 793,627
5 Claims. (Cl. 315-8.5)

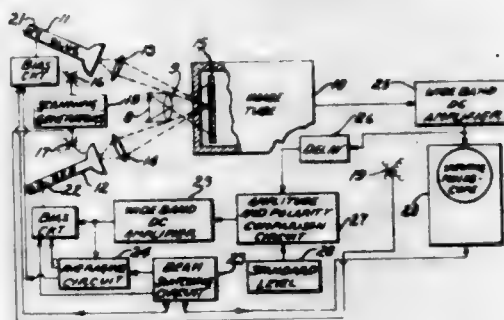


1. A counting circuit comprising a multi-position electron beam tube adapted to operate with crossed electric and magnetic fields including a cathode, a plurality of groups of electrodes surrounding said cathode, each of said groups of electrodes including a target output electrode and a spade electrode adapted to hold an electron beam on its corresponding target electrode and a switching electrode for switching an electron beam from one group of electrodes to the next; a source of switching signals coupled to each of said switching electrodes, and circuit means coupled to all of said switching electrodes and adapted to operate in two states in one of which it applies an operating potential to said switching electrodes which allows them to perform their normal switching function in response to signals from said source of switching signals and in the other of which it applies a different potential to said switching electrodes so that said switching electrodes are disabled and do not perform their normal switching function when switching signals are applied thereto from said source of switching signals.

2,999,184

CONTROL OF PHOTOEMISSION

J. Richard Hansen, Pittsburgh, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed July 12, 1957, Ser. No. 671,682
3 Claims. (Cl. 315-10)

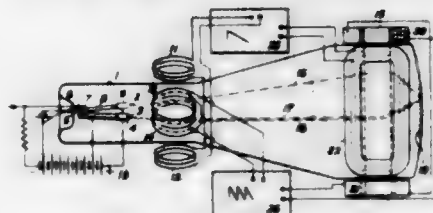


1. The method of maintaining the signal output of an image conversion apparatus free of error due to inhomogeneities in the photo-emissive surface, which comprises the steps of scanning said surface with light beams of relatively long and short wave lengths, respectively, and utilizing the photocurrent derived from one of said scanning operations to control the output of photocurrent from the other of said scanning operations.

2,999,185

TELEVISION DEVICE

Harry R. Lubcke, Los Angeles, Calif.
(2443 Creston Way, Hollywood 28, Calif.)
Filed Jan. 9, 1950, Ser. No. 137,635
38 Claims. (Cl. 315-13)



30. An electron discharge device comprising electrode means for producing a plurality of electron beams along respective paths having a common general direction, a target electrode mounted transversely to said beam paths, deflection means positioned between said electrode means and said target electrode, and electron lens producing means surrounding said beam paths between said deflection means and said target for establishing a common converging and focusing field for said electron beams.

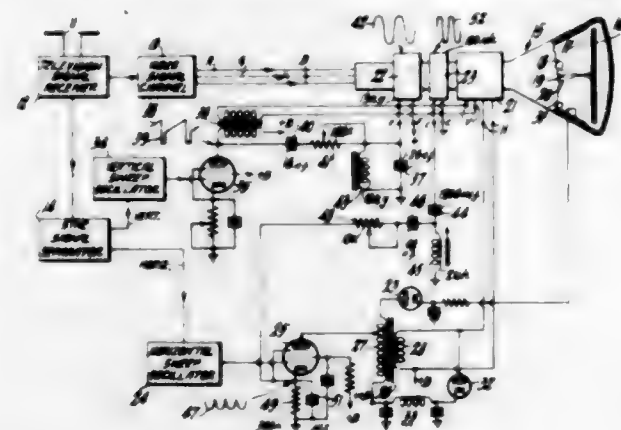
2,999,186

MULTI-BEAM CONVERGENCE CONTROLLING SYSTEMS

Dalton H. Pritchard, Princeton, N.J., and Morris David Nelson, New York, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Filed Apr. 7, 1953, Ser. No. 347,284
22 Claims. (Cl. 315-13)

18. In a television receiver including a cathode ray image reproducing tube having means for developing at least one cathode ray beam therein and a sweep system for supplying to the cathode ray tube a deflection signal of a selected frequency, a circuit for developing a convergence control signal for dynamically controlling the convergence of the cathode ray beam throughout each cycle of deflection, said circuit including a resonant network having first and second tuned circuit portions, said first tuned circuit portion of said resonant network being coupled to said sweep system and being tuned to said

selected frequency, said second tuned circuit portion being coupled to said first circuit portion and developing a



convergence control signal substantially at the selected frequency for converging the cathode ray beam.

2,999,187

DIFFERENTIAL FAULT SENSING CIRCUIT

Joseph H. Roberts, Eriton, N.J., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed June 13, 1960, Ser. No. 35,856
9 Claims. (Cl. 315-163)



1. A fault detection circuit for use with at least two thermionic active elements connected in parallel, each said element provided with at least a cathode, anode, and a control grid, comprising, pulse transformer means for each of said active elements, each of said transformer means having primary and secondary coils, the primary coils of said transformer means being connected electrically in parallel with one end of each primary coil connected in common and the other end of each primary coil connected to a similar electrode, respectively, in each of said elements for being exposed to the voltage changes thereon, means connected to said secondary coils for passing a voltage pulse in response to an overvoltage on an electrode connected to one of said transformer primary coils, and means responsive to said pulse for triggering overload circuitry to indicate a fault in one of said active elements.

2,999,188

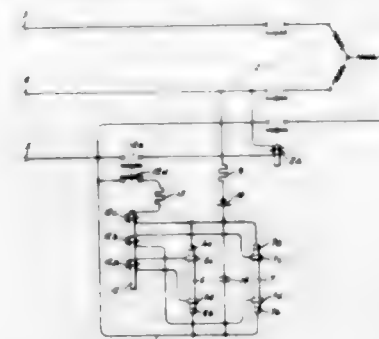
FAIL-SAFE OVERLOAD PROTECTIVE SYSTEM

Robert P. Alley, Shirley, Ill., assignor to General Electric Company, a corporation of New York

Filed Sept. 4, 1958, Ser. No. 758,980
5 Claims. (Cl. 317-13)

3. An overload protective system for an electrical load device comprising: an electroresponsive switching device

having normally open contacts for controlling the energization of said load device and having a pair of operating windings; an energization circuit including a pair of thermally sensitive elements the potential drop across which varies inversely according to their temperatures connected electrically in parallel and adapted to be mounted in thermal contact with said load device; means connecting each of said operating windings to respective points on said elements mechanically separate from the terminal



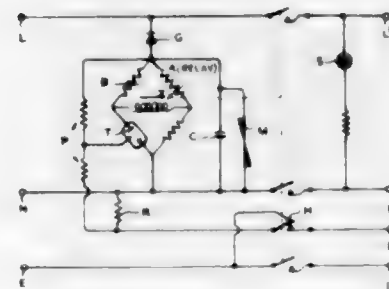
connections of said elements to said energization circuit to receive potentials developed across respectively different portions of said elements, said switching device responding to the potentials developed across both of said windings to close its contacts when the temperatures of said elements are less than predetermined values and to open its contacts when the temperatures of said elements exceed predetermined values, and each one of said windings supplying less than the total ampere turns required to maintain said contacts closed.

2,999,189

PROTECTIVE ARRANGEMENTS FOR ELECTRICAL CIRCUITS AND APPARATUS

Michael Cornelius Gerrard, 18 Highfield Road, Chislehurst, England

Filed Dec. 15, 1959, Ser. No. 859,782
Claims priority, application Great Britain Dec. 16, 1958
5 Claims. (Cl. 317-18)



1. A safety device for disposal between a source of current supply and a current-consuming appliance, comprising first and second input supply terminals, an input earth terminal, a bridge circuit having first and second diagonals, connections between said first diagonal and said first and second input terminals, a relay disposed in said second diagonal, first and second output supply terminals, first and second output earth terminals, a current path between said first input and first output supply terminals, a current path between said second input and second output supply terminals, current path between said input earth terminal and first output earth terminal, a trigger device disposed in an arm of said bridge circuit and reversibly changeable between a low impedance condition and a high impedance condition under the control of a trigger electrode, a potential divider, a connection between a first end of said potential divider and said first input supply terminal, a current path from the second end of said potential divider to said second output earth ter-

minal, a connection between an intermediate point in said potential divider and said trigger electrode, and four contacts controlled by said relay, said contacts being disposed respectively in said four current paths to interrupt said paths on de-energization of said relay, the relationship between the impedance of the arms of said bridge circuit being such that said relay is energized to close said contacts when said trigger device is in its high impedance condition, but when said trigger device is in its low impedance condition said bridge is substantially balanced and said relay is de-energized.

2,999,190

SWITCHBOARD

Taft Emerson Armandroff and William Francis Olashaw, New Britain, Conn., assignors to General Electric Company, a corporation of New York

Filed Mar. 11, 1957, Ser. No. 645,251
4 Claims. (Cl. 317-120)



1. A switchboard assembly comprising: a rectangular cabinet having its interior divided into front and rear rectangular chambers; means for mounting circuit controlling devices of equal width in side-by-side vertical rows in said front rectangular chamber; a plurality of vertically extending bus bars rigidly supported in said rear chamber, one at each rear corner, one at each front corner, and at least one at the front central portion of said rear chamber for supplying electrical power to said circuit-controlling devices, whereby free access is provided through said rear chamber between said vertically extending bus bars to the back surfaces of each row of circuit-controlling devices mounted in said front chamber; and a plurality of polyphase-connected main bus conductors extending into said rear chamber and connecting both of the vertical bus bars in the rear corners of said rear chamber to a first electrical phase, connecting both of the vertical bus bars in the front corners of said rear chamber to a second electrical phase, and connecting the vertical bus bar in the front central portion of said rear chamber to a third electrical phase.

2,999,191

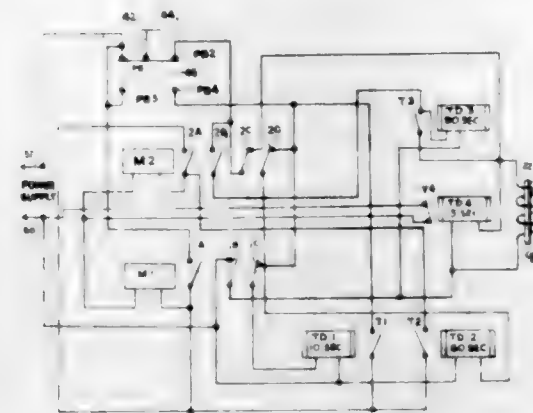
AUTOMATIC FLUSHING DEVICE FOR TOILET FACILITIES

Vazgen Muradian, 110 E. Columbia Ave., Palisades Park, N.J., and Nisan Balicoglu, 2321 Bassford Ave., Bronx, N.Y.

Filed June 26, 1959, Ser. No. 823,207
3 Claims. (Cl. 317-141)

1. Control means for a flushing system of a sanitary facility having a flush valve, comprising a solenoid having a plunger adapted for operative connection to said valve for operating the same, a two position switch, two instantly acting relays, first, second and third time delay relays, a power supply in circuit with said solenoid, switch, instantly acting and time delay relays, the first and second time delay relays being energized when the switch is

moved from one position to another position, one of the instantly acting relays being actuated a predetermined time after the first time delay relay is energized to close a part of an enabling circuit, the other instantly acting relay being actuated to close another part of the enabling circuit and energize the third time delay relay a second predetermined time after the second time delay relay is energized when the switch is restored to the one position



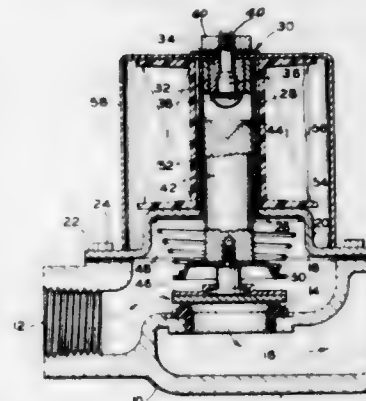
thereof, said third time delay relay fully closing said enabling circuit a third predetermined time after energization thereof, said solenoid being energized through the fully closed enabling circuit, and a fourth time delay relay in circuit with said solenoid and enabling circuit and operative to open the enabling circuit and deenergize the solenoid a fourth predetermined time after the solenoid is energized.

2,999,192

SOLENOID ACTUATOR AND CONTROL MEANS THEREFOR

Rudolph J. Lambert, Webster Groves, Mo., assignor to White-Rodgers Company, St. Louis, Mo., a corporation of Delaware

Filed June 16, 1958, Ser. No. 742,405
1 Claim. (Cl. 317-191)

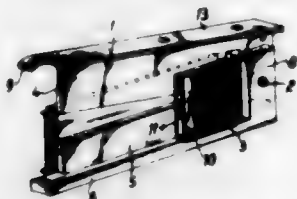


In an arrangement wherein a solenoid having a spring-returned reciprocating plunger is operated on a variable voltage power supply first at a voltage level which effects the pull in of the plunger from its returned position and subsequently at a lower voltage level which will not effect the pull in of the plunger from its returned position but will hold it in once it has been pulled in; the improvement which consists in providing means comprising an elongated member of magnetic material adjacent said plunger and coextending sufficiently therewith when the plunger is in a returned position as to divert such portion of the available magnetomotive force, which would otherwise act to pull in the plunger, as will increase the required voltage necessary to pull in the plunger by a substantial amount so that the differential in minimum required pull-in and hold-in voltages is greater than it would otherwise be.

2,999,193

ACTUATOR MAGNET ASSEMBLY

Wilhelm Breiting, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Sept. 15, 1959, Ser. No. 846,050
Claims priority, application Germany Sept. 24, 1958
3 Claims. (Cl. 1-191)

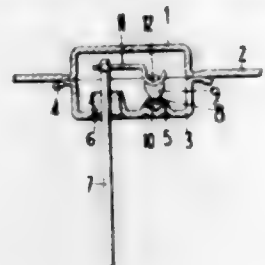


1. An actuator magnet assembly comprising, a frame; a long narrow pole piece fixed on said frame, said frame and pole piece being arranged to form a stationary structure which is T-shaped at cross sections taken normal to the longer dimension of said pole piece and the entire T-shaped structure being made of permeable material; a winding having an axial opening therethrough snugly fitting over said pole piece and the winding extending thereabove; an armature above said winding and having a pole piece extending into the winding and similar in length and width to the fixed pole piece, said armature being T-shaped at cross sections taken normal to the longer dimension of its pole piece and the entire T-shaped portion being made of permeable material; and pivot means rotatably connecting the armature to the frame beyond said winding and transversely of the longer dimensions of said pole pieces.

2,999,194

SEMICONDUCTOR DEVICES

David Boswell, Mill Hill, London, and John Ewels, Harrow, England, assignors to The General Electric Company Limited, London, England
Filed Mar. 6, 1957, Ser. No. 644,382
Claims priority, application Great Britain Mar. 12, 1956
6 Claims. (Cl. 317-234)



1. A semiconductor device including a semiconductor body mounted in a hermetically sealed envelope which consists of a plain metallic part and a second metallic part directly sealed together by cold pressure welding, the semiconductor body being secured to the second part of the envelope in good electrical and thermal contact therewith and having in contact with it at least one electrode provided with a lead sealed in electrically insulated relationship through the second part of the envelope.

2,999,195

BROAD AREA TRANSISTORS

John S. Saby, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Continuation of abandoned application Ser. No. 293,568, June 14, 1952. This application Aug. 13, 1956, Ser. No. 663,531

21 Claims. (Cl. 317-235)

1. In combination, a wafer of monocrystalline germanium of one conduction type having opposed faces separated by a thickness less than 40 mils, an impurity diffused region on each face of said crystal and extending

into said crystal so that the thickness of germanium of said one conduction type between the regions is substantially less than the transverse dimension of said impurity diffused regions to provide two rectification junctions therein, at least one of said impurity diffused regions

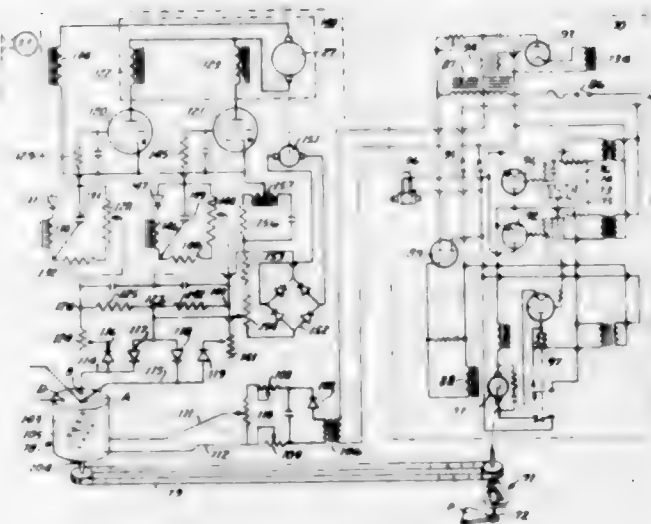


having an area substantially less than the area of the opposed face to leave a marginal position of the original conduction type surrounding said one impurity diffused region, and a base electrode connected to said marginal portion.

2,999,196

CONTOUR FOLLOWING MACHINE

Wendell L. Martin, Pepper Pike Village, Ohio, assignor to The Martin Brothers Electric Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 12, 1957, Ser. No. 677,599
9 Claims. (Cl. 318-28)



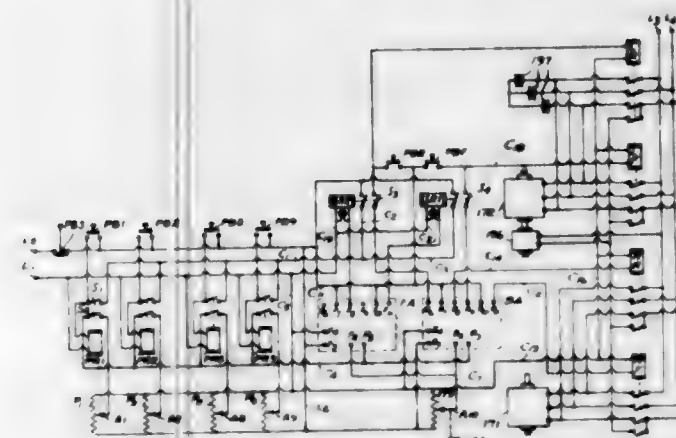
1. In a contour reproducing apparatus, a carriage mounted for movement in any direction in a plane, means for driving said carriage along a desired path, said means comprising steering means for determining the desired direction of movement of said carriage, a sine-cosine generator controlled by said steering means for providing a voltage functional of the sine of the angle between the desired direction of travel of said carriage and a fixed axis and another voltage functional of the cosine of said angle, said sine-cosine generator having a single input, an electric motor for driving said carriage in directions parallel with said axis, another electric motor for driving said carriage in directions at right angles to said axis and electric circuit means associated with each of said motors for driving said motors at speeds directly proportional to said sine and cosine voltages, each of said electric circuit means comprising two electronic control devices each having a control electrode, connections between the associated electric motor and the electronic control devices whereby the motor is energized to rotate in one direction when one of the electronic control devices conducts and is energized to operate in the opposite direction when the other electronic control device conducts, rectifier means in circuit with the output of said sine-cosine generator for sensing the polarity of the output of said sine-cosine generator, and connections from said rectifier means to the control electrodes of said electronic control devices whereby a control voltage is supplied to the control electrode of one of the devices when

the output of the sine-cosine generator is of one polarity and to the control electrode of the other device when the output is of the opposite polarity.

2,999,197

MOTOR CONTROL SYSTEM

Lee R. Gensman, Tigard, Oreg., assignor to Monarch Forge & Machine Works, Inc., Portland, Oreg., a corporation of Oregon
Filed Aug. 19, 1957, Ser. No. 678,795
7 Claims. (Cl. 318-29)



1. In a control system for adjusting a part movable in a path to selected positions of adjustment for said part, a pair of motors, signal means regulated by said part producing a signal voltage depending in amplitude upon the amount of displacement of said part from a selected position of adjustment for said part, a pair of voltage sensitive regulating circuits, receiving simultaneously the signal voltage produced by said signal means, one of said regulating circuits being placed in motor-controlling condition exclusively of the other in response to signal voltages falling within a given range of amplitudes, the other of said regulating circuits being placed in motor-controlling condition exclusively of said one in response to signal voltages falling within a second range of amplitudes that is larger than said given range, means connecting said one of said regulating circuits to one of said motors whereby it is operable to actuate said one motor exclusively of the other while responding to signal voltages in said given range, and means connecting said other of said regulating circuits to said other of said motors whereby it is operable to actuate said other motor exclusively of said one motor while responding to signal voltages in said second range.

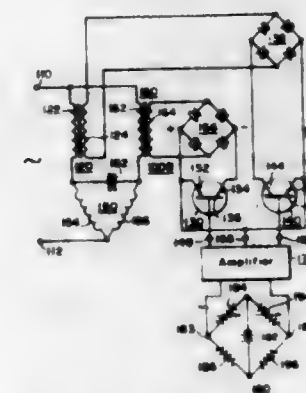
2,999,198

ELECTRICAL CONTROL APPARATUS

Karl Schlick, Karlsruhe, Germany, assignor to Siemens-Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed July 17, 1958, Ser. No. 749,282
Claims priority, application Germany Aug. 2, 1957
6 Claims. (Cl. 318-207)

1. In an electrical control apparatus for controlling the direction of rotation of a motor having first and second windings, in combination, a source of alternating current having one terminal connected to one end of each of said first and second windings and a second terminal, first and second transformers each having primary and secondary windings, the primary windings of said first and second transformers being connected between said first and second windings of said motor and said second terminal of said source, first and second transistors each having a base, an emitter and a collector, the emitter-collector paths of said first and second transistors being connected across the secondary windings of said first and second transformers respectively, first

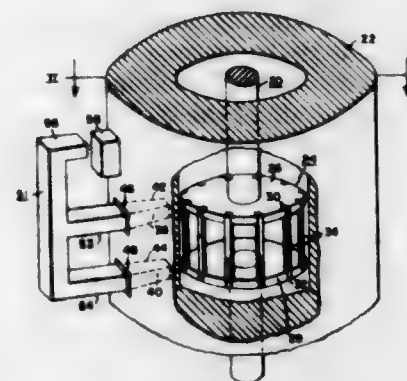
and second rectifying means connected between the secondary windings of said first and second transformers and said first and second transistors for rectifying the voltage applied between the emitter and the collectors of each of said transistors, and means for applying a control voltage between the emitter and the base of each



2,999,199

MOTOR POSITION INDICATOR

Cecil T. Wint, Pittsburgh, and John Mazur, Elizabeth, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 29, 1958, Ser. No. 738,730
8 Claims. (Cl. 318-265)



7. A rotary position indicating and controlling system adapted for use with a rotatable member and driving means for rotating said member, said system comprising a transformer having a primary leg and a pair of secondary legs; a primary winding disposed on said primary leg, a pair of secondary windings disposed respectively on said secondary legs, at least one magnetic member mounted on said rotatable member for rotation therewith, said magnetic member being movable to a position of magnetic coupling relative to said primary leg and one of said secondary legs at least once during each revolution of the rotatable member, a relatively fixed magnetic member, means for mounting said fixed magnetic member at a position of magnetic coupling relative to said primary leg and to the other of said secondary legs, circuit means for coupling said primary winding to a source of fluctuating potential and for combining the outputs of said secondary windings, whereby a pulse appears in said secondary circuit means when said first mentioned magnetic member is moved to its coupling position, additional circuit means for coupling said secondary output to a pair of parallel amplifying circuits, means for biasing one of said amplifying circuits to produce an output signal when said secondary output is at a minimum voltage, means for biasing the other am-

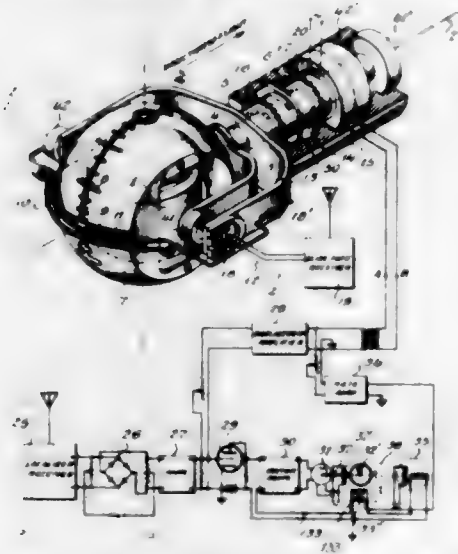
plifying circuit to produce an output when said secondary output is at a maximum voltage, circuit means coupled to said one amplifying circuit for starting and stopping said driving means, and circuit means coupled to said other amplifier for reversing said driving means, after a predetermined number of the starting and stopping operations.

2,999,200

BLIND LANDING INDICATOR AND SERVO-CONTROLLER FOR AIRCRAFT

Orland E. Esval, Huntington, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Original application Feb. 5, 1947, Ser. No. 726,605, now Patent No. 2,613,050, dated Oct. 7, 1952. Divided and this application June 14, 1952, Ser. No. 293,527

10 Claims. (Cl. 318-489)



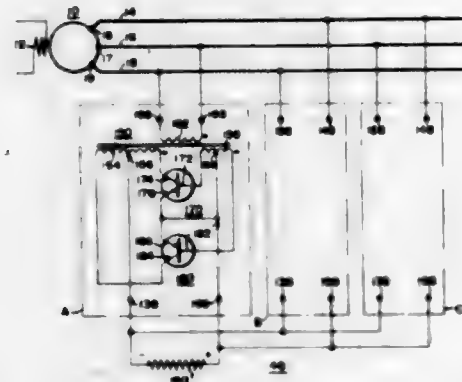
8. In a radio guided homing automatic pilot for aircraft whereby the craft may be caused to maintain a radio course, comprising means for obtaining a first signal proportional to the magnitude of the displacement of the craft from said radio course, means for providing a second signal having a value proportional to the angle of craft approach toward said radio course, means for integrating at least a portion of said displacement signal with respect to time, means for producing a resultant signal proportional to the algebraic sum of said first and second signals corrected by the output of said integrating means, and servo means for controlling the ailerons of said craft governed by said resultant signal.

2,999,201

ELECTRIC CONTROL CIRCUIT

John F. Reuther, Penn Township, Allegheny County, and James D. Finley, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 9, 1957, Ser. No. 670,815
10 Claims. (Cl. 322-28)



10. In a regulator system for a dynamo-electric machine having output terminals and an excitation field wind-

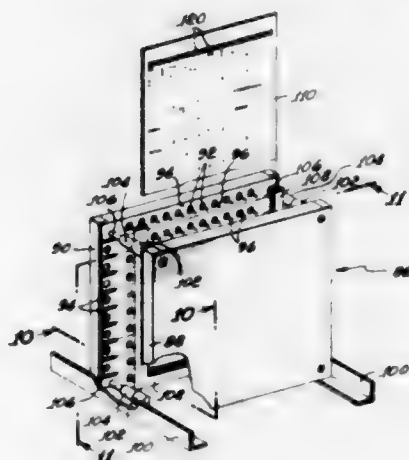
ing, a transformer having a primary winding and two secondary windings, said primary winding being connected across said output terminals, a plurality of transistors each having an emitter and a collector, said transistors being connected in a full-wave connection to said secondary windings for rectifying the voltage across said secondary windings and providing a direct current output, the emitters and the collectors of said transistors being connected in inverted connections with the unidirectional output current flowing in said transistors in a direction opposite to that of the normal emitter current of said transistors, the direct current output of said transistors being a measure of the voltage across the output terminals of said dynamo-electric machine, and a magnetic amplifier for comparing said direct current output with a reference voltage, said magnetic amplifier being connected between said transistors and said field winding to control the current applied to said field winding in accordance with the larger of said direct current output and said reference voltage and to maintain the output voltage of said machine at substantially a predetermined value.

2,999,202

VOLTAGE DIVIDER SETTING DEVICE

Louis A. Ule, Alhambra, Calif., assignor to Gillilan Bros. Inc., Los Angeles, Calif., a corporation of California

Filed June 4, 1956, Ser. No. 589,082
4 Claims. (Cl. 323-74)

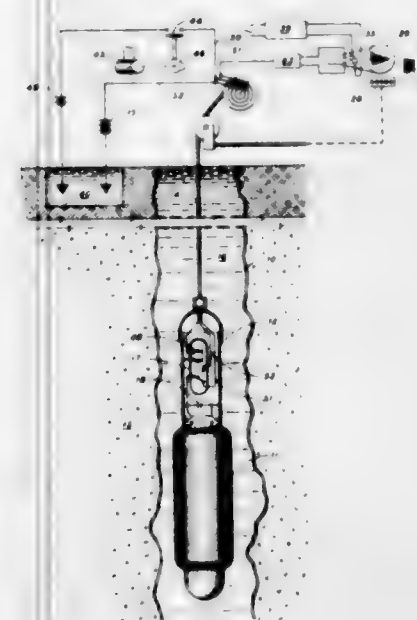


1. A translation device for passing a selected fraction of a signal to a load, said device comprising: a plurality of circuits, a plurality of impedance elements corresponding to each circuit, a switch mechanism for each impedance element to connect any one or more of said impedance elements into the corresponding circuit of each, each of said switch mechanism including an actuating pin, at least a portion of said switches being disposed in a bank, the actuating pins of said bank of switches projecting outwardly therefrom, a perforated member, first means to maintain said member in any one of several transverse positions, whereby the total impedance of each of said circuits may be fixed according to one of several alternative positions of said member, and second means to clamp said member to said bank of switches, whereby selected actuating pins may project through the perforations of said member and others are moved effectively by the lack of perforations at the relative positions of said other actuating pins, two input terminals, said plurality of circuits including first and second circuits connected serially with each other between said two input terminals, the load being connected in parallel with one of said circuits, said switch mechanisms being adapted to change selectively the impedance of each of said circuits by connecting any one or more of said elements serially in one of said circuits and the remainder of said elements serially in the other.

2,999,203 NUCLEAR MAGNETISM LOGGING METHOD AND APPARATUS

Robert J. S. Brown, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Oct. 31, 1955, Ser. No. 543,967
11 Claims. (Cl. 324-5)



1. The method of reducing the effect of magnetic materials in an earth formation traversed by a well bore on a nuclear magnetism signal to permit identification of a physical characteristic thereof which comprises the steps of applying a magnetic polarizing field to a portion of said earth formation by positioning a polarizing field coil in said well bore adjacent said formation containing said magnetic materials, flowing a direct current through said polarizing coil, decreasing the amplitude of said direct current to substantially zero in a predetermined time interval, then reversing the direction of current flow through said polarizing field coil to apply an alternating current of decreasing amplitude for at least one cycle through said polarizing coil prior to cessation of current flow in said coil, and then detecting the electrical signal induced in said coil by the in phase precession of protons in said earth formation under the influence of the earth's magnetic field as an indication of said physical characteristic of said earth formation and substantially independent of the effect of said magnetic materials in the earth formation on said induced signal.

2,999,204

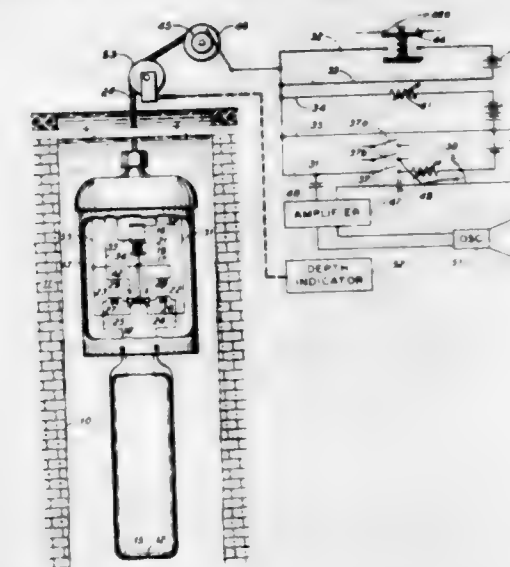
METHOD AND MEANS FOR REDUCING INHOMOGENEITIES IN NUCLEAR MAGNETISM WELL LOGGING

Stanley B. Jones, Whittier, and Robert J. S. Brown, Fullerton, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Nov. 22, 1957, Ser. No. 698,108
18 Claims. (Cl. 324-5)

3. The method of detecting atomic precession of fluids in an earth formation traversed by a well bore wherein the earth formation has a tendency to sustain magnetic field inhomogeneities induced by the effect of the magnetic field of a polarizing coil on randomly distributed magnetically retentive material in and around said well bore comprising the steps of applying said polarizing magnetic field to the protons of said fluids in said earth formation, terminating said polarizing magnetic field, applying a compensating magnetic field to said fluids in said earth formation in a direction opposite to the magnetic field sustained by said magnetically retentive ma-

terials, and then detecting the signal induced by the precession of said protons in the magnetic field within



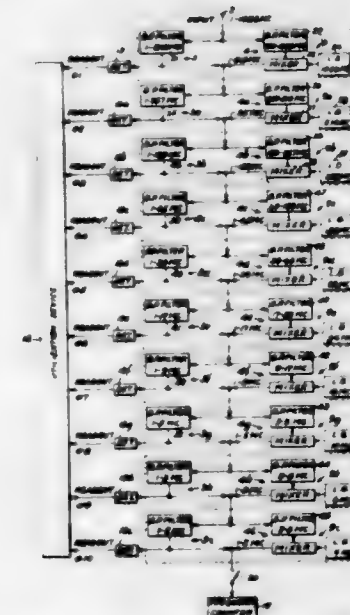
said earth formation and constituting the earth's magnetic field and said compensating magnetic field.

2,999,205

FREQUENCY INDICATING SYSTEM

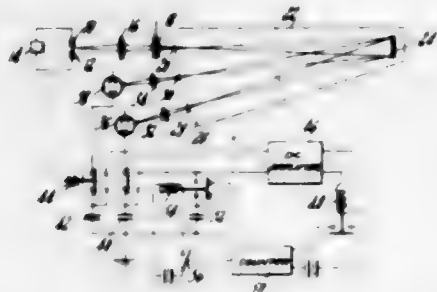
William Sichak, Nutley, and Robert T. Adams, Short Hills, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed May 16, 1958, Ser. No. 735,905
20 Claims. (Cl. 324-79)



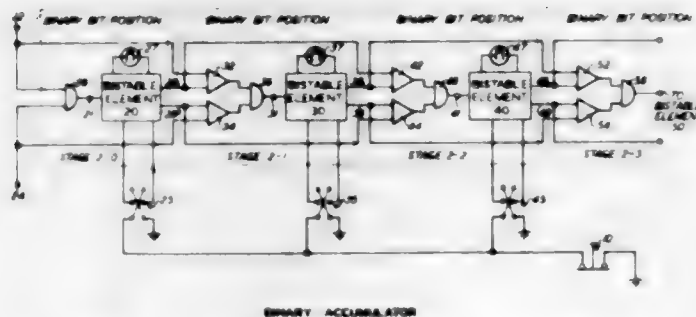
5. A system for obtaining an indication representing the frequency of a signal wave in a given frequency range comprising a signal wave input, means for dividing said frequency range into a plurality of subdivided frequency ranges, means for translating said subdivided frequency ranges to a first common subdivided frequency range, means for dividing said first common subdivided frequency range into a plurality of subdivided frequency ranges, means for translating said last-mentioned subdivided frequency ranges to a second common subdivided frequency range, a predetermined number of successive means for dividing the common subdivided frequency range of each preceding means into subdivided frequency ranges and translating the subdivided frequency ranges to a common subdivided frequency range, and means for detecting the presence or absence of said signal wave in each of said subdivided frequency ranges to provide an indication representing the frequency of said signal wave.

2,999,206
METHOD AND APPARATUS FOR MEASURING THE RATIO OF ELECTRIC POTENTIALS
 Hugh F. Stoddart, South Sudbury, and Elliot Dubois, Lincoln, Mass., assignors to Baird-Atomic, Inc., Cambridge, Mass., a corporation of Massachusetts
 Filed Oct. 3, 1958, Ser. No. 765,226
 7 Claims. (Cl. 324-140)



1. Apparatus for measuring the ratio of two electric potentials comprising a first capacitor and means to charge said first capacitor to at least the higher of said two potentials, means to incrementally discharge said capacitor such that each increment of discharge is a fixed percentage of the instantaneous potential on said first capacitor and means to count the number of increments required to reduce the potential on said capacitor from the higher to the lower of said two potentials, said number of increments providing a digital indication of the logarithm of the ratio of said two potentials.

2,999,207
DIFFERENCE TOTALIZER
 Allen G. Quynn, Jr., Frederick, Md., assignor, by mesne assignments, to HRB-Singer, Inc., State College, Pa., a corporation of Delaware
 Filed Oct. 1, 1957, Ser. No. 687,579
 17 Claims. (Cl. 328-44)

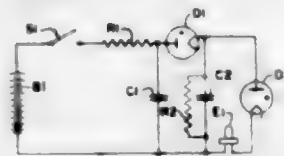


1. Apparatus for binary counting, comprising N bi-stable means for representing the powers of two, each of said N bi-stable means having a first and a second stable state wherein the Mth bi-stable means (M being an integer smaller in magnitude than N) is responsive only to both the (M-1) bi-stable means and the (M-2) bi-stable means such that when said (M-1) bi-stable means and said (M-2) bi-stable means change from the first stable state to the second stable state the Mth bi-stable means changes stable states.

2,999,208
R-C LONG DELAY TIMING CIRCUIT
 Herbert E. Ruehleemann, Fullerton, Pa., assignor to the United States of America as represented by the Secretary of the Navy
 Filed Mar. 7, 1955, Ser. No. 492,812
 7 Claims. (Cl. 328-78)
 (Granted under Title 35, U.S. Code (1952), sec. 266)

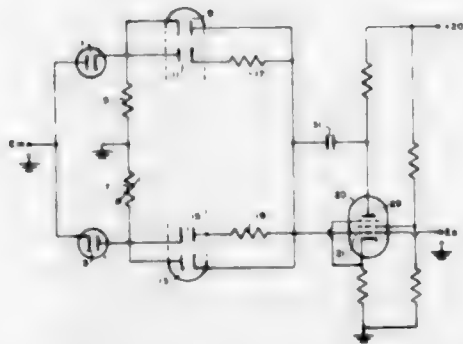
1. An electrical time delay circuit comprising a triggering circuit including a normally disabled gas diode, a first time constant network including a parallel connected resistor of predetermined value and capacitor connected across said triggering circuit, a second time con-

stant network including a resistor and a capacitor, means including a source of potential for charging said second network, and automatic switch means interconnecting said first and second networks and being intermittently operable when the potential difference between said networks is of a first predetermined value and of a second



predetermined value to provide a low impedance conductive path and a high impedance virtually nonconductive path, respectively, between said networks whereby said first network is charged in successive steps to a potential level by said second network sufficient to fire said diode after a predetermined number of intermittent operations of said automatic switch means.

2,999,209
SLOW ATTACK-FAST RELEASE AVERAGING CIRCUIT
 George W. Cook, 2211 39th St. NW., Washington, D.C.
 Original application June 15, 1953, Ser. No. 361,885, now Patent No. 2,909,759, dated Oct. 20, 1959. Divided and this application June 9, 1959, Ser. No. 819,193
 2 Claims. (Cl. 328-127)
 (Granted under Title 35, U.S. Code (1952), sec. 266)



1. A slow attack fast release averaging circuit comprising a pair of parallel connected circuit means each of which include a uni-directional element, one end of each said elements being connected together and the other end of each said elements being connected through an impedance element to ground potential, a first pair of electronic tubes comprising a first and a second diode and a second pair of electronic tubes comprising a first and second diode, each of said diodes having an anode element and a cathode element, said tubes of said first and second pairs being reversely connected such that the cathode element and the anode element of the first and second diodes, respectively, of the first pair being connected together, and the cathode element and anode element of the second and first tubes, respectively, of the second pair being connected together, said connected elements of each pair of tubes being connected to one of said uni-directional elements, a common potential terminal, the anode element of the first diode in the first pair and the cathode element of the first diode in the second pair being connected directly to said common terminal, the cathode element of the second diode in the first pair and the anode element in the second diode of the second pair being connected through individual resistor elements to said common terminal, a signal amplifying means, the input of said signal amplifying means being connected to said common terminal, and a capacitor connected between an output of said amplifying means and said common terminal.

2,999,210

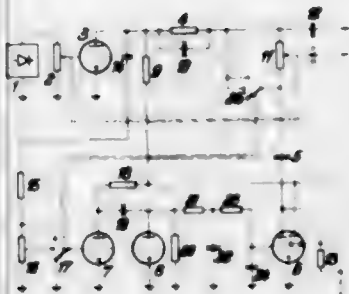
AUTOMATIC VOLUME EXPANDER

Waldemar Moortgat-Pick, Grassau, Chiemgau, Germany, assignor to Korting Radio Werke G.m.b.H., Grassau, Chiemgau, Germany

Filed Oct. 17, 1957, Ser. No. 690,714

Claims priority, application Germany Nov. 30, 1956

9 Claims. (Cl. 330-145)



1. An automatic volume range expander circuit for use with a multiple stage audio amplifier, comprising a potential developing means connected to a first stage of said amplifier and delivering unidirectional control potential impulses proportioned to the audio frequency amplitude in said first stage; and a voltage dividing circuit shunted across the output of said first stage and including an impedance connected in series to the input to the next stage, said voltage dividing shunt circuit comprising a condenser and a vacuum tube connected mutually in series from said input to ground, the internal resistance of said vacuum tube being controlled by the application of said control potential impulses to an electrode of the tube, and the capacity of said condenser as compared with the said impedance at the output of said first stage being chosen small enough that said unidirectional potential impulses occurring at audio frequencies will be blocked from entering the input to said next stage through said condenser and also small enough that the volume expansion at medium audio frequencies materially exceeds the volume expansion occurring at low audio frequencies.

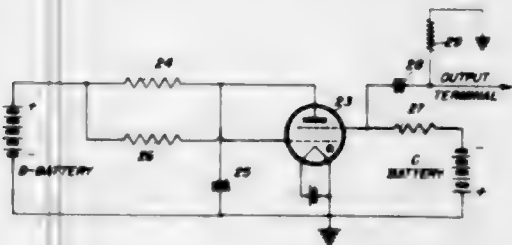
2,999,211

GASEOUS RELAXATION PULSE GENERATOR WITH OUTPUT TAKEN FROM SCREEN GRID

John H. Kuck, Silver Spring, and William M. McCord, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed July 12, 1951, Ser. No. 236,382

3 Claims. (Cl. 331-129)



1. In a pulse generator comprising a single gas-filled tube having a directly-heated, grounded cathode, an anode, a control grid, and a screen grid, a source of direct current potential, circuit means connecting said source and said tube in a relaxation system, said circuit means including a storage device connected between the anode and cathode, and means for charging said device at a predetermined rate, a source of negative potential, connections including a series connected impedance impressing said negative potential on said screen grid, and a pulse output circuit connected between said impedance and said screen grid.

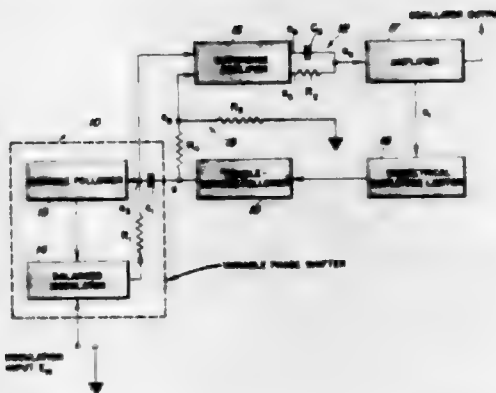
2,999,212

FREQUENCY MODULATED OSCILLATOR

Bedford S. Robertson, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 15, 1956, Ser. No. 571,849

8 Claims. (Cl. 332-29)



1. A frequency modulated oscillator comprising, an amplifier, a variable phase shifter receiving the output of said amplifier, and providing a voltage shifted in phase with respect to said output, a voltage divider also receiving the output of said amplifier for establishing a reference voltage, a fixed phase shifter, means receiving the phase shifted output of said variable phase shifter and said reference voltage and providing equal and oppositely polarized output components for application to said fixed phase shifter, and means applying the output of said fixed phase shifter to the input of said amplifier in positive feedback relationship to the output thereof.

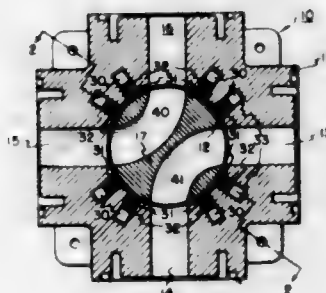
2,999,213

WAVE GUIDE ROTARY SWITCH

Daniel Olivieri, Yonkers, and Lee W. Forker, Bayville, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Apr. 3, 1958, Ser. No. 726,219

6 Claims. (Cl. 333-7)



3. A wave guide rotary switch comprising a stator member having a cylindrical cavity portion and a plurality of wave guide channels extending outwardly from said cavity at spaced intervals on the periphery thereof, a cylindrical rotor member rotatably disposed within said cavity and having at least one wave guide channel extending therethrough, said rotor channel being located to bring the ends thereof into registration with the ends of different pairs of stator wave guide channels when the rotor is rotated to different predetermined angular positions, a plurality of elongated conductive members extending between said stator and rotor members at spaced intervals around the periphery of said cavity, said conductive members having longitudinal dimensions parallel to the center axis of said cavity greater than the maximum cross-sectional dimensions of said wave guide channels, each of said conductive members having longitudinally

extending surface areas extending substantially throughout its entire length in contact with said rotor and stator members to provide a short circuit connection between the rotor and stator members, at least one of said contacting surface areas of each of said conductive members making a sliding contact during rotation of said rotor member, and each of said conductive members being positioned from the end of a stator wave guide channel by a distance considerably less than one quarter wave guide wavelength when said rotor wave guide channel is in registration with a pair of stator channels.

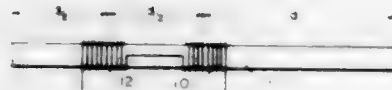
2,999,214

TEMPERATURE-COMPENSATED MAGNETIC-CORED INDUCTOR

Richard W. Bradmiller, Winter Park, Fla., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Sept. 4, 1958, Ser. No. 758,946

6 Claims. (Cl. 336-179)



4. An inductor comprising: an elongated magnetic core having characteristics such that the permeability of said core varies as a function of temperature, the rate of variation of permeability of said core due to temperature change being greatest adjacent the ends of said core, and the permeability of said core being greatest adjacent a center position thereof; a first coil positioned on said core adjacent said center position; and means for compensating for changes in inductance and Q of said first coil due to changes in temperature, said means comprising a second coil connected in series with said first coil and positioned a predetermined distance from said first coil, the effective inductance of said second coil being less than the effective inductance of said first coil, said first coil and said second coil being wound on said core in opposite directions whereby flux produced in said coils is 180° out of phase.

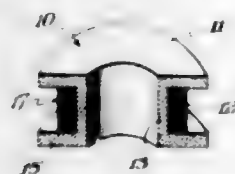
2,999,215

MAGNETIC CORE AND METHOD OF MANUFACTURE

Carroll W. Lufcy, Silver Spring, and William K. Kise, Jr., Takoma Park, Md., assignors to Dynacor, Inc., Kensington, Md., a corporation of Maryland

Filed May 24, 1957, Ser. No. 661,327

11 Claims. (Cl. 336-213)



1. A tape-wound magnetic core incorporating a toroidal wrapping of thin magnetic tape whose magnetic characteristics are made uniform and insensitive with respect to mechanical shocks which do not subject the core material to a strain exceeding their elastic limit by means of the method which comprises the steps of annealing said cores, empirically determining an intensity and duration for a succession of mechanical shocks which will stabilize the magnetic characteristics of said cores without exceeding their elastic limit, and applying said empirically determined succession of mechanical shocks to said cores.

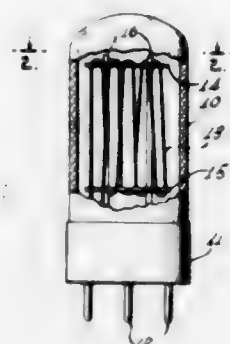
2,999,216

BALLAST TUBE

Benjamin F. Steiger and Max Yarmovsky, Livingston, N.J., assignors to Tung-Sol Electric Inc., a corporation of Delaware

Filed Feb. 23, 1960, Ser. No. 10,172

5 Claims. (Cl. 338-20)



1. A ballast tube which passes constant current for a range of applied voltages comprising, an envelope containing an iron wire with a first covering of nickel and a second covering of platinum, said envelope containing an inert gas at reduced pressure.

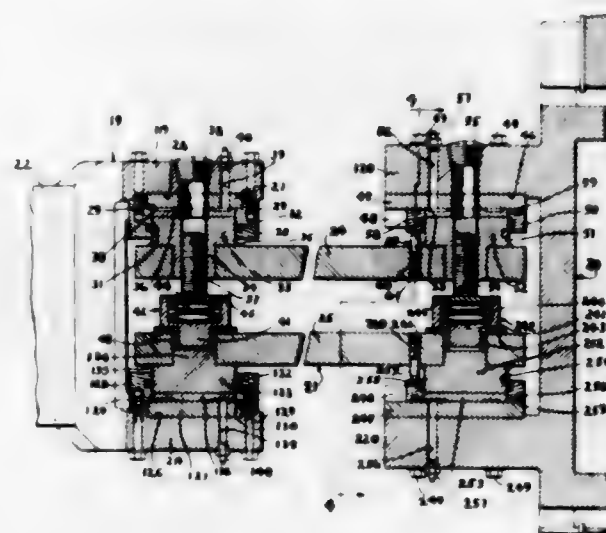
2,999,217

CURRENT TRANSFER DEVICE FOR RELATIVELY MOVABLE MEMBERS

John R. Barefoot, Youngstown, and George H. Goldner, Warren, Ohio, assignors, by mesne assignments, to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio

Filed Aug. 8, 1957, Ser. No. 677,025

4 Claims. (Cl. 339-2)



1. In an electrical device through which relatively high amperage current flows, the combination comprising a pair of spaced-apart, current conducting members shiftable relative to each other and one carrying an annular wall which defines a circular recess, a rigid current conducting arm extending between said members, pin means carried by said arm in electrical unity therewith and projecting transversely thereof for rotatably fitting within said recess and the free terminal end of said pin means providing an electrical contact surface in abutting relation with an electrical contact surface which forms the bottom of said recess, means urging respective electrical contact surfaces of said pin means and said member into low electrical resistance engagement, and means in sealing engagement with both said defining wall and said pin means at a place spaced from the latter's free terminal end to maintain lubricant between said contact surfaces and prevent entrance of foreign matter therebetween.

2,999,218

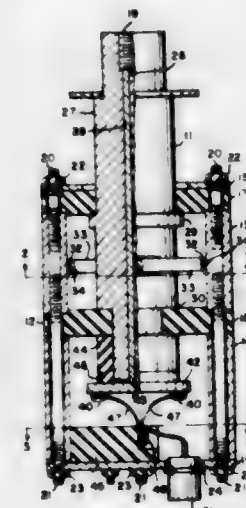
COAXIAL ROTARY JOINT

William J. Moulds, Albuquerque, N. Mex., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Dec. 29, 1959, Ser. No. 862,731

1 Claim. (Cl. 339-8)

(Granted under Title 35, U.S. Code (1952), sec. 266)



A joint for connecting a rotating coaxial system to a stationary coaxial system comprising; a cylindrical electrically conductive housing having a portion of the inner surface polished, a first electrically conductive plate member attached to one end of the housing, a second plate member attached to the other end of the housing, means for connecting the housing to the outer conductor of the stationary coaxial system through the first plate, a first bearing member located within the housing and spaced between the first and second plates, a second bearing member located within the housing and adjacent to the second plate, a coaxial connector member rotatable and supported within said bearings, the coaxial connector member having an inner conductor member and an outer conductor member insulated from one another, the outer conductor member adapted to be connected to the outer conductor of the rotating coaxial system and the inner conductor member adapted to be connected to the inner conductor of the rotating coaxial system; a plurality of spring wiper elements connected to and rotatable with the outer conductor of the coaxial connector member, each of the wiper members having a contact button, the contact buttons engaging the polished inner surface of the housing during rotation of the connector member; an electrically conductive disk connected to and rotatable with the inner conductor of the connector member and spaced from the outer conductor, one surface of the disk being polished, an insulating wiper mount mounted in the housing adjacent the first plate, a plurality of stationary spring wipers having contact buttons mounted in the housing on the wiper mount, the contact buttons of the stationary wipers engaging the polished surface of the disk during rotation of the disk and means for connecting the stationary wiper elements with the inner conductor of the stationary coaxial system.

2,999,219

PLUG-IN POWER BUSWAY

Henry H. Chase, Keene, N.H., assignor to General Electric Company, a corporation of New York

Filed Oct. 23, 1958, Ser. No. 769,110

5 Claims. (Cl. 339-22)

1. An electric power plug-in busway system comprising an elongated enclosure of generally rectangular cross section, and a plurality of relatively wide, thin, flat bus bars supported in edge-to-edge spaced relation in said enclosure with their relatively wide surfaces in a substan-

tially common plane throughout the major intermediate portions of said conductors, said bus bar conductors having a plurality of longitudinally spaced intermediate portions thereof twisted at 90 degrees to said common plane



with the twisted portions having uninsulated parts, said enclosure having openings adjacent the twisted portions for permitting insertion of contacts of a plug-in type power take-off device making plug-in contact with the uninsulated parts of said twisted portions.

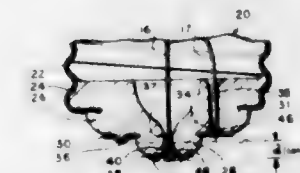
2,999,220

LAMP BASE

Leo C. Werner, Cedar Grove, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 25, 1958, Ser. No. 763,264

6 Claims. (Cl. 339-146)



1. A multiple-contact base comprising, a shell, an insulator attached to and projecting beyond an end of said shell and contoured to provide two extensions of unequal length, a first contactor member of generally planar configuration mounted on one of said extensions and located at a first plane that is spaced from the end of said shell and is transverse to the shell axis, and a second contactor member of generally planar configuration mounted on the other of said extensions at a second transverse plane located beyond said first plane, said first and second contactor members each comprising a sheet-metal element a portion whereof is displaced to form at least one outwardly-projecting boss of sufficient axial length to provide preformed contact surfaces that are spaced predetermined fixed distances from the end of said shell and from each other.

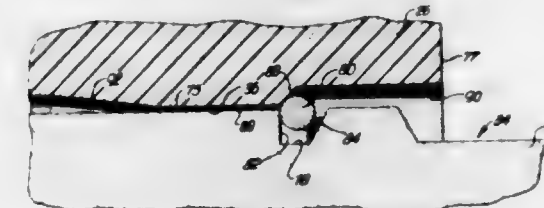
2,999,221

SNAP-IN CONTACTS FOR ELECTRICAL CONNECTORS

Roger H. Ellis, Arcadia, and Ernest W. Kuehl, San Fernando, Calif., assignors to Cannon Electric Company, Los Angeles, Calif., a corporation of California

Filed Aug. 2, 1960, Ser. No. 46,940

16 Claims. (Cl. 339-176)



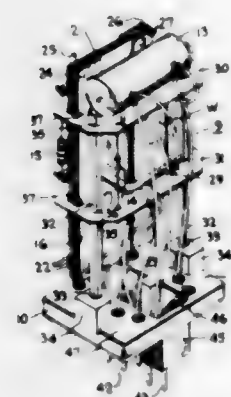
1. In an electrical connector the combination of: an insulator member having a conductor end and a contact end and a bore extending through the insulator member from end to end; an elongated contact terminal mounted in said bore; non-yielding stop means limiting the position of said terminal in said bore in the direction of the contact end; and yieldable stop means limiting the position of said terminal in said bore in the direction of the conductor

end, said yieldable stop means comprising an annular shoulder formed in said insulator bore angularly inclined relative to the axis thereof so as to face radially-inwardly and toward said contact end and a bore section of restricted diameter adjoining said shoulder toward the conductor end, a compressible ring of an outside diameter when expanded to lodge against said shoulder and of a diameter when compressed sufficiently small to slide through the bore section of restricted diameter, a groove in said terminal receiving said ring and sufficiently deep to accommodate said ring when compressed, the wall of said groove facing the conductor end providing a driving face for engagement with said ring, said driving face being angularly inclined relative to the bore axis so as to face radially-outwardly and toward said conductor end and having an angle of inclination relative to the axis of the bore greater than the angle of inclination of the shoulder of the insulator member, whereby axial driving force toward the conductor end imposed upon the terminal by the coupling thereof with a mating terminal is not sufficient to dislodge the terminal in the bore but application of a terminal removal driving force greater than the coupling driving force will force the terminal groove face against the ring, whereby the ring will be cammed by the shoulder into compressed circumference and into the bore section of restricted diameter and the terminal may thereupon be completely withdrawn from the insulator.

2,999,222

ELECTRIC CONTROL UNIT

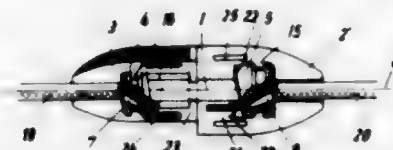
Charles J. Adams, Bloomington, Ill., assignor to General Electric Company, a corporation of New York
Filed Oct. 22, 1957, Ser. No. 691,775
1 Claim. (Cl. 339-186)



An insulating base adapted for plug-in connection to a socket, said base comprising a generally planar rectangular shaped base portion having a pair of parallel opposed side edges, a stem projecting in a first dimension from the central area of one side of said base portion having a generally rectangular cross section taken in a plane parallel to said base portion and having a cavity communicating with the opposite side of the base portion, said stem having a second dimension generally perpendicular to said side edges which extends substantially completely across said base portion and which is greater than said first dimension, said stem having an outer wall with a slot therein extending parallel to said first dimension to define a keyway, two sets of plug-in terminals carried by said base portion at opposite sides of said stem and extending from said one side of the base portion parallel to said first dimension, said two sets of terminals extending distances which are less than the distance of projection of said stem, and a third set of plug-in terminals carried by the stem and extending from its outer end parallel to said two sets of terminals, said cavity being adapted to receive conductors for connection to said third set of terminals.

2,999,223
CABLE CONNECTOR
Eugen Peter, Becknang, Württemberg, Germany, assignor to Telefunken G.m.b.H., Berlin-Charlottenburg, Germany

Filed Jan. 5, 1961, Ser. No. 86,814
Claims priority, application Germany Jan. 14, 1960
10 Claims. (Cl. 339-205)



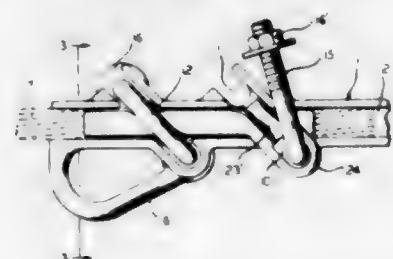
1. A cable connector comprising, in combination: two shells made of insulating material and in face-to-face relationship so as together to form an elongated body having a longitudinal axis and being rotationally substantially symmetric about said axis, said shells having at their ends longitudinal passages through which cable ends may be received, each of said shells being composed of two superposed half shells; an electrically conductive cylindrical element arranged interiorly of and coaxially with said elongated body, part of said element being surrounded by one of said shells and the remainder of said element being surrounded by the other shell, said element connecting said shells together for preventing movement thereof relative to each other in axial direction and for mounting said shells for rotation relative to each other about said axis into and out of a starting position, said element having at each of its opposite ends a bore one of whose openings is in alignment with a corresponding passage; and cooperating helical surfaces on each of said shells and said element for receiving, when said shells are in said starting positions, cable ends which project through said passages and bores and for clamping said cable ends when said shells are rotated relative to each other out of said starting position.

2,999,224

STRAIN CLAMP

Walter W. Krasse, West Allis, and Ronald J. Bertling, South Milwaukee, Wis., assignors to McGraw-E Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Apr. 8, 1957, Ser. No. 651,442
7 Claims. (Cl. 339-265)



5. A strain clamp for supporting a conductor comprising a body member including an anchoring attachment and a conductor seat in substantial alignment therewith, conductor hold-down means comprising a keeper having a conductor seat, said body member defining at least one pair of apertures disposed in spaced relationship at opposed sides of said conductor seat, a U-bolt member having threaded legs arranged to be axially slidably received by said apertures and having its bail portion embracingly engageable with said keeper, one of said opposed apertures having an open end for laterally slidably receiving one leg of said U-bolt, and threaded nut members engageable with respective U-bolt legs, the other of said pair of apertures being of a size to permit passing the U-bolt legs and bail portion axially therethrough, the legs of

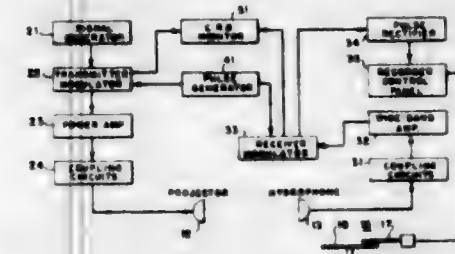
said U-bolt being of sufficient length to permit said nut members to remain in threaded engagement at the ends thereof and to further permit slidable rotation of said U-bolt within the plane of said U-bolt and relative to the said opposed apertures, the respective conductor seats of said body member and of said keeper each defining complementary relative longitudinally undulating contoured surfaces.

2,999,225

ELECTRONIC SWITCHING APPARATUS AND METHOD

Earle C. Gregg, Jr., Chagrin Falls, and Erwin F. Shrader, East Cleveland, Ohio, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Jan. 20, 1955, Ser. No. 483,185
10 Claims. (Cl. 340-8)

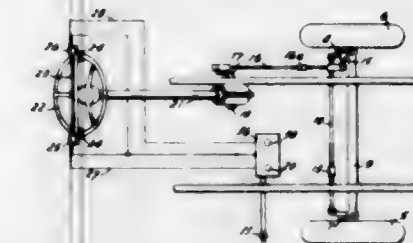


1. Transmitting and receiving apparatus comprising a signal generator for generating electrical signals, a first amplifier connected to said signal generator, said first amplifier being biased beyond cut-off, a fixed radiator connected to said first amplifier for radiating signals which pass through said first amplifier, a rotatable transducer for receiving signals radiated by said radiator, a second amplifier connected to the output of said rotatable transducer, said second amplifier being biased beyond cut-off, a pulse generator for generating electrical pulses, a first means connected to the output of said pulse generator for unbiasing said first amplifier for a first predetermined period of time in response to the pulse output from said pulse generator, second means connected to the output of said pulse generator for unbiasing said second amplifier for a second predetermined period of time in response to the output of said pulse generator, and a recording means mechanically coupled to said rotatable transducer and electrically coupled to the output of said second amplifier.

2,999,226

HAND STEERING WHEEL POSITION INDICATOR

Lyle W. Wusterbarth, Rte. 1, Kiel, Wis., assignor of one-half to Leon W. Wusterbarth, Kiel, Wis.
Filed Nov. 6, 1958, Ser. No. 772,218
4 Claims. (Cl. 340-52)



1. A hand steering wheel position indicator device for indicating alignment between a hand steering wheel and steerable ground wheels of an automobile, said device comprising a pair of movement-sensitive electrical switches secured at spaced locations to an attaching bar, means on said bar for quick attachment to said hand steering wheel, a separate base member positionable on the ground and beneath said car, an electric light for each

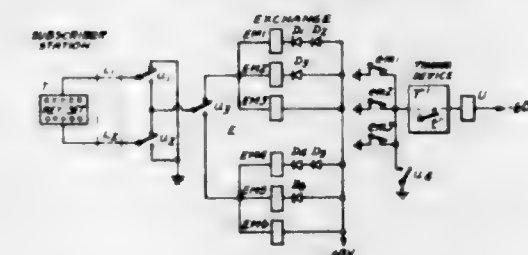
of said switches and mounted on said base member, and an electrical circuit so connecting said light and switches whereby the former cause the latter to indicate the direction in which said wheel is turned from a predetermined position.

2,999,227

CIRCUIT ARRANGEMENT FOR THE TRANSMISSION OF SIGNAL PULSES ACCORDING TO THE VOLTAGE-COMPARISON METHOD

Alois Hezel, Stuttgart-Weilimdorf, and Wolfgang Weisser, Stuttgart, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed July 24, 1957, Ser. No. 673,970
Claims priority, application Germany July 26, 1956
10 Claims. (Cl. 340-172)

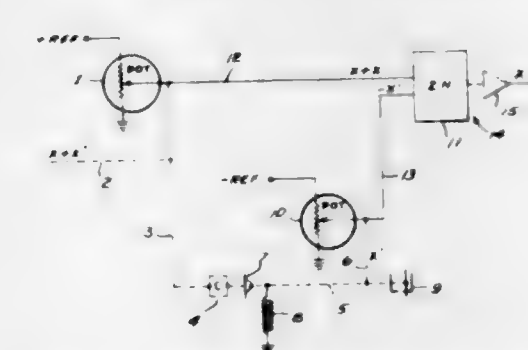


1. A circuit arrangement for the transmission of signal pulses between transmitters and receivers according to the voltage comparison method via one or more lines in telecommunication systems, comprising a transmitter, a receiver, a line connected between said transmitter and said receiver, a single common source of potential, a plurality of nonlinear resistances, means including said line for connecting said transmitter and said receiver in series with said source of potential, potential responsive means in said receiver, means for setting the potential response of said potential responsive means by the insertion of combinations of said nonlinear resistances in series therewith with selected polarities, and means for adjusting the potential drop of said transmitter by selectively inserting combination of said nonlinear resistances in series therewith with selected polarities, whereby the voltages to be compared between said transmitter and said receiver via said line are produced by a current, originating with said common source of voltage and flowing through nonlinear resistances arranged at said transmitter and said receiver.

2,999,228

MEMORY DEVICE FOR ANALOG COMPUTERS

Richard J. Facciola, Rego Park, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,793
7 Claims. (Cl. 340-173)



3. A memory device comprising a pair of potential difference measuring instruments, each of said instruments being adapted to establish a voltage in its output according to a mechanical analog position, a mechanical drive shared on the input side of each instrument, a selective

make and break device disposed in the drive for one of the instruments, an adding network connected to the output of each of said instruments and means for removing potential from the said one of the instruments accumulated thereon while the latter was selectively connected to said drive.

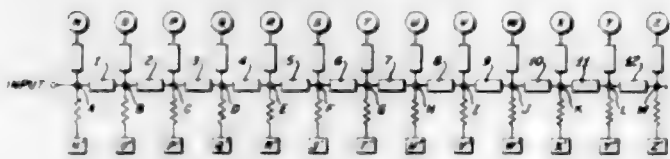
2,999,229

SHIFT REGISTER USING SOLID STATE DEVICES

Llewellyn H. Thomas, Leonia, N.J., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 11, 1959, Ser. No. 792,584

9 Claims. (Cl. 340-173.1)



8. A multi-stage shift register comprising a plurality of cascaded stages, each of said stages including a first group of three series connected two-terminal germanium bars having all current carriers therein confined to an energy level below the current conducting energy level of said bars, said bars being immersed in liquid helium whereby said devices are easily switched from the conducting to the nonconducting state, a second group of three two-terminal germanium bars maintained at liquid helium temperature having one of said terminals of each connected to each junction between the devices of said first group, each of said first groups being connected in series, a plurality of two-terminal resistors having one terminal of each connected to each of said junctions, each of said stages having first and second stable states defined by the states of conduction of said first group of devices, means to store information represented by one of said stable states in the first of said stages and means to shift information to each succeeding stage, said last two mentioned means comprising means to apply predetermined patterns of voltages to the second terminals of selected ones of said second group of devices and of selected ones of said resistors.

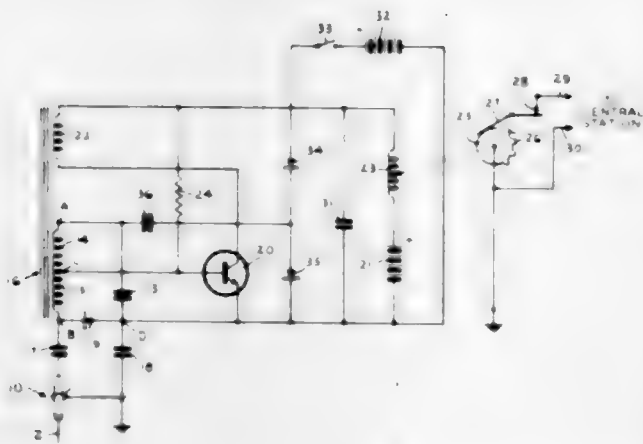
2,999,230

LIQUID LEVEL SUPERVISORY DEVICE

Peter Laakmann, Staten Island, N.Y., assignor to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey

Filed July 21, 1959, Ser. No. 828,572

8 Claims. (Cl. 340-244)



1. A liquid level supervisory device, comprising a phase bridge having a reference arm including a first capacitive element and a variable arm including a second capacitive

element arranged to be immersed in said liquid and having a capacitance value dependent on the level of said liquid, a transistor having an input pair of electrodes coupled across the neutral leg of said bridge, a feedback circuit coupled between an output pair of electrodes of said transistor and arranged to be coupled to said bridge circuit, said coupling between said feedback circuit and said bridge circuit being regenerative for conditions in which the ratio of the capacitance of one of said arms to the capacitance of the other of said arms exceeds a predetermined value and being degenerative for conditions in which said ratio is less than said predetermined value, said transistor being arranged to generate an oscillatory signal when said coupling between said bridge circuit and said feedback circuit is regenerative, means responsive to presence of said oscillatory signal to produce a substantial increase in the driving current of said transistor whereby said transistor is driven to saturation and the output current of said transistor is only limited by the external load thereof after said oscillatory signal has started, and means responsive to the absence of said saturation current in said output circuit to produce an alarm signal indication.

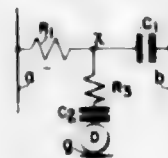
2,999,231

GROUND DETECTORS FOR ELECTRICAL DISTRIBUTION SYSTEMS

Norbert Leo Kusters and Donald William Robert McKinley, Ottawa, Ontario, and Allan Ross Morse, Aylmer, Quebec, Canada, assignors to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada

Filed June 16, 1958, Ser. No. 742,340

11 Claims. (Cl. 340-255)



1. Apparatus for detecting connection of impedances between ground and a pair of alternating current distribution conductors energizable from a source and normally isolated from ground, comprising first and second linear impedance means each having a terminal connected to respective conductors and a common junction for their other terminals, a branch path connected between said junction and ground and comprising a third impedance whereby said conductors normally have a mean potential substantially that of ground, alternating current responsive means connected in series in said path, and means energizing said first and second impedance means effective to vectorially displace the potential of said junction from said mean potential.

2,999,232

MOUTH OPENING ALARM

George J. Wilson, 186 Benham Road, Groton, Conn.

Filed Jan. 15, 1960, Ser. No. 2,779

3 Claims. (Cl. 340-279)

1. A mouth opening warning device comprising a closed flexible band adapted to be engaged substantially vertically around a person's head and having a lower portion adapted to extend beneath the person's chin, a housing movably mounted on said lower portion, guide loops on the opposite side walls of the housing slidably receiving the opposite side portions of the band, an electric vibrator mounted in said housing, a battery in said housing, a normally open switch mounted in said housing and having a movable transversely extending operating

element engaging the band beneath the housing and closing the switch responsive to downward movement of said

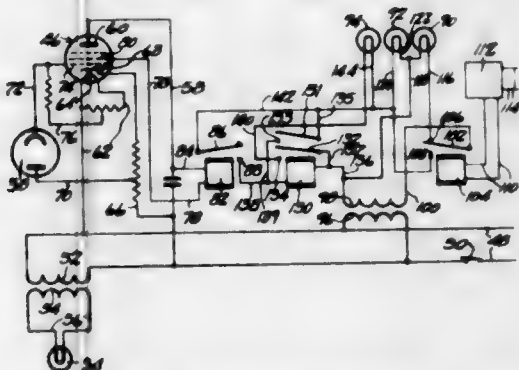


housing in the band, and circuit means connecting said vibrator to said battery through said switch.

2,999,233

GAME TIMING DEVICE

Robert A. Dresbach, R.R. 4, Box 294, and Stanley D. Kuespert, 814 Sherman Ave., both of South Bend, Ind.
Filed Mar. 26, 1956, Ser. No. 573,967
10 Claims. (Cl. 340-323)

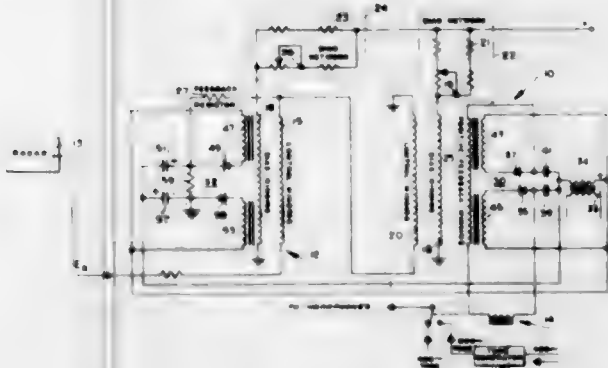


1. A game timing device comprising a goal member through which a game member is passed to produce a score, means for directing a beam of light across the goal member to be intercepted by passage of a ball through said goal member, light-sensitive means normally impinged by said light beam, a signal, a time responsive means having timing and elapsed time conditions, and signal actuating means actuable by said light-sensitive means only when said time-responsive means is in its elapsed time condition.

2,999,234

TONE ALERTING CIRCUIT

Melville C. Creusere, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 8, 1957, Ser. No. 633,168
4 Claims. (Cl. 343-7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

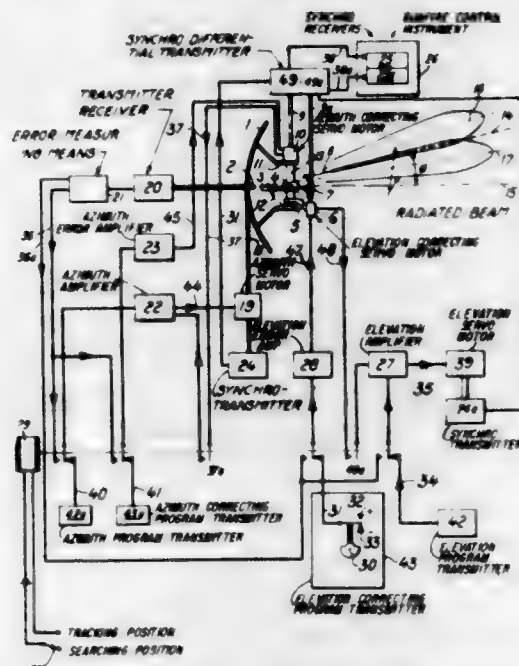


1. An object proximity warning system comprising a tone generating supply means, a radar means, and a relay means for changing the tone supplied by said tone-

generating means, said relay means including a first magnetic amplifier and a second, low-level, magnetic amplifier, said first magnetic amplifier being supplied with positive feedback so that a very small change in control current is sufficient to cause said first amplifier output to vary from a very small output to its maximum output which is sufficient to energize said relay and thus operate as a switch at a predetermined control current, said control current being derived from the radar range voltage of said radar means at a first desired range, said low-level magnetic amplifier being connected to operate as a switch in a similar manner as said first magnetic amplifier whereby when a second desired radar range is reached the current output of said low-level amplifier changes from very low to full output which is added to the much smaller current from the radar range voltage and to the control winding of said first magnetic amplifier to cause it to return to its cut-off condition and deenergize said relay.

2,999,235

RADAR SEARCHING AND TRACKING DEVICES
Ernst von Segebaden, Drottningholm, Gunnar Winkler, Bromma, and Harry Claesson, Sportstugevagen 4, Danderyd, Sweden; said von Segebaden and said Winkler assignors to said Claesson
Filed Dec. 16, 1955, Ser. No. 553,618
13 Claims. (Cl. 343-7.4)



1. In a radar system for searching and tracking objects in space, a radiant energy focusing means with a focal point and an axis of orientation, first azimuth and elevation angle adjusting means for moving said radiant energy focusing means in any direction, an energy radiating and receiving member located at said focal point for producing a beam along a beam axis determined by said radiating and receiving member, means for operating said radiating and receiving member so as to rotate said beam axis about a scanning axis inclined to the beam axis, and second azimuth and elevation angle adjusting means for adjusting said radiating and receiving member so as to deviate said scanning axis relative to said axis of orientation.

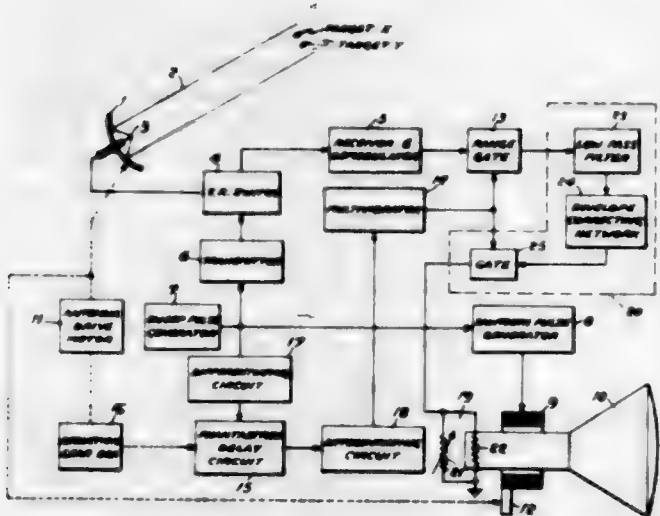
2,999,236

HIGH RESOLUTION RADAR

Sidney W. Lewinter, Verona, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 18, 1958, Ser. No. 749,506
5 Claims. (Cl. 343-11)

1. In a radar system for determining and indicating the bearing and range to targets and having a radar trans-

mitter and receiver yielding an envelope of return radar pulses, means for improving bearing resolution comprising filter means coupled to the output of said receiver for producing a signal indicative of said envelope, a circuit coupled to the output of said filter for attenuating low frequencies in said filter output to a greater degree



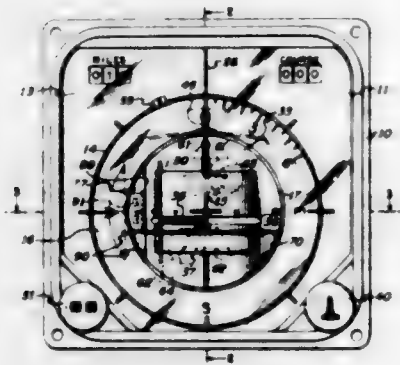
than high frequencies, means for generating pulses coincident with said return radar pulses, gating means coupled to the output of said circuit and controlled by said coincident pulses and means coupled thereto for employing the output of said gating means to indicate the positions of said targets.

2,999,237

FLIGHT INDICATORS

Gustav J. Cypser, Plainview, N.Y., and Edward R. Dayton, Grand Rapids, Mich., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Feb. 29, 1960, Ser. No. 11,603
8 Claims. (Cl. 343-107)

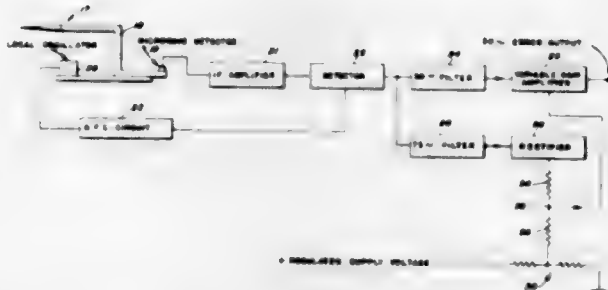


1. In an aircraft navigation indicator for indicating to the pilot the position of the craft with respect to a radio-defined flight path and including radio receiver means for supplying an output in accordance with the departure of said craft with respect to said flight path, pointer means displaceable across the face of said indicator in accordance with departures of said aircraft from said flight path, reference means mounted in said instrument for movement from one position in said instrument invisible to the pilot to another position therein visible to the pilot and adjacent said pointer whereby when in said other position to provide a visible reference for said pointer, and means responsive to the magnitude of the output of said receiver for moving said reference means from one position to the other.

2,999,238
AUTOMATIC ERROR SENSITIVITY CONTROL
FOR RADAR RECEIVER

Henry H. George, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 28, 1954, Ser. No. 465,455
3 Claims. (Cl. 343-108)

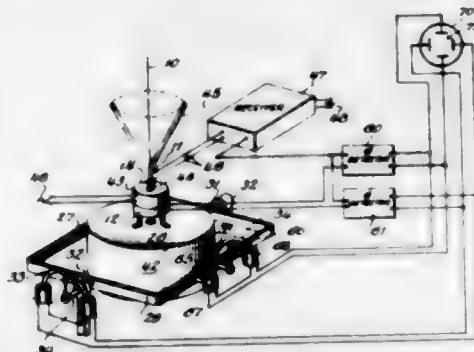


1. In a receiver for a beam riding missile, said receiver providing an error signal output proportional to the displacement of the missile from the axis of a nutating guidance beam; a sensitivity control comprising means for inserting on the missile guidance beam a calibrating signal at a known level of amplitude modulation and at a frequency sufficiently different from the nutation frequency of the guidance beam to permit separation of the calibrating frequency from the nutation frequency, means for detecting the receiver output, means for separating said calibrating signal from said detected receiver output, means for rectifying said separated calibrating signal to obtain the average value thereof, a reference voltage source having a constant value output, and means for comparing the output of said reference voltage source with the average value of said calibrating signal for controlling the gain of said receiver to maintain said average value at a constant level.

2,999,239

APPARATUS FOR DETERMINING THE VERTICAL
Robert L. Wathen, Hempstead, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Feb. 26, 1949, Ser. No. 78,547
3 Claims. (Cl. 343-117)



3. Means for determining the vertical by the energy in radio signals received in a movable craft comprising a platform gimbaled to the craft, a pair of follow-up motors active on the gimbaled axes for positioning said platform to a predetermined attitude, a radio antenna system mounted on said platform, receiving and phase detecting means sensitive to the angle of displacement of said antenna system from the vertical as defined by the electric vector of the received radio waves and controlling said follow-up motors so as to reduce said angle to zero.

2,999,248

PHOTOVOLTAIC CELLS OF SINTERED MATERIAL

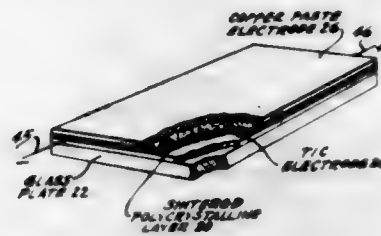
Frederick H. Nicoll, Princeton, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Nov. 1, 1957, Ser. No. 694,829

1 Claim. (Cl. 136-89)

A photovoltaic device comprising a nonconducting borosilicate glass base plate, an electrically conducting transparent electrode continuously coextensive and connected to said plate forming an ohmic contact with said plate, said transparent electrode including a chemically reduced layer of tin or titanium chloride, a substantially continuous central polycrystalline layer of interlocked photovoltaic crystals formed from the group consisting of sulfides, selenides and sulphoselenides of cadmium, said layer being substantially coextensive with said conductive electrode, the crystals of said polycrystalline

layer having incorporated therein activator proportions of a halide ion, and a copper paste rectifying electrode including metallic copper and a resin in contact and



substantially coextensive with said polycrystalline layer, and lead connections to said electrically conducting electrode and to said rectifying electrode.

DESIGNS

SEPTEMBER 5, 1961

191,257

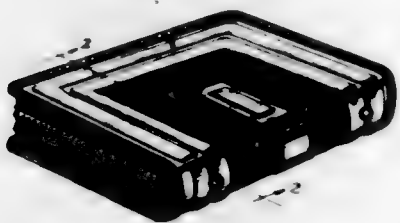
RING BINDER

Seymour Mace Cole, Glencoe, and Paul I. Dale, Wilmette, Ill., assignors to Feldco, Inc., Chicago, Ill., a corporation of Illinois

Filed Feb. 2, 1960, Ser. No. 59,233

Term of patent 14 years

(Cl. D6—2)



191,260

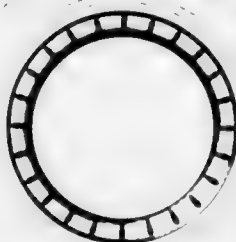
WHEEL TRIM

George Albert Lyon, 13881 W. Chicago Blvd., Detroit, Mich.

Filed Jan. 12, 1960, Ser. No. 59,025

Term of patent 14 years

(Cl. D14—30)



191,258

COMBINED MOUNTING BRACKET AND RAILING POST

Louis Blum, Pittsburgh, Pa., assignor to Blumcraft of Pittsburgh, Pittsburgh, Pa., a firm

Filed Apr. 1, 1960, Ser. No. 59,995

Term of patent 14 years

(Cl. D13—7)



191,261

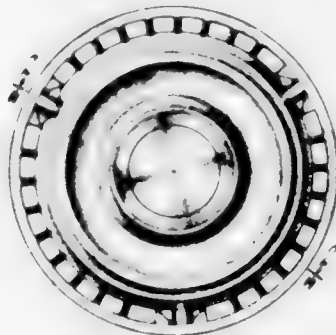
WHEEL COVER

Robert A. Cadaret, Los Angeles, Calif., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 13, 1961, Ser. No. 63,904

Term of patent 7 years

(Cl. D14—30)



191,259

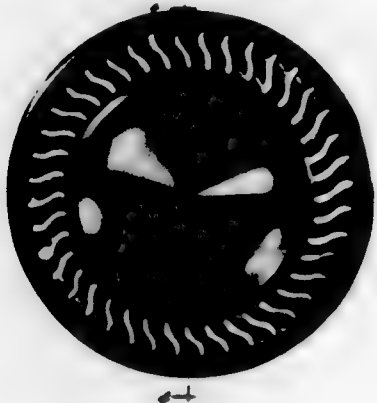
WHEEL COVER

George Albert Lyon, 13881 W. Chicago Blvd., Detroit, Mich.

Filed Jan. 4, 1960, Ser. No. 58,918

Term of patent 14 years

(Cl. D14—30)



191,262

MOBILE LABORATORY

John M. Liptay, Manhasset, N.Y. (% Laboratory Furniture Co., Inc., P.O. Box 590, Mineola, N.Y.)

Filed Oct. 1, 1959, Ser. No. 57,768

Term of patent 14 years

(Cl. D16—2)



191,263

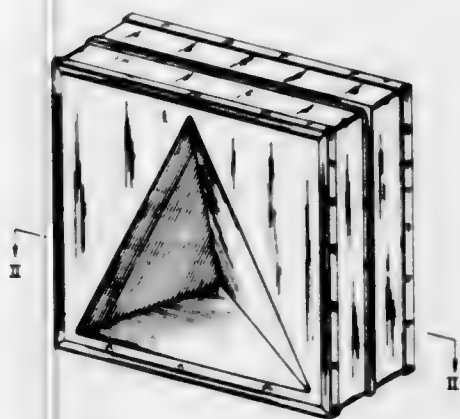
GLASS BLOCK

Howard F. Kingsbury, Port Allegany, Pa., assignor to Pittsburgh Corning Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 9, 1959, Ser. No. 57,874

Term of patent 14 years

(Cl. D18-2)



191,266

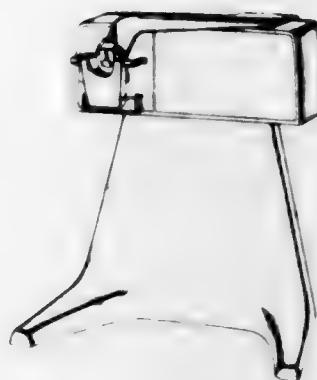
CAN OPENER

Alfred W. Madl, Milwaukee, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin

Filed Mar. 29, 1961, Ser. No. 64,539

Term of patent 14 years

(Cl. D22-2)



191,264

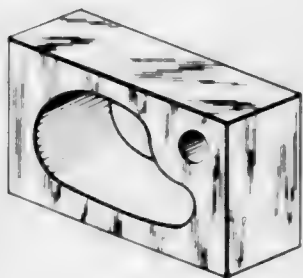
BUILDING BLOCK

Dano Jackley, 3902 Cloverhill Road, Baltimore, Md.

Filed Oct. 11, 1960, Ser. No. 62,441

Term of patent 14 years

(Cl. D18-2)



191,267

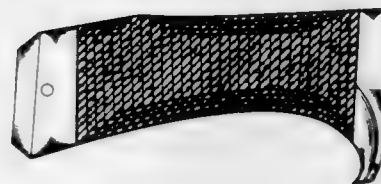
KNIFE HANDLE

Frederick L. Baker, Jr., Rte. 1, Janesville, Wis.

Filed Feb. 10, 1961, Ser. No. 63,886

Term of patent 14 years

(Cl. D22-3)



191,268

KNIFE POUCH

Earle W. Beyer, Delhi, Calif., assignor to Richard C. Soto, South San Francisco, Calif.

Filed Feb. 20, 1961, Ser. No. 64,003

Term of patent 14 years

(Cl. D22-6)



191,265

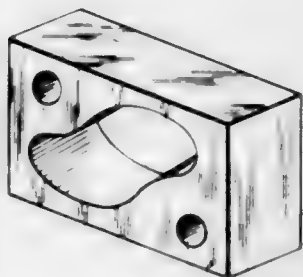
BUILDING BLOCK

Dano Jackley, 3902 Cloverhill Road, Baltimore, Md.

Filed Oct. 11, 1960, Ser. No. 62,442

Term of patent 14 years

(Cl. D18-2)



191,269

**HOUSING FOR AN ELECTRO HYDRAULIC
REGULATOR**

Alfred Weis, Olpe, Westphalia, Germany, assignor to
Elektro-Mechanik G.m.b.H., Olpe, Westphalia, Ger-
many

Filed Oct. 5, 1959, Ser. No. 57,814

Claims priority, application Germany Apr. 9, 1959

Term of patent 14 years
(Cl. D26—5)



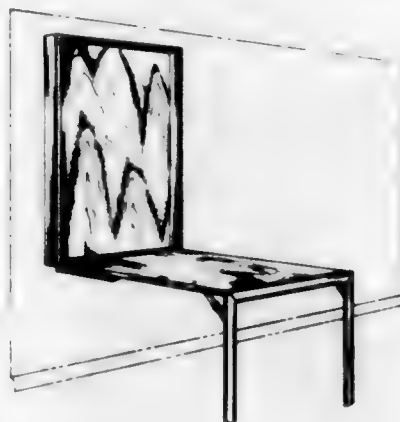
191,272

**FOLD-AWAY WALL MOUNTED DINING TABLE
OR SIMILAR ARTICLE**

Nicholas A. Ungaro, Louisville, Ky., assignor to Kroehler
Mfg. Co., Naperville, Ill., a corporation of Illinois

Filed Apr. 28, 1960, Ser. No. 60,353

Term of patent 14 years
(Cl. D33—14)



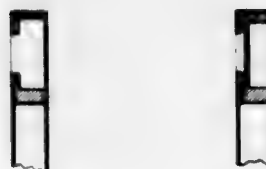
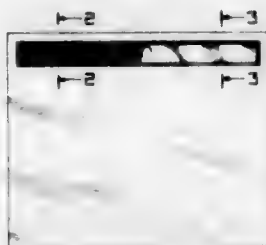
191,273

FILE DRAWER FACE PANEL

Florence S. Knoll, New York, N.Y., assignor to Knoll
Associates, Inc., New York, N.Y., a corporation of
New York

Filed Feb. 18, 1960, Ser. No. 59,437

Term of patent 14 years
(Cl. D33—19)



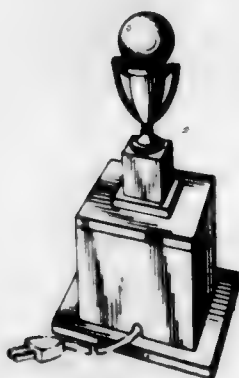
191,270

TROPHY

Norbert Serbin, 3527 N. Oconto St., Chicago, Ill.

Filed Mar. 21, 1961, Ser. No. 64,427

Term of patent 14 years
(Cl. D29—23)



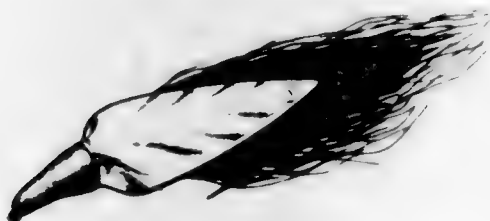
191,271

SPOON FLY FISHING LURE

Malcom P. Holder, P.O. Box 420, Nice, Calif.

Filed Jan. 19, 1959, Ser. No. 54,212

Term of patent 7 years
(Cl. D31—4)



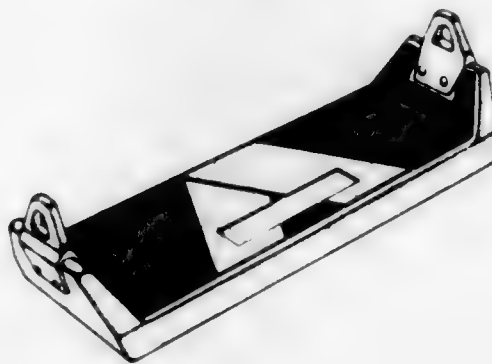
191,274

SWING SEAT

Ralph E. Williams and Warren P. Miller, Anderson,
Ind., assignors to American Playground Device Co.,
Anderson, Ind., a corporation of Indiana

Filed June 15, 1960, Ser. No. 60,971

Term of patent 14 years
(Cl. D34—5)



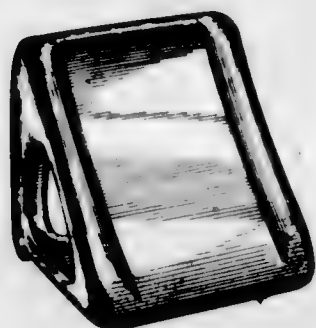
**191,275
HOE HEAD**

Paul Ales, % A. and A. Mfg. Co., Gurdon, Ark.
Filed June 17, 1959, Ser. No. 56,397
Term of patent 14 years
(Cl. D39—1)



**191,276
WHEEL BLOCK**

Walter F. Jicha and Marion C. Wilson, Hammond, Ind.,
assignors to Calumet Steel Castings Corporation,
Hammond, Ind., a corporation of Indiana
Filed Apr. 11, 1960, Ser. No. 60,129
Term of patent 14 years
(Cl. D41—1)



**191,277
PAPER CARTON OPENER**

William A. Utz, 820 Hughes St., Fort Worth, Tex.
Filed July 27, 1960, Ser. No. 61,546
Term of patent 14 years
(Cl. D44—29)

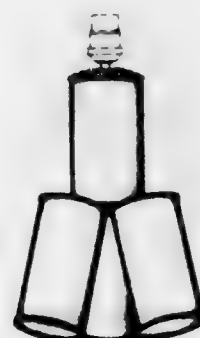


**191,278
CAN PUNCTURING DEVICE**
Mitchell V. Rybinski, 23 Ellis St., Ansonia, Conn.
Filed Mar. 28, 1961, Ser. No. 64,525
Term of patent 14 years
(Cl. D44—29)



**191,279
LAMP BASE OR THE LIKE**

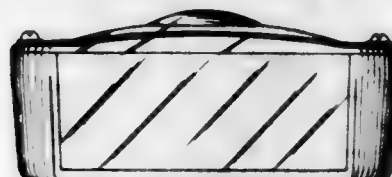
Louis O. Dennis, 3944 Clermont St., New Orleans, La.
Filed Sept. 1, 1959, Ser. No. 57,400
Term of patent 14 years
(Cl. D48—20)



**191,280
LAMP BASE OR SIMILAR ARTICLE**
Donald W. Hansen, New York, N.Y., assignor to Donald
Hansen Lamps, New York, N.Y., a partnership
Filed Mar. 8, 1961, Ser. No. 64,192
Term of patent 3½ years
(Cl. D48—20)



**191,281
COMBINED LICENSE PLATE ILLUMINATOR,
REAR LAMP AND REFLECTOR FOR AUTO-
MOTIVE VEHICLES**
John B. Dickson, Kew Gardens, N.Y., assignor to Signal-
Stat Corporation, Brooklyn, N.Y., a corporation of
New York
Filed Apr. 4, 1960, Ser. No. 60,024
Term of patent 7 years
(Cl. D48—32)



191,282

SPACING UNIT FOR A GRILLE

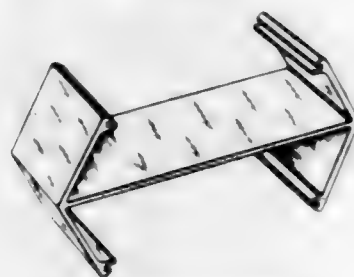
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
 Filed Apr. 29, 1960, Ser. No. 60,380
 Term of patent 14 years
 (Cl. D54-2)



191,283

SPACING UNIT FOR A GRILLE

Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
 Filed Apr. 29, 1960, Ser. No. 60,384
 Term of patent 14 years
 (Cl. D54-2)



191,284

WRAPPED LOAF OF BREAD

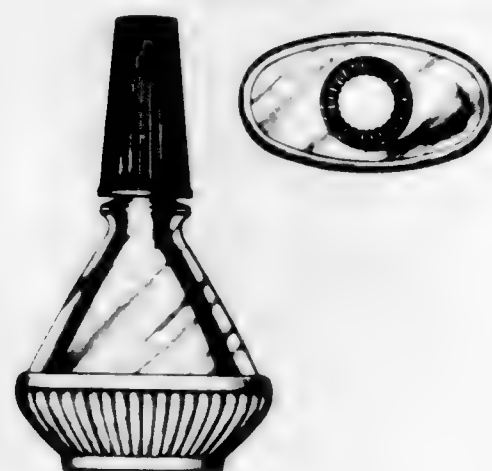
Charles V. O'Donnell, 1 View St., Dudley, Mass.
 Filed Dec. 31, 1958, Ser. No. 53,999
 Term of patent 14 years
 (Cl. D58-2)



191,285

BOTTLE

Morton Edell, 37 Empire St., Newark, N.J.
 Filed Mar. 24, 1961, Ser. No. 64,469
 Term of patent 14 years
 (Cl. D58-8)



191,286

WALLPAPER PANEL

Fred R. Kazenwadel, Saddle River, N.J., and George K. Birge, Buffalo, N.Y., assignors to George K. Birge Co., Inc., Buffalo, N.Y.
 Filed Aug. 12, 1960, Ser. No. 61,733
 Term of patent 7 years
 (Cl. D59-10)



191,287

WALLPAPER PANEL

Fred R. Kazenwadel, Saddle River, N.J., and George K. Birge, Buffalo, N.Y., assignors to George K. Birge Co., Inc., Buffalo, N.Y.
 Filed Aug. 12, 1960, Ser. No. 61,734
 Term of patent 7 years
 (Cl. D59-10)



191,288

WALLPAPER PANEL

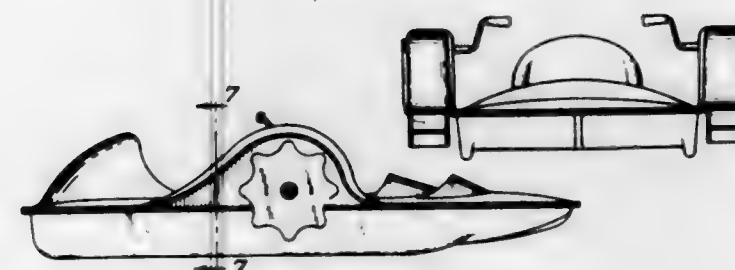
Curt Oscar Hesse, Dumont, N.J., and George K. Birge, Buffalo, N.Y., assignors to George K. Birge Co., Inc., Buffalo, N.Y.
 Filed Aug. 12, 1960, Ser. No. 61,735
 Term of patent 7 years
 (Cl. D59-10)



191,289

MANUALLY PROPELLED WATER-CRAFT

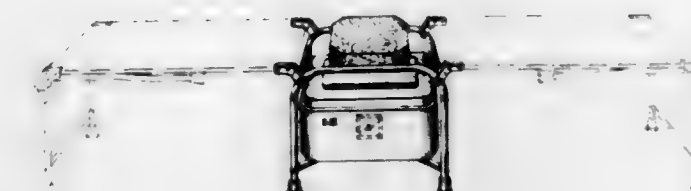
John W. Love, 18530 S. Broadway, Gardena, Calif.
 Filed July 18, 1960, Ser. No. 61,385
 Term of patent 14 years
 (Cl. D71-1)



191,292

MASSAGE UNIT AND COUCH COMBINATION

Carl Krauss, % Lakewood Engineering and Mfg. Co., 212 N. Carpenter St., Chicago, Ill.
 Filed July 20, 1959, Ser. No. 56,839
 Term of patent 14 years
 (Cl. D83-1)



191,293

HEATER FOR HAIR DRYING APPARATUS

Leon F. Willat, Mill Valley, Calif.
 (1077 Howard St., San Francisco, Calif.)
 Filed Mar. 9, 1961, Ser. No. 64,207
 Term of patent 14 years
 (Cl. D86-10)



191,290

STAPLING MACHINE

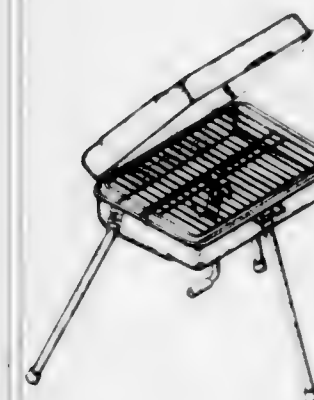
David Belbow, 1485 Pine St., San Francisco, Calif.
 Filed Mar. 2, 1961, Ser. No. 64,126
 Term of patent 14 years
 (Cl. D74-1)



191,291

BARBECUE GRILL

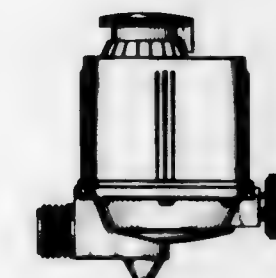
Leslie W. Miller, 251 Lakewile Ave. NE., Atlanta, Ga.
 Filed Nov. 27, 1959, Ser. No. 58,481
 Term of patent 7 years
 (Cl. D81-10)



191,294

WATER METERING VALVE FOR LAWN SPRINKLERS

Steven Charnota, 4945 Normandy Ave., Chicago, Ill., and Arnold F. Wolf, 5511 Warren Ave., Morton Grove, Ill.
 Filed July 18, 1960, Ser. No. 61,398
 Term of patent 7 years
 (Cl. D91-3)



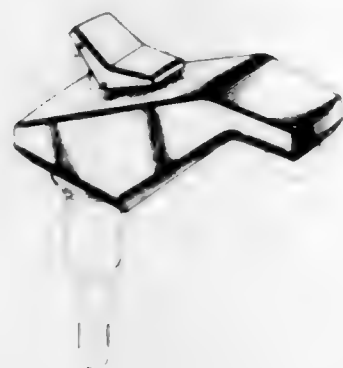
191,295

FAUCET FITTING

Frederick David Chapman, Chicago, Ill., assignor to The Murray Corporation of America, Pittsburgh, Pa., a corporation of Delaware

Continuation of design applications Ser. Nos. 59,061 and 59,062, Jan. 15, 1960. This application May 9, 1961, Ser. No. 65,369

Term of patent 14 years
(Cl. D91—3)



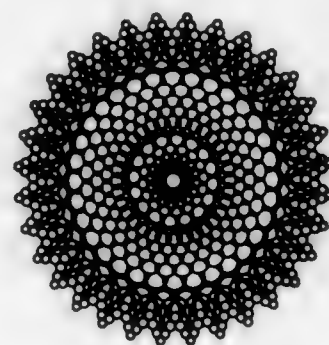
191,296

PLASTIC DOILY

Richard F. Fricke, Leominster, Mass., assignor to Plasticraft of Leominster, Inc., Leominster, Mass., a corporation of Massachusetts

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 Komroff, Paul, to Emerson Radio & Phonograph Corp. Air conditioner. 2,998,711, 9-5-61, Cl. 62—262.
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 O'Brochta, John. 2,999,095.
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 Koubas, Delore L., to United States of America, Navy. N(B-trinitroethyl)-p-nitroaniline. 2,999,114, 9-5-61, Cl. 260—577.
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 Liddy, Clarence, to Socony Mobil Oil Co., Inc. Lubricant containing a calcium salt-calcium soap mixture and process for forming same. 2,999,066, 9-5-61, Cl. 252—39.
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Olmsted, Lester E., and E. J. Puetz, to National Lead Co. Method for bleaching hydrous titanium dioxide. 2,999,011, 9-5-61, Cl. 23-202.

Olympia Werke A.G.: See—

Bretling, Wilhelm. 2,999,193.

Orrevad, Anders E. O.: See—

Lindstrom, Ernest O., and Orrevad. 2,999,176.

Owens-Corning Fiberglass Corp.: See—

Stalgio, Charles J. 2,998,620.

Owens-Illinois Glass Co.: See—

Adams, Elmer L., and Gasmire. 2,998,621.

Brown, Richard R. 2,998,920.

Ouellette, Herve J., to United States of America, Army. Revolving cage gun with a plurality of barrels and removable chambers. 2,998,758, 9-5-61, Cl. 89-155.

Pagano, Joseph F.: See—

Donovick, Richard, Pagano, and Vandeputte. 2,999,048.

Page, Clarence and G. A., to Page-Detroit, Inc. Weighing and grading mechanism. 2,998,969, 9-5-61, Cl. 177-203.

Page-Detroit, Inc.: See—

Page, Clarence and G. A. 2,998,969.

Page, George A.: See—

Page, Clarence and G. A. 2,998,969.

Pannier Corp.: See—

Gross, Frank D. 2,999,001.

Patterson, Richard F. Aerodynamic drag device. 2,998,949, 9-5-61, Cl. 244-145.

Payer, Rodolphe L., to N. Slater Co. Ltd. Gripping surface for preformed helical rods. 2,998,696, 9-5-61, Cl. 57-145.

Payne, Emory T., and R. A. Seybert, to Clayton Anderson & Co. Liquid shortening method. 2,999,022, 9-5-61, Cl. 99-118.

Pasandak, Louis A., to Halvorson Trees, Inc. Apparatus for mounting trees in stands therefor. 2,998,674, 9-5-61, Cl. 47-1.

Pearce, Lewis C., to American Greetings Corp. Collating machine. 2,998,972, 9-5-61, Cl. 270-58.

Pelino, William M.: See—

Gallagher, Cornelius A., and Pelino. 2,999,152.

Pellizzetti, Italo. Grinding-mixing mill for foundry sand. 2,998,935, 9-5-61, Cl. 241-120.

Pemco Wheel Co.: See—

Murphy, Thomas H. 2,998,617.

Peoria Plastic Co.: See—

Miller, John H. 2,998,896.

Pergande, Leslie S., to Illinois Tool Works. Sine bar assembly. 2,998,657, 9-5-61, Cl. 33-179.5.

Pergande, Leslie S., to Illinois Tool Works. Machine for checking curvilinear couplings and the like. 2,998,658, 9-5-61, Cl. 33-179.5.

Peracchino, Mario A.: See—

Porter, Carroll D., and Peracchino. 2,998,705.

Personal Products Corp.: See—

Winch, Allen R. 2,998,614.

Persyn, Charles L., Jr., to Tidewater Oil Co. Butadiene conversion of C₄ fraction of unsaturated hydrocarbons. 2,999,061, 9-5-61, Cl. 208-67.

Perun, Samuel. Cushion means for milk bottle crates. 2,998,895, 9-5-61, Cl. 217-35.

Peter, Eugen, to Telefunken G.m.b.H. Cable connector. 2,999,223, 9-5-61, Cl. 339-206.

Peterson, Robert W., to D. R. Madden. Tank sampler. 2,998,726, 9-5-61, Cl. 78-425.4.

Petrie, James A.: See—

Haworth, Lionel, Petrie, and Moss. 2,998,959.

Pfizer, Chas., & Co., Inc.: See—

Stephens, Charles R., Jr. 2,999,111.

Phalin, Harry O.: See—

Cleaver, William R., and Phalin. 2,999,036.

Philio Corp.: See—

Fisher, Joseph F. 2,999,127.

Pilcher, Will, and S. L. Eaton, to The Procter & Gamble Co. Personal use detergent lotion. 2,999,068, 9-5-61, Cl. 252-187.

Phillips Petroleum Co.: See—

Brasil, Robert J., and Blasche. 2,998,704.

Frey, Frederick E. 2,999,071.

Louhan, Rector P. 2,999,106.

Short, James N., and Farrar. 2,999,089.

Pilette, Thomas G., Jr. Reusable shipping container. 2,998,894, 9-5-61, Cl. 217-12.

Pinkas, Balthasar H., to Minneapolis-Honeywell Regulator Co. Semiconductor circuit means having dual biasing levels. 2,999,175, 9-5-61, Cl. 307-88.5.

Pirro, Raffaele. Apparatus for the closure under high vacuum of glass bottles and small bottles. 2,998,686, 9-5-61, Cl. 58-101.

Pittsburgh Plate Glass Co.: See—

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Pizzi, Albert L., and R. R. Wahlberg, to Western Electric Co., Inc. Reel supporting pallet. 2,998,940, 9-5-61, Cl. 242-68.7.

Placek, Eugene W., to Genie Products Co. Anti-hypnotic apparatus. 2,998,799, 9-5-61, Cl. 116-28.

Plattsmier, Rodney L., and M. L. Crow, to The Guberson Corp. Swab mandrel. 2,998,990, 9-5-61, Cl. 287-108.

Poirier, Norman A.: See—

Masci, Joseph N., and Poirier. 2,999,069.

Pollmeier, Konrad, to Durkoppwerke Aktiengesellschaft. Loop taker mechanism for chain-stitch sewing machines. 2,998,787, 9-5-61, Cl. 112-200.

Poly Industries, Inc.: See—

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Polymark Ltd.: See—

Meyer, Peter, Yarsley, and Titow. 2,998,681.

Polymer Corp.: See—

Davis, William J. 2,998,840.

Polymer Corp. Ltd.: See—

Killer, Robert F., and Morimoto. 2,999,083.

Porter, Carroll D., and M. A. Peracchino, to United States of America, Navy. Pressure gain valveless combustor. 2,998,705, 9-5-61, Cl. 60-35.6.

Potter, Francis M., and G. B. Achtmeyer, to Sperry Rand Corp. Winding apparatus for dynamo electric machines. 2,998,937, 9-5-61, Cl. 242-1.1.

Pratt, Francis L. Spanish guitar with means for converting to Hawaiian guitar. 2,998,742, 9-5-61, Cl. 84-267.

Prete, Ernest, Jr., to Brown-Line Corp. Strap buckle. 2,998,626, 9-5-61, Cl. 24-170.

Priesmeyer, Charles, to Meyer & Wenhe, Inc. Seal press. 2,998,766, 9-5-61, Cl. 101-5.

Pritchard, Dalton H., and M. D. Nelson, to Radio Corp. of America. Multi-beam convergence controlling systems. 2,999,186, 9-5-61, Cl. 315-13.

Procter & Gamble Co.: See—

Pilcher, Will, and Eaton. 2,999,068.

Proell, Wayne A.: See—

Bowman, Norman J., and Proell. 2,999,033.

Prokopik, Michael. Draw bridges for model railroads. 2,999,137, 9-5-61, Cl. 101-9.

Prosser, Robert M., and C. A. Seibert, Jr., to E. I. du Pont de Nemours and Co. Method of storing 4,4'-methylenebis(phenylisocyanate). 2,999,106, 9-5-61, Cl. 260-458.

Pruett, Roy L., to Union Carbide Corp. Process for producing nickel and cobalt hydrogenation catalysts. 2,999,075, 9-5-61, Cl. 252-472.

Puetz, Eckard J.: See—

Olmsted, Lester E., and Puetz. 2,999,011.

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Bachman, Gustave B., and Standish. 2,999,118.

Fener, Henry, and White. 2,999,099.

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Quaker Oats Co.: See—

Huffman, George W., and Moore. 2,999,018.

Quaker Stretcher Co.: See—

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Quinn, James L., J. K. Duncan, and J. S. Mentzer, to Cummins-Chicago Corp. Length sensing device. 2,998,881, 9-5-61, Cl. 209-82.

Quynn, Allen G., Jr., to HRB-Singer, Inc. Difference totalizer. 2,999,207, 9-5-61, Cl. 328-44.

Radio Corp. of America: See—

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Stern, Fred. 2,999,167.

Rachrs, Emory C., and R. N. Clifton, to The Cincinnati Milling Machine Co. Broaching tool. 2,998,634, 9-5-61, Cl. 29-95.1.

Railco Co., Inc.: See—

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Randise, Dominick, to Sperry Rand Corp. Sweep generator. 2,999,174, 9-5-61, Cl. 307-88.5.

Randles, Arthur E., Jr. Egg carton closing machine. 2,998,688, 9-5-61, Cl. 53-376.

Raskhodoff, Nicholas M., and A. G. Lowell, said Lowell, assor., to United States of America, Navy. Adjustable slit. 2,998,730, 9-5-61, Cl. 74-89.

Raum, Alaric L. J.: See—

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Goldblatt, Leo A., Hopper, and Rayner. 2,999,104.

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Anapacher, William B., Scott, Bowen, Redmond, and Detwiler. 2,998,780.

Reese, Melvin C. Heat pump. 2,998,710, 9-5-61, Cl. 62-155.

Renner, Elmer J., to Stephens-Adamson Mfg. Co. Pulley hubs. 2,998,731, 9-5-61, Cl. 74-230.8.

Renoux, Robert A., to Societe d'Applications Industrielles Plastiques. Apparatus for pressing gramophone records. 2,998,622, 9-5-61, Cl. 18-5.3.

Reuther, John F., and J. D. Finley, to Westinghouse Electric Corp. Electric control circuit. 2,999,201, 9-5-61, Cl. 322-28.

Resabek, Vernon E., to International Harvester Co. Operating mechanism for ejector rate and apron of self-loading scrapers. 2,998,682, 9-5-61, Cl. 37-126.

Rhodes, Charles K. Amusement device. 2,998,673, 9-5-61, Cl. 46-43.

Rich, John P., to Improved Machinery Inc. Filter. 2,998,883, 9-5-61, Cl. 210-404.

Ricketts, Ezra L. Extrusion orifice end block. 2,998,624, 9-5-61, Cl. 18-12.

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Rieseler, Hermann deceased (H. Rieseler, nee Scherber, heir). Supercharged internal combustion engine with controls therefor. 2,998,698, 9-5-61, Cl. 60-13.

Rimbach, Henry W., to Westinghouse Electric Corp. Blue halophosphate phosphor. 2,999,070, 9-5-61, Cl. 252-301.4.

Rimmer, William, to United States of America, Navy. Delay mechanism. 2,998,944, 9-5-61, Cl. 244-14.

Rinderle, Karl. Machine for stirring, beating and mixing solid substances. 2,998,963, 9-5-61, Cl. 259-9.

Risney, Dale R. Water ski tow handle. 2,998,797, 9-5-61, Cl. 116-6.1.

Rixson, Oscar C. Co.: See—

Burritt, Silvius, Jr., and Ellis. 2,998,685.

Risone, Michael L., to United States Steel Corp. Shaft mounting. 2,998,716, 9-5-61, Cl. 64-1.

Roberts, Joseph H., to United States of America, Atomic Energy Commission. Differential fault sensing circuit. 2,999,187, 9-5-61, Cl. 315-163.

Robertson, Bedford S., Jr., to United States of America, Navy. Frequency modulated oscillator. 2,999,212, 9-5-61, Cl. 332-29.

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Roederer, Helmut, and Hans-Heinrich Völker, to Corn Products Co. Process for the manufacture of chocolate. 2,999,017, 9-5-61, Cl. 99-23.

Roederer, Helmut, and W. Zinke, to Corn Products Co. Water resistant adhesive and process for preparing same. 2,999,030, 9-5-61, Cl. 106-210.

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Roose, James B.: See—

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Rosen, Irving, to Diamond Alkali Co. Method of destroying fungi and nematodes and employing 2,2'-(p-ylene)-bis-[2-thiopsendourea] dihydrochloride. 2,999,046, 9-5-61, Cl. 167-30.

Rosenstock, Henry M., to William H. Johnston Laboratories, Inc. Method and apparatus for ionization investigation. 2,999,157, 9-5-61, Cl. 250-41.9.

Rosett, Bernard, to Servo Corp. of America. Bi-directional hot box detector. 2,999,151, 9-5-61, Cl. 246-169.

Rowbottom, Jack, to E. I. du Pont de Nemours and Co. Catalyst for acrylonitrile synthesis. 2,999,072, 9-5-61, Cl. 252-429.

Rowe, William W., to Cincinnati Industries Inc. Process and apparatus for treating webs with residual films. 2,998,841, 9-5-61, Cl. 154-30.

Roy, Leo T., to Craft, Inc. Spring hinge. 2,998,618, 9-5-61, Cl. 16-184.

Rubin, Robert J., to United States of America, Navy. Shock tube for studying warhead combination damage. 2,998,719, 9-5-61, Cl. 73-12.

Ruck, Herbert C., to The Bendix Corp. Wave-clipping circuit. 2,999,173, 9-5-61, Cl. 307-88.5.

Rudder, Frank B., L. E. Simpson, and L. G. Smith. Tamper-proof container closure. 2,998,897, 9-5-61, Cl. 220-24.

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Blanchi, Renato, and Ruehleman. 2,999,179.

Ruehleman, Herbert E. Selectively variable timing fuse. 2,998,773, 9-5-61, Cl. 102-70.2.

Ruehleman, Herbert E., to United States of America, Navy. R-C long delay timing circuit. 2,999,208, 9-5-61, Cl. 328-78.

Ruhr Intrins Hubstapler G.m.b.H.: See—

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Runk, Walter A.: See—

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Ryan, John W. Percussive cap structure. 2,998,777, 9-5-61, Cl. 102-86.6.

Ryan, Thomas J., and R. M. Nelden, to American Radiator & Standard Sanitary Corp. Fluid drive rotor vane tie ring. 2,998,782, 9-5-61, Cl. 103-115.

Ryan, Antonio, to Zahnradfabrik Friedrichshafen. Electromagnetic friction clutch. 2,998,877, 9-5-61, Cl. 192-84.

SKF Industries, Inc.: See—

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Saby, John S., to General Electric Co. Broad area transistors. 2,999,195, 9-5-61, Cl. 317-285.

Sackman, August E. Bow with arrow rest. 2,998,811, 9-5-61, Cl. 124-24.

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Saint, David, to Graco Metal Products, Inc. Toy cradles and driving mechanisms therefor. 2,998,612, 9-5-61, Cl. 5-109.

St. Armour, John P. Hole location gauge. 2,998,656, 9-5-61, Cl. 35-178.

Sanchez, Fred S. Wrist attached lighter assembly. 2,998,718, 9-5-61, Cl. 67-4.1.

Sandell, Donald M. Children's vehicular toy. 2,998,979, 9-5-61, Cl. 280-87.05.

Savage Laboratories, Inc.: See—

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Saunders, Robert H., to United States of America, Navy. 2,4-dinitrophenyl hydrosone of trinitropentanone. 2,999,112, 9-5-61, Cl. 260-566.

Saunders, Robert H., to United States of America, Navy. 2-trinitroethylphenylamine. 2,999,115, 9-5-61, Cl. 260-577.

Sautereau, Lucien E. F. Drawing table. 2,998,672, 9-5-61, Cl. 45-131.

Sawaya, Olive R. Pie dough perforator, fluter and trimmer. 2,998,786, 9-5-61, Cl. 107-49.

Schaeffer, George A., to Steamaster Co., Inc. Steam gun. 2,998,924, 9-5-61, Cl. 259-136.

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Schaper, William H., to Schaper Mfg. Co., Inc. Game apparatus. 2,998,973, 9-5-61, Cl. 273-1.

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Scherer, James F. Thermo-actuator. 2,998,725, 9-5-61, Cl. 73-368.

Scherling Corp.: See—

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Schlesinger, Albert, and S. M. Gordon, to Endo Laboratories, Inc. Cyanobenzhydryl ethers of amino alcohols. 2,999,096, 9-5-61, Cl. 260-294.7.

Schlick, Karl, to Siemens-Halske Aktiengesellschaft. Electrical control apparatus. 2,999,198, 9-5-61, Cl. 318-207.

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- Schlusser, Paul H.: See—
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- Schell Mfg. Co., Inc.: See—
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- Schrameck, Jack E.: See—
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- Schuessler Knitting Mills, Inc.: See—
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- Schuessler, Walter E., to Schuessler Knitting Mills, Inc.
Cuffed cap and face hood and method of forming. 2,998,611, 9-5-61, Cl. 2-202.
- Schultz, Edward H. Automobile bumper jack saddles. 2,998,961, 9-5-61, Cl. 284-133.
- Schulz, Gustav, to Siemens and Halske Aktiengesellschaft Berlin and Munich. Gas analysis based upon absorption of infrared rays. 2,999,158, 9-5-61, Cl. 250-43.5.
- Schunack, Johannes, to International Standard Electric Corp. Method of mechanically detecting a mark affixed to a document. 2,999,166, 9-5-61, Cl. 250-219.
- Schwartz, Elmer R. Truck bed hold-down latch apparatus. 2,998,890, 9-5-61, Cl. 214-506.
- Schwenk, Kurt, to Mobay Chemical Co. Flexible coupling device. 2,998,717, 9-5-61, Cl. 64-18.
- Scott, Ellis H.: See—
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- Scott, Raymond. Automatic tape transporting and position selecting device. 2,998,989, 9-5-61, Cl. 242-55.12.
- Seestrom, Hjalmer E., W. B. Guerrant, Jr., and R. L. Campbell, Jr., to Clayton Anderson & Co. Process for treatment of fats. 2,999,021, 9-5-61, Cl. 99-118.
- Searle, G. D., & Co.: See—
Colton, Frank B., and Laos. 2,999,092.
- Seaton, Raymond M., and Sollman. 2,999,101.
- Seelbach, Charles W.: See—
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- Shaler, Amos J.: See—
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- Shampaine Co.: See—
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- Shaw, John C. S.: See—
Hawthorne, William R., and Shaw. 2,998,793.
- Sherman, Arthur L.: See—
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- Shimeld, Tom A. G., to Davy and United Engineering Co. Ltd. Turn-over gear for use with rolling mills and the like. 2,998,888, 9-5-61, Cl. 214-1.
- Shook, Alvin L. Fishing rig. 2,998,669, 9-5-61, Cl. 43-48.4.
- Short, James N., and R. C. Farrar, to Phillips Petroleum Co. Polymerization of conjugated dienes with polynuclear hydrocarbons as polymerization promoters. 2,999,089, 9-5-61, Cl. 260-94.3.
- Shrader, Erwin F.: See—
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- Shyne, Maurice W., and J. B. Cataldi. Emergency air brake equipment. 2,998,997, 9-5-61, Cl. 308-9.
- Michak, William, and E. T. Adams, to International Telephone and Telegraph Corp. Frequency indicating system. 2,999,205, 9-5-61, Cl. 824-79.
- Sides, Harold I., to H. I. and K. B. Sides. Display bin and support therefor. 2,998,886, 9-5-61, Cl. 211-126.
- Sides, Harold I.: See—
Sides, Harold I. 2,998,886.
- Sides, Harold I. Seat structures. 2,998,978, 9-5-61, Cl. 280-35.90.
- Sides, Kitty B.: See—
Sides, Harold I. 2,998,886.
- Siemens-Halske Aktiengesellschaft: See—
Schlick, Karl. 2,999,198.
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- Silver, Walter H., and O. W. Oerman, to Deere & Co. Hitch device. 2,998,989, 9-5-61, Cl. 287-62.
- Simpson, Leonard E.: See—
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- Singleton, John C., to The Babcock & Wilcox Co. Liquid level gauge. 2,998,724, 9-5-61, Cl. 73-323.
- Slak, Harold D. Cargo-carrying aircraft. 2,998,948, 9-5-61, Cl. 244-187.
- Skinner, Ransom P., to Union Carbide Corp. Container for low temperature liquids. 2,998,708, 9-5-61, Cl. 62-45.
- Skyer, Robert A.: See—
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- Slater, N., Co. Ltd.: See—
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- Sloan, Douglas M.: See—
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- Smith, Francis R.: See—
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- Smith, John H. Portable hydraulic jack. 2,998,960, 9-5-61, Cl. 254-2.
- Smith, Leonard G.: See—
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- Smith, Preston W., Jr., and M. C. Junger, to Acoustica Associates, Inc. Sonic wave conductor. 2,998,723, 9-5-61, Cl. 73-290.
- Smith, Telford L. Pipe clamp. 2,998,629, 9-5-61, Cl. 24-279.
- Snowden, William A., Jr. Heat reducing cigarette filter. 2,998,819, 9-5-61, Cl. 131-10.
- Snyder, George H., Inc.: See—
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- Snyder, George H., Jr., to George H. Snyder, Inc. Slide container. 2,998,879, 9-5-61, Cl. 206-1.
- Societe Anonyme Geoffroy-Deleors: See—
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- Liddy, Clarence. 2,999,066.
- Sollman, Paul B.: See—
Dodson, Raymond M., and Sollman. 2,999,101.
- Solum, James R.: See—
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- Sommer, Gordon M., and J. K. Liu, to U.S. Industries, Inc. Clutches. 2,998,872, 9-5-61, Cl. 192-18.
- Sommer, Gordon M., to U.S. Industries, Inc. Transfer mechanism. 2,998,887, 9-5-61, Cl. 214-1.
- Soreban, Inc.: See—
MacNeill, John H. 2,998,874.
- Spalding, A. G., & Bros., Inc.: See—
Molitor, Robert P. 2,998,977.
- Spannhake, Ernst W.: See—
Hyler, John H., Lott, and Spannhake. 2,998,998.
- Spargo, John. Pivotal louver assembly. 2,998,765, 9-5-61, Cl. 98-119.
- Spat, Melvin, to United States of America, Navy. Lubricating arrangement for co-axial shafts. 2,999,000, 9-5-61, Cl. 308-187.
- Spechler, Daniel S.: See—
Beeber, Allan R. A., and Spechler. 2,999,016.
- Speldel Corp.: See—
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- Spence, Thomas E., and F. R. Smith, to SKF Industries, Inc. Methods of fabricating anti-friction bearings. 2,998,636, 9-5-61, Cl. 29-148.4.
- Spencer, Harvey G., to United States of America, Air Force. Sealing rings. 2,998,991, 9-5-61, Cl. 288-17.
- Spero, Harold A. Sunglasses. 2,998,610, 9-5-61, Cl. 2-13.
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- Wood, Herbert H., to Thomas Walker Ltd. Means for attaching prong-carrying devices to flexible material. 2,998,607, 9-5-61, Cl. 1-325.
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- Wood, Herbert H., to Thomas Walker Ltd. Means for attaching prong-carrying devices to flexible material. 2,998,609, 9-5-61, Cl. 1-325.
- Wood, Herbert H., to Thomas Walker Ltd. Fastening devices for wearing apparel. 2,998,627, 9-5-61, Cl. 24-227.
- Woodhall, Philip, and K. Hale, to The General Electric Co. Ltd. Thermally operated bi-metallic electric devices. 2,999,142, 9-5-61, Cl. 200-138.
- Worden, Floyd O. Cattle oiler. 2,998,803, 9-5-61, Cl. 119-157.
- Wright, John W. T.: See—
 Howies, Donald A., and Wright. 2,999,180.
- Wright, Kenneth A., and J. B. Solum, to B and W Inc. Stop collar. 2,998,843, 9-5-61, Cl. 166-241.
- Wurlitzer, Rudolph Co., The: See—
 Thurston, Edward G., and Andersen. 2,998,741.
- Wusterbarth, Leon W.: See—
 Wusterbarth, Lyle W. 2,999,226.

- Wusterbarth, Lyle W., 1/4 to L. W. Wusterbarth. Hand steering wheel position indicator. 2,999,226, 9-5-61, Cl. 340-52.
- Yale and Towne Mfg. Co., The: See—
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- Yarmovsky, Max: See—
 Steiger, Benjamin F., and Yarmovsky. 2,999,216.
- Yarsley, Victor E.: See—
 Meyer, Peter, Yarsley, and Tittow. 2,998,631.
- Yaworsky, John. Apparatus for measuring fabric for draperies. 2,998,659, 9-5-61, Cl. 33-180.
- Yenni, Donald M., and W. A. Runck, to Union Carbide Corp. Process of making spark plug electrode structures. 2,998,632, 9-5-61, Cl. 29-25.12.
- Yogus, William, and J. D. MacPetrie, to The Valeron Corp. Adjustable diameter cutter for boring operations and the like. 2,998,737, 9-5-61, Cl. 77-76.
- Young, Raymond A., to James R. Kearney Corp. Connecting means for insulator strings. 2,999,125, 9-5-61, Cl. 174-141.
- Zahnradfabrik Friedrichshafen: See—
 Ryba, Anton. 2,998,877.
- Zaugg, Harold E., to Abbott Laboratories. 3,9-diazabicyclo-[4.2.1]nonane derivatives. 2,999,091, 9-5-61, Cl. 260-239.3.
- Zauner, John H., to United States of America, Navy. Thermal potential producing cell. 2,999,122, 9-5-61, Cl. 136-90.
- Zielinski, Edward J. Archery bow sight. 2,998,652, 9-5-61, Cl. 38-46.
- Zimont, Leonard J.: See—
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- Zinke, Walter: See—
 Roederer, Helmut, and Zinke. 2,999,030.
- Zinkernagel, Robert: See—
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- Zitko, Ronald F., to International Harvester Co. Seed strand planter. 2,998,706, 9-5-61, Cl. 61-72.6.
- Ziets, Alex: See—
 Carmody, Don R., and Ziets. 2,998,699.
- Zlotek, Thaddeus F., to Formsprag Co. Sprag retainer for one-way clutches. 2,998,875, 9-5-61, Cl. 192-45.1.
- Zlotek, Thaddeus F., to Formsprag Co. Sprag for one-way clutches and method of forming the same. 2,998,876, 9-5-61, Cl. 192-45.1.

CLASSIFICATION OF PATENTS

ISSUED SEPTEMBER 5, 1961

NOTE.—First number=class, second number=subclass, third number=patent number

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

September 5, 1961

Volume 770

Number 1

TRADEMARKS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

Appellant's Brief

The following amendment is made, to take effect on publication in the FEDERAL REGISTER. Notice and public procedure, and deferment of the time of taking effect, are deemed unnecessary in view of the nature of the amendment, which is procedural only.

The purpose of this change is to expedite the handling of requests for extensions of time for filing appeal briefs by providing that short extensions may be handled by the Board of Appeals, instead of by the Commissioner. Any extension to a date more than sixty days from the original expiration date must still be sought from the Commissioner, by request brought prior to the expiration of the time sought to be extended. Failure to file either the brief or an appropriate request for extension within the allotted time results in the appeal standing dismissed (37 CFR 1.192(b)) with the consequent abandonment of the application if no claim stands allowed (37 CFR 1.197(c)).

Paragraph (a) is amended by adding the following sentences at the end thereof:

§ 1.192 Appellant's brief.

(a) * * * The Board of Appeals may, for sufficient cause shown, extend the time for filing the brief to a date not

later than sixty days after the original expiration date. Any longer or further extension must be sought from the Commissioner. All requests for extensions must be filed prior to the expiration of the period sought to be extended.

(Sec. 1, 66 Stat. 793; 35 U.S.C. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 134)

Dated: July 28, 1961.

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,
Assistant Secretary of Commerce for Domestic Affairs.
[F.R. Doc. 61-7328; Filed, Aug. 2, 1961; 8:49 a.m.]
Published in 26 F.R. 6983, Aug. 3, 1961.

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

Pending Application Index; Access to Applications

The following amended rule is adopted, to take effect on publication. The text of this rule was, except in one particular, published in the Federal Register for May 20, 1961 (26 F.R. 4404), and all persons who desired were invited

CONDITION OF TRADEMARK APPLICATIONS AS OF JULY 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	13,364
Date of oldest new application	January 16, 1961
Date of oldest amended application	January 12, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	1-16-61	1-12-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	2-2-61	2-2-61
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The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed: subscription price, \$10.00 per annum, foreign mailing \$3.75 additional; single copies, 20 cents each.

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to submit written data, views, arguments or suggestions in connection with the proposed rule. The amended rule is adopted after consideration of all the material submitted. The rule departs from the published text in the particular addition in the final sentence of paragraph (a), after the word "Commissioner," of the words "and the Trademark Trial and Appeal Board." The added reference to said board is merely informational in character, and notes the significance its decisions have shared with those of the Commissioner since its establishment in accordance with the provisions of Public Law 85-609, approved August 8, 1958, 72 Stat. 540.

Sec. 2.27 is amended to read as follows:

§ 2.27 Pending application index; access to applications.

(a) An index of pending applications including the name and address of the applicant, a reproduction or description of the mark, the goods or services with which the mark is used, the class number, the dates of use, and the serial number and filing date of the application will be available for public inspection as soon as practicable after filing. Access to the file of a particular pending trademark application will be permitted prior to publication under § 2.81 upon the showing in writing of good cause for such access. Decisions of the Commissioner and the Trademark Trial and Appeal Board in applications and proceedings relating thereto are published or available for inspection or publication.

(b) After a mark has been registered, or published for opposition, the file of the application and all proceedings relating thereto are available for public inspection and copies of the papers may be furnished upon paying the fee therefor.

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6; sec. 41, 60 Stat. 427, 440, 15 U.S.C. 1123)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7556; Filed, Aug. 9, 1961; 8:46 a.m.]

Published in 26 F.R. 7215-7216, Aug. 10, 1961

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form." and inserting

in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235 Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47 Interference; notice of taking testimony.

v. ----- } Interference No. -----
-----, 19-----

(Name of opposing attorney)

(Address of opposing attorney)

SIR: You are hereby notified that on -----, 19-----, at ----- o'clock in the forenoon at the office of ----- Street, -----, I shall proceed to take testimony on behalf of the party ----- in the above identified interference.

The witnesses to be examined are:

(Name of witnesses)

(Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on -----, 19-----, I served a copy of the foregoing notice of taking testimony upon -----, the attorney for the party -----, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:48 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 108,905 (DESIGN OF MAN ON HORSE), Hart Schaffner & Marx, Coats, vests, trousers, overcoats and raincoats; Reg. No. 539,004, same, Men's and boys' articles of clothing, filed July 24, 1961, D.C., S.D.N.Y., Doc. 61/2009, Hart Schaffner & Marx v. Alexander's Department Stores, Inc.

Reg. No. 190,410 (KILLANT AND DESIGN), H. B. Nowlin, doing business as Killant Chemical Company, Chemical composition for destroying insects, filed July 20, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/456, Scholz Homes, Inc. v. Revet Development Company, Inc.

Reg. No. 261,034 (BAGPAK), Capem Machinery Corporation, Bag filling and sealing machinery; Reg. No. 307,004, same, Bagpak, Inc., Paper bags; Reg. No. 084,771 (THE BAGPAKER), International Paper Company, filed July 21, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 934/61-M, International Paper Company v. Bag Pak, Inc. et al.

Reg. No. 307,004. (See Reg. No. 261,034.)

Reg. No. 508,925 (PAUL SACHS ORIGINAL AND DESIGN), Paul Sachs Originals, Inc., Ladies' and misses' wearing apparel—namely, street dresses and suits of silk, wool, rayon, cotton and combinations thereof; Reg. No. 700,130 (DON SACHS), Paul Sachs Originals Co., Ladies' and misses' dresses, filed July 10, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 881/61-WM, Paul Sachs Originals Company v. John Sachs et al., doing business as Sachs of California.

Reg. No. 507,774 (FLAVAROMA), Meat Industry Suppliers, Inc., A food composition for curing meats; Reg. No. 005,558, same, Spice seasoning for meat products; Reg. No. 044,900, same, Hickory wood flakes impregnated with spices; Reg. No. 045,034, same, Barbecue sauce, filed Mar. 11, 1959, D.C., N.D. Ill. (Chicago), Doc. 590396, Meat Industry Suppliers, Inc. et al. v. The Kroger Company. Stipulation and order

holding trademark infringed; defendants enjoined July 11, 1961.

Reg. No. 539,004. (See Reg. No. 108,905.)

Reg. No. 554,187 (KRAFT), Kraft Foods Company, Cheese, grated cheese, pasteurized process cheese food, salad dressings, tartar sauce, ice cream mix, etc.; Reg. No. 004,314 (K AND DESIGN), same, Candy; Reg. No. 070,230 (KRAFT), National Dairy Products Corporation, Fresh fruits, fruit juices, soup bases, jellies, alimentary products composed chiefly of macaroni and spaghetti, pickles, candy, dessert sauces, butter, margarine, ketchup, mustard, etc., filed July 24, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/465, National Dairy Products Corporation v. Elleen Kraft, doing business as Kraft Products Company.

Reg. No. 550,151 (PENNY THE HEN), C. A. Swanson & Sons, Boned chicken and turkey; Reg. No. 548,007 (DESIGN OF HEN), same (included by counterclaim July 18, 1961), filed June 30, 1961, D.C.N.J. (Camden), Doc. 522/61, Chester Wagner v. Campbell Soup Company.

Reg. No. 004,314. (See Reg. No. 554,187.)

Reg. No. 005,558. (See Reg. No. 507,774.)

Reg. No. 000,002 (BAVARIAN'S), Bavarian Brewing Company, Inc., Beer of a legal alcoholic content, filed July 14, 1961, D.C., S.D. Fla. (Tampa), Doc. 4167-T, International Breweries, Inc. v. Anheuser-Busch, Inc.

Reg. No. 044,900. (See Reg. No. 507,774.)

Reg. No. 045,034. (See Reg. No. 507,774.)

Reg. No. 050,771. (See Reg. No. 261,034.)

Reg. No. 001,077 (SUBURBIA), Moglen Manufacturing Co. (co-partnership), Ladies' and teen-age shorts, pedal pushers, slacks, T-shirts, beach robes, bathing suits and coveralls, filed July 21, 1961, D.C., S.D.N.Y., Doc. 61/2589, Suburbia Manufacturing Corporation v. House of Suburbia, Inc. et al.

Reg. No. 070,230. (See Reg. No. 554,187.)

Reg. No. 700,130. (See Reg. No. 502,925.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 102,170. American Enka Corporation, Enka, N.C. Filed Aug. 8, 1960.

REXOLITE

Owner of Reg. No. 560,507.
For Plastic Material in Rod, Sheet or Tube Form.
First use Aug. 16, 1960.

SN 103,075. The American Fire Clay & Products Co., Canfield, Ohio. Filed Aug. 22, 1960.

PINE LAKE

For Clay in Bulk.
First use about November 1957.

SN 104,146. Douglas Structural Products Corp., Long Island City, N.Y. Filed Sept. 9, 1960.

DECRAPLAST

For Plastic Sheeting Materials Having Diverse Uses for Ornamental Purposes.
First use Aug. 29, 1960.

SN 106,603. Japan Exlan Company Limited, Kita-ku, Osaka, Japan. Filed Oct. 18, 1960.

EXLAN

Owner of Japanese Reg. No. 495,350, dated Jan. 31, 1957.
For Polyacrylonitrile Fibres for Padding, Stuffing, and for the Textile Industry.

SN 106,931. Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Oct. 21, 1960.

GABBROSIL

Priority is claimed under Sec. 44(d) on Italian application filed Apr. 22, 1960; Reg. No. 150,508, dated Aug. 19, 1960.
For High-Purity Silicon for Use in the Manufacture of Electrical Semiconductor Devices.

SN 110,380. Sun Chemical Corporation, New York, N.Y. Filed Dec. 16, 1960.

"FACIL-FOAM"

For Low Density Sheet Material of Polystyrene Having a Closed Cell Structure To Be Used for Decorative Surfacing and as an Insulating Material.
First use Oct. 19, 1960.

SN 112,034. Ernest W. Ekstrand, d.b.a. Ekstrand Mfg. Co., Washington, D.C. Filed Jan. 18, 1961.

VERDYTE

For Sea-Moss or Similar Plants.
First use Aug. 8, 1960.

TM 4

SN 112,133. Cornell Seed Company, St. Louis, Mo. Filed Jan. 19, 1961.



No claim is made to the word "Seeds" per se. Owner of Reg. Nos. 238,504, 585,061, and others.
For Grass Seed for Lawns and Fields.
First use Aug. 28, 1952.

SN 113,019. A. A. Krejtman, Inc., New York, N.Y. Filed Feb. 3, 1961.



The monogram, consisting of the letters "AAK," interwoven into one, are placed on the lower part of the ellipse which encircles the mark and is part of the entire mark herein sought to be registered.
For Synthetic Fibers.
First use Nov. 22, 1960.

SN 113,992. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Feb. 20, 1961.

HEROX

Owner of Reg. No. 707,000.
For Resinous Plastic Materials in the Form of Filaments for General Use in the Industrial Arts.
First use Jan. 24, 1961.

SN 114,985. Mt. Everest Strawberry Company, Inc., Elmhurst, N.Y. Filed Mar. 6, 1961.

FOUNTAIN OF FRUIT

For Strawberry Plants.
First use Feb. 3, 1961.

SN 115,916. Harville Rose Service, Tyler, Tex. Filed Mar. 17, 1961.

QUEEN OF THE FIELD

For Rose Plants.
First use Oct. 1, 1950.

SEPTEMBER 5, 1961

U. S. PATENT OFFICE

TM 5

SN 116,565. Plastic Materials & Polymers, Inc., Hicksville, N.Y. Filed Mar. 27, 1961.



Owner of Reg. No. 627,170.
For Polystyrene Molding and Extruding Pellets.
First use Mar. 15, 1961.

SN 118,825. Texas Plastics, Inc., Elise, Tex. Filed Apr. 27, 1961.

ROLL-TEX

For Heavy Duty Black and Clear Polyethylene Film Used for Agricultural, Industrial, and Commercial Purposes.
First use Mar. 15, 1960.

Class 2—Receptacles

SN 89,764. Sweetheart Paper Products Company, Inc., Chelsea, Mass., assignee of Guild Plastics, Inc., Cambridge, Mass. Filed Jan. 27, 1960.

SWEETHEART

For Plastic Disposable Dishes and Containers.
First use Jan. 11, 1957.

SN 99,028. American Heritage Industries, Waterloo, Iowa. Filed June 15, 1960.



American Heritage

The lining on the drawing does not indicate color, but merely reproduces the design feature of the specimens.

For Wooden Items—Namely, Salad Bowls, Trays With and Without Legs.

First use June 1, 1959.

SN 106,061. Container Corporation of America, Chicago, Ill. Filed Oct. 10, 1960.



For Paperboard Boxes, Cartons and Containers, and Plastic Containers.
First use June 28, 1958.

SN 108,517. St. Regis Paper Company, New York, N.Y. Filed Nov. 15, 1960.

POLLOCOTE

For Wax-Coated Paperboard Cartons.
First use Aug. 14, 1958.

SN 113,681. Chas. D. Briddell, Incorporated, Crisfield, Md. Filed Feb. 15, 1961.

PARTY PORTER

For Insulating Containers for Foods and Beverages.
First use Jan. 10, 1961.

SN 113,682. Chas. D. Briddell, Incorporated, Crisfield, Md. Filed Feb. 15, 1961.



MR. HOT'N COLD

For Insulating Containers for Foods and Beverages.
First use Jan. 10, 1961.

SN 113,683. Chas. D. Briddell, Incorporated, Crisfield, Md. Filed Feb. 15, 1961.

WEEKENDER

For Insulating Containers for Foods and Beverages.
First use Jan. 10, 1961.

SN 114,784. Owens-Illinois Glass Company, Toledo, Ohio. Filed Mar. 2, 1961.

SHARPAK

For Shipping Containers Formed Primarily of Paperboard.
First use July 28, 1960.

SN 114,844. Diamond National Corporation, New York, N.Y. Filed Mar. 3, 1961.



Owner of Reg. Nos. 271,456, 679,439, and others.
For Plates Made of Paper and Pulp.
First use Dec. 28, 1960.

SN 114,845. Diamond National Corporation, New York, N.Y. Filed Mar. 3, 1961.

DIAMOND

Owner of Reg. Nos. 271,456, 679,439, and others.
For Plates Made of Paper and Pulp.
First use April 1925.

SN 115,824. The Metal Box Company Limited, London, England. Filed Mar. 16, 1961.

DIOLOK

Owner of British Reg. No. 794,084, dated Aug. 5, 1959. For Cartons and Bags.

SN 116,202. Bernard Cahn Co., Inc., New York, N.Y. Filed Mar. 22, 1961.

COLAPSO COOLER

For Collapsible Insulated Bags.
First use Jan. 18, 1960.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 100,623. Marilyn Belt Manufacturing Co., Retail Division, Inc., Ferris, Tex. Filed July 11, 1960.

MARILYN

For Ladies' Handbags, Purses, and Pocketbooks of All Different Colors, Styles, Materials and Shapes.
First use May 2, 1953.

SN 115,385. Silver Incorporated, Chicago, Ill. Filed Mar. 10, 1961.

PORT A BAR

For Travel Bags Specifically for Carrying Bottles and Bar Equipment.
First use Feb. 15, 1961.

SN 115,414. Aristocrat Leather Products, Inc., New York, N.Y. Filed Mar. 13, 1961.

MUSEUM MASTERPIECES

For Purses, Wallets, and Handbags.
First use Aug. 10, 1960.

SN 115,498. LSL Enterprises, Inc., St. Louis, Mo. Filed Mar. 13, 1961.

HAPPY-GO-ROUND DOG TENDA

For Dog Tethering Devices.
First use Mar. 4, 1961.

SN 116,758. I. Smallman & Sons Co., New York, N.Y. Filed Mar. 29, 1961.

FESTIVAL

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses and Pocket Secretaries.
First use Feb. 3, 1961.

SN 116,759. I. Smallman & Sons Co., New York, N.Y. Filed Mar. 29, 1961.

COQUETTE

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses and Pocket Secretaries.
First use Feb. 3, 1961.

Class 4 — Abrasives and Polishing Materials

SN 109,876. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Dec. 8, 1960.

KIWI

Owner of U.S. Reg. Nos. 294,323, 697,306, and others. For Shoeshine Preparation.
First use Feb. 29, 1960; in commerce Feb. 29, 1960.

SN 116,976. Colgate-Palmolive Company, New York, N.Y. Filed Apr. 3, 1961.

ROUGH 'N READY

For Impregnated Scouring Pads.
First use Nov. 2, 1960.

Class 6 — Chemicals and Chemical Compositions

SN 72,433. Chas. L. Hulsking & Co., Inc., New York, N.Y. Filed Apr. 28, 1959.

ACRAWAX

For Synthetic Wax-Like Chemical Substances Useful in Various Applications in the Industrial Arts.
First use at least as early as 1939.

SN 85,885. Mac's Super Gloss Co., Inc., Los Angeles, Calif. Filed Nov. 23, 1959.

MR. SURE START

No claim is made to the wording "Sure Start" except in the association shown.
For Combustible Fluid for Igniting Charcoal or Other Materials.
First use Nov. 5, 1959.

SN 86,168. Markhl Company, Chicago, Ill. Filed Nov. 27, 1959.

THERMOMELT

For Temperature Indicating Compositions, in Pellet, Stick and Liquid Form, Which by Melting at Particular Temperatures Thereby Indicate Temperature of Heated Surfaces.
First use June 26, 1959.

SN 97,912. American Cyanamid Company, New York, N.Y. Filed May 26, 1960.

ZINOPHOS

Owner of Reg. No. 501,399.
For Phosphorothioate for Use as Nematocide, Insecticide, Acaricide, Ovicide and Rodenticide.
First use May 12, 1960.

SN 101,800. Nopco Chemical Company, Newark, N.J. Filed Aug. 1, 1960.

METASAP

Owner of Reg. Nos. 354,474, 531,064, and others.
For Metallic Soaps and Chemical Compositions for Use as Lubricants and Stabilizers for Resins and Plastics.
First use January 1917.

SN 103,816. Standard Scientific Supply Corp., New York, N.Y. Filed Sept. 1, 1960.

DEPROTENOL

For Blood Deproteinizing Reagent for Laboratory Use.
First use Jan. 15, 1958.

SN 108,434. Marvell Industries, Pasadena, Calif. Filed Oct. 27, 1960.

CL-1301

For Germicide-Deodorant for Household and/or Industrial Use.
First use July 19, 1959.

SN 108,575. Rohm & Haas Company, Philadelphia, Pa. Filed Nov. 16, 1960.

BAKTHANE

Owner of Reg. Nos. 584,215 and 639,518.
For Insecticide.
First use on or about Nov. 7, 1960.

SN 109,042. Daystrom, Incorporated, Murray Hill, N.J. Filed Nov. 25, 1960.

STATNUL

For Chemical Solution for Application to Insulation Material for the Purpose of Preventing Accumulation of Static Charges.
First use Aug. 29, 1960.

SN 110,414. Diamond Alkali Company, Cleveland, Ohio. Filed Dec. 19, 1960.

TANOLIN G+

Owner of Reg. Nos. 654,308, 654,608, and others.
For Chrome Tanning Salt Specifically Designed for Sole Leather or for Leather Where Solidity is of Prime Importance.
First use Nov. 16, 1960.

SN 111,083. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Dec. 30, 1960.

PERONE

Owner of Reg. No. 548,760.
For Hydrogen Peroxide.
First use at least as early as Dec. 31, 1936.

SN 111,133. Suburban Propane Gas Corporation, Whippany, N.J. Filed Dec. 30, 1960.

Fuelite

For Liquefied Petroleum Gas.
First use at least as early as November 1923.

SN 114,197. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 23, 1961.

MICRODOL-X

Owner of Reg. No. 418,984.
For Photographic Processing Chemicals.
First use May 26, 1960.

SN 114,486. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 27, 1961.



For Phosphate and Potash Chemicals Such as Calcium Phosphate, Potassium Carbonate, Potassium Chloride, Potassium Hydroxide.
First use September, 1960.

SN 114,496. Marshall Dairy Laboratory, Inc., Madison, Wis. Filed Feb. 27, 1961.



Owner of Reg. No. 414,258.
For Neutralizer for Determining the Acidity of Milk, Cream and Whey.
First use on or about Apr. 1, 1957.

Class 7 — Cordage

SN 102,173. American Greetings Corporation, Cleveland, Ohio. Filed Aug. 8, 1960.

TWIRLY TYE

For Ribbon for Gift-Wrapping Purposes and the Like.
First use July 20, 1950.

SN 109,454. William E. Wright & Sons Company, West Warren, Mass. Filed Dec. 1, 1960.

WRIGHT'S

Owner of Reg. Nos. 385,536 and 505,417.
For Ribbon and Tapes for Gift Tie Purpose.
First use Nov. 16, 1954.

SN 112,365. Cating Rope Works, Inc., Maspeth, N.Y. Filed Jan. 24, 1961.

DOCRYLENE

For Rope of Synthetic Fibers.
First use Aug. 10, 1960.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 108,218. Rogers Incorporated, New York, N.Y. Filed Nov. 10, 1960.



The mark consists of three horizontal lines, one below the other, with their left-hand margins aligned and with their right-hand margins at variance to the extent that the center horizontal line is longer than the uppermost line and the lowermost line, and a vertical line of a length corresponding to the longest horizontal line spaced from, but parallel to, the left-hand ends of said horizontal lines.
For Pipes.
First use prior to Jan. 1, 1950.

SN 110,361. Reliance Imports, Inc., Queens Village, N.Y.
Filed Dec. 16, 1960.

RELIANCE

For Smokers' Articles—Namely, Cigarette Lighters, Tobacco Pouches, Pipe Cleaners, Pipe Reamers, Pipe Racks, Pipes, Pipe Lighters, Pipe Accessories, Cigarette and Cigar Holders.
First use Dec. 5, 1960.

SN 112,030. Anthony Cuchlars, d.b.a. Rocket Reamer, Schuylkill Haven, Pa. Filed Jan. 18, 1961.

ROCKET

For Scraper for Smoking-Pipe Bowls.
First use Oct. 17, 1960.

SN 114,447. Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany. Filed Feb. 27, 1961.



For Ash Trays, Cigarette Lighters Made of Precious or Non-Precious Metal.
First use in March 1949; in commerce in or before 1953.

SN 114,448. Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany. Filed Feb. 27, 1961.

MERCEDES-BENZ

For Ash Trays, Cigarette Lighters Made of Precious or Non-Precious Metal.
First use in March 1949; in commerce in or before 1953.

SN 114,449. Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany. Filed Feb. 27, 1961.



For Ash Trays, Cigarette Lighters Made of Precious or Non-Precious Metal.
First use in March 1949; in commerce in or before 1953.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 114,579. Grand Central Rocket Co., Redlands, Calif. Filed Feb. 27, 1961.



For Solid Propellants, Rocket Motors-Rocket Propulsion Systems.
First use Sept. 1, 1960.

Class 10—Fertilizers

SN 113,070. Kenneth J. Anderson, d.b.a. Anderson Peat Company, Inlay City, Mich. Filed Feb. 6, 1961.

VITALIUM

For Peat.
First use Jan. 19, 1961.

SN 113,219. Hi-Yield Fertilizer Co., Bonham, Tex. Filed Feb. 7, 1961.



For Complete Fertilizer, Especially Prepared for Lawns.
First use June 25, 1960.

SN 114,075. Allied Chemical Corporation, New York, N.Y. Filed Feb. 21, 1961.

NURANA

For Liquid Fertilizer.
First use Dec. 22, 1960.

SN 116,508. Great Lakes Carbon Corporation, New York, N.Y. Filed Mar. 27, 1961.

PERMALITE

Owner of Reg. Nos. 531,713, 576,760, and 581,781.
For Light Weight Aggregate for Use as a Soil Conditioner.
First use Jan. 17, 1961.

Class 11—Inks and Inking Materials

SN 109,305. Del-E-Tape, Inc., Hicksville, N.Y. Filed Nov. 30, 1960.

DEL-E-TAPE

For Eradicable Inked Type Ribbons Such as Typewriter Ribbons.
First use in 1941.

Class 12—Construction Materials

SN 88,702. Wabash Drilling Company, St. Louis, Mo. Filed Jan. 8, 1960.



Applicant formally disclaims the wording "Drilled Cast-In-Place Piling" as a part of the mark.
For Piling.
First use Nov. 18, 1959.

SN 100,737. Timber Engineering Company, Washington, D.C. Filed July 12, 1960. SN 110,232. H. H. Robertson Company, Pittsburgh, Pa. Filed Dec. 14, 1960.



Owner of Reg. Nos. 386,738, 695,164, and others.
For Metal Bridging for Wood Floor Joists.
First use Feb. 26, 1960.

SN 103,405. Indiana Limestone Company, Inc., Bedford, Ind. Filed Aug. 25, 1960.

GEMSET

For Precast Decorative Panels or Slabs of Concrete for Use on the Interiors or Exteriors of Buildings.
First use Aug. 2, 1960.

SN 105,784. Triodetic Structures, Ottawa, Ontario, Canada. Filed Oct. 4, 1960.



For Prefabricated Structural Forms, Trusses, Bridges, Space Frames, Buildings, Randomes and Parts Thereof, Composed Principally of Metal.
First use Dec. 31, 1955; in commerce July 27, 1959.

SN 107,702. H. H. Robertson Company, Pittsburgh, Pa. Filed Nov. 2, 1960.

Q-PANEL

The word "Panel" is disclaimed apart from the mark.
Owner of Reg. No. 395,248.
For Building Construction Panels Formed Principally From Metals and Including Overlapping and Interlocking Edges.
First use Feb. 7, 1942.

SN 108,099. United States Plywood Corporation, New York, N.Y. Filed Nov. 8, 1960.

PERMAGARD

Owner of Reg. No. 677,891.
For Lumber and Wood Products, Such as Plywood Having Laminated Thereon a Protective and Decorative Surface.
First use June 27, 1960.

SN 108,389. H. H. Robertson Company, Pittsburgh, Pa. Filed Nov. 14, 1960.

Q-DECK

The word "Deck" is disclaimed apart from the mark.
Owner of Reg. No. 395,248.
For Metal Roof Deck.
First use Sept. 20, 1946.

SN 108,390. H. H. Robertson Company, Pittsburgh, Pa. Filed Nov. 14, 1960.

Q-HANGER

The word "Hanger" is disclaimed apart from the mark.
Owner of Reg. No. 395,248.
For Suspension Sites Comprising Metal Strips or Tongues Cut in Part From One Surface of Cellular Metal Flooring Sections.
First use Oct. 27, 1959.

TM 770 O.G.—2

Q-FLOOR

The word "Floor" is disclaimed apart from the mark as shown. Owner of Reg. No. 395,248.
For Metal Cellular Sub-Flooring.
First use December 1941.

SN 114,031. The National Plastic Products Company, d.b.a. National Plastic Products Company, Odenton, Md. Filed Feb. 20, 1961.

BEAUTILITE

For Laminated Thermosetting Plastic Sheet Material.
First use Dec. 14, 1960.

SN 114,330. Klekhaefer Corporation, Cedarburg, Wis. Filed Feb. 24, 1961.

ASTRO-LITE

For Plastic Skylights.
First use Oct. 22, 1960.

SN 114,837. Chevron Structural Units Limited, London, England. Filed Mar. 3, 1961.

CHEVRON

Owner of British Reg. No. 708,219, dated Dec. 6, 1951.
For Shaped Pieces of Common Metal for Constructional Purposes.

SN 114,871. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 3, 1961.

SCOTCHFOAM

Owner of Reg. Nos. 417,265, 639,884, and others.
For Vibration Damping Tape.
First use Jan. 25, 1961.

SN 114,890. Texas Gypsum Company, Inc., El Paso, Tex. Filed Mar. 3, 1961.

FIRE-STONE

For Pre-Cast Gypsum Wall Panels.
First use July 13, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 101,315. Elkay Manufacturing Company, Chicago, Ill. Filed July 22, 1960.

WASTEALL

For Sinks.
First use Jan. 22, 1960.

SN 105,979. Gustav F. Gerdt KG., Bremen, Germany. Filed Oct. 7, 1960.

GESTRA

Owner of German Reg. No. 631,025, dated Dec. 8, 1952; and U.S. Reg. Nos. 705,578 and 705,579.
For Pressure Regulators, Reduction Valves, Steam Technical Apparatus, Devices and Machine Parts—Namely, Safety Valves, Locking Valves, Slides and Faucets, Disinfecting Valves and Silt and Sludge Removing Valves.

SN 112,272. Kirsch Company, Sturgis, Mich. Filed Jan. 23, 1961. SN 111,720. Austin-Hastings Co., Inc., Cambridge, Mass. Filed Jan. 12, 1961.

ARCHITRAC

For Traverse Tracks for Supporting Movable Panels, Such as and Including Flexible Draperies.
First use Jan. 10, 1961.

AHCO

For Solder.
First use December 1935.

SN 112,296. Newton Insert Co., Los Angeles, Calif. Filed Jan. 23, 1961.

SPEEDSERTS

For Fastening Members Adapted To Be Anchored in a Softer Mass and Adapted To Have Other Elements Connected Thereto in Order That Said Other Elements Can Be Attached to Said Mass.
First use Mar. 28, 1960.

SN 111,733. Firth Sterling, Inc., Pittsburgh, Pa. Filed Jan. 12, 1961.



For Hot Work Steel Suitable for Dies, Aircraft Structural Members, and High Strength Applications, in the Form of Metal Bodies or Pieces, Such as Billets, Bars (Including Rounds, Squares and Flats) and Forgings.
First use Dec. 6, 1960.

SN 112,312. Racine Hydraulics & Machinery, Inc., Racine, Wis. Filed Jan. 23, 1961.



Owner of Reg. Nos. 600,991 and 608,206.
For Valves for the Control of Fluids.
First use Aug. 15, 1960.

CONCAST

For Metal Bars.
First use Jan. 4, 1961.

SN 113,285. Kimro, Inc., Erie, Pa. Filed Feb. 8, 1961.



For Line Holders for Boats.
First use Apr. 1, 1960.

SN 115,319. Elastic Stop Nut Corporation of America, Union, N.J. Filed Mar. 10, 1961.



The drawing is lined for red. Owner of Reg. Nos. 611,674 and 620,669.
For Lock Nuts.
First use Jan. 16, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 105,822. Knapp Mills Incorporated, Long Island City, N.Y. Filed Oct. 5, 1960.

FERRO NICROLUM

Owner of Reg. Nos. 601,283, 602,631, and 700,048.
For Metals Clad or Surfaced With Lead for Corrosion and/or for Radiation Protection.
First use during July 1959.

Class 15—Oils and Greases

SN 92,547. Pan-American Laboratories, Inc., Angola, Ind. Filed Mar. 10, 1960.



For Water Absorbent as Used in Gasoline for Preventing the Freezing of Fuel Systems.
First use Jan. 20, 1960.

SN 112,449. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Jan. 25, 1961.

POLYRAN

Owner of German Reg. No. 620,392, dated May 15, 1952.
For Synthetic Lubricating Oils and Greases Containing Polyethers.

SN 116,447. Warner-Patterson Company, Chicago, Ill. Filed Mar. 24, 1961.

WARNER

Owner of Reg. No. 512,862.
For Compounds Intended Primarily for Use in Cooling Systems of Liquid Cooled Internal Combustion Engines—Namely, Water Pump Lubricants; and Anti-Ice Compounds for Fuel Lines.
First use April 1955 on water pump lubricants; March 1922 in a different form.

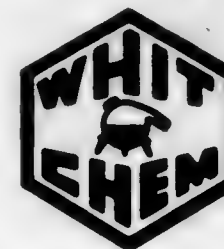
Class 16—Protective and Decorative Coatings

SN 100,535. Permanent Pigments, Inc., Norwood, Ohio. Filed July 8, 1960.

ACRA

For Pigments Used in Artists' Supplies, and in Particular Oil Colors, Water Colors, and Emulsion Colors.
First use May 18, 1959.

SN 102,271. Chester Whitfield Smith, d.b.a. Whitfield Chemical Company, Detroit, Mich. Filed Aug. 8, 1960.



Owner of Reg. No. 564,609.
For Compositions Used in the Coating and Protecting of Spray Booths and Other Surfaces.
First use Apr. 4, 1956.

SN 113,065. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed Feb. 6, 1961.

RADIANT

Owner of Reg. Nos. 248,535, 250,427, and 288,225.
For Paint and Varnish Remover.
First use at least as early as Nov. 10, 1938.

SN 118,172. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Apr. 19, 1961.

MULTIPRIME

For All Purpose Paint Primers.
First use Dec. 19, 1958.

SN 118,304. United Lacquer Mfg. Corp., Linden, N.J. Filed Apr. 20, 1961.

DECOR-VEIL

For Paint.
First use Apr. 3, 1961.

SN 118,450. The Kansas Paint & Color Company, Wichita, Kans. Filed Apr. 24, 1961.

FLAME-TEC

For Protective and Decorative Coatings—Namely, Paints, Enamels, and Primers.
First use Jan. 11, 1961.

SN 118,508. The Martin-Senour Company, Chicago, Ill. Filed Apr. 25, 1961.

AQUA-CRYL

For Acrylic Latex House Paint and Under-Coater.
First use Mar. 24, 1961.

SN 118,747. West Virginia Pulp and Paper Company, New York, N.Y. Filed Apr. 26, 1961.

WESTVACO

Owner of Reg. Nos. 119,948, 710,733, and others.
For Edge Filler Coating Material.
First use Mar. 31, 1961.

SN 118,915. Shaw Pipe Protection, Ltd., Rexdale, Ontario, Canada. Filed Apr. 28, 1961.

YELLOW JACKET

Owner of Reg. No. 116,560, dated Jan. 8, 1960.
For Polyethylene Coating To Be Applied by an Extrusion Process to Pipes and the Like.

SN 119,207. Ironside Manufacturing Co., Warren, Mich. Filed May 3, 1961.

TOUGHY ONE COAT

For Sealers and Coatings for Boats.
First use Oct. 31, 1958.

Class 17—Tobacco Products

SN 119,824. The Bloch Brothers Tobacco Co., d.b.a. Kentucky Club, Wheeling, W. Va. Filed May 12, 1961.

WHITEHALL

For Smoking Tobacco and Cigarettes.
First use Nov. 19, 1936.

SN 119,825. The Bloch Brothers Tobacco Co., d.b.a. Kentucky Club, Wheeling, W. Va. Filed May 12, 1961.

DONNIFORD

For Smoking Tobacco.
First use Aug. 8, 1939.

Class 18—Medicines and Pharmaceutical Preparations

SN 103,529. Bristol-Myers Company, New York, N.Y. Filed Aug. 29, 1960.

REDUTYL

Owner of Reg. No. 595,108.
For Antibiotic Pharmaceutical Preparation.
First use Aug. 2, 1960.

SN 106,144. Roham Laboratories, North Hollywood, Calif. Filed Oct. 10, 1960.

ROHAM

For Medicinal and Pharmaceutical Non-Narcotic Preparation for Relief of Insomnia.
First use June 16, 1960.

SN 111,293. Societe d'Exploitation des Laboratoires, Societe a Responsabilite Limitee, Issy-les-Moulineaux, Seine, France. Filed Jan. 4, 1961.

HEBUCOL

Priority claimed under Sec. 44(d) on French Reg. No. 492,098, dated Nov. 24, 1960 (Paris); Natl. Inst. No. 154,192.
For Medicinal Preparation for the Treatment of Jaundice, Hepatitis and Malaria, and Digestive and Liver Disorders and Skin Conditions Resulting Therefrom.

SN 117,618. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed Apr. 11, 1961.

S.A.T.

For Pharmaceutical Composition Useful as an Analgesic for Relief of Pain.
First use Mar. 29, 1961.

SN 117,690. Chicago Pharmacal Company, Chicago, Ill. Filed Apr. 12, 1961.

MYOSED

For Medicinal Preparation in Tablet Form Adapted for Use in Treatment of Skeletal Muscle Disorders, Such as Bursitis, Fibrositis, Lumbago and Myositis.
First use Mar. 21, 1961.

SN 117,832. American Felsol Company, Lorain, Ohio. Filed Apr. 14, 1961.

FELSOL

Owner of Reg. No. 199,780.
For Analgesic and Antipyretic Compositions.
First use July 1, 1960.

SN 118,196. Knoll A.-G. Chemische Fabriken, Ludwigshafen (Rhine), Germany. Filed Apr. 4, 1961.

MYCANODIN

Owner of German Reg. No. 714,227, dated May 23, 1958.
For Medicines and Pharmaceutical Preparations—Namely, an Antimycotic Agent.

SN 118,257. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Apr. 20, 1961.

TRABANE

Owner of Reg. No. 682,444.
For Dermatologic and Anti-Inflammatory Medication.
First use Feb. 8, 1961.

SN 118,958. Carter Products, Inc., New York, N.Y. Filed May 1, 1961.

CAPLARIL

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and To Achieve Sleep.
First use Feb. 28, 1961.

SN 119,098. Vitamix Pharmaceuticals, Incorporated, Philadelphia, Pa. Filed May 1, 1961.

CANDYLYN

For Antibiotic Throat Troches.
First use on or about Apr. 25, 1961.

Class 19—Vehicles

SN 102,341. Pneuways Development Company (Private) Limited, Salisbury, Southern Rhodesia. Filed Aug. 9, 1960.

PNEUWAYS

Owner of Federation of Rhodesia and Nyasaland Reg. No. 2295/1959, dated Dec. 8, 1959.
For Specialized Fixed-Path Vehicles Provided With Pneumatic Tired Wheels.

SN 105,546. Pullman Incorporated, Chicago, Ill. Filed Sept. 30, 1960.

PS-3

Owner of Reg. Nos. 653,320, 693,753, and others.
For Railway Freight Vehicles.
First use July 3, 1957.

SN 107,899. Pullman Incorporated, Chicago, Ill. Filed Nov. 2, 1960.

PS-5

Owner of Reg. Nos. 653,320, 693,753, and others.
For Railway Freight Vehicles.
First use Oct. 8, 1957.

SN 115,472. Hunter Boat Corporation, Suisun City, Calif. Filed Mar. 13, 1961.

HUNTER

For Boats.
First use 1887.

SN 116,863. Bernard N. Beck, d.b.a. Guide Canoe, St. Paul, Minn. Filed Mar. 31, 1961.

Guide

For Canoes.
First use Mar. 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 104,148. Ether Limited, Erdington, Birmingham, England. Filed Sept. 9, 1960.

DELATROL

Priority claimed under Sec. 44(d) on British Reg. No. 805,975, dated May 17, 1960.
For Solenoid Valves.

SN 111,237. Standard Motor Products, Inc., Long Island City, N.Y. Filed Jan. 3, 1961.

SPIFFY SPOOL

For Automotive Spool Electrical Wire in Varying Length.
First use September 1960.

SN 111,966. Federal Employees' Distributing Company, Los Angeles, Calif. Filed Jan. 17, 1961.

ELECTROVOX

For Transistor Portable Radio Receivers.
First use April 1960.

SN 115,237. Kem Manufacturing Company, Inc., Fair Lawn, N.J. Filed Mar. 9, 1961.

KEM

Owner of Reg. Nos. 229,272, 371,586, and 422,114.
For Starting, Lighting and Ignition Parts for Automobiles, Including Connectors and Cables.
First use July 1920.

SN 116,903. Newcomb Audio Products Co., Los Angeles, Calif. Filed Mar. 31, 1961.

BALLERINA

For Table Model Phonographs.
First use May 17, 1953.

SN 116,925. Sekisui Chemical Company Ltd. of Japan, Osaka, Japan. Filed Mar. 31, 1961.

EVERCEL

For Electrical Tape.
First use Sept. 1, 1957; in commerce Sept. 1, 1957.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 77,143. Rite-Way Dairy Farm Equipment Corporation, Springfield, Mass. Filed July 6, 1959.

COWCAN

For Milking Machines, Parts Thereof, and Attachments Therefor.
First use Oct. 30, 1968.

SN 84,111. Alim Corporation, New York, N.Y. Filed Oct. 28, 1959.

ALIM ABC ALLCLASS

For Fire Extinguishers Containing Fire Extinguishing Powders.
First use Sept. 15, 1959.

SN 87,064. Franklin L. Lebus, Sr., Longview, Tex. Filed S.R. Dec. 10, 1959; Am. P.R. Sept. 28, 1960.

LEBUS

Owner of Reg. Nos. 525,543, 653,226, and 643,700.
For Hoisting Equipment in General, Including Cable or Wire Spooling on Rotary Drums of All Kinds, and Oil Field Drilling and Fishing Tools—Namely, Pivotal Knuckle Joints, Overshots and Releasing Wash Overshots and Spears.
First use June 1, 1946.

SN 108,367. Overstrom & Sons, Inc., Alhambra, Calif. Filed Nov. 14, 1960.

OVERSTROM

For Inclined Vibrating Screens, Rotary Mud Screens, Horizontal Differential Motion Screens and Conveyors, and Oscillating Screens and Conveyors.
First use Jan. 30, 1939, on rotary mud screens.

SN 109,618. Oxford Distributing Corporation, New York, N.Y. Filed Dec. 5, 1960.

TOP

For Electric Dry Shavers.
First use Sept. 1, 1960.

SN 109,859. Econ-O-Veyor Corp., Glen Cove, N.Y. Filed Dec. 8, 1960.

ECON-O-LIFT

Owner of Reg. No. 603,261.
For Material-Handling Conveyors.
First use Dec. 12, 1958.

SN 110,331. Great Neck Saw Manufacturers, Inc., Mineola, N.Y. Filed Dec. 16, 1960.

GLIDER

For Hand Saws.
First use during February 1946.

SN 110,608. La Technique Integrale, Paris, France. Filed Dec. 21, 1960.

TRANSROL

Owner of French Reg. No. 476,995, dated Dec. 10, 1958 (Seine); Natl. Inst. No. 117,842.
For Machines and Machine Tools and Parts Thereof, Components of Machine Driving Gear, Couplings and Driving Belts (Except for Vehicles), and Agricultural Implements.

SN 111,012. The Raymond Corporation, Greene, N.Y. Filed Dec. 29, 1960.

RAYMOND

Owner of Reg. No. 615,980.
For Material Handling Machinery—Namely, Lift Trucks, Pallet Switcher Trucks, Hydraulic Hoists, and Portable Cranes.
First use Sept. 5, 1951.

SN 111,251. United Equipment Accessories, Inc., Waverly, Iowa. Filed Jan. 3, 1961.

JIFILIF

For Unitary Portable Electric Truck Mounted Hoists.
First use Jan. 19, 1960.

SN 111,903. John E. Mitchell Company, Inc., Dallas, Tex. Filed Jan. 16, 1961.



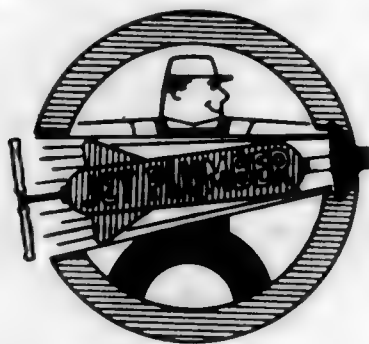
The drawing is lined for green, blue and red.
For Machines for Dispensing Drinks.
First use Aug. 25, 1960.

SN 112,135. Dansk Designs, Inc., Great Neck, N.Y. Filed Jan. 19, 1961.

ODIN

For Stainless Steel Flatware.
First use Sept. 1, 1960.

SN 112,421. Universal Jet Inc., San Diego, Calif. Filed Jan. 24, 1961.



The drawing is lined for red and blue, but no claim is made to color.
For Plumbing Equipment Specifically a Tool for Clearing Blocked Pipes.
First use Sept. 14, 1960.

SN 113,809. Crane Co., Chicago, Ill. Filed Feb. 16, 1961.
Owner of Reg. Nos. 293,974 and 715,286.

CRANE TELEDYNE

For Valve Actuating Mechanisms.
First use January 1961.

SN 113,813. Dart Drug Corporation, Washington, D.C. Filed Feb. 16, 1961.

DIAMOND SHARP

The word "Sharp" is disclaimed.
For Razor Blades.
First use Dec. 22, 1960.

SN 114,060. U.S. Industries, Inc., New York, N.Y. Filed Feb. 20, 1961.



Owner of Reg. Nos. 619,833, 668,943, and others.
For Electro-Electronic-Mechanical Seal Weld Cutting Machines.
First use Aug. 2, 1960; Nov. 1, 1954, as to letters "USI" in different display on other types of machinery.

SN 114,325. A. Gilby & Sons Ltd., London, England. Filed Feb. 24, 1961.

LITHO-NETTE

For Textile Cover for Printing Rollers.
First use June 23, 1959; in commerce Feb. 1, 1961.

SN 116,338. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Mar. 23, 1961.

PORTAFLARE

For Power Operated Portable Tube Flaring Tool.
First use Feb. 23, 1960.

Class 24—Laundry Appliances and Machines

SN 103,733. Michael Mutolese, Manoa, Pa. Filed Aug. 31, 1960.

TOP-ARMOLE

For Pressing Machine.
First use Apr. 6, 1960.

SN 108,184. Kungsors Trainindustri Axel Andersson & Co., Kungsor, Sweden. Filed Nov. 10, 1960.

EAGLE BRAND

The word "Brand" is disclaimed.
For Clothes Pins.
First use in commerce February 1947.

SN 110,664. Chicago Granitine Manufacturing Company, Chicago, Ill. Filed Dec. 22, 1960.

GLASTEX

For Laundry Tubs.
First use July 3, 1957.

Class 25—Locks and Safes

SN 107,878. Reflectone Electronics, Inc., Stamford, Conn. Filed Nov. 4, 1960.

BANKOGRAPH

For Depository Apparatus Including Image Recording Means.
First use Nov. 2, 1960.

SN 112,040. Gemex Precision Metals, Inc., Union, N.J. Filed Jan. 18, 1961.

STACAP

For Locks and Keys Sold in Combination and Used To Prevent Both the Theft of Automobile Hub Caps and the Tampering With the Air Valves on Automobile Tires.
First use Dec. 31, 1959.

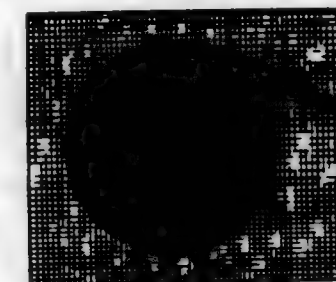
SN 112,041. Gemex Precision Metals, Inc., Union, N.J. Filed Jan. 18, 1961.

GEMLOK

Owner of Reg. No. 357,056.
For Locks and Keys Sold in Combination and Used To Prevent Both the Theft of Automobile Hub Caps and the Tampering With the Air Valves on Automobile Tires.
First use Mar. 3, 1959.

Class 26—Measuring and Scientific Appliances

SN 114,050. Sabins Dohrmann, Inc., San Diego, Calif. Filed Feb. 20, 1961.



SN 104,776. The Titan Valve & Manufacturing Company, Cleveland, Ohio. Filed Sept. 19, 1960.

TANK MASTER

For Thermostatic Controls for Water Heaters, Degreasers, Deep Fat Fryers, and Similar Goods.
First use June 1950.

SN 107,253. Fujikoshi Kozai Kogyo Kabushiki Kaisha, d.b.a. Fujikoshi Steel Industry Co., Ltd., Minato-ku, Tokyo-to, Japan. Filed Oct. 27, 1960.

Nachi

Owner of U.S. Reg. No. 706,944.
For Measuring Instruments and Parts and Appliances Thereof—Namely, Micrometers, Gauges, Gear Testers and Gear Inspection Devices.
First use Dec. 10, 1928; in commerce Dec. 12, 1959.

SN 109,204. Safe-Lad Manufacturing Company, Portland, Oreg. Filed Nov. 28, 1960.

SCALE-MOBILE

For Manually Propelled Wheeled Platform for Supporting Platform Scales.
First use Sept. 10, 1960.

SN 112,342. Peer E. Wedvick, d.b.a. The Slidegide Co., New York, N.Y. Filed Jan. 23, 1961.

UNIVERT

For Converters and Devices for Indicating Equivalent Monetary Values.
First use Mar. 16, 1960.

SN 112,371. de Var Systems, Inc., Glenbrook, Conn. Filed Jan. 24, 1961.

DE VAR

For Potentiometric Recorders, Instrumentation Preamplifiers, Millivolt to Air Pressure Signal Converters, Differential Pressure and Pressure Transducers, Indicating Controllers, Recorder Accessories and Charts, Adjustable Alarms, Strain Gauge Excitation Regulators, Components for Square Root Extraction and Multiplication of Two Signals as Accessory to Potentiometric Recorders, and Process Controllers.
First use Sept. 19, 1960, on potentiometric recorders.

SN 112,484. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Jan. 25, 1961.

PB

For Computers and Computer Components and Apparatus Associated With Computers Including Analogue to Digital Converters and Digital to Analogue Converters.
First use Jan. 3, 1961.

SN 113,900. Botany Industries, Inc., d.b.a. Rolley Co., Reno, Nev. Filed Feb. 17, 1961.

ORAMA IV

For Eye Glass Lenses and Sun Glasses.
First use Dec. 7, 1960.

The drawing is lined for the color gold.
For Cathodic Protection System for Use on Ships and Pipe Lines, Consisting of Anodes and Control Panels Equipped With Instruments To Determine the Protection of the Ship or Pipe Line Against Galvanic Metal Losses.
First use on or about Mar. 1, 1956.

SN 114,951. General Dynamics Corporation, Rochester, N.Y. Filed Mar. 6, 1961.



Owner of Reg. No. 631,661.
For Data Processing Equipment, Computing Equipment, Readout Equipment, Toll Ticketing Equipment, Sonar Communication Equipment, and Electrical Navigation Equipment; and Components and Parts Thereof.
First use at least as early as Nov. 23, 1960, on sonar communication equipment.

SN 116,479. Copymaton, Inc., Chicago, Ill. Filed Mar. 27, 1961.

COPYMATE

For Photocopying Apparatus.
First use Aug. 23, 1960.

SN 116,513. Hemmeter Corporation, Mountain View, Calif. Filed Mar. 27, 1961.

AIR-FLOAT

For Wheel Balancers, Associated Equipment and Supplies.
First use Mar. 20, 1961.

SN 116,627. Dresser Industries, Inc., Dallas, Tex. Filed Mar. 28, 1961.

ROOTS

Owner of Reg. Nos. 153,840, 710,549, and others.
For Rotary Positive Displacement Gas Meters.
First use Apr. 14, 1960; 1868 in a different display.

SN 116,631. Federal Products Corporation, Providence, R.I. Filed Mar. 28, 1961.

AIRPROBE

For Gauge Heads Used in Dimensional Gauging.
First use May 1954.

SN 116,679. Tech Serv. Inc., College Park, Md. Filed Mar. 28, 1961.

DigiBits

For Transistorized Digital Logic Packages.
First use Mar. 21, 1961.

SN 116,770. Viewlex, Inc., Holbrook, N.Y. Filed Mar. 29, 1961.

TABLETALK

For Machines and Apparatus for Projecting Views and Indicia From Films and/or Slides With Sound Accompaniment.

First use Mar. 13, 1961.

SN 117,073. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Apr. 4, 1961.

SONECTOR-PHON

Owner of German Reg. No. 743,232, dated Dec. 2, 1960; and U.S. Reg. No. 647,070.

For Sound Film Reproducing Apparatus.

SN 117,084. Bausch & Lomb Incorporated, Rochester, N.Y. Filed Apr. 4, 1961.

DynaZoom

Owner of Reg. No. 696,048.
For Microscopes.
First use Mar. 22, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 111,262. Coro, Inc., New York, N.Y. Filed Jan. 3, 1961.
Owner of Reg. No. 708,082.

Magi-Clip

For Earrings.
First use Aug. 11, 1960.

SN 112,060. Manco Watch Strap Co., Inc., Jersey City, N.J. Filed Jan. 18, 1961.

NYLONAIRE

For Watch Bands Made of Nylon.
First use Jan. 5, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 100,525. Lever Brothers Company, New York, N.Y. Filed July 8, 1960.

LIFE LINE

For Tooth Brushes.
First use Apr. 6, 1960.

Class 31 — Filters and Refrigerators

SN 113,469. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Feb. 13, 1961.

VERSARE

For Refrigeration Apparatus for the Cooling of Liquids.
First use Jan. 20, 1961.

SN 114,608. Gelman Instrument Company, Chelsea, Mich. Filed Feb. 28, 1961.

MICROPHORE

For Microporous Plastic Material Generally Made of Cellulose Acetate Which Is Used in the Laboratory for Electrophoretic Separations.

First use Jan. 19, 1961.

Class 32 — Furniture and Upholstery

SN 109,990. Pen Dee, Incorporated, Portsmouth, Va. Filed Dec. 9, 1960.

SHUR-DRI

For Baby Pads and Mattresses.
First use Feb. 7, 1960.

SN 113,695. Data Processing Accessories Company, Princeton, N.J. Filed Feb. 15, 1961.

D-P-A

For Office Files and Panels Used in Machines Which Process Tabulating Cards.
First use Dec. 21, 1960.

SN 116,174. Wagemans & Van Tulen N.V., Maastricht, Netherlands. Filed Mar. 21, 1961.

ARTIFORT

Owner of Dutch Reg. No. 63,663, dated Feb. 6, 1962.
For Furniture—Namely, Spring Mattresses and Filled Mattresses (Filled With Kapok, Hair or Other Materials), Benches, Including Cushions, Pouffes Ottoman, Pillows, Backs (of Chairs, Etc.), Tables, Chairs, Easy-Chairs, Arm Chairs.

SN 117,001. H. Goodman Inc., Cleveland, Ohio. Filed Apr. 3, 1961.

P.M.

For Mattresses and Box Springs.
First use Mar. 22, 1961.

SN 117,092. William Smalley Cadmus, New York, N.Y. Filed Apr. 4, 1961.

VUE-TRAY

For Plain and Compartmented Transparent and Non-transparent Storage Trays and Drawers.
First use Sept. 12, 1960.

SN 117,294. Oakland Builders, Inc., Springfield Gardens, N.Y. Filed Apr. 6, 1961.

PRESTO-LINE

For Kitchen Cabinets Made of Wood.
First use Jan. 8, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 83,948. Berns Air King Corporation, Chicago, Ill. Filed Oct. 26, 1959.

DRI-AIRE

Owner of Reg. Nos. 624,383 and 649,229.
For Electric Dehumidifiers.
First use Jan. 15, 1952.

SN 105,144. Coolair Manufacturing Corp., North Hollywood, Calif. Filed Sept. 26, 1960.

COOL-BLO

For Air Diffusers, Air Registers, and Air Grilles.
First use on or about Mar. 4, 1957.

SN 108,734. Esick Manufacturing Company, Los Angeles, Calif. Filed Nov. 14, 1960.

PARAMOUNT

Owner of Reg. No. 381,967.
For Air Coolers.
First use December 1939.

SN 108,825. Rival Manufacturing Company, Kansas City, Mo. Filed Nov. 21, 1960.

PURE-O-MAT

For Cabinet-Type Blower Operated Air Filtering and Circulating Units Having Porous Air Filters.
First use Nov. 4, 1960.

SN 108,826. Rival Manufacturing Company, Kansas City, Mo. Filed Nov. 21, 1960.

PURE-O-MATIC

For Cabinet-Type Blower Operated Air Filtering and Circulating Units Having Porous Air Filters.
First use Nov. 4, 1960.

SN 109,171. Continental Boilers, Inc., Oswego, N.Y. Filed Nov. 28, 1960.

CONTINENTAL

For Steam Boilers for Industrial Use.
First use 1950.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 111,206. Narahiko Muro, Minato-ku, Tokyo, Japan. Filed Jan. 3, 1961.

MARET

Owner of Japanese Reg. No. 546,372, dated Jan. 7, 1960.
For Shims.

SN 116,660. Port Phillip Rubber Co. Pty. Ltd., Gardenvale, near Melbourne, Australia. Filed Mar. 28, 1961.

Thermofort

Owner of Australian Reg. No. 130,999, dated Feb. 14, 1957.
For Reinforced Pneumatic Tyre Repair Patches Made of Rubber or Principally of Rubber.

Class 36 — Musical Instruments and Supplies

SN 98,841. Andy Apperson, d.b.a. Hilltop Records, Ashland, Ohio. Filed June 13, 1960.

**h*
hilltop records**

The word "Records" is disclaimed. The lining on the drawing represents shading only.
For Musical Phonograph Records.
First use Oct. 1, 1959.

SN 114,860. James E. Kirchstein, d.b.a. Sara Record Company, Sauk City, Wis. Filed Mar. 3, 1961.

Sara

For Phonograph Records.
First use Jan. 6, 1961.

SN 115,062. Everett L. Ingraham, d.b.a. Ingraham Productions, Daly City, Calif. Filed Mar. 7, 1961.

SEQUOIA

For Mechanically Grooved Phonograph Records.
First use Dec. 21, 1960.

Class 37 — Paper and Stationery

SN 79,313. Günther Wagner, Hannover, Germany. Filed Aug. 10, 1959.

ULTRACARBON

Owner of German Reg. No. 724,508, dated Apr. 30, 1959.
For Paper and Paper Goods, Such as Carbons, Copying Paper, Writing Paper, Drawing Paper, and Duplicating Paper, Material for Drawing and Recordation in the Form of Sheets or Strips as Well as in the Form of Rollers, Printed Forms, Stencils, Waxed Paper.

SN 80,454. Scott Paper Company, Chester, Pa. Filed Aug. 28, 1959.

WHITE GOLD STRONG-SET

For Printing and Converting Papers.
First use July 29, 1959.

SN 87,789. Dixie Wax Paper Company, Dallas, Tex. Filed Dec. 22, 1959.

LAMI-PAC

Owner of Reg. No. 678,458.
For Printed Waxed Webbed Sheets of Paper.
First use Nov. 30, 1959.

SN 102,996. American Can Company, New York, N.Y. Filed Aug. 19, 1960.



The trademark consists of a fanciful portrait.
For Toilet Tissue.
First use Mar. 23, 1959.

SN 113,440. Owens-Illinois Glass Company, Toledo, Ohio. Filed Feb. 10, 1961.



For Paperboard.
First use Dec. 12, 1960.

SN 116,063. The Parker Pen Company, Janesville, Wis. Filed Mar. 20, 1961.

DUOFILL

For Fountain Pens and Parts and Accessories Therefor, Ball Point Pens and Mechanical Pencils.
First use Mar. 13, 1961.

SN 116,511. L. & C. Hardtmuth, Inc., Bloomsbury, N.J. Filed Mar. 27, 1961.

TECHNIGRAPH

Owner of Reg. Nos. 375,022 and 558,728.
For Pencils and Lead Holders.
First use Mar. 13, 1961.

SN 116,774. Waldorf Paper Products Company, St. Paul, Minn. Filed Mar. 29, 1961.

WALD-EX

For Paperboard.
First use Sept. 14, 1960.

Class 38—Prints and Publications

SN 67,622. The National Society for Crippled Children and Adults, Inc., d.b.a. The Easter Seal Society and The Easter Seal Agency, Chicago, Ill. Filed Feb. 12, 1959.

EASTER SEALS

Owner of Reg. Nos. 695,821 and 686,318.
For Stamps for Use in Raising Money for Charitable Purposes.
First use in 1934.

SN 86,988. Frank H. Newton, Deerfield, Ill. Filed Dec. 9, 1959.

THE CAREER HOSTESS

For Magazine.
First use June 7, 1959.

SN 102,215. The Reuben H. Donnelley Corporation, New York, N.Y. Filed Aug. 8, 1960.

MODERN DRUGS

For Reference Guide.
First use Jan. 1, 1935.

SN 102,461. Electronic Periodicals, Inc., Cleveland, Ohio. Filed Aug. 11, 1960.

SPECIFILE

For Organized Assemblage of Manufacturer's Specification and Data Sheets Coded and Filed by Product Classifications.
First use September 1959.

SN 105,424. Dazey Enterprises, Inc., St. Louis, Mo. Filed Sept. 29, 1960.



For Printed Church Fund Raising Kits, Comprising an Instruction Manual, Promotion Literature, Questionnaires, and Donation Intention Cards.
First use Aug. 20, 1960.

SN 113,699. Diamond National Corporation, New York, N.Y. Filed Feb. 15, 1961.

TRU-TONE

Owner of Reg. No. 385,413.
For Color Pictorials of Food Products and Labels for Canned Foods.
First use Nov. 1, 1935.

SN 113,967. Watt Publishing Company, Mount Morris, Ill. Filed Feb. 17, 1961.

Feed & Farm Supplier

For Trade Periodical.
First use Feb. 1, 1961.

SN 114,130. Norcross, Inc., New York, N.Y. Filed Feb. 21, 1961.

LACE BOUQUET

For Greeting Cards.
First use Feb. 14, 1961.

SN 114,378. George F. Walsh Publishing Company, Inc., Landisville, N.J. Filed Feb. 24, 1961.



For Magazine.
First use Dec. 16, 1960.

Class 39—Clothing

SN 72,187. British Nylon Spinners Limited, Pontypool, England. Filed Apr. 24, 1959.

BRI-LON

Owner of British Reg. No. B777,558, dated May 13, 1958.
For Ladies' and Children's Garments—Namely, Sweaters, Cardigans, Dresses, Coats, Suits, Vests, Panties, Swimwear, Tights, Stoles, Pullovers, Socks, Lingerie, Nightdresses, Pajamas and Skirts; Men's and Children's Garments—Namely, Pullovers, Sweaters, Shirts, Pajamas, Under Vests, Under Pants, Tights, Swimwear, Trousers, Socks, Coats and Suits.

SN 85,740. Hickok Manufacturing Co. Inc., Rochester, N.Y. Filed Nov. 20, 1959.

VIP

For Apparel Belts.
First use July 1, 1959.

SN 85,960. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Nov. 24, 1960.

RAMBL-CORD

For Fabrics Sold Only in Finished Apparel—Namely, Men's, Boys', and Children's Slacks and Walk Shorts.
First use Oct. 16, 1959.

SN 100,622. Marilyn Belt Manufacturing Co., Retail Division, Inc., Ferris, Tex. Filed July 11, 1960.

MARILYN

For Ladies' Belts of All Different Styles, Colors, Materials, and Sizes.
First use Jan. 2, 1950.

SN 102,016. Fit-Rite Pants Company, Inc., New York, N.Y. Filed Aug. 4, 1960.

MANSLACK

For Boys' Trousers and Slacks.
First use July 29, 1960.

SN 102,732. Cape Ann Manufacturing Co., Gloucester, Mass. Filed Aug. 16, 1960.

FISHNET

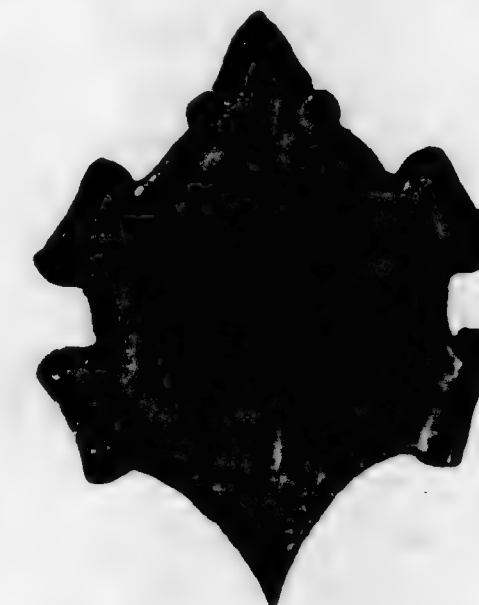
For Vests, Coats, Jackets, Pullovers and Sport Shirts for Men, Women and Children.
First use on or about Nov. 1, 1959.

SN 102,849. International Shoe Company, St. Louis, Mo. Filed Aug. 17, 1960.



The word "Condados" is a Spanish word, one definition thereof being a political subdivision equivalent to a county. For Women's Dress, Casual, and Sport-Type Shoes.
First use Aug. 5, 1960.

SN 103,246. Alpi Seidenwebereien und Krawattenfabrik Albrecht Pick K.G., Krefeld, Germany. Filed Aug. 23, 1960.



Priority claimed under Sec. 44(d) on German application filed May 31, 1961; Reg. No. 749,370, dated May 31, 1961.
For Neckties.
First use May 1960.

SN 103,469. McGregor-Doniger Inc., New York, N.Y. Filed Aug. 26, 1960.

VER-V-LAWN

For Men's Outer Shirts.
First use Aug. 11, 1960.

SN 104,043. Norwich Mills Inc., Norwich, N.Y. Filed Sept. 7, 1960.

"SWING EASE"

For Men's Sport Shirts.
First use June 21, 1960.
Subj. to Intf. with SN 105,672.

SN 105,672. Rugby Knitting Mills, Inc., Buffalo, N.Y. Filed Oct. 3, 1960.



Owner of Reg. No. 234,586.
For Men's and Boys' Knitted and Woven Sportswear—Namely, Sweaters, Jackets, Knit Shirts and Sport Shirts.
First use December 1938.
Subj. to Intf. with SN 104,043.

SN 107,230. Brown Company, Boston, Mass. Filed Oct. 27, 1960.

WUL-TEX

For Innersole Material for Shoes.
First use Feb. 19, 1960.

SN 107,966. Lester Pincus Shoe Corporation, New York, N.Y. Filed Nov. 7, 1960.

COUNTESS VINCELLI

The name "Vincelli" is a fictitious name invented by the petitioner. Owner of Reg. No. 676,043.
For Shoes, Slippers and Boots.
First use July 12, 1960.

SN 108,265. Bullock's, Inc., Los Angeles, Calif. Filed Nov. 14, 1960.

SAVILE ROW

For Men's Wearing Apparel—Namely, Dress Shirts, Sport Shirts, Underwear, Handkerchiefs, Hosiery, Robes, Suits, Sport Jackets, Slacks, Tuxedos, and Shoes.
First use 1944.

SN 109,559. Character Foundations, Inc., New York, N.Y. Filed Dec. 5, 1960.

CHARACTER

For Ladies' Corsets, Panties, Corsets, Brassieres, Girdles, and Combination Sets Consisting of Brassiere and Girdle.
First use Jan. 5, 1936.

SN 109,700. Joseph G. Kadison, d.b.a. Quaker Marine Supply Co., Philadelphia, Pa. Filed Dec. 6, 1960.

DOCK 'N DECK

For Caps, Hats, Belts, Jackets, Shirts, Storm Suits, Ties.
First use January 1957.

SN 109,985. M'Lady Sportswear, Inc., Reading, Pa. Filed Dec. 9, 1960.

LINKS AND LATER

For Women's Wear—Namely, Sweaters, Pants, Skirts, Shorts, Shirts, Dresses, Suits and Coats; and Men's Shirts.
First use Oct. 11, 1960.

SN 110,826. Dutchess Underwear Corporation, New York, N.Y. Filed Dec. 27, 1960.

HUG-UMS

For Ladies' Wearing Apparel—Namely, Underwear, Nightgowns, Slips, Petticoats, Pajamas, Bloomers, Vests, Panties, and Lounging and Hostess Robes.
First use Nov. 2, 1960.

SN 111,467. André Fantasies Inc., Baltimore, Md. Filed Jan. 9, 1961.



For Ladies' Hair Coverings.
First use Aug. 1, 1960.

SN 111,583. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Jan. 10, 1961.

PANAMA

Owner of Reg. Nos. 147,304, 577,000, and 603,244.
For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers and Vests.
First use Mar. 17, 1958.

SN 111,712. Youthercraft Manufacturing Company, Kansas City, Mo. Filed Jan. 11, 1961.



For Ladies' Suits and Coats.
First use Dec. 14, 1960.

SN 112,256. Hanes-Millis Sales Corporation, High Point, N.C. Filed Jan. 23, 1961.



For Misses' and Girls' Socks.
First use Sept. 8, 1960.

SN 114,081. L. E. Beaudin Shoe Company, Hanover, Pa. Filed Feb. 21, 1961.

FASHION'S YOUNG-MONEY SHOES

Applicant hereby disclaims the words "Fashion's" and "Shoes" apart from the mark as a whole.
For Ladies' Shoes.
First use Feb. 10, 1961.

SN 116,038. C. D. Kepner Leather Company, Boston, Mass. Filed Mar. 20, 1961.



For Leather Insoles.
First use Feb. 9, 1961.

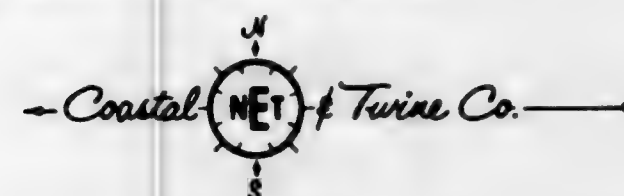
Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 88,861. Konrad Hornschuch Aktiengesellschaft Werk Weissbach, Weissbach, Wurttemberg, Germany. Filed Jan. 12, 1960.

TEXTOLIN

Owner of German Reg. No. 714,752, dated June 10, 1958.
For Table-Cloths.

SN 89,662. Robert F. Ederer, d.b.a. Coastal Net & Twine Co., Biloxi, Miss. Filed Jan. 26, 1960.



For Netting for Making Fish Nets, Tennis and Other Sport Nets, Camouflage Nets, and the Like.
First use January 1959.

SN 100,839. J. R. Erikson Co., Inc., Atlanta, Ga. Filed July 14, 1960.



For Upholstering Fabrics.
First use on or about Jan. 1, 1958.

SN 103,688. Gebr. Schulten, Oeding, near Borken, Germany. Filed Aug. 30, 1960.



Priority claimed under Sec. 44(d) on German application filed July 18, 1960; Reg. No. 739,879, dated Sept. 5, 1960.
For Velvet- and Cord-Fabric of Cotton for Men's, Women's, and Children's Outerwear.

SN 106,399. Fieldcrest Mills, Inc., Spray, N.C. Filed Oct. 14, 1960.

ROYAL CARNATION

For Sheets, Pillow Cases, Blankets, Bedspreads, and Towels.
First use in June 1959.

SN 106,602. Japan Exlan Company Limited, Kita-ku, Osaka, Japan. Filed Oct. 18, 1960.

EXLAN

Owner of Japanese Reg. No. 498,350, dated Mar. 20, 1957.
For Bed Sheets, Blankets, Quilts, Bedspreads, Pillow Cases, Curtains, Chair Covers, Chair and Couch Throws, and Textile Carpets.

SN 108,767. J. P. Frank Chemical & Plastic Corp., New York, N.Y. Filed Nov. 21, 1960.



For Vinyl Film Sold as Piece Goods.
First use Oct. 1, 1960.

SN 109,455. William B. Wright & Sons Company, West Warren, Mass. Filed Dec. 1, 1960.

WRIGHT'S

Owner of Reg. No. 385,536.
For Ribbons in Hanks, Bolts and Reels and Ruffings, Frillings and Similar Trimmings for Windows and Window Casements.
First use Nov. 21, 1927.

SN 111,305. Wunda Weve Carpet Co., Greenville, S.C. Filed Jan. 4, 1961.

WUNDALON

Owner of Reg. Nos. 437,645 and 647,164.
For Woven Nylon Pile Carpets.
First use Jan. 15, 1960.

SN 111,473. Bates Manufacturing Company, Lewiston, Maine. Filed Jan. 9, 1961.

PILGRIM'S PRIDE

For Bedspreads.
First use June 1, 1959.

SN 113,674. Shamokin Woolen Mills, Inc., New York, N.Y. Filed S.R. Jan. 19, 1961; Am. P.R. June 1, 1961.

SHAMOKIN

Owner of Reg. No. 384,730.
For Pile Fabrics in the Piece of Wool and Mohair, and Textile Fabrics in the Piece of Wool, Worsted, Cotton, Silk, Rayon, Cashmere, Synthetic Fibres and Mixtures Thereof.
First use Apr. 5, 1938.

SN 114,199. N. Erlanger, Blumgart & Co., Inc., New York, N.Y. Filed Feb. 23, 1961.

PLAID-O-MATIC

For Textile Fabrics for Liners for Outerwear Garments, and Outerwear Garments Such as Shirts, Robes, Dresses, Skirts, and the Like.
First use Nov. 1, 1960.

SN 115,213. B. J. Aronsohn, Inc., New York, N.Y. Filed Mar. 9, 1961.

PURMA-PUFF

For Upholstery Fabrics.
First use about October 1952.

SN 115,761. Appleton Woolen Mills, Appleton, Wis. Filed Mar. 16, 1961.

AP-SORB

For Papermaker's Felts.
First use Mar. 2, 1961.

SN 115,795. Fieldcrest Mills, Inc., Spray, N.C. Filed Mar. 16, 1961. SN 111,520. The Massillon Rubber Company, Massillon, Ohio. Filed Jan. 9, 1961.

FUNCTIONALE

For Textile Rugs and Carpeting.
First use Jan. 11, 1961.

Class 43—Thread and Yarn

SN 113,618. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Feb. 14, 1961.

ROSEBUD

For Hand Knitting Yarn.
First use December 1940.

SN 115,394. Textured Yarn Co., Inc., Philadelphia, Pa. Filed Mar. 10, 1961.

WIZARD OF AH'S

For Synthetic and Natural Yarns and Mixtures Thereof.
First use Feb. 15, 1961.

SN 115,398. Turner Halsey Company, New York, N.Y. Filed Mar. 10, 1961.

THECO

Owner of Reg. Nos. 619,994 and 618,052.
For Cotton Threads and Cotton Yarns.
First use Dec. 31, 1928, on cotton yarns.

SN 115,413. American Viscose Corporation, Philadelphia, Pa. Filed Mar. 13, 1961.

AVICOLOR

For Yarns, Fibers, Threads and Filaments.
First use Mar. 6, 1961.

SN 115,790. Dixie Mercerizing Company, Chattanooga, Tenn. Filed Mar. 16, 1961.

DIXETTE

Owner of Reg. Nos. 640,418 and 149,368.
For Yarns.
First use Feb. 10, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 110,877. National Sanitary Laboratories, Inc., Chicago, Ill. Filed Dec. 27, 1960.

PINKIÉS

For Rubber Prophylactics Sold for the Prevention of Diseases Only.
First use Nov. 15, 1960.

MARCO EXPENDA-GLOVE

For Polyethylene Examining Glove.
First use Dec. 12, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 102,488. Ma Cherie Sales Corporation of America, St. Louis, Mo. Filed Aug. 11, 1960.



Applicant disclaims exclusive right to use of the word "Orange" in its common descriptive form, except in the combination shown.
For Orange-Flavored Soft Drink Base for Use in Making Soft Drink Beverages.
First use June 15, 1960.

Class 46—Foods and Ingredients of Foods

SN 78,261. Concentrados Vegetales S.A., Madrid, Spain. Filed July 23, 1959.

SACOVE

Owner of Spanish Reg. No. 333,810, dated Apr. 2, 1959.
For Food Products—Namely, Fruit and Vegetable Preserves, With or Without Sugar; Concentrates, Juices, and Extracts of Edible Fruits and Vegetables in Dehydrated Form.

SN 85,056. The Sugardale Provision Company, Canton, Ohio. Filed Nov. 10, 1959.

PORKIES

For Skinless Pure Pork Sausage.
First use on or about Jan. 22, 1953.

SN 106,044. Candygram, Inc., Chicago, Ill. Filed Oct. 10, 1960.

KIDDIEGRAM

Owner of Reg. No. 704,721.
For Candies.
First use Apr. 3, 1959.

SN 108,634. Horne's Enterprises, Inc., d.b.a. Horne's, Bayard, Fla. Filed Nov. 17, 1960.

HORNE'S

For Smoked Hams, Fruit Marmalades, Fruit Jellies, Fruit Conserves, Nut Conserves, Toasted and Salted Nuts, Candies, Cookies, and Sandwiches.
First use Dec. 19, 1947.

SN 110,773. Lincoln Foods, Inc., Lawrence, Mass. Filed Dec. 23, 1960.



The mark comprises the surname and portrait of Abraham Lincoln. Owner of Reg. No. 705,652.
For Flavored Milk Shake Syrup for a Food Beverage, Fruit Preserves, Fruit Jellies, Apple Cider, Prune Juice and Canned Food Beverage Comprising Orange Juice and Lesser Ingredients.
First use May 1946 on milk shake syrup.

SN 114,461. Ralph Ettlinger, d.b.a. Ralph Ettlinger & Sons, Chicago, Ill. Filed Feb. 27, 1961.

PERLENE

For Flour.
First use May 1958.

SN 114,467. Foremost Dairies, Inc., San Francisco, Calif. Filed Feb. 27, 1961.

THRIFTY FIFTY

For Dry Milk With Half the Fat Removed.
First use Feb. 8, 1961.

SN 114,856. Intercontinental Food Laboratories Co., Philadelphia, Pa. Filed Mar. 3, 1961.

TENDER-LEE

For Meat Tenderizer.
First use Aug. 2, 1960.

SN 115,516. Pelolan Fruit Distributors, Dinuba, Calif. Filed Mar. 13, 1961.

MT. CAMPBELL

Owner of Reg. No. 624,598.
For Fresh Grapes and Fresh Deciduous Fruits.
First use June 1, 1958.

SN 115,737. Sol Cafe Mfg. Corp., Jamaica, N.Y. Filed Mar. 15, 1961.

LAURA ANN

For Coffee.
First use Oct. 1, 1957.

SN 116,105. R. C. Bigelow, Inc., Norwalk, Conn. Filed Mar. 21, 1961.

ZOWIE

Owner of Reg. No. 650,630.
For Blend of Salt, Monosodium Glutamate (MSG), Dextrose, Cornstarch and Selected Choice Herbs and Spices (a Seasoning).
First use Feb. 20, 1961.

SN 116,200. E. J. Brach & Sons, Chicago, Ill. Filed Mar. 22, 1961.

FRUITEENS

For Candy.
First use Mar. 3, 1961.

Class 48—Malt Beverages and Liquors

SN 74,452. Oland & Son Limited, Halifax, Nova Scotia, Canada. Filed May 25, 1959.



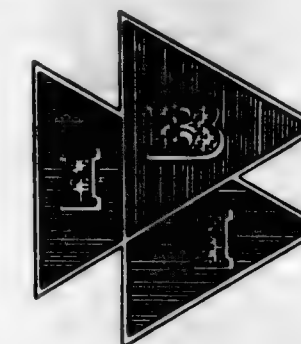
Applicant claims no exclusive rights in "Beer" as the name of the goods identified herein. Owner of Canadian Reg. No. 104,250, dated Aug. 24, 1956.
For Lager Beer.

SN 106,020. Oland & Son Limited, Halifax, Nova Scotia, Canada. Filed Oct. 7, 1960.



Owner of Canadian Reg. No. 117,194, dated Mar. 11, 1960.
For Beer.

SN 109,797. International Breweries, Inc., Detroit, Mich. Filed Dec. 7, 1960.



The drawing is lined for red, blue, and gold, but no claim is made to color. Owner of Reg. Nos. 687,839 and 692,533.
For Beer.
First use May 15, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 101,986. Societa Ceramica Richard Ginori, Milan, Italy. Filed Aug. 4, 1960.

RICHARD GINORI

"Richard Ginori" does not identify a particular individual. For Artistic Plaques, Statuettes and Mosaics, Center Pieces.
First use 1873; in commerce 1950.

SN 100,180. Gaspard & Sons Ltd., Winnipeg, Manitoba, Canada. Filed Nov. 28, 1960.

Candelite Greetings

For Greeting Cards in the Form of a Plastic Cylinder Enclosing a Candle.
First use Dec. 1, 1959; in commerce Sept. 26, 1960.

SN 100,711. Lockheed Aircraft Corporation, Burbank, Calif. Filed Dec. 6, 1960.



The word "Stand" is disclaimed except as shown. The drawing is lined for green, but no claim is made to color. For Elevated Work Access Stands.
First use no later than May 3, 1960.

SN 113,507. Diversified Technology Inc., East Syracuse, N.Y. Filed Feb. 13, 1961.



No claim is made to the word "Craft" apart from the mark shown.
For Decorative Wall Plaques.
First use at least as early as Aug. 1, 1960.

SN 114,659. Walnut Metal Industries, Inc., Yonkers, N.Y. Filed Feb. 28, 1961.

BELVEDERE

For Shirt and Blouse Hangers, Skirt and Trouser Hangers, Skirt and Blouse Hangers, and Belt Hangers.
First use March 1957.

SN 115,317. Elastic Stop Nut Corporation of America, Union, N.J. Filed Mar. 10, 1961.

ESNA

Owner of Reg. No. 554,340.
For Rectangular Signs, Signals, Letters, Symbols and Components Thereof.
First use Jan. 29, 1960.

SN 115,341. Rodney B. Hazlett, d.b.a. Hazlett Products Co., Cuyahoga Falls, Ohio. Filed Mar. 10, 1961.

AUTO-BLOT-O

For Oil Blotter Pad for Garage Floor.
First use August 1959.

Class 51—Cosmetics and Toilet Preparations

SN 80,891. Siegfried Lechner, d.b.a. L. Lechner, Berlin-Dahlem, Germany. Filed Sept. 4, 1959.

ASPASIA-STIFT

"Aspasia" was the Greek name of a lady friend of Pericles and Socrates, and literally means "the beloved one." The German word "Stift" means a pencil or a crayon.
For Make-Up Pencils.
First use in about 1896; in commerce in about 1896.

SN 86,280. Ellen Kaye Laboratories, Inc., St. Paul, Minn. Filed Nov. 30, 1959.

MILKFOAM

For Permanent Wave Solution.
First use Feb. 27, 1959.

SN 94,437. Colgate-Palmolive Company, New York, N.Y., assignee of Unexcelled Chemical Corporation, New York, N.Y. Filed Apr. 5, 1960.

DRI-AWAY

For Anti-Perspirant.
First use on or about May 11, 1959.

SN 104,676. Avon Products, Inc., New York, N.Y. Filed Sept. 19, 1960.

TOPAZE

Owner of Reg. No. 328,608.
For Perfume, Spray Perfume, Cologne, Cologne Mist, Cream Sachet, Powder Sachet, Dusting Powder, Perfumed Bath Oil, Cream Lotion, and Soap.
First use February 1935 on perfumery.

SN 109,600. Lucky Heart Laboratories, Inc., Memphis, Tenn. Filed Dec. 5, 1960.

Reveal

For Cosmetics—Namely, Face Creams.
First use Mar. 20, 1959.

SN 110,467. The Realistic Company, Cincinnati, Ohio. Filed Dec. 19, 1960.

SPRING ALIVE

Owner of Reg. No. 653,536.
For Permanent wave Curling Solutions.
First use on or about Nov. 15, 1960.

SN 115,533. Sears, Roebuck and Co., Chicago, Ill. Filed Mar. 13, 1961.

SEARS

For Cosmetic and Toilet Preparations—Namely, Cleansing Creams, Face Powder, Lipstick, Rouge, Makeup Base, Cologne, Perfume, Deodorants, Depilatories, Mascara, Eyebrow Pencils, Bath Salts, Suntan Creams, Shaving Lotion, Hair Waving Fluids, Hair Oils, Hair Shampoo, Filled Compacts, Tooth Powders and Cream.
First use on or about Jan. 15, 1959.

Class 52—Detergents and Soaps

SN 116,448. Warner-Patterson Company, Chicago, Ill. Filed Mar. 24, 1961.

WARNER

Owner of Reg. No. 512,862.
For Compounds Intended Primarily for Use in Cooling Systems of Liquid Cooled Internal Combustion Engines—Namely, Radiator Cleaners in Liquid and Powder Form.
First use April 1955; March 1922 in a different form.

SN 116,522. Huntington Laboratories, Inc., Huntington, Ind. Filed Mar. 27, 1961.

GERMA SAN

Owner of Reg. Nos. 213,003 and 297,409.
For Surgical Detergent.
First use Mar. 23, 1961.

SN 116,846. The Shetland Co., Inc., Salem, Mass. Filed Mar. 30, 1961.



Owner of Reg. Nos. 554,787, 627,689, and 671,787.
For Liquid Wax Remover and Compound for General Cleaning, Rug and Upholstery Shampoo Concentrate, and Upholstery Shampoo Kits Comprising Rug and Upholstery Shampoo Concentrate and Applicator Therefor.
First use August 1960 on upholstery shampoo kits comprising rug and upholstery shampoo concentrate and applicator therefor.

SN 117,301. Safeway Stores, Incorporated, Oakland, Calif. Filed Apr. 6, 1961.

SCAMPER

Owner of Reg. No. 632,852.
For Toilet Soap.
First use September 1960.

SN 117,816. Stearns Chemical Corporation, Madison, Wis. Filed Apr. 13, 1961.

DART

For Washing Machine Compound and an Industrial Detergent.
First use 1950.
Subj. to Intf. with SN 116,145 and SN 122,071.

SN 122,071. Economics Laboratory, Inc., St. Paul, Minn. Filed June 15, 1961.

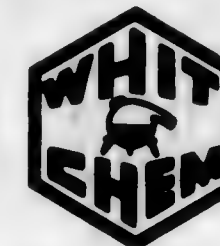
DART

For Chlorinated Detergent for Use in Dairies for Cleaning Pipeline Systems, Bulk Tanks, and Tank Trucks.
First use Mar. 24, 1960.
Subj. to Intf. with SN 116,145 and SN 117,816.

CELESTE

Owner of Reg. No. 819,014.
For Soap.
First use Oct. 27, 1958.

SN 102,270. Chester Whitfield Smith, d.b.a. Whitfield Chemical Company, Detroit, Mich. Filed Aug. 8, 1960.



Owner of Reg. No. 564,600.
For Chemical Composition Used in the Cleaning of Metals.
First use May 1, 1952.

SN 112,111. Beacon Enterprises, Inc., Chicago, Ill. Filed Jan. 19, 1961.

LADY LUXURY

For Bubble Baths, Bath Crystals, Guest Soap.
First use Dec. 1, 1960.

SN 114,471. The Fuller Brush Company, East Hartford, Conn. Filed Feb. 27, 1961.

FULLSPEED

For Floor Cleaner and Wax Stripper.
First use on or about Oct. 7, 1960.

SN 116,004. Louis G. Champion, d.b.a. Z-Zorbitt Co., La Jolla, Calif. Filed Mar. 20, 1961.



For Dry Powder Used in Absorbing Oil, Grease, Etc.
First use Feb. 4, 1961.

SN 116,145. Monarch Chemicals, Inc., Minneapolis, Minn. Filed Mar. 21, 1961.

DART

For Powdered Detergent.
First use Sept. 12, 1949.
Subj. to Intf. with SN 117,816 and SN 122,071.

SERVICE MARKS

Class 100 — Miscellaneous

SN 94,442. National Advertising Agency Network, St. Louis, Mo. Filed Mar. 14, 1960.



MARKET DEVELOPMENT ASSOCIATES

For Trade Association Services to Its Members Including Determining Market Potentials, Gathering Information on Product Acceptance, Checking Distribution Channels, Selecting Local Media, Making Opinion Surveys, General Research Based on Accumulated Experiences of Its Members, Specific Sales or Marketing Activities, Obtaining Case History Material and Photographs on Specific Installations or Operations, and Contacting the Local Press for Public Relations and Publicity Activities.

First use Sept. 7, 1957.

SN 114,398. American Institute of Certified Public Accountants, New York, N.Y. Filed Feb. 27, 1961.



The Latin phrase "Custos Fidelitatis" means "faithful guardian."

For Association Services in Furnishing Information and Advice in the Field of Accountancy to Certified Public Ac-

countants Who Are Members of Applicant and to the Profession and Public Generally.

First use on or about Apr. 9, 1957; on or about May 23, 1916, as to "American Institute of Accountants."

Class 101 — Advertising and Business

SN 82,037. Stewart A. Washburn & Company, Inc., New York, N.Y., by change of name from Technical Division, Inc., New York, N.Y. Filed Sept. 24, 1959.

hoods up

For Promotion of the Sale of Goods and Services of Others by Providing Consultation Services, Investigation of Specific Problems, Research for Solution of Problems, Preparing Statistical Reports Concerning Service Made, Preparing Special Training Materials, Manuals, Brochures, Films, Film Strips and Advertising and Promotional Material, in the Automotive and Petroleum Industries.

First use Jan. 1, 1955.

SN 87,441. Local Merchant Stamp Corporation, St. Paul, Minn. Filed Dec. 16, 1959.

LOCAL MERCHANT

For Promoting the Sale of Goods of Various Merchants Through the Use of Trading Stamps as a Medium of Exchange.

First use Sept. 11, 1959.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 111,200. Omniba Bona, Incorporated, Roanoke, Va. Filed Jan. 3, 1961.



For Indicating Membership in Omniba Bona, Incorporated, Whose Purpose Is To Promote the Civic, Social and Religious Activities of the Community.

First use August 1957.

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SN 116,628. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Mar. 28, 1961.



For Indicating Membership in a Cooperative Purchasing and Marketing Association.

First use April 1945.

SN 116,799. The Bull Moose Party, New York, N.Y. Filed Mar. 30, 1961.

THE BULL MOOSE PARTY

For Indicating Membership in Applicant.

First use Jan. 3, 1961.

CERTIFICATION MARKS

Class A—Goods

SN 86,066. Snia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. Filed Nov. 25, 1959.



The mark certifies that the goods bearing the mark contain fibers, yarns or threads manufactured by applicant and that the goods meet standards of quality and construction established by applicant. Owner of Italian Reg. Nos. 139,275, dated Nov. 7, 1958, and 140,126 and 140,539, dated Dec. 9

and Dec. 22, 1958, respectively; and U.S. Reg. Nos. 348,790, 294,996, and others.

For Underwear, Boots, Shoes, and Slippers, Items of Clothing, Paper Tissue, Book Binding, Paper and Paper Articles Including Cardboard and Stationery Articles; Printed Matter, Newspapers, Periodicals and Books; Umbrellas and Parasols.

Class B—Services

SN 94,507. The National Association of Insurance Agents, Inc., New York, N.Y. Filed Apr. 6, 1960.

**YOUR INDEPENDENT
INSURANCE AGENT
SERVES YOU FIRST**

The mark certifies that the services on which the mark is used are performed by the members of applicant and that the services conform to standards established by applicant. Owner of Reg. No. 655,102.

For Services as Insurance Agents.
First use Sept. 18, 1956.

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TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 720,800. SELPEX. Borg-Warner Corporation. SN 75,969. Pub. 5-23-61. Filed 6-18-59.
720,801. AG. Bio-Rad Laboratories. SN 91,232. Pub. 6-20-61. Filed 2-19-60.
720,802. BIO-RAD. Bio-Rad Laboratories. SN 91,233. Pub. 6-20-61. Filed 2-19-60.
720,803. CELAWE. Celanese Corporation of America. SN 97,542. Pub. 3-7-61. Filed 5-20-60.

Class 2—Receptacles

- 720,804. ULTRA PAK AND DESIGN. Packaging Frontiers, Inc., by assignment and change of name from William S. Schneider, d.b.a. The William Steven Company. SN 74,067. Pub. 10-6-59. Filed 5-19-59.
720,805. STA-DRAW. Action Bag & Envelope Co., Inc. SN 100,207. Pub. 6-20-61. Filed 7-5-60.
720,806. STRATODUR. Mauser, Kommandit-Gesellschaft. SN 101,964. Pub. 6-20-61. Filed 8-3-60.
720,807. THRIFTANKS. Doyle and Roth Manufacturing Co. Inc. SN 102,008. Pub. 6-20-61. Filed 8-4-60.
720,808. ANSCO-TAINER. General Aniline & Film Corporation. SN 109,407. Pub. 6-20-61. Filed 12-1-60.
720,809. CATALINA. Bruel Company. SN 109,470. Pub. 6-20-61. Filed 12-2-60.
720,810. KABE-O-RAP. Metal Cladding, Inc. SN 109,504. Pub. 6-20-61. Filed 12-2-60.
720,811. SUPERIOR JET. John Wood Company. SN 109,658. Pub. 6-20-61. Filed 12-5-60.
720,812. SHIP SAFE. Carolina Container Company. SN 109,771. Pub. 6-20-61. Filed 12-7-60.
720,813. SHIP SAFE ETC. AND DESIGN. Carolina Container Company. SN 109,772. Pub. 6-20-61. Filed 12-7-60.
720,814. SIFT-GARD. Continental Can Company, Inc. SN 109,956. Pub. 6-20-61. Filed 12-9-60.
720,815. NYPOLENE AND DESIGN. M. Korn Packaging Co., Inc. SN 110,446. Pub. 6-20-61. Filed 12-19-60.
720,816. POLYWALL. Bemis Bro. Bag Company. SN 110,732. Pub. 6-20-61. Filed 12-23-60.
720,817. EXTEND-A-CAN AND DESIGN. Carl W. McPherson. SN 110,868. Pub. 6-20-61. Filed 12-27-60.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 720,818. STARFLITE AND DESIGN. The Baltimore Luggage Co. SN 100,969. Pub. 6-20-61. Filed 7-18-60.
720,819. TOTABLES. Dura-Tan Company Inc. SN 108,469. Pub. 6-20-61. Filed 11-15-60.

Class 4—Abrasives and Polishing Materials

- 720,820. TETRABOR. Elektrosmelzwerk Kempten, G.m.b.H. SN 79,636. Pub. 5-31-60. Filed 8-17-59.
720,821. KOMPACT. Turtle Wax, Inc. SN 98,554. Pub. 6-20-61. Filed 6-6-60.
720,822. SPEEDRY. Speedry Chemical Products, Inc. SN 104,380. Pub. 6-20-61. Filed 9-12-60.

- 720,823. 44. Norton Company. SN 112,299. Pub. 6-20-61. Filed 1-23-61.
720,824. SILVER DOLLAR. Western Auto Supply Company. SN 112,988. Pub. 6-20-61. Filed 2-2-61.

Class 5—Adhesives

- 720,825. DOT. Devon Tape Corp. SN 94,274. Pub. 6-20-61. Filed 4-4-60.

Class 6—Chemicals and Chemical Compositions

- 720,826. EZON. The Seamless Rubber Company. SN 27,742. Pub. 10-22-57. Filed 4-8-57.
720,827. TEREKO. Technical Research Company. SN 66,662. Pub. 6-20-61. Filed 1-28-59.
720,828. TETRABOR. Elektrosmelzwerk Kempten, G.m.b.H. SN 79,637. Pub. 5-24-60. Filed 8-17-59.
720,829. ADIMOLL. Farbenfabriken Bayer Aktiengesellschaft. SN 82,499. Pub. 5-24-60. Filed 10-1-59.
720,830. KEM FIX. Polychrome Corporation. SN 88,618. Pub. 6-20-61. Filed 1-7-60.
720,831. WATCO. Industrial Chemicals, Inc. SN 95,287. Pub. 4-4-61. Filed 4-18-60.
720,832. SWABSTIX. Petrolite Corporation. SN 96,260. Pub. 6-20-61. Filed 5-2-60.
720,833. MYCO 8-45. Masury-Young Company. SN 97,850. Pub. 6-20-61. Filed 5-25-60.
720,834. SATINTOP. Chemical Coating Materials Company. SN 98,634. Pub. 6-20-61. Filed 6-9-60.
720,835. DECHLORANE. Hooker Chemical Corporation. SN 98,653. Pub. 6-20-61. Filed 6-8-60.
720,836. EVERY DAY. Hardy Salt Company. SN 98,792. Pub. 6-20-61. Filed 6-10-60.
720,837. FRILLON. The Dow Chemical Company. SN 99,500. Pub. 6-20-61. Filed 6-22-60.
720,838. RUSTY. Cromit Products Corporation, d.b.a. Albicrom Products. SN 99,616. Pub. 6-20-61. Filed 6-24-60.
720,839. PENGLO. Heyden Newport Chemical Corporation. SN 99,626. Pub. 6-20-61. Filed 6-24-60.
720,840. AQUAFLOC. Dearborn Chemical Company. SN 100,014. Pub. 6-20-61. Filed 6-30-60.
720,841. ISOTEIN. J. R. Short Milling Company and General Mills, Inc. (Joint venture). SN 101,046. Pub. 6-20-61. Filed 7-18-60.
720,842. SUPER GREEN. Western Phosphates, Inc. SN 101,529. Pub. 6-20-61. Filed 7-26-60.
720,843. MONOCITE. E. I. du Pont de Nemours and Company. SN 102,219. Pub. 6-20-61. Filed 8-9-60.
720,844. HYDROGEL. Oil Center Sales. SN 102,582. Pub. 6-20-61. Filed 8-12-60.
720,845. CURIT. Schering Aktiengesellschaft. SN 103,302. Pub. 6-20-61. Filed 8-23-60.
720,846. Z-MET. Merck & Co., Inc. SN 105,826. Pub. 6-20-61. Filed 10-5-60.
720,847. COLOR-SEAL. Wood Treating Chemicals Co. SN 106,169. Pub. 5-9-61. Filed 10-10-60.
720,848. ALKAR. Universal Oil Products Company. SN 107,076. Pub. 6-20-61. Filed 10-24-60.
720,849. MODAFLOW. Monsanto Chemical Company. SN 108,653. Pub. 6-20-61. Filed 11-17-60.

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Class 10—Fertilizers

- 720,850. FERTI-LIQUID. Clover Chemical Company. SN 105,724. Pub. 6-20-61. Filed 10-4-60.
720,851. DORMAL. Agricultural Laboratories, Inc. SN 106,454. Pub. 6-20-61. Filed 10-17-60.

Class 11—Inks and Inking Materials

- 720,852. COBANOL. Central Compounding Company. SN 90,819. Pub. 6-20-61. Filed 3-31-61.

Class 12—Construction Materials

- 720,853. VIBRO-FOIL. Sun Chemical Corporation. SN 99,674. Pub. 6-20-61. Filed 6-24-60.
720,854. FEREM. Sun Chemical Corporation. SN 99,675. Pub. 6-20-61. Filed 6-24-60.
720,855. BELSON. Belson Manufacturing Company. SN 100,088. Pub. 6-20-61. Filed 7-1-60.
720,856. NU-LAM. Nu-Lam Wood Products, Inc. SN 101,027. Pub. 6-20-61. Filed 7-18-60.
720,857. BEAUTY-GLIDE. Campbell-Larrie Plastics, Inc. SN 106,043. Pub. 6-20-61. Filed 10-10-60.
720,858. FRANCISCAN. Gladding, McBean & Company. SN 108,773. Pub. 6-20-61. Filed 11-21-60.
720,859. ULTRACHECK. Gustin-Bacon Manufacturing Company. SN 108,776. Pub. 6-20-61. Filed 11-21-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 720,860. BON-DEE LIFETIME. The William L. Bonnell Company, Inc. SN 35,082. Pub. 12-9-58. Filed 8-7-57.
720,861. TRICOUPLER. P-G Products Mfg. Co., Inc. SN 103,592. Pub. 6-20-61. Filed 8-29-60.
720,862. LINEAR HOUR-GLASS MOTIF. Chemex Corporation. SN 107,738. Pub. 6-20-61. Filed 11-3-60.
720,863. NU-HITE ADAPTERS. Daniel L. Jerman. SN 108,038. Pub. 6-20-61. Filed 11-17-60.
720,864. MONO. Mohs Commercial Corporation. SN 110,349. Pub. 6-20-61. Filed 12-16-60.
720,865. CLIPEX. Richard Manufacturing Co. SN 110,587. Pub. 6-20-61. Filed 12-19-60.
720,866. 'COMPACT'. Lyon Incorporated. SN 110,774. Pub. 6-20-61. Filed 12-23-60.

Class 14—Metals and Metal Castings and Forgings

- 720,867. DIXIE-FAB. Dixie Bronze Company. SN 101,481. Pub. 6-20-61. Filed 7-26-60.
720,868. SILTEMP. Union Carbide Corporation. SN 107,714. Pub. 6-20-61. Filed 11-2-60.

Class 16—Protective and Decorative Coatings

- 720,869. TETRABOR. Elektrosmelzwerk Kempten, G.m.b.H. SN 79,638. Pub. 5-31-60. Filed 8-17-59.
720,870. LACOLOID. British Paints Limited. SN 108,445. Pub. 6-20-61. Filed 11-15-60.

Class 17—Tobacco Products

- 720,871. R. FAERCH'S. R. Faerch A/S. SN 78,865. Pub. 6-20-61. Filed 8-3-59.
720,872. JOHN COTTON OF EDINBURGH AND DESIGN. John Cotton Limited. SN 96,571. Pub. 6-20-61. Filed 5-6-60.

Class 18—Medicines and Pharmaceutical Preparations

- 720,873. LAMINA AND DESIGN. Merrick Medicine Company. SN 99,021. Pub. 6-20-61. Filed 6-14-60.
720,874. SUPERDREN. Nicholas International Limited. SN 104,472. Pub. 12-20-60. Filed 9-14-60.
720,875. SENOKOL. The Purdue Frederick Company. SN 110,090. Pub. 5-2-61. Filed 12-12-60.
720,876. MINAGEST. Minette Pharmaceutical Corp. SN 110,584. Pub. 6-20-61. Filed 12-19-60.
720,877. ROCKABYL. The Distillers Company (Biochemicals) Limited. SN 111,391. Pub. 6-20-61. Filed 1-6-61.
720,878. HUSHABYL. The Distillers Company (Biochemicals) Limited. SN 111,392. Pub. 6-20-61. Filed 1-6-61.
720,879. LUCOFEN. H. Lundbeck & Co., A/S. SN 111,516. Pub. 6-20-61. Filed 1-9-61.
720,880. PET TONE AND DESIGN. Palos Verdes Bird Farm, Inc. SN 111,754. Pub. 6-20-61. Filed 1-12-61.
720,881. ELECTROMYCIN. Northern States Poultry Service and Laboratories, Inc. SN 111,991. Pub. 6-20-61. Filed 1-17-61.
720,882. HYDROPRES-KA. Merck & Co., Inc. SN 112,473. Pub. 6-20-61. Filed 1-25-61.
720,883. REIVOUL. Alexander S. Louvier, d.b.a. S. Louvier & Co. SN 113,846. Pub. 6-20-61. Filed 2-18-61.
720,884. THEOCLIMAN. American Pharmaceutical Company. SN 114,306. Pub. 6-20-61. Filed 2-24-61.
720,885. SAZINOL. James C. Stineman. SN 114,726. Pub. 6-20-61. Filed 3-1-61.
720,886. FILMAR. Armour and Company. SN 115,211. Pub. 6-20-61. Filed 3-9-61.
720,887. ARMCOTE. Armour and Company. SN 115,212. Pub. 6-20-61. Filed 3-9-61.
720,888. HYPO CLENS. Stander Laboratories, Inc. SN 115,850. Pub. 6-20-61. Filed 3-16-61.
720,889. RHINOGEN. Merck & Co., Inc. SN 115,934. Pub. 6-20-61. Filed 3-17-61.
720,890. HALDRONE. Eli Lilly and Company. SN 116,043. Pub. 6-20-61. Filed 3-20-61.
720,891. ORATROL. Alcon Laboratories, Inc. SN 116,102. Pub. 6-20-61. Filed 3-21-61.
720,892. ULTRAMIL. Carter Products, Inc. SN 116,205. Pub. 6-20-61. Filed 3-22-61.

Class 19—Vehicles

- 720,893. BEAM'S. Beam's, Inc. SN 76,148. Pub. 6-20-61. Filed 6-22-59.
720,894. ST. JOE. St. Joe Marine Trailer Company. SN 100,310. Pub. 6-20-61. Filed 7-5-60.
720,895. B BAUCO WITHIN A CIRCLE. Joseph Pokotlow, d.b.a. Bergen Auto Upholstery Co. SN 108,704. Pub. 6-20-61. Filed 11-18-60.
720,896. ALLEGRO. Etablissements des Cycles Allegro, Arnold Grandjean S.A. SN 112,836. Pub. 6-20-61. Filed 1-31-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 720,897. HOFFMAN AND DESIGN. Hoffman Electronics Corporation. SN 93,685. Pub. 6-6-61. Filed 3-25-60.
- 720,898. FSP. Whirlpool Corporation. SN 94,377. Pub. 6-20-61. Filed 4-4-60.
- 720,899. SMOOTHIE. Klehart Corporation. SN 96,801. Pub. 6-20-61. Filed 5-10-60.
- 720,900. MINIT MOUNT. Edward A. Hoffman. SN 98,282. Pub. 6-20-61. Filed 6-2-60.
- 720,901. RELIANT AND DESIGN. Radio Engineering Laboratories, Inc. SN 96,815. Pub. 6-20-61. Filed 6-10-60.
- 720,902. LADY SUSAN. J J Newberry Co. SN 102,684. Pub. 6-20-61. Filed 8-15-60.
- 720,903. MOLDED HEAT. Electro-Flex Corporation. SN 107,119. Pub. 6-20-61. Filed 10-25-60.
- 720,904. MAGIC CHEF. Magic Chef, Inc., by change of name from Dixie Products, Inc. SN 107,325. Pub. 5-16-61. Filed 10-28-60.
- 720,905. HI-PI & DRI. Jerrold Electronics Corporation. SN 107,766. Pub. 6-20-61. Filed 11-3-60.
- 720,906. SPEED-O-FAX. Woodland Oil & Gas Co., Inc. SN 109,134. Pub. 6-20-61. Filed 11-25-60.
- 720,907. FLUOHMIC. Shawinigan Chemicals Limited. SN 109,740. Pub. 6-20-61. Filed 12-6-60.
- 720,908. NEPO. Multi Electric Mfg. Inc. SN 110,219. Pub. 6-20-61. Filed 12-14-60.
- 720,909. PIX-SEE AND DESIGN. Polaris Engineering Corp. SN 110,227. Pub. 6-20-61. Filed 12-14-60.
- 720,910. SIGNICO AND DESIGN. Signal Indicator Corporation. SN 110,563. Pub. 6-20-61. Filed 12-20-60.
- 720,911. BEAM-X. Burroughs Corporation. SN 110,735. Pub. 6-20-61. Filed 12-23-60.
- 720,912. INTERCON. Amphenol-Borg Electronics Corporation. SN 111,576. Pub. 6-20-61. Filed 1-10-61.
- 720,913. JACKSON. W. L. Jackson Mfg. Co., Inc. CONSOLIDATED CERTIFICATE. SN 111,801, pub. 6-13-61, filed 1-13-61, Cl. 21; SN 111,802, pub. 6-13-61, filed 1-13-61, Cl. 34.
- 720,914. IN-DICATOR. Edwards Company, Inc. SN 112,448. Pub. 6-20-61. Filed 1-25-61.
- 720,915. SWITCHSTAT. Penn Controls, Inc. SN 112,765. Pub. 6-20-61. Filed 1-30-61.
- 720,916. EHERT 100. Ebert Electronics Corp. SN 112,835. Pub. 6-20-61. Filed 1-31-61.
- 720,917. SOUND SPAN. The Siegler Corporation. SN 114,830. Pub. 6-20-61. Filed 3-3-61.

Class 22—Games, Toys, and Sporting Goods

- 720,918. POLYHEDRAL DESIGN. W. J. Volt Rubber Corp. SN 74,085. Pub. 6-20-61. Filed 5-19-59.
- 720,919. BEACH-BOY JR. Magnetic Cards of California, Inc. SN 98,370. Pub. 6-20-61. Filed 6-3-60.
- 720,920. BEACH-BOY SR. Magnetic Cards of California, Inc. SN 98,371. Pub. 6-20-61. Filed 6-3-60.
- 720,921. BEACHMASTER. Magnetic Cards of California, Inc. SN 98,372. Pub. 6-20-61. Filed 6-3-60.
- 720,922. MAGNA-CARDS. Magnetic Cards of California, Inc. SN 98,373. Pub. 6-20-61. Filed 6-3-60.
- 720,923. TABLEMASTER. Magnetic Cards of California, Inc. SN 98,374. Pub. 6-20-61. Filed 6-3-60.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 720,924. CONVERTIBLE. Sunbeam Corporation. SN 68,951. Pub. 6-20-61. Filed 3-4-59.

- 720,925. TETRABOR. Elektroschneidwerk Kempten, G.m.b.H. SN 79,635. Pub. 5-31-60. Filed 8-17-59.
- 720,926. VARI-FLO. Blackmer Pump Company. SN 95,474. Pub. 9-13-60. Filed 4-21-60.
- 720,927. AMERICAN AND DESIGN. American Twist Drill Company. SN 95,799. Pub. 6-20-61. Filed 4-25-60.
- 720,928. CORTINA. Imperial International Corp. SN 99,052. Pub. 6-20-61. Filed 6-15-60.
- 720,929. CLOVER. Hermes Machine Tool Co., Inc. SN 99,144. Pub. 6-20-61. Filed 6-16-60.
- 720,930. AIRITER. The Rotor Tool Company. SN 99,367. Pub. 6-20-61. Filed 6-20-60.
- 720,931. DIAL O MATIC. AM Manufacturing Company. SN 99,706. Pub. 6-20-61. Filed 6-27-60.
- 720,932. IOWA CURBMASTER. Iowa Construction Equipment Corporation. SN 99,936. Pub. 6-20-61. Filed 6-29-60.
- 720,933. PARADRAFTER. Roberts Company. SN 100,465. Pub. 6-20-61. Filed 7-7-60.
- 720,934. FEED PAK. The Cross Company. SN 106,312. Pub. 6-20-61. Filed 10-13-60.
- 720,935. PROPANE POWER AND DESIGN. Carolina Propane Power. SN 107,315. Pub. 6-20-61. Filed 10-28-60.
- 720,936. VERSO. De Laval-Holroyd, Inc. SN 107,656. Pub. 6-20-61. Filed 11-2-60.
- 720,937. TWIRL-CON. Henry N. Dittrich, d.b.a. Twirl-Con Company. SN 107,659. Pub. 6-20-61. Filed 11-2-60.
- 720,938. PENNANT. Hammel, Riglander & Company, Inc. SN 108,320. Pub. 6-20-61. Filed 11-14-60.
- 720,939. CORLEY-MILLER. Miller Wrapping & Sealing Machine Company. SN 108,348. Pub. 6-20-61. Filed 11-14-60.
- 720,940. CADET. International Harvester Company. SN 108,637. Pub. 4-18-61. Filed 11-17-60.
- 720,941. DASY AND DESIGN. Overseas Dairies, Inc. SN 108,910. Pub. 6-20-61. Filed 11-22-60.
- 720,942. NORTHERN LINE. Tacoma Boatbuilding Co., Inc. SN 109,745. Pub. 6-20-61. Filed 12-6-60.
- 720,943. CADET. Wood Brothers Manufacturing Company. SN 109,751. Pub. 4-18-61. Filed 12-6-60.
- 720,944. JABSCO. Jabaco Pump Company. SN 110,855. Pub. 6-20-61. Filed 12-27-60.
- 720,945. MILLAR MULTIMATIC AND DESIGN. Millar Elevator Industries, Inc. SN 110,943. Pub. 6-20-61. Filed 12-28-60.
- 720,946. SWALLOW. Gorham Manufacturing Company. SN 111,109. Pub. 6-20-61. Filed 12-30-60.
- 720,947. ECONOREEL. Gleason Reel Corp. SN 111,667. Pub. 6-20-61. Filed 1-11-61.
- 720,948. CORK-ACE AND DESIGN. Denis Industries, Ltd. SN 112,033. Pub. 6-20-61. Filed 1-18-61.
- 720,949. CADET. Gilson Bros. Co. SN 112,251. Pub. 4-18-61. Filed 1-23-61.

Class 25—Locks and Safes

- 720,950. ELECTRASEAL. Protection Equipment Company, Inc. SN 104,109. Pub. 6-20-61. Filed 9-8-60.

Class 26—Measuring and Scientific Appliances

- 720,951. MARK. Micro Controls, Inc. SN 72,055. Pub. 9-8-59. Filed 4-22-59.
- 720,952. FOTOMASK. Simmonds Precision Products, Inc., by change of name from Simmonds Aerocessories, Inc. SN 73,622. Pub. 6-20-61. Filed 5-13-59.
- 720,953. PLUG SCOPE. Champion Spark Plug Company. SN 78,258. Pub. 6-20-61. Filed 7-23-59.

- 720,954. Kalaha. SN 79,029. Pub. 6-20-61.
- 720,955. Pub. 6-20-61.
- 720,956. Pub. 6-20-61.
- 720,957. SN 101,990. Pub. 6-20-61.
- 720,958. 101,990. Pub. 6-20-61.
- 720,959. Pub. 6-20-61.
- 720,960. Pub. 6-20-61.
- 720,961. Pub. 6-20-61.
- 720,962. Pub. 6-20-61.
- 720,963. SN 105,381. Pub. 6-20-61.
- 720,964. FANCY. 105,381. Pub. 6-20-61.
- 720,965. Pub. 6-20-61.
- 720,966. 6-20-61.
- 720,967. Pub. 6-20-61.
- 720,968. chinen. 108,61. Pub. 6-20-61.
- 720,969. SN 108,61. Pub. 6-20-61.
- 720,970. 100,93. Pub. 6-20-61.
- 720,971. sonics. 12-14. Pub. 6-20-61.
- 720,972. Pub. 6-20-61.
- 720,973. Co. Pub. 6-20-61.
- 720,974. 110,4. Pub. 6-20-61.
- 720,975. Inc. Pub. 6-20-61.
- 720,976. SN 112,033. Pub. 6-20-61.

Class

- 720,977. Watch. 4-25-61.
- 720,978. 4-25-61.
- 720,979. Pub. 6-20-61.

Class

- 720,980. 87,43. Pub. 6-20-61.
- 720,981. Pub. 6-20-61.
- 720,982. SN 101,990. Pub. 6-20-61.
- 720,983. 6-20-61.

- 720,954. BINOMASTER. Taisei Kogaku Kogyo Kabushiki Kaisha, d.b.a. Taisei Optical Industry Co., Ltd. SN 79,029. Pub. 6-20-61. Filed 8-4-59.
- 720,955. PHOTOGROUP. Sylvan A. Kasper. SN 84,899. Pub. 6-20-61. Filed 11-9-59.
- 720,956. TRU-FAX. Curtis-Young Corporation. SN 101,545. Pub. 6-20-61. Filed 7-27-60.
- 720,957. STRATODUR. Mauser, Kommandit-Gesellschaft. SN 101,965. Pub. 6-20-61. Filed 8-3-60.
- 720,958. LECTRO-LEVEL. Alco Valve Company. SN 101,999. Pub. 6-20-61. Filed 8-4-60.
- 720,959. BOLEX. Paillard Incorporated. SN 102,338. Pub. 6-20-61. Filed 8-9-60.
- 720,960. SONORIZER. Paillard Incorporated. SN 102,584. Pub. 6-20-61. Filed 8-12-60.
- 720,961. UNI-TOTE ETC. AND DESIGN. Universal Controls, Inc. SN 104,783. Pub. 6-20-61. Filed 9-19-60.
- 720,962. UNI-TOTE. Universal Controls, Inc. SN 104,784. Pub. 6-20-61. Filed 9-19-60.
- 720,963. FANCIFUL R. Rotron Manufacturing Co., Inc. SN 105,880. Pub. 6-20-61. Filed 9-28-60.
- 720,964. ROTRON ARRANGED UNDER AN ENLARGED FANCIFUL R. Rotron Manufacturing Co., Inc. SN 105,882. Pub. 6-20-61. Filed 9-28-60.
- 720,965. SWEEP-FLO. Flo-Tronics, Inc. SN 106,894. Pub. 6-20-61. Filed 10-21-60.
- 720,966. BIAx. Ford Motor Company. SN 107,002. Pub. 6-20-61. Filed 10-24-60.
- 720,967. TELEVAR. David P. Bushnell. SN 108,022. Pub. 6-20-61. Filed 11-8-60.
- 720,968. MULTITRONIC. Exacta-Continental Bureau-maschinenwerk Gesellschaft mit beschraenkter Haftung. SN 108,619. Pub. 6-20-61. Filed 11-17-60.
- 720,969. OZAFAX. General Aniline & Film Corporation. SN 109,865. Pub. 6-20-61. Filed 12-8-60.
- 720,970. LABOMATOR. Agfa Aktiengesellschaft. SN 109,931. Pub. 6-20-61. Filed 12-9-60.
- 720,971. SONOSWITCH AND DESIGN. Powertron Ultrasonics Corporation. SN 110,231. Pub. 6-20-61. Filed 12-14-60.
- 720,972. GRAMERCY. Raygram Corporation. SN 110,360. Pub. 6-20-61. Filed 12-16-60.
- 720,973. SPARKLESCOPE. Central States Paper & Bag Co. SN 110,401. Pub. 6-20-61. Filed 12-19-60.
- 720,974. LABCRAFT. The Porter Chemical Company. SN 110,466. Pub. 6-20-61. Filed 12-19-60.
- 720,975. "STRIPE-LINE PATTERNS." Fine Art Designers, Inc. SN 110,537. Pub. 6-20-61. Filed 12-20-60.
- 720,976. VOLUPETTOR. Standard Scientific Supply Corp. SN 110,589. Pub. 6-20-61. Filed 12-19-60.

Class 27 - Horological Instruments

- 720,977. ADMIRATION. Reusser S.A., Orvin et Tradition Watch Co. SN 84,341. Pub. 6-20-61. Filed 10-30-59.
- 720,978. SEA WOLF. Zodiac S.A. SN 96,304. Pub. 4-25-61. Filed 5-2-60.
- 720,979. "D" RING. Feurer Bros., Inc. SN 109,252. Pub. 6-20-61. Filed 11-29-60.

Class 28 - Jewelry and Precious-Metal Ware

- 720,980. RIST-KOMFORT. Kestenman Bros. Mfg. Co. SN 87,434. Pub. 6-20-61. Filed 12-16-59.
- 720,981. DIADEM. Spedel Corporation. SN 99,887. Pub. 11-8-60. Filed 6-28-60.
- 720,982. HELIO AND DESIGN. Hugo Hersberg Company. SN 102,390. Pub. 1-10-61. Filed 8-10-60.
- 720,983. DUBL-PLAY. Marvella Inc. SN 107,358. Pub. 6-20-61. Filed 10-28-60.

Class 30 - Crockery, Earthenware, and Porcelain

- 720,984. ROMCO. Leland B. Huston, d.b.a. Romco. SN 90,517. Pub. 6-20-61. Filed 2-8-60.

Class 31 - Filters and Refrigerators

- 720,985. LINEAR HOUR-GLASS MOTIF. Chemex Corporation. SN 107,737. Pub. 6-20-61. Filed 11-3-60.

Class 32 - Furniture and Upholstery

- 720,986. ACOUSTIPHONIC. Phillips & Brooks, Inc., assignee of Phillips-Brooks Atlanta Company. SN 71,605. Pub. 7-7-59. Filed 4-15-59.
- 720,987. NETHFACTS. The Netherland Furniture Factories, Ltd. SN 96,721. Pub. 6-20-61. Filed 5-9-60.
- 720,988. PILLOW-QUILT. Bedding Manufacturers Associates Inc. SN 97,541. Pub. 6-20-61. Filed 5-20-60.
- 720,989. FANFARE. Bassett Furniture Industries, Inc. SN 98,618. Pub. 6-20-61. Filed 6-8-60.
- 720,990. MADELEINE. Bassett Furniture Industries, Inc. SN 98,619. Pub. 6-20-61. Filed 6-8-60.
- 720,991. SUSSEX. Bassett Furniture Industries, Inc. SN 98,622. Pub. 6-20-61. Filed 6-8-60.
- 720,992. MONTE CRISTO. Bassett Furniture Industries, Inc. SN 99,555. Pub. 6-20-61. Filed 6-23-60.
- 720,993. WESTBURY. Bassett Furniture Industries, Inc. SN 99,558. Pub. 6-20-61. Filed 6-23-60.
- 720,994. TRANSNORDIC. Bassett Furniture Industries, Inc. SN 99,559. Pub. 6-20-61. Filed 6-23-60.
- 720,995. ANTOINETTE. Bassett Furniture Industries, Inc. SN 99,562. Pub. 6-20-61. Filed 6-23-60.
- 720,996. TELEMARKE. Bassett Furniture Industries, Inc. SN 99,564. Pub. 6-20-61. Filed 6-23-60.
- 720,997. FUNCTIONAIRE. Bassett Furniture Industries, Inc. SN 99,565. Pub. 6-20-61. Filed 6-23-60.
- 720,998. FASCINATION. Bassett Furniture Industries, Inc. SN 99,566. Pub. 6-20-61. Filed 6-23-60.
- 720,999. ELTHAM. Bassett Furniture Industries, Inc. SN 99,585. Pub. 6-20-61. Filed 6-23-60.
- 721,000. BRANDOM KITCHENS AND DESIGN. Herbert M. Brandom. SN 99,716. Pub. 6-20-61. Filed 6-27-60.
- 721,001. DELECTA AND DESIGN. Tomlinson of High Point. SN 99,895. Pub. 6-20-61. Filed 6-28-60.
- 721,002. STRATODUR. Mauser, Kommandit-Gesellschaft. SN 101,967. Pub. 6-20-61. Filed 8-3-60.
- 721,003. FANCIFUL REPRESENTATION OF A FILING GIRL. Oxford Filing Supply Co., Inc. SN 111,992. Pub. 6-20-61. Filed 1-17-61.
- 721,004. CHAIR-FOAM COLLECTION. Schnadig Corporation. SN 112,321. Pub. 6-20-61. Filed 1-23-61.
- 721,005. PLATTER LADDER. Tecton, Inc. SN 112,335. Pub. 6-20-61. Filed 1-23-61.
- 721,006. HALLMARK DESIGNS. The Kenmar Manufacturing Company. SN 112,735. Pub. 6-20-61. Filed 1-30-61.
- 721,007. SOLIDEX. Societe des Verreries Industrielles Reunies du Loing (S.O.V.I.R.E.L.). SN 89,206. Pub. 6-20-61. Filed 1-18-60.

Class 34 — Heating, Lighting, and Ventilating Apparatus

- 720,913. CONSOLIDATED CERTIFICATE. See Class 21.
721,008. HEV-E-DUTY. Industrial Combustion Inc. SN 66,440. Pub. 7-28-59. Filed 1-26-59.

Class 35 — Bolting, Hose, Machinery Packing, and Nonmetallic Tires

- 721,009. THE STANDARD PACKING ETC. Garlock Inc., by change of name from The Garlock Packing Company. SN 22,672. Pub. 10-7-58. Filed 1-16-57.
721,010. REPRESENTATION OF A GASKET. Flexitallic Gasket Company. SN 82,495. Pub. 1-31-61. Filed 10-1-59.
721,011. DC AND DESIGN. Dyna-Chemical Inc. SN 97,835. Pub. 6-20-61. Filed 5-25-60.
721,012. AVICA-FLEX. Avica Corporation. SN 109,233. Pub. 6-20-61. Filed 11-29-60.
721,013. THORO-BILT. Dayco Corporation. SN 112,367. Pub. 6-20-61. Filed 1-24-61.
721,014. THORO-SPRAY. Dayco Corporation. SN 112,885. Pub. 6-20-61. Filed 2-1-61.

Class 37 — Paper and Stationery

- 721,015. CO-ED. Sterling Pulp & Paper Company. SN 75,798. Pub. 1-31-61. Filed 6-15-59.
721,016. POCKET-PLANNER. Regency Crafts, Inc. SN 85,158. Pub. 6-20-61. Filed 11-12-59.
721,017. CHEMI-"SUPER"-JET. Tetre Sales Co., Inc. SN 95,652. Pub. 6-20-61. Filed 4-22-60.
721,018. SOLOWRAP. Reynolds Metals Company. SN 98,244. Pub. 6-20-61. Filed 6-17-60.
721,019. BALLOGRAF. Ballograf-Verken AB. SN 100,490. Pub. 6-20-61. Filed 7-8-60.
721,020. PENCOA AND DESIGN. Pen Corporation of America. SN 101,275. Pub. 6-20-61. Filed 7-21-60.
721,021. SHO-CASE. St. Regis Paper Company. SN 106,280. Pub. 6-20-61. Filed 10-12-60.
721,022. CON-BRITE. Continental Can Company, Inc. SN 109,672. Pub. 6-20-61. Filed 12-6-60.
721,023. VERTIMASK. Donald D. Hedberg, d.b.a. The Dyna-Slide Company. SN 111,186. Pub. 6-20-61. Filed 1-3-61.
721,024. VISI-SCORE. Sportscore Company. SN 111,234. Pub. 6-20-61. Filed 1-3-61.
721,025. HONOR ROLL. Topco Associates, Inc. SN 111,363. Pub. 6-20-61. Filed 1-5-61.
721,026. PATRICIAN. Patrician Paper Company, Inc. SN 112,582. Pub. 6-20-61. Filed 1-26-61.

Class 38 — Prints and Publications

- 721,027. TSMC. Trading Stamp Manufacturing Co. SN 92,332. Pub. 6-20-61. Filed 3-7-60.
721,028. DIAMOND DOLLARS. Diamond Dealers of America, Inc. SN 93,065. Pub. 6-20-61. Filed 3-17-60.
721,029. DIAMOND DIVIDENDS. Diamond Dealers of America, Inc. SN 93,056. Pub. 6-20-61. Filed 3-17-60.
721,030. ASSOCIATION NEWSLETTER. Association Institute. SN 96,920. Pub. 6-20-61. Filed 5-12-60.
721,031. ALUMINUMS. Bridgeport Brass Company. SN 96,937. Pub. 6-20-61. Filed 5-12-60.
721,032. THE MAGICAT THEATER. Jeanne L. Dixon. SN 97,009. Pub. 6-20-61. Filed 5-11-60.

- 721,033. REPRESENTATION OF PART OF HEAD OF CAT. Jeanne L. Dixon. SN 97,010. Pub. 6-20-61. Filed 5-11-60.
721,034. MIKE THE MAGICAT. Jeanne L. Dixon. SN 97,011. Pub. 6-20-61. Filed 5-11-60.
721,035. MIKE THE MAGICAT. Jeanne L. Dixon. SN 97,012. Pub. 6-20-61. Filed 5-11-60.
721,036. FACTS. PMA Corporation. SN 101,805. Pub. 6-20-61. Filed 8-1-60.
721,037. BASEBALL DIGEST AND DESIGN. Herbert F. Simons, d.b.a. Baseball Digest. SN 102,267. Pub. 6-20-61. Filed 8-8-60.
721,038. HOUSTON NOW. The Houston Post Company. SN 102,483. Pub. 6-20-61. Filed 8-11-60.
721,039. FLORA-CHEQUE. Florists Telegraph Delivery Association. SN 102,642. Pub. 6-20-61. Filed 8-15-60.
721,040. VERMONTENSE AND DESIGN. Free Press Association, d.b.a. The Burlington Free Press. SN 103,850. Pub. 6-20-61. Filed 9-2-60.
721,041. PLANT ENGINEERING. Technical Publishing Company. SN 104,959. Pub. 6-20-61. Filed 9-21-60.
721,042. THE MILNER DUMACRAT. Milner Enterprises, Inc. SN 106,269. Pub. 6-20-61. Filed 10-12-60.
721,043. PROFESSOR PHUMBLE. The Hearst Corporation. SN 106,697. Pub. 6-20-61. Filed 11-18-60.
721,044. THE BOSTON GLOBE. Globe Newspaper Company. SN 106,774. Pub. 6-20-61. Filed 11-21-60.
721,045. MUSIC LIFE. Lan-Cor Corporation. SN 109,078. Pub. 6-20-61. Filed 11-25-60.
721,046. YANKEE COLOUR AND DESIGN. Yankee Colour Corporation. SN 109,284. Pub. 6-20-61. Filed 11-29-60.
721,047. SYNDAKTOGRAPH. Bio-Research Consultants, Inc. SN 109,460. Pub. 6-20-61. Filed 12-1-60.
721,048. TODAY'S CHUCKLE. General Features Corporation. SN 109,487. Pub. 6-20-61. Filed 12-2-60.
721,049. CARTE BLANCHE. Hilton Credit Corporation. SN 109,586. Pub. 6-20-61. Filed 12-5-60.
721,050. BVC. Bregman, Vocco and Conn, Inc. SN 109,770. Pub. 6-20-61. Filed 12-7-60.

Class 39 — Clothing

- 721,051. SQUIRETOWN. Mavest, Inc. SN 75,194. Pub. 6-20-61. Filed 6-5-59.
721,052. TISH-U-WATE. J. Schoeneman, Incorporated. SN 85,062. Pub. 6-20-61. Filed 11-10-59.
721,053. SABU. Superba Cravata, Inc. SN 87,738. Pub. 6-20-61. Filed 12-21-59.
721,054. TRENCH AND DESIGN. Trench Mfg. Co., Inc. CONSOLIDATED CERTIFICATE. SN 91,569, pub. 1-10-61, filed 2-24-60, Cl. 40; SN 91,570, pub. 1-10-61, filed 2-24-60, Cl. 50.
721,055. SLACKS APPEAL BY ASHER. The Asher Company Inc. SN 91,583. Pub. 6-20-61. Filed 2-25-60.
721,056. SUPP-HORT. Kayser-Roth Corporation. SN 101,007. Pub. 6-20-61. Filed 7-18-60.
721,057. FRENCH SCOOP. Fairy Mills, Inc., assignee of Pauline Gordon, Inc. SN 101,322. Pub. 6-20-61. Filed 7-22-60.
721,058. SWEVEL AND DESIGN. Larima Imports Ltd. SN 103,029. Pub. 6-20-61. Filed 8-19-60.
721,059. NINA RICCI. Nina Ricci S.A.R.L. SN 104,050. Pub. 6-20-61. Filed 9-7-60.
721,060. THE UNQUESTIONABLE BRA. Enchantress of Florida, Ltd. SN 104,442. Pub. 6-20-61. Filed 9-14-60.
721,061. "STORMNIK." March & Mendl, Inc. SN 104,843. Pub. 6-20-61. Filed 9-20-60.
721,062. MISS CHERRY DALE AND DESIGN. Stone Manufacturing Company. SN 105,467. Pub. 6-20-61. Filed 9-29-60.

- 721,063. NATURAL FORM. Endicott Johnson Corporation. SN 106,072. Pub. 6-20-61. Filed 10-10-60.
721,064. BY DAMON CREATIONS. Damon Creations, Inc. SN 106,392. Pub. 6-20-61. Filed 10-14-60.
721,065. THE "CONCHO." March & Mendl, Inc. SN 106,615. Pub. 6-20-61. Filed 10-18-60.
721,066. THE WESTERN QUEEN ROLL-UR-OWN. Texas Harvest Hat Company. SN 106,761. Pub. 6-20-61. Filed 10-19-60.
721,067. THE DUSTER ROLL-UR-OWN AND DESIGN. Texas Harvest Hat Company. SN 106,762. Pub. 6-20-61. Filed 10-19-60.
721,068. THE RIVER BOAT ROLL-UR-OWN. Texas Harvest Hat Company. SN 106,763. Pub. 6-20-61. Filed 10-19-60.
721,069. THE RATTLER ROLL-UR-OWN. Texas Harvest Hat Company. SN 106,764. Pub. 6-20-61. Filed 10-19-60.
721,070. THE CHEYENNE TRAIL ROLL-UR-OWN AND DESIGN. Texas Harvest Hat Company. SN 106,765. Pub. 6-20-61. Filed 10-19-60.
721,071. THE GUN SLINGER ROLL-UR-OWN AND DESIGN. Texas Harvest Hat Company. SN 106,767. Pub. 6-20-61. Filed 10-19-60.
721,072. THE TOMBSTONE ROLL-UR-OWN. Texas Harvest Hat Company. SN 106,768. Pub. 6-20-61. Filed 10-19-60.
721,073. "ON CALL." Sport Specialty Shoemakers, Inc. SN 106,855. Pub. 6-20-61. Filed 10-20-60.
721,074. JAMES NELSON. James Nelson, Limited. SN 106,934. Pub. 6-20-61. Filed 10-21-60.
721,075. MISS B. Belk Stores Services, Inc. SN 109,842. Pub. 6-20-61. Filed 12-8-60.
- 721,086. STRATODUR. Mauser, Kommandit-Gesellschaft. SN 101,966. Pub. 6-20-61. Filed 8-3-60.
721,087. DENTEPOX. Westwood Dental Mfg. Inc. SN 102,524. Pub. 6-20-61. Filed 8-11-60.
721,088. CITOMAT. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 107,166. Pub. 6-20-61. Filed 10-26-60.
721,089. VEE-FORM. Personal Products Corporation. SN 109,731. Pub. 6-20-61. Filed 12-6-60.

Class 45 — Soft Drinks and Carbonated Waters

- 721,090. SALUTE. Dr. Pepper Company. SN 109,306. Pub. 6-20-61. Filed 11-29-60.
721,091. RAISE AND DESIGN. Coca-Cola Bottling Company of Palo Alto. SN 109,889. Pub. 6-20-61. Filed 12-1-60.

Class 46 — Foods and Ingredients of Foods

- 721,092. BELLO GRAPPO. J. D. Young, d.b.a. Youngstown Grape Distributors. SN 85,547. Pub. 6-20-61. Filed 11-17-59.
721,093. TRIO AND DESIGN. Carnation Company. SN 87,191. Pub. 6-20-61. Filed 12-14-59.
721,094. KELLASE. Spencer Kellogg and Sons, Inc. SN 93,374. Pub. 6-20-61. Filed 3-21-60.
721,095. PEPINA. Bruce's Foods Company. SN 94,251. Pub. 6-20-61. Filed 4-4-60.
721,096. SKY ROCKET AND DESIGN. The William Kelly Milling Company. SN 94,402. Pub. 6-20-61. Filed 4-5-60.
721,097. CORN CABIN* AND DESIGN. Corn Cabin Company. SN 96,942. Pub. 6-20-61. Filed 5-12-60.
721,098. CORN CABIN DELICIOUS POPCORN PRODUCTS AND DESIGN. Corn Cabin Company. SN 96,944. Pub. 6-20-61. Filed 5-12-60.
721,099. PICKED FOR FLAVOR. Fine Foods, Inc. SN 97,298. Pub. 6-20-61. Filed 5-17-60.
721,100. BUTTERNUT. Interstate Bakeries Corporation. SN 100,369. Pub. 6-20-61. Filed 7-6-60.
721,101. REPRESENTATION OF JOAN OF ARC ON HORSE. The Illinois Canning Company. SN 101,267. Pub. 6-20-61. Filed 7-21-60.
721,102. GOLD SEAL. The Braun Brothers Packing Company. SN 102,374. Pub. 6-20-61. Filed 8-10-60.
721,103. DAN-DEE. National Dairy Products Corporation. SN 102,782. Pub. 6-20-61. Filed 8-16-60.
721,104. QUINT Q. Petaluma Co-Operative Creamery. SN 103,596. Pub. 5-2-61. Filed 8-29-60.
721,105. TEMPE SUN. Blue Goose Growers, Inc., by change of name from American National Growers Corporation. SN 106,029. Pub. 5-2-61. Filed 10-10-60.
721,106. MASTER MIX AND DESIGN. Central Soya Company, Inc. SN 107,927. Pub. 6-20-61. Filed 11-4-60.
721,107. GOLDEN RULE. Paul F. Beich Company. SN 108,017. Pub. 6-20-61. Filed 11-8-60.
721,108. HI-GROWN. Hi-Valley Orchards. SN 109,587. Pub. 6-20-61. Filed 12-5-60.
721,109. DAIRY ROLL "SHORTIES" AND DESIGN. Phoenix Candy Co., Inc. SN 109,621. Pub. 6-20-61. Filed 12-5-60.
721,110. DAIRY ROLL. Phoenix Candy Co., Inc. SN 109,622. Pub. 6-20-61. Filed 12-5-60.

Class 40 — Fancy Goods, Furnishings, and Notions

- 721,054. CONSOLIDATED CERTIFICATE. See Class 39.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 721,076. BLENDETTE. Seamprufe Incorporated. SN 18,355. Pub. 7-8-58. Filed 10-29-56.
721,077. VIRGINIA AND DESIGN. Virginia Towel Mills, Inc., assignee of Mabel Bates, d.b.a. Virginia Towel Mills. SN 53,786. Pub. 12-23-58. Filed 6-18-58.
721,078. COSSERAT. Etablissements Cosserat. SN 93,909. Pub. 6-20-61. Filed 3-29-60.
721,079. FASHION WEAVERS. Fieldcrest Mills, Inc. SN 107,187. Pub. 6-20-61. Filed 10-26-60.
721,080. TWINKLE-DON. J. M. McDonald Co. SN 107,360. Pub. 6-20-61. Filed 10-28-60.
721,081. CALPRETA WONDER-DRY. The Calico Printers' Association Limited. SN 109,237. Pub. 6-20-61. Filed 11-29-60.
721,082. WONDEROY. Hockmeyer Bros., Inc. SN 110,153. Pub. 6-20-61. Filed 12-13-60.
721,083. JOLISSA. J. P. Stevens & Co., Inc. SN 113,177. Pub. 6-20-61. Filed 1-26-61.

Class 44 — Dental, Medical, and Surgical Appliances

- 721,084. CULPAK-KIT. Diagnostic Associates, Inc. SN 73,080. Pub. 3-7-61. Filed 5-7-59.
721,085. NEUROPHYSIOGRAPH. E & M Instrument Co., Inc. SN 100,434. Pub. 6-20-61. Filed 7-7-60.

Class 47 — Wines

- 721,111. PRINCE ROUGE. Barton & Guestier, S.A. SN 98,850. Pub. 6-20-61. Filed 6-13-60.

721,112. PANTRY MASTER AND DESIGN. Pantry Master Products Co., Inc. SN 109,264. Pub. 6-20-61. Filed 11-29-60.

721,113. CARNIVAL. Di Giorgio Fruit Corporation, d.b.a. Santa Fe Wine Company and La Vista Vintners. SN 109,568. Pub. 6-20-61. Filed 12-5-60.

Class 48—Malt Beverages and Liquors

721,114. O'KEEFE OLD STOCK ALE AND DESIGN. O'Keefe Brewing Company Limited. SN 106,095. Pub. 6-20-61. Filed 9-23-60.

Class 49—Distilled Alcoholic Liquors

721,115. QUEEN'S CASTLE. Brooks & Bohm (Whisky Shippers) Limited. SN 102,892. Pub. 6-20-61. Filed 8-18-60.

Class 50—Merchandise Not Otherwise Classified

721,054. CONSOLIDATED CERTIFICATE. See Class 39.

721,116. THRIFTY KRIS. Felix Lillenthal & Co., Inc. SN 97,768. Pub. 6-20-61. Filed 5-24-60.

721,117. SB AND DESIGN. Skienena Biserie, Narodni Podnik. SN 101,208. Pub. 6-20-61. Filed 7-20-60.

721,118. DOORGRAM. Sri Deva Ram Sukul, d.b.a. Doorgram Manufacturing Co. SN 111,370. Pub. 6-13-61. Filed 10-13-60.

Class 51—Cosmetics and Toilet Preparations

721,119. LIP-ROLET. Irène Chassefont S.A. SN 88,729. Pub. 6-20-61. Filed 1-11-60.

721,120. LOVE AFFAIR. Goya Limited. SN 98,518. Pub. 6-20-61. Filed 3-23-60.

721,121. GOLDEN FLASK OF BEAUTY AND DESIGN. Beauty Care, Inc. SN 93,574. Pub. 6-20-61. Filed 3-3-60.

721,122. PLASSARD. La Parfumerie Plassard. SN 93,615. Pub. 6-20-61. Filed 3-24-60.

721,123. ADAQUA. Adaqua, Inc. SN 98,838. Pub. 6-20-61. Filed 6-13-60.

721,124. SIMONE COCHARD AND DESIGN. Simone Nelly Cochard de Bohme, assignee of Pierre Bohme. SN 105,617. Pub. 6-20-61. Filed 10-3-60.

721,125. MF AND DESIGN. Max Factor & Co., d.b.a. Max Factor. SN 106,821. Pub. 6-20-61. Filed 10-20-60.

721,126. PLACE SETTING. Revlon, Inc. SN 107,057. Pub. 6-20-61. Filed 10-24-60.

721,127. CREME DE CENTA. Beautron Corporation. SN 109,155. Pub. 6-20-61. Filed 11-28-60.

721,128. SERRA CENTA. Beautron Corporation. SN 109,156. Pub. 6-20-61. Filed 11-28-60.

721,129. BEAUTE DE CENTA. Beautron Corporation. SN 109,158. Pub. 6-20-61. Filed 11-28-60.

721,130. VICTORIA'S YOUTH LIFT AND DESIGN. Joseph G. Smith, d.b.a. Joseph G. Smith and/or J. G. Smith. SN 111,233. Pub. 6-20-61. Filed 1-3-61.

721,131. TAJ MAHAL. Old Empire, Inc., d.b.a. Taj Mahal. SN 111,285. Pub. 6-20-61. Filed 1-4-61.

Class 52—Detergents and Soaps

721,132. SOACLENS. Burton, Parsons Chemicals, Inc. SN 106,042. Pub. 6-13-61. Filed 10-10-60.

721,133. DAZZLE ALL PURPOSE CLEANER AND DESIGN. J. L. Prescott Company. SN 106,742. Pub. 6-20-61. Filed 10-19-60.

721,134. CARB-MEDIC AND DESIGN. Radiator Specialty Company. SN 100,098. Pub. 6-20-61. Filed 11-25-60.

721,135. DESIGN OF WOMAN AND TOILET BOWL. American Home Products Corporation, d.b.a. Boyle-Midway. SN 110,192. Pub. 6-20-61. Filed 12-14-60.

721,136. MERIT. G.P. Manufacturing Co., Inc. SN 110,321. Pub. 6-20-61. Filed 12-16-60.

Service Marks

Class 100—Miscellaneous

721,137. R AND DESIGN. Rescon Electronics Corporation. SN 102,342. Pub. 6-20-61. Filed 8-9-60.

Class 101—Advertising and Business

721,138. SHAKEY'S. Johnson, Plummer & Associates. SN 56,727. Pub. 6-20-61. Filed 8-6-58.

721,139. SAF-T-SAKE AND DESIGN. Safety Sake Enterprises, Inc. SN 73,617. Pub. 6-20-61. Filed 5-13-59.

721,140. MORE FOR LESS AT MOORE'S. Moore's Wholesale Builders Supply of Richmond, Incorporated. SN 89,933. Pub. 6-20-61. Filed 1-29-60.

721,141. IRIS. Bruce M. Evander, d.b.a. International Registered Identity System. SN 90,629. Pub. 6-20-61. Filed 2-9-60.

Class 102—Insurance and Financial

721,142. CREDIT COMMAND. General Merchandise Company. SN 77,740. Pub. 6-20-61. Filed 7-15-59.

721,143. STATE FARM INSURANCE ETC. AND DESIGN. State Farm Mutual Automobile Insurance Company. SN 96,369. Pub. 1-10-61. Filed 5-3-60.

721,144. THE PILOT AND REPRESENTATION OF A PILOT. Pilot Life Insurance Company. SN 99,778. Pub. 6-20-61. Filed 6-27-60.

721,145. OCASCO. The Ohio Casualty Insurance Company. SN 104,938. Pub. 6-20-61. Filed 9-21-60.

Class 105—Transportation and Storage

721,146. DESIGN OF SERIES OF BANDS. Totem International Shipping Corporation. SN 101,522. Pub. 6-20-61. Filed 7-26-60.

Class 106—Material Treatment

721,147. PRESTWICK. Courtaulds (Alabama) Inc., by change of name and assignment from Courtaulds, Inc. SN 107,556. Pub. 6-20-61. Filed 11-1-60.

Class 107—Education and Entertainment

721,148. ALBM CLUB. Ware House of Music, Inc. SN 71,987. Pub. 6-20-61. Filed 4-21-59.

721,149. IEI AND DESIGN. Industrial Education Institute. SN 82,830. Pub. 6-20-61. Filed 10-7-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials Class 21—Electrical Apparatus, Machines, and Supplies

721,150. National Lead Company, New York, N.Y. SN 108,586. Filed 8-29-60.

QUIK-GEL

For High-Yield Bentonitic Clay Used as a Suspending Agent for Oil Well, Water Well and Seismic Drilling. First use Aug. 24, 1959.

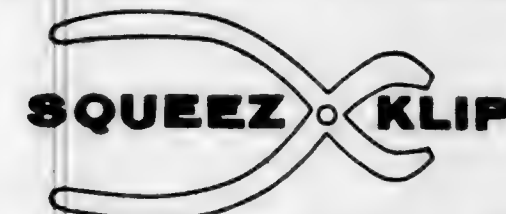
Class 13—Hardware and Plumbing and Steam-Fitting Supplies

721,151. Federal Enameling & Stamping Company, Pittsburgh, Pa. SN 79,641. Filed P.R. 8-17-59; Am. S.R. 6-14-61.

CLEAR-VU

For Covered Cooking Vessels. First use on or about July 1, 1959.

721,152. Republic Fastener Products Corp., Saddle Brook, N.J. SN 95,198. Filed P.R. 4-15-60; Am. S.R. 6-30-61.



For Hog Rings for Upholstery, Pliers for Application of Rings to Upholstery, Kits of Clips for Decorations, Gardening, Upholstery, Drapery, Camping and Other General Uses. First use Mar. 10, 1960.

Class 18—Medicines and Pharmaceutical Preparations

721,153. Marion Laboratories, Inc., Kansas City, Mo. SN 59,500. Filed P.R. 9-24-58; Am. S.R. 6-14-61.

SATIN-SEAL

For Coating Which Is Incorporated in Medicinal Tablets Consisting of Iron and Vitamins. First use Aug. 20, 1958.

Class 19—Vehicles

721,154. Dana Corporation, Toledo, Ohio. SN 100,100. Filed P.R. 7-1-60; Am. S.R. 6-10-61.



For Boat Trailers and Utility Trailers. First use on or about June 8, 1960.

721,155. Tessier Industries, Incorporated, Cleveland, Ohio. CONSOLIDATED CERTIFICATE. SN 90,197, filed P.R. 2-2-60, Am. S.R. 5-25-61; SN 120,832, filed 5-25-61.

Hilton

For Transistor Radio Receiving Sets, in Class 21. For Sewing Machines, in Class 23. First use Dec. 1, 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

721,155. CONSOLIDATED CERTIFICATE. See Class 21.

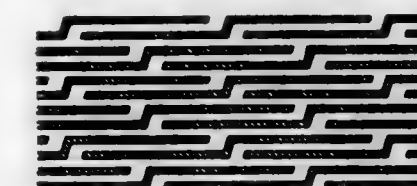
721,156. Bergman Tool Mfg. Co., Inc., Buffalo, N.Y. SN 96,183. Filed P.R. 5-2-60; Am. S.R. 6-22-61.

DIAL-A-CUT

For Tinner's Snips Adjusting Device for Selecting and Setting the Cut Thereof. First use Apr. 8, 1960.

Class 37—Paper and Stationery

721,157. Burroughs Corporation, Detroit, Mich., assignee of The Todd Company, Inc., Rochester, N.Y. SN 14,417. Filed P.R. 8-22-56; Am. S.R. 12-12-58.



The trademark consists of a repeating pattern of green parallel lines having overlapping offset portions, substantially as illustrated. The drawing is lined for green.

For Safety Paper Products, Including Checks, Bank Money Orders, Identification Cards, Birth Certificates, Passports, Export Licenses, Merchandise Coupons, Stock Certificates, Operators' Licenses, and Gift Certificates.

First use on or about Oct. 22, 1914.

Class 38—Prints and Publications

721,158. Daniel Francis Pierre, Beverly, Mass. SN 88,799. Filed P.R. 1-11-60; Am. S.R. 5-16-61.

CERTIFIED USED CAR PRICES

For Manual Issued Annually, and Monthly Supplements Thereof.

First use May 6, 1954.

721,150. Research Reports, Inc., Indianapolis, Ind. SN 99,786. Filed P.R. 6-27-60; Am. S.R. 7-3-61.



For Bulletin.
First use Feb. 1, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

721,160. Qualitex, Inc., New York, N.Y. SN 94,346. Filed P.R. 4-4-60; Am. S.R. 6-19-61.

SYLKEN

For All Combed Glazed Cotton Fabric for Ladies' Dresses, Pajamas, Shirts, Blouses, and Men's Shirts and Pajamas. First use July 1956.

Class 46—Foods and Ingredients of Foods

721,161. Fruit Products Corporation, New York, N.Y. SN 102,647. Filed P.R. 8-15-60; Am. S.R. 4-13-61.

FUDGE STICK

For Frozen Confections on Sticks and Dry Flavoring Ingredients for Making the Same.
First use Aug. 1, 1938, on frozen confections.

Class 49—Distilled Alcoholic Liquors

721,162. Golden Gate Stores, Inc., d.b.a. Hilton Distributing Company, San Francisco, Calif. SN 96,331. Filed P.R. 5-3-60; Am. S.R. 5-3-61.

HILTON'S

For Gin, Vodka, Bourbon Whiskey, and Brandy. First use about Feb. 11, 1952, on brandy.

TRADEMARK REGISTRATIONS RENEWED

142,815. PERFECTA AND DESIGN. Cl. 36. 5-17-21.	389,087. GENERAL. Cl. 23. 7-22-41.
143,933. DMC. Cl. 40. 6-21-21.	389,215. PRESSOVAC. Cl. 23. 7-29-41.
145,370. GRAPHETTE AND DESIGN. Cl. 45. 8-2-21.	389,395. RIDING WITH RUSSELL. Cl. 38. 8-5-41.
146,906. PANOMALT. Cl. 48. 9-20-21.	389,446. TAKA-COMBEX. Cl. 18. 8-5-41.
147,184. PANOMALT AND DESIGN. Cl. 46. 10-4-21.	389,464. PROMIN. Cl. 18. 8-5-41.
147,257. KARDEX. Cl. 32. 10-11-21.	389,679. REGENT'S PARK. Cl. 32. 8-19-41.
147,357. MAY KNIT AND DESIGN. Cl. 39. 10-11-21.	389,727. COASTAL. Cl. 46. 8-19-41.
147,600. GALLEY. Cl. 27. 10-25-21.	389,728. SEA-MIST. Cl. 46. 8-19-41.
147,607. WHITE SOUTHERN. Cl. 12. 10-25-21.	389,747. SLEEPY-TIME DESIGN ETC. Cl. 39. 8-19-41.
147,681. JIFFY. Cl. 46. 10-25-21.	389,813. KODAK. Cl. 2. 8-19-41.
147,825. HYNITE. Cl. 10. 11-1-21.	390,029. KODAK. Cl. 1. 9-2-41.
148,346. ARMCO AND DESIGN. Cl. 14. 11-15-21.	390,223. WINDBREAKER. Cl. 51. 9-9-41.
148,651. AGGRESSIVE. Cl. 37. 11-22-21.	390,397. SATINOL. Cl. 33. 9-23-41.
148,869. HONESTY. Cl. 39. 11-29-21.	390,597. TOY M'FRS U.S.A. AND DESIGN ETC. Cl. 38. 9-30-41.
149,084. MAXI. Cl. 23. 12-6-21.	391,483. CRUSH IT TWIST IT ETC. AND DESIGN. Cl. 39.
149,129. KAHN AND DESIGN ETC. Cl. 39. 12-6-21.	391,646. TREESWEET AND DESIGN. Cl. 46. 11-18-41.
149,933. LITTLE GIANT. Cl. 23. 12-27-21.	391,672. RAYMASTER. Cl. 44. 11-18-41.
150,073. MANHATTAN. Cl. 39. 12-27-21.	391,707. REVEX. Cl. 23. 11-18-41.
379,918. LULLABY. Cl. 21. 7-30-40.	391,949. PRESERVOL. Cl. 6. 12-2-41.
387,309. SUPER HIDING. Cl. 16. 5-13-41.	392,027. VASODRINE. Cl. 18. 12-2-41.
388,005. JM. Cl. 47. 6-10-41.	392,167. VEIN-X. Cl. 46. 12-16-41.
388,009. JM PROSPERITY BRAND ETC. AND DESIGN. Cl. 47. 6-10-41.	392,225. INTERWOVEN YOUNGFELLER. Cl. 39. 12-16-41.
388,019. CASAMIA. Cl. 47. 6-10-41.	392,271. CHEROKEE. Cl. 12. 12-16-41.
388,099. CELASCREEN. Cl. 42. 6-10-41.	392,272. KENNESAW. Cl. 12. 12-16-41.
388,107. HEXAVIBEX. Cl. 18. 6-10-41.	392,427. LINEX TABLETS. Cl. 18. 12-23-41.
388,760. DUZ-IT. Cl. 39. 7-8-41.	392,428. LYNEX. Cl. 18. 12-23-41.
388,792. ADAPTOL. Cl. 44. 7-8-41.	392,513. ELDERADO. Cl. 39. 12-30-41.
388,934. AMERICAN. Cl. 16. 7-15-41.	392,544. DULETE. Cl. 23. 12-30-41.
388,935. INDIAN HEAD AND DESIGN. Cl. 16. 7-15-41.	392,551. ICETITE. Cl. 5. 12-30-41.
389,078. ACRUF. Cl. 23. 7-22-41.	
389,079. TANRUF. Cl. 23. 7-22-41.	

TRADEMARK REGISTRATIONS CANCELED

Section 8	
102,940. FAN FOLD FORMS AND DESIGN. Cl. 37. 3-2-15.	608,930. GORDON'S EVER FAST AND DESIGN. Cl. 5.
323,986. NAFFRON. Cl. 18. 5-7-35.	608,938. LT-30. Cl. 5.
323,437. PICNIT. Cl. 39. 6-25-35.	608,940. TEXDYE. Cl. 11.
326,111. MILITAIRE KODETTE AND DESIGN. Cl. 39. 7-16-35.	608,952. AMERICAN PANAL AND DESIGN. Cl. 12.
The following registrations issued July 19, 1955	
608,922. PLASTICLEAR. Cl. 2.	608,954. VICTORY. Cl. 12.
608,925. TEMP-O-HONE. Cl. 4.	608,964. CASH-WAY. Cl. 12.
608,927. RUB'R-CORK. Cl. 5.	608,968. TRANSLUSITE. Cl. 12.
	608,973. STORMMASTER. Cl. 12.
	608,982. "REMOVE-A-MATIC." Cl. 12.
	608,987. READI-PART. Cl. 13.
	608,996. SUPERTUNE. Cl. 15.
	608,997. CALIFORNIA RESEARCH AND DESIGN. Cl. 15.
	608,998. AIGLON. Cl. 15.

609,002. JALO-LUBE. Cl. 15.	609,174. STROLL-BEEZE. Cl. 39.
609,004. AEROMARINE. Cl. 15.	609,177. RIVERTON. Cl. 39.
609,005. HIGOL. Cl. 15.	609,180. NEAR-N-DEAR. Cl. 39.
609,009. HO-CAR. Cl. 15.	609,181. LITTLE MISS MORT. Cl. 39.
609,013. RUB-R-IZE AND DESIGN. Cl. 16.	609,182. LITTLE MR. MORT. Cl. 39.
609,024. OMNI BOND. Cl. 16.	609,183. BEAU-SET. Cl. 39.
609,025. Z-7. Cl. 16.	609,188. "IT'S A FAMILY AFFAIR" AND DESIGN. Cl. 39.
609,026. BURFLEX. Cl. 16.	609,192. LETH-R-FLEX. Cl. 42.
609,028. PRELUNGFILTRD. Cl. 17.	609,194. MIRACLE TOP. Cl. 42.
609,029. COLONY. Cl. 17.	609,197. MARTHA WHITE'S FANCI-FAB. Cl. 42.
609,033. RUTAMINAL-ES. Cl. 18.	609,198. BOUNCE KNOT. Cl. 42.
609,035. STA-A-VAIL. Cl. 18.	609,203. SUPERTEX. Cl. 44.
609,040. ANSTADONE. Cl. 18.	609,205. THE MYO-PLASTEX AND DESIGN. Cl. 44.
609,042. CYESICAPS. Cl. 18.	609,206. ALLAN'S. Cl. 45.
609,044. "LUCKY ME" AND DESIGN. Cl. 18.	609,227. COFFEE BIRD. Cl. 46.
609,047. AMBETA. Cl. 18.	609,229. MONEY MAKER AND DESIGN. Cl. 46.
609,054. BIG CHIEF. Cl. 22.	609,230. MONEY MAKER AND DESIGN. Cl. 46.
609,055. FLI-TOSSR. Cl. 22.	609,231. SPINNER AND DESIGN. Cl. 46.
609,058. MAKO AND DESIGN. Cl. 23.	609,234. GOODLEIGH. Cl. 46.
609,061. DISINSECTOR. Cl. 23.	609,245. VINEYARD MAID. Cl. 46.
609,074. GRAND TONE AND DESIGN. Cl. 23.	609,249. FC AND DESIGN. Cl. 46.
609,076. ROCKETTE. Cl. 23.	609,252. JTB. Cl. 46.
609,083. GRADOSOL. Cl. 26.	609,258. READIFLAKES. Cl. 48.
609,088. ASL AND DESIGN. Cl. 26.	609,263. PINK DOMINO. Cl. 51.
609,093. LEDO. Cl. 28.	609,264. MOISTREAT. Cl. 51.
609,094. RIST-LETTE BY LEDO. Cl. 28.	609,265. BOLD VENTURE. Cl. 51.
609,097. COTTON QUEEN. Cl. 29.	609,268. CREME PATT. Cl. 51.
609,101. ABOVE ALL STAR STEEL AND DESIGN. Cl. 32.	609,270. JEWELOLO. Cl. 51.
609,106. TOTE-BAR. Cl. 32.	609,276. LANO-SET. Cl. 51.
609,111. OSCILLAIR AND DESIGN. Cl. 34.	609,279. MINIT DRI AND DESIGN. Cl. 51.
609,112. INFINITROL. Cl. 34.	609,281. PICTURE BOOK TOILETRIES. Cl. 51.
609,113. NORGRAN. Cl. 36.	609,283. 9 x 9. Cl. 51.
609,119. THE BUDGIE BEACON AND DESIGN. Cl. 38.	609,284. GUYS AND DOLLS. Cl. 51.
609,125. AT THE OFFICE. Cl. 38.	609,289. FASEL. Cl. 52.
609,130. CAMERA COLLEGE. Cl. 38.	609,290. CYANATEX. Cl. 52.
609,132. BEHIND THE CAMERA. Cl. 38.	609,298. DUO PLAN AND DESIGN. Cl. 101.
609,133. PLATTER CHATTER. Cl. 38.	609,305. CELLULAR GLASS FILL. Cl. 12.
609,135. TOPS AMONG TEENS. Cl. 38.	609,307. E-Z KLEEN AND DESIGN. Cl. 12.
609,136. WHAT'S YOUR QUESTION. Cl. 38.	609,309. CHLORO-PINE. Cl. 15.
609,140. TROPICRISP. Cl. 39.	609,312. CHROMETAL. Cl. 19.
609,141. FAIRETTE. Cl. 39.	609,313. CUSHION-RIDE. Cl. 19.
609,143. CHAMOLET. Cl. 39.	609,314. ORIGINAL FREE-ARMS A AND DESIGN. Cl. 22.
609,144. D'PUCCINI AND DESIGN. Cl. 39.	609,319. AUTO-TIMER. Cl. 26.
609,145. EN-DEARING. Cl. 39.	609,321. WHITEHALL CUSTOM BUILT KITCHENS. Cl. 32.
609,151. LUSTRA POINT. Cl. 39.	609,322. THE MURPH IN-A SOFA ETC. AND DESIGN. Cl. 32.
609,152. SKINNER-SAFE. Cl. 39.	609,326. J. BOGOFF. Cl. 39.
609,155. TUR-VAL DERRY. Cl. 39.	609,331. VIRGINIAN. Cl. 42.
609,156. TRU-VAL GREGG. Cl. 39.	609,333. GRENACHE. Cl. 46.
609,157. TRU-VAL KEITH. Cl. 39.	609,335. CHERVEN'S AND DESIGN. Cl. 46.
609,161. DRIB-AWAY. Cl. 39.	609,340. LUSTER BATH. Cl. 52.
609,165. KEYS. Cl. 39.	609,341. MR. WHITE AND DESIGN. Cl. 52.
609,167. MODERN MANNER. Cl. 39.	609,343. NATIONAL RETAIL FOOD AUDIT. Cl. 101.
609,169. GARLAND PETITE. Cl. 39.	
609,171. LIVELY LAD. Cl. 39.	
609,172. DUETS LITTLE CRAFT DUETS, ETC. AND DESIGN. Cl. 39.	
609,173. SUPRALON. Cl. 39.	

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

444,808. HEAD OF A COW. Cl. 46. 2-8-55. Fromageries Bel, Paris, France. Corrected: In the certificate, lines 3 and 15 and in the statement, column 1, line 1, "Societe" should be deleted.	615,084. PERFECT FLAME. Cl. 15. 11-1-55. Perfect Power Corporation. Humble Oil & Refining Company, New York, N.Y. Amended to appear:
500,226. STEELOX. Cl. 14. 5-11-48. The American Rolling Mill Company. Armco Steel Corporation, Middletown, Ohio. Amended to appear:	

STEELOX

608,521. "BONES FOR BOWSER." Cl. 2. 7-12-55. Crown Zellerbach Corporation, San Francisco, Calif. Amended to appear:

"Bones for Bowser"

PERFECT FLAME

616,294. HEAD OF A COW AND THE MERRY COW ETC. Cl. 46. 11-15-55. Fromageries Bel, Paris, France. Corrected: In the certificate, lines 4 and 15, in the statement, column 1, line 1, "Societe" should be deleted.

618,068. SEMBLOK. Cl. 12. 12-27-55. The Stebbins Engineering and Manufacturing Company, Watertown, N.Y. Corrected: In the certificate, lines 4 and 16 and in the statement, column 1, line 1, before "Stebbins," The should be inserted.

684,556. GOLD BOND. Cl. 101. 9-1-59. Gold Bond Stamp Company, Minneapolis, Minn. Corrected: In the statement, column 2, line 5 should be deleted and *First use early in 1938; in commerce early in 1940.* should be inserted.

701,600. B AND DESIGN. Cl. 14. 7-26-60. Sandusky Foundry & Machine Company, Sandusky, Ohio. Corrected: In the statement, column 1, line 1, "Co." should be deleted and *Company* should be inserted.

710,591. ZIPPO. Cl. 26. 1-31-61. Zippo Manufacturing Company, Bradford, Pa. Corrected: In the statement, column 1, line 1, ", Inc." should be deleted.

717,334. LAWYERS BOND. Cl. 37. 6-20-61. Parker & Son, Inc., Los Angeles, Calif. Corrected: In the heading, "PRINCIPAL" should be deleted and *SUPPLEMENTAL* should be inserted.

718,825. INGRAM. Cl. 15. 7-25-61. Ingram Oil and Refining Company, New Orleans, La. Corrected: In the statement, column 2, after line 5, *First use Mar. 15, 1954; in commerce Mar. 15, 1954.* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

196,870. REPRESENTATION OF A HARP AND SHAM-ROCK. Cl. 45. Thomas Moore. 3-31-25. New Cert. Sec. 7(c) to Coca-Cola Bottling Company of Minnesota, Incorporated, Minneapolis, Minn.

367,474. ESHCOL. Cl. 46. Sam Surabian. 5-16-39. New Cert. Sec. 7(c) to Sam Surabian & Sons, Dinuba, Calif.

501,171. BEVISOL. Cl. 6. The Wm. S. Merrell Company. 7-27-48. New Cert. Sec. 7(c) to Mead Johnson & Company, Evansville, Ind.

577,799. DRISODA AND DESIGN. Cl. 45. Thomas J. Moore, doing business as Thomas Moore & Co. 7-21-53. New Cert. Sec. 7(c) to Coca-Cola Bottling Company of Minnesota, Incorporated, Minneapolis, Minn.

640,101. TOM MOORE AND DESIGN. Cl. 45. Thomas Moore, doing business as Thomas Moore & Co. 1-15-57. New Cert. Sec. 7(c) to Coca-Cola Bottling Company of Minnesota, Incorporated, Minneapolis, Minn.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1—Raw or Partly Prepared Materials

75,582. Oct. 19, 1909. Pfister & Vogel Leather Company, Milwaukee, Wis. Pub. by Pfister & Vogel Tanning Company, Milwaukee, Wis.

LOTUS

For All Kinds of Leather.

Class 4—Abrasives and Polishing Materials

142,947. May 24, 1921. Brillo Manufacturing Company, Inc., Brooklyn, N.Y. Pub. by registrant.



For Cleaning, Scouring, and Polishing Wads, Pads, Rolls, and Cloths of Abradant Nature for Removing Foreign Matter From Metal and Other Surfaces.

Class 6—Chemicals and Chemical Compositions

429,388. Apr. 29, 1947. J. W. Spencer, d.b.a. Consolidated Drug Company, successor to Consolidated Drug Corporation, New Orleans, La. Pub. by The Diversey Corporation, Chicago, Ill.

DEOSAN

For Chemical Preparation for Use as a Disinfectant, Deodorant, and Antiseptic Cleaner.

Class 15—Oils and Greases

390,092. Sept. 9, 1941. Tiona Petroleum Company, Pennsauken, N.J. Pub. by registrant.



For Lubricating Oils.

Class 17—Tobacco Products

190,947. Oct. 28, 1924. Societe Anonyme Ed. Laurens—"Le Khedive"-Extension Belge, Brussels, Belgium. Pub. by registrant.

PRINCE DE MONACO

For Cigarettes.

SEPTEMBER 5, 1961

U. S. PATENT OFFICE

TM 39

387,890. June 3, 1941. The Axton-Fisher Tobacco Company, Louisville, Ky. Pub. by Philip Morris Incorporated, New York, N.Y.

DOUBLETS

For Cigarettes.

Class 18—Medicines and Pharmaceutical Preparations

396,098. July 28, 1961. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

DIGIFORTIS

For Preparations Containing Cardiovascular Constituents of Digitalis for Use in Treatment of Cardiovascular Disturbances.

419,770. Mar. 5, 1946. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

VENTREX

For Anti-Anemic Preparation.

427,426. Feb. 11, 1947. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

UNIBASE

For Universal Ointment Base, a Medium for Carrying Medication in Ointment Form.

438,844. May 11, 1948. Oscar Nonnenmann, San Francisco, Calif. Pub. by registrant.

Vita-San

For Medicinal Preparation in Powder Form Utilized as a Tonic and for the Treatment of Internal and External Ailments of Animal, Fish and Plant Life.

439,296. June 15, 1948. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

MENAGEN

For Estrogenic Preparation.

Class 21—Electrical Apparatus, Machines, and Supplies

443,429. Oct. 11, 1949. The Lionel Corporation, New York, N.Y. Pub. by registrant.



For Molded Plastic Electrical Housings or Parts—Namely, Cases for Electrical Fence Controllers, Cases for Telephone Loading Coils and Bases for Telephone Keys.

Class 22—Games, Toys, and Sporting Goods

313,358. May 22, 1964. The Lionel Corporation, New York, N.Y. Pub. by registrant.

LIONEL

For Toys—Namely, Trains, Boats, Ranges, Figures, Animals, and Engineering Building Elements.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

137,416. Nov. 23, 1920. Westbrook Elevator Mfg. Co., Danville, Va. Pub. by registrant.

Westbrook ELEVATORS

For Freight and Passenger Elevators.

Class 28—Jewelry and Precious-Metal Ware

441,019. Oct. 19, 1948. Aktiebolaget Gustaf Erikssons Metallfabrik, Eskilstuna, Sweden. Pub. by Aktiebolaget Gense, Eskilstuna, Sweden.

GENSE

For Silver Plated Tableware, Flatware, and Hollowware—Namely, Coffee Services; Tea Services; Dinner Services, Egg Cups, Casters, Cups, Trays, Food Warmers; Omelette Dishes, Plates, Strainers, Sugar Tongs; Ladles, Bread Baskets, Pudding Forms, Carving Knives, Carving Forks, Table Knives, Table Forks and Table Spoons of All Kinds.

Class 32—Furniture and Upholstery

142,608. May 17, 1921. Marsh Furniture Company, High Point, N.C. Pub. by registrant.



For Kitchen Cabinets.

389,519. Aug. 5, 1941. Sears, Roebuck and Co., Chicago, Ill. Pub. by registrant.

SLUMBERSOUND

For Mattresses.

Class 37—Paper and Stationery

390,015. Sept. 2, 1941. Nekoosa-Edwards Paper Company, Port Edwards, Wis. Pub. by registrant.

**KING
SNOW**

For Wrapping Paper.

Class 38—Prints and Publications

144,070. June 21, 1921. The Thoroughbred Record Company, Inc., Lexington, Ky. Pub. by registrant.

THOROUGHbred

For Weekly Periodical.

145,196. July 26, 1921. Bernhard Ulmann Co., Inc., New York, N.Y. Pub. by Hooaac Mills Corporation, New York, N.Y.

BEAR

For Lesson-Books and Patterns for Art-Needlework; Also Instructions and Lessons on Art-Needlework Issued in Form of Books, Sheets or Leaflets Published From Time to Time.

390,579. Sept. 30, 1941. The Hopp Press, Incorporated, New York, N.Y. Pub. by registrant.

MASTR

For Laminated Printed Sheets, and Printed Matter as Follows: Cards Having Highly Finished Surfaces, Sectional Price Markers, and Price Tickets.

Class 39—Clothing

223,962. Feb. 15, 1927. Interwoven Stocking Company, New Brunswick, N.J. Pub. by registrant.



For Hosiery.

381,682. Oct. 1, 1940. International Latex Corporation, Dover, Del. Pub. by registrant.

Playtex

For Girdles.

389,535. July 1, 1941. Levinsohn Bros. & Co., Inc., New York, N.Y. Pub. by registrant.

10-Way

For Men's Suits and Boys' Suits.

389,217. July 29, 1941. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.

**STETSON
DOWN-A-ROUND**

For Hats and Caps for Men, Women, and Children.

389,277. July 29, 1941. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.

KAMA-LUX

For Men's Felt Hats.

389,759. Aug. 19, 1941. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.

STETSON TRIANGLE

For Hats and Caps for Men, Women, and Children.

434,270. Nov. 18, 1947. Supak & Sons, Minneapolis, Minn. Pub. by Supak & Sons Manufacturing Company, Elizabeth City, N.C.

*Weather
Winky*

For Snow Suits and Mackinaws, and Adults' and Children's Ski Pants.

444,041. June 20, 1950. Supak & Sons, Minneapolis, Minn. Pub. by Supak & Sons Manufacturing Company, Elizabeth City, N.C.

*Weather
Winky*

For Snow Suits and Children's and Adults' Ski Suits, Ski Pants, and Mackinaws.

Class 44—Dental, Medical, and Surgical Appliances

242,369. May 22, 1928. The Bay Company, Bridgeport, Conn. Pub. by Parke, Davis & Company, Detroit, Mich.

BAYHESIVE

For Adhesive Plaster.

383,160. Nov. 26, 1940. Mon Docteur Importing Co., Inc., Middlefield, Conn. Pub. by Dainty Maid, Inc., Middlefield, Conn.

DAINTETTE

For Sanitary Sets for Feminine Hygiene Containing Antiseptic Powder, Suppositories, Vaginal Jelly, and a Catamenial Appliance in the Nature of a Soft Rubber Cup.

Class 45—Soft Drinks and Carbonated Waters

142,279. May 10, 1921. H. B. Hunter Co., Inc., Norfolk, Va. Pub. by registrant.



For Syrups To Be Used in Making Non-Alcoholic, Maltless Soda Fountain Beverages.

Class 46—Foods and Ingredients of Foods

389,704. Aug. 10, 1941. The Kansas Milling Company, Wichita, Kans. Pub. by registrant.

**SPARK
LIFE**

For Wheat Flour.

390,591. Sept. 30, 1941. Ruby Farris Sullivan, d.b.a. Mrs. Sullivan's Pie Shop, Jackson, Tenn. Pub. by registrant.

Mrs. Sullivan's
SOUTHWESTERN

For the purposes of this registration, applicant disclaims the words "Mrs. Sullivan's" apart from the other features of the mark.
For Pies.

Class 51—Cosmetics and Toilet Preparations

292,286. Mar. 8, 1932. National Toilet Company, Paris, Tenn. Pub. by The Chattanooga Medicine Company, Chattanooga, Tenn.

Nadinola

For Liquid Cleanser, Face Powder, Cleansing Cream, Nourishing Cream, and Vanishing Cream.

383,960. Dec. 24, 1940. J. B. Knight, Sr., d.b.a. Old 97 Manufacturing Company, Tampa, Fla. Pub. by Old 97 Company, Tampa, Fla.



For Sachets and Perfumes.

390,142. Sept. 9, 1941. Max Factor & Co., Los Angeles, Calif. Pub. by registrant.



For Cosmetic in the Nature of a Solidified Cream Used for a Make-Up Base.

390,143. Sept. 9, 1941. Max Factor & Co., Los Angeles, Calif. Pub. by registrant.



For Cosmetic in the Nature of a Solidified Cream Used for a Make-Up Base.

442,555. Apr. 26, 1949. John N. McMath Company, d.b.a. Lloyd-Sargent Co., Larchmont, N.Y. Pub. by registrant.

PUNCH AND JUDY

For Shampoo, Dusting Powder, Bubble Bath, Cologne, Talcum Powder, Hair Pomade, Brilliantine and Hair Tonic.

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Gleason Works, The, Rochester, N.Y. 391,707, ren. 9-5-61. Cl. 23.
Gleason Works, The, Rochester, N.Y. 392,544, ren. 9-5-61. Cl. 23.
Glenhaven Ltd., Baltimore, Md. 609,140, can. Cl. 39.
Globe Newspaper Co., Boston, Mass. 721,044, pub. 6-20-61. Cl. 38.
Globe Tailoring Co., The: See—
Kahn Tailoring Co.
Gold Bond Stamp Co., Minneapolis, Minn. 684,556, cor. Cl. 101.
Goldberg, David N., Chicago, Ill., to The Grapette Co., Inc., Camden, Ark. 145,370, ren. 9-5-61. Cl. 45.
Goldberg, S., & Co. Inc., Hackensack, N.J. 389,747, ren. 9-5-61. Cl. 39.
Golden Gate Stores, Inc., d.b.a. Hilton Distributing Co., San Francisco, Calif. 721,162. Cl. 49.
Goldfarb, Samuel J., to The House of Perfection, Inc., New York, N.Y. 388,786, ren. 9-5-61. Cl. 39.
Goldman, Mortimer D., New York, N.Y. 609,181-2, can. Cl. 39.
Gordon, Pauline, Inc.: See—
Fairly Mills, Inc.
Gorham Mfg. Co., Providence, R.I. 720,946, pub. 6-20-61. Cl. 23.
Goya Ltd., London, England. 721,120, pub. 6-20-61. Cl. 51.
Grand Sheet Metal Products Co., Melrose Park, Ill. 609,074, can. Cl. 25.
Grapette Co., Inc.: See—
Goldberg, David N.
Greenfield Tap and Die Corp., Greenfield, Mass., to United-Greenfield Corp., Chicago, Ill. 149,084, ren. 9-5-61. Cl. 23.
Greenfield Tap and Die Corp., Greenfield, Mass., to United-Greenfield Corp., Chicago, Ill. 149,933, ren. 9-5-61. Cl. 23.
Grenache Inc., Quebec, Canada. 609,333, can. Cl. 46.
Guatin-Bacon Mfg. Co., Kansas City, Mo. 720,859, pub. 6-20-61. Cl. 12.
Hammel, Riglander & Co., Inc., New York, N.Y. 720,938, pub. 6-20-61. Cl. 23.
Hardy Salt Co., St. Louis, Mo. 720,836, pub. 6-20-61. Cl. 6.
Hearst Corp., The, New York, N.Y. 721,043, pub. 6-20-61. Cl. 38.
Hecht, Edward A., d.b.a. Hecht-Turner Manufacturers, Noblesville, Ind. 609,106, can. Cl. 32.
Hecht-Turner Manufacturers: See—
Hecht, Edward A.
Hedberg, Donald D., d.b.a. The Dyna-Slide Co., Chicago, Ill. 721,023, pub. 6-20-61. Cl. 37.
Hermes Machine Tool Co., Inc., Long Island City, N.Y. 720,929, pub. 6-20-61. Cl. 23.
Heyden Newport Chemical Corp., New York, N.Y. 720,839, pub. 6-20-61. Cl. 6.
Hilton Credit Corp., Los Angeles, Calif. 721,049, pub. 6-20-61. Cl. 38.
Hilton Distributing Co.: See—
Golden Gate Stores, Inc.
Hi-Valley Orchards, Tehachapi, Calif. 721,108, pub. 6-20-61. Cl. 46.
Hockmeyer Bros., Inc., New York, N.Y. 721,082, pub. 6-20-61. Cl. 42.
Hoffman, Edward A., Boise, Idaho. 720,900, pub. 6-20-61. Cl. 21.
Hoffman Electronics Corp., Los Angeles, Calif. 720,897, pub. 6-6-61. Cl. 21.
Holt, Douglas (Estd. 1919) Ltd., London, England. 608,966, can. Cl. 15.
Hooker Chemical Corp., Niagara Falls, N.Y. 720,835, pub. 6-20-61. Cl. 6.
Hoosac Mills Corp.: See—
Ulmann, Bernhard Co., Inc.
Hopp Press, Inc., The, New York, N.Y. 390,579, 12(c) pub. 9-5-61. Cl. 38.
House of Carras, Ltd., New York, N.Y. 609,009, can. Cl. 15.
House of Perfection, Inc.: See—
Goldfarb, Samuel J.
Houston Post Co., The, Houston, Tex. 721,038, pub. 6-20-61. Cl. 38.
Hudnut, Richard, New York, N.Y. 609,284, can. Cl. 51.
Hugo Herzberg Co., St. Louis, Mo. 720,982, pub. 1-10-61. Cl. 28.
Humble Oil & Refining Co.: See—
Perfect Power Corp.
Hunter, H. B., Co., Inc., Norfolk, Va. 142,279, 12(c) pub. 9-5-61. Cl. 45.
Houston, Leland B., d.b.a. Romco, Loveland, Colo. 720,984, pub. 6-20-61. Cl. 30.
Huttig Sash & Door Co., St. Louis, Mo. 608,982, can. Cl. 12.
Illinois Canning Co., The, Hoopeston, Ill. 721,101, pub. 6-20-61. Cl. 46.
Imperial International Corp., New York, N.Y. 720,928, pub. 6-20-61. Cl. 23.
Industrial Chemicals, Inc., South Bend, Ind. 720,831, pub. 4-4-61. Cl. 6.
Industrial Combustion Inc., Milwaukee, Wis. 721,008, pub. 7-28-59. Cl. 34.
Industrial Education Institute, Boston, Mass. 721,149, pub. 6-20-61. Cl. 107.
Ingram Oil and Refining Co., New Orleans, La. 718,825, cor. Cl. 15.
International Harvester Co., Chicago, Ill. 720,940, pub. 4-18-61. Cl. 23.
International Latex Corp., Dover, Del. 381,682, 12(c) pub. 9-5-61. Cl. 39.
International Register Co., Chicago, Ill. 609,319, can. Cl. 26.
International Registered Identity System: See—
Evander, Bruce M.
International Shoe Co., to International Shoe Co., St. Louis, Mo. 148,869, ren. 9-5-61. Cl. 39.
Interstate Bakeries Corp., Kansas City, Mo. 721,100, pub. 6-20-61. Cl. 46.
Interwoven Stocking Co., New Brunswick, N.J. 223,962, 12(c) pub. 9-5-61. Cl. 39.
Interwoven Stocking Co., New Brunswick, N.J. 392,225, ren. 9-5-61. Cl. 39.
Iowa Construction Equipment Corp., Cedar Falls, Iowa. 720,932, pub. 6-20-61. Cl. 23.
Jabsco Pump Co., Costa Mesa, Calif. 720,944, pub. 6-20-61. Cl. 23.
Jackson, W. L., Mfg. Co., Inc., Chattanooga, Tenn. 720,913, pub. 6-13-61. Classes 21 and 34. (Consolidated certificate, Classes 21 and 34.)
Jalo-Lube Co., Hollywood, Fla. 609,002, can. Cl. 15.
Jazz At The Philharmonic, Inc., to Vorgaan Sales Corp., New York, N.Y. 609,113, can. Cl. 36.
Jelenko, J. F., & Co. Inc., New York, N.Y. 388,792, ren. 9-5-61. Cl. 44.
Jerman, Daniel L., Teaneck, N.J. 720,863, pub. 6-20-61. Cl. 13.
Jerrold Electronics Corp., Philadelphia, Pa. 720,905, pub. 6-20-61. Cl. 21.
Johnson, Endicott, Corp., Endicott, N.Y. 721,063, pub. 6-20-61. Cl. 39.
Johnson, Mead, & Co.: See—
Merrell, Wm. S., Co., The.
Johnson, Plummer & Associates, Sacramento, Calif. 721,138, pub. 6-20-61. Cl. 101.
Kahn Tailoring Co., Indianapolis, Ind., to The Globe Tailoring Co., Cincinnati, Ohio. 149,129, ren. 9-5-61. Cl. 39.
Kansas Milling Co., The, Wichita, Kans. 389,704, 12(c) pub. 9-5-61. Cl. 46.
Kaplan Furniture Co., Boston, Mass. 389,679, ren. 9-5-61. Cl. 32.
Kasper, Sylvan A., Billings, Mont. 720,955, pub. 6-20-61. Cl. 26.
Kayser-Roth Corp., New York, N.Y. 721,056, pub. 6-20-61. Cl. 39.
Kelly, William, Milling Co., The, Hutchinson, Kans. 721,096, pub. 6-20-61. Cl. 46.
Kenmar Mfg. Co., The, East Palestine, Ohio. 721,006, pub. 6-20-61. Cl. 32.
Kesterman Bros. Mfg. Co., Providence, R.I. 720,980, pub. 6-20-61. Cl. 28.
Kiehart Corp., New York, N.Y. 720,899, pub. 6-20-61. Cl. 21.
Kiekhafer Corp., Cedarburg, Wis. 609,004, can. Cl. 15.
Knight, J. B., Sr., d.b.a. Old 97 Mfg. Co., by Old 97 Co., Tampa, Fla. 383,860, 12(c) pub. 9-5-61. Cl. 51.
Koket, Anne, Brooklyn, N.Y. 609,161, can. Cl. 38.
Korn, M., Packaging Co., Inc., New York, N.Y. 720,815, pub. 6-20-61. Cl. 2.
Kroger Co., The: See—
Kroger Grocery & Baking Co., The.
Kroger Grocery & Baking Co., The, to The Kroger Co., Cincinnati, Ohio. 392,167, ren. 9-5-61. Cl. 46.
Kron-Kirk Mfg. Co., Columbia, S.C. 609,111, can. Cl. 34.
Lan-Cor Corp., Salt Lake City, Utah. 721,045, pub. 6-20-61. Cl. 38.
La Parfumerie Plassard, Boulogne-Billancourt, France. 721,122, pub. 6-20-61. Cl. 51.
Larima Imports Ltd., New York, N.Y. 721,058, pub. 6-20-61. Cl. 39.
Larus & Bro. Co., Richmond, Va. 609,029, can. Cl. 17.
La Vista Vintners: See—
Di Giorgio Fruit Corp.
Leading Jewelry Mfg. Co., Mamaroneck, N.Y. 609,093-4, can. Cl. 28.
Levinsohn Bros. & Co., Inc., New York, N.Y. 388,535, 12(c) pub. 9-5-61. Cl. 39.
Lilly, Eli, and Co., Indianapolis, Ind. 720,890, pub. 6-20-61. Cl. 18.
Lilly, Leonard M., d.b.a. Duo-Plan Co., St. Paul, Minn. 609,298, can. Cl. 101.
Lionel Corp., The, New York, N.Y. 313,353, 12(c) pub. 9-5-61. Cl. 22.
Lionel Corp., The, New York, N.Y. 443,429, 12(c) pub. 9-5-61. Cl. 21.
Little Craft Inc., New York, N.Y. 609,172, can. Cl. 39.
Lloyd-Sargent Co.: See—
McMath, John N., Co.
Louvier, Alexander S., d.b.a. S. Louvier & Co., Port Arthur, Tex. 720,883, pub. 6-20-61. Cl. 18.
Louvier, S., & Co.: See—
Louvier, Alexander S.
Loxit Systems, Inc., Chicago, Ill. 608,954, can. Cl. 12.
Lucky Me Compounding Corp., Huntsville, Ark. 609,044, can. Cl. 18.
Lundbeck, H., & Co., A/S, Copenhagen, Denmark. 720,879, pub. 6-20-61. Cl. 16.
Lyon Inc., Detroit, Mich. 720,866, pub. 6-20-61. Cl. 13.
MacCormack, Robert, Scotch Plains, N.J. 609,028, can. Cl. 17.
Macy, R. H., & Co., Inc., New York, N.Y. 390,223, ren. 9-5-61. Cl. 51.
Magic Chef, Inc., by change of name from Dixie Products, Inc., Cleveland, Tenn. 720,904, pub. 5-16-61. Cl. 21.
Magnetic Cards of California, Inc., Santa Monica, Calif. 720,119-23, pub. 6-20-61. Cl. 22.

Manhattan Shirt Co., The: See—
Reis, Robert, & Co.
March & Mendi, Inc., New York, N.Y. 721,061, pub. 6-20-61. Cl. 39.
March & Mendi, Inc., New York, N.Y. 721,065, pub. 6-20-61. Cl. 39.
Marine By-Products Co.: See—
Wilbur-Elia Co.
Marion Laboratories, Inc., Kansas City, Mo. 721,153, Cl. 18.
Market Research Corp. of America, Chicago, Ill. 609,343, can. Cl. 101.
Marsh Furniture Co., High Point, N.C. 142,608, 12(c) pub. 9-5-61. Cl. 32.
Marvella Inc., New York, N.Y. 720,983, pub. 6-20-61. Cl. 28.
Maskinaktiebolaget Karlebo, Stockholm, Sweden. 609,058, can. Cl. 23.
Masury Young Co., Boston, Mass. 720,833, pub. 6-20-61. Cl. 6.
Mausser, Kommandit-Gesellschaft, Köln-Ehrenfeld, Germany. 720,806, pub. 6-20-61. Cl. 2.
Mausser, Kommandit-Gesellschaft, Köln-Ehrenfeld, Germany. 720,957, pub. 6-20-61. Cl. 26.
Mausser, Kommandit-Gesellschaft, Köln-Ehrenfeld, Germany. 721,002, pub. 6-20-61. Cl. 32.
Mausser, Kommandit-Gesellschaft, Köln-Ehrenfeld, Germany. 721,086, pub. 6-20-61. Cl. 44.
Mayest, Inc., New York, N.Y. 721,051, pub. 6-20-61. Cl. 39.
May Knitting Co., Inc., New York, N.Y. 147,357, ren. 9-5-61. Cl. 39.
McDonald, J. M., Co., Hastings, Nebr. 721,080, pub. 6-20-61. Cl. 42.
McKesson & Robbins, Inc., New York, N.Y. 392,427-8, ren. 9-5-61. Cl. 18.
McMath, John N., Co., d.b.a. Lloyd-Sargent Co., Larchmont, N.Y. 442,555, 12(c) pub. 9-5-61. Cl. 51.
McPherson, Carl W., Phoenix, Ariz. 720,817, pub. 6-20-61. Cl. 2.
Merck & Co., Inc., Rahway, N.J. 720,846, pub. 6-20-61. Cl. 6.
Merck & Co., Inc., Rahway, N.J. 720,882, pub. 6-20-61. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 720,889, pub. 6-20-61. Cl. 18.
Merrill, Wm. S., Co., The, to Mead Johnson & Co., Evansville, Ind. 501,171, new cert. Cl. 6.
Merrick Medicine Co., Waco, Tex. 720,873, pub. 6-20-61. Cl. 18.
Metal Cladding, Inc., North Tonawanda, N.Y. 720,910, pub. 6-20-61. Cl. 2.
Metal Lux, Milan, Italy. 609,083, can. Cl. 26.
Metals Disintegrating Co., Inc., Union, N.J., to American-Marietta Co., Chicago, Ill. 388,934-5, ren. 9-5-61. Cl. 16.
Micro Controls, Inc., Mansfield, Ohio. 720,951, pub. 9-5-59. Cl. 26.
Mil-Hi Laboratories, Inc., d.b.a. Minit Dri, New York, N.Y. 609,279, can. Cl. 51.
Miller Elevator Industries, Inc., New York, N.Y. 720,945, pub. 6-20-61. Cl. 23.
Miller-Wrapping & Sealing Machine Co., Chicago, Ill. 720,939, pub. 6-20-61. Cl. 23.
Milloy, Clare R., d.b.a. Clare Rumball, Erie, Pa. 609,265, can. Cl. 51.
Milner Enterprises, Inc., Jackson, Miss. 721,042, pub. 6-20-61. Cl. 38.
Minette Pharmaceutical Corp., Cheektowaga, N.Y. 720,876, pub. 6-20-61. Cl. 18.
Minit Dri: See—
Mil-Hi Laboratories, Inc.
Mitchell Mfg. Co., Chicago, Ill., to Elco Electronics, Inc., Michigan City, Ind. 379,918, ren. 9-5-61. Cl. 21.
Modern Manner, Inc., Hanover, Pa. 609,167, can. Cl. 39.
Modern Structures Co., Inc., Washington, D.C. 609,024, can. Cl. 16.
Mohas Commercial Corp., San Francisco, Calif. 720,864, pub. 6-20-61. Cl. 13.
Mon Docteur Importing Co., Inc., by Dainty Maid, Inc., Middlefield, Conn. 383,160, 12(c) pub. 9-5-61. Cl. 44.
Monanto Chemical Co., St. Louis, Mo. 720,849, pub. 6-20-61. Cl. 6.
Moore Fabrics, Inc.: See—
Moore Fabrics
Moore Fabrics, to Moore Fabrics, Inc., Pawtucket, R.I. 609,192, can. Cl. 42.
Moore, Thomas, to Coca-Cola Bottling Co. of Minnesota, Inc., Minneapolis, Minn. 198,870, new cert. Cl. 45.
Moore, Thomas, & Co.: See—
Moore, Thomas J.
Moore, Thomas J., d.b.a. Thomas Moore & Co., to Coca-Cola Bottling Co. of Minnesota, Inc., Minneapolis, Minn. 577,799, new cert. Cl. 45.
Moore, Thomas, d.b.a. Thomas Moore & Co., to Coca-Cola Bottling Co. of Minnesota, Inc., Minneapolis, Minn. 640,101, new cert. Cl. 45.
Moore's Wholesale Builders Supply of Richmond, Inc., Richmond, Va. 721,140, pub. 6-20-61. Cl. 101.
Morris, Philip, Inc.: See—
Axton-Fisher Tobacco Co., The
Mt. Vernon Milling Co.: See—
Short, J. R., Milling Co.
Mrs. Sullivan's Pie Shop: See—
Sullivan, Ruby F.
Multi Electric Mfg. Inc., Chicago, Ill. 720,908, pub. 6-20-61. Cl. 21.
Murphy Door Bed Co., Inc., New York, N.Y. 609,322, can. Cl. 32.
Mutascio, Joseph, d.b.a. Prosperity California Wines, to Prosperity California Wines, Inc., New York, N.Y. 388,003, ren. 9-5-61. Cl. 47.
Mutascio, Joseph, d.b.a. Prosperity California Wines, to Prosperity California Wines, Inc., New York, N.Y. 388,019, ren. 9-5-61. Cl. 47.
Myo-Plastex Appliance Co.: See—
Regent, Doreen W.
National Dairy Products Corp., Chicago, Ill. 721,103, pub. 6-20-61. Cl. 46.
National Lead Co., New York, N.Y. 721,150, Cl. 1.
National Toilet Co., by The Chattanooga Medicine Co., Chattanooga, Tenn. 292,286, 12(c) pub. 9-5-61. Cl. 51.
Nekoosa-Edwards Paper Co., Port Edwards, Wis. 390,015, 12(c) pub. 9-5-61. Cl. 37.
Nekris, Murray H., New York, N.Y. 609,312, can. Cl. 19.
Nelson, James, Ltd., Nelson, England. 721,074, pub. 6-20-61. Cl. 39.
Netherland Furniture Factories, Ltd., The, New York, N.Y. 720,987, pub. 6-20-61. Cl. 32.
Newberry, J. J., Co., New York, N.Y. 609,165, can. Cl. 39.
Newberry, J. J., Co., New York, N.Y. 720,902, pub. 6-20-61. Cl. 21.
News Syndicate Co., Inc., New York, N.Y. 609,130, can. Cl. 38.
New York Herald Tribune Inc., New York, N.Y. 609,125, can. Cl. 38.
Nicholas International Ltd., Toronto, Ontario, Canada. 720,874, pub. 12-20-60. Cl. 18.
Nina Ricci S.A.R.L., Paris, France. 721,059, pub. 6-20-61. Cl. 39.
Nonnenmann, Oscar, San Francisco, Calif. 438,844, 12(c) pub. 9-5-61. Cl. 18.
Normandin Bros. Co., Los Angeles, Calif. 609,188, can. Cl. 39.
Northern States Poultry Service and Laboratories, Inc., Laverne, Minn. 720,881, pub. 6-20-61. Cl. 18.
Norton Co., Worcester, Mass. 720,823, pub. 6-20-61. Cl. 4.
Nu-Lam Wood Products, Inc., Camas, Wash. 720,858, pub. 6-20-61. Cl. 12.
Ogilvie Sisters Laboratories, Inc., New York, N.Y. 609,276, can. Cl. 51.
Ohio Casualty Insurance Co., The, Hamilton, Ohio. 721,145, pub. 6-20-61. Cl. 102.
Oil Center Sales, LaFayette, La. 720,844, pub. 6-20-61. Cl. 6.
O'Keefe Brewing Co., Ltd., Toronto, Ontario, Canada. 721,114, pub. 6-20-61. Cl. 48.
Old Colony Knitting Mills, Inc., Newton Centre, Mass. 609,173, can. Cl. 39.
Old Empire, Inc., d.b.a. Taj Mahal, Newark, N.J. 721,131, pub. 6-20-61. Cl. 51.
Old 97 Co.: See—
Knight, J. B., Sr.
Old 97 Mfg. Co.: See—
Knight, J. B., Sr.
Opelka Mfg. Corp., Chicago, Ill. 609,203, can. Cl. 44.
Oregon Worsted Co., Portland, Ore. 609,198, can. Cl. 42.
Organon Inc., Orange, N.J. 609,040, can. Cl. 18.
Ovaltine Food Products: See—
Wander Co., The
Overseas Dairies, Inc., West Chester, Pa. 720,941, pub. 6-20-61. Cl. 23.
Oxford Filing Supply Co., Inc., Garden City, N.Y. 721,003, pub. 6-20-61. Cl. 32.
P-G Products Mfg. Co., Inc., New York, N.Y. 720,861, pub. 6-20-61. Cl. 13.
PMA Corp., Pittsburgh, Pa. 721,036, pub. 6-20-61. Cl. 38.
Packaging Frontiers, Inc., Boston, Mass., by assignment and change of name from W. S. Schneider, d.b.a. The William Steven Co., Los Angeles, Calif. 720,804, pub. 10-6-59. Cl. 2.
Paillard Inc., New York, N.Y. 720,959-60, pub. 6-20-61. Cl. 26.
Palos Verdes Bird Farm, Inc., Waleria, Calif. 720,880, pub. 6-20-61. Cl. 18.
Pantry Master Products Co., Inc., New York, N.Y. 721,112, pub. 6-20-61. Cl. 47.
Paquin Ltd., London, England. 609,283, can. Cl. 51.
Para Mfg. Co., Inc., Newark, N.J. 609,194, can. Cl. 42.
Parke, Davis & Co.: See—
Bay Co., The
Parke, Davis & Co., Detroit, Mich. 323,986, can. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 388,107, ren. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 389,446, ren. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 389,464, ren. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 396,698, 12(c) pub. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 419,770, 12(c) pub. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 427,426, 12(c) pub. 9-5-61. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 439,296, 12(c) pub. 9-5-61. Cl. 18.
Parker & Son, Inc., Los Angeles, Calif. 717,334, cor. Cl. 37.
Patrician Paper Co., Inc., New York, N.Y. 721,026, pub. 6-20-61. Cl. 37.
Pen Corporation of America, New York, N.Y. 721,020, pub. 6-20-61. Cl. 37.
Penn Controls, Inc., Goshen, Ind. 720,915, pub. 6-20-61. Cl. 21.
Perfect Power Corp., Humble Oil & Refining Co., New York, N.Y. 615,084, Am. 7(d). Cl. 15.
Personal Products Corp., Milltown, N.J. 721,089, pub. 6-20-61. Cl. 44.
Petaluma Cooperative Creamery, Petaluma, Calif. 721,104, pub. 5-2-61. Cl. 46.

Petrolite Corp., St. Louis, Mo. 720,832, pub. 6-20-61. Cl. 6.
Peter Pan Foundations, Inc., New York, N.Y. 609,180, can. Cl. 39.
Pfister & Vogel Leather Co., by Pfister & Vogel Tanning Co., Milwaukee, Wis. 75,582, 12(c) pub. 9-5-61. Cl. 1.
Pfister & Vogel Tanning Co.: See—
Pfister & Vogel Leather Co.
Phillips-Brooks Atlanta Co.: See—
Phillips & Brooks, Inc.
Phillips & Brooks, Inc., from Phillips-Brooks Atlanta Co., Atlanta, Ga. 720,986, pub. 7-7-59. Cl. 82.
Phoenix Candy Co., Inc., Brooklyn, N.Y. 721,109-10, pub. 6-20-61. Cl. 46.
Pierre, Daniel F., Beverly, Mass. 721,158, Cl. 38.
Pilot Life Insurance Co., Greensboro, N.C. 721,144, pub. 6-20-61. Cl. 102.
Pink Domino Co., St. Paul, Minn. 609,263, can. Cl. 51.
Pittsburgh Plate Glass Co.: See—
United States Glass Percha Paint Co.
Porter Chemical Co., The, Hagerstown, Md. 720,974, pub. 6-20-61. Cl. 26.
Poirrette Corsets, Inc., New York, N.Y. 326,111, can. Cl. 39.
Pokotilow, Joseph, d.b.a. Bergen Auto Upholstery Co., Rutherford, N.J. 720,895, pub. 6-20-61. Cl. 19.
Polaris Engineering Corp., Chicago, Ill. 720,909, pub. 6-20-61. Cl. 21.
Polychrome Corp., Yonkers, N.Y. 720,830, pub. 6-20-61. Cl. 6.
Poppers Supply Co.: See—
William, Herman
Powertron Ultrasonics Corp., Garden City, N.Y. 720,971, pub. 6-20-61. Cl. 26.
Precision-Made Products, Inc., Worcester, Mass. 608,958, can. Cl. 12.
Premo Pharmaceutical Laboratories, Inc., South Hackensack, N.J. 392,027, ren. 9-5-61. Cl. 18.
Prescott, J. L., Co., Passaic, N.J. 721,133, pub. 6-20-61. Cl. 52.
Pronto-Seal, Inc., Lynbrook, N.Y. 609,270, can. Cl. 51.
Prosperity California Wines: See—
Mutascio, Joseph
Prosperity California Wines, Inc.: See—
Mutascio, Joseph
Protection Equipment Co., Inc., Hopkins, Mass. 720,950, pub. 6-20-61. Cl. 25.
Purdue Frederick Co., The, New York, N.Y. 720,875, pub. 6-20-61. Cl. 18.
Qualitex, Inc., New York, N.Y. 721,160, Cl. 42.
Radiator Specialty Co., Charlotte, N.C. 721,134, pub. 6-20-61. Cl. 52.
Radio Engineering Laboratories, Inc., Long Island City, N.Y. 720,901, pub. 6-20-61. Cl. 21.
Raguerie de Corps Gras "Aiglon" Societe Anonyme, Auberville, France. 608,998, can. Cl. 15.
Ranhoff, Karin B., Smeestad, near Oslo, Norway. 609,314, can. Cl. 22.
Raygram Corp., Mt. Vernon, N.Y. 720,972, pub. 6-20-61. Cl. 26.
Reading Tube Corp., New York, N.Y. 608,987, can. Cl. 13.
Reed, Eldo L., Waterville, Minn. 608,930, can. Cl. 5.
Regency Crafts, Inc., New York, N.Y. 721,016, pub. 6-20-61. Cl. 37.
Regent, Doreen W., d.b.a. Myo-Plastex Appliance Co., Middleborough, England. 609,205, can. Cl. 44.
Reis, Robert, & Co., to The Manhattan Shirt Co., New York, N.Y. 150,073, ren. 9-5-61. Cl. 39.
Republic Fastner Products Corp., Saddle Brook, N.J. 721,152, Cl. 13.
Recon Electronics Corp., Waltham, Mass. 721,137, pub. 6-20-61. Cl. 100.
Research Reports, Inc., Indianapolis, Ind. 721,150, Cl. 38.
Reusser S.A., Orvin et Tradition Watch Co., Bevilard, Switzerland. 720,977, pub. 6-20-61. Cl. 27.
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Official Gazette

UNITED STATES PATENT OFFICE

Containing the Patents, Designs, & Trademarks Issued

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OFFICIAL GAZETTE + UNITED STATES PATENT OFFICE

September 12, 1961

Volume 770

Number 2

"The Patent System Added the Fuel of Interest to the Fire of Genius"—Lincoln

THE FIRE STILL BURNS!

This issue marks a milestone in the history of the United States. Published herein is an extract of the 3,000,000th patent. Impressive as this single figure is, what is more significant is the total number of patents.

This total—in the 125 years since the numbering system in use today was started—is a tremendous volume by any standard. Surely it points up the complementary influence of the United States Patent System on the technological, scientific and economic growth of the country. This is a record of achievement for the genius, industry and inventiveness of Americans from all walks of life.

These 3,000,000 patents, published and fully disclosed to the public, make up the greatest and most important treasure of applied technical knowledge in the world. Their influence on American creative and inventive genius is beyond calculation.

The certain conclusion to be drawn from this milestone is that the United States has come a long way from an agricultural economy to the greatest and most productive industrial nation in the world. The Patent System as a stimulus to invention, in disclosing invention and inducing investment, has been a vital ingredient in this growth.

It takes an impressive number, like 3,000,000, to remind us how far we have come and where we are headed. We are proud, in this issue of the OFFICIAL GAZETTE, to call this milestone to your attention.

DAVID L. LADD,
Commissioner of Patents.

PATENTS

NOTICES

Claims in Subparagraph Form

The presentation of claims divided into subparagraphs and indented according to structure, ingredients or process steps contained in the application is approved. An example of this form of claim is as follows:

"1. A device which is designed to receive fuel and air from suitable sources of supply and to transform said fuel and air into a mixture suitable for combustion, said device comprising in combination:

- (a) an air manifold,
- (b) a throttle valve located within said air manifold and mounted on an axis, each end of the throttle valve extending a substantial distance from said axis,
- (c) said air manifold being of substantially constant cross section in the throttle area,
- (d) said throttle valve having a mid portion of considerable thickness as compared with its end portions, whereby a venturi effect is created in said air manifold,
- (e) means to move said throttle so that its ends move beyond the center position in each direction through arcuate paths about an axis,
- (f) a fuel passageway leading to said air manifold,
- (g) said fuel passageway merging into an orifice as it enters the air manifold, and
- (h) the front portion of said throttle being adapted to move through a first arcuate path toward one side of said air manifold, and the rear portion on said throttle being adapted to move through a second arcuate path toward the other side of said air manifold, said orifice being located between planes drawn through the points where the extensions of said first and second arcuate paths would intersect the inner walls of said air manifold, said planes being normal to the axis of said air manifold."

No claim will be objected to solely because it is cast in this form.

Claims in allowed applications will be printed in subparagraph form if so presented by the applicant.

M. C. ROSA,

Aug. 3, 1961. Director, Patent Examining Operation.

Tabular Form of Claims

The Director of the Patent Examining Operation has advised the examining corps that "the presentation of claims divided into subparagraphs, ingredients, or process steps contained in the application is approved. * * * Accordingly, no claim should be objected to solely because it is cast in this form. Claims in allowed applications will be printed in subparagraph form if so presented by the applicant."

This order was promulgated because claims presented in

this form had on occasion been printed in the patent in the traditional continuous form. The order is consistent with the recommendations of a group of Primary Examiners filed last year with the Commissioner of Patents. These recommendations, which were published in the May 1961 issue of the Journal of the Patent Office Society (43 J.P.O.S. 317,319), read in part:

"In order to facilitate consideration of the claims it is recommended that applicant be strongly urged or required to present the claims in a form convenient for the Examiner to consider such as in an orderly sequence as well as an orderly internal arrangement. Within the claims, the clauses thereof shall be separated, in order that the Examiner may readily determine those individual factors which are essential to the claim."

The order is also consistent with Resolution 2(c) of the Patent Office Affairs (Patents) Committee adopted by the Section of Patent, Trademark and Copyright Law of the American Bar Association in St. Louis—viz.,

"2.(c) Resolved, That the Section recommends, at least in the case of lengthy or complex claims, more extensive use of the tabular form of claim wherein individual elements, steps or features are set forth by indentations or other clarifying format."

While it is somewhat more expensive to print patents containing claims in this recommended form, such expense seems to be more than offset by the advantages in facilitating examination.

The cooperation of all patent practitioners is asked in encouraging the presentation of claims in the "clarifying format."

DAVID L. LADD,

Commissioner.

Aug. 24, 1961.

CORRECTED NOTICE

Punched Cards for Organic Phosphorus Compounds

Sets of punched cards recording the Patent Office analysis of the subject matter of the U.S. Patents pertaining to organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,

Director of Administration.

Aug. 17, 1961.

New Applications Received During July 1961

Patents	7,064
Designs	369
Plant Patents	7
Reissues	30
Total	7,460

Issue

Patents	768—No. 2,999,241 to No. 3,000,006, incl.
Designs	50—No. 191,297 to No. 191,346, incl.
Plant Patents	3—No. 2,089 to No. 2,091, incl.
Reissues	3—No. 25,035 to No. 25,037, incl.
Total	824

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Licenses for Filing of Applications in Foreign Countries

The Patent Office continues to receive petitions for retroactive licenses to file applications in foreign countries. It therefore seems desirable to call attention to the fact that the filing of such applications is still governed by the provisions of 35 U.S.C. 184, which reads, as follows:

§ 1.84. Filing of application in foreign country.

Except when authorized by a license obtained from the Commissioner a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner pursuant to section 181 of this title without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been inadvertently filed abroad and the application does not disclose an invention within the scope of section 181 of this title.

The term "application" when used in this chapter includes applications and any modifications, amendments, or supplements thereto, or divisions thereof.

M. L. REYNOLDS,

First Assistant Commissioner.

Aug. 24, 1961.

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

Pending Application Index; Access to Applications

The following amended rule is adopted, to take effect on publication. The text of this rule was, except in one particular, published in the Federal Register for May 20, 1961 (26 F.R. 4404), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed rule. The amended rule is adopted after consideration of all the material submitted. The rule departs from the published text in the particular addition in the final sentence of paragraph (a), after the word "Commissioner," of the words "and the Trademark Trial and Appeal Board." The added reference to said board is merely informational in character, and notes the significance its decisions have shared with those of the Commissioner since its establishment in accordance with the provisions of Public Law 85-609, approved August 8, 1958, 72 Stat. 540.

Sec. 2.27 is amended to read as follows:

§ 2.27 Pending application index; access to applications.

(a) An index of pending applications including the name and address of the applicant, a reproduction or description of the mark, the goods or services with which the mark is used, the class number, the dates of use, and the serial number and filing date of the application will be available for public inspection as soon as practicable after filing. Access to the file of a particular pending trademark application will be permitted prior to publication under § 2.81 upon the showing in writing of good cause for such access. Decisions of the Commissioner and the Trademark Trial and Appeal Board in applications and proceedings relating thereto are published or available for inspection or publication.

(b) After a mark has been registered, or published for opposition, the file of the application and all proceedings

relating thereto are available for public inspection and copies of the papers may be furnished upon paying the fee therefor.

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6; sec. 41, 60 Stat. 427, 440, 15 U.S.C. 1123)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, JR.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7556; Filed, Aug. 9, 1961; 8:46 a.m.]

Published in 26 F.R. 7215-7216, Aug. 10, 1961

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form," and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235 Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said

division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47 Interference; notice of taking testimony.

v. Interference No. _____, 19____.

(Name of opposing attorney)

(Address of opposing attorney)

Str: You are hereby notified that on _____, 19____, at _____ o'clock in the forenoon at the office of _____ Street,

_____ I shall proceed to take testimony on behalf of the party _____ in the above identified interference.

The witnesses to be examined are:

(Name of witnesses) (Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on _____, 19____, I served a copy of the foregoing notice of taking testimony upon _____, the attorney for the party _____, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved: HICKMAN PRICE, JR.,
Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:48 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

Appellant's Brief

The following amendment is made, to take effect on publication in the FEDERAL REGISTER. Notice and public procedure, and deferment of the time of taking effect, are deemed unnecessary in view of the nature of the amendment, which is procedural only.

The purpose of this change is to expedite the handling of requests for extensions of time for filing appeal briefs by providing that short extensions may be handled by the Board of Appeals, instead of by the Commissioner. Any extension to a date more than sixty days from the original expiration date must still be sought from the Commissioner, by request brought prior to the expiration of the time sought to be extended. Failure to file either the brief or an appropriate request for extension within the allotted time results in the appeal standing dismissed (37 CFR 1.192(b)) with the consequent abandonment of the application if no claim stands allowed (37 CFR 1.197(c)).

Paragraph (a) is amended by adding the following sentences at the end thereof:

§ 1.192 Appellant's brief.

(a) * * * The Board of Appeals may, for sufficient cause shown, extend the time for filing the brief to a date not later than sixty days after the original expiration date. Any longer or further extension must be sought from the Com-

missioner. All requests for extensions must be filed prior to the expiration of the period sought to be extended.

(Sec. 1, 66 Stat. 793; 35 U.S.C. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 134)

Dated: July 28, 1961.

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, JR.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7328; Filed, Aug. 2, 1961; 8:49 a.m.]

Published in 26 F.R. 6983, Aug. 3, 1961.

Disclaimers

Des. No. 188,189.—Herman H. Renneker, Palm Springs, Calif. TELEPHONE HANDSET SUPPORTING DEVICE. Patent dated June 14, 1960. Disclaimer filed Aug. 14, 1961, by the assignee, H. H. Renneker Co., Inc.

Hereby enters this disclaimer to the claim of said patent.

2,679,214.—Sulo Michael Nampa, Detroit, Mich. FREIGHT LOADING. Patent dated May 25, 1954. Disclaimer filed Aug. 7, 1961, by the assignee, Evans Products Company. Hereby enters this disclaimer to claim 23 of said patent.

2,863,954.—Herman H. Renneker, Palm Springs, Calif. TELEPHONE HANDSET SUPPORTS. Patent dated Dec. 9, 1958. Disclaimer filed Aug. 14, 1961, by the assignee, H. H. Renneker Co., Inc.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

2,977,324.—Dennis Albert Dowden and Alexander Muirhead Ure Caldwell, Norton-on-Tees, England. CATALYSTS. Patent dated Mar. 28, 1961. Disclaimer filed Aug. 7, 1961, by the assignee, Imperial Chemical Industries Limited.

Hereby enters this disclaimer to claims 1, 4, and 8 of said patent.

Erratum

In the OFFICIAL GAZETTE, issue of July 25, 1961, vol. 768, p. 943, first column, under the heading "2,933,784 ALUMINIUM ALLOYS," strike out the entire claim, beginning with "1. A current lead-in device for electric glow discharge" and ending with "throughout its whole extent," and insert instead 1. An alloy of aluminum consisting essentially of 0.5 to 5 weight percent nickel, 0.1 to 0.3 weight percent titanium, 0.005 to 0.10 weight percent beryllium, 0.1 to 1.0 weight percent iron and 0.05 to 0.5 weight percent silicon, the balance being pure aluminum.

Patents Available for Licensing or Sale

2,980,406. Impeller Pump. Emile Egger, Cressier, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

2,988,023. Method of and Apparatus for Burning (Incinerator for Burning Garbage, Etc.). Anthony I. Oswald, 66 Inter-Park Ave., Buffalo 11, N.Y.

Smith-Corona Marchant Inc. offers to negotiate to license any or all of the following 36 patents to domestic manufacturers upon reasonable terms.

Applications for license may be addressed to: Patent Department, Smith-Corona Marchant Inc., 410 Park Ave., New York 22, N.Y.

2,478,630. Power Operated Printing Machine.

2,545,133. Typewriter and Like Separably Interfitted Stem and Molded Cap Keys.

2,599,535. Line Spacing Mechanism for Typing Machines.

2,599,537. Adjustable Margin Regulating Means for Typing Machines.

2,631,713. Case Shift Mechanism for Typewriting Machines.

2,633,223. Silent Key Mechanism for Typewriters.

2,644,566.	Line Locking and Margin Releasing Mechanism for Typewriting Machines.	2,604,589.	Electrical Trigger Circuits.
2,660,285.	Typewriter Key Touch Controlling Means.	Re. 24,042.	(Orig. Pat. 2,666,911). Changeable Exhibitors.
2,664,989.	Ribbon Vibrating Mechanism for Typewriting Machines.	2,680,808.	Capacitor Charging and Discharging Circuit.
2,684,145.	Typewriter Type Bar Action.	2,689,085.	Division Mechanism-Pre-Estimation of Quotient Digits by Dividend-Divisor Comparison.
2,734,613.	Power Mechanism for Typewriting Machines.	2,690,302.	Counter.
2,757,773.	Power Actuated Typing Mechanism for Business Machines.	2,690,303.	Counter.
2,758,602.	Carriage Retarding Device for Typewriters.	2,713,456.	Machine for Translating Binary Values to Decimal Values.
2,789,877.	Carbon Ribbon Supply for Typewriters.	2,771,550.	Counting Circuits.
2,880,688.	Power Actuated Typing Mechanism for Business Machines.	2,771,551.	Counting Circuits.
2,851,945.	Type Striking Platen Operating Means for Visible Printing Calculating Machines.	2,771,575.	Diode Capacitor Regenerator.
2,416,369.	Actuating Mechanism for Registers.	2,771,590.	Readout Mechanism.
2,538,826.	Calculating Machine (Means to Electrically Pre-Estimate the Value of a Quotient).	2,822,130.	Readout and Radix Conversion From a Mechanical Register to a Capacitive Storage.
2,553,796.	Spring Colling Machine.	2,830,286.	Binary Relay.
2,583,377.	Selection Mechanism (for Keyboard Value Entering).	2,895,674.	Calculating Machines.
		2,912,162.	Square Root Extracting Circuit Arrangements.
		2,922,144.	Read-Record Circuits.

CONDITION OF PATENT APPLICATIONS AS OF JULY 31, 1961

Total number of pending applications (excluding Designs)	194,691
Total number of pending Design applications	5,245
Total number of applications awaiting action (excluding Designs)	91,822
Total number of Design applications awaiting action	1,450
Date of oldest new application	April 18, 1960
Date of oldest amended application	April 15, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS		6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		7, 11, 17, 27, 34, 35, 39, 53, 62.	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		5, 8, 20, 29, 33, 36, 40, 52, 66.	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		1, 4, 9, 10, 18, 22, 23, 28, 45, 47.	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE		3, 15, 19, 25, 30, 32, 49, 55, 67.	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS		91, 92, 93, 94, 95.	
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working		12-16-60	12-2-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		1-27-61	11-14-60
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors		9-23-60	10-3-60
4. (VI) FALLER, E. A., Material or Article Handling		12-27-60	12-27-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics		8-11-60	8-2-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides		9-6-60	9-19-60
7. (IV) ANDERSON, E. G., Optics		11-16-60	11-21-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds		1-23-61	2-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines		1-16-61	10-18-60
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making		11-16-60	11-3-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits		9-7-60	9-1-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls		8-15-60	8-11-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning		9-9-60	9-23-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabric		8-26-60	8-3-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus		2-14-61	2-14-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems		7-26-60	7-26-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering		9-13-60	9-21-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors		2-1-61	2-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners		9-27-60	10-10-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors		2-2-61	2-1-61
21. (III) MADER, R. C., Textiles		11-28-60	11-3-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows		11-1-60	10-17-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education		1-3-61	1-4-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders		1-4-61	1-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making		10-10-60	10-7-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers		10-3-60	9-19-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids		12-16-60	11-16-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes		9-22-60	9-6-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings		11-9-60	10-31-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)		1-23-61	1-23-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)		Oldest Application	
		New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....		9-13-60	9-22-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....		10-5-60	10-3-60
33. (V) MUSHAKE, W. E., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....		10-13-60	9-1-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....		10-25-60	11-3-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....		11-29-60	12-5-60
36. (V) EVANS, R. L., Measuring and Testing (part).....		9-19-60	9-19-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....		9-19-60	9-6-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....		8-2-60	7-29-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....		10-31-60	10-27-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....		2-3-61	1-19-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....		10-20-60	10-31-60
42. (II) BRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....		9-9-60	9-15-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....		7-14-60	8-1-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....		4-18-60	4-15-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....		2-16-61	2-1-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....		8-17-60	8-2-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles.....		12-16-60	12-16-60
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....		6-29-60	7-5-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....		9-9-60	9-12-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....		10-4-60	10-5-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....		7-26-60	7-12-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....		1-24-61	2-1-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....		12-6-60	1-4-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....		6-20-60	7-11-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....		10-17-60	10-7-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....		7-18-60	8-2-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....		8-12-60	8-8-60
58. (III) BRONAUUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....		11-29-60	11-17-60
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....		9-15-60	10-6-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part); Synthetic Rubber; Photographic Processes and Products.....		9-6-60	8-15-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.....		1-4-61	1-3-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.....		11-7-60	10-17-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....		9-13-60	9-22-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....		7-13-60	9-6-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....		9-1-60	9-8-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales.....		5-2-60	5-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....		11-4-60	11-14-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....		5-26-60	4-28-60
69. (III) MONCURE, J. A., Industrial Arts.....		4-7-61	4-6-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts.....		4-10-61	4-14-61
71. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.....		9-13-60	8-19-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners.....		2-1-61	2-2-61
73. WAHL, R. A., Wire Working.....		1-30-61	1-19-61
74. BERLOWITZ, W., Gas Separation.....		11-21-60	11-14-60
75. REZNEK, J. (acting), Metallic Building Structures.....		12-2-60	12-1-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....		12-23-60	12-1-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during September 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960*.

Patents.....Numbers 2,357,282 to 2,359,276, inclusive
Plant Patents.....Numbers 638 to 642, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

ADAMS AND WAKEFIELD v. WOLINSKI

Special Patent Docket No. 95. Decided January 3, 1961
[48 CCPA —; 285 F.2d 133; 129 USPQ 288]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—INTERFERENCES—ELECTION UNDER 35 U.S.C. 141, 146.

"In a two-party interference when the winner in the Patent Office, who is in the position of appellee in an appeal to this court by the loser, elects to go to a District Court under 35 U.S.C. 141, 146, this court dismisses the appeal as a matter of course upon being advised of the filing of the notice of election."

2. SAME—SAME—SAME.

Under circumstances where a three party interference entitled *Keller, Garvin and McMillan v. Wolinski v. Adams and Wakefield* was decided by the Board of Patent Interferences in favor of Wolinski on July 25, 1960, Adams and Wakefield appealed on September 20, and Keller et al. did nothing until October 10 when they filed in the Patent Office their "Election under 35 U.S.C. 141," saying that they elected "to have all further proceedings conducted as provided in 35 U.S.C. 146"; and upon consideration of the question whether the Adams et al. appeal acted to extend, by the 20 days referred to in 35 U.S.C. 141, the time within which the other losing party, Keller et al. could seek a review in the District Court, *Held* that "In our opinion Keller et al. cannot take advantage of 35 U.S.C. 141 because they ceased to be a party to the interference upon the expiration of the time within which they, as a defeated party, could have taken an appeal or have filed a civil action under 35 U.S.C. 146"; that "But for the appeal by Adams et al., their failure to do either would beyond question have left them without recourse to obtain review of the final decision of priority against them"; that "We do not see how the timely appeal of Adams et al. changes the situation"; that "There are various points at which one can cease to be a party to an interference by failing to act and this is one of them"; that "If one cannot be deemed to be a party, it follows that one is not an 'adverse party'; that "The fallacy of the position taken by Keller et al. is in the apparent assumption that all parties to an interference remain parties to it for as long as any proceedings in the interference are pending"; that "this is patently not the case"; that "Losers must apply for the remedies made available to them by statute and rule within the time allowed to them and when they do not they cease to be parties"; and that "The acts of other losers do not alter this status."

3. SAME—SAME—SAME.

"Keller et al. argue that they are 'an adverse party' by virtue of reasons of appeal 9 and 10 included in the notice of appeal filed by Adams et al. These two reasons allege error in the Board's decision only with respect to the Keller et al. request that they be allowed to convert their application into a sole application of Garvin. * * * Keller et al. say a decision as to reasons of appeal 9 and 10 in favor of Adams et al. would prejudicially affect their rights. The answer to this is that since, * * * the party Keller et al. is not a party to this appeal, we would not pass on issues relating to rights of Keller et al. in the instant case even if appellant has assigned error with respect thereto."

4. SAME—SAME—EXTENSION OF APPELLANTS' TIME TO FILE PETITION AND RECORD.

"Keller et al. filed their 'Election' prior to the end of the time within which Adams et al. were required by our Rule 25 to file their petition and record, thus creating the present controversy and uncertainty whether the appeal would proceed in this court. The Patent Office has certified to us only copies of the papers called for by said Rule in election cases, plus the Board opinion; but since the appeal is to proceed, appellants' time to file their petition and a proper record is hereby extended to ten days after the date hereof, subject to any further extension the Commissioner may grant to enable the copy of the record to be prepared."

770 O.G.—14

ON MOTION. Interference No. 87,508.

Motion to Refuse to dismiss appeal GRANTED.

Motion to strike Notice of Election by party Keller et al. DISMISSED and to adjudge Keller et al. without standing in instant appeal GRANTED.

Motion to dismiss appeal DENIED.

Harry H. Levin, Paul A. Rose, Curtis, Morris & Safford, Truman S. Safford for Adams and Wakefield.
Edward B. Beale and A. Newton Huff for Wolinski.

Cushman, Darby & Cushman, Richard G. Kline for moving party Keller et al.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges

RICH, J., delivered the opinion of the court.

The above entitled appeal arose out of a three-party interference, No. 87,508, which was entitled, in the Patent Office, *Keller, Garvin and McMillan v. Wolinski v. Adams and Wakefield*.¹ Priority was awarded to Wolinski by the Board of Patent Interferences on July 25, 1960.² September 20 Adams and Wakefield appealed to this court. Keller et al. did nothing until October 10 when they filed in the Patent Office their "Election Under 35 U.S.C. 141," saying that they elected "to have all further proceedings conducted as provided in 35 U.S.C. 146." It will be observed that this notice was filed more than the 60 days after the Board's decision allowed for taking an appeal, but within the 20 days after the taking of the appeal to this court by Adams et al., the latter period being that specified in 35 U.S.C. 141.

[1] In a two-party interference when the winner in the Patent Office, who is in the position of appellee in an appeal to this court by the loser, elects to go to a District Court under 35 U.S.C. 141, 146, this court dismisses the appeal as a matter of course upon being advised of the filing of the notice of election. Had Wolinski, the winner in this case, elected to go to the District Court, we should no doubt have dismissed. Wolinski, however, made no such election and expressly desires that the review of the decision of priority in his favor shall be by this court.

Keller et al., who, like Adams et al., could have appealed to this court within 60 days of the Board decision, did not do so. By the provisions of the statute and Patent Office rule their right to review by appeal was therefore lost. Within the same 60 day period Keller et al. could have initiated an action in the District Court under 35 U.S.C. 146. They did not do so. Had Adams et al. not appealed to this court, Keller et al. would therefore have had no right to a review of the award of priority against them, either by appeal or by civil action in a District Court. By their purported notice of election, however, they now seek to force the review, initiated by the other losing

¹The Board's opinion discusses and rules on efforts by Keller et al. to convert their application into a sole application by Garvin as to the interference count. Such conversion was approved but formal conversion was deferred until after termination of the interference. The Board treated Garvin as the sole inventor.

²In brief, the basis of the award to Wolinski was that Adams et al. did not disclose in their application the invention of the count and Keller et al. (to become Garvin as in note 1, supra) failed in their attempt to overcome Wolinski's filing date by proof of prior conception or actual reduction to practice by Garvin.

party, into the District Court against the combined opposition of appellant Adams et al. and appellee Wolinski, and to participate in that trial de novo.

The question now before us, taking one view of the matter, is whether the Adams et al. appeal to this court acted to extend, by the 20 days referred to in 35 U.S.C. 141, the time within which the other losing party, Keller et al., could seek a review in the District Court. Taking another view, Adams et al. having appealed and Keller et al. having done nothing within the 60 day period, the question is whether Wolinski is the only one who can "elect," under section 141, to have all further proceedings conducted under section 146, or whether Keller et al. can now force them into the District Court against their wills.

These questions are formally raised by three complementary motions in this court. The first motion is that of Adams et al., filed November 14, 1960, asking that we refuse to dismiss their appeal to us. Wolinski, by a statement filed November 18, concurred in that request. The second motion is by Wolinski, filed December 13, asking us to strike from the files of this appeal the Keller et al. election and to adjudge Keller et al. to be without standing in this appeal. The third motion, filed December 20, is by Keller et al. asking us to dismiss the appeal of Adams et al. "pursuant to the Notice of Election filed with the Commissioner of Patents on October 10, 1960, under the provisions of Section 141 of Title 35 U.S.C." Extensive memoranda support the motions. Obviously the basic issue is whether we will dismiss the appeal to this court by Adams et al.

Keller et al. rely primarily on a literal construction of the language of 35 U.S.C. 141 which provides for the dismissal of an appeal to this court "if any adverse party to such interference" (our emphasis) files a notice of election. Keller et al. say they are an "adverse party," that they timely filed a notice of election and that if we do not dismiss we are legislating "contrary to the expressed purpose, intent and language of the statute." They say that legislative history and court decisions clearly indicate the purpose of Congress to allow "any defeated applicant in an interference" to have an appeal to this court dismissed and to require his "adversary" to resort to a civil action but they refer to no history or case so indicating.

Wolinski, the winner below and appellee here, argues that the Keller et al. notice of election is "a null, void and meaningless document." He further contends that Keller et al., as a defeated party which took no steps within 60 days to obtain review of the decision adverse to it, has no standing in these subsequent proceedings. Precedents relied on include *Wheeler et al. v. Kleinschmidt et al.*, 32 CCPA 975, 149 F.2d 161, 65 USPQ 407, *Beall v. Ormsby*, 33 CCPA 959, 154 F.2d 663, 69 USPQ 314, *Thompson v. Dunn et al.*, 35 CCPA 957, 166 F.2d 443, 77 USPQ 49, and *Island Road Bottling Co. v. Drink-Mor Beverage Co.*, 30 CCPA 708, 132 F.2d 129, 56 USPQ 65, all for the general proposition that defeated parties who do not appeal to this court are not parties and have no standing in this court to control its actions. The precedent principally relied on, however, is *Nelson v. Berry et al.*, 19 CCPA 1270, 59 F.2d 351, 14 USPQ 57.

There appears to be no prior case on all fours with this one, perhaps for the reason suggested by Wolinski

that "no defeated interferent in a three-party interference has ever been known to run the risks inherent in failing to take positive action to seek review within the limit of appeal provided by law."

In *Nelson v. Berry et al.*, the closest precedent we know of, one Jardine who had been a party along with Nelson and Berry et al. (in fact he seems to have been the "et al.") in two of four interferences involved in the appeal, did not appeal to this court and the court said "he cannot be regarded as a party to the appeal before us." Jardine had, however, brought suit under R.S. 4915 in those two interferences and then attempted to move this court (seeking to that extent to be treated as a party) to stay its proceedings on appeal therein. Nelson and Berry both objected, as Adams et al. and Wolinski are objecting here, saying that Jardine had no right to move in this court because he was not a party to the appeals. Notwithstanding the fact that Jardine had filed his suits within a month of the Board's decisions and before the appeals to this court were taken, it was held that Jardine could not stay the proceedings in this court. The case is distinguishable, however, because no notice of election under the then applicable statute, R.S. 4911, the predecessor of 35 U.S.C. 141, was filed by Jardine.

[2] In our opinion Keller et al. cannot take advantage of 35 U.S.C. 141 because they ceased to be a party to the interference upon the expiration of the time within which they, as a defeated party, could have taken an appeal or have filed a civil action under 35 U.S.C. 146. But for the appeal by Adams et al., their failure to do either would beyond question have left them without recourse to obtain review of the final decision of priority against them. We do not see how the timely appeal of Adams et al. changes the situation. There are various points at which one can cease to be a party to an interference by failing to act and this is one of them. If one cannot be deemed to be a party, it follows that one is not an "adverse party." The fallacy of the position taken by Keller et al. is in the apparent assumption that all parties to an interference remain parties to it for as long as any proceedings in the interference are pending. This is patently not the case. Losers must apply for the remedies made available to them by statute and rule within the time allowed to them and when they do not they cease to be parties. The acts of other losers do not alter this status.

[3] Keller et al. argue that they are "an adverse party" by virtue of reasons of appeal 9 and 10 included in the notice of appeal filed by Adams et al. These two reasons allege error in the Board's decision only with respect to the Keller et al. request that they be allowed to convert their application into a sole application of Garvin. (See note 1, supra.) Keller et al. say a decision as to reasons of appeal 9 and 10 in favor of Adams et al. would prejudicially affect their rights. The answer to this is that since, as we have held above, the party Keller et al. is not a party to this appeal, we would not pass on issues relating to rights of Keller et al. in the instant case even if appellant has assigned error with respect thereto.

For the foregoing reasons we dispose of the motions as follows:

The Adams et al. motion that we refuse to dismiss the appeal is granted.

Wolinski's motions (1) to strike the Keller et al. notice of election is dismissed because said notice was filed in the Patent Office and is beyond our control; (2) to adjudge Keller et al. without standing in the instant appeal is granted; (3) to refuse to dismiss the appeal is granted.

The Keller et al. motion that we dismiss the appeal is denied.

[4] Keller et al. filed their "Election" prior to the end of the time within which Adams et al. were required by our Rule 25 to file their petition and record, thus creating the present controversy and uncertainty whether the appeal would proceed in this court. The Patent Office has certified to us only copies of the papers called for by said Rule in election cases, plus the Board opinion; but since the appeal is to proceed, appellants' time to file their petition and a proper record is hereby extended to ten days after the date hereof, subject to any further extension the Commissioner may grant to enable the copy of the record to be prepared.

Motion to Refuse to dismiss appeal GRANTED.

Motion to strike Notice of Election by party Keller et al. DISMISSED and to adjudge Keller et al. without standing in instant appeal GRANTED.

Motion to dismiss appeal DENIED.

U.S. Court of Customs and Patent Appeals

H.D.T. COMPANY FACTORS, INC. v. H. M. SINCLAIR, JR.,
TRUSTEE FOR THE OHIO PARTNERSHIP, THE SINCLAIR
MANUFACTURING COMPANY

No. 6650. Decided April 14, 1961

[48 CCPA —; 288 F.2d 947; 129 USPQ 283]

TRADEMARK—CONFUSING SIMILARITY—"CORAL" AND "BLUE CORAL" FOR CLEANERS.

In an opposition by the registrant of "BLUE CORAL" for an automobile polisher and cleaner against a trademark application seeking to register the mark "CORAL" for household liquid synthetic detergent, Held that "There is no question but that BLUE CORAL is an arbitrary mark as used on opposer's product, but we do not agree with opposer that CORAL is the feature which makes the mark distinctive in the public's mind; that 'BLUE is not descriptive of coral'; that 'We strongly doubt that the public associates blue with coral even though a technical description of coral includes blue and other colors'; and that 'When blue is used with coral, a unique and distinctive combination is created which is not likely to be confused with Coral by purchasers of these products.'"

APPEAL from the Patent Office. Opposition No. 37,531.

AFFIRMED.

William E. Schuyler, Jr. (Francis C. Broune and Andrew B. Beveridge, of counsel) for appellant.

Freeman Crampton, Burns, Doane and Benedict (James P. Burns, of counsel) for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

MARTIN, J., delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board of the United States Patent Office, 123 USPQ 57, dismissing an opposition to the registration of the word "Coral" as a trademark for "a household liquid synthetic detergent." The applicant, appellee here, is H. M. Sinclair, Jr., as

trustee for The Sinclair Manufacturing Company. The opposer-appellant is H.D.T. Company Factors, Inc., owner of the registered marks "BLUE CORAL" for an automobile polish and automobile cleaning and polishing service and "BLUE CORAL SEALER" for a polish preservative.

Applicant's detergent, "Coral," is sold in retail grocery stores and supermarkets, in 22- and 32-ounce cans, through the usual wholesale channels in all States east of the Rocky Mountains, and is intended primarily for washing dishes although it is also recommended for washing automobiles and certain textiles. The letters of "Coral" in the trademark application and displayed on applicant's goods are drawn so as to simulate rough natural pieces of coral. A first use of "Coral" in commerce on April 10, 1956, is alleged.

Opposer started to use "BLUE CORAL" as a trademark in 1928 in connection with a liquid cleaner and polish for automobiles. Later, opposer used "BLUE CORAL SEALER" in reference to a wax paste polish preservative and "BLUE CORAL" as a service mark. The cleaner-polish is packaged in 16-ounce bottles and the sealer is packaged in 80-gram jars and 227-gram cans. Both cleaner and sealer are blue in color and blue is the predominate color of the containers and labels.

Opposer has chosen to distribute its products solely through new automobile dealers. These dealers use opposer's products on the cars of their customers and sell the products to car owners for do-it-yourself applications. Opposer has agreements with the Cadillac and Pontiac Divisions of General Motors Corporation and with the Lincoln-Mercury Division of Ford Motor Company under which the container labels of opposer's products will recite both the name of the motor car company and opposer's name. For example, one "BLUE CORAL" label in evidence bears the word "Cadillac" in script letters of approximately the same size as the block letters in "BLUE CORAL," and also recites on the left side of the label: "Distributed by CADILLAC MOTOR CAR DIVISION. * * * By Special Arrangement With H.D.T. COMPANY, FACTORS * * *". The right side of the label recites "A Cadillac BLUE CORAL TREATMENT HAS NO EQUAL."

The president of opposer testified that the products are shipped to the Cadillac Motor Car Division. Cadillac then ships the products to their distributors who in turn ship to their dealers. Opposer also sells and ships its products directly to other new automobile dealers, using for those shipments its own H.D.T. Company labels.

There is no dispute as to opposer's prior use of its mark. The sole issue is whether concurrent use of "Coral" and "BLUE CORAL" on the respective goods of the parties is likely to cause confusion or mistake or to deceive purchasers as to the source or origin of the goods.

In dismissing the opposition, the Board stated:

* * * Considering the nature of and the differences between the products of the parties together with the conditions and circumstances under which they are ordinarily sold and the differences between the marks "CORAL" and "BLUE CORAL," it is concluded that purchasers would not be reasonably likely to assume that these products originated with or are in some way connected with the same producer.

Opposer urges several reasons for reversal of the

Board's decision. It is pointed out that "Coral" detergent can be used to wash sand and grit from automobile surfaces while "BLUE CORAL" can thereafter be used to clean and burnish the same surface and "BLUE CORAL SEALER" can finally be used to protect the resulting cleaned polished surface. It is urged that this common theme of performing different functions consecutively on the same surface to accomplish a desirable end result will associate the products in the minds of the public so that use of similar marks is likely to result in confusion. It is also asserted that materials for cleaning and polishing automobiles are ordinarily distributed along with synthetic liquid household detergents, such as that manufactured by applicant, in grocery stores, supermarkets, and drug stores. It is argued that, although opposer has chosen to restrict the marketing of its product to new car dealers, channels of distribution are subject to change and opposer should not be deprived of the presumption that all conventional modes of distribution are contemplated. Further, opposer urges that its mark, "BLUE CORAL," is dominated by the word "CORAL" and that "BLUE" is merely descriptive of the color of the products and containers.

There is no question but that "BLUE CORAL" is an arbitrary mark as used on opposer's product, but we do not agree with opposer that "CORAL" is the feature which makes the mark distinctive in the public's mind. "BLUE" is not descriptive of coral. We strongly doubt that the public associates blue with coral even though a technical description of coral includes blue and other colors. When blue is used with coral, a unique and distinctive combination is created which is not likely to be confused with "Coral" by purchasers of these products.

Although it may be customary to wash an automobile before polishing it, we believe that the products used for these two distinct purposes are so different in composition and in preparation for using that the products in and of themselves can be judged dissimilar. Also it should be remembered that the primary use of applicant's detergent is in dish washing whereas opposer's product is used to polish automobiles. The usual characteristics and uses of the products should be determinative.

Regarding the channels of trade, opposer has gone to great pains to prove that it has been selling its products, "BLUE CORAL" cleaner and wax, practically exclusively to the great automobile manufacturers and dealers of this country and it is just as clear that applicant channels its product through supermarkets and grocery stores. This evidence convinces us that these automobile manufacturers, such as General Motors and Ford, and the thousands of automobile dealers throughout the country identify opposer's product by this trademark, so much so that it is unlikely that this group of purchasers or the public generally who purchase from the dealers would ever confuse opposer's products with applicant's household detergent, primarily used for washing dishes and sold under the trademark "Coral" in supermarkets and grocery stores.

Of course, as opposer argues, consideration should be given to its right to change its marketing practices, but not to the extent of concluding that similar channels of trade are probable, in view of all of the evidence

that has been presented to us by the opposer to the contrary. Opposer revels in the exclusiveness of its channel of trade—the automotive industry—and we believe in reading the whole record that it is very improbable that opposer would ever use applicant's channels for trade. However, if in the future it did, we believe that the differences in the marks and the products negate the likelihood of confusion by purchasers as to the source of the goods. This is especially so if the products were sold in the same supermarkets and grocery stores in view of the shape of the letters in "Coral" in applicant's mark.

In view of our analysis of the situation, we are of the opinion that the use by applicant of its trademark on its goods is not likely to cause confusion or mistake or deceive purchasers. We therefore affirm the decision of the Board.

AFFIRMED.

SMITH, J., concurring:

In concurring with the decision of the majority, I do so only for the reason that applicant's mark "Coral" as used on its household liquid synthetic detergent does not so resemble opposer's previously registered mark "BLUE CORAL" as to be likely to cause confusion, mistake or deception of purchasers. The marks do not sound alike or look alike. The mark "BLUE CORAL" calls forth a mental image and psychological response which is distinct from the imagery and psychological response called forth by applicant's mark "Coral."

Since either party may extend its business into products more closely competing than those here before us and since each party is free to change its marketing practices, I do not think it necessary or desirable to base this decision upon a comparison of the goods and the present marketing practice as is done in the majority opinion in partial support of the conclusion there reached.

U.S. Court of Customs and Patent Appeals

IN RE ALEXANDER C. McCABE

No. 6649. Decided March 15, 1961

[48 CCPA —; 287 F.2d 921; 129 USPQ 149]

PATENTABILITY—PARTICULAR SUBJECT MATTER—APPARATUS FOR SHAPING GLASS TUBING.

The decision of the Board of Appeals refusing certain claims to apparatus for shaping glass tubing is affirmed.

APPEAL from the Patent Office. Serial No. 289,850.

AFFIRMED.

Carl Hoppe (James F. Mitchell, of counsel) for appellant.

Clarence W. Moore (George C. Roeming, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

MARTIN, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Primary Examiner of claims 12 and 13 of appellant's application for a patent on machines for heating glass tubing. Certain claims have been held by the Examiner to be withdrawn from

consideration under the provisions of Rule 142(b) and are not before us. No claims have been allowed.

The appealed claims are:

12. Apparatus for reshaping lengths of glass tubing comprising a frame, a first and a second horizontal shaft rotatably mounted on said frame in parallel relationship and at substantially the same elevation, a plurality of first rollers on and disposed normal to said first shaft, a plurality of second rollers on and disposed normal to said second shaft, said first roller being positioned offset on the corresponding second rollers in a direction parallel to the axes of rotation of said shafts, means for rotating one of said shafts, said shafts being spaced apart and said rollers having diameters such that a length of glass tubing positioned on said rollers is cradled thereby above the level of said shafts and rotated by said rollers as the shaft revolves, and means for holding a short length of glass tubing in contact with the roller cradle comprising a shiftable holddown roller, a bell crank rotatably mounting said hold-down roller, and manually operable means for shifting said bell crank to operate said hold-down roller into and out of contact with a short length of glass supported by said rollers, said holddown roller having its axis of rotation parallel to said shafts; and means for heating a portion of glass tubing supported on said rollers.

13. Apparatus for reshaping lengths of glass tubing comprising a magazine having an inclined floor consisting of a plurality of inclined slat members, a fixed, longitudinally extending stop at the lower end of said magazine, said last mentioned stop being triangular in cross section with one shortest side substantially vertically disposed and positioned toward the upper end of said magazine, feeding means associated with said magazine and including a longitudinally extending horizontally disposed member arranged for vertical reciprocation adjacent said longitudinally extending stop, manually operable means for reciprocating said member, whereby lengths of glass tubing may be urged from said magazine one by one by lifting said lengths over said shorter side of said fixed stop to roll down one of the other sides of said stop, a frame, a first and a second horizontal shaft rotatably mounted on said frame in parallel relationship and at substantially the same elevation, a plurality of first rollers on and disposed normal to said first shaft, a plurality of second rollers on and disposed normal to said second shaft, said first rollers being positioned offset on the corresponding second rollers in a direction parallel to the axes of rotation of said shafts, means for rotating one of said shafts, said shafts being spaced apart and said rollers having diameters such that a length of glass tubing positioned on said rollers is cradled thereby above the level of said shafts and rotated by said rollers as the shaft revolves, and means for holding a short length of glass tubing in contact with the roller cradle comprising a shiftable holddown roller, a bell crank rotatably mounting said holddown roller and manually operable means for shifting said bell crank to oscillate said hold-down roller into and out of contact with a short length of glass supported by said rollers, said holddown roller having an axis of rotation parallel to said shafts; and means for heating a portion of glass tubing supported on said rollers.

The references relied on by the Examiner and the Board are:

Koenig, 1,455,056, May 15, 1923.

Dichter, 2,226,803, Dec. 24, 1940.

Appealed claim 12 recites a machine for heating a length of glass tubing until it is soft enough to be bent into another shape such as that of a neon sign letter. The machine includes two adjacent parallel horizontal shafts on which rollers are positioned. The shafts and rollers are disposed so that a glass tube will be cradled by the rollers of both shafts. The glass tube is caused to rotate by rotation of one of the shafts and is heated while rotating. Also included is a separate "holddown roller" meant to hold a short length of glass tubing in contact with the cradling rollers and comprising a roller with an axis of rotation parallel to the shafts and mounted on one end of a bell crank. The bell crank is mounted so that the roller may be shifted into or out of contact with the rotating length of glass tubing.

Appealed claim 13 recites the apparatus of claim 12 in combination with apparatus which holds a supply of glass tubes and will feed them one at a time from the holder. The latter apparatus comprises a table with an inclined top. Lengths of glass tubing are to be arranged on the table top in a single layer and parallel to the lowest edge of the top. A stop along the lowest edge of the table top prevents the tubes from

rolling down and off the top. A tube is fed from the table top mechanically by pushing up the lowest tube until it clears the stop whereupon the tube rolls off by gravity. The other tubes remain on the table top until each in turn assumes the lowest position on the top and is pushed up over the stop. It is apparently intended that the lowest edge of the table top be adjacent, slightly above, and parallel to the shafts of the cradling rollers recited in claim 12 so that a glass tube rolling from the table top will fall into rotating position on the rollers. This desired coaction between the feeding machine and the rotating machine is, however, not recited in claim 13.

The Koenig patent discloses a machine intended to operate on lengths of glass tubing so as to simultaneously divide each length of tube into two parts and close the new end of each part. The Koenig machine comprises two adjacent parallel horizontal rotating shafts with disc rollers mounted thereon so that a glass tube will be cradled and rotated by the discs. Another pair of disc rollers, each mounted on an arm and positioned above an end of the glass tube, bear down on the tube. Each of the latter pair of upper rollers has a rotational axis in skewed relation to the rotational axis of the cradling roll shafts so that each will exert a force outward along the axis of the rotating glass tube. Heating flames are directed toward the middle of the cradled glass tube. When the glass becomes soft enough, the combination of outward and downward force of the upper rollers pulls the tube apart and causes it to fall from the cradling rolls as two completed vials. Thereupon, a pusher arm is automatically actuated whereby another glass tube is delivered from an adjacent vertical magazine to the cradling rolls.

The Dichter patent discloses a machine designed to reform the closed or bottom end of a glass vial. As in the Koenig machine, the Dichter machine includes a pair of shafts with disc rollers mounted thereon and forming a tube-rotating cradle. Two glass vials are placed on the cradle with closed ends facing each other. The open end of each vial is attached to a rotatable blower head so that air may be forced into the vial. Another disc roller is disposed above each vial and opposite the cradling discs, and exerts a continuous pressure on each vial. These upper rollers are so arranged with their rotational axes skewed in relation to the rotational axes of the cradling rollers as to urge the vial axially toward the blower head. A firm fit of blower head with vial mouth is thus assured. Each blower head with attached rotating vial is then moved inward along the axis of rotation toward a button-shaped mold which contacts the heat-softened vial bottom and gives it the desired shape. Pressure of air inside the vial aids in the bottom shaping. The vial bottom may be heated before or while it is in the rotating cradle. Dichter also discloses that letters, decorations, or other marks may be formed on vial walls simultaneously with bottom shaping. For this purpose, a mold in the form of a roller bearing peripheral dies is urged down against the heated portion of the rotating vial. The mold or impression roller is mounted with a shaft on a vertically swingable arm so that the roller may bear down on or be raised from

the glass vial. One pertinent embodiment of impression roller comprises a shaft to which are attached two discs. One disc serves as the impression roll. The other disc of diameter equal to the impression roll disc is mounted parallel thereto on the shaft and serves as a frictional drive wheel for the impression roll disc since the former contacts the rotating vial, apparently at an unheated area.

The rejections of claims 12 and 13 are based on different grounds and we will consider them separately.

Claim 12 stands rejected as being "unpatentable over Dichter." The sole issue appears to be whether Dichter discloses or suggests a holddown roller having its axis of rotation parallel to that of the supported glass tube. It is not urged that Dichter does not disclose the combination of the other elements recited in claim 12. The Board found that both the imprinting rolls and the skewed rolls of the Dichter machine perform a "hold-down function." With regard to the former rolls, the board stated:

"* * * As we view the function and operation of these rolls it is believed that they perform a function of applying a downwardly directed force to the top portion of the tube wall as the tube is cradled on the rotating rolls 22. This force acts to hold the tubing 'in contact with the roller cradle' and even though appellant designates his rolls as a holddown roll such designation is believed not to differentiate this element in a manner effective to point out a new and unobvious result or function. * * *

With regard to the skewed rolls which are disposed above the cradled glass tube, the Examiner held that it was a matter of choice whether these rolls are placed parallel or at an angle to the axis of rotation of the glass tube. The Board affirmed this holding, stating:

"* * * the skewed arrangement does not appear to be essential, as particularly evidenced by the omission thereof from Dichter's claims as to the scope of his invention as well as evidenced by consideration of the operation of the device. * * *

As to the mechanical linkage, including a bell crank, used to support appellant's holddown roller, the Board was of the opinion that these details were "but arbitrary selections providing no essential difference in the contribution thereof to the functioning of the device."

Appellant urges that the axial force or pressure resulting from the skewed rolls of Dichter is essential to the operation of the Dichter machine and that there is nothing in Dichter to suggest that these skewed rollers might be oriented with their rotational axes parallel to the axis of the rotating vials. Appellant admits that the imprinting roller of Dichter could be adapted to perform a holddown function but argues that, as placed by Dichter, it performs an entirely different function and is inoperative to perform a hold-down function since it is meant to contact a softened area of glass which would deform under pressure.

We agree with the Board that claim 12 is unpatentable over Dichter. In our opinion, Dichter shows three sets of rollers which, although they may have other functions, would inherently hold the glass tubes down on the rotating cradle rollers while performing these other functions. The first of these is the impression roller. It is quite obvious that if this roller is to make letters, decorations or other marks on the revolving glass tube it must be in contact with the tube and therefore it would naturally have the effect of holding the tube down.

Appellant claims this impression roller could not also function as a hold-down means because it is

applied to the heated glass tubing and therefore it would also deform the tube. We disagree with appellant. The hold-down operation is inherent in the primary function of this roller of making the desired impressions and there is no evidence that in accomplishing its primary purpose it causes deformation of the glass tubing.

Claim 12 also reads on the frictional drive wheel disc of Dichter. There can be no question but that this disc is in contact with the glass tubing since it secures its momentum from the rotating vial itself and it is to be noted that this roller operates on the unheated portion of the vial.

The third set of rollers of Dichter which inherently have a hold-down action are those that are skewed and urge the tubing axially toward the blower head. It is without significance that the primary purpose of these rollers is to cause this axial movement of the tubing rather than to hold it down. It would be perfectly obvious to any layman, no less to one skilled in the art, who was interested only in the hold-down feature to construct these discs so that their axes of rotation would be parallel to the axis of the tubing.

Appellant also argues that claim 12 sets forth a novel combination. However, we agree with the Solicitor wherein he states in his brief that:

Claim 12 sets forth nothing more than a combination of old elements each functioning only as in the prior art. There is no surprising consequence or new and additional function attributable to the fact of combination. It is well settled that arrangements of old elements so functioning are presumed obvious to one skilled in the art. *In re Wagner*, 32 CCPA 1088, 1092, 149 F.2d 939, 941 (1945); *In re Smith*, 34 CCPA 1007, 1012, 161 F.2d 274, 278 (1947); *In re Crawford*, 45 CCPA 750, 754, 250 F.2d 370, 373 (1957); *In re Attwood*, 45 CCPA 824, 828, 253 F.2d 234, 237 (1958).

We come now to claim 13. The issues relating to the rejection of this claim have not been presented to us with clarity. Consideration of the several statements and arguments of the Examiner, the Board, appellant, and the Solicitor leads us to the conclusion that claim 13 stands rejected primarily because it discloses a combination of a tube feeding device and a tube cradling device, and that such a combination is disclosed in the Koenig patent. Appellant urges that this rejection is not proper because Koenig does not disclose the specific tube feeding device and the specific tube cradling device recited in claim 13.

We believe the Board's rejection of claim 13 is sound. Koenig teaches a combination of an apparatus which feeds the tubes and a cradle structure upon which the tubes are held down while rotated and heated. The basic combination of claim 13 is therefore old.

Appellant contends that because its feeder will handle bent tubes whereas Koenig's apparatus is not constructed to achieve this result, this fact endows its apparatus with patentable significance. We are of the opinion that this contention also is untenable for two reasons. First, although claim 13 does recite that the magazine consists "of a plurality of inclined slat members" and the application states that the slat members "may be removed to provide room for any bends which may have been formed in said glass tubes" there is nothing to indicate how the apparatus would handle bent tubes. The whole operation of the feeder as disclosed in the specification and diagrams negates the possibility of using this apparatus to feed bent

glass tubes to the cradle structure. Second, assuming arguendo that this particular function could be accomplished by appellant's apparatus, there still would be no cooperation between the feeder and the cradle structure which would produce a patentable combination.

In view of the foregoing, we affirm the Board's rejection of claims 12 and 13.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE HENRY W. KERN

No. 6,671. Decided April 14, 1961

[48 CCPA — ; 289 F.2d 513; 129 USPQ 345]

1. CLAIMS—PRODUCT—PROCESS LIMITATIONS.

"As to claims 27 and 29, which are dependent from allowed claims even if the process were new, that fact does not render a claim for an old product valid."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—"FASTENING ELEMENT DESIGNED FOR WELDING."

The rejection of claims to a fastening element designed for welding and to its method of production as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 442,478.

AFFIRMED.

Balluff and McKinley (E. J. Balluff, of counsel) for appellant.

Clarence W. Moore (Joseph F. Nakamura, of counsel) for the Commissioner of Patents.

Before WOLLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

KIRKPATRICK, J., delivered the opinion of the court.

This appeal is from a decision of the Board of Appeals of the United States Patent Office sustaining the Examiner's rejection of method claims 22, 24, 25 and 26 and article claims 27 to 31, inclusive, of the appellant Kern's application Serial No. 442,478 for a patent for "Fastening Element Designed for Welding." (In this case a weld nut).

The process claims on appeal relate to a method of making weld nuts from a standard square nut blank by a single application of pressure to cold form the blank between the upper and lower dies of a press. Claim 22 may be taken as representative of the rejected method claims and is as follows:

22. A method of forming a polygonal weld element having a generally axially disposed bore from a discrete blank having substantially parallel generally flat end surfaces and a peripheral surface normal to and intersecting said end surfaces to form meeting edges therewith, said method including the steps of (1) supporting the blank while leaving a plurality of spaced localized areas of one end surface adjacent the edge thereof unsupported, (2) simultaneously and uniformly applying axial pressure of metal deforming intensity against the other end surface directly opposite said areas, (3) uniformly increasing the areas of pressure applied to said other end surface inwardly toward the axial center of the blank so as to axially displace said edge areas to form essentially axially disposed welding projections while (4) maintaining the peripheral surface normal to the planes of the original end surfaces, (5) discontinuing the applied axial pressure when an amount of pressure has been applied sufficient to deform the spaced projections a predetermined axial distance beyond the original plane of said one surface so as to form a polygonal weld element having a plurality of uniform welding projections on one surface at the corners thereof and within the area defined by the peripheral surface of said weld element while confining the axial displacement of said projections so that the tips of said projections will lie in a common plane.¹

¹The numbers in the above text do not appear in the claim but have been inserted for convenience of reference in the discussion which follows.

The references relied on by the Board are:

Almdale (1), 2,054,187, September 15, 1936.
Demboski et al., 2,073,467, March 9, 1937.
Green, 2,355,856, August 15, 1944.
Howe, 2,612,647, October 7, 1952.

The Board held that the rejected method claims were unpatentable over Almdale (1) as the basic reference, with Howe, Demboski and Green as secondary references.

In view of Demboski et al. and Howe the appellant cannot well claim that the idea of forming a weld nut from a standard blank in a "one shot" operation is new nor that it is new to displace metal from one side of a nut to form projections on the other side.

Now referring to the first of the five so-called steps called for in claim 22, there is no novelty in using, in a die press operation to form a weld nut, a lower die which by reason of cavities in its surface leaves unsupported the corners of the blank from the underface of which corners metal is to be extruded by pressure applied to the upper face. This is fully disclosed in Howe and, indeed, not only is it obvious, but it would not be possible to extrude metal axially by cold flow from a wholly supported lower surface.

Steps (2) and (5) taken together claim no more than operating the die press in the way in which such tools usually are operated and stopping when enough metal has been extruded to make projections of the desired size and shape.

Step (4), together with the description in step (5) of the welding projections as "within the area defined by the peripheral surface of said weld element" (claims 22, 24 and 25) or "without substantial lateral deformation from the original sides of the blank" (claim 26), merely states an obvious expedient.

The only point at which the appellant can contend with the slightest degree of plausibility that his invention has any novelty over the combined references cited against it by the Board is step (3), "uniformly increasing the areas of pressure applied to said other end surface inwardly toward the axial center of the blank so as to axially displace said edge areas to form essentially axially disposed welding projections." This describes the operation of an upper die with a beveled engaging surface which extends outwardly beyond the outside of the nut and terminates in a blunt face. As the Board pointed out, "The operation of this bevelling die will cause pressure to be applied first to the outermost portion of the corner and then to radially inward portions as the metal deforms." As against the contention that this was a novel step, the Board cited Almdale (1) and Demboski. The Almdale drawings, Figs. 2 and 3, disclose a finished nut which shows every feature of alleged patentable novelty of the article of the appellant's application. The appellant's interpretation of Fig. 3 of Almdale as showing bevels on two upper edges rather than at the four corners is answered by the specification, which states that the corners may be formed with bevels, and the fact that the term "corners" is consistently used in the specification to denote the intersection of three, not two, surfaces.

Almdale includes in his specification the statement, "The outer corners of the head may be formed with

bevels 18 and the pressure employed in so forming the corners may flow the metal of the head to entirely form the triangular projections 18, or to cause them to extend further," and a person of ordinary skill in the art would know that the use of a beveled die for this purpose is necessary. The appellant, because of the use of the word "may," refers disparagingly to this statement as "conjectural." However, it seems to us that, although not claimed, it is about as clear a disclosure of how the desired result is to be obtained as anything could be.

It is to be remembered that the article of the application, with its weld projections, is old, and an overall consideration of the rejected claims strongly suggests that the invention, if any, resides in providing tools of the proper form to produce such an article. Given the task of producing the nut of Almdale's Figs. 2 and 3 by die pressing, it would be well within the capabilities of any diemakers skilled in the art to make dies which would produce the desired article.

After all, a die is substantially a mold or counterpart for the article desired.

We hold that the Board made no error in affirming the Examiner's rejection of claims 22, 24, 25 and 26.

As to the article claims, these were all rejected by the Examiner, and his action was not reversed by the Board. They are all product by process claims and are all for a fully anticipated product. Of course, those article claims which incorporate disallowed method claims (28, 30 and 31) are not patentable. [1] As to claims 27 and 29, which are dependent from allowed claims even if the process were new, that fact does not render a claim for an old product valid.

[2] We hold that the Board was correct in affirming the Examiner's rejection of the article claims.³

AFFIRMED.

SMITH, J., did not sit during the argument and did not participate in the decision.

³ Petition for rehearing filed by appellant was granted for the sole purpose of changing certain language in the original opinion of the court.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,400,301, R. A. Clark, Jr., Remote radio receiver tuning indicating apparatus; 2,333,330, H. A. Rahmel et al., System for determining listening habits of wave signal receiver users, filed Nov. 3, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1941, A. C. Nielson Company v. American Research Bureau, Inc. On defendant's motion, cause transferred to D.C., S.D.N.Y. Mar. 26, 1959.

2,491,925, A. Lazardo, Apparatus for electroplating; 2,040,025, same, Electroplating barrel, filed July 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1226, Hardwood Line Mfg. Co. v. The Stutz Company.

2,530,904, N. Brookes, Device for determining point at which pipe is stuck in a well; 2,530,300, P. W. Martin, Apparatus for determining movability of members in wells; 2,530,300, same, Device for determining relative movements of parts in wells, filed July 28, 1961, D.C., S.D. Tex. (Houston), Doc. 13/780, Phillip W. Martin et al. v. Houston Oil Field Material Company, Inc.

2,530,300. (See 2,530,308.)

2,530,904. (See 2,530,808.)

2,563,794, Rickes and Wood, Vitamin B₁₂; 2,763,302, same, Vitamin B₁₂-Active composition and process of preparing same, filed June 23, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 29/814, Merck & Co., Inc. v. Philadelphia Laboratories, Inc. et al. Same, filed July 21, 1961, D.C., S.D. Ohio (Dayton), Doc. 2626, Merck & Co., Inc. v. Durr Products, Inc. et al. Same, filed July 24, 1961, D.C. Conn. (New Haven), Doc. 8892, Merck & Co., Inc. v. H. L. Moore Drug Exchange, Incorporated et al. Same, filed March 29, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61-C-237, Merck & Co., Inc. v. Gyms Laboratories of America, Inc. Consent judgment; injunction granted Aug. 7, 1961.

2,622,064, A. W. Franklin, Method of making an electrical unit; 2,647,852, same, Design forming and attaching method, filed Jan. 18, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c92, Resources and Facilities Corporation v. Methode Manufacturing Corporation. Order dismissing cause with prejudice (notice July 27, 1961).

2,659,575, G. W. Gelsmann, Slide fastener closures for apparel; 2,654,003, same, Children's garments; Reg. No. 563,332 (MERRY MITES BY MERRY HULL AND DESIGN), Merry Hull & Company, Infants and children's coats, hats, vests, rompers, sweaters, booties, slippers, etc., filed July 31, 1961, D.C., S.D.N.Y., Doc. 61/2710, Merry Hull & Company v. Hi-Line Co., Inc. et al.

2,630,305, R. L. Miller, Weight proportioning means and method, filed May 6, 1959, D.C. Ariz. (Phoenix), Doc. 3057,

Robert L. Miller v. Arizona Sand and Rock Company, Inc. Cause dismissed July 19, 1961.

2,640,025. (See 2,491,925.)

2,647,852. (See 2,622,054.)

2,649,632, J. S. Kessler, Toggle type connecting assembly; 2,600,211, Kessler and Ebert, Adjustable toggle-type connecting assemblies, filed July 21, 1961, D.C., E.D. Wis. (Milwaukee), Doc. 61-C-181, Ladish Company v. G. & H. Products Co., Inc.

2,653,370, H. P. Hoopes, Ejection molding apparatus, filed July 27, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/082, Fibreboard Paper Products v. Mundet Cork Corporation.

2,654,003. (See 2,629,875.)

2,667,859, Murray and Brethaupt, Cattle and hog applicator; 2,765,778, C. Kramer, Suspended rubbing type animal insecticide applicator, filed Aug. 3, 1960, D.C. Kan. (Kansas City), Doc. KC-1427, Carl Kramer v. M. V. Welsh et al. Stipulation and order of dismissal of complaint for infringement of Patent No. 2,765,775 with prejudice and dismissing counterclaim for invalidity of said patent and counterclaim for infringement of Patent No. 2,687,859 without prejudice July 10, 1961.

2,703,302. (See 2,563,794.)

2,710,600, S. Coleman, Battery hold-down frame of synthetic rubber resin material, filed Oct. 14, 1957, D.C., N.D. Ill. (Chicago), Doc. 57c1698, Van Brode Milling Co., Inc. v. Alice Stone et al. Defendants enjoined (notice July 28, 1961).

2,716,400, E. A. Thesieres, Loose-leaf binder, filed June 24, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c997, Ernest A. Thesieres v. Loose Leaf Metals Co. et al. Order dismissing suit without prejudice (notice July 27, 1961).

2,765,775. (See 2,667,857.)

2,775,294, G. Schwank, Radiation burners; 2,870,830, same, Gas burners, filed July 21, 1961, D.C. Minn. (Duluth), Doc. 5/61/51, American Infra-Red Co., Inc. et al. v. Lambert Industries, Inc.

2,784,067, A. Rexroth, Apparatus for shooting material into cupolas, filed July 25, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/469, Alfred Rexroth v. Bearden Sales & Eng. Co. et al.

2,795,208, Berry and Wells, Bag, filed July 24, 1961, D.C., S.D.N.Y., Doc. 61/2608, Morris J. Berry et al. v. Nappe-Smith Mfg. Corp.

2,795,677, S. Slater, Electrical wiring device, filed July 25, 1961, D.C., S.D.N.Y., Doc. 61/2624, Slater Electric Inc. v. General Electric Company.

2,818,963, H. C. Warren, Automatic control circuits, filed July 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1231, Ten-top Limited v. Tigerman Engineering Company.

2,833,850. (See 2,439,201.)

2,860,211. (See 2,649,632.)

2,870,830. (See 2,775,294.)

2,882,243, R. M. Milton, Molecular sieve absorbents; 2,882,244, same, filed May 13, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c752, Union Carbide Corporation v. W. R. Grace & Co., et al. Dismissed by stipulation and order Oct. 14, 1960.

2,882,244. (See 2,882,243.)

2,949,978, J. H. Halstead, Vehicle lifting apparatus; 2,956,043, same, Automatic safety leg, filed July 24, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/074, John H. Halstead v. Globe Hoist Company.

2,956,043. (See 2,949,978.)

2,958,555, Martin and Abel, Copper and iron containing scale

removal from ferrous metal, filed June 22, 1961, D.C., E.D. Ill. (Chicago), Doc. 1875-D, The Dow Chemical Company v. Shamrock Chemical Service Incorporated. Order holding patent valid and infringed; injunction granted; dismissed by stipulation without prejudice July 26, 1961. Same, filed same, D.C. Del. (Wilmington), Doc. 2350, The Dow Chemical Company v. Shamrock Chemical Service Incorporated. Decree as above.

2,964,850, M. A. Herman, Universal style gage, filed July 25, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/468, Martin A. Herman v. Shepard et al.

2,965,906, R. G. Kershaw, Ballast distributing apparatus for railroads, filed July 26, 1961, D.C., W.D. Mich. (Grand Rapids), Doc. 4137, Kershaw Manufacturing Company, Inc. v. Kalamazoo Manufacturing Company.

Re. 24,441 (of 2,800,942), Parker and Brazil, Apparatus for performing multiple metal working operations of pipe, filed Jan. 14, 1958, D.C., S.D. Tex. (Houston), Doc. 11/438, J. R. Parker et al. v. Brown & Root, Inc. et al. Decree holding defendants have infringed July 28, 1961.

REISSUES

SEPTEMBER 12, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,035

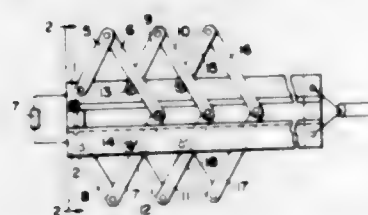
APERIODIC DIRECTIVE ANTENNA

Andrew Alford, Winchester, Mass.

(299 Atlantic Ave., Boston, Mass.)

Original No. 2,910,694, dated Oct. 27, 1959, Ser. No. 427,690, May 5, 1954. Application for reissue Oct. 21, 1960, Ser. No. 64,233

13 Claims. (Cl. 343-732)



3. An aperiodic directive antenna comprising a transmission line terminated in its characteristic impedance and formed of a pair of parallel conductors with a plurality of conducting links connected between said conductors in parallel to form loops with the plane of the loops positioned substantially parallel to the plane of the line and coupled thereto at spaced points along the transmission line, said loops being substantially $\lambda/2$ where λ is a wave length corresponding to a frequency in the band of reception or transmission and are spaced along the line at distances corresponding to less than $\lambda/4$ from one another.

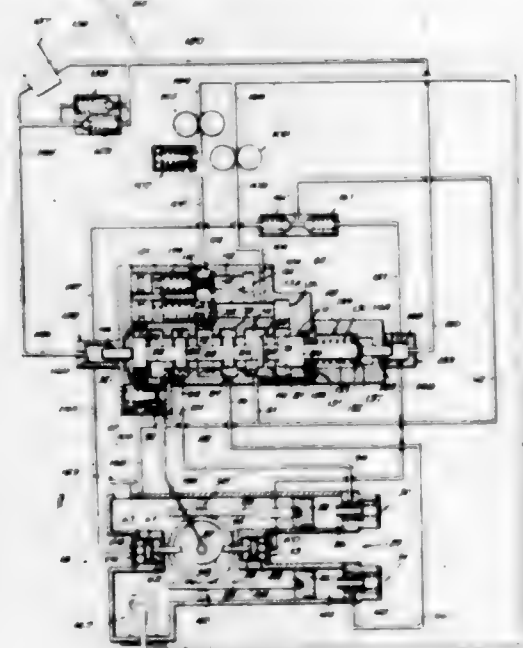
25,036

FLUID POWER STEERING SYSTEM

Verne P. Donner, Palatine, and William W. Henning, Hinsdale, Ill., and George S. Allin, Jr., Green Bay, Wis., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Original No. 2,917,125, dated Dec. 15, 1959, Ser. No. 653,802, Apr. 19, 1957. Application for reissue Apr. 24, 1961, Ser. No. 105,246

9 Claims. (Cl. 180-79.2)



9. For a vehicle of the kind described having a two-wheel tractor pivotally connected to a trailer, said vehi-

cle having a fluid power steering system capable of angularly displacing said tractor with respect to said trailer, said steering system consisting of a first rack member and a second rack member disposed in opposed relation on said tractor and a pinion gear connected to said trailer meshed in steering engaging relation, a first ram connected to said first rack member and a second ram connected to said second rack member in operative relation, a source of fluid pressure on said tractor, a fluid working circuit consisting of a servo-motor operated control valve and fluid servo-motor therefor interposed operatively between said source and said rams for controlling the angular displacement between said tractor and said trailer, and a fluid control circuit having a manually operated fluid displacement pump for energizing said servo-motor; a follow-up means for moving said control valve from an operating position to a neutral position when a predetermined angular displacement between said tractor and said trailer is reached comprising a cam disposed on said pinion gear in secured relation, a servo-pump having a first cylinder and a second cylinder mounted in opposed relation on said tractor, said cylinders being positioned in operative relation with said cam, said cylinders being communicatively connected to said fluid control circuit whereby said cylinders responsive to movement of said cam actuate said servo-motor of said control valve in a direction for moving said control valve from an operating position to a neutral position when said predetermined angular displacement between said tractor and said trailer is attained.

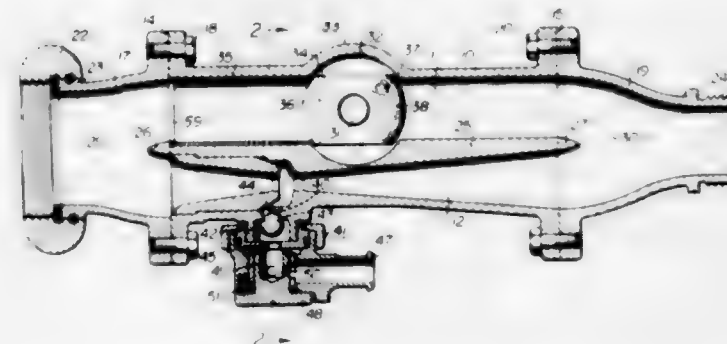
25,037

BYPASS PROPORTIONER

Jack H. Brazier, Smithville, Ohio, assignor to Akron Brass Manufacturing Co., Inc., Wooster, Ohio, a corporation of Ohio

Original No. 2,953,160, dated Sept. 20, 1960, Ser. No. 756,235, Aug. 20, 1958. Application for reissue Jan. 6, 1961, Ser. No. 81,206

4 Claims. (Cl. 137-599.1)



4. A fire fighting foam producing proportioner comprising, a tubular body having first and second spaced ends, said body having first and second generally parallel through passages, said body including a longitudinally extending web separating said first body passage from said second body passage, said body having a longitudinal axis extending through said web, said web extending along substantially the entire length of said body, said body having first and second outwardly directed flanges at said first and second ends respectively, a tubular inlet mem-

SEPTEMBER 12, 1961

U. S. PATENT OFFICE

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ber having inner walls defining an inlet passage terminating at an inlet opening, said inlet member having an outwardly directed flange, means connecting said first flange on said body and said flange on said inlet member to maintain the body and inlet member in fluid tight engagement, a tubular outlet member having inner walls defining an outlet passage terminating at an outlet opening, said outlet member having an outwardly directed flange, means connecting said second flange on said body and said flange on said outlet member to maintain the body and outlet member in fluid tight engagement, said inlet and outlet members including hose connection means, the axes of said inlet and outlet member passages and said body lying on a common line, the inlet and outlet openings each communicating directly with both of said body passages through said inlet and outlet passages respectively, said inlet member walls flaring smoothly and symmetrically outwardly with respect to the member axis from the inlet

opening, said outlet member walls flaring smoothly and symmetrically with respect to the member axis inwardly to the outlet opening, said first body passage being a venturi having a throat therein, said second body passage having substantially uniform cross sectional area from one end to the other, the total of the cross sectional area of said first body passage throat and the cross sectional area of said second body passage being greater than the cross sectional area of the outlet opening, the cross sectional area of the inlet opening being at least as great as the cross sectional area of the outlet opening, a shut off valve carried by the said body and disposed in said second body passage to open and close said second body passage, a foam agent inlet opening communicating with said first body passage, and a foam agent conducting assembly communicating with said foam agent inlet passage, said proportioner having a unidirectional flow from said inlet member to said outlet member when in use.

PLANT PATENTS

GRANTED SEPTEMBER 12, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,089

ROSE PLANT

Anthony Perry, Garden Grove, Calif., assignor to Great Western Rose Company, Inc., Pomona, Calif., a corporation of California

Filed Aug. 16, 1960, Ser. No. 50,044

1 Claim. (Cl. 47-61)

The new and distinct variety of rose plant of the class designated as hybrid tea roses, substantially as herein shown and described, characterized particularly as to novelty by the distinctive bright yellow color of the flowers, the extremely double petalage of the blooms, the medium size and abundance of the blooms throughout the growing season, the excellent petal substance and the lasting quality of the blooms, the long flower stems, and its vigorous upright growth and the heavy glossy foliage.

bunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a medium tall habit of growth, leathery and glossy foliage, a free-flowing habit, quick repetition of bloom, and a distinctive and uniform Empire Yellow general color tonality of the flowers throughout their life.

2,091

ROSE PLANT

Pedro Dot, Barcelona, Spain, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania

Filed Nov. 22, 1960, Ser. No. 71,108

1 Claim. (Cl. 47-61)

A new and distinct variety of rose plant of the miniature class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a low-growing compact habit of growth, superior floriferousness, attractive blooms of miniature size, a distinctive Mimosa Yellow general color tonality of the blooms, and ease of propagation by cuttings.

2,090

ROSE PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Nov. 15, 1960, Ser. No. 69,532

1 Claim. (Cl. 47-61)

A new and distinct variety of rose plant of the flori-

PATENTS

GRANTED SEPTEMBER 12, 1961

GENERAL AND MECHANICAL

2,999,241
STAPLING DEVICE
Henry J. Starr, 7 Sedgwick Ave., Darien, Conn.
Filed Jan. 29, 1959, Ser. No. 789,871
2 Claims. (Cl. 1-49)

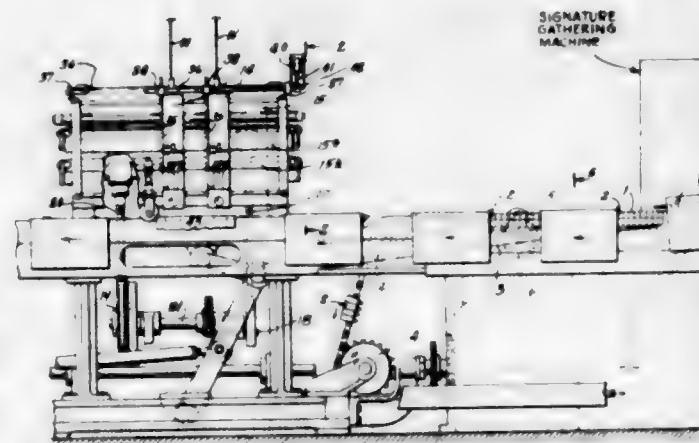


1. A stapler magazine having an elongated staple channel including a loading end adapted to receive a stick of staples, a spring biased staple pusher reciprocably movable in said channel and urging the stick of staples through said channel away from the loading end, a pair of spaced elongated flanges secured to and forming the upper wall of said channel to restrain upward movement of said stapler pusher when said stapler pusher is in said channel, a guide rod mounted at the loading end of said channel and disposed substantially perpendicular to the longitudinal axis of said staple channel, a detent in the forward end of said staple pusher, a slot in said staple pusher arranged in combination with said detent and said guide rod so that at the extreme loading end position of said staple pusher said detent engages said guide rod and said slot is in registry with said guide rod, said staple channel having suitably foreshortened side walls at the loading end thereof for the generally vertical depression of said staple pusher out of said channel and the simultaneous entry of said guide rod in said slot when said guide rod and said slot are in registry, and a notch in the end of said foreshortened walls for retaining said staple pusher out of said channel, there being sufficient play between said guide rod and said slot for the movement of said staple pusher into said notch, thereby facilitating the loading of said stapler magazine.

2,999,242
SADDLE STITCHED BOOK MAKING MACHINE
Clarence R. Young, Easton, Pa., and Robert D. Easton, Santa Ana, Calif., assignors to T. W. & C. B. Sheridan Co., New York, N.Y., a corporation of New York
Filed June 10, 1960, Ser. No. 35,358
2 Claims. (Cl. 1-105)

1. A saddle stitched book making machine including means for feeding books assembled for saddle stitching and in series and opened at least sufficiently to permit them to be bound by stitching, a book stitcher having a book stitching station fed by said feeding means and at least one automatic wire stitcher head and means for successively operating said head in cycles for stitching books successively fed to said station and said head having means for feeding from a wire supply a length of stitching wire and which is normally automatically activated in response to said head's operation during each cycle, means for detecting when said station fails to be fed with one of said books ready for stitching, and means automatically responsive to said detecting means for deactivating said wire feeding means while said head operates through its cycle so that said head may be operated through that cycle without stitching action, said wire feeding means com-

prising wire gripper jaws reciprocating in a wire feeding direction and return therefrom and having means for clamping them on the wire while moving to feed the wire and for unclamping these jaws to permit their return while said head operates to complete a cycle, and



said deactivating means comprising means actuated by said detecting means for holding said jaws unclamped while moving in their wire feeding direction and releasing them at least prior to their again moving in said wire feeding direction unless again actuated by said detecting means.

2,999,243
ARCHERY FINGER TABS
Joseph P. Gross, 3646A N. 19th St., and Elmer G. Perkle, 1514 N. 34th St., both of Milwaukee, Wis.
Filed Sept. 25, 1959, Ser. No. 842,444
2 Claims. (Cl. 2-21)



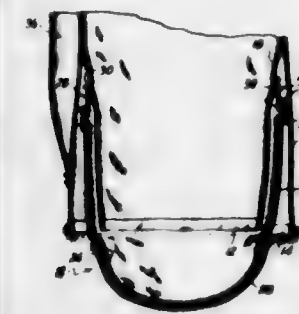
1. An archery finger tab comprising: a first piece having an inner end portion with a finger hole extending transversely therethrough and an enlarged outer portion having a slot therein through which an arrow shaft may be projected; an exterior piece superposed upon and secured to said first piece, said exterior piece having a transverse finger hole therethrough in registration with the finger hole in said first piece, said exterior piece being formed of a material having hair on and lying flat against its exposed surface, and said exterior piece being positioned with the hair filaments directed toward the outer end of the tab; and an inner piece superposed upon and secured to the opposite side of said first piece, said inner piece having a transverse finger hole therethrough in registration with the registering finger holes in said first and exterior pieces, said inner piece being formed of a material having hair on and lying flat against its exposed surface, and said inner piece being positioned with the hair filaments directed toward the tab inner end.

SEPTEMBER 12, 1961

GENERAL AND MECHANICAL

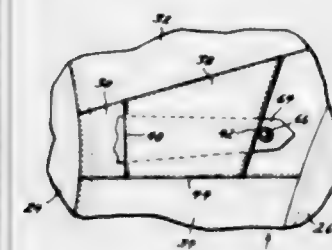
207

2,999,244
PARKA-BUNTING
Laura B. Wright, 419 4th Ave., Fairbanks, Alaska
Filed Aug. 19, 1959, Ser. No. 834,750
1 Claim. (Cl. 2-69.5)



In a sleeved baby bunting, a body portion of a length to extend beyond the feet of an infant and comprising an outer ply of material and a lining therein throughout substantially the entire area of said body portion, said lining being free of securement to said outer ply in the lower regions of said body portion, a closure for the bottom of said body portion in the form of a bag, the periphery of said closure extending upwardly between said outer ply and said lining a substantial distance upwardly from the bottom edge of said body portion and lining, and means for removably securing said closure to the outer face of said lining throughout its entire periphery and at a level upwardly from the bottom edges of said body portion and said lining.

2,999,245
SHIRT
Bernard Lippman, 180 Madison Ave., New York 16, N.Y.
Filed Dec. 30, 1958, Ser. No. 783,808
2 Claims. (Cl. 2-115)



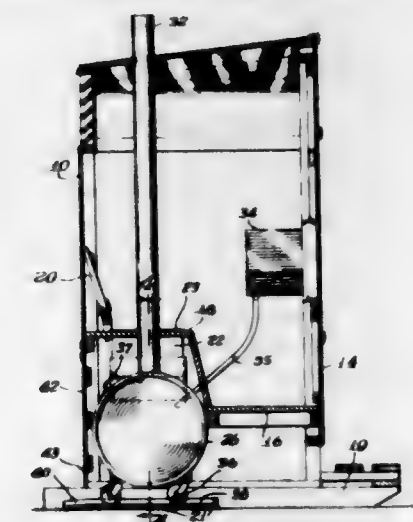
1. A short comprising a body, a yoke extending between a collar and a sleeve portion on said body, a yoke piece intermediate the collar and the sleeve portion, said yoke piece having a length less than the distance between the collar and the sleeve portion, means securing the edges of said yoke piece to a juxtaposed ply of said yoke except for two portions where the yoke piece is not joined to said juxtaposed ply, at least one of said two portions where said yoke piece is not joined to said juxtaposed ply having a length less than the width of said yoke piece, said two portions defining an aperture intermediate said yoke piece and juxtaposed ply adjacent to and spaced from the collar portion and an aperture intermediate said yoke piece and said juxtaposed ply adjacent to and spaced from the sleeve portion, said apertures permitting the space intermediate said yoke piece and juxtaposed ply to receive an epaulet strap, said securement means preventing free movement of an epaulet strap extending through said apertures, and said securement means joining said yoke piece to said juxtaposed ply in a manner so that said yoke piece lies substantially flat and is substantially indistinguishable in the absence of an epaulet strap.

2,999,246
WAISTBANDS FOR NETHER-GARMENTS
John G. Rowan, Clayton, Mo., assignor to Elder Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Nov. 24, 1958, Ser. No. 776,065
1 Claim. (Cl. 2-221)



A nether-garment including a tubular waistband having front and rear centerlines lying along and defining the crotch-plane of the nether garment, an outer band and an inner band, said outer and inner bands each being folded over inwardly both at the top and at the bottom and being mutually secured in the region of their folds, thereby defining a tunnel, a reinforcing member disposed between the top fold of the outer band and the bottom fold of the inner band and being secured within said folds, an elastic member disposed between said reinforcing band and said outer band and being secured in place in its inner end portion to said reinforcing and inner bands, the other or opposite end of said elastic member being free, said elastic member being attached at a position on the waistband which is approximately midway between the front and rear centerline of the waistband, said reinforcing band and said inner band each being provided with a common slit, said elastic member extending rearwardly between said reinforcing band and said outer band with its free end located a substantial distance forwardly of the common slit and being of such length as to be wholly within the waistband, fastening means on the free end of said elastic section projecting freely through said slit, said fastening means being of less width than said elastic member, and means secured to the waistband adjacent to the mid-portion of the rear of said waistband for engagement with the fastening means of said elastic section when said section is stretched.

2,999,247
PORTABLE TOILET OR THE LIKE
James M. Kulka, 1623 S. Jefferson St., Chicago, Ill.
Filed Oct. 13, 1959, Ser. No. 846,135
3 Claims. (Cl. 4-119)



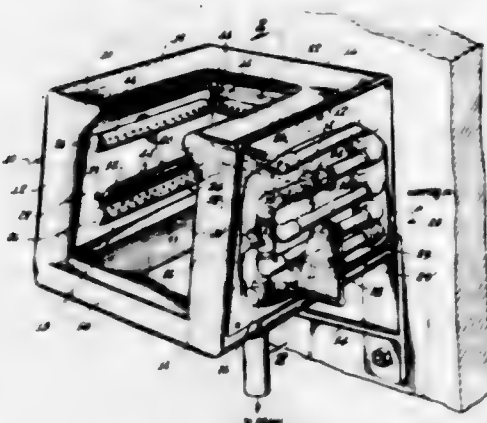
1. A toilet unit providing improved sanitation and servicing facility, said unit comprising a housing having a floor, a front wall with an entrance door, a rear wall and a raised toilet seat platform along the inner side of said rear wall, said platform enclosing a chamber within and above the floor of said housing, said platform hav-

ing a horizontal portion in which is placed a toilet seat opening and a vent pipe opening, the rear wall of said housing having an openable panel covering said chamber, spaced U-shaped guide tracks mounted on the floor of said housing and extending from the front of said chamber out beyond the rear of said housing and terminating with flared mouths at a point level with the ground, a large drum-like tank having a generally cylindrical bottom and a top fitting closely beneath said horizontal platform portion, the top of said tank having a flanged opening corresponding to said toilet seat opening and a small opening corresponding to said vent opening, four caster wheels mounted respectively near each end of the tank on the underside thereof to support its bottom horizontally just above the ground, said wheels fitting said tracks to roll said tank sideways into said housing chamber, a movable vent pipe extending through the top of said housing down through said platform to said tank, and a movable collar flange extending from said toilet seat opening to the flanged opening of said tank, whereby said tank when filled can easily be removed from said housing for servicing.

2,999,248

EMERGENCY WASH FACILITY

Hugh H. Logan, Pasadena, James F. Nelson, Woodland Hills, Elmer F. Dixon, La Crescenta, and Joe A. Taube, Burbank, Calif., assignors to Logan Emergency Showers, Inc., Glendale, Calif., a corporation of California
Filed Dec. 28, 1959, Ser. No. 862,170
2 Claims. (Cl. 4-166)



1. An emergency head wash fountain comprising a bowl having side walls and a rear wall defining a washing space which is open at the top and front of the bowl to receive the head of a user, the upper portions of said walls having lips which incline inwardly and upwardly and define the top opening of the bowl, a pair of vertically spaced, horizontally elongated spray heads on each wall below the lip of the respective walls so as to be shielded against contaminants dropping from above, the upper spray heads being arranged to discharge a plurality of sprays into said space to wash the sides, top and back of the user's scalp and head and the lower spray heads being arranged to direct a plurality of sprays into said space to wash the user's face, and an inclined baffle mounted on each wall between the adjacent vertically spaced pair of spray heads to shield the lower spray heads against contaminants and liquid dropping from above.

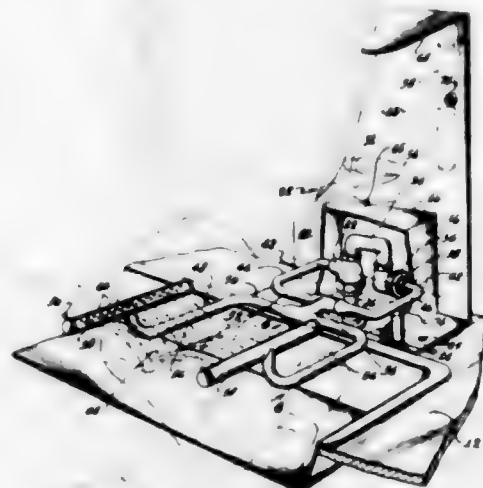
2,999,249

RETRACTABLE EMERGENCY WASH FACILITY

Hugh H. Logan, Pasadena, Kenneth G. Doty, La Canada, and James F. Nelson, Woodland Hills, Calif., assignors to Logan Emergency Showers, Inc., Glendale, Calif., a corporation of California
Filed Dec. 28, 1959, Ser. No. 862,177
4 Claims. (Cl. 4-166)

1. An emergency wash fountain comprising a base to be attached to a supporting surface, a valve mounted on

said base including a rotatable valve stem, a liquid spray head means fixed to said valve stem whereby the latter is rotated to open and close the valve by swinging of the spray head means, the spray head means occupying a given retracted position when the valve is closed and a given washing position when the valve is open, said valve having an inlet for connection to a source of liquid under

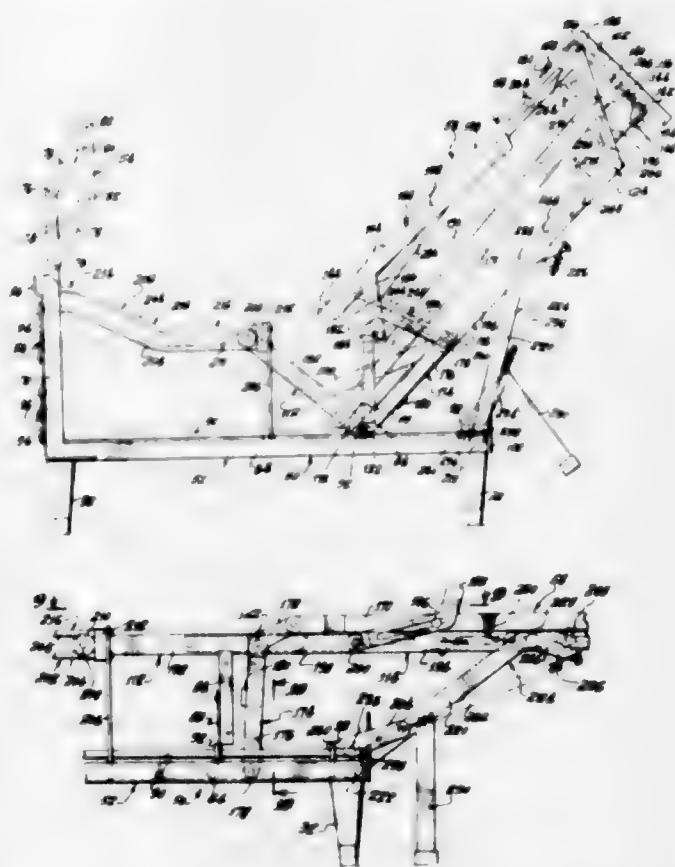


pressure and an outlet, and means connecting the spray to the valve outlet for flow of liquid from the valve to the spray head means including a liquid-tight swivel joint having its swivel axis coaxial with the turning axis of the valve stem for accommodating said swinging of the spray head means between said retracted and washing positions.

2,999,250

CHAIR BED

Alfred Rea, 2230 Charnwood Ave., Los Angeles 38, Calif.
Filed Mar. 25, 1957, Ser. No. 648,368
1 Claim. (Cl. 5-13)



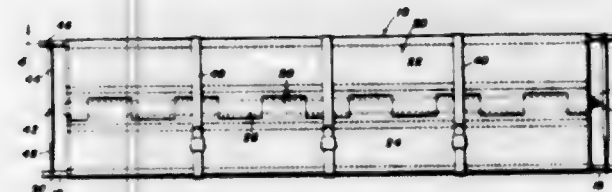
In a chair bed, the combination of: a main frame; a folding bed frame comprising a series of sections and a series of pivot means each interconnecting two of said

sections; leg means pivotally connected to said bed frame by one of said pivot means and engageable with said main frame; and means responsive to unfolding of said bed frame for moving said leg means into engagement with said main frame, including means interconnecting said leg means and one of said sections of said bed frame which is spaced from the sections thereof that are pivotally interconnected by said one pivot means.

2,999,251

FOLDABLE STRETCHER

Carl D. Hedges, 1806 E. 3rd St., Pueblo, Colo.
Filed Dec. 16, 1958, Ser. No. 780,814
3 Claims. (Cl. 5-82)

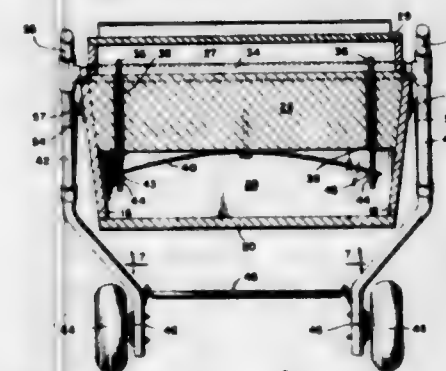


1. A stretcher comprising an elongated main body panel of flexible material having a hem along each edge thereof, a side rail received in each hem, said body panel being constructed of two longitudinally disposed sections having interdigitated loops on the adjacent edges, and a removable metal strap insert threaded through said loops for retaining the longitudinal sections in attached relation thereby permitting the stretcher to be separated along its longitudinal center line for assisting in the removal of an injured person from the stretcher, each loop on the longitudinal sections of the main body panel being provided with a rigid reinforcement hollow member of loop shaped configuration for receiving said strap, hand grips on the ends of the side rails, and a tightener extending between the hand grips, said tightener including a pair of telescopic sections each having an outwardly facing U-shaped yoke on the ends for engaging the side rails, and a spring urging the telescopic sections outwardly thereby spreading the side rails apart and tensioning the main body panel.

2,999,252

SELF CONTAINED BOAT TRAILER

Harold W. Norrby, 5522 Kenwood Place, Seattle 3, Wash.
Filed Aug. 11, 1958, Ser. No. 754,482
5 Claims. (Cl. 9-1)

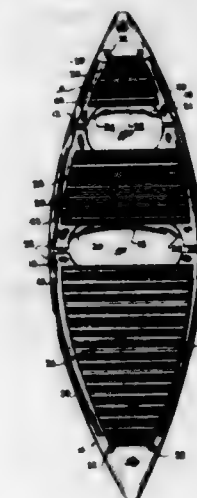


1. A self-contained boat trailer, comprising: a boat hull having a transverse beam fixedly supported adjacent the stern in spaced relation above the bottom, an axle superposed along said beam and extending beyond the sides of the hull, a pair of U-bolts straddling said axle and beam, one on each side of the longitudinal median of said boat, passing downward to a point spaced from the underside of said beam, a leaf spring having each end connected to the lower extremities of one of said U-bolts in spaced relation to said beam underside and intermediately bearing on the beam underside, a strut

2,999,253

CONVERTIBLE CANOE AND KAYAK

Arnold S. Lewis, 200 Riverside Drive, New York, N.Y.
Filed Aug. 25, 1958, Ser. No. 756,808
1 Claim. (Cl. 9-2)



A collapsible watercraft comprising a hull having an open top and inflatable side walls with slide fastener members disposed at the top of the side walls, a plurality of panels having edges terminating in end flaps forming concave arcuate end portions, slide fastener members secured along the panel edges terminating short of the flaps and cooperating with said fastener members at the side walls for connecting the panels to the side walls of the hull to form a deck and for connecting the panels in spaced end-to-end relationship to define openings in the deck for occupants of the craft, and latch means for connecting the flaps to the side walls and adapted to release such flaps to expand said openings and facilitate entrance and exit of the occupants of the craft leaving the panels and slide fastener undisturbed.

2,999,254

BUOYANT BOAT CONSTRUCTION

Henry J. Nolde, 1308 Alki Ave., Seattle, Wash.
Filed Feb. 24, 1959, Ser. No. 794,945
2 Claims. (Cl. 9-3)



1. A metal boat, comprising: a hull having a bottom with integral sides, a stern and a bow; a floor spaced apart above said bottom and on its periphery integrally joined with the hull to form a bottom buoyancy chamber; said floor near the stern of the boat rising to form a stern-transverse wall, said stern-transverse wall bending in the direction of the stern to form a stern-transverse seat; said floor near the bow rising to form a bow-transverse wall and said bow-transverse wall bending toward the bow to form a bow-transverse seat, a transverse bulkhead in the bow integrally joined with the upper surface of the floor integrally joined with the hull sides; a deck in the bow peripherally integral with the hull and the transverse bulkhead to form a bow buoyancy chamber; each of the sides

of the hull bending interiorly over into a gunwale overlying the sides of said floor, a section of the gunwale bending over into an interior wall spaced from the hull side and extending to and joining with the floor; a pair of transverse walls integral with each said interior wall and the related hull side to form a gunwale buoyancy chamber at each side of the hull above an edge portion of said bottom buoyancy chamber; an interior wall extending beyond said transverse walls at the floor to form a lower interior wall and with the floor, the adjacent side, the transverse wall, and the gunwale defining a locker above the floor; said boat having a notched transom to receive an outboard motor; and wall means associated with said stern-transverse seat beneath and to the rear thereof to define an outboard motor compartment forward of the transom.

2,999,255

LIFE PRESERVER

Claude O. Lanciano, Jr., Coke, Va., and Peter J. Zannoni, Grantsville, W. Va., assignors to Rubber Fabricators, Inc., Grantsville, W. Va., a corporation of New Jersey
Filed Aug. 27, 1958, Ser. No. 757,554
4 Claims. (Cl. 9—338)



2. An inflatable life preserver device adapted to be secured to a person's body, for buoying purposes, comprising elongated front and rear panel members of generally rectangular outline secured together in air-tight relation at the bottom and side marginal edges and open at the top thereof to thus define an elongated air holding body portion, a yoke member connected to the top of the panel members as a continued planar extension thereof, said yoke member being C-shaped and inflatable and being airtight marginally except at the portion thereof opposite and remote from the ends thereof, and being in open communication, at said opposite and remote portion, with the air holding body portion so defined by said front and rear panel members, and defining a unitary collar for the top of said body portion, means connected to the said device to inflate the same, and members secured to the interior of and intermediate the front and rear panel members and normally expanded to maintain the form of the body portion and being compressible on application of force and then returning to normal expanded form.

2,999,256

SHOE FITTING

Howard V. S. Mott, Stuart, Okla.
(Southwest City, Mo.)

Filed Nov. 27, 1959, Ser. No. 855,943
7 Claims. (Cl. 12—142)

1. That improvement in methods of manufacturing shoes on a series of lasts of varying arch widths from a last on which the following points have been established, (1) the point of tangency at the medial aspect at the side of the head of the first metatarsal bone with a line parallel with the medial foot border, (2) the point of

tangency at the lateral side of the head of the fifth metatarsal bone with a line parallel with the first line, drawing a line between the points of tangency of the first and fifth metatarsal bones to establish an arch width dimension of a foot, providing a last having said arch width

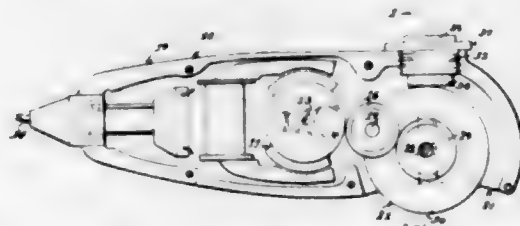


dimension and forming from the selected last a series of lasts of varying arch widths, constructing a series of shoes on said lasts which vary in arch widths, and designating the widths of each member of the series of shoes by the distance between said tangent points.

2,999,257

SHINING AND POLISHING DEVICE

Raymond Estrada, 2609 Ivy Ave., Rapid City, S. Dak.
Filed Feb. 3, 1959, Ser. No. 790,874
1 Claim. (Cl. 15—24)



In a shining and polishing device, a hollow housing, a motor arranged in said housing and adapted to be connected to a source of electrical energy, a drive shaft driven by said motor, a wheel mounted on said shaft, an idler journaled in said housing and frictionally engaging said wheel, a pair of spaced parallel opposed support portions arranged in said housing, spring members mounted in said support portions and including offset bearing portions and retaining lips, a driven shaft having its ends engaging said bearing portions, a sleeve mounted on said driven shaft, bristles extending outwardly from said sleeve, a circular collar mounted on said sleeve and frictionally engaging said idler, said driven shaft being removably secured by said bearing portions, a bushing threadably engaging said housing, a plug adjustably mounted in said bushing, a polish stick connected to said plug and mounted for movement towards and away from said bristles, said plug being provided with diametrically opposed slots, and spring members mounted in said slots and engaging said bushing, there being an opening in said housing, and portions of the bristles extending through said last named opening.

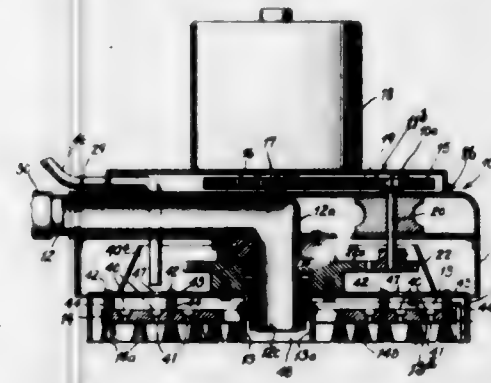
2,999,258

SURFACE-CLEANING AND RUG-SHAMPOOING MACHINES

Edward Berberian, 759 Hudson Blvd., Jersey City, N.J.
Filed Oct. 24, 1958, Ser. No. 769,465
5 Claims. (Cl. 15—50)

1. A surface-cleaning and rug-shampooing machine which comprises a casing having a downwardly extending

off-take pipe open at its lower end, a horizontal annular disc rotatably mounted on said off-take pipe and having a downwardly open, vertical, cylindrical squeegee wall depending from its outer periphery, a pair of transverse squeegees on diametrically opposite sides of said off-take pipe below said horizontal disc and extending from said off-take pipe in a curved path tangent to said off-take pipe to a position adjacent to said cylindrical squeegee wall, a pair of brushes in the space within said cylindrical

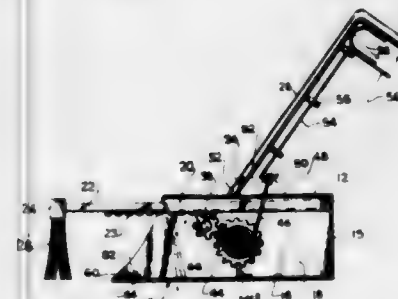


squeegee wall on opposite sides of said transverse squeegees to brush on a surface to be cleaned, and supporting springs between said horizontal disc and said brushes and transverse squeegees whereby said casing and said horizontal disc are spring supported on said brushes and said transverse squeegees to permit tilting of said casing and said horizontal disc relative to the surface on which said brushes and said transverse squeegees are supported.

2,999,259

COMBINATION DUST PAN AND BRUSH

Sheldon Polner, 3076 36th St., Astoria, N.Y.
Filed Feb. 19, 1960, Ser. No. 9,907
3 Claims. (Cl. 15—104.8)



3. A dustpan assembly, comprising a generally rectangular pan having a flat top, bottom, sides and rear and with an open front, a brush retractably mounted at said open front and normally extending forwardly thereof, a handle mounted on the pan, means operatively connecting said handle and brush for retracting the brush into the pan and extending the brush therefrom, said means including a finger grip, said handle including a hand grip, and spring means biasing the finger and hand grips apart, whereby the brush is retracted into the pan when the finger and hand grips are squeezed together, there being a scraper bar disposed on said bottom of the pan near the open front for scraping debris from the brush and for retaining the debris in the pan.

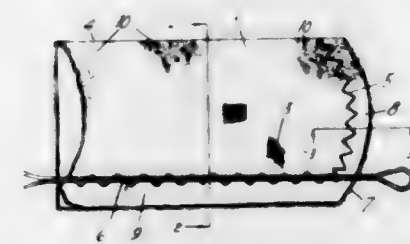
2,999,260

TOOTH CLEANING DEVICE

Helen R. King, 1033 Wilshire Blvd., Kalamazoo, Mich.
Filed Oct. 5, 1959, Ser. No. 844,351
2 Claims. (Cl. 15—118)

2. A tooth cleaning device comprising a body member open at one end to receive a finger of the user, said body member being formed of a section of loosely woven fabric lappingly folded upon itself, the lapping sections

of the folded fabric being transversely stitched across one end thereof constituting the outer end of the body member and along the side edge thereof opposed to the fold of the fabric and spaced therefrom to receive a finger, and a strand of dental floss folded upon itself to

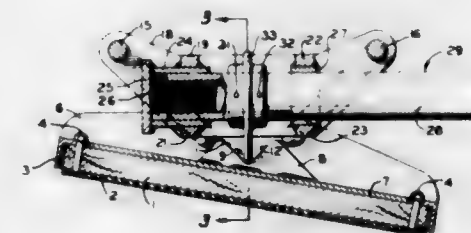


provide a loop, the strand being removably secured to the body by the said stitching extending longitudinally of the body member and being positioned with the looped end thereof projecting beyond the outer end of the body member for grasping.

2,999,261

BULL FLOAT

Sidney D. Lapham, R.F.D. 2, Box 316, Martinez, Calif.
Filed Oct. 10, 1955, Ser. No. 539,310
3 Claims. (Cl. 15—235.8)



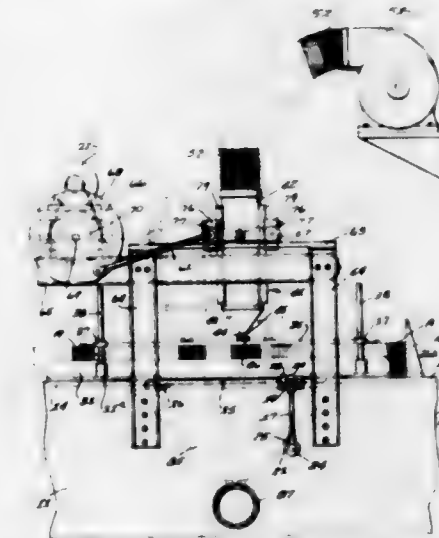
1. A bull float comprising: a shoe and rocker interconnected by a pair of spaced upwardly diverging links; a handle threadably connected to said rocker transversely of said shoe; an upwardly extending web fixed to said shoe in the vertical plane of said handle, said web being formed with a V-shaped cam follower track; and a circular cam follower mounted on said handle eccentrically thereof and for rotation within the confines of said notch.

2,999,262

APPARATUS FOR CLEANING CORRUGATED PARTITION STRIPS

Mervyn M. Jenkins and Jay R. Macy, Waco, Tex., assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Apr. 15, 1958, Ser. No. 728,644
11 Claims. (Cl. 15—307)



1. In combination, a horizontal table surface having end sections and a perforate intermediate section, side

guide members disposed parallel and longitudinally of said table surface and spaced apart laterally thereon to receive and guide sawed and slotted corrugated strips being delivered to said table, means for moving said strips upright on edge in side-by-side relationship and through said parallel side guide members, an upright air nozzle assembly defining at its lower end a nozzle opening having a span effective for projecting a stream of air downwardly along the dimension of the strips extending between said side guide members as they are fed therethrough, a source of forced air, means operatively connecting said air source to said nozzle assembly, movable carriage means mounting said nozzle assembly so that its nozzle opening overlies said strips on the perforate section of the table surface, said carriage means being adapted for reciprocating movement, and power means operatively connected to reciprocate said carriage means parallel to the table surface for moving the nozzle assembly in oscillating fashion, thereby directing the forced air across surfaces of the underlying strips for cleaning them of loose particles.

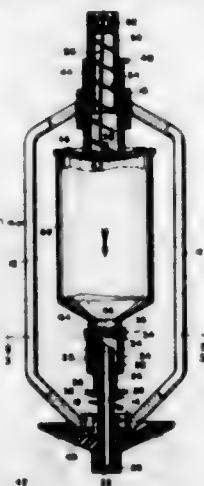
2,999,263

VACUUM DANDRUFF HAIR BRUSH
John Raymond Smith, Box 481, Rockingham, N.C.
Filed Aug. 10, 1959, Ser. No. 832,761
1 Claim. (Cl. 15-344)



A combination hair brush and dandruff removing vacuum device comprising a brush head having bristles around a major portion of the periphery thereof, said brush head being provided with an enlarged fan receiving section, said brush head being provided with an air passageway from the surface supporting said bristles within the periphery of said bristles and extending to said enlarged fan receiving section, said brush head being provided with an enlarged transverse passage in communication with said air passage and extending to the exterior of said brush head, said transverse passage being closed at one end, means to selectively open and close the other end of said transverse passage, said air passage being appreciably enlarged from said transverse passage to said fan receiving section and being provided with a filter receiving seat, a filter removably mounted on said filter receiving seat in said enlarged portion of said air passage and removable through the fan receiving section, a motor support detachably connected to said brush head having a fan receiving section cooperating with the fan receiving section of said brush head to provide a fan receiving chamber therebetween, a motor, means to mount the motor in a motor receiving recess in said motor support, said motor support having a removable section to provide access to the motor receiving recess, said motor having a shaft extending into the fan receiving chamber, a fan mounted on said shaft within said fan receiving chamber, an air outlet means in said fan receiving chamber through said enlarged fan receiving section of said brush head and said cooperating section of said motor support whereby filtered air will be forced from the fan receiving chamber drawing dandruff and loose hair into said filter and ready cleaning thereof can be obtained by separation of the motor support from the brush head providing for ready removal of the filter element and providing for complete cleaning through the transverse passage.

2,999,264
MEANS FOR UNBLOCKING PIPES
Donald J. Stearns, 33 E. 1 St., Chula Vista, Calif.
Filed Apr. 4, 1960, Ser. No. 19,875
5 Claims. (Cl. 15-406)



1. Means for unblocking pipes, comprising: a rigid frame having a gas conducting spout at one end thereof and a pipe-engaging sealing member on said spout; a cup member axially slidably mounted on said spout; a manually operable plunger assembly having a pressure pad resiliently biased to engage said container and hold the same between said pressure pad and said cup member; said spout having a bayonet point adjacent to said cup and extending toward said plunger assembly to pierce said container when said plunger assembly is moved toward said bayonet point.

2,999,265
SATURATED PAD FOR CLEANSING AND DEODORIZING
Jerome J. Duane, Westport, Conn., and Dorothy B. Tarnoff, New York, N.Y., assignors, by mesne assignments, to Dorothy B. Tarnoff, New York, N.Y.
Filed Sept. 23, 1957, Ser. No. 685,601
4 Claims. (Cl. 15-506)

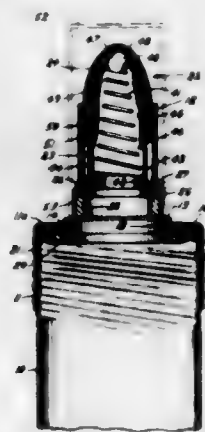


1. A cleansing and deodorizing product for cleansing and deodorizing the female pelvic region comprising a readily disposable fibrous pad saturated with a liquid composition having a pH of from 5 to 6.5, said composition containing at least 86% by weight of water, from 0.1% to 2% by weight of a bacteriostatic agent and from 0.05% to 2% by weight of a surface active agent which will not inactivate the bacteriostatic agent and which composition, when applied to the female pelvic region, is not injurious thereto and will not leave any deposits thereon.

2,999,266
MARKING DEVICES
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedy Chemical Products, Inc., Richmond Hill, N.Y.
Filed Aug. 19, 1959, Ser. No. 834,774
3 Claims. (Cl. 15-566)

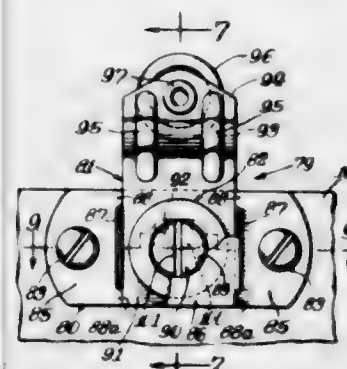
1. A marking device comprising an ink container having a threaded open end portion, a screw cap releasably

engaging said threaded end and having an end wall provided with a central opening, a tubular housing open at its free outer end and mounted with an inner end portion engaged in said opening in the end wall of the cap, a tubular spout coaxially arranged in the housing and having an annular shoulder formed between an inner end portion which is of relatively greater diameter and an outer end portion which is of relatively reduced diameter and has a rounded converging tip extending through and outwardly beyond the outer end of said housing, said



spout having a valve controlled ink feeding opening through its rounded tip end, and a flexible porous applicator having a marking portion extending across said ink feeding opening and said valve and having skirt portions embracing said outer reduced end portion of the spout, a retaining ring encircling said skirt and slidably engaging opposed inner surface portions of said housing, and being arranged and adapted to releasably retain the inner annular edge portion of said skirt opposite said shoulder of the spout.

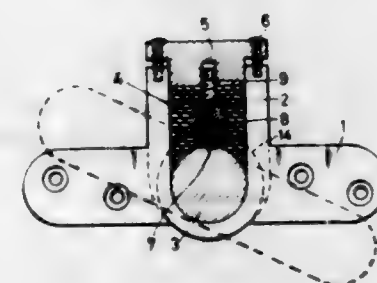
2,999,267
SLIDING DOOR HANGER ASSEMBLY
John G. Sterling, Crystal Lake, Ill., and George L. Dornbrock, Burlington, Wis., assignors to John Sterling Corporation, Richmond, Ill., a corporation of Illinois
Filed Aug. 7, 1959, Ser. No. 832,307
6 Claims. (Cl. 16-105)



1. In a hanger assembly adapted to support a door for movement along an overhead track, a mounting bracket having a platform portion and flange means offset therefrom whereby the same is adapted to be mounted to one face of the door with its said platform portion spaced outwardly of said face; a hanger bracket supporting track-engaging roller means and comprising a body portion disposed in the spacing between said platform portion and one door face and guided for rectilinear sliding movement parallel to the latter, adjustment means journaled for rotation between adjacent opposed faces of said body and platform portions, means providing driving connection of said adjustment means with said hanger bracket and arranged to rectilinearly drive the latter in response to rotation of said adjustment means,

means for rotating said adjustment means, and locking means selectively operable to effect relative movement of said body and platform portions to pinch said adjustment means between the said opposed faces thereof whereby said adjustment means and said hanger bracket are locked in selected positions.

2,999,268
FRICTION HINGE, ESPECIALLY FOR PIVOT WINDOWS
Einar Strandengen, Haugenstua (Grorud), Oslo, Norway, assignor to A/S Grorud Jernvarfabrik, Grorud, Oslo, Norway
Filed Aug. 25, 1959, Ser. No. 835,944
Claims priority, application Norway Sept. 1, 1958
4 Claims. (Cl. 16-141)

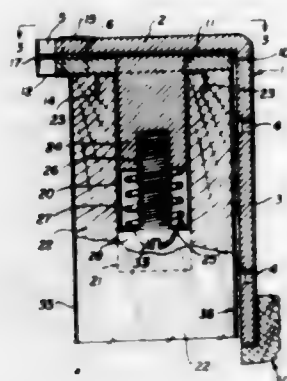


1. A friction hinge, especially for pivot windows which are pivotally mounted about a horizontal or vertical axis which extends preferably through the centre of gravity of the window, comprising a sash fitting, a cylindrical pivot pin secured to and projecting from the sash fitting, a frame fitting provided with a bearing housing for the pivot pin, said bearing housing including means secured to the frame fitting defining a U-shaped recess the bottom of which is semi-cylindrical and constitutes one bearing half engaging the pivot pin, a second bearing half comprising a friction block which is accommodated in the recess and is provided with a semi-cylindrical surface corresponding to and engaging the surface of the pivot pin, the friction block having straight sides slidably engaging the straight sides of the U-shaped recess and being supported and guided by the straight sides of the recess, a press block accommodated in the U-shaped recess on the side of the friction block opposite the pin for pressing the friction block against the cylindrical surface of the pin, and means for securing the press block to the bearing half having the U-shaped recess and for forcing the press block against the friction block and the latter in turn into frictional engagement with the pivot pin.

2,999,269
CABINET HINGE
Raymond Mellinger, Denver, Colo., assignor to Mellinger Fixtures Company, Inc., Denver, Colo., a corporation of Colorado
Filed Apr. 28, 1958, Ser. No. 731,442
3 Claims. (Cl. 16-149)

1. In a cabinet assembly including a cabinet body and a door arranged for selective mounting with either face exposed, the combination which comprises a set of door supporting hinges mounted to permit opening the door along a single edge regardless of which door face is out, each hinge set including an angle member mounted by means of one leg on opposite sides of a door opening on the cabinet assembly in position to receive a door therebetween, the other leg of each of said angle extending outwardly from the cabinet frame on which said first leg is attached, a pivot plate pivotally secured to each said other leg and each being pivotal through a substantial arc, there being a non-circular opening in each said plate, a plunger assembly mounted in opposite edges of the door adjacent

an edge, a plunger in each assembly extending beyond the door edge in which it is mounted, each plunger having a periphery of registering shape with the opening in each said plate, and spring means maintaining each said plunger

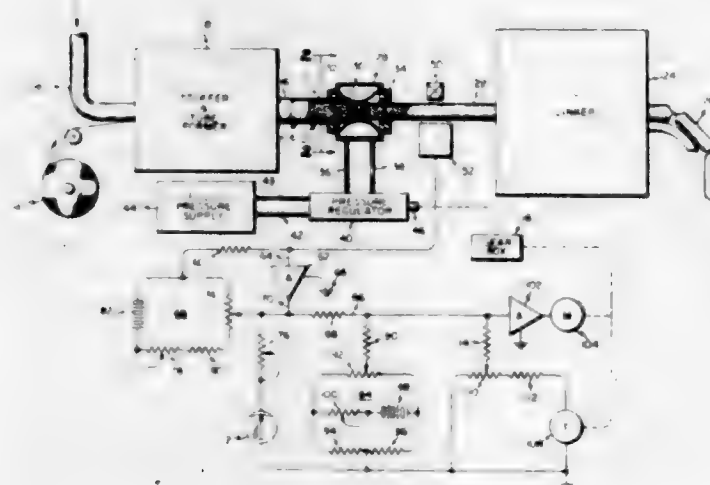


in extended position, whereby the door is mountable with either face exposed and the plungers temporarily support the door rigidly on the pivot plates for movement therewith.

2,999,270

EXTRUSION PACKAGING APPARATUS

Robert A. Knapp, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Sept. 29, 1958, Ser. No. 763,949
14 Claims. (Cl. 17-35)



1. An apparatus for producing sausages comprising a hollow tube through which sausage meat is extruded into a sausage casing mounted on said tube and being drawn thereoff by meat extruded from said tube to form a sausage, means for controlling the diameter of said sausage, a radiation source and detector mounted adjacent said diameter controlling means, and control means controlled by said detector and varying said diameter controlling means to maintain the weight per unit length of said sausage substantially constant.

2,999,271

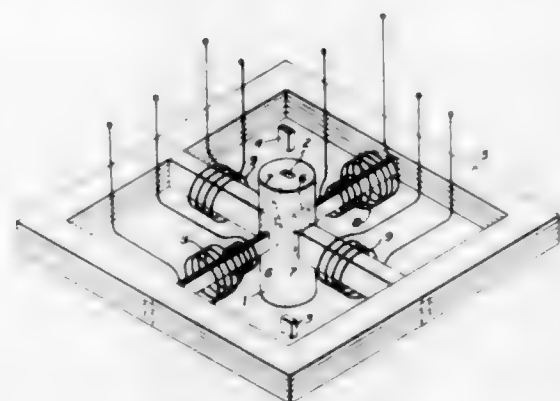
MAGNETIC MATERIAL

Richard B. Falk, Greenville, Gerald L. Hatinger, Edmore, and George D. Hooper, Greenville, Mich., assignors to General Electric Company, a corporation of New York
Filed Aug. 30, 1960, Ser. No. 52,796
7 Claims. (Cl. 18-16.5)

1. A process for orienting and compacting fine particle magnetic powder whose properties are derived from shape anisotropy, said process comprising simultaneously applying an alternating and direct current field to a quantity of said powder and compacting said powder while

said direct current field remains energized to form a compacted and highly oriented magnet structure.

5. A process for orienting and compacting fine particle magnetic powder whose properties are derived from shape anisotropy, said process comprising simultaneously applying an alternating and direct current field to a charge of said powder contained in a die cavity, said direct current field being at least 1400 gauss and said direct current field being greater than said alternating current field,



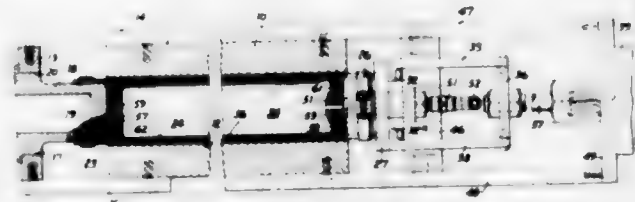
the bottom of said charge in said die cavity being from about 0.10 to about 0.385 inch below the bottom of the poles supplying said direct current field, the poles for supplying said direct and alternating current fields being at least twice the height of the powder charge, and compacting said powder while said direct current field remains energized to form a compacted magnet structure possessing a high degree of orientation in the direction of the direct current field.

2,999,272

MACHINE FOR FORMING PRE-STRESSED HOLLOW ARTICLES

Elmer P. Warnken, Cincinnati, Ohio, assignor, by mesne assignments, to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Original application Oct. 9, 1957, Ser. No. 689,144.
Divided and this application May 9, 1958, Ser. No. 734,238

2 Claims. (Cl. 18-19)



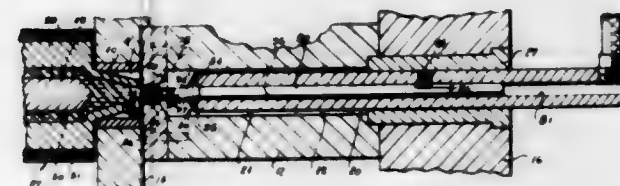
1. A machine for forming a prestressed hollow, tubular article which comprises an elongated mold body having an elongated mold bore therein, an elongated bladder inside the mold body, the outer diameter of the bladder being less than the interior diameter of the mold bore to form an annular space between the bladder and the mold bore for receiving a tubular, laminated, resin-impregnated preform with end portions of the preform projecting from opposite ends of the mold bore, clamp means for engaging the opposite end portions of the preform throughout the circumference thereof, means for moving at least one of the clamp means in a direction axially of the mold bore and of the preform to stress the walls of the preform in tension throughout the circumference thereof, means for injecting hydraulic fluid into the bladder to cause the wall of the bladder to engage the inner wall of the preform and urge the wall of the preform into engagement with the wall of the mold bore,

and means for heating the mold body to set the resin of the preform while the preform is prestressed both lengthwise and circumferentially.

2,999,273

APPARATUS FOR MOLDING HOLLOW PLASTIC ARTICLES

Erich Gronemeyer, Pompton Plains, and Samuel Cherba, Totowa, N.J., assignors to Peerless Tube Company, Bloomfield, N.J., a corporation of New Jersey
Filed Mar. 2, 1955, Ser. No. 491,727
6 Claims. (Cl. 18-30)

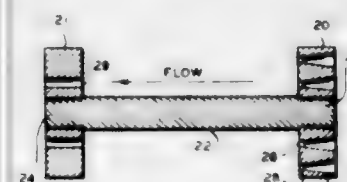


1. Apparatus for forming tubular plastic containers, which comprises: a mold having an elongated cavity therein, an elongated reciprocable core positioned in the mold cavity, said core having a diameter less than that of the mold cavity and, with the mold cavity, forming a container sidewall-defining space, the core having a free end located adjacent a first end of the mold cavity, the core being partially retractable to produce a charge-receiving space in the mold communicating with the sidewall-defining space, a passage in the first end of the mold centrally confronting the free end of the core, the core having a central pin on its free end which closes the passage when the core is advanced into the mold and provides an opening through the passage when the core is partially retracted, and means for alternately partially retracting the core from the mold and for advancing the core into the mold to close the passage and to compress the charge of plastic material in the charge-receiving space to force such plastic material to flow into the container sidewall-defining space.

2,999,274

DISPERSING SOLID ADDITIVES IN PLASTICS

Cecil J. Silas and John N. Scott, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,214
5 Claims. (Cl. 18-30)



1. An improved dispersion plug suitable for use in the nozzle of an injection molding machine to disperse pigment in a resinous thermoplastic polymer comprising a first perforated disk to be positioned upstream in said nozzle, said first disk containing a plurality of holes having a diameter of from 0.010 to 0.025 inch, each of said holes having an enlarged opening countersunk in one face of said first disk, a second perforated disk to be positioned downstream of said first disk in said nozzle, said second disk containing a plurality of holes having a diameter greater than the diameter of the holes in said first disk and in the range of 0.020 to 0.060 inch with a land length of from 0.1 to 0.5 inch, and a rod axially joining said first and second disks and spacing said disks apart.

2,999,275

MECHANICAL ORIENTATION OF MAGNETICALLY ANISOTROPIC PARTICLES

Walter S. Blume, Jr., Cincinnati, Ohio, assignor to Leyman Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed July 15, 1958, Ser. No. 748,705

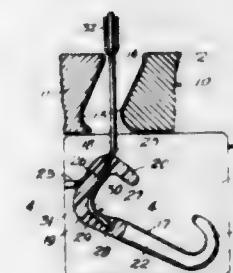
7 Claims. (Cl. 18-55)

1. A method of producing permanent magnet material, said method comprising, mixing anisotropic, substantially domain size particles of a permanent magnet material with a workable non-magnetic matrix material, and milling the resulting mixture between rolls into elongated form, whereby the preferred magnetic axes of said particles are aligned substantially perpendicularly to the surface of said elongated form, said permanent magnet material being adapted to be magnetized to form an anisotropic permanent magnet by applying to said material a magnetizing field which is directed perpendicularly to the surface of said material.

2,999,276

METHOD OF MOLDING PLASTIC TRAVELERS WITH WIRE INSERTS

Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,253
1 Claim. (Cl. 18-59)



The method of forming a plastic traveler having an insert comprising the steps of positioning a portion of a workpiece strand between a pair of forming dies; closing the forming dies on the workpiece strand and thereby forming a portion of the workpiece strand adjacent an end thereof into an upper portion and an insert, said insert having a bearing surface spaced from the ends of said insert; opening the forming dies and freeing the insert therefrom; positioning the insert while still attached to the workpiece strand within a die cavity formed by a plurality of relatively movable casting dies by clamping the upper portion immovably between relatively movable portions of the casting dies, the insert extending into the die cavity in cantilever fashion with a free end and with the bearing surface contacting a support surface on a die and with the insert free to flex away from the support surface; injecting liquid plastic material under pressure into the die cavity through a sprue opening; directing the pressure of the entering plastic material against the insert to force the bearing surface into firm contact with the support surface during the injecting step whereby the bearing surface is shielded from contact with the liquid plastic; and directing the liquid plastic flow adjacent the free end of the insert substantially along the insert toward and past the free end to prevent lifting of the free end by the plastic and consequent disengagement of the bearing surface from the supporting surface; hardening the liquid plastic material to form a traveler; opening the casting dies; severing the insert from the upper portion; and forming the upper portion and the adjacent portions of the workpiece strand into an insert between the forming dies preparatory to the formation of another traveler.

2,999,277

INSULATION MOUNTING

William H. Spencer, La Canada, and James D. Brown, Los Angeles, Calif., assignors to Ultra-Tach Co., Los Angeles, Calif., a partnership
Filed Aug. 6, 1956, Ser. No. 602,689
14 Claims. (Cl. 20-4)

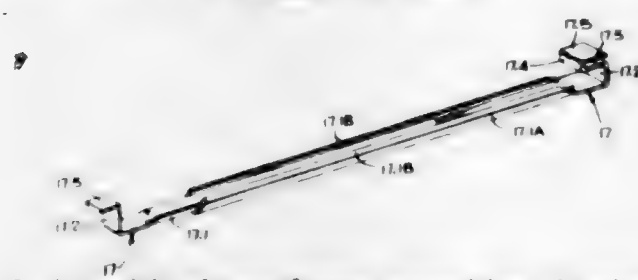


1. In a previously erected building of the type having a covering structure including spaced parallel channel-shaped purlins underlying and supporting a covering layer and having the flanges thereof extending in the same direction, that improvement for supporting a layer of relatively thin lightweight sheet material on the interior side of said covering structure, which improvement comprises: a plurality of elongated, thin, narrow, metal strips each having at its opposite ends an upwardly and outwardly extending L-shaped terminal end and an S-shaped terminal end projecting from the same face side of said strip, said brackets having a length spanning the distance between adjacent purlins with one leg of said L-shaped end resting on the upper flange of one purlin and with the upper one of the U-shaped portions of said S-shaped terminal end opening outwardly and embracing the upper flange of the other adjacent purlin, said brackets being spaced apart lengthwise of said purlins and cooperable with one another underlying and supporting panels of lightweight sheet material spanning the distance between adjacent purlins.

2,999,278

INSULATION MOUNTING

William H. Spencer, La Canada, and James D. Brown, Los Angeles, Calif., assignors to Ultra-Tach Co., Los Angeles, Calif., a partnership
Continuation of application Ser. No. 531,220, Aug. 29, 1955. This application Jan. 21, 1959, Ser. No. 788,235
9 Claims. (Cl. 20-4)



5. An article of manufacture comprising a bracket suitable for supporting sheet insulating material between a series of channel-shaped purlins having the web portions thereof in parallel vertical planes and their flanges projecting in the same direction from the upper and lower edges of said web of each purlin, said bracket comprising a plurality of elongated members slidably assembled in the telescopic relation and having wide flat ends, one of said bracket ends being L-shaped with one leg extending vertically to lie along the exterior side of one of said purlin webs and the other leg of said L-shaped end being adapted to rest on top of the same purlin flange, the other of said bracket ends terminating in a U-shaped portion adapted to clip over the free edge of the flange of a second purlin to thereby support the main body of said bracket from a pair of spaced purlins and providing a rigid underlying support for a sheet of insulating material, one of said elongated members being generally V-shaped in cross-section with the edges of the V-legs turned inwardly toward one another, a second one of said elongated members being V-shaped in cross-section and of such size as to be slidable within the V-shaped channel of said first-mentioned member and held against lateral displacement therefrom by the intumed edges thereof.

2,999,279

WINDOW STRUCTURE

Paul H. Lauer, Cuyahoga Falls, Ohio, assignor to The Falako Corporation
Filed July 22, 1957, Ser. No. 673,350
5 Claims. (Cl. 20-52)



2. A window frame structure comprising opposed side members and first and second panel members, said opposed side members having flanges extending therefrom, said first and second panel members being in sliding engagement with each other and each having first and second legs, each said side member having first and second tracks separated by wall means defining a recessed portion, a spring member secured to each side member and each having a base portion and first and second leaves, said base portions residing in said respective recessed portions with said first leaf of each spring member engaging said first legs of said first panel to hold same against said flange, said second leaf of each spring member engaging said first legs of said second panel to hold same against said first panel, said first legs of said first panel member engaging said first tracks of said opposed side members for sliding engagement therewith, said second legs of said first panel member overlying said recessed portion, said first legs of said second panel member overlying said recessed portion, and said second legs of said second panel member engaging said second tracks of said opposed side members for sliding engagement therewith.

2,999,280

EXTRUDED THRESHOLD, SILL AND FASCIA PLATE

Wallace W. Miller, 205 N. 3rd, El Cajon, Calif.
Filed May 9, 1960, Ser. No. 27,910
2 Claims. (Cl. 20-64)



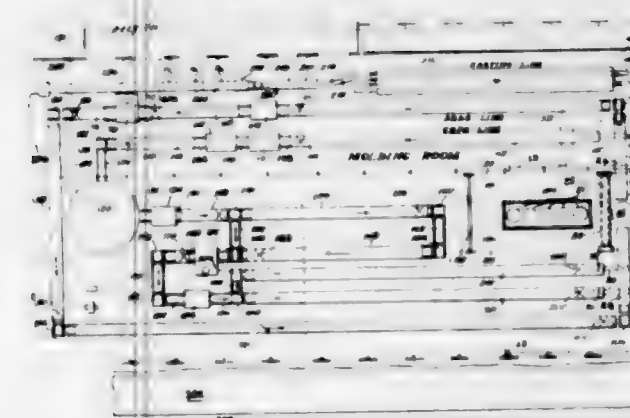
1. A unitary threshold-sill-fascia structural unit adapted to be formed by the process of extrusion, said unitary structural unit comprising a pair of spaced longitudinally extended legs, the innermost leg having a short flange adapted for placement on a sub-sill, a substantially horizontal plate unitary with and extending between the top of said legs and defining an elevated threshold, a sill

unitary with and sloping downwardly and outwardly from said threshold, a sill rest unitary with said sill and remote from said threshold, and a fascia plate unitary with said sill rest and depending vertically downwardly therefrom a distance substantially equal to the transverse dimension of said threshold to mask and protect the sub-sill to a depth equal to said transverse dimension, and a lip flange extending inwardly from said fascia plate adjacent the lower end thereof, said lip flange being adapted to be buried in the front facing of a building below the sub-sill.

2,999,281

APPARATUS FOR MAKING CASTINGS

James Ross Drever, Geneva, and Edward C. Kavanaugh and John E. Bossong, Oak Park, Ill., assignors to Griffin Wheel Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 14, 1958, Ser. No. 755,065
2 Claims. (Cl. 22-64)



1. In an arrangement for continuously producing metal castings by forcing molten metal into permanent molds each comprising cope and drag mold sections and a pouring tube through which the metal is forced under pressure into the mold, the combination of: a pouring station for producing the castings; an open conveyor circuit for transporting castings from the pouring station through a plurality of casting processing stations; a closed conveyor circuit for transporting the drag sections from the pouring station through a plurality of drag processing stations and back to the pouring station; another closed conveyor circuit for transporting the cope sections from the pouring station through a plurality of cope processing stations and back to the pouring station; said pouring station being disposed in a generally straight conveyor line which forms a common part of all three previously mentioned circuits; a pouring tube preheat station adjacent the conveyor line and in close proximity to the pouring station; a mold assembly station in said straight conveyor line immediately preceding the pouring station; means for transferring preheated tubes to said pouring station; and a mold disassembly station in said straight conveyor line following said pouring station.

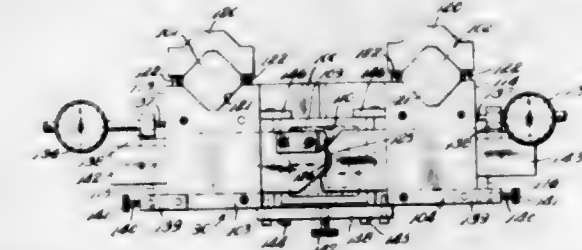
2,999,282

APPARATUS TO CENTER ARTICLES IN A MATRIX

Martin A. Herman, 11606 Edgewater Drive, Cleveland, Ohio
Filed Mar. 18, 1960, Ser. No. 16,013
9 Claims. (Cl. 22-116)

1. Apparatus for centering articles in a matrix comprising a frame having a pair of spaced uprights thereon, upper and lower support means operatively carried by each of said uprights in vertically spaced horizontally aligned and spaced relation, a matrix mold with a vertically open mold cavity therein fixedly and operatively secured to and extending between said uprights to be positioned thereby, cooling means operatively associated with said matrix mold, a template slidably carried by each of said

support means and extending both laterally inwardly and outwardly therefrom, the adjacent laterally inner edges of said templates being contoured to engage a test article, means operatively carried by one of said templates to position a test article accurately thereon to extend into said mold cavity, the laterally outer surfaces of said support means being gaging surfaces in the apparatus and said templates having laterally outer gaging surfaces thereon, adjustable means operatively connecting each



of said templates to its said support means to position its laterally inner face accurately with relation to a reference on a test article positioned by one of said templates whereby a test article can be accurately located in said mold cavity and matrix material can be poured into said mold cavity to embed a test article therein, and individual gage means connected between said templates and said support means to enable said templates to be set in accurate balanced relation to said mold cavity.

2,999,283

BINDER COMPOSITIONS

Bruce Paul Barth, Piscataway Township, Middlesex County, N.J., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 1, 1958, Ser. No. 764,511
9 Claims. (Cl. 22-193)

1. An inorganic particulate material coated with a coating composition comprising 10 to 300 parts by weight of a water-soluble carbohydrate and 100 parts by weight of 2, 4, 6 trimethylphenol.

2,999,284

ALIGNING GAUGE FOR FLEXIBLE HINGED FASTENERS

Frank Ellsworth McComb, Oak Park, Ill., assignor to Flexible Steel Lacing Company, a corporation of Illinois
Filed Oct. 8, 1959, Ser. No. 845,236
3 Claims. (Cl. 24-33)



1. A clip for use in attaching to the end of a belt a fastener incorporating a pair of flaring arms which are interconnected by a series of loops adapted for engagement with a hinge pin and which have aligned apertures for receiving a bolt having means engageable with cooperating means associated with the aperture in one of the arms to prevent rotation of the bolt relative to the fastener, whereby when the bolt is passed through the apertures in the arms and through an opening in the belt, a nut can be threadably engaged with the bolt to tightly clamp the arms to the opposed faces of the belt, said clip comprising a substantially U-shaped plate having a resilient, arched base section and a pair of arms flaring from said base section at an angle corresponding generally to the flare of the arms of the fastener, one of said arms extending from said arched base section for a greater distance than the other of said arms, whereby the resilient characteristic of said base section affords snap-on assembly of said clip to the fastener and affords engagement of said one arm with the head of the bolt so as to

initially engage the rotation-preventing co-operating means of the bolt and the aperture in the one arm of the fastener.

2,999,285

UPHOLSTERY BUTTON CONSTRUCTION

Lawrence L. Morton, Wheaton, and William H. Decker and Leslie H. Bennett, Chicago, Ill., assignors of one-half to Kroehler Mfg. Co., Naperville, Ill., a corporation of Illinois, and one-half to Maxant Button & Supply Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 8, 1958, Ser. No. 778,930
5 Claims. (Cl. 24-94)



1. An upholstery button construction comprising a head portion including a collet having a central opening, a pair of deformable prongs having integral lateral ears which are joined together engaging said collet, and an eye member having lateral ears engaging said collet, said prongs and eye member being substantially contiguous to each other and disposed substantially centrally of said collet, said eye member and prongs extending through said opening, said eye member affording means for attachment of a cord thereto for applying tension on said head portion.

2,999,286

BUCKLE

Lucille Norman, 4 E. 82nd St., New York 17, N.Y.
Filed May 21, 1958, Ser. No. 736,868
3 Claims. (Cl. 24-171)



1. A buckle for attaching two pieces of fabric comprising a pair of frames, the first of said frames having a through recess therein, the second frame being movable in an out of closed position within the recess in the first frame, the second frame having a laterally extending slot in the upper portion thereof, and a plurality of perforations above the slot, the first frame being provided with a plurality of perforations in the upper part thereof, the perforations being adapted for sewing the frames to one of said pieces of fabric, both of said frames having a plurality of projections in the lower portions thereof, said projections on said frames adapted to mesh in the closed position of the frames, and said meshing projections being adapted to clamp therebetween a second piece of fabric which has first been passed through the laterally extending opening in the second frame, whereby the clamping of the fabric between the meshing projections of the two frames force the upper portion of the second frame against the upper part of the through recess of the first frame to lock the frames together.

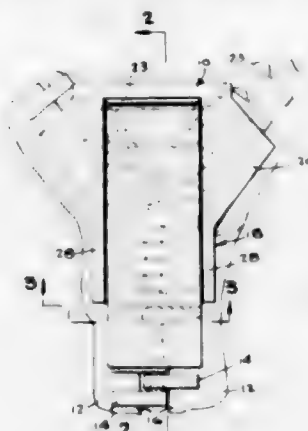
2,999,287

SLIDER FOR SLIDE FASTENERS

Donald E. Breithaupt, 1216 Camino Vega, Farmington, N. Mex.
Filed Jan. 29, 1960, Ser. No. 5,456
5 Claims. (Cl. 24-205.14)

1. A slide for a slide fastener comprising a body having inner and outer walls defining between them longitudi-

dinal guide channels extending along opposite sides thereof, said channels each being adapted to receive a stringer tape therethrough, said outer wall having a depression formed therein opening outwardly therefrom and outwardly of one end thereof, said outer wall having an opening extending transversely therethrough adjacent the other end thereof, a support bar disposed in the plane of said outer wall and traversing said opening, a pull



tongue having an end thereof pivotally connected on said support bar and being movable into and out of said depression, said pull tongue when disposed within said depression having an opposed end thereof projecting beyond said one end of said outer wall, a lock member extending across said projecting end of said pull tongue, said lock member when said pull tongue is pivoted into said depression lockably engaging between adjacent fastener elements of one of said stringer tapes.

2,999,288

BUCKLE ASSEMBLY

Alden Y. Warner, Farmington, Wilbur J. Craven, East Hartford, and John Stacherl, New Britain, Conn., assignors to The Capewell Manufacturing Company, Hartford, Conn., a corporation of Connecticut
Filed Nov. 23, 1955, Ser. No. 548,706
5 Claims. (Cl. 24-230)

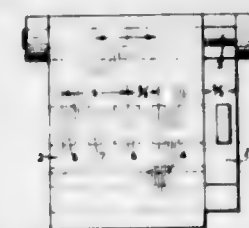


1. A buckle assembly comprising a channel-shaped frame having an inwardly facing transverse abutment and upstanding side portions, a separable fitting for attachment to a belt having a head at one end forming a pair of transverse shoulders facing oppositely to said transverse abutment of the frame, said fitting overlying a portion of the frame adjacent said transverse abutment in operative assembly with either shoulder of the head interengaged with the abutment of the frame to prevent longitudinal withdrawal of the fitting relative to the frame, a retainer member, pivot means on said side portions of the frame rotatably mounting said retainer member thereon for rotation about an axis extending transversely of the frame and spaced from and in alignment with said portion of the frame overlain by said fitting, said retainer member engaging the overlying portion of the fitting to prevent movement thereof in a direction normal to the frame and being rotatable into a non-obstructing position to permit insertion and withdrawal of the fitting, and means biasing said retainer member into fitting engaging position.

2,999,289

DEVICE FOR HOLDING OBJECTS MORE PARTICULARLY WELDING RODS

Jan Tenger, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 22, 1958, Ser. No. 730,083
Claims priority, application Germany May 4, 1957
4 Claims. (Cl. 24-248)

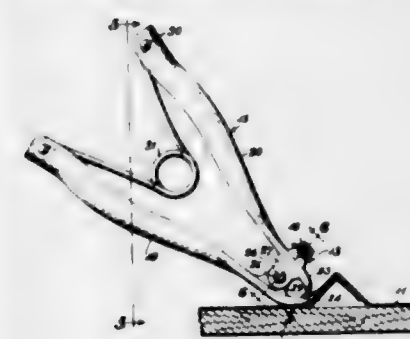


1. A device for holding a plurality of objects, comprising a pivot pin, a pair of jaws rotatably and slidably mounted on said pin in a manner whereby said jaws are axially rotatable about the said pin and axially displaceable on said pin relatively to each other, said jaws having a substantially elongated shape in the direction of said pin, and a plurality of permanent magnets positioned in substantial alignment parallel to said pin and in spaced relation to each other on opposing surfaces of said jaws, one of said jaws having magnets of both polarities in a manner whereby when the said jaws are in one axial position relative to each other opposing ends of said magnets on said opposing surfaces are of opposite polarity and attract the said jaws to each other thereby simultaneously holding said objects clamped between them when the said jaws are axially shifted relative to each other and when the said jaws are in one axial position relative to each other the opposing magnets are of the same polarity and repel the said jaws from each other thereby maintaining the said jaws separated.

2,999,290

CLAMPING DEVICE

Benjamin F. Giles, 11616 Main St., Middletown, Ky.
Filed July 9, 1957, Ser. No. 670,701
2 Claims. (Cl. 24-252)



1. A heavy duty clamping device for securing a ladder on a metal roof comprising two elongated arms, means pivotally interconnecting said arms adjacent one end thereof to define a pair of long portions which act as handles and first and second short arcuate portions which continuously curve inwardly toward each other and act as beak-like interlocking jaw members to grip the marginal edges of closely overlapping sections of the metal roof, the first of said jaw members being wide and terminating in a flat beveled edge for slipping underneath the marginal edges of closely overlapping portions of the metal roof, said first jaw member having a concave face and a circular indentation defined therein spaced from said flat beveled edge and centrally spaced within the width of said first jaw member, said second jaw member being wide and tapering to a single point, said point of said second jaw member being received in the indentation defined in said first jaw member when said jaw members engage, said

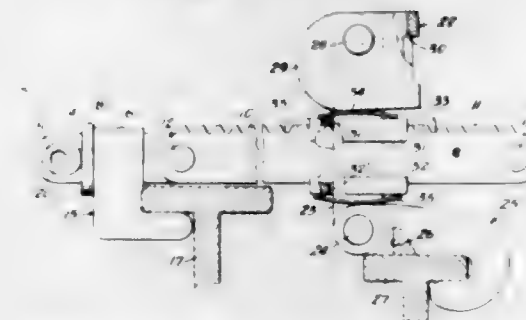
770 O.G.—15

first jaw member extending beyond the point of engagement with said second jaw member as a flat beveled edge for raising a marginal edge of closely overlapping portions of the metal roof, and resilient means to bias said pair of long portions apart to force said short portions into said beak-like arrangement.

2,999,291

CLAMP WITH RELATIVELY ADJUSTABLE ARTICLE ENGAGING MEMBERS

Jack G. Imperato, 1121 82nd St., Brooklyn, N.Y.
Filed May 22, 1959, Ser. No. 815,067
8 Claims. (Cl. 24-263)

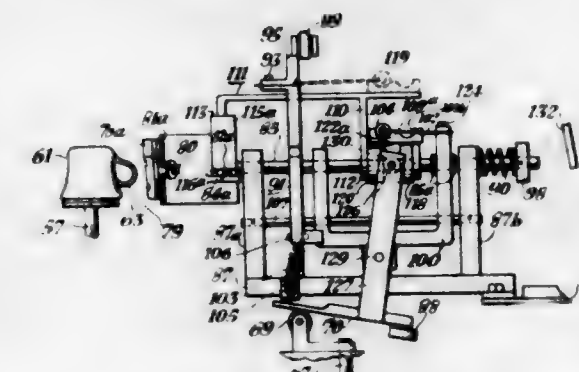


7. A clamp of the class described, comprising a pair of hook-shaped article engaging members, an elongated straight rack bar portion for adjustably spacing the members one from the other, a clamp unit comprising a rod, a pair of plates slidable on said rod, means movable on one end portion of the rod to move the plates into clamping engagement with said rack bar portion, one plate having means for keying the same to said rack bar portion, one of said members being pivoted to the other end portion of said rod, and means for supporting the other of said members on one end of said rack bar portion to control position thereof with respect to the first named member.

2,999,292

APPENDAGING MACHINE

Vincent P. Miller, Pittsburgh, Pa., assignor to Miller Pottery Engineering Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 8, 1959, Ser. No. 804,902
9 Claims. (Cl. 25-22)

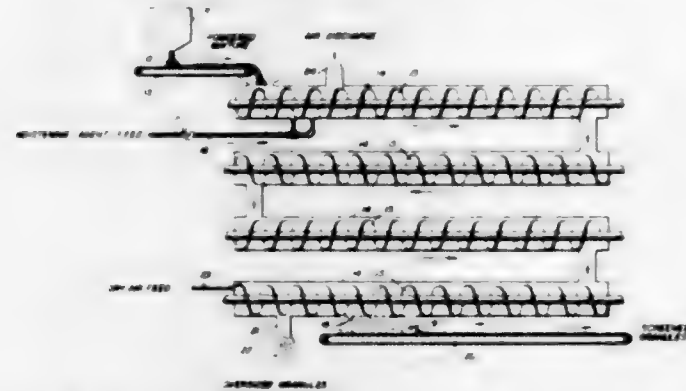


1. In an appendage holding device the combination comprising a support, jaws arranged to be opened and closed carried by said support, means for reciprocating said support from an initial position to an extended position, a linkage member operatively connected to said jaws, means for moving said linkage member in accordance with the movement of said support to maintain said jaws in a closed position, means for moving said linkage member relative to said support to cause said jaws to be opened and closed at any position of said support, said linkage member having a pair of recesses separated by a raised portion formed thereon, a locking roller, means affixing said locking roller to said support, said roller arranged to ride from one of the said pair of recesses to the other of said pair as said linkage member is moved

relative to said support whereby said linkage member is locked in position with respect to said support to maintain said jaws opened and closed.

2,999,293 PROCESS OF GRANULATING EFFERVESCENT MATERIALS

Albert Wesley Taft, Glen Burnie, and Joseph M. White and Robert E. Kolb, Baltimore, Md., assignors to Warner-Lambert Pharmaceutical Company
Filed Sept. 12, 1957, Ser. No. 683,450
9 Claims. (Cl. 25-156)

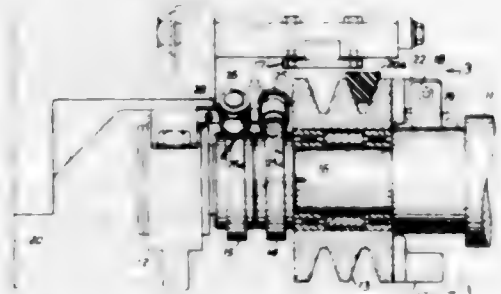


1. In a process for the production of an effervescent composition comprising preparing a powdered mixture which is reactive in aqueous solution to produce effervescence and forming said mixture into discrete granular particles, the improvement which comprises feeding said powdered mixture to an elongated treating zone in which it is conveyed while being subjected to a mixing, tumbling and cutting action, continuously adding water beneath the surface of said powdered mixture within said treating zone at a point adjacent to the point at which said powdered mixture is fed to said treating zone in an amount of about 1 to about 3 percent of the weight of said powdered mixture being fed per unit of time to dampen said powdered mixture locally and to cause a localized effervescent reaction to take place, further subjecting said locally reacted mixture to said mixing, tumbling and cutting action whereby the aggregations of dampened particles formed by said localized effervescent reaction are broken up into small dampened nuclei, and continuing the mixing and tumbling of the resulting mixture so as to cause the powdered mixture remaining to adhere to said damp nuclei and to build up discrete granular particles.

2,999,294 DEVICE FOR MEASURING ENERGY INPUT TO RAISING ROLLERS OF TEXTILE RAISING MACHINES

John M. Magarshack, Heaton Moor, Stockport, and Edward Moss, Didsbury, Manchester, England, assignors to The British Cotton Industry Research Association, Didsbury, England, a British association of Shirley Institute

Filed Apr. 28, 1959, Ser. No. 809,553
4 Claims. (Cl. 26-33)

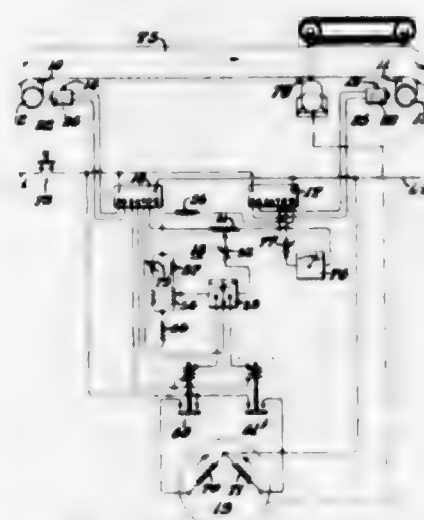


1. In a nap raising machine, a series of nap raising rollers, a dynamometer associated with one of said series of rollers at one end of the latter, said dynamometer

comprising a drive transmission which includes a driving pulley and deflectable means interposed between said pulley and said roller, said deflectable means being subject to a deflection whose magnitude is in direct proportion to the energy being transmitted to the roller, and means for indicating the magnitude of said deflection.

2,999,295 FABRIC STRETCH CONTROL DEVICE

George Manning and John A. McCoig, Sr., Gastonia, N.C., assignors to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina
Filed June 14, 1960, Ser. No. 35,972
4 Claims. (Cl. 26-54)



1. Apparatus for controlling the stretch of a fabric and the like between the input and output rollers of a processing machine, said apparatus comprising; first and second toothed gears at least the teeth of which are of metal of relatively high magnetic permeability, said gears being mounted for rotation with said input and output rollers, respectively; first and second magnetic devices mounted adjacent to the teeth of said first and second gears, respectively, for establishing respectively first and second magnetic fields in the path of rotation of the teeth of said first and second gears, each of said magnetic devices including a winding for inducing voltages therein in response to changes occurring in the magnetic fields resulting from movement therethrough of said gear teeth, said induced voltages being proportional to the respective speeds of rotation of said toothed gears and also of said input and output rollers; differential comparison means coupled to said windings of said first and second devices for comparing the voltages induced in said windings; and means coupled to said comparison means and responsive to a voltage difference between said compared voltages for altering automatically the speed of rotation of one of said input and output rollers in a direction to reduce said voltage difference.

2,999,296 NOVEL FILAMENTS AND FABRICS

Alvin L. Breen, West Chester, and Georges Pamm, Chadds Ford, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 25, 1957, Ser. No. 648,421
8 Claims. (Cl. 28-78)

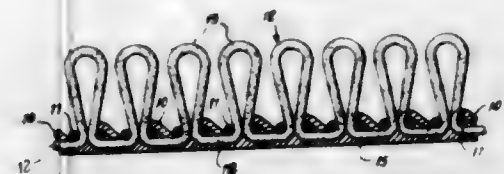


6. A pill-resistant fabric containing polyester textile staple fibers, said fibers having a continuous void throughout their length and said polyester having the ester linkages in the polymer chain.

2,999,297 BACKINGS FOR TUFTED FABRICS

Harold A. Schwartz, Norwalk, Conn., assignor to Patchogue-Plymouth Corporation, a corporation of New York

Filed Dec. 19, 1955, Ser. No. 553,763
5 Claims. (Cl. 28-80)

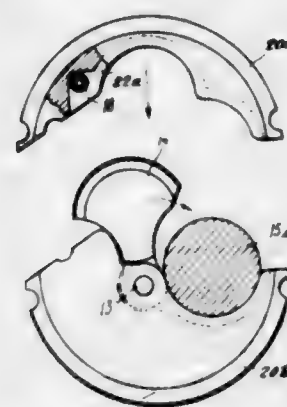


1. In a tufted pile rug, a woven backing comprising warp threads constituted by twisted ribbons of paper and filler threads also constituted by twisted ribbons of paper, said filler and warp threads being interwoven to form a loose open weave having well-defined interstices, at least the filler threads being coated with a lubricant to enhance the slippage thereof whereby in lubrication looping needles may pass through said interstices without excessive friction, yarns tufted through said backing to form pile loops above said backing and connecting loops beneath said backing, and a film-like coating of adhesive material formed on the undersurface of said backing to bond said connecting loops thereto, said adhesive material being compatible with said lubricant.

2,999,298 APPARATUS FOR FORGING A CRANKSHAFT OR SIMILARLY SHAPED PART

Paul de Framond, St. Martin-en-Coailleur, France, assignor to Compagnie des Ateliers et Forges de la Loire (St. Chamond, Firminy, St. Etienne, Jacob-Holtzer), Paris, France

Filed June 25, 1959, Ser. No. 822,801
Claims priority, application France Feb. 9, 1959
6 Claims. (Cl. 29-6)

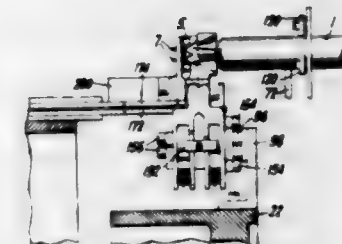


1. In apparatus for the forging of crankshaft-like elongated metal parts having a plurality of axially spaced, radially offset and angularly displaced crankpin sections separated by transverse webs, from an elongated blank having a plurality of crankpin blank sections corresponding in positions to said crankpins and separated by enlargements corresponding in position to said webs, said apparatus comprising transversely displaceable forging means for exerting transverse forging pressure upon each one in turn of said crankpin blank sections being forged and axially displaceable means for supporting said blank in a predetermined angular position and for exerting an axial forging pressure component thereon during the forging of each of the said crankpin sections, which axially displaceable means comprise a first means at one side of said forging means for cradling a crankpin blank section of said blank on one side from said crankpin being forged and a second means at the other side of said forging means for cradling a previously forged crankpin on the other side from said crankpin being forged, that

improvement wherein said second cradling means has at least two angularly displaced and overlapping recesses, each of which is selectively operable to receive a crankpin cradlingly therein for supporting said blank in a predetermined angular position, and means for plugging the crankpin bounding portion of all of said recesses of said cradling means that do not receive a crankpin therein to prevent metal flow parallel to the crankpin axis.

2,999,299 BASE THREADING AND WELDING METHOD AND APPARATUS

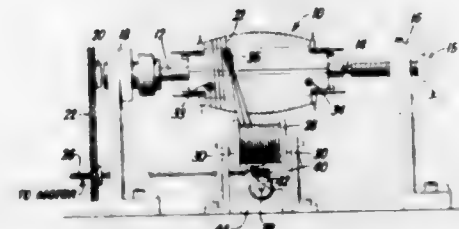
Stanley C. Shappell, West Boxford, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,790
5 Claims. (Cl. 29-25.13)



1. The method of locating lead-in wires, extending from an end of an electrical device, in pins of a base which comprises: positioning a base in axial alignment with the device and spaced from the free ends of the lead-in wires; positioning a threader between said base and the free ends of said lead-in wires, and in axial alignment with said base; advancing said base into abutting relationship with said threader; revolving the device about the axis of the threader; effecting relative longitudinal movement, between said device on the one hand and said threader and said base on the other hand, while said device is revolving, whereby the free ends of the lead-in wires enter into and through said threader and into the pins of said base; displacing said threader from abutting relationship with said base; displacing said threader from encompassing relationship with respect to the lead-in wires; and effecting relative movement, along the longitudinal axis of said device, between said device and said base, whereby the free ends of the lead-in wires are caused to pass through the pins of said base.

2,999,300 APPARATUS AND METHOD FOR PRODUCING CATHODE RAY TUBES

Aurelius Sendor, Forest Hills, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,871
2 Claims. (Cl. 29-25.19)

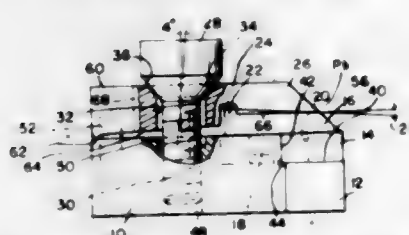


1. Apparatus for manufacturing grid structures for cathode ray tubes comprising a polyhedral mandrel rotatable about an axis; a pair of wire supporting combs adjustably fastened to a pair of opposed surfaces of said mandrel and parallel to the axis of rotation of said mandrel; means for rotating the mandrel and winding wire over said combs so as to form a grid of parallel wires be-

tween the combs; slotted means extending in the direction of the axis of the mandrel carried by said mandrel and means, movable within and along said slotted means, for applying cement to wires across said parallel combs.

2,999,301 CUTTING TOOL

Alfred R. Conti, 7730 Detroit Blvd., Walled Lake, Mich., and Daniel J. Menter, 3309 Harold St., Saginaw, Mich.
Filed Feb. 24, 1959, Ser. No. 794,995
5 Claims. (Cl. 29—96)



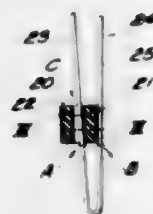
1. A cutting tool comprising a support body having a flat support surface thereon and a pair of locating surfaces extending outwardly from said support surface, a flat polygonal blade on said support surface having an opening therein and engageable with said locating surfaces, a clamp mounted on said support body and movable thereon in a direction generally parallel to said support surface and having substantial components toward both of said locating surfaces, an adaptor intermediate said clamp and blade coupling said clamp to said blade at said opening for movement of the blade in said direction, said adaptor having a projection loosely received in the opening in said blade to so couple the latter, an elongated tongue and groove connection between said clamp and said adaptor extending in a direction generally transverse to the direction of movement of said clamp on said support body, threaded means connected to said support body and engageable with said clamp, and camming surfaces on said threaded means and clamp effective to move said clamp and blade to locate said blade against both of said locating surfaces and thereafter to clamp said blade in located position on said support surface.

2,999,302

APPLYING LEADS TO TUBULAR ELECTRICAL COMPONENTS

Willem Beukema, Bernard Hendrik Bruijning, and Johannes Vuurmans, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 29, 1956, Ser. No. 618,887
Claims priority, application Netherlands Nov. 5, 1955
5 Claims. (Cl. 29—155.5)



1. A method of forming leads on an electrical component in a form of a tubular insulating body having metal coatings at the inner and outer surfaces, comprising the steps of arranging a hairpin-shaped elongated conductor with the bight spaced from one end surface of the body, with one leg extending through the bore of the body in contact with the inner coating and some distance beyond the other end surface, and with the second leg extending in contact with the outer coating and some distance beyond the said other end surface; dipping the assembly

bight first into liquid solder while maintaining the body in a supported position spaced above the bight to thereby solder the legs to the respective metal coatings; and severing at least the bight portion to divide the conductor into two separate leads each connected to one of said coatings and extending from at least one end of the body.

2,999,303

BLADES FOR GAS TURBINE ENGINES

George O. Eccles, Barrowford, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed May 8, 1959, Ser. No. 811,831
Claims priority, application Great Britain May 21, 1958
3 Claims. (Cl. 29—156.8)



1. The process of forming a platformed or shrouded blade for an internal combustion turbine engine from a blank having a plurality of longitudinal axially disposed holes extending through the potential platform end thereof and filled with a deformable material comprising extruding said blank to provide a blade portion of relatively thin elongated cross-section, upsetting the said end into a laterally widened platform portion having an undersurface facing away from said end, said platform being of greater thickness than needed for the finished product thereby "kinking" the filled holes to substantially follow the outline of the widened portion, further shaping the platform portion by engaging its under surface and forcing the platform in a die having a cavity shaped in plan to receive it and having a longitudinal extension cavity of approximately blade thickness and width thereby to extrude metal from the platform in the extension cavity thus drawing out and straightening the holes in that portion of the upset blade end which is left to form the tip platform or shroud.

2,999,304

METHOD OF MANUFACTURING HEAT EXCHANGERS

Theron F. Pauls, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed Jan. 29, 1960, Ser. No. 5,534
13 Claims. (Cl. 29—157.3)



1. In a method of making a hollow metal heat exchanger from a seamless one-piece sheet metal blank having internally disposed therein a system of distended tubular passageways bulged out of the face of said blank and circumscribed by solid web portions of said blank wherein said system comprises at least two spaced and adjacent rectilinear tubular passages, a combination of steps comprising cutting the solid web portion of said blank between and adjacent said passages to form a cut there-

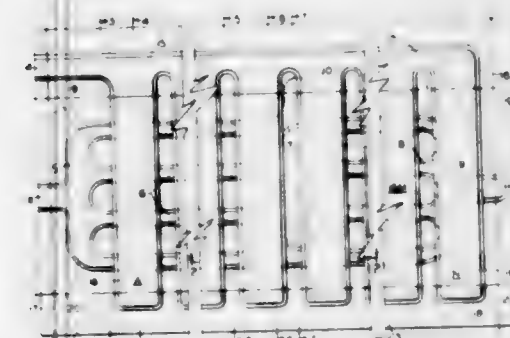
through, and separating the edges of said blank adjacent said cut away from each other substantially in the plane of said blank sufficiently to substantially alter the cross-sectional configuration of said passages adjacent said cut so as to increase their distention out of the face of said blank.

2,999,305

SPIRAL HEAT EXCHANGER

William G. Reynolds, Anchorage, Ky., assignor to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware

Filed Dec. 27, 1955, Ser. No. 555,547
7 Claims. (Cl. 29—157.3)



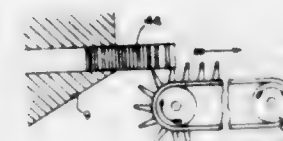
1. A method of making a heat exchanger comprising: forge welding at least three sheets of metal into a composite panel with one resist pattern between one pair of adjacent faces to prevent welding along areas forming one potential system of passageways for the flow of fluid longitudinally along said panel and with another resist pattern between another pair of adjacent faces to prevent welding along areas forming another potential system of passageways for the flow of fluid transversely of said panel and across said one potential system of passageways; expanding one of said potential systems of passageways to one height; thereafter, expanding the other system of potential passageways to a relatively greater height; and spirally wrapping said panel about a transverse axis.

2,999,306

HOT PRESSURE WELDED HONEYCOMB PASSAGEWAY PANELS AND LIKE STRUCTURES

Bruce L. Baxter, Louisville, Ky., assignor to Reynolds Metals Company, Richmond Va., a corporation of Delaware

Filed Nov. 19, 1956, Ser. No. 622,901
5 Claims. (Cl. 29—157.3)



1. A method of making a honeycomb panel comprising: assembling a stack of superposed metal sheets together with an appropriate pattern of stop-weld material sandwiched between certain sheets, each pattern being composed of a transverse row of spaced parallel longitudinally extending strips of stop-weld material, the alternate patterns being aligned with one another and offset transversely from the intermediate patterns which are aligned with each other; applying heat and pressure to the stack to bond the sheets together outside of said stop-weld strips and thereby form an integral panel having a plurality of transverse rows of strip-like areas providing unwelded potential honeycomb passages; and expanding said honeycomb passages by inserting a plurality of expansion tools aligned in a row simultaneously

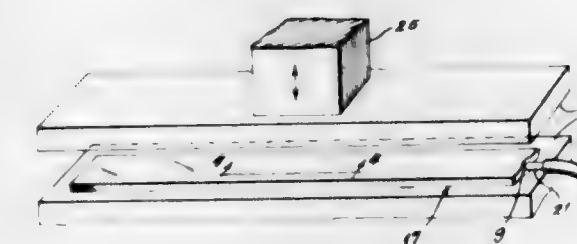
ly into the ends of a given row of passages, each of said tools being inserted axially into its passage, and relatively moving said row of tools as a group in a direction at right angles to said row of passages and away from the unexpanded portion of said panel so as to effect the simultaneous expansion of said given row of passages and by successively repeating said insertion and expansion operation for each succeeding row of passages.

2,999,307

FABRICATION OF HOLLOW ARTICLES

William J. Compas, Branford, Conn., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed Nov. 30, 1956, Ser. No. 625,534
6 Claims. (Cl. 29—157.3)



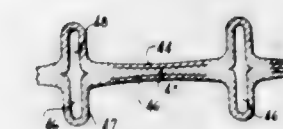
2. In forming a hollow article from a blank of ductile metal by expanding an unjoined portion of said blank, the method comprising the steps of positioning the blank between spaced apart pads, expanding the unjoined portion of the blank into firm engagement with said pads by injecting a fluid pressure into said unjoined portion at a first pressure level to expand said unjoined portion, thereby forming a hollow portion, regulating said fluid pressure to below the bursting pressure level of said blank, increasing the spacing between said pads so that said pads are spaced farther apart than during the prior expansion step, and increasing the volume of the expanded unjoined portion by expanding the resultant hollow portion into firm engagement with the pads by injecting a fluid pressure into said unjoined portion at a second pressure level sufficiently high to further expand said unjoined portion, said second pressure level being below said first pressure level.

2,999,308

HEAT EXCHANGER

Theron F. Pauls, Oak Park, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed June 3, 1957, Ser. No. 663,062
13 Claims. (Cl. 29—157.3)



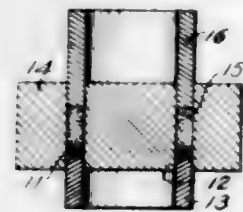
1. In the method of producing a hollow metal heat exchanger from a blank of ductile sheet metal having provided therein a plurality of internal passageways co-extending with each other in substantially spaced relationship wherein said passageways have their opposite walls bulged out of corresponding opposite faces of said blank, the improvement comprising the step of thinning down and simultaneously elongating the web portion of said blank between adjacent passageways by compressing said web portion to force the metal of said web portion to flow toward said adjacent passageways sufficiently to thereby change the cross sectional configuration of said adjacent passageways so that their axis transverse the

plane of said blank is elongated, said step being performed while maintaining substantially said spaced relationship between said adjacent passageways.

2,999,309
COMPOSITE METAL ARTICLE AND METHOD OF PRODUCING

Jerome F. Kuznick, Upper Montclair, N.J., and Jan M. Krol, New York, N.Y., assignors to Welded Carbide Tool Company, Inc., Clifton, N.J., a corporation of New Jersey

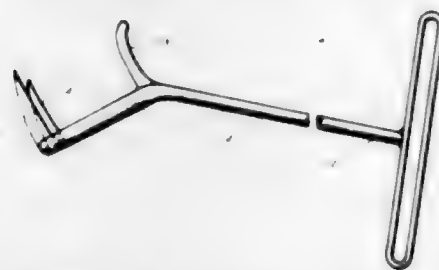
Filed Apr. 6, 1955, Ser. No. 499,591
13 Claims. (Cl. 29—194)



3. An article comprising a steel body, a hard metal body consisting essentially of at least one member selected from the group consisting of the carbides, nitrides, borides and silicides of a metal selected from the group consisting of titanium, tungsten, tantalum, zirconium, chromium and molybdenum, and a powder metal alloy layer positioned between said bodies and bonding the same together, said article being produced by hot pressing a powder metal alloy layer while in contact with said steel body and said hard metal body at sufficient temperature below 2400° F. and sufficient pressure to produce a metallurgically bonded joint between said steel body and said powder metal layer on one interface and between said hard metal body and said powder metal layer on the other interface, said powder metal alloy layer consisting essentially of not less than about 30% by weight of a powder of said hard metal, the balance of said powder metal alloy being selected from the group consisting of iron powder, nickel powder, chromium powder, manganese powder, cobalt powder, combinations of these metal powders and inter-alloys thereof.

2,999,310
TOOLS FOR RAILWAY AIR BRAKE HOSE CONNECTIONS

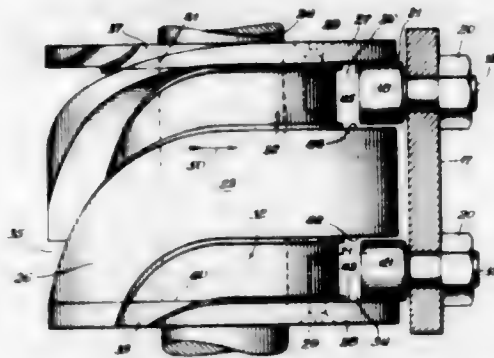
Wiley S. Pope, 2426 Ave. U Ensley, Birmingham 8, Ala.
Filed Oct. 14, 1957, Ser. No. 689,879
1 Claim. (Cl. 29—270)



A tool for railway air brake hose connections, comprising a metal rod, said rod having one end formed as a T shaped handle, its other end portion being bent slightly out of line with the shank portion leading from the handle, its bent portion being formed with three integral extended portions, two of said extended portions being at the extreme end of the rod, being substantially U shaped and extending substantially perpendicular to said other end portion, the other extended portion being positioned at the point on the rod where it starts to bend out of line and extending outward from the rod in the same direction as that of the U shaped extended portions.

2,999,311
METHOD OF MANUFACTURE OF AN INDEXING CAM

James A. McDonald, Oak Lawn, and Howard H. Evans, La Grange Park, Ill., assignors to Commercial Cam & Machine Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 4, 1959, Ser. No. 791,121
4 Claims. (Cl. 29—401)

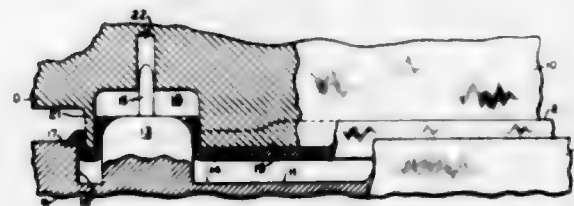


1. The method of making an indexing cam for use with a pair of followers whose adjacent edges are spaced a first distance apart with the furthestmost edges of the followers being spaced a second distance apart when no pressure is applied to the followers, said method including the steps of: forming a cam body part of cylindrical configuration with a first cylindrical axis and an end; forming an end plate part of cylindrical configuration with a second cylindrical axis and an end; releasably joining said parts with said two ends abutting and axes coincident to form a cam body; machining a pair of cam tracks in the cylindrical surface of said body with parallel dwell portions in each of said tracks, said tracks being machined so that the adjacent walls of the tracks along the said dwell portions are closer together than said first distance with the furthestmost walls of said tracks along the said dwell portions being machined to be at least said second distance apart, said tracks being machined so that the furthestmost walls of said portion of one track is defined by said end part and the furthestmost wall of said portion of the other track is defined by said body part; releasing and separating said parts; machining one of said ends to define a new end closer to said furthestmost wall therein than was the original end; heat treating said parts; reassembling the separated parts; and polishing at least the furthestmost walls of said tracks.

2,999,312
FLANGE REINFORCED EMBOSSEMENT

Arnold G. Schilberg, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Dec. 29, 1955, Ser. No. 556,130
1 Claim. (Cl. 29—545)



The forming of a flange reinforced cylindrical embossment on a flat metal blank in a single operation, comprising initially expanding a circular portion of the blank surrounding and immediately adjacent a preformed perforation therein by drawing the same over the gradually curved head of a male die member in forming the embossment, progressively extruding the drawn metal to form a tubular embossment on the blank of a thickness substantially thinner than the blank, and extruding a reinforcing flange closely adjacent the tubular embossment

and substantially reduced in thickness from the blank, said extruding of the flange being simultaneous with the extrusion of the embossment to provide balanced forces on opposite sides of the intermediate die member and prevent tearing of the metal as occurs where the extruding operations are successive.

2,999,313
TAPE DISPENSER

George W. Emmert, Winnetka, Ill., assignor to FEDCO Corporation, a corporation of Illinois
Filed July 22, 1957, Ser. No. 673,422
7 Claims. (Cl. 30—124)



6. A dispenser for adhesive tape, comprising a body over which unwound tape may be withdrawn in a predetermined path from the circumference of an associated roll of tape, means for severing the unwound tape at a predetermined transverse line along said path, spaced apart tape support surfaces on said body for supporting the unwound tape along said path intermediate said transverse line and the circumference of the roll of tape, said tape support surfaces having a void therebetween bridged by a portion of the unwound tape, and depressor means adapted to contact the surface of the tape opposite that surface contacted by said tape support surfaces for depressing the bridging portion of tape into said void subsequent to the severing of the tape, thereby to direct the severed end of the tape outwardly from said body into a position wherein such end may be readily grasped by the fingers preparatory to withdrawal of another length of tape from the roll.

2,999,314
COOKY, BISCUIT AND DOUGHNUT CUTTER

William H. Reichlein, 8642 SE. Holgate Blvd., Portland 66, Oreg.
Filed May 24, 1960, Ser. No. 31,297
1 Claim. (Cl. 30—306)



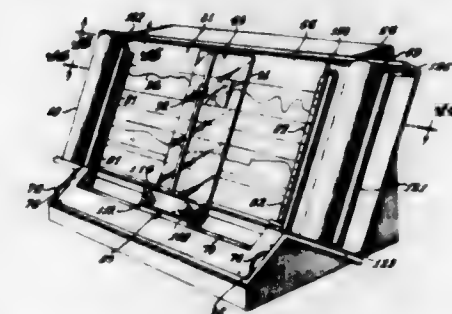
A cookie and doughnut or biscuit cutter comprising one pair of interconnected cutting elements of substantially elliptical shape in plan view, arcuate in front elevation with their convex surfaces adjacent each other and thereat interconnected by arcuate crosspieces, said cutting elements and arcuate crosspieces all made of material of uniform cross-sectional diameter whereby to present a smooth, uninterrupted circular form in side elevation, a first pair of side plates interconnecting said cutting elements and having aligned openings therethrough, said side plates having slots therein open at one of their ends, a second pair of side plates coextensive in length with said first pair of side plates, means carried by said second pair of side plates extending through said slots thereby removably mounting said second pair of side plates to said first pair of side plates.

pair of side plates, a second pair of cutting elements secured to said second pair of side plates spaced inwardly from said first pair of cutting elements concentrically therewith, and a wire frame formed into a handle at one of its ends bifurcated at its opposite end into a bail member provided with opposing trunnions journaled in said first pair of side plates, whereby when both pairs of cutting elements are rolled over a sheet of dough uninterrupted rings of dough will be cut between said first and second pairs of cutting elements and the dough between successive rings will be severed by said arcuate crosspieces, and whereby upon removal of said second pair of cutting elements and their side plates from said first pair of side plates circles of dough will be cut by said first pair of cutting elements and the dough therebetween severed by said arcuate crosspieces.

2,999,315
GRAPH TRANSFORMATION APPARATUS

Bernard S. Benson, Malibu, Calif., assignor to Benson-Lehner Corporation, Los Angeles, Calif., a corporation of California

Filed Apr. 24, 1953, Ser. No. 350,991
17 Claims. (Cl. 33—1)



6. Graph transformation apparatus comprising a stationary data support having a flat surface adapted to have imposed thereon a data graph, said data graph extending generally from left to right when viewed by a human operator seated at the support; elongate guide means mounted on said support and disposed substantially horizontally and parallel to the abscissae of the data graph; means for mounting at least one end of said elongate guide means for movement toward and away from the data graph imposed on said surface, said movement being generally along the ordinate of the data graph; an index guide member secured to said movable end of said elongate guide means and disposable along an edge of said data support, whereby said elongate guide means may be adjusted in accurate parallelism with the abscissae of the data graph; an abscissa read-out member mounted on said guide means and movable longitudinally back and forth therealong, a portion of said abscissa read-out member projecting over said flat surface and carrying a reference line generally transverse of the abscissae of the data graph, said reference line being imposable against the data graph; an ordinate read-out member movably mounted on said reference member and carrying an ordinate read-out graph adapted to be imposed against said reference line and said data graph, and means for measuring the relative position of said ordinate read-out member on said abscissa read-out member.

2,999,316
FINE-ADJUSTMENT DEVICE

Bernhard Wempe, Wasserlohnstrasse 7, Egerer, near Chieming, Upper Bavaria, Germany

Filed Aug. 24, 1959, Ser. No. 835,526
Claims priority, application Germany Sept. 3, 1958
6 Claims. (Cl. 33—19)

1. A fine adjustment device, comprising, in combination: a base means; a movable table; means for guiding

the movement of said table along said base means; a screw spindle connected to said table for moving the latter along said guiding means; said table including a lower table part, an upper table part, leaf springs connecting said table parts for friction-free movement therebetween, and an abutment connected to the upper table part; an additional leaf spring clamped to said lower table part and bearing against said abutment in the vicinity of the clamping point; means connected to the free end of said additional leaf spring for adjusting the position of said spring and thus the position of the upper

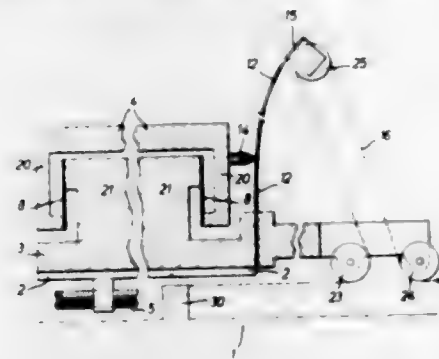


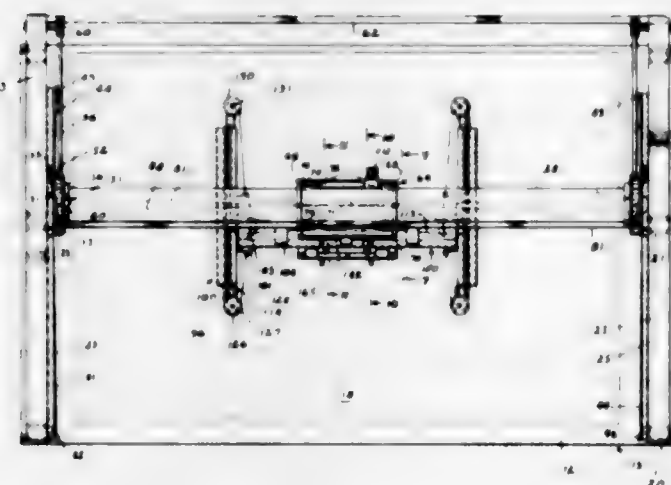
table part with respect to the lower table part, the distance between said means and the abutment being greater than the distance between the clamping point and the abutment, said adjusting means including a first guide pulley, a second guide pulley on the end of the additional leaf spring, a third guide pulley, said first and third pulleys being on said table, a winding device on said base means, and a traction rope secured on one end to the base means, extending parallel to the plane of the table to said first pulley, over said second pulley to the third pulley, and then extending parallel to the plane of the table to said winding device.

2,999,317

DRAFTING APPARATUS

Samuel W. Alderson, New York, N.Y., assignor to Alderson Research Laboratories, Inc., Long Island City, N.Y., a corporation of New York

Filed July 22, 1957, Ser. No. 673,191
17 Claims. (Cl. 33-26)



1. In a drafting machine, the combination of a drafting board provided with guide tracks at opposite ends thereof, and a primary and a secondary rectangular coordinate system, the primary system including a first cross-beam mounted for sliding travel in said tracks, a cross-slide mounted for sliding travel on the cross-beam, the secondary system including a second cross-beam centrally pivoted on the cross-slide, opposed end frames carried by said second cross-beam and provided with guide tracks, a stylus frame mounted for sliding travel in said last mentioned guide tracks at right angles to said second

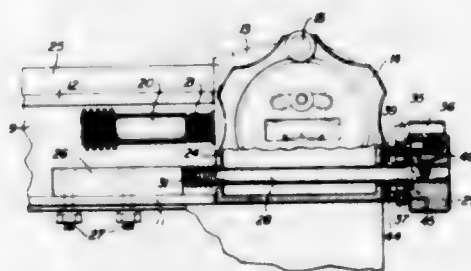
cross-beam, a stylus carriage mounted for longitudinal sliding travel on said stylus frame, a drafting head pivoted on said carriage, a bar slide mounted for movement on the drafting head and a stylus carried by said bar slide whereby movement of said cross-slide or said first cross-beam, when the coordinate systems are parallel, produces horizontal or vertical lines, respectively, and when non-parallel produces lines at an angle to said horizontal or vertical lines, and rotation of the drafting head, when the stylus is disposed eccentrically of the second pivot, produces circles.

2,999,318

DOUBLE LINE SPACER AND MICROMETER MECHANISM FOR RULING MACHINES

Robert S. Shelly, Logan, Utah, assignor to Pack Manufacturing Company, Logan, Utah, a corporation of Utah

Filed Mar. 3, 1958, Ser. No. 718,648
12 Claims. (Cl. 33-81)



1. In combination, an indexing head having means to position a straightedge; a block fixed to a supporting table on one side of the indexing head and spaced from said head; a stem extending through the indexing head and having at one end a screw threaded engagement with said block; a knob secured to the opposite end of the stem on the opposite side of the indexing head and adapted to rotate the stem to move the indexing head relative to said block; a step washer fixed to the indexing head near the knob, the stem passing through the step washer and rotatable relative thereto; said step washer having at least two laterally disposed steps; a control arm mounted on the stem between the knob and the step washer and secured against longitudinal movement; a pin fixed to the control arm engageable with a selected one of the steps of the step washer; and a spring means biasing said indexing head and said washer against said control arm and the said control arm against said knob to hold said pin in such engagement but yielding to permit engagement of said pin with another step as the control arm is swung.

2,999,319

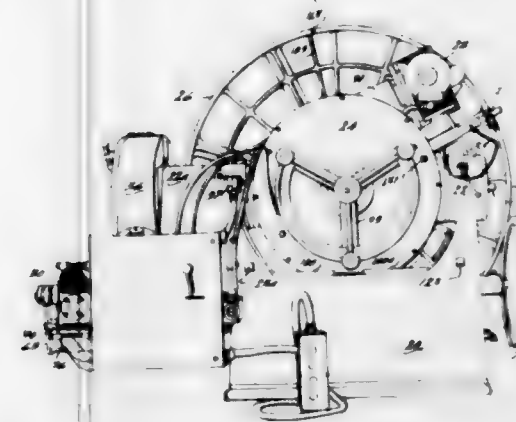
LAYOUT FIXTURE

Clarence Henry Miller, Detroit, Mich., assignor, by mesne assignments, to Machine Products Corporation, a corporation of Michigan

Filed Nov. 16, 1955, Ser. No. 547,171
3 Claims. (Cl. 33-174)

2. A checking fixture comprising a base member having upwardly extending, spaced apart arms, a drum-like supporting member trunnioned between said arms, a table rotatably mounted on one face of said supporting member, said table having two radially spaced concentric shoulders on the side thereof adjacent the supporting member, an annular scale mounted on the radial shoulder closest to said supporting member, a clamp having one portion bearing on said scale and another portion positioned opposite the other of said radial shoulders, said clamp being provided with a threaded aperture in said other portion thereof, a threaded rod member engageable with said clamp in the threaded aperture thereof and rotatably supported by said table, said rod-

like member having an annular groove therein adapted to receive a pin whereby said rod-like member is permitted to rotate but is held against longitudinal move-



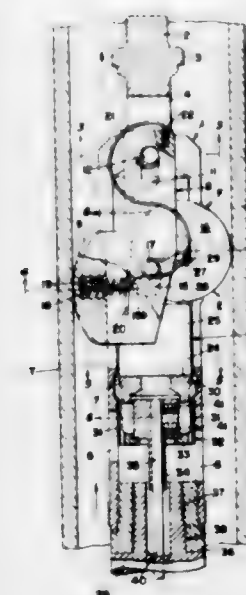
ment for moving said clamp member toward or away from said scale, and tool engaging means at the end of said rod-like member whereby said rod-like member may be rotated to thread said clamp against said scale.

2,999,320

RELEASE ASSEMBLY FOR TUBING CALIPER

John V. Fredd, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware

Filed Mar. 3, 1959, Ser. No. 796,812
23 Claims. (Cl. 33-178)



1. In an internal tube wall caliper and recording device adapted to be passed through an extended length of tubing, said device including a plurality of feelers arranged in a feeler head assembly and mounted for movement from a feeler-retracted position out of contact with the tubing wall to a feeler-extended position for contact with the tubing wall; a mechanism for releasing said feelers for movement from the feeler-retracted position to the feeler-extended position comprising an elongated hollow body member adapted to be secured to the feeler head assembly, a plunger mounted within said body member for longitudinal movement with respect thereto, a feeler controlling member secured to said plunger, said controlling member releasing said feelers for movement to a feeler-extended position in response to movement in a predetermined direction of said plunger with respect to said body member, a releasable retaining member mounted within said body member and originally locked in position therein, said retaining member engaging said plunger to prevent movement of the latter in said predetermined direction, a contacting member movable longi-

tudinally with respect to said body member and extending beyond the outer surface of said body member to firmly contact the tubing wall, and means operated by said contacting member, in response to a downward longitudinal movement of said body member with respect to said contacting member, to unlock said retaining member, thereby to release said plunger for movement in said predetermined direction.

2,999,321

APPARATUS FOR FACILITATING THE MAKING OF PLEATED DRAPERIES

John W. McAllister and Eva C. McAllister, West Covina, Calif., assignors of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California

Filed May 13, 1959, Ser. No. 812,888
10 Claims. (Cl. 33-180)



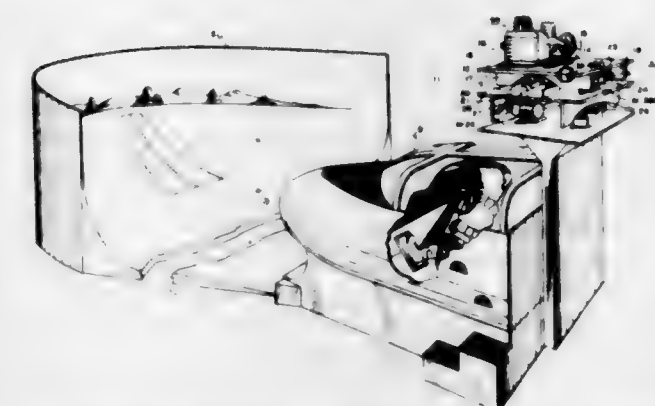
1. Apparatus for facilitating the making of pleated draperies, comprising: an elastic longitudinal member carrying at equally spaced locations therealong a plurality of spacer members; fastening means for fastening a first portion of said elastic longitudinal member at a fixed location; and controllably operable fastening means for locking said spacer members in any selected extended relationship with respect to said fixed location.

2,999,322

VISUAL DISPLAY METHOD AND APPARATUS

Harold S. Hemstreet, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware

Filed Jan. 5, 1955, Ser. No. 480,033
34 Claims. (Cl. 35-12)



9. Apparatus for use in conjunction with a grounded aircraft trainer for providing a realistic visual display of a ground area, said trainer being provided with dummy controls and instruments and operable by a student to provide instrument indications simulating those of an actual aircraft during like operation of said controls, said apparatus being adapted for use with a motion picture film having a plurality of frames, each of said frames bearing a representation of said ground area as it would appear when viewed obliquely from an airborne aircraft, and each of said frames representing said area as viewed at a different point along a reference path extending obliquely toward said ground area, comprising, in combination, motion picture projection apparatus for project-

ing images from said film to be observed by said student, said projection apparatus being controlled in accordance with the simulated instantaneous position of said simulated aircraft from said ground area so as to project an image at any given instant from a selected frame of said film which represents said area as viewed from a distance commensurate with the simulated distance between said simulated instantaneous position of said simulated aircraft and said ground area, means for deriving a first control quantity commensurate with the ratio between the instantaneous simulated horizontal distance between said simulated aircraft and said reference path and the simulated altitude of said reference path at said simulated distance, means for deriving a second control quantity commensurate with the difference between the instantaneous simulated altitude of said simulated aircraft and the simulated altitude of said reference path at said simulated distance, variable vertical magnification means for magnifying said projected image vertically with respect to a horizon portion of said image, and lateral distortion means for modifying said image so as to laterally displace ground area portions of said image by amounts proportional to their distances below said horizon portion of said image, said first control quantity being connected to control the amount of the lateral displacement caused by said lateral distortion means and said second control quantity being connected to control the amount of magnification caused by said variable vertical magnification means.

2,999,323

MOCCASINS AND FOOTWEAR

Joseph D. Bozza, Jersey City, N.J., assignor to The Jo-An Shoe Manufacturing Co. Inc., Fairlawn, N.J., a corporation of New Jersey
Original application Dec. 17, 1956, Ser. No. 628,928, now Patent No. 2,946,069, dated July 26, 1960. Divided and this application July 3, 1958, Ser. No. 747,105
4 Claims. (Cl. 36-11)



4. A footwear construction comprising a sole and peripheral upper portion, said peripheral upper portion having its edge gathered to form a pocket at each end, a cord secured to the gathered edge of and on the inner surface of each of said pockets to retain the shape of said pockets, a front-central upper piece, a pair of upper strips extending rearwardly from said upper piece, said strips being joined at their rear ends to form a closed peripheral edge, the peripheral length of the edge of said upper portion in gathered condition being substantially equal to that of said upper piece and strips, said upper portion being joined in edge-abutting relation with the upper piece and strips throughout their entire peripheries by stitches extending across the line of abutment of said edges.

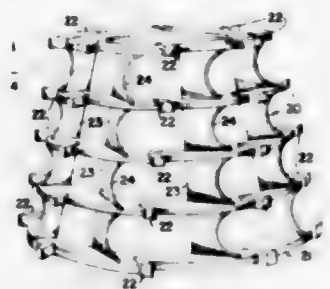
2,999,324

CUTTERS FOR HYDRAULIC DREDGES

Sidney Carl Ohlhausen, Rte. 2, Box 455, Alvin, Tex.
Filed Feb. 29, 1960, Ser. No. 11,822
5 Claims. (Cl. 37-67)

1. A cutter comprising a supporting frame including a hub adapted to be rotated about an axis at the center thereof, a plurality of struts extending therefrom and diverging from each other, the ends of said struts being secured to an annular base member, a cutting cage positioned to substantially envelop the supporting frame, said cutting cage including a plurality of annular spaced members being connected by a plurality of web members, said

annular members having outwardly extending cutting teeth, the inner portion of said annular members having



recessed portions in which said struts of the supporting frame are positioned.

2,999,325

COMBINATION PAD AND COVER UNIT FOR IRONING TABLE TOPS

Donald J. Munson, Minneapolis, Minn., and Robert Gustin, Boston, Mass., assignors to The J. R. Clark Company, Spring Park, Minn., a corporation of Minnesota

Filed Aug. 6, 1958, Ser. No. 753,502
1 Claim. (Cl. 38-140)



A combination pad and cover unit for an ironing table top comprising a section of relatively thick padding material having a pad portion adapted to completely cover the top and a peripheral marginal portion adapted to depend downwardly around the peripheral edge of the top, a cover sheet of fabric material completely overlapping the pad portion and having a peripheral marginal portion extending downwardly along the outside of the marginal portion of the padding material, a skirt extending completely around the peripheral edge of the top outside of the marginal portion of said sheet, said skirt, cover sheet and section being stitched together along the line of juncture of the section pad portion and marginal portion to form a fixed continuous downwardly directed lip of said marginal portions within the skirt adapted to closely engage around the periphery of the top to prohibit lateral slippage of the unit along the top under normal ironing pressures, an elongated strip of fabric material covering the lip throughout its length, said strip being formed in a U-shape in cross section and extending downwardly inside the lip, then under the lip, and upwardly between the lip and skirt, and being held by the stitching along said line of juncture.

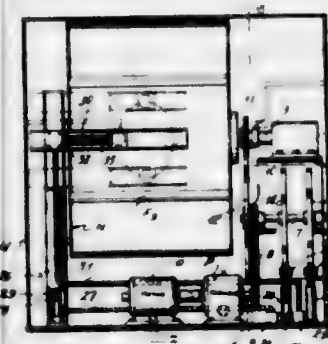
2,999,326

APPARATUS FOR PRODUCING ANIMATED OPTICAL EFFECTS

Georges Musaphis, 87 Withington Road, Newton, Mass.
Filed Oct. 14, 1958, Ser. No. 769,052
4 Claims. (Cl. 40-106.52)

1. An apparatus for producing animated optical effects comprising: a cabinet having an aperture through which the products of animation may be viewed, a rotatable drum mounted therein and adapted to support a plurality of pictures successively for presentation through said aperture, a source of light within said drum arranged to project light through said pictures, a prime mover, actuating means operable by said prime mover for intermittently rotating the drum to present for a predetermined period successive pictures for observation through said

aperture, additional actuating means operable by said prime mover for varying the position of the light source during the periods when the pictures are observable through the aperture, and translucent screens overlying and adjacent each picture and immovable with respect

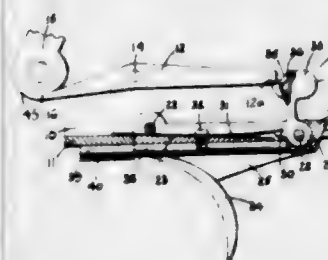


thereto and having non-magnifying bulbous protrusions from the plane of the picture and overlying selected portions of the picture, whereby as the position of the light source is changed a simulation of movement of the selected portions of the picture will be created.

2,999,327

SINGLE TRIGGER MECHANISM FOR DOUBLE BARRELLED SHOT-GUNS

John Eyton Orr, 42 Broad Road, Acocks Green, Birmingham, England
Filed Aug. 24, 1959, Ser. No. 835,522
8 Claims. (Cl. 42-42)



1. In a single trigger mechanism for a double-barrelled gun comprising a body, first and second firing members mounted therein, spring means urging said firing members towards fired positions, and first and second sears in said body coacting with said first and second firing members respectively to retain same releasably in cocked positions, the provision in combination; of a trigger movable relatively to said body between cocked and fired positions, an inertia member mounted movably on said trigger and movable therewith in a first direction during movement of said trigger, and movable relatively to said trigger in each of a second direction in response to gun recoil and a third direction, said first, second and third directions being mutually transverse, a primary abutment face on said inertia member, a secondary abutment face on said inertia member, abutment faces on said sears, selector means including a manually operable selector member operatively connected with said inertia member for moving same in said third direction to bring at least part of said primary abutment face into overlapping relation as viewed along said first direction with said abutment face on one of said sears and out of overlapping relation with said abutment face on the other of said sears selectively while positioning said secondary abutment face in said third direction potentially to be operative in relation to said abutment face of said other of said sears, to effect release of said one sear only upon movement of said trigger to its fired position, said inertia member having a mass such that it is moved along said second direction to an inoperative position in response to recoil of the gun upon release of said one sear and subsequent firing of the as-

sociated barrel of the gun, means urging said inertia member to an operative position along said second direction and active to effect such movement upon cessation of gun recoil, said secondary abutment face of said inertia member having at least a part disposed in overlapping relation with said abutment face of said other of said sears when said inertia member occupies said operative position to effect release of said other of said sears in response to movement of said inertia member in said first direction when said trigger is again moved to its fired position.

2,999,328

FISHING APPARATUS

Leonell J. E. Revord, 1112 Louis Ave., Flint, Mich.
Filed May 31, 1960, Ser. No. 32,768
1 Claim. (Cl. 43-17)



An apparatus for fishing through a hole in ice, said apparatus comprising an elongated upstanding body supported in and extending through the hole in the ice, a reel, having an extension thereon, rotatably mounted on the lower end portion of the body and submerged in the water below the ice, a line wound upon said reel so as to rotate said reel upon a pull on said line, said upstanding body having its upper end bifurcated to form a pair of branches and having transverse aligned openings through said pair of branches, a signal arm having one of its end portions in said bifurcation, being slotted from a side edge thereof to substantially its central portion, and having an oversized aperture therein, a pivot pin in said aligned openings in said body and in the slot in said signal arm for pivotally mounting said signal arm for movement from a horizontal cocked position to a vertical signaling position, a coiled tension spring positioned along the outer side surfaces of said upstanding body and said signal arm and having its opposite ends fixed to said body and arm so as to stretch said spring partially around the pivotal connection when said signal arm is in a cocked position, and a sear mechanism having a catch portion engaging said enlarged aperture in said signal arm, a nub portion connected to said body, and a second catch portion on said sear mechanism and arranged to releasably engage said nub portion to hold said signal arm in horizontal cocked position and to be disengaged therefrom by rotary movement of said reel to release said spring activated signal arm from horizontal cocked position for movement to vertical signaling position.

2,999,329

SOUND EMITTING FISHING LURE

Henry Pankuch, 1508 W. 101 St., Los Angeles 47, Calif.
Filed Nov. 26, 1958, Ser. No. 776,648
2 Claims. (Cl. 43-26.2)

1. An audible fishing lure, including, a buoyant body for maintaining the fishing lure horizontally aligned and

partially submerged along the surface of the water having an upper and lower surface and defining a vertical opening from its upper surface through to its lower surface, said vertical opening being partially filled with water when the body is partially submerged, a horizontally aligned rotatable shaft supported by said body and passing transversely through said vertical opening of said body, a plurality of angularly spaced water vanes supported on each end of said rotatable shaft adjacent opposite sides of said body for rotating said shaft when the fishing lure is pulled along the surface of the water, only some of said vanes at each of the opposite sides of said body being in said water for any angular position of said



rotatable shaft when the body is partially submerged, a ratchet wheel positioned in said vertical opening and supported on said rotatable shaft so as to be rotatable therewith, said ratchet wheel having a plurality of teeth along only a predetermined portion of the circumference of said ratchet wheel so as to provide for spaced audible signals, and a flexible reed having a first end supported on the upper surface of said body, and a second end contacting the circumference of said ratchet wheel to provide for an audible signal reverberating in the non-water filled portion of the vertical opening when the second end of the flexible reed is vibrated by the successive teeth of said ratchet wheel as the wheel is rotated with said shaft.

2,999,330
SPINNING LURE
John A. Sich, Jr., 3520 Hudson Drive,
Youngstown 11, Ohio
Filed Oct. 10, 1958, Ser. No. 766,600
2 Claims. (Cl. 43-42.2)

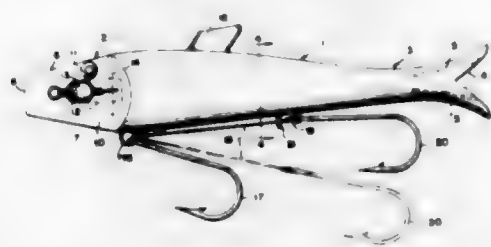


1. In a spinning lure having an elongated body member in the form of a narrow shaft, eyelets formed at the opposite ends of said shaft and a hook attached to one of said eyelets; the improvement comprising an elongated first spinner element rotatably mounted on said shaft between said eyelets, said first spinner element comprising a strip like member having a longitudinally extending section twisted 90° between its end portions which end portions are disposed at right angles to said shaft and apertured to receive said shaft, the longitudinal axis of said twisted section being parallel with said shaft and positioned at one side thereof, a second spinning element formed on one of said end portions of said first spinning element and positioned on the same side of the shaft and comprising a blade extending outwardly therefrom, said blade being curved in a direction opposite to the direction of the twist of said element.

2,999,331
FISHING LURES
Wilmer R. Northrup, Box 412, and Thomas W. Kaylor,
2111 Greenwood Ave., both of Reedport, Oreg.
Filed Apr. 7, 1959, Ser. No. 804,716
1 Claim. (Cl. 43-42.46)

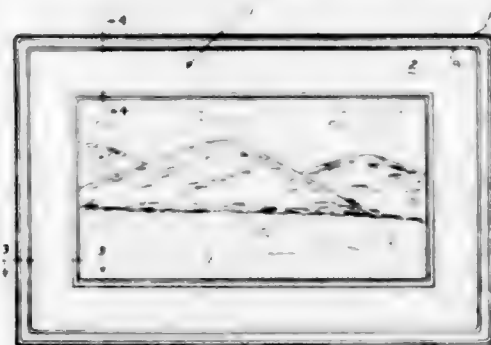
A fishing lure comprising an elongated rigid body member, means attached to said body member rearward

of its forward end for attachment to a trolling line, said body member having a head portion at its forward end and a tail portion at its opposite end including tail fins, a fin of bendable metal secured to the top surface of the body of the lure and arranged diagonally relative to the longitudinal center line of the lure, said head portion having side surfaces converging to a vertical edge, offset from the longitudinal axis of the lure and offset from



said line attaching means, whereby the motion of the lure when moved through the water will simulate that of a crippled fish in that said offset vertical edge will cause the lure to swing to one side against the pull exerted by the trolling line and simultaneously said bendable fin will cause a rolling action of the lure and whereby the pull of the trolling line will return the lure to an upright position.

2,999,332
TABLE PLACE MAT
Jack Stein, Dayton, Ohio, assignor to Art Industries, Inc.,
a corporation of Ohio
Filed Dec. 4, 1958, Ser. No. 778,187
3 Claims. (Cl. 45-68.4)



1. A place mat, including a first flexible sheet of impermeable transparent plastic, a smaller flexible sheet of impermeable material imposed on said first sheet, a third flexible sheet of material having an artistic impression thereon hermetically enclosed between said first and second sheets and a layer of absorbent material welded to said first sheet and over said second sheet, the welds between said layer of absorbent material and said first sheet being outside the margins of said second smaller sheet and arranged to simulate a frame for the artistic impression of said third sheet.

2,999,333
BELT HOOP SPINNER
William E. Clark, 305 Robinson St., Newport, Tenn.
Filed Jan. 20, 1959, Ser. No. 787,910
2 Claims. (Cl. 46-47)

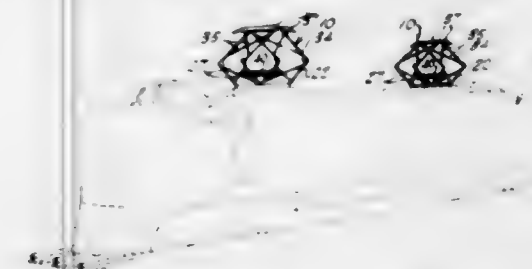
1. A device of the character described consisting solely of a circular body member adapted to be positioned around the waist of the user, the outer periphery of the body member being provided with a continuous circular recess therein, a hoop arranged for rotary engagement with said recess, the diameter of said hoop being substantially greater than the diameter of the body member,

the body member having an inner smooth surface, there being a split in said body member, said body member



having openings on opposite sides of the split, and a hook member engaging said openings.

2,999,334
LOCOMOTIVE PANTOGRAPH
Moses Zion, Brooklyn, N.Y., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Aug. 15, 1957, Ser. No. 678,375
3 Claims. (Cl. 46-217)



1. A toy pantograph for model railway locomotives including parts of a size adapted to be mounted on such model railway locomotives, comprising a base frame having an upwardly extending lug at each end with an outer lower substantially vertical face and an upper beveled face, a bottom side arm on each side of said base frame each having a lug on the end adjacent said base frame with a substantially vertical lower face opposing the vertical face of the lug on said base member and with a beveled upper face at the same elevation as the beveled upper face of the lug on said base member, flexible means connecting the lugs of said base member with each of said side arms intermediate the height of the vertical portions of said lugs, said side arms being pivotal upwardly to move the beveled faces of opposing lugs of said base member and said side arms into contact, simulated collector shoe means, a pair of upper side arms, one end of each of which is pivotally connected to each respective bottom side arm at the end thereof which is unconnected to said base frame member and the other end of which is pivotally connected to said collector shoe means, and a spring connected to said bottom side arms at a location on each above the tops of said lugs when said pantograph is in a raised operative position with the beveled faces of said lugs in contact, said spring biasing said lugs into contact when said pantograph is in said upper operative position.

2,999,335
MANUALLY OPERABLE CAROUSEL-SIMULATING TOY
Lee A. Burnett, Los Angeles, Calif., assignor of one-fourth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed June 30, 1959, Ser. No. 823,963
2 Claims. (Cl. 46-220)

1. A manually operable carousel-simulating toy, comprising: a frame including two laterally spaced upstanding members and an interconnecting base member, said frame being provided with rollable horizontally pivotally

mounted wheel means extending below said base member for rollable contact with an underlying surface; oversized ring means mounted between said upstanding members spaced above said base member and open at the top and bottom in a position symmetrically disposed about a vertical central axis passing vertically centrally through the base member and the ring means; a rotatable carousel means consisting of a lower platform, an upper platform, and a longitudinal interconnecting central member having its own central longitudinal axis of rotation, said longitudinal central member extending upwardly through said ring means at an angle with respect to the vertical central axis passing centrally through the base member and the ring means and being of substantially smaller, round, exterior, cross-sectional shape and diameter than the inside diameter of said ring means and normally having an exterior portion of said longitudinal central member lying in rollable frictional abutting engagement with a corresponding interior portion of said ring means; and precessional-movement mounting means including a first element and a second element; said carousel means being centrally provided at the bottom there-

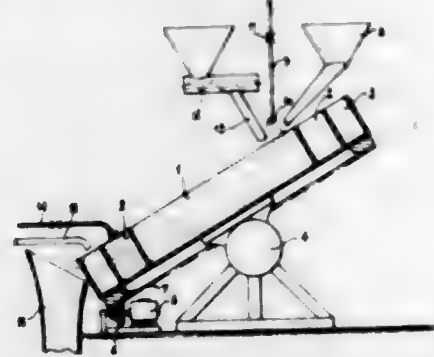


of with said first element of said precessional-movement mounting means and said base member being centrally provided with said second element of said precessional-movement mounting means precessionally engaging said first element of said precessional-movement mounting means whereby to mount said central member for rotation about its own longitudinal axis of rotation and for precessional movement about the vertical central axis passing centrally vertically through the base member, the precessional-movement mounting means, and the ring means, whereby said longitudinal axis of rotation of the longitudinal central member describes the surface of a cone about the vertical central axis passing through the base member, the precessional-movement mounting means, and the ring means; and handle means having one end fixedly fastened to said frame and having another end extending to a position offset therefrom for oscillating said frame about a horizontal axis whereby to cause said ring means to frictionally impart precessional movement to said longitudinal central member of said carousel means and to impart rotation thereto about its central longitudinal axis of rotation.

2,999,336
PREPARATION OF COATED SEEDS
Jean-Baptiste Cecas, Paris, France, assignor to Compagnie Nord-Africaine de l'Hyperphosphate Reno, Sfax, Tunisia, a corporation of Tunisia
Filed July 23, 1959, Ser. No. 829,045
Claims priority, application France Aug. 9, 1958
4 Claims. (Cl. 47-58)

1. A method of preparation of seeds provided with a coating of fertilizer material comprising the steps of introducing seeds to be coated into a granulating device, applying liquid in a fine spray to said seeds to moisten the surface thereof, adding fertilizer material in a fine powdered form to the moistened seeds for coating the moistened surface of said seeds with said fertilizer mate-

rial in a proportion of three to seven times the weight of said seeds, and further treating the coated seeds with concentrated sulphuric acid which is from 3 to 5% of the



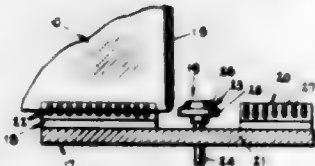
weight of said coated seeds to simultaneously dry and set the coating on said coated seeds by the exothermic reaction of the sulphuric acid with the fertilizer material.

2,999,337

APPARATUS AND METHOD FOR MAKING MULTIPLE SHEET GLAZING UNITS

Donald E. Sharp, Maumee, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Feb. 2, 1956, Ser. No. 563,007
2 Claims. (Cl. 49-1)



1. In apparatus for producing all-glass multiple sheet glazing units, comprising means for supporting a pair of hard glass sheets in fixed spaced face-to-face relation with respect to one another, a conveyor for moving said spaced glass sheets along a definite path, concentrated heat sources for raising the temperature of the spaced marginal edge portions of said sheets to a condition at which they may be fused to one another, a pair of forming wheels mounted for rotation the peripheral portions of which engage opposed heated marginal edge portions of said sheets as they move along the definite path and urge them toward and into fusion contact with one another, said peripheries provided with a plurality of spaced depressions to provide the sealed edge wall of the glazing unit with a patterned embossed surface.

2. A method of producing all-glass multiple sheet glazing units, comprising supporting a pair of hard glass sheets in fixed spaced face-to-face relation with respect to one another, moving said glass sheets along a definite path, heating the marginal edge portions only of said sheets as they move along said path to a temperature at which they are pliable, urging said pliable marginal edge portions toward and into direct fusion contact with one another to form a sealed edge wall, and during the urging of the pliable marginal edge portions toward one another impressing in the outersurfaces thereof a plurality of spaced depressions to provide a patterned embossed surface on the edge wall.

2,999,338

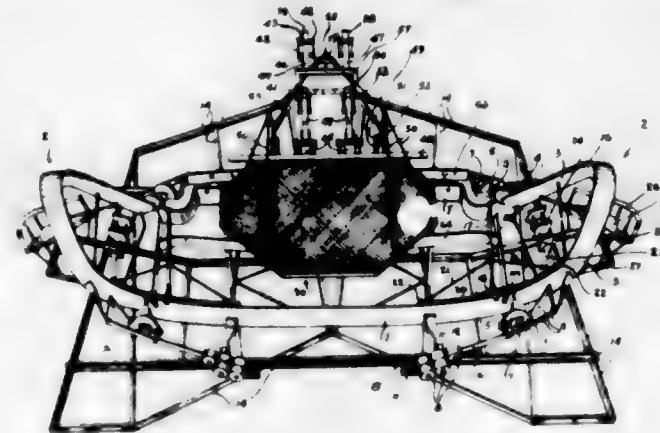
GLASS BENDING MOULD

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed Jan. 29, 1957, Ser. No. 636,965
2 Claims. (Cl. 49-67)

1. Apparatus for bending an elongated glass sheet into a compound curvature including a central region having

a transverse curvature, comprising a skeleton type bending mould having a central mould portion provided with bars having shaped upper surfaces for supporting the lateral edges of the central portion of the bent sheet, a Lehr comprising a bending zone provided with overhead heaters maintained at a temperature sufficient to cause bending of said glass sheet, ancillary heating means disposed closely above the central portion of the glass sheet and supported on said mould, said ancillary heating means serving to supplement the heating to which said central portion of the glass sheet is subjected by said over-



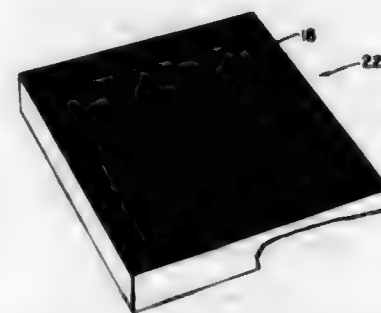
head heaters, and apertured reflector means having a heat reflective surface disposed closely above said ancillary heating means, said apertured reflector means serving to permit heat radiated from said overhead heaters to impinge on the glass sheet while increasing the proportion of radiant heat emitted by said ancillary heating means which impinges upon the central portion of the glass sheet to cause said central portion of the glass sheet to assume said transverse curvature about an axis extending longitudinally of the glass sheet in alignment with said ancillary heating means.

2,999,339

METHOD OF PROVIDING AN ELECTRICALLY CONDUCTIVE SURFACE

Joseph R. Hensler, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York

Filed Dec. 7, 1956, Ser. No. 627,067
3 Claims. (Cl. 49-77)



1. A method of making an article having an electrically conductive surface comprising the step of reducing a selected surface portion of a body of phosphate glass consisting essentially of by weight 8-25% silver phosphate, 30-75% aluminum phosphate, 10-30% alkali metal phosphate, and up to about 25% barium phosphate by exposing said surface portion to a reducing atmosphere at a temperature of 300° to 400° C. for about 2 to 3 hours, thereby to decrease the resistivity of said selected portion to less than about 10 ohms per square.

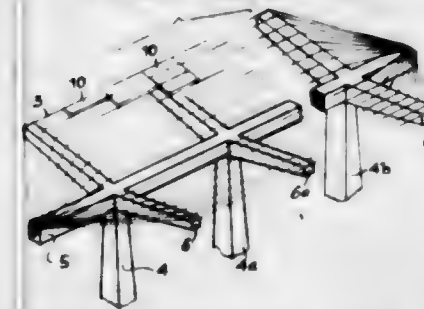
2,999,340

SURFACE SUPPORTING STRUCTURE

Rudolf Maculan, 6 Herrengasse, Vienna I, Austria; Ernst Meissner, guardian of Alexander Maculan, heir of said Rudolf Maculan, deceased

Filed Aug. 13, 1954, Ser. No. 449,595

Claims priority, application Austria July 13, 1954
1 Claim. (Cl. 50-49)



A roof construction comprising a pair of spaced erect standards, a ridgepiece supported atop and rigidly interconnecting said standards, a plurality of pairs of cantilever arms secured to said ridgepiece, the arms of each said pair extending laterally outwardly therefrom in opposite directions at spaced intervals along said ridgepiece, said arms conjointly defining a sloping roof area, said ridgepiece having each end extending beyond the adjacent one of said pairs of arms, a plurality of spaced cables extending over and across and supported by said arms and tensioned therebetween in parallel relation with said ridgepiece, all said cables at said ends converging toward end of said ridgepiece whereby the same is directly compressed by the tension in said cables, and metallic sheeting extending over and supported on and by said cables, said sheeting extending over said roof area and being attached to said cables at intervals only therealong.

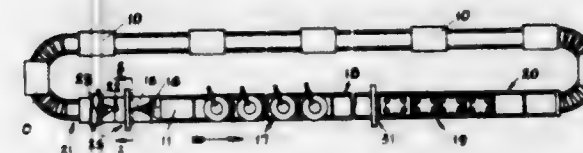
2,999,341

CLEANING GLASS SUPPORTING TABLES

Harold M. Alexander and William E. McCown, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Oct. 22, 1956, Ser. No. 617,634

3 Claims. (Cl. 51-277)



2. A method of cleaning metal surfaced tables in a glass surfacing operation comprising brushing the magnetizable metal surfaces of said tables with a metal brush, thereafter passing the brushed tables through a first magnetic field to remove from the metal surfaces of the tables foreign matter resulting from said brushing, and subsequently passing said tables through a second magnetic field of reversed polarity from said first field to demagnetize the metal surfaces of said tables.

2,999,342

MECHANISM FOR APPLYING AND PRESSING ADHESIVE TAPE TO PERPENDICULARLY RELATED FACES OF TRAVELING CARTONS

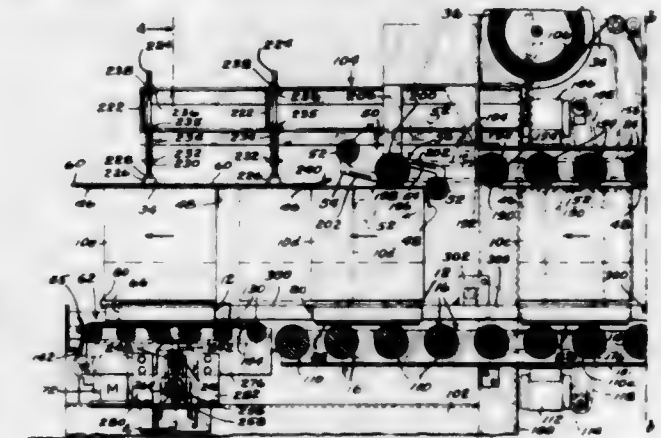
Clifford D. Keely, West Englewood, N.J., and Raymond J. Balsley, Hempstead, N.Y., assignors to General Corrugated Machinery Company, Inc., Palisades Park, N.J., a corporation of New Jersey

Filed Apr. 22, 1959, Ser. No. 688,253

12 Claims. (Cl. 53-66)

1. A carton taping machine of the U-return type comprising, in combination, means for feeding a carton through an outgoing course, then through a transverse course and finally through a return course to the end of

the machine at which it was introduced, all while maintaining the original orientation of the carton, means responsive to the carton for automatically feeding and cutting a length of tape determined by the length of the carton itself but exceeding the carton in length by a predetermined amount, means for applying the length of tape to the top of the carton as it travels along the outgoing course, with overhanging tape ends of substantially



predetermined lengths protruding beyond the front and rear faces of the carton, means automatically effective to press down the rearwardly protruding tape end against the rear face of the moving carton as the carton travels along the first course, and means automatically effective to press the originally leading, but now trailing, tape end against the originally leading, but now trailing, face of the moving carton as the carton travels along the return course.

2,999,343

MACHINES FOR THE PACKING OF BOTTLES OR LIKE ARTICLES INTO CASES OR THE LIKE

Robert Michael Berry, Forest House, Birmingham Road, Henley-in-Arden, England

Filed Mar. 16, 1960, Ser. No. 15,506

1 Claim. (Cl. 53-166)



A machine for the packing of bottles or like articles into cases or the like, of the kind embodying an unfettered counter balanced head frame in which a plurality of bottles or the like are held for lowering into a packing case, comprising an air cylinder, a piston slidably mounted in said air cylinder, a piston rod coupled to said piston and connected to said head frame, a secondary piston mounted on said piston rod, the position of which is adjustable in accordance to the required initial downward travel of the head frame, a primary outlet to said air cylinder to permit of the passage of air from said cylinder during the initial descent of the head frame, and a secondary restricted outlet to said air cylinder operable on the closing of the primary outlet by the secondary piston to retard the rate of travel of the head frame during the remainder of its descent.

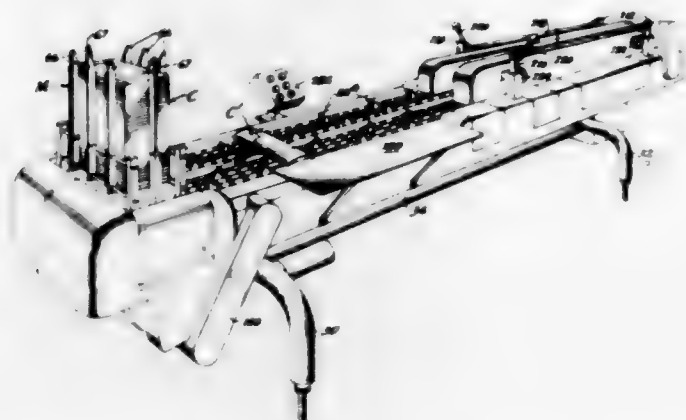
2,999,344

CARTONING MACHINE

Richard D. Clanin and Omar Hansen, Jr., Anderson, Ind., assignors to Lynch Corporation, Anderson, Ind., a corporation of Indiana

Filed Aug. 3, 1959, Ser. No. 831,297

21 Claims. (Cl. 53—186)



1. In a cartoning machine of the character disclosed, a magazine for a stack of collapsed cartons, the carton bodies being operated upon being of rectangular configuration and horizontally disposed with panels of the carton bodies constituting the side, top and bottom panels thereof, and having dust tabs and end panels connected therewith, a conveyor for receiving cartons from said magazine, said conveyor having carton-receiving dogs biased to engage the side panels of the carton and bow the top panel of the carton upwardly, said magazine having projections for supporting said stack of cartons in such manner that the lowermost one may be withdrawn downwardly from the stack, vacuum cups for engaging the lowermost carton, withdrawing it from the magazine, partly erecting it and preliminarily bowing the top panel thereof, said magazine having strippers for engaging said top panel to effect such bowing and a breaker rod to start the erection of the carton as it is withdrawn past said breaker rod, tuckers for dust tabs and an end panel at one end of the carton, means for retaining said dust tabs and said end panel tucked to serve as a stop for product inserted into the carton from the other end thereof, a tucker for dust tabs and an end panel at the other end of the carton, dewaxers past which the carton passes comprising heating plates and heaters therefor to remove part of the wax from the ends of the carton and the top end panels thereof to permit the application of glue thereto, holddown means for removing the bow from the top panel of the carton and contacting the end panels thereof with said dewaxing means, gluing means for said carton ends and said remaining end panels thereof, tucking means for said top end panels to tuck them against the ends of the carton, means to heat said ends to set the glue, means to cool said ends to insure that the glue remains set, and means for discharging the sealed carton from said machine.

2,999,345

APPARATUS FOR FOLDING FLEXIBLE WRAPPERS ABOUT RECTANGULAR BLOCK-SHAPED ARTICLES

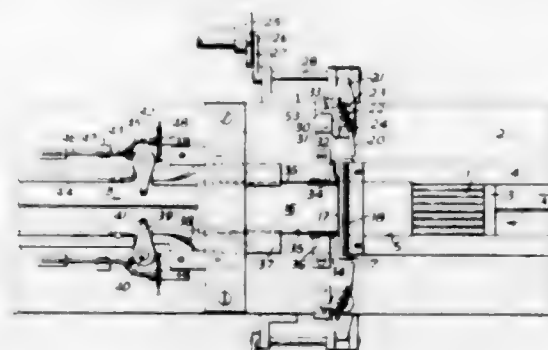
John Walker Chalmers, Charles Thomas Hall, and William Arthur Roffey, all of Deptford, London, England, assignors to Molins Machine Company Limited, London, England, a British company

Filed Mar. 1, 1960, Ser. No. 12,215

Claims priority, application Great Britain Mar. 17, 1959
9 Claims. (Cl. 53—230)

1. Apparatus for wrapping rectangular block-shaped articles by moving an article against a wrapper blank, provided with pairs of slits at each side spaced apart by

the article thickness and extending from the edges of the blank to such distance that the two pairs are spaced apart by the width of the article to provide a flap at each side of the blank, said blank being positioned in the path of the article, whereby the blank is first folded into a U about the article by being moved between plates spaced apart by the article thickness, with the base of the U extending substantially between said slits, said apparatus comprising a guide channel for the blank to lead it into position in the path of the article, a finger movable at



each side of the blank while in said guide channel to bend the said flap at that side through an angle with respect to the plane of the blank and in the direction of movement of the article, guides to retain the flaps in bent position and folding devices arranged, on continued movement of the article, to fold the blank into the said U, whereupon the said flaps project forward of the base of the U and lead the moving article and folded blank, and thereafter to fold the material extending laterally of the top and bottom faces of the article to form long side folds along the sides of the article.

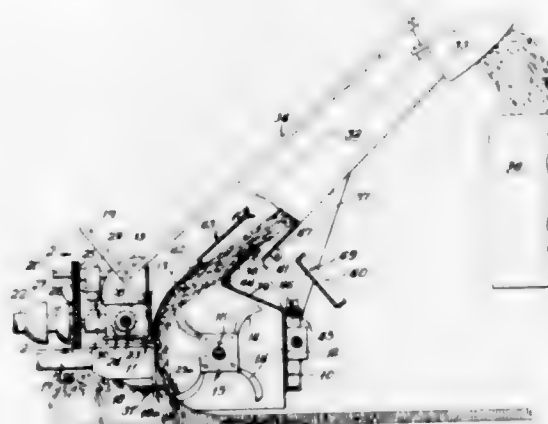
2,999,346

VARIABLE DISCHARGE CROP REAPER AND CHOPPER

Bernard C. Mathews, Rte. 4, Huntley, Ill.

Filed July 7, 1959, Ser. No. 825,435

10 Claims. (Cl. 56—1)



1. A harvesting device comprising an elongated housing portably supported to travel sidewise over the ground and provided with an entrance thereto at the bottom thereof facing downward toward the ground and exit means therefrom at the top and a centrifugal impeller therein all of which are elongated in the direction of the length of and are substantially co-extensive with the length of the housing, the centrifugal impeller being elongated axially and interposed between the entrance and exit means and rotatable about its axis in a direction to remove ground borne material from the ground at the entrance and impel the removed ground borne material upwardly in the housing at the front thereof and rearwardly in the housing at the top thereof and discharge it centrifugally from the housing through the exit means, the exit means being provided with exit selecting means

which is disposable in two optional positions providing selective centrifugal discharge of the removed ground borne material from the housing in two different optional directions in one of which said optional positions the impeller discharges the removed ground borne material centrifugally over the top of the exit selecting means in a direction generally upward from the housing and in the other of which said two optional positions the impeller discharges the removed ground borne material underneath the exit selecting means in a direction generally rearward from the housing.

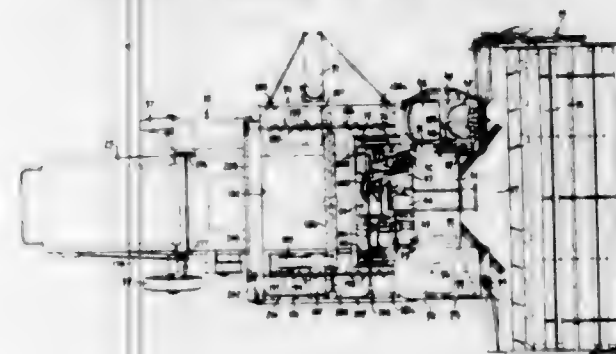
2,999,347

SELF-PROPELLED COMBINE

Donald S. Horne, Robert Ashton, and Leslie L. Kepkay, all of Toronto, Ontario, Canada, assignors to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed June 24, 1958, Ser. No. 744,156

17 Claims. (Cl. 56—21)



1. A self-propelled combine comprising, in combination, a wheeled frame having thereon units for performing conventional harvesting and treating operations, an operator's platform and source of power disposed on said frame at substantially a common level, said source of power including an enclosure having a filtering air intake, and power transmission means coupling said source of power to said harvesting and treating units.

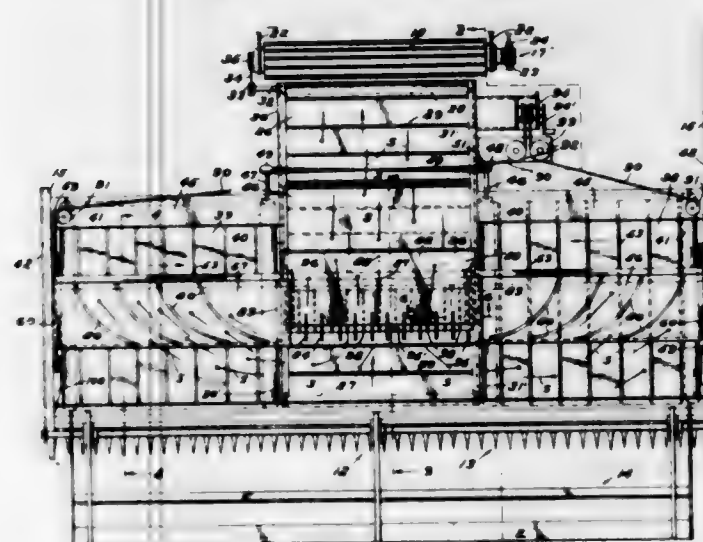
2,999,348

WINDROWER MECHANISM

Arthur Raymond Cunningham, Chicago, Ill., assignor to Cunningham & Sons, Chicago, Ill., a partnership

Filed Apr. 20, 1959, Ser. No. 807,616

12 Claims. (Cl. 56—23)



1. A hay windrower mechanism comprising a support adapted to travel along a field, an endless apron having forward and rearward, horizontally extending guide members rotatably mounted on said support, about which guide members said apron is trained for movement of an upper reach thereof rearwardly of the direction of travel

of said support, a further endless apron at a side of said first named apron having spaced guide members extending in the general direction of said support travel about which said further apron is trained for movement of its upper reach toward said first named apron, a drag structure having means mounting the same on said support in position above said first named and further aprons, and means to drive said aprons for said respective movements of the upper reaches thereof, said aprons and drag structure having elements thereon causing hay deposited thereon to move inwardly toward and on said first named apron while reversing the direction of disposition of the stems of the hay, said drag structure comprising a drag plate above said further apron and a drag plate above said first named apron adjustable longitudinally in relation to said first plate.

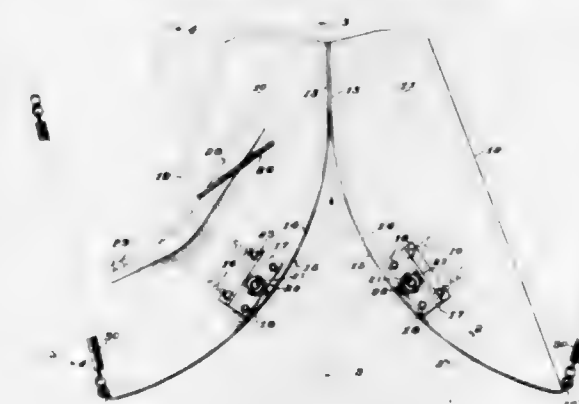
2,999,349

GRASS AND WEED DEFLECTING ATTACHMENT FOR COTTON PICKERS

N T Nichols, Jr., P.O. Box 1463, Belzoni, Miss.

Filed Feb. 1, 1960, Ser. No. 6,006

5 Claims. (Cl. 56—28)



1. A grass and weed deflecting attachment for a cotton picker including a frame, picking spindles and guide fingers; comprising a pair of plates disposed beneath said spindles and said guide fingers, said plates being pivotally supported by said frame at opposite sides laterally with respect to said spindles and said fingers and having adjacent edges including straight portions and curved portions, and means cooperating with said frame and said plates for yieldably retaining said straight portions in contact.

2,999,350

TINE RAKE

Fred C. Dettman, 821 Carson Ave., Rochester, N.Y.

Filed Aug. 3, 1959, Ser. No. 831,361

2 Claims. (Cl. 56—400.17)



1. A lawn rake comprising a frame having means for supporting a plurality of tines, a plurality of spaced

spring flat cross sectioned tines extending in splayed arrangement from said supporting means in a common plane, the free ends of said tines having downwardly curved ends extending out of said plane, and having their tip ends terminating along an arc of relatively long radius, a section of wire mesh secured across the underside of the free ends of said tines and disposed on the concave side of the curved ends thereof, said mesh having a curved marginal edge disposed short of the end tips of said tines, and said mesh being flexibly bound to said tines, and underlying said tines and extending rearwardly along the tines to the frame.

2,999,351

BULKY YARN

T. B. Davenport and Alfred G. New, Greenville, S.C., assignors to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed July 17, 1956, Ser. No. 598,353
7 Claims. (Cl. 57-140)

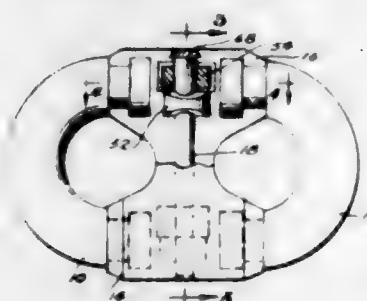


5. A multi-filament nylon yarn containing at least about 10 filaments per end and having imparted thereto a set tendency to twist to the extent of at least about 40 turns per inch, spaced lengths of said yarn having not more than about 10 turns of twist per inch, and said yarn having segments, disposed between said spaced lengths, which are more highly twisted in conformity with said tendency so that there is at least about 40 turns of twist per inch differential between said spaced lengths and said highly twisted segments.

2,999,352

DETACHABLE CHAIN JOINING LINK

Charles D. Linnebank, Media, Pa., assignor to Baldt Anchor, Chain & Forge Division of The Boston Metals Company, Chester, Pa., a corporation of Maryland
Filed Sept. 13, 1960, Ser. No. 55,769
3 Claims. (Cl. 59-87)



1. A detachable chain link, comprising: a pair of oppositely disposed U-shaped end elements, each of said end elements being identical in size and shape to the other and so disposed with respect to the other that the leg portions of each are directed towards and in alignment with the leg portions of the other, a pair of substantially hour-glass shaped cap members, each of said cap members being of substantially identical shape and being provided on one face with a smoothly contoured outer surface, and on the other face with a mating surface, means disposed at each end of each of said cap members on the mating surface thereof for releasably holding the leg portions of said end elements, means defining a pair of spaced recesses and a pair of similarly spaced projecting lugs on the mating surface of each of said cap members, said recesses and said lugs on one of said cap members being adapted to mate with the corresponding lugs and recesses, respectively, on the other of said cap members when both are in mating relation-

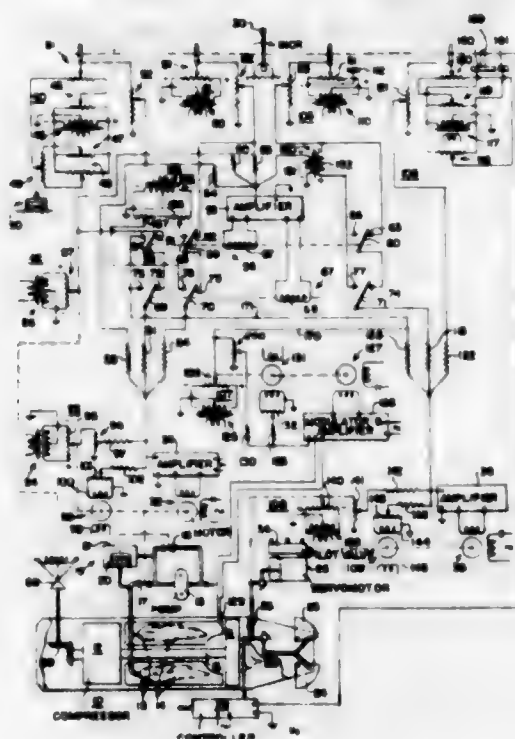
ship, said mated pairs of said lugs and recesses lying substantially between respective aligned pairs of leg portions of said end elements, means defining a hole through said cap members when in mating relationship, said hole passing through the lugs on both of said cap members, and pin means removably disposed within said hole to releasably secure said cap members together.

2,999,353

INTERRELATED MAIN FUEL CONTROL AND NOZZLE AREA CONTROL

Eduard C. Petry and Orville J. Underwood, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed July 15, 1950, Ser. No. 174,022
25 Claims. (Cl. 60-35.6)



1. Control apparatus for a variable speed combustion engine having fuel flow control means and exhaust gas flow control means, the combination comprising, engine speed selecting means, engine speed responsive means, first motor means arranged to control the fuel flow control means, means connecting said speed selecting means and said speed responsive means in controlling relation to said first motor means, second motor means arranged to control the exhaust gas flow control means, engine temperature responsive means responsive to a temperature indicative of engine operation, means connecting said temperature responsive means in controlling relation to said second motor means, control means connected to said speed selecting means and said speed responsive means and arranged to be actuated upon the occurrence of a predetermined differential between selected speed and actual speed, and means including said control means for connecting said second motor means to said speed selecting means and said speed responsive means to effect movement of said second motor means by an amount proportional to the difference between selected speed and actual speed.

2,999,354

VARIABLE AREA NOZZLE

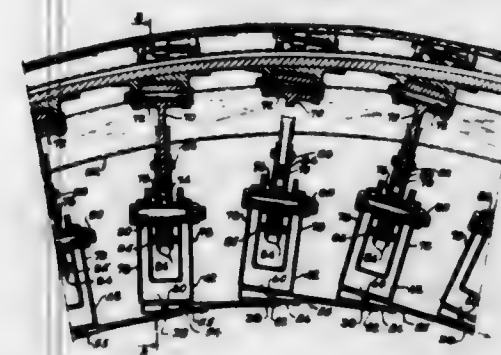
Ella A. Gallo, Englewood, and William F. Payne, Cedar Grove, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Filed July 18, 1956, Ser. No. 598,612
14 Claims. (Cl. 60-35.6)

1. A nozzle construction comprising a plurality of circumferentially-spaced nozzle members each having one

longitudinal edge contacting and circumferentially overlapping a portion of the inner surface of the adjacent nozzle member so as to form a nozzle of substantially circular cross-section; means pivotally supporting the upstream ends of said nozzle members such that the pivot axis of each nozzle member is perpendicular to a plane including its said longitudinal edge and the axis of said nozzle.

10. A convergent-divergent fluid nozzle comprising a plurality of pairs of nozzle members with each pair of nozzle members being pivotally connected in end-to-end relation to form upstream and downstream members and with the upstream nozzle members being pivotally supported at its upstream end, the upstream and downstream nozzle members being disposed to form the convergent and divergent portions respectively of the nozzle and each upstream nozzle member having one longitudinal edge circumferentially overlapping the adjacent upstream nozzle member to provide said upstream nozzle portion with a substantially circular cross-section and each downstream nozzle member having one longitudinal edge cir-



cumferentially overlapping the adjacent downstream nozzle member to provide said downstream nozzle portion with a substantially circular cross-section; a plurality of circumferentially overlapping shroud members, forming a substantially annular shroud about said nozzle; first axially movable annular means co-axial with the nozzle; means pivotally connecting the upstream end of each shroud member to said first annular means; means connecting said shroud members with the downstream nozzle members so that axial movement of said annular means results in adjustment of the downstream ends of said shroud members and of said downstream nozzle members to simultaneously adjust, in the same direction, the area of the downstream end of the shroud and the nozzle exit area; second axially movable annular means co-axial with the nozzle; and means interconnecting said second annular means with each of the upstream nozzle members so that axial movement of said second annular means results in adjustment of the downstream ends of said upstream nozzle members to adjust the nozzle throat area.

2,999,355

CONTROL APPARATUS FOR AIRCRAFT HAVING THRUST REVERSING MEANS

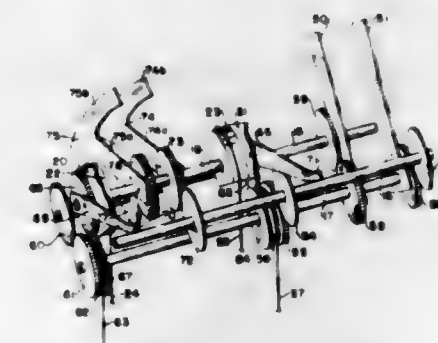
Arthur L. Fishpaw, Baltimore, Md., and Gilbert P. McAvoy, Winter Park, Fla., assignors to The Martin Company, Middle River, Md., a corporation of Maryland

Filed Dec. 3, 1957, Ser. No. 700,374
13 Claims. (Cl. 60-35.54)

1. A control mechanism for an aircraft having a jet engine and a thrust reverser means, comprising throttle control means movable through a range of positions from minimum power position to full power position, thrust reverser control means movable through a range of positions from minimum reverse position to full reverse position, and throttle advance means operated in accordance with operations of said thrust reverser control for setting minimum positions for said throttle control consistent with

the position of said thrust reverser control in order to obtain sufficient thrust for effective operation of said thrust reverser means, and afterburner, and afterburner control means, in which cut-off means are operatively connected with said reverser control and are operative upon movement of said reverser control to actuate said afterburner control means to an "off" condition prior to actuation of the aircraft thrust reverser means.

12. A control mechanism for a multi-engine aircraft having thrust reverser means associated with its engine comprising a housing, a first shaft disposed in said housing, a throttle lever for each engine mounted for pivotal movement on said shaft, each throttle lever extending through a respective elongated slot in said housing and having handle means thereon to be manually grasped, each throttle lever being movable along its slot for a substantial number of degrees of movement in order to control the speed of its respective engine, a throttle advance arm for each engine mounted for pivotal movement on said shaft and positioned axially adjacent a



throttle lever, a second shaft disposed in said housing in spaced relation to said first shaft and substantially parallel thereto, a reverser lever for each engine mounted for pivotal movement on said second shaft, each reverser lever extending through a respective elongated slot in said housing and being movable through a substantial number of degrees of movement in order to control the amount of thrust reversing effect of each engine, gear means interconnecting said reverse levers with respective throttle advance arms for each engine, said throttle advance arms having means interengageable with said throttle levers, whereby upon movement of respective ones of said reverse levers toward full reverse positions, the respective throttle advance arms engage respective ones of said throttle levers and advance them toward full power positions, and throttle retarding levers disposed on said first shaft adjacent respective ones of said throttle levers for moving said throttle levers in the throttle retarding direction in the event said throttle levers are advanced too far along their respective elongated slots for the proper use of said reversing means.

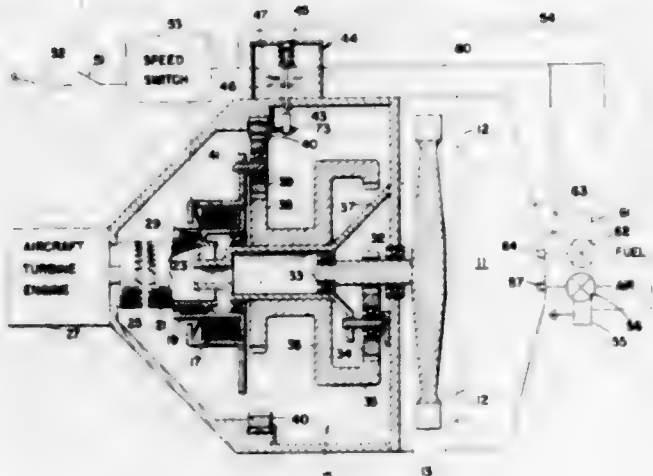
2,999,356

COMBUSTION STARTER HAVING TORQUE SENSING CONTROL

John H. Ferguson, Jr., Saquoit, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,729
5 Claims. (Cl. 60-39.14)

1. A combustion starter comprised of a combustion chamber having an igniter, fuel supply means and air supply means, a turbine arranged to be driven by gases from said chamber and operably connected by a two-stage planetary gearing and coupling means to drive an aircraft turbine engine, said air supply means including a source of pressurized air and being arranged to air-motor the starter so that an appreciable driving torque is transmitted through the starter, control means arranged to sense when the starter is transmitting torque of a predetermined low value, said control means when sensing said torque being arranged to energize said igniter and

to operate said fuel supply means and further permit the supply of air from said air supply means so that combustion gases are automatically supplied to said turbine only when the starter is transmitting said predetermined torque, said planetary gearing including a second stage

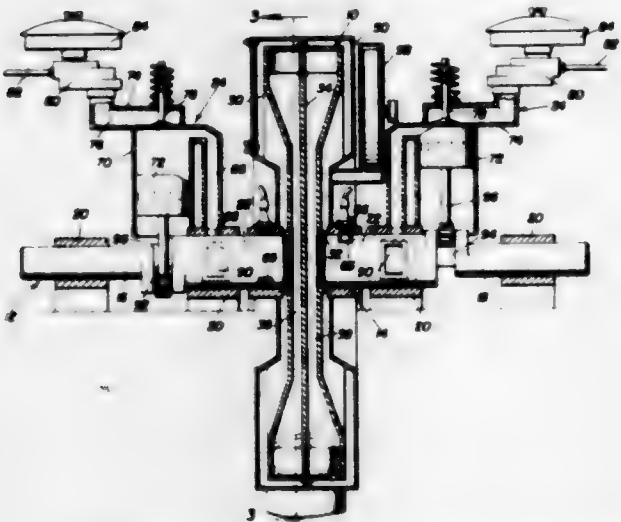


ring gear arranged for limited rotation when the starter is transmitting said predetermined torque, said ring gear when rotated being arranged to actuate said control means and means connected to said ring gear arranged to return said ring gear to its initial position whereby said control means is de-actuated.

2,999,357

REACTION MOTOR

Albert W. Elling, Rte. 2, Hampton, Iowa
Filed Sept. 16, 1958, Ser. No. 761,381
17 Claims. (Cl. 60—39.34)



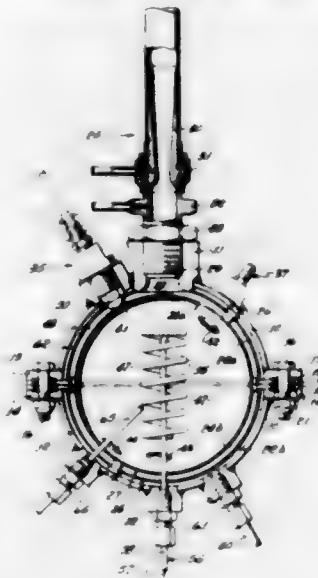
1. A reaction motor of the internal combustion type comprising a shaft, means supporting said shaft, a reaction rotor supported upon said shaft and mounted for rotation about the axis of said shaft, said rotor including a body having a pair of combustion chambers therein, means for delivering combustible mixtures to each of said chambers, a reaction nozzle mounted upon said body and projecting therefrom radially of the shaft axis and having its outlet directed rearwardly of the direction of rotation of said body, said nozzle including passageways each separately communicating a combustion chamber with said outlet, said shaft including a pair of aligned sections, said body being disposed between and mounted upon the adjacent ends of said sections, said sections including each a passage means delivering a combustible mixture to one of said chambers, each section having an igniter mounted adjacent thereto and having means for communicating said igniter with a chamber intermittently in timed sequence for igniting a combustible mixture therein.

2,999,358

REACTION CHAMBER FOR MONOPROPELLANT OR BI-PROPELLANT FUELS

Eugene B. Zwick, Pacoima, Calif., assignor, by mesne assignments, to Sandstrand Corporation, a corporation of Illinois

Filed Oct. 21, 1957, Ser. No. 691,301
6 Claims. (Cl. 60—39.46)



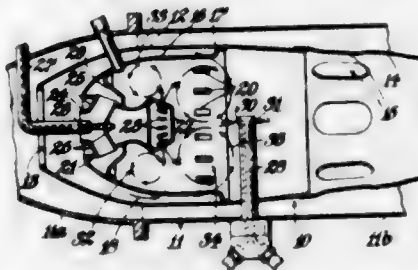
1. A reaction chamber comprising an outer metallic spherical shell, an intermediate metallic spherical shell, an inner metallic spherical shell, means for supporting said intermediate and said inner shells within and in spaced and concentric relationship with respect to the outer shell, said inner shell being fixedly held by said means in spaced relationship with respect to the intermediate shell, the outer surface of said inner shell and the inner surface of said intermediate shell forming a spherical exhaust duct, said intermediate shell being also held by said means in spaced relationship with respect to said outer shell, the space between the intermediate shell and the outer shell providing a gas-filled insulation jacket for said inner shell, a plurality of injection nozzles randomly distributed around the outer shell, said nozzles injecting fuel in the form of a fine spray into the inner shell, a plurality of unrestricted orifices provided in said inner shell, said orifices being of greater diameter than the tips of said nozzles, said orifices being in concentric relationship with respect to the respective nozzles, and an exhaust duct connected to said spherical duct through said intermediate shell for conveying the products of reaction from said inner shell through said orifices and through said spherical duct and into said exhaust duct.

2,999,359

COMBUSTION EQUIPMENT OF GAS-TURBINE ENGINES

Frederick Reginald Murray, Newstead Abbey, Linby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

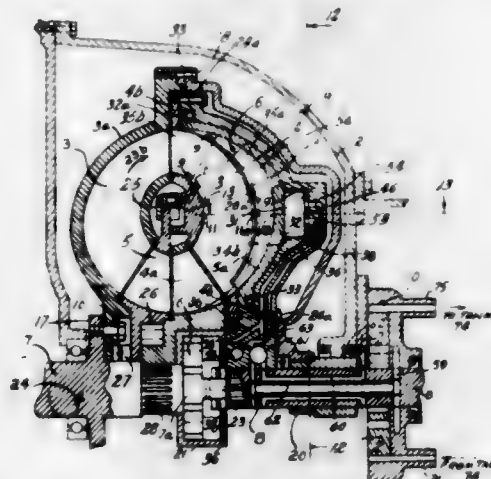
Filed Apr. 24, 1957, Ser. No. 654,967
Claims priority, application Great Britain Apr. 25, 1956
9 Claims. (Cl. 60—39.65)



1. Gas turbine engine combustion equipment comprising an air casing structure, a flame tube structure housed

piston reciprocable therein for connection with a work element to reciprocate the same through a cycle of operation, a hydraulic circuit for said cylinders and having a pressure side and a return side, a control valve for selectively connecting the return cylinder to the pressure side of said circuit and the first lift cylinder and second lift cylinder to the return side of said circuit or for connecting the return cylinder to the return side of said circuit and the first and second lift cylinders to the pressure side of said circuit, an energy storage and release cushion connected to said circuit intermediate the connections of said first and second lift cylinders thereto, a uni-directional flow valve interposed in said circuit intermediate such connection of said cushion and first lift cylinder thereto, said uni-directional valve being a positively operated valve operative in one condition thereof to permit the flow of fluid from the pressure side of said circuit to said second lift cylinder but operative in other condition thereof to prevent the return flow of fluid there-through and to direct it into said cushion, a counter-balance cylinder having a piston reciprocable therein for connection with such work element to bias the same in the direction of movement enforced thereon by actuation of said lift cylinders, and means for maintaining a relatively constant force upon said counter-balance piston to effect such biasing force thereof.

Ambrose E. Zierick, 212 E. 182nd St., Bronx 57, N.Y.
Filed Feb. 25, 1957, Ser. No. 641,999
10 Claims. (Cl. 60—54)



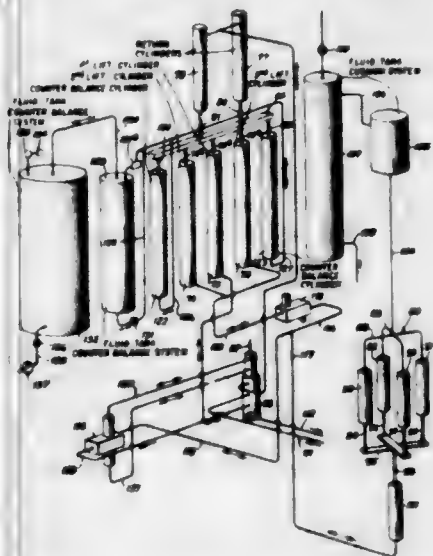
9. A hydraulic coupling of the character described, comprising an impeller connected to a driving shaft, a first turbine section connected to a driven shaft facing said impeller, said first turbine section having vanes defining open ended buckets, a second turbine section having vanes and a wall supporting said vanes, said vanes and said wall defining bucket portions, closed at one end, means mounting said second turbine section for sliding movement against a side of said first turbine section, means oscillating said second turbine section slidably over said side of said first turbine section for bringing the bucket portions thereof in and out of register with the buckets of said first turbine section.

**Yoshio Kinoshita, 4 Kawashima-cho, Nakano-ku,
Tokyo, Japan**

Filed Sept. 4, 1958, Ser. No. 759,046
2 Claims. (Cl. 60—54.5)

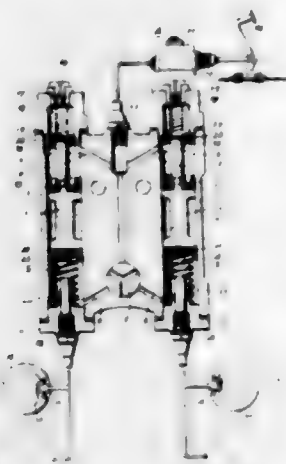
1. A safety arrangement for a hydraulic braking system comprising in combination, a housing; at least one pair of

August F. Habenicht, 17221 67th Court, Tinley Park, Ill.
Filed May 26, 1959, Ser. No. 816,012
4 Claims. (Cl. 60—51)



1. In a hydraulic system, a first lift cylinder, a second lift cylinder and a return cylinder each equipped with a

spaced apart cylinders in said housing; a piston mounted for reciprocation in each of said cylinders dividing each of said cylinders into a first chamber located towards the one end and a second chamber located towards the other end of said cylinder; a cup shaped lid over said first chamber; a second lid defining the end of said second chamber; elongated movable stop means extending from said piston the length of said first chamber adapted to engage the far end of said chamber, said stop means normally limiting the upward thrust of said piston in said first chamber; a ring valve seat almost at the far end of said first chamber, said elongated stop means passing therethrough; valve means adapted to engage said valve seat partially preventing fluid flow therethrough, said valve means straddling said elongated stop means and defining the far end of said first chamber, the far end of said elongated stop means normally engaging said valve means; a top spring expandably biased between the top of said cup-shaped lid and said valve means normally closing said valve partially preventing fluid flow and holding said stop means; a second spring in said second chamber biasing said piston towards said first chamber; a fluid master cylinder pressure cham-



ber associated with said cylinders; fluid conduits between said pressure chamber and said first and second chambers; a second chamber valve adapted when closed to isolate said second chambers from said pressure chamber, said chamber valve normally being in said closed position; means to transmit the fluid pressure compressed in said second chamber to a mechanical element for braking purposes; and means for applying pressure to said pressure chamber to expel brake fluid therefrom to completely fill said second chambers when the chamber valve is in open position and to only fill the space between the piston and the valve means in the first chambers, so that when brake pressure is applied to said pressure chamber when the chamber valve is closed, said pressure is transmitted by said fluid conduits only to said first chambers, the fluid pressure therein thereupon pushing upon said piston which in turn forces braking pressure to be transmitted to said mechanical elements for braking purposes, but when said brake fluid expands due to heat the valve means is opened thereby to provide a space for taking up the expansion, the fluid in the second chamber pushing against said piston which in turn pushes against said stop means and said top spring.

2,999,363

DOUBLE-WALLED PIPE FOR LIQUIFIED GAS

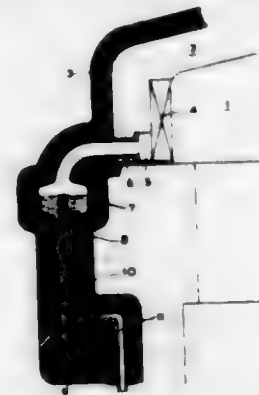
Johannes van der Ster, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 5, 1956, Ser. No. 595,900

Claims priority, application Netherlands July 9, 1955
6 Claims. (Cl. 62-6)

1. A cooled conduit for use with a cold-gas refrigerator provided with a condenser for condensing gas to form a

condensation liquid comprising: a first pipe operatively connected to said condenser and extending downwardly for a substantial portion of its length, said first pipe having a widened portion adjacent to the end thereof closest to said condenser, a second pipe within said first pipe and having the upper end thereof terminating in the widened portion of said first pipe, said condensation



liquid forming on said condenser and being conducted to said first pipe whereby when said condensation liquid in said first pipe rises to a predetermined level in the widened portion of said first pipe it overflows into the upper end of said second pipe, the condensation liquid in said first pipe acting as an insulation for the condensation liquid in said second pipe, and an insulating wall surrounding said first and second pipes.

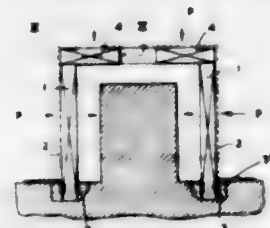
2,999,364

METHOD AND DEVICES FOR SEPARATING COMPONENTS FROM A GAS- AND/OR VAPOUR MIXTURE

Evert Hellingman, Cornelis Jacobus Marie van der Laan, and Klaas Roozendaal, all of Eindhoven, Netherlands, assignors to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 18, 1958, Ser. No. 749,509

Claims priority, application Netherlands July 26, 1957
4 Claims. (Cl. 62-6)



1. A method of separating components from a gas and vapor mixture by cooling, said gas having impurities such as water and carbonic acid; comprising building up a layer of snow having a temperature gradient on a gauze wall arranged adjacent to a heat conducting plate, the latter being fixed to a heat exchanger, and passing said gas and vapor mixture through said layer of snow to separate out the water and carbonic acid therefrom, the rate of feeding said gas and vapor mixture being at most 10 cm./sec. for obtaining a porous layer of snow.

2,999,365

METHOD OF SEPARATING GASEOUS IMPURITIES FROM A GASEOUS MIXTURE

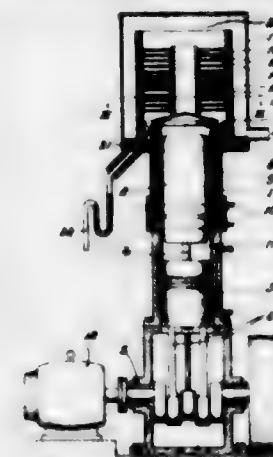
Cornelius Otto Jonkers, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 25, 1955, Ser. No. 524,183

Claims priority, application Netherlands July 24, 1954
2 Claims. (Cl. 62-12)

1. A method of separating from a mixture of gases wherein a heat exchanger having said gases passing there-

through, is provided with a supporting member which is operatively connected to a thermal sink, a plurality of apertured plates mounted in spaced relationship on said supporting member and extending at right angles thereto, and a housing engaging the peripheral edges of said projections for enclosing the same, said housing having an inlet port at the hotter end of said heat exchanger where the gas mixture is admitted and an outlet port at the colder end thereof where the gas mixture is discharged, said thermal sink being adjacent to the outlet port adjacent to the colder end of the housing, said thermal sink forming a cold source for said housing, the apertures in successive plates being arranged in staggered relationship to each other, comprising the steps of introducing said



gaseous mixture into the inlet port of said heat exchanger at a pressure where the rate of flow speed is such that at least 0.1 gram of the gas mixture per second calculated on the basis of a volume of the gases entering said inlet port is transferred through each aperture of said plates at a mean velocity of at least 5 cm. per second, said projections being cooled such that each successive plate is at a maximum temperature of 10° to 20° C. less than the next preceding plate in a direction toward the outlet port, and the plate at which said separation is effected being at a temperature between 10° to 20° C. below the separation point of said gas to be separated thereby substantially preventing the formation of ice grains in the medium and causing the water and carbon dioxide to settle on said projections.

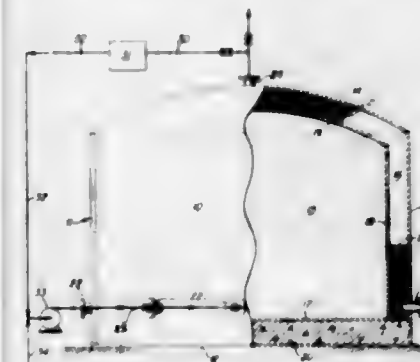
2,999,366

INSULATED CRYOGENIC STORAGE TANK

Ivan V. La Fave, Oak Lawn, and Ivan L. Wissmiller, Chicago, Ill., assignors to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 19, 1958, Ser. No. 781,675

7 Claims. (Cl. 62-45)



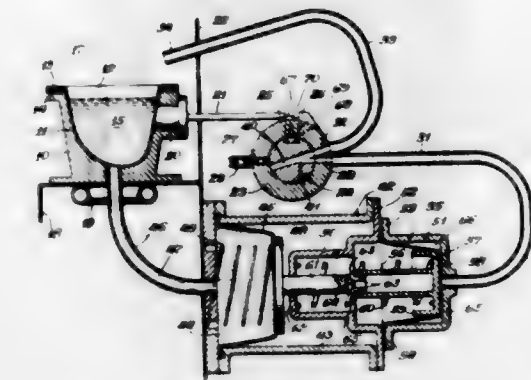
5. An insulated tank for the cryogenic storage of liquids comprising an inner fluid-tight storage vessel, an outer housing spaced apart from said inner vessel to provide an annular space, a light weight fluidizable insulating material substantially filling said annular space, gas distribution means including peripherally spaced in-

let nozzles penetrating said outer housing adjacent the bottom thereof and terminating within said annular space, and gas outlet means penetrating said outer housing located in the top portion of said annular space, and means for supplying a gaseous fluidizing medium to said gas distribution means from a source exterior to said tank.

2,999,367

HOME APPLIANCE

Leonard M. Stanulis, Benton Harbor, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Mar. 5, 1959, Ser. No. 797,409
8 Claims. (Cl. 62-139)

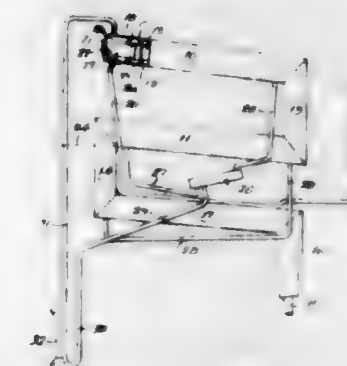


1. Apparatus for freezing ice bodies, comprising: a mold for freezing an ice body therein; means forming a chamber expansible under internal pressure; a supply of freezable liquid under pressure; means directing liquid from said supply into the chamber for expansion thereof; a movable member operatively connected to the interior of the mold for ejecting an ice body therefrom on movement of said member in one direction from an initial position; means interconnecting said expansible chamber and movable member for movement of the member in said one direction on said expansion of the chamber; and means for transferring liquid from said chamber to the mold.

2,999,368

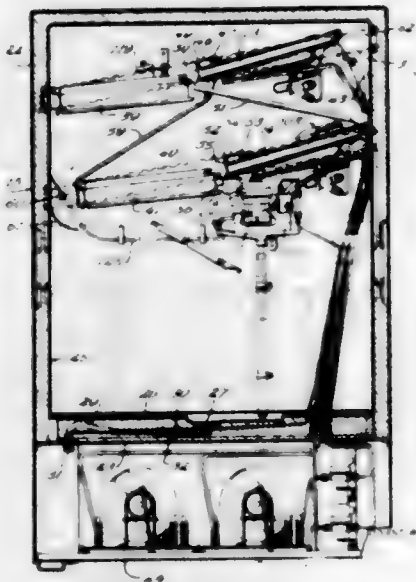
HOME APPLIANCE

Walter E. Schomburg, Philadelphia, Pa., assignor to Whirlpool Corporation, a Delaware corporation
Filed Nov. 23, 1959, Ser. No. 854,655
7 Claims. (Cl. 62-272)



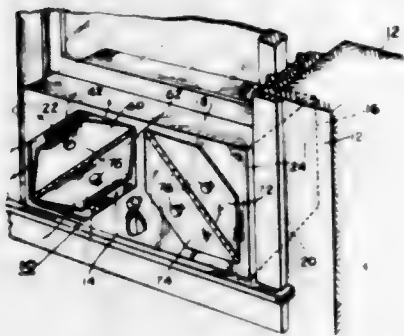
1. In an absorption refrigeration system including a tubular evaporator having a wall, a conduit for liquid refrigerant and a tubular conduit for inert gas each having an outlet emptying into the evaporator, defrosting apparatus, comprising: means for defrosting the evaporator during a defrost cycle including a conduit for hot liquid refrigerant emptying into the evaporator; and means in the tubular evaporator cooperating with said wall to form a sump receiving said hot liquid, the gas outlet having at least a major portion thereof beneath the top of the sump to be at least partially blocked by liquid in said sump.

2,999,369
TANDEM PLATE AUTOMATIC ICE CUBE MAKER
 Donald F. Swanson and Edmund J. Buzicky, St. Paul, Minn., assignors to Whirlpool Corporation, a corporation of Delaware
 Filed June 4, 1956, Ser. No. 589,123
 3 Claims. (Cl. 62-320)



1. An ice cube making apparatus including a pair of inclined substantially parallel freezing plates arranged with one above the level of the other, ice cube cutting means positioned adjacent to the lower end of said plates to receive slabs of ice sliding from said plates, water circulating means, said water circulating means including a pump having an inlet and an outlet, means connecting the outlet of said pump with the upper end of the upper of said refrigerator plates, and means guiding liquid from the lower edge of the upper plate to the upper edge of said lower plate.

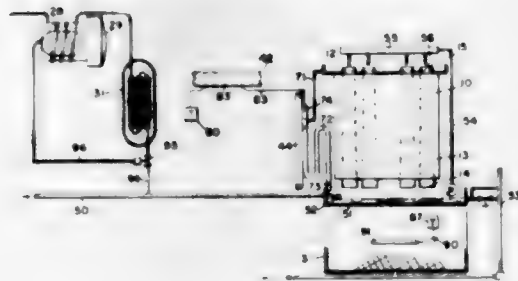
2,999,370
AIR CONDITIONING APPARATUS
 Arthur H. Eberhart, Hilliard, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Aug. 11, 1960, Ser. No. 48,937
 9 Claims. (Cl. 62-325)



1. Apparatus for conditioning air for an enclosure within a building comprising in combination, a casing including a first wall and a second wall; said casing being provided interiorly with two compartments each extending between said first and second walls; a condenser in one of said compartments and means for supplying air thereto; an evaporator in the other of said compartments and means for supplying air thereto, said condenser and said evaporator dividing their respective compartments into inlet and outlet chambers each of which extends from the first wall to the second wall and is triangular in cross section; said first wall having openings formed therein providing communication between the respective chambers and the enclosure, said second wall having open-

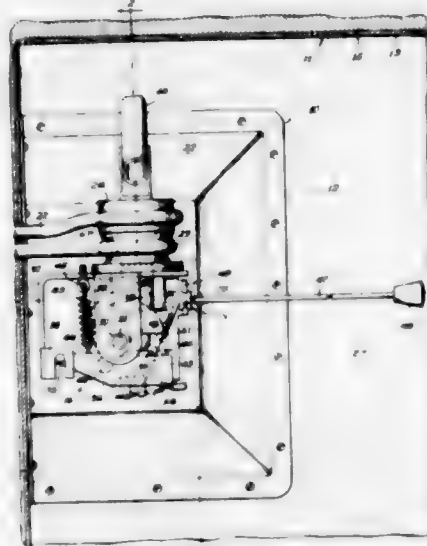
ings formed therein providing communication between the respective chambers and the air outdoors; and closures for the openings to said chambers adapted to open the inlet chambers either to the enclosure or to the air outdoors and to open the outlet chambers either to the enclosure or to the air outdoors.

2,999,371
ICE CUBE MAKERS
 David E. MacLeod, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
 Original application July 1, 1950, Ser. No. 171,593, now Patent No. 2,775,098, dated Dec. 25, 1956. Divided and this application June 1, 1956, Ser. No. 588,820
 4 Claims. (Cl. 62-347)



2. In a water distributor to direct water against the interior wall of a tube, the combination of an element disposed in a substantially horizontal plane against which the stream of water is directed, protuberances extending from opposite sides of the element to space the element from the interior wall of the tube, legs extending upward from the remaining sides of the element terminating in flanges adapted to rest upon the end of the tube, each leg including a portion extending upward and inward from the element, a second portion connected to the first portion extending upward and outward therefrom and a third portion connecting the second portion with the flange.

2,999,372
HOME APPLIANCE
 Ernest A. Baillif, Evansville, Ind., and Robert W. Fink, Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
 Filed May 13, 1959, Ser. No. 812,996
 1 Claim. (Cl. 62-353)



In a refrigerator means: means defining a chamber having a recess in said chamber defining means; means providing refrigerant to a point adjacent said chamber defining means; an ice making apparatus including a peripherally grooved mold, said apparatus including a

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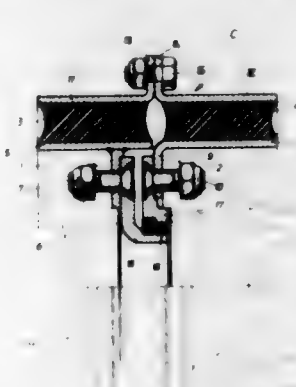
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first portion receivable in said recess, a second portion including said mold receivable in said chamber and a third portion securing said ice making apparatus on the chamber defining means and insulatingly closing said recess; and a conduit extending from said refrigerant providing means at said point into fitted encircling relationship with said mold in the grooves thereof.

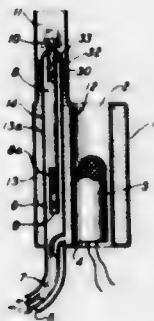
centering ring means interposed between said first and second profiled rings for centering the same with regard



2,999,373

GENERATOR ASSEMBLY FOR ABSORPTION REFRIGERATING SYSTEM OF THE PRESSURE-EQUALIZED GAS TYPE

Hans Stierlin, Rainweg 15, Schlieren-Zurich, Switzerland
Filed Jan. 30, 1959, Ser. No. 790,187
Claims priority, application Switzerland Feb. 12, 1958
9 Claims. (Cl. 62—497)



1. A generator for gas-equalized refrigeration systems comprising a chamber having a first compartment at its lower region and a second compartment extending from the bottom to the top of the chamber and enveloping the first compartment, a heat exchanger of the counterflow type having coaxial inner and outer tubes, the outer tube containing liquid solution high in absorbed refrigerant and being connected to the bottom region of the first compartment, the inner tube of the heat exchanger containing liquid solution low in absorbed refrigerant and connected to the bottom region of the second compartment, a pump tube extending vertically through the second compartment with its lower end opening into the top region of the first compartment, heating means for directly heating the solution low in absorbed refrigerant within the second compartment, the heating means positioned remote from the pump tube, the heated solution low in absorbed refrigerant in turn heating the solution high in absorbed refrigerant within the first compartment to release refrigerant vapor from the latter solution, a rectifier tube connected to the upper end of the second compartment, the upper open end of the pump tube being above the level of the liquid solution in the second compartment, and means heat isolating the pump tube for at least a substantial portion of its length within the solution of the second compartment from such liquid solution within the second compartment.

2,999,374

COUPLING, ESPECIALLY FOR UNIVERSAL JOINT SHAFTS AND THE LIKE

Hans-Joachim Kleinschmidt, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed Dec. 3, 1959, Ser. No. 857,154
Claims priority, application Germany Jan. 27, 1959
3 Claims. (Cl. 64—11)

1. A rubber elastic coupling system for universal joint shafts and the like, which comprises: a first member with a first flange, a second member to be coupled to said first member and having a second flange, a first annular rubber element connected to said first flange, a second annular rubber element connected to said second flange, a first profiled ring connected to said first flange, a second profiled ring connected to said second flange,

to each other, and connecting means independent of said centering ring means and interconnecting said rubber elements.

2,999,375

CIRCULAR KNITTING MACHINES EQUIPPED WITH WRAP THREAD MECHANISM

Alfred Percy Saunders, Leicester, England, assignor to Wildt Mellor Bromley Limited, Leicester, England, a British company
Filed Jan. 22, 1958, Ser. No. 710,461
Claims priority, application Great Britain Jan. 28, 1957
9 Claims. (Cl. 66—135)



1. A circular knitting machine comprising, in combination, a bottom plain needle cylinder, a superimposed top rib needle cylinder, a circle of double-ended latch needles for operation in said cylinders, said needles being transferable from one cylinder to the other, a cylindrical wrap instrument bed arranged concentrically within said top needle cylinder, a circular series of individually movable wrap instruments having actuating butts in said instrument bed, said instruments consisting of blade-like elements each provided with a lower thread guiding extremity extending in an axial direction with respect to the needle cylinders, means for moving said instruments radially to carry threads across the needle circle, means for producing relative movement between the thread guiding extremities and the adjacent ends of predetermined needles in the bottom needle cylinder to wrap threads around said needles and produce embroidery plating effects on the face of knitted fabric, a system of control cams for controlling movements of said wrap instruments during the wrapping of wale threads around desired needles, and means for displacing said wrap instruments lengthwise from a first height at which they are normally inoperative with their thread guiding extremities withdrawn to a second height at which the actuating butts on the instruments are acted on by said control cam system.

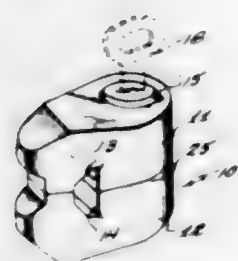
2,999,376 FLAT FILE HOODED GAS LIGHTER

Richard H. Haneberg, % G. C. Fuller Mfg. Co., 5285 Crookshank Road, Cincinnati 38, Ohio
Filed May 3, 1960, Ser. No. 26,575
3 Claims. (Cl. 67-6.1)



1. A gas lighter comprising a holder including a pair of coextensive arms having a resilient connection at one of their ends for relative swinging movements of said arms, one of the arms having an upturned free end for mounting a pyrophoric element, the free end of the other arm having an offset portion extending upwardly therefrom substantially normal to the plane of the arms, a straight portion connected to the upper end of the offset portion and extending laterally therefrom with its axis lying in an offset plane parallel to the plane of the arms, a terminal portion connected to the end of the straight portion and extending downwardly in parallelism with the offset portion, a flat file disposed parallel to and adjacent the straight portion and having a notch formed centrally in each of its end edges, said notches respectively engaging the inner surface of the offset portion and the terminal portion of the holder, a gas retaining hood having a top wall and a marginal, downturned skirt, parallel, upwardly extending and confronting grooves stamped internally in opposed sides of the downturned skirt and receiving the outer surfaces of the offset and terminal portions of the holder, and a lug struck in the body of the hood from each of the two external corner portions formed by the skirt and each groove, said lugs projecting toward one another across the internal mouth of each groove and located beneath and in overlapped engagement with the adjacent end edge of the file on each side of the notch therein.

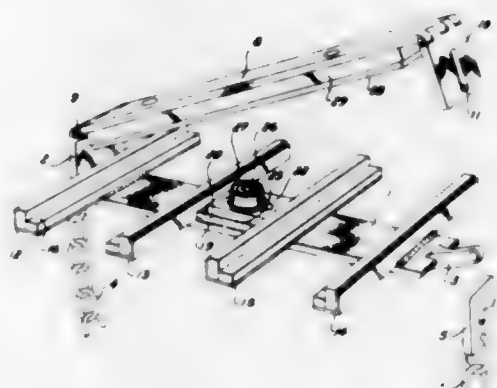
2,999,377
PADLOCK HOUSING
Royce L. Raye, 1652 Perryton Drive, Dallas, Tex.
Filed May 11, 1960, Ser. No. 28,477
2 Claims. (Cl. 70-32)



1. A padlock housing comprising in combination a male member including a relatively heavy housing having an inner face, a generally circular shoulder flange formed on said face and having a flat face on a portion of its circumference, a lock barrel in said housing, a threaded extension on said barrel extending from said inner face and through said shoulder flange, the inner face of said male housing member having an inwardly extending bore adjacent said extension, a female member comprising a second relatively heavy housing including a confronting inner face, a threaded socket therein for reception of said threaded extension, a generally circular counter-sink surrounding said threaded socket, said counter-sink having wall portions complementary to the wall por-

tions of the shoulder flange on said male member and adapted to receive the same, a pin extending outwardly from the confronting inner face of said female member and extending into the bore in said male member, said shoulder flange and counter-sink and said pin and bore preventing relative rotation of said male and female members when in locked position, and a recess extending into at least one of said housings from the inner face thereof for the reception of an article to be locked.

2,999,378
SKI CLAMP
William B. Blair, 1006 Haron St., Anaheim, Calif.
Filed Jan. 23, 1961, Ser. No. 84,267
12 Claims. (Cl. 70-58)



1. A ski clamp consisting of a base plate, a strap hingedly attached at one end to the base plate, means locking the other end of the strap to the base plate, two pairs of spaced angle members mounted on the base plate, each of the pairs of spaced angle members being adapted to receive a ski therebetween, said strap extending over both of the pairs of angle members, and a chain attached to the base plate.

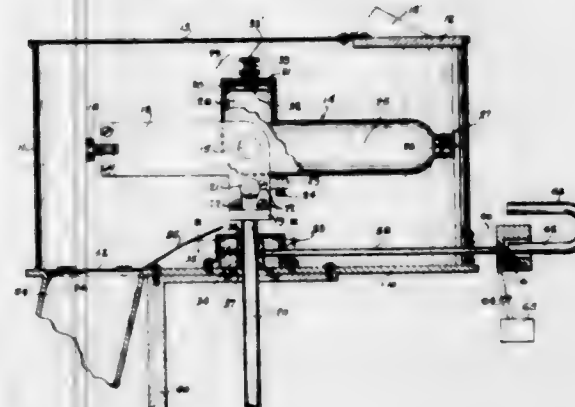
2,999,379
GAS ANALYZING APPARATUS
Richard B. Beard, Philadelphia, Pa., and Elias Snitzer, Lowell, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 19, 1957, Ser. No. 641,150
1 Claim. (Cl. 73-23)



Apparatus for rapidly sensing the partial pressure of hydrogen in a heated atmosphere containing other gases upon a flow of hydrogen through said apparatus due to the rate of sorption of hydrogen into palladium being greater than the rate of sorption of hydrogen into nickel, said apparatus comprising, a nickel tube which sorbs hydrogen and through which hydrogen diffuses at high temperatures, a coating of palladium on one surface wall thereof, which coating sorbs hydrogen and through which coating hydrogen diffuses at high temperatures, a coating of palladium on the other surface wall of said nickel tube, which coating sorbs hydrogen and through which coating hydrogen diffuses at high temperatures, means supporting a portion of said tube in said heated atmosphere, means to bring the heated atmosphere into contact with one wall of said tube, and an outlet for gas from the other wall of said tube and adapted for connection to partial-pressure-sensing means.

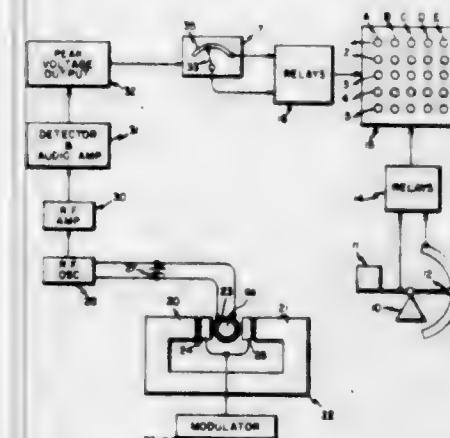
2,999,380 DENSIMETER

George J. Thiesen and Ian R. Dagg, Ottawa, Ontario, Canada, assignors to National Research Council, Ottawa, Ontario, Canada, a corporation of Canada
Filed Sept. 10, 1958, Ser. No. 760,244
Claims priority, application Canada July 29, 1958
7 Claims. (Cl. 73-32)



1. A densimeter comprising an assembly including a vessel for containing a liquid sample; means for continuously rotating said assembly about an axis of rotation, said vessel being asymmetrically disposed with respect to said axis; means resiliently mounting said assembly with freedom of oscillation transverse to said axis; and means for measuring the amplitude of any such oscillation.

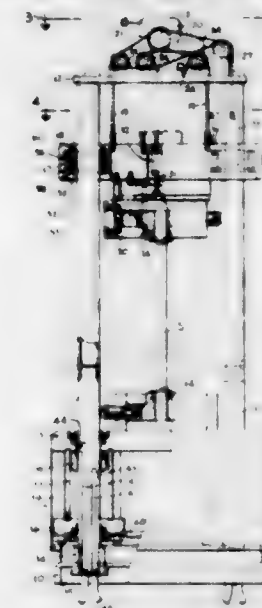
2,999,381
NUCLEAR MAGNETIC RESONANCE MEASURING SYSTEM
Wilbert E. Chope and Frank M. Alexander, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 23, 1958, Ser. No. 730,308
7 Claims. (Cl. 73-73)



7. Apparatus for rendering measurements responsive to the ratio of a particular characteristic of a sample to the weight of the sample, comprising a scale for weighing the sample, nuclear magnetic resonance measuring apparatus for measuring said particular sample characteristic, means including an array of devices each to be operated in response to a particular ratio reading, means selectively actuated by said scale for preparing a different first group of said devices for operation in response to varying weight measurements of said sample, means actuated by said nuclear magnetic resonance measuring apparatus for selectively preparing for operation in response to varying measurements of said characteristic a different second group of said devices with each of said second groups including a device from each of said first groups, and means for operating any device common to both a prepared first group and a prepared second group to render thereby a ratio measurement for the sample under test.

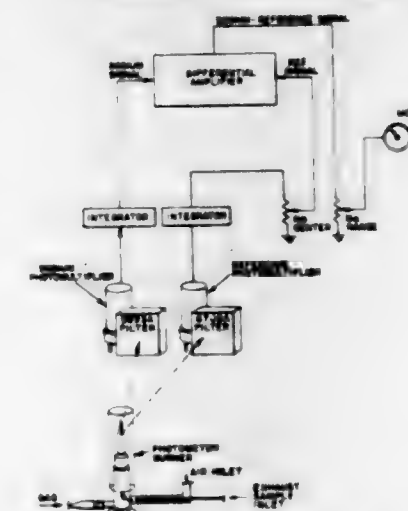
2,999,382 TESTING MACHINE

John C. McClelland, Flourtown, Pa., assignor, by mesne assignments, to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 14, 1958, Ser. No. 721,384
12 Claims. (Cl. 73-93)



1. A specimen testing machine, comprising in combination, a base, a plurality of columns carried by said base, a crosshead movable along said columns, power means for moving the crosshead along the columns, friction column grippers and power gripper operating means carried by the crosshead for locking it at any point along the columns, a table crosshead slidably mounted for axial movement along said columns, power means for moving said table crosshead along the columns, and means on each of said crossheads for engaging a specimen and stressing it endwise between them, said column grippers including longitudinally extending radially flexible column clamping elements encircling the columns, means carried by said crosshead closely engaging the ends of said clamping elements and securely holding them against endwise axial movement on the crosshead, and said power means for operating the column grippers including means for forcing the intermediate portion between the ends of said clamping elements toward said columns completely around the circumference.

2,999,383
METALLIC TRACER METHOD FOR DETERMINING LUBRICANT IN ENGINE EXHAUST
Ford R. Bryan, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 2, 1960, Ser. No. 33,516
8 Claims. (Cl. 73-116)



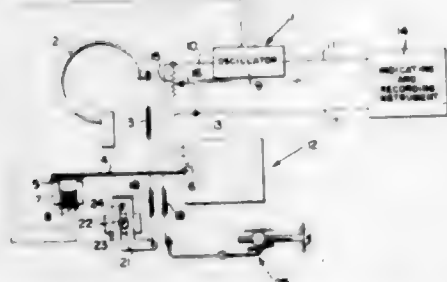
1. The process of determining the substantially instantaneous lubricant consumption of an internal com-

bustion engine which comprises establishing in the lubricant of the internal combustion engine a known concentration of a metallic compound which is soluble in the lubricant, operating the engine, abstracting from the exhaust stream of the engine a sample which constitutes a known fraction of the total exhaust stream, entraining this sample in a flame and photometrically determining the intensity of the light generated by the flame and having a wave length which is characteristic of the metal introduced into the lubricant by the metallic compound, said light intensity being indicative of the substantially instantaneous lubricant consumption.

2,999,384

ZERO ADJUSTING APPARATUS

Justin O. Johnson, Jr., Levittown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,862
10 Claims. (Cl. 73—393)

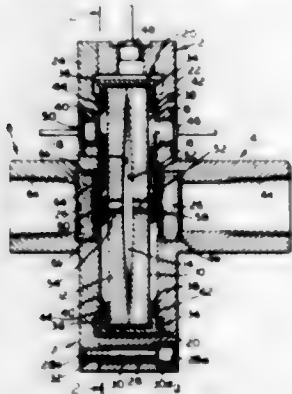


1. An ambient temperature compensated fine zero adjusting apparatus for a force balance system comprising, a stationary bracket, a screw means having its longitudinal axis vertically positioned for rotation on said bracket, a stud threadedly mounted on said screw means at one end and protruding through a vertical slot in said bracket at its other end, a pivot pin having its longitudinal axis protruding in a vertical direction from said bracket, a cam lever pivotally mounted on said pivot pin, said lever having at one of its ends a protruding tapered portion in contact with the outer peripheral portion of said stud, a biasing means having one of its end fixedly connected to said bracket and another end in contact with said lever to retain said lever in contact with said stud and a lug connected to the other end of said lever to apply very small incremental increases in tension to a zero spring means when said screw is rotated in one direction and/or to apply very small incremental decreases in tension to said zero spring when said screw is rotated in the opposite direction.

2,999,385

PRESSURE SENSING INSTRUMENT

Russell Wolfe, Lexington, Mass., assignor to Trans-Sonics, Inc., Burlington, Mass.
Filed Sept. 17, 1956, Ser. No. 610,197
2 Claims. (Cl. 73—398)



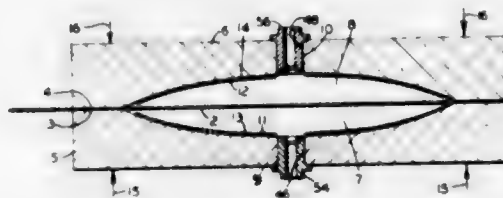
2. Apparatus for sensing differential fluid pressure comprising, in combination, a pair of plates, said plates having

opposing surfaces with opposing depressions formed therein, an electrically conducting diaphragm under radial tension disposed between said plates and against said opposing surfaces, electrodes structurally fixed to said plates and located within said depressions, said electrodes and said diaphragm thereby forming a differential capacitor whose capacitances depend upon deflection of said diaphragm in response to differences in the pressures on opposite sides thereof, means clamping said plates together against said diaphragm, said clamping means including a plurality of separate circumferentially spaced U-shaped clips engaging the outer surfaces of said plates, said clamping means including projections extending between each arm of said clips and the outer surfaces of the plates adjacent to said arms, said projections being the only force transmitting means between said plates and said clips, whereby said clips may undergo differential expansion with respect to said plates without warpage of said plates, said clips exerting a total clamping force of sufficient magnitude to form a bond between said plates and said diaphragm having sufficient strength to prevent slippage of said diaphragm between said plates resulting from deflection of said diaphragm by said differences in pressure, said plates having passages leading to their outer surfaces from said depressions.

2,999,386

HIGH PRECISION DIAPHRAGM TYPE INSTRUMENTS

Russell Wolfe, Lexington, Mass., assignor to Trans-Sonics, Inc., Lexington, Mass.
Filed Nov. 2, 1956, Ser. No. 620,051
15 Claims. (Cl. 73—398)



1. An instrument having a radially tensioned diaphragm deflectable upon the application of force perpendicular thereto, said instrument comprising, in combination, a diaphragm support made from a single piece of electrically insulating material and having a substantially flat surface, a concave depression formed in said surface, an electrically conducting diaphragm engaging said flat surface, an electrode mounted on the surface of said depression, and means clamping said diaphragm against the flat surface of said diaphragm support with sufficient force to bond said diaphragm to said support to form a unitary elastic structure thereof, whereby said diaphragm and said support deform as a single elastic body upon deflection of said diaphragm, there being essentially no slippage of said diaphragm along said flat surface, said diaphragm having a free span along its diameters between the areas at which it is clamped against said flat surface, and means for making electrical connection to said diaphragm and to said electrode.

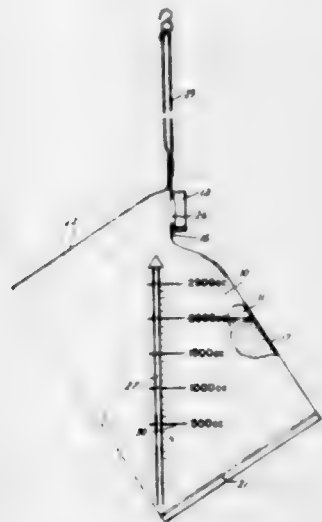
2,999,387

FLUID TIGHT CONTAINER

John Andelin, Los Angeles, Calif., assignor, by mesne assignments, to Falcon Plastics Company, Los Angeles, Calif., a corporation of California
Filed Feb. 16, 1959, Ser. No. 793,319
2 Claims. (Cl. 73—427)

1. A fluid tight container comprising a pair of substantially identical opposed rectangular front and back walls of flexible thermoplastic film material closed along one side and along the top and bottom thereof and par-

tially closed along the other side thereof except for a circular opening at the top of such other side, said opening extending from its upright diameter along opposite walls of the container, and a rigid tubular neck member of molded plastic provided with an integral peripheral flange, said flange being heat bonded to said front and back walls adjacent said circular opening whereby to fa-



cilitate the introduction to and discharge from said container through said neck member of liquids and particulate solids, said neck member having a removable cover for sealing said container and said flange portion of said neck member including an extension tongue directed upwardly from said member in the plane of said flange beyond the top of said container and to which the upper corner of said container is heat bonded.

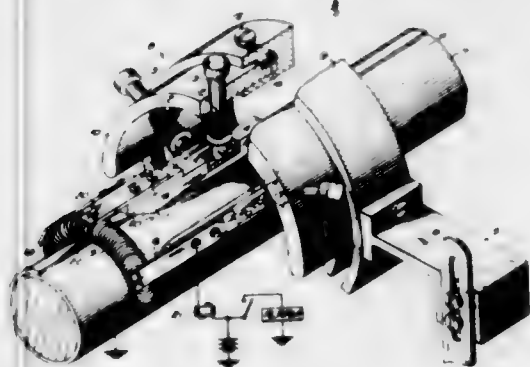
2,999,388

ELECTRICAL PROBE

Thomas F. Herron, Jr., Trenton, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 13, 1958, Ser. No. 773,630

5 Claims. (Cl. 73-432)



1. An electrical probe for detecting raised irregularities in a longitudinally moving elongated article having an electrically conductive surface which comprises an electrically conductive helical spring, a plurality of parallel conductive supports affixed and extending to one side of the spring, the spring being mounted on the supports in a substantially arcuate path extending transverse to the elongated article, a plurality of insulated support elements, one for each of the parallel conductive supports, affixed to respective ones of said supports, a rigid frame means for supporting the elements in contact with the article, the parallel conductive supports being affixed to the helical spring and to the elements to support the helical spring above the non-raised article surface and in spaced relation to the non-raised portion of the surface, alarm circuit means connected between one or more of the conductive supports and the conductive surface of the

article, the helical spring being spaced from the article surface by the elements so that a predetermined raise in the surface level completes the electrical circuit and actuates the alarm.

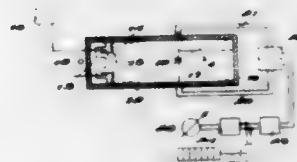
2,999,389

GYROSCOPE DEVICE WITH VIBRATING GAS PARTICLES OR PARTICLES OF ANOTHER SOUND TRANSFERRING MEDIUM

Carl-Erik Granqvist, Lidings, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidings, Sweden, a corporation of Sweden

Filed Mar. 9, 1959, Ser. No. 798,037

Claims priority, application Sweden Mar. 10, 1958 16 Claims. (Cl. 73-505)



1. A gyroscopic device comprising a sound conductor containing a fluid sound conducting medium, means for generating a sustained, standing, longitudinal oscillation within said conductor, and means on opposite sides of a nodal point of said oscillation for measuring changes in pressure of said nodal point when said conductor is displaced in a direction perpendicular to said longitudinal oscillation.

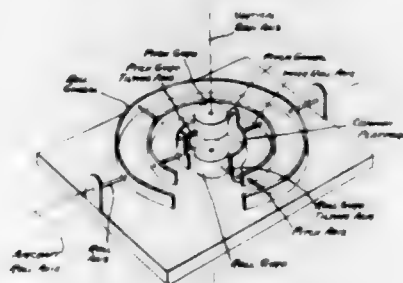
2,999,390

NON-TUMBLING VERTICAL GYROSCOPE SYSTEM

Maurits ten Bosch, White Plains, and Paul Lang, Katonah, N.Y., assignors to M. ten Bosch, Inc., Pleasantville, N.Y., a corporation of New York

Filed July 7, 1958, Ser. No. 746,970

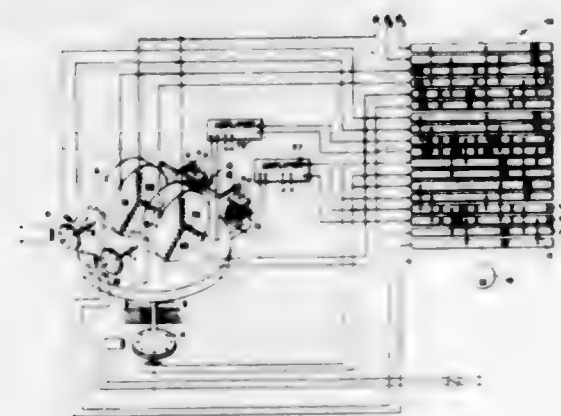
14 Claims. (Cl. 74-5.34)



1. A non-tumbling vertical gyroscope unit having superimposed pitch and roll gyroscopes and common inside level platform, intermediate pitch and outside roll gimbals common to both gyroscopes, said superimposed gyroscopes having substantially common vertical spin axes and perpendicular respective tilting axes and restoring torquer arrangements actuated by deviation of the platform axes from the horizontal to restore said platform axes to the horizontal, said gyroscopes being positioned directly together in superimposed position with their spin axes vertically aligned and with the bottom of the pitch gyroscope being directly above the top of the roll gyroscope and said common platform consisting of a shell encircling and enclosing the lower part of the pitch gyroscope and the upper part of the roll gyroscope and accelerometers positioned upon said platform and gimbals mounted for sensitivity parallel to the axes of the vertically stabilized coordinate system to react against the gyroscopes about their respective tilting axes in such a direction as to precess and erect the platform back into the horizontal plane.

2,999,391

SELF-COMPENSATING GYRO APPARATUS
 Darwin L. Freebairn, Glendale, and John M. Slater, Inglewood, Calif., assignors to North American Aviation, Inc.
 Filed Dec. 11, 1950, Ser. No. 200,234
 40 Claims. (Cl. 74-5.37)

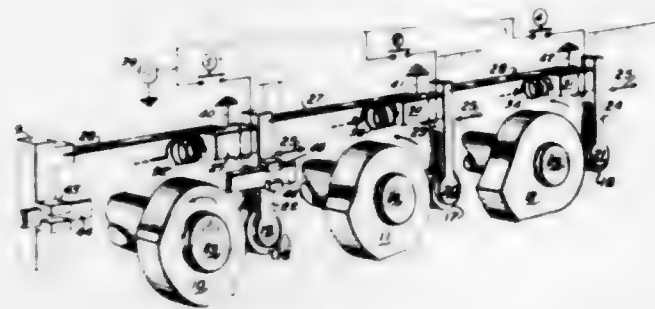


1. In a gyro stabilized device a pair of gyroscopes having disturbing torque characteristics independent of spin direction oriented with a common input axis and output axes normal thereto, pickoff means for detecting precession of said gyros about their output axes relative to said stabilized device, torquer means for applying torques to the output axis of each gyroscope, torquer means for applying a torque to said input axis of said gyro stabilized device in response to signals from said pickoff means, and sequence switch means for periodically reversing the direction of rotation of each gyroscope alternately, controlling said platform torquer means in response to each of said pickoff means associated with each gyroscope, and reversing the sense of the torque applied by said platform torquer in coordination with the direction of rotation of said gyroscopes whereby substantially all output-axis disturbing torque influencing said gyroscopes is compensated.

2,999,392

POSITIONING DEVICE

Russell V. Rogers, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
 Filed Oct. 29, 1957, Ser. No. 693,129
 6 Claims. (Cl. 74-55)

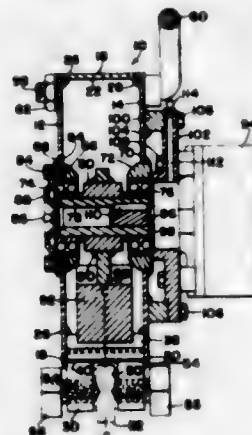


1. A device for selectively displacing a member comprising first coupling means engaging said member when said first coupling means is operated, first displacing means displacing said first coupling means during a first time interval, second coupling means engaging said first coupling means when said second coupling means is operated, second displacing means for displacing said first and second coupling means when said second coupling means is operated during a portion of said first time interval and means for operating said first and second coupling means at selected times whereby said member is displaced with said coupling means according to said selective times.

2,999,393

VIBRATOR

Edwin F. Peterson, % Martin Eng. Co., Neponset, Ill.
 Filed Feb. 13, 1959, Ser. No. 793,088
 15 Claims. (Cl. 74-37)



1. A vibrator of the class described, comprising: a pair of spaced apart parallel similar plates having coterminous lower edges and at least one plate having an aperture therethrough substantially centrally thereof on an axis normal to the plates, each plate additionally having opposite generally upright end edges and a top edge, said end edges meeting and rising respectively from said lower edge at a pair of lower corners and meeting said top edge at a pair of upper corners; a pair of mounting blocks spaced apart lengthwise of said lower edges and rigidly secured to said plates respectively at said lower corners and respectively including means for mounting the vibrator on an object to be vibrated; wall means spanning and rigidly joined to the plates and being in the form of an inverted U having opposite legs secured respectively to the blocks and a bight extending from one leg to the other generally in the form of a partial annulus about the aforesaid axis, said wall means being so dimensioned that the upper corners project beyond said bight and said wall means defining with the plates and blocks a hollow casing having a bottom opening afforded by the space between the blocks; a pair of bearing means respectively on the plates and coaxial with said aperture; a shaft coaxially journaled in the bearing means and extending across the interior of said casing; weight means within the casing eccentrically of the shaft and connected to the shaft for rotation about the shaft axis in an orbit partially closed peripherally by the wall means, said shaft having an end portion exposed at said aperture for coaxial connection to a driving source; handle means connected to the upper corners where said corners project beyond said bight; and closure means spanning the lower edges of the plates and extending between and removably secured to the blocks for normally closing said bottom opening and removable to afford access to the interior of the casing.

2,999,394

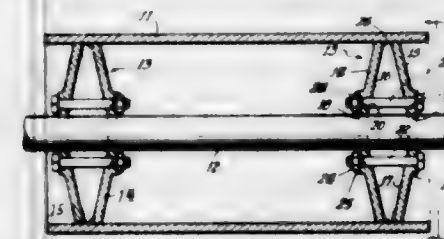
CONVEYOR PULLEY OR THE LIKE

David Firth, South Bend, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana

Filed Dec. 31, 1958, Ser. No. 784,264
 8 Claims. (Cl. 74-230.8)

1. A hubless pulley of the class described comprising, a cylindrical drum-like rim member, a pair of separate concentric circular discs received within said rim member and centrally perforated to closely pass a shaft there-through, said discs being respectively concavely dished on their opposing faces, a first of said discs being permanently peripherally integrated with said rim member thereby forming a unit with it and a second of said discs being inserted into said rim member and bearing at its periphery on said unit, said discs having holes there-

through spaced around said central perforations and located close to it, and take-up means each including a threaded bolt member extending between the discs and passing through the holes and each arranged for screwing action with another threaded member to draw the



discs toward one another whereby the discs may be clamped onto the shaft by flexing thereof, the periphery of the second disc being simultaneously tightened against said unit by said takeup means, one of the threaded members of the take-up means being integrated with the first disc.

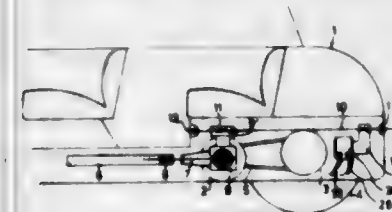
2,999,395

BELT TRANSMISSION WITH AT LEAST ONE AXIALLY EXPANDABLE BELT PULLEY

Hubertus J. van Doorne, A54a Stationsstraat, Dourne, Netherlands

Filed Jan. 18, 1960, Ser. No. 9,147

Claims priority, application Netherlands Jan. 21, 1959
 3 Claims. (Cl. 74-242.14)



1. A belt transmission comprising two pulleys, at least one of which is an expandable pulley, a belt connecting said pulleys, and a device for adjusting the distance between the axes of said pulleys, a normally open electrical make-and-break contact, a part of said contact being carried by a pulley half of said expandable pulley and being controlled by the relative axial displacement of the pulley halves of said expandable pulley so that by approaching said pulley halves one with respect to the other to a predetermined distance, said contact is closed and by separating said pulley halves beyond said predetermined distance, said contact is opened.

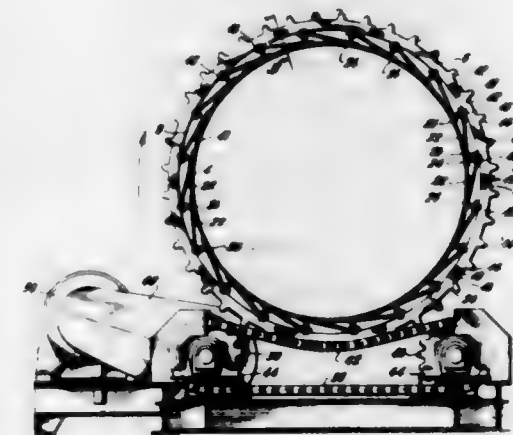
2,999,396

DRIVE FOR ROTARY DRUMS

Leonard M. Kaczmarek, Chicago, Ill., assignor to Link-Belt Company, a corporation of Illinois
 Filed Apr. 17, 1959, Ser. No. 807,875
 1 Claim. (Cl. 74-244)

A drive for a rotary drum, comprising a sprocket surrounding said drum, said sprocket having an inside diameter substantially greater than the outside diameter of said drum and comprising a plurality of arcuate segments arranged end-to-end, each of said segments having a plurality of teeth formed on its outer surface and an arcuate inner surface, means for detachably connecting the adjacent ends of said segments to form the complete sprocket, a plurality of mounting plates fixed to the inner surface of each segment, each of said mounting plates extending laterally outwardly for some distance on both sides of its segment in directions normal to the plane of the sprocket and having flat inner faces arranged parallel to the inner surface of its segment, an elongated leaf element detachably connected at one of its ends to the said laterally outwardly extending portions of each mount-

ing plate in engagement with the full length of the flat inner face thereof, all of said leaf elements being bent to extend tangentially inwardly of, and in the intended direction of rotation of the sprocket, the side edges of each leaf element diverging from each other to form the leading end of each element of substantially greater width

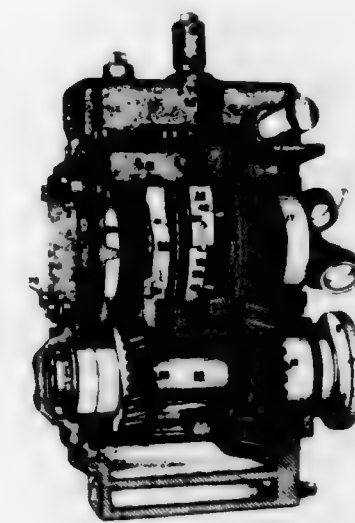


than its trailing end, the leading ends of all of the leaf elements being flatly welded to the outer surface of the drum so that the greater width of said welded ends will provide substantial lateral stability for the sprocket, a drive chain engaging said sprocket, and means for driving said chain to impart rotary movement to said drum through said sprocket and said spacer elements.

2,999,397

DRIVE GEAR AND CLUTCH ASSEMBLY

Gustave Walter, 15 Thorne St., Jersey City, N.J.
 Filed Jan. 30, 1959, Ser. No. 790,189
 5 Claims. (Cl. 74-377)



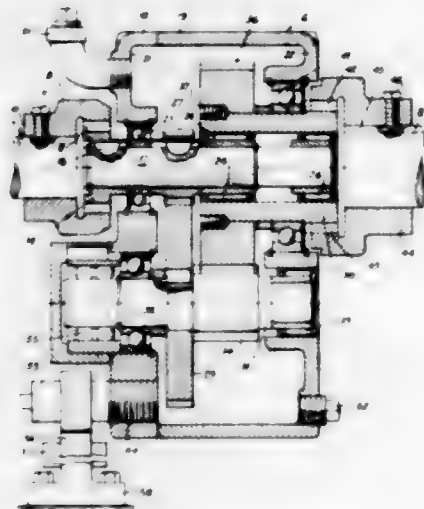
1. In combination, a drive shaft, a drive gear, and a clutch assembly for coupling said gear to said shaft comprising shifter means on, driven by and immovable rotatably independently of said shaft, complementary drive and driven main clutch elements connected respectively to said shifter means and gear, complementary drive and driven pilot clutch members also connected respectively to said shifter means and gear in such relation as to precede engagement-wise the engagement of the main clutch elements, a yieldable connection between the shifter means and drive pilot clutch member automatically disconnectable on continued applied thrust to the shifter means after engagement of the pilot clutch members to permit the continued movement of the drive main clutch element into engagement with its comple-

mentary driven main clutch element, a lost motion device associated with said yieldable connection for permitting of relative freedom of movement between said drive pilot clutch member and the shifter means after the yieldable connection has been disconnected so that, while the drive main clutch element continues movement in the same direction under said continued applied thrust to the shifter means, the drive pilot clutch member may back off in the opposite direction freeing the pilot clutch, means independent of the yieldable connection and lost motion device for latching the shifter means in position in which the main clutch elements are engaged, and means for continuing to rotate in synchronism the drive and driven pilot clutch members after the yieldable connection and lost motion device have freed the same from engagement.

2,999,398

SPEED CHANGE DEVICE

Joseph D. Christian, 480 Potrero, San Francisco, Calif.
Filed Mar. 26, 1959, Ser. No. 802,187
1 Claim. (Cl. 74-421)

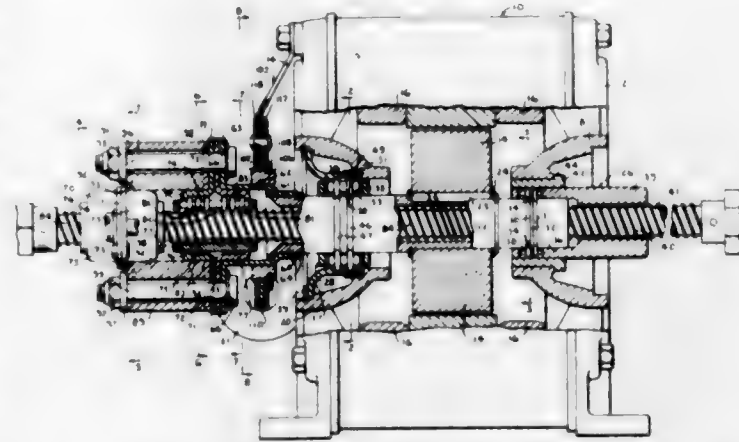


A speed change device adapted to be mounted between a high speed driving shaft and a coaxial low speed driven shaft, said device comprising a casing having opposite first and second walls, a first gear wheel, a tubular shaft carrying said first gearwheel and extending on each side of the second wall, a first bearing mounted on the tubular shaft and supported in the second wall, a second driven shaft coaxial with the tubular shaft and extending on each side of the first wall with one end thereof extending into said tubular shaft and substantially coextensive with the tubular shaft through the second wall, a second bearing supporting the second driven shaft in the first wall, a third bearing mounted on the second shaft and supporting the tubular shaft on the second shaft, said third bearing being located at the position where the tubular shaft carries the first gearwheel, a fourth bearing located within the tubular shaft and carrying the end of the second driven shaft, said fourth bearing being located within the end of the tubular shaft where it protrudes outside the casing, a second gearwheel on the second driven shaft between the second and third bearings, a counter-shaft supported in the first and second walls, a third gearwheel mounted on the counter-shaft and meshed with the gearwheel on the tubular shaft, a first and a second flexible coupling respectively mounted between the driving shaft and the second driven shaft and the tubular shaft and the low speed driven shaft to rotate the low speed driven shaft from the high speed driving shaft and support the speed change device in position between the high speed driving shaft and the low speed driven shaft.

2,999,399

MOTION-CONVERTING DEVICE

Ralph H. Wise, Gary, Ind., assignor, by mesne assignments, to The Anderson Company, a corporation of Indiana
Filed May 2, 1957, Ser. No. 656,587
10 Claims. (Cl. 74-441)

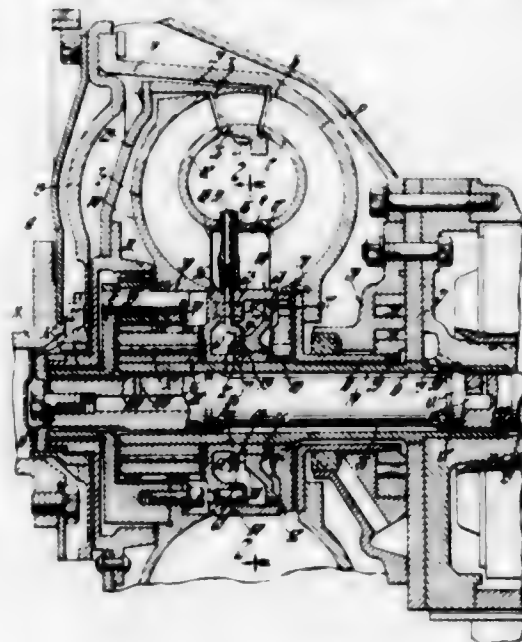


2. A motion-converting mechanism comprising motor means, motion-transmitting means rotatably driven by said motor means, nonrotatable screw means passing through said motion-transmitting means and operatively engaged thereby and means for axially adjusting portions of said motion-transmitting means relative to each other comprising attaching means adapted to rotate with said motion-transmitting means and having a plurality of apertures therethrough, outwardly extending arms carried by each portion of said motion-transmitting means and having apertures therethrough adapted to be aligned with at least two of the apertures in the attaching means, the apertures in said extending arms or said attaching means being arcuate in shape, spacer means positioned between said portions of the motion-transmitting means for axially spacing said portions, and fastening means for securing said spacer means and one of said portions of the motion-transmitting means to the attaching means whereby the slack may be removed from between the motion-transmitting means and the screw means.

2,999,400

HYDRODYNAMIC TORQUE CONVERTERS AND CONTROLS THEREFOR

Oliver K. Kelley, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 13, 1954, Ser. No. 403,813
16 Claims. (Cl. 74-645)



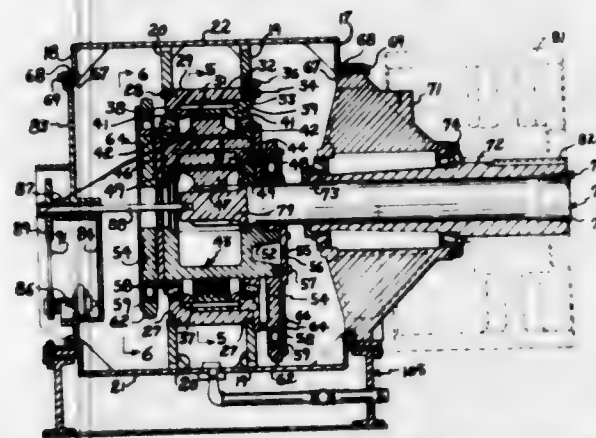
1. A torque converter comprising an impeller, a turbine member, and a rotatable reaction member having

pivotaly mounted blading adjustable to a low exit angle and a high exit angle position with respect to the rotative axis of the torque converter, a first means tending to urge said blading to the high angle position, a second means biased to oppose said first means with force sufficient to move said blading to the low angle position, and a third means for rendering said second means ineffective to oppose said first means, said blading being contoured so that the fluid flow within said converter may act on said blading to supplement the action of said first means.

2,999,401

DRIVE FOR RECIPROCATING POWER PUMPS AND THE LIKE

Eugene J. Bedard and Donald F. Lippincott, Detroit, and Claude H. Nickell, Dearborn, Mich., assignors to The Wheland Company, a corporation of Tennessee
Filed Nov. 28, 1958, Ser. No. 776,977
1 Claim. (Cl. 74-801)

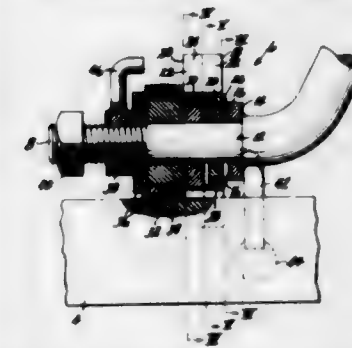


In a planetary gear, a housing, an internally toothed ring gear nonrotatably mounted in the housing, at least three planet gears in mesh with the ring gear, a carrier for said planet gears having bearing pins thereon on which the planet gears are rotatably mounted, tapered roller thrust bearings embodying outer races fixedly mounted in the housing located on either side of the planet gears and supporting the carrier for rotation and holding it against thrust, a hollow carrier shaft, other thrust bearings mounted in the housing and supporting the carrier shaft for rotation and holding it against thrust, a power shaft having a relatively short section adjacent its outer end tapered inwardly of the power shaft and fitting in a complementarily tapered section on the carrier shaft, the remainder of the power shaft being unsupported throughout its length, whereby its inner end extends in cantilever fashion into the center of the gear system defined by the ring and planet gears, and a sun gear on the inner end of the power shaft in mesh with said planet gears.

2,999,402

TOOL FOR SHARPENING ICE SKATES

Roy R. Bratton, Rte. 4, Lee's Summit, Mo.
Filed Apr. 29, 1959, Ser. No. 809,688
5 Claims. (Cl. 76-83)



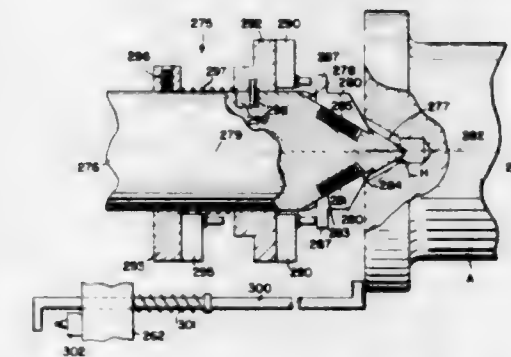
3. A tool for sharpening ice skates comprising a shouldered shaft, a handle secured to said shaft, a cutter wheel

770 O.G.—17

2,999,403

AXLE RECENTERING MACHINE

George B. Anderson and Francis E. Compton, Rochester, N.Y., assignors to Consolidated Machine Tool, division of Farrel-Birmingham Company, Inc., Rochester, N.Y., a corporation of Connecticut
Filed June 26, 1959, Ser. No. 823,235
7 Claims. (Cl. 77-18)

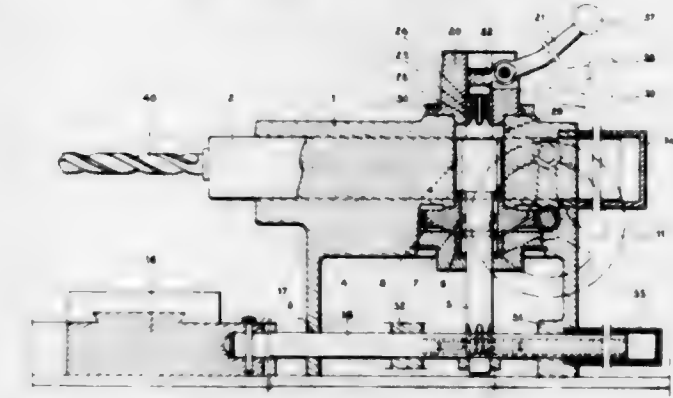


1. A machine for recentering axles and the like comprising a work support for holding a workpiece, a tool head, a tool carrier reciprocable in said tool head toward and from the workpiece, a tool spindle rotatably journaled in said carrier, a tool mounted thereon to rotate therewith, means for reciprocating said carrier to feed the tool into and to retract it from the workpiece, means for rotating said spindle, adjustable means for stopping the feed movement of said carrier, and means for adjusting said adjustable stop means comprising a probe adapted to be engaged with the workpiece.

2,999,404

DRILLING AND THE LIKE ARRANGEMENT FITTED ON A LATHE TAILSTOCK

Henri René Bruet, Paris, France, assignor to Etablissements A. Cazeneuve, La Plaine Saint-Denis, France, a company of France
Filed July 14, 1959, Ser. No. 827,060
Claims priority, application France July 22, 1958
10 Claims. (Cl. 77-34.6)



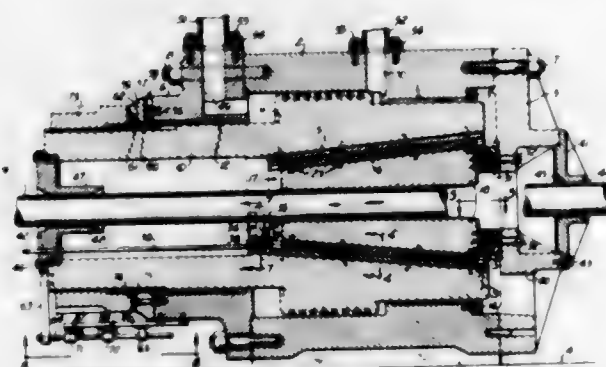
1. In a lathe including a carriage and a tailstock, the provision of a machining system comprising a sleeve slidably carried inside said tailstock and extending longitudinally of the latter, and adapted to carry a tool, a first rack rigid with the outer surface of the sleeve, longitudinally of the latter, a relay shaft slidably and

revolvably carried in the tailstock, its axis lying in a transverse plane of the latter, locking means for immobilizing said tailstock during cutting operation, a first pinion and a second pinion keyed to said relay shaft and of which the first pinion meshes with the rack on the sleeve and the second pinion is keyed to one end of the relay shaft, a draw bar operatively connected with the latter carriage, and a second rack carried by said draw bar, parallel with the longitudinal axis of the tailstock and adapted to mesh with the second pinion.

2,999,405
APPARATUS FOR RADIALLY COMPRESSING ARTICLES

John C. Ewart, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Dec. 24, 1957, Ser. No. 704,926
7 Claims. (Cl. 78-14)

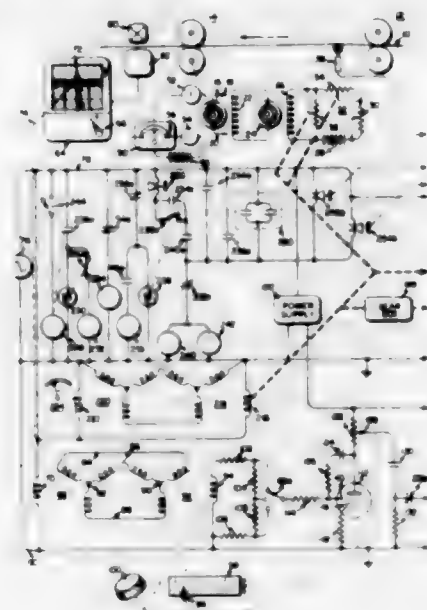


1. An apparatus for cold sizing a tubular article, comprising an annular die assembly having an axial opening to receive the article to be sized and being formed of a plurality of circularly disposed radially movable die segments, each of said die segments being tapered in an axial direction and having a generally flat outer surface, a hollow mandrel disposed around the die assembly and having a generally polygonal inner surface tapered to complement the tapered outer surfaces of the die segments, key means for preventing relative rotation between the mandrel and the die segments, trough means formed in the inner surface of the mandrel and disposed in substantial registry with the joints between adjacent die segments for conducting a flushing medium through the apparatus, means for introducing a flushing medium into said trough means to flush foreign material therefrom, a hollow piston disposed around the mandrel and connected directly thereto, a cylinder slidably containing the piston, means for alternately introducing hydraulic fluid into opposite ends of the cylinder to reciprocate the piston with movement of the piston in one direction forcing the die segments radially inward against the pipe to size the same and movement of the piston in the opposite direction expanding the die segments out of contact with the pipe after sizing to permit advancement of the pipe through the die assembly, and means for guiding the die segments in radial movement and for preventing axial movement of the die segments with the mandrel.

2,999,406
CONTROL APPARATUS
Richard F. Warren, Columbus, Ohio, assignor to Industrial Nucleonics Corporation
Filed May 6, 1957, Ser. No. 657,434
4 Claims. (Cl. 80-35)

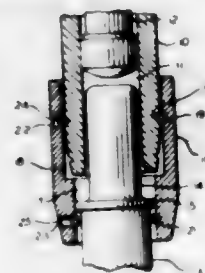
1. In the combination of a rolling mill and like apparatus wherein an elongated workpiece of ductile material is passed in succession through first and second machine elements in tractive engagement with said workpiece for

reducing a cross-sectional dimension of the same, said apparatus including means for driving said second machine element and adjustable means for regulating the speed of said driving means, with means for measuring said dimension and means controlled by said measuring means for actuating said speed regulating means, the improvement comprising: a radioactive source of penetrative radiation and a radiation detector positioned near the material exit side of said second machine element for producing an indication of the measured value of said cross-sectional dimension of said workpiece issuing from said second machine element, target setting means permitting selection and indication of a desired value of said dimension, means responsive to any deviation of said measured value indication from said desired value indication for producing a first electrical signal functional



of said deviation, circuit means having a variable element coupled to said target setting means for converting the absolute value of the deviation-functional characteristic of said first electrical signal into a value proportional to the percentage deviation of said measured value indication from said desired value indication to provide a compensated error signal, an electronic amplifier having an input and an output, means for connecting said error signal to said amplifier input, motor means controlled by said amplifier output for actuating said adjustable means for regulating the speed of said driving means, means driven by said motor means for producing a second electrical signal proportional to the speed thereof, and adjustable means for connecting said second electrical signal to said amplifier input in opposition to said error signal.

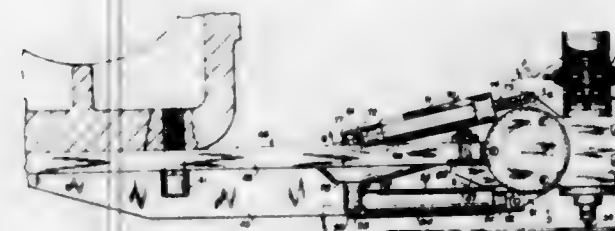
2,999,407
AXIAL IMPACT TOOL AND WORK-RETAINER COMBINATION
Ralph D. De Francesco, Chicago, Ill., assignor to Arrow Tools, Inc., Chicago, Ill., a corporation of Illinois
Filed June 3, 1960, Ser. No. 33,722
16 Claims. (Cl. 81-52.35)



1. In combination with a percussive tool comprising a casing provided with a longitudinally extending cylinder

having a hammer reciprocable therein for transmitting repetitive impact forces to a work member, a retainer element carried by said casing adjacent an end thereof and being provided with a longitudinally extending passage therethrough coaxially oriented with respect to said cylinder and extending forwardly thereof, a longitudinally extending work member supported by said retainer element and having a portion thereof disposed within said passage for limited longitudinal movements with respect thereto and being adapted to have repetitive impact forces transmitted thereto by said hammer, said work member being equipped with a laterally outwardly projecting annular flange positioned within said passage, and an impact-absorbing and dissipating structure carried by said retainer element and extending laterally inwardly into said passage forwardly of and in alignment with said flange for resistively arresting forward propulsion of said work member enforced thereon by impact forces transmitted thereto by said hammer.

2,999,408
MACHINE TOOL
Henry W. Spreitzer, Shaker Heights, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 24, 1958, Ser. No. 730,630
12 Claims. (Cl. 82-14)

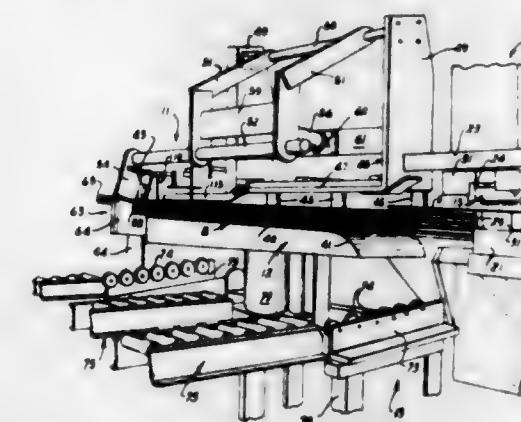


1. The combination comprising a pattern-reading unit for controlling a machine tool slide, said unit having an active pattern-reading position and an inactive position and including a pattern-responsive element and slide control means actuated by said element, a support for said unit, a post carried by said support, a first member fixed to said unit, bearing means on said post mounting said first member for rocking movement about said post and relative to said support to move said unit between said positions, said unit moving in a first direction when moving toward said active position and in a second direction when moving toward said inactive position, an abutment mounted adjacent said first member and supported stationarily with respect to said support, said abutment facing in said second direction, said first member having a portion engageable with said abutment to limit movement of the unit in said first direction, double-acting motor means effectively connected between said support and said first member for selectively rocking said first member and selectively operable to urge said portion into engagement with said abutment, and means connected to said abutment for adjusting the position of said abutment.

2,999,409
BLANK SEVERING MACHINE
George Elton Gollwitzer, McKeesport, Pa., assignor to Kelsey-Hayes Company, a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 553,869
5 Claims. (Cl. 83-91)

5. In combination, a machine for severing blanks of predetermined length from a continuous strip of material, said machine comprising blank severing means, means for advancing said strip of material past said severing means, a stop spaced beyond said severing means in position to be engaged by the forward edge of said strip of material for accurately determining the length of said

strip advanced past said severing means, said stop being at substantially the same height as said severing means, a support for the portion of said strip between said stop and severing means, said support having an elongated straight top surface between said stop and severing means, said top surface being upwardly inclined from end to end in the direction of advance of said strip, means for initially sustaining said support at a level such that the low end of its top surface adjacent said severing means is at a level slightly below said severing means so that said top surface is in position for full surface-to-surface supporting engagement with a substantial length of the mid-section of said strip between said stop



and severing means throughout the full length of said top surface to support said portion of said strip in straight inclined condition before severing and to positively prevent longitudinal bowing of the latter when its forward edge is engaged with said stop, thereby to enable more accurately determining the length of said strip advanced past said severing means, indexing means for periodically lowering said support from the aforesaid initial level thereof to cause the stack of blanks to accumulate thereon with the top blank in the stack in inclined position to support said portion of said strip between said stop and severing means during a severing operation, and means for actuating said severing means.

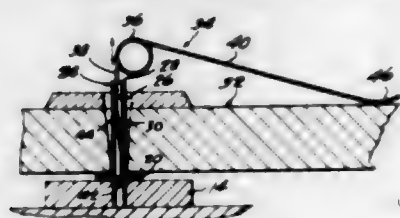
2,999,410
SEVERING DEVICE FOR FABRIC MATERIAL
Abe Brenner, 255 W. 23rd St., New York, N.Y.
Filed Dec. 13, 1957, Ser. No. 702,590
5 Claims. (Cl. 83-485)



1. A device for severing a selected length of a fabric work piece composed of a material incapable of self sustained support over a slot in a flat support, comprising a flat support to completely support the workpiece thereon, a work supporting plate thereon, said plate having a slot therein, paper carried by the support independent of the work piece prior to the severing of the work piece and having a portion overlying said slot to provide a support for the full portion of said work piece, positioned over said slot, means transversely disposed across the support to retain the work piece in place on said paper support, and cutting means overlying the slot, means connecting said cutter means with said support to guide the

same for movement along said slot of said plate, said slot extending for at least the width of the work piece and the spaced walls thereof guidingly receiving said cutting means for movement therebetween, the space of said walls being sufficient to permit said paper to support itself thereover and said cutting means being movable progressively in and through the slot to progressively sever the work piece and underlying portion of the paper while the uncut underlying paper portion supports the work piece during the severing thereof.

2,999,411
PIANO KEY TENSIONING DEVICE
Arlo E. Rice, P.O. Box 1027, Baird, Tex.
Filed May 20, 1960, Ser. No. 30,570
6 Claims. (Cl. 84-439)



1. In combination, a piano mechanism base, a forward rail, a balance rail, and a back rail spacedly supported on said base, a piano key overlying and extending across said rails, said key having a forward end portion overlying said forward rail, an intermediate portion overlying said balance rail, and a rear end portion overlying said back rail, said key having a vertical bore extending through its intermediate portion, a vertical pin secured to the balance rail and rising through said bore, and a tensioning spring mounted on said pin and downwardly tensioned upon the key behind the pin, said spring comprising a coil, a vertical arm carried by said pin and a downwardly tensioned horizontal arm extending rearwardly from the vertical arm and having a terminal tensioned downwardly upon the upper surface of the key.

2,999,412
TWO PART RING WITH LUG AND RECESS RETAINING MEANS
Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Mar. 17, 1958, Ser. No. 721,764
2 Claims. (Cl. 85-8.8)



1. A self-locking two piece fastening device wherein the two pieces are adapted to be inserted radially into a peripheral groove in a shaft from opposite sides thereof and snapped into locking engagement with each other in cooperative relationship with said groove, comprising a first generally U-shaped flat piece having a notch in the outer edge of each leg of the U and the end surface of each leg being inclined inwardly from the outer edge to the inner edge of the leg to provide a cam surface at the free end of each leg of the U, and a second generally U-shaped flat piece of resilient material having an upstanding lug formed integrally on the outer edge of each leg of the U, said first and second U-shaped pieces being adapted to straddle the shaft in superposed relationship as they are moved toward each other into said groove from opposite sides of the shaft, and said lugs on said second piece being spaced apart less than the distance

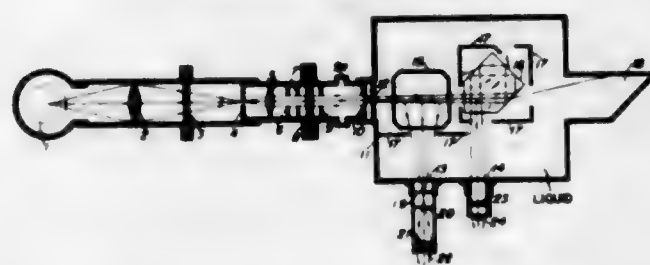
between the outer edges of the legs of said first piece with said lugs at first being in alignment with said notches in said first piece in the direction of application of said pieces and being temporarily forced out of alignment with said notches by said cam surfaces on said first piece as the two pieces are moved progressively toward each other to resiliently deform said second piece and effect snapping of the lugs into the notches as the lugs reach a position of alignment with said notches in the radial direction perpendicular to the direction of application.

2,999,413
PROCESS OF MAKING A FISHING NET
Kazuo Momoi, 760 Nakahiro, Ako City,
Hyogo-ken, Japan
Filed Feb. 26, 1959, Ser. No. 795,856
2 Claims. (Cl. 87-12)



1. The process of making a fishing net, comprising the combination of steps of placing at least one outer strand of polyvinyl synthetic fiber next to one core strand of polyamide synthetic fiber; twisting the outer strand about the inner core to form a composite yarn with the polyamide fiber on the inside and the polyvinyl fiber on the outside; twisting a plurality of said yarns into a cord; knotting a plurality of said cords at spaced intervals with a slipless knot to make a net, whereby, by thus disposing the polyvinyl synthetic fiber strands about the polyamide synthetic fiber strands, said cords can be made into a net without heat treatment and the knots thus made do not loosen.

2,999,414
LIGHT BEAM WEAKENER
Robert F. Stamm, Stamford, Conn., and Peter A. Button, East Gallie, Fla., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed June 17, 1958, Ser. No. 742,550
3 Claims. (Cl. 88-1)



1. A light beam weakener for weakening a light beam by a factor of the order of 5×10^{-4} comprising a liquid bath, a seven-sided one-piece glass prism immersed in said liquid bath, said prism having five flat working surfaces, the second and fourth of which surfaces are parallel, a third surface at right angles to the second and fourth surfaces, said second, third, and fourth surfaces comprising glass-liquid reflecting surfaces, and a first and fifth light transmitting surface, which surfaces when extended form an angle of 45° with said third surface and which are at 90° with each other, all of said surfaces being perpendicular to a common plane, and a light source impinging incident substantially parallel light on

said first light transmitting surface of the prism; said liquid bath having a different index of refraction than said glass prism at the wave length being employed, thereby causing the major portion of the light to escape from the prism at each reflection and a small but calculable portion of the light beam to be internally reflected from each surface.

2,999,415
RANGEFINDER SIGHT WITH RANGEFINDER OF EXTERNAL BASIS TYPE
Tadeusz Malinowski and Walter Mandler, Midland, Ontario, Canada, assignors to Ernst Leitz Canada Limited, Midland, Ontario, Canada
Filed July 13, 1959, Ser. No. 826,545
4 Claims. (Cl. 88-2.2)



1. An optical rangefinder-sight comprising in combination a rangefinding system and sighting system, whose rangefinding system is of the external basis type to be applied for targets having a form of horizontal rod of known length, said rangefinding system comprising a telescopic optical system including a reticle having a fixed vertical line bearing divisions in terms of ranges and two tilted lines passing through a point arbitrarily selected on said vertical line and forming fixed angles with said vertical line; whereby when the said two tilted lines on the reticle embrace the two opposite ends of the image of the target rod, the image of the said target rod intersects the said vertical line of the reticle at a height which indicates the proper range division, corresponding to the real range of the target.

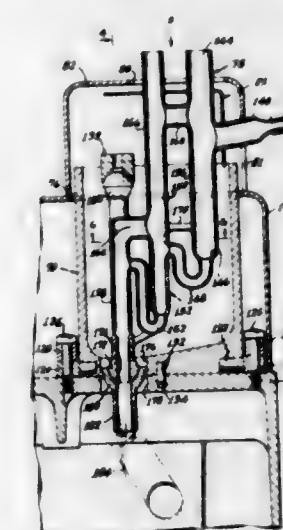
2,999,416
PHOTOGRAPHIC MEASURING FINDER
Friedrich Mische, Braunschweig-Gliesmarode, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed May 26, 1958, Ser. No. 737,615
Claims priority, application Germany Oct. 2, 1957
13 Claims. (Cl. 88-2.4)



1. A measuring finder for photographic cameras comprising, in combination, an Albada view finder of the solid block type including a front member facing the object, an ocular member, an intermediate block extending between and in surface to surface contact with said members, a semi-permeable concave mirror disposed at the interface between said front member and said block and facing said ocular member, and a picture defining frame disposed at the interface between said ocular member and said block in substantially the focal plane of said mirror for reflection thereby at substantially infinity, said block being formed of plural components united in sur-

face to surface relation and defining a mirrored interface intersecting the optical axis of the view finder at an acute angle thereto and facing said ocular member; and a range finder including a relatively elongated prism extending laterally from said intermediate block and containing the optical axis of the range finder, the outer end of said prism being beveled to reflect, along the range finder axis to said prism and to said mirrored surface for reflection by the latter to said ocular member along the optical axis of the view finder, light entering through a surface portion of said prism facing the object, and an Abat wedge including a positive member, mounted on said surface portion in the path of light rays from the object, and an adjustable negative member operatively associated with said positive member; said prism being an integral extension of one of said block components, whereby the paths of light rays entering through either said front member or said surface portion and directed to said ocular member, lie entirely within solid elements without intervening air spaces.

2,999,417
COLORIMETER
Jack Isreeli, Tuckahoe, N.Y., assignor, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed June 5, 1957, Ser. No. 663,681
14 Claims. (Cl. 88-14)

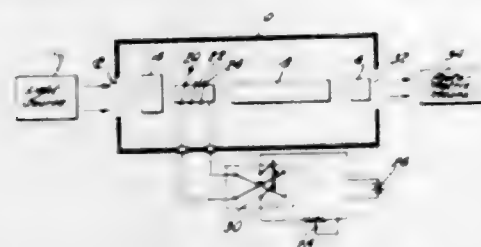


1. A flow cell for exposing a liquid stream to a light beam for viewing by a photosensitive device, comprising a tubular inlet member having an inlet opening for the liquid stream above its lower end and a vent opening, another tubular member laterally spaced from said first mentioned tubular member and having an inlet opening and a light-permeable portion above its lower end to provide a viewing member for exposing the liquid column therein to the light beam, a tubular reflexed part connecting the lower end of said inlet member to said viewing member at said inlet opening thereof to provide a reflexed flow path for the liquid stream from said inlet member to said viewing member, outlet means for the liquid stream connected to said viewing member above its lower end for providing a predetermined level of liquid in said viewing member, and vent means above said outlet means whereby the pressures on the liquids in said outlet means and said inlet member are equal.

2,999,418
POLARIMETRIC APPARATUS
Albert S. Keston, 67 Bonn Place, Weehawken, N.J.
Filed Mar. 31, 1958, Ser. No. 725,148
10 Claims. (Cl. 88-14)

1. A polarimeter of the type that measures the rotation of the plane of polarization of a beam of polarized light produced by a substance through which the beam

passes, comprising in combination, a source of light, light polarizing means for polarizing light from said source to form two beams of plane polarized light having polarization planes that are offset in opposite directions by predetermined angles from an intermediate reference plane, said polarizing means including magnetically-actuated beam-rotating means for rotating the plane of polarization of separate portions of the light from said source to form said two offset beams, a polarization analyzer having a polarizing axis substantially perpendicu-

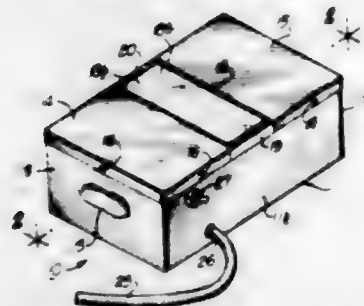


lar to said reference plane, a sample chamber located between said light polarizing means and said analyzer and photometric means for sensing the relative intensities of the portions of said two beams passing through said analyzer, said polarimeter having no movable beam-rotating parts in the path of said beams, whereby the intensities of the beams passing through said analyzer at the time of measurement differ as a function of, and only as a function of, the rotation of said beams by said substance in said chamber.

2,999,419

FILM DOT ANALYZER

Harold R. Benson, Lombard, Ill., assignor to mArc Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 3, 1958, Ser. No. 771,329
1 Claim. (Cl. 88-14)



An analyzer for the dot structure of photographic film comprising, a rectangular light box having a pair of identical cover members which together cover less than the entire top of said box so as to leave a space between said cover members at the center of said box, flange members integral with said cover members extending into said space below the top of said cover members to define a shelf, a light transmitting viewing surface supported on said shelf, said viewing surface comprising two adjacent sections one formed of clear glass plate and the other formed of frosted glass plate, a lamp disposed in said box adjacent one end thereof and near the bottom of said box, the lamp being disposed so that a line interconnecting said lamp and said viewing surface makes an angle within the range of twenty degrees to forty-five degrees with the plane of said cover members.

2,999,420

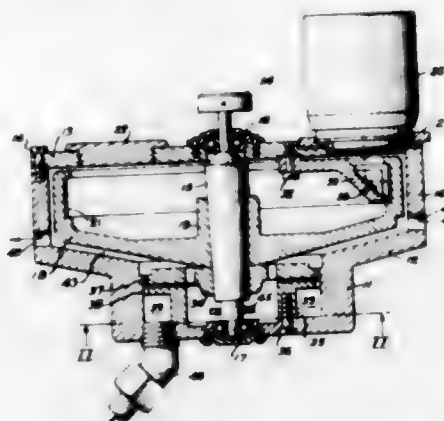
CONTINUOUS WRITING STREAK CAMERA

Willard E. Buck, Boulder, Colo., assignor to Beckman & Whitley, Inc., San Carlos, Calif., a corporation of California

Filed Mar. 31, 1958, Ser. No. 724,993
2 Claims. (Cl. 88-16)

1. In a high speed camera of the character described, a housing for a rotary film drum, an interconnecting and

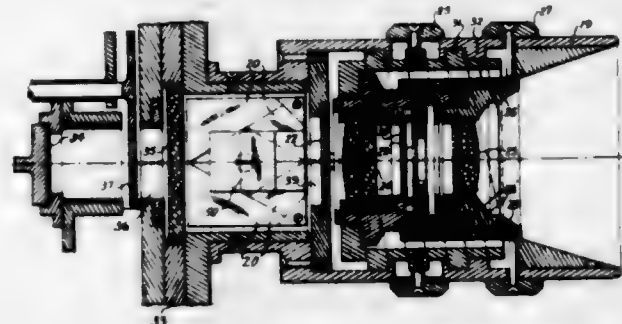
concentric housing for a turbine, a rotatable shaft extending coaxially through both housings, a film drum on the shaft, a turbine rotor on the shaft whereby operation



2,999,421

CAMERA AND PROJECTOR SYSTEM

Earl M. Welch, New York, N.Y., assignor to Mecca Film Laboratories Inc., New York, N.Y.
Filed Nov. 20, 1957, Ser. No. 697,704
3 Claims. (Cl. 88-16.4)



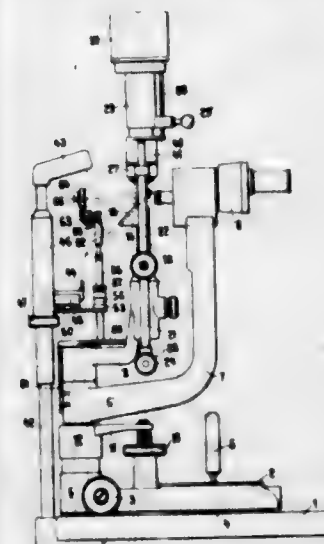
1. In the combination of a conventional lens system having a lens assembly for projecting an image to an image screen, and conventional focusing means for adjusting said lens assembly, with a beam splitting and integrating device fixed on the optical axis between said lens assembly and said screen; a prism structure forming said device for separating the beam between the plane of said image screen and said lens assembly into three separate bundles of light, each bundle terminating in a separate identical image on said image screen, said structure comprising three prism assemblies having rectangular entrance and exit faces, each set of three faces being substantially symmetrically arranged about an axis normal to the optical axis of said lens assembly and having contiguous sides meeting substantially at said optical axis to obtain maximum light area for each bundle from the total circular area of the beam by which the sets of faces are circumscribed, means for holding a film frame in the operative position in the plane of said image screen, in optical alignment to intercept said three separate images on said one frame, said prism assemblies having their axes deflected divergently toward said frame from the optical axis of said lens assembly, so as to place said images in contiguous rectangular spaces similarly arranged on said one film frame, each set of said end faces having their contiguous sides along axes normally across said optical axis and extending radially in a normal direction to said axis respectively, each set of said end faces forming a substantially symmetrical arrangement about an axial plane extended through the radially contiguous sides of two of said faces and passing through the middle of the third face at one end of said device, a basic color

filter having a different basic color in the path of each separate bundle, said basic colors being red, blue and yellow green, said color filter being mounted adjacent one end of said device and having the three rectangular basic color areas contiguous with each other along radii in the same axial planes as those of said contiguous sides of said end faces, two of said prism assemblies being fixed in opposed relation on opposite sides of an axial plane through the optical axis of said lens assembly, and at one side of said axis, said two assemblies each having three reflective surfaces in series for the bundles being transmitted, the third assembly being fixed at the other side of said axis across the juncture of the opposed assemblies and having four reflective surfaces in series for the corresponding bundle, said third assembly providing the same light distance between said lens assembly and said image screen as the other two assemblies.

2,999,422

SLIT LAMP

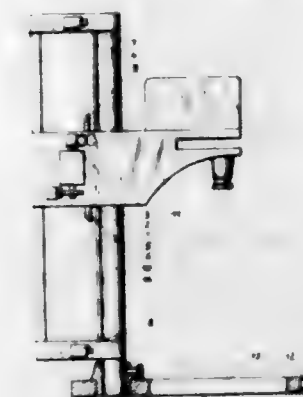
Hans Papritz, Liebefeld-Berne, Switzerland, assignor to Haag-Streit A.G., Liebefeld-Berne, Switzerland
Filed Dec. 3, 1957, Ser. No. 700,312
Claims priority, application Switzerland Dec. 28, 1956
7 Claims. (Cl. 88-20)



1. A slit lamp for microscopic examination of the eye, of the type having an illuminating device for projecting a flat light beam into the eye and a microscope for observation of the eye, comprising a common vertical pivot axis for the said microscope and the said illuminating device, the said microscope and illuminating device having each a support mounted for independent rotation round the common vertical pivot axis, whereby the illuminating device is arranged for free motion between the microscope and the eye, the said illuminating device having a light source, a slit diaphragm, a reflector having a mirror plane and a lens system so correlated that a sharp image of the said slit diaphragm is produced in the eye, a common horizontal pivot axis on the said support of the illuminating device for the said light source, slit diaphragm and lens system allowing tilting of the said light source, slit diaphragm and lens system to different angular positions relatively to the said reflector which is fixed on the support of the illuminating device, the said horizontal pivot axis passing through the locus of the vertical mirror image of the said sharp image of the slit diaphragm with reference to the said mirror plane so that the said sharp image of the slit diaphragm appears at the same place of the eye for any angular position of the said light source, slit diaphragm and lens system relatively to the said reflector, while the angle of incidence of the said flat light beam into the eye changes in accordance with the angular position of the light source slit diaphragm and lens system relatively to the said reflector.

2,999,423

ELECTRIC DRIVES FOR PHOTOGRAPHIC ENLARGING AND REPRODUCING APPARATUS
Herbert Hauptvogel and Erich Korf, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden
Filed Sept. 6, 1957, Ser. No. 682,495
Claims priority, application Germany Sept. 28, 1956
3 Claims. (Cl. 88-24)

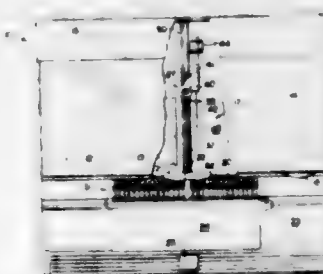


1. An enlarging apparatus comprising a stationary base plate, a guiding column supported by and substantially perpendicular to said base plate, a rack attached to and extending along the major portion of said guiding column, a movable carriage member on said guiding column along which it can be reciprocated, an optical projection unit on said carriage member, electric drive means secured to said carriage member, a gear driven by said drive means and engaging said rack for reciprocating said carriage member, a source of electric power, control means for energizing said drive means from said source of power, and limit switch means comprising a cut-out switch attached adjacent each end of said rack and an abutment at either side of said carriage member, said abutments being adapted to operate said cut-out switches in the extreme positions of said carriage member so as to de-energize said drive means to bring said carriage member to a stop.

2,999,424

SLIDE CHANGER APPARATUS

Robert F. McCammon, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 1, 1960, Ser. No. 66,619
5 Claims. (Cl. 88-28)

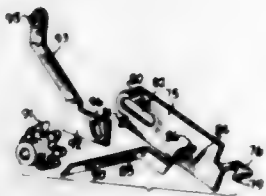


5. In a photographic projector, slide changer, a slide tray holding a plurality of individual slides in a side by side relationship, with each of the slides having a magnetic edge adapted to move past a slide receiving window in a wall of the projector as said slide tray moves whereby the slides may be individually moved to a projection position by said slide changer, a magnet, and means movably mounting said magnet on said slide changer to thereby position said magnet at said window with a first portion of said magnet in engagement with one of the slides, said magnet being movable to allow movement of said magnet relative to said slide changer and in the direction of movement of said slide tray to allow relatively free movement of the slide tray as the next succeeding slide is moved into position to engage a second portion of said magnet.

2,999,425

SLIDE PROJECTION APPARATUS

Henry J. Emmel, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
 Filed Oct. 12, 1959, Ser. No. 845,867
 7 Claims. (Cl. 88—28)



1. In a slide projector, the combination including a projection lens system for projecting an image from a transparent slide onto a screen, a slide tray normally movable in a step by step manner and thereby being adapted to successively bring transparent slides disposed within the tray into a loading position, a driving motor, means actuated by said motor and effective in timed sequence to move the slide disposed in said loading position into a projection position relative to said lens system and after a predetermined time interval to return such slide to said loading position in said tray; means for effecting said stepped movement of said slide tray and including cooperating dog and toothed means, means comprising a blocking member actuated by said motor upon the return of such slide to loading position for causing a first portion of said dog to engage said toothed means for normally effecting movement of said slide tray into its next forward position, and selectively controlled means actuated by the energization of said motor for actuating said blocking member in a different manner upon the return of said slide to loading position for thereby causing a second portion of said dog to engage said toothed means for effecting movement of said slide tray into its next rearward position.

2,999,426

LENS SUPPORTING AND POSITIONING MEANS

Joseph Hanke, 3349 N. Avers Ave., Chicago, Ill.
 Filed July 22, 1958, Ser. No. 750,193
 3 Claims. (Cl. 88—51)



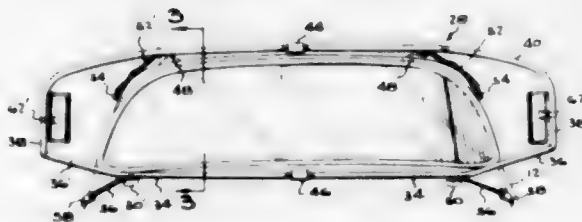
1. For use in supporting and positioning a pair of cooperating lenses with said lenses properly located for use before the eyes of a user of eyeglasses or sunglasses, as the case may be; a readily applicable and removable holder for said lenses, comprising an elongated inverted generally U-shaped adapter frame embodying a longitudinally bowed bight portion of a curvature and length that is adapted to bear conformably and comfortably against the forehead of the user and provided at its ends with lateral depending limb portions the lower ends of which terminate in a plane above the plane of the eyebrows of the user, the lower ends of said limb portions having integral forwardly extending lens supporting and suspending members horizontally displaced and which when individually connected with their respective

eye lenses properly position and hold the lenses before the user's eyes in correctly usable position, a brace of a length approximately the same as the length of said bight portion and disposed in spaced parallelism below the bight portion and located between the median portions of the respective limb portions and having its ends connected with said limb portions, said brace conformable in curvature with the bight portion, the brace, bight portion and limb portions cooperatively providing prescribed location and support for the lenses and obviating the need for a nose bridge, and means for applying and retaining the frame in restful but reliable contact with the forehead, said means comprising an elastic head-embracing strap and links connected to the forward ends of the strap and having their respective forward ends individually connected with said limb portions at points adjacent to which the ends of the brace are rigidly connected with said limb portions.

2,999,427

REAR VIEW MIRROR SUPPORTING FRAME FOR AUTOMOBILES

Wilbur Fred Newcomb, 2129 Palomar Drive, Ventura, Calif.
 Filed Apr. 3, 1959, Ser. No. 804,025
 4 Claims. (Cl. 88—86)

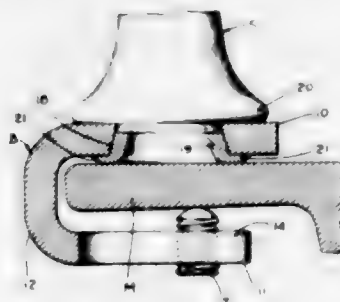


1. In combination, a vehicle body having a windshield, a top above the windshield, a cowl below the windshield, a hood forwardly of the cowl, and door frames at opposite sides of the windshield, an open frame positioned in front of and extending across the windshield and reaching at its ends laterally outwardly beyond related door frames, said open frame having upper and lower horizontal members severally located above and below the windshield, upper means securing the upper member to the body top, lower means securing the lower member to the cowl, said open frame having end portions, and rear-view mirrors severally mounted on said end portions.

2,999,428

MOUNTING FOR REAR VISION REFLECTOR

Frank N. Mariani, 165 Seaman St., Washington Heights, New York, N.Y.
 Filed May 31, 1955, Ser. No. 511,914
 2 Claims. (Cl. 88—98)



1. In a rear vision reflector adapted to be removably mounted on a marginal part of a vehicle and including a stem for supporting a mirror casing, the combination of a U-shaped bearing having spaced, substantially parallel upper and lower arms defining a gap for removably receiving said marginal part, said upper arm having an opening therein and said stem having a nipple, said nipple

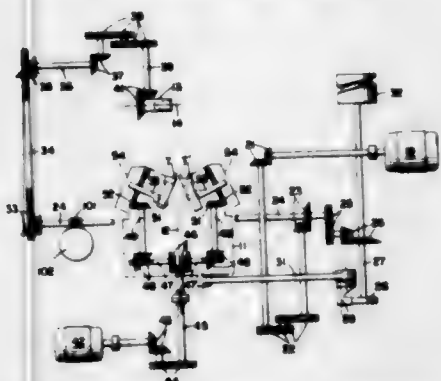
having a downwardly diverging flaring conical portion with an outwardly projecting rim, the nipple extending through said opening with the rim of the nipple contacting the inner surface of said upper arm, whereby the stem is mounted for rotation relative to said bearing, said lower arm having means for cooperating with said marginal part for urging the latter toward said upper arm and for urging the rim of said nipple against said upper arm to preclude accidental rotation of said stem relative to said bearing.

2,999,429

DRIVE OF GEAR GENERATING MACHINE

Leonard O. Carlsen, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York

Filed Dec. 19, 1958, Ser. No. 781,591
8 Claims. (Cl. 90—6)



1. A gear generating machine comprising a rotatable cradle, a cutting tool and a rotatable work spindle of which one is carried by the cradle, a generating train connecting the spindle and the cradle for simultaneous rotation for gear generation, a first motor for driving the cutting tool, a second motor for driving the generating train, a device for varying the speed of the second motor, and means operable in time with the generating train for actuating said device to thereby effect variation of the rate of said rotations as gear cutting proceeds, said means being arranged to progressively increase said rate from an initial phase of cutting to an intermediate point of tooth profile generation.

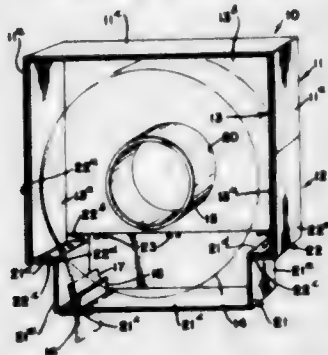
2,999,430

CONTAINER AND METHOD OF MAKING THE SAME

Thomas Riley, Fairview Park, Donald Zaas, South Euclid, Jacob Gaser, Valley City, and John Strmac, Lakewood, Ohio, assignors to Apex Paper Box Company, Cleveland, Ohio, a corporation of Ohio

Original application Jan. 29, 1959, Ser. No. 789,865.
Divided and this application Mar. 14, 1960, Ser. No. 18,214

1 Claim. (Cl. 93—36)



A method of forming a container adapted to house a roll of photographic film comprising the steps of forming an upper cover member from a first blank by folding the sides and ends thereof together and fastening the same, and forming a substantially rectangular mating photographic spool support member by folding a substantially

770 O.G.—18

rectangular member into a spool support having an open top and bottom, forming circular and registering openings in the sides of said spool support member and fastening therein a spool member adapted to mate therewith and rest on the openings, forming a rectangular-shaped open top bottom cover member from a blank by folding the ends thereof upwardly and fastening the same together and forming a larger size rectangular-shaped open top bottom cover member to said open top bottom cover member being of substantially the size of the upper cover member and adapted to mate with and fit over the spool support, said larger open top bottom cover member having a rectangular cutout in the center thereof of sufficient dimension to receive telescopically the first mentioned rectangular shaped bottom cover member, telescoping said bottom cover members together and fastening them so as to form a stepped bottom cover and securing said bottom and top cover members and spool support together.

2,999,431

RESILIENT MAT CONSTRUCTION

Robert L. Mitchell, 2130 San Fernando Road, Los Angeles 65, Calif.

Filed Oct. 17, 1957, Ser. No. 690,870
8 Claims. (Cl. 94—13)



1. A mat comprising: a plurality of resilient pads assembled to form a layer having a relatively smooth and even upper surface, said pads having protruding arms thereon, having spaced alternating tongues and slots of like shape formed along the periphery of said arms with said tongues having lateral projections, said pads being connected together along adjacent edges to form rows with a tongue of one interlocking with an adjacently positioned slot on an adjacent pad whereby is formed a line of junction between adjacent pads, said line of junction thereby being spaced apart from re-occurring interlocked lines of junction between other adjacent interlocked pads, a projecting arm on another adjacent pad connecting with the adjacent arms of two adjacent connected pads and extending transverse to the junction line thereof to form a connecting means at the end of the line of junction for securing said two adjacent connected pads together, a first set of orthogonally intersecting rib shock-absorbing means formed integral with said layer and disposed to absorb the initial force of a shock applied to said layer; and a second set of orthogonally intersecting rib shock absorbing means formed integral with said layer and disposed alternately between said first set and being of a lesser height than said first set to supplement said first means by absorbing the force of any shocks which stress said first means to near its limit of absorption, whereby said first and second sets of shock-absorbing means are substantially uniformly disposed in said mat.

2,999,432

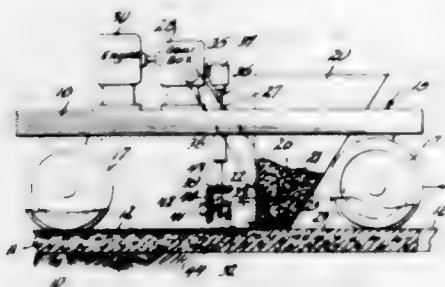
ROAD SURFACES

Carl F. Ytterberg, 241 Hollywood Ave., Crestwood, Tuckahoe, N.Y.

Filed Sept. 25, 1956, Ser. No. 611,941
2 Claims. (Cl. 94—24)

1. The method of constructing a concrete pavement for roads and streets subject to heavy vehicular traffic as

opposed to interior flooring constructions, which method consists of the steps of pouring and spreading without the application of vibration a concrete base slab of substantially the standard gravel, sand and cement mix, containing the usual proportion of voids, but being of a relatively low water content, up to a level of substantially the final desired grade; grading a quantity of hard road-metal aggregate selected from the group consisting of gravel and broken stone or hard rock, to size ranging from about three quarters of an inch to about three eighths of an inch in diameter; mixing said aggregate with dry Portland cement after having slightly wetted the aggregate with water only sufficiently to cause a coating of

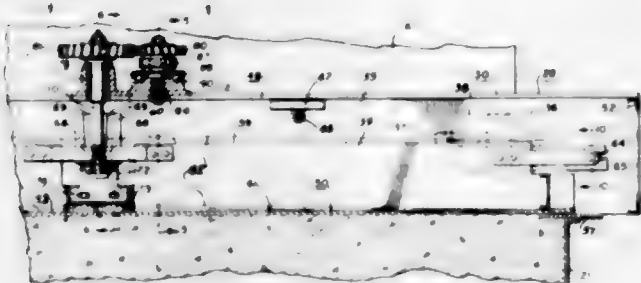


the dry cement to adhere to the particles of aggregate; then spreading a layer of said dry-coated aggregate directly upon the top surface of the base slab, without the interposition of any other material, while the concrete comprising the slab is still somewhat wet; then vibrating this overlay of aggregate to embed the coated aggregate particles in the surface of the base slab replacing the natural voids in said base slab to the extent that the upper portion of the base slab is densified without substantially increasing the over-all height of said desired grade; the process thus described serving to obviate the presence of fines in the top surface of the pavement which fines could be dislodged by a finishing treatment such as brooming or the like.

2,999,433

ROAD FINISHING MACHINE

Alphonse J. Baltes, 181 Benedict Ave., Norwalk, Ohio
Filed Mar. 5, 1957, Ser. No. 644,134
8 Claims. (Cl. 94-45)



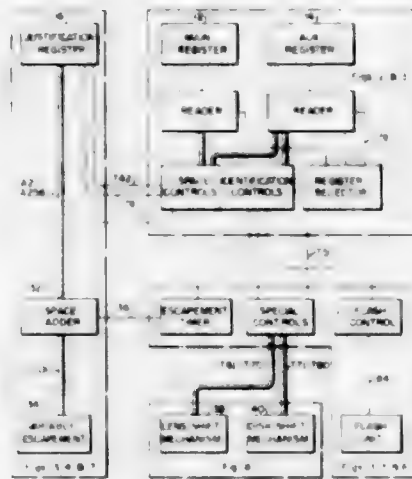
8. A road finishing machine including a carriage structure adapted to travel on spaced road forms between which road material is adapted to be contained, a screed operatively connected to said carriage structure and adapted to extend in a transverse direction between said road forms, first drive means for reciprocally moving said screed in said transverse direction, said screed including crown member means for engaging road material, raising and lowering means connected to said crown member means at an intermediate portion thereof, and second drive means mounted on said screed for actuating said raising and lowering means, and means interengaging said second drive means and said carriage structure to power said second drive means in response to the reciprocal movement of said screed relative to said carriage.

2,999,434

APPARATUS FOR TYPE COMPOSITION

Rene A. Higonnet, Cambridge, Mass. (% Graphic Arts Research Foundation, Inc., 58 Charles St., Cambridge 41 Mass.), Louis M. Moyroud, West Medford, Mass. (% Graphic Arts Research Foundation, Inc., 58 Charles St., Cambridge 41, Mass.), and Ellis P. Hanson, Rowley, Mass., assignors, by mesne assignments, to said Higonnet and said Moyroud

Filed Oct. 1, 1957, Ser. No. 687,572
17 Claims. (Cl. 95-4.5)



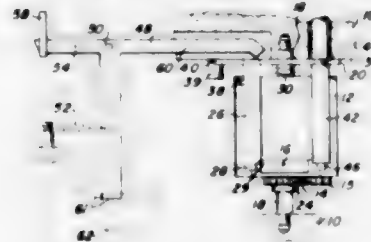
1. In apparatus for type composition, a rotatable shaft having an angular position for each of a number of fonts, a register to represent the characters in a line of type and a distinctive code for each of said fonts to be inserted at a selected position in said line, and transcription means including cyclically operated means to read the characters and font codes successively from the register and to space the characters, a decoder associated with said shaft, connections from said cyclically-operated means to said decoder, a circuit to rotate the shaft and to interrupt the cyclic operation of said reading means, and means to re-instate said cyclic operation and to stop the shaft when the decoder reaches a position which matches said code.

2,999,435

AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERAS

Paul Harter, Stuttgart-Wangen, and Erwin Staudt, Stuttgart, Germany, assignors to Eastman Kodak Company, Rochester, N.Y.

Filed Jan. 4, 1960, Ser. No. 178
Claims priority, application Germany Feb. 14, 1959
8 Claims. (Cl. 95-10)



1. In a camera including a frame; first and second adjustable exposure control elements; an exposure meter with a photocell disposed for illumination by scene light and an electric measuring instrument connected to said photocell, said instrument having a body coupled to said first element and movable relative to said frame for adjustment in conjunction with said first element, said instrument also having a pointer deflected differentially as a function of scene brightness in a predetermined path from a zero position relative to said instrument body; a camera operating member disposed for manual actuation; and means coupled to said operating member and coop-

erating with said second element and said pointer for adjusting said second element as a function of the position of said pointer relative to said camera frame; the combination comprising: a sensing member movable in one path along with said instrument body and movable in a direction crossing the path of said pointer at the zero position of said pointer relative to said instrument body; and a member intercoupling said operating member and said sensing member for moving the latter toward the path of said pointer in response to actuation of said operating member, said intercoupling member being blocked by said sensing member, and thereby blocking said actuation, when said pointer is in its zero position relative to said instrument body.

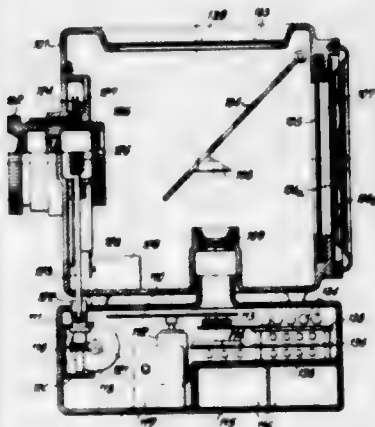
2,999,436

PROCESS AND DEVICE FOR AUTOMATICALLY ADJUSTING OPTICAL INSTRUMENTS

Fritz Faulhaber, Schönaich, Bezirk Boblingen, Germany, assignor to Voigtländer, A.G., Braunschweig, Germany, a corporation of Germany

Filed Sept. 1, 1955, Ser. No. 532,020

Claims priority, application Germany Sept. 4, 1954
14 Claims. (Cl. 95—10)



1. Apparatus for automatic sharp focusing of optical devices comprising a camera; an objective adjustably mounted in said camera for adjustment along its own axis to vary the sharpness of focusing; a photoelectric organ supported in relatively fixed relation to said objective; optical elements in said camera positioned and arranged to direct light entering through said objective onto said photoelectric organ; an opaque slit diaphragm positioned in the path of light directed onto said photoelectric organ; driving means connected to said diaphragm to move the latter to intermittently interrupt the light directed toward said photoelectric organ, said means producing in the photoelectric organ an output current having a characteristic wave shape varying with the sharpness of focusing of the objective and with the relative ratio of high frequency harmonics to low frequency harmonics varying in accordance with the wave shape in such manner that, at sharp focusing of the objective, the proportion of high frequency harmonics is much greater than the proportion of low frequency harmonics; filtering means connected to the output of said photoelectric organ and effective to separate the output current into two components, one containing a band of the high frequencies and the other containing a band of the low frequencies; comparison means connected to the output of said filtering means and effective to provide a control signal proportional to the quotient of the high frequency band component divided by the low frequency band component; servo mechanism connected to said objective to adjust the same along its axis; translating means connected between said comparison means and said servo mechanism for energizing the latter responsive to increasing values of said control signal to adjust said ob-

jective toward the position of sharp focusing; the control signal attaining a stable maximum value when the objective is in the position of sharp focusing, and said translating means de-energizing said servo mechanism when the control signal attains a stable maximum value.

2,999,437

PHOTOGRAPHIC SHUTTERS

Erich Hahn, Werner Hahn, and Rolf Noack, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden

Filed Oct. 10, 1957, Ser. No. 689,428

9 Claims. (Cl. 95—10)



1. In a camera having a housing, a photographic exposure control mechanism comprising first exposure factor setting means including a first rotatable setting ring, second exposure factor setting means including a second rotatable setting ring, a cylindrical cam surface on one edge of said first ring, a control rod extending transversely to the plane of said first ring, means for biasing said control rod against said cam surface for axial motion in response to rotation of said first ring, a control sleeve threaded to the free end of said control rod for axial movement thereof due to axial movement of said control rod, said second setting means including coupling means connecting said control rod to said second ring for rotating said rod, means for controlling the rotation of said control sleeve whereby upon rotation of said rod said sleeve is axially moved, and indicating means responsive to the position of said sleeve, for indicating the composite positions of said setting means.

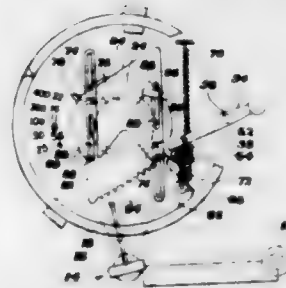
2,999,438

AUTOMATIC EXPOSURE CONTROL SYSTEM

Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Dec. 5, 1958, Ser. No. 778,429

7 Claims. (Cl. 95—10)



1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface and having a multiple-speed shutter mechanism including means for setting the exposure time of said shutter mechanism; the combination comprising: a light-measuring instrument adapted to be differentially energized by scene light as a function of the intensity of said light; a diaphragm mechanism having a variable exposure aper-

ture aligned with said lens system and comprising at least one sliding blade having a cam-shaped edge; first means controlled by said instrument and disposed in cooperative relation with said diaphragm mechanism for limiting the size of said aperture as a function of said intensity; said limiting means including a member differentially moved by said instrument relative to said cam-shaped edge for limiting the sliding movement of said blade as a function of the position of said member; means for sliding said blade into contact with said member; and second means controlled by said instrument and disposed in cooperative relation with said setting means to determine said exposure time as a function of said intensity.

2,999,439

AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERA

Hubert Nerwin and John H. Eagle, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Dec. 5, 1958, Ser. No. 778,430
6 Claims. (Cl. 95-10)



1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface, the combination comprising: a shutter mechanism including a capping device normally interposed between said scene and said surface in alignment with said lens system for completely blocking said image from said surface and adapted, in response to triggering said shutter mechanism, for temporarily moving said capping device away from its position of alignment with said lens system for a preselected exposure time to establish an effective exposure aperture; manually operable means for triggering said shutter mechanism; a light-measuring instrument adapted for energization by scene light and having a member differentially positioned as a function of scene brightness, said member being disposed in cooperative relation with said capping device for limiting the movement of said capping device away from its position of alignment with said lens system to determine the size of said aperture as a function of scene brightness; and means interrelating said differentially positioned member and said shutter triggering means for blocking manual operation of the latter when said differentially positioned member is in a predetermined position.

2,999,440

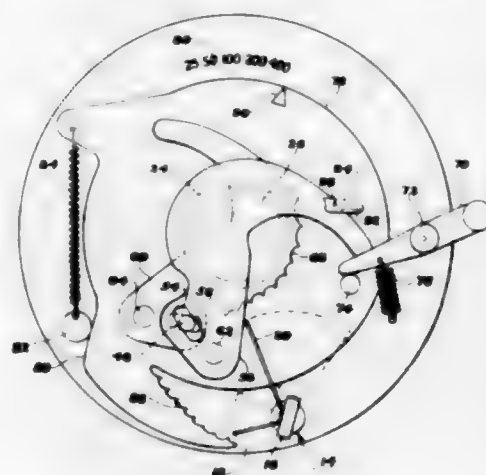
AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERA

Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Dec. 5, 1958, Ser. No. 778,431
8 Claims. (Cl. 95-10)

1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface and having a multiple-speed shutter mechanism including at least one capping device normally interposed between said scene and said surface in alignment with said lens system for completely blocking said image from said

surface and adapted, in response to operation of said shutter mechanism, for temporarily moving said capping device at least partially out of alignment with said lens system for a selected period of time to establish an exposure aperture, said shutter mechanism also including means for selecting the duration of said period of time; the combination comprising: a light-measuring instrument adapted to be exposed to light from said scene and differentially energized thereby as a function of the in-



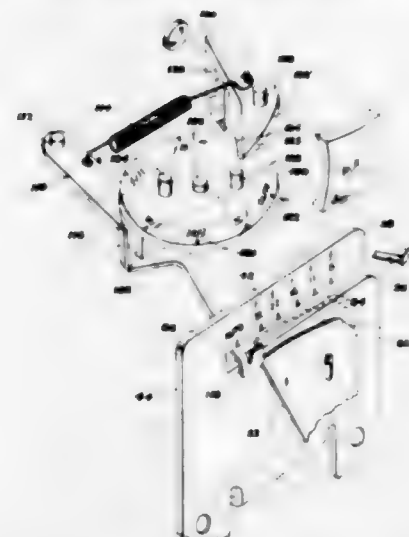
tensity of said light; first means controlled by said instrument and disposed in cooperative relation with said selecting means to control the duration of said period of time as a function of said intensity; and second means controlled by said instrument and disposed in cooperative relation with said capping device for limiting the movement of said capping device away from its position of alignment with said lens system to limit the size of said aperture as a function of said intensity.

2,999,441

AUTOMATIC EXPOSURE CONTROL SYSTEM FOR PHOTOGRAPHIC CAMERAS

Miller H. Hutchison, Jr., Robert F. O'Brien, and Edgar S. Marvin, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 2, 1959, Ser. No. 796,309
11 Claims. (Cl. 95-10)



1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface; a photocell positioned for energization by said scene; an electric measuring instrument having a pivoted coil connected to said cell and energized thereby to assume an angular position as a function of the intensity of said light; a pointer driven by said coil; an actuating device accessible to the camera operator; at least one movable diaphragm vane forming an exposure aperture aligned

with said lens system, the size of said aperture being a function of the position of said vane; and sensing means connected to said vane for movement in a predetermined path to sense the position of said pointer upon movement of said vane, for determining the size of said aperture; an arrangement for positioning said vane, comprising: a first spring normally maintaining said actuating device in an initial position and adapted to be overcome by manual movement of said device away from said initial position; a second spring opposed to said first spring and having a force lighter than the force of said first spring, for moving said vane and for moving said sensing means into engagement with said pointer in response to movement of said actuating device away from said initial position; override means adapted for movement into the path of said sensing means for intercepting said sensing means irrespective of the position of said pointer; and manually operable selecting means coupled to said override means for moving the latter into said path.

2,999,442

AUTOMATIC PHOTOGRAPHIC DIAPHRAGM

Sho Takahama, Nishinomiya-shi, Hyogo-ken, Japan, assignor to Yashica Co., Ltd., Tokyo, Japan, a corporation of Japan

Filed Oct. 30, 1959, Ser. No. 849,953

Claims priority, application Japan Jan. 14, 1959

8 Claims. (Cl. 95-10)



1. An improved automatic light responsive diaphragm mechanism, comprising a light meter rotated first gear, a rack carrying movable diaphragm control member, an idler gear, means alternatively supporting said idler gear in engagement with said first gear and said rack, said idler gear being rotated to a predetermined position by said first gear in accordance with the light actuating said meter, and means rotating said idler gear when in engagement with said rack in accordance with said predetermined position thereof to move said diaphragm control member an amount corresponding to the position of said first gear.

2,999,443

OPTICAL FILTER COMPENSATION MEANS COUPLED TO EXPOSURE-RESPONSIVE DEVICE

Hideo Miyachi, Okaya-shi, Nagano-ken, Japan, assignor to Yashica Co., Ltd., Tokyo, Japan, a corporation of Japan

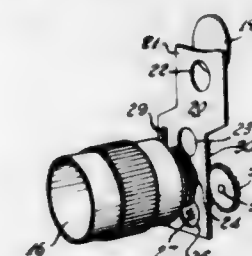
Filed Dec. 1, 1959, Ser. No. 856,469

Claims priority, application Japan Dec. 28, 1958

10 Claims. (Cl. 95-10)

1. Filter compensation means for use with an optical device including a body, a lens having an optical axis and a photo-mechanical translator including a photo transducer, comprising a plate having a plurality of apertures formed therein, movably mounted to said body to follow a path which sequentially brings said apertures into registration with the optical axis of said lens, an optical filter mounted in at least one of said apertures in said plate, and masking means consisting of a substantially opaque member connected to and movable with said plate and

so shaped and positioned as to intercept a predetermined fraction of the light directed at said transducer when



said filter registers with said optical axis and permit the remaining fraction of said light to pass substantially undiminished.

2,999,444

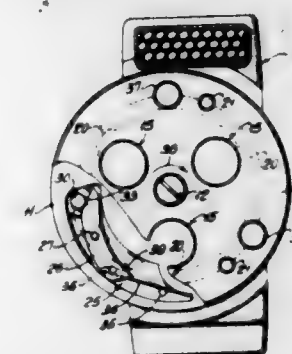
TURRET DETENT MEANS

Hideo Miyachi, Okaya-shi, Nagano-ken, Japan, assignor to Yashica Co., Ltd., Tokyo, Japan, a corporation of Japan

Filed Nov. 12, 1959, Ser. No. 852,522

Claims priority, application Japan Dec. 10, 1958

7 Claims. (Cl. 95-45)



1. Camera turret means for use with a camera which includes a camera body housing and a fixed lens mounted therein comprising a turret head rotatably mounted to the front wall of said body, said turret having formed therein sets of detents and of lens apertures, each said set including a plurality of the same number of equiradially spaced apertures, detent means reciprocally mounted to said front wall to sequentially engage said detent apertures as said head is rotated, resilient means biasing said detent means toward a forward position, said apertures being spaced so that as one of said lens apertures registers with said fixed lens said detent means engages a detent aperture and blocking means comprising a checking lever pivotally connected to said front wall of said camera housing, means connected to said camera housing and lever biasing a first end of said lever towards said detent means and forward of the same when said detent means are displaced from said forward position thereof, and check means to contact said lever and move said first end thereof away from said detent means as said turret head is rotated, thereby freeing said detent means for entry into the next-detent aperture as said head is further rotated.

2,999,445

PHOTOGRAPHIC SHUTTER

Paul Fahlenberg, Balerbrunn, near Munich, Germany, assignor to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a firm of Germany

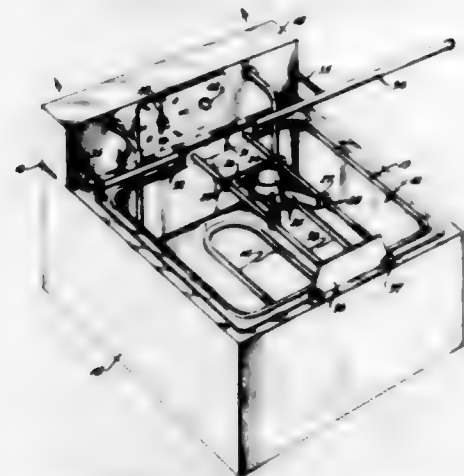
Filed June 9, 1960, Ser. No. 35,070

Claims priority, application Germany June 19, 1959

8 Claims. (Cl. 95-63)

1. An electrical timing device for photographic cameras comprising a delay circuit means including a capacitor and resistor in series and also a first inductance coil, a source of potential for said circuit means, and compensat-

on said spaced means whereby said hopper mounting means can be moved to and fro and from side to side



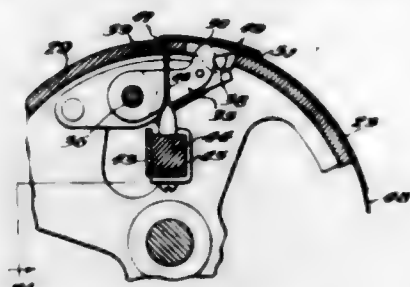
above said container in operative relation above said container.

2,999,452
DISPOSABLE WRAPPER FOR COOKING FOOD
Thomas A. Hardy, 3205 Tampa St., Houston, Tex.
Filed Sept. 29, 1958, Ser. No. 764,117
2 Claims. (Cl. 99-402)



1. A wrapper for use in cooking food comprising a thin foldable sheet of metal having openings therethrough distributed substantially uniformly throughout the area of the sheet and formed with intersecting strip-like portions extending continuously across the sheet between the openings and having portions of trough shape in cross-section whose opposite ends are closed adjacent the intersections of the strip-like portions.

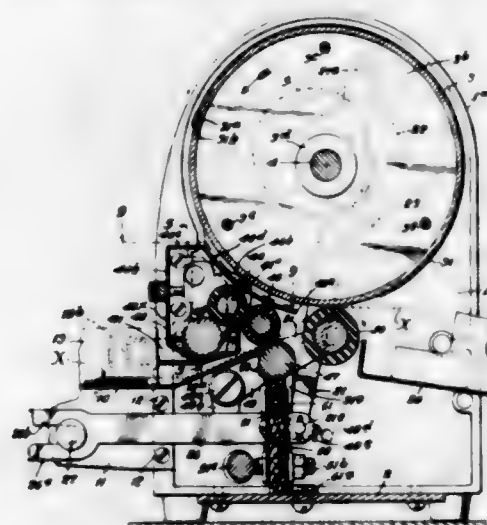
2,999,453
MEANS FOR LINE PRINTING
John R. Roberts, Maplewood, N.J., assignor to Ditto, Incorporated, a corporation of Delaware
Original application May 18, 1949, Ser. No. 93,941, now Patent No. 2,707,433, dated May 3, 1955. Divided and this application May 2, 1955, Ser. No. 505,407
1 Claim. (Cl. 104-132)



In a duplicating machine, a drum having grippers for securing a master sheet to the surface of said drum, a slot in said drum surface and extending in an axial direction, a combined block-out and master sheet holder comprising a flexible sheet adapted to overlie a master sheet engaged by said grippers, means on said flexible sheet to carry a second master sheet, the top marginal portion of said flexible sheet being adapted to fit into

the slot, and means for retaining said marginal portion in said slot and for permitting the shifting of said block-out and master sheet holder in an axial direction, said flexible sheet having said top marginal portion formed of magnetic material and having a body portion which constitutes a block-out portion, and said means for carrying a second master sheet constituting a flap portion disposed adjacent said marginal portion and overlying said block-out portion to provide normally contacting surfaces, said flap portion being shorter than said block-out portion, and means for securing the contacting surfaces of said flap and body portions to each other at certain points which are aligned parallel to said top marginal portion and spaced therefrom so that said points along which said surfaces are secured to each other will overlie the surface of said drum whereby a marginal portion of the second master sheet can be wedged between said surfaces and held in place without crimping the same.

2,999,454
LIQUID DUPLICATOR
Glen E. Wimmer, Chicago, Ill.
(231 Center Ave., Evanston, Ill.)
Filed Dec. 22, 1955, Ser. No. 554,679
11 Claims. (Cl. 101-132.5)

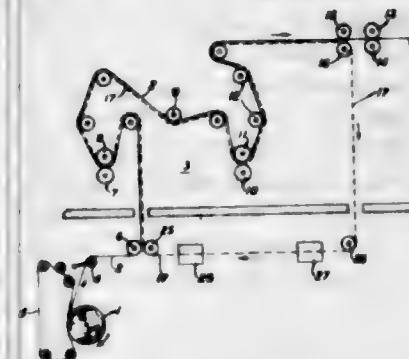


1. In a duplicating machine, a support, a drum rotatably mounted on said support and means for rotating it, means for feeding paper sheets to the drum and moistening the paper sheets fed to said drum, including a trough having liquid therein and a train of rollers on said support, comprising a roller in contact with said liquid, a second roller formed of a yieldable, distortable material in rolling contact with said liquid contacting roller, a driven paper contacting roller formed of a yieldable, distortable material in rolling contact with said second roller, a driving roller in direct engagement with the drum for driving the aforesaid paper contacting roller, and a second paper contacting roller in rolling contact with said first named paper contacting roller.

2,999,455
METHOD OF AND APPARATUS FOR INCREASING THE EFFICIENCY OF PRINTING MACHINES
Harry Zeimer, 47 Rue Guy Moquet, Paris XVII, France
Filed Apr. 7, 1958, Ser. No. 726,915
15 Claims. (Cl. 101-225)

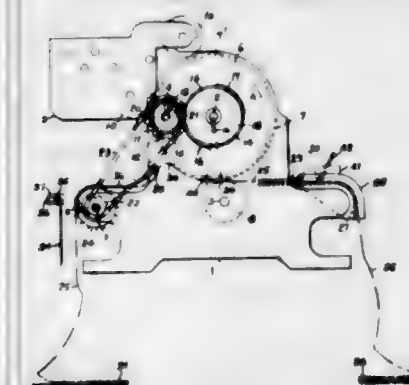
7. Apparatus for reinforcing a paper web while in transport through a printing press and during the printing thereon by the press, comprising a continuous flexible strip of a material of greater resistance to tearing than the paper web, means for applying the strip to a lateral marginal region of the web to leave substantially the entire printing area of the web exposed, the strip being so attached at the input side of the press to

the web that the strip is free of engagement with the web transport means of the press, and for maintaining the application of the strip to the marginal web portion



through the passage thereof through the press, means for separating the strip and the web at the output side of the press, and means for transporting the separated strip from the press output side to the press input side.

2,999,456
PRINTING MACHINE FOR PUNCHED PAPER
Frederick Edward Lanegan, Vine Cottage, 139 Drift Road, Clansfield, Portsmouth, England
Filed Jan. 6, 1959, Ser. No. 785,289
11 Claims. (Cl. 101-228)

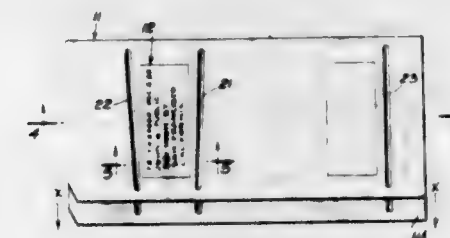


10. A printing machine for printing a longitudinally punched web, comprising, in combination, a printing roller; a printing form on said printing roller; means for continuously rotating said printing roller; pressure-applying means movable to and from an operative printing position cooperating with said printing form along a printing line for printing and transporting the paper web; a pin wheel drive adapted to engage punched holes in the punched web for drawing the web away from said printing roller; drive means for intermittently driving the pin wheel drive and including means operatively connected to said printing roller for synchronizing the intermittent operation of said pin wheel drive with the passage of said printing form through the printing line in such a way that the pin wheel drive is at rest at the commencement of each printing operation but starts to rotate shortly thereafter and continues rotation for a certain time after termination of the printing operation so that at the commencement of each printing operation a slack portion is formed in the web between said printing roller and said pin wheel drive and so that the slack portion is made taut by said pin wheel drive while the web is released by said printing roller and pressure applying means before the next following printing operation.

2,999,457
PAPER ADDRESS PLATE
Daniel J. Hushek, 630 Davis, Melrose Park, Ill.
Filed May 19, 1960, Ser. No. 30,226
2 Claims. (Cl. 101-369)

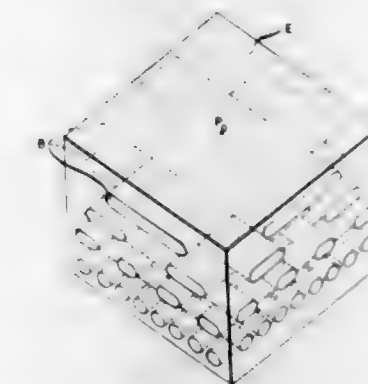
1. A paper printing plate of the kind adapted to be used in a machine handling system wherein a number of

paper printing plates are fed seriatim from a stack to a printing station, said paper printing plate including a printing area having a hectographic image formed on one surface thereof, the location of said printing area corresponding to the location of like printing areas on a number of similar printing plates to be used in the machine handling system, means for maintaining an image on a printing plate spaced from an opposed surface on an immediately adjacent printing plate both to prevent off-setting of the image onto the adjacent printing plate while the printing plate is stacked with a plurality of printing plates and to prevent smudging of the image whenever the printing plate is moved relative to an immediately adjacent printing plate, as occurs during the feeding of the printing plate from a stack of like plates to a printing station, said means comprising embossed rail members formed in the printing plate at opposite sides of the print-



ing area and generally longitudinally aligned with the direction in which the plate is to be moved in the machine handling system, each rail member including both a ridge projecting from the surface of the plate bearing the image at a height greater than that of the image and a groove in the surface of the plate opposite that bearing the image, whereby some nesting of the ridges of one printing plate in the grooves of an adjacent printing plate may occur in a stack of printing plates, said rail members being slightly skewed with respect to one another and the direction in which the printing plate is to be moved in the machine handling system for causing the ridges of one printing plate to ride out of the grooves of an adjacent printing plate immediately upon relative movement between the printing plate to separate the plates from a nested condition and insure against smudging of the images between adjacent printing plates.

2,999,458
SURFACE WAVE GENERATOR
David L. Coursen, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 1, 1958, Ser. No. 745,873
3 Claims. (Cl. 102-22)



1. A surface wave generator wherein the natural detonation front is distorted to arrive simultaneously at a plurality of finish points on a surface which consists of a mass of a cap-sensitive high explosive within which mass are disposed at least six inert rod-shaped barriers each of

which barriers extends from a surface of said mass to another surface of said mass, said barriers defining a continuous matrix of said explosive and delimiting a series of paths from an initiation point to each of said finish points, each of said paths being of sufficient cross-sectional area to support the detonation, the shortest path from said initiation point to any one finish point being substantially equal to the shortest path from said initiation point to any other finish point, said barriers being stacked in at least four parallel layers, the barriers in each of said layers being parallel, coplanar, and separated by a gap of at least 0.3 millimeter, the barriers in each of said layers crossing perpendicularly the barriers in the immediately adjacent layers and lying directly over the gaps between barriers in the next-to-nearest lower layer, each of said barriers having a cross-sectional area of at least 3 square millimeters and sufficient to prevent the propagation of the detonation through the barrier, the minimum dimension of any barrier being at least 1 millimeter, the length of the barrier in any given layer except the last layer being equal to at least

$$\left(\frac{2n+1-(-1)^n}{4}\right)W_{n-1}$$

wherein n is the layer number and W_{n-1} is the width of each individual barrier in the preceding layer, the length of the barrier in the last layer being equal to at least

$$\left(\frac{2N-1+(-1)^N}{2}\right)W_{N-1}$$

wherein N is the total number of barrier layers and W_{N-1} is the width of each individual barrier in the next-to-last layer, the number of barriers in any given layer except the last layer being equal to at least

$$\frac{2n+1-(-1)^n}{4}$$

wherein n is the layer number, the number of barriers in the last layer being equal to at most

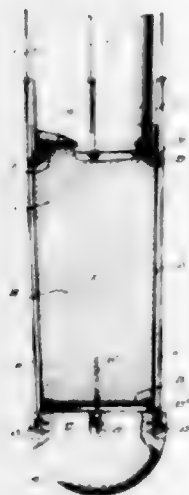
$$\frac{2N-3+(-1)^N}{2}$$

wherein N is the total number of barrier layers.

2,999,459 APPARATUS FOR HANDLING EXPLOSIVE CARTRIDGES

Lester P. Barlow, Stamford, Conn., assignor to Atlas Powder Company, Wilmington, Del., a corporation of Delaware

Filed Aug. 25, 1954, Ser. No. 452,125
6 Claims. (Cl. 102-24)



1. A blasting unit comprising a plurality of cartridges of carbonaceous material which are to be charged with liquid-oxygen, said cartridges being assembled into end-

to-end vertical relationship with similar cartridges, a rigid base means on which the lowermost of said cartridges rests, cable holding means over the uppermost of said cartridges, cable means extending longitudinally of said cartridges, cable means extending longitudinally of said cartridges for longitudinal stability and attached to said base means and said holding means, each of said cartridges comprising a generally frusto-conical sleeve member, means adjacent the bottom of said sleeve member retaining an apertured plate member, a foraminous diaphragm covering said apertured plate member to prevent the passage of carbon therethrough, a second foraminous diaphragm adjacent the top of said cartridge, means to retain said diaphragm spaced inwardly from the top of said cartridge to retain the carbon in said cartridge, said top diaphragm member being flexible and loosely retained so that it will bow upwardly as the oxygen evaporates to cause contact with an adjacent cartridge, and cable engaging means positioned intermediate adjacent cartridges to secure said cartridges against lateral displacement.

2,999,460

ELECTRIC BLASTING CAP

Henry Joseph Stinger, Mendenhall, Pa., and Tadeusz Michael Urban, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 2, 1959, Ser. No. 796,350
4 Claims. (Cl. 102-28)



1. An electric blasting cap comprising a shell containing a detonation composition and an ignition composition in initiating proximity thereto, a plug member formed in two one-piece mating sections above said ignition composition, a single, thin non-conducting film supported between the mating sections of the plug and projecting out and down therefrom, a notch in the lower end of said film which protrudes out from the bottom of the plug, a pair of separate and distinct conducting ribbons affixed along the surface of said film, each ribbon terminating at one end along one side of said notch, a bridgewire in initiating proximity to the ignition composition stretching across the mouth of the notch and secured at either end in electrical contact with one of the two separate conducting ribbons, each of said ribbons also being in electrical contact with one of a pair of leg wires entering the cap at the end remote from the detonating composition and mounted between the mating sections of the plug member.

2,999,461

IMPACT FUZE

Robert Apotheloz, Wallisellen, Zurich, and Max Huber, Zurich, Switzerland, assignors to Machine Tool Works Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland

Filed Mar. 23, 1959, Ser. No. 801,226
Claims priority, application Switzerland Mar. 28, 1958
3 Claims. (Cl. 102-75)

1. A delay impact fuze for projectiles comprising a fuze casing having a longitudinally extending bore there-

in, a slide transversely slidable in said casing, means for moving said slide from a safety position to a firing position, a forward striking pin located in said bore, a detonator which is aligned with said pin when said slide is in firing position, a first inertia sleeve slidably mounted in said bore, a second inertia sleeve also slidably mounted in said bore behind said first sleeve and normally abutting said first sleeve, a rod fixed to said casing located within said sleeves having a circumferential groove at the upper part thereof, an extension upon said pin having a bore accommodating the top portion of said rod, said



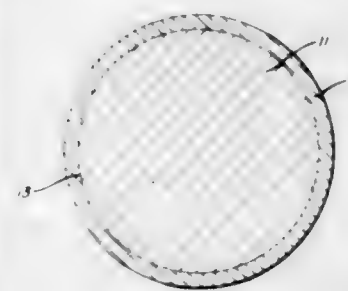
extension having recesses extending transversely thereof, balls in said recesses cooperating with said circumferential groove in said rod and with said first and said second inertia sleeve normally locking said pin, a striker spring cooperating with said second inertia sleeve and said extension upon said pin, said second inertia sleeve compressing said spring upon impact against said pin and moving said first inertia sleeve into abutment with said slide whereby said striker spring operative upon deceleration separates said sleeves thereby releasing said balls from said rod and moving said balls along said bore of said extension and said pin to detonating position.

2,999,462

RESTRICTED AMMONIUM NITRATE PROPELLANT

Robert A. Mosher and William G. Stanley, Seymour, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 26, 1957, Ser. No. 705,460
6 Claims. (Cl. 102-98)



1. A solid propellant comprising a shaped body portion, formed of ammonium nitrate as the major component and an oxidizable binder therefor, and a combustion restrictor coat positioned immediately contiguous to that part of the surface of said body where direct burning is to be prevented, which restrictor consists essentially of the resin reaction product of (a) an epoxy resin having an epoxide equivalent weight between about 165 and 215 derived from epichlorohydrin and a bisphenol with (b) a liquid polysulfide polymer having an average molecular weight on the order of 1000 derived from alkali metal polysulfide, dichloroethyl formal and a minor amount of trichloro-lower-alkane, and with (c) a polyalkylene polyamine, the weight ratio of said epoxy to said polysulfide having been between about 70:30 and 35:65 and the amount of said polyamine having been between about 5 and 15 parts by weight per 100 parts of epoxy plus

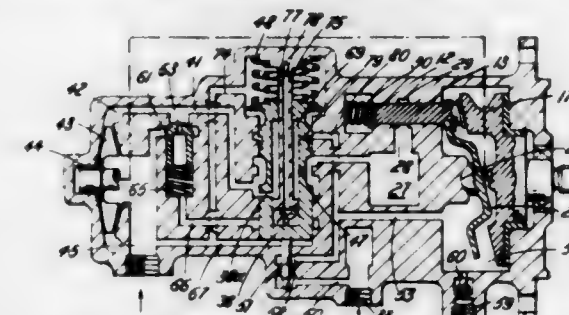
polysulfide reactants and wherein said restrictor coat is obtained by contacting said surface with a mixture of said reactants.

2,999,463

VARIABLE-DELIVERY MULTI-STAGE HYDRAULIC PUMPS

Alan Cameron-Johnson, Gloucester, England, assignor to Rotol Limited, Gloucester, England, a British company

Filed Sept. 4, 1958, Ser. No. 759,072
Claims priority, application Great Britain Sept. 11, 1957
11 Claims. (Cl. 103-5)



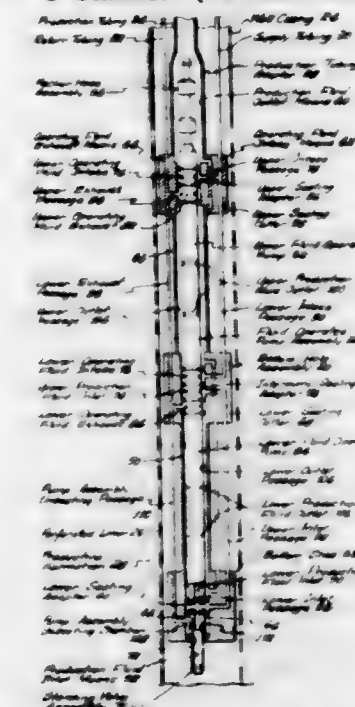
1. A variable delivery multi-stage hydraulic pump unit comprising in combination, a positive displacement pump having a fluid inlet and a fluid outlet, a non-positive displacement pump for priming said positive displacement pump and also having a fluid inlet and a fluid outlet, conduit means connecting the fluid outlet of the priming pump with the fluid inlet of the positive displacement pump, valve means in the conduit means, a piston means in operative connection with the valve means which piston means is connected to be loaded by the delivery pressure of the unit and is arranged to cause the valve means to throttle the conduit on increase of the delivery pressure of the unit and biasing means subjected to loading in dependence upon the difference in pressure at the inlet and outlet of the priming pump, which biasing means is in operative connection with the valve means to bias the valve means to throttle the conduit.

2,999,464

TANDEM HYDRAULIC PUMP SYSTEM

Clarence J. Coberly, San Marino, Calif., assignor to Kobe, Inc., Huntington Park, Calif., a corporation of California

Filed Aug. 12, 1955, Ser. No. 527,971
5 Claims. (Cl. 103-49)

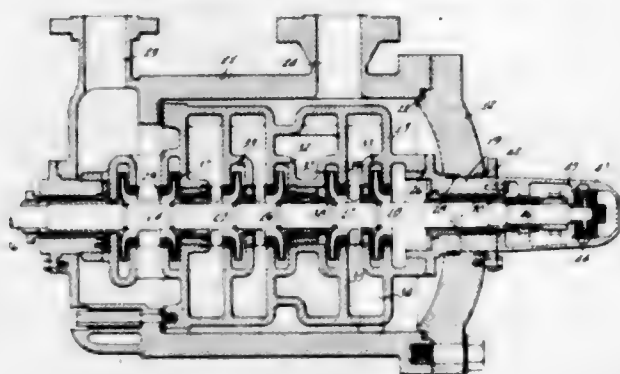


1. In a bottom-hole assembly for a fluid-operated pump assembly, the combination of: an upper sealing collar

engageable with the pump assembly adjacent the upper end thereof; an upper pump housing tube below and connected to said upper sealing collar and adapted to receive an upper portion of the pump assembly; a lower sealing collar below and connected to said upper pump housing tube and engageable with the pump assembly intermediate the ends thereof; a lower pump housing tube below and connected to said lower sealing collar and adapted to receive a lower portion of the pump assembly; a bottom shoe below and connected to said lower pump housing tube and engageable with the pump assembly adjacent the lower end thereof; operating-fluid intake means on said upper sealing collar and connectible to an operating-fluid supply tubing; upper and lower intake passages respectively connecting said operating-fluid intake means to the interiors of said upper and lower sealing collars; production-fluid inlet means on said bottom shoe and adapted to communicate with a well and communicating with the interior of said bottom shoe; an upper inlet passage connecting said production-fluid inlet means to the interior of said lower sealing collar; production-fluid outlet means on said upper sealing collar and connectible to a production tubing; means connecting said upper pump housing tube to said production-fluid outlet means; and means connecting said lower pump housing tube to said production-fluid outlet means.

2,999,465

DOUBLE CASING MULTIPLE STAGE PUMP
Charles L. Babb, Brookfield, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 23, 1958, Ser. No. 750,388
3 Claims. (Cl. 103-107)



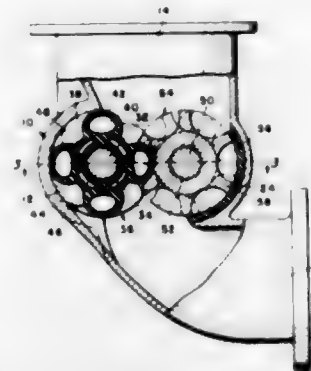
1. In a centrifugal pump: an outer casing having an open end; an inner casing having an open end mounted in spaced relationship within said outer casing; a shaft journaled in said inner casing extending axially therefrom to the exterior of said outer casing; a cover detachably mounted on said outer casing defining an aperture radially spaced about said shaft; a sleeve comprising a stuffing box radially spaced about said shaft and extending through said cover aperture in close relation thereto, one end of said stuffing box rigidly connected to the open end of said inner casing; a sealing means in sealing engagement with said stuffing box and said shaft; and an external thrust bearing casing having an open end rigidly connected to the second end of said stuffing box and radially spaced about said shaft.

2,999,466
PUMP

Hanns Hornschuch, Easton, and Horst E. Greve, Raubsville, Pa., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 23, 1959, Ser. No. 841,813
5 Claims. (Cl. 103-128)

1. A non-clog pump for handling liquids and semi-liquids, comprising a case having a flexible wall member capable of being deformed and a non-flexible wall member, a rotor member having helical lobes and a sec-

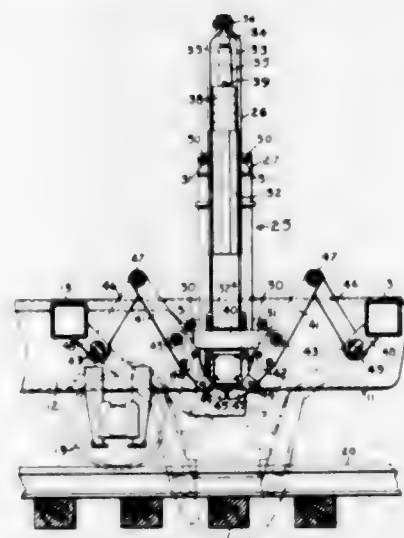
ond rotor member having helical pockets to receive such lobes rotatably mounted in said casing and forming working chambers defined in part by said case, one of said rotors being flexible and capable of being deformed and the other rotor being non-flexible, said rotor members rotatable in opposite directions to one another and cooperating with said wall members to form entrapments for delivering liquids and semi-liquids from one chamber to the other, said flexible rotor member in part in face to face relationship with said non-flexible wall member, said non-flexible rotor member in part in face



to face relationship with said flexible wall member, such that the entrapments are formed between cooperating flexible and non-flexible members such that said entrapment may be enlarged by deformation of the flexible member, and said flexible rotor member capable of deforming when in mesh with said non-flexible rotor, said flexible rotor having a series of spaced helical passages therein closed off from the exterior of the flexible rotor forming peripheral walls of said lobes and the recesses formed therebetween, said flexible walls capable of being deformed into said such passages.

2,999,467

RAILWAY POWER BALLASTER
Willis H. Knippel, Palos Park, Ill., assignor to Pullman Incorporated, a corporation of Delaware
Filed Sept. 27, 1957, Ser. No. 686,768
4 Claims. (Cl. 104-12)

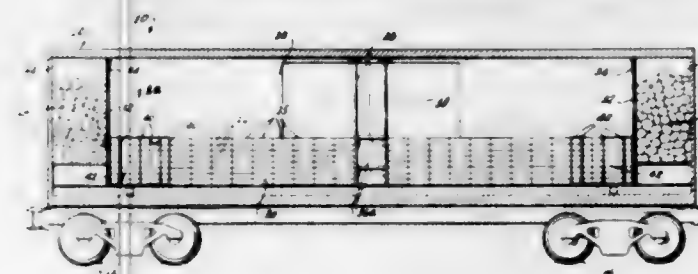


1. In a power ballaster for tamping a railway road bed the combination comprising a machine having a frame including longitudinally spaced transverse members and supporting wheels, a vertically reciprocable drop-head having a front side and a rear side disposed transversely of said machine and operatively mounted on said frame between said transverse members, a tamping bar at each of said front and rear sides of said drop-head and each being disposed vertically and pivotally mounted intermediate its ends to said drop-head, said tamping bars

being swingable in longitudinal direction relatively to said machine, links adjacent both said front and rear sides of said drop-head respectively pivotally connecting the upper ends of said tamping bars to the transverse members of said frame, and means on said frame for raising said drop-head and tamping bars relatively to said frame and releasing them to fall free whereby to impact the lower ends of said tamping bars into the road bed with the links providing guiding means for operatively swinging said tamping bars in a controlled path of movement in response to rising and falling movement of said drop-head.

2,999,468

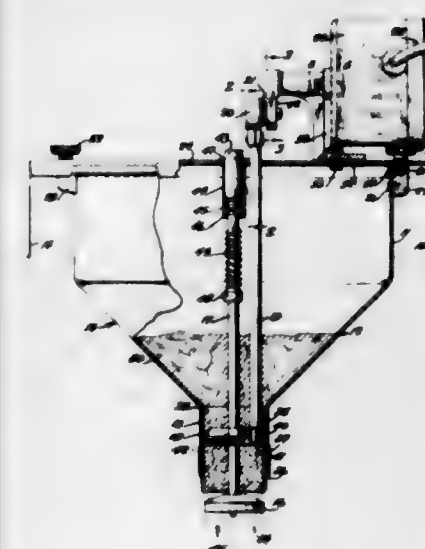
METHOD AND MEANS FOR LOADING PRODUCE CONTAINERS AND THE LIKE FOR SHIPMENT
Walton B. Crane, South Pasadena, Calif., assignor to Allied Plastics Company, Los Angeles, Calif., a corporation of California
Filed Aug. 14, 1959, Ser. No. 833,760
2 Claims. (Cl. 105-369)



2. A loaded freight van comprising a van body including a relatively flat floor, a plurality of boxes supported on said floor in a series of vertical stacks arranged side by side in rows which extend lengthwise and crosswise of the van, means binding together all of the stacks in a plurality of said crosswise rows at each end of the van only to form at the ends of the van relatively massive, freely slidable bulkhead means, there being a plurality of unbound stacks between said bulkhead means, and said bulkhead means being slidable lengthwise of the van to compact said unbound stacks in response to relatively abrupt acceleration and deceleration forces on the van.

2,999,469

HAND SUPPORTED DOUGHNUT MACHINE
Morrison Cottingham, Oklahoma City, Okla. (814 S. University Ave., Little Rock, Ark.), and Galea E. Forryth, 1914 E. 5th, Little Rock, Ark.
Filed Sept. 25, 1958, Ser. No. 763,217
4 Claims. (Cl. 107-14)

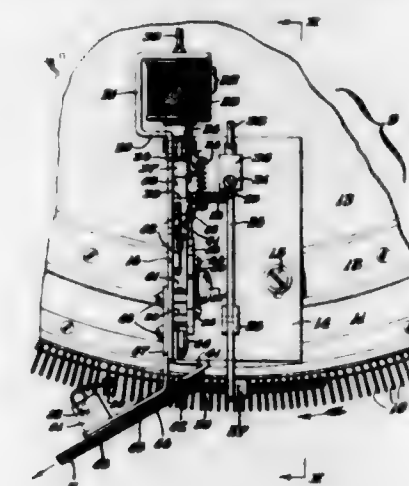


3. In a hand supported machine for forming doughnuts, the combination which comprises a hopper having

a cylindrical upper section, a frusto-conical shaped intermediate section and a cylindrical neck depending from the lower end of the frusto-conical shaped section, a bar, channel-shaped in cross section extended across the upper end of the hopper and clamped to opposite edges thereof, a lower plunger positioned in the lower end of the neck, a stem extended from the lower plunger to a button slidably mounted in the cross bar on the upper end of the hopper, a spring on the stem mounted to urge the lower plunger upwardly to close the lower end of the neck, an upper plunger slidably mounted on said stem and disposed at an initial position in the intermediate hopper section, a vertically disposed rod secured to and extended upwardly from the upper plunger, a horizontally disposed loop-shaped cam on the upper end of the rod extended from the upper plunger, a substantially triangular shaped bracket having a flange on the lower end thereof that is mounted on the cross bar, said bracket having reversely positioned slots in the opposite ends thereof, a shaft rotatably mounted in the upper end of said bracket intermediate of the slots therein, an eccentric arm mounted on an end of the shaft extended from the end of the bracket toward the center of the hopper, a roller carried by the eccentric arm and positioned in the cam loop on the upper end of the rod, a motor having parallel spaced studs thereon that are mounted in the slots in the bracket that is mounted on the cross bar, and means operatively connecting the motor to the shaft rotatably mounted in the upper end of the bracket whereby reciprocation of the upper plunger is provided through the coaction of the roller on the eccentric arm with the cam loop, so that upon downward movement of said upper plunger the dough therebeneath will be trapped in said neck as said upper plunger descends and enters same, and the dough so trapped between said upper plunger and said lower plunger will be compressed and force the lower plunger downwardly to permit the escape of dough at the lower end of the neck and upon upward movement of said upper plunger said spring will force said lower plunger upwardly to its initial position in engagement with the lower end of the neck thereby severing the dough at the lower end of the neck to form a dough ring.

2,999,470

AUTOMATIC SELECTIVE DOFFING DEVICE FOR KNITWEAR LOOPING MACHINES
Howard L. Beamon, Winston-Salem, N.C., assignor to Hanes Hosiery Mills Company, Winston-Salem, N.C., a corporation of North Carolina
Filed Aug. 24, 1959, Ser. No. 835,509
18 Claims. (Cl. 112-26)



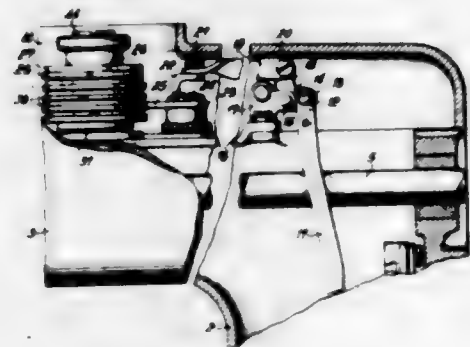
1. In combination, a doffing attachment and a knitwear looping machine having a revolvable dial the periphery of which is equipped with a plurality of points, said attachment including a retractable stripper element adjacent the points for removing looped articles from the points as

the dial revolves, cam means for retracting the stripper element, and means automatically operative to actuate the cam means to retract the stripper element at predetermined intervals to permit selected looped articles to remain on the points for subsequent removal therefrom.

2,999,471

ADJUSTABLE GUIDING CAM MECHANISM

Christian Joseph Marinas Benlak and Herbert Wenz, Kaiserslautern, Pfalz, Germany, assignors to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany
Filed Sept. 30, 1957, Ser. No. 687,139
Claims priority, application Germany Oct. 2, 1956
5 Claims. (Cl. 112-158)



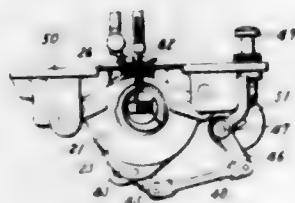
1. A guiding cam mechanism for zig-zag sewing machines of the type having a laterally deflectable needle bar and a material feed dog adapted to be guided by said cam mechanism, said mechanism including needle bar cam follower means operatively connected to and adapted to transmit lateral deflection impulses to said needle bar and feed dog cam follower means including a single follower member operatively connected to and movable about a pivot in a single plane and adapted to transmit stitch length control impulses to said feed dog, said cam mechanism comprising a cam shaft, a first group of rotatable cam disks mounted on said cam shaft for engagement by said feed dog cam follower means and a second group of rotatable cam disks for engagement by said needle bar cam follower means mounted on said shaft coaxially with said first group, said first group being mounted around said shaft and being axially and angularly adjustable relative to said second group and relative to said feed dog cam follower means, and setting means including a manipulating member mounted coaxially with said first group and operative to move said first group, thereby providing for optional phase displacement between said first group and said second group of disks and for axially moving said first group to associate different cams of said first group with said follower member.

2,999,472

CHAIN STITCH APPARATUS IN CONVENTIONAL LOCK STITCH SEWING MACHINES

Hideo Yamano, Minami-Hinokicho, Sakai City, Japan, assignor to Kabushiki Kaisha Toboku Kosakusho, Sakai City, Japan

Filed Oct. 5, 1959, Ser. No. 844,449
Claims priority, application Japan Oct. 6, 1958
1 Claim. (Cl. 112-168)



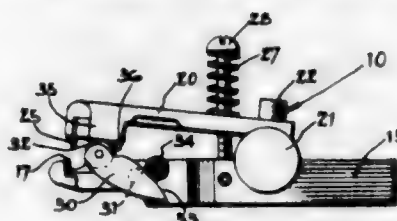
In a lock stitch sewing machine having a shuttle and a drive shaft on which said shuttle is mounted, the com-

bination of a raceway around said shuttle, an oscillatory member slidably mounted in said raceway, said oscillatory member having an elliptical needle aperture therein and a narrow thread opening extending from said needle aperture through one end of the oscillatory member, a projection on each side of said oscillatory member opposite said needle aperture for holding a thread, a pin adjacent the other end of said oscillatory member, a pivotally mounted lever having one end engaging said pin, a push piece on said shaft engageable with the other end of said lever for moving said lever so as to move said oscillatory member toward the said other end of said oscillatory member, spring means engaging the other end of said oscillatory member urging said oscillatory member in a direction opposite to the direction in which it is urged by said lever, a blocking member pivotally mounted for movement into and out of engagement with said lever for blocking the movement of said lever, spring loaded link means connected to said blocking member urging it into the blocking position, and a lever member connected to said link means for moving said link means against the spring loading thereof to move the blocking member out of the blocking position.

2,999,473

AUTOMATIC THREAD CUTTING ATTACHMENT FOR SEWING MACHINES

John J. Wanner, 217 S. Washington St., Winchester, Va.
Filed June 18, 1959, Ser. No. 821,272
2 Claims. (Cl. 112-252)



1. In a sewing machine comprising in combination, needle carrier means adapted for limited oscillatory movement, work feeding means, means for driving the needle carrier means and said feeding means, and automatic thread cutting means including a pair of members pivotally connected together, and each having a free end, complementary cutting blades detachably secured to the free end of each of said members, means biasing said cutting blades together into cutting relation, a floating member pivotally supported by one of said pair of members with a portion in engagement with the other member of said pair, and a fourth member connected to the needle carrier means and in engagement with another portion of said floating member at a location spaced from the point of pivotal support thereof for causing said cutting blades to move out of cutting relation in synchronism with feeding movements of the work feeding means, and means carried by one of said members for preventing cutting action of said blades when a work piece is therebetween.

2,999,474

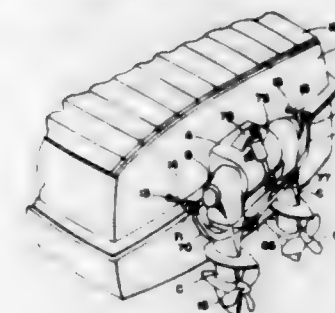
CENTRIFUGAL GATE VALVE FOR SEWING MACHINES

Walter J. Mendles, Trumbull, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Feb. 14, 1958, Ser. No. 715,280
3 Claims. (Cl. 112-256)

1. In a sewing machine, a shaft rotatably journaled therein, said shaft formed with a lubricant conducting bore, bearing means associated with said shaft, a lubricant conducting port leading from said shaft bore to said bearing means; means for directing lubricant into said shaft bore, and a sewing speed responsive centrifugally oper-

able valve means associated with said shaft bore for opening said shaft bore between said lubricant directing means stationary housing and said end housings, respectively, a steering lever pivotally mounted inside of said transom,



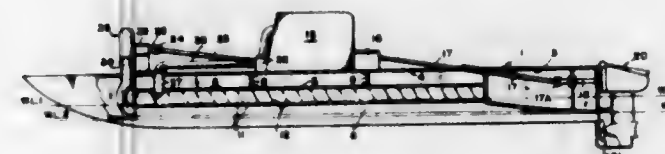
and said lubricant conducting port upon attainment of a predetermined speed of rotation of said shaft.

links connecting said steering lever with said steering connections on said steering arms, and steering means connected with said steering lever.

2,999,475

BOAT HULL CONSTRUCTION

Walter Conrad Kautz, Jr., 3635 SE. 69th Ave., Portland 6, Oreg.
Filed Apr. 8, 1960, Ser. No. 21,050
1 Claim. (Cl. 114-67)



A watercraft comprising a hull, an engine carried by the hull, propeller means driven by said engine, said hull having a buoyant bow section and a spaced apart buoyant stern section, side members enclosing and interconnecting said bow and stern sections to provide a downwardly opening air chamber between said sections and forwardly of the rearward end of said bow section and rearwardly of the forward end of said stern section, a main top deck and a downwardly spaced adjacent deck interconnecting said sections and said side members, a honey-comb structure comprising downwardly opening rearwardly inclined cells depending from said adjacent deck extending full length and width thereof and terminating on a plane above the bottom edges of said side members and thereby dividing said chamber into an upper section and a lower section, a source of air pressure carried by the hull and driven by said engine, means for directing air pressure from said source to the interior of said lower section at the forward end thereof whereby when the hull is in forward motion it will ride on air stratum within said lower section and whereby when at rest upon the water the air trapped within said downwardly opening cells will provide normal flotation and fore and aft and transverse stability for the watercraft.

2,999,476

OUTBOARD MARINE DRIVE FOR INBOARD ENGINE

George Verne Johnson, 5510 SW. Buddington, Portland, Oreg.
Filed Sept. 26, 1958, Ser. No. 763,609
1 Claim. (Cl. 115-35)

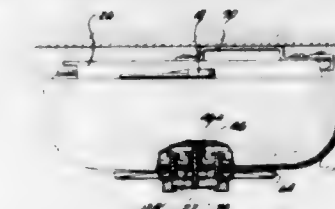
An outboard drive on the transom of a boat comprising a stationary housing mounted on the outside of said transom, a pair of end housings mounted on opposite sides of said stationary housing for individual pivotal movement about a transverse horizontal axis, a pair of vertical propeller drive shaft housings mounted for rotation about their respective axes on said end housings, steering arms on said vertical housings, steering connections on said steering arms located on said transverse axis, a pair of hydraulic lift units connected between said

2,999,477

FIRE ALARM

Verneur E. Pratt, 2000 Skyline Drive, Fullerton, Calif., and Edmund C. Pratt, 369 1/2 West Road, La Habra, Calif.

Filed June 9, 1959, Ser. No. 819,163
7 Claims. (Cl. 116-106)



1. An alarm comprising a bell having a sounding pin formed integral therewith, a sealed sub-assembly substantially housed within said bell comprising a cup-shaped member and a cover member enclosing the latter, a storage drum rotatably mounted in said sub-assembly for storing a spring, a constant tension spring normally stored on said storage drum and adapted to return to same when unwound therefrom, a drive drum rotatably mounted in said sub-assembly and having one end of the spring connected thereto for winding the spring onto same from said storage drum, a hammer having movable sounding heads at opposite ends thereof and rotatably mounted in said sub-assembly adjacent the sounding pin to allow a sounding pin to extend outwardly therefrom for striking the pin, step-up transmission gearing mounted in said sub-assembly in a driven relationship with said drive drum to be responsive to the rotation of same provided by the unwinding of the spring from said drive drum and having a driving connection with the hammer for continuously driving same at a constant rate throughout substantially the whole length of the spring, means mounted externally of said sub-assembly and connected to the drive drum for winding the spring thereon, and control means extending outwardly of said sub-assembly and said bell engageable and disengageable with the gearing to selectively control the operation of the gearing, and latch means mounted on the bell operable to lock and unlock the control means into and out of engagement with the gearing to selectively control the sounding of the bell.

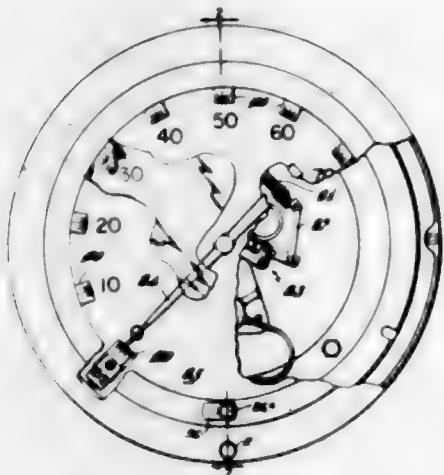
2,999,478

TEST INSTRUMENT OF THE DIAL TYPE

Robert C. Du Bois, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Feb. 20, 1959, Ser. No. 794,636
17 Claims. (Cl. 116-129)

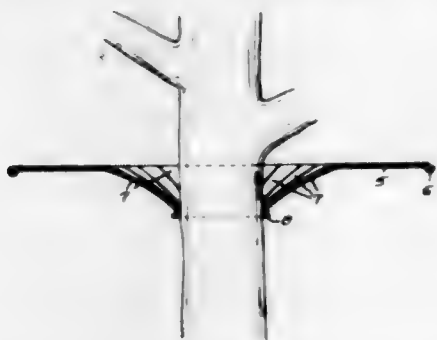
1. An instrument of that kind which includes a dial, a pointer and means for moving the pointer relatively to

the dial, a graduation carrier and means whereby said carrier may be releasably fixed to the dial whereby a graduation mark on the carrier may be located at a selected part of the dial, characterized in that said carrier comprises a body portion having means for securing it in adjusted position circumferentially of the dial and a tab having thereon an elongate graduation mark which



is radial with respect to the axis about which the pointer swings and which represents a major dial division, the tab being adjustable transversely relatively to the body portion of the carrier, means for moving the tab by minute increments relatively to the body portion of the carrier and means whereby the tab is retained in adjusted position.

2,999,479
ANIMAL RESTRAINING TREE GUARD
 Gault Carder, Box 41, Gassaway, W. Va.
 Filed Feb. 17, 1960, Ser. No. 9,358
 1 Claim. (Cl. 119—1)

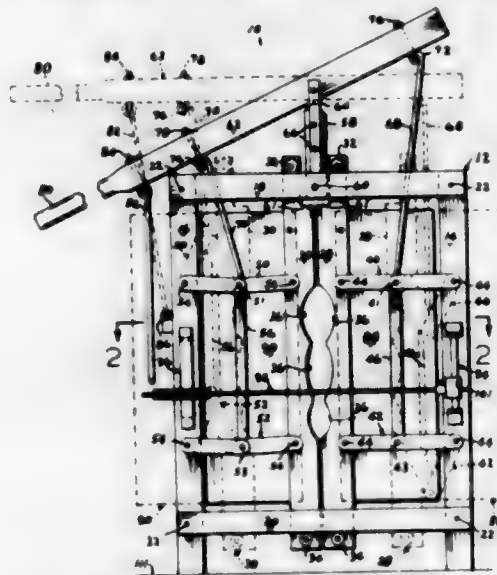


An animal restraining tree guard comprising a disc-like body having a substantially circulen periphery, said body having radial slits extending inwardly from points spaced inwardly from said periphery, said slits forming fingers which terminate at a central portion of said body, the terminal ends of said fingers being curved out of plane of said body, one of said slits extending through the periphery of said body, and releasable interlocking means on said body on opposite sides of said slit which extends through the periphery of said body, whereby said guard may be opened to pass about the trunk of a tree and then by bending the fingers as they engage the tree trunk enable the guard to be locked about the said tree trunk.

2,999,480
LIVESTOCK CHUTE GATE
 Colonel Sparkman, Box 377, Elk City, Okla.
 Filed July 17, 1959, Ser. No. 827,741
 4 Claims. (Cl. 119—98)

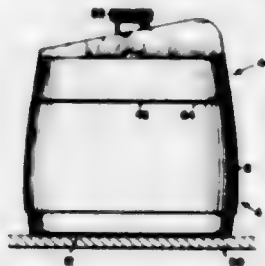
1. A livestock chute gate, comprising: a frame, said frame including a pair of vertical side members joined at their upper ends in fixed spaced-apart relation by a

pair of horizontal top members connected to the opposing sides of said side members and a pair of horizontal bottom members connected to the opposing sides of said side members adjacent the lower ends of the latter; a pair of upright co-acting stanchions freely received between said top and said bottom pairs of members for movement toward and away from each other, said stanchions extending above and below said top and said bottom pairs of members, respectively, the adjacent edge portions of said stanchions having a series of arcuate opposing graduated recesses adapted for engaging opposing sides of different aged animal's necks; rollers journaled by the respective upper and lower ends of said stanchions above and below said top and said bottom pairs of members, respectively; upper and lower co-acting pairs of pivotally connected links extending between



and pivotally connected to one side of each said side member and the respective adjacent said stanchion; a vertical bar interconnecting the respective said upper and lower pairs of links; a lever pivotally supported intermediate its ends by the medial portion of said pair of top members for vertical pivoting movement, one end portion of said lever being adapted to contact an adjacent upper and lateral surface of said frame to form a stanchion closed position overcenter locking stop for at least one pair of said links; and a pair of rod members extending between and pivotally connected at their opposing ends, respectively, with the respective central pivotal connection of said upper pairs of links and said lever and simultaneously pivoting the respective said upper and lower pairs of links in opposing directions from a stanchion open position to a stanchion closed and locked position when said lever is pivoted downwardly.

2,999,481
PENCIL POINTER
 Walter Butler Lincoln, Riverside, N.J., assignor to C. Howard Hunt Pen Co., Camden, N.J., a corporation of New Jersey
 Filed Oct. 28, 1959, Ser. No. 849,268
 11 Claims. (Cl. 120—91)



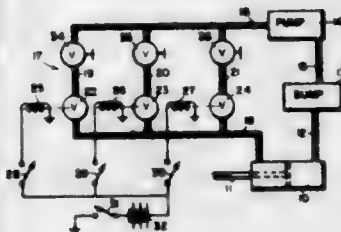
1. A pencil pointer comprising a base, a hub supported on said base by a ball joint and having an outer abrasive

surface, stop means to limit the movement of said hub on said joint, a cap mounted for rotation above said support, a pencil guide in said cap having an axis intersecting said abrasive surface, and resilient means interposed between said cap and said hub to resist the downward tilting of the hub away from the pencil guide.

2,999,482

DIGITAL FLUID CONTROL SYSTEM

John L. Bower, Downey, Calif., assignor to North American Aviation, Inc.
Filed Apr. 15, 1957, Ser. No. 652,890
10 Claims. (Cl. 121—38)

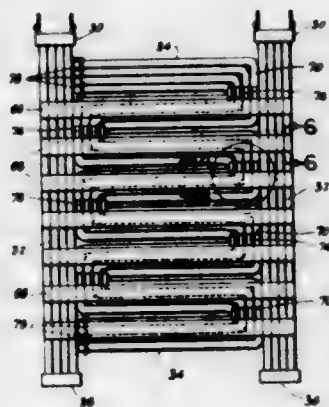


1. In a fluid control system, an input for receiving fluid under pressure, an output for providing output fluid flow, a plurality of conduits coupled in parallel between said input and output, means individual to at least two of said conduits for controlling fluid flow through the several ones thereof in proportion to successive digital orders, and means for selectively permitting flow through the several ones of said conduits.

2,999,483

FURNACE WALL AND SUPPORT CONSTRUCTION

Wilbur H. Armacost, Scarsdale, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 8, 1957, Ser. No. 695,324
8 Claims. (Cl. 122—510)



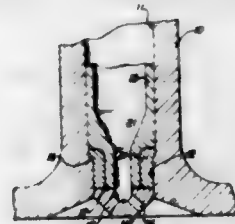
1. In combination, a once-through boiler including an upright furnace of polygonal transverse section, a plurality of tubes lining the inner surface of each corner of the furnace and extending vertically throughout the length of the furnace, said tubes forming part of the circuit of the boiler and being supported from above, a number of tubes bent in serpentine fashion and disposed in the plane of each of the furnace walls substantially filling the space between said corner tubes and forming the inner surface of the wall between said corner tubes with these serpentine tubes also forming a part of the circuit of the boiler, horizontal structural support members extending across each of the walls at vertically spaced locations throughout the length of the wall and in juxtaposition to the portions of the tubes remote from the furnace interior, said support members being carried by the vertically extending corner tubes at each end of each wall and with said

serpentine tubes intermediate said corner tubes being carried by said support members while permitting said serpentine tubes to expand and contract as required by variations in temperature of the tubes.

2,999,484

PRECOMBUSTION CHAMBER

Johannes Luszkat, Kohn-Ehrenfeld, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,633
7 Claims. (Cl. 123—32)

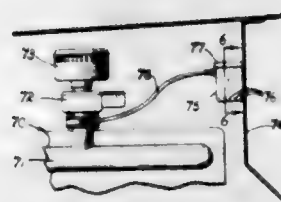


1. A precombustion chamber construction for a cylinder head comprising a hollow precombustion chamber body adapted to be mounted within the cylinder head, a precombustion chamber head secured to the precombustion chamber body and also adapted to be mounted within the cylinder head, a plurality of ducts extending through said precombustion chamber head and communicating with the interior of the precombustion chamber body, and a high thermal conductivity jacket disposed between a portion of the precombustion chamber head and the cylinder head.

2,999,485

PROCESS FOR PRECONDITIONING AIR FOR USE IN THE OXIDATION OF HYDROCARBON FUELS

James H. Lundy, 2409 E. Belmont Ave., Herman G. Rempel, 4717 E. Nevada, and Ralph Slavich, 4363 N. Van Ness, all of Fresno, Calif.
Filed Mar. 28, 1960, Ser. No. 17,938
16 Claims. (Cl. 123—119)



1. In the operation of an internal combustion engine having a combustion chamber, the steps of introducing a powdered cupric salt into the combustion chamber with hydrocarbon fuel and air of combustion, and oxidizing the fuel and the cupric salt in the combustion chamber whereby the latter forms copper oxide which acts as a catalyst in the oxidation of the fuel.

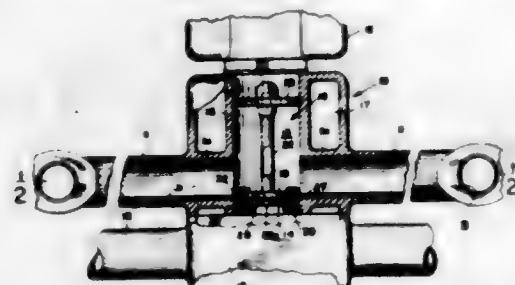
2,999,486

MEANS FOR INCREASING FUEL COMBUSTION EFFICIENCY IN INTERNAL COMBUSTION ENGINES

Vincent Guarnaschelli, Alton Ave., Greenlawn, N.Y.
Filed May 25, 1960, Ser. No. 31,601
6 Claims. (Cl. 123—122)

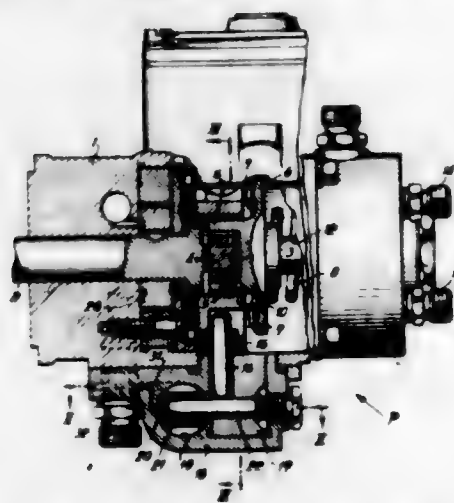
1. In an internal combustion engine which includes an intake manifold housing enclosing an upright cylindrical chamber open at the top upon which is mounted a carburetor to discharge fuel mixture into the chamber and below which is mounted an exhaust manifold housing to heat the chamber, said chamber having a floor, provided with an axial passage therethrough, the

improvement consisting of a high heat conducting upright metallic tube mounted in said chamber and registering in said passage, a perforated disc mounted on the tube between the upper and lower ends of the tube,



said disc having a depending circumferential flange, the upper end of the tube having means thereon obstructing passage of exhaust gases from the exhaust manifold housing into the chamber.

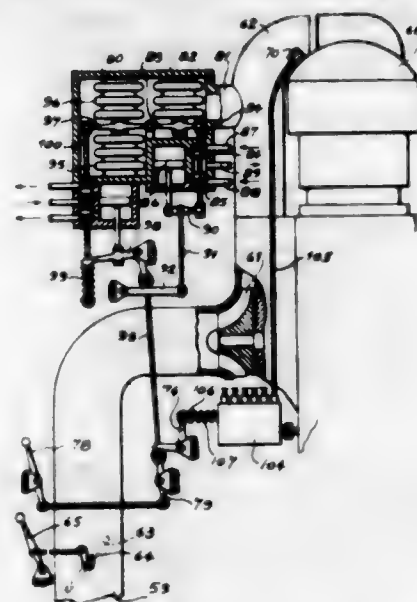
2,999,487
FUEL INJECTION PUMP FOR MULTICYLINDER INTERNAL COMBUSTION ENGINES
Reinhardt Stier, Stadelingen, Kreis Boblingen, Württemberg, and Eberhard Hofmann, Stuttgart-Zuffenhausen, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Nov. 17, 1959, Ser. No. 853,506
Claims priority, application Germany Nov. 21, 1958
4 Claims. (Cl. 123-139)



1. In a fuel injecting arrangement for multicylinder internal combustion engines of the type comprising fuel supply pump means having an output side, rotary drive shaft means for operating said pump means in such a way that the pressure at said output side increases in response to increasing rotary speed of said shaft means, piston means for injecting measured quantities of fuel into the cylinders of the engine, and a cam drive for said piston means including a component angularly adjustable about a fixed axis for thereby regulating the timing of injection strokes performed by said piston means, the improvement which consists in the provision of means for angularly adjusting said component in response to variations in the rotary speed of said shaft means, said adjusting means comprising, in combination, a rotary shaft member coupled with said component for angularly displacing the same; cylinder means connected with the output side of said pump means; plunger means received in said cylinder means for movement in a first direction in response to increasing pressure at said output side; resilient means for permanently biasing said plunger means in a second direction counter to said first direction; and means for articulately connecting said plunger means with said shaft member so that the shaft member is rotated in response to movements of said plunger means in either of said directions.

2,999,488
FUEL CONTROL WITH FEEDBACK AND FORCE MULTIPLICATION

Ferdinando Carlo Reggio, P.O. Box 692, Norwalk, Conn.
Original application Feb. 3, 1939, Ser. No. 254,355, now abandoned. Divided and application Ser. No. 496,296, July 27, 1943, now abandoned. Continued and application Ser. No. 591,511, June 7, 1956. Divided and this application Dec. 8, 1960, Ser. No. 74,519
11 Claims. (Cl. 123-140)

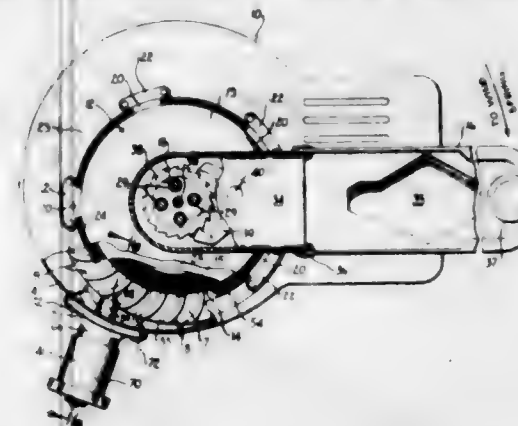


1. In a fuel control for an engine having an air intake system with a compressor therein, a fuel control member for controlling the rate of fuel supply to the engine, a servo motor for positioning said control member, servo motor control valve, a valve actuating mechanism, pressure responsive means connected with said air intake system downstream from the compressor for transmitting to the said valve actuating mechanism a first force substantially proportional to the compressor discharge pressure in the direction to increase the rate of engine fuel supply, and a feed-back spring connected with the fuel control member and adjusted thereby for applying to the same valve actuating mechanism a second force opposing said first force and varying in predetermined relation to the position of the fuel control member, the arrangement being such that during steady operation the said actuating mechanism is in equilibrium under said two forces acting against each other, but as soon as such equilibrium is disturbed the said actuating mechanism will move the servo motor control valve and set in motion the servo motor to vary the adjustment of the fuel control member and thereby alter the said second force set up by the feed-back spring until the equilibrium of the valve actuating mechanism is restored.

2,999,489
SPRING MOTOR ENGINE STARTER
Charles L. Coughlin, Herbert A. Gumtow, and Ib H. Svendsen, Milwaukee, and Hugh S. Brown, Wauwatosa, Wis., assignors to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,754
10 Claims. (Cl. 123-179)

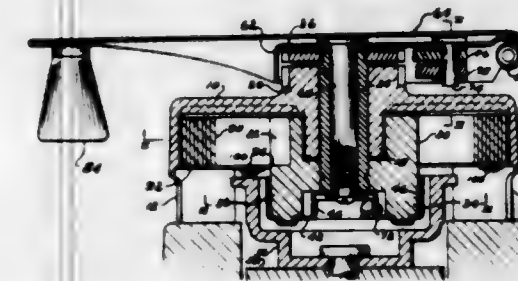
1. In a spring motor starter for rotating the crankshaft of an internal combustion engine of the type having a flywheel on its crankshaft which is provided with fan blades for forcing cooling air across the engine, means for preventing rotation of the crankshaft while the spring of the spring motor is being wound, said means comprising: a stop member; means slidably mounting the stop member on a fixed part of the engine adjacent to the flywheel, and guiding the stop member for linear motion substantially radially with respect to the flywheel between

an extended position engaged between two adjacent fan blades on the flywheel to prevent rotation of the flywheel, and a retracted position in which the stop member is clear of the flywheel; means to releasably and impositively



hold the stop member in said extended position, said means including a spring biasing the stop member to its extended position; and manually controllable means for retracting the stop member and holding it in its retracted position.

2,999,490
SPRING STARTER
Lyle J. Hamman, Eaton Rapids, Mich., assignor to Eaton Stamping Company, a corporation of Michigan
Filed Apr. 27, 1959, Ser. No. 809,165
15 Claims. (Cl. 123-179)

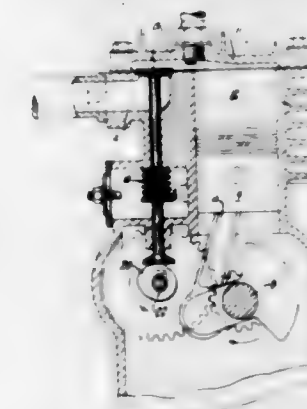


1. A starter for an internal combustion engine having a clutch element in driving relation to the engine crankshaft comprising a spring fixed at one end with respect to the engine, a drive member affixed to the other end of said spring, means affixed to said drive member to rotate said member and wind said spring, said means comprising a crank handle movable between a cranking position and a non-cranking position, releasable means maintaining said spring in wound condition, release actuating means affixed to said crank handle releasing said releasable means upon moving said handle to the non-cranking position and clutch means mounted on said drive member establishing driving relation with the engine clutch element upon release of said spring and rotation of said drive member thereby to crank the engine.

2,999,491
INTERNAL COMBUSTION ENGINE AND METHOD OF OPERATING THE SAME TO OBTAIN COMPRESSION REDUCTION DURING CRANKING
Joseph R. Harkness, Milwaukee, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 15, 1960, Ser. No. 56,260
12 Claims. (Cl. 123-182)

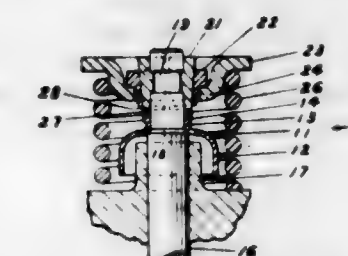
1. The hereindescribed method of operating a four-stroke cycle internal combustion engine having a cylinder, a crankshaft, a piston in the cylinder operatively connected with the crankshaft and coacting with the cylinder to form a combustion chamber, and poppet intake and ex-

haust valves for the combustion chamber, the piston having the customary intake, compression, power and exhaust strokes, which method comprises: opening the intake poppet valve to admit combustible fuel mixture into the combustion chamber during the intake stroke, igniting the fuel mixture near the end of the compression stroke, and opening the exhaust poppet valve to enable the products of combustion to be expelled during the exhaust stroke—all in the conventional manner; and said method being characterized by automatically and in timed relation with rotation of the crankshaft, so controlling the opening and closing of one of said poppet valves that during the compression stroke of the piston, said valve is held between five and twenty-thousandths of an inch off its seat while



the piston moves from a point substantially one-eighth its total ascent from bottom dead-center to a point between one-half and three-quarters its total ascent, and is then gradually closed, with final closure occurring when the piston has reached a point in its compression stroke substantially three-fourths its total ascent from bottom dead-center, whereby said valve in addition to serving its conventional purpose, provides a precisely controlled orifice leading from the combustion chamber and having a flow capacity such that at running speeds the loss of compression resulting from the open orifice is insignificant and does not preclude acceptable engine performance, whereas during starting of the engine when piston travel is slow, compression is appreciably reduced so that cranking of the engine is easier.

2,999,492
VALVE STEM SEAL
Denny D. Duesenberg, Grosse Ile, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,207
7 Claims. (Cl. 123-188)



2. An internal combustion engine valve gear comprising a poppet valve, an umbrella seal engaging the poppet valve stem and substantially restricted from moving axially along the stem in one direction, a member having elastomeric properties on said valve stem and contacting a portion of the umbrella seal, said poppet valve having an annular groove at one end, valve spring retaining means detachably mounted in the poppet valve stem groove, said valve spring retaining means being in contact with one of said umbrella seal and said elastomeric

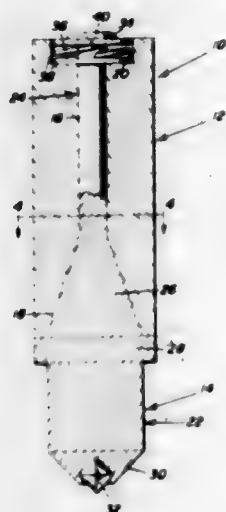
member when said valve spring retaining means are detachably mounted in the poppet valve stem groove, said spring retaining means and said umbrella seal being so figured that the elastomeric member is compressed in sealing engagement with the poppet valve and the umbrella seal when the valve spring retaining means are detachably engaged in the poppet valve stem groove.

2,999,493

DIAMOND DRESSING TOOL

Otis E. Blair, West Orange, N.J., assignor to The Staset Company, Inc., West Orange, N.J., a corporation of New Jersey

Filed May 26, 1960, Ser. No. 31,999
4 Claims. (Cl. 125—39)



4. A diamond tool comprising a sleeve adapted to be rigidly secured within a holder, an axial bore formed through said sleeve having an inwardly tapered counterbore at one end, an elongated cutting tool having a diametrically enlarged head end portion and a cylindrical shank end portion at the other end, a conical bearing intermediate portion tapering toward said shank end portion and disposed between the latter and said head end portion, said shank portion rotatably received in said axial bore with said conical bearing portion seated in said counterbore, a centrally disposed cutting tool carried at the end of said head portion remote from said shank portion, and means interconnected between said sleeve and cutting tool resiliently urging said intermediate portion into tight frictional engagement with said counterbore, a counterbore formed in said end of said axial bore remote from said tapered counterbore, said spring means disposed in said second mentioned counterbore, said spring means including a compression spring disposed about said shank and between the confronting surfaces of said diametrically enlarged end portion and said sleeve, a centrally disposed inwardly tapering shallow recess formed in the outer end surface of said diametrically enlarged end portion.

2,999,494

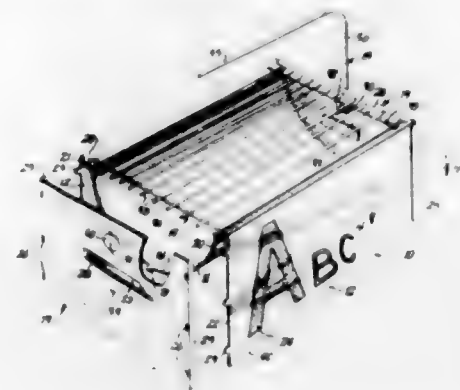
PICNIC GRILL

Robert Leland Richardson, Eden, N.Y., assignor to Eclipse Metal Mfg. Corp., Eden, N.Y., a corporation of New York

Filed Oct. 27, 1958, Ser. No. 769,655
3 Claims. (Cl. 126—25)

2. A light gage sheet metal fire pot for a picnic grill capable of being set up in the order of one minute and restored to a collapsed condition a large number of times, comprising a pair of generally parallel one piece sheet metal vertical end walls having bottoms adapted for steady support on the ground and a sheet metal body sheet hav-

ing generally parallel edges engaging the opposing faces of said end walls, said metal body sheet having a generally semicylindrical trough-shaped central portion and side walls each forming an integral downward continuation of each rim of said trough-shaped portion, a first integral tab projecting from each edge of said metal body sheet at the bottom of said trough-shaped portion into a companion slot in the corresponding end wall and being bent toward the outer face of the latter, a second integral tab projecting from each edge of said metal body sheet adjacent the upper end of each side wall into a slot in



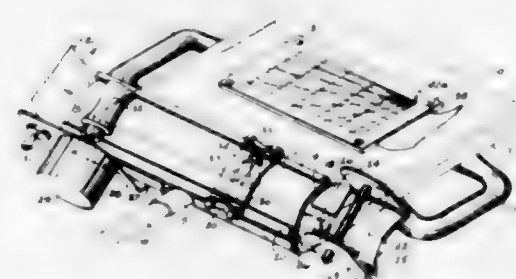
the corresponding end wall and being bent toward the outer face of the latter, said first and second integral tabs forming the sole support for said trough-shaped portion, and said companion slots containing said first tabs being at such high elevation as to hold said trough-shaped portion under stress with its bottom distorted upwardly from true semicylindrical shape, and a third integral tab projecting from each edge of said metal body sheet at the lower end of each side wall into a slot in the corresponding end wall and being bent toward the outer face of the latter.

2,999,495

SPIROMETER RECORDING DEVICE

Robert E. Shipley, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

Filed Feb. 25, 1958, Ser. No. 717,471
3 Claims. (Cl. 128—2.08)



1. A spirometer of the portable type adapted to be held by a patient and comprising: a bellows having a pair of hinged-together end plates, an inlet duct connected to said bellows adjacent said hinge, a frame connected to one of said plates, means for mounting a sheet of paper on said frame on an arcuate surface having its center coaxial with the axis of said hinge and adapted to guide said paper parallel to the axis of said hinge, a marking means rigidly attached to said other plate and movable thereby in a direction transverse to the direction of movement of said paper for marking a line on said paper, and means for moving said paper at a uniform rate as said bellows is inflated to thereby produce a graph for determining the expiratory flow rate and vital capacity of a patient while producing a single exhalation through said duct into said bellows.

2,999,496

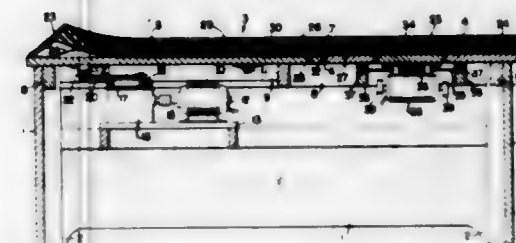
TRACTION-PERCUSSION TABLE

Edward Le Roy Parson, Watertown, Wis.

(144 Park Ave., Prescott, Ariz.)

Filed Sept. 30, 1958, Ser. No. 764,375

11 Claims. (Cl. 128—33)



1. In a table for treating the human body and having a fixed top portion and a movable top portion, a horizontally and longitudinally stretchable support pad secured above said portions, means to reciprocate said movable portion relative to said fixed portion to stretch said support pad to produce traction treatment of the human body, and means forming part of said fixed portion to apply vertical percussive forces through said pad to the said body, said pad providing at least a partial restrainer for said last-named means.

2,999,497

BREATHING APPARATUS HOSE RESTRAINER

William C. Hamilton and Harry W. Austin, Pittsburgh, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 11, 1957, Ser. No. 671,236

5 Claims. (Cl. 128—142)



1. In breathing apparatus, the combination with an axially elastic hose having its opposite ends secured to a mask and oxygen supply connector, of a stretch controller comprising a slack flexible cord extending through the hose, and means anchoring the ends of the cord at the mask and connector, said cord between said means being only enough longer than the length of the hose between the mask and connector to permit unrestrained normal stretching of the hose, and the cord being made from undrawn permanently-stretchable material, whereby when excessive tension is applied to the hose said cord will be elongated permanently a limited amount as the hose stretches a corresponding abnormal amount, the elongating cord absorbing energy and thereby serving as a shock absorber.

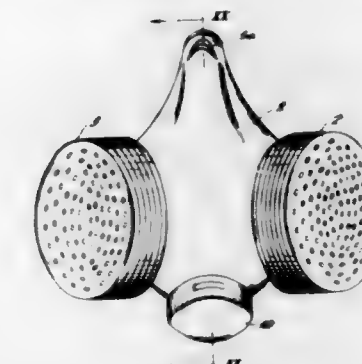
2,999,498

RESPIRATOR

James N. Matheson, Reading, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey

Filed May 7, 1957, Ser. No. 657,671

5 Claims. (Cl. 128—146)



1. In an industrial respirator comprising a face piece of flexible material of substantially pear shaped outline, a pair of filter boxes secured to the exterior of the enlarged sides thereof, a pair of inhalation valves mounted on the interior surface of said face piece in communication with said filter boxes, each of said inhalation valves comprising a thin, flexible valve diaphragm and a pair of suspending stud elements located in close, side by side relationship above the diaphragm and integrally secured to the inner surface of the face piece, there being no other valve fastening elements, whereby substantial flexing of said diaphragm and minimum breathing resistance are provided.

2,999,499

FLEXIBLE CHECK VALVE

Richard H. Willet, Oakland, Calif., assignor to Cutter Laboratories, Inc., a corporation of California

Filed July 11, 1958, Ser. No. 748,035

2 Claims. (Cl. 128—214)



1. In a parenteral fluid administration set, including a fluid container having an outlet, a drip meter connected to said outlet, a first check valve, a first fluid conduit connected at one end of said drip meter and at its other end to said first check valve, a Y-connection having a first and second inlet conduit and a common third outlet conduit, conduit means connecting the first check valve and the first inlet conduit, the improvement consisting in a second check valve connected to the second inlet conduit and having a flexible valve body and a movable valve member therein normally maintained in closed position and movable under positive fluid force applica-

tion to permit fluid flow therethrough in a first direction into the second inlet conduit and thence to the third outlet conduit, said flexible valve body being manipulatable to unseat the valve member to permit fluid flow from the second inlet conduit in a direction opposite to said one direction.

2,999,500

CONTAINER FOR TAKING AND STORING OF BIOLOGICAL FLUIDS

Friedrich Schürer, Biberstrasse 3, Vienna, Austria
Filed May 18, 1955, Ser. No. 569,369
Claims priority, application Austria May 22, 1954
8 Claims. (Cl. 128-276)

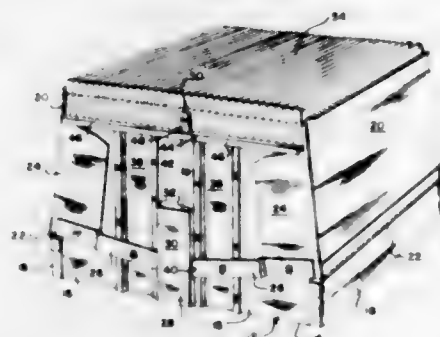


1. Device for taking and storing biological fluids comprising a thin, flexible stretchable bag, having a substantially rigid tubular neck portion, a protective casing of flexible, but non-stretchable material positioned surrounding said bag, said bag and said protective casing being pulled over said substantially rigid neck portion and sealed thereto by tappable closure means, positioned over said neck portion, said casing being positioned surrounding said bag, so that between said bag and said casing a hollow space is formed which is substantially completely taken up when said bag is completely filled.

2,999,501

FILING CABINET

Herbert Weston, New York, and Gilbert L. Anderson, Levittown, N.Y., assignors to VISIRecord, Inc., New York, N.Y., a corporation of New York
Filed June 16, 1958, Ser. No. 742,423
1 Claim. (Cl. 129-16)



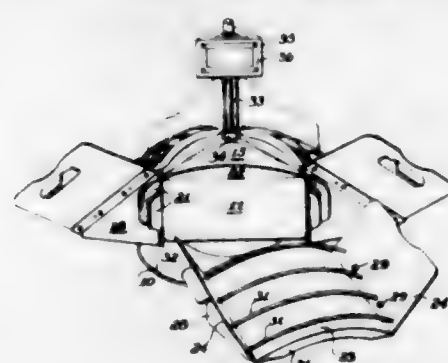
A filing unit comprising a bottom member, a pair of spaced, opposed upright side walls fixed to said bottom member, spaced and opposed upright front and back walls disposed substantially perpendicular to the plane of said side walls in fixed relation thereto, front and back panels mounted along their lowermost edges for pivotal motion about axes parallel to the plane of said bottom member and said front and back walls respectively, each of said panels having a restraining arm rigidly fixed thereto, a free end of said arm extending substantially parallel to one of said side walls, a pair of spaced vertically disposed tracks mounted on said one side wall, a track follower having means along opposite side thereof for slidably engaging said tracks and for confining said follower to motion along said tracks, said

follower also having wall means thereon extending substantially perpendicular to the plane of said one side wall, said wall means having slots therein for slidably receiving portions of said restraining arms adjacent the free ends thereof, the dimensions of said slots being such that the motion of the restraining arm therein is limited to motion in a direction transverse of the direction of motion of said track follower along said tracks, and stop members fixed at spaced locations along said tracks for limiting the motion of said followers to a predetermined distance along said tracks, whereby the pivotal displacement of said panels about their respective axes is confined to angles determined by the length of said tracks between said stops.

2,999,502

ROTARY FILE

Maurice W. Joyce, 142 Boardman Road, Youngstown 12, Ohio
Filed July 18, 1958, Ser. No. 749,434
1 Claim. (Cl. 129-16)



A rotary card file comprising a base means, a substantially vertically extending shaft supported by said base means, a multi-sided main body means rotatably supported by said shaft, the sides of said main body means being normally substantially vertically disposed, each of the sides of said main body means including an upper extension at the upper longitudinal edge thereof, each of said upper extensions being angularly disposed outwardly and upwardly with respect to the side and having an arcuate outer edge, each of said sides including an end extension at each end thereof, a card holding unit for each of said sides, each of said units including a rectangular body member including an arcuate upper surface and an arcuate under surface, the under surfaces of each of said body members being complementary to the arcuate upper edges of said upper extensions, means adjacent said upper surface of each of said units for holding cards on the units, each of said units including a pair of end panels, said end panels extending from the opposite end edges of the rectangular body member of the associated unit upwardly and outwardly from the upper surface thereof, each of said rectangular body members including a flange at the upper back edge thereof and extending at an angle with respect to said upper surface, each of said last-mentioned flanges having an arcuate outer edge of similar configuration to the under surface of the associated body member, said flange on each of said units engaging and overlying one of said upper extensions to support each unit adjacent one of said sides, each of said units being provided with a pair of substantially triangular legs depending from the under surface of the associated body member, each of said legs including a normally vertically disposed edge engaging the adjacent side of the main body means and being at an angle to the end edges of the associated rectangular body member whereby the upper surfaces of the units are disposed at an acute angle to the adjacent sides of the main body means, each of said legs also including a bottom edge for supporting the units on a sup-

porting surface, the pair of legs on each unit being adapted to engage the end extensions formed on the sides of said main body means for retaining each unit in operative position.

2,999,503

FILTER

Milton O. Schur, Asheville, and James C. Rickards, Brevard, N.C., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Dec. 23, 1953, Ser. No. 400,072
2 Claims. (Cl. 131-208)



1. A filter for smoking devices comprising a wrapper and enclosed within the wrapper a filling of crumpled and gathered paper sheet, said sheet initially weighing about 7 to 25 grams per square meter and said filling being substantially uniformly distributed within the said wrapper at a density of about 0.1 to 0.3 gram per cubic centimeter and having a multitude of generally longitudinal tortuous passageways therethrough, said paper having been substantially softened prior to enclosure within the said wrapper by random mechanical working thereof until the vast majority of its fibers have been partially pulled apart at random locations therein.

2,999,504

HAIR CURLER

Monica Russell, 220 Mansion Road, Wallingford, Conn.
Filed Aug. 20, 1958, Ser. No. 756,209
3 Claims. (Cl. 132-41)



1. An adjustable one-piece hair curler for varying size curls which is adapted to lie flat on the head, comprising a thin disc-like base member with a central opening therethrough and a slot extending from the periphery of the base member to said opening, said base member having a plurality of spaced, thin plastic elongated resilient fingers secured thereto adjacent the periphery of said opening and about said opening and extending axially of said base member, said spaced fingers thereby forming a spindle portion of the hair curler around which hair strands may be wound, said fingers being sufficiently resilient to permit them to be bent outwardly over hair wound around them adjacent the base member, a hair fastening tab member for each finger which is integral with the outer periphery of the base member and is located radially outward from its matching finger, a plurality of openings longitudinally spaced in said fingers each of which is adapted to coact with said tabs to provide an adjustable fastening for the resilient fingers.

2,999,505

COMBINATION NAIL CLIPPER AND TWEEZERS

Martin E. Herstedt, 208 15th Ave., East Moline, Ill.
Filed Nov. 23, 1959, Ser. No. 854,825
1 Claim. (Cl. 132-73.5)

A combination nail clipper and tweezers, comprising: a pair of complementary members fixedly connected to-

gether at one pair of ends and normally biased apart at their opposite pair of ends, said opposite ends having co-operative jaws; means at said jaw ends for effecting closing and opening of the jaws and including a lever pivoted to the members at said jaw ends on an axis normal to the members for optional swinging about said axis to a folded position in which said lever lies along and in closely spaced relation to the outer surface of one member and having a terminal end adjacent to said connected ends of the members; pivot means at said connected ends and beyond said terminal end of the lever and including a shaft turnable in said connected ends on a second axis parallel to the lever axis and having opposite end portions projecting outwardly respectively beyond the outer surfaces of said members; a pair of tweezer elements fixedly connected to and carried by said opposite end portions, re-

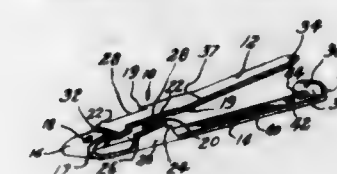


spectively, at the outer surfaces of said members for selective swinging about said pivot means axis between an operating position extending away from the members to a storage position in which said elements lie respectively closely along the outer surfaces of said members with one element lying between said one member and the folded lever, said elements being of such length that the free end of said one element lies short of the lever pivot in its storage position, said elements in their operative position being biased apart to enable manual squeezing thereof to bring their free ends together; and head means fixed on the one end portion of the shaft at the same surface as the lever and said head means and the terminal end of the lever having cooperating parts operative in the storage position of said elements and the folded position of the lever to releasably retain said respective positions of said elements and lever.

2,999,506

NAIL CLIPPER

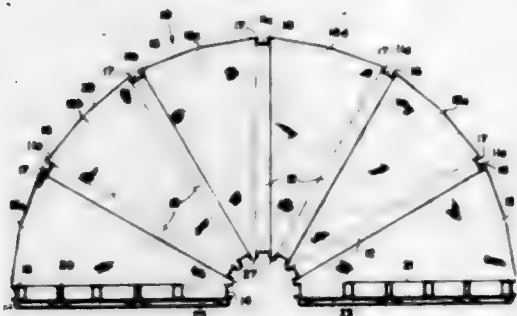
John W. Hunt, Pontiac, Mich., assignor to Pontiac Specialties Manufacturing Corporation, Pontiac, Mich., a corporation of Michigan
Filed Dec. 20, 1957, Ser. No. 704,085
8 Claims. (Cl. 132-75.5)



1. A manicure implement having a continuous one-piece construction comprising upper and lower arms hingedly secured together at one end by means of a spring portion, said lower arm being provided along at least one longitudinal side edge at a point adjacent the spring portion with an upwardly projecting shearing blade, the upper marginal edge of said blade being tapered downwardly towards said spring portion and forming a shearing edge, said upper arm being provided with a recess extending inwardly from at least one longitudinal side edge with the lower margin of the longitudinal wall forming a shearing edge, the distal portion of said upper arm being off-set upwardly from the remainder of the arm at a point adjacent to the spring side of said recess, said recess being adapted to register with and receive said shearing blade in overlapping fashion when said arms are pivoted towards each other to form a nail cutting jaw having a cutting action which proceeds from a point remote from said spring towards said spring.

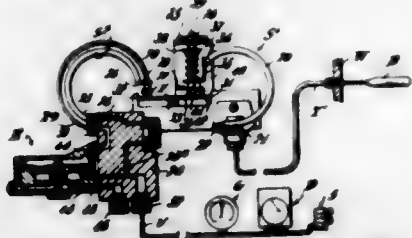
2,999,507
COLLAPSIBLE SHELTER USING BELLOWS-LIKE SECTIONS

Henry P. Glass, 666 Lake Shore Drive, Chicago 11, Ill.
 Filed May 27, 1960, Ser. No. 32,213
 5 Claims. (Cl. 135-1)



1. A collapsible shelter comprising a plurality of four sided framework structures, each of said structures comprising a floor section, a roof section and a pair of end sections, and a plurality of wedge-shaped bellows-like sections one attached to each of the opposite perimetral edges of adjacently arranged structures to interconnect them into a unitary shelter, said wedge-shaped bellows-like sections having their narrow ends at the same side of the shelter and being extendable in an arcuate manner about a common point to expand the volume of said shelter.

2,999,508
SUPPRESSION DEVICE FOR NARROW SPANS
 Robert C. Du Bois, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
 Filed May 19, 1960, Ser. No. 30,288
 13 Claims. (Cl. 137-85)

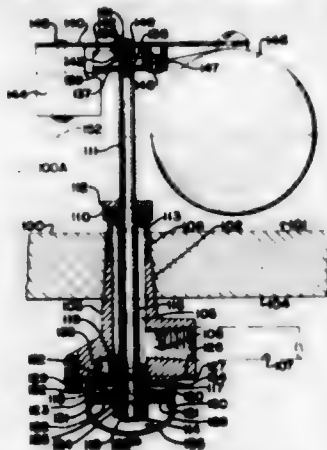


1. A pressure transmitter of the kind which comprises an input Bourdon tube of stainless steel and a feedback Bourdon tube of a material whose modulus of elasticity varies approximately 2% for each 100° F. change in temperature, said transmitter having a suppression ratio of the order of 20, in combination, means operative so to modify motion of the tip of the input tube as to prevent any motion of said tip in response to increase in internal pressure until after said pressure has reached a definite determined value, said motion-modifying means comprising a spring connected to the tip of the input tube and which is so normally stressed as to oppose motion of said tip in response to increase in pressure, said spring being of a material having a substantially constant modulus of elasticity with respect to temperature variations.

2,999,509
DEVICE FOR AUTOMATICALLY VALVING LIQUID
 Paul M. Hankison and William Foster Walker, Bethel, Pa., assignors to Hankison Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Dec. 12, 1956, Ser. No. 627,899
 9 Claims. (Cl. 137-195)

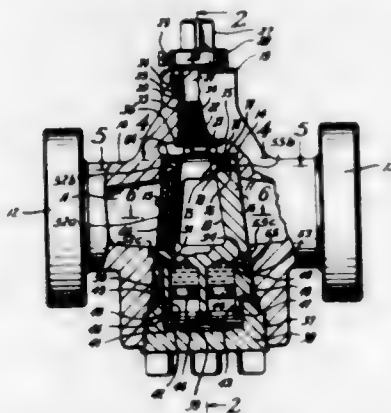
4. In a device for automatically valving liquid, in combination, a liquid holding member having a wall against which liquid collects under pressure, a main valve inside said base, a valve body having a seat for said main valve and extending through said wall for the periodical dis-

charge of accumulated liquid, an outlet in said valve body for said discharge, a hollow valve stem extending through said wall and movable within said valve body, said main valve being mounted on said valve stem and movable therewith, a pilot valve on the liquid collecting side of said wall to open and close the top of said valve stem, a float adapted to engage said accumulated liquid, said float having an operative connection to said pilot valve, magnetic attraction means including a magnet operative between said hollow valve stem and said float to



keep said pilot valve closed unless and until the level of said liquid reaches a predetermined height exerting a force upon said float sufficient to lift said float and overcome said magnetic attraction means, a cylinder in the lower end of said valve body on the outside of said wall, an annular piston fixed to said valve stem and having a passage communicating through said valve stem with the end of said cylinder away from said main valve, said piston adapted to be moved in said cylinder by the pressure of gas flowing through said valve stem to said end when said pilot valve is opened to open said main valve.

2,999,510
AUTOMATIC LUBRICANT-SEALED PLUG VALVE
 Alexander S. Volpin, 10200 W. Broadview Drive, Miami Beach 54, Fla.
 Filed July 5, 1957, Ser. No. 670,320
 8 Claims. (Cl. 137-246.12)



1. An automatic lubricant-sealed plug valve, comprising, a valve casing having a chamber therein and upstream and downstream flow ports communicating with said chamber, a one-piece ported plug member rotatable in the chamber, cooperating sealing surfaces on the plug member and in the chamber, a sealing groove system in said sealing surfaces about each flow port when the plug member is in the closed position, means including sealant reservoir means for supplying sealant to both said groove systems, and an additional groove system in said sealing surfaces for intercepting and conducting line pressure fluid leaking between said surfaces into said reservoir means to force sealant therefrom into said sealing groove systems.

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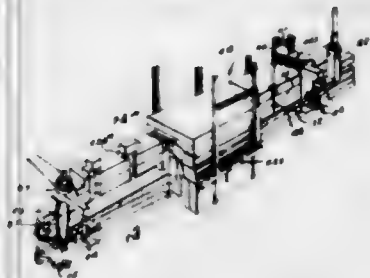
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2,999,511

CONTROLLING THE FLOW OF MOLTEN GLASS THROUGH A FURNACE FOREHEARTH

Clarence Chew, Sr., Godfrey, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 9, 1956, Ser. No. 621,356
10 Claims. (Cl. 137-392)

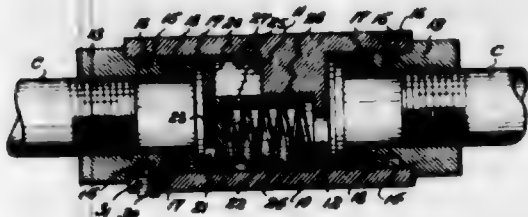


1. The combination of means providing a horizontally disposed channel through which a fluid flows from a higher to a lower level, a depth regulating block mounted over the channel and extending downward in the channel into the path of the flowing fluid, said block being approximately the width of the channel and controlling the depth of the fluid on the downstream side of the block, a piston motor comprising a cylinder, piston and piston rod, means providing operating connections between the piston rod and said block through which reciprocating movements of the piston rod impart substantially proportional vertical reciprocating movements to the said block, and means controlled by the depth of the fluid in the channel at a point downstream from said block for controlling the operation of the piston motor and causing the motor to move said block into positions to maintain the fluid flowing within the channel substantially at a predetermined level.

2,999,512

FLOW CONTROL VALVE

Eugene V. Barkow, 681 Morris Turnpike, Springfield, N.J.
Filed Oct. 31, 1960, Ser. No. 66,070
8 Claims. (Cl. 137-614.16)



1. A flow control valve comprising: a cylindrical elongated valve body including tubular end portions separated by a cross wall having an eccentrically arranged axial through bore; a pair of axially aligned tubular coupling plugs each of which has fluid-tight swiveling engagement within one end portion of the valve body for fixed connection to the adjoining end of a fluid conduit through which fluid is caused to flow alternately in opposite directions, whereby the coupling plugs will remain stationary while the valve body may be manually rotated in its swiveled engagement with said plugs; a metering disk arranged at right angles to the axis of the valve body and being affixed to the inner end of one of the coupling plugs in fluid-tight connection therewith and having an orifice therein disposed eccentric to the axis of the valve body; a cup-shaped cylindrical poppet valve member including an imperforate end wall and a tubular side wall having radial perforations therein, said poppet valve member being mounted for limited reciprocation in the through bore of the cross wall of the valve body between

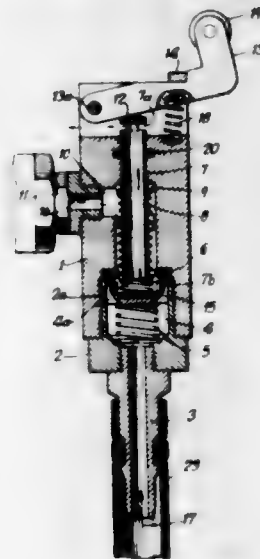
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a first terminal position contiguous to the metering disk and a second terminal position spaced therefrom and being arranged with its imperforate end wall facing the metering disk for even contact therewith in said first terminal position; and spring means biasing the poppet valve member into its said first terminal position, the cross wall of the valve body being spaced axially from the metering disk to provide a by-pass chamber in communication with the side wall perforations of the poppet valve member.

2,999,513

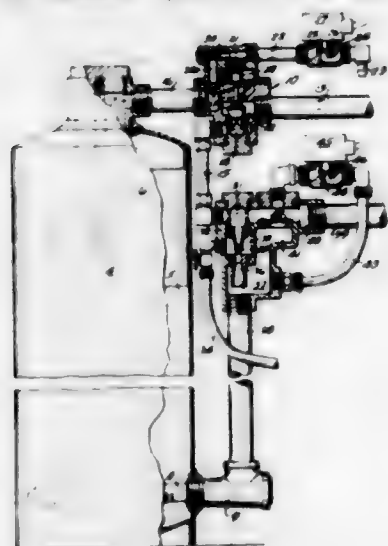
PNEUMATIC CONTROL VALVE

Hans Oetiker, 21 Oberdorfstrasse, Horgen, Switzerland
Filed Mar. 31, 1959, Ser. No. 803,217
Claims priority, application Switzerland Mar. 31, 1958
1 Claim. (Cl. 137-620)



A quick-acting pneumatic valve comprising an oblong housing block, a bore extending longitudinally through said housing block, said bore having a small diameter portion at one end of said housing block, a large diameter portion at the opposite end of said housing block, and an intermediate diameter portion between said small diameter portion and said large diameter portion, an interior annular shoulder formed between said large diameter portion and said intermediate diameter portion for forming a valve seat, a cup-shaped check valve placed in said large diameter portion coaxially thereof and having a rim adapted to abut said shoulder, a first spring in said large diameter portion for pressing said check valve against said shoulder, said cup-shaped check valve having a cavity whose bottom forms a second valve seat, a tubular member coaxially movable in the small diameter portion and in the intermediate diameter portion of said bore and having an end extending outside of said housing block, said tubular member having a second end extending into said cavity and adapted to abut said second valve seat, a second spring interposed between said tubular member and said check valve and extending into the cavity of the latter, for urging said tubular member away from said check valve, a valve outlet in said housing block communicating with said intermediate diameter portion for conducting compressed air flowing through said check valve and through said intermediate diameter portion to said outlet upon pressing said check valve away from said first seat by means of said tubular member against the action of said first spring, and for conducting air in the opposite direction to the flow of the compressed air through said outlet, through said intermediate diameter portion and through said tubular member to the outside upon allowing removal of said tubular member from said second seat by said second spring.

2,999,514
CONTROLS FOR FLUID TREATMENT APPARATUS
 Benjamin H. Kryzer, St. Paul, Minn., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
 Filed June 25, 1958, Ser. No. 744,577
 13 Claims. (Cl. 137-624.18)

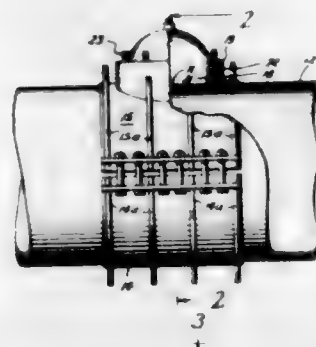


1. A control for fluid treatment apparatus comprising casing means having first and second tank connecting ports, a main valve having a first chamber, a second chamber and a third chamber; partitions separating said second chamber from the first and third chambers respectively and having ports for flow from the second chamber to the first and third chambers; said first tank connecting port communicating with said first chamber; a supply pipe for fluid under pressure connected to said second chamber; a first passage connecting said third chamber to said second tank connecting port; a service outlet port communicating with said first passage; closure means movable to selectively close the ports in said partitions, said closure means being movable to a first position closing the port in the partition between the third and second chambers and opening the port in the partition between the first and second chambers, and said closure means being movable to a second position opening the port in the partition between the second and third chambers and closing the port in the partition between the first and second chambers, a waste outlet port communicating with said first tank connecting port; a waste conduit vented to atmospheric pressure and connected to said waste outlet port; a second valve which is operative independently of said closure means controlling flow from said waste outlet port to said waste conduit; an aspirator interposed in said first passage to direct fluid to said second tank connecting port; means for conducting a regenerating fluid to said aspirator; a second passage having ends connected to said first passage near the inlet and outlet sides respectively of said aspirator and disposed to by-pass said aspirator; a third valve which is operable independently of said second valve, interposed in said second passage to control flow through said passage; fluid pressure responsive means operatively connected to said closure means; one side of said fluid pressure responsive means being subject to the pressure in said first tank connecting port and the other side being subject to the pressure in said waste conduit; and automatic timing means operatively connected to said second and third valves for activating them successively to open positions and then to closed positions at predetermined time intervals.

2,999,515
PIPE LINE LEAK CLAMP
 John J. Watson, P.O. Box 1149, Jacksonville, Tex.
 Filed Dec. 20, 1957, Ser. No. 704,062
 2 Claims. (Cl. 138-99)

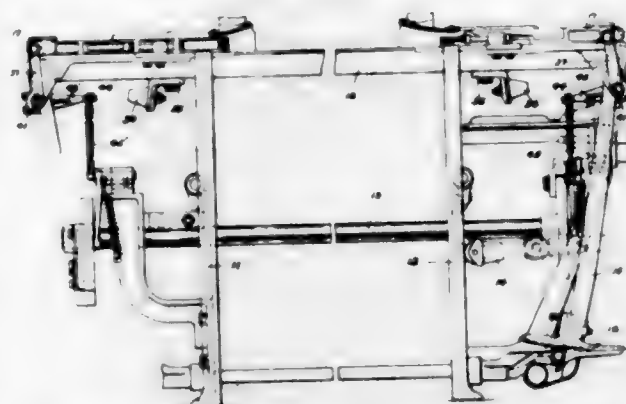
1. A pipe repair device comprising, a longitudinally split sleeve adapted to snugly embrace a pipe and rein-

force the wall of the pipe, means for securing the sections of the sleeve together with each section in firm abutment with a pipe therebetween, a leak-chamber open at one end carried by the sleeve, said chamber being closed except at said one end to confine fluids when said one end of the chamber is sealed to a pipe over a leak, a continuous wall carried by the chamber and spacedly surrounding the wall thereof at its open end to provide a seal-receiving channel



with the open end of the wall terminating approximately in the cylindrical surface constituted by the inner surface of the sleeve, seal means in said channel, and compression means accessible from the exterior of the device for urging the seal means into firm engagement with the pipe and the sidewalls of the channel adjacent the pipe to provide a seal between the pipe and said open end of said chamber.

2,999,516
SHUTTLE CONTROL MECHANISM
 Edward C. Nichols, Upton, and Charles P. Powell, West Medway, Mass., assignors to Draper Corporation, Hopedale, Mass., a corporation of Maine
 Filed May 28, 1959, Ser. No. 816,518
 15 Claims. (Cl. 139-155)

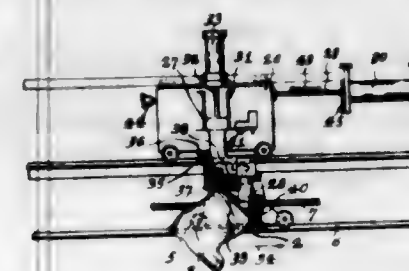


1. In a fly shuttle loom having a lay, shuttle boxing means at opposite ends of said lay, a shuttle movable along said lay and adapted to be arrested by said shuttle boxing means, the improvement which comprises means in contact with both sides of said shuttle effective to move said shuttle outwardly of said lay to a predetermined position after said shuttle has been picked into said boxing means.

2,999,517
AUTOMATIC FILLING DEVICE FOR TRAVELLING MOULDS
 Anthony Cervinka, Batavia, Ontario, Canada, assignor to Bata Shoe Company of Canada Limited, Batavia, Ontario, Canada
 Filed Sept. 15, 1958, Ser. No. 761,089
 Claims priority, application Canada Jan. 17, 1958
 1 Claim. (Cl. 141-137)

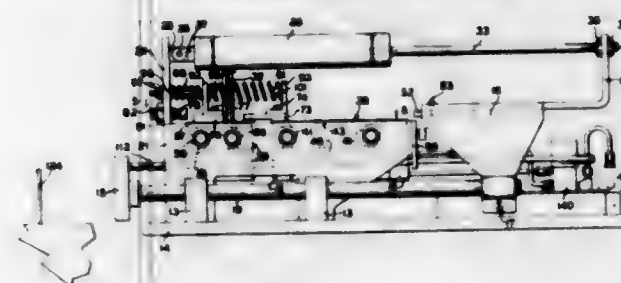
An apparatus for automatically filling open ended molds including continuously horizontally moving conveying means, open ended molds carried by the conveying means, a carrier means mounted above the conveying means for horizontal travel relative to the conveying

means, a filling gun means adapted to contain and introduce material into the open ended molds, means mounting the filling gun means for upward and downward movement relative to the containers, a cylinder and piston unit operably connected to said mounting means to move the mounting means upward and downward, switch means on the carrier means to actuate the piston and cylinder unit to move the mounting means downward, shoulder means on the conveying means for contacting the switch means to operate the switch means for moving the mounting means and filling gun means downward to engage a mold, further switch means on the mounting means operative to stop the downward movement of the mounting means, flange means on the conveying means spaced from the shoulder means for engaging the further switch means on the mounting means whereby such further switch means is operative to stop the downward movement of the mounting means and allow the filling gun means to introduce material into the mold, said shoulder being engage-



able with the mounting means when the mounting means is in the downward position to move the carrier means with the conveying means while the filling gun means is introducing material into the mold, means on the filling gun means operative when a predetermined quantity of material has been introduced into the mold to actuate said piston and cylinder unit to move the mounting means and filling gun means upward, switch means on the carrier means in the path of movement of the mounting means operative when engaged by the mounting means to actuate the piston and cylinder unit to stop the upward movement of the mounting means, a second piston and cylinder unit operably connected to the carrier means to move the carrier means in a direction opposite to that of the conveying means when the upward movement of the mounting means has been stopped, and additional switch means on the carrier means in the path of movement of the mounting means effective when engaged by the mounting means to actuate said second piston and cylinder unit to move the carrier means in said opposite direction.

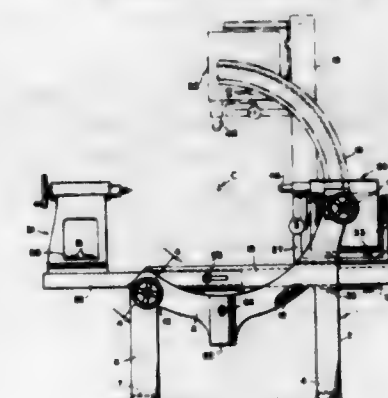
2,999,518
AUTOMATICALLY ADJUSTABLE GAUGING DEVICE FOR POSITIONING AN ELEMENT
 Orville E. Mowery and Robert G. Miller, Wabash, Ind., assignors to The G. M. Diehl Machine Works, Inc., Wabash, Ind., a corporation of Indiana
 Filed May 12, 1958, Ser. No. 734,735
 16 Claims. (Cl. 143-168)



11. Sawing apparatus comprising sawing means operable to saw in a plane, a guide located for positioning material to be moved into engagement with said sawing means, said guide having a guiding face parallel with the plane of said sawing means, power means for moving

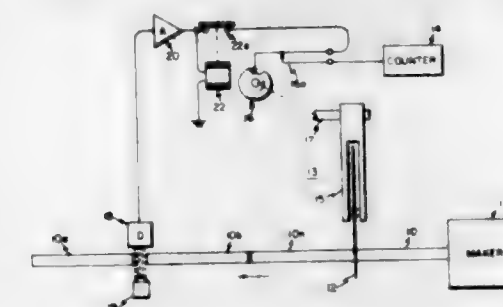
said guide perpendicularly to said plane, means for engaging and moving material guided by said guide into engagement with said sawing means, and control means disposed in the path of, and engaged by, material moving under the influence of said engaging and moving means, said control means being effective, when so engaged, to actuate said power means to retract said guide from engagement with said material.

2,999,519
MULTI-PURPOSE POWER TOOL
 Tony E. Petersen, 8833 SE. Pine, Portland 16, Oreg.
 Filed June 22, 1959, Ser. No. 821,806
 5 Claims. (Cl. 144-1)



1. A multipurpose power tool comprising in combination a stationary main base including a pair of spaced apart parallel segmental guide tracks, segmental slide members slidably mounted in said guide tracks, said slide members and guide tracks formed on equal radii of curvature having common centers spaced apart a distance equal to the spacing of said tracks, parallel ways permanently secured to said slide members with the longitudinal axis of the ways parallel to the planes of said slide members, a power-driven spindle, means mounting said spindle for sliding movement in a straight path along the ways parallel thereto, means for locking the spindle to the ways, the axis of said spindle extending in a direction at right angles to and intersecting a line joining said spaced apart centers throughout all movements of said slide members relative to said guide tracks and throughout all movement of the spindle along said ways.

2,999,520
CIGARETTE ROD CUTTER AND CIGARETTE COUNTER
 Walker B. Lowman, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
 Filed Jan. 3, 1958, Ser. No. 707,035
 2 Claims. (Cl. 146-101)



1. In a cigarette making machine having a means for periodically severing a predetermined length from a cigarette rod continuously formed by said machine, an apparatus comprising, in combination, a counter having an actuator means to change the state of the count registered therein by one each time said last mentioned means is actuated; detector means emitting a voltage pulse in accordance with a gap between adjacent lengths of said peri-

odically severed rod; an amplifier connected to said detector means for amplifying said voltage pulses; circuit means forming a low impedance path to deliver said voltage pulses to said actuator means to operate said counter; relay means having movable contacts serially connected in said circuit means intermediate said amplifier and said actuator means, said relay operable to close said movable contacts when said voltage pulse rate exceeds a predetermined minimum value; and second movable contacts operable by said machine and connected in series circuit relationship with said first movable contacts and said amplifier, said second movable contacts closing each time a cigarette is severed from said rod, said counter registering a count on closure of said first and second movable contacts.

2,999,521

POUCH AND METHOD OF MAKING SAME

Joseph J. Bono, Wauwatosa, and Cyril J. Roos, Cedarburg, Wis., assignors to American Heat-Seal, Inc., Milwaukee, Wis.

Filed Aug. 5, 1959, Ser. No. 831,835
8 Claims. (Cl. 150-13)



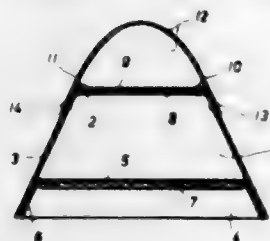
4. A mail pouch comprising an integral fabric blank folded to define a laterally enclosed storage chamber having a closed bottom and an open top, said chamber having side seams formed of common edges of said blank brought together and integrally secured by a heat sealable adhesive interposed therebetween, said closed bottom having triangular handle means integrally formed therewith and extending outwardly therefrom at each end thereof, each of said handle means being formed of a portion of a common edge of said blank open upon the formation of said seams and lapped inwardly thereto to define a multi-layer generally isosceles triangle in based relationship therewith, said triangle having a layer of heat sealable adhesive interposed intermediate said layers and activated to effect an integral complete surface to surface engagement therebetween, and said open top having closing means secured thereto for selectively opening and closing said chamber.

2,999,522

LADY'S HANDBAG

Peter Schlumbohm, 41 Murray St., New York 7, N.Y.

Filed Nov. 2, 1959, Ser. No. 850,273
1 Claim. (Cl. 150-28)



A lady's handbag characterized by nested elements comprising a first conical element and a second conical element, each said element having a top wall, an open bottom and conical side walls with an upper section adjoining the top wall and a lower section adjoining the open bottom, the conicity of the side walls being identical, the diameter of the top wall of the second element corresponding to a diameter of the lower section of the conical

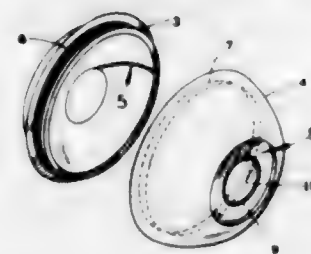
side walls of said first element; the lower section of the conical side walls of said first element extending towards the open end beyond the top wall of the second element and being in contact with the lower section of the conical side walls of said second element, said contact being sustained by bonding means such as glue to reinforce the lower section of the conical side walls of both elements at the common open end of the two elements, the top wall of the first element having an opening to allow access to the space below it and a closure for said opening; a mirror corresponding to the diameter of the upper section of the side walls of the second element and fastened to the top wall of said second element, said mirror facing the common open end of the two conical elements, said top wall of said second element being recessed far enough from said open end to let the side walls of said second element form a shadow-box to shade the mirror against the light which illuminates the face of the viewer.

2,999,523

ORNAMENTAL DOOR KNOB COVER

Charles J. Amdur and Edward J. Weinstein, both of 2312 Ponce De Leon Blvd., Coral Gables, Fla.

Filed Apr. 29, 1960, Ser. No. 25,706
3 Claims. (Cl. 150-52)



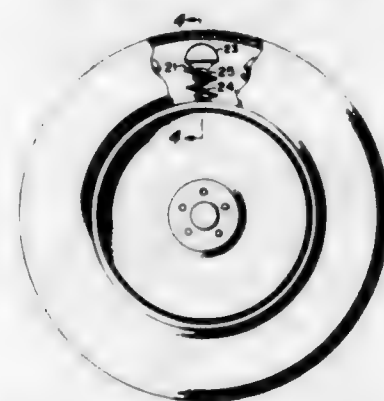
1. An ornamental cover for a door knob having a coaxial stem comprising a flexible inner member of predetermined thickness shaped to cover the inner portion of said knob in close proximity therewith, said inner member having a radial slit therethrough for the distension of said member when manually applied over said stem and on said inner portion of said knob, an outer cover member of predetermined thickness shaped to fit the outer portion of said knob in close proximity therewith, closure means integral with the mating outer edges of each of said cover members for securing said members together over said knob.

2,999,524

TUBELESS TIRE-RIM AND SPRING UNIT SUPPLEMENT

John A. Marston, 40 N. 8th St., San Jose 12, Calif.

Filed Jan. 5, 1960, Ser. No. 570
2 Claims. (Cl. 152-6)



1. A tubeless tire supporting assembly comprising a rim having flanges at the sides for retaining a tubeless tire thereon, said rim having circumferentially spaced radially disposed openings extending therethrough, an outer spring

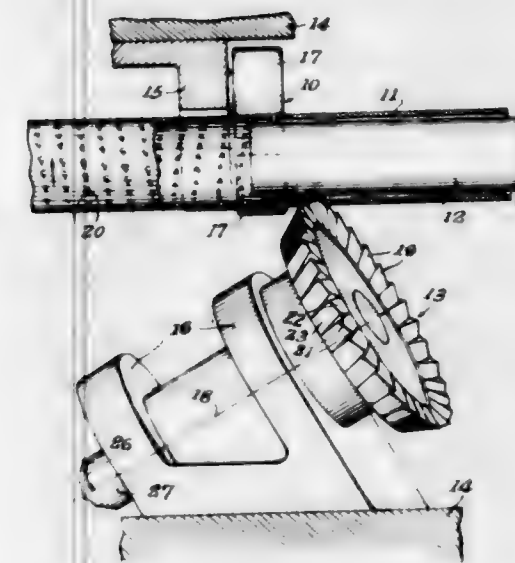
gripping washer positioned in each of said openings, a spring secured on said outer spring gripping washer, a head of elastic material carried by said spring, an inner spring gripping washer positioned within the outer spring gripping washer, an inner spring mounted in and extended from said inner spring gripping washer, a bumper of resilient material secured in the outer end of the inner spring, and a rim lock for securing the rim in position on a wheel.

2,999,525

TUBE-PERFORATING MECHANISM

Carl A. Mercer, Woodland Hills, Calif.
(21300 Sherman Way, Canoga Park, Calif.)

Filed Sept. 22, 1958, Ser. No. 762,657
6 Claims. (Cl. 153-2)



1. Tube-perforating mechanism comprising a rotary cutter having circumferentially arranged teeth, each tooth being formed to have a radial edge and a tangential edge that meet to form a penetrating apex, said cutter being disposed at an angle with its axis of rotation in a vertical plane and at an angle to the horizontal, the rotation of the cutter being in a direction advancing the teeth with the tangential edges thereof leading, and means to guide a tube along a horizontal path that lies in a vertical plane that is at an angle to the mentioned vertical plane, the successive teeth of the cutter penetrating the tube to simultaneously rotate and longitudinally advance the tube, thereby producing perforations in the tube that are arranged on a helix, the mentioned tooth edges imparting an elongated taper form to said perforations.

2,999,526

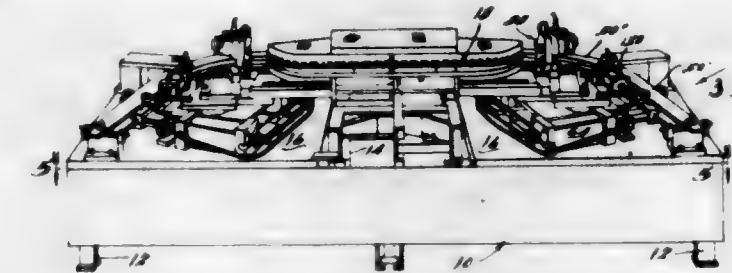
MACHINE FOR STRETCH BENDING METAL MOULDING

Robert W. Williamson, New Baltimore, Mich., assignor, by direct and mesne assignments, of one-fourth to O. D. Herron, Grosse Pointe, one-fourth to Dudley A. Hunter, Utica, and one-fourth to Haven Manufacturing Corporation, New Haven, Mich., a corporation of Michigan

Filed Mar. 17, 1958, Ser. No. 721,748
17 Claims. (Cl. 153-32)

1. A machine for stretch bending strips of metal moulding comprising a support, a form mounted on said support adapted to engage said moulding during the bending thereof, means for holding one portion of a moulding strip in engagement with one portion of said form, a carriage arm mounted on said support in spaced relation to said form for rotation about a first axis, a slide mounted on said carriage arm for reciprocation therealong, a head mounted on said slide for rotation relative thereto about a second axis, clamp means mounted on said

head and adapted to grip an end portion of said moulding, a cam follower mounted on said slide, a cam mounted on said support for engagement by said cam follower, power means acting between said carriage arm and said slide for urging said slide in one direction relative to said arm and forcing said follower against said cam, said cam being so shaped and disposed that said power means in



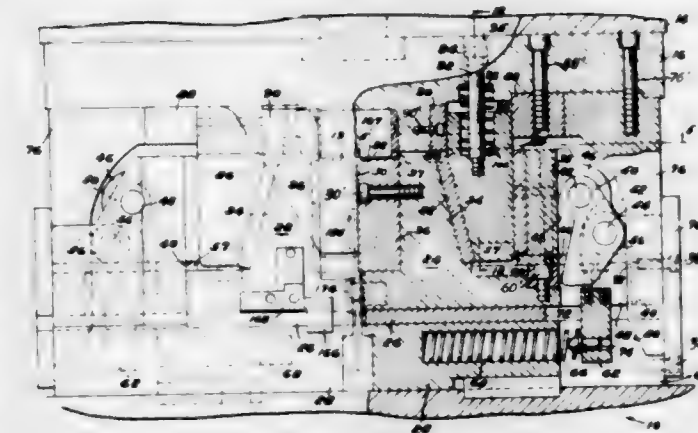
forcing said follower against said cam produces a moment urging said carriage arm to rotate about said first named axis in the direction of rotation thereof during operation of said machine for bending a strip of metal moulding, a second cam mounted on said support and a second follower on said head co-operating to control the rotation of said head about said second axis during said operation of said machine.

2,999,527

AUTOMATIC RESTRIKE DIE AND FEED MECHANISM

Joseph A. Klavon, Jr., Jackson, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Apr. 1, 1958, Ser. No. 725,752
4 Claims. (Cl. 153-34)



1. Apparatus for finish forming an article such as a brake shoe of T-section composed of a web and a transverse rim extending along one edge of the web, said apparatus comprising a support for the shoe, opposed dies on opposite sides of said support movable toward each other along guided paths to grip the web of the shoe on said support and having surfaces engaging the web side of the trim on opposite sides of the web while the web is gripped, a third die movable transversely of said guided paths and toward said support into engagement with the opposite side of the rim and cooperable with said surfaces of said opposed dies to shape the rim and square it with respect to the web, means operated by the movement of said third die toward said guided paths for moving said opposed dies toward each other into gripping relation with the web prior to the engagement of said third die with the rim, and back-up cams carried by said third die and wedgingly engageable with said opposed dies during the final stage of the movement of said third die toward said paths for urging said opposed dies toward each other into firm gripping engagement with the web and for backing up said opposed dies during the sub-

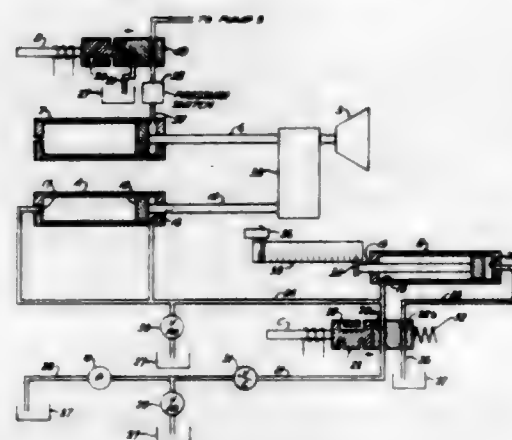
sequent engagement of said third die with the rim, means mounting said back-up cams on said third die for reciprocation relative to said third die in the direction of movement of the latter, and resilient means yieldably opposing movement of said back-up cams relative to said third die away from said guided paths.

2,999,528

STRETCH MEASURING AND LIMITING DEVICE FOR STRETCHING MACHINES

Joseph A. Kurtak, Pittsburgh, Pa., assignor to Setton Engineering Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 15, 1958, Ser. No. 735,521
9 Claims. (Cl. 153—35)



1. A stretch measuring and limiting device for use with a stretching machine having a hydraulically movable head for gripping and stretching a workpiece, said device comprising two hydraulic cylinders, the first cylinder having a fluid displacing rod extending through one end of the cylinder, the second cylinder having a fluid port at each end and a piston rod extending through one end of the cylinder, the rod of the first cylinder being connected to the head and movable with it, a hydraulic supply line normally connected to the first cylinder and to the first port of the second cylinder adjacent its piston rod receiving end, a hydraulic discharge line normally connected to the second port of the second cylinder, a pump for supplying fluid under pressure to the supply line to maintain the piston in the second cylinder normally at one end of that cylinder, valve means for disconnecting the pump from the supply line and the discharge line from the second port of the second cylinder and for connecting the first cylinder and the second port of the second cylinder in a closed hydraulic circuit, valve actuating means operative in response to a predetermined force exerted by the head on the workpiece, and limiting means adapted to be actuated by a predetermined relative movement between the second cylinder and its piston rod for stopping further stretching movement of the head.

2,999,529

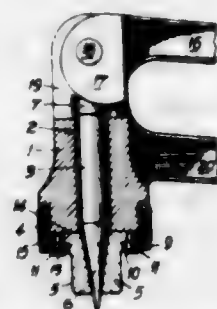
EXPANDING TOOL FOR PIPES

Włodzimierz Rast, 46 Kanbara St., Flinders Park, South Australia, Australia

Filed Nov. 12, 1958, Ser. No. 773,389
Claims priority, application Australia Nov. 13, 1957
1 Claim. (Cl. 153—80)

An improved tube expander comprising a series of jaws, an outward flange on each jaw, a pin on each said flange, a main body having a hollow therein, a holding member engageable on one end of the said body having an inward flange and elongated apertures in said flange engaged by said pins whereby the said jaws are confined on said holding member but may be expanded or contracted thereon, a circlet urging said jaws into contracted position, said flanges on said jaws being confined between

the said inward flange on said holding member and a face on said body to prevent axial movement of said jaws, a tapered shaft axially movable in the hollow of said body to expand or contract said jaws, a handle on



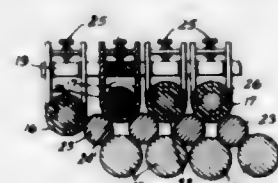
said body projecting substantially at right angles thereto, a second handle pivoted to said body and extending adjacent the first said handle, and a cam on said second handle to engage and move said tapered shaft.

2,999,530

SHEET METAL WORKING MACHINE WITH STRAIGHTENING ROLLERS

Fritz Ungerer, Arlingerstrasse 6, Pforzheim-Brotzingen, Germany

Filed Jan. 8, 1957, Ser. No. 633,074
Claims priority, application Germany Jan. 13, 1956
4 Claims. (Cl. 153—106)



1. A sheet metal working machine comprising a plurality of spaced sheet straightening rollers, a plurality of spaced flexible intermediate rollers disposed above said straightening rollers for supporting said straightening rollers along the entire width of a sheet being worked upon during passage against said straightening rollers, said straightening rollers forming V-shaped formations therebetween, said intermediate rollers being disposed in said V-shaped formations and being further located in front and rearwardly of said straightening rollers, said intermediate rollers being of substantially the same length as said straightening rollers, supporting rolls of considerably shorter length than said straightening rollers and arranged in staggered relationship with respect to each other and disposed independently of said intermediate rollers above said intermediate rollers, and means for individual adjustment of at least some of said supporting rolls relative to said intermediate rollers, said supporting rolls each bearing against two adjacent intermediate rollers.

2,999,531

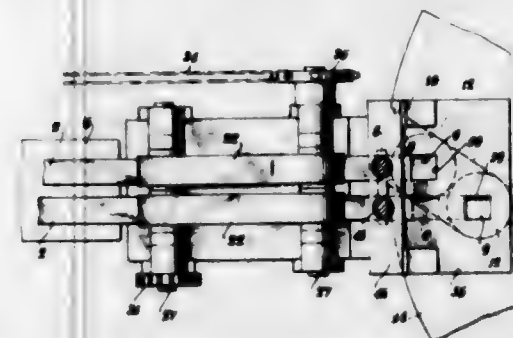
METHOD AND MEANS FOR FORMING AND INSERTING GASKET BLANKS IN CLOSURES

Daniel D. Acton, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Nov. 4, 1955, Ser. No. 545,051
3 Claims. (Cl. 154—1.5)

1. A device for inserting substantially rectangular gasket blanks into closures comprising a gasket strip forming means adapted to form a strip of predetermined width and thickness, a gasket insertion plate having a generally rectangular aperture corresponding to the shape of the gasket blank and slightly smaller than said blank, a closure positioning means adapted to present closures suc-

cessively beneath said aperture, a gasket strip advancing means adapted to contact a gasket strip formed by said gasket strip forming means and positioned between said gasket strip forming means and the gasket blank insertion plate aperture and adapted to intermittently advance the gasket strip a distance equal to a gasket blank length, a straight-line cutter reciprocally mounted adjacent the path of the gasket strip between said gasket strip forming means and the said aperture, cutter drive means adapted to move said cutter during the interval between gasket strip movement to sever said gasket strip and to thereby



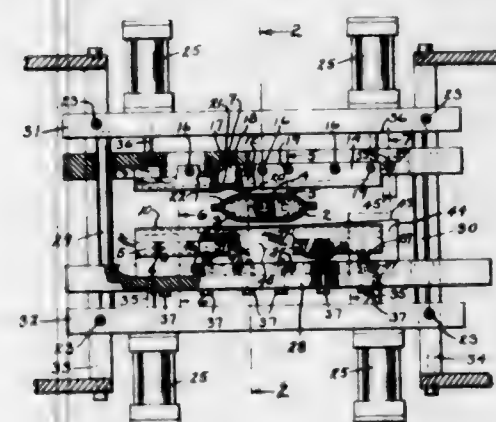
cut a gasket blank therefrom a plurality of gasket blank lengths from the end while the gasket strip is stationary whereby subsequent advancement of said gasket strip by said advancing means moves said gasket blanks above a closure presented beneath said aperture by said closure positioning means, a gasket blank pressing tool, and a reciprocal drive means for said pressing tool to move said pressing tool against the gasket blank above the closure while the closure is at the gasket blank insertion aperture and adapted to move the gasket blank through said aperture and against the closure.

2,999,532

COMBINED SHEAR AND HEAT SEAL APPARATUS

George J. Bursak, 5601 W. Auer Ave., Milwaukee 16, Wis.

Filed Sept. 17, 1958, Ser. No. 761,491
3 Claims. (Cl. 154—42)



1. In an apparatus for transversely sealing and shearing a tube of heat sealable sheet material to form packages therefrom, the combination comprising: a pair of facing support members disposed on opposite sides of said tube and arranged for opposed reciprocal movement toward and away from said tube; a first sealing member mounted on one of said support members and having a sealing face adjacent and transverse to said tube; a second sealing member retractably mounted on the other support member and having a sealing face adjacent and transverse to said tube, said second sealing member being adapted to move between extended and retracted positions with respect to said other support member and being biased toward said extended position; means to heat at least one of said sealing members; a first knife blade mounted

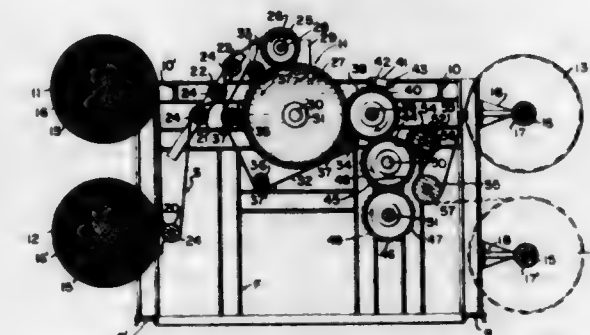
on said one of said support members and having a shearing edge substantially coextensive with the sealing face of said first sealing member; a second knife blade mounted on said other support member and having a shearing edge extending forwardly toward said tube, said shearing edge of said second knife blade extending forwardly further than the sealing face of said second sealing member only when said second sealing member has been moved from said extended position toward said retracted position, whereby opposed movement of said support members toward said tube initially causes the sealing faces of said sealing members to clampingly engage a transverse section of said tube therebetween and continuation of such motion causes said clamping engagement to be maintained while said second sealing member is moved from said extended position toward said retracted position, said shearing edge of said second knife then extending forwardly of the sealing face of said second sealing member to shearingly engage said first knife blade to transversely shear said tube; and bias means to cause said first knife blade and said second knife blade to be maintained in tight shearing engagement.

2,999,533

APPARATUS FOR MAKING BAGS

Lamont Slagel, Denver, and Harry A. Mead, Lakewood, Colo., assignors to Dairy Containers, Inc., Denver, Colo., a corporation of Colorado

Filed May 1, 1959, Ser. No. 810,470
18 Claims. (Cl. 154—42)



1. Apparatus for making bags of flexible, heat sealable material from a strip of said material in flat form having opposed walls in abutting relation and connected at the lateral edges, comprising a rotating cylindrical drum provided with heating units having a position and extent on said drum corresponding to heat seals joining said walls to be produced for at least one bag; means for moving said strip around said drum and into engagement with said heating units; means for producing at least one longitudinal slit in said strip of a predetermined extent and at spaced longitudinal positions along said strip corresponding to the length of a bag; and means for producing a transversely extending series of perforations in said strip at spaced positions along said strip corresponding to the length of a bag.

2,999,534

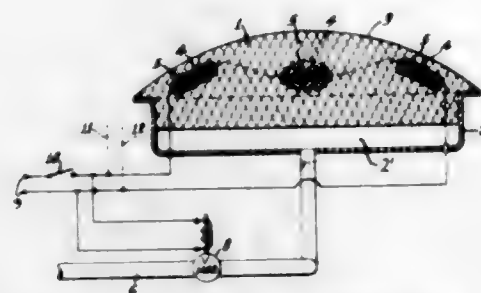
CATALYTIC HEATING DEVICE

Hans Wagner, Osnabrück, Germany, assignor to Fireless Gas Heater Corporation, Houston, Tex., a corporation of Texas

Filed Aug. 13, 1956, Ser. No. 603,708
4 Claims. (Cl. 158—99)

1. A catalytic heater for operation with gaseous or gasified liquid fuel comprising, a catalytic heating pad made of a material of low catalytic activity, said pad having a plurality of spaced portions made of a material of high catalytic activity and being embedded internally of said pad and entirely enclosed by said pad entirely beneath the outer surface thereof and spaced from said outer surface, electric heating elements operatively associated with said spaced portions of high catalytic activity,

respectively, for causing vigorous catalytic reaction in spaced portions, whereby said spaced portions of high

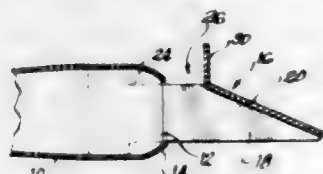


catalytic activity activate said heating pad in adjacent spaced portions thereof for accelerating the catalytic operation of said heating pad.

2,999,535

FLAME SHAPERS

Jerry T. Alger, Chicago, Ill., assignor, by mesne assignments, to Configured Tube Products Co., St. Louis, Mo., a corporation of Missouri
Filed Mar. 20, 1957, Ser. No. 647,302
5 Claims. (Cl. 158-113)



4. In a burner, the combination comprising a generally horizontal mixture tube with a front end having an axial discharge port therein to discharge fuel-air mixture from said tube, a generally inverted channel-shaped flame shaper having a substantially straight planar top wall with its rear end spaced forwardly from the end of said tube and inclined downwardly between its rear and front ends across the axis of said tube for deflecting most of the mixture downwardly to form a main flame portion, a pair of opposed laterally spaced sidewall flanges projecting downwardly from said top wall and extending generally from rear to front along said top wall to confine the portion of the mixture intercepted by said top wall, said sidewall flanges having leg portions constituting rearward extensions thereof and extending rearwardly of the rear end of said top wall and terminating in mounting portions secured to said mixture tube, said leg portions having a gap therebetween opening upwardly between said front end of said tube and said rear end of said top wall, and a flame-retaining wall connected to the rear end of said top wall at the front end of said gap and extending upwardly from said top wall and in a transverse direction relative to the general direction of said sidewall flanges, said flame-retaining wall being spaced forwardly from the front end of said tube and opposite a portion of said port for carrying a portion of the mixture upwardly through said gap to form a relatively small upwardly directed secondary flame portion.

2,999,536

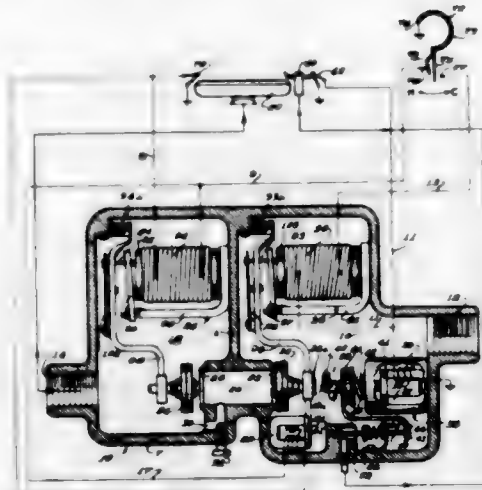
FLOW CONTROL DEVICE

Joseph C. Schwallbach, Wauwatosa, Wis., assignor to Baso Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Nov. 17, 1955, Ser. No. 547,462
17 Claims. (Cl. 158-123)

1. A flow control device for fluid fuel burning apparatus having a burner comprising, an on-off first flow control member having flow-preventing and flow-permitting positions, electroresponsive operator means for said flow control member, a second flow control member having increased flow-permitting and reduced flow-permit-

ting positions, and interlock means associated with said first flow control member and responsive to the heat of burning fuel at said burner for overcalling said operator

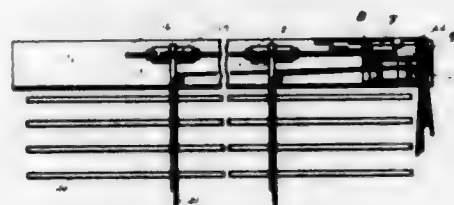


means and preventing movement of said first flow control member from flow-preventing to flow-permitting position when said second flow controlling member is in reduced flow-permitting position.

2,999,537

VENETIAN BLINDS

Holger Bror Martin Falk, Abackagatan 6, Goteborg, Sweden
Filed Sept. 1, 1959, Ser. No. 837,507
2 Claims. (Cl. 160-177)

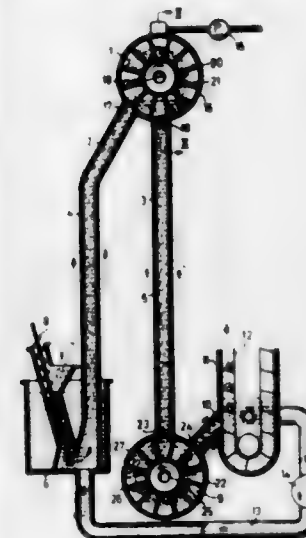


1. A control mechanism for Venetian blinds, comprising an elongated channel-strip member for carrying the slat assembly, a longitudinally extending spindle journaled therein, a plurality of rollers carried by said spindle to which blind ribbons may be attached for adjusting the inclination of the slats, an angle-piece of sheet material disposed within said channel member adjacent one extreme end thereof, said angle-piece having a bottom portion flush with the bottom of said channel member with one end coincident with said extreme end of the channel member, a first upstanding wall at the opposite end of said bottom portion of said angle-piece, said wall having an aperture therethrough for passing pull cords of Venetian blinds serving to hoist the slat assembly, said aperture extending longitudinally of the channel member, a guide roller for the pull cords rotatably mounted within the angle-piece and adjacent said extreme end of the channel member, said one end of said angle-piece including a second upstanding wall opposing said first wall in spaced relation, a control roller being rotatably mounted in said spaced upright walls, said control roller being provided with an axially extending recess fixedly receiving the adjacent end of said spindle, said control roller having reduced end portions to facilitate mounting the roller in said walls, and said walls having upward opening recesses for receivably supporting said control roller, said control roller being provided with a diametrically extending through bore for receiving a control cord for rotating said roller, and said angle-piece having two apertures on either side of said control roller for receiving the respective portions of a control cord.

2,999,538

IMPREGNATION APPARATUS

Heinrich Hüllmann, Württemberg, Germany, assignor to Escher Wym G.m.b.H., Ravensburg, Germany, a corporation of Germany
Filed Aug. 31, 1959, Ser. No. 837,052
Claims priority, application Germany Sept. 9, 1958
9 Claims. (Cl. 162-237)



1. An apparatus for impregnating fibrous materials with digesting liquid in the production of cellulose or semi-cellulose comprising an introduction container for the fibrous materials to be impregnated; a vacuum chamber; an impregnation chamber; a separation chamber; flow connections defining a circuit for impregnation liquid which leads serially through said introduction container, then through said vacuum chamber, then through said impregnation chamber, then through said separation chamber and then again through said introduction container; means in said circuit for circulating the impregnation liquid; means for introducing the fibrous materials to be impregnated into the introduction container and for continuously admixing them with the circulating liquid; means arranged in said separation chamber for separating the fibrous materials together with impregnation liquid absorbed and adsorbed by them from the circulating liquid; the vacuum chamber comprising a generally cylindrical housing having circumferentially spaced openings for the inlet and outlet of the circulating liquid; a rotary bucket wheel arranged within said housing coaxially therewith and provided with radially extending partitions for conveying the fibrous materials from the inlet opening to the outlet opening; said partitions having strainer-like orifices which allow the impregnation liquid to pass from the inlet opening to the outlet opening in opposite direction to the rotation of the wheel but not the fibrous materials contained herein; and pump means for removing separated air from the vacuum chamber and maintaining the vacuum.

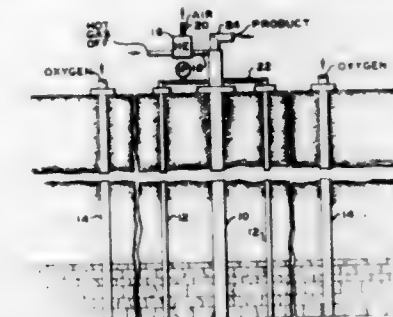
2,999,539

IN SITU COMBUSTION PROCESS

William S. Walls, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 694,945
8 Claims. (Cl. 166-39)

5. A process for initiating combustion in a permeable carbonaceous stratum and recovering hydrocarbons therefrom by in situ combustion comprising passing a gas at a temperature in the range of about 225 to 400° F. radially thru an annular section of said stratum between an ignition borehole and a series of surrounding first injection boreholes spaced from said ignition borehole a distance of several feet so as to heat said section to a temperature of at least the boiling point of connate water and not

above 350° F.; while said section is at said temperature, heating the carbonaceous material at said ignition borehole to ignition temperature; passing air thru said section from said first injection boreholes to the hot area at said ignition borehole to initiate combustion of carbonaceous material; continuing air injection thru said first

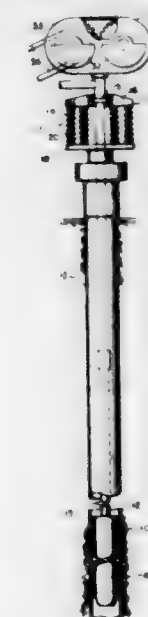


injection boreholes to advance the resulting combustion zone outwardly thereto; closing said first injection boreholes and injecting air into a series of second injection boreholes radially outside of said first series to feed said combustion front; and recovering hydrocarbons produced by the combustion thru said ignition borehole.

2,999,540

SONIC HEATER FOR WELLS

Albert G. Bodine, Jr., 13120 Moorpark St., Sherman Oaks, Calif.
Filed July 20, 1959, Ser. No. 828,340
18 Claims. (Cl. 166-39)



1. The process of heating production well fluids within and surrounding a production well bore in a producing oil field, that comprises: generating sonic wave energy at the ground surface, transmitting said sonic wave energy down the well bore to a production region via a solid elastic wave transmitting column, and converting the sonic wave energy received at the lower end of said column to heat energy by oscillating a member coupled to said lower end of said column relative to a heat generating body, while holding said body in frictional contact therewith.

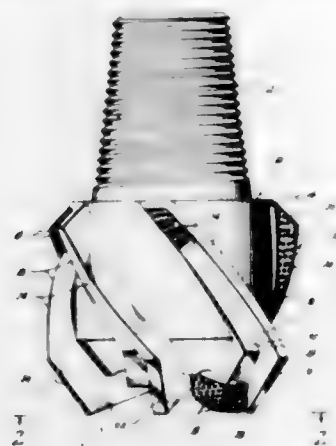
2,999,541

MILLING TOOL

Robert B. Kinzbach and William Strecker, Houston, Tex., assignors to Kinzbach Tool Company, Incorporated, Houston, Tex., a corporation of Texas
Filed Oct. 11, 1957, Ser. No. 689,650
9 Claims. (Cl. 166-55.7)

1. A milling tool comprising a generally cylindrical body having a threaded portion of reduced external di-

ameter at its upper end for connection to the lower end of a drill string for rotation with the string, external cutting blades on the body having lower portions extending radially from the center of and projecting downwardly from the lower end of said body in angularly spaced relation and out of diametrical alignment



relative to each other to prevent said lower portions from assuming positions in straddling relation to the end portion of a work piece positioned in endwise abutting engagement therewith and portions of helical shape extending radially outwardly from the body and upwardly from the outer ends of said lower portions.

2,999,542 LOCATOR FOR WELL CASING COLLAR SPACES AND SIMILAR RECESSES

William D. Myers, Norwalk, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed June 24, 1957, Ser. No. 667,443
14 Claims. (Cl. 166-64)

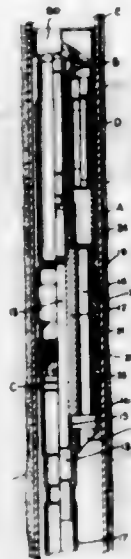


1. In apparatus adapted to be run in a well conduit having a recess therein: a supporting member adapted to be moved longitudinally in the well conduit; a locating member pivotally mounted on said supporting member and movable laterally of said supporting member and adapted to move into the recess; means engaging said locating member at its pivot region to shift said locating member laterally outward of said supporting member and into the recess; and cam means on and movable with said supporting member and engaging said locating member to shift said locating member laterally inward from said recess in response to longitudinal movement of said supporting member in the well conduit.

2,999,543 PARALLEL TUBULAR STRING APPARATUS FOR WELL BORES

William D. Myers, Norwalk, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed July 11, 1958, Ser. No. 748,008
18 Claims. (Cl. 166-129)



1. In apparatus to be disposed in a well bore: a body member having first and second passages therein, said first passage having a larger diameter than said second passage; first guide means on said body inclined downwardly toward and extending to said second passage and adapted to be engaged by a second tubular string extending from the top of the well bore to direct said second tubular string to said second passage; and a second guide means on said body inclined downwardly from said second passage toward and extending to said first passage and adapted to be engaged by a first tubular string extending to the top of the well bore to direct said first tubular string to said first passage.

2,999,544 RETRIEVABLE PARALLEL STRING WELL PACKER APPARATUS

Martin B. Conrad, Downey, and William S. Althouse, Jr., Arcadia, Calif., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed June 9, 1958, Ser. No. 740,709
17 Claims. (Cl. 166-134)



1. In a well apparatus adapted to be set in a well conduit disposed in a well bore: a body; normally retracted means on said body operable by manipulation of

said body for anchoring said body to the well conduit against downward movement therewithin; a plurality of longitudinally spaced expanders on said body, each expander having an expander surface tapering in a downward and inward direction; a plurality of sets of normally retracted slips engaging said expander surfaces; said expanders and slip sets being arranged in series and being interassociated; means for shifting said expanders and slips simultaneously longitudinally of each other to expand said slips into engagement with the well conduit; said slips having conduit engaging teeth facing in an upward direction to prevent upward movement of said body in the well conduit.

2,999,545 RETRIEVABLE PLUG

Herbert L. Bigelow, Whittier, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed June 3, 1957, Ser. No. 663,288
7 Claims. (Cl. 166-153)



1. In a plug adapted for longitudinal movement in a well conduit: a valve device having a sealing surface adapted to engage a companion seat in the well conduit; said device having a passage through which fluid may flow between regions externally of said device above and below said sealing surface; said device having a valve seat therein surrounding said passage; a valve member movable downwardly into engagement with said seat; said valve member having means connectible to a wire line to be elevated by said wire line from said seat to open said passage; and means interconnecting said device and valve member with said valve member elevated from said seat, whereby said device and valve member are movable together upwardly in the well conduit.

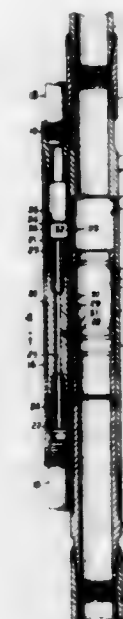
2,999,546 SIDE PORT VALVE ASSEMBLY WELL TOOLS

George G. Grimmer and Harry B. Schramm, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Filed Jan. 30, 1957, Ser. No. 637,124
30 Claims. (Cl. 166-224)

1. A flow controlling device for use with a pair of well flow conductors including: an elongate tubular body member connectable in one of said flow conductors; a tubular valve housing disposed exteriorly of said body member and extending parallel thereto and adapted to be connected in the second of said flow conductors; said flow controlling device having a lateral port means communicating between the interior of said body member and the interior of said valve housing; a valve member mounted in said valve housing for movement therein from a first position opening said port means to a second

position closing said port means; a sleeve mounted in said body member and slidable therein; means extending between and engaging said sleeve and said valve member for connecting said sleeve to said valve member for causing said valve member to move with said sleeve

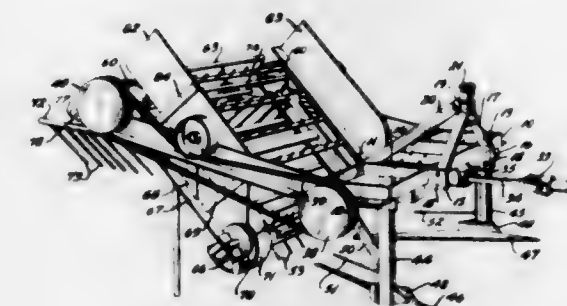


whereby movement of said sleeve moves said valve member from said first position to said second position; said sleeve having an upwardly facing shoulder and a downwardly facing shoulder engageable by a suitable shifting tool to move said sleeve.

2,999,547 PEANUT DIGGER AND SHAKER

William Redden Long, Tarboro, N.C., assignor to Long Manufacturing Company, Tarboro, N.C.

Filed Jan. 21, 1960, Ser. No. 3,954
9 Claims. (Cl. 171-101)



1. A combined peanut digger and shaker comprising a frame including a three-point hitch for attachment to a tractor, an endless conveyor carried by said frame, a pair of correspondingly spaced sprockets one at each side of said frame, endless chains about each pair of sprockets, spaced cross bars attached along the lengths of said chains, spaced prongs carried by said cross bars, striker bar means across and of a length substantially equal to the width of the conveyor and mounted in association with said conveyor to move between the cross bars thereof and to strike the vines carried by the conveyor to impart a jarring blow thereto, a pair of angularly disposed plow blades supported below the forward portion of said frame and adapted to sever the tap roots of the peanuts when the machine is operated, and means for attaching the machine to a tractor in a manner that it can be both pulled and the conveyor driven by the tractor.

2,999,548

REVERSIBLE DISC PLOW

Philip D. Wenzel, Stockton, Calif., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Mar. 30, 1960, Ser. No. 18,750
8 Claims. (Cl. 172-212)



1. A reversible disc plow implement having a main frame, a beam pivoted on said frame so as to be swingable on a substantially vertical axis to reverse the plowing direction, means for swinging said beam, a plurality of spaced, axially vertical plow axes rotatably mounted on said beam, discs on said axes, a support pivotally mounted on said implement so as to rotate on an axis extending approximately parallel with the median line of said implement, a rocker mounted on said support so as to rock about an axis approximately parallel with and below the support axis, means synchronized with said beam-swinging means for moving said rocker clockwise about its axis when viewed from the rear when said beam is swung from right-hand plowing to left-hand plowing and vice versa, and a side-thrust-resisting furrow wheel mounted to rotate on said rocker.

2,999,549
DRILLING

Hal Stratton, Pasadena, Calif., assignor to Shell Oil Company, Continental Oil Company, both corporations of Delaware, Superior Oil Company, Union Oil Company of California, both corporations of California, all of Los Angeles, Calif.

Filed Sept. 30, 1957, Ser. No. 687,003
14 Claims. (Cl. 175-5)



1. Apparatus for drilling a hole in a formation underlying a body of water comprising a floating vessel having a cellar opening at its bottom into the water, means for anchoring the vessel over the formation, a rotary drilling derrick mounted on the vessel over the cellar, a derrick floor disposed over the cellar, a rotary table mounted in the derrick floor, an outwardly extending track mounted on the vessel with one end nearer the rotary table than the other end, a carriage adapted to move on the track, an elongated and downwardly extending scabbard in the cellar, a pivot connecting the upper portion of the scab-

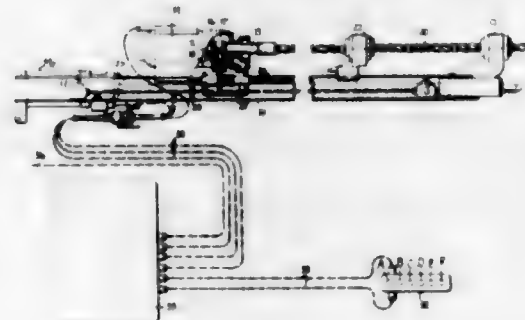
bard to the carriage, and means for moving the carriage to carry the scabbard toward and away from the rotary table.

2,999,550

DRILLING MACHINE

Jean Gerentes, Saint-Etienne, France, assignor to Constructions Electro-Mecaniques de Saint-Etienne (Ancienne Usine Wageor), Saint-Etienne, France, a corporation of France

Filed Oct. 30, 1957, Ser. No. 693,475
Claims priority, application France Oct. 31, 1956
1 Claim. (Cl. 175-33)



A variable feed drill comprising a drilling tool, a longitudinally movable drilling tool carrier, a three-phase main motor coupled to and rotating said tool, a threaded member, a nut member engaging the threaded member, one of said members being longitudinally fixed, the other of said members being coupled to said carrier for moving the same, said three-phase motor rotating said other member, an auxiliary reversible motor rotating said one member whereby said carrier is moved in accordance with the difference between motor speeds, the auxiliary motor being a three-phase motor comprising at least two field windings including a different number of poles so that said auxiliary motor has at least two speed ranges each corresponding to one of said windings, the auxiliary motor having a greater slip than the first said motor and having a plurality of speed ranges, a control device independent of and coupled to the auxiliary motor for commutating the field windings thereof thereby automatically changing the range in accordance with the type of substance to be drilled, said control device comprising an electro-mechanical control including manually operated contactors, said control being coupled to said motors for a manual control of the movement of the carrier and of the speed range of the auxiliary motor, an over-current relay disposed in the current supply of the first said motor, and circuits coupled to the auxiliary motor and relay, said relay actuating the winding of the auxiliary motor having the larger number of poles when current in the first said motor achieves a predetermined level.

2,999,551

METHOD OF AIR DRILLING

Robert P. Murphy, Jr., Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Sept. 23, 1957, Ser. No. 685,406
9 Claims. (Cl. 175-68)

1. In a method of drilling a well in which a gas is used as the circulation fluid and wherein the rate of influx of aqueous formation fluids into the well bore is sufficiently high to interfere with the effective removal of cuttings from said well during the drilling thereof but said influx is not in excess of about 2 barrels per hour, the improvement which comprises injecting into said gas before it passes into said well, a finely divided solid non-toxic oil soluble metal soap derived from a metal selected from the group consisting of aluminum, magnesium, calcium, zinc and lithium, and from an aliphatic carboxylic acid having from about 8 to 18 carbon atoms.

2,999,552

TUBULAR DRILL STRING MEMBER

Fred K. Fox, 242 Stoney Creek Drive, Houston, Tex.
Filed Mar. 4, 1959, Ser. No. 797,180
5 Claims. (Cl. 175-323)



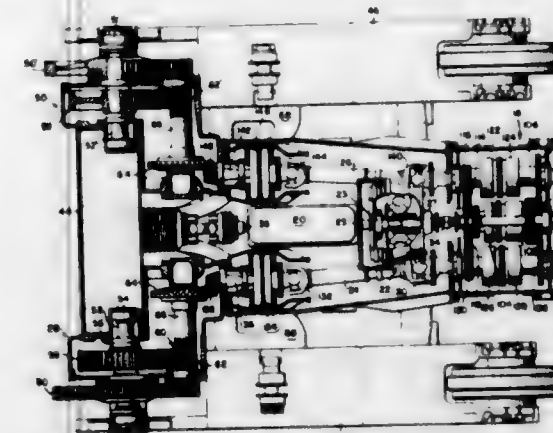
2. An integral, elongate tubular member having means at its opposite ends for connection in a drill string and at least one helical groove in its outer peripheral surface, which has a base forming, in any section transversely of said member, a line which is at least substantially flat and intersects at its opposite ends with said peripheral surface.

2,999,553

VEHICLE DRIVE ARRANGEMENT

Daniel M. Schwartz, Salt Lake City, Utah, assignor to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware

Filed Feb. 27, 1958, Ser. No. 717,972
3 Claims. (Cl. 180-6.7)



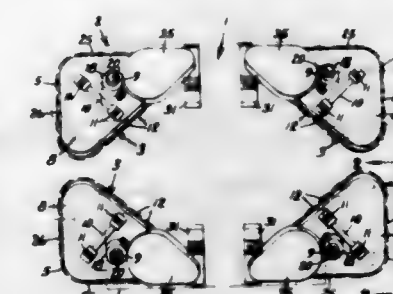
1. A mobile material handling machine having a main frame, a traction unit transmission at the forward end of the main frame, said transmission unit including at least an input shaft and dual output shafts, each of said shafts extending rearwardly from said traction unit transmission, said dual output shafts being independently connected to change speed and reverse gears in the traction unit transmission, a prime mover mounted on said main frame rearwardly of the traction unit transmission, means drivably connecting the prime mover to the input shaft of the traction unit transmission, dual final drives at the rearward end of the main frame, paired traction units for the material handling machine, means connecting each of the traction units to its respective final drive, dual torque shafts independently connecting the dual output shafts from the traction unit transmission to the dual final drives whereby the traction units are independently and simultaneously operable in either direction of rotation.

2,999,554

MACHINE PROPELLING MECHANISM

John H. Wagner, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 3, 1958, Ser. No. 746,518
20 Claims. (Cl. 180-6.48)



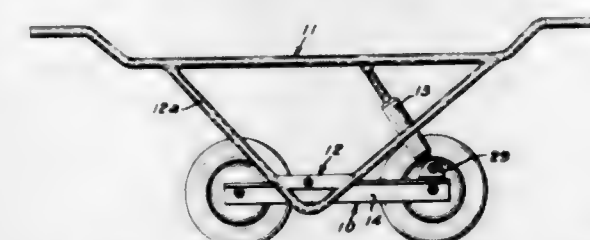
1. A crawler mounted machine propelling means comprising a frame having angularly related portions extending in directions one transversely to the other providing guiding means, endless crawler tread means guided for circulation along said guiding means of said frame portions, and means for adjustably mounting said frame whereby the latter may be adjusted selectively to bring said crawler tread means of one portion or the other into contact with the ground whereby the machine may be propelled in relatively different directions.

2,999,555

MOTORIZED LITTER

Malcolm Brooks Stroud, 296 Hope Ave., Santa Barbara, Calif., and Donald Floyd Greene, 318 E. Gutierrez St., Santa Barbara, Calif., assignors to one-third to Harry W. Brelsford, Santa Barbara, Calif.

Filed Aug. 29, 1957, Ser. No. 680,939
3 Claims. (Cl. 180-19)



1. A motor driven litter comprising: a wheel frame including a pair of parallel frame members; a pair of wheels mounted in line between the frame members; a motor mounted on the wheel frame; a driving connection between the motor and the wheels; an elongated litter frame disposed above the wheel frame; supports extending downwardly from each side of the litter frame to the motor frame; means for pivoting the litter supports to each frame member of the motor frame along a horizontal transverse axis and disposing the direction of elongation with the line of the wheel pair, and means to limit the rate of angular movement between said wheel frame and said litter frame about said pivot, said pivot and said means being the only connections between said wheel frame and said litter frame whereby said litter frame may be readily maintained in horizontal position regardless of the inclination of the wheel frame in ascending or descending hills.

2,999,556

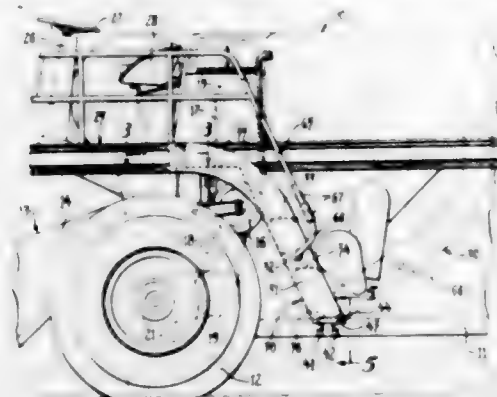
OPERATOR'S PLATFORM FOR COMBINES

Donald S. Horne, Robert Ashton, and Leslie L. Kephay, Toronto, Ontario, Canada, assignors to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed Dec. 18, 1959, Ser. No. 860,535
3 Claims. (Cl. 180-89)

1. In a combine having a body supported by ground engaging wheels which include a front wheel, the com-

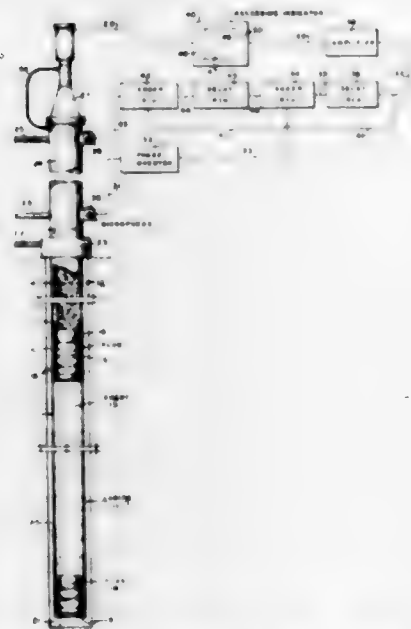
bination comprising, an operator's platform mounted on the top front of said body at a level above the top of said front wheel, an inclined frame extending fore and aft of said body from said platform back over said front wheel to a point near the bottom of said body, supports on said frame permitting an operator to easily climb to



and descend from said platform, and horizontal hinge structure joining said frame and said body at said point arranged so that said frame can be tilted about a horizontal axis back away from the platform to make accessible that area of the body which is adjacent said front wheel.

2,999,557 ACOUSTIC DETECTING AND LOCATING APPARATUS

Edward W. Smith, Melrose Highlands, Mass., and George V. Copland, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware
Filed May 28, 1956, Ser. No. 587,765
20 Claims. (Cl. 181-5)



7. Apparatus for determining the depth of a plug in a well comprising a conduit having liquid therein, a source of acoustic energy operatively coupled to said liquid, acoustic energy detecting means operatively coupled to said liquid adjacent the top portion of said conduit, and circuit means operatively connected to said detecting means for determining the distance of said plug therefrom.

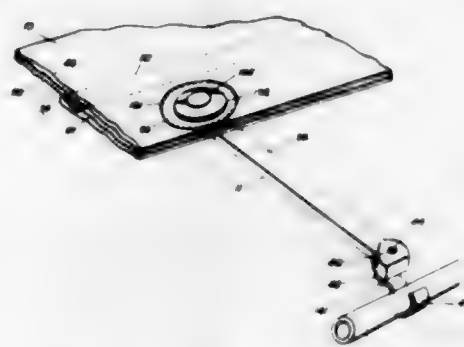
2,999,558 STRAP FOR A TUMBLING DEVICE

Joseph H. Bohrer, Sr., Erie, Pa., assignor to Continental Rubber Works, Erie, Pa., a corporation of Pennsylvania

Filed July 31, 1957, Ser. No. 675,399
3 Claims. (Cl. 182-139)

1. A tumbling device comprising a frame, a tumbling surface, tensioning members attaching said tumbling sur-

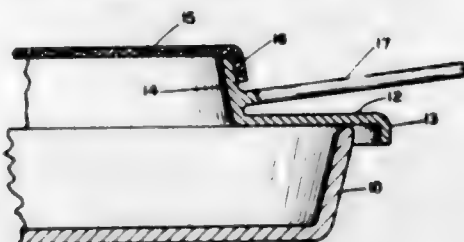
face to said frame, said frame comprising side members and end members defining an opening, each said tensioning member having one end thereof attached to said tumbling surface and the other end thereof attached to said frame, said one end of each said tensioning member having a head integrally attached thereto by means of a neck portion, spaced holes in said tumbling surface adjacent the periphery thereof, said neck portions each being dis-



posed in one of said holes with said heads having an outwardly directed flange overlying the top side of said tumbling surface and the bodies of said tensioning members being disposed against the bottom side thereof below said tumbling surface, and means to attach the ends of said tensioning members opposite said heads to said frame, said heads, neck portions, and bodies of said tensioning members being made of resilient rubber like material.

2,999,559 SPLATTER GUARD FOR FRYING PANS AND THE LIKE

Samuel D. Boyer, 15390 West U.S. 40, Golden, Colo.
Filed Apr. 4, 1958, Ser. No. 726,447
3 Claims. (Cl. 183-1)



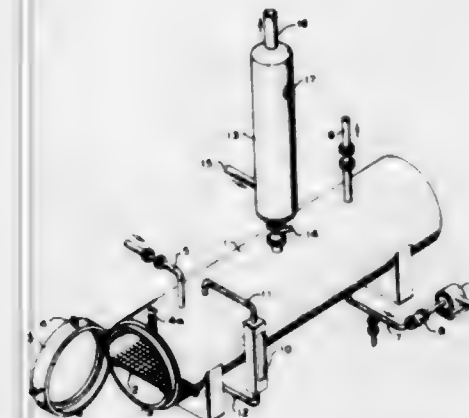
1. A splatter preventing cover for frying pans and the like comprising a substantially flat metal ring adapted to rest on the top edge of a pan, said ring having a downwardly extending flange about its outer periphery to prevent its lateral displacement from a pan on which it rests and an upwardly extending flange about its inner periphery and defining a large central opening, and a disc of disposable moisture pervious fibrous sheet material having a flange formed thereon about its outer periphery and fitting the outer wall of said upwardly extending flange for holding said disc in position on said ring, said disc being held in position by engagement of its flange about said upwardly extending flange whereby said disc falls from said ring when said ring is inverted.

2,999,560 SEPARATION OF FLARE SYSTEMS

Charles L. Seefuth, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 20, 1956, Ser. No. 629,729
3 Claims. (Cl. 183-2.5)

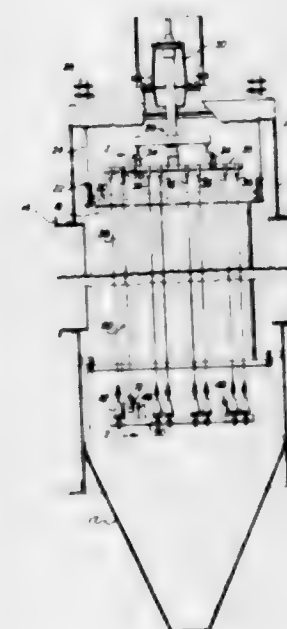
1. An apparatus comprising in combination a horizontally disposed first vessel containing a sole horizontal screen separating said vessel into an upper section and a lower section, said vessel having at least one removal end; means for introducing gas to said vessel; separate conduit means for venting the upper section of said

vessel; means for withdrawing liquid from the lower section of said vessel; a second vessel disposed directly above and communicating with the upper section of said first vessel through a valved means; means for introducing a



2,999,561 ELECTRICAL PRECIPITATOR APPARATUS

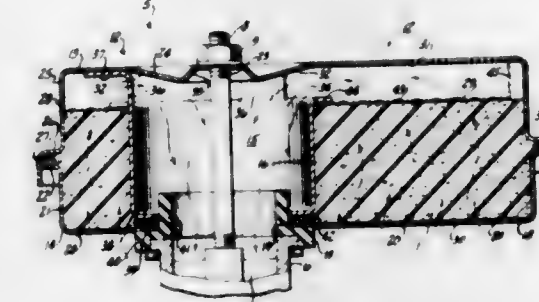
Joseph Phyl, Fanwood, N.J., assignor to Research-Cottrell, Inc., Bridgewater Township, N.J., a corporation of New Jersey
Filed Nov. 10, 1959, Ser. No. 851,993
4 Claims. (Cl. 183-7)



1. In an electrical precipitator having a dirty gas inlet and a clean gas outlet, a high tension frame member and a steady frame member spaced therefrom, a plurality of discharge wires connected to and extending between said frame members and complementary extended surface collecting plates, the improvement comprising a rigid latticed trussed frame interconnecting the spaced frame members, said rigid latticed trussed frame comprising a pair of substantially rigid stays, the bottom extremity of each of said stays being connected to one of said spaced frame members, the upper extremity of each of said stays being connected to the other of said spaced frame members and a plurality of substantially rigid lattice members interconnecting said stays.

2,999,562 AIR CLEANER

Leo J. Lechtenberg, Elm Grove, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 24, 1960, Ser. No. 17,401
7 Claims. (Cl. 183-44)



high velocity gas stream containing liquids and solids entrained therein into a lower portion of said second vessel, said second vessel being adapted for phase separation of said gas stream; and means for flaring the gas from said second vessel.

1. An air cleaner of the character described comprising: a cup-like lower housing member having an imperforate side wall and apertures in its bottom wall providing air inlet and outlet ports; a laterally outwardly projecting flange around the rim of the lower housing member, a foam plastic filter element entirely filling the lower housing member with the bottom of the element seated upon the bottom wall of the housing; an integral laterally outwardly projecting ridge extending around the perimeter of the filter element and overlying the flange on the lower housing member; the filter element having a hole therethrough in register with the air outlet port in the lower housing member; an imperforate liner in said hole in the filter element, the bottom end of the liner being contiguous to the bottom wall of the lower housing member; a cover member cooperable with the lower housing member and the filter element to constrain air entering the inlet port in the bottom wall of the lower housing member to flow upwardly through the filter element and then downwardly through said liner and the outlet port, said cover member having an imperforate top wall spaced above the top surface of the filter element and a laterally outwardly projecting peripheral flange on its lower edge which opposes the flange on the lower housing member and overlies the ridge on the filter element; and means for drawing the cover member bodily downwardly toward the lower housing member to cause the flange on the cover member to cooperate with the flange on the lower housing member in clampingly compressing said ridge on the filter to thus provide a seal between the lower housing member and the cover.

2,999,563 ARRANGEMENT FOR SEPARATING OUT FINE SOLID PARTICLES DISPERSED IN GASES

Julius Wehn, Leverkusen, and Hans Rumpf, Karlsruhe, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Oct. 16, 1957, Ser. No. 690,552
Claims priority, application Germany Oct. 19, 1956
5 Claims. (Cl. 183-83)

1. An arrangement for separating out fine solid particles dispersed in gases comprising a cyclone container, a cyclone element which is pervious to gas and said solid particles and which is arranged in said container at a distance from the inside wall and coextensive with respect to said inside wall, means to introduce gas into the interior of said cyclone element in whirling fashion, said cyclone element having a thickness, flexibility and mesh size such that a pulsating deformation of said

cyclone element occurs under the influence of the flow of the particle containing gas through said arrangement



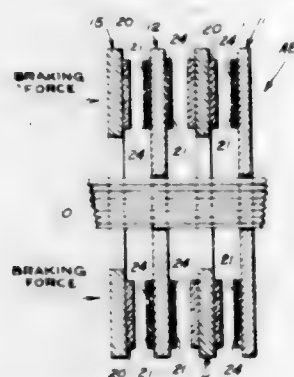
and a common discharge chamber for the cyclone container and the cyclone element.

2,999,564

FRICTION COUPLES

Roswell S. Frichette, Jr., Ramsey, N.J., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,155
3 Claims. (Cl. 188-71)



1. A friction couple comprising a rotary member and an opposing member, engageable one with another, one of said members being faced with a powdered metal friction element composed of nickel aluminide intermetallic bonded by and sintered with nickel metal, and containing a hard ceramic imparting enhanced wear and thermal resistance thereto, and the other of said members being faced with a powdered metal element composed of molybdenum aluminide intermetallic bonded with nickel metal and containing discrete chunks of molybdenum metal dispersed in the nickel bonded molybdenum aluminide, said facings being disposed opposite one another in the friction couple.

2,999,565

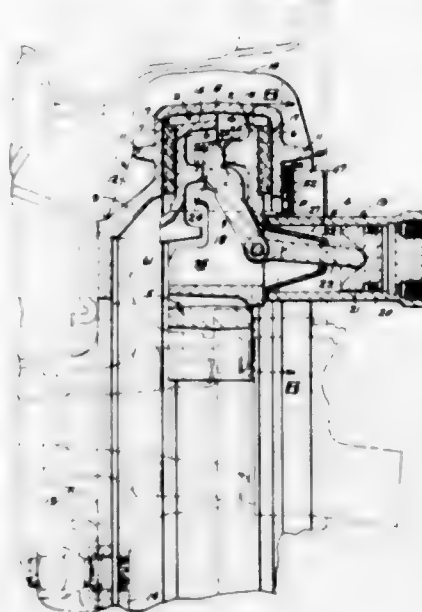
DISK BRAKE

Edwin R. Evans, 3215 W. Shore Drive,
Orchard Lake, Mich.

Filed Mar. 7, 1956, Ser. No. 570,064
4 Claims. (Cl. 188-72)

1. In a disk brake, a rotatable member having axially spaced disks each provided with a generally radial brake surface in opposed, confronting relation to the radial brake surface of the other, an anchor, a pair of friction members supported on said anchor and movable away from each other into frictional engagement with said respective brake surfaces, a third friction member comprising an arcuate backing having friction lining thereon engageable with the side of one of said disks opposite its brake surface for

retarding said rotatable member and limiting axial movement of said one disk and flexing of said rotatable member upon movement of said pair of friction members into engagement with said brake surfaces of said disks, means



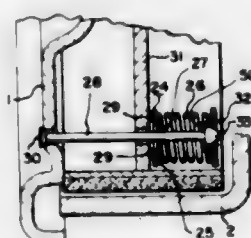
for mounting said third friction member on said anchor including bosses on said arcuate backing and axial recesses in said anchor receiving said bosses, and means for fixing said bosses in said recesses with said friction lining normally spaced from said side of said one disk.

2,999,566

BRAKE SHOE SPRING

Edward J. Naudzius, Lathrup Village, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 24, 1959, Ser. No. 835,561
7 Claims. (Cl. 188-78)



2. A device of the character described comprising in combination; a hold-down brake shoe pin assembly including a vehicle backing plate, a vehicle brake shoe, a brake drum for engaging said shoe, a pin mounted on said backing plate and extending through said shoe, a spring cap mounted on said pin, a spring seat contacting said brake shoe, means on said spring seat for limited engagement with said shoe, a coil spring compressibly mounted between said spring cap and said spring seat thereby maintaining resilient contact by said spring seat in a limited area of said brake shoe to retard heat transfer from said brake shoe to said spring.

2,999,567

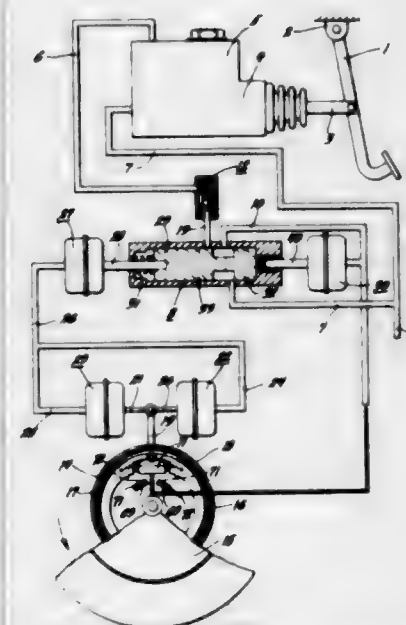
VEHICLE BRAKE

Fred Adams, Clawson, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 19, 1959, Ser. No. 834,876
7 Claims. (Cl. 188-181)

1. In a device of the character described comprising in combination, a hydraulic fluid brake actuating system including means for pressurizing fluid, a vehicle drum brake including hydraulic means for actuating said brake

in communication with said hydraulic fluid brake actuating system, a rotating brake drum connected to a vehicle wheel, a brake support member, a backing plate mounted for limited rotation on said brake support member, brake shoes mounted within said rotating drum for engagement with the inner periphery of said drum, a torque sensing means connected to said backing plate, a torque control means connected to said torque sensing means through a hydraulic means, a control valve mounted in said hydraulic fluid brake actuating system, a pressure



control means mounted in said hydraulic brake fluid actuating system biasing said control valve to a closed position, said torque control means biasing said control valve to a normally open position for normal brake operation when said vehicle wheel is rotating normally, said pressure control means biasing said valve to a closed position to reduce the pressure in the hydraulic brake actuating means when said wheel is skidding and thereby relieve brake actuating fluid pressure and permit normal rotation of said vehicle wheel.

2,999,568

ROOM DIVIDER PARTITIONS

Oskar R. Ludwig and Anthony Pezone, both of
64-25 72nd Ave., Middle Village, N.Y.

Filed May 26, 1960, Ser. No. 31,977
4 Claims. (Cl. 189-34)



1. A partition construction of the character described, comprising a plurality of individual panel sections joined together to form a single partition, each said panel section being provided with end posts of channel shape, a locking member being disposed between the adjacent channel-shaped posts of adjoining panel sections, said locking member being movable from a position wholly

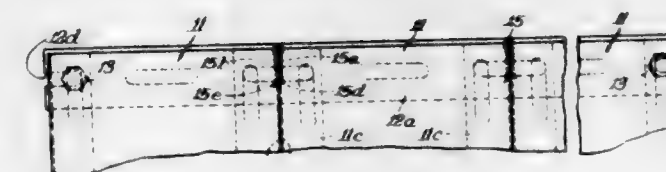
within one of said channel posts to a position partly within each of said channel posts, said latter position being its locking position and the former being its unlocked position, said locking member being a channel provided with a box section at its upper end, one of said channel-shaped posts having a pair of cam faces provided thereon for engagement with said box section of the locking channel, said locking channel being movable upwardly to bring its box section into engagement with one of said cam faces, thereby causing said locking channel to be cammed from its unlocked position wholly within said last-mentioned channel-shaped post to its locking position extending across and overlapping both channel-shaped posts, said locking channel being movable downwardly to bring said box section into engagement with the second cam face in order to cam said locking channel back to its unlocked position wholly within said first-mentioned channel-shaped post.

2,999,569

PANEL CONSTRUCTION

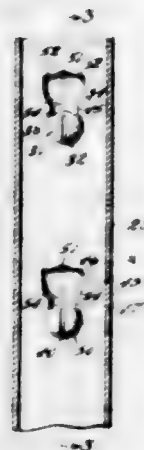
Allen B. Wilson, Chicago, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 16, 1956, Ser. No. 571,991
2 Claims. (Cl. 189-35)



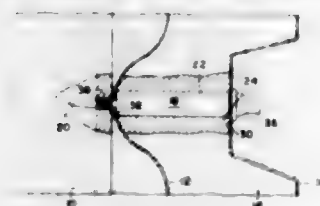
1. A structure comprising a plurality of panels, each panel having a substantially flat body portion, the adjacent edges of adjacent panels having side walls formed thereon and disposed substantially perpendicular thereto and terminating in juxtaposed free ends, inwardly directed flanges formed on each of said side walls and extending therefrom in the same direction as the associated body portion and substantially parallel thereto, and a clip interconnecting adjacent panels, said clip including two resilient arms connected by a U-shaped resilient portion, said U-shaped portion being disposed about the free ends of two adjacent side walls and having an inner maximum dimension greater than the combined thickness of said side walls, said arms pressing against the oppositely directed faces of said adjacent side walls of adjacent panels and lying flat thereagainst for the major part of the length of said arms, the edge of said U-shaped portion and the edge of the outer ends of said arms on each side of said clip lying in a common plane and the planes defined by said edges being parallel and spaced apart a distance equal to the space between said body portion and said flange, whereby portions of said arms extend between and are in contact with the associated flange and the adjacent face of the associated body portion, the ends of said arms opposite the U-shaped portion being directed outwardly away from the associated side wall to facilitate assembly therewith, said edges of said U-shaped portion of said clip and said edges of said outer ends of said arms on each side of said clip being spaced from said adjacent side walls and contacting said body portions and said flanges of said panels at points disposed outwardly of said side walls, all portions of said arms of said clip which are intermediate said U-shaped portion and said outer ends and which are in contact with said side walls of said panels being of reduced width and out of contact with said body portions and said flanges of said panels, said clip serving to hold said adjacent panels firmly together with the surfaces of said body portions lying in common planes.

2,999,570
INTERLOCK
 Edward A. Seitz, 136 E. 3rd St., Lansdale, Pa.
 Filed July 25, 1957, Ser. No. 674,135
 3 Claims. (Cl. 189—36)



1. An interlock connection comprising a first member having a hole extending therethrough and having a slot extending down from the hole, the hole being flat at the edges of the top and recessed upwardly at a position above the slot, and a second member adapted to be interlocked with the first member, and in interlocked position positively interlocked with the first member, having a locking lug projecting therefrom provided with a shank extending into the slot and a head engaging the walls of the slot on the side of the first member remote from the second member, the head being adapted to pass through the hole and the shank diameter being carried in prolongation across the head at the top of the head to form a projection which fits into the recess above the slot, the head on either side of the projection extending straight across.

2,999,571
POWDER-ACTUATED FASTENER
 Peter H. Huber, % Allied Service, N. River Drive, Hampton, Ill.
 Filed Sept. 12, 1958, Ser. No. 760,703
 1 Claim. (Cl. 189—36)



A powder-actuated fastener of the class described adapted to be shot into a support structure, comprising: a relatively short pin having front and rear portions of substantially similar diameters except that said front portion terminates in a forward, sharp, support-penetrating point; and a relatively longer barrel of larger diameter than the pin disposed coaxially rearwardly of the pin at the rear portion of said pin, said barrel having a front radial end and a rear radial end, said front radial end being provided with a forwardly opening coaxial bore receiving said rear portion of the pin so that the point of the pin projects a substantial distance ahead of said front radial end, said bore and said rear portion of the pin being so constructed and cooperative as to effect a joint in which the barrel becomes a rigid, rearward, diametrically enlarged extension of the pin whereby the pin and barrel effect a rigid composite preassembled fastener adapted to be fired as a unit, said front radial end of the barrel affording an abrupt annular front abutment normal to the axis of the pin and barrel and axially offset back from the point for positively abutting the support structure so as to limit penetration of the sup-

port structure by the fastener and to positively space the rear end of the barrel rearwardly from the structure according to the length of the barrel, and said barrel having at its said rear end a coaxial portion of reduced diameter for receiving a second support structure spaced from the first-named support structure by the length of the barrel and said coaxial portion being further adapted to receive a securing means.

2,999,572
EARTH ANCHOR
 John D. Hinckley, 2112 Octavia St., New Orleans 15, La.
 Filed Feb. 12, 1958, Ser. No. 714,741
 2 Claims. (Cl. 189—91)

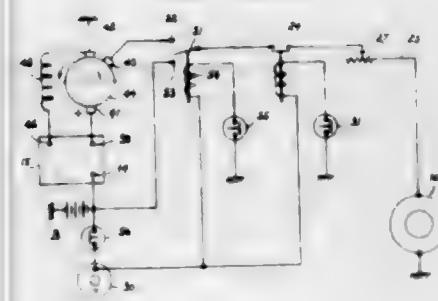


1. An anchor of the class described comprising a rotatable conical boring element having lateral helical flanges thereon, motor means for rotating said element in one direction to advance the element into soil including a cylinder element, a reciprocating piston therein having a swivel connection with said boring element, one of said elements being provided with helical ribs, the other of said elements having helical grooves cooperating with said ribs whereby upon reciprocation of said piston the boring element is rotated with respect to said cylinder element, means for supplying fluid under pressure alternately to opposite sides of said piston, means pivoted on said element engageable with the material being bored for resisting rotation of the element in the opposite direction, said pivoted means being movable out of engagement with said material and disposed in substantially tangential relation to said element when the element is rotated in said one direction and freely swingable outwardly from said element into penetrating engagement with said material when the element tends to rotate in the opposite direction, thereby to resist rotation of said element in said opposite direction, and a plurality of flaps pivoted to said cylinder element, said flaps being swingable from a position wherein they lie against the cylinder element to a position in which they project radially outwardly, the faces of said flaps being inclined with respect to the axis of said cylinder element.

2,999,573
ELECTRIC CONTROL CIRCUIT FOR ELECTRO-MAGNET CLUTCHES
 Jean Maurice and Michel Rist, Paris, France, assignors to Societe Anonyme Francaloe du Ferodo, Paris, France, a corporation of France
 Filed Dec. 17, 1957, Ser. No. 703,422
 Claims priority, application France Dec. 19, 1956
 11 Claims. (Cl. 192—3.5)

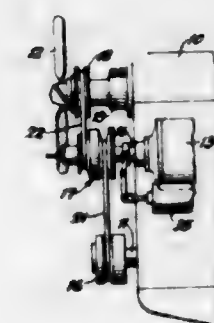
1. In an electric control circuit for an electromagnetic clutch of an automobile vehicle having an engine, driving

wheels, a dynamo having two main brushes and driven by said engine, a transmission having at least two shafts, said transmission being driven by said engine through said clutch and driving said wheels, a storage battery, a cut-out switch coupling said battery to said main brushes of said dynamo, a control coil for said clutch, an auxiliary brush disposed on said dynamo between said main brushes, connecting means for supplying power from said dynamo to said clutch control coil through said auxiliary brush, and a relay inserted in said connecting



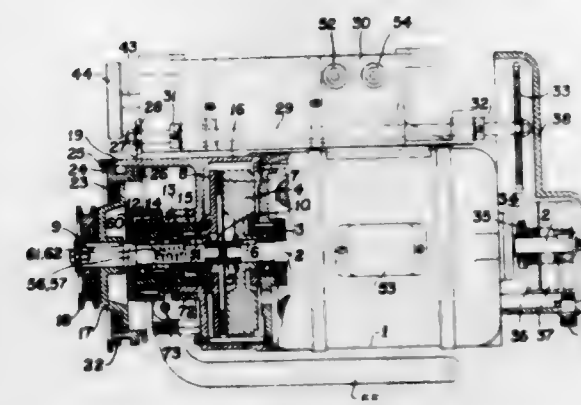
means for selectively connecting said clutch control coil to said battery, the combination with said relay of an exciting circuit for said relay, means for connecting one end of said exciting circuit to said battery, means for grounding the other end of said exciting circuit, a switch in said exciting circuit, means responsive to the speed of one of said transmission shafts, and means operatively connecting said responsive means and said switch for making the relay connecting the clutch control coil to said battery when the speed of said shaft exceeds a predetermined value.

2,999,574
VARIABLE SPEED DRIVE
 Adiel Y. Dodge, % A. Y. Dodge Co., 206 S. Main St., Rockford, Ill.
 Filed Oct. 12, 1959, Ser. No. 845,785
 8 Claims. (Cl. 192—3.5)



1. A variable speed drive for engine accessories comprising a variable driving sheave, an accessory shaft, a variable driven sheave rotatably mounted on the accessory shaft, a belt connecting the driving and driven sheaves, means including parts responsive to the speed of the accessory shaft to vary the effective diameter of the driven sheave in a direction tending to maintain the speed of the driven sheave constant regardless of the speed of the driving sheave, a releasable clutch connecting the driven sheave to the accessory shaft, and control means responsive to the speed of the accessory shaft to release the clutch when the speed exceeds a predetermined amount.

2,999,575
DRIVE AND STOP APPARATUS FOR SEWING MACHINES
 Max Schwab, Verl. Scheffeltstr. 55, Schwetzingen, Baden, Germany; Olga Brunhilde Schwab, née Bonner, sole devisee of said Max Schwab, deceased
 Filed Apr. 15, 1953, Ser. No. 349,061
 Claims priority, application Germany Apr. 17, 1952
 9 Claims. (Cl. 192—146)



1. An electric power source for a sewing machine which enables the operator to stop the sewing machine with the needle bar in a pre-elected dead position, the said power source comprising an electric motor having an extended motor shaft, mounted on the said motor shaft a magnetic clutch comprising two adjacent elements, one of the said elements being fixedly attached to the said motor shaft while the other of the said elements is mounted to rotate freely about and to move axially on the said motor shaft in and out of operative contact with the first of the said clutch elements, a coupling frame at one side of the motor, a first coupling element fastened to the end of the said motor shaft within the coupling frame, a coupling shaft mounted within the coupling frame in line with the said motor shaft, a second coupling element mounted on the said coupling shaft to move axially on the said coupling shaft in and out of operative contact with the said first coupling element, spring tension means to keep the said second coupling element out of contact with the said first coupling element, a brake disk fitted to the said coupling shaft to move axially on the said coupling shaft, a brake drum mounted within the said coupling frame about the said brake disk, a sheave for driving the sewing machine attached to the free end of the said coupling shaft, a lever connected at one end to the foot control of the sewing machine and linked at the other end to means counteracting the spring tension and moving the said second coupling element into operative contact with the said first coupling element when the said lever is moved into one position and moving the said brake disk into operative contact with the said brake drum when the said lever is moved into the opposite position, means to rotatably connect the said brake drum to a third shaft arranged parallel to the said first named shafts, and the said third shaft to the said second element of the magnetic clutch, a stub shaft arranged parallel to the afore-named shafts and being adaptable to be operatively connected to one of the main drive shafts of the sewing machine, three power contacts arranged adjacent to the said stub shaft, three friction rings mounted on the said stub shaft in operative alignment with the said power contacts, the first of the said friction rings being adapted to supply power to the said magnetic clutch to keep it closed during the normal operation of the sewing machine, the other two of the said friction rings having circuit breaking notches axially offset against each other, and a switch connected to the foot control of the sewing machine which cuts the power passing through the said first friction ring and inserts one of the said other two friction rings in the circuit of the magnetic clutch.

2,999,576
IMPROVEMENTS IN APPARATUS FOR RECEIVING, ASSORTING AND STORING OF EMPTY MILK BOTTLES AND THE LIKE

Allan Gustaf Otto Glembring, 19-B Norra Gubberogatan, Goteborg, Sweden

Filed Jan. 16, 1957, Ser. No. 634,516

Claims priority, application Sweden Jan. 20, 1956

6 Claims. (Cl. 194-4)



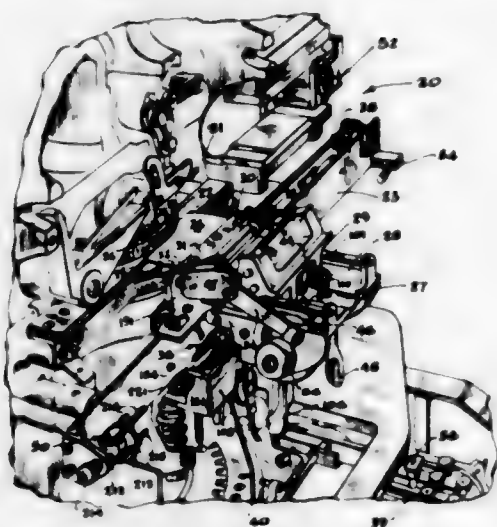
1. An apparatus for receiving, assorting and storing different size bottles and the like, comprising a housing including an intake end and a lower end, cross beams disposed in said housing defining a plurality of tandemly arranged compartments, a stop member for said bottles carried by each of said cross beams and said lower end, said housing being provided with a channel defining a guide path for movement of said bottles from said intake end to said lower end, each of said cross beams being spaced from the bottom of said channel a predetermined distance to provide respective openings of different sizes permitting further movement of said bottles towards said lower end whose diameters are smaller than said opening, so that only bottles having a diameter greater than its associated compartment opening are collected in said compartment, each of said compartments being further provided with an outlet opening, a blocking shutter disposed adjacent said opening, a catch for said shutter, releasing means for said catch actuated by its associated stop member permitting removal of said bottle through said outlet opening to a storing place.

2,999,577
EMBOSSING MACHINE

Edwin C. Colyer and George W. Brown, Willoughby, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Dec. 5, 1958, Ser. No. 778,418

14 Claims. (Cl. 197-6.6)



1. In an embossing machine of the kind including an embossing station and a carriage mounted for movement in co-ordinate directions with respect to said embossing station, a workholder comprising: a shaft journaled in said carriage; a first jaw member affixed to said shaft for rotation therewith; a second jaw member journaled on said shaft; biasing means urging said second jaw member toward contact with said first jaw member to grip a blank

printing device or the like between said jaw members; a spur gear affixed to said shaft; a drive gear disposed in meshing engagement with said spur gear; and an operating handle connected to said drive gear for rotating said drive gear to rotate said shaft and pivot said jaw members between a normal operating position in which said jaw members are effective to grip and support a blank printing device or the like in alignment with the embossing station of said embossing machine and a loading position in which said second jaw member is separated from said first jaw member to permit replacement of the printing device.

2,999,578
RIBBON CHANGE PACKAGE

Martin P. Holden, Levittown, Pa., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 30, 1959, Ser. No. 843,417

9 Claims. (Cl. 197-151)



1. A ribbon supply package for a typewriting or other printing machine, comprising a ribbon spool having at least one end flange, a pigmented ribbon at least partially wound on said spool, a spool cap comprising a crown contiguous to one end of said ribbon spool and a rim in surrounding relationship to said spool dimensioned to surround the spool flange with clearance therefrom and being stable enough so that if the spool cap is lightly grasped by its rim it will retain its normal form and will allow free exit of the spool out of the cap, said supply package including a portion with which said cap is associated to provide therewith a spool enclosure, means associating said cap removably with said package portion, said spool adapted to be dropped out of the rim of the cap when the latter is removed from said package portion, and means embodied in said cap to detain said spool therein at the will of the person handling the supply package, whereby the spool is adapted to be installed in position on a machine by handling its cap and whereby said cap is thereafter removable from the spool in its installed position.

2,999,579
TRANSFER APPARATUS

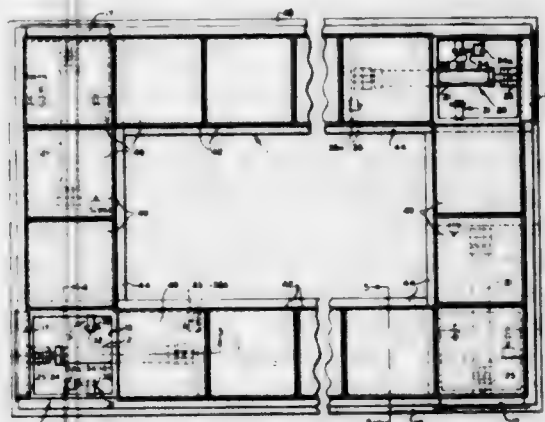
Valerian R. Kostrzewa, 400 W. Lynn, Saginaw, Mich.

Filed Oct. 30, 1957, Ser. No. 693,477

3 Claims. (Cl. 198-19)

1. Precision indexing article transfer apparatus for precisely locating work relative to work stations comprising; frame means forming a corner; a plurality of rec-

tangular pallet members in edge-to-edge abutting relation, each having a free upper face to receive an article to be transferred around the corner; first, spaced apart, parallel, inner and outer guide rails mounted by said frame means and forming one section of said corner; second, spaced apart, parallel, inner and outer guide rails supported by said frame means and forming the other section of said corner, including an inner rail extending normally from said inner guide rail and an outer guide rail having an end aligning with the said other outer guide rail; a carriage at said corner mounted for longitudinal movement in longitudinal alignment with said second guide rails; a reciprocable assembly extending longitudinally with said second guide rails beneath said carriage and supported at one end by the interior of said frame means and at the other end connected to said carriage for moving said carriage to and fro longi-



tudinally; an upstanding pusher rail fixed to the one end of said carriage forming, when the reciprocable assembly is in one position, a continuation of said outer rail of the first guide rails; parallel inner and outer, third guide rails beneath said second guide rails supported in longitudinal alignment therewith by said frame means; tongue and groove means on said third guide rails and carriage extending exactly longitudinally with said second guide rails; tongue and groove means on said first and second guide rails and pallets for maintaining, in cooperation with said tongue and groove means on said carriage and third guide rails, exact alignment of said pallets in their transfer from one section of said corner to another; and means for moving said pallets along said first guide rails with said tongue and groove means of the first guide rails and pallets in close interfitting relation to move a single pallet at a time onto said carriage and interfit the tongue and groove means of said second rails and pallet.

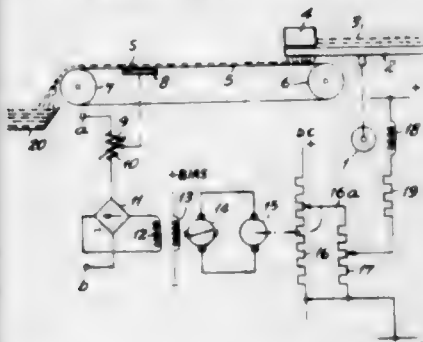
2,999,580

CONTROL OF FEEDING MOVEMENTS

Donald Windsor Prowse and Raymond Georges Rayden, Rugby, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company

Filed May 5, 1958, Ser. No. 732,999

3 Claims. (Cl. 198—37)



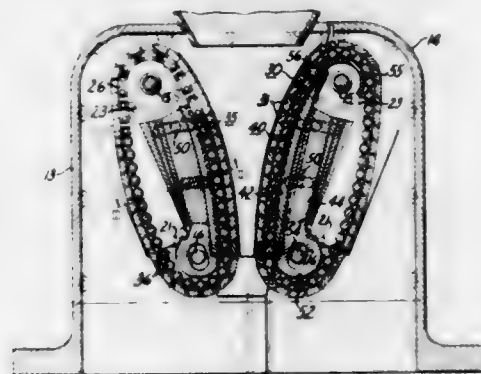
1. An electric control system for a motor driving a feeder which supplies solid particle material to an endless

band type conveyor including an excitation circuit for said motor, a variable reactor having two co-operating parts at least one of which is movable and being constructed and arranged for a substantial relative displacement for changing the reactor inductance, a measuring means having a member arranged to be displaced in accordance with the weight of material carried on a predetermined portion only of said band type conveyor, said movable one of said two reactor parts being mechanically connected to said measuring means member and movable in accordance with movements of said member, an amplidyne generator having a field winding, a rectifier, means connecting said amplidyne field winding through said rectifier to the output of said variable reactor for control of the voltage of said amplidyne generator responsive to the weight of material as determined by said measuring means, a D.C. source, means for connecting said feeder motor excitation circuit for energization by said D.C. source, a variable impedance in said excitation circuit having a control member, and a positioning motor energized by said amplidyne generator and mechanically arranged to position said variable impedance control member for maintaining the desired feeding rate of material to the conveyor.

2,999,581

ENDLESS TRACK ASSEMBLY

Robert T. Baugh, Brookfield, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Original application Aug. 15, 1956, Ser. No. 604,223, now Patent No. 2,959,364, dated Nov. 8, 1960. Divided and this application Mar. 10, 1958, Ser. No. 720,252 2 Claims. (Cl. 198—165)



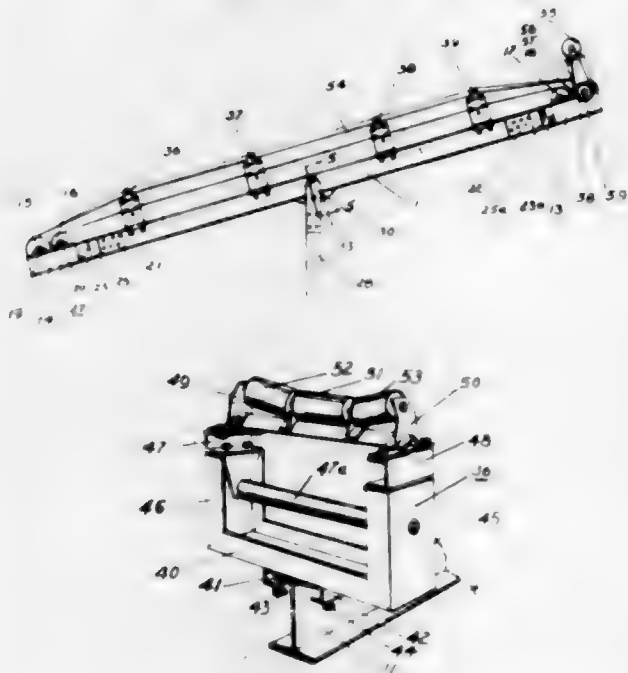
1. In a combination comprising: a frame; a pair of vertically spaced substantially parallel rotatable shafts mounted in said frame for rotation relative thereto; sprocket wheels journaled upon each of said shafts at the outer extremities thereof adjacent and within said frame to provide a first and second pair of wheels respectively adjacent each side of said frame; a pair of endless chains mounted for movement with one another, one of said chains being reeved about said first pair of wheels and the other of said chains being reeved about said second pair of wheels; a plurality of tread plates connecting corresponding portions of said chains and cooperating therewith to define a substantially continuous bearing surface for movement with said chains; a convexly contoured support means mounted to said frame intermediate said shafts for holding said bearing surface to a convex contour during loading thereof and for receiving the forces of loading from said bearing surface and solely and directly transferring said forces to said frame without loading said shafts; and antifriction load transmission means interposed between said bearing and said support means in circumscribing relationship to said support means, said support means comprising: a mounting plate having a body portion secured to said frame intermediate opposed runs of said bearing surface and a depending portion, said depending portion having an elongated bore defined therethrough and disposed in spaced circumscribing relationship about the lowermost of said shafts, said body portion

having a force receiving surface in facing relationship to the working portion of said bearing surface, a support shoe mounted to said force receiving surface intermediate said surface and said antifriction load transmission means and extending upwardly beyond said surface to an end, and arcuate guide means secured to said end and extending upwardly therefrom into spaced shielding relationship about the uppermost of said shafts.

2,999,582

BELT CONVEYORS

Le Roy F. Ramer, 700 Dumont, Richardson, Tex.
Filed Apr. 13, 1959, Ser. No. 805,942
4 Claims. (Cl. 198—192)



1. In a portable conveyor, a single longitudinal supporting beam, a yoke member mounted on each end thereof, each of said yoke members carrying a plurality of yoke rollers, one of said rollers being power driven, a plurality of roller assemblies the operative portions thereof being positioned only on the upper face of said longitudinal beam, said roller assemblies being slidable in relation thereto, an endless belt threaded about each of the outermost yoke roller members, thence inwardly through the aforesaid roller assemblies, one portion of said belt riding within said roller assemblies, and one portion of said belt riding above said roller assemblies, the portion above said roller assemblies being cupped to carry material and the like, said belt being operative in a plane above said supporting member.

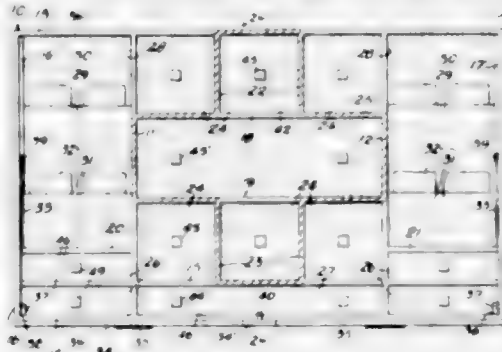
2,999,583

PORTABLE FIRST AID CABINET

Louis P. Mancini, 129 Braidburn Road,
Florham Park, N.J.
Filed July 30, 1959, Ser. No. 830,488
3 Claims. (Cl. 206—12)

1. A portable first aid cabinet of the class described comprising an oblong rectangular plastic casing defined by a back wall, top, bottom and side walls and a plurality of longitudinally spaced vertical and horizontal partitions, at least two of the vertical partitions extending the full depth of the cabinet, said partitions dividing the casing into a plurality of longitudinally and vertically spaced drawer compartments, the front of the casing being open, the partitions terminating at the open front of the casing in a common vertical plane, said compartments being of varied cross-sectional contours, drawer elements arranged in said drawer compartments, said drawer

elements having front wall portions conforming to the cross-sectional contour of the compartments in which they are arranged, said front wall partitions lying in a common plane spaced inwardly of said common vertical plane, each drawer element also including a bottom and back wall, a sectional portion of the cabinet having two spaced sets of three compartments, each all of the same cross-sectional contour, said spaced sets of compartments being fully divided and spaced by one elongated

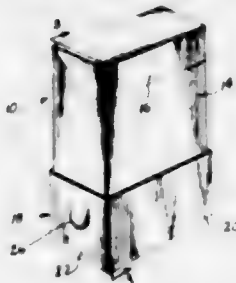


compartment, each front wall portion having an integral handle projecting from the face thereof and lying within said common vertical plane, the drawer elements in said sets of compartments and elongated compartment controlling dispensing of first aid equipment contained therein such, for example, as sterilized bandages, cotton, adhesive tape, band aids, sterilized gauze, swab sticks, scissors and the like, and standard types of remedies for treatment of wounds, burns, etc. in rendering first aid, and a door for closing the open front of the casing.

2,999,584

COMBINATION CIGARETTE PACKAGE AND ASH RECEIVER

Alice M. Gillespie, 360 E. 234th St., Bronx, N.Y.
Filed Oct. 26, 1959, Ser. No. 848,817
1 Claim. (Cl. 206—41)



A combined cigarette package and ash tray, comprising a closed rectangular-shaped paper container with cigarettes enclosed therein, a box-like hollow lightweight metal open-top receptacle removably mounted on one end of the container, and a channel-shaped lined member fitted in said receptacle, said liner member having a flat rectangular bottom wall and upstanding side walls, said side walls having grooves therein extending transversely parallel to the bottom wall, the groove in one side wall being spaced further from said bottom wall than the groove in the other side wall, said grooves facilitating bending portions of the side walls parallel to the bottom wall to form two closed compartments one above the other in said receptacle, said portions of the side walls having circular holes therein for passing cigarette ashes into the respective compartments, said holes being aligned with each other when said portions of the side walls are bent parallel to each other and to the bottom wall in the receptacle, whereby a lighted cigarette may be passed through the holes to the bottom wall to extinguish the lighted cigarette, there then being a space defined between the upper bent portion of said one side wall and the open top of the receptacle defining a tray to support therein the container of cigarettes.

2,999,585
PLASTIC LIPSTICK CASING
 Eric G. Hultgren, Bridgeport, Conn.
 Filed July 20, 1960, Ser. No. 44,197
 5 Claims. (Cl. 206—56)



1. A plastic lipstick container comprising an inner cylindrical member of plastic material having a straight longitudinal slot in the side wall extending parallel to the axis thereof to an open outer end of the member, a lipstick carrier of plastic material comprising a one-piece, cup-shaped member slidably engaging the inner surface of the cylindrical member and having an integral button projecting therefrom and through said slot, and an operating sleeve of plastic material mounted on the outer surface of the member solely for relative rotation thereon and having an internal helical groove receiving the end of the button and cooperating therewith for moving the button of the carrier along the longitudinal slot in response to relative rotation between the sleeve and inner member, said inner member having a plurality of vent openings in the wall opposite the longitudinal slot arranged to form a venting means extending for a substantial distance along the member intermediate the ends thereof to facilitate movement of the lipstick carrier and a lipstick carried thereby along the inner member.

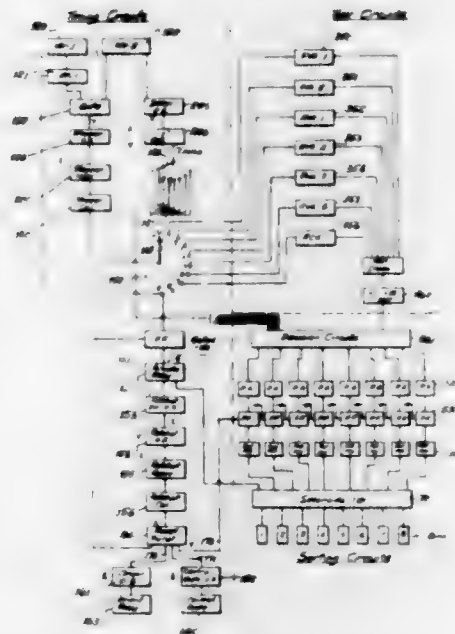
2,999,586
FRACTIONATION OF ALUMINA HYDRATES
 Carl D. Keith, Munster, Ind., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
 No Drawing. Filed Aug. 3, 1955, Ser. No. 526,332
 5 Claims. (Cl. 209—5)

1. The method of fractionating minute solid particles of alumina hydrates containing trihydrate which comprises mixing an alumina trihydrate composition of random particle sizes with water, acidifying the mixture to obtain an acidic aqueous slurry of said alumina hydrate solid particles in the acidified aqueous medium, settling the mixture, and separating a fraction containing crystalline particles of different size distribution than in the alumina trihydrate composition acidified.

2,999,587
AUTOMATIC DIODE SORTER
 Richard A. Campbell, Los Angeles, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
 Filed Aug. 12, 1957, Ser. No. 677,525
 22 Claims. (Cl. 209—73)

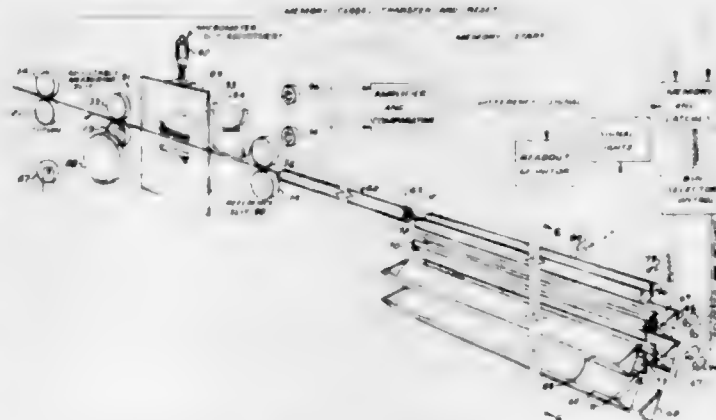
1. An apparatus for automatically segregating a plurality of unilaterally conducting electronic devices in accordance with certain predetermined direct current characteristics comprising: means for selectively individually presenting said devices to a test station at which the devices are held motionless in a predetermined position; means for serially performing at least two predetermined direct current electrical tests upon said devices in said test station, each test being of a different electrical parameter of said devices; and means for automatically discharging said devices from said test station and segregating said

devices in response to said tests into at least two groups in response to said direct current tests, said two groups



being of a different predetermined preference in accordance with the number of tests each device satisfies.

2,999,588
SIZE CLASSIFICATION OF SUTURES
 George Spencer Bott, Westwood, N.J., and Arthur Sinclair Taylor, Spring Valley, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
 Filed Aug. 29, 1960, Ser. No. 52,636
 12 Claims. (Cl. 209—74)



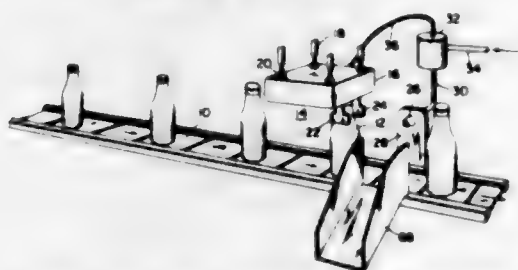
1. Apparatus for classifying sutures according to predetermined diameter classification limits which comprises, in combination: guide means to control the path of a suture, at least a pair of entrance feed rolls and a pair of faster feed rolls, the rolls of each pair having parallel axes, and having at least a circular part of each of the four rolls of an electrically conductive material, means to hold each pair of rolls in juxtaposition under sufficient loading to be in electrical contact when the rolls of the pair are not separated by a suture between them, the said pairs of rolls being mounted with all rolls tangent to the path of the suture, means to determine when each pair of rolls is in electrical contact and when each pair of rolls is separated by a suture, means to drive the entrance feed rolls, means to drive the faster feed rolls at a faster surface speed than the driven speed of the entrance feed rolls and to thereby keep the suture stretched while between the two pair of rolls, at least one of said drive means permitting slippage with respect to the suture; a gauging zone between the entrance feed rolls and the faster feed rolls, gauging means functioning through said gauging zone; a holding chamber, said guide means being coaxial with and serving to direct the suture into the holding chamber after the suture has passed the

said rolls and gauging zone; a rotatable bar having a groove therein parallel to the axis of the bar, a resilient faced rotatable bar parallel and adjacent to and in sealing engagement with said grooved bar and sealing the groove when said groove is in a suture-receiving position, when in said suture-receiving position said groove being coaxial with said holding chamber and in position to receive a suture therefrom, a plurality of suture bins, and means controlled by the gauging means and the electric contact between the rolls of each pair of rolls to disengage the groove from engagement with the resilient faced bar, and to dump the suture from the groove, and means controlled by the gauging means to direct the suture into a suture bin selected on the basis of the gauged size characteristics of the suture.

2,999,589

CLASSIFYING APPARATUS

Alan Norwich, Delaware, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Mar. 9, 1960, Ser. No. 13,752
6 Claims. (Cl. 209-82)



1. In an apparatus for automatically inspecting a series of conveyor-borne objects for a physical characteristic, said apparatus having means for selectively identifying those objects having a deficiency in said characteristic, the combination of gauging means mounted adjacent to the conveyor and responsive both to the proximity of a passing object and to the value of said characteristic therein for providing an aggregate signal which includes a proximity component and a characteristic-indicative component, switch means for controlling said identification means, means for enabling said switch means when said signal increases to a first selected value, means for disabling said switch means when said signal increases to a second selected value which is greater than said first value, and means for actuating said enabled switch means when said signal decreases to a third selected value.

2,999,590

MINIMUM DIAMETER MEASUREMENT BY DIGITAL FLYING SPOT SCANNER

Gerard E. Gerhardt, Plainfield, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 29, 1960, Ser. No. 52,642
10 Claims. (Cl. 209-82)



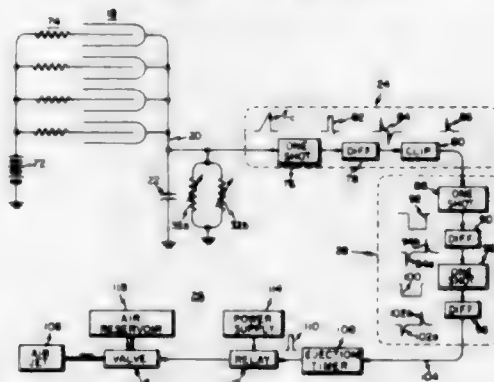
1. A device for measuring the diameter of a strand which comprises: means to scan a light beam across a strand at a known rate, and thereby intercept said light beam over a period of time which is a function of the strand diameter, light sensitive means to convert the

period of light beam interception into an electrical signal, a generator of high frequency electric pulses, means controlled by said electrical signal to transmit the said high frequency electrical pulses during said period of light beam interception, means to count said pulses, during said period of transmission, and means to readout the count of said pulses as a measure of strand diameter.

2,999,591

CONTAINER INSPECTION SYSTEM

Jack G. Crump, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Oct. 23, 1958, Ser. No. 769,161
6 Claims. (Cl. 209-82)



1. In a measuring system for determining at least one physical property of a plurality of spaced containers traveling at a substantially constant rate, apparatus comprising a transducer defining an inspection path across the path of said containers for generating a signal proportional to said physical property, means connected to said transducer for integrating said signal, means for enabling said integrating means whenever a container reaches a first position in said inspection path, and means for disabling said integrating means when said container reaches a second position in said inspection path to confine said time interval of signal integration to a period of time less than that required for said container to transit said inspection path.

2,999,592

MANUALLY CONTROLLED RECORD SORTING MACHINE

Samuel Brand, Binghamton, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 9, 1955, Ser. No. 487,089
19 Claims. (Cl. 209-122)



1. In a sorting machine, the combination of a carriage carrying a sorting tray having a group of compartments

demarcated by separable partition plates, feeding means for feeding records to selected compartments, a plurality of keys, one for each compartment, means under control of said keys and said partition plates and operable in accordance with the last compartment selected for moving said carriage in either of two directions to operatively associate a selected compartment of the tray with the feeding means, selective means controlled by said keys for determining in accordance with the key utilized which direction said carriage is to be moved to correlate the selected compartment with the record feeding means, and means for separating adjacent partition plates to form a record receiving compartment.

2,999,593

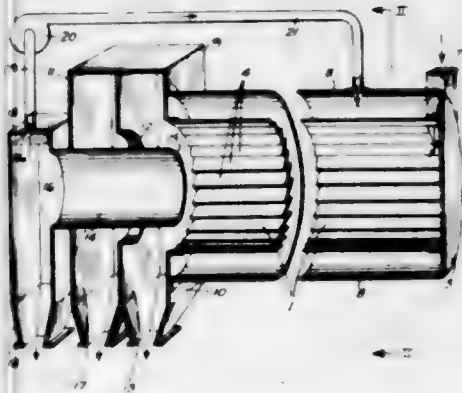
CLASSIFICATION OF MATERIALS

Hans Stern, 17 Morris Crescent, Springs, Transvaal, Union of South Africa

Filed Nov. 4, 1957, Ser. No. 694,418

Claims priority, application Union of South Africa Nov. 12, 1956

6 Claims. (Cl. 209-144)



1. Apparatus for the classification of materials and for the breaking down of agglomerations of particles into separate fractions of varying respective physical properties comprising an elongated whirl chamber of circular cross section having a longitudinal axis of substantial length relative to said cross section and having a plurality of entrant apertures distributed around the entire periphery and extending substantially along the length thereof, said entrant apertures being closely spaced and tangentially disposed to permit tangential entry of a practically undivided fluid stream of peripherally uniform pressure into the whirl chamber which is closed at one end by an end wall and completely open at the other end to provide a discharge outlet; draft inducing means introducing air into the whirl chamber through such entrant apertures; an inlet for raw materials being provided towards the closed end of said whirl chamber and receiving means at the other end of the whirl chamber for receiving the fractions, there being no material impediment to fluid flow in an axial direction from the whirl chamber into the receiving means.

2,999,594

DISCHARGE MECHANISM FOR SAND CLASSIFIERS

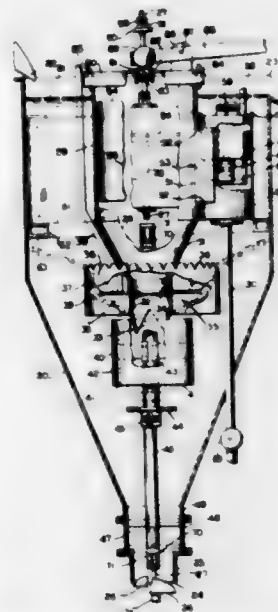
Eric P. Thammie, 58 Clinton Ave., Farmingdale, N.Y.

Filed May 27, 1959, Ser. No. 816,182

11 Claims. (Cl. 209-162)

1. A material discharge valve construction comprising in operative combination a receptacle for material to be classified by settling, having a valved under-flow outlet and an upper overflow outlet; a control tank extending above said receptacle overflow weir and draining through a conduit leading to the atmosphere; a conduit leading from the lower control tank into the receptacle, providing communication with same and having umbrel-

la like means above its lower limit co-operative with material accumulated in the receptacle to variably restrict flow into said control tank through said lower conduit and through a column of suspension therein; a float located in said control tank; a tubular valve stem connecting said float to a valve closing the under-flow outlet whereby operation of the valve is effected by variation of level in the control tank; an auxiliary control tank fastened on said main control tank and communicating



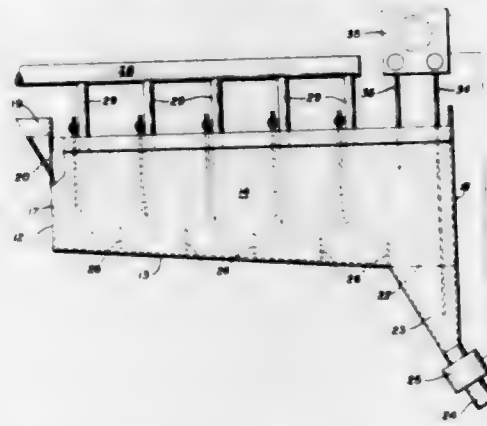
with same through a connecting passage; an adjustable and valved auxiliary inlet pipe located below overflow level; an auxiliary float located in said auxiliary control tank; an inlet valve operated by said auxiliary float whereby the water level in said main control tank is automatically controlled; a vent-pipe extending upwardly from said umbrella-like means; a sealed, tubular enclosure concentric with said tubular valve stem; and an under-flow-rate limiting adjustable stop and closing mechanism engaging said valve stem on top of said control tank.

2,999,595

APPARATUS FOR FLOTATION CONCENTRATION IN COARSE SIZE RANGE

Edmund A. Schoeld, Carlsbad, N. Mex., Jack D. Nabors, Saskatoon, Saskatchewan, Canada, and Joseph S. Reiter, Carlsbad, N. Mex., assignors to Potash Company of America, Carlsbad, N. Mex., a corporation of Colorado

Original application July 2, 1956, Ser. No. 595,500, now Patent No. 2,931,502, dated Apr. 5, 1960. Divided and this application Sept. 8, 1959, Ser. No. 838,544 5 Claims. (Cl. 209-170)



1. An elongated tank for pulp of substantial depth, having a feed inlet at one end, a concentrate overflow along at least one side wall positioned lower than other walls of said tank, and a lower discharge outlet at the opposite end of the tank, said inlet and outlet determining a

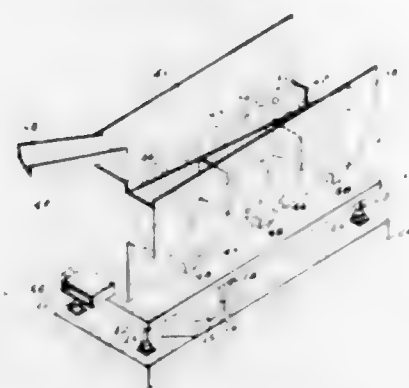
liquid level at an elevation substantially higher than said concentrates overflow, means disposed at intervals lengthwise of said tank for directing streams of brine and aerating gas in downwardly sweeping movements toward the bottom of said tank for aerating and floating concentrate material of the pulp and for moving non-floating solids of said pulp in a progressive flow from inlet to outlet, and a control mechanism for said discharge outlet, including means for measuring pressures indicative of pulp density in an upper portion and a lower portion of the outlet end of said tank, and arranged to change the discharge capacity of said outlet in accordance with the pressure differential of said measurement.

2,999,596

METHOD AND APPARATUS FOR THE SEGREGATION OF PARTICULATE MATERIAL

Archibald B. Dunwoody, 2640 Peachtree Road NW., Atlanta, Ga.

Filed Oct. 6, 1955, Ser. No. 538,931
3 Claims. (Cl. 209-467)



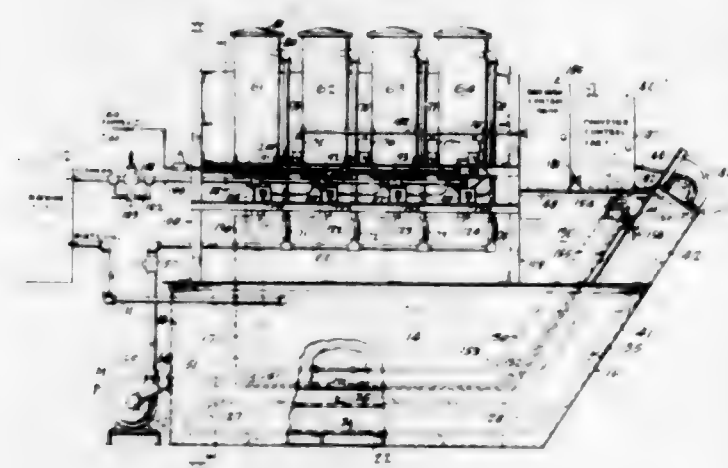
1. A separating apparatus including a trough of generally U-shaped cross section, means for feeding material to be separated to said trough, fluid flow means for stratifying said mass, and means for vibrating said trough with both longitudinal and transverse components of motion to produce spiral motion of particles of said material, said trough being bounded by at least one wall of varying longitudinal height below that of the opposed wall.

2,999,597

BACKWASH FILTERING SYSTEM

Harold H. Harms, 1404 Palmetto St., Toledo 6, Ohio

Filed Aug. 5, 1958, Ser. No. 753,244
15 Claims. (Cl. 210-333)



9. A backwash liquid filtering system comprising: a settling tank, a plurality of filtering chambers, an inlet manifold connected to all of said filtering chambers, separate inlet valves in said inlet manifold to each chamber, an outlet manifold connected to all of said chambers,

pump means to apply liquid pressure of settled liquid from said settling tank to said inlet manifold and through at least some of said filtering chambers to said outlet manifold, additional separate outlet ducts connected to each filtering chamber, discharge valves in each said separate outlet duct, means for connecting each inlet manifold valve with its corresponding outlet duct discharge valve for the same filtering chamber whereby the opening of one valve closes the other and vice versa, and means for selectively operating said connecting means to close an inlet manifold valve and open its corresponding outlet duct valve whereby liquid pressure from said other filtering chambers forces filtered liquid into the outlet of said chamber with the closed inlet valve to backwash the filter in said chamber through its now open discharge outlet duct, and means for recirculating the resulting backwash liquid from said filtering chamber into said system through said settling tank, said recirculating means comprising a seepage tank for receiving said backwash liquid from the discharge outlet ducts of said filtering chambers, said seepage tank having at least one seeping aperture near its bottom immersed in said settling tank to permit the non-turbulent flow of backwash liquid from said seepage tank into said settling tank, and movable means in said seepage tank for preventing said aperture from becoming clogged.

2,999,598

SIEVE STRUCTURES

Harald Joachim Georg Schade, Karlsbaderstrasse, Michelbach, Nassau, Germany

Filed Mar. 6, 1958, Ser. No. 719,522
10 Claims. (Cl. 210-488)



1. A sieve for straining fluid media comprising a plurality of continuously bent laminations stacked in spaced relation to form a plurality of continuously bent fluid passages therebetween; said laminations being shaped to define passages having relatively narrow inlets and relatively wide outlets and progressively increasing in cross-section from said inlets to said outlets; said inlets being situated in a joint inlet-plane and said outlets being situated in a joint outlet-plane; each of said laminations enclosing at the inlet-plane-end thereof an angle with said inlet-plane different from the angle enclosed between each of said laminations at the outlet-plane-end thereof with said outlet-plane, said first mentioned angle being less than said last mentioned angle; the inlet-plane ends of said laminations being relatively free and the ends of said laminations adjacent said outlet-plane being clamped together by clamping means projecting transversely through said laminations; and means for removing foreign matter from the inlet-plane-end of said passages, said removing means including a scraper including a scraper edge and a blade, said edge being situated in said inlet-plane and said blade being shaped in such a fashion that each cross-section thereof taken along a section-plane at right angles to said inlet-plane is generally symmetrical with respect to said inlet-plane to a cross-section taken along said section-plane of the nearest end of one of said laminations, and said removing means further including means for moving said scraper relative to said narrow inlets in the direction of the curvature of the inlet-plane-ends of said laminations.

2,999,599

DISPLAY SHELVING

Sydney W. Jentzen, Bloomfield Township, Mich., assignor to Jentzen-Miller Company, Royal Oak, Mich., a corporation of Michigan

Filed Sept. 2, 1958, Ser. No. 758,194
9 Claims. (Cl. 211-90)



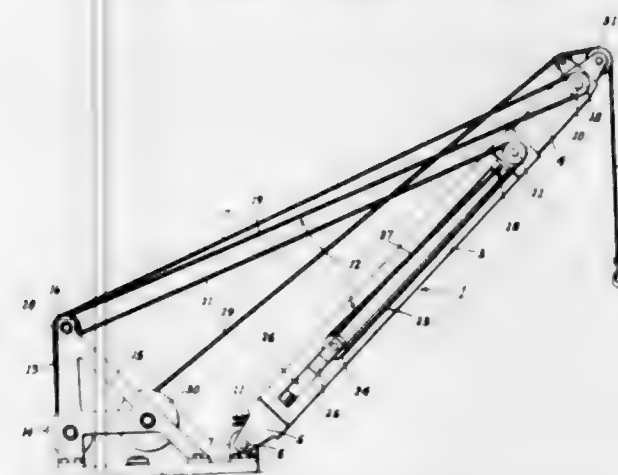
1. In combination with a floor and wall, a pair of parallel spaced upright forwardly extending struts arranged at right angles to said wall, each strut consisting of an upright tubular channel support parallel to and spaced forwardly of said wall, means at its lower end resting on the floor, an upright tubular body above the floor bearing against said wall, horizontal tubular braces fixedly connecting upper and lower ends of said body with said support, the front surface of said body having formed therein throughout its height a series of vertically spaced apertures, a bracket securing the top of each strut to said wall, a rectangular horizontally disposed shelf removably interposed between said pair of struts and including a rectangular frame, and rearwardly extending notched brackets on the rear ends of said frame, each bracket including a pair of vertically spaced notched fingers retainingly projected and nested within an adjacent pair of apertures in an adjacent pair of strut bodies respectively.

2,999,600

COMPENSATING TELESCOPIC BOOM

Earl Gates, 1117 14th St., Santa Rosa, Calif.

Filed Sept. 4, 1959, Ser. No. 838,248
6 Claims. (Cl. 212-55)



1. In a crane, a mounting deck, a boom upstanding from the deck at an angle to the perpendicular, the boom comprising upper and lower sections mounted together for relative telescopic movement, means connecting the boom sections for extending and contracting the same, the lower section being mounted on the deck, and a boom supporting structure connected between the deck and both boom sections adjacent their upper ends at an acute angle to said sections and including automatically functioning means incorporated therewith so that the said angle of the boom will remain unchanged with any extending or contracting movement of the upper boom section relative to the lower boom section.

2,999,601

HINGED BOOM STOP

George W. Mork, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Filed Nov. 10, 1958, Ser. No. 773,076
6 Claims. (Cl. 212-59)



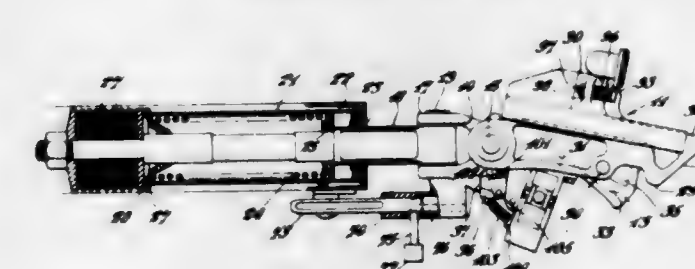
1. In a load-handling machine having a main frame, including an elevated portion, and a boom pivotally mounted on the main frame for movement in a vertical plane, means for arresting upward movement of the boom, comprising: first pivot means mounted on the elevated portion of the main frame; first strut means, connected at one end to said first pivot means; second pivot means, mounted on the boom; second strut means, connected at one end to said second pivot means; third pivot means, interconnecting said first and second strut means adjacent their other ends; the respective effective lengths of said first and second strut means and the locations of said first and second pivot means being such that, when the boom is in a predetermined elevated position, at least one of said strut means engages a portion of the boom above said second pivot means.

2,999,602

COUPLING DEVICE FOR RAILWAY VEHICLES

Peter S. MacGregor, Poole, and Anthony J. J. Keeley, Broadstone, England, assignors to Flight Refuelling Limited, near Blandford, Dorset, England

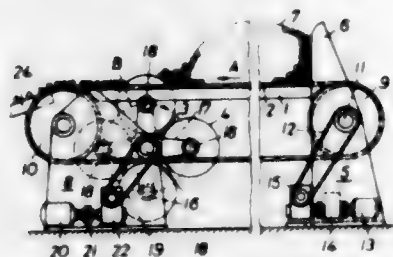
Filed Sept. 10, 1959, Ser. No. 839,125
8 Claims. (Cl. 213-97)



1. A coupling device for railway vehicles comprising a coupling unit mounted for turning movement in a horizontal plane and including a hook for turning movement in a vertical plane and a ramp disposed at one side of the hook to lead a corresponding hook of another coupling unit into engagement with a hook-engaging part on said first coupling unit, the ramp being movable as one with the hook of the same coupling unit and a trip device being provided for lifting the said corresponding hook clear of the hook-engaging part; the combination therewith of a locking mechanism on each coupling unit to engage automatically with the other coupling unit when the hooks are in engagement with the hook-engaging parts and prevent the said hooks from being disengaged, each said locking mechanism comprising a pivotally mounted latch arm having an opening at one end and a slidably mounted bolt adapted to enter the opening of the complementary coupling device, and resilient means normally urging each bolt toward locked position.

2,999,603

APPARATUS FOR ARRANGEMENT OF RODS
Oscar Josef Smejda, Nydalen, Oslo, Norway, assignor to
Christiaan Spigerverk, Nydalen, Oslo, Norway
Filed May 13, 1960, Ser. No. 29,081
Claims priority, application Norway May 15, 1959
8 Claims. (Cl. 214-1)



1. An apparatus for arranging a bundle of rods into a layer of parallel rods, comprising a substantially horizontal supporting means for supporting a bundle of rods, support members supporting opposite ends of said supporting means, a carrier rotatably mounted below said supporting means, a cylindrical body freely rotatably mounted on said carrier in such a distance from the axis of the carrier that when the axis of the cylindrical body during rotation of the carrier is in a position vertically above the axis of the carrier, the uppermost part of the said cylindrical body will project above the level of the undermost rods in a bundle of rods resting on said supporting means, means connected to said carrier for rotating the carrier and means for moving a bundle of rods placed on said supporting means in parallel with the axis of the carrier and said carrier in parallel horizontal directions relatively to each other.

2,999,604

APPARATUS FOR TRANSFERRING ARTICLES
Charles Chalich, Salisbury, N.C., assignor to Taylor Manufacturing Company, Inc., Salisbury, N.C., a corporation of North Carolina
Filed Nov. 13, 1957, Ser. No. 696,087
15 Claims. (Cl. 214-1)



1. An article-engaging device comprising a pair of gripper elements, a rigid support, bendable flexible members suspending each gripper element from the support and holding the elements in downwardly and outwardly inclined relationship, and means to move said elements inwardly into clamping engagement with an article therebetween, said means comprising a substantially channel-shaped body including opposed flanges and a connecting web therebetween, said web being interposed between the gripper elements and said support and said flanges being disposed outwardly of said gripper elements,

ments, a plunger connected to said web, and means to impart axial movement to said plunger; said flanges being movable into straddling engagement with the distal surfaces of said gripper elements in response to downward axial movement of said plunger to effect inward movement of said elements for gripping an article therebetween.

2,999,605

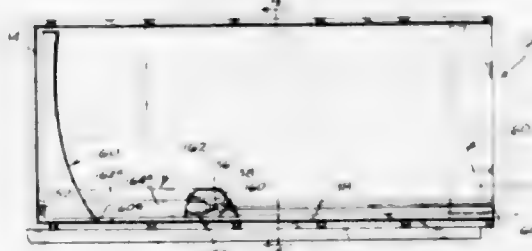
APPARATUS FOR MOVING PIPE INTO AND OUT OF AN OIL WELL DERRICK
Frank D. De Jarnett, 2150 Chestnut Ave., Long Beach, Calif., assignor to one-half to Paul A. Medearis
Filed Dec. 20, 1954, Ser. No. 476,363
19 Claims. (Cl. 214-2.5)



1. Apparatus for handling sections of pipe in the region of an elevator-equipped oil well derrick, including: an upright excavated shaft below the derrick floor; a hinged elongated holder to surround one end of a pipe section at least at its hinged position along its length, said holder being pivoted from one end for movement between a prone position adjacent said shaft and an upright position in substantial alignment with the shaft for lifting a pipe section from prone position to upright position to cause the lifted pipe section to drop longitudinally into the shaft, said shaft being of an effective depth to place the upper end of the dropped pipe section in a position accessible for engagement by the elevator; and power means to move said holder between its two positions.

2,999,606

REFUSE VEHICLE WITH RAM-ACTUATED PACKER BLADE
Ernest F. Kamin, 1648 N. Ross Ave., Portland, Oreg.
Filed Dec. 21, 1959, Ser. No. 860,949
7 Claims. (Cl. 214-82)

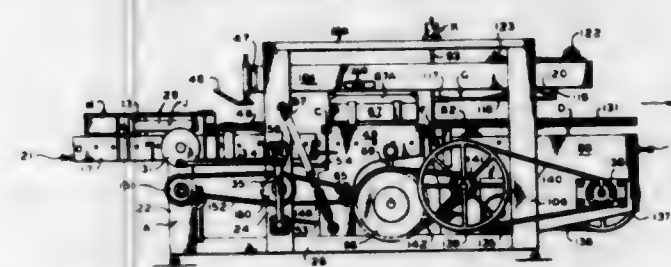


1. In a refuse-collection vehicle comprising an elongated substantially rectangular hollow body with forward and rear ends and including a floor and side walls, and a packer blade extending transversely of and substantially straight across said body with ends adjacent said side walls and a bottom edge adjacent said floor, said blade being movable in a path longitudinally of said body between a retracted position adjacent the forward end and an extended position adjacent the rear end of said body, the improvement comprising means adjacent each end of the blade near its bottom edge for guiding the blade in its path, fluid-operated ram means substantially parallel to said floor and extensible substantially

the entire length of said body disposed above and close to the floor of said body operatively connected between the forward end of said body and said blade and extending rearwardly of the bottom edge of the blade for moving the blade in its path, and elongated cover means extending longitudinally of said body joined to said blade for movement with the blade, said cover means extending rearwardly from said blade and being disposed in shielding relation over said ram means.

2,999,607

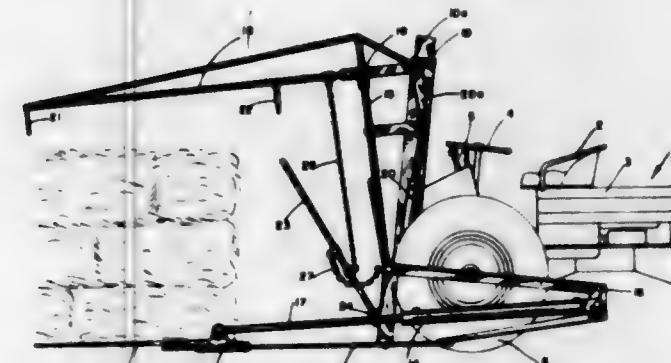
SHIPPING CASE OPENER
Henry Tancredi and Frederick W. Kulicke, Philadelphia, Pa., assignors to Kulicke & Soffa Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 11, 1959, Ser. No. 833,006
15 Claims. (Cl. 214-304)



1. A machine for automatically opening flaps on shipping cases comprising in combination, a frame, a carriage vertically reciprocable in said frame, conveyor means forwardly urging the cases in a longitudinal path of travel through said carriage, a gate arresting the forward progress of the cases when said carriage is in lowered position, tripper means responsive to the advancement of each case against said gate reciprocating said carriage to successively discharge one case in the elevated position thereof, a horn medially disposed in the path of travel of the elevated cases discharged from said carriage, said horn initially engaging the upper leading edge of each successively discharged case immediately below the closed level of the flaps thereof and thereafter flaring open the flaps as the carriage descends, and a terminal conveyor advancing the opened cases longitudinally past and below said horn.

2,999,608

BALED HAY STACKER
Charles de Ganahl, Box 75, Yampa, Colo.
Filed July 27, 1959, Ser. No. 829,704
9 Claims. (Cl. 214-654)

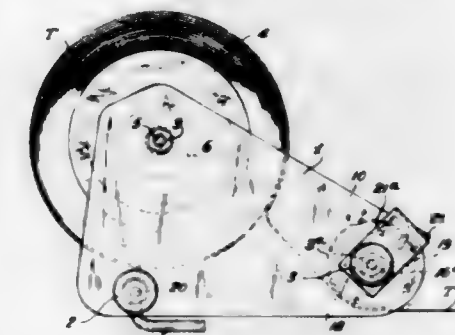


1. A mobile, baled-hay stacker comprising in combination with a self-propelled tractor, an elevator mounted on such a tractor, said elevator including a series of forwardly extending, elongated tines arranged to be moved from ground resting position to an elevated position, a series of extensible tines reciprocally mounted on said elongated tines lying in the same general plane as said tines in position to support a hay load in an extended position forwardly of said elevating tines, means for advancing and retracting said extensible tines, clamp means juxtaposed above said tines and arranged to move into

clamping position on a carried load, means for raising and lowering said forwardly extending tines, and a pusher bar pivotally mounted on and adjacent the bottom portion of said elevator in position to pivot downwardly to bear against a load carried in extended position to prevent retraction of the load on retraction of the extensible tines.

2,999,609

MASKING-TAPE APPLICATOR
Thomas G. Thompson, Shanango Township, Mercer County, Pa. (R.D. 2, West Middlesex, Pa.)
Filed Nov. 3, 1959, Ser. No. 850,567
2 Claims. (Cl. 216-29)



1. A masking-tape applicator comprising a single supporting plate, a masking-tape holder rotatably mounted upon one side of said plate, a front guide member extending from said one side of said plate and below said tape-holder, said front guide member being forward of the path of the tape and being free of engagement therewith, a handle extending from the other side of said plate in the region of said front guide member so as to effect alignment of said front guide member in the desired path for the masking-tape, a rear guide member mounted upon said one side of said plate and rearward of said tape-holder and said front guide member so as to maintain alignment of the masking-tape in the path determined by said front guide member, the path of the tape being directly from the tape holder to the rear guide member, and a handle extending from said other side of said plate in the region of said rear guide member so as to guide the masking-tape along the determined path and to effect pressure of said rear guide member upon the masking-tape as it is applied to the work.

2,999,610

RIVET SETTING TOOL
Roland H. Gapp, Santa Ana, Calif., assignor to Townsend Company, a corporation of Pennsylvania
Filed Apr. 18, 1958, Ser. No. 729,443
3 Claims. (Cl. 218-35)

1. A setting tool for a blind rivet of the character described including a headed sleeve and a stem, comprising a sleeve open at its rear end and having an end wall extending across its forward end, said end wall having a forward face for seating against the head of the rivet sleeve and an axial bore through which the rivet stem may extend into said sleeve, a draw-bolt slideable in said sleeve and having means drivingly engageable with the rivet stem for pulling of the latter into the sleeve by rearward movement of said draw-bolt in the sleeve, an enlarged head at the forward end of said sleeve, said head having slots at diametrically opposite sides of and in a common axial plane of the sleeve, a pair of axially extending levers having forward ends slideably received in said slots and rear ends extending rearwardly along the outside of said sleeve, means connecting an intermediate point of said levers to said head for pivoting of the levers in said axial plane, a pair of chisel blades slideably received in said slots and having inner tip ends slideably received in slots in said end wall which open

into said axial bore, said blades having cutting edges at their inner tip ends and being longitudinally movable along direction lines inclined rearwardly of said sleeve at acute angles to the sleeve axis to extend said cutting edges into and retract said edges from said axial bore to indent the rivet stem, means connecting the adjacent levers and

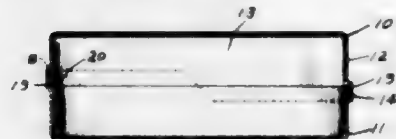


blades for movement of the latter by pivoting of said levers, cam followers on said levers extending to the interior of said sleeve through slots in the sleeve wall, and cam surfaces on said draw-bolt engageable with said cam followers to pivot said levers to extend said cutting edges into said axial bore when said draw-bolt is moved rearwardly to a predetermined position in said sleeve.

2,999,611

TWO-PART PLASTIC CONTAINER

Thomas V. Paulson, Rte. 2, Box 198, Fallbrook, Calif.
Filed May 19, 1960, Ser. No. 30,254
1 Claim. (Cl. 220-4)



A container comprising two identical, separable, flexible, resilient molded plastic rectangular sections fitting together in mutual telescopic relation, each section having a continuous main wall and a pair of auxiliary walls at diagonal corners, the main walls of said sections being in aligned abutting relation, said auxiliary walls being offset outwardly and each extending substantially halfway along two converging sides of said main wall, the ends of said auxiliary walls being beveled and being in aligned abutting relation with the corresponding auxiliary wall ends of the complementary section when the sections are fitted together, there being a post-like abutment on the inner side of each main wall at said diagonal corners and extending beyond the edge thereof to effect alignment of said sections when being assembled, and nib and socket means for locking said sections together.

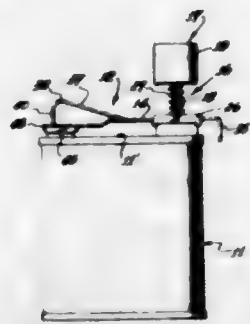
2,999,612

CAN OPENER AND SEALER

Ralph A. Valvano, Long Beach, Calif.
(602 S. Quaker Ave., Tulsa 20, Okla.)
Filed Oct. 20, 1958, Ser. No. 768,489
2 Claims. (Cl. 220-51)

1. A can opener and sealer device, comprising an elongated thin body, a slider member mounted for limited movement longitudinally of said body, punch means carried in part on said slider member and in part on said body, said punch means including an upwardly spring-biased, rotatably mounted punch stem terminating in a punch blade provided with upwardly facing shoulders adapted to engage the inner surface of a can adjacent a hole punched in the end thereof by said punch for releasably anchoring the device to the can, a sealing pad carried by said slider member and through which the stem of said punch extends, a punch element carried on said body adjacent its other end, said punch element

comprising an elongated integral portion of said body separated therefrom by a split throughout its length and

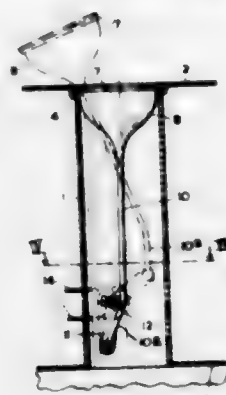


having an upwardly inclined main portion and a downwardly turned pointed end portion, and a sealing pad on the underside of said body adjacent said punch element.

2,999,613

REMOTE-CONTROLLED DEVICE FOR CLOSING AND OPENING FUEL-TANKS OF MOTOR-VEHICLES

Giuseppe Garaballo, 21 Ivrea, Chivasso, Turin, Italy
Filed Jan. 22, 1960, Ser. No. 4,115
Claims priority, application Italy Nov. 13, 1959



A remote-controlled filler cap assembly for motor-vehicle fuel tanks comprising a filler tube for connecting at one open end to the tank, a stepped formation at the other open end of the tube defining an annular shoulder to serve as a valve seating, an operating shaft disposed within the tube for rotation about an axis transverse to the longitudinal axis of the tube and extending at one end externally of the tube, a crank mounted on said operating shaft and disposed within the tube, a connecting rod coupled at one end to the free end of the crank, and a valve member including a rigid disc coupled to the other end of the connecting rod and having a radial recess at its periphery and a resilient cup-shaped element disposed coaxially about the connecting rod with a flange seated in the peripheral recess of the disc, whereby the flange is caused to abut and seal against the valve seat shoulder when the connecting rod is operated to draw the valve member into that open end of the tube.

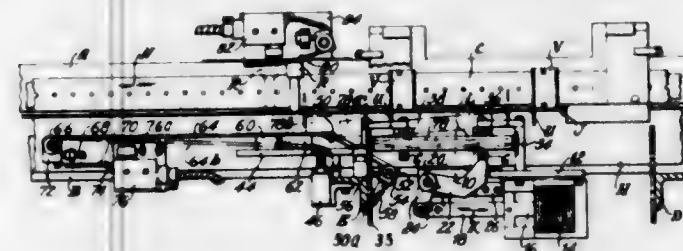
2,999,614

APPARATUS FOR FEEDING CLEATS TO BOX-MAKING MACHINES

David G. Kingsley and Richard L. Rice, Mountain Lakes, and L. Stanley Hayward, Morris Plains, N.J., assignors to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Original application Sept. 20, 1954, Ser. No. 457,066, now Patent No. 2,827,201, dated Mar. 18, 1958. Divided and this application Apr. 19, 1957, Ser. No. 659,451
3 Claims. (Cl. 221-13)

3. Apparatus for dispensing mitered cleats comprising a conveyor band, motor means for driving said conveyor band, push elements secured to and projecting from said

conveyor band at intervals spaced apart sufficiently to permit said cleats to be received lengthwise in the spaces between said push elements, a hopper having a bottom and being adapted to hold a stack of said cleats with the bottom cleat in said stack at one side of and adjacent to the path of said push elements, a movable cleat ejecting member adapted to engage said bottom cleat and move its trailing end outwardly into said path for engagement by the succeeding push element, power means for actuating said cleat ejecting member, a cleat supporting surface for supporting said cleat as it is pushed along said path by said push elements, a gate member positioned at the output end of said hopper, said gate member extending obliquely inward from the outboard side of said hopper toward said path to direct the leading end of said cleat laterally into said path as it moves away from said hopper, and being mounted for outward movement to allow the leading end of said cleat to pass between said gate member and the outer end of the preceding push element when said cleat is too long to fit into the space between



the preceding and succeeding push elements at the level at which it is normally supported by said cleat supporting surface, a ramp member positioned adjacent the inner end of said gate member and just outboard of said cleat path to be engaged by the mitered leading end of such excessively long cleat and to cam said leading end upwardly, resilient means urging said movable gate member inwardly to push said leading end onto the top of the preceding push element and into alignment with said path, a guide rail extending along the outside of said path beyond the end of said gate member and being mounted for outward movement to permit passage of a cleat of excessive length, resilient means urging said guide rail inwardly, and an electrical switch connected to control said motor means, said switch being arranged to be actuated by the outward movement of said guide rail to a predetermined position beyond the position to which said guide rail is normally moved by passage of a cleat of excessive length whereby to stop said conveyor bands if the leading end of a cleat fails to move over into line with said push elements.

2,999,615

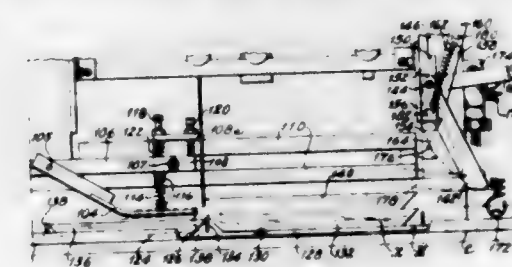
APPARATUS FOR FEEDING CLEATS TO BOX-MAKING MACHINES

David G. Kingsley, Mountain Lakes, and L. Stanley Hayward, Morris Plains, N.J., assignors to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware

Original application Sept. 20, 1954, Ser. No. 457,066, now Patent No. 2,827,201, dated Mar. 18, 1958. Divided and this application Apr. 19, 1957, Ser. No. 659,453
1 Claim. (Cl. 221-13)

Apparatus for dispensing cleats of generally uniform thickness, said apparatus comprising a hopper adapted to hold a generally vertical stack of said cleats, a conveyor, motive means for driving said conveyor, push elements mounted on said conveyor for movement therewith lengthwise across the lower end of said hopper, said push elements being spaced apart to receive said cleats lengthwise between them, a base member extending across the bottom of said hopper, said base member being spaced from the bottom of said hopper to permit

said push elements to pass through the bottom of said hopper and engage the bottom cleat in said stack and push it endwise out of said hopper along said bar member, a pair of exit gates mounted side-by-side in a generally vertical position at the output end of said hopper, each of said gates being pivoted near its upper end for outward movement of its lower end, the lower end of the first of said gates being spaced above said base member a distance greater than the thickness of one of said cleats but less than twice the said thickness and the lower end of the second of said gates being spaced above said base member a distance greater than twice the thickness of one of said cleats but less than three times the said thickness and means urging said gates in-

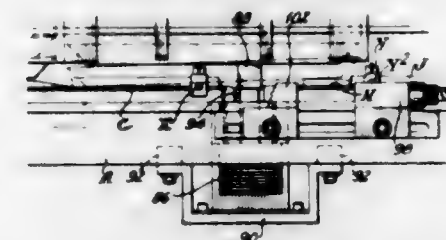


wardly toward the ends of the cleats in said stack, said urging means being yieldable to permit said gates to swing outwardly to increase the spacing of their lower ends from said base member, an electric switch connected to control said motive means, switch actuating means associated with said second gate for movement therewith, said switch actuating means being arranged to actuate said switch to stop said motive means upon outward movement of said second gate, whereby said first gate may be open to permit either a cleat of abnormal thickness or two cleats of normal thickness to pass out of said hopper, and said second gate may open in the event of a more serious malfunction and in so opening stop said conveyor.

2,999,616

APPARATUS FOR FEEDING CLEATS TO BOX-MAKING MACHINES

David G. Kingsley, Mountain Lakes, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Original application Sept. 20, 1954, Ser. No. 457,066, now Patent No. 2,827,201, dated Mar. 18, 1958. Divided and this application Apr. 19, 1957, Ser. No. 659,452
2 Claims. (Cl. 221-224)



1. Apparatus for dispensing slats comprising a conveyor band, means for driving said conveyor band, push elements secured to said conveyor band at intervals to define alternate spaces for respectively receiving cleats of two different lengths, a hopper adapted to hold a generally vertical stack of cleats of one of said lengths in line above the path of said push elements, a horizontal cleat supporting surface extending across the bottom of said hopper for supporting the bottom cleat in said stack in said path, the lower end of said hopper on at least three sides thereof being spaced above said supporting surface a distance at least slightly exceeding the thickness of one of said cleats, whereby said push elements can pass through the lower end of said hopper and en-

gage the trailing end of said bottom cleat, strip it from the bottom of said stack and push it endwise out of said hopper along said path, a movable cleat elevating member adapted to engage said bottom cleat and hold its trailing end above said path, motive means for actuating said cleat elevating member as aforesaid, control means for controlling the operation of said motive means, actuating elements carried by said conveyor band in predetermined relation with the push elements at the trailing ends of the spaces for receiving cleats of the other of said lengths, to actuate said control means and cause said motive means to drive said cleat elevating member to engage said bottom cleat and hold the same above said path as the latter said push members pass the trailing end of said bottom cleat.

2,999,617

DISPENSING APPARATUS WITH HOPPER

Aquila D. Mast, Lancaster, Pa., assignor to Daffin Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania

Filed May 26, 1959, Ser. No. 815,997
1 Claim. (Cl. 222-504)



Dispensing apparatus comprising a hopper, a chute communicating with said hopper at the bottom and side thereof, a gate slidably mounted on said chute for movement between closed and open positions to control flow of material through said chute, resilient means for urging said gate to closed position, a freely rotatable pulley, an elongated flexible member trained over said pulley and having one end secured to said gate, a second freely rotatable pulley engaging said flexible member, a continuously rotating grooved friction drive pulley, a tubular guide, said flexible member being trained over said drive pulley and extending through said guide and terminating in a free end, said second pulley and said guide being so related and disposed as to maintain said flexible member in frictional engagement with at least one-half the periphery of said drive pulley when a pull is exerted on said flexible member and means to retain said flexible member in said groove, whereby upon exerting a pull on said flexible member, said flexible member will frictionally engage said drive pulley with sufficient pressure to cause said drive pulley to move said flexible member to open said gate and upon release of said flexible member to frictionally disengage said flexible member from said drive pulley said gate will be returned to said closed position by said resilient means.

2,999,618

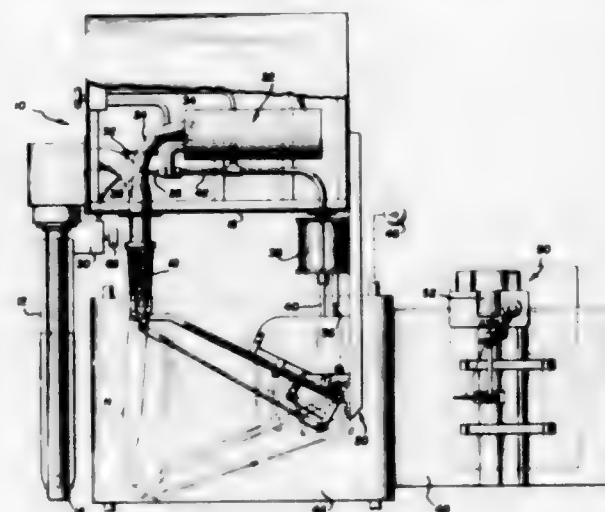
HOSIERY INSPECTING, STACKING AND BUNDLING APPARATUS

Gas T. Smith, Paducah, Ky., assignor to Marvel Specialty Company, Inc., Paducah, Ky., a corporation of Kentucky

Filed Aug. 6, 1959, Ser. No. 832,047
5 Claims. (Cl. 223-43)

1. A hosiery inspection and bundling machine comprising a hosiery inspection form, bundling means for

receiving inspected hosiery from said form and operable when actuated to tie received hosiery into a bundle, means actuable to transfer an inspected hose from said form to said bundling means, means for counting actuations

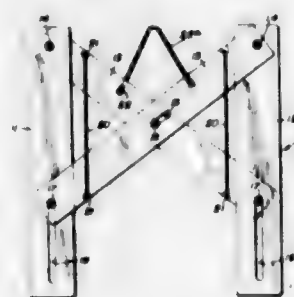


of said transfer means, and means controlled by said counting means for actuating said bundling means to tie hosiery into bundles containing a selected number of hose.

2,999,619

GARMENT CREASING DEVICE

Harold Thorne, Downingtown, Pa., assignor to Gordon Samuel Lexton, Downingtown, Pa.
Filed Jan. 7, 1959, Ser. No. 785,474
4 Claims. (Cl. 223-74)

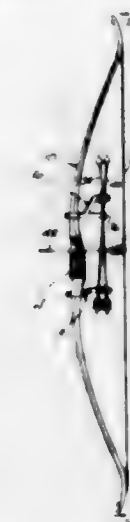


1. A garment creasing device, particularly a device for use with trousers, comprising a pair of spaced apart substantially rigid components adapted to be inserted into a trouser leg, a pair of link members arranged in crossed-over relationship with one end of each member being pivotally connected to one end of each of said components, the other end of each link member being mounted for longitudinal sliding movement between uppermost and lowermost positions in an elongated slot provided in each component in spaced relation to said pivot connections, a lost motion connection between said link members in proximity to their cross-over point, and resilient means operably connecting said link members between the cross-over point end each component normally urging said link members to their uppermost position in said elongated slots to hold the spaced components away from each other, yet upon pressing the components together adjacent said pivotal connections, the resilient means allow the other ends of said link members to move to the lowermost position in the elongated slots to move the spaced components toward each other thereby permitting the device to be inserted in the trouser leg, and upon release of said components, the resilient means moves the link members towards the uppermost position in the slots so that the spaced components stretch the trousers.

2,999,620

ARROW HOLDING ATTACHMENT

Bert E. Haggard, Rte. 2, England, Ark.
Filed Nov. 27, 1959, Ser. No. 855,902
3 Claims. (Cl. 224-1)

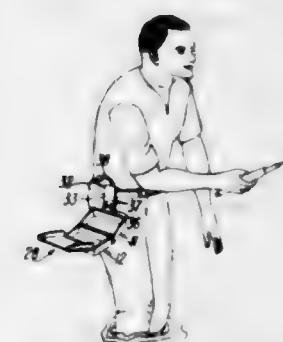


1. An arrow holding attachment for mounting upon an arching bow to hold arrows in a convenient and ready position about the bow to permit rapid shooting comprising a pair of support member adapted to be arranged in parallel relation, one of said members being on one side of the hand grip of an arching bow and the other of said members on the opposite side of said hand grip, means on one of the complementary ends of said support members for fixedly attaching said support members to the adjacent portions of said bow, and a plurality of stalls on the other of the complementary ends of said support members, the stalls of said support members being in substantial alignment, the stalls on one of said support members being directly behind each other with their entrances on the same side of the support and the stalls on the other of said support members being behind each other with their entrances on opposite sides of the support.

2,999,621

FOLDABLE TACKLE BOX

Albert L. Kiser, Scottsdale, Ariz., assignor to Product Development Corporation, a corporation of Arizona
Filed Apr. 7, 1959, Ser. No. 804,616
7 Claims. (Cl. 224-5)



1. A foldable tackle box comprising a pair of rectangular tray units, each having a flat bottom and upstanding side walls, one side wall of one unit being hinged to an adjacent side wall of the other unit for folding movement of said other unit relative to said one unit from an open position in which said units are in generally flat relation to a closed position in which said units are in superposed face-to-face relation, the opposite side wall of said one unit having a rigid upstanding extension, the length of said extension beyond said one unit being substantially equal to the thickness of said other tray unit, an elongated member hinged at one end to the upper end of said extension for a second folding

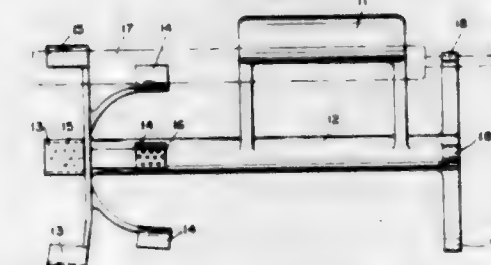
770 O.G.-21

movement of said units from a position generally perpendicular to said member to another position parallel to said member with the bottom of said other unit bearing against said member, said member including means at the opposite end for connecting the box to a waist belt, and means for releasably fastening said opposite end of said member to said one unit when said units are in said other position for holding said units closed in said other position.

2,999,622

FISHING ROD HOLDERS

Delbert Durham, 2500 Shammoor Ave., Norwood, Ohio
Filed Aug. 11, 1959, Ser. No. 833,067
1 Claim. (Cl. 224-45)

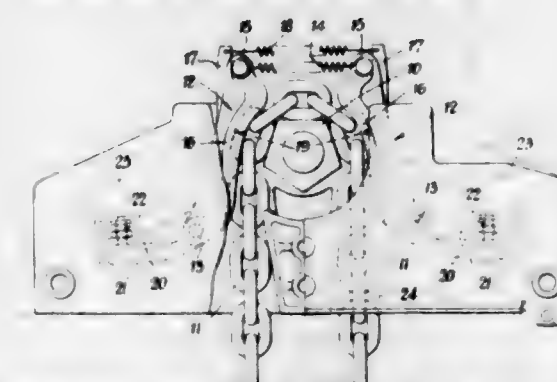


A fishing rod holder comprising a handle, a shank parallel to said handle and attached thereto, axially spaced hooks and supports with opposed semi-cylindrical rod-engaging surfaces extending outwardly from said shank at one end thereof, hooks axially aligned with said first named hooks extending outwardly from said shank at the other end thereof, the stems of said first named hooks being resilient and bent to keep the rod-engaging surfaces of said first named hooks normally out of axial alignment with those of the last named hooks and those of the supports, whereby, when fishing rods are placed between said first named hooks and said supports and are engaged under said last named hooks, the rod-engaging surfaces of said first named hooks will be in axial alignment with the rod engaging surfaces of the last named hooks and of the supports, the resilient stems of the first named hooks will be straight and under tension and yieldingly retaining the fishing rods between the hooks and the supports.

2,999,623

CHAIN GUARDS FOR ELECTRICALLY OPERATED HOIST PULLEY BLOCKS

Donald Mayer King, Argyle Works, Stevenage, England
Filed Nov. 25, 1958, Ser. No. 776,329
Claims priority, application Great Britain Nov. 26, 1957
5 Claims. (Cl. 226-43)



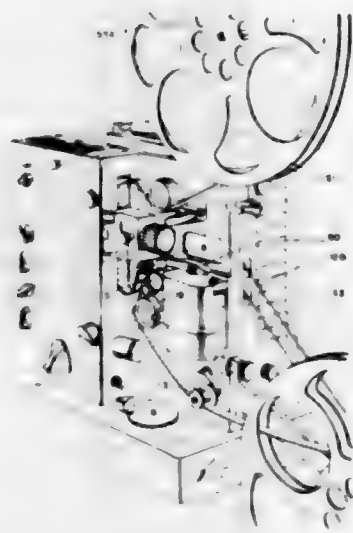
1. In operative association with a chain system including a chain, an abutment on the chain and extending outwardly therefrom, a sprocket engaging and moving the chain in a predetermined alignment with respect to said sprocket, and a control operative to control movement of the chain; an apparatus responsive to said abutment for actuating said control and to deformities in said chain for actuating said control, said apparatus comprising, on opposite sides of said sprocket, a first lever adjacent said

chain and sprocket and having a surface facing the chain and adapted to accommodate the passage of the chain in said predetermined alignment between the sprocket and said lever, a second lever adjacent said chain and sprocket and operatively disposed with respect to said abutment for being engaged by the latter, said first lever having a shape adapted to permit the free passage of said abutment and being displaceable solely by said chain when the latter deviates from said predetermined alignment, resilient means respectively connecting the first levers and the second levers on opposite sides of said sprocket and urging said levers toward said chain, pivot means supporting the levers whereby the first lever on each side of the sprocket is adapted to be pivoted when said chain deviates from said predetermined alignment and whereby the second lever on each side of the sprocket is adapted to be pivoted independently of the associated first lever by engagement with said abutment, and control actuating means operatively disposed with respect to at least one of said levers on each side of the sprocket and responsive to a pivoting of at least one of said levers on each side of the sprocket to actuate said control.

2,999,624

MECHANISM FOR FEEDING STRIP MATERIAL
Cornelius Graham Mayer, Chobham, and John Bertram Killow, Betchworth, England, assignors, by mesne assignments, to Radio Corporation of America, Princeton, N.J.

Filed June 13, 1958, Ser. No. 741,923
Claims priority, application Great Britain June 18, 1957
9 Claims. (Cl. 226-50)



1. Mechanism for feeding strip material in opposite directions between reversible rotary members and including a rotor assembly which has a substantial inertial resistance to acceleration and which comprises a drum over which the strip passes in travelling between the rotary members, said rotor assembly being rotatable freely by the strip material travelling thereover in one direction for smoothing out fluctuations in the strip movement, and means for contacting and driving the rotor assembly in the reverse direction at a speed such as to maintain tension in the strip between said drum and one of said rotary members.

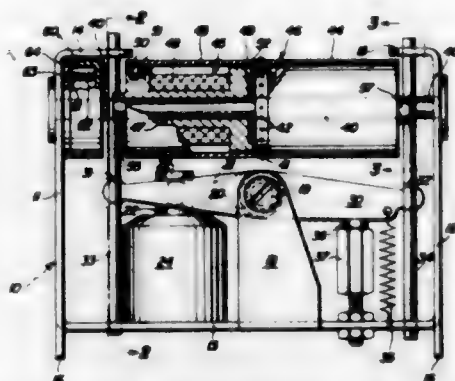
2,999,625

TAPE TRANSPORT APPARATUS
Lloyd J. Lapointe, Manchester, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Filed June 23, 1958, Ser. No. 743,805
8 Claims. (Cl. 226-51)

1. A record transport device, comprising a frame, a record supporting feed drum means rotatably mounted on said frame, a pair of rotatably mounted clutch spools

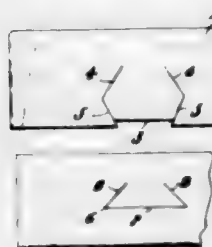
which are individually operated one at a time and which in their engaged conditions are respectively rotatably connected to said drum means and which in their disengaged conditions are respectively rotatably disconnected from said drum means, means for rotating one of said spools in one direction, means for rotating the other of said



spools in the opposite direction, and a single power means mounted on said frame for simultaneously operating the two spool rotating means in opposite directions so that said drum means may be driven in either rotative direction depending on which one of said clutch spools is in its engaged condition.

2,999,626

SELF-LOCKING BOX
William J. McDermott, Natick, Mass., assignor to Denison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Filed Aug. 11, 1959, Ser. No. 833,033
1 Claim. (Cl. 229-45)



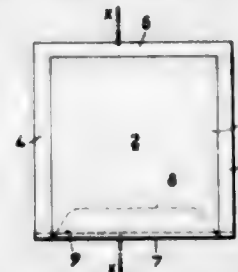
A self-locking box comprising a bottom part having an upstanding portion and a top part having a depending portion extending downwardly along the outside of the bottom portion when the box is closed, the upstanding portion being cut to define a pair of opposed edges which diverge from each other downwardly and the depending portion having a tongue fitting into the cut between said edges, the tongue having a pair of side edges which also diverge from each other downwardly, the angle of divergence of the tongue edges being less than the angle of divergence of said cut edges and the edges of one of said pairs intersecting the edges of the other pair when the box is closed with the tongue inserted in the cut, the edges of the lower end of the tongue being convergent to facilitate insertion of the tongue into the cut and the maximum width of the cut being substantially equal to the maximum width of the tongue so that the tongue may be freely inserted into the cut.

2,999,627

FLAT BAG PACKAGE AND METHOD FOR FABRICATING SAME
Fritz Reinhardt, near Herford, Westphalia, Germany, assignor to Firma Fr. Hesser, Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed July 31, 1958, Ser. No. 752,243
Claims priority, application Germany Oct. 18, 1957
1 Claim. (Cl. 229-55)

A bag unit comprising, in combination, a flat bag of sheet material, a commodity in said bag, said bag includ-

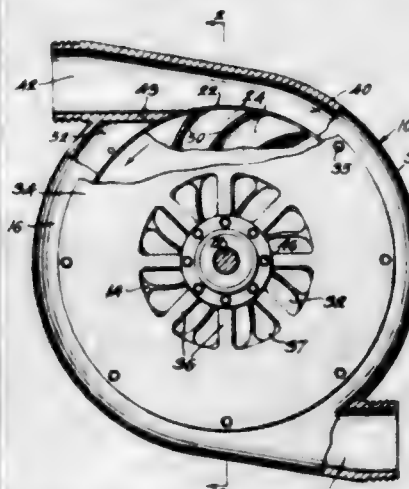
ing lateral margins, a protective bell-like cover surrounding said flat bag and forming a stably-standing hollow body open at the bottom and connected with the flat bag only at an upper seam and at said lateral margins, the protective bell-like cover being of a stiffer material than



the flat bag, the upper seam terminating at one end in a triangular sealed area provided with an aperture, the upper seam further terminating at its other end in a triangular sealed area having therein a channel extending from the interior of the flat bag towards the apex of a corner of said bag.

2,999,628

LOW PRESSURE COMPRESSOR
Joseph S. Cromble, 7725 Robinson Way, Arvada, Colo.
Filed Aug. 26, 1957, Ser. No. 680,040
3 Claims. (Cl. 230-47)



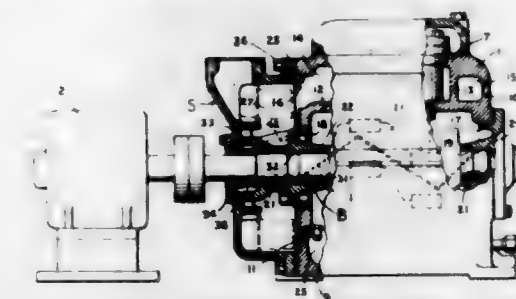
1. A low pressure compressor comprising a disc-shaped rotor including a hub member mounted for rotation on a shaft, said rotor being provided with annular cavities on opposed sides of said rotor adjacent to said hub and a pair of rows of horn-shaped openings diverging outwardly and rearwardly from said annular cavities through the periphery of said rotor, a housing arranged in spaced relation over said rotor to form a peripheral cavity adjacent to the periphery of said rotor and including a plurality of openings in substantial registry with the annular cavities in said rotor, and a pair of diametrically opposed tangentially extending exhaust conduits leading from the peripheral cavity formed by said housing in a direction opposite to the rearward extension of said horn-shaped openings and with the inner ends of said exhaust conduits defining baffles terminating adjacent to the periphery of said rotor to direct the fluid discharged from said horn-shaped openings into said conduits.

2,999,629

INTERCHANGEABLE, HERMETIC AND OPEN-TYPE REFRIGERATION COMPRESSOR
Henri Soumerai, Springfield, Mass., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Apr. 23, 1959, Ser. No. 808,401
22 Claims. (Cl. 230-58)

1. An end bell adapter means for an open ended compressor having a crankshaft extending a predeter-

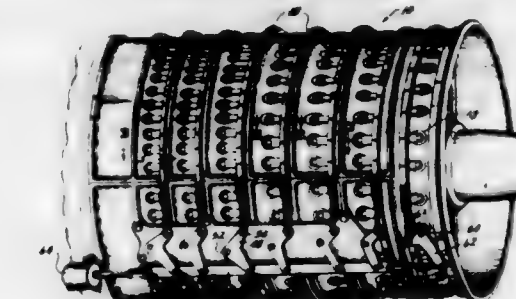
mined distance outwardly of the open end of the compressor comprising, a cylindrical section having at least one end wall with passages therein, and an end cover section, means on said cylindrical section to permit the cylindrical section to be connected to the end cover section at one end and to the open end of the compressor at the other end to provide a hermetically sealed



chamber in assembled position, inlet means in said end cover in communication with said chamber, an axially extending bearing means in said end wall, an annular member formed on the bearing means, said annular member disposed in assembled position to seal the crankcase of the compressor and to position the bearing means for rotatably supporting the crankshaft extension.

2,999,630

COMPRESSOR
Robert Evans Warren, Marblehead, Mass., and Felix Ernst Nagel, Columbus, and Gerhard Neumann and Le Var C. Jensen, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Aug. 8, 1957, Ser. No. 677,145
1 Claim. (Cl. 230-114)

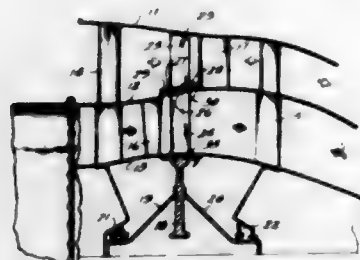


A compressor for an axial flow machine comprising: a casing having an inlet and an outlet; a series of guide vanes adjustably mounted in a row in the inlet of said casing; a plurality of rows of stator vanes adjustably mounted in said casing downstream of said row of guide vanes; a plurality of rows of lever arms, the lever arms of one row being connected to said inlet guide vanes and the arms of the remaining rows being connected to said stator vanes; a plurality of actuator rings, the lever arms of each of said plurality of rows being connected to one of said rings; the actuator ring for said row of guide vanes being positioned on the downstream side of the associated guide vanes and the actuator rings for said rows of stator vanes being positioned on the upstream side of the associated stator vanes; a plurality of bellcranks pivotally mounted on said casing, each bellcrank being connected at one of its ends to one of said plurality of actuator rings and at its other end to a common actuator arm, the bellcrank connected to the actuator ring of said one row of lever arms of said guide vanes being reversed from the bellcranks connected to said remaining rows of lever arms, the remaining rows of lever arms also being reversed from said one row, in order that the actuator ring connected to said one row of lever arms may be turned in a direction opposite to the actuator rings of said remaining rows to turn all of the vanes in the same direction.

2,999,631

DUAL AIRFOIL

Charles Wolfmeyer, Wyoming, Ohio, assignor to General Electric Company, a corporation of New York
Filed Sept. 5, 1958, Ser. No. 759,251
5 Claims. (Cl. 230-116)

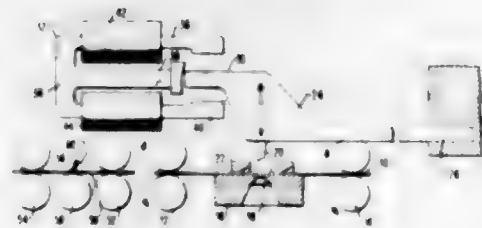


1. A rotor construction comprising: a rotor wheel; a plurality of dual airfoils mounted on the periphery of the wheel, each dual airfoil including a turbine bucket, a compressor blade, and a mid-platform section connecting the blade to the outer extremity of the bucket, the mid-platforms of adjacent dual airfoils abutting along their lateral surfaces; and interlock faces carried by the mid-platform sections, the interlock faces of adjacent dual airfoils bearing against each other to resist torsion and centrifugal twisting forces, said interlock faces being capable of movement relative to each other; a sealing member adapted to be held adjacent to the mid-platforms to seal the joint therebetween and to provide flexural and torsional vibration dampening.

2,999,632

HIGH SPEED PUNCH MECHANISM

André Marcel Tailleux, Paris, France, assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 26, 1958, Ser. No. 783,053
Claims priority, application France Feb. 3, 1958
5 Claims. (Cl. 234-109)



4. A mechanism for marking an element, comprising an oscillatable marking member cantilevered in a support, magnet means oscillating the member at a preselected frequency and normally within an amplitude at which it is ineffective to contact the element, and means responsive to a signal to augment the normal action of said magnet means for increasing the amplitude of such oscillation to cause the member to mark the element.

2,999,633

CALCULATING RULE

Roy Pio Pini, Via Giacomo Leopardi 6, Bollate, Milan, Italy
Filed Dec. 27, 1956, Ser. No. 630,946
Claims priority, application Italy Dec. 28, 1955
2 Claims. (Cl. 235-61)

1. A slide rule for relating variables such as material shrinkage, mold size and finished article size, comprising an elongated body having a first linear scale indicating dimensions for the finished article, a second linear scale parallel to the first scale for indicating mold dimensions, and a third scale of shrinkage percentages arranged transversely of the first and second scales, a slide slidable on

said elongated body along said first and second scales, a bell crank lever having first and second arms respectively provided with an index and a slot, a pivot pivotally supporting said lever on said slide, a spline slidably supported on said slide for movement transversely of said first and second scales and including a pin engaged in the slot in said second arm, a second pin on said spline, and a bar pivoted to said elongated body and having a slot slidably

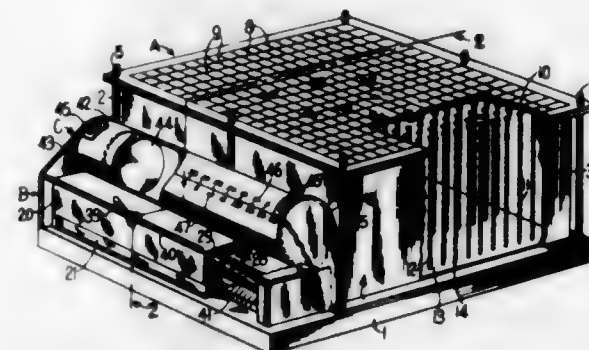


engaging said second pin, said bar having an index for indicating a percentage on the third scale, the pivot for said bell crank indicating a dimension on one of the first two said scales and the index on said first arm indicating a dimension on the other of the latter scales whereby due to the pivoting of said lever and movement of said spline selection of two of the variable indicates the third of the variables.

2,999,634

CONTOUR DEVICE

Franklin E. Walker, Brockton, Mass.
(6251 Nottingham Drive, Washington 22, D.C.)
Filed Jan. 21, 1959, Ser. No. 788,240
6 Claims. (Cl. 235-61)



5. A differential volume contour device comprising a flexible surface collapsibly supported over a base to define with other elements an air-tight zone therebetween, an air-tight gear box communicating with said zone, a cylinder mounted for selective communication with said zone, a multiplicity of flexible cables anchored each at one end thereof in said flexible surface and at the other end thereof in separate tensioning means for moving the same downwardly at said flexible surface, and a multiplicity of springs mounted around said cables and extending between said base and said flexible surface for constantly urging the latter upward, said tensioning means being mounted in said gear box for independent operation by means positioned outside an air-tight wall thereof, and said cylinder including a piston for movement therealong to register changes of volume in said zone.

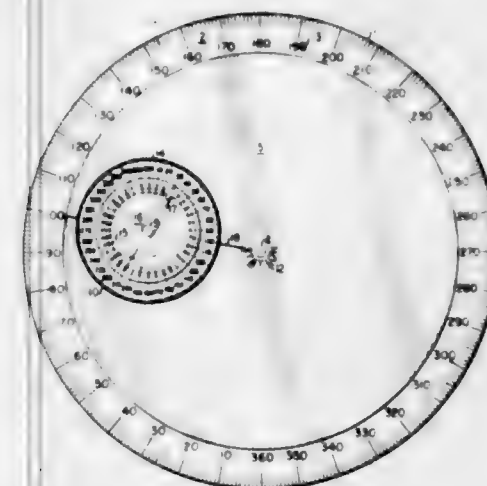
2,999,635

NAVIGATIONAL COMPUTER

Edward W. Robertson, 912 State St., Camden 2, N.J.
Filed July 6, 1959, Ser. No. 825,262
13 Claims. (Cl. 235-61)

1. A navigational computer comprising a base ring defining a first axis of revolution, azimuthal indicia upon said base ring, a second ring adapted to rotate about a second axis substantially parallel and eccentric to said first axis while simultaneously revolving that second axis around said first axis, azimuthal indicia upon said second

ring, means integrating said rotation and revolution of the second ring to maintain, throughout revolution, any given radial thereof substantially parallel to its corresponding radial on the base ring, a third ring adapted to rotate

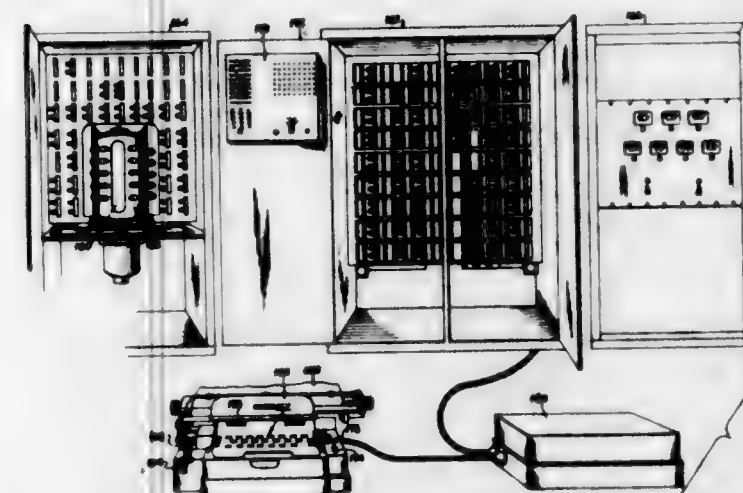


about the second axis in freely adjustable rotation relative to the second ring and, as so adjusted, to rotate in unison with the second ring, and azimuthal indicia upon said third ring.

2,999,636

COMPUTER

Glenn E. Hagen, Manhattan Beach, Calif., assignor, by means assignments, to Alvac International Incorporated, a corporation of Panama
Filed Aug. 18, 1953, Ser. No. 374,987
14 Claims. (Cl. 235-167)



1. In an electronic computing device, a pair of plural order binary recirculating registers together comprising a pair of independent electronic delay lines and each adapted to transmit a time sequential signal group the successive signals of each of which are indicative of the successive digits of distinct plural order binary numbers, a common electromagnetic delay line comprising an endless magnetic record, a recording head and a reading head mounted in spaced relation along a common track on such record, a biplexing device interposed between the output ends of said electronic delay lines and the input end of said electromagnetic delay line record head to transmit signals to said electromagnetic delay line from said electronic delay lines alternately whereby each signal in said electromagnetic delay line indicative of a digit of one of said numbers is interposed between a pair of signals indicative of digits of the other of said numbers, a debiplexing device interposed between the output end of said electromagnetic delay line read head and the input ends of said electronic delay lines and operative to transmit signals from said electromagnetic delay line to said elec-

tronic delay lines alternately whereby the interspersed digit indicative signals of said numbers in said electromagnetic delay line are separated and all and only signals indicative of digits of one number are transmitted to a first of said electronic delay lines and all and only signals indicative of digits of the other number are transmitted to the second of said electronic delay lines, and means selectively operative to modify the time delay of one of said electronic delay lines to effect a denomination order digit shift in the one of said registers embodying said one electronic delay line.

2,999,637

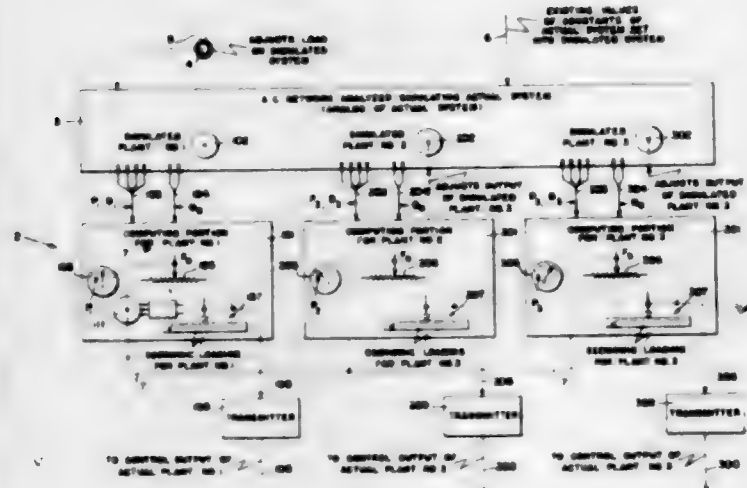
TRANSISTOR MAJORITY LOGIC ADDER

Winfield S. Curry, Jr., Anaheim, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Apr. 29, 1959, Ser. No. 809,750
2 Claims. (Cl. 235-175)



1. In a parallel adder circuit, an apparatus for adding the n th digit of first and second binary numbers wherein n is a positive integer greater than zero which commences with 1 and assumes progressively increasing values for increasing orders of significance of the digits of said binary numbers, said apparatus comprising a first majority logic computer element having first, second and third input terminals and an output terminal, said first and second input terminals being responsive, respectively, to first and second signals representative of the n th digit of each of said first and second binary numbers and said third input terminal being responsive to a third signal that is the complement of the carry signal produced by the addition of the $(n-1)$ digits of said first and second binary numbers and the carry from the $(n-2)$ order; a second majority logic computer element having a first, second and third input terminal and an output terminal, said first and second input terminals being responsive, respectively, to fourth and fifth signals representative of the complements of signals representing the n th digit of said first and second binary numbers and said third input terminal being responsive to said third signal thereby to produce a sixth signal at said output terminal thereof representative of the carry digit from the addition of the n th digits of said first and second binary numbers and the carry from the $(n-1)$ order at said output terminal thereof; and a third majority logic computer element having first, second and third input terminals and an output terminal, said first and second input terminals being connected, respectively, to the output terminals of said first and second majority logic computer elements and said third input terminal being responsive to said third signal thereby to produce at the output terminal thereof a signal representative of the sum of the n th digits of said first and second binary numbers and the carry from the $(n-1)$ order.

2,999,638
MEASURING AND CONTROLLING APPARATUS
 William R. Brownee, 780 Montgomery Drive,
 Birmingham 9, Ala.
 Filed Jan. 7, 1957, Ser. No. 632,756
 10 Claims. (Cl. 235-185)

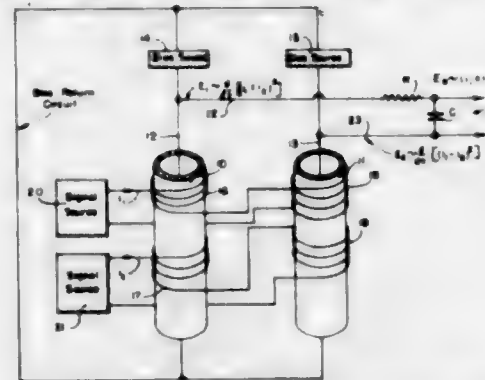


7. Apparatus for assigning the loads to the interconnected generating plants of a power system in accordance with the incremental costs of delivered energy for the plants, comprising means constituting an analog of said system including devices which simulate the operation of said system plants and which constitute simulated plants in said analog, the latter also including a simulated reference point simulating a common reference point in said system, and a computing portion individual to each of said system plants and its corresponding simulated plant, each of said portions including first means arranged to derive from the corresponding one of said simulated plants a first effect which is representative of the value of the phase angle between the output voltage of said corresponding simulated plant and the voltage at said simulated point, second means arranged to compute from said first effect a second effect which is a function of said phase angle and which is representative of the incremental transmission loss for said corresponding simulated plant with respect to said simulated reference point, third means arranged to compute a third effect which is a function of the output of said corresponding simulated plant and which is representative of the incremental generating cost for said corresponding simulated plant with respect to said simulated reference point, and fourth means arranged to adjust the output of said corresponding simulated plant to the economic balance value required to establish equality between said second and third effects, these economic balance values of the outputs of said simulated plants representing the economic combination of loadings for said system plants at which the latter will operate with equal incremental costs of delivered energy.

2,999,639
ANALOG MULTIPLYING CIRCUITS
 Daniel M. Lipkin, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
 Filed Nov. 19, 1957, Ser. No. 697,344
 10 Claims. (Cl. 235-194)

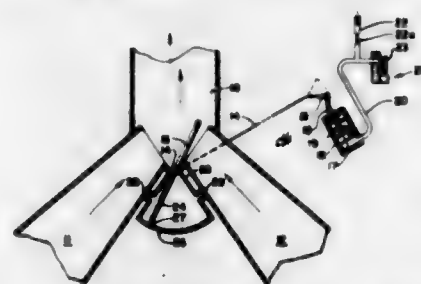
7. In combination, a plurality of magnetic cores, bias means for applying to each of said cores a magnetomotive force of sufficient magnitude to saturate each of said cores and to cause said cores to operate in the associated region of vanishing rotational hysteresis loss, input coil means on each of said cores responsive to signals applied thereto for applying magnetomotive forces to said cores in directions transverse to the magnetomotive forces produced by said bias means, first and second signal sources

for supplying separate signals, means coupling both of said signal sources to the input coil means of one of said cores such that said input coil means on said one core applies a magnetomotive force proportional to the instantaneous sum of said signals from both of said sources to said one core, means coupling both of said signal sources to the input coil means of another of said cores such that



said input coil means on said other core applies a magnetomotive force proportional to the instantaneous difference between the signals from both of said sources to said other core, means for deriving separate output signals from each of said cores, and output means for deriving a signal in accordance with a combination of said separate output signals from said cores.

2,999,640
AIR CONDITIONING MIXING VALVE
 Robert W. Waterfill, Montclair, N.J., assignor, by mesne assignments, to Buensod-Stacey Corporation, a corporation of Ohio
 Filed June 12, 1957, Ser. No. 665,163
 10 Claims. (Cl. 236-13)

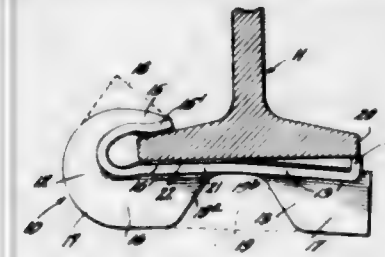


2. In an air conditioning system having a mixing chamber into which separate warm and cool air ducts are directed for feeding air thereto, a mixing valve including a damper pivotally mounted within said chamber and adapted to be moved between two extreme limits of motion where the outlet of one of said ducts into said chamber is closed and the other is open; means connected between said ducts forming an hermetically sealed housing; a blade lying substantially in the plane of said damper and extending from its pivotal mounting into said housing, the other end of said blade cooperating with a wall of said housing to form separate compartments therein; restricted conduit means for causing the differential pressure between said ducts to act on said blade and at least partially balance the thrust on said damper caused by the air pressure within the duct being closed; and condition responsive means operably connected with said damper for determining the duct to be closed by said damper.

2,999,641
RAIL ANCHORS
 James R. Steele and Stephen M. Lounsbury, Jr., Owego, N.Y., assignors to Moore & Steele Corporation, Owego, N.Y., a corporation of Delaware
 Filed Sept. 5, 1957, Ser. No. 682,196
 4 Claims. (Cl. 238-327)

1. A rail anchor comprising a T-section bar steel member formed to provide a jaw portion comprising

upper and lower jaws for gripping the base flange of a rail and a body portion to extend beneath the rail base, said lower jaw and said body portion being formed with portions for abutting engagement with the side face of an adjacent cross-tie and said body portion having an upturned end portion of a height not substantially less than $\frac{3}{16}$ " for abutting engagement with that edge of the rail base flange which is opposite to the portion gripped by said jaws, said jaws having rail base gripping portions and said body portion having an element adjacent said rail base which gripping portions and



element comprise a continuous flange portion of said T-section member, said jaws and said body portion having stiffening ribs comprising the web portion of said T-section member, a substantial intermediate segment of said body portion having the web completely removed and consisting only of said flange portion of said T-section member, the web portions defining the removed portion comprising smooth curves so that the straight portion of the anchor is free from abrupt changes in section, whereby said segment of said body portion is more easily flexed.

2,999,642
DISPENSING DEVICE
 Florence B. Stone, Nutley, N.J., assignor to Vacuum Ventures, Inc., Pompton Lakes, N.J., a corporation of New Jersey
 Filed Dec. 18, 1959, Ser. No. 860,566
 5 Claims. (Cl. 239-52)

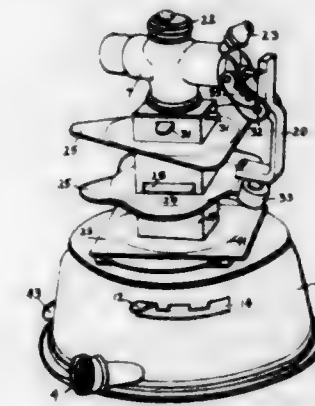


1. A dispensing device for rolled material comprising a hollow core member within said rolled material, said core member being rotatable with the rolled material when the material is being dispensed and having an inner surface on which there is disposed an evaporative substance confined within a frangible covering, and a supporting member for the rolled material extending within the hollow core member and having means for rupturing the frangible covering upon rotation of the core member and the support to release the evaporative substance confined within the covering.

2,999,643
ADJUSTABLE PATTERN IRRIGATION SPRINKLING DEVICE
 William P. Kennedy, 304 Freyer Drive, Marietta, Ga.
 Filed Mar. 24, 1958, Ser. No. 723,490
 7 Claims. (Cl. 239-97)

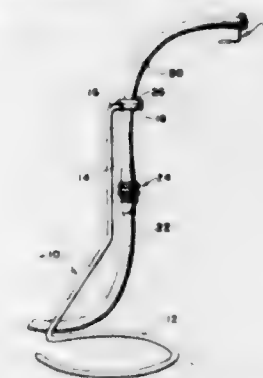
1. A cam-controlled pattern sprinkler, including a supporting body, a reduction geared water motor, conduit

means connecting said water motor to rotary distribution head means, with said head means including a common fluid entry and two fluid exits with cylinder means reciprocatingly movable within said head means and between said entry and each of said fluid exits, with one exit producing an inclined jet discharge stream and the other exit producing a vertically circular discharge spray, with said cylinder means having connected thereto means to



cause a constant volume of fluid entering said entry to be distributed varying proportionally through said exits so as to vary the length of said inclined jet stream and vary the diameter of said vertically circular spray so that when said inclined jet stream is shortened said diameter of said circular spray is lengthened and when said jet stream is lengthened said diameter of said circular spray is shortened.

2,999,644
PORTABLE SPRINKLING DEVICE
 Edward Nobinger, 1731 Mims Ave. SW., Birmingham, Ala.
 Filed Apr. 7, 1959, Ser. No. 805,117
 20 Claims. (Cl. 239-229)

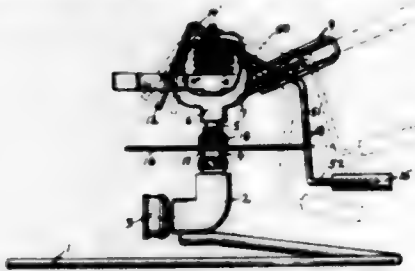


1. A liquid sprinkling device comprising a resilient and flexible hose, a stand for mounting on the ground, means attaching said hose to said stand with an end of said hose unsupported, and deflector means attached to said hose and comprising a thin rod-like member in the end of said hose extending transversely thereacross, said deflector means being attached to said hose in such a manner that the periphery of the end of said hose is free to expand when the pressure of the fluid is increased and is held in position in said hose when said hose is in an expanded condition.

2,999,645
CAM CONTROLLED PATTERN IMPULSE SPRINKLER
 William P. Kennedy, 304 Freyer Drive, Marietta, Ga.
 Filed Sept. 8, 1959, Ser. No. 838,576
 15 Claims. (Cl. 239-230)

1. A sprinkler having a rotary distribution head, impulse clapper means to rotate said distribution head by means of clapper oscillation, cam means in association with and variably controlling the amplitude of oscillation

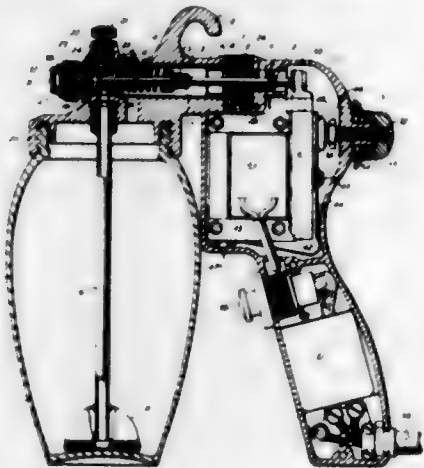
of said clapper means, the combination of said means causing said sprinkler to form an area spray pattern and



said head to vary in rotational speed during each revolution of said head.

2,999,646 SPRAY GUN

Josef Wagner, Friedrichshafen-Flachbach am Bodensee, Germany, assignor to Charles S. Tanner Company, Providence, R.I., a corporation of Rhode Island
Filed Aug. 26, 1960, Ser. No. 52,147
3 Claims. (Cl. 239-332)



1. A spray gun comprising a housing consisting of a hollow body, an electromagnet secured therein, an armature pivotally mounted adjacent the rear of said magnet and extending upwardly, spring means yieldingly urging said armature toward said electromagnet, a handle extending from the lower portion of said body, a push button switch, manually operated, secured in said handle, electrical connections between said switch, magnet and a source of electricity, a barrel extending horizontally from the top of said body above the top of said magnet, a pump therein, that improvement in said pump which comprises a longitudinal guide tube slidably mounted within said barrel, said pump consisting of a pump cylinder having a stepped axial bore, provided with a valve seat and a radial bore, said pump cylinder secured to said longitudinal guide tube, a pump piston slidably mounted for reciprocating movement within said axial bore, a buffer cap secured to one end of said pump piston, a spring interposed between said buffer cap and said pump cylinder yieldingly urging said pump piston to a suction position, suction action being effected by the reciprocating motion of said piston across said radial bore, a connecting rod slidably mounted in said guide tube and abutting said buffer cap on one end, and said armature on the other end, means secured to the lower side of the front portion of said barrel for holding a depending container, a tube attached to said barrel in communication with said radial bore, the free end of said tube adapted to be immersed in fluid to be sprayed located in said depending container, a closure cap having a nozzle aperture removably secured to said pump cylinder, an atomizing nozzle held against the end of said pump cylinder by said closure cap and positioned to project into said stepped axial bore, a valve head abutting said valve seat, a spring interposed between said valve

head and said atomizing nozzle, one end of said pump piston engaging said valve head in opposition to said last mentioned spring, said barrel having a recess, means located in said recess and rotatively engaging said guide tube whereby said guide tube moves horizontally in said barrel and said pump piston moves said valve head away from said valve seat in accordance with the viscosity of the liquid to be atomized.

2,999,647

MIST AND SPRAY PRODUCTION METHOD AND NOZZLE DESIGNS FOR ITS USAGE

Benjamin Sosnick, San Jose, Calif.
Filed Mar. 3, 1958, Ser. No. 718,629
3 Claims. (Cl. 239-468)

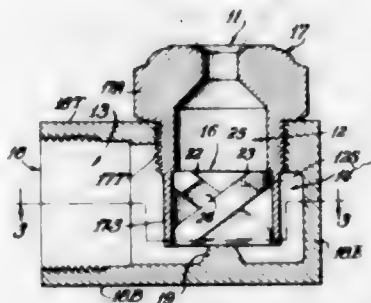


1. Fluid emitting device to provide emittent fluid in a continuously variable pattern from a nearly cylindrical stream to a wide angle cone, said pattern further continuously variable from greatest fluid density at the center of the cone to greatest fluid density at the edges of the cone, comprising a generally cylindrical chamber provided with a single fluid outlet and a first fluid inlet disposed to introduce into said chamber a fluid stream coaxial with said outlet, and at least one additional fluid inlet disposed to introduce into said chamber a fluid stream at an angle to the axis of said first stream, conduits for carrying said streams to said inlets and valve means in said conduits for controlling the flow of each of the streams and shutting off either stream without shutting off the other, characterized by said outlet being flared and having a diameter substantially equal to that of said chamber and by said chamber being substantially non-convergent upstream of said outlet.

2,999,648

SIDE INLET CONICAL SPRAY NOZZLE

Fred W. Wahlm, St. Charles, and Edward J. O'Brien, Glen Ellyn, Ill., assignors to Spraying Systems Co., Bellwood, Ill., a corporation of Illinois
Filed Aug. 10, 1959, Ser. No. 832,648
7 Claims. (Cl. 239-487)



1. A side inlet spray nozzle comprising a body having therein a whirl chamber passage and an inlet passage both of which extend inwardly into the body and are disposed in crosswise relation to one another in a common plane substantially at the midwidth of each, the inlet passage being closed at its inner end and the whirl chamber passage having a spray discharge orifice at the outer end thereof from which the whirl chamber passage extends inwardly into the inlet passage at one side thereof and projects therein centrally of the width of the inlet

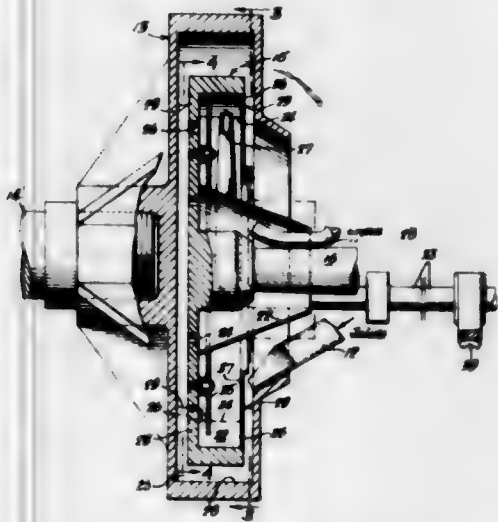
passage toward the opposite side thereof and is open at its inner end to provide an entrance thereto which faces toward said opposite side and is spaced therefrom to provide a passage therebetween, the portion of the whirl chamber passage which projects into the inlet passage being defined by a surrounding wall which projects toward and terminates at a distance from said opposite side of the inlet passage to provide said entrance to the whirl chamber passage and said surrounding wall being disposed at a distance from the closed end of the inlet passage to provide the inlet passage with an end space beyond the said surrounding wall and the said surrounding wall being disposed within the inlet passage in a position providing at opposite sides of the aforesaid common plane corresponding and uniform paths of flow at opposite sides of the surrounding wall and between the open inner end of the whirl chamber passage and inner end of said wall and said opposite side of the inlet passage toward and to said end space at the closed end of the inlet passage.

2,999,649

APPARATUS FOR CONTINUOUSLY CRUSHING AND SELECTIVELY DISCHARGING SOLID MATERIALS

Charles S. Radcliffe, Philadelphia, Pa., assignor to Con-centro Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 1, 1956, Ser. No. 568,727
11 Claims. (Cl. 241—39)



1. In an apparatus for crushing solid materials, the combination comprising a first centrifugal rotor having a circumferential wall forming the outer wall of a bowl space, means to feed liquid and solids continuously to said bowl space, a second centrifugal rotor eccentrically mounted within the first and having a bowl space with an outer circumferential wall located at least partially within said bowl space of the first in kneading proximity to said first circumferential wall, said bowl space of said second rotor communicating with an inner portion of said bowl space of said first rotor to receive a mixture of liquid and solids crushed between the circumferential walls of said rotors and discharged from said first bowl space into said second bowl space, and means for discharging continuously from an inner portion of said second rotor an effluent comprising said liquid containing solids crushed between said circumferential walls.

2,999,650

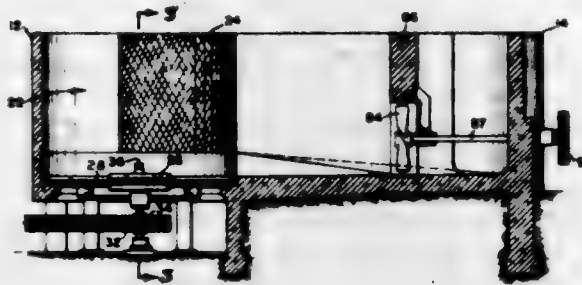
PULPER

Leo Campagnano, Via Borromeo 1B/7, Milan, Italy

Filed Nov. 22, 1957, Ser. No. 698,166
6 Claims. (Cl. 241—46)

1. Pulping apparatus for paper stock comprising a tub, a section of said tub set aside for pulping but in com-

munication with the remaining portions of said tub, means in said pulping section for subjecting paper stock to a vigorous hydraulic sheer pulping action including a pulping rotor having first blades thereon for directing said stock outwardly and second blades thereon for



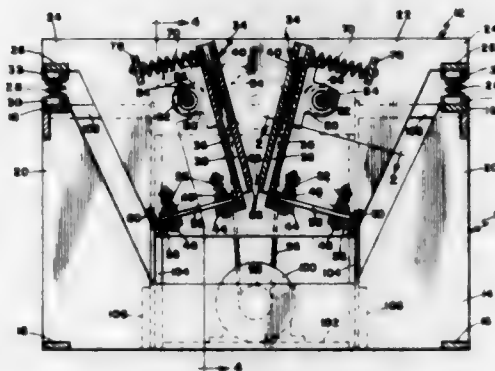
directing said stock upwardly, and separate means for continuously withdrawing from said pulping section and circulating around said tub under conditions of comparatively mild agitation stock components of a predetermined maximum particle size.

2,999,651

SINGLE STAGE ROCK CRUSHER

John D. Ault, El Cajon, and David P. McConnell, Los Angeles, Calif., assignors, by direct and mesne assignments, to Mining Research Corp., Los Angeles, Calif., a corporation of California

Filed July 11, 1958, Ser. No. 747,939
14 Claims. (Cl. 241—218)



1. A single stage rock crusher, comprising: a fixed base frame; a floating frame resiliently mounted on said base frame; a pair of opposed crusher jaws operatively mounted in said base frame and converging at their lower edges to define a throat therebetween; a plurality of support bars resiliently connected at one end thereof to the lower edge of each of said jaws; the other ends of said support bars being resiliently connected to said floating frame; resilient support means interconnecting the upper portions of said jaws with said floating frame; and means for vibrating said jaws toward and away from each other.

2,999,652

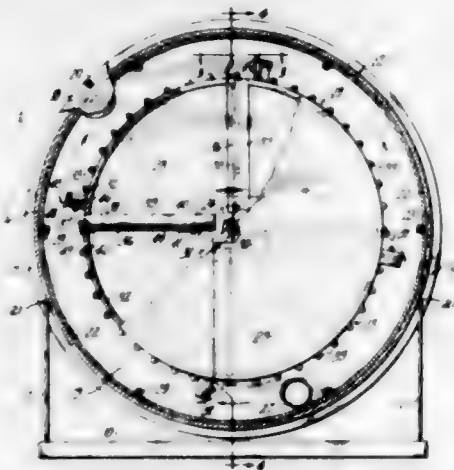
ORE PULVERIZING MILL WITH CENTRIFUGAL IMPACT PULVERIZING ACTION

Ervin J. Dear, 495 N. Bowling Green, Los Angeles, Calif.
Filed July 27, 1959, Ser. No. 829,863

1 Claim. (Cl. 241—275)

An ore processing mill comprising: a housing embodying a circular rim, front and back plates secured to said rim to define a rotor chamber, a cylindrical liner fitted within the rim of said housing, retained by said front and back plates, and having on its inner face a plurality of axially extending barrier bars, said liner and barrier

bars being of extremely hard tough, wear resistant material, a rotor mounted in said chamber coaxially and having a rim spaced radially inwardly from the housing rim to define an annular reducing chamber having a radial width roughly equivalent to $\frac{1}{4}$ the radius of said rim, said rotor comprising a pair of axially spaced circular end plates and a cylindrical rim secured to and bridging between the peripheries of said end plates, said rotor rim being provided with a plurality of circumferentially spaced discharge apertures, said rotor further including a plurality of impeller blades secured to the inner faces of and bridging between the respective rotor end plates and having outer ends communicating with the respective rotor periphery apertures at the trailing extremities thereof with respect to rotor rotation, a plurality of removable blade liners of extremely hard, tough wear resistant material each seated against the forward face of their respective blade and detachably secured thereto, the inner ends of said blades and blade liners being spaced radially outwardly from the axis of the rotor to define an unobstructed rotor throat for receiving ore chunks, said rotor having an axial inlet through which such ore chunks can be fed into said throat, and said housing having a hopper and a feed opening communicating with said rotor inlet opening for the feeding of ore chunks into said rotor throat, from which said chunks will be drawn through said feed opening and inlet

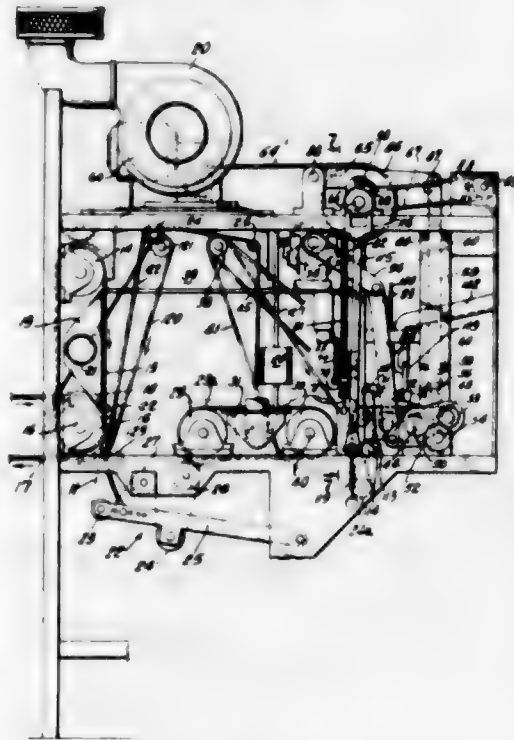


into said throat and thence into the path of high speed rotation of the rotor blades, will be impelled by said blades in circumferentially and outwardly spiralling paths of movement and discharged through said rotor discharge apertures into said reducing chamber, resulting in explosive impact of the ore fragments against said housing rim liner and against said barrier bars thereof whereby reduction of the ore fragments into small particles will be effected, said rotor having, on the periphery of its said rim, a plurality of radially projecting bats of hard, tough, wear resistant material adapted to engage with explosive impact, particles rebounding from said housing rim and to impart to them, additional impetus in their movement within said annular processing chamber, impelling said fragments tangentially into renewed explosive impact with the housing rim and its said barrier bars, and a plurality of axially extending cylindrical impact bars of hard, wear-resisting material arranged at substantial uniform circumferential spacing between said bats and not more than 15° angular intervals as subtended at the rotor axis, adapted to engage particles rebounding from said housing rim and to impart to them, additional impetus in their movement within said annular reducing chamber, impelling said fragments tangentially into renewed explosive impact with the housing rim and its said barrier bars, said bats projecting radially outwardly beyond said impact bars, a distance roughly half-way for said rotor rim to the inner surface of said housing liner.

2,999,653

MACHINE FOR WINDING LOG ROLL

Henry Ganz, West Englewood, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Apr. 11, 1957, Ser. No. 652,218
13 Claims. (Cl. 242-56)



1. A machine for winding up web material into rolls of given length from a source of web material of substantially greater length and which comprises: delivery mechanism operating continuously to deliver web material at a given linear speed into the machine for winding, devices for feeding the web linearly forwardly to a windup station, a variable speed drive for said devices, means for establishing and disestablishing a driving connection between said drive and the feeding devices, control mechanism for automatically operating said means to disestablish said driving connection after a predetermined length of material has been fed and for automatically operating said means again to establish said driving connection, instrumentalities operable to store the material continuously delivered to the machine while the driving connection is disestablished, and means operable while the driving connection is disestablished for adjusting the variable speed drive according to the amount of such excess material delivered to operate said feeding devices, upon reestablishment of said driving connection, at a speed higher than the speed of delivery until all the excess material stored by said instrumentalities has been fed forward to the windup station.

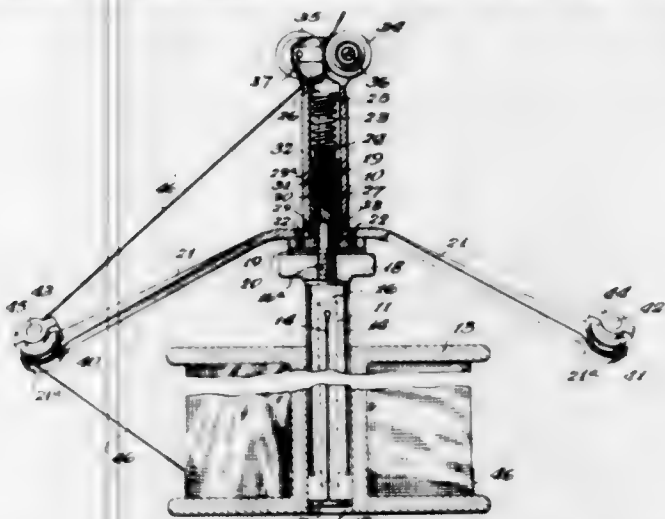
2,999,654

UNWINDING DEVICE

Frederick J. Fuller, Chicago, Ill., assignor, by mesne assignments, to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Oct. 25, 1956, Ser. No. 618,386
4 Claims. (Cl. 242-128)

1. A device for controlling the unwinding of a coil of an elongated flexible member comprising: a base member for removably attaching said device in an operative relationship to said coil, a rotatable member supported for rotation by said base member, said rotatable member carrying flexible member guide means spaced from said base member for guiding said flexible member off said coil as said rotatable member rotates about said coil, and means cooperating with said rotatable member and said base member for yieldingly retarding the rotation of said rotatable member including a passage in said rotata-

ble member, locking means arranged to be raised or lowered in said passage, resilient force applying means

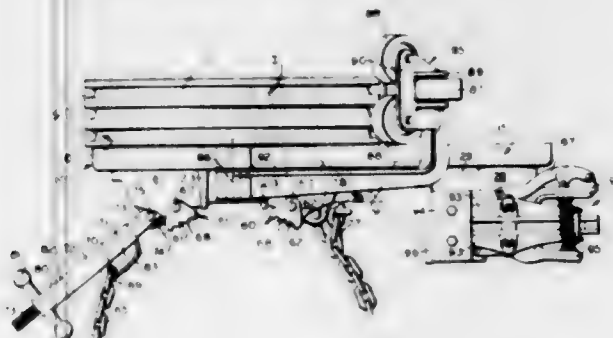


arranged to abut against said base member and a spring tension determining member normally received in said passage and bearing against said locking means.

2,999,655

POLE TENSIONER

Gerald A. M. Petersen, 460 Kifer Road, Santa Clara, Calif., Robert W. Goode, Morgan Hill, Calif., and Herschel Robert Gustafson, Spokane, Wash.; said Goode and said Gustafson assignors to said Petersen
Filed Feb. 6, 1959, Ser. No. 791,617
13 Claims. (Cl. 242-155)



1. In a cable stringing and tensioning apparatus of the type including a pair of coplanar bull wheels operatively associated with a brake disc and brake shoes engageable therewith for retarding turning of said bull wheels under the influence of a cable looped about them; a flat triangular shaped frame having bearings at its adjacent angles for supporting said bull wheels for rotation in a common plane, a bearing at the other angle of said triangular frame having said brake disc journaled thereon, means for drivingly connecting said bull wheels to said brake disc for rotating the latter in unison therewith, and clamping means on that face of said flat frame opposite said bull wheels for securing said frame to a power pole.

2,999,656

GAS TURBINE ENGINE WITH CANTED VARIABLE GAP AUGMENTARY INTAKE

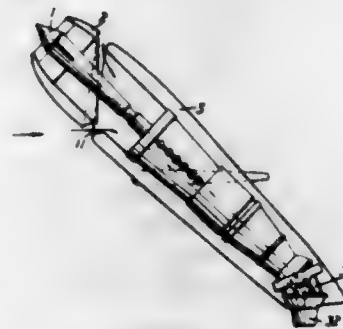
Peter Arthur Ward, Littleover, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

Filed May 18, 1959, Ser. No. 813,903

Claims priority, application Great Britain Aug. 15, 1958
7 Claims. (Cl. 244-23)

1. A gas turbine engine comprising a compressor and air intake means therefor open at the front end of the

engine axis, said air intake means comprising spaced apart wall members which are disposed downstream of the nose of the engine and define between themselves a gap, the wall members being shaped to direct air through said gap and into the air intake means aft of said front end, means effecting relative axial movement of said

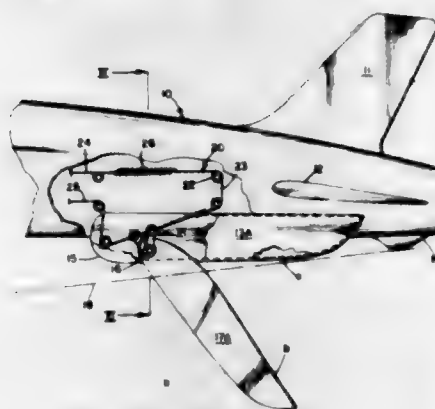


wall members so as to close or open said gap and means mounting said engine for selective positioning at and between a forward propulsion position and a vertical lift position, the gap being inclined at an angle to the said axis of the engine and the mounting means having such an axis that the forward edge of the gap is lower than the rearward edge thereof when the engine is vertical.

2,999,657

STABILIZING MEANS FOR AIRCRAFT

John R. Clark, Dallas, Tex., assignor to Chance Vought Corporation, a corporation of Delaware
Filed Feb. 17, 1958, Ser. No. 715,541
2 Claims. (Cl. 244-91)



1. For providing added stability during supersonic flight of an aircraft having structure defining a no-damage ground line, a device additional to said structure and comprising, in combination with said aircraft: a symmetrically mounted pair of fixed fins placed in a rearward, ventral location on said aircraft, said fins extending from said aircraft downwardly toward and lying substantially entirely above said ground line; a movable fin positioned inside each of said fixed fins and extensible therefrom; and means for simultaneous extension of said movable fins from said fixed fins prior to high-speed supersonic flight to a position wherein they extend well below said ground line at substantially zero angle of attack and for simultaneous, automatic retraction of the same into said fixed fins and above said ground line prior to landing of said aircraft.

2,999,658

AIRFOIL STRUCTURE

John Pavlecka, 8797 Capital, Oak Park, Mich.

Filed July 16, 1958, Ser. No. 749,005

25 Claims. (Cl. 244-124)

1. In a structure, two panels forming each a part of an airfoil shell in facing positions of each other, string-

ers extending one on each of said panels in spanwise opposed alignment with each other, said stringers bearing longitudinal segmental tenoned sockets aligned coaxially with each other, a longitudinally mortised linear key telescoped into engagement with said sockets, said string-



er sockets being parted angularly from one another on one lateral side of said stringers, and a spar having a longitudinal segmental tenoned socket thereon aligned coaxially with and complementally to said parted stringer sockets and in engagement with said key therein.

2,999,659

PARACHUTE APPARATUS

James Martin, Southlands Manor, Southlands Road, Denham, near Uxbridge, England

Filed Feb. 6, 1959, Ser. No. 791,680

Claims priority, application Great Britain Feb. 10, 1958 5 Claims. (Cl. 244-141)



2. A parachute apparatus, comprising a deploying member of substantially fixed shape; a controller parachute including a crown, a plurality of shroud lines, each of said lines having a terminal portion secured to a peripheral portion of said crown, and the other terminal portions of said shroud lines being secured to each other, and an anti-squid line having respective ends fastened to said other terminal portions and to a central portion of said crown; a draw line having respective end portions fastened to said deploying member and to said central crown portion; another parachute having a crown; and connecting means secured to said other terminal portions and to the crown of said other parachute.

2,999,660

UNIVERSAL FISHING SPIKE

Frank Kurtz, 926 S. Carson Ave., Los Angeles 36, Calif.

Filed Mar. 27, 1959, Ser. No. 802,513

8 Claims. (Cl. 248-48)

8. A universal fishing spike, comprising: a plurality of elongated body members of similar trough-like configuration; means for removably fastening together said body members in aligned end-to-end relationship with one of said members at the upper end; and a socket for receiving the handle of a fishing pole mounted in the upper member inwardly of the upper end thereof and including a short cylindrical member, a tubular member positioned within the cylindrical member so as to extend transversely thereof, and a bolt extending through the cylindrical mem-

ber, the tubular member and the body member, said bolt being used to alternatively fasten together the members



2,999,661

HANGER

William M. Shuter, 7806 Bryn Mawr Ave., Chicago 31, Ill.

Filed June 10, 1959, Ser. No. 819,497

4 Claims. (Cl. 248-62)



1. A hanger for elongate members comprising elongate securing means having a driving head formed at one end thereof, a transverse aperture adjacent said head, and a shaft portion adapted to penetrate and supportably engage a body to which said hanger may be fixed; and an elongate flexible clamp means passing through said aperture and rotatable about the axis thereof, said clamp means having free ends formed for locking engagement whereby the free ends of said clamp means may be locked to form a closed loop engaging and supporting said elongate member.

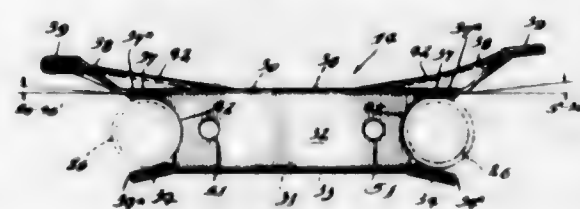
2,999,662

CHAIR STRUCTURE

Richard J. Lappin and Robert G. Mohr, Muskegon, Mich., assignors to Brunswick Corporation, a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,150

11 Claims. (Cl. 248-188)



1. A bracket for a chair chassis or the like, comprising, a generally channel shaped member including an upper

wall, a lower wall spaced below the upper wall and an upright wall connecting the upper and lower walls, said upper and lower walls each having an end portion projecting longitudinally outwardly beyond the upright wall at one end to thereby provide a space therebetween opening longitudinally outwardly for receiving a transverse leg member to be attached to the end portions.

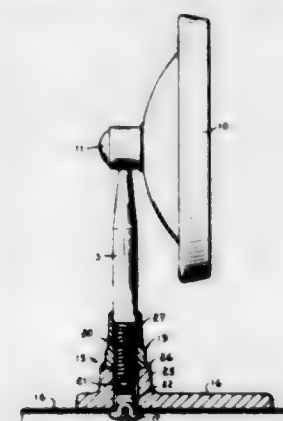
2,999,663

VEHICLE MIRROR MOUNTING STRUCTURE

John W. Anderson, 578 Broadway, Gary, Ind.

Filed Dec. 18, 1958, Ser. No. 781,388

6 Claims. (Cl. 248-220.5)



1. A rear view mirror mounting structure comprising an arm having means at one end for supporting a mirror for limited angular adjustment, the opposite end of said arm being cylindrical and including an unthreaded terminal portion of reduced diameter, a toggle pivotally mounted on said terminal portion, a portion of the arm adjacent said unthreaded terminal portion being threaded, a nut engaging said threaded portion and movable upon rotation toward said toggle, the outer face of said nut being formed with a sleeve snugly fitting said arm and concealing said threads when the nut is turned to clamping position.

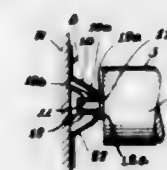
2,999,664

SHADE ROLLER AND BRACKET ASSEMBLIES

Bryson McCalloch, 319 S. Charles St., Saginaw, Mich.

Filed Feb. 21, 1958, Ser. No. 716,630

2 Claims. (Cl. 248-247)



1. A shade roller and bracket assembly comprising; a bracket for attachment to a support having a projecting portion with an opening therein; a roller having a supporting pintle extending from one end thereof received by said opening; and a nylon sleeve conforming to the shape of and fast on said pintle extending into said opening for rotation therein.

2,999,665

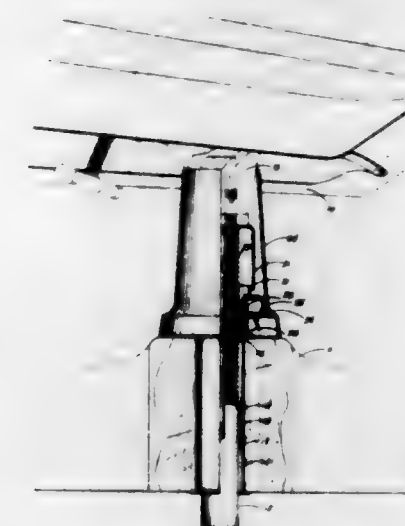
LOCKING ARRANGEMENT FOR SWIVEL CHAIR STRUCTURE

Sidney Albert Ericson, Bridgeport, and Henry Wheeler Parrott, Shelton, Conn., assignors to The Basick Company, Bridgeport, Conn., a corporation of Connecticut

Filed June 2, 1958, Ser. No. 739,426

8 Claims. (Cl. 248-405)

1. A device for locking a swivel chair seat to a chair base of the type including a screw post having an upper



flange member rigidly secured to said base and at least one flexible spring member attached to said nut and adapted to yieldably engage said flange member in locking relation, whereby said chair seat is locked to said chair base.

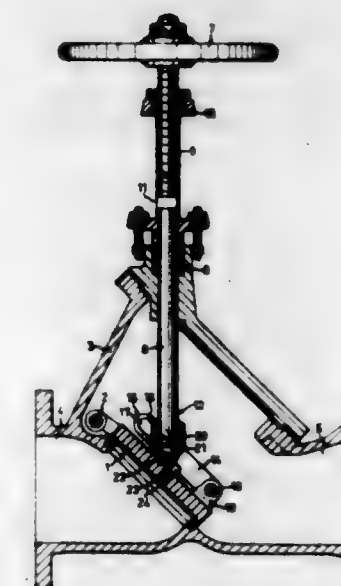
2,999,666

VALVES

Tore Albert Sjögren, Broby, Sweden, assignor to Aktiebolaget Broby Armaturfabrik, Broby, Sweden, a corporation of Sweden

Filed Feb. 23, 1960, Ser. No. 10,298

5 Claims. (Cl. 251-82)



1. A valve comprising a pivotally mounted valve member, a valve stem for actuating the valve member, a link means having a slot therein, said link means having one end articulated on the valve member, a pivot on the end of said valve stem engaged in the slot in said link means, said slot being no wider than necessary to permit sliding of said pivot along said slot, whereby said pivot and valve stem, in addition to transferring pivoting movements caused by the axial movements of the valve stem to the valve member for opening and closing the valve, can be positioned to hold the valve member closed or opened, and can be positioned so that the pivot occupies an intermediate position in the slot, in which position the pivot in combination with the articulation of said link means permits the valve member to swing freely under the influence of the flow conditions through the valve.

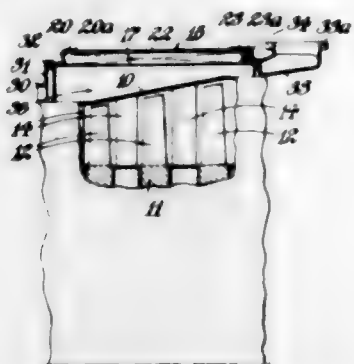
2,999,667

PROTECTIVE ARRANGEMENT FOR USE WITH APPARATUS OR MACHINES HAVING ROTATING PARTS

Frederick William Walton Morley, Castle Donington, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed Sept. 12, 1957, Ser. No. 683,629

Claims priority, application Great Britain Sept. 28, 1956
13 Claims. (Cl. 253—39)



1. A protective device for use with apparatus having a rotating part and stationary structure, said device comprising a tubular liner member which in use of the device surrounds the rotating part, a plurality of layers of interwoven wire encircling said liner member, means supporting said layers of interwoven wire in radially spaced relation to said liner member, an outer tubular wall member surrounding said plurality of layers of interwoven wire, said outer tubular wall member being secured to said liner member, and means for securing the device to the stationary structure of the apparatus.

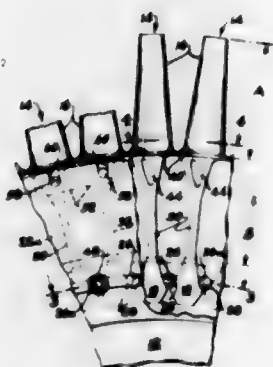
2,999,668

SELF-BALANCED ROTOR BLADE

Werner E. Howald, Ridgewood, and Otto Hollerith, Wyckoff, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Filed Aug. 28, 1958, Ser. No. 757,714

11 Claims. (Cl. 253—39.15)



1. A rotor for compressors, turbines or the like comprising a rotor member; a plurality of circumferentially-spaced blades extending radially outwardly from the periphery of said rotor member, each of said blades having a circumferentially-enlarged root end portion with the remaining portion of each blade extending radially outwardly from the radially-outer end of the blade root end portion; and a plurality of circumferentially-spaced pins disposed about the periphery of and extending through said rotor member between the root ends of said blades with each pin engaging a groove in the side of and at the radially outer end of each of the enlarged root ends of the two adjacent blades for supporting the blades against radially outward movement, each blade decreasing in circumferential width radially outwardly of its supporting pins such that the portion of the circumference of each pin surrounded by the root end grooves of the

two adjacent blades is substantially less than 360° and a substantial portion of the radially outer side of each pin is free of contact with the two blades supported thereby.

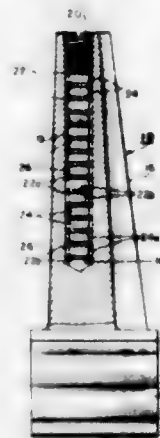
2,999,669

DAMPING APPARATUS

Ralph E. McGinnis, Folsom, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 21, 1958, Ser. No. 775,448

8 Claims. (Cl. 253—77)



1. A blade including an elongated vane portion of substantially airfoil cross section, said vane portion having an interior wall including opposed surface portions defining a longitudinally extending cavity therein, a plurality of plates snugly fitted within said cavity and arranged in spaced relation to each other so as to divide the cavity into a series of chambers along at least part of the length of said cavity, and a member loosely disposed in each chamber and loosely fitted with respect to said wall so as to be independently movable back and forth into and out of contact with the opposed surface portions of said interior wall.

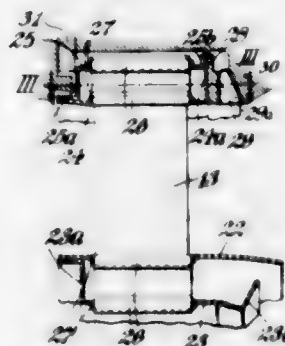
2,999,670

STATOR CONSTRUCTION FOR ROTARY FLUID MACHINE

Nigel Edward Payne, Burton-on-Trent, and Ernest Frank Sheldon, Ilkeston, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Oct. 4, 1956, Ser. No. 614,027

Claims priority, application Great Britain Oct. 18, 1955
7 Claims. (Cl. 253—78)



1. A stator for a rotary fluid machine comprising outer stator structure and inner stator structure with an annular working fluid passage therebetween and means interconnecting the inner and outer stator structure including a ring of blades extending across the working fluid passage, which blades are secured at their inner and outer ends in inner and outer shroud rings respectively, each shroud ring comprising a pair of radially spaced sheet metal walls which are joined together at their axially-spaced edges and which have slots through which the blade ends pass, the blade ends being rigidly secured

to both walls of each shroud ring as by brazing, the inner shroud ring being secured to said inner stator structure and the outer shroud ring being provided with a ring of circumferentially-spaced axially-projecting radially-extending dogs, a ring of circumferentially-spaced radially-extending elements rigid with the outer stator structure, which elements extend circumferentially between said dogs to locate the outer shroud ring circumferentially and coaxially within the outer stator structure with freedom for radial expansion, and means locating the outer shroud ring axially with respect to the outer stator structure.

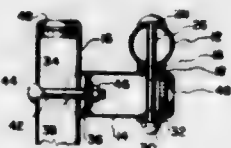
2,999,671

HANDRAIL CONNECTION

James H. Blayden, Pittsburgh, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 17, 1959, Ser. No. 799,882

3 Claims. (Cl. 256-65)



1. In a railing connection, the combination comprising a rail member and a spacing member in juxtaposed relationship, a pair of saddle members interposed the rail and spacing members, said saddle members having flat terminal end mating surfaces contacting each other and an end of each opposite thereto in contact one each with the rail member and the spacing member adjacent thereto, an interconnecting element extending axially through the rail, spacing and saddle members, said interconnecting element having its axis disposed normal to the plane of the flat mating surfaces of the saddle members, and means securing the interconnecting element to rigidly unit the rail, spacing and saddle members in desired angular adjustment of the rail and spacing members about the axis of the interconnecting element.

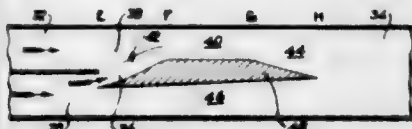
2,999,672

FLUID MIXING APPARATUS

Daniel L. Harshman, Cedar Grove, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Apr. 9, 1958, Ser. No. 727,468

6 Claims. (Cl. 259-4)



1. Apparatus for mixing fluids; said apparatus comprising a first passageway for a first fluid; a second passageway for a second fluid having a velocity which in general is different from that of said first fluid; a third passageway into which said first and second passageways discharge; and a passageway having its entrance opening directed substantially upstream into the fluid flow of said second passageway and having its outlet opening arranged to discharge in a substantially downstream direction into the fluid flow of said first passageway for diverting a portion of said second passageway fluid into said first passageway at a point upstream of the junction of said first and second passageways with said third passageway, downstream of said flow diverting passageway the cross-sectional area of said first passageway being such that the fluid of said first passageway and the diverted fluid of said second passageway converge to a throat region.

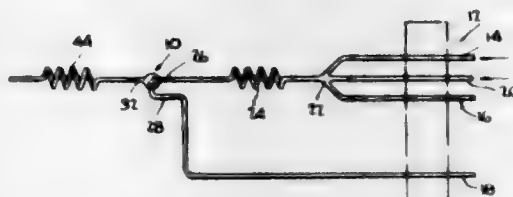
2,999,673

LIQUID MIXING MEANS

Gerald Kessler, Tarrytown, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed Aug. 5, 1959, Ser. No. 831,860

5 Claims. (Cl. 259-7)



1. In a fluid flow system having a supply tube for the flow therethrough of a segmented stream comprising a series of liquid segments separated from each other by an intervening segment of an inert gas and another supply tube for the flow therethrough of a stream of another liquid, and a delivery tube; a device for intermixing successive portions of the liquid of said segmented stream and successive portions of said other liquid during the flow of said streams, comprising a chamber having a non-magnetic wall and positioned between said supply tubes and said delivery tube at the confluence of said streams, said chamber having an inlet for each of said streams connected to said supply tubes, respectively, and an outlet for the intermixed liquids connected to said delivery tube, said chamber being closed except at said inlets and said outlet and having a volume in relation to the rates of flow of the incoming streams and a shape which prevent the entrapment of the incoming gas segments in said chamber, whereby the outgoing stream of intermixed liquids comprises a series of segments of the intermixed liquids separated from each other by an intervening segment of the inert gas, and a magnetic mixer member disposed in said chamber and freely movable therein by magnetic action through said non-magnetic wall of the chamber for intermixing the liquids during the flow thereof through said chamber.

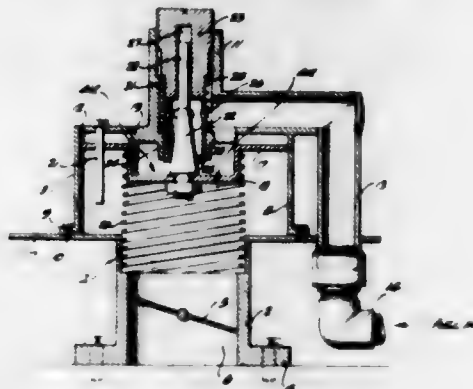
2,999,674

FUEL CARBURETOR WITH CENTRAL AIR INTAKE

Harry W. McClain, 5460 El Parque, Long Beach 4, Calif.

Filed Sept. 29, 1958, Ser. No. 764,074

3 Claims. (Cl. 261-50)



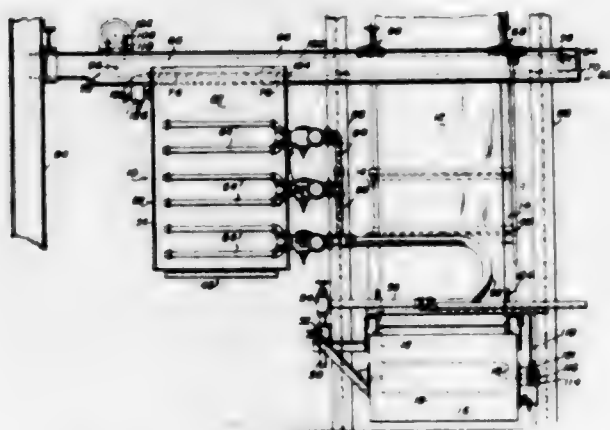
1. A fuel carburetor comprising a housing, said housing having a mixture outlet thereon and a connection means to attach the same to an intake manifold, a central tube on the housing arranged substantially in alignment with the vertical center line of the housing, a fuel intake pipe extending into said tube above the lower end thereof, said housing having air passages in the top thereof surrounding said tube, a ring-shape air valve within the housing cooperatively associated with said tube and said air passages to close the air passages in one position of

the air valve, spring means bearing against the air valve to urge the same to closed position, a plug threaded into said tube and longitudinally adjustable within the tube, a sleeve depending from the plug, said sleeve having fuel ports extending through the wall thereof to admit fuel from said fuel intake pipe, seat means in the sleeve, a needle valve, means mounting the needle valve on the air valve, said needle valve cooperating with said seat to control fuel flow into said housing, said plug having a counterbore extending vertically therein, and a guide rod extending from the needle valve into the counterbore to guide the needle valve in its movement.

2,999,675

PRE-HEATER OR FURNACE ASSEMBLY

John E. Erhardt, Jr., and Elhardt M. Siegel, Baltimore, Md., assignors, by mesne assignments, to Selas Corporation of America, a corporation of Pennsylvania
Filed Nov. 13, 1953, Ser. No. 391,858
15 Claims. (Cl. 263—3)

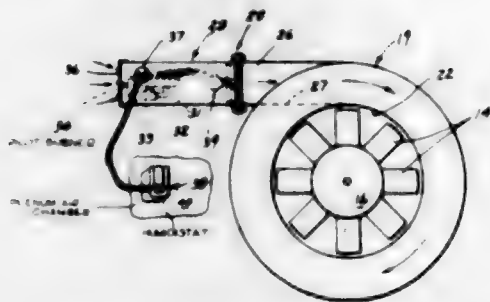


14. An apparatus for heat treating a continuous moving length of work comprising, a movable heater surrounding said work and having a plurality of heating elements, means to mount said heater for movement from a first position surrounding said work to a second position removed beyond one edge of said work, means for heating said elements and means responsive to a change in the rate of movement of the work to retract the heater assembly laterally from its first position to its second position entirely removed from said work.

2,999,676

GRAIN CONDITIONING APPARATUS

Ewell F. Ewing, 133 S. 10th St., Beech Grove, Ind.
Filed June 1, 1959, Ser. No. 817,395
3 Claims. (Cl. 263—19)



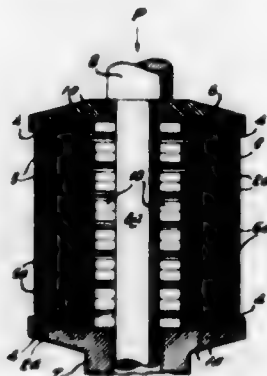
1. Apparatus for introducing heated air into a grain storage bin comprising a cylindrical tube, a fan and an electric drive motor therefor mounted within said tube coaxially therewith for moving air through the tube, the air outlet end of said tube being adapted to communicate with the grain storage bin, an annular tubular member having a generally spiral cross-sectional configuration in a plane parallel to the axis of said tube and

supported on said tube in spaced relation with the air inlet end thereof, said annular member having spaced, overlapping marginal areas disposed at the inner circumference thereof, the diameter of said annular member at its inner circumference being at least equal to the inside diameter of said tube, said spaced marginal areas providing an annular passage communicating with the interior of said annular member, and means for introducing hot gases under positive pressure peripherally into said annular member, whereby the hot gases enter said tube only at the peripheral area thereof and unheated air is drawn into said tube through the space between said tube inlet end and said annular member thereby moderating the temperature rise of said tube and said drive motor.

2,999,677

SPRING CONSTRUCTION

Karl Schindler, Frankfurt am Main, Germany, assignor to Henschel-Werke G.m.b.H., Kassel, Germany
Filed May 2, 1960, Ser. No. 26,138
Claims priority, application Germany May 2, 1959
10 Claims. (Cl. 267—2)



1. A spring column comprising a plurality of ring-shaped spring elements including alternate external and internal members having respective interior and exterior wedge-shaped surfaces in sliding contact with each other whereby loading causes relative movement of said internal and external members and expansion of said external members, said internal members each including a central inwardly projecting portion, and a set of dish-shaped spring elements cooperating with each of said internal members, including one dish-shaped element inverted above the other and having their opposite faces abutting at the peripheries thereof against said inwardly projecting portions of said internal members.

2,999,678

AUXILIARY SPRING SUSPENSIONS

John E. Heckethorn, Dyersburg, Tenn., assignor to Heckethorn Manufacturing & Supply Company, Dyersburg, Tenn., a corporation of Colorado
Filed Sept. 8, 1959, Ser. No. 838,726
9 Claims. (Cl. 267—8)

1. A damped resilient suspension device for connection between sprung and unsprung members comprising, in combination, a shock absorber of the direct acting type having a telescoping cylinder and piston rod, the piston rod issuing through a packed opening in the inner end of said cylinder, means for securing the outer or remote end of the cylinder of the shock absorber to one of said members and means for securing the remote end of the piston rod to the other of said members; a coil supporting spring surrounding said shock absorber, an annular spring seat carried by said shock absorber cylinder near its remote end, and an annular spring seat carried by the remote end of the piston rod, the coil spring being compressed between said seats and adapted to surround the greater portions of both the cylinder and piston rod in

all positions thereof; a bellows-like boot element of rubber-like material having a restricted neck portion at one end thereof snugly and elastically received about the inner end portion of said cylinder, and an annularly pleated main portion extending away from said inner end portion of the cylinder to surround and afford protection to the variably exposed portions of said piston rod, said neck portion of the boot having a maximum outside diameter at least as great as that of any of the pleated portions



of said boot element, said neck portion itself acting as a buffer between the inner end portion of the shock absorber cylinder and the intermediate surrounding convolutions of the coil spring; and a supplemental buffer element comprising a relatively narrow annular band of rubber-like material surrounding an intermediate portion of said shock absorber cylinder to prevent abrasive contact between the intermediate portion of the cylinder and the convolutions of the spring surrounding said portion.

2,999,679

SPRING MOUNT

Jürgen Ulderup and Franz Gottfried Reuter, Lemförde, Hannover, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed Apr. 12, 1957, Ser. No. 652,571

Claims priority, application Germany Apr. 17, 1956

4 Claims. (Cl. 267-49)



1. A spring mount comprising, in combination, a base made of rubber, said base having perforations therein, and adapted to guide a leaf spring and a layer of rubber-like polyurethane superposed on said base and attached thereto through a plurality of projections which are integral with said rubber-like polyurethane and project into said perforations in said base to lock the rubber-like polyurethane thereto.

2,999,680

PNEUMATIC SPRING SUSPENSION

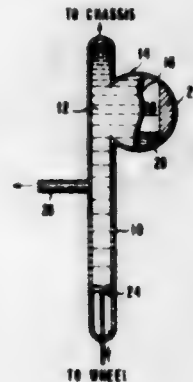
Bernhardt J. Elseman, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 24, 1959, Ser. No. 795,142

10 Claims. (Cl. 267-64)

1. A pneumatic load-bearing spring having a gas suspension chamber for a load-supporting gas, said suspen-

sion chamber containing under load-induced pressure (1) a condensing gas which consists of at least one substantially non-toxic inert compound capable of existing in both the liquid phase and the gaseous phase under the operating conditions of temperature and pressure of said chamber, which condensing gas has a vapor pressure equal to from about 10% to about 90% of the total pressure at the normal operating pressure level of said chamber; (2) a non-condensing gas which consists of at



least one substantially non-toxic, inert gas which by itself is capable of existing in only the gaseous phase under the operating conditions of temperature and pressure of said chamber and which non-condensing gas is present in an amount to provide that part of the total pressure in said chamber which is in excess of that provided by the condensing gas; and (3) a pool of said condensing gas in liquefied state occupying a minor fraction of the volume of said chamber.

2,999,681

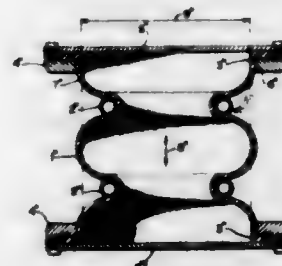
SPRING BELLOWS FOR AIR SPRING SYSTEMS

Josef Müller, Stuttgart-Riedenberg, Friedrich H. van Winsen, Kirchheim-Teck, and Alfred G. Zimmer, Stuttgart, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany

Filed Mar. 15, 1957, Ser. No. 646,373

Claims priority, application Germany Mar. 27, 1956

5 Claims. (Cl. 267-65)



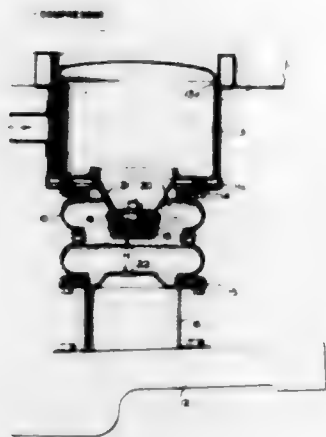
1. A bellows spring for pneumatic spring systems of motor vehicles comprising bellows means having an axis extending in the direction of spring movement and having connecting portions, a plurality of sealing plate means and annular connecting means cooperating with said connecting portions for retaining said bellows means against said sealing plate means, the portions of said bellows means immediately following said connecting portions extending from said connecting portions in directions toward said axis forming angles not exceeding 30° in the normal rest position of the spring with the direction of spring movement, said connecting portions abutting the radially inmost surfaces of said connecting means, said radially inmost surfaces extending essentially in the direction of spring movement.

2,999,682
PNEUMATIC SPRING SYSTEM FOR
MOTOR VEHICLES

Eugen Stump, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Sept. 16, 1957, Ser. No. 684,006

Claims priority, application Germany Sept. 19, 1956
 5 Claims. (Cl. 267—65)



1. A pneumatic spring system, especially for heavy-duty motor vehicles, comprising a frame member and an axle member movable relative to one another, pneumatic means suspending said frame member on said axle member including spring bellows and a relatively rigid reservoir tank for a pneumatic medium located between said two members, said reservoir tank being rigidly secured to said frame member and disposed outside of, but immediately adjacent to, the spring bellows, an apertured support means rigidly secured to said tank at one end of said bellows and defining a wall between the interiors of said spring bellows and said tank and having at least one large aperture providing free passage therethrough in both directions at all times of pressurized pneumatic medium between all parts of said interiors, said tank being of large volume relative to said bellows to provide in combination with said bellows a pressure medium chamber of a total volume substantially greater than the volume of said bellows, means for maintaining a pneumatic medium under pressure in said interiors, said apertured support means projecting into said bellows and providing a central abutment surface facing the interior of said bellows, means rigidly secured to said axle member at the other end of said bellows also defining a central abutment surface facing said first mentioned abutment surface, and elastomeric buffer means secured to one of said abutment surfaces within the interior of said bellows and engageable with the other abutment surface to provide a cushion for limiting the spring movement of said two members with respect to each other, said aperture providing a substantially unimpeded passage between said interiors when said buffer means and said other abutment surface are in engagement.

2,999,683
AUTOMATIC LUGGAGE COMPARTMENT
LID CONTROL SYSTEM

Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan

Filed Dec. 23, 1958, Ser. No. 782,440

2 Claims. (Cl. 268—74)

1. A lifting and unlatching device for the lid of a vehicle luggage compartment provided with latch means having a movable latch release member for holding the lid latched in closed positions, said device comprising a U-shaped bracket mounted in a fixed position within the

luggage compartment with the ends thereof extending toward the lid, a lever including a pair of lever arms and a transversely extending connecting member rigidly maintaining the lever arms in spaced apart relation, one of said lever arms being longer than the other, pivot means extending through said lever arms and bracket ends pivotally supporting the lever between the bracket ends, stops secured to said bracket extending between the ends thereof and engageable with the lever at each side of the pivot means to limit pivotal movement thereof, a second U-shaped bracket secured to the lid, an axially extensible link one end of which is pivotally secured between the lever arms centrally of the longer of the lever arms, the other end of which extends between the ends of the second U-shaped bracket, said extensible link including a housing supported by said second pivot means, a thrust bearing within said housing, a screw shaft rotatably supported by said thrust bearing, worm and worm

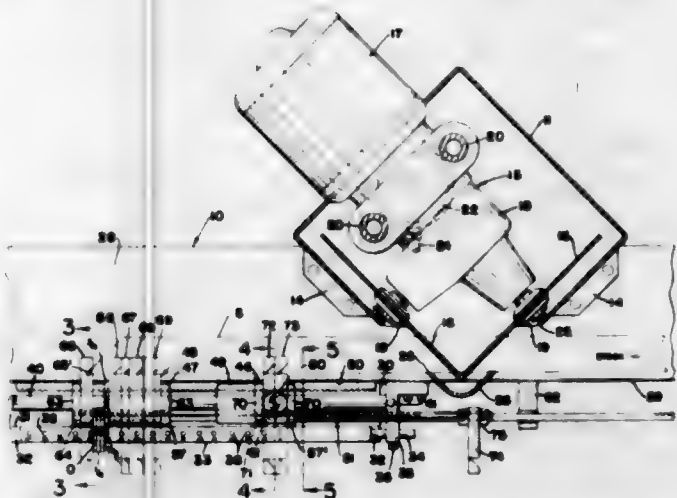


gear drive means for said screw shaft operably associated therewith, an extensible tube sleeved over said screw shaft having a high efficiency ball nut fixed to one end thereof in engagement with the screw shaft operable to permit manual movement between the tube and screw shaft on application of an axial force therebetween and providing for automatic movement therebetween on rotating of the screw shaft by the worm and worm gear, third pivot means securing the other end of said extensible tube between the ends of said second bracket, and a cable connected between said latch release member and the end of the long lever arm remote from the pivot connection thereof to the first mentioned bracket for releasing said latch means on initial pivoting of said lever on initial extension of said extensible link, said extensible link being operable on further extension thereof to pivot the lever into engagement with one of said stops and then to open said lid.

2,999,684
CUTTING GAUGE FOR FRAME PARTS
 James L. Kovalcik, 325 Elknud, Johnstown, Pa.
 Filed Feb. 4, 1959, Ser. No. 791,224
 3 Claims. (Cl. 269—192)

1. In combination with a table, a cutting gauge for measuring frame pieces of material for a storm window or door comprising, a graduated scale bar mounted longitudinally of said table, a main gauge block mounted on said table for movement along said scale bar, a master gauge bar rotatably mounted on said block for movement over said table, cooperating means on said main gauge block and said scale bar to position and lock said gauge block, a secondary gauge block mounted for movement along said scale bar, a gauge bar rotatably mounted on said secondary block for movement over said table, a stationary longitudinal rack bar on said table, a laterally spaced rack bar carried by said main gauge block, and a

pinion on said secondary gauge block meshing with both said rack bars, whereby movement of said main block



will cause a predetermined fractional movement of said secondary block in the same direction.

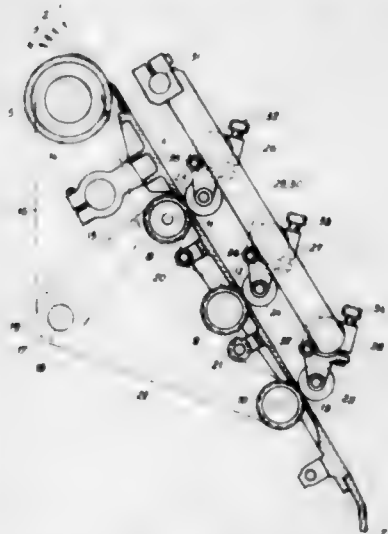
2,999,685

FORMER FOLDING APPARATUS FOR ROTARY AND LIKE PRINTING MACHINES

René Bürki and Eduard von Helm, Bern, Switzerland, assignors to Maschinenfabrik Winkler, Fallert & Co. A.G., Bern, Switzerland

Filed June 7, 1960, Ser. No. 34,572

Claims priority, application Switzerland July 7, 1959
5 Claims. (Cl. 270-86)



1. A grooving funnel for rotary printing machines and like apparatus comprising a grooving funnel plate, a funnel roll adjacent said plate for feeding paper webs onto said plate, said plate having a plurality of recesses therein, tension cylinders extending into said recesses with the exterior surfaces of said tension cylinders lying substantially flush with said plate, a plurality of pressure rollers, mounting means for said rollers supporting said rollers adjacent and in alignment with said tension cylinders so that folds will be prevented from forming in paper webs passing between said tension cylinders and said pressure rollers, said mounting means including a support for said pressure rollers, a shaft for said support, means rotatably adjustably securing said support on said shaft so that upon rotation of said support all of said pressure rollers will be adjusted simultaneously relative to said plate and said tension cylinders, said mounting means further including a two-part holder pivoted to said support for each of said pressure rollers, and adjusting screw means provided for each holder for individually adjusting each of said holders and the respective pressure roller relative to said plate.

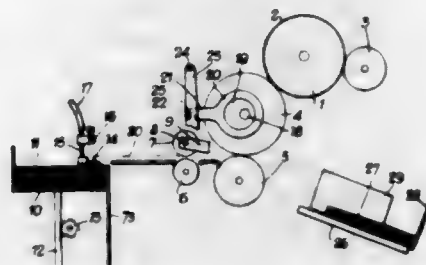
2,999,686

FEEDING APPARATUS FOR ROTARY PRINTING MACHINES

Leslie H. Cheeseman, Rickmansworth, and Frederick E. Lingard, Hemel Hempstead, England, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Jan. 26, 1959, Ser. No. 789,184

Claims priority, application Great Britain Jan. 28, 1958
7 Claims. (Cl. 271-11)



1. A rotary printing machine comprising in combination a frame, a table carried by the frame for supporting a stack of sheets of paper, a rotary printing couple supported by the frame, suction means for lifting the top sheet from the stack and presenting it to the printing couple, said means including a suction pad adapted to engage the top sheet of the stack, a carrier for the pad, drive means for moving the carrier, guiding means for the carrier, said guiding means embodying a slide, a first upwardly extending guideway and a second substantially horizontally extending guideway, the two guideways intersecting and the slide being arranged for movement along the guideways, there being a block slidably fitted within the horizontally extending guideway and having a recess therein for receiving the slide which is adapted to fit slidably in the first guideway, the arrangement being such that the carrier is moved first upwardly and then laterally to present a sheet to the printing couple and then in reverse direction to return the pad into position for engaging the next sheet and such that, during the feeding operation, the slide moves upwardly along the upwardly extending guideway into the recess in the block and then the block together with the slide is moved along the horizontally extending guideway.

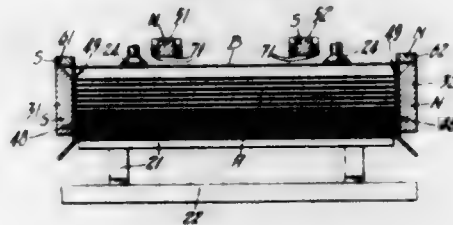
2,999,687

SHEET FEEDER

William B. Hommel, Penn Yan, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 23, 1958, Ser. No. 782,543

4 Claims. (Cl. 271-18)



1. In a sheet feeding machine, the combination of a magazine for holding a horizontal stack of magnetizable sheets, a plurality of horizontally disposed magnets extending along the opposite sides of the stack of sheets at a level below the line of feed of the topmost sheet to be fed from the stack, said magnets constituting a lower strata magnetic field operable to magnetize the sheets to set up a repelling force therebetween to vertically separate the sheets in the upper portion of the stack, a plurality of horizontally disposed magnets supported by said first mentioned magnets and extending along said opposite sides of the stack of sheets at the level of said line of feed and constituting a secondary upper strata magnetic

field operable to magnetize said topmost sheet to set up a sheet repelling force therein to prevent feeding of more than a single sheet from the stack, means for engaging and elevating said topmost sheet into between the magnets of said secondary magnetic field to be magnetized thereby, said first mentioned lower strata magnets being cut away at their upper ends to provide a pair of parallel air gaps above the opposite sides of said stack of sheets, said air gaps having a magnetic field of reduced intensity to restrict the vertical level of the topmost sheet of the magnetically separated sheets, said suction means engaging and elevating said topmost sheet through said air gaps into between said secondary magnetic field magnets to be magnetized thereby, and a plurality of horizontally disposed magnets disposed above and extending between and parallel to said first mentioned plurality of magnets for vertically attracting and yieldably holding said topmost sheet out of contact with a subjacent sheet for individual feeding from said magazine.

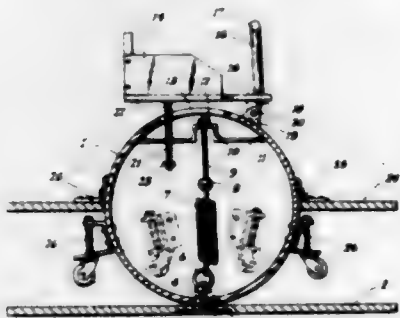
2,999,688

AMUSEMENT RIDING DEVICE FOR CHILDREN

Harold M. Gabrielson, Merced, Calif., assignor of one-half to Pentecostal Church of God, Merced, Calif., an unincorporated association

Filed June 30, 1959, Ser. No. 823,887

5 Claims. (Cl. 272—33)



1. An amusement riding device for children comprising a base, a body having a spherical lower portion resting on the base, means securing the body in connection with the base for simultaneous rocking and rotating motion, means to limit the extent of rocking motion of the body, said last named means being a plurality of spring-loaded upwardly yieldable caster units attached in circumferentially spaced relation on the body in adjacent but normally spaced relation to the base, a seat above the body, and means mounting the seat on the body.

2,999,689

PORTABLE TABLE BOWLING GAME

Victor W. Litwinczuk, Hull, Quebec, Canada (% Mr. Massy Baker, 464 Springfield Road, Rockcliffe, Ottawa 2, Ontario, Canada)

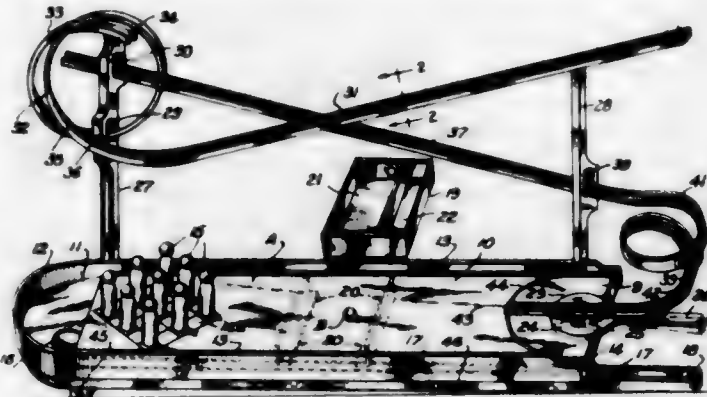
Filed July 24, 1959, Ser. No. 829,245

Claims priority, application Canada Feb. 27, 1959

3 Claims. (Cl. 273—39)

1. A table game using bowling pins and balls comprising a playing deck, a well having an orifice in the floor thereof and underlying the rear end of the deck, a wall partially surrounding the well and forming a backstop, lateral walls on the deck, a channel below the deck communicating at one end with the orifice, the other end of the channel projecting beyond the front of the deck, a diagram on the deck denoting the position of bowling pins, an elevated track formed of an upper and a lower portion arranged diagonally across each other and inclined in opposite directions, with the ball-receiving end of the upper portion of the track located adjacent the front end of the deck, and with the ball-receiving end of the lower portion of the track adjacent the rear end of the deck, the upper portion of the track having a loop

located adjacent and above the rear end of the deck and formed with a discharge lip overhanging the upper end of the lower portion of the track, the lower portion of the track having a loop adjacent to and above the front end of the deck, the discharge end portion of the lower portion of the track extending over the front end of the deck,



means for oscillating said discharge end portion through an arc over the front end of the deck to align the said discharge end portion with any selected bowling pin during the period the playing ball is travelling on the lower portion of the track, and means for supporting the two portions of the track above and adjacent one of the lateral walls of the deck.

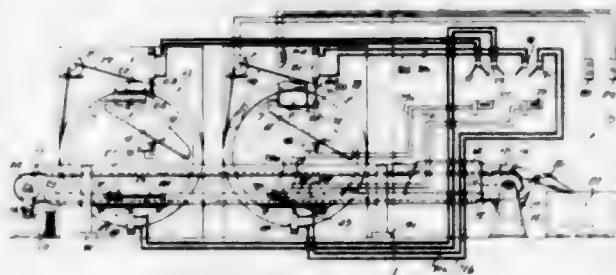
2,999,690

BOWLING PIN CHANGING MECHANISM

William F. Huck, Forest Hills, N.Y., assignor, by mesne assignments, to The Brunswick Automatic Pinsetter Corporation, Paramus, N.J., a corporation of Delaware

Filed Feb. 28, 1957, Ser. No. 643,157

12 Claims. (Cl. 273—43)



1. A pin changing mechanism for use with a plurality of pinsetting machines comprising, means for discharging pins out of each of said machines, means for discharging pins into each of said machines, a conveyor extending along the rear of said plurality of machines and associated with both said means for carrying pins toward the machines from a pin storage area remote from the machines in one operation and in another operation carrying pins toward the pin storage area from the machines, and means including manually operable controls for selectively operating said first and second-mentioned means of each machine independently.

2,999,691

BOWLING GAME PIN ELEVATING AND BALL RETURNING APPARATUS

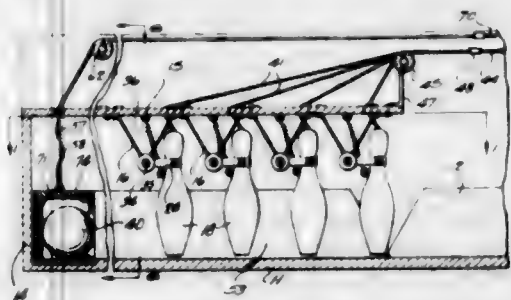
Charles J. Utley, 600 N. 10th Ave., Kelso, Wash.

Filed Nov. 6, 1959, Ser. No. 851,315

6 Claims. (Cl. 273—44)

4. In a bowling game apparatus, an alley, a horizontal support mounted at the end of the alley and being spaced sufficiently above the alley to receive bowling pins in upright positions therebeneath, a plurality of depending pin assemblies secured to said support and being arranged

in a generally triangular array, each bowling pin assembly comprising a pair of spaced transversely aligned hanger bars, a generally U-shaped bowling pin carrier, said hanger bars being provided with enlarged generally diamond-shaped eye members at their bottom ends, transversely aligned pivot shaft elements on the ends of the respective side arms of the pin carrier loosely engaging in said eye members and pivotally connecting the ends of the respective side arms of the pin carrier to the lower end portions of the hanger bars, said eye members being sufficiently large to allow a substantial amount of free motion of the pivot elements, a normally vertical bowling pin rigidly secured at its neck portion to the



bight portion of the pin carrier, a toggle spring connecting a point on the bowling pin normally subjacent its neck portion to a point on said horizontal support located above and between said hanger bars, whereby said spring at times supports the bowling pin in a substantially horizontal position, said support being formed above the pins with respective apertures located rearwardly of the positions assumed by the top ends of the pins when the pins are horizontal, and flexible cable means connected to the top ends of the bowling pins and extending slidably through the respective apertures and extending forwardly therefrom, whereby the pins may be simultaneously returned to vertical positions by exerting tension simultaneously on said flexible cable means.

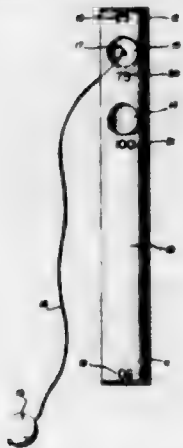
2,999,692

GAME APPARATUS

Anthony R. Di Pietro, 3421 St. Ambrose Ave.,
Baltimore, Md.

Filed Dec. 15, 1959, Ser. No. 859,641

1 Claim. (Cl. 273-97)



A device of the character described comprising an open-ended cylindrical body having additional openings in the side thereof, a ball receivable in either end of said body, said additional openings being of slightly less diameter than the diameter of said ball and being longitudinally spaced and positioned adjacent one end of said body, and a cord interconnecting said ball and said body, the juncture between said cord and said body being diametrically opposite the outermost of said additional openings, the outermost of said additional openings being the opening adjacent said one end of said body, and said body having indicia thereon adjacent each of the openings and adjacent each open end thereof.

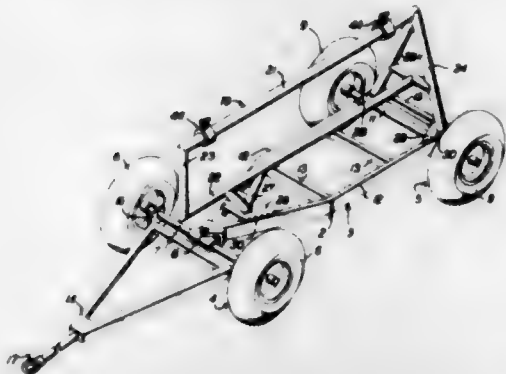
2,999,693

TRAILER-MOUNTED MISSILE RACK

John R. Thorson, Takoma Park, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Apr. 24, 1959, Ser. No. 808,684

10 Claims. (Cl. 280-29)



1. In a trailer for transporting bombs and missiles, a chassis including a frame supported on front and rear wheel and axle assemblies, means pivotally connecting the front wheel and axle assembly to said frame, a drawbar connected to said front wheel and axle assembly, an adaptor frame mounted on said chassis frame and comprising vertically spaced upper and lower beams, a missile rack comprising end plates interconnected by beam members, said plates having leg portions straddling said upper and lower beams, and arcuate cradles on said end plates to support missiles.

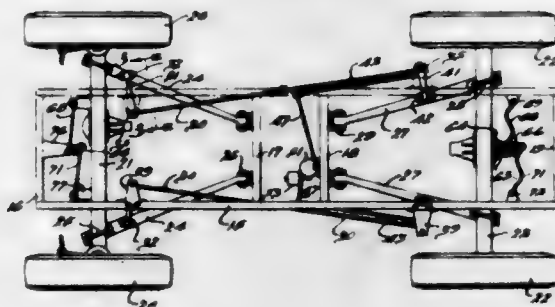
2,999,694

SPRING SUSPENSION FOR MOTOR VEHICLES

William D. Allison, 39 Radnor Circle,
Grosse Pointe 36, Mich.

Filed Apr. 12, 1954, Ser. No. 422,371

21 Claims. (Cl. 280-104)



1. In a vehicle structure having front and rear wheels, swinging lever arm means for each wheel responsive to vertical motion thereof, longitudinal torsional spring means common to said wheels and connected to said lever arm means for torsional deflection thereby, and means for vertically spacing a portion of one lever arm means from a part of the vehicle structure including a rigid vertical transmitting link having rolling articulate connections at opposite ends with said portion of the lever arm means and said part of the vehicle structure.

2,999,695

SUSPENSION FOR TANDEM AXLE ASSEMBLY

Leo A. Bixby, Niles, and Clarence C. Bartell, Dearborn, Mich.; said Bixby assignor to Rockwell-Standard Corporation, a corporation of Pennsylvania

Filed Oct. 18, 1957, Ser. No. 691,080

10 Claims. (Cl. 280-104.5)

5. In a tandem axle assembly for a vehicle, two spaced transverse axles supported at opposite ends by ground engaging wheels, suspension means comprising longitudinal members at opposite sides of the vehicle rockably mounted intermediate their ends, and means connecting

the ends of the axles to the ends of said members for substantially universal relative movement comprising a rocking bottom connection between each end of each member and the associated axle and coacting vertically slidably displaceable trunnion side connections between each end of each member and the associated axle, said connections comprising cooperating engaged parts on



each end of said member and the associated axle which prevent relative movement between said axles and the ends of said members in a direction longitudinally of said members while permitting vertical sliding movement at said connections, and the trunnions at each axle end being aligned with each other on axes substantially parallel to the axle.

2,999,696
KICK-STAND AND PARKING BRAKE FOR BICYCLES AND SIMILAR VEHICLES

Leo A. Ringelstetter, Plain, Wis.
Filed Aug. 5, 1959, Ser. No. 831,886
6 Claims. (Cl. 280—296)



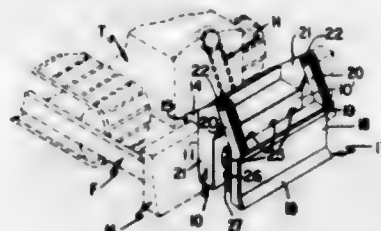
1. A combination rear tire brake and kick-stand having a forward and rearward movement for bicycles and similar vehicles comprising, a casing having sides, a closed forward end and an apertured rearward end, an angular kick-stand having a substantially horizontal upper arm extending through opposed sides of the casing and swivelly secured thereto, a brake rod substantially parallel with the longitudinal axis of the casing having one end thereof slidably extended through the aperture of said rearward end of the casing, the other end carrying a U-shaped member in communication with the upper arm of the kick-stand within said casing, said U-shaped member having its legs extending forwardly and having a cam seat in the bight portion thereof and a slot in the upper leg, a cam secured to the upper arm of the kick-stand communicable with the said slot and normally in pressure engagement against the cam seat to place said brake rod in extended position, spring means between the cam seat and the rearward end of the casing to urge said brake rod to a retracted position when the cam is in communication with said slot, means for securing said casing to the frame of the vehicle.

2,999,697
CUSHIONED PUSHER CUP ATTACHMENT FOR BULLDOZER MOLD BOARDS

William A. Winget, Perry Chapel Road,
Rte. 2, Lima, Ohio
Filed June 10, 1957, Ser. No. 664,732
3 Claims. (Cl. 280—481)

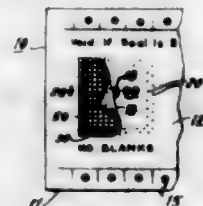
1. A pusher attachment for tractors comprising a vertically disposed backing member having a pair of laterally

spaced up and down flat plate portions, means for rigidly securing said backing member to one end of a tractor so that forces imparted to the pusher member are transmitted to the tractor, a forwardly disposed member positioned in advance of said backing member and having a pair of laterally spaced up and down flat plate portions overlapping respectively portions of the adjacent flat plate portions of said backing member, a pivotal connection between said forwardly disposed member and said backing member so that the forwardly disposed member is con-



nected to the backing member for shifting movements toward and away therefrom, the arrangement being such that the flatwise engagement of said plate portions resists transverse or sidewise movements of the forwardly disposed member relative to the backing member and confines the relative movements therebetween to movements toward and away from each other, and cushioning means between the backing and forwardly disposed members for cushioning the rearward movement of the forwardly disposed member.

2,999,698
SALES PROMOTIONAL CARDS
Robert H. Hoese, 6162 Ellsworth St., Dallas, Tex.
Filed Apr. 23, 1959, Ser. No. 808,388
2 Claims. (Cl. 283—6)



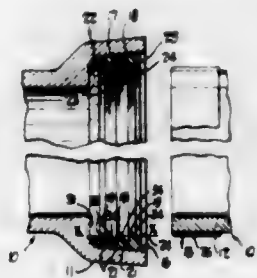
1. A sales promotional card including: a sheet of relatively thin paper board having front and rear faces; indicia on a portion of the front face of said sheet; a seal member of separate thicker material overlying the indicia on the front face of said sheet to conceal the same; means detachably securing the seal member to said sheet, said means comprising threads stitched in a zig-zag manner through the sheet and the perimeter of the seal member whereby the zig-zag stitching of the threads prevents resewing of the seal member to the sheet without leaving evidence of tampering; and means on the rear face of the sheet underlying the indicia on the front face thereof and coacting with said seal member to prevent detection of said indicia through said sheet.

2,999,699
PIPE JOINT
Wylie M. Lafferty, New Philadelphia, Ohio, assignor to Universal Sewer Pipe Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 6, 1958, Ser. No. 765,501
1 Claim. (Cl. 285—110)

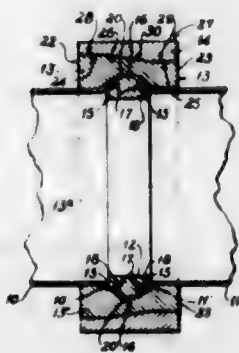
A joint for connecting the spigot end of a vitrified clay bell and spigot pipe section to the bell end of another similar pipe sections, said bell end having an internal diameter greater than the external diameter of said spigot end, said joint comprising: a resilient, unitary, substantially incompressible, seamless sealing ring capable of cold flow

disposed within said bell end and bonded thereto, and a unitary, substantially incompressible, seamless collar disposed on said spigot end and bonded thereto, said sealing ring comprising a plurality of parallel, resilient, annular sealing flanges each projecting radially inwardly and having an axial outer face sloping at an angle away from the open end of said bell, and having an axial inner face substantially perpendicular to said axis, a plurality of parallel annular grooves equal in number to the number of said flanges and disposed therebetween and of a volume and cross-sectional shape the same as that of said flanges, said collar having a smooth, cylindrical sealing surface engaging said sealing flanges, the external diameter of said sealing surface on said collar being of a size to provide engagement thereof and forming a circumferential line of initial contact with said flanges along the respective



sloping outer faces and with further axially inward movement of said seamless collar to bend only the end portions of said flanges extending radially inwardly of said circumferential line of initial contact against said perpendicular inner faces along a circumferential line equal in diameter to said circumferential line of initial contact into the adjacent annular grooves, said flanges and grooves being proportioned with respect to the circumferential line of engagement of the external diameter of said sealing collar therewith so that said adjacent grooves are substantially filled by the bent over end portions of said flanges, and the remaining portions of said flanges adjacent said ring remain substantially unflexed, said sealing ring having inner and outer cylindrical supporting surfaces disposed at its respective ends, said supporting surfaces having an internal diameter no greater than the external diameter of said seamless collar.

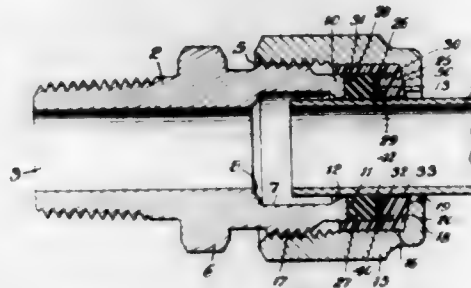
2,999,700
COUPLING FOR FLARED END TUBES INCLUDING INNER AND OUTER SLEEVE ELEMENTS
Francis L. Smith, West Islip, N.Y., assignor to Republic Aviation Corporation, near Farmingdale, Suffolk County, N.Y., a corporation of Delaware
Filed Feb. 13, 1956, Ser. No. 564,849
2 Claims. (Cl. 285-332.3)



2. In a coupling to engage and secure the flared end of a tube the combination with a back-up ring having at least one side surface disposed at substantially the same angle as the angle of the flared end of the tube, of a clamp consisting of a pair of semi-circular sections, a hinge of spring material engaging a pair of adjacent ends of said sections, said sections being provided with con-

tinuous internal grooves, each having at least one wall disposed at the same angle as the angle of the side surface of the ring and the flare of the tube, and a sleeve movable over the clamp parallel to the axis of the tube, the external surface of the clamp and the internal surface of the sleeve being formed with corresponding marginal areas disposed in different planes and parallel one to the other and to the axis of the tube with the inner edges of said areas interconnected by sloping areas whereby the sloping areas of the sleeve and clamp serve as cam surfaces for the marginal areas when the sleeve is moved over the clamp to complete the closing of the clamp and the marginal areas of the clamp and sleeve serve as individual bearing surfaces to hold the clamp in the closed position aforesaid.

2,999,701
PIPE COUPLING HAVING SEALING AND ANCHORING MEANS
David R. Blair, Prospect Heights, and Dibrell P. Hynes, Chicago, Ill., assignors to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 8, 1959, Ser. No. 805,033
1 Claim. (Cl. 285-340)



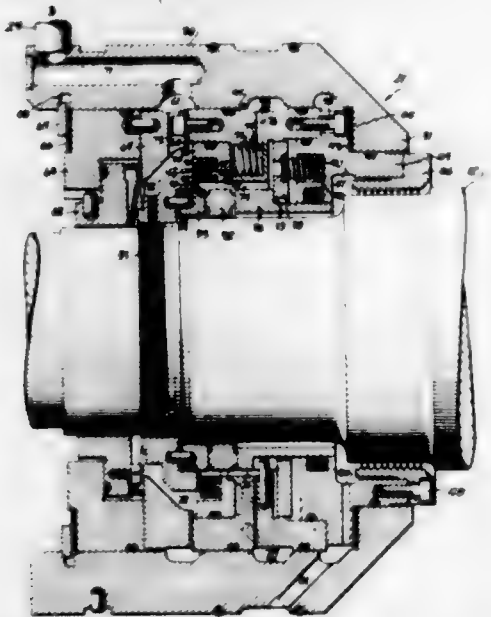
In a pressure joint, a tube, a pressure housing for receiving and surrounding said tube, said housing including a plurality of relatively movable chamber elements, one of said elements having a cylindrical portion and an end wall having an aperture through which the end of the tube extends, an anchorage on said tube including a deformable substantially conical gripping ring having its inner edge positioned for substantially continuous contact with the tube, a relatively non-distortable cushion member of nylon or the like having an annular end wall and a circumferential wall surrounding and confining the outer edge of said gripping ring, the outer diameter of said circumferential wall being generally equal to the inner diameter of said cylindrical portion of the one of said elements, a rigid reinforcing ring positioned between said gripping ring and cushion and seated against said cushion annular end wall, said reinforcing ring having a circumferential flange positioned against said cushion circumferential wall and confining the outer edge of said gripping ring, and means for providing a seal between said tube and said housing including a body of resilient rubber-like relatively distortable material surrounding said tube between said tube and the inner surface of said circumferential wall, said flexible body having an outer diameter generally equal to the inner diameter of said circumferential wall and an inner diameter generally equal to the outer diameter of said tube, said flexible body being positioned entirely within said circumferential wall, said cushion member having an end portion formed and adapted to be contacted by one of said chamber elements, the other of said chamber forming elements including an offset end portion adapted to penetrate said cushion and be positioned within said circumferential wall and in contact with said flexible body, said offset end portion having an outer diameter generally equal to the inner diameter of said circumferential wall of said cushion member and an annular end wall positioned for con-

tact with said flexible body, the inner diameter of said offset end portion annular wall being slightly greater than the outer diameter of said tube, said offset end portion being on the interior of said pressure joint, said flexible body being contained between said offset end portion, circumferential wall, gripping ring and the tube to be sealed, said chamber forming elements being adapted to subject the seal and cushion member to compression sufficient to substantially flatten said gripping ring and to force said gripping ring to bite into the tube, the gripping ring, reinforcing ring and the cushion member annular end wall preventing extrusion of said seal axially along said tube.

2,999,702

SHAFT SEAL WITH POSITIVE AUTOMATIC SHUT-DOWN FEATURE

Robert Dunn, Olean, and Frederick A. Goersz, Allegany, N.Y., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Oct. 14, 1959, Ser. No. 846,417
1 Claim. (Cl. 286-8)



In a shaft seal, the combination comprising a first member surrounding the shaft and rotatable therewith, a floating seal ring surrounding the shaft and urged into seating engagement with said first member, a stationary member surrounding said floating seal ring, an annular piston slidably mounted on said stationary member for movement in a direction axially of the shaft, a contact seal ring carried by said piston, an annular contact surface on said first member and facing axially of said shaft, spring means operatively interposed between said piston and stationary member for urging said contact seal ring toward engagement with said contact surface, means for applying pressurized liquid to said piston to urge separation between said contact seal ring and said contact surface, and drainage means for removing fluid by-passed by said seal rings, said contact seal ring and contact surface being normally separated but engaging when the forces urging them together exceed those urging them apart such as when the pressure of said liquid falls below a predetermined value.

2,999,703

PLUGGED ASSEMBLIES

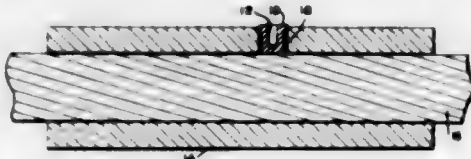
Robert R. Myers, McKeesport, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 19, 1958, Ser. No. 755,920

6 Claims. (Cl. 287-1)

5. The combination with a cable of a plastically deformable sleeve surrounding and supported on said cable,

said sleeve having an aperture through a wall thereof, a plastically deformable plug in said aperture having a blind orifice extending axially into the same from an exposed terminal end face thereof remote from the cable, and



said plug and sleeve plastically deformed into compressive engagement with each other and with the cable with the plug completely filling the aperture and having a maximum cross-sectional area of the plug within the aperture adjacent the cable.

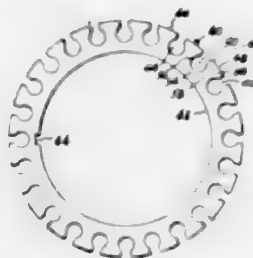
2,999,704

TOLERANCE RING

John Haller, 18500 Sheldon Road, and Lewis W. Alexander, 41131 E. 8 Mile Road, both of Northville, Mich.

Filed Sept. 13, 1955, Ser. No. 534,120

6 Claims. (Cl. 287-52)



1. A tolerance ring comprising a generally annular body of porous sintered powdered metal having outer and inner generally concentric peripheries, one of said peripheries having radially-compressible teeth projecting outwardly therefrom in circumferentially-spaced relationship therearound and recesses disposed between said teeth, said teeth having circumferentially broad tips and said tips having widths substantially equal to the maximum widths of said teeth.

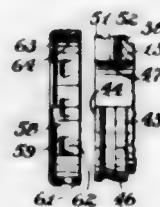
2,999,705

ENGINE STARTER DRIVES

Glenn S. Spencer, Horseheads, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Dec. 21, 1959, Ser. No. 860,765

11 Claims. (Cl. 287-52.08)



1. In a starter drive, a power shaft having a transverse passage, a sleeve adapted to be fixedly mounted on the shaft, a flange formed on the sleeve and having radial side portions providing abutments and having a top portion connecting said side portions, said flange having slot means formed therein opening to the top and one of the flange side portions and adapted to register with the said shaft passage, securing means mounted in the shaft passage and engaging said flange slot means, retainer means journaled on the shaft for securing the sleeve to the shaft, means formed in the flange top portion for fastening the retainer means to the flange, said retainer means

abutting said one side portion of the flange and having a portion yieldably engaging said fastening means and encompassing portions of said securing means.

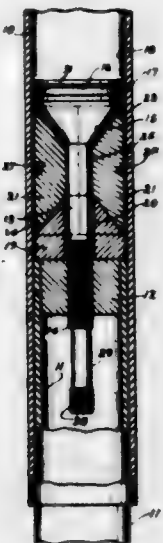
ing adapted to be secured to a supporting structure, said casing circumscribing said protuberance and having converging and diverging tapered surfaces in a direction opposite to that of said protuberance surfaces, to form an elliptical space between said protuberance and said cas-

2,999,706

TUBE LOCK

Merrill B. Wilcox, Minneapolis, Minn., assignor to Aladdin Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota

Filed May 6, 1959, Ser. No. 811,337
1 Claim. (Cl. 287—58)



Mechanism for locking outer and inner telescoping tubes against longitudinal movement with respect to each other including a plug fixedly mounted in a first end of said inner tube to have position inside said outer tube; a stud concentric with said inner tube and threadably mounted in said plug; a first conical cam integral with said stud and converging toward said plug; a friction member mounted on said first conical cam to tend to hold said first conical cam and stud against angular displacement with respect to said outer tube; a second conical cam surrounding said stud between said first end of said inner tube and said first conical cam and converging toward said first conical cam; a plurality of wedges between said first and second conical cams, each wedge having a surface adjacent, concentric with and in matching relationship to a portion of an inner surface of said outer tube, a surface adjacent, concentric with and in matching relationship to a portion of said first conical cam, and a surface adjacent, concentric with and in matching relationship to a portion of said second conical cam; a retaining member constituted as an integral extension of said stud at an end thereof opposite said first conical cam; said retaining member consisting of a shank integral with and extending outwardly from a threaded portion of said stud, and a second threaded portion integral with said shank; and said shank being of dimension to pass freely through said plug and of length greater than that of a threaded portion of said plug in which said stud is normally threadably mounted.

2,999,707

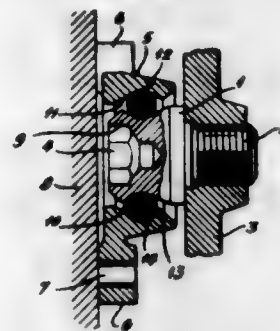
FLEXIBLE JOINT

Ernest Kniepkamp, Hellbrunn (Neckar), and Franz Gottfried Reuter, Lemförde, Hannover, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

Filed Nov. 27, 1957, Ser. No. 699,354

Claims priority, application Germany Nov. 28, 1956
1 Claim. (Cl. 287—85)

A flexible joint adapted to fasten a motor and the like to a supporting structure which comprises a protuberance adapted to be secured to a motor, said protuberance having diverging and converging tapered surfaces, a cas-



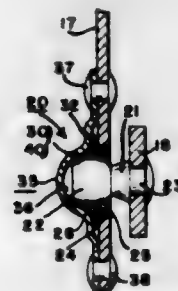
ing and between said tapered surfaces within said elliptical space, a compressed O-ring having a cellular polyurethane plastic core and a rubber-like substantially non-porous polyurethane plastic external surface, said O-ring having a substantially circular cross section.

2,999,708

BALL AND SOCKET JOINT

Michael A. Dudash, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 11, 1957, Ser. No. 689,575
3 Claims. (Cl. 287—87)



1. A ball and socket joint including, a stud having a ball end and a shank projecting therefrom, a retainer having a partially spherical recess, a bearing liner mounted within the retainer and formed to define a ball socket portion for the ball end of the stud, said liner comprising an integral element having a single slot extending axially therethrough and a plurality of spaced slots in the socket portion, said liner also having a polygonal flange, and a member attached to said retainer having a complementary aperture receiving said polygonal flange whereby the liner is retained in nonrotative relationship between the retainer and the member.

2,999,709

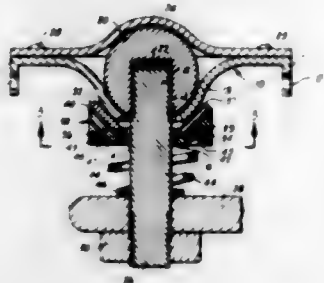
BALL JOINT ASSEMBLY

James O. Melton, Norman, and Thomas B. Wilkinson, Oklahoma City, Okla., assignors to Jamco, Inc., Oklahoma City, Okla., a corporation of Oklahoma

Filed Sept. 12, 1960, Ser. No. 55,300
1 Claim. (Cl. 287—90)

In a ball joint assembly for pivotally interconnecting two members, comprising a body having a spherically shaped socket portion and adapted for connection with one of said members, said socket portion having an axial opening therein, a ball member fitting in said spherically shaped socket portion, a stud secured to said ball member and extending through said axial opening, said stud being of a size to extend loosely through said axial opening and being adapted for connection with the other of said members in spaced relation from said body, the improvement which comprises a dished thrust washer around said stud

adjacent said body and having wall portions inclined to bear tangentially against said spherically shaped socket portion, said thrust washer further having a central aperture therein of smaller diameter than said axial opening to partially seal said axial opening, and having a flat annular lip surrounding said central aperture; high density, synthetic resin bearing means around said stud between said dished thrust washer and said other member; and a spring around said stud compressively retained between

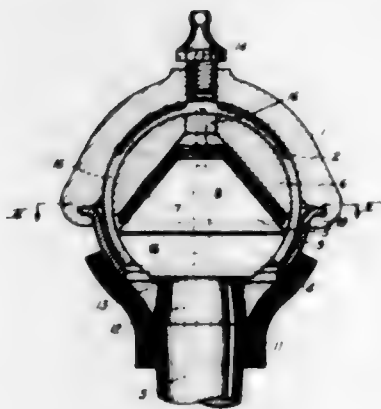


said bearing means and said other member to constantly urge said ball member into engagement with said socket portion, said bearing means having a dished surface complementary in configuration to said thrust washer and mating therewith to form a bearing, and said bearing means further having a convexly shaped surface opposite said dished surface and a peripheral flange extending parallel to said stud toward said other member, said flange forming a guide for said spring, and said flange and said opposite surface providing a seat for said spring.

2,999,710

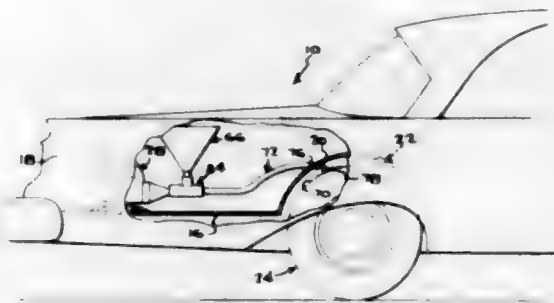
BALL JOINT, ESPECIALLY FOR MOTOR VEHICLES
Josef H. Latzen, deceased, late of Strump-Osterrath, near Dusseldorf, Germany, by Anneliese Latzen, nee Dahmen, heir, Strump, near Osterrath near Dusseldorf, Germany, assignor to A. Ehrenreich & Cie, Dusseldorf-Oberkassel, Germany

Filed Sept. 5, 1957, Ser. No. 682,198
Claims priority, application Germany Sept. 8, 1956
4 Claims. (Cl. 287—90)



1. In a ball-shaped suspension joint for the suspension of the wheels of a motor vehicle: a stud, a head connected to said stud and having a spherical surface portion adjacent said stud and a cone-shaped surface portion integral with said spherical surface portion and remote from said stud, a cap arranged above said cone-shaped surface portion and having an outer spherical surface and an inner cone-shaped surface corresponding to the outer contour of said cone-shaped surface portion, said cap being rotatably supported by said cone-shaped surface portion and being rotatable about the extension of the longitudinal axis of said stud, said outer spherical surface portion supplementing said spherical surface portion of said head to form a spherical surface of a nearly complete ball, and a socket member embracing said cap and said head.

2,999,711
ANTI-SKID SANDING DEVICE
Leonard J. Sturmer, 1128 Pierce Ave., Niagara Falls, N.Y.
Filed Apr. 24, 1959, Ser. No. 808,716
1 Claim. (Cl. 291—3)

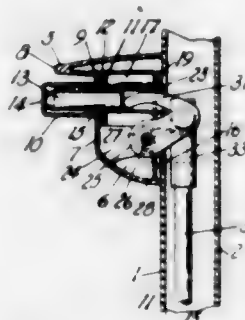


An automobile wheel sanding device comprising an electric blower, means for mounting the blower on a part of an automobile, an air jet assembly extending from and communicating with said blower, said assembly comprising a horizontal tubular head, a reduced diameter jet tube extending forwardly through said head and spaced from the interior of the head, said head having a closed rear end and an open forward end and said jet tube having an open forward end spaced rearwardly from the forward end of the head, a gravity feed and hopper mounted on said jet assembly and communicating with the interior of said head at a point behind the open forward end of the jet tube, and a sand projecting pipe having a rear end connected to the forward end of said head.

2,999,712

PUSH BUTTON HANDLE

Gerald V. Jakeway, Grand Rapids, Mich., assignor to Keeler Brass Company, Grand Rapids, Mich.
Filed May 16, 1960, Ser. No. 29,269
9 Claims. (Cl. 292—336.3)



9. A handle comprising a grip and a chambered head having a push button opening therein, a tubular bearing member supportedly mounted within said head in alignment with said opening therein, a push button reciprocally mounted in said opening in said head and provided with a stem slidably and supportedly mounted in said bearing member, a lever pivotally mounted within said head to project rearwardly therefrom and having a forwardly projecting arm disposed in said bearing member in thrust engagement with said stem of said push button, said lever having a coupling element on its swinging end, and an actuated member pivotally connected to the coupling element.

2,999,713

EAR CORN HOLDER

John F. Jones, 302½ S. Elm St., Greensboro, N.C.
Filed Jan. 27, 1960, Ser. No. 4,942
2 Claims. (Cl. 294—5)

1. A holder for an ear of corn comprising a pair of divergent arms pivotally connected at one end, said arms including oppositely, substantially right angular bent and crossed intermediate portions and reversely bent free end portions terminating in opposed prongs paralleling said

intermediate portions and adapted to penetrate the end portions of an ear of corn for rotatably supporting same, and a coil spring mounted longitudinally on each intermediate portion and having one end anchored to the



outer end portion thereof and its other end anchored to the inner end portion of the other of said intermediate portions for yieldingly resisting swinging movement of said free end portions of said arms away from each other.

2,999,714

DUAL-POSITION HANDLE FOR CONTAINERS

Ernest D. Ritchie, 6349 E. Barman, Tucson, Ariz.

Filed Sept. 17, 1956, Ser. No. 610,370

1 Claim. (Cl. 294-31.2)



A combined handle and pouring-cradle for a vacuum bottle comprising a substantially flat horizontal grip portion, a leg depending from each end of said grip portion, a depression and a perforation near one end of each leg, a circular band, protuberances and perforations at diametrically opposite points of said band, pivots connecting said legs to said band through said first and last mentioned perforations, said depressions and said protuberances being so designed and located as to engage one another when said legs are rotated about said pivots, and means for tightening said band around said vacuum bottle, characterized by the fact that said legs are of sufficient length to support said vacuum bottle in a tilted position when said legs are rotated about said pivots to a horizontal position, whereby the open end of said bottle is sufficiently elevated to prevent the contents from pouring therefrom after the first cupful has been removed from said bottle.

2,999,715

VACUUM RELEASE APPARATUS

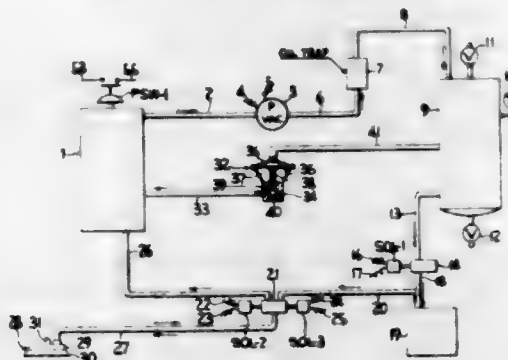
Vance S. Firestone, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

Filed Sept. 18, 1959, Ser. No. 840,877

5 Claims. (Cl. 294-64)

1. An apparatus for providing a source of vacuum and a source of compressed air which comprises a pressure tank, a vacuum tank, a power-operated vacuum pump having an inlet and an outlet, conduit means communi-

cating the vacuum tank to the inlet of the vacuum pump for evacuation of the vacuum tank, conduit means communicating the pressure tank to the outlet of the vacuum pump during communication of said vacuum tank with said inlet of the vacuum pump provided by said first-mentioned conduit means, valved conduit means communicating said vacuum tank with the atmosphere and



communicating said inlet of said vacuum pump with the atmosphere through said vacuum tank and including a normally open valve, means operatively closing said normally open valve in response to air pressure in the pressure tank, actuated switch means to connect the vacuum pump to a power source upon actuation of the switch means and means responsive to air pressure in the vacuum tank to actuate the switch means.

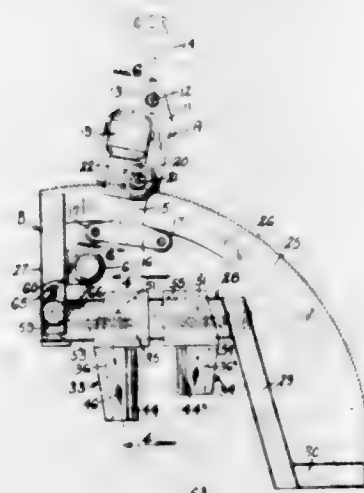
2,999,716

ROLLOVER GRABS

Robert S. Elberty, Meriden Ave., Southington, Conn., assignor to Jack Breslav, New Haven, Conn.

Filed Dec. 21, 1956, Ser. No. 629,913

7 Claims. (Cl. 294-86)

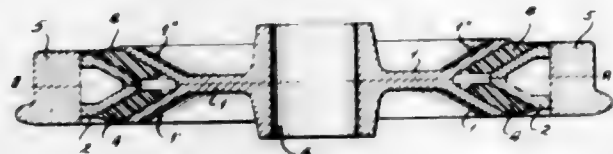


1. A grapple comprising an arm member, means for suspending said member, a pair of gripping jaws slidably mounted on said arm member for relative approaching and separating movements, means for actuating said jaws, each of said jaws comprising a leg member projecting from said arm in substantial parallelism and a jaw member slidably mounted on each of the leg members, the contacting surfaces of each leg member and its associated jaw member being inclined toward the gripping surface of the corresponding jaw member whereby relative movement between each jaw member and its associated leg member will effect relative approaching or separating movements of the jaw members and spring means urging each of said jaw members in one direction along said inclined surface upon its associated leg member, said direction being that tending to separate the jaw members.

2,999,717

RESILIENT RAILWAY WHEEL

Franz G. Reuter, Lemförde, Hannover, and Robert Igelbrack, Vöhrtrup, Osnabrück, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Feb. 21, 1958, Ser. No. 716,674
Claims priority, application Germany Feb. 25, 1957
1 Claim. (Cl. 295—11)

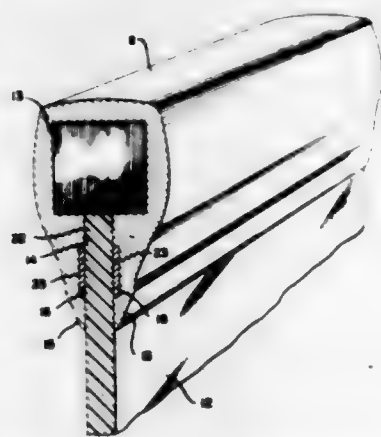


A disc wheel for rail vehicle comprising a one-piece hub and body, said body having a V-shaped edge spaced from said hub having an open radially outer end, a one-piece open V-shaped felly lying within said V-shaped edge with its apex nearest the hub, the inside diameter of the felly being substantially smaller than the outside diameter of the hub and body, a rubber-like polyurethane plastic insert between said edge and felly, and a separate rim mounted on the open base of said V-shaped felly.

2,999,718

SUN VISOR

Frank Handler, 1730 Wilshire, Detroit 21, Mich.
Filed Sept. 17, 1959, Ser. No. 840,586
2 Claims. (Cl. 296—97)



1. A sun visor comprising an elongated, rigid, horizontally arranged support strip and a panel having a horizontally arranged, straight, flat top edge; said strip being in the form of a channel of uniform cross-section, with the channel opening downwardly, and the base portion of the channel being widened to form a uniform cross-section tunnel extending the length of the strip and of a considerably greater width in cross-section than the thickness of the panel; the legs of the channel below the tunnel each having a flat vertically arranged interior face with said faces being parallel and spaced apart a distance substantially equal to the thickness of the panel for snugly receiving the panel top edge portion between them, said panel top edge portion being arranged between and in flat face to face contact with both of said faces with the top horizontal edge of the panel extending to the tunnel and forming a continuation of the tunnel and closing off the gap in the tunnel formed by the intersection of the leg interior faces and the tunnel forming base portion; means for securing the panel to the strip, said means consisting of a horizontally extending groove formed in each of the flat interior faces of the legs and extending the full length of the strip, the grooves opening toward each other and being oppositely aligned, each of the grooves being substantially centered in the vertical direction relative to its respective leg, each groove being of a

height which is approximately one-third of the height of its respective leg face and being shallow and in cross-section being substantially in the form of a narrow, vertically elongated rectangle having a vertical edge open; each groove being completely filled with an adhesive material which adhesive secures the panel top portion to both of the legs and which forms the only connection between the panel and the strip, said adhesive being positioned only in said grooves, whereby the means for securing the panel to the strip is permanent and is completely concealed and protected within the channel.

2,999,719

RECLINING CHAIR WITH FOLDED BACK-REST AND CONTROL

Fridtjof F. Schleppehake, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Mar. 28, 1958, Ser. No. 724,700
6 Claims. (Cl. 297—85)



1. In a reclining chair including a support, a body-supporting unit including a seat and back-rest mounted on said support for inclining and reclining movement, a leg-rest disposed in a stored position folded back beneath said seat, and a leg-rest supporting and controlling linkage operatively connected to and mounting said leg-rest for pivotal movement from said stored position through a downward arc to an intermediate position and then through an upward arc to various elevated leg-supporting positions, said leg-rest supporting and controlling linkage being operatively connected between said body-supporting unit and said leg-rest for effecting said pivotal movement and including a compensating link, means pivotally connecting said compensating link to said body-supporting unit, a first link pair having two links pivotally connected with each other, a second link pair having two links pivotally connected with each other, respective means pivotally connecting one link of said first and second link pairs to said compensating link at spaced points thereof, respective means pivotally connecting the other link of said first and second link pairs to said leg-rest at spaced points thereof, means pivotally connecting said first and second link pairs to each other for coordinating said link pairs, and means pivotally connecting one link of said link pairs to said support.

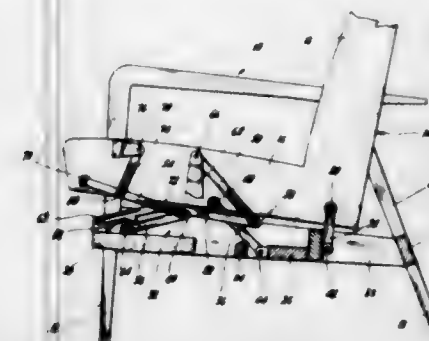
2,999,720

LEG-REST CONTROL FOR RECLINING CHAIR

Fridtjof F. Schleppehake, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Ocean Ridge, Boynton Beach, Fla.
Filed May 25, 1959, Ser. No. 815,523
8 Claims. (Cl. 297—89)

1. In a reclining chair having a support frame, a body-supporting unit including a seat and back-rest mounted on the support frame for tilting movement to a reclining position, and a leg-rest; leg-rest control means for moving the leg-rest from a retracted underslung inverted posi-

tion beneath the seat to an extended position in which it is spaced forwardly of the front of the seat, said leg-rest control means comprising a first pair of links formed by a first and second link pivotally connected end-to-end, a second link pair formed by a third and fourth link pivotally connected end-to-end and interconnected with the first pair of links for coordinated movement, the second and fourth links being pivotally connected to spaced points on the leg-rest, the third link being pivotally connected to the forward end portion of the seat and extending rearwardly in the sitting position of the body-supporting unit, the first link being pivotally mounted on a portion of the chair structure, and an actuating link



pivotally mounted on the support frame at a point rearwardly of and above the position of the pivotal mount of the first link on the seat in the sitting position of the body-supporting unit, said actuating link being pivotally connected to the third link at an intermediate point thereon proximate to the pivotal connection of the latter to the seat, the upper end of the third link being moved rearwardly with the seat when the body-supporting unit is brought to its reclining position, and the actuating link and third link cooperating with the seat to provide a drag link action for bringing the leg-rest to its extended position, with the seat serving as a driving crank, the actuating link serving as a driver crank, and the third link serving as a connecting rod.

2,999,721

HYDRAULIC STABILIZERS FOR TILTING TRUCK OR TRAILER DUMP UNITS

Louis S. Wood, 1605 Grant Blvd., Findlay, Ohio
Filed May 5, 1958, Ser. No. 733,035
9 Claims. (Cl. 298—17)



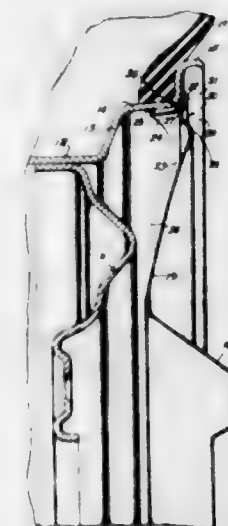
1. In a dump vehicle, a chassis including a frame, at least one wheeled rear axle, spring means supporting said frame at each side of said rear axle and connected thereto, a dump body, transversely disposed pivot means mounting the said dump body on the said chassis, and means for raising and lowering said dump body about its pivot means for accomplishing a dumping cycle, the said frame and axle being tiltable laterally with respect to each other when said vehicle is on uneven terrain, a stabilizer for eliminating any increase in lateral tilting of said axle and frame with respect to each other during each dumping cycle of said dump body comprising means pivoted or said frame including laterally spaced arms linked at one end to said rear axle, one of said arms being fixed to said pivot means and the other of said arms being journaled thereto, and means locking the other said arm to said pivot means fixing said rear axle and frame in the

lateral angular relationship assumed by them with respect to each other said locking means operable responsive to the initial raising and releasable upon lowering of the dump body during each said dumping cycle.

2,999,722

WHEEL COVER

George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Original application Nov. 23, 1955, Ser. No. 548,709.
Divided and this application Dec. 27, 1956, Ser. No. 630,989
3 Claims. (Cl. 301—37)

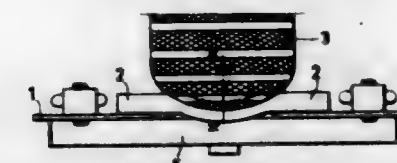


1. In a wheel structure including a tire rim having a radially inwardly facing flange portion and an axially outwardly facing flange portion joined thereto, a cover member for disposition at the outside of the wheel including a sheet metal body having a margin for overlying said flange portions and provided with an underturned flange structure engageable with the axially outwardly facing flange portion of the rim and having generally axially inwardly extending cover retaining extension structure thereon engageable with the radially inwardly facing flange portion, said cover member margin having an annular reinforcing rib projecting generally axially inwardly and backed up against the juncture of said underturned flange structure and said cover retaining extension structure, the radially inner side of said rib comprising a flange extending obliquely generally radially outwardly and axially inwardly toward, and in reinforcing strut relation to, the portion of said rib which is backed up against said juncture.

2,999,723

CHAIN FOR TRACTORS

Jonas Martin Ostberg and Carl Viktor Larsson, Alfta, Sweden
Filed May 31, 1956, Ser. No. 588,373
Claims priority, application Sweden June 15, 1955
1 Claim. (Cl. 305—57)



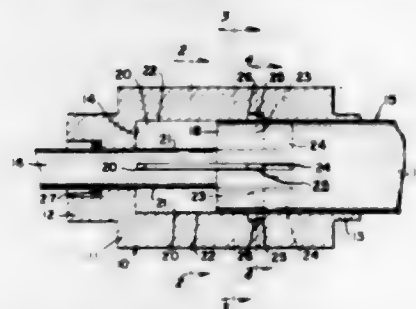
In a tractor drive, the combination of a track comprising interconnected links, and a rubber tire having a tread adapted to accommodate said links, each link being constituted by two coplanar plates spaced transversely of said tire by a distance substantially corresponding to the width of the tread of said tire, parallel spaced bars of rectangular cross-section aligned transversely of said tread

and interconnecting said plates, said plates having flat surfaces facing said tread, said bars being secured to said flat surfaces, the tread being provided with grooves and extending transversely throughout the tread for accommodating said bars and having a width substantially equal to the thickness of said bars and having a peripheral spacing substantially equal to the spacing of the two parallel bars, and pivotable loops on the rigidly interconnected plates for connection to another of said links.

2,999,724

DIFFERENTIAL DIAMETER RECIPROCATED SHAFT AND SUPPORTING MEANS THEREFOR

John F. Sherwood, P.O. Box 225, Rte. 2, Golden, Colo.
Filed Aug. 22, 1960, Ser. No. 51,201
6 Claims. (Cl. 308-4)

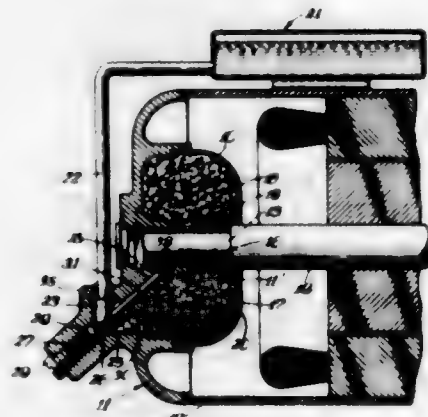


1. A differential diameter reciprocated shaft and supporting means therefor comprising a cylindrical housing, a shaft reciprocably mounted in the housing having a piston portion smaller in diameter than the internal diameter of the housing and a work shaft portion larger in diameter than the piston portion, and a plurality of stationary supporting guides spaced circumferentially of the piston portion of the shaft and extending radially between said portion and the housing in reinforcing relationship to the piston shaft.

2,999,725

LUBRICATOR SYSTEM

Edward J. Schaefer, 400 E. Spring St., Bluffton, Ind.
Filed Oct. 1, 1957, Ser. No. 687,588
30 Claims. (Cl. 308-78)



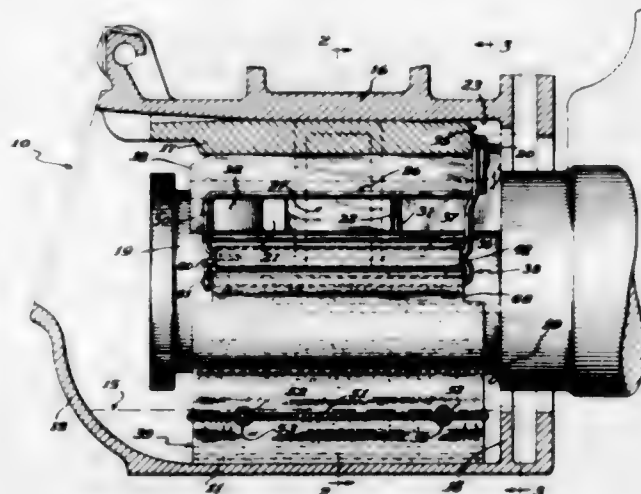
1. A bearing lubricator comprising a primary liquid lubricant reservoir adapted to be located adjacent a bearing, means for depositing lubricant from said primary reservoir upon the contacting surfaces of the bearing and a journal operable therein, an airtight reserve lubricant reservoir, airtight conduit means interconnecting said reservoirs for carrying lubricant by gravity from said reserve reservoir to said primary reservoir, said conduit means having its outlet located in said primary reservoir at a point such that the lubricant will flow from said reserve reservoir to said primary reservoir only when the lubricant level in said primary reservoir is below said outlet,

sealing means for said conduit means for preventing lubricant flow therethrough, and means responsive to operation of the journal for automatically opening said sealing means upon operation of the journal for a predetermined period.

2,999,726

JOURNAL LUBRICATOR

Bertil E. Peterson, Chicago, Ill., assignor to Cardwell Westinghouse Company, a corporation of Delaware
Filed May 22, 1957, Ser. No. 660,799
11 Claims. (Cl. 308-87)



1. In combination with a journal box that has a lubricant reservoir at the bottom and a ceiling at the top, a journal rotatable above the reservoir, a bearing having a lower bearing surface riding on top of the journal and an upper wedging surface bounded at its inner end by an upraised shoulder portion of said bearing, said shoulder terminating short of said ceiling, said bearing having a transversely-extending lug at each of its opposite sides and being formed with an inwardly facing shoulder on each of its opposite sides with the outwardly facing portions of said lugs inclined towards each other in the direction of the outer end of the bearing, and a wedge engaged between the upper surface of said bearing and said ceiling with its inner end abutting said shoulder to provide a transverse passage that extends across the top surface of said shoulder at the upper inner region of said box; of an open-topped framework for securing a lubricator in said box and comprising a transverse end strap disposed in said passage to bear against the top surface of said shoulder and cantilever arms carried by said strap at its opposite ends and extending along the opposite sides of said bearing, each arm having outer and inner vertical crossbars with a lug-receiving loop between said bars, the free ends of said arms being biased towards each other such that the outer crossbars grip against the side surfaces of the bearing at a point immediately outward of the inclined surfaces of said lugs with the loops supported on the lugs and the inner crossbars engaging said inwardly facing shoulder to maintain said framework in permanently fixed position on said bearing, and attachment means carried by each arm for engaging the opposite ends of a lubricator.

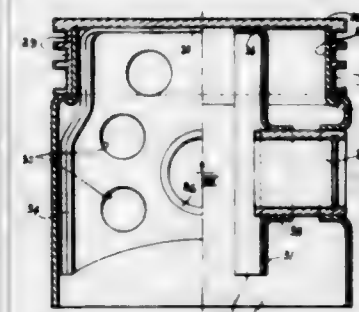
2,999,727

PISTON

André Cornet, 31ter Rue Louise Michel, Levallois-Perret, France
Filed June 2, 1958, Ser. No. 739,153
Claims priority, application France June 4, 1957
9 Claims. (Cl. 309-10)

1. A piston formed of sheet metal, and comprising a skirt portion, a head portion having a head part and a grooved annular part, two sleeves forming bearings for

a wrist pin, two armature plates orientated in a plane perpendicular to the axis of the wrist pin bearings, means for welding said plates to said head part on the one hand



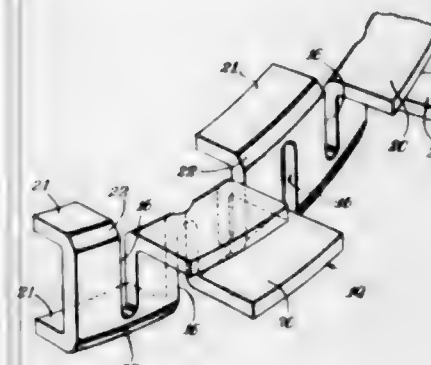
and to a major portion of said skirt portion on the other hand and cylindrical openings formed in the skirt on the one hand, and in said armature plates on the other hand, to support the sleeves through a welded connection.

2,999,728

PISTON RING ASSEMBLY

Melvin E. Estey, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana

Filed Mar. 27, 1957, Ser. No. 648,937
15 Claims. (Cl. 309-45)



1. A piston ring assembly comprising a cylinder-engaging rail, and positioning and expanding means comprising a circumferentially expandable structure having portions extending axially and portions bent to extend radially outward from the first-mentioned portions for holding said rail at one side of said groove, and portions bent to form shoulders abutting the inner periphery of the rail to force it outwardly, said last-mentioned portions extending radially inward from said shoulders.

2,999,729

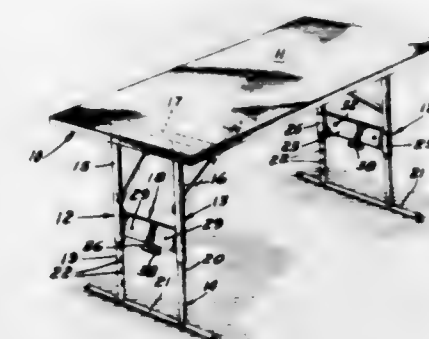
ADJUSTABLE SUPPORT FOR A PLATFORM

Albert N. Semmelroth, San Pedro, Calif., assignor to Virco Mfg. Corporation, Los Angeles, Calif., a corporation of California

Filed Mar. 9, 1959, Ser. No. 798,149
5 Claims. (Cl. 311-39)

1. An adjustable support for a platform, comprising spaced apart upper tubular members secured to said platform for unitary raising and lowering movements therewith and depending therefrom; lower interconnected members respectively telescopically slidable in said upper members as a unit, said lower members each having a linear series of spaced apart openings; a frame structure interconnecting the lowermost end portions of said upper mem-

bers and movable therewith; rotatably mounted members carried by said frame structure respectively having projections successively positionable in the openings of said lower members, and being rotatable in response to telescoping movements thereof; at least one projection of each said rotatably mounted members being in engagement with the openings of one of said lower members at

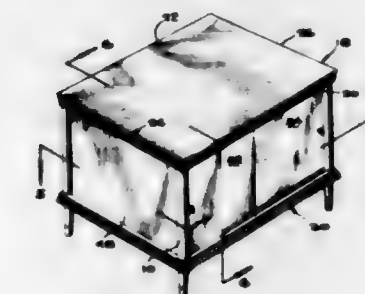


2,999,730

KNOCKDOWN CABINET STRUCTURE

Clarence Adam Troutman, P.O. Box 1289, High Point, N.C.

Filed Aug. 8, 1958, Ser. No. 753,931
4 Claims. (Cl. 312-257)



1. In a knockdown cabinet structure, a plurality of legs each having a pintle projecting from the upper end and having a shoulder inwardly of and spaced from the lower end, a flat top having spaced side edges and an end edge extending between adjacent ends of the side edges, there being a socket in said top at each of the juncture points of the end edges with the adjacent ends of said side edges and opening inwardly from the under face of said top, said legs being disposed so that the pintles extend into and are embracingly held within said sockets, a flat bottom having spaced side edges, and an end edge extending between adjacent ends of the side edges, and being provided with an opening at each of the juncture points of the end edges with the adjacent ends of said side edges, said bottom being disposed so that the lower end portions of said legs extend through the openings with the upper face of the bottom bearing against the shoulders, and a releasable wedge pin carried by each of said legs and bearing against the under face of said bottom for holding the bottom in position on said legs.

CHEMICAL

2,999,731

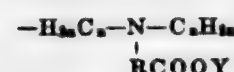
DYEING OF NORMAL WOOL

Arthur Jacob Immanus Harding, Syton, Leicester, England, assignor to Woodlyn Corporation, Spartanburg, S.C.

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,874
20 Claims. (Cl. 8-54)

1. A process for non-uniformly dyeing a wool textile material whose wool content consists substantially entirely of normal wool fibres which comprises treating said textile material, in the absence of chlorinated wool and other forms of wool treated to alter the dyestuff affinity thereof as compared to normal wool, with an aqueous solution containing a condensation product which renders some of the amino acids present in wool at least partially resistant to dyeing with dyestuffs which normally dye wool, said condensation product being selected from the group consisting of condensation products of aldehydes and aromatic sulphonic acids and water-soluble salts of condensation products of aldehydes and aromatic sulphonic acids, a water-soluble organic aliphatic acid which is non-injurious to wool and at least one dyestuff which will dye wool and which contains at least two sulphonic acid groups in the molecule, the said aqueous solution having an initial pH of between 2.8 and 4.9.

groups C_2H_5 , C_3H_7 , the alkylol group $=C_2H_4OH$, and the polyalkylene amine radical



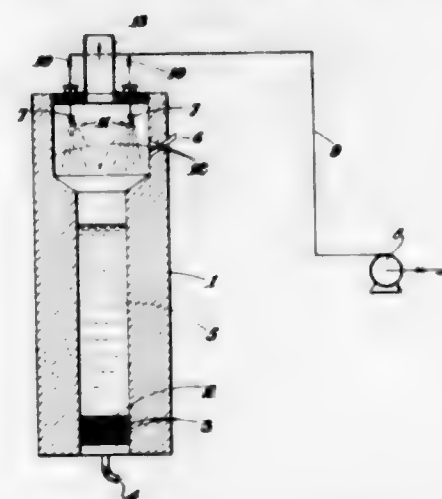
and where n is 1-3 inclusive; and maintaining in the water a pH in the range between 5 and 8.5.

2,999,733

CHLORINATION PROCESSES

James Dennis Groves, Fairfield, Stockton-on-Tees, England, assignor to British Titan Products Company Limited, Billingham, England, a company of Great Britain

Filed Jan. 16, 1958, Ser. No. 709,229
Claims priority, application Great Britain Jan. 16, 1957
12 Claims. (Cl. 23-87)



1. A method of treating iron-titanium bearing materials which comprises chlorinating the material in a reactor at a temperature above 800°C . and in a chlorination bed having a vapor space above the top of the bed, removing a vapor mixture comprising ferrous chloride and titanium tetrachloride from the top of the bed, and maintaining the temperature of a portion of the vapor space above said bed below 400°C . but above 200°C . whereby to chill the vapors as they are removed from the bed, said portion being spaced from the upper level of the bed thereby forming a solid suspension of ferrous chloride in the vapor and removing the suspension from the reactor.

2,999,734

PROCESS FOR THE PRODUCTION OF ALUMINOSILICATE GELS

Horst Weber and Ernst Podachus, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 9, 1959, Ser. No. 785,805
Claims priority, application Germany Jan. 16, 1958
12 Claims. (Cl. 23-113)

1. Process for the manufacture of aluminosilicate gels characterized by continuously combining simultaneously solutions of alkali metal silicate, alkali metal aluminate, and aluminum salt of an acid with intense stirring, at a stay in the mixer of less than 10 seconds, to form a homogeneous hydrogel mixture separating the hydrogel from the liquid and drying it at temperatures of up to 300°C .

SEPTEMBER 12, 1961

CHEMICAL

347

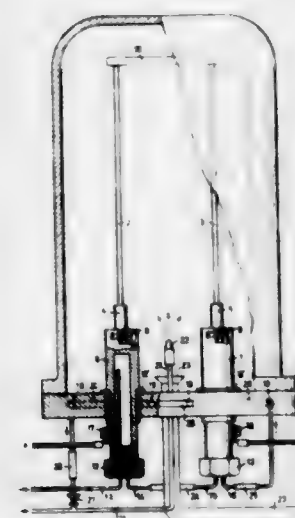
2,999,735

METHOD AND APPARATUS FOR PRODUCING HYPER-PURE SEMICONDUCTOR MATERIAL, PARTICULARLY SILICON

Konrad Reuschel, Pretzfeld, Upper Franconia, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed Apr. 20, 1960, Ser. No. 23,524

Claims priority, application Germany June 11, 1959
9 Claims. (Cl. 23-223.5)



1. In a method of producing semiconductor silicon, in which silicon is precipitated upon an electrically heated carrier body consisting of silicon, by decomposing a gaseous compound of silicon in contact with the carrier body, the carrier body being heated by passing electric current therethrough, the gaseous compound being mixed with hydrogen gas, the process being carried out at a temperature of at least about 1100°C . in a reaction space at least partly enclosed by a heat-conductive structure, the improvement comprising supporting the carrier body in said space in gas sealed and electrically insulated relation with respect to said structure, passing hydrogen under superatmospheric pressure in heating exchange relation with the said structure to cool the latter so as to protect the electrical insulating seal, said cooling being to not lower than about 300°C . so as to disfavor precipitation of an oily, viscous coating of silicon compound upon said structure.

2,999,736

HIGH PURITY SILICON

Harold Shalit, Drexel Hill, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 7, 1959, Ser. No. 785,329

2 Claims. (Cl. 23-223.5)

2. The method of preparing high purity silicon which includes the steps of: preparing silicon tetrafluoride; purifying the silicon tetrafluoride by passing a stream of gaseous silicon tetrafluoride countercurrently with a stream of anhydrous liquid hydrogen fluoride containing a hydrocarbon selected from the group consisting of meta xylene and mesitylene and further purifying the silicon tetrafluoride by cooling at a temperature between -20°C . and about -50°C . and recovering the gaseous silicon tetrafluoride from such cooling, whereby any trace amount of boron trifluoride contaminant is removed from the gaseous silicon tetrafluoride; and converting the thus purified silicon tetrafluoride to high purity silicon.

770 O.G.-23

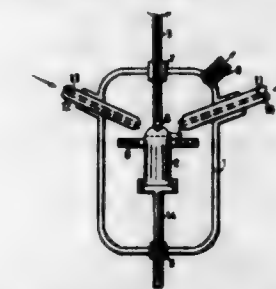
2,999,737

PRODUCTION OF HIGHLY PURE SINGLE CRYSTAL SEMICONDUCTOR RODS

Karl Siebertz, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed Apr. 16, 1959, Ser. No. 806,882

Claims priority, application Germany Apr. 30, 1958
9 Claims. (Cl. 23-223.5)



1. The method of continuously growing in a continuous operation a highly pure relatively thin single crystal rod-like semiconductor body from a melt of said semiconductor material, comprising producing within a reaction vessel between one end of a main electrode consisting of said semiconductor material and at least one counter electrode a glow-arc discharge to form said melt at said one end of said main electrode in the form of a substantially drop-shaped molten zone, said electrodes being disposed to produce substantially uniform heating of such molten zone by said glow-arc discharge, dipping into said melt the end of a relatively thin seed member consisting of said semiconductor material and having a cross-sectional area which is small as compared with the surface area of said drop-shaped melt, directing onto said drop-shaped melt a highly pure gaseous compound of said semiconductor material to continuously supply the melt therewith, said gaseous compound decomposing thermally by the action of said glow-arc discharge to effect continuous deposit of said semiconductor material upon said drop-shaped melt, and continuously withdrawing said body from said drop-shaped melt to cause molten material to solidify thereon at a rate which corresponds substantially to the rate at which said semiconductor material is deposited on said melt by the thermal decomposition of said gaseous compound.

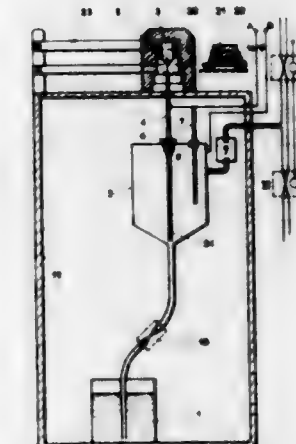
2,999,738

AUTOMATIC DEVICE FOR TAKING SAMPLES OF ACTIVE SOLUTIONS

André Redon, Savigny-sur-Orge, Seine-et-Oise, France, assignor to Commissariat à l'Energie Atomique, Paris, France

Filed Aug. 26, 1959, Ser. No. 836,090

Claims priority, application France Aug. 26, 1958
6 Claims. (Cl. 23-259)



1. In an automatic device for taking samples of active solutions, a sample bottle, a conduit feeding said bot-

tle, means for placing said solution under vacuum, single action control means for said vacuum means, an electro-pneumatic motor system, a liquid switch actuated by contact between the active solution and said feeding conduit in said system, said vacuum means causing said solution to contact and enter said feeding conduit, a vacuum valve and an atmospheric valve in said system, means for closing said vacuum valve actuated by contact between the solution and said conduit, means actuated by closure of said vacuum valve for opening said atmospheric valve whereby the body of the solution is separated from the fraction of the solution which has penetrated said feeding conduit to collect a desired quantity of the active solution in said bottle.

2,999,739

ANTI-KNOCK FLUIDS

Sam D. Heron, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 28, 1956, Ser. No. 574,397
6 Claims. (Cl. 44-69)

1. In an antiknock composition consisting essentially of organolead material as the principal antiknock ingredient, organic halogen scavenger material selected from the class consisting of that having two atoms of chlorine plus one atom of bromine per atom of said anti-knock lead, and that having two atoms of bromine per atom of said anti-knock lead, and a gasoline soluble phosphorus-containing, spark plug anti-fouling compound, the phosphorus-to-lead atom ratio of said composition being from about 0.02:3 to about 0.7:3; the improvement in which the bromine content of the organic halogen scavenger material is increased by about 15 to 20 percent.

6. A gasoline containing the composition of claim 1 in amount sufficient to provide effectively improved anti-knock, but not more than equivalent to six milliliters of tetraethyllead per gallon.

2,999,740

SURFACE IGNITION SUPPRESSION

Thomas F. Banigan, Jr., Walnut Creek, Calif., assignor to Tidewater Oil Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Original application Nov. 27, 1956, Ser. No. 624,507. Divided and this application May 13, 1959, Ser. No. 819,523
9 Claims. (Cl. 44-69)

1. A gasoline fuel for internal combustion engines containing tetraethyllead in anti-knock amounts, halide scavengers in normal amounts in excess of 1.0 theory, and between 0.15 and 0.6 theory of a compound having the formula



wherein n is an integer of 3 to 6, inclusive, and R is a lower alkyl radical.

2,999,741

PRODUCTION OF CARBON MONOXIDE AND HYDROGEN

Roger M. Dille and Roland W. Chapman, Whittier, and John C. Ahlborn, Monterey Park, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,839
8 Claims. (Cl. 48-196)

1. A method for recovering carbonaceous solid from a gas stream resulting from reaction of carbonaceous fuel with oxygen in a reaction zone to produce a product gas stream comprising carbon monoxide, hydrogen, and entrained carbonaceous solid, which comprises contacting said product gas stream with water in a gas scrubbing zone effecting removal of carbonaceous solid from said gas stream and forming a dispersion of solid in water, contacting said dispersion with a liquid hydrocarbon

mixture having a gravity above 20° API and containing lower gravity components effecting resolution of said dispersion into clarified water and a slurry of solid in said hydrocarbon mixture, separating said slurry and said

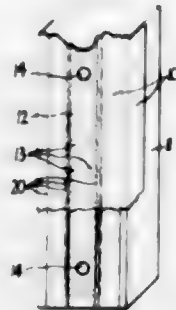


clarified water, and vaporizing a portion of said hydrocarbon mixture comprising said slurry and forming a residue slurry of carbonaceous solid in oil having a gravity below 20° API.

2,999,742

GRINDING BLOCKS

Roman Schuster, Funk Weg 14, Senden (Iller), Germany
Filed May 9, 1957, Ser. No. 670,354
Claims priority, application Germany May 11, 1956
6 Claims. (Cl. 51-293)



1. The method of producing a grinding tool; comprising the steps of applying a pattern sheet to a strip having corners and edges so that said sheet conforming to the contour of said strip and overlies same, casting a block on said strip supported contoured pattern sheet to conform the corresponding face of the block to said contour, providing markings on said pattern sheet at the locations of said corners and edges of the contour of said block thus formed, removing said pattern sheet, imparting to an emery sheet perforations corresponding to said markings on said pattern sheet so that said perforations run parallel to and spaced from each other through said emery sheet, and then connecting said emery sheet to said block face whereby said perforations coincide with said corners and edges, thereby to conform said perforated emery sheet to said block face so that said perforated emery sheet may be bent sharply without causing breakage thereof at said corners and edges.

2,999,743

DEFORMABLE SELF-SUPPORTING EXPLOSIVE COMPOSITION

Cyril James Breza, Thorofare, and Clyde Oliver Davis, Wenonah, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 17, 1960, Ser. No. 46,044
5 Claims. (Cl. 52-5)

1. An explosive composition consisting essentially of a cap-sensitive crystalline high explosive compound selected from the class consisting of the organic nitrates and nitramines admixed with a binding agent consisting of 25-75% by weight of an organic rubber and 75-25%

by weight of a thermoplastic terpene hydrocarbon resin, said high explosive compound constituting 92.5-70% by weight of said explosive composition, said composition having the ability to deform in shape when subjected to mechanical pressure or manipulation and to hold itself in any shape into which it is thus formed when the pressure is released whereby the composition may be molded or shaped at room temperature into a self-supporting physical form of any desired size and configuration.

2,999,744

PLASTIC EXPLOSIVE COMPOSITIONS

Warren H. Eckels, Kingston, N.Y., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 6, 1955, Ser. No. 506,663
11 Claims. (Cl. 52-5)

1. A plastic explosive composition comprising from 75% to 95% by weight of the composition of crystalline high explosive of the group consisting of cyclonite, trinitrotoluene, pentaerythritol tetranitrate, tetryl, nitroguanidine, picric acid, nitrolactose, mannitol octanitrate, and sucrose octanitrate and from 5% to 25% by weight of the composition of a silicone gel comprising a polysilicone.

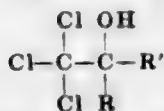
2,999,745

PROCESS OF DEFOLIATING COTTON PLANTS

Albert Bloom, Summit, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 23, 1958, Ser. No. 769,098
5 Claims. (Cl. 71-2.7)

1. The process of defoliating cotton plants which consists of applying to the leaves at a rate sufficient to cause defoliation of said plants a liquid composition comprising a water-miscible organic solvent containing as active defoliant 0.5 to 2.5% by weight of a trichloro alkanol having the following general formula:



wherein R represents a member selected from the class consisting of hydrogen and methyl, and R' represents a member selected from the class consisting of hydrogen, methyl and ethyl.

2,999,746

SUPPRESSING POTATO SPROUTING BY THE VAPORS OF DIPROPARGYL ETHER

Frederick A. Hessel, Montclair, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,607
3 Claims. (Cl. 71-2.7)

1. The method of retarding the sprouting of potatoes during storage which comprises exposing 1,000 parts by weight of said potatoes to 1 part by weight of the vapors of dipropargyl ether.

2,999,747

METHOD OF TREATING REFRACTORY ORES FOR THE RECOVERY OF VALUES THEREFROM

Anthony R. Ronzio, Littleton, Colo., assignor to Radiological Research Institute, Inc., Denver, Colo., a corporation of Nevada

No Drawing. Filed Oct. 28, 1958, Ser. No. 770,014
6 Claims. (Cl. 75-1)

1. A method of recovering metal values from refractory ores which comprises the steps of reacting together a carbonaceous reducing agent and a strong oxidizing agent selected from the group consisting of alkali metal nitrates, alkali metal persulphates and alkali metal peroxides in the presence of the refractory ore, the oxi-

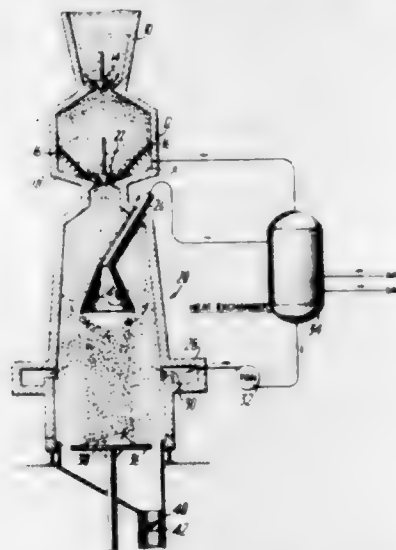
dizing agent and amount thereof being selected to react with the carbonaceous reducing agent to form an alkali metal carbonate and heat, the heat of reaction being operative to fuse the alkali metal carbonate, reacting the fused alkali metal carbonate with the ore at an elevated temperature, the elevated temperature being due to the heat of reaction, to produce an insoluble metallic carbonate and soluble alkali compound, and thereafter leaching to separate the soluble alkali compound and insoluble metallic carbonate.

2,999,748

PROCESS OF REDUCING MOLDED BODIES COMPRISING METALLIC OXIDES

Toralv Båsen, Vagsbygd pr. Kristiansand S., Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

Filed Nov. 24, 1959, Ser. No. 855,048
Claims priority, application Norway Nov. 27, 1958
5 Claims. (Cl. 75-36)



1. In the process of treating iron oxides for use in an electric smelting furnace the steps of forming molded aggregates of the oxide and a carbonaceous reducing agent, passing such aggregates downwardly in the shaft, heating such aggregates in a central portion of the shaft to a temperature between 800° C. and 1300° C. at which the reducing agent is caused to react with the oxide to generate CO and supplying air to the central portion of the shaft whereby such generated CO from the charge is burned in the central portion of the shaft continuously to heat the charge as it moves down whereby some sintering may take place in the portion of the charge toward the center while the aggregates in the outer area of the shaft that contact the lining remain separate and free flowing so that lodging of the charge is prevented, and causing the products of combustion to move downwardly in the shaft from the combustion zone so volatiles are not driven out of the charge before it reaches the combustion zone.

2,999,749

METHOD FOR PRODUCING NON-AGING RIMMED STEELS

Earle R. Saunders, Hudson, Ohio, and Russell M. Franks, New York, and Carl A. Belser, Lewiston, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 17, 1958, Ser. No. 761,456
11 Claims. (Cl. 75-58)

1. A method for the production of non-aging rimmed steel which comprises providing a molten bath of steel, adding to said molten bath an addition agent comprising at least 25 percent manganese and at least one element selected from the group consisting of columbium, tantalum, vanadium, and boron in an amount sufficient to combine with the nitrogen in said steel.

2,999,750 PHOTOCONDUCTIVE LAYERS FOR ELECTROPHOTOGRAPHY

Alfred Miller, Munich, and Hildegard Haydn, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Dec. 10, 1957, Ser. No. 701,726
Claims priority, application Germany Dec. 14, 1956
3 Claims. (Cl. 96—1)

1. An electrophotographic sheet material comprising an electrically conductive base plate, and coated on said plate a non-photoconductive binding agent having dispersed therein a particulate photoconductive insulating substance for electrophotography, said binding agent consisting of a solid film-forming polyester of carbonic acid and an aromatic dihydroxy compound containing as sole reactive groups hydroxyl groups, said polyester being soluble in organic solvents and comprising structural units which are the esterification product of carbonic acid and a member of the group consisting of di-(monohydroxy-aryl)-alkanes, dihydroxy-diaryl-sulfones, dihydroxy-diaryl ethers and dihydroxy-diaryl thioethers, said groups members containing as sole reactive groups hydroxy groups, said photoconductive substance being employed in proportions of about 1 part per 0.3-2 parts by weight of binding agent, and in an amount of 5-40 g. per square meter.

2,999,751 CHEMICAL SENSITIZING OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Fritz Dersch, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 30, 1957, Ser. No. 675,043
5 Claims. (Cl. 96—107)

1. The process of increasing the speed of a photographic silver halide emulsion which comprises, digesting an emulsion of silver halide in an essentially inert colloidal carrier in the presence of a sensitizing amount of a reaction product prepared by kneading a mixture of 10 parts by weight of essentially inert solid gelatin and from 2 to 6 parts by weight of thioformamide until a highly viscous sticky mass is obtained.

2,999,752 ZINC FOOD SUPPLEMENT

Charles S. Webb, 256 Columbia Ave., Palmerton, Pa.
No Drawing. Filed Aug. 28, 1958, Ser. No. 757,684
5 Claims. (Cl. 99—2)

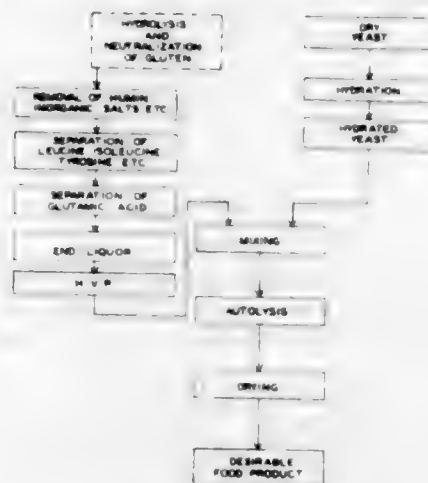
1. An animal and vegetable nutritional supplement composition consisting essentially of a uniform mixture of from about 80-90% by weight zinc oxide and from about 10-20% by weight dolomitic lime, said composition being in the form of discrete particles having sizes in the range of from about 44 microns to about 100 microns.

2,999,753 PROCESS FOR PRODUCING A PROTEINOUS FOOD PRODUCT

Irena E. Witwicka, Montreal, Quebec, and John S. Pavuk and Kenneth M. Gaver, Preville, Quebec, Canada, assignors to The Ogilvie Flour Mills Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Oct. 13, 1958, Ser. No. 766,865
3 Claims. (Cl. 99—14)

1. A process for producing food products from end liquor obtained in processes for glutamic acid recovery from protein hydrolysates which comprises: alkalizing glutamic acid end liquor with sodium hydroxide, heating the resulting liquor under vacuum until the ammonia has been substantially completely eliminated, neutralizing the deammoniated liquor with hydrochloric acid, mixing moist yeast with between about 3.5 and about 4.5

parts by weight of said neutralized liquor per part by weight yeast solids, storing the resulting mixture until



autolysis of the yeast is substantially complete, and drying the resulting mixture.

2,999,754 COMPOSITION AND METHOD FOR THE PREPARATION OF BEVERAGES

Robert M. Lauck and Arthur Dock Fon Toy, Park Forest, Ill., assignors to Victor Chemical Works, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Nov. 3, 1959, Ser. No. 850,545
9 Claims. (Cl. 99—78)

4. A solid, water-soluble, substantially non-hygroscopic and stable beverage-forming composition comprising a flavoring agent, a coloring agent, dextrose monohydrate in an amount of about 10 to 20 times the combined weights of said flavoring and coloring agents, and a sufficient amount of phenylphosphonic acid to impart a tart, tangy taste to a beverage prepared therefrom.

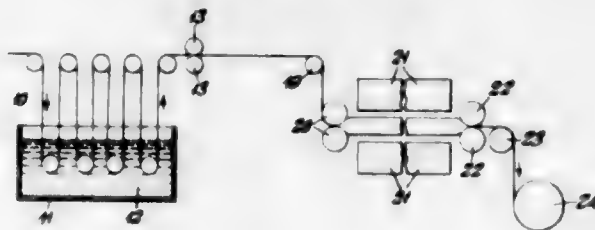
2,999,755 FLUID SHORTENING AND METHOD OF MAKING THE SAME

Edward Handschumaker, Williamsville, and Horst G. Hoyer, Buffalo, N.Y., assignors to Spencer Kellogg and Sons, Inc., Buffalo, N.Y.
No Drawing. Filed Aug. 19, 1959, Ser. No. 834,629
16 Claims. (Cl. 99—118)

1. A fluid shortening comprising a normally liquid edible triglyceride oil as the major ingredient and from about 0.50% to about 1.75% of normally solid monoglycerides of a saturated fatty acid having a chain length greater than 18 carbon atoms uniformly distributed therein.

2,999,756 METHOD FOR PRODUCING CELLULOSIC SAU- SAGE CASINGS AND PRODUCT

Edward A. Shiner, Chicago, and Cyril J. Brounstein, Park Forest, Ill., assignors to Union Carbide Corporation, a corporation of New York
Filed June 22, 1959, Ser. No. 821,706
4 Claims. (Cl. 99—176)



1. Method for producing tubular sausage casings of regenerated cellulose, the steps which comprise annularly extruding a viscose having a gamma number between 34

and 50 to form a tubular product, coagulating and regenerating the tubing to form gel tubing, washing the gel tubing, plasticizing the gel tubing with a polyhydric alcohol, simultaneously drying and stretching linearly and transversely the plasticized gel tubing, said stretching being within the range of 15% to 23% in the transverse direction and 2% to 8% in the longitudinal direction, and maintaining the casing wall thickness within a range corresponding to the formula:

$$B.D.G. = (D_s)^2 (34.3 \text{ to } 42.3)$$

wherein B.D.G. is the bone dry gauge weight of cellulose in a 100 foot length of dried casing and D_s is the recommended stuffing diameter of the casing in inches reached by internal stuffing pressures of 100 to 150 mm. Hg, said viscose after regeneration and coagulation yielding a regenerated cellulose having a degree of polymerization corresponding to a viscosity of at least 4.3 centipoise according to TAPPI test method T-203-cm-50.

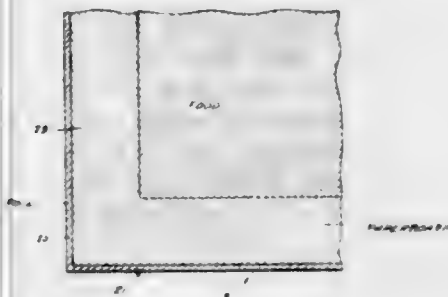
2,999,757

METHOD FOR PRODUCING CELLULOSIC SAUSAGE CASINGS AND PRODUCT
Edward A. Shiner, Chicago, and Cyril J. Brounstein, Park Forest, Ill., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 30, 1959, Ser. No. 849,742
5 Claims. (Cl. 99-176)

1. In the method for producing cellulosic sausage casing by the annular extrusion of a solution of a regeneratable cellulose derivative to form after regeneration, washing, and plasticizing, a gel cellulosic tubing, the steps which comprise concurrently drying and stretching said gel cellulosic tubing from 35% to 55% in the transverse direction and from 2% to 8% in the longitudinal direction, the wall thicknesses of the gel cellulosic tubing being such that after said drying and stretching, the bone-dry gauge of the dried casing is from $62.7D-10.3$ to $93.9D-15.5$ grams cellulose per 100 foot length of dried casing, D being the attained diameter of the casing in inches upon being wetted and inflated by an internal air pressure of 200 millimeters of mercury.

2,999,758

ICE CREAM PACKAGE
Frank Alan Brown, Lake Zurich, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,243
3 Claims. (Cl. 99-180)



1. An improved ice cream package comprising ice cream contained in a self supporting carton, said carton being fabricated from a built-up board including paperboard having moisture absorption characteristics, and a moisture repellent barrier bonded to one side of said paperboard, the paperboard side of said built-up board forming the inner moisture-absorbing surface of said carton and being in contact with and absorbing moisture from said ice cream said paperboard being at least about 10 points in thickness.

2,999,759

MAGNESIA BRICK
Russell Pearce Heuer, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania
No Drawing. Filed Aug. 14, 1959, Ser. No. 833,673
4 Claims. (Cl. 106-58)

1. In producing basic refractory brick having resistance to cracking in the unburned condition, the art which includes mixing (1) refractory particles of the class consisting of magnesia, mixtures of at least 15% of magnesia with chrome ore making up the balance, mixtures of magnesia with 5% to 75% olivine, and mixtures of magnesia with 1% to 25% alumina, said magnesia being dead-burned and further being characterized by having the property of promoting cracking of ordinary basic refractory brick when molded wet with water and drying at temperatures short of mineralizing temperatures; (2) a crack-preventing material consisting essentially of a boron oxygen compound in a concentration of 0.02% to 0.30% calculated as B_2O_3 , said percentages being by weight on a dry basis and said compound being a specific additive supplementing the composition of the particles; and (3) water; molding into brick at pressures in excess of about 5000 p.s.i. the mixture thus formed; and drying the brick at temperatures short of mineralizing temperatures in the presence of said refractory particles.

2,999,760

CELLULOSE ACETATE COMPOSITION
Arthur Ferreira Cacella, Waynesboro, Va., and Helen Lyng White, Chadds Ford, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 23, 1958, Ser. No. 737,231
7 Claims. (Cl. 106-184)

4. A process for the formation of a composition which comprises contacting, at a temperature below about -20°C. , a cellulose acetate having a combined acid value of from 59.8 to 60.0% with a solvent of methyl acetate and acetone containing from about 20 to about 80% by weight of methyl acetate, and thereafter raising the temperature of the mixture until it becomes a fluid solution; the said cellulose acetate being added so that it is present in the composition in amount of from about 16 to about 18% by weight.

2,999,761

LIQUID LAUNDRY STARCH
James L. Miller, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware
No Drawing. Filed Feb. 20, 1959, Ser. No. 794,523
8 Claims. (Cl. 106-213)

1. A non-gelling liquid laundry starch composition consisting essentially of an aqueous starch paste containing from about 5% to about 15% thereof by weight of starch, said paste being stabilized against objectionable separation of the dispersed starch therein, during alternate freezing and thawing thereof, with about 1% to about 4% thereof by weight of a mixture of borax and sodium tripolyphosphate, the weight ratio of said phosphate to combined weight of borax and said phosphate ranging from about 0.1 to about 0.5.

2,999,762

PROCESS FOR MANUFACTURING BINARY MIXTURES OF LIQUID SUBSTANCES WITH A PULVERULENT MATERIAL
André Louis Verdier, Paris, France
Filed July 12, 1957, Ser. No. 671,633
Claims priority, application France Aug. 2, 1956
3 Claims. (Cl. 106-309)

1. A process for producing homogeneous binary mixtures of a predetermined composition, useful for the

further preparation of rubber articles, paints, inks and plastics and consisting of particles of a solid phase thoroughly dispersed within a liquid phase, said solid phase being constituted by particles of pulverulent materials selected from the group of the pigments and fillers for said rubber articles, paints, inks and plastics, consisting of zinc oxide, titanium dioxide, lithopone, calcium carbonate, barium sulphate, silica, and iron oxide, and the liquid phase consisting of an agent of low volatility, capable of coating said particles and selected from the group of binders and plastifiers for said rubber articles, paints, inks and plastics, consisting of mineral oil residues, waxes, pine tar, linseed oils, China-wood oils, castor oils, stearic acid, oleoglycerophthalic resin, tricresylphosphate, said particles further being continuously formed in an enclosure separate from the outer atmosphere and being surrounded after they have been formed by a specific gaseous medium, said process comprising continuously collecting said particles from said enclosure while preventing any contact thereof with the outer atmosphere, continuously conveying in parallel through air-tight ducts said collected particles to a plurality of air-tight homog-



enizers in liquid communication with each other, continuously dispersing said particles in each homogenizer through a flow of said liquid phase continuously circulated in a closed circuit through successively each of said homogenizers, said conveying and dispersing being performed in the presence of said gaseous medium only for preventing self-agglomeration of said particles before being dispersed, adjusting the supply of said particles to said homogenizers and the rate of flow of said liquid therethrough so as to have at any instant a small volume of particles in the presence of a homogeneous mass in which the liquid phase is predominant, the volumetric liquid to solid ratio further being several times larger than that which corresponds to said predetermined composition, thereby obtaining a binary mixture having a liquid content in excess, thereafter continuously removing said liquid content in excess by circulating said mixture through serially disposed mechanical concentrating stages until the remaining binary mixture delivered by said stages reaches the desired composition, and recirculating said removed content of liquid in excess within said flow of liquid through said homogenizers.

2,999,763

METHOD OF APPLYING FLOCK TO A FABRIC
François Noël Sommer, Paris, France, assignor to Société Anonyme dite: La Manufacture de Feutres de Mouton—Anciens Etablissements Roger Sommer et Ses Fils, Paris, France

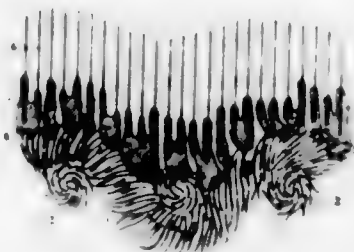
Filed Mar. 9, 1959, Ser. No. 798,002

Claims priority, application France Mar. 11, 1958

4 Claims. (Cl. 117—33)

1. A method of manufacturing an article by flocking fibres of a certain length onto one face of a woven-fibres

fabric coated beforehand with rubber latex, which comprises the steps of converting said latex into foam, spreading said foam against said face of the fabric so as to form above the upper fibres of said fabric a layer of relatively substantial thickness in relation to the height of the fibres to be flocked, carrying out the flocking step immediately thereafter by projecting the fibres to be flocked perpendicularly against said foam coated face



in order to cause the lower parts of said fibres to penetrate into said foam and inbetween the upper fabric fibres, allowing said foam to collapse, to deposit itself in the form of droplets around the flocked fibres and around the upper fabric fibres engaged by said flocked fibres and to retract by capillarity from the flocked fibres towards the upper fabric fibres thus coating only the lower ends of the flocked fibres with the upper fabric fibres.

2,999,764

PROCESS FOR SURFACING PRESOFTENED POLY-AMIDE WITH AN IN SITU CURABLE ELASTOMER

Joseph Edgar Rhoads, Beaver Valley Road, R.D. 2, New Castle County, Del.

No Drawing. Filed June 19, 1957, Ser. No. 666,768
7 Claims. (Cl. 117—47)

6. The process comprising the steps of softening the surface of a synthetic polyamide base with a solvent softening agent for the polyamide, applying liquid urethane elastomer composition to the softened surface of the polyamide, and subsequently curing the urethane elastomer composition in situ.

2,999,765

COATING FOR MILK CONTAINERS

Arthur H. Boenau, Flushing, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed June 11, 1958, Ser. No. 741,240
3 Claims. (Cl. 117—76)

1. A two-step coating operation for milk containers comprising first dipping the container material in an impregnating solution of petroleum wax blended with 2-10 percent of polyethylene, wiping the container material to remove surface wax from the container material, dipping the container material in a coating bath at least substantially free of polyethylene and formed of more than 98 percent petroleum wax to apply a finished coating to the container material, draining the container material and cooling to set the finished coating, thereby providing a satisfactory coating for the container with a reduced requirement for wax.

2,999,766

MAGNETIC SIGNAL CARRIERS

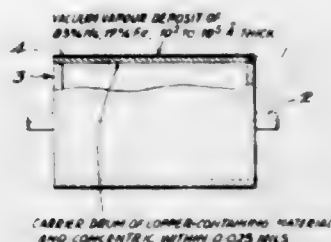
Fred Ashworth, Sale, and Alfred John Knowles, Flixton, Manchester, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a company of Great Britain

Filed Feb. 3, 1958, Ser. No. 712,644

Claims priority, application Great Britain Feb. 27, 1957
1 Claim. (Cl. 117—94)

A signal storing device comprising a surface layer on a non-magnetic carrier body, said surface layer being

formed by vacuum vapor deposition of an alloy containing 83 parts of pure nickel and 17 parts of pure iron and having a thickness between 10^3 and 10^5 Å. providing a coercivity between 200 and 600 oersteds, and said



carrier body comprising a rotatable cylinder of a material including copper, the outer surface of the cylinder being concentric with the axis of rotation within 0.025 mil and having a surface roughness not substantially more than 10^5 Å.

2,999,767

COATING PROCESS AND COATING PROMOTER COMPOUNDS FOR BULLETS

Franklin B. Clay, Jr., Westport, Joseph F. Kenney, Bridgeport, Marshall J. Kidder, Fairfield, and Raymond H. Vandenberg, Stratford, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

No Drawing. Filed Jan. 16, 1959, Ser. No. 787,123

7 Claims. (Cl. 117-109)

1. The method of metal coating successive groups of metal articles comprising mixing a batch of said articles with an aqueous solution of an organic film-forming coating promoter agent comprising a weak organic acid and a plurality of salts taken from the group consisting of the alkyl and alkenyl trimethyl ammonium halides, agitating said mixture and spreading said coating agent as organic molecular films on the metal surfaces, adding a quantity of metal powder particles and by tumbling in a rotating drum developing high pressures between the metal surfaces of said articles and the particles of metal powder to part said films at the areas of contact and bring said surfaces together in metal-to-metal contact with each other and deposit and attach said particles to the article surfaces and to each other to deplete said particles of metal powder in the solution and build up said particles into continuous dense strongly adherent metal coatings on the surfaces of said articles to the desired thickness, removing said group of articles, separating, cleaning and resupplying said aqueous solution and a new group of articles into mixture for continuation of the process.

2,999,768

COMPLEX CHROMIC COMPOUNDS

Carl Boresch, Leverkusen-Wiesdorf, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 8, 1958, Ser. No. 747,108

Claims priority, application Germany July 19, 1957

3 Claims. (Cl. 117-121)

3. A process for increasing the hydrophobic properties of a surface wherein the surface is contacted with a complex chromic compound containing inorganic and organic acid radicals, in which the molecular ratio of chromium to the total of the organic acid radicals is below 1:1.

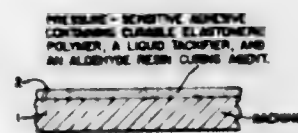
2,999,769

PRESSURE-SENSITIVE ADHESIVE TAPE EMPLOYING ADHESIVE CONTAINING CURABLE POLYMER, A LIQUID TACKIFIER AND ALDEHYDE RESIN CURING AGENT

Ralf Korpman, East Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Jan. 14, 1960, Ser. No. 2,450

13 Claims. (Cl. 117-122)



1. A normally tacky and pressure-sensitive adhesive tape having improved "quick-stick" and cohesive characteristics comprising a flexible backing coated on at least one major surface thereof with an adhesive comprising a curable elastomeric polymer, a liquid tackifier in an amount from about 25 to about 500 parts per hundred parts of the elastomeric polymer, and an aldehyde resin curing agent soluble in the elastomeric polymer and selected from the group consisting of heat reactive phenol-formaldehyde resins, urea-formaldehyde resins and melamine-formaldehyde resins in an amount from about 5 to about 75 parts per hundred parts of elastomeric polymer, said liquid tackifier being in an amount at least equal to that of the aldehyde resin curing agent.

2,999,770

PROCESSES OF CHEMICAL NICKEL PLATING AND BATHS THEREFOR

Gregoire Gutzelt, Highland, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a New York corporation

No Drawing. Filed Aug. 27, 1953, Ser. No. 376,977

31 Claims. (Cl. 117-130)

1. A method of depositing nickel from a chemical reduction plating bath, said method comprising immersing a catalytic article to be coated in a solution of nickel ion and a hypophosphite reducing agent capable of reducing the nickel in solution, said solution having a nickel ion concentration of about 7 grams per liter, a hypophosphite ion concentration of about 15 grams per liter, a relatively high plating temperature that is disposed near the boiling point thereof, and an initial pH within the range from about 5.5 to 9.1, and allowing said article to remain in said solution until a nickel coating of desired thickness is deposited thereon.

2,999,771

CHROME PLATING AND ANODIZING STOPOFF COMPOSITION

Norman I. Gaynes, 1254 Hedra Place, Rahway, N.J.

No Drawing. Filed Apr. 17, 1958, Ser. No. 729,079

10 Claims. (Cl. 117-132)

8. A method of masking and impeding the flow of ions onto and from selected portions of surfaces immersed in acid electroplating baths, anodizing baths, chemical etching baths and chemical milling baths, which comprises the steps of applying a plurality of coats of an organic solvent solution of a non-aqueous composition comprised of a major portion, by weight, of a blend of an unmodified vinyl chloride-vinyl acetate copolymer and vinyl chloride-vinyl acetate copolymer modified with interpolymerized maleic acid, and minor portions each of chlorinated biphenyl of 60% chlorination, an extender and propylene oxide in a volatile solvent onto said selected portions of said surfaces, drying each of said plurality of coats before applying a successive one of said coats, the ratio of the ingredients of said composition to

the unmodified vinyl chloride-vinyl acetate copolymer being

1.5 to 4.0 for the modified vinyl chloride-vinyl acetate copolymer

0.5 to 2.5 for the chlorinated biphenyl

0.5 to 4.5 for the extender

0.01 to 0.9 for the propylene oxide.

2,999,772

COATED ARTICLE COMPRISING A SUBSTRATE OF POLYETHYLENE OR POLYAMIDE AND A GRAFTED COATING OF POLYTETRAFLUOROETHYLENE OR POLYMETHYL METHACRYLATE

Robert E. Burk and Edward H. Price, West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 6, 1952, Ser. No. 319,184
2 Claims. (Cl. 117—138.8)



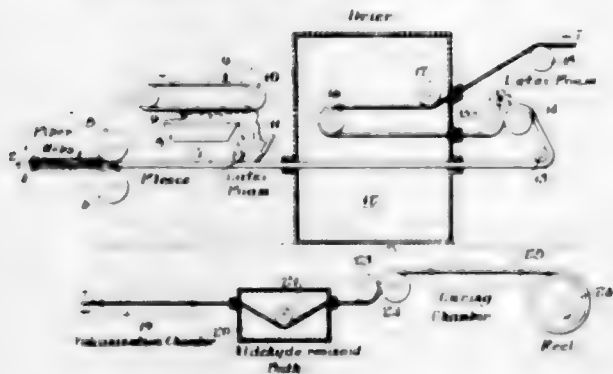
1. A coated article comprising a solid, shaped, thermoplastic, synthetic polymeric substrate and a continuous coating of a thermoplastic, synthetic polymer grafted to said substrate, said article being selected from the group consisting of a polyethylene substrate coated with polytetrafluoroethylene, a polyethylene substrate coated with polymethyl methacrylate, and a polyamide substrate coated with polytetrafluoroethylene; said coated article being characterized in that the coating is incapable of being removed from said substrate when the coated article is subjected to the action of a compound which is a solvent for the material comprising said coating and a non-solvent for the material comprising said substrate.

2,999,773

PROCESS FOR THE PRODUCTION OF SHEET MATERIALS

Wilhelm Graulich, Leverkusen-Bayerwerk, Gustav Sinn, Bergisch-Neukirchen, and Carl-Ludwig Nottebohm and Robert Schabert, Weinheim an der Bergstrasse, Germany, assignors of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Carl-Freudenberg KG.a.A., Weinheim-Bergstrasse, Germany, a corporation of Germany

Filed Oct. 2, 1956, Ser. No. 613,390
22 Claims. (Cl. 117—139.5)



15. A process for the production of sheet materials which comprises treating a material selected from the group consisting of fiber fleeces, textiles, paper and materials similar in structure to paper and textiles with an aqueous emulsion of a synthetic elastomer selected from the group consisting of polymers of conjugated diolefines and copolymers of 90-40 parts by weight of conjugated diolefines and 10-60 parts by weight of monoethylenically unsaturated compounds, said synthetic elastomer con-

taining a vulcanizing agent and having a Defo value of at least 5,000, and being non-sticky and highly elastic, applying an aldehyde condensation resinoid to the treated material, and then vulcanizing the latter.

2,999,774

PRODUCTION OF SOIL-RESISTANT MATERIAL

Joseph W. Schappel, Morton, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 18, 1956, Ser. No. 628,965

8 Claims. (Cl. 117—139.5)

1. A continuous method of improving the soil resistance of regenerated cellulose comprising mixing an aqueous suspension of silica having a particle size of under 50 millimicrons with a hydrolizable, acidic, multi-valent metal salt selected from the group consisting of aluminum, zinc, magnesium, ferric and cupric salts, aging the mixture to form a bath containing from about 0.05 to about 0.30 percent by weight of silica, at least 90 percent of the latter mentioned silica having an average particle size of from about 0.5 to about 1.5 microns, continuously passing regenerated cellulose through said bath, removing excess bath fluid from said regenerated cellulose on leaving said bath, and thereafter drying said regenerated cellulose to fix retained silica particles thereon.

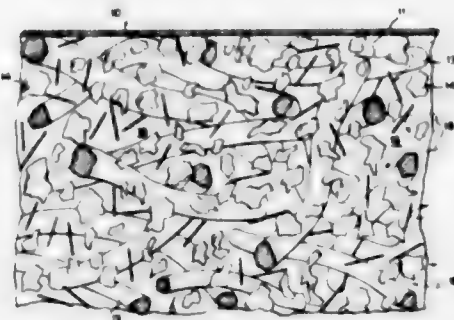
2,999,775

CIGARETTE FILLER COMPOSITION

Mortimer M. Marks, 166—25 Cryders Lane, Whitestone, N.Y.

Filed May 21, 1957, Ser. No. 660,459

3 Claims. (Cl. 131—17)



1. A low burning temperature tobacco mixture comprising tobacco fibers and a plurality of glass flakes inert at the tobacco burning temperature and having a thickness of the order of .0001 of an inch and a width in the order of the diameter of the tobacco fibers intermixed with said fibers to form a plurality of air retarding baffles within the mixture to reduce the temperature of combustion therein, said glass flakes consisting of at least 5% but a minor proportion of the tobacco mixture.

2,999,776

METHOD OF PRODUCING DIFFERENTIATED DOPING ZONES IN SEMICONDUCTOR CRYSTALS

Heinz Dorendorf and Heinz Henker, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany

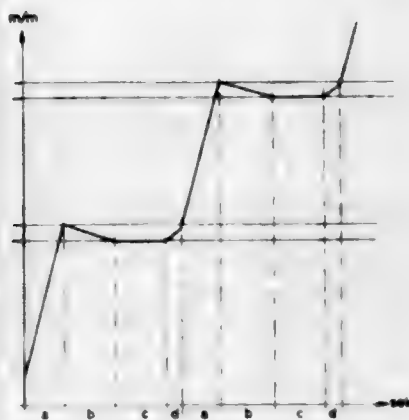
Filed Jan. 9, 1956, Ser. No. 558,168

Claims priority, application Germany Jan. 13, 1955

4 Claims. (Cl. 148—1.6)

1. In a process for growing semiconductor crystals in which there is maintained at least one solid-liquid interface which is caused to move with respect to the semiconductor material under treatment in combination there-

with the step of passing a controlled direct current through said solid-liquid interface so as to superimpose a com-



ponent of motion caused by the Peltier effect upon the moving solid-liquid interface.

2,999,777

ANTIMONIDE COATED MAGNETIC MATERIALS
Ernest J. Yamartino and Richard B. Falk, Wakefield, Mass., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 16, 1957, Ser. No. 702,801
10 Claims. (Cl. 148—31.55)

1. Finely divided magnetic particles of material selected from the group consisting of iron and iron-cobalt alloy, said particles having thereon a coating comprising the reaction product of antimony and said material, the weight ratio of said material to said antimony ranging from about 2.9 to about 11.7.

2,999,778

ANTIMONIDE COATED MAGNETIC MATERIALS WITH LEAD AND LEAD-ANTIMONY MATRICES
Lewis I. Mendelsohn, Swampscott, Mass., assignor to General Electric Company, a corporation of New York

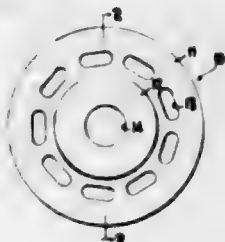
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,803
5 Claims. (Cl. 148—31.55)

1. In a magnetic structure comprising finely divided particles of a magnetic material selected from the group consisting of iron and iron-cobalt alloy, said particles being coated with an antimonide of said material, a matrix of a material selected from the group consisting of lead and a lead-antimony alloy containing up to about 2 percent by weight of antimony there being at least about one part by weight of said matrix material to each part by weight of magnetic material.

2,999,779

METHOD AND APPARATUS FOR EDGE SEALING
John W. Morris, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed Nov. 18, 1957, Ser. No. 697,063
2 Claims. (Cl. 154—2.71)

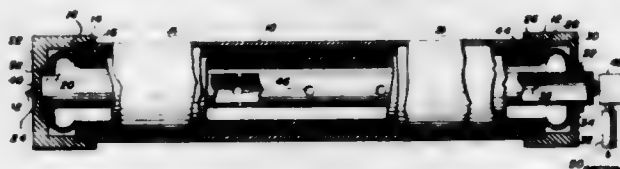


1. Apparatus for edge sealing the plastic interlayer of a prepressed laminated glass article consisting essentially of a disc having a uniform thickness of slightly less than the thickness of a plastic interlayer, means forming a hub

connected to opposite sides of said disc of lesser diameter than said disc whereby said disc may be grasped and rolled along the edge of the laminated glass article and in contact with the edge of the plastic interlayer to compress the plastic interlayer at its edge and provide an improved seal between the plastic interlayer and the glass sheets forming the article, and a plurality of spaced openings in said disc disposed between and spaced from the outer periphery of said disc and said hub means, said openings increasing the flexibility of said disc.

2,999,780

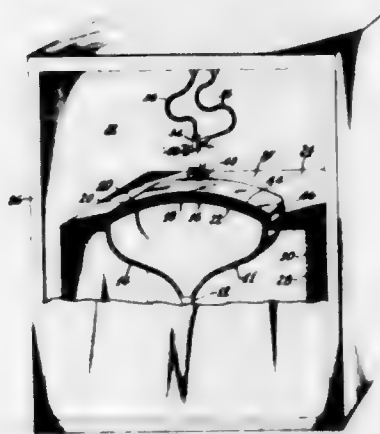
METHOD OF CASTING TUBULAR ARTICLES
Lewis Ferrault, Tulsa, Okla., assignor to H. D. Boggs Company, Ltd., Omaha, Nebr., a partnership
Filed Nov. 13, 1953, Ser. No. 391,821
4 Claims. (Cl. 154—83)



1. The method of casting fibrously reinforced tubular articles of settable material comprising: introducing a tubular formation of fibrous reinforcing material into a horizontally disposed tubular mold mounted for rotation about its longitudinal axis; introducing a measure of settable material into the mold; spinning the mold and its contents to evenly distribute the settable material through the reinforcing material; inserting a radially inflatable expansible mandrel into the lumen defined by the mold and its contents; inflating the expansible mandrel to bring its peripheral surface into contact with the contents of the mold; further expanding the mandrel against the inner surface of the contents of the mold while the mold is spinning; and curing the settable material to at least a non-flowable state while the mandrel is so applied.

2,999,781

METHOD OF DELAMINATING LAMINATED GLASS STRUCTURES
Ralph E. Davis, Marion, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 1, 1959, Ser. No. 856,490
2 Claims. (Cl. 154—120)



2. The method of delaminating a laminated cathode ray tube, said tube including a bulb having a neck portion, a funnel portion, and a faceplate portion, and a glass cap bonded to the external surface of said faceplate portion by an interlayer of resilient polymerized resin, said cap including a relatively flat front portion overlying said faceplate and a surrounding side portion formed as a short hollow cylindrical section integral with said front portion, said method comprising the steps of:

masking said bulb so as to expose only said cap and so as to shield said neck and funnel portions, eroding away said front portion of said cap by sandblast blowing abrasive particles thereupon to pulverize it, then fracturing the remaining said side portion of said cap to remove said side portion from said bulb, and removing said interlayer of polymerized resin from said bulb.

2,999,782

COMPOSITE HEAT-SEALABLE WRAPPING MATERIAL

John L. Justice and Charles M. Rosser, Wallingford, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed July 14, 1959, Ser. No. 826,922
17 Claims. (Cl. 154—136)

1. A composite wrapping material which comprises a normally hydrophilic, non-fibrous, flexible cellulosic sheet and a polyalkylenimine substantially uniformly distributed within the sheet adjacent at least one surface thereof, and a film of thermoplastic resin selected from the group consisting of polyolefins and sarans consisting predominantly of vinylidene chloride, said film being joined continuously to said sheet by anchorage to said polyalkylenimine.

11. A method of making a composite wrapping material comprising passing a washed regenerated cellulose sheet in the gel state through a solution containing a polyalkylenimine thereby impregnating it with the solution, drying the sheet and applying thereto a film comprising a resin from the group which consists of polyolefins and sarans consisting predominantly of vinylidene chloride.

2,999,783

PROCESS FOR SIMULTANEOUS PRODUCTION OF HIGH α -PULP WITH FURFURAL FROM LATIFOLIATE TREE MATERIALS

Tomio Terai and Tetsuya Takamatsu, Fukushima-ken, Japan, assignors to Hodogaya Kagaku Kogyo Kabushiki Kaisha

Filed Sept. 29, 1958, Ser. No. 763,830
Claims priority, application Japan Oct. 5, 1957
8 Claims. (Cl. 162—14)

1. A process for the simultaneous production of high α -pulp and furfural from latifoliate wood, comprising the steps of saturating a quantity of chips of said wood with liquid by immersing said wood chips in a liquid selected from the group consisting of water and dilute aqueous organic acid at a temperature of 80 to 105° C., draining the excess liquid from said chips, passing superheated steam through said saturated chips so as to heat said chips to a temperature of 170 to 215° C. and to remove furfural from said chips, immersing the residue of the steamed chips in cold alkaline liquor so as to saturate said residue with alkaline liquor, and passing superheated steam through said saturated residue so as to heat the same to a temperature of 160 to 175° C.

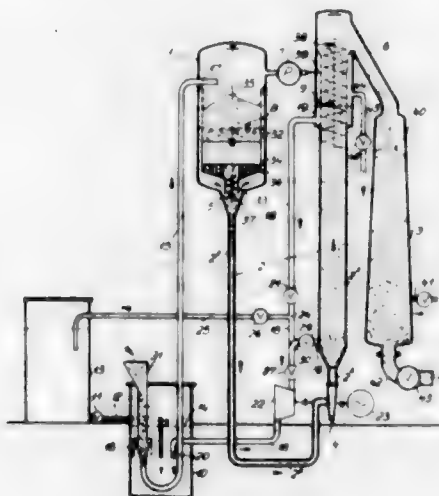
urate said residue with alkaline liquor, and passing superheated steam through said saturated residue so as to heat the same to a temperature of 160 to 175° C.

2,999,784

PROCESS AND APPARATUS FOR THE TREATMENT OF FIBROUS MATERIALS IN THE PRODUCTION OF CELLULOSE OR SEMI-CELLULOSE

Heinrich Hullmann, Ravensburg, Germany, assignor to Escher Wyss G.m.b.H., Ravensburg, Germany, a corporation of Germany

Filed July 7, 1958, Ser. No. 746,697
Claims priority, application Germany July 10, 1957
11 Claims. (Cl. 162—19)



1. In a process for the treatment of fibrous materials in the production of cellulose or semi-cellulose in which the fibrous materials are impregnated with digesting liquid and digested at superatmospheric pressure and elevated temperature, the method of impregnating said materials comprising the steps: continuously circulating an excess quantity of digesting liquid in a closed flow path which includes first, second and third portions; subjecting said liquid to atmospheric pressure in said first portion of said flow path, to vacuum in said second portion of said flow path and to at least atmospheric pressure in said third portion of said flow path; continuously admixing the material to be impregnated with the circulating digesting liquid in said first portion; leading the so-obtained mixture to said second portion; separating part of the circulating material and liquid from one another during circulation through the second portion; recombining the material just separated and the circulating liquid as the material leaves the second portion; separating the material from the circulating liquid in said third portion of the path and replacing with new liquid the liquid which is absorbed and adsorbed by the material; and recirculating the liquid through the flow path.

2,999,785

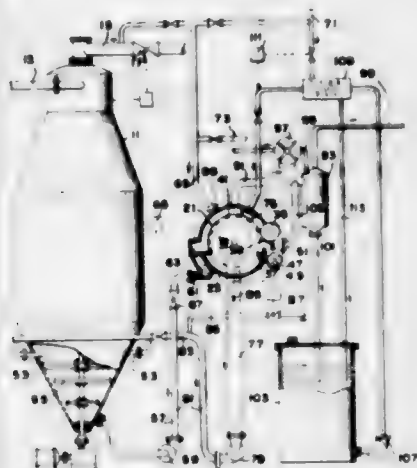
METHOD AND PLANT FOR WASHING OF CELLULOSIC PULP UNDER OVERPRESSURE

Johan Christoffer Fredrik Carl Richter, St. Jean Cap Ferrat, Alpes Maritimes, France, and Rolf Jomar Johansen, Karlstad, Sweden, assignors to Aktiebolaget Kamyr, Karlstad, Sweden, a Swedish company

Filed July 17, 1959, Ser. No. 827,954
4 Claims. (Cl. 162—60)

2. A method of washing digesting liquor from cellulosic pulp supplied from a blow tank to a filter having a rotary sieve drum, by means of steam liberated from said pulp by dropping the pressure thereon at the introduction of the pulp into said blow tank, which method comprises carrying the pulp while still under superatmospheric pressure from the blow tank to the pulp vat of

the filter; forming a layer of pulp on at least the upper exterior surface of said sieve drum; separately introducing said steam from said blow tank into a casing enclosing said sieve drum, and above the liquid level of said pulp vat therein; thereby maintaining the part of the exterior of said sieve drum located above the pulp



level in said filter surrounded by steam of said super-atmospheric pressure; maintaining at the same time, the interior of said sieve drum at essentially atmospheric pressure; and continuously passing said blow steam through said pulp layer and into the interior of said drum, to displace or carry with it part of the liquid content of said pulp.

2,999,786

MACHINE GLAZED PAPER

Martin L. Downs and Ralph A. Nelson, Appleton, Wis., assignors to Thilmann Pulp & Paper Company, Kaukauna, Wis., a corporation of Wisconsin
No Drawing. Filed Aug. 9, 1957, Ser. No. 677,209
2 Claims. (Cl. 162-129)

1. In the manufacture of machine glazed paper, the steps of preparing a base sheet from cellulosic pulp having a freeness in excess of 600, superimposing on said base sheet a low freeness cellulosic pulp having a freeness of less than 400 and more than 50, said low freeness pulp comprising at least 5 percent and not more than 15 percent, by weight, of the finished sheet, on a dry basis, and thereafter pressing the superimposed low freeness pulp against a polished drying surface at a pressure in excess of about 80 p.s.i. and less than about 1500 p.s.i., and drying said sheet while maintaining said low freeness surface in contact with said polished drying surface to provide a finished machine glazed sheet.

2,999,787

MACHINE GLAZED PAPER

Martin L. Downs and Ralph A. Nelson, Appleton, Wis., assignors to Thilmann Pulp & Paper Company, a corporation of Wisconsin
No Drawing. Filed Oct. 4, 1957, Ser. No. 688,142
7 Claims. (Cl. 162-135)

1. A process for the manufacture of machine glazed type paper comprising the steps of forming a base sheet having an apparent density of less than about 11 pounds per ream per mil of thickness, said base sheet being leveled and having a glossy surface, said base sheet being dried to substantial normal sheet dryness to thereby maintain the leveled surface, preparing an aqueous mixture including a hydrophilic colloid which mixture provides a transparent film, said hydrophilic colloid mixture having water holding properties higher than about 3 seconds, setting said colloid on the said glossy surface of said base sheet without substantial penetration of said base sheet, and drying the combined sheet with the colloid contacting a smooth drier surface whereby machine glazed paper having improved gloss is provided.

2,999,788

SYNTHETIC POLYMER FIBRID PAPER

Paul Winthrop Morgan, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 22, 1959, Ser. No. 788,371
92 Claims. (Cl. 162-146)



1. A pulp comprising a plurality of supple, wholly synthetic polymeric particles having one dimension of minor magnitude relative to their largest dimension, a high surface area and possessing (a) an ability to form a waterleaf having a couched wet tenacity of at least about 0.034 lb./in./oz./sq. yd. when the said pulp is deposited from a liquid suspension upon a foraminous surface, which waterleaf, when dried at a temperature below about 50° C., has a dry tenacity at least equal to its couched wet tenacity and (b) an ability, when a plurality of the said particles is deposited concomitantly with staple fibers from a liquid suspension upon a foraminous surface, to bond the said fibers by physical entwinement of the said particles with the said fibers to give a composite waterleaf with a wet tenacity of at least about 0.034 lb./in./oz./sq. yd.

2,999,789

PAPER MAKING

Paul Quinn, Bath, England, assignor to W. S. Hodgkinson & Company Limited, Wells, England
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,863
Claims priority, application Great Britain Apr. 2, 1957
4 Claims. (Cl. 162-201)

1. A process for the production of synthetic resin-filled paper suitable for the production of decorative and wear-resistant laminates which comprises the steps of incorporating substantially water-insoluble melamine monomer in a fibre pulp, manufacturing a paper web with a smooth close surface which facilitates printing from said fibre pulp, printing the paper web, and treating the printed paper web with formaldehyde in the molar ratio of from 1 to 3 moles of formaldehyde per mole of melamine to convert the melamine to partially condensed melamine-formaldehyde resin in situ within the paper web, the amount of melamine employed being such as to constitute from 25% to 50% of the weight of the resin-filled paper.

2,999,790

STABLE ALUMINUM HYDROXIDE SUSPENSION

Charles E. Alford, Bethlehem, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 24, 1959, Ser. No. 835,435
6 Claims. (Cl. 167-55)

1. A colloidal liquid gastric antacid preparation comprising about 5.5 to 6.7% of gelatinous aluminum hydroxide in aqueous suspension and having incorporated therein about 0.5 to 7% of a hexitol as a stabilizing agent to prevent thickening and hardening.

2,999,791

PROCESS OF PRODUCING MIXTURE OF PTC, PROCONVERTIN AND PROTHROMBIN

Alfred H. Fowell, Walnut Creek, Calif., assignor to Cutter Laboratories, Berkeley, Calif., a corporation of California

Filed Aug. 6, 1957, Ser. No. 676,557
3 Claims. (Cl. 167-74)

1. The method of collectively recovering the proteins: plasma thromboplastin component, proconvertin, and prothrombin from non-citrated human plasma, comprising: mixing said plasma with an insoluble barium salt, separating said adsorbing agent and its adsorbed proteins from the plasma, eluting the adsorbed proteins from said adsorbing agent with a sodium citrate solution, adjusting the pH of the solution to a pH within the range of 3.0 to 4.5, precipitating the proteins with ethanol, and collecting the resulting precipitate.

2,999,792

SEROLOGIC TEST

Diego Segre, Madison, Wis., assignor to the United States of America as represented by the Secretary of Health, Education, and Welfare

No Drawing. Filed June 20, 1958, Ser. No. 743,473
1 Claim. (Cl. 167-84.5)

In an antigen-antibody serologic test for the detection of viral antigens, the improvement which comprises in preparing the antibody for said test as follows: suspending a finely ground anion resin in water, removing any precipitated resin particles, recovering the resin particles remaining in suspension, resuspending the resin particles remaining in suspension in an aqueous sodium hydroxide solution, recovering the resin particles from the sodium hydroxide suspension, washing the resin particles recovered from the sodium hydroxide suspension with water until the electrical conductivity of the wash water approaches that of distilled water, suspending the washed resin particles in water buffered to a pH of about 10.6 with 0.2 M tris (hydroxymethyl) aminomethane to provide a resin concentration w./v. of about 1 percent, diluting a gamma globulin fraction containing a viral antibody with distilled water to provide a gamma globulin concentration w./v. of about 0.1 percent, and then mixing about equal volumes of said buffered resin suspension with said diluted gamma globulin fraction, said mixture containing suspended resin particles coated with antibody and being adaptable for use in said test with impure antigen in virus-containing material.

2,999,793

DIAGNOSTIC PREPARATION AND PROCESS FOR THE DETERMINATION OF SERUM ALKALINE PHOSPHATASE

Arthur L. Babson, Morris Plains, N.J., assignor to Warner-Lambert Pharmaceutical Company

No Drawing. Filed July 11, 1957, Ser. No. 671,151
7 Claims. (Cl. 195-103.5)

1. A dry preparation for use in the determination of serum alkaline phosphatase which comprises about 1 to about 3 percent by weight of sodium phenolphthalein phosphate, up to about 0.1 percent by weight of a magnesium salt and tris(hydroxymethyl)-aminomethane in an amount sufficient to maintain the serum pH in a range of about 9 to about 11.

2,999,794

RECOVERY OF QUINOLINE

Donald J. Foster, South Charleston, and Denvil E. Reed, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 24, 1958, Ser. No. 762,915
18 Claims. (Cl. 202-42)

1. A process for the recovery of quinoline from a mixture with other aromatic nitrogen bases which com-

prises subjecting said mixture to azeotropic distillation in the presence of kerosene so as to obtain a distillate comprised essentially of a quinoline-kerosene azeotrope and separating the quinoline component from said distillate.

2,999,795

METHOD AND APPARATUS FOR THE PURIFICATION OF HEAVY-WATER

Sakae Yagi, Meguro-ku, Tokyo, and Yuzo Uruguchi, Kawasaki-shi, Kanagawa-ken, Japan (both % Tokyo University, 1 Motofujicho, Bunkyo-ku, Tokyo, Japan)

Filed Nov. 21, 1955, Ser. No. 548,179
Claims priority, application Japan Dec. 3, 1954
5 Claims. (Cl. 202-45)



2. A method of producing heavy water concentrate comprising feeding feed water to the first of a series of at least three rectifying columns, each rectifying column having a plurality of spaced tubes filled with tower packings through which downflow water flows, said water being heated from outside of the tubes where compressed heating medium flows, feeding the downflow water in turn through succeeding columns, taking steam out of the top of each of the columns and feeding it to the bottom of the respective preceding columns into direct contact with the downflow water, recovering the heavy water concentrate coming out of the last column, combining condensates of heating medium from each column which condense while heating each column, returning a part thereof to the first column and feeding it as reflux water into direct contact with the steam rising in the column, passing the rest through a heat exchanger to heat the feed water being fed to the first column, and supplying the steam generated in the columns from said first column to the space between said spaced tubes and into indirect heat exchange relationship with the downflow water in each of said columns as heating medium, the portion of said steam entering each column being compressed before it enters each column a number of times equal to the number of the position of the column in said series of columns so that it absorbs energy necessary and sufficient for circulation and heating the columns.

2,999,796

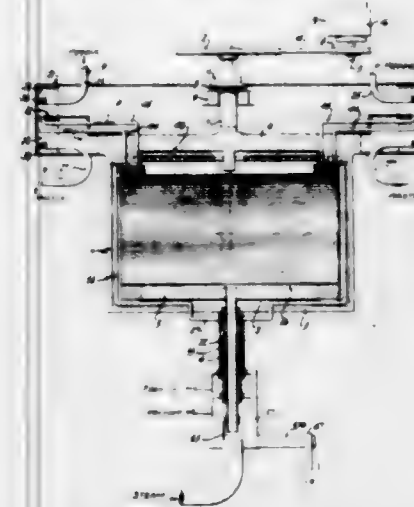
MULTIPLE UNIT CENTRIFUGAL EVAPORATOR

Le Roy A. Bromley, Berkeley, Calif., assignor to The Regents of the University of California, Berkeley, Calif.

Filed Feb. 9, 1959, Ser. No. 791,949
7 Claims. (Cl. 202-236)

1. A centrifugal evaporator chamber comprising: a lower first metal evaporator disc; a first gasket ring coaxially stacked on said first evaporator disc; a metal separator ring coaxially stacked on said first gasket ring; a second gasket ring coaxially stacked on said separator ring; an upper second disc stacked on said second gasket ring; a feed water inlet port formed in said second gasket ring above said separator ring; a conduit mounted on the lower face of said first disc communicating between said

inlet port and the central portion of the upper face of said first disc; a waste water port formed in said first gasket ring below said separator ring; a condensate in-



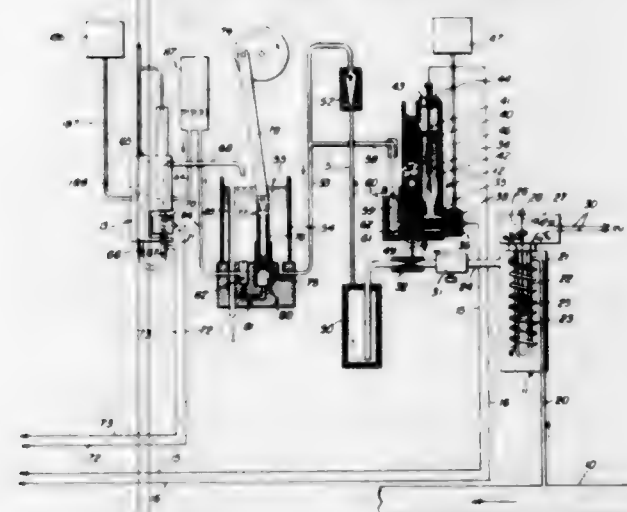
let port formed in said second gasket ring above said separator ring; and means for compressing said discs and rings thereby to form a fluid-tight evaporator chamber.

2,999,797

INDICATING AND CONTROL SYSTEM RESPONSIVE TO DEMAND

George A. Campbell, Pompton Plains, N.J., assignor to Wallace & Tiernan Inc., a corporation of Delaware

Filed Apr. 4, 1957, Ser. No. 650,768
7 Claims. (Cl. 204-1)



1. In a system for the treatment with chlorine of a main flow of unchlorinated aqueous liquid, in combination, means comprising a main vessel for said main flow, for advancing said unchlorinated liquid along said vessel in a predetermined direction past a first locality of the vessel to a second locality thereof downstream of the first locality, adjustable means connected to said vessel at the second locality for there supplying chlorine to said main flow, and means connected to said vessel at the first locality, for determining in advance the demand of the unchlorinated liquid for treatment with chlorine to reach a desired standard result of such treatment, said demand-determining means comprising conduit means for withdrawing a sample flow of said unchlorinated liquid, at a controlled rate, from said vessel at said first locality, electrolytic chlorine generating means connected to said conduit means for chlorinating said sample flow at a rate governed by supply of current to said generating means, adjustable current supply means having a circuit extending to said chlorine generating means for energizing the latter, means associated with the conduit means downstream of the sample chlorinating means for testing the sample flow

of liquid after chlorination, to produce an electrical signal variable with the chlorine content of the treated liquid, standard means for producing, independently of the character of the liquid, a constant, comparable electrical signal representing the aforesaid desired standard result of chlorine treatment, and cyclically operating means electrically directly responsive to departures of the first signal from the second signal as representing departure of the chlorine content of the treated liquid from the desired standard result of treatment, for periodically adjusting said current supply means to change the rate of chlorination by the generating means in a direction to restore the chlorine content of the treated liquid to the desired standard result.

2,999,798

METHOD OF PRODUCING A WEAR-RESISTING SURFACE ON A METAL ELEMENT

Max Eitel, Esslingen (Neckar), and Franz J. Eisele, Stuttgart-Unterturkheim, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

No Drawing. Filed Dec. 9, 1955, Ser. No. 551,979
6 Claims. (Cl. 204-34)

1. Method of increasing the wear resistance of a metal element which comprises the steps of applying a layer consisting essentially of metal and of metal sulfide on the surface of the element, said layer being applied by simultaneously electroplating said metal and electrophoretically depositing said sulfide from a bath consisting essentially of a salt of said metal in solution and of said sulfide in suspension.

2,999,799

ELECTROPLATING OF NIOBIUM

Edward B. Saubestre, Elmhurst, and Edward P. Bulan, Flushing, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 26, 1958, Ser. No. 744,652
5 Claims. (Cl. 204-42)

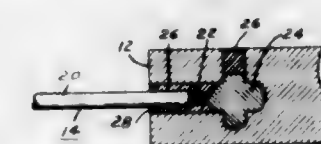
1. A method for cladding a niobium substrate comprising the steps of connecting said substrate as the anode in an electrolytic cell containing an electrolyte of approximately 10% concentration by weight of sodium hydroxide in aqueous solution, applying a voltage across the anode-solution interface until a yellow film of niobium oxide is formed on a surface of said substrate, electrolytically depositing a first coating of nickel over said film, electrolytically depositing a second coating of a metal selected from the class consisting of nickel and iron over the nickel coated substrate, and heating the resultant structure to red heat to bond said coatings to said substrate.

2,999,800

WELDMENT AND PROCESS FOR MAKING THE SAME

William O. Reeside, Malvern, Pa., assignor to A. V. Smith Engineering Company, Narberth, Pa., a corporation of Pennsylvania

Filed June 12, 1959, Ser. No. 819,970
6 Claims. (Cl. 204-196)



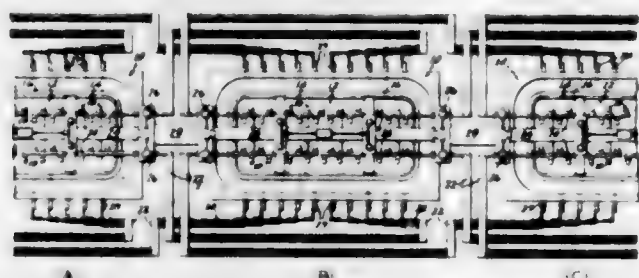
1. A weldment comprising an insulator-sheathed copper conductor, a high silicon iron member having a pair of blind intersecting openings angularly disposed in respect to each other, one of said blind openings extending

generally axially in respect to said member, the other of said blind openings extending angularly to said one blind opening, said insulator-sheathed copper conductor extending through one of said openings, with the insulator-sheath being broken away to present bare copper wire intermediate the mouth of said one opening and the intersection between the openings, a generally cross-shaped fusion weld nugget occupying the region of intersection of both of said blind openings and extending into the portions of each opening on each side of the region of intersection between the openings, said weld nugget being spaced from the insulator-sheath on the copper conductor, said fusion weld nugget being formed from the fusion of thermite, copper from the copper conductor, and high silicon iron from the high silicon iron member, and a high-dielectric waterproofing material being disposed within each opening on the open side of said weld nugget.

2,999,801

APPARATUS FOR SUPPLYING CURRENT TO HIGH AMPERAGE ELECTROLYTIC CELLS

Johan Wleugel, Oslo, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway
Filed Aug. 2, 1957, Ser. No. 675,915
Claims priority, application Norway Oct. 28, 1952
6 Claims. (Cl. 204-244)



1. In an electrolytic cell of the type comprising a pot serving as a cathode, a carbon anode of rectangular cross-section with one axis longer than the other of the type which is carbonized in the furnace suspended above the pot and adapted to extend down into a bath within the pot, and contact bolts entering the anode by means of which current may be transmitted to the anode, two sets of anode bus bars adjacent the upper part of the anode running parallel with a major horizontal axis of the anode but electrically separated from each other near the center of their combined length, and means for transmitting current to such bus bars at corresponding ends of the bus bars relative to the outside faces of the anode, so that the flow of current in the respective members of the sets will be in opposite directions.

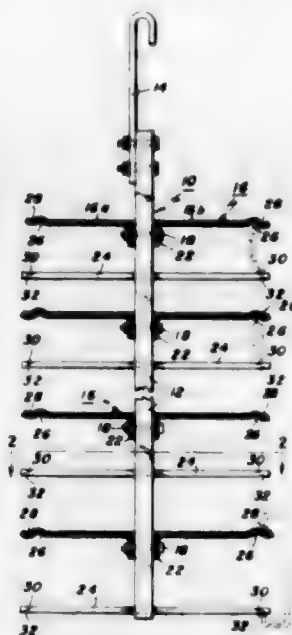
2,999,802

ANODIZING RACKS

Kenneth W. Gault, Newnan, Ga., assignor to The William L. Bonnell Company, Inc., Newnan, Ga.
Filed Nov. 3, 1958, Ser. No. 771,657
10 Claims. (Cl. 204-297)

1. A rack for holding articles during their treatment in an electrolyte bath or the like comprising a vertical metallic spine having means on its upper end adapted both to suspend the rack from a bus bar extending over the bath and to conductively engage said bus bar, and a pair of article-holding metallic pins operatively associated with said spine and extending laterally therefrom, said pins being spaced vertically from one another a predetermined distance adapting them to grip an article between their free outer ends, one of said pins comprising a plurality of coextensive plies of springy sheet metal disposed in face engagement and being secured at its

inner end to the spine so as to extend therefrom as a cantilever, the portions of the plies together forming the



free outer end of said one pin being shaped to provide article-engaging and gripping means.

2,999,803

CAUSTIC ECONOMY AND AVOIDANCE OF POLLUTION

Claiborne A. Duval, Jr., Beaumont, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed June 15, 1959, Ser. No. 820,551
13 Claims. (Cl. 208-39)



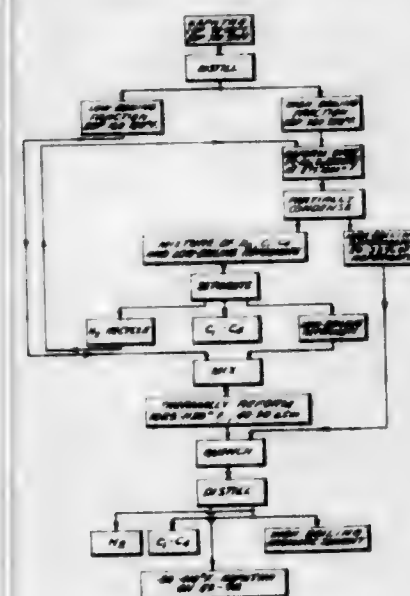
12. A method of recovering phenols from a coal tar fraction containing phenols which comprises in a caustic extraction stage contacting a coal tar fraction containing at least one phenol with aqueous alkali metal hydroxide containing at least 35 percent by weight of alkali metal hydroxide to obtain a liquid aqueous phase substantially immiscible with extracted coal tar fraction, said liquid aqueous phase comprising alkali metal hydroxide, alkali metal salt of at least one extracted coal tar phenol, and water in proportions to form two substantially immiscible liquid phases at a temperature within the range of about 60° F. to about 150° F., separating said liquid aqueous phase from extracted coal tar fraction, stratifying said separated liquid aqueous phase at a temperature within the range of about 60° F. to about 150° F. to obtain a liquid aqueous salt phase comprising alkali metal hydroxide, water, and alkali metal salt of the aforesaid coal tar phenol and a liquid hydroxide phase comprising water and alkali metal hydroxide, separating said liquid aqueous salt phase from liquid hydroxide phase, diluting said liquid aqueous salt phase with water to obtain dilute aqueous

salt phase, in a solvent extraction stage contacting said dilute aqueous salt phase with a substantially water-immiscible solvent for extracted coal tar phenols selected from the group consisting of solvents of the aforesaid class having an initial boiling point at least 25° F. higher than the end boiling point of the extracted phenol and solvents of the aforesaid class having an end boiling point at least 25° F. lower than the initial boiling point of the extracted phenol to produce a solvent extract phase comprising one of the aforesaid solvents and extracted phenol and diluted aqueous alkali metal hydroxide solution, concentrating said dilute aqueous alkali metal hydroxide solution, recycling the concentrated aqueous alkali metal hydroxide solution so obtained at least in part to the aforesaid caustic extraction stage, fractionating the aforesaid solvent extract phase to obtain a solvent fraction and at least one phenol fraction, and recycling said solvent fraction to the aforesaid solvent extraction stage.

2,999,804

REFORMING GASOLINE

Henry D. Noll, Philadelphia, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
Filed Dec. 9, 1958, Ser. No. 779,221
3 Claims. (Cl. 208-65)



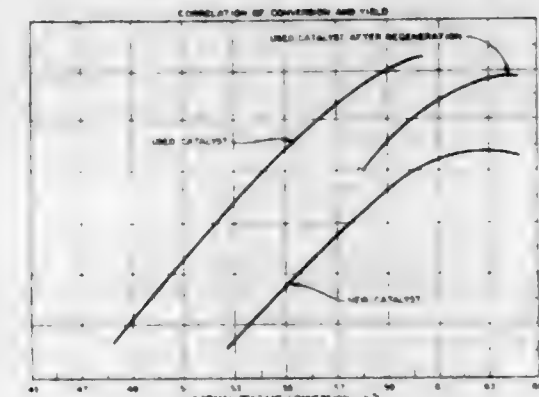
1. The method of upgrading naphtha to provide high boiling aromatic solvent, upgraded gasoline and gaseous hydrocarbons which method comprises the steps of: fractionally distilling a naphtha having an initial boiling point within the range from about 70° F. to about 100° F. and an end boiling point within the range from about 360° F. to about 390° F. to separate a low boiling fraction having an initial boiling point within the range of from about 70° F. to about 100° F. and an end boiling point within the range from about 160° to about 180° F. and a high boiling fraction having an initial boiling point near said end boiling point of the low boiling fraction and having an end boiling point within the range from about 360° F. to about 390° F.; hydrogenatively aromatizing said high boiling fraction in the presence of several mols of hydrogen per mol of hydrocarbon at superatmospheric pressure at a temperature within the range from 875° F. to 1000° F. over a platinum-alumina catalyst to form a highly aromatic reformate; partially condensing the effluent from the hydrogenative aromatizing zone to separate a liquid constituting from about 20% to about 33% of the reformate; mixing the remaining portion of the reformate with said low-boiling naphtha fraction, and passing said mixture through a thermal reforming zone at a temperature within the range from about 1025° F. to 1125° F. at a pressure of from about 40 to about 50 atmospheres at a soak-

ing factor within the range from about 1 to 10 cu. ft./BSD; withdrawing and immediately quenching and cooling the effluent from the thermal reforming zone by contact with said hydrocarbon fraction separated by the partial condensation of the effluent from the hydrogenative aromatizing zone; and passing the thus prepared mixture of the quench oil and the effluent from the thermal reforming zone to a fractional distillation step from which there are recovered products comprising a minor amount of heavy aromatic solvent, and a major amount of naphtha having an F-1 octane number within the range from 85 to 92.

2,999,805

PARAFFIN ISOMERIZATION PROCESS

John W. Myers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,797
9 Claims. (Cl. 208-140)



6. A process comprising reforming a naphtha fraction under reforming conditions in contact with a platinum-halogen-alumina catalyst; continuing said contacting until the coke deposit on said catalyst is in the range of 0.3 to 3 weight percent of the catalyst and its activity for reforming is too low for further reforming; thereafter contacting said catalyst in unregenerated condition containing said coke deposit under isomerizing conditions with a stream consisting essentially of isomerizable paraffin hydrocarbon of 4 to 8 carbon atoms per molecule admixed with H₂ so as to produce isomeric hydrocarbon with greater efficiency than would be obtained by regenerating said catalyst and using same in the isomerization step.

2,999,806

TREATMENT OF HYDROCARBON DISTILLATES

Ralph B. Thompson, Hinsdale, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 13, 1959, Ser. No. 799,069
18 Claims. (Cl. 208-206)

2. A method of treating a sour hydrocarbon distillate which comprises reacting mercaptans contained in said distillate with air in the presence of an alkaline solution of cobalt phthalocyanine catalyst and a sufficient amount of a sodium phosphate salt to substantially prevent precipitation of said catalyst out of the solution.

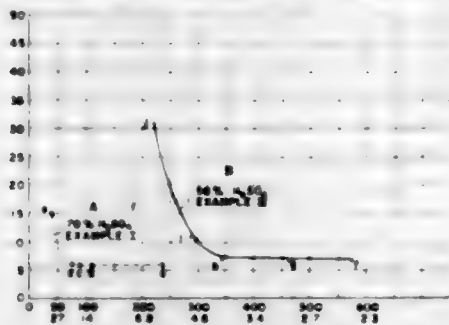
2,999,807

REMOVAL OF NITROGEN COMPOUNDS FROM GASOLINE

Weigert C. Bunleigh, Amsterdam, and Cornelis D. Ten Have, Rotterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Oct. 23, 1959, Ser. No. 848,384
Claims priority, application Netherlands Mar. 31, 1959
2 Claims. (Cl. 208-254)

1. A process for the removal of nitrogen compounds from a liquid mixture of hydrocarbons containing un-

saturated hydrocarbons and boiling in the gasoline range comprising passing the hydrocarbon mixture in downward and concurrent flow with sulfuric acid of at least 65% concentration over a hydrophilic surface of a contact bed of solid, inert material, with the ratio by volume of the sulfuric acid to the hydrocarbon being less than one and with the contact time being selected with reference to the

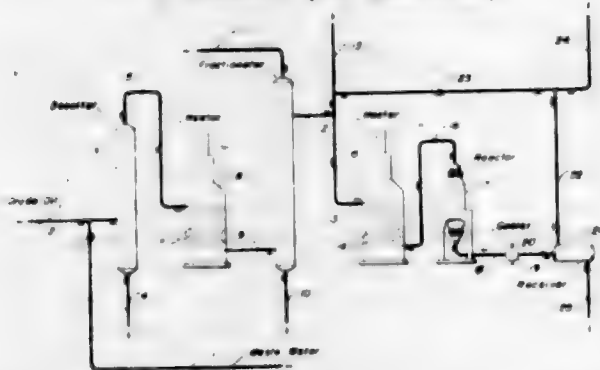


sulfuric acid concentration to substantially forestall polymerization of the unsaturated hydrocarbon, said contact time being less than 30 seconds, and removing the sulfuric acid and the hydrocarbon mixture as continuous phases from the bed, the proportion of acid to nitrogen compounds being such that no more than about 15% of the sulfuric acid is consumed during the contact.

2,999,808

WASTE WATER TREATMENT

Kenneth M. Brown, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Dec. 26, 1957, Ser. No. 705,209
6 Claims. (Cl. 208-264)



2. The method of removing phenols from water contaminated therewith which comprises contacting said water with crude oil to thereby transfer a major portion of the phenols from said water to said crude oil, withdrawing treated water reduced in phenol content, separately withdrawing crude oil containing phenols, fractionating said crude oil containing phenols to separate a light fraction comprising components boiling up to about 300° F., an intermediate phenol-containing fraction comprising components boiling from about 300° to about 650° F., and a heavy fraction comprising components boiling above about 650° F., subjecting said intermediate fraction to treatment with hydrogen at a temperature of from about 500° to about 800° F. to remove phenols from said intermediate fraction, and recovering a hydrotreated oil substantially free of phenols.

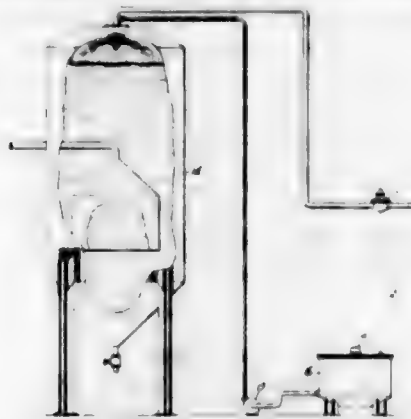
2,999,809

METHOD OF REMOVING RESIDUAL OXYGEN FROM WATER CONDITIONING SYSTEMS

Harold E. Elger, Milwaukee, and Carroll E. Imhoff, New Berlin, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 20, 1957, Ser. No. 660,143
4 Claims. (Cl. 210-48)

3. In a hot process water softening system including a chemical tank, a raw water supply, and a sedimentation tank, the chemical tank and the raw water supply each

being independently connected with the sedimentation tank to supply reactants thereto, the method of removing dissolved oxygen from water treated therein comprising: forming, in the chemical tank, a lime slurry consisting substantially of saturated calcium hydroxide; adding to said slurry sufficient sodium sulphite to form sodium hydroxide, calcium sulphite and an excess of calcium ions, said calcium sulphite being insoluble and unreactive with oxygen; agitating said slurry in the chemical tank to main-



tain said insoluble calcium sulphite in suspension with the slurry solution; feeding said slurry including said sodium hydroxide and said suspended calcium sulphite into the sedimentation tank of the hot process water softening system at a rate proportionate to the flow of raw water into the sedimentation tank; feeding to the sedimentation tank raw water, containing dissolved oxygen and calcium bicarbonate, at a rate to dilute the calcium ion concentration whereupon said calcium sulphite solubilizes to remove dissolved oxygen from said raw water.

2,999,810

METHOD OF KILLING ALGAE

Norman K. Sundholm, Middlebury, and Winchester L. Hubbard, Woodbridge, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed June 24, 1959, Ser. No. 822,416
6 Claims. (Cl. 210-64)

1. The method of killing chlorophyll-containing algae in water which comprises applying a chemical selected from the group consisting of 2-amino-1,4-naphthoquinone and 2-amino-3-chloro-1,4-naphthoquinone to said algae.

2,999,811

INHIBITOR COMPOSITION

James H. Schell, Houston, Tex., and Alfred Douty, Wyncote, and Harry L. Faigen, Philadelphia, Pa., assignors to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
No Drawing. Filed Aug. 7, 1957, Ser. No. 676,703
2 Claims. (Cl. 252-8.55)

1. An inhibitor composition consisting essentially of an aqueous solution of from 5 to 50% of a salt from the group consisting of sodium chloride, potassium fluoride, sodium sulfate, sodium nitrate, magnesium chloride and lithium chloride and from 5 to 50% of an iron corrosion inhibitor from the group consisting of organic corrosion inhibitors which are soluble in a sodium chloride solution of at least 5% by weight concentration and including sufficient water to render the composition consolute.

2,999,812

OIL WELL TREATING MATERIAL

Stanley Earl Krahler, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 17, 1958, Ser. No. 709,466
6 Claims. (Cl. 252-8.55)

1. An acid soluble surface-active composition consisting of 6 to 12 parts by weight of a mixture of aliphatic

and cycloaliphatic hydrocarbons having an average molecular weight of about 250 and a boiling range of from about 285° to about 410° C., 3 to 12 parts by weight of the alkali metal salts of monosulfonic acids of said mixture and 25 to 35 parts by weight of the alkali metal salts of disulfonic acids of said mixture, 0 to about 6 parts by weight of sodium chloride, 17 to 24 parts by weight of isopropyl alcohol and the remainder of 100 parts by weight being water.

2,999,813

LUBRICANT COMPRISING A SULFURIZED MINERAL OIL AND A POLYVALENT METAL DITHIOCARBAMATE

Richard C. Givens and Melvin R. Hefty, Port Arthur, Tex., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Dec. 18, 1956, Ser. No. 628,980
9 Claims. (Cl. 252—33.6)

1. A lubricating composition consisting essentially of a stably sulfurized mineral lubricating oil in major proportion containing about 0.3 to 1.5 percent by weight of combined stable sulfur, about 5–20 percent by weight of a lead soap selected from the group consisting of lead naphthenates and lead soaps of fatty acids containing at least 8 carbon atoms per molecule, about 0.5–5 percent by weight of a sulfurized fatty oil, and about 0.1 to 10 percent by weight of an oil soluble polyvalent metal dithiocarbamate, wherein the said polyvalent metal is chosen from the group consisting of alkaline earth metals, cadmium and zinc, said stably sulfurized mineral lubricating oil being obtained by heating a mineral lubricating oil with sulfur at a temperature above about 350° F. until a sulfurized product is obtained wherein the sulfur is present substantially entirely in a form which is nonreactive with copper in the copper strip corrosion test at 212° F.

2,999,814

CUTTING FLUID

Ernst Lang, Union City, N.J., assignor to Socony Mobil Oil Company Inc., a corporation of New York

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,335
11 Claims. (Cl. 252—34.7)

1. An aqueous coolant and lubricant composition consisting essentially of the following components:

Weight percent

A reaction product obtained by reacting a solution of a saturated polyol and water with an olefin oxide, said polyol containing at least three hydroxyl groups, from three to six carbon atoms per molecule, and only carbon, hydrogen and oxygen, said water being present in the proportion of from 0.08 to 1.5 mols per mol of hydroxyl radical in said polyol, said olefin oxide being selected from the group consisting of ethylene oxide, propylene oxide and mixed ethylene and propylene oxides and being employed in a molal quantity of at least 0.4 times the total molal quantity of hydroxyl in the polyol plus water and at least 1.5 times the molal quantity of water, and said reaction being conducted between about 80° C. and about 140° C. in the presence of an etherification catalyst

An alkanolamine fatty acid soap, the alkanolamine of which is selected from the group consisting of diethanolamine and triethanolamine and the acid of which is selected from the group consisting of castor oil fatty acids, ricinoleic acid, wool grease fatty acids and oleic acid

15–20

1.5–5.2

Weight percent

An alkanolamine phosphate, the alkanolamine of which is selected from the group consisting of diethanolamine and triethanolamine 11–22
A rust inhibitor selected from the group consisting of sodium, potassium and lithium nitrite and sodium carbonate 2–4
A germicide selected from the group consisting of phenol, the sodium salt of orthophenylphenol, the sodium salt of tetrachlorophenol, and methyl p-hydroxy benzoate 1.15–3.25
and the balance water.

2,999,815

AZEOTROPIC COMPOSITION

Bernhardt J. Elscman, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,817
1 Claim. (Cl. 252—171)

An azeotropic composition consisting of about 87.5% by weight of 1,1,2-trichloro-1,2,2-trifluoroethane and about 12.5% by weight of acetone and boiling at 45° C. and 760 mm. pressure.

2,999,816

AZEOTROPIC COMPOSITION

Edward J. Bennett, Newark, Del., and Howard M. Parmelee, Woodstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,427
1 Claim. (Cl. 252—171)

An azeotropic composition consisting of about 93.6% by weight of 1,1,2-trichloro-1,2,2-trifluoroethane and about 6.4% by weight of methyl alcohol and boiling at 39° C. and 760 mm. pressure.

2,999,817

AZEOTROPIC COMPOSITION

Frank A. Bower, Woodstown, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,436
1 Claim. (Cl. 252—172)

An azeotropic composition consisting of about 52% by weight of 1,1,2-trichloro-1,2,2-trifluoroethane and about 48% by weight of methylene chloride and boiling at 37° C. and 760 mm. pressure.

2,999,818

PHOSPHORS AND METHODS FOR PRODUCING SAME

George H. Morrison, Westbury, Frank C. Pailita, Maspeth, and Walter Zloczower, Forest Hills, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,958
4 Claims. (Cl. 252—301.6)

2. A process for producing an electroluminescent phosphor from a copper activated, chloride coactivated cathodoluminescent zinc-cadmium sulfide phosphor, said process comprising the steps of mixing said cathodoluminescent phosphor with copper sulfate, the amount of copper added, as expressed in a percentage by weight of the cathodoluminescent phosphor, being about 35%; firing said mixture at a temperature falling within the approximate range 700°–900° C.; and washing said fired mixture with an alkali cyanide solution to remove all excess copper therefrom, thus producing a white emitting electroluminescent phosphor.

2,999,819 PHOSPHATE GLASS COMPOSITION FOR DOSIMETER

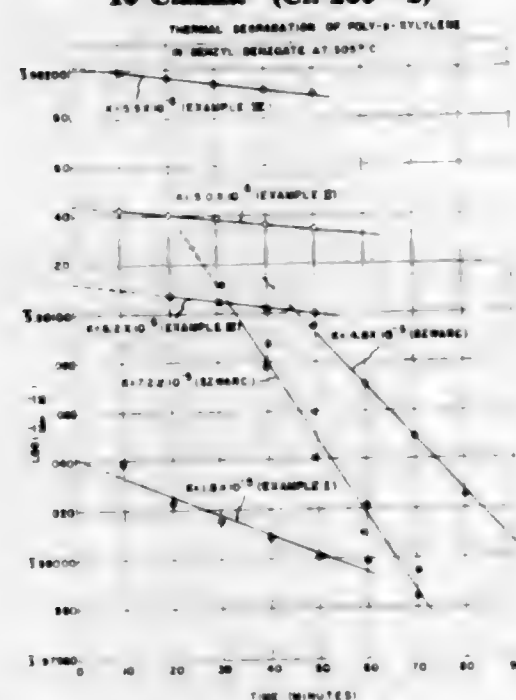
Gerald E. Blair, Pittsford, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
No Drawing. Filed Nov. 23, 1959, Ser. No. 854,591
2 Claims. (Cl. 252-408)

2. A dosimetric phosphate glass composition the batch constituents of which consist essentially of by weight 50 parts aluminum metaphosphate, 25 parts magnesium metaphosphate, 25 parts lithium metaphosphate, and 8 parts silver metaphosphate.

2,999,820 POLY-XYLYLENES PREPARED BY DECOMPOSITION OF QUATERNARY AMMONIUM COMPOUNDS

Thomas E. Young, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 2, 1955, Ser. No. 505,339
10 Claims. (Cl. 260-2)



1. Substantially linear p-xylylene homopolymer, the recurring units of which are



units, said homopolymer having a specific unimolecular thermal degradation constant, k , of less than $2.0 \times 10^{-5} \text{ min}^{-1}$, said constant being determined at 305°C . in solution in benzyl benzoate at a concentration of 0.39 gm. of polymer in 100 ml. of benzyl benzoate, said k being that of the equation

$$k = \frac{-2.303}{t} \log \left(\frac{\frac{1}{M_m} - \frac{1}{M}}{\frac{1}{M_m} - \frac{1}{M_0}} \right)$$

wherein t is the heating time in minutes at 305°C , M_m is the molecular weight of the p-xylylene unit, i.e., 104.14, M is the molecular weight of said polymer determined from the inherent viscosity of said solution at time t by the equation

$$M = \left(\frac{\eta_{inh}}{3.3 \times 10^{-4}} \right)^{4/3}$$

and M_0 is the molecular weight of said polymer at time 0, the time elapsed in the viscosity degradation test from the initial heating of the viscometer to the earliest possible viscosity determination being less than twenty minutes, said homopolymer having an inherent viscosity of at least 0.55 after 50 minutes at 305°C . in solution in benzyl benzoate at a concentration of 0.39 g. of polymer in 100

ml. of benzyl benzoate, said homopolymer being prepared by heating to a temperature of at least 100°C . in an aqueous alkali metal hydroxide solution, maintained at at least 5 molal concentration, a member of the class consisting of quaternary ammonium hydroxides and quaternary ammonium salts of strong inorganic acids in which the quaternary ammonium nitrogen is attached to three methyl groups and to a methylene radical whose remaining valence is satisfied by carbon of a phenyl ring, said phenyl ring having in its p-position a methyl substituent.

2,999,821 REGENERATION OF ANION-EXCHANGE RESINS

Sallie A. Fisher, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 17, 1958, Ser. No. 767,770
8 Claims. (Cl. 260-2.1)

1. A method for removing chloride and silicate anions from a styrene-divinylbenzene quaternary ammonium anion-exchange resin which has at least one of said anions on the resin's ion-exchange sites, said method comprising treating the anion-exchange resin containing any chloride and silicate anions with an alkali metal bicarbonate, whereby said anions on the resin are replaced by bicarbonate ions and the resin is then capable of being used so as ultimately to take on more of said anions.

2,999,822 MIXTURE OF TWO COPOLYMERS OF A CONJUGATED DIOLEFINIC COMPOUND AND AN OILY PLASTICIZER AND ARTICLES FORMED THEREFROM

Emert S. Pfau, Cuyahoga Falls, and Gilbert H. Swart and Kermit V. Weinstock, Akron, Ohio, assignors to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio

Filed June 7, 1952, Ser. No. 292,308
17 Claims. (Cl. 260-2.5)

1. A mixture of (1) 5-80 parts of a copolymer of a conjugated diolefinic compound of less than 8 carbon atoms with a mono-olefinic compound copolymerizable therewith and comprising at least 80 parts by weight of said mono-olefinic compound, (2) 95-20 parts of a polymer of a conjugated diolefinic compound of less than 8 carbon atoms with a mono-olefinic compound copolymerizable therewith, having at least 50 percent by weight of diolefinic compound residue therein and being of a toughness such that a composition composed of 100 parts by weight thereof, 30 parts by weight of hydrocarbon oil and 65 parts of high abrasion furnace carbon black will have a Mooney plasticity of at least 60, and (3) an oily plasticizer in the amount of at least 30 percent by weight of said polymer.

2,999,823 FOAMED ALKYD-POLYISOCYANATE PLASTICS

Bernard A. Dombrow, Teaneck, N.J., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 22, 1955, Ser. No. 536,035
9 Claims. (Cl. 260-2.5)

1. A foamed cellular plastic material which is the reaction product of a mixture which comprises (a) an aromatic diisocyanate selected from the group consisting of meta-toluene diisocyanate and diphenyl-methane diisocyanate and (b) an alkyd resin having an acid number of from about 5 to about 80, said ingredients (a) and (b) being present in a ratio of from about 35 to about 150 parts by weight of (a) for each 100 parts by weight of (b), said ingredient (b) being the reaction product of a mixture comprising a polyhydric alcohol selected from the group consisting of diethylene glycol, triethylene glycol, 1,4 butylene glycol, glycerol, trimethylol propane, pentaerythritol and mixtures thereof and a blend of dibasic

acids consisting essentially of about 72% to 80% by weight of α -ethyl suberic acid, about 12% to 18% by weight of α,α' -diethyl adipic acid and about 6% to 10% by weight of sebacic acid, in which polyhydric alcohol-dibasic acid mixture the hydroxyl groups and carboxyl groups are in the ratio of from 3(OH):1(COOH) to 4(OH):5(COOH).

2,999,824 POLYEPOXIDE PRODUCTS

Fred G. Singleton, Pittsburgh, and William C. Hunt, Rosedale, Pa., assignors to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed July 6, 1956, Ser. No. 596,147
9 Claims. (Cl. 260-18)

1. The uncured thermosetting mixture consisting of a resinous polymeric epoxide having an epoxide equivalent ranging from about 140 to about 4000, and an ester formed by reacting castor oil and an organic acid selected from the group consisting of dicarboxylic acids, the two carboxyl groups of which are joined solely by carbon-to-carbon linkages, and the anhydrides thereof in the proportion of approximately three mols of said acid per mol of castor oil, said ester having at least a portion of the free carboxyl groups thereof esterified with a polyhydric alcohol selected from the group consisting of glycerin and a glycol.

2,999,825 EPOXY-POLYAMIDE-ESTER RESIN REACTION PRODUCT

Don E. Floyd, Robbinsdale, and Dwight E. Peerman, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,859
7 Claims. (Cl. 260-18)

1. A process of curing epoxy resins which comprises reacting 60 to 70 parts by weight of an epoxy resin of a polyhydric phenol and an epihalohydrin, having an epoxy equivalent weight of 140 to 300 with 30 to 40 parts by weight of a polymeric amino polyamide-ester composition, said polyamide ester composition being a mixture of (A) an amino polyamide of the polymeric fat acids and a polyalkylene polyamine with (B) 10 to 20% by weight based on said polyamide of an alkyl ester of an alpha-beta unsaturated acid selected from the group consisting of maleic, fumaric, acrylic and methacrylic acids.

2,999,826 REACTION PRODUCT OF EPOXY RESINS AND POLYAMIDES FROM BLENDS OF ALIPHATIC POLYAMINES AND AROMATIC POLYAMINES

Dwight E. Peerman, Minneapolis, and Don E. Floyd, Robbinsdale, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,655
5 Claims. (Cl. 260-18)

5. A cured composition of matter comprising from 60 to 75% by weight of an epoxy resin being a polyglycidyl ether of polyhydric phenol having an epoxy equivalent weight of 160 to 325 and from 40 to 25% by weight of an amino polyamide of polymeric fat acids and a mixture of an arylene polyamine and two different alkylene polyamines, said polyamide having an amine number of from 50 to 450.

2,999,827 EPOXY COATING COMPOSITIONS

Charles W. McGary, Jr., and Charles T. Patrick, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Jan. 21, 1959, Ser. No. 788,038
45 Claims. (Cl. 260-23)

1. A composition comprising the products of reaction of (1) a polyepoxide containing at least two cyclohexene oxide groups, and (2) an aliphatic monocarboxylic acid

containing between three and twenty-two carbon atoms in an amount sufficient to provide between about 0.3 and 0.7 carboxyl equivalents per epoxy equivalent of said polyepoxide.

2,999,828 WAX COMPOSITION AND SHEET MATERIALS COATED THEREWITH

Robert W. Dannenbrink, Neenah, and George E. Unmuth, Menasha, Wis., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 5, 1959, Ser. No. 810,985
9 Claims. (Cl. 260-28.5)

1. A wax composition containing as the essential components by weight from about 5% to about 50% of a polyethylene having a molecular weight between about 3,000 and about 12,000, a density between 0.880 and 0.910 and between about 7% and about 12% of its carbon atoms present as branched chain carbons, and between about 5% and about 90% of an intermediate wax derived from petroleum distillate and having a melting point between about 140°F . and 170°F ., a viscosity of less than 10 centistokes when measured at 210°F . and a refractive index, when measured at 194°F ., of at least 1.4292 plus 0.0002 refractive index units per degree Fahrenheit by which the melting point of said wax exceeds 140°F .

2,999,829 AQUEOUS SHELL MOLDING COMPOSITION COMPRISING MALEIC ACID, FURFURYL ALCOHOL, AND UREA

Leo H. Treat, Inkster, Mich., and Robert C. Shaffer, West Los Angeles, Calif.

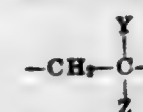
No Drawing. Filed June 25, 1954, Ser. No. 439,483
4 Claims. (Cl. 260-29.6)

1. A metastable, substantially monomeric solution capable of rapid polymerization to an infusible and insoluble solid upon the application of heat, said solution comprising about 100 parts of furfuryl alcohol, 20 to 50 parts of a substance selected from the group consisting of maleic acid and maleic anhydride and 2 to 10% of urea based upon the combined weight of the furfuryl alcohol and maleic constituent, said solution being stabilized by the presence of 0.2 to 5% by weight of ammonium chloride.

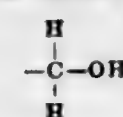
2,999,830 COMPOSITION COMPRISING A REFRACTORY MATERIAL AND A POLYMETHACROLEIN REACTION PRODUCT AND METHOD OF PRODUCTION THEREOF

Elbert E. Gruber, Cuyahoga Falls, and Edward F. Kalafus, Akron, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 21, 1958, Ser. No. 729,492
19 Claims. (Cl. 260-29.6)

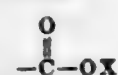
1. A composition of matter comprising (1) a refractory material and (2) from 0.1 to 10% by weight of said refractory material of at least one water soluble polymeric material having a molecular weight of at least 500 and being selected from the group consisting of a homopolymer consisting essentially of recurring units of A and a copolymer consisting essentially of recurring units of at least 70% A and the balance B, where A has the formula



where Y is an alkyl group of from 1 to 12 carbon atoms, where Z comprises from about 20 to 45%



groups and from 20 to 45%



groups, where X is a cation having the formula



where R₁, R₂ and R₃ are selected from the class consisting of hydrogen, alkyl, and alkylaryl radicals having less than 6 aliphatic carbon atoms, with the balance being



groups, and where B is the residue of at least one monomer selected from the class consisting of butadiene, isoprene, cyanoprene, dimethyl butadiene, chloroprene, styrene, acrylonitrile, methacrylonitrile, methyl isopropenyl ketone, methyl vinyl ketone, alpha methyl styrene and vinyl toluene.

2,999,831

VULCANIZED RUBBER PRODUCT CONTAINING A METAL HYDRIDE AS AN ANTIOXIDANT

Hugh T. Stewart, Los Gatos, Calif., assignor to Stewart Development Company, San Fernando, Calif., a corporation

No Drawing. Filed June 26, 1957, Ser. No. 668,020
4 Claims. (Cl. 260—33.6)

1. A vulcanized rubber product containing as an antioxidant a hydride selected from the group consisting of sodium hydride, calcium hydride, titanium hydride and zirconium hydride; said hydride being uniformly dispersed throughout said product and being present in an amount from 0.10 part to 5.0 parts by weight per 100 parts by weight of the rubber ingredient of said product.

4. The product of claim 1 in which said hydride is dispersed in powdered form in a medium selected from the group consisting of white mineral oil, paraffin oil, and petrolatum.

2,999,832

METHOD OF MANUFACTURING DYED, HARDENED, RESINOUS PRODUCTS OF CONDENSATES

Gerhard Faerber, Rheinberg, Rhineland, Germany, assignor to Deutsche Solvay-Werke G.m.b.H., Solingen-Ohlig, Germany

No Drawing. Filed Mar. 5, 1957, Ser. No. 643,939
Claims priority, application Germany Apr. 27, 1956
22 Claims. (Cl. 260—37)

1. A method of dyeing and hardening a hardenable epoxy groups-containing resinous condensate of a member selected from the group consisting of epichlorohydrin and dichlorohydrin with at least one member selected from the group consisting of a polyhydric alcohol and a polyhydric phenol, which method consists essentially of mixing the condensate with a dyestuff selected from the group consisting of triarylmethane dyes, thiazine dyes, azine dyes and indamine dyes, said dyestuff containing nitrogen selected from the group consisting of primary, secondary and tertiary nitrogen atoms; and heating the resulting mixture to a temperature at which the mixture is hardened, whereby said mixture is simultaneously dyed and hardened.

2,999,833

PROCESS FOR MIXING A NOVALAK RESIN AND SAND WITH AN A-STAGE RESIN AND SAND TO OBTAIN A SHELL MOLDING SAND

Julius M. Blumenthal, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

No Drawing. Filed Apr. 9, 1954, Ser. No. 422,259
1 Claim. (Cl. 260—38)

The process of producing a molding sand for shell molding comprising intensively mixing together a Novalak resin and a mass of sand heated sufficiently to cause

the Novalak resin to coat the individual sand grains, intensively mixing together a second quantity of sand and an A stage phenol formaldehyde resin containing a polymerization catalyst, said second mixing operation being conducted at a temperature too low to permit substantial polymerization of said A stage phenol formaldehyde resin, combining said two sand batches while the hot mixed sand retains a substantial amount of heat and mixing the combined sands until a free flow, non-dusting sand is obtained.

2,999,834

FIBROUS MATERIALS HAVING COATINGS CONTAINING POLYMERIZATION CATALYSTS

Marco Wismer, Richland Township, Allegheny County, and Ronald R. Rabenold, Pittsburgh, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa.

No Drawing. Filed July 11, 1958, Ser. No. 747,854
8 Claims. (Cl. 260—40)

1. A method of catalyzing the interpolymerization of mixtures of $\text{C}=\text{CH}_2$ monomers and polyesters of alpha-beta ethylenic dicarboxylic acids and dihydric alcohols, which comprises incorporating into the mixtures, reinforcing fibrous material said material having discrete coatings upon the fibers of a polyester of a polyol and a dicarboxylic acid which is free of ethylenic unsaturation, said discrete coatings containing a peroxide polymerization catalyst.

2,999,835

RESINOUS MIXTURE COMPRISING ORGANO-POLYSILOXANE AND POLYMER OF A CARBONATE OF A DIHYDRIC PHENOL, AND PRODUCTS CONTAINING SAME

Eugene P. Goldberg, Glens Falls, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Jan. 2, 1959, Ser. No. 784,433
7 Claims. (Cl. 260—42)

1. A resinous mixture comprising, by weight, from about 0.1% to 20% organopolysiloxane and a polymer of a carbonate of a dihydric phenol in which the carbonate group is attached directly to a carbon atom of an aromatic ring, the weight of said organopolysiloxane being based on the weight of the carbonate polymer.

2,999,836

REACTION PRODUCT OF N-GLYCIDYL-PHTHALIMIDE AND A DIANHYDRIDE COMPOUND, PROCESS FOR PREPARING SAME, AND MODIFICATION THEREOF

Richard E. Ludwig, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,758
12 Claims. (Cl. 260—42)

1. The reaction product of a composition comprising N-glycidylphthalimide and a dianhydride compound, the amount of said dianhydride compound being that which provides between about 0.5 and about 1.5 anhydride groups for each epoxide group of said N-glycidylphthalimide.

10. The reaction product of a composition as claimed in claim 1, wherein a modifier selected from the group consisting of alcohols and epoxidized silicone resins is included.

2,999,837

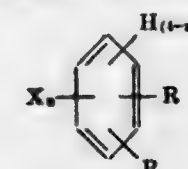
INHIBITION OF MOLD CORROSION FOR QUATERNIZED POLYMERS

Boris Franzus, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Apr. 29, 1957, Ser. No. 655,537
15 Claims. (Cl. 260—45.7)

1. A compounded stock of quaternizable heterocyclic nitrogen-base polymer which can be cured with substan-

tially no mold corroding effect comprising a polymer of a monomer system which comprises a vinyl-substituted pyridine compound and a copolymerizable conjugated diene having from 4 to 8 carbon atoms per molecule; an organic halide quaternizing agent which quaternizes with a mold corroding effect selected from the group consisting of hexachloro-p-xylene, benzotrichloride, and benzal chloride; and a corrosion inhibiting amount of at least 0.05 mol per mol of quaternizing agent of a compound having the formula selected from the group consisting of



and (B) metal salts of Formula A containing at least one carboxy substituent, where each X is selected from the group consisting of carboxy and cyano and n is an integer from 1 to 3, said X's when plural being positioned on nonadjacent ring carbon atoms, and each R is selected from the group consisting of hydrogen and alkyl radicals having from 1 to 6 carbon atoms, the metal of said metal salts being selected from the group consisting of alkali metals, nickel, iron, copper and lead.

2,999,838

POLYMERIC COMPOSITIONS AND SHAPED STRUCTURES THEREOF

James Maurice Quinn, Tonawanda, N.Y., and Allan Kenneth Schneider, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 4, 1959, Ser. No. 797,045
9 Claims. (Cl. 260—45.7)

1. A composition of matter comprising polyvinyl chloride and 1-15% of at least one stabilizing compound selected from the group consisting of the reaction product of 1,2,4-trimethylenecyclohexane with methyl methacrylate, the reaction product of 1,2,4-trimethylenecyclohexane with methyl acrylate and the reaction product of 1,2,4-trimethylenecyclohexane with maleic anhydride.

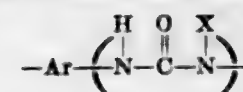
2,999,839

STABILIZATION OF ELASTOMERS CONTAINING UREYLENE GROUPS

Harold C. Arridson, Jr., Wilmington, Del., and Norman Blake, Chadds Ford, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 17, 1958, Ser. No. 709,445
14 Claims. (Cl. 260—45.9)

1. A stabilized composition of matter comprising a synthetic segmented elastomeric polymer having a plurality of low-melting polymeric segments alternating in the polymer chain with high-melting ureylene-containing segments, the polymeric segment being the residue remaining after removal of the terminal hydroxyl groups from a hydroxyl-terminated polymer having a melting point below 60° C. and a second order transition temperature below room temperature, the ureylene-containing segment containing at least one group of the formula



wherein Ar represents an aromatic radical attached to the



group of the formula through a carbon atom of an aromatic ring and X is selected from the group consisting of hydrogen and a monovalent organic radical, said segmented polymer having admixed therein between 1% and 15% by weight of an aliphatic amine having a molecular weight above about 280.

2,999,840

STABILIZED UNCURED COPOLYMERS OF BUTADIENE AND STYRENE

Richard W. Bell, Ernest Csendes, and Herbert F. McShane, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 9, 1959, Ser. No. 819,008
1 Claim. (Cl. 260—45.85)

An uncured copolymer of 1,3-butadiene and styrene stabilized against gel formation during mechanical shearing at a temperature above about 135° C. by incorporating therein (1) at least 0.75% by weight of said copolymer of an antioxidant selected from the group consisting of a diaryl amine and the reaction product of 2 moles of acetone and one mole of diphenyl amine, and, (2) at least 0.1% by weight of said copolymer of a promoter compound selected from the group consisting of (a) a polyol having the structure $\text{HOCH}_2(\text{CHOH})_n\text{CH}_2\text{X}$, wherein X is taken from the group consisting of —OH and lower alkyl —NH, (b) an ammonium citrate, and, (c) an acetate salt of an N(lower alkyl)glucamine said alkyl group having 1-4 carbon atoms.

2,999,841

STABILIZED ELASTOMER COMPOSITIONS

Ernest Csendes, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,622
6 Claims. (Cl. 260—45.95)

1. A cured elastomer selected from the group consisting of natural rubber and synthetic rubber made from conjugated dienes, said elastomer having incorporated therein a stabilizing amount of a phenolic antioxidant and a non-polymeric hydrocarbon polyol, said polyol being a saturated acyclic aliphatic compound containing 3 to 6 carbon atoms and having at least 3 alcoholic hydroxyl groups as its sole substituents, each of said hydroxyl groups being on a different carbon atom, said phenolic antioxidant and said polyol being present in an amount within the range of 0.1 to 5 parts by weight per 100 parts of said elastomer.

2,999,842

STABILIZED CURED ELASTOMERS

Ernest Csendes, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,627
6 Claims. (Cl. 260—45.95)

1. A cured elastomer selected from the group consisting of natural rubber and synthetic rubber made from conjugated dienes, said elastomer having incorporated therein a stabilizing amount of a phenolic antioxidant and a thio-substituted aliphatic polyol, said polyol being of the formula



wherein n is an integer within the range of 3 to 4, said phenolic antioxidant and said polyol being present in an amount within the range of 0.1 to 5 parts by weight per 100 parts of said elastomer.

2,999,843

POLY-ALPHA-OLEFINS STABILIZED WITH 2-HYDROXY-4-PENTADECYLBENZOPHENONE

Alfred Johannes Forck, Tonawanda, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 12, 1959, Ser. No. 845,668
6 Claims. (Cl. 260—45.95)

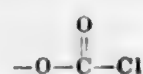
1. A poly-alpha-olefin composition containing dispersed therein 0.0005% to 10% by weight of a 2-hy-

droxy-4-pentadecylbenzophenone as an agent to inhibit deterioration of said polyolefin composition by ultraviolet light.

2,999,844
POLYCARBONATE PREPARATION UNDER ANHYDROUS CONDITIONS

Erwin Müller and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Oct. 21, 1957, Ser. No. 691,168
Claims priority, application Germany Oct. 22, 1956
7 Claims. (Cl. 260-47)

1. A method for making a polycarbonate which comprises reacting a compound selected from the group consisting of phosgene and an organic compound having two



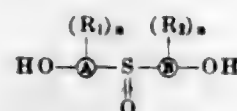
groups with an organic compound having at least two hydroxyl groups selected from the group consisting of a polyhydric alcohol, a phenol and a sodium salt of a phenol while the said reactants are dissolved in an inert organic solvent therefor, said solvent having a member selected from the group consisting of a carbonate, a bicarbonate and an hydroxide of a member selected from the group consisting of an alkali metal and an alkaline earth metal suspended therein, said reaction being conducted under substantially anhydrous conditions at a temperature whereby any water produced by the reaction is removed substantially immediately by azeotropic distillation and a product substantially free from chlorine is obtained.

2,999,845
COPOLYMER CONTAINING POLYCARBONATE AND POLYSILOXY CONSTITUENTS
Eugene P. Goldberg, Glens Falls, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Jan. 2, 1959, Ser. No. 784,431
11 Claims. (Cl. 260-47)

1. The process of preparing a copolymer composition containing dihydric phenol derived groups linked with carbonate and siloxy groups which comprises reacting together under esterification conditions a dihydric phenol, phosgene and organodihalosilane.

2,999,846
HIGH MOLECULAR WEIGHT THERMOPLASTIC AROMATIC SULFOXY POLYCARBONATES
Hermann Schnell, Krefeld-Urdingen, and Heinrich Krimm, Krefeld-Bockum, Germany
No Drawing. Filed Nov. 27, 1957, Ser. No. 699,194
Claims priority, application Germany Nov. 30, 1956
9 Claims. (Cl. 260-49)

1. A film-forming high molecular weight resinous thermoplastic linear polycarbonate of a dihydroxy compound having the formula



in which A and B are aromatic radicals selected from the class consisting of benzene and naphthalene radicals, R₁ and R₂ are alkyl substituents containing up to four carbon atoms, and each n is a number from 0 to 4 inclusive, each hydroxyl group of said dihydroxy compound being esterified with carbonic acid, thus forming long polycarbonate molecular chains.

2,999,847
UREA AND THIOUREA RESINOUS COMPOSITION
Joseph John Nemes, Somerville, and Richard Dickran Vartanian, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Feb. 16, 1959, Ser. No. 793,275
7 Claims. (Cl. 260-69)

1. A process for preparing a stable, hydrophilic, partially polymerized, potentially thermosetting, resinous product, comprising a partially alkylated dimethylol urea and a partially methylolated thiourea and free thiourea, which comprises methylolating by reacting in an aqueous medium relative proportions of one mole of urea with from between 1.50 and 2.35 moles of formaldehyde at a pH of between 7 and 10, and at a temperature of between about 70 and about 100° C. for from 0.25 to 2.0 hours, adjusting the pH of the reaction mixture to from between 4 and 6, alkylating the urea-formaldehyde condensate by reacting it with from between about 0.3 and 2.0 moles of a saturated aliphatic monohydric alcohol containing from 1 to 3 carbon atoms at a temperature of from between 70 and 100° C. for from between 0.25 and 2.0 hours, adjusting the pH of the reaction mixture to a value from between 7.0 and 9.0 and adding thereto from between 0.18 and 0.75 mole of thiourea, reacting said thiourea with from between 0.03 to 0.35 mole of available formaldehyde at a temperature of from between 50 and 100° C. for from 1 to 30 minutes to produce a stable resinous product, said stable resinous product being one which does not become turbid when maintained for four weeks at 25° C. and which does not hydrophobe when diluted with three times its volume of water at 20° C.

2,999,848
SULFONE POLYESTERS
Donald M. Young, Geneva, Switzerland, and Christian F. Horn, New York, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 7, 1957, Ser. No. 688,392
16 Claims. (Cl. 260-75)

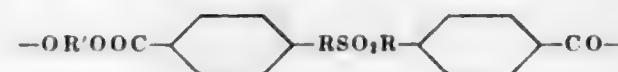
1. A fiber-forming linear polymer consisting essentially of structural units of the general formula



wherein the R's are divalent saturated alkylene radicals containing from three to eight carbon atoms, R' is a para-dialkylene phenylene radical containing up to ten carbon atoms and R'' is a divalent radical selected from the group consisting of saturated alkylene, alkylene ether and aralkylene radicals containing from two to ten carbon atoms.

2,999,849
SULFONE POLYESTERS
Donald M. Young, Geneva, Switzerland, and Christian F. Horn, New York, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 7, 1957, Ser. No. 688,423
13 Claims. (Cl. 260-75)

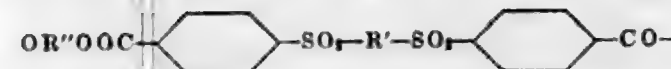
1. A fiber-forming linear polymer consisting essentially of recurring structural units of the general formula



wherein the R's are saturated alkylene radicals containing from one to five carbon atoms and R' stands for a member selected from the group consisting of divalent saturated alkylene, alkylene ether and aralkylene radicals containing from two to ten carbon atoms.

2,999,850
SULFONE POLYESTERS
Donald M. Young, Geneva, Switzerland, and Christian F. Horn, New York, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 7, 1957, Ser. No. 688,425
14 Claims. (Cl. 260-75)

1. A fiber-forming linear polymer consisting essentially of repeating structural units of the general formula



wherein R' is a divalent saturated alkylene radical containing from four to six carbon atoms and R'' is a divalent radical selected from the group consisting of saturated alkylene, alkylene ether and aralkylene radicals containing from two to ten carbon atoms.

2,999,851
ISOCYANATE EXTENSION OF VERY HIGH MOLECULAR WEIGHT POLYESTERS
Otto C. Elmer, Akron, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,810
4 Claims. (Cl. 260-75)

1. The method which comprises reacting a dihydroxy terminated polyester having a molecular weight of from about 10,000 to 20,000 and comprising the reaction product of an aliphatic dicarboxylic acid of from 4 to 10 carbon atoms and at least one glycol having the formula HO(RO)_nH where n is an integer from 1 to 50 and where R is an alkylene radical of from 2 to 4 carbon atoms with an organic diisocyanate to form a chain extended millable polyester urethane, the mol ratio of said polyester to said diisocyanate being essentially about 1:1.

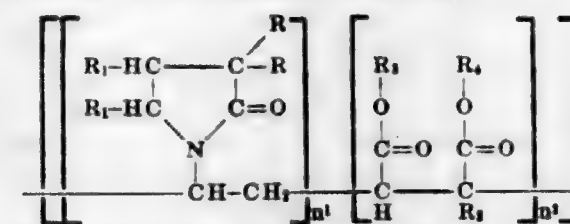
2,999,852
METHOD OF PREVENTING POLYMERIC PYRROLIDONES AND PIPERIDONES FROM ADHERING TO POLYMERIZATION VESSELS IN WHICH THEY ARE PREPARED
Edgar E. Renfrew, Lock Haven, and Saul R. Buc, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 4, 1958, Ser. No. 778,049
6 Claims. (Cl. 260-78)

1. The method of preventing polymeric pyrrolidones and piperidones from adhering to polymerization equipment in which they are prepared comprising cleaning the interior surfaces of said equipment and drying said interior surfaces, wetting the cleaned and dried interior surfaces of said equipment, prior to polymerization, with a solution containing 0.5 to 10 parts by weight of an alkyl-trichlorosilane of 10 to 24 carbon atoms, followed by exposing the treated surface to an aqueous fluid containing 1% by weight of a non-ionic alkyl phenol-ethylene oxide surfactant and drying the same and thereafter polymerizing the corresponding monomers of said pyrrolidones and piperidones in the dried equipment and recovering the polymer therefrom.

2,999,853
COPOLYMERS OF N-VINYLPYRROLIDONES WITH DIAKYL MALEATES OR FUMARATES
William M. Perry, Bethlehem, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 23, 1957, Ser. No. 680,027
6 Claims. (Cl. 260-78.5)

1. A water insoluble, tacky and flexible polymeric ma-

terial adaptable as pressure sensitive adhesive characterized by the following general formula:



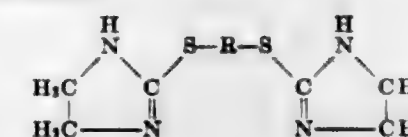
wherein R represents a member selected from the class consisting of hydrogen and methyl groups, R₁ represents a member selected from the class consisting of hydrogen, methyl and ethyl groups, R₂ represents a member selected from the class consisting of hydrogen and alkyl groups of from 1 to 3 carbon atoms, R₃ and R₄ represent an alkyl chain of from 3 to 14 carbon atoms, and wherein the ratio of n¹/n² ranges from 1 to 5.

2,999,854
FLUORINATED ELASTOMERS AND CROSS LINKING THEREOF
Francis J. Honn, Westfield, and Willard M. Sims, Hackensack, N.J., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed July 31, 1958, Ser. No. 752,196
10 Claims. (Cl. 260-79.5)

1. A vulcanization process which comprises reacting at a temperature above about 50° C. minor amounts of a cross-linking agent selected from the group consisting of organic and inorganic peroxy compounds which are stable below about 50° C. and inorganic polysulfides with an elastomeric copolymer of perfluoropropylene and a fluorinated ethylene selected from the group consisting of fluoropropylene and a fluorinated ethylene selected from vinylidene fluoride and 1,1-fluorochloroethylene.

2,999,855
PROCESS OF VULCANIZING CHLOROPRENE POLYMERS
Ralph E. Miegel, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 17, 1959, Ser. No. 827,732
9 Claims. (Cl. 260-79.5)

1. A process of vulcanizing chloroprene polymers wherein zinc oxide, magnesia and from 0.3 to 5.0 parts by weight per 100 parts of the polymer of the compound having the formula



wherein R is taken from the group consisting of —CH₂CH₂— and —CH₂CH=CH—CH₂—, are incorporated into said chloroprene polymer followed by heating to effect curing of said chloroprene polymer.

2,999,856
POLYETHYLENE WAXES AND PROCESS FOR PREPARING THEM
Herbert Bestian and Joachim Lange, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Dec. 9, 1958, Ser. No. 779,054
Claims priority, application Germany Dec. 19, 1957
10 Claims. (Cl. 260-94.9)

1. A process for the manufacture of a low molecular, waxy polyethylene having a flowing/dropping point in the range between 100 and 115° C., a melt viscosity at 120° C. in the range between 100 and 3000 centistokes

and a crystalline portion between 55 and 75%, which comprises polymerizing ethylene with an addition of 5 to 30% by volume of hydrogen (the percentage being calculated on the mixture of ethylene and hydrogen) at a temperature in the range between 120 and 180° C. and a pressure in the range between 300 to 600 atmospheres gauge in the presence of di-tert-butyl peroxide catalyst and under substantially anhydrous conditions.

2,999,857

PROCESS FOR THE SEPARATION OF N-PARAFFINS FROM HYDROCARBON OILS

Alfred Hoppe, Frankfurt am Main, Germany, assignor to Edlebens Gesellschaft m.b.H., Frankfurt am Main, Germany, a body corporate of Germany
No Drawing. Filed Oct. 3, 1958, Ser. No. 765,019
Claims priority, application Germany Oct. 10, 1957
6 Claims. (Cl. 260-96.5)

1. A process for the separation of n-paraffins from hydrocarbon oils in the presence of an oil solvent by treating said oils with an aqueous solution of urea containing 10-40% by weight of water to form an n-paraffin-urea adduct containing solvent and unused urea, characterized in that the formation of the n-paraffin-urea adduct is carried out in two stages under small differences of pressure, the pressure of the second stage being lower than the pressure of the first stage, and in the presence of the aforesaid oil solvent the boiling point of which is such that when the pressure is reduced in said second stage the boiling point of said solvent is exceeded and evaporates, whereby the adduct is physically broken up without decomposition of the adduct into its components, but liberates the unused urea which forms new adduct.

2,999,858

PREPARATION OF SUCROSE MONOESTERS

Gerard Warren Curtis, Fairlawn, N.J., assignor to Robert S. Aries, New York, N.Y.
No Drawing. Filed Sept. 18, 1956, Ser. No. 610,640
14 Claims. (Cl. 260-234)

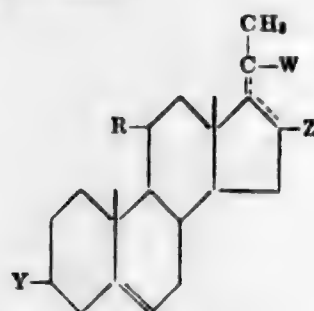
1. The process of preparing a monoester reaction product of sucrose and a higher fatty acid in which an alcohol by-product is formed, comprising reacting finely divided sucrose with a lower alkyl ester of a higher fatty acid in the presence of a finely divided basic compound selected from the group consisting of the alkali and alkaline-earth oxides, hydroxides and carbonates in a liquid hydrocarbon medium in which sucrose is substantially insoluble, removing the alcohol by-product formed, and recovering the sucrose monoester in substantial yield as principal reaction product.

2,999,859

11,20-BIS OXYGENATED PREGNADIENE-3-ONE 3-KETALS AND PROCESS OF PREPARING THEM

George I. Posa, North Plainfield, and Lewis H. Saret, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed July 8, 1955, Ser. No. 520,902
22 Claims. (Cl. 260-239.55)

22. An 11,20-bis-oxygenated-pregnadiene-3-one 3-ketal having a double bond at C-17, which can be represented by the following formula:



wherein Y is a ketal substituent, R is a radical selected

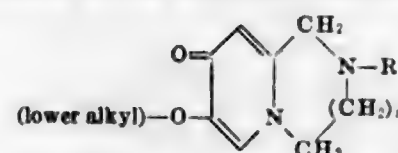
from the group which consists of hydroxy and keto, W is a radical selected from the group which consists of β -hydroxy, lower alkoxy and keto, and Z is a radical selected from the group which consists of hydroxy, lower alkoxy and keto.

2,999,860

2-SUBSTITUTED DERIVATIVES OF 7-ALKOXY-1,2,3,4-TETRAHYDRO-8H-PYRIDO[1,2]PYRAZIN-8-ONES AND 7-ALKOXY-1,2,3,4,5,9-HEXAHYDROPYRIDO[1,2][1,4]DIAZEPIN-9-ONES AND THEIR DERIVATIVES

Carl Peter Krimmel, Mundelein, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed July 6, 1959, Ser. No. 824,929
11 Claims. (Cl. 260-268)

1. A compound of the structural formula



wherein R is a member of the class consisting of lower alkyl and lower hydroxyalkyl radicals and n is a positive integer smaller than 3.

2,999,861

SEGREGATION OF ORGANIC NITROGEN COMPOUNDS

Raymond N. Fleck, Whittier, and Carlyle G. Wight, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,142
13 Claims. (Cl. 260-290)

1. A process for treating a mixture derived from a nitrogenous mineral oil source essentially comprising basic and non-basic organic nitrogen compounds, which comprises: (1) contacting said mixture with a lean granular adsorbent comprising a partially dehydrated Type X zeolitic metallo alumino silicate having pores of substantially uniform diameter between about 7 Å. and about 13 Å., whereby there is obtained a rich adsorbent containing adsorbed non-basic organic nitrogen components of said mixture and a raffinate product which is rich in the basic organic nitrogen components of said mixture; (2) separating said raffinate product from said rich adsorbent; and (3) treating said rich adsorbent to recover the adsorbed non-basic organic nitrogen components therefrom.

2,999,862

PROCESS FOR CONVERTING CRUDE COPPER PHTHALOCYANINE INTO FINELY DIVIDED β -FORM

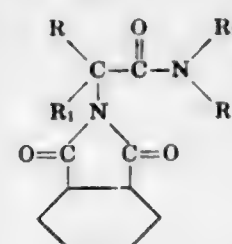
Georg Gelger, Binningen, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland, a Swiss firm
No Drawing. Filed Aug. 14, 1959, Ser. No. 833,699
Claims priority, application Switzerland Aug. 15, 1958
5 Claims. (Cl. 260-314.5)

1. A process for the conversion of crude reddish-blue copper phthalocyanine into the finely divided greenish-blue β -form having improved tinctorial strength, which consists in grinding dry crude reddish-blue copper phthalocyanine at elevated temperature in a ball mill in the presence of water as the exclusive grinding assistant and recovering the finely divided greenish-blue β -form.

2,999,863
ALPHA-PHTHALIMIDO-ACETAMIDE DERIVATIVES

Sidney D. Upham, Pearl River, N.Y., assignor to Oklahoma State University of Agriculture and Applied Science, a corporation of Oklahoma
No Drawing. Filed July 27, 1953, Ser. No. 370,645
3 Claims. (Cl. 260-326)

1. New alpha, alpha-disubstituted-alpha-phthalimido-acetamides having the following formula:



in which R and R₁ are selected from the group which consists of alkyl and cycloalkyl and R and R₁ together are cycloalkyl, and R₂ and R₃ are selected from the group which consists of hydrogen, alkyl and cycloalkyl groups.

2,999,864

METAL DERIVATIVES OF BORANE ADDUCTS

Henry C. Miller, Wilmington, Del., and Earl L. Muetterties, Chadds Ford, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,194
7 Claims. (Cl. 260-340.6)

1. Compounds represented by the formula



where M is a metal selected from the class consisting of groups I-A and II of the periodic table, having a valence of z and an atomic number no greater than 56, Y is an element of group V-A of the periodic table having an atomic number no greater than 51, and R is a monovalent hydrocarbon radical of 1 to 10 carbon atoms selected from the group consisting of alkyl and cycloalkyl.

2,999,865

EPOXIDES AND METHOD OF PREPARING SAME

Benjamin Phillips and Frederick C. Frostick, Jr., Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,302
4 Claims. (Cl. 260-348)

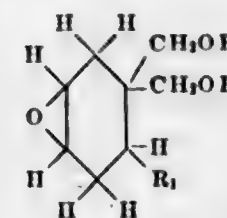
1. A triepoxide, 3,4-epoxycyclohexane-1,1-dimethanol bis(9,10-epoxystearate).

2,999,866

EPOXIDES AND METHOD OF PREPARING THE SAME

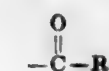
Paul S. Starcher, Charleston, and Samuel W. Tinsley, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,303
4 Claims. (Cl. 260-348)

4. Compounds of the formula:



wherein R₁ represents a member selected from the group consisting of hydrogen and methyl and R represents

members selected from the group consisting of hydrogen and the group



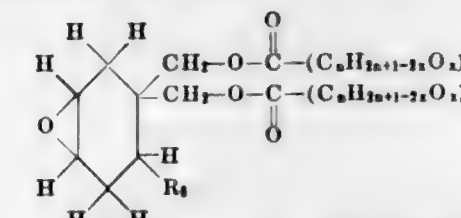
wherein R₂ is a member selected from the group consisting of hydrogen and alkyl groups of from 1 through 17 carbon atoms.

2,999,867

EPOXIDES AND METHOD OF MAKING THE SAME

Paul S. Starcher, Charleston, and Samuel W. Tinsley, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,305
4 Claims. (Cl. 260-348)

4. Compounds of the formula:



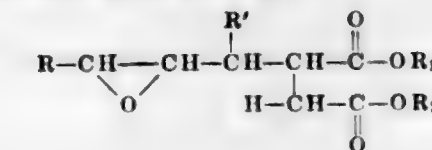
wherein R₄ represents a member selected from the group consisting of hydrogen atoms and methyl and the group (C_nH_{2n+1-2x}O_x) represents an epoxyalkyl group containing n carbon atoms, 2n+1-2x hydrogen atoms and x oxygen atoms, said oxygen atoms being present only as oxirane oxygen attached to vicinal carbon atoms, n represents the integer 17 and x represents a whole positive integer in the range of from 2-3.

2,999,868

2,3-EPOXYALKYLSUCCINIC ACID DERIVATIVES AND THE PROCESS OF MAKING THEM

Benjamin Phillips, Paul S. Starcher, and Donald L. Heywood, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 23, 1958, Ser. No. 744,007
8 Claims. (Cl. 260-348)

1. Compounds of the formula:



wherein R and R' represent members selected from the group consisting of hydrogen atoms and lower alkyl groups of from one through nine carbon atoms, the sum of the carbon atoms of R and R' being at least one and not greater than nine and R₁ and R₂ represent alkyl groups containing from four through twelve carbon atoms.

2,999,869

ALKALI METAL SALTS OF α,α' -ANTHRAQUINONE DISULFONATES

Robert D. Donaldson, Nixon, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 27, 1958, Ser. No. 724,234
1 Claim. (Cl. 260-370)

In the process of preparing alkali metal salts of 1,8-anthraquinone disulfonic acid which comprises disulfonating anthraquinone in the presence of mercury as a catalyst, and separating the 1,5-isomer therefrom to yield a diluted disulfonation liquor containing substantially 1,8-anthraquinone disulfonic acid, the improvement which comprises removing substantially all of the mercury by treating the said disulfonation liquor with finely divided copper metal, heating the treated mixture to 70-80° C., filtering while hot to remove copper and copper-mercury,

treating the filtrate with aqueous alkali metal chloride, cooling the treated filtrate and again filtering to isolate the solid salt of 1,8-anthraquinone disulfonic acid followed by drying of the same.

2,999,870

PROCESS OF PREPARING 4-HYDROXY-3-KETO-4-ANDROSTENES

Bruno Camerino, Renato Modelli, and Bianca Patelli, all of Milan, Italy, assignors to Società Farmaceutici Italia, a corporation of Italy

No Drawing. Filed Feb. 23, 1961, Ser. No. 92,175

Claims priority, application Italy Mar. 1, 1960

10 Claims. (Cl. 260-397.4)

1. A process of preparing a 4-hydroxy-3-keto-4-androstene which comprises treating the corresponding 4,5-epoxy-3-keto-androstane, dissolved in an organic solvent, with an aqueous solution of a base taken from the group consisting of alkali metal hydroxides and quaternary ammonium hydroxides, at from 50° C. to 150° C.

2,999,871

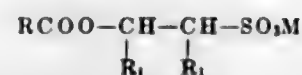
PROCESS OF IMPROVING THE ODOR OF SULFO-ALKYL ESTERS OF FATTY ACIDS

Leslie M. Schenck, Mountainside, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,347

7 Claims. (Cl. 260-400)

1. The process of substantially eliminating the odor of phosphine present in sulfoalkyl esters of fatty acids having the following general formula



wherein R represents an alkyl radical of from 8 to 22 carbon atoms, R₁ represents a member selected from the class consisting of hydrogen, methyl and ethyl groups and M represents a metal selected from the group consisting of alkali and alkaline earth metal, which comprises treating the sulfoalkyl ester of fatty acid in substantially neutral form with hydrogen peroxide in a quantity ranging from 200 to 2,000 parts per million of said hydrogen peroxide.

2,999,872

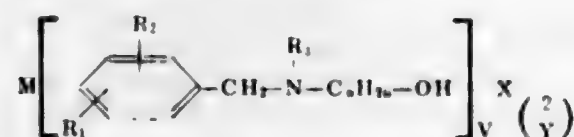
METAL SALT AMINOALCOHOL COMPLEXES

W E Craig, Philadelphia, and John O'N. Van Hook, Abington, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 6, 1958, Ser. No. 719,509

9 Claims. (Cl. 260-429)

1. A compound of the formula



wherein M is a divalent metallic ion selected from the group consisting of nickel, cobalt, cadmium, zinc and copper, R₁ is alkyl containing from four to eighteen carbon atoms, R₂ is selected from the group consisting of hydrogen and lower alkyl, R₃ is selected from the group consisting of hydrogen, lower alkyl and 2-hydroxyethyl, X is an anion selected from the group consisting of halide, sulfate, nitrate, phosphate, selenate, citrate, and lower alkanoate, n is an integer of from 2 to 3, Y is the valence of the anion X, and V is an integer of from 1 to 2.

2,999,873 PROCESS FOR THE PREPARATION OF ORGANIC ISOCYANATES

Albert Bloom, Summit, N.J., Harlan B. Freyermuth, Easton, Pa., and James B. Normington, Little Silver, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 9, 1956, Ser. No. 596,395

4 Claims. (Cl. 260-453)

1. The process of preparing aromatic isocyanates which comprises reacting a solution of phosgene in an inert solvent with a solution of an aromatic amino compound selected from the class consisting of organic mono- and poly-amines in the same inert solvent at atmospheric pressure and at a temperature of 100°-200° C. while passing phosgene through the solution mixture, removing the hydrogen halides from the reaction mixture and recovering the isocyanate, the said inert solvent comprising from 50 to 95% by weight of an aromatic petroleum solvent distilling at approximately 125°-225° C. and from 5-50% by weight of an oxygen bearing organic compound selected from the group consisting of dialkyl ethers of mono-, di- and tri-alkylene glycols.

2,999,874

ESTERS OF PHOSPHORIC AND THIOPHOSPHORIC ACIDS CONTAINING SULFOXIDE GROUPS AND PROCESS FOR THEIR PRODUCTION

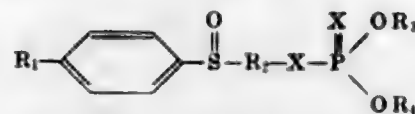
Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 23, 1957, Ser. No. 691,807

Claims priority, application Germany Dec. 1, 1956

5 Claims. (Cl. 260-461)

1. Thiophosphoric acid esters of the following formula



wherein R₁ stands for a member selected from the group consisting of a lower alkyl radical and a halogen atom, R₂ stands for a lower alkylene radical, X stands for a member selected from the group consisting of an oxygen and a sulfur atom, at least one X being sulfur, and R₃ and R₄ stand for lower alkyl radicals.

2,999,875

PREPARATION OF AMINO ACIDS

Arthur F. Ferris, Princeton, N.J., and Harold K. Latourette, Clarence, N.Y., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 21, 1957, Ser. No. 697,786

15 Claims. (Cl. 260-465.4)

12. The method of producing an omega-cyano carboxylic acid by cleaving a cyclic ketone having a 5 to 7 carbon ring with a group selected from the class consisting of oximino, amido, nitro, halogen, amino and amino derivatives on one position alpha to the carbonyl group and an oximino group on the other position alpha to the carbonyl group, comprising the step of reacting said cyclic ketone with an acylating agent in aqueous base, thereby cleaving the ring structure between the carbonyl carbon and the alpha-oximino carbon, to produce said omega-cyano carboxylic acid.

2,999,876

VAPOR PHASE SYNTHESIS OF ALLYL CYANIDE

Richard L. Roberts, Milton, and John W. Lynn, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 7, 1958, Ser. No. 719,727

4 Claims. (Cl. 260-465.9)

1. A process for the preparation of allyl cyanide which consists of contacting a mixture of hydrogen cyanide and

allyl chloride with a supported copper salt catalyst which is a member selected from the group consisting of copper sulfate on fused aluminum oxide, cuprous chloride on fused aluminum oxide and copper aluminum oxide, in the vapor phase at a temperature of 150° C.-300° C.

2,999,877

SYNTHESIS OF 1,4-DICAFFEYL-QUINIC ACID

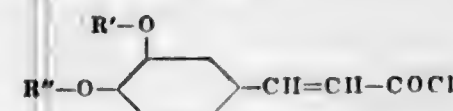
Alberto Vercellone, Milan, and Luigi Panizzi, Rome, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed Dec. 27, 1955, Ser. No. 555,283

Claims priority, application Italy Dec. 28, 1954

6 Claims. (Cl. 260-473)

1. The process of synthesizing 1,4-dicaffeyl-quinic acid, which comprises condensing a caffeic acid derivative of the type



wherein R', R'' individually represent members of the group consisting of carbomethoxy, carboethoxy and carbobenzyloxy, and jointly represent members of the group consisting of carbonyl and thionyl, with quinic acid and saponifying the condensation product with a 3% barium hydroxide solution at 0 to 30° C. in the absence of air.

2,999,878

SYNTHESIS OF β-HYDROXY-α-AMINO ACID

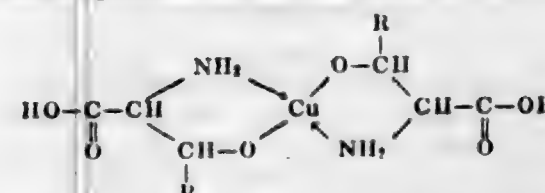
Kenji Okawa, Yao City, Osaka, and Mikio Sato, Sumiyoshi-ku, Osaka, Japan, assignors to Ajinomoto Co., Inc., Tokyo, Japan, a company of Japan

No Drawing. Filed June 5, 1957, Ser. No. 663,608

Claims priority, application Japan June 19, 1956

5 Claims. (Cl. 260-519)

1. A process for the synthesis of β-hydroxy-α-amino acid selected from the group consisting of serine, threonine and phenylserine comprising reacting an aldehyde selected from the group consisting of formaldehyde, acetaldehyde and benzaldehyde in an alkaline aqueous medium with copper salt of glycine to produce a chelated condensation product having the general formula



wherein R is a radical from the group consisting of hydrogen, methyl and benzene radicals and precipitating the copper from the condensation product to produce free amino acid.

2,999,879

PROCESS FOR THE PRODUCTION OF AROMATIC CARBOXYLIC ACIDS

Franz Broich, Ferdinand List, and Nikolaus Roh, Marl, Westphalia, Germany, assignors to Chemische Werke Huls Aktiengesellschaft, Marl, Germany, a corporation of Germany

No Drawing. Filed May 31, 1955, Ser. No. 512,333

Claims priority, application Germany July 1, 1954

4 Claims. (Cl. 260-524)

1. Process for the production of a substituted mononuclear aromatic carboxylic acid from the corresponding substituted mononuclear aromatic compound having an aliphatic side chain with 1 to 2 carbon atoms, said compound being substituted in the aromatic nucleus by a member of the group consisting of halogen and nitro groups which comprises first partially oxidizing said compound with air and then treating the partially oxidized compound in an aqueous emulsion which contains an emulsifying agent at a temperature within the range from

75° to 85° C. with a water soluble hypochlorite in quantity corresponding at the most to the quantity theoretically required until the odor of the hypochlorite has disappeared and thereafter acidifying the emulsion to recover the aromatic carboxylic acid formed.

2,999,880

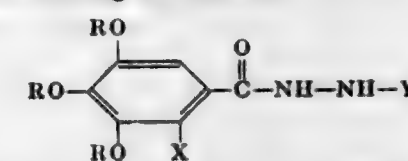
N-SUBSTITUTED-N'-BENZOYLHYDRAZINES

William B. Wheatley, Syracuse, and Harry L. Dickison, Fayetteville, N.Y., assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 20, 1958, Ser. No. 743,506

12 Claims. (Cl. 260-559)

1. A compound selected from the group consisting of a free base and the nontoxic acid addition salts thereof, said free base having the formula



wherein R is (lower) alkyl, X is a member selected from the group consisting of hydrogen, chloro and bromo and Y is a member selected from the group consisting of alkyl containing less than eleven carbon atoms, cyclopentyl, methylcyclopentyl, cyclohexyl, methylcyclohexyl, cyclohexylcyclohexyl, cyclohexenyl, methylcyclohexenyl, benzyl, hexahydrobenzyl, tetrahydrobenzyl, methoxybenzyl, hydroxybenzyl, hydroxymethoxybenzyl, dimethoxybenzyl, methylenedioxybenzyl and dihydroxybenzyl.

2,999,881

ACRYLAMIDE MONOMER POLYMERIZATION INHIBITOR

George C. Gleckler, Springdale, and George L. Sutherland, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,201

8 Claims. (Cl. 260-561)

1. A method of inhibiting the polymerization of a solution of an amide selected from the group consisting of acrylamide and α-alkyl acrylamides which comprises incorporating therein the ferrous iron complex of N-nitrosophenylhydroxylamine as a polymerization inhibitor.

2,999,882

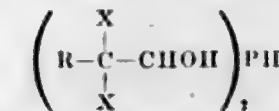
METHOD OF PREPARING SECONDARY PHOSPHINES

Sheldon A. Buckler, Stamford, Conn., and Lois Doll, Adams, Mass., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

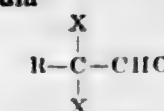
No Drawing. Filed Aug. 31, 1959, Ser. No. 836,925

6 Claims. (Cl. 260-606.5)

1. A method of preparing a secondary phosphine having the formula



wherein X is selected from the group consisting of chlorine and fluorine and R is a member chosen from the group consisting of H, Cl, F, lower alkyl (C₁-C₄), and monohalo-substituted lower alkyl which comprises reacting, in the presence of an aqueous mineral acid, one mole of phosphine with two moles of an aldehyde conforming to the formula



wherein X and R have the meaning given above, and recovering the resulting secondary phosphine.

2,999,883

METHOD OF PRODUCING DIPHENYL SULPHONES

Cornelis Johannes Schoot, Eindhoven, and Johan Herman Van Rij, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 22, 1959, Ser. No. 828,735

Claims priority, application Netherlands July 25, 1958 12 Claims. (Cl. 260-607)

1. In the method of producing nuclear halogenated diphenylsulfones by the Friedel-Crafts condensation, in the presence of a condensation agent selected from the group consisting of aluminum chloride and ferric chloride, of a nuclear halogenated benzene sulfonhalide and an aromatic compound selected from the group consisting of benzene and nuclear halogenated benzenes the improvement which comprises heating said reagents almost to the reaction temperature while at least one of said reagents is out of contact with the remaining reagents and then mixing all of said preheated reagents together at the reaction temperature, said reaction temperature being such that the condensation is completed within 20 minutes and being between about 80° C. and 160° C.

2,999,884

PROCESS FOR PREPARING A POLYFLUOROALKANOL

Viktor Weinmayr, Landesberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 20, 1959, Ser. No. 814,386

6 Claims. (Cl. 260-633)

1. The process which comprises reacting about 0.5 mole of hexafluoropropylene with 1 mole formaldehyde and at least 2 moles of hydrogen fluoride at a temperature in the range of from 100° C. to 200° C. and a pressure in the range of from about 600 p.s.i.g. to about 2500 p.s.i.g., there being present not more than 1 part of water for each part of hydrogen fluoride, and separating from the reaction mass 1H,1H-2-(trifluoromethyl)-tetrafluoro-1-propanol.

2,999,885

PURIFICATION OF FLUOROCARBONS

Jack W. Heberling, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 17, 1959, Ser. No. 840,534

7 Claims. (Cl. 260-648)

1. The process for decreasing the impurities in a saturated fluorocarbon of 2 to 6 carbon atoms which consists of carbon and fluorine and in which the impurities consist essentially of at least one member of the group of perfluoroolefins and saturated and unsaturated halo-hydrocarbons which halo-hydrocarbons contain fluorine and at least one member of the group consisting of chlorine and hydrogen, which process comprises intimately contacting the impure saturated fluorocarbon with an aqueous solution of potassium permanganate in a concentration of from about 5% to about 40% by weight which contains from about 0.5 to about 2 parts by weight of an alkali metal hydroxide per part of potassium permanganate, at a temperature of from about 20° C. to about 95° C., employing an amount of the permanganate solution to provide from about 2 to about 6 parts by weight of potassium permanganate for each part of impurity in the saturated fluorocarbon, and separating the purified saturated fluorocarbon from the reaction mixture.

2,999,886

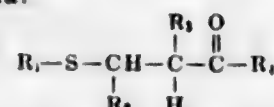
STABLE SOLVENT COMPOSITIONS

Clarence R. Crabb, Lake Jackson, and Harris G. Hughes and Leighton S. McDonald, Angleton, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 13, 1959, Ser. No. 852,620

7 Claims. (Cl. 260-652.5)

1. A composition comprising a chlorinated hydrocarbon solvent and an amount, sufficient to improve the stability of said solvent, of a sulfur-containing compound having the formula:



wherein R₁, R₂, and R₃ are each selected from the class consisting of hydrogen and a lower alkyl group having from 1 to 2 carbon atoms and R₄ is selected from the group consisting of hydrogen and an alkyl group having from 1 to 5 carbon atoms.

2,999,887

PREPARATION OF A C₄H₇Cl COMPOUND FROM A SOLUTION OF COPPER CHLORIDE AND HYDROGEN CHLORIDE SATURATED WITH ACETYLENE

Joseph B. Finlay, Louisville, Ky., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,830

2 Claims. (Cl. 260-654)

2. A process of preparing 2,3-dichloro-1,3-butadiene which comprises reacting, in the presence of cuprous chloride, hydrogen chloride with a chlorinated carbon compound having the empirical formula C₄H₃Cl, a boiling point of 55° C. at 760 mm. Hg pressure, a refractive index n_D²⁰ of 1.4525, a density D₄²⁰ of 0.9938, a density D₄²⁰ of 0.9920, a mass spectrophot cracking pattern which displays parent peaks at m/e 86 and 88 with the largest single peak being at m/e 51 and having an infrared spectrum characterized by strong absorption at 3.04, 4.72, 6.2 and 11.0 to 11.2μ wavelengths.

2,999,888

PRODUCTION OF CHLOROPRENE

Henry Peter Crocker, Hornsea, East Yorkshire, and Karl Heinrich Walter Turck, Banstead, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed June 23, 1959, Ser. No. 822,183

Claims priority, application Great Britain July 4, 1958 5 Claims. (Cl. 260-655)

1. The process for the production of chloroprene which comprises treating 3:4-dichlorobutene-1 with an aqueous alkali metal hydroxide solution at a temperature in the range of 70° to 130° C., and at a pressure sufficient to maintain the reaction mixture in the liquid phase, separating from the reaction mixture an oil phase containing chloroprene and unreacted dichlorobutene and distilling the oil phase to recover the chloroprene therefrom.

2,999,889

DIVINYLMAGNESIUM AND METHOD OF MAKING

Donald J. Foster, South Charleston, and Erich Tobler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,463

4 Claims. (Cl. 260-665)

4. Process for making divinylmagnesium which comprises reacting magnesium with divinylmercury, the reaction being carried out in a solvent reaction medium, said solvent being an aliphatic ether containing from two to twelve carbon atoms.

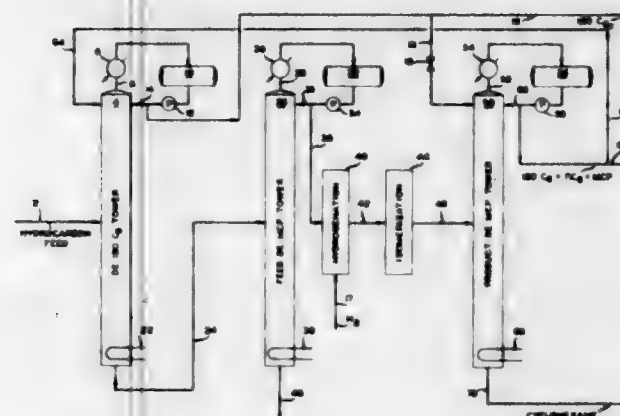
2,999,890

PROCESS FOR ISOMERIZATION OF HYDROCARBONS

Joseph W. Davison, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 21, 1959, Ser. No. 860,764

13 Claims. (Cl. 260-666)



1. In a process in which a hydrocarbon stream comprising isohexanes, methylcyclopentane and normal hexane is fractionated in a first fractional distillation zone to separate a product rich in isohexanes from a stream containing normal hexane and methylcyclopentane which are subjected to isomerization conditions to form therefrom isohexanes and cyclohexane in an effluent stream, and said effluent stream is fractionated in a second fractional distillation zone to separate cyclohexane and produce an overhead fraction, the improvement which comprises refluxing the first fractional distillation zone with at least a portion of said overhead fraction from the second fractional distillation zone.

4. In a process in which a hydrocarbon stream comprising isohexanes, methylcyclopentane and normal hexane is fractionated in a first fractional distillation zone to separate as a first overhead fraction a product rich in isohexanes from a stream containing normal hexane and methylcyclopentane which are subjected to isomerization conditions to form therefrom isohexanes and cyclohexane in an effluent stream, and said effluent stream is fractionated in a second fractional distillation zone to separate cyclohexane, as a distillation residue, from isohexanes as a second overhead fraction, the improvement which comprises refluxing the first fractional distillation zone with at least a portion of said second overhead fraction, and refluxing the second fractional distillation zone with at least a portion of said first overhead fraction.

2,999,891

REMOVING ALKALI METAL CATALYSTS FROM POLYMERS

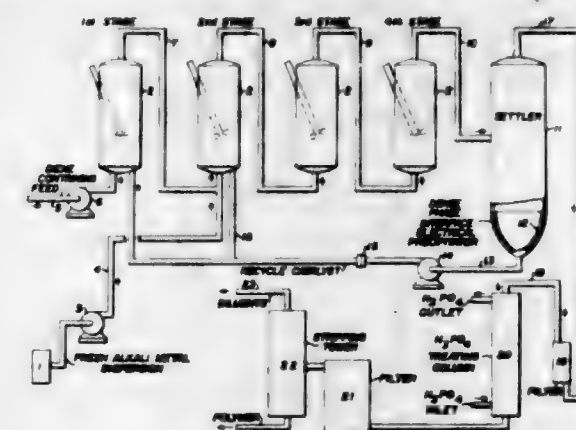
Anthony H. Gleason, Westfield, and Ober C. Slotterbeck, Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Sept. 23, 1957, Ser. No. 685,528

12 Claims. (Cl. 260-669)

5. A process for preparing a substantially alkali metal free liquid polymer solution which comprises polymerizing in a polymerization zone a reaction mixture containing monomers comprising about 80 to 100 weight percent of a C₄ to C₁₀ conjugated diolefin and about 0 to 20 weight percent of a vinyl aromatic hydrocarbon in the presence of a finely divided alkali metal catalyst and an

inert diluent, whereby a polymer-containing reaction mixture containing finely divided free alkali metal and insoluble alkali metal-containing compounds is formed, separating out about 0-100% of the free alkali metal and insoluble alkali metal-containing compounds from the reaction mixture and contacting the resulting mixture containing residual alkali metal and alkali metal compounds at a



temperature level between about 20° and 80° C. with a composition consisting of about 200 to 2,000 weight percent based on total alkali metal of a phosphorus-containing compound selected from the group consisting of phosphoric acids, phosphoric anhydrides and mixtures thereof until substantially all of the alkali metal-containing compounds are converted to alkali metal phosphates, and filtering off said alkali metal phosphates.

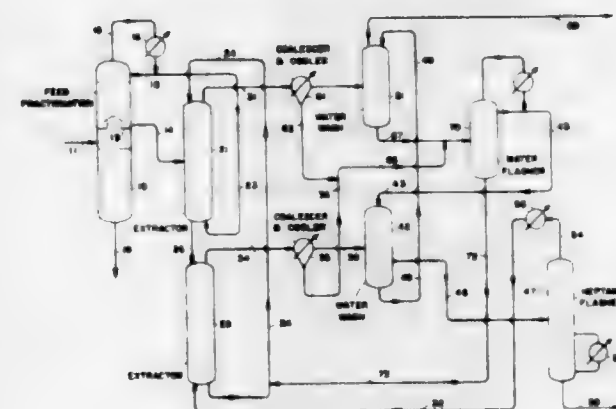
2,999,892

SOLVENT EXTRACTION PROCESS

Michael N. Papadopoulos, Albany, and Carl H. Deal, Jr., Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed Sept. 2, 1958, Ser. No. 758,342

6 Claims. (Cl. 260-674)



1. A process for recovering naphthalenes of at least a five carbon number spread from a hydrocarbon fraction containing alkyl benzenes of a like carbon number spread, the steps comprising subjecting said fraction to a liquid-liquid extraction with sulfolane solvent to obtain an extract-solvent phase rich in said naphthalenes and a raffinate phase rich in said alkyl benzenes, separating the extract-solvent phase from the raffinate and thereafter recovering the naphthalene extract from the sulfolane solvent.

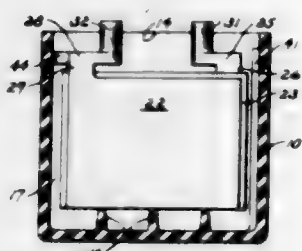
ELECTRICAL

2,999,893

STORAGE BATTERY CONSTRUCTION

John P. Casserly, Cleveland Heights, Ohio, assignor to The Electric Storage Battery Company, a corporation of New Jersey

Filed June 16, 1958, Ser. No. 742,148
1 Claim. (Cl. 136-166)



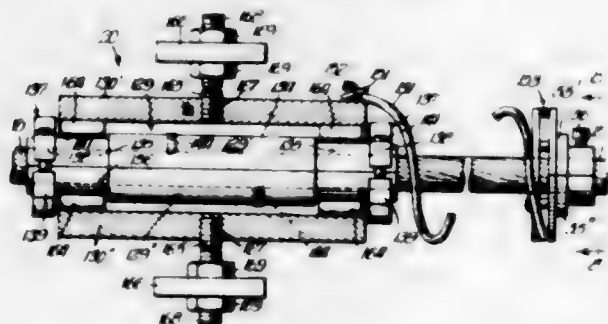
In combination, a storage battery casing having a plurality of cell compartments each adapted to receive a cell element comprising a group of positive plates connected together by means of a strap carrying a terminal post and a group of negative plates connected together by means of a strap carrying a terminal post, said cell elements being adapted to be oriented in their respective cell compartments in accordance with a predetermined grouping of the cells of the battery, a rib in each of said compartments, each of said ribs being on the wall of its respective compartments which, according to said grouping, is to be adjacent the terminal post of the same polarity on each of the respective cell elements, and an extension on the strap connecting together the plates of the opposite polarity on each of said cell elements, each of said ribs extending above the normal seating height of said extensions when said cell elements are properly oriented with respect to said cell grouping in their respective cell compartments, said extension being adapted to strike the rib on the wall of the cell compartment if the cell element is not inserted into the compartment in accordance with said cell grouping and thus prevent said cell element from properly seating in the cell compartment.

2,999,894

APPARATUS FOR SUPPRESSING GALLOPING CONDUCTORS

Raymond C. Binder, West Lafayette, Ind., assignor to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana

Filed Jan. 6, 1958, Ser. No. 707,217
10 Claims. (Cl. 174-42)



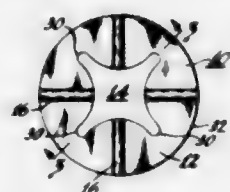
1. In apparatus of the class described for suppressing galloping oscillations in a suspended conductor, which galloping oscillations are characterized by substantially transverse components of motion having such large amplitudes and such low frequencies as to render such transverse components of motion readily visible, and which galloping oscillations are further characterized by tor-

sional components of motion causing a twisting and untwisting of the conductor in a coupled relationship to the substantially transverse components of motion in the conductor, the combination of a longitudinally split bearing sleeve, means for fixedly mounting said bearing sleeve over the conductor with the conductor extending longitudinally therethrough, a longitudinally split torsional inertia member, means for securing the sections of said inertia member together over said bearing sleeve for rotation about the conductor as an axis, anti-friction roller bearings between said bearing sleeve and said inertia member, rods extending outwardly from said inertia member, weights adjustably positioned on said rods for increasing the torsional inertia of said member, a helically coiled spring having its convolutions surrounding said conductor, means for fastening one end of said spring to said inertia member, and clamping means for anchoring the other end of said spring to said conductor, whereby said spring is operative by winding and unwinding axially of the conductor to torsionally resist the rotation of said inertia member in opposite directions of rotation during galloping oscillations and whereby said spring returns said inertia member to a substantially normal angular position with respect to said bearing sleeve and conductor upon the cessation of said galloping oscillations.

2,999,895

SPACER FOR MOUNTING ELECTRICAL ELEMENTS ON SUPPORTS

Charles M. Smith, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,822
2 Claims. (Cl. 174-138)



1. A spacer comprising a disk of insulating material, said disk being formed with a central, four-pointed, substantially symmetrical, star-shaped opening, said opening being defined by four arcuate-shaped sides, center points of opposite pairs of said arcuate-shaped sides being closer to each other than the respective ends of said opposite pairs of sides, and four radially disposed ribs extending outwardly from said disk and symmetrically spaced on said disk, each of said ribs extending between a separate one of said center points of said sides and the periphery of said disk.

2,999,896

APPARATUS INCORPORATING A DICHROIC MIRROR

Stanley Frederick Quinn, Ashford, England, assignor to Electric & Musical Industries Limited, Middlesex, England, a company of Great Britain

Filed Nov. 13, 1956, Ser. No. 621,823
Claims priority, application Great Britain Nov. 16, 1955
14 Claims. (Cl. 178-5.4)

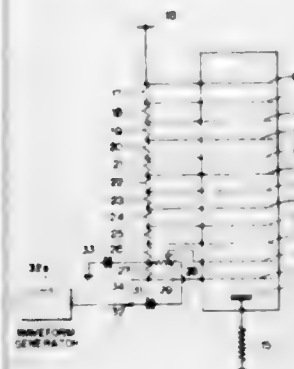
1. Apparatus incorporating a dichroic mirror on which light is incident with a varying angle of incidence, converting means for converting light from said mirror into electrical signals, and amplifying means for amplifying said electrical signals, in which the spectral characteristics of said mirror vary with said angle of incidence,

SEPTEMBER 12, 1961

ELECTRICAL

377

and said apparatus includes means for varying the gain of said amplifying means in a manner related to said



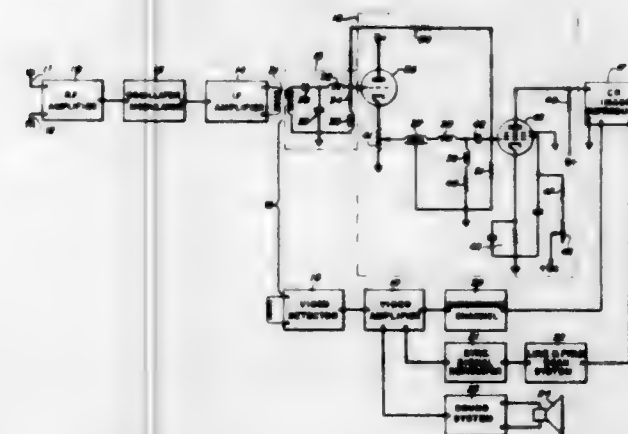
varying angle of incidence to reduce the effect of variations in the spectral characteristics of said mirror with variations in the angle of incidence of said light.

2,999,897

LUMINANCE AMPLIFIER

Charles H. Heuer, Glencoe, and John L. Rennick, Elmwood Park, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware

Filed May 28, 1958, Ser. No. 738,372
6 Claims. (Cl. 178-5.4)



1. A luminance channel for a color television receiver having a chrominance channel which introduces a time delay of a predetermined amount in the translation of chrominance information, said luminance channel comprising: video detector means for developing luminance signal energy; a cathode follower coupled to said detector means and having a load impedance comprising a time-delay network exhibiting a time delay of substantially said predetermined amount; a video amplifier; means, including an A.C. coupling impedance, for coupling said time-delay network to said amplifier to apply a luminance signal thereto; and D.C. connecting means between said video detector means and said video amplifier, having a transmission to A.C. components of said luminance signal substantially less than that of said means coupling said network to said amplifier, for restoring at said amplifier at least part of the direct-current component of said luminance signal.

2,999,898

PULSE AND NOISE SEPARATORS

Alfred Pollak, Hannover, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Jan. 22, 1960, Ser. No. 4,054

Claims priority, application Germany Jan. 23, 1959
7 Claims. (Cl. 178-7.3)

1. A separator circuit for separating signal components exceeding a preselected modulation level from a combination signal including intelligence signals and synchronizing pulses at different modulation levels, the pulses serving

to synchronize a local oscillator, said separator comprising a tube having electrodes including an anode, a cathode, a control grid means for applying said combination signals to said control grid, and a screen grid; a source of supply potential; a separator circuit output load resistor connected between said screen grid and the source; a feedback resistance chain connected between the control grid and ground and having a tap therebetween con-



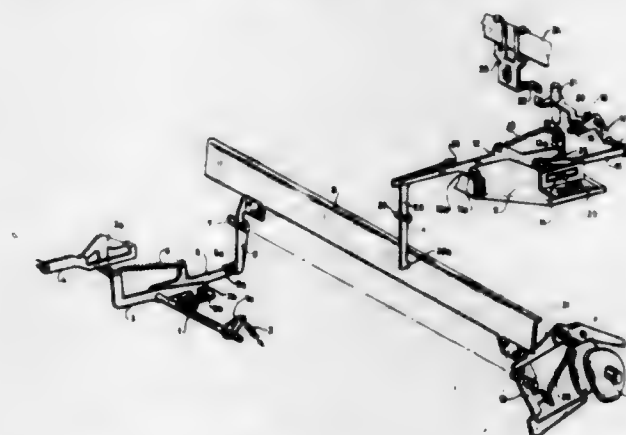
nected to the anode; coupling means connected between the anode and said local oscillator for applying a positive pulse to the anode and the control grid corresponding with each cycle of the oscillator, whereby each positive pulse renders the tube conductive and establishes a rectified negative bias on the control grid, said bias being determined by the amplitude of the positive pulses and the values of said resistance chain and the bias level being adjusted to said preselected modulations level.

2,999,899

TELEPRINTER MACHINE COMPRISING A DEVICE FOR VARIABLY SETTING THE RIBBON STROKE

Herbert Wüsteney and Rudolf Rekowitz, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed May 20, 1958, Ser. No. 736,514
Claims priority, application Germany May 31, 1957
8 Claims. (Cl. 178-23)



1. A teleprinter machine including ribbon actuating means having a variable stroke having a first auxiliary device for selectively variably setting the ribbon stroke and a second auxiliary device for controlling station identification means, said auxiliary devices being respectively differently operatively affected incident to transmitting and receiving said first device including an element for governing the variable setting of the ribbon stroke, said second device including interlock means, and means operable by said interlock means for operatively affecting the actuation of said element for governing the variable setting of the ribbon stroke.

2,999,900

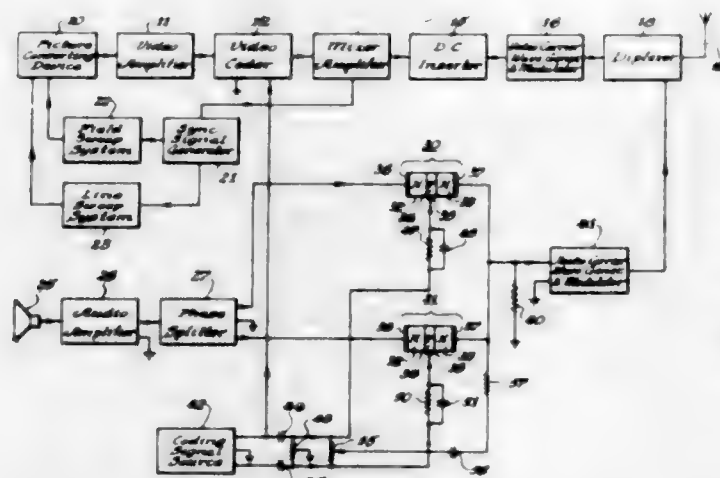
SIGNAL TRANSLATING APPARATUS

Adrian J. De Vries, Yorkfield Township, Du Page County, and Walter S. Druz, Bensenville, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware

Filed May 27, 1957, Ser. No. 661,804
14 Claims. (Cl. 179-1.5)

1. Signal-translating apparatus comprising: a source of intelligence signal; a pair of bi-directional transistors each

having first, second and third terminals and responsive to one voltage condition on said third terminal for assuming a conductive state wherein a relatively low impedance path is provided between its first and second terminals to permit bi-directional current translation therebetween and responsive to another voltage condition on said third terminal for assuming a non-conductive state wherein a relatively high impedance path is provided between its first and second terminals to prevent the translation of current therebetween; means coupling said intelligence signal source to said first terminal of each said transistors for applying said intelligence signal thereto; a common load cir-



cuit; means coupling both said second terminals to said load circuit; means for developing an alternating switching signal; means for applying said switching signal to said third terminal of each of said transistors to condition said transistors to their respective conductive states in alternation thereby to translate said intelligence signal to said load circuit through said transistors in alternation, the non-conductive transistor translating undesired leakage current from said switching-signal-developing means to said load circuit to produce an undesired switching signal component in said load circuit; and means coupled to said load circuit for cancelling said switching signal component.

2,999,901

CONNECTOR FOR EXTENDING TELEPHONE CALLS TO LINES WITH DIFFERENT SERVICE REQUIREMENTS

Alfred Scheunert, Berlin-Siemensstadt, Germany, assignor to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed June 21, 1956, Ser. No. 592,788

Claims priority, application Germany June 30, 1955
4 Claims. (Cl. 179-17)



1. A connector switch for respectively extending telephone calls to individual lines and to private branch exchange trunk groups and to party lines, having predetermined ringing codes respectively assigned thereto,

comprising a device for securing the transmission of full ringing codes to party line stations to which calls are to be extended, said device comprising a control relay adapted to be operated in two stages, control contact means actuated by said connector switch responsive to setting of the wipers thereof relative to bank contacts allotted to party line stations including a station to which a call is to be extended for initially actuating said control relay to assume its first-stage operated position, a ringing relay, code ring impulse generating means, normally open circuit means extending from said control relay to said code ring impulse generating means, contact means actuated by said control relay in its first-stage operated position for closing said normally open circuit means, further contact means in said circuit means for connecting said generating means to said control relay so as to cause actuation thereof to assume its second-stage operated position, and contact means actuated by said control relay in its second-stage operated position for connecting said ringing relay with said code ring impulse generating means at the start of transmission thereby of the code ring impulse series allotted to the called party line station to operate said ringing relay accordingly, and circuit means controlled by said ringing relay for transmitting to the called party line station ringing current in accordance with said code ring impulse series.

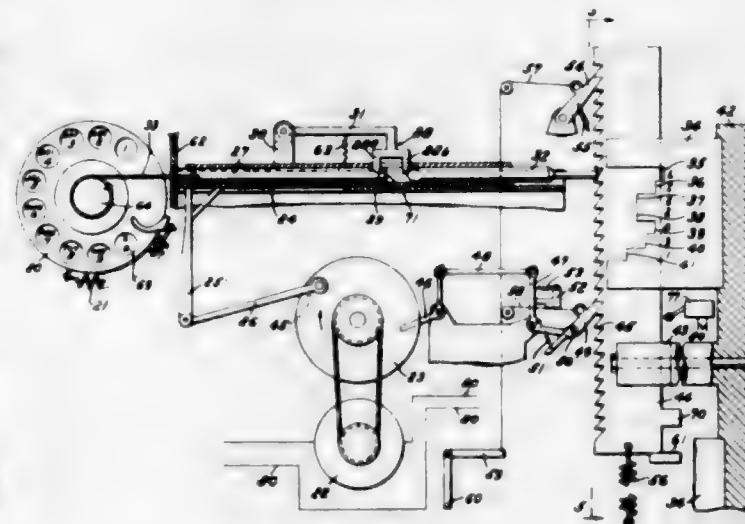
2,999,902

AUTOMATIC TELEPHONE DIALER

Walter C. Swartz, 1985 Beverly Ave., Berkley, Mich.

Filed July 12, 1956, Ser. No. 597,510

1 Claim. (Cl. 179-90)



An automatic dialing apparatus for dial telephones comprising a bi-directionally reciprocating member adapted to be disposed between a dial telephone and a mechanism having a multiple face stop, a slide plunger slidably disposed on said reciprocating member at the dial end thereof having an inner end equipped with a ratchet tooth and an outer end, connecting means connected to said slide plunger outer end adapted to angularly move a telephone dial when said slide plunger is moved by said reciprocating member, a cam plunger slidably disposed in said reciprocating member at the stop end thereof adjacent said multiple face stop having an extending end adapted to engage said stop and an internal end having a cam surface; said multiple face stop being located adjacent to the extending stop end of said reciprocating member to abut said cam plunger extending end at various certain points of travel of said reciprocating member; a bifurcated tang moveably mounted on said reciprocating member for travel therewith having a pull leg and a cam leg equipped with opposed inclined surfaces; said tang pull leg inclined surface by-passing said slide plunger and tooth in a non-dialing direction of

reciprocating member travel; said pull leg engaging said tooth in the dialing angular movement direction of reciprocating member travel to cause said slide plunger to angularly move said dial in the dialing direction; said bifurcated tang cam leg inclined surface when engaged by said cam plunger raising said bifurcated tang to disconnect said pull leg from said slide plunger tooth to free said slide plunger from further travel with said reciprocating member to permit said slide plunger to travel in the opposite direction via said connecting means when the dial angularly reversely moves under power of its own spring upon release of said slide plunger; said multiple stop faces being distance-wise coordinated to limit the travel of said slide plunger at a point coordinated with angular movement of the dial and the digit desired to be dialed on the telephone.

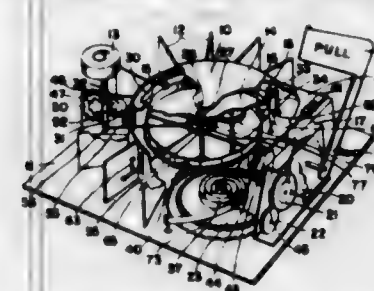
2,999,903

CALL TRANSMITTING DEVICES

Reynold Hematch, 300 E. 61st St., New York, N.Y.

Filed Nov. 7, 1957, Ser. No. 694,979

5 Claims. (Cl. 179-90)



1. In a call transmitting system for driving a dial pulse means, a plurality of pushbuttons, each having a released position and an actuated position, there being one such pushbutton for each dial pulse character group, motor means, a rotatable disk urged in one direction of rotation by said motor, said disk being adapted to drive a dial pulse means to send dial pulses corresponding to the pushbutton which has been actuated, a plurality of trip means located equidistantly on the periphery of said disk, each trip means having two positions one of which renders it effectual and the other ineffectual, means coupling said plurality of pushbuttons to said plurality of trip means to render a selected trip means effectual, actuating means at a fixed point adjacent to the path of said trip means for intercepting said trip means in its effectual position, brake means for stopping the rotation of said disk, means coupling said actuating means to said brake means for stopping said disk when said effectual trip means reaches said fixed point, and starting means responsive to actuation of any pushbutton for releasing said brake means.

2,999,904

TELEPHONE INSTALLATION BAY STRUCTURE WITH SLIDING SWITCH FRAMES

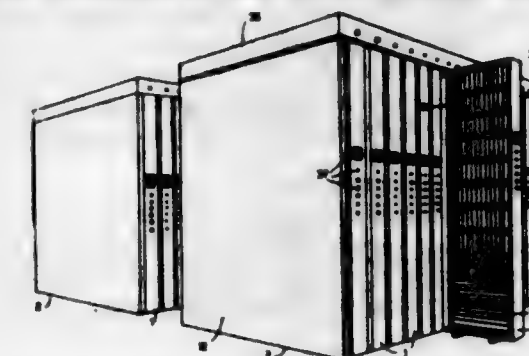
Willy Lohs, Friedrich Sommer, and Günter Thom, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed Dec. 10, 1958, Ser. No. 779,456

Claims priority, application Germany Dec. 20, 1957
17 Claims. (Cl. 179-91)

1. An automatic telephone exchange installation having a plurality of switch bays, each switch bay having a plurality of sliding frames, each frame containing switching means, the shape of each frame corresponding generally to that of a long rectangle with relatively narrow edges, said frames being arranged in the respective bays in upright position side by side and individually slidable for edge-wise insertion into and withdrawal from the corresponding bays, connection cable means for each bay, said bays being disposed in spaced relation to form service passages therebetween the width of which is determined by said con-

nection cable means and to delimit a peripheral passage extending about all said bays, the number of bays being such that the length of said service passages delimited by



said bays exceeds the length of the section of said peripheral passage extending perpendicularly to said service passages.

2,999,905

NOISE ELIMINATOR

Paul J. Malliaric, Allegheny County, Pa.

(2539 Homestead Ave., Pittsburgh 34, Pa.)

Filed Jan. 9, 1958, Ser. No. 707,977

10 Claims. (Cl. 179-100.1)



1. A first record transcription means producing electric signals from a first record, a second record transcription means producing electric signals from a second record and a third record transcription means producing signals from a third record, current limiting non-linear resistances connected to said means, one end of each of said resistances being connected to the output of one of said means, the minimum desirable transcription signal potential being not less than the cut off voltage of the said resistances, and the other ends of each of said resistances being connected together at a common junction.

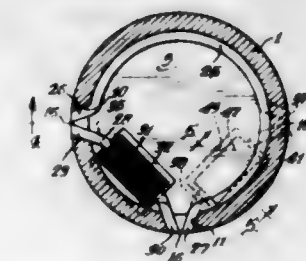
2,999,906

MAGNETIC RECORDER HEAD

Jack L. Metz, Chicago, Ill., assignor to Warwick Manufacturing Corporation, a corporation of Delaware

Filed Dec. 19, 1957, Ser. No. 703,864

8 Claims. (Cl. 179-100.2)



1. A unitary magnetic recorder head comprising, a casing including a pair of members each having an internal cavity and an annular rim with one member inverted and positioned above the other, a spacer disposed between said members, a first core positioned within the casing at one side of the spacer having a generally C-shaped first part with pole pieces at its ends and a second part substantially bridging the ends of the first part with a gap having pole pieces formed between the adjacent ends of the parts, a coil around one of said first core parts, a second core positioned within the casing on the other side of the spacer having a generally C-shaped first part with pole pieces at its ends and a second part substantially

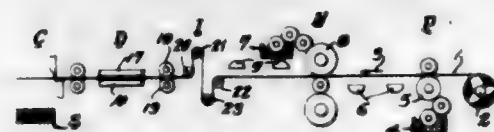
bridging the ends of the first part with a gap having pole pieces formed between the adjacent ends of the parts, a second coil around one of said second core parts, the two cores being rotatably oriented relative to each other to have a gap of one stacked above a gap of the other and the remaining gap of each core on opposite sides of the stacked gaps, and means defining openings in the casing to expose the gaps to the outside of the casing.

2,999,907

SYSTEM FOR MANUFACTURING AT HIGH SPEED MAGNETIC SOUND RECORD SHEETS USED ON A MAGNETIC SOUND RECORD READING MACHINE

Yasushi Hoshino, 462 1-chome, Tanagawa Okunawa-cho, Setagaya-ku, and Mamoru Namikawa, 664 Kugahara-cho, Ota-ku, both of Tokyo, Japan, and Shigezo Tochi-hara, Kawasaki-shi, Kanagawa, Japan (531 Matsunoki-Jyutaku, Matsumaki-cho, Suginami-ku, Tokyo, Japan)

Filed Aug. 28, 1958, Ser. No. 757,876
Claims priority, application Japan Sept. 2, 1957
6 Claims. (Cl. 179-100.2)



1. Apparatus for manufacturing magnetic sound record sheets from a continuous blank sheet and a master record comprising printing means, supply means for continuously supplying the blank sheet to said printing means; coating means adjacent said printing means for applying a magnetic film to said sheet, drying means adjacent said printing and coating means to dry said sheet, converting means operatively associated with said drying means for converting the movement of said sheet from a continuous to an intermittent movement, copy means for transferring information from said master record to said magnetic film, punch means for punching guide holes into said sheet, and cutting means for cutting the sheet into predetermined lengths.

2,999,908

DEVICE FOR HOLDING A MASTER MAGNETIC RECORD SHEET AND A MAGNETIC RECORD SHEET TO BE PRINTED IN A CORRECT OVERLAPPING RELATIONSHIP IN PRINTING OPERATION

Yasushi Hoshino, 462 1-chome, Tanagawa Okunawa-cho, Setagaya-ku, and Mamoru Namikawa, 664 Kugahara-cho, Ota-ku, both of Tokyo, Japan, and Shigezo Tochi-hara, Kawasaki-shi, Kanagawa, Japan (531 Matsunoki-Jyutaku, Matsumaki-cho, Suginami-ku, Tokyo, Japan)

Filed June 2, 1959, Ser. No. 817,557
Claims priority, application Japan June 3, 1958
1 Claim. (Cl. 179-100.2)



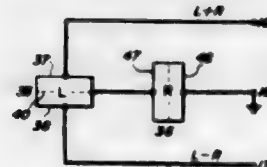
An apparatus for printing a printed magnetic sound record sheet from a master magnetic sound record sheet by applying a magnetic field, comprising a pair of main rollers, an electro-magnet in said rollers, a pair of holding plates between which a master sheet and a print sheet are held in correct overlapping relationship, an auxiliary pair of rollers operatively disposed with respect to and

adapted to press the holding plates and located on one side of the two main rollers, a roller on the other side of said two main rollers and adapted to press the holding plates after the same have passed between said main rollers, a device for forwarding the holding plates with a master sheet and a print sheet therebetween, a motor coupled to and rotating one of the main rollers, a switch coupled to and controlling the rotation of the motor, another switch for controlling the rotation of the motor, a switch for energizing the electro-magnets in the main rollers, and a system which operates the first switch for controlling the rotation of the motor when the holding plates reach the auxiliary pair of rollers to rotate the main roller, operates the second switch for controlling the rotation of the motor and the switch for energizing the electro-magnets to establish a magnetic field between the main rollers when the holding plates enter between the two main rollers, and then cuts off the first switch when the tail end of the holding plates passes the auxiliary rollers and the second switch and the switch for energizing the electro-magnets when the tail end of the holding plates has passed between the main rollers.

2,999,909

TRANSDUCER APPARATUS

Cosler D. Knight, Lake Zurich, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 778,017
4 Claims. (Cl. 179-100.41)

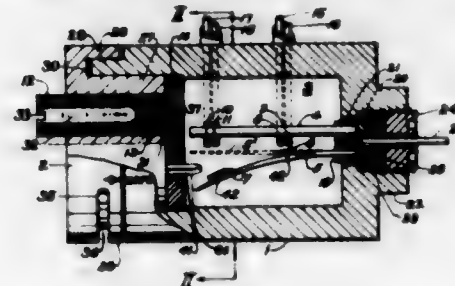


1. A stereophonic pickup and matrixing arrangement comprising: a first transducer assembly comprising a body of piezoelectric material, a pair of signal-translating electrodes affixed to different surfaces of said body, a pair of output terminals connected to said electrodes respectively, and a common electrode disposed on another surface and constituting with each of said signal-translating electrodes a transducing element; a second transducer assembly comprising a body of piezoelectric material and a pair of signal-translating electrodes affixed to different surfaces thereof; means for coupling said common electrode to one of the signal-translating electrodes of said second transducer assembly and a third output terminal connected to one of said electrodes of said second assembly.

2,999,910

TIMING DEVICE

Robert A. Cooley, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 26, 1953, Ser. No. 357,529
11 Claims. (Cl. 200-52)



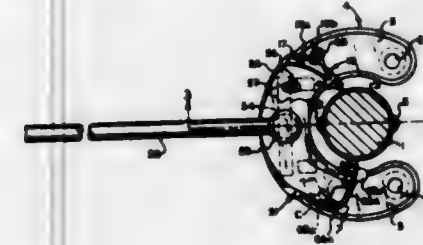
6. A timing device comprising electrodes, electrostatically chargeable repellant members, charging means,

and means for electrically connecting said electrodes upon movement of one of said members resulting from diminution of the charge.

2,999,911

DIRECTION SIGNALING APPARATUS

Peter J. Dryer, Boyne City, and Douglas C. Harding, Ann Arbor, Mich.; said Dryer assignor to Boyne Products, Inc., Boyne City, Mich., a corporation of Michigan, and said Harding assignor to Don R. Ford Associates, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 4, 1959, Ser. No. 797,266
9 Claims. (Cl. 200-61.34)

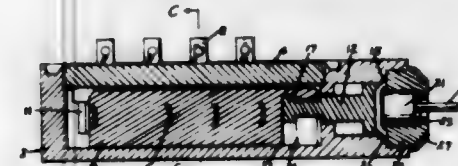


1. Direction signaling apparatus for use with cam means movable in an orbital path, said apparatus comprising a support member; a molded, unitary actuating member having a body portion terminating at its ends in integral, flexible fingers adapted to project toward the path of said cam means; means mounting said actuating member on said support member for rocking movements about an axis intermediate the ends of said body portion from a neutral position to operating positions on opposite sides of said neutral positions; switch means; switch operating means integrally formed on said actuating member on opposite sides of said axis and connected to said switch means for operating said switch means in response to rocking of said actuating member; and means connected to said actuating member for rocking the latter from said neutral position to either of said operating positions.

2,999,912

SWITCH

George F. Kincaid, Bradley C. Douglas, and Benjamin A. Gay, St. Louis, Mo., assignors to Atlas Powder Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 13, 1957, Ser. No. 696,074
5 Claims. (Cl. 200-82)



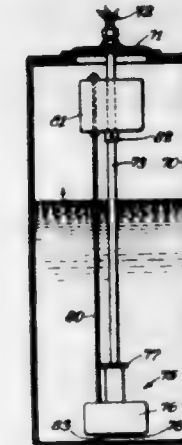
1. A switch comprising in combination a switch housing, at least one electrical contact member attached to said housing, a rigid movable nonconducting slide member carrying a second electrical contact member, said slide member mounted in said housing for longitudinal movement and so shaped in relation to said housing that lateral movement in any direction within the housing and rotational movement within the housing is prevented, by means of rigid, contacting, bearing surfaces between said slide member and said housing and independent of said electrical contacts, said slide member being adapted for longitudinal movement within said housing to two positions, at one position said first electrical contact member and said second electrical contact member being operatively engaged and in the other position said first electrical contact member being disengaged from operative contact with said second electrical contact member, means for rigidly holding said slide member in one of

said positions, and means for moving said slide member longitudinally within said housing from one of said positions to the other position which comprises a piston and an explosive squib.

2,999,913

LIQUID LEVEL RESPONSIVE DEVICE

Morley V. Friedell, Wheatridge, Colo., assignor to C. A. Norgren Co., a corporation of Colorado
Original application Sept. 19, 1956, Ser. No. 610,773, now Patent No. 2,915,605, dated Dec. 1, 1959. Divided and this application July 27, 1959, Ser. No. 829,858
3 Claims. (Cl. 200-84)



1. A device responsive to the level of liquid in a container comprising, a liquid tight casing in the container to be immersed in the liquid, a first float movably mounted on the exterior of the casing, a sleeve of magnetic material surrounding the casing and carried by the float, an electrical switch within the casing, a switch operating element within the casing and movable to operate the switch, a permanent magnet within the casing and carrying the switch operating element, said magnet being vertically movable from a first position at one elevation to a second position at a higher elevation, a stop on the casing positioned to support the float in a position wherein the sleeve is located to exert sufficient magnetic attraction on the magnet to raise the magnet to said second position, said float having sufficient buoyancy to support itself and the sleeve in the liquid, but insufficient buoyancy to overcome said magnetic attraction, and a second float in the container above the first float and secured thereto, said floats having sufficient buoyancy in the aggregate with rising liquid level to overcome said attraction and raise the sleeve away from the magnet, said magnet being constantly biased by gravity toward said first position and movable across the space intervening between said first and second positions by said gravity bias in a single, rapid, continuous movement upon decrease in the magnetic attractive force to a value below the force of said gravity bias, said first float having sufficient buoyancy to support the sleeve, in raised position when the liquid level falls below the second float.

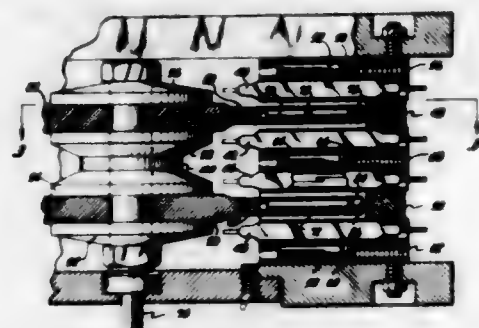
2,999,914

MAGNETIC SWITCH

Robert Edward Stanaway, Pasadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Dec. 23, 1957, Ser. No. 704,557
5 Claims. (Cl. 200-87)

3. A commutator switch device including a plurality of magnetic switches each mechanically biased to one of two positions, one magnet for each magnetic switch placed in a critical region for applying a holding magnetic field to said switches, first and second magnets displaced from one another and movably mounted to move past each of

said magnetic switches, said first magnet serving to apply a magnetic field which aids the holding magnetic field to operate each switch to a second position against the mechanical bias, said holding magnetic field serving to hold each magnetic switch in the second position when the magnetic field of the first magnet is removed, said displacement between the first and second magnets being suffi-



ciently great to provide a region therebetween which is substantially free of any magnetic field from either magnet, said second magnet having a magnetic field poled opposite to that of the first magnet and serving to oppose the holding magnetic field to reduce the net magnetic field of each switch when applied thereto whereby each magnetic switch is returned to the one position by its mechanical bias.

2,999,915

POLARIZED CHANGE-OVER CONTACT DEVICE
Friedrich Pfeleiderer and Otto Adam Thiele, Munich-Solln, Germany, assignors to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed Nov. 7, 1957, Ser. No. 694,972
Claims priority, application Germany Dec. 21, 1956
11 Claims. (Cl. 200-93)



1. A polarized protective tubing change-over contact arrangement comprising an inner change-over contact spring made of magnetizable material and two outer contact springs also made of magnetizable material, said outer springs cooperatively disposed relative to said inner contact spring and forming air gaps therewith, said change-over spring being movable in a path for selective contacting engagement with said outer contact springs, and a single permanent magnet having opposite poles bracketing both of said outer contact springs, the field of said permanent magnet extending across said air gaps of said contact springs substantially transverse thereof in a plane defined by the motion of a line disposed axially on said change-over contact spring.

2,999,916

MINIATURE RELAY

Clarence Huettner, Howard R. Reeve, and Charles R. Reuter, Indianapolis, Ind., assignors to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Filed Sept. 11, 1959, Ser. No. 839,400
4 Claims. (Cl. 200-93)

1. A relay comprising, in combination, an insulative coil form having an axial passage therethrough and winding of wire therearound, a pair of ferromagnetic plates extending in opposite directions from said passage, one of said plates being fixed in and substantially filling out to portion of the length of said passage and to other of said plates having its inner edge mounted for rocking displacement on the inner edge of the first plate and consti-

tutes the armature of the relay, a C-shaped permanent magnet member and a C-shaped ferromagnetic member faced into each around said coil form and defining air gaps between their ends at the respective ends of said passage, the ends of said C-shaped members at the outer end of said armature constituting stationary contact means selectively engageable with said end of the armature when said windings are energized and de-energized, respectively, a terminal pin secured to each end of said windings, to each of said C-shaped members and to said



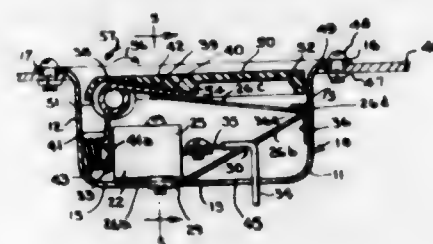
fixed ferromagnetic plate constituting mechanical mounting and electrical connection therefor, an insulative base plate having apertures therein through which said terminal pins may extend for connection to external energizing and work circuits, a casing slipped over said C-shaped members and said base plate and constituting with said base plate a sealed enclosure for the relay, and resilient elements interposed between the inner surface of said casing and said C-shaped members to maintain all of said elements in assembled relation.

2,999,917

MACHINE CONTROL SWITCH

Virgil R. Carpenter, St. Paul, Minn., assignor to The Unipress Company, Minneapolis, Minn., a corporation of Minnesota

Filed Feb. 20, 1959, Ser. No. 794,717
7 Claims. (Cl. 200-153)

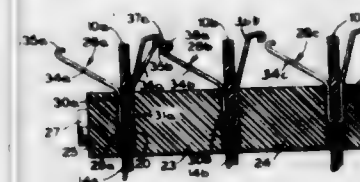


1. A machine control switch comprising an open end housing, a cover mounted for limited movement in the open end of said housing, a micro switch mountable in said housing, said micro switch including at least two terminals and a push button to selectively change the electrical relationship between said terminals, an insulating member, and means for independently removably retaining the micro switch in said housing and removably retaining the insulating member in said housing, said insulating member retained in the housing in position for being selectively interposed between the cover and the terminals, said means retaining the micro switch in said housing including a pair of tinnermans for separately retaining the insulating member in the housing, said housing having an elongated aperture through which the tinnermans are extended, and a pair of bolts for removably attaching the micro switch to the tinnermans, one bolt being connected to each tinnerman.

2,999,918

ELECTRICAL CIRCUIT CONNECTOR APPARATUS
Orville B. Shafer, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 26, 1957, Ser. No. 705,459
6 Claims. (Cl. 200-166)



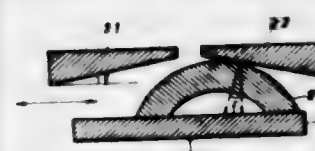
1. Apparatus for electrically interconnecting the electrical circuitry on a plurality of separate spaced apart circuit supporting members, said apparatus comprising a plurality of resilient generally U-shaped members mounted on first and second circuit supporting members, each of said U-shaped members having a pair of legs connected by a base, the bases of said U-shaped members being received by apertures in said first and second circuit supporting members so as to be connected to the electrical circuitry thereon, the legs of each U-shaped members extending along opposite sides of the circuit supporting member upon which it is mounted from the said base and then diagonally outwardly away from said opposite sides, and turned-in portions on the free ends of each of said legs, one of the legs on said first circuit supporting member being adapted to be latched to one of the legs on said second supporting member by way of the turned-in portions on the free ends thereof.

2,999,919

VIBRATOR DEVICES

Emile Torcheux and Etienne Honore, Paris, France, assignors to Societe Marocaine de Recherches, d'Etudes et de Developpements "SOMAREDE," a corporation of Morocco

Filed May 8, 1959, Ser. No. 811,833
Claims priority, application France May 10, 1958
2 Claims. (Cl. 200-166)



1. A vibrator device comprising in combination: two stationary armatures having respective planar contact surfaces; a hollow cylinder portion bounded by a plane parallel to its axis; a conductive body having a planar surface, said hollow portion being arranged for effecting over said planar surface a reciprocating motion of a predetermined direction for periodically and alternately engaging said planar contact surfaces, said contact surfaces forming with said direction an angle substantially equal to the angle of friction between said cylinder portion and said armatures; and means for guiding said motion of said cylinder portion.

2,999,920

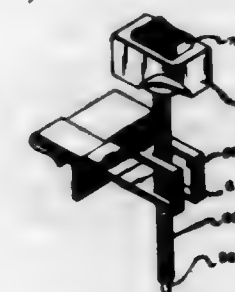
REVERSIBLE GEARED HEAD ELECTRIC MOTOR AND CONTROL SYSTEM THEREFOR

Steffen S. Brown, Dayton, Ohio, assignor to The Brown-Brockmeyer Company, Dayton, Ohio, a corporation of Ohio

Filed July 15, 1957, Ser. No. 672,057
2 Claims. (Cl. 200-168)

1. A switch arrangement especially adapted for use with a reversible electric motor having a relay controlled low voltage control system which comprises; a manually

operable switch having an operating element on one side, a cable leading from the other side of the switch, a resilient support member attached to the said other side of the switch and extending along and enclosing said cable,



and a spring clip adapted for detachably receiving and supporting said supporting element, said spring clip being slotted so that the supporting element can be removed therefrom and placed in adjusted position therealong.

2,999,921

ELECTRONICALLY CONTROLLED WORKING PROCESSES

Ariel I. Stiebel, Detroit, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania

Filed Sept. 10, 1958, Ser. No. 760,169
9 Claims. (Cl. 219-7.5)

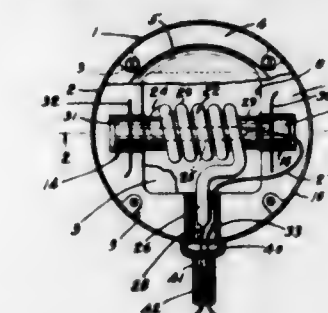


1. A method of controlling predetermined processes including a cutting operation on work pieces in a machine controlled work piece processing system comprising providing selectively magnetized portions on a de-magnetized magnetizable work piece which are in the processing system to serve as control signals for processing said work piece, sensing said magnetized portions on the work piece at stations adapted to perform process operations on said work piece, and controlling the process at the station where the magnetized portions are sensed by the nature of the control signals in said magnetized portions.

2,999,922

NEON FLASH LIGHT ASSEMBLY
Alfred T. Schmidt, 5547 Vineland, North Hollywood, Calif.

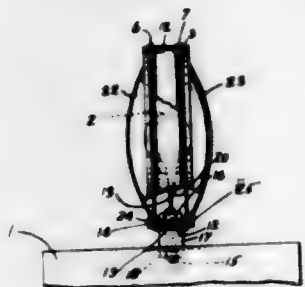
Filed July 20, 1959, Ser. No. 828,371
5 Claims. (Cl. 240-11.4)



1. In a device of the character disclosed, a casing having a circular side wall, a web secured to and within the confines of said side wall, diametrically disposed channel members secured to said web in substantial alignment, a transparent tube provided with half round ends, the half round ends being confined in the aligned channels of said channel members, and a helical neon tube surrounding the transparent tube between the half round ends thereof

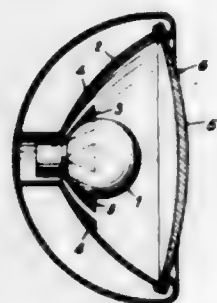
for supporting said helical neon tube, said channel members being formed to detachably receive spring wires adapted to overlie the half round portions of the transparent tube for holding the half around portions within said channel members.

2,999,923
FLASHER LIGHT CASING CONSTRUCTION
Alfred T. Schmidt, 5547 Vineland,
North Hollywood, Calif.
Filed July 20, 1959, Ser. No. 828,372
3 Claims. (Cl. 240-11.4)



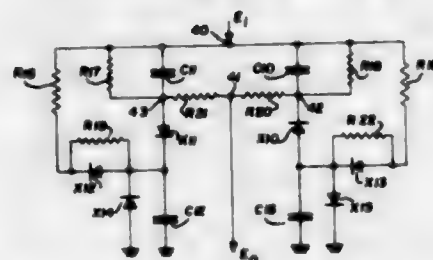
1. In flasher light casing construction, an elongated flexible strip of substantially isosceles trapezoidal cross-section, providing two bases of different dimension joined by legs, the base of greater dimension facing outwardly and the base of lesser dimension facing inwardly, said flexible strip being formed into an annulus to provide a side wall for said flasher light casing, a ring engaging the outwardly facing base for maintaining the flexible member in annular form, said flexible strip being provided with a pair of spaced apart substantially parallel annular grooves on the base of lesser dimension, and the legs of said strip forming flared end walls leading from the outer base to the inner base and said annular grooves, lenses having a diameter substantially equal to the diameter of the annular grooves, the lenses being adapted to have press fit engagement with the flared end walls to expand the said strip for reception of the edges of said lenses within the annular grooves, and a neon tube confined within the flasher light casing and provided with electrodes passed externally of the casing.

2,999,924
ANTI-FOG LIGHTING PROJECTOR
Félix Mottier and Edouard Mottier, Chamby-sur-Montreux, Switzerland
Filed Sept. 3, 1958, Ser. No. 758,843
Claims priority, application Switzerland Sept. 10, 1957
9 Claims. (Cl. 240-41.35)



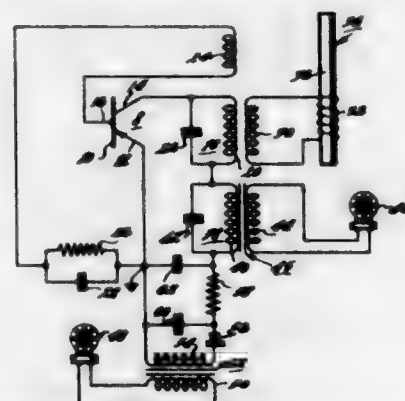
1. An anti-fog lighting projector comprising a source of light rays, a reflector member defining a cavity around the source, said cavity having an opening for the outward passage of light from said source, reflecting coloured areas disposed on the surface of the reflector member around the source, and a reflecting crown secured to said reflector member and disposed on the periphery of said opening in order to reflect the divergent rays inside the reflector.

2,999,925
VARIABLE DECISION THRESHOLD COMPUTER
Elmer Thomas, Adelphi, Md., assignor to Page Communications Engineers, Inc., Washington, D.C., a corporation of Delaware
Filed Jan. 28, 1959, Ser. No. 789,638
13 Claims. (Cl. 250-8)



1. In an apparatus for reducing the error effect of fading of carrier type keying signals, the combination comprising means for receiving discrete binary signals, means for separating sequentially received signals of different type in distinct circuits, means for storing said different signals separately in said circuits, means for comparing each last received stored signal of one type to the current input signal of the other type to establish a first decision threshold, and means for erasing said stored signals upon receipt of a prolonged input signal of one type to establish a second decision threshold.

2,999,926
SEMI-CONDUCTOR SIGNAL TRANSMITTING SYSTEMS
Dietrich A. Jenny, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 30, 1953, Ser. No. 401,304
2 Claims. (Cl. 250-17)

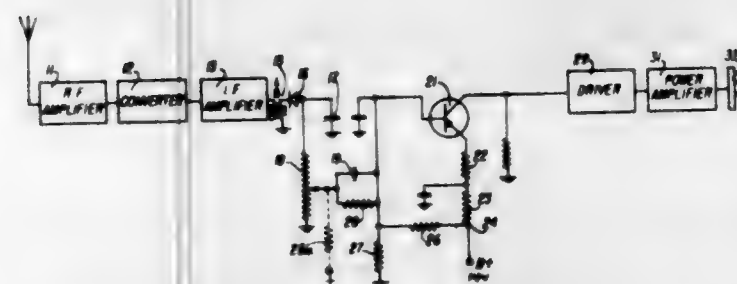


2. In combination with an amplitude modulated oscillator circuit including a semi-conductor device having a semi-conductive body and base, emitter and collector electrodes cooperatively associated therewith, a first means for converting applied acoustical energy into electrical energy, means including a rectifier circuit coupled between said first means and said device and operative to apply direct current biasing potentials to said device, said direct current biasing potentials from said rectifier providing the sole source of biasing potentials for said device, a second means for converting said acoustical energy into electrical energy, said second means being connected to amplitude modulate said oscillator circuit, and an output circuit for said oscillator circuit tunable to modulated oscillator signals connected with the collector electrode of said device.

2,999,927
RADIO RECEIVER CIRCUIT
Bernhard Birkenes, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 3, 1958, Ser. No. 771,538
3 Claims. (Cl. 250-20)

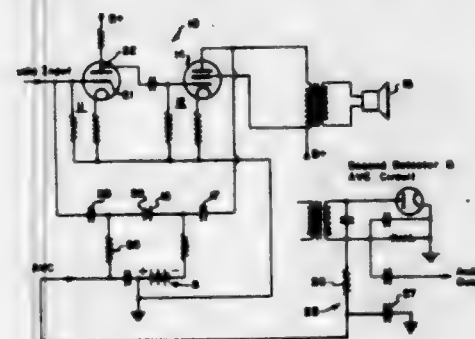
1. In an automobile radio receiver operative directly from an electrical system of a vehicle which provides a

potential subject to abrupt change during operation of the vehicle, including in combination, a detector circuit for demodulating radio signals comprising a signal input transformer, a detector diode, and a detector load impedance, said load impedance including first resistor means coupled between said detector diode and a reference point thereby forming a detector load across which demodulated signals are developed, an audio frequency amplifier circuit including a transistor having an input electrode and further electrodes, circuit means for deriving amplified signals from said further electrodes, an audio frequency coupling capacitor connected between said first resistor means and said input electrode for applying the demodulated signals from said detector circuit to said audio frequency amplifier circuit, said coupling capacitor forming means for deriving detected audio frequency voltages from said detector circuit, voltage divider



means energized by the vehicle electrical system and connected to said input electrode for biasing the same with respect to the reference point whereby a substantial direct current potential is developed across said coupling capacitor, said diode being poled to cause reverse biasing thereof upon the aforementioned potential change in the vehicle electrical system and consequent charge change of said coupling capacitor, and a second untapped resistor coupled solely from a point of said first resistor means remote from the reference point to a potential of the order of that established by the electrical system, said second resistor having a value substantially greater than that of said first resistor means whereby said first resistor means and said second resistor form a network to forward bias said diode and overcome the tendency for sensitivity change of said detector diode during the charge change of said coupling capacitor.

2,999,928
PORTABLE CLOCK-RADIO ALARM SYSTEM
Arthur W. Haydon, Milford, Conn., and Henry T. Winchel, Culver City, Calif., assignors to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware
Filed Sept. 2, 1959, Ser. No. 837,679
1 Claim. (Cl. 250-20)



A radio receiving system for automatically detecting the presence or absence of a transmitted signal and for performing an alarm function in response to the absence of a transmitted signal, comprising circuit means for

detecting said signal, said circuit means including automatic volume control voltage producing circuit means for automatically maintaining the strength of said signal at a substantially constant level, feedback circuit means including part of the voltage output circuit of an amplification stage in said radio receiving system for introducing a voltage additively into a preceding amplification stage such that said voltage will cause an oscillation to develop in the amplification stages across which said voltage is maintained, means for controlling the passage of said feedback voltage to said preceding stage comprising a diode connected in series with said feedback means, a source of biasing voltage normally biasing said diode to conduct said feedback voltage to said preceding stage, circuit means connecting the automatic volume control voltage producing circuit means to said diode to apply a voltage in opposing relation to said biasing voltage, said automatic volume control voltage being of such magnitude in relation to said bias voltage as to condition said diode to be substantially non-conductive of the positive feedback voltage when a transmitted signal of minimum predetermined strength is being received.

2,999,929
INFRA-RED GAS ANALYSERS
Albert E. Martin, John Smart, and Gordon L. Richardson, Newcastle-upon-Tyne, England, assignors to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Apr. 2, 1956, Ser. No. 575,657
Claims priority, application Great Britain Apr. 6, 1955
6 Claims. (Cl. 250-43.5)

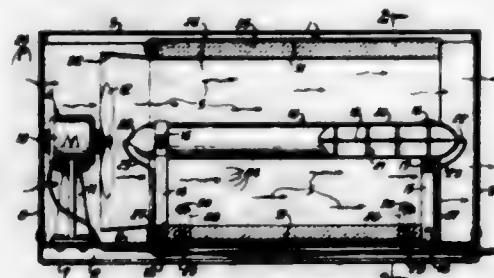


1. In an infra-red gas analyser for the analysis of two components of a gas mixture, comprising infra-red radiation source means, two separate paths for said radiation, means for introducing a gas mixture under test into one radiation path and a gas, which transmits infra-red radiation in the range of wave length absorbed by the gas mixture, into the second path for the analysis of one component gas, and for introducing said second mentioned gas into the first said path and said gas mixture under test into the said second path for the analysis of the second component gas, the combination with the said means for introducing gas into the two said paths of detection means comprising means in one path sensitive to one component gas to be detected and means in the other path sensitive to the other component gas to be detected.

2,999,930
RADIANT ENERGY PURIFIER
Adolf J. Burklin and Francis W. Lauck, Milwaukee, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 26, 1959, Ser. No. 815,961
2 Claims. (Cl. 250-46)

1. Apparatus for thermal treatment of dust particles in air without substantial heating of the air, and in which the air flows through a passage between opposed walls of material substantially transparent to radiant heat energy, a source of radiant heat energy behind one of said walls to apply radiant heat to the entire area within said passage, and a radiant energy reflector behind the oppo-

site of said walls and coextensive therewith to increase the radiant energy treatment of the dust particles in the



flowing air, said transparent material shielding the air from heat conduction from said source and said reflector.

2,999,931

X-RAY INTERFEROMETER

Placido William Zingaro, Hartsdale, N.Y., assignor to Philips Electronics, Inc.
Filed Dec. 4, 1958, Ser. No. 778,175
15 Claims. (Cl. 250-51.5)

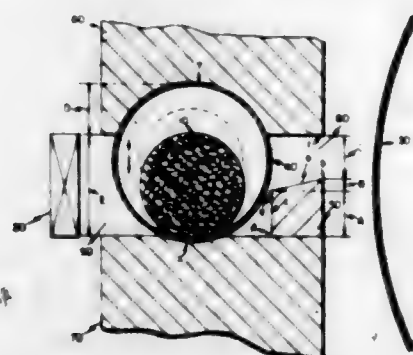


1. An X-ray interferometer comprising a detector, a first diffracting crystal positioned in the path of a beam of X-rays to divide said beam into two portions, a second diffracting crystal positioned to intercept and reflect one portion of the X-rays along a first given path toward said detector, a third diffracting crystal positioned to intercept and reflect the other portion of the X-rays along a second given path toward said detector, and means to move one of said second and third diffracting crystals relative to said detector to thereby vary the length of one of said paths and produce changes in intensity of the resultant beam of X-rays formed by combining said two portions of the X-ray beam in said detector.

2,999,932

MEASURING SYSTEM

David L. Spooner, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Dec. 12, 1957, Ser. No. 702,405
1 Claim. (Cl. 250-83)



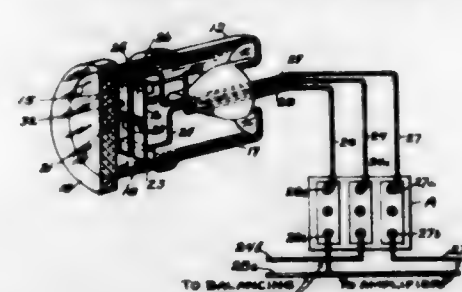
In a continuous measuring system for rod material moving freely through a pass tube, said system including a radio-active source of penetrative radiation, a detector electrically responsive to radiation incident thereat, and means for mounting said source and said detector adjacent said tube and in axial alignment with an aperture

extending transversely therethrough, the height of said aperture being substantially equal to the diameter of said rod material, the improvement comprising a block of radiation absorbent material interposed in the aperture between said rod material and said detector and including a first surface transverse the width of said aperture and extending upwardly in perpendicular relationship to a plane paralleling the horizontal diameter of said rod material and extending therethrough below said diameter wherein radiation passing below said plane is substantially absorbed by said block, and a second surface extending upwardly and outwardly from said first surface toward said detector wherein radiation passing through a substantially small central portion of said rod material above said plane is reflected to fall upon said detector.

2,999,933

RADIATION RESPONSIVE MEANS

Charles F. Green, Schenectady, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of War
Filed Nov. 29, 1939, Ser. No. 306,753
2 Claims. (Cl. 250-83.3)

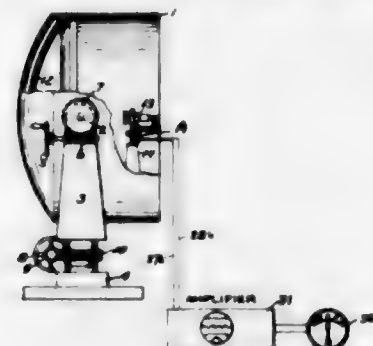


1. A detector comprising a high vacuum thermo-couple tube including a window transparent to thermal radiation, a pair of coplanar thermo-electric generating units arranged in side-by-side relation within said tube, the plane of said units being immediately to the rear of and parallel with the window of said tube, each unit being composed of a pair of vertically disposed narrow flat strips of electrically dissimilar conductors of an order of thinness within the range of 6 to 10 millionths of an inch, the strips of each unit being united to each other along a horizontally disposed junction line arranged intermediate of the strips and being coextensive with their widths, the junction lines of one pair of strips forming a continuation of the other pair of said strips, the respective units being electrically connected in opposition within said tube for automatically compensating for changes in background radiation.

2,999,934

RADIATION DETECTOR APPARATUS

Laurens A. Taylor, Schenectady, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of War
Filed Nov. 29, 1939, Ser. No. 306,755
7 Claims. (Cl. 250-83.3)



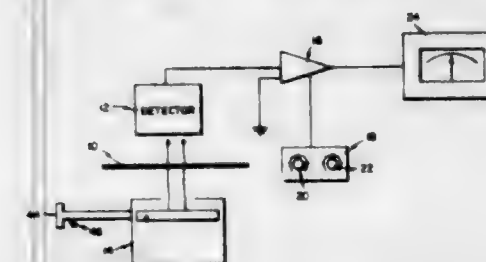
1. In an apparatus for locating distant bodies by thermo-radiation, means for collecting and focusing the

heat radiation from a distant body to form a thermal image thereof, means within the focal region of the collected heat radiation for translating thermal into electrical energy, said means including an evacuated vessel provided with a rock-salt window, thermo-responsive means within the vessel, said means being electrically connected in opposition to effect automatic compensation for changes in background radiation and including a pair of vertically extending laterally spaced thermal junction lines, the latter being such as to provide a relatively wide vertical acceptance angle, one of said thermal junction lines being positioned to receive the thermal image formed by said first-mentioned means and an indicating device in electrical relation with said thermo-responsive means.

2,999,935

CONVERTIBLE RADIATION SOURCE

George B. Foster, Worthington, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Oct. 30, 1957, Ser. No. 693,290
5 Claims. (Cl. 250-83.3)



5. In a measuring system utilizing a radioactive source for determining the variable absorption characteristics of the material under test, a target assembly for varying the mean energy level of radiation emitted by said radioactive source comprising a plurality of bremsstrahlung generator sections each having a different atomic number, and a variable beta collimating section; means for restricting the radiation emitted by said source to an area of said assembly less than one of said sections, and means for altering the relative positions of said source and said assembly.

2,999,936

RADIATION WELL LOGGING

Gerhard Herzog and George M. Wood, Houston, Tex., assignors to Texaco Inc., a corporation of Delaware
Filed Dec. 6, 1957, Ser. No. 701,085
9 Claims. (Cl. 250-83.3)



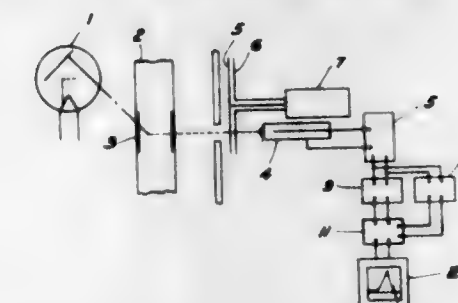
1. The method of logging an earth formation traversed by a bore hole which comprises passing a vertically elongated radiation logging instrument through the bore hole while continuously urging said instrument toward one side of the bore hole in order to direct a sensitive face of the instrument against an adjacent formation, making a penetrative radiation log primarily indicative

of a characteristic of the composition of the earth formations by bombarding an earth formation adjacent the bore hole with primary radiation emitted from a source carried by said instrument and detecting secondary radiation resulting from said primary radiation in a zone whose vertical dimension is a minor fraction of the length of the elongated instrument along its major axis, determining the condition of the wall of the bore hole by passing an electric current through a zone adjacent said sensitive face of the instrument and measuring the electrical resistivity between spaced positions along the sensitive face of the instrument in order to detect minor variations in the configuration of the formation defining the side of the bore hole adjacent said sensitive face of the instrument, recording a signal proportional to the detected radiation in correlation with the depth of the instrument in the bore hole, and recording a signal proportional to the electrical resistivity between said positions as an indication of the configuration of the formation adjacent said sensitive face of the instrument in correlation with the depth of the instrument in the bore hole.

2,999,937

X-RAY APPARATUS

Thomas R. Kohler, Ardsley, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,143
9 Claims. (Cl. 250-83.3)



1. Apparatus for selectively measuring wave-lengths in a polychromatic beam of X-rays comprising means to detect said polychromatic beam of X-rays, and filter means positioned to intercept said polychromatic beam of X-rays before entering the detector in order that the intensity of a selected range of wavelengths may be measured including that of a wave-length corresponding to a given wave-length in said polychromatic beam of X-rays, said filter means comprising two pairs of filter elements, each pair of said filter elements being mounted in a rotatable disc member one pair of filter elements each having an absorption edge which is shorter than said given wave-length and the other pair of filter elements each having an absorption edge which is longer than said given wave-length, and means to rotate said disc member to alternately interpose between the specimen and detector two filter elements having the same absorption edge and two filter elements having different absorption edges.

2,999,938

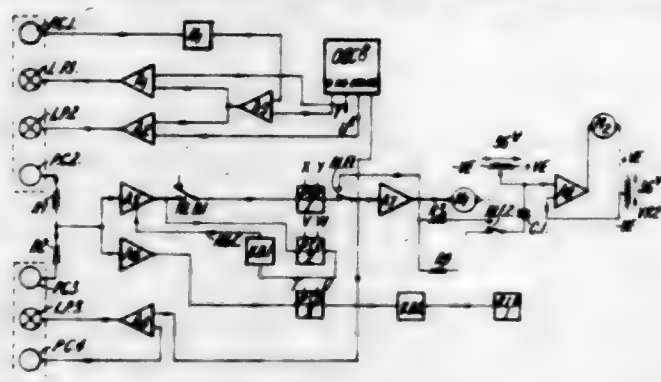
AUTOMATIC LINE FOLLOWER

Arthur Hann, Henry Robert Legge, and Frank Alfred Richards, Luton, England, assignors to Hunting Engineering Limited, Bedfordshire, England, a British company

Filed Apr. 21, 1959, Ser. No. 807,872
Claims priority, application Great Britain Apr. 22, 1958
26 Claims. (Cl. 250-202)

1. Apparatus for following a line marked on a surface providing a background having a different reflectivity to that of the line, which apparatus comprises in combination a scanning unit comprising illuminating means for directing light at the surface so that the line is illumin-

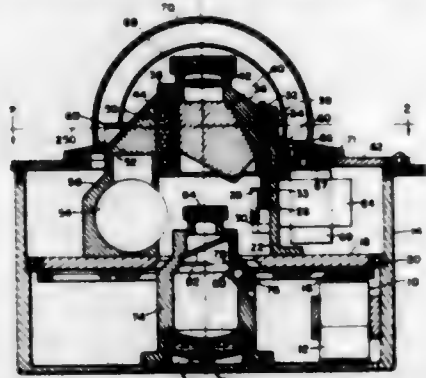
ated and a light sensitive device for receiving light reflected back from the surface, said illuminating means providing two periodically-varying light outputs having a phase difference therebetween and respectively forming



areas of illumination in the region of the line, means for moving the scanning unit relatively over the surface and means for analysing the output of the light sensitive device and for providing an output for monitoring the scanning-unit-moving means.

2,999,939 POSITION DETECTOR

Robert E. Bible, Burbank, Calif., Marc G. Dreyfus, Stamford, Conn., and James M. Parker, Livermore, and Robert R. Williamson, Tujunga, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed May 23, 1957, Ser. No. 661,565
29 Claims. (Cl. 250-203)



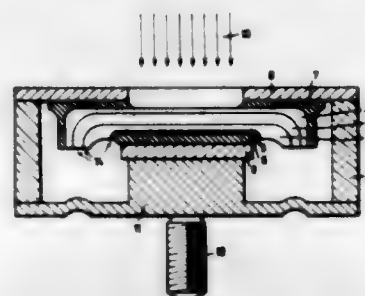
1. In combination for determining the relative position of a measuring object, means including energy-focusing means for producing a reference signal having parameters representing the particular disposition of a simulated body removed from the measuring object and at a particular position below the horizon of the measuring body to provide a reference even with variations in the positioning of the measuring object, means including the energy-focusing means for producing a signal representing the position of a particular body removed from the measuring object and at a selected position above the horizon, and means responsive to the reference means and to the last mentioned means for comparing the parameters of the first and second signals to produce a signal representing the position of the measuring object relative to the selected removed body.

2,999,940 ENCAPSULATED PHOTOELECTRIC SEMI-CONDUCTOR DEVICE

Arnulf Hoffmann, Schlom, Pretzfeld, Upper Franconia, and Walter Hart, Nurnberg, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Stettin, Germany, a corporation of Germany
Filed May 19, 1960, Ser. No. 30,127
Claims priority, application Germany May 29, 1959
2 Claims. (Cl. 250-211)

1. A photoelectric semiconductor device comprising a disc-shaped crystalline semiconductor body having four

successive strata of alternately different types of conductance between the two disc faces so as to provide three n-p junctions of which each is formed between two adjacent ones of said strata and inversely poled relative to the next following junction, two electrodes containing donor and acceptor substance respectively and being alloy-bonded to the two outer strata respectively at the disc faces of said semiconductor body, said two outer



strata having lower ohmic resistance than said other two strata, one of said two electrodes being ring-shaped and leaving exposed a central portion of the adjacent semiconductor stratum to constitute a photosensitive area, and a capsule gas-tightly enclosing said semiconductor body and electrodes, said capsule being area-bonded to said two electrodes and having an opening through which said photosensitive area remains exposed.

2,999,941
SOLID-STATE IMAGE INTENSIFIER
Hendrik Anne Klasens, Johannes Gerrit van Santen, and Hendrik Jacobus Maria Joormann, all of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 10, 1956, Ser. No. 615,183
Claims priority, application Netherlands Oct. 14, 1955
8 Claims. (Cl. 250-213)



1. A solid-state image intensifier comprising a radiation-receiving member and an electroluminescent member in juxtaposed relationship, and a pair of electrodes by means of which a potential can be applied to the juxtaposed radiation-receiving and electroluminescent members, said radiation-receiving member comprising a body containing two materials distributed in lumped amounts throughout the body, one of said materials being a radiation-absorbing and responsive variable-impedance material, the other material possessing a fixed impedance characteristic that increases the quantity of radiation absorbed by the said one material.

2,999,942
SOLID-STATE IMAGE INTENSIFIER
Hendrik Anne Klasens, Gesinus Diemer, and Sjoerd Theunis Stap, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,591
Claims priority, application Netherlands Dec. 20, 1956
7 Claims. (Cl. 250-213)

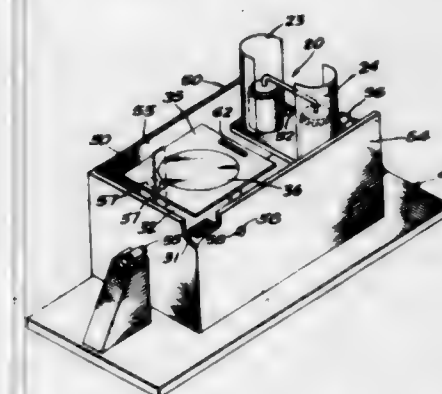
1. A solid-state image intensifier comprising a first layer of radiation-responsive, variable-impedance material, a second layer of voltage-responsive, luminescent material adjacent the first layer and coupled thereto, a third conductive layer conductively connected to the second layer on the side thereof remote from the first layer, radiation-

unresponsive impedance elements on the side of the first layer remote from the second layer, and a pair of interleaved electrodes coupled to the side of the radiation-unresponsive elements remote from the first layer for applying a voltage to a radiation-unresponsive impedance



element in series with a parallel-arranged variable-impedance elemental area and luminescent elemental area, whereby the resistance magnitude of the variable-impedance elemental area, which is determined by incident radiation, determines the voltage applied to the luminescent elemental area and its resultant luminescence.

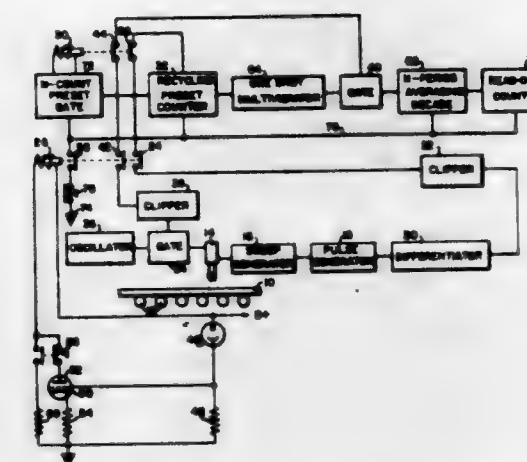
2,999,943
SELF-ORIENTING HELIOTROPIC DEVICE
Charles Willard Geer, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Dec. 8, 1959, Ser. No. 858,150
13 Claims. (Cl. 250-215)



1. A positive heliotropic device including a temperature differential sensing mechanism having a plurality of containers which are tubularly connected and sealed so as to form a closed system, said system containing a predetermined quantity of liquid which has a low boiling point; a shield supported adjacent each container and movable in concert therewith, said shields being so proportioned and positioned that when said containers and a source of radiant energy are in a predetermined relation, said containers are equally insulated, and when not in said predetermined relation, said shields allow a greater amount of radiant energy to strike those of said containers most distant from said source and a lesser amount to strike those of said containers less distant from said source, thereby producing a temperature differential between said containers; and support means rotatably connected to said mechanism whereby said temperature differential between said containers results in a transfer of liquid to the cooler container thus causing a change in the static balance of said mechanism and rotation thereof with respect to said support until said temperature differential is eliminated.

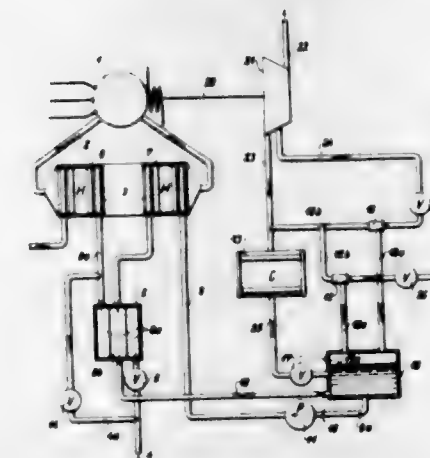
2. A device according to claim 1 wherein a solar energy converter panel is coupled to said mechanism and is movable in concert therewith.

2,999,944
NON-CONTACTING WIDTH GAGE
John F. Laycak, Duquesne, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 29, 1959, Ser. No. 862,676
11 Claims. (Cl. 250-219)



1. In apparatus for measuring the edge-to-edge dimension of an article, means for producing a train of voltage pulses having a predetermined pulse recurrence frequency, means for producing groups of pulses in which the number of pulses in each group is proportional to the dimension being measured and the recurrence frequency of the groups of pulses is equal to the recurrence frequency of said train of pulses, means including a counting device for producing a gating pulse in response to a predetermined number of pulses in said train, means for gating said groups of pulses with said gating pulse, and a device for counting the pulses passing through said gating means.

2,999,945
PROCESS OF AND APPARATUS FOR COOLING ELECTRICAL GENERATORS
László Heller and Árpád Bakay, Budapest, Hungary, assignors to Licencia Talalmányokat Ertekesito Vallalat, Budapest, Hungary
Filed Dec. 10, 1958, Ser. No. 779,475
Claims priority, application Hungary Dec. 14, 1957
12 Claims. (Cl. 290-2)



12. The process of cooling an electrical generator, comprising the steps of circulating a cooling medium through said generator, passing said cooling medium, when heated by said generator, in heat exchange relationship first with natural cooling water and then with a refrigerant condensate, and artificially cooling said condensate prior to reuse thereof for further cooling of additional quantities of said heated cooling medium, said last-mentioned step comprising evaporating a portion of said condensate in an evaporator of a refrigerating machine.

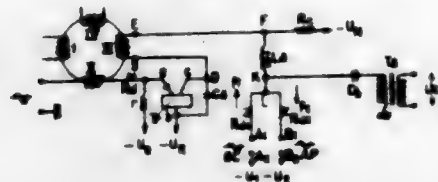
2,999,946

POLARISED MAGNETOSTATIC RELAY

Pierre Burstow, Paris, France, assignor to Compagnie Industrielle des Telephones, Paris, France, a corporation of France

Filed Feb. 2, 1959, Ser. No. 790,602

Claims priority, application France Feb. 13, 1958
7 Claims. (Cl. 307—88)



6. A polarized magnetostatic relay having three stable operating states, comprising a magnetic amplifier including a saturable magnetic circuit with an operating winding wound thereon and a plurality of further windings wound thereon including at least a control winding and a feedback winding, a transistor connected in circuit with the operating winding and including a collector electrode, said collector electrode being connected in a circuit including said feedback winding and a load impedance with the collector current providing negative feedback ampere-turns at said feedback winding, a pair of branch circuits connected to said collector circuit between the collector and said load impedance, each branch circuit including a rectifier and a respective direct-current source, each said direct-current source providing a potential in the respective branch circuit whereby each of said branch circuits may selectively be made conducting or non-conducting to direct-current, depending upon the potential of the collector which is determined by the total control ampere-turns of said further windings, and means connected to said branch circuits for utilizing the changes in direct-currents therein.

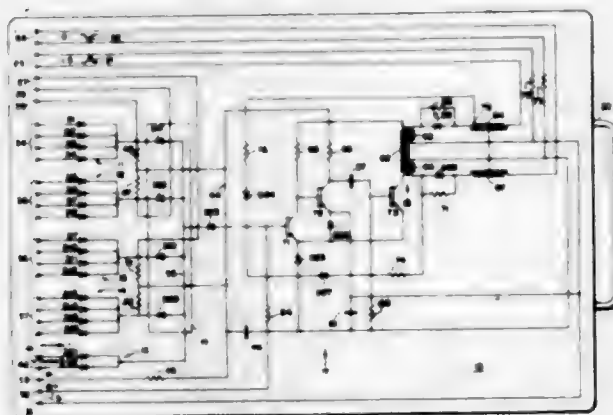
2,999,947

UNIVERSAL LOGICAL PACKAGE

Franklin R. Dean, Needham, Mass., assignor to Computer Control Company, Inc., Wellesley, Mass., a corporation of Massachusetts

Filed Dec. 5, 1957, Ser. No. 700,779

5 Claims. (Cl. 307—88.5)



4. A logical package having input and output terminals and adapted for interconnection and association with a plurality of identical packages for the implementation of logical operations comprising, a plurality of AND gates, each of said AND gates having a plurality of inputs coupled to said input terminals, an OR gate, means for applying the outputs of said AND gates as inputs to said OR gate, a transformer having a primary winding and a pair of secondary windings, a transistor connected to said primary winding for controlling the passage of current in said primary winding, biasing means connected to said transistor for maintaining said transistor in a steady

condition in the absence of a trigger signal, a trigger circuit having its input coupled to the output of said OR gate, means coupling the output trigger signal of said trigger circuit to the input of said transistor, means for transmitting a regenerative signal from one of said secondary windings to the input of said trigger circuit, a signal delay device connected to the other of said secondary windings, and means for transmitting a delayed degenerative signal obtained from said delay device to the input of said trigger circuit to terminate said output trigger signal.

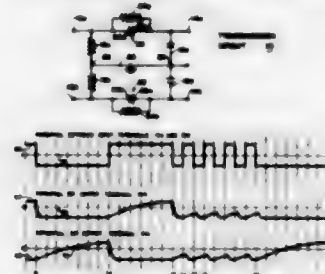
2,999,948

SIGNAL TRANSMISSION CIRCUIT

Robert W. Beckwith, Fayetteville, N.Y.

Filed May 15, 1958, Ser. No. 735,563

3 Claims. (Cl. 307—88.5)



1. As a new use of an electric circuit adapted to produce, at a first and second output terminal thereof, respectively a first and a second unidirectional potential with respect to a point of reference potential in response to alternating potentials applied across a first and a second input terminal thereof, said circuit comprising a first and a second half-circuit balanced to one another with corresponding components of said half-circuits being balanced to one another, said first and second half-circuit respectively comprising: first and second resistance circuit means connected from said point of reference potential to said first and second input terminals respectively, a first and a second non-linear resistance circuit means interconnecting said first terminals and said second terminals respectively, each said non-linear resistance circuit means including a unidirectional device and having a relatively low resistance when its unidirectional device is in the normal forward conduction state and a relatively high resistance when its unidirectional device is in the reverse conduction state, and a first and a second output reactance circuit means connected from said point of reference potential to said first and second output terminal respectively, the time constants of said half-circuits, as determined by their respective resistive and reactive circuit means, when their respective unidirectional devices are in their said reverse conduction states being greater than the periodicity of alternation of said alternating input potentials, the method comprising applying across said input terminals unidirectional potentials of non-zero magnitude as well as said alternating potentials, whereby to produce at said output terminals, with respect to said point of reference potential, unidirectional potentials, with different combinations of polarities depending on whether unidirectional or alternating potential is applied to said input terminals.

2,999,949

ELECTRICAL RESET TIMING DEVICES

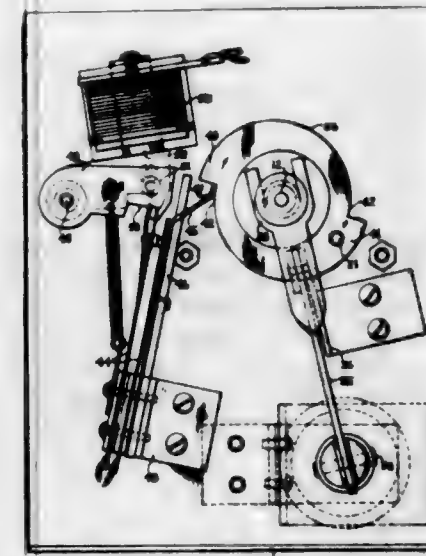
Harry H. Thompson, 4134 W. Newport, Chicago, Ill.

Filed July 27, 1959, Ser. No. 829,740

7 Claims. (Cl. 307—141.4)

2. A device of the class described comprising a mounting plate, a motor on said plate and including a circuit therefor and a shaft, a cam on said shaft for rotation relative thereto, a torsion spring embracing the shaft and arranged between the cam and the plate for effecting rotation of the cam with the shaft, a normally open switch unit in said circuit and including cooperative con-

tact blades, a latch member pivotally carried by the plate and having latched engagement with one of the blades for releasably holding the switch unit in open position, the other blade of said switch unit engaging said cam, electromagnetic means for actuating said latch member to release said one of said switch blades to close said switch unit, pressure means for effecting rotation of said cam



with said shaft by said torsion spring, electromagnetic means for actuating said pressure means to release said cam for rotation relative to said shaft in an opposite direction, and a starting switch to effect simultaneous energization of said electromagnetic latch actuating means and said electromagnetic pressure actuating means to release said latch member and said pressure means respectively.

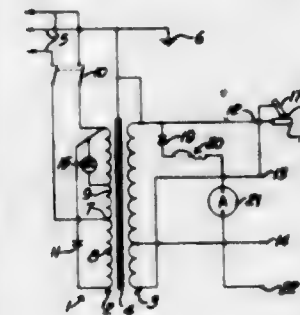
2,999,950

DIRECT CURRENT POWER SOURCE

Arthur E. Johnson, Elkhorn, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Aug. 27, 1958, Ser. No. 757,574

7 Claims. (Cl. 307—155)



7. In a battery charging and arc welding power source adapted to be connected to a single-phase 3-wire power line having one ground wire, a metal housing for said power source, a welding transformer mounted within the housing and having a primary winding adapted to be connected across the full voltage of said 3-wire single-phase power lines and having a secondary output winding adapted to supply a welding current suitable for arc welding, an output terminal mounted on said housing and electrically connected to one end of the secondary output winding and to the housing and to said ground wire, a second output terminal mounted in insulated relation on said housing and connected to said secondary winding in electrically spaced relation to said first output terminal, a metal plate removably attached in direct contact to said housing, a rectifying element mounted on said metal plate and having a negative pole connected to said plate, and a third output terminal mounted in insulated relation on said plate and con-

nected to a positive pole of the rectifying element whereby said first output terminal and said third output terminals provide an output suitable for charging a battery, said construction permitting provision of said battery charging circuit without necessity of internal electrical connection to the transformer.

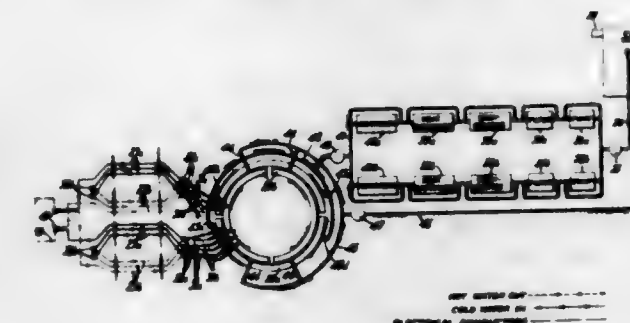
2,999,951

DYNAMOELECTRIC MACHINE COOLING

Edward J. Flynn, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Feb. 26, 1957, Ser. No. 642,409

3 Claims. (Cl. 310—54)



1. In a dynamoelectric machine having a rotor member, a stator member and housing, means for the water cooling of said stator member, said means comprising conduit means within the conductor bars of said stator, connected in electrically insulating manner to means for maintaining the resistivity of the water coolant at a desirable level, said means comprising means for deoxygenating and deionizing said water.

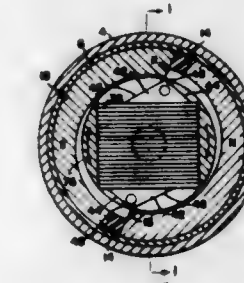
2,999,952

SYNCHRONOUS MOTOR

Frederic J. Hammes, R.D. 1, Birdsboro, Pa., assignor of one-half to Dorothy C. Hammes, Birdsboro, Pa., and one-fourth to John A. Stinson, Jensen Beach, Fla.

Filed June 10, 1960, Ser. No. 35,264

9 Claims. (Cl. 310—154)



1. An alternating current motor comprising a stator, a rotor mounted for rotation within said stator, said stator comprising opposed magnetized cylindrical segments with adjacent segments being of opposite polarity and the inner surfaces of each of the segments being formed eccentrically with respect to the center of rotor rotation, said rotor comprising a coil, a magnetic core extending through said coil, said core having each end formed with a pair of relatively inclined surfaces meeting along a narrow circumferential surface extending substantially longitudinally of the rotor, the surface of each pair of surfaces extending generally in the direction of reducing radius of the stator surfaces forming a smaller angle with a tangent at the center of said narrow circumferential surface than is formed with said tangent by the other surface of each pair, and means supplying to said coil from an alternating current source a unidirectional power supply of one polarity during each portion of rotor rotation represented by one of said segments, said polarity reversing with successive segments.

2,999,953

WINDING ARRANGEMENT FOR DYNAMO-ELECTRIC MACHINE

Irving M. Levy, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 29, 1959, Ser. No. 843,158
4 Claims. (Cl. 310-166)



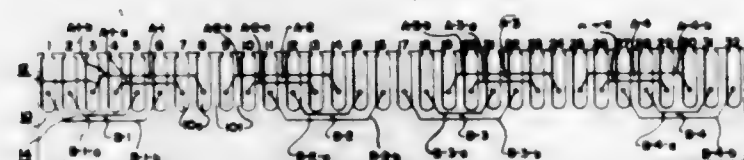
1. A dynamoelectric machine stator winding arrangement, comprising, a stator having a total of thirty-two slots, a first winding including a pair of elements spanning slots 1-11 and 17-27 respectively, numbered arbitrarily, said first elements being connected to each other to provide coils of the same polarity, a second winding including another pair of elements spanning slots 6-16 and 22-32 respectively, said second elements being connected to each other for the same polarity opposite to that of the first pair, said elements all having only one coil side per slot and elements of said first and second windings having overlapping relation to each other between slots 6-11 and also slots 22-27.

2,999,954

TWO-SPEED FOUR-SIX POLE STATOR WINDING ARRANGEMENT

Irving M. Levy, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 29, 1959, Ser. No. 843,211
5 Claims. (Cl. 310-166)



1. A dynamoelectric machine stator winding arrangement, comprising, a stator having a total of thirty-two slots numbered arbitrarily 1 through 32, a first winding including a first coil having concentric segments spanning slots 3-8, 4-7, a second coil having concentric segments spanning slots 9-4, 10-13, a third coil having concentric segments spanning slots 19-24, 20-23, as well as a fourth coil having concentric segments spanning slots 25-30, 26-29 respectively, a second winding including a first coil having concentric segments spanning slots 1-6, 2-5, a second coil having concentric segments spanning slots 11-16, 12-15, a third coil having concentric segments spanning slots 17-22, 18-21, as well as a fourth coil having concentric segments spanning slots 27-32, 28-31 respectively, means connecting said first four coils together in pairs in a sequence of alternate polarity, said second four coils being wound and interconnected together in pairs in a sequence of alternate polarity, all of said elements of both first and second windings having only one coil side per slot and having overlapping relation such that one coil side of each of said elements of one winding is centrally located relative to elements of the other winding.

2,999,955

TWO-SPEED TWO-FOUR POLE STATOR WINDING ARRANGEMENT

Irving M. Levy, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 29, 1959, Ser. No. 843,210
6 Claims. (Cl. 310-188)

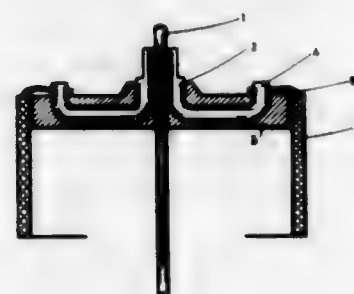


1. A dynamoelectric machine stator winding arrangement, comprising, a stator having a total of twenty-four slots, a first winding including a first coil having concentric segments spanning slots 1-6, 2-5, a second coil having concentric segments spanning slots 7-12, 8-11, a third coil having concentric segments spanning slots 13-18, 14-17 as well as a fourth coil having concentric segments spanning slots 19-24, 20-23 respectively, a second winding including a first coil having concentric segments spanning slots 3-10, 4-9 as well as a second coil having concentric segments spanning slots 15-22, 16-21 respectively, means connecting coils one and four in series with each other and joined at one end at least with coils two and three in series with each other, said coils of said second winding having a connection in series with each other such that one end is also joined where coils three and four of said first winding are joined, all of said coils of both first and second windings having only one coil side per slot such that one coil side of each segment fills one slot, each of said twenty-four slots having one coil side therein.

2,999,956

COMMUTATOR FOR MINIATURE MOTORS

Fritz Füllhaber, Johann-Sebastian-Bach-Weg 9, Schönmach, Württemberg, Germany
Filed Apr. 24, 1959, Ser. No. 808,651
Claims priority, application Germany Apr. 26, 1958
7 Claims. (Cl. 310-235)



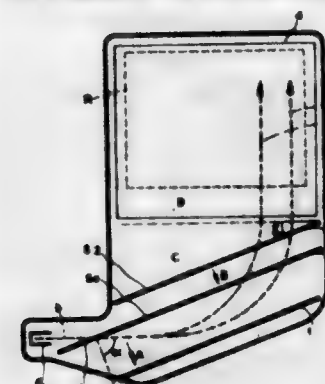
1. A commutator for a miniature device for interconversion of electrical and mechanical energy, comprising a number of commutator segments distributed about the axial center line of the commutator, each segment being formed of a piece of wire of rounded cross section and having a first portion of its length extending along and near said axial center line and an adjacent portion extending outwardly away from said center line, and a coaxially mounted body of insulating material in which the said adjacent portions are embedded, the respective ends of said first portions freely protruding from the insulating material at the same side and being insulated from each other by intermediate free air spaces, the said ends having outer inset surface portions forming in conjunction with each other a cylindrical coaxial collector surface having a radius less than that corresponding to the diameter of the original rounded wire plus the distance of the wire to said axial center line.

2,999,957

CATHODE RAY TUBE

Pieter Schagen, Salfords, near Redhill, and Nigel David Ritchie Calder, Crawley, England, assignors to North American Philips Company, Inc., New York, N.Y.

Filed July 24, 1957, Ser. No. 673,796
Claims priority, application Great Britain Aug. 1, 1956
13 Claims. (Cl. 313-79)

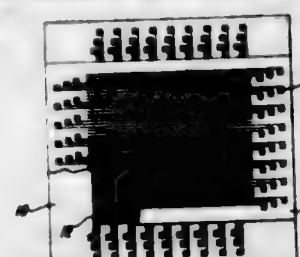


3. A cathode-ray device comprising a pair of spaced control electrodes of elongated form and defining therebetween a trajectory control space, an electron-receiving target associated with one of said electrodes, means for launching an electron beam into said trajectory control space along a selected trajectory, and means for establishing in said trajectory control space a graded electrostatic electron-deflecting field that continuously increases in intensity along a given dimension of the device for bending said selected trajectory to terminate on said target and for providing a focusing effect for the beam which varies in accordance with the selected beam trajectory.

2,999,958

ELECTROLUMINESCENT DISPLAY DEVICE

Edwin Roy Bowerman, Jr., Whitestone, and Albert J. Marko, Deer Park, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,745
2 Claims. (Cl. 313-108)



1. An electroluminescent device comprising an electroluminescent layer; a first set of parallel separate optically opaque electrodes extending in a first direction and secured to one surface of said layer, said first set of electrodes being composed of an inert metal selected from the class consisting of gold and platinum; and a second set of parallel separate optically opaque electrodes extending in a second and non-parallel direction and secured to the other surface of said layer, said second set electrodes being composed of aluminum, the electrodes in at least one of said sets of electrodes having widths substantially equal to the thickness of said electroluminescent layer, the thickness of said electroluminescent layer being between 1 and 3 mils.

2,999,959

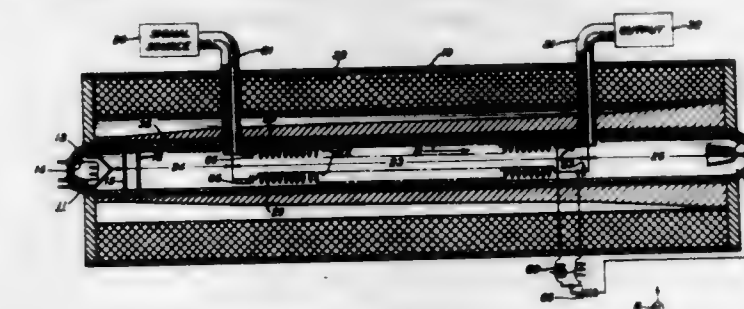
TRAVELING WAVE TUBE

Johan Wilhelm Klaver, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 4, 1960, Ser. No. 19,553
8 Claims. (Cl. 315-3.6)

2. A transverse-field device comprising a cathode for forming and projecting a beam of electrons, said beam

being characterized by a spurious cyclotron wave noise content, means for minimizing said cyclotron wave noise content comprising means for producing a high magnetic flux density throughout said cathode, a source of electromagnetic signal waves, input means coupled to said source



means including said input means for producing signal cyclotron waves on said beam, means for causing said signal cyclotron waves to interact with said electromagnetic signal waves, and means for causing said flux density to decrease with distance from said cathode to said input means.

2,999,960

LIGHTNING ARRESTER

Francis V. Cunningham, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Dec. 12, 1957, Ser. No. 702,370
9 Claims. (Cl. 315-36)

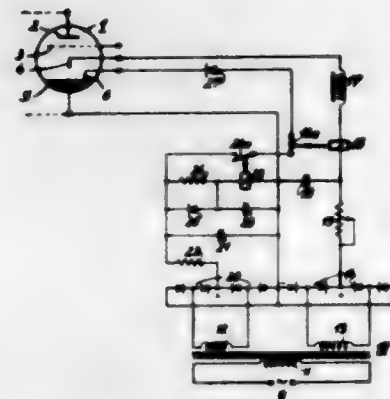


1. In combination, a valve type lightning arrester having one side connected to ground and including a housing having a conductive closure cap and enclosing a spark gap structure and a negative resistance element, in series with said spark gap structure, and protective gap means in series relation with a power line and said conductive closure cap, said protective gap means comprising a housing, and first and second relatively spaced electrodes disposed within said protective gap housing, said protective gap housing having a re-entrant surface adjacent said first and second electrodes for increasing the creepage path between said first and second electrodes, one of said electrodes being adapted to be connected to said line and the other of said electrodes being supported by said conductive closure cap and supporting said protective gap housing.

2,999,961

IGNITION AND EXCITATION CIRCUIT FOR SINGLE-ANODE POOL-TYPE DISCHARGE VESSELS

Ludwig Filberich, Berlin-Stemmenstadt, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Stemmenstadt, Germany, a corporation of Germany
Filed Oct. 21, 1959, Ser. No. 847,794
Claims priority, application Germany Nov. 5, 1958
10 Claims. (Cl. 315-168)

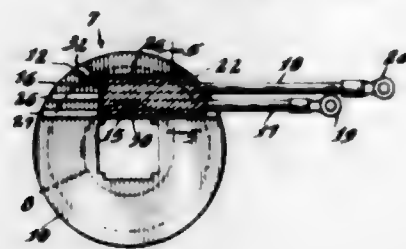


1. With a single-anode discharge vessel having a pool cathode, a main anode, an ignitor and an excitation anode, the combination of an ignition and excitation system comprising a pulse circuit connected between said cathode and said ignitor and having pulse generating means for supplying an ignition pulse to said ignitor, an excitation circuit connected between said cathode and said excitation anode and having continuous-current supply means, an electric energy storer and a direct-current source connected thereto for normally maintaining said storer in charged condition, and control circuit means connected with said excitation circuit and responsive to current change in said excitation circuit, said control circuit means connecting said energy storer to said pulse circuit for issuing an ignition pulse from said storer to said ignitor, whereby the moment of said pulse is dependent upon the vanishing moment of excitation current and independent of the phase condition of the discharge vessel to re-ignite said excitation prior to the next conducting halfcycle period of said vessel.

2,999,962

COIL CONSTRUCTION

John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed June 10, 1957, Ser. No. 664,673
2 Claims. (Cl. 317-158)



1. A coil construction comprising a spool having a core and two end portions of electrical insulating material, wire wound on said core between said end portions, at least three spaced parallel ribs of fusible material on the outer face of one of said end portions, said ribs defining two elongated grooves, said ribbed end portion having an aperture therethrough leading to one of said grooves, the inner end length of said wire extending through said aperture and lying in said one groove, the outer end length of said wire lying in the other of said grooves, a sleeve of fusible electrical insulating material on each end length of said wire and lying in part in the respective grooves, said

sleeves each having a free end beyond said grooves, a terminal member mechanically fixed to the free end of each sleeve and electrically connected to the wire therein, said ribs and portions of said sleeves between said ribs being in fused relation with each other, whereby strain between said spool and said terminal members is carried by said sleeves and said wire end lengths are free of strain.

2,999,963

DRY RECTIFIER OF SMALL TYPE

Heinz Schneider, Berlin-Haselhorst, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed July 12, 1960, Ser. No. 42,255
Claims priority, application Germany July 22, 1959
6 Claims. (Cl. 317-234)

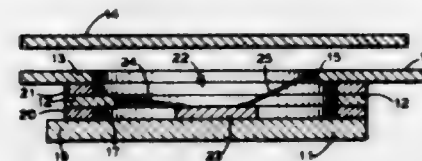


1. A dry rectifier comprising a stack of rectangular rectifier elements and connector plates, which stack is enclosed at the bottom and two opposite sides by a metallic member of U-shaped cross section lined by insulation, a top cover plate which rests upon a fourth side of the stack, bent lugs formed as extensions of opposite side walls of said member and serving to fasten the cover plate, the cover plate having lateral flange portions which rest upon contact edge faces of said opposite side walls, the middle portion of the cover plate protruding into the space between the said opposite walls, and constituting a spacer piece, said opposite walls having upper marginal portions which are bent to flare outwardly and upwardly in an inclined direction, whereby the edge faces of the walls providing said contact faces extend in the outward and downward direction, the said middle portion of the cover plate being wedge-shaped and being inserted between the flared-out portions, so that, when said lugs are bent inwardly to fasten the cover, the bending pressure imposes a stress exclusively upon the cover plate but not upon the rectifier elements.

2,999,964

HOLDERS FOR ELECTRICAL DEVICES

Mannes N. Glickman, Nutley, N.J.
(2780 Woodshire Drive, Hollywood 28, Calif.)
Filed July 18, 1960, Ser. No. 43,608
7 Claims. (Cl. 317-234)

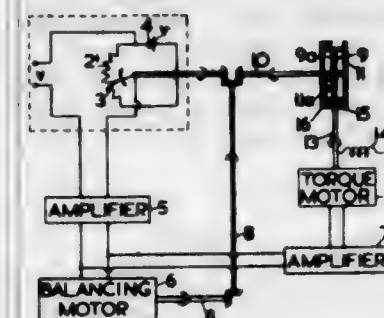


1. A casing for an electrical device having at least two terminal leads, comprising a bottom metal plate, an annular metal plate overlying the bottom plate, an annular layer of fused electrical insulating material securing said plates together to provide a hollow open ended casing for receiving therein said electrical device, means on interior surface portions of said plates for electrical connection to the leads of said device, means on exterior portions of said plates providing external electrical connections and adapted to allow for electrical testing of said device in the open ended casing, and a metal closure plate secured to outer surface portions of said annular plate for sealing said casing.

2,999,965

ELECTRICAL MEASURING SERVOSYSTEM

Leslie Akroy, Cove, near Farnborough, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Apr. 28, 1959, Ser. No. 809,427
Claims priority, application Great Britain May 1, 1958
2 Claims. (Cl. 318-28)



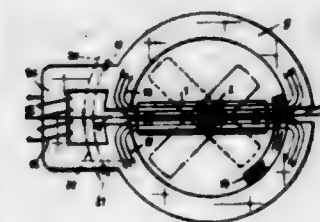
1. In an electrical instrument comprising a digital encoder having an input member and a carrier member, said carrier member having spring means normally holding it in a datum position, and a self balancing negative feedback servo system including a drive motor connected to be operated in accordance with the degree of unbalance of the system and connected mechanically to drive the input member of the digital encoder, the provision of a second drive motor connected electrically to be operated in accordance with the degree of unbalance of the system and connected mechanically to drive the carrier member against its spring influence in the opposite sense to that in which the input member is driven.

2,999,966

TIMEPIECE COMPRISING AN ELECTROMAGNETICALLY MAINTAINED OSCILLATING REGULATOR

André Beyner and René Besnon, Neuchâtel, Switzerland, assignors to Ebauches S.A., Neuchâtel, Switzerland, a firm

Filed May 13, 1959, Ser. No. 812,841
11 Claims. (Cl. 318-132)



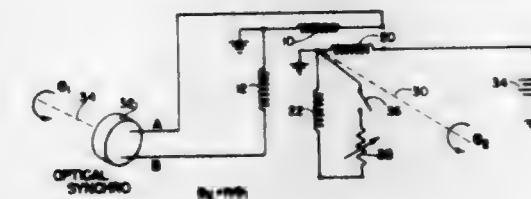
1. In a timepiece having an electromagnetically maintained oscillating regulator member, an oscillating field magnet, a ring having high magnetic permeability, situated in the immediate neighbourhood of the said magnet and canalizing its magnetic flux in such manner as to divide it into partial fluxes, the number of which is equal to the number of poles of the magnet, the said ring being open at at least one point, a branch from the said ring, facing the said aperture, a pick-up winding coiled around the said branch of the ring, and a driving winding, situated in the area swept by the said magnetic flux when the said magnet oscillates, and intended to maintain the oscillations of the said magnet, the whole arrangement being such that, as long as the magnet is not situated opposite the aperture of the ring, the pick-up winding is washed by a constant magnetic flux, the value of which is equal to that of one partial flux, the said flux changing sign by passing through zero when one pole of the magnet travels past the said aperture of the ring, whereby there is induced in the pick-up winding an impulse signal which

controls the feed of the driving winding in such manner that the regulator thus receives a single driving impulse per complete oscillation of the magnet.

2,999,967

SERVO SYSTEMS

Harold H. Seward, 7 Leroy Drive, Burlington, Mass.
Filed Apr. 23, 1959, Ser. No. 808,378
6 Claims. (Cl. 318-171)

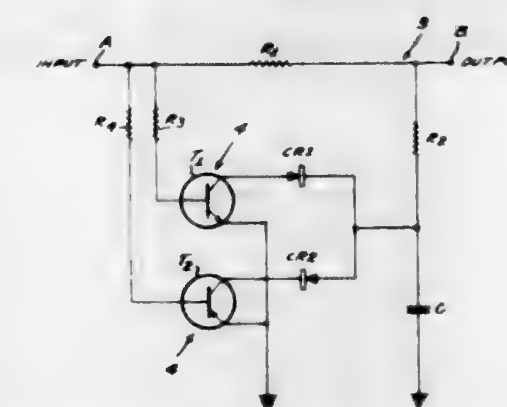


1. Apparatus for electrically driving a shaft comprising, in combination: a resolver including a stator and a rotor, each having a pair of space quadrature windings, and a shaft connected to said rotor; an optical synchro including a rotatable input shaft and operative in response to the position of said input shaft to provide first and second triangular waveform output signals in electrical phase quadrature, said signals having N cycles for each revolution of said input shaft where N is an integer greater than 1; connections from said optical synchro to said resolver for applying said first and second signals to one of said pairs of space quadrature windings to produce a magnetic field rotating N times for each revolution of said input shaft; and a source of excitation current connected to the other of said pairs of space quadrature windings.

2,999,968

SWITCHING CIRCUIT FOR NONLINEAR SERVO INTEGRAL COMPENSATION

Mervin Weiss, Pearl River, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,333
3 Claims. (Cl. 320-1)



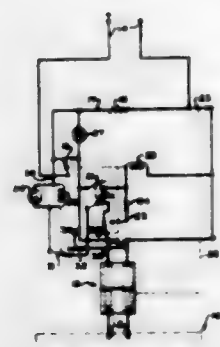
2. An integration circuit of the character described comprising an input terminal which is adapted to have a D.C. input voltage applied thereto, an output terminal, and a ground terminal, a storage capacitor interposed between said output terminal and said ground terminal, and a transistorized switching means interposed between said capacitor and said input terminal, said switching means being operative to add the capacitor voltage to the input voltage when the input voltage and the capacitor voltage have the same polarity and to instantly discharge said capacitor to zero potential through said ground terminal when the polarity of the capacitor voltage is opposite to the polarity of the input voltage.

2,999,969

SIGNALING ARRANGEMENTS FOR BATTERY CHARGING CIRCUIT

George H. Fritzinger and Sol S. Jaffe, West Orange, N.J., assignors, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey

Filed Dec. 17, 1958, Ser. No. 780,981
11 Claims. (Cl. 320-48)



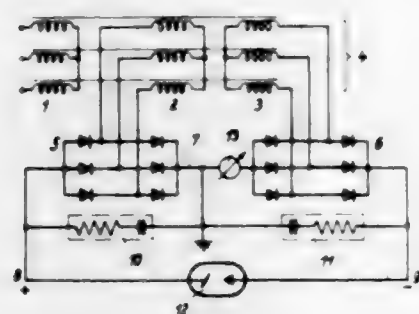
6. In a charging circuit for a sealed storage battery having a switch operable from a normal position as the battery reaches a predetermined state of charge: the combination of means for connecting a battery to said charging circuit, means for activating said charging circuit to start the charging of said battery, means controlled by said battery switch for releasing said activating means to terminate the charging of the battery as said battery switch is operated from normal position, a signaling device, means responsive to operation of said battery switch for placing said signaling device in operation, and means responsive to said connecting means as the battery is disconnected from said charging circuit for placing said signaling device out of operation.

2,999,970

CIRCUIT ARRANGEMENT FOR X-RAY APPARATUS PROVIDING FOR THREE-PHASE FULL WAVE RECTIFICATION OF ALTERNATING CURRENT

Heinz Schwesig and Kurt Bischoff, Erlangen, Germany, assignors to Siemens-Reiniger-Werke Aktiengesellschaft, Erlangen, Germany

Filed Aug. 8, 1956, Ser. No. 602,830
Claims priority, application Germany Aug. 16, 1955
4 Claims. (Cl. 321-27)



1. A three-phase high voltage generator with full wave rectification, for use in connection with X-ray apparatus, comprising primary winding means for each phase, an even number of secondary transformer windings for each phase, said windings being connected to form respective three phase winding groups, each of which contains a winding from each phase and produces three phase output voltages of identical magnitude, each winding group having a group of dry rectifier elements interconnected therewith in a three-phase full-wave rectification circuit, the direct-current outputs of the dry rectifier groups being connected in series with the opposite sides of the output

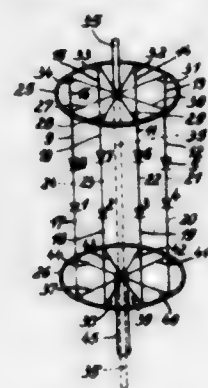
of such series circuit being respectively allocated to the anode and cathode terminals of the X-ray tube and the symmetry point of the series circuit being grounded.

2,999,971

POWER CURRENT RECTIFIER WITH SEMICONDUCTING RECTIFIER UNITS

Paul Schnecke, Berlin-Stemestadt, Germany, assignor to Siemens-Schuckertwerke, Aktiengesellschaft, Berlin, Germany, a corporation of Germany

Filed July 9, 1959, Ser. No. 825,939
Claims priority, application Germany July 10, 1958
26 Claims. (Cl. 321-27)



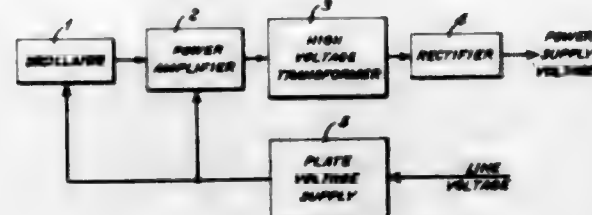
1. Power-current rectifier apparatus comprising a number of like semiconductor-rectifier units electrically connected in parallel, a system of conductors comprising two feeder buses having a common axis defining the center axis of the cage system, a number of conductor elements extending about said center axis and generally longitudinally thereto, said conductor elements being uniformly distributed about said axis and including said respective semiconductor-rectifier units, and two groups of connecting conductors radiating from each of said respective feeder buses and electrically connecting each bus with said respective cage-rod conductors on axially opposite sides respectively of said units, and means for propelling cooling gas between the radiating conductors.

2,999,972

STABILIZED POWER SUPPLY

Larry J. Stroman, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Mar. 13, 1958, Ser. No. 721,245
7 Claims. (Cl. 323-44)



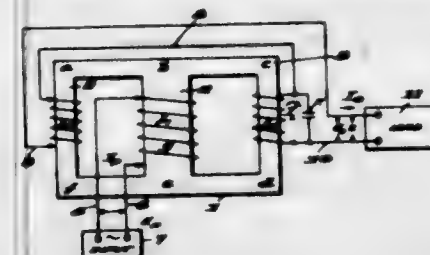
1. A power supply operable to translate a line voltage into a power supply voltage and to regulate the amplitude of the power supply voltage against changes in line voltage comprising means including an oscillator supplied with said line voltage and operable to supply an output voltage increasing with increasing line voltage, said means having a frequency of output voltage versus line voltage characteristic of one sense, and means including a transformer connected to said means including an oscillator to receive said output voltage and operable to supply said power supply voltage, said transformer having a power supply voltage versus frequency characteristic of the opposite sense to compensate for the said characteristic of said means including an oscillator.

2,999,973

TRANSFORMER APPARATUS

Lewis A. Medlar, Oreland, Pa., assignor to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 15, 1957, Ser. No. 646,429
17 Claims. (Cl. 323-60)



17. A magnetic servo system for supplying controllable magnitude alternating current from an A.C. input to a load comprising at least three inductively coupled electrical coils, a first and a second of said coils being connected in series; an input, an output, and a control electrical circuit, all passing current, the input electrical circuit including one of (a) a third one of said coils and (b) the series combination of said first and second coils and being connected across said A.C. input, the output electrical circuit including the other of (a) said third coil and (b) the series combination of said first and second coils and being connected across said load; the coils of said input and said output electrical circuits being linked by magnetic paths forming an input and an output magnetic circuit having two common portions, one of said magnetic circuits having a portion not common to both of said circuits and said input and output electrical circuits being so inductively related to said common portions that the input and output magnetomotive forces generated by the input and output currents aid in one of said common portions and oppose in the other; and a capacitive reactance, said control electrical circuit including said capacitive reactance and being inductively coupled to a first one of said common portions; whereby no power is directly coupled between said input and output electrical circuits, but the control current producing a magnetomotive force in said first portion of the magnetic circuits of phase and magnitude to produce a resultant of the control and output magnetomotive forces opposite to the output magnetomotive force in said first common portion and thereby to couple power from the input to the load through said control electrical circuit; the control magnetomotive force functioning as the standard and being automatically compared in said magnetic circuits with said output magnetomotive force to furnish a net magnetomotive force equal in magnitude and phase to their vector difference, said net magnetomotive force operating as the error and being automatically translated in the magnetic circuits into a circulating flux which produces an output voltage in said output electrical circuit, and the output voltage being operative to drive the output current which is the regulated quantity and which generates the output magnetomotive force, the feedback quantity.

2,999,974

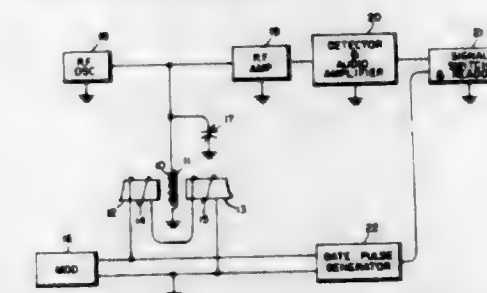
SIGNAL SWITCH AND READOUT FOR NUCLEAR MAGNETIC RESONANCE MEASUREMENT APPARATUS

Clyde W. Pinkley, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed July 5, 1960, Ser. No. 40,754
8 Claims. (Cl. 324-5)

1. In nuclear magnetic resonance apparatus for subjecting a material to be analyzed to mutually perpendicular magnetic and radio-frequency fields including a resonant tank circuit and amplifier circuitry to develop an absorption signal pulse train in response to a condition of

nuclear resonance between the fields and for the material being measured, improved signal switch apparatus comprising a gate pulse generator developing a gate pulse train coincident with the signal pulse train, a bias voltage source, a first amplifier adding the gate pulse train and the bias voltage, a second amplifier adding the signal pulse train, gate pulse train and the bias voltage, a clipping circuit



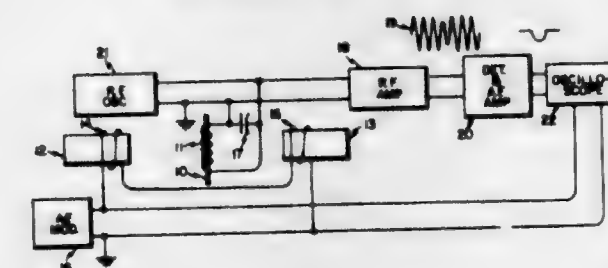
clipping the voltages added by the first amplifier, a second clipping circuit clipping the voltages added by the second amplifier, and a subtraction amplifier subtracting the added voltages of one of the adding amplifiers from the added voltages of the other adding amplifier, thereby developing an output signal pulse train with a substantially reduced noise level between output signal pulses.

2,999,975

NUCLEAR MAGNETIC RESONANCE MEASURING AND CONTROL DEVICE

Clyde W. Pinkley, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

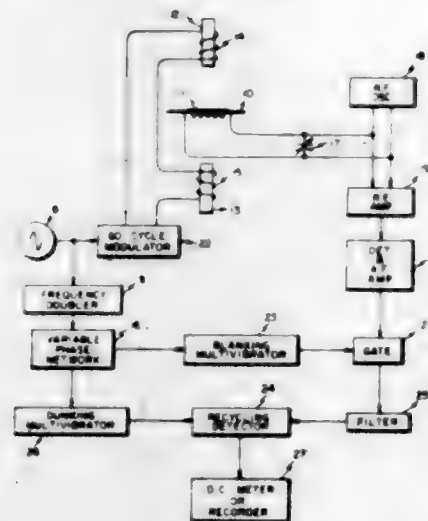
Filed Mar. 3, 1958, Ser. No. 718,633
9 Claims. (Cl. 324-5)



1. In nuclear magnetic resonance measuring apparatus for subjecting a material to be analyzed to mutually perpendicular magnetic and radio-frequency fields including a resonant tank circuit developing a voltage responsive to a condition of nuclear resonance between the fields and for the material being measured, the improvement comprising a radio-frequency amplifier driven by the amplitude-modulated, radio-frequency signal developed by said tank circuit during nuclear resonance, a pair of diode detectors driven by the output of said radio-frequency amplifier and each including a serially-connected, half-wave rectifier and a load impedance, said rectifiers being oppositely poled relative one another whereby the audio voltages developed across said load impedances have opposite polarities with respect to ground, a differential amplifier including a vacuum tube having anode, cathode and control grid electrodes, a cathode-follower including a vacuum tube having anode, cathode and control grid electrodes and applying the follower output to the cathode of the amplifier, means applying the audio voltage developed across one of said load impedances to the cathode-follower input and the audio voltage developed across the other load impedance to the control grid of said differential amplifier with said amplifier cathode and control grid electrodes being driven in opposite polarity directions relative one another, and a common output impedance connected to the anode of said audio amplifier so that an audio signal is produced at the amplifier output signal which is proportional to the algebraic difference of the two audio signals applied to the differential amplifier.

2,999,976 NUCLEAR MAGNETIC RESONANCE MEASURING AND CONTROL DEVICE

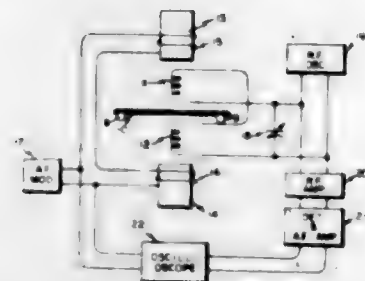
Kenneth E. Francis, Worthington, and Frank M. Alexander, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Mar. 3, 1958, Ser. No. 718,894
7 Claims. (Cl. 324—5)



3. In nuclear magnetic resonance measuring apparatus for subjecting a material to be analyzed to mutually perpendicular magnetic and radio-frequency fields including a resonant tank circuit developing a radio-frequency signal that is amplitude modulated in response to periodic conditions of nuclear resonance between the fields and for the material being measured and an audio-frequency detector developing an audio pulse in response to each occurrence of nuclear resonance, the improvement comprising a recycling detector including a peak voltage amplifier having a peak voltage charging capacitor and a cathode-follower amplifier driven by the voltage across said capacitor, an electronic gate applying each periodic audio pulse to said peak amplifier and rejecting the signal portions between consecutive pulses, means discharging said capacitor between consecutive pulses applied to said peak voltage amplifier, and low impedance readout means connected to the output of said cathode-follower amplifier.

2,999,977 NUCLEAR MAGNETIC RESONANCE MEASURING SYSTEM

Leonard C. Brown, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed May 20, 1958, Ser. No. 736,632
10 Claims. (Cl. 324—5)

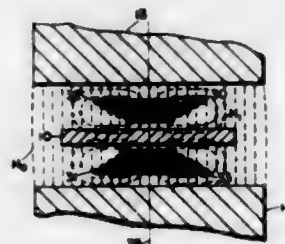


1. In nuclear magnetic resonance measuring apparatus for subjecting flat sheet material to be analyzed to mutually perpendicular magnetic and radio-frequency fields including a resonant tank circuit developing an output signal responsive to a condition of nuclear resonance between the fields and for the material under measurement, the improvement comprising a pair of relatively flat coils axially aligned and spaced in a parallel relationship with respect to one another and included in said

resonant tank circuit, a radio-frequency source energizing said coils to produce opposing radio-frequency magnetic fields in the common space therebetween with axial components cancelling one another and radial components reinforcing one another, means adapted to support the flat sheet material under measurement in the space between the coils, and a pair of spaced magnet poles developing a second magnetic field passing through said coils and parallel to the axis thereof.

2,999,978 NUCLEAR MAGNETIC RESONANCE MEASURING APPARATUS

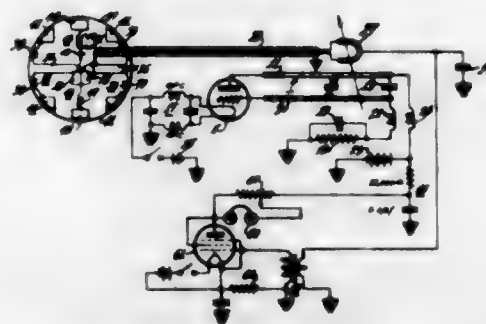
Clyde W. Pinkley, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Dec. 28, 1959, Ser. No. 862,361
10 Claims. (Cl. 324—5)



1. In nuclear magnetic resonance measuring apparatus for subjecting flat sheet material to be analyzed to mutually perpendicular magnetic and radio-frequency fields including a resonant tank circuit developing an output signal responsive to a condition of nuclear resonance between the fields and for the material under measurement, the improvement comprising a pair of identical coils axially aligned and spaced with respect to one another so that the distance between corresponding turns on the two coils equals the radius of the turns, a radio-frequency source energizing said coils to produce opposing radio-frequency magnetic fields in the common space therebetween and as measured along the axis, means adapted to support the flat sheet material under measurement in the space between the coils, and a pair of spaced magnet poles developing a second magnetic field passing through said coils and parallel to the axis thereof.

2,999,979 APPARATUS FOR SUBSURFACE INVESTIGATING

Harry J. Wolf, Haddon Heights, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Nov. 15, 1946, Ser. No. 709,897
9 Claims. (Cl. 324—3)

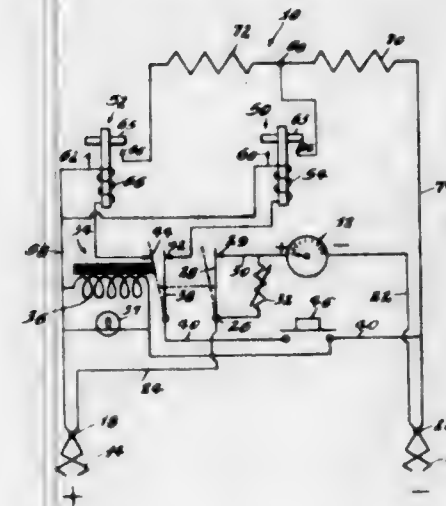


8. A detector for foreign objects located under the surface of the earth comprising in combination, a high frequency oscillator, a pair of spaced dipole transmitting antennas, each having two opposed legs disposed about the circumference of a circle, each leg comprising a self-supporting inductance coil and a terminating capacity plate, said inductance coils and capacity plates conforming with and lying substantially in the circumference of

said circle, a crossed-over two-wire transmission line extending along a diameter of said circle, means including said transmission line for energizing said transmitting antennas in phase opposition from said oscillator, and a dipole receiving antenna interposed between and equally capacitively coupled to said transmitting antennas in the radiation field thereof so as to be normally non-responsive to signals therefrom, said receiving antenna including in each leg thereof an inductance element and a terminating capacitor plate.

2,999,980 AUTOMATIC BATTERY TESTER

Robert E. Barnes, 114 E. Grove St., Algona, Iowa
Filed Feb. 14, 1958, Ser. No. 715,311
2 Claims. (Cl. 324—29.5)



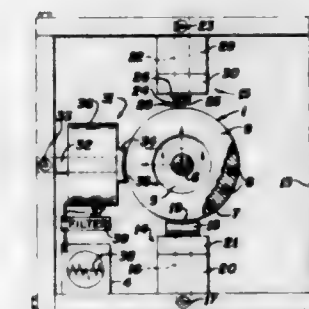
1. An automatic battery tester for total battery voltage operable by following identical procedures on either a 6 volt battery or a 12 volt battery to provide a "no load" voltage test and a "load" voltage test utilizing the full range of the same voltmeter for each type battery, said tester comprising:

- a pair of tester terminals adapted to be connected to a battery;
- a dual purpose voltage discriminating relay switch connected between said tester terminals and including a pair of switch means, said relay switch non-responsive to a 6 volt battery and responsive to a 12 volt battery;
- a voltmeter connected in series with one of said switch means between said tester terminals;
- a multiplying resistance connected between said voltmeter and said one switch means whereby meter current traverses said multiplying resistance on 12 volt battery operation and bypasses same on 6 volt battery operation, thereby utilizing the full range of said voltmeter for either voltage condition and providing a "no load" voltage test;
- a dual load circuit between said tester terminals, said dual load circuit including,
 - a manual switch connected between one of said tester terminals and the other switch means of said voltage discriminating relay switch;
 - a 6 volt range load resistance;
 - means including said other switch means and responsive to closure of said manual switch connecting said 6 volt range load resistance between said tester terminals when said voltage discriminating relay switch is non-responsive;
 - a 12 volt range load resistance;
 - means including said other switch means and responsive to closure of said manual switch connecting said 12 volt range load resistance and said 6 volt range load resistance in series between said tester terminals when said voltage discriminating relay switch is responsive;
 - whereby when said manual switch is closed the proper load resistance for the battery under test automatically

2,999,981

APPARATUS FOR TESTING DEFECTS IN METAL MEMBERS

Walter L. Probert, Wauwatosa, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Jan. 14, 1959, Ser. No. 786,784
7 Claims. (Cl. 324—34)

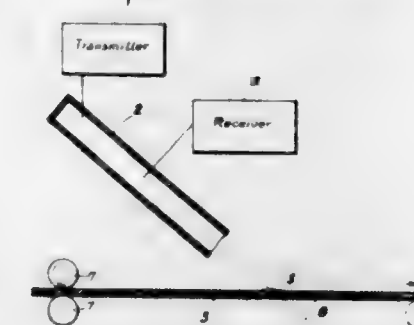


1. A detection unit adapted to inspect like successive circumferential areas of a magnetic member, which comprises a main field structure having a pair of spaced magnetic pole means spaced to allow movement of said magnetic member therebetween to establish a magnetic cross field, one of said pole means having a circumferential span generally corresponding to one of said successive areas and the other of said pole members having a circumferential span equal to at least two of said successive areas, and a detector arranged to respond to a change in the magnetic cross field resulting from movement of the magnetic member between the pole means to establish an output proportional to the characteristic of said successive areas of said moving magnetic member.

2,999,982

ELECTROMAGNETIC DEVICE FOR HOMOGENEITY CONTROL

Georges Broussard, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Jan. 6, 1958, Ser. No. 707,391
Claims priority, application France Jan. 25, 1957
6 Claims. (Cl. 324—58.5)



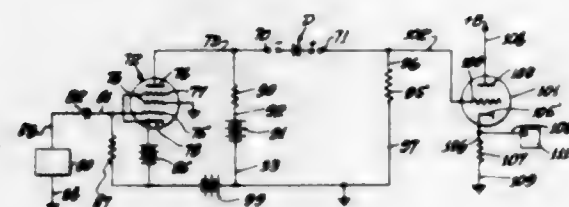
6. A device for automatically detecting homogeneity defects in a body of compact material, said device comprising: an ultra high frequency generator of microwave energy, energy guiding means operatively connected to said generator for transmitting said microwave energy at an acute angle upon a limited surface portion of said body; means for supporting said body adjacent to said energy guiding means; means for effecting relative movement between said energy guiding means and said body while maintaining the distance therebetween generally constant; and receiver means including means for collecting part of said ultra high frequency energy returned

from said limited surface portion toward said guiding means; said energy guiding means being so oriented with respect to the body supporting means and the means for effecting relative movement between said guiding means and said body to produce at said collecting means ultra high frequency energy of one frequency reflected by said body and ultra high frequency energy of a different frequency resulting from energy diffraction by said body due to defects therein at said limited surface portion, said receiver means heterodyning the reflected energy of said one frequency and the diffracted energy of said different frequency to provide indication of such defects in the body.

2,999,983

SEMICONDUCTOR DIODE RECOVERY TESTER
Joseph M. Stern, Los Angeles, and Richard H. Fuller, Playa Del Rey, Calif., assignors to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware

Filed Aug. 18, 1958, Ser. No. 755,593
8 Claims. (Cl. 324—158)



6. A circuit for measuring the reverse recovery effect in an asymmetrically conductive device comprising: a load resistor connected in series relationship with said conductive device, one terminal of said load resistor being connected to the positive terminal of said conductive device and the other terminal of said load resistor being connected to ground; power amplifying means including a non-linear amplifying device, a first direct current potential source, a second direct current potential source of greater voltage than said first direct current potential source, and a limiting resistor having one terminal connected to the positive terminal of said amplifier device and the other terminal connected to the positive terminal of said first direct current potential source, the positive terminal of the second direct current potential source being connected to the negative terminal of said first direct current potential source and the negative terminal of said second direct current potential source being connected to the negative terminal of said amplifier device, the output terminals of said power amplifying means connecting the positive terminal of the amplifying device to the negative terminal of said conductive device and the negative terminal of said direct current first potential source to ground, thereby causing said conductive device to normally be biased in the reverse direction; a cyclic voltage source having a positive output waveform with a rapid decay time from a relatively high to a relatively low voltage level, one output terminal of said cyclic voltage source being connected to the input terminal of said amplifier device in said power amplifying means and the other output terminal connected to ground; a cathode ray oscilloscope for measuring the current flow through said conductive device; and a cathode follower for preventing the transmission to said cathode ray oscilloscope of forward current pulses passing through said conductive device, said cathode follower having its input terminals connected across said load resistor and its output terminals connected across the vertical deflection input terminals of said cathode ray oscilloscope, whereby a positive output pulse from said cyclic voltage source causes the flow of forward current through said conductive device and a negative voltage drop across said load resistor thereby cutting off the output current flow

through said cathode follower, the steep trailing edge of the positive voltage pulse resulting in the flow of transient recovery current through said conductive device permitting the measurement of the recovery current by said cathode ray oscilloscope.

2,999,984

SERIES-ENERGIZED CASCADED TRANSISTOR AMPLIFIER

Kenneth H. Beck, Newtown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 13, 1956, Ser. No. 565,056
1 Claim. (Cl. 330—18)



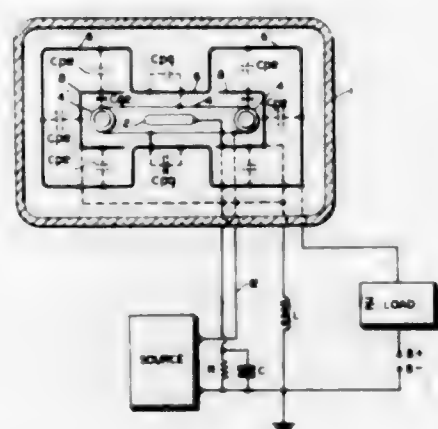
A multi-stage transistor amplifier characterized by its adaptability for operation according to a selected one of a plurality of load voltage and load power sharing modes, comprising a plurality of transistors each having an emitter, a collector and a base, and having a current gain of less than unity, a source of direct current, each of said transistors having a separate resistive signal circuit connecting its base to the source of direct current, an input circuit, a load, and means directly connecting across said direct current source in a direct current series circuit said input circuit, the emitter to collector circuit of all of said transistors, and said load in the order stated, each of said separate resistive signal circuits including a separate pair of series-connected resistors individual to and associated with the corresponding one of said transistors, a connection between the junction of the two resistors in each of said pairs and the base of the corresponding one of said transistors, and means connecting each of said pairs of resistors directly across said direct current source, the resistance of each of said resistors being selectively proportioned with respect to the load and the current gain of the associated transistor to provide operation according to the selected one of said modes.

2,999,985

ELECTRON-TUBE STABILIZED AMPLIFIER

Ben H. Tongue, West Orange, N.J., assignor to Blonder-Tongue Electronics, Newark, N.J., a corporation of New Jersey

Filed Aug. 13, 1959, Ser. No. 833,510
5 Claims. (Cl. 330—80)



1. An electron-tube circuit for operation at a predetermined radio frequency having, in combination, an elec-

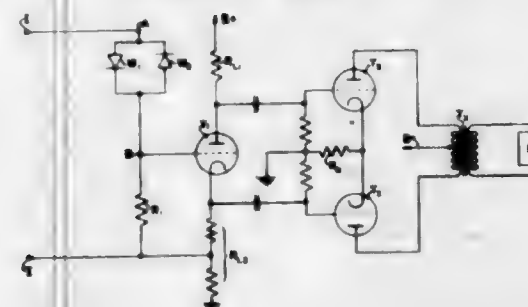
tron tube provided with an anode, a grounded cathode and a control electrode forming an active region in the tube for the flow of electrons therebetween, and a further electrode within the tube extending external to the said active region and capacitively coupled to portions of the said anode and control electrode also extending external to the said active region, radio-frequency input and output circuits connected from the cathode to the control electrode and to the anode, respectively, and a circuit connection from the said further electrode to ground having an impedance therein of sufficient reactance at the said predetermined radio-frequency to shift the phase of the radio-frequency energy fed from the said output circuit to the said input circuit through said capacitive coupling from the said external portions of the anode and control electrode to the further electrode substantially one hundred eighty degrees with respect to the phase of the radio-frequency energy fed from the said output circuit to the said input circuit through the inherent anode-to-control electrode capacitance in the said active region of electron flow.

2,999,986

METHOD OF CORRECTING NON-LINEAR DISTORTION

George William Holbrook, Kingston, Ontario, Canada, assignor to Her Majesty the Queen in the Right of Canada as represented by the Minister of National Defence

Filed Dec. 13, 1957, Ser. No. 702,595
11 Claims. (Cl. 330—149)

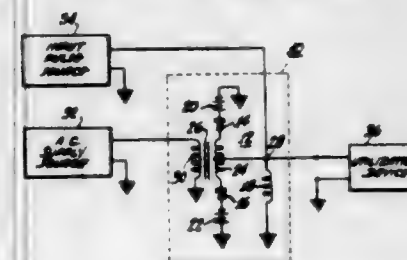


1. In a signal transmission circuit including a vacuum tube having a non-linear dynamic transfer characteristic whereby to cause a signal applied to said circuit to be distorted by said circuit; apparatus for compensating for said distortion comprising an impedance network formed of interconnected two-electrode linear circuit elements and at least one two-electrode non-linear circuit element having a non-linear impedance/applied voltage characteristic; said impedance network having an output connected to said vacuum tube and an input for connection to the source of the signal to be transmitted by said transmission circuit, said network having a transfer function complementary to the transfer function of said transmission circuit.

2,999,987

CONVERTER CIRCUITS

Kam Li, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,881
12 Claims. (Cl. 332—1)



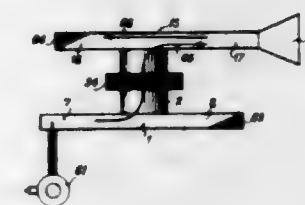
1. A circuit for converting a unidirectional pulse signal to a phase signal comprising a parametric oscillator

having an input for receiving said pulse signal and an output for providing said phase signal, means for applying supply signals to said oscillator, said oscillator, upon application of said supply signals, oscillating in either one or the other of two phases, said oscillations building up to a maximum value in a given time interval, and means for applying selectively said pulse signal during said given time interval to control the phase of said oscillations.

2,999,988

RESONANT DIRECTIONAL COUPLERS

Pierre G. Marié, 16 Rue de Varize, Paris, France
Filed Mar. 17, 1954, Ser. No. 416,869
Claims priority, application France Mar. 23, 1953
16 Claims. (Cl. 333—10)



16. A wave guide coupler system comprising a first rectangular wave guide adapted to support an electromagnetic wave in the TE_{01} rectangular mode, said guide having an aperture in the wide wall thereof centered about a point at which the longitudinal and transverse current components of said wave in said wall are of substantially equal magnitude and in phase quadrature, a cylindrical cavity resonator affixed at one end to said principal rectangular guide coaxially with said aperture with the end of said cavity resonator adjacent said guide closed except at said aperture, said cavity resonator having such a diameter as to support said wave only according to the TE_{11} circular mode, and a second rectangular wave guide the axis of which may have any direction parallel to the wide face of said first rectangular guide, said second rectangular guide being adapted to support said wave in the TE_{01} rectangular mode and having an aperture in one of its wide walls centered about a point at which the longitudinal and transverse current components of said wave in said wall are of substantially equal magnitude and in phase quadrature, said second rectangular guide being affixed to said cavity resonator with its aperture coaxial with said cavity resonators and with the end of said cavity resonator adjacent said second rectangular guide closed except across the aperture in said second rectangular guide.

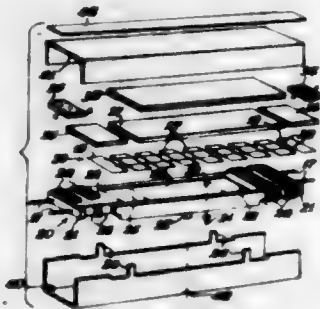
2,999,989

ELECTRO-MECHANICAL FILTER

Bernard Niederman, Chicago, and Rudolph L. Pohanka, Berwyn, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 6, 1958, Ser. No. 713,660
3 Claims. (Cl. 333—71)

1. An electromechanical filter for use with electrical circuits including in combination, a filter structure including a plurality of plates disposed in edge-to-edge spaced relationship and interconnected by wires, a pair of inductive coils for coupling said filter structure to the electrical circuits, said coils each having separate sections, an elongated unitary supporting member of insulating material having an intermediate portion supporting said filter structure and having opposite end portions respectively supporting said coils in operative relation, a container surrounding said supporting member and said filter structure thereon and having closure members posi-

tioned at the end portions of said supporting member, a pair of terminal pins directly attached to said end portions of said supporting member and projecting therefrom through said closure members in engagement therewith so as to support said supporting member within said container, said end portions each having a plurality of notches therein disposed in opposing pairs and a recess interconnecting the same, said coils being wound around said supporting member at opposite ends thereof with said separate sections of each coil being dis-



posed in said recesses and in said pairs of notches, said pairs of notches retaining said sections in spaced relationship with respect to each other, a pair of magnets disposed on opposite sides of each of said coils, said filter structure having end-plates at opposite ends thereof disposed respectively between said magnets and within the sections of said coils nearest the center of said supporting member and spaced from the sections of said coils nearest the ends of said supporting member for minimizing power losses.

2,999,990 WAFFER COIL

Albert Zack, Danvers, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed July 17, 1956, Ser. No. 598,342
3 Claims. (Cl. 336-192)

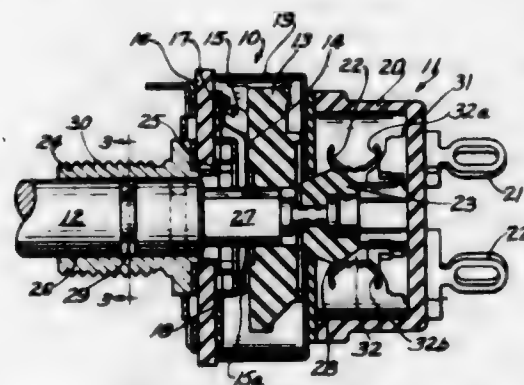


1. A wafer coil comprising a generally cylindrical core, a plurality of turns of alternating conductive and insulating material spirally wrapped on said core, an originating connecting tube electrically connected to the leading edge of the conductive material, and a terminating connecting tube electrically connected to the trailing edge of the conductive material, said core having a reentrant curved channel formed in the periphery thereof, said originating connecting tube being disposed within said curved channel.

2,999,991
GROUNDING MEANS FOR ELECTRICAL CONTROLS WITH A RECIPROCATING SHAFT
Stanley O. Bender, Elkhart, Ind., assignor to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed June 20, 1960, Ser. No. 37,364
11 Claims. (Cl. 338-162)

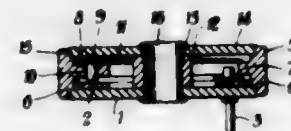
1. An electrical control comprising, in combination, a shaft, a variable resistor and a switch mounted in tandem on the shaft, a housing for the variable resistor and the switch, a mounting bushing having a bore, the bushing being attached to the housing with the shaft reciprocally and rotatably mounted in the bore of the mounting bushing, a groove in the shaft located within the bore of the

mounting bushing, resilient means disposed in the groove in compression between the groove and the bore of the



mounting bushing and encompassing less than one half the circumference of the groove.

2,999,992
ELECTRICAL CONTROL COMPONENTS
Desmond George Morrish, Welling, England, assignor to Ardente Acoustic Laboratories Limited, London, England, a British company
Filed July 19, 1955, Ser. No. 523,869
Claims priority, application Great Britain July 19, 1954
4 Claims. (Cl. 338-163)

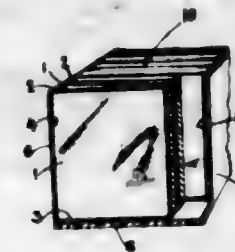


1. An electrical control component comprising two similar disc-like plates located in spaced and co-axial relation, an annular control head co-axial with the plates and manually rotatable with respect thereto about its axis and forming with said plates a housing in the general shape of a short cylinder or disc, annular bearing surfaces on said control head co-axial therewith and in engagement with corresponding surfaces at the peripheries of the plates to form bearings for the rotational movement and at the same time to locate said control head on the plates and space the latter apart, a centrally located spacing member to further assist in spacing said plates apart, fastening means extending between the two plates to press them against said spacing member and against the bearing surfaces of the control head, a resistance element mounted on the inward face of one of said disc-like plates, an inwardly extending projection on said control head, a contact member located in, and by, said projection for contacting said resistance element and for traversing the latter, terminal means on at least one of said plates for connection to an external circuit, and connecting means connecting said element and said contact member to said terminal means, whereby rotation of said control head causes variations of resistance in said external circuit.

2,999,993
POTENTIOMETER
Walter A. Sherwood, Hempstead, N.Y., assignor, by mesne assignments, to Chandler Evans Corporation, West Hartford, Conn., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,522
8 Claims. (Cl. 338-176)

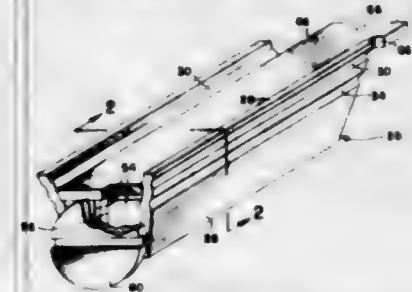
1. A potentiometer comprising thin parallel strips of conductive material, insulating material so disposed as to separate said conductive strips, a body of continuously conductive material lying in contact with each of said strips, parts of said strips and said insulating material spaced from the resistance material lying exposed in a common plane to constitute a smooth working surface

for the passage of suitable pick-up means, and a protective insulating coating covering the resistance material



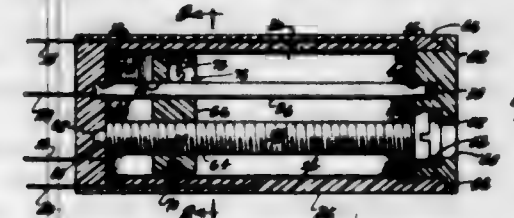
and adjacent surfaces of the conductive strips and insulating material.

2,999,994
ADJUSTABLE ELECTRICAL RESISTORS
Marian E. Bouras and Wilbur T. Hardison, Riverside, and Edward D. O'Brien, Anaheim, Calif.; said Hardison and O'Brien assignors to Bouras Inc., a corporation of California
Original application Sept. 1, 1955, Ser. No. 531,956, now Patent No. 2,935,715, dated May 3, 1960. Divided and this application Mar. 4, 1960, Ser. No. 12,773
9 Claims. (Cl. 338-180)



1. A variable resistor comprising a housing having a base, relatively flat sidewalls diverging outwardly and upwardly at an angle from said base, and end closures, said base, sidewalls and end closures being formed from a single piece of metal sheet, a nonconductive support member positioned upon said base in the housing and extending externally of said housing past one of said end closures, a slider having relatively flat sloping sidewalls diverging at the same angle as and engaging said housing sidewalls, contact means operatively connected to said slider, elongate resistor means mounted on said support within said housing, elongate conductor means mounted on said support within said housing, means for moving said slider for variably connecting said elongate resistor means and elongate conductor means by said contact means, terminals mounted on the part of said support which is outside of said housing, and means for connecting said terminals to said resistor means and conductor means.

2,999,995
MECHANICALLY VARIABLE RESISTOR
Marian E. Bouras and Carl N. Boode, Riverside, and Edward D. O'Brien, Anaheim, Calif.; said Boode and said O'Brien assignors to Bouras, Inc.
Filed May 20, 1957, Ser. No. 660,246
2 Claims. (Cl. 338-180)



1. A variable resistor comprising a tubular housing of dielectric material, said housing being closed at one end by an end wall and having a cap at the other end thereof, said housing, end wall and cap defining a cavity and said end wall having a bearing-hole therein, a resistance ele-

ment mounted on the inner surface of said housing within said cavity, a rotatable leadscrew having a threaded portion disposed in said cavity parallel to said resistance element, said leadscrew having a smooth unthreaded bearing portion of reduced diameter at one end thereof which bearing portion is journaled within said bearing hole in said end wall, an outwardly facing annular shoulder on said leadscrew adjacent said bearing portion, said shoulder bearing against said end wall around the margins of said bearing hole to limit endwise movement of the leadscrew in that direction, the other end of said leadscrew terminating in a head having a driver-engageable portion, said head being disposed within a cylindrical aperture in said cap, said cap having an inwardly projecting tubular flange encircling the marginal edge of said leadscrew head, the driver-engagement portion of said head being accessible through the aperture defined by said inwardly projecting flange, an elastomeric O-ring seated within said aperture between said inwardly turned flange and said head, said O-ring being compressed slightly so as to seal the clearances between the leadscrew and said housing, and resiliently exerting endwise pressure against the end of said leadscrew so as to hold said annular shoulder against said end wall, a guide rod extending through said cavity parallel to said leadscrew, a slider movable lengthwise of said cavity and having a contact thereon wiping on said resistance element, said slider being operatively engaged by the thread of said leadscrew and movable thereby when the leadscrew is turned, said slider slidably engaging said guide rod so as to be prevented thereby from turning, and terminal means electrically connected to said resistance element and to said contact.

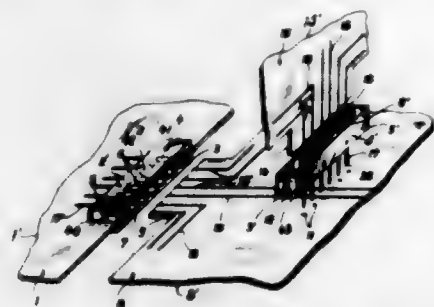
2,999,996
WIRE WOUND RESISTOR TERMINAL CAP
Louis W. Bernal, East Boston, Mass., assignor to Ace Electronics Associates, Inc., a corporation of Massachusetts
Filed Jan. 16, 1961, Ser. No. 83,109
8 Claims. (Cl. 338-329)



1. A connection terminal assembly for a wire wound resistor of the type having an insulating base and a wire resistance element wound thereon, comprising a first plate element interposed between a plurality of turns of said wound resistance element and said base, said first plate element being in surface contact with said insulating base and including a body of high temperature solder in contact with said wire resistance element, a second plate element overlying said plurality of turns of said resistance element sandwiching said plurality of turns between said two plate elements, said second plate element including a material in direct contact with said resistance element which is similar in composition and melting point to said resistance element, said elements being welded together and said wire resistance element being embedded in said solder of said first plate element.

2,999,997
ELECTRICAL SOCKET FOR PRINTED CIRCUIT CARDS
Ulrich Tüchel, Bismarckstr. 107, Heilbronn (Neckar), Germany
Filed Apr. 22, 1958, Ser. No. 730,074
Claims priority, application Germany Dec. 19, 1957
7 Claims. (Cl. 339-17)
4. A female socket for receiving a printed circuit panel having a plurality of individual printed circuits compris-

ing a panel having a substantially rectangular cutout portion adapted to receive a projected portion of the printed circuit panel, socket wall means of insulation material extending around the marginal edge of the cutout portion and overlying each side of the cutout portion and

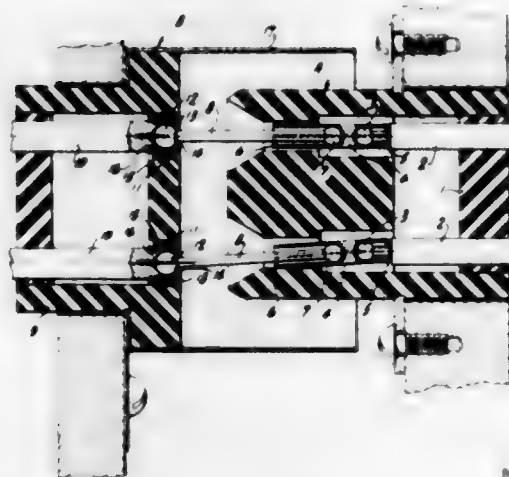


defining a socket receptacle surrounding the cutout portion, a plurality of individual contact members spaced along the cutout portion held at one end in said socket wall means and extending toward the cutout area for effecting contact with the individual circuits of the printed circuit panel when the latter is inserted therein.

2,999,998

SELF-ALIGNING ELECTRICAL CONNECTOR ASSEMBLY

Fred H. Cole, 1028 Sierra Bonita, Los Angeles 19, Calif.
Filed Sept. 22, 1958, Ser. No. 762,532
4 Claims. (Cl. 339-64)



1. An electrical connector assembly consisting of a first part having a terminal pin rigidly connected thereto, a connector sleeve contacting said terminal pin for limited universal movement at one end and having an expansible opening at the other end; a second part having an expansible receptacle terminal rigidly connected thereto; and a solid connector pin having end terminals with substantially spherical surfaces, said end terminals respectively mating with said opening and said receptacle terminal, thereby providing a solid pin terminal connection that will adjust for misalignments without imposing abnormal contact pressures upon contact surfaces.

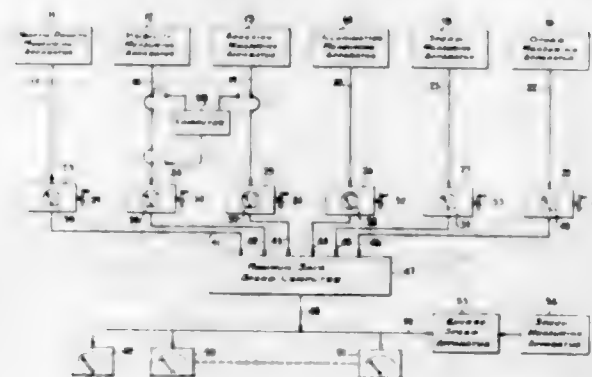
2,999,999

HIGHWAY TRAFFIC CONTROL SYSTEM

Everhard H. B. Bartelink, P.O. Box 425, Concord, N.H.
Filed Feb. 8, 1955, Ser. No. 486,873
11 Claims. (Cl. 340-31)

1. A traffic control system comprising means for measuring the number of vehicles in a predetermined section of a highway, means for measuring the visibility in such section, means for measuring the illumination in said section, means for measuring the adhesion between the

wheels of a vehicle and the surface of said section, means for measuring the speeds of vehicles in said section, means connected to said speed measuring means for determining the speed of the slowest vehicle in said section, means connected to each of said measuring means and controlled thereby for computing the predetermined maximum safe speed in said section under the conditions as measured by said measuring means, indicating means

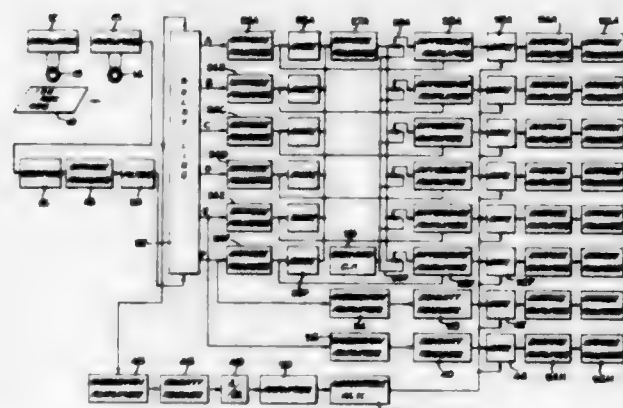


connected to the output of said computing means and controlled thereby for indicating said speed, and excess speed indicating means connected to said speed measuring means and to the output of said computing means for comparing the speeds of vehicles in said section with the computed maximum safe speed and for indicating the presence of a vehicle having a speed in excess of said maximum safe speed.

3,000,000

AUTOMATIC READING SYSTEM

Kenneth R. Eldredge, Palo Alto, Calif., assignor, by means assignments, to General Electric Company, New York, N.Y., a corporation of New York
Filed May 6, 1955, Ser. No. 506,598
21 Claims. (Cl. 340-149)

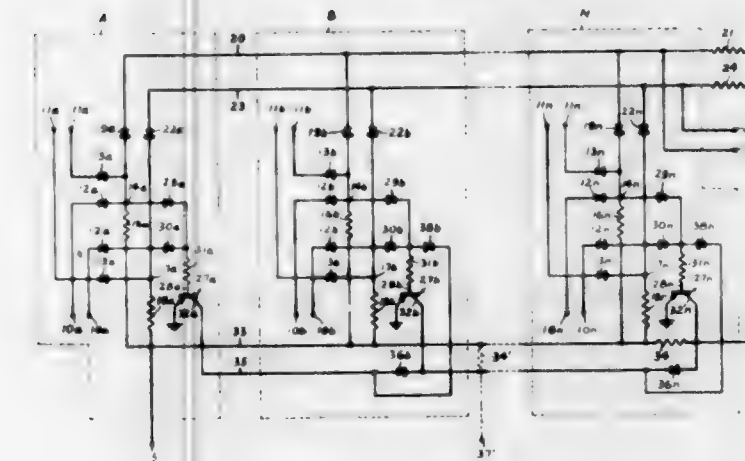


3. Apparatus for recognizing each of a plurality of different characters written on a document in magnetic ink in form adapted to be recognized by the human eye in accordance with the respective shapes and orientations of the written character, wherein the whole portion of each of said characters is written with magnetic ink, each of said characters comprising a continuous distribution of magnetic ink on said document, said apparatus comprising magnetizing means to subject each of said characters to a common magnetic field configuration for magnetizing the entire magnetic ink distribution of each of said characters, magnetic reading means for sensing the magnetic field configuration of each of said characters and in response to said field configuration for delivering an output representative thereof, and identification means responsive to said output for providing a corresponding one of a plurality of signal patterns representative of the character sensed by said reading means.

3,000,001

PARALLEL BINARY COMPARATOR CIRCUIT

Robert M. Brink, New Canaan, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 21, 1957, Ser. No. 691,470
10 Claims. (Cl. 340-149)

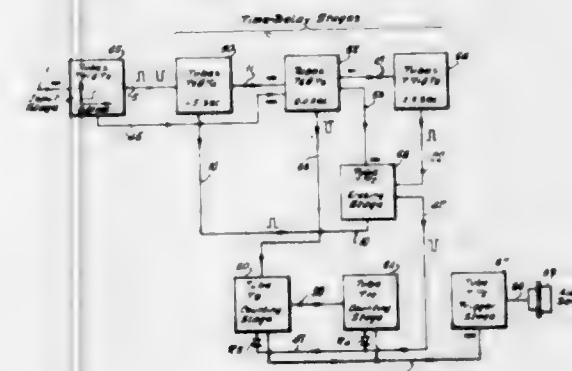


1. Apparatus for comparing two binary numbers in parallel representation digit by digit comprising a comparing circuit for each pair of corresponding digits to be compared including at least one AND gate responsive to entry of signals representing unequal digits to provide an output indicating the inequality, and transistor means responsive to the operation of the gate adapted to disable the circuits for comparing subsequent corresponding digits.

3,000,002

ELECTRONIC ALARM SYSTEM

Jens Peter Rehahn, Berlin, Germany, assignor to VEB Funkwerk Köpenick, Berlin, Germany
Filed Feb. 29, 1956, Ser. No. 568,662
1 Claim. (Cl. 340-164)



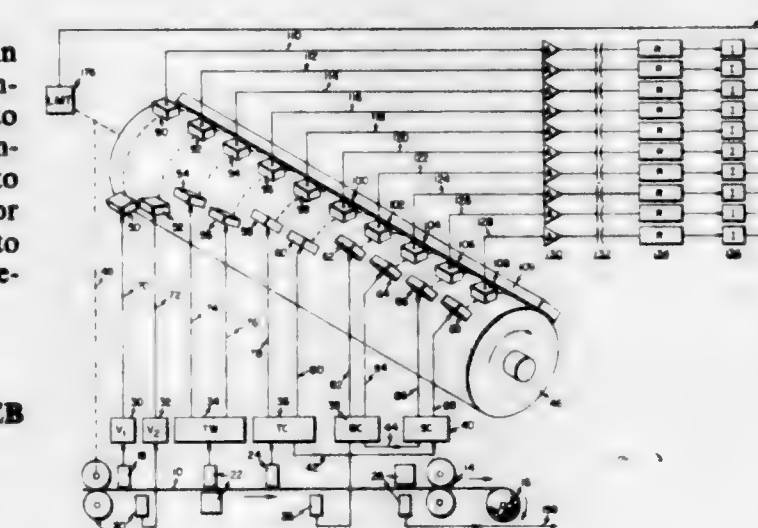
An automatic alarm producing circuit which releases an alarm upon the reception of three successive signals each having a duration between values a and b separated by intervals of lengths between c and d ; comprising an input stage responsive to a signal of predetermined minimum strength to assume an operative condition and which, after termination of said signal, returns to an inoperative condition with a delay equal to c following the termination of said signal; a first electronic relay means including a monostable multivibrator having a time delay d and connected to said input stage so as to be triggered immediately in response to an electrical signal received from said input stage; a second electronic relay means including monostable multivibrator having a time delay of a minus d ; coupling means connecting said last multivibrator to said first relay means and said input stage, said second relay means being responsive to an electrical signal received from said first relay means when the latter is in its initial condition and a signal from said input stage when the latter is in said operative condition; a third electronic relay means connected to said second relay means so that said third relay means assumes its

operative condition with a time delay of b minus a after said second relay means has been triggered; means connecting said first relay means to said input stage for triggering said first relay means at the termination of said signal; counting means connected to said second relay means for registering a count each time said second relay means returns to its initial condition; erasing means connected with said first and third relay means, and responsive to output impulses of said first and third relay means produced at the termination of said signal, for erasing impulses which have been registered by said counting means, provided that said second relay means is in its initial condition; and means for releasing an alarm when said counting means has registered three impulses.

3,000,003

PRODUCT ANALYSIS

Robert P. Einsel, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Nov. 25, 1957, Ser. No. 698,867
12 Claims. (Cl. 340-172.5)



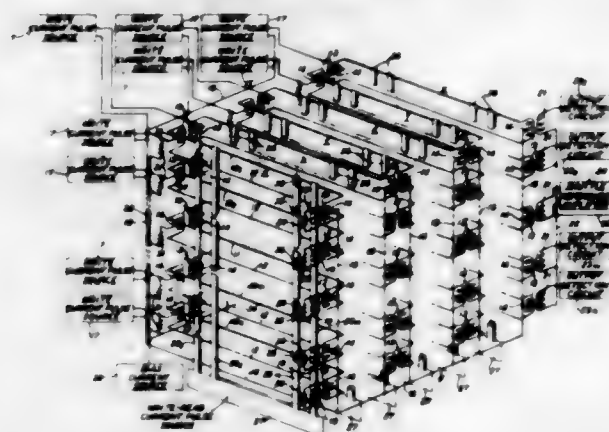
1. Electronic apparatus for classifying items of a material product into a plurality of categories determined by arbitrarily chosen combinations of properties possible of occurrence in a given item, comprising a plurality of signal lines, at least one such line corresponding to each property in said combinations, means for testing an item for each property in said combinations; said testing means including a plurality of means for generating electrical signals upon the occurrence of each property in said item, at least one of said signal generating means including means for measuring a physical characteristic of said product, means associated with said measuring means for generating a voltage analog of variations in said measured characteristic, and means for generating a signal whenever said voltage analog varies beyond selected limits; means for routing each of said signals onto the signal line corresponding to that property being tested when said signal is generated; a first plurality of gates, one such gate corresponding to each of said signal lines, each gate having a trigger input terminal, a control input terminal connected to its corresponding signal line, and an output controlled by the presence of signals on both said input terminals simultaneously; means for generating a signal simultaneously applied to all said trigger input terminals when all tested properties of an item have been tested, groups of said gate outputs, each group including the outputs of those gates connected to signal lines corresponding to properties in one of said combinations; a second plurality of gates, each gate of said second plurality thereof corresponding to one of said groups and having a connection to each output in said group, for propagating a signal received on any of said connections, and a plurality of indicating means,

each corresponding to one gate of said second plurality of gates and each responsive to said propagated signals from its respective gate for indicating the category of an item in accordance with a specific combination of properties therein.

3,000,004

MAGNETIC MEMORY ARRAY

David C. Weller, Lake Mohawk, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 4, 1959, Ser. No. 791,230
23 Claims. (Cl. 340-174)

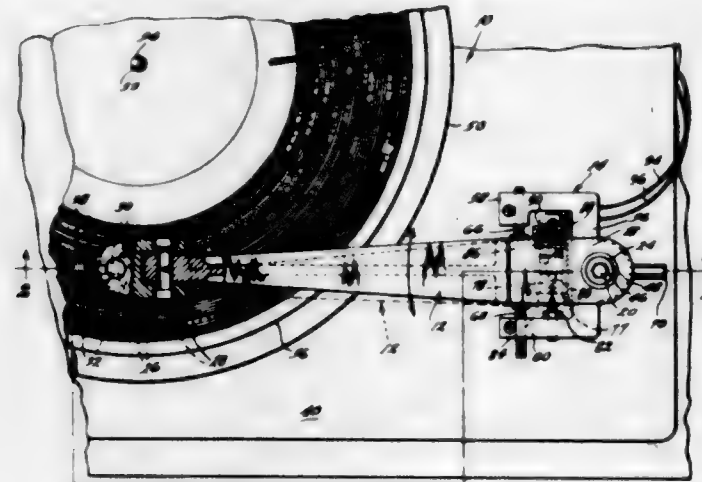


1. An electrical circuit comprising a magnetic memory wire having a flux path capable of assuming stable remanence states, an electrical return conductor, a first and a second balanced impedance means connecting said memory wire and said return conductor at each end respectively, means inductively coupled to said memory wire defining an information address thereon, means including a pulse source for applying a first current pulse to said last-mentioned means, and means including another pulse source for applying a second current pulse to one of said balanced impedance means coincidentally with said first current pulse to induce a stable remanence state at said information address.

3,000,005

OFF-CENTER INDICATOR

Robert C. Moyer, Indianapolis, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,160
2 Claims. (Cl. 340-282)



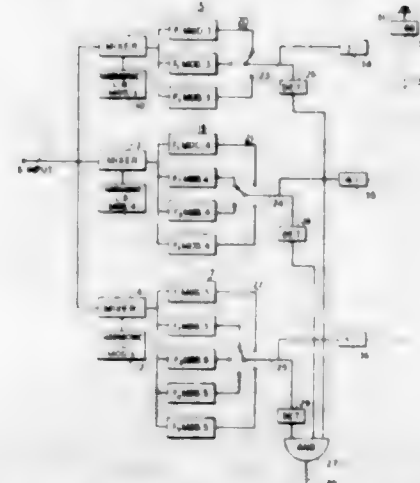
1. An off-center indicator for indicating the eccentricity of a recording spiral on a disc recording, said indicator comprising a tone arm, a follower arm, a shaft, means pivoting said tone arm and said follower arm independently for rotation about said shaft, a stop fixed to said follower arm and adapted to touch said tone arm whereby said tone arm will push said follower arm when said tone arm is moved in one direction, means for ro-

tating said disc recording, tracking means fixed to said tone arm and engageable in said recording spiral for moving said tone arm when said recording is rotating, an electrical component comprising at least two interacting parts and having an electrical characteristic whose value is a function of the displacement between said two parts, means to mount one of said parts on said tone arm, means to mount the other of said parts on said follower arm, said two parts of said component being in an interacting relationship over a relatively wide range of displacements from each other, and indicating means connected to at least one of said parts to indicate the displacement of said parts as a function of the value of said electrical characteristic.

3,000,006

MIXED-BASE DATA TRANSMISSION

Richard E. Williams, Fairfax, Va., assignor to Melpar, Inc., Alexandria, Va., a corporation of New York
Filed Mar. 20, 1957, Ser. No. 647,424
31 Claims. (Cl. 340-347)



1. In a system for converting signal amplitude to frequency, a mixed base filter arrangement comprising means for converting a given frequency to a plurality of first frequencies f_1 separated in pairs by an interval $N_1 F$ means for converting said frequency to a further plurality of second frequencies f_2 separated in pairs by an interval $N_2 F$, where N_1 and N_2 are integers, a plurality of N_1 adjacent first filters each of bandwidth F and covering together a band equal to f_1 , said first filters responsive to one of said frequencies f_1 and arranged to provide a response in one only of said first filters in dependence on the value of f_1 , N_2 adjacent second filters each of bandwidth F and covering together a band equal to $N_2 F$, said second filters responsive to one only of said frequencies f_2 and arranged to provide a response in one only of said second filters in dependence on the value of f_2 , and means for selecting one of said first filters and one of said second filters in response to said signal amplitude, whereby the combination of the selected first and second filter represents uniquely said signal amplitude.

3,000,007

RADAR SYSTEMS

Reginald Frederick Hansford and Eric Parker, London, England, assignors to The Decca Record Company Limited, London, England, a British company
Filed Apr. 30, 1956, Ser. No. 581,540
Claims priority, application Great Britain May 2, 1955
11 Claims. (Cl. 343-5)

1. A radar system comprising a transmitter, a directional transmitting antenna system, a main directional receiving antenna system consisting of a focussing device and an associated receptor element at the focal point of said focussing device for picking up received signals brought to the focal point by said focussing device, said main directional receiving antenna system being arranged to provide a directional receiving beam having

its beam axis directed in the same direction as the transmitting beam axis, an auxiliary directional receiving antenna system comprising a focussing device and a separate receptor element and arranged to provide a directional receiving beam directed at an angle off-set from the main beam in a direction where signals picked up by the main antenna system are to be reduced, a first receiver coupled to the receptor element of said main receiving system and arranged to produce a first rectified video output, a second receiver coupled to the

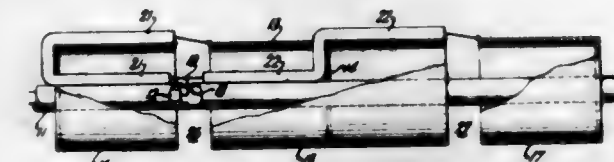


receptor element of said auxiliary directional receiving system and arranged to produce a second rectified video output, first means for combining the two video outputs in a subtractive manner, second combining means for combining the two video outputs in an additive manner, an indicator and switch means operative to feed to the indicator from said first combining means video signals from below a predetermined range and operative to feed to the indicator from said second combining means signals from targets beyond said predetermined range.

3,000,008

SHIELDED ANTENNA

Sidney Pickles, P.O. Box 530, Colusa, Calif.
Filed June 22, 1960, Ser. No. 37,949
9 Claims. (Cl. 343-792)



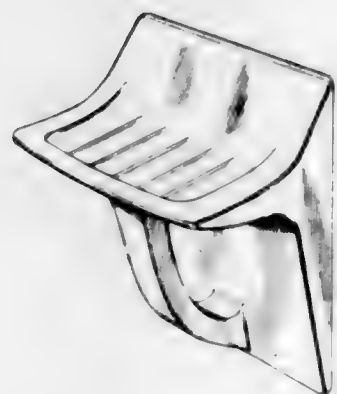
5. An improved antenna comprising a half-wave radiator divided into two open-ended quarter-wave cavities by a central transverse metallic diaphragm, a metallic support tube disposed axially through said radiator and mounting the latter by connection to said diaphragm, a pair of metallic end shields mounted upon said support tube in closely spaced relation to the open ends of said radiator cavities to define gaps thereat, and energizing means including two coaxial feed cables of equal length extending through said support tube and therefrom to apply excitation voltages of like amplitude and phase across said gaps for exciting said radiator to radiate and exciting said end shields to cancel radiation from the end shields and support tube.

DESIGNS

SEPTEMBER 12, 1961

191,297

COMBINED SOAP HOLDER AND GRAB RAIL
Joseph P. Bonghey and Jules P. Compagnucci, Trenton, N.J., assignors to Bay Ridge Specialty Company, Inc., Trenton, N.J., a corporation of New Jersey
Filed Aug. 12, 1960, Ser. No. 61,727
Term of patent 14 years
(Cl. D4—3)



191,298

HEEL FOR SHOE OR SIMILAR ARTICLE
Jules Fern, Los Angeles, Calif., assignor to Fern Shoe Company, Los Angeles, Calif., a corporation of California
Filed Sept. 6, 1960, Ser. No. 62,030
Term of patent 3½ years
(Cl. D7—5)



191,299

BRUSH FOR GOLFING ACCESSORIES OR THE LIKE
Andrew J. Beban, 56 W. York St., and George Beban, 562 Van Everett St., both of Akron, Ohio
Filed Mar. 7, 1960, Ser. No. 59,657
Term of patent 3½ years
(Cl. D9—2)



191,300

COMBINED CLEANER AND DRIER FOR FLOORS OR THE LIKE
Howard A. Anderson, Pittsburgh, Pa., assignor to Blawell Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 31, 1960, Ser. No. 60,049
Term of patent 14 years
(Cl. D9—2)



191,301

OBSERVATION TOWER OR SIMILAR ARTICLE
John K. Groseclose, Columbus, Ohio, assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 2, 1961, Ser. No. 64,116
Term of patent 14 years
(Cl. D13—1)



SEPTEMBER 12, 1961

U. S. PATENT OFFICE

409

191,302

CURVED JALOUSIE WINDOW
Phillip Graham, 2825 Glenmore Ave., Pittsburgh, Pa.
Filed Mar. 12, 1959, Ser. No. 54,956
Term of patent 14 years
(Cl. D13—1)



191,305
CHAIR

John A. Grosskopf, North Miami, Fla., assignor to Scroll, Inc., Miami, Fla., a corporation of Florida
Filed Jan. 5, 1961, Ser. No. 63,460
Term of patent 3½ years
(Cl. D15—1)



191,306
OTTOMAN

John A. Grosskopf, North Miami, Fla., assignor to Scroll, Inc., Miami, Fla., a corporation of Florida
Filed Jan. 5, 1961, Ser. No. 63,461
Term of patent 3½ years
(Cl. D15—8)



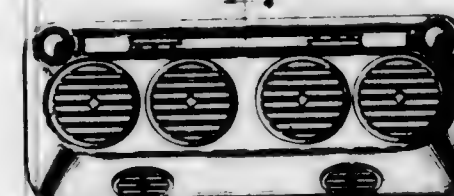
191,303

CART FOR CARRYING DISHES OR THE LIKE
Philip Tashman, 4800 Ronda, Coral Gables, Fla.
Filed Dec. 6, 1960, Ser. No. 63,125
Term of patent 3½ years
(Cl. D14—3)



191,304

AUTOMOBILE AIR CONDITIONING CASE
William E. Lind, 1401 Foch St., Fort Worth, Tex.
Filed Dec. 5, 1960, Ser. No. 63,108
Term of patent 3½ years
(Cl. D14—6)



191,307
HOSE SUPPORTER

Georges Magnin, Daniel Jannichard 21, La Chaux-de-Fonds, Switzerland, and Jean Grimm, La Chaux-de-Fonds, Switzerland; said Grimm assignor to said Magnin
Filed Jan. 30, 1961, Ser. No. 63,752
Term of patent 14 years
(Cl. D17—8)



191,308

SPLITTER KNIFE

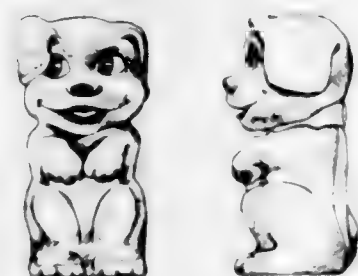
Edward M. Key, P.O. Box 292, McMinnville, Oreg.
 Filed June 3, 1960, Ser. No. 60,836
 Term of patent 14 years
 (Cl. D22—3)



191,309

CHILD'S TOILET TRAINING FIGURE

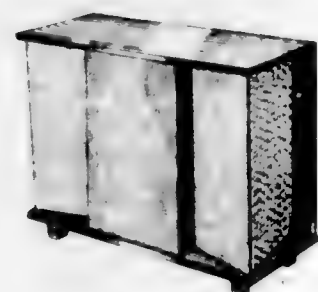
Frances Bales Hill, 6100 Yolanda Drive, Fort Worth, Tex.
 Filed May 11, 1960, Ser. No. 60,545
 Term of patent 14 years
 (Cl. D25—1)



191,310

LOUD SPEAKER CABINET

Antonio Joseph Petrucci, Mount Tabor, N.J., assignor
 to Radio Frequency Laboratories, Inc., Boonton, N.J.,
 a corporation of New Jersey
 Filed June 27, 1960, Ser. No. 61,132
 Term of patent 3½ years
 (Cl. D26—14)



191,311

COMBINED STAND AND SHELF FOR TELEVISION RECEIVERS

Walter Gusdorf, 8706 Florence, Brentwood, Mo.
 Filed July 5, 1960, Ser. No. 61,205
 Term of patent 3½ years
 (Cl. D33—14)



191,312

COMBINED CART AND SHELF FOR TELEVISION RECEIVERS

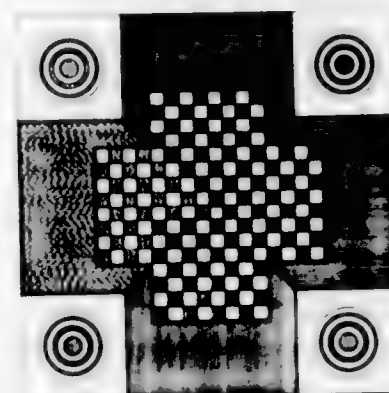
Walter Gusdorf, 8706 Florence, Brentwood, Mo.
 Filed July 5, 1960, Ser. No. 61,225
 Term of patent 3½ years
 (Cl. D33—14)



191,313

GAME BOARD

William J. Brozovich, 10529 Buford Ave.,
 Inglewood, Calif.
 Filed Oct. 18, 1960, Ser. No. 62,535
 Term of patent 3½ years
 (Cl. D34—5)



191,314

GOLF BALL RETRIEVING DEVICE

Harold I. Mengel, 626 Alton Ave., Reading, Pa.
 Filed Apr. 26, 1961, Ser. No. 64,831
 Term of patent 14 years
 (Cl. D34—5)



191,315

COVER FOR GOLF CLUB IRONS

Peter J. Damiani, 5835 N. Whipple St., Chicago, Ill., and
 Samuel G. Rita, 4024 W. Morse, Ave., Lincolnwood,
 Ill.

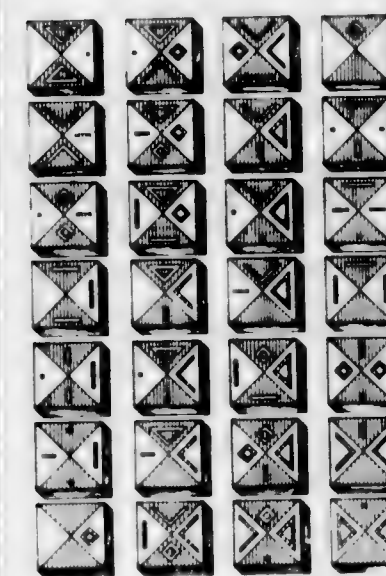
Filed May 2, 1960, Ser. No. 60,420
 Term of patent 7 years
 (Cl. D34—5)



191,316

SET OF GAME PIECES

Virgil T. Calfee, Dallas, Tex., assignor of one percent to
 Thomas D. Copeland, Jr., Garland, Tex.
 Filed Nov. 18, 1959, Ser. No. 58,380
 Term of patent 7 years
 (Cl. D34—5)



191,317

STAND FOR FLOWER POTS

August Rohrmüller, 198—40 32nd Ave., Bayside, N.Y.
 Filed June 20, 1960, Ser. No. 61,045
 Term of patent 7 years
 (Cl. D35—3)



191,318

LAWN CLIPPER

Herbert D. Berkson, 11 Pemberton Square, Boston, Mass.,
 assignor of one-half to Robert F. Muss, Brookline,
 Mass.

Filed Oct. 26, 1959, Ser. No. 58,050
 Term of patent 14 years
 (Cl. D40—1)



191,319

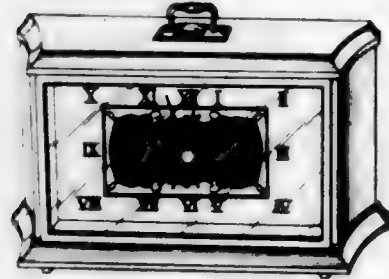
PORTABLE HYDRAULIC HOIST

Robert A. Singletary, Box 811, Cortez, Colo.
 Filed Jan. 4, 1960, Ser. No. 58,925
 Term of patent 3½ years
 (Cl. D41—1)



**191,320
CLOCK**

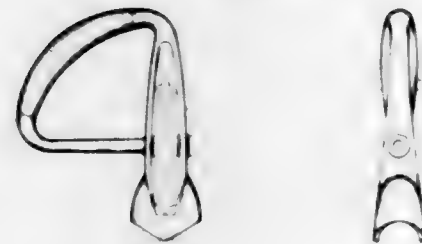
Joseph Pahn, Jr., Wheaton, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 14, 1960, Ser. No. 62,829
Term of patent 14 years
(Cl. D42-7)

**191,323
BREAD TRAY**

William Walter Robinson, Forest Hills, N.Y., assignor to Arnold Bakers, Inc., Port Chester, N.Y., a corporation of New York
Filed Nov. 29, 1960, Ser. No. 63,018
Term of patent 3½ years
(Cl. D44-10)

**191,321
CULINARY BEATER**

Richard S. Latham, Chicago, Ill., assignor, by mesne assignments, to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 58,977
Term of patent 14 years
(Cl. D44-1)

**191,324
CONDIMENT DISPENSER**

Richard M. Watts, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 15, 1960, Ser. No. 62,852
Term of patent 14 years
(Cl. D44-22)

**191,325
HANDLE FOR CULINARY IMPLEMENTS
OR SIMILAR ARTICLES**

James L. Hvale, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 22, 1960, Ser. No. 62,933
Term of patent 14 years
(Cl. D44-29)

**191,322
SNACK SERVING TRAY OR THE LIKE**

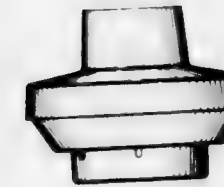
Robert Karoff, 222 4th Ave., New York, N.Y.
Filed July 23, 1959, Ser. No. 56,891
Term of patent 3½ years
(Cl. D44-10)

**191,326
SWIZZLE STICK**

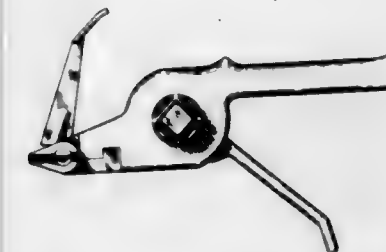
Howard T. Wheat, 3138 N. Argonne Drive, Milwaukee, Wis.
Filed Apr. 24, 1958, Ser. No. 50,596
Term of patent 14 years
(Cl. D44-29)

**191,327
TABLE LAMP BASE**

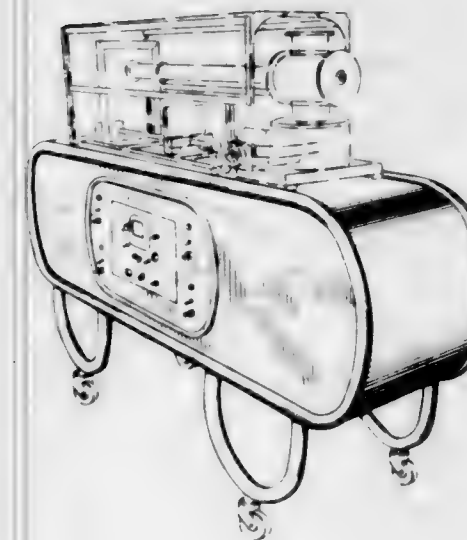
William Johnston, Lombard, and Herman Gittleson and Jules J. Gittleson, Chicago, Ill., assignors to Decor Glo Industries, Inc., Chicago, Ill.
Filed Feb. 16, 1961, Ser. No. 63,960
Term of patent 14 years
(Cl. D48-20)

**191,328
STRAP TENSIONING TOOL**

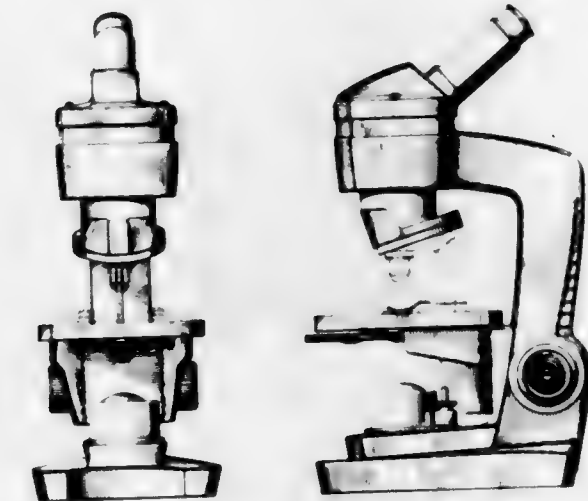
Omer Salvail, 2288A Chamby St., Montreal, Quebec, Canada
Filed Apr. 13, 1961, Ser. No. 64,718
Term of patent 14 years
(Cl. D54-13)

**191,329
ELECTRIC METALLURGICAL PROCESSING UNIT**

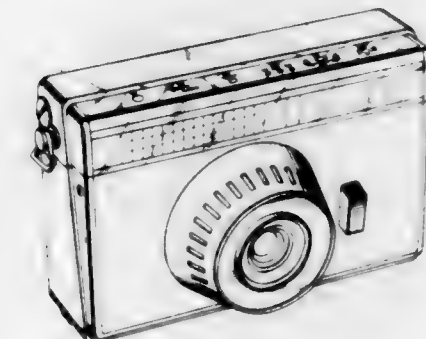
Steven Hurwitz, 310 West End Ave., New York, N.Y.
Filed June 8, 1959, Ser. No. 56,249
Term of patent 3½ years
(Cl. D55-1)

**191,330
MICROSCOPE**

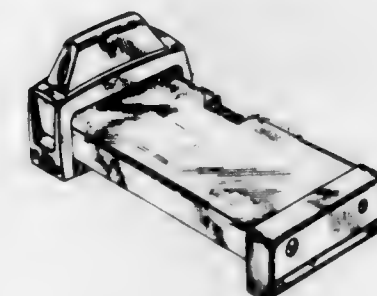
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed May 19, 1961, Ser. No. 65,242
Term of patent 14 years
(Cl. D57-1)

**191,331
PHOTOGRAPHIC CAMERA**

Walter Hennig and Manfred Claus, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Jan. 12, 1961, Ser. No. 63,554
Term of patent 14 years
(Cl. D61-1)

**191,332
PRINTING MACHINE**

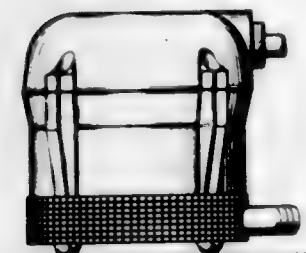
John A. Maul, Lyndhurst, and Roy P. Heas, Westlake, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 59,339
Term of patent 14 years
(Cl. D64-11)



191,333

MINIATURE RECIRCULATING PUMP FOR DISPLAYS AND THE LIKE

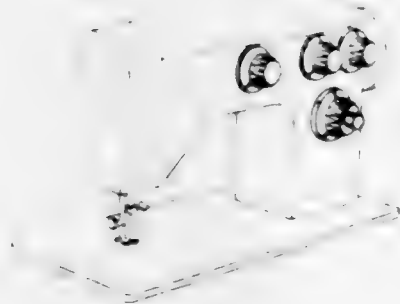
Damon B. Johnson and Charles B. Faison, Oklahoma City, Okla., assignors to Little Giant Corporation, Oklahoma City, Okla., a corporation of Oklahoma
 Filed June 30, 1960, Ser. No. 61,176
 Term of patent 14 years
 (Cl. D65—1)



191,334

SEWING MACHINE OR SIMILAR ARTICLE

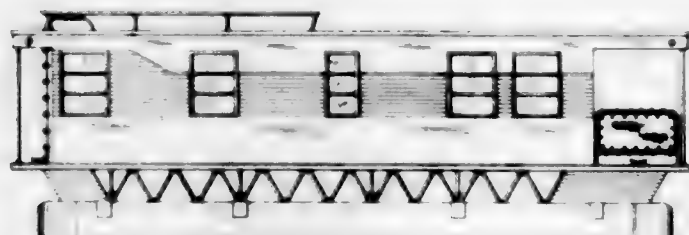
Sidney J. Hamlett, Parma, Ohio, assignor to White Sewing Machine Corporation, Cleveland, Ohio, a corporation of Delaware
 Filed Oct. 3, 1960, Ser. No. 62,338
 Term of patent 14 years
 (Cl. D70—2)



191,335

HOUSE BOAT OR SIMILAR ARTICLE

George W. Meek, Fort Myers, Fla., assignor to General Panel Corporation, Fort Myers, Fla., a corporation of New York
 Filed June 10, 1960, Ser. No. 60,911
 Term of patent 7 years
 (Cl. D71—1)



191,336

COMBINED SIGNAL LIGHT AND TOW HITCH FOR BOATS

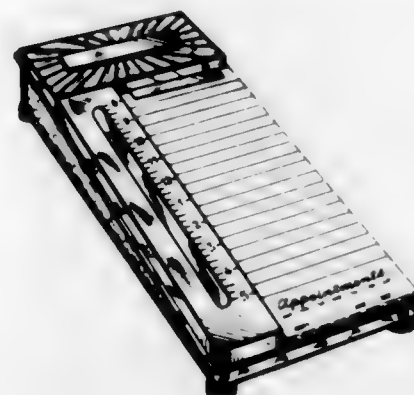
Andrew George Griparis, 1000 Westminister Road, Joliet, Ill.
 Filed Aug. 18, 1960, Ser. No. 61,888
 Term of patent 14 years
 (Cl. D71—1)



191,337

COMBINED CLOCK AND MEMO PAD HOLDER

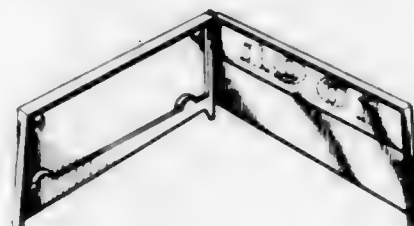
Samuel Jack Kaufman, 1016 5th Ave., New York, N.Y.
 Filed July 10, 1959, Ser. No. 56,735
 Claims priority, application Switzerland Apr. 25, 1959
 Term of patent 14 years
 (Cl. D74—1)



191,338

DESK CALENDAR

Wallace A. Monson, Minneapolis, Minn., assignor to Standard Packaging Corporation, a corporation of Virginia
 Filed Dec. 24, 1959, Ser. No. 58,807
 Term of patent 14 years
 (Cl. D74—5)



191,339

DESK BASE FOR A WRITING INSTRUMENT

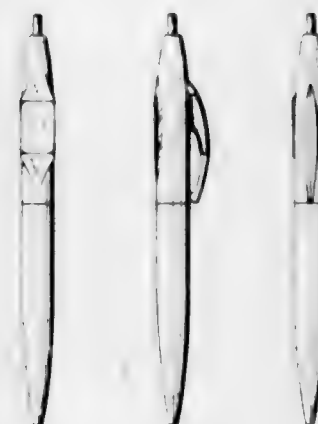
Robert H. Hoss, Mountain Side, N.J., and Harold E. Steinberg, Philadelphia, Pa., assignors to The Esterbrook Pen Company, Camden, N.J., a corporation of New Jersey
 Filed Sept. 12, 1960, Ser. No. 62,105
 Term of patent 14 years
 (Cl. D74—5)



191,340

PEN

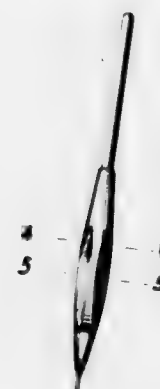
Jack Hillel Shaw, London, England, assignor to Penparts Limited, London, England
 Filed Oct. 27, 1960, Ser. No. 62,637
 Claims priority, application Great Britain June 23, 1960
 Term of patent 3 1/2 years
 (Cl. D74—17)



191,341

MECHANICAL PENCIL

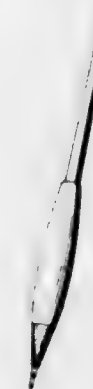
Günter Fuchs, Schwarzenbach (Saale), Germany, assignor to A. W. Faber-Castell, Stein, near Nurnberg, Germany
 Filed Nov. 10, 1958, Ser. No. 53,330
 Claims priority, application Germany May 10, 1958
 Term of patent 14 years
 (Cl. D74—24)



191,342

MECHANICAL PENCIL

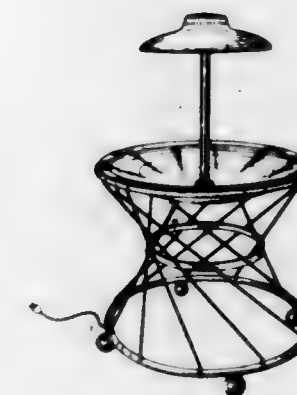
Günter Fuchs, Schwarzenbach (Saale), Germany, assignor to A. W. Faber-Castell, Stein, near Nurnberg, Germany
 Filed Nov. 10, 1958, Ser. No. 53,331
 Claims priority, application Germany May 10, 1958
 Term of patent 14 years
 (Cl. D74—24)



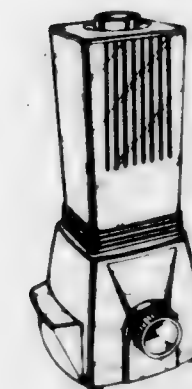
191,343

COMBINED COOLER AND DISPLAY STAND

Frederick A. Kell, 2373 Fair Acres Road, St. Louis County, Mo.
 Filed May 12, 1959, Ser. No. 55,884
 Term of patent 14 years
 (Cl. D80—11)

191,344
BLENDER

Donald E. Leman, Chicago, and Robert O. Ernest, Oak Park, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
 Filed Oct. 12, 1960, Ser. No. 62,456
 Term of patent 14 years
 (Cl. D89—1)



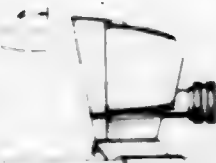
191,345

LAWN SPRINKLER

John D. Belmont, Babylon, N.Y., assignor to Melnor Industries, Inc., Carol Place, Moonachie, N.J., a corporation of New York

Filed July 21, 1960, Ser. No. 61,453

Term of patent 7 years
(Cl. D91-1)



191,346

SPRINKLER FOR EXTINGUISHING FIRES

Eric P. Hanson, North Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware

Filed Oct. 24, 1960, Ser. No. 62,583

Term of patent 14 years
(Cl. D91-1)



LIST OF REISSUE PATENTEEES

TO WHOM

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NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Alford, Andrew. A periodic directive antenna. Re. 25,035, 9-12-61, Cl. 343-732.
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Donner, Verne P., W. W. Henning, and G. S. Allin, Jr., to International Harvester Co. Fluid power steering system. Re. 25,036, 9-12-61, Cl. 180-79.2.
Henning, William W.: See—
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International Harvester Co.: See—
Donner, Verne P., Henning, and Allin. Re. 25,036.

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Dot, Pedro, to The Conard-Pyle Co. Rose plant. 2,091, 9-12-61, Cl. 47-61.
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Jackson & Perkins Co.: See—
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Grosskopf, John A., to Scroll, Inc. Ottoman. 191,306, 9-12-61, Cl. D15-8.
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TO WHOM

PATENTS WERE ISSUED ON THE 12TH DAY OF SEPTEMBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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- Beamon, Howard L., to Hanes Hosiery Mills Co. Automatic selective doffing device for knitwear looping machines. 2,999,470, 9-12-61, Cl. 112-26.
- Beard, Richard B., and E. Snitzer, to Minneapolis-Honeywell Regulator Co. Gas analyzing apparatus. 2,999,379, 9-12-61, Cl. 73-23.
- Beck, Kenneth H., to Minneapolis-Honeywell Regulator Co. Series energized cascaded transistor amplifier. 2,999,984, 9-12-61, Cl. 330-18.
- Becker, Floyd L.: See—
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- Beckman & Whitley, Inc.: See—
Buck, Willard E. 2,999,420.
- Beckwith, Robert W. Signal transmission circuit. 2,999,948, 9-12-61, Cl. 307-88.5.
- Bedard, Eugene J., D. F. Lippincott, and C. H. Nickell, to The Wheland Co. Drive for reciprocating power pumps and the like. 2,999,401, 9-12-61, Cl. 74-801.
- Beiser, Carl A.: See—
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- Bell Telephone Laboratories, Inc.: See—
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- Bendix Corp., The: See—
Ferguson, John H., Jr. 2,999,356.
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- Benink, Christian J. M., and H. Wenz, to G. M. Pfaff, A.G. Adjustable guiding cam mechanism. 2,999,471, 9-12-61, Cl. 112-158.
- Bennett, Edward J., and H. M. Parmelee, to E. I. du Pont de Nemours and Co. Azetropic composition. 2,999,816, 9-12-61, Cl. 252-77.1.
- Bennett, Leslie H.: See—
Morton, Lawrence L., Decker, and Bennett. 2,999,285.
- Benson, Bernard S., to Benson-Lehner Corp. Graph transformation apparatus. 2,999,315, 9-12-61, Cl. 33-1.
- Benson, Harold R., to NuArc Co., Inc. Film dot analyzer. 2,999,419, 9-12-61, Cl. 88-14.
- Benson-Lehner Corp.: See—
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- Berni, Louis W., to Ace Electronics Associates, Inc. Wire wound resistor terminal cap. 2,999,996, 9-12-61, Cl. 338-329.
- Berry, Robert M. Machines for the packing of bottles or like articles into cases or the like. 2,999,343, 9-12-61, Cl. 53-166.
- Besson, Rene: See—
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- Blake, Norman: See—
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- Blayden, James H., to Aluminum Co. of America. Handrail construction. 2,999,871, 9-12-61, Cl. 256-65.
- Bleuennstein, Julius M., to Ford Motor Co. Process for mixing a Novalac resin and sand with an A-stage resin and sand to obtain a shell molding sand. 2,999,833, 9-12-61, Cl. 260-38.
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Gruber, Elbert E., and E. F. Kalafus, to The General Tire & Rubber Co. Composition comprising a refractory material and a polymethacrolein reaction product and method of producing thereof. 2,999,830, 9-12-61, Cl. 260-29.6.

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Hoshino, Yasushi, M. Namikawa, and S. Tochihara. System for manufacturing at high speed magnetic sound record sheets used on a magnetic sound record reading machine. 2,999,907, 9-12-61, Cl. 179-100.2.

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Kurix, Frank. Universal fishing spike. 2,999,660, 9-12-61, Cl. 248-48.
Kuzmick, Jerome F., and J. M. Krol, to Welded Carbide Tool Co., Inc. Composite metal article and method of producing. 2,999,309, 9-12-61, Cl. 29-194.
La Fave, Ivan V., and I. L. Wissmiller, to Chicago Bridge & Iron Co. Insulated cryogenic storage tank. 2,999,366, 9-12-61, Cl. 62-45.
Lafferty, Wylie M., to Universal Sewer Pipe Corp. Pipe joint. 2,999,899, 9-12-61, Cl. 285-110.
Lanciano, Claude O., Jr., and P. J. Zannoni, to Rubber Fabricators, Inc. Life preserver. 2,999,255, 9-12-61, Cl. 9-338.
Lanegan, Frederick E. Printing machine for punched paper. 2,999,456, 9-12-61, Cl. 101-228.
Lang, Paul: See—
Ten Bosch, Maurits, and Lang. 2,999,390.
Lange, Joachim: See—
Bestian, Herbert, and Lange. 2,999,856.
Lapham, Sidney D. Bull float. 2,999,261, 9-12-61, Cl. 15-235.8.
Lapointe, Lloyd J., to Royal McBee Corp. Tape transport apparatus. 2,999,625, 9-12-61, Cl. 226-51.
Laplin, Richard J., and R. G. Mohr, to Brunswick Corp. Chair structure. 2,999,662, 9-12-61, Cl. 248-188.
Larsson, Carl Viktor: See—
Ostberg, Jonas M., and Larsson. 2,999,723.
Latourette, Harold K.: See—
Ferris, Arthur F., and Latourette. 2,999,875.
Latzén, Anneliese: See—
Latzén, Josef H. 2,999,710.
Latzén, Josef H., deceased, by A. Latzen, nee Dahmen, heir, to A. Ehrenreich & Cie. Ball joint, especially for motor vehicles. 2,999,710, 9-12-61, Cl. 287-30.
Lauck, Francis W.: See—
Burkitt, Adolf J., and Lauck. 2,999,930.
Lauck, Robert M., and A. D. F. Toy, to Victor Chemical Works. Composition and method for the preparation of beverages. 2,999,754, 9-12-61, Cl. 99-78.
Lauer, Paul H., to The Falaco Corp. Window structure. 2,999,279, 9-12-61, Cl. 20-52.
Laug, Ernst, to Socony Mobil Oil Co. Inc. Cutting fluid. 2,999,814, 9-12-61, Cl. 252-34.7.
Layack, John F., to Jones & Laughlin Steel Corp. Non-contacting width gage. 2,999,944, 9-12-61, Cl. 250-219.
Lechtenberg, Leo J., to Briggs & Stratton Corp. Air cleaner. 2,999,562, 9-12-61, Cl. 183-44.
Legge, Henry R.: See—
Hann, Arthur, Legge, and Richards. 2,999,938.
Leitz, Ernst, Canada Ltd.: See—
Malinowski, Tadeusz, and Mandler. 2,999,415.
Levy, Irving M., to General Motors Corp. Winding arrangement for dynamoelectric machine. 2,999,953, 9-12-61, Cl. 310-166.
Levy, Irving M., to General Motors Corp. Two-speed four-pole stator winding arrangement. 2,999,954, 9-12-61, Cl. 310-166.
Levy, Irving M., to General Motors Corp. Two-speed two-pole stator winding arrangement. 2,999,955, 9-12-61, Cl. 310-166.
Lewis, Arnold S. Convertible canoe and kayak. 2,999,253, 9-12-61, Cl. 9-2.
Lexton, Gordon S.: See—
Thorne, Harold. 2,999,619.
Leyman Corp.: See—
Rume, Walter S., Jr. 2,999,275.
Li, Kam, to Radio Corp. of America. Converter circuits. 2,999,987, 9-12-61, Cl. 332-1.
Llaby-Owens-Ford Glass Co.: See—
Alexander, Harold M., and McCown. 2,999,341.
Sharp, Donald E. 2,999,337.
Licencia Palamanyokai Ertekesito Vallalat: See—
Heller, Laszlo, and Bakay. 2,999,945.
Lilly, Eli, and Co.: See—
Shipley, Robert E. 2,999,495.
Lincoln, Walter B., to C. Howard Hunt Pen Co. Penell pointer. 2,999,481, 9-12-61, Cl. 120-91.
Lingard, Frederick E.: See—
Cheeseman, Leslie H., and Lingard. 2,999,686.
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Kaczmarek, Leonard M. 2,999,396.
Linnenbank, Charles D., to Baldt Anchor, Chain & Forge Division of The Boston Metals Co. Detachable chain joining link. 2,999,352, 9-12-61, Cl. 59-87.
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List, Ferdinand: See—
Broich, Franz, List, and Roh. 2,999,879.
Litwincuk, Victor W. Portable table bowling game. 2,999,689, 9-12-61, Cl. 273-39.
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Logan, Hugh H., Nelson, Dixon, and Taube. 2,999,248.
Logan, Hugh H., J. F. Nelson, E. F. Dixon, and J. A. Taube, to Logan Emergency Showers, Inc. Emergency wash facility. 2,999,248, 9-12-61, Cl. 4-166.
Logan, Hugh H., K. G. Doty, and J. F. Nelson, to Logan Emergency Showers, Inc. Retractable emergency wash facility. 2,999,249, 9-12-61, Cl. 4-166.
Lohs, Willy, F. Sommer, and G. Thom, to Siemens & Halske Aktiengesellschaft Berlin and Munich. Telephone installation bay structure with sliding switch frames. 2,999,904, 9-12-61, Cl. 179-91.
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Long, William R., to Long Mfg. Co. Peanut digger and shaker. 2,999,547, 9-12-61, Cl. 171-101.
Lorenz, Anton: See—
Schliephacke, Fridtjof F. 2,999,719.
Schliephacke, Fridtjof F. 2,999,720.
Lounsberry, Stephen M., Jr.: See—
Steele, James R., and Lounsberry. 2,999,641.
Lowman, Walker B., to Industrial Nucleonics Corp. Cigarette rod cutter and cigarette counter. 2,999,520, 9-12-61, Cl. 146-101.
Ludwig, Oskar R., and A. Pezone. Room divider partitions. 2,999,568, 9-12-61, Cl. 180-34.
Ludwig, Richard E., to E. I. du Pont de Nemours and Co. Reaction product of N-glycidylphthalimide and a dianhydride compound, process for preparing same, and modification thereof. 2,999,836, 9-12-61, Cl. 260-42.
Lundy, James H., H. G. Rempel, and R. Slavich. Process for preconditioning air for use in the oxidation of hydrocarbon fuels. 2,999,485, 9-12-61, Cl. 123-119.
Lynch Corp.: See—
Clanin, Richard D., and Hansen. 2,999,344.
Lynn, John W.: See—
Roberts, Richard L., and Lynn. 2,999,876.
Lyon, George A. Wheel cover. 2,999,722, 9-12-61, Cl. 301-37.
Luznat, Johannes, to Ford Motor Co. Precombustion chamber. 2,999,484, 9-12-61, Cl. 123-32.
Macgregor, Peter S., and A. J. J. Keeley, to Flight Refuelling Ltd. Coupling devices for railway vehicles. 2,999,602, 9-12-61, Cl. 213-97.
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Miller, Clarence H. 2,999,319.
Machine Tool Works Oerlikon, Administration Co.: See—
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MacLeod, David E., to Carrier Corp. Ice cube makers. 2,999,371, 9-12-61, Cl. 62-347.
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Maculan, Rudolf. 2,999,340.
Maculan, Rudolf, deceased; E. Meisner, guardian of A. Maculan, heir of said R. Maculan. Surface supporting structure. 2,999,340, 9-12-61, Cl. 50-49.
Macy, Jay R.: See—
Jenkins, Mervyn M., and Macy. 2,999,262.
Magarshack, John M., and E. Moss, to The British Cotton Industry Research Assn. Device for measuring energy input to raising rollers of textile raising machines. 2,999,294, 9-12-61, Cl. 26-33.
Malinaric, Paul J. Noise eliminator. 2,999,905, 9-12-61, Cl. 179-100.1.
Malinowski, Tadeusz, and W. Mandler, to Ernst Leitz, Canada Ltd. Rangefinder sight with rangefinder of external basis type. 2,999,415, 9-12-61, Cl. 88-2.2.
Mallory, P. R., & Co., Inc.: See—
Fuller, Frederick J. 2,999,654.
Huettner, Clarence, Reeve, and Reuter. 2,999,916.
Mancini, Louis P. Portable first aid cabinet. 2,999,583, 9-12-61, Cl. 206-12.
Mandler, Walter: See—
Malinowski, Tadeusz, and Mandler. 2,999,415.
Manning, George, and J. A. McCoy, Sr., to Cocker Machine & Foundry Co. Fabric stretch control device. 2,999,295, 9-12-61, Cl. 26-54.
Manning, Maxwell & Moore, Inc.: See—
Du Bois, Robert C. 2,999,478.
Du Bois, Robert C. 2,999,508.
Mariani, Frank N. Mounting for rear vision reflector. 2,999,428, 9-12-61, Cl. 88-98.
Marié, Pierre G. Resonant directional couplers. 2,999,988, 9-12-61, Cl. 333-10.
Marlson, John A. Tubeless tire-rim and spring unit supplement. 2,999,524, 9-12-61, Cl. 152-6.

- Marko, Albert J.: See—
Bowerman, Edwin R., Jr., and Marko. 2,999,958.
- Marka, Mortimer M.: Cigarette filler composition. 2,999,775, 9-12-61, Cl. 131—17.
- Martens, Jack E.: Two part ring with lug and recess retaining means. 2,999,412, 9-12-61, Cl. 85—8.8.
- Martin, Albert E., J. Smart, and G. L. Richardson, to C. A. Parsons & Co. Ltd.: Infra-red gas analysers. 2,999,929, 9-12-61, Cl. 250—43.5.
- Martin Co., The: See—
Fishpaw, Arthur L., and McAvoy. 2,999,355.
- Martin, James.: Parachute apparatus. 2,999,659, 9-12-61, Cl. 244—141.
- Marvel Specialty Co., Inc.: See—
Smith, Gus T.: 2,999,618.
- Marvin, Edgar S.: See—
Hutchinson, Miller R., Jr., O'Brien, and Marvin. 2,999,441.
- Maschinenfabrik Winkler, Fallert & Co.: See—
Buehl, René, and Von Helm. 2,999,685.
- Massey-Ferguson Ltd.: See—
Horne, Donald S., Ashton, and Kepkay. 2,999,347.
Horne, Donald S., Ashton, and Kepkay. 2,999,356.
- Mast, Aquila D., to Daffin Mfg. Co.: Dispensing apparatus with hopper. 2,999,617, 9-12-61, Cl. 222—504.
- Matheson, James N., to The Electric Storage Battery Co.: Respirator. 2,999,498, 9-12-61, Cl. 128—146.
- Mathews, Bernard C.: Variable discharge crop reaper and chopper. 2,999,346, 9-12-61, Cl. 56—1.
- Maurice, Jean, and M. Riat, to Societe Anonyme Francaise du Ferodo.: Electric control circuit for electromagnet clutches. 2,999,573, 9-12-61, Cl. 192—3.5.
- Maxant Button & Supply Co.: See—
Morton, Lawrence L., Decker, and Bennett. 2,999,285.
- Mayer, Cornelius G., and J. B. Killow, to Radio Corp. of America.: Mechanism for feeding strip material. 2,999,624, 9-12-61, Cl. 226—50.
- McAllister, Eva C.: See—
McAllister, John W., and E. C.: 2,999,321.
- McAllister, John W., and E. C.: $\frac{1}{2}$ to Gadget-Of-The-Month Club, Inc.: Apparatus for facilitating the making of pleated draperies. 2,999,321, 9-12-61, Cl. 33—180.
- McAvoy, Gilbert P.: See—
Fishpaw, Arthur L., and McAvoy. 2,999,355.
- McCammon, Robert F., to Minneapolis-Honeywell Regulator Co.: Slide changer apparatus. 2,999,424, 9-12-61, Cl. 89—28.
- McClain, Harry W.: Fuel carburetor with central air intake. 2,999,674, 9-12-61, Cl. 261—50.
- McClelland, John C., to The Budd Co.: Testing machine. 2,999,382, 9-12-61, Cl. 73—93.
- McColg, John A., Sr.: See—
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- McComb, Frank E., to Flexible Steel Lacing Co.: Aligning gauge for flexible hinged fasteners. 2,999,284, 9-12-61, Cl. 24—33.
- McConnell, David P.: See—
Ault, John D., and McConnell. 2,999,651.
- McCown, William E.: See—
Alexander, Harold M., and McCown. 2,999,341.
- McCulloch, Bryson.: Shade roller and bracket assemblies. 2,999,664, 9-12-61, Cl. 248—267.
- McDermott, William J., to Dennison Mfg. Co.: Self-locking box. 2,999,626, 9-12-61, Cl. 229—45.
- McDonald, James A., and H. H. Evans, to Commercial Cam & Machine Co.: Method of manufacture of an indexing cam. 2,999,311, 9-12-61, Cl. 29—401.
- McDonald, Leighton S.: See—
Crabb, Clarence R., Hughes, and McDonald. 2,999,886.
- McGary, Charles W., Jr., and C. T. Patrick, Jr., to Union Carbide Corp.: Epoxy coating compositions. 2,999,827, 9-12-61, Cl. 260—23.
- McGinnis, Ralph E., to Westinghouse Electric Corp.: Damp-ing apparatus. 2,999,669, 9-12-61, Cl. 253—77.
- McGraw-Edison Co.: See—
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- McShane, Herbert F., Jr.: See—
Bell, Richard W., Csendes, and McShane. 2,999,840.
- Mead, Harry A.: See—
Slagel, Lamont, and Mead. 2,999,533.
- Mecca Film Laboratories Inc.: See—
Welch, Earl M.: 2,999,421.
- Medearis, Paul A.: See—
De Jarnett, Frank D.: 2,999,605.
- Medlar, Lewis A., to Fox Products Co.: Transformer apparatus. 2,999,973, 9-12-61, Cl. 323—60.
- Mellinger Fixtures Co., Inc.: See—
Mellinger, Raymond. 2,999,269.
- Mellinger, Raymond, to Mellinger Fixtures Co., Inc.: Cabinet hinge. 2,999,269, 9-12-61, Cl. 16—149.
- Meissner, Ernst: See—
Maculan, Rudolf. 2,999,340.
- Melpar, Inc.: See—
Williams, Richard E.: 3,000,006.
- Melton, James O., and T. B. Wilkinson, to Jameco, Inc.: Ball joint assembly. 2,999,709, 9-12-61, Cl. 287—90.
- Mendelsohn, Lewis I., to General Electric Co.: Antimonide coated magnetic materials with lead and lead-antimony matrices. 2,999,778, 9-12-61, Cl. 148—31.55.
- Mendles, Walter J., to The Singer Mfg. Co.: Centrifugal gate valve for sewing machines. 2,999,474, 9-12-61, Cl. 112—256.
- Menter, Daniel J.: See—
Conti, Alfred R., and Menter. 2,999,301.
- Mercer, Carl A.: Tube-perforating mechanism. 2,999,525, 9-12-61, Cl. 153—2.
- Merck & Co., Inc.: See—
Poos, George I., and Saret. 2,999,859.
- Metropolitan-Vickers Electrical Co. Ltd.: See—
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- Meta, Jack L., to Warwick Mfg. Corp.: Magnetic recorder head. 2,999,906, 9-12-61, Cl. 179—100.2.
- Miegel, Ralph E., to E. I. du Pont de Nemours and Co.: Process of vulcanizing chloroprene polymers. 2,999,855, 9-12-61, Cl. 260—79.5.
- Miller, Alfred, and H. Haydn, to Agfa Aktiengesellschaft.: Photoconductive layers for electrophotography. 2,999,750, 9-12-61, Cl. 96—1.
- Miller, Clarence H., to Machine Products Corp.: Layout fixture. 2,999,819, 9-12-61, Cl. 33—174.
- Miller, Henry C., and E. L. Muettterties, to E. I. du Pont de Nemours and Co.: Metal derivatives of borane adducts. 2,999,864, 9-12-61, Cl. 260—340.6.
- Miller, James L., to A. E. Scales Mfg. Co.: Liquid laundry starch. 2,999,761, 9-12-61, Cl. 106—213.
- Miller Pottery Engineering Co.: See—
Miller, Vincent P.: 2,999,292.
- Miller, Robert G.: See—
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- Miller, Vincent P., to Miller Pottery Engineering Co.: Appending machines. 2,999,292, 9-12-61, Cl. 25—22.
- Miller, Wallace W.: Extruded threshold, sill and fascia plate. 2,999,280, 9-12-61, Cl. 20—64.
- Mine Safety Appliances Co.: See—
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- Mining Research Corp.: See—
Ault, John D., and McConnell. 2,999,651.
- Minneapolis-Honeywell Regulator Co.: See—
Beard, Richard B., and Snitzer. 2,999,379.
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Petty, Edward C., and Underwood. 2,999,358.
- Minnesota Mining and Mfg. Co.: See—
Honn, Francis J., and Sims. 2,999,854.
- Mische, Friedrich, to Voigtlander A.G.: Photographic measuring finder. 2,999,416, 9-12-61, Cl. 88—2.4.
- Mitchell, Robert L.: Resilient mat construction. 2,999,481, 9-12-61, Cl. 94—13.
- Miyachi, Hideo, to Yashica Co., Ltd.: Optical filter compensation means coupled to exposure-responsive device. 2,999,443, 9-12-61, Cl. 95—10.
- Miyachi, Hideo, to Yashica Co., Ltd.: Turret detent means. 2,999,444, 9-12-61, Cl. 95—45.
- Mobay Chemical Co.: See—
Kniepkamp, Ernst, and Reuter. 2,999,707.
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Reuter, Franz G., and Igelbrink. 2,999,717.
Ulderup, Jürgen, and Reuter. 2,999,679.
- Modelli, Renato: See—
Camerino, Bruno, Modelli, and Patelli. 2,999,870.
- Mohr, Robert G.: See—
Lampin, Richard J., and Mohr. 2,999,662.
- Mollins Machine Co. Ltd.: See—
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- Momoi, Kazuo.: Process of making a fishing net. 2,999,413, 9-12-61, Cl. 87—12.
- Moore & Steele Corp.: See—
Steele, James R., and Lounsbury. 2,999,641.
- Morgan, Paul W., to E. I. du Pont de Nemours and Co.: Synthetic polymer fibril paper. 2,999,788, 9-12-61, Cl. 162—146.
- Mortin, Louis H., to Coats & Clark Inc.: Method of molding plastic travelers with wire inserts. 2,999,276, 9-12-61, Cl. 18—59.
- Mork, George W., to Bucyrus-Erie Co.: Hinged boom stop. 2,999,601, 9-12-61, Cl. 212—59.
- Morley, Frederick W., to Rolls-Royce Ltd.: Protective arrangement for use with apparatus or machines having rotating parts. 2,999,667, 9-12-61, Cl. 253—39.
- Morris, John W., to Pittsburgh Plate Glass Co.: Method and apparatus for edge sealing. 2,999,779, 9-12-61, Cl. 154—271.
- Morrish, Desmond G., to Ardenite Acoustic Laboratories Ltd.: Electrical control components. 2,999,992, 9-12-61, Cl. 338—163.
- Morrison, George H., F. C. Patilla, and W. Zloczower, to Sylvania Electric Products Inc.: Phosphors and methods for producing same. 2,999,818, 9-12-61, Cl. 252—301.6.
- Morton, Lawrence L., W. H. Decker, and L. H. Bennett, $\frac{1}{2}$ to Kroehler Mfg. Co. and $\frac{1}{2}$ to Maxant Button & Supply Co.: Upholstery button construction. 2,999,285, 9-12-61, Cl. 24—94.
- Mosher, Robert A., and W. G. Stanley, to Standard Oil Co.: Restricted ammonium nitrate propellant. 2,999,462, 9-12-61, Cl. 102—98.
- Moss, Edward: See—
Magarshack, John M., and Moss. 2,999,294.
- Motorola, Inc.: See—
Birkenes, Bernhard. 2,999,927.
Niederman, Bernard, and Pohanka. 2,999,989.
- Mott, Howard V. S.: Shoe fitting. 2,999,256, 9-12-61, Cl. 12—142.
- Mottier, Edouard: See—
Mottier, Felix and E.: 2,999,924.
- Mottier, Felix and E.: Anti-fog lighting projector. 2,999,924, 9-12-61, Cl. 240—41.35.
- Mowery, Orville E., and R. G. Miller, to The G. M. Diehl Machine Works, Inc.: Automatically adjustable gauging device for positioning an element. 2,999,518, 9-12-61, Cl. 143—168.
- Moyer, Robert C., to Radio Corp. of America.: Off-center indicator. 3,000,005, 9-12-61, Cl. 340—282.
- Moyroud, Louis M.: See—
Higonnet, René A., Moyroud, and Hanson. 2,999,434.
- Muettterties, Earl L.: See—
Miller, Henry C., and Muettterties. 2,999,864.

- Muller, Erwin, and O. Bayer, $\frac{1}{2}$ to Farbenfabriken Bayer Aktiengesellschaft and $\frac{1}{2}$ to Mobay Chemical Co.: Polycarbonate preparation under anhydrous conditions. 2,999,844, 9-12-61, Cl. 260—47.
- Müller, Josef, F. H. Van Winsen, and A. G. Zimmer, to Daimler-Benz Aktiengesellschaft.: Spring bellows for air spring systems. 2,999,681, 9-12-61, Cl. 267—65.
- Munson, Donald J., and R. Gustin, to The J. R. Clark Co.: Combination pad and cover unit for ironing table tops. 2,999,825, 9-12-61, Cl. 38—140.
- Murphy, Robert F., Jr., to Pan American Petroleum Corp.: Method of air filling. 2,999,551, 9-12-61, Cl. 175—68.
- Murray, Frederick R., to Rolls-Royce Ltd.: Combustion equipment of gas-turbine engines. 2,999,859, 9-12-61, Cl. 60—39.65.
- Musaphia, Georges.: Apparatus for producing animated optical effects. 2,999,326, 9-12-61, Cl. 40—106.52.
- Myers, Robert W., to Phillips Petroleum Co.: Paraffin isomerization process. 2,999,805, 9-12-61, Cl. 208—140.
- Myers, Robert R., to Aluminum Co. of America.: Plugged assemblies. 2,999,703, 9-12-61, Cl. 287—1.
- Myers, William D., to Baker Oil Tools, Inc.: Locator for well casing collar spaces and similar recesses. 2,999,542, 9-12-61, Cl. 166—64.
- Myers, William D., to Baker Oil Tools, Inc.: Parallel tubular string apparatus for well bores. 2,999,543, 9-12-61, Cl. 166—129.
- Nabors, Jack D.: See—
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- Nagel, Felix E.: See—
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- Namikawa, Mamoru: See—
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Hoshino, Yasushi, Namikawa, and Tochihara. 2,999,908.
- National Dairy Products Corp.: See—
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- National Research Council: See—
Thiessen, George J., and Dagg. 2,999,380.
- National Research Development Corp.: See—
Airey, Leslie. 2,999,985.
- Naudius, Edward J., to General Motors Corp.: Brake shoe spring. 2,999,566, 9-12-61, Cl. 188—78.
- Nelson, James F.: See—
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- Nelson, James F.: See—
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- Nelson, Ralph A.: See—
Downs, Martin L., and Nelson. 2,999,786.
Downs, Martin L., and Nelson. 2,999,787.
- Nemes, Joseph J., and R. D. Vartanian, to American Cyanamid Co.: Urea and thiourea resinous composition. 2,999,847, 9-12-61, Cl. 260—69.
- Nerwin, Hubert, to Eastman Kodak Co.: Automatic exposure control system. 2,999,438, 9-12-61, Cl. 95—10.
- Nerwin, Hubert, and J. H. Eagle, to Eastman Kodak Co.: Automatic exposure control for photographic camera. 2,999,439, 9-12-61, Cl. 95—10.
- Nerwin, Hubert, to Eastman Kodak Co.: Automatic exposure control for photographic camera. 2,999,440, 9-12-61, Cl. 95—10.
- Neumann, Gerhard: See—
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- New, Alfred G.: See—
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- Newcomb, Wilbur F.: Rear view mirror supporting frame for automobiles. 2,999,427, 9-12-61, Cl. 88—86.
- Nichols, Edward C., and C. P. Powell, to Draper Corp.: Shutter control mechanism. 2,999,516, 9-12-61, Cl. 139—155.
- Nichols, N. T., Jr.: Grass and weed deflecting attachment for cotton pickers. 2,999,349, 9-12-61, Cl. 56—28.
- Nickell, Claude H.: See—
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- Niederman, Bernard, and R. L. Pohanka, to Motorola, Inc.: Electro-mechanical filter. 2,999,989, 9-12-61, Cl. 333—71.
- Noack, Rolf: See—
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- Nobinger, Edward.: Portable sprinkling device. 2,999,644, 9-12-61, Cl. 239—229.
- Nolde, Henry J.: Buoyant boat construction. 2,999,254, 9-12-61, Cl. 9—3.
- Noll, Henry D., to Houdry Process Corp.: Reforming gasoline. 2,999,604, 9-12-61, Cl. 208—65.
- Norpe Chemical Co.: See—
Dombrow, Bernard A.: 2,999,823.
- Norgren, C. A., Co.: See—
Friedell, Morley V.: 2,999,913.
- Norman, Lucille.: Buckle. 2,999,286, 9-12-61, Cl. 24—171.
- Normington, James B.: See—
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- Norby, Harold W.: Self contained boat trailer. 2,999,252, 9-12-61, Cl. 9—1.
- North American Aviation, Inc.: See—
Bower, John L.: 2,999,482.
- Frederick, Darwin L., and Slater. 2,999,391.
- North American Phillips Co., Inc.: See—
Beukema, Willem, Bruijning, and Vuurman. 2,999,302.
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- Jonkers, Cornelius O.: 2,999,365.
- Klaessens, Hendrik A., van Santen, and Joormann. 2,999,941.
- Klaessens, Hendrik A., Diemer, and Stap. 2,999,942.
- Kohler, Thomas R.: 2,999,937.
- Schagen, Pieter, and Calder. 2,999,957.
- Schoot, Cornelis J., and Van Rij. 2,999,863.
- Tenger, Jan.: 2,999,289.
- Van Der Ster, Johannes. 2,999,363.
- Northup, Wilmer R., and T. W. Kaylor.: Fishing lures. 2,999,331, 9-12-61, Cl. 43—42.46.
- Norwich, Alan, to Industrial Neolux Corp.: Classifying apparatus. 2,999,589, 9-12-61, Cl. 208—82.
- Nottebohm, Carl-Ludwig: See—
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- NuArc Co., Inc.: See—
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- O'Brien, Edward D.: See—
Bouras, Marian E., Boode, and O'Brien. 2,999,995.
Bouras, Marian E., Hardison, and O'Brien. 2,999,994.
- O'Brien, Edward J.: See—
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- O'Brien, Robert F.: See—
Hutchinson, Miller R., Jr., O'Brien, and Marvin. 2,999,441.
- Oetiker, Hans.: Pneumatic control valve. 2,999,513, 9-12-61, Cl. 137—920.
- Ogilvie Flour Mills Co., Ltd., The: See—
Witwicka, Irena E., Pavuk, and Gaver. 2,999,753.
- Ohihausen, Sidney C.: Cutters for hydraulic dredges. 2,999,324, 9-12-61, Cl. 37—47.
- Okawa, Kenji, and M. Sato, to Ajinomoto Co., Inc.: Synthesis of β -hydroxy- α -amino acid. 2,999,878, 9-12-61, Cl. 260—519.
- Oklahoma State University of Agriculture and Applied Science: See—
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- Olin Mathieson Chemical Corp.: See—
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Cooley, Robert A.: 2,999,910.
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Pauls, Theron F.: 2,999,308.
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- Orr, John E.: Single trigger mechanism for double barrelled shotguns. 2,999,327, 9-12-61, Cl. 42—42.
- Ostberg, Jonas M., and C. V. Larsson.: Chain for tractors. 2,999,723, 9-12-61, Cl. 306—57.
- Otis Engineering Corp.: See—
Fredd, John V.: 2,999,320.
- Grimmer, George G., and Schramm. 2,999,546.
- Owens-Illinois Glass Co.: See—
Chew, Clarence, Sr.: 2,999,511.
- Jenkins, Mervyn M., and Macy.: 2,999,262.
- Pack & Semiconductors, Inc.: See—
Campbell, Richard A.: 2,999,587.
- Stern, Joseph M., and Fuller.: 2,999,983.
- Pack Mfg. Co.: See—
Shelly, Robert S.: 2,999,318.
- Page Communications Engineers, Inc.: See—
Thomas, Elmer.: 2,999,925.
- Palilla, Frank C.: See—
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- Pamm, Georges: See—
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- Pan American Petroleum Corp.: See—
Murphy, Robert P., Jr.: 2,999,531.
- Panzizi, Luigi: See—
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- Pankuch, Henry.: Sound emitting fishing lure. 2,999,329, 9-12-61, Cl. 43—26.2.
- Panadopoulos, Michael N., and C. H. Deal, Jr., to Shell Oil Co.: Solvent extraction process. 2,999,892, 9-12-61, Cl. 260—674.
- Papritz, Hans, to Haag-Streit A.G.: Silt lamp. 2,999,422, 9-12-61, Cl. 88—20.
- Parker, Eric: See—
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- Parker, James M.: See—
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- Parmelee, Howard M.: See—
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- Parrott, Henry W.: See—
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- Parson, Edward L.: Traction-percussion table. 2,999,496, 9-12-61, Cl. 128—33.
- Parsons, C. A., & Co. Ltd.: See—
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- Patrick, Charles T., Jr.: See—
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- Paula, Theron F., to Olin Mathieson Chemical Corp.: Method of manufacturing heat exchangers. 2,999,304, 9-12-61, Cl. 29—157.3.
- Paula, Theron F., to Olin Mathieson Chemical Corp.: Heat exchanger. 2,999,308, 9-12-61, Cl. 29—157.3.
- Paulson, Thomas V.: Two-part plastic container. 2,999,611, 9-12-61, Cl. 220—4.
- Pavlecka, John.: Airfoil structure. 2,999,658, 9-12-61, Cl. 244—124.
- Pavuk, John S.: See—
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- Payne, William F.: See—
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- Peerless Tube Co.: See—
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- Peerman, Dwight E.: See—
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- Peerman, Dwight E., and D. E. Floyd, to General Mills, Inc.: Reaction product of epoxy resins and polyamides from blends of aliphatic polyamines and aromatic polyamines. 2,999,826, 9-12-61, Cl. 260—18.

- Pentecostal Church of God: See—
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 Perkio, Elmer G.: See—
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 Perry, William M., to General Aniline & Film Corp. Copolymers of N-vinylpyrrolidones with dialkyl maleates or fumarates. 2,999,853, 9-12-61, Cl. 280-78.5.
 Petersen, Gerald A. M., R. W. Goode, and H. R. Gustafson, said Goode and said Gustafson, assigns, to said Petersen. Pole tensioner. 2,999,855, 9-12-61, Cl. 242-155.
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 Peterson, Bertil E., to Cardwell Westinghouse Co. Journal lubricator. 2,999,726, 9-12-61, Cl. 308-87.
 Peterson, Edwin F. Vibrator. 2,999,393, 9-12-61, Cl. 74-87.
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 Pfaff, G. M., A.G.: See—
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 Pfeiderer, Friedrich, and O. A. Thiele, to Siemens & Halske Aktiengesellschaft, Berlin and Munich. Polarized change-over contact device. 2,999,915, 9-12-61, Cl. 200-93.
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 Phillips, Benjamin, P. S. Starcher, and D. L. Heywood, to Union Carbide Corp. 2,3-epoxyalkylsuccinic acid derivatives and the process of making them. 2,999,868, 9-12-61, Cl. 260-348.
 Phillips Petroleum Co.: See—
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 Franzus, Boris. 2,999,837.
 Myers, John W. 2,999,805.
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 Pickles, Sidney. Shielded antenna. 3,000,008, 9-12-61, Cl. 343-792.
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 Pinkley, Clyde W., to Industrial Nucleonics Corp. Signal switch and readout for nuclear magnetic resonance measurement apparatus. 2,999,974, 9-12-61, Cl. 324-5.
 Pinkley, Clyde W., to Industrial Nucleonics Corp. Nuclear magnetic resonance measuring and control device. 2,999,975, 9-12-61, Cl. 324-5.
 Pinkley, Clyde W., to Industrial Nucleonics Corp. Nuclear magnetic resonance measuring apparatus. 2,999,978, 9-12-61, Cl. 324-5.
 Pittsburgh Plate Glass Co.: See—
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 Morris, John W. 2,999,779.
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 Podschus, Ernst: See—
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 Pohanka, Rudolph L.: See—
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 Potash Co. of America: See—
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 Powell, Charles P.: See—
 Nichols, Edward C., and Powell. 2,999,516.
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 Quinn, Paul, to W. S. Hodgkinson & Co. Ltd. Paper making. 2,999,789, 9-12-61, Cl. 162-201.
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 Radiological Research Institute, Inc.: See—
 Ronzio, Anthony R. 2,999,747.
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 Rhoads, Joseph E. Process for surfacing presoftened polyamide and an in situ curable elastomer. 2,999,764, 9-12-61, Cl. 117-47.
 Rice, Arlo E. Plano key tensioning device. 2,999,411, 9-12-61, Cl. 84-439.
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 Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass bending mould. 2,999,338, 9-12-61, Cl. 49-67.
 Richter, Johan C. F. C., and R. J. Johansen, to Aktiebolaget Kamyr. Method and plant for washing of cellulosic pulp under overpressure. 2,999,785, 9-12-61, Cl. 162-60.
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 Riley, Thomas, D., Zaza, J. Gaser, and J. Strmac, to Apex Paper Box Co. Container and method of making the same. 2,999,430, 9-12-61, Cl. 93-36.
 Ringelstetter, Leo A. Kick-stand and parking brake for bicycles and similar vehicles. 2,999,896, 9-12-61, Cl. 280-296.
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 Robertson, H. H. Co.: See—
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 Roberts, Richard L., and J. W. Lynn, to Union Carbide Corp. Vapor phase synthesis of allyl cyanide. 2,999,876, 9-12-61, Cl. 260-465.9.
 Robertson, Edward W. Navigational computer. 2,999,635, 9-12-61, Cl. 235-61.
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 Saubestre, Edward B., and F. P. Bulan, to Sylvania Electric Products Inc. Electroplating of niobium. 2,999,799, 9-12-61, Cl. 204-42.
 Saunders, Alfred P., to Wildt Mellor Bromley Ltd. Circular knitting machines equipped with wrap thread mechanism. 2,999,375, 9-12-61, Cl. 66-135.
 Saunders, Earle R., R. M. Franks, and C. A. Beiser, to Union Carbide Corp. Method for producing non-aging rimmed steels. 2,999,749, 9-12-61, Cl. 75-58.
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 Schagen, Pieter, and N. D. R. Calder, to North American Philips Co. Inc. Cathode ray tube. 2,999,957, 9-12-61, Cl. 313-79.
 Schappel, Joseph W., to American Viscose Corp. Production of soil-resistant material. 2,999,774, 9-12-61, Cl. 117-139.5.
 Schell, James H., A. Dony, and H. L. Faigen, to Amchem Products, Inc. Inhibitor composition. 2,999,811, 9-12-61, Cl. 252-8.55.
 Schenck, Leslie M., to General Aniline & Film Corp. Process of improving the odor of sulfoalkyl esters of fatty acids. 2,999,871, 9-12-61, Cl. 260-400.
 Scheunert, Alfred, to Siemens & Halske Aktiengesellschaft, Berlin and Munich. Connector for extending telephone calls to lines with different service requirements. 2,999,901, 9-12-61, Cl. 139-17.
 Sehlberg, Arnold G., to A. O. Smith Corp. Flange reinforced embossment. 2,999,312, 9-12-61, Cl. 29-545.
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 Schliephacke, Fridtjof F., to A. Lorenz. Reclining chair with folded back-rest and control. 2,999,710, 9-12-61, Cl. 297-85.
 Schliephacke, Fridtjof F., to A. Lorenz. Leg-rest control for reclining chair. 2,999,720, 9-12-61, Cl. 297-89.
 Schiumbohm, Peter. Ladies' handbag. 2,999,522, 9-12-61, Cl. 150-28.
 Schmidt, Alfred T. Neon flash light assembly. 2,999,922, 9-12-61, Cl. 240-11.4.
 Schmidt, Alfred T. Flasher light casing construction. 2,999,923, 9-12-61, Cl. 240-11.4.
 Schnecke, Paul, to Siemens-Schuckertwerke Aktiengesellschaft. Power current rectifier with semiconducting rectifier units. 2,999,971, 9-12-61, Cl. 321-27.
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 Schneider, Heinz, to Siemens-Schuckertwerke Aktiengesellschaft. Dry rectifier of small type. 2,999,963, 9-12-61, Cl. 317-234.
 Schnell, Hermann, and H. Krimm. High molecular weight thermoplastic aromatic sulfonyl polycarbonates. 2,999,846, 9-12-61, Cl. 260-49.
 Schoeld, Edmund A., J. D. Nabors, and J. S. Reiter, to Potash Co. of America. Apparatus for flotation concentration in coarse size range. 2,999,595, 9-12-61, Cl. 200-93.
 Schomburg, Walter E., to Whirlpool Corp. Home appliance. 2,999,368, 9-12-61, Cl. 62-272.
 Schoot, Cornelis J., and J. H. Van Rij, to North American Philips Co., Inc. Method of producing diphenyl sulphones. 2,999,883, 9-12-61, Cl. 260-407.
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 Schurer, Friedrich. Container for taking and storing of biological fluids. 2,999,500, 9-12-61, Cl. 128-276.
 Schuster, Roman. Grinding blocks. 2,999,742, 9-12-61, Cl. 51-203.
 Schwab, Max, deceased; O. B. Schwab, nee Bonner, sole devisee. Drive and stop apparatus for sewing machines. 2,999,575, 9-12-61, Cl. 192-146.
 Schwab, O. B.: See—
 Schwab, Max. 2,999,575.
 Schwalbach, Joseph C., to Baso Inc. Flow control device. 2,999,536, 9-12-61, Cl. 158-123.
 Schwartz, Daniel M., to The Elanco Corp. Vehicle drive arrangement. 2,999,553, 9-12-61, Cl. 180-6.7.
 Schwartz, Harold A., to Patchogue-Plymouth Corp. Backings for tufted fabrics. 2,999,297, 9-12-61, Cl. 28-80.
 Schwesig, Heinz, and K. Bischoff, to Siemens-Reiniger-Werke Aktiengesellschaft. Circuit arrangement for X-ray apparatus providing for three-phase full wave rectification of alternating current. 2,999,970, 9-12-61, Cl. 321-27.
 Scott, John N., Jr.: See—
 Silas, Cecil J., and Scott. 2,999,274.
 Searle, G. D., & Co.: See—
 Krimmel, Carl P. 2,999,860.
 Seefuth, Charles L., to Phillips Petroleum Co. Separation for flare systems. 2,999,560, 9-12-61, Cl. 183-2.5.
 Segre, Diego, to United States of America, Health, Education and Welfare. Serologic test. 2,999,792, 9-12-61, Cl. 167-84.5.
 Seis, Edward A. Interlock. 2,999,570, 9-12-61, Cl. 189-36.
 Seis, Corp. of America: See—
 Erhardt, John E., Jr., and Siegel. 2,999,675.
 Semmelroth, Albert N., to Virco Mfg. Corp. Adjustable support for a platform. 2,999,729, 9-12-61, Cl. 311-39.
 Seward, Harold H. Servo systems. 2,999,967, 9-12-61, Cl. 318-171.
 Shafer, Orville B., to International Business Machines Corp. Electrical circuit connector apparatus. 2,999,918, 9-12-61, Cl. 200-186.
 Shaffer, Robert C.: See—
 Treat, Leo H., and Shaffer. 2,999,820.
 Shalit, Harold, to Houdry Process Corp. High purity silicon. 2,999,736, 9-12-61, Cl. 23-223.5.
 Shappel, Stanley C., to Sylvania Electric Products Inc. Base threading and welding method and apparatus. 2,999,299, 9-12-61, Cl. 29-25.13.
 Sharp, Donald E., to Libbey-Owens-Ford Glass Co. Apparatus and method for making multiple sheet glazing units. 2,999,337, 9-12-61, Cl. 40-1.
 Sheldon, Ernest F.: See—
 Payne, Nigel E., and Sheldon. 2,999,670.
 Shell Oil Co.: See—
 Bunning, Welgert C., and Ten Have. 2,999,807.
 Papadopoulos, Michael N., and Deal. 2,999,892.
 Stratton, Hal. 2,999,549.
 Shelly, Robert S., to Pack Mfg. Co. Double line spacer and micrometer mechanism for ruling machines. 2,999,318, 9-12-61, Cl. 33-81.
 Sheridan, T. W., & C. B., Co.: See—
 Young, Clarence R., and Easton. 2,999,242.
 Sherwood, John F. Differential diameter reciprocated shaft and supporting means therefor. 2,999,724, 9-12-61, Cl. 306-4.
 Sherwood, Walter A., to Chandler Evans Corp. Potentiometer. 2,999,993, 9-12-61, Cl. 338-176.
 Shiner, Edward A., and C. J. Brounstein, to Union Carbide Corp. Method for producing cellulosic sausage casings and product. 2,999,759, 9-12-61, Cl. 99-176.
 Shiner, Edward A., and C. J. Brounstein, to Union Carbide Corp. Method for producing cellulosic sausage casings and product. 2,999,757, 9-12-61, Cl. 99-176.

Shipley, Robert E., to Eli Lilly and Co. Spirometer recording device. 2,999,495, 9-12-61, Cl. 128-2.08.
 Shuter, William M. Hanger. 2,999,661, 9-12-61, Cl. 248-62.
 Sich, John A., Jr. Spinning lure. 2,999,330, 9-12-61, Cl. 43-42.2.
 Sieberts, Karl, to Siemens and Halske Aktiengesellschaft Berlin and Munich. Production of highly pure single crystal semiconductor rods. 2,999,737, 9-12-61, Cl. 23-223.5.
 Siegel, Elhardt M.: See—
 Erhardt, John E., Jr., and Siegel. 2,999,675.
 Siemens & Halske Aktiengesellschaft: See—
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 Siemens & Halske Aktiengesellschaft Berlin and Munich: See—
 Lohs, Willy, Sommer, and Thom. 2,999,904.
 Pfeiderer, Friedrich, and Thiele. 2,999,915.
 Scheunert, Alfred. 2,999,901.
 Sieberts, Karl. 2,999,737.
 Wustenev, Herbert, and Rekwitz. 2,999,899.
 Siemens-Heiniger-Werke Aktiengesellschaft: See—
 Schweig, Heinz, and Bischoff. 2,999,970.
 Siemens-Schuckertwerke Aktiengesellschaft: See—
 Filberich, Ludwig. 2,999,961.
 Hoffmann, Arnulf, and Hartel. 2,999,940.
 Reuschel, Konrad. 2,999,735.
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 Schneider, Heinz. 2,999,963.
 Silas, Cecil J., and J. N. Scott, Jr., to Phillips Petroleum Co. Dispensing solid additives in plastics. 2,999,274, 9-12-61, Cl. 18-30.
 Sims, William M.: See—
 Honn, Francis J., and Sims. 2,999,854.
 Singer Mfg. Co., The: See—
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 Slagel, Lamont, and H. A. Mead, to Dairy Containers, Inc. Apparatus for making bags. 2,999,533, 9-12-61, Cl. 154-42.
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 Slavich, Ralph: See—
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 Gleason, Anthony H., and Slotterbeck. 2,999,891.
 Smart, John: See—
 Martin, Albert E., Smart, and Richardson. 2,999,929.
 Smejda, Oscar J., to Christiania Spigervæk. Apparatus for arrangement of rods. 2,999,603, 9-12-61, Cl. 214-1.
 Smith, A. O., Corp.: See—
 Burkin, Adolf J., and Lauck. 2,999,930.
 Ewart, John C. 2,999,405.
 Johnson, Arthur E. 2,999,950.
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 Schilberg, Arnold G. 2,999,312.
 Smith, A. V., Engineering Co.: See—
 Reeside, William O. 2,999,800.
 Smith, Charles M., to Radio Corp. of America. Spacer for mounting electrical elements on supports. 2,999,895, 9-12-61, Cl. 174-138.
 Smith, Edward W., and G. V. Copland, to Halliburton Co. Acoustic detecting and locating apparatus. 2,999,557, 9-12-61, Cl. 181-5.
 Smith, Francis L., to Republic Aviation Corp. Coupling for flared end tubes including inner and outer sleeve elements. 2,999,700, 9-12-61, Cl. 285-332.3.
 Smith, Gus T., to Marvel Specialty Co., Inc. Hosiery inspecting, stacking and bundling apparatus. 2,999,618, 9-12-61, Cl. 223-43.
 Smith, John R. Vacuum dandruff hair brush. 2,999,263, 9-12-61, Cl. 15-344.
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 Societe Anonyme dite: La Manufacture de Feutres de Mouzon-Anciens Etablissements Roger Sommer et Ses Fils: See—
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 Societe Marocaine de Recherches, d'Etudes et de Developpements "Somarede": See—
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 Socony Mobil Oil Co., Inc.: See—
 Boenau, Arthur H. 2,999,765.
 Duval, Claiborne A., Jr. 2,999,803.
 Laug, Ernst. 2,999,814.
 Sommer, Francois N., to Societe Anonyme dite: La Manufacture de Feutres de Mouzon-Anciens Etablissements Roger Sommer et Ses Fils. Method of applying flock to a fabric. 2,999,763, 9-12-61, Cl. 117-83.
 Sommer, Friedrich: See—
 Lohs, Willy, Sommer, and Thom. 2,999,904.
 Sosnick, Benjamin. Mist and spray production method and nozzle designs for its usage. 2,999,847, 9-12-61, Cl. 239-468.
 Soumerai, Henri, to Worthington Corp. Interchangeable, hermetic and open-type refrigeration compressor. 2,999,629, 9-12-61, Cl. 230-58.
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 Speedry Chemical Products, Inc.: See—
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 Spencer, William H., and J. D. Brown, to Ultra-Tach Co. Insulation mounting. 2,999,277, 9-12-61, Cl. 20-4.
 Spencer, William H., and J. D. Brown, to Ultra-Tach Co. Insulation mounting. 2,999,278, 9-12-61, Cl. 20-4.
 Sperry Rand Corp.: See—
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 Mosher, Robert A., and Stanley. 2,999,462.
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 Starcher, Paul S., and S. W. Tinsley, to Union Carbide Corp. Epoxides and method of making the same. 2,999,867, 9-12-61, Cl. 260-348.
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 Blair, Otis E. 2,999,493.
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 Steele, James R., and S. M. Lounsbury, Jr., to Moore & Steele Corp. Rail anchors. 2,999,641, 9-12-61, Cl. 238-327.
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 Sterling Drug Inc.: See—
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 Sterling, John, Corp.: See—
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 Sterling, John G., and G. L. Dornbreck, to John Sterling Corp. Sliding door hanger assembly. 2,999,267, 9-12-61, Cl. 16-105.
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 Stern, Joseph M., and R. H. Fuller, to Pacific Semiconductors, Inc. Semiconducting diode recovery tester. 2,999,983, 9-12-61, Cl. 324-158.
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 Stewart, Hugh T., to Stewart Development Co. Vulcanized rubber product containing a metal hydride as an antioxidant. 2,999,831, 9-12-61, Cl. 260-33.8.
 Stiebel, Ariel I., to Rockwell-Standard Corp. Electronically controlled working processes. 2,999,921, 9-12-61, Cl. 219-7.5.
 Stier, Reinhardt, and E. Hofmann, to Robert Bosch, G.m.b.H. Fuel injection pump for multicylinder internal combustion engines. 2,999,487, 9-12-61, Cl. 123-139.
 Stierlin, Hans. Generator assembly for absorption refrigerating system of the pressure-equalized gas type. 2,999,373, 9-12-61, Cl. 62-497.
 Stinger, Henry J., and T. M. Urban, to E. I. du Pont de Nemours and Co. Electric blasting cap. 2,999,460, 9-12-61, Cl. 102-28.
 Stinson, John A.: See—
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 Strmac, John: See—
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 Studenbaker-Packard Corp.: See—
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 Stump, Eugen, to Daimler-Benz Aktiengesellschaft. Pneumatic spring system for motor vehicles. 2,999,682, 9-12-61, Cl. 267-65.

Sturmer, Leonard J. Anti-skid sanding device. 2,999,711, 9-12-61, Cl. 291-3.
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 Saubestre, Edward B., and Bulan. 2,999,799.
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 Taff, Albert W., J. M. White, and R. E. Kolb, to Warner-Lambert Pharmaceutical Co. Process of granulating effervescent materials. 2,999,293, 9-12-61, Cl. 25-156.
 Tailleux, Andre M., to International Business Machines Corp. High speed punch mechanism. 2,999,632, 9-12-61, Cl. 234-109.
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 Ten Bosch, Maurits, and P. Lang, to M. Ten Bosch, Inc. Non-tumbling vertical gyroscope system. 2,999,390, 9-12-61, Cl. 74-5.34.
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 Downs, Martin L., and Nelson. 2,999,787.
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 Thomas, Elmer, to Page Communications Engineers, Inc. Variable decision threshold computer. 2,999,925, 9-12-61, Cl. 250-8.
 Thompson, Harry H. Electrical reset timing devices. 2,999,949, 9-12-61, Cl. 307-141.5.
 Thompson, Ralph B., to Universal Oil Products Co. Treatment of hydrocarbon distillates. 2,999,806, 9-12-61, Cl. 206-206.
 Thompson, Thomas G. Masking-tape applicator. 2,999,609, 9-12-61, Cl. 216-29.
 Thorne, Harold, to Gordon B. Levton. Garment creasing device. 2,999,619, 9-12-61, Cl. 223-74.
 Thorson, John K., to ACF Industries, Inc. Trailer-mounted missile rack. 2,999,693, 9-12-61, Cl. 280-29.
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 Hoshino, Yashushi, Namikawa, and Tochihara. 2,999,908.
 Tongue, Ben H., to Blonder-Tongue Electronics. Electron-tube stabilized amplifier. 2,999,985, 9-12-61, Cl. 330-80.
 Torcheux, Emile, and E. Honore, to Societe Marocaine de Recherches, d'Etudes et de Developpements "Somarede." Vibrator devices. 2,999,919, 9-12-61, Cl. 200-166.
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 Troutman, Clarence A. Knockdown cabinet structure. 2,999,730, 9-12-61, Cl. 312-257.
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 Shiner, Edward A., and Brownstein. 2,999,757.
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 Urban, Tadeus M.: See—
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Van Der Ster, Johannes, to North American Phillips Co., Inc. Double-walled pipe for liquefied gas. 2,999,363, 9-12-61, Cl. 62-4.

Van Doorne, Hubertus J. Belt transmission with at least one axially expandable belt pulley. 2,999,395, 9-12-61, Cl. 74-242.14.

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Verdier, André L. Process for manufacturing binary mixtures of liquid substances with a pulverulent material. 2,999,762, 9-12-61, Cl. 106-309.

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Wahl Clipper Corp.: See—
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Wahl, Fred W., and E. J. O'Brien, to Spraying Systems Co. Side inlet conical spray nozzle. 2,999,648, 9-12-61, Cl. 239-487.

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Weber, Horst, and E. Podschus, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of aluminosilicate gels. 2,999,734, 9-12-61, Cl. 23-113.

Wehn, Julius, and H. Rumpf, to Farbenfabriken Bayer Aktiengesellschaft. Arrangement for separating out fine solid particles dispersed in gases. 2,999,563, 9-12-61, Cl. 183-83.

Weinmayr, Viktor, to E. I. du Pont de Nemours and Co. Process for preparing a polyfluoro alkane. 2,999,884, 9-12-61, Cl. 260-633.

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Amdur, Charles J., and Weinstein. 2,999,523.

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Plan, Emert S., Swart, and Weinstock. 2,999,822.

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Welded Carbide Tool Co., Inc.: See—
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Wempe, Bernhard. Fine-adjustment device. 2,999,316, 9-12-61, Cl. 33-19.

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Wisner, Marco, and R. R. Rabenold, to Pittsburgh Plate Glass Co. Fibrous materials having coatings containing polymerization catalysts. 2,999,834, 9-12-61, Cl. 260-40.

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Witwiel, Johan, to Elektrokemisk A/S. Apparatus for supplying current to high amperage electrolytic cells. 2,999,801, 9-12-61, Cl. 204-244.

Wolfe, Russell, to Trans-Sonics, Inc. Pressure sensing instrument. 2,999,385, 9-12-61, Cl. 73-398.

Wolfe, Russell, to Trans-Sonics, Inc. High precision diaphragm type instruments. 2,999,386, 9-12-61, Cl. 23-398.

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Young, Donald M., and C. F. Horn, to Union Carbide Corp. Sulfone polyesters. 2,999,849, 9-12-61, Cl. 260-75.

Young, Donald M., and C. F. Horn, to Union Carbide Corp. Sulfone polyesters. 2,999,850, 9-12-61, Cl. 260-75.

Young, Thomas E., to E. I. du Pont de Nemours and Co. Polyxylenes prepared by decomposition of quaternary ammonium compounds. 2,999,820, 9-12-61, Cl. 260-2.

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Zierick, Ambrose E. Variable volumetric hydraulic couplings. 2,999,361, 9-12-61, Cl. 60-54.

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CLASSIFICATION OF PATENTS

260— 2.5: 2,999,822	260— 79.5: 2,999,855	260— 654: 2,999,887	285—332.3: 2,999,700	308— 87: 2,999,726	324— .5: 2,999,978
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2,999,851	607: 2,999,883	206: 2,999,896	141.4: 2,999,962	324— .5: 2,999,976	347: 3,000,006
78: 2,999,852	633: 2,999,884	481: 2,999,897	155: 2,999,963	2,999,977	343— 5: 3,000,007
78.5: 2,999,853	648: 2,999,885	283— 6: 2,999,898	306— 4: 2,999,964	2,999,978	732: Re.25,035
79.5: 2,999,854	652.5: 2,999,886	285— 110: 2,999,899	78: 2,999,965	2,999,979	792: 3,000,008

CLASSIFICATION OF DESIGNS

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

September 12, 1961

Volume 770

Number 2

TRADEMARKS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

Appellant's Brief

The following amendment is made, to take effect on publication in the FEDERAL REGISTER. Notice and public procedure, and deferment of the time of taking effect, are deemed unnecessary in view of the nature of the amendment, which is procedural only.

The purpose of this change is to expedite the handling of requests for extensions of time for filing appeal briefs by providing that short extensions may be handled by the Board of Appeals, instead of by the Commissioner. Any extension to a date more than sixty days from the original expiration date must still be sought from the Commissioner, by request brought prior to the expiration of the time sought to be extended. Failure to file either the brief or an appropriate request for extension within the allotted time results in the appeal standing dismissed (37 CFR 1.192(b)) with the consequent abandonment of the application if no claim stands allowed (37 CFR 1.197(c)).

Paragraph (a) is amended by adding the following sentences at the end thereof:

§ 1.192 Appellant's brief.

(a) * * * The Board of Appeals may, for sufficient cause shown, extend the time for filing the brief to a date not

later than sixty days after the original expiration date. Any longer or further extension must be sought from the Commissioner. All requests for extensions must be filed prior to the expiration of the period sought to be extended.

(Sec. 1, 66 Stat. 793; 35 U.S.C. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 134)

Dated: July 28, 1961.

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7328; Filed, Aug. 2, 1961; 8:49 a.m.]

Published in 26 F.R. 6983, Aug. 3, 1961.

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

Pending Application Index; Access to Applications

The following amended rule is adopted, to take effect on publication. The text of this rule was, except in one particular, published in the Federal Register for May 20, 1961 (26 F.R. 4404), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed rule. The amended rule is

CONDITION OF TRADEMARK APPLICATIONS AS OF JULY 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	13,364
Date of oldest new application	January 16, 1961
Date of oldest amended application	January 12, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	1-16-61	1-12-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	2-2-61	2-2-61
Renewals (All Classes)	7-3-61	7-21-61
Sec. 12 (e) Publications (All Classes)	6-7-61	6-20-61

Applications filed during the month of July 1961—1870

Registrations Issued	301—No. 721,163 to No. 721,463
Renewals Issued	66

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, \$10.00 per annum, foreign mailing \$3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

adopted after consideration of all the material submitted. The rule departs from the published text in the particular addition in the final sentence of paragraph (a), after the word "Commissioner," of the words "and the Trademark Trial and Appeal Board." The added reference to said board is merely informational in character, and notes the significance its decisions have shared with those of the Commissioner since its establishment in accordance with the provisions of Public Law 85-609, approved August 8, 1958, 72 Stat. 540.

Sec. 2.27 is amended to read as follows:

§ 2.27 Pending application index; access to applications.

(a) An index of pending applications including the name and address of the applicant, a reproduction or description of the mark, the goods or services with which the mark is used, the class number, the dates of use, and the serial number and filing date of the application will be available for public inspection as soon as practicable after filing. Access to the file of a particular pending trademark application will be permitted prior to publication under § 2.81 upon the showing in writing of good cause for such access. Decisions of the Commissioner and the Trademark Trial and Appeal Board in applications and proceedings relating thereto are published or available for inspection or publication.

(b) After a mark has been registered, or published for opposition, the file of the application and all proceedings relating thereto are available for public inspection and copies of the papers may be furnished upon paying the fee therefor.

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6; sec. 41, 60 Stat. 427, 440, 15 U.S.C. 1123)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7556; Filed, Aug. 9, 1961; 8:46 a.m.]

Published in 26 F.R. 7215-7216, Aug. 10, 1961

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form," and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the

applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235 Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47 Interference; notice of taking testimony.

Interference No. _____
_____, 19____

(Name of opposing attorney)

(Address of opposing attorney)

Sin: You are hereby notified that on _____, 19____, at _____ o'clock in the forenoon at the office of _____ Street, _____, I shall proceed to take testimony on behalf of the party _____ in the above identified interference.

The witnesses to be examined are:

(Name of witnesses)

(Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on _____, 19____, I served a copy of the foregoing notice of taking testimony upon _____, the attorney for the party _____, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:46 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

CORRECTED NOTICE

Punched Cards for Organic Phosphorus Compounds

Sets of punched cards recording the Patent Office analysis of the subject matter of the U.S. Patents pertaining to organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic

phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,
Director of Administration.

Aug. 17, 1961.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA), The Coca-Cola Company, Beverage; Reg. No. 47,189, same, Non-alcoholic maltless beverages; Reg. No. 228,145, same, Beverages and syrups for the manufacture of such beverages; Reg. No. 228,146, same; Reg. No. 415,755 (COKE), same, Non-alcoholic maltless beverages and syrups for making such beverages, filed June 18, 1961, D.C., N.D. Calif. (San Francisco), Doc. 39/974, *The Coca-Cola Company v. Falcone Flavor House*. Consent judgment; trademarks held infringed; injunction granted July 14, 1961.

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 85,539 (ZEISS), C. Zeiss, Lenses, prisms, reflectors, microscopes, projecting apparatus, kinematographs, etc., filed July 17, 1952, D.C., S.D.N.Y., Doc. 77/208, *Panatech Corporation v. Carl Zeiss, Inc., Harry M. Durning, United States Collector of Customs, New York and James L. McGranery, Attorney General, U.S.A.* Complaint dismissed as to Attorney General Feb. 27, 1953; dismissed against Carl Zeiss, Inc. May 5, 1961; consent judgment against Collector of Customs and staying him from interfering because of recordation by or on behalf of Attorney General of Cert. of Reg. No. 85,539 with importation of plaintiff's merchandise bearing trademark "Zeiss" and directing release of goods imported, etc. July 12, 1961.

Reg. No. 176,000 (PHILIP BERIO AND CO. AND DESIGN), F. Romeo & Co., Inc., Olive oil, filed July 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1227, *Societa Anonima Lucchese Oli e Vini v. August Battaglia Company*. Same, filed same, Doc. 61c1228, *Societa Anonima Lucchese Oli e Vini v. D'Andrea & Sons Italian Foods*.

Reg. No. 203,616 (BETTER HOMES AND GARDENS), Successful Farming Publishing Company, Monthly publication; Reg. No. 602,407, same, Meredith Publishing Company, Periodic publication; Reg. No. 606,550 (BETTER HOMES), Booklet issued periodically; Reg. No. 626,002 (BETTER HOMES AND GARDENS ETC. AND DESIGN), same, Home planning service, filed July 31, 1961, D.C., S.D.N.Y., Doc. 61/2714, *Meredith Publishing Company v. Universal Publishing and Distributing Corporation*.

Reg. No. 204,255 (DESIGN OF PLAYING CARD), The United States Playing Card Company, Playing cards; Reg. No. 578,001 (BICYCLE PLAYING CARDS AND DESIGN), same, filed July 28, 1961, D.C., S.D.N.Y., Doc. 61/2689, *The United States Playing Card Company v. Standard Packaging Corporation*.

Reg. No. 228,145. (See Reg. No. 22,406.)

Reg. No. 228,146. (See Reg. No. 22,406.)

Reg. No. 422,250 ("SEVEN UP"), The Howdy Company, Carbonated, nonalcoholic, noncereal, maltless beverages sold as soft drinks, and syrups, extracts and flavors used in making same; Reg. No. 331,965 (7 UP AND DESIGN), same; Reg. No. 390,905, same, The Seven Up Company, Carbonated nonalcoholic, noncereal, maltless beverages, sold as soft drinks; Reg. No. 406,906, same; Reg. No. 406,182, same; Reg. No. 505,659, same, The Seven-Up Company, same; Reg. No.

632,795 ("FRESH UP" WITH 7 UP AND DESIGN), same; Reg. No. 639,700, same, Carbonated soft drinks, filed Aug. 7, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1478, *The Seven-Up Company v. Green Mill Beverage Co. et al.* Trademark held valid; defendants enjoined Jan. 31, 1961.

Reg. No. 331,345. (See Reg. No. 252,350.)

Reg. No. 399,905. (See Reg. No. 252,350.)

Reg. No. 406,906. (See Reg. No. 252,350.)

Reg. No. 406,182. (See Reg. No. 252,350.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 418,001 (LOWERATOR), W. J. Gibbs, doing business as Lowerator Manufacturing Co., Apparatus for holding articles or layers of articles capable of being stacked, filed July 25, 1961, D.C., S.D.N.Y., Doc. 61/2610, *American Machine & Foundry Company v. Levelator Corporation of America et al.*

Reg. No. 512,007 (MASON-DRI), Sapolin Paints, Inc. (formerly Sapolin Co., Inc.), Ready mixed paint for exterior use and interior use on masonry walls to waterproof or damp-proof same, filed July 27, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 29/480, *Sapolin Paints, Inc. v. Carroll, Ltd. Inc. et al.*

Reg. No. 524,000 (KING KORN), Big Stone Canning Co., Canned sweet corn, whole kernel corn and cream style corn; Reg. No. 607,735 (KING CORN AND DESIGN), same, Canned vegetables, filed June 18, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1039, *Big Stone Canning Co. v. King Korn Stamp Co.* By agreement, complaint dismissed with prejudice Mar. 11, 1960.

Reg. No. 548,018 (NATION WIDE NATIONAL VAN LINES INC. AND DESIGN), National Van Lines, Inc., Services relating to the moving of goods; Reg. No. 563,900 (NATIONAL VAN LINES, INC.), same, Transportation of goods by motor van, filed Apr. 15, 1957, D.C., N.D. Ill. (Chicago), Doc. 57c665, *National Van Lines, Inc. v. Alfred E. Dean and Dean Van Lines, Inc.* Injunction denied Mar. 9, 1960. Appeal, filed Apr. 6, 1960, C.C.A., 7th Cir., Doc. 13/026, *National Van Lines, Inc. v. Dean et al.* Decree of District Court affirmed Apr. 26, 1961.

Reg. No. 563,832 (MERRY MITES BY MERRY HULL AND DESIGN), Merry Hull & Company, Infants' and children's coats, hats, vests, rompers, sweaters, booties, slippers, etc.; Reg. No. 614,461 (TALL TROUSERS), Gladys W. Geismann, doing business as Merry Hull, Children's slacks, shorts and overalls; 2,629,575, G. W. Geismann, Slide fastener closures for apparel; 2,654,003, same, Children's garments, filed July 31, 1961, D.C., S.D.N.Y., Doc. 61/2710, *Merry Hull & Company v. Hi-Line Co., Inc. et al.*

Reg. No. 563,950. (See Reg. No. 548,018.)

Reg. No. 578,001. (See Reg. No. 204,255.)

Reg. No. 595,639. (See Reg. No. 252,350.)

Reg. No. 600,018 (PLAYBOY), HMH Publishing Co., Inc., Monthly magazine; Reg. No. 643,926 (DESIGN OF RABBIT'S HEAD), same, filed July 24, 1961, D.C. Colo. (Denver), Doc. 7209, *HMH Publishing Co., Inc. et al. v. Playboy Lounge*.

Reg. No. 603,407. (See Reg. No. 203,616.)

Reg. No. 607,735. (See Reg. No. 524,000.)

Reg. No. 606,550. (See Reg. No. 203,616.)

Reg. No. 614,461. (See Reg. No. 563,832.)

Reg. No. 626,002. (See Reg. No. 203,616.)

Reg. No. 631,338 (LISANNE), Lisanne, Inc., Ladies' and misses' housecoats and robes, filed June 26, 1961, D.C., S.D.N.Y., Doc. 61/2264, *Lisanne, Inc. v. Lisette Lingerie, Inc. et al.*

Reg. No. 632,795. (See Reg. No. 252,350.)

Reg. No. 639,700. (See Reg. No. 252,350.)

Reg. No. 670,707 (HAYDEN'S AND DESIGN), Hayden's Hollandaise, Inc., Hollandaise and bearnaise sauce, filed Sept. 3, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 26/938, *Hayden's Hollandaise, Inc. v. Mauris H. Orosenker Advertising Agency et al.* Dismissed by stipulation (notice July 26, 1961). Same, filed same, Doc. 24/294, *Hayden's Hollandaise, Inc. v. Martin B. Dabrow et al.* Decree as above.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 111,625. Societe de la Viscoee Suisse, Emmenbrücke, Switzerland. Filed Jan. 10, 1961.

NYLSUISSE

For Synthetic Fibres and Filaments.
First use August 1957; in commerce in or about February 1958.

Class 2—Receptacles

SN 114,848. Danak Designs Inc., Great Neck, N.Y. Filed Mar. 3, 1961.

FESTIVAAL

For Wooden Serving Trays.
First use Aug. 23, 1960.

SN 115,825. The Metal Box Company Limited, London, England. Filed Mar. 16, 1961.

DIOFORM

Owner of British Reg. No. 788,333, dated Mar. 10, 1959.
For Cartons and Bags.

SN 116,806. Continental Can Company, Inc., New York, N.Y. Filed Mar. 30, 1961.

CONO-FRESH

Owner of Reg. Nos. 553,791, 650,161, and 651,879.
For Plastic Bags.
First use Feb. 10, 1961.

SN 116,916. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Mar. 30, 1961.

E-Z FREZ

Owner of Reg. Nos. 227,085, 678,900, and others.
For Ice Cream Bags.
First use Mar. 6, 1961.

SN 117,366. Illinois Tool Works, Chicago, Ill. Filed Apr. 7, 1961.

FLAVOR-VUE

For Plastic Containers—Namely, Cups and the Like.
First use Mar. 31, 1961.

SN 117,545. Hy Solomon, Hollywood, Fla. Filed Apr. 10, 1961.

GARB-A-CAN

For Concrete Storage Receptacles for Garbage and Refuse Cans.
First use Feb. 1, 1961.

SN 117,873. Advance Boiler & Tank Co., Milwaukee, Wis. Filed Apr. 12, 1961.

TRAN-O-STAK

For Material Handling Drums Formed of Metal.
First use on or about Aug. 1, 1960.

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SN 117,944. Bemis Bro. Bag Company, St. Louis, Mo. Filed Apr. 17, 1961.

DURA-GRIP

Owner of Reg. Nos. 365,067, 662,739, and others.
For Paper Bags.
First use Mar. 29, 1961.

SN 118,903. Puget Sound Casket Company, Tacoma, Wash. Filed Apr. 28, 1961.

FIBERSEAL

For Caskets.
First use July 18, 1959.

SN 118,904. Puget Sound Casket Company, Tacoma, Wash. Filed Apr. 28, 1961.

DURASEAL

For Caskets.
First use July 18, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 80,089. Goldcrest Handbags, Inc., New York, N.Y. Filed Aug. 24, 1959.

CREST-HYDE

For Handbags.
First use July 30, 1959.

SN 116,543. The May Department Stores Company, New York, N.Y. Filed Mar. 27, 1961.

FLITECREST

For Leather and/or Vinyl Plastic and/or Fabric Covered Vinyl Plastic Hand Luggage, Suitcases, Travelling Bags, Briefcases and Attaché Cases; Fiber Packing Trunks.
First use Nov. 26, 1960.

Class 5—Adhesives

SN 116,436. Spray A Tape, Inc., Boston, Mass. Filed Mar. 24, 1961.

SPRAY A TAPE

For Aerosol Adhesives for Home and Office Use.
First use Jan. 12, 1961.

SN 117,637. International Minerals & Chemical Corporation, Skokie, Ill. Filed Apr. 11, 1961.



For Adhesives for Foundry Cores and Molds and Other Refractories.
First use March 1961.

SEPTEMBER 12, 1961

U. S. PATENT OFFICE

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Class 6—Chemicals and Chemical Compositions

SN 103,873. Ransohoff Company, Hamilton, Ohio. Filed Sept. 2, 1960.



RANSOHOFF

SN 73,948. Milwhite Mud Sales Company, Houston, Tex. Filed May 18, 1959.

LUBRI-FILM

For Additive Composition for Rotary Drilling Muds for Providing Extreme Pressure Lubrication and Corrosion Protection.
First use on or about Feb. 1, 1959.

SN 80,460. Jacques Wolf & Co., Newark, N.J. Filed Aug. 28, 1959.

CANTSLIP

For Anti-Slip Textile Finishing Compositions Used in the Finishing of Rayon and Mixed Fibers.
First use June 1959.

SN 82,664. Gould-National Batteries, Inc., St. Paul, Minn. Filed S.E. Oct. 5, 1959; Am. P.R. June 21, 1961.



The words "Acid-Pak" are disclaimed apart from the mark as shown.
For Electrolyte for Filling Dry Charged Batteries.
First use Aug. 5, 1958.

SN 89,501. Chem Lab Products, Incorporated, Norwalk, Calif. Filed Jan. 22, 1960.



The drawing is lined for green, but this is not a limitation on the generality of the mark.
For Compositions for Chlorinating Swimming Pools, and for Laundry Bleaches.
First use May 1, 1959.

SN 103,871. Ransohoff Company, Hamilton, Ohio. Filed Sept. 2, 1960.

RANSOHOFF

For Corrosion Inhibitors, Acid Neutralizers, Hydrocarbon Rust Inhibitors, and Mixtures Containing the Foregoing for Treating Metals.
First use Aug. 21, 1959.

For Corrosion Inhibitors, Acid Neutralizers, Hydrocarbon Rust Inhibitors, and Mixtures Containing the Foregoing for Treating Metals.
First use Aug. 21, 1959.

SN 110,483. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Dec. 19, 1960.



The words "Specialties Phytosanitaires" are disclaimed apart from the mark. Priority claimed under Sec. 44(d) on French Reg. No. 490,952, dated Oct. 6, 1960; Natl. Inst. No. 151,786.

For Chemical Products Used for Agriculture, Horticulture and Forestry—Namely, Herbicides and Preparations for Destroying Noxious Animals.

SN 111,246. Titekote Corporation, Wilmington, Del. Filed Jan. 3, 1961.

TITEKOTE

For Urethane Leather Treating Compound for Improving Abrasion and Scuff Resistance Properties of the Leather.
First use Dec. 5, 1960.

SN 112,036. Hal J. Ellison, d.b.a. Silaco Chemical Company, Chicago, Ill. Filed Jan. 18, 1961.

SILACIDE

For Chemical Composition for Use as a Silicide in Making Paper.
First use on or about Feb. 10, 1960.

SN 114,241. Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany. Filed Feb. 23, 1961.

LANCET

Owner of German Reg. No. 740,785, dated Oct. 4, 1960.
For Chemical Products for Industrial Use—Namely, Chemicals for the Production of Etched Cliches From Silted Metals.

SN 114,841. Crompton & Knowles Corporation, Worcester, Mass. Filed Mar. 3, 1961.

NYLANTHRENE

Owner of Reg. No. 600,605.
For Dyes.
First use on or about Feb. 4, 1954.

SN 114,870. McKay Chemical Company Incorporated, Brooklyn, N.Y. Filed Mar. 3, 1961.

JACK FROST

Owner of Reg. No. 322,141.
For Chemical Compound for Etching Glass.
First use Sept. 1, 1930.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 100,339. A. R. Albert Corporation, Cleveland Heights, Ohio. Filed July 6, 1960.

MR. "A" JR.

For Ash Tray.
First use May 12, 1960.

SN 100,342. A. R. Albert Corporation, Cleveland Heights, Ohio. Filed July 6, 1960.

MR. "A"

For Ash Tray.
First use May 12, 1960.

Class 11—Inks and Inking Materials

SN 116,624. The Buckeye Ribbon & Carbon Co., Cleveland, Ohio. Filed Mar. 28, 1961.



For Ink, Inked Ribbons, Carbon Paper, and Duplicating Fluid for Use in Spirit Duplicating Operations.
First use May 1, 1951.

SN 116,635. Gotham Ink & Color Co., Inc., Long Island City, N.Y. Filed Mar. 28, 1961.

ETHALIN

For Flexographic Inks for Use on Printing Equipment in the Graphic Arts; Coatings and Varnishes for Flexographic Application; and Varnishes, Vehicles and Thinners for Flexographic Inks and Flexographic Coatings.
First use Dec. 18, 1950.

SN 116,636. Gotham Ink & Color Co., Inc., Long Island City, N.Y. Filed Mar. 28, 1961.

FLEXALIN

For Flexographic Inks for Use on Printing Equipment in the Graphic Arts; Coatings and Varnishes for Flexographic Application; and Varnishes, Vehicles and Thinners for Flexographic Inks and Flexographic Coatings.
First use Apr. 22, 1960.

SN 116,637. Gotham Ink & Color Co., Inc., Long Island City, N.Y. Filed Mar. 28, 1961.

VINYLEX

For Flexographic and Rotogravure Inks for Use on Printing Equipment in the Graphic Arts; Coatings and Varnishes for Flexographic and Rotogravure Application; and Varnishes, Vehicles and Thinners for Flexographic and Rotogravure Inks and Flexographic and Rotogravure Coatings.
First use Apr. 10, 1959.

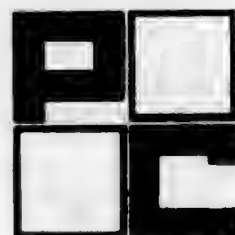
SN 116,638. Gotham Ink & Color Co., Inc., Long Island City, N.Y. Filed Mar. 28, 1961.

GOTHALIN

For Flexographic Inks for Use on Printing Equipment in the Graphic Arts; Coatings and Varnishes for Flexographic Application; and Varnishes, Vehicles and Thinners for Flexographic Inks and Flexographic Coatings.
First use May 31, 1945.

Class 12—Construction Materials

SN 89,869. Porce-Cote Research & Development Corp., Uniondale, N.Y., by change of name from Porce Cote Corp., Uniondale, N.Y. Filed Jan. 28, 1960.



For Porcelain Repair and Refinishing Units Including Liquid Compositions Adapted To Be Applied to Damaged Areas on Sinks, Tubs, Basins, Commodes, and Other Articles of Porcelain.
First use January 1955.

SN 105,532. Moncrief-Lenoir Manufacturing Company, Houston, Tex. Filed Sept. 30, 1960.



For Corrugated Metal Roofing and Siding.
First use June 1, 1959, on corrugated metal roofing.

SN 109,302. Cleveland Wash Tray Mfg. Co. Inc., Cleveland, Ohio. Filed Nov. 30, 1960.

TERRASTONE

For Shower Bases.
First use May 3, 1960.

SN 109,971. E. J. Lavino and Company, Philadelphia, Pa. Filed Dec. 9, 1960.

K-KN

Owner of Reg. No. 248,118.
For Plastic Chrome Ore Composition for Use for Furnace Construction and for Repair.
First use Mar. 20, 1958.

SN 112,345. John E. Wool Lumber Company, Inc., Norfolk, Va. Filed Jan. 23, 1961.

WOLCO

For Lumber and Ready-to-Hang Door Units.
First use January 1957.

SN 112,833. Don Chemical Company, Inc., Long Island City, N.Y. Filed Jan. 31, 1961.

DON-F

For Floor and Wall Surfacing Material Having an Epoxy Resin Base.
First use Feb. 21, 1956.

Class 13—Hardware and Plumbing and Class 14—Metals and Metal Castings and Steam-Fitting Supplies

SN 95,753. Nibco Inc., Elkhart, Ind. Filed Apr. 25, 1960. Owner of Reg. No. 675,437.

HUSKY

For Pipe Fittings Including Valves.
First use Jan. 15, 1960.

SN 101,355. Tomlinson Industries, Inc., Cleveland, Ohio. Filed July 22, 1960.

THE HEART OF YOUR URN

For Valve-Type Faucet Dispensers for Liquid Food Products—Namely, Coffee, Tea, Milk and Juices.
First use May 1958.

SN 114,943. Electricam Corporation, Grand Rapids, Mich. Filed Mar. 6, 1961.

ADJUSTA-HOOK

For Drapery Hooks.
First use Dec. 31, 1960.

SN 115,005. Elias N. Seligson, Elmont, N.Y. Filed Mar. 6, 1961.

POLY-FIT

For Fittings Used in Plumbing and Sprinkler Piping and Insert Type Fittings To Be Used on Polyethylene Plastic Tubing With Clamps.
First use Mar. 15, 1960.

SN 115,025. Wisconsin Wire Works, Appleton, Wis. Filed Mar. 6, 1961.

LEV-L-WEVE

For Fourdrinier Wire.
First use Dec. 29, 1960.

SN 115,412. Albright Mfg. Co. Inc., Chicago, Ill. Filed Mar. 13, 1961.



For Conveyor and Transmission Belt Fasteners.
First use Feb. 6, 1961.

SN 115,511. Nixdorff-Krein Manufacturing Company, St. Louis, Mo. Filed Mar. 13, 1961.



Owner of Reg. Nos. 500,214 and 511,547.
For Chains, Including Anti-Skid Chains for Tires, Anchor-age Chains, Tow Chains, Log Chains, Chains for Tethering Animals, Hoist Chains, and General Chains.
First use Jan. 2, 1961.

SN 78,518. Stanwood Corporation, Chicago, Ill. Filed July 27, 1959.

STANALOY

For Ferrous and Non-Ferrous Metal Alloys Sold in Sheet, Plate, Bar and Other Forms, and Also for Such Alloys Used for Making Industrial Heat Treating, Pickling and Plating Baskets, Trays, Pots, Carburizing Boxes and Furnace Parts.
First use Feb. 2, 1959.

SN 111,674. The Lincoln Electric Company, Cleveland, Ohio. Filed Jan. 11, 1961.

PLANEWELD

Owner of Reg. No. 382,719.
For Metallic Welding Electrodes.
First use July 28, 1939.

SN 111,736. K. C. Glader Company, Niles, Ill. Filed Jan. 12, 1961.

KEN-AIR

For Low Temperature, Air Hardening Tool Steel.
First use Aug. 1, 1960.

Class 15—Oils and Greases

SN 109,677. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.

**PASOCUTT**

Owner of Reg. Nos. 653,295, 698,430, and others.
For Cutting Oils.
First use July 23, 1960.

SN 109,679. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.

**PASOL**

Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Lubricating Oils.
First use May 21, 1960.

SN 100,680. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.



Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Cutting Oils.
First use July 18, 1960.

SN 100,681. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.



Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Industrial Oils—Namely, Lubricating and Power Transmission Oils.
First use June 1, 1960.

SN 100,682. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.



Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Industrial Oils—Namely, Lubricating and Power Transmission Oils.
First use July 23, 1960.

SN 100,683. El Paso Natural Gas Products Company, El Paso, Tex. Filed Dec. 6, 1960.



Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Lubricating Oils.
First use June 1, 1960.

SN 114,070. Wynn Oil Company, Azusa, Calif. Filed Feb. 20, 1961.

FRICTION PROOFING

Owner of Reg. Nos. 588,163 and 589,942.
For Packaged Chemical Products To Be Added to Lubricating Oils, Greases, and Internal Combustion Engine Fuels.
First use on about Feb. 26, 1945.

SN 115,620. Penn-West Petroleum Company, Inc., Orlando, Fla. Filed Mar. 14, 1961.

PENN-WEST

For Gasoline, Lubricating Oils and Greases.
First use Jan. 28, 1961.

SN 116,065. Petrolite Corporation, St. Louis, Mo. Filed Mar. 20, 1961.

BOTOL

For Chemicals Added to Hydrocarbons, Such as Petroleum, To Prevent the Formation of Emulsions With Water Present Therein, Particularly When Said Hydrocarbons Are Subjected to Turbulence, Such as Occurs During Transportation in Tankers, Pipelines, Etc.
First use Mar. 3, 1961.

SN 116,769. Universal Motor Oils Co., Inc., Wichita, Kans. Filed Mar. 29, 1961.

LO-ICY

For Lubricating Oil.
First use October 1932.

SN 117,486. Gulf Oil Corporation, Pittsburgh, Pa. Filed Apr. 10, 1961.



The drawing is lined for orange and blue. Owner of Reg. No. 621,650.
For Petroleum and Its Products—Namely, Fuel Oil, Gasoline, Kerosene, Naphtha, Lubricating Oils, Motor Oils, Technical and Industrial Oils, Petroleum Waxes, and Lubricating Greases.
First use at least as early as 1933 on gasoline.

Class 16—Protective and Decorative Coatings

SN 93,280. Continental Coatings Corporation, New York, N.Y. Filed Mar. 21, 1960.

ROCKCOAT

For Coal Tar Based Anti-Corrosive for Use Under Severe Conditions of Abrasion.
First use Aug. 11, 1941.

SN 93,281. Continental Coatings Corporation, New York, N.Y. Filed Mar. 21, 1960.

STEELSAVER

For Coal Tar Based Anti-Corrosive for Marine Use.
First use Aug. 11, 1941.

SN 97,306. Gerald Gross, d.b.a. Transparent Glass Coatings Co., Los Angeles, Calif. Filed May 17, 1960.

SUN STOP

For Resin Glass Coating Material.
First use Feb. 1, 1954.

SN 103,292. The Patterson-Sargent Company, Cleveland, Ohio. Filed Aug. 23, 1960.

LUX-COTE

For Paints.
First use June 24, 1960.

SN 108,312. Gilman Paint and Varnish Company, Chattanooga, Tenn. Filed Nov. 14, 1960.

RUB-R-LITH

For Exterior Masonry Paint (Acrylic Base).
First use May 1956.

SN 110,870. Midland Laboratories, Dubuque, Iowa. Filed Dec. 27, 1960.

MID-DRY

For Protective Floor Coating for Institutional and Industrial Use.
First use on or about Aug. 24, 1960.

SN 110,897. Specialized Coatings, Inc., Passaic, N.J. Filed Dec. 27, 1960.

POLY MICA

For Varnishes.
First use Oct. 25, 1960.

SN 119,862. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 12, 1961.

NAPHTHANIL

Owner of Reg. No. 277,939.
For Paint Pigments.
First use Apr. 17, 1961.

SN 120,071. Archer-Daniels-Midland Company, Minneapolis, Minn. Filed May 16, 1961.

AROTHIX

For Thixotropic Vehicle for Wall Paints.
First use Jan. 26, 1959.

SN 120,222. Pierpont Paint and Wall Paper Corp., New York, N.Y. Filed May 17, 1961.



For Paints.
First use Nov. 15, 1960.
TM 770 O.G.—6

SN 120,538. Kurpees Paint Co., Louisville, Ky. Filed May 22, 1961.

FABRIMATCH

For Liquid Interior Top Coat Paints and Colorants for Tinting Said Paints.
First use Apr. 25, 1961.

SN 120,762. Sears, Roebuck and Co., Chicago, Ill. Filed May 24, 1961.

DECO-SPRAY

For Paint, Enamel, and Lacquer.
First use on or about Dec. 23, 1959.

SN 121,376. Foy-Johnston, Inc., Cincinnati, Ohio. Filed June 5, 1961.

CERTINT

For Ready Mixed Paints and Paint Enamels for Exterior and Interior Surfaces.
First use Feb. 23, 1961.

SN 121,728. Guardian Chemical Corporation, Long Island City, N.Y. Filed June 9, 1961.

SURTISEAL

For Coating Material for Protecting, Rendering Water-Repellent and Brightening Masonry and Similar Surfaces.
First use May 16, 1961.

SN 121,976. Mary Carter Paint Company, Tampa, Fla. Filed June 14, 1961.

ROL-EZE

For Paint.
First use Mar. 14, 1961.

Class 17—Tobacco Products

SN 115,827. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

DOLPHIN

For Cigarettes.
First use Mar. 13, 1961.

SN 115,830. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

BON HOMME

For Cigarettes.
First use Mar. 13, 1961.

SN 115,834. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

ENSIGN

For Cigarettes.
First use Mar. 13, 1961.

SN 115,836. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

STATESMAN

For Cigarettes.
First use Mar. 13, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 91,469. Jerry C. Totzka, d.b.a. Generic Drug Co., Detroit, Mich. Filed Feb. 23, 1960.

GENERIC A-CAPS

The term "A-Caps" is disclaimed apart from the mark as shown.
For Vitamin Capsules.
First use on or about Feb. 6, 1960.

SN 96,017. Merck & Co., Inc., Rahway, N.J. Filed Apr. 28, 1960.

GRO-AID

For Hematinic Preparation for Veterinary Use.
First use Apr. 12, 1960.

SN 96,619. Humble Oil & Refining Company, Houston, Tex., assignee of Penola Oil Company, New York, N.Y. Filed May 6, 1960.

ENCO

For Pharmaceutical Grade Petrolatum.
First use Sept. 23, 1959.

SN 96,678. Contactisol Inc., Lindenhurst, N.Y. Filed May 9, 1960.

VAZIN

For Ophthalmic Medicines, Particularly an Astringent Decongestant Emollient.
First use Jan. 4, 1960.

SN 101,532. Nicholas International Limited, Toronto, Ontario, Canada. Filed July 22, 1960.

HOPULONE

For Antibacterial-Analgesic Ointment.
First use Mar. 29, 1960; in commerce Mar. 29, 1960.

SN 104,218. Abbott Laboratories, North Chicago, Ill. Filed Sept. 12, 1960.

**DULCET
ASPIRIN**

No claim is made to the word "Aspirin" apart from the mark as shown. Owner of Reg. No. 500,527.
For Aspirin Aluminum in Sweetened Tablet Form for Children.
First use Sept. 7, 1960.

SN 108,196. National Remedy Products Company, Inc., Springfield, Mo. Filed Nov. 10, 1960.

Naremc

For Medicinal, Vitamin and Mineral Preparations for Poultry and Animal Use.
First use Nov. 11, 1954.

SN 115,289. American Home Products Corporation, d.b.a. Wyeth Laboratories, Philadelphia, Pa. Filed Mar. 10, 1961.

ADVIRAX

For Vaccine Preparation.
First use Mar. 1, 1961.

SN 118,506. Sterling Drug Inc., New York, N.Y. Filed Apr. 24, 1961.

PEDIACOF

For Cough Syrup.
First use Apr. 10, 1961.

SN 118,763. Breon Laboratories Inc., New York, N.Y. Filed Apr. 27, 1961.

FORTIZYME

Owner of Reg. No. 675,499.
For Anti-Inflammatory Preparation.
First use Mar. 15, 1961.

SN 119,177. C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany. Filed May 3, 1961.

NOTANDRON

Owner of German Reg. No. 634,527, dated Feb. 23, 1953.
For Medicines and Pharmaceutical Preparations—Namely, a Hormone Preparation.

SN 119,219. McNeill Laboratories, Incorporated, Philadelphia, Pa. Filed May 3, 1961.

PARAFON-FORTE

Owner of Reg. Nos. 668,920 and 681,397.
For Muscle Relaxant Analgesic.
First use Mar. 22, 1961.

SN 119,642. Schering Corporation, Bloomfield, N.J. Filed May 9, 1961.

UTONEX

For Antibacterial Preparation for Veterinarian Use.
First use Dec. 29, 1960.

SN 119,805. Storck Pharmaceuticals, Inc., St. Louis, Mo. Filed May 11, 1961.

EMESERT

For Rectal Suppository for Vomiting and Nausea.
First use Oct. 15, 1958.

SN 119,889. The Purdue Frederick Company, New York, N.Y. Filed May 12, 1961.

DIGOXALINE

For Preparation for the Treatment of Diseases of the Heart.
First use May 5, 1961.

Class 19—Vehicles

SN 115,510. Nixdorf-Krein Manufacturing Company, St. Louis, Mo. Filed Mar. 13, 1961.

SN 97,264. Nelson A. Taylor Co., Inc., Gloversville, N.Y. Filed May 16, 1960.

Taylor MADE

For Boat Windshields, Convertible Boat Tops, Boat Covers, Mooring Buoys and Floats, Boarding Ladders for Boats, Rear-View Mirrors, Windshield Wipers, and Sun Visors.
First use 1908.

SN 108,378. Pullman Incorporated, Chicago, Ill. Filed Nov. 14, 1960.

HYDROFRAME-60

For Railway Freight Vehicles and Frames on Railway Freight Vehicles.
First use Apr. 29, 1960.

SN 110,852. Hudson Foam Latex Products, Inc., Edgewater, N.J. Filed Dec. 27, 1960.

CUSH-N-FOAM

Owner of Reg. No. 591,459.
For Rubber and Plastic Foam, Formed or Cut to Size, for Vehicular Cushioning, Headliners and Padding.
First use May 12, 1952.

SN 110,982. Dana Corporation, Toledo, Ohio. Filed Dec. 29, 1960.

Rollaire

For Resilient Cradle Assemblies as Used on Boat Trailers.
First use June 8, 1960.

SN 111,072. Dana Corporation, Toledo, Ohio. Filed Dec. 30, 1960.

Adjust-o-matic

For Adjustable Cradle Assemblies as Used on Boat Trailers.
First use June 8, 1960.

SN 113,677. The American Thermos Products Company, Norwich, Conn. Filed Feb. 15, 1961.

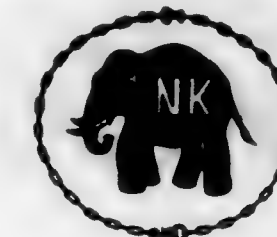
THERMOS

Owner of Reg. Nos. 67,002, 700,748, and others.
For Car Vacuum Bottle Holders.
First use May 16, 1958.

SN 115,473. Hunter Boat Corporation, Suisun City, Calif. Filed Mar. 13, 1961.

Hunter

For Boats.
First use about 1949; 1887 as to the mark in a different display.



Owner of Reg. Nos. 509,214 and 511,547.
For Wagon and Vehicular Hardware.
First use Jan. 2, 1961.

SN 117,431. George W. Gerlach, Jr., Lancaster, Pa. Filed Apr. 10, 1961.

LITTLE GOLD CUPPERS

For Boats.
First use Jan. 26, 1961.

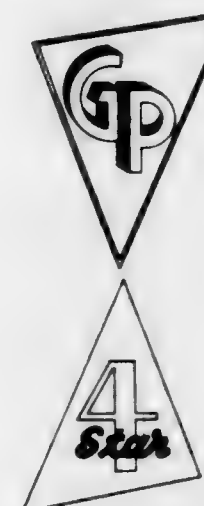
SN 117,519. Multi-Car Corporation, Detroit, Mich. Filed Apr. 10, 1961.

MULTI-CAR

For Railway Vehicles Used for Carrying Railway Freight and Particularly Automotive Vehicles.
First use on or about Feb. 15, 1961.

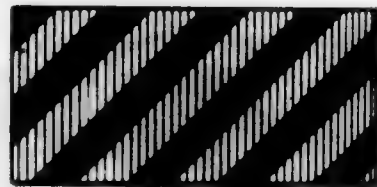
Class 21—Electrical Apparatus, Machines, and Supplies

SN 91,930. Guaranteed Parts Company, Inc., Seneca Falls, N.Y. Filed Mar. 1, 1960.



Owner of Reg. No. 386,409.
For Ignition Coils, Distributor Parts, Condensers, Generator Cutouts, Voltage Regulators, Electric Automotive Ignition, Starting, and Lighting Equipment—Namely, Motor and Generator Brushes, Bushings for Starters and Generators, Contact Arms and Screws, Condensers, Distributor Covers, Distributor Leads, Distributor Rotors, Coils, Generator Cutouts, Voltage Regulators, Relays, Switches for Auto and Radio, Starter and Dimmer Switches, Stop Light Switches, Starter Springs, and Starter Bolts and Washers.
First use Apr. 14, 1958.

SN 96,329. The Antenna Specialists Company, Cleveland, Ohio. Filed June 3, 1960.



The drawing is lined for red.
For Antennas.
First use on or about Apr. 1, 1960.

SN 99,680. Teletray Electronic Systems, Inc., Silver Spring, Md. Filed June 24, 1960.

DINE-A-PHONE

For Electronic Ordering Systems for Food and Drink Service Establishments Having a Plurality of Separate Food and Drink Service Stations, Comprising a Telephone at Each Station and a Central Exchange to Which Each Telephone Is Connected for Centralized Control of Ordering and Service to the Patrons of the Establishment.
First use June 5, 1959.

SN 102,288. H. Von Wichmann K.G., Hamburg, Germany. Filed Aug. 8, 1960.

AUTOREX

Owner of German Reg. No. 559,666, dated June 21, 1943; and U.S. Reg. No. 625,743.
For Electrical System Parts and Accessories for Automotive Vehicles, Tractors and Bicycles.

SN 108,830. Siemens & Halske Aktiengesellschaft, Munich, Germany. Filed Nov. 21, 1960.



Owner of German Reg. Nos. 35,800, dated Feb. 2, 1899; 132,933, dated Aug. 3, 1910; 337,261, dated Aug. 3, 1925.

For Apparatus, Equipment and Accessories for Electric Power Generation, Distribution and Consumption, Comprising: (1) Generators and Motors for Direct Current and Alternating Current; (2) Transformers, Rectifiers, Converters for Translating Direct Current to Alternating Current; (3) Resistors, Control Thermostats, Potentiometers, Capacitors, Reactor Coils for Electric Power Current, Switches, Circuit Breakers, Motor Starters, Control Panels, Switch Panels, Contactors, Electromagnets; (4) Electrical Illumination Equipment, Comprising Incandescent, Fluorescent, Arc and Mercury-Arc Lamps; Flood Lights, Theater Stage Lighting and Control Equipment; and Accessories—Namely, Lamp Sockets, Lamp Fixtures, Arc-Lamp Carbons, Flood Lights, Reflectors, Lamp-Mounting Accessories; (5) Electric Batteries, Accumulator Batteries, Battery-Cell Switching Devices; (6) Electric Drives for Machines, Electric Propulsion Drives for Road and Rail Vehicles, Locomotives, Boats and Other Conveyances; Electric Ignition Devices; Electric Drills; (7) Wiring and Line Material, Including Junction Boxes; Terminals; Conductor Parts and Mounting Parts for Cables and Overhead Lines, Electric Railways, Overhead Trolley Lines, Underground Lines, Masts for Electric Lines; Tubularly Enclosed Electric Wires and Cables; Outlets, Plug Contacts and Other Accessories for

Wiring and Installation Purposes; (8) Electric Insulating Material and Insulating Devices, Impregnated Insulating Web Material for Electrical Purposes; (9) Electric Fuses, Lightning Arresters, Overload Protectors; (10) Apparatus for Electric Heating, Including Hot Plates, Electric Ranges, Electric Cooking Devices, Electric Soldering Irons, Electric Heaters, Apparatus and Devices for Electric Production of Steel and for Production of Metal From Ore; Induction Heating Devices; (11) Electric Hoist, Crane, and Elevator Drives and Controls Therefor; Electric Devices for Controlling Pneumatic and Hydraulic Power Transmission Plants and for Controlling Motors, Pumps and Compressors for Fluid Systems; (12) Electricity Vending Apparatus; (13) Electrically Driven Household Appliances, Fans, Electric Clocks; and (14) Components and Parts of the Electrical Products Described Above Under (1) to (13).

SN 108,834. Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany. Filed Nov. 21, 1960.



Owner of German Reg. Nos. 72,277, dated Sept. 20, 1904; 132,669, dated July 26, 1910; and 326,846, dated Jan. 13, 1925.

For (1) Electric Apparatus and Devices for Controlling and Regulating Electric Current, Voltage, Power, Temperature, Pressure and Other Conditions; Electric Apparatus for Transmitting and Receiving Signals; Direct-Current to Alternating-Current Converters; Electric Drives for Machines, Electric Propulsion Drives for Road and Rail Vehicles, Locomotives, Boats and Other Conveyances; (2) Wiring and Line Material, Including Junction Boxes; Terminals; Conductor Parts and Mounting Parts for Cables and Overhead Lines, Electric Railways, Overhead Trolley Lines, Underground Lines, Masts for Electric Lines; Tubularly Enclosed Electric Wires and Cables; Outlets, Plug Contacts and Other Wiring Accessories; (3) Electric Hoist, Crane and Elevator Drives and Controls Therefor; Electric Devices for Controlling Pneumatic and Hydraulic Power Transmission Plants and for Controlling Motors, Pumps and Compressors for Fluid; (4) Electricity Vending Apparatus, Electricity Meters, Watt-Hour Meters, Ampere-Hour Meters, Electric Timing Switches, Electric Clocks; Electric Photo-Duplicating Apparatus; Electric Projection Apparatus; (5) Electric Bleaching Apparatus, Ozone Producing Apparatus, Induction Melting Furnaces, Electrolytic Apparatus for Producing Hydrogen and Oxygen; Electro-Metallurgical Refining Apparatus; X-Ray Apparatus, Fluorescent Screens for X-Ray Apparatus; Electric Ignition Equipment for Internal Combustion Engines; Electric Drying and Ventilating Apparatus; and (6) Components and Parts of the Electrical Products Described Above Under (1) to (5).

SN 113,274. ESC Electronics Corporation, Palisades Park, N.J. Filed Feb. 8, 1961.



Owner of Reg. No. 624,891.
For Filters, Transformers, Shift Registers, Multi-Vibrators and Oscillators, Encapsulated Assemblies of Networks.
First use Apr. 1, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 102,282. W. J. Volt Rubber Corp., Los Angeles, Calif. Filed Aug. 8, 1960.



For Back Packs Used in Connection With the Self-Contained Underwater Breathing Apparatus Known as Scuba.
First use February 1960.

SN 103,023. Richard B. Jeffrey, New Veron, N.J. Filed Aug. 19, 1960.

MANIPULATION

For Equipment Sold as a Unit for Playing a Board Game.
First use July 30, 1960.

SN 113,230. Louis Marx & Company, Inc., New York, N.Y. Filed Feb. 7, 1961.

MISS MARLENE

For Dolls and Doll Dresses.
First use Jan. 17, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 96,184. Bergman Tool Mfg. Co., Inc., Buffalo, N.Y. Filed May 2, 1960.

POWER-CUT

For Tinnerns' Snips.
First use Apr. 30, 1954.

SN 100,945. The Staet Company, Inc., West Orange, N.J. Filed July 15, 1960.

TURN-A-TOOL

For Diamond Tipped Tools.
First use May 24, 1960.

SN 101,141. Union Tractor Inc., Jacksonville, Fla. Filed July 19, 1960.



Owner of Reg. No. 708,377.
For Tractor Parts.
First use Apr. 12, 1960.

SN 101,978. Robert G. Raque, Louisville, Ky. Filed Aug. 3, 1960.

SLIDEWALK

For Conveyors for Transporting People.
First use Feb. 12, 1960.

SN 102,011. Emasco Screen Pipe Company of Texas, Houston, Tex. Filed Aug. 4, 1960.

EMSCO

For Mufflers.
First use on or about May 6, 1960.

SN 102,287. H. Von Wichmann K.G., Hamburg, Germany. Filed Aug. 8, 1960.

AUTOREX

Owner of German Reg. No. 559,666, dated June 21, 1943; and U.S. Reg. No. 625,743.

For Internal Combustion Engines and Parts for Automotive Vehicles, Tractors and Internal Combustion Engines, Grinding, Boring and Milling Machines, Hydraulic Presses, Riveting Machines, Lifts and Hoists, Tire Vulcanizing and Capping Equipment, Grease Guns, and Tools for the Repair and Maintenance of Motor Vehicles and Tractors.

SN 102,879. A. C. Weber & Co., Inc., Chicago, Ill. Filed Aug. 17, 1960.



Applicant's wholly owned subsidiary is the owner of Reg. No. 628,210.
For Hand Type Knitting Machines and Parts Thereof.
First use June 17, 1960.

SN 102,928. Leeson Corporation, Cranston, R.I. Filed Aug. 18, 1960.



Owner of Reg. No. 138,885.
For Textile Machinery and Parts Thereof, and Machinery for Winding Electrical Coils and Parts Thereof.
First use Apr. 20, 1960, on textile machinery.

SN 104,683. E. W. Bliss Company, Canton, Ohio. Filed Sept. 19, 1960.

MIDLAND SUPERALLOY SPECIAL

No claim is made to the term "Superalloy Special" apart from the mark as shown.
For Cast Steel Rolls Employed in Mills for the Rolling of Steel, Such as Cold Mill Backing-Up Rolls.
First use in or about October 1957.

SN 104,684. E. W. Bliss Company, Canton, Ohio. Filed Sept. 19, 1960.

MIDLAND SUPERALLOY

No claim is made to the term "Superalloy" apart from the mark as shown.
For Cast Steel Rolls Employed in Mills for the Rolling of Steel, Such as Roughing Rolls, Intermediate Rolls, Top, Middle, and Bottom Rolls, Cold Break-Down Rolls, and Floor Plate Finishing Rolls.
First use on or about Nov. 20, 1947.

SN 106,833. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Oct. 20, 1960.

MIDGET-AIR

For Fluid Pressure Operated Cylinders.
First use Sept. 30, 1960.

SN 107,547. E. W. Bliss Company, Canton, Ohio. Filed Nov. 1, 1960. SN 116,703. Cella Machinery, Inc., New York, N.Y. Filed Mar. 29, 1961.

MIDLAND SUPERMETAL

No claim is made to the term "Supermetal" apart from the mark as shown.

For Roughing Rolls, Intermediate Rolls, and Finishing Rolls Employed in Structural Mills, Merchant Mills, and Billet Bar Mills.

First use in or about May 1947.

SN 110,737. The Challenge Machinery Company, Grand Haven, Mich. Filed Dec. 23, 1960.

CHAMPION

For Paper Cutting Machines and Particularly Power-Operated Paper Cutters for Cutting Stacks of Paper Sheets.

First use on or before Nov. 21, 1960.

SN 111,849. Bethlehem Steel Company, Bethlehem, Pa. Filed Jan. 16, 1961.

BETHCO—DRAWN

Owner of Reg. Nos. 384,939, 578,870, and 585,737.

For Steel Wire Strand Used for Sawing Stone and Similar Materials.

First use Oct. 17, 1960.

SN 112,261. William C. N. Hopkins, d.b.a. American Metal Products Company and American Metal International Co., Portland, Ore. Filed Jan. 23, 1961.

HOPKINS

For Mufflers, Exhaust Systems, and Parts Thereof.

First use in 1947.

SN 113,935. Manufacturers Supplies Company, St. Louis, Mo. Filed Feb. 17, 1961.

Z

Owner of Reg. No. 657,112.

For Machines for Skiving Leather and Leather-Like Material and Parts Thereof.

First use 1934.

SN 114,930. Club Razor Blade Mfg. Company, Newark, N.J. Filed Mar. 6, 1961.

GOLDTONE

Owner of Reg. No. 385,718.

For Razor Blades.

First use Dec. 15, 1939.

SN 115,215. H. Brazier Limited, Hertford, England. Filed Mar. 9, 1961.

TENEMAX

Owner of British Reg. No. 771,383, dated Nov. 20, 1957.

For Machines for Grading Material on the Basis of Size, and Screens Being Parts of Such Machines.

SN 115,323. Fisher & Ludlow Limited, Birmingham, England. Filed Mar. 10, 1961.

FLOWLINK

Owner of British Reg. No. 710,066, dated Aug. 22, 1952.

For Conveyors (Machines) and Component Parts Thereof.

C-PAK

For Automatic Milk Bottle and Milk Carton Casers, Case Stacking and Unstacking Machines, and Apparatus for Transferring Milk Bottles and Cartons From One Conveyor to Another.

First use on or about Jan. 19, 1955.

SN 116,800. John Burton Machine Corporation, Concord, Calif. Filed Mar. 30, 1961.

CELLUBANDER

For Machines for Applying Bands to Container Closures.

First use Oct. 31, 1957.

SN 116,815. Gilson Bros. Co., Plymouth, Wis. Filed Mar. 30, 1961.

HOLIDAY

For Garden Tillers, Garden Tractors, Compost Grinders, Concrete Mixers, Lawn Mowers, and Parts and Accessories Thereof.

First use Nov. 30, 1960, on garden tillers.

SN 117,039. Rudolph Peck, d.b.a. Peck Clamp Tool Company, New York, N.Y. Filed Apr. 3, 1961.

SPAT-FREE

For Clamps To Be Used as Tools for Holding Work Pieces and the Like.

First use Feb. 8, 1961.

Class 25—Locks and Safes

SN 114,591. Bartline Industries, New York, N.Y. Filed Feb. 28, 1961.

PORT A LOCK

For Door Locks.

First use May 23, 1960.

Class 26—Measuring and Scientific Appliances

SN 103,785. Heraeus Quarzschmelze G.m.b.H., Hanau am Main, Germany. Filed Sept. 1, 1960.

SUPRASIL

For Optical Articles, Such as Prisms, Lenses, Plates, Mirrors, Rods and Ingots of Optical Material and Transparent or Translucent Laboratory and Industrial Articles, Including Those Transparent or Translucent for Infrared or Ultra-violet Radiation, Such as Tubes, Containers and Receptacles and Crucibles.

First use April 1956; in commerce July 31, 1957.

SN 108,831. Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany. Filed Nov. 21, 1960. SN 117,350. Fielden Electronics Limited, Wythenshawe, Manchester, England. Filed Apr. 7, 1961.



Owner of German Reg. Nos. 72,277, dated Sept. 20, 1904; 132,669, dated July 26, 1910; and 326,846, dated Jan. 13, 1925.

For Instruments for Measuring Voltage, Current and Power; Light Measuring Devices, Insulation Testing Devices, Current Indicators, Ground-Connection Testers; Electricity Meters Including Watt-Hour Meters and Ampere-Hour Meters; Temperature Measuring Devices Including Pyrometers, Resistance Thermometers and Temperature Remote Indicators; Apparatus for Measuring Distance, Direction, Altitude, Speed, Inclination, Time, Frequency; Steam Pressure Gauges; Air Pressure Gauges; Gas Meters; Oscillographs; and Components, Parts and Accessories of the Aforesaid Products.

SN 115,378. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Mar. 10, 1961.

SLEEVE-STAT

For Thermostats for Controlling the Temperatures of Coolants in Internal Combustion Engines.

First use Feb. 22, 1961.

SN 115,742. Univis, Inc., Fort Lauderdale, Fla. Filed Mar. 15, 1961.



For Ophthalmic Lenses and Lens Blanks.

First use Feb. 23, 1961.

SN 116,451. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Mar. 24, 1961.

TRANSCENTURY

For Nautical Instruments, Particularly Depth Sounders.

First use June 1959.

SN 116,962. Aseptic Thermo Indicator Company, North Hollywood, Calif. Filed Apr. 3, 1961.

ATI

For Temperature and Sterilization Indicator Devices.

First use on or about Aug. 1, 1932.

SN 116,997. General Controls Co., Glendale, Calif. Filed Apr. 3, 1961.

WIZARD

For Electric Counters.

First use Feb. 12, 1932.

SN 117,349. Fielden Electronics Limited, Wythenshawe, Manchester, England. Filed Apr. 7, 1961.

TELSTOR

Owner of British Reg. No. 712,650, dated Nov. 27, 1952.

For Electronically Operated Level Indicators.

TEKTOR

Owner of British Reg. No. 675,083, dated Dec. 3, 1948.

For Electronic Apparatus for Performing Switching Operations by Means of Its Sensitivity to the Proximity of Moving Objects; and Counting, Measuring, Indicating, Signalling and Checking Apparatus Incorporating Such Electronic Switching Apparatus.

Class 27—Horological Instruments

SN 114,806. Sunbeam Corporation, Chicago, Ill. Filed Mar. 2, 1961.

THE VILLA

For Clocks.

First use Feb. 13, 1961.

SN 115,314. Dundee Watch Company, Chicago, Ill. Filed Mar. 10, 1961.



For Watches.

First use Jan. 25, 1961.

SN 115,424. Max Blum, d.b.a. Sea Liner Watch Co., New York, N.Y. Filed Mar. 13, 1961.

SEA LINER

For Watches and Watch Movements.

First use June 8, 1954.

SN 115,513. Novochoe S.A., La Chaux-de-Fonds, Neuchatel, Switzerland. Filed Mar. 13, 1961.

NEW DIAC

Owner of Swiss Reg. No. 182,254, dated Sept. 7, 1960.

For Shock-Absorbing Bearings for Horological Pieces.

SN 115,514. Novochoe S.A., La Chaux-de-Fonds, Neuchatel, Switzerland. Filed Mar. 13, 1961.

NEWSHOCK

Owner of Swiss Reg. No. 140,669, dated Jan. 17, 1952.

For Shock-Absorbing Bearings for Horological Pieces.

SN 115,910. General Time Corporation, New York, N.Y. Filed Mar. 17, 1961.

WESTPORT

Owner of Reg. Nos. 108,232 and 702,220.

For Watches and Parts Thereof.

First use September 1960.

SN 116,793. The Ball Company, Chicago, Ill. Filed Mar. 30, 1961.

BALL TRAINMASTER

For Watches.

First use Mar. 16, 1961.

Class 28 — Jewelry and Precious-Metal Ware Class 29 — Brooms, Brushes, and Dusters

SN 115,255. Renoir of California, Inc., Los Angeles, Calif. Filed Mar. 9, 1961.

Endearings

For Enameled Sterling Silver Rings and Earrings.
First use Sept. 27, 1960.

SN 115,911. Goodman and Morris, Portland, Oreg. Filed Mar. 17, 1961.

TREND

For Diamond Rings.
First use in or about April 1960.

SN 115,982. The Alvin Corporation, Providence, R.I. Filed Mar. 20, 1961.

PIROUETTE

For Sterling Silver Flatware and Table Cutlery.
First use Feb. 27, 1961.

SN 116,707. Coro, Inc., New York, N.Y. Filed Mar. 29, 1961.

Eleganté

Owner of Reg. No. 516,662.
For Pearl Necklaces, Pearl Bracelets, Pearl Earrings, and All Pearls for Personal Wear and Adornment—Namely, Pearl Brooches, and Pearl Finger Rings, Pendants, Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Locketts, Finger Rings, Charm Bracelets, Charms, and the Following Goods Made in Whole or in Part of Precious Metals or Plated With Same: Beads, Pins and Jewelry Initials.
First use April 1948.

SN 116,711. Fairfax Distributing Co., Inc., Washington, D.C. Filed Mar. 29, 1961.

**YOURS FOR LOVE—
YOURS FOR LIFE**

Owner of Reg. No. 605,271.
For Diamond Finger Rings.
First use December 1952.

SN 116,899. Matsui Pearl Importing Co., New York, N.Y. Filed Mar. 31, 1961.

MATSU

For Cultured Pearls and Costume Jewelry—Namely, Rings, Earrings, Pendants, Bracelets and Tie Tacks.
First use in January 1960.

SN 114,238. Maendler Brush Mfg. Co. Inc., St. Paul, Minn. Filed Feb. 23, 1961.



For Paint Brushes.
First use Jan. 18, 1961.

Class 31 — Filters and Refrigerators

SN 107,167. Alaska-Werk Dieter Schildbach K-G, Bergneustadt, Germany. Filed Oct. 26, 1960.



Owner of U.S. Reg. No. 708,733.
For Household Refrigerators.
First use Dec. 1, 1959.

SN 108,832. Siemens & Halske Aktiengesellschaft, Munich, Germany. Filed Nov. 21, 1960.



Owner of German Reg. No. 337,261, dated Aug. 3, 1925.
For Refrigerating Apparatus and Components and Parts Thereof.

SN 108,833. Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany. Filed Nov. 21, 1960.



Owner of German Reg. No. 326,846, dated Jan. 13, 1925.
For Refrigerating Apparatus and Components and Parts Thereof.

SN 114,390. American Air Filter Company, Inc., Louisville, Ky. Filed Feb. 27, 1961.

DRI-PAK

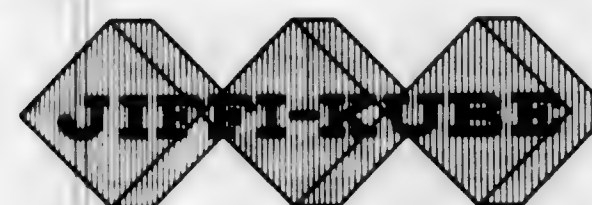
For High Efficiency Unit Air Filters for Use in Ventilating and Air Conditioning Systems.
First use Jan. 25, 1961.

SN 114,474. Gould-National Batteries, Inc., St. Paul, Minn. Filed Feb. 27, 1961.



For Air Filters and Oil Filters for Internal Combustion Engines.
First use Nov. 11, 1960.

SN 115,480. Jim-Kube Corporation, Gardena, Calif. Filed Mar. 13, 1961.



The drawing is lined for red.
For Automatic Ice Cube Vending Machines.
First use Nov. 15, 1959.

Class 32 — Furniture and Upholstery

SN 110,682. Henredon Furniture Industries, Incorporated, Morganton, N.C. Filed Dec. 22, 1960.

CIRCA '70

Owner of Reg. No. 597,074.
For Bedroom, Dining Room, Upholstered, and Occasional Furniture.
First use April 1960.

SN 113,392. Blair Displays, Incorporated, St. Louis, Mo. Filed Feb. 10, 1961.

VITA-MATIC

For Display Counter Unit.
First use Dec. 26, 1960.

SN 116,914. Pro-phy-lactic Brush Company, Florence, Mass. Filed Mar. 31, 1961.

PROLON

For Molded Plastic Drawers.
First use June 26, 1957.

SN 117,520. Joe Myers Advertising Specialties, Inc., Indianapolis, Ind. Filed Apr. 10, 1961.

WINNAH

For Multi-Purpose Cushion.
First use Mar. 10, 1961.

SN 117,540. West Side Mattress Company, Inc., Wichita, Kans. Filed Apr. 10, 1961.

The Millerite

For Mattresses, Box Springs and Related Bedding Products.
First use March 1947.

SN 117,634. M. J. Eunice and S. J. Strocky, Pittsburgh, Pa. Filed Apr. 11, 1961.

FOAM-AD

For Seat Pad.
First use Feb. 18, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 99,386. Western Boiler Co., Los Angeles, Calif. Filed June 20, 1960.

HUSKY

For Industrial Oil and Gas Fired Steam and Hot Water Boilers.
First use Apr. 4, 1960.

SN 100,115. Electric Furnace-Man, Inc., Emmaus, Pa. Filed July 1, 1960.



"The Finest in Automatic Heat" is disclaimed except in association with the mark.
For Oil and Gas Fired Boilers and Heaters.
First use Jan. 8, 1957.

SN 101,559. Lamb Industries, Inc., Toledo, Ohio. Filed July 27, 1960.

ALUMATIC

Owner of Reg. No. 436,651.
For Hot Water Heaters.
First use May 22, 1957.

SN 111,762. Rock Island Register Co., Rock Island, Ill. Filed Jan. 12, 1961.

BENDA-VANE

For Forced Air Grilles and Registers.
First use Jan. 2, 1941.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 112,231. Dayco Corporation, Dayton, Ohio. Filed Jan. 23, 1961.

DAY-FLO

Owner of Reg. Nos. 297,677, 687,226, and others.
For Rubber Fluid-Conveying Hose.
First use Sept. 13, 1960.

Class 36 — Musical Instruments and Supplies

SN 103,017. The Gray Manufacturing Company, Hartford, Conn. Filed Aug. 19, 1960.

LUMINDEX

For Index Strips for Sound Records Used on Sound Recording and Transcribing Machines.
First use July 19, 1960.

Class 37—Paper and Stationery

SN 70,011. Weber Costello Co., Chicago Heights, Ill. Filed Mar. 20, 1959.

PALLE-TRAY

For Plastic Trays Sold With Crayons, Chalks or Charcoal Sticks.

First use Oct. 28, 1958.

SN 92,409. Venus Pen & Pencil Corporation, New York, N.Y. Filed Mar. 8, 1960.

"PRESSURE PROOFED"

Owner of Reg. No. 379,514.

For Lead Pencils.

First use Apr. 26, 1939.

SN 110,083. Pillo-Pak of New England, Inc., Nashua, N.H. Filed Dec. 12, 1960.

SPRING-PAK

For Sheets of Corrugated Paper for Use in Various Forms of Packing.

First use Apr. 5, 1957.

SN 110,752. Fort Howard Paper Company, Green Bay, Wis. Filed Dec. 23, 1960.

BOSSTEX

Owner of Reg. No. 359,278.

For Toilet Tissue.

First use Aug. 24, 1960.

SN 113,374. Scott Paper Company, Philadelphia, Pa. Filed Feb. 9, 1961.

MAGIC OVAL

For Dispensing Boxes Incorporating Facial Tissues Therein.

First use Aug. 1, 1960.

SN 114,007. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 20, 1961.

KIM

Owner of Reg. Nos. 229,755, 699,434, and others.

For Absorbent Paper—Namely, Facial Tissue and Toilet Tissue.

First use Feb. 13, 1961.

SN 115,803. Handy Wacks Corporation, Sparta, Mich. Filed Mar. 16, 1961.

HANDY WACKS

Applicant disclaims the word "Handy" apart from the mark shown. Owner of Reg. No. 413,868.

For Packaged Wax Paper.

First use Apr. 1, 1926.

SN 116,773. Waldorf Paper Products Company, St. Paul, Minn. Filed Mar. 29, 1961.

CHEM-WALD

For Corrugated Paperboard.

First use Sept. 14, 1960.

SN 116,838. Riegel Paper Corporation, New York, N.Y. Filed Mar. 30, 1961.

DRAPEX

For Plastic Laminated Film for Use as Packaging Material and in Particular a Polyethylene-Acetate Laminated Film.

First use on or before Mar. 20, 1959.

SN 116,868. Brown Company, Boston, Mass. Filed Mar. 31, 1961.

TWS

For Paper Towels.

First use Nov. 23, 1960.

SN 119,258. Kimberly-Clark Corporation, Neenah, Wis. Filed May 4, 1961.

SPUNMIST

For Absorbent Tissue Paper Suitable for Hygienic, Cosmetic, or Cleaning Purposes.

First use May 2, 1961.

Class 38—Prints and Publications

SN 78,031. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed July 20, 1959.

SPEEDFAX

For Catalogues Issued Periodically and Containing Information Concerning Electrical Equipment.

First use in December 1951.

SN 100,307. Sigma Chemical Company, St. Louis, Mo. Filed July 5, 1960.

SIGMA

For Technical Bulletins Published From Time to Time.

First use September 1951.

SN 101,954. I. Lodge Catalogs, Inc., Philadelphia, Pa. Filed Aug. 3, 1960.

FUN FAIR

For Catalogues Published From Time to Time.

First use July 21, 1960.

SN 112,924. Standard & Poor's Corporation, New York, N.Y. Filed Feb. 1, 1961.

STOCKSCOPE

For Rotatable Disc Stock Market Reference Charts.

First use Sept. 11, 1959.

Class 39—Clothing

SN 43,361. Jack Adams, d.b.a. Bonny's Skating Apparel, New York, N.Y. Filed Jan. 3, 1958.

BONNY

Owner of Reg. No. 636,485.

For Skating Tights and Skating Jackets.

First use January 1950.

SN 94,780. Etablissements Lejaby, Paris, France. Filed Apr. 11, 1960.

LEJABY

For Ladies' Garments—Namely, Underwear, Brassieres, Negligees, Corsets, Girdles, Blouses, Nightgowns, Stockings, Bathing Costumes, and Leotards.

First use June 20, 1957; in commerce June 20, 1957.

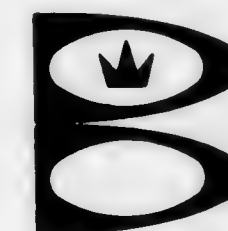
SN 98,538. Scout-Tex, Inc., New York, N.Y. Filed June 6, 1960.

KNIT-WITS

For Infants' Polo Shirts, Shirts, Slacks, Capri Pants, Pedal Pushers, Shorts, Pants, Jackets, Diapers, and Combinations Thereof.

First use January 1957.

SN 102,190. Brunswick Corporation, Chicago, Ill. Filed Aug. 8, 1960.



For Shoes for General Wear and Sport Wear.

First use May 1959.

SN 102,992. The Bernhard Altmann Corporation, New York, N.Y. Filed Aug. 19, 1960.

BERNHARD ALTMANN

The name "Bernhard Altmann" is that of applicant's former president and founder of applicant's business, now deceased. Owner of Reg. Nos. 549,931, 629,209, and others.

For Sweaters, Skirts, Blouses, Sport Jackets, Hosiery, Dresses, Robes, Coats, Scarfs, and Barrets.

First use 1946.

SN 105,999. Phyllis Shoe Company, Inc., Lowell, Mass. Filed Oct. 7, 1960.



For Ladies' Shoes.

First use Sept. 6, 1960.

SN 110,731. Azalea Originals Inc., New York, N.Y. Filed Dec. 23, 1960.

Azalea Originals

No claim is made to the word "Originals" apart from the mark shown in the drawing.

For Stoles, Blouses, Capes, Cloaks, Women's Dresses, Suits, Scarfs, Women's Bathing Suits, and Pullovers.

First use during October 1960.

MRS. AMERICA

Owner of Reg. Nos. 575,274 and 705,656.

For Women's Dresses.

First use August 1960.

SN 111,620. Societe de la Viscose Suisse, Emmenbrucke, Switzerland. Filed Jan. 10, 1961.

NYLSUISSE

For Hosiery, Shirts, Underwear, Ties, for Men, Women, and Children.

First use August 1957; in commerce in or about February 1958.

SN 113,741. Mandel Manufacturing Company, St. Louis, Mo. Filed Feb. 15, 1961.



No claim is made by applicant to the use of the word "Britches" apart from the mark as shown in the drawing.

For Ladies' Outer-Wear, Consisting of Women's Capri Length and Jamaica Length Pants.

First use July 1, 1960.

SN 114,575. Dal-Tex Shoe Company, Inc., Dallas, Tex. Filed Feb. 27, 1961.

DALLE VALLE DEBS

For Shoes.

First use Mar. 5, 1959.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 102,993. The Bernhard Altmann Corporation, New York, N.Y. Filed Aug. 19, 1960.

BERNHARD ALTMANN

The name "Bernhard Altmann" is that of applicant's former president and founder of applicant's business, now deceased. Owner of Reg. Nos. 549,931, 629,209, and others.

For Fabrics for Making Coats, Suits, Dresses, Robes, and Jackets.

First use 1946.

SN 104,443. Fabrex Corp., New York, N.Y. Filed Sept. 14, 1960.

INSTANT WARDROBE

For Piece Goods Made of Polyester Fibers, Acrylic Fibers and Blends Thereof.

First use Aug. 31, 1960.

SN 106,477. Courtaulds, Limited, London, England. Filed Oct. 17, 1960.

DELTINE

Owner of British Reg. No. 530,152, dated Mar. 12, 1932; and U.S. Reg. No. 315,750.

For Shrink-Resistant Rayon Piece Goods for Use as Linings in Outer Garments.

SN 111,789. Courtaulds, Limited, London, England. Filed Jan. 13, 1961.

COURTELLE

Priority claimed under Sec. 44(d) on British Reg. No. 814,825, dated Dec. 20, 1960. Owner of U.S. Reg. Nos. 396,182 and 703,071.
For Textile Piece Goods Consisting Wholly or Mainly of Acrylic Fibers.

SN 115,641. Terry Tuck, Inc., Los Angeles, Calif. Filed Mar. 14, 1961.

DRESS-A-PILLOW

For Decorative Pillow Covers (Shams).
First use June 15, 1960.

SN 115,774. Burlington Industries, Inc., New York, N.Y. Filed Mar. 16, 1961.

ISOTHERM

For Textile Fabrics in the Piece Suitable for Use in the Manufacture of Men's and Boys' Suits, Slacks, Sportcoats and Topcoats; and Women's Suits, Dresses and Coats.
First use June 23, 1959.

SN 116,160. Shirley Fabrics Corporation, New York, N.Y. Filed Mar. 21, 1961.

GLENORA

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof.
First use Feb. 1, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 107,214. Marion S. Pump, d.b.a. Wolverton Enterprises, Kalamazoo, Mich. Filed Oct. 26, 1960.

E-ZE FLO

Owner of Reg. No. 653,230.
For Dispenser for Hairdressing Liquids.
First use Sept. 26, 1955.

SN 109,152. Barr Winley Co., Inc., Evanston, Ill. Filed Nov. 28, 1960.

KLEENPAK

For Disposable Fountain Syringe.
First use Jan. 1, 1952.

SN 115,064. Laboratory Associates, North Brunswick, N.J. Filed Mar. 7, 1961.

G-I STRING

For Tape for Location of Bleeding in the Intestinal Tract.
First use Sept. 11, 1958.

SN 121,664. The Anchor Rubber Company, Orange, Conn. Filed Apr. 28, 1961.



Applicant disclaims the word "Brand," without relinquishing any common law rights therein.
For Surgical Latex Tissue Finger Cots.
First use May 31, 1949.

Class 45—Soft Drinks and Carbonated Waters

SN 87,168. A/S Dansk Coladrik, Copenhagen, Denmark. Filed Nov. 5, 1959.

JOLLY COLA

Applicant disclaims the exclusive right to the use of "Cola" apart from the mark as a whole. Owner of Danish Reg. No. 1081-1959, dated June 20, 1959.
For Cola Type Soft Drinks.

Class 46—Foods and Ingredients of Foods

SN 56,704. P. Ferrero & C., Alba, Cuneo, Italy. Filed Aug. 6, 1958.



Owner of Italian Reg. No. 116,549, dated Mar. 22, 1954; and U.S. Reg. No. 708,557.
For Pastry, Candies, Biscuits, Jams, Sugar, Honey, Cocoa, Baking Chocolate, Tea, Coffee, and Coffee Substitutes, Spices.

SN 75,202. North Pacific Cannery & Packers, Inc., Portland, Ore. Filed June 5, 1959.

ROYAL PURPLE

For Canned and Frozen Vegetables and Fruit, Excluding Plums.
First use 1921 on canned fruit.

SN 79,820. Virg Davidson-Chudacoff Company, Culver City, Calif. Filed Aug. 18, 1959.

TOP HAT BRAND

Applicant makes no claim to the word "Brand."
For Frozen and/or Fresh Dressed Poultry and Parts Thereof.
First use September 1953.

SN 86,058. Northern Supply Co., Amery, Wis. Filed Nov. 25, 1959. SN 93,457. Safeway Stores, Incorporated, Oakland, Calif. Filed Mar. 22, 1960.

MO-FLAS

For Dairy Feed.
First use Oct. 1, 1952.

SN 90,180. Bruce O. Nicholes, Madras, Ore. Filed Feb. 2, 1960.



The lining on the drawing represents shading only.
For Fresh Potatoes.
First use Nov. 1, 1954.

SN 92,032. A. Michaud Co., Philadelphia, Pa. Filed Mar. 2, 1960.



For Frozen Meats.
First use on or about Nov. 16, 1959.

SN 92,880. Hollywood Brands, Inc., Centralia, Ill. Filed Mar. 15, 1960.



Owner of Reg. Nos. 515,986, 634,956, and 707,260.
For Candy.
First use Jan. 15, 1957.

SN 93,192. Luk-O-Ma Corporation, Port Chester, N.Y. Filed Mar. 18, 1960.



For Fried Edible Ball-Like Pastry.
First use Feb. 12, 1960.



The mark as depicted in the accompanying drawing represents a portion of the container of the goods. Applicant disclaims the entire background design matter apart from the mark shown; reserving, however, any common law rights it may have therein.
For Fresh Orange Juice.
First use Jan. 1, 1960.

SN 94,071. Kitchen Products, Inc., Chicago, Ill. Filed Mar. 31, 1960.

PALM BEACH

For Canned Citrus Fruit Juice.
First use during 1932.

SN 95,457. The Taylor Provisions Company, d.b.a. Taylor Provisions Co., Trenton, N.J. Filed Apr. 20, 1960.

POP-UPS

For Combination Package Containing Sliced Chopped Meat in "Loaf" or "Roll" Form and a Cooking Pouch Therefor.
First use Apr. 12, 1960.

SN 97,607. Armour and Company (Delaware corporation), Chicago, Ill., assignee of Armour and Company (Illinois corporation), Chicago, Ill. Filed May 23, 1960.

FRI-CHIP

For Vegetable Shortening.
First use May 2, 1960.

SN 97,683. National Pectin Products Company, Chicago, Ill. Filed May 23, 1960.



The phrase "Cold Soluble" is disclaimed apart from the mark as shown.
For Cold Water Soluble Food Stabilizer Consisting of Pectin, Locust Bean Gum, Sucrose and Dextrose, Said Product Being Sold Only to Food Processors.
First use May 25, 1956.

SN 98,873. Crown Meat & Provision Co. Inc., Minneapolis, Minn. Filed June 13, 1960.

CORONET

Owner of Reg. No. 605,868.
For Smoked Beef Tongues.
First use May 1956.

SN 101,024. James G. Moran, d.b.a. Moran Specialties, Burbank, Calif. Filed July 18, 1960.



For Fruit Coated Ice Cream Bars.
First use June 11, 1960.

SN 102,299. Best Kosher Sausage Co., Chicago, Ill. Filed Aug. 9, 1960.

BEST'S

For Bologna, Breakfast Beef, Breakfast Sausages, Corned Beef, Frankfurters, Frozen Beef Patties, Garlic Sausage, Kishka, Knackwurst, Liver Sausage, Pastrami, Peppermeat, Pickled Brisket, Salami, and Tongue.
First use 1936.

SN 102,343. Reynolds Brothers, Incorporated, Sturgeon Bay, Wis. Filed Aug. 9, 1960.

CHEREFRESH

For Canned Cherry Juice.
First use on or about July 29, 1935.

SN 104,748. Northville Laboratories, Incorporated, Northville, Mich. Filed Sept. 19, 1960.

NOLAVAN

For Vanilla, Vanilla Powder and Imitation Vanilla Flavor for Food Purposes.
First use Jan. 4, 1954.

SN 105,083. Kakawateez, Ltd., Findlay, Ohio. Filed Sept. 23, 1960.



Applicant disclaims the word "Peanuts."
For Sugar Coated Peanuts.
First use June 23, 1960.

SN 105,427. Fisher Cheese Company, Wapakoneta, Ohio. Filed Sept. 29, 1960.



For Cheese.
First use Mar. 4, 1957.

SN 106,377. Prima Foods Inc., New York, N.Y. Filed Nov. 14, 1960.

DANISH PRIDE

No claim of exclusive right is made to "Danish," it being the place of geographic origin of the product. Owner of Reg. No. 705,315.
For Canned Ham.
First use May 1955.

SN 109,601. M & R Dietetic Laboratories, Inc., Columbus, Ohio. Filed Dec. 5, 1960.

ENGLISH INN

For Canned Meats and Chili Con Carne.
First use July 26, 1960.

SN 109,634. Seaboard Allied Milling Company, d.b.a. Rodney Milling Company, Kansas City, Mo. Filed Dec. 5, 1960.



For Wheat Flour.
First use Aug. 1, 1918.

SN 109,825. James O. Welch Company, Cambridge, Mass. Filed Dec. 7, 1960.

JAMAICA MINTS

Applicant claims no exclusive right to the word "Mints" apart from the mark as shown.
For Candy.
First use August 1960.

SN 110,134. Gonzalo Raul Avila, d.b.a. Avila y Espinosa, Culiacan, Sinaloa, Mexico. Filed Dec. 13, 1960.



The drawing is lined for shading.
For Fresh Vegetables.
First use Dec. 1, 1942; in commerce Dec. 1, 1942.

SN 110,938. Fant Milling Company, Sherman, Tex. Filed Dec. 28, 1960.

DUTCH OVEN

For Flour.
First use Nov. 14, 1960.

SN 115,351. Kelvin K. Larson, d.b.a. Corleen Farms, Indio, Calif. Filed Mar. 10, 1961.

DESERT DIAMONDS

For Fresh Grapes.
First use Jan. 21, 1961.

SN 116,222. Food Products Company of America, Chicago, Ill. Filed Mar. 22, 1961.

DOG HOUSE

For Dog and Cat Food.
First use in or about March 1937.

SN 116,382. Bruce Church, Inc., Salinas, Calif. Filed Mar. 24, 1961.



For Fresh Melons.
First use at least as early as June 1959.

SN 116,474. The Carey Salt Company, Hutchinson, Kans. Filed Mar. 27, 1961.

EV'R-FLO

For Salt for Stock Feed.
First use Sept. 21, 1960.

SN 116,608. Van Camp Sea Food Company, Port of Long Beach, Calif. Filed Mar. 27, 1961.

MISSION

Owner of Reg. No. 132,275.
For Canned Tuna.
First use May 23, 1918.

SN 116,632. Flotill Products, Incorporated, Stockton, Calif. Filed Mar. 28, 1961.

MULTI-MATO

For Canned Tomatoes.
First use Mar. 15, 1961.

SN 116,927. Rala Singh, d.b.a. Rala Singh Farms, Glendale, Ariz. Filed Mar. 31, 1961.

COMPLETE

For Fresh Vegetables.
First use November 1957.

SN 117,258. Frederick Joseph Carten, Westmount, Quebec, Canada. Filed Apr. 6, 1961.

SEAGYL

Owner of Canadian Reg. No. 102,263, dated Dec. 23, 1955.
For Food Product Made From Seaweed (Dulse, Etc.), Being in the Nature of a Dietary Supplement Containing Minerals.

SN 117,338. Buddy Boy Popcorn Co., Watseka, Ill. Filed Apr. 7, 1961.

POPPIN' GOOD

For Unpopped Popcorn.
First use Aug. 26, 1954.

Class 49 - Distilled Alcoholic Liquors

SN 82,072. Barton Distilling Company, Chicago, Ill. Filed Sept. 25, 1959.

CZARINA

For Vodka.
First use June 13, 1955.

SN 105,006. Katz Drug Company, Kansas City, Mo. Filed Sept. 22, 1960.



For Blended Scotch Whisky.
First use Sept. 6, 1960.

Class 50 - Merchandise Not Otherwise Classified

SN 94,485. Robert A. Grossman, d.b.a. R. A. Grossman Co., Richmond Hill, N.Y. Filed Apr. 6, 1960.



For Combined Interchangeable Display Letters and Perforated Boards.
First use Feb. 11, 1960.

SN 107,550. Boyertown Packaging Service Corp., Boyertown, Pa. Filed Nov. 1, 1960.



Boyertown Bag

For Cushioned Shipping Pads.
First use Sept. 13, 1960.

SN 118,064. Gotham Chalkboard & Trim Co. Inc., New Rochelle, N.Y. Filed Apr. 18, 1961.



For Chalkboards and Blackboards.
First use Sept. 1, 1955.

SN 118,893. Malt-A-Plenty, Inc., Tulsa, Okla. Filed Apr. 28, 1961.

FLAMING SNOWBALLS

Owner of Reg. No. 623,751.
For Package Containing Candles, Dollies, and Ice Cream Balls Covered With Coconut.
First use Nov. 3, 1954.

Class 51 - Cosmetics and Toilet Preparations

SN 81,723. Minkolein Company, Waldwick, N.J. Filed Sept. 21, 1959.



Earl of Mink

For Cosmetic Facial and Body Emollient Creams and Lotions, Liquid Foundation Base, and Suntan Lotion.
First use May 20, 1959.

SN 89,945. Helena Rubinstein, Inc., New York, N.Y. Filed Jan. 29, 1960.

COVER FLUID

Applicant disclaims the word "Fluid" apart from the mark as a whole.
For Make-Up Base.
First use Sept. 23, 1959.

SN 96,524. Ravell Laboratories, Inc., Somerville, N.J. Filed May 5, 1960.



Applicant disclaims the word "Formula" apart from the mark as shown.
For Cleansing Cream, Dry Skin Cream, Hormone Cream, Hand and Body Lotion, Milk Complexion Soap, and Protein Tooth Paste.
First use Dec. 18, 1959.

SN 100,472. Societe Maurice Blanchet, Parfums de Luxe, Suresnes (Seine), France. Filed July 7, 1960.

OPERA DE PARIS

For Perfumery—Namely, Perfumes, Toilet Water, and Skin Lotion.
First use 1959; in commerce June 8, 1960.

SN 104,644. Scandia Cosmetics Corporation, d.b.a. Scandia, New York, N.Y. Filed Sept. 16, 1960.

SECRET TOUCH

For Compact Face Powder.
First use Nov. 14, 1957.

SN 106,815. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed Oct. 20, 1960.

WIND AND WEATHER

Owner of Reg. No. 383,277.
For Hand Cream and a Preparation Recommended for Use as a Skin Lotion and for Use as a Foundation Base for Powder.
First use Jan. 7, 1935, on a preparation recommended for use as a skin lotion and foundation base for powder.

SN 108,666. John Robert Powers Products Co., Inc., New York, N.Y. Filed Nov. 17, 1960.

BIO-TONIC MASQUE

For purposes of registration the word "Masque" is disclaimed apart from the mark as shown.
For Cosmetic Skin Lotion.
First use June 30, 1960.

SN 110,545. Lady Iris Cosmetic Company, Inc., New York, N.Y. Filed Dec. 20, 1960.

LADY IRIS

For Cosmetic Pencils.
First use Dec. 1, 1960.

THE FIRST ROSE

For Cologne.
First use on or about June 25, 1960.

SN 110,843. The Fuller Brush Company, East Hartford, Conn. Filed Dec. 27, 1960.

NIGHT FIRE

For Cologne.
First use on or about June 20, 1960.

SN 112,898. Houbigant, Inc., New York, N.Y. Filed Feb. 1, 1961.

Spray gift

For Toilet Water.
First use July 21, 1960.

Class 52—Detergents and Soaps

SN 81,722. Minkolein Company, Waldwick, N.J. Filed Sept. 21, 1959.



The lining on the drawing does not represent color.
For Hair Shampoo.
First use May 20, 1959.

SN 82,257. Madison Chemical Corporation, d.b.a. The Madison Supply and Equipment Co., Maywood, Ill. Filed Sept. 28, 1959.

ACT-O-VE NE

For Rug, Carpet and Upholstery Cleaner.
First use in April 1954.

SN 102,002. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed Aug. 4, 1960.

QUIK-DIP

For Preparation for the Cleaning of Silver.
First use Nov. 3, 1952.

SN 103,863. Lestoll Products, Inc., Holyoke, Mass. Filed Sept. 2, 1960.

LESTOIL SPARKLE SCENT

Owner of Reg. Nos. 343,957, 636,572, and 702,036.
For Liquid Detergent for Laundering and Household Cleaning.
First use Aug. 16, 1960.

SN 103,674. Ransohoff Company, Hamilton, Ohio. Filed Sept. 2, 1960.



For Detergents for Cleaning Metal and Metal Parts, Acid Pickling and Descaling Compounds, Acid Cleaning and Rinsing Compounds, Alkaline Descalers and Cleaners, Electro-Cleaners and Abrasive Cleaning Compounds and Mixtures Thereof for Treating and Cleaning Metals.
First use Aug. 21, 1959.

SN 104,132. Amway Sales Corporation, Grand Rapids, Mich. Filed Sept. 9, 1960.

AMWAY

Owner of Reg. Nos. 707,656, 716,128, and 716,672.
For All Purpose Cleaning Concentrates, Detergents and Soaps in Liquid, Powder and Solid Form.
First use Nov. 16, 1959.

SERVICE MARKS**Class 100—Miscellaneous**

SN 58,633. B. H. Johnson, Cincinnati, Ohio. Filed Sept. 9, 1958.

Country Kitchen

For Restaurant and Catering Services.
First use Nov. 27, 1939.

SN 102,884. American Travelers Club, Inc., Wilmington, Del. Filed Aug. 18, 1960.



For Rendering Assistance to American Travellers in Foreign Countries—Namely, Giving Such Travellers Information With Respect to Reservations, Restaurants, Night Clubs, Shopping, Automobile Rentals and Customs Regulations With Respect to Foreign Countries.
First use April 1960.

Class 101—Advertising and Business

SN 81,229. Associated Grocers' Company of St. Louis, Missouri, St. Louis, Mo. Filed Sept. 14, 1959. COLLECTIVE MARK.



Applicant disclaims any exclusive rights to the word

WARCO

Owner of Reg. No. 679,395.
For Rug and Upholstery Shampoo.
First use July 29, 1960.

SN 115,464. Fix-Off Company, Inc., Detroit, Mich. Filed Mar. 13, 1961.

FIX-OFF

For Stain Remover for Fabrics.
First use Oct. 14, 1954.

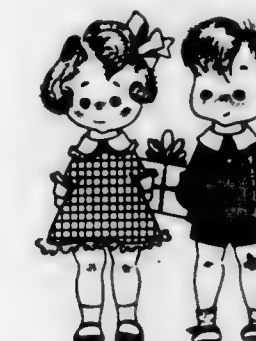
SN 115,618. Northern Laboratories, Manitowoc, Wis. Filed Mar. 14, 1961.

JADEX

For Household Detergent.
First use Feb. 13, 1961.

"Stores" apart from the mark as shown. Owner of Reg. Nos. 220,072, 567,401, and others.
For Retail Grocery Services To Indicate the Services Rendered by the Members of Applicant.
First use July 23, 1923.

SN 81,951. Alvin B. Yerkes, Jr., d.b.a. The Sharaday Company, Huntington, Ind. Filed Sept. 23, 1959.



For Advertising Services.
First use Apr. 14, 1959.

SN 102,725. Atlantic Appliance Co., Inc., Neptune, N.J. Filed Aug. 16, 1960.

SUPERAMA

For Department Store Service.
First use on or about June 1, 1954.

SN 113,226. Interpel Corporation, Pittsburgh, Pa. Filed Feb. 7, 1961.

INTERPEL

For Advertising Services, Public Relations Advisory Services, and Counseling Services Relating to Promotional Activities Such as Sales Promotion.
First use Nov. 1, 1960.

Class 102—Insurance and Financial

SN 99,421. Education Funds Inc., Providence, R.I. Filed June 21, 1960.



For Providing and Distributing Funds for Loans for Educational Purposes.
First use May 16, 1960.

Class 103—Construction and Repair

SN 75,879. Precision Recapping Equipment Co., Macon, Ga. Filed June 16, 1959.



For Retreading Aircraft Tires of Others.
First use Sept. 3, 1953.

Class 104—Communication

SN 113,255. American Broadcasting-Paramount Theatres, Inc., New York, N.Y. Filed Feb. 8, 1961.



For Broadcasting of Television Programs.
First use Nov. 20, 1956.

Class 105—Transportation and Storage

SN 83,885. Hammel Moving & Storage, Inc., Detroit, Mich. Filed Oct. 23, 1959.

WHERE IN THE WORLD DO YOU WANT TO GO?

For Transporting Household Goods and Miscellaneous Freight by Vehicle.
First use in December 1954.

Class 107—Education and Entertainment

SN 59,872. American Machine & Foundry Company, New York, N.Y. Filed Oct. 1, 1958.

BOWL WHERE YOU SEE THE



Owner of Reg. Nos. 168,740, 665,632, and others.
For Rental and Maintenance of Automatic Pin Setting Machines for Bowling; Stimulating Interest in Bowling by Operating Instructional Clinics and by Means of Brochures, Newspaper and Periodical Advertisements.
First use as early as October 1957; September 1956 in substantially the form shown.

SN 98,526. Programs for Achievement in Reading, Inc., Providence, R.I. Filed June 6, 1960.



For Installation and Orientation of Educational Programs for Others.
First use on or about May 24, 1960.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 721,163. **FASTER STARTING AND DESIGN.** Northern Minnesota Bluegrass Growers Assn. SN 89,195. Pub. 6-27-61. Filed 1-18-60.
- 721,164. **KOBBLER KIP.** Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation). SN 99,997. Pub. 6-27-61. Filed 6-30-60.
- 721,165. **STRUCTO-FOAM AND DESIGN.** General Foam Products. SN 108,142. Pub. 6-27-61. Filed 8-22-60.
- 721,166. **ELASTOE.** Beckwith-Arden Inc. SN 108,535. Pub. 6-27-61. Filed 11-16-60.
- 721,167. **EAU-NO AND DESIGN.** John E. Daniels Leather Company. SN 109,850. Pub. 6-27-61. Filed 12-8-60.
- 721,168. **W AND DESIGN WITHIN A CIRCLE.** Westinghouse Electric Corporation. CONSOLIDATED CERTIFICATE. SN 111,032, pub. 6-20-61, filed 12-29-60, Cl. 1; SN 111,025, pub. 6-20-61, filed 12-29-60, Cl. 2; SN 111,033, pub. 6-20-61, filed 12-29-60, Cl. 6; SN 111,024, pub. 6-20-61, filed 12-29-60, Cl. 12; SN 111,029, pub. 6-20-61, filed 12-29-60, Cl. 13; SN 111,034, pub. 6-20-61, filed 12-29-60, Cl. 14; SN 111,035, pub. 6-20-61, filed 12-29-60, Cl. 15; SN 111,028, pub. 6-20-61, filed 12-29-60, Cl. 16; SN 111,030, pub. 6-20-61, filed 12-29-60, Cl. 21; SN 111,036, pub. 6-20-61, filed 12-29-60, Cl. 23; SN 111,027, pub. 6-20-61, filed 12-29-60, Cl. 24; SN 111,026, pub. 6-20-61, filed 12-29-60, Cl. 26; SN 111,038, pub. 6-20-61, filed 12-29-60, Cl. 31; SN 111,037, pub. 6-20-61, filed 12-29-60, Cl. 34; SN 111,031, pub. 6-20-61, filed 12-29-60, Cl. 44.
- 721,169. **CAB-O-SIL.** Cabot Corporation. SN 111,784. Pub. 6-27-61. Filed 1-13-61.
- 721,170. **ANILSKIN.** Armour and Company. SN 111,842. Pub. 6-27-61. Filed 1-16-61.
- 721,171. **DELSUEDE.** Armour and Company. SN 111,843. Pub. 6-27-61. Filed 1-16-61.
- 721,172. **GREEN BOND.** Archer-Daniels-Midland Company. SN 112,108. Pub. 6-27-61. Filed 1-19-61.
- 721,173. **CROWN-SEAL.** Crown Zellerbach Corporation. SN 112,227. Pub. 6-27-61. Filed 1-23-61.
- 721,174. **PETAL-PUSHER.** The Nitragin Company, Inc. SN 112,297. Pub. 6-27-61. Filed 1-23-61.
- 721,175. **TEDLAR.** E. I. du Pont de Nemours and Company. SN 112,527. Pub. 6-27-61. Filed 1-26-61.
- 721,176. **SHUCRAFT.** Albert Trostel & Sons Company. SN 112,794. Pub. 6-27-61. Filed 1-30-61.
- 721,177. **GENFOAM.** The General Tire & Rubber Company. SN 112,961. Pub. 6-27-61. Filed 2-2-61.
- 721,178. **WYOBOND.** Archer-Daniels-Midland Company. SN 113,072. Pub. 6-27-61. Filed 2-6-61.
- 721,179. **WYO-JEL.** Archer-Daniels-Midland Company. SN 113,073. Pub. 6-27-61. Filed 2-6-61.
- 721,180. **RAYNORTH.** Rayonier Incorporated. SN 113,240. Pub. 6-27-61. Filed 2-7-61.
- 721,181. **SUPERANIER.** Rayonier Incorporated. SN 113,241. Pub. 6-27-61. Filed 2-7-61.
- 721,182. **GLAMOR BRANCH.** Florida Ornamental Foliage Co. SN 113,821. Pub. 6-27-61. Filed 2-16-61.

Class 2—Receptacles

- 721,168. **CONSOLIDATED CERTIFICATE.** See Class 1.
- 721,183. **STA-HANG.** Action Bag & Envelope Co., Inc. SN 99,695. Pub. 6-27-61. Filed 6-27-60.
- 721,184. **STA-SNAP.** Action Bag & Envelope Co., Inc. SN 99,696. Pub. 6-27-61. Filed 6-27-60.

- 721,185. **EVERGLAZE.** Metal Coating Corporation. SN 105,185. Pub. 6-27-61. Filed 9-26-60.
- 721,186. **CCC.** Continental Can Company, Inc. SN 109,394. Pub. 6-27-61. Filed 12-1-60.
- 721,187. **SLIDE-A-PIC.** American MCW Dispensers, Inc. SN 109,548. Pub. 6-27-61. Filed 12-5-60.
- 721,188. **BLUE OX.** Waldorf Paper Products Co. SN 110,910. Pub. 6-27-61. Filed 12-27-60.
- 721,189. **GLASTI-KLAD.** Weben Boiler and Tank Company, Inc. SN 111,450. Pub. 6-27-61. Filed 1-6-61.
- 721,190. **PLASTIBOX.** Container Development Corporation. SN 111,586. Pub. 6-27-61. Filed 1-10-61.

Class 4—Abrasives and Polishing Materials

- 721,191. **Z-N.** Minnesota Mining and Manufacturing Company. SN 98,668. Pub. 6-27-61. Filed 6-8-60.
- 721,192. **POWER PUFF.** Colgate-Palmolive Company. SN 113,089. Pub. 6-27-61. Filed 2-6-61.

Class 5—Adhesives

- 721,193. **NORAD.** American Can Company. SN 113,060. Pub. 6-27-61. Filed 2-8-61.

Class 6—Chemicals and Chemical Compositions

- 721,168. **CONSOLIDATED CERTIFICATE.** See Class 1.
- 721,194. **POLY URETHANE AND DESIGN.** Mobay Chemical Company. SN 60,050. Pub. 6-27-61. Filed 10-3-58.
- 721,195. **PENNOX.** Pennsalt Chemicals Corporation. SN 78,143. Pub. 6-27-61. Filed 7-21-59.
- 721,196. **BALAB.** Francys C. Bresee, administratrix of the estate of Fred Bresee, Jr., d.b.a. Balab. SN 95,245. Pub. 6-27-61. Filed 4-18-60.
- 721,197. **AYR-TRAP.** Sun Chemical Corporation. SN 99,672. Pub. 6-27-61. Filed 6-24-60.
- 721,198. **REPRESENTATION OF SKUNK ETC.** Pennsalt Chemicals Corporation. SN 99,960. Pub. 6-27-61. Filed 6-29-60.
- 721,199. **DYLANIZE.** Stevensons (U.S.A.) Inc. SN 100,069. Pub. 6-27-61. Filed 6-30-60.
- 721,200. **SYNDAN.** Scientific Design Company, Inc. SN 101,128. Pub. 6-27-61. Filed 7-10-60.
- 721,201. **HERKOL.** Nordsa Essential Oil & Chemical Company, Inc. SN 101,569. Pub. 3-21-61. Filed 7-27-60.
- 721,202. **THIOSPERSE.** American Cyanamid Company. SN 102,166. Pub. 6-27-61. Filed 8-8-60.
- 721,203. **PERMA GLAZE AND DESIGN.** Perma-Cement Products of America, Incorporated. SN 105,301. Pub. 6-27-61. Filed 9-27-60.
- 721,204. **PROOF.** M.F.A. Oil Company. SN 106,614. Pub. 6-20-61. Filed 10-18-60.
- 721,205. **CHLOREGAL.** Gelsy Chemical Corporation. SN 107,006. Pub. 6-27-61. Filed 10-24-60.
- 721,206. **DOUBLE ARROW DESIGN.** Vulcan Materials Company, d.b.a. Frontier Chemical Company. SN 107,086. Pub. 6-27-61. Filed 10-24-60.
- 721,207. **WESTVACO.** West Virginia Pulp and Paper Company. SN 108,423. Pub. 6-27-61. Filed 11-14-60.

721,208. TRI-ETHANE. Pittsburgh Plate Glass Company, assignee of Columbia-Southern Chemical Corporation. SN 110,930. Pub. 6-27-61. Filed 12-28-60.

Class 8—Smokers' Articles, Not Including Tobacco Products

721,209. TRAYGAY. American Greetings Corporation. SN 91,903. Pub. 6-27-61. Filed 3-1-60.

Class 9—Explosives, Firearms, Equipments, and Projectiles

721,210. TROJAN EXPLOSIVES AND DESIGN. Trojan Powder Company. SN 99,467. Pub. 6-27-61. Filed 6-21-60.

721,211. LYMAN. The Lyman Gun Sight Corporation. SN 101,561. Pub. 6-27-61. Filed 7-27-60.

Class 10—Fertilizers

721,212. NATURE'S WAY. Fred A. Velth. SN 97,269. Pub. 6-27-61. Filed 5-16-60.

721,213. PEARL-E-PEAT. Tennessee Products & Chemical Corporation. SN 97,965. Pub. 6-27-61. Filed 5-26-60.

Class 11—Inks and Inking Materials

721,214. MONROE. Grady & Neary Ink Co. SN 88,664. Pub. 6-27-61. Filed 1-8-60.

721,215. COBAN-X. Central Compounding Company. SN 90,820. Pub. 6-27-61. Filed 3-31-61.

Class 12—Construction Materials

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,216. STRONGBORD. Johns-Manville Corporation. SN 85,668. Pub. 6-27-61. Filed 11-19-59.

721,217. SYMBOL (RING AND EXTENDED RADII). Shenango China, Inc. SN 97,578. Pub. 6-27-61. Filed 5-20-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,218. BUCKS COUNTY PROVINCIAL. Bucks County Provincial, Inc. SN 99,289. Pub. 6-27-61. Filed 6-20-60.

721,219. FANCIFUL MARINE UNIFORMED FIGURE. Plastic Products Corporation. SN 105,303. Pub. 6-27-61. Filed 9-27-60.

721,220. CB. Hydril Company. SN 105,645. Pub. 6-27-61. Filed 10-3-60.

721,221. CS. Hydril Company. SN 108,000. Pub. 6-27-61. Filed 11-7-60.

721,222. KOVE-PLEX. Cardinal Manufacturing Corporation. SN 110,927. Pub. 6-27-61. Filed 12-28-60.

Class 14—Metals and Metal Castings and Forgings

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,223. FERRALIUM. Langley Alloys Limited. SN 93,614. Pub. 4-11-61. Filed 3-24-60.

721,224. PORCEGLAZE. Monarch Aluminum Mfg. Company. SN 97,229. Pub. 6-27-61. Filed 5-16-60.

721,225. VANADIUM TYPE H. Vanadium-Alloys Steel Company. SN 97,346. Pub. 6-27-61. Filed 5-17-60.

721,226. VANADIUM TYPE K. Vanadium-Alloys Steel Company. SN 97,347. Pub. 6-27-61. Filed 5-17-60.

721,227. ECONO-PAC. Continental Steel Corporation. SN 108,029. Pub. 6-27-61. Filed 11-8-60.

Class 15—Oils and Greases

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

Class 16—Protective and Decorative Coatings

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,228. COLOR-MIST. Chemo Corporation. SN 98,057. Pub. 6-27-61. Filed 5-31-60.

721,229. TORPEDO. British Paints Limited. SN 107,174. Pub. 6-27-61. Filed 10-26-60.

721,230. EPILUX. British Paints Limited. SN 107,639. Pub. 6-27-61. Filed 11-2-60.

Class 17—Tobacco Products

721,231. MICROPORE. P. Lorillard Company. SN 77,119. Pub. 6-27-61. Filed 7-6-59.

Class 18—Medicines and Pharmaceutical Preparations

721,232. VITA-LANE. La Lanne Incorporated. SN 83,801. Pub. 6-27-61. Filed 10-22-59.

721,233. UPEPTOID-B. Ubiotica Corporation. SN 84,259. Pub. 6-27-61. Filed 10-29-59.

721,234. UPEPTOID-A. Ubiotica Corporation. SN 84,260. Pub. 6-27-61. Filed 10-29-59.

721,235. UNOID-A. Ubiotica Corporation. SN 84,261. Pub. 6-27-61. Filed 10-29-59.

721,236. UPNEOID-C. Ubiotica Corporation. SN 84,262. Pub. 6-27-61. Filed 10-29-59.

721,237. UTROPHOID-C. Ubiotica Corporation. SN 84,263. Pub. 6-27-61. Filed 10-29-59.

721,238. UPNEOID-A. Ubiotica Corporation. SN 84,264. Pub. 6-27-61. Filed 10-29-59.

721,239. UMORPHOID-A. Ubiotica Corporation. SN 84,266. Pub. 6-27-61. Filed 10-29-59.

721,240. SULMABERON. C. H. Boehringer Sohn. SN 103,260. Pub. 6-27-61. Filed 8-23-60.

721,241. FOAMICIN. Block Drug Company, Inc., d.b.a. The Foamycin Company. SN 115,577. Pub. 6-27-61. Filed 3-14-61.

721,242. EPIMYCIN. Delta Drug Corporation. SN 116,293. Pub. 6-27-61. Filed 3-23-61.

Class 19—Vehicles

721,243. IMPERIAL MOBILE HOMES AND DESIGN. Stanley N. Lewis. SN 94,782. Pub. 6-27-61. Filed 4-11-60.

721,244. VISTA-VISOR. Vista-Visor Inc. SN 101,586. Pub. 6-27-61. Filed 7-27-60.

721,245. KING KART. D.T.M. Engineering, Inc. SN 104,021. Pub. 6-27-61. Filed 9-7-60.

721,246. SNO-TRAVELER. Polaris Industries, Inc. SN 112,219. Pub. 6-27-61. Filed 2-1-61.

721,247. OWENS. Brunswick Corporation. SN 112,944. Pub. 6-27-61. Filed 2-2-61.

721,248. NICAD. Gould-National Batteries, Inc. SN 50,480. Pub. 1-20-59. Filed 4-28-58.

Class 21—Electrical Apparatus, Machines, and Supplies

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,249. CROWN AND FANCIFUL SHIELD DESIGN. Packard-Bell Electronics Corporation. SN 60,623. Pub. 6-27-61. Filed 10-14-58.

721,250. MONOGRAM. Radio Corporation of America. SN 70,944. Pub. 10-13-59. Filed 4-6-59.

721,251. FE FIDELITY ENGINEERS AND DESIGN. Hornstein Photo Sales, Inc. SN 74,312. Pub. 6-27-61. Filed 5-22-59.

721,252. NAVCO. Navco, Inc. SN 91,617. Pub. 6-27-61. Filed 2-25-60.

721,253. RAZ-A DAPTA AND DESIGN. Todd Electric Company, Inc. SN 96,290. Pub. 11-8-60. Filed 5-2-60.

721,254. SEMCOR AND REPRESENTATION OF FULL WAVE LOGOTYPE. U.S. Semiconductor Products, Inc., assignee of United Industrial Corporation. SN 99,259. Pub. 6-27-61. Filed 6-17-60.

721,255. ONONDAGA ELECTRONICS AND DESIGN. Speer Carbon Company. SN 100,166. Pub. 6-27-61. Filed 7-1-60.

721,256. DURACLAD. Electric Machinery Mfg. Company. SN 103,714. Pub. 4-25-61. Filed 8-31-60.

721,257. DURA-CLAD. Aladdin Industries, Incorporated. SN 105,589. Pub. 4-25-61. Filed 10-3-60.

721,258. STAN-PAC. Motorola, Inc. SN 105,655. Pub. 4-11-61. Filed 10-3-60.

721,259. TOWNE. The Yale & Towne Manufacturing Company. SN 108,105. Pub. 6-27-61. Filed 11-8-60.

721,260. THERMOFIT. Guy L. Stevens, d.b.a. Groove-Rite Tool Company. SN 110,292. Pub. 6-27-61. Filed 12-15-60.

721,261. PERFECTION THRU RESEARCH AND DESIGN. The Rauland Corporation. SN 110,788. Pub. 6-27-61. Filed 12-23-60.

721,262. PACKARD BELL. Packard-Bell Electronics Corporation. SN 111,212. Pub. 6-27-61. Filed 1-3-61.

721,263. CONTIPS. Instrument Specialties Company, Inc. SN 111,404. Pub. 6-27-61. Filed 1-6-61.

721,264. ROYAL. Slumberest Company. SN 111,438. Pub. 6-27-61. Filed 1-6-61.

721,265. MADREC. Lockheed Aircraft Corporation. SN 111,515. Pub. 6-27-61. Filed 1-9-61.

721,266. SIGHT-O. Incentive Ideas, Inc. SN 94,166. Pub. 6-27-61. Filed 4-1-60.

721,267. JIFAROO. The Procter & Gamble Company. SN 99,091. Pub. 6-27-61. Filed 6-15-60.

721,268. CORVETTE 37. Commerce-Pacific, Inc. SN 104,376. Pub. 6-27-61. Filed 9-13-60.

721,269. RUSSIAN HOOK. Best Tackle Manufacturing Co. SN 105,619. Pub. 6-27-61. Filed 10-3-60.

721,270. AMERESE. American-Japanese Export Import Corporation. SN 107,098. Pub. 6-27-61. Filed 10-25-60.

721,271. KINDER. Sifo Company. SN 111,016. Pub. 6-27-61. Filed 12-29-60.

Class 22—Games, Toys, and Sporting Goods

721,266. SIGHT-O. Incentive Ideas, Inc. SN 94,166. Pub. 6-27-61. Filed 4-1-60.

721,267. JIFAROO. The Procter & Gamble Company. SN 99,091. Pub. 6-27-61. Filed 6-15-60.

721,268. CORVETTE 37. Commerce-Pacific, Inc. SN 104,376. Pub. 6-27-61. Filed 9-13-60.

721,269. RUSSIAN HOOK. Best Tackle Manufacturing Co. SN 105,619. Pub. 6-27-61. Filed 10-3-60.

721,270. AMERESE. American-Japanese Export Import Corporation. SN 107,098. Pub. 6-27-61. Filed 10-25-60.

721,271. KINDER. Sifo Company. SN 111,016. Pub. 6-27-61. Filed 12-29-60.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

721,168. CONSOLIDATED CERTIFICATE. See Class 1.

721,272. BREHMER LEIPZIG POLYGRAPH AND DESIGN. VEB Leipziger Buchbindereimaschinenwerk, by change of name from VEB Falt- und Heftmaschinenwerk Leipzig. SN 81,032. Pub. 6-27-61. Filed 9-8-59.

721,273. THE MASTER. Bissell Inc. SN 82,472. Pub. 6-27-61. Filed 10-1-59.

721,274. BAKAN. Cook Chemical Company. SN 91,348. Pub. 6-27-61. Filed 2-23-60.

721,275. PERFECTROL. Engineering Sales Corporation. SN 94,057. Pub. 6-27-61. Filed 3-31-60.

721,276. "SAFE-T-GRIP." Ideal Industries, Inc. SN 98,220. Pub. 6-27-61. Filed 6-1-60.

721,277. SIMEON L. & GEORGE H. ROGERS COMPANY STAINLESS. Oneida Ltd. SN 98,517. Pub. 6-27-61. Filed 6-6-60.

721,278. ALMAR. Midland Products Co. SN 98,998. Pub. 6-27-61. Filed 6-14-60.

721,279. DIAL-A-BREAKER. Kennametal, Inc. SN 101,877. Pub. 6-27-61. Filed 8-2-60.

721,280. LODDING. Lodding Engineering Corporation. SN 106,612. Pub. 6-27-61. Filed 10-18-60.

721,281. WISS CREST. J. Wiss & Sons Co. SN 109,540. Pub. 6-27-61. Filed 12-2-60.

721,282. DECOR. J. Wiss & Sons Co. SN 109,542. Pub. 6-27-61. Filed 12-2-60.

721,283. AGROMAT. Wandel Machine Co., Inc. SN 109,824. Pub. 6-27-61. Filed 12-7-60.

721,284. MUSTANG. Great Neck Saw Manufacturers, Inc. SN 110,330. Pub. 6-27-61. Filed 12-16-60.

721,285. HESSTON. Hesston Manufacturing Company, Inc. SN 110,437. Pub. 6-27-61. Filed 12-19-60.

721,286. THE NEWSBOY THAT NEVER SLEEPS. Publisher's Vending Services Inc. SN 110,782. Pub. 6-27-61. Filed 12-23-60.

721,287. READ-O-MAT. Publisher's Vending Services Inc. SN 110,783. Pub. 6-27-61. Filed 12-23-60.

721,288. THE NEWSBOY THAT NEVER SLEEPS READ-O-MAT-JUNIOR. Publisher's Vending Services Inc. SN 110,784. Pub. 6-27-61. Filed 12-23-60.

721,289. THE NEWSBOY THAT NEVER SLEEPS READ-O-MAT. Publisher's Vending Services Inc. SN 110,785. Pub. 6-27-61. Filed 12-23-60.

721,290. GRAYLINE. Wilson Jones Company. SN 111,568. Pub. 6-27-61. Filed 1-9-61.

721,291. GP AND DESIGN. General Packaging Equipment Co. SN 111,663. Pub. 6-27-61. Filed 1-11-61.

721,292. AHCO. Austin-Hastings Co., Inc. SN 111,844. Pub. 6-27-61. Filed 1-16-61.

721,293. GRIPRING. Waldes Kohinoor, Inc. SN 112,008. Pub. 6-27-61. Filed 1-17-61.

721,294. ROTA-BLAST. Hughes Tool Company. SN 112,266. Pub. 6-27-61. Filed 1-23-61.

721,295. MOCRAFT. Minneapolis-Moline Company. SN 112,288. Pub. 6-27-61. Filed 1-23-61.

721,296. VEDETTE. Societe Burmelec, Société Anonyme. SN 105,770. Pub. 6-27-61. Filed 10-4-60.

721,297. TOWNE. The Yale and Towne Manufacturing Company. SN 108,106. Pub. 6-27-61. Filed 11-8-60.

721,298. CONSOLIDATED CERTIFICATE. See Class 1.

721,299. CONSOLIDATED CERTIFICATE. See Class 1.

721,300. CONSOLIDATED CERTIFICATE. See Class 1.

721,301. CONSOLIDATED CERTIFICATE. See Class 1.

721,302. CONSOLIDATED CERTIFICATE. See Class 1.

721,303. CONSOLIDATED CERTIFICATE. See Class 1.

721,304. CONSOLIDATED CERTIFICATE. See Class 1.

721,305. CONSOLIDATED CERTIFICATE. See Class 1.

721,306. CONSOLIDATED CERTIFICATE. See Class 1.

721,307. CONSOLIDATED CERTIFICATE. See Class 1.

721,308. CONSOLIDATED CERTIFICATE. See Class 1.

721,309. CONSOLIDATED CERTIFICATE. See Class 1.

721,310. CONSOLIDATED CERTIFICATE. See Class 1.

721,311. CONSOLIDATED CERTIFICATE. See Class 1.

721,312. CONSOLIDATED CERTIFICATE. See Class 1.

721,313. CONSOLIDATED CERTIFICATE. See Class 1.

Class 26—Measuring and Scientific Appliances

- 721,168. CONSOLIDATED CERTIFICATE. See Class 1.
- 721,298. REPRESENTATION OF GREEK LETTER OMEGA AND LETTER I. Hans Rutishauser, d.b.a. Omega Instrument Company. SN 28,287. Pub. 7-14-59. Filed 4-16-57.
- 721,299. AIRCRAFT ARMAMENTS INC. AND DESIGN. Aircraft Armaments, Inc. SN 59,941. Pub. 6-27-61. Filed 9-30-58.
- 721,300. SHIELD WITH PSI AND DESIGN. Pitchford Scientific Instruments Corporation. SN 67,241. Pub. 6-21-60. Filed 2-6-59.
- 721,301. AIR-DATA-MATIC. Specialties, Inc. SN 75,796. Pub. 3-29-60. Filed 6-15-59.
- 721,302. TEMP-O-LARM. Walter Kidde & Company, Inc., assignee of Kidde Ultrasonic & Detection Alarms, Inc. SN 76,574. Pub. 6-27-61. Filed 6-26-59.
- 721,303. FLOWCON. Daystrom, Incorporated. SN 91,077. Pub. 6-27-61. Filed 2-17-60.
- 721,304. NAVCO. Navco, Inc. SN 91,616. Pub. 6-27-61. Filed 2-25-60.
- 721,305. COSMAFORM. Precision-Cosmet Company, Inc., d.b.a. Precision Cosmet Company. SN 93,856. Pub. 6-27-61. Filed 3-28-60.
- 721,306. ROTAN. Tektronix, Inc. SN 97,141. Pub. 4-11-61. Filed 5-13-60.
- 721,307. DRAINOMETER. Standard Oil Company of California. SN 99,545. Pub. 6-27-61. Filed 6-22-60.
- 721,308. ROTRON. Rotron Manufacturing Co., Inc. SN 105,379. Pub. 6-27-61. Filed 9-28-60.
- 721,309. TRANSFER-A-MATIC. General Aniline & Film Corporation. SN 109,312. Pub. 6-27-61. Filed 11-30-60.
- 721,310. OMNIGUARD. McGraw-Edison Company. SN 110,454. Pub. 6-27-61. Filed 12-19-60.

Class 27—Horological Instruments

- 721,311. BALLERINA. Elgin National Watch Company, assignee of Bradley Time Corporation. SN 109,769. Pub. 6-27-61. Filed 12-7-60.
- 721,312. ACTION PROOF. Bulova Watch Company, Inc. SN 110,975. Pub. 6-27-61. Filed 12-29-60.

Class 28—Jewelry and Precious-Metal Ware

- 721,313. DIAMOND FLEX. Feature Ring Co., Inc. SN 106,890. Pub. 6-27-61. Filed 10-21-60.
- 721,314. W AND DESIGN. Wells Manufacturing Company. SN 107,716. Pub. 6-27-61. Filed 10-31-60.
- 721,315. NEWFLEX. Favre-Leuba Watch & Chronometer Co., Inc. SN 109,782. Pub. 6-27-61. Filed 12-7-60.
- 721,316. SEA MIST PEARLS AND DESIGN. Paul Morris. SN 109,888. Pub. 6-27-61. Filed 12-8-60.
- 721,317. ALBERT WEISS. Albert Weiss & Co., Inc. SN 109,926. Pub. 6-27-61. Filed 12-6-60.
- 721,318. LA VIE. La Vie Jewelry Corp. SN 110,448. Pub. 6-27-61. Filed 12-19-60.

Class 29—Brooms, Brushes, and Dusters

- 721,319. WORKMASTER. Bissell Inc. SN 82,473. Pub. 6-27-61. Filed 10-1-59.
- 721,320. JANGALA. Mohawk Brush Company. SN 106,121. Pub. 6-27-61. Filed 10-10-60.

Class 31—Filters and Refrigerators

- 721,168. CONSOLIDATED CERTIFICATE. See Class 1.
- 721,321. BERKEFELD-FILTER AND DESIGN. Berkefeld-Filter Gesellschaft und Celler Filterwerke GmbH. SN 64,453. Pub. 11-10-59. Filed 12-17-58.
- 721,322. AVCOLD. Avco Corporation. SN 108,595. Pub. 6-27-61. Filed 11-17-60.

Class 32—Furniture and Upholstery

- 721,323. COMFORT ANGLE. Antler Tool & Die Company. SN 97,364. Pub. 6-27-61. Filed 5-18-60.
- 721,324. SEQUENCE. Charak Furniture Company. SN 97,456. Pub. 6-27-61. Filed 5-19-60.
- 721,325. MARSEILLE. Bassett Furniture Industries, Inc. SN 98,620. Pub. 6-27-61. Filed 6-8-60.
- 721,326. WAVERLY. Bassett Furniture Industries, Inc. SN 98,623. Pub. 6-27-61. Filed 6-8-60.
- 721,327. CENTURA. Bassett Furniture Industries, Inc. SN 99,556. Pub. 6-27-61. Filed 6-23-60.
- 721,328. PLANAROUND. Bassett Furniture Industries, Inc. SN 99,557. Pub. 6-27-61. Filed 6-23-60.
- 721,329. RHAPSODY. Bassett Furniture Industries, Inc. SN 99,561. Pub. 6-27-61. Filed 6-23-60.
- 721,330. FD AND DESIGN. Furniture Dynamics, Inc. SN 111,136. Pub. 6-27-61. Filed 12-30-60.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 721,168. CONSOLIDATED CERTIFICATE. See Class 1.
- 721,331. KA-BOB. Whirlpool Corporation. SN 102,715. Pub. 6-27-61. Filed 8-15-60.
- 721,332. ENDEX. Sunbeam Equipment Corporation. SN 106,659. Pub. 4-25-61. Filed 10-18-60.
- 721,333. INFRA-CHEF. B. Merritt, Inc. SN 109,610. Pub. 6-27-61. Filed 12-5-60.
- 721,334. MENU MAGIC AND DESIGN. Montgomery Ward & Co., Incorporated. SN 109,987. Pub. 6-27-61. Filed 12-9-60.
- 721,335. TWIST-O-SEAL. Electro-Therm, Inc. SN 110,145. Pub. 6-27-61. Filed 12-13-60.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 721,336. MAXIMAIRE. Dayco Corporation. SN 108,284. Pub. 6-27-61. Filed 11-14-60.

Class 36—Musical Instruments and Supplies

- 721,337. FLEETWOOD ETC. AND DESIGN. Rayn Recording Inc. SN 104,478. Pub. 5-23-61. Filed 9-14-60.

Class 37—Paper and Stationery

- 721,338. THRIFTLINE. Advertising Aids, Inc. SN 82,751. Pub. 6-27-61. Filed 10-6-59.
- 721,339. RAY-BAN. KVP Sutherland Paper Company. SN 94,303. Pub. 10-18-60. Filed 4-4-60.
- 721,340. MARKETTE. Eberhard Faber Inc. SN 106,704. Pub. 6-27-61. Filed 10-19-60.
- 721,341. WHITMAN AND DESIGN. Whitman Publishing Company. SN 108,930. Pub. 6-27-61. Filed 11-22-60.

- 721,342. HI-MEMORY. Hollingsworth & Vose Company. SN 112,618. Pub. 6-27-61. Filed 1-27-61.
- 721,343. DREAM STARS. A. J. Siris Products Corp. SN 112,640. Pub. 6-27-61. Filed 1-27-61.
- 721,344. KLINGKRAFT. West Virginia Pulp and Paper Company. SN 112,660. Pub. 6-27-61. Filed 1-27-61.
- 721,370. REST-O-SET. The Hercules Trouser Company. SN 109,063. Pub. 6-27-61. Filed 11-25-60.
- 721,371. "LADY BEV." Beik Stores Services, Inc. SN 109,463. Pub. 6-27-61. Filed 12-2-60.
- 721,372. PANTRIFIC. H. & M. Sportswear, Inc. SN 110,151. Pub. 6-27-61. Filed 12-13-60.
- 721,373. SHAPEMASTERS. Slim-Bilt, Inc. SN 113,244. Pub. 6-27-61. Filed 2-7-61.

Class 38—Prints and Publications

- 721,345. NUMBERS IN COLOR. Cuisenaire Company of America Inc. SN 46,908. Pub. 6-27-61. Filed 3-3-58.
- 721,346. CUISENAIRE. Cuisenaire Company of America Inc. SN 46,910. Pub. 6-27-61. Filed 3-3-58.
- 721,347. INVESTOGRAPHS. Van Strum & Towne, Inc., assignee, by mesne assignments, from Edwin S. Quinn. SN 76,828. Pub. 6-27-61. Filed 6-30-59.
- 721,348. DATA-GUIDE. Data-Guide, Inc. SN 88,846. Pub. 5-9-61. Filed 1-12-60.
- 721,349. MEDICINE IN THE MAGAZINES. Ciba Pharmaceutical Products Inc. SN 89,646. Pub. 6-27-61. Filed 1-26-60.
- 721,350. BETTER HOMES & GARDENS ETC. Meredith Publishing Company. SN 91,820. Pub. 6-27-61. Filed 2-29-60.
- 721,351. JUMBLE—THAT SCRAMBLED WORD GAME. Chicago Tribune-New York News Syndicate, Inc. SN 96,669. Pub. 6-27-61. Filed 5-9-60.
- 721,352. EL AVANCE CRIOLLO. E. Menendez. SN 104,095. Pub. 6-27-61. Filed 9-8-60.
- 721,353. WHAT'S NEW IN PLANT-ENGINEERING EQUIPMENT AND DESIGN. Putman Publishing Company. SN 106,275. Pub. 6-27-61. Filed 10-12-60.
- 721,354. OBELISK AND ELECTRON ORBIT DESIGN. Van Valkenburgh, Nooger & Neville, Inc. SN 106,777. Pub. 6-27-61. Filed 10-19-60.
- 721,355. BETTER HOMES & GARDENS. Meredith Publishing Company. SN 107,030. Pub. 6-27-61. Filed 10-24-60.
- 721,356. WHITMAN AND DESIGN. Whitman Publishing Company. SN 108,931. Pub. 6-27-61. Filed 11-22-60.

Class 39—Clothing

- 721,357. THE BIG T. Trinity Hosiery Company, Inc. SN 73,527. Pub. 4-26-60. Filed 11-13-58.
- 721,358. HM AND DESIGN. Hank Mann, Inc. SN 77,213. Pub. 6-27-61. Filed 7-7-59.
- 721,359. PRINCESS APRONS AND DESIGN. J. L. Deltale Co., Inc. SN 92,971. Pub. 5-2-61. Filed 3-16-60.
- 721,360. MONTE CARLO. U-Wan-A Wash Frocks, Inc. SN 99,975. Pub. 6-27-61. Filed 6-29-60.
- 721,361. MAGIC-FLEX. Excelsior Underwear, Inc. SN 102,751. Pub. 4-4-61. Filed 8-16-60.
- 721,362. DEBBI PETITE. Debbi Day, Inc. SN 103,108. Pub. 6-27-61. Filed 8-22-60.
- 721,363. LOLLI-JAMAS. Modern Globe, Inc. SN 106,625. Pub. 6-27-61. Filed 10-18-60.
- 721,364. THE BOOT HILL ROLL-UR-OWN AND DESIGN. Texas Harvest Hat Company. SN 106,769. Pub. 6-27-61. Filed 10-19-60.
- 721,365. MONTE CRISTO. Albert Turner & Company, Inc. SN 106,960. Pub. 6-27-61. Filed 10-21-60.
- 721,366. PLAYBILL. Joseph H. Cohen & Sons, Inc. SN 107,114. Pub. 6-27-61. Filed 10-25-60.
- 721,367. GLEN OAKS. Glen Oaks Manufacturing Company. SN 108,313. Pub. 6-27-61. Filed 11-14-60.
- 721,368. MISS BONNIE DOON. Alex Lee Wallau, Inc. SN 108,928. Pub. 6-27-61. Filed 11-22-60.
- 721,369. LONDON BEAU. La Salle Neckwear Company. SN 108,988. Pub. 6-27-61. Filed 11-23-60.

Class 40—Fancy Goods, Furnishings, and Notions

- 721,374. TRUSTAY. Endsdown Company, Inc. SN 110,146. Pub. 6-27-61. Filed 12-13-60.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 721,375. MAGILAINE. David Crystal, Inc. SN 99,845. Pub. 6-27-61. Filed 6-28-60.
- 721,376. SEERSUCKER DOLL-UP. Cabin Crafts Inc. SN 110,736. Pub. 6-27-61. Filed 12-23-60.
- 721,377. SIENEAU. Fieldcrest Mills, Inc. SN 113,194. Pub. 6-27-61. Filed 2-7-61.
- 721,378. LANVEAU. Fieldcrest Mills, Inc. SN 113,195. Pub. 6-27-61. Filed 2-7-61.
- 721,379. BOUCHEAU. Fieldcrest Mills, Inc. SN 113,196. Pub. 6-27-61. Filed 2-7-61.
- 721,380. BIENTEAU. Fieldcrest Mills, Inc. SN 113,197. Pub. 6-27-61. Filed 2-7-61.
- 721,381. DANDEEN. Dan River Mills, Incorporated. SN 113,273. Pub. 6-27-61. Filed 2-8-61.
- 721,382. WARMSPUN. Chatham Manufacturing Company. SN 113,397. Pub. 6-27-61. Filed 2-10-61.
- 721,383. SUBLIME. Chatham Manufacturing Company. SN 113,398. Pub. 6-27-61. Filed 2-10-61.

Class 43—Thread and Yarn

- 721,384. LAMIKIN AND DESIGN. Waterman, Merrill, Largen & Co. SN 79,962. Pub. 5-9-61. Filed 8-20-59.
- 721,385. BERNHARD ALTMANN. The Bernhard Altmann Corporation. SN 102,991. Pub. 6-27-61. Filed 8-19-60.

Class 44—Dental, Medical, and Surgical Appliances

- 721,168. CONSOLIDATED CERTIFICATE. See Class 1.
- 721,386. STER-O-LETTE THRIFT KIT. Ster-O-Lette Co. SN 105,224. Pub. 6-27-61. Filed 9-26-60.
- 721,387. CROWNOMATIC. The William Getz Corporation. SN 110,275. Pub. 6-27-61. Filed 12-15-60.
- 721,388. K-T HOLDERS. Howard Randolph Holt, d.b.a. Kim-Tam Enterprises. SN 113,920. Pub. 6-27-61. Filed 2-17-61.

Class 45—Soft Drinks and Carbonated Waters

- 721,389. PENAFIEL. Manantiales Penafiel, S.A. SN 95,662. Pub. 6-27-61. Filed 12-22-60.

Class 46—Foods and Ingredients of Foods

- 721,390. LUIGI'S. Napoli Restaurant, Inc. SN 45,593. Pub. 6-27-61. Filed 2-10-58.
- 721,391. VI-AD. Minnesota Rubber Company, assignee of Minnesota Rubber Properties, Inc., d.b.a. Carlson Farms. SN 69,427. Pub. 6-27-61. Filed 3-12-59.
- 721,392. VI-AD ETC. AND DESIGN. Minnesota Rubber Company, assignee of Minnesota Rubber Properties, Inc., d.b.a. Carlson Farms. SN 72,345. Pub. 6-27-61. Filed 4-27-59.
- 721,393. VI-AD. Minnesota Rubber Company, d.b.a. Carlson Farms. SN 87,570. Pub. 6-27-61. Filed 12-18-59.
- 721,394. VI-AD AND DESIGN. Minnesota Rubber Company, d.b.a. Carlson Farms. SN 87,571. Pub. 6-27-61. Filed 12-18-59.
- 721,395. VI-AD THE DIAMOND QUALITY EGG AND DESIGN. Minnesota Rubber Company, d.b.a. Carlson Farms. SN 87,572. Pub. 6-27-61. Filed 12-18-59.
- 721,396. TRIPLE-R. The Robertson Corporation, d.b.a. Ewing Mill Co. SN 90,323. Pub. 6-27-61. Filed 2-4-60.
- 721,397. MJB AND DESIGN. M.J.B. Co. SN 95,297. Pub. 6-27-61. Filed 4-18-60.
- 721,398. KITCHEN-PAL AND DESIGN. Valley City Milling Company. SN 95,656. Pub. 6-27-61. Filed 4-22-60.
- 721,399. SHUR-SEED. Klenszade Products, Incorporated. SN 97,400. Pub. 6-27-61. Filed 5-18-60.
- 721,400. CAREFREE. Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation). SN 97,608. Pub. 6-27-61. Filed 5-23-60.
- 721,401. WESTERN CHEF. Ranchers Cotton Oil, d.b.a. Ranchers Cotton Oil Company. SN 98,611. Pub. 6-27-61. Filed 5-18-60.
- 721,402. BANAN-O. Salada-Shirriff-Horsey, Inc. SN 99,172. Pub. 6-27-61. Filed 6-16-60.
- 721,403. TARGET. United Biscuit Company of America. SN 100,318. Pub. 6-27-61. Filed 7-5-60.
- 721,404. A "BRODY" BIRD AND DESIGN. Relf & Brody, Inc. SN 100,641. Pub. 6-27-61. Filed 7-11-60.
- 721,405. NEW ORLEANS KITCHENS AND DESIGN. New Orleans Kitchens, Inc. SN 100,924. Pub. 6-27-61. Filed 7-15-60.
- 721,406. GOETZE'S ETC. AND DESIGN. Goetze's Candy Co., Inc. SN 101,257. Pub. 6-27-61. Filed 7-21-60.
- 721,407. REPRESENTATION OF A BABY'S HEAD. Mead Johnson & Company. SN 101,881. Pub. 6-27-61. Filed 8-2-60.
- 721,408. WHOLE COW AND DESIGN. Richard M. Schultz, d.b.a. Dick Schultz. SN 101,896. Pub. 6-27-61. Filed 8-2-60.
- 721,409. CUDAHY PURITAN AND DESIGN. The Cudahy Packing Company. SN 102,459. Pub. 6-27-61. Filed 8-11-60.
- 721,410. PROTO BLOX. Columbian Hog and Cattle Powder Company. SN 103,658. Pub. 6-27-61. Filed 8-30-60.
- 721,411. YERBA ENCANTA FLAVOR ENCHANTMENT. Frank Wertz, d.b.a. Mission Garden Products Co. SN 104,568. Pub. 6-27-61. Filed 9-15-60.
- 721,412. HAPPY KIDS. W. B. Roddenberry Co., Inc. SN 104,754. Pub. 6-27-61. Filed 9-19-60.
- 721,413. KRUN-CHEEZ. Sunshine Biscuits, Inc., d.b.a. Dickey Foods. SN 107,602. Pub. 6-27-61. Filed 11-1-60.
- 721,414. MAZOLA. Corn Products Company. SN 111,068. Pub. 6-27-61. Filed 12-30-60.
- 721,415. SWANK. Knapp-Sherrill Company. SN 112,464. Pub. 6-27-61. Filed 1-25-61.

Class 49—Distilled Alcoholic Liquors

- 721,416. CLOSTER ETC. AND DESIGN. Klosterbrennerei A.G. Erste Badische Wein- und Edelbranntweinbrennerei. SN 93,600. Pub. 6-6-61. Filed 3-25-60.

Class 50—Merchandise Not Otherwise Classified

- 721,417. SAFT-SAKE MESSAGE SENDER. Safety Sake Enterprises, Inc. SN 73,614. Pub. 6-27-61. Filed 5-13-59.
- 721,418. SAFT-SAKE. Safety Sake Enterprises, Inc. SN 73,615. Pub. 6-27-61. Filed 5-13-59.
- 721,419. SAFT-FLEX. Safe-T Pacific Baking Company. SN 86,903. Pub. 6-7-60. Filed 12-8-59.
- 721,420. RYDEN AND DESIGN. Aktiebolaget A. W. Ryden. SN 91,580. Pub. 6-27-61. Filed 2-25-60.
- 721,421. SHOW-KIT. William H. Buck, d.b.a. Kit-Kraft. SN 93,758. Pub. 6-27-61. Filed 3-28-60.
- 721,422. ELECTRONIC-RODENT-REPELLER AND DESIGN. Otto Stader, d.b.a. Ardmore Specialties. SN 96,991. Pub. 6-27-61. Filed 5-12-60.
- 721,423. SERENDIPOGRAPH. Esphyr Slobodkina-Urquhart, d.b.a. Art Development Co. SN 98,213. Pub. 6-27-61. Filed 6-1-60.

Class 51—Cosmetics and Toilet Preparations

- 721,424. MARK OF A MAN. Pioneer Industries, Inc. SN 80,920. Pub. 4-18-61. Filed 9-4-59.
- 721,425. ORBIT AND DESIGN. Lucente Enterprises, Inc. SN 82,517. Pub. 4-18-61. Filed 10-1-59.
- 721,426. SQUEAKY. Jane Wharton Mitten, d.b.a. Derm Laboratories. SN 83,814. Pub. 6-27-61. Filed 10-22-59.
- 721,427. TRESEMME. Alberto-Culver Company, by change of name and assignment from Lobeck, Inc. SN 86,165. Pub. 6-27-61. Filed 11-27-59.
- 721,428. GENTLEMAN JIM AND DESIGN. Alfred A. Anthony. SN 88,893. Pub. 4-18-61. Filed 1-13-60.
- 721,429. PEARLESCENT. Roux Laboratories, Inc. SN 102,345. Pub. 6-20-61. Filed 8-9-60.
- 721,430. TUMBLEWEED. International Products Corporation. SN 106,167. Pub. 6-27-61. Filed 9-26-60.
- 721,431. PARFUM LORLE AND DESIGN. International Products Corporation. SN 105,168. Pub. 6-27-61. Filed 9-26-60.

Class 52—Detergents and Soaps

- 721,432. SLUMBERLAND. Johnson & Johnson. SN 109,696. Pub. 6-27-61. Filed 12-6-60.
- 721,433. HYDRAZENE. National Detergents, Inc., d.b.a. National Cleaners Chemical Mfg. Co. SN 111,004. Pub. 6-27-61. Filed 12-29-60.
- 721,434. SILI-WICK. Superior Laboratories, Inc. SN 111,052. Pub. 6-27-61. Filed 12-27-60.

Service Marks**Class 100—Miscellaneous**

- 721,435. MARCH OF DIMES. The National Foundation. SN 94,908. Pub. 6-27-61. Filed 4-12-60.
- 721,436. NF AND DESIGN. The National Foundation. SN 94,909. Pub. 6-27-61. Filed 4-12-60.
- 721,437. REPRESENTATION OF ARTISTS' PALETTE. The Walker Studio, Inc. SN 98,040. Pub. 6-27-61. Filed 5-27-60.

Class 101—Advertising and Business

- 721,438. LARG-O-CHROME. Chicago Color Laboratories, Inc. SN 51,171. Pub. 3-1-60. Filed 5-7-58.
- 721,439. LARG-O-COLOR. Chicago Color Laboratories, Inc. SN 51,172. Pub. 3-1-60. Filed 5-7-58.
- 721,440. SCIENTIFIC TECHNICAL LITERATURE RESEARCH AND DESIGN. Cyril W. Sernak, d.b.a. Patent Searching Service. SN 83,746. Pub. 6-27-61. Filed 10-21-59.

Class 104—Communication

- 721,441. THE FRIENDLY VOICE OF TITUSVILLE AND NORTH BREVARD. WRMP, Inc. SN 90,590. Pub. 6-27-61. Filed 2-8-60.

Class 105—Transportation and Storage

- 721,442. FLAG DESIGN. Fred. Olsen & Co. SN 80,913. Pub. 6-27-61. Filed 9-4-59.

Class 106—Material Treatment

- 721,443. SUN-X. American Glass Tinting Corporation. SN 58,485. Pub. 6-16-59. Filed 9-8-58.
- 721,444. SONOSOLDER. Sonobond Corporation, assignee of Aeroprojects, Incorporated. SN 95,348. Pub. 6-27-61. Filed 4-19-60.

Collective Membership Marks**Class 200**

- 721,445. GREEK LETTERS ALPHA, GAMMA AND DELTA. Alpha Gamma Delta Fraternity. SN 109,935. Pub. 6-27-61. Filed 12-9-60.

Certification Marks**Class B—Services**

- 721,446. G.E.M. Motor Travel Services, Inc. SN 76,586. Pub. 5-23-61. Filed 6-26-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 19—Vehicles

- 721,447. MacGregor-Comarain, Paris (Seine), France. SN 81,914. Filed P.R. 9-23-59; Am. S.R. 4-19-61.

- 721,449. American Doll & Toy Corporation, Brooklyn, N.Y. SN 93,652. Filed P.R. 3-25-60; Am. S.R. 6-28-61.

SPRA-BATH

For Doll's Bath Tubs.
First use Mar. 3, 1960.

- 721,450. American Doll & Toy Corporation, Brooklyn, N.Y. SN 93,653. Filed P.R. 3-25-60; Am. S.R. 6-28-61.

PLA-BATH

For Doll's Bath Tubs.
First use Mar. 3, 1960.

Priority claimed under Sec. 44(d) on French Reg. No. 481,383, dated June 26, 1959 (Seine); Natl. Inst. No. 130,470.

For Ships, Railroad Cars, Trucks, Hatch Covers, Removable Decks Inside of Shipholds, Masts, and Covers for Railroad Cars.

Class 22—Games, Toys, and Sporting Goods

- 721,448. B. F. Gladding & Company, Inc., South Otselle, N.Y. SN 92,755. Filed P.R. 3-14-60; Am. S.R. 6-20-61.

Class 38—Prints and Publications

- 721,451. Roger Preuss, d.b.a. Preuss Studio, Minneapolis, Minn. SN 89,457. Filed P.R. 1-21-60; Am. S.R. 7-6-61.

SUPER

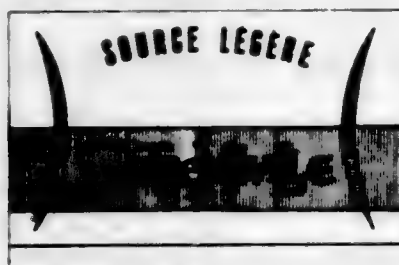
For Fishing Lines.
First use July 20, 1959.
TM 770 O.G.—7

WILDLIFE OF AMERICA

For Calendars.
First use Nov. 15, 1956.

Class 45—Soft Drinks and Carbonated Waters

721,452. Societe des Eaux Minerales de Contrexeville (Vouges), Paris, France. SN 92,504. Filed 3-9-60.



The drawing is lined for blue and pink. Owner of French Reg. No. 440,429, dated Mar. 24, 1954 (Seine); Natl. Inst. No. 31,983.

For Mineral Waters.

721,453. Societe des Eaux Minerales de Contrexeville (Vouges), Paris, France. SN 92,505. Filed 3-9-60.



The drawing is lined for blue and pink. Owner of French Reg. No. 440,430, dated Mar. 24, 1954 (Seine); Natl. Inst. No. 31,984.

For Mineral Waters.

Class 46—Foods and Ingredients of Foods

721,454. Superior Tea & Coffee Co., Chicago, Ill. SN 54,112. Filed P.R. 8-23-58; Am. S.R. 7-21-60.

COFFEE!
with that
EXTRA GOODNESS
that brings
customers back

For Coffee.
First use May 26, 1958.

721,455. Southern Planters, Inc., Quitman, Ga. SN 74,904. Filed P.R. 6-1-59; Am. S.R. 7-7-61.

Lady Brooks

For Canned Vegetables.
First use Oct. 27, 1958.

721,456. Perry H. Chipurnoi, Inc., New York, N.Y. SN 81,544. Filed P.R. 9-17-59; Am. S.R. 9-15-60.

"CHIPS,"
by
Chipurnoi

For Candy.
First use Aug. 25, 1959.

Class 47—Wines

721,457. Klosterbrennerei A.G. Erste Badische Wein- und Edelbranntweinbrennerei, Emmendingen, Germany. SN 93,576. Filed 1-24-61.



The translation of the German words appearing on the drawing is "old square bottle with lead seal." Owner of German Reg. No. 734,441, dated Mar. 7, 1960.

For Wines.

721,458. John Bardenheler Wine & Liquor Company, d.b.a. The Old Dublin Wine Company, St. Louis, Mo. SN 102,371. Filed P.R. 8-10-60; Am. S.R. 7-5-61.

**THE SWEETEST
LITTLE WINE THE
VINEYARD EVER GREW**

For Wine.
First use Sept. 10, 1959.

Class 49—Distilled Alcoholic Liquors

721,461. Edward Simpson & Co. Limited, London, England. SN 102,268. Filed 8-8-60.

721,459. Arthur Bell & Sons Ltd., Perth, Scotland. SN 69,604. Filed P.R. 2-16-59; Am. S.R. 10-23-59.



The trademark comprises the package—namely, the bottle and the label thereon. Owner of U.S. Reg. Nos. 401,242, 684,528, and others.

For Scotch Whisky.

First use September 1954; in commerce September 1954; Dec. 13, 1933, as to "Bell's"; 1939 as to use of the square bottle and the words "Royal Vat."

721,460. Klosterbrennerei A.G. Erste Badische Wein- und Edelbranntweinbrennerei, Emmendingen, Germany. SN 93,575. Filed 1-24-61.



The translation of the German words appearing on the drawing is "old square bottle with lead seal." Owner of German Reg. No. 734,441, dated Mar. 7, 1960.

For Brandy.



Priority claimed under Sec. 44(d) on British Reg. No. 805,211, dated May 2, 1960.

For Gin.

721,462. The Savoy Hotel Limited, London, England. SN 103,199. Filed P.R. 8-22-60; Am. S.R. 6-10-61.



Owner of U.S. Reg. No. 659,124.

For Scotch Whisky.

First use on or about June 1, 1931; in commerce on or about Dec. 16, 1933.

Service Mark**Class 100—Miscellaneous**

721,463. Resources Research, Inc., Washington, D.C. SN 67,893. Filed P.R. 2-17-59; Am. S.R. 11-10-60.

RESOURCES RESEARCH, INC.

The drawing is lined for red, but no claim is made for color.
For Engineering Services Relating to Biological, Chemical and Environmental Research.
First use Sept. 1, 1958.

TRADEMARK REGISTRATIONS RENEWED

20,339. O.K. AND DESIGN. Cl. 21. 11-10-1891.	388,991. THE WHISTLING OYSTER AND DESIGN. Cl. 33. 7-22-41.
144,544. GERMAN'S. Cl. 46. 7-12-21.	389,093. BOVERT AND DESIGN. Cl. 10. 7-22-41.
144,708. BREYERS AND DESIGN. Cl. 46. 7-19-21.	389,106. BED OF ROSES. Cl. 51. 7-22-41.
145,137. PEARLS OF WHEAT. Cl. 46. 7-26-21.	389,225. LOCKERAP AND DESIGN. Cl. 37. 7-29-41.
145,335. SUNBEAM. Cl. 21. 8-2-21.	389,269. REMCRAFT. Cl. 37. 7-29-41.
145,630. GINGINOL AND DESIGN. Cl. 18. 8-16-21.	389,272. REMROCK. Cl. 37. 7-29-41.
145,778. QUAKER STATE. Cl. 15. 8-16-21.	389,429. AUSTALON. Cl. 44. 8-5-41.
145,926. STERIL-SEAL. Cl. 46. 8-23-21.	389,587. NOODLEMAN. Cl. 46. 8-12-41.
145,987. ZERO. Cl. 46. 8-23-21.	389,588. DESIGN OF NOODLEMAN. Cl. 46. 8-12-41.
146,388. PRIVATE STOCK. Cl. 48. 9-6-21.	389,590. SOUTHERN PLANTATION. Cl. 46. 8-12-41.
146,396. CONQUEROR. Cl. 16. 9-6-21.	389,621. AUSTALON. Cl. 14. 8-12-41.
147,083. MOORE'S EMERALD OIL AND DESIGN. Cl. 18. 10-14-21.	389,752. MACY'S CLUB CHAMPION. Cl. 39. 8-19-41.
147,576. ARMORCOTE. Cl. 16. 10-25-21.	389,818. SUNBREAKER. Cl. 51. 8-19-41.
147,747. PURITAN. Cl. 40. 11-1-21.	389,861. HOSPITALITY. Cl. 28. 8-26-41.
147,774. SANIWHITE. Cl. 35. 11-1-21.	390,296. DREAM PRINCE. Cl. 32. 9-16-41.
147,826. ENZYMAZE. Cl. 46. 11-1-21.	390,297. DREAM PRINCESS. Cl. 32. 9-16-41.
147,893. BUTYN AND DESIGN. Cl. 18. 11-8-21.	390,700. HOST. Cl. 39. 9-30-41.
148,068. STANFORD BRAND AND DESIGN. Cl. 46. 11-8-21.	390,871. BAND WAGON. Cl. 51. 10-7-41.
148,347. OCTAGON DESIGN. Cl. 13. 11-15-21.	391,399. BLODGETT. Cl. 34. 11-4-41.
148,982. OCTAGON DESIGN. Cl. 14. 12-6-21.	391,659. PATSY AND DESIGN. Cl. 1. 11-18-41.
149,046. RED TANG AND DESIGN. Cl. 23. 12-6-21.	391,701. EDISON. Cl. 6. 11-18-41.
150,275. THE CALIFORNIA CITROGRAPH. Cl. 38. 1-3-22.	391,838. BURMYLON. Cl. 39. 11-25-41.
150,563. SHAPIRO, BERNSTEIN & CO. INC. AND DESIGN. Cl. 38. 1-3-22.	391,846. SUPER MARKET MERCHANDISING. Cl. 38. 11-25-41.
150,746. GULF STREAM. Cl. 42. 1-10-22.	392,180. WALKABLES. Cl. 39. 12-16-41.
150,966. SHAPIRO, BERNSTEIN & CO., INC. Cl. 38. 1-10-22.	392,212. PHILADELPHIA BRAND. Cl. 46. 12-16-41.
385,974. HYPER-VISCRA. Cl. 18. 3-25-41.	392,251. ATLAS. Cl. 48. 12-16-41.
386,863. BEACHCOMBERS AND DESIGN. Cl. 49. 4-22-41.	392,265. ARROW. Cl. 23. 12-16-41.
388,100. CELASQUARE. Cl. 42. 6-10-41.	392,266. COMPANION. Cl. 23. 12-16-41.
388,369. VULCAN. Cl. 9. 6-24-41.	392,336. MOHAWK. Cl. 29. 12-28-41.
388,791. SPLASH OF LIQUID DESIGN. Cl. 45. 7-8-41.	392,366. FURNEX. Cl. 6. 12-23-41.
388,840. PROSPERITY. Cl. 24. 7-15-41.	392,424. MOLACCO. Cl. 6. 12-23-41.
	392,550. GEM. Cl. 38. 12-30-41.
	392,609. BAND BOX. Cl. 37. 1-6-42.
	392,684. GLADIOLA AND DESIGN. Cl. 46. 1-6-42.
	392,649. DELCOS. Cl. 18. 1-6-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

181,938. "PERMALLOY." Cl. 14. 4-1-24.
415,053. VIOREL. Cl. 6. 7-10-45.
694,077. HYTEX. Cl. 5. 3-8-60.
694,835. DEXTROID. Cl. 18. 3-22-60.
715,013. EUROMAC. Cl. 23. 5-9-61.

Section 8

325,872. BANKERS. Cl. 22. 7-2-35.
326,520. FLUF-PLASTIC. Cl. 3. 7-23-35.
327,318. ELGIN AND DESIGN. Cl. 27. 8-20-35.

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609,344. GOLDEN GIANTS NEW HAMPSHIRE. Cl. 1.	609,450. REPINE. Cl. 18.
609,345. COLLO AND DESIGN. Cl. 1.	609,424. PUROVERINE. Cl. 18.
609,351. NYLENKA. Cl. 1.	609,429. SUSTABARB. Cl. 18.
609,354. MILKARTN. Cl. 2.	609,438. DELAGRAN. Cl. 18.
609,367. STATOFIX. Cl. 6.	609,444. CYESICAP. Cl. 18.
609,369. PAKALOR. Cl. 6.	609,451. TALS. Cl. 18.
609,370. SYNOFORM. Cl. 6.	609,453. CHEK-CHIP. Cl. 19.
609,378. PROJECT X. Cl. 6.	609,454. AERIUS. Cl. 19.
609,385. SMOKE MATE. Cl. 8.	609,456. HESTER SPORTSMAN AND DESIGN. Cl. 19.
609,386. REGULAIDER. Cl. 9.	609,459. REPRESENTATION OF CHEF'S HEAD. Cl. 21.
609,391. MIDCO. Cl. 10.	609,462. BINOTROL. Cl. 21.
609,392. GRANULITE AG-SLAG. Cl. 10.	609,463. WINDOWBRAIN. Cl. 21.
609,394. NITRO-GREEN. Cl. 10.	609,464. DOGGY GRILL. Cl. 21.
609,404. LANDO DO-IT-YOURSELF AWNING. Cl. 12.	609,469. GILBERT HALL OF SCIENCE. Cl. 21.
609,408. AMVERLITE. Cl. 12.	609,472. ECHOTRON. Cl. 21.
609,411. PARKPORT. Cl. 12.	609,473. "REVERBETRON." Cl. 21.
609,413. REPRESENTATION OF SHIELD. Cl. 14.	609,486. ALARM SERVICE AND DESIGN. Cl. 21.
609,414. "ALNISI." Cl. 14.	609,487. THE UNICORN AND DESIGN. Cl. 21.
609,417. TEX TEXT AND DESIGN. Cl. 16.	609,489. MINIBANK. Cl. 21.
609,420. SIGN-WRITER. Cl. 16.	609,492. MIRACLE AIR. Cl. 21.
609,423. MI-KEL AND DESIGN. Cl. 17.	609,495. STEACAP. Cl. 21.
	609,496. PRECISE. Cl. 21.
	609,498. DI AND DESIGN. Cl. 21.
	609,499. SIZZ-L-GLAS. Cl. 21.
	609,500. CLEVITE BRUSH ETC. AND DESIGN. Cl. 21.
	609,502. ROTORAMA AND DESIGN. Cl. 21.
	609,503. ZIMCOM. Cl. 21.
	609,505. MERRI MARINER AND DESIGN. Cl. 22.
	609,507. BAT-A-BASE. Cl. 22.
	609,511. N.E.M. TOYS AND DESIGN. Cl. 22.
	609,512. LIARS POKER. Cl. 22.
	609,516. RAPIDO. Cl. 22.
	609,520. TUBOPLAST. Cl. 23.
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609,533. PHOTOWRITER. Cl. 26.	609,657. FASHIONS FOR FUN & FUNCTION AND DESIGN. Cl. 40.
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609,547. FINETAR. Cl. 26.	609,670. SHURLITE. Cl. 46.
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609,550. CHUB-DEB. Cl. 26.	609,674. ADDINGTON'S AND DESIGN. Cl. 46.
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609,566. MINOLTAACORD. Cl. 26.	609,678. QUEEN OF HEARTS AND DESIGN. Cl. 46.
609,572. ESTRELLITA AND DESIGN. Cl. 28.	609,679. LUXURIA BRAND. Cl. 46.
609,573. ROLLER-AID. Cl. 29.	609,680. ANA GOLD. Cl. 46.
609,577. THERMO-STONE. Cl. 30.	609,681. CORBITATE. Cl. 46.
609,581. BREW-BRITE. Cl. 31.	609,683. MUNCHIES. Cl. 46.
609,582. E & D AND DESIGN. Cl. 31.	609,685. PRIDE OF UTAH. Cl. 46.
609,583. MISTER ICE AND DESIGN. Cl. 31.	609,685. WISHBONE. Cl. 49.
609,586. SEPARMATIC, INC. AND DESIGN. Cl. 31.	609,697. SMP CO. Cl. 50.
609,587. P AND M. Cl. 31.	609,701. POWER GLO AND DESIGN. Cl. 50.
609,593. REST-O-PHIL. Cl. 32.	609,709. AIR BABY AND DESIGN. Cl. 50.
609,611. FAMILIFACTS AND DESIGN. Cl. 37.	609,728. DEEPORR. Cl. 51.
609,620. RESPON'SN BLOTTER. Cl. 38.	609,713. SUDDEN DATE. Cl. 52.
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609,642. PECOS BILL. Cl. 39.	609,733. PEER DRI AND DESIGN. Cl. 106.
609,643. PECOS JILL. Cl. 39.	609,734. FORT LAVARAY. Cl. 106.
609,646. TWILLAREES. Cl. 39.	609,736. POP-KANS. Cl. 2.
609,647. TOCKS. Cl. 39.	609,743. "BEAMED POWER-PERFECT MATCH." Cl. 21.
609,650. WYLLIN. Cl. 39.	609,746. BUTCHER SHOP QUARTETTE AND DESIGN. Cl. 46.
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627,468. "HA-LUSH-KA." Cl. 46. 5-22-56.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

22,266. STORM'S. Cl. 18. 12-27-1892. James Scott Robinson. Mary A. Robinson, Memphis, Tenn. Amended: In the certificate, lines 9 and 10, in the heading, and in the statement, lines 6 and 7 and 37 and 38, "medicinal preparation for diseases of the liver, stomach, or bowels" is deleted and <i>laxative</i> is inserted, and in the statement, lines 10 through 29 and lines 53 through 59 are deleted, and the drawing is amended to appear:	699,617. NALGON. Cl. 1. 6-21-60. Nalge Company, Inc. The Nalge Co., Inc., Rochester, N.Y. Amended: In the statement, column 1, after line 1, , now by change of name <i>The Nalge Co., Inc.</i> is inserted.
	701,346. NALGENE. Cl. 26. 7-19-60. Nalge Company, Inc. The Nalge Co., Inc., Rochester, N.Y. Amended: In the statement, column 1, after line 1, , now by change of name <i>The Nalge Co., Inc.</i> is inserted.

STORM'S

615,702. VILLAGE BLACKSMITH. Cl. 23. 11-8-55. The Village Blacksmith Company. General Metals Corporation, Watertown, Wis. Amended: In the statement, column 2, lines 1 through 5, "and for cutlery—namely, kitchen, table, barbecue and butcher knives; cleavers; steels; spatulas; meat slicers; block scrapers; hamburger turners; and barbecue, kitchen and table forks" is deleted.

710,565. NALGE. Cl. 26. 1-31-61. Nalge Company, Inc. The Nalge Co., Inc., Rochester, N.Y. Amended: In the statement, column 1, after line 1, , now by change of name *The Nalge Co., Inc.* is inserted.

718,701. EXECUTIVE INN. Cl. 100. 7-18-61. Executive House Motor Hotels Corporation, Cincinnati, Ohio. Corrected: In the statement, column 2, line 6, "689,734" should be deleted and *689,734* should be inserted.

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(Registered; Renewed; Canceled; Amended; Disclaimed; Corrected, etc.; New Certificates; 12c Publications.)

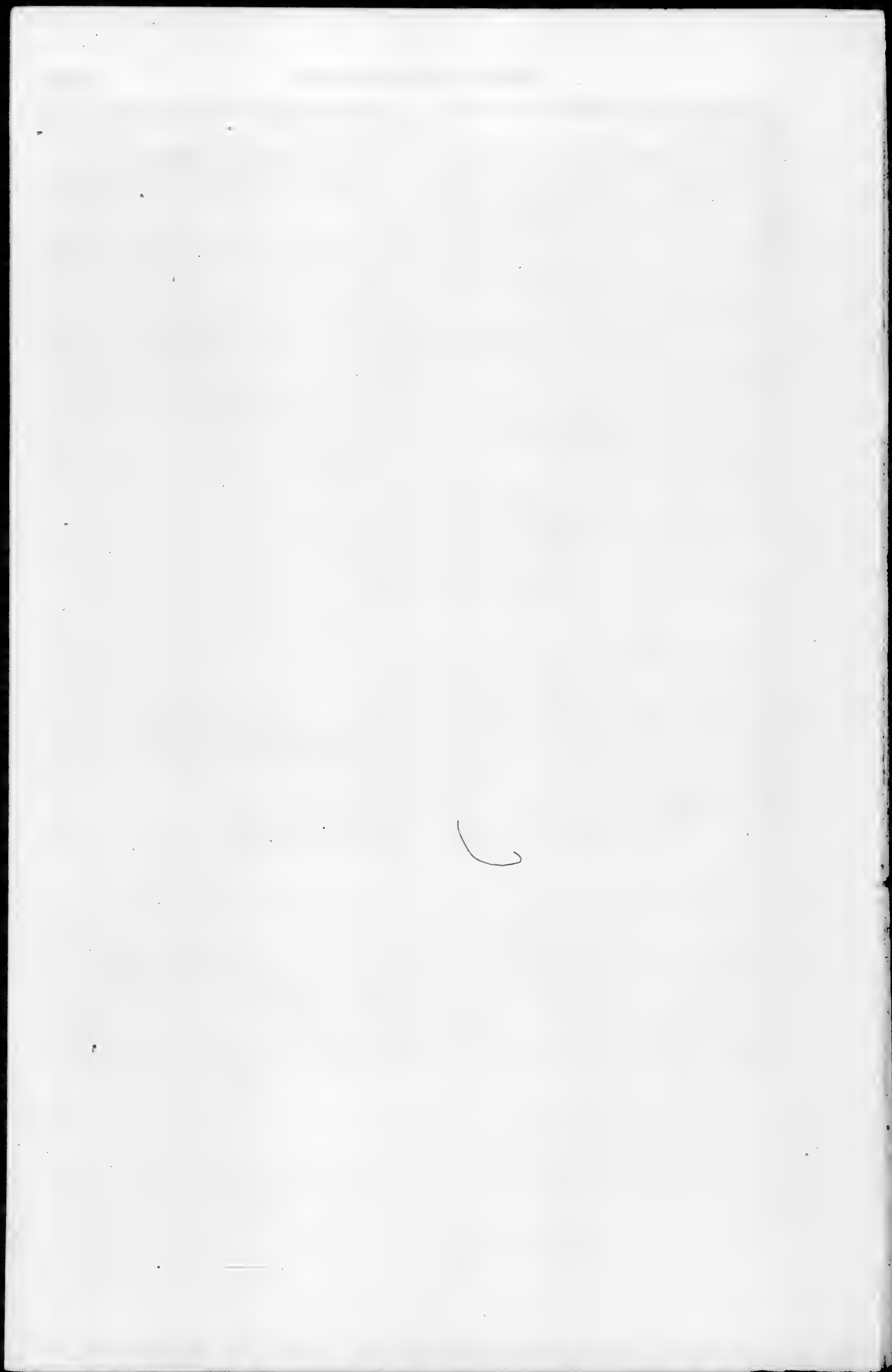
- A.B. Metal Products Ltd., Abercynon, Glamorgan, Wales. 609,489, can. Cl. 21.
 Abbott Laboratories, North Chicago, Ill. 147,893, ren. 9-12-61. Cl. 18.
 Action Bag & Envelope Co., Inc., Brooklyn, N.Y. 721,183-4, pub. 6-27-61. Cl. 2.
 Advance Pattern Co., Inc., New York, N.Y. 609,550, can. Cl. 26.
 Advance Pattern Co., Inc., New York, N.Y. 609,554, can. Cl. 26.
 Advertising Aids, Inc., Seattle, Wash. 721,338, pub. 6-27-61. Cl. 37.
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 Ahlers, Carl, Inc.: See—
 Ahlers, Carl.
 Air Baby Inc., New York, N.Y. 609,709, can. Cl. 50.
 Aircraft Armaments, Inc., Cockeysville, Md. 721,299, pub. 6-27-61. Cl. 26.
 Aktiebolaget A.W. Ryden, Nybro, Sweden. 721,420, pub. 6-27-61. Cl. 50.
 Aktiebolaget Jonkopings-Vulcan: See—
 Jonkopings Och Vulcans Tandsticksfabriksaktiebolag.
 Aladdin Industries, Inc., Nashville, Tenn. 721,267, pub. 4-25-61. Cl. 21.
 Alarm Service, Inc., Chicago, Ill. 609,486, can. Cl. 21.
 Alberto-Culver Co., Melrose Park, by change of name from Lobco, Inc., Chicago, Ill. 721,427, pub. 6-27-61. Cl. 51.
 Alco Products, Inc.: See—
 American Locomotive Co.
 Alpha Gamma Delta Fraternity, Chatham, N.J. 721,445, pub. 6-27-61. Cl. 200.
 Altmann, Bernhard, Corp., The, New York, N.Y. 721,885, pub. 6-27-61. Cl. 43.
 American Can Co., New York, N.Y. 721,193, pub. 6-27-61. Cl. 5.
 American Collo Corp.: See—
 Sellgmann, Otto.
 American Cyanamid Co., New York, N.Y. 609,444, can. Cl. 18.
 American Cyanamid Co., New York, N.Y. 721,202, pub. 6-27-61. Cl. 6.
 American Doll & Toy Corp., Brooklyn, N.Y. 721,449-50. Cl. 22.
 American Enka Corp., Enka, N.C. 609,351, can. Cl. 1.
 American Glass Tinting Corp., Houston, Tex. 721,443, pub. 6-16-59. Cl. 106.
 American Greetings Corp., Cleveland, Ohio. 721,209, pub. 6-27-61. Cl. 8.
 American Historical Co., Inc., The, New York, N.Y. 609,611, can. Cl. 37.
 American-Japanese Export Import Corp., Houston, Tex. 721,270, pub. 6-27-61. Cl. 22.
 American Locomotive Co., now by change of name Alco Products, Inc., New York, N.Y. 609,527, can. Cl. 23.
 American MCW Dispensers, Inc., Dallas, Tex. 721,187, pub. 6-27-61. Cl. 2.
 American Pin Co., The, to Scovill Mfg. Co., Waterbury, Conn. 147,747, ren. 9-12-61. Cl. 40.
 American Screen Products Co., Miami, Fla. 609,487, can. Cl. 21.
 American Steel Foundries, Chicago, Ill. 148,347, ren. 9-12-61. Cl. 13.
 American Steel Foundries, Chicago, Ill. 148,962, ren. 9-12-61. Cl. 14.
 American Vermiculite Corp., New York, N.Y. 609,408, can. Cl. 12.
 Anderson, Warren R., d.b.a. Papaya Food Products Co., Los Angeles, Calif. 609,674, can. Cl. 46.
 Anthony, Alfred A., Westport, Conn. 721,428, pub. 4-18-61. Cl. 51.
 Antler Tool & Die Co., Grand Rapids, Mich. 721,323, pub. 6-27-61. Cl. 32.
 Archer-Daniels-Midland Co., Minneapolis, Minn. 721,172, pub. 6-27-61. Cl. 1.
 Archer-Daniels-Midland Co., Minneapolis, Minn. 721,178-9, pub. 6-27-61. Cl. 1.
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 Stader, Otto.
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 Armour and Co., from Armour and Co., Chicago, Ill. 721,400, pub. 6-27-61. Cl. 46.
 Armour and Co., Chicago, Ill. 721,170-1, pub. 6-27-61. Cl. 1.
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 Associated British-Pathe Ltd., London, England. 609,369, can. Cl. 6.
 Atlas Osone Mfg. Co.: See—
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 Austenal Laboratories, Inc., to Howe Sound Co., New York, N.Y. 389,429, ren. 9-12-61. Cl. 44.
 Austenal Laboratories, Inc., to Howe Sound Co., New York, N.Y. 389,621, ren. 9-12-61. Cl. 14.
 Austin-Hastings Co., Inc., Cambridge, Mass. 721,292, pub. 6-27-61. Cl. 23.
 Avco Corp., Nashville, Tenn. 721,322, pub. 6-27-61. Cl. 81.
 Baker, Walter, & Co., Ltd., Boston, Mass., to General Foods Corp., White Plains, N.Y. 144,544, ren. 9-12-61. Cl. 46.
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 Bamberger, L., & Co., Newark, N.J., to R. H. Macy & Co., Inc., New York, N.Y. 389,618, ren. 9-12-61. Cl. 51.
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 Bassett Furniture Industries, Inc., Bassett, Va. 721,325-9, pub. 6-27-61. Cl. 32.
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 Sund, Cora I.
 Beckwith-Arden Inc., Watertown, Mass. 721,166, pub. 6-27-61. Cl. 1.
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 Berkefeld-Filter Gesellschaft und Celler Filterwerke GmbH., Hannover, Germany. 721,321, pub. 11-10-59. Cl. 31.
 Best Tackle Mfg. Co., Sebawaing, Mich. 721,269, pub. 6-27-61. Cl. 22.
 Bissell Inc., Grand Rapids, Mich. 721,273, pub. 6-27-61. Cl. 23.
 Bissell Inc., Grand Rapids, Mich. 721,319, pub. 6-27-61. Cl. 29.
 Block Drug Co., Inc., d.b.a. The Foamycin Co., Jersey City, N.J. 721,241, pub. 6-27-61. Cl. 18.
 Blodgett, G. S., Co., Inc., The, Burlington, Vt. 391,399, ren. 9-12-61. Cl. 34.
 Blue Ridge Manufacturers, Inc., Baltimore, Md. 609,646, can. Cl. 39.
 Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 721,240, pub. 6-27-61. Cl. 18.
 Bostwick Laboratories, Inc., Bridgeport, Conn. 609,722, can. Cl. 52.
 Boyle, John, & Co., Inc., New York, N.Y. 150,746, ren. 9-12-61. Cl. 42.
 Bradley Time Corp.: See—
 Elgin National Watch Co.
 Bresee, Francys C., administratrix of the estate of Fred Bresee, Jr., d.b.a. Balab, Burlingame, Calif. 721,196, pub. 6-27-61. Cl. 6.
 Bresee, Fred, Jr.: See—
 Bresee, Francys C.
 Breyer Ice Cream Co., Philadelphia, Pa., to National Dairy Products Corp., New York, N.Y. 144,708, ren. 9-12-61. Cl. 46.
 British Paints Ltd., Newcastle-on-Tyne, England. 721,229-30, pub. 6-27-61. Cl. 16.
 Brunswick Corp., Chicago, Ill. 721,247, pub. 6-27-61. Cl. 19.
 Buck, William H., d.b.a. Kit-Kraft, Lexington, Mass. 721,421, pub. 6-27-61. Cl. 50.
 Bucks County Provincial, Inc., Palm Beach, Fla. 721,218, pub. 6-27-61. Cl. 13.
 Bulova Watch Co., Inc., Flushing, N.Y. 721,312, pub. 6-27-61. Cl. 27.
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 Butcher Shop Quartette, Inc., New York, N.Y. 609,746, can. Cl. 46.
 Cabin Crafts Inc., Dalton, Ga. 721,376, pub. 6-27-61. Cl. 42.
 Cabot Corp., Boston, Mass. 721,169, pub. 6-27-61. Cl. 1.
 California Citograph Publishing Co., Ltd., Los Angeles, Calif. 150,275, ren. 9-12-61. Cl. 38.
 California Spray-Chemical Corp., Wilmington, Del. 609,391, can. Cl. 10.
 Cardinal Mfg. Corp., Shreveport, La. 721,222, pub. 6-27-61. Cl. 13.
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 Carmac Co.: See—
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 Central Compounding Co., Chicago, Ill. 721,215, pub. 6-27-61. Cl. 11.
 Charak Furniture Co., Boston, Mass. 721,324, pub. 6-27-61. Cl. 32.
 Chatham Mfg. Co., Elkin, N.C. 721,382-3, pub. 6-27-61. Cl. 42.
 Chemsol Corp., Chicago, Ill. 721,228, pub. 6-27-61. Cl. 16.
 Chicago Color Laboratories, Inc., Chicago, Ill. 721,438-9, pub. 3-1-60. Cl. 101.
 Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 145,335, ren. 9-12-61. Cl. 21.

Chicago Tribune-New York News Syndicate, Inc., New York, N.Y. 721,351, pub. 6-27-61. Cl. 38.
 Chipmunk, Perry H., Inc., New York, N.Y. 721,456. Cl. 40.
 Chiyoda Kogaku Seiko Kabushiki Kaisha, Higashi-ku, Osaka, Japan. 609,566, can. Cl. 26.
 Ciba Pharmaceutical Products Inc., Summit, N.J. 721,349, pub. 6-27-61. Cl. 38.
 Clements, Fred W., to International Laboratories, Inc., Rochester, N.Y. 145,630, ren. 9-12-61. Cl. 18.
 Clements, Fred W., to International Laboratories, Inc., Rochester, N.Y. 147,083, ren. 9-12-61. Cl. 18.
 Clevite Corp., Cleveland, Ohio. 609,500, can. Cl. 21.
 Cluett Peabody & Co., Inc., New York, N.Y. 390,700, ren. 9-12-61. Cl. 39.
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 Cochran, Jacqueline, Roselle, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 390,871, ren. 9-12-61. Cl. 51.
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 Container Development Corp., Watertown, Wis. 721,190, pub. 6-27-61. Cl. 2.
 Continental Can Co., Inc., New York, N.Y. 721,186, pub. 6-27-61. Cl. 2.
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 Cook Chemical Co., Kansas City, Mo. 721,274, pub. 6-27-61. Cl. 23.
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 Corn Products Co., New York, N.Y. 721,414, pub. 6-27-61. Cl. 46.
 Cotton Belt, Inc., Pinetops, N.C. 609,593, can. Cl. 32.
 Crown Zellerbach Corp., San Francisco, Calif. 721,173, pub. 6-27-61. Cl. 1.
 Crown Zellerbach Corp., d.b.a. Western Waxed Paper Co., division of Crown Zellerbach Corp., to Crown Zellerbach Corp., San Francisco, Calif., and North Portland, Ore. 389,225, ren. 9-12-61. Cl. 37.
 Crystal, David, Inc., New York, N.Y. 721,375, pub. 6-27-61. Cl. 42.
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 Cudahy Packing Co., The, Omaha, Nebr. 721,409, pub. 6-27-61. Cl. 46.
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 Daniels, John E., Leather Co., Boston, Mass. 721,167, pub. 6-27-61. Cl. 1.
 Data-Guide, Inc., Flushing, N.Y. 721,348, pub. 5-9-61. Cl. 38.
 Dayco Corp., Dayton, Ohio. 721,336, pub. 6-27-61. Cl. 35.
 Daystrom, Inc., Elizabeth, N.J. 609,498, can. Cl. 21.
 Daystrom, Inc., Murray Hill, N.J. 721,303, pub. 6-27-61. Cl. 26.
 Debbi Day, Inc., New York, N.Y. 721,362, pub. 6-27-61. Cl. 39.
 Delisle, J. L., Co., Inc., Fitchburg, Mass. 721,359, pub. 5-2-61. Cl. 39.
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 Doniger, David D., & Co., Inc., New York, N.Y. 609,655, can. Cl. 39.
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 Docher, Gerard H., d.b.a. The Granulite Co., Chicago, Ill. 609,392, can. Cl. 10.
 Dublin Wine Co., The: See—
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 Dumart Textile Co., Inc., New York, N.Y. 609,651, can. Cl. 39.
 Du Pont de Nemours, E. I., and Co., Wilmington, Del. 721,175, pub. 6-7-61. Cl. 1.
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 Eaton-Dikeman Co., The, Mount Holly Springs, Pa. 609,581-2, can. Cl. 31.
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 Electric Machinery Mfg. Co., Minneapolis, Minn. 721,256, pub. 4-25-61. Cl. 21.
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 Vulcan Materials Co.
 Furniture Dynamics, Inc., Los Angeles, Calif. 721,330, pub. 6-27-61. Cl. 32.
 Gee Mfg. Co., Inc., El Paso, Tex. 609,642-3, can. Cl. 39.
 Geigy Chemical Corp., Ardsley, N.Y. 721,205, pub. 6-27-61. Cl. 6.
 General Aniline & Film Corp., New York, N.Y. 721,309, pub. 6-27-61. Cl. 26.
 General Cable Corp.: See—
 Phillips Insulated Wire Co.
 General Foam Products, Los Angeles, Calif. 721,165, pub. 6-27-61. Cl. 1.
 General Foods Corp.: See—
 Baker, Walter, & Co. Ltd.
 General Metals Corp.: See—
 Village Blacksmith Co., The.
 General Packaging Equipment Co., Houston, Tex. 721,291, pub. 6-27-61. Cl. 23.
 General Tire & Rubber Co., The, Akron, Ohio. 721,177, pub. 6-27-61. Cl. 1.
 Gets, William, Corp., The, Chicago, Ill. 721,387, pub. 6-27-61. Cl. 44.
 Gibson, James E., Jr., to The Fil-Back Co., Inc., High Point, N.C. 609,507, can. Cl. 22.
 Gilbert, A. C., Co., The, New Haven, Conn. 609,469, can. Cl. 21.
 Gilleland, Reuben A., d.b.a. Atlas Oxone Mfg. Co., Peoria, Ill. 609,492, can. Cl. 21.
 Gladding, B. F., & Co., Inc., South Otselic, N.Y. 721,448, Cl. 22.
 Glasberg, Hyman, d.b.a. Evelyn Hat Co., Boston, Mass. 609,641, can. Cl. 39.
 Glen Oaks Mfg. Co., New York, N.Y. 721,367, pub. 6-27-61. Cl. 39.
 Gob Shops of America, Inc.: See—
 Sterling Stores Corp.
 Goetze's Candy Co., Inc., Baltimore, Md. 721,406, pub. 6-27-61. Cl. 46.
 Goldstein Millinery Co., Chicago, Ill. 609,636, can. Cl. 39.
 Goodman, A., & Sons, Inc., Long Island City, N.Y. 389,587-8, ren. 9-12-61. Cl. 46.
 Goodrich, B. F., Co., The, Akron, Ohio. 147,774, ren. 9-21-61. Cl. 35.
 Gould-National Batteries, Inc., St. Paul, Minn. 721,248, pub. 1-20-59. Cl. 21.
 Grady & Neary Ink Co., Chicago, Ill. 721,214, pub. 6-27-61. Cl. 11.
 Granulite Co., The: See—
 Docher, Gerard H.
 Graver Tabk & Mfg. Co., Inc., East Chicago, Ind. 609,730, can. Cl. 103.
 Great Neck Saw Manufacturers, Inc., Mineola, N.Y. 721,284, pub. 6-27-61. Cl. 23.
 Groove-Rite Tool Co.: See—
 Stevens, Guy L.
 H. & M. Sportswear, Inc., New Bedford, Mass. 721,372, pub. 6-27-61. Cl. 39.
 Harlan, O. A., & Co., to Sunsweet Growers Inc., San Jose, Calif. 148,068, ren. 9-12-61. Cl. 46.
 Hercules Trousers Co., The, Columbus, Ohio. 721,370, pub. 6-27-61. Cl. 39.
 Heaton Mfg. Co., Inc., Hesston, Kans. 721,285, pub. 6-27-61. Cl. 23.

Hester, James H., d.b.a. Hester Sportsman, Santa Monica, Calif. 609,454, can. Cl. 19.
 Hester Sportsman: See—
 Hester, James H.
 Hollingsworth & Vose Co., East Walpole, Mass. 721,342, pub. 6-27-61. Cl. 37.
 Holman, A. J., Co., Philadelphia, Pa. 392,550, ren. 9-12-61. Cl. 38.
 Holt, Howard R., d.b.a. Kim-Tam Enterprises, North Smithfield, R.I. 721,388, pub. 6-27-61. Cl. 44.
 Hornstein Photo Sales, Inc., Chicago, Ill. 721,251, pub. 6-27-61. Cl. 21.
 Howe Sound Co.: See—
 Austenal Laboratories, Inc.
 Hughes Tool Co., Houston, Tex. 721,294, pub. 6-27-61. Cl. 23.
 Hydril Co., Los Angeles, Calif. 721,220-1, pub. 6-27-61. Cl. 13.
 Ideal Industries, Inc., Sycamore, Ill. 721,276, pub. 6-27-61. Cl. 23.
 Incentive Ideas, Inc., Dallas, Tex. 721,266, pub. 6-27-61. Cl. 22.
 Industrial Soap Co., St. Louis, Mo. 609,378, can. Cl. 6.
 Instrument Specialties Co., Inc., West Paterson, N.J. 721,263, pub. 6-27-61. Cl. 21.
 Intermedico Corp., Floral Park, N.Y. 609,429, can. Cl. 18.
 International Laboratories, Inc.: See—
 Clements, Fred W.
 International Products Corp., New York, N.Y. 721,430-1, pub. 6-27-61. Cl. 51.
 International Silver Co.: See—
 International Silver Co., The.
 International Silver Co., The, to International Silver Co., Meriden, Conn. 389,861, ren. 9-12-61. Cl. 28.
 Jewel Paint & Varnish Co.: See—
 Wadsworth-Howland Co.
 Johns-Manville Corp., New York, N.Y. 721,216, pub. 6-27-61. Cl. 12.
 Johnson & Johnson, New Brunswick, N.J. 721,432, pub. 6-27-61. Cl. 52.
 Jones, Wilson Jones Co., Chicago, Ill. 721,290, pub. 6-27-61. Cl. 23.
 Jonkopings Och Vulcans Tandtekniska Aktiebolag, to Aktiebolaget Jonkopings-Vulcan, Jonkoping, Sweden. 388,369, ren. 9-12-61. Cl. 9.
 KVP Sutherland Paper Co., Kalamazoo, Mich. 721,339, pub. 10-18-60. Cl. 37.
 Kennametal, Inc., Latrobe, Pa. 721,279, pub. 6-27-61. Cl. 23.
 Kidde Ultrasonic & Detection Alarms, Inc.: See—
 Kidde, Walter, & Co., Inc.
 Kidde, Walter, & Co., Inc., Belleville, from Kidde Ultrasonic & Detection Alarms, Inc., Clifton, N.J. 721,302, pub. 6-27-61. Cl. 28.
 Kim-Tam Enterprises: See—
 Holt, Howard R.
 Kit-Kraft: See—
 Buck, William H.
 Kleinsade Products, Inc., Beloit, Wis. 721,399, pub. 6-27-61. Cl. 46.
 Klepper Co., New York, N.Y. 609,454, can. Cl. 19.
 Klosterbrenner A.G. Erste Badische Wein- und Edelbranntweinbrennerei, Emmendingen, Germany. 721,457, Cl. 47.
 Klosterbrenner A.G. Erste Badische Wein- und Edelbranntweinbrennerei, Emmendingen, Germany. 721,460, Cl. 49.
 Knapp-Sherrell Co., Donna, Tex. 721,415, pub. 6-27-61. Cl. 46.
 Kraft Cheese Co., to National Dairy Products Corp., Chicago, Ill. 392,212, ren. 9-12-61. Cl. 46.
 La Lanne Inc., Oakland, Calif. 721,232, pub. 6-27-61. Cl. 18.
 Lamont, Creston L., d.b.a. Lamont's Hatchery, Eugene, Ore. 609,344, ren. 9-12-61. Cl. 1.
 Lamont's Hatchery: See—
 Lamont, Creston L.
 Lando Products, Inc., Sausalito, Calif. 609,404, can. Cl. 12.
 Langley Alloys Ltd., Langley, Slough, England. 721,223, pub. 4-11-61. Cl. 14.
 La Salle Neckwear Co., Philadelphia, Pa. 721,369, pub. 6-27-61. Cl. 39.
 La Vie Jewelry Corp., New York, N.Y. 721,318, pub. 6-27-61. Cl. 28.
 Lewis, Stanley N., Gardena, Calif. 721,243, pub. 6-27-61. Cl. 19.
 Liberty Mfg. Co., Red Springs, N.C. 609,394, can. Cl. 10.
 Lipoff, Harry, d.b.a. Lipoff's Wholesale Meats, Philadelphia, Pa. 609,679, can. Cl. 46.
 Lipoff's Wholesale Meats: See—
 Lipoff, Harry.
 Litestar, Inc., Long Island City, N.Y. 609,577, can. Cl. 30.
 Lloyd Brothers, Inc.: See—
 Penick, S. B., & Co.
 Lobco, Inc.: See—
 Alberto-Culver Co.
 Lockheed Aircraft Corp., Burbank, Calif. 721,265, pub. 6-27-61. Cl. 21.
 Lodding Engineering Corp., Auburn, Mass. 721,280, pub. 6-27-61. Cl. 23.
 London Leather Novelties, New York, N.Y. 609,385, can. Cl. 8.
 Lorillard, P., Co., New York, N.Y. 721,231, pub. 6-27-61. Cl. 17.
 Lucente Enterprises, Inc., Youngstown, Ohio. 721,425, pub. 4-18-61. Cl. 51.
 Lyman Gun Sight Corp., The, Middlefield, Conn. 721,211, pub. 6-27-61. Cl. 9.
 M.F.A. Oil Co., Columbia, Mo. 721,204, pub. 6-20-61. Cl. 6.
 M.J.B. Co., San Francisco, Calif. 721,397, pub. 6-27-61. Cl. 46.
 M & B Dietetic Laboratories, Inc.: See—
 Nucoa Butter Co.
 MacGregor-Comarain, Paris (Seine), France. 721,447. Cl. 19.
 MacVeagh, Franklin, & Co., Chicago, Ill., to Carnation Co., Los Angeles, Calif. 145,187, ren. 9-12-61. Cl. 44.
 Macy, R. H., & Co., Inc.: See—
 Bamberger, L., & Co.
 Macy, R. H., & Co., Inc., New York, N.Y. 389,752, ren. 9-12-61. Cl. 39.
 Manantiales Penafiel, S.A., Mexican Co. Estacion Garci-Crespo, Tehuacan, Puebla, Mexico. 721,389, pub. 6-27-61. Cl. 45.
 Mann, Frank, Inc., Temple, Tex. 721,388, pub. 6-27-61. Cl. 39.
 McBell Enterprises, Inc., Racine, Wis. 609,573, can. Cl. 29.
 McGraw-Edison Co.: See—
 Edison, Thomas A., Inc.
 McGraw-Edison Co., West Orange, N.J. 721,310, pub. 6-27-61. Cl. 26.
 Mead Johnson & Co., Evansville, Ind. 721,407, pub. 6-27-61. Cl. 46.
 Melville Shoe Corp.: See—
 Miles Shoes, Inc.
 Menendes, E., Miami, Fla. 721,352, pub. 6-27-61. Cl. 38.
 Merck & Co., Inc.: See—
 Sharp & Dohme, Inc.
 Merck & Co., Inc., Rahway, N.J. 609,681, can. Cl. 46.
 Meredith Publishing Co., Des Moines, Iowa. 721,350, pub. 6-27-61. Cl. 38.
 Meredith Publishing Co., Des Moines, Iowa. 721,355, pub. 6-27-61. Cl. 38.
 Merritt, B., Inc., Chicago, Ill. 721,383, pub. 6-27-61. Cl. 34.
 Metal Coating Corp., Chicago, Ill. 721,168, pub. 6-27-61. Cl. 2.
 Micamold Radio Corp., Brooklyn, N.Y. 609,495, can. Cl. 21.
 Midland Products Co., Midland Park, N.J. 721,278, pub. 6-27-61. Cl. 23.
 Miles Shoes, Inc., to Melville Shoe Corp., New York, N.Y. 392,180, ren. 9-12-61. Cl. 39.
 Milson Mills, Inc., Lebanon, Pa. 609,647, can. Cl. 39.
 Minneapolis-Moline Co., Hopkins, Minn. 721,295, pub. 6-27-61. Cl. 23.
 Minnesota Mining and Mfg. Co., St. Paul, Minn. 721,191, pub. 6-27-61. Cl. 4.
 Minnesota Rubber Co., Minneapolis, from Minnesota Rubber 721,391-5, pub. 6-27-61. Cl. 46.
 Minnesota Rubber Properties, Inc.: See—
 Minnesota Rubber Co.
 Mirus, Gilbert B., d.b.a. Carmac Co., Monrovia, Calif. 609,453, can. Cl. 19.
 Mission Garden Products Co.: See—
 Werts, Frank.
 Mitten, Jane Wharton, d.b.a. Derm Laboratories, Newark, N.J. 721,426, pub. 6-27-61. Cl. 51.
 Mobay Chemical Co., Pittsburgh, Pa. 721,194, pub. 6-27-61. Cl. 6.
 Modera Globe, Inc., Pawtucket, R.I. 721,363, pub. 6-27-61. Cl. 39.
 Monarch Aluminum Mfg. Co., Cleveland, Ohio. 721,224, pub. 6-27-61. Cl. 14.
 Mohawk Brush Co., Albany, N.Y. 392,336, ren. 9-12-61. Cl. 29.
 Mohawk Brush Co., Albany, N.Y. 721,320, pub. 6-27-61. Cl. 29.
 Montgomery Ward & Co., Inc., Chicago, Ill. 721,334, pub. 6-27-61. Cl. 34.
 Morris, Paul, New York, N.Y. 721,316, pub. 6-27-61. Cl. 28.
 Motor Travel Services, Inc., Minneapolis, Minn. 721,446, pub. 5-23-61. Cl. B.
 Motorola, Inc., Chicago, Ill. 721,258, pub. 4-11-61. Cl. 21.
 Muscat Cooperative Growers: See—
 Muscat Cooperative Winery Association, d.b.a. Muscat Cooperative Growers, Kingsburg, Calif. 609,680, can. Cl. 46.
 N.B.K. Co., St. Paul, Minn. 609,652, can. Cl. 39.
 Nalge Co., Inc., The: See—
 Nalge Co., Inc.
 Nalge Co., Inc., The Nalge Co., Inc., Rochester, N.Y. 609,617, Am. 7(d). Cl. 1.
 Nalge Co., Inc., The Nalge Co., Inc., Rochester, N.Y. 701,346, Am. 7(d). Cl. 26.
 Nalge Co., Inc., The Nalge Co., Inc., Rochester, N.Y. 710,565, Am. 7(d). Cl. 26.
 Napoli Restaurant, Inc., Portland, Me. 721,390, pub. 6-27-61. Cl. 46.
 National Cleaners Chemical Mfg. Co.: See—
 National Detergents, Inc.
 National Dairy Products Corp.: See—
 Breyer Ice Cream Co.
 Kraft Cheese Co.
 National Detergents, Inc., d.b.a. National Cleaners Chemical Mfg. Co., Chicago, Ill. 721,433, pub. 6-27-61. Cl. 52.
 National Foundation, The, New York, N.Y. 721,435-6, pub. 6-27-61. Cl. 100.
 Navco, Inc., St. Louis, Mo. 721,252, pub. 6-27-61. Cl. 21.
 Navco, Inc., St. Louis, Mo. 721,304, pub. 6-27-61. Cl. 26.
 Nephi Processing Plant, Inc., Nephi, Utah. 609,685, can. Cl. 46.
 New Orleans Kitchens, Inc., LaFayette, La. 721,405, pub. 6-27-61. Cl. 46.
 Nitragin Co., Inc., The, Milwaukee, Wis. 721,174, pub. 6-27-61. Cl. 1.
 Norda Essential Oil & Chemical Co., Inc., New York, N.Y. 721,201, pub. 3-21-61. Cl. 6.
 Northern Minnesota Bluegrass Growers Assn., Roseau, Minn. 721,163, pub. 6-27-61. Cl. 1.

- Nacosa Butter Co., New York, N.Y. M & R Dietetic Laboratories, Inc., Columbus, Ohio. 145,987, ren. 9-12-61. Cl. 46.
- Oberfell, George G., Bartlesville, Okla. 600,386, can. Cl. 9.
- Oiler, Frank E., Cleveland, Ohio. 600,533, can. Cl. 20.
- Olive Heights Citrus Association, Olive, Calif. 392,251, ren. 9-12-61. Cl. 44.
- Olsen, Fred., & Co., Oslo, Norway. 721,442, pub. 6-27-61. Cl. 106.
- Olympic Radio & Television, Inc., Long Island City, N.Y. 600,462, can. Cl. 21.
- Omega Instrument Co.: See—
Rutishauser, Hans.
- Onida Ltd., Onida, N.Y. 721,277, pub. 6-27-61. Cl. 23.
- Orber Mfg. Co., Pawtucket, R.I. 609,572, can. Cl. 28.
- Osborne Co., The, Clifton, N.J. 609,728-9, can. Cl. 101.
- Pabst Brewing Co.: See—
Val Blatz Brewing Co.
- Pacific Can Co., San Francisco, Calif. 609,736, can. Cl. 2.
- Pacific States Laboratories, Inc., San Francisco, Calif. 609,439, can. Cl. 18.
- Packard-Bell Electronics Corp., Los Angeles, Calif. 721,249, pub. 6-27-61. Cl. 21.
- Packard-Bell Electronics Corp., Los Angeles, Calif. 721,262, pub. 6-27-61. Cl. 21.
- Papaya Food Products Co.: See—
Anderson, Warren R.
- Parker Brothers, Inc., Portland, Me., and Salem, Mass. 325,672, can. Cl. 22.
- Parkersburg-Aetna Corp., Parkersburg, W. Va. 609,411, can. Cl. 12.
- Patent Searching Service: See—
Sernak, Cyril W.
- Peerless Finishing Corp., Paterson, N.J. 609,733, can. Cl. 106.
- Penick S. B., & Co., New York, N.Y., to Lloyd Brothers, Inc., Cincinnati, Ohio. 385,974, ren. 9-12-61. Cl. 18.
- Pennsalt Chemicals Corp., Philadelphia, Pa. 721,195, pub. 6-27-61. Cl. 6.
- Pennsalt Chemicals Corp., Philadelphia, Pa. 721,198, pub. 6-27-61. Cl. 6.
- Perma-Cement Products of America, Inc., Pittsburgh, Pa. 721,203, pub. 6-27-61. Cl. 6.
- Pharma-Craft Corp., The, now by change of name Pharma-Craft Corp., New York, N.Y. 609,451, can. Cl. 18.
- Pharma-Craft Corp.: See—
Pharma-Craft Corp., The.
- Phillips Insulated Wire Co., Pawtucket, R.I., to General Cable Corp., New York, N.Y. 20,339, ren. 9-12-61. Cl. 21.
- Phinny Brothers Co., to Quaker State Oil Refining Corp., Oil City, Pa. 145,778, ren. 9-12-61. Cl. 15.
- Pierce & Stevens Chemical Corp., Buffalo, N.Y. 694,077, can. Cl. 5.
- Pioneer Industries, Inc., Darby, Pa. 721,424, pub. 4-18-61. Cl. 51.
- Pitchford Scientific Instruments Corp., Pittsburgh, Pa. 721,300, pub. 6-27-61. Cl. 26.
- Pittsburgh Plate Glass Co., from Columbia-Southern Chemical Corp., Pittsburgh, Pa. 721,208, pub. 6-27-61. Cl. 6.
- Plastic Products Corp., Seattle, Wash. 721,219, pub. 6-27-61. Cl. 18.
- Polaris Industries, Inc., Roseau, Minn. 721,246, pub. 6-27-61. Cl. 19.
- Poolley Machine Co., Philadelphia, Pa. 609,587, can. Cl. 31.
- Poul Holst-Knudsen, Copenhagen, Denmark. 609,677-8, can. Cl. 46.
- Power Glo Products, Queens Village, N.Y. 609,703, can. Cl. 50.
- Precision Mfg. Co., Inc., Philadelphia, Pa. 609,496, can. Cl. 21.
- Precision Cosmet Co.: See—
Precision-Cosmet Co., Inc.
- Precision-Cosmet Co., Inc., d.b.a. Precision Cosmet Co., Minneapolis, Minn. 721,306, pub. 6-27-61. Cl. 26.
- Preuss, Roger, d.b.a. Preuss Studio, Minneapolis, Minn. 721,451, Cl. 38.
- Preuss Studio: See—
Preuss, Roger.
- Princess Coals, Inc.: See—
Princess Elkhorn Coal Co.
- Princess Elkhorn Coal Co., Paintsville, Ky., to Princess Coals, Inc., Huntington, W. Va. 391,659, ren. 9-12-61. Cl. 1.
- Procter & Gamble Co., The, Cincinnati, Ohio. 721,267, pub. 6-27-61. Cl. 22.
- Prosperity Co., Inc., The, to Ward Industries Corp., Syracuse, N.Y. 388,840, ren. 9-12-61. Cl. 24.
- Publisher's Vending Services Inc., Minneapolis, Minn. 721,286-9, pub. 6-27-61. Cl. 23.
- Purity Mills, Inc., Dixon, Ill. 609,683, can. Cl. 46.
- Putman Publishing Co., Chicago, Ill. 721,353, pub. 6-27-61. Cl. 38.
- Quaker State Oil Refining Corp.: See—
Phinny Brothers Co.
- Quinn, Edwin S.: See—
Van Strum & Towne, Inc.
- Radio Corp. of America, New York, N.Y. 721,250, pub. 10-13-59. Cl. 21.
- Ranchers Cotton Oil Co.: See—
Ranchers Cotton Oil.
- Ranchers Cotton Oil, d.b.a. Ranchers Cotton Oil Co., Fresno, Calif. 721,401, pub. 6-27-61. Cl. 46.
- Ratner, Lee, d.b.a. Ratner Mfg. Co., Chicago, Ill. 609,713, can. Cl. 51.
- Ratner Mfg. Co.: See—
Ratner, Lee.
- Rauland Corp., The, Chicago, Ill. 721,261, pub. 6-27-61. Cl. 21.
- Ravin Recording Inc., Lynn, Mass. 721,337, pub. 5-23-61. Cl. 86.
- Rayonier Inc., New York, N.Y. 721,180-1, pub. 6-27-61. Cl. 1.
- Relf & Brody, Inc., Petaluma, Calif. 721,404, pub. 6-27-61. Cl. 46.
- Reliance Mfg. Co., New York, N.Y. 609,650, can. Cl. 39.
- Remington Rand Inc., Buffalo, to Sperry Rand Corp., New York, N.Y. 389,269, ren. 9-12-61. Cl. 37.
- Remington Rand Inc., Buffalo, to Sperry Rand Corp., New York, N.Y. 389,272, ren. 9-12-61. Cl. 37.
- Resources Research, Inc., Washington, D.C. 721,463, Cl. 100.
- Robertson Corp., The, d.b.a. Ewing Mill Co., Bedford, Ind. 721,396, pub. 6-27-61. Cl. 46.
- Robinson, James S. Mary A. Robinson, Memphis, Tenn. 22,266, Am. 7(d). Cl. 18.
- Robinson, Mary A.: See—
Robinson, James S.
- Roddenberry, W. B. Co., Inc.: See—
Roddenberry, W. B. Co.
- Roddenberry, W. B. Co., to W. B. Roddenberry Co., Inc., Cairo, Ga. 389,590, ren. 9-12-61. Cl. 46.
- Roddenberry, W. B. Co., Inc., Cairo, Ga. 721,412, pub. 6-27-61. Cl. 46.
- Rosa, James D., Chicago, Ill. 609,511, can. Cl. 22.
- Rotron Mfg. Co., Inc., Woodstock, N.Y. 721,308, pub. 6-27-61. Cl. 26.
- Roux Laboratories, Inc., New York, N.Y. 721,429, pub. 6-20-61. Cl. 51.
- Royal McBee Corp.: See—
Royal Typewriter Co., Inc.
- Royal Typewriter Co., Inc., to Royal McBee Corp., New York, N.Y. 392,265-6, ren. 9-12-61. Cl. 23.
- Rubinstein, Helena, Inc.: See—
Stuart Products, Inc.
- Rugrofters, Inc., New York, N.Y. 609,544, can. Cl. 26.
- Rutishauser, Hans, d.b.a. Omega Instrument Co., Pasadena, Calif. 721,208, pub. 7-14-59. Cl. 26.
- S-Port Packing Co., Altoona, Pa. 609,671, can. Cl. 46.
- Safe-T Pacific Baking Co., Redwood City, Calif. 721,419, pub. 6-7-60. Cl. 50.
- Safety Safe Enterprises, Inc., Washington, D.C. 721,417-18, pub. 6-27-61. Cl. 50.
- Salut Cornelius The Centurion Chapel of Valley Forge Military Academy: See—
Younghusband, James L.
- Salada-Shirriff-Horsey, Inc., Woburn, Mass. 721,402, pub. 6-27-61. Cl. 46.
- Sandosa Chemical Works, Inc., New York, N.Y. 609,424, can. Cl. 18.
- Saraber, Peter, Goslar/Harz, Germany. 609,547-8, can. Cl. 24.
- Savoy Hotel Ltd., The, London, England. 721,462, Cl. 49.
- Schleifer, Ernest H., San Diego, Calif. 609,354, can. Cl. 2.
- Schultz, Dick: See—
Schultz, Richard M.
- Schultz, Richard M., d.b.a. Dick Schultz, Welcomes, Minn. 721,408, pub. 6-27-61. Cl. 46.
- Scientific Design Co., Inc., New York, N.Y. 721,200, pub. 6-27-61. Cl. 6.
- Scovill Mfg. Co.: See—
American Pin Co., The.
- Screw Machine Products Co., Portland, Oreg. 609,701, can. Cl. 50.
- Sellmann, Otto, to American Collo Corp., New York, N.Y. 609,345, can. Cl. 1.
- Separmatic, Inc., Milwaukee, Wis. 609,586, can. Cl. 31.
- Sernak, Cyril W., d.b.a. Patent Searching Service, Washington, D.C. 721,440, pub. 6-27-61. Cl. 101.
- Shapiro, Bernstein & Co., Inc., New York, N.Y. 150,563, ren. 9-12-61. Cl. 38.
- Shapiro, Bernstein & Co., Inc., New York, N.Y. 150,966, ren. 9-12-61. Cl. 38.
- Sharp & Dohme, Inc., Philadelphia, Pa., to Merck & Co., Inc., Rahway, N.J. 392,649, ren. 9-12-61. Cl. 18.
- Shenango China, Inc., New Castle, Pa. 721,217, pub. 6-27-61. Cl. 12.
- Sifo Co., St. Paul, Minn. 721,271, pub. 6-27-61. Cl. 22.
- Simonds Saw and Steel Co.: See—
Ever Sharp File Co.
- Simpson, Edward & Co. Ltd., London, England. 721,461, Cl. 49.
- Siris, A. J., Products Corp., New York, N.Y. 721,843, pub. 6-27-61. Cl. 37.
- Slim-Bilt, Inc., Wellesey, Mass. 721,373, pub. 6-27-61. Cl. 39.
- Slumberest Co., Georgetown, Ky. 721,264, pub. 6-27-61. Cl. 21.
- Societe Des Eaux Minerales De Contrexeville (Voages), Paris, France. 721,452-3, Cl. 45.
- Societe Statofix Transcontinental, Tangier, Morocco. 609,367, can. Cl. 6.
- Societe Surmelec, Societe Anonyme, Paris, France. 721,296, pub. 6-27-61. Cl. 24.
- Sonobond Corp., from Aeroprojects, Inc., West Chester, Pa. 721,444, pub. 6-27-61. Cl. 108.
- Southern Carbon Co., Monroe, La., to Columbian Carbon Co., New York, N.Y. 392,386, ren. 9-12-61. Cl. 6.
- Southern Carbon Co., Monroe, La., to Columbian Carbon Co., New York, N.Y. 392,424, ren. 9-12-61. Cl. 6.
- Southern Planters, Inc., Quitman, Ga. 721,455, Cl. 46.
- Specialties, Inc., Syosset, N.Y. 721,301, pub. 3-29-60. Cl. 26.
- Speer Carbon Co., Saint Marys, Pa. 721,255, pub. 6-27-61. Cl. 21.
- Sperry Rand Corp.: See—
Remington Rand Inc.
- Squirt Co., The, Beverly Hills, and Milwaukee, Wis., to The Squirt Co., Van Nuys, Calif. 389,701, ren. 9-12-61. Cl. 45.

- Stader, Otto, d.b.a. Ardmore Specialties, Ardmore, Pa. 721,422, pub. 6-27-61. Cl. 50.
- Standard Brands Inc.: See—
Ward Baking Co.
- Standard Oil Co. of California, San Francisco, Calif. 721,307, pub. 6-27-61. Cl. 26.
- Steckler, Nat P., d.b.a. EZ Products, New York, N.Y. 609,505, can. Cl. 22.
- Sterling Stores Corp., now by change of name, Gob Shops of America, Inc., Pawtucket, R.I. 609,637, can. Cl. 39.
- Ster-o-lette Co., Brooklyn, N.Y. 721,366, pub. 6-27-61. Cl. 44.
- Stevens, Guy L., d.b.a. Groove-Rite Tool Co., Novi, Mich. 721,260, pub. 6-27-61. Cl. 21.
- Stevensons (U.S.A.) Inc., Providence, R.I. 721,199, pub. 6-27-61. Cl. 6.
- Stuart Co., The, to The Stuart Dental Products Co., Pasadena, Calif. 415,063, can. Cl. 8.
- Stuart Dental Products Co., The: See—
Stuart Co., The.
- Stuart Products, Inc., St. Paul, Minn., to Helena Rubinstein, Inc., New York, N.Y. 389,106, ren. 9-12-61. Cl. 51.
- Sun Chemical Corp., New York, N.Y. 721,197, pub. 6-27-61. Cl. 6.
- Sunbeam Corp.: See—
Chicago Flexible Shaft Co.
- Sunbeam Equipment Corp., Meadville, Pa. 721,332, pub. 4-25-61. Cl. 34.
- Sund, Cora L., to The Beachcombers, Hollywood, Calif. 388,863, ren. 9-12-61. Cl. 49.
- Sunshine Biscuits, Inc., d.b.a. Dickey Foods, Long Island City, N.Y. 721,413, pub. 6-27-61. Cl. 46.
- Sunsweet Growers Inc.: See—
Harlan, O. A., & Co.
- Super Market Publishing Co., Inc., New York, N.Y. 391,846, ren. 9-12-61. Cl. 38.
- Superior Laboratories, Inc., Tyler, Tex. 721,434, pub. 6-27-61. Cl. 52.
- Superior Tea & Coffee Co., Chicago, Ill. 721,454, Cl. 46.
- Susser, Sylvan, New York, N.Y. 609,620, can. Cl. 38.
- Tektronix, Inc., Portland, Oreg. 721,306, pub. 4-11-61. Cl. 28.
- Telrex, Inc., Asbury Park, N.J. 609,743, can. Cl. 21.
- Tennessee Products & Chemical Corp., Nashville, Tenn. 721,213, pub. 6-27-61. Cl. 10.
- Terre, Victor J., Brooklyn, N.Y. 609,502, can. Cl. 21.
- Texas Harvest Hat Co., Laredo, Tex. 721,364, pub. 6-27-61. Cl. 59.
- Texas Plastic Development Co., Houston, Tex. 609,417, can. Cl. 16.
- Todd Electric Co., Inc., Yonkers, N.Y. 721,253, pub. 11-8-60. Cl. 21.
- Tory Hat Co., Inc., New York, N.Y. 609,629, can. Cl. 39.
- Travenol Laboratories, Inc., Morton Grove, Ill. 694,835, can. Cl. 18.
- Trinity Hosiery Co., Inc., Trinity, N.C. 721,357, pub. 4-26-60. Cl. 39.
- Trojan Powder Co., Allentown, Pa. 721,210, pub. 6-27-61. Cl. 9.
- Trostel, Albert & Sons Co., Milwaukee, Wis. 721,176, pub. 6-27-61. Cl. 1.
- Tuboplast S.A., Vevey (Vaud), Switzerland. 609,520, can. Cl. 23.
- Turner, Albert & Co., Inc., New York, N.Y. 721,365, pub. 6-27-61. Cl. 39.
- Ublotica Corp., Detroit, Mich. 721,233-9, pub. 6-27-61. Cl. 18.
- Union Plate and Wire Co., Attleboro, Mass. 609,414, can. Cl. 14.
- United Biscuit Co. of America, Melrose Park, Ill. 721,408, pub. 6-27-61. Cl. 46.
- United Industrial Corp.: See—
U.S. Semiconductor Products Inc.
- United Merchants and Manufacturers, Inc., New York, N.Y. 609,734, can. Cl. 106.
- United Paper Co., Inc., Richmond, Va. 392,609, ren. 9-12-61. Cl. 37.
- U.S. Packaging Corp., Bridgeport, Conn. 609,420, can. Cl. 16.
- U.S. Semiconductor Products Inc., from United Industrial Corp., Phoenix, Ariz. 721,254, pub. 6-27-61. Cl. 21.
- U-Wan-A Wash Flocks, Inc., New York, N.Y. 721,360, pub. 6-27-61. Cl. 39.
- Val Blatz Brewing Co., to Pabst Brewing Co., Milwaukee, Wis. 146,388, ren. 9-12-61. Cl. 48.
- Valley City Milling Co., Portland, Mich. 721,398, pub. 6-27-61. Cl. 46.
- Van Strum & Towne, Inc., New York, from E. S. Quinn, Rochester, N.Y. 721,347, pub. 6-27-61. Cl. 38.
- Van Valkenburgh, Nooger & Neville, Inc., New York, N.Y. 721,354, pub. 6-27-61. Cl. 38.
- Vanadium-Alloys Steel Co., Latrobe, Pa. 721,225-6, pub. 6-27-61. Cl. 14.
- VEB Fals- und Heftmaschinenwerk Leipzig: See—
VEB Leipziger Buchbindereimaschinenwerk.
- VEB Leipziger Buchbindereimaschinenwerk, by change of name VEB Fals- und Heftmaschinenwerk Leipzig, Leipzig, Germany. 721,272, pub. 6-27-61. Cl. 23.
- Velth, Fred A., Cincinnati, Ohio. 721,212, pub. 6-27-61. Cl. 10.
- Victoria Silk Press, Inc., St. Louis, Mo. 609,508, can. Cl. 21.
- Village Blacksmith Co., The, General Metals Corp., Watertown, Wis. 615,702, Am. 7(d). Cl. 28.
- Vista-Visor Inc., Detroit, Mich. 721,244, pub. 6-27-61. Cl. 19.
- Vital Publications, Inc., New York, N.Y. 609,624, can. Cl. 38.
- Vita-Zahnfabrik H. Rauter K.G., Emsen, Germany. 609,370, can. Cl. 6.
- Vulcan Materials Co., d.b.a. Frontier Chemical Co., Mountain Brook, Ala. 721,206, pub. 6-27-61. Cl. 6.
- WRMF, Inc., Titusville, Fla. 721,441, pub. 6-27-61. Cl. 104.
- Wade, Geoffrey, Advertising, Chicago, Ill. 609,725, can. Cl. 100.
- Wadsworth-Howland Co., to Jewel Paint & Varnish Co., Chicago, Ill. 146,896, ren. 9-12-61. Cl. 16.
- Waldes Kohlenor, Inc., Long Island City, N.Y. 721,293, pub. 6-27-61. Cl. 23.
- Waldorf Paper Products Co., St. Paul, Minn. 721,188, pub. 6-27-61. Cl. 2.
- Walker-Gordon Laboratory Co., Inc., to Walker-Gordon Laboratory Co., Inc., Plainsboro, N.J. 389,068, ren. 9-12-61. Cl. 10.
- Walker, Hiram & Sons, Inc., Detroit, Mich. 609,697, can. Cl. 49.
- Walker, Ruth S., Manhasset, N.Y. 609,659, can. Cl. 44.
- Walker Studio, Inc., The, Yonkers, N.Y. 721,437, pub. 6-27-61. Cl. 100.
- Wallau, Alex Lee, Inc., New York, N.Y. 721,368, pub. 6-27-61. Cl. 59.
- Wandel Machine Co., Inc., Pomeroy, Pa. 721,283, pub. 6-27-61. Cl. 23.
- Ward Baking Co., to Standard Brands Inc., New York, N.Y. 147,826, ren. 9-12-61. Cl. 46.
- Ward Industries Corp.: See—
Prosperity Co., Inc., The.
- Waterman, Merrill, Largent & Co., New York, N.Y. 721,394, pub. 6-8-61. Cl. 43.
- Weber Boiler and Tank Co., Inc., Dallas, Tex. 721,169, pub. 6-27-61. Cl. 2.
- Weiss, Albert & Co., Inc., New York, N.Y. 721,317, pub. 6-27-61. Cl. 28.
- Weiss Noodle Co., Cleveland, Ohio. 627,468, can. Cl. 46.
- Wells Mfg. Co., Attleboro, Mass. 721,314, pub. 6-27-61. Cl. 28.
- Wertz, Frank, d.b.a. Mission Garden Products Co., Riverside, Calif. 721,411, pub. 6-27-61. Cl. 46.
- West Virginia Pulp and Paper Co., New York, N.Y. 721,207, pub. 6-27-61. Cl. 6.
- West Virginia Pulp and Paper Co., New York, N.Y. 721,344, pub. 6-27-61. Cl. 37.
- Western Electric Co., Inc., New York, N.Y. 181,938, can. Cl. 14.
- Western Waxed Paper Co.: See—
Crown Zellerbach Corp.
- Westinghouse Electric Corp., Pittsburgh, Pa. 721,168, pub. 6-20-61. Classes 1, 2, 6, 12, 13, 14, 15, 16, 21, 23, 24, 26, 31, 34, and 44. (Consolidated certificate.)
- Whirlpool Corp., St. Joseph, Mich. 721,381, pub. 6-27-61. Cl. 34.
- Whistling Oyster, The, Ogunquit, Maine. 388,991, ren. 9-12-61. Cl. 33.
- Whitman Publishing Co., Racine, Wis. 721,341, pub. 6-27-61. Cl. 37.
- Whitman Publishing Co., Racine, Wis. 721,356, pub. 6-27-61. Cl. 38.
- Williams, Donald C., Elgin, Ill. 609,464, can. Cl. 21.
- Wilson Bros., Chicago, Ill. 609,658, can. Cl. 89.
- Wiss, J., & Sons Co., Newark, N.J. 721,281-2, pub. 6-27-61. Cl. 25.
- Wolf Foods, Inc., Kansas City, Mo. 609,670, can. Cl. 46.
- Yale and Towne Mfg. Co., The, New York, N.Y. 721,297, pub. 6-27-61. Cl. 25.
- Yale & Towne Mfg. Co., The, New York, N.Y. 721,259, pub. 6-27-61. Cl. 21.
- Younghusband, James L., Chicago, Ill., to Saint Cornelius The Centurion Chapel of Valley Forge Military Academy, Wayne, Pa. 609,719, can. Cl. 52.



PATENTS NOTICES

Claims in Subparagraph Form

The presentation of claims divided into subparagraphs and indented according to structure, ingredients or process steps contained in the application is approved. An example of this form of claim is as follows:

"1. A device which is designed to receive fuel and air from suitable sources of supply and to transform said fuel and air into a mixture suitable for combustion, said device comprising in combination:

- (a) an air manifold,
- (b) a throttle valve located within said air manifold and mounted on an axis, each end of the throttle valve extending a substantial distance from said axis,
- (c) said air manifold being of substantially constant cross section in the throttle area,
- (d) said throttle valve having a mid portion of considerable thickness as compared with its end portions, whereby a venturi effect is created in said air manifold,
- (e) means to move said throttle so that its ends move beyond the center position in each direction through arcuate paths about an axis,
- (f) a fuel passageway leading to said air manifold,
- (g) said fuel passageway merging into an orifice as it enters the air manifold, and
- (h) the front portion of said throttle being adapted to move through a first arcuate path toward one side of said air manifold, and the rear portion on said throttle being adapted to move through a second arcuate path toward the other side of said air manifold, said orifice being located between planes drawn through the points where the extensions of said first and second arcuate paths would intersect the inner walls of said air manifold, said planes being normal to the axis of said air manifold."

No claim will be objected to solely because it is cast in this form.

Claims in allowed applications will be printed in subparagraph form if so presented by the applicant.

M. C. ROSA,

Aug. 3, 1961. Director, Patent Examining Operation.

Tabular Form of Claims

The Director of the Patent Examining Operation has advised the examining corps that "the presentation of claims divided into subparagraphs, ingredients, or process steps contained in the application is approved. * * * Accordingly, no claim should be objected to solely because it is cast in this form. Claims in allowed applications will be printed in subparagraph form if so presented by the applicant."

This order was promulgated because claims presented in

this form had on occasion been printed in the patent in the traditional continuous form. The order is consistent with the recommendations of a group of Primary Examiners filed last year with the Commissioner of Patents. These recommendations, which were published in the May 1961 issue of the Journal of the Patent Office Society (43 J.P.O.S. 317,319), read in part:

"In order to facilitate consideration of the claims it is recommended that applicant be strongly urged or required to present the claims in a form convenient for the Examiner to consider such as in an orderly sequence as well as an orderly internal arrangement. Within the claims, the clauses thereof shall be separated, in order that the Examiner may readily determine those individual factors which are essential to the claim."

The order is also consistent with Resolution 2(c) of the Patent Office Affairs (Patents) Committee adopted by the Section of Patent, Trademark and Copyright Law of the American Bar Association in St. Louis—viz.,

"2.(c) Resolved, That the Section recommends, at least in the case of lengthy or complex claims, more extensive use of the tabular form of claim wherein individual elements, steps or features are set forth by indentations or other clarifying format."

While it is somewhat more expensive to print patents containing claims in this recommended form, such expense seems to be more than offset by the advantages in facilitating examination.

The cooperation of all patent practitioners is asked in encouraging the presentation of claims in the "clarifying format."

DAVID L. LADD,

Commissioner.

Aug. 24, 1961.

CORRECTED NOTICE

Punched Cards for Organic Phosphorus Compounds

Sets of punched cards recording the Patent Office analysis of the subject matter of the U.S. Patents pertaining to organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,

Director of Administration.

Aug. 17, 1961.

New Applications Received During July 1961

Patents	7,054
Designs	369
Plant Patents	7
Reissues	30
Total	7,460

Issue

Patents	1,188—No. 3,000,009 to No. 3,001,196, incl.
Designs	44—No. 191,347 to No. 191,390, incl.
Plant Patents	2—No. 2,092 to No. 2,093, incl.
Reissues	4—No. 25,038 to No. 25,041, incl.
Total	1,238

Board of Appeals Decisions Rendered in the Month of July 1961

Examiner affirmed	206
Examiner affirmed in part	42
Examiner reversed	61
Total	309

Licenses for Filing of Applications in Foreign Countries

The Patent Office continues to receive petitions for retroactive licenses to file applications in foreign countries. It therefore seems desirable to call attention to the fact that the filing of such applications is still governed by the provisions of 35 U.S.C. 184, which reads, as follows:

§ 1.84. Filing of application in foreign country.

Except when authorized by a license obtained from the Commissioner a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner pursuant to section 181 of this title without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been inadvertently filed abroad and the application does not disclose an invention within the scope of section 181 of this title. The term "application" when used in this chapter includes applications and any modifications, amendments, or supplements thereto, or divisions thereof.

E. L. REYNOLDS,
First Assistant Commissioner.

Aug. 24, 1961.

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

Pending Application Index; Access to Applications

The following amended rule is adopted, to take effect on publication. The text of this rule was, except in one particular, published in the Federal Register for May 20, 1961 (26 F.R. 4404), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed rule. The amended rule is adopted after consideration of all the material submitted. The rule departs from the published text in the particular addition in the final sentence of paragraph (a), after the word "Commissioner," of the words "and the Trademark Trial and Appeal Board." The added reference to said board is merely informational in character, and notes the significance its decisions have shared with those of the Commissioner since its establishment in accordance with the provisions of Public Law 85-609, approved August 8, 1958, 72 Stat. 540.

Sec. 2.27 is amended to read as follows:

§ 2.27 Pending application index; access to applications.

(a) An index of pending applications including the name and address of the applicant, a reproduction or description of the mark, the goods or services with which the mark is used, the class number, the dates of use, and the serial number and filing date of the application will be available for public inspection as soon as practicable after filing. Access to the file of a particular pending trademark application will be permitted prior to publication under § 2.81 upon the showing in writing of good cause for such access. Decisions of the Commissioner and the Trademark Trial and Appeal Board in applications and proceedings relating thereto are published or available for inspection or publication.

(b) After a mark has been registered, or published for opposition, the file of the application and all proceedings

relating thereto are available for public inspection and copies of the papers may be furnished upon paying the fee therefor.

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6; sec. 41, 60 Stat. 427, 440, 15 U.S.C. 1123)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7556; Filed, Aug. 9, 1961; 8:46 a.m.]

Published in 26 F.R. 7215-7216, Aug. 10, 1961

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form." and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235. Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said

division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47 Interference; notice of taking testimony.

v. ----- Interference No. -----
-----, 19-----

(Name of opposing attorney)

(Address of opposing attorney)

Sin: You are hereby notified that on -----, 19-----, at ----- o'clock in the forenoon at the office of ----- Street, -----, I shall proceed to take testimony on behalf of the party ----- in the above identified interference.

The witnesses to be examined are:

(Name of witnesses)

(Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on -----, 19-----, I served a copy of the foregoing notice of taking testimony upon -----, the attorney for the party -----, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:48 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

Patent Office Telephone Numbers

A new series of numbers has recently been assigned to telephone extensions in patent examining divisions. Telephone calls to division personnel should be handled as follows:

1. To reach the Primary and Assistant Primary Examiner, dial "28" followed by the division number. The Primary Examiner of Division 3, for example, may be reached by dialing "2803."
2. To reach the division clerk, assistant examiners and all other employees, dial "25" followed by the division number.

STERling 3-9200 should no longer be used in placing telephone calls to the Patent Office. Any Office extension may be reached directly by dialing "WO-7" plus the desired

extension number. For example, the Primary Examiner of Division 3 may be reached by dialing WO 7-2803. Station-to-station long distance calls may be dialed directly by preceding the Office number with Area Code "202."

C. A. KALK,

Aug. 28, 1961.

Director of Administration.

Patents Available for Licensing or Sale

2,696,862. Shipping Bag. Christopher C. Smith, 2121 N. 19th St., Philadelphia 21, Pa.

2,991,897. Non-Refillable Bottle Cap and Spout. Carroll E. Burnett, 1020 Josephine St., Marinette, Wis.

2,973,576. Electric Cutting Machine. A. Kuster & Co. Werkzeugmaschinen, Zurich, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

Des. Pat. 185,506. Coin Controlled Cigar Vending Machine. Willie Allen Moore, P.O. Box 175, Grambling, La.

Correspondence concerning the following 2 patents should be directed to: Frank Ledermann, 154 Nassau St., New York 38, N.Y.

2,668,956. Collar Stiffener. Harry Gordon, Southampton, N.Y.

2,725,545. Electrical Connector Having Insulation Penetrating Means Contacting the Conductors. Harry Gordon, Southampton, N.Y.

Admiral Corporation is willing to sell or grant licenses under the following 6 patents upon reasonable terms to domestic manufacturers.

Replies may be addressed to: James T. Barr, Patent Counsel, Admiral Corporation, 3800 Cortland St., Chicago 47, Ill.

2,465,216. Basket Structure for Washing Machines.

2,568,614. Washer.

2,583,168. Washer.

2,753,731. Power Transmission (Washer).

2,793,757. Washing Machine.

2,893,251. Washer Transmission.

General Electric Company is prepared to grant non-exclusive licenses under the following 3 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Specialty Control Department, Waynesboro, Va.

2,977,523. Control Circuit.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,975,148. Epoxy-Resin β -Monoallyl Itaconate-Containing Compositions, Their Preparation and Articles Containing Same.

2,983,734. Catalytic Hydrogenation.

Classification Order No. 321

The following transfer is hereby ordered to take effect on Friday, September 1, 1961:

From Division 47 to Division 23

Class 35, EDUCATION

M. C. ROSA,

Director, Patent Examining Operation.

CONDITION OF PATENT APPLICATIONS AS OF JULY 31, 1961

Total number of pending applications (excluding Designs)	194,601
Total number of pending Design applications	5,245
Total number of applications awaiting action (excluding Designs)	91,822
Total number of Design applications awaiting action	1,450
Date of oldest new application	April 18, 1960
Date of oldest amended application	April 15, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS		6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		7, 11, 17, 27, 34, 35, 39, 53, 62	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		5, 8, 20, 29, 33, 36, 40, 52, 66	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		1, 4, 9, 10, 18, 22, 23, 28, 45, 47	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE		3, 15, 19, 25, 30, 32, 49, 55, 67	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS		91, 92, 93, 94, 95	
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working		12-16-60	12-2-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		1-27-61	11-14-60
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors		9-23-60	10-3-60
4. (VI) FALLER, E. A., Material or Article Handling		12-27-60	12-27-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics		8-11-60	8-2-60
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides		9-6-60	9-19-60
7. (IV) ANDERSON, E. G., Optics		11-16-60	11-21-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds		1-23-61	2-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines		1-16-61	10-18-60
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making		11-15-60	11-3-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits		9-7-60	9-1-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls		8-15-60	8-11-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning		9-9-60	9-23-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics		8-26-60	8-3-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus		2-14-61	2-14-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems		7-26-60	7-25-60
17. (IV) LEIGHY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering		9-13-60	9-21-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors		2-1-61	2-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners		9-27-60	10-10-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors		2-2-61	2-1-61
21. (III) MADER, R. C., Textiles		11-28-60	11-3-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows		11-1-60	10-17-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education		1-3-61	1-4-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders		1-4-61	1-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making		10-10-60	10-7-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers		10-3-60	9-19-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids		12-16-60	11-16-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes		9-22-60	9-6-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings		11-9-60	10-31-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)		1-23-61	1-23-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils		9-13-60	9-22-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)		10-5-60	10-3-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures		10-13-60	9-1-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating		10-25-60	11-3-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling		11-29-60	12-5-60
36. (V) EVANS, R. L., Measuring and Testing (part)		9-19-60	9-19-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits		9-19-60	9-6-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins		8-2-60	7-29-60
39. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)		10-31-60	10-27-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages		2-3-61	1-19-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices		10-20-60	10-31-60
42. (II) SRAQOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems		9-9-60	9-15-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles		7-14-60	8-1-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes		4-18-60	4-15-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating		2-16-61	2-1-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)		8-17-60	8-2-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles		12-16-60	12-16-60
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers		6-29-60	7-5-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring		9-9-60	9-12-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber		10-4-60	10-5-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems		7-26-60	7-12-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)		1-24-61	2-1-61
53. (IV) NINAN, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination		12-6-60	1-4-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers		6-20-60	7-11-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members		10-17-60	10-7-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry		7-18-60	8-2-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting		8-12-60	8-8-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrating Processes and Apparatus; Baths, Closets, Sinks, and Spitoons; Boring and Drilling; Paper Manufactures; Selective Cutting		11-29-60	11-17-60
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating		9-15-60	10-6-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products		9-6-60	9-15-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths		1-4-61	1-3-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus		11-7-60	10-17-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds		9-13-60	9-22-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions		7-13-60	9-6-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)		9-1-60	9-6-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales		5-2-60	5-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics		11-4-60	11-14-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers		5-26-60	4-28-60
69. (III) MONCURE, J. A., Industrial Arts		4-7-61	4-6-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts		4-10-61	4-14-61
71. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass		9-13-60	8-19-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners		2-1-61	2-2-61
73. WAHL, R. A., Wire Working		1-30-61	1-19-61
74. BERLOWITZ, W., Gas Separation		11-21-60	11-14-60
75. REZNEK, J. (acting), Metallic Building Structures		12-2-60	12-1-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene		12-23-60	12-1-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during September 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 560. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents	Numbers 2,857,282 to 2,859,270, inclusive
Plant Patents	Numbers 638 to 642, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

CAMBRIDGE RUBBER COMPANY

v.

CLUETT, PEABODY & Co., INC.

No. 6,623. Decided February 8, 1961

[48 CCPA —; 286 F.2d 623; 128 USPQ 549]

1. TRADEMARKS—CONFUSING SIMILARITY—OPPOSITION—EVIDENCE—GOODS RECITED IN APPLICATION.

Upon consideration in an opposition of a question of confusing similarity, *Held* that "Although the evidence does not indicate that applicant has used its mark on boys' underwear, we must resolve the issues here in accordance with the goods recited in the application, * * *."

2. SAME—SAME.

In an opposition by the registrant of "WINTER CARNIVAL" for women's boots to an application to register the same mark for men's and boys' underwear, *Held* that "there is a reasonable likelihood that the same customers would purchase both the boots of registrant and the underwear of applicant"; that "use of the identical trademark on the instant goods would be likely to lead purchasers to assume that they emanated from the same source"; and that "concurrent use of the 'WINTER CARNIVAL' mark by the parties on their respective goods would be likely to result in the confusion contemplated by section 2(d) of the Lanham Act."

APPEAL from the Patent Office. Opposition No. 36,744.

REVERSED.

Jacobi & Jacobi, Herbert J. Jacobi (Samuel L. Davidson, of counsel) for appellant.

Myron Amer for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

WORLEY, Chief Judge, delivered the opinion of the court.

This is an appeal from a decision of the Commissioner of Patents, acting through the Assistant Commissioner, 122 USPQ 211, reversing the Examiner of Interferences and dismissing an opposition to the registration of a trademark.

Applicant, appellee here, manufactures men's and boys' furnishings including shirts, ties, handkerchiefs, and underwear, and seeks registration of the mark "WINTER CARNIVAL" for use on men's and boys' underwear. Applicant has used the mark only on men's boxer-type undershorts sold in men's clothing and department stores.

Appellant manufactures footwear of rubber and other material and is the registrant of "WINTER CARNIVAL" for use on women's boots. The opposition is based on prior use and registration, alleging likelihood of confusion.¹

At the time appellant's opposition was filed, its registration recited use of "WINTER CARNIVAL" for boots for men, women and children. It appears, however, that its mark has actually been used only on

women's boots. Subsequent to the decision of the Commissioner and in accord with a recommendation therein, appellant restricted its registration to women's boots.

It is undisputed that registrant is the prior user. The Examiner sustained the opposition, stating that the respective goods of the parties are marketed in the same retail establishments and might readily be purchased by either sex, and that contemporaneous sale of the instant goods under identical trademarks would be reasonably likely to result in confusion, mistake, or deception of purchasers.

The Assistant Commissioner reversed the Examiner and dismissed the opposition on the grounds that registrant's products, women's boots, are ordinarily purchased by women while applicant's products, underwear for men and boys, are likely to be purchased primarily by men in men's shops. The Assistant Commissioner further stated that although the products of both parties are actually sold in department stores, they are not likely to be sold or displayed together or in the same departments, hence confusion is unlikely.

[1] Although the evidence does not indicate that applicant has used its mark on boys' underwear, we must resolve the issues here in accordance with the goods recited in the application, i.e. "men's and boys' underwear." *General Shoe Corp. v. Lerner Bros. Mfg. Co., Inc.*, 45 CCPA 872, 254 F.2d 154, 117 USPQ 281. Registrant contends it is common knowledge that women, as mothers, purchase their children's clothes, including, of course, their undergarments. [2] Therefore, as the matter stands before us, there is a reasonable likelihood that the same customers would purchase both the boots of registrant and the underwear of applicant. In our opinion, use of the identical trademark on the instant goods would be likely to lead purchasers to assume that they emanated from the same source.

We agree with the Examiner that concurrent use of the "WINTER CARNIVAL" mark by the parties on their respective goods would be likely to result in the confusion contemplated by section 2(d) of the Lanham Act.

The decision is reversed.

REVERSED.

MARTIN, J. (concurring):

I concur in the result only since I cannot conclude that there is a clear likelihood of confusion among purchasers as to the source of the goods of the respective parties. Yet, on the other hand, since identical trademarks are being used on items of wearing apparel which reasonably could be purchased by the same customers, even though the articles are very different, doubt is raised in my mind as to whether the concurrent use of the marks would be likely to cause confusion among purchasers and that doubt must be resolved in favor of the first user of the trademark.

SEPTEMBER 19, 1961

U. S. PATENT OFFICE

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U.S. Court of Customs and Patent Appeals

IN RE JAMES F. HUNTER

No. 6655. Decided March 15, 1961. *Petition for Rehearing denied May 5, 1961*

[48 CCPA —; 288 F.2d 930; 129 USPQ 225]

1. CLAIMS—CONSTRUCTION OF CLAIMS—EFFECT OF "COMPRISING."

"The only significant difference between appellant's method and that of the combined references lies in the sleeve of the Tocci-Guilbert patent. There is no question but that appellant provides in his specification for the joining of the ends of the cord without such a device. Assuming that there is patentable significance in joining the ends of a cord by means of appellant's method without a sleeve, appellant did not draw his claims to exclude the use of such a sleeve. Claims 33 and 35 state: 'A process of connecting the ends of multiple-strand cords for window shades which comprises * * *' certain steps. Claim 39, a product claim, also uses the word 'comprising' in this connection. In using these words, appellant has drawn claims which read upon the Tocci-Guilbert patent in all material respects since there is nothing in said claims to preclude the presence of a sleeve in the process or the product."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—METHOD OF CONNECTING CORDS.

The decision of the Board of Appeals refusing claims in an application for a patent on a method of connecting cords is sustained.

APPEAL from the Patent Office. Serial No. 499,732.

AFFIRMED.

Morrison, Kennedy & Campbell (Luther E. Morrison and Willis R. Rice, of counsel) for appellant.

Clarence W. Moore (S. William Cochran, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

MARTIN, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Examiner of claims 33 to 36, inclusive, and 39, the only remaining claims of appellant's application for a patent on a method of connecting cords.

Appellant's invention relates to a joint for multiple-strand cords and a process for making such a joint. The cords contemplated are those used in operating window shades and Venetian blinds. Common usage requires that such cords be endless and that any cord joints be flexible and of a diameter substantially equal to that of the cord itself so that the joints will move easily around pulleys in the shade or blind apparatus.

Claims 33, 34 and 39, which are representative, are as follows:

33. A process of connecting the ends of multiple-strand cords for window shades which comprises loosening the strands adjacent to said ends to increase the voids between the strands, covering said strands and filling the voids between them with a settable flexible plastic, then abutting said ends together in alignment and compressing the said ends to substantially the size of the cords to be joined while setting the plastic.

34. A device according to claim 33 in which the ends of the joint are compressed inwardly below the surface.

39. A joint for multiple-strand cords comprising two adjacent cord ends abutted together, each having the voids between the strands filled with a body of a flexible plastic uniting the ends together and having both ends of the outer surface of the plastic compressed inwardly below the surface of the cord.

The references relied on are:

Putvin, 1,903,496, April 4, 1933.

Tocci-Guilbert, 2,596,513, May 13, 1952.

The sole issue is whether the claimed joint and process for making it are unobvious in view of the cited prior art. No distinction has been made by the Patent Office or the appellant between process claims 33 and 35 and product claims 34, 36, and 39, and we make none here.

Appellant's steps to join the ends of a cord as set forth in claim 33 are: (1) loosening the strands adjacent to the ends of the cord; (2) covering said strands and filling the voids between them with a settable flexible plastic; (3) abutting the ends of the strands together; (4) compressing the ends to substantially the size of the cord until the plastic is cured.

The Tocci-Guilbert patent, which relates to a method of joining ends of belting, "particularly round and V belts of rubber, leather, rope and the like," enumerates the following steps: (1) paring down the ends to be joined; (2) coating the ends with rubber cement or resinous material; (3) placing a thermoplastic resinous disc between the ends; (4) inserting the cord ends into a tubular coupling; (5) abutting the ends with the disc between them within the coupling; (6) applying heat to melt the resinous disc and fuse the ends.

The patentee states that when rope is to be joined, paring down of the ends is omitted. The other steps, however, are applicable to both rubber and rope belts.

Although appellant's step of "loosening the strands" or "unravelling them" (claim 35) is not disclosed in the Tocci-Guilbert patent, the Putvin patent shows this step in producing a flat overlap seam when joining drier felts. Furthermore, when a cord is cut, the strands inherently will become unravelled. Appellant admits this result in his specification. Therefore, this step is without patentable significance. Further, it is obvious that if the strands are unravelled, the heated resinous material will permeate the voids between the strands.

[1] The only significant difference between appellant's method and that of the combined references lies in the sleeve of the Tocci-Guilbert patent. There is no question but that appellant provides in his specification for the joining of the ends of the cord without such a device. Assuming that there is patentable significance in joining the ends of a cord by means of appellant's method without a sleeve, appellant did not draw his claims to exclude the use of such a sleeve. Claims 33 and 35 state: "A process of connecting the ends of multiple-strand cords for window shades which comprises [emphasis ours]—" certain steps. Claim 39, a product claim, also uses the word "comprising" in this connection. In using these words, appellant has drawn claims which read upon the Tocci-Guilbert patent in all material respects since there is nothing in said claims to preclude the presence of a sleeve in the process or the product. In the case of *In re Cone*, 28 CCPA 1282, 121 F.2d 470, 50 USPQ 54, this court stated in affirming the rejection of certain method and product claims:

Many of the claims use the term "comprising," which does not exclude other ingredients in the composition, and none of the claims describe a composition consisting of the ingredients named in the claims.

See also *In re Cox and Clapsdale*, 22 CCPA 761, 73

¹The coupling is woven of wires on 90 degree bias so that "Elongation of the woven tubular coupling * * * constricts its diameter substantially throughout its entire length."

¹Applicant sought relief by cancellation proceedings. That relief was denied by the Examiner and sustained by the Commissioner. Applicant has not appealed from that action.

F.2d 630, 23 USPQ 348; *In re Daniel Gray, Richard O. Bailey and William S. Murray*, 19 CCPA 745, 53 F.2d 520, 11 USPQ 255.

[2] In view of the fact that appellant did not limit his claims to preclude the use of a sleeve in his process and his product, we are compelled to affirm the decision of the Board of Appeals.

AFFIRMED.

KIRKPATRICK, J., was present at the argument of this case, but did not participate in the decision.

U.S. Court of Customs and Patent Appeals

PUREX CORPORATION, LTD. (ASSIGNEE OF MANHATTAN SOAP COMPANY, INC.)

v.

THE MARYLAND PAPER PRODUCTS CO.

No. 6596. Decided February 21, 1961

[48 CCPA —; 287 F.2d 186; 129 USPQ 59]

1. TRADEMARKS—OPPOSITION—LACHES—DELAY.

Where applicant urged that, since opposer had not previously challenged its right to use the mark "SWEETHEART" on the goods specified in the registrations referred to in its notice under Rule 2.123(c), opposer was guilty of laches and could not maintain the opposition as it would not be "equitable" to prohibit registration of the mark on what applicant asserted to be the related paper products specified in the application, and where, in support of its position, applicant invoked the provision of section 19 of the Lanham Act that "In all inter partes proceedings equitable principles of laches, estoppel, and acquiescence, where applicable, may be considered and applied," Held that "Delay, as one of the elements of laches, must be an inexcusable delay" and that "The fact that opposer elected not to oppose the prior registrations does not constitute such an 'inexcusable delay.'"

2. SAME—SAME—SAME—SAME—DUTY TO OPPOSE.

"Registration of the mark 'SWEETHEART' by applicant as its trademark on drinking straws, cups, spoons, forks, plates, food containers, matches and cellulose ribbons, does not per se place a duty upon opposer to take legal action on peril of losing its exclusive rights to its mark on toilet soap and products related thereto."

3. SAME—CONFUSING SIMILARITY—"SWEETHEART" FOR TOILET SOAP AND PAPER PRODUCTS.

"We think there would be likelihood of confusion by a purchaser attributing a common source or origin to the 'SWEETHEART' toilet soap of opposer's registration and to the 'SWEETHEART' paper towels, paper toilet tissue, and paper facial tissue of applicant's application. The goods are all purchased by the same class of purchasers and are normally so related that purchase of one of them may well recall the need for the others."

4. SAME—SAME—SAME—SAME.

"In addition to such use association, the record shows that many of the retail stores selling such goods display them for sale in close proximity to each other. This further suggests to the purchaser that the goods are of a related nature and makes for greater convenience of the prospective purchaser in locating and purchasing such items. It seems to us that this fact also enhances the chances of confusion, mistake or deception as to source or origin of the goods. A purchaser passing from one display to an adjoining one and seeing the same mark 'SWEETHEART' displayed on paper towels, paper facial tissue, toilet soap and paper toilet tissue is more likely to ascribe a common source or origin to all such goods than would be the case if such goods were sold in physically separated departments or sales areas. It seems to us, therefore, that these circumstances indicate that paper toilet tissue, toilet soap, paper towels and paper facial tissue are such closely related goods that confusion, mistake or deception of purchasers as to their source or origin will be likely."

APPEAL from the Patent Office. Opposition No. 30,891.

REVERSED.

James M. Naylor, Naylor & Neal (James Atkins and Russell Law, of counsel) for the appellant.

Albert J. Kramer for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States District Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court.

This appeal was taken from the Assistant Commissioner's dismissal (121 USPQ 611) of appellant-opposer's opposition to appellee-applicant's application for registration of the trademark "SWEETHEART."

Each party uses the word "SWEETHEART," as its trademark. Opposer's predecessor had used and registered the mark for toilet soap many years before applicant used it on any of the various paper products which it sells.

Applicant took no testimony but gave notice under Rule 2.123(c) that it would rely upon its registrations of the mark "SWEETHEART" as official records of the Patent Office as follows:

- (1) Trademark Registration No. 377,958 for drinking straws,
- (2) Trademark Registration No. 379,130 for cellulose ribbons,
- (3) Trademark Registration No. 437,193 for paper cups,
- (4) Trademark Registration No. 647,868 for matches,
- (5) Trademark Registration No. 652,696 for paper spoons and forks,
- (6) Trademark Registration No. 654,599 for paper food containers and plates.

The notice further states, "The purpose of these registrations is to show the rights of applicant and a related company in the use of the name 'Sweetheart' in connection with various paper products."

The record here does not show any objection was made by opposer to any of the foregoing registrations.

The issues which require determination are:

- (1) Has opposer as the prior user and registrant of the mark "Sweetheart" for toilet soap lost its right to oppose the registration of the same mark by applicant on the goods specified in the application here in issue?
- (2) Is there likelihood of confusion, mistake or deception of purchasers as to source or origin of applicant's goods as specified in the application for registration where the mark "Sweetheart" is applied thereto?

[1] It is applicant's position that since opposer has not previously challenged applicant's right to use the mark "SWEETHEART" on the goods specified in the registrations referred to in the notice under Rule 2.123(c) it is guilty of laches and for this reason cannot maintain the present opposition as it would not be "equitable" at this time to prohibit registration of the mark on what applicant asserts to be the related paper products specified in the application here in issue. In asserting this position applicant invokes section 19 of the Lanham Act (15 USC § 1069) that "In all inter partes proceedings equitable principles of laches, estoppel, and acquiescence, where applicable, may be considered and applied."

Delay, as one of the elements of laches, must be an inexcusable delay. *United States v. Alex Dussel Iron Works, Inc.*, 5th Cir., 1929, 31 F.2d 535, 536; *Loverich v. Warner Co.*, 3rd Cir., 1941, 118 F.2d 690, 693. The fact that opposer elected not to oppose the prior registrations does not constitute such an "inexcusable delay."

[2] Registration of the mark, "SWEETHEART" by

¹ Ser. No. 691,493 filed July 18, 1955. The amended application asserts adoption and use of the mark by applicant on paper towels, paper napkins, paper toilet tissue, paper facial tissue, waxed paper, wrapping paper for frozen foods, rolls of paper for business machines and paper bags in Class 37, Paper and Stationery.

applicant as its trademark on drinking straws, cups, spoons, forks, plates, food containers, matches and cellulose ribbons, does not per se place a duty upon opposer to take legal action on peril of losing its exclusive rights to its mark on toilet soap and products related thereto.

On the issue of likelihood of confusion, mistake or purchaser deception, the Examiner, relying on the decision of this court in *Lever Brothers Co. v. The Stroux Co.*, 27 CCPA 858, 109 F.2d 445, 44 USPQ 357, and on the decision of the Commissioner in *Lever Brothers Co. v. Fort Howard Paper Co.*, 91 USPQ 341, held there was a likelihood of confusion, mistake or deception and sustained the opposition. The Assistant Commissioner reversed the Examiner after distinguishing these cases on the basis they did not involve "an ordinary English word in everyday usage in describing people and things."

We do not find this to be a tenable distinction. It is true that none of the marks in issue in those cases, i.e. "Lux," "Sit-Ru-Lux" and "Paperlux" was "an ordinary English word in everyday usage in describing people and things," but this is not the determinative test of whether or not a word may become a trademark.

The mark "SWEETHEART" here in issue is a proper trademark when applied to the goods of the respective parties. While it is a "common English word," it has had various meanings and connotations, none of which constitutes either a common or generic name for the goods on which it is used by opposer and applicant. It is not a designation descriptive of the goods or of their quality, ingredients, properties or functions. Its use on the goods here in issue is both arbitrary and distinctive. As such, it is as much a trademark for the goods to which it has been applied as were the marks involved in the *Lever Brothers* cases, supra.

[3] We think there would be likelihood of confusion by a purchaser attributing a common source or origin to the "SWEETHEART" toilet soap of opposer's registration and to the "SWEETHEART" paper towels, paper toilet tissue, and paper facial tissue of applicant's application. The goods are all purchased by the same class of purchasers and are normally so related that purchase of one of them may well recall the need for the others.

[4] In addition to such use association, the record shows that many of the retail stores selling such goods display them for sale in close proximity to each other. This further suggests to the purchaser that the goods are of a related nature and makes for greater convenience of the prospective purchaser in locating and purchasing such items. It seems to us that this fact also enhances the chances of confusion, mistake or deception as to source or origin of the goods. A purchaser passing from one display to an adjoining one and seeing the same mark "SWEETHEART" displayed on paper towels, paper facial tissue, toilet soap and paper toilet tissue is more likely to ascribe a

² The *New English Dictionary on Historical Principles*, Oxford at the Clarendon Press, 1888, indicates that the word appeared in 1290 A. D. as two words, "swete heorte," and it was "A term of endearment . . . used chiefly in the vocative." From 1589 to 1786 it was used to mean, "One who is loved illicitly; a paramour." The word has also been applied to jam tarts, burs or thorny sprays and plants bearing them, and a tame rabbit. Finally, the word also is used as a verb meaning "to court."

common source or origin to all such goods than would be the case if such goods were sold in physically separated departments or sales areas. It seems to us, therefore, that these circumstances indicate that paper toilet tissue, toilet soap, paper towels and paper facial tissues are such closely related goods that confusion, mistake or deception of purchasers as to their source or origin will be likely.

Since we have found confusion, mistake and purchaser deception likely as to some of the goods listed in the application, we reverse the decision appealed from without passing upon whether the use of the "SWEETHEART" mark on the other goods listed in the application would be likely to result in such confusion, mistake or deception.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE ELBERT O. THOMPSON

No. 6598. Decided April 14, 1961

[48 CCPA —; 288 F.2d 955; 129 USPQ 255]

1. CLAIMS—CONSTRUCTION OF CLAIMS—LIMITATION NOT EXPRESSED.

"Claim 15 calls for only one entrapment device and, if the Martinet structure has an entrapment device which meets the language of the claim, it is immaterial that the appellant's specification and drawings show an additional one, not claimed."

2. SAME—SAME—SAME.

"* * *, an element not claimed may not be supplied by the specification and the specification may be resorted to only in case of ambiguity in the claim."

3. PATENTABILITY—PARTICULAR SUBJECT MATTER—DENTISTRY APPARATUS.

Certain claims to evacuation apparatus for dental and surgical work held unpatentable over prior art; but certain other claims held patentable.

APPEAL from the Patent Office. Serial No. 411,510. MODIFIED.

Philip A. Mallinckrodt for appellant.

Clarence W. Moore (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

KIRKPATRICK, J., delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the Patent Office affirming the Examiner in his rejection of claims 7, 8, 15, 16 and 17 of a patent application, Serial No. 411,510, filed by Elbert O. Thompson for a "Method of Dentistry and Apparatus Therefor." Broad method claims 20 to 24, inclusive, have been relinquished and all the claims now in issue are for apparatus.

The main purpose of the apparatus claimed, as set out in the specification, is the evacuation from the mouth of a patient undergoing dental treatment of a sufficient volume of water to allow the dentist to use a relatively heavy wash stream when playing water upon the tooth being drilled. The specification points out that the two types of ejectors in general use are both unsatisfactory—the conventional saliva ejector, because it lacks the capacity to carry off a stream of water of the volume which the applicant considers desirable, the customary surgical aspirator, because it employs suction of such strength that it may injure

the delicate tissues of the patient's mouth. Apparently, an ordinary vacuum cleaner, when operatively connected with a tube, gives the proper suction to allow dental operations to be carried on under a sizeable stream of water without danger of injury to the patient.¹ This record discloses nothing to indicate that the invention does not accomplish its purpose.

Claim 15 may be taken as a basis for discussion and is as follows:

In evacuation apparatus for dental and surgical work utilizing a stream of fluid projected on an area being worked upon, said apparatus including a fluid-conducting tube, at least the outer reach of which is flexible and of length adapted for manipulation relative to a patient and is provided at the outer, intake end thereof with inflow orifice means, air-suction means operatively connected with said tube, and a liquids and solids entrapment device interposed between said tube and said air-suction means, in fluid-flow communication therewith, the improvement, comprising a fluid-conducting tube and inflow orifice means as specified which has inflow and conducting capacities, respectively, of at least approximately eight cubic feet of air and entrained matter per minute; and air-suction means as specified which has an exhaust to atmosphere and is capable in normal operation of evacuating from the patient said approximately eight cubic feet of air and entrained matter per minute through said tube and orifice means and which does not develop a static suction of more than approximately five inches of mercury at the said inflow orifice means.

The Board rejected all the claims now before the court upon a single reference, namely, *Martinet* 2,627,937.

Martinet's device is simply a vacuum cleaner of the canister or vertical tank type and, like most if not all cleaners of that type, has a filter device in the tank to protect the motor-fan unit in the dome and to retain and collect in the tank the dust, dirt and foreign material picked up by the cleaner in use. The Board held that *Martinet's* apparatus, which has the volumetric capacity and static suction specified in the appellant's claim, has suction means and a flexible hose which fully meet the corresponding elements of the claims.

As to the entrapment device, the appellant concedes that certain elements appearing in his specification and drawings are identical with the paper cone and tank of *Martinet* but contends that those elements are not the claimed "liquids and solids entrapment device interposed between said tube and said air-suction means." That, he says, is to be found in a different filter receptacle through which the tube passes, disclosed in the specification and drawings as being placed outside of the tank of the vacuum cleaner and at a distance from it.

[1] Claim 15 calls for only one entrapment device and, if the *Martinet* structure has an entrapment device which meets the language of the claim, it is immaterial that the appellant's specification and drawings show an additional one, not claimed. The question, therefore, is whether *Martinet's* paper cone and receptacle meet the language of the claim. We think they do.

The appellant contends that the "air-suction means" of claim 15 is the entire vacuum cleaner including both the entrapment portion consisting of the filter cone and receptacle and the motor-fan suction unit in the dome of the receptacle. Therefore, he says, since the filter cone and receptacle in the vacuum cleaner are a part of the air suction means, one must look to the external filter receptacle for the entrapment device of the claim. Inasmuch as the motor-fan unit

¹ The specification says, "As aforesaid, there are commercially available suction cleaner units which satisfy all the requisites of this invention."

of *Martinet* can be aptly described as "air-suction means" without including the entrapment assembly consisting of the bowl and receptacle, this argument is an attempt to limit the claim by the specification, which is inadmissible. Hence, claim 15 reads directly on *Martinet* and cannot be allowed.

[2] As stated, an element not claimed may not be supplied by the specification and the specification may be resorted to only in case of ambiguity in the claim. In the present case, if there were any ambiguity as to what elements the phrase "air-suction means" refers to, it would not be resolved in the appellant's favor by the specification. Where the specification refers to the vacuum cleaner as a whole, including all its various elements, it is called, not "air-suction means," but "suction cleaner unit" and in several places is identified by the numeral 18 which, in the drawings, marks the entire unit. On the other hand, where the specification is dealing with just the motor and fan in the dome of the vacuum cleaner, the term "motor-fan unit" is used with the identifying numeral 23. The terms being thus defined, it is clear that, when the appellant describes his entrapment device as being between the tube and the air suction means, he has aptly and accurately located *Martinet's* cone filter entrapment device.

It is true that claim 15 calls for a "liquids and solids" entrapment device, but, as has been pointed out, the claim does not call for two entrapment devices, and the bowl of *Martinet* with its paper cone and disc filters is capable of entrapping both liquids and solids. In fact, the appellant, who freely concedes that his cone and bowl construction and *Martinet's* are identical, points out in his specification that "Any moisture (liquid) . . . which may escape elimination . . . will be deposited in suction cleaner receptacle 19 or caught by filter cone 25." That is saying, in effect, that both his and *Martinet's* device will entrap water and, of course, solids. In short, claim 15, construed broadly, as we are bound to construe it, is not limited to a structure supplied with a separate catch receptacle external to the tank.

Claim 16 merely limits the air suction means of claim 15 by specifying that it shall be a fan. Claim 16, therefore, must fall with claim 15.

Claim 7 further limits claim 16 by specifying that the air evacuation unit shall consist of the receptacle and filter as well as the other structures of *Martinet*. This limitation, when inserted in claim 15 in lieu of the "air-suction means," does accomplish the result contended for by the appellant, that is, it includes the entrapment device of *Martinet* within the appellant's "air-suction means," and we must look to the specification to find the claimed liquids and solids entrapment device. They appear as the external filter receptacle, thus distinguishing the structure from that of *Martinet*.

Claims 17 and 8 stand upon a different basis. Like claim 15 they call for "a liquids and solids entrapment device interposed between said tube and said air-suction means" but add a "removable and water-resistant filter receptacle disposed within the entrapment device for catching and retaining solid matter carried by the incoming stream of air" (claim 17) or "the entrapment device includes, internally thereof, a removable, water-resistant, filter receptacle for solid matter removed from the stream of air" (claim 8).

Martinet does not disclose such a structure since his only entrapment or catch device consists of the cone and the bowl taken together. The bowl is a receptacle but it is not "disposed within" itself. The cone is not a "receptacle" because the material which it collects would be deposited on its external surface rather than in the interior as would be the case if the word "receptacle" described it.

[3] Claims 17, 8 and 7, therefore, do not read on the *Martinet* disclosure. Inasmuch as there is no other art cited against the application and the Board's decision rests entirely upon *Martinet*, we hold that the decision is erroneous as to claims 17, 8 and 7, and it is reversed as to those claims.

The decision is affirmed as to claims 15 and 16. MODIFIED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

- 2,129,332, D. Mastini, Telephone system, filed July 27, 1961, D.C., S.D.N.Y., Doc. 61/2676, *Domenico Mastini v. American Telephone and Telegraph Company et al.* Same, filed same, Doc. 61/2677, *Domenico Mastini v. General Telephone and Electronics Corporation*. Same, filed same, Doc. 61/2678, *Domenico Mastini v. International Telephone and Telegraph Company*.
- 2,333,134, Markus and Buehler, Jr., Refrigeration apparatus, filed Jan. 26, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c141, *Frick Company v. Peter Hand Brewery Company*. Dismissed by stipulation, with prejudice, Apr. 17, 1961.
- 2,543,689, M. G. Driessen et al., Process for the separation of solids of different specific gravity and grain size, filed July 31, 1961, D.C., M.D. Pa. (Scranton), Doc. 7353, *Stamcarboron N.V. v. Jeddo-Highland Coal Company*.
- 2,558,467, B. P. Solomon, Pleating device, filed Feb. 7, 1961, D.C., E.D. Mich. (Detroit), Doc. 20/902, *Pleatmaster, Inc. v. Kirach Company*. Complaint dismissed Aug. 1, 1961.
- 2,611,900, H. Hertz, Necktie, Suit for Declaratory Judgment, filed July 26, 1961, D.C., W.D.N.Y. (Buffalo), Doc. 9269, *Wembley, Inc. v. Superba Cravats, Inc.*
- 2,722,714, J. R. Blizard et al., Shurring machine, filed Mar. 15, 1957, D.C., N.D. Ill. (Chicago), Doc. 57c468, *Tee-Pak, Inc. v. Union Carbide & Carbon Corporation et al.* Cause dismissed by stipulation without prejudice Nov. 3, 1960.
- 2,750,061, A. B. Campbell, Cover member for dispensing valve structure, filed July 10, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1269, *Precision Valve Corporation v. Campbell Products Company*. Cause dismissed by stipulation Apr. 17, 1959.
- 2,766,906, F. V. Bookout, Selective bottled beverage vending machine, filed July 30, 1958 (amended complaint filed Sept. 2, 1958), D.C., W.D. Mo. (Kansas City), Doc. 11/986, *The Vendo Company v. Coca Cola Bottling Company*. Claims 3, 5 and 6 of patent held valid and infringed; defendant William F. Crome & Co. enjoined Jan. 16, 1961. Appeal, filed Mar. 21, 1961, C.C.A., 8th Cir., Doc. 16/735, *William F. Crome & Company, doing business as Coca Cola Bottling Company v. The Vendo Company*.
- 2,766,918, A. A. Armstrong, Cast iron valve seat insert, filed Jan. 25, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c136, *Thompson Ramo Wooldridge, Inc. v. Wausau Motor Parts Company*. Cause dismissed pursuant to Rule 41(a) (1) Mar. 17, 1961.
- 2,793,066, A. E. Davis, Non-curling gummed paper, method and composition for making same, filed Sept. 9, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1665, *Nashua Corporation v. Minnesota Mining & Manufacturing Company*. Complaint dismissed by stipulation and order without prejudice Dec. 16, 1960.
- 2,805,780, F. P. Brennan, Garment supporting structure, filed Nov. 21, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1815, *Brennan Engineering Corporation et al. v. James R. Zeman, et al.* Notice of dismissal under Rule 41(a) Apr. 20, 1961.
- 2,812,595, E. A. Drott, Earth moving apparatus, filed July 31, 1961, D.C., S.D. Ill. (Peoria), Doc. P-2449, *Drott Manufacturing Corporation v. Ulrich Manufacturing Company*.
- 2,831,244, I. A. Weaver, Wheel alignment gauge, filed Aug. 4, 1961, D.C., S.D. Ill. (Peoria), Doc. P-2450, *Dura Corporation v. Bear Manufacturing Company*.
- 2,831,736, R. K. H. Runckel, Lubricating devices, filed May 27, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c944, *Rolf K. H. Runckel v. The Rolin Corporation*. Stipulation dismissing cause with prejudice July 27, 1961.
- 2,854,066, C. J. Gelmer, Maternity garment, filed Oct. 27, 1959, D.C., E.D. Mich. (Detroit), Doc. 19/531, *Freeman Manufacturing Company v. Federal Department Stores, Inc.* Decree dismissing complaint July 31, 1961.
- 2,860,184, W. H. Zegers, Clip for combination weatherstrip and wash balance, filed July 30, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1234, *Zegers, Inc. v. Precision Weatherstrip Company*. Injunction granted; counterclaim dismissed Dec. 12, 1960.
- 2,934,932, H. B. Wagner, Hydraulic cement mortar compositions and methods of use, filed Dec. 9, 1960, D.C., S.D. Tex. (Houston), Doc. 13/447, *Title Council of America, Inc. v. C. E. Kaiser Co. et al.* Consent judgment; patent held valid and infringed Aug. 1, 1961.
- 2,933,411, D. E. Herfurth, Support arrangement for electric drills, or the like, filed Aug. 1, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/096, *Magnetic Tool Corporation v. Buz Magnetic Products, Inc.*
- 2,957,793, J. W. Dickey, Laminating polyurethane foam, filed Aug. 2, 1961, D.C. Conn. (New Haven), Doc. 8905, *Reeves Brothers, Inc. v. The Princeton Knitting Mills, Inc.*
- 2,962,778, Peak and Wade, Pouring control for aluminum ingots, filed July 26, 1961, D.C., E.D. Wash. (Spokane), Doc. 2144, *James Wade et al. v. Kaiser Aluminum and Chemical Corporation*.
- 2,974,336, G. P. Kelley, Adjustable dockboard, filed Aug. 7, 1961, D.C., S.D. Ohio (Columbus), Doc. 6176, *Kelley Company, Inc. v. Auto-Mechanical Dock Board, Inc.*
- 2,982,547, R. D. Carrier, Aquatic play equipment, filed June 15, 1961, D.C., S.D.N.Y., Doc. 61/2140, *Wham-O Manufacturing Company, Inc. v. Prospect Leather Goods Co., Inc. et al.* Consent judgment; defendants enjoined Aug. 1, 1961.

REISSUES

SEPTEMBER 19, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

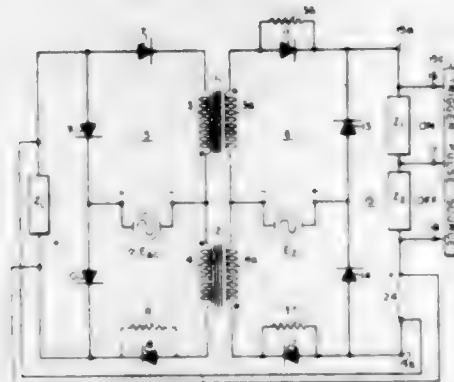
25,038

MAGNETIC AMPLIFIER CONTROL CIRCUIT

Robert A. Ramsey, Jr., 116 Clearview Drive, R.D. 1, Library, Pa.

Original No. 2,717,965, dated Sept. 13, 1955, Ser. No. 355,891, May 18, 1953. Application for reissue May 22, 1957, Ser. No. 661,564

22 Claims. (Cl. 307-88)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A magnetic trigger circuit comprising a pair of saturable magnetic cores, magnetizing means operative to apply a magnetizing force to said cores successively, demagnetizing means operative to apply a demagnetizing force to said cores successively and to each core in alternation with said magnetizing means, means responsive to the application of a first triggering pulse to said circuit to render said demagnetizing means ineffective thereby permitting said magnetizing means to saturate said cores, and means responsive to the application of a second triggering pulse to said circuit to re-establish said demagnetizing means effective in said circuit.

25,039

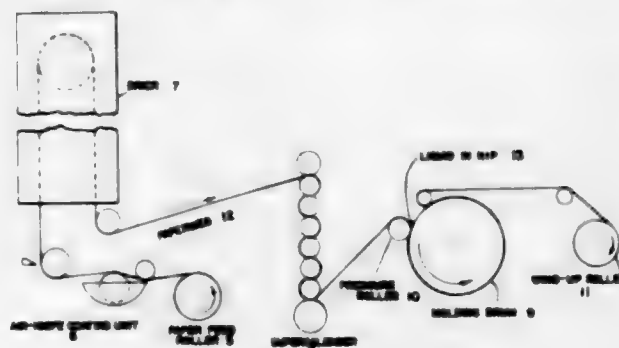
METHOD OF PRODUCING HIGH GLOSS MINERAL-COATED PAPER AND RESULTANT PRODUCT

Frederick H. Frost, Portland, and Philip S. Leighton, Westbrook, Maine, assignors to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
Original No. 2,759,847, dated Aug. 21, 1956, Ser. No. 343,584, Mar. 20, 1953. Application for reissue May 19, 1958, Ser. No. 736,422

4 Claims. (Cl. 117-64)

16. The method of forming a high specular gloss on the surface of a coating on a paper web, the coating comprising a water-swellable hydrophilic adhesive material and having a smooth, dry, densified surface, which method includes the steps of: moving the paper web toward and pressing said coated surface against a polished heated finishing surface, applying a limited amount of an aqueous liquid to the surface of said coating during movement of the web so that liquid will be picked up by said coating to swell only the coating surface; limiting the quantity of said liquid picked up by the surface of said coating to an amount no greater than that which can be readily absorbed by said coating to prevent penetration of said liquid through said coating and into the paper to an extent which

would cause wetting and swelling of the paper web; pressing the surface of said coating while at least the surface portion of said coating is swelling and while at least a



portion of said liquid is at the surface of said coating, against said polished heated finishing surface; and drying said coating while the surface of the same is in adhesive contact with said polished heated finishing surface.

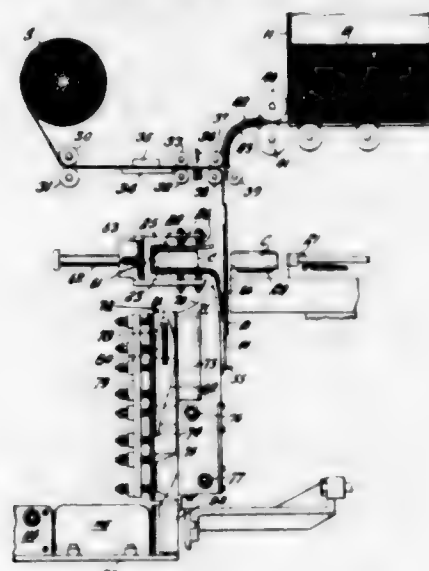
25,040

WRAPPING MECHANISM AND A METHOD OF WRAPPING ARTICLES

Anton Richard Frank, Jamaica, and William H. Giles, Brooklyn, N.Y., assignors, by mesne assignments, to Van Buren Machine Corp., Brooklyn, N.Y., a corporation of New York

Original No. 2,911,774, dated Nov. 10, 1959, Ser. No. 599,227, July 20, 1956. Application for reissue Nov. 1, 1960, Ser. No. 66,682

5 Claims. (Cl. 53-27)



3. A method of packaging an article which consists of superposing a box blank having two sets of laterally projecting tabs on a wrapper sheet and holding the blank and sheet in a predetermined superposed relation against relative movement between the box blank and wrapper sheet with the wrapper sheet extending beyond and overlapping the major portion of the box blank at one end of the blank and the box blank extending beyond and overlapping the wrapper sheet at the other end of the blank, folding the blank and wrapper sheet around an article to be wrapped with the ends of the blank and the ends of the wrapper sheet overlapping, simultaneously forming

SEPTEMBER 19, 1961

U. S. PATENT OFFICE

429

end tucks in the wrapper in the projecting ends of the wrapper, and folding the tabs of the box blank against the ends of the article, and completing and folding and sealing the wrapper ends around the box and article.

25,041

AIRCRAFT PAYLOAD COMPUTER

Archie J. Clapp, Jr., 5411 Littleford St., Springfield, Va.
Original No. 2,867,381, dated Jan. 6, 1959, Ser. No. 699,426, Nov. 27, 1957. Application for reissue Apr. 29, 1959, Ser. No. 809,895

6 Claims. (Cl. 235-61)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. A computer for helicopters comprising a base member having a plurality of sets of curves fixedly carried

thereby, said sets being disposed each, respectively, in a different sector of the same circular region; one of said sets showing the effect of air temperature on allowable gross weight; a second one of said sets showing the effect of dew point on allowable gross weight; a third one of said sets showing the effect of take-off headwind on allowable gross weight and a second member serving as an indicating member mounted for rotation relative to said first member about an axis perpendicular to and passing through the center of said circular region; said second member having spaced markings radially extending from said axis, each having an index point and being arranged to cooperate, respectively, with one of said sets of curves; one of said radial markings being calibrated in altitude and cooperating with said first set of curves; another of said markings being calibrated in dew point temperature and cooperating with said second set of curves; the third one of said markings being calibrated in take-off headwind velocity and cooperating with said third set of curves; the sector containing said third set of curves being provided with an arcuate scale described about said axis and calibrated in gross weight; the positions of said sets of curves on said base member and said markings on said indicating member being so arranged that movement of said indicating member to position a selected altitude mark to coincide with a selected air temperature curve will cause the index point of said dew point temperature marking to indicate a curve of said second set, further movement of said indicating member to position a selected dew point mark to coincide with said indicated curve will position the index point of said headwind velocity marking to designate a curve of said third set, and still further movement of said indicating member to position a selected headwind velocity mark to coincide with said designated curve will cause the junction of said third marking with said scale to indicate the allowable gross weight corresponding to the selected air temperature, altitude, dew point and headwind.

PLANT PATENTS

GRANTED SEPTEMBER 19, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,092

LITTLELEAF LINDEN TREE

Edward H. Scammon, 7621 Lewis Road, Olmsted Falls, Ohio

Filed Feb. 25, 1960, Ser. No. 11,116

1 Claim. (Cl. 47-59)

A new and distinct variety of Littleleaf Linden tree (*Tilia cordata*), substantially as herein shown and described, characterized and distinguished from the species by its straight and rapid growth, its uniform branching habit in whorls about the trunk and its excurrent form.

2,093

ROSE PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Nov. 18, 1960, Ser. No. 70,363

1 Claim. (Cl. 47-61)

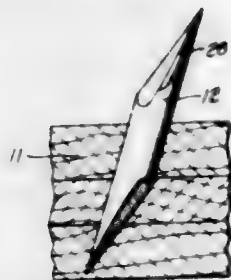
A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a plant habit which is generally similar to that of the variety "Peace" (Plant Patent No. 591), an exquisite shape and large size of the flowers comparable to those of the variety "Peace," and an unusual and distinctive Ivory Yellow, lightly overcast with La France Pink general color tonality of the flowers.

PATENTS

GRANTED SEPTEMBER 19, 1961

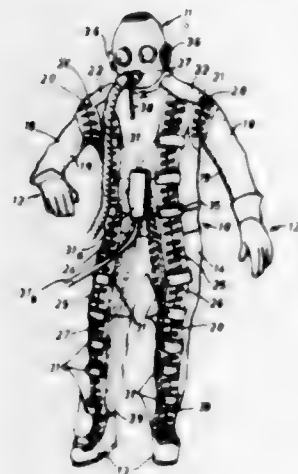
GENERAL AND MECHANICAL

3,000,009
METHOD OF MAKING CARPET GRIPPERS
Richard H. Selstad, West Covina, Calif., assignor to The Roberts Co., a corporation of California
Filed Sept. 28, 1959, Ser. No. 842,705
4 Claims. (Cl. 1-82)



1. A method of forming a carpet gripper, including the steps of:
providing a carpet nail comprising a length of metal nail wire having a beveled face on each end, said faces being parallel and forming points at each end of the nail;
inserting said bottom end of the nail into a wooden strip through the top surface thereof a distance substantially less than the thickness of the strip and so that the axis of the nail is at an acute angle to the upper surface of the strip;
reforming the point on the upper end of the nail to form a sharper point; and
driving the nail farther into the strip to a position in which the bottom point of the nail is adjacent to the lower surface of the strip but does not penetrate the same.

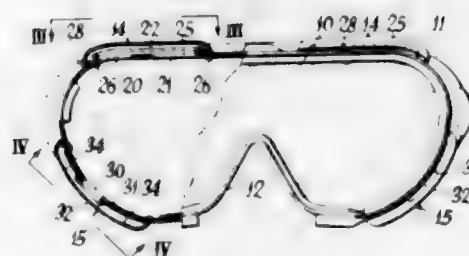
3,000,010
PRESSURE SUIT
Carl Rich, Toronto, Ontario, Canada, assignor to King-hurst Limited, Toronto, Ontario, Canada
Filed May 10, 1955, Ser. No. 507,405
4 Claims. (Cl. 2-2.1)



1. A pressure suit adapted to compensate for changes in atmospheric pressure upon the body of a wearer and comprising in combination: metal wire fabric gas permeable pliable panels of limited interstitial stretchability formed to enclose the human body; electrical tensioning means attached to portions of adjacent panels; and electrical conducting means for providing electrical energization of said tensioning means whereby said panels are ten-

sioned to apply a predetermined pressure to the body of the wearer while enabling the skin of the body to breathe through said panels at substantially atmospheric pressure.

3,000,011
SAFETY GOGGLE
Willard F. Sterne and Roy A. Bright, Buffalo, N.Y., assignors to Virginia I. Du Bois, Snyder, Laurene T. Holzworth, Rita C. Sterne, and Eileen Silbert, Buffalo, and Florence E. Taylor, Kenmore, N.Y.
Filed July 26, 1957, Ser. No. 674,386
2 Claims. (Cl. 2-14)



1. In a safety goggle, a lens member, frame means about the marginal portion of the lens member and extending rearwardly substantially to the wearer's face, said frame member forming an enclosing wall between the lens member and the wearer's face, and ventilating means comprising an opening in such enclosing wall and a convex shield disposed over said opening but spaced outwardly therefrom, an outward flange on said enclosing wall surrounding said opening and projecting into the space within said convex shield, said shield having an opening therein out of registry with the enclosing wall opening and its surrounding flange to provide an indirect ventilating air passage from the surrounding atmosphere to the space enclosed within the goggle.

3,000,012
POLICEMAN'S OVERCOAT
Raymond M. Neil, 43 Putnam St., Waterbury, Conn.
Filed May 18, 1960, Ser. No. 29,848
1 Claim. (Cl. 2-94)



A policeman's overcoat of the type adapted to extend to a point between the waist and the knees of the wearer, said overcoat having overlapping front vertical edge portions adapted to be secured together, one of the lower front edge portions of said overcoat having a vertical slot spaced from its vertical edge, said vertical slot extending upwardly from the bottom edge of said overcoat and joined at its upper end with a horizontal slot formed in the overcoat, extending inwardly towards the center and terminating in an oval aperture for receiving the upper loop of a revolver holster, said loop being adapted to pass through said oval aperture and encircle the policeman's belt which is worn inside said overcoat with the holster hanging outside said overcoat below said

SEPTEMBER 19, 1961

GENERAL AND MECHANICAL

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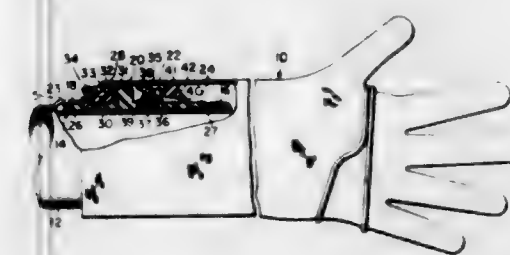
aperture, the lower central portion of said overcoat between said vertical slot and its vertical edge comprising a flap overlapping said vertical slot, and means to detachably secure said overlapping flap in closed position to the outer side of said slot.

3,000,013
WITHIN-THE-SHOE SOCK
William J. Traenkle, 61 Old Ox Road, Manhamet, N.Y.
Filed Sept. 8, 1959, Ser. No. 838,632
2 Claims. (Cl. 2-240)



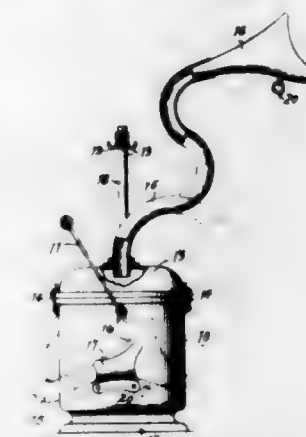
1. A within-the-shoe cuff-less sock consisting of toe, sole, heel and instep-engaging portions, the sock being of a height to be co-extensive with the height of a standard sports shoe to be worn with said sock, the upper edge of the rear portion of the sock adapted to be substantially coterminous with the rear upper edge of said shoe, and a dangle comprising a narrow connecting member and an enlarged member, the connecting member secured at one end to the upper edge of said rear portion of the sock and at the other end to said enlarged member and said enlarged member adapted to be disposed outside of said rear upper edge of said shoe in snug engagement therewith to prevent the sock from riding down inside said shoe.

3,000,014
FLIGHT SUIT DISCONNECT
Randall F. White, Downey, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 18, 1959, Ser. No. 794,215
8 Claims. (Cl. 2-270)



1. A disconnect for detachably connecting a flexible tubular appendage member telescopically to a flexible tubular body member of a flexible pressure flight suit comprising a semiflexible bushing adapted to be attached to one of said members and having an annular external shoulder, said bushing capable of being flexed into an oval cross-sectional configuration to facilitate entry of an appendage of the occupant of the suit, a semiflexible retaining ring concentrically mounted around said bushing, said ring and shoulder having complementary bearing surfaces tending to resist longitudinal separation while permitting relative rotation, and elongate expandable means adapted to be connected to and extending around the periphery of another of said members for detachably clamping said ring against the bushing in rotatable relation.

3,000,015
HOSPITAL APPLIANCE
Honey E. Hart, 309 Hayes St., San Francisco, Calif.
Filed Oct. 17, 1960, Ser. No. 63,127
1 Claim. (Cl. 4-110)



In a combined urinal and body movement accommodating facility, the combination of a pail-like container having a bale for convenient handling, a cover removably attached to said container having a central opening, a flexible conduit attached to said cover and extending through said central opening, a flaring substantially rigid cone-like member attached to the upper end of said flexible conduit, the length of said flexible conduit being sufficient to reach from said container to said cone-like member when applied to a bedridden patient, a saddle-like bracket mounted upon the side of said container and contoured to receive and support said cone-like member with said flexible conduit in a coiled condition about said receptacle when said container is being moved from one bed to another, and an upwardly projecting post secured to said container for temporarily supporting said conical member in an elevated position at bed level following a use thereof, and characterized by the fact that said conical member is substantially elliptical in cross-section at its open end and contoured to engage with and encompass the genital region of a patient when in a reclining position, and by the fact that said open end has an inwardly extending lip forming a dam across the lower region of said opening to prevent the escape of fluid when in use.

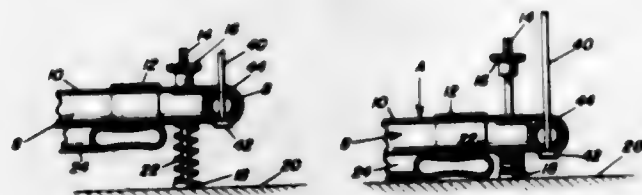
3,000,016
MAGNETIC SECURING MEANS
Stockwell A. Ridge, 907 W. Water St., Elmira, N.Y.
Filed Mar. 3, 1960, Ser. No. 12,606
1 Claim. (Cl. 4-149)



Magnetic means for attaching a flexible curtain or the like to the plane surface of a ferrous member including a permanent magnet of generally rectangular cross-section, and a pole piece of magnetizable material having a U-shaped cross-section loosely surrounding said magnet on three sides, leaving the fourth side free for direct engagement with said ferrous member, said curtain being grasped between the pole piece and magnet to form the sole attachment of said magnetic means to the curtain; the edges of said pole piece terminating in close prox-

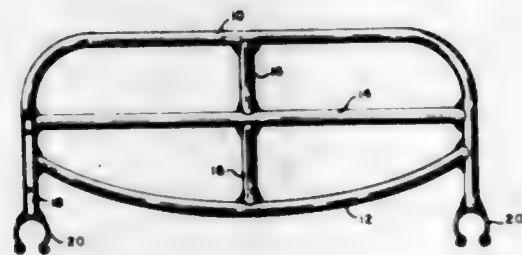
imity to the surface of said fourth side of said magnet whereby when said attaching means is brought into contact with the surface of the ferrous member, said ferrous member substantially completes the magnetic circuit of said magnet; in which said magnet is so polarized that said fourth side constitutes one pole, and the opposite side, surrounded by the pole piece, constitutes the other pole.

3,000,017
SAFETY-NET FOR SWIMMING POOLS
Leonard A. Skovira, 6304 Eastern Ave.,
Baltimore 24, Md.
Filed July 10, 1959, Ser. No. 826,223
2 Claims. (Cl. 4-172)



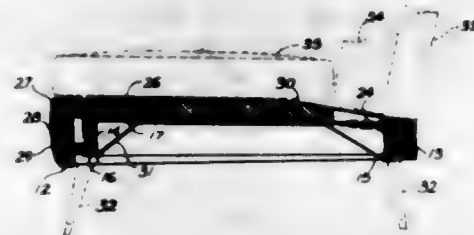
1. A safety net for swimming pools, comprising in combination, a perimetric frame, interwoven webbing of resiliently elastic material secured to and spanning said frame, a continuous inflatable and deflatable tube secured to the underside of the frame and extending substantially perimetrically of the latter, said tube when inflated providing buoyancy for the frame whereby the same may float on water, a plurality of spring-biased legs provided on and projecting downwardly from said frame for depressing supporting the same in an elevated position on the bottom of a pool when said tube is deflated, a normally closed compressed air supply valve adapted to be stationarily mounted adjacent a side of a pool, a flexible hose communicating said valve with said tube, and means connected to said frame and responsive to depression of the frame on said legs for opening said valve and thereby inflating said tube.

3,000,018
END BOARD FOR LITTERS
Joseph M. Collins, Richmond, Mich. (1453 Aeromed
Evacuation Sq., APO 953, San Francisco, Calif.)
Filed Dec. 16, 1958, Ser. No. 780,969
2 Claims. (Cl. 5-82)
(Granted under Title 35, U.S. Code (1952), sec. 266)



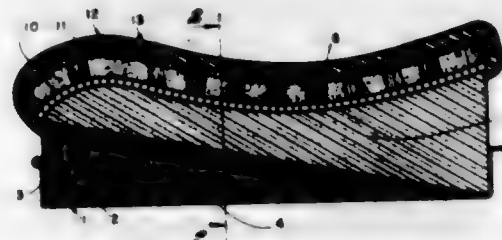
1. In combination with a foldable stretcher comprising a flexible sheet of fabric made fast to two side rails extending beyond said fabric to form handles for carrying a human patient, an end frame adapted to hold a pillow in place including an outer U-shaped member, a base member connecting the legs of said outer U-shaped member, essentially U-shaped spring means fixedly attached to the ends of said U member and fitting over the handles of said side rails of said stretcher to form an end board for said stretcher.

3,000,019
SEAT CONSTRUCTION FOR UPHOLSTERED FURNITURE
Leslie R. Maurer, East Palestine, Ohio, assignor to Kamm Manufacturing Company, East Palestine, Ohio, a corporation of Ohio
Filed Dec. 3, 1959, Ser. No. 857,120
8 Claims. (Cl. 5-345)



1. A seat construction for upholstered furniture comprising in combination a frame having front, back and side rails, secondary front and back rails positioned in co-axial relation to said front and back rails, a section of flexible sheet material secured to said secondary front and back rails and stretched therebetween and secured at its side edges to said side rails, and a first section of urethane foam positioned on said section of flexible sheet material, additional sections of urethane foam positioned on said front rail and separate sections of flexible sheet material one of which is secured to said frame and positioned over said additional sections of urethane foam on said front rail so as to hold said foam in position thereon and another one of which is secured to said secondary front rail and to said back rail and positioned over said first section of urethane foam so as to hold the same in position on said first mentioned section of flexible sheet material.

3,000,020
SAFETY CUSHION
Charles F. Lombard, Rolling Hills, and Kenneth E. Green, Santa Ana, Calif., assignors to United Tanks, Inc., Alhambra, Calif., a corporation of California
Filed May 15, 1958, Ser. No. 735,399
5 Claims. (Cl. 5-355)

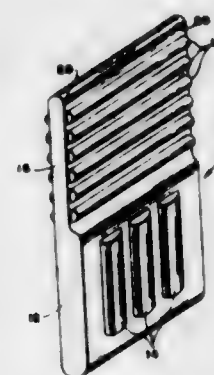


1. A safety cushion, comprising: a base structure substantially uniformly distributed of essentially inelastic deformable energy-absorbing material; a continuous load-distributing structure, substantially rigid and non-deformable under normal conditions of use covering said base structure; and a continuous resilient cushion unit covering said load-distributing structure.

3,000,021
COMBINATION BOAT FENDER AND BOAT STEP
Charles Lang, 24th and Blvd., Ship Bottom, N.J.
Filed Aug. 21, 1958, Ser. No. 756,489
2 Claims. (Cl. 9-1)

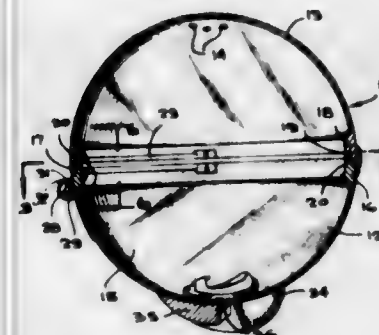
1. A combined fender and step plate device for protecting the gunnel of a boat comprising, in combination, a rectangular shaped one-piece rubber panel including a fender section and a step section, said step section being integrally connected to said fender section by a thin strip of rubber joining the adjacent portion of said fender section intermediate its front and rear walls, the rear wall of said fender section provided with a plurality of hori-

zontally spaced apart parallel vertical segmental cylinder members integral therewith, and both sides of said step section provided with a plurality of spaced apart



parallel horizontal segmental cylindrical elements, said step section to be disposed substantially at right angles to said fender section serving to protect the gunnel of the boat applied thereto from damage.

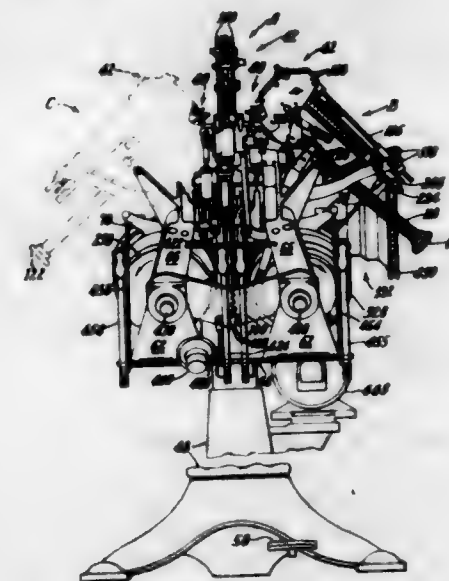
3,000,022
SPHERICAL AMUSEMENT DEVICE
Carol M. Cathey, 511 Summers Lane, and William H. Finch, 2682 Eberline St., both of Klamath Falls, Oreg., and Alwyn R. Bechtold, Roseburg, Oreg.
Filed July 10, 1959, Ser. No. 826,202
6 Claims. (Cl. 9-310)



1. An amusement device of the character described comprising a pair of mating transparent hemispherical shell members adapted to define a generally spherical enclosure to receive an occupant, clip means on the external rim portions of the shell members releasably holding the rim portions of the shell members together at one location of the enclosure, vertically aligned elongated horizontal gripping elements mounted internally on the rim portions of the shell members substantially diametrically opposite said clip means and being spaced sufficiently close together vertically so that the occupant may simultaneously grip the gripping elements, and sealing means interposed between the rim portions of the shell members.

3,000,023
MACHINES FOR SHAPING UPPERS OVER LASTS
Charles B. Noonan, Vassalboro, Maine, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Apr. 28, 1959, Ser. No. 809,433
13 Claims. (Cl. 12-7.6)

1. In a machine for shaping uppers over lasts and having a wiper and a support for a last with an upper and sole assembled thereon, means for moving the wiper height-wise of the last to wipe the upper into the angle between the last and a marginal extension of the sole and then press the margin of the upper and the sole extension against said support, a tool mounted for movement relatively to the wiper for forming a fastener-receiving hole in the sole and margin while they are pressed together,



hole to secure the sole and margin in pressed together relation.

3,000,024
SHOE MACHINE
Frank Hlobil, Laurelton, and Herman Schwabe, New York, N.Y., assignors to Herman Schwabe, Inc., Brooklyn, N.Y., a corporation of New York
Filed Feb. 16, 1959, Ser. No. 793,507
20 Claims. (Cl. 12-8.3)

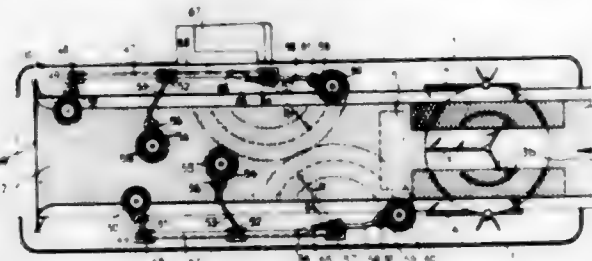


1. A shoe lasting machine comprising a rotatably mounted tool in the form of a screw with left and right-hand threads disposed end to end, means to support a shoe assembly including a last with an insole and an upper, means to move said support means in order to move said shoe assembly against said tool, with the plane of the insole substantially parallel to the axis of the tool, and with the shoe assembly moving lengthwise transversely of the axis of the tool at the middle of the tool, and motor means to rotate the tool in that direction which causes the tool to pull both sides of the upper simultaneously inward around the insole as it presses the edge of the upper against the insole.

3,000,025
VEHICLE WASHING PLANT
Roberto Emanuel, 7 Via Canova, Turin, Italy
Filed Apr. 16, 1957, Ser. No. 653,221
Claims priority, application Italy June 3, 1953
2 Claims. (Cl. 15-21)

1. In a vehicle washing plant, a passageway for the vehicle having an entrance and exit end; a pair of rotary brushes at opposite longitudinal sides of the passageway; mounting means for each brush comprising a stationary support and an arm in which the brush is rotatably supported from the support for a swinging movement about a vertical axis, the arm having a radius sufficient

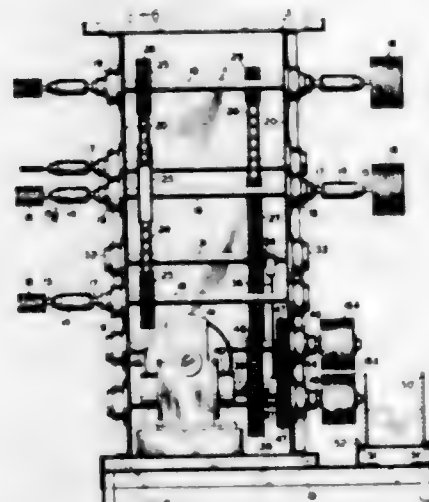
for the brush to reach a longitudinal mid-plane of the passageway; the two supports being staggered lengthwise of the passageway with respect to each other whereby a brush can effectively engage during its swinging movement a rearwardly facing surface on the body of a vehicle traveling through the passageway in advance of



the opposite brush; said arms normally extending toward the entrance end of the washing plant and a control means associated with each arm for controlling swinging movements of the arm within a range including a position in which the arm extends from its associated support towards the entrance end to a position wherein the brush extends towards the exit end of the passageway.

3,000,026

MACHINE FOR BRUSHING PIPE FITTINGS
Klaus Prime, 104 East D St., Wellston, Ohio, and Arthur J. Stockmeister, 227 Main St., Jackson, Ohio
Filed June 13, 1958, Ser. No. 741,947
8 Claims. (Cl. 15—21)



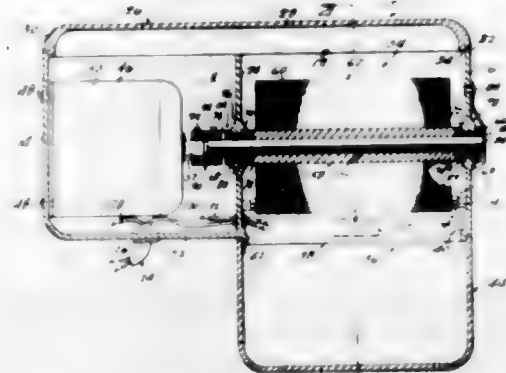
1. A machine for cleaning pipe fittings or the like comprising a supporting structure, a drive shaft, a series of spindles rotatably mounted on the supporting structure, gearing for transmitting rotary motion from said shaft to each of said spindles, a wire brush mounted on each of said spindles, a driving motor, and means connecting said motor to said shaft for continuously imparting an oscillating movement to said shaft about its axis.

3,000,027

ROTARY BRUSH CLEANING MACHINE
Herman L. Swords, Rte. 2, Minford, Ohio
Filed Dec. 31, 1959, Ser. No. 863,186
4 Claims. (Cl. 15—21)

1. A rotary brush cleaning machine comprising a horizontally elongated closed hollow housing having first and second end walls, a back wall, a front wall, and an abbreviated bottom wall, said abbreviated bottom wall being spaced from said second end wall to define a particle discharge opening, a vertical transverse partition wall extending across the housing and spaced from said first end wall, an electric motor mounted in the casing between said first end wall and said partition wall, a horizontal rotary brush extending between and

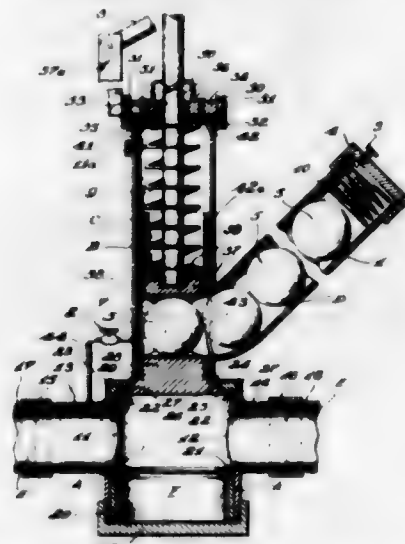
journaled in said partition wall and said second end wall, means operatively connecting the motor to the brush, said brush being positioned over said discharge opening, said front wall having an opening exposing the forward side of the brush, said motor being mounted on the first end wall and having a shaft axially aligned with the brush, said brush comprising a polygonal shaft, a core



non-rotatably circumsposed on the polygonal shaft, and a cylindrical bristle-equipped brush element surrounding and fixed to the core, said polygonal shaft having bearings non-rotatably engaged on its ends located outwardly of the ends of the core, said partition wall and said second end wall having bearing openings in which said bearings turn, and a coupling separably connected to the motor shaft to the adjacent end of the polygonal shaft.

3,000,028

PIPELINE CLEANING DEVICE
John C. Bule, 11418 72nd Ave., and Reginald M. Rault, 1311 75th Ave., both of Edmonton, Alberta, Canada
Filed June 3, 1958, Ser. No. 739,594
2 Claims. (Cl. 15—104.06)



1. Apparatus for inserting pig balls into a pipeline comprising, a tubular casing for disposition in and transversely of said pipeline, said casing having aligned lateral orifices and conduit coupling means associated therewith for connecting the casing in said pipeline, covers closing both ends of the casing, one of said covers having an opening therethrough defining an inwardly facing valve seat, a hollow cylinder connected at one end to said one cover about said opening and extending from the casing, an injector slidably mounted within said cylinder and passable through said opening, said injector being formed with a transverse cage having diametrically opposite openings alignable with said orifices when the injector is moved into the casing, the end of the injector nearest the casing carrying a valve normally seated on said valve seat and checking motion of the injector away from the casing, the other end of the injector being in the form of a cylindrical cup, a bracket secured within the cup, a

cylinder cover closing the end of the cylinder remote from the casing, a spindle slidably mounted through the cylinder cover with its inner end secured to said bracket, a tension spring encircling the spindle and connected at its ends to the bracket and cylinder cover, manually operable lever means connected to the outer end of the spindle for moving the injector into the casing against the tension of said spring, fluid lock preventing means between the cylinder and injector, a valved pressure equalizing conduit between the cylinder and one said conduit coupling means associated with the casing orifices, and an angularly disposed pig ball magazine connected to and opening into the cylinder so as to register with said cage when said valve is seated, said magazines having a removable closure with a bleed valve means and also having spring means therein for biasing the pig balls toward the cylinder.

3,000,029

BATH TUB CLEANING BRUSH
Stuart G. Wood, 2700 Q St., NW., Washington, D.C.
Filed Jan. 8, 1960, Ser. No. 1,380
2 Claims. (Cl. 15—172)



1. In a brush for scrubbing bath tubs and the like, a handle, a brush pivotally mounted upon said handle, brush guide means mounted upon said handle and co-operatively engaging said brush for angular pivotal movement of said brush with respect to said handle, a sleeve-like member slidably and rotatably mounted upon said handle, said sleeve-like member being provided with a longitudinally extending slot and a plurality of radially extending slots leading from said first mentioned slot, a stop mounted upon said handle for interengagement with said slots, said stop moving within said first mentioned slot for longitudinal movement of said brush guide means and angularly pivotally moving said brush, with said stop moving into one of said radially extending slots for preventing further longitudinal movement of said sleeve-like member and locking said brush in a given pivotal position, and spring means constantly urging said sleeve-like member in a direction against said stop for movement of said stop into said radially extending slots.

3,000,030
BRUSH

Carl Colbert Ours, Ridgewood, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,868
1 Claim. (Cl. 15—201)

A brush comprising an integral body of a synthetic, flexible thermoplastic material and a plurality of tufts; said body having a substantially smooth uninterrupted upper surface and a lower surface; said lower surface having a series of substantially straight lands and uninterrupted grooves; said grooves extending across the entire lower surface; said lands retaining the tufts of said brush

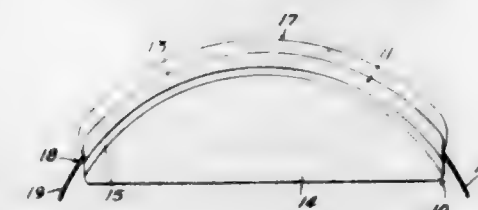
and so formed that the height of said lands measured in a direction perpendicular to said upper surface is less than three times the width of said grooves measured in a direction parallel to said upper surface and perpendicular to the long axis of said lands; said upper surface being pro-



vided with a plurality of thin projections that extend upwardly from the perimeter of the upper surface of said brush; and wherein adjacent projections are separated by notches; said notches being directionally opposed to said grooves and the bottoms of said notches being substantially coincident with the upper surface of said brush.

3,000,031

TYPE CLEANING DEVICE WITH REVERSIBLE CLEANING ELEMENT
Frank A. Stirrup, 517 Carleton Road, Westfield, N.J.
Filed July 23, 1959, Ser. No. 829,079
4 Claims. (Cl. 15—210)



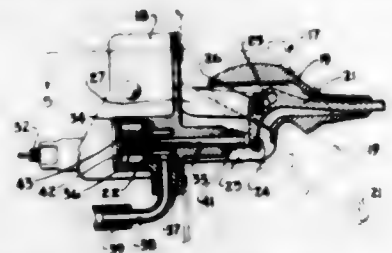
1. A type cleaning device comprising an arc-shaped channel, including a centrally disposed reinforcing web on the concave surface thereof, said web forming a finger-piece portion facilitating operation of the device, said channel having on the convex surface thereof side flanges extending only in a radial direction, a cleaning element in the form of a thick strip arranged in the channel of the device within said flanges, said element being of sufficient thickness to project beyond the flanges of said channel, a stripper tape arranged between the bottom of the channel and said element, said tape having finger-piece ends protruding beyond ends of said channel, thereby facilitating stripper removal of the element from the channel of the device, and said web extending the full length of the channel portion of the device.

3,000,032

WINDSHIELD CLEANER CONTROL
Raymond A. Deibel, Cheektowaga, and William C. Rieser, Buffalo, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed June 19, 1957, Ser. No. 666,525
4 Claims. (Cl. 15—250.02)

1. In a vehicle windshield cleaner system, a control means including a housing and bracket portion, a lever mounted on said portion for pivotal movement and operable to cause movement of a wiper motor control cable, an operator mounted within the lever for pivotal movement therewith, said operator being shiftable relative to said lever, said pivotal movement of said lever being about an axis transverse to the direction in which said operator is shiftable, and a valve assembly having a valve

which is maintained in a first position in all positions of said lever when said operator is not shifted, said valve

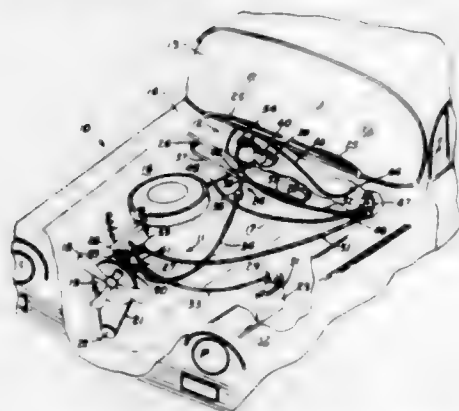


being movable to a second position by shifting movement of said operator.

3,000,033 WINDSHIELD CLEARING SYSTEM

Edmond F. Webb, Franklin, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee

Filed May 7, 1958, Ser. No. 733,638
3 Claims. (Cl. 15-250.02)



3. In a vehicle windshield clearing system having a wiper motor and a control valve therefor, and a washer unit including a pump means and a nozzle, a fluid pressure operated actuating unit for said control valve, a source of fluid pressure having a supply line, a fluid pressure system including an expansible chamber means in said actuating unit, having a movable wall operatively associated with said control valve, and means for fluid connecting said supply line with said chamber means, a valve unit in said fluid connecting means for controlling the admission of fluid pressure to said chamber means, a pressure bleed means for said chamber means located in said fluid pressure system and including a fluid passage means open at one end to said system and to the atmosphere at the other end thereof, said passage means having an internally threaded portion, an adjustable screw member having a head section and a shank section with a threaded portion, said shank section being formed with a longitudinally extended cutaway portion and insertable through the other end of said passage means for engagement of the threaded portion thereof with the internally threaded portion of said passage means, and a porous compressible material for restricting the flow of fluid through said passage means and compressible by said screw member to provide for a variation in the rate of flow of fluid through said passage means in response to adjustment of said screw member.

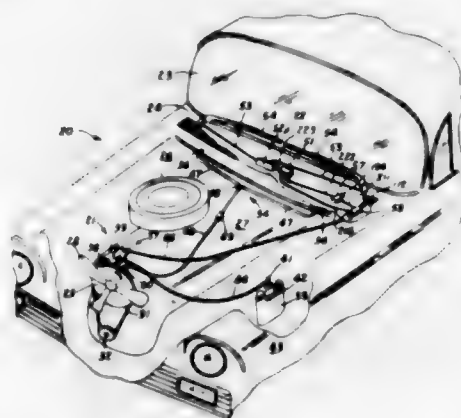
3,000,034 WINDSHIELD CLEARING SYSTEM

Edmond F. Webb, Franklin, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee

Filed May 19, 1958, Ser. No. 736,132
11 Claims. (Cl. 15-250.02)

1. In a vehicle having a windshield with wipers therefor and an engine with an external element movable during

operation of the engine, a system for clearing the windshield comprising, fluid discharge means operable upon contact with said element to discharge a fluid against said windshield, motor means operable to move said wipers either in an operating direction or in a parking direction, circuit means including a manually operated switch for selectively controlling the operation of said motor means, and control means for said system including a manually operable device operatively connected to said fluid dis-

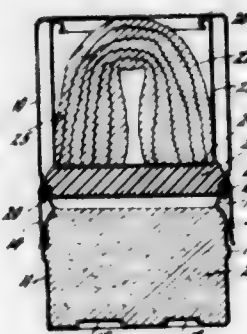


charge means for movement thereof into and out of contacting engagement with said engine element, switch means interposed in said circuit means and operable by movement of said device, said switch means including relatively movable contact members certain of which are alternately movable in opposite directions to selectively control the operation of said motor means, and time delay means actuated by movement of said certain contact members in one direction to delay their alternate movement in another direction.

3,000,035 SHOE POLISH KIT

William C. Harris, Racine, and John Jay Anderson, Kenosha, Wis., assignors to S. C. Johnson & Son, Inc., Racine, Wis.

Filed Sept. 15, 1960, Ser. No. 56,176
9 Claims. (Cl. 15-258)



4. A shoe polish container comprising in combination a polish cup having a bottom wall and a side wall, said side wall having a substantially horizontally disposed outwardly flaring upper lip and an overcap for said polish cup having a substantially horizontally disposed indented band whereby the outwardly flaring upper lip of the side wall of said polish cup engages the indented band of said overcap, thereby effecting a substantially airtight seal.

3,000,036 CLEANING TOOL

Harold B. De Benedetti, Concord, Calif., assignor to Tide-water Oil Company, Los Angeles, Calif., a corporation of Delaware

Filed Aug. 12, 1959, Ser. No. 833,273
10 Claims. (Cl. 15-314)

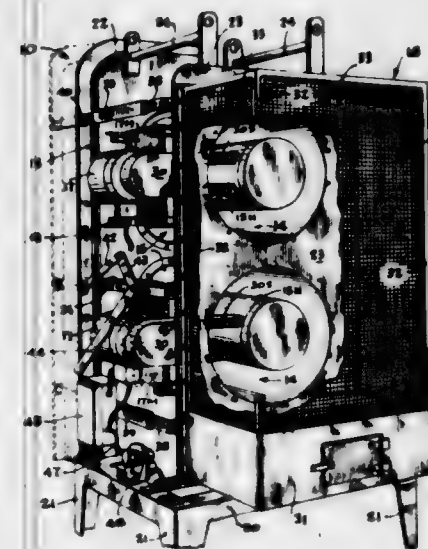
1. A cleaning tool for employing a stream of fluid under pressure, comprising: a tubular elongated handle

and a tubular nozzle having an axial portion rotatably mounted with respect to said handle, a radially extending



offset portion, and an inclined terminal portion with its axis extending generally axially back toward the axis of said axial portion.

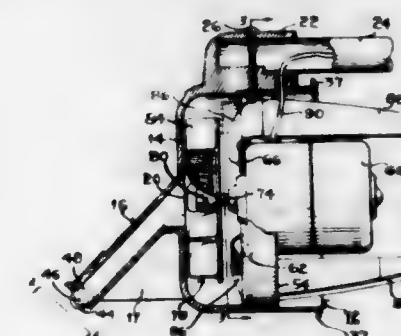
3,000,037
PORTABLE SUCTION CLEANER UNIT
Vernon L. Mario, 701 S. La Grange Road, and Louis L. Lathey, 547 S. Kensington, both of La Grange, Ill., and William E. Clark, 5747 S. Austin, Chicago, Ill.
Filed Jan. 9, 1959, Ser. No. 785,934
2 Claims. (Cl. 15-315)



1. A portable unitary structure for drawing air through a large-bodied enclosure of the type having an access door opening, a vertically elongated box shaped main support frame opening through opposed generally parallel vertically extending front and rear faces thereof to accommodate flow of air and air-borne dust and debris in a horizontal direction straight through the frame from the front face to the rear face thereof for direct discharge from the rear of the frame, said frame including a vertical face plate of elongated elevational configuration like that of an access door opening disposed along the rear face thereof and having a pair of vertically spaced openings occupying a substantial area of said plate, a pair of fan blade elements and individual fan drive motors mounted to said frame at vertically spaced points to dispose the fan blade elements for rotation about vertically spaced horizontal axes that extend lengthwise through said frame to create a pair of generally horizontally moving flow streams

through said plate openings, an extensible bellows-type adapter duct having a transverse cross-sectional shape of vertically elongated configuration and of a size to correspond substantially to the configuration and size of the front face of the frame to extend horizontally forwardly from said front face as a common flow passage extension for the flow streams created by said pair of fan blade elements, said duct having a pressure plate framing its front end for sealing engagement against a marginal portion of the enclosure bordering the access door opening thereof, separate support arms fixed to the front end of said duct and projecting rearwardly along opposite side faces of said frame, and means including manually actuatable operating linkages mounted along opposite side faces of the frame and connected to said arms to support said duct and to control extension and retraction of said duct.

3,000,038
VACUUM SWEEPER
Earl R. Heavner, Dayton, Ohio
(215 E. 66th St., Apt. 4A, New York, N.Y.)
Filed Jan. 17, 1956, Ser. No. 559,653
4 Claims. (Cl. 15-412)

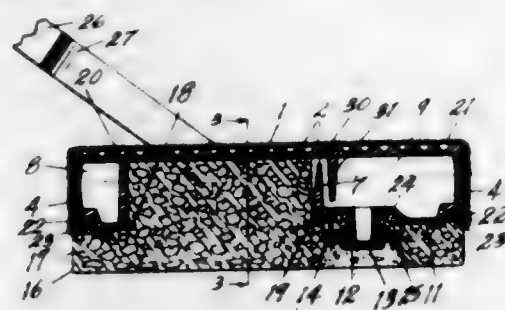


1. In a vacuum sweeper comprising a hollow generally cylindrical housing, means providing a suction port at one end of the housing, said housing having an opening in the opposite end thereof, dust collection means attached to the housing and communicating with the opening in said opposite end, there being a continuous air channel extending from the suction port through the housing and into the dust collection means, a generally circular spider mounted transversely in the housing, said spider having an aperture therein permitting the passage of air there-through, and blower means including a rotary air impeller supported by the spider, said impeller being disposed between the spider and the suction port and operating to move air rearwardly through the aperture in the spider to the dust collection means, the improvement wherein the spider includes means projecting helically upstream therefrom adjacent the aperture therein to form an air scoop for directing air through said aperture and means providing an air foil projecting downstream therefrom and forming a continuous curved surface with said air scoop for directing air through the housing, and means providing a flange projecting downstream from the spider engaging and supporting the air foil, the flange and the air foil cooperating with the spider to form a channel for an electric cable leading to the blower means which channel is shielded from the air stream and the housing.

3,000,039
CLEANING DEVICE FOR FLOORS AND THE LIKE
Walter Carlson, 800 East B St., Iron Mountain, Mich.
Filed Apr. 19, 1956, Ser. No. 579,251
10 Claims. (Cl. 15-534)

1. In a cleaning device, a body member comprising a bottom transversely corrugated on its outer side, outer side and end walls, inner side and end walls spaced inwardly from corresponding outer walls, the inner walls

defining a holder open at the top and having inwardly projecting flanges at their upper edges, top walls extending between said inner and outer walls and with said walls and bottom defining a reservoir surrounding the holder, the inner walls having openings at the bottoms thereof opening to said holder, one inner wall being spaced from its corresponding outer end wall to provide an enlargement for the reservoir, the top wall of which is provided with a filler nipple, there being a recess in the top wall surrounding said filler nipple, the end top walls having transverse grooves therein, a wiping cloth disposed upon



the bottom with its ends wrapped around the outer end walls and disposed within said grooves, clamp members detachably securing said wiping cloth within said grooves, a sponge of substantial firmness having an inner portion disposed within said holder and an outer portion overlapping and in supported relation to said top walls, said inner portion having grooves in its edges with which said flanges are engaged, said outer portion having an opening therein receiving said filler nipple, and a closure threaded upon said filler nipple and clamping a portion of said sponge into said recess surrounding the nipple.

3,000,040

CLEANING DEVICE

Walter Carlson, 800 East B St., Iron Mountain, Mich.
Filed Nov. 3, 1955, Ser. No. 544,684
4 Claims. (Cl. 15-567)



3. In a cleaning device, a sponge holder member constituting a liquid reservoir and comprising rear, side, top and bottom walls, and a front wall extending from the bottom wall but terminating in substantially spaced relation to the top wall, inwardly projecting continuous flanges on the top wall and the portion of the side walls above said front wall, the upper end of said front wall and said flanges having intumed continuous holder members on their edges, said flanges and the upper end of said front wall being inwardly inclined, and a sponge having an inner portion fitting within said holder members and an outer flange-like portion overlapping said flanges and the upper portion of said front wall, the portion of said sponge overlapping said inwardly inclined surfaces being out of contact therewith when the sponge is not subjected to pressure, said wall parts and said holder members defining a liquid reservoir and distributing channel therefor surrounding the sponge.

3,000,041
LEG MOUNTS FOR FURNITURE GLIDE UNITS,
OR THE LIKE
Frederick N. Reynolds, Augusta, Ky., assignor to The
F. A. Nelder Company, Augusta, Ky., a corporation of
Kentucky

Filed July 24, 1959, Ser. No. 829,263
2 Claims. (Cl. 16-42)



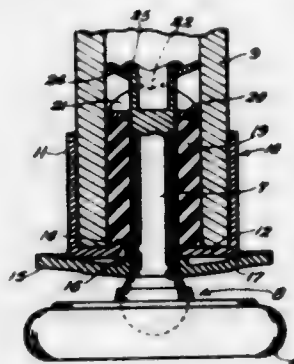
1. A glide mounting for axial insertion into the open end of a straight walled tubular leg member comprising an elongated, upstanding pindle having a shank portion mounted on and projecting from the shoe for insertion into the central portion of the lower end of the tubular member, said pindle having an outwardly and upwardly flaring shoulder portion mounted in fixed position on the upper end of the shank portion, a support element mounted on the pindle shank portion and engaging the lower end of the tubular member, an elastic rubber sleeve positioned on the element and surrounding the pindle shank portion, said sleeve normally having a cross sectional configuration conforming to the interior wall of the end of the tubular member, said shoulder portion having a maximal lateral configuration conforming to and slightly undersized with respect to the interior configuration of the end of the tubular member, and a corresponding outwardly and upwardly flaring portion formed on the sleeve snugly receiving the flared shoulder portion on the pindle, said flaring portion on the sleeve normally having a maximal cross sectional configuration greater than the interior configuration of the end of the tubular member, and adapted to be compressed to fit into the tubular end when the mount is axially forced into the said end whereby the flared end of the sleeve and the sleeve body will be crowded into the space between the shank portion and the shoulder portion of the pindle and the interior straight wall of the end of the tubular member.

3,000,042

LEG MOUNT FOR FURNITURE GLIDES

Frederick N. Reynolds, Augusta, Ky., assignor to The
F. A. Nelder Company, Augusta, Ky., a corporation of
Kentucky

Filed Dec. 10, 1959, Ser. No. 858,812
6 Claims. (Cl. 16-42)



1. In a mount for insertion into the end of a tubular member the combination with a shoe having a mounting pindle secured to and projecting upwardly therefrom, of

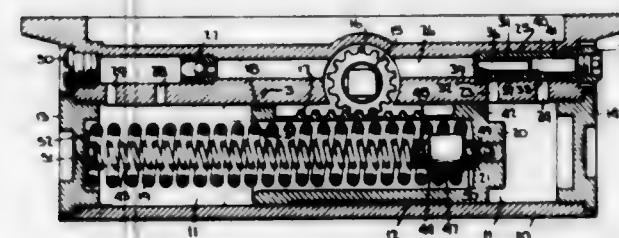
a tubular member receiving ferrule rotatably supported concentrically on the pindle, a resilient sleeve loosely mounted on the pindle and located in the ferrule, means for securing the lower end of the sleeve to the ferrule, a cam washer free on the upper end of the pindle, means for securing a non-rotatable connection between the upper end of the sleeve and said washer, and a co-operative cam means fast on the upper end of the pindle and having a rotatable camming engagement with the cam washer whereby upon relative rotation between the ferrule and washer cam means the cam washer will be moved axially away from the cam means to axially compress the sleeve and force the sleeve body laterally out against the inside of the tubular member.

3,000,043

DOOR CLOSER WITH BACK CHECK

Mathias M. Check, Stratford, Pa., assignor to The Yale
and Towne Manufacturing Company, Stamford, Conn.,
a corporation of Connecticut

Filed May 3, 1960, Ser. No. 26,604
4 Claims. (Cl. 16-64)



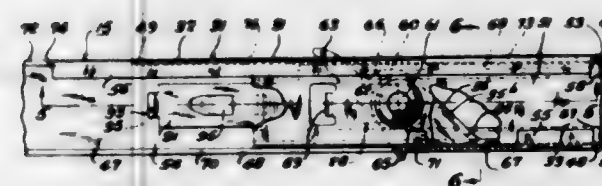
1. A door closer comprising, a housing having a fluid filled chamber therein, a piston movable in said chamber, a port through said piston whereby said fluid may pass freely from one side of the piston to the other side when said piston is moved in one direction in said chamber, a check valve for closing said port to prevent the free flow of fluid through said port when said piston is moved in the other direction in said chamber whereby to check the movement of said piston in said other direction, a helical compression spring extending from one end of said chamber toward said one side of said piston, and a closure member supported on the free end of said spring in alignment with said port and spaced a predetermined distance from said port when said piston is displaced to an extreme position in said other direction whereby said closure member will be engaged by said piston and close said port to provide fluid checking of the final movement of said piston in said one direction.

3,000,044

DOOR CHECK

Edwin L. Allen, 1219 Hereford Road, Cleveland Heights
18, Ohio, and Robert S. Heron, 4434 W. 67th Place,
Brooklyn, Ohio, assignors to Lisle W. Menzinger, Rock-
ford, Ill., trustee

Filed June 30, 1958, Ser. No. 745,435
8 Claims. (Cl. 16-82)



7. A door check device comprising a pair of relatively longitudinally slidable link members at least one of which has parallel flanges and a web portion therebetween, cooperably engageable check elements on said link members for establishing an effective holding length for

the check device, said web portion having longitudinally spaced openings therein, projection means on the other link member and extending toward said web portion, and a plate spring on said one link member and having a convexly bowed portion extending in the direction of the longitudinal spacing of said openings and the convex side of said bowed portion being engageable by said projection means for producing a releasable auxiliary holding action between said link members, said spring being disposed on one side of said web portion and attached thereto by having a first lug engaged in one of said openings and a second lug extending through the other opening and bearing against the opposite side of said web portion.

3,000,045

TRAVERSE ROD ASSEMBLY

Frederick A. Young, 311 18th St., Cheyenne, Wyo.

Filed Jan. 23, 1959, Ser. No. 788,627
3 Claims. (Cl. 16-87.8)

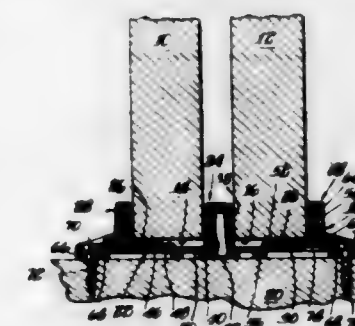


1. An improved corner-connecting drapery bracket adapted to be secured to the master slide of a traverse drapery rod assembly and formed as a flat shank adapted to be held upon and cantilevered from the master slide to lie in spaced parallelism with the outer side face of the master slide and including a head at the extended end of the shank having a laterally offset center portion which is offset towards the face of the master slide with vertical offset edges at each side of the center portion and a horizontal slot across the center portion which extends into each offset edge, whereby to permit the drape corner to lie against the outer face of the head with a portion thereof being within the offset and to be fastened thereto by extending a pin across the slot and into the slot portion at each offset edge at the inner face of the head.

3,000,046

DOOR GUIDE

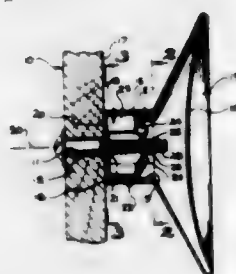
Robert E. Foltz, Sterling, Ill., assignor to Lawrence
Brothers, Inc., Sterling, Ill., a corporation of Illinois
Filed Aug. 31, 1960, Ser. No. 53,248
9 Claims. (Cl. 16-90)



1. An adjustable door guide comprising: rigid base means adapted to be positioned beneath the bottom edges of a plurality of by-passing doors; means defining an anti-friction surface centrally upstanding from said base means; a plurality of first locking means on said base means, a portion of said locking means being disposed at predetermined discrete lateral spacings from one side of said second mentioned means and the remainder of said locking means being disposed at similar spacings on the

opposite side of said second mentioned means; a plurality of upstanding guide-tip elements; and second locking means on each of said guide-tip elements interengageable with selected first locking means for positively and selectively positioning said guide-tip elements with respect to said second mentioned means, each of said discrete spacings corresponding with the width of a glide path for a door of different standard thickness whereby automatically to define glide paths of proper clearance for doors of said standard thicknesses.

3,000,847
DOOR PULL FASTENER
Richard C. Hill, 2317 S. 4th St., Arcadia, Calif.
Filed Apr. 29, 1960, Ser. No. 25,643
6 Claims. (Cl. 16-121)

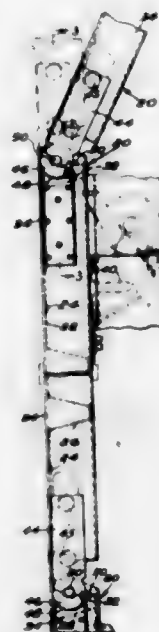


1. An assembly rapidly connectible to a panel, comprising body means forming a rearwardly opening tubular recess for exposure to the panel forward side, a screw extensible through the panel and projecting forwardly into the recess, and a one-piece insert in said recess having a rearwardly exposed base containing an opening through which the screw extends, said insert having wings with gripping portions which extend forwardly adjacent the body recess bore wall and with spreading portions which taper forwardly relatively away from said gripping portions and the base toward and into engagement with the screw thread, said gripping portions of the wings having cylindrical outer surface extent engageable with and having curvature remaining substantially the same as the body bore wall, said gripping portions being slightly oversize in relation to said recess bore prior to reception of the insert in said recess, said outer surfaces of the gripping portions being in interference engagement with said bore wall when the insert is received in the recess, whereby said gripping portions may be caused increasingly to grip said recess wall in response to turning of the screw tending to draw said spreading portions toward said base.

3,000,848
OVERHEAD DOOR
Arthur J. Harach, Eggertsville, N.Y., assignor to Morrison Steel Products, Inc., Buffalo, N.Y.
Original application Mar. 9, 1955, Ser. No. 493,089.
Divided and this application May 2, 1958, Ser. No. 745,785
2 Claims. (Cl. 16-128)

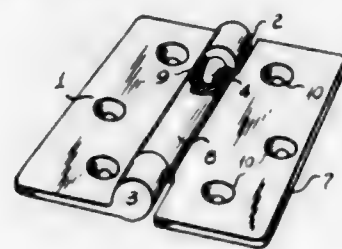
1. In a multi-section door including first and second door sections, an improved door section pivotal connection comprising, a pivot bracket secured to the lower portion at each side of said first door section, with such pivot brackets depending from the first section to overlap the second door section, a pivot pin extending laterally from the depending end of each of said pivot brackets and pivotally received in said second door section, a pivot bracket connected to the upper portion of said second door section at each side thereof, each of the depending ends of the first pivot brackets including a curved bearing surface formed thereon concentrically

about the pivot axis of said pivot pins, each of the last pivot brackets having a complementary curved bearing



surface receiving the bearing surface of an associated one of said first pivot brackets.

3,000,849
PLASTIC HINGE AND METHOD OF MAKING THE SAME
Claude S. Terry, Jr., Bainbridge, N.Y., assignor to American Plastics Corporation, New York, N.Y., a corporation of New York
Filed Aug. 4, 1958, Ser. No. 752,690
10 Claims. (Cl. 16-139)

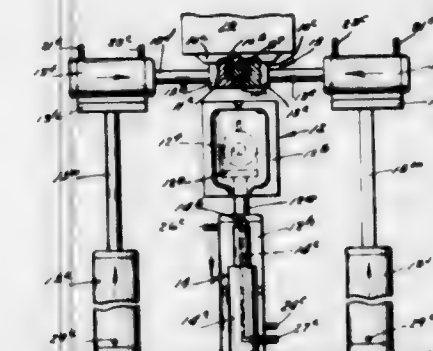


7. A two-shot injection molded plastic hinge comprising: two leaves, one of which has two spaced apart knuckles and the other of which has a single interposed knuckle, and a stub pintle connecting the contiguous ends of each two adjacent knuckles and being integral with one of said adjacent knuckles and projecting into a conformably shaped socket in the other adjacent knuckle, each pintle being so long that the leaves of the hinge cannot be assembled or separated from one another by snap-action between them.

3,000,850
METHOD AND APPARATUS FOR FORMING HOLLOW PLASTIC ARTICLES
Wilbur A. Schalch, Maumee, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 4, 1958, Ser. No. 771,835
19 Claims. (Cl. 18-5)

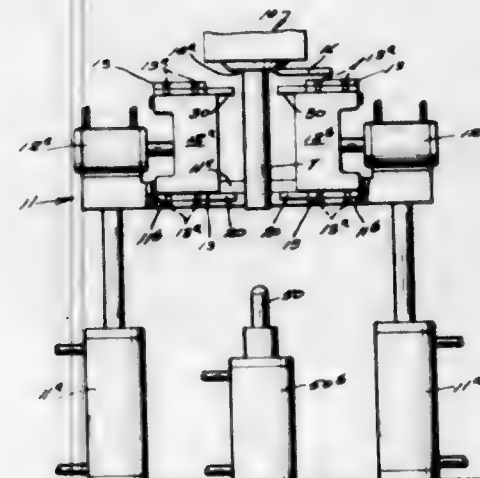
14. Apparatus for molding hollow plastic articles, said apparatus comprising a pair of complementary molds respectively having molding sections cooperating to define an interconnected mold cavity defining said article, means for extruding a tubular formation of plastic material, each of the molding sections of said molds being mounted for movements in a closed path in a plane dis-

posed radially with respect to the axis of extrusion of said plastic material and coinciding along the axis of extrusion, means for moving the molding sections of each respective mold as a unit around each other in alternate sequence by moving said molding sections through said closed paths of movement to thereby alternately reverse



the relative positions of said molds with respect to said extruding means and to alternately enclose successive portions of the extruded plastic material, means insertable into one of said molds for forcing the mold enclosed plastic material to conform to the shape of the mold cavity, and means for severing said plastic material between the molded portion and said extruding means.

3,000,851
METHOD AND APPARATUS FOR MANUFACTURE OF HOLLOW ARTICLES FROM TUBING
Wilbur A. Schalch, Maumee, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 28, 1959, Ser. No. 789,564
18 Claims. (Cl. 18-5)

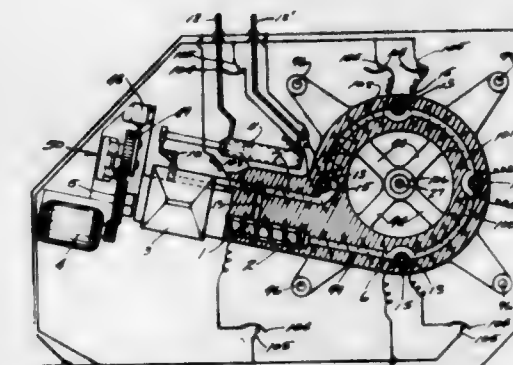


8. In the art of forming plastic articles from vertically downwardly extruded, heat-softened, thermoplastic tubing, the method of reducing the differential in wall thickness inherently produced in the top portions of the extruded tubing due to the weight of such tubing, which comprises severing a length of such tubing and supporting the severed length of tubing only adjacent the lower portions thereof for a period sufficient to permit axial shrinkage of the upper portions of the severed length of tubing.

14. Apparatus for forming hollow plastic articles from a freely pendant, vertically extruded tube of heated thermoplastic material comprising a partible mold having horizontally shiftable segments disposed on opposite sides of said tube and movable between an open position horizontally remote from the tube and a closed position enclosing the tube, a pair of tube holding units respectively mounted on the top and bottom portions of said partible mold, each of said tube holding units having means there-

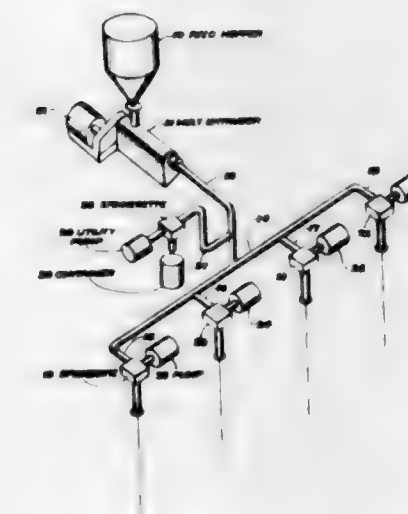
on for grasping said tube when said mold segments are moved toward said closed position, means for severing said tube above the uppermost tube holding unit after said tube is engaged by said tube holding units, and means for moving said partible mold axially downwardly with respect to the plastic tube to space apart the severed ends, whereby said partible mold may be closed on the severed length of tubing at any desired time subsequent to the severing of the tube.

3,000,852
METHOD AND APPARATUS FOR FORMING HOLLOW ARTICLES
Leonard D. Soubler, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 3, 1959, Ser. No. 850,612
12 Claims. (Cl. 18-5)



1. In a process for manufacturing plastic articles, the improvement comprising heating a supply of thermoplastic material, circulating the heated thermoplastic material through a continuous conduit extending past a plurality of discharge ports and back to said supply, maintaining a working temperature in said circulating material, maintaining a predetermined pressure on said circulating material, and selectively opening and closing said discharge ports in a timed sequence to extrude measured lengths of said material in tubular form, enclosing said lengths in a mold and expanding same to final form.

3,000,853
MELT SPINNING
Robert C. Hart, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 26, 1959, Ser. No. 789,049
4 Claims. (Cl. 18-8)



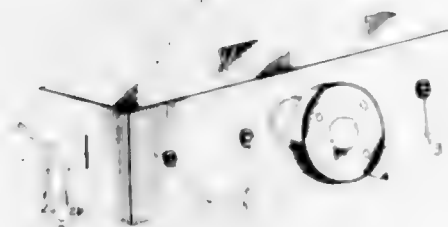
1. Apparatus for melt spinning synthetic filaments from a melt spinning composition, comprising in combi-

nation, a supply source of melt spinning composition, a plurality of filament-forming spinnerettes, conduit means for conducting the melt spinning composition from the supply source to said spinnerettes, means associated with each spinnerette for forcing the composition therethrough at substantially a constant rate to form filaments, an additional outlet means connected to said conduit means downstream from the supply source and upstream from the filament-forming spinnerettes, means associated with said outlet means adapted during normal spinning operation to force melt spinning composition therethrough and out of the system at a rate substantially less than said constant rate, but adapted to operate at least at said constant rate when any malfunction develops during spinning whereby the holdup time of the spinning composition in the apparatus is maintained constant.

3,000,054

EXTRUSION DIE DEVICE

Walter Seifried and Wilhelm Ott, Wiesbaden-Biebrich, Germany, assignors to Kalle Aktiengesellschaft, Wiesbaden-Biebrich, Germany, a corporation of Germany
Filed June 24, 1959, Ser. No. 822,568
Claims priority, application Germany June 27, 1958
1 Claim. (Cl. 18-12)



Extrusion device for producing flat-shaped articles comprising a die body having a tapering cut-out, a two-plate die inserted into said tapering cut-out, the inner surfaces of which plates contact each other forming flow channels and baffles between them, the outer surfaces of said plates diverging from each other in a pattern corresponding to the tapering cut-out of the die body whereby a matching fit is formed between said tapering cut-out of the die body and said plates, said two plates also forming between them an orifice which determines the final shape of said articles, and elements extending through the die body into said tapering cut-out to adjust the position of the two-plate die within the die body, said elements for adjustment being accessible at the side of said extrusion device which is opposite the orifice, said adjustment elements acting to force the said two-plate die into the tapering cut-out.

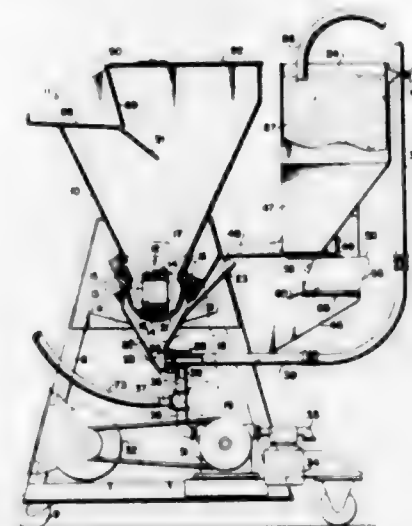
3,000,055

GRINDING, MIXING AND FEEDING APPARATUS FOR PLASTIC MOLDING MACHINES

Theodore F. Schlicksupp, Essex Fells, N.J. (% Foremost Machine Builders, Inc., 83 Dorn Ave., Livingston, N.J.); H. Michael Albers, executor of the estate of Theodore F. Schlicksupp, deceased
Filed July 23, 1957, Ser. No. 674,230
1 Claim. (Cl. 18-30)

Apparatus for grinding plastic scrap and blending with fresh plastic, comprising a movable frame structure adapted to be moved alongside a plastic molding machine, mechanism for grinding plastic scrap mounted on said frame structure, an electric motor mounted on said frame operatively connected to drive said grinding mechanism, a hopper supported by said frame above said mechanism for supplying plastic scrap thereto, a mixing chamber receiving the ground plastic scrap beneath said mechanism, said mixing chamber having an inlet opening, a bin for fresh plastic material supported on said frame, fresh

plastic feeding means carried by said frame for receiving fresh plastic from said bin and delivering it into said opening, means for controlling said feeding means to regulate the amount of fresh plastic delivered to said chamber, a pneumatic mixing and conveying device arranged at the bottom of the mixing chamber to receive from said chamber said ground plastic scrap and said fresh plastic, a conveyer pipe one end of which is supported by said frame and leading from said device to the molding machine, an airlift device adapted to be placed in a container for withdrawing fresh plastic from the container and delivering it to said bin, and a common supply of air under pressure for operating said mixing and conveying device and said air-lift device comprising an electrically-driven air pump, both said pump and said motor being mounted on said frame, and said air-lift device being connected to said common air supply by means of a flexible hose to permit movement of the airlift device for transfer from an empty to a full container of fresh plastic.

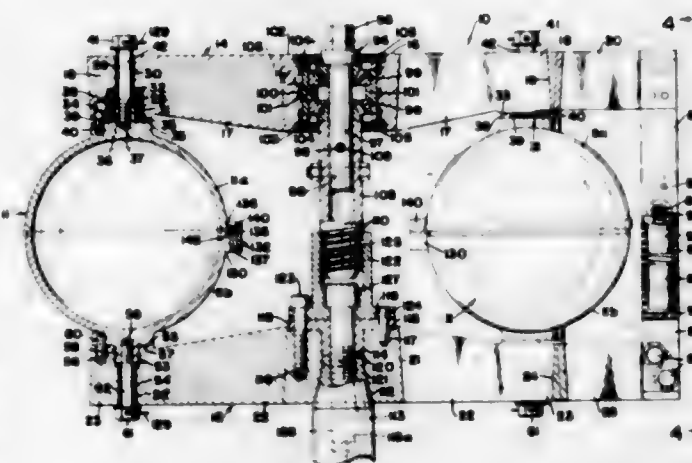


chine, an airlift device adapted to be placed in a container for withdrawing fresh plastic from the container and delivering it to said bin, and a common supply of air under pressure for operating said mixing and conveying device and said air-lift device comprising an electrically-driven air pump, both said pump and said motor being mounted on said frame, and said air-lift device being connected to said common air supply by means of a flexible hose to permit movement of the airlift device for transfer from an empty to a full container of fresh plastic.

3,000,056

MOLD CARRIERS FOR USE IN ROTATIONAL CASTING

Gilbert Thomas Parsch, Akron, Ohio, assignor to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 26, 1958, Ser. No. 717,668
14 Claims. (Cl. 18-43)



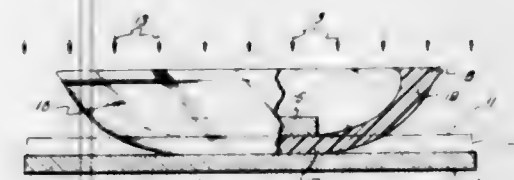
1. A spider for use with a rotational casting machine comprising, a wheel-like lower mold carrying member having a hub area adapted for connection to said machine, an upper wheel-like mold carrying member resili-

ently and yieldably hinged to said lower member, and means extending between the hub areas of said members for coupling the members together in substantially parallel planes.

3,000,057

METHOD FOR THE MANUFACTURE OF THREE-DIMENSIONAL OBJECTS BY SELECTIVELY HEATING PLASTIC SHEETS POSSESSING ELASTIC MEMORY

Theodore Swedlow, 628 Alameda St., and Svend Sondergaard, 575 Stonehurst Drive, both of Altadena, Calif., and Jan De Swart, Los Angeles, Calif.; said De Swart assignor to said Swedlow and said Sondergaard
Filed May 10, 1957, Ser. No. 658,387
3 Claims. (Cl. 18-48)

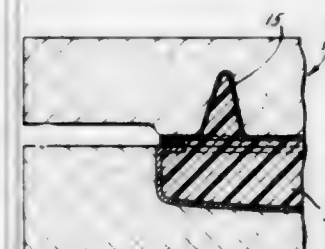


1. A process for forming objects from a polymeric material in selected shapes without the use of a mold comprising stretching a polymeric material having a capacity for reverting to its previous unstretched condition, shaping the stretched material to a predetermined shape, applying heat in a selected temperature range to selected portions of the shaped material to cause these portions of the material to tend to revert to their unstretched condition, applying localized surface heat to induce shallow fissures in the object surface to give an ornamental appearance, and reducing the temperature of the material to the temperature at which the material is stable when the desired amount of change of shape of the heated portion of the material has taken place.

3,000,058

METHOD OF FABRICATING REFRIGERATOR DOORS

Albert F. Thiele, Jr., Melrose Park, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 19, 1956, Ser. No. 617,037
2 Claims. (Cl. 18-59)

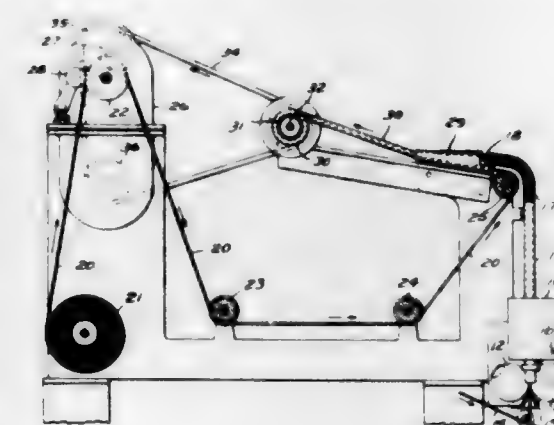


1. In fabricating insulating structure having a preformed, dished outer shell and an inner plastic liner cooperatively housing an expanded cellular core of insulative material, the method which comprises: providing a shell configured to mechanically interlock with said core during its expansion; disposing within the cavity defined by said shell a charge of "foam plastic" material; interposing a thermoplastic member of generally sheet-like configuration between said material and a surface delineating the shape ultimately desired of said member; and introducing heat both to expand said material and to plasticize said member sufficiently to permit it to be molded by the expanding core in conformity with the shape delineated by said surface.

3,000,059

METHOD OF TREATING CRIMPED TEXTILE FIBERS

Carl J. Russo, Newark, Alexander L. Trifunovic, Wilmington, and Henry A. Sinaki, Alden, Del., assignors to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Original application Feb. 4, 1957, Ser. No. 638,027, now Patent No. 2,960,729, dated Nov. 22, 1960. Divided and this application Mar. 9, 1960, Ser. No. 13,926
6 Claims. (Cl. 19-66)

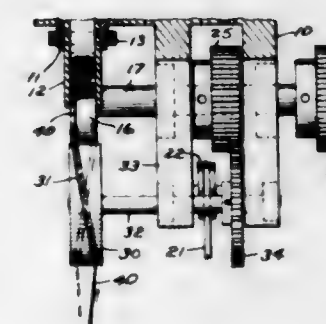


1. The method of treating textile fibers which comprises feeding said fibers against a compacted mass of previously crimped fibers in an elongated crimping zone in a stuffer crimper to cause the fibers to be folded over and crimped, advancing said compacted mass of crimped fibers along said zone while held compacted in said crimper to a discharge point, discharging the mass of fibers from said crimper in the form of a compact core having a cross section corresponding to that of said zone, confining said core in a tape, reeling said tape with said core to form a package, treating said package for processing the fibers therein, unreeling said tape and core and withdrawing the treated fibers under tension from said core.

3,000,060

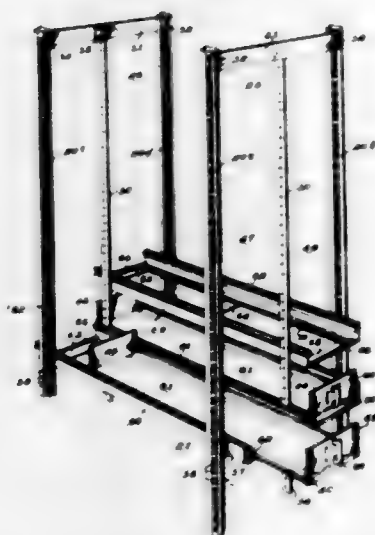
CRIMPING APPARATUS

Ewart H. Shattuck and Andrew A. Benedek, Wilmington, Del., assignors to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Filed Jan. 8, 1959, Ser. No. 785,619
14 Claims. (Cl. 19-66)



1. A stuffer crimper comprising a member forming an elongated crimping chamber, feed rolls disposed to feed yarn or the like into one end of said chamber against the pressure of a mass of crimped yarn held compacted therein whereby said yarn is folded over and crimped as it enters said chamber, guide means positioned to guide said yarn in its passage to said feed rolls, said guide means including means to reciprocate said yarn axially of said feed rolls for causing said yarn to be distributed uniformly within said crimping chamber.

3,000,061

STORAGE BUILDING CONSTRUCTIONRay D. Cooper, Mountain View, Calif.
(705 Raymond, Los Altos, Calif.)Original application May 18, 1955, Ser. No. 509,232, now
Patent No. 2,872,048, dated Feb. 3, 1959. Divided
and this application Nov. 24, 1958, Ser. No. 775,846
3 Claims. (Cl. 20-1)

1. In a storage building having a plurality of ranges of permanently fixed vertical structural columns supporting a plurality of floors and extending therebetween, said floors being each constructed and arranged to support and hold a normal load of foot traffic, and said columns providing the sole supporting means for each floor and the support for substantial storage loads between said floors; the improvement comprising providing a plurality of load equalizing and distributing cross beams and connecting the opposite ends of each such beam respectively to adjacent columns of each range line just below each floor above the bottom floor, providing a plurality of strap-like load supporting members, and connecting the upper end of each such strap-like storage load supporting member to a cross beam substantially midway between each pair of columns of each range to freely depend from a said beam parallel to said columns, each of said strap-like supporting members being of a length less than the distance between opposed floors and having its lower free end terminating short of the floor toward which it extends, said ranges comprising a series in which each two adjacent ranges comprise a pair of ranges, a plurality of pairs of horizontal substantially rectangular load storage members arranged in tiers in vertically spaced relation on each side of said depending strap-like members and between columns of alternate pairs of ranges, means slidably supporting the parallel sides of said load storage members respectively from said columns and from said depending strap-like members in spaced relation to the floor, whereby each series of tiers of load carrying members bridges only alternate pairs of ranges providing traffic aisles between said pairs of ranges into which said load carrying frame members may be selectively projected from said alternate pairs of ranges.

3,000,062

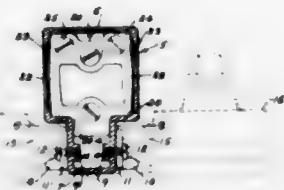
REMOVABLE MULLIONGeorge T. McCandless, New Britain, Conn., assignor to
The American Hardware Corporation, New Britain,
Conn., a corporation of Connecticut

Filed Dec. 6, 1957, Ser. No. 701,197

4 Claims. (Cl. 20-11)

1. In a removable mullion assembly for installation between the threshold and the head jamb of a door opening, the combination of an elongated tubular mullion member having opposed yieldable sidewalls, a mounting plate fit-

ting within the lower end portion of said mullion member and adapted to be secured to said threshold for positioning said mullion member thereon, said mounting plate being of a height such that said mullion member may be swung into a vertical position thereover when pivoted about a lower edge thereof in a direction parallel to said sidewalls, said mounting plate having outwardly projecting portions at its opposite sides engaging the sidewalls of said mullion member and being of greater maximum



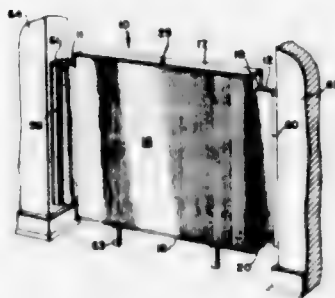
width across said outwardly projecting portions than the interior width of said mullion member between its said sidewalls whereby said sidewalls are distorted to provide a tight fit between said mounting plate and said mullion member, the upper edges of said outwardly projecting portions of said mounting plate being engageable by said sidewalls of the mullion member as it is swung into a vertical position thereover and adapted to cam said sidewalls outwardly over the sides of said mounting plate.

3,000,063

SAFETY GATELawrence John Hoog, 1001 E. Lincoln St.,
Bloomington, Ill.

Filed Dec. 16, 1959, Ser. No. 859,956

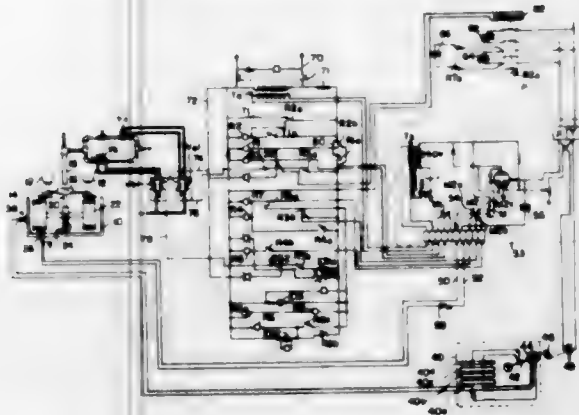
6 Claims. (Cl. 20-71)



1. In a safety gate, a central gate body comprising upper and lower spaced substantially parallel beams, upper and lower aligned channel tracks in said beams, front and rear panels placed against opposite front and rear faces of the beams and secured thereto to form an internal space between the beams and front and rear panels with the outer ends of said internal space freely open, at least two end panels having upper and lower edges slidably fitted in said aligned channel tracks and movable through the freely open ends of said internal space, end heads on the outer ends of the end panels, an upright screw shaft journaled between the adjacent inner ends of the end panels in the upper and lower beams and having oppositely threaded sections, upper and lower nut blocks on the sections threaded correspondingly to the opposite threads of the sections to produce movement of the blocks together or apart incident to rotary movements of the screw shaft in opposite directions, means for rotating the shaft, and pairs of links pivoted to the blocks and to the inner end portions of the end panels for converting the vertical movements of the blocks into horizontal sliding movements of the end panels to expand and contract the safety gate.

3,000,064
END POINT MOISTURE CONTENT
CONTROL FOR SAND

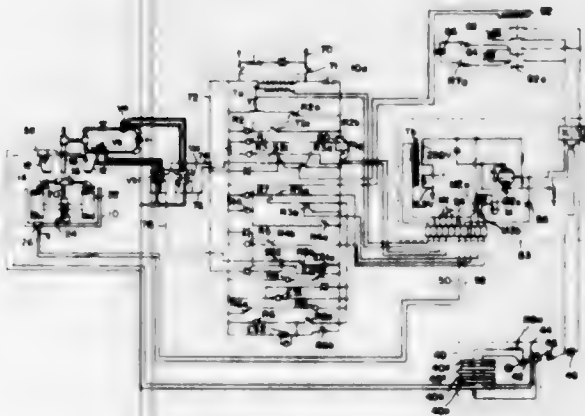
Harry W. Dietert and Randolph L. Dietert, Detroit, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed July 11, 1957, Ser. No. 671,221
23 Claims. (Cl. 22-89)



1. Apparatus for tempering granular material which comprises a mixer for mixing granular material and water, means for adding water to the granular material including a shut-off valve, moisture responsive means for measuring the moisture of the granular material in the mixer during addition of water thereto and during mixing of the granular material and water therein, means responsive to attainment of the desired granular material moisture content in said mixer operatively connected to said valve to close said valve, and timing means operable after a predetermined short interval to retest the mixture in the mixer for moisture content and operable to resume the addition of water if required.

3,000,065
END POINT MOISTURE CONTROL FOR
SOLID GRANULAR MATERIAL

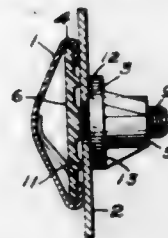
Harry W. Dietert and Randolph L. Dietert, Detroit, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Jan. 20, 1958, Ser. No. 710,147
17 Claims. (Cl. 22-89)



1. Automatic apparatus for producing a required moisture content in granular material which comprises a mixer, valve means controlling the addition of liquid to the mixer, a hopper for receiving granular material prior to placement in said mixer, an automatic valve control system comprising temperature responsive means responsive to temperature in said hopper, moisture responsive means in said mixer, means for locking in said temperature responsive means at the value determined just prior to initiating a mixing cycle, and means responsive to initial temperature and increasing moisture content to close said valve means.

3,000,066
MOLDING AND THE LIKE FASTENING DEVICES
Clarence W. Cochran, Belmont, Mass., assignor to
United-Carr Fastener Corporation, Cambridge, Mass.,
a corporation of Delaware

Filed June 29, 1959, Ser. No. 823,540
2 Claims. (Cl. 24-73)



1. A fastening device for attaching molding strips and the like to suitable supports, said fastening device including a molding strip holding member formed entirely of molded plastic material and having a molding engaging plate-like portion and an attaching portion, said fastening device also including a molded plastic attaching member for cooperation with the molding holding member to hold a molding strip to a support and interengaging fastening means provided partly by the attaching portion of the molding strip-holding member and partly by the attaching member to secure the parts in assembly, and a sealing portion formed integral with each of said members of said attaching device to press against opposite faces of a support around an aperture in the support to seal the aperture against the passage of moisture.

3,000,067
SHOE CLIP

Alan Hanflig, 36 Patricia Lane, Syosset, N.Y.
Filed Mar. 9, 1959, Ser. No. 798,079
4 Claims. (Cl. 24-87)



1. A detachable clipping device for tying together a pair of shoes, comprising a flexible line terminating at each end in a bendable metal clip; each said clip comprising a unitary thin flat strip of metal having on one end a receiving end containing a perforation, on its other end a bendable pointed tongue, and an elongated bendable section and a line clamping section intermediate said tongue and receiving ends; each end of said line terminating in a said clamping section, said tongue being adapted to be bent adjacent one end of said line clamping section, said bendable section being adapted to be bent adjacent the other end of said line clamping section, said bent tongue being in operative engagement with said perforation.

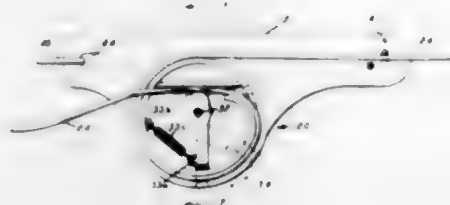
3,000,068
GUY LINE GRAB DEVICE

Marvin E. Hughes, P.O. Box 7, Santa Maria, Calif.
Substituted for abandoned application Ser. No. 575,660,
Apr. 2, 1956. This application June 4, 1958, Ser. No.
740,511

5 Claims. (Cl. 24-134)

1. A guy line grab device comprising a base plate adapted to be anchored at one zone thereof, said base plate having a portion extending in the opposite direction from the zone of anchorage, cable guide means extending beyond one face of said base plate, a drum extending from the said face of said base plate disposed substantially at one side of an imaginary line passing through said zone and cable guide means and having its

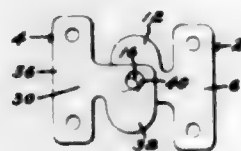
periphery close at one point to said line, a side plate at the side of the drum opposite to said base plate providing a marginal flange around said drum, means within the drum confining and providing a seat for the terminal portion of a cable, said side plate having a slot there-through through which the terminal portion of a cable



is insertable into engagement with said seat, said side plate having a cut-away portion, and a clamp lever device pivoted within the drum and operable from the exterior of the drum, extending through said cut-away portion and said clamp lever device having a portion within said drum to clamp the terminal portion of the cable against said seat.

3,000,069 FASTENING DEVICE

Stuart T. Shears, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,813
1 Claim. (Cl. 24-230)

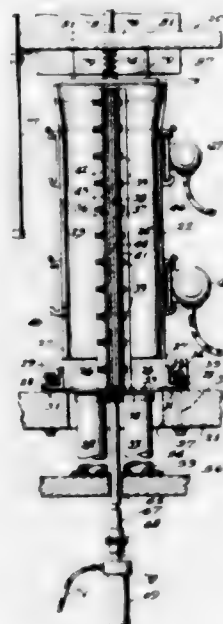


A fastener having a female member and a male member, said female member comprising two connected yieldable arms in spaced parallel relationship, one of said arms having a wall forming an aperture therethrough and said male member comprising an engaging portion and a stud extending from one face of said engaging portion, said stud having a holding edge in substantially right angle relationship with said engaging portion, said stud being circular in cross section and having its free end formed of two planar segments of a circle and having a common chord offset from the center of the circle, said chord sloping downwardly from said holding edge to merge into said engaging portion at a point offset from the axis of said engaging portion passing through the center of the stud, said segments forming an angle therebetween and each segment sloping downwardly from the chord and toward said engaging portion, said holding edge engaging the wall of said aperture to lock said female element to said male element and the smaller of said segments comprising a release portion to facilitate releasing of said stud from said aperture by a movement transversely of the axis of said engaging portion.

3,000,070
MACHINE FOR MAKING MULTI-DUCT CONDUIT
Archib R. Gagne, Franklin Park, Ill., assignor to Gagne Enterprises, Inc., Naperville, Ill., a corporation of Illinois
Filed May 7, 1958, Ser. No. 733,542
3 Claims. (Cl. 25-41)

1. In a mold comprising a pair of longitudinally extending mold portions spaced a slight distance from each other along contiguous mold portions, a pair of flanges on each mold portion in spaced confronting relationship

with the flanges on the other mold portion, a shim of resilient material disposed between each pair of confronting flanges and maintaining said mold portions spaced a small distance apart, a plurality of fastening means spaced along the length of said mold, each of said fastening means including bolt means extending through said resilient shim and said paired flanges, the improvement in



said mold which comprises resilient means between one end of said bolt means and one of said flanges, and a vibrator secured to one of said mold portions whereby said vibrator and said resilient shim, said confronting flanges, said resilient means and said fastening means enable said mold portion to move toward and away from each other during vibration.

3,000,071 METHOD OF SINTERING INTERMETALLIC MATERIALS

Ralph F. Wehrmann, Waukegan, Ill., assignor to Pansteel Metallurgical Corporation, a corporation of New York
No Drawing. Filed Apr. 23, 1953, Ser. No. 350,760
8 Claims. (Cl. 25-156)

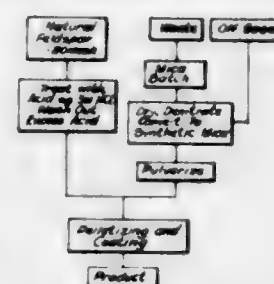
1. The method of forming an article of manufacture of dense, nonporous, refractory character resistant to oxidation in air at high temperatures in the range of from about 1600° C. to about 2000° C., comprising milling to a particle size range of 0.5 to 5 microns an alloy or intermetallic composition of silicon with one of the metals selected from the group consisting of tantalum and columbium, said silicon being in proportion of 1 to 3 atoms of silicon per atom of metal, pressing said finely milled product under a forming pressure exceeding 5 tons per square inch, to regular forms of rods, bars, tubes, discs, plates, pellets and the like, and irregular forms, and heating said shaped product in an oxidizing free atmosphere to sinter the same in a temperature range of about 1300° to 1800° C.

3,000,072 PROCESS OF CONTAINING AND FIXING FISSION PRODUCTS

Edward J. Evans, Ottawa, Ontario, Canada, assignor to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a company
Filed Aug. 20, 1959, Ser. No. 835,127
5 Claims. (Cl. 25-156)

1. A method of containing and fixing fission products which comprises mixing fission product material with the constituents substantially in molar proportions to form synthetic mica, heating the mixture at a temperature below its melting point and not substantially less than

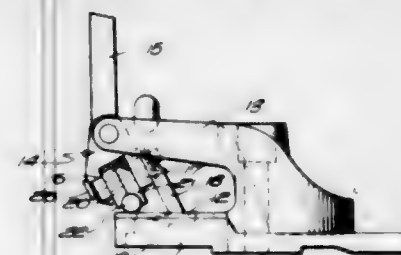
900° C., pulverizing the product and compressing the pulverized product into pellets at a temperature below



the melting point of the mica and a pressure of not substantially less than 1000 p.s.i.

3,000,073 TENTER CLIP

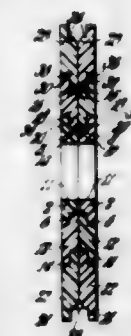
Matthew M. Zack, Warwick, and John E. Waterman, Chepachet, R.I., assignors to Winsor & Jernald Manufacturing Company, a corporation of Maine
Filed Mar. 28, 1960, Ser. No. 17,984
3 Claims. (Cl. 26-62)



1. A tenter clip for a tenter chain comprising a body having a plate portion for supporting a web, a clamp jaw pivotally connected to said body above said plate portion and having a free end depending toward said plate and disposed thereover for clamping a web to said plate portion, the said free end of said jaw comprising a pair of clamp bars, said bars being oriented generally parallel to the pivoting axis of said jaw, a work engaging member removably fastened between said clamp bars to permit rotation of said work engaging member relative to said jaw.

3,000,074 POM POK RING

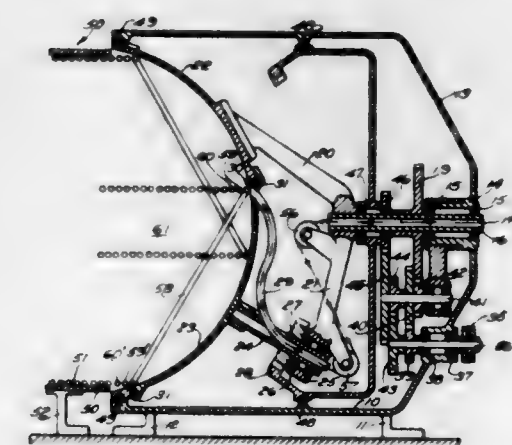
Sophie Butkiewicz, 1482 Corbin Ave., New Britain, Conn.
Filed June 11, 1959, Ser. No. 819,586
1 Claim. (Cl. 28-2)



In the art of forming designs of yarn, a multi-size device comprising, a pair of sets of nested rings of different sizes, each of the rings of a set of each of said pair thereof being formed of a resilient material for separable interlocking engagement in concentric relation as a series of concentric circles in a single plane, each of the rings of a set of each of said pair thereof having outer and inner faces and being provided with an outer peripheral flange terminating in an outer annular shoulder adjacent the inner face thereof and with an inner peripheral flange

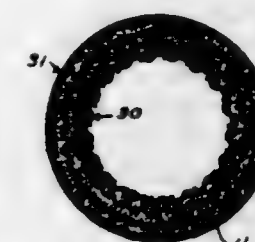
terminating in an inner annular shoulder adjacent the outer face thereof for facilitating the resilient nesting of the rings of a set as a unit in circumadjacency, the recited combination being such that corresponding rings of the sets of said pair thereof may be selectively disposed with their inner faces in face-to-face relationship for providing an outermost peripheral groove formed at the juncture of the respective outer annular shoulders.

3,000,075
MACHINE AND METHOD OF WINDING AND COILING TEXTILE STRAND MATERIAL
John A. Bradshaw, 55 Stever Ave., Hillsdale, N.J.
Filed Oct. 30, 1959, Ser. No. 849,854
4 Claims. (Cl. 28-21)



2. An apparatus for handling strand-like material comprising a fixed guide having a lengthwise axis extending generally horizontally and open at its opposite axial ends and providing a supporting surface spaced from said axis, a thrust plate shaped to generally conform to the concave surface of a portion of a sphere and located with its concavity adjacent one end of said guide, means to rotate said plate about the axis of said guide, said plate having an independent segment as a portion of said plate including said axis, means to rotate said segment relative to said plate about an axis at one side of the axis about which said plate rotates, and a strand guide carried by said segment at a location to cross the axis of said guide every revolution of the segment and means to direct said material along the axis of rotation of said plate and thence to the strand guide on said segment.

3,000,076
LOOM PICKER AND BEARING
Leslie A. Ranton, Middle Haddam, and Henry C. Morton, Branford, Conn., assignors to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut
Filed Dec. 5, 1957, Ser. No. 700,797
3 Claims. (Cl. 28-80)



1. A multi-ply cylindrical woven fabric impregnated with a moldable bonding resin, said fabric containing yarns capable of bonding to said resin and having at its inner surface multi-filament yarns, at least one filament of which is composed of polymeric fluorocarbon resin and the other filaments of which are composed of a material capable of bonding to an impregnant.

3,000,077

CUTTING AND ABRADING TOOLS

Leonard George Oxford, Haywards Heath, England, assignor to Simmonds Aeroaccessories Limited, Glamorganshire, Wales, a British company

Filed Dec. 23, 1957, Ser. No. 704,745

Claims priority, application Great Britain Dec 21, 1956
8 Claims. (Cl. 29—78)



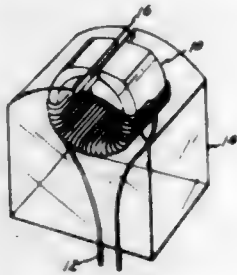
1. A cutting tool comprising a thin flexible cutting strip, and backing means to support the strip in contact with a work; the cutting strip being of hardenable ferrous material having a multiplicity of holes in parallel rows, a multiplicity of cutting edges each composed of one sharpened and hardened edge of a hole, and ridges formed by reversely-bending the strip along lines parallel to the rows of holes, the edges extending from the ridges above the general plane formed thereby, the strip also having at alternate ridges along one side edge, side cutting edges which are aligned with the edges at the corresponding ridges and are formed by cutting away portions of the strip at that side, the cutting edges at the holes and at the sides overlapping for continuous cutting up to said side; and the backing means leaving the portion of the strip freely projecting at said side.

3,000,078

METHOD OF MAKING MAGNETIC TRANSDUCER HEADS

Leo J. Emenaker and Mark M. Sierra, Los Angeles, Calif., assignors to The Bendix Corporation, a corporation of Delaware

Filed June 4, 1956, Ser. No. 589,188
4 Claims. (Cl. 29—155.5)



1. A method of making a magnetic transducer head having a core of brittle material with a transducer gap therein and having a winding around the core at a location away from said transducer gap, which comprises the steps of: forming a closed loop of brittle magnetic material; placing a winding upon the closed loop of brittle magnetic material; casting said loop in a block of hardenable non-magnetic material so that said closed loop is adjacent to one surface of said block at a location away from said winding; and abrading a groove in said block so as to provide a non-magnetic, flux gap in said loop whereby to form said transducer head.

3,000,079

TUNER AND METHOD FOR MAKING SAME

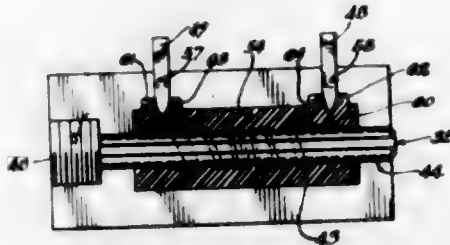
William H. Howell, Fairfield, and Harold T. Lyman, Milford, Conn., assignors to Aladdin Industries Incorporated, Nashville, Tenn., a corporation of Illinois

Filed May 5, 1955, Ser. No. 506,174

4 Claims. (Cl. 29—155.56)

1. In a method of making a tuner, the steps comprising applying etch-resisting material to the outer surface

of a thin-walled cylindrical metal tube in a generally helical pattern, applying a hardening resinous plastic coating to the inner surface of said tube, mounting said tube on a greased mandrel with a plurality of regularly spaced longitudinal grooves thereon alternating with longitudinal ridges, said tube being mounted on said mandrel while said coating is still in a plastic state, said grooves and ridges on said mandrel thereby forming corresponding ridges and grooves in said coating, said ridges on said mandrel fitting closely in said tube with only slight clear-



ance therebetween for centering said mandrel in said tube and thereby providing substantial uniformity in the thickness of the portions of said coating along said ridges, applying an etching agent to said tube and thereby dissolving the portions thereof not protected by said etch-resisting material, the remaining portions of said tube thereby defining a generally helical coil adherent to said coating, mounting said mandrel in a mold, introducing an electrically insulating resinous plastic material into said mold so as to imbed said coil therein, and removing said mandrel from said coil and imbedding plastic material.

3,000,080

METHOD OF MAKING WELDED BI-METAL PISTON RINGS

Bela M. Ronay, 24 Randall St., Annapolis, Md.

Filed Mar. 20, 1956, Ser. No. 585,600

4 Claims. (Cl. 29—156.6)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of forming layered piston rings having an outer overlay that is relatively soft and brittle and an inner core that is relatively tough and resilient which comprises the steps of preheating a preformed cylinder of low chrome molybdenum alloy steel to a temperature of approximately 700° to 900° F., while holding the cylinder at such temperature welding and overlay of piston ring cast iron onto the outer surface thereof by oxy-acetylene welding, and cooling the resultant product to develop a substantially 100% pearlitic structure therein.

3,000,081

WHEEL MANUFACTURE

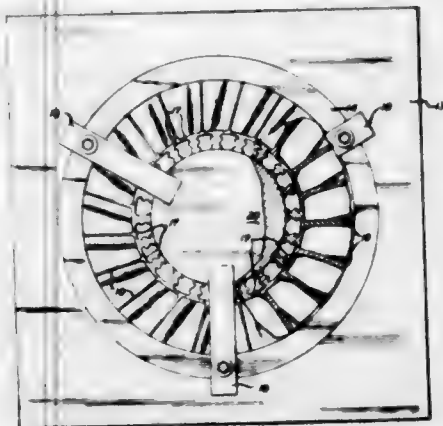
Lester I. Webb, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed July 16, 1957, Ser. No. 672,220

10 Claims. (Cl. 29—156.8)

1. In a process for manufacturing wheels including a plurality of radial blades secured to a central hub with said blades being provided with bases having irregularly shaped root portions, the steps of arranging a plurality of blades in positions corresponding to their final position in the finished wheel and with the bases of the blades forming a substantially continuous band concentric with the wheel, rigidly securing the blades in this position, placing a highly heated metallic hub blank within the band formed by the blade bases and applying a heavy

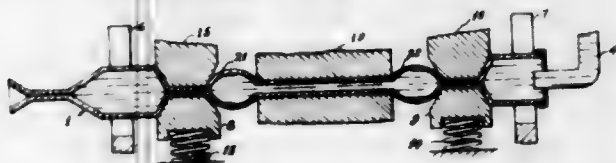
axial pressure to the blank to cause the metal of the blank to form the wheel hub by flowing radially into contact



with the irregularly shaped root portions of the blade bases and to secure the blades firmly to the hub.

3,000,082

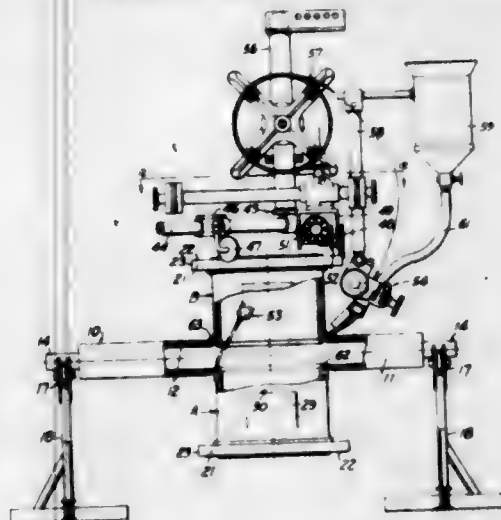
METHOD OF PRODUCING HOLLOW BLADES
Irving E. Hjelstrom, West Caldwell, N.J., assignor to
Curtis-Wright Corporation, a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,099
7 Claims. (Cl. 29-156.8)



1. A method of forming a blade from tubular material which method comprises closing an end portion of the tube, filling the tube with fluid and maintaining the fluid in the tube under pressure from a connected pressure source, crimping the tube to close off a length of tube from the pressure source, and forming the blade contour in said length of tube during the latter portion of the crimping operation whereby pressure in the tube is gradually increased during the forming of the blade to a maximum at the time when said crimping operation is complete.

3,000,083

METHOD FOR THE MANUFACTURE OF VALVES
Austin U. Bryant, Walnut Creek, Calif., assignor to Grove
Valve and Regulator Company, Oakland, Calif., a corporation of California
Filed June 27, 1955, Ser. No. 518,080
4 Claims. (Cl. 29-157.1)

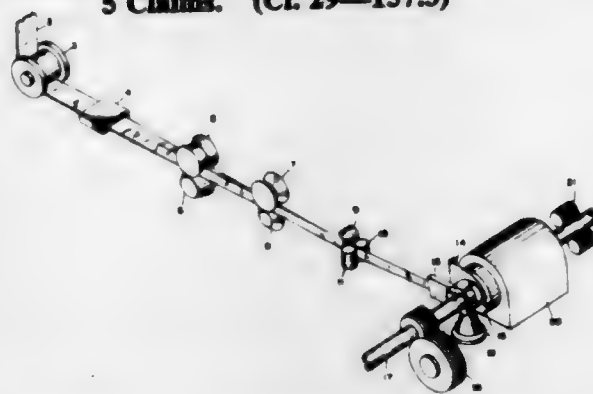


1. In a method for the manufacture of valve bodies of the type including a main body part together with pipe coupling hubs having machined ends and side pads presenting machined end faces that are true with respect to the machined ends, the method making use of arc

welding means of the submerged arc type adapted to track upon an annular surface and make a circular weld; the steps of locating a first hub upon one horizontal front wall of the main body part with a machined end of the hub inserted in an opening in the upper wall of the body part, said location being established by supporting the machined faces of the pads a predetermined distance from the upper face of said body part, heating the hub to expand it in the opening, lightly welding the hub to the upper wall of the body part, inverting the main body part together with said first hub, applying a similar second hub upon the upper wall of the main body part with one machined end of the same inserted in the corresponding opening, said second hub being located by spacing the end faces of its pads a predetermined distance from the end faces of the pads of the first hub, heating the second hub, applying a light application of weld metal between the second hub and the corresponding upper wall of the body, applying said arc welding means to the second hub to track upon the machined end of the same, utilizing said welding means to form a circular interior weld between the first hub and the lower wall of the body, inverting the assembly, applying the welding means to the first hub, utilizing said welding means to form a circular interior weld between the second hub and the lower wall of the body, utilizing the welding means for forming an exterior circular weld between the first hub and the body, inverting the assembly, reapplying the welding means to the upper machined end of the second hub, and then utilizing the welding means for forming an exterior circular weld between the second hub and the lower wall of the body.

3,000,084

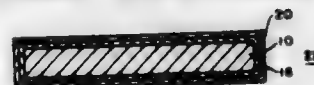
APPARATUS AND METHOD FOR FABRICATING FINNED TUBING
Robert J. Garland, Dewitt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Mar. 27, 1957, Ser. No. 648,940
5 Claims. (Cl. 29-157.3)



1. In a method for winding a ribbon about a rotating and advancing tube, the steps which consist in placing a longitudinal crease in a ribbon, folding the legs of the ribbon into face-to-face engagement, winding the folded ribbon about the tube with the fold adjacent the tube and separating the legs of the folded ribbon from face-to-face contact.

3,000,085

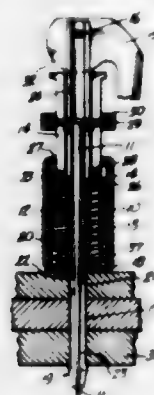
PLATING OF SINTERED TUNGSTEN CONTACTS
William B. Green, Greensburg, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 13, 1958, Ser. No. 741,870
5 Claims. (Cl. 29-183.5)



1. In a semiconductor device comprising a tungsten base contact member, the improvement comprising said

tungsten base contact member having at least a first layer of sintered copper disposed about and completely covering its surface, and at least a second electrodeposited layer of a metal selected from at least one of the group consisting of gold and silver disposed about and completely covering the copper.

3,000,086
CAM LOCKED SHEET METAL CLAMP WITH INDEPENDENTLY OPERABLE EXPANDER PIN
Oscar N. Davis, 1528 E. 55th St., S., Wichita, Kans.
Filed May 29, 1957, Ser. No. 662,451
8 Claims. (Cl. 29—238)



1. A tool for forcing two or more superimposed work sheets into desired relative positions by first forcing like sized circular perforations in the respective sheets into exact registry, and for subsequently clamping the sheets flat against each other to maintain them in the desired relative positions, said tool comprising: a generally cup shaped pressure shoe having a central hole in its otherwise closed bottom end; a sleeve mounted within the open end of said shoe and projecting therefrom and having limited reciprocal movement with relation thereto; a compressed coil spring within the shoe bearing against the bottom of the shoe and against the inner end of the sleeve and urging the sleeve toward the outer end of its limited path of travel; an elongated centrally bored mandrel extending centrally through the sleeve and through the hole in the bottom of the shoe and projecting beyond the respective remote ends of both, and having limited reciprocal movement with relation thereto, that portion of the mandrel which projects from the shoe being longitudinally segmented to provide a plurality of elongated flexible work engaging fingers with enlarged work engaging portions at their tips; a cam pivotally mounted on that portion of the mandrel which projects from the sleeve and bearing against the outer end of the sleeve, said cam being manually movable to force the sleeve to move along the mandrel toward the fingered end thereof to further compress said spring to increase the compressive force on work pieces positioned between the shoe and said tips; and an expander pin freely movable in the bore of said mandrel and being movable longitudinally therein, said pin being completely independent of the sleeve, shoe and mandrel for penetration of the segmentally fingered portion of the mandrel to exert an outward wedging action on all said fingers to increase the peripheral diameter of said fingered portion.

3,000,087
SINTERED TUNGSTEN CARBIDE ALLOY PRODUCT
Charles H. Dyer, Grand Junction, Colo., assignor to Western Alloy Products Company, Denver, Colo., a corporation of Colorado
No Drawing. Filed May 1, 1959, Ser. No. 810,227
9 Claims. (Cl. 29—182.8)

1. A sintered tungsten carbide product for use in earth drilling tools consisting of from 30% to 100% of crushed

and ground particles of a fused alloy of tungsten carbide having the approximate formula W_2C and cobalt in the amount of 1% to 3%, and from 0% to 70% of particles of carburized tungsten having the approximate formula WC , bonded together by a lower melting point metallic material comprising from 5% to 30% of said particles and selected from the group consisting of cobalt, nickel, iron and alloys thereof.

3,000,088
METHOD OF MAKING HOLLOW RIGID SHEET METAL STRUCTURE
Jean H. Melzer, Vogler-Str. 36, Weinheim an der Bergstrasse, Germany
Filed May 13, 1957, Ser. No. 658,709
Claims priority, application Germany May 17, 1956
4 Claims. (Cl. 29—421)



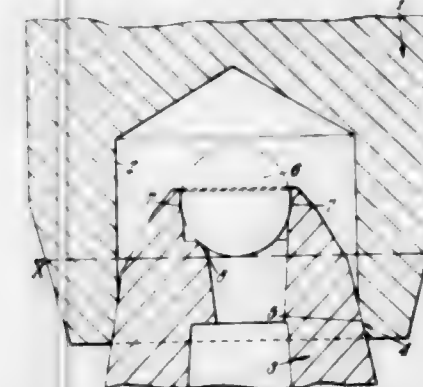
1. The method of producing hollow rigid sheet metal structures from at least three planar metal sheets, which comprises sandwiching between two continuous cover sheets a lattice sheet having an area pattern of lattice-forming perforations each covering an area of substantially equal width and length, locally welding said lattice sheet to one of said cover sheets at a multitude of mutually spaced and areally distributed points, locally welding said lattice sheet to the other cover sheet at another multitude of interspersed points, sealing the edges of the flat sandwich assembly, and supplying pressure fluid into the sealed interspaces to expand the sandwich assembly and permanently deform said lattice sheet into a rigid three-dimensional spacer structure formed by the lattice-sheet material located between the perforations.

3,000,089
METHOD OF ASSEMBLING A TORQUE TRANSMITTING DEVICE
Max P. Baker and Frederick W. Sampson, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Dec. 4, 1953, Ser. No. 396,264, now Patent No. 2,800,777, dated July 30, 1957. Divided and this application Dec. 24, 1956, Ser. No. 637,344
5 Claims. (Cl. 29—436)



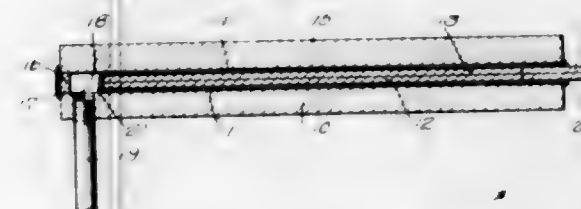
1. In a method for inserting an elastomeric reinforced insert having an inner solid reinforcing member into a chamber through an opening smaller than the elastomeric portion and larger than the inner reinforcing member of said insert, the steps comprising: deforming the elastomeric portion of said insert against said inner reinforcing member so that it will pass through said opening, lowering the temperature of said insert as a unit so that the elastomeric portion thereof will remain in the deformed state without the application of external force, inserting said insert at least partially through said opening and into said chamber, and finally raising the temperature of said insert so that the elastomeric material thereof will resume its normal shape and draw itself through said opening into said chamber.

3,000,090
BALLPOINTED WRITING INSTRUMENTS
Hans Reinhard Fehling, Zug, Switzerland, assignor to I.R.C. Limited, London, England, a company of Great Britain
Filed Aug. 25, 1958, Ser. No. 756,909
Claims priority, application Great Britain Aug. 28, 1957
5 Claims. (Cl. 29—441)



1. In the manufacture of a ballpointed writing instrument having a nib comprising a metal ball-accommodating housing including lateral ball seatings in the wall of the housing of substantially constant circumferential thickness and a metal ball mounted therein, the method of increasing the clearance between the writing ball and its seatings in the housing which consists in subjecting the exterior of the nib to a constricting force exceeding the elastic limit of the nib structure in a zone which extends circumferentially around the nib exterior to assure a permanent deformation of the nib, which zone is located parallel to and to the rear of the plane tangential to the rear of the ball and perpendicular to the axis of the nib and no greater than three ball diameters radially distant from the center of the writing ball, such that the nib is deformed to increase the clearance between the writing ball and its seatings in the nib housing.

3,000,091
CLADDING ASSEMBLY
Leonard P. Zick, Chicago, Ill., assignor to Chicago Bridge and Iron Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1958, Ser. No. 770,669
9 Claims. (Cl. 29—471.5)

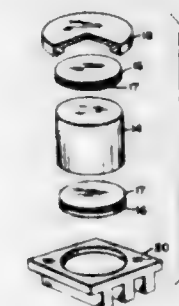


1. A cladding sandwich including two inner plates arranged with the edges of the plates hermetically sealed together in the form of an envelope, said envelope being surrounded by plates in face-to-face relationship to the envelope with brazing material between the inner plates forming the envelope and each adjacent surrounding plate thereby forming a composite assembly, the edges of the assembly being hermetically sealed to produce an evacuable zone between the base plates and the outside of the envelope, means for evacuating said evacuable zone, and a gas conveying conduit communicating with the interior of the envelope and leading outside the assembly, without communicating with the evacuable zone, to means for controlling the gas pressure in the envelope independently of pressure in the evacuable zone.

2. A method of cladding a plate to another plate comprising positioning and arranging two inner plates with the edges of the plates hermetically sealed together

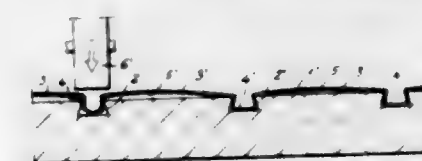
in the form of an envelope, surrounding said envelope with plates in face-to-face relationship to the envelope with brazing material between the inner plates forming the envelope and each adjacent surrounding plate thereby forming a composite assembly, hermetically sealing the edges of the assembly to produce an evacuable zone between the surrounding plates and the outside of the envelope, providing a gas conveying conduit communicating with the interior of the envelope and leading outside the sandwich to means for controlling the gas pressure in the envelope without communicating with the evacuable zone, evacuating the zone below atmospheric pressure, regulating the gas pressure in the envelope by the gas conveying conduit and gas pressure controlling means to above atmospheric pressure, and heating the composite assembly to effect brazing.

3,000,092
METHOD OF BONDING CONTACT MEMBERS TO THERMOELECTRIC MATERIAL BODIES
Samuel J. Scuro, Verona, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 10, 1959, Ser. No. 858,758
3 Claims. (Cl. 29—472.9)



1. In a process for forming a thermoelectric device comprising a body of thermoelectric material selected from the group consisting of indium arsenide, indium arsenide phosphide and indium antimonide, with a low resistance metallic electrical contact member at one end thereof, the steps comprising assembling the body with one surface in contact with a nickel surface of a nickel-clad molybdenum contact member, the surface of the body and the nickel surface closely conforming to each other, heating the assembly comprising the contact member and the body of thermoelectric material to a temperature of from 765° C. to 780° C. for the indium arsenide and indium arsenide phosphide and from 515° C. to 520° C. for indium antimonide, while under pressure and in an inert atmosphere for a brief period of time, whereby a direct fusion and alloying takes place between the nickel surface and the thermoelectric material in contact therewith.

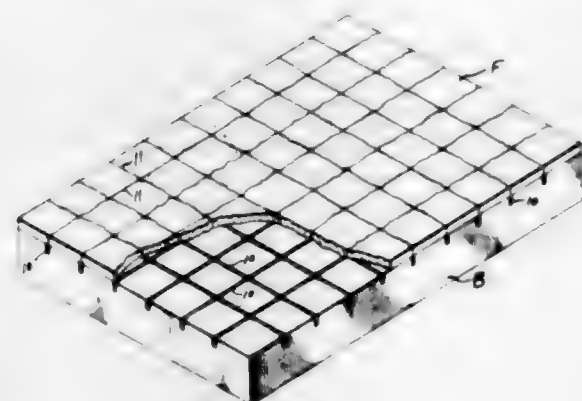
3,000,093
METHOD IN COVERING BUILDING ELEMENT SURFACES WITH SHEET METAL
Walter Wredendorn, Mockfjard, Sweden, assignor to Aktiebolaget Bostadsforskning, Stockholm, Sweden, a Swedish joint-stock company
Filed Apr. 2, 1958, Ser. No. 725,914
3 Claims. (Cl. 29—505)



1. A method of covering a surface of a building element with a continuous, imperforate sheet metal cover,

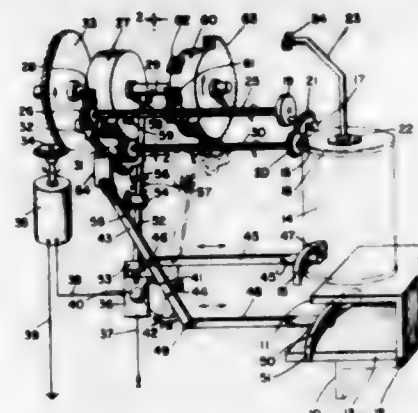
comprising the steps of forming said surface to be covered with a plurality of parallel spaced apart undercut grooves of substantially dove-tail shaped cross-section, forming the sheet metal cover with corresponding channel-shaped ridges which are parallel spaced apart by distances slightly larger than the distances between said grooves and each having substantially parallel side portions and a concave bottom portion shaped to contact the bottom of the groove only at the center of the latter, with the depth of the ridge to the center of said concave bottom portion being substantially greater than the depth of the related groove in the building element, placing the formed sheet metal cover against said surface of the building element with said ridges registering with, and entering into said grooves, and exerting a pressure only against the portions of said cover between said ridges in the direction toward, and substantially perpendicular to said surface to be covered and acting at least against said side portions of the ridges so that each ridge is pressed into the related groove and has its bottom portion flattened against the bottom of the groove to cause said side portions of the ridge to plastically expand outwardly into the undercut portions of the groove for close adherence to the under cut sides of the latter, while said portions of the cover between said ridges are bowed outwardly away from said surface thereby to permit expansion and contraction of the sheet metal cover relative to the building element.

3,000,994
METHODS OF PRODUCING HARD FACED SURFACES
Roman F. Arnoldy, 3827 Childress, Houston, Tex.
Filed Feb. 18, 1957, Ser. No. 640,780
8 Claims. (Cl. 29—328)



1. A method of applying a hard facing of a relatively brittle material to a base of a relatively ductile material by welding or the like without causing cracking of the base material and without forming undesirable wrinkles, high spots or other surface irregularities in the facing, comprising the steps of, providing means with the relatively ductile base material in a predetermined pattern of substantially uniformly spaced lines for preventing the welding of the relatively brittle hard facing to said relatively ductile base material at said spaced lines of said predetermined pattern, and then applying the relatively brittle hard facing to said relatively ductile base material and said means in the predetermined pattern in such thickness relative to the thickness of the base material that either cracking or warping of the base material would normally occur to bond said facing to said base material except at said spaced lines of said predetermined pattern so that substantially vertical planes of weakness are created in said facing at said predetermined pattern which induces cracking of the facing in said predetermined pattern without causing cracking or warping of said base material.

3,000,995
ELECTRIC CAN OPENER
Edward E. Moran, General Delivery, Carmalia, Calif.
Filed May 9, 1960, Ser. No. 27,636
5 Claims. (Cl. 30—4)



1. An electric can opener comprising, in combination: cutting means for opening said can; a drive motor; gear means coupling said drive motor to said cutting means for operation thereby; switch means for energizing said drive motor; a can receiving structure including means responsive to the insertion of a can for actuating said switch means to energize said drive motor; means responsive to a given position of said gear means for actuating said switch means to deenergize said motor after said can has been opened, said gear means including two rows of sector gear teeth of different arcuate extent; a power gear coupled to said cutting means; and gear shift means for moving said power gear from a first position in engagement with one of said rows of sector gear teeth to a second position in engagement with the other of said rows of sector gear teeth whereby said cutting means is operable for different durations for opening cans of different diameters.

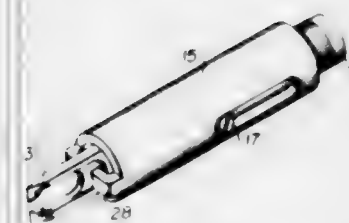
3,000,996
CAN OPENERS
Daniel T. Cushman, Los Angeles, Calif., and Edwin A. McKesson, 422 Oakhurst, Los Angeles, Calif.; said Daniel T. Cushman assignor to Ethel Williamson, Detroit, Mich.
Substituted for abandoned application Ser. No. 330,654, Jan. 12, 1953. This application June 29, 1959, Ser. No. 826,387
3 Claims. (Cl. 30—10)



1. An opener for a can having upper and lower ends, said opener including a lever and a cutting blade formed by an end portion of such lever, a handle member rigidly extending from said blade, an elongated support for said lever exteriorly engageable with a can wall and proportioned to extend approximately from end to end of an engaged can, means for fulcruming the lever on the upper end of said support substantially at the juncture of said blade and handle member, such means establishing a substantially horizontal axis, about which the blade may be forced downwardly to puncture the upper end of said can,

a stop member fixed on said support below and adjacent to the fulcrum means and projecting toward the axis of said can, above the upper end of the can and engageable by the blade in its downward travel to definitely limit such travel, and a ledge on the lower end of the support forming a seat for the can, said ledge projecting toward the can axis, and a seating element for a smaller can of a height materially less than that intended to seat on said ledge, such element being slidable in said support to and from the axis of a can engaged by the support and being predeterminedly upwardly spaced from said ledge, whereby said element when shifted toward the can axis serves to seat said smaller can and when shifted from said axis permits functioning of said ledge to seat a larger can.

3,000,997
CAP REMOVAL TOOL
Robert W. Hartz, Springdale, Conn., assignor to Gregory Industries, Inc.
Filed July 6, 1959, Ser. No. 824,971
3 Claims. (Cl. 30—272)



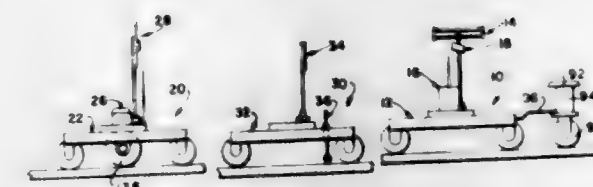
1. A cap removing tool comprising a tubular guide sleeve, an impact shank carried in the sleeve in guided engagement therewith, the shank having an impact end and a blade end, a bifurcated blade fixed to the shank and forming the blade end thereof, said blade having a pair of longitudinally extending tines, each such tine having a transversely extending cutting edge, said tines defining two transverse extremes of a cap receiving space therebetween, said guide sleeve having a pair of longitudinally projecting guide fulcrums projecting from one end thereof and defining another two extremes of said cap receiving space, said sleeve and shank being relatively reciprocal, and guide means maintaining the shank and sleeve in rectilinear guided relationship.

3,000,998
CONTOUR MARKER ADAPTER
John H. Holder, 1843 E. Compton Blvd., Compton, Calif.
Filed Sept. 26, 1960, Ser. No. 58,512
6 Claims. (Cl. 33—21)



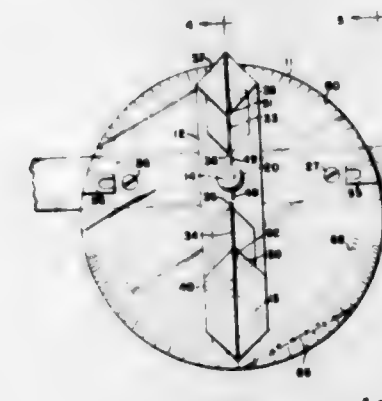
1. The combination, with a contour marker of the type which includes a pair of elongated channel frame members spacedly secured together and in alignment, and a protractor pivotally secured to one end between the frame members, with an articulated arm, the outer end of which carries a marking point, secured to the protractor, of: an adapter for said contour marker; said adapter including: a table provided with parallel fixed end risers, and parallel plates, secured to the top of the table, provided with parallel spaced apart grooves for receiving one of the frame members of the contour marker for slide adjustment of the contour marker relative to said plates.

3,000,999
SYSTEM OF ALIGNING RAILROAD TRACK
Erice E. Hayes, 6710 Northwest Highway, Chicago 31, Ill.
Filed Dec. 31, 1958, Ser. No. 784,153
29 Claims. (Cl. 33—60)



6. A system of aligning railroad track comprising telescope means arranged to be carried by the track to be aligned at a sighting position in predetermined relation therewith for sighting a line, means at said sighting position for transmitting signals in the form of electromagnetic waves, a driven wheeled carriage arranged to ride on the track for movement into a target position remote from said sighting position, target means carried by said carriage upon which the line is sighted to determine the position thereof, means operable in response to the signal transmitted by said transmitting means for driving said carriage in both directions to thereby effect movement of the same into said target position, and jack-rabbit means arranged to be carried by the track to be aligned at a position intermediate said telescope means and said carriage for determining the position of the portion of track carrying the same with respect to said line of sight.

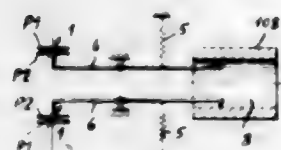
3,000,100
SIGHT MEASURING INSTRUMENT
Robert E. Reinhardt, 3483 S. Utah St., Arlington, Va.
Filed Apr. 20, 1960, Ser. No. 23,586
4 Claims. (Cl. 33—64)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A measuring instrument comprising a stationary member, a pivoting member pivotally mounted on the stationary member, a brake for locking the pivoting member against and releasing it for pivotal movement on the stationary member, said pivoting member being weighted so as to assume a normal gravity controlled position when the brake is released, means for positioning the pivotal axis of the pivoting member a predetermined distance from the eye of the user of the instrument, and at least one pair of sighting elements carried by the pivoting member, the two sighting elements of the pair being positioned a predetermined distance apart such that they are in vertical alignment when the pivoting member is in its normal gravity controlled position and such that the pivotal axis of the pivoting member falls midway between them.

3,000,101 ELECTROMECHANICAL MEASURING APPARATUS

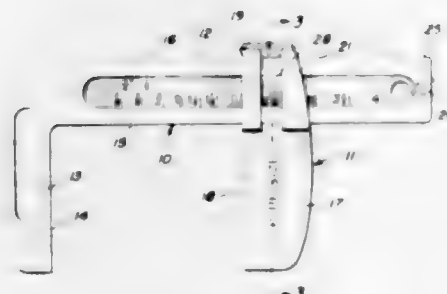
Loris Giardino, 6 Via G. Rossi, and Vittorio Faenza, 148
Via Mazzini, both of Bologna, Italy
Filed Apr. 30, 1957, Ser. No. 656,014
Claims priority, application Italy Apr. 30, 1956
13 Claims. (Cl. 33-143)



13. An electromechanical apparatus for measuring and checking characteristics of articles comprising a transducer formed of a variable capacitor having a pair of substantially parallel plates separated by a space to be acted upon to cause variations of capacitance of said transducer, mechanical means for connection to the article to be measured and acting upon said space between the plates to vary the capacitance of said variable capacitor in accordance with a characteristic to be measured, a fixed capacitor electrically connected to said variable capacitor and acting as a comparison capacitance, a generator of alternating voltage connected to said variable and fixed capacitors, automatic means for varying the voltage of said generator to correct for deviation from linearity of the voltage across said variable capacitor as the voltage thereof varies with the characteristic of the article being measured due primarily to parasitic capacitances of said transducer, said automatic means varying the input to said generator so as to maintain the difference between the voltage across said fixed capacitor and a predetermined fraction of the voltage across said variable capacitor at a constant value, and means for detecting the voltage across said variable capacitor.

3,000,102 PIPE GAUGE

Jack D. Snyder, 1506 Rosedale Ave., Houston, Tex.
Filed Aug. 26, 1958, Ser. No. 757,372
4 Claims. (Cl. 33-143)

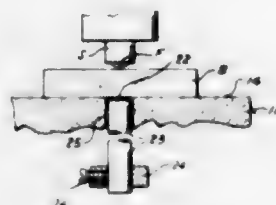


1. A pipe gauge consisting of a pair of components, one of said components being of L-shaped configuration having a short leg presenting a fixed jaw and a long leg presenting a carrier bar at right angles thereto, the other component being a jaw generally rectangular in form having a lower portion opposed to said fixed jaw and having an upper portion slidably embracing said carrier bar, said upper portion having three fingers joined together at the upper and lower ends by common integral fixation to the coplanar main body portion of the movable jaw, two of such fingers being coplanar and outwardly offset to one side of the main body of the movable jaw and disposed in spaced apart relation, the remaining finger being intermediate and immediately adjacent said two fingers and outwardly offset to the other side of the main body of the

movable jaw, with the opposed inner surfaces of the three fingers spaced apart a distance corresponding to the thickness of said carrier bar to snugly embrace the same therebetween, and there being indicia on said carrier bar visible through the window between said two fingers as afforded by the material offset from therebetween to present said remaining finger, the opposite outward displacement of said fingers on opposite sides of said main body of the movable jaw presenting continuous planar upper and lower guide edges extending the full width and thickness of said movable jaw slidably engaging and guiding the opposite longitudinal side edges of said long leg in surface-to-surface contacting relation therewith.

3,000,103 GAGE BLOCK VERIFICATION INSTRUMENT AND PROCEDURE

George D. Webber, Lakewood, Ohio, assignor, by mesne assignments, to Webber Gage Company, Cleveland, Ohio, a corporation of Ohio
Filed May 18, 1959, Ser. No. 813,891
1 Claim. (Cl. 33-147)



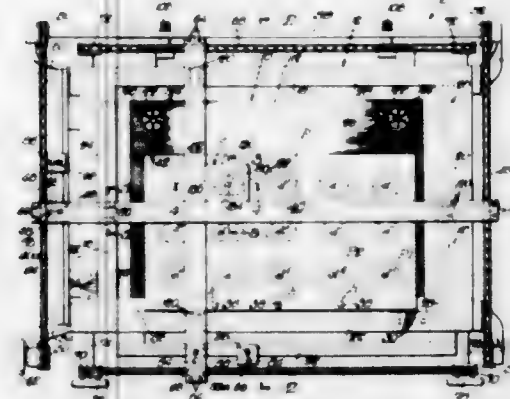
A gage block inspection instrument comprising a rigid frame adapted to be mounted on a table of a comparator or the like adjacent the feeler thereof, a measuring table on the frame having a generally flat top surface adapted to support the gage blocks and having an opening there-through, an anvil member having a high wear resisting convex top surface projecting through the opening toward such feeler, a lever supporting said anvil member and having a fixed pivot on the frame remotely of the anvil member in a direction generally parallel to said flat surface, an adjusting screw below the lever and thread-connected to the frame remotely of the anvil member in the opposite direction along the lever and having a convex top surface in contact with the lever, and a spring connecting the lever to the frame to hold the lever in contact with the convex surface of the screw.

3,000,104 PHOTOCOMPOSING APPARATUS OF STEP-AND-REPEAT TYPE

Jack Polayes, Westport, Conn., assignor to The Bar-Plate Manufacturing Company, Orange, Conn., a corporation of Connecticut
Filed Oct. 19, 1959, Ser. No. 847,420
2 Claims. (Cl. 33-184.5)

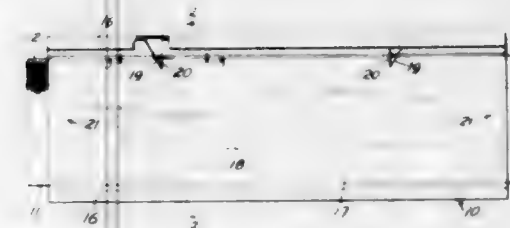
1. In step-and repeat apparatus for photocomposing from a chase part onto a flexible plate part, the combination of a support having a plane surface; a flexible air-impervious front-exposed mat normally backed at its rear against said surface and being flexible therefrom; two crossing flexible straightedges mounted on said support for sliding movement at right angles to and on each other and over the front of said mat throughout its expanse; a transparent cover movable into and from a closed position on the front of said mat in which it clears said straightedges and a pair of superposed plate and chase parts on said mat; means for applying a partial vacuum in the space between said mat and said cover in its closed position; and means for sealing said space from the atmosphere so that on application of a partial vacuum therein said mat and superposed parts thereon will be

drawn against said cover, and the chase part in substantial electrical resistance interposed between the electrodes and edge-to-edge abutment with both straightedges will also beyond the lateral bounds of the web material for pre-



3,000,105 DEVICE FOR SELECTING RECORDED SECTIONS OF RECORDING STRIPS

Frank A. Schrup, 750 E. Front St., Plainfield, N.J.
Filed Sept. 13, 1957, Ser. No. 683,865
2 Claims. (Cl. 33-189)

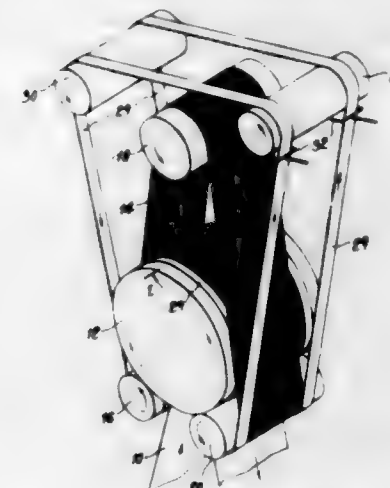


1. A device for selecting sections of recordings on a cardiograph strip, said device comprising an elongated frame of channel cross-sectional form, the channel being defined by a back wall and side walls projecting at right angles to one surface of the back wall, the side walls terminating in laterally extending inwardly bent hook-shaped flanges paralleling the back wall, an elongated transparent panel having side edge portions fixed to said flanges, said panel being spaced from and paralleling said surface of the back wall and covering the channel of said frame, the channel opening through ends of the frame for movement of a cardiograph strip there-through, one side edge portion of said panel having a pair of predeterminable spaced and aligned apertures arranged inwardly of ends of said panel and end portions of the frame, and the spacing of said apertures defining a predeterminable sectional portion of the frame controlling selection of the sections of recordings on said strip.

3,000,106 APPARATUS FOR DRYING PAPER BY ELECTRICAL CONDUCTIVITY

Arthur Christman, Pleasantville, N.Y., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed Mar. 20, 1957, Ser. No. 647,240
11 Claims. (Cl. 34-1)

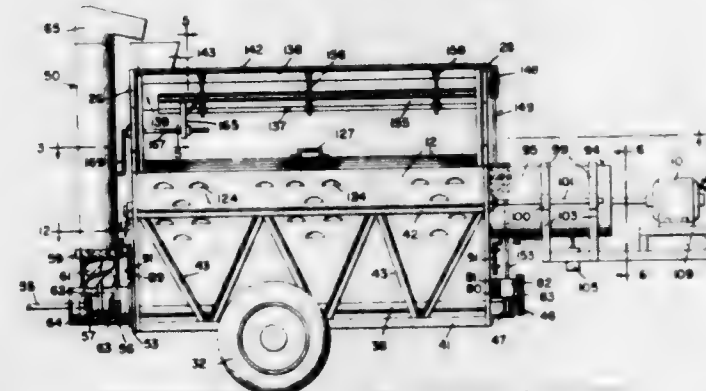
1. Drying apparatus for web material comprising, in combination, a pair of evenly spaced traveling conductive electrodes bearing forcibly and evenly against one another through the web material to be dried throughout an extensive range of travel, a source of electrical potential, conductive means connecting opposite sides of said source to the respective electrodes, and protective means of high



venting short circuiting contact of the electrodes beyond the lateral bounds of the web material.

3,000,107 AGRICULTURAL MACHINE FOR TRANSPORTING, DRYING AND MIXING GRANULAR MATERIAL

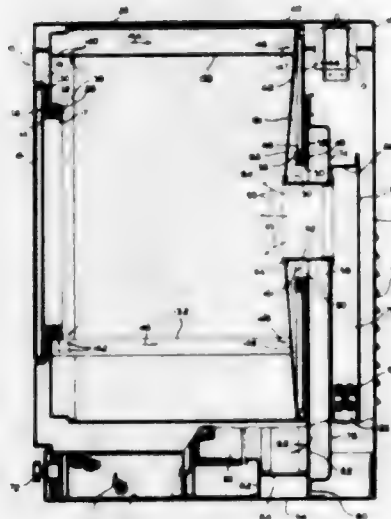
Edmund C. Ryan, Monona, Iowa
Filed Feb. 20, 1959, Ser. No. 794,690
18 Claims. (Cl. 34-102)



1. An agricultural machine comprising in combination, a wagon body having downwardly converging side walls joined to form a longitudinal trough bottom, front and back end walls, means supporting the body for movement over the ground, an auger conveyor positioned in said trough bottom for moving material to one end of the body, a top trough structure supported at an elevation above and paralleling said trough bottom, means for transferring material from said one end of the body into one end of said top trough, cooperating means associated with the top trough for moving material therealong and discharging the material downwardly into the body to be received in the trough bottom, an inverted elongate V canopy disposed longitudinally of and in close proximity to said auger conveyor, said canopy having the longitudinal edges of the downwardly divergent sides thereof directed toward and spaced from the downwardly converging side walls of said body, means supporting the canopy for vertical adjustment whereby the space between the said longitudinal edges thereof and the body wall may be changed, material agitating means extending longitudinally of each longitudinal edge of the canopy below and inwardly of such edge, and the last means comprising a large diameter tube extending at one end into the body through an end wall thereof, means for supporting the tube for longitudinal in-and-out adjustment, and means supported by the outer end of and movable with said tube for creating a forced draft of air from said outer end for discharge through the inner end thereof.

3,000,108 COAXIAL FLOW DRIER

John Paul Jones, Benton Harbor, and Clifton A. Cobb and James T. Williams, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of New York
Filed June 11, 1956, Ser. No. 590,735
7 Claims. (Cl. 34-133)



1. A drier mechanism for clothes and the like, comprising a housing, a hollow drier drum supported by said housing for rotation therewithin and having an imperforate outer peripheral wall, a front end wall and a pair of spaced apart rear walls, means for rotating said drum about a horizontal axis within said housing, means in the front end wall defining an access opening for the admission of clothes to be dried, means in the forwardmost of said rear walls defining an air entrance opening communicating with the drum interior, means in the rearwardmost of said rear walls defining an air discharge opening, conduit means extending axially through the forwardmost rear wall and concentrically inwardly spaced from said means defining said air discharge opening to conduct a supply of air from a heated source directly to the drum interior, said pair of spaced walls together forming a space at the rear of said drum extending radially outwardly from said air discharge opening in communication there with a plurality of axially extending hollow vanes on said outer peripheral wall of said drum, each of said vanes communicating with said spaced rear walls at one end thereof and having openings at the opposite end thereof receiving moisture-laden air from the interior of said drum, and means for circulating heated air through said conduit means into the drum interior and for withdrawing moisture-laden air from the drum interior, through the vanes into the space between the rear walls and outwardly through said air discharge opening.

3,000,109
COOLING TUNNEL FOR HOT SHEET OR STRIP
Francis U. Hill, Cleveland, and Morton L. Simon, Willoughby, Ohio, assignors to James B. Shaver, doing business as Iron Lung Ventilator Company, Cleveland, Ohio
Filed Dec. 31, 1957, Ser. No. 706,489
1 Claim. (Cl. 34-156)

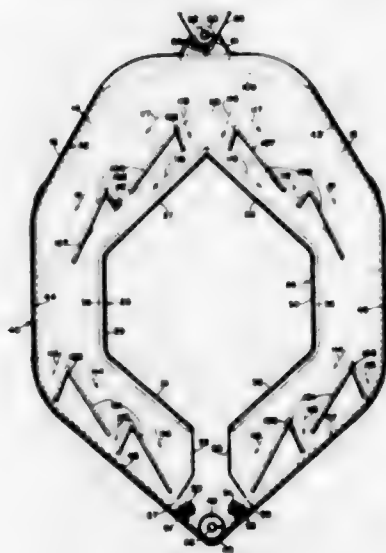
In an apparatus for rapidly cooling longitudinally moving hot metal strip or sheet, an elongate straight through cooling tunnel open at its opposite ends to the outside atmosphere and through which the strip or sheet to be cooled is passed in one direction, said tunnel including a pair of axially aligned sections forming a continuous tunnel through which a cooling fluid is moved at high velocity, means for injecting a sheet or strip enveloping cooling fluid into both ends of the axially aligned tunnel sections, fluid velocity accelerating means carried by the opposite ends of said tunnel for injecting the cooling

fluid at high velocity into the respective tunnel sections, opposed jet diffusing means intermediate the tunnel ends for discharging the spent cooling fluid from each of the tunnel sections, said opposed jet diffusing means increasing in cross sectional area toward an exhaust manifold



and substantially equally on both sides of the longitudinal axis through the tunnel, an exhaust manifold communicating with the respective diffusing means, and a spent cooling fluid discharge flue communicating with said manifold.

3,000,110
BAFFLE PLATES FOR CROP DRIER
Murray W. Forth and Harry A. Flak, Jr., Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed June 4, 1958, Ser. No. 739,792
8 Claims. (Cl. 34-167)



1. For use in a crop drier having a central heating area with inner and upright wall structure adjacent to and generally surrounding the heating area with a central apex portion above the heating area and outer and upright wall structure spaced from the inner wall structure and forming with the latter a pair of upright material drying chambers on opposite sides of the heating area, said drying chambers diverging and converging in inclined relation respectively above and below the heating area, said drying chambers having a common upper material inlet means above said central apex portion and lower outlet means effecting a gravitational path of movement of the material through the chambers, the improvement residing in: elongated baffle plates between and spaced from the inner and outer wall structures, said baffle plates defining wedge-shaped structures having edges thereon in opposed relation to the normal gravitational path of movement for bi-directing the material to move in paths on opposite sides of the wedge-shaped structures, at least two of the wedge-shaped structures being positioned above the inner wall structure and on opposite sides of the apex portion whereby said inlet means may fill an area between the latter wedge-shaped structures and inner wall structure prior to filling an area above the latter wedge-shaped structures and the outer wall structure.

3,000,111 METER

Stanley L. Heymann, 4945 Edgemere Ave., Baltimore, Md.
Filed Jan. 21, 1959, Ser. No. 788,241
8 Claims. (Cl. 35-11)



1. A reaction time tester meter, comprising, an electric motor, a source of power for said electric motor, said electric motor having a drive pulley associated therewith, structure including a friction transmitter pulley carrying a first gear means and mechanically associated with said drive pulley, a second gear means engaged with said first gear means, said first gear means transmitting power from said drive pulley to said second gear means, an indicating dial, a clutch means located between said second gear means and said indicating dial, a pivotally mounted clutch lever including a first solenoid means for moving said clutch lever, and a linkage including a second solenoid means for moving said friction transmitter pulley out of engagement with said drive pulley.

3,000,112
AUTOPILOT SIMULATOR
Merle W. Crabb, Endicott, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Apr. 21, 1959, Ser. No. 807,920
3 Claims. (Cl. 35-12)

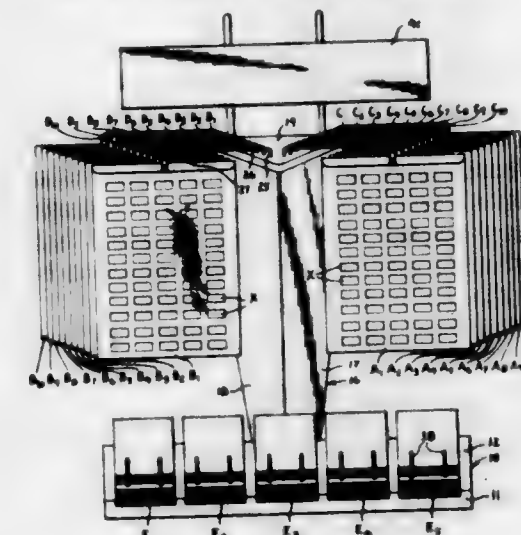


3. In an autopilot simulator, means for generating a deflection signal proportional to that required to restore an aircraft to a true course comprising integrating means, said integrating means comprising an operational amplifier coupled to a feedback condenser, means connected to said integrating means for supplying a rate signal, said integrating means integrating said rate signal from a given reference time to provide an error signal, means associated with said integrating means for establishing said reference time including a resistor and first switch means connectable in parallel with said feedback condenser to force the output of said integrating means to a substantially zero value, second switch means for disconnecting the output of said integrating means from succeeding components in said simulator, said first switch means disconnecting said resistor to allow said integrating means to integrate said rate signal commencing at said selected time to force the output of said integrating means to represent said error signal, means connecting said first switch means to said second switch means for connecting the output of said integrating means to succeeding components in said simulator at said selected time, means providing additional signals representing factors affecting said deflection signal, and means including a summing amplifier for summing said error signal and said additional signals to generate said deflection signal.

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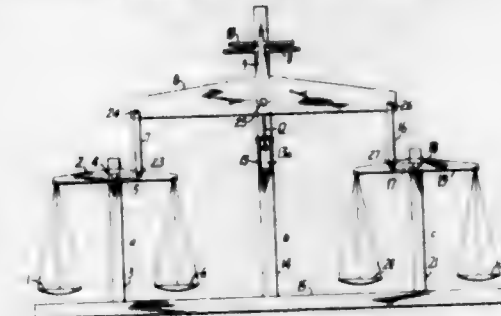
3,000,113 DISPLAY UNIT

Walter H. Olson, Rockford, Ill., assignor, by mesne assignments, to Valpar Corporation, Rockford, Ill., a corporation of Delaware
Filed Mar. 6, 1958, Ser. No. 719,598
9 Claims. (Cl. 35-28.3)



1. A color chip display unit comprising a support, first and second sets of arms, means mounting each of the arms in said first and second sets on said support in two spaced rows for horizontal swinging movement relative thereto, said arms each having a depending portion on the outer end thereof, a transparent panel swivelly attached to the depending portion on each of said arms, a plurality of different color chips on each transparent panel and spaced apart thereon, each of the arms in said first and second sets of arms being vertically offset from the other arms in the respective set, the depending portions on the arms in each set being laterally offset when said arms in said first and second sets extend in relatively opposite directions from said support whereby to permit each of the arms in one set to be swung into overlapping relation to the others in that set.

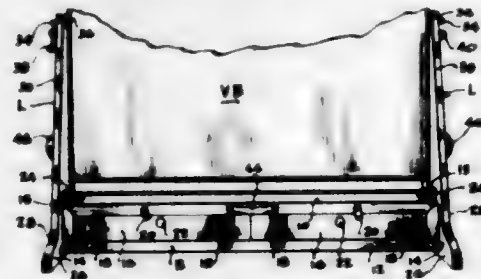
3,000,114
COMBINED BALANCE FOR SOLVING EQUATIONS AND INEQUALITIES
Konstantin Orlov, 5 Mianika, Belgrade, Yugoslavia
Filed Oct. 12, 1959, Ser. No. 845,698
Claims priority, application Yugoslavia Oct. 14, 1958
4 Claims. (Cl. 35-30)



1. A combined balance for solving equations and inequalities in which numerical values are represented by weights, said combined balance comprising a base, a balance having a horizontal balance beam centrally pivoted to an upright stand mounted in the center of said base, said pivot dividing said beam into two arms of equal length, two identical balance scales having smaller balance beams and stands than said first balance, each said smaller balance beam being pivoted to its respective stand as in said first balance, said identical balance scales mounted on said base symmetrically with respect to said center mounted balance and adjacent the ends of the horizontal balance beam of said center mounted balance, all said balance beams being approximately in

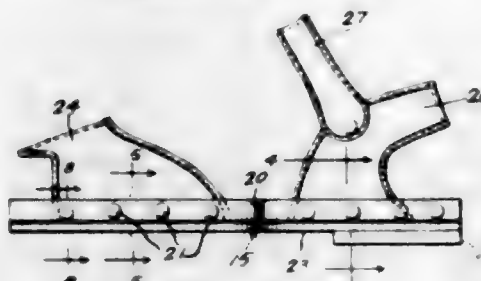
the same vertical plane, lever means pivotally connecting the respective ends of said horizontal balance beam of said center mounted balance with the pivots of the balance beams of said identical balance scales, said lever means being rigidly fixed to said respective pivots of the smaller balance beams, and scale pans respectively suspended from the respective ends of said balance beams of said similar balance scales for receiving weights designated by one of the + and - mathematical signs, and the inner said scale pans for receiving weights designated by the other of said signs, whereby the positive and negative values on left side of an equation can be accurately represented in the left identical balance scale, and the values on the right side of the equation can be similarly represented on the right identical balance side, and indicating means on said center mounted balance for indicating the balance of the equation.

3,000,115
PORTABLE VISUAL BOARD ASSEMBLY
Clifford Welch, 139 Atherwood Ave.,
Redwood City, Calif.
Filed Jan. 31, 1958, Ser. No. 712,487
5 Claims. (Cl. 35-60)



2. In a portable all purpose visual board assembly, the improvement comprising: an elongated frame having a top and a pair of vertical sides each having a top corner edge; a pair of legs, each leg being pivotally connected at a point between its ends to the frame to swing about an axis parallel to and substantially on one of the edges, the portion of the leg extending below the axis of pivot of the leg being longer than the vertical side, whereby the legs are swingable between a folded position along the top of the frame and an erect position against the vertical sides to resist spreading; a visual board having conformations on opposed sides adapted to be received between the legs when in the erect position with said conformations bearing against the legs to sustain the legs in the erect position; and means on the upper portions of the legs to sustain the visual board.

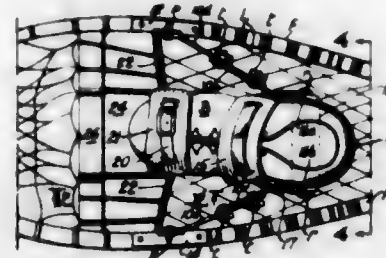
3,000,116
SANDAL
Joseph H. R. Ally, 2 Ropes St., Salem, Mass.
Filed July 31, 1959, Ser. No. 830,916
1 Claim. (Cl. 36-2.5)



A sandal embodying an inner sole having toe and heel portions a felt pad fitted within said sandal, a welt comprising a length of semi-rigid material, having its marginal edge secured around the marginal edge of said sole and extending upwardly therefrom, a vamp section removably fitted within said toe portion of said sandal,

with the lower edge of said vamp section resting against said welt, socket sections of head and socket fasteners, secured to said welt with said sockets facing inwardly, said head sections of head and socket fasteners secured along the lower edge of said vamp adapted to engage within said sockets, removably securing said vamp to said welt, and a back strap removably secured to the heel portion of said welt.

3,000,117
SNOWSHOE HARNESS
Harold Howe, Rowayton, Conn., assignor to Howe Folding Furniture, Inc., New York, N.Y., a corporation of New York
Filed Mar. 30, 1960, Ser. No. 18,558
8 Claims. (Cl. 36-4.5)



1. A snow shoe harness comprising, a pair of brackets mounted on a snow shoe frame in laterally spaced relation, a rigid adjustable strap the ends of which are pivotally connected to said brackets respectively, said strap being shaped so that it has a curved intermediate portion disposed rearwardly of the snow shoe from its pivoted ends and two arms extending from said intermediate portion to said brackets respectively, said intermediate portion providing an abutment for the heel of a user's boot, means supported by and extending between opposed portions of said rigid strap for limiting downward movement of the boot heel relative to said rigid strap, means anchored at its ends to opposed portions of the rigid strap and adapted to extend forwardly from said rigid strap and around and over the front of the user's boot to hold the boot from moving forward away from abutting relation to the said intermediate portion of said rigid strap, and a toe strap detachably engageable with the snow shoe and adapted to extend over the toe of a user's boot and to prevent the toe portion of the boot from lifting from the snow shoe irrespective of the lifting and lowering of the heel portion of the boot and of the rigid strap.

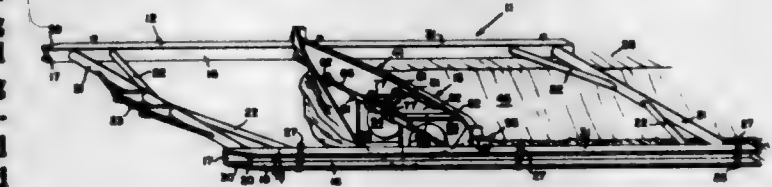
3,000,118
FOOT COVERING
Anne W. O'Shea, 23 Robin Road, Rumson, N.J.
Filed Mar. 11, 1960, Ser. No. 14,455
1 Claim. (Cl. 36-10)



A disposable hygienic foot covering to be worn while trying on new shoes comprising a relatively thin sheet of vinyl plastic material having a pair of symmetrical sections disposed on opposite sides, respectively, of a transverse medial line of fold and secured together along their opposed longitudinal edges to provide a normally flat foot-receiving envelope open at one end, each section being provided with openings for ventilation, each section having a first portion adjacent the open end of said enve-

lope, a sole-forming portion adjacent said medial line of fold and an intermediate boot-forming portion, said first portion and said boot-forming portion being disposed on opposite sides, respectively, of a transverse line of fold and said first portion being folded over said boot-forming portion to reinforce the open end of said envelope, said boot-forming portion and said sole-forming portion being disposed on opposite sides, respectively, of a second transverse line of fold spaced from said medial line of fold and said sole-forming portion being folded inwardly and upwardly along said boot-forming portion, whereby upon insertion of a foot into the open end of said envelope the sole-forming portions of the respective sections will permit expansion on opposite sides of said medial line of fold.

a roller rotatably mounted on said bracket plate and adapted to be supported by and in rolling engagement with the adjacent of said channel upper surfaces, the



outer side of said bracket plate being adapted to contact in sliding engagement the adjacent of said channel inner surfaces.

3,000,119
INSTEP STRAPS
Jacob I. Altman, Clayton, Mo., assignor to Deb Shoe Company, Inc., St. Louis, Mo., a corporation of Missouri
Filed Sept. 26, 1957, Ser. No. 686,354
5 Claims. (Cl. 36-58.5)



1. An instep strap for removable disposition around the shank of a lady's pump and the instep of the wearer when the pump is on the foot, said strap consisting of an endless tubular member of relatively inelastic material arranged and secured in a flat two-ply band adapted to fit comfortably across the under side of the shank of the pump, said band being integrally connected at its opposite ends to a symmetrically positioned medial portion having the form of an internally open, somewhat flattened tube, said medial portion being shirred throughout its length and thereby shortened, said medial portion being adapted to fit across the wearer's instep, and a flat elastic strip extending freely through the medial portion, said elastic strip being shorter in length than the unshirred length of the medial portion and being secured at its ends to, and within, the opposite ends of the two-ply band so as to hold the pump firmly on the foot of the wearer while cushioning the tendency of the elastic strip to bite into the wearer's instep.

3,000,120
CANAL EXCAVATING APPARATUS
Herschel C. Larus, Salina, and Walter C. Peterson, Sacramento, Calif., assignors to A. Teichert & Son, Inc., Sacramento, Calif.
Filed May 14, 1957, Ser. No. 659,159
9 Claims. (Cl. 37-103)

1. A canal excavating apparatus comprising: an elongated rigid sled adapted to straddle the canal, said sled being capable of being oriented and inclined in a predetermined direction and slope, said sled including a pair of parallel channels providing a pair of parallel inner surfaces and a pair of co-planar upper surfaces; a main bucket including a bottom plate shaped to conform to the outline of the canal, a back plate mounted on the rear edge of said bottom plate; and a pair of wing buckets mounted on the lateral extremities of said main bucket, each of said wing buckets including a vertical side plate, a back plate, a bit mounted on the lower leading edge of said wing bucket, a bracket plate adjustably mounted on the outer side of said side plate, and

3,000,121
AUTOMATIC VERTICAL CONTROL OF EARTH MOVING MACHINES
David O. Martin, Dallas, and Frank J. Ocnaschek, Richardson, Tex., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 21, 1956, Ser. No. 586,197
3 Claims. (Cl. 37-144)

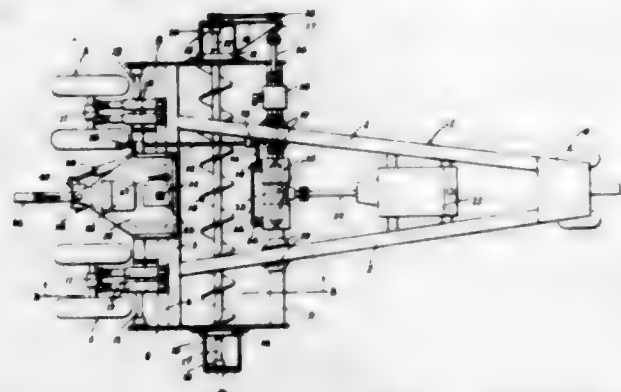


1. Means for controlling a movable blade of an earth-moving machine comprising a photo-electric pickup device mounted on the blade of said tractor, a transmitting means comprising a light source, a rotating drum surrounding said light source and formed with at least two circumferentially arranged rows of slots, each of said rows of slots having a different number of slots therein, each row of slots constructed and arranged to modulate said light beam, a motor driving said rotating drum, said light source in conjunction with the rotating drum establishing a plane of reference defined by the comparative intensities of the modulated light beams, said photo-electric pickup device constructed to receive said light beams, an amplifier-detector attached to said photo-electric pickup device and producing an output which is zero when the photo-electric pickup device is in alignment with the plane of reference and producing a direct current signal with a polarity which indicates whether the photo-electric pickup device is above or below the plane of reference, a servo-amplifier receiving the direct current signal from said amplifier-detector, and a blade positioning mechanism receiving the output of said servo-amplifier and positioning said blade so as to close the servo loop to maintain the output of the amplifier-detector at zero.

3,000,122
ROAD BUILDER
Raymond A. Gurries, San Jose, and John Carlett, Los Gatos, Calif., assignors to Gurries Manufacturing Co., San Jose, Calif., a corporation of California
Filed Jan. 19, 1959, Ser. No. 787,496
5 Claims. (Cl. 37-180)

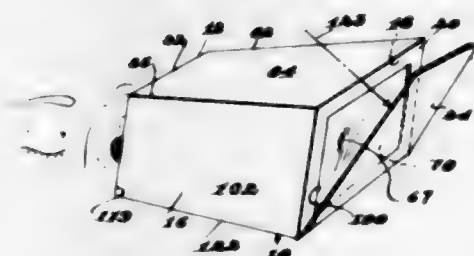
1. In a land leveling implement, a main wheel-supported frame, a bowl mounted on the frame and including side plates, and a ground engaging blade extending between the side plates, a transverse conveyor-type auger,

arranged to be reversibly driven or held stationary, extending the full distance between the side plates, and means mounting the auger in connection with the bowl a material distance ahead of the blade as well as above



the ground, the side plates having openings through which the conveyor at its end projects; said auger being non-enclosed and unobstructed for its full extent between the side plates.

3,000,123
SLIDE VIEWER
Walter W. Hicks, 1003 N. Mansion Drive,
Silver Spring, Md.
Filed Sept. 5, 1958, Ser. No. 759,226
1 Claim. (Cl. 40-63)

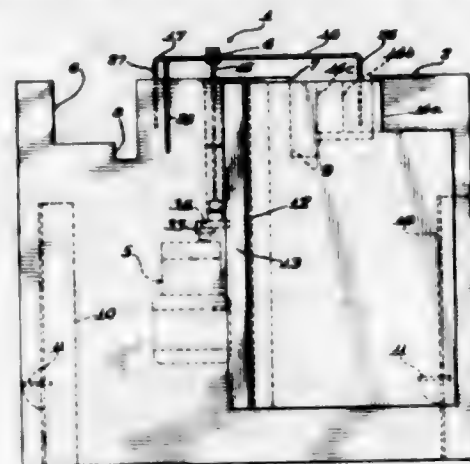


A device of the character described for viewing photographic slides the bottom, top and sides of which are of trapezoidal formation, a viewing opening, magnifying lens mounted in said opening, an aligned opening in the end opposite from said viewing end, frictional closure means adapted to maintain said slide in alignment with said openings, an adjustable reflecting flap positioned adjacent said slide and adapted to reflect the maximum of light toward the back of said slide whereby the picture on said slide is illuminated, and means for accentuating light comprising a layer of light reflecting substance applied to the upper surface of said reflecting flap wherein slits radiating outwardly from the opening are formed in one of the lower tabs and a horizontal slit is formed below said opening whereby said magnifying lens may be maintained in alignment, and said viewer when assembled will present said circular and square openings in horizontal alignment.

3,000,124
PAGE TURNING DEVICE
Arnold E. Johnson and Leonard Peretti, Chicago, Ill., assignors to Arvey Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 806,000
6 Claims. (Cl. 40-104)

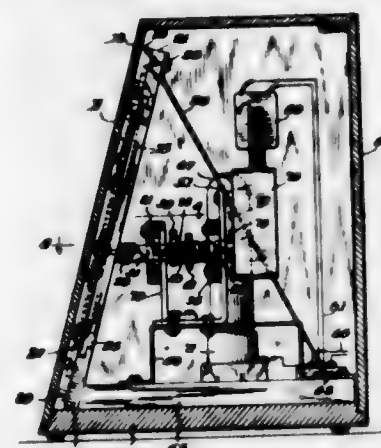
1. A page turning device comprising a support panel having opposite faces, a plurality of pages hingedly connected to the front face of said panel and to each other along a hinge line, a rotatable shaft carried by the rear face of said panel and disposed substantially parallel to and offset from said hinge line in the direction of the plane of the front face of the panel, angularly spaced radially extending arms of unequal length carried by said

shaft, a finger transversely carried by each arm, said panel being provided with a pair of notches each being disposed a substantially equal distance on each side of said shaft, said notches being respectively disposed unequal distances on each side of said hinge line whereby



all of said fingers may pass through all of said notches when the shaft is rotated, said pages being provided with notches each being disposed unequal distances from both the shaft and the hinge line whereby when the shaft is rotated certain of said fingers pass through certain of said page notches and abut certain of said pages.

3,000,125
PICTORIAL DISPLAY DEVICE
Victor Elvestrom, Minneapolis, Minn., assignor to Cinesat Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,104
17 Claims. (Cl. 40-137)



1. Display apparatus comprising a cabinet structure having a viewing window, a pictorial representation comprising a plurality of segregated similarly positioned like-size incremental spaced strip areas forming a plurality of different representations, the strip areas being arranged substantially parallel to each other with adjacent strips separated by a border area having uniform light transmitting characteristics, the pictorial representations formed by the incremental strip areas being arranged in orderly sequences repeating as a series $a, b, c, \dots n$, the border areas each being of a width which is a minor fraction of that of a pictorial incremental area, a masking strip area having a plurality of light transmitting incremental strip areas each of a width substantially corresponding to a single incremental strip of the pictorial representation and separated from each other by a masking region of a width corresponding to the combined width of the number of incremental strips of pictorial representations intervening between adjacent incremental areas of like pictorial areas and the borders of constant light transmitting characteristics, a driving means connected to one of the mask elements

ments and the pictorial representations relative to each other, means to provide stepped movement between the mask and pictorial representation for revealing all incremental strips of each separate pictorial representation simultaneously through the mask element apertures and for stepping the movement between the several separate pictorial representations, and means to control the period of dwell of each incremental area within the apertures of the mask.

3,000,126
CARTRIDGE-GUIDING MECHANISM
Russell S. Robinson, Short Beach, Conn.
(124 Vin Yella, Lido Isle, Newport Beach, Calif.)
Filed Feb. 4, 1953, Ser. No. 335,111
21 Claims. (Cl. 42-18)



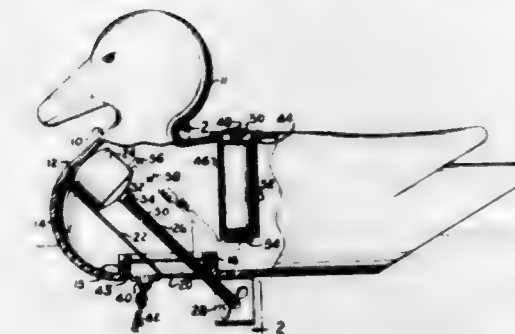
15. In a firearm of the repeating type, a barrel having a chamber, a breech extension to which the barrel is rigidly connected and having inner walls spaced apart a distance less than the maximum cartridge diameter, inwardly projecting lands on the extension walls providing intersecting grooves arranged to receive and guide a cartridge for longitudinal sliding movement and to control its vertical movement therein, one of said grooves communicating with the chamber, and means including a reciprocable bolt for moving the cartridge longitudinally within one of said grooves during the recoil of the bolt and swinging said cartridge into the other groove at the intersection of the grooves during the latter part of the recoil.

3,000,127
FISHERMEN'S TOOL
Wilson Stegeman, 2727 Montecito Road,
Santa Rosa, Calif.
Filed Jan. 26, 1959, Ser. No. 788,953
2 Claims. (Cl. 43-1)



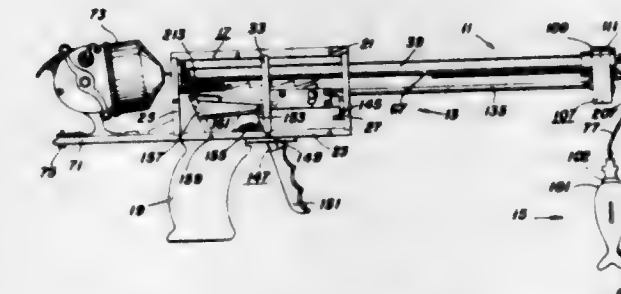
1. A fisherman's tool comprising a shank of resilient material, a handle fixedly secured to one end of said shank, the other end of said shank being formed with furcations between which a fish hook may be engaged, a grip-member of resilient material slidably mounted on said shank, said grip-member having a recess in one end thereby providing resilient walls to partially surround and hold a fish hook received by the bifurcated end of the shank when the grip-member is slid to that end of the shank, and said grip-member having a pair of notches to receive a line to be wrapped on the grip-member.

3,000,128
MECHANIZED WATERFOWL DECOY
Ingie Lee McAda, 3219 Miami, Wichita Falls, Tex.
Filed Oct. 6, 1958, Ser. No. 765,398
9 Claims. (Cl. 43-3)



1. A composite, attachable propelling mechanism for a waterfowl decoy having a hollow, buoyant body portion with an opening formed in the bottom thereof, which mechanism comprises a closure member adapted to complementally fit into said opening in fluid tight relation, an electric motor mounted on said closure member on the upper side thereof, a shaft extending outward from said motor, a tube extending through said closure and forming a fluid tight joint therewith, said tube being in substantially axial alignment with the axis of the shaft of said motor, said tube extending into said hollow, buoyant body portion of said decoy to a point above the normal water line when said decoy is floating on water, a propeller shaft, which propeller shaft extends downwardly and rearwardly through said tube and being in axial alignment with the shaft of said motor, coupling means connecting said motor shaft and said propeller shaft within said tube, a screw type propeller secured to said propeller shaft exterior of the outer end of said tube, a battery mounted in said body portion, and an electrical circuit connecting said motor and said battery.

3,000,129
FISHING DEVICE
Horace S. Rainey, 4674 Quince Road, Memphis, Tenn.
Filed June 30, 1958, Ser. No. 745,519
10 Claims. (Cl. 43-19)



4. A fishing device comprising a gun including a barrel, a bait removably received in said barrel, said bait including a body portion, substantially all of said body portion extending outside of said barrel, a fishing line mounted from said gun and attached to said bait, said bait being provided with a groove therein, holding means mounted on said gun and including at least one finger adapted for movement between a position in which the finger is disposed in said groove for holding the bait against ejection from the gun and a position in which the finger is retracted from said groove, a plunger movably received in said barrel, a power spring received in said barrel between said plunger and said bait, said spring including a forward end, said spring being in direct contact with said bait over a substantial area of said forward end, cocking means engageable with said plunger, said cocking means being arranged to move said plunger in a

selected number of successive steps against said spring to compress the spring between the plunger and the bait, by a selected predetermined amount so that the distance that the bait will travel can be selectively determined before casting trigger means operably coupled to said finger for retracting the finger from said groove to allow the bait to be cast from said gun, said spring being arranged so that said forward end thereof is outside of said barrel when said bait departs therefrom, whereby the last contact between said gun and said bait is by said spring outside of said barrel.

3,000,130

AUDIBLE FISHING LURE

Henry Pankuch, 1508 W. 101st St., Los Angeles, Calif.
Filed Sept. 10, 1959, Ser. No. 839,154
6 Claims. (Cl. 43-42.17)



1. An audible fishing lure for simulating the sounds produced by a particular small animal attractive to fish when pulled through water on a fish line, including, an elongate body having a number of teeth at its forward end, means supported at the rear end of said body to which a hook may be connected, a shaft supported at the forward end of said body including an eye to which the fish line may be attached, a rotatable member supported on said shaft and having at least one surface area at an angle to the direction of movement of the lure through the water, said member being rotated on said shaft responsive to the pressure of the water against said surface area as the fishing lure is pulled through the water by the fish line, and at least one resilient arm mounted on said rotatable member and having one end resiliently positioned against said teeth at the forward end of said body for producing a predetermined intermittent sound simulating the sound produced by the particular small animal as said member rotates.

3,000,131

ATTACHMENT FOR FISHHOOKS

Harold S. Stinson, Town and Country, Mo.
(11777 Clayton Road, St. Louis 22, Mo.)
Filed Jan. 26, 1959, 788,800
2 Claims. (Cl. 43-44.6)



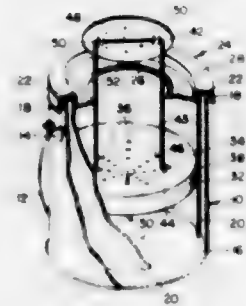
1. In combination, a fish-hook composed of a shank having a line-attaching end loop formed at its upper extremity and positioned to one side of said shank, a bend and a barb formed at its lower extremity; a bait clamping element normally disposed in engagement with the opposite side of said shank, the upper extremity of said bait clamping element having a bend disposed outwardly from said shank thereby forming an inwardly converging bait receiving opening whereby bait material may be inserted in the opening thus provided and then used as a wedge to open the upper end of the clamp, a bend and a barb formed at the lower extremity of said bait clamping element, said last named bend formed to diverge outwardly from the bend of said fish-hook, thus forming an open-

ing between the said two last named bends, whereby bait material may be inserted in the opening thus provided and then used as a wedge to open the lower end of the clamp; and a connection disposed across said shank and attaching the upper extremity of the upper outwardly disposed bend of said clamping element to the line-attaching end loop of said fish-hook.

3,000,132

DIPLESS MINNOW BUCKET

George H. Kolstinen, 209 Park Ave.,
Brocktonridge, Minn.
Filed Jan. 20, 1960, Ser. No. 3,545
6 Claims. (Cl. 43-56)

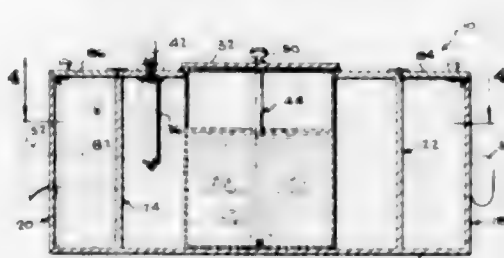


6. A bait container having a cylindrical wall and closed upper and lower ends, an access opening in said upper end, a buoyant member within said container adapted to slidably engage the inner annular surface of said cylindrical wall of said container, foraminous means affixed axially on said ring-like buoyant member, a generally U-shaped arcuate arm pivotally connected to said buoyant member and extending upwardly through said access opening of said closed end, a closure plate hingedly connected to said closed end of said container and pivotally connected to the upper extremity of said U-shaped arm, and releasable locking means on said closed end of said container engageable with said closure plate to hold it in a closed position, said U-shaped arm being operable when said container is filled with water to open said closure plate upon upward movement of said arms and said buoyant member.

3,000,133

FISHING APPARATUS

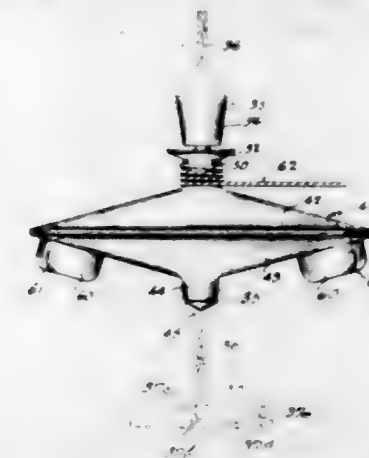
Tom T. Coney, P.O. Box 1147, Rosedale, Miss.
Filed Oct. 16, 1959, Ser. No. 846,994
3 Claims. (Cl. 43-57)



1. A fishing apparatus comprising an open top box having a floor, a pair of side walls rising from the side edges of said floor, and an end wall rising from each end edge of said floor and connecting each of the adjacent ends of said side walls to the other, a second upstanding main partition positioned within said box inwardly of and spaced from one of said end walls and extending from one of said side walls to the other, a second upstanding main partition positioned within said box inwardly of and spaced from the other of said end walls and extending from one of said side walls to the other side wall, a first upstand-

ing auxiliary partition positioned within said box inwardly of and spaced from said one side wall and extending from said first main partition to said second main partition, a second upstanding auxiliary partition positioned within said box inwardly of and spaced from said other side wall and extending from said first main partition to said second main partition, a tank having an open top and adapted to contain live fish bait fixedly positioned within and spaced from said main and auxiliary partitions, a top extending over the space between said main and auxiliary partitions and said tank and together with said tank, main and auxiliary partitions, and adjacent portions of said floor forming an enclosure, pump means extending into said enclosure for injecting air under pressure into said enclosure, and conduit means connecting the interior of said tank with the interior of said enclosure, the space between said first main partition, the adjacent end wall, and the adjacent side wall portions forming a storage compartment.

upper member and downwardly tapered portion of the lower member provided with transverse holes through



which loops of driver cords may be passed for imparting rotating motion to the body.

3,000,134

TOY BUILDING BLOCKS

Richard Marini, Jamaica, N.Y., assignor to Guild Arts and Crafts, Inc., New York, N.Y.
Filed Feb. 28, 1957, Ser. No. 643,026
3 Claims. (Cl. 46-26)



3. In a toy building block construction kit, a building block having a front wall and a plurality of side walls extending rearwardly from the periphery of the front wall, the inner surfaces of said side walls defining a hollow interior, each of the side walls being provided at their rearward extremities with a longitudinally extending beveled locking rib projecting inwardly at right angles to the interior surface of the respective wall, a connecting member of resilient plastic material having a longitudinally extending filler portion adapted to be placed between and in an abutting relationship to the exterior surfaces of a pair of adjoining blocks and be coextensive with said exterior surfaces, said connecting member also including a laterally extending portion disposed medially at the rear of the filler portion, the extremities of the laterally extending portion being provided with forwardly extending portions adapted to be received within their respective hollow interiors of said adjoining blocks, the forward extremities of each of said forwardly extending portions having mutually inwardly directed locking ribs adapted to be received in engagement with the respective locking ribs on the interior surfaces of said blocks.

3,000,135

SOUND EMITTING FLYING SAUCER AND TOP

Joseph A. Banoczi, 82 West Ave., Darien, Conn.
Filed Dec. 4, 1958, Ser. No. 778,092
2 Claims. (Cl. 46-63)

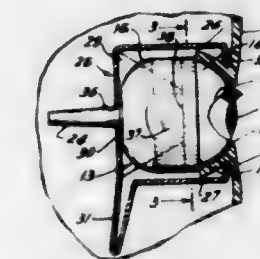
1. A toy comprising a body including upper and lower substantially conical hollow molded plastic members secured together at their peripheral edges, the lower member being tapered downwardly on its under side to a central spinning point, downwardly extending hollow tubular members on the under side of the lower member adjacent its outer periphery provided with side openings providing sound emitting means by flow of air over these openings, a central upward extension on the upper side of the upper member, and said upward extension on the

3,000,136

DOLL'S HEAD AND EYE MOUNTING MEANS THEREFOR

David Cohn, Poundridge, N.Y., assignor to Model Plastic Corporation, White Plains, N.Y., a corporation of New York

Filed Nov. 26, 1958, Ser. No. 776,544
2 Claims. (Cl. 46-169)



1. An eye mounting means for a doll's head having an eye opening and a curved lip formed integrally with the head and extending inwardly from the front wall thereof continuously about said eye opening and forming a socket within the head with the eye opening located substantially centrally thereof, said eye mounting means including an eye construction comprising a shell having an eye opening and an eye member disposed at said opening and pivotally mounted within said shell for relative movement with reference to said eye opening, said shell having a curved forward portion adapted to fit said socket and having flattened opposite sides and a shoulder at the forward end of each of said flattened sides, a housing having a rear wall and oppositely disposed tongues extending forwardly from said rear wall having inwardly directed sharpened portions at the forward ends thereof adapted to be clamped on said lip, said housing having side tongues extending forwardly from said rear wall between which said eye construction is secured with said side tongues clampingly engaged against the flattened side faces of said eye construction and with the ends of said side tongues disposed in abutting engagement with said shoulders, and said housing including a U shaped extension connected between said rear wall and one of said tongues having said inwardly directed sharpened portions, said U shaped extension being disposed in angular relation with said one tongue and with the opposite portions of said extension being spaced apart and adapted to be compressed into closer relation to thereby bend said one tongue inwardly for securing said inwardly directed sharpened portions of said oppositely disposed tongues in clamping engagement on said lip with the curved forward portion of said eye construction disposed in said socket.

3,000,137 SELF UPSETTING TOY VEHICLE

Henry E. Vine, 1050 N. Broadway, Sheridan, Wyo.
Filed Sept. 16, 1960, Ser. No. 56,566
4 Claims. (Cl. 46-202)



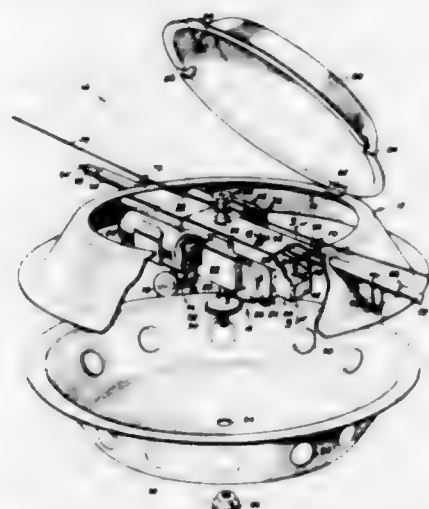
1. In a self upsetting toy vehicle, a mobile frame having a forward end and a rearward end, a seat on said frame between the forward and rearward ends thereof, a bumper extending along and spaced from the forward end of said frame, means connecting said bumper to said frame for movement toward and away from the forward end of said frame, a spring loaded first arm having a ground engaging element on one end positioned beneath said frame intermediate the ends thereof and having the other end pivotally connected to said frame for movement of said arm between a position suspended from said frame to a position in which said element is in contact with a ground surface, a first releasable latch means engaging said ground engaging element for holding said arm in the suspended position, a spring loaded second arm disposed forwardly of the adjacent said seat and connected intermediate its ends to said frame for swinging movement between a substantially horizontal position to an upwardly sloping position, a second releasable latch means engaging one end of said second arm for holding said second arm in the horizontal position, and means connecting said first and second latch means to said bumper connecting means so that execution of the movement of said bumper toward the forward end of said frame will release said first and second latch means and permit the movement of said first arm under the action of the associated loaded spring from the suspended position to the position in which the ground engaging element is in contact with the ground surface to forcibly engage said ground surface to cause tilting movement of the vehicle and the movement of said second arm under the action of the associated loaded spring from the horizontal position to the upwardly sloping position to forcibly engage a dummy toy occupant when disposed in said seat to cause ejection of said occupant out of said seat and free of said vehicle.

3,000,138 TOY DEVICE

Frank P. Tagliaferri, 3821 Mount Pleasant Ave.,
Baltimore, Md.
Filed Aug. 27, 1959, Ser. No. 836,545
2 Claims. (Cl. 46-244)

1. A flying saucer toy device, comprising, upper and lower dish-shaped members arranged face-to-face but spaced from each other, a chassis in said upper dish-shaped member and having its ends connected thereto, means including a vertically arranged driven element having one end fixedly secured to said lower dish-shaped member so as to rotate therewith, said driven element being supported by said chassis and having its other end extending upwardly through said upper dish-shaped member, a capstan at the upper end of said driven element and arranged so that a line positioned between two vertically spaced members passes at least once around said capstan, diametrically spaced hook fairleads on said upper dish-shaped member for receiving said line connected between said vertically spaced members and passed around said capstan, a tube fastened to said

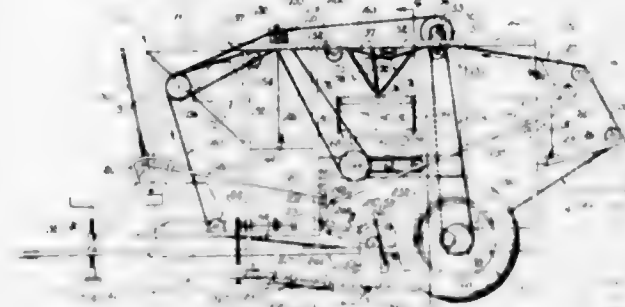
chassis and arranged in alignment with said line and extending from opposite sides of said upper dish-shaped member, a slidable rod positioned in said tube and extending from opposite ends thereof, reversible motor means mounted in said chassis and coupled to said driven element to rotate said driven element, an electrical circuit including switch means for controlling the direction of operation of said reversible motor means, said switch means being connected to said slidable rod and actuated



in opposite directions by the opposite ends of said rod striking spaced objects positioned on said line in alignment with said rod and said lower dish-shaped member having a plurality of spaced windows formed in its peripheral surface, and light means in said electrical circuit for projecting light through said windows while said lower dish-shaped member is rotating, whereby said flying saucer device can be used to simulate an actual flying saucer.

3,000,139 MACHINE FOR APPLYING HOT CAPS AND THE LIKE

Paul A. Bezzerides, P.O. Box 1303, Ornd, Calif.
Filed Apr. 25, 1960, Ser. No. 24,566
15 Claims. (Cl. 47-1)

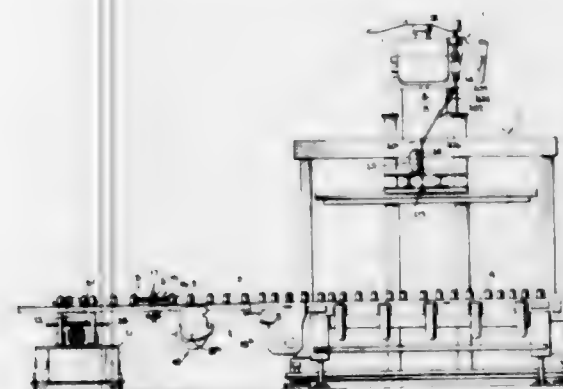


1. A machine for applying hot caps over plants longitudinally spaced in a row comprising means for supporting hot caps; means mounting the cap supporting means for earth traversing movement longitudinally over such a row of plants; hot cap carrier means including a plurality of hot cap receptacles adapted to receive such hot caps complementarily therein; means supporting the carrier means on the mounting means for movement sequentially past said cap supporting means and thence along a predetermined path in upwardly adjacent relation to and longitudinally of such row of plants during such earth traversal for first removing hot caps from said supporting means and then applying the removed hot caps successively over plants in said row; and earth engaging means borne by the mounting means laterally adjacent to the carrier means and said predetermined path thereof for depositing dirt around the caps applied to the plants, said

dirt being adapted to bear downwardly against the applied caps for enabling removal of the caps from the receptacles and for holding such caps over the plants.

3,000,140 AUTOMATIC WEIGHT REGULATOR FOR GLASS MACHINES

William H. Fosse and Frederick Z. Fosse, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,318
8 Claims. (Cl. 49-5)



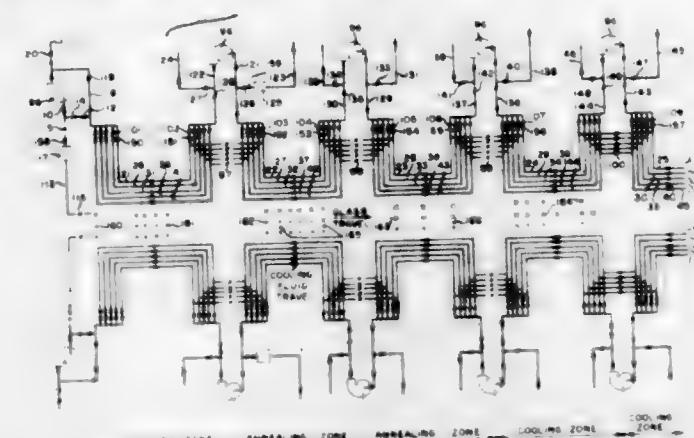
1. An automatic glass forming machine comprising the combination of a glass feeder, feed correction means for selectively raising and lowering the weight of the charges delivered by said glass feeder, a glass article forming means adjacent said glass feeder and operatively coupled thereto to mold charges therefrom into glass articles, a conveyor to convey continuously the molded articles from said forming means, weighing means adjacent said conveyor, transfer means to move glass articles to said weighing means, article sensing means connected to said weighing means to selectively sense glass articles which are over or under a predetermined weight, overweight counting means connected to said article sensing means to count the number of overweight articles sensed thereby, underweight counting means connected to said article sensing means to count the number of underweight articles sensed thereby, first control means connected between said overweight counting means and said feed correction means for lowering the charge weight a predetermined amount when the overweight counting means reaches a set count, and second control means connected between said underweight counting means and said feed correction means for raising the charge weight a predetermined amount when the underweight counting means reaches a set count.

3,000,141 LEHR

Joseph S. Gregorius, Tarentum, and Thomas R. Reed and Horace W. Gardner, Pittsburgh, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa.

Filed Sept. 5, 1957, Ser. No. 682,241
5 Claims. (Cl. 49-47)

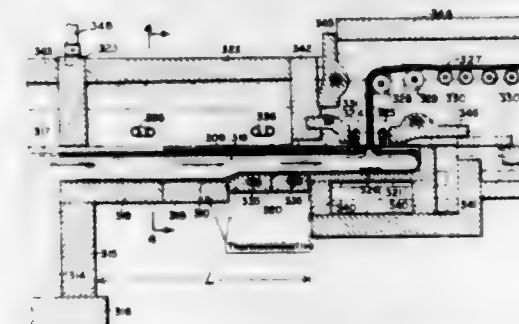
1. A Lehr for annealing glass comprising a tunnel having an entrance and an exit and characterized by a temperature gradient between said entrance and said exit, a conveyor extending longitudinally through said tunnel for conveying glass from said entrance to said exit, transversely arranged longitudinally extending ducts in said tunnel in proximity to said conveyor, each duct being constructed of a plurality of sections, inlets and outlets to each section of said ducts, means for selectively withdrawing air from the outlet of each duct section and selec-



tively discharging said air to the ambient atmosphere, and means for selectively introducing air from the ambient atmosphere and from the outlet of each duct section into the inlet of the next preceding duct section.

3,000,142 PROCESS FOR PRODUCING FLAT GLASS

Bernard Long, Paris, France, assignor to Societe des Glaces de Boussols, Paris, France, a corporation of France
Filed Feb. 16, 1959, Ser. No. 793,442
Claims priority, application France Apr. 2, 1958
3 Claims. (Cl. 49-83.1)



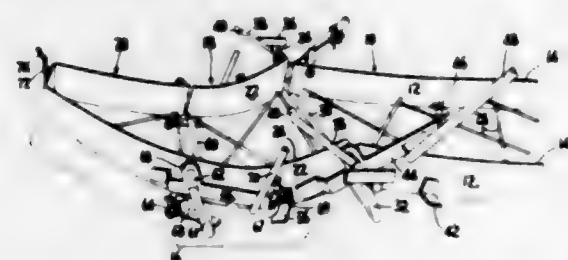
3. A process for producing flat glass, comprising the steps of refining glass in a tank furnace, passing molten glass from said tank furnace to a drawing chamber through a substantially horizontal cooling channel having a minimum length of about one meter, limiting the depth of flow in said channel to a maximum of substantially 30 cm. to prevent the occurrence of a return flow toward said tank furnace upon the drawing of a sheet of glass from the melt in said drawing chamber, cooling the upper part of the flow in said channel at an average rate exceeding approximately 100° C. per meter so as to form a first skin of relatively viscous molten glass on the surface of said flow and simultaneously cooling the lower part of said flow at substantially the same rate so as to form a second skin of relatively viscous molten glass at the underside of said flow, thereby entraining between said skins a mass of relatively fluid, hotter material in the central region of said flow, and drawing said sheet of glass with said first and second skins constituting respectively a proximal and a distal layer of said sheet.

3,000,143 METHOD FOR BENDING GLASS SHEETS

Harold E. McKelvey, Rural Valley, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Jan. 4, 1956, Ser. No. 557,361
9 Claims. (Cl. 49-84)

1. A method of bending glass sheets into complex curvatures having a relatively gently curved central portion merging into intermediate regions of severe curvatures and terminating in relatively flat extremities ad-

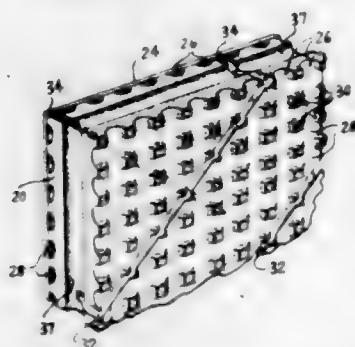
jacent each intermediate region comprising mounting a glass sheet in bending relation to a shaping surface, subjecting the glass to glass softening temperatures, applying an upward thrust to lift each intermediate region and its adjacent extremity of the glass about a first axis of rota-



tion as the glass softens upon exposure to glass softening temperature and subsequently starting and continuing to apply an additional upward thrust to each glass sheet extremity about a second axis of rotation disposed longitudinally outwardly of said first axis during the final stage of the bending cycle.

3,000,144 COMPOSITE PANELS FOR BUILDING CONSTRUCTIONS

Joseph R. Kitson, Newington, Conn., assignor, by mesne assignments, to Cassavan Industries, Paterson, N.J., a corporation of New Jersey
Filed Mar. 7, 1956, Ser. No. 570,037
7 Claims. (Cl. 50-268)



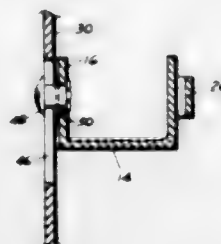
1. A concrete reinforced building panel of large modular dimensions, comprising a main body slab of low density, relatively low strength expanded thermosetting plastic resin, and thin impact-resistant sheet facing material secured on the surface of said slab, the latter being formed to provide at least two sets of spaced parallel passages extending throughout the panel area, the passages in one set being disposed at an angle to those in the other set and intersecting the latter to provide multiple points of communication between the two sets throughout the panel area, and a hardened concrete grout filling said passages and providing an integral rigid grid of interconnected structural members serving as the principal load-bearing support in said panel.

3,000,145 TRUSS ANCHOR

Louis L. Fine, Miami, Fla., assignor to Advance Metal Products, Inc., Miami, Fla., a corporation of Florida
Filed Oct. 22, 1957, Ser. No. 691,613
1 Claim. (Cl. 50-466)

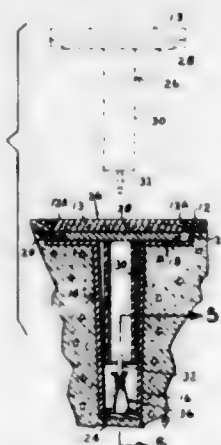
An anchoring device for anchoring roof elements to the concrete continuous top beam of concrete block structures wherein the said concrete beam is poured in place between form-constituting side members; said anchoring device comprising an elongated upright strap having a lower bent portion adapted to be positioned in the concrete and having an upper end portion of a length sufficient to permit its attachment to a rafter or beam, a saddle in the form of an upwardly facing channel-like

member of moisture proof material comprising a bottom and upstanding side walls, connecting means between one of said side walls and the said strap holding the saddle and strap against separation while permitting rotational movement of the saddle with respect to said strap, whereby to permit the saddle to extend across and to bear upon the top of the poured concrete beam, extended end portions on said saddle adapted to rest upon the top edges of said form-constituting side members, the distance between the said walls of the saddle being such as to receive the lower edge portion of a roof beam to position



said roof beam and to hold it against movement away from the said strap, said connecting means comprising a rivet firmly secured to a side wall of said channel-like member, and said upright strap having an elongated slot extending longitudinally of said strap intermediate the ends thereof, said rivet extending loosely into said slot and headed over to permanently connect said saddle and said strap, said loose connection and said slot permitting vertical adjustment of said saddle whereby said saddle will at all times completely rest on said concrete top beam with a full bearing area.

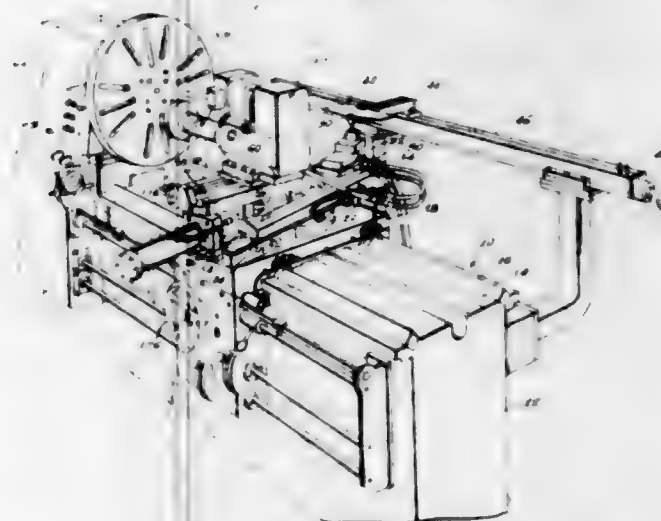
3,000,146 WALL ANCHOR Methel A. Rogers, Choctaw, Okla. (18073 Vineyard Road, Castro Valley, Calif.) Filed Oct. 19, 1959, Ser. No. 847,287 4 Claims. (Cl. 50-471)



2. A movable partition wall anchor, including: a socket adapted for installation in a supporting surface to be covered by tile, said socket comprising, a centrally apertured rectangular plate having a surrounding relatively short outstanding wall, the outer free edge surface of said outstanding wall lying in the plane of the supporting surface below the tile, the dimensions of said rectangular plate being slightly greater than the dimensions of a section of tile, and a tubular member secured at one end to said rectangular plate around the aperture therein and projecting inwardly of the supporting surface, said tubular member having a closed free end; a plug member removably received by said socket, said plug member comprising, a rectangular cap freely received within the outstanding wall of said rectangular plate, said rectangular cap being of equal dimensions with respect to a section of tile and having its outer surface parallel with respect to the plane of the free edge surface of said out-

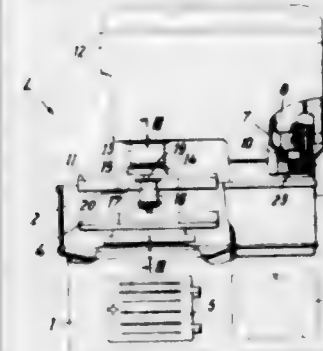
standing wall, and a mandrel centrally connected to one side of said rectangular cap and extending into said tubular member; and means within said tubular member for normally holding said plug member within the socket.

3,000,147 CONTOUR GRINDER Michael J. Celovsky, Detroit, Mich., assignor to Industrial Tool Engineering Co., Detroit, Mich., a corporation of Michigan Filed Oct. 2, 1958, Ser. No. 764,925 11 Claims. (Cl. 51-100)



1. A contour grinder comprising a table, a tracer slide, swivel means mounting said tracer slide on said table, a tracer head, a tracer head slide mounted for axially adjustable movement on said tracer slide, said tracer head being swivel mounted on said tracer head slide, a grinder spindle, a grinder spindle slide, said grinder spindle being slidably mounted on said grinder spindle slide, and swivel means mounting said grinder spindle slide on said tracer slide.

3,000,148 TWO-LAP LAPPING MACHINE Hans Friedrich Bovenstegen, Hasselerstr. 32, Mettmann, Rhineland, Germany Filed Dec. 28, 1959, Ser. No. 862,418 14 Claims. (Cl. 51-111)



1. In a lapping machine, in combination: a base having a seat; a lower lap having an upper surface and rotatably mounted in said base; an upper frame member having a seat and connected to said base for movement about a vertical axis; an upper lap having a lower surface, rotatably mounted in said upper frame member, and movable with the latter into vertical alignment with and laterally away from the lower lap; a tool holder removably receivable in each of said seats and comprising a tool adapted to treat the surfaces of said laps; and a drive operatively connected with said upper frame member for reciprocating the latter about said vertical axis whereby the tool is adapted to treat the lower surface of said upper lap when the tool holder is received in said first

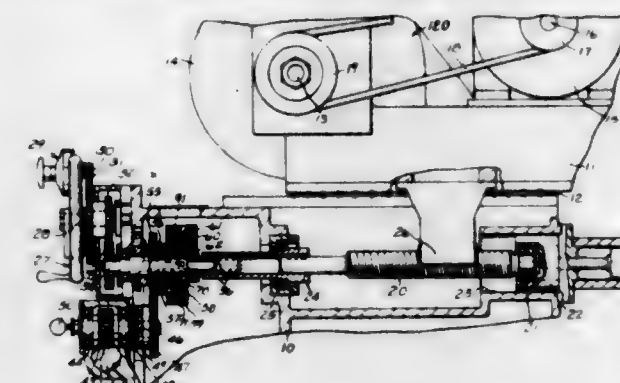
mentioned seat and the tool is also adapted to treat the upper surface of said lower lap when the tool holder is received in said last mentioned seat.

3,000,149 CONTACT WHEEL FOR ABRASIVE BELTS Stanley L. Johnson, St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware Filed Apr. 11, 1955, Ser. No. 500,593 6 Claims. (Cl. 51-141)



1. A contact wheel for an abrasive belt and the like which renders said belt highly aggressive while permitting said belt to effect a visually uniform abraded surface on the work piece, characterized in that the peripheral surface of said wheel is provided with a first series of equidistantly spaced parallel grooves of equal width of which each groove extends across the peripheral face of said wheel, a second series of equidistantly spaced parallel grooves of equal width similarly extending across the peripheral face of said wheel such that grooves of said second series intersect and cross grooves of said first series and grooves of said first series intersect and cross grooves of said second series, the grooves of said first series having a circumferential pitch differing from that of the grooves of said second series, said crossing grooves defining a plurality of substantially congruent protruding quadrangularly shaped belt-engaging lands.

3,000,150 GRINDING MACHINE Olva E. Hill, West Boylston, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts Filed May 19, 1959, Ser. No. 814,312 18 Claims. (Cl. 51-165)



1. In a grinding machine having a transversely movable wheel slide, a rotatable grinding wheel thereon, means including a nut and screw feed mechanism operatively connected to feed said slide in either direction, a grinding wheel truing device including a longitudinally traversable truing tool slide, a transversely movable truing tool on said truing tool slide, means to traverse a truing tool slide longitudinally through one complete reciprocation for an intermittent truing cycle or continuously for a continuous truing cycle, a truing tool feeding mechanism to feed said truing tool transversely, a wheel feed compensator mechanism operatively connected to impart a compensating adjustment to said nut and screw

feed mechanism, a post-process work gage, means actuated by and in timed relation with the longitudinal movement of the truing tool slide to actuate the truing tool feed mechanism and to actuate the feed compensator at the start of each slide movement, and operative connections between the post-process gage and the truing tool feed mechanism and between the gage and the feed compensator to actuate the truing tool feed mechanism when the work piece being gaged is undersize or to actuate the feed compensator when the work piece being gaged is oversize.

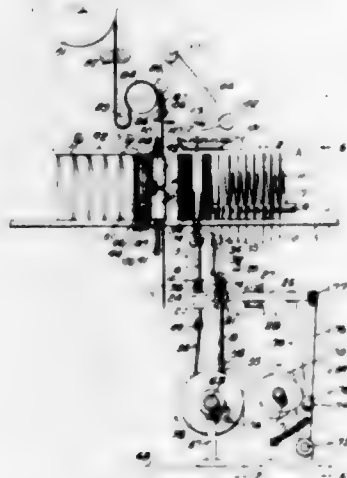
3,000,151

METHOD AND APPARATUS FOR FORMING AND WRAPPING PACKS OF ENVELOPES AND SIMILAR ARTICLES

Richard Winkler, Rengsdorf, near Neuwied, and Kurt Dunnebler, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri

Filed May 1, 1957, Ser. No. 656,390

Claims priority, application Germany May 11, 1956
17 Claims. (Cl. 53-3)



1. An apparatus for wrapping envelopes into packs, including means for advancing envelopes one after another with the face side of one envelope facing the rear side of an adjacent envelope, separating means for controlling advance of a foremost envelope to cause the envelopes to gather into a pack responsive to advance thereof by said advancing means, separating means for projection into position on the retractive side of the pack to start a succeeding pack, actuating means for alternately projecting and withdrawing the separating means from contact with a pack, means for wrapping the foremost pack of envelopes, means for alternately advancing one separating means to move the gathered pack into said wrapping means and for returning the other separating means for gathering a succeeding pack of envelopes, said separating means having expandable and contractable parts in contact with the envelopes to separate the packs when said parts are expanded and to facilitate passage into position between envelopes advanced by said advancing means when said parts are contracted, and means responsive to said actuating means for effecting operation of said parts of the separating means.

3,000,152

METHODS OF AND MEANS FOR PACKING COMMODITIES

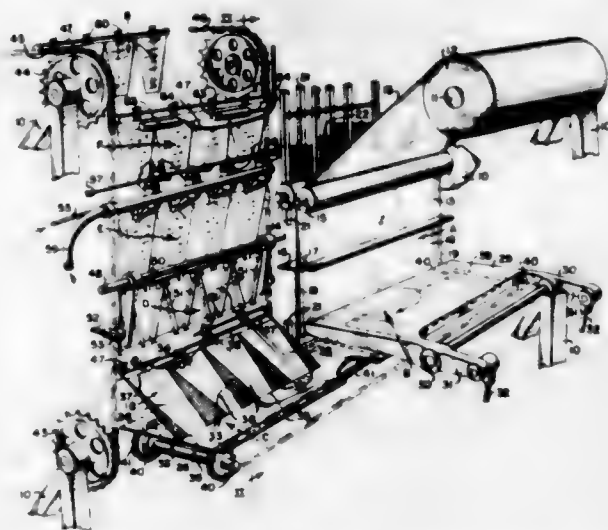
Gerald Downie, 116 Meadowview Road,
West Ewell, England

Filed Sept. 23, 1957, Ser. No. 685,622

Claims priority, application Great Britain Sept. 27, 1956
4 Claims. (Cl. 53-14)

1. A method of packing a commodity in a pocket on a stick comprising folding a web of material upon itself

with the aid of the stick, so that only said stick is interposed between the folded layers of said web and projects beyond said web fastening portions of the facing surfaces of said web to form a pocket having three closed sides and a fourth open side, said fourth side lying parallel



with one edge of the web while simultaneously securing said stick to the inside of the pocket at said fourth side, lifting said pocket carried by said stick with said fourth side uppermost to beneath a commodity delivery means, filling each pocket with the commodity in liquid state, and then solidifying the commodity in each pocket.

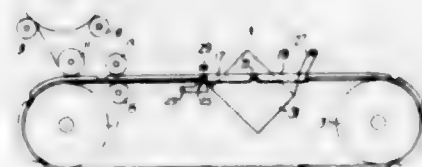
3,000,153

METHOD FOR PACKING PRODUCTS AND A DEVICE FOR CARRYING OUT SAID METHOD

Sven Eric Dahlen, Box 47, Stenstorp, Sweden, and
Gosta Nilsson, Skultorp, Sweden

Filed Feb. 10, 1958, Ser. No. 714,331

13 Claims. (Cl. 53-33)



2. A method of packaging a product in a thermoplastic packaging material by means of a packaging apparatus, which comprises placing a strip of said thermoplastic material against a movable member of said packaging apparatus; heating said strip and temporarily pressing the marginal areas thereof against said movable member so as to secure, by adhesion, the marginal areas to said movable member; the portion of said strip between said marginal areas being unsupported and forming a free space to accommodate the product to be packaged; placing a product in said space; and pressing together the marginal areas of said strip adjacent said product to form a sealed package inclosing said product.

3,000,154

PANNING MECHANISM FOR BREAD MOLDER

Merlin A. Stickelber, 1150 Southwest Blvd.,
Kansas City, Mo.

Filed May 16, 1960, Ser. No. 29,246

8 Claims. (Cl. 53-74)

1. In a loaf panning device, a loaf conveyor and a pan conveyor extending lengthwise under said loaf conveyor and endwise beyond the discharge end thereof, a fulcrum remote from the extending portion of said pan conveyor mounting one of said conveyors and vertically movable

supporting means for said conveyor adjacent the discharge end of said loaf conveyor to adjust the vertical spacing of said pan conveyor from the discharge end of said loaf conveyor.



of said pan conveyor from the discharge end of said loaf conveyor.

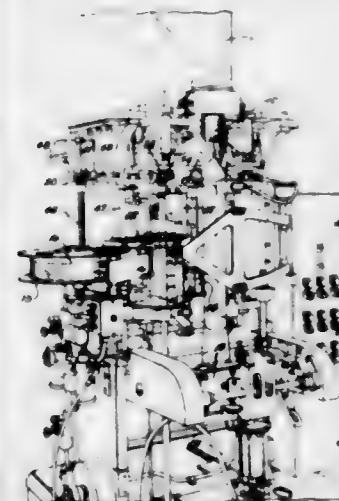
3,000,155

LABELING ATTACHMENTS FOR AUTOMATIC PACKAGING MACHINES

Alfred P. Gansman, Sheboygan, Wis., assignor to Haysen Manufacturing Company, Sheboygan, Wis., a corporation of Wisconsin

Filed May 18, 1960, Ser. No. 29,967

2 Claims. (Cl. 53-137)



1. In a machine for successively packaging measured charges of a product and having a former through which charges of the product are fed and about which a continuous web of flexible thermoplastic sheet material drawn from a roll is formed into a tube, and movable end seal dies for advancing the tube and transversely sealing and severing sections thereof to provide a succession of packages; the improvements which comprise: a reel turnably mounted on the machine and carrying a roll of labels in unbroken strip form; powered means independent of the end seal dies for pulling an extent of the label strip from the roll and positioning the outermost label adjacent a face of a package; and means independent of the end seal dies for severing said outermost label from the strip and preliminarily heat tacking it to a local face portion of the package, subsequent engagement of the end seal dies with the package effecting a final complete heat seal of the severed label to the package.

3,000,156

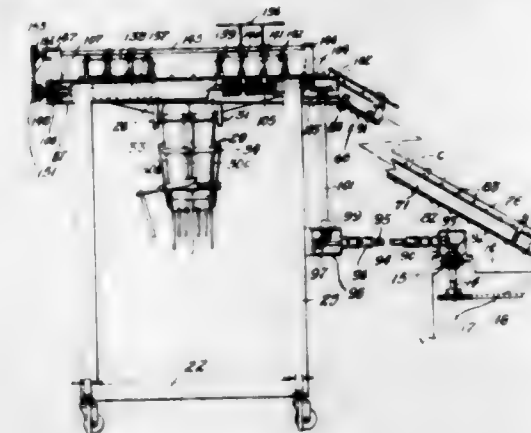
BOXING MACHINE

Ray F. La Forge, Jr., Rockford, Ill., assignor to Anderson Bros. Mfg. Co., Rockford, Ill., a corporation of Illinois

Filed Apr. 9, 1959, Ser. No. 805,165

19 Claims. (Cl. 53-153)

1. In an apparatus for packaging tapered cups comprising an upright cup guide dimensioned to loosely receive the major end of the cups, a chute extending laterally of the upper end of said cup guide adapted to have a cup roll therealong and drop into said guide, and con-



veyor means including a conveyor support drum disposed alongside said chute and a conveyor belt supported at one end on said drum, said belt having an upper run disposed

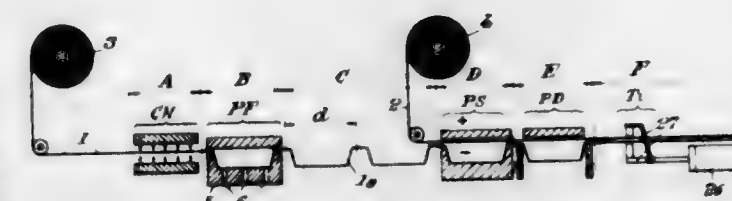
3,000,157

PACKAGING AND SIMILAR MACHINES

Jacques Gaspard Honoré Ollier, 17 Rue du General Henrion Bertier, Neuilly-sur-Seine, France, Georges Frédéric Grosshans, 53 bis Rue de Boulainvilliers, Paris 16, France, and Robert Masson, 6 Blvd. de Courbevoie, Neuilly-sur-Seine, France

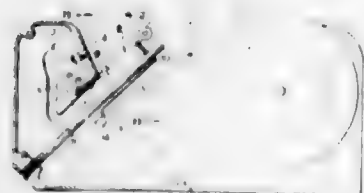
Filed June 25, 1958, Ser. No. 744,536

Claims priority, application France June 29, 1957
4 Claims. (Cl. 53-184)



1. A machine adapted to form various articles from a flexible band and comprising longitudinal supporting means, at least two working stations each adapted to perform, when operated during a given time period, a predetermined forming step on said band, means for securing each of said working stations in an adjustable position along said longitudinal supporting means, actuating means for rendering said working stations simultaneously operative, and driving means for pulling said band step by step, between successive operations of said actuating means, along said supporting means through said working stations, said drawing means comprising two cooperating elements relatively movable in opposite directions perpendicular to said band between a first position in which said elements grip said band and a second position in which said elements are inoperative relative to said band, means for displacing both said cooperating elements to and fro along said longitudinal supporting means between a pair of precisely determined locations, at least one location in said pair being adjustable, and means for maintaining said cooperating elements in said first position when said elements are moved along said longitudinal supporting means from a first to a second location in said pair and in said second position when said elements are moved along said longitudinal supporting means from said second to said first location in said pair.

3,000,158
BAG-TYING APPARATUS
 Gustav Nilsund, Fack 29, Korstrask, Sweden
 Filed May 27, 1960, Ser. No. 32,256
 Claims priority, application Sweden May 29, 1959
 3 Claims. (Cl. 53—198)



1. An apparatus for tying bags with pressure-sensitive tape which comprises a casing, a reel for a pressure-sensitive tape supply roll, a guide wheel for said tape, registering U-shaped slots in facing side walls of said casing including an entry portion for thrusting the gathered or twisted bag top therethrough to engage it with a length of tape, an intermediate portion for wrapping the length of tape about the gathered or twisted bag top, and a blind portion for finishing wrapping of the tape length about the bag top and severing the tape, slide means assisting in moving the gathered or twisted bag top through the intermediate portion of said registering U-shaped slots, and knife means so arranged as to sever the tape when the tied bag top is moved through the end of the blind portion of said U-shaped slots, the free tape end clinging to the side of the knife means facing the tacky side of the tape, characterized by the fact that the slide means which has a notch for accommodating the gathered or twisted top of the bag is arranged to be moved in a rectilinear path along rod or like guide means in the apparatus casing, and that the knife means is fixedly mounted in the apparatus casing in a position parallel with the path of movement of said slide means and spaced a small distance from the side of the said slide means having said notch and facing the knife means.

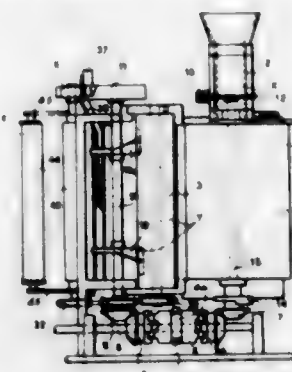
3,000,159
TAPE APPLYING APPARATUS
 Donald A. Schuldt, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
 Filed Apr. 27, 1959, Ser. No. 809,133
 10 Claims. (Cl. 53—198)



1. Apparatus for applying adhesive tape to rectangular packages or the like comprising means adapted to define a path for travel of a package unit to be taped, a movably mounted tape applying roller normally disposed with respect to said path defining means so that a peripheral portion of said roller is disposed in the path of a package unit travelling along said path, biasing means operatively associated with at least one of said roller and path defining means tending to maintain said normal positional relationship therebetween, and means for supplying adhesive tape to said applying roller with the adhesive side thereof

away from said roller and positioned for engagement by a package unit travelling said path, movement of a package unit along said path past said tape applying roller causing engagement of said roller by said package unit and lateral movement of said roller with respect to said path and against the bias of said biasing means to a position in which said roller applies said tape with substantial pressure to the side of said package unit in engagement therewith, said biasing means returning said roller to its initial position upon movement of said package unit out of engagement therewith, and a tape severing knife mounted adjacent said tape applying roller in a position to sever said tape intermediate said package unit and roller upon disengagement of said package unit from said roller and lateral movement of said package causing engagement of said tape with said knife.

3,000,160
UNIVERSAL WINDING MACHINE FOR COINS AND DISC SHAPED OBJECTS
 Giuseppe Speggorin and Alfio Lampazzi, both of Via Dogana 1, Milan Italy
 Filed July 20, 1959, Ser. No. 828,127
 Claims priority, application Italy July 23, 1958
 10 Claims. (Cl. 53—212)



1. A stacking and wrapping apparatus for coins and the like, comprising: means defining a coin feeding station; and a coin wrapping station; indexing means comprising a conveyor receiving coins at the feeding station and transferring the coins to the wrapping station; means, at the feeding station and comprising an upright stacking tube having a laterally movable bottom closure for intermittently feeding a predetermined number of coins to said conveyor; means, at the wrapping station, intermittently wrapping said coins; and means intermittently moving the conveyor to transfer the coins from the feeding station to the wrapping station, said conveyor comprising a rotary drum having at least one axially extending recess in its periphery in axial alignment with and below said stacking tube when at said feeding station, to receive the coins from said stacking tube when said bottom closure is opened.

3,000,161
CIGARETTE COLLECTING MACHINES
 George Daniel Horgan, London, England, assignor to American Machine & Foundry Company, New York, N.Y.

Filed Oct. 4, 1957, Ser. No. 688,375
 Claims priority, application Great Britain Oct. 8, 1956
 16 Claims. (Cl. 53—244)

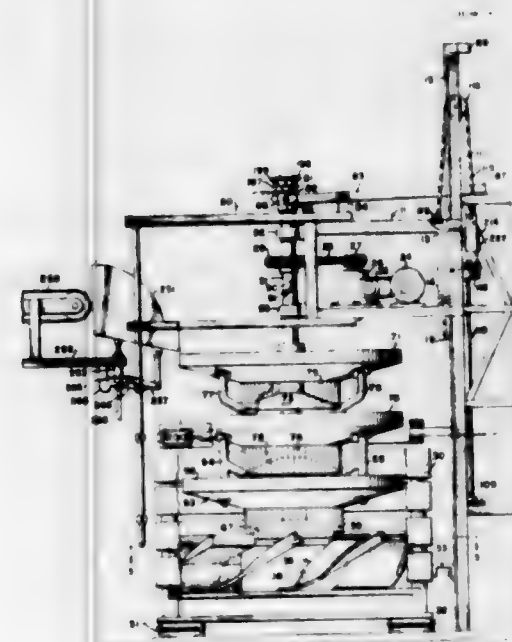
1. An apparatus for automatically collecting cigarettes from a source of supply and delivering them into a container, said apparatus comprising a conveyor for conveying cigarettes from said source of supply to a discharge position, a telescoping chute connected to receive cigarettes from said discharge position and to conduct them downwardly in stacked side by side relationship, a gate mounted at the lower end of said chute for controlling

the discharge of cigarettes from said chute to a tray for receiving said discharged cigarettes and means for raising



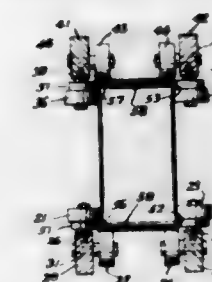
said chute relative to said tray each time a layer is deposited.

3,000,162
PALLET BOX FILLER
 Earl W. Carlson and Herman Ryder, Yakima, and Alvan Baum, Wapato, Wash., assignors to the United States of America as represented by the Secretary of Agriculture
 Filed May 19, 1960, Ser. No. 30,392
 7 Claims. (Cl. 53—248)



1. An apparatus for filling a box with fresh fruit comprising a frame, a vertical shaft having a free lower end rotatably carried by the frame, an inclined baffle carried by the lower end portion of the shaft to one side thereof so that the baffle rotates horizontally with the shaft, the baffle being pivotally mounted to the shaft on a transverse axis along the upper edge portion of the baffle with the opposite edge portion of the baffle free, means for continuously feeding fresh fruit onto the upper portion of the baffle as it rotates such that, when a box being filled is in position with the rotating baffle therein the baffle is positioned with its free edge portion riding over the layer of fruit in the box and the fruit being fed onto the baffle rolls down it, and means for gradually moving the baffle upwardly as the box is being filled so as to maintain the incline of the baffle essentially constant, said baffle being padded and provided with an upwardly extending, flexible shield along its radial outer edge portion to engage the box sides as the box is being filled, thus to prevent bruising of the apples as they roll down the baffle and prevent them from being bruised by contact with the sides.

3,000,163
CARTON SEALER ROLLERS
 John B. Bellamy, Jr., 222 Crescent Road, San Anselmo, Calif.
 Filed May 21, 1956, Ser. No. 586,242
 8 Claims. (Cl. 53—387)



1. Carton sealer rollers comprising a group of rollers mounted and arranged in pairs wherein one pair of said rollers is mounted on and adjacent one rail of a carton sealing machine and another pair is mounted on and adjacent an opposite rail of the carton sealing machine; said rails permitting movement of a succession of cartons to be sealed past said group of rollers each of said rollers having tapered end faces for exerting increased pressure on the cartons at the meeting surfaces of the cartons with the rollers; one roller of each of said pairs being mounted for rotation about a vertical axis and being adapted to engage at a tapered end face thereof with one side of each passing carton adjacent the bottom thereof, and the other roller of each of said pairs of rollers being mounted for rotation about a horizontal axis and being adapted to engage at a tapered end face thereof with the bottom of each passing carton adjacent to a side thereof.

3,000,164
COMBINED CORN PICKING AND STALK SEVERING DEVICE
 Raymond R. Klecker, Rte. 1, Box 34, Hector, Minn.
 Filed June 16, 1959, Ser. No. 820,717
 1 Claim. (Cl. 56—16)



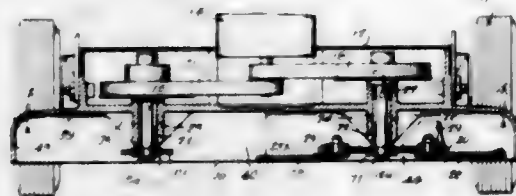
A forage harvester for treating adjacent rows of standing stalks of corn simultaneously comprising in combination a mobile reducing unit including crop reducing and mixing means, and a forwardly projecting downwardly inclined continuous conveyor communicating with said crop reducing means and conveying harvested crops thereto, and a harvesting attachment detachably and co-operatively mounted on said reducing unit, said attachment including a housing structure overlying and overlapping said conveyor and having rearwardly extending stalk receiving throats disposed on each side of said conveyor adjacent the marginal edges thereof, said throats receiving therein the standing stalks of said adjacent rows of corn, stalk severing means carried by said attachment and severing the stalks received in one of said throats and stalk gathering means engaging and carrying said severed stalks rearwardly for delivery to said conveyor, and corn picking means including snapping rolls receiving the stalks entering said other throat therebetween and snapping the

ears of corn therefrom and directing them inwardly to said conveyor and releasing the stripped stalks therefrom to remain standing in the field, said severed stalks and snapped ears being delivered continuously and simultaneously to the crop reducing means by said conveyor for simultaneous reduction and intermixing thereof.

3,000,165

LAWN MOWER

Etchison G. Lill, Wheaton, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 24, 1957, Ser. No. 705,011
5 Claims. (Cl. 56—25.4)



1. In a rotary mower, a housing having a top wall, a shaft depending downwardly from said top wall, a cutting means rotated by said shaft, sheet metal vanes having mounting portions secured to said cutting means and also including vane portions extending upwardly from said cutting means and backwardly relative to the direction of rotation of said cutting means the upper edge of said vane portions being adjacent said top wall, said vane portions positioned adjacent said shaft and extending radially from said shaft, said vane portions being provided with flange portions at the outer edges thereof, and said flange portions extending from said vane portions forwardly relative to the direction of rotation of said cutting means.

3,000,166

DEVICES FOR PICKING UP MATERIAL LYING ON THE GROUND

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a limited company of the Netherlands
Filed Oct. 16, 1957, Ser. No. 690,479
Claims priority, application Netherlands Oct. 20, 1956
7 Claims. (Cl. 56—345)



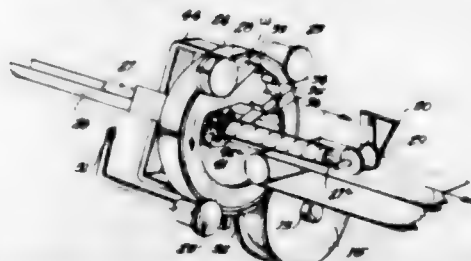
1. Apparatus for picking up material lying on the ground comprising: a frame, a conveyor on said frame and inclined with respect to the ground for engaging the material and conveying the same in an upward direction, said conveyor having an end adjacent the ground and defining an obtuse angle therewith, at least two overlapping guide members pivotally connected to said frame at different distances from said end and extending along the conveyor in spaced relation thereto, said guide members having free extremities respectively positioned above said conveyor at different distances from said end of

said conveyor, said guide members together extending over substantially all of the conveyor, and a further guide member pivoted on said frame and including an arcuate portion extending downwardly toward the apex of said angle.

3,000,167

SPIRAL WRAPPING MACHINE

Paul Pierce, Jr., La Grange, Ill., assignor to Pierce Wrapping Machine Co., La Grange Park, Ill., a corporation of Illinois
Filed May 5, 1960, Ser. No. 27,157
12 Claims. (Cl. 57—3)

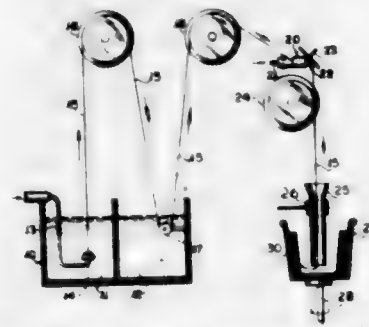


2. In apparatus for spiral winding, a frame, a web source mounted on said frame for planetary movement about a given axis, said web source providing a length of wrapping material for application to a flexible article on said axis, means on said frame for sequentially positioning a plurality of buttressing elements in contact with said article on the side thereof opposite the point of tangential contact of said web with said article, said positioning means being mounted on said frame in fixed angular relation to said axis.

3,000,168

METHOD AND APPARATUS FOR PRODUCING BULKY YARN

Hilliard H. Penland, West Asheville, N.C., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Aug. 21, 1957, Ser. No. 679,339
2 Claims. (Cl. 57—34)



1. A method of bulking freshly spun viscose rayon yarn comprising extruding viscose into an acid setting bath to form multifilament yarn, withdrawing said yarn from said setting bath, passing said yarn through a second weakly acidic bath, imparting stretch to said yarn, directing said yarn through a zone of reduced tension, directing said yarn into an air jet during its travel through said zone and subjecting the yarn to the action of a strong current of air to impart bulk to said yarn and thereafter twisting and collecting said yarn in a rotating centrifugal spin pot.

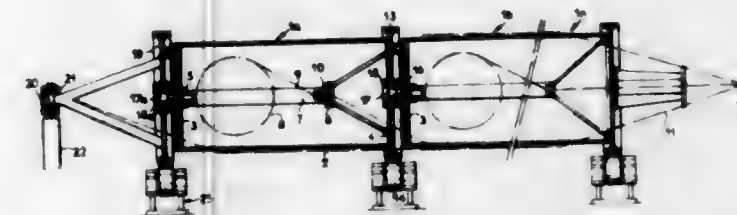
3,000,169

TUBULAR STRANDING MACHINE

Elle Andre Richard, Courbevoie, France, assignor to Le Materiel de Cablerie Societe Anonyme, Paris, France, a corporation of France
Filed Feb. 15, 1960, Ser. No. 8,778
Claims priority, application France Feb. 20, 1959
3 Claims. (Cl. 57—58.34)

1. A cabling machine composed of a rotating tubular body of separate members assembled together, said mem-

bers carrying wire reels which deliver wire thereon to a cabling unit, means for supporting said rotating tubular body in which each member is supported at only three points and consisting of two rollers mounted in rotation

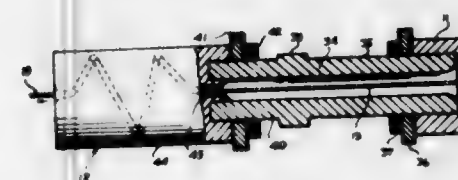


about their axes on said supporting means and arranged in a same transverse section and carrying one extremity of the member, and a coupling of the knuckle-joint type supported by the adjacent member at the other extremity of the member.

3,000,170

TWISTING SPINDLE

Alfred W. Vibber, 116 Pinchurst Ave., New York, N.Y.
Original applications May 8, 1951, Ser. No. 225,209, now Patent No. 2,843,997, dated July 22, 1958, and Aug. 19, 1957, Ser. No. 678,861, now Patent No. 2,952,114, dated Sept. 13, 1960. Divided and this application June 3, 1960, Ser. No. 33,844
6 Claims. (Cl. 57—58.86)



1. A supply spindle for twisting elongated flexible material comprising a hollow rotatable shaft, a package support floatingly mounted on such shaft, a flyer mounted on the shaft, said flyer having a generally radially directed passage therein communicating with the bore through the shaft so that the material may be pulled from the package downwardly through the shaft and outwardly through the flyer into a delivery balloon, and a material tensioning device in the flyer, said tensioning device comprising a spiral passage in such flyer, the spiral passage being a part of the generally radially directed passage, whereby the material is thrown into contact with the walls of the spiral passage by the centrifugal force of the flyer.

3,000,171

BUFFER GUARDED ROPE AND METHOD FOR FORMING THE SAME

Frank H. Swanser, Gardena, Calif., assignor to Swann Company, Gardena, Calif., a co-partnership
Filed Nov. 18, 1957, Ser. No. 697,043
8 Claims. (Cl. 57—153)

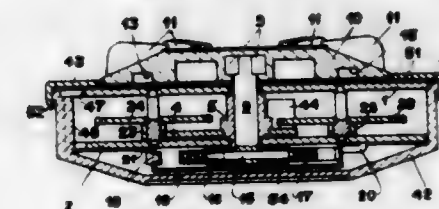


1. As a new article of manufacture, a multiple strand rope and buffer means on each strand where the strand is exposed to abrasion, said buffer means being ribbons spaced from each other and each having a cross-section of generally segmental shape, the buffer means characterized in that it is resistant to compression, tension, wear and localized stresses to a greater extent than the non-buffer area of said strands.

3,000,172

TIME METER WITH ALARM DEVICE

Raymond Beaumann, Les Bois, Switzerland, assignor to Ebauches S.A., Neuchatel, Switzerland
Filed Aug. 25, 1959, Ser. No. 835,954
Claims priority, application Switzerland Sept. 11, 1958
8 Claims. (Cl. 58—21.13)

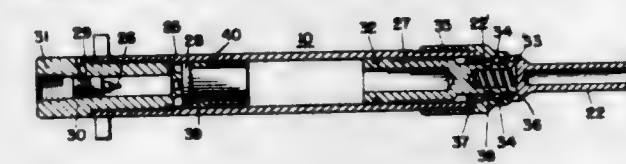


1. In a time meter with alarm device, adapted to produce an alarm signal at the end of a predetermined lapse of time, including a clockwork movement and an alarm device arranged between two pillar plates, a driving member adapted to successively engage a part of the said clockwork movement and a part of the said alarm device, a single main spring arranged outside the frame formed by the said pillar plates and a rotary winding knob, coaxial with the said driving member, serving to wind the main spring and to set the said lapse of time, the outer end of the main spring being attached to one of the said pillar plates, the winding knob being rigidly connected to a shaft and the driving member being rigidly secured to a hub, the improvement in which the inner end of the main spring is hooked to a pin traversing the shaft of the winding knob and the hub of the driving member, the said pin thus interlocking the said shaft and the said hub and also interlocking, therefore, the winding knob and the driving member and securing the winding knob in axial direction.

3,000,173

GUNSIGHT RETRACTING THRUSTER

Albert M. Stott, Aldan, Pa., and Herbert A. Magnus, Merchantville, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Oct. 5, 1960, Ser. No. 60,762
3 Claims. (Cl. 60—26.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A thruster including a casing having an interior groove near its end, a load actuating member having a hollow end extending into said casing, said hollow end having perforations intermediate its ends and having an internal thread at its inner end, a piston movable within said casing and having a hollow rod extending into the hollow end of said member, said rod having at its inner end an external thread designed to cooperate with said internal thread and having an exterior groove, a spring tending to separate said piston from said member, and locking located in said perforations and extending between said interior groove and said rod for locking said member to said casing and receivable in said exterior groove upon movement of said piston for imparting to said member a movement which is terminated by the abutting of said threads.

3,000,174

PROCESS FOR EFFECTING THE PROPULSION OF ROCKET AND JET ENGINES

Richard S. Vose, 225 N. Princeton Ave., Swarthmore, Pa.
No Drawing. Filed Feb. 18, 1954, Ser. No. 411,250
2 Claims. (Cl. 60—35.4)

1. The process of effecting the propulsion of rocket and jet engines which comprises preparing a mixture

of a hydrocarbon oil and sodium in the proportion of 250 to 1000 parts by volume of sodium to 1000 parts by volume of oil, heating the mixture to a temperature within the range of 200° F. to below the boiling point of the hydrocarbon oil until the adsorption by the sodium of the hydrogen produces a mixture of sodium, hydrogen and oil in which the ratio of sodium to hydrogen is within the range 1 to 0.42 and 1 to 1.15, depositing the sodium-oil-hydrogen mixture so produced in the engine and by admixture therewith of an oxidizing agent liberating the energy of the mixture to effect propulsion.

3,000,175

BURNING RATE ACCELERATION CATALYSTS FOR SOLID PROPELLANT COMPOSITIONS

Ralph W. Lawrence, Glendora, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed May 13, 1955, Ser. No. 508,314
19 Claims. (Cl. 60—35.4)

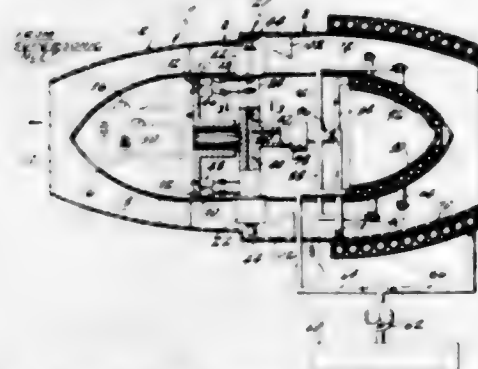
1. In a method of producing thrust for propulsion by burning a propellant composition, in a chamber wherein said propellant composition consists essentially of a cured intimate mixture of a solid inorganic oxidizing salt and a combustible organic resin, the improvement which comprises burning said propellant in the presence of the burning rate acceleration catalyst, lead chloride.

3,000,176

DUCTED FAN ENGINE

Wesley A. Kuhrt, East Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Apr. 5, 1957, Ser. No. 650,986
5 Claims. (Cl. 60—35.6)



1. In a power plant having a duct and an air inlet therefor, a fan having blades located in said duct for moving air therethrough, a combustion chamber downstream of said fan, an impulse turbine for driving the fan, a source of normally gaseous fuel in a liquid state, a heat exchanger adjacent said combustion chamber, a high pressure pump for pumping liquid fuel through said heat exchanger to gasify said fuel, the gasified fuel alone driving said impulse turbine, said impulse turbine comprising a plurality of nozzles carried adjacent outer tips of said blades for emitting externally of said blades a plurality of streams of gasified fuel into the air pumped by said fan, and means for mixing said fuel and said air prior to entrance into said combustion chamber, and means for varying the pitch of said fan blades to feather the latter and operate as a ramjet.

3,000,177

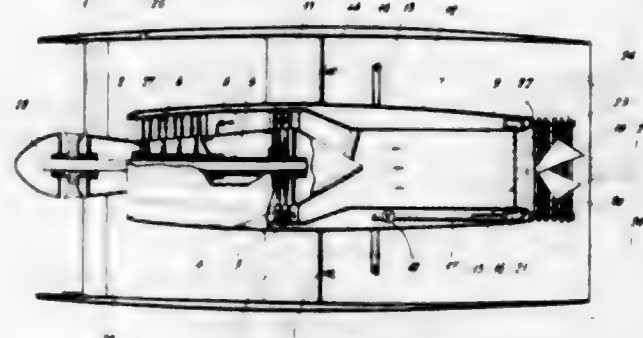
MULTIPLE-FLOW JET-PROPULSION ENGINES

René Paul Logerot, Paris, and Hans Georg Munzberg, Dammare les Lys, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed July 5, 1957, Ser. No. 670,106
Claims priority, application France July 11, 1956
1 Claim. (Cl. 60—35.6)

In a jet propulsion unit of the type including two coaxial motive streams normally discharging in the same

direction and comprising an inner casing ending with an outlet and bounding the flow path of the inner motive stream, and an outer casing bounding with said inner casing the flow path of the outer motive stream, said latter flow path being of annular shape and extending to an exhaust section downstream of said outlet, the provision of an aerodynamically operating device for the control of the effective passage area of said outer motive stream, said device comprising a pair of controllable flaps pivotally supported at said outlet respectively for sym-



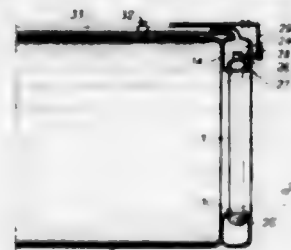
metrical swinging movement toward and away from each other across the inner motive stream issuing through said outlet and for substantial retraction from said inner motive stream on opposite sides thereof within said outlet for symmetrically diverting at least a fraction of said inner motive stream as it issues from said outlet into the flow path of said outer motive stream, upstream of said exhaust section, thereby forming a symmetric partial fluid obstruction across said outer motive stream and restricting the effective passage area thereof.

3,000,178

EJECTION NOZZLES HAVING VARIABLE CROSS-SECTIONAL AREA

René Paul Logerot, Paris, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed Aug. 5, 1958, Ser. No. 753,349
Claims priority, application France Sept. 16, 1957
3 Claims. (Cl. 60—35.6)



1. A device for controlling the outlet section of a jet propulsion unit, comprising an inwardly projecting annular manifold at said outlet section forming an annular barrier which constitutes a diaphragm reducing the effective area of said outlet, said annular manifold having a slotlike opening extending along its inner periphery and bounded by smoothly curved lips bent towards each other, a movable ring substantially concentric with and accommodated within said annular manifold for partially obstructing said opening while leaving a gap with one lip or the other of said opening, said ring having a curved outline substantially fitting with said curved lips, and controllable means for supplying pressure fluid to said manifold.

3,000,179

ROCKET ENGINE PUMP FEED SYSTEM

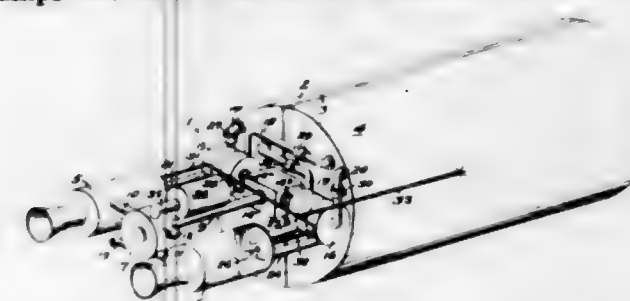
Adolphus Samma, Yuma Test Station, Ariz.

Filed Dec. 11, 1959, Ser. No. 859,076
1 Claim. (Cl. 60—35.6)

(Granted under Title 35, U.S. Code (1952), sec. 266)

A rocket fuel pumping system comprising, in combination, a pair of laterally spaced combustion chambers, a

propellant source for said combustion chambers, said propellant source comprising a cylindrical tank and a dividing wall therein intersecting said tank diametrically whereby said tank is divided into individual fuel containers, each forming a completely separate compartment, a pair of diametrically arranged centrifugal pumps for pumping said propellant from said compartments to said combustion chambers, a turbine connected with and disposed between said combustion chambers, said turbine being operated by the combustion gas pressure in said combustion chambers, a first pipe line system connecting said compartments and said centrifugal pumps, said first pipe line system comprising a pair of pipes communicating between each of said compartments and each of said pumps, and a check valve mounted on each said pipe, a second pipe line system connecting said centrifugal pumps and said combustion chambers, said second pipe



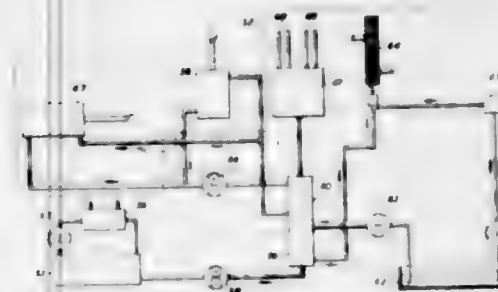
line system comprising a pair of uninterrupted pipes communicating between each of said centrifugal pumps and each of said combustion chambers, a booster rocket connected to said turbine, said booster rocket being adapted to initiate rotation of said turbine, transmission means connecting said turbine and said centrifugal pumps, said transmission means comprising a first shaft connected at one end to said turbine, a transmission unit connected to the other end of said first shaft and a pair of axially aligned axles normal to said first shaft connecting said transmission unit and each of said centrifugal pumps, and an electrical firing means connected to said combustion chambers and said booster rocket comprising an electrical lead connected to each said combustion chamber and said booster rocket, and a glow plug mounted in each of said combustion chambers and in connection with the aforesaid electrical lead.

3,000,180

ENGINES FOR HIGH SPEED AIRCRAFT OR MISSILES

Geoffrey Charley Gerald Mansfield, London, and Jack Vallis Blyth, Ewell, England, assignors to D. Napier & Son Limited, London, England, a company of Great Britain

Filed Apr. 3, 1958, Ser. No. 726,290
Claims priority, application Great Britain Apr. 4, 1957
4 Claims. (Cl. 60—39.08)



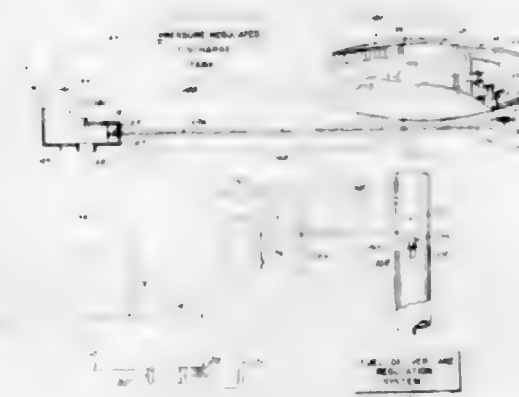
1. A propulsion engine for high speed aircraft or missiles including means for supplying a liquid fuel to the engine, a closed fluid circuit comprising an oil lubrication system, another separate closed fluid circuit comprising a hydraulic servo system, and a separate heat exchanger included in each of said fluid circuits, the liquid

fuel being passed in series, first through the heat exchanger in the oil lubrication system, and then through the heat exchanger in the hydraulic servo system to function as the cooling medium for both heat exchangers.

3,000,181

TURBINE ENGINE ACCELERATION CONTROL APPARATUS

Paul M. Stiglic, Wickliffe, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed July 5, 1957, Ser. No. 669,983
2 Claims. (Cl. 60—39.28)



1. In a fuel control system for a compressor turbine engine having an acceleration rate limits characteristic which varies as a function of engine speed, comprising conduit means, fuel delivery means delivering fuel through the conduit means to the engine at a pressure related to the engine speed, fuel flow control means in said conduit means and operatively connected to the fuel delivery means for controlling the flow of fuel to the engine by the fuel delivery means, pneumatic speed converting means mechanically connected to the engine and in fluid communication with a constant pressure air source for converting the engine speed to a first air pressure proportional to the engine speed, function generating means in fluid communication with the converting means and receiving air at said first pressure therefrom, said generating means being in fluid communication with ambient and with a constant air pressure source and producing a second air pressure which is a function of said first air pressure, said constant air pressure and ambient air pressure and which is also proportional to the acceleration rate limits characteristic of the engine, and pressure comparator means mechanically connected to the fuel flow control means and in fluid communication with the conduit means downstream of said control means for sensing the fuel flow pressure therein and also in fluid communication with the function generating means receiving air at said second pressure therefrom, said comparator means actuating said fuel flow control means when the fuel flow pressure is greater than said second air pressure to decrease fuel flow to the engine.

3,000,182

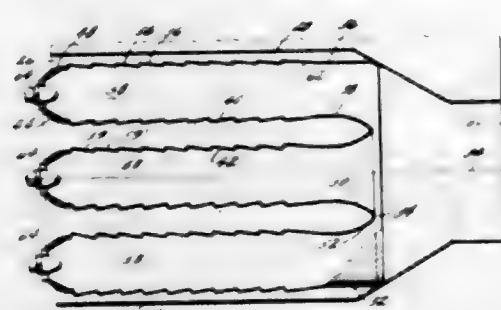
CAN BURNER DESIGN

Richard F. Buswell, Wethersfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Apr. 1, 1960, Ser. No. 19,408
4 Claims. (Cl. 60—39.65)

1. In a combustion chamber having an axis, a can burner comprising a shell of circular cross section and having an axis parallel to said combustion chamber axis and further having a forward end and a gas passage defining after end with an outlet, an annular center tube concentric about said shell axis and extending from said shell forward end toward said shell after end but terminating short thereof, fuel nozzles in said shell forward end, access holes in said shell and center tube through

which air from said combustion chamber may enter, said shell and said centertube cooperating to define an enclosed combustion zone in which fuel from said nozzles



may be burned with air from said access holes for eventual discharge as heated gases of combustion through said outlet.

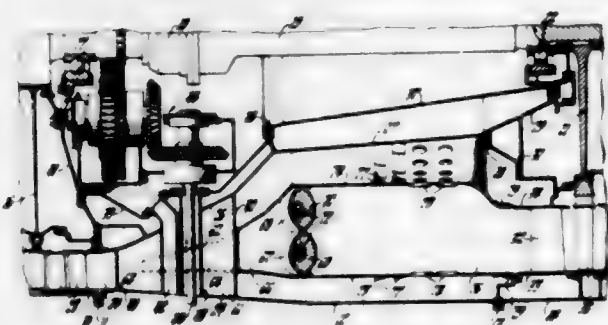
3,000,183

SPIRAL ANNULAR COMBUSTION CHAMBER

Russell S. Hall, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 30, 1957, Ser. No. 637,314

10 Claims. (Cl. 60—39.65)



1. A combustion apparatus comprising an air duct, outer and inner annular walls within the duct spaced radially and defining between the walls the downstream portion of a combustion chamber, an outer row and an inner row of entrance cones discharging into the space between the walls, the said rows being radially spaced from each other, each cone having an inlet at the upstream end thereof and a swirler in the inlet to produce vortex flow in the cone, the cones diverging in the downstream direction and being disposed at a substantial circumferential angle to the axis of the walls, the cones in each row being in echelon so that the said cones merge at zones differentially spaced from the inlets thereof, and means for injecting fuel into the cones.

3,000,184

COOLED INJECTOR

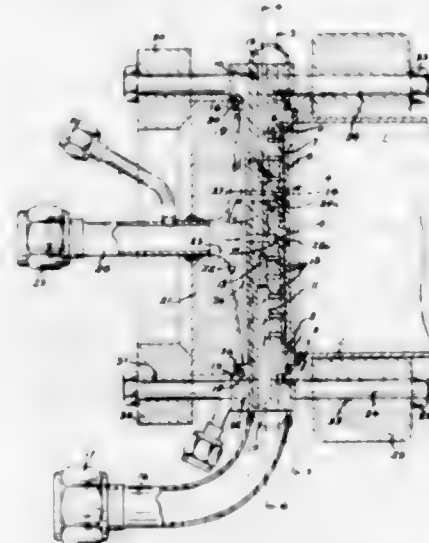
Allen M. Fish, Sacramento, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Aug. 14, 1956, Ser. No. 604,054

8 Claims. (Cl. 60—39.74)

1. In a combustion chamber head for rocket fuel motors adapted to be supplied with a fuel and a coolant oxidizer liquid, a relatively thin face plate for closing one end of a combustion chamber, a backup plate disposed in back of said face plate in closely spaced parallel relation to said face plate, said backup plate having a plurality of circumferentially spaced substantially radially passages extending from the periphery of the backup plate toward its center, manifold means extending around the periphery of said face plate connecting said radial passages at the outer ends thereof, means for introducing said coolant oxidizer liquid into said manifold, said backup plate formed with lateral passages extending from said sub-

stantially radial passages forwardly into the space between said backup and face plates for directing the cool-



stant oxidizer liquid into impinging engagement with the inner surface of said face plate next to said back-up plate.

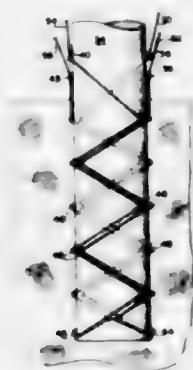
3,000,185

METHODS AND APPARATUS FOR BREAKING SUCTION BETWEEN HYDRAULIC SOIL AND OBJECTS IN CONTACT THEREWITH

Emile J. Brinkmann, Jr., New Orleans, La., assignor to Kerr-McGee Oil Industries, Inc., a corporation of Delaware

Filed Mar. 14, 1958, Ser. No. 721,542

2 Claims. (Cl. 61—46.5)



1. A supporting member comprising a rigid member for use in contact with hydraulic soil, an elongated flexible member secured at one end to the rigid member, guide means secured to the rigid member and spaced from the secured end of the flexible member, the flexible member passing lengthwise slidably through the guide means closely adjacent the rigid member, and a plurality of spaced means fixedly secured to the rigid member and releasably securing the flexible member to the rigid member at a plurality of spaced points on the flexible member between said secured end and said guide means with a plurality of said points out of line with said secured end and said guide means and a plurality of said points out of line with each other and with the flexible member arranged in zig-zag configuration on the surface of the rigid member.

3,000,186

CONTROL MEANS FOR REFRIGERATING APPARATUS

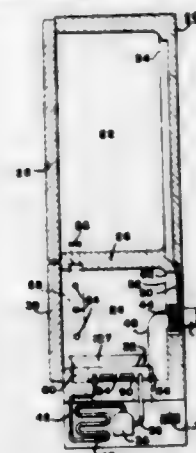
Leonard J. Mann, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 27, 1959, Ser. No. 802,524

8 Claims. (Cl. 62—153)

7. A refrigerator including an insulated cabinet having a compartment to be cooled, refrigerant liquefying and

evaporating means located outside said compartment, fan means for circulating air from said compartment into heat transfer with said evaporating means and return, thermostatic means for controlling said fan means, a door for



said compartment, and control means mechanically associated with and mechanically operated by said door and directly and immediately responsive to each opening of said door for insuring operation of said fan means whenever the door is opened.

3,000,187

REFRIGERATED STORAGE TANK

George E. Mussey, Paul L. Luxem, and John J. Yucas, Tomahawk, Wis., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,871

3 Claims. (Cl. 62—158)



1. A liquid storage container for holding perishable liquids under sanitary conditions comprising inner and outer shells, support means for the container, said support means engaging only said inner shell, an evaporator plate integrally secured to the outer surface of the inner shell for cooling the contents of the container and for strengthening the inner shell against load deformations, the inner surface of the inner shell of the container having smooth surfaces and corners provided thereto, refrigerating means connected to said evaporator plate for pumping refrigerant through it, a thermostatic switch for controlling said refrigerating means, means connected to the refrigerating means for over-riding said thermostatic switch when additional warm perishable liquids are added to the storage container, and pressure controlled means in said refrigerating mechanism for removing all refrigerant from the evaporator plate each time the thermostatic switch acts to turn off the refrigerating mechanism.

3,000,188

GAS SEPARATION

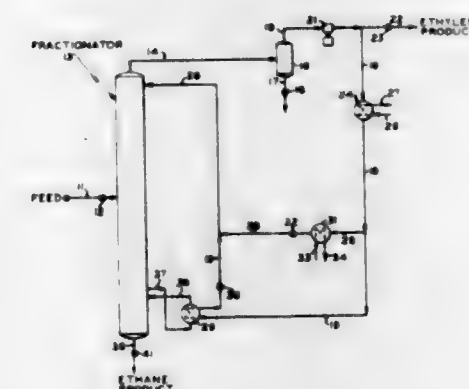
Saverio G. Greco, Brooklyn, N.Y., assignor to The M. W. Kellogg Co., Jersey City, N.J., a corporation of Delaware

Filed Nov. 15, 1956, Ser. No. 622,291

14 Claims. (Cl. 62—28)

1. The process for the separation of a normally gaseous hydrocarbon component from a mixture of normally

gaseous hydrocarbons containing the same which comprises introducing said mixture into a distillation zone, withdrawing a bottoms fraction from said distillation zone, withdrawing a vaporous overhead fraction comprising said component from said distillation zone, compressing at least a portion of said overhead fraction thereby heating the same, further regulating the temperature to control the heat balance of at least a portion of the compressed overhead fraction by indirect heat exchange with at least one externally supplied heat ex-



change medium, indirectly contacting at least a portion of the overhead fraction thus further regulated as to temperature with liquid from the lower portion of said distillation zone thereby heating and at least partially vaporizing said liquid and at least partially condensing said portion of temperature regulated overhead fraction, returning said vaporizing liquid to the lower portion of said distillation zone and passing all of said partially condensed overhead to said distillation zone as reflux thereto.

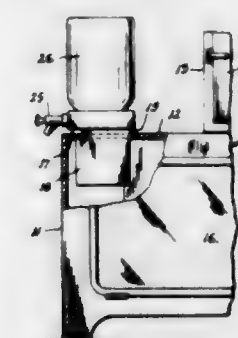
3,000,189

SNOW MAKING MACHINE HAVING SYRUP DISPENSER

Samuel Bert, P.O. Box 7803, Dallas, Tex.

Filed Feb. 10, 1959, Ser. No. 792,415

1 Claim. (Cl. 62—389)



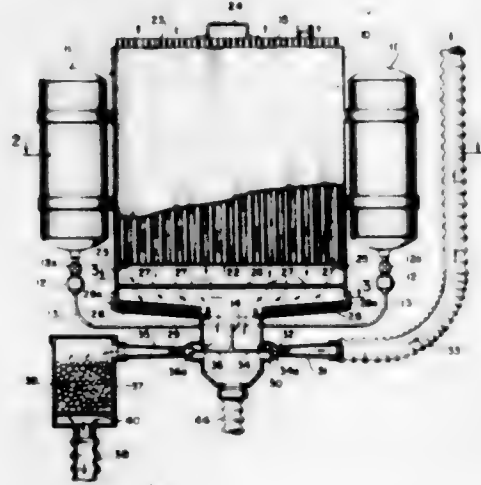
An apparatus for storing and dispensing ingredients of a "snow cone," including snow and syrup, said apparatus comprising a snow storage compartment provided with a snow dispensing door, and having a top wall portion provided with openings therein, means located above the compartment and communicating with the interior thereof through one of said openings for supplying fresh snow to the compartment to replace snow withdrawn from the compartment, said means including an ice comminuting mechanism, a syrup container including syrup dispensing means removably mounted in said top wall and projecting through a second opening into the snow compartment, whereby the snow in the compartment will automatically cool the syrup in said container, and a removable syrup reservoir disposed externally of the compartment and in an inverted position and communicating with the interior of the syrup container for maintaining a supply of syrup therein.

3,000,190
APPARATUS AND WEARING APPAREL FOR BODY REFRIGERATION
 Virgil Stark, 405 Lexington Ave., New York 17, N.Y.
 Filed July 15, 1959, Ser. No. 827,349
 21 Claims. (Cl. 62-259)



15. A cooling apparatus for personal wear comprising a head supported protective garment covering at least the upper part of the wearer's person, refrigerant retaining means and a support therefor within said garment and independent thereof, said refrigerant retaining means including at least one removable cartridge filled with a cooling mixture in frozen condition, a closed chamber associated with said refrigerant retaining means, and ducts leading therefrom for conducting cooled air towards the upper part of said garment, motor driven means for circulating said air through said ducts, and replaceable means for powering said motor driven means.

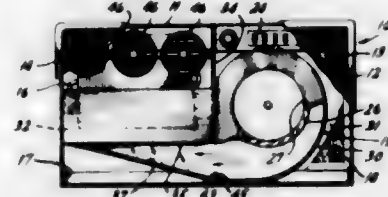
3,000,191
PORTABLE APPARATUS FOR BODY PROTECTION IN ENCLOSED WEARING APPAREL
 Virgil Stark, 405 Lexington Ave., New York, N.Y.
 Filed Nov. 14, 1960, Ser. No. 69,066
 14 Claims. (Cl. 62-259)



1. A refrigerating apparatus, comprising a casing having an insulated front and back wall, side walls and a distribution well in the bottom thereof, a refrigerating unit comprising a refrigerant sealed in a casing having metallic fins on the front and back walls thereof which will be received by and held in position in the top part of said refrigerating apparatus, at least one source of gas under pressure attached to the external part of said refrigerating apparatus, a conduit from said gas receptacle to the interior part of said distribution well terminating in a nozzle of a venturi jet compressor in the side of said distribution well delivering gas under pressure to said nozzle, distributing the aspired and compressed cool dry

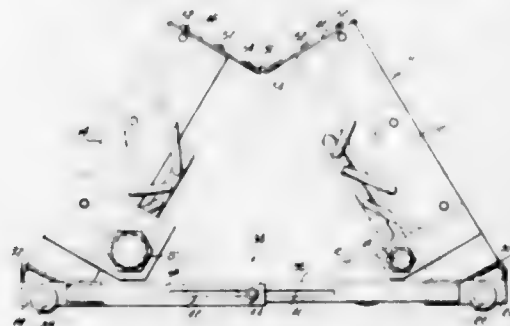
air from said venturi jet compressor through a flexible conduit, and means located within the bottom of said apparatus for removing condensed moisture from the air stream.

3,000,192
AIR CONDITIONING
 William H. Mullin, Havertown, and Francis Feeney, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
 Filed May 25, 1960, Ser. No. 31,652
 7 Claims. (Cl. 62-285)



1. An air conditioner comprising: a generally rectangular housing; an evaporator within said housing being so disposed as to extend angularly across an upper corner of said housing in such a manner that condensate drips from substantially the entire area of the evaporator; and blower means within said housing and including baffle means so obliquely disposed beneath said evaporator as to direct air discharged from said blower means upwardly over said evaporator in heat exchange therewith, positioning of said baffle means further being such that condensate formed upon said evaporator and falling therefrom impinges upon and wets substantially the entire air directing surface of said baffle means, the wetted surface being effective to entrap particulate matter entrained in the air moved by said blower means.

3,000,193
AIR CONDITIONING EVAPORATORS
 Thomas G. Crider, Lakewood, Ohio, assignor to Hupp Corporation, Cleveland, Ohio
 Filed Feb. 21, 1958, Ser. No. 716,749
 5 Claims. (Cl. 62-285)

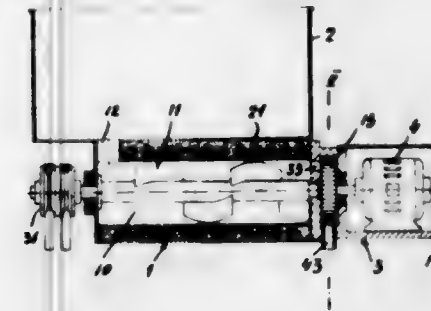


1. A heat exchanger comprising a pair of generally vertically extending coils each having upper and lower ends, a hinge construction connecting the adjacent ends of said coils to permit the opposite ends to be variably spaced, adjustable means connected to said opposite ends of said coils to determine the spacing therebetween, and drip pans mounted on each of said coils adjacent the respective lower ends thereof, said drip pans being disposed directly beneath said lower ends of said coils in all positions thereof.

3,000,194
CONTINUOUS ICE-CREAM MACHINE
 Poerio Carpigiani, 14 Via Cairoli, Bologna, Italy
 Filed June 23, 1960, Ser. No. 38,182
 Claims priority, application Italy July 4, 1959
 3 Claims. (Cl. 62-342)

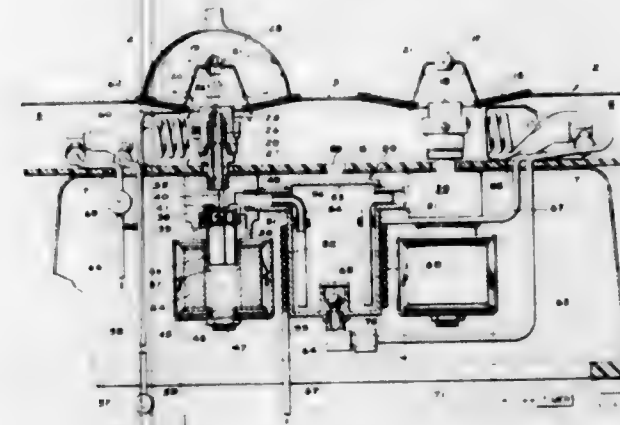
1. In a machine for the continuous manufacture of ice-cream, comprising a horizontal cylindrical freezing and

mixing chamber, a rotatable helical mixer in said chamber, a tank for the liquid mixture to be frozen mounted above said mixing chamber, a duct connecting said tank with the top of said chamber at one end thereof, and dispensing means at the opposite end of said chamber and including passage means connecting said chamber with



atmosphere and a pump cooperative with said passage means for selectively dispensing ice cream from said chamber and forcing air into said chamber to disperse through any mixture in said chamber and rise through said duct and tank to preerate the liquid mixture in said tank.

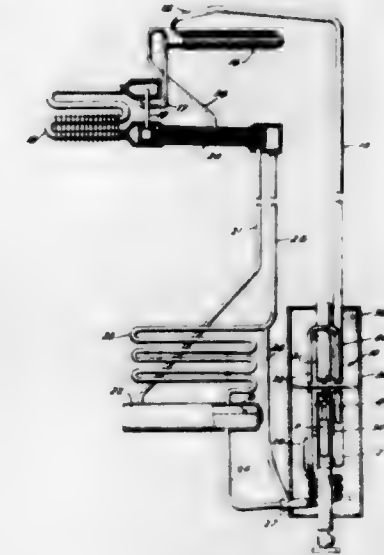
3,000,195
DRINKING GLASS FROSTER
 George Joseph Federighi, 616 Teresita Blvd., San Francisco, Calif., assignor to Reuben S. Tice, Monterey, Calif.
 Filed June 5, 1959, Ser. No. 818,348
 14 Claims. (Cl. 62-373)



11. A drinking glass froster comprising: an annular support having a central opening formed therein and which support is adapted to seat against the rim of an inverted drinking glass on said support, an upwardly directed discharge nozzle in said opening, a source of liquid CO₂ under pressure, a conduit connecting said source with said nozzle, heat transfer means in heat transfer relation to said conduit adjacent to but spaced from said nozzle for cooling the CO₂ in said conduit adjacent to said nozzle to a temperature below that of the vaporizing temperature of CO₂ in said conduit between said source and said heat transfer means.

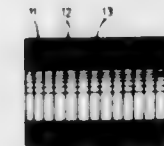
3,000,196
ABSORPTION REFRIGERATION
 Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
 Filed Oct. 27, 1958, Ser. No. 769,708
 Claims priority, application Sweden Oct. 29, 1957
 5 Claims. (Cl. 62-487)

4. In absorption refrigeration apparatus, a vapor-expulsion unit comprising a plurality of upright pipes serving as a vapor-liquid lift pump, heating tube and flue, respectively, means heat conductively connecting the exterior surfaces of the pipes serving as said heating



path of flow for combustion gases, and means for positioning said heating tube in said flue pipe to provide parallel paths of flow for combustion gases having a first pair of inlets at the lower end of said tube and a second pair of outlets at the upper end of said tube whereby both the inner and outer surfaces of said tube are in the paths of upwardly flowing combustion gases.

3,000,197
FLEXIBLE COUPLING MEMBER
 Hans Ruegg and Richard Keller, Ruti-Zurich, Switzerland, and Albert Klopfer, Stuttgart, Germany, assignors, by mesne assignments, to Allpatent Aktiengesellschaft, Vaduz, Liechtenstein, a corporation of Liechtenstein
 Filed Jan. 11, 1960, Ser. No. 1,477
 Claims priority, application Germany Jan. 13, 1959
 8 Claims. (Cl. 64-15)



1. A flexible coupling member for transmitting torque between a pair of shafts, comprising a plurality of concentric helical springs forming a set, each of said springs being composed of closely spaced helically wound wire of substantially rectangular cross section, the adjacent concentric springs being in close contact with each other and having windings of opposite pitch, and means including a radial flange rigidly fixed to each of said shafts and having a radial surface contacting and permanently bonded to the surfaces of the end convolutions of each of said springs for thereby rigidly securing all of said springs to said shafts.

3,000,198
FLEXIBLE COUPLING FOR DRIVE SHAFTING
 Ellarson R. Stout, Fayson Lakes, N.J., assignor to Curtis-Wright Corporation, a corporation of Delaware
 Filed Jan. 18, 1960, Ser. No. 2,955
 7 Claims. (Cl. 64-15)

1. A flexible coupling for substantially coaxial shafts in end-to-end spaced relation, comprising a multiple heli-

cal spring assembly, the assembly comprising two or more spring helices interwound with one another, one end of said assembly being sprung over the end of one shaft and the other end of said assembly being sprung over the end of the other shaft, and a plurality of sub-



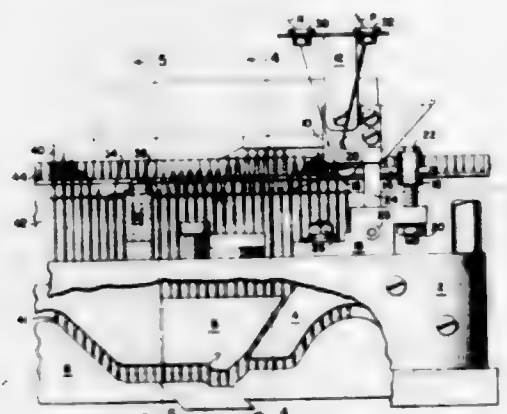
stantially cylindrically shaped plugs of substantially the same diameter as said shafts disposed within said spring assembly and between the shaft ends, said plugs being spaced apart by a distance less than axial thickness of any one spring convolution.

3,000,199

KNITTING MACHINE AND METHOD

Maurice H. Feltner, Lakeport, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts

Filed Mar. 12, 1959, Ser. No. 798,903
8 Claims. (Cl. 66-93)



1. In a circular knitting machine having independent needles, means for feeding a base yarn to the needles, means for feeding a pile-forming yarn to the needles along a path spaced from that of said base yarn, means for effecting longitudinal movements of the needles to draw and form stitches of both the base and pile-forming yarns, elements projectible between needles to engage and hold bights of said pile-forming yarn without engaging said base yarn, and means for controlling movements of said elements, said last means producing, while, and at the location where, the pile-forming yarn is being drawn by the needles, movements of pile yarn-engaging portions of said elements in the direction opposite that of movement of the needles in drawing yarn, thereby to act on said pile-forming yarn only to effect the formation of elongated pile loops.

3,000,200

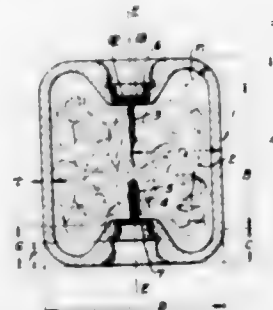
FLASH LAMP

Warren F. Albrecht, Euclid, Ohio, assignor to General Electric Company, a corporation of New York

Filed June 3, 1958, Ser. No. 739,579
2 Claims. (Cl. 67-31)

1. A flash lamp comprising a sealed glass bulb containing a charge of combustible flash material and electrostatically dischargeable ignition means for initiating combustion of said charge, a pair of electrical contacts

on said bulb hermetically sealed in said bulb and means for preventing accidental electrostatic discharge of said



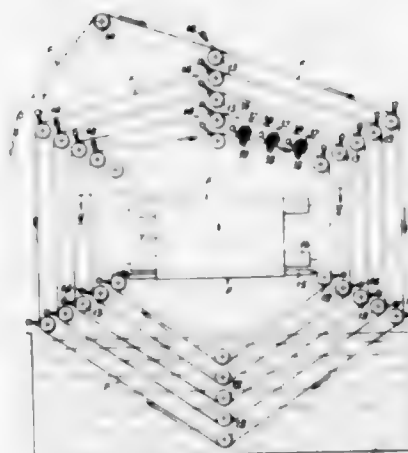
combustible flash material including recesses in said bulb in which said contacts are placed.

3,000,201

MACHINE FOR WASHING SPREAD OUT PRINTED CLOTH

Guglielmo Manetti, Milan, Italy, assignor to Comerio Ercole, S.p.A.

Filed May 7, 1958, Ser. No. 733,538
Claims priority, application Italy May 9, 1957
1 Claim. (Cl. 68-62)



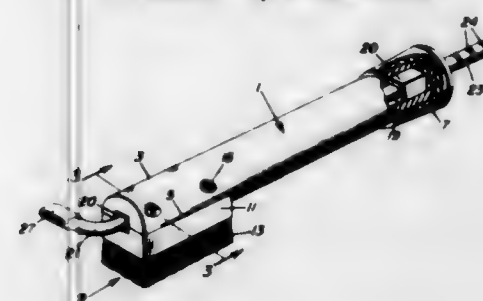
Apparatus for washing a web of cloth printed on one side of its two faces, said apparatus comprising a vat for a washing liquid, a plurality of substantially parallel rollers arranged in arrays, radially disposed about a substantially common axis with at least one of said arrays being located within the said vat and the remainder and at least one of said arrays being located outside the vat, said rollers further being arranged to define a spiral polygonal path such that said cloth can follow said path and contact the rollers with only one of its faces, means within said arrays to receive the cloth therefrom and to apply to the cloth a force to maintain the same against said rollers, spray means associated with and spaced from the rollers positioned outside of said vat and arranged to direct a spray towards the rollers and thus against the cloth directly being engaged by the rollers, brushing means operatively disposed above the spiral path towards the end thereof and sprinklers operatively disposed with respect to said brushing means to sprinkle the cloth where it contacts said brushing means, said means to receive the cloth including means for guiding the cloth from said spiral to a direction parallel to said axis; the latter said means comprising a cylinder including coaxial sections having oppositely directed threads for engaging the cloth and transversely spreading the same and substantially circular members diametrically opposed with respect to said cylinder for limiting contact of the cloth therewith.

3,000,202

COMBINATION IMPLEMENT FOR REMOVING SPOTS FROM FABRIC

Frank D. Gramados, 2644 E St., San Diego, Calif., assignor of 50% percent to George D. Lang-Dale, San Diego, Calif.

Filed Jan. 12, 1960, Ser. No. 1,892
6 Claims. (Cl. 68-222)



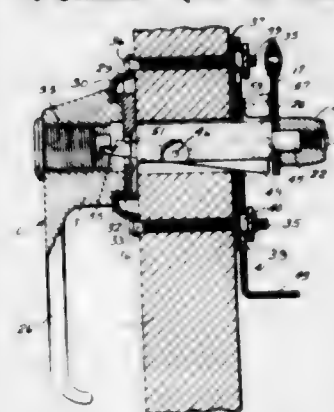
1. An implement for use in spotting fabric comprising an elongated longitudinally bored body forming a handle turnable about its longitudinal axis by a hand grasping and turning the body, said body having a front end portion, a bristled brush embodying a bristle-equipped back attached to said front end portion at one side of the body, and a steam tube extending axially through the bore in said body and rotatable therein with one end attachable to a source of steam under pressure and having a front end portion terminating in a steam discharge nozzle and being curved laterally of the body, said nozzle being of a length that the discharge end may be caused to project beyond the free ends of the bristles, whereby in response to rotation of the tube in and relative to said body said nozzle may be swung to and positioned in angular relation to the plane of the bristles of said brush or into alignment therewith in front thereof, so that in the angular position of the nozzle relative to the brush, said nozzle and brush may be positioned selectively in facing relation to fabric by a slight rotation of said body for use of the nozzle and brush alternatively in spotting, whereas, in the aligned position of said nozzle relative to said brush, said brush and nozzle may be used simultaneously in spotting.

3,000,203

LOCK MECHANISM

Henry H. Olson, Detroit, Mich., assignor to Crawford Door Company, Detroit, Mich., a corporation of Michigan

Filed Jan. 20, 1959, Ser. No. 787,859
4 Claims. (Cl. 70-216)



4. In a door lock, a stationary lock plate, a lock spindle extending through said lock plate and mounted for pivotal movement with respect thereto, a handle secured to one end of said lock spindle on the opposite end thereof from said lock plate and adapted to turn said lock spindle in a direction to set said spindle in a locked position, a release member pivotally mounted on said lock spindle intermediate the ends of said lock spindle and said release member for pivoting about an axis extending transversely of the axis of said lock spindle, key operated mechanism mounted in said handle and having operative connection

770 O.G.—32

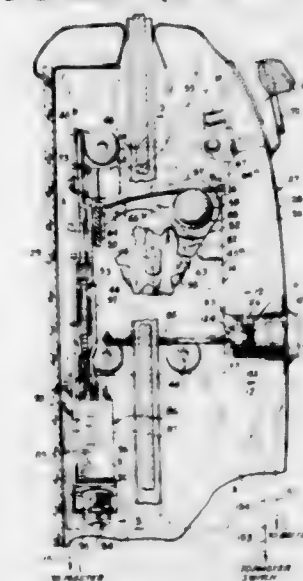
with the opposite end of said release member from said lock plate, to move said release member out of engagement with said lock plate and thereby accommodate free movement of said lock spindle into a release position, spring means biasing said lock spindle into a release position, and inside operated mechanism slidably mounted on said lock plate for movement in a direction transversely of the pivotal axis of said lock spindle and engageable with the opposite end of said release member from said key operated mechanism, for moving said release member into the release position independently of operation of said key operated mechanism.

3,000,204

DOOR CONTROL MECHANISM

Angele R. de Vito, 1913 Staunton Road, Cleveland Heights, Ohio, assignor, by mesne assignments, to Lisle W. Mezzimer, Rockford, Ill., trustee

Filed Aug. 23, 1957, Ser. No. 679,968
5 Claims. (Cl. 70-264)



2. In electrically controlled door latch mechanism for vehicle doors; a pivoted latch member having a door-latched position in engagement with a keeper; detent means for releasably holding said latch member against door-unlatching pivotal movement including a swingable detent lever; a locking lever swingable to locking and releasing positions relative to said detent lever for producing, through said detent means, desired door-locked and door-unlocked conditions of said latch member; manually operable means effective on said locking lever for swinging the same to its locking and releasing positions; a pair of selectively energizable locking and unlocking solenoids of the plunger type located on opposite sides of a median line extending through the pivot axis of said locking lever and having plungers therein axially movable in the general direction in which said median line extends; links attached to said plungers and connected to said locking lever at points located on opposite sides of, and at relatively short lever-arm distances from, said pivot axis for swinging said locking lever to its locking and releasing positions in response to the selective energization of said solenoids; and energizing circuit means connected with said solenoids for producing the selective energization thereof.

3,000,205

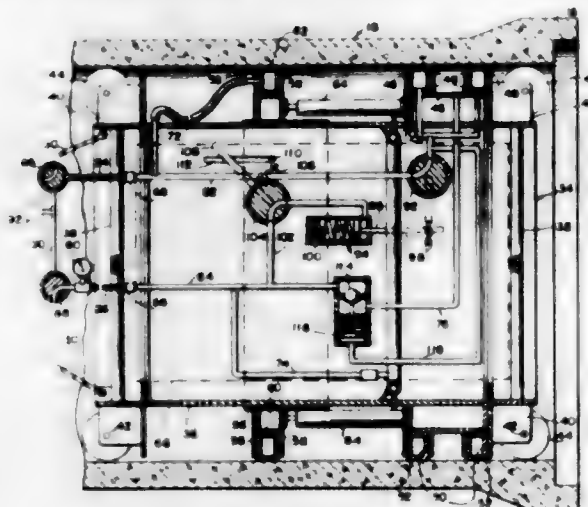
METHOD AND APPARATUS FOR TESTING PIPE JOINT

George E. Suderow, New York, N.Y., assignor to Delong Corporation, New York, N.Y., a corporation of Delaware

Filed May 8, 1958, Ser. No. 734,009
4 Claims. (Cl. 73-46)

1. Apparatus for testing a pipe joint for leakage comprising: carriage means disposable within an end of a pipe

section; a pair of spaced expandable packers carried by said carriage means and defining therewith, and with the interior wall of a pipe when engaged therewith, a closed testing chamber; holding means movable relative to said carriage means and releasably engageable with the interior wall of a pipe to prevent movement of said carriage longitudinally thereof; power-operated extensible means connected to said carriage means and to said holding means for effecting relative movement therebetween longitudinally of a pipe when disposed therewithin; and conduit means carried by said carriage means for intro-

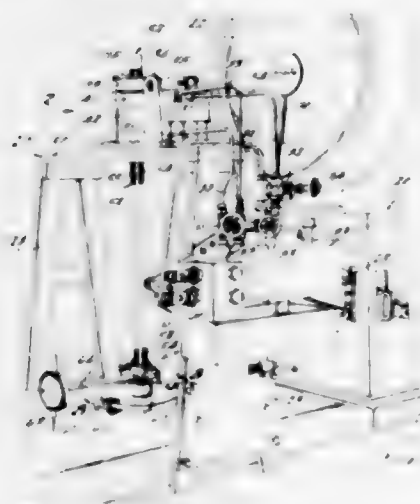


ducing air under pressure into said testing chamber, whereby said carriage and holding means can be disposed within the end of a first pipe section, said end connected to a second pipe section, said holding means engaged with the first section, said power-operated means operated to move said carriage means into a position wherein said packers are positioned on opposite sides of the joint between the first and second sections, said packers engaged with the sections to define a testing chamber, and air under pressure introduced into the chamber to test the joint for leaks.

3,000,206

LOAD-DEFLECTION TESTING MACHINE

Thomas C. McMahon, Windsor, Ontario, Canada, assignor to Chrysler Corporation of Canada, Limited, Windsor, Ontario, Canada
Filed Dec. 16, 1957, Ser. No. 703,067
11 Claims. (Cl. 73-94)



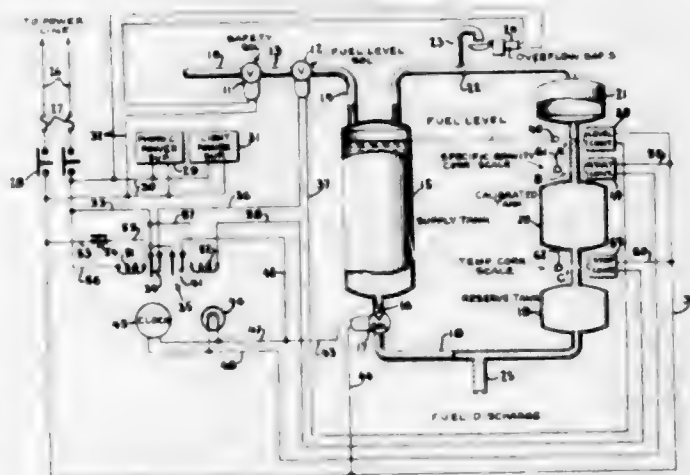
1. A load-deflection machine comprising a platform scale, a rigid yoke structure spanning the scale platform, an internally threaded sleeve floatingly mounted on said yoke structure above the scale platform for limited vertical movement relative thereto, a threaded load applying shaft detachably engaged with said threaded sleeve for alternate conjoint or relative vertical movement with re-

spect thereto, a pressure plate carried by said shaft arranged to deflect a resilient element relative to said scale platform, a pivot arm mounted on said yoke for oscillation about a horizontal axis intermediate its end portions, said pivot arm having one end portion connected to said floating sleeve to cause actuation thereof and the other end portion connected to a pressure fluid operated motor for actuation thereby to cause controlled vertical movement of said floating sleeve.

3,000,207

APPARATUS FOR DETERMINING THE RATE OF FLOW OF A LIQUID

John Howell Goffe, Clayton, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Oct. 7, 1957, Ser. No. 688,707
2 Claims. (Cl. 73-113)

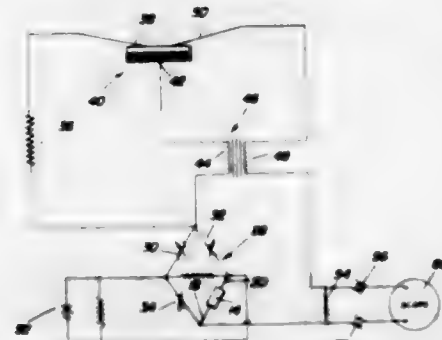


1. A device for measuring the rate of flow of a liquid through a system comprising: a supply tank and a calibrated tank having an upward extension, said tanks having a flow tube connecting them at their bottoms, liquid supply means for the supply tank, a discharge tube leading from the flow tube, means acting to maintain a common liquid level in the supply tank and the upward extension of the calibrated tank when they are in communication through said flow tube, means to isolate the supply tank from said flow tube, and means to measure the time required for discharge of said calibrated tank while the supply tank is so isolated.

3,000,208

STRAIN GAUGE

Frank D. Piazza, Jr., 1101 Heeney St., Johnstown, Pa.
Filed Oct. 6, 1958, Ser. No. 765,415
5 Claims. (Cl. 73-136)



1. In a strain measuring system for measuring the strain on a rotatable member and adapted to convey strain indicating signals to a remotely located strain indicator by conventional means, a strain responsive resistor, said resistor bonded to said rotatable member, an electrical bridge circuit, said resistor comprising one arm of said bridge circuit and an oscillator circuit connected

to said bridge circuit whereby variations in the value of said resistor will cause corresponding variations in the frequency of said oscillator, each of said bridge and said oscillator circuits secured to said rotatable member.

3,000,209

TORQUE WRENCH

Martin J. Gill, Attleboro, Mass., assignor to Apco Mossberg Company, a corporation of Massachusetts
Filed Apr. 23, 1959, Ser. No. 808,423
4 Claims. (Cl. 73-139)

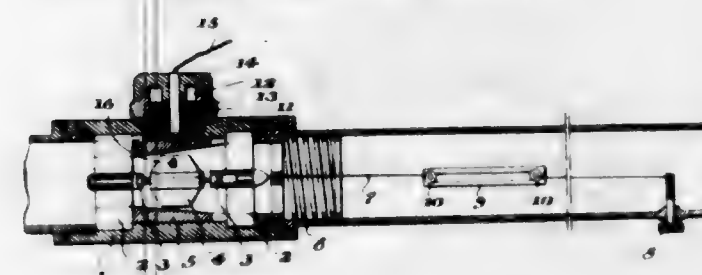


3. In a torque wrench, a hollow casing having an open side, a rotatable work engaging head at one end thereof in the hollow of said casing, a work bar positionable in said casing through said open side having means to engage said head in torque turning relation thereto, said casing carrying a dial and pointer and said bar carrying a dial movement detachably engaging said pointer, and a reference plate carried by said bar and fixed thereto adjacent the end thereof which engages said head but free to move relative to said bar from said location of fixing to the dial movement carrying end of said bar and linkage between said plate and movement for actuation of said pointer.

3,000,210

METER FOR LIQUIDS

Jean Faure-Herman, 68 Rue de l'Est, Boulogne-sur-Seine, France
Filed Sept. 6, 1955, Ser. No. 532,556
Claims priority, application France Sept. 18, 1954
6 Claims. (Cl. 73-231)



1. In a liquid meter the combination comprising a body through which the liquid passes, a conical nozzle slidably mounted in said body for sliding movement axially of said nozzle and said body, a turbine rotatably mounted coaxially in said nozzle, means fixed on said body on which said turbine is mounted for fixing said turbine to keep it axially immovable in said body, tension means connected to said nozzle for displacing it axially in one direction in said body for changing the cross section of the passage for the liquid in said turbine, and spring means between said body and said nozzle urging said nozzle in the opposite direction from said tension means into one of its end positions, said tension means and said spring means together regulating the position of said nozzle.

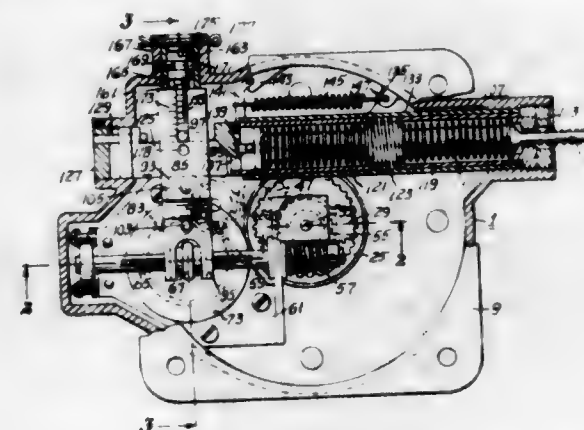
3,000,211

TEMPERATURE COMPENSATING COUPLING MEANS FOR LIQUID METERS

Erik Thane and Raymond L. Wrinkle, Oakland, Calif., assignors to Granberg Corporation, Oakland, Calif.
Filed May 24, 1957, Ser. No. 661,447
3 Claims. (Cl. 73-233)

1. A temperature compensator coupling for coupling a liquid meter shaft and a counter shaft in a rotational speed relationship which will vary with temperature, com-

prising a housing; a drive connection in said housing, having one end connectable to such liquid meter shaft and the remaining end connectable to such counter shaft and including a continuous speed-ratio variable coupling; adjustable means for operating said continuous speed-ratio variable coupling within a limited speed range, said adjustable means comprising a bar having a drive connection with said continuous speed-ratio variable coupling, a rotatable drive disk in proximity to said bar, a wheel slidably mounted on said bar with its rim in the plane of the proximate surface of said drive disk, a lever having a forked end straddling said drive disk, and a fulcrum at an intermediate point along said lever; means responsive to temperature changes of the liquid flowing through such meter for effecting compensating adjustment in said adjustable means, said temperature responsive means including a Syphon bellows in said housing, said Syphon bellows having a temperature connection connectable to such liquid meter to enable said Syphon bellows to sense the temperature of liquid flowing through



such meter, and a mechanical connection from said Syphon bellows to said lever at a point thereon between said forked end and said fulcrum whereby to change the location of said wheel with respect to said drive disk, said mechanical connection comprising a sleeve surrounding said Syphon bellows and at least partially enclosing the free end of said bellows, an aligned sleeve having a partially enclosed end facing the partially enclosed end of said first sleeve and at its other end connected to said lever, and a coiled spring under compression between the opposing ends of said sleeves; and means for neutralizing expansion of said Syphon bellows attributable to ambient temperature, said means including an outside sleeve affixed to said first sleeve and slidably enclosing said second sleeve, a Syphon temperature responsive bellows in said second sleeve, a pin anchored in said outer sleeve and passing through a slot in said second sleeve between the Syphon bellows therein and said lever, spring means urging said pin into pressure engagement with the proximate end of said Syphon bellows.

3,000,212

LIQUID LEVEL SENSOR

Lester D. Friel, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 4, 1955, Ser. No. 544,888
5 Claims. (Cl. 73-304)

1. In liquid gaging apparatus, a combination comprising a capacitive probe liquid quantity measuring means having an inner and an outer cylindrical electrode, liquid level sensor means adapted to be located at any position within the inner electrode of said probe measuring means, holding means for said liquid level sensor means operatively connected to said liquid level sensor means and movable therewith, said holding means comprising a resilient member and another member, the latter member arranged to bring a force to bear on the former member

to cause peripheral expansion of said resilient member and to thereby provide a friction fit between the resilient



member and the interior surface of the inner electrode of said probe measuring means.

3,000,213

FLUID TESTING PROBE

Charles E. Eves, Wood Dale, and Edward J. Tschupp, Libertyville, Ill., assignors, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 8, 1955, Ser. No. 526,972
5 Claims. (Cl. 73-349)



1. A probe for determining the characteristics of a fluid medium moving relative thereto comprising a body having a leading edge, a trailing edge and an intermediate bulbous portion, said body having a first narrow elongated opening in said bulbous portion substantially normal to the direction of said relative motion; a second narrow elongated opening in said trailing edge substantially parallel to said first opening; a fluid guide within said body having two openings and a minimum cross-sectional area, one opening of said guide communicating with said first opening and the other opening spaced from said body and said second opening; and a temperature sensitive device disposed in said fluid guide at said minimum cross-section.

3,000,214

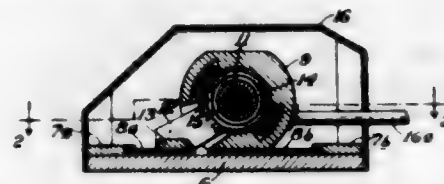
ELECTROMAGNETIC THERMOMETER

Bořivoj Dubský and Oldřich Straka, Prague, Czechoslovakia, assignors to Vyzkumny a zkušební letecký ústav, Letňany, Czechoslovakia

Filed Oct. 9, 1957, Ser. No. 689,177
Claims priority, application Czechoslovakia Oct. 11, 1956
1 Claim. (Cl. 73-362)

An electromagnetic thermometer comprising a ferromagnetic torsional body, means for magnetizing said body, pick-up coil means on said body and adapted to have an electromotive force induced therein in response to the deformation of the magnetization of the torsional body by torsional stressing of the latter, a base exposed to the temperature to be measured for expansion and contraction in response to changes in said temperature, a cylindrical casing having said torsional body therein and being rigidly secured to the latter at its opposite ends, first and second strips secured to said base at spaced

apart locations and extending generally parallel to the latter to move toward and away from each other in response to expansion and contraction of said base, said first strip being tangentially connected to said cylindrical casing, and an arm extending radially from the middle of said torsional body and being connected to said second



strip, said strips and base having different thermal coefficients of expansion so that said arm and casing are turned relative to each other to torsionally stress said body in response to changes in the temperature acting on said base, whereby the electromotive force induced in said pick-up coil means is proportional to the temperature.

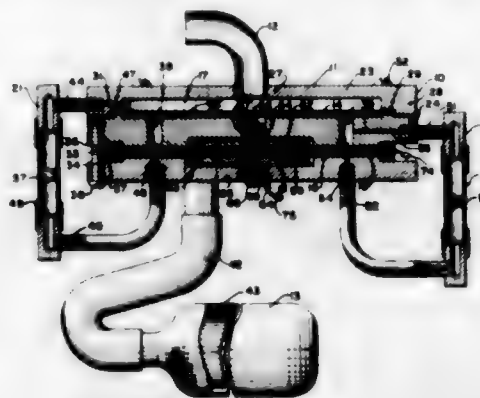
3,000,215

MICROBAROPHONE

John V. Atanasoff, Fulton, Md., and Anthony Caravale, 113 Croydon Court, Silver Spring, Md.

Filed Sept. 27, 1951, Ser. No. 248,626
5 Claims. (Cl. 73-398)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A microbarophone comprising a transducer including a pressure sensitive diaphragm of electrically conductive material forming a movable condenser plate, a fixed condenser plate disposed in parallel spaced relation to said pressure sensitive diaphragm, a second diaphragm disposed in parallel spaced relation to said sensitive diaphragm for averaging the atmospheric pressure variations adjacent the microbarophone, said diaphragm being disposed between said sensitive diaphragm and the surrounding atmosphere, frequency selective means interposed between said second diaphragm and said sensitive diaphragm for impressing the average pressure on one side of the sensitive diaphragm, restrictive means for averaging the pressure variations adjacent the microbarophone and for transmitting said averaged pressures to the other side of said sensitive diaphragm, and averaging means connecting said frequency selective means to said other side of said sensitive diaphragm for limiting low frequency response thereof.

3,000,216

INCREMENTAL HYDROBAROPHONE

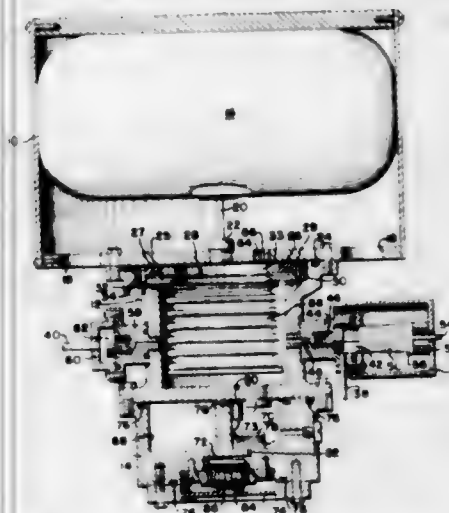
Edward L. Peters, University Park, and Marvin S. Weinstein, Silver Spring, Md., and John H. Buchler, Victoria, Tex., assignors to the United States of America as represented by the Secretary of the Navy

Filed Jan. 30, 1959, Ser. No. 790,304
7 Claims. (Cl. 73-398)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A Wien bridge type hydrobarophone for use in the depths of the sea, comprising an upper casing, a middle

casing, and a lower casing connected together in sealing relation, an inflated flexible bag in said upper casing exposed exteriorly to sea water, a bellows carried in said middle casing, the interior of said bellows being sealed off from the interior of said middle casing, a rubber diaphragm across one end of said bellows, sealed passage means open to the inside of said bag and the side of said rubber diaphragm outside the chamber formed by said rubber diaphragm and said bellows, a coil carried in said lower casing, a metal diaphragm sealing said



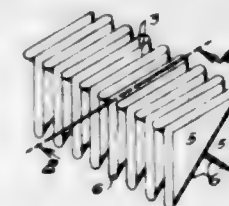
lower casing and exposed on its exterior face to the sea, its interior face being in proximity to said coil, means filtering gradual changes of pressure and serving to block sudden changes of pressure from the interior of the middle casing to the interior face of the metal diaphragm to equalize the pressures on the faces of the metal diaphragm, a Permalloy slug carried by and movable with the metal diaphragm under the influence of any pressure differentials on the exterior and interior faces of said metal diaphragm to vary the inductance of the coil and means for measuring this inductance variation.

3,000,217

SAMPLE SPLITTER

Charles R. McKinney, Monrovia, and Leon T. Silver, Altadena, Calif., assignors to California Institute Research Foundation, Pasadena, Calif., a corporation of California

Filed Jan. 16, 1956, Ser. No. 559,188
4 Claims. (Cl. 73-421)



1. A blank destined to become a sample splitter, comprising: a single piece of stock defining a series of similar four sided figures, first fold lines adjoining two adjacent sides of each figure to a pair of adjacent figures, each figure also adapted to be folded along a diagonal axis to form a trough having triangular sides substantially parallel sides, suspended between neighboring troughs along said first fold lines.

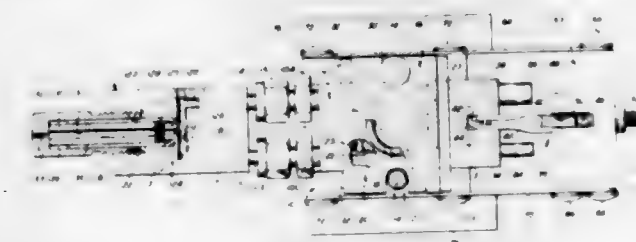
3,000,218

CHROMATOGRAPHIC SAMPLING APPARATUS
Monte Lee Marks, Pasadena, and Fabio C. Calciprina, Sierra Madre, Calif., assignors, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Filed Dec. 7, 1956, Ser. No. 626,983
2 Claims. (Cl. 73-422)

1. A metering device comprising a first metal body having a smooth surface, a second metal body having a

smooth surface, means for compressively holding the two surfaces together to make a metal-to-metal sliding contact seal, one of the surfaces being harder than the other, means for sliding the bodies with respect to each other between first and second positions, the first body having first, second, third, and fourth conduits opening at spaced locations out of the smooth surface of the first body, the first conduit being connected to a first fluid stream and the second conduit being connected to a second fluid stream, a sample chamber having inlet and outlet passages, conduit means opening out of the surface of the second body and having first means for connecting



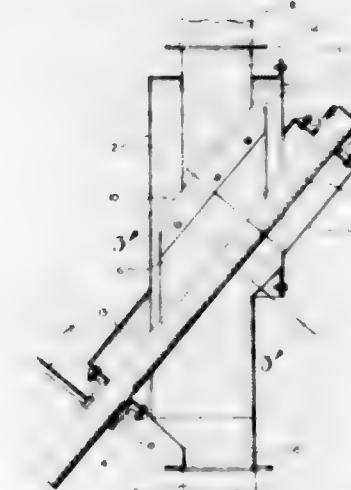
the second and fourth conduits in series and second means for connecting the sample chamber in series with the first and third conduits when the bodies are in the first position, said second means being operable to connect the sample chamber in series with the second and fourth conduits when the bodies are in the second position, the smooth surface of the second body having a guard groove disposed around said second means of said conduit means, means for connecting the guard groove to the first fluid stream when the bodies are in the first position, and means for connecting the guard groove to the second fluid stream when the bodies are in the second position.

3,000,219

SAMPLING APPARATUS

Fred F. De Boalt, Wenatchee, Wash., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 5, 1957, Ser. No. 663,760
5 Claims. (Cl. 73-422)



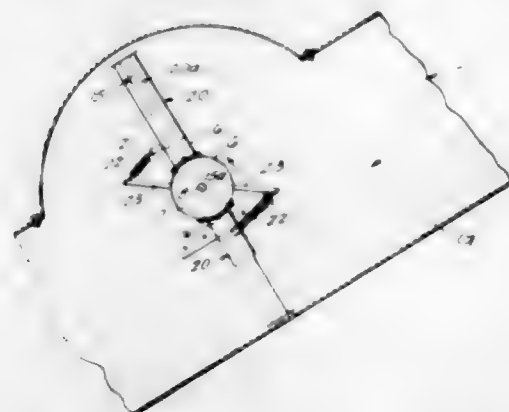
1. In a duct system for flowing material, apparatus for removing representative samples of the entire cross-sectional area comprising a casing providing a sampling chamber, an inlet duct, an outlet duct, an inclined hollow shaft extending transversely through said casing and oscillatably mounted therein about a fixed axis, said shaft being disposed below the said inlet duct terminus, a hollow cutter box providing a passageway extending upwardly from said shaft and having a free end provided with an opening, the opening in said cutter box being of uniform width and at least equal in length to the corresponding maximum dimension of the said inlet duct terminus and the passageway through said cutter box com-

municating with the hollow portion of said shaft, and means for oscillating said shaft to move said cutter box from a position at one side of said inlet duct terminus to the opposite side thereof.

3,000,220

SAMPLING MECHANISM

Ernest A. Johnson, 425 N. 53rd Ave., W., Duluth, Minn.
Filed May 7, 1956, Ser. No. 583,111
13 Claims. (Cl. 73-424)



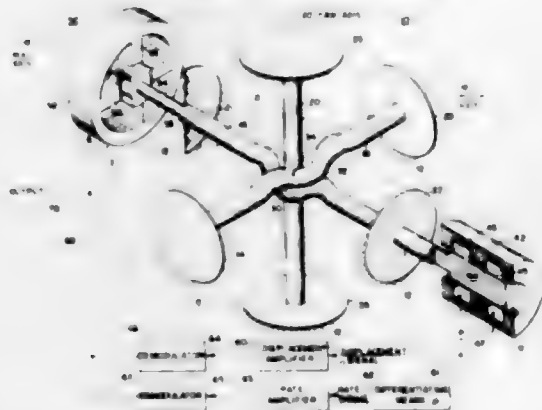
1. A sampling device for taking a sample of granular material which is passing along a chute comprising, a major tube mounted over said chute with its longitudinal axis extending transversely to the longitudinal axis of the chute, means to rotate said tube, a pick-up tube extending radially from said major tube and having a channel therein in communication with the interior of said major tube and being of a length to extend into material carried on said chute and pick up a sample therefrom, said pick-up tube having an opening adjacent its outer end facing the direction of rotation of said tube and a second and oppositely arranged opening facing in the opposite direction, a closure movably mounted on said pick-up tube over said openings, means biasing said closure to closed position over said openings in said pick-up tube, means connected with said closure for temporarily moving said closure away from said openings in said pick-up tube while the latter extends into material carried on said chute to permit some of the material to flow through the openings of said pick-up tube and a sample thereof to be trapped within said pick-up tube when said closure is again biased to closed position, and mechanical actuating means positioned to engage and actuate said closure-moving means to cause the same to so move said closure.

3,000,221

CONTROL APPARATUS

Leonard P. Eatin, Wayland, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed May 25, 1959, Ser. No. 815,373
7 Claims. (Cl. 73-517)



5. In a multi-axis accelerometer: a base, three elongated members, at least two of which have central por-

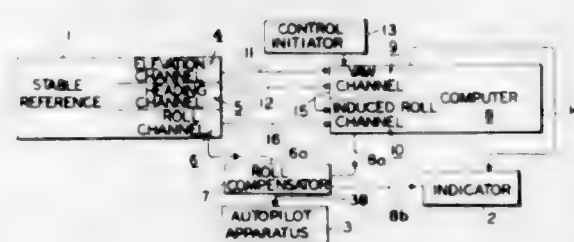
tions thereof offset from their respective longitudinal axes, and each of said members being characterized by its mass centroid lying substantially on its longitudinal axis; mounting means for each member for individually mounting said members for movement relative to said base along their respective longitudinal axes, said offset portions permitting said mounting means to position said members orthogonally relative to one another and so that said mass centroids of said members substantially coincide; and pick-off means associated with each member for producing a signal indicative of relative movement between each of said members and said base.

3,000,222

GYRO APPARATUS FOR MANEUVERING CRAFT

Gerald L. Sullivan, West Peabody, Richard A. Pfuntner, Lynn, and Edward E. Lynch, Wakefield, Mass., assignors to General Electric Company, a corporation of New York

Filed July 3, 1959, Ser. No. 824,850
11 Claims. (Cl. 74-5)

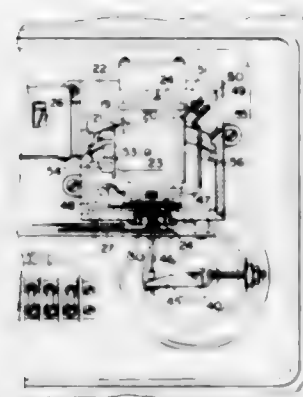


1. A navigational reference comprising a stabilized platform suspended for mounting on a supporting craft in a suspension having parts relatively movable angularly about a vertical heading axis, a horizontal pitch axis perpendicular to the heading axis, and a roll axis aligned with the fore-and-aft axis of the craft, means for translating the angular relationship between a part of said suspension and a specified heading of interest into a deviation signal proportional to said angular relationship, and resolver means responsive both to said deviation signal and to angular relationships between the parts of said suspension about said pitch axis producing output signals characterizing effects of yaw occurring during maneuvers of said craft.

3,000,223

GYRO INTEGRATOR

Harold E. Trekeil, Wakefield, Mass., assignor to General Electric Company, a corporation of New York
Filed July 20, 1960, Ser. No. 44,130
7 Claims. (Cl. 74-5.4)



1. A gyroscopic integrating device comprising a gyroscope having a rotor supported in a frame and a gimbal supporting said frame for rotation about a minor axis perpendicular to the rotor spin axis, a support mounting said gimbal for rotation about a major axis perpendicular to said minor axis, input means comprising a linkage mechanism connected to said frame for applying a vari-

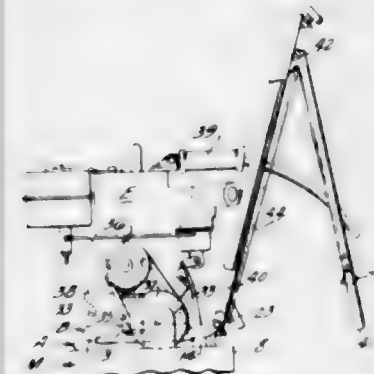
able signal torque to said gyroscope about said minor axis to cause precession of the gyroscope and the supporting gimbal about said major axis, output means connected to be driven by said gimbal, means supported by said frame to produce a rotating magnetic field and a relatively fixed eddy current leveling ring surrounding said gyroscope in inductive relationship with said magnetic field acting to maintain the plane of the spin axis perpendicular to the axis of the leveling ring, the axis of said leveling ring being inclined to said major axis to cause oscillatory motion of said linkage during precession of said gyroscope whereby the effect of friction in said linkage is eliminated.

3,000,224

POWER-DRIVEN IMPLEMENT WITH DETACHABLE POWER, CONTROL AND GUIDING UNIT

Byron L. Ertsgaard, Excelsior, and Stanley V. Soumore, Minneapolis, Minn., assignors to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota

Original application Oct. 4, 1954, Ser. No. 459,922, now Patent No. 2,904,287, dated Sept. 15, 1959. Divided and this application July 18, 1958, Ser. No. 749,472
6 Claims. (Cl. 74-16)



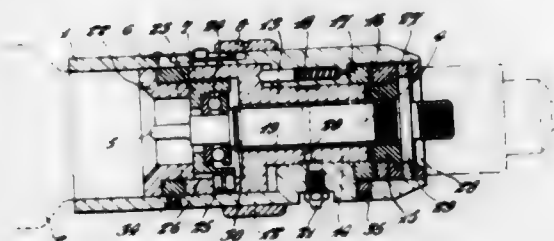
1. A ground-traversing power driven machine comprising a power utilizing implement having a rotary driven member mounted thereon to transmit power to the implement, an adaptor plate mounted on said implement and having a substantially flat upper surface, said adaptor plate having forward and rearward end portions, a motor base plate having a substantially flat under surface adapted to be superimposed on the flat upper surface of the adaptor plate in registering relation therewith, said upper and under surfaces being substantially co-planar when the base plate is secured to the adaptor plate, said base plate having forward and rearward end portions, a transversely extending channel member mounted on one end portion of one of said plates, the channel of said channel member facing said opposite end portion of said one end plate, the other of said plates having a channel-engaging edge projecting outwardly from the end portion thereof and being slidable into channel-engaging relation within said channel member when said base plate is superimposed upon said adaptor plate, an instantly releasable clamping member shiftable mounted on the other end of one of said plates and being shiftable into clamping engagement with the corresponding end portion of the other of said plates to move said last-mentioned plate in a direction to urge said edge and channel member into snug fitting interlocked relationship and to thereby secure said plates together, said clamping member being instantly shiftable out of clamping engagement with said corresponding end portion to permit ready release of said plates, a motor fixedly mounted on said base plate in superimposed relation and having a rotary drive member thereon, guide handle structure secured to said machine and extending upwardly and rearwardly therefrom, controls mounted on said handle structure and connected to said motor in controlling relation.

tion, and power-transmitting means connecting said drive member with said driven member in power-transmitting relation.

3,000,225

ROTARY DRILL HEADS

Cecil Arthur Taylor, London, England, assignor to The Rawlplug Company Limited, London, England
Filed Sept. 29, 1958, Ser. No. 764,180
Claims priority, application Great Britain Nov. 26, 1957
6 Claims. (Cl. 74-22)

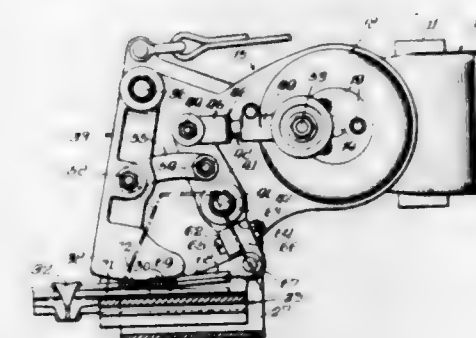


1. A drill head for a rotary drill which comprises a casing; a shaft mounted in the casing and capable of simultaneous rotational and reciprocal movement, the shaft being adapted at one end to be rotated by the driving shaft of the rotary drill and at the other end to be connected to a chuck for transmitting thereto rotary and reciprocal movement; means for imparting to the shaft during rotation reciprocations of one frequency; means for imparting to the shaft during rotation reciprocations of another frequency; and means for selectively engaging either of said reciprocation imparting means whereby, during rotation, reciprocations of either frequency may be imparted to the shaft.

3,000,226

COUNTERBALANCED DRIVE MECHANISM FOR HARVESTER

Charles H. Muchhansen, Shelbyville, Ill., assignor, by mesne assignments, to Oliver Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 13, 1958, Ser. No. 721,121
3 Claims. (Cl. 74-40)



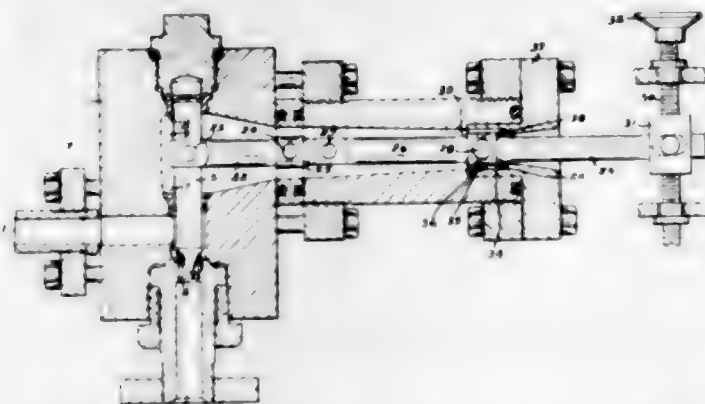
1. A counterbalanced drive mechanism for a reciprocating sickle comprising a support member, a drive shaft rotatably mounted in said support member, a unitary rigid drive lever spaced from said drive shaft and pivotally mounted intermediately of its ends on said support member and having a lower end adapted to be operatively connected to said reciprocating sickle, eccentrically driven means operatively connecting said drive shaft and an upper end of said drive lever, counterbalancing weight lever means spaced from said drive shaft and pivotally mounted adjacent the upper end thereof on said support member, and a drive link operatively connected to said counterbalancing weight lever means intermediate the ends thereof and to said drive lever between its pivotal mounting on said support member and its connection to said drive shaft.

3,000,227

HIGH PRESSURE VALVE

Hugo H. Buchter, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed June 27, 1957, Ser. No. 668,396
1 Claim. (Cl. 74-101)

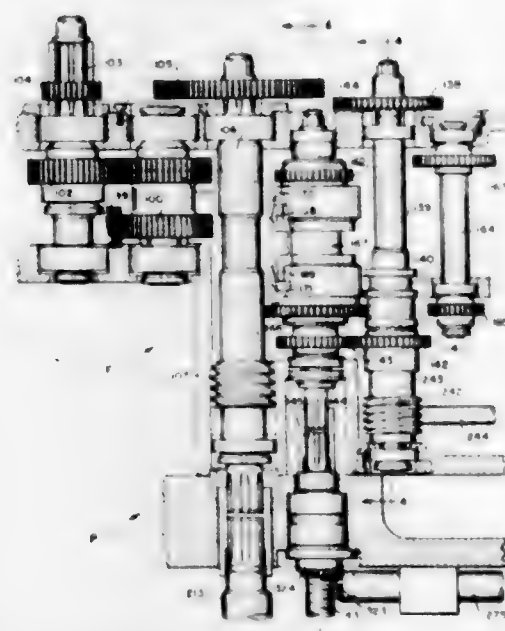


A valve actuating device of the character described comprising a body, a stem slidably arranged within said body, lever and fulcrum means within said body comprising a first lever extending through an opening in said body, said lever being provided with a circular section adjacent said fulcrum, resilient sealing means adjacent said circular lever section, said sealing means abutting said body, and adapted and arranged to contact the interior of said body and to form a pressure-tight seal between said circular section and said body, said other end of said first lever being linked to a second lever and fulcrum means, said second lever being then linked to said stem.

3,000,228

TRANSMISSION

Edward C. Ballard, Southport, and Arthur A. Tomenceak and James E. Ettoerre, Fairfield, Conn., assignors to The Ballard Company, a corporation of Connecticut
Original application Jan. 31, 1955, Ser. No. 484,998, now Patent No. 2,947,188, dated Aug. 2, 1960. Divided and this application Nov. 10, 1959, Ser. No. 852,002
7 Claims. (Cl. 74-364)

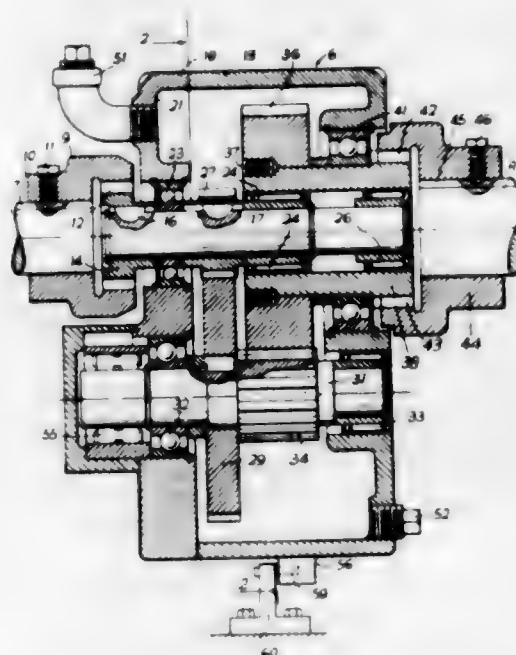


1. In a transmission, first and second parallel shafts; intermeshing transfer gears keyed to said shafts for changing the relative rotation of one to the other; a third shaft; a reversible gear drive connecting said first shaft and said third shaft; parallel power paths connecting said second shaft and said third shaft; and transfer gears in each of said parallel power paths for changing the relative rotations of said third and second shafts.

SPEED CHANGE DEVICE

Joseph Dennis Christian, San Francisco, Calif., assignor to Holo-Filts International Incorporated, San Francisco, Calif.

Filed June 3, 1960, Ser. No. 33,688
3 Claims. (Cl. 74-421)



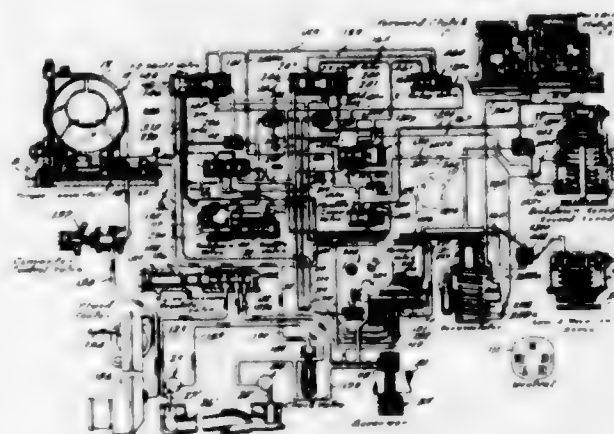
1. A speed change device for coupling a prime mover shaft to a machine shaft comprising a gearing having a housing containing an input shaft and an output shaft and a countershaft, and gearwheels on the main shaft and output shaft meshing with gearwheels on the countershaft, a flexible coupling connecting the mainshaft with the prime mover shaft, a flexible coupling connecting the machine shaft with the output shaft, and cam means including a part fixed to the housing and a fixed part co-operating therewith for applying a force on the housing offsetting bending loads on the input shaft and output shaft caused by the tooth pressures between the gearwheels, said housing, gearing and couplings being otherwise suspended on said prime mover shaft and said machine shaft.

3,000,230

HYDRODYNAMIC TRANSMISSION

Leonard E. Froelie, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Feb. 18, 1957, Ser. No. 640,804
38 Claims. (Cl. 74-472)



1. In an engine driven vehicle having a throttle valve control, a multispeed power transmission unit comprising input and output shafts, gearing interconnecting said shafts and arranged for selective activation to provide for transmission of a first, a second and a third speed drive

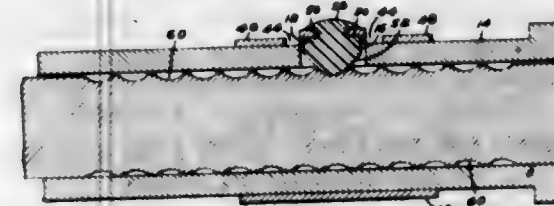
between said shafts, and automatically operable vehicle speed and throttle valve responsive pressure fluid activatable control means for said gearing arranged to automatically provide for sequential upshifts from first to second to third speed drive and reversely arranged downshifts with the automatic downshift being directly from third speed to first speed during closed and light throttle operation, said automatically operable transmission shift control means including a pair of interconnected pressure fluid operable shift valves each selectively operable by conjointly applied pressure fluid means responsive respectively to the transmission output shaft speed and the degree of throttle valve opening to accomplish said sequential upshifts and downshifts and pressure fluid operated means connecting said shift valves and operable after upshift of each of said valves to apply an anchoring fluid force to the shift valve controlling second speed to third speed shifts whereby downshift from third speed directly to first speed is automatically accomplished during closed and light throttle operation.

3,000,231

FASTENING DEVICE

Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Filed Feb. 15, 1960, Ser. No. 8,551
3 Claims. (Cl. 74-502)

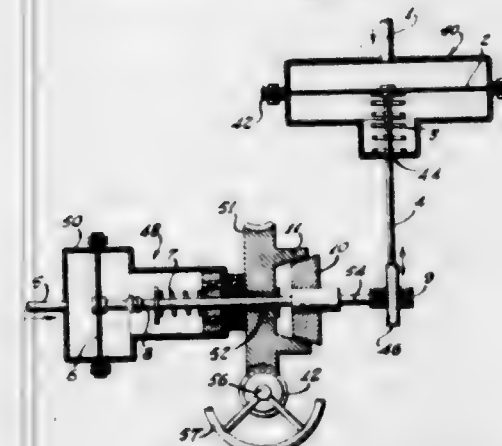


1. A fastening device for use with a pair of telescoping members including an apertured outer housing and an axially moveable inner shaft, said fastening device comprising a resilient clip member adapted for snap engagement with a pair of non-metallic contact portions, said contact portions being joined by a web in juxtaposed relation within said clip, said contact portions entering into diametrically opposed frictional engagement with said inner shaft through said apertured housing.

3,000,232

LOCKING CONTROL DEVICE

Heinz Gena, Leuna, Germany, assignor to VEB Leuna-Werke "Walter Ulbricht," Leuna, Germany
Filed July 27, 1960, Ser. No. 45,733
3 Claims. (Cl. 74-531)



1. A device for locking a pneumatic or hydraulic movable positioning member in a given position upon failure of the pneumatic or hydraulic source of control pressure, comprising a control member, a shaft member connected

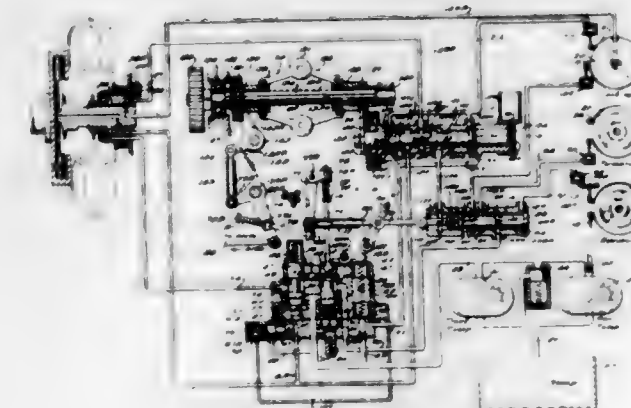
to said control member and axially movable therewith, means for biasing said shaft member and said control member in one direction, means for directing control pressure against said control member to maintain it in equilibrium against said biasing, said shaft member including a first clutch member thereon, gear means connecting said shaft member and said movable positioning member, and hand rotatable positioning means including a second clutch member disposed for engagement with said first clutch member upon failure of said control pressure and movement of said control member under the force of said biasing means.

3,000,233

AUTOMATIC TRANSMISSION

Clifton R. Roche, % The Whittier, 415 Burns Drive, Apt. 1455, Detroit, Mich.

Original application May 16, 1947, Ser. No. 748,382, now Patent No. 2,645,137, dated July 14, 1953. Divided and this application Dec. 1, 1952, Ser. No. 323,383
28 Claims. (Cl. 74-645)



1. In a torque converting transmission, in combination with a source of fluid under pressure, a plurality of forward driving means of differing speed ratios, reverse driving means, and speed changing mechanism for rendering said driving means effective and ineffective including a plurality of hydraulically operable motor means for engaging and disengaging said driving means, a fluid conducting system for providing communication between said source and said several motor means, selector valve means incorporated in said system and arranged to selectively direct fluid from said source either to a motor for said reverse driving means or to a motor for said forward driving means, pressure regulating valving means incorporated in said system and arranged between said source and said selector valve means, additional valving means arranged between said selector valving means and a forward drive motor means, and speed responsive means for actuating said additional valving means, and means including a member adapted to be moved by and in response to opening movement of an engine throttle control for modifying the effect of said speed responsive means upon said additional valving means.

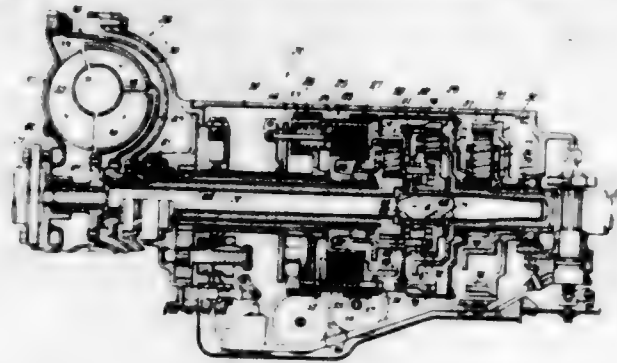
3,000,234

TRANSMISSION MECHANISM

Everett Ruston Burnett, Chino Lake, Calif., assignor to Borg-Warner Corporation, a corporation of Illinois
Filed Aug. 23, 1957, Ser. No. 679,866
8 Claims. (Cl. 74-688)

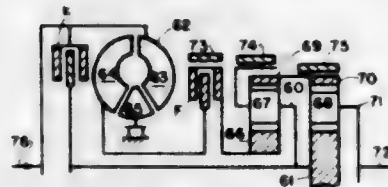
8. In a transmission, the combination of a drive shaft; a driven shaft; a hydrodynamic coupling device having a driving member driven from said drive shaft and primary and secondary driven elements or turbines; first, second, and third planetary gear sets each having a ring gear, a sun gear, a plurality of planet gears in mesh with said ring gear and sun gears, and a planet gear carrier, said primary turbine being connected with said sun gear of

said first gear set and said secondary turbine being connected with said sun gear of said second gear set, said ring gear of said second gear set being connected to said carrier of said first gear set; a one-way clutch for connecting together said second sun gear with said first planet gear carrier, said second planet gear carrier being connected with said driven shaft, said third planet gear carrier also being connected with said driven shaft, said third sun gear being rigidly connected with said first ring gear;



and a positive type brake for said third ring gear for taking reaction from said third planetary gear set and thereby establishing a reverse drive power train from said drive shaft through said hydrodynamic device and said planetary gear set, to said driven shaft, said second planetary gear set functioning as a rotating reaction element as reverse driving torque is transmitted through said first and third planetary gear sets to said driven shaft, and the reverse driving speed ratio increasing with speed of said driven shaft.

3,000,235
PLANETARY TRANSMISSION
Howard W. Simpson, 730 Crescent Drive,
Dearborn, Mich.
Filed Feb. 13, 1956, Ser. No. 564,923
14 Claims. (Cl. 74-759)

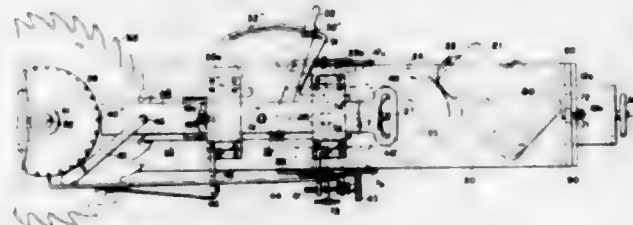


1. In a variable speed transmission, input and output shafts, two planetary gear sets, each set comprising sun, ring and planet gears and a carrier for supporting the planet gears; first clutch means for connecting the input shaft to the carrier of one gear set and the sun gear of the other gear set, second clutch means for connecting the input shaft to the sun gear of said one gear set, means connecting the ring gears of both sets for co-rotation, and a connection between the carrier of the other gear set and the output shaft whereby, when both clutch means are engaged, a drive is obtained through the transmission.

3,000,236
SAW-SHARPENING MACHINE
Otto Lindheim, 819 58th St., Brooklyn, N.Y.
Filed Aug. 27, 1959, Ser. No. 836,412
6 Claims. (Cl. 76-43)

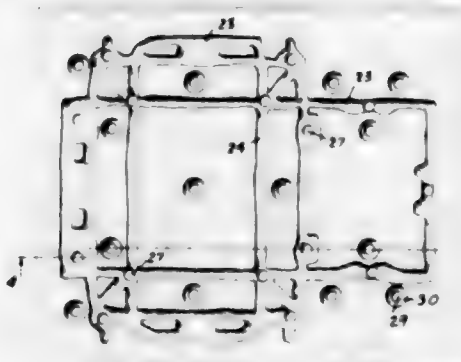
6. A saw-sharpening machine comprising a base, a support for a saw blade to be sharpened, said support being pivotable about an axis and slidable on said base along said axis, grinding means on said base, displaceable mounting means for holding said blade on said support with one of the teeth of said blade operatively aligned with said grinding means in the direction of said axis, drive means for alternatively advancing and retracting said mounting means toward and from said grinding

means by reciprocating said support along said axis, control means coupled with said mounting means and synchronized with said drive means for operatively aligning successive teeth of said blade with said grinding means during successive reciprocating cycles of said support, tilting means synchronized with said drive means for inversely inclining said support with respect to said grinding means during successive reciprocating cycles whereby successive teeth will be ground with opposite flank angles, a cradle rockably suspended on said base and having said



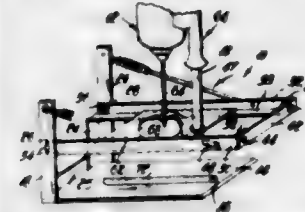
support slidably mounted thereon, said support being tiltable on said base together with said cradle; said tilting means comprising cam means on said base, a rotatable member on said cradle operatively connected with said drive means, and cam-engaging means eccentrically positioned on said rotatable member for intermittent co-action with said cam means; and a manually operable means for retracting said cam means from contact with said cam-engaging means and for optionally stabilizing said cradle in a symmetrical position with respect to said grinding means.

3,000,237
METHOD OF MAKING DIES FOR FORMING CARDBOARD BLANKS
Harry L. Phillips, Piedmont, and Lytton S. Fain, San Leandro, Calif., assignors, by direct and mesne assignments, to Floscal Corporation, Oakland, Calif., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,633
9 Claims. (Cl. 76-107)



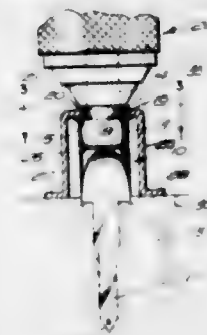
1. A method of making a rule supporting mold for a die for making a cardboard blank that includes the steps of; forming a continuous, relatively wide recess as compared with the thickness of the rules to be supported, in one side of a panel along a line that defines the outline of said blank, then positioning one of the edges of rules within said recess including the marginal portions of said rules along said edges with said marginal portions and said edges spaced from the opposite sides of said recess and the bottom of said recess respectively and with said rules disposed along a line that exactly follows the outline of said blank, then casting a material in said recess in tight inseparable engagement with the sides and bottom of said recess and in releasable engagement with said edges and marginal portions of said rules along opposite sides of the latter, and permitting said casting to harden whereby said panel will carry a mold formed with a groove that is exactly complementary to said rules along their said edges and said marginal portions when said rules are removed from said material.

3,000,238
CLOTH DRILLING DEVICE
Tasdik Gabriel Makuf, 798 Juniper Drive, Logan, Utah
Filed Feb. 26, 1959, Ser. No. 795,753
12 Claims. (Cl. 77-5)



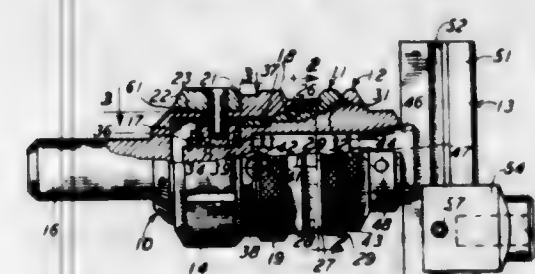
1. A cloth drilling apparatus comprising: a base with a work surface adapted to receive a bed of cloth; at least one support member extending upwardly from said base; platform means mounted on said support member and extending over said base; a cloth drill having a base plate with a plane underside mounted on said platform means; said platform means and said work surface being oriented with respect to each other so that the drilling axis of said cloth drill is perpendicular to said work surface; and means for adjusting the orientation of said drill platform means and said work surface with respect to each other, to thereby adjust the drilling axis of the drill to a line perpendicular with said work surface, if said drilling axis is canted with respect to the underside of the drill base.

3,000,239
DEPTH STOP FOR A BORING TOOL
Robert B. Ransom, Westerly, R.I., assignor to Norfolk Products Corporation, a corporation of Connecticut
Filed Oct. 29, 1959, Ser. No. 849,475
8 Claims. (Cl. 77-55)



1. A depth stop for a boring tool comprising a circular spacing collar, one end of which is to engage a shoulder of the boring tool and the other end of which is to engage the chuck jaws which grip the boring tool, and a depth control member freely embracing said collar between its engaged ends and of a dimension less than the distance between its engaged ends whereby said member is freely rotatable on said collar.

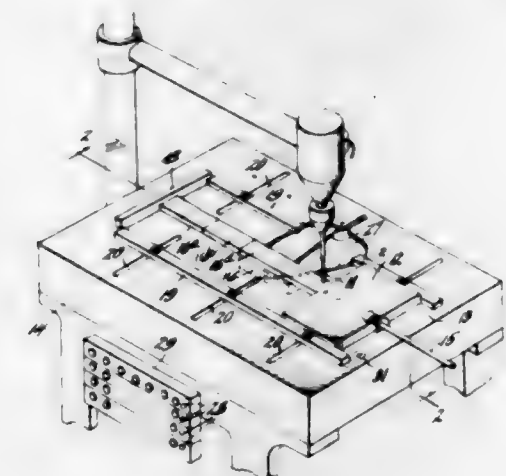
3,000,240
ECCENTRICALLY ADJUSTABLE TOOL HOLDER
Frederick Helmut Eckardt, 2117 N. Green Bay Road,
Racine, Wis.
Filed June 6, 1960, Ser. No. 34,189
6 Claims. (Cl. 77-58)



1. An eccentrically adjustable tool holder comprising a housing including a shank at one end for mounting in a

boring machine and having an eccentric conical bore in the other end thereof and said housing having a mark thereon, a ring having one end thereof telescopically and rotatably disposed in said bore with a mating conical outside diameter and having an eccentric conical bore in the other end thereof, a tool holding member having one end thereof telescopically and rotatably disposed in said bore of said ring with a mating conical outside diameter and having an eccentric conical bore in the other end thereof for receiving a tool, a scale on said ring and said member for rotative alignment with said mark on said housing and indicating the rotative relation between said housing and said ring and said member, and an axially displaceable means connected between said housing and said member and operative thereon for forcing the mating conical surfaces into snug contact to secure said housing and said ring and said member against relative rotation.

3,000,241
POSITIONING DEVICES
Warren A. Welsh, Westfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 12, 1958, Ser. No. 760,772
13 Claims. (Cl. 77-64)

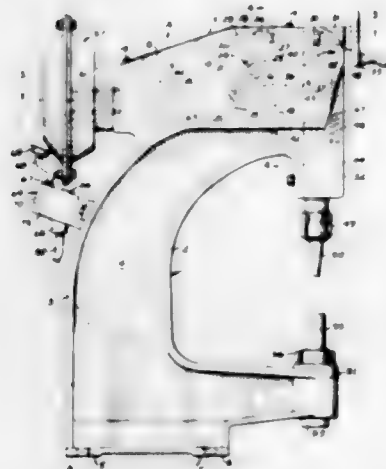


1. A positioning device for locating a piecepart at a preselected position with respect to a working tool, which comprises a series of gauge blocks of differing lengths such that any selected length of a fixed increment up to a predetermined maximum may be formed by placing any combination of said gauge blocks into end-to-end alignment, means for supporting the gauge blocks in a first normal position in a single row, a plurality of actuating means for arranging any desired combination of said gauge blocks in end-to-end alignment in a second operating position, and means for selectively activating the actuating means to align the gauge blocks in any desired combination.

3,000,242
RIVETING MACHINE
Harry B. Barrett, Clayton, Mo.
(18 S. Kingshighway, St. Louis 8, Mo.)
Filed Mar. 8, 1957, Ser. No. 644,859
8 Claims. (Cl. 78-41)

1. An adjustable slide mechanism comprising a housing having a push-rod slidably mounted thereon, a plunger movable with respect to the housing and through a straight path from any one of a plurality of initial positions to a fixed final position, toggle link means operatively connected to said push-rod and plunger, a yoke rockably mounted on the housing and cooperating with the push-rod for setting said plunger at any one of the

initial positions, means for moving said push-rod whereby to drive said plunger from the initial to the final position.

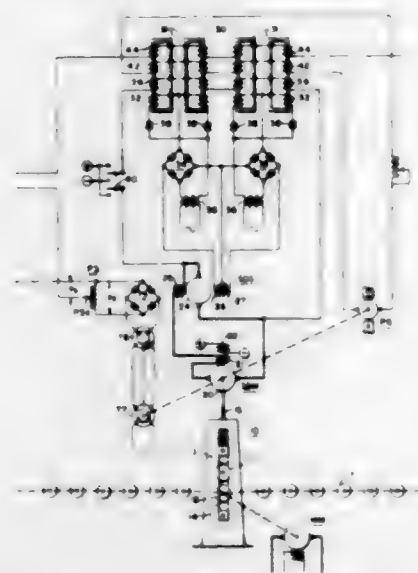


3,000,243

SHEET LENGTH CONTROLLER

Loren F. Stringer, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 9, 1955, Ser. No. 533,478
9 Claims. (Cl. 80-56)



1. In a control system for a rolling mill having a pair of rolls with driving means therefor and having a screwdown motor operable to vary the spacing of the rolls, the combination of regulating means operable to effect operation of the screwdown motor, first signal producing means actuated by the screwdown motor to produce a first signal in accordance with the roll spacing, second signal producing means actuated by the passage of a sheet of material toward the rolls for measuring the length of a sheet of material to be rolled and for producing a second signal in accordance therewith, and circuit means connecting the regulating means and said first and second signal producing means for applying a control signal to the regulating means in accordance with a differential between said first and second signals.

3,000,244

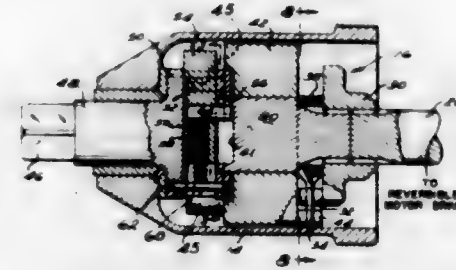
POWER OPERATED ROTARY IMPACT WRENCH

James Starrock, Orwell, Ohio, assignor to Master Power Corporation, Bedford, Ohio, a corporation of Maryland

Filed Sept. 22, 1958, Ser. No. 762,518
2 Claims. (Cl. 81-52.3)

1. In an impact wrench, co-axial rotatable driving and driven members, one of said members having an impact

surface spaced from its axis of rotation, an impact element slidably mounted in the other of said members for movement into and out of the path of said impact surface, said driving member including an inertia mass for delivering an impact blow, a drive shaft rotatable with a predetermined torque varying inversely with the speed of rotation thereof, a resilient coupling between said drive shaft and said driving member, cam means operably associated with said drive shaft, said driven member and said impact



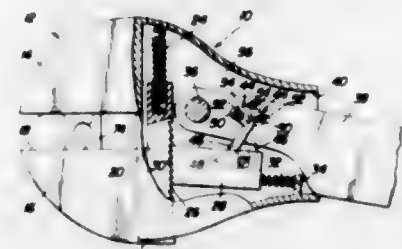
element, said cam means being operable by rotation of said drive shaft relative to said driving and driven members to retract said impact element out of the path of said impact surface, said resilient coupling resisting such rotation relative to the driving member by a force less than the torque of said drive shaft when substantially stalled and greater than the torque of said drive shaft after free acceleration of said drive shaft and driving member through about one-half a revolution.

3,000,245

PIVOTED HEAD, SLIDABLE SIDE JAW WRENCH HAVING RATCHET-TYPE ACTUATING MEANS

Allie E. Orr, % Orr Boat & Gun Shop, 1005 S. St. Andrews St., Dothan, Ala., assignor of twenty-five percent to Jeff Orr and twenty-five percent to J. E. Buntin, both of Dothan, Ala.

Filed Sept. 2, 1959, Ser. No. 837,623
11 Claims. (Cl. 81-63.2)



1. A ratcheting end wrench comprising a wrench head having a pair of jaw members associated therewith one movable relative to the other, means resiliently urging said jaw members toward each other, an operating arm having one end pivotally secured to said head for movement between two limits, a latch engageable with said movable jaw member for limiting the movement of the latter away from the stationary jaw member, means normally urging said latch into engagement with said movable jaw member, abutment means carried by said latch, actuating means operatively connected to said operating arm and engageable with said abutment means for disengaging said latch from said movable jaw member upon movement of said operating arm toward one limit position.

3,000,246

OPERATING MEANS FOR A SLIDABLE SIDE JAW WRENCH

August Samuel Aegeyter, Wanderstrasse 19, Basel, Switzerland

Filed June 16, 1959, Ser. No. 820,818
4 Claims. (Cl. 81-165)

1. A slidable side jaw wrench comprising a body having a fixed jaw, a movable jaw mounting means slidably mounting said movable jaw on said body for movement

towards and away from said fixed jaw, operating means for said movable jaw connected thereto and including a slide connected to said mounting means and having an upper step and a lower step thereon, a shaft journaled

said body member so that when said screw is retracted said tool retracts from the center of the central opening by gravity, whereby the tool may be adjusted along three perpendicular planes.



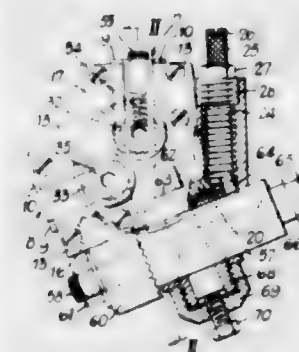
in said body, cam means on said shaft for engaging at least one of said steps to move said slide upon rotation of said shaft, and slide adjusting means for rotating said shaft mounted outwardly of said body.

3,000,247

ROLLER BOX TOOLS FOR MACHINE TOOLS

Albert Saunders, Walton-on-Thames, England, assignor to Accurate Tools (Saunders) Limited, Surrey, England

Filed June 27, 1958, Ser. No. 745,214
Claims priority, application Great Britain July 3, 1957
3 Claims. (Cl. 82-35)



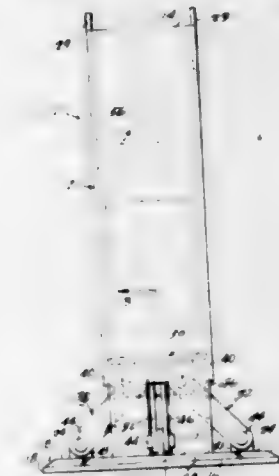
1. A roller box tool comprising a body member having a central opening therethrough, synchronously adjustable roller means movable toward and away from the center of said central opening, a tool housing having a stud projecting therefrom, said body member having a lug with a slot therein through which said stud passes, means on said stud for fixing said housing in adjusted position along said slot, a tool container, a chamber in said tool housing in which said tool container may slide and being elongated along the axis of said stud and perpendicular to the axis of said slot, a bolt mounted in said tool housing for rotatable movement and extending in a direction parallel to the axis of said stud, said tool container being formed with a threaded opening therethrough in alignment with said bolt so that turning said bolt moves the tool container toward and away from said stud, a tool, an opening in said tool container in which said tool is mounted and extending in a direction normal to the axis of said slot and said stud, a set screw for holding said tool in fixed position with respect to said tool container, means for adjusting the position of said tool in said container including a screw in the base of said container and extending along the axis of said opening therein so that the amount of tool projection into the central opening may be adjusted when the set screw is released, said screw being at the lowest portion of the container and said tool housing being disposed at the lower portion of

3,000,248

PILE CASING CUTTERS

Lee M. Boughton, Kathman Road, Brewerton, N.Y., assignor of one-half to Philip Hillsberg and Maurice H. Sharp, Syracuse, N.Y.

Filed June 26, 1959, Ser. No. 823,135
8 Claims. (Cl. 83-191)



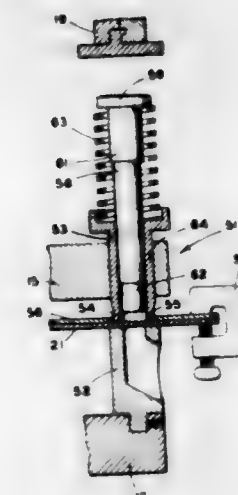
1. A pile casing cutter comprising a vertically elongated tubular barrel having an open upper end, a disc fixed concentrically on the lower end of the barrel, said disc being larger in diameter than the barrel and having a peripheral edge to bear guidingly against the interior of a pile casing, cutter plates slidably resting upon the upper surface of the disc, said cutter plates having arcuate radially outward cutting edges, and operating means for the cutter plates comprising a vertically movable pressure head confined in the barrel, and individual links operatively connected to and extending between the pressure head and the cutter plates.

3,000,249

PUNCH WITH GUIDE COOPERATING WITH A PATTERN FIX ON A WORK PIECE

Maynard L. Foskett, Kalamazoo, Mich., assignor to Clarage Fan Company, Kalamazoo, Mich., a corporation of Michigan

Filed Oct. 1, 1956, Ser. No. 613,058
2 Claims. (Cl. 83-249)

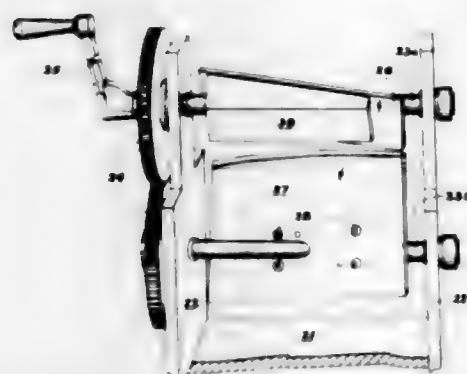


1. A punch and die assembly for providing a plurality of openings through a substantially flat work piece, comprising: a template having a plurality of guide openings, said guide openings being of predetermined sizes and

being located in predetermined positions with respect to each other; means for removably clamping the template upon the work piece with said guide openings located in selected positions over the work piece; a punch and die support structure having vertically spaced upper and lower support members, said upper support member having a cylindrical sleeve opening extending therethrough and toward the lower support member; a sleeve slidably and snugly received into said sleeve opening for axial movement toward and away from said lower support member, said sleeve having an integral, radially outwardly extending flange near its upper end engageable with said upper member adjacent the upper end of the sleeve opening for supporting said sleeve upon said upper support member, said sleeve having a coaxial punch guide opening therethrough, the lower end of said sleeve extending below said upper support member and being slidably and snugly receivable into one of the guide openings in said template when said flange is adjacent said upper support member; at least one punch having a work engaging end capable of producing the desired openings through said work piece when said sleeve is in said guide openings, said punch having an elongated body portion slidably and snugly disposed within said punch guide opening for movement lengthwise of the central axis thereof, said punch having a radially outwardly extending flange spaced from the work engaging end a distance substantially greater than the axial length of said sleeve; resiliently flexible means disposed between the flange on said sleeve and the flange on said punch, said flexible means normally holding the work engaging end of said punch above the lower end of said sleeve and resiliently resisting movement of said punch through said sleeve toward the lower support member; at least one die corresponding to each said punch and securable upon said lower support member in axial alignment with said sleeve opening in the upper support member, said die having an upper surface conforming with the lower side of the work piece adjacent a guide opening in said template, said die having a punch opening penetrating said upper die surface for snug slidable reception of the work engaging end of said punch, whereby the work piece can rest upon the upper surface of the die and be held thereagainst by the lower end of said sleeve which enters a guide opening in the template when said punch is moved downwardly against the contrary urging of said resilient means to engage and penetrate the work piece.

3,000,250

ROTARY CUTTER FOR PRODUCING A PROGRESSIVE TRANSVERSE CUT ON A WEB
Heinz C. Altmann and Gordon S. Rugg, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 25, 1957, Ser. No. 642,177
3 Claims. (Cl. 83-341)

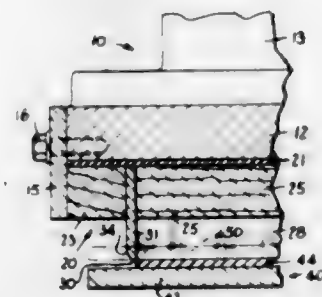


1. A rotary chopper comprising in combination, a pair of parallel rotatable arbors mounted to be rotated in opposite directions; a pair of planar knife blades each hav-

ing an axially elliptical cutting edge of substantially equal length, one of said elliptical cutting edges being formed by the intersection of a cylindrical knife heel concentric to the axis of rotation of one of said arbors with a planar knife face, and the other of said elliptical cutting edges being formed by the intersection of a cylindrical knife heel concentric to the axis of rotation of the other of said arbors with a planar knife face, and the radii of the two said cylindrical knife heels being unequal; means for rigidly mounting each of said knife blades on opposite ones of said arbors so that the said knife heels will be substantially concentric to the respective arbors upon which they are mounted and so that the cutting edges of said knife blades will meet in continuous point shearing contact throughout a phase of the revolution of said blades, said mounting means being such that each blade is mounted with its planar knife face in inclined relation to its respective arbor by a different angular amount, and with the blade having the larger knife heel radius being mounted at the larger angle of inclination to its arbor, and with the direction of inclination of the two planar knife faces being the same during the phase of revolution of said knife blades when said elliptical cutting edges are in shearing contact; and means for rotating said arbors in opposite directions at the same angular velocity so that the elliptical cutting edge of the knife blade having the larger radius of revolution leads the elliptical cutting edge of the knife blade having the smaller radius of revolution during the shearing action.

3,000,251

DIE AND METHOD OF MAKING SAME
Milton Berlin, Forest Hills, and Lawrence M. Rheingold, Baldwin, N.Y., assignors to Templet Industries, Incorporated, Brooklyn, N.Y., a corporation of New York
Filed Apr. 8, 1957, Ser. No. 651,252
3 Claims. (Cl. 83-690)



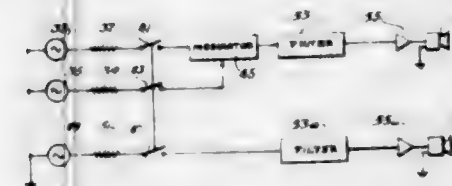
1. In a die set for blanking out a shape from metal: a pair of cooperating die members arranged in mutual alignment and for relative reciprocable translatable movement towards and away from one another from spaced into operative engagement, one of said members constituting at least two compressible die blocks having complementary edge surfaces, a die rule defining a closed shape located and held between said complementary surfaces and having a longitudinal edge portion protruding beyond said die blocks towards the other member, and a rigid backing plate against which said die blocks and die rule are abutted, said die rule having an inner surface which is parallel to the direction of movement of said members and which extends all the way to the free edge of the die rule, said free edge of the die rule including a plane portion which meets the inner surface of the die rule at an angle of 90°, the outer surface of said die rule adjacent the free edge of said die rule constituting an inclined bevel which meets the plane portion of said free edge of the die rule at an angle,

said plane portion having a width which is proportional to the fracture distance of the metal to be blanked, the thickness of the die rule being at least substantially equal to the thickness of the metal being blanked, the thickness M of the metal to be blanked, the distance E the free edge is located beyond said die blocks and the thickness T of the die rule being so interrelated that the angle A formed by said thicknesses and distance is at least 10° where

$$\tan A = \frac{T}{E+M}$$

3,000,252

ELECTRIC MUSICAL INSTRUMENT
William C. Wayne, Jr., Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 9, 1953, Ser. No. 385,138
17 Claims. (Cl. 84-1.01)



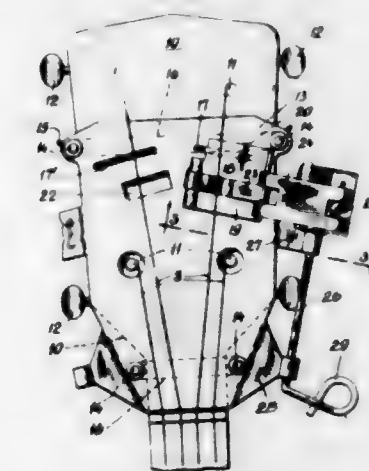
1. An electrical musical instrument comprising a set of audio-frequency sources of electric oscillations having frequencies corresponding to the tones of an equally-tempered scale in which the fundamental frequency of each tone is the twelfth root of two times that of the next lower tone, said sources consisting of a first group of 19 generators tuned to the frequencies of consecutive half-tones and a second group of at least 12 generators tuned to the frequencies of the consecutive half-tones immediately below the first group, a keyboard having keys corresponding to said tones, at least three switches mechanically coupled to each key, the first of said switches being coupled to a first source included in the second group of sources corresponding to the normal tone pitch of the key, the second of said switches being coupled to a second source tuned to a frequency an octave above said first source, and the third of said switches being coupled to a third source a tempered fifth above the second source, a plurality of modulators, a plurality of collectors each connecting the second switch of each octavely related key to one of said modulators, a second plurality of collectors each connecting the third switch of each octavely related key to said one of said modulators, an electroacoustical translating means, and means for electrically connecting the first switch of each key and the output of each modulator to the electroacoustic translating means including switch means selectively associating the outputs of said modulators with the electroacoustic translating system.

3,000,253

PITCH CHANGING DEVICE FOR STRING INSTRUMENTS
Jean Marie Houde, 4083 Rivard, Montreal, Quebec, Canada
Filed Dec. 22, 1958, Ser. No. 782,007
4 Claims. (Cl. 84-312)

1. Pitch changing device for string instruments, comprising in combination: a string instrument; a base plate fixed to the head of said instrument and a supporting plate adjustably fixed over said base plate; a rigid angularly bent tensioning member pivotally mounted at one end on said supporting plate and upwardly pivotable in a direction crosswise of a string to be tensioned; said string resting against and lying within the said angular bend when said member is in operative position so that the

pivoting thereof will vary the tension in said string; an extensible member comprising a first and a second arm pivotally joined together end-to-end; the other end of said first arm being pivotally connected to the free end of said tensioning member and the other end of said



second arm being hinged to the base plate; manual means on said extensible member for providing extension thereof; said second arm resting on the base plate in operative position and when the two arms have passed their point of dead center.

3,000,254

EXPANSION BOLT MEANS WITH THREAD MEANS TO COUPLE THE EXPANSION SHELL TO THE BOLT
Carl C. Hottenstein, Richland, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Oct. 4, 1957, Ser. No. 688,369
3 Claims. (Cl. 85-2.4)



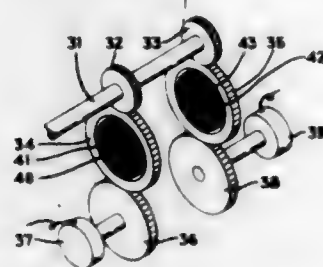
1. An anchoring device comprising a bolt having a threaded portion of one hand throughout its length and an unthreaded portion, the crests of the threads extending above the surface of said unthreaded portion, a threaded wedge nut on said bolt, an expansion shell including a plurality of leaves engaging said wedge nut and an interiorly threaded ring, the interior of said ring being larger in diameter than the unthreaded portion of said bolt, said ring being in threaded engagement with the threaded portion of said bolt when said shell is in the unexpanded condition, and said ring being receivable on the unthreaded portion of said bolt when said shell is in the expanded condition.

3,000,255

SCANNING DEVICES FOR OPTICAL SEARCH
Lloyd A. Iddings, 5207 11th Road S., Arlington, Va.
Filed May 31, 1955, Ser. No. 512,344
12 Claims. (Cl. 88-1)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A scanning system in a target search system comprising; a search system including an optical system pro-

ducing a collimated search beam; a scanning device in said collimated search beam, said scanning device having a pair of opaque discs, one having a radial transparent line therein and the other having a one-turn spiral transparent line therein and said discs being driven at different rotative speeds in the same direction for providing a spiral scan of said collimated search beam; an angular position information means driven by each disc for providing the angular displacement of each said disc and the corresponding transparent line at any time; a detector for detect-



ing a target signal in said collimated beam by coincidence of said radial and spiral transparent lines with the beam carrying said target signal through which said target signal is transmitted; means coordinating the angular displacement information from said angular position information means for each disc and said detector signals to provide coordinate information of the target signal in the collimated search beam; and means making manifest said coordinate information whereby the target producing a target signal may be located accurately in the area searched.

3,000,256

OPTICAL HEIGHT FINDERS

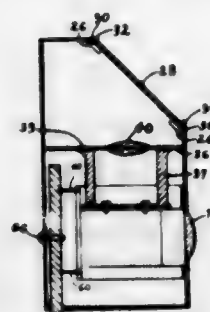
Walter Lewis Hyde, East Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Dec. 5, 1957, Ser. No. 700,812
6 Claims. (Cl. 88-1)



1. A distance measuring device comprising means for directing two beams of light on overlapping angular paths toward a distant object to produce a boundary area between said beams, means for modulating said beams with separate intelligence, a receiver spaced from said light directing means having a light-sensitive cell responsive to light reflected from the object illuminated by said beams of light, and embodying a servo-motor mechanism having means associated with said light-sensitive cell for operating said motor mechanism in response to the nature of the modulated light received by said light-sensitive cell, means in said receiver for restricting the area of pick-up of said light to an angular limit less than the included angle of projection of one of said beams of light, and means associated with said servo-motor mechanism to indicate from the relative angular relationship of said beams of light and said receiver the distance being measured.

3,000,257
AMBIENT ILLUMINATION OF RETICLE FOR RANGE FINDER

Sol Domeshek, 160 S. Middleneck Road, Great Neck, N.Y.
Filed June 11, 1959, Ser. No. 819,786
2 Claims. (Cl. 88-2.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

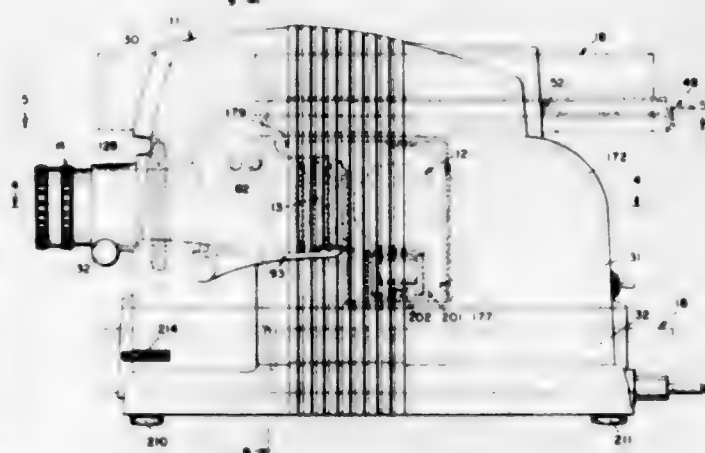


1. A ranging device comprising, a housing, a transmitting mirror mounted in said housing, reflecting elements secured in said housing in spaced apart relation to said transmitting mirror, focusing lenses mounted between said transmitting mirror and said reflecting elements and adapted to focus an image reflected from the reflecting elements to the mirror, a cam plate having a spiral track, rotatably secured in said housing, reticle plates movably secured in said housing and having pin means riding in the track of said cam plate, whereby rotative movement of said cam plate causes said reticle plates to move linearly, means for illuminating said reticle plates and transmitting the images on said reticle plates to said reflecting elements for focusing upon said transmitting mirror, and indicia on said cam plate, said illuminating means comprising ambient lights, a lens for collecting said ambient light secured to a guide block mounted in said housing and adapted to transmit and reflect said light to said reticle plates.

3,000,258

PHOTOGRAPHIC SLIDE PROJECTOR

Louis J. Misuraca, Glendale, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Original application Sept. 29, 1954, Ser. No. 459,147.
Divided and this application Mar. 31, 1958, Ser. No. 725,047
8 Claims. (Cl. 88-28)

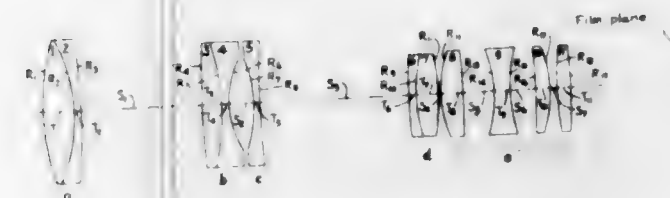


1. In combination, a photographic film slide projector, a slide containing magazine mounted on said projector, means on the projector defining a projection aperture, slide handling means for withdrawing a slide from a magazine compartment and moving the slide to projection position at said aperture, and slide preheating means in said projector for directing heat onto at least the foremost slide in said magazine yet to be projected for preheating said slide prior to withdrawing it for projection.

3,000,259

VARIABLE MAGNIFICATION LENS SYSTEM

Eugene Turula and Geraldine B. Lynch, Rochester, N.Y., assignors to Revere Camera Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,081
2 Claims. (Cl. 88-57)



1. An objective lens of variable magnification power, including a first component of two lens elements cemented together to form a front doublet, a second component of two lens elements cemented together to form another doublet spaced rearwardly from the front doublet, a third component of a single lens element spaced rearwardly from the second component, a fourth component of two lens elements cemented together to form a doublet spaced rearwardly from the third component, said four components together forming a front member wherein the first component is axially movable and the second and third components together are axially movable as a unit but differently from the axial movement of the first component, to vary the equivalent focal length and magnification power of the lens, and a rear member of a plurality of lens elements spaced rearwardly from said fourth component, the characteristics of the lens elements of the front member and their spatial relationship to each other being substantially in the proportions indicated by the data in the following table:

Lens	N	V	Radil, mm.	Thicknesses, mm.
1.....	1.517	64.5	$R_1 = +71.5$	$T_1 = 9.5$
2.....	1.617	36.5	$R_1 = -50.0$	$T_1 = 2.0$
			$R_2 = -205.74$	$S_1 = \text{variable}$
3.....	1.720	29.3	$R_4 = +272.0$	$T_1 = 6.5$
4.....	1.641	56.9	$R_4 = -72.75$	$T_4 = 2.5$
			$R_5 = +27.5$	$S_2 = 7.0$
5.....	1.523	50.6	$R_7 = -40.25$	$T_5 = 2.0$
			$R_8 = +234.0$	$S_3 = \text{variable}$
			$R_9 = +177.3$	$T_6 = 2.05$
6.....	1.617	36.5	$R_{10} = +50.0$	$T_7 = 7.25$
7.....	1.517	64.5	$R_{11} = -71.5$	

wherein the lens elements are numbered in order from front to rear in the first column, the corresponding refractive indices N for the D line of the spectrum are given in the second column, the corresponding dispersive indices V are given in the third column, the radii of curvature R of the lens surfaces are given in the fourth column, the respective surfaces being numbered from front to rear and being respectively identified by the subscript numeral used with each R, with plus and minus values of R indicating curved surfaces which are respectively convex and concave toward the front of the lens, the axial thicknesses T of the respective lens elements and the axial thicknesses S of the air spaces between successive spaced elements being given in the fifth column, the respective lens element thicknesses and air spaces being separately numbered from front to rear and being respectively identified by numerical subscripts used with each T and S.

3,000,260

ZOOM PROJECTION LENS

Eugene Turula and Geraldine B. Lynch, Rochester, N.Y., assignors, by mesne assignments, to Revere Camera Company (formerly Samica Corporation), a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 17,958
3 Claims. (Cl. 88-57)



1. A zoom projection lens comprising a first lens element of positive power, a second lens element of negative power, a third lens element of positive power, and a plurality of lens elements grouped behind said third element and collectively forming a rear member, the below-indicated characteristics of the first three elements being substantially within the ranges respectively indicated below, viz:

$$\begin{aligned}
 &+0.757 F_0 < F_1 < +1.135 F_0 \\
 &+1.237 F_0 < F_2 < +1.855 F_0 \\
 &-0.251 F_1 < F_3 < -0.377 F_1 \\
 &+0.300 F_1 < F_4 < +0.450 F_1 \\
 &+0.367 F_1 < R_1 < +0.497 F_1 \\
 &+2.036 F_1 < R_2 < +2.754 F_1 \\
 &+1.096 F_2 < R_3 < +1.482 F_2 \\
 &-1.034 F_2 < R_4 < -1.399 F_2 \\
 &+0.611 F_2 < R_5 < +0.826 F_2 \\
 &-1.522 F_3 < R_6 < -2.059 F_3
 \end{aligned}$$

wherein F_0 indicates the equivalent focal length of the front member when the parts are set for maximum focal length, F_0 indicates the equivalent focal length thereof when set for minimum focal length, F with a numerical subscript indicates the focal length of an individual lens element identified by the subscript, numbering the elements in consecutive order from front to rear, and R with a numerical subscript indicates the radius of curvature of a surface identified by the subscript, numbering the surfaces in consecutive order from front to rear, the first and third elements being movable axially in unison while the other elements remain axially stationary, to vary the equivalent focal length and magnification power of the lens system without substantial change in the back focus.

3,000,261

GOLF TRAINER HAVING OPTICAL VIEWING MEANS

Robert Frenkel, 823 Park Ave., New York, N.Y.
Filed Jan. 17, 1957, Ser. No. 634,679
4 Claims. (Cl. 88-74)



1. A golf trainer comprising coaxially aligned and telescopically engaged casing sections, means supporting the sections with the axis thereof in substantially vertical disposition, means on said sections for locking the same in extended relation, means on said sections for locking

the same in nesting relation, said sections being constituted at least in part by uppermost and lowermost sections with respect to said extended relation, handle means on said uppermost section for carrying purposes, said uppermost and lowermost sections being provided with vertically aligned openings, a lens having a substantially horizontal focal axis operatively disposed with respect to the opening in the uppermost section, a first mirror operatively disposed with respect to said lens for reflecting images transmitted by the same downwardly along said axis, a second mirror in said lowermost section and operatively disposed to reflect images received from said first mirror outwardly through the opening in the lowermost section and in an upwardly inclined direction, and a further lens between said mirrors, said mirrors and lenses being operatively associated to project an upright image.

3,000,262 PHOTOELECTRICALLY CONTROLLED REAR MIRROR

Jacob Rabinow, 1603 Drexel St., Takoma Park, Md., and Arthur O. Morse, 11105 Brandywind St., Kensington, Md.; said Rabinow assignor of fifteen percent to Max L. Libman, Vienna, Va.

Filed Dec. 14, 1956, Ser. No. 628,404
2 Claims. (Cl. 88-77)

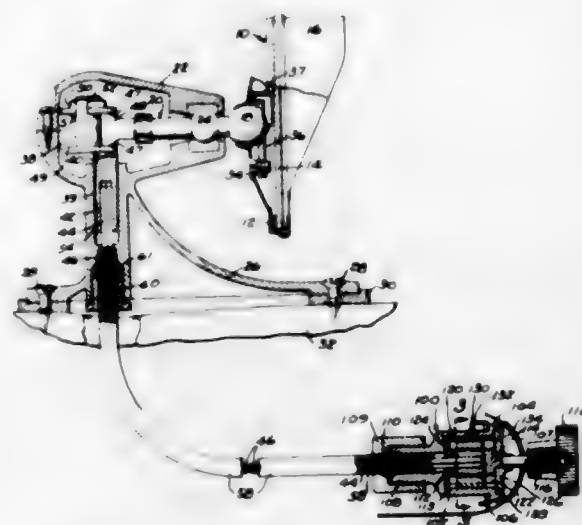


1. A self-contained automatic rearview mirror for automotive vehicles comprising a housing, a rearview mirror mounted in said housing, means for adjustably mounting said housing on a vehicle, photo-electric means mounted in said housing and oriented to receive light from substantially the same field of view as the mirror, anti-glare means operable to change the reflectance of said mirror mounted in said housing, said last means being movable into at least two alternative positions corresponding respectively to glare and non-glare condition, electric motor means mounted in said housing for operating said anti-glare means, said photo-electric means being responsive to the intensity of light from the same field of view as that seen by the mirror to produce a signal of amplitude related to said light intensity, and circuit means in said housing controlled by said signal for actuating said motor means to move the mirror to the non-glare condition when the light from said field of view exceeds a predetermined amount, and to return the mirror to the other position when the light from the field of view is below a predetermined amount, said anti-glare means comprising a liquid-tight casing having a transparent wall, a partially light-absorbing liquid in said casing, said mirror being located in said casing opposite said transparent wall, said motor means comprising means for changing the distance between said mirror and said wall.

3,000,263
REMOTE CONTROL MECHANISM FOR
AUTOMOTIVE ACCESSORIES
Thomas Willard Milton and Robert H. Milton, both of 32934 N. River Road, Mount Clemens, Mich.
Filed June 12, 1957, Ser. No. 665,338
5 Claims. (Cl. 88-93)

1. A control mechanism for a rear view mirror for a motor vehicle comprising a base adapted to be secured to the motor vehicle, a head assembly carried by the base

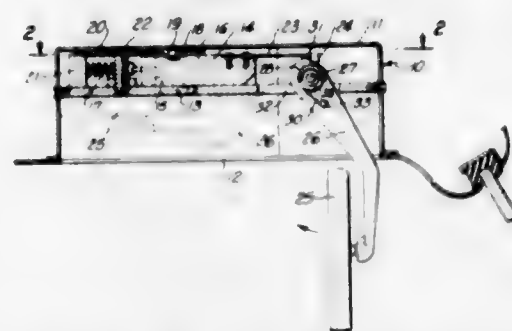
and including a casing, a mirror carrying member journaled for universal angular movement in the casing and having a portion projecting outwardly through an aperture in the casing, a threaded member rotatably mounted in the base, a crank arm carried by the threaded member and operably connected to the mirror carrying member whereby rotation of the threaded member oscillates and elevates the mirror carrying member in planes substan-



tially perpendicular and parallel to the axis of the threaded member, an open ended yoke interposed between the crank arm and the mirror carrying member, a single manually rotatable member positioned in the vehicle, flexible driving means between the manually operable member and the threaded member, and stop means to limit rotational movement of the manually rotatable member in opposite directions.

3,000,264 RETRACTABLE MIRROR FOR AUTOMOTIVE VEHICLES

Basil B. Felts, 54 W. Ramsey St., Banning, Calif.
Filed July 27, 1959, Ser. No. 829,616
6 Claims. (Cl. 88-93)



1. A retractable rear view mirror construction for the interior of an automotive vehicle comprising a mounting arm mounted at one end thereof for rotation beneath the roof of the vehicle adjacent to and behind the top of the windshield, a rear view mirror mounted on the opposite end of said mounting arm, said mounting arm being rotatable between a normal position in which said mirror is held in substantially vertical position and a retracted position in which said mirror is moved to a more horizontal position adjacent to the roof of the vehicle, a weight disposed beneath the roof of the vehicle adjacent to and behind the top of the windshield and adjacent to the upper end of said mounting arm, said weight being mounted for sliding movement along the longitudinal axis of the vehicle, means carried by said weight engaging said mounting arm to hold said mounting arm in said normal position, a coil spring engaging said mounting arm and urging said mounting arm toward

said retracted position, retaining means engaging said weight to normally maintain said weight in a retracted position, said weight adapted upon impact of the vehicle against an object to be moved forwardly by the force of inertia against the force of said retaining means, the forward movement of said weight releasing said mounting arm for rotation by said spring to said retracted position.

3,000,265 CARTRIDGE FEEDING MECHANISM FOR FIREARMS

Russell S. Robinson, Short Beach, Conn.
(124 Via Yella, Lido Isle, Newport Beach, Calif.)
Filed Oct. 29, 1952, Ser. No. 317,484
7 Claims. (Cl. 89-33)



1. The combination of an interlinked or disintegrating ammunition belt of the type in which cartridges are thrust forward out of each link during loading, each link having a shell of partial cylindrical form, the interior arc of which, through the length of the link shell, is of substantially the same diameter as the maximum diameter of the cartridge and having at least one detent which protrudes into the interior body of the link shell to engage the cartridge to prevent its free longitudinal movement in the link shell, with a firearm comprising a gun casing having means for receiving said belt, and a barrel and barrel extension which are longitudinally slidable in the gun casing, said barrel extension having thereon a clearing lug offset laterally with respect to the barrel axis to engage a cartridge during the last part of the barrel run out, and clear the cartridge from the detent before it is fed to the central or loading position, and means to engage the cleared cartridge upon the next run out of the barrel to load it into the barrel.

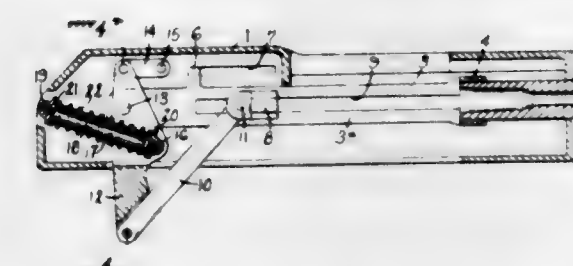
3,000,266
SEMI-AUTOMATIC AND FULL-AUTOMATIC OPERATION OF GAS-OPERATED FIREARM WITH
SLIDABLE BARREL AND SLIDABLE RECEIVER
Oscar Bilbao Varona, 17 N. Road Cubao, Quezon City, Philippine Republic
Filed July 29, 1959, Ser. No. 830,399
5 Claims. (Cl. 89-140)



3. A firearm comprising a stock having a cavity therein, a barrel slidably mounted in the stock, a receiver slidably mounted in the cavity of the stock, a bolt having a firing pin therein slidably mounted in the receiver, a hammer, sear and trigger assembly positioned in the receiver, a plate also positioned in the cavity in the stock, said plate having a tube extended rearwardly from one end, a latch positioned in one side of the tube, a stem having notches in one side extended from the receiver into the tube and positioned whereby the notches coast with the latch for retaining the receiver in position for semi-automatic operation of the firearm, said plate hav-

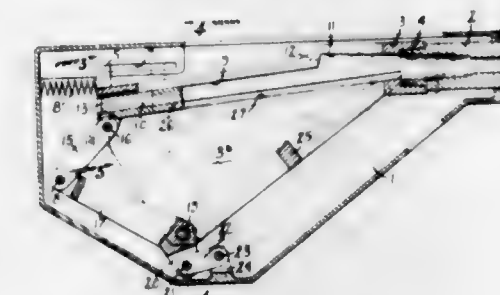
ing an inclined lower edge, and a sear actuator pivotally mounted in the receiver and having a projection adapted to ride on the inclined lower edge of the plate whereby upon forward movement of the receiver, in full-automatic operation of the firearm, the sear is actuated to release the hammer.

3,000,267
BREECH BOLT OPERATING MECHANISM
Russell S. Robinson, Short Beach, Conn.
(124 Via Yella, Lido Isle, Newport Beach, Calif.)
Filed Sept. 24, 1952, Ser. No. 311,215
19 Claims. (Cl. 89-169)



1. A breech bolt operating mechanism for a firearm having a casing, a barrel and barrel extension mounted in the casing for longitudinal sliding movement therein and a breech bolt movably carried by the barrel extension, said mechanism including a member pivotally mounted on the barrel extension and connected to the casing and to the breech bolt to move the latter relatively to the barrel extension, and recuperator means supported by the casing and connected to, and acting upon, said member to apply, through said member, a restoring force to the barrel extension to return the barrel forwardly while rotating the member about its pivot to move the bolt to closed position.

3,000,268
TOGGLE LOCK FOR BREECH BOLT
Russell S. Robinson, Short Beach, Conn.
(124 Via Yella, Lido Isle, Newport Beach, Calif.)
Filed Sept. 12, 1952, Ser. No. 309,193
13 Claims. (Cl. 89-189)

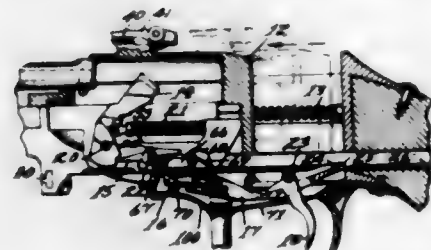


1. Operating and locking mechanism for the breech bolt of a firearm having a gun casing, a barrel and a barrel extension longitudinally slidable in the gun casing, and a longitudinally sliding breech bolt carried by said barrel extension and locked to it when in battery position, said mechanism including a toggle link connected to the breech bolt to actuate the same, a toggle lever fulcrumed in the barrel extension and pivotally connected to said link, the lever and link constituting toggle members, and said fulcrum point of the lever in the barrel extension being displaced a substantial distance transversely from the barrel axis with respect to the length of the link and being so located that the toggle members are in substantial alignment when the breech bolt is in battery position and fold rearwardly wholly upon that side of the barrel axis upon which said fulcrum point is located.

3,000,269

CARBINE STABILIZER

Oscar Bilbao Varona and Olivio Bilbao Varona, both of 17 N. Road Cubao, Quezon City, Philippine Republic
Filed July 29, 1959, Ser. No. 830,401
6 Claims. (Cl. 89—198)

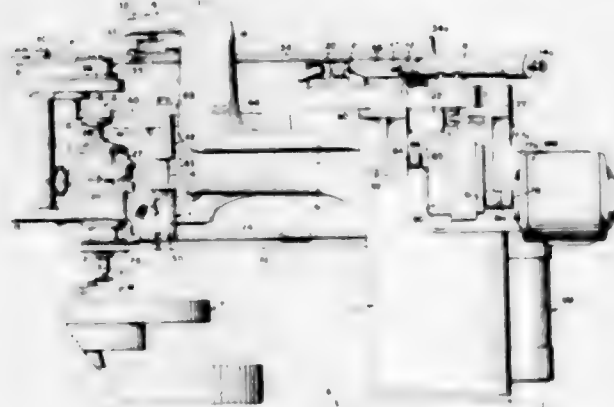


1. A firearm comprising a stock, a barrel mounted for sliding movement in said stock, a receiver fixed to said barrel and slidable therewith, a hammer pivotally mounted in the stock and positioned to coact with the barrel for firing a cartridge therein, a trigger operatively connected to the hammer, a liner mounted in said stock, said receiver being mounted in said liner for mounting the barrel and receiver in the stock whereby the barrel and receiver are free to slide rearwardly in the stock with the recoil action resulting from firing a cartridge in the barrel, and resilient means mounted in said liner and engaging the rear of said receiver for returning the barrel and receiver to the firing position.

3,000,270

PROFILE MILLING MACHINES

Allen D. Gunderson, Racine, Wis., assignor to George Gorton Machine Co., Racine Wis., a corporation of Wisconsin
Filed Mar. 18, 1955, Ser. No. 495,245
12 Claims. (Cl. 90—13.1)



1. In a profile milling machine, in combination, a supporting structure; a worktable; a cutter spindle mounted for universal lateral movements over said worktable; said cutter spindle being also mounted for movements axially between a working position at said worktable and a non-working position retracted therefrom; powered feed mechanism operatively connected with said cutter spindle for feeding said spindle from non-working position to working position and for retracting said spindle from working to non-working position; a powered master unit on said supporting structure; said master unit including a profile surface thereon, a tracer stylus mounted for movements in tracing engagement along said profile surface and for movements radially relative thereto between a position in tracing engagement therewith and an inactive position spaced radially therefrom, and a powered drive mechanism for moving said tracer stylus along said profile surface in tracing engagement therewith through a tracing cycle; a pantograph mechanism pivotally supported on said supporting structure

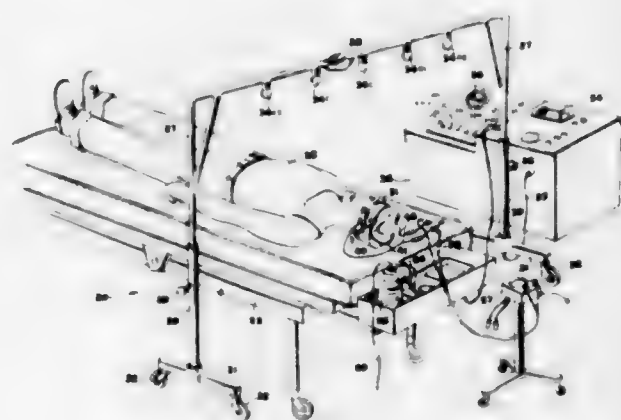
connected between said tracer stylus and said cutter spindle for transmitting movements to said cutter spindle as lateral movements thereof in scaled reproduction of the movements of said tracer stylus; means operable upon completion of a tracing cycle of said tracer stylus for moving the latter radially from position in tracing engagement with said profile surface to inactive position and through said pantograph mechanism simultaneously moving said cutter spindle laterally to position for retraction from working to non-working position; and interlock means for effecting operation of said cutter spindle feed mechanism to retract said cutter spindle when said tracer stylus is moved to inactive position upon completion of a tracing cycle.

3,000,271

MECHANICS OF A METHOD FOR THE INDUCING AND RECORDING THE PHENOMENA KNOWN AS NYSTAGMUS, CAUSED BY STIMULATION OF EITHER OR BOTH LABYRINTHS, PORTIONS OF THE BALANCING MECHANISM OF THE HUMAN BODY

Salmon C. Harvey, 7702 4th Ave., and Nicholas Lagoumintzis, % Brooklyn Eye & Ear Hospital, 29 Greene Ave., both of Brooklyn, N.Y., and Carl C. Harvey, % Sadie Horowitz, 585 Maple Ave., Teaneck, N.J.

Filed Oct. 27, 1958, Ser. No. 769,642
4 Claims. (Cl. 128—2.1)



1. Apparatus for inducing and recording nystagmus in the human body, comprising in combination, temperature changing means for stimulating the horizontal and vertical channels of the balancing mechanism of a patient, positioning means for orientating the head of the patient to control the stimulation of the determined ones of the horizontal and vertical canals, electrical detection means for producing a signal in response to detection of the nystagmus developed in the patient, permanent recording means for recording said signals produced by said electrical detection means, said positioning means comprising a table for supporting the patient in a predetermined position relative to a substantially horizontal plane, said temperature changing means for stimulating the canals of the balancing mechanism of the patient comprising a conduit, an ear piece having a main body member receivable within the outer ear of the patient and having a bore extending therethrough for supporting said conduit adjacent to the eardrum of the patient, means for generating a fluid stream of low specific heat at a predetermined temperature, said conduit conducting said fluid stream from said generating means, said electrical detection means comprising a pair of electrodes, one such electrode being supported in electrical conducting relationship adjacent to each temple of the patient, each said electrode detecting a difference in potential between the opposite sides

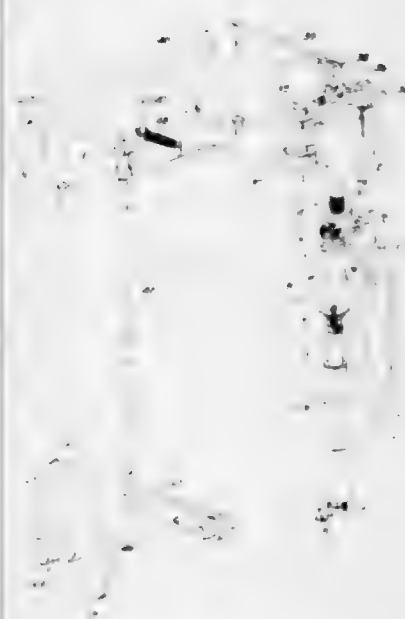
3,000,273

WORKTABLE

Karl Emil Witzig, 42 Im Klenke, Stuttgart, Germany, and Rudolf Frank, 15 Georg-Kroppstrasse, Ludwigsburg, Germany
Filed Dec. 17, 1956, Ser. No. 628,617
Claims priority, application Germany Dec. 17, 1955
12 Claims. (Cl. 90—15.1)



3,000,272
LAMP BASE SOLDER TRIMMING APPARATUS
Otto Kvet, South Euclid, Ohio, assignor to General Electric Company, a corporation of New York
Filed Oct. 13, 1958, Ser. No. 766,778
2 Claims. (Cl. 90—14)

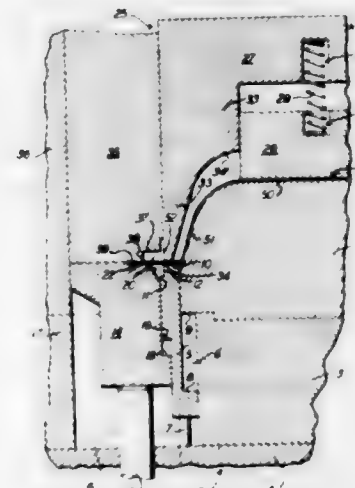


1. In a machine tool, in combination, support means; a worktable turnably carried by said support means for turning movement about a given axis so as to pass through several working positions, said axis extending upwardly and said worktable having a downwardly directed surface surrounding said axis, drive means for turning said worktable about said axis; and a plurality of work gripping means for holding work pieces to be machined during operation, said plurality of work gripping means being carried by said worktable and distributed about its axis, said plurality of work gripping means extending downwardly from said downwardly directed surface of said worktable and each of said work gripping means having at least one work engaging surface which is directed downwardly away from said downwardly directed surface of said worktable.

3,000,274

APPARATUS FOR MAKING RECEPTACLES

Edmund L. Duskey, Michigan City, and Stanley J. Halter, La Porte, Ind., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 803,927
5 Claims. (Cl. 93—36.5)



1. In an electric lamp making apparatus, the combination of lamp holder means having a vertical axis for supporting a lamp comprising a bulb having a base at the upper end thereof with a center contact and a concentric ring contact at the upper end of the base and with the center contact spaced vertically from and at a level above the ring contact, and a globule of solder on the upper surface of each said center and ring contact connecting thereto respective lead-in wires extending from the said bulb, said holder means holding said lamp with its center contact in the said axis of the holder, and solder trimming mechanism comprising a cutter arranged to be above said holder means and having inner and outer concentric lower end faces with cutting teeth therein, the said inner face being recessed within the said outer face so that the said faces are spaced apart vertically a predetermined distance corresponding to the vertical spacing of said center and ring contacts of said lamp base, a stop pin projecting axially downward from the inner face of said cutter a predetermined small distance beyond the outer face thereof, means mounting said cutter with its vertical axis offset from the vertical axis of the lamp holder means a distance approximately equal to the medial radius of the ring contact on the lamp base, means for rotating said cutter about its axis and urging it resiliently downward to bring the stop pin thereon into engagement with a portion of the ring contact of the lamp base approximately diametrically opposite the solder globule thereon whereby to trim down to predetermined heights the respective solder globules on said center and ring contacts.

1. An apparatus for making thin foil receptacles comprising the combination of a first die means and a second die means, said first die means comprising in concentrically disposed relationship to each other a stationary die element, a draw ring-like member and an anvil member interposed between said stationary die element and said draw ring-like member, said draw ring-like member being slidably mounted with respect to said anvil member and said anvil member being slidably mounted with respect to

said stationary die element, said draw ring-like member also being provided with adjacent inclined and stepped surfaces, said second die means comprising a draw punch having an outer wall aligned with said anvil member, a die member movably mounted on said draw punch and aligned with said stationary die element and a hemming punch slidably disposed with respect to said draw punch and generally aligned with said draw ring-like member, said hemming punch having surfaces which cooperate with at least one of the said surfaces of the draw ring-like member and certain surfaces on the anvil member which are disposed adjacent the said surfaces of the hemming punch and draw ring-like member during bottoming of said second die means to produce an angulated rim having a flat lip on the foil receptacle formed by said apparatus and another surface of the draw ring-like member cooperating with one of the said surfaces on the anvil member upon the upward stroke of said second die means for wiping said flat lip on the rim of the foil receptacle and drawing it back in a flattened condition towards a wall of the rim, and means for resiliently biasing said draw ring-like member whereby said draw ring-like member can disengage the formed foil receptacle from the anvil member upon the upward stroke of said second die means.

3,000,275

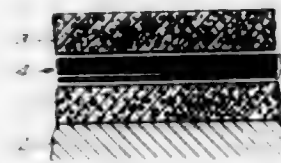
JIG APPARATUS

Luther E. Severson, Toledo, Ohio, assignor, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Original application Jan. 10, 1952, Ser. No. 265,734, now Patent No. 2,843,027, dated July 15, 1958. Divided and this application June 30, 1958, Ser. No. 745,440
3 Claims. (Cl. 93—51)



1. In a plastic box machine, a support, a jig on said support adapted to receive flat box blanks having side and end walls and tabs on opposite sides of each end wall, said jig having a pair of laterally spaced end folding plates, a pair of laterally spaced blocks on each end plate, shouldered portions on the facing sides of each pair of blocks and against which the tabs are adapted to rest respectively, a pair of laterally spaced side folding plates arranged at right angles to said end plates and below the plane of said end plates, plunger means having a heated element engageable with the juncture of the end walls and tabs for rendering the latter foldable, said plunger means movable sufficiently to force the tabs over the shouldered portions for folding same at right angles to the end walls, and other plunger means having heated elements for enabling folding of the side and end walls, said other plunger means pushing the box blank progressively into the jig and forcing the box end walls first over the end plates to fold same upwardly and then the side walls over the side plates to fold same against the end-wall tabs and means for positioning said plunger, said other plunger, and said jig relative to each other to alternately move one of the plungers toward and away from the jig and then alternately move the other plunger toward and away from the jig.

3,000,276
CONSTRUCTION OF CONCRETE RAFTS, ROADS, AIRCRAFT RUNWAYS AND THE LIKE
Frank Foulger, Gerrards Cross, England, assignor to British Cellophane Limited, Bridgwater, England, a British company
Filed Dec. 30, 1957, Ser. No. 705,882
Claims priority, application Great Britain Jan. 12, 1957
3 Claims. (Cl. 94—10)

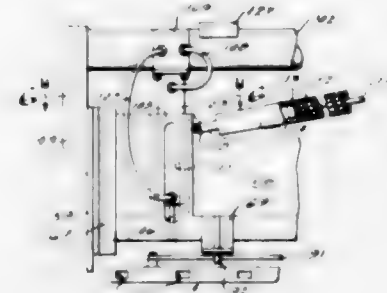


3. In an article of manufacture comprising a concrete slab, and a base supporting said slab, in which the effective coefficient of friction between the slab and the base is substantially reduced, the improvement comprising a sheet assembly of at least two sheets of polyethylene each having a slip agent incorporated therein to attain a coefficient of friction between at least two of the adjacent sheets of less than 0.25, said sheet assembly resting on and covering said base, and said slab resting on said sheet assembly, the said polyethylene sheet assembly consisting of a length of flattened tubing.

3,000,277

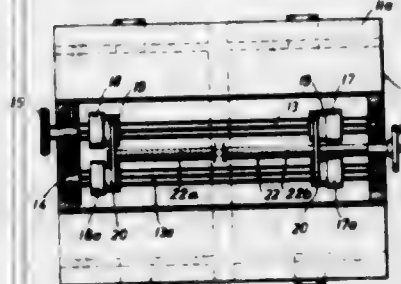
ASPHALT PAVING MACHINE

Theodore B. Crane, 18211 Stansbury, Detroit, Mich., and Harold F. Fehlberg, Detroit, Mich.; said Fehlberg assignor to said Crane
Filed Jan. 15, 1957, Ser. No. 634,264
1 Claim. (Cl. 94—45)



In an asphalt paving machine, a frame having longitudinal frame members, a screed supporting plate extending transversely between said frame members, a screed carried by said plate, means for oscillating said screed, guide means on said frame members for permitting vertical movement of said plate, the length of said plate being shorter than the space between said frame members, a frame member extending transversely between said longitudinal frame members above said plate, a pair of springs connected between a central portion of said transverse frame member and opposite ends of said plate exerting equal and opposite forces on said plate and maintaining said plate in centered position between said longitudinal frame members, the strength of said spring means being such that substantial horizontal movement of said plate due to reaction forces from said oscillating screed will be prevented, a pair of vertically disposed cylinders secured to the underside of said transverse frame member at opposite ends thereof, a pair of clearance tubes formed in said plate for receiving said vertical cylinders, the internal diameter of said clearance tubes being substantially larger than the diameters of said vertical cylinders, and pivotal connections between the piston rods of said vertical cylinders and said plate, whereby tilting movement of said plate with respect to said frame will be permitted.

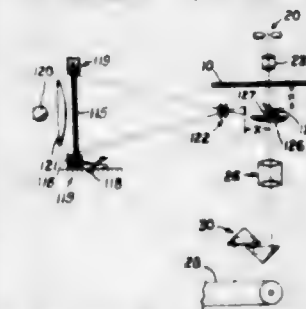
3,000,278
MOVABLE DEVICE FOR ROLLING ROAD SURFACES AND THE LIKE
Benno Kaltenecker, Siegburg-Balsdorf, Germany, assignor to Bomag Bopparder Maschinenbaugesellschaft m.b.H., Boppard, Germany, a firm
Filed Nov. 21, 1958, Ser. No. 775,532
Claims priority, application Germany Nov. 23, 1957
5 Claims. (Cl. 94—50)



1. A vehicle for rolling road surfaces having two weight-loaded running wheels arranged one after the other in the longitudinal direction of travel, the axles of said wheels being subject to constant vibratory action of eccentric masses rotating in a vertical plane, a pair of power driven shafts extending longitudinally of said vehicle and journaled at opposite ends on the chassis thereof above said wheels, means coupling together and driving said shafts for rotation in opposite directions, said shafts non-rotatably supporting pairs of eccentric masses shiftable longitudinally on said shafts, the masses on each shaft being located 180 degrees out of phase at all times, said eccentric masses being disposed as pairs substantially equidistant from a central vertical plane through said chassis, and means mounting said eccentric masses for movement on said shafts longitudinally of said chassis to vary the effective moment arms of said eccentric masses.

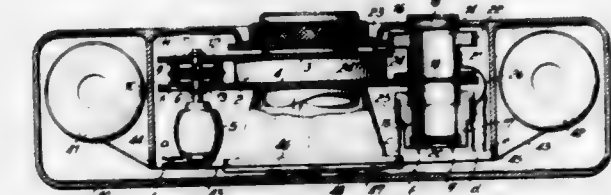
3,000,279

PHOTOGRAPHIC TYPE COMPOSITION
Richard C. O'Brien, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed July 24, 1957, Ser. No. 673,934
11 Claims. (Cl. 95—4.5)



1. Apparatus for use in a phototypesetting device having a type matrix and a primary optical system through which image bearing light beams are passed from the matrix for recording on photosensitive record material, said device also including means for producing relative movement between the optical system and the record material in accordance with the spacing requirements of the projected character images, comprising a pi character plate having transparent and opaque portions defining a pi character and also having code indicia related to the spacing requirements of the pi character, means for illuminating said plate to provide a light beam bearing a pi character image, means for directing said pi character image into said primary optical system for recording on said record material, means for sensing the code indicia on said plate, and means connecting said sensing means into said spacing movement producing means for inserting the spacing information related to the pi character into said device and providing proper spacing therefor in conjunction with the recording operation.

3,000,280
PHOTOGRAPHIC CAMERA WITH AUTOMATIC ADJUSTMENT OF EXPOSURE CONDITIONS
Fritz Faulhaber, Schönaich, Bezirk Boblingen, Germany, assignor to Voigtlander Aktiengesellschaft, Braunschweig, Germany, a corporation of Germany
Filed Nov. 6, 1956, Ser. No. 620,627
Claims priority, application Germany Nov. 9, 1955
6 Claims. (Cl. 95—10)



1. A photographic camera comprising, in combination, an objective mount, a shutter embracing said objective mount; a first manually adjustable geared adjusting ring rotatably mounted on said shutter for adjusting a first exposure condition; a second manually adjustable geared adjusting ring rotatably mounted on said shutter for adjusting a second exposure condition; an electric motor; differential gearing interconnecting said motor and each of said rings, an exposure meter including a photo-electric element and a light condensing system directing light upon said element, said exposure meter including an iris diaphragm in front of said element and including blades connected to a pair of coaxial relatively rotatable members for adjustment of the iris diaphragm opening by relative rotation of said members; first driving mechanism interconnecting one of said members and said first ring for conjoint rotation; second driving mechanism interconnecting the other of said members and said second ring for conjoint rotation, said second driving mechanism including an intermediate component in constant driving connection with said other member and normally in driving connection with said second ring; said component being displaceable out of driving connection with said second ring for manual adjustment of itself, conjointly with adjustment of said other member to adjust said iris diaphragm opening, to adjust a third exposure condition; a source of electric potential, a resistance fixed to one of said members; a contact fixed to the other of said members and movable along said resistance upon relative rotation of said members; and a normally open null balance circuit including said photo-electric element, said resistance and its associated contact, and said source in three parallel branches, the output of said circuit being applied to said motor; whereby, upon manual adjustment of one of said rings to adjust one of said first and second exposure conditions followed by closing of said circuit, said motor will be energized, responsive to any unbalance in said circuit, to adjust the other ring through said differential gearing to adjust the other one of said first and second exposure conditions conjointly with adjustment of said iris diaphragm to adjust the solid angle of the light incident upon said photo-electric element.

3,000,281

PHOTOGRAPHIC CAMERA HAVING AUTOMATIC EXPOSURE SETTING

Waldemar T. Rentchler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Aug. 30, 1957, Ser. No. 681,305
Claims priority, application Germany Sept. 26, 1956
17 Claims. (Cl. 95—10)

1. In a photographic camera, exposure-adjusting means including a movable setting member having a number of different predetermined positions; a releasable lock for locking said member in a finite number of fixedly-related

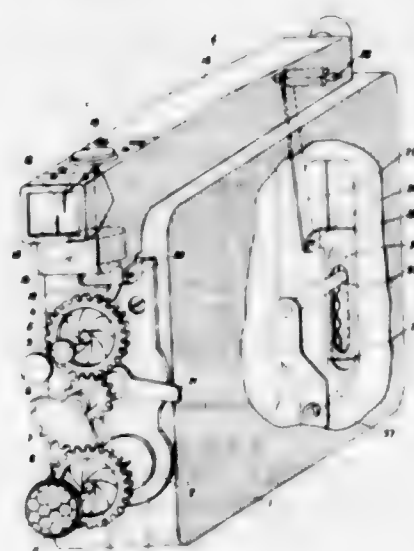
different positions; an electro-magnetic-mechanical control device for actuating said lock; photoelectric means including a photocell having a light-sensitive surface adapted to be exposed to light from a subject; an electronic amplifier connected to the photocell for control thereby, said amplifier being connected to said control device and having an output capable of fully energizing said device to effect complete actuation of said lock, said amplifier being responsive to photocell voltage when the latter changes and attains a predetermined value and being arranged to have a switching-type on-off action by



3,000,283
PHOTOELECTRIC EXPOSIMETER FOR PHOTOGRAPHIC OR MOVING-PICTURE PICK-UP CAMERA

Bedřich Kafka, Prerov, Czechoslovakia, assignor to Meopta Prerov, národní podnik, Prerov, Czechoslovakia

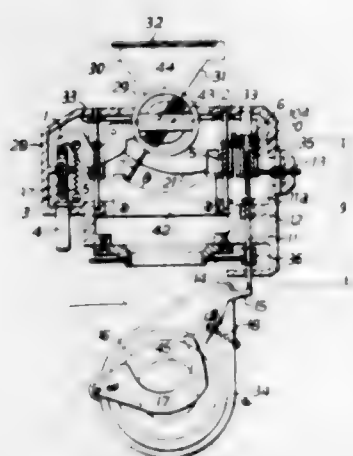
Filed Dec. 8, 1959, Ser. No. 858,116
Claims priority, application Czechoslovakia Dec. 10, 1958
3 Claims. (Cl. 95—10)



which the said predetermined value switches it on and operates the control device; and a stepping-type light-limiting means movable in response to movement of said setting member, for causing a number of different, consecutive and distinctly separate values of light energy to reach said light-sensitive surface of the photocell respectively as the setting member is moved through the said predetermined positions whereby the member may be halted in a given position by the said lock in response to a predetermined triggering intensity of light from the subject, causing a response of said amplifier.

3,000,282
CONTROL MEANS FOR EXPOSURE FACTORS
Rolf Noack and Heinz Schmalz, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany

Filed June 26, 1959, Ser. No. 823,084
7 Claims. (Cl. 95—10)



1. In a photographic camera including a housing, an exposure meter and pointer device arranged in said housing, a shutter and diaphragm arrangement including shutter and diaphragm blades, a shutter releasing mechanism, and a drive and escapement mechanism for said shutter blades adjustable according to required time exposures, the provision of a diaphragm control and setting arrangement comprising a slide member slidable

within said housing which co-operates with said exposure meter pointer and is controlled by said releasing mechanism, resilient means for urging said slidable member in one direction, a diaphragm setting member connected to said diaphragm for setting the aperture of the diaphragm blades, and a transmission element mounted between said slidable member and the diaphragm setting member, said transmission element comprising a plurality of threaded portions connected to each other which portions can be rotated independently and relatively to one another to thereby vary the operative length of connection between the slide member and the setting member.

3,000,284
DEVICES FOR DETERMINING THE ORIENTATION IN SPACE OF AN APPARATUS AT A GIVEN TIME

Bernard Louis Yves Dubuisson, Paris, France, assignor to Société Française d'Optique et de Mécanique, Rouell-Malmaison, France, a corporation of France
Filed May 15, 1959, Ser. No. 813,548
Claims priority, application France, May 16, 1958
3 Claims. (Cl. 95—12.5)



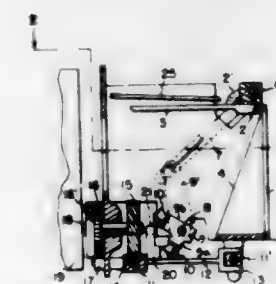
1. In a system including a moving support and an apparatus carried by said support, a device for determining the orientation in space of said apparatus at a given time, which device comprises, in combination, a gyroscope including a rotor having a spin axis and a center of gravity, means for freely mounting said gyroscope on said support, said means being entirely balanced about the center of gravity of said rotor, so as to make the orientation of said rotor substantially free from influence by movements of said support in space, optical means for indicating the orientation of said apparatus at a given time with respect to the spin axis of said rotor, and an optical system including a light source, means operatively disposed with respect to said source for the projection of an image, a first objective, a system of mirrors between said objective and the latter said means for directing said image through said objective, a semi-transparent and semi-reflecting plate between said optical means and first objective, the image passing through said plate onto said optical means, a light responsive means, and a system of mirrors between said plate and light responsive means, the image being reflected by said optical means, said plate, and the second said system of mirrors onto said light responsive means.

3,000,285
MASK AND MIRROR ACTUATOR FOR REFLEX CAMERA

Albert Goldammer, Nunsdorf, Baden, Germany, assignor to Bodenseewerk Perkin-Elmer & Co., G.m.b.H., Überlingen (Bodensee), Germany
Filed Dec. 16, 1958, Ser. No. 780,900
Claims priority, application Germany Dec. 19, 1957
7 Claims. (Cl. 95—42)

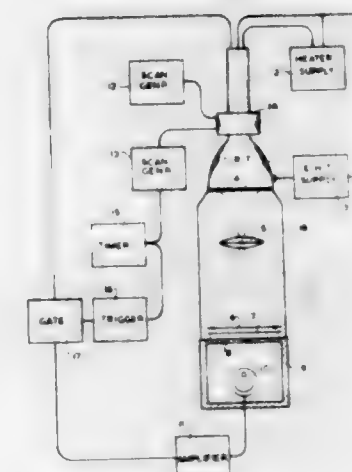
1. A reflex camera comprising a casing having a front wall with a radiation permeable opening therein, a top wall adapted to transmit a reflected image of an object to be photographed, and a back wall adapted to transmit radiation to a radiation sensitive material; shutter means in said opening positioned to control the passage of radiation therethrough; mask means pivoted to alternately block the passage of radiation to said radiation sensitive material and from said top wall; mirror means pivoted to alternately block the passage of radiation from said top wall and to reflect radiation from the front wall opening to the

top wall; control slide means adapted to move linearly within said casing; cam means on said control slide means; cam rider means adapted to be actuated by said cam



means to control the movement of each of said mirror means and said mask means; and external lever means for positioning said control slide means.

3,000,286
APPARATUS FOR PHOTOGRAPHIC PRINTING
George Stanley Elphick, Woldingham, England, assignor to Bush and Rank Cinetel Limited
Filed Mar. 16, 1959, Ser. No. 799,592
Claims priority, application Great Britain Mar. 20, 1958
9 Claims. (Cl. 95—73)

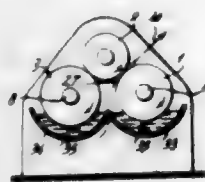


1. Photographic printing apparatus comprising a cathode ray tube having a fluorescent screen, means for generating an electron beam within said tube and causing it to impinge upon said screen to cause the emission of light therefrom, optical means for forming an image of said screen upon an object to be printed, means for exposing photographic material to light from said object, a timing device for controlling the exposure of said photographic material, means for terminating said exposure, said timing device including capacitance means, means for imparting a charge to said capacitance means varying at a constant, adjustable rate and trigger means fed with the voltage developed across said capacitance means and, in response to said voltage exceeding a predetermined value, providing an output signal to said control means for terminating said exposure, means operable to produce cyclically repeated deflection of the electron beam of said cathode ray tube in a first direction and means controlled by said progressively changing potential for producing deflection of said electron beam in a second direction perpendicular to said first direction at a rate such that a traversal of said electron beam over said screen in said second direction is completed each time said potential reaches said predetermined value.

3,000,287

APPARATUS FOR DEVELOPING AND/OR FIXING PHOTOGRAPHIC PRINTING MATERIAL

Peter Henricus Heldens, Venlo, Netherlands, assignor to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a Dutch limited liability company
Filed Nov. 28, 1955, Ser. No. 549,493
Claims priority, application Netherlands Nov. 30, 1954
7 Claims. (Cl. 95-89)

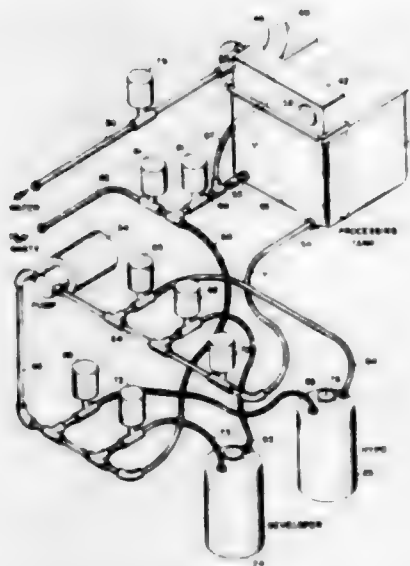


1. An apparatus for applying liquid evenly to both sides of a moving photographic sheet material, comprising a plurality of horizontal rotatable rollers each having a diameter of at least 15 mm. and a length of many times its diameter, said rollers bearing one against another along generating lines of their outer surfaces so that they rotate together, the outer surfaces of said rollers being substantially impervious to liquid, and means for distributing liquid over said surfaces, at least one of said rollers having at least part of its weight supported by another of said rollers along its line of contact with the latter and being flexible and saggable bodily along said line under its own weight but comprising means maintaining its circumferential profile traversing said line substantially uniformly convex at all locations along said line as said rollers are rotated, those two of said rollers forming between contiguous portions of their respective outer surfaces a passage for applying liquid to both sides of said material, said one roller when supported horizontally at its ends only having a sag along its lowest generating line amounting to at least 0.1% of its length.

3,000,288

APPARATUS AND METHOD FOR PROCESSING PHOTOGRAPHIC ELEMENTS

Douglas F. Winack, Manhattan, N.Y., assignor to Autolab Corporation, Nassau County, N.Y., a corporation of New York
Filed May 15, 1957, Ser. No. 659,437
28 Claims. (Cl. 95-89)



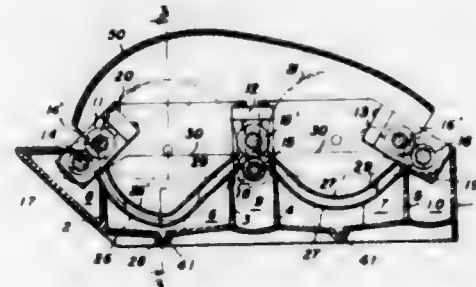
1. Apparatus for processing an exposed photographic element which comprises a processing tank adapted for disposition of said element in contact with liquid contained therein, a liquid reservoir, liquid supply conduit

means for directing liquid from said reservoir to said tank which comprises pump means for effecting flow therethrough and valve means for controlling said flow, liquid return conduit means for directing liquid from said tank to said reservoir which comprises pump means for effecting flow therethrough and valve means for controlling flow of liquid therethrough, liquid circulating conduit means for circulating liquid from said tank and back thereto which comprises pump means for effecting said circulatory flow and valve means for controlling said flow, means for directing liquid entering said processing tank during said circulatory flow to produce a flow pattern providing controlled turbulence of liquid in contact with a photographic element disposed in said tank, and means for actuating said valve means and said pump means for sequentially pumping liquid from said reservoir to said tank through said liquid supply conduit means, then responsive to supply of a predetermined quantity of liquid to said tank from said reservoir instituting and continuing to maintain during a predetermined period the pumping of liquid through said liquid circulating conduit means from said tank and back to said tank and thereafter following the expiration of said predetermined period pumping liquid from said tank to said reservoir through said liquid return conduit means.

3,000,289

PHOTOGRAPHIC DEVELOPING APPARATUS

Takashi Horiechi, 8-10 Nino Mitsu-cho 4 Chome, Fukui-ku, Kobe, Japan
Filed Nov. 25, 1959, Ser. No. 855,427
3 Claims. (Cl. 95-94)

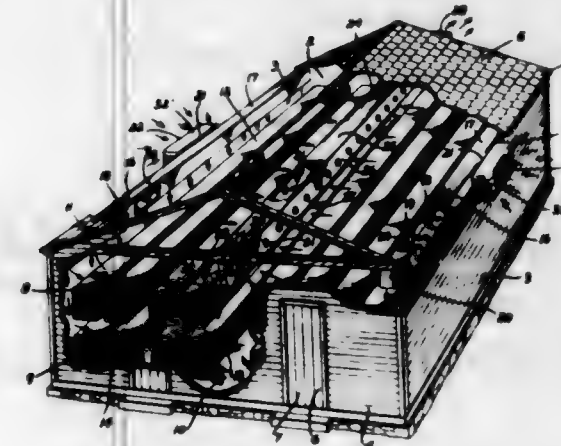


1. A tank for simultaneously performing developing and fixing having a developer chamber, a fixer chamber and three rooms for rollers, one between the two chambers, one at the front end and another at the rear end of the tank, said roller rooms each having respectively a set of two conveying rollers, upper and lower, positioned so that the line of contact of the rollers of every set keeps nearly level with the upper edge of the partition wall, two pairs of plates running parallel to each other in pairs and corrugated and multiperforated so as to prevent a conveyed paper from sticking and make it pass submerged through the solution in the developer chamber thence through the solution in the fixer chamber, the first pair of plates connecting between the front room of rollers and the middle room of rollers, the second pair of plates connecting between the middle room of rollers and the rear room of rollers in the same way, a gearing attached to the outside wall of the tank enabling said three sets of rollers to convey sensitive papers at uniform speed, the developer chamber and the fixer chamber being each provided with an inclined bottom, an inclined groove attached to the lowest part of said inclined bottom, a water gauge attached to the outside wall of the tank, a flexible transparent tube connecting the lowest end of the groove to the lowest end of the water gauge, said water gauge being adapted to be freely turned along the wall of the tank and thus act as a draining pipe when wanted.

3,000,290

METHOD AND APPARATUS FOR VENTILATING POULTRY AND LIKE HOUSES

Vernon F. Rodick and Henry F. Rodick, Sedalia, Mo., assignors to The Steam-O-Matic Corporation, Sedalia, Mo., a corporation of Missouri
Filed Feb. 16, 1958, Ser. No. 714,269
3 Claims. (Cl. 98-33)



1. A ventilated housing comprising a building structure enclosing a substantially sealed three-dimensional volume of space including circumferential side walls, a floor and an overhead wall, a horizontal intake duct positioned adjacent the overhead wall, mounted adjacent to a side wall of the building and extending substantially the length thereof, said intake duct having a plurality of laterally spaced ports in the underside thereof adapted to discharge air therefrom substantially vertically downwardly in said building, a first conduit communicating with the building exterior connected to said intake duct and adapted to discharge air thereto from the building exterior, a first blower means communicating with said first conduit adapted to move air therethrough from the building exterior to the intake duct at at least two speeds, the higher of said speeds sufficient to flow air from said underside ports substantially to the floor of said building adjacent the side walls thereof, the lower of said speeds sufficient only to move air out of said underside ports and no substantial distance below said duct, a discharge conduit from said building interior to the exterior thereof, said discharge conduit laterally displaced from the intake duct and communicating with the interior of the building at substantially the same vertical level as said duct and a second blower means communicating with said discharge conduit and operative to move air therethrough from the interior of the building to the exterior thereof at at least two speeds, the lower of said speeds operable to effectively exhaust air input at the lower speed of the first blower and the upper of said speeds operable to effectively exhaust air input at the higher speed of the first blower and control means for separately actuating said blower means and controlling the velocities thereof.

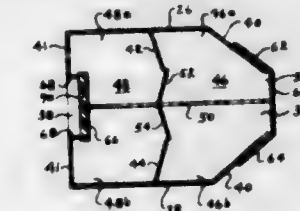
3,000,291

VENTILATOR-AIR PURIFIER COMBINATION

Samuel J. Zarnott, Michigan City, Ind., (8510 Bruce Drive, Niles, Ill.)
Filed Jan. 20, 1958, Ser. No. 710,152
4 Claims. (Cl. 98-37)

1. A ventilator-air purifier construction, comprising vertically arranged substantially parallel side members each having flanges on both edges extending toward the respective flange on the other side member and spaced laterally from one another to form an air inlet opening and an air outlet opening, vertically arranged baffles connected to the internal side walls of each of said side members and extending inwardly toward each other and toward said inlet opening, a vertical partition extending parallel

with said side wall members and through said air inlet opening, a vertically arranged baffle on each side of said partition and extending outwardly generally toward said first mentioned baffles and toward said inlet opening, a vertical strip on the outside edge of said partition forming a closure for said inlet opening and having flanges corresponding to the adjacent flanges on said side wall members, a vertical strip on the inside edge of said partition forming a closure for said outlet opening, sealing material on the surface of said last mentioned strip facing said outlet opening, a track below said partition extending generally parallel with the lower edge of said partition, a pair of spaced rollers rotatably connected to said partition and mounted on said track, a track above said partition extending generally parallel with the upper edge



of said partition, a pair of spaced rollers rotatably connected to said partition and engaging said last mentioned track, a lug carried by said partition adjacent each of said rollers, a spring means at the upper end of said partition having a part forming notches for receiving the lugs at the upper end of said partition, a spring means at the lower end of said partition having a part forming notches for receiving the lugs at the lower end of said partition, a handle connected to said partition for moving the latter inwardly and outwardly, a plate like member at the bottom of said side wall members sloping outwardly and downwardly and substantially closing the lower end between said members, and a plate like member at the top of said side wall members sloping outwardly and upwardly and substantially closing the upper end between said members.

3,000,292

FUME HOOD

Clifford A. Wojan, Brooklyn, N.Y., assignor, by mesne assignments, to Norbute Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,783
6 Claims. (Cl. 98-115)



1. A fume hood comprising a rectangular cabinet having joined top, bottom, front, rear and side walls defining a compartment therebetween, said front wall being formed at least in part by a vertically slidable sash, said sash forming means for providing an adjustable face opening into said compartment, said top wall having a pair of openings therein, one of said pair of openings being an air exhaust opening and being adapted to be connected to an exhaust duct and an air pump and the other of said pair of openings being an air intake opening and being adapted to be connected to an air supply duct and a source of air at a pressure above atmospheric pressure for direct

ing air into said compartment along a predetermined path, said intake opening being located adjacent said front wall and said exhaust opening being located adjacent said rear wall; a substantially imperforate first baffle extending across said compartment from one said side wall to the other said side wall and from adjacent said bottom wall to adjacent said top wall, the top portion of said baffle being disposed vertically intermediate said intake and exhaust openings and the bottom portion of said baffle being disposed nearer to said rear wall than to said front wall whereby said compartment is divided into a working chamber intermediate said front wall and said baffle and a first plenum chamber intermediate said baffle and said rear wall, said top and bottom portions of said baffle being spaced respectively from said top and bottom walls to permit the passage of air from said working chamber to said plenum chamber between said portions of said baffle and said top and bottom walls; a second baffle mounted in said working chamber and extending across, and at an acute angle with respect to, said path of air flow from said intake opening, said second baffle extending from one said side wall to the other said side wall and extending from adjacent said front wall to a portion of said top wall intermediate said intake and said exhaust openings, said second baffle being connected to said front wall by an imperforate member extending from said one side wall to the other, said second baffle defining a second plenum chamber with said member and said front wall, top and side walls and said second baffle comprising a pair of spaced plates mounted substantially parallel to each other, each of said plates having holes therethrough distributed throughout substantially their entire faces, said plates being mounted with said holes in one said plate in staggered relation to said holes in the other said plate, one of said plates having air deflectors mounted thereon and extending into said second plenum chamber and transversely to said path of air flow from said intake openings; said bottom wall having a raised portion adjacent said front wall and extending substantially from said one side wall to said other side wall for deflecting gases toward said rear wall; and a deflector extending from externally of said working chamber to internally of said working chamber and above and spaced from said bottom wall for deflecting air across said bottom wall toward said rear wall, said last-mentioned deflector extending along substantially the full length of the front edge of said bottom wall.

3,000,293 ROOF JACK

William R. Grace, Rosemead, Calif., assignor to Trade-Wind Motors, Inc., Pico Rivera, Calif., a corporation of California

Filed Oct. 14, 1959, Ser. No. 846,471
6 Claims. (Cl. 98—119)



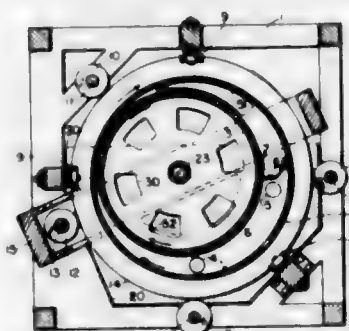
1. A roof jack of the character referred to including, a body having an inlet opening to communicate with an exhaust duct, and a forward open side defining an outlet opening, an apertured partition in the body above the inlet opening, a primary shutter having front and rear edges, said rear edge being pivotally connected to the

body on an axis transverse the body and adjacent the rear edge of the aperture in the partition, said shutter normally overlying the aperture in the partition, a secondary shutter with upper and lower edges and parallel sides, means at the sides of the secondary shutter intermediate the top and bottom edges thereof pivotally connecting the shutter to the body to normally extend across and close the outlet opening, said lower edge of the primary shutter occurring adjacent the forward edge of the secondary shutter when the shutters are in their normal closed position and serving to normally maintain the secondary shutter closed.

3,000,294 FILTER PRESS

Edison Lowe, William C. Rockwell, and Walter E. Hamilton, El Cerrito, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

Filed Oct. 1, 1957, Ser. No. 687,594
4 Claims. (Cl. 100—121)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A filter press comprising a frame; a first hollow rotatable cylinder provided with a foraminous filter surface; means for mounting said cylinder in the frame for rotation about a fixed center; a second hollow rotatable cylinder provided with a foraminous filter surface, said second cylinder having a diameter smaller than that of the first cylinder, said second cylinder being mounted with its axis parallel to the axis of the first cylinder and eccentrically within the first cylinder to provide a space therebetween comprising a pinch point where the cylinder surfaces are at a minimum distance from one another and extending divergently from said pinch point in a direction counter to the direction of rotation of said cylinders; means for rotating said cylinders in the same direction; means for feeding material into said space under super-atmospheric pressure; means cooperating with said cylinders to prevent flow of material from said space except through said foraminous filter surfaces; a single freely-pivotable yoke for supporting said second cylinder and maintaining it in alignment with said first cylinder; and a shaft for pivoting said yoke, said shaft being parallel to the axes of the cylinders and journaled in the frame external to the first cylinder at a point arcuately spaced from the pinch point in a direction counter to the direction of rotation of said cylinders, whereby said yoke will pivot in a direction counter to the direction of rotation of said cylinders as the pressure on the material fed into said space is increased thereby decreasing the dimensions of the pinch point and increasing the pressure at which the material is pressed.

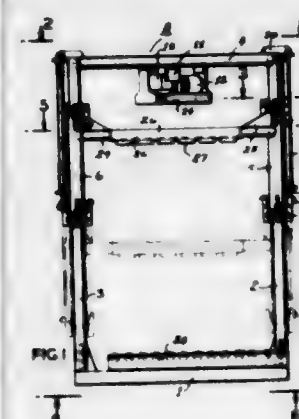
3,000,295 COMPRESSION DEVICE

Frank W. Fenton, Lemay, Mo., assignor to Beacon Production Equipment Corporation, a corporation of Illinois

Filed Mar. 24, 1958, Ser. No. 723,604
5 Claims. (Cl. 100—214)

4. A compression device comprising a compressible work-load supporting base, a plurality of uprights mounted

on said base, each upright having a sleeve encircling the same, each sleeve having a plurality of roller elements mounted at each of its ends for engaging the outer surface of the related upright and for maintaining said sleeves spacedly therefrom, a platen plate supported from the sleeves, a fluid cylinder mounted on each upright above the upper end of the related sleeve in axial parallel

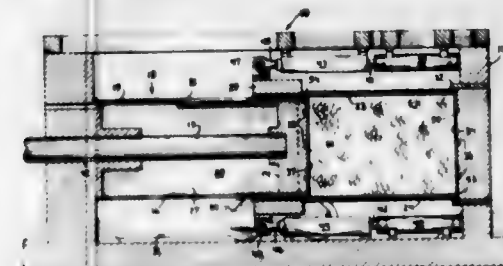


relation thereto, each cylinder having a piston for vertical reciprocal movement, the lower end of each piston being connected to the sleeve of the associated upright, means for providing and directing fluid to the cylinders for effecting relative movement of the sleeves with respect to the uprights, and means for adjusting the contact pressure of the sleeve rollers on the upright outer surfaces.

3,000,296 BALER

Charles O. Poland, Indianapolis, Ind., assignor to Indiana Farm Bureau Cooperative Association, Inc., Indianapolis, Ind., a corporation of Indiana

Filed Aug. 10, 1959, Ser. No. 832,723
5 Claims. (Cl. 100—251)



4. A baler comprising a main frame providing an end wall, means in said frame defining a charging chamber having a bottom and side walls and arranged on an axis substantially perpendicular to said end wall, said charging chamber having a charge-receiving mouth, a plunger mounted for axial reciprocation in said charging chamber and movable oppositely past said mouth, a hollow sleeve, open at both ends and reciprocally sleeved on said charging chamber walls, said sleeve having top and bottom walls and having side walls, the side walls of said sleeve each being formed with a plurality of axially-extending slots opening through the forward ends of said sleeve walls and terminating short of the rearward ends of said sleeve walls, said frame end wall being formed with transverse grooves registering with the open ends of said sleeve wall slots, said frame, said chamber-defining means and said sleeve being so proportioned and arranged that, when the forward end of said sleeve is substantially in abutment with said frame end wall, the rearward ends of said slots are closely adjacent, but forwardly spaced from, the forward end of said chamber-defining means, and said sleeve being retractable to a position in which its forward end substantially coincides with the forward end of said chamber-defining means.

3,000,297

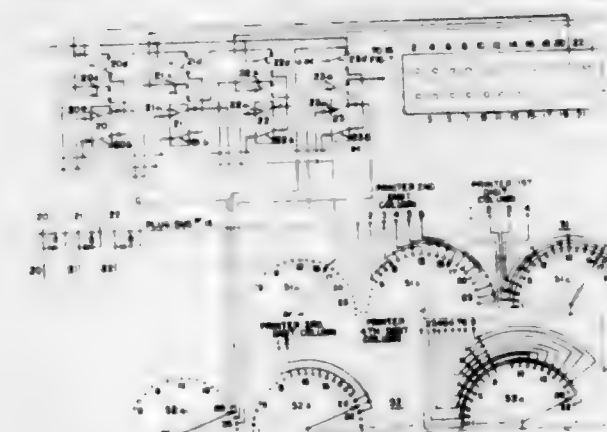
COMPUTER PLUGBOARD VERIFIER

Leon Milton Warshawsky and Wolfgang G. Braun, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force

Filed July 23, 1959, Ser. No. 829,158

4 Claims. (Cl. 101—93)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for checking the circuit connections on a computer plugboard having a plurality of plugs with a plurality of connector pins on each plug and with certain of said pins being connected together with patchcords, comprising: a rectifier matrix, said rectifier matrix having a first pair of rectifiers connected to each pin, a plug bus line for each plug on said plugboard, one of said rectifiers for all of the pins on each plug being connected to the corresponding plug bus line, a pin bus line for each pin on said plug, the other of said rectifiers for all of the like positioned pins on each plug being connected to the corresponding pin bus line, a printer having key operating solenoids over certain of its keys, means for sequentially applying a test voltage to said pin and the pin of the other end of the patchcord if a patchcord is encountered, means connected to said last named means for operating certain solenoids of said printer over code symbols representing the pin being tested, a second pair of rectifiers connected to the output of each of said plug bus lines, means responsive to an output from a pair of rectifiers connected to one of said plug bus lines for operating solenoids on said printer over code symbols representing the plug on which the pin at said other end of a patchcord appears, a third pair of rectifiers connected to the output of each of said pin bus lines, means responsive to an output from a pair of rectifiers connected to one of said pin bus lines for operating solenoids on said printer over code symbols representing the pin at said other end of an encountered patchcord, means responsive to an output from a pair of rectifiers connected to a plug bus line for stopping the scanning and for operating said printer to record the code numbers representing the pins at both ends of an encountered patchcord, means for starting the scanning after the printing information has been supplied to the printer and means for disconnecting each of said pins from the checking circuit after it has been checked.

3,000,298

PRINTING BY DIAZOTIZATION

William C. Bryant, Lombard, and Herbert P. Sherman, Chicago, Ill.; said Bryant assignor to said Sherman

No Drawing. Filed Dec. 17, 1956, Ser. No. 628,560

10 Claims. (Cl. 101—129)

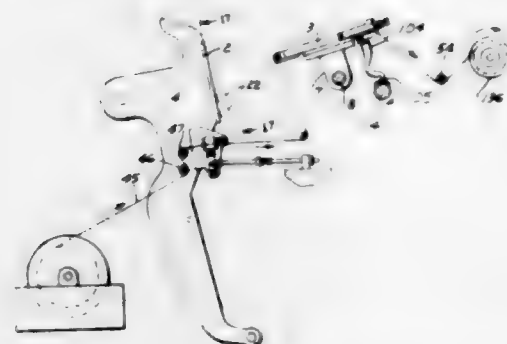
1. A method of stencil printing utilizing the diazo-dye process comprising providing a dry porous base sheet having a high concentration available at a surface thereof of a material selected from the class consisting of a relatively non-volatile, substantially non-oxidizing acid and a substance which yields nitrous acid in an acidic

medium, applying to said surface while the latter is dry, through a stencil, a coloring composition comprising a diazotizable amine, a coupler, and the other member of said first named class whereby the nitrous acid yielding substance reacts with said acid to liberate nitrous acid, the nitrous acid diazotizes the amine and the diazotized amine reacts with the coupler to produce an azo-dye, said substance which yields nitrous acid being present in an amount from about 2 to 10 times the stoichiometric quantity in order to assure complete diazotization of the amine, said coupler being present in an amount between about 2 to 12 times the stoichiometric quantity in order to assure full coupling of the diazotized amine thereby avoiding the presence on the base, after the reaction, of diazotized amine, the reactants reacting at said surface so that the formation of the dye is substantially restricted to said surface whereby a fine line image is obtained.

3,000,299

PRINTING MACHINES

Allen H. Nells, Thompson, and Lester D. Nells, Chardon, Ohio, assignors to Diamond Printing Machinery Company, Cleveland, Ohio, a company of Ohio
Filed Jan. 18, 1960, Ser. No. 3,101
8 Claims. (Cl. 101-291)



2. A device for feeding strip material progressively through a printing press of the type having a bed and platen alternately pivotable toward and away from each other in unison between open and closed positions, said device comprising a first gripper associated with said bed and a second gripper associated with said platen, said first gripper adapted to have said strip material threaded therethrough, said bed and platen adapted to have a portion of said strip material threaded therebetween and said second gripper adapted to have a portion of said strip material threaded therethrough, means for closing said first gripper when said bed is in an open position and opening said first gripper when said bed is in a closed position, and means for opening said second gripper when said platen is in an open position and closing said second gripper when said platen is in a closed position.

3,000,300

ELECTRICALLY CONTROLLED INK AGITATOR

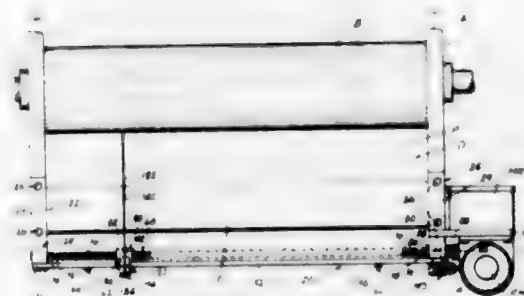
Douglas Ortleb, deceased, late of 5456 Ruskin Ave., St. Louis 15, Mo., by Ella A. Ortleb, executrix, St. Louis, Mo.

Filed Nov. 21, 1960, Ser. No. 70,906

6 Claims. (Cl. 101-364)

1. In an ink agitating mechanism in the form of an attachment for a printing press, said press including an ink fountain and an inking roller, the combination of: a pair of end brackets each including a horizontal leg segment adapted to be mounted on one side frame of the press and a depending leg segment; a pair of vertically spaced guide rails each having its ends secured to one of said depending leg segments; a helically generated screw extending transversely therebetween and having its end portions journaled in said depending leg segments; a reversible

motor unit including an output shaft having a flexible connection with one end thereof for rotating the screw; a micro switch having an actuating roller, and a magnetic switch for controlling the directional rotation of the output shaft; a nut block provided with a tongue plate engageable in the groove of the helically generated screw reciprocable transversely of the mechanism; an agitator blade supported from a bracket adjustably mounted on a standard secured to said nut block, said blade having its lower edge disposed in proximity to the upper surface of the bottom wall of the fountain and its forward edge in prox-



imity to the periphery of the inking roller; a reversing rod extending transversely of the mechanism and having its opposite ends supported in slide blocks secured to the depending leg segments and disposed between the guide rails; a pair of travel blocks slidably disposed between the guide rails secured to said rod in determined spaced relationship with the nut block disposed between them; a cam block also secured to said rod and having a portion thereof slidably disposed between the guide rails with a depending portion thereof overlying and extending below the top surface of the lower of said guide rails into engagement with the roller of the micro switch.

3,000,301

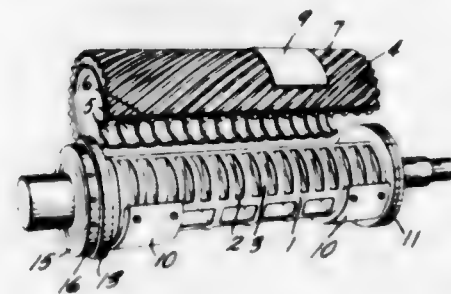
IMPRESSION CYLINDERS

Karl Barthel, Heidelberg, Germany, assignor to Schnellpressenfabrik A.G. Heidelberg, Heidelberg, Germany, a corporation of Germany

Filed Mar. 27, 1959, Ser. No. 802,388

Claims priority, application Germany Jan. 31, 1959

4 Claims. (Cl. 101-375)



1. An impression cylinder for relief printing machines comprising, a rotatably driven cylindrical core portion provided with a plurality of radially extending ribs disposed axially spaced over an entire length of the core portion corresponding to the working length of the core portion and each rib having arcuate surfaces forming a part of the circumference of the core portion, and a cylindrical, hollow, arcuate, stereotype plate-carrying jacket portion removably mountable radially on said core portion extending longitudinally over said working length of the core portion and extending circumferentially at least over a half of the core portion to form a part of the circumference of the cylinder, said jacket portion having a longitudinal opening to allow both placement and removal of said jacket portion relative said core portion in a radial direction, said plate-carrying jacket portion having inner, axially spaced ribs extending inwardly along said opening and extending angularly a given angu-

lar distance only from opposite marginal edges of said opening, said ribs in the plate-carrying jacket portion being spaced axially relative to each other sufficiently to allow placement of said jacket portion on said core portion and removal therefrom in a radial direction with said ribs on said core portion passing through spaces between successive ribs on said jacket portion, and said ribs on said jacket portion having innermost surfaces corresponding to the inner periphery of the jacket for overlying and resting on the peripheral surfaces of registering ribs on the core portion.

3,000,302

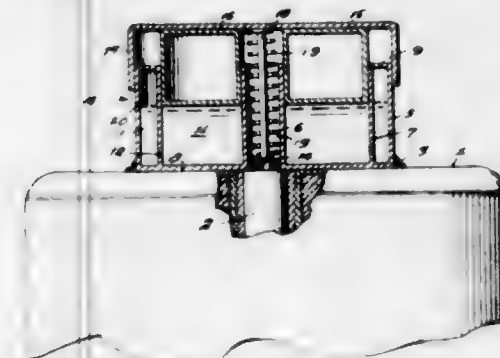
MINE PROTECTIVE DEVICE

Leonidas R. Littleton, Emory, Va., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 22, 1960, Ser. No. 16,897

1 Claim. (Cl. 102-8)

(Granted under Title 35, U.S. Code (1952), sec. 266)



In combination with a mine having a fuze, a mine protective device comprising a cylindrical housing having an inner wall, an intermediate annular wall, an outer wall and an end wall, said end wall connecting said inner, intermediate and outer walls whereby an inner chamber and an outer chamber are formed for receiving a hydraulic fluid therein, said intermediate wall being apertured to provide restricted communication between said inner and said outer chambers, there being a central passage provided through said housing by said inner wall, a guide sleeve secured in the lower end of said central passage, an annular floating piston slidably contacting said inner and said intermediate walls, a pressure plate having an annular flange in telescoping contact with the aforesaid outer wall, said pressure plate being secured to the upper side of said piston, an actuating pin connected at one end to said pressure plate, its other end being slidably received in said guide sleeve and a spring surrounding said actuating pin, said spring normally reacting between said guide sleeve and said pressure plate to urge said pressure plate and said annular plate upwardly.

3,000,303

MINE CLEARING DEVICE

Leonidas R. Littleton, Emory, Va., assignor to the United States of America as represented by the Secretary of the Army

Original application Apr. 29, 1953, Ser. No. 352,066.

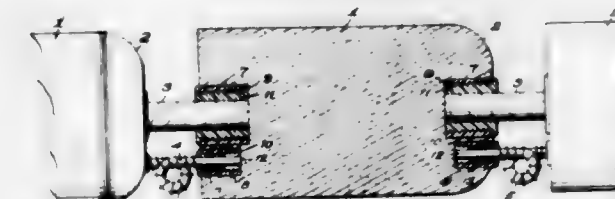
Divided and this application May 29, 1959, Ser. No. 817,004

1 Claim. (Cl. 102-22)

(Granted under Title 35, U.S. Code (1952), sec. 266)

In a mine clearing device, the combination comprising a plurality of aligned, equally spaced, preformed, cylindrical blocks of explosive, each of said blocks having a round end, means for flexibly connecting the adjacent opposed ends of said blocks comprising a threaded socket in each block end centrally thereof, a plurality of short flexible rope sections, each section having an externally threaded cap secured to each adjacent opposed end, each

of said ends being screw threadedly received in a corresponding socket in each respective block end, a plurality of looped Primacord sections, means connecting the opposed ends of each looped section to adjacent ends of a preceding and succeeding explosive block comprising at least one threaded socket in each block end eccentrically



of said rope receiving socket, said Primacord sections having an externally threaded cap at each opposed end, each capped Primacord end being screw threadedly received in a corresponding eccentric socket in each respective block end, and a coiled wire encircling each said looped section.

3,000,304

CONTAINER CLOSURE

James B. Donaldson, Cooksville, Ontario, Canada, assignor to T. W. Hand Fireworks Co. Limited, Cooksville, Ontario, Canada, a corporation of Canada

Filed Sept. 30, 1955, Ser. No. 537,839

1 Claim. (Cl. 102-39)



A cartridge case comprising a base and circularly shaped side walls integrally formed from elastic thermoplastic material, said side walls being in the form of a hollow cylinder having a constant external diameter along its length above said base, a charge contained in said case above said base, a detonating cap in said base, a sharp-edged and imperforate metallic disc having a circular peripheral edge spaced above said charge and having said peripheral edge embedded in the inner surface of said side walls, said disc having an outer diameter greater than the inner diameter of said side walls but less than the outer diameter of said side walls, and means forming a spacer between said disc and the upper end of said charge.

3,000,305

GRAIN IMMOBILIZER

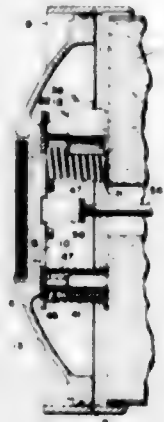
Robert L. Schmidt, Arthur H. Miller, and David D. Grimes, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Nov. 2, 1955, Ser. No. 544,616

8 Claims. (Cl. 102-49)

1. In a sustainer rocket casing containing a propellant grain, a braking apparatus for preventing the shifting of said grain in said casing, said apparatus comprising a first plate secured to the forward end wall of said casing, a post secured to said first plate, a second plate movably connected to said first plate and engaging the propellant grain, a coil spring between said plates for urging said second plate to bear upon said propellant grain, an internally tapered sleeve mounted on said second plate coaxial with said post, a ball race coaxially disposed on said post,

means for supporting said ball race out of engagement with said sleeve, and means for releasing said supporting



means to permit said ball race to move into engagement with said sleeve.

3,000,306

SOLID PROPELLANT PROPULSION SYSTEM
Robert F. Wenzel, West Covina, and Clark E. Allardt, Pomona, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Jan. 9, 1958, Ser. No. 707,959
3 Claims. (Cl. 102-49)



1. A solid propellant propulsion system for use within a missile, said propulsion system comprising a missile housing, a solid fuel sustainer charge disposed within said missile housing, a sustainer exhaust nozzle positioned adjacent said sustainer charge, a solid fuel boost charge positioned about said sustainer exhaust nozzle and within said missile housing, means for igniting said sustainer charge, means for igniting said boost charge, a plurality of boost exhaust nozzles annularly arranged about said sustainer nozzle adjacent said boost charge, said boost exhaust nozzles being canted to provide force components acting both longitudinally and tangentially of said missile to produce missile roll as well as forward thrust, and means associated with said propulsion system through operative connection with said sustainer charge ignition means and said boost charge ignition means for delaying ignition of said sustainer charge by said sustainer charge ignition means to produce a period of substantially zero thrust between a first expenditure of said boost charge consequent to ignition by said boost charge ignition means and said ignition and subsequent expenditure of said sustainer charge.

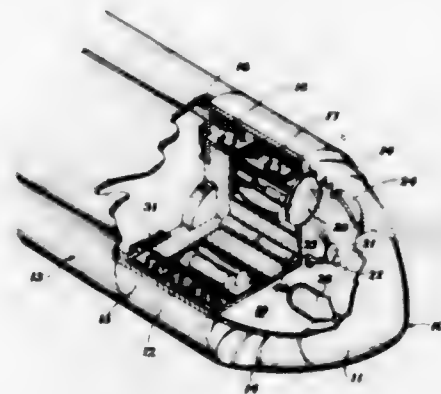
3,000,307

DEVICE FOR CORRECTING THE COURSE OF A MISSILE

Herbert Trotter, Jr., Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 4, 1953, Ser. No. 374,163
4 Claims. (Cl. 102-50)

1. A missile having a series of charges adapted to be fired in response to infrared radiation emitted by a target for varying the course thereof, a head provided with air scoops for imparting rotation thereto in flight, a scanning system within said head offset with respect to the

axis of said missile and positioned to scan a hollow conical zone surrounding said axis, a circuit including an infrared detecting means associated with said scanning system and an amplifier circuit for receiving a signal from said detecting means upon entry of a target into said zone, means actuated by the output of said amplifier to fire a charge in accordance with the orientation of said detecting means at the time said signal is received, and a

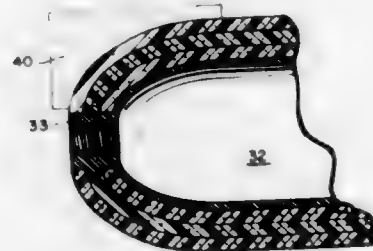


second circuit including a light-sensitive means associated with said scanning system and an amplifier circuit for receiving a signal from said light-sensitive means in response to the presence of high intensity visible radiation in said zone, the output of said second-mentioned amplifier circuit blocking the output signal from said first-mentioned amplifier circuit only when said target and said high intensity visible radiation are in said zone and are scanned simultaneously.

3,000,308

HIGH EXPLOSIVE COMPOSITION

William E. Land, Washington, D.C., and Ralph O. Phillips, Londonderry, Vt., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 7, 1956, Ser. No. 570,194
2 Claims. (Cl. 102-56)



1. A substantially cylindrical hollow explosive bomb casing of cured plastic bonded explosive having a plurality of overlying layers of aluminum material embedded therein, said aluminum material consisting of a continuous aluminum strand wound about the longitudinal axis of the bomb casing.

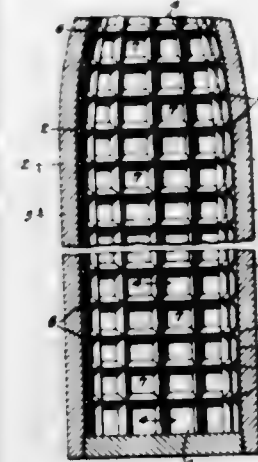
3,000,309

FRAGMENTATION PROJECTILE

Louis Zapf, Rockaway, N.J., assignor to the United States of America as represented by the Secretary of War
Filed Jan. 30, 1943, Ser. No. 474,197
6 Claims. (Cl. 102-67)

(Granted under Title 35, U.S. Code (1952), sec. 266)
4. A projectile comprising a metallic shell of generally uniform wall thickness, a rigid liner fitting within said

shell and having its wall indented to form a plurality of flange on said peripheral wall for engagement with said fuse components to prevent rotational movement thereof with respect to said body member.



3,000,310

FUSE HOUSING

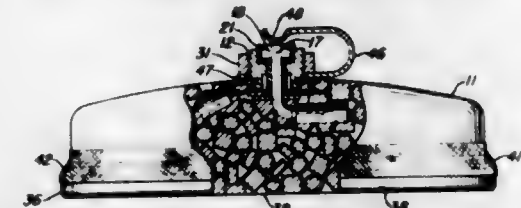
Walter C. Power and Ellis Burrell, Rochester, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 13, 1956, Ser. No. 597,830
1 Claim. (Cl. 102-70)



A fuse housing comprising a unitary elongated body member having a single longitudinal bore of uniform diameter extending throughout the length of said body member, an annular flange formed on the peripheral wall of said bore adjacent one end of said body member, a hollow tapered nose member, means comprising a continuous sheet metal ring solidly imbedded on one end in said nose member and the other end thereof having an annular flange in abutment with the inner face of said annular flange in said bore for rigidly mounting said nose member on said one end of said body member with the hollow portion of said nose member in aligned communication with said bore, an external annular shoulder provided between said one end of said body member and the other end thereof for abutting a missile housing, said other end of said body member adjacent said shoulder being externally threaded for threaded attachment to said missile, said other end of said bore being open to permit the insertion of the components of a fuse into said bore of said body member and into said hollow portion of said nose member, internal threads provided on said other end of said bore for retaining the fuse components within said body member, said internal threads and said external threads being positioned on said body member in axial non-overlapping relation, and key means formed in the peripheral wall of said bore adjacent said annular

770 O.G.—34

3,000,311
IGNITER FOR ROCKET PROPELLANT
William G. Stanley, Seymour, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Nov. 6, 1956, Ser. No. 620,768
4 Claims. (Cl. 102-70)



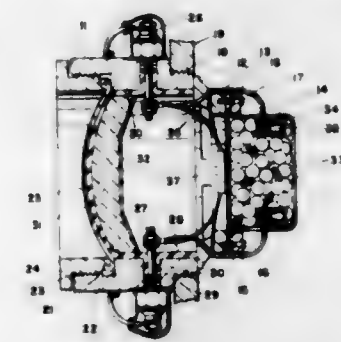
parallel outwardly-opening grooves, V-shaped in cross section, and a mass of explosive within said liner.

1. An igniter assembly comprising a vessel, having an open end, an igniter mixture, positioned in said vessel, consisting essentially of (a) a number of grains of a powder member selected from the class consisting of black powder, magnesium powder-potassium nitrate mixture, aluminum powder-potassium nitrate mixture, aluminum powder-alkali metal perchlorate mixture and magnesium powder-alkali metal perchlorate mixture and (b) a number of lumps consisting essentially of ammonium nitrate, an oxidizable binder and a combustion catalyst, the ammonium nitrate being the predominant component, said lumps having a minimum dimension of at least about 1/8 inch and a maximum dimension of not more than about 3/8 inch, said igniter mixture containing an amount of said powder member at least sufficient to initiate sustained combustion of said lumps, readily destructible means for maintaining said mixture within said vessel and means, positioned within said vessel, adapted for initiating burning of said powder member.

3,000,312

IGNITER

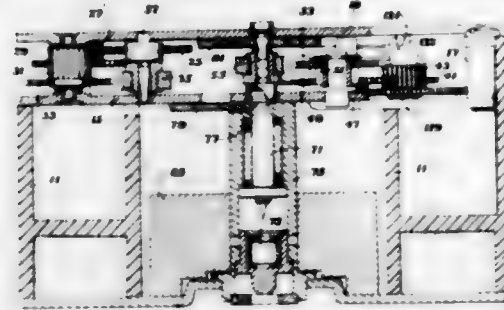
Ernest R. Roberts, Pasadena, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 23, 1952, Ser. No. 306,030
7 Claims. (Cl. 102-70.2)



1. An igniter comprising a metallic body member having an opening therethrough, a wire mesh cage, supporting means attaching said cage over the opening, in such a manner that said cage is free to discharge gases in many directions, safety diaphragm means secured to said body member at a position of the opening spaced from the cage, primer means within said cage for initiating combustion therein, a plurality of self-combustible pellets within said cage in proximity to the primer means said pellets being larger in size than the interstices of said cage, whereby they are retained within said cage until they are substantially consumed by combustion, and means for igniting the primer means.

3,000,313 DELAYED ARMING SELF-DESTRUCTION TYPE FUZE

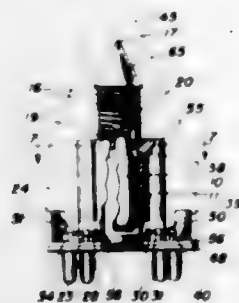
Norman N. Lareau and Paul J. Ernise, Rochester, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 2, 1956, Ser. No. 595,567
8 Claims. (Cl. 102-70.2)



1. A fuze for a missile comprising a detonator connectable to a source of electric power through an electric circuit, inertia means movable in response to the forces of acceleration developed during launching of the missile, a time delay mechanism actuable by the movement of said inertia means through a predetermined distance for energizing said source, time delay means initiated by said time delay mechanism after movement of said inertia means through said predetermined distance, said time delay means closing after a predetermined period of time after actuation, an arming switch for electrically connecting said detonator in said circuit and thereby arming said fuze, a small inertia means movable in response to the forces of deceleration developed as a result of a graze impact of the missile with an object, a normally open graze switch fixed to and actuable by said small inertia means through a predetermined distance to a closed position for electrically closing said circuit to said detonator and causing the detonation of said missile, and a normally open self-destruction switch connected in parallel with said graze switch and in said circuit, said time delay means closing said self-destruction switch after a predetermined period of time after the closing of said arming switch and thereby electrically closing said circuit to said detonator and causing the self-destruction of said missile.

3,000,314 FUZE

Edwin R. Sanders, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 19, 1946, Ser. No. 655,526
4 Claims. (Cl. 102-70.2)

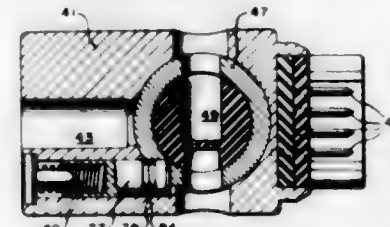


1. In a fuze of the type including radio-frequency signaling apparatus having at least one electron tube and adapted to cause explosion of a missile upon attainment of target proximity, a chambered nose enclosing said apparatus and having a relatively thick wall, means for positioning said tube in said fuze and including a protective casing for said tube, a cap for closing said casing, and a radiating antenna coupled to said apparatus and secured to said cap, said relatively thick wall screening

said antenna from electrical impulses due to ionized droplets of moisture contacting said nose during flight of the projectile, whereby premature operation of the fuze will be prevented.

3,000,315 SAFETY AND ARMING MECHANISM

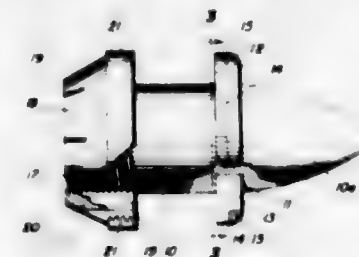
Harry G. Anastasia, Paramus, and Edward J. Hazen, Westwood, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed July 23, 1958, Ser. No. 750,545
6 Claims. (Cl. 102-70.2)



4. In an explosive train for an electrically operated projectile fuze, an acceleration actuated arming mechanism comprising an electrically responsive detonator, support means having an ignition conducting passage, rotor means supporting said detonator for movement about an axis between a first unarmed position out of communication with said passage and a second armed position in communication with said passage, said rotor means being eccentrically mounted with respect to said axis in such manner as to be responsive to forces of inertia incident to acceleration applied to said fuze tending to move said rotor means in a first direction, means biasing said rotor means for movement in a second direction opposite to said first direction and being effective to move said rotor means from said unarmed position to said armed position, electrical conductor means on said support means adapted for connection with a source of electrical energy, electric contact means on said rotor means connected with said detonator, said contact means being disposed for wiping contact with said conductor means in such manner as to provide a shunt connection for said conductor means in said unarmed position of said rotor means and to eliminate said shunt connection and connect said detonator in circuit with the source of electrical energy only in said armed position of said rotor means, and acceleration responsive locking means normally biased into locking engagement with said rotor means, said locking means being responsive to release said rotor means for movement in said second direction upon initial movement of said rotor means in said first direction and withdrawal of said locking means incident to sustained acceleration forces acting upon said locking means.

3,000,316 PROJECTILE

Henry F. Dunlap, William D. Crozier, and Robert M. Bleakney, Albuquerque, N. Mex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 10, 1944, Ser. No. 544,192
1 Claim. (Cl. 102-93)

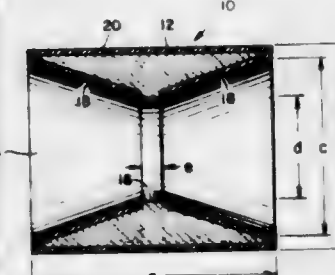


In a projectile, a subcaliber core having an external thread course, means for centering the core in an over-

size gun barrel, said means consisting of an internally threaded sabot which is screwed onto the thread course, said sabot being at least partially slotted to insure its shattering when eventually yielding to centrifugal force, and a malleable filler forced into the slots and extruding into part of the thread course, respectively sealing the slots against gas escape and locking the sabot on said core.

3,000,317 TAPERED TUBULAR PROPELLANT GRAIN

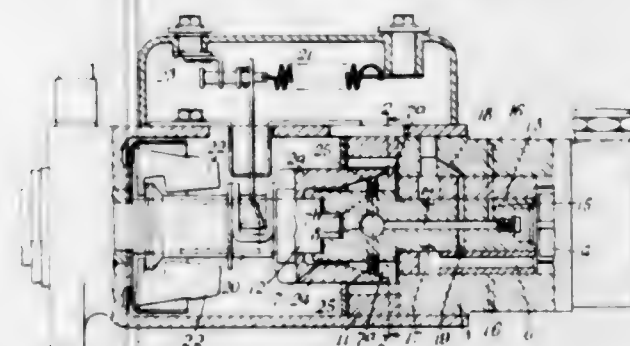
Werner R. Kirchner, Arcadia, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 29, 1955, Ser. No. 537,610
1 Claim. (Cl. 102-98)



A solid propellant grain for use in piston-type catapult launchers comprising a tubular body of combustible material, said body having a bore open at both ends and formed with a central portion of uniform diameter and end portions tapering from the central portion outwardly towards the ends, said central portion being a minor portion of the body length, a layer of combustible inhibiting material applied to all surfaces of the body except the surface of the central bore portion for restricting the burning characteristics of the grain from said central portion outwardly whereby a substantially constant pressure is produced when the grain is ignited in a chamber having an increasing volume.

3,000,318 LIQUID FUEL PUMPS FOR INTERNAL COMBUSTION ENGINES

George Volosovich, London, England, assignor to C.A.V. Limited, Acton, London, England
Filed Sept. 28, 1959, Ser. No. 842,982
2 Claims. (Cl. 103-38)

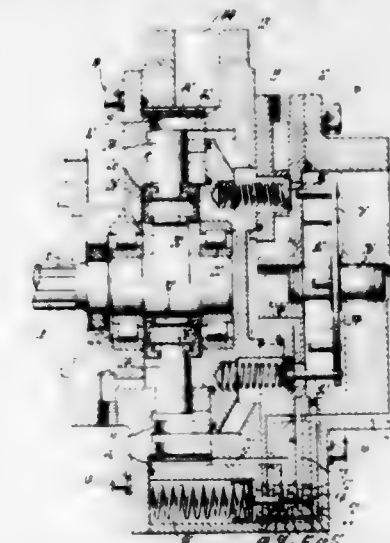


1. Means for supplying liquid fuel to a multi-cylinder internal combustion engine, comprising in combination an injection pump having a rotary member provided with a diametrical bore, a stationary annular cam surrounding said rotary member, a pair of plungers mounted within and extending from opposite ends of said bore so as to be movable inwardly by said cam during rotation of said rotary member, a feed pump for supplying fuel to said bore between said plungers, a rotary distributor rigid with said rotary member and provided with passages for distributing fuel from said injection pump to each in turn of the engine cylinders, radially adjustable members

which are situated between said rotary member and said annular cam, and which embrace opposite sides of said rotary member and have end parts arranged to serve as stops for limiting outward movements of said plungers, and a fork rotatable with, and movable axially relative to, said rotary member, said fork and radially adjustable members having complementary inclined surfaces which serve by contact with each other to enable the positions of said radially adjustable members at which said stops limit the outward movements of said plungers to be varied by axial movement of said fork.

3,000,319 PUMP CONTROL

Robert M. Tuck, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1957, Ser. No. 676,744
3 Claims. (Cl. 103-40)



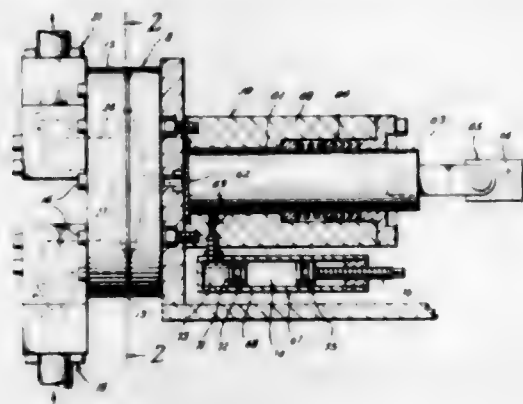
1. In a pump including a housing confining a plurality of radially arranged cylinders and a corresponding number of pistons in said cylinders, said housing having therein an inlet cavity communicating with said cylinders via circumferentially arranged individual inlet passages, each of said passages having a check valve therein normally closing the passage during the discharge stroke of the piston in the corresponding cylinder, the combination of an axially displaceable piston having flange carrying pins of varying length adapted to engage said check valves, said piston being responsive to and actuated by the pressure of the discharge fluid, movement thereof being accompanied by sequential opening of said valves.

3,000,320 PUMP

Sandiford Ring, 6315 England St., Houston, Tex.
Filed July 18, 1957, Ser. No. 672,770
1 Claim. (Cl. 103-44)

A fluid pump for corrosive liquids comprising, a body having an annular, elliptical in cross section chamber, said body split into two parts on the center line of the ellipse, a diaphragm of inert material extending across the chamber and clamped between the split halves of the body, one of said body halves having an inlet and outlet opening into the chamber, a molded-in-place liner of chemically inert material in said one body half and in said inlet and outlet, said one-half of the body and the inlet and outlet being provided by several sections secured together, said liner being molded in each section and having radially outwardly extending flanges at the extremities of each section which lock the liner sections in place and abut the liner sections of adjacent body sections to form seals therewith, valve seats in the liner of

the inlet and outlet, check valve members of chemically inert material cooperative with the seats to permit flow



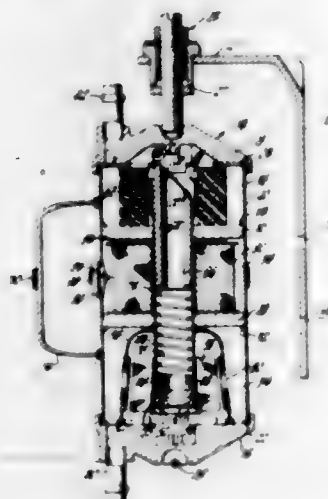
into the chamber through the inlet only and out of the chamber through the outlet only, and fluid means for reciprocating the diaphragm.

3,000,321

ELECTROMAGNETIC PLUNGER PUMPS

Leland C. Parker, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 23, 1959, Ser. No. 841,794
2 Claims. (Cl. 103-53)



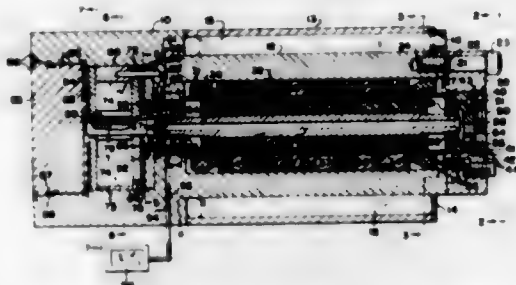
1. An electromagnetic pump comprising a casing having two inner partitions dividing the interior of said casing into an inlet port chamber and an outlet port chamber at opposite ends of the casing, a magnetic coil chamber being defined between said two partitions, a nonmagnetic cylinder within said casing, a cylindrical magnetic plunger slidable in said cylinder, a passage extending through said plunger and connecting said inlet port chamber and outlet port chamber, pressure-actuated one-way valve means carried by said plunger and controlling said passage, said valve means including a flat valve member surrounded by said outlet port chamber and inclined with respect to the axis of said plunger, a solenoid coil located in said coil chamber and surrounding said nonmagnetic cylinder and effective upon being energized to pull said plunger toward said inlet port chamber, a spring urging said plunger towards said outlet port chamber, a subcasing attached to the outside wall of said casing, an opening through the wall of the latter and connecting the interior of said subcasing with said coil chamber, a magnetic armature registering with and movable in said opening, normally closed contacts controlled by the position of said armature, and a circuit leading through said contacts and said coil for intermittently energizing the latter and thereby attract said armature and open said contacts.

3,000,322

MOTOR DRIVEN PUMP

Howard T. White, Melrose Park, Pa., assignor to Fosterin Corporation, Fostoria, Ohio, a corporation of Ohio
Original application Aug. 27, 1957, Ser. No. 680,448.
Divided and this application June 30, 1959, Ser. No. 824,019

5 Claims. (Cl. 103-118)



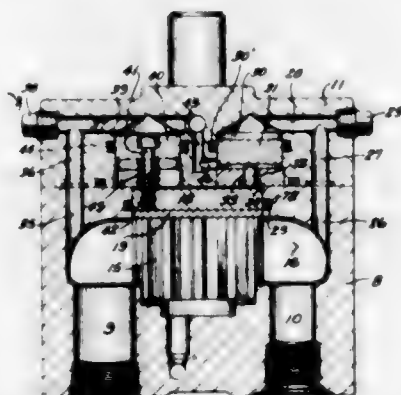
1. A motor driven pump having an elongated unitary housing with a first longitudinal bore extending inwardly from one end, a second longitudinal bore extending inwardly from the opposite end, said bores terminating at and being separated by an integral radially inwardly extending interior wall, said first bore providing a motor housing section, an end closure wall with a central closure member therein for closing the outer end of said first bore, a longitudinally axially extending cylindrical sleeve connecting said interior wall and said closure wall and providing with said first bore an isolated motor stator chamber, motor stator windings and field laminations in said motor stator chamber, a longitudinally axially disposed shaft interiorly in said sleeve and extending through said interior wall and into said second bore, bearings for said shaft in said interior wall and in said central closure member, said second bore having a pump rotor chamber therein and fluid inlet and delivery connections in communication with said pump rotor chamber, and a pump rotor on said shaft in said pump rotor chamber for delivering fluid from said fluid inlet connection to said fluid delivery connection.

3,000,323

HIGH PRESSURE GEAR PUMP

Glenn S. Park, New Berlin, and George A. Rea, Wauwatosa, Wis., assignors to The Heli Co., Milwaukee, Wis., a corporation of Wisconsin

Filed Apr. 14, 1960, Ser. No. 22,229
8 Claims. (Cl. 103-126)



4. In a high pressure gear pump of the type including a housing having a main pump chamber with intermeshing gears and having a pressure loading chamber and having a low pressure inlet leading to and a high pressure outlet leading from said main pump chamber, a single axially movably mounted wear plate in said housing in contact with the end faces of both of said gears, pressure pick-up ports in said wear plate for by-passing fluid under pressure from said main chamber to said loading chamber to load the back face of said wear plate and

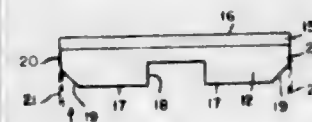
urge it against said gear end faces, there also being a first cylinder in said housing, a push piston slidable in said first cylinder, there being communication between said first cylinder and the high pressure outlet from the pump so located as to push said push piston toward the wear plate, means between said push piston and a portion of said wear plate near said high pressure side of the pump for exerting an inward force toward the gears on said portion of the wear plate at the high pressure side of the pump in response to pressure from the push piston, there also being a second cylinder in said housing having an inner end and an outer end, a pull piston slidably mounted in said second cylinder, the outer end of said second cylinder being in communication with the low pressure side of said pump and the inner end of said second cylinder being in communication with said pressure loading chamber whereby the pull piston is urged outwardly by loading pressures, and a connection between said last piston and the portion of the wear plate on the low pressure side of the pump for pulling said portion outwardly when said pull piston is moved outwardly by loading pressures, said two pistons providing an anti-cocking couple for the wear plate to compensate for normal cocking tendencies, said pressure pick-up ports in the wear plate being located remotely from said high pressure outlet and intermediate the pump inlet and outlet pressures so that pressure loading is at a pressure substantially less than full pump pressure to compensate for changes in pressure loading pressures.

3,000,324

VANE FOR ROTARY PUMPS

Oscar E. Roosen, Grosse Pointe, Mich., assignor to The Roosen Filter Company, Hazel Park, Mich., a corporation of Michigan

Filed Oct. 6, 1958, Ser. No. 765,605
3 Claims. (Cl. 103-136)



1. A vane for use in radially movable vane type fluid pumps, said vane comprising a rectangular plate-like member having forward and rear faces, radially disposed outer and inner end surfaces and lateral side edge surfaces, said member having its lateral side edge surfaces both slanted inwardly from one face of said member throughout substantially the entire side edge surface toward the other face of said member, said member having its radially outer end surface bevelled with the outer tip portion arcuate, the outer edge of said arcuate tip portion being disposed substantially in the plane of the adjacent face, and an open channel formed in said other face of said member leading from said bevel through to the opposite inner end of said member, said slanted lateral side edge surfaces being slanted inwardly toward said other face of said member having said channel, said last mentioned face being the forward face of said vane during rotary movement under operative conditions.

3,000,325

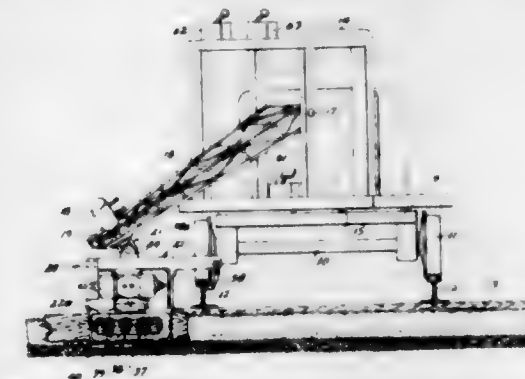
MACHINE FOR HANDLING RAILROAD TIES OR THE LIKE

Henry J. Perazzoli, 3 Plymouth Road, Gwynedd Valley, Pa.

Filed Feb. 1, 1960, Ser. No. 5,790
6 Claims. (Cl. 104-9)

1. In a machine for handling railroad ties or the like a tie gripping unit comprising in combination a pair of opposed frame members interconnected for relative movement toward and away from each other, motor means car-

ried by the unit for effecting said movement, an endless tie-engaging and driving chain on each frame member, means mounting each of said chains on its frame member to present a run which faces and parallels a run on the other, a backing member behind each of said parallel chain runs whereby said runs are held in driving contact with the tie,



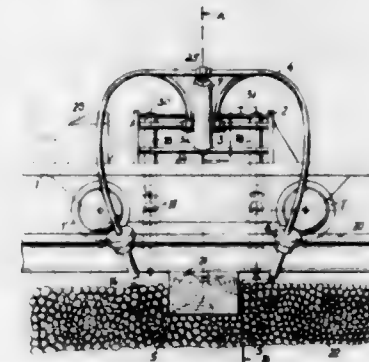
and motor means carried by the unit including means connecting the motor to the chains for simultaneously driving the chains with the parallel runs moving in the same direction, all of said parts being constructed and arranged so that the parallel chain runs grip a tie on opposing sides whereby to move the tie longitudinally of its axis.

3,000,326

MOBILE TRACK TAMPER

Franz Plasser and Josef Theurer, both of Johannsgasse 3, Vienna, Austria

Filed Jan. 28, 1960, Ser. No. 5,228
1 Claim. (Cl. 104-12)



A machine for tamping ballast under ties supporting the rails of a railroad track, comprising a carriage with wheels for mobility on the track, a tamping tool carrier having a pair of adjacent ends, pivot means mounted on said carriage between the rails and extending parallel to the track, the tamping tool carrier being journaled on the pivot means opposite said ends for pivoting the tamping tool carrier in a vertical plane perpendicular to the track, and a pair of tamping tools mounted on said ends for pivoting movement into the ballast at each side of a tie with which the tamping tool carrier is aligned and in a direction from the end of the tie toward the track, the tamping tools being inclined toward the tie.

3,000,327

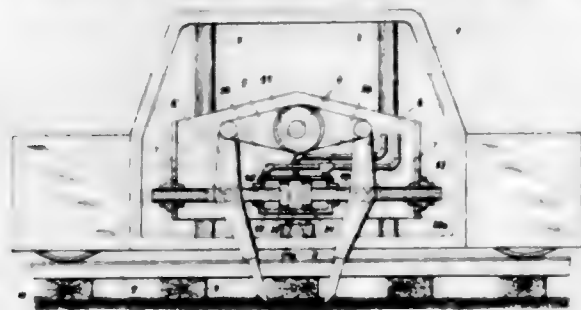
TRACK TAMPING MACHINE

Franz Plasser and Josef Theurer, both of Johannsgasse 3, Vienna, Austria

Original application Oct. 13, 1954, Ser. No. 462,886, now Patent No. 2,876,709, dated Mar. 10, 1959. Divided and this application June 11, 1958, Ser. No. 741,984
Claims priority, application Austria June 25, 1954
1 Claim. (Cl. 104-12)

In a track tamping machine of the type comprising a wheeled carriage for mobility on the track, a vertically movable carrier mounted on the carriage, at least one pair of opposing tamping tools carried by the carrier

to reciprocate in a direction substantially parallel to the track, and eccentric shaft means operatively connected to the upper ends of the tamping tools for imparting a vibratory motion to the tools; a pressure-operated mechanism for varying the relative distance between the tamping tools of each pair of opposing tools, said mechanism including a stationary cylinder closed at both ends and fixedly mounted on the tamping tool carrier between the opposing tools and with its axis substantially parallel to the track, a fixed guide member having two ends supported in said tamping tool carrier and passing through said cylinder along the cylinder axis, two opposing hollow piston rods reciprocally mounted on said guide member in both cylinder ends, each piston having one end extending into the cylinder to reciprocate in a direction substantially parallel to the track, an annular piston carried at said one end of each rod, the two

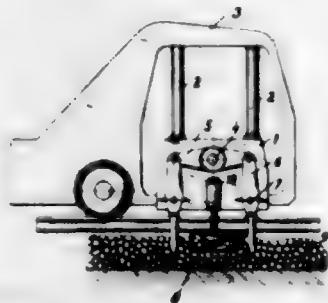


pistons dividing the cylinder into a center chamber and two outer chambers, the piston rods and the pistons being arranged substantially symmetrically with regard to the center point of the cylinder, a support yoke fixedly mounted on each of said piston rods at a position between the cylinder and the support of the fixed guide member in the tamping tool carrier to form a pair of substantially symmetrically arranged yokes reciprocating in unison with the piston rods, each support yoke having two laterally spaced ends, pivot means connecting each tamping tool of a pair of opposing tools substantially at the midpoint of the tool to a respective one of said yoke ends, and pressure means for applying pressure to each of said cylinder chambers and to reciprocate the tamping tools in a direction parallel to the track, the pressure means connected to the two outside chambers being hydraulic fluid.

3,000,323

MOBILE TRACK TAMPING MACHINE

Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed Feb. 24, 1959, Ser. No. 794,930
Claims priority, application Austria Feb. 24, 1958
3 Claims. (Cl. 104-12)



1. A mobile ballast tamping machine adapted to travel along the rails of a railroad track, comprising in combination: a vertically adjustable tamping tool carrier which may be lowered into a tamping position, at least one pair of cooperating tamping tools mounted on the carrier so that each tool of the cooperating pair of tools is positioned alongside the longitudinal sides of a tie to be tamped and in proximity of one of said rails when the carrier has been lowered into the tamping position, an addi-

tional tamping tool mounted on the carrier centrally in respect of said pair of cooperating tamping tools and laterally outside the end of said tie, and a horizontal pressure member mounted on said additional tamping tool and arranged to contact the ballast surface when the tamping tool carrier is in said tamping position.

3,000,329

HOIST OVER STAIRWAYS

John G. Fargo and Leroy J. Fargo, both of
2601 N. Sherman Drive, Indianapolis, Ind.
Filed June 17, 1959, Ser. No. 821,065
2 Claims. (Cl. 104-126)

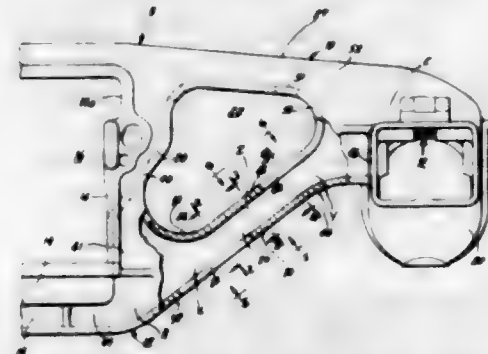


1. A hoist comprising a lifting tackle carrying beam; a hinge member fixed to each underside end portion of the beam spaced along the beam from the beam end; a bar extending transversely across and under each of said portions; a second hinge member fixed to the top side of each of said bars intermediate their ends; a pintle hingedly interconnecting said first and second members thereby hinging said bars to said beam; and a leg attached to each end portion of each of said bars; said pintles being on opposing sides of the bars and positioning said bars and said hinge members to have flat abutting surfaces between said beam end portions and said bars limiting outward swinging of said legs to beam supporting positions and permitting the legs on one of said bars to swing toward the legs of the other bar; and means selectively maintaining the legs of one bar spaced from the other legs in the beam supporting positions.

3,000,330

CAR TRUCK

James A. Shafer, East Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed June 9, 1960, Ser. No. 35,863
4 Claims. (Cl. 105-206)



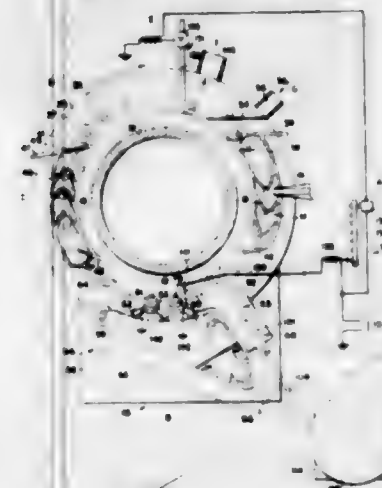
1. In a railway truck side frame, the combination of a lower tension member and an upper compression member merging at the outer ends thereof with journal-receiving portions; spaced columns extending between and rigidly attached to said members intermediate said journal-receiving portions; said tension member comprising a generally horizontal load-supporting portion disposed be-

tween said columns and diagonally-extending portions joining said columns and said journal-receiving portions; each of said diagonal portions having a geometric longitudinal axis and a neutral axis in intersecting less steeply inclined relation with the longitudinal axis; said compression member having a neutral axis extending in opposite directions outwardly from the columns to intersect first with said geometric axes and then further outwardly with the neutral axes of said tension members.

3,000,331

COATED TABLET PRESS

Raymond G. Frank, Ambler, Pa., assignor to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 28, 1957, Ser. No. 636,677
18 Claims. (Cl. 107-1)



1. A rotary coated tablet press comprising a rotating die head having a die cavity, means for rotating said die head to carry said die cavity through an arcuate path, tablet delivery means for delivering a tablet to the die cavity, said tablet delivery means comprising a tablet mover having a tablet pocket, a fixedly mounted track, said tablet mover being mounted on said track to bear against said track and to move therealong in guiding contact therewith, said track having consecutively an approach flight, a working flight and a return flight, said approach flight disposed between a position removed from the path of said die cavity and a position adjacent to the path of said die cavity, said return flight disposed between another position adjacent to the path of the die cavity and a position removed from said path, said working flight located adjacent to the path of said die cavity between said positions adjacent thereto and having the shape of a finite arc with its center of generation located on the axis of rotation of said rotary die head, means for positioning said tablet mover to bear against said working flight and to align the tablet pocket of said tablet mover vertically above said die cavity, means for driving said tablet mover along said track including said approach flight, working flight and return flight with the same angular velocity along said working flight as said die cavity, and means for lowering the tablet relative to the tablet mover after deposit of the tablet at the die cavity while the tablet pocket is moved along said working flight.

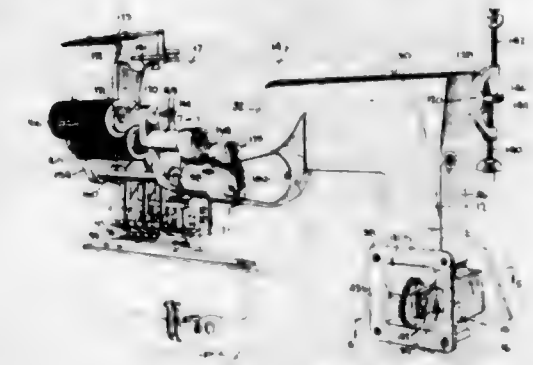
3,000,332

STRIP METERING DEVICE FOR MULTIPLE ROW RUFFLE SEWING MACHINE

Victor J. Stipoda, Great Neck, N.Y., assignor to Man-Sew Corporation, New York, N.Y., a corporation of New York
Filed July 27, 1959, Ser. No. 829,698
12 Claims. (Cl. 112-132)

1. In combination with a sewing machine having a supporting arm for stitching mechanism, a main operat-

ing shaft therefor and feeding means; a ruffling attachment comprising an elongated housing structure of substantially coextensive length with the machine arm mounted at the base of the rear side of said arm, said housing structure at one end having a part extending downwardly and forwardly beneath the machine arm adjacent the stitching mechanism, a series of ruffer blades oscillatably mounted on the lower end of said housing part, actuating mechanism for said blades comprising a longitudinally disposed rock shaft horizontally mounted in said housing structure, means operatively

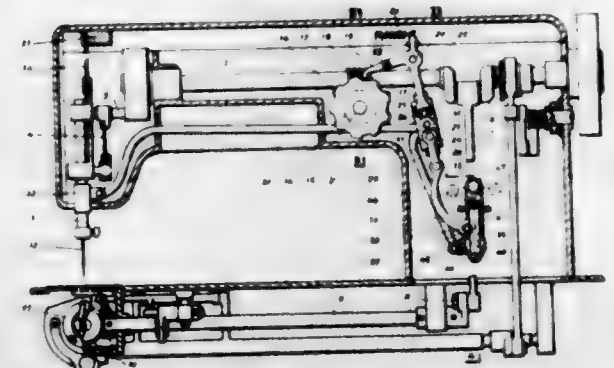


connecting said main shaft and said rock shaft comprising an eccentric actuated pitman, a second rockshaft mounted in the lower end of said housing part on which said ruffer blades are carried, and means connecting said rockshafts for operating said ruffer blades; and auxiliary strip metering means mounted on said sewing machine and said housing and positioned in advance of the sewing machine feed means and the ruffling blades for feeding a series of strips to said blades and the stitching mechanism to form multiple rows of sewn ruffles, and actuating means for said strip metering means operatively connected with the second rockshaft.

3,000,333

ZIG-ZAG SEWING MACHINE WITH VARIABLE SEWING CYCLE

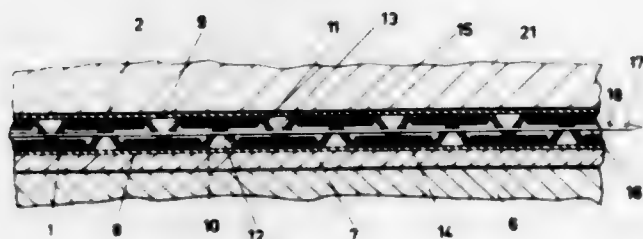
Antonio Moro, Milan, Italy, assignor to F.lli Borletti S.p.A., Milan, Italy
Filed July 29, 1955, Ser. No. 525,177
Claims priority, application Italy Aug. 6, 1954
13 Claims. (Cl. 112-158)



1. A zig-zag sewing machine comprising a frame, a main shaft, a needle bar, means operatively connected to said main shaft and needle bar to impart vertical oscillatory motion to said needle bar, an oscillating support, a generally horizontal rod pivotally connected to one end of said needle bar and at its other end to said oscillating support, a first cam rotatably mounted in said machine on a camshaft, means for rotating said camshaft from said main shaft, a lever carried on a lever shaft having one end engaging said cam and the other end engaging said support for imparting oscillatory movement to said support, adjustable means connected to said support for varying the amplitude of the oscillatory movement imparted by said support to said rod for varying the trans-

verse movement of said needle bar, adjustable means connected to said support to rotate said support to vary the origin of the zig-zag stitch, a second cam removably mounted coaxially on a hub of said first cam, a spring being mounted between the two cams to thereby facilitate the removal of the removable cam when it is necessary to substitute it with any other cam, a knurled button screwed on the shaft of the cams to retain said removable cam, and means for shifting said lever axially of the lever shaft for engaging either of said cams.

3,000,334
APPARATUS FOR SEWING NECKTIES
Eric Allan Hedbrandh, Erik Dahlbergsgatan 64, Helsingborg, Sweden
Filed Mar. 17, 1958, Ser. No. 721,994
Claims priority, application Sweden Mar. 23, 1957
14 Claims. (Cl. 112-174)

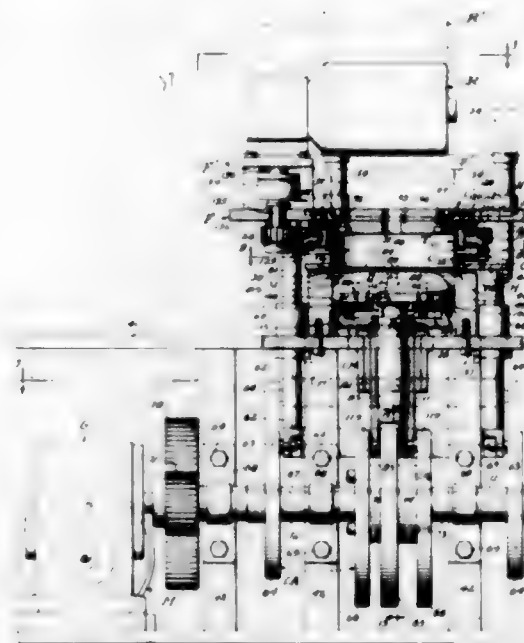


9. An apparatus for stitching together two overlapping fabric parts constituting the longitudinal edges of a necktie blank to form the longitudinal seam of said necktie comprising: first means for forming the overlapping fabric parts into staggered, opposed crimps, all of which intersect a single straight line; second means operatively associated with said first means for holding the crimps of one of said two fabric parts spaced apart from adjacent crimps of the other of said fabric parts, both of said means being constructed to permit passage through said crimps of a needle in a single motion; and a needle operatively associated with said first and second means and which is of sufficient length to pass through all of the crimps formed by said first means at the same time and which is adapted to pull thread through all of said crimps in a single motion.

3,000,335
DIAPHRAGM ASSEMBLY APPARATUS
William A. Raub, Haverford, and Roy Ullman, Willow Grove, Pa., assignors to The E. F. Griffiths Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 18, 1958, Ser. No. 749,468
6 Claims. (Cl. 113-1)

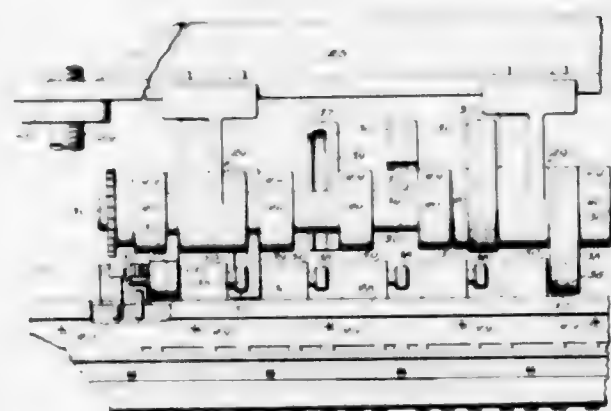
1. Apparatus for making a diaphragm assembly including a centrally apertured annular mounting frame and diaphragm material extending across the aperture, the marginal portion of the material being crimped in a channel formed on the frame, the apparatus comprising: mechanism for supporting said mounting frame; first means for supporting a sheet of diaphragm material with a portion of generally dome-like contour extending across said aperture and a portion extending over said channel; second means to engage the diaphragm material over said channel and fold and tuck a portion of the same into the channel; third means providing for relative movement of said first and second means toward each other for said tucking operation; fourth means having parts disposed respectively on opposite sides of said channel, the parts being relatively movable toward one another while engaged with the frame for crimping the folded and tucked material in the channel; fifth means supporting said parts and providing for said engagement and said relative move-

ment; and mechanism to cause the following operations: to activate said third means for the performing of said



tucking operation and to activate said fifth means for the performing of said crimping operation.

3,000,336
INSIDE HORN AND SUSPENDING MEANS
Edward W. Wagner, Maywood, and Charles W. Stetter, Paterson, N.J., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 2, 1957, Ser. No. 632,161
18 Claims. (Cl. 113-7)

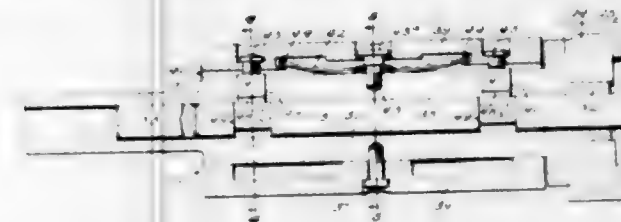


1. In a can body seam completing machine, an inside horn, an elevated member over said horn, and suspending means connecting said horn with said elevated member for supporting said horn solely from said elevated member, said suspending means comprising power-actuated progressively releasable and re-engageable suspending devices spaced apart longitudinally of said horn.

3,000,337
CAN BODY MAKER AND EXPANDABLE HORN THEREFOR
Adolph J. Schpatz, Cincinnati, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 20, 1958, Ser. No. 709,834
5 Claims. (Cl. 113-8)

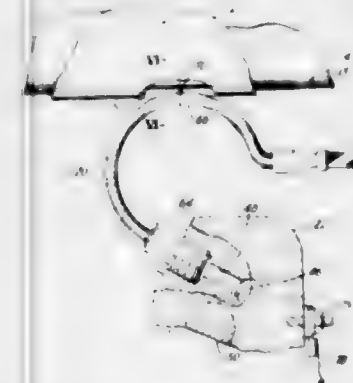
1. In a can body maker including an expandable horn around which body blanks are bent into cylindrical form, and a continuously driven member; expanding means for said horn including an actuating shaft rotatably mounted in said horn and having one of its ends disposed at one

end of said horn, and one-directional rotary means for transmitting continuous driving motion in one direction



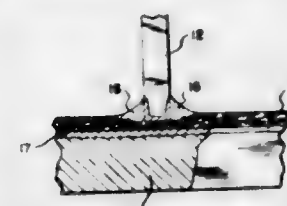
from said continuously driven member to said actuating shaft.

3,000,338
METHOD AND APPARATUS FOR SOLDERING CANS
Frederick S. Sillars, Beverly, Mass., assignor, by mesne assignments, to Campbell Soup Company, Camden, N.J., a corporation of New Jersey
Filed Oct. 15, 1957, Ser. No. 690,247
20 Claims. (Cl. 113-60)



1. In a machine for soldering the side seams of can bodies each of which has a seam joint including a re-entrant groove, the combination of means for moving bodies along a predetermined path of travel with their side seams in substantial alignment, a resilient solder applying needle having a discharge portion including an orifice, and means mounting said needle for locating the initial position of said discharge portion in respect to the can side seam path whereby said portion will remain in engagement with the side seams of the moving can bodies with the orifice in the grooves.

3,000,339
BRAZING FILLER METAL
Charles D. Coxe, Fairfield, Conn., assignor to Handy & Harman, New York, N.Y., a corporation of New York
Filed May 7, 1958, Ser. No. 733,555
6 Claims. (Cl. 113-110)



1. A brazing filler metal consisting of a metallic skeletal lamellar structure and a brazing metal filling the interlamellar spaces of the lamellar structure, said metallic skeletal lamellar structure comprising many cohering, generally parallel laminar particles having a length substantially greater than their thickness, said laminar particles being composed of a high temperature melting metal selected from the group consisting of iron, cobalt and nickel and their base metal alloys, which is substantially insoluble in the brazing metal at the fusion tem-

perature of the brazing metal, said brazing metal having a substantially lower melting temperature than said skeletal metal.

3,000,340
METHOD OF MAKING A WELDED TRAILER TANK
Ernest Rackel, Fort Wayne, Ind., assignor to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan
Original application Feb. 3, 1956, Ser. No. 563,298.
Divided and this application Jan. 5, 1959, Ser. No. 785,551
4 Claims. (Cl. 113-120)



1. Method of making a complete generally cylindrical curved sheet metal wall tank comprising the steps of assembling together relatively small area rectangular flat sheets of metal in co-planar relation with adjacent edges in butting engagement, then joining the edges of said flat sheets by straight line submerged arc welding to form a plurality of relatively large area flat sheet metal blanks, bending said blanks to form portions of said cylindrical curved wall, and welding said blanks together with straight line welds to form the completed cylindrical curved wall whereby the cylindrical tank is formed from a plurality of small flat sheets by straight line welds without having to weld curved edges.

3,000,341
GROUP BURNING FIXTURE
Herbert C. Winkel, Watervliet, and Charles H. McAlpine, Coloma, Mich., assignors, by direct and mesne assignments, to Kalamazoo Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed Aug. 20, 1956, Ser. No. 604,907
6 Claims. (Cl. 113-122)

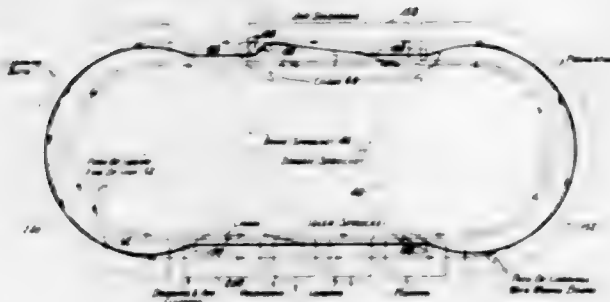


1. In an apparatus for fusing together the lugs of battery plates, said apparatus having a frame defining a battery plate receiving zone and a pair of combs respectively positioned above the respective sides of said zone and movable transversely thereof toward and away from each other, the improvement which comprises a pair of dam elements positioned above said zone between said combs and cooperable therewith to limit flow of molten metal during the fusion operation, said dam elements being supported for sliding movement toward and away from each other; means for moving said dam elements toward and away from each other; and lift means including a pair of arms mounted on said frame for pivotal movement about an axis adjacent one side of said zone for simultaneously moving both of said dam elements when adjacent each other in the same direction about said axis so that both of said elements are moved toward a position adjacent said one side of said zone.

3,000,342

DIP SOLDERING MACHINES

Adolph S. Doron, Beverly, Andrew J. Gilbride, Swampscott, and Frank W. Spencer, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed May 11, 1956, Ser. No. 584,361
2 Claims. (Cl. 113-129)



2. In apparatus for dip treating work pieces and including an elongated liquid-containing tank wherein the work pieces are to be successively immersed, a track extending above the tank and lengthwise thereof, work supporting carriages adapted to be guided by the track in succession to position a lower surface of each work piece in moving contact with the liquid in the tank and then be removed therefrom at its exit end, flexible endless drive means operable at substantially constant speed and coupled to the carriages for moving them in one direction over the length of the tank, and at least two wheel-like members respectively arranged above the tank to engage the drive means, adjacent ones of said members being spaced differently transversely of the tank for cooperating with opposite sides of the drive means to cause its path to deviate from that of the direction of the carriages whereby the speed of the latter is reduced from that of the drive means while traversing the liquid in the tank.

3,000,343

AIRCRAFT CARRIER

David H. Winter, Silver Spring, Md., assignor to the United States of America, as represented by the Secretary of the Navy
Filed July 6, 1959, Ser. No. 825,376
8 Claims. (Cl. 114-43.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An aircraft carrier comprising, a hull, an upper flight deck, a pair of lower flight decks located beneath and at least partially overlapped by said upper flight deck adjacent the respective sides of the hull, and extending from a point forward of midships of the hull to the bow end of said hull.

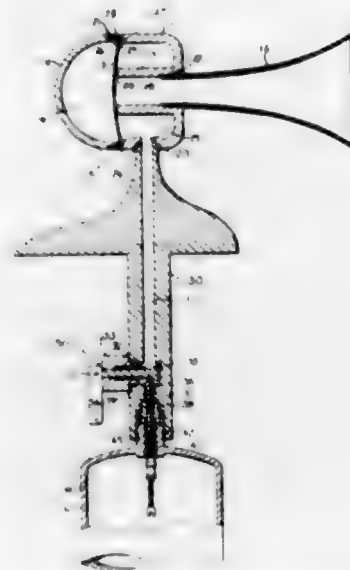
3,000,344

POWER HORN

Donald Ferrell, 158 Cayuga St., Groton, N.Y.
Filed Feb. 25, 1957, Ser. No. 642,066
3 Claims. (Cl. 116-112)

1. A self-contained sound producing unit comprising: a sound producing unit having a tensioned diaphragm, a disposable container of fluid under pressure, a control valve connecting said sound producing unit and said disposable container, said valve forming means for controlling the operation of the said sound producing unit, said sound producing unit comprising a casing having a

forward member and a rearward member, said tensioned diaphragm dividing said casing into a forward pressure chamber in said forward member and a rearward pressure chamber in said rearward member, said diaphragm being crimped about its periphery, a rigid joint being

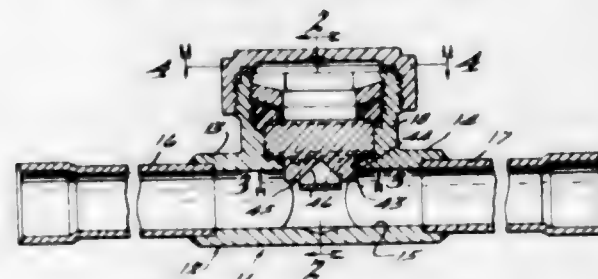


formed between said forward member and said rearward member, a shoulder and groove on said forward member at said joint, a lip on said rearward member at said joint, said diaphragm being adapted to be retained along its crimped peripheral portion by said shoulder and groove and said lip at said joint.

3,000,345

LIQUID INDICATOR

Robert A. Gray, Jr., Port Huron, John C. Inch, Marysville, and John R. Fueslein, Jeddo, Mich., assignors to Mueller Brass Co., Port Huron, Mich., a corporation of Michigan
Filed Feb. 19, 1960, Ser. No. 9,834
9 Claims. (Cl. 116-117)



1. In a liquid indicator, a liquid passage, a sight glass connected with said passage, an inclined portion on said sight glass adapted to be contacted by liquid in said passage only when the passage is full, and a visual indicator mounted adjacent said inclined sight glass surface whereby said indicator will appear distorted when the liquid is not in contact with said surface.

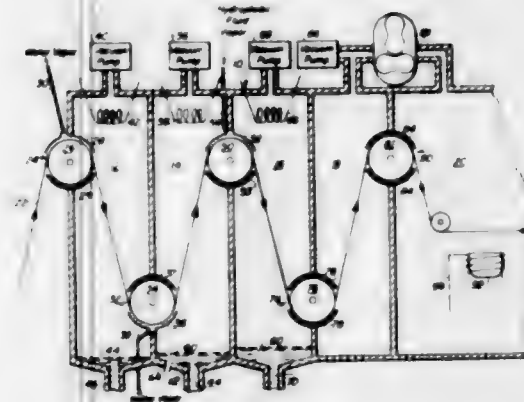
3,000,346

VACUUM COATING APPARATUS

Milo P. Huflicka, Jr., Concord, Mass., assignor, by means assignments, to National Steel Corporation, Pittsburgh, Pa., a corporation of Delaware
Filed Nov. 5, 1958, Ser. No. 772,102
8 Claims. (Cl. 118-49)

1. An apparatus for coating a substrate in a vacuum coating system which comprises a first chamber in communication with the atmosphere by means of at least one restricted passage, means for introducing into said passage an atmosphere of a condensible vapor so that said condensible vapors pass in both directions through said passage, means for maintaining said first chamber at a

pressure lower than atmospheric pressure, a second chamber in communication with said first chamber by means of a second restricted passage, means for introducing into said second passage an atmosphere of a condensible vapor so that said condensible vapor passes in both directions through said second passage, means including vapor condensing means, for maintaining said second chamber at

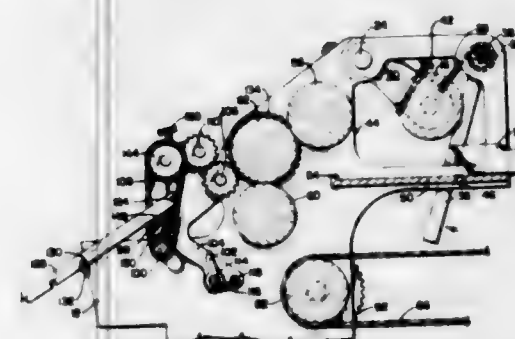


a lower pressure than said first chamber, a third chamber in communication with said second chamber by means of a third restricted passage, means, including vapor condensing means, for maintaining said third chamber at a lower pressure than said second chamber, means for passing said substrate through said passages and chambers, and means for vaporizing a coating material so as to deposit a coating on said substrate.

3,000,347

ADHESIVE APPLYING APPARATUS

Charles F. Schaefer, 1470 Main St., Stratford, Conn.
Filed Oct. 16, 1958, Ser. No. 767,666
8 Claims. (Cl. 118-245)



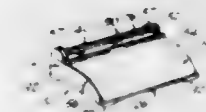
1. In a machine of the described character having a coating roll rotatable about a fixed horizontal axis, means for applying a coating substance to the surface of said coating roll from above the latter so that the coating roll can apply such substance to the upper surface of sheet material fed tangential to said surface of the coating roll at the bottom of the latter, feed roller means normally disposed below said coating roll to support and feed the sheet material during the application of the coating substance to its upper surface, and stripping elements normally disposed in back of said coating roll to engage the latter adjacent the bottom thereof and to separate the sheet material therefrom following the application of the coating substance to the sheet material; the improvement comprising pivotally mounted support means carrying said stripping elements and swingable about an axis parallel to said axis of the coating roll to displace the stripping elements along a path extending under said coating roll from the normal position of the stripping elements to an exposed cleaning position in front of the coating roll, means supporting said feed roller means from said pivotally mounted support means so that, upon swinging of the latter, said feed roller

means is displaced with said stripping elements from its normal position to an exposed cleaning position in front of the coating roll, and manually actuatable means connected to said support means for swinging the latter to selectively dispose said stripping elements and feed roller means in said normal and cleaning positions.

3,000,348

MOISTENING DEVICE

Fred J. Mallet, Park Sheraton Hotel, 7th Ave. and 55th St., New York, N.Y.
Filed Aug. 26, 1957, Ser. No. 680,047
2 Claims. (Cl. 118-246)



1. A moistening or liquid applying device comprising a casing having a base, a pair of side walls, and an end wall upstanding at one end of the base between the side walls, a flange at the edge of the base removed from the end wall, a partition wall extending upwardly from the base between the side walls and substantially parallel to and spaced from both the end wall and the flange, the walls and the base defining a reservoir, the inside face of each of the side walls having a recess therein, the recess having a downwardly directed section, the recess providing an upwardly and laterally opening slot, each side wall having a projection above its top edge, the projection having a kerf opening upwardly through the top of the projection, a pair of rolls, each roll having end faces and pins extending laterally from the end faces, the pins being receivable in the kerfs and slots, the rolls being of such length that the end faces of each roll are closely adjacent and have slight clearance with relation to the inside faces of the side walls when the pins are in the kerfs or slots, the rollers, when their pins are received in the slots and kerfs, being one above the other, the lower roller having its pins in the slots and the upper roller having its pins in the kerfs, the kerf of one of the projections extending through the projection and the pin in that kerf extending through the kerf to the outside of the casing and having a handle mounted thereon, the kerf and slot of each side wall being in vertical lines laterally displaced with relation to each other, and the rolls being displaced out of vertical alignment, the kerfs being long enough so that the upper roll rests upon and drives the lower roller and may move vertically with the lower roller, the lower roller being positioned to be disposed in the liquid in the reservoir while the upper roller rides free of the body of liquid in the reservoir, a cover for the device, the cover being entirely free of anchorage to any wall or part of the base and having a front wall for reception upon the casing end wall, said front wall having a flange for seating within the end wall, the cover having side walls with inwardly turned annular flanges, the annular flanges, when the cover is positioned on the casing, encompassing the end faces of the top rollers to retain the upper rollers against accidental separation, the cover having an access opening between the flanges for access to make contact with the face of the upper roller through said access opening, the cover having projections to nest against and on the reservoir side of a partition wall, the last mentioned projections and said front wall flange cooperating to retain the cover in fixed but removable relation to the rollers, and the cover having a free end edge engaging against the face of the flange facing said partition wall.

3,000,349

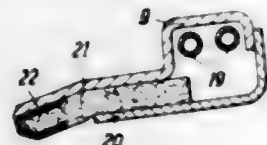
DUPLICATOR MOISTENING DEVICE

Wilhelm Ritzfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzfeld, Franzensbader Str. 21, Berlin-Grünwald, Germany

Filed Aug. 10, 1959, Ser. No. 832,533

Claims priority, application Germany Aug. 13, 1958

4 Claims. (Cl. 118—264)



1. In a duplicator, in combination, a moistening device comprising liquid-transferring means for applying a liquid to a copy sheet so as to moisten the same, said liquid-transferring means including a felt body having at least a surface portion consisting of a fibrous material selected from the group consisting of polytetrafluoroethylene fibers and polyester fibers; and means for supplying liquid to said liquid-transferring means.

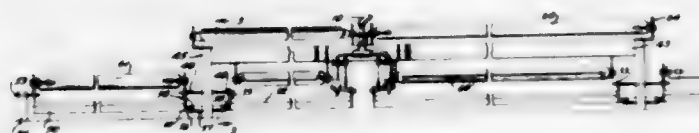
3,000,350

POULTRY DRINKING FOUNTAIN

Gurney L. Wilson, Rte. 1, Robbins, N.C.

Filed Mar. 13, 1959, Ser. No. 799,360

8 Claims. (Cl. 119—81)



1. A water trough arrangement for use in the supplying of water to poultry and the like, comprising a suitable support, a first trough fixedly mounted on said support, a second trough having one end transversely and horizontally pivoted on said support, a flexible conduit interconnecting the said one end of the second trough to the first trough, water inlet means adjacent the other end of the second trough, and weight control valve means associated with said water inlet means and supporting the said other end of the second trough to control the flow of water thereto.

3,000,351

DOG MUZZLE

Adorico Cabral De Melo, 85 Davis St., Fall River, Mass.

Filed May 27, 1959, Ser. No. 816,119

7 Claims. (Cl. 119—130)



3. An animal muzzle comprising a ring including a plurality of sections and means hingedly connecting said sections at one end, a bit mounted in the ring and having one end connected to said means, and common means detachably connecting the other ends of the sections and the other end of the bit together.

3,000,352

WRITING INSTRUMENT

Wilhelm Grube and Friedrich Grube, Heidelberg-Rohrbach, Germany, assignors to Kaweco Badische Feilfederfabrik Friedrich Grube, Wiesloch, Wiesloch near Heidelberg, Germany, a German firm

Filed Dec. 2, 1957, Ser. No. 700,037

Claims priority, application Germany Nov. 30, 1956

1 Claim. (Cl. 120—42.03)



1. In a ball point pen, a tubular holding member having a rear end portion, a pinlike actuating knob placed in said rear end portion coaxially of said member, said holding member having a tapered fore end portion having a free end eccentric of said holding member, a bore in said fore end portion, the longitudinal axis of said bore being slanted with respect to and intersecting the longitudinal center line of said holding member at said rear end portion, and a single oblong writing element substantially coextensive with and placed in said holding member and having a writing end extending through said bore and being eccentric of said holding member, said writing element having a rear end located concentric with the rear end of said holding member and axially abutting said knob.

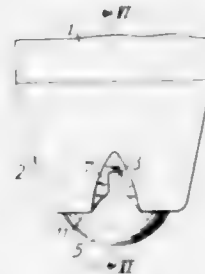
3,000,353

BALL POINT PENS

Josef Schwarzäugl, Stein, near Nurnberg, Germany, assignor to A. W. Faber-Castell, Stein, near Nurnberg, Germany

Filed Jan. 9, 1961, Ser. No. 81,642

6 Claims. (Cl. 120—42.4)



1. A ball point pen comprising a hollow shaft containing an ink paste reservoir therein, said shaft being formed at one end thereof with a socket having a lip, said socket forming a spherical seat for a ball rotatably mounted in said socket and partly projecting therefrom beyond said lip, said shaft being formed with a plurality of longitudinal channels extending from said ink paste reservoir to said socket, only one of said channels terminating at one end thereof at said lip of said socket with each of the remaining channels terminating at one end thereof at a point within said socket and spaced from said lip, whereby more ink paste is supplied to that por-

tion of said lip at which said one end of said one longitudinal channel terminates than is supplied to the remainder of said lip, thereby producing a thickening of the stroke at said lip portion.

3,000,354

REFILL OF A BALL POINT WRITING MEANS

Werner Germann, Lugano-Viganello, Switzerland, assignor to Doleo S.A., Lugano, Switzerland

Filed Jan. 26, 1959, Ser. No. 788,946

Claims priority, application Switzerland Feb. 4, 1958

7 Claims. (Cl. 120—42.4)



1. A refill for a ball point writing means comprising a tubular member provided at one end with a ball point for writing, a writing composition in said tubular member adjacent said ball point, a pasty plug forming a retaining and follower means for said writing composition, and a closure for said tubular member remote from said ball point, said pasty plug being spaced from said closure to provide a compartment, a liquid in said compartment, at least one chemical compound incorporated in said pasty plug and at least one chemical compound in solution in said liquid, said chemical compounds being inert to the writing composition but reactive with each other to generate a gas in said compartment.

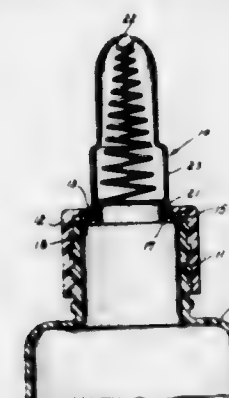
3,000,355

MARKING DEVICES

Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.

Filed Aug. 24, 1959, Ser. No. 835,459

1 Claim. (Cl. 120—42.4)



In a marking device, the combination of a marking fluid squeeze type container having an externally threaded open end neck; a spout having an upper end opening and also having its lower end flaring outwardly and termination in a peripheral outward flange; with such flange seating on and engaging the upper edge of the neck; a retaining ring in said spout at its lower end; a valving

ball in said spout opening at its upper end; a coiled compression spring in the spout between and bearing against the retaining ring and the ball; and an internally threaded cap threaded on said neck and having a flexible peripheral inward flange formed with a central hole whose edge is flexible and is in tight sealing engagement with the side wall of the spout at its outwardly flaring lower end; the cap flange having on its lower surface an annular rib formed and directed toward the flange of the spout and the upper edge of the neck to bear against the spout flange and press the latter tightly against the neck edge, such rib being coaxial with the neck edge.

3,000,356

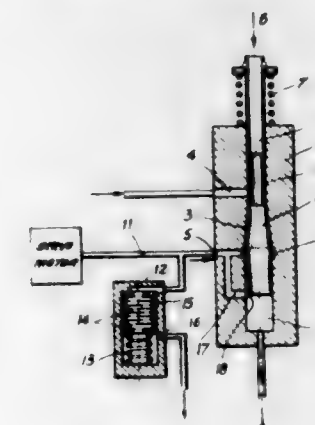
PRESSURE REDUCING DEVICE FOR HYDRAULIC SERVO-MECHANISMS

Antoine Brueker, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France

Filed Oct. 2, 1957, Ser. No. 687,759

Claims priority, application France Oct. 29, 1956

4 Claims. (Cl. 121—38)



1. Apparatus for coupling a fluid pressure source to a pressure responsive device comprising a gradually opening valve coupled to said source, first means coupled to and controlling the valve, second means coupling said valve to said device, and constant-leakage means coupled to said second means and establishing an output threshold providing for a progressively controlled loss of load in said valve and enabling the lowering of the pressure of said source to a predetermined maximum pressure.

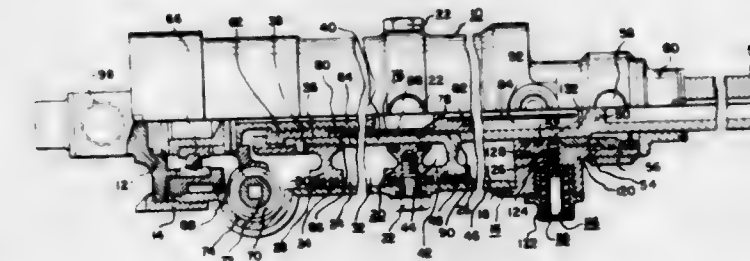
3,000,357

HIGH TEMPERATURE HYDRAULIC ACTUATOR ASSEMBLY

Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,572

7 Claims. (Cl. 121—38)

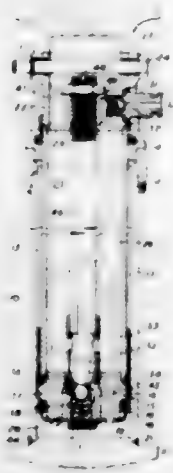


1. An actuator assembly including, a cylinder, a reciprocable piston disposed in said cylinder and dividing said cylinder into opposed chambers, and a constant flow valve fluidly connected with each chamber whereby cooling fluid will be circulated at a substantially constant rate through said cylinder when said chambers are pressurized.

3,000,355

HYDRAULIC PROPS OR STRUTS

Michael J. Marlow, Cheltenham, England, assignor to Dowty Mining Equipment Limited, Tewkesbury, England, a British company
 Filed Feb. 15, 1960, Ser. No. 8,796
 Claims priority, application Great Britain Feb. 23, 1959
 8 Claims. (Cl. 121—40)



1. A hydraulic prop for the support of an externally applied load from a resisting base through pressurization of contained liquid, said prop comprising at least two telescopic cylinder and ram members mounted slidably one in the other and together enclosing a liquid pressure chamber, one part of the ram member having a passageway connecting the inside and the outside of the pressure chamber, a valve disposed in said passageway, and a valve-operating element effectively fixed in another part of the ram member separated from the one part in which the valve is disposed by a portion of the ram member which is subject to longitudinal strain under the opposed forces of the externally applied load on the ram member and the resulting liquid pressure in the pressure chamber, the valve-operating element being disposed in co-operative association with the valve to open same as an excess pressure relief valve when the longitudinal strain in the ram member exceeds a predetermined value.

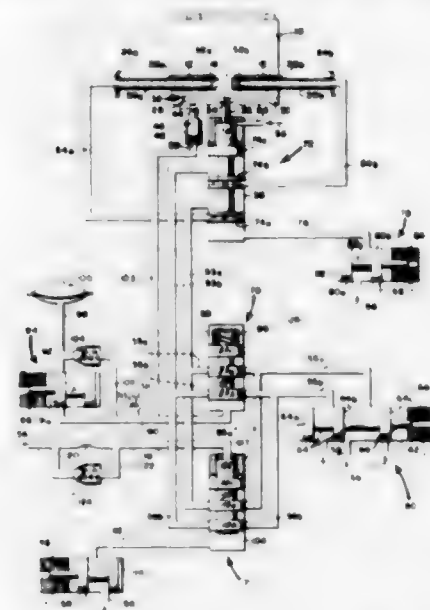
3,000,359

HYDRAULIC DRIVE MECHANISM FOR MOVING AN ARTICLE TO PREDETERMINED POINTS

Gordon H. May, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
 Filed Mar. 11, 1960, Ser. No. 14,229
 7 Claims. (Cl. 121—40)

4. Arrangement for moving an object to predetermined points along a rectilinear path comprising a slave cylinder arranged to support said object; high pressure lines leading into said slave cylinder at opposite ends thereof; a control valve for said lines having line-blocking components settable from a first position wherein they connect one of said lines to a source of fluid under high pressure and the other of said lines to a sump to effect operation of said slave cylinder and movement of said object, to a second position wherein they block said lines to arrest movement of the object; and means for actuating said valve including fluid in said valve for holding said line-blocking components thereof in line-closing position, a fluid accumulator, a low pressure line connecting said valve and said accumulator, line-blocking means settable from a position wherein it blocks said low pressure line to maintain fluid in said valve and thus keep the line-blocking components of said valve in line-blocking condition to a position wherein it opens said low pressure line to permit escape of the fluid in said valve to said accumulator and thus cause the line-blocking components of said valve to open said high pressure lines, a pump connected to said low pressure line at a

point between said valve and said low-pressure-line-blocking means, camming means supported for movement with said object having a sequence of alternate lobes and recesses in actuating engagement with said pump for alternately pumping fluid into, and withdrawing fluid from, said low-pressure line as said object moves along said

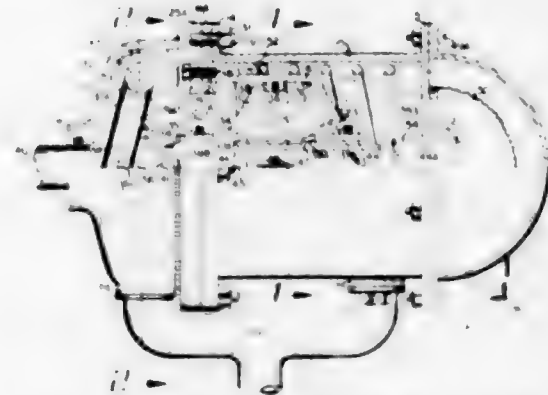


3,000,360

HYDRAULIC VALVE

Carle C. Conway III, Glendora, Calif., assignor to Aero-Jet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Apr. 15, 1957, Ser. No. 652,937
 6 Claims. (Cl. 121—41)

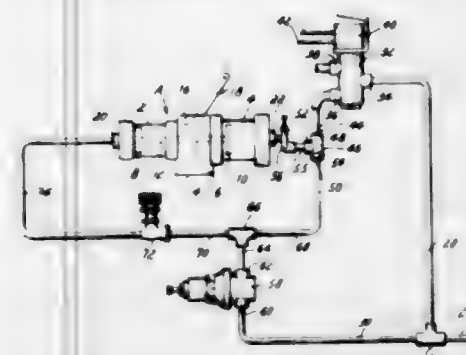


1. A servo control mechanism for a pressure line, comprising: a double ended cylinder; a piston arranged therein; a piston rod on which said piston is mounted, said piston rod being tubular for at least a portion of its length, and passages being provided through the piston rod and piston leading from the inner periphery of the tubular portion of the piston rod to the opposite working faces of the piston; a pressure responsive valve member mounted in the tubular portion of the piston rod, and effective to admit line pressure to one or the other face of said piston through the passages in the piston rod and piston; means for sequentially directing fluid at monitored line pressure through said pressure responsive valve member and then through said passages in a unitary flow path; means for loading said valve member to be operable at a predetermined absolute value comprising only a spring; and means for relieving said pressure responsive valve member of fluid back-pressure.

3,000,361

PUSH DOOR MECHANISM

Frank M. Delany, Summit, N.J., and Kristupas Daugirdas, Dorchester, Mass., assignors to National Pneumatic Co., Inc., Boston, Mass., a corporation of Delaware
 Filed Nov. 6, 1959, Ser. No. 851,463
 14 Claims. (Cl. 121—44)



1. In combination, a door adapted to be pushed from first to second position, a differential piston-cylinder assembly having a small side and a large side, an operative connection between said piston and said door, a plurality of fluid sources having fluid at different predetermined high and low pressures the relative magnitudes of which are defined hereinafter, and control means operatively connected between said fluid sources and said differential assembly, said control means being effective to perform the following functions: (a) set up a locking condition by connecting fluid at high pressure to the large side of said assembly and connecting fluid at low pressure to the small side thereof, and (b) set up a pushing condition by connecting fluid at low pressure above atmospheric pressure to the large side of said assembly and fluid at low pressure to the small side thereof, the magnitude of said high pressure applied to the large side of said assembly in said locking condition being such, in conjunction with the difference in size between said large and small sides of said assembly and the magnitude of the low pressure then applied to the small side thereof, as to retain said door in its first position with a large locking force, the magnitude of the low pressure applied to the large side of said assembly in said pushing condition being such, in conjunction with the difference in size between said large and small sides of said assembly and the magnitude of the low pressure then applied to the small side thereof, as to retain said door in its first position with a reduced force which can be overcome by manually pushing on said door.

3,000,362

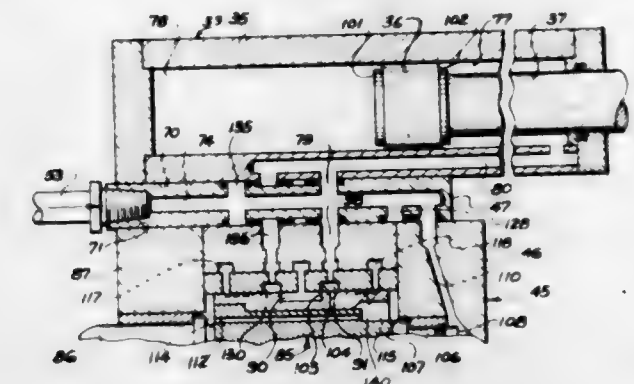
TRACER MECHANISM

Harry C. McCurdy, deceased, late of Zanesville, Ohio, by Ruth L. McCurdy, administratrix, Zanesville, Ohio; said Harry C. McCurdy assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Delaware
 Continuation of abandoned application Ser. No. 642,212, Feb. 25, 1957. This application Sept. 15, 1960, Ser. No. 56,318

17 Claims. (Cl. 121—45)

14. A control apparatus comprising, in combination, a stationary valve body including valve chamber and an inner cylindrical surface provided with two spaced recesses having spaced inner edges; means forming a source of pressurized fluid; means forming a drain; a control element having an outer surface slideably engaging said cylindrical surface and provided with a recess having two outer edges each of which is spaced a minute distance inwardly from a respective one of said inner edges of said valve body recesses; fluid motor casing means forming a motor cylinder; piston means separating said motor cylinder into first and second chambers; an actuating rod on said piston means and extending to the

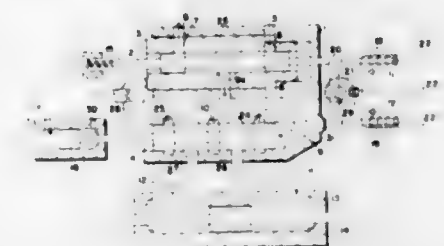
exterior of said fluid motor casing means; passage means connecting one of said chambers with said recess in said control element; passage means connecting the other of said chambers with said source; passage means connecting said source and drain with said valve body; contour sensing means operatively connect-



3,000,363

TWO STAGE HYDRAULIC SERVO VALVE

Paul F. Hayner and George J. Shomphe, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
 Filed Mar. 31, 1959, Ser. No. 803,169
 3 Claims. (Cl. 121—46.5)



1. A two-stage hydraulic servo valve adapted to control a source of fluid under pressure, comprising: a housing; a pilot cylinder formed in said housing; a reciprocating sleeve valve in said cylinder, a pilot port being formed in said housing and said sleeve valve for connecting said source of fluid with the interior of said sleeve valve; a reciprocal, pilot piston valve in said sleeve valve adapted selectively to open and close said sleeve valve ports when said pilot piston valve is displaced relative to said sleeve valve; a control cylinder in said housing connected to said pilot cylinder through a passageway in said housing, an input control port formed in said housing for connecting said source of fluid with the interior of said control cylinder and an output port formed in said housing for connecting the interior of said control cylinder to an output actuator device; a reciprocal, control piston valve in said control cylinder adapted selectively to open and close said input control port in response to variations in fluid under pressure in said passageway to said pilot cylinder and apply said fluid through said output port; a means connecting said control piston valve and said sleeve valve for effecting their joint movement such that displacement of said control piston valve effects a counter displacement of said sleeve valve; motor means coupled to said pilot piston valve and affixed to said housing for controlling said pilot piston valve selectively to open and close said ports in said sleeve valve to apply said fluid through said passageway to said control cylinder,

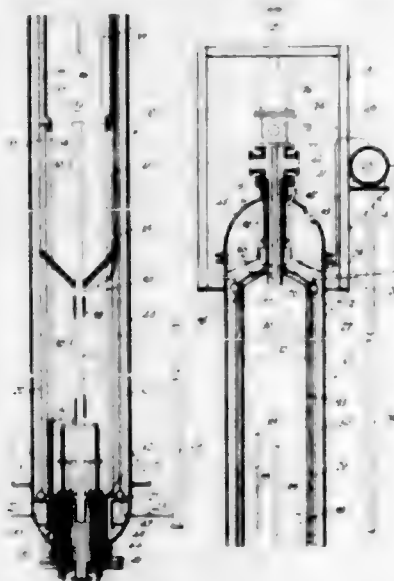
whereby when said pilot piston valve is displaced, said sleeve valve is displaced in the same direction under increased pressure further to control the closing of said sleeve-valve ports and discontinue the displacement of said control piston valve, thereby providing a flow of fluid through said output port that varies in proportion to the displacement of said pilot piston valve relative to said housing; and stops associated with said housing to limit the motion of said pilot piston valve in a given direction while permitting the continued motion of said sleeve valve and said control piston valve, whereby when said motion of said pilot piston valve has been limited by said stops, fluid under pressure continues to be impressed on said sleeve valve to shear through such particles as may become wedged between said pilot piston valve and said sleeve valve.

3,000,364

REACTOR WITH SUPERHEATER COIL ENCIRCLING HEAT CARRIER LIFT PIPE

Andrew B. Steever, Old Greenwich, Conn., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 30, 1957, Ser. No. 637,113
2 Claims. (Cl. 122-4)



1. In high temperature processing apparatus utilizing a superheated fluid as a reactant, a relatively elongated reaction chamber having superposed upper and lower zones with a gas outlet from said upper zone, said lower zone having a high temperature therein, a vertically arranged transfer pipe in said chamber for transferring a solid particulate heat carrier from said lower to said upper zone and having at least a lower portion thereof subjected to said high temperature, means for protecting at least said lower portion of said transfer pipe from the effects of such relatively high temperature comprising a tubular coil in contact with and jacketing the exterior surface of said transfer pipe lower portion; means for introducing a fluid into said tubular coil for superheating thereof by heat absorption from the surrounding high temperature zone, and means for withdrawing the superheated fluid from said tubular coil and discharging the superheated fluid into said upper zone as a reactant.

3,000,365

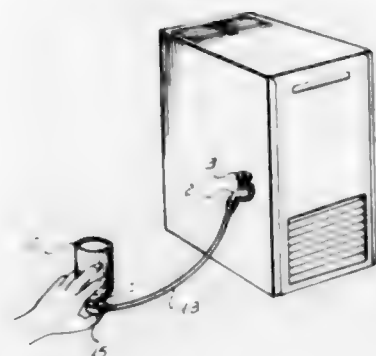
METHOD FOR PROTECTING AND TREATING A HEATING SYSTEM AGAINST RUST, CORROSION, ETC.

Richard A. Neim, Bronx, N.Y.
(144 Hunter Ave., North Tarrytown, N.Y.)

Filed Nov. 9, 1959, Ser. No. 851,705
2 Claims. (Cl. 122-379)

1. Method of treating a domestic steam and hot water system having a furnace and a normally closed opening

means, which comprises: temporarily manually coupling into said system while it remains in normally closed condition a dispenser container which is normally disconnected from the system, said container having a normally closed manually operable valve and containing a liquid treating agent for protecting the system against deterioration, and a non-foaming gaseous propellant under residual pressure greater than the internal pressure of the system and having a connecting means adapted to be connected to the system, said coupling including the steps of con-



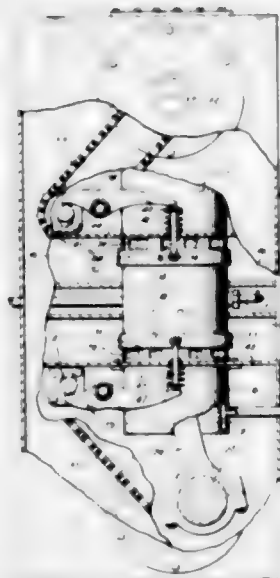
necting said connecting means to said normally closed opening means in the system, then opening communication between the interior of said system and the manually operable valve of the container by opening the normally closed opening means, then manually opening the valve of the container to feed the treating agent from the container into the system, thereafter closing communication between the interior of the system and the container by closing the said opening means, and thereupon disconnecting the container from the system, and foregoing steps being duplicated in their entirety for each treatment of the system.

3,000,366

OPPOSED PISTON ENGINE

Walter L. Blackburn, Houston, Tex.
(2104 17th St., Galena Park, Tex.)

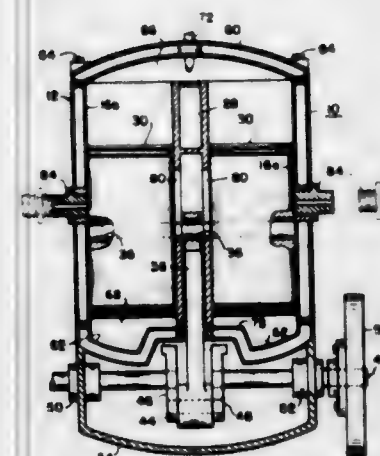
Filed July 28, 1958, Ser. No. 751,461
5 Claims. (Cl. 123-51)



1. In an engine, a stationary cylinder, a crankshaft, a piston in the cylinder connected to the crankshaft, ports in the cylinder, an annular header disposed about the ports, a ring-like slide valve disposed about said ports and wholly within the header, means including an element movably extending through said header arranged to move said slide valve in a direction opposite to that of the piston in response to rotation of the crankshaft, and means sealing said element with respect to the header.

DOUBLE ACTING TWO-STROKE CYCLE ENGINE

Hodge M. Eagleson, 1525 State Ave., Cornopolis, Pa.
Filed Aug. 17, 1960, Ser. No. 58,137
3 Claims. (Cl. 123-53)



1. In a double acting internal combustion engine, a combination comprising an engine block, four separate substantially parallel cylinders disposed in said block and arranged in adjacent pairs with the cylinders of each adjacent pair having a partition common thereto, a double acting piston in each cylinder with wrist pins connecting said pistons to form adjacent pairs corresponding to said adjacent pairs of cylinders, a first head means affixed to said block and forming a first common firing chamber at the crankshaft end of said four cylinders, a second head means affixed to said block and forming a second common firing chamber for said four cylinders at that end opposite said crankshaft end, a single crankshaft throw means, connecting rod means joined at one end to said single crankshaft throw means and at the other end to said wrist pins so that said pistons move substantially in unison, means for actuating said pistons to move substantially in unison under firing pressure comprising spaced apart gas ports in said cylinders and at least one fuel injector for each of said first and second firing chambers, operation of said fuel injectors being timed to that of said pistons, lubricating means extending through a side of each of said cylinders and disposed in a plane of oscillation of said wrist pins adjacent an end thereof and within limits of their stroke, said lubricating means delivering oil substantially continuously to said pistons during operation of said engine.

3,000,368

FUEL INJECTION APPARATUS FOR INTERNAL COMBUSTION ENGINES

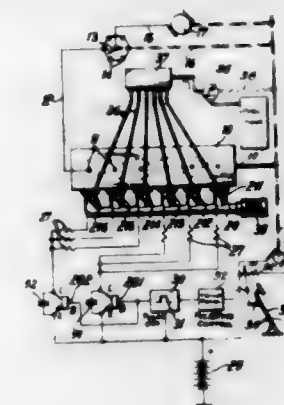
Heinrich Knapp and Leo Steinke, Stuttgart, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Apr. 14, 1960, Ser. No. 22,255

Claims priority, application Germany Apr. 15, 1959
8 Claims. (Cl. 123-119)

1. In an electrically operated fuel injection apparatus for internal combustion engines, having at least one electro-magnetically operable injection nozzle device movable between open and closed conditions, in combination, electromagnetic means in said nozzle device energizable for moving said nozzle device between one and the other of said conditions; electrical energy means for furnishing electric pulses for energizing said electromagnetic means for spaced pulse periods so as to move electromagnetically said nozzle device from one to the other one of said conditions during said pulse periods, with a residual electromagnetic effect of said electromagnetic means appearing therein after the termination of each pulse period

and tending to create a delay of the return of said nozzle means to said one condition thereof; and electrical means



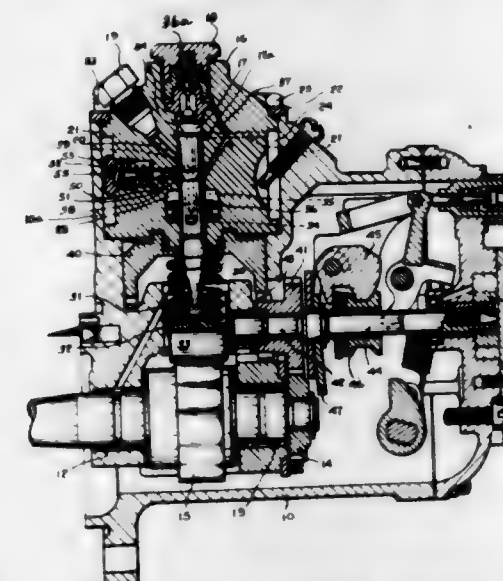
for reducing said delay by counteracting said residual electromagnetic effect.

3,000,369

FUEL INJECTION APPARATUS

Waldemar O. Biehoff, Holyoke, Mass., assignor to American Bosch Arms Corporation, a corporation of New York

Filed Nov. 23, 1959, Ser. No. 854,807
7 Claims. (Cl. 123-139)



1. In a device of the character described, a housing having a bore, a pumping and distributing member in said bore, a plurality of outlets communicating with said bore and adapted to deliver fuel to each of a plurality of combustion chambers successively, passage means for supplying fuel to said bore from a suitable source of fuel, means for effecting reciprocation and rotation of said pumping and distributing member for pumping and distributing fuel to each of said outlets successively, fuel distributing means on said pumping and distributing member and fuel injection timing passage means communicating with said fuel distributing means for allowing the passage of fuel from said fuel distributing member for automatically varying the timing of injection upon changes in speed of operation of said pumping and distributing member.

3,000,370

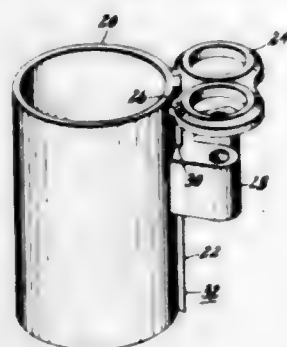
CYLINDER LINER AND VALVE SEAT ASSEMBLY

Theodore W. Kunzog, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 9, 1959, Ser. No. 851,753
6 Claims. (Cl. 123-193)

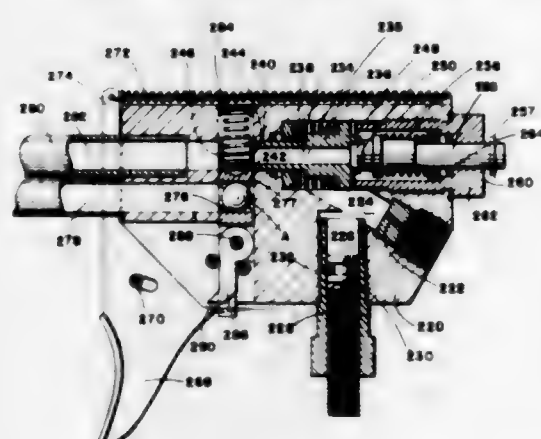
4. A cast predominantly aluminum block assembly, comprising, a finned block having cast therein a cylinder

liner, a valve seat and a valve guide, said liner having a longitudinally protruding dovetail interlock extending along its outer surface, said seat and guide each having an external interlock for mating with said dovetail inter-



lock whereby the seat and guide may be positioned and held with respect to the liner in predetermined position therewith prior to casting of the block therearound, said liner, seat and guide being formed from compacted and sintered ferrous material.

3,000,371
AUTOMATIC FLUID POWERED GUN
Floyd Don Hyde, 702 1/2 S. Palm, Alhambra, Calif.
Filed June 10, 1958, Ser. No. 741,097
16 Claims. (Cl. 124-11)

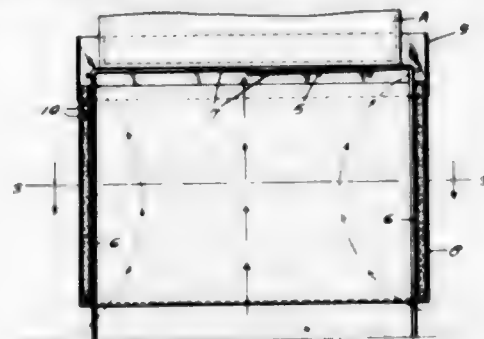


9. In an automatic fluid powered gun the combination of: a frame; a barrel having a bore therethrough and supported on said frame; a projectile loading member movable laterally of said bore; said loading member having a projectile holding opening movable into alignment with said bore; a chamber containing pressure fluid; valve means responsive to fluid pressure in said chamber and having a differential area exposed to fluid force tending to project said valve toward said loading member and to open said valve; said projectile loading member normally holding said valve closed; and a trigger for moving said loading member to a position in which said opening therein aligns with said bore and wherein said valve member is permitted to project into said opening whereby it opens and releases fluid pressure into said bore from said chamber.

3,000,372
FIELD COOK STOVE
Wesley L. Hall, Box 211, Martin, Ky.
Filed Sept. 6, 1960, Ser. No. 54,288
1 Claim. (Cl. 126-9)

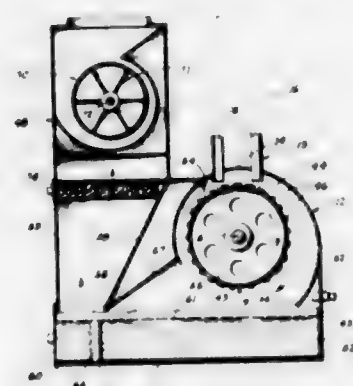
An outdoor disposable cook stove comprising a frame embodying a pair of inverted U-shaped members, providing leg sections and connecting grill sections, said leg sections having spurs extending outwardly from the surface thereof, a fuel envelope fitted around said leg sections, the fuel envelope being pierced by said spurs, se-

curing said envelope in an adjusted position on said leg sections, and the upper and lower ends of said envelope being spaced from the upper and lower ends respectively



of said wire frame, providing passageways for the passage of air to the burning fuel envelope, at the upper end thereof.

3,000,373
SMOKE GENERATOR
Richard A. Hawley, Oakland, Calif., assignor to Meat Packers Equipment Co., Oakland, Calif., a corporation of California
Filed Jan. 26, 1959, Ser. No. 788,984
3 Claims. (Cl. 126-59.5)

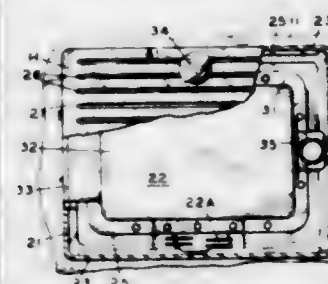


1. In a smoke generator, a horizontal-axis driven friction drum, means to guide a substantially vertical log of wood for frictional engagement at its lower end with the top of the drum, a housing in which the drum is enclosed, an elongated water pan in the housing under the drum disposed so that the axis of the drum is transversely of the length of the pan; the housing including a circumferential shroud extending over the drum from end to end thereof and having starting and terminal ends relative to the direction of rotation of the drum, the terminal end being disposed adjacent one end of the pan and the starting end of the shroud being disposed a substantial distance above the water in the pan, a baffle in the housing extending downwardly from said starting end of the shroud at an incline toward the other end of the pan and terminating at its lower edge close to but spaced from said water in the pan, the drum at the bottom turning toward the baffle, and an upwardly extending smoke-exhausting duct formed with the housing between said other end of the pan and the lower edge of the baffle.

3,000,374
AIR CIRCULATING HEATERS
Fred L. Lund, Box 406, Glendale, Oreg.
Filed June 13, 1958, Ser. No. 741,788
1 Claim. (Cl. 126-110)

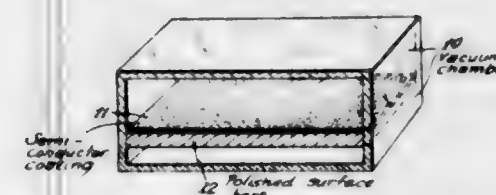
An air circulating heater comprising a vertical air duct, an integral peripheral flange formed on the upper end of said duct and extending outwardly therefrom for supporting said duct interiorly of an opening in a floor, an annular vertical flange on said duct above said peripheral flange, a casing having top and side walls and an open

bottom, said annular vertical flange engaging the interior margin of said open bottom positioning said casing centrally in said duct, an air circulating fan in said duct, an air filter in said duct below said fan, a grille in said duct at substantially floor level interiorly of said annular vertical flange whereby to overlie said duct when said casing is removed, said casing having a plurality of transversely extending elongated air discharge slots on opposite sides thereof, brackets extending dependingly inwardly from opposite sides of said casing, a solid fuel burning fire pot carried by said brackets in centered relation in



said casing and spaced from said grille to provide an unimpeded air passage from said duct about said fire pot, a heat exchanger mounted on top of said fire pot centrally of said casing and spaced from the top and side walls thereof, a smoke outlet extending from the top of said heat exchanger through the top of said casing, means forming an air duct extending between the exterior of said casing and the interior of said fire pot for supplying air for combustion of solid fuel in said fire pot, and means including an access door in said casing and a communicating access opening in said heat exchanger for supplying solid fuel to said fire pot.

3,000,375
SEMI-CONDUCTOR HEAT ABSORPTION MEANS
Marcel J. E. Golay, 116 Ridge Road, Rumson, N.J.
Filed Oct. 7, 1957, Ser. No. 688,656
1 Claim. (Cl. 126-270)

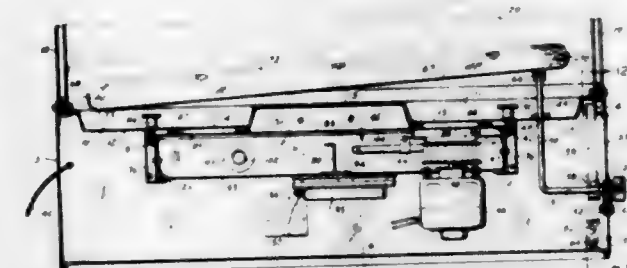


An efficient solar heat collector comprising a closed vacuum chamber transparent to solar radiation, a metallic base plate having a polished reflecting surface spaced from and facing one wall of said chamber and a thin film of tellurium evaporated on said polished reflecting surface in a vacuum of about one millimeter of mercury to produce a black tellurium coating, said black tellurium coating having high absorption in the solar spectral region from 0.4-2 microns, having a sharp cut-off and having low absorptivity and emissivity in the heat energy spectral region from 5-15 microns whereby the coated plate is strongly heated by solar radiation with low heat losses by emissivity in the 5-15 micron spectral region.

3,000,376
INCUBATORS FOR INFANTS
William Harold Smith and Rudolph Frohner, Norwalk, Conn., and Roy T. Adolphson, Webster Groves, Mo., assignors to O.E.M. Corporation, East Norwalk, Conn., a corporation of Connecticut
Filed Apr. 23, 1957, Ser. No. 654,503
3 Claims. (Cl. 128-1)

1. An incubator comprising a base housing having a horizontal wall, a tray removably mounted on said wall, an elevating rod adapted to project through said wall and

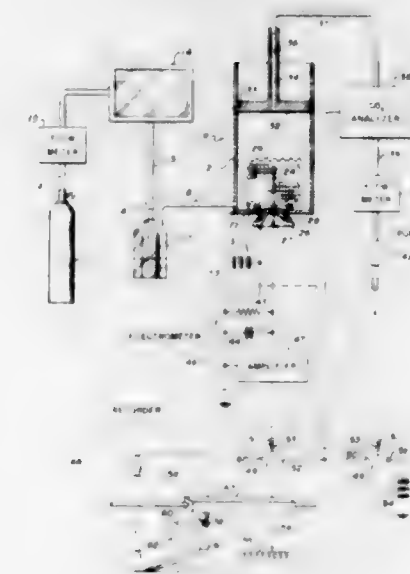
operatively connected to the underside of said tray adjacent one end thereof, spring biased means for urging said elevating rod upwardly so as to elevate said tray to any



one of a plurality of selected angular positions, and locking means on one end of the elevating rod for locking the tray at any such selected position.

ERRATUM
For Class 128-2.1 see:
Patent No. 3,000,271

3,000,377
METHOD AND APPARATUS FOR METABOLIC ASSAY
Bert M. Tolbert, Berkeley, Martha R. Kirk, Concord, and Elton M. Baker, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed May 10, 1956, Ser. No. 584,154
17 Claims. (Cl. 128-2.07)



1. In a method of assaying the metabolic rate of a selected carbon containing substance in a living subject, the steps comprising administering a measured quantity of said substance to said subject which quantity contains a known proportion of radioactive carbon as a constituent thereof, collecting the exhalations of said subject subsequent to administration of said substance thereto, directing said exhalations along a confined path, detecting the degree of radioactivity of said exhalations at a point in said confined path at a plurality of times, and comparing said degrees of radioactivity of said exhalation at said plurality of times whereby changes in the rate of transmission of said substance through the biochemical system of said subject are observed.

3,000,378

LIMB COMPRESSION SLEEVE

Stephen A. Ziemann, Mobile, Ala., assignor to S. H. Camp & Company, Jackson, Mich., a corporation of Michigan

Filed Nov. 26, 1957, Ser. No. 698,945
3 Claims. (Cl. 128—165)

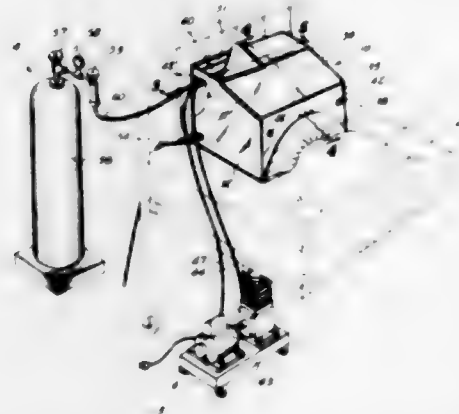


1. A compression sleeve to be worn following the Ziemann Needle Lymphangioplasty for controlling lymphedema comprising an elongated arm encompassing portion adapted to enclose the entire length of the arm, said arm portion consisting of elastic cloth expandable transversely to the length of said arm portion, lacing extending the length of said arm portion constituting a portion of the periphery thereof whereby the circumference of said arm portion may be varied along the length and a shoulder piece affixed to one end of said arm portion having a shoulder overlying portion adapted to engage the shoulder of the wearer and a band affixed to said shoulder piece extending transversely to the longitudinal length of the sleeve for encompassing the upper chest region of the wearer thereby maintaining said end of said arm portion adjacent said shoulder.

3,000,379

OXYGEN TENT APPARATUS

John J. Viers, 110 W. Grant, Marshalltown, Iowa
Filed Jan. 4, 1960, Ser. No. 385
3 Claims. (Cl. 128—191)



1. In a tent for receiving at least the head portion of the body of a patient in medical treatment including a top wall and a pair of oppositely disposed end walls, one of said end walls having a closable head receiving opening, a cooling unit comprising a plurality of connected vertically stacked coils, means supporting said cooling unit within said tent at a location adjacent to and extended transversely of said other end wall, with a pair of adjacent ones of said coils being vertically spaced over a portion of their lengths, an oxygen supply tube having a discharge end section extended transversely of said other end wall and inserted within said cooling unit between said vertically spaced pair of coils, and a closure for the terminal end of said discharge

section, said section within said cooling unit being formed with a plurality of longitudinally spaced outlets, whereby the oxygen supplied within the tent is cooled and circulated with the air in said tent.

3,000,380

MEANS AND METHODS OF INJECTING OR INFUSING FLUIDS INTO PATIENTS

George O. Doherty, 2301 River Road, Missoula, Mont.
Filed Sept. 22, 1958, Ser. No. 762,630
2 Claims. (Cl. 128—214)

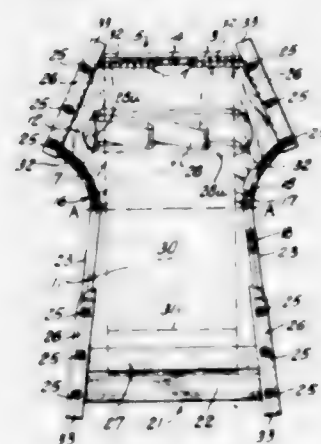


1. Intravenous catheter means comprising a needle having a tubular bore and a sharpened end capable of penetrating the flesh and entering a blood vessel of a patient, said needle also being provided at its other end with a hub-like element, a rigid elongated barrel removably secured by a slip-fit to the hub, a flexible catheter having one end slidably disposed within the tubular bore of the needle and having a substantial portion of its length extending beyond the hub-like element of the needle into and lying loosely within the barrel so as to be shiftable from the barrel through the needle and into the patient's blood vessel when the needle has been inserted therein, said loosely lying portion being provided at its proximal end with an enlargement sized for retentive engagement within the hub and an imperforate plug slidably engaged within the barrel for shifting movement axially therealong, said plug having an inwardly presented flat face-portion for abutting engagement against said proximal end of the portion of the catheter which lies loosely within the barrel for propelling the catheter through the bore of the needle as the plug is pushed along the barrel.

3,000,381

DIAPER HOLDER

William G. Mulhole, Elizabeth, N.J., and John J. Osmar, North Little Rock, Ark., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
Filed Nov. 7, 1956, Ser. No. 620,824
5 Claims. (Cl. 128—284)

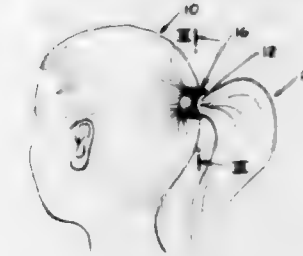


5. A diapering device comprising, in combination; a diaper pad holder which in turn comprises a crotch portion, leg embracing portions, waist embracing portions, said holder being divided by an imaginary median line passing approximately through the mid-point of the crotch portion into a front half and a rear half, the leg embracing portions and waist embracing portion of the holder to the rear of said median line being extensible and elastic and the leg embracing portions and the waist embracing portion to the front of said median line being relatively inextensible and non-elastic, fastening devices along the

3,000,384

FASTENER TIE

Eber F. Piers, Jr., 2436 Inverness Ave., Hollywood, Calif.
Filed Jan. 4, 1960, Ser. No. 171
2 Claims. (Cl. 132—46)



sides of each of said front and rear halves, beyond their respective leg embracing portions, a front strap extending across and secured at its ends to said front half adjacent the waist embracing portion of said half, and a rear strap extending across and secured at its ends to the rear half of said holder; and an elongated disposable diaper pad having its front end inserted under said front strap and the remainder of the pad folded over the front strap and threaded under said rear strap, whereby said pad is attached to the relatively inextensible front half of the holder and is slidably positioned on said extensible rear half, and the holder bearing the pad may be fitted on a baby by placing said leg embracing portions between a baby's legs and stretching the extensible rear half of the holder around the baby and securing it to said front half by said fastening devices without stretching the pad where it is fixed in the front half of the holder.

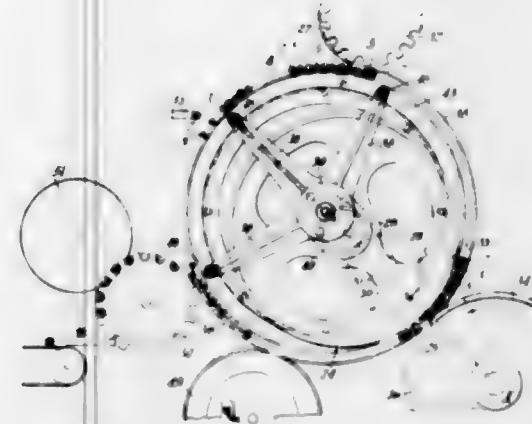
1. A fastener comprising: an elongated flexible tape having on opposite faces thereof interengageable mating surfaces including a first surface provided with a multiplicity of small outwardly projecting loops made of stiff filamentary material and a second surface having a multiplicity of curly filamentary members releasably interengageable with said loops, operative portions of said surfaces being displaced from one another longitudinally of the tape.

3,000,382

MANUFACTURE OF FILTER-TIP CIGARETTES

George Daniel Horgan, London, England, assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Sept. 3, 1958, Ser. No. 758,705
Claims priority, application Great Britain Sept. 10, 1957
15 Claims. (Cl. 131—94)



1. A machine for applying uniting band material to filter mouthpiece cigarette assemblies, comprising a rotatable cylindrical drum for supporting filter mouthpiece assemblies on the periphery thereof, means for feeding lengths of uniting band material to be wrapped about the assemblies and eccentric means within said drum co-operating with said feeding means for frictionally engaging the cigarette assemblies and the lengths of connecting material in a rolling motion for applying said lengths to said assemblies.

3,000,383

METHOD OF FORMING TOBACCO COMPOSITION

James A. de Tomasi, Cold Spring Harbor, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

No Drawing. Filed Sept. 1, 1955, Ser. No. 532,117
1 Claim. (Cl. 131—140)

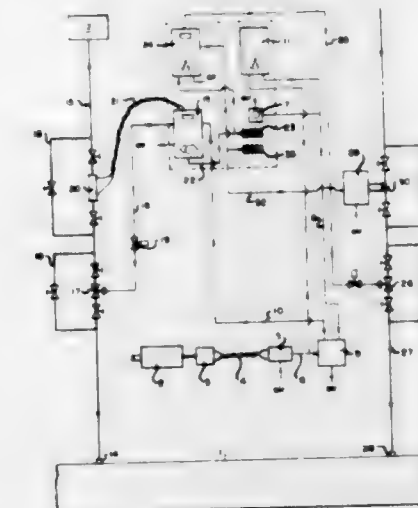
A method of making a viscous tobacco slurry which comprises combining finely divided dry ground tobacco and sodium carboxymethyl cellulose in water to form a composition, acidifying said composition and maintaining the acidity of said composition at a pH between 2 and 3, whereby sodium carboxymethyl cellulose is insolubilized as cellulose glycolic acid and the viscous character of said composition is preserved.

3,000,385

PICKLING APPARATUS

Ell Shay, Warren, Ohio, assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio

Filed Oct. 30, 1957, Ser. No. 693,369
10 Claims. (Cl. 134—57)



1. Apparatus for continuously pickling a product comprising a pickling tank through which said product is passed, measuring means to measure the speed at which the product passes through the tank, and means responsive to said measuring means to introduce a pickling agent into the tank whereby the pickling agent is introduced at a rate proportional to the measurement of said measuring means.

3,000,386

EXPANSIBLE FRAME STRUCTURE

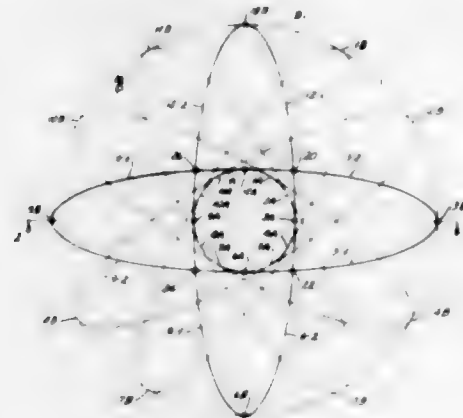
John H. Schulze and Stanley J. Bye, Iowa City, Iowa, assignors to the State of Iowa, for the use and benefit of the State University of Iowa, Iowa City, Iowa, an educational institution of Iowa

Filed Dec. 3, 1958, Ser. No. 778,012
7 Claims. (Cl. 135—4)

1. An expansible frame structure shiftable between a contracted position in which said structure defines an elongate substantially frusto-conical shape and an expanded position in which said structure defines a hollow substantially hemispherical dome-like shape, said structure in either of said positions having a vertical axis of

symmetry extending upwardly from the center of a base circle to the center of an apex circle, said structure comprising a plurality of elongate flexible first strips having their lower ends located at symmetrically spaced locations upon said base circle, said first strips being inclined upwardly from said base circle to extend circumferentially in a first direction about said axis to terminate at their upper ends at symmetrically spaced locations on said apex circle, a plurality of elongate flexible second strips having a length equal to the length of said first strips, a first pivot located on the lower end of each of said second strips pivotally connecting the lower end of the second strip to the lower end of one of said first strips to define a strip pair, the second strip of each strip pair being inclined upwardly from said first pivot to extend circumferentially about said axis in a direction opposite to said first direction to terminate upon said apex circle at a location where the first and second strips of each strip

pair are symmetrically disposed relative to each other on opposite sides of a vertical plane containing said axis and the first pivot of the strip pair, a second pivot on the upper end of each of said second strips pivotally connecting the upper end of the second strip of each strip pair to the upper end of a first strip of another strip pair, a series of third pivots interconnecting said strip pairs to each other at locations intermediate the ends of the strips, restraining means interconnecting the lower ends of said strip pairs to each other to maintain said first pivots on a base circle of relatively large maximum radius when said structure is in said expanded position, and means pivotally interconnecting said strips at a location above said base circle operable when said structure is in said expanded position to flex said strips to extend along great circle arcs of a hemispherical surface of radius substantially equal to said relatively large maximum radius and to establish a maximum radius of said apex circle materially smaller than said relatively large maximum radius.



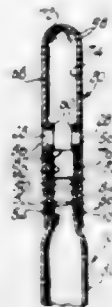
3,000,387

UMBRELLA RIB TIPS

Henry Tibony, New York, N.Y.
(118 Dudley Ave., Staten Island, N.Y.)
Filed Aug. 26, 1957, Ser. No. 680,093
6 Claims. (Cl. 135—36)

1. The combination of an umbrella rib, and a tip for the rib, the tip comprising a tubular member formed by producing a plurality of ridges in and a pair of openings extending through an otherwise flat piece of material, the openings being bounded by slight projections from the surface of the piece, the piece being rolled into tubular form with one end closed and the other end open, the ridges forming ledges on the inside face of the bore of the tubular form and the openings being disposed in opposed relation when the piece is in the tubular form, each ledge being defined by a small wall section tapering toward the closed end and a narrow face at a sharp angle

with the wall section, the projections extending into the bore, the rib having a plurality of ledges adjacent its end and complementary to the bore ledges, the ledges being

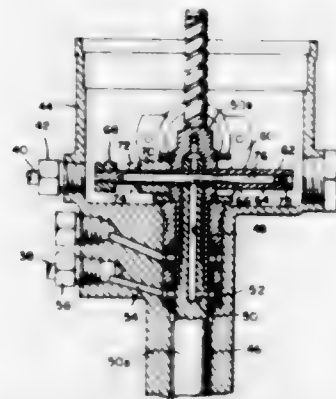


resiliently interlocked by pushing the rib end into the bore, and the projections providing means to limit movement of the rib end into the bore.

3,000,388

ENGINE GOVERNOR CONTROL VALVE

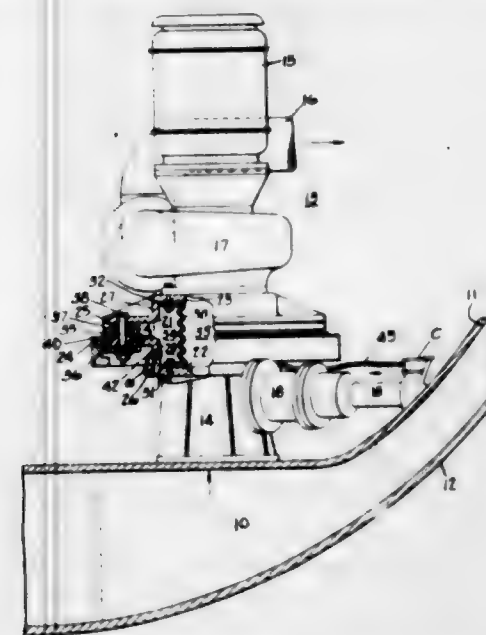
Ernest R. Larges, Southfield Township, Oakland County, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed June 11, 1956, Ser. No. 590,456
1 Claim. (Cl. 137—56)



A speed responsive governor control valve comprising a tubular drive shaft adapted to be operated at a speed dependent on vehicle operation, said drive shaft including an axially extending first passage therein, a cross opening extending diametrically across said drive shaft, a cross shaft of approximately uniform outside diameter fixed in said cross opening in sealing relationship therewith, said cross shaft having a second passage therein of uniform diameter which extends from one end to a point adjacent to, but spaced from, the opposite end leaving the portion adjacent said opposite end solid and integrally closed, the intermediate portion of said cross shaft received in the cross opening in said drive shaft and the end portion of said cross shaft adjacent the closed end thereof having the outside diameter thereof slightly reduced to form a narrow annular locating shoulder engaging said drive shaft to provide accurate location of said cross shaft and structure carried thereby, a first port in said cross shaft connecting said first and second passages, a second port adjacent the integrally closed end of said cross shaft communicating with the atmosphere, a separate closure element within said second passage adjacent the open end thereof for closing same, a tubular valve slidable over said cross shaft adjacent said second port, an adjustable spring seat threaded on the solid integrally closed end portion of said cross shaft, said seat providing an adjustment for calibration of governed speed, and a compression spring between said seat and valve for holding said valve in a normally open position until the predetermined governed speed has been attained, said valve being movable by centrifugal force radially of said shaft across said second port against the action of said spring to close said second port.

3,000,389
CONTROL MEANS COMPRISING A RESILIENT COUPLING FOR COOLING SYSTEM ELEMENTS
Leslie E. Alsager, Falls Church, Va., and Edward S. Sheridan, Takoma Park, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed May 27, 1960, Ser. No. 32,492
2 Claims. (Cl. 137—68)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for the delivery of liquid to a heat exchange system of a ship, said apparatus comprising valve structure supported by a liquid supply tank within the ship, said valve structure forming a valved inlet passageway communicating through its lower end with said tank and having an annular outer flange at its upper end, pump structure positioned above the valve structure forming an outlet passageway for communication with the heat exchange system and having an annular outer flange at its lower end, said annular flanges being generally similar and disposed in alignment, a resilient annular spacer between said annular flanges, means including clamping means for securing the flanges together to permit vibrational movement of the pump structure relative to the valve structure, a tubular bellows partition fixedly secured between said annular outer flanges forming an inner connecting passageway between the valve and pump passageways and an outer compartment with said resilient ring, means for closing the valved inlet passageway when the bellows becomes ruptured and pressure increases in the outer compartment, said means comprising a controller for the valved passageway, a pressure sensing element in said outer compartment and connections between said sensing element and said controller.

3,000,390

FLUID VALVE

Oakley W. Hosking, P.O. Box 416, Monroe, N.Y.
Filed Mar. 14, 1958, Ser. No. 721,377
1 Claim. (Cl. 137—234.5)

A fluid valve adapted to be removably secured in a valve stem comprising a hollow, substantially cylindrical, metallic barrel, a screw plug member secured to one end of said barrel for relative rotation therebetween and having a threaded exterior portion, a stem extending axially through the barrel and plug and therebeyond, a valve stopper of resilient material secured onto the stem, the other end portion of the barrel being of double thickness by the end being turned inwardly upon itself against the inner surface of the barrel and an inwardly directed, converging surface constituting a sealing seat formed adjacent the bend, said valve stopper having a surface mating

with the sealing seat to form the seal, the diameter of the inner surface of the double thickness portion of the barrel being substantially greater than the thickness of the stem proximate therewith, and a spring encircling the stem

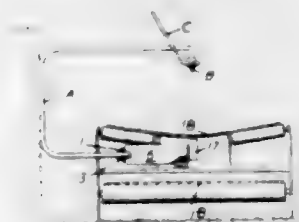


within the barrel and plug and abutting at one end flanges on the stem and at the other end abutting the end of the reversely turned end portion of the barrel forming the sealing seat to maintain the stopper in sealing engagement with the sealing seat.

3,000,391

AUTOMATIC CONTROLLER FOR BELT CONVEYOR SPRAYER SYSTEMS

Charles Bernard Marshall, 21 Ribblesdale Road, Sherwood, Nottingham, England, and Cyril Marshall, "Trees," Winchester Ave., Beeston, England
Filed Dec. 31, 1958, Ser. No. 784,256
4 Claims. (Cl. 137—343)



1. An automatic controller for a belt conveyor spray system, comprising a pump, a pulley in operative connection with the pump, a cylinder, a piston movable along the cylinder, an oil reservoir separated from the cylinder by the piston, a feed duct from the reservoir to the pump, a delivery duct from the pump to the cylinder, a valve for admitting spraying liquid to a spray nozzle, the valve being opened by movement of the piston toward the reservoir, and a spring disposed to oppose such movement of the piston but overcome by the pressure of the oil when the pulley is driven, the pump, pulley, cylinder, and valve being combined as a unit with the pulley exposed at one end of the unit in a position to be driven by a moving conveyor belt that is depressed by a load into engagement with the pulley.

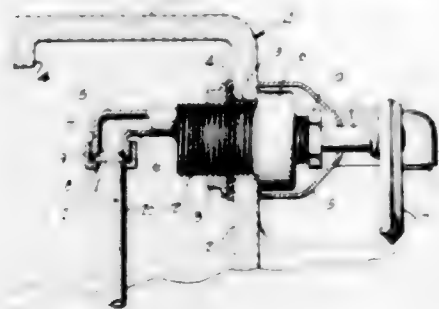
3,000,392

COMBINATION FAUCET

Stephen A. Young, 1005 E. Monroe St., Delphi, Ind.
Filed Oct. 19, 1955, Ser. No. 541,474
3 Claims. (Cl. 137—357)

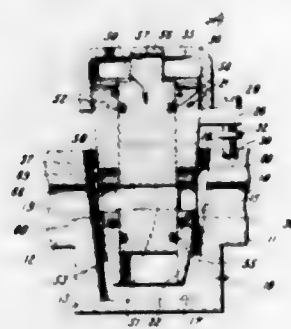
1. In a faucet of the class described adapted to be mounted in the front face of a plumbing fixture, in combination, a faucet body, a mounting shank connected with and extending from said body, said shank being of smaller cross sectional area than the portion of the body with which the shank is connected, valve mechanism in the body extending therefrom on the opposite side from the shank, said shank adapted to be axially entered in an opening in a mounting member, such opening being of less

cross sectional area than the portion of the body with which the shank is connected, a hollow supply connection portion integrally extending from the other end of said shank, said portion being positioned eccentric to the axis of said shank, and a tubular inlet spaced longitudinally from said shank integrally extending from said portion in a direction substantially diametrically across said axis,



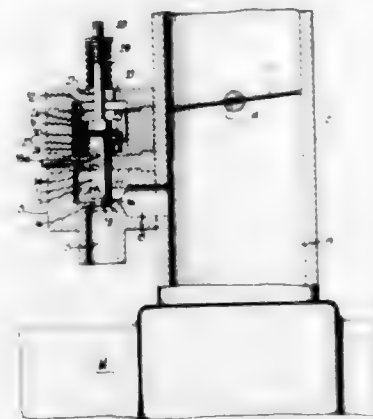
supply connecting means on the end portion of said inlet, and said connecting portion and inlet lying wholly within the confines of a projection of the shank aforesaid whereby said shank may be entered into such opening from the body side thereof without tilting said body with respect to said axis, and lock means on said shank to clamp said faucet body on such mounting member.

3,000,393
VALVE STRUCTURE
Wallace J. Maynard, 6219 San Ricardo Way,
Buena Park, Calif.
Filed May 25, 1959, Ser. No. 815,492
3 Claims. (Cl. 137-454.2)



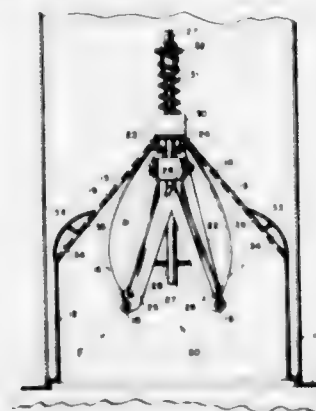
1. A valve structure comprising a body including two inflow passages, an outflow passage and a surface defining a central tapered chamber, the inflow passages opening into the chamber from substantially opposite sides and the outflow passage opening into the chamber between the inflow passages; a capsule tapered to correspond to the chamber for insertion therein, said capsule defining two capsule inflow passages, a capsule outflow passage and a cylindrical bore, and including a cylinder slidably fitted in the cylindrical bore and having a flow-enabling opening in its surface, and an insert plug slidably fitted within each of the capsule inflow passages, each of said insert plugs having an axial opening and one end face fitted to the curvature of the cylinder and a length whereby the other end face is outside of the peripheral surface of the capsule; means for positioning the capsule within the cavity whereby the body flow passages and capsule flow passages are substantially coaxially aligned and the other end face of each insert plug is pressed against the surface of the body defining the central chamber to maintain the respective insert plugs against the cylinder in sealing engagement; and resilient means for providing a fluid seal between the capsule and the surface of the body defining the central chamber.

3,000,394
GOVERNOR
Harold Gold, Shaker Heights, and David M. Straight,
North Olmsted, Ohio
Filed Sept. 20, 1957, Ser. No. 685,341
4 Claims. (Cl. 137-480)



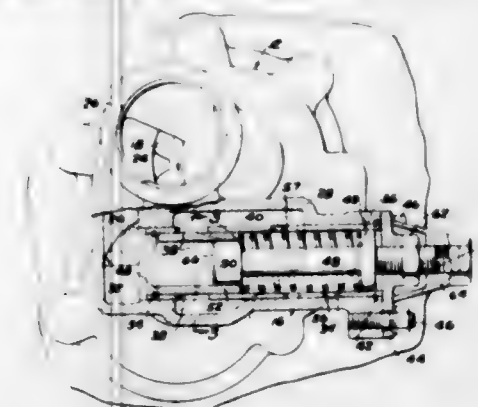
1. An induction pipe for an internal combustion engine, said induction pipe having an aperture therein and a throttle valve upstream of said aperture, the improvement which comprises a housing attached to the induction pipe and passaged to communicate said induction pipe with atmosphere through the aperture in said pipe, valve means in said housing, and diaphragm means on said valve means dividing the housing interior into a plurality of chambers, one of which is in communication with atmosphere through said passage in the housing and with said induction pipe aperture, said housing being apertured to communicate another chamber with atmosphere, means biasing the valve means to an open position, and said valve means being movable upon closure of the throttle valve and creation of a pressure differential between said chambers to control the air supply through the housing passage from atmosphere to said induction pipe.

3,000,395
AIR CONDITIONING
Robert W. Waterfall, Montclair, N.J., assignor, by mesne assignments, to Buensod-Stacey Corporation, a corporation of Ohio
Filed Aug. 2, 1957, Ser. No. 675,975
13 Claims. (Cl. 137-512.15)



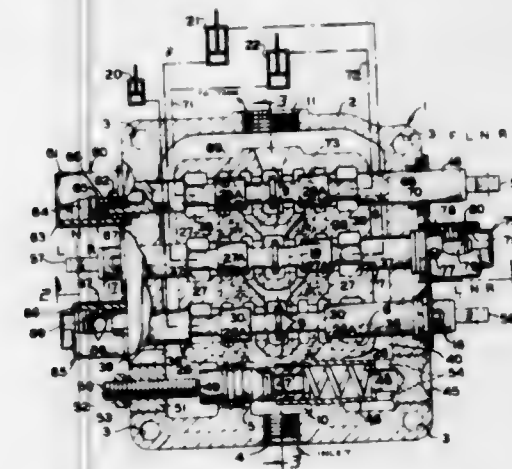
11. In an air conditioning system, pre-settable flow regulating means for maintaining a substantially constant flow of air to a room or zone being conditioned, including flexible curtain means; perforated motion limiting means cooperating with said flexible curtain means thereby to control the flow of air through said perforated motion limiting means; and a channel member extending along at least one side of said motion limiting means and covering a predetermined number of the perforations therein within the area of cooperation between said curtain means and said motion limiting means.

3,000,396
PRESSURE RELIEF VALVE
Carl K. Davis, 181 S. Wilson Blvd.,
Mount Clemens, Mich.
Filed Sept. 18, 1957, Ser. No. 685,776
1 Claim. (Cl. 137-516.15)
(Filed under Rule 47(b) and 35 U.S.C. 118)



A pressure relief valve for a pressure fluid system having high and low pressure zones, said valve comprising a housing having a cylindrical bore, inlet and outlet ports located at one end of said bore and communicating with said high and low pressure zones respectively, a sleeve slidably received within said bore and adapted to seal said outlet ports, a generally spool-shaped member positioned within said bore and having enlarged ends of different diameters, the small end of said spool being slidably received within said sleeve and adapted to seal it against the passage of fluid, a spring disposed between the large end of said spool and one end of said sleeve, means for varying the axial position of said spool relative to said housing to vary the force of said spring on said sleeve, the forward annular edge of said sleeve being exposed to the inlet pressure whereby upon a predetermined inlet pressure the sleeve is moved against the spring resistance to open said outlet ports.

3,000,397
VALVE ASSEMBLY
Herbert H. Schmiel, Willoughby, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 24, 1959, Ser. No. 835,489
17 Claims. (Cl. 137-622)

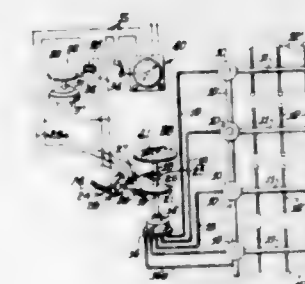


1. In a multiple spool valve assembly, the combination of a housing formed with an inlet port, an outlet port, a plurality of parallel spool valve bores, a bypass passage intersecting said bores and extending from said inlet port to said outlet port, pairs of supply passages intersecting the respective bores and leading to the latter from said inlet port, pairs of service ports intersecting the respective bores and adapted for connection with a corresponding number of fluid motors, and a pair of return

passages intersecting said bores and leading therefrom to said outlet port; spool valves axially movable in the respective bores, each spool valve being formed to provide a neutral position whereat fluid flows from said inlet port to said outlet port via said bypass passage and at least one operating position whereat said bypass passage is blocked thereby and whereat one supply passage of the associated pair thereof is communicated with one service port of the associated pair thereof; and a check valve in each supply passage effective to permit flow of fluid in one direction only from said supply passage to said service port.

3,000,398
AUTOMATIC TIME-CONTROLLED SPRINKLER SYSTEMS

Gustav Link, 3961 N. Mission Road, Los Angeles, Calif.
Continuation of application Ser. No. 394,769, Nov. 27, 1953. This application Apr. 28, 1958, Ser. No. 731,552
7 Claims. (Cl. 137-624.16)

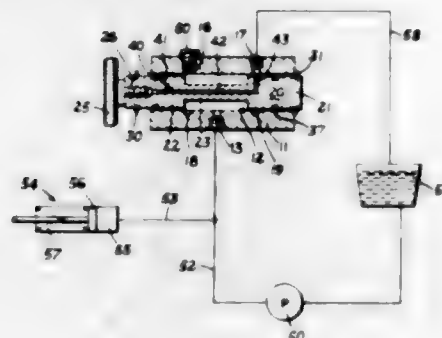


1. A control system for use in controlling the flow of water from a water main to branch sprinkler pipes by way of a flow control valve interposed between the water main and each branch pipe comprising: a control unit embodying a rotary means operative to effect opening and closing of flow control valves in succession so as to selectively establish water flow from the main to each of the branch pipes in succession; a first electric synchronous motor operatively connected to said control unit to rotate said rotary means, said first motor being connected in an electric control circuit; a control unit switch connected in series with said first motor; an actuating member rotatable with said rotary means and engageable with said switch for operating the latter; a timer unit having a rotary timer disc; a second synchronous electric motor connected to drive said disc; a timer switch connected in series with said first motor and said control unit switch; a plurality of spaced switch operating elements on said timer disc, each successively engageable in response to rotation of the disc to operate said timer switch for a period of time during engagement with each operating element; said first motor being energized, with said control unit switch closed, in response to closing of said timer switch for the time required to close one flow control valve and open a succeeding control valve; opening of said control unit switch in response to rotation of said rotary means effecting opening of said control circuit to terminate operation of said first motor; and means operable to move said actuating member to close said control circuit across said control unit switch.

3,000,399
LOCK PROOF TWO POSITION SPOOL VALVE
Clayton J. Brukner, % Waco Aircraft Co., Troy, Ohio
Filed Sept. 12, 1958, Ser. No. 760,702
5 Claims. (Cl. 137-625.48)

1. A valve of the character described comprising a valve body having a cylindrical bore therethrough, an outlet port adjacent one end of said bore, an inlet port intermediate said outlet port and the other end of said

bore, a pressure balanced spool reciprocable in said bore and including a pair of spaced bore-engaging portions connected by a reduced central portion overlying said inlet port, means defining closed and open limit positions for said spool wherein one of said bore-engaging portions selectively closes said outlet port and opens said outlet port to said inlet port, the other of said bore-

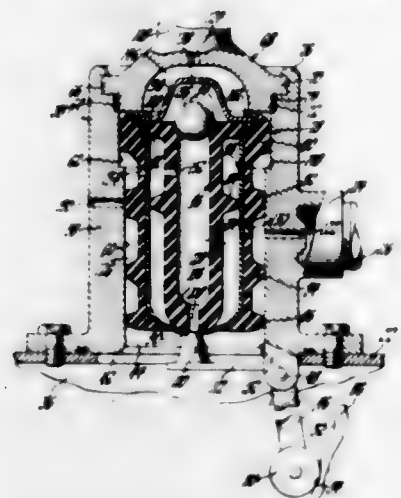


engaging portions having a circumferential groove therein, an elastomer sealing ring received in said groove to seal between said spool portion and said bore, and means in said spool defining a passageway connecting at one end with said groove and at the other with said outlet port in said closed position of said spool to provide for continuous venting of said groove to said outlet port in closed position.

3,000,400 DUAL HEIGHT LEVELING VALVE FOR VEHICLE AIR SUSPENSION

Cashner J. Chlo, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 27, 1959, Ser. No. 796,067
5 Claims. (Cl. 137-627.5)



1. In a device of the class described, a fixed housing having a main cylindrical bore, an inlet port and an exhaust port formed in said housing, an annular member slidably disposed in said bore and normally maintained in a first axial position, said annular member having a main cylindrical cavity terminating in a curved end wall, said end wall having an aperture extending therethrough in axial alignment with said cavity, a flexible tubular element disposed in said cavity, said element having a thickened nose portion yieldably engaging said end wall and normally closing said aperture, a passage in said nose portion communicating with the interior of said tubular element, a lever pivoted on said housing, operating means on said lever engaging said thickened nose portion acting to displace said nose portion from said end wall and open said aperture upon swinging movement of said lever in one direction and to close said aperture and open said passage upon swinging movement of said lever in the

opposite direction, said lever occupying a first predetermined neutral angular position when said operating means engages said nose portion without displacing the same from said end wall, and pressure responsive means effective to displace said annular member to a second axial position whereby said lever is angularly displaced to a second predetermined neutral position when said operating means engages said nose portion without displacing the latter from said end wall.

3,000,401 BOUNDARY LAYER FLOW CONTROL DEVICE

Friedrich O. Ringleb, 22 NW. New Jersey Ave., Woodbury Heights, N.J.

Filed Jan. 29, 1960, Ser. No. 5,569
10 Claims. (Cl. 138-39)
(Granted under Title 35, U.S. Code (1952), sec. 266)

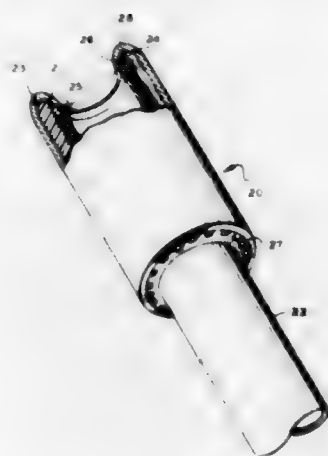


1. A structure over which a fluid flows said structure comprising a leading surface; a trailing surface; a curvilinear surface interposed between said leading and trailing surfaces, said leading surface and said curvilinear surface being contoured to substantially form a cusp at their juncture; and a lip extending downstream from the cusp generally in the direction of fluid flow over the cusp.

3,000,402 THREAD PROTECTOR

Mark M. Bowman, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 12, 1958, Ser. No. 714,810
7 Claims. (Cl. 138-96)

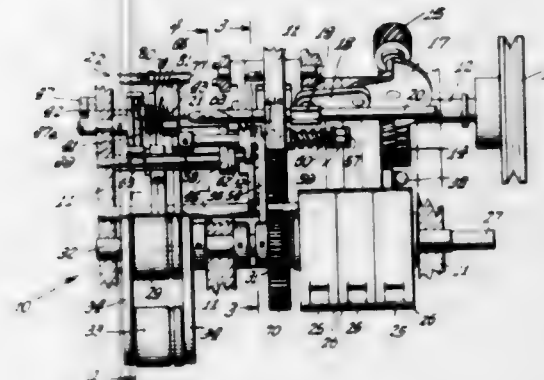


1. A thread protector comprising an impact absorbing sleeve having void spaces in the wall thereof amounting to from about 30 to about 60 percent of the wall volume and having internal threads extending partially through the sleeve so as to terminate at a resulting shoulder of unthreaded cylinder wall; a metal shell having an internal diameter sufficient for a friction fit over said sleeve, enclosing said sleeve with one open end flush with the threaded end of said sleeve and the other open end turned inwardly about the unthreaded end of said sleeve.

3,000,403 WEAVING MACHINE

Stefan Elsen, St. Hyacinthe, Quebec, Canada, assignor to Bridgeport Fabrics, Inc., Bridgeport, Conn., a corporation of Connecticut

Filed Jan. 13, 1960, Ser. No. 2,141
17 Claims. (Cl. 139-124)

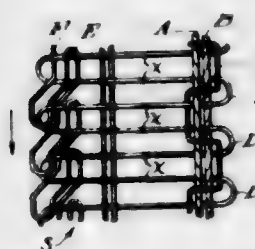


1. In a loom having shed-forming means; a mechanism for weaving the far and near selvages, said mechanism comprising means for carrying a loop of filling thread from the near side of said shed through said shed and depositing it therein, means for forming a loop of crossover thread adjacent the near side of said shed through which said loop of filling thread is passed as it is deposited in said shed, means for depositing a loop of locking thread on said filling thread carrying means adjacent the far side of said shed as the loop of filling thread is deposited therein, means adjacent the far side of said shed for picking up the loop of filling thread before the filling thread carrying means is withdrawn from said shed and depositing said loop of filling thread on said means for depositing said locking thread so that a loop of locking thread is passed therethrough, means for withdrawing said filling thread carrying means from said shed, means for wrapping said loop of crossover thread around said loop of filling thread after said latter loop has been completely deposited in said shed and said means for carrying said filling thread has been withdrawn therefrom, means for forming a second loop of said crossover thread in a plane spaced from and beside said first loop thereof for receiving the next loop of filling thread and means for casting the first loop of filling thread off the means for depositing said locking thread when the means for picking up the loop of filling thread picks up the said second loop of filling thread deposited in said shed.

3,000,404 NARROW FABRIC

Stefan Elsen, St. Hyacinthe, Quebec, Canada, assignor to Bridgeport Fabrics, Inc., Bridgeport, Conn., a corporation of Connecticut

Filed Mar. 5, 1959, Ser. No. 797,480
3 Claims. (Cl. 139-383)



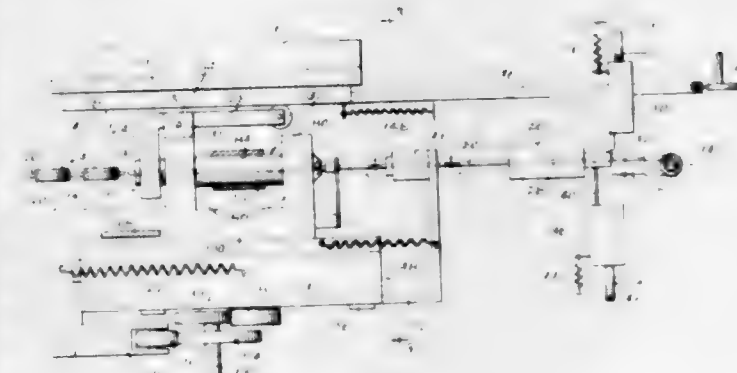
1. A narrow fabric comprising warp yarn constituting the length of the fabric, weft yarn forming loops running back and forth across the length of the fabric in a

textile weave, the margin of the fabric at one edge having a first cord extending along said margin and extending under some of the loops of the weft threads, a second cord close to the first cord and extending along the surface of the weft thread loops, and a locking thread extending weftwise along the margin of the tape and interlaced with the ends of the weft thread loops and with the cords to hold the cords in place.

3,000,405 APPARATUS FOR STRIPPING INSULATION FROM WIRE

Carmen L. Basile, Pamkracy Terry, Ralph R. Tullgren, and Robert R. Kaufmann, all of Chicago, Ill., assignors to Taylor Spring and Manufacturing Company, Chicago, Ill., a corporation of Illinois
Original application June 16, 1955, Ser. No. 515,996, now Patent No. 2,935,786, dated May 10, 1960. Divided and this application Sept. 8, 1959, Ser. No. 838,455

9 Claims. (Cl. 140-1)



7. Stripping mechanism comprising stripping means movable along an axis internal thereto along which wire to be stripped is adapted to be moved and control means bodily stationary relative to such movement of the stripping means, said stripping means including a plurality of stripping elements disposed around said axis, means for rotating the stripping elements around said axis, means for moving said stripping means along said axis, a lever included in said stripping means for moving the stripping elements radially inwardly and movable therewith along said axis, said lever being disposed laterally of the stripping elements and movable transversely thereof, said stripping elements being biased radially outwardly, said control means including a member having a control surface parallel with said axis and disconnectedly engaging said lever, said member being movable transversely and correspondingly moving the lever and thereby the stripping elements radially inwardly, the disconnected engagement between said member and lever being such as to enable free relative movement therebetween in the movement of the stripping means along said axis, and means for moving said member transversely.

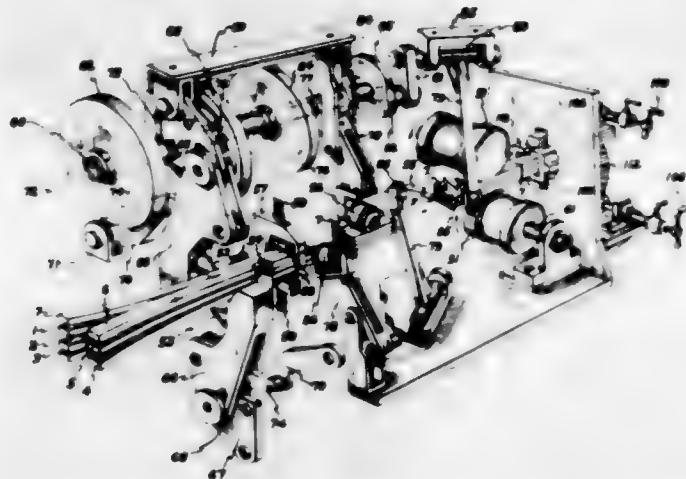
3,000,406 CABLE TRANSPOSING MECHANISM

Clifford S. West, Adams, Mass., assignor to General Electric Company, a corporation of New York

Filed Feb. 13, 1959, Ser. No. 793,179
20 Claims. (Cl. 140-71)

1. In a cable transposing apparatus which has a strand pusher for laterally transposing a strand of a lengthwise moving stranded cable, means for giving said pusher two simultaneous components of movement during its strand transposing operation, one of said components of movement being in a direction which is parallel to the length

of the cable and the other being in a direction which is perpendicular to the length of the cable, and the speed



of said one component of movement being substantially equal to the speed of lengthwise movement of said cable.

3,000,407

ELECTRIC LAMP MOUNT MAKING METHOD AND APPARATUS

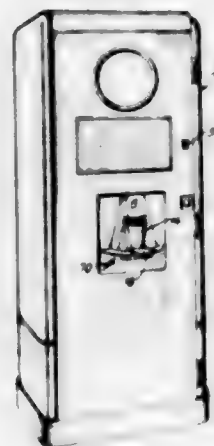
John W. Anthony and Norman W. Lewis, Cleveland, Ohio, assignors to General Electric Company, a corporation of New York

Filed May 5, 1958, Ser. No. 732,957
5 Claims. (Cl. 144—71.6)



1. In a mount making machine; holder means for supporting and carrying to a plurality of stations a mount comprising a stem having a vertical axis with a pair of lead-in wires extending generally downward from said stem along opposite sides of said axis and a tie wire anchored in and extending substantially horizontally from a portion of said stem across and substantially beyond one of said lead-in wires; curling mechanism adjacent the path of movement of said holder means at one of said stations comprising a bending member, means mounting said bending member for movement to engage said one lead-in wire and bend it outwardly away from said axis to bring a portion thereof into proximity to the free end of said tie wire, a curling member, and means mounting said curling member for movement into engagement with the free end of the tie wire to curl it about the adjacent portion of said one lead-in wire; re-forming mechanism adjacent the path of movement of said holder means at another station comprising a second bending member, means mounting said second bending member for movement to engage said tie wire and bend it downward to an acute angle to said vertical axis, a third bending member, and means mounting said third bending member for movement to engage and bend said one lead-in wire back toward said vertical axis to approximately its initial position simultaneously with the bending of said tie wire by said second bending member; and means for actuating said curling and re-forming mechanisms in proper time relation.

3,000,408
VENDING MACHINE
Alfred Vischer, Jr., Park Ridge, Ill. (% Vischer Products Co., 2815 W. Ranscoe St., Chicago 18, Ill.)
Filed Oct. 4, 1956, Ser. No. 613,959
17 Claims. (Cl. 141—174)

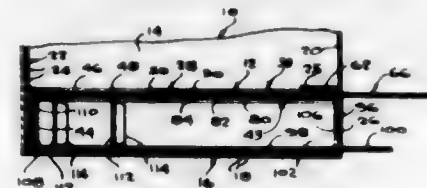


1. A vending machine comprising cup drop means for supporting a plurality of stacks of cups and for selectively removing said cups from alternate ones of said stacks, means for positioning each removed cup at a fill station, means responsive to single actuation of a start mechanism for causing the cup at the fill station to be filled, then to move the filled cup from the fill station to a position opposite a delivery opening, then to feed the filled cup through the delivery opening and cause said cup drop means to remove a cup from one of said stacks and to supply it to said second-mentioned means, then to move the latest removed cup to the fill station and obstruct said delivery opening, and then to deenergize the machine in the last condition of operation, whereby when operation of the machine is again initiated, the operating cycle commences with the filling of the cup which is at the fill station.

3,000,409

MEASURING DEVICE FOR GRANULAR AND LIKE MATERIALS

Paul R. Thomasco, 205 S. 3rd St., Lebanon, Pa.
Filed Sept. 12, 1958, Ser. No. 760,756
4 Claims. (Cl. 141—373)



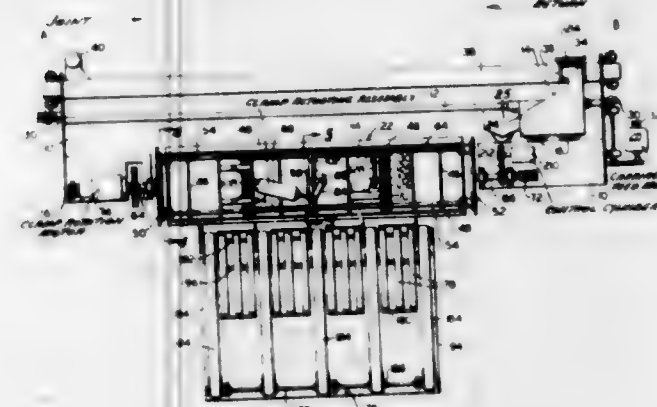
4. A measuring dispensing container comprising a bottom wall, side walls, and front and back walls, said front wall having a dispensing opening extending to said bottom wall and between the side walls, a horizontal housing within the container and bearing upon said bottom wall, said housing extending between the back and front walls and having an open front end registered with said dispensing opening, said housing having side walls secured to the container side walls and having bottom edges bearing upon the container bottom wall, and a top wall assembly, said top wall assembly comprising parallel spaced upper and lower top wall panels defining a slideway therebetween which includes portions of the housing side walls, said upper and lower top wall panels having registered openings therein, a slide panel slidably engaged in said slideway and having back and front ends, said slide panel having longitudinally spaced transverse openings therein which are selectively registrable with said upper and lower top wall panel openings, and a flap on the front end of the slide panel extending forwardly through

said dispensing opening for operating the slide, and a drawer slidably engaged in the housing beneath said top wall assembly and bearing upon the housing bottom wall, said drawer having back and front end walls, and a drawer operating flap on said front end wall and extending out through said dispensing opening, said drawer being substantially the length of the housing, said drawer front end wall serving as a closure for the dispensing opening in the retracted position of the drawer.

3,000,410

APPARATUS AND METHOD FOR THE JOGGING AND JOINTING OF VENEER

Clarence L. Rothrock, Sonoma, Calif., assignor of one-half to Cloverdale Plywood Co., Cloverdale, Calif., a corporation of California
Filed Oct. 9, 1958, Ser. No. 766,284
26 Claims. (Cl. 144—117)



9. A jogging and jointing machine comprising, in combination, clamping means including a pair of jaws adapted for movement between an open position and a closed position for clamping sheets of cuttable material face to face with the adjacent edge margins thereof held tightly together, means for effecting the opening and closing of said jaws, means for driving the clamping means in rotation, shaker means positioned below said jaws for aligning the edges of said material, jump bar means for moving said material transversely of said jaws and into position for jointing, cutter means for jointing the edges of said material, means for driving the cutter means past said jaws into cutting engagement with the edges of the cuttable material while said material is clamped in said jointing position between said jaws, and means for controlling operation of the enumerated elements.

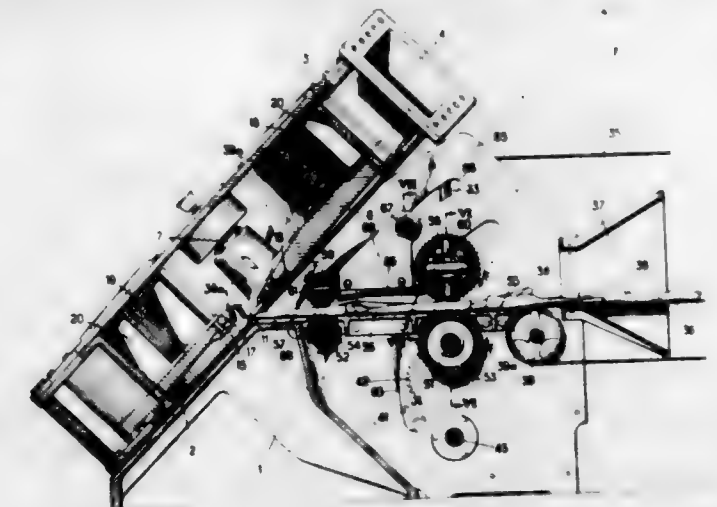
3,000,411

MACHINE FOR CUTTING UP WOOD, ESPECIALLY SAWMILL SCRAPS

Pierre Ealet, Charleville, France, assignor to Societe Anonyme dite: Etablissements Gustin Fils, Deville, France, a corporation of France
Filed Apr. 18, 1960, Ser. No. 22,921
Claims priority, application France Apr. 28, 1959
10 Claims. (Cl. 144—176)

1. A machine for cutting scrap lumber into small bevelled bits comprising in combination a base, a drum fixed to said base, a rotary cutter within said drum, means carried by said cutter for expelling the small bits from the drum; feed means for supplying scrap lumber to said drum, means associated with said feed means for firmly gripping and advancing said scraps of lumber, regardless of their size and shape, means for driving said rotary cutter, said feed means and said gripping means, a clutch between said drive means and said gripping means and feed means which permits said gripping means and said feed means to be stopped without stopping said rotary

cutter and the direction of travel of said feed means to be reversed, and means for automatically releasing said

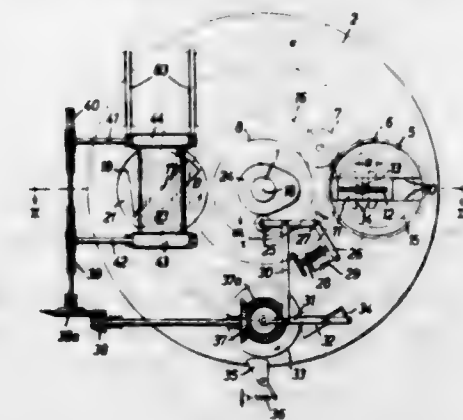


clutch when an oversize scrap enters said scrap gripping means.

3,000,412

WOOD-WOOL PRODUCING MACHINE

Annela Jaschke, House No. 198, Unterschondorf (Ammersee), Germany
Filed June 15, 1959, Ser. No. 820,291
6 Claims. (Cl. 144—185)



1. A wood-wool producing machine comprising a rotatable main disc, a planing knife secured to the main disc at a planing station, another disc eccentrically mounted on the main disc for rotation, a rectilinear guide means on said other disc, a sliding body reciprocable in said guide means, a scratching knife secured to the sliding body, gear means interconnecting the main disc and the other disc to drive the latter disc upon rotation of the main disc so as to maintain the guide means and sliding body constantly parallel to a datum, and reciprocating means for the reciprocation of the sliding body in the rectilinear guide means at the planing station, said reciprocating means comprising a gear wheel coaxial with the other disc and rotatably mounted on the main disc, a stationary gear rim coaxial with the main disc and meshing with the gear wheel to rotate the latter upon rotation of the main disc and an eccentric pin mounted on the gear wheel and engaging the sliding body.

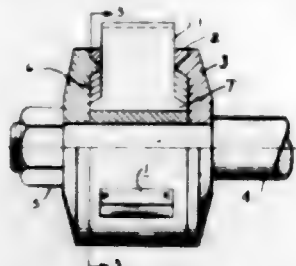
3,000,413

ASSEMBLY MEANS FOR A CYLINDRICAL PLANER HEAD

James H. Pollard, R.F.D. 1, Glencoe, Ala.
Filed May 31, 1960, Ser. No. 32,905
3 Claims. (Cl. 144—230)

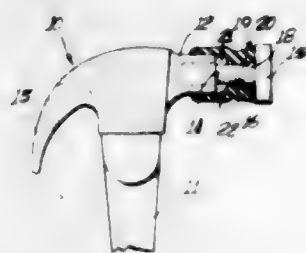
1. A quick interchangeable boltless planer head comprising, a main supporting body, a drive shaft, said body being mounted removably on the shaft, three cutting

blades, each of said blades having an integral wide portion as its bottom, two flanges, said flanges being part of the supporting body, two shims, said shims being located in the body structure in engagement with the wide bot-



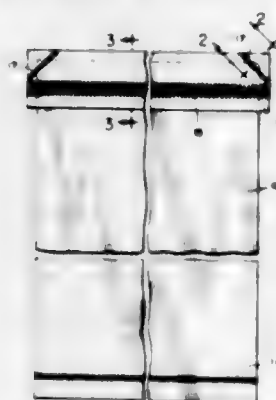
toms of the blades, screw threads on an end of the shaft, a comparatively large nut, said nut being mounted on the threaded end of the shaft as a means for tightly holding the assembled body and blades together for use.

3,000,414
HAMMER
Nat Cordis, Crown Stock Farms, Silver Lake, Wis.
Filed Mar. 16, 1956, Ser. No. 571,950
6 Claims. (Cl. 145-29)



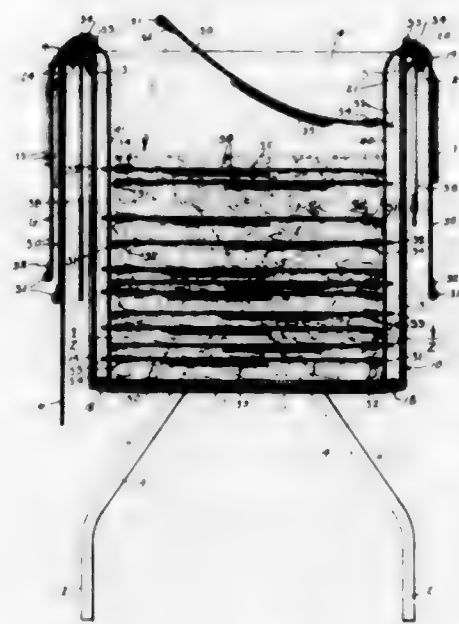
5. A hammer construction comprising a hammer head, a separable striking block having a reduced portion, and a resilient sleeve means having thin-walled sections at opposite ends thereof which embrace a portion of said head and said reduced portion of said block thereby flexibly securing said block to said head, said sleeve means having an intermediate thick-walled section providing an inwardly extending elastic shoulder spaced from said head and against which said block abuts.

3,000,415
THERMOPLASTIC BAG CLOSURE AND METHOD
Mathew F. Kritchever, Glencoe, Ill., assignor of twenty-five percent to Horace Dawson, Evanston, Ill.
Filed Aug. 1, 1960, Ser. No. 46,468
2 Claims. (Cl. 150-3)



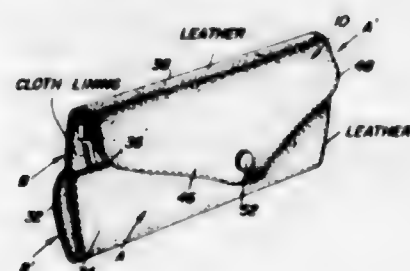
1. A bag of thermoplastic material sealed at one end and having lips at the opposite open end, a U-shape thermoplastic strip enclosing said lips of the bag, a heat-sealing weld uniting the interior faces of the strip to the outer faces of the bag lips transversely of the bag, and a diagonal weld at each corner of the bag uniting the U-shape strip portions and the interior lips of the bag to each other.

3,000,416
MULTIPLE ORDER RECEIVING RECEPTACLE
Erik D. Lindgren, 303 Dahl St., Rhinelander, Wis.
Filed Aug. 31, 1959, Ser. No. 837,050
7 Claims. (Cl. 150-49)



7. In a receptacle for receiving a plurality of individual groups of articles, the combination comprising: a bag having a bottom and oppositely disposed side walls; a pair of rigid rod-like members, one of the rod-like members being disposed along and secured to the upper margin of one side wall and the other of the rod-like members being disposed along and secured to the upper margin of an opposite side wall; two sets of cord-like guides, the guides of one set being secured at one end to one of the rod-like members and extending downwardly adjacent the corresponding side wall to be secured at the bottom of the receptacle and the guides of the other set being secured at one end to the other of the rod-like members and extending downwardly adjacent the corresponding side wall to be secured at the bottom of the receptacle; and a plurality of flexible sheets arranged in two groups, the sheets of one group each being slidably mounted at one margin on one of the sets of guides and the sheets of the other group each being slidably mounted at one margin on the other of the sets of guides, said sheets each being movable along the respective guides into and out of said bag and over the corresponding rod-like member, whereby one group of sheets will hang over one of the rod-like members and the other group will hang over the other rod-like member.

3,000,417
EYEGLASS CASE
Charles Goldstein, South Easton, Mass.
(18563 Clark St., Tarzana, Calif.)
Filed Jan. 15, 1958, Ser. No. 709,023
3 Claims. (Cl. 150-52)



1. A case for accommodating two pairs of eyeglasses, said case comprising in combination a partition wall having upper and lower edges and a pair of end edges, said partition wall consisting of two layers of fabric material

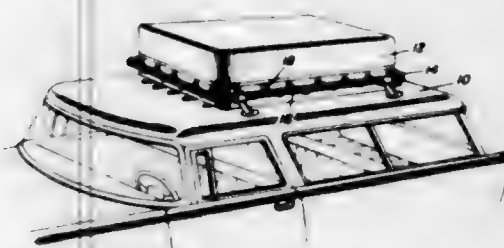
juxtaposed and secured together, and integral extension provided on one of said layers at the lower edge of said partition wall and extending upwardly therefrom to provide an upwardly opening first pocket at one side of the partition wall, an integral extension provided on the other of said layers at the upper edge of the partition wall and extending downwardly therefrom to provide a downwardly opening second pocket at the other side of the partition wall, a first covering member of leather-like material superposed on the first pocket forming extension, said first covering member passing under the lower edge of the partition wall and upwardly in overlapping relation with the second pocket forming extension whereby to provide a closure flap for the second pocket, a second covering member of leather-like material superposed on the second pocket forming extension, said second covering member passing over the upper edge of the partition wall and downwardly in overlapping relation with the first pocket forming extension whereby to provide a closure flap for the first pocket, and releasable means for fastening said flaps in their closed position.

3,000,418
DIFFERENTIAL PRESSURE CARGO AND LUGGAGE CONTAINER
James L. Bittling, Lake Charles, La.
(29614 Crow Drive, Selfridge Air Force Base, Mich.)
Filed Feb. 6, 1959, Ser. No. 791,724
6 Claims. (Cl. 150-52)



1. In combination, a motor vehicle having a body and an engine-driven source of suction, a closed collapsible cargo container mounted on said body, a suction conduit leading from said source to the container, and an adjustable suction regulator connected in said conduit.

3,000,419
AUTOMOBILE LUGGAGE RACK COVER
Billy Morrison, 206 S. Pecos, Midland, Tex.
Filed Oct. 12, 1959, Ser. No. 845,740
4 Claims. (Cl. 150-52)



1. For use in a vehicle luggage rack of the type including a generally rectangular frame mounted horizontally on the vehicle top in vertically spaced relation thereto, a cover comprising a flat, flexible, generally rectangular container insertable in the frame and adapted to rest on the vehicle top, said container having an access opening therein, an endless flap on the container extending horizontally therearound below the opening therein

and adapted to overlie the frame, spaced grommets in the flap, and a rope threaded through said grommets and adapted to be looped under and around the frame for lashing the container therein.

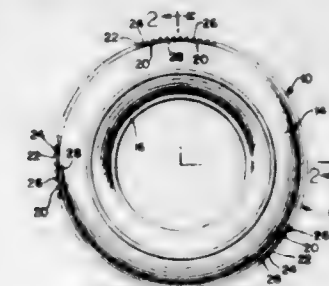
3,000,420
NUT WITH RECESSES TO RECEIVE METAL OF THE WORKPIECE
Albert Spokes, P.O. Box 436, Warrington, Pa.
Filed Mar. 14, 1958, Ser. No. 721,595
4 Claims. (Cl. 151-41.73)



1. An internally threaded nut adapted to be mounted in a generally circular aperture in relatively thin sheet metal without distorting the metal, said nut comprising a shank, said shank having a generally cylindrical pilot portion on its free end of a diameter sufficiently less than that of the aperture for free engagement therein, an annular generally cylindrical shoulder on the other end of said shank spaced from said pilot portion and having a diameter appreciably greater than that of said pilot portion for engagement with the face of the metal bounding the aperture, and an enlarged head adjacent to and outward of said shoulder having a diameter substantially greater than that of said shoulder, the axial distance between said head and the free end of said shank being less than the thickness of the metal, said shank being formed circumferentially thereabout in the space between the pilot portion and shoulder with a plurality of recesses each extending from said pilot portion to and terminating at said shoulder, said recesses being of increasing depth in the direction toward said shoulder and having radially outwardly diverging side walls defining of the region between each adjacent pair of recesses a radially outwardly tapering rib extending longitudinally of said shank, said ribs terminating at their radially outer extremities substantially flush with said pilot portion throughout their entire length, forcing of said shoulder against said metal face effecting cold-flow deformation of the metal radially inward in generally inverse proportion to the distance away from said shoulder, whereby said recesses serve to conformably receive such deformed metal to firmly and nonrotatably secure said nut and said ribs serve to effect breaking engagement with the metal being deformed for minimum distortion and strain of said metal and nut.

3,000,421
RESILIENT TIRE TREAD
Nathan Hack, 537 San Vicente Blvd., Santa Monica, Calif., and Morton Hack, 18262 Warrington Drive, and Leonard Hack, 19924 Canterbury, both of Detroit, Mich.

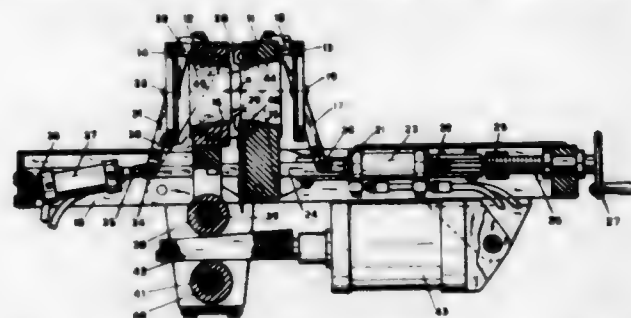
Filed Mar. 9, 1959, Ser. No. 798,253
16 Claims. (Cl. 152-209)



1. In a tire tread formed of resilient material, an outer annular tread surface having an endless series of spaced

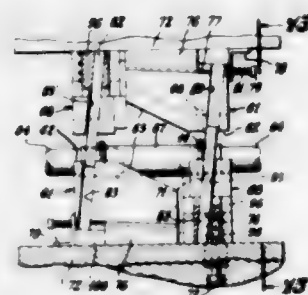
transverse ground plane contacting rib members formed integrally with and extending outwardly of said tread surface, said rib members being independent of each other and inclined at an angle to said tread surface, said tread surface having a continuous series of alternating rib members and grooves therebetween, each of said rib members further having its front and rear faces diverging at an acute angle from an outer edge to a conjunction with said tread surface, and said rib members being spaced a sufficient distance from each other that when said tire tread is in rotation and said rib members are engaged with a ground plane surface they will flex independently and out of contact with each other under load in one direction, and thus produce a movement of said tire tread relative to said ground plane surface in the opposite direction.

the cheeks and being adapted for executing a swinging movement, and means for engaging and displacing one



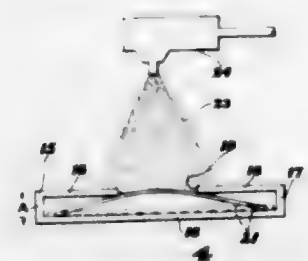
of said cheeks relative to the other to effect said movements of the cheeks.

3,000,424
METHOD OF MAKING STEEL OFFSET FITTING
Grant J. Weise, 3853 Royal Woods Drive,
Sherman Oaks, Calif.
Filed Oct. 28, 1955, Ser. No. 543,545
6 Claims. (Cl. 153-21)



4. The method of forming an offset conduit fitting from a thin walled tubular conduit section, comprising the steps of: internally supporting the end portions of said section against inward deformation, relatively moving said end portions laterally of the longitudinal axis of said section while holding the axes of said end portions at all times parallel to each other and forming the intermediate portions of the section by confining the entire outer surface thereof.

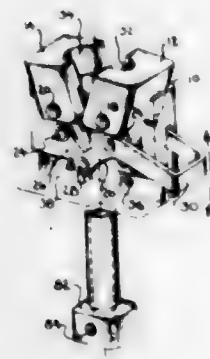
3,000,425
METHOD AND APPARATUS FOR FORMING SHEET METAL
Howard T. Hodges and Erwin J. McGuire, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 24, 1957, Ser. No. 654,861
3 Claims. (Cl. 153-32)



1. The method of forming a bend of prescribed curvature in a portion of a flat sheet of metal comprising the steps of uniformly sand blasting the surface which is to form the convex side of the curve in the area to be bent while masking off the remainder of the surface, confining the sheet during sand blasting so that when it is flat, it will be free to vibrate, but when it has become bent to the prescribed amount, it will be held against vibration, and stopping said sand blasting when the sheet is held against vibration.

3,000,422
CRIMPING TOOL
Leon K. Yeiser, Lebanon, Pa., assignor to
AMP Incorporated, Harrisburg, Pa.
Original application Dec. 14, 1955, Ser. No. 553,072.
Divided and this application June 20, 1957, Ser. No. 666,808

4 Claims. (Cl. 153-1)

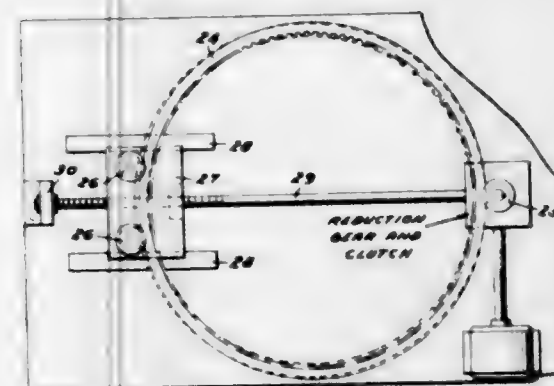


1. A tool for crimping electrical connectors to conductors including a plurality of jaws forming die members, means for pivotally mounting said jaws relative to each other so that the die members are operable between an open and a closed position, said die members when in closed position defining connector supporting surfaces, an internally recessed portion on the connector supporting surfaces, an opening in the jaws coaxial with the die members, a ram longitudinally movable in the opening, means for actuating said ram, and a first die means on one end of said ram, and a second die means comprised of said internally recessed portion, whereby the first and second die means cooperate to crimp a connector to a conductor.

3,000,423
MACHINE FOR JOGGING SHAPED METAL OR METAL PROFILES
David J. B. Arts, Amsterdam, Netherlands, assignor to
N.V. Koninklijke Nederlandse Vliegtuigenfabriek
Fokker, Amsterdam, Netherlands
Filed Aug. 13, 1958, Ser. No. 754,896
Claims priority, application Netherlands Aug. 19, 1957
5 Claims. (Cl. 153-11)

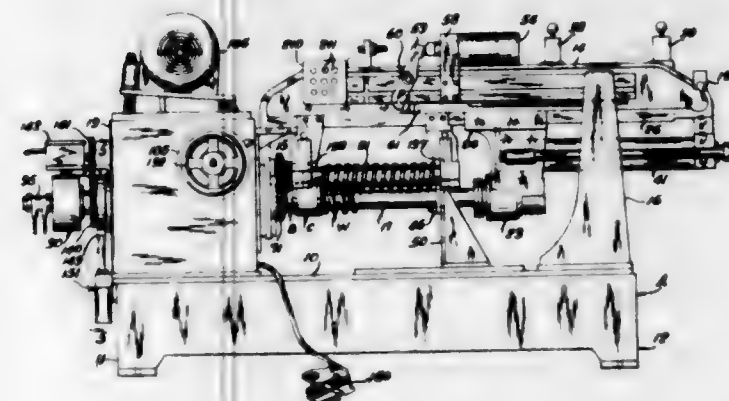
1. Apparatus for joggling a metal channel comprising clamp cheeks for engaging said channel around the entire periphery thereof and at positions spaced longitudinally along said channel, means supporting said cheeks for relative movement transversely of said channel as well as relative movement in a direction longitudinally of said channel, said means comprising a parallelogram guide including parallel hinge rods connected to one of

3,000,426
METHOD AND APPARATUS FOR TRUING CIRCULAR RINGS
William H. Ducker, Birmingham, and Lee K. Fisher, Royal Oak, Mich., assignors to Cargill Detroit Corporation, Birmingham, Mich., a corporation of Michigan
Filed Nov. 29, 1957, Ser. No. 699,699
8 Claims. (Cl. 153-32)



1. A method for truing to circular form out-of-round rigid rings characterized by locally deflecting the ring to a different curvature from the finally desired circular arc beyond yield point progressively and repeatedly around the entire ring, and reducing the extent of said deflection beyond yield point in successive cycles until the yield point is no longer exceeded.

3,000,427
MACHINE FOR PRODUCING HELICALLY COILED ARTICLES
Joseph Gogan, Wlamer Road, R.F.D. 2, Willoughby, Ohio
Filed Aug. 8, 1958, Ser. No. 754,007
4 Claims. (Cl. 153-67)

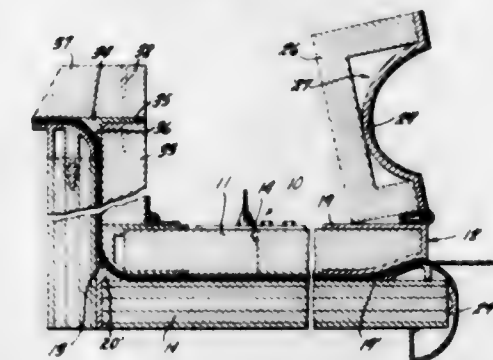


1. A coiling machine having a frame, a spindle rotatably supported by said frame, a mandrel rotatably supported by said frame coaxially with said spindle and adapted to have stock coiled thereabout, clamping means supported by said spindle for clamping stock to be coiled about said mandrel, drive means for rotating said spindle in one direction including a clutch and a brake, cam operated switch means operated in relation to rotation of said spindle, a disk-like member secured for rotation with said spindle, said member having a V-shaped depression in the periphery thereof, a wedge mounted on said frame for movement toward and away from said member, fluid pressure operated means connected to said wedge for effecting said movement, said wedge being adapted to cooperate with said member for rotation of said spindle into a predetermined position for receiving said stock, said clutch and brake being responsive to operation of said switch means to halt rotation of said spindle in a position other than said predetermined position and with said V-shaped depression engageable by said wedge, time delay relay means responsive to said switch means and effective after halting of said spindle to release said brake and to actuate said fluid pressure operated means

770 O.G.—38

for moving said wedge into said depression for rotating said spindle from said other position to said predetermined position, said wedge and member being adapted to rotate said spindle in said one direction and in an opposite direction so that said spindle can be centered to said predetermined position from said other position when the latter is on either side of said predetermined position.

3,000,428
ARTICULATED SHAPING TOOL FOR PRESSING SHEET MATERIAL ONTO A COUNTER SURFACE
Herman E. Hansen, Winterton, N.Y., and Roger K. Austin, Deal, N.J., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Mar. 15, 1956, Ser. No. 571,653
5 Claims. (Cl. 154-1)

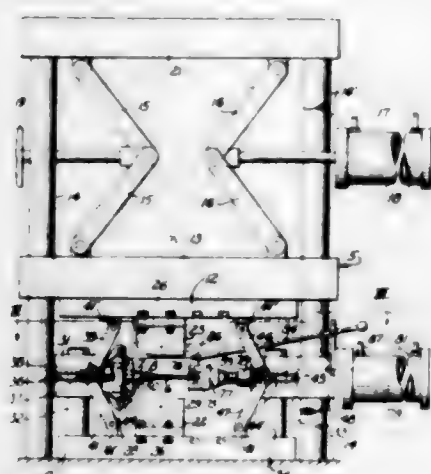


1. A portable articulated shaping tool having a matrix press surface of curvilinear profile composed of three sections for pressing a thin, flexible sheet to a smooth, continuous counter surface which has a convex front edge surface, a main horizontal counter surface, a concave rear cove surface, and an upright backplash surface, said shaping tool comprising a main section having a bottom matrix surface complementary to said main horizontal counter surface, a backplash section having a rear matrix surface complementary to the backplash surface of said counter, hinge means connecting said surface of said counter, hinge means connecting said backplash section to the main section for pivotal movement to an upright position at the rear end of the main section, said backplash section in upright position and said main section in position on the main horizontal counter surface cooperating to define a continuous matrix surface of curvilinear profile complementary to the horizontal, rear cove and upright surfaces of the counter, a front edge section having a rear concave matrix surface complementary to the convex front edge surface of the counter, and hinge means connecting the front edge section to the main section for pivotal movement to a downwardly depending position at the front end of the main section, said front edge section in downwardly depending position and said main section cooperating to define a continuous matrix surface of curvilinear profile complementary to the main horizontal and the convex front edge surfaces of the counter.

3,000,429
MACHINE FOR PRESTRESSING AND MOLDING REINFORCED PLASTIC MEMBERS
Elmer P. Warnken, Cincinnati, Ohio, assignor to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Filed June 22, 1956, Ser. No. 593,117
9 Claims. (Cl. 154-1)

8. A machine for fabricating an article from a plurality of plastic impregnated elongated fibres; said machine comprising a pair of molds having operative means connected thereto for movement of said molds into a position in which a mold cavity is defined therebetween, a pair of clamps disposed in a plane of reference between said molds and including means receiving and supporting

moldable fibres extended in spaced relation between said molds, and means operatively connected to said clamps and said mold operative means for coordinated movement



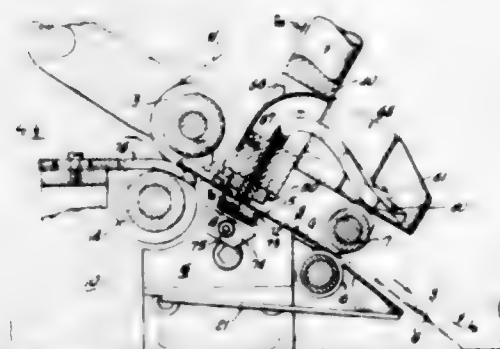
of said clamps in the course of relative mold movement retaining said fibres at all times disposed relatively equidistant between said molds through the molding of said fibres to the shape of said mold cavity.

3,000,430

METHOD AND MACHINE FOR CUTTING ADHESIVE BANDAGES FROM A WEB

Henry Ganz, West Englewood, Arthur R. Pasquine, Metuchen, and William P. Belden, Fanwood, N.J., assignors to Johnson & Johnson, a corporation of New Jersey

Filed Feb. 5, 1957, Ser. No. 638,265
20 Claims. (Cl. 154-1)



1. A web cut-off mechanism comprising a web support and a crush cutter cooperating therewith, the crush cutter comprising spaced knives shaped for cutting and severing the web transversely and also severing waste pieces between the said knives, a movable knife support and means mounting the knives thereon, the knife support having a passage communicating with the space between the knives for receiving the waste pieces, mechanism for moving the said knife support to bring the knives periodically against the web support and means advancing the web in timed relation thereto.

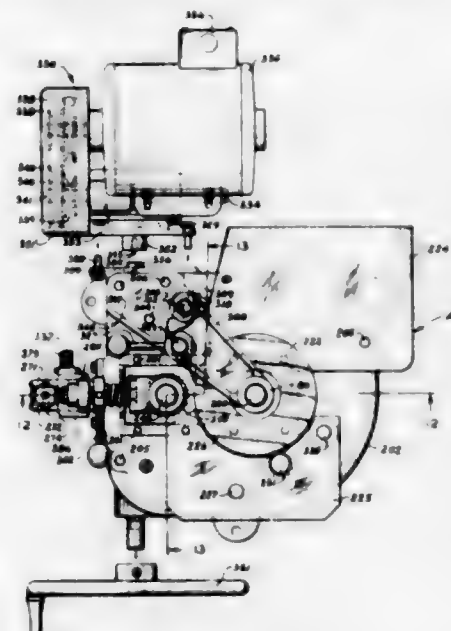
3,000,431

MACHINES FOR STRIPPING LINING FROM AUTOMOTIVE BRAKE SHOES

Harry B. Barrett, Clayton, Mo.
(18 S. Kingshighway, St. Louis 8, Mo.)
Filed Mar. 8, 1957, Ser. No. 644,860
5 Claims. (Cl. 154-1)

1. A brake shoe stripping machine comprising a base, bearing means mounted on the base, a supporting element rockably mounted on the bearing means and projecting radially therefrom, feed-wheel means operatively mounted on and carried by the supporting element in outwardly spaced relation to the bearing means, said feed-wheel means having a roughened peripheral surface for gripping

the outwardly presented face of the lining of a brake shoe, a pair of spaced feed-wheels for gripping the interior face on opposite sides of the brake shoe flange, power means for rotating said feed-wheel means and pair of feed-wheels in opposite directions, compression spring means operatively mounted on the base and bearing against the supporting element for urging said feed-wheel means resiliently toward said pair of feed-wheels, means including a resilient element opposing said biasing means for simultaneously actuating said power means and urging

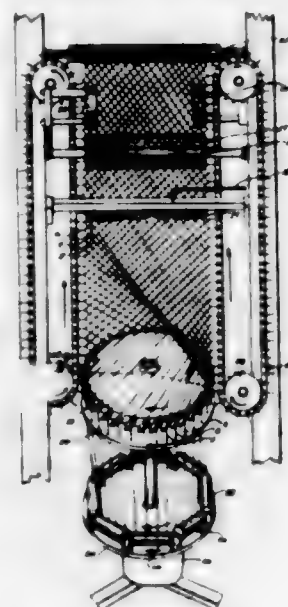


said feed-wheel means into grip-forming engagement with the brake lining, means spaced from said pair of feed-wheels for supporting the edge of the brake shoe rim, means for adjusting the spacing between said last-mentioned means and the pair of spaced feed-wheels, a knife interposed in the path of said lining and having a cutting edge, spring means normally biasing said cutting edge away from the interface between the lining and rim, and cam means for positioning and holding the cutting edge at said interface whereby to strip the lining from said brake shoe as it is fed along a horizontal path.

3,000,432

FABRIC AND METHOD OF AND APPARATUS FOR PRODUCING THE SAME

Nell L. Olken, 76 Robbins Road, Watertown, Mass.
Filed July 1, 1955, Ser. No. 519,450
14 Claims. (Cl. 154-1.7)



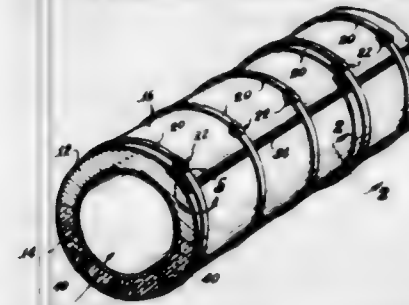
2. Apparatus of the character described having, in combination, means for supplying strands substantially defining a cylinder extending in a predetermined direction,

means for rotating the strands about the axis of said cylinder, a first plurality of successively disposed strand-hook means movable along the said direction and disposed successively to pass a predetermined point of the said cylinder, means operated synchronously with the rotating means for moving the hook means along the said direction in order that the successively disposed hook means may each pick up an individual strand of the array of strands as it successively rotates past the said predetermined point and may draw the successively picked-up strand along the said direction, a second plurality of successively disposed strand-hook means movable along the said direction past a further point of the said cylinder disposed substantially diametrically opposite to the said predetermined point, and means operated synchronously with the rotating means for moving the second plurality of pick-up means along the said direction in order that the second plurality of successively disposed hook means may each pick up an individual strand of the array of strands as it successively rotates past the further point and may draw the thusly picked-up strands along the said direction.

3,000,433

THERMAL INSULATION FOR PIPE

Ray T. Kemper, Los Angeles County, Calif.
(21759 Western Ave., Torrance, Calif.)
Filed Nov. 7, 1956, Ser. No. 626,852
12 Claims. (Cl. 154-28)



9. A method of insulating a substantially horizontal hollow cylindrical body against heat transfer relative to the surrounding atmosphere, comprising: bonding a thick layer of flexible porous insulating material of low compressive strength to a first longitudinal portion of the surface of a flexible weatherproof sheet, leaving a second adjacent longitudinal portion of the area of the sheet clear; attaching radial spacer elements to said first portion of the sheet with the spacer elements extending through said layer of porous insulating material; placing on the upper side of the cylindrical body at least one preformed insulating slab of relatively high compressive strength, said slab being of the shape of a segment of a cylinder conforming to the curvature of the cylindrical body, the area of the outer surface of said slab corresponding at least approximately to the area of said second portion of said sheet; and wrapping the securing said sheet around the cylindrical body with said second portion of the sheet covering said slab and with said first portion of the sheet extending under the cylindrical body with said porous flexible material meeting the opposite longitudinal edges of the slab and with said spacer elements in contact with the cylindrical body.

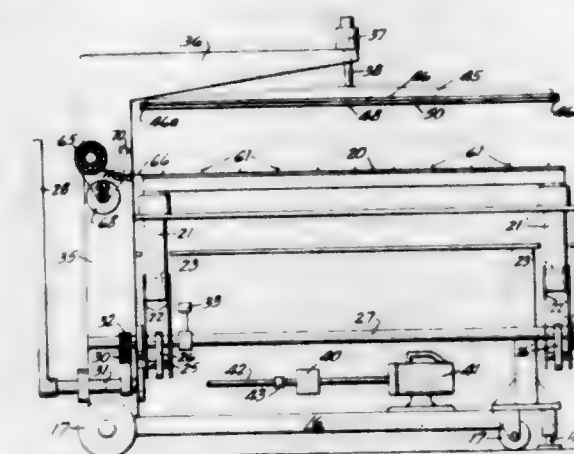
3,000,434

TEXTILE SPLICING

Cecil M. Nelson, Minneapolis, Walter C. Larsen, Bloomington, Edwin A. Goralski, Maplewood, and Donovan T. Rehwalder, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,919
4 Claims. (Cl. 154-42)

1. An apparatus for splicing lengths of textile fabric in end to end relationship by means of a heat activatable

bonding film to form a single length, comprising a narrow elongate first jaw of a length at least equal to the width of the textile fabric and a complementary second jaw, each jaw being movable toward and away from the other and the face of each jaw having a normally planar configuration; means for supporting the two ends of the first jaw, means for holding the supported first jaw fixed in a normal position, means for moving the supported first jaw to a splicing position, means for holding the sup-

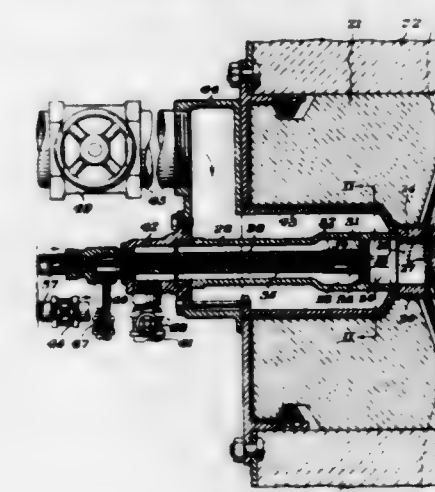


ported first jaw fixed in the splicing position; means for supporting the second jaw in a position adjacent to the splicing position and for pressing on the center of the second jaw to force the second jaw against the first jaw when the first jaw is in splicing position, the second jaw having a tapered configuration with a dimension in cross section at its center that is greater than its dimension in cross section at its two ends, the said dimensions being perpendicular to the face of the jaw, and a heating element adjacent the face of at least one of the jaws.

3,000,435

FURNACE BURNER

Frederick S. Bloom and James E. Hovis, Allegheny County, Pa., assignors, by direct and mesne assignments, to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Apr. 28, 1950, Ser. No. 158,904
3 Claims. (Cl. 158-11)



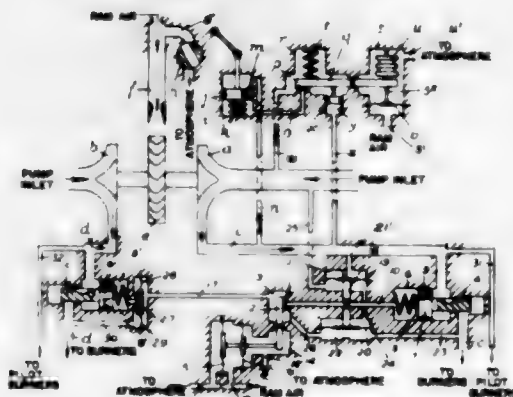
1. A furnace burner comprising a tubular heat-conductive body adapted to project at one end into a furnace to be heated thereby, said body having an interior tubular wall and at each end thereof a transverse wall to define therebetween an elongated mixing chamber, radial outlet openings in said tubular wall adjacent the transverse wall at said one end constituting outlet openings from said chamber to said furnace, a liquid fuel sprayer mounted in said body and having a restricted discharge opening positioned centrally in the opposite end wall disposed to spray atomized fuel oil into said chamber at

said opposite end in a cone extending axially toward said one end, radial air-inlet openings in said tubular wall adjoining the end wall at said opposite end, closed duct means spaced from and connected to said air-inlet openings to supply fresh combustion air to said mixing chamber at said opposite end in radial paths intersecting said cone whereby the combustion air is turbulently mixed with said sprayed atomized oil adjacent said opposite end of the chamber and the mixture passes through said chamber and out of said outlet openings while being heated by said heated conductive body, gaseous-fuel inlet openings in said opposite end wall surrounding said sprayer discharge opening, and duct means to introduce gaseous fuel in said inlet openings axially toward said one end of the chamber to intersect said combustion air entering through said radial air-inlet openings.

3,000,436 LIQUID FUEL SUPPLY SYSTEM FOR AERIAL BODIES

Owen Napier Lawrence, Dorridge, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England

Filed Mar. 18, 1958, Ser. No. 722,321
4 Claims. (Cl. 158—36.3)



1. A liquid fuel supply system for a ram jet aerial body of the type specified, comprising in combination an air turbine operable by ram air, a pair of centrifugal pumps connected to and operable by the air turbine, a pair of fuel supply pipes connected respectively to the fuel pumps for conducting fuel therefrom, a pair of throttles mounted respectively in the fuel supply pipes, a pair of servo-mechanisms operatively connected respectively to the throttles and provided with separate control valves in response to movements of which the corresponding servo-mechanisms actuate the throttles connected thereto, a balancing pipe having one end in communication with one of the fuel supply pipes at the outlet side of the throttle therein, a first control means having a member responsive to ram air pressure and operatively connected to the control valve of the servo-mechanism connected to the last mentioned throttle, and a second-control means having a member responsive to fuel pressure in the balancing pipe and operatively connected to the control valve of the other servo-mechanism.

3,000,437 SLIDING MULTIPLE DOOR ASSEMBLY AND INTERIOR CABINET

Howard J. Bennett, Morris Park, Lake Waubesa, McFarland, Wis.

Filed Jan. 16, 1956, Ser. No. 559,161
5 Claims. (Cl. 160—33)

1. A sliding door assembly comprising a magazine, a downwardly directed opening at one end of said magazine, a plurality of like size, rectangular, flat panels movably disposed in face-to-face relationship within the magazine so that they may be moved sequentially through said opening, a guideway extending downwardly away from

said opening and holding said panels in edgewise relationship, means flexibly joining the panels to each other so that they may be stacked in the magazine and sequentially withdrawn into said guideway, flat surfaces on the top and bottom edges of each panel normal to the plane of the surface of the panel, said surfaces contacting each

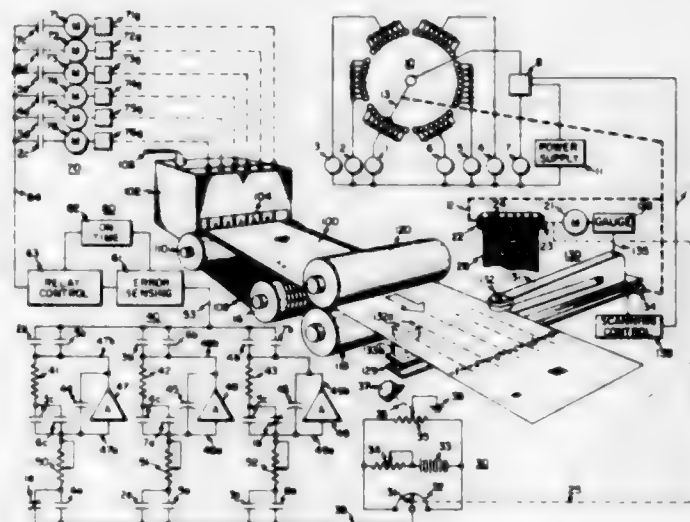


other when the panels are positioned in the guideway and providing no tendency toward lateral displacement, and means adjacent the opening of the magazine for successively moving out of engagement the contacting flat surfaces of adjacent panels and forcing each panel into the magazine when the lowermost panel is raised.

3,000,438 MEASURING AND CONTROLLING SYSTEM

Frank M. Alexander, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed Nov. 8, 1957, Ser. No. 695,416
4 Claims. (Cl. 162—259)



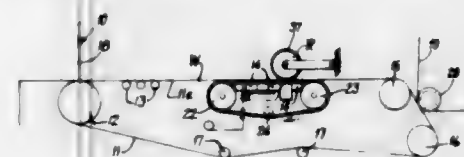
1. The combination, with a manufacturing machine for continuously producing a laterally extended length of a formed product, of flow regulating means for forming a cross-sectional dimension profile of said product across the width thereof, said flow regulating means including a row of local profile adjustments each affecting said dimension at a portion of said width, said portion being substantially less than the total extent of said width, a plurality of actuators, each of said actuators being mechanically associated with a corresponding one of said local profile adjustments for driving the same in response to a control signal, means for gauging said dimension, means for mounting said gauging means on the product output side of said machine, traversing means associated with said mounting means for causing said gauging means to cy-

clically scan said product to and fro across said width thereof, means connected to said gauging means for generating a first signal indicative of said dimension at the traversing point of measurement, means for processing said signal to provide said control signal, and signal routing means controlled by said traversing means for routing said control signal to each of said actuators seriatim according to the lateral position of said gauging means with respect to said product.

3,000,439 MOVING BELT SUCTION BOX ASSEMBLY

Harry C. Moore, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Nov. 19, 1958, Ser. No. 774,995
7 Claims. (Cl. 162—314)



1. In a paper machine, a traveling forming wire carrying a paper web thereon, a traveling endless perforate belt engaging the bottom side of the wire, a suction box having a generally flat top and relatively shallow grooves therein, means furnishing liquid under pressure to said grooves to lubricate the bottom side of the belt essentially entirely therealong and thereacross during travel over the box, and a cylindrical member positioned in rolling contact with the paper web above the grooves in the suction box and compacting the web while over said suction box top to remove undesirable fibrous formations therein.

3,000,440 DEEP WELL ORIENTING TOOL

Robert Howard Malcomb, Ventura, Calif., assignor to Regan Forge and Engineering Company, San Pedro, Calif., a corporation of California

Filed Apr. 29, 1957, Ser. No. 655,742
8 Claims. (Cl. 166—4)



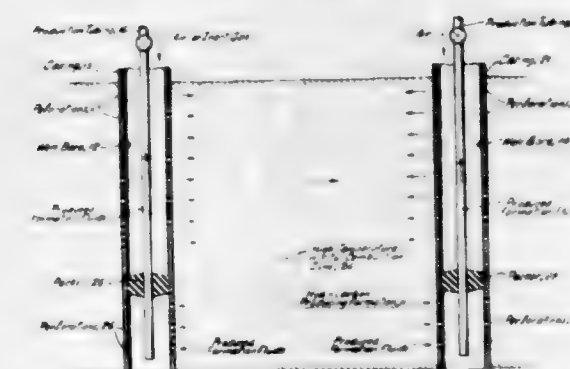
1. In combination: telescopically related first and second members relatively movable in the direction of the axis thereof; interengaging means on said first and second members preventing relative rotation thereof about said axis; an arcuate race carried by one of said first and second members and disposed in a plane substantially perpendicular to said axis and having an end; a gravity responsive element movable in said race and engageable with said end thereof; stop means engageable with said first and second members and movable rela-

tive thereto between an operative position wherein it limits relative axial movement of said first and second members in one direction to a short stroke and an inoperative position wherein it limits relative axial movement of said first and second members in said one direction to a longer stroke; and cam means connected to said stop means and engageable with said gravity responsive element when said gravity responsive element is in engagement with said end of said race for moving said stop means from said operative position to said inoperative position in response to relative axial movement of said first and second members in said one direction.

3,000,441 IN SITU COMBUSTION

Robert E. Kunetka, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed July 18, 1958, Ser. No. 749,498
9 Claims. (Cl. 166—11)



7. A method of carrying out an in situ combustion operation for the production of hydrocarbons from an underground formation containing viscous crude oil having an API gravity less than 30° which comprises initiating in situ combustion within said formation in a zone adjacent a first well bore penetrating said formation, introducing air into said formation via said first well bore to maintain in situ combustion therein to reduce the viscosity of said crude oil and to displace hydrocarbons of reduced viscosity from said formation toward a second well bore penetrating said formation at a distance removed from said first well bore, producing the resulting displaced hydrocarbons from said formation via said second well bore, discontinuing the injection of said combustion supporting gas into said formation via said first well bore, introducing into said formation via said first well bore a non-combustion supporting gas as a heat carrier to transfer the heat from the high temperature combustion zone created within said formation to another portion of said formation adjacent said high temperature combustion zone in the direction of said second well bore and in the direction of the flow of said non-combustion supporting gas within said formation whereby the hydrocarbons in said other portion of the formation are heated to a relatively elevated temperature to effect viscosity reduction, discontinuing the injection of said non-combustion supporting gas into said formation via said first well bore, introducing air into said formation via said second well bore to initiate and/or maintain in situ combustion in the presence of hydrocarbons with reduced viscosity within said formation in said other portion of said formation under conditions such that the high temperature combustion zone within said formation resulting from said in situ combustion moves within said formation in the direction of said second well bore and counter-current to the flow of said combustion supporting gas introduced into said formation via said second well bore and producing the resulting displaced hydrocarbons of reduced viscosity from said formation via said first well bore.

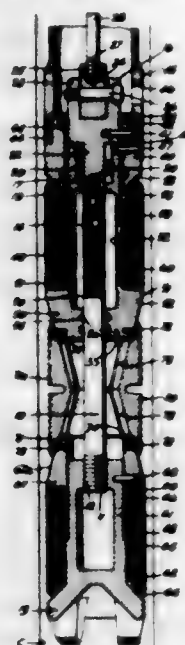
3,000,442 FRACTURE TREATMENT OF EARTH FORMATIONS

Marvin Gambill, Hobbs, N. Mex., assignor to United Chemical Corporation of New Mexico, Hobbs, N. Mex., a corporation of New Mexico
No Drawing. Filed June 6, 1957, Ser. No. 663,915
11 Claims. (Cl. 166—42)

5. The method of fracture treating earth formations which comprises, injecting into such formations under high pressure sufficient to induce fracture of said formations a fluid composition characterized by its containing about 5 to about 50 parts by weight of solid sodium chloride suspended per 50 parts of fluid, said fluid also carrying in solution a composition consisting essentially of alkali metal polyphosphate, polyamino polycarboxylic acid chelating agent and polyglycoside in the weight ratio of about 1:1:1 to 10:1:0.1, maintaining said pressure for a predetermined interval of time, and, thereafter, releasing said pressure.

3,000,443 BRIDGING PLUG

Archie E. Thompson, Bell Gardens, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Continuation of application Ser. No. 427,819, May 5, 1954. This application Aug. 19, 1957, Ser. No. 678,808
3 Claims. (Cl. 166—135)



1. In well apparatus: a mandrel adapted to be lowered into a well borehole; a pair of oppositely-spaced-apart slip wedging members carried by said mandrel and mounted for longitudinal movement relative to each other, said wedging members having slip-supporting surfaces converging toward each other; a plurality of slips carried by and suspended between said slip-wedging members, each of said slips having a pair of opposite, mutually-converging cam surfaces; each of said cam surfaces being stepped at an intermediate portion thereof, and said slips being initially supported on said wedging members upon the outermost stepped portion of each of said cam surfaces, whereby said slips may be expanded rapidly during the initial movement of said slip-wedging surfaces toward each other.

3,000,444 CENTRALIZER

Kenneth A. Wright and James R. Solum, Los Angeles, Calif., assignors, by mesne assignments, to B and W, Incorporated, Torrance, Calif., a corporation of California
Filed Nov. 5, 1957, Ser. No. 694,554
4 Claims. (Cl. 166—241)

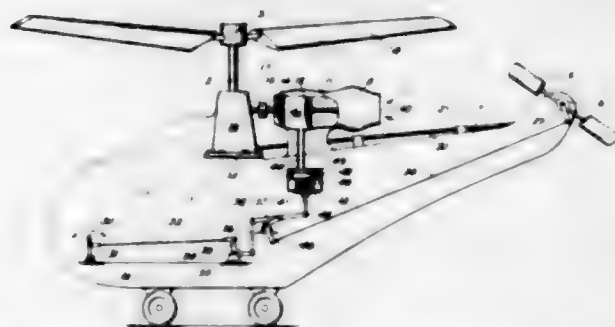
1. In a casing centralizer, the combination of: a pair of spaced coaxial annular collars connected by a plurality

of axially extending bowed staves, each collar having an internal abutment, circumferentially spaced axially extending skirts and side walls forming a plurality of pockets on each collar, each pocket having a window opening remote from said abutment, each bowed staff having a portion supported on the outer surface of a collar and having a terminal part extending through one



of said window openings between the side walls and into the corresponding pocket, respectively, the terminal part of each staff having an extreme end face and side faces and being confined and overlapped by its respective skirt, the extreme end face of each staff engaging said abutment and the side faces engaging said walls, and weld means joining each staff to said collar.

3,000,445
HELICOPTER TORQUE CONTROL DEVICE
Joseph Stuart III, Palo Alto, Calif., assignor, by mesne assignments, to Hiller Aircraft Corp., Palo Alto, Calif., a corporation of California
Filed Sept. 14, 1959, Ser. No. 839,782
3 Claims. (Cl. 170—135.22)



1. The combination in a rotary wing aircraft of a main lift rotor, a tail rotor, a gas driven turbine engine having a gas chamber therein, said engine being operatively connected with said lift rotor and said tail rotor for driving said rotors, and means operatively connected between said tail rotor and said engine in communication with the gas chamber thereof for automatically increasing or decreasing the pitch or said tail rotor in accordance with an increase or decrease in the pressure of the turbine gas in said gas chamber, whereby an increase in torque compensating thrust may be automatically imparted to said tail rotor by increasing the pitch thereof upon increased power being supplied to said lift rotor by said turbine engine, and vice versa; said means comprising a member responsive to gas pressure, a conduit extending from said engine gas chamber through which gas from said chamber may flow against said member, said member being movable in response to variance in the pressure of engine gas passing through said conduit from said engine gas chamber, and mechanism operatively connected between said member and said tail rotor for modi-

fying the pitch of said tail rotor in response to movement of said member as a result of increased or decreased gas pressure in said gas chamber of said turbine engine.

3,000,446
HELICOPTER ROTOR BLADES
Elmer F. Waraken, Cincinnati, Ohio, assignor to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Filed Aug. 25, 1958, Ser. No. 756,753
12 Claims. (Cl. 170—159)

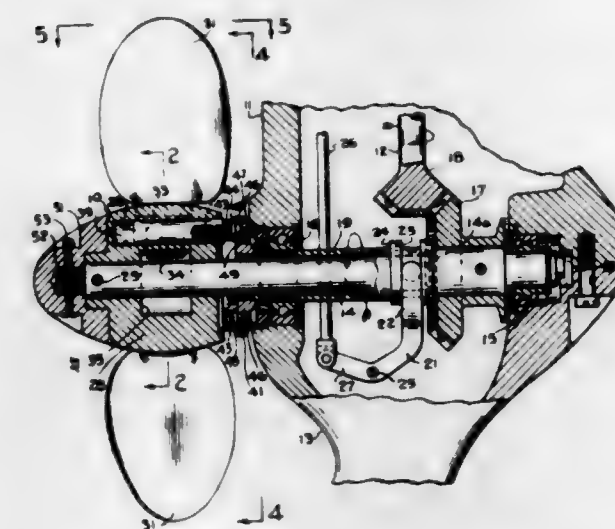


12. A hollow, plastic, rotor blade body having spanwise a root end, a tip end and a general taper from said root end to said tip end and having chord-wise the profile of an airfoil with a leading face and a trailing edge, said body comprising: top and bottom skin portions each extending from said root end to said tip end and from said leading face to said trailing edge, the thickness of each of said skin portions tapering from the root end to the tip end thereof, each skin portion comprising top and bottom, resin impregnated, cover layers of bidirectional reinforcement fabric extending from the root end to the tip end thereof and in between said cover layers resin impregnated layers of unidirectional fabric extending from said root end to said tip end with the warp threads being spanwise positioned and under static tension, and the intermediate region of each skin portion between the root ends region and the tip end region comprising a resin impregnated filler material of density less than said fabrics and positioned sandwich fashion between said layers of unidirectional fabric extending from said root end to said tip end, the concentration of said filler material in said intermediate region decreasing towards said tip end region, said unidirectional and bidirectional fabric layers and said filler material providing said skin portion with a graduated decrease in thickness from said root end to said tip end thereof, said skin portions being joined together at said trailing edge and at said leading face; and rib means disposed chord-wise in said body between said skin portions and joined to said skin portions.

3,000,447
PROPELLER MECHANISM FOR MARINE VESSELS
Charles E. Baugher, 3212 Jackson Blvd.,
Unlontown, Ohio
Filed July 13, 1959, Ser. No. 826,787
13 Claims. (Cl. 170—160.43)

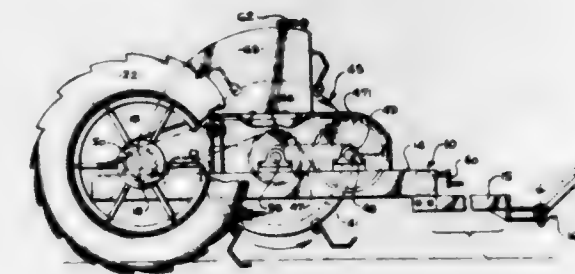
1. A propeller drive unit for a driven shaft of a marine power unit including control element rotatably and axially shiftably mounted on the shaft, comprising a hub having a central opening therethrough for rotatable reception of the shaft therethrough, releasable means for non-rotatably affixing said hub to the driven shaft to rotate therewith in given direction about the axis of the shaft, retaining means releasably affixed on the outer end of said shaft for retaining the hub on the shaft independently of said releasable means, a plurality of propeller blades each mounted on said hub to be rotatable about an axis radially of the longitudinal axis, said blades having radially extending stem portions rotatably therewith within the hub, said hub having peripherally spaced passages extending axially inwardly of one end of the same and communicating with said stem portions, and pitch-adjusting means including a member at said end of the hub having peripherally spaced elements extending therefrom and

reciprocal in said passages with reciprocal movement of said member with respect to the hub, said elements and stem portions having interengaging means operable by reciprocation of said member to rotate said blades, said member having means thereon for releasably affixing the same to the control element on the shaft, said hub and pitch-adjusting means being mountable on the shaft as a unit by releasably affixing said hub and mem-



ber to said driven shaft and said control element, respectively, and said control element being prevented from rotation on the shaft through rigid connection of the pitch-adjusting means between the control element and the hub, whereby accidental release of said releasable means with respect to the shaft will allow the shaft to rotate independently of said control element as well as said adjusting means and said hub while the hub is retained in the shaft by said retaining means.

3,000,448
BEACH CLEANING MACHINE
Leland H. Platt, Jr., and John D. Platt, Los Angeles, Calif., assignors to J. H. Platt & Son, Los Angeles, Calif., a partnership
Filed Jan. 8, 1960, Ser. No. 1,384
4 Claims. (Cl. 171—92)

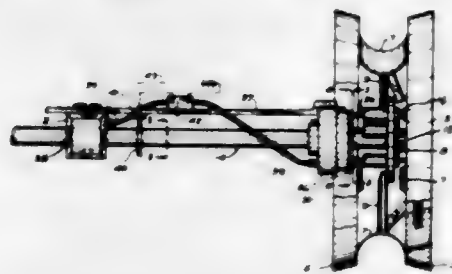


1. A beach sand cleaning machine comprising a frame, wheels supporting said frame, a succession of rakes movably carried by said frame and operable to successively enter and continuously comb a strip of the sand along which the machine is advanced, means mounting said rakes for movement into the sand and then upwardly to elevate debris separately from the sand, means for actuating the rakes in such movement, and a hopper carried by said frame and positioned to receive said debris elevated by the rakes, said rakes being formed of flexible tines having essentially comb arrangement and being unencumbered and spaced to pass the sand so that substantially none of the sand is elevated to the hopper, said tines having looped inner portions connected to said mounting means.

3,000,449

COTTON CHOPPING MACHINE

Elmer A. Morgan, 3621 N. 38th St., and Fred S. Anderson, 2143 W. Marshall, both of Phoenix, Ariz.
Filed Oct. 24, 1960, Ser. No. 64,528
2 Claims. (Cl. 172-94)

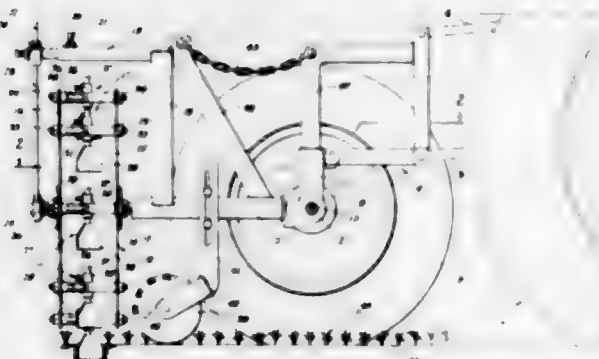


2. A cotton chopping machine having a frame, a wheel axle journaled on said frame, a wheel on said axle disposed to run along an earth row including a row of cotton plants, said wheel having a hub and a split rim with an outside part running on one side of said row and the inside part running on the opposite side of said row so that cotton plants extend upward through the space between said rims, said wheel parts being held together in an axial alignment by inwardly curved arcuate braces joined to a hub by radially extending brackets, a plurality of cotton chopping knives having arcuately curved blades, substantially conforming with the curve of the inside of said rim parts, radially disposed handles swingably supporting said knives on said brackets so that said knives swing through said rims and cut cotton plants protruding into said wheel through the space between said rim parts, and power driven mechanism within said wheel to swingably operate said blades to cut said plants as the wheel runs along said row, consisting of cylinders having pistons and piston rods operative therein, supported within said wheel, said piston rods being pivotally connected to the handles supporting knives, and mechanism for providing a charge of compressed air to the cylinder in the lowermost portion of its rotation, said mechanism including a cam on the axle supporting said wheel, and an insulated contact element on said frame disposed to contact lobes on said cam and thereby complete an electrical circuit through an electrically operated air valve, and an air supply pipe for said cylinder having an electrically operated air valve controlled by said cam.

3,000,450

PLANT THINNING MACHINE

Albert M. Jongeneel, 165 Edgewater Drive, Rio Vista, Calif.
Filed Oct. 9, 1959, Ser. No. 845,554
1 Claim. (Cl. 172-94)



In a plant thinning machine which comprises a mount adapted to be supported above and moved along a crop row, a front driven rotary member journaled on the mount for rotation about an axis lengthwise of the machine, a rear rotary member disposed in adjacent but spaced facing relation to said front rotary member and disposed with its axis in laterally offset relation and parallel to the axis of the front rotary member, a plurality

of thinning blade units between and journaled in connection with said rotary members in circumferentially spaced array, and means supporting the rear rotary member from the mount for rotation; said means comprising an axial stub shaft projecting from the rear face of said rear rotary member, a stay bar in which the shaft is supported projecting upwardly therefrom, rigid supporting means connecting the bar and mount including a rigid arm extending over the rotary members in clearance relation thereto, and means adjustably connecting the stay bar and arm, said last named means comprising a shaft turnably projecting into the arm at its rear end and normally clamped against rotation, a slotted head on the rear end of the shaft through which the stay bar slidably projects, and a clamping screw mounted on the head and holding the stay bar against sliding movement.

3,000,451

CULTIVATING AND WEEDING IMPLEMENTS

Monte E. Adams, 4650 Maple Ave., San Diego, Calif.
Filed Dec. 30, 1957, Ser. No. 706,182
2 Claims. (Cl. 172-372)



2. A cultivating and weeding implement, comprising a plurality of disc-like cutting blades, sequentially and tangentially disposed, the edges of which are bevelled and continuously sharpened; a mounting bar secured to said blades with the outer edges of said blades extending beyond said bar; and a handle affixed to said bar; said blades being upwardly convex transversely of said bar and flat in the direction longitudinal of said bar; said blades having tangential contact portions flattened and merged, with continuous cutting edges defining cutting crotches extended beyond the adjacent edges of the mounting bar, the curvature of the blades combined with the spacing of said cutting crotches from the mounting bar providing the tool with self-cleaning characteristics.

3,000,452

CULTIVATING AND WEEDING HAND TOOLS

Monte E. Adams, 4650 Maple Ave., La Mesa, Calif.
Filed Dec. 8, 1958, Ser. No. 778,788
4 Claims. (Cl. 172-372)



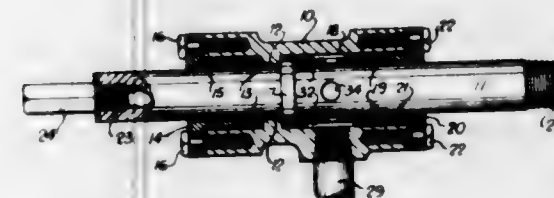
1. A cultivating and weeding hand tool comprising a single cutting blade having the configuration of multiple merged disc cutters forming cutting crotches front and rear, said blade being sharpened around its entire periphery to form a continuous cutting edge, any portion of which edge projects at an angle from the normal direction of thrust to produce a slicing effect on contact with weeds, said blade having at least a pair of apertures therein, a handle having end portions positioned over

said apertures and means extending through said apertures and connected to said end portions to thereby attach said handle for front and rear movement of said blade.

3,000,453

EARTH BIT DRIVER

William A. St. Germain, 660 S. Sycamore Ave., Littleton, Colo.
Filed Dec. 15, 1958, Ser. No. 780,550
1 Claim. (Cl. 175-207)



An earth bit driver comprising a barrel formed with a tubular bore and an integral, axially-narrow, annular shoulder intruding radially of said bore inwardly adjacent one end of the barrel to therein define a circular passage of restricted size relative to and coaxial with said bore, said shoulder having plane, annular end walls radial of the barrel and its bore, a tubular member longer than said barrel rotatably journaled in and through the passage of said shoulder and extending coaxially of said bore through and outwardly beyond each end of the barrel, an annular collar fixedly and exteriorly embracing said member in a size rotatably receivable within said bore, said collar having plane, annular end walls radial of the associated member and being disposed axially of the latter for end wall coaction with the side of said shoulder innermost of the barrel when the member is engaged through and to extend at each end outwardly beyond the barrel, whereby to limit displacement of said member in one direction axially of the barrel, a stuffing box closing the end of said barrel at the side of said shoulder remote from said collar in radial sealing compression about said member and thrust reaction against the side of the shoulder outermost of the barrel, a tubular sleeve formed with an exterior circumferential channel and holes opening radially therethrough loosely and revolubly embracing said member within the barrel in end-bearing engagement against the side of said collar remote from said shoulder, a stuffing box closing the end of the barrel adjacent the end of said sleeve remote from the collar in radial sealing compression about said member and thrust reaction against the opposed end of said sleeve, whereby to limit displacement of said member in a direction axially of the barrel tending to separate said collar from the shoulder, a flow passage radially of said member adapted to register as an incident of member rotation with the holes radial of said sleeve, means for the input of water under pressure radially through said barrel and to the channel circumferentially of said sleeve, a stud connectible in driven relation with a source of power coaxially and detachably closing the end of said member at the side of said collar remote from said sleeve, and means at the opposite end of said member for separably coupling tubular lengths coaxially thereto.

3,000,454

MATERIAL WEIGHING AND BAG FILLING MACHINE

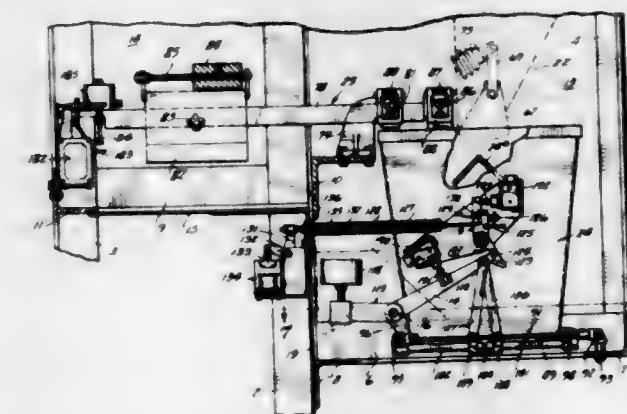
Frank L. Hopkins and Jack D. Hehn, Minneapolis, Minn., assignors to Bemis Bro. Bag Co., St. Louis, Mo., a corporation of Missouri

Filed Feb. 14, 1957, Ser. No. 640,176
12 Claims. (Cl. 177-81)

3. In a machine for dispensing predetermined quantities of bulk material, a frame structure, a weighing scale

770 O.G.—37

supported by said frame structure and including a weighing bucket having a discharge passage in its bottom and a dump gate normally closing said discharge passage, latch mechanism releasably locking said gate in its closed position, said gate being urged toward an open position by weight of material in said bucket, means for closing said gate when the bucket is empty, an accumulator hopper positioned to discharge bulk material into said bucket, said accumulator hopper having a discharge opening in its bottom and a gate normally closing said discharge opening, power-operated mechanism for said hopper discharge gate, power-operated feeding mechanism delivering material to said accumulator hopper at a uniform pre-

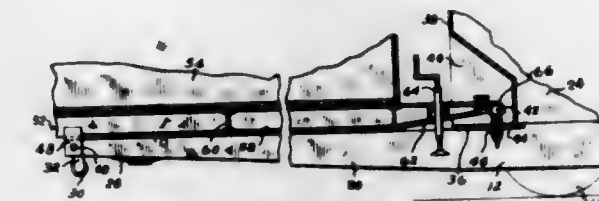


determined relatively low rate, control mechanism connected to said hopper gate operating mechanism and operative periodically to open said hopper gate to rapidly dump the accumulated contents of the hopper into the bucket and subsequently allow direct delivery of material at a lower rate to said bucket through the open hopper, and control mechanism comprising a weighing scale-actuated control element and responsive to a predetermined weight of material in the bucket to render said hopper discharge gate operating mechanism operative to close said hopper discharge gate and to release the latch mechanism to allow opening of the bucket dump gate for discharge of the weighed predetermined quantity of material from the weighing bucket.

3,000,455

TRANSPORTING UNIT FOR HOUSE TRAILERS

Alfred B. Mayfield, Box 334, Halstead, Kans.
Filed June 26, 1958, Ser. No. 744,856
3 Claims. (Cl. 180-12)



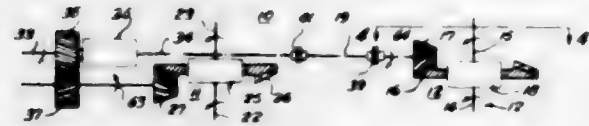
1. In combination with a house trailer having a chassis, supporting wheels, and a tongue extending from one end thereof, a tractor unit for transporting said trailer, said unit including a frame; a power plant mounted on said frame; a pair of front wheels supporting one end of the frame and operably connected with said power plant; a cab mounted on the frame, said frame including a pair of elongated, spaced apart tapered beams extending rearwardly from said cab and beneath said trailer when the trailer is being transported by the tractor; brackets rigidly interconnecting said chassis and said beams; a plate spanning the distance between said beams and secured to the latter; and a ball and socket joint secured to said plate and coupling the forward end of said tongue with said unit whereby to form a unitary vehicle.

3,000,456

AXLE MECHANISM

Chester D. Christie, Shaker Heights, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Nov. 12, 1958, Ser. No. 773,216
2 Claims. (Cl. 180—22)



1. In a multiple driving axle assembly; a pair of first and second driving axles comprising first and second housings containing first and second power output differential gear units; first and second power input gears in said first and second housings in meshed driving engagement with said first and second differential gear units; said first housing having main and auxiliary gear chamber portions therein; antifriction bearing means in said first housing in a spaced-apart relation along a common rotation axis including first and second antifriction bearings on opposite sides of said auxiliary gear chamber portion; drive shaft means extending to said axles for supplying torque to said power input gears including a pair of relatively rotatable first and second shaft members supported in a substantially aligned relation in said first housing by said bearing means for rotation on said common axis; an inter-axle differential in the auxiliary gear chamber portion of said first housing and comprising first and second side gears in a spaced-apart opposed relation along said common axis, and an annular group of planet pinion gears disposed between and in meshed engagement with said side gears; a gear train in said first housing for transmitting torque from said inter-axle differential to said first power input gear including a gear directly connected to and rotatable with said first side gear; said second side gear having a sleeve portion and being supported for rotation by having said sleeve portion received in said second antifriction bearing; said second shaft member having a socket portion received in and supported by said sleeve portion and connected with the latter to be driven thereby; said first shaft member extending across said auxiliary chamber portion and having one end thereof supported by said first antifriction bearing and its other end received and supported in said socket portion; said first shaft member having a splined intermediate portion and a journal portion rotatably supporting said first side gear; a carrier ring surrounding said group of planet pinion gears; and stub shaft members connected with said carrier ring so as to extend inwardly therefrom and rotatably supporting said planet pinion gears; said stub shaft members having splined inner end portions engaged with said splined intermediate portion of said first shaft member as a drive connection for said carrier ring and to provide for self-positioning of said planet pinion gears between said side gears.

3,000,457

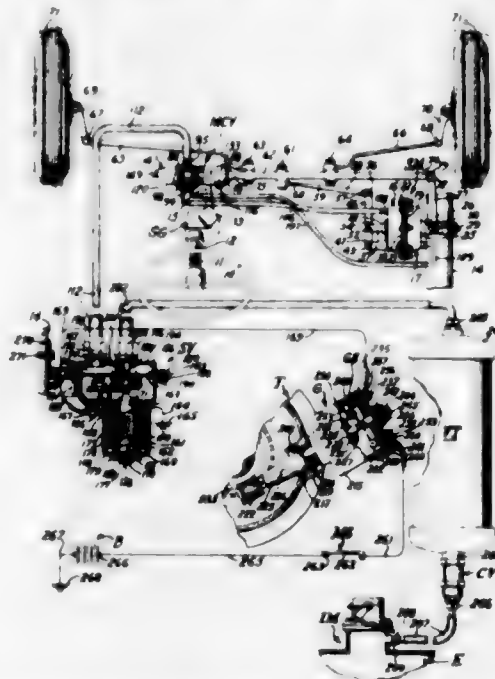
PNEUMATICALLY-ACTUATED ASSISTOR FOR VEHICULAR STEERING SYSTEMS

Glenn T. Randol, Mountain Lake Park, Md., assignor of fifty percent to Hamill-Markus Industries, Inc., Warren, Mich.

Filed Jan. 3, 1957, Ser. No. 632,365
6 Claims. (Cl. 180—79.2)

1. In a vacuum booster mechanism for use on a vehicle having an engine, a drive line, steered elements and a manual steering element therefor comprising: a fluid-pressure operated power cylinder; a power member reciprocable in said power cylinder from a normal medial neutral position with respect thereto and dividing the interior of said cylinder into two variable pressure com-

partments, one on each side of said power member; a pivotal connection between said power cylinder and a portion fixed to said vehicle; another pivotal connection between said power member and one of said steered elements; steering control valve means having a pair of telescopically-related relatively slidable elements, one of said valve elements being connected to one of the steered elements and the other valve element being connected to the steering element; a vacuum chamber disposed between said valve elements in constant communication with a vacuum supply conduit; a pair of air-vacuum chambers disposed between said valve elements, one on each side of said vacuum chamber in longitudinally spaced relation thereto, said air-vacuum chambers being normally connected respectively to opposite ends of said power cylinder and to atmosphere to establish balanced pressures on opposite sides of said power member for power-inactivation of said power cylinder; an air vent in said outer valve element; an axial passageway in one of said valve elements closed at one end and open at the other in constant communication with said air vent; a pair of cross passageways intersecting said axial passageway in communication respectively with said air-vacuum chambers to vent the latter to atmosphere; spring means having a normally preloaded spring reacting between said



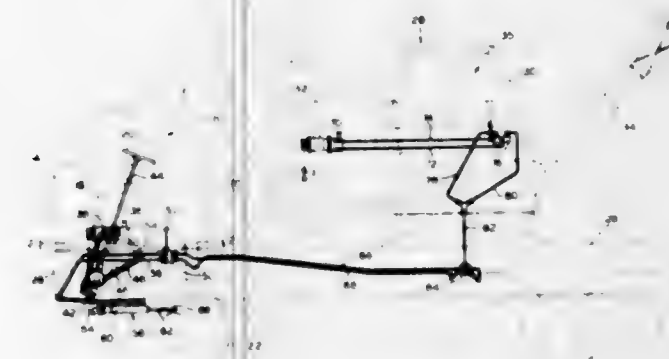
valve elements to establish the normal neutral position thereof; limiting means operably incorporated between said valve elements to define the limits of the relative operating movements of said valve elements in opposite directions from said neutral position thereof to selectively isolate said air-vacuum chambers from atmosphere and connect the isolated one to the vacuum chamber to vary the pressure in the selected compartment of said power cylinder to create differential pressures on opposite sides of said power member to effect movement thereof in the selected direction of movement of the steering element for power-activation of the steered elements whereby a reactionary force supplemented by said spring means is induced in said steering and steered elements tending to return said valve elements to neutral position wherein pressures on opposite sides of said power member are balanced when movement of the steering element is halted; a source of vacuum production connected to said vacuum supply conduit; a vacuum accumulator interposed in said supply conduit; a solenoid controlled shut-off valve interposed in said supply conduit between said accumulator and steering control valve means to isolate said accumulator from said steering control valve means thereby disabling power assistance to said steered elements; a speed-sensitive switch operated at speeds proportional to said drive line for controlling said shut-off

valve; and an electrical circuit including a source of electrical energy for energizing said solenoid to close said shut-off valve when the speed of the drive line reaches a predetermined factor.

3,000,458

SELECTIVE STEERING MECHANISM

Walter E. Ross, Benton Harbor, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed May 23, 1957, Ser. No. 661,182
4 Claims. (Cl. 180—79.2)



4. A selective power steering mechanism for a crane vehicle having dirigible wheels at one end and a first prime mover and a first operator's station adjacent the one end and a second operator's station in a rotatable cab adjacent the other end thereof, the power steering mechanism comprising a first unidirectional fluid pump operated by the first prime mover, a first reservoir for storing fluid and supplying it to the said first pump, a first fluid pressure regulator for regulating the output pressure of the said first pump, an operator's steering wheel at the said first operator's station, first steering valve means operated by the said steering wheel and connected by pressure and return fluid conduits to the said first pump and said first reservoir respectively, a transfer valve having two operating positions located adjacent the first operator's station and connected by fluid conduits to the said first steering valve means, a piston and cylinder type fluid actuator connected through a steering gear mechanism to turn the dirigible wheels of the vehicle, fluid conduits connecting the said transfer valve with the said fluid actuator, a follow-up connection between the said steering gear mechanism and the said first steering valve means, a second unidirectional fluid pump driven by the second prime mover, a second fluid reservoir arranged to store fluid and supply it to the said second pump, a second fluid pressure regulator for regulating the output pressure of the said second pump, second steering valve means located at the second operator's station and connected by pressure and return fluid conduits to the said second pump and the said second reservoir respectively, the said second steering valve means having two operating positions on either side of a neutral position and means normally biasing the same to the neutral position, a lever for operating the said second steering valve means additional conduit means including a rotatable fluid connection connecting the said second steering valve means with the said transfer valve, both of the said steering valve means being arranged so that when their respective prime movers and pumps are operating fluid circulates continuously from the pump through the steering valve means and back to the corresponding reservoir, whereby when the said transfer valve is in a first position and the first prime mover and the said first pump are operating the vehicle is steered by turning the said operator's steering wheel to operate the said first steering valve means to admit fluid through the said transfer valve to the said fluid actuator, the said

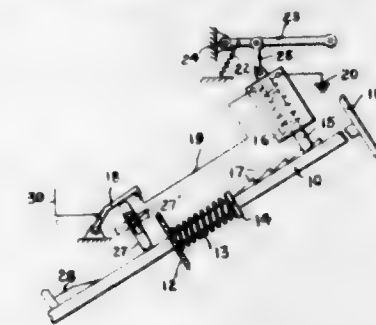
follow-up connection causing the dirigible wheels of the vehicle to maintain continuously as long as the transfer valve is in its said first position a position corresponding accurately to the position of the said steering wheel, and when the said transfer valve is in its second position and the second prime mover and the said second pump are operating steering of the vehicle is accomplished by intermittent operation of the said steering lever to operate the said second steering valve means, such operation of the said second steering valve means admitting fluid from the second pump through the said transfer valve to the said fluid actuator and thereby turning the dirigible wheels in the selected directions as long as the said steering lever holds the second steering valve means out of its neutral position.

3,000,459

AUTOMATICALLY-OPERATED VEHICLE PARKING BRAKE

Julian Silver, 165 Juniper Road, Scarsdale, N.Y., and Domenick A. Pugliese, 3668 White Plains Road, Bronx, N.Y.

Filed Nov. 9, 1959, Ser. No. 851,790
3 Claims. (Cl. 180—82)



1. In a vehicle, a foot brake operating rod, a spring acting on the rod to urge the rod to the position of brake application and said rod when being depressed against the action of the spring serving to release the brake, said brake rod having ratchet teeth, a solenoid having a plunger pawl engageable with the ratchet teeth to normally hold the rod depressed against the action of the spring, said solenoid upon being energized permitting said plunger to be released from the ratchet teeth, biasing means urging the plunger pawl into engagement with the ratchet teeth, relay means conditioned by the closing of the doors of the vehicle serving to energize the solenoid as the doors of the vehicle are opened and switch means associated with the brake rod to deenergize the solenoid when the brake operating rod is being released.

3,000,460

SONIC GEOPHYSICAL EXPLORATION

Arthur F. Hasbrook, Bexar County, Tex., assignor to Olive S. Petty, San Antonio, Tex.

Filed Feb. 5, 1958, Ser. No. 713,499
5 Claims. (Cl. 181—5)



1. Apparatus for use in sonic geophysical exploration comprising a recording medium, recording stylus means for repetitively traversing said recording medium, a source

of electrical impulses, circuit controlling means electrically connected with said source and operable by movement of said stylus means for activating said source to initiate said impulses, adjustment means operatively associated with said circuit controlling means to advance or retard in time the initiation of impulses from said source, a sonic transducer electrically connected with said source for converting said electrical impulses into sonic impulses and impressing the latter on the surface of the earth, an elevation-sensitive means, means operatively associated with said elevation-sensitive means for supplying to said adjustment means electrical correction signal representative of elevation changes to control the time of initiation of said impulses, whereby delay in arrival time of reflected sonic impulses resulting from changes in elevation of said apparatus is compensated.

3,000,461

SONIC GEOPHYSICAL EXPLORATION

Arthur F. Hasbrook, Bexar County, Tex., assignor to Olive S. Petty, San Antonio, Tex.
Filed Feb. 21, 1958, Ser. No. 716,809
4 Claims. (Cl. 181—5)



1. Apparatus for use in sonic geophysical exploration comprising a recording medium, recording stylus means for repetitively traversing said recording medium, a source of electrical impulses, circuit controlling means electrically connected with said source and operable in timed relation with the movement of said stylus means for activating said source to initiate said impulses, elevation-sensitive adjustment means operatively associated with said circuit controlling means to advance or retard in time to the position of said stylus means for the initiation of impulses from said source in conformity with change in elevation of said apparatus, said adjustment means comprising an elevation-sensitive circuit generating corrective signals representing changes in elevation of said apparatus, and a variable delay circuit receiving said corrective signals, said variable delay circuit being comprised in said circuit controlling means, and a sonic transducer electrically connected with said source for converting said electrical impulses into sonic impulses and impressing the latter on the surface of the earth, whereby delay in arrival time of reflected sonic impulses resulting from changes in elevation of said apparatus is compensated.

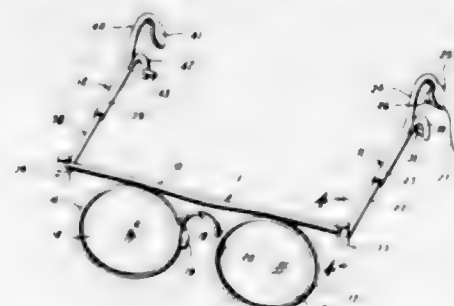
3,000,462

AIR-CONDUCTION HEARING AID CLAMPS

Alonzo L. Smith, P.O. Box 6252, Houston, Tex.
Original application Jan. 18, 1954, Ser. No. 404,672, now Patent No. 2,946,394, dated July 26, 1960. Divided and this application May 19, 1960, Ser. No. 30,279
9 Claims. (Cl. 181—23)

1. A clamping frame comprising, a front frame member adapted to extend across the brow of the user, means for connecting said frame member to an eyeglasses lens frame, a side temple member connected to each end of said front frame member and adapted to extend along

the side of the head of the user for support on the user's ears, each of said side temple members carrying an ear cavity plug member which is adapted to extend into the ear cavity of the ear adjacent thereto, each of said side temple members adjustable longitudinally to properly position the ear cavity member within its re-

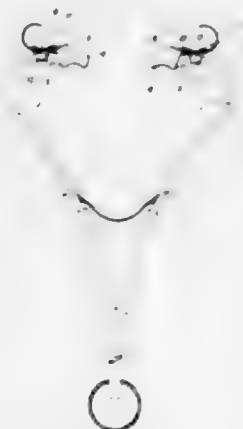


spective ear cavity, a receiver of an air conduction hearing aid mounted upon the rear portion of one of the side temple members of the frame, said frame having an air passage therein extending from the point at which the receiver is mounted to the ear cavity members whereby sound may be conducted from the receiver through said passage of frame to both ears of the user so that a balanced hearing is obtained.

3,000,463

DETACHABLE EAR PLUGS FOR STETHOSCOPES

Marion C. Collins, 1030 Sierra Drive, Turlock, Calif.
Filed Apr. 14, 1958, Ser. No. 728,336
3 Claims. (Cl. 181—24)



1. An attachment for a stethoscope, said stethoscope including a pair of rigid opposed tubes, and an ear plug on the outer end of each tube; the attachment comprising a pair of ear plugs having bores disposed to communicate with the first named plugs and of a size to fit on the outer forward end portions thereof, a metal strip secured in and projecting rearwardly from each attachment plug to a point rearwardly of the related first named plug when the attachment plug is in place thereon, and a tube-embracing clip on the rear end of said strip.

3,000,464

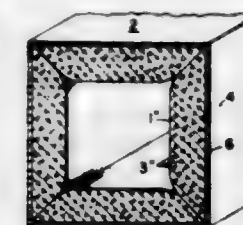
ACOUSTIC ABSORBER

Bill G. Watters, Nahant, Mass., assignor to Bolt Beranek and Newman Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Sept. 18, 1957, Ser. No. 684,676
12 Claims. (Cl. 181—33)

1. A new article of manufacture, comprising an acoustically reflective panel having a compressed sheet secured thereto over substantially the entire area of the sheet, the sheet being formed of originally porous foam-like acoustically absorptive material the pores of which are sub-

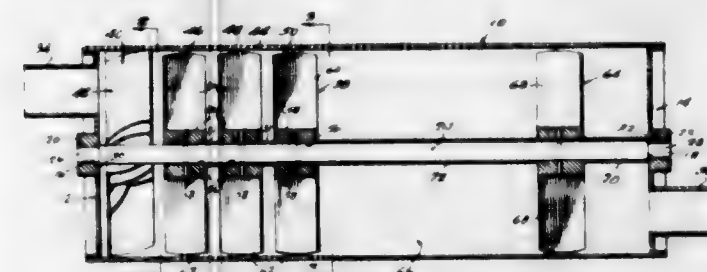
stantially collapsed and provided with binding means associated with the pores for holding the pores so col-



lapsed, the binding means being releasable to restore said material to its normal expanded physical characteristics.

3,000,465
MUFFLER

Russell J. Bruno, 1606 Hospital Ave., Franklin, La.
Filed Jan. 15, 1960, Ser. No. 2,776
4 Claims. (Cl. 181—64)



1. An internal combustion engine muffler comprising an elongated closed and imperforate casing having a cylindrical side wall and forward and rear end walls, intake and outlet necks on related end walls and communicating with the interior of the casing, a stationary guide vane unit extending across the interior of the casing close to said forward end wall, forward and rear bearings fixed axially on said end walls, a shaft extending axially in said casing and journaled at related ends thereof in the bearings, said shaft extending through said guide vane unit, said guide vane unit comprising a plurality of spaced radial vanes partially overlapping each other and having the inward ends spaced from said shaft and having the outward ends fixed to said casing side wall, a forward turbine unit extending across the interior of the casing and positioned directly behind said guide vane unit, said forward turbine unit comprising bladed rotor means fixed axially on said shaft, a rear turbine unit fixed axially on said shaft, said rear unit being spaced forwardly from said rear end wall, said rear unit being spaced rearwardly from said forward unit so as to define a turbulence chamber in the casing therebetween, said rear unit comprising a rotor having blades reversed in angle with respect to the blades of the forward unit.

3,000,466

FOLDING SCAFFOLD

Wallace J. S. Johnson and Robert E. Fisher, Berkeley, Calif., assignors to Up-Right, Inc., Berkeley, Calif., a corporation of California
Filed Dec. 1, 1959, Ser. No. 853,041
10 Claims. (Cl. 182—118)

10. A collapsible scaffold having a pair of spaced vertical supporting frames and including a bracing structure comprising: a first ladder structure having a first pair of spaced bracing members interconnected by steps, a second pair of spaced bracing members pivotally joined to respective first bracing members, said first and second bracing members also being pivotally joined in pairs to respective vertical supporting frames; a second ladder

structure having a third pair of spaced bracing members interconnected by steps, a fourth pair of spaced bracing members pivotally joined to respective third bracing members, said third and fourth bracing members also being pivotally joined in pairs to respective vertical supporting frames and at points above respective second and first member junctions; said first and second pairs

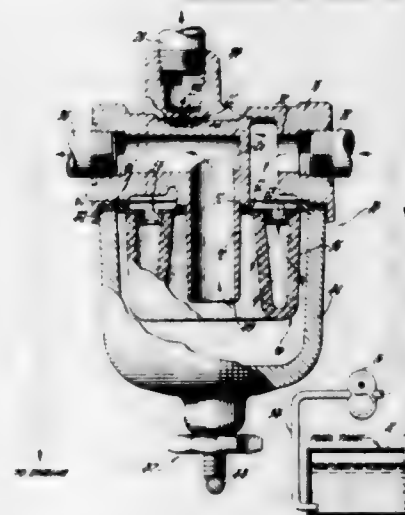


of bracing members being interlocked with said third and fourth pairs of bracing members; a rigid horizontal support member interconnecting said frames and having one end pivotally connected to one frame and detachably connected to the other frame; whereby said first and second ladder structures complement each other, forming a ladder structure spanning said supporting frames.

3,000,467

VAPOR SEPARATION UNITS FOR INTERNAL COMBUSTION ENGINES

Roy L. Bowers, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 721,982
1 Claim. (Cl. 183—2.5)



A vapor separating unit for an internal combustion engine fuel system, said unit comprising a receptacle having an upper portion defining a U-shaped zone for receiving fuel vapor, a fuel inlet passage leading directly to an intermediate part of said U-shaped zone and an L-shaped liquid fuel outlet passage within said U-shaped zone, a lower portion of said receptacle defining a lower zone communicating and registering with said U-shaped zone for receiving liquid fuel from said fuel inlet passage, a part of said upper portion defining said L-shaped liquid fuel outlet passage including a depending sleeve extending said outlet passage, a filter element surrounding said sleeve in said lower zone and arranged transverse to a flow path from said inlet passage to said outlet passage, an open vent of small flow capacity in said upper portion and leading from one leg of said U-shaped zone for removing vapor from said unit, and said inlet and outlet passages being of large flow capacity for handling liquid fuel.

3,000,468

MECHANICAL TIMING UNIT

Peter H. Morganson, Winsted, Conn., assignor to the United States of America as represented by the Secretary of the Air Force

Filed June 20, 1956, Ser. No. 592,694
3 Claims. (Cl. 185-39)



1. A mechanical timing unit comprising a frame, a drum journaled in said frame, a shaft journaled in said frame, a second drum journaled on said shaft, a gear fixed to said second drum, a mainspring one end of which is fixed to said first drum and the other end of which is fixed to said second drum, said spring being in equilibrium when wound on said first drum and being stressed by winding in reverse direction on said second drum so the spring will tend to unwind from the second drum and wind up on the first drum, a ratchet and pawl arrangement for releasing the second drum to rotate freely on said shaft when said second drum is being rotated to wind said spring thereon; a timing train supported by said frame comprising an escapement means to control the rate at which said spring unwinds from said second drum, a balance bar as a part of said escapement means, an adjustable balance spring for controlling the oscillating frequency of said balance bar and a winding train supported by said frame comprising a second shaft journaled in said frame, a second ratchet journaled on said second shaft, a sun gear fixed to said second ratchet, a planet support fixed to said second shaft, a third shaft journaled in said planet support, a planet gear fixed to said third shaft and meshed with said sun gear, a second planet gear fixed to said third shaft, a second sun gear journaled on said second shaft and meshed with said second planet gear, a pinion gear fixed to said second sun gear and meshed with the gear fixed to said second drum, a second pawl and pin means journaled on said frame, a second spring attached to said frame and urging said second pawl into engagement with said second ratchet; and a solenoid attached to said frame, said solenoid having a rotatable armature, a third spring attached to the solenoid and the armature of said solenoid, a first arm fixed to the armature of said solenoid, a second arm fixed to the armature of said solenoid, said third spring holding said second arm out of contact with said balance bar allowing the unit to run and holding said first arm against the pin of the second pawl and pin means to disengage the second pawl from the second ratchet preventing rewinding of the mainspring when the solenoid is deactivated, and when said solenoid is activated said first arm being removed from contact with said pin allowing said second pawl to engage said second ratchet so said mainspring can be rewound and said second arm being forced into engagement with said balance bar preventing the balance bar from oscillating and holding the balance bar in a position such that said balance spring is in tension so the balance bar will begin oscillating when released.

3,000,469

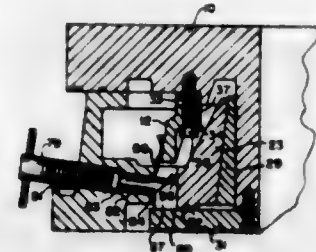
ROTARY WORK HOLDER

Bernard F. Froehlich, Colerain Township, Hamilton County, Ohio (% The Troyke Mfg. Co., 11294 Orchard St., Sharonville, Ohio)

Filed Dec. 17, 1958, Ser. No. 781,147
1 Claim. (Cl. 188-71)

In a rotary work holder which comprises a base having an upright central bearing opening, a table rotatably

mounted on said base, and a journal member mounted on the table and extending downwardly through said opening, a brake which comprises a brake plate attached to the journal portion remote from the table and engageable with the base surrounding the bearing opening to hold the table in position on the base, the brake plate having a braking face extending normally to the axis of the journal member, there being an upright bore in the base overlying the braking face of the brake plate, said upright bore extending parallel to the axis of the journal member, a brake plug mounted in the upright bore and



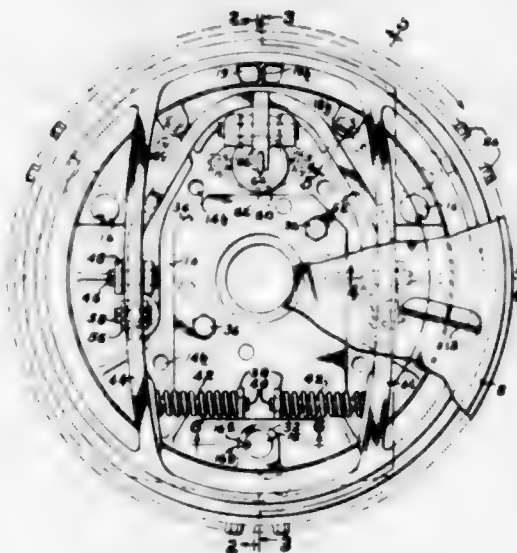
engageable with the braking face of the brake plate, there being a transverse bore in the base intersecting the upright bore, a brake actuating plug mounted in said transverse bore and engageable with the brake plug, the brake plug having a flat wedging face extending at an angle of approximately 30° to the upright bore, the brake actuating plug having a flat wedging face complementary to and engaging the wedging face of the brake plug, and releasable means for urging the brake actuating plug lengthwise of the transverse bore and in a direction to hold the brake plug against the brake plate and lock the table against rotation.

3,000,470

WATER COOLED, DISC TYPE BRAKE ASSEMBLY

Joseph M. Milan, Rio, 2, Sayre, Okla.

Filed Jan. 7, 1959, Ser. No. 785,345
5 Claims. (Cl. 188-72)



1. A brake construction comprising; a non-rotatable backing plate, and a friction engaging element, a housing surrounding said backing plate and said friction engaging element, an annular ring within said housing, an annular friction disc secured to said ring and mounted between said backing plate and said friction engaging element, operating means for moving said friction engaging element toward said backing plate, means for resiliently stabilizing said friction engaging element with respect to said backing plate, at least two upstanding members secured in fixed relation relative to said backing plate, and spring elements interposed between said upstanding members and said friction engaging element.

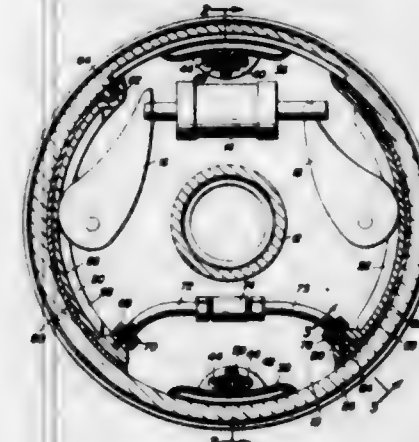
3,000,471
SPRING BRAKE FOR GASOLINE
ENGINE STARTER

Richard A. Glenn, Racine, Wis., assignor, by means of assignment, to Peter Vukos, Racine, Wis.
Filed Apr. 10, 1959, Ser. No. 805,441
4 Claims. (Cl. 188-82.6)



1. A free motion brake for use on a gasoline engine starter of the spring impulse type, comprising a rotatable member, teeth on the periphery of said member, a spiral coiled spring disposed over said teeth and having the outer end thereof anchored in a fixed position, an indentation in the length of the other end of said spring and extending radially inwardly between two of said teeth to be engaged with said teeth, said spring being coiled inwardly from said outer end and being overlapped upon itself over said indentation for expanding to loosen on said teeth when the latter are rotated in the direction opposite to said coiled direction, and for said spring contracting to tighten onto said teeth when the latter are rotated in said coiled direction and after a slight rotation thereof.

3,000,472
FORCED AIR COOLED BRAKES
Gerald P. Sturgis, 416 W. 11th St., The Dalles, Oreg.
Filed Apr. 24, 1959, Ser. No. 808,597
7 Claims. (Cl. 188-264)

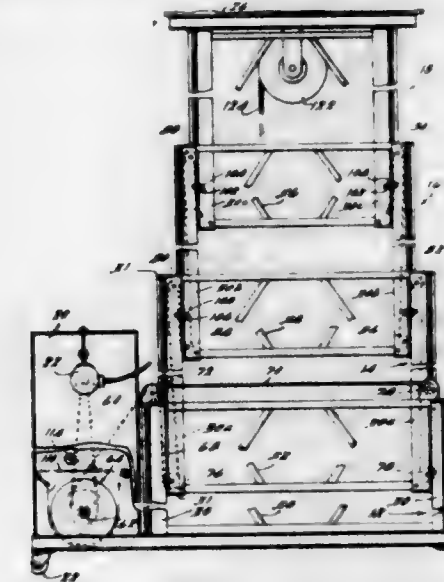


1. In a brake unit, the combination of a brake drum having a braking surface provided with a spiral groove with brake surface area between the portions of the groove, brake shoes operative to engage said surfaces and when in contact therewith continually being swept by said surfaces to present new and transversely progressive changing areas of said surfaces to the shoes, and passage means for introducing air under pressure from a source into said groove through said brake shoes at diametrically opposite points on said brake drum to cool the drum and shoes, and means subjected to a source of vacuum for withdrawing the heated air from said groove, said means for withdrawing heated air including at least one suction cup disposed between said shoes adjacent to the braking surface within said brake drum.

3,000,473
TELESCOPING TOWER
Stanley G. Reynolds, Muskegon, Mich., assignor to Reynolds Elevator Corporation, a corporation of Michigan
Filed Dec. 2, 1958, Ser. No. 777,680
6 Claims. (Cl. 189-14)

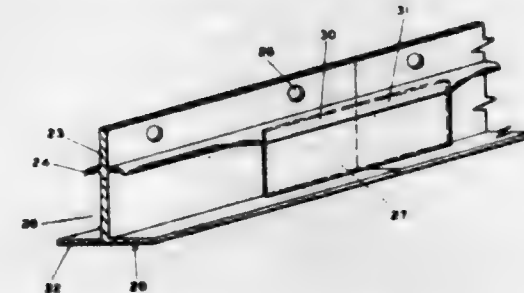
1. In a telescoping tower which includes a base section, intermediate sections one of which is telescopically

supported on said base section, and a platform-supporting section telescopically supported on one of said intermediate sections; the improvement which comprises providing substantially hollow upright corner posts for said sections arranged in close telescoping relation, pulleys mounted within said corner posts adjacent the upper end of said base and adjacent the upper and lower ends of said intermediate sections said pulleys communicating with the



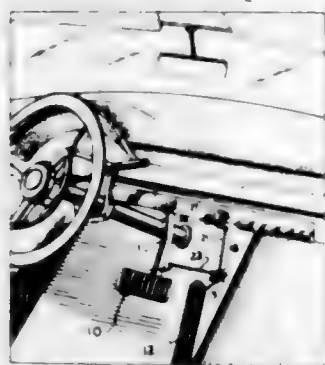
interior of a next adjacent post, respectively, lift cables extending about said pulleys and through said corner posts and connected to the lower end of said platform section, and means connected to said cables for pulling said cables about said pulley thereby to move said sections upwardly to extend said tower, said cables being substantially fully enclosed by said corner posts, respectively.

3,000,474
CEILING SUSPENSION RAIL
Leon S. Friedman, Ernest L. Spencer, and Leon Seligson, Columbus, Ohio, assignors to National Aluminum Company, Columbus, Ohio, a corporation of Ohio
Filed Dec. 8, 1954, Ser. No. 473,777
1 Claim. (Cl. 189-36)



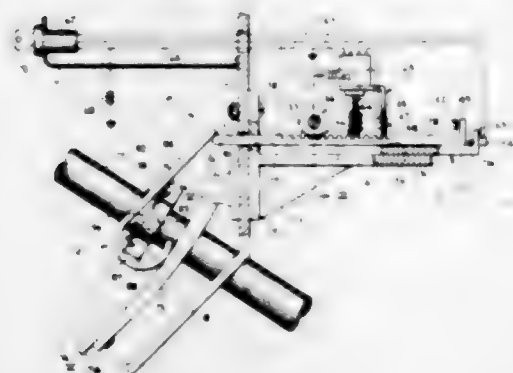
In combination, a plurality of strips for use in supporting wallboard, tile or the like, each of the strips having a vertical web and an outwardly projecting horizontal flange at its lower edge, and a bendable lip extending outwardly horizontally from the web of the strip intermediate the height thereof and projecting outwardly from the web a distance substantially less than the distance which the flange projects outwardly therefrom, said lip extending the full length of the strip and having a continuous slot extending longitudinally thereof near the web to serve as a weakened portion to facilitate bending of the lip downwardly towards the flange of the strip, said lip having a downturned knife-edge at its outer edge, and a clip for connecting adjacent strips together, each of the ends of said clip extending into the socket of each strip formed between the lip and the flange thereof, said lip being bent downwardly over the upper edge of said clip so that the knife-edge contacts with the side surface of the clip.

3,000,475
SPEED CONTROL FOR AUTOMOTIVE VEHICLES
 Leon G. Arpin, 340 Mountain Ave., North Caldwell, N.J.
 Filed Mar. 8, 1960, Ser. No. 13,510
 5 Claims. (Cl. 192-3)



1. An automotive accelerator pedal hold down device for use in a vehicle having a spring controlled accelerator pedal and a brake device, said hold down device comprising a flexible line adapted to be connected at one end thereof to the accelerator pedal of the vehicle for maintaining the pedal in a selected depressed position, pull means for said flexible line, a locking body on said line disposed between said one end and said pull means for locking said line in a predetermined control position in respect to the accelerator pedal, said locking body including a lever arm, a locking control member connected to one end thereof to said lever arm, said pull means comprising a pull rod having an actuating knob, said locking body having a bore formed therethrough and said line extending through said bore, said lever arm being swingable to a clamping or releasing position in respect to said line, said locking control member being connected to said lever arm, and a flexible line connected to the other end of said locking control member and adapted to be connected to the brake device of the vehicle whereby said brake device may exert a thrust on said locking control member, said first-named flexible line comprising a beaded chain, said locking body comprising a cylindrical member, said cylindrical member being formed with a cut-out therethrough and communicating with said bore whereby said bore is discontinuous, said lever arm having a swingable front portion thereof disposed in said cut-out at the bottom of said bore whereby the size of the bore may be adjusted to produce either clamping or releasing of said beaded chain.

3,000,476
SWITCH OPERATED BRAKE CONTROL
 Kenneth B. Barry, 10507 S. Westnedge, Portage Township, Kalamazoo County, Mich.
 Filed May 18, 1959, Ser. No. 813,778
 3 Claims. (Cl. 192-3)

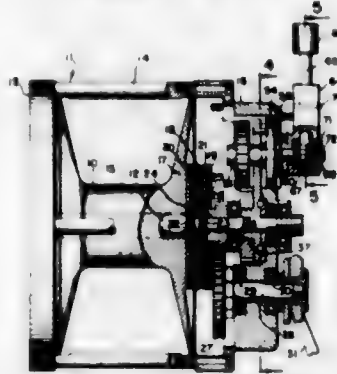


1. A device for operating a lever-type brake pedal pivotally supported adjacent to the fire wall of an automotive vehicle having a steering post, comprising: a support frame mountable upon the side of said fire wall op-

posite from the brake pedal; a rack slidably supported upon said frame for lengthwise movement in a substantially horizontal direction, one end of said rack extending through said fire wall; a motor mounted upon said frame; gear means connecting said motor to said rack for selectively driving said rack in both lengthwise directions; electrical means including a source of electrical energy and switch means controlling the operation of said motor; an elongated bar having at one end a curved portion defining a cam engageable with the brake lever and at its other end an arm engageable by the one end of said rack; a pivot post and clamp means supporting said pivot post upon said steering post parallel with the pivot axis of the brake pedal, said elongated bar being pivotally mounted on said pivot post for movement around an axis parallel with the pivot axis of the brake lever and transverse of said brake lever whereby movement of said rack in one direction operates through said bar to effect movement of said brake lever.

3,000,477
FISHING REEL BRAKE
 Charles B. Dunn, Miami, Fla., assignor to Anglers Manufacturing Company, Miami, Fla., a corporation of Florida

Filed Apr. 4, 1960, Ser. No. 19,725
 2 Claims. (Cl. 192-14)

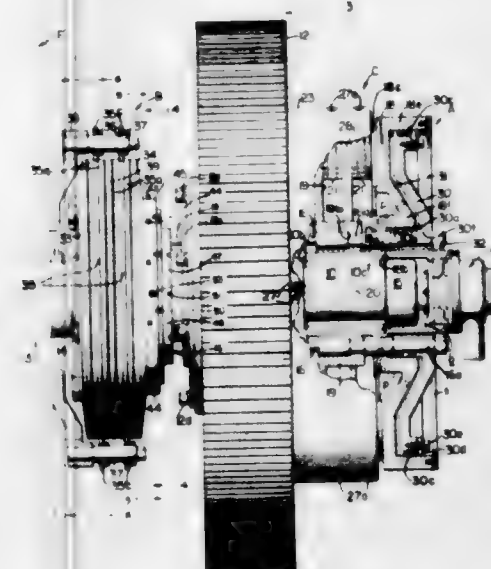


1. For use with a fishing reel and its support including a spindle extension, a brake-clutch mechanism comprising relatively movable brake elements on said reel and spindle extension, a brake shifting member rotatable and slidable along the extension, means engaging said member to cause slidable movement on rotation to energize the brake-clutch mechanism, said member having a cutaway portion opening through one side thereof and having a slot opening at its inner end into the cutaway portion and further having a short wall along one side of the slot having an inner edge exposed on the cutaway portion, a rotary disc mounted beside the cutaway portion of said member, a pin projecting from the disc positioned to slide in said slot, a second pin projecting from the disc angularly displaced from the first-named pin positioned to ride along the edge of the short wall, a brake lever connected to the disc for rocking the same through a pre-selected angular motion to cause the member to rotate and incidental to its rotary motion to slide axially along the spindle toward and from the brake-clutch mechanism.

3,000,478
CLUTCH-BRAKE MECHANISM
 Horace Johnson Carter, Wilmington, Del., assignor to Ferracute Machine Company, Bridgeton, N.J., a corporation of New Jersey
 Filed July 16, 1959, Ser. No. 827,578
 18 Claims. (Cl. 192-18)

1. A combined clutch-brake mechanism comprising a driving member journaled about a shaft with the journal-bearing thereof having a hub-collar surrounding and rotatable with said shaft, a clutch means for connecting

said driving member with said shaft and a brake means for stopping said shaft and each having a non-shiftable member formed with a hub portion and mounted on and rotatable with said shaft at opposite sides, respectively, of said hub-collar of said bearing and in end-to-end contact therewith, said brake means having a shiftable part mounted on the hub of said non-shiftable brake member, means reacting between said non-shiftable brake member and said shiftable brake part and positioned for normally biasing said shiftable part to move it relatively to said non-shiftable brake member in a direction away from said driving member to brake-applied position, said clutch means having a shiftable part mounted on the hub of and movable relatively to said non-shiftable clutch member in a direction away from said driving member to engage said clutch means, a fluid-pressure actuator carried by said non-shiftable clutch member and including an actuator member actuated by said fluid-pressure

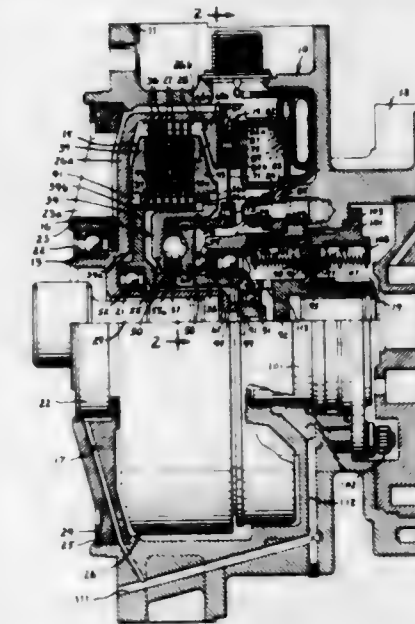


in a direction axially of and away from said driving member to engage said clutch means, and connection means positively connecting said actuator member and said shiftable part of clutch means and said shiftable part of said brake means and whereby, when said actuator member is actuated by fluid pressure, the shiftable brake part is moved against its bias to release said brake means and the shiftable clutch part is moved to engage the clutch means and a portion of said pressure exerted upon said actuator member is transmitted through said connecting means to the hub of said non-shiftable brake member and the portion of said pressure exerted upon the non-shiftable clutch member is transmitted through its hub and the hub-collar of said driving member to the hub of said non-shiftable brake plate, thus neutralizing the pressures exerted upon said fluid-pressure actuator within the clutch-brake mechanism itself without exerting a lateral thrust load on said driving member.

3,000,479
ELECTROMAGNETIC CLUTCH
 Bruce H. Mosbacher, Rockford, Ill., assignor to Roper Hydraulics, Inc., Rockford, Ill., a corporation of Illinois
 Filed June 23, 1958, Ser. No. 743,906
 12 Claims. (Cl. 192-35)

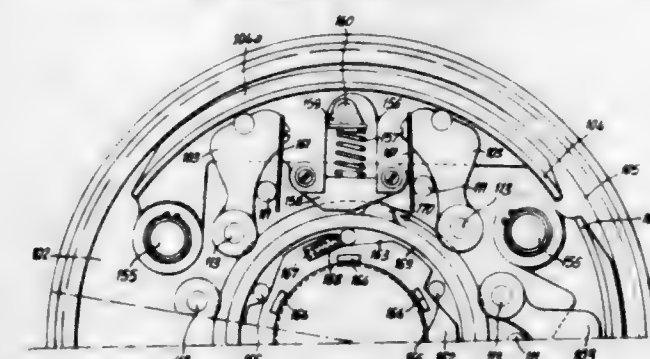
1. A multiple disk clutch including a housing, input and output members disposed in the housing, first and second sets of coaxial main clutch elements respectively mounted on said input and output shafts for rotation therewith and for relative axial movement into and out of coacting engagement, clutch operating means mounted on said output member for rotation therewith and for axial movement relative thereto to press the clutch elements into coacting engagement, a force multiplying ap-

paratus including a rotary cam member disposed coaxially of said clutch operating member and mounted for rotation relative to said driven member, annularly spaced balls disposed between said cam member and said clutch operating means for moving the latter axially in a direction to engage said clutch elements when the cam member is turned relative to said operating means in the direction of rotation of said input member, a pilot clutch including a first pilot clutch member on said input member and a second pilot clutch member, means non-rotatably mounting said second pilot clutch member on said cam member for



axial movement relative thereto into and out of coacting engagement with said first clutch member, said mounting means including spring means interposed between said cam member and said second pilot clutch member for yieldably urging said second pilot clutch member in one direction into engagement with said first clutch member to normally effect engagement of the main clutch elements, and selectively operable means non-rotatably mounted on said housing for moving said second pilot clutch member in the other direction and for retarding rotation of said second pilot clutch member when the latter is moved in said other direction to effect disengagement of the main clutch elements.

3,000,480
AUTOMATIC CLUTCH CONSTRUCTION
 Michael Bochory, 4 Villa Jocelyn, Square Lamartine, Paris, France
 Filed Oct. 3, 1956, Ser. No. 613,713
 Claims priority, application France Oct. 6, 1955
 22 Claims. (Cl. 192-48)



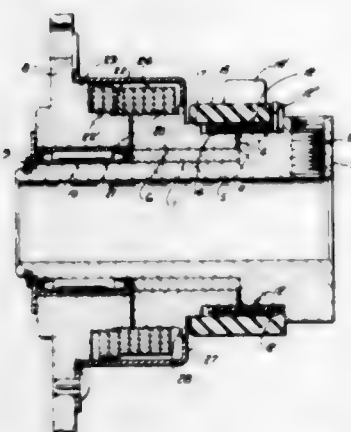
22. In an automatic centrifugal clutch having a drive shaft and a driven shaft, in combination, a centrifugal coupling comprising a drum operatively connected to one of said shafts for rotation therewith; a support operatively connected to the other of said shafts for rotation therewith; a plurality of shoes mounted on said support movable between an engaged position in which said shoes engage a peripheral surface of said drum and a disengaged

position in which said shoes are spaced from said surface; first spring means connected to said shoes and tending to keep the same in said disengaged position, said first spring means being constructed so as to permit said shoes to move against the force of said spring means from said disengaged position to said engaged position when said other shaft rotates at least at a predetermined low speed; at least one weight means for each of said shoes pivotally mounted on said support and movable independent of the movement of said shoes between an active position in which said weight means directly engages the corresponding shoe to press said shoe against said drum surface with increased pressure and an inactive position; second spring means operatively connected to said weight means and tending to keep said weight means in said inactive position, said weight means turning from said inactive to said active position under the influence of centrifugal forces and said second spring means being constructed and arranged so as to exert a counter-moment on said weight means permitting turning of the same from said inactive to said active position thereof under the influence of said centrifugal forces only when said other shaft rotates at a predetermined high speed greater than said predetermined low speed; abutment means on said weight means; uni-directional coupling means located between said drum and said support and including an inner member fixed to said drum for rotation therewith and an outer member coupled to said inner member only when said drum rotates in one direction; and engagement means projecting from said outer member for engaging said abutment means so as to turn said weight means into the active position thereof to cause clutch engagement when the rotational speed of said drum exceeds that of said other shaft, whereby the clutch engagement takes place progressively in two successive stages.

3,000,481

HELICAL COIL TYPE CLUTCHES

Donald M. Tomko, Cleveland, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Apr. 23, 1958, Ser. No. 730,475
3 Claims. (Cl. 192-48)

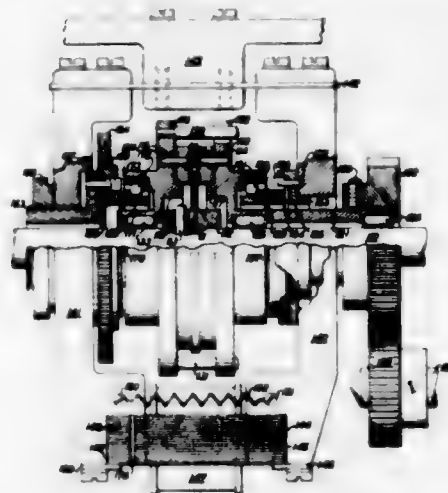


1. A torque limiting spring or coil clutch mechanism comprising an input drum, an output drum and an intermediate drum, all in axial alignment, two helical clutch springs, one in preloaded self-energizing full floating relationship to the input and intermediate drums and the other in preloaded self-energizing relationship to the intermediate drum and connected to the output drum to turn therewith, and means operative to deenergize coils of said one spring associated with the input drum to render the mechanism ineffective to transmit torque from the input to the output drum in one direction, said other spring having a low index relative to that of said one spring and being helically wound oppositely thereof or in an over-running direction so as to limit the torque transmissible from the input drum to the output drum.

3,000,482

ELECTRO-MAGNETICALLY ACTUATED DRIVING DEVICES FOR COMPUTING MACHINES

Henri G. Felsel, Paris, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France
Filed Nov. 7, 1958, Ser. No. 772,612
Claims priority, application France Nov. 29, 1957
7 Claims. (Cl. 192-84)

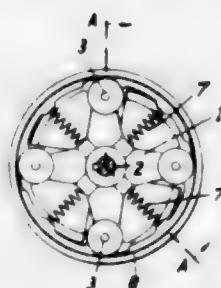


1. In an electro-magnetically actuated drive device, a primary driving shaft adapted to rotate continuously, a secondary shaft for a mechanism to be driven, a friction disc keyed on said secondary shaft, a first pressure member driven by said primary shaft, a first friction ring fixed on said first pressure member to engage a first face of said friction disc, a second pressure member driven by the first pressure member, a second friction ring fixed on said second pressure member to engage the other face of said friction disc, a coupling electro-magnet having two armatures, two levers each flexibly connected at one end to a fixed point and connected at the other end, respectively, to the two armatures of said electro-magnet and arranged to exert an amplified pressure on said pressure members when the electro-magnet is energized, so that the pressure of the friction rings of said pressure members on said friction disc is increased to rotatively drive said secondary shaft from said primary shaft.

3,000,483

CLUTCHING DEVICE FOR WASHING AND DRYING MACHINES

Johann Coenders, Hans Waldeshelm, Krefeld-Traar, Germany
Filed Dec. 1, 1959, Ser. No. 856,484
Claims priority, application Germany Dec. 6, 1958
2 Claims. (Cl. 192-103)



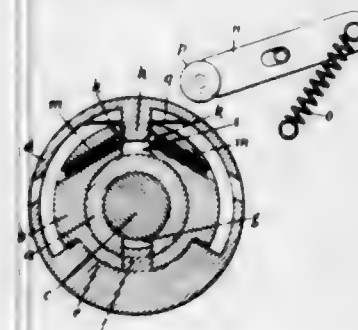
1. Centrifugal force coupling comprising a shaft, drive members secured radially to said shaft with one of their ends, the other of their ends being free, two-armed weight levers pivotally secured to respective free ends of said members, one of the arms of each of said levers being lighter and the other being heavier and offset from said one arm, a pair of driven drums rotatably mounted on said shaft and having inner peripheral faces adjacent respectively to said heavier and said lighter arms, compression spring means for urging the lighter of said arms into engagement with the peripheral face of its respective

drum during a low rate of revolutions, said other heavier arms being adapted to engage by centrifugal force with the peripheral face of its respective drum at a higher rate of revolutions.

3,000,484

DRIVING MEANS FOR A LIQUID FUEL INJECTION PUMP

George Voloskevich, West Kensington, London, England, assignor to C.A.V. Limited, London, England
Filed Mar. 18, 1959, Ser. No. 800,297
Claims priority, application Great Britain Mar. 19, 1958
1 Claim. (Cl. 192-104)



Driving means for a liquid fuel injection pump of the kind specified, comprising in combination a two-part coupling consisting of a rotary driven part provided with a radial gap, and a rotary driving part coaxial with and surrounding the driven part and provided with diametrically opposite first and second radial gaps, a dynamically unbalanced ring surrounding the coupling and having rigid therewith diametrically opposite and inwardly extending first and second detents through the medium of which the ring is constantly connected to the driving part so as to be rotatable therewith, the first detent being slidable within the first radial gap in the driving part, the second detent being slidable within the second radial gap in the driving part into and out of engagement with the radial gap in the driven part for interconnecting and disconnecting the driving and driven parts in response to radial movement of the unbalanced ring during rotation of the ring by the driving part, and the ring having an unbalanced mass adjacent the second detent so that the ring is movable under the action of centrifugal force in the direction for disengaging the second detent from the radial gap in the driven part, and spring-loaded means carried by the driving part and acting on the first detent for preventing radial movement of the ring by centrifugal force until the rotary motion imparted to the ring by the driving part exceeds a predetermined speed, and for holding the ring in the position in which the second detent is disengaged from the radial gap in the driven part.

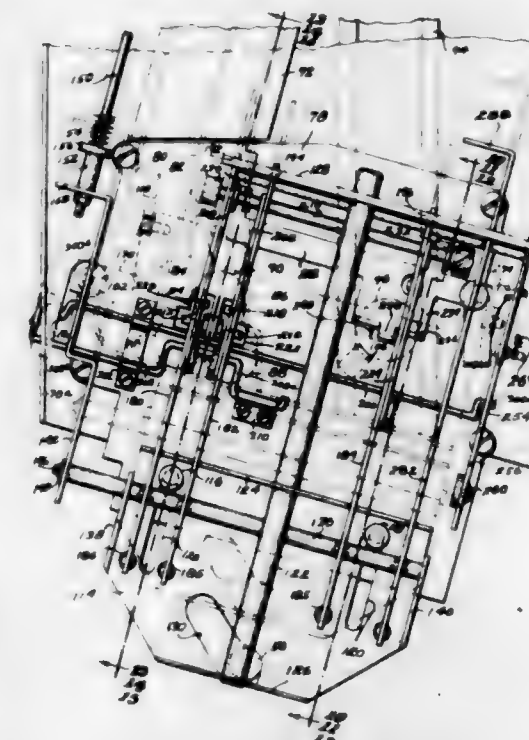
3,000,485

MULTI-PRICE VENDING MACHINE

Francis C. Du Grenier, 15 Hale St., Haverhill, Mass., and Frank B. Perri, Groveland, Mass.; said Perri assignor to Blanche E. Bouchard, Haverhill, Mass.
Filed May 4, 1956, Ser. No. 582,759
2 Claims. (Cl. 194-92)

1. A vending machine comprising an article-storing magazine divided into a plurality of compartments, an article ejector for each compartment, a plurality of operating handles each connected to one of said ejectors, said handles being movable through a predetermined operating stroke to cause said ejectors to remove articles from said compartments, coin-controlled mechanism normally preventing all of said handles from being moved through said fixed stroke but permitting said handles to move through a limited part of said stroke, coin-controlled mechanism comprising a shaft positioned to be moved by

each of said operating handles, a fixed mounting panel, a carriage movable relative to said panel, means connecting said shaft and carriage for moving said carriage relative to said panel when said shaft is moved by one of said operating handles, a plurality of locking levers totaling at least three in number pivotally carried by said carriage, a locking bar carried by said panel in position to intercept each of said locking levers when said carriage is moved a predetermined distance upon operation of any operating handle through said limited part of said stroke, whereby to prevent said any handle from moving fully through said operating stroke, a coin platform for supporting thereon at several positions a plurality of coins of one or more denominations, a coin chute for directing coins to said platform, a plurality of auxiliary levers, one auxiliary lever for each locking lever, each auxiliary lever being pivotally attached to said panel, a plurality of coin feeler elements each positioned to engage a coin at a different one of said several positions on said platform and to support one of said auxiliary levers against pivotal movement in one direction relative to said panel when in engagement with a coin on said platform, means connecting each auxiliary lever with one of said locking levers for

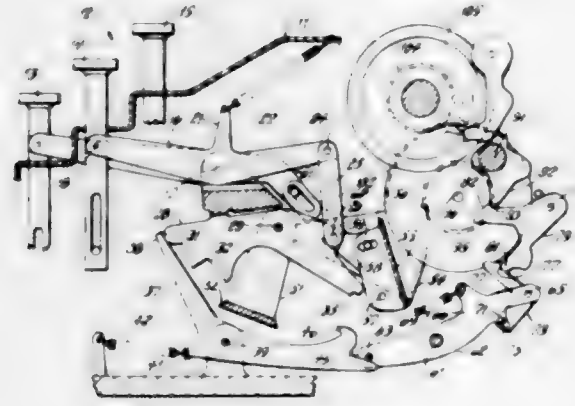


camming said locking levers into position to bypass said locking bar when said auxiliary levers are supported against pivotal movement in said one direction and said carriage is moved through said predetermined distance by operation of one of said handles, thereby to free said carriage to permit the operating handle to complete said operating stroke, first selectively operated price differential mechanism for freeing said carriage when the coins deposited in the machine are insufficient in number to support a certain two of said auxiliary levers, said first price differential mechanism comprising a rod rotatably supported by said panel and having cam means for engaging and supporting said two auxiliary levers against pivotal movement in said one direction, and means operated by only certain ones of said handles when said certain handles are moved through said limited part of said stroke for rotating said rod to place said cam means in supporting engagement with said two auxiliary levers, and second selectively operated price differential mechanism for freeing said carriage when the coins deposited in the machine are insufficient in number to support both of said two auxiliary levers, said second price differential mechanism comprising normally locked displaceable means in said locking bar which when released permits movement through said locking bar of the locking lever attached to

one of said two auxiliary levers, and means operated by handles other than said certain handles for releasing said displaceable means.

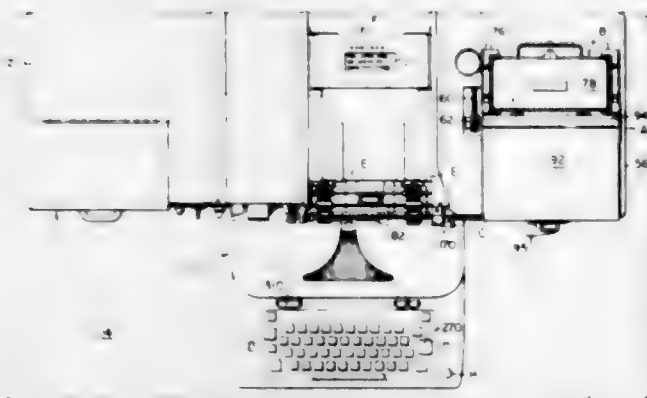
3,000,486 CIPHERING MACHINE

Edward J. Yeo, Norwalk, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 16, 1953, Ser. No. 349,144
11 Claims. (Cl. 197-4)



2. A ciphering machine comprising a plurality of keys, a cipher type wheel, an indexing mechanism for said cipher type wheel that includes a plurality of key bell levers connected with said keys, a key lever bail, a gear segment mounted for rotation with said key lever bail, and means coupling said gear segment and said cipher type wheel; and a key latch mechanism comprising a plurality of key stop latches actuated by said key bell levers into and out of engagement with said key lever bail and a key latch bail adapted for movement into and out of engagement with said key bell levers to prevent said keys from returning to non-actuated position until a ciphering operation is complete.

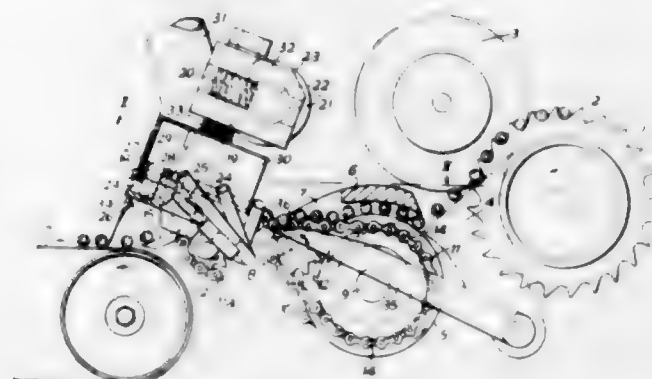
3,000,487
STENCIL-CHARACTER-FORMING APPARATUS
Hans M. Friedrichsen, Smyrna, Ga., assignor to Elliott Addressing Machine Company, Cambridge, Mass., a corporation of Delaware
Filed Feb. 11, 1960, Ser. No. 8,126
20 Claims. (Cl. 197-130)



1. In apparatus of the type described, the combination of character forming means including a platen, a card supporting track extending parallel to the platen and being constructed and arranged to support a record card and the like for endwise movement along the track from a position spaced from the platen in a direction longitudinally thereof to a second position next adjacent to and alongside the platen, retractable hold-down means for engaging a next adjacent record card and the like with the platen, transfer means for moving a record card and the like along said track to said second position

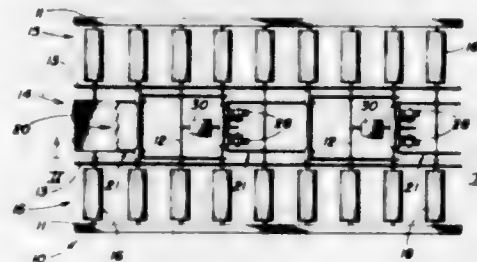
alongside the platen, means for removing a card engaged with the platen, and means for operating the hold-down means, transfer means, and card removing means in timed relation to each other.

3,000,488
APPARATUS FOR COLLECTING OR
ARRANGING CIGARETTES
Tom Rowlands, London, England, assignor to Molins Machine Company Limited, London, England, a British company
Filed Aug. 25, 1958, Ser. No. 757,040
Claims priority, application Great Britain Aug. 29, 1957
11 Claims. (Cl. 198-33)



11. Apparatus for reversing cigarettes, comprising feeding means to feed cigarettes sideways one after the other, a suction drum rotatable about an axis transverse to the axes of cigarettes fed by said feeding means, said drum having a peripheral surface substantially parallel to its axis, cigarette holding suction grooves formed in said peripheral surface and inclined to the said axis of rotation of the drum, said grooves being arranged to hold cigarettes around part of the said peripheral surface in overlapping relationship with cigarettes in adjacent grooves, the said drum being so disposed in relation to said feeding means as to receive in said grooves successive cigarettes from the feeding means while the drum rotates, and to swing them generally lengthwise about its axis, to reverse their orientation, and means to cut off suction from said suction grooves at a position substantially in line with the direction in which the cigarettes are fed toward the drum by said feeding means, to release reversed cigarettes from the drum.

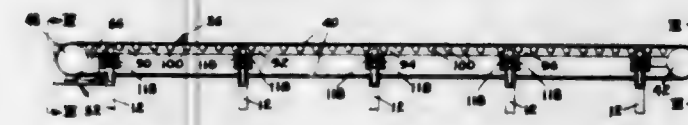
3,000,489
SENSING DEVICE
Norman C. Poel, Grand Rapids, and John C. Baxter, East Grand Rapids, Mich., and Robert J. McKnight, Upper Montclair, N.J., assignors to The Rapids Standard Company Inc., Grand Rapids, Mich., a corporation of Michigan
Filed May 29, 1959, Ser. No. 816,900
19 Claims. (Cl. 198-160)



1. In combination with a conveyor having a power operated propelling member flanked on each side by a low friction conveying track, the top surfaces of said propelling member and said conveying tracks cooperating to form a conveying surface; a plurality of vertically movable supports mounted in tandem on said conveyor

beneath said propelling member, each of said supports being biased upwardly and having a portion adapted to bear against the under surface of said propelling member; a sensing fitting having a wire-like rod; means on said rod projecting above said conveying surface; said sensing fitting being vertically movable under the weight of an article seated over said projecting means; said sensing fitting being connected to said support for urging said support downwardly when said projecting means is depressed whereby said propelling member drops below article contacting position.

3,000,490
ACCUMULATOR CONVEYOR
James R. Sebastian, East Grand Rapids, Mich., assignor to The Rapids-Standard Company, Incorporated, Grand Rapids, Mich., a corporation of Michigan
Filed Apr. 2, 1958, Ser. No. 725,970
3 Claims. (Cl. 198-184)



1. A conveyor for transporting and accumulating articles thereon, and comprising: a conveyor bed including parallel spaced friction reducing rail members, said friction reducing rail members including a plurality of wheels rotatably mounted to said rails and having the tops thereof projecting above the top surface of said rails to collectively form a conveying surface, a plurality of cross supports secured between said rails, vertically disposed posts mounted on said cross supports and having a compressible member encircling each thereof, a plurality of separate conveyor supporting members disposed between said rail members in consecutive end to end aligned relation, each end of each of said conveyor supporting members being slidably received on one of said posts and resting on said compressible member and guide elements on each side of and at each end of said conveyor supporting members for guiding the vertical reciprocal movement of said conveyor supporting members on said compressible members, and a driven conveyor member supported on said conveyor supporting members and normally movable thereover with the upper surface thereof yieldingly disposed for vertical movement with respect to the plane of said conveying surface.

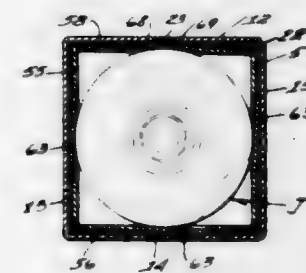
3,000,491
ONE-PIECE PAINT BRUSH CONTAINER
James C. McIntosh, 29321 Milton Ave., Madison Heights, Mich.
Filed Nov. 5, 1958, Ser. No. 771,999
1 Claim. (Cl. 206-15.1)



A paint brush container for removably enclosing a new or used paint brush under dry or wet conditions

comprising a case for receiving the bristle end, stock, and a portion of the handle of a paint brush; said case having interconnected side, bottom, and end walls; top cover flaps formed integral with said side walls as upward extensions thereof; the material of said case side walls and flaps being bendable at the juncture of said flaps and side walls constituting a hinge area therebetween; said flaps being swingable toward one another via said hinge area to form a top closure for said case; said flaps having means for by-passing the projecting handle of a paint brush; and means for securing said flaps in the closed condition over the top of said case; the cross-sectional area of the material of said side walls and flaps being reduced along the line of juncture of said flaps and side walls to provide an easily bendable hinge area along the line of juncture therebetween; said end walls having gable points extending above said case for contacting said flaps in their closed position; said flap's handle by-passing means comprising opposite area in said flaps having resilient fingers bendable by the presence of a handle; said fingers being formed by separating the material of said flaps into parallel strips such as by lancing or molding; said means for securing said flaps comprising extending tabs on one said flap and tab receiving sockets on the other said flaps; said side and end walls converging downwardly toward one another to a point adjacent the end of the bristles; said side and end walls being substantially parallel from a point adjacent the end of the bristles to said bottom wall; said parallel side and end wall area defining a sump area below the bristles for receiving sediment coming from paint residues in a used paint brush.

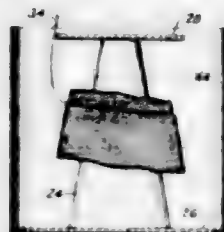
3,000,492
CARTON FOR FRAGILE JUG-LIKE ARTICLES
John D. Miller, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 1, 1958, Ser. No. 752,538
2 Claims. (Cl. 206-46)



1. A package for a jug-like container having a neck portion and a body portion, comprising a tubular carton having a plurality of side panels foldably connected together in a closed configuration, bottom closure flaps foldably connected to the lower ends of the side panels and adapted to close the bottom of said carton, at least two oppositely disposed top flaps foldably attached to the upper ends of the side panels, said top flaps being intumed to lie flush with their respective side panels with their free edges forming downward facing abutments, an end closure formed of a resilient sheet-like material and having a central panel nestable within said intumed top flaps, said central panel having an aperture adapted to receive the neck portion of said container, at least two flange flaps depending from the periphery of said central panel and adapted to lie flush with said intumed top flaps, locking tabs foldably attached to the lower ends of said flange flaps, said locking tabs being arranged to swing laterally outwardly and having free edges adapted to closely underlie said abutments when said central panel snugly engages the neck portion of said container, and said tubular carton being sized so that a portion of said

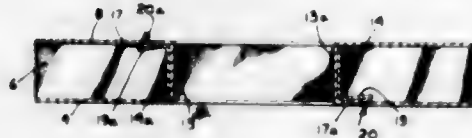
inturned top flaps is spaced apart from the body portion of a container placed within the carton a distance less than the thickness of the locking tabs, whereby the locking tabs will be compressed when they are placed between the inturned top flaps and the body portion of the container, and will spring outwardly to underlie said abutments to lock the end closure securely in place when the free edges of the locking tabs underlie said abutments.

3,000,493
WIRE PACKAGE AND REEL
Donald A. Hirst, R.D. 1, Lambertville, N.J.
Filed July 11, 1957, Ser. No. 671,197
2 Claims. (Cl. 206—52)



1. A wire shipping, storage, handling and dispensing package from which wire can be drawn through the open top end thereof at high speeds, comprising an enclosure open at one end and having a smooth cylindrical inner surface, a removable reel unit, having a conical core with radially extending flanges at opposite ends thereof, the flange at the smaller end of the core being of smaller diameter than the flange at the larger end of the core, and a body of wire closely wound on said core, in a plurality of layers extending generally parallel to the surface of said core, so that said body is of substantially uniform thickness throughout the length of the core, and means for supporting said reel unit concentrically within said enclosure so that its smaller flange is substantially in the plane of the open end of the enclosure to form an annular gap therewith through which the wire can be withdrawn.

3,000,494
HOLDER FOR ROLLS OF TAPE
Lee P. Monroe, Grand Rapids, Mich., assignor to Packaging Corporation of America, a corporation of Delaware
Filed Feb. 20, 1959, Ser. No. 794,694
5 Claims. (Cl. 206—52)



5. A holder for rolls of tape, comprising: a pair of side walls and a pair of end walls; a pair of bracing flaps struck from each of said side walls, said bracing flaps being of the same configuration and generally rectilinear in shape; corresponding bracing flaps of each of said pairs of bracing flaps extending towards each other through the holder and lying one upon the other, said bracing flaps being of a length generally equal to the width of said end walls; the bracing flaps of said pairs of bracing flaps exposed to the center of the holder having first locking ears projecting from the outer end thereof; second locking ears struck from each of said side panels along the line joining the bracing flap not exposed to the center of the holder, said first and second locking ears being generally of the same configuration; and said first locking ears superimposed upon said second locking ears and positioned within the interior of said holder, whereby said bracing flaps are locked in position.

3,000,495
PACKAGING METHOD AND MEANS
Alan Henry Downing, 29 Glen Elra Road, Rippon, Victoria, Australia
Filed Apr. 11, 1958, Ser. No. 727,949
2 Claims. (Cl. 206—59)



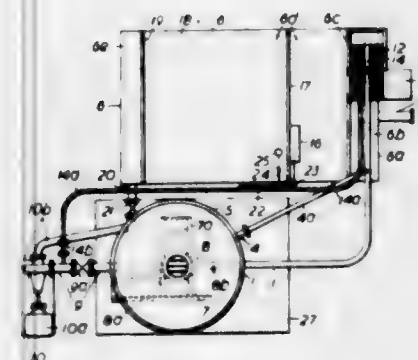
1. Fully-formed packaging means adapted to contain simultaneously a plurality of different goods and comprising flexible tubular material in flattened form wound into a roll adapted to be rotatably supported to pay out the flattened tubular material to receive the goods to be packaged in predetermined lengths of said tubular material, said flattened tubular material having at least two concentric plies defining at least two concentric tubes directly secured to each other along a plurality of lines extending longitudinally of the wound tubular material, whereby said tubular material is adapted to be opened into a plurality of separate coextensive longitudinally-disposed compartments each adapted to receive goods to be packaged.

3,000,496
RECESSED BOTTOM CONTAINER
Louis P. Larson, Glendale, Mo., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Oct. 29, 1958, Ser. No. 770,360
1 Claim. (Cl. 206—65)



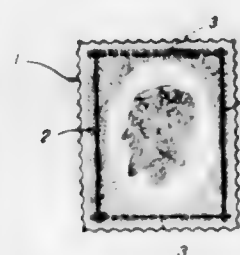
A package comprising a combination of a hexagonal container having a partial bottom closure and a plurality of tetrahedral articles arranged in a bridged self-supporting relation over a void in said bottom closure, the container having six foldably connected together upstanding side walls, the partial bottom closure comprising an internal flange with the upper face thereof upwardly and uniformly angularly disposed from the lower marginal portions of the side walls, the flanges having an inner free end edge defining an opening in the bottom closure, said flange comprised of bottom panels, said bottom panels in side marginal edgewise abutting relationship with at least one pair of abutting panel edges connected together by a vertically disposed bellows fold and at least one pair of disconnected panel side edges having alternating protruding portions, said disconnected panel edges being in locking engagement, the tetrahedral articles being positioned in the container in a cooperative self-supporting arrangement, the arrangement having an underface substantially pyramidal in conformation and supported solely at the perimeter portions thereof adjacent the side walls by the angularly disposed upper face of the internal flange, the apical portions of the underface of the arrangement bridged over the opening in the partial bottom closure.

3,000,497
SALT PURIFICATION, RECLAMATION AND TREATMENT PLANT
Angelo J. Rossi, 6 Erith St., Mount Road Township, Port Elizabeth, Cape Province, Union of South Africa
Filed July 16, 1958, Ser. No. 748,918
Claims priority, application Union of South Africa June 16, 1957
10 Claims. (Cl. 209—17)



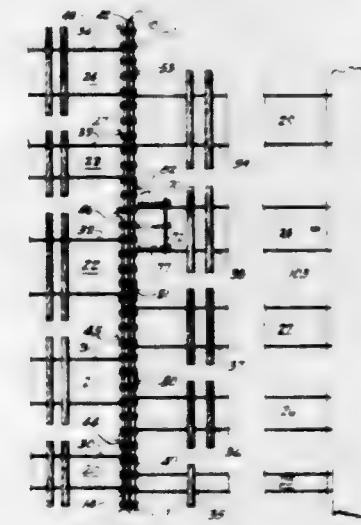
4. A granular material treatment plant comprising a conical container having an overflow duct, an upper charging end and a lower discharging end, entraining flow conduit means having downwardly converging side wall portions and front and rear wall portions together defining a branch cavity, the upper ends of said wall portions being connected to the discharging end of said conical container, a transverse conduit having a flow inlet and flow outlet and being convergent toward said flow outlet and to which the bottom ends of said wall portions are connected with said branch cavity opening into said transverse conduit, said rear wall portion curving smoothly downwardly and rearwardly from said conical container to said flow outlet, a rotary valve in said branch cavity operable to open and close cyclically, delivery pump means connected to said flow inlet, a tank and a screen over said tank, a delivery pipe connected to the flow outlet of said entraining flow conduit means and ending over said screen, and said delivery pump means having a suction side connected to said tank.

3,000,498
SORTING METHODS
Geoffrey Percy Copping, Chesham, England, assignor to Her Majesty's Postmaster General, London, England
Filed May 19, 1958, Ser. No. 736,071
Claims priority, application Great Britain May 20, 1957
15 Claims. (Cl. 209—81)



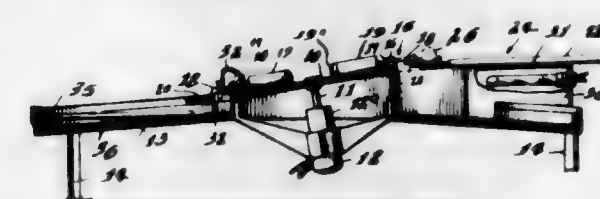
1. A method of handling letters and similar flat articles having an electrically conducting substance applied thereto and a di-electric material shielding the said substance, the said method including the step of detecting the said conducting substance by applying to the said shielding material at spaced points thereon, an electric potential of sufficient voltage to cause a discharge through the di-electric material to the electrically conducting substance, thereby to establish an electrical connection between the said spaced points.

3,000,499
LUMBER SORTER
Harry E. Bovay, Jr., Charles A. Lawler, and Lionel H. Wheeler, Houston, Tex., assignors to H. E. Bovay, Jr., Consulting Engineers, Houston, Tex., a partnership
Filed Nov. 29, 1955, Ser. No. 549,623
7 Claims. (Cl. 209—90)



1. In broad handling apparatus comprising channel forming means including a conveyor and guide means at each side of the conveyor along the length thereof, an opening in the side of the guide means at one side of the conveyor, said opening being long compared to the width of the channel defined between said guide means whereby a board disposed on said conveyor with its length in the direction of travel of said conveyor can be moved transversely off the conveyor through said opening, gate means at the downstream end of said opening for deflecting boards by an acute angle out of said channel through said opening, forward stop means adjacent said gate means for stopping the component of the board motion parallel to the channel, storage means at a lower level than said conveyor disposed adjacent said opening to receive boards discharged therefrom, the improvement comprising said stop means adjacent said channel extending transversely therealong opposite said opening for stopping the horizontal component of the board motion perpendicular to the channel, and wherein said storage means includes a chain conveyor extending transverse to the channel, said chain conveyor including a chain sprocket shaft disposed beneath the first said conveyor that forms part of said channel, said storage means further including skid means guiding boards falling off the first said conveyor onto said chain conveyor away from said chain sprocket shaft.

3,000,500
EGG GRADER
Gerald L. Kitson, Rte. 3, Rockford, Mich.
Filed Dec. 24, 1956, Ser. No. 630,182
10 Claims. (Cl. 209—121)



1. An apparatus for weighing and grading ovoid articles comprising in combination a fixed frame, an inclined spindle supported in said frame, means for rotating said spindle, a table carried by the said spindle and adapted to rotate therewith in a plane inclined to the horizontal, radially extending balance arms on said table

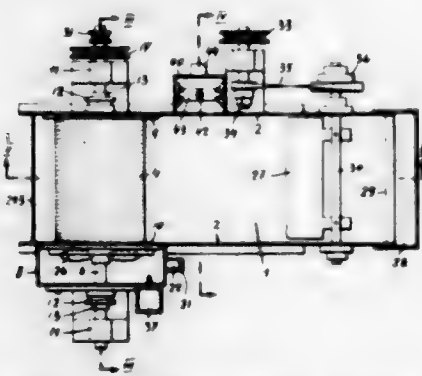
and having fulcrum supports fixed to said table adjacent the periphery thereof, and adjustable tubular counterweight means on the inner end of each balance arm, the axis of said tubular counterweight means lying along a radius of said table, cradle means on the outer end of each of said balance arms into which an article may be placed, the cradle being depressed thereby to an extent varying with the weight of the article, grading stations arranged about and subjacent to said inclined table to receive the graded articles, and a fluid counterweight medium partially filling each of said tubular counterweights, whereby rotation of said table shifts the effective center of gravity of the counterweight fluid in each counterweight to attain a maximum effective leverarm when the fulcrum of a given balance arm is disposed at the highest point in its orbit about the spindle and to attain the minimum effective leverarm when the said fulcrum of a given balance arm is at its lowest point in its orbit.

3,000,501

FROTH FLOTATION PROCESS AND MACHINE

Aldo Motosi, 13 Via Dei Mille, La Spezia, Italy
Filed June 12, 1959, Ser. No. 820,016

Claims priority, application Italy June 17, 1958
5 Claims. (Cl. 209-169)



1. In a flotation machine having a vat, a horizontal metallic drum perforated at its periphery, closed at one end and open at its opposite end rotatably mounted in said vat; means for rapidly rotating said drum; means at the open drum end for creating a suction in the direction of said drum, when the drum is rotated; means for feeding an aqueous suspension of comminuted solids and air into said vat, from the open side of said drum; said vat being provided with a substantially cylindrical baffle at its rear end and a gently sloping bottom at its opposite end, whereby said drum is mounted in said vat substantially concentrically to said cylindrical baffle, means for keeping the liquid level at the interior of said vat below the upper periphery of said drum, the said drum being revolved at such a speed as to cause the sucked fluids to be thoroughly mixed at the drum interior and then expelled through the perforations into the said vat, above the liquid level in the form of a froth-bearing liquid and means for skimming the froth and discharging same at the front end of the said vat and for discharging the exhausted pulp from an outlet provided near the bottom of said vat.

3,000,502

APPARATUS FOR SEPARATING ORE

Edward A. Hobart, Troy, Ohio, assignor to The Hobart Brothers Company, Troy, Ohio

Original application Aug. 21, 1956, Ser. No. 605,310, now Patent No. 2,938,627, dated May 31, 1960. Divided and this application July 1, 1959, Ser. No. 824,239
4 Claims. (Cl. 209-458)

1. In an ore separator; a sluice comprising a downwardly inclined trough having side walls that converge toward the lower end thereof, divider blade means in the path of the discharge from the sluice, means tiltably sup-

porting the blade means to vary the division of the discharge from the sluice, and compartments comprising partition means extending along beneath the blade means so the discharge passing on opposite sides of the blade means is separately collected, said sluice having an enlarged dependent basin portion at its upper end, means for supplying a water slurry of the ore to said basin to



the side thereof that is opposite the connection of the said trough to the basin, said basin portion in cross section having a rounded bottom so the material supplied thereto will swirl about in the basin and remain in mixed condition, the side of the basin adjacent the trough being unobstructed whereby the slurry in its mixed condition overflows freely into the trough.

3,000,503

SPIRAL CLASSIFIER

William H. Reck, Palo Alto, Calif., assignor to Western Machinery Company, San Francisco, Calif., a corporation of Utah

Filed July 9, 1958, Ser. No. 747,459

22 Claims. (Cl. 209-464)



1. In a spiral classifier for wet separations, an upwardly inclined trough, a substantially continuous spiral assembly mounted for rotation in said trough about an axis substantially parallel to the deck of said trough and having the last two flights thereof at the discharge end of said trough of reduced diameter, providing greater clearance between the deck of said trough and the perimeter of the said spiral assembly.

3,000,504

VISIBLE DISPOSABLE GASOLINE FILTER FOR OUTBOARD MOTORS

Carl F. H. Pfeiffer, 429 S. 8th St., Quincy, Ill.

Filed June 13, 1958, Ser. No. 741,954

1 Claim. (Cl. 210-94)



In combination with a flexible fuel line extending between a fuel reservoir and an internal combustion engine and having an interrupted area therein, a fuel filter disposed in said interrupted area, said fuel filter comprising an outer shell of flexible, pliable, transparent material, an apron connector having a reduced tubular extension

fitted on each end of said shell, the opposed ends of the interrupted fuel line engaging in said extensions, a rigid reinforcing ring disposed interiorly of each end of said shell interiorly of the apron of the adjacent apron connector, a metallic, fine mesh filtering cylinder having an open end disposed interiorly of one of said reinforcing rings and a closed end positioned interiorly of said shell fitted within the confines of said ring, and means securing the open end of said filter about the interior of the reinforcing ring in the end of said shell adjacent said fuel reservoir.

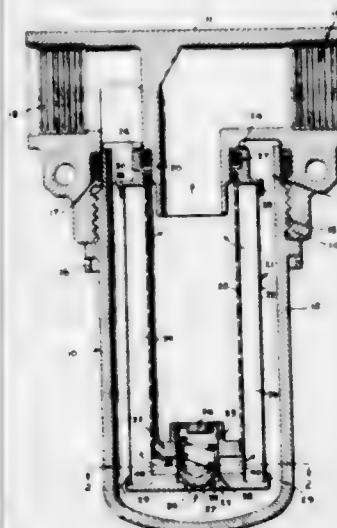
3,000,505

FILTER UNIT

William J. Scavuzzo, Clark, N.J., assignor to Parolator Products, Inc., Rahway, N.J., a corporation of Delaware

Filed May 22, 1958, Ser. No. 737,165

1 Claim. (Cl. 210-132)



A filter cartridge comprising a cylindrical woven filter member, a cylindrical metal edge filter member disposed concentrically within said outer member and in spaced relationship therewith to provide an annular chamber therebetween, an annular end cap having a central opening therein fixed to the upper ends of said members to seal off the ends thereof and said annular chamber and to provide outlet means for said cartridge, a circular end cap fixed to the lower ends of said members to seal the bottom of said members and chamber, a central projection disposed in said circular end cap extending interiorly of said metal edge member and having a central inlet port in the bottom thereof, horizontal passages extending through said central projection in communication at their outer end with said annular chamber and at their inner end with said inlet port, a by-pass valve disposed in said projection for closing off said inlet port, and biasing means normally maintaining said valve seated over said port to prevent flow through said passages into said annular chamber, whereby said filter members and by-pass valve form an integral unit.

3,000,506

THROWAWAY TYPE FILTER

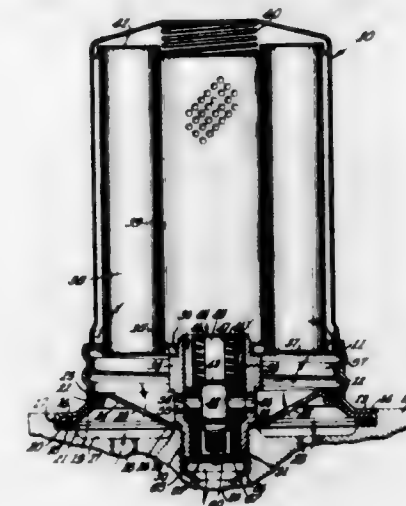
William H. Hultgren, Readington, N.J., assignor to Parolator Products, Inc., Rahway, N.J., a corporation of Delaware

Filed May 27, 1959, Ser. No. 816,188

15 Claims. (Cl. 210-133)

1. In combination, an engine block, a full flow screw-on filter unit having a filter element mounted on said block, a hollow adapter bushing threaded into said block to secure said unit thereto and for discharging oil to said block, oil inlet means in said filter unit for receiv-

ing dirty oil from said block, a portion of said bushing extending into said unit and having said filter element seated thereon, a relief valve disposed in said bushing for by-passing said filter element comprising a stationary



sleeve member forming a discharge chamber with said bushing, a valve member in said sleeve, biasing means for normally maintaining said valve member seated, and an inlet tube communicating with said oil inlet means and said sleeve.

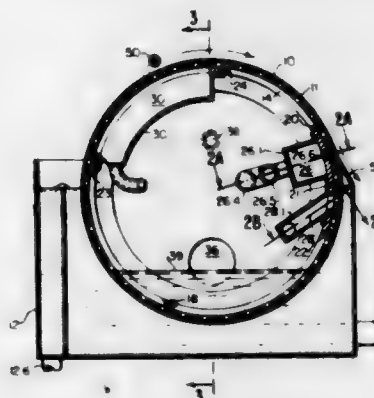
3,000,507

ROTARY FILTER

Frank W. Young, 211 North St., Medfield, Mass.

Filed June 19, 1957, Ser. No. 666,738

5 Claims. (Cl. 210-402)

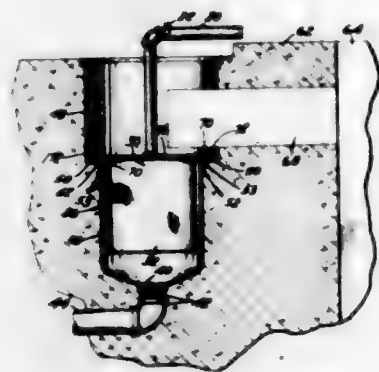


1. In a rotary vacuum filter of the type described, a hollow cylindrical shell mounted for rotation about its principal axis and having filtrate passages and a surface adapted for filtration, an internal structural member for said shell comprising an inner stationary cylinder having its outer surface substantially co-cylindrical with the internal surface of said shell, said inner cylinder being formed with end head member portions located at the ends of said shell and being cut out in central regions to define filtration areas with sections of the inner cylinder in the form of longitudinal spaced blades extending between the head member portions, said blades having outer surface areas adjacent to the inner surface of said shell and forming means maintaining a portion of said shell at a pressure higher than at the interior of said shell to permit removal of filter solids, and closures at the ends of said shell forming a pressure-tight enclosed region of the interior of said shell, one of said closures being mounted on one of said head member portions and having a filtrate outlet opening eccentric of and substantially below said axis, means for applying a vacuum to the interior of said shell and means for draining filtrate from said opening under vacuum.

3,000,500 VACUUM CLEANER ATTACHMENT FOR SWIMMING POOL SKIMMER

Charles A. Spunking and Merle E. Oberholts, Ralston, Nebr., assignors to The Refinite Corporation, Ralston, Nebr.

Filed Dec. 13, 1956, Ser. No. 628,029
1 Claim. (Cl. 210-477)



In a filtering and skimming unit comprising: a collector tank having an open top adjacent the ground surface, and a filtering device in said tank, the improvement comprising a removable cover in said tank above said filter, said cover having an aperture therethrough, and a pipe attached to said cover and extending upwardly from said cover, the inner wall of said collector tank having a first inwardly extending annular portion having a generally horizontal first annular ledge on its upper surface and further having a second generally horizontal inwardly extending annular portion disposed below said first inwardly extending portion and having on its upper surface a second generally horizontal annular ledge receiving thereon and supporting said cover, and keepers each having an end pivotally attached to the upper side of said first annular ledge for horizontal swinging movements of the other end of each keeper, said other end of each keeper being swingable from a storage position above said first ledge, to permit removal of said cover, to a keeping position such that said other end of each keeper is disposed above said cover for preventing said cover from coming upwardly out of place.

3,000,509 SORTING DEVICE

Raymond B. Larter, P.O. Box 39652, Los Angeles, Calif.
Filed Feb. 23, 1960, Ser. No. 10,253
6 Claims. (Cl. 211-11)



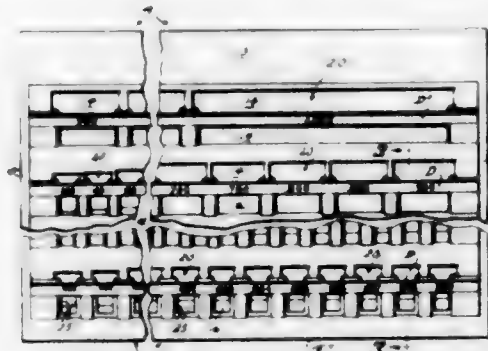
1. A sorting device, comprising: a stack of leaves having ends disposed in shingled relation; each leaf including at its shingled end a pair of cupped tabs folded laterally outwardly therefrom beyond the side margins of said leaf and an end element folded over said shingled end to form a transversely extending index slip receiving slot open at its ends, said end element being slotted to expose an index slip in said slot.

3,000,510 CASES FOR GAGE BLOCKS

George D. Webber, Lakewood, Ohio, assignor, by mesne assignments, to Webber Gage Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 9, 1958, Ser. No. 766,235
5 Claims. (Cl. 211-13)

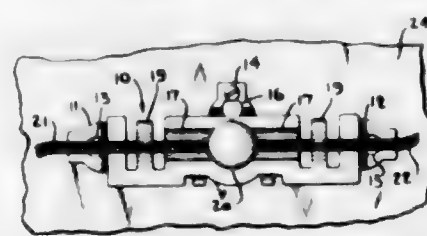
1. A case or holder for rectangular gage blocks, comprising a body adapted to be made in one piece as a plastic

molding and having supporting base or sill portions and a recumbent web or bed portion of stair-like cross section providing substantially imperforate rearwardly inclined rests for main or principal area surfaces of the gage blocks and contiguous substantially imperforate arresting abutments for surfaces of the blocks disposed at right angles to their main or principal area surfaces, and having a series of T-shaped partitions extending forwardly from the rest surfaces distances considerably less



than the widths of associated arresting abutments measured perpendicularly of the rest surfaces and with their T arms overhanging the rest surfaces in pairs and spaced apart horizontally, whereby the gage blocks can be individually slidably retained by said T arms, each readily accessibly disposed to being grasped and picked up by human fingers, while substantial front face areas of the blocks including areas adjacent the arresting abutments are exposed to view.

3,000,511
BULB HOLDING PLATE
Thomas G. Sconzo, Macon St., Sayville, N.Y.
Filed Jan. 30, 1959, Ser. No. 790,104
1 Claim. (Cl. 211-26)



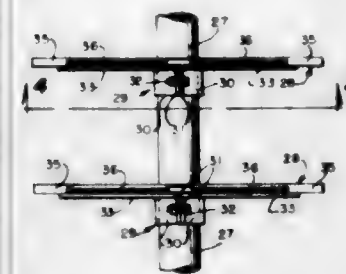
A plate member adapted to be readily affixed to a nail or screw extending from a wall surface, said member being further adapted to hold a decorative bulb or the like, and having terminal openings at opposed ends of its longitudinal axis and at least one marginal opening at its central vertical axis for accommodating a nail head and affixing the plate to the wall, said plate further having an opening at an area intersecting its longitudinal and vertical axis for holding a bulb socket, said socket having conducting wires extending therefrom, and retainer means extending outwardly and upwardly of the plate and on either side of the central opening to accommodate said conducting wires.

3,000,512
BASEMENT PIPE TABLES AND SHELVES
Harry W. Maynor, 10016 Stone Street Road,
Valley Station, Ky.

Filed June 9, 1959, Ser. No. 819,156
1 Claim. (Cl. 211-108)

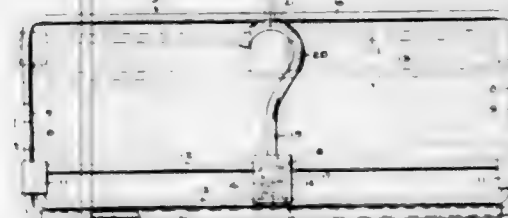
In a device of the character described, a vertically disposed post, a pair of superimposed platforms each provided with central openings for the projection there-through of said post, clamps fastened below said platform and including arcuate portions surrounding said post, each of said platforms including a pair of horizontally

disposed coplanar aligned sections, and connecting devices comprising pairs of rods having end portions con-



nected to said pair of sections, said rods having threaded portions and bushings engaging said threaded portions.

3,000,513
APPAREL CARRIER
Ralph A. Horton, 1621 NE. 56th St.,
Fort Lauderdale, Fla.
Filed Apr. 21, 1959, Ser. No. 807,845
2 Claims. (Cl. 211-119)

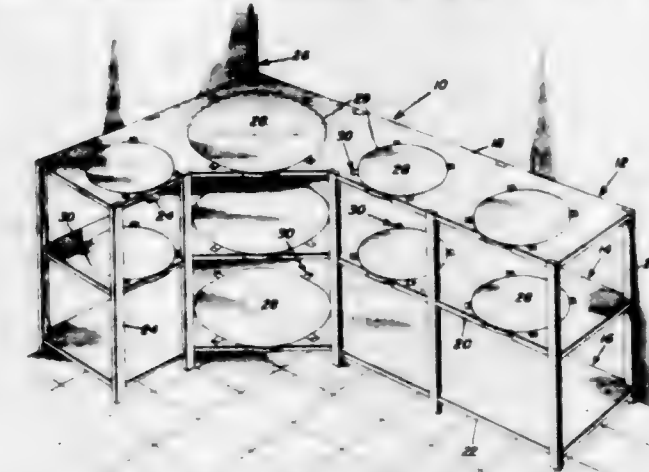


1. An apparel carrier of the character described that is adapted to support slender flexible articles, such as neckties, the carrier comprising an open rectangular frame that includes an upper slightly flexible rail, a lower spaced apart rail and with the rails being connected by end leg portions, an article clamping frame that is disposed within the first named frame and with the clamping frame having its end portions mounted within bearing blocks that are apertured to receive the leg portions and to be slidable thereon and whereby the clamping frame is movable toward and from the lower rail, a block carried by the clamping frame intermediate its ends and with the block being chambered, a suspension hook having a shank portion that extends through an aperture formed in the top of the last named block, spring means disposed within the chamber to bias the shank of the hook upwardly, the hook having a head portion that has underlying snapping engagement with the upper rail to yieldably bias the clamping frame in a direction to clamp upon articles supported upon the lower rail, the hook adapted to be disengaged with the upper rail whereby to move upwardly to cause the clamping frame to shift in a vertical direction away from the lower rail whereby the hook is disposed above the frame.

3,000,514
REVOLVING SHELF CONSTRUCTION
Wyatt B. Hallmark, 2807 Pleasant Drive, Dallas, Tex.
Filed July 13, 1959, Ser. No. 826,615
4 Claims. (Cl. 211-144)

2. A shelf having a circular opening therein and further having a plurality of recesses therein communicating with the opening, a rotary disk operable in the opening, and means for rotatably supporting said disk in said opening, said means comprising generally U-shaped brackets at spaced points around the opening, said brackets including an apertured, right angularly bent end portion secured to the shelf, at least one roller journaled for rota-

tion on a horizontal axle in the brackets and engaged beneath the disk for supporting same horizontally, and rollers journaled for rotation on vertical axes on the



brackets, the last named rollers being operable in the recesses and protruding therefrom into the opening and engaged with the periphery of the disk for radially guiding same.

3,000,515
INTEGRAL SHELF
Vance M. Gifford, San Jose, Calif., assignor to W. R. Ames Company, Milpitas, Calif., a corporation of California
Filed May 4, 1960, Ser. No. 26,890
3 Claims. (Cl. 211-153)



1. A knockdown and foldable shelf formed from a flat sheet of metal of uniform thickness and comprising: a main center shelf portion; a pair of supporting brackets integral with said main center shelf portion and coplanar therewith; a plurality of supporting hooks extending in opposed relation from a rear edge of each supporting bracket, each said bracket being connected to said main center shelf portion along a weakened bending line portion defining an end of said main center shelf portion, the total cross-sectional area of material along said lines being reduced from the cross-sectional area of material of said adjoining center portion and said supporting brackets during the manufacture of said shelf to thereby reduce the bending strength along said bending lines; whereby said shelf is transportable in said flat sheet form until ready for installation, at which time said brackets are bendable upward by hand from the plane of the center shelf portion into a substantially right angular form to reposition and turn said supporting hooks normal to said shelf portion for installation.

3,000,516
APPARATUS FOR AUTOMATICALLY TRANSFERRING WORKPIECES TO AND FROM A LATHE OR OTHER MACHINE TOOL
Reginald John Dixon, Solihull, and Lewis Jones, Coventry, England, assignors to Wickman Limited, Coventry, England

Filed Aug. 21, 1958, Ser. No. 756,369
Claims priority, application Great Britain Aug. 31, 1957
2 Claims. (Cl. 214-1)

1. Apparatus for automatically transferring work-pieces to and from a machine of the kind which includes a

rotary headstock for carrying a plurality of work-pieces and adapted to be rotated intermittently about a horizontal axis, comprising in combination with the headstock, a downwardly inclined feed chute for conveying a plurality of work-pieces in succession to a loading position spaced from the headstock both laterally and in the axial direction thereof, means for controlling intermittent movement of the work-pieces by gravity along the chute, an angularly and rectilinearly oscillatable arm for transferring the work-pieces individually from the chute to the headstock, and from the latter to another position, means for actuating the arm in co-ordination with the intermittent movements of the headstock and work-pieces, a second chute spaced from the headstock both laterally and in the axial direction thereof for receiving work-pieces delivered by the arm to the last

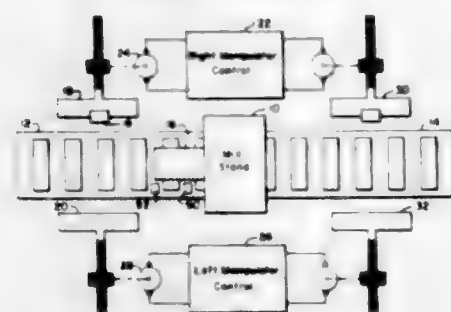


mentioned position, means pivotally supporting the second chute, fluid-actuated means for intermittently moving the second chute through 180° about its pivot axis to reverse positions of work-pieces transferred thereto by the arm from the headstock, a second angularly and rectilinearly oscillatable arm for transferring work-pieces individually from the second chute back to the headstock following the work-piece reversing movements of the second chute, and for subsequently transferring the reversed work-pieces from the headstock to a discharge position, means for actuating the second arm in co-ordination with the movements of the headstock and the second chute, and a discharge chute spaced from the headstock in the axial direction thereof for receiving the work-pieces delivered by the second arm to the discharge position.

3,000,517

WORKPIECE POSITION CONTROL APPARATUS
Frank G. Willard, Clarence, N.Y., and Henry A. Pahl, Evergreen Park, Ill., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 5, 1959, Ser. No. 818,454
13 Claims. (Cl. 214-1)



1. In workpiece control apparatus operative with first and second workpiece positioning devices for positioning a workpiece, the combination of a first control device operative with said first workpiece positioning device for providing a first control signal for positioning said first workpiece positioning device to a first predetermined position, a second control device operative with said sec-

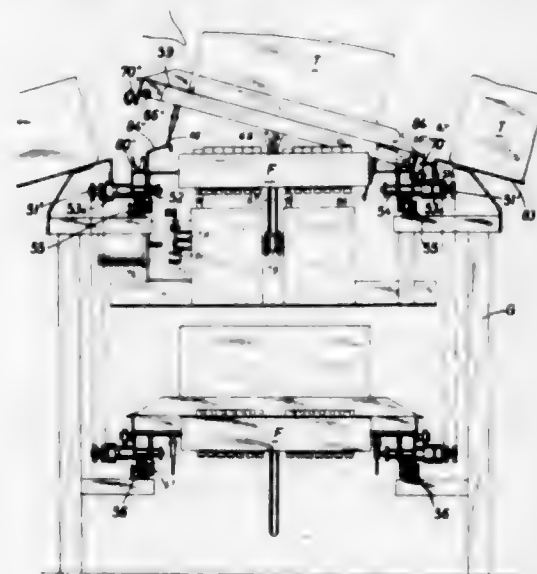
ond workpiece positioning device for providing a second control signal for positioning said second workpiece positioning device to a second position, a position signal storage device operative with one of said first and second control devices for providing a third control signal for positioning one of said workpiece positioning devices to a third position, and a position difference determining device operative with at least said third control signal for providing a fourth control signal to position the other of said workpiece positioning devices to a fourth position in accordance with a predetermined relationship to said third position.

3,000,518

CONVEYOR DISTRIBUTING SYSTEM WITH STATION SELECTOR

Albert Baumann, Bielefeld, Germany, assignor to Durkoppwerke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany

Filed Jan. 7, 1960, Ser. No. 1,085
Claims priority, application Germany Jan. 9, 1959
15 Claims. (Cl. 214-11)



1. A distributing system for articles to be selectively delivered to a plurality of stations located at opposite sides of a track, comprising a carrier movable along said track, a load support on said carrier provided with a generally horizontal load-bearing surface, first and second pivot means on said carrier releasably engaging said support, said support being held by said pivot means for respective rotation about two generally horizontal, substantially parallel axes spaced apart in a direction transverse to the direction of carrier motion, and mechanism at each of said stations operable to impart to said support a tilting displacement about one of said pivot means while simultaneously releasing said support from the other of said pivot means.

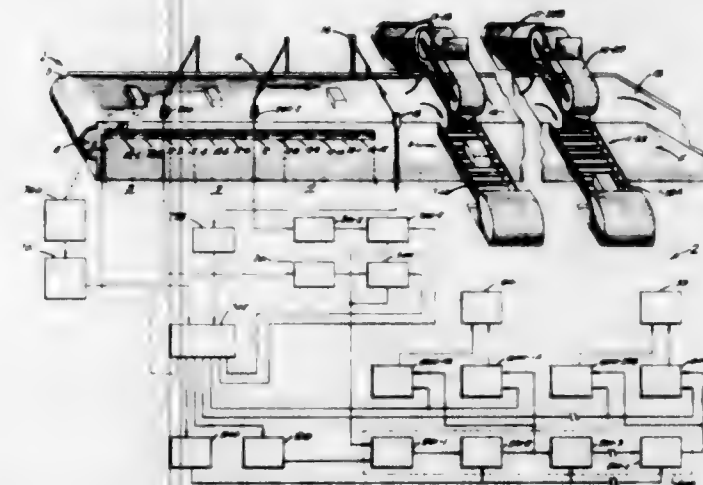
3,000,519

AUTOMATIC SORTATION SYSTEM CONTROL
Richard F. Purnell, Hinsdale, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Sept. 23, 1958, Ser. No. 762,782
21 Claims. (Cl. 214-11)

1. In a conveyor system of the type in which objects at a loading position are placed on a moving conveyor at spaced positions for movement to selected ones of a plurality of discharge stations adjacent a path traversed by the conveyor and in which control circuits synchronized with the movement of the conveyor operate transfer mechanisms to remove the objects at their respective selected discharge stations, the combination with the control circuits of a plurality of spaced visually observable devices positioned along the conveyor at the loading

position and operated in the order of their appearance in the direction of conveyor movement to indicate a posi-



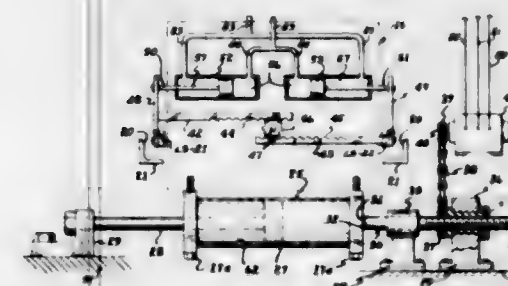
tion on the conveyor with respect to which an object is to be positioned.

3,000,520

PROBING DEVICE FOR BLOCK MACHINE PALLET HANDLER

Paul M. Thomas and Lawrence W. Wright, Phoenix, Ariz., assignors to Builders Equipment Company, Phoenix, Ariz., a corporation of Arizona

Filed June 30, 1958, Ser. No. 745,579
6 Claims. (Cl. 214-16.4)



1. A probing device for positioning a pallet handler platen relative to a pallet rack having space pallet supporting guideways including vertically disposed side faces, a pair of power actuatable oppositely laterally reciprocable probe fingers on said platen adapted to be moved from a retracted position outwardly to engage said vertically disposed side faces, a movable abutment surface on the pallet handler frame for limiting lateral movement of said platen relative to said guide rails, power means on said frame for adjusting said movable abutment surface, and sensing devices on the outer ends of said probe fingers adapted to engage said side faces to regulate the operation of said power means.

3,000,521

CONVEYOR UNIT

Sherrill S. Deputy, Elkhart, Ind., assignor to Godfrey Conveyor Company, Inc., Elkhart, Ind., a corporation of Indiana

Filed Oct. 10, 1958, Ser. No. 766,486
8 Claims. (Cl. 214-83.2)

1. A conveyor for trucks and trailers having spaced cross members supporting a floor, comprising a plurality of dust plates arranged in end to end relation supported by said cross members, a plurality of drag pans spaced above said plates and arranged in end to end relation, bars along opposite edges of said drag pans resting on said dust plates and supporting said drag pans and being offset longitudinally from the respective pans to form an overlapping relationship between said bars and adjacent pans, a pulley at each end of said plates, the upper surface of

which is substantially on a plane with the upper surface of said drag pans, a pulley at each end of said drag pans, the upper surface of which is substantially on a plane with the upper surface of said dust plates, a pair of closely spaced pulleys intermediate said last two pulleys, the upper surface of which is substantially on a plane with the upper surface of said dust plates, a drive pulley spaced below said pair of pulleys, a means for moving said drive pulley toward and away from said pair of pulleys, an endless conveyor belt extending around said first two



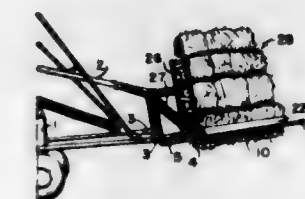
mentioned pulleys and said power pulley and over said second mentioned pulleys and said pair of pulleys, a motor connected to said power pulley for driving said belt, a removable cover above said drag pans consisting of a series of plates having longitudinal bars along each side resting on said drag pans directly above said first mentioned bars, and material deflectors attached to the end of each cover plate on the end posterior to the direction of movement of said belt and at opposite sides of the plate, said deflectors tapering from the end of the respective cover plate toward the outside edge of the conveyor.

3,000,522

PICKUP UNIT FOR HAY BALES

Edward Bloor Grange, Harmanston, Alberta, Canada

Filed Dec. 11, 1958, Ser. No. 779,587
2 Claims. (Cl. 214-147)



1. In combination with an hydraulic front end loading device for tractors, a pickup for bales comprising a framework adapted to be secured detachably to the said loading device, a stationary clamp arm secured rigidly to the said framework to extend forwardly from one side thereof, a movable clamp arm mounted slidably on the said one side of the framework and having a shaft extending across the framework into sliding engagement with the opposite side thereof, hydraulic ram means retractable between the said movable clamp arm and the framework to move the movable clamp arm with relation to the stationary clamp arm and skid pads secured along the said stationary and movable arms to extend below the said arms, each of such skid pads being secured to its respective arm at an angle to direct the compressive force of the arms upwardly with respect to a bale grasped therebetween.

3,000,523

ROAD VEHICLES

Jean Bernard Nicolas, 11 Ave. Jean Jaures, Auxerre, Yonne, France

Filed Dec. 16, 1958, Ser. No. 780,787
Claims priority, application France June 27, 1958
13 Claims. (Cl. 214-505)

1. A road vehicle comprising a load supporting platform having a loading end movable between raised and lowered positions; a pair of wheels each disposed on one

side of said platform to support same adjacent to said loading end; a pair of hinges each fixed to one side of said platform, the axes of said hinges diverging upwardly and outwardly to define obtuse angles with respect to the plane of said platform and acute angles with respect to a vertical plane transverse to said platform; a pair of wheel supporting arms each having a first end hinged to said platform at one of said hinges and a second end to carry one of said wheels for rotation with said wheel in running position with its axis transverse to said platform situated on the loading end side of said hinge; and means operatively associated with said arms to maintain said

the flooring member, reeled up side curtains on said combined floor and roof forming member adapted to be unreel, and curtain fasteners on said curtains and flat bed-type body for causing said curtains to unreel in response to raising of said combined floor and roof forming member, upstanding permanent support means on one end of said body for releasable engagement with said roof and floor forming member when raised above its lowermost position and upstanding retractible rigid support means on the other end of said body for engagement with said roof and floor forming member when raised above its lowermost position.



loading end out of direct ground contact in lowered position; said hinge axis of each of said wheel supporting arms being oblique with respect both to a vertical plane longitudinal to said platform and to a vertical plane transverse to same to move each said wheel and said arm as a unit in such a manner that when one of said wheels is turned about the hinge axis of the corresponding wheel supporting arm, from its outermost position with respect to said platform towards said loading end thereof, said wheel passes through its lowermost position with respect to said platform to move said platform to its highest position before reaching said loading end.

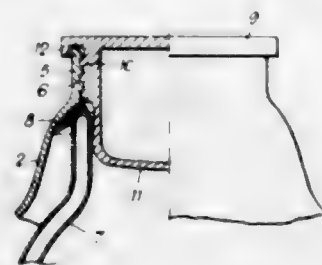
3,000,524 TRAILER

Samuel M. Bader, Elyria, Ohio, assignor to The Carlson Fabrication & Welding Co., Inc., Lorain, Ohio, a corporation of Ohio
Filed Feb. 14, 1958, Ser. No. 715,403
8 Claims. (Cl. 214-512)



1. A truck body construction comprising a flat bed type body, supporting wheels underlying said body and secured thereto in supporting relation, a combined roof and floor forming member overlying said flat bed type body, and means carried by said flat bed type body for raising and lowering said combined roof and floor forming member between a position directly lying on said flat bed type body to a roof forming position and intermediate positions, said raising and lowering means being disposed entirely beneath the upper surface of said roof and flooring member whereby the entire upper surface thereof will be free from projections which would limit the flooring member from supporting loads wider than

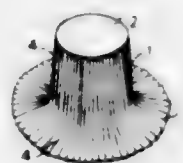
3,000,525
VACUUM FLASKS
Laurence Leslie-Smith, Grosvenor Gardens House, Grosvenor Gardens, London SW. 1, England
Filed Feb. 16, 1959, Ser. No. 793,605
Claims priority, application Great Britain Feb. 14, 1958
4 Claims. (Cl. 215-13)



1. A vacuum flask comprising a canister, a base closing one end of the canister, a shoulder portion on the other end of the canister, a vacuum flask bottle housed within the canister between said base and said shoulder portion, a neck on said bottle, a resilient annular sealing member surrounding the neck and engaging the shoulder portion, an upstanding cylindrical portion on said shoulder portion, screw threads on said cylindrical portion, and a stopper having a depending bung portion for engaging in the neck of the bottle, a cylindrical portion of substantial axial length on said stopper, and screw threads on said cylindrical portion of the stopper for engaging the screw threads on said upstanding cylindrical portion whereby when the stopper is screwed on to the shoulder the bung portion is urged into the neck of the bottle until it fits tightly therein to form a closure therefor, the said resilient sealing member permitting lateral displacement of the neck of the bottle for receiving the bung portion of the stopper.

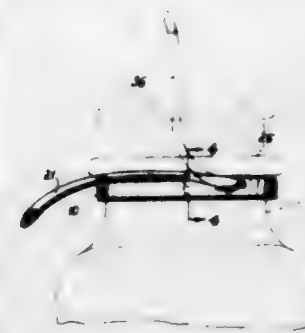
3,000,526 BOTTLE CAPS

Geoffrey Ewart Ford, Bedford, England, assignor to Fords (Finsbury) Limited, Bedford, England, a British company
Filed Apr. 22, 1957, Ser. No. 654,156
Claims priority, application Great Britain Feb. 28, 1957
4 Claims. (Cl. 215-38)



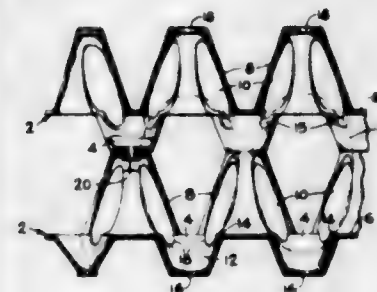
3. A thin and flexible pleated metal foil cap comprising a crown portion and a flanged skirt, said crown portion tapering slightly towards its upper, closed, end and having a height substantially equal to its diameter, and said flanged skirt extending radially outwards from the lower, open, end of said crown and having a diameter substantially equal to twice the diameter of said crown.

3,000,527
HANDLE FOR CONTAINERS
Webb C. Jennings, Rocky River, Ira T. Swartwood, Lakewood, and Rudolph A. Sampson, Cleveland, Ohio, assignors to Sun Industries, Inc., Rocky River, Ohio, a corporation of Ohio
Filed Oct. 11, 1957, Ser. No. 689,664
5 Claims. (Cl. 215-100)



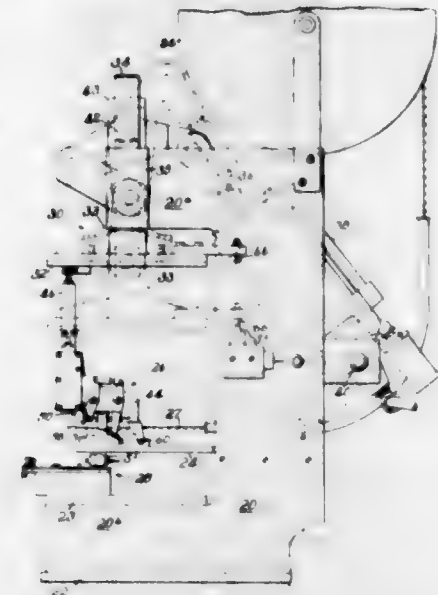
1. A container handle comprising an endless band of thermoplastic material having a bail integral therewith, said band and bail comprising a unitary structure adapted to encircle the neck of a container, and to be removably attached thereto, the bail having a pair of arms and a connecting portion, the latter of which embodies a finger grip, the arms of the bail extending normally laterally of the band in a plane substantially parallel to the band, and having the ends thereof remote from the finger grip portion turned at substantially a right angle to the arms, and connected to the outer face of the band, the points of connection between the arms and the band defining a line disposed to one side of a diametric line through the band and the finger grip portion normally lying on the other side of said diametric line and outside the band.

3,000,528
EGG TRAY
Henry Y. Kuhl and Paul R. Kuhl, both of Box 26, Flemington, N.J.
Original application Mar. 5, 1958, Ser. No. 719,374, now Patent No. 2,950,726, dated Aug. 30, 1960. Divided and this application Mar. 17, 1960, Ser. No. 15,658
2 Claims. (Cl. 217-26.5)



1. An egg supporting tray formed of a sheet of stiff material which is not substantially affected by the action of egg washing liquid, said sheet having a plurality of egg receiving cavities therein extending downward below the plane of the sheet and having openings in the bottoms thereof, the upper edges of said cavities presenting egg supporting rims upon which eggs placed in the cavities may rest, said sheet further having a plurality of projections extending upward above the plane of the sheet about said cavities, said projections having elongated openings therein extending from points adjacent the plane of the sheet to points near the upper portions of said projections and occupying the major portion of the side walls of the projections, said openings in the projections being positioned on the sides of the projections which face toward said cavities so that fluid may circulate through said openings into and out of contact with eggs supported by the rims at the edges of the cavities.

3,000,529
ELEMENT APPLYING MACHINES
Sylvester L. Gookin, Cohasset, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Oct. 27, 1958, Ser. No. 769,768
3 Claims. (Cl. 218-15)



1. In a machine for attaching elements that are fed to the machine in the form of a continuous strip of element blanks, a fixed shear member for cooperating in severing the endmost element blank from the strip; an actuating plunger mounted for reciprocation toward and away from the said member; and element attaching tool, including gripping fingers, carried by the plunger and adapted to engage with the endmost element blank prior to the severing operation; a second shear member carried by and actuatable by the plunger into co-operative shearing relation with the fixed shear member; and means for intermittently feeding the strip to advance the endmost element thereof beyond the fixed shear member and into the operative path of the tool, said means comprising a yieldably mounted fairlead block for guiding the strip, biasing means normally maintaining the block and a strip thereon in a plane substantially transverse to the path of the tool and spaced apart heightwise from the fixed shear member, a feed finger engageable with the strip, and means for advancing the finger in time relation to the operation of the plunger; whereby after the feeding operation said tool gripping fingers and second shear member engage with the endmost element blank causing the block and a strip thereon to yield toward and into cooperative shearing relation to the fixed shear member.

3,000,530
TRANSPORT TANKS HAVING A SUBSTANTIALLY SPHERICAL WALL
Helmuth William Carlsson, Limhamn, Sweden, assignor to AB Interconsult, Malmö, Sweden, a corporation of Sweden
Filed Oct. 23, 1959, Ser. No. 848,239
Claims priority, application Sweden Aug. 8, 1959
2 Claims. (Cl. 220-1)



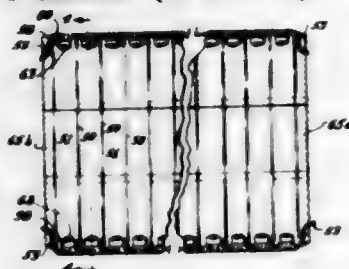
1. A transport tank comprising a substantially spherical confining wall having two substantially circular open-

ings at diametrically opposed positions in said wall, and two inwardly curving spherical cups closing said openings and connected to said spherical wall along the border of said openings.

3,000,531

METAL HOGSHEAD

Jacob Douglas Gay, Jr., and Frederic W. Joswig, Paris, Ky., assignors to Gay-Bell Corporation, Paris, Ky., a corporation of Kentucky
Filed June 27, 1957, Ser. No. 668,500
5 Claims. (Cl. 220—5)

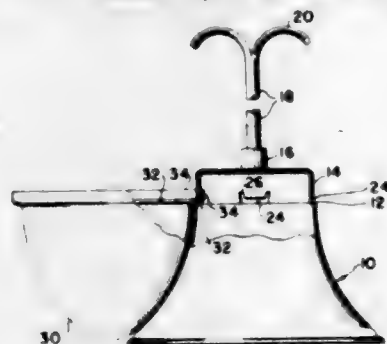


1. A metal hogshead comprising a flexible metal blank having score lines which define upstanding staves, said blank also having score lines and notches which define a hoop-and-liner for each longitudinal edge of said blank, said blank being bendable about said score lines whereby to define said staves and said hoops-and-liners, each said hoop-and-liner including a hollow chime section depending downwardly and inwardly from each said staff, a top abutting a said chime, a bottom abutting a said chime, and flexible lacing means within the hollow chimes whereby to pull and hold tight said blank about said top and bottom.

3,000,532

MULTIPLE TRAY SERVING DEVICE

Louis Mikhlich, New York, N.Y.
(3637 Old Arch Road, Norristown, Pa.)
Filed Nov. 18, 1958, Ser. No. 775,677
3 Claims. (Cl. 220—23.4)



2. A serving device, comprising a hollow base member of circular horizontal cross-section and at least one removable receptacle attached to and supported on said base member, said receptacle having a circular outwardly extending circumferential rim at its top, said rim having an upwardly extending flange at its outer periphery, said base member having formed therein, at a point intermediate its top and bottom, a circumferentially extending slot, said slot connecting at each end thereof with a vertically extending slot formed in the base wall, said vertically extending slots each of a height equal at least to the height of said flange.

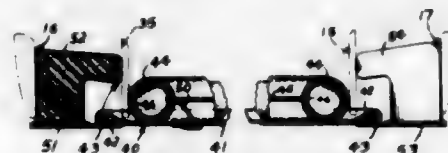
3,000,533

ENGINE INLET PLUG

Marvin S. Jodock, Seattle, Wash., assignor to William E. Rockhill and Arthur D. Peterson, doing business as Globe Plastic Company, Seattle, Wash.
Filed Apr. 24, 1959, Ser. No. 808,705
4 Claims. (Cl. 220—24.5)

1. A closure plug adapted to close the air inlet openings of a jet or similar aircraft engine having a relatively

large main air inlet opening and two smaller openings adjacent the periphery of said large opening, said closure plug comprising: a central flexible and foldable panel generally circular in plan form, deformable first means connected to the periphery of said panel for applying tension forces thereto about said periphery to cause said panel to occupy substantially a single plane, second means separate from said first means and connected with said panel and



including arcuately extending resilient wall means which extend at least in part substantially perpendicularly to said plane of said panel, said last mentioned means being foldable with said panel, said plug further comprising plug means at the periphery of said panel for closing said two smaller openings, whereby, said plug may be stored in a generally collapsed and folded state and may be unfolded for use to plug the openings of an engine or the like.

3,000,534

GASOLINE FILLER CAP

Hermann Obergfell, Elmhurst, Ill., assignor to Badger Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 20, 1959, Ser. No. 835,026
2 Claims. (Cl. 220—46)

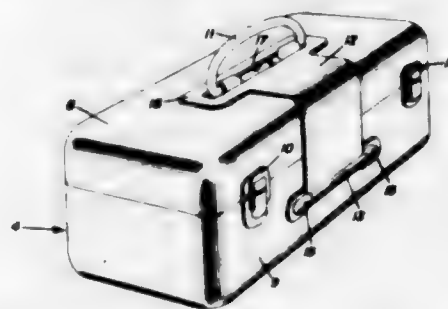


1. A filler cap comprising a disk-like body adapted to overlie a filler neck, a cylindrical lock housing depending centrally from said body, a pair of oppositely disposed radially and axially extending elongated rib-like projections formed on said housing, for substantially the length of said housing, a radially movable detent in each of said projections biased outwardly to a locking position and extending axially of said projection and terminating in proximally spaced relationship to said body, a gasket surrounding said housing in immediately subjacent relationship to said body and above said detents, and snugly receiving said projections, and a spring extending around said housing between said gasket and said body and including an upwardly extending integral spring leg on each side of each of said projections to urge said gasket toward said detents.

3,000,535

TOOL OR TACKLE BOX

August Erdmann, 1623 Oak St., Brainerd, Minn.
Filed Mar. 26, 1959, Ser. No. 802,078
2 Claims. (Cl. 220—55.7)



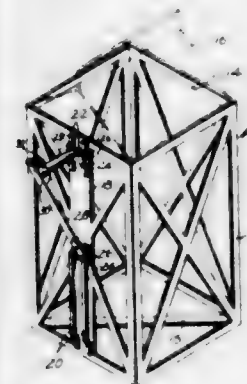
1. A safety securing device for boxes of the type including a front, a back, a cover hingedly mounted on

said back and a generally U-shaped carrying handle pivotally mounted transversely on said cover, said device comprising a hasp pivotally mounted for swinging movement in a vertical plane on the box front, said hasp including a right angularly bent free end portion adapted to overlie and rest on the cover and terminating in a T-head, said T-head having a longitudinal slot therein receiving the handle when said handle is in its upstanding carrying position for securing said hasp in operative position.

3,000,536

DEVICE FOR HANDLING AND PROTECTING MILK CARTONS

J. D. Roy, R.R. 8, Box 183, Decatur, Ill., assignor of one-tenth part to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed June 5, 1959, Ser. No. 818,365
2 Claims. (Cl. 220—85)



1. A milk carton carrier comprising, in combination, an upwardly opening walled receptacle of generally hollow prismatic shape for slidably receiving and supporting a generally similarly shaped milk carton therewithin, said receptacle including lattice-type walls and having a bottom wall with openings therethrough, said receptacle having at least one side-wall thereof provided with a web, handle supporting brackets carried by said web and including a pair of vertically-spaced-apart sets of slide brackets secured in longitudinally aligned and spaced-apart relationship upon said web, and a foldable handle assembly supported upon said brackets for selective movement between a normally closed position lying immediately adjacent to said web and an outwardly projecting grasping position protruding outwardly therefrom, said foldable handle assembly including a pair of pivotally connected handle-bars, with each handle-bar having a remote end provided with a trunnion pin rotatably and slidably supported within each of said set of brackets for relative rotative and sliding longitudinal movement.

3,000,537

GOLF BALL DISPENSING APPARATUS

Dave Simon, 74 Wensley Drive, Great Neck, N.Y.
Filed Dec. 1, 1958, Ser. No. 777,414
10 Claims. (Cl. 221—7)



1. Coin-controlled apparatus operable, responsive to insertion of a coin, to deliver a pre-set number of golf balls to a patron of a driving range or the like, said apparatus comprising, in combination, a relatively elongated ramp; an upwardly extending endless conveyor at the lower end of said ramp; buckets on said conveyor ar-

ranged to lift individual balls from said ramp; a driving motor for said conveyor having an energizing circuit; means operable responsive to insertion of a coin in the apparatus, to close said energizing circuit; gravity feed delivery means receiving balls from the upper end of said conveyor and extending to a ball delivery station longitudinally adjacent the upper end of said ramp; and counting means operable by balls travelling along said delivery means and effective to open the energizing circuit of said motor after a pre-set number of operations by such balls.

3,000,538

FOOD-VENDING MACHINE

Jacob Haller, 533 41st Ave., San Francisco, Calif.
Filed Aug. 6, 1956, Ser. No. 602,206
8 Claims. (Cl. 221—69)



1. In a food vending machine, a tray adapted to have food items disposed thereon, a platform adapted for supporting the tray, a hinge supporting the rear edge of the platform, means for normally supporting the body of the platform in horizontal position, and means operable for releasing the latter means to cause the tray to drop into inclined position and to allow the tray to slide off the platform, the tray having rear and side flanges only rising therefrom to confine the food items and providing a free front edge allowing the said items to slide thereover for final discharge, and the side flanges having inwardly turned tongues to serve as supporting means for additional trays.

3,000,539

VENDING MACHINE

William Danziger, Franklin Square, and Harold Roth, Hewlett Neck, N.Y., assignors to Continental Vending Machine Corp., Westbury, N.Y., a corporation of New York

Filed Oct. 10, 1955, Ser. No. 539,394
10 Claims. (Cl. 221—129)

1. In a vending machine, having a housing, with a delivery tray, and enclosing rear and front rows of hoppers, containing columns of packages, with a chute leading from all hoppers to the tray; and that improvement in combination therewith, for selectively ejecting a package from any hopper of any row thereof; which consists of a pivoted ejecting arm, having a T-finger and a solenoid operatively connected therewith, through an off-set bell crank like shoulder, the parts being so arranged that the pivoted ejecting arm rests alongside the solenoid when in inactive position, all together constituting a package ejecting unit, one such unit disposed under every hopper of all rows thereof; and the pivoted ejecting arms being in normally downward inactive positions with said T-fingers out of engaging alignment with the bottom packages of the columns in all hoppers rows, but any one ejecting arm of which, when tilted upward by its solenoid and bell-

crank shoulder, places said finger in engaging alignment with one bottom package in its respective hopper; a movable support disposed under the hopper rows, on which the ejecting units are mounted; and motor means oper-

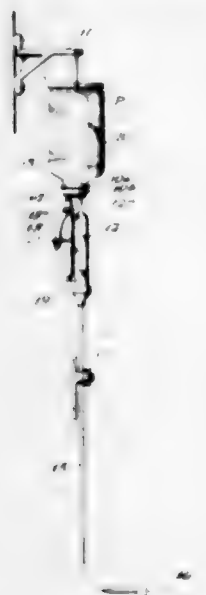


atively connected with the movable support, actuating it fore and aft under the hoppers of all rows thereof, for ejecting that particular package engaged by the one lifted finger.

3,000,540

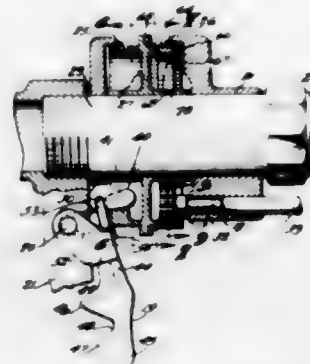
FLOW CONTROL DEVICE AND METHOD

Warren E. Wheeler, Columbus, Ohio, assignor, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Aug. 8, 1957, Ser. No. 677,109
3 Claims. (Cl. 222-14)



1. Means for limiting the volume of parenteral fluid dispensed from a container having an outlet passage and means having an outer portion externally of the container and providing an inlet for passage of air into the container to replace fluid dispensed through the outlet passage, comprising a collapsible enclosure removably sealingly secured to said outer portion to have communication solely with the inlet means during a dispensing of fluid from the container to provide a predetermined volume of air to be drawn through said inlet into the container as a result of a vacuum condition in the container, and means for readmitting air into the interior of the enclosure subsequent to a dispensing of fluid from the container and precluding admission of air to the enclosure during such dispensing.

3,000,541
METER MINDER
William J. Sonnenburg, 2038 W. Hill Ave., Fullerton, Calif., and Frederick W. Oestreich, Jr., 9546 Melita St., Pico Rivera, Calif.
Filed July 29, 1959, Ser. No. 830,219
4 Claims. (Cl. 222-20)



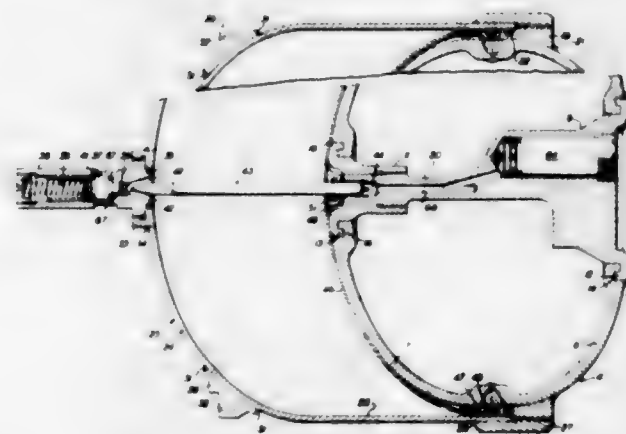
1. An attachment for a fuel pump hose dispensing valve having a pump meter, a lever for operating the valve and a trigger for controlling the lever, the improvement comprising a collar having scales on end portions thereof rotatably mounted on the hose adjacent the valve, hubs mounted on the hose at opposite ends of said collar, pointers mounted on the hubs to register with the scales of the collar, said collar having an internal gear therein, a pinion meshing with the internal gear of the collar and mounted on a flexible shaft extended from the pump meter for rotating the collar with rotation of the pump meter, and means for actuating the trigger to release the valve operating lever to close the valve when the collar rotates to a predetermined position.

3,000,542

HYDRO-PNEUMATIC ACCUMULATOR

Ernst A. Longenecker, Jackson, Mich., and John R. Thorson, Takoma Park, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Feb. 26, 1959, Ser. No. 795,773
5 Claims. (Cl. 222-30)



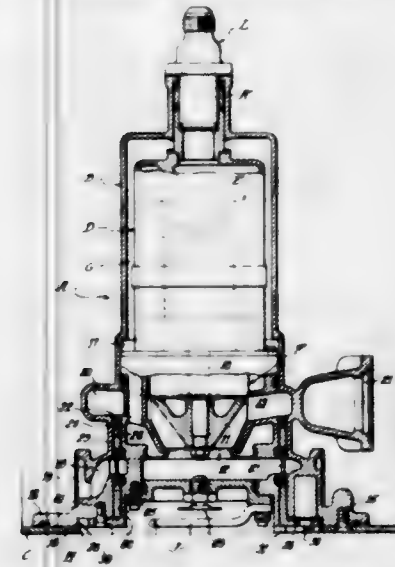
1. In a hydro-pneumatic accumulator, a cup-shape liquid container having an arcuate crown section merging with a cylindrical side wall, an ellipsoidal-shape gas container mounted on the rim portion of said liquid container, a cup-shape piston mounted for reciprocative movement within said liquid container between said gas container and said crown section, a guide stem extending through said piston and supported at its ends by said crown section and gas container, a check valve on said crown section to yieldably resist passage of liquid outwardly from said liquid container, means to release pressurized gas from said gas container to move said piston toward said crown section, said gas container comprising a pair of cup-shape members welded together at their

rim portions, adapters secured to their respective cup-shape members and secured to each other, one of said adapters having a gas inlet and outlet passages, and a valve to close said inlet passage.

3,000,543

PLUG-IN PUMP ASSEMBLY

Albert Paul, Cleveland, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 22, 1958, Ser. No. 762,348
5 Claims. (Cl. 222-333)



1. A pump and motor unit support comprising: a housing having end means; means defining bore means interrupting said end means and defining a pump and motor unit receiving chamber within said housing; means defining passage means in said housing, said passage means being adapted to fluidly interconnect said chamber with the exterior of said support; movable closure means carried by said housing; means defining a pair of abutment means on said closure means, said closure means permitting fluid communication between said chamber and said exterior through said passage means when in a first position relative to said housing and preventing said fluid communication when in a second position relative to said housing, said closure means being moved to said first position upon the reception in said chamber of a pump and motor unit which engages one of said abutment means and moves said closure means to said first position and being moved from said first position to said second position upon the withdrawal of said unit from said chamber which engages the other of said abutment means and moves said closure means to said second position, and additional means interconnected with said closure means movable between an engaging position and a disengaging position whereby said closure means is secured to said unit when said additional means is in its engaging position and said pump is disengaged for complete removal from said closure means when said additional means is in its disengaging position.

3,000,544

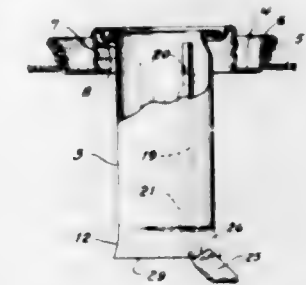
VENTED POURING SPOUTS FOR CONTAINERS

Seward M. Roberts, San Mateo, Calif., assignor to American Flange & Manufacturing Co. Inc., New York, N.Y., a corporation of Delaware

Filed July 29, 1958, Ser. No. 751,736
6 Claims. (Cl. 222-479)

1. A vented spout for containers, comprising a substantially cylindrical spout member formed out of sheet metal seamed along one side thereof, said spout member having an outer end, a side wall and an inner end, a partition member having a body portion and an extending portion, said body portion lying within said spout member and substantially isolating one longitudinal portion

of the passage through said cylindrical spout member from the remainder thereof to provide an air vent passage, said partition member being formed as an elongated strip of sheet metal, said extending portion extending beyond said inner end of said spout member, said body portion of said partition member being formed with elongated sides engaged with the interior of said cylindrical spout member at positions spaced from the said seam, said



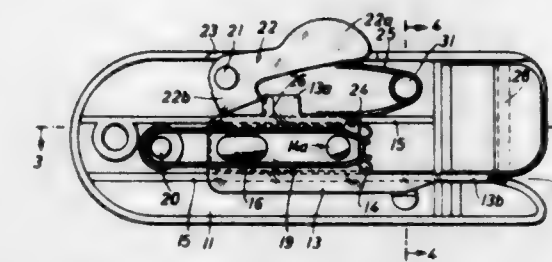
elongated sides being contoured to mate with the interior cylindrical surface of said spout member and means to maintain said spout member and said partition member in fixed assembled relationship, said means including interengaging means between said spout member on one hand and said extending portion and the opposite end of said partition member on the other hand, for securing said partition member in place of said spout member.

3,000,545

DEVICE FOR THREADING FIXED NEEDLES, PARTICULARLY SEWING MACHINE NEEDLES

Edmund Ullisberger, 32 Hauptstrasse, Bergerhausen, Kreis Berghelm, Germany

Filed May 29, 1959, Ser. No. 816,811
Claims priority, application Germany May 29, 1958
7 Claims. (Cl. 223-99)



1. A device for threading fixed needles, particularly sewing machine needles, comprising a housing, a pushing needle reciprocable in the housing, a pair of elastic needle gripping jaws at one end of the housing for aligning the eye of the machine needle with the pushing needle, resilient means engageable with the pushing needle for moving the forward end thereof with an entrained thread through the eye of the needle to be threaded and resilient means for retracting the pushing needle, said resilient means for moving the pushing needle into threading position including a lever pivotally mounted in the housing with one end thereof projecting outwardly of the housing and another end in the housing engageable with the pushing needle for indicating the position of the pushing needle with respect to the needle to be threaded, and resilient means in the housing engaged with said lever, the pushing needle being moved to threading position against the tensioned retracting means.

3,000,546

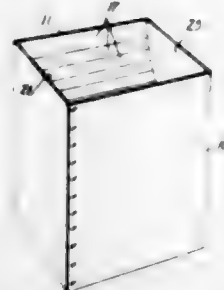
DISPLAY STAND

Thomas P. Catri, Sandusky, Ohio, assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed Dec. 30, 1958, Ser. No. 783,851
4 Claims. (Cl. 229-16)

1. A display device of corrugated board comprising a stand having upright, oppositely disposed pairs of side-

walls at its upper end one of which oppositely disposed pairs of sidewalls constitutes a given pair of upright panels, a bin extending between said pair of upright panels, said bin comprising a slinglike train of panels which are hinged to each other with all adjacent pairs of panels in said train being narrower than the spacing between said pair of upright panels, said bin being hinged

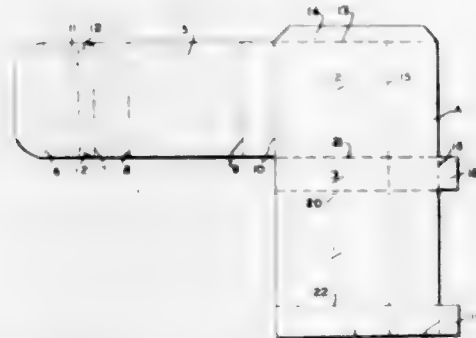


to each of said pair of upright panels and hanging as a catenary between them, said slinglike train of panels and said pair of upright panels together forming a load-carrying span assembly, said span assembly including fastening means between at least one adjacent pair of said panels in said span assembly to permit completion of the span assembly to be accomplished upon erection of the display device.

3,000,547

PAPER BOARD FOLDING BOX

Irving H. Fowle and Francis J. Emminger, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,413
1 Claim. (Cl. 229-38)



A box-like container comprising top and bottom panels, side walls, and a flap integral with one of said panels and extending from one end thereof, said flap being of sufficient length to extend through the container and form a closure for both ends thereof, said panels and walls being provided with perforations along straight lines and adjacent the end of the container opposite the end from which said flap extends, whereby the size of said container may be diminished by removing a portion of said panels and walls, said flap also being provided with perforations along a line adjacent the free end thereof, whereby the flap may be shortened by removal of a portion thereof to provide a neat closure for both ends of the container after it is diminished in size.

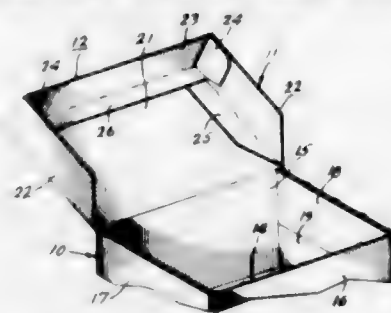
3,000,548

CONTAINER CONSTRUCTION

Howard L. Frazier, King of Prussia, Pa., assignor to Edwin J. Schoettle Company, Inc., North Wales, Pa., a corporation of Pennsylvania
Filed Nov. 18, 1959, Ser. No. 853,801
1 Claim. (Cl. 229-51)

A container formed of a unitary paper board blank having a base and front, rear and side walls forming an open body portion, a lid adapted to overlie the opening to said body portion and close the same, said lid being

hingedly connected to the container rear wall and having a downwardly extending skirt portion thereon adapted in the closed position of the lid to overlie and embrace the upper portion of the side and front walls of the container body portion, said side walls each comprising a first unitary panel formed integrally with said paper board blank and a second panel consisting of a pair of intermeshing glue flaps folded over said first panel with each glue flap covering a portion of said first panel and the pair of glue flaps together being substantially co-



extensive with and adhesively secured to said first panel to thereby provide the side wall with a double thickness throughout the paper board of the blank, and flaps secured to the upper portions of the front and side wall panels along fold lines with the flaps being partially cut away from the front and side wall panels providing weakened areas on said fold lines to permit the flaps to be readily torn away from the front and side wall panels, said flaps partially overlie said container opening and adhesively secured to said lid in the closed position of the lid to maintain said lid in the closed position.

3,000,549

SHOPPING BAG

Charles W. Stange, 125 Northfield Ave., West Orange, N.J., and Harold R. Smith, 15 Fairchild Place, Whippany, N.J.
Filed Mar. 17, 1959, Ser. No. 800,834
2 Claims. (Cl. 229-54)



2. A shopping bag comprising a body having side walls embodying a plurality of layers of material located adjacent the top of the bag, a pair of handles for said bag arranged in parallel positions at opposite sides of the bag, said handles being formed of cord-like material having the ends thereof disposed between said layers and extending upward beyond the top of the bag, and a shield for said handles in the form of a sheet of flexible material secured to the exterior layer of material adjacent the top of the bag and projecting upward therefrom adjacent and beyond the exterior of the sides and ends of said handles.

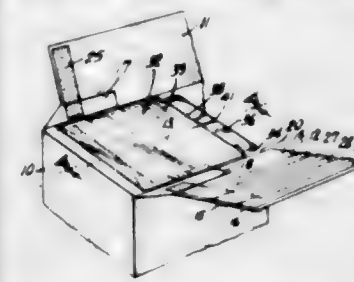
3,000,550

VALVE SLEEVE FOR BAGS

Norman K. Charlton, Palatka, Fla., assignor to Hudson Pulp & Paper Corp., Palatka, Fla.
Filed June 4, 1958, Ser. No. 739,772
3 Claims. (Cl. 229-62.5)

1. A pasted-end bag having a tubular wall, at least one end of the tubular wall of said bag being folded at opposite sides to provide inwardly extending inner flaps,

and outer flaps folded one over the other and over the inner flaps in generally parallel planes, the outer overlapping flaps being pasted to each other and cooperating with at least one inner flap to provide a valve opening therebetween through which material is delivered to the interior of the bag, said inner flap forming a valve for closing the valve opening, a valve sleeve between the overlapping pasted flaps and inner valve flap and pasted thereto, said valve sleeve having an outer portion and an inner portion with the inner surface of each portion being continuous and without seams and extending throughout the entire width of the inner valve flap to provide a tubular

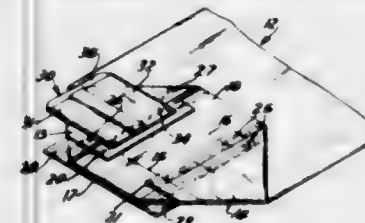


liner in the valve opening, and the inner portion of the sleeve adjacent the inner valve flap extending into the bag beyond the inner edge thereof and beyond the inner edge of the outer portion of the sleeve throughout the entire width of the latter to engage the outer overlapping flaps of the bag and provide a double seal between the two portions of the sleeve and between the sleeve and pasted overlapping outer flaps, respectively, and the outer portion of the sleeve adjacent the pasted overlapping outer flaps extending outwardly from the valve opening beyond the outer edge of the inner portion of the sleeve to provide a finger grip for the sleeve at the outside of the bag.

3,000,551

BAGS

Lamar T. Atwood, Pine Bluff, Ark., assignor to Hudson Pulp & Paper Corp., New York, N.Y., a corporation of Maine
Filed Sept. 11, 1959, Ser. No. 839,399
9 Claims. (Cl. 229-62.5)



1. In a bag of the type having overlapping end flaps forming an opening through which material is delivered to the interior of the bag and in which the overlapping flaps form a valve for closing the opening, a strip of thin, flexible material sealed to one of the valve flaps and extending inwardly from the end of the flap into the bag throughout the width of the flap, a valve sleeve in the opening between the valve flaps, one side of the sleeve being attached to one of said valve flaps with an adhesive and the other side of the sleeve having its end portion, only, attached to the strip beyond the edge of the flap to provide a space into which the outer end of the sleeve may be tucked.

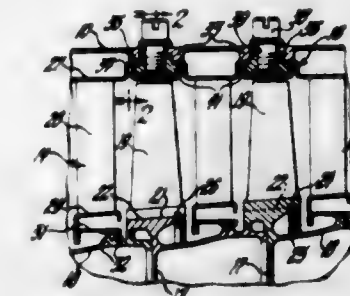
3,000,552

COMPRESSOR VANE MOUNTING

Lewis Cooper, Jr., and Robert B. Kooschmann, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 28, 1957, Ser. No. 660,498
5 Claims. (Cl. 230-132)

3. An axial-flow turbomachine stator comprising an annular case with circumferential ribs on the radially

inner surface thereof and radial grooves between the ribs; stator vane rings having marginal portions bearing against the radially inner surface of the ribs, rotor shroud rings bearing against the radially inner surface of the said marginal portions of adjacent stator vane rings and having parts extending radially into said grooves and engaging between the ribs to locate the rotor shroud rings axially

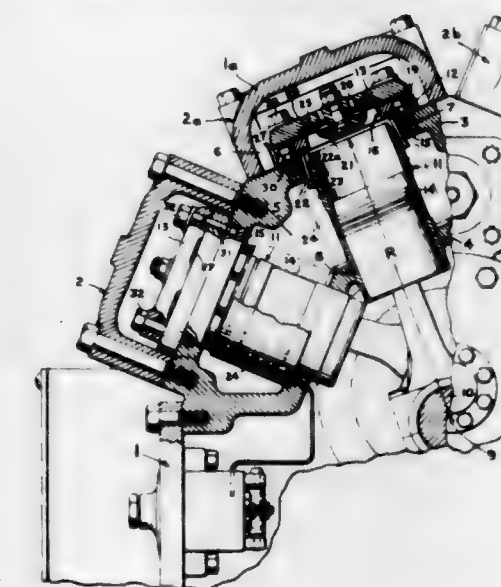


of the case, the edges of the vane rings bearing against the said parts of adjacent rotor shroud rings to locate the stator vane rings axially of the case, and means connected to the case and the rotor shroud rings holding the rotor shroud rings radially outwardly against the said marginal portions and thereby holding the stator vane rings against the case.

3,000,553

CYLINDER LINER AND VALVE SERVICE DESIGN FOR HIGH SPEED RECIPROCATING COMPRESSORS

Henry M. Tower, West Suffield, and Andrew J. Nicholas, Suffield, Conn., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed June 16, 1958, Ser. No. 742,312
2 Claims. (Cl. 230-238)



1. In a reciprocating compressor, a crankcase, an upper bulkhead in said crankcase, the face of said upper bulkhead being spaced from the center line of said crankcase a predetermined radial distance, a lower bulkhead in said crankcase spaced from said upper bulkhead to form a suction manifold therebetween, said bulkheads each having at least one bore extending therethrough with uniform diameters the length of the respective bores, said bore in the upper bulkhead being in alignment with the bore in the lower bulkhead and the aligned bores disposed parallel to a plane perpendicular to the center line of said shaft, said bore in the upper bulkhead being of larger diameter than the bore in said lower bulkhead, a cylinder liner having a flange formed about the upper end thereof, said cylinder liner and said flange having a diameter on their outer peripheries such that in assembled position the flange and cylinder liner will have a sliding fit with the bore in the upper bulkhead and the bore

in the lower bulkhead respectively, and support and valve means directly connected in assembled position to said upper bulkhead about the bore and to the upper face of said cylinder liner for supportably positioning the upper face of the flange in alignment with the upper face of the bulkhead to fix the cylinder liner relative the center line of the crankshaft in accordance with the predetermined spaced radial distance, said support and valve means being in communication with the suction manifold and the cylinder liner and arranged to control flow of fluid to said cylinder liner.

3,000,554

VOTING MACHINE

Ransom F. Shoup, Bryn Mawr, Pa., assignor to The Shoup Voting Machine Corporation, New York, N.Y., a corporation of New York

Filed May 10, 1957, Ser. No. 658,445

6 Claims. (Cl. 235—54)



1. In a voting machine of the type which includes a column of voting counters, a first locking mechanism movable to a first position in which said voting machine is locked against use and to a second position in which said voting machine is released for use, a removable, transparent cover for said column, a second locking mechanism movable to a first position in which it engages said cover and prevents removal thereof and to a second position in which it is out of engagement with said cover and permits removal thereof, and means operatively connecting said first and second locking mechanisms and operative to prevent movement of said second locking mechanism to its second position unless said first locking mechanism has been moved to its first position, said means including a plunger carried by said first locking mechanism and an apertured member carried by said second locking mechanism and engageable with said plunger when said first locking mechanism is moved to its second position to prevent movement of said second locking mechanism to its second position and vice versa.

3,000,555

DIGITAL COMPUTER INPUT

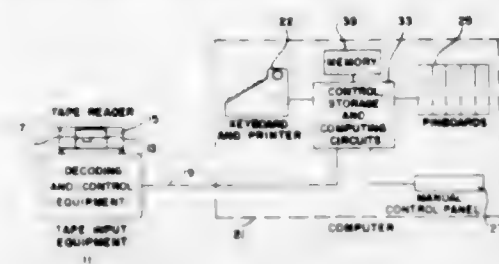
Frank T. Innes, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Mar. 4, 1955, Ser. No. 492,285

27 Claims. (Cl. 235—61.6)

1. In digital computer apparatus the combination of electrical computing means adapted to receive over individual input circuits a plurality of electrical signals representative respectively of operating instructions, a first switchboard storage medium for the program storage of said operating instructions, means for automatically sequentially scanning said switchboard to sense said instructions and to supply electrical signals in accordance

therewith, a second medium for manually programming operating instructions comprising multi-position switches settable to individual ones of said instructions, means for deriving electrical signals representative of operating instructions set in said second medium, a third medium for the program storage of operating instructions comprising a record member in which characters representative of operating instructions appear as an encoded group of



holes, means for reading said encoded characters as encoded electrical signals, circuit means including a decoder for decoding said encoded electrical signals into signals representative of operating instructions, and means for selectively applying said electrical signals derived from operating instructions stored in any of said media to the individual instruction input circuits of said computing means.

3,000,556

DATA CONVERSION SYSTEM

Lawrence L. Bewley, Covina, and Jerry F. Foster, Arcadia, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed June 26, 1957, Ser. No. 668,179

15 Claims. (Cl. 235—61.6)



6. Apparatus for translating alphanumeric information from a standard punch card having punches arranged in vertical columns and in two groups of horizontal rows designated zone rows and numeric rows, said apparatus comprising means for simultaneously storing in electrical form a plurality of binary-coded digits, said means including a number of digit storage positions, means for successively sensing and identifying by binary-coded digits in electrical form each of the rows on the punch card, means for simultaneously sensing a row at a time all of the punches in each successive row, and means responsive to the punch sensing means and the row identifying means for establishing in binary-coded form row identifying digits in selected storage positions in the storing means according to the row being sensed and the punches sensed in that row respectively.

3,000,557

CALCULATING MACHINE

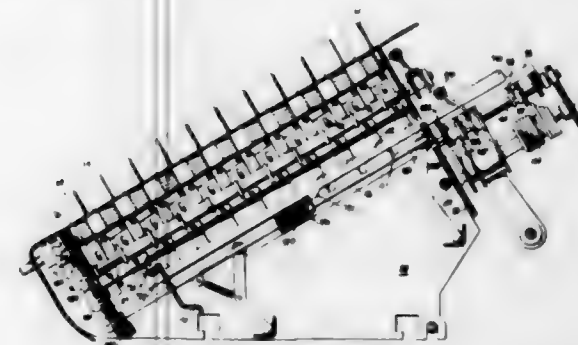
Grant C. Ellerbeck, San Leandro, Calif., assignor to Friden, Inc., a corporation of California

Filed May 10, 1956, Ser. No. 584,003

36 Claims. (Cl. 235—63)

1. In a calculating machine having an ordinarily arranged and cyclically operable digitating means, a register shiftable with respect to said digitating means, and

means for shifting said register, the combination which comprises multiplier value registering members associated with selected orders of said digitating means, means for positioning said members to represent selected values, a movable member associated with each one of said selected orders of said digitating means, means for translating a selected one of said movable members a predetermined amount with each cycle of machine operation, such mo-



tion being in a direction to engage the positioned value registering member of the selected order, means for sequentially selecting the movable member to be so translated, and means operated upon the engagement of the movable member with its associated value registering member for controlling operation of said shifting means, said sequential selecting means, and said digitating means.

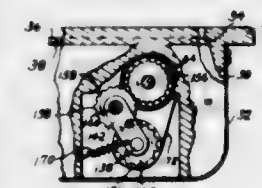
3,000,558

PRESSURE COMPUTERS

William L. Jaynes, Jr., Onondaga, N.Y. (107 Lindbergh Road, Syracuse, N.Y.), assignor of one-half to Arthur R. Jaynes, Syracuse, N.Y.

Filed Sept. 16, 1955, Ser. No. 534,789

2 Claims. (Cl. 235—86)



1. A pump pressure computer for fire hose use comprising a casing having a card forming a wall thereof, a roll journaled within the casing on an axis parallel to the plane of said card, windows in said card arranged along a line parallel to the axis of the roll, a second roll journaled within said casing, means for mounting said second roll for movement towards and away from said first roll, yielding means for urging said rolls apart, a flexible chart having its ends secured to each of said rolls, and being adapted to be rolled from one roll to the other and pass beneath said window, said chart having a series of rows and lines of indicia thereon adapted to be viewed through said windows one line at a time, and means for driving one of said rolls from the other.

3,000,559

COUNTER

Charles Dom, 10 Rue de la Muse, Geneva, Switzerland

Filed June 4, 1958, Ser. No. 739,873

Claims priority, application Switzerland July 11, 1957

3 Claims. (Cl. 235—113)

2. A counting instrument comprising a case having a bottom surface and defining the shape of a wrist watch, an upper wall closing the upper surface of said case, apertures in said upper wall, first and second rotary counting members mounted inside said case opposite said apertures, a counter control member accessible from the out-

side of said case and actuating step by step said first and second rotary counting members, guide means mounted in said case for guiding axial and angular movement of said counter control member, a tens transfer device mounted on said first rotary counting member for effecting a step-by-step actuation of said second rotary counting member at the end of each revolution of said first rotary counting member, a guide member having parallel guiding surfaces mounted on said counter control member, said guide member angularly movable by said counter control member between two operating positions



defined by said parallel guiding surfaces of said guide member abutting against said bottom surface and said upper wall of said case, detent means mounted in said case to maintain said guide member in either one of its operating positions, and actuating members mounted on said guide member to actuate one of said rotary counting members by axial displacement of said counter control member when said guide member is in one operating position and to actuate the other rotary counting member by axial displacement of said counter control member when said guide member is in the other operating position.

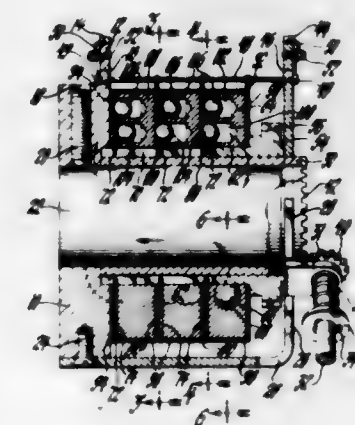
3,000,560

ANNULI ACCUMULATOR INSTRUMENTS

John F. Clancy, deceased, late of East Troy, Wis., by Marie F. Clancy, executrix, East Troy, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 4, 1958, Ser. No. 739,940

11 Claims. (Cl. 235—117)



1. An accumulator instrument comprising a shaft, two numeral wheels mounted for rotation on said shaft, means for rotating one of said wheels, two flat discs of non-magnetic material interposed between said wheels, one of said discs being fixed and in contact with said one wheel, the other of said discs being attached to the other wheel to rotate therewith, an annular series of holes in each of said discs, the two series of holes being arranged coaxially and with different radii, an arcuate slot in said one disc, said one wheel having two pockets, a ball linearly movable in each of said pockets, one of said balls being adapted to register with a hole in said fixed disc, the other of said balls being adapted to register with said slot and a hole in said rotatable disc, the said wheels and balls being of magnetic material, and said wheels being mutually attracted magnetically.

3,000,561 TEN KEY ADDING AND SUBTRACTING MACHINE

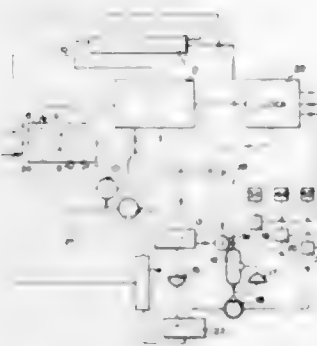
Richard W. Pitman, Laverock-Hillcrest, Pa., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 12, 1955, Ser. No. 552,508
5 Claims. (Cl. 235-137)



1. A tens transfer mechanism for a machine of the class described having a plurality of differentially movable rack members, a like plurality of register wheels, a frame supporting said register wheels and shiftable to move said wheels into and out of engagement with said rack members, each register wheel having a projection thereon, and an aligner for each register wheel to restore the register wheel from a misaligned position into an aligned position, said transfer mechanism comprising a plurality of arms pivoted on said frame for shifting with said register wheels, each arm being in alignment with one of said register wheels and having a projection in the path of the projection of the next lower denomination wheel, a detent for each arm, each detent having a part to hold its associated arm in a normal position from which position said arm may be moved by engagement of the projection on said next lower denomination register wheel with its said projection, each arm having a cam slot into which said part of its associated detent moves as said arm is moved, means to urge said detent to move said part to an end position in said slot to thereby move said arm to effect a tens transfer into the aligned register wheel, and means to prevent such movement of said detent while said register wheels are in engagement with said rack members.

3,000,562 OUTPUT CONVERTERS FOR DIGITAL COMPUTERS

Robert Justin Froggatt, Norwood Green, Southall, and Nigel David Robinson, Hillingdon, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed Sept. 12, 1957, Ser. No. 683,527
Claims priority, application Great Britain Sept. 15, 1956
4 Claims. (Cl. 235-155)



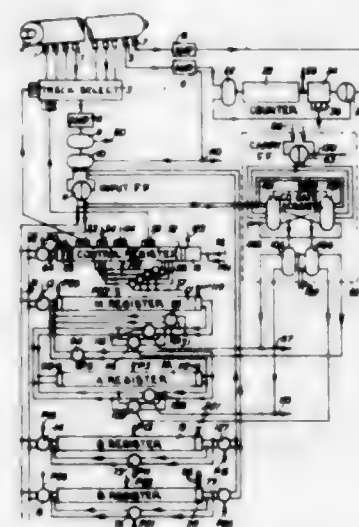
1. Apparatus for converting a serial binary coded number into another scale of notation in which characters are expressed in binary code, comprising a first register for signals representing said number, a second register for signals representing further numbers being equivalents of bits stored in said first register on said other scale of notation and to which a corresponding filler according to said scale of notation is added, means for deriving signals from said first register, gating means responsive to a

first signal derived from said first register for selectively deriving second signals from said second register representing the equivalent with added filler corresponding to said first signal, a third register for signals derived from said second register, adding means for adding said second signals and the signals already stored in said third register with means for detecting the occurrence of a carry in said adding means, means for storing representations of said filler, and subtracting means responsive to said detection means for selectively subtracting the filler in the absence of a carry in a predetermined bit-position in said adder.

3,000,563 ELECTRONIC DIVIDER

Raymond Bird, Letchworth, and Phillip Wood, Stevenage, England, assignors to International Computers and Tabulators Limited, London, England, a British company

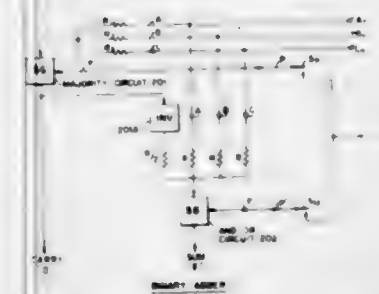
Filed Aug. 20, 1956, Ser. No. 604,884
Claims priority, application Great Britain Aug. 19, 1955
4 Claims. (Cl. 235-167)



1. Electronic cyclically-operable calculating apparatus for performing division on numbers expressed in binary digital notation, which comprises a first shift register of n stages settable to represent a dividend value, a binary subtractor operatively connected to said first shift register so as to form an accumulator, sign-indicating means settable to a first or to a second state according as whether said first shift register contains a positive or a negative value, a shift pulse source which provides n shift pulses in each cycle of the apparatus, a divisor storage device settable to represent a divisor value, means operative on each cycle of the apparatus to read out from the divisor storage device to the subtractor signals in synchronism with the n shift pulses and representing the value to which said divisor storage device has been set, a second shift register also having n stages, means operative in each cycle to apply to the first and second shift registers a shift pulse train consisting of all of said n -shift pulses except the first, whereby the values in said shift registers are left-shifted by one stage with respect to said divisor value, first gating means responsive to said sign indicating means being in its first state at the beginning of a cycle to cause digit-representing signals to be applied from said first shift register both to said subtractor and to said second shift register in synchronism with said shift pulse train, so that at the end of the cycle said second shift register has been set to the value which, at the beginning of that cycle, was in said first shift register but with a relative left shift of one digit and the value in said first shift register has been reduced by the value of said divisor, second gating means responsive to said sign indicating means being in its second state at the beginning of a cycle to cause digit rep-

resenting signals to be applied from said second shift register both to the subtractor and to an input of said second shift register in synchronism with said shift pulse train, so that at the end of the cycle said first shift register has been set to represent the value from said second shift register reduced by the value of said divisor and the value in said second shift register has been relatively left-shifted by one digit, a quotient store, and gating means controlled by said sign-indicating means and operative to set said quotient store in accordance with a different quotient digit on each cycle, whereby the formation of a dividend remainder and the shifting of the remainder relative to the divisor take place simultaneously.

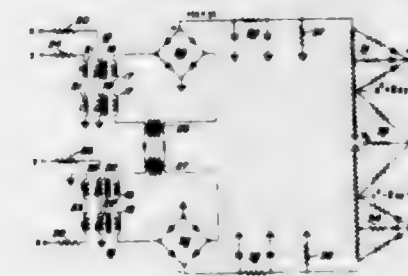
3,000,564
ELECTRONIC APPARATUS
Kenneth E. Schrelner, Harrington Park, N.J., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 15, 1957, Ser. No. 671,862
2 Claims. (Cl. 235-176)



1. An electronic binary adder, wherein a binary "1" is represented by a periodic electrical wave having a first phase relationship with respect to a reference standard and a binary "0" is represented by said periodic electrical wave having a second phase relationship with respect to said reference standard: said electronic binary adder consisting in combination of: a first input terminal for accepting a first periodic electrical wave having either said first phase relationship representative of a binary "1," or said second phase relationship representative of a binary "0"; a second input terminal for accepting a second periodic electrical wave having either said first phase relationship representative of a binary "1," or said second phase relationship representative of a binary "0"; a third input terminal for accepting a third periodic electrical wave having either said first phase relationship representative of a binary "1," or said second phase relationship representative of a binary "0"; a first subharmonic generator having a first input terminal, a second input terminal and an output terminal, said first subharmonic generator employing a serial circuit consisting of a lumped parameter inductance and a non-linear lumped parameter capacitance; a second subharmonic generator having a first input terminal, a second input terminal and an output terminal, said second subharmonic generator employing a serial circuit consisting of a lumped parameter inductance and a non-linear lumped parameter capacitance; a first resistor having a magnitude of R ohms, said first resistor being connected between said first input of said binary adder and said first input of said first subharmonic generator; a second resistor having a resistance of R ohms, said second resistor being connected between said second input terminal of said binary adder and said first input terminal of said first subharmonic generator; a third resistor having a resistance of R ohms, said third resistor being connected between said third input terminal of said binary adder and said first input terminal of said first subharmonic generator; a fourth resistor having a resistance of R ohms, said fourth resistor being connected between said first input terminal of said binary adder and said first input terminal of said second subharmonic generator; a fifth resistor having a resistance of R ohms, said fifth resistor being connected between said second input terminal of said binary adder and said first input terminal of said second subharmonic generator; a sixth resistor having a resistance of R ohms, said sixth resistor being connected between said third input terminal of said binary adder and said first input terminal of said second subharmonic generator; a seventh resistor having a resistance of $R/2$ ohms, said series circuit being connected between said output terminal of said first subharmonic generator and said first input terminal of said second subharmonic generator and said first input terminal of said second subharmonic generator; power source means connected to said second input of said first subharmonic generator and to said second input of said second subharmonic generator, said power source means producing a periodic electrical wave whose phase constitutes said reference standard; a carry output terminal, said carry output terminal being connected to said output terminal of said first subharmonic generator; a sum output terminal, said sum output terminal being connected to said output terminal of said second subharmonic generator; whereby, a carry periodic electrical wave having said first phase relationship with respect to said reference standard, and representative of a binary "1," will be present at said carry output terminal when all three, or any two, of said first, second and third periodic electrical waves respectively have said first phase relationship with respect to said reference standard, a carry periodic electrical wave having said second phase relationship with respect to said reference standard and representative of a binary "0," will be present at said carry output terminal when none, or only any one, of said first, second and third periodic electrical waves have said first phase relationship with respect to said reference standard, a sum periodic electrical wave having said first phase relationship with respect to said reference standard and representative of a binary "1," will be present at said sum output terminal when all three, or only any one, of said first, second and third periodic electrical waves have said second phase relationship with respect to said reference standard and representative of a binary "0," will be present at said sum output terminal when all three, or only any one, of said first, second and third periodic electrical waves have said second phase relationship with respect to said reference standard.

resistor being connected between said second input terminal of said binary adder and said first input terminal of said second subharmonic generator; a sixth resistor having a resistance of R ohms, said sixth resistor being connected between said third input terminal of said binary adder and said first input terminal of said second subharmonic generator; a series circuit consisting of an inverter and a seventh resistor having a resistance of $R/2$ ohms, said series circuit being connected between said output terminal of said first subharmonic generator and said first input terminal of said second subharmonic generator; power source means connected to said second input of said first subharmonic generator and to said second input of said second subharmonic generator, said power source means producing a periodic electrical wave whose phase constitutes said reference standard; a carry output terminal, said carry output terminal being connected to said output terminal of said first subharmonic generator; a sum output terminal, said sum output terminal being connected to said output terminal of said second subharmonic generator; whereby, a carry periodic electrical wave having said first phase relationship with respect to said reference standard, and representative of a binary "1," will be present at said carry output terminal when all three, or any two, of said first, second and third periodic electrical waves respectively have said first phase relationship with respect to said reference standard, a carry periodic electrical wave having said second phase relationship with respect to said reference standard and representative of a binary "0," will be present at said carry output terminal when none, or only any one, of said first, second and third periodic electrical waves have said first phase relationship with respect to said reference standard, a sum periodic electrical wave having said first phase relationship with respect to said reference standard and representative of a binary "1," will be present at said sum output terminal when all three, or only any one, of said first, second and third periodic electrical waves have said second phase relationship with respect to said reference standard and representative of a binary "0," will be present at said sum output terminal when all three, or only any one, of said first, second and third periodic electrical waves have said second phase relationship with respect to said reference standard.

3,000,565
CIRCUITS FOR OBTAINING FOUR QUADRANT
ANALOGUE MULTIPLICATION
Robert H. Wilkinson, Baltimore, Md., assignor, by means assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 10, 1957, Ser. No. 652,074
2 Claims. (Cl. 235-178)



1. In a circuit for four quadrant analogue multiplication, the combination comprising means for deriving the sum and difference of a first and a second input signal; said means comprising a saturable reactor having first, second, third and fourth control windings, said first input signal being coupled to said first control winding and said second input signal being coupled to said second, third and fourth control windings, said first and fourth control windings being coupled to said first and fourth control windings, said first and fourth control windings being coupled to said first and fourth control windings, said first and fourth control windings being coupled to said first and fourth control windings.

control windings having the same relative polarity and said second and third control windings having the same relative polarity but opposite to that of said first and fourth control windings, said first and second control windings each having a resistor connected in series therewith, said third and fourth windings each having a resistor connected in series therewith which has a value one half the value of each of the resistors connected in series with said first and second control windings, a dummy load connected to one side of said third control winding and to a relay, the other side of said third control winding being connected to said relay whereby the circuit in which said third control winding is connected is alternately opened and closed, the opening and closing of said circuit providing a resultant control signal in said reactor which is alternately proportional to the sum and difference of said input signals.

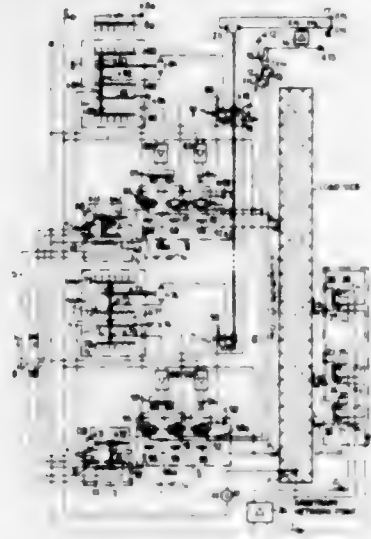
3,000,566

ECONOMIC DISPATCH COMPUTER FOR ELECTRIC INTERMESHED POWER DISTRIBUTION SYSTEMS

Hans Edelmann, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany

Filed May 7, 1958, Ser. No. 734,086

Claims priority, application Germany May 8, 1957 15 Claims. (Cl. 235-185)



1. An economic dispatch computer for an alternating-current distribution system of interlinked power generating stations, comprising a model network of transmission impedances equivalent to those of the system, said network having load-side terminal points and having feeder points corresponding to those of the respective stations; alternating-current supply means having control means responsive to the load conditions of the system for imparting to said network a current-flow distribution simulating that in the system, said current supply means comprising for each power station a group of transformer devices connected to one of said respective feeder points and to said load-side terminals; a number of measuring means correlated to the respective power stations, each of said measuring means being connected to one of said respective feeder points for response to current and voltage values of the power passing into said network at said one feeder point, and each of said measuring means being continuously connected to one of said respective groups of transformer devices for deriving therefrom an output voltage dependent upon the incremental transmission losses of an individual station, whereby the incremental transmission losses of all said interlinked stations are simultaneously ascertained by said number of measuring means; a number of potentiometer means correlated to the respective stations and having each an adjustable

tap voltage indicative of the incremental power production cost of an individual station; and comparator means connected with said measuring means and said potentiometer means for comparing said two voltages for each of the respective stations; said potentiometer means having a displaceable member for adjusting said tap voltage, and control means connecting said comparator with said member for controlling said member toward maintaining the sum of said two voltages at a given value.

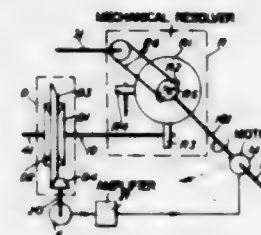
3,000,567

COMPUTER DEVICES

Peter Alan Houghton, Great Baddow, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Filed Dec. 30, 1957, Ser. No. 705,971

Claims priority, application Great Britain Jan. 14, 1957 2 Claims. (Cl. 235-186)



1. A computing device comprising an electro-mechanical sine function resolver having a resolver input shaft, a resolver control shaft and a resolver output shaft adapted to run at the product of the speed of the resolver input shaft times a sine function of the angular position of the resolver control shaft with respect to a datum position; motor means for applying an input to said resolver input shaft; a mechanical differential having first and second input members and an output shaft, said first input member being driven by said resolver output shaft; an input means connected to said second input member, the speed of rotation of said second input member constituting the input quantity of the computer device; a potential source connected to the differential output shaft; an amplifier; means for applying the output of said potential source to the input of said amplifier, means for applying the output from said amplifier to said motor means to drive the resolver input shaft whereby the speed of said resolver input shaft is proportional to the product of the input quantity times the secant of the angular position of the resolver control shaft.

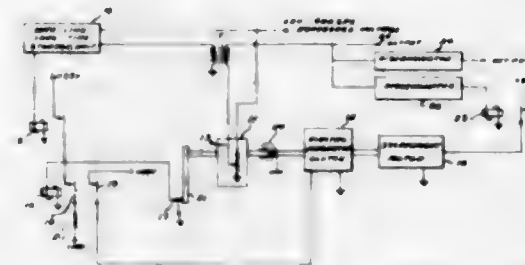
3,000,568

TIME-TO-GO MECHANISM

Edward E. Mitchell, New Hartford, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Dec. 17, 1957, Ser. No. 703,464

6 Claims. (Cl. 235-193)



1. A device for providing a continuous indication of time-to-go to an event from intermittent data comprising: means for producing a first voltage proportional to said data, means for producing a gradually increasing second voltage, means for subtracting said second voltage from said first voltage to produce an output voltage proportional to time-to-go and means responsive to an output

signal from said first voltage producing means for resetting said gradually increased voltage to zero whenever any new data signal is received.

3,000,569

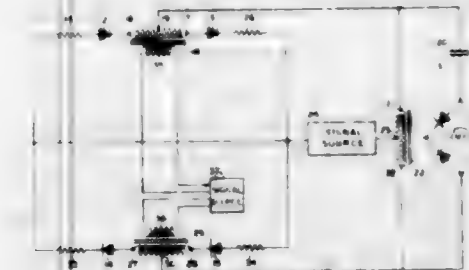
MULTIPLIER OF QUANTITIES REPRESENTED BY VOLTAGE AMPLITUDE AND FREQUENCY

Donald G. Scorgie, 356 Collins Ave., Pittsburgh, Pa.

Filed June 15, 1956, Ser. No. 591,770

6 Claims. (Cl. 235-194)

(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A computing device for multiplying a frequency quantity and an amplitude quantity, comprising a capacitance, a variable voltage power source having a voltage level proportional to the amplitude quantity, modulator means connecting the capacitance and power source in series and with selectable relative polarity, modulator drive means for controlling the rate of connection of the capacitance and power source in proportion to the frequency quantity, and a current responsive measuring device for indicating the average value of the magnitude of alternating charging current flow through the capacitance.

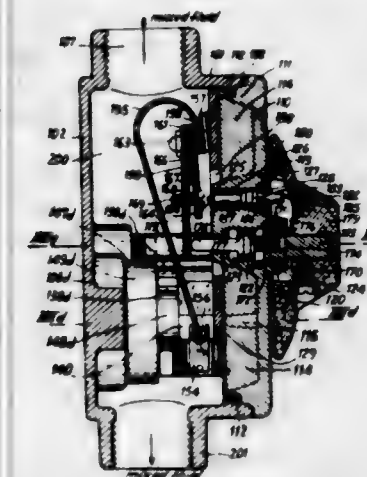
3,000,570

THERMOSTATIC FLUID MIXING COCK

Michel Trubert, 8 Ave. du General-Gouraud, Viroflay, France

Filed Aug. 29, 1958, Ser. No. 758,116

Claims priority, application France Sept. 6, 1957 5 Claims. (Cl. 236-12)



1. Thermostatic mixing valve for hot and cold fluids, comprising a control mechanism detachable as a unit including a plate, an adjustable thermostatic bimetallic strip connected to said plate, a pair of fluid-regulating valves carried by said plate and each having a jet orifice and a slotted rocker pivotally connected to said plate, operatively connected to said bimetallic strip and positioned for controlling said fluid-regulating valve jet orifices, said strip, valve and rocker being connected to said plate as a unit, a hollow body housing said control mechanism providing a fluid mixing chamber around said control mechanism and having an open front, a detachable cover closing said body open front, a pair of inlet orifices formed with and extending within said body and each having a mouth front face lying in a plane parallel to

that of said body open front, said valves each being detachably mounted in a fluid-tight manner on a different one of said orifice mouth front faces and means detachably retaining and tightly applying said cover on said body with said cover bearing against said plate retaining said valves on said orifice mouths in a seal-tight manner.

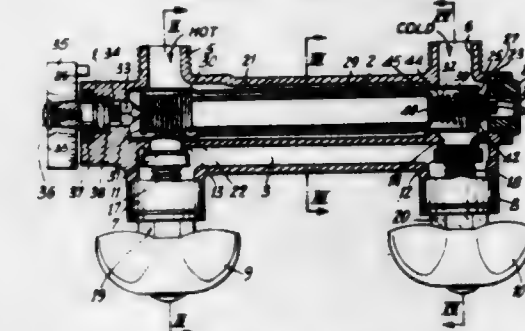
3,000,571

MIXING COCK WITH THERMOSTATIC COLD-WATER COMPENSATION

Nicole Fresson, born Trubert, 34 Rue Raphael-Corby, and Denis Trubert, 6 Ave. du General-Gouraud, both of Viroflay, Seine-et-Oise, France

Filed Jan. 7, 1959, Ser. No. 785,416

Claims priority, application France Jan. 11, 1958 4 Claims. (Cl. 236-12)



1. A device for mixing fluids of different temperatures and delivery of a fluid of a desired temperature comprising an elongated body having a pair of longitudinally extending ducts thereon, a hot fluid inlet opening adjacent one end thereof and a cold fluid inlet passage adjacent the opposite end of said body, said body hot fluid opening being in communication with one end portion of one of said ducts, an open end mixing chamber extending longitudinally of and within said one of said ducts and having an opening in one end portion thereof in communication with the opposite end portion of said one of said ducts, said mixing chamber open end positioned within said cold fluid inlet passage, a wall in said body extending from said body to said mixing chamber adjacent said mixing chamber opening and closing off said one of said ducts from said cold fluid inlet passage, said mixing chamber having a second opening in the end portion thereof opposite to said first mentioned mixing chamber opening and being in communication with the other of said ducts, an adjustable thermostatic member positioned within said mixing chamber and extending to said open end thereof, said body having an open end for the insertion of said mixing chamber and said thermostatic member in said body, a plug detachably closing said body open end and said mixing chamber open end, said plug having radial openings communicating with said cold fluid inlet openings and an axial recess in said plug opening into said mixing chamber and said radial openings, resilient means normally closing said plug recess, a valve slidably mounted in said plug recess connected to and controlled by said thermostatic means for at times closing said plug radial openings, manually controlled means for opening and closing said chamber second opening for controlling the communication of said mixing chamber with said second duct and said second duct having an outlet opening.

3,000,572

LOW FUEL DAMPER CONTROL

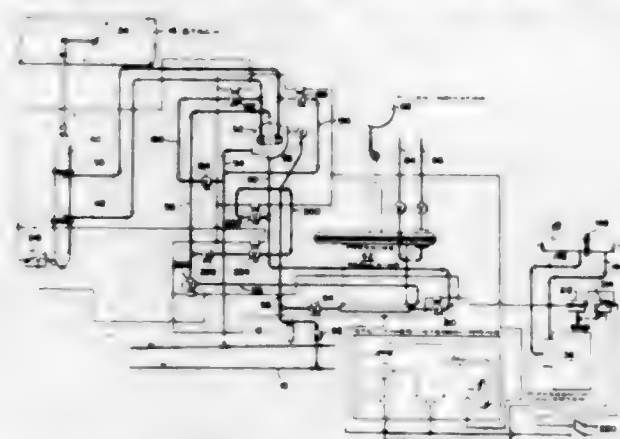
Paul F. Sullivan, Coatesville, Pa., assignor to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania

Filed Mar. 26, 1957, Ser. No. 648,588

6 Claims. (Cl. 236-15)

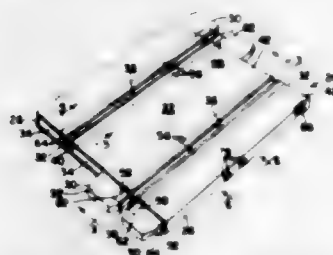
1. A control mechanism for a soaking pit or furnace control comprising a primary control system including a

source of gas fuel having a main conduit means, damper means for said conduit, means for controlling said damper means, an air conduit means, a damper means in said air conduit means, and means for controlling said damper means in said air conduit means, stack damper means in said stack means, and means for controlling said stack damper means, said several control means including air to gas ratio regulating means, furnace pressure regulating means, a hydraulic circuit connected to each of said damped controlling means, and relay valve means in said hydraulic circuit: the combination with said primary control system of a supplementary control system for taking over the control of said stack damper controlling means when the



gas flow in said main conduit has been reduced to a point sufficiently low and to a point where the furnace temperature has reached a set control position and wherein said stack damper has reached a predetermined point in its closing movement as actuated by said primary control system, said supplementary control system having a fluid control means and electrical means interconnected with said primary control system including a plurality of electrically actuated valves for controlling the flow of fluid in said hydraulic circuit to said relay valve means and from said relay valve means to said stack damper control means to thereby hold said stack damper in fixed semi-closed position, said valves being connected to said electrical means, whereby to increase and maintain positive pressure in the furnace when firing at low fuel rates.

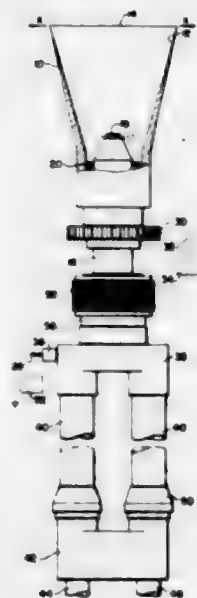
3,000,573
TRACK FOR ELECTRICAL TOY VEHICLE
Floyd E. Schlau, Moline, Ill., assignor to Strombeck-Becker Mfg. Co., Moline, Ill.
Filed Sept. 16, 1959, Ser. No. 840,273
13 Claims. (Cl. 238-10)



1. A toy track of the class described, comprising: a base of electrically non-conducting material having front and rear ends, opposite sides, a top and a bottom and including in its top a fore-and-aft groove extending from end-to-end thereof, said base having at its front end a pair of laterally spaced apart extensions providing between them a space affording a forward continuation of said groove, each extension being of reduced vertical dimension so as to have an upper portion offset below the level of the base top, and said base having at its rear end a pair of rearwardly facing, forwardly extending pocket means spaced laterally apart according to and dimensioned on the order of the extensions so as to be

capable of receiving forwardly therein similar extensions on another base, each pocket means being defined at its top by a transverse wall portion of the base top, said wall portion being of a vertical thickness on the order of the vertical offset between the base top and the upper portions of the front extensions; and a pair of electrical conductor strips running fore-and-aft on the base top, one at each side of the groove, each strip having a front end portion offset downwardly and projecting forwardly to overlie the respective extension, and each strip having a downwardly and forwardly directed hook-like rear end portion hooking under the respective transverse wall portion and entering the respective pocket means.

3,000,574
DUAL ATOMIZATION AND ELECTROSTATIC DEPOSITION MEANS
John Sedlacik, Jr., Garfield, N.J., assignor to Interplanetary Research & Development Corp., Garfield, N.J., a corporation of New Jersey
Filed Dec. 8, 1959, Ser. No. 858,146
4 Claims. (Cl. 239-15)

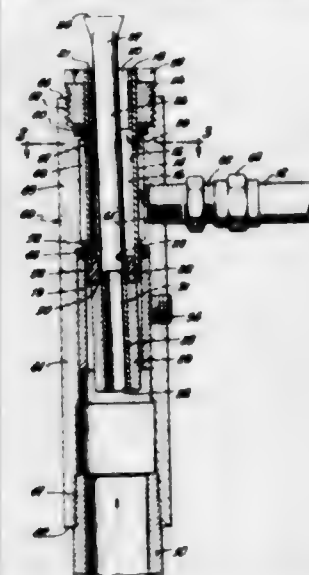


1. An atomizer arrangement for sequentially producing dual atomization and electrostatic deposition of coating material onto an article to be coated comprising, a pressure operated nozzle for initially atomizing fluid coating material into fine particles and spraying a pattern of said coating material particles substantially radially of the axis of said nozzle, a centrifugal atomizer revolvably mounted relative to said pressure operated nozzle and positioned to receive substantially all of the spray emitted from said pressure operated nozzle on an inner surface of said centrifugal atomizer, means for rotating said centrifugal atomizer at a speed sufficient to finally atomize and project the particles laterally from said centrifugal atomizer, and means for establishing an electrostatic field adjacent said centrifugal atomizer for charging the particles emitted therefrom to facilitate electrostatic deposition, said pressure operated nozzle including adjustable spray control means for controlling the density of the spray adjacent the centrifugal atomizer and deposition onto the inner surface thereof.

3,000,575
DEVICE FOR DISCHARGING FLUIDS FROM A PLURALITY OF SUPPLY SOURCES
John O. Hruby, Jr., Burbank, Calif., assignor, by mesne assignments, to Rain Jet Corporation, Burbank, Calif., a corporation of California
Filed June 19, 1959, Ser. No. 821,489
5 Claims. (Cl. 239-225)

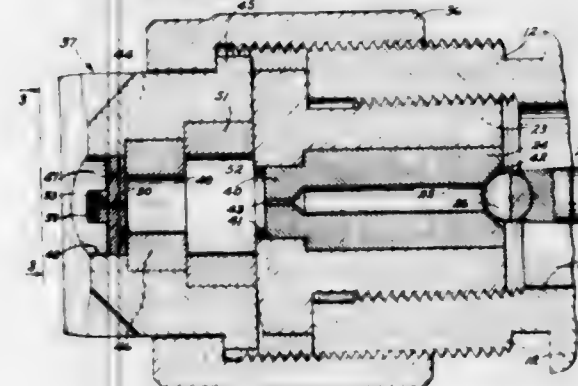
1. A device for discharging fluids from a plurality of supply sources, comprising a body having an inside wall

defining an open-ended passage extending through the body, an outer end of the passage-forming wall defining a fluid discharge opening, an inner end of said passage-forming wall defining an inner end opening in the body, a tubular stem having an outer end portion and an inner end portion, the stem being arranged longitudinally in said passage with the inner end portion of the stem extended through said inner end opening and the outer end portion of the stem in said discharge opening, the inner end portion of the stem having a fluid inlet opening formed therein and the outer end portion of the stem having a fluid outlet opening formed therein, that portion of the stem which is disposed within said discharge opening being of smaller cross sectional size than the



discharge opening, walls in the body defining an aperture and fluid deflecting surfaces for admitting fluid to within the body passage and for deflecting fluid in the body in a swirl around the stem thereby to gyrate the stem around in the body, a jacket around the body and having an outer end closed around the outer end of the body and having an inner end extending beyond said inner end opening of the stem, a seal in the jacket and around the body spaced inwardly beyond said aperture defining walls, the jacket having an opening formed therein between the outer end of the jacket and said seal and adapted to be connected to a first source of fluid, and the inner end of the jacket having an opening formed therein and adapted to be connected to a second source of fluid.

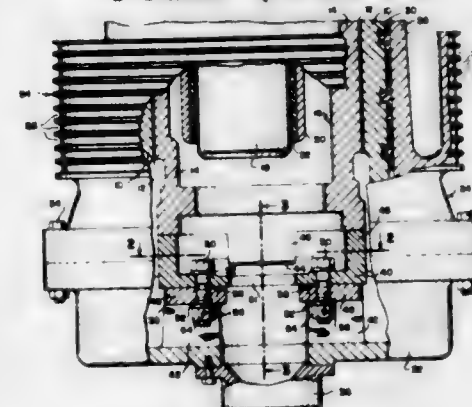
3,000,576
SPRAY GUN
Gustave S. Levey and Stanton F. Harvey, Houston, Tex., assignors to The Spec-Flo Company, Houston, Tex., a corporation of Texas
Filed Mar. 1, 1960, Ser. No. 12,092
8 Claims. (Cl. 239-499)



4. Means for hydraulically atomizing and spraying paint comprising an airless spray gun having a passage-way with an inlet adapted to be connected to a source of liquid paint under pressure, said passageway leading to a

spray tip having a nozzle opening extending therethrough, said nozzle opening being elongated in cross-section and being defined by converging walls of said spray tip intersecting in a non-circular sharp edge, said nozzle opening having an area no greater than about .001 square inch, a valve body in said passageway having a valve seat surrounding a valve port, said valve port having a substantially larger area than said nozzle opening, a valve member movable in said passageway for controlling the flow of paint through said valve port, said gun including an enlarged chamber between said valve port and said nozzle opening, and means between said valve port and said nozzle opening, including an axially extending circular bore with a diameter substantially smaller than said chamber connecting said valve port with said chamber, said means creating a compact submerged jet of liquid paint moving axially through said chamber and into said nozzle opening with a velocity and pressure substantially equal to the velocity and pressure of the paint passing through said nozzle opening, whereby the paint emerges from said nozzle opening as an atomized mist substantially uniformly distributed in an elongated spray pattern having feathered edges.

3,000,577
SHEAR PIN DRIVE FOR GYRATORY CRUSHERS
Lester R. Ferguson, Riveredge, N.J., assignor to Kennedy Van Saun Mfg. & Eng. Corporation, New York, N.Y., a corporation of Delaware
Filed July 23, 1959, Ser. No. 829,047
5 Claims. (Cl. 241-32)

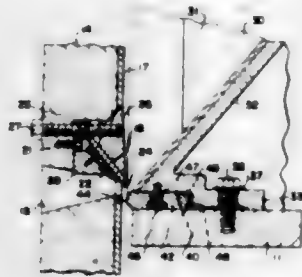


1. In a gyratory crusher including an upright main crusher shaft the lower portion of which is surrounded by an eccentric sleeve for gyrating the shaft, a driving pulley for rotating the eccentric sleeve, a rotatable driving disc fixed to the pulley and supporting the eccentric sleeve in operative position around the lower portion of the shaft, and a drive coupling between the driving disc and the eccentric sleeve including a coupling member having a driving connection with the eccentric sleeve and a driving connection with the driving disc, the improvement comprising spaced dog keys mounted on and secured to the coupling member and constituting a part of one of said driving connections of the coupling member, and a shear bolt securing each of said dog keys to the coupling member, said shear bolts carrying the driving load from the driving disc to the eccentric sleeve, whereby said shear bolts are sheared off releasing the dog keys from the coupling member thereby avoiding damage to the crusher when an uncrushable object comes between the crushing elements of the crusher.

3,000,578
WOOD CHIPPERS
Denis George Riches and Ray B. Jorgensen, Seattle, Wash., assignors to Sydney Hansel, Edmonds, Wash.
Filed Feb. 24, 1960, Ser. No. 10,618
2 Claims. (Cl. 241-92)

1. In a chipper having a base, a rotary disc normal to the base, chip cutting knives projecting from the working

face of the disc, a log feed spout supported on the base and having a bottom wall and a rear wall inclined at an acute angle to the disc working face, said bottom wall having a rebate on its underside adjacent to the working face of the disc, an anvil within the rebate, said anvil having parallel side edges, each of said side edges being bev-

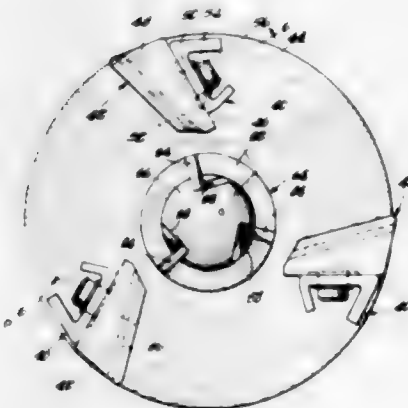


eled to provide upper and lower wear faces, said wear faces being inclined at substantially the same angle as the inclined rear wall of the feed spout, said anvil being divided longitudinally into a plurality of identical and interchangeable parts, and means for adjustably securing each anvil part to the bottom wall of the feed spout.

3,000,579 IMPELLER SHOE

Thomas E. Bridgewater, Elmhurst, Ill., assignor to Adams Engineering Company, Chicago, Ill., a corporation of Illinois

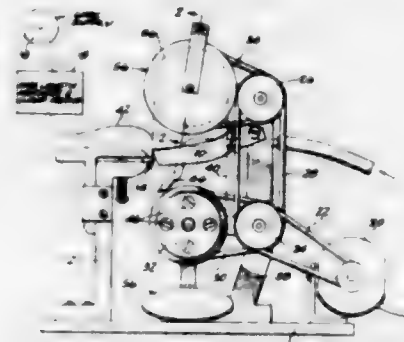
Filed Dec. 4, 1959, Ser. No. 857,364
8 Claims. (Cl. 241-275)



1. In an impact crushing apparatus, an impeller rotatable about a predetermined axis and comprising radially extending support means, a plurality of blade means circumferentially spaced on said support means for accelerating material to be crushed and projecting such material laterally outwardly, each of said blade means comprising an upstanding bracket of predetermined thickness having an aperture therethrough and fixed to said support means, a wear resisting shoe including a body abutting said bracket and a stud having a length greater than said thickness and projecting substantially perpendicularly from said body through said aperture, recess means in said stud and spaced from said body a distance similar to said thickness, and a locking element removably disposed in said recess means and engageable with said bracket for releasably securing the shoe to the bracket, and said impeller including a centrally located distributing member releasably connected with said support means, said distributing member comprising a generally conical body portion and a plurality of radially short upstanding blade elements for initially directing the material radially outwardly and accelerating the material prior to engagement of said material with said blade means.

3,000,580 COIL WINDER

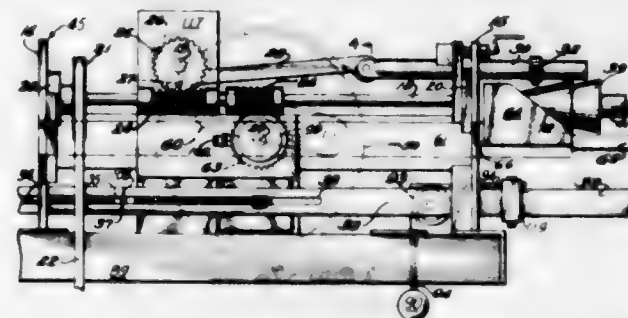
Mitchel J. Matovich, Jr., 196 Lyndhurst, San Carlos, Calif.
Filed Nov. 4, 1957, Ser. No. 694,437
5 Claims. (Cl. 252-4)



1. In a coil-winding machine of the type wherein a closed loop of wire is rotated by means of a pair of rotatably mounted spaced pulleys around the portion of a workpiece around which it is desired to wind wire turns to pull a length of wire attached to said closed loop on said pulleys to form an adjacent loop, the improvement comprising a groove in the periphery of each pulley within which said closed loop is retained on said pulleys, a chamfered edge on each pulley, a disc for and associated with each pulley, means for rotatably supporting each said disc coaxially with each its associated pulley adjacent its chamfered edge, means for yieldably urging each said disc against its associated pulley to form with said chamfered edge a slot for retaining an adjacent loop, and a means for each pulley to direct an adjacent loop into said slot.

3,000,581 COP WINDER

Henry C. Beecher, 1521 Clarkson St., Baltimore 30, Md.
Filed Jan. 20, 1958, Ser. No. 710,065
9 Claims. (Cl. 242-27)



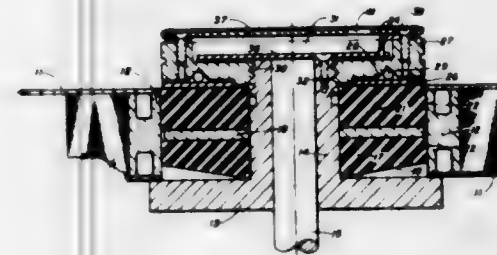
1. A cop making machine, comprising, a housing structure having spaced walls, a spindle journaled in said housing structure, traversing means, means for rotating said spindle and for driving said spindle and traversing means in synchronism, said traversing means including an oscillating shaft bearing a fairlead for supplying yarn from end to end of said spindle during cop winding, a measuring bar arranged parallel with respect to said spindle and axially positionable in said housing structure to control cop length and including a piece longitudinally adjustable on said bar, a headpiece on said bar disposed in alignment with an end of said spindle, a clutch disconnectably linked in rotation with said spindle and engaged thereto by action of said longitudinally adjustable piece when said headpiece is pressed away from the end of said spindle by the cop being wound, a traveler plate affixed in rotation to said clutch, cam means on said plate to disconnect said spindle and plate through said clutch on selected rotation of said plate, means for controlling the amount of rotation of said plate, a doffing beam journaled in said housing, means on the traveller plate for

propelling said doffing beam through its travel as the said plate revolves, a carriage including a projection thereon to encompass said spindle, said carriage being operated by said doffing beam to force said cop off said spindle, a knife on the carriage to cut the yarn and free the completed cop, an extension on the front of said housing structure to guide said carriage and said knife, and means for returning said measuring bar towards said spindle after said cop is ejected and simultaneously as said traveller plate rotates to its first position, disconnects said clutch and stops, awaiting formation of a subsequent cop to reoperate the aforementioned parts.

3,000,582 TAPE REEL HOLD DOWN DEVICE

Dwight W. Brede, Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Aug. 13, 1959, Ser. No. 833,453
4 Claims. (Cl. 242-55.11)

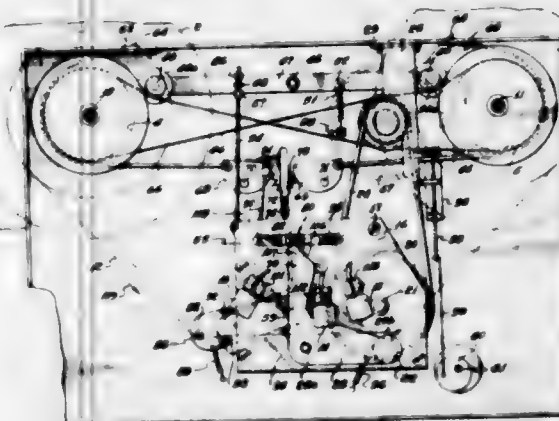


1. A tape reel hold down device for holding a tape reel upon a turntable, a hub extending upwardly from the turntable and adapted to engage a driving shaft, a resilient means carried by said hub, said resilient means being of substantially smaller diameter than said turntable, and the confronting portions of said resilient means and said turntable being engaged at the radially most inward portions thereof and diverging outwardly to define a substantial space between the radially more outward portions thereof, and means making threaded engagement with said hub and adapted to apply axial pressure to the resilient member whereby the member expands radially outwardly and downwardly to engage the associated reel hub.

3,000,583 APPARATUS FOR RECORDING AND FOR PLAYBACK OF SOUND UTILIZING A TAPE

Richard K. Hoskin, Gardena, Calif., assignor to Newcomb Electronics Corp., Los Angeles, Calif., a corporation of California

Filed Aug. 12, 1957, Ser. No. 677,503
11 Claims. (Cl. 242-55.12)



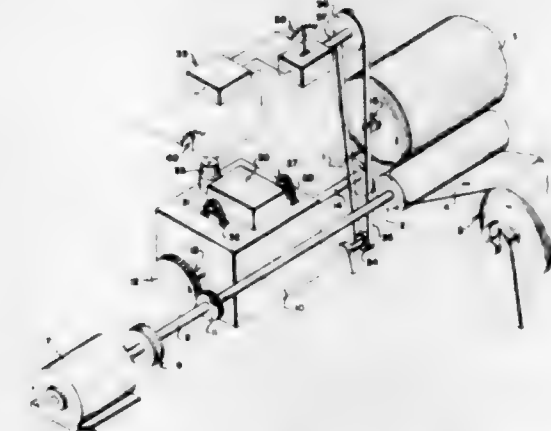
1. In a machine for operating a tape: a supply reel for the tape; a takeup reel for the tape; means for moving the tape in either forward or reverse directions; means for braking said reels; a control rod; a universal mounting for the rod about a fixed point; means for guiding the

rod for movement in the three directions from a neutral position; means effective in said neutral position to apply the braking means; means whereby movement of the rod in any of the three directions from said neutral position serves to release the braking means; means whereby movement of the rod in the first direction causes the takeup reel to be driven, and to move the tape in an operating position; means whereby movement of the rod in the second direction causes the tape to be placed into an inoperative position and the supply reel to be driven; and means whereby movement of the rod in the third direction causes the takeup reel to be driven at an advanced speed.

3,000,584 WINDUP ROLL DRIVE

Everett W. Clem, Shrewsbury, Mass., assignor to Rice Barton Corporation, Worcester, Mass., a corporation of Massachusetts

Filed July 29, 1957, Ser. No. 674,857
4 Claims. (Cl. 242-66)



1. In a web roll winding mechanism comprising a motor, a pair of parallel winding rolls driven by said motor, said winding rolls being adapted to support said web roll as it is wound, one of said winding rolls being driven substantially directly by said motor, the other of said winding rolls being driven through a differential gear unit at a speed different from the speed of said first mentioned winding roll, said differential gear unit having an input gear driven substantially directly by said motor, a follower gear opposed to said input gear, and an interconnecting output gear assembly from which said second mentioned winding roll is substantially directly driven, the improvement comprising positively infinitely variable speed changing means, the input thereof being connected to said follower gear for applying a load thereto, the output of said speed changing means being connected directly to the output of said differential gear unit, and means responsive to the increasing diameter of said web roll being wound for controlling said speed changing means whereby the speed of said second mentioned winding roll may be varied relative to the speed of said first mentioned roll as the web roll being wound increases in size.

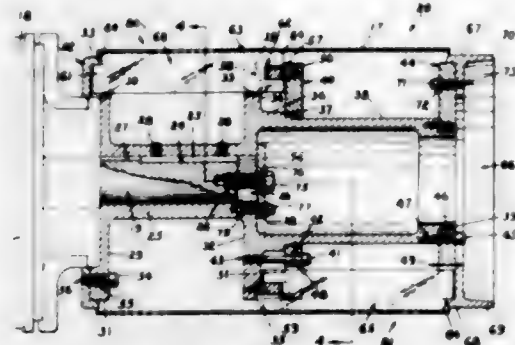
3,000,585 EXPANSIBLE MANDREL

Andrew L. Sokal, Waterville, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 699,688
5 Claims. (Cl. 242-72)

3. In a centrifugally expansible mandrel that is substantially symmetrical about an axis, and adapted to wind continuous filamentary material on a yieldable core, the improvement which comprises, in combination: a plurality of hub portions arranged concentrically about said axis; a flange positioned adjacent the end of each hub portion, the flanges associated with each hub portion

constituting a pair; each flange having a plurality of similar slots spaced at equal angular intervals adjacent the outer periphery thereof; a bar having a gripping surface extending parallel to said axis for each pair of slots and being supported for radial movement in respect to said

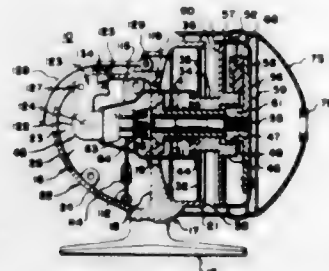


axis in said slots, said bars being arranged in banks, one bank for each pair of flanges, and said banks being arranged to support said core throughout its length; and means associated with said flanges to limit the radial movement of said bars.

3,000,586 FISHING REEL

Henry I. Mandoff, San Diego, Calif., assignor to Langley Corporation, San Diego, Calif., a corporation of California

Filed Apr. 21, 1958, Ser. No. 729,832
7 Claims. (Cl. 242-84.2)



3. A spinning type casting reel comprising a housing having a base and a wall portion, a non-rotative line-carrying spool supported for rectilinear movement on said base, a line-winding member rotatably positioned in concentric relation to said spool for engaging and winding a line onto said spool on rotation of said line-winding member, means for rotating said line-winding member, said spool having a flange movable upon movement of said spool in the direction of said housing wall portion to engage with said housing wall portion to clamp the line therebetween, spring means operable on said spool for normally positioning its flange free of said wall portion, and manually operable means for slidably moving said spool against the bias of said spring means to effect engagement of said spool flange with said housing wall portion.

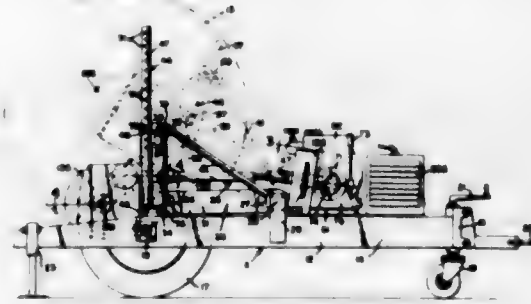
3,000,587 REEL WINDER

Robert W. Goode, Morgan Hill, Calif., assignor to Gerald A. Petersen, Santa Clara, Calif.

Filed May 26, 1958, Ser. No. 737,948
3 Claims. (Cl. 242-86.5)

1. In a reel winder, a trailer frame disposed parallel to and in proximity to the ground, wheels supporting said frame above the ground, said frame having divergent sides and a transversely extending first end and being open at the end opposite said first end, said frame being open and unobstructed between said sides and to the ground, a horizontal transverse shaft at said first end, means mounting said shaft on said frame in proximity to the ground for oscillatory movement, reel support

arms fixed to said transverse shaft projecting toward the open end of said trailer, a cylinder connected at one end to said frame adjacent the outer end of one of said support arms and a piston in said cylinder connected to said support arm, said cylinder being substantially vertical, means for energizing said cylinder, a transverse horizontal spindle on the outer ends of said arms to support and rotate a reel, a prime mover on said first end of said frame, a torque converter connected to said prime mover and driven thereby, a power train from said torque converter and pivotally mounted on said frame about an

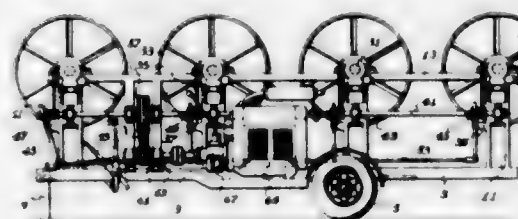


axis spaced toward said first end relative to said shaft, said power train comprising a first shaft connected to said torque converter, a right angle gear drive connected to said first shaft, a first universal joint connected to said right angle gear drive, a telescope shaft connected to said first universal joint and extending to the outer end of one of said support arms, a second universal joint connected to said telescopic shaft, and means for driving said spindle from said second universal joint, said first universal joint being located eccentric relative to said transverse shaft.

3,000,588 MULTIPLE REELING DEVICE

Stephen A. Brady, 4604 E. 25th St., Tulsa, Okla.

Filed July 25, 1958, Ser. No. 750,910
1 Claim. (Cl. 242-86.5)

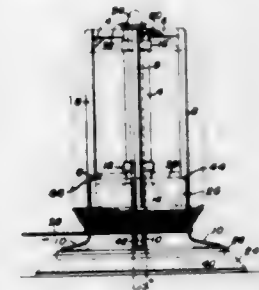


A reeling device comprising a wheeled vehicle having a chassis elongated in the direction of movement of the vehicle, a plurality of reels mounted on the chassis for rotation about parallel axes, said axes being spaced apart lengthwise of the chassis and the reels being in line with each other lengthwise of the chassis, a motor mounted on the chassis for rotating the reels, a drive shaft connected to be rotated by the motor, a jack shaft mounted for rotation on and extending at least a major portion of the length of the chassis, means drivably interconnecting the drive shaft and the jack shaft to rotate the jack shaft at a substantially lower speed than the drive shaft, a plurality of individual drive connections between the jack shaft and the reels to rotate the reels at a substantially lower speed than the jack shaft, means for selectively interrupting the driving connection between the jack shaft and any of the reels, a transmission between the motor and the jack shaft having reverse drives and a neutral position in which the motor idles without turning the drive shaft, the transmission and the drive shaft interconnecting the motor and the jack shaft for rotation of the jack shaft independently of the vehicle wheels.

3,000,589 WIRE COIL CARRIER

Walter G. Patterson, Atlanta, Ga., assignor to Atlantic Steel Company, Atlanta, Ga., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 719,468
3 Claims. (Cl. 242-115)



1. A wire coil carrier comprising an upright primary frame member having vertically disposed side members terminating in outwardly directed foot portions adapted to support a wire coil, horizontally disposed end members and a cylindrical core supported in said end members, said side members being parallel to and of greater length than said core; an upright secondary frame member having vertically disposed side members, horizontally disposed end members, and centrally disposed collar means supported in said end members of said secondary frame member and surrounding said core, said side members of said secondary frame member being parallel to and of greater length than said core; said frame members intersecting about an axis defined by said core and said collar means in rotatable engagement therewith and said secondary frame member being foldable about said core to collapsed substantially parallel position with respect to said primary frame member.

3,000,590 PIRN BARREL AND METHOD OF FORMING SAME

Charles K. Dunlap, William B. Broadbent, and Joseph K. Taylor, Hartsville, S.C., assignors to Sonoco Products Company, a corporation of South Carolina

Filed June 25, 1956, Ser. No. 593,551
5 Claims. (Cl. 242-118.31)



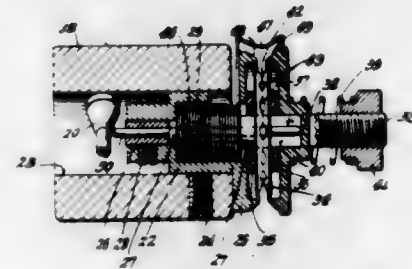
1. In a pirn for carrying the windings of a textile yarn package, the combination with an inner metal reinforcing tube of a covering therefor comprising a laminated and resin impregnated paper tube structure characterized by a relatively dense, radially compressed wall, said paper tube structure being of uniform exterior diameter and being proportioned in diameter interiorly for a push fit on said reinforcing tube except at an inturned end

portion of said paper tube that is shaped for bottoming disposition over an adjacent end of said reinforcing tube, said inturned end portion being less compressed than the rest of the tube structure and the inner diameter of said paper tube at said inturned end portion is reduced for gripping said reinforcing tube upon bottoming of said end portion thereon, said reduced inner paper tube diameter rendering the paper tube wall thereat less dense and thereby imparting a relative resilience thereto for said gripping action.

3,000,591 ROTARY TENSION DEVICE FOR SEWING MACHINES

Clarence R. Backlin, Blauvelt, N.Y., assignor to Willcox & Gibbs Sewing Machine Co., New York, N.Y., a corporation of New York

Filed Oct. 7, 1958, Ser. No. 765,794
2 Claims. (Cl. 242-155)



1. In a rotary tension device for a high speed sewing machine, a tension housing adapted to be mounted on a sewing machine and having a tubular tension stud fixed therein to project therefrom, said stud having a shoulder thereon and a bifurcated end portion, a tension wheel having a pair of braking washers on opposite sides thereof rotatably mounted on the stud with one washer engaging the housing, an outer disk slidable on the stud and having a portion cooperating with the bifurcated portion of the stud to prevent rotation thereof on the stud, and adjustable spring means urging the outer disk toward the housing and applying braking pressure on the tension wheel disposed therebetween, the improvement wherein said wheel and braking washers are formed of nylon and said wheel has a peripheral groove and has transverse spaced holes extending through the wheel and intersecting the bottom of said peripheral groove whereby a lightweight wheel having improved thread traction is provided.

3,000,592 GUIDE FASTENING MEANS

Mary M. Faky, New Haven, Conn., assignor to Heany Industrial Ceramic Corporation, New Haven, Conn., a corporation of New York

Filed Sept. 25, 1958, Ser. No. 763,289
2 Claims. (Cl. 242-157)



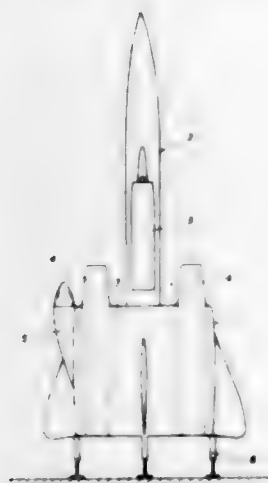
1. In a yarn guide, the combination with a ceramic body having an integral guide portion extending laterally therefrom and including a pigtail, said body having a cylindrical opening therein that is closed at one end and provided with ribs extending endwise of its interior surface, of a fastening means consisting of a hollow cylindrical bushing of slightly resilient material fitted in said opening and having a cylindrical central opening extending endwise thereof, and a threaded metal supporting post engaging the cylindrical central opening of the bush-

ing with its inner end in contact with the closed end of said body, the inner surface of the bushing being tightly and closely engaged with the threads of the metal supporting post and held thereby against endwise movement in the body and the outer surface of the bushing being closely and tightly engaged with the ribs in the body and held thereby against turning movement in the body.

3,000,593

CARRIER AIRCRAFT HAVING AN ANNULAR WING

Gerhard Eggers, Dammarie les Lys, France, and Erich Haberkorn, Stuttgart-Bernhausen, Germany, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed May 27, 1958, Ser. No. 738,149
Claims priority, application France June 18, 1957
4 Claims. (Cl. 244-2)



1. A composite flying machine comprising a carrier aircraft and a carried craft detachably secured thereto, said carrier aircraft comprising an annular aerofoil, slide-ways extending substantially along generatrices of the inner surface of said annular aerofoil in a fore-and-aft direction, said slide-ways being adapted to slidably engage and support rim portions of said carried craft whereby the latter is at least partly accommodated within said annular aerofoil, and a power plant and cabin arranged peripherally with respect to said annular aerofoil whereby the inner space thereof is left free and available for housing therein said carried craft.

3,000,594

TILTABLE JET POWER UNIT FOR AIRCRAFT

Gero Madelung, Munich, Germany, assignor to Messerschmitt A.G., Augsburg, Germany, a company of Germany
Filed Oct. 31, 1960, Ser. No. 66,260
Claims priority, application Germany Oct. 30, 1959
1 Claim. (Cl. 244-12)



Means for suspending at least one jet power unit tiltably below an airfoil member of an aircraft, comprising

a pivot located below said airfoil member of the aircraft in front of the point of maximum thickness of the airfoil member profile and extending substantially parallel to the transverse axis of the aircraft, said pivot being supported by the airfoil member, the region of the airfoil member above said pivot being recessed to permit the jet power unit to swing into said recess when deflected into the vertical position, the cowl of the jet power unit being constructed so that the said recess will be occupied by the cowl when the jet power unit is in the horizontal position, the upper contour of the jet power unit having a rear portion which is recessed in relation to the forward portion by an amount substantially equal to the thickness of the airfoil member, tilting means being provided for tilting the jet power unit.

3,000,595

ELEVATOR TAB CONVERTIBLE FROM AN ANTI-BALANCE TAB TO AN ASSIST TAB

John L. Dorn, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed July 21, 1959, Ser. No. 828,659
13 Claims. (Cl. 244-82)

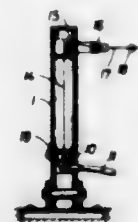


1. In an airplane having horizontal tail surfaces inclusive of at least one of each of the following: a movable stabilizer pivotally mounted on the airplane tail structure, an elevator pivotally mounted on the stabilizer and a control tab pivotally mounted on the elevator; the improvement comprising at least one additional dual acting tab pivotally mounted on the elevator which alternately functions as either an anti-balance tab or an assist tab, depending on the pivotal position of the stabilizer, and mechanism supported throughout the tail structure, stabilizer and elevator for selectively actuating the additional dual acting tab.

3,000,596

ARRESTING DEVICE FOR AIRCRAFT

Werner Puffe, Dusseldorf-Eller, Germany, assignor to Hein, Lehmann & Co. A.G., Dusseldorf, Germany
Filed Dec. 30, 1959, Ser. No. 862,915
Claims priority, application Germany Dec. 31, 1958
14 Claims. (Cl. 244-110)

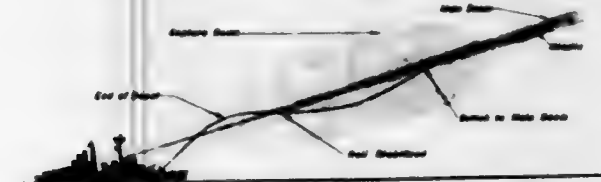


1. An aircraft barrier comprising support members disposed at opposite sides of a runway, an arresting cable and an activating cable spanning said support members, each of said support members being provided with respective carrying means for said arresting cable displaceable from a lowered position of said arresting cable to an elevated position thereof, and transmission means operatively connected to said activating cable for upwardly displacing said carrying means upon entrainment of said activating cable by an aircraft.

3,000,597

ROCKET-PROPELLED MISSILE

Alfred J. Bell, Takoma Park, and Carl W. Besmerer, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Aug. 15, 1951, Ser. No. 241,942
20 Claims. (Cl. 244-14)



10. A guided missile including a body having a forward section of ogival contour, a cylindrical amidships section, said amidships section having two pairs of steering wings pivotally mounted therein near the center of gravity of said missile and oriented in a cruciform configuration, each pair of wings being arranged to operate independently of the other pair of wings so that the course of said missile can be changed without a substantial change in attitude, a tapered aft section having two pairs of tail fins attached thereto and indigitated substantially 45° to said pairs of steering wings, roll flippers movably mounted on certain of said tail fins, a cylindrical sustainer rocket located in said amidships section, all of said sections cooperating to provide a smooth contour for said body of said missile, a fuze in said forward section, a warhead in said forward section adjacent said fuze and operatively associated therewith, a guidance compartment in said amidships section for receiving missile guidance apparatus, a steering wing control compartment in said amidships section for receiving wing control mechanism for controlling said wings, a roll stabilization compartment in said aft section for receiving apparatus for controlling said roll flippers, and a conduit extending from said sustainer rocket through said aft section for discharging thrust producing gases from said sustainer rocket.

3,000,598

ROLL STABILIZATION SYSTEM

George B. Bush, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 30, 1954, Ser. No. 459,572
7 Claims. (Cl. 244-14)



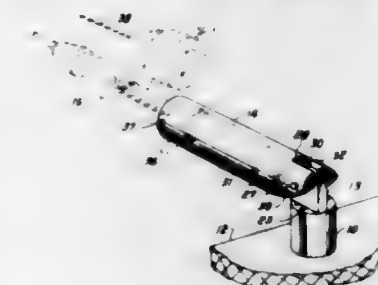
1. A roll stabilization system for a guided missile having an aerodynamic control surface and a servo system associated therewith, comprising a receptor for electromagnetic energy, said receptor including a transmission medium having significant power of magnetic rotation of the plane of polarization of said electromagnetic energy, an alternating current signal generator providing an oscillating magnetic field, means for applying said os-

cillating magnetic field to said medium for causing the transmitted plane of polarization of said electromagnetic energy to oscillate with respect to the initial plane of polarization thereof, means for resolving the resulting oscillating plane of polarization, thereby producing an amplitude modulation of the electromagnetic energy at the frequency of the alternating magnetic field with depth of modulation and phase proportional to roll angular error of the missile, means for detecting the electromagnetic energy, means for comparing the detected signal with the alternating voltage of said signal generator to produce a D.C. signal which is proportional to roll error in polarity and magnitude, said D.C. signal being utilized to operate said servo system whose output orients said aerodynamic control surface, which, in turn, rolls the missile in a direction to reduce the roll error.

3,000,599

FISHING ROD HOLDER

Henry T. Honig, 5330 Royal Lane, Dallas, Tex.
Filed May 31, 1960, Ser. No. 32,659
6 Claims. (Cl. 248-38)

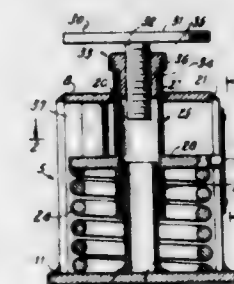


3. A fishing rod holder including a base, a member overlying the base, spring-pressed means rotatably connecting the member to said base, a pin extending from one of the adjacent surfaces of said member and base, the other of said surfaces having sockets arranged in an arc about the axis of rotation of said member for selective engagement by the pin to hold said member against rotation relative to said base, a socket member for receiving the handle of a fishing rod and pivotally attached to said rotatable member for movement about a substantially horizontal axis, one of the members having a plurality of spaced recesses arranged in an arc about the pivotal axis, and a latch element carried by the other of said members for selective engagement with the recesses to secure the socket member in adjusted positions.

3,000,600

FLOOR TYPE SPRING SUPPORT

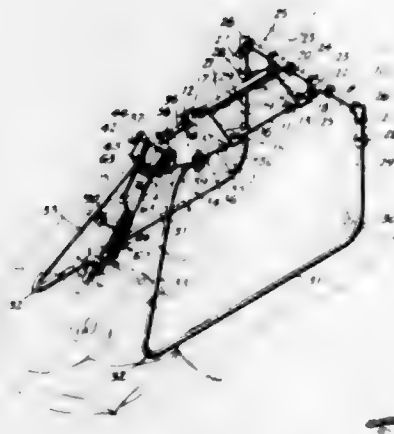
Leonard S. Suozzo, Hackensack, N.J., assignor to Bergen Pipe Support Corp., New York, N.Y., a corporation of New York
Filed May 20, 1959, Ser. No. 814,491
3 Claims. (Cl. 248-54)



1. In a support device of the character described, a housing comprising a base, a top wall spaced above the base and a side wall extending from the base to the top wall, said top wall having a through opening, an up-standing guide tube within the housing, said guide tube

being mounted on the base and aligned with said opening, a tubular plunger coaxial with the guide tube and including a lower part slidable relative to the guide tube and an upper part extending through said opening and above the top plate, a bearing member carried by and positioned intermediate the ends of the plunger, spring means coaxial with the guide tube and plunger and positioned between the base and the bearing member, and a load carrying unit mounted on the plunger and comprising a load plate, an externally threaded member depending from and normal to the load plate, an internally threaded tubular adjusting member engaging the threaded member, said adjusting member including a first part that is slidably and rotatably positioned in the upper part of the plunger and a second part that bears against the upper extremity of the plunger and limits downward sliding movement of the adjusting member relative to the plunger.

3,000,601
PORTABLE NURSERY FEEDER
Charles R. Pedro, Mina, Nev.
Filed June 14, 1960, Ser. No. 35,928
8 Claims. (Cl. 248-106)

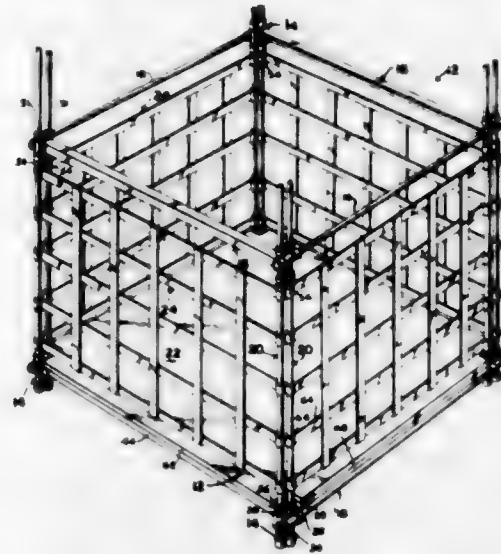


1. A device of the character described comprising a frame, a bracket pivoted to said frame, a pair of guide members extending from said bracket, a bottle holder slidably mounted on said guide members, means for latching said bracket in lowered position, spring means normally urging said bracket to raised position, and a stop member adjustably positioned upon one of said guide members whereby to limit downward movement of said bottle holder in its lowered position.

3,000,602
PALLET CONTAINER
Francis Lorain O'Brien, Sandusky, Ohio, assignor to Norwalk Truck Lines, Inc., a corporation of Ohio
Filed Jan. 15, 1960, Ser. No. 2,693
8 Claims. (Cl. 248-120)

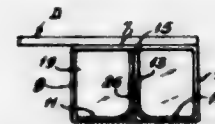
1. A generally rectangular frame composed of front and rear sides and a pair of ends, and having four corner units each with a pair of vertical sockets, another socket on one side of said vertical sockets, and a bracket means on the other side of said vertical sockets, a pair of elongate cross beams constituting front and rear sides of the frame, means for connecting the opposite ends of each of said cross beams to the respective bracket means on said corner units, whereby to form front and rear sub-assemblies consisting of a pair of corner units and one of said cross beams, a pair of elongate end pieces for said frame, each of said end pieces having the opposite ends engaging in the other sockets the respective corner units so as to constitute the ends of the frame, said frame being adapted to support a platform engaging in said framework with the marginal edges there-

of resting on said cross beams and end pieces, and four pairs of corner posts, each pair of posts respectively



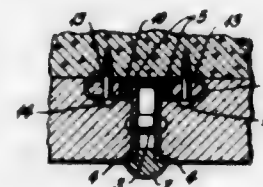
engaging in the pairs of vertical sockets in said corner units.

3,000,603
PAPERBOARD PALLET SPACERS AND THE LIKE
Ronald R. Hemann, Highland, Ill., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware
Filed Sept. 21, 1959, Ser. No. 841,223
12 Claims. (Cl. 248-120)



4. A pallet having a deck and a runner secured beneath said deck as a supporting member therefor, said runner being formed from a sheet of paperboard material folded into an elongate tube of polygonal cross section so as to have top and side walls, the top wall being in engagement with said pallet deck, the side walls being integrally connected to said top wall and extending downwardly therefrom, a pair of bottom sections each integrally connected and extending inwardly from opposite said side walls, said bottom sections having up-turned marginal portions extending upwardly into engagement with said top wall, said top wall having transverse flaps cut and folded downwardly therefrom, said flaps having downwardly opening slots, said up-turned marginal portions being secured within the slots of said flaps, and said flaps being of outline equal to the internal cross-section of the tube.

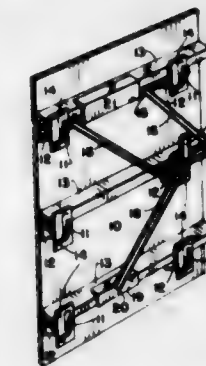
3,000,604
FRAME HAVING CARRYING ARMS FASTENED TO HOLDING RAILS
Hans Schulze-Röbbecke, Fichtenstrasse 28, Remscheid, Germany
Filed May 9, 1958, Ser. No. 734,236
1 Claim. (Cl. 248-205)



A frame having carrying arms fastened to a holding rail, which is characterized in that the holding rail includes two legs positioned oppositely to each other in spaced and parallel relation, which legs are spaced apart

a distance equal to the thickness of said carrying arms and which are adapted to envelop the carrying arms therebetween, each leg being provided with at least two projections directed transversely and outwardly therefrom, and in that the holding rail is provided with clamps for the fastening of the holding rail to a wall, said clamps being designed to grasp oppositely positioned projections and being provided on each side thereof with two opposite holes for receiving fastening elements.

3,000,605
SCAFFOLD JACK
Carl M. Jahn, 2640 St. Paul St., Denver, Colo.
Filed Feb. 8, 1960, Ser. No. 7,476
6 Claims. (Cl. 248-240)

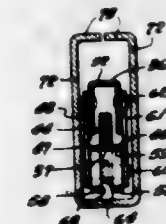


1. A scaffold jack particularly adapted for operative association with vertical walls of concrete forms secured in use position by means including; spacedly-correlated, laterally-open brackets stationarily protruding outwardly from the form wall and beams supported in edge engagement with the wall on and spanning between the brackets in each horizontal succession thereof, said jack comprising a rigid, planar frame formed with spacedly-parallel side members, coaligned end portions of one of said members oppositely extended beyond the frame receivable in corresponding journaled engagement through the lateral openings of contiguous, horizontally-paired brackets subjacent and parallel to the beam supported thereby, whereby to hingedly link said frame to the wall for actuation through a vertical arc plane-perpendicular to the wall, an angular shoe affixed intermediately of and to parallel said one member as a clip actuable with and opening away from the frame adapted to conformably engage over an opposed salient corner of the adjacent beam as an incident of and to upwardly limit frame actuation in its journaled mounting, and means radial of and connected for angular adjustment relative to the other of said parallel side members selectively coactable with other beam components of the wall to retain said frame at the upward limit of its actuatable range established by inter-engagement of said shoe and beam.

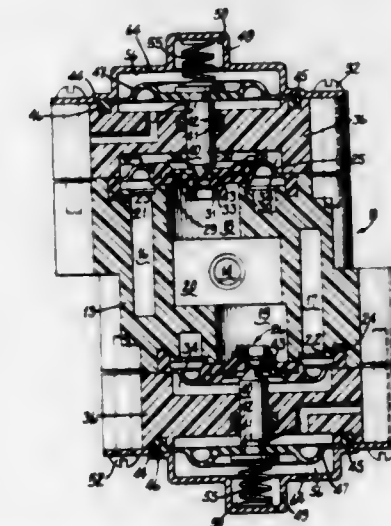
3,000,606
BALANCED MOUNTING MEANS FOR A SURGICAL LAMP
Frederick K. Storm, Jr., Los Angeles, and Eldridge H. Smiley, Rosemead, Calif., assignors, by mesne assignments, to American Sterilizer Company, Erie, Pa., a corporation of Pennsylvania
Filed Aug. 16, 1957, Ser. No. 678,584
7 Claims. (Cl. 248-284)

1. In an apparatus for virtually uniformly counterbalancing a surgical lamp device positioned in spaced relation to a fixed support, the provision of: a pair of spaced apart end mounting means, one of said end mounting means having a pivotal connection to a lamp device, and the other of said end mounting means having a pivotal connection to a support; a movable support means connected between said end mounting means and affording vertical movement of a lamp device and uniformly count-

er-balancing said lamp device in selected vertical positions, said support means including a pair of parallel support members each connected at each end to the associated end mounting means, and counter-balancing means in-



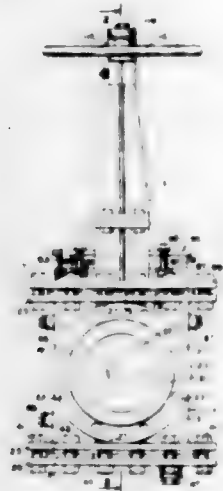
3,000,607
PNEUMATICALLY CONTROLLED DIAPHRAGM SHUT OFF VALVE
Carl C. Bauerleitz, Lincolnwood, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Apr. 15, 1958, Ser. No. 728,578
1 Claim. (Cl. 251-28)



A pneumatically operable valve structure comprising a valve body having concentric inlet and outlet ports opening to one end thereof, a resilient fluid pressure operated diaphragm valve seated on said one end of said valve body and overlying said ports with a portion thereof engageable with a part of the valve body which defines said inlet port to control fluid flow between said ports, a bleed orifice and an enlarged orifice formed within said diaphragm in portions thereof overlying said inlet port and said outlet port respectively, a closure cap having a guide bore formed therein and extending over said diaphragm and sealing the periphery thereof to said valve body, a pilot cooperable with said enlarged orifice to control fluid flow therethrough and guided within said bore, a sealing member carried by said closure cap within said bore and engageable with said pilot, a resilient air diaphragm seated on the opposite surface of said closure cap from said first mentioned diaphragm and connected to said pilot to effect movement of same, and an end cap overlying said air diaphragm and sealing the periphery thereof to said closure cap, compression spring means interposed between said end cap and said air diaphragm, and an air passage communicable with a source of pressurized air formed within said closure cap for selectively supplying air under pressure to the space between said closure cap and said air diaphragm.

3,000,608

STOCK VALVE

John L. Williams, 17467 NE. West View Road,
Oswego, Oreg.Continuation of application Ser. No. 400,664, Dec. 28,
1953. This application Aug. 25, 1959, Ser. No. 835,964
13 Claims. (Cl. 251-170)

1. A valve comprising a valve body including a rectangular chest having spaced inlet and outlet walls, spaced side walls, a bottom wall and a top wall, a pair of seat members, each including a rectangular plate-like elastomer body fitting at its edges against the side, bottom and top walls of the chest to be supported thereby against shifting movement within the chest in directions in its plane, said chest having aligned inlet and outlet ports of the same size formed in said inlet and outlet walls in spaced relation to the boundaries of said walls, said seat members having aligned ports formed therein of the same size as the chest ports and disposed in alignment with said chest ports, said seat members having flat outer faces and having formed on their inner faces opposed elastomer annular beads projecting inwardly from said inner faces, in concentric relation to and immediately adjacent the seat member ports, said elastomer seat members having a combined thickness taken through the bead portions thereof slightly greater than the distance between the inlet and outlet chest walls to dispose the flat outer faces of the seat member bodies in compressed sealing engagement with the said chest walls, and to dispose said annular beads to continuous compressed sealing engagement with one another, the top wall of said chest having a gate opening formed therethrough, a gate extending through said opening and supported for movement between the annular beads and being operable to progressively break the seal between the beads as said gate moves therebetween and to simultaneously form new sealing engagement with the beads, and means for moving the gate toward and away from a position between the annular beads.

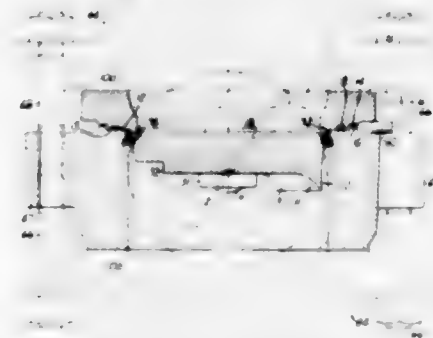
3,000,609

VALVE CONSTRUCTION

Austin U. Bryant, Walnut Creek, Calif., assignor to Grove
Valve and Regulator Company, Oakland, Calif., a corporation of CaliforniaFiled July 11, 1958, Ser. No. 748,000
1 Claim. (Cl. 251-306)

In a valve of the butterfly type, a body having a flow passage adapted for flow in either direction, a circular disc-like valve member within the body, said valve member having a valve working surface of uniform width formed on its outer periphery that conforms substantially to the segment of a sphere, annular sealing means carried by the body and adapted to contact and seal with respect to said surface, shaft means for mounting the valve member for turning movement about an axis extending generally parallel to the plane of the valve member, said axis being offset from the center plane of the valve member and said surface being coincident with the center of said sphere, turning movement of the valve member about said axis serving to move the valve member between a closed position in which it extends substantially at right angles to the axis of the passage and a full open position in which the valve member extends substantially parallel to said axis, said valve member presenting leading and trailing edges to fluid flow through the

tending generally parallel to the plane of the valve member, said axis being offset from the center plane of the valve member and said surface being coincident with the center of said sphere, turning movement of the valve member about said axis serving to move the valve member between a closed position in which it extends substantially at right angles to the axis of the passage and a full open position in which the valve member extends substantially parallel to said axis, said valve member presenting leading and trailing edges to fluid flow through the



passages for full open and partially open positions of the same, and flow deflecting means mounted upon one of said edges of the valve member and serving to reduce the torque required to hold the valve member in partially open positions under high velocity flow operating positions, said means being in the form of a deflector projecting from that face of the valve member nearest to said axis and in a region near but spaced from the outer circumference of said face thereby to present deflecting surfaces to fluid flow in either direction to obtain said reduced torque upon flow in either direction.

3,000,610

VALVE CONSTRUCTION

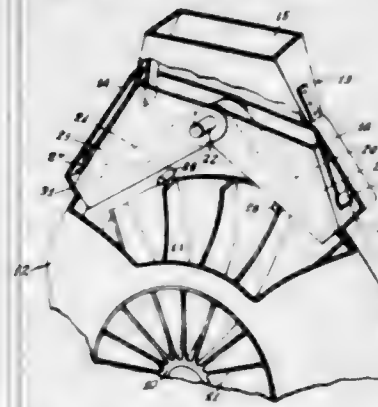
Austin U. Bryant, Walnut Creek, Calif., assignor to Grove
Valve & Regulator Co., Oakland, Calif., a corporation of CaliforniaFiled Oct. 13, 1958, Ser. No. 767,047
4 Claims. (Cl. 251-327)

1. In a valve construction, a body having aligned flow passages and a space located between the passages, a valve gate disposed within the body space and movable between open and closed positions relative to the passages, seating means carried by the body and adapted to seat upon the side surfaces of the gate in annular areas surrounding the passages, resilient seal rings of the O-ring type disposed upon opposite sides of the gate, and means

defining recesses for mounting and loosely retaining the O-rings on the sides of the gate, said means including inner and outer annular members carried by the sides of the gate, said outer annular members having inner peripheral surfaces forming the outer peripheral defining surfaces of said recesses and being formed to provide pressure equalizing communication between the recesses and the body space when the valve is in closed position, said inner annular members having outer peripheral surfaces forming the inner peripheral defining surfaces of said recesses and being formed to provide pressure equalizing communication between the corresponding recess and the corresponding associated body passage when the valve is in closed position.

3,000,611

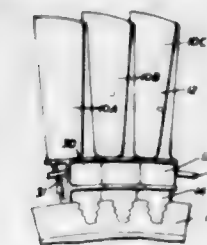
REVERSIBLE TURBINE

Joseph Liston, 900 Robinson St., West Lafayette, Ind.
Filed Oct. 14, 1957, Ser. No. 690,037
10 Claims. (Cl. 253-51)

1. A reversible turbine, comprising a housing, a rotor having generally radial blades rotatably mounted within said housing, an inlet conduit having opposite side walls flaring toward said housing and joining it substantially tangentially, means including vanes pivotally mounted between said flaring walls for controlling the flow of gas toward said rotor, each of said vanes extending in the general direction of gas flow from its axis of pivotal mounting to a point adjacent the periphery of said rotor and in part defining a nozzle-like passage progressively decreasing in area toward an outlet opening at the tip of the vane, each of said vanes being swingable about said axis to vary the size of said outlet opening, and control means for adjusting the position of each vane about its axis, the pivotal axis of each vane being located sufficiently far from the associated wall of the inlet conduit that the vane and wall, in all positions of vane adjustment, will always converge relatively to each other in the direction of gas flow.

3,000,612

TURBINE BLADE RINGS AND METHODS OF ASSEMBLY

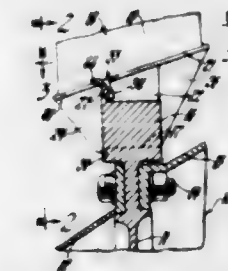
Basil Thomas George Bishop, London, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Apr. 18, 1960, Ser. No. 22,998
3 Claims. (Cl. 253-77)

1. A turbine blade ring comprising a rotor, a ring of individual blades mounted on said rotor, each of said

blades comprising an aerofoil portion, a root portion engaging said rotor, a platform portion intermediate between said aerofoil portion and said root portion, said platform portion having a transverse front wall, a transverse rear wall, and at least one web extending from said front wall to said rear wall, and wire lacing passing through said webs of said blades between said front and rear walls of said platform portions and having unsupported generally tangentially extending portions between adjacent webs to damp transverse vibrations of said blades, said wire lacing comprising a plurality of short rectilinear lengths of wire each of which passes through holes in said webs of at least two adjacent platform portions, and each of said blades being laced by at least one of said short lengths of wire to the adjacent blade on its one side and by at least one other of said short lengths of wire to the adjacent blade on its other side.

3,000,613

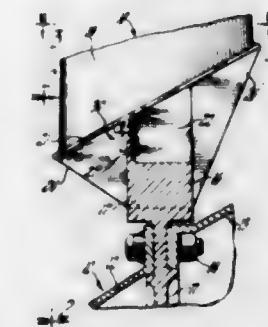
ROTOR BLADE LOCK

Harvey W. Welsh, Indianapolis, Ind., assignor to General
Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,271
6 Claims. (Cl. 253-77)

1. A rotor assembly for a turbomachine comprising, in combination, a rotor having a blade receiving slot in the periphery thereof; a blade including a root slidably mounted in the slot; means on said blade and rotor together preventing movement of the root in one direction in the slot; means providing a shoulder on the rotor facing in the said one direction and an undercut in the shoulder having a radially inwardly facing surface; the blade including a platform overlying the shoulder and with an opening through the platform adjacent the shoulder; and a blade locking member including a body extending through the opening and abutting the shoulder, a hook on the body abutting the said surface, and means on the body engaging the radially outer surface of the platform to retain the hook against the said surface.

3,000,614

ROTOR BLADE LOCKS

Harvey W. Welsh, Indianapolis, Ind., assignor to General
Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,321
10 Claims. (Cl. 253-77)

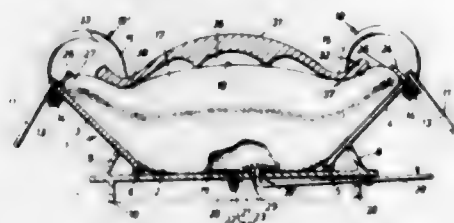
1. A rotor assembly for a turbomachine comprising, in combination, a rotor having a blade receiving slot in the periphery thereof; a blade having a root slidably mounted

in the slot and a platform disposed adjacent the rotor, the platform having a non-circular opening therein; means on the rotor aligned with the opening adapted to engage a locking means; and locking means comprising a generally cylindrical body having an axis and engaging the said means on the rotor, a lug on the body dimensioned to pass through the opening and engageable with the inner surface of the platform, and a deformable tab on the body deformable into the opening to restrain the locking means against rotation about its said axis, the lug and tab being relatively angularly displaced about the axis of the body.

3,000,615

TIRE SPREADER AND INVERTER

Erhard J. Alm, Toronto, Ontario, Canada, assignor to Vulcan Equipment Co. Ltd., Toronto, Ontario, Canada
Filed Sept. 2, 1958, Ser. No. 758,506
10 Claims. (Cl. 254-50.3)

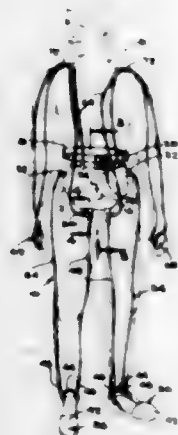


1. Apparatus for spreading and inverting a transverse section of a tire casing comprising a planar inflatable air bag having an extent to conform substantially around the outer periphery of a transverse tire casing section, channel-shaped adjustable platform means for adjustably conforming said air bag throughout its extent to a section of a tire casing throughout inflation of said bag and means for securing said air bag and adjustable platform means to a tire casing section against separation under the inflation of said air bag.

3,000,616

BODY WARMER

James O. Spangler, Box 272, Heavener, Okla.
Filed Oct. 10, 1958, Ser. No. 766,477
2 Claims. (Cl. 257-12)



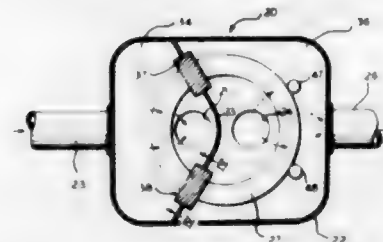
1. A body warmer comprising a resilient and compressible torso engaging heat transfer air reservoir having upper and lower edges and opposed end edges, valved air input means on the reservoir at said upper edge, air return check valves on said reservoir at said upper edge and located at opposite sides of said input means, air outlet check valves on said reservoir at said ends, and two laterally spaced combination valves on said reservoir at said lower edge, two hollow hand warmer elements, return tubes connected to and extending between said elements, and said air return check valves, outgoing tubes connected to and extending between said combination valves and the hand warmer elements, air transfer tubes

extending between and connected at one end to said air outlet check valves, and hollow compressible foot warmer elements to which the other ends of the transfer tubes are connected, and return flow tubes connected at one end to said foot warmer elements and to said combination valves, said combination valves having check valves providing one-way flow of air into said reservoir and having ports severally communicating with said air transfer tubes and said return flow tubes, and a manual valve element for selectively closing one of said ports at a time.

3,000,617

SEAL MEANS FOR A ROTARY HEAT EXCHANGER

Bartholomew J. Kitko, Garfield Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 24, 1959, Ser. No. 822,492
5 Claims. (Cl. 257-269)

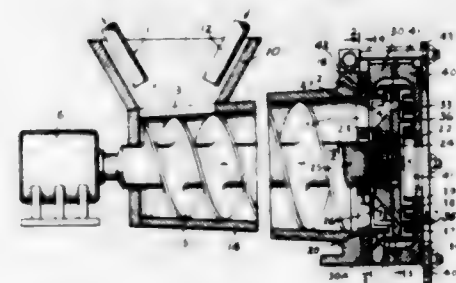


1. A regenerator for transferring heat energy comprising an annularly shaped regenerator matrix drum having gas flow passages therethrough and having annular outer surfaces, a regenerator housing enclosing said drum and provided with a partition dividing the housing into first and second flow chambers with said housing having an inlet and an outlet for each of said chambers and said partition having a pair of spaced openings through which said matrix drum extends, a sealing collar in one of said openings circumscribing the regenerator drum and having sealing surfaces in sealing relationship with the annular surfaces of the drum in substantially a radial plane with said sealing surfaces fixed in position with respect to each other and supported on said collar, a yieldable seal in said one opening between the partition and collar, yielding supports for said collar including yieldable biasing means positioned radially outwardly of the collar between the partition and collar and positioned radially inwardly of the collar between the partition and collar for yieldingly supporting the collar with respect to the drum in both radial directions, and means for rotating said drum.

3,000,618

CONTINUOUS MIXER

Earle T. Oakes, deceased, late of East Islip, N.Y., by E. Thomas Oakes and Mabel R. Oakes, executors, East Islip, N.Y., assignors to The E. T. Oakes Corporation, Islip, N.Y., a corporation of New York
Filed Sept. 3, 1958, Ser. No. 758,805
1 Claim. (Cl. 259-9)



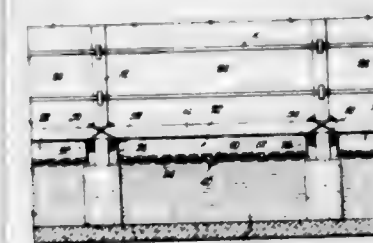
A continuous mixer comprising a casing having an inlet adjacent to one end and an outlet at the other end, a screw member rotatably mounted in said casing

to advance material from said inlet to said outlet, a plate at the outlet end of said casing having orifices therein, a pair of mixing head sections adjacent to said plate and having opposed recesses in their confronting faces, clamping means detachably holding said sections and plate on the end of said casing, a rotor detachably fixed to the end of said screw member and interposed between said mixing head sections, a member fixed to said rotor adjacent to said plate having an outwardly inclined surface thereon facing towards said screw member and radial blades fixed to said inclined surface for directing the material outwardly around the periphery of said rotor, said mixing head sections and said rotor having annular rows of teeth thereon concentric with said rotor, the rows of teeth on said rotor being interposed between the rows of teeth in said sections.

3,000,619

LIQUID COLLECTION STRUCTURE FOR USE IN TREATING THE WOOD COMPONENTS OF COOLING TOWERS

Donald R. Baker, Blue Springs, Mo., and Charles E. Loedel, Overland Park, Kans., assignors to The Marley Company, Kansas City, Mo., a corporation of Delaware
Filed July 30, 1956, Ser. No. 600,872
6 Claims. (Cl. 261-108)

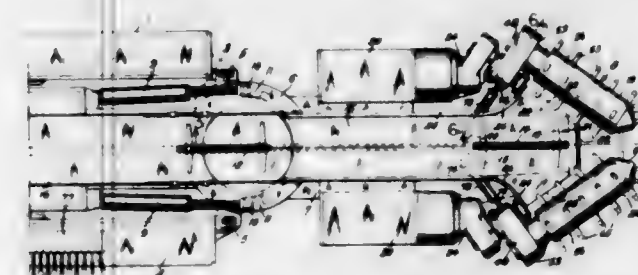


1. In a water cooling tower having a cold water receiving basin and wood components overlying the basin including framework and a fill, structure for use in the treatment of said components with a solution containing a preservative, said structure comprising a pan-like, liquid-collecting vessel adapted to collect said solution as the latter is poured over the wood components and when the vessel is placed beneath said components upon the level of water in the basin, said vessel having a flexible bottom provided with weight means, presenting a depression in said bottom for pooling the liquid and holding the remainder of the bottom taut as the weight means sinks below said level of water; and means on the vessel for tying the same to said framework.

3,000,620

MINING AND LOADING MACHINE HAVING ANGULARLY RELATED ROTARY DISINTEGRATORS

Neal W. Densmore, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 9, 1957, Ser. No. 701,556
16 Claims. (Cl. 262-19)



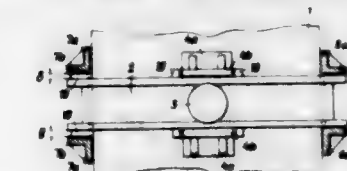
1. In a mining machine, a support, and cutting and dislodging mechanism carried by said support for cutting

and dislodging the mineral of a solid mine vein comprising rotary toothed disintegrators having their axes of rotation permanently angularly disposed with their axial lines lying in planes converging forwardly and inwardly, said disintegrators having exposed free outer mineral penetrating ends disposed in close adjacency near the point of convergence of the axial lines of the disintegrator axes, means for rotating said disintegrators about said axes, adjustable mounting means movable horizontally relative to said support and at the outer portion of which said rotary disintegrators are journaled, said disintegrators arranged with their axes lying in planes in fixed angular relation which is maintained during horizontal movement of said mounting means relative to said support, and means for adjusting said mounting means to move the latter horizontally to cause said disintegrators to penetrate and disintegrate the mineral across the working face of the mine vein.

3,000,621

TILTABLE CRUCIBLE OR CONVERTER FOR REFINING CRUDE IRON

Peter Puxkandl, Linz, Austria, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria, an Austrian company
Filed Mar. 5, 1959, Ser. No. 797,507
Claims priority, application Austria Mar. 12, 1958
4 Claims. (Cl. 266-39)



1. A tiltable crucible for refining crude iron comprising a crucible shell of substantially circular cross-section, a ring surrounding said shell, diametrically spaced trunnions extending outwardly from said ring, three pairs of angularly spaced-apart claws on said shell slidably receiving said ring and supporting said shell on said ring, two pairs of said claws being arranged diametrically opposite each other on a diameter substantially coinciding with the axis of said trunnions and the third pair of claws being interposed between said two pairs of claws to provide for three point support of said shell on said ring.

3,000,622

LIQUID SPRINGS

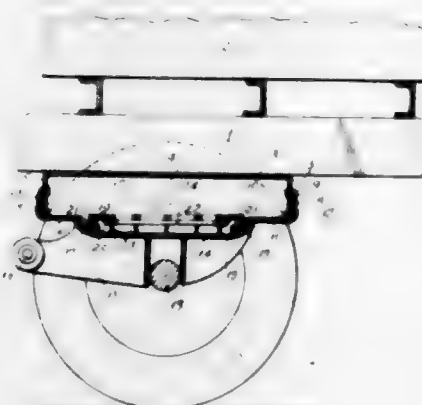
John Hales, Hatherley, Cheltenham, England, assignor to Dowty Rotol Limited, a British company
Filed Apr. 17, 1959, Ser. No. 807,163
Claims priority, application Great Britain Apr. 22, 1958
3 Claims. (Cl. 267-1)



2. A liquid spring comprising a non-deformable pressure vessel wholly filled with compressible liquid, an end

wall of the vessel having an opening therein defining an axially outer bearing surface, a radially inwardly directed flange, and an axially inward bore of larger diameter than said outer bearing surface, a plunger having an outer end portion in slidable engagement with said outer bearing surface, a radially outwardly directed flange located axially inwardly of and engageable with said inwardly directed flange, and an axially inner end portion extending beyond its flange and spaced radially inwardly of said bore, a liquid sealing packing resting upon the plunger's flange, intermediate the inner end portion of the plunger and the bore, a cylindrical inner bearing ring intermediate the inner end portion of the plunger and the bore, located axially inwardly of the packing, said inner bearing ring having a longitudinal passage from end to end to freely equalize liquid pressure between the spaces located beyond such ends.

3,000,623
PNEUMATIC SUSPENSION FOR VEHICLES
Rene Gouirand, 210 W. 88th St., New York, N.Y.
Filed Nov. 20, 1959, Ser. No. 854,478
3 Claims. (Cl. 267-15)

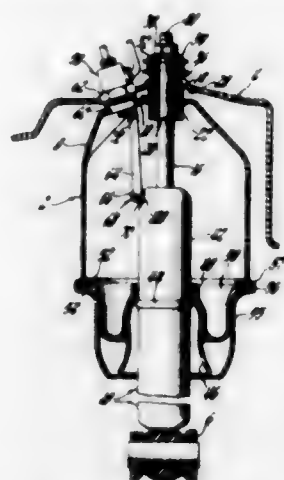


1. A pneumatic suspension for vehicles comprising: a chassis frame provided with a rigid walled pneumatic chamber open at its bottom, a wheeled axle below said open bottom, a rigid plate carried by said axle and provided with a peripheral upwardly diverging flange, an annular flexible diaphragm the outer margin of which is secured to the rigid pneumatic chamber to form a hermetic seal therewith, the inner margin of said diaphragm overlying and overlapping the diverging peripheral flange of said plate, a pressure ring overlying and bearing upon the inner margin of said diaphragm, and a succession of screws annularly spaced about said pressure ring and passing through openings in said ring remote from the inner edge of the diaphragm, said screws being threaded into said plate in spaced relation to the inner margin of the diaphragm to force the pressure ring into tight gripping relation with the diaphragm and produce a hermetically sealed joint between the diaphragm and the plate.

3,000,624
AIR SPRING ASSEMBLY AND CONTROL DEVICE THEREFOR
Cashner J. Chlo, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,922
2 Claims. (Cl. 267-65)

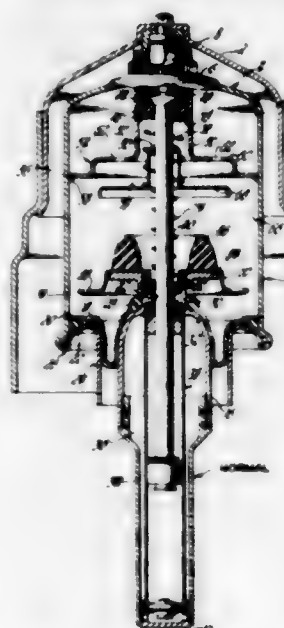
1. In an air spring assembly of the type including a piston and cylinder connected by a flexible diaphragm, a hydraulic shock absorber arranged concentrically with said spring and having a portion thereof extending into said cylinder, a leveling valve mechanism mounted externally on a wall of said cylinder, an operating lever

for said mechanism extending through said wall into said cylinder, means forming a cam surface on a vertical



wall of said shock absorber, and a roller on the free end of said lever engaging said cam surface.

3,000,625
MULTIPLE STAGE VARIABLE RATE SPRING
Von D. Polhemus, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 775,029
9 Claims. (Cl. 267-65)

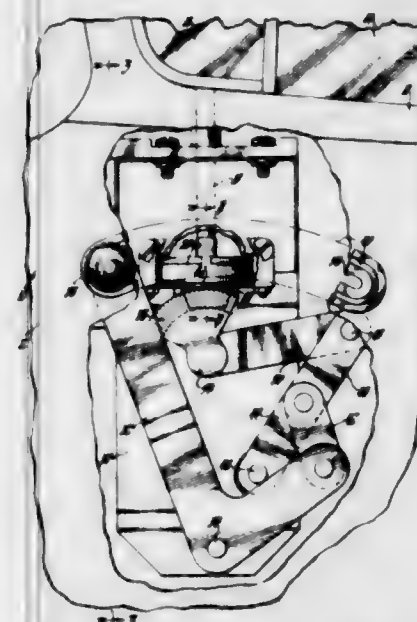


1. A multiple stage variable rate spring comprising, a piston and cylinder connected by a flexible diaphragm, a partition fixed in said cylinder having openings therein, a movable imperforate partition resiliently biased against said piston, said movable partition being spaced radially inwardly from the wall of said cylinder, closure means for said openings yieldably movable with said piston, and means on said cylinder forming a ledge portion engageable with said movable partition, said movable partition being located vertically between said closure means and said ledge portion.

3,000,626
OPERATING APPARATUS FOR A PIVOTED WINDOW
Raymond F. Darney, Wayne, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 12, 1959, Ser. No. 833,311
4 Claims. (Cl. 268-121)

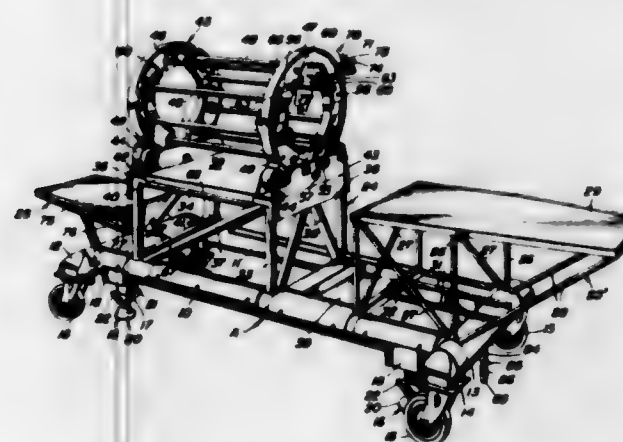
1. Operating apparatus for a pivoted window, including: a shaft connected at one end to the window; means

mounting the shaft for pivotal movement about its longitudinal axis to swing said window between open and closed positions; a drive plate connected to said shaft at the other end thereof, said drive plate having drive lugs depending from opposite sides thereof; a casing having a braking surface; a pair of separate, independent brake members mounted in spaced relation to each other in said casing for braking engagement with the casing to prevent rotation of the brake members in the casing when the brake members are forced apart, said drive lugs lying between said brake members so that the application of a pivoting force transmitted through said



window forces said brake members apart; movable operating means for pivoting said shaft; and coupling means connecting said operating means to said shaft through said brake members and said lugs, said coupling means forcing said brake members together upon the application of a pivoting force transmitted by movement of said operating means, the coupling means making direct engagement with the brake members and the brake members making direct engagement with the drive plate, whereby the brake members form a series part of the force path between the movable operating means and the window shaft.

3,000,627
ASSEMBLY STAND
Vernon S. Foote, Jr., Marblehead, Mass., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 19, 1959, Ser. No. 834,903
10 Claims. (Cl. 269-112)



1. An assembly test stand including a frame having a center section, a missile component supporting cage, means rotatably mounting the cage on the center section,

locking means including a spring urged plunger on the center section, a plurality of complementary locking means on said cage and cooperating with said plunger for locking the cage in any of a plurality of desired roll positions, braking means including a brake shoe on the center section and movable into engagement with the cage for temporarily securing said cage in a desired roll position, means connected to said brake shoe for moving the shoe into frictional engagement with the cage, displaceable cam means disposed at each end of said cage and movable into engagement with the missile component when the missile component is in said cage for releasably locking the missile component to the cage, and means disposed at each end of the cage in engagement with said cam means for displacing said cam means and casters carried by said frame in engagement with a surface for supporting the stand above the surface.

3,000,628
BOW STRINGER
Loren P. Kellogg, Leicester, N.Y.
Filed Apr. 21, 1958, Ser. No. 729,695
12 Claims. (Cl. 269-205)

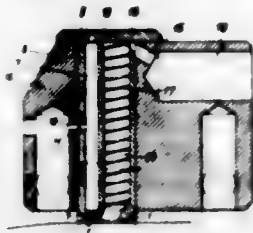


1. In a device for facilitating stringing a bow having a central handle and flexible limbs extending from opposite ends of said handle, the combination comprising: a support, a member carried by said support and adapted to engage one of said limbs adjacent one end thereof, and means pivotally mounted on said support for relatively free and unrestrained pivoted movement and spaced from said member for engaging said handle, said member and said means adapted to support said bow so that when pressure is manually applied to the free end of the other of said limbs for decreasing the distance between the ends of said limbs, said means is adapted to be pivotally moved by said handle relative to said member whereby said limbs will bend substantially evenly and under substantially equal pressure to facilitate attaching a bow string to the free ends of said limbs.

3,000,629
SEPARATING DEVICE FOR SHEET FEEDING APPARATUS
Georg Spleen, 9 Posartstrasse, Munich 27, Germany
Filed Oct. 12, 1959, Ser. No. 845,963
Claims priority, application Germany Oct. 14, 1958
7 Claims. (Cl. 271-26)

1. In sheet feeding apparatus, a suction nozzle for detaching individual sheets from a pile of sheets, said nozzle comprising a reciprocable piston defining a first longitudinal bore, a suction cup disposed at the end of the piston and in communication with said bore to constitute a first suction zone in said cup, the piston defining at least one other longitudinal bore in communication with

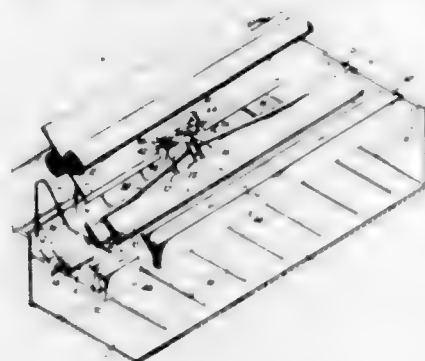
said cup to constitute another suction zone in said cup separate from the first suction zone, means for applying suction to all said bores and corresponding suction zones,



and control means automatically shutting off the suction from all but one of said zones towards the end of the stroke of the piston.

3,000,630

PAPER SEPARATING MECHANISM AND METHOD
Robert C. Slate, 1101 Emerson St., Seattle, Wash.
Filed Dec. 29, 1960, Ser. No. 79,331
14 Claims. (Cl. 271-64)



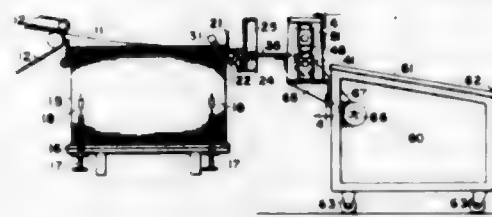
3. A device for automatically separating positive and negative photographic sheets fed thereto in face-to-face contact with one sheet slightly leading the other; comprising a stationary apparatus having laterally juxtaposed guide elements including a centrally disposed surface deflecting the leading edge of the lead sheet under a central point and two guide surfaces deflecting laterally spaced portions of the leading edge of the lead sheet over two guide points adjacent to said central point and lifting the portion of the following sheet passing closest to said central point slightly thereabove to accordingly keep same from engaging said central point, whereupon the following sheet proceeds in separated relation to the lead sheet with separation occurring around said central point as said sheets are progressively fed through said apparatus.

3,000,631

SHEET ABSTRACTING DEVICE FOR LAYBOYS
Paul Hain and Daniel J. Kuebel, Hamilton, Ohio, assignors to The Champion Paper and Fibre Company, Hamilton, Ohio, a corporation of Ohio
Filed Aug. 27, 1958, Ser. No. 757,522
3 Claims. (Cl. 271-64)

1. A sheet abstraction device for association with a layboy for piling sheets of paper being fed thereto along the top surface of the pile being built, comprising a mobile frame adapted to be positioned adjacent said layboy on the opposite side thereof to that direction in which the sheets are fed to said pile, stop means disposed in the path of movement of said sheets for arresting movement of said sheets when they have reached a position directly over said pile, means for selectively disabling said stop means to permit movement of the sheets

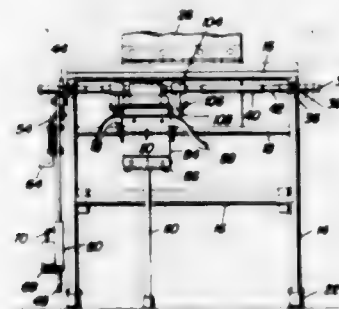
beyond the location of said pile onto said frame, a sheet receiving surface carried by said frame for receiving said sheets, said surface sloping downwardly in one direction from said stop means, means disposed behind



said stop means and adjacent the higher edge of said surface for imparting continued motion to said sheets to move said sheets onto said sloping surface when said stop means is disabled to permit selected sheets to pass over and beyond the pile being formed on said layboy.

3,000,632

EXERCISING DEVICE
Anthony A. Fuchs, 422 W. 4th, Port Angeles, Wash.
Filed May 15, 1959, Ser. No. 813,471
1 Claim. (Cl. 272-58)



An exercising device comprising a seat, a horizontally disposed transverse rod mounted adjacent the front edge of said seat for rotation about its longitudinal axis, a laterally extending arm rigid with said rod, said arm including a weight mounted therein, a support member extending laterally outwardly from said rod and being slidably and pivotally mounted on the rod whereby the support member may be disposed generally in alignment with either foot of a person disposed on the seat, prop means attached to and supporting the outer end of the support member, a foot pedal hingedly attached to the outer end of the support member for pivotal movement about an axis generally parallel to the longitudinal axis of the rod, means on the foot pedal for securing a person's foot thereto, and a flexible member connected to the foot pedal in spaced relation to the pivotal connection between the pedal and the support member, offset means slidably and non-rotatively mounted on the rod and detachably engaged with the flexible member whereby pivotal movement of the foot pedal will cause rotational movement of the rod and swinging movement of the arm and weight in a vertical plane for exercising the foot and leg muscles.

3,000,633

BOWLER'S AID
George C. Bonovich, 1129 Mahoney St., Rodeo, Calif.
Filed Aug. 31, 1959, Ser. No. 837,064
8 Claims. (Cl. 273-54)

1. A bowler's arm guiding device having an outer plate and an inner plate; joining means securing said plates together in substantially parallel alignment and in spaced-apart relationship, said joining means having a length slightly greater than the width of the bowler's arm to permit the arm to swing freely between said plates; means connected to said inner plate to attach and secure the guiding device to the bowler's torso; said outer and inner plates extending from a point above the bowler's shoulder

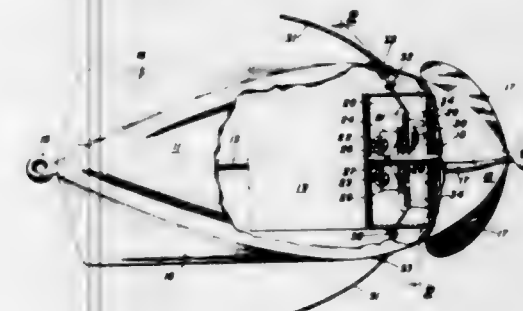
downwardly on opposite sides of the bowler's arm to a point below the elbow and slightly above the hip; means



for said inner plate to receive the bowler's arm there-through whereby the arm of the bowler is guided through a predetermined arcuate path.

3,000,634

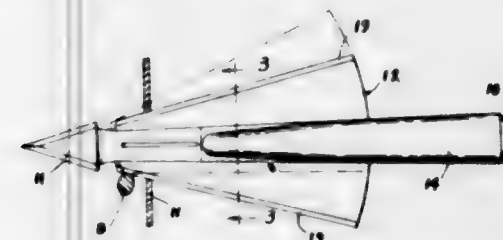
TARGET SLEEVE
Frank C. South, Princeton, N.J., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 26, 1946, Ser. No. 657,185
3 Claims. (Cl. 273-105.3)



1. The combination of an aerial target sleeve adapted to be employed in practice with ordnance missiles of the type including a proximity fuze, a radio frequency signal generator of the sweep-frequency type carried adjacent to said target sleeve for producing thereabout a radiant energy field, and means coupling said signal generator to said sleeve whereby a missile will be detonated upon its approach to said target.

3,000,635

ARCHERY ARROWS
Naseeb Nieman, P.O. Box 161, Ravenna, Ohio
Filed Nov. 30, 1959, Ser. No. 856,044
6 Claims. (Cl. 273-106.5)



1. An improved archery arrow, comprising an arrow shaft, an arrow head at one end of said shaft, and a single flat blade of sector shape immediately behind said arrow head and disposed flatwise in the same general plane, opposite side edges of the blade extending outwardly of respective sides of the shaft, the small part of the blade adjoining the rear of said arrow head so that said blade forms a continuation of the general wedge shape of said arrow head, an opening in said shaft behind said arrow head, and means mounting said blade in said opening for shifting movement in the flatwise plane of the blade.

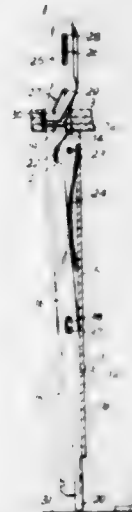
3,000,636
GOLF GAME DEVICE
Hardie T. Butler, Jr., 2915 Conrad Ave. SW.,
Atlanta, Ga.
Filed Oct. 19, 1960, Ser. No. 63,528
5 Claims. (Cl. 273-176)



1. A golf game device comprising a plurality of tee areas, a plurality of target areas, said tee areas being disposed in side-by-side relation to each other, said target areas being disposed in side-by-side relation to each other and in alignment with the respective tee areas, each target area comprising a target plate having a plurality of openings therein, said openings being arranged with one center opening and concentric rings of openings arranged in enclosing relation to the central opening whereby the central opening will form a bull's eye, guide means associated with each opening for guiding a golf ball rearwardly and downwardly therefrom, and indicator means actuated by the golf ball for indicating whether the golf ball entered the central opening or an opening in one of a concentric rows of openings.

3,000,637

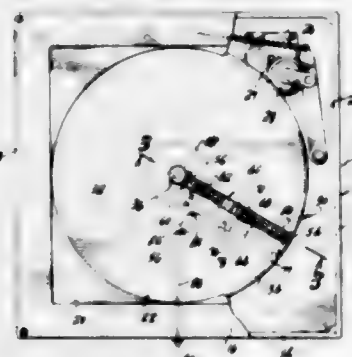
RECORD SUPPORTING AND RELEASING SPINDLE FOR AUTOMATIC TALKING MACHINES
Lawrence Vincent Guest, Old Hill, England, assignor to Birmingham Sound Reproducers Limited, Old Hill, Staffordshire, England, a British company
Filed June 20, 1958, Ser. No. 743,401
Claims priority, application Great Britain June 25, 1957
3 Claims. (Cl. 274-10)



1. A disc record supporting and releasing mechanism comprising a spindle presenting a shoulder at one side and spaced from the upper end thereof, a release lever mounted in an axial slot in the spindle and capable of limited up and down movement and transverse rocking movement in said slot, means yieldingly urging said release lever upwards towards a position in which its upper end is engaged in the hole in the lowermost record of a stack on the spindle but below the next to lowermost record in the stack and means yieldingly urging said release lever transversely so that its upper end moves in the direction away from the shoulder, reciprocating means for rocking said lever first in the direction to move its upper end towards the shoulder to disengage the lowermost record therefrom and thereafter permitting

said release lever to make a return rocking movement, and co-operating elements on the spindle and on the release lever comprising a surface inclined to the vertical on one and an abutment pin in fixed position on the other adapted to engage one another at a point near one end of the inclined surface when the release lever has been rocked to release the lowermost record, so that the upward bias of the release lever is overcome by transfer of the weight of the remainder of the stack of records to the upper end of the release lever after release of the lowermost record from the shoulder of the spindle and the upper end of the release lever is constrained to move transversely in the direction away from the said shoulder by sliding engagement of the said inclined surface with the said abutment pin during downward movement of the release lever under the weight of said remainder of the stack to urge said remainder of the stack transversely towards the axis of the spindle and to deposit it upon the shoulder of the spindle.

3,000,638
RECORD RECORDING AND PLAYING DEVICE
James R. Dennis, 9812 Wanda Park Drive,
Beverly Hills, Calif.
Filed Apr. 23, 1956, Ser. No. 579,987
3 Claims. (Cl. 274-13)

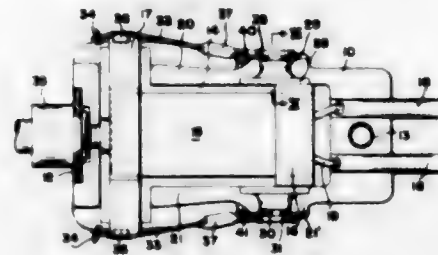


1. In a recording device, the combination of: a housing having an opening in the upper surface thereof; a support for a record blank on said housing adjacent said opening; a primary carriage mounted in said housing for rotary movement with respect to said blank, said primary carriage having track means thereupon and being constituted by a rotatable disc having a radial slot therein; a drive motor connected to said primary carriage to rotate the same; a secondary carriage located in said slot and mounted on said track means for radial movement with respect to said primary carriage; drive means interconnecting said primary and secondary carriages, said drive means including said disc and a lead screw supported below said slot upon said disc, said lead screw having a disengageable traveling nut normally urged into engagement therewith and connected to said secondary carriage; a release button projecting upwardly through said slot for momentarily releasing said nut from said lead screw; and a recording head on said secondary carriage for making a record on said blank.

3,000,639
STYLUS SECURING MEANS FOR PHONOGRAPH PICKUP CARTRIDGES
James M. Jacque, Conneaut, Ohio, assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Feb. 18, 1959, Ser. No. 794,094
5 Claims. (Cl. 274-37)

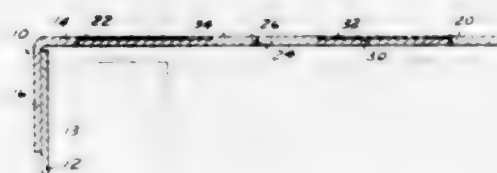
1. Stylus holding means for use in a phonograph pickup cartridge comprising a pair of housing halves and in securing the bifurcated rear end defining a pair of arms of an elongated and replaceable thin stylus member to said phonograph pickup cartridge which comprises a resilient body of elastomeric material formed with an enlarged first end, an enlarged second end and a center por-

tion of reduced size, said enlarged first end being resiliently clamped between said housing halves whereby the same is anchored with respect to said phonograph pickup cartridge, said enlarged second end projecting from said phonograph pickup cartridge, said center portion being adapted to slidably receive said pair of arms of said



bifurcated rear end upon movement of said stylus member in a direction transverse to the direction of extent of said resilient body, and said enlarged second end resiliently bearing against said arms to continuously urge the same against said housing halves when said arms are positioned on opposite sides of said center portion.

3,000,640
STORAGE CONTAINER RECORD
Walter L. Strauss, 200 4th Ave., New York, N.Y.
Filed Oct. 7, 1958, Ser. No. 765,791
2 Claims. (Cl. 274-42)

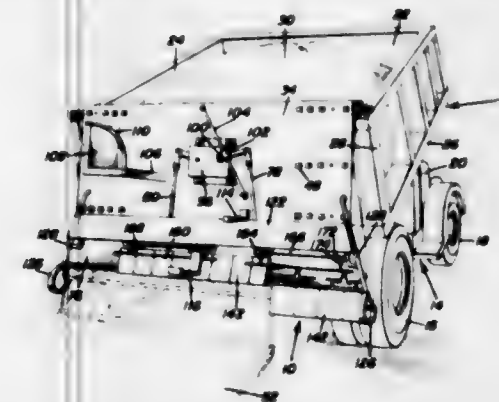


1. A destructible container comprising, in combination, an upwardly opening receptacle member defining a storage compartment, a closure member releasably carried upon the open upper end of said receptacle, a sheet having sound grooves at one side fixedly secured upon a wall portion of one of said receptacle and closure members and being frangibly integral therewith, said sheet and the underlying wall portion forming a disc type record, means for selectively separating said disc type record from the remainder of said wall and providing communication with the interior of said storage compartment, said closure member including a substantially flat main wall, said disc type record comprising a substantially flat circular plate formed within said flat main wall and flush with the opposite facing surfaces thereof, said means selectively separating said disc type record from said flat main wall comprising a circular row of perforations extending through said flat main wall defining said circular plate, said flat circular plate including a circular base having a flat surface on one lower side and having an upwardly projecting central circular portion upon the opposite upper side, said grooved sheet having a central opening receiving said circular projecting portion secured upon said upper side of said base, said base comprising part of said main wall, and mounting means integral with said base for mounting said disc type record upon the turntable of a record player.

3,000,641
SPREADER FOR ATTACHMENT TO VEHICLE BODIES
Arthur L. Walborn, 1312 Hampden Blvd., Reading, Pa.
Filed Feb. 24, 1960, Ser. No. 10,713
7 Claims. (Cl. 275-2)

1. A spreader attachment for dump body trucks comprising a hopper having an outlet in the bottom thereof,

a vertically sliding plate forming a valve for the outlet, a plurality of cut-off plates movably attached to the sliding plate and forming an extension thereof for forming an adjustable partial valve for the outlet of the hopper thereby varying the width of discharge from the hopper with the sliding plate providing adjustment in the depth of discharge from the hopper, means connected to said sliding plate for effecting control thereof, said means being mounted on the hopper and manually controlled, and means interconnecting the cut-off plates and the sliding plates for retaining the cut-off plates in extended and retracted position, said hopper including a front wall, end walls and a main plate forming a rear wall, the front wall adapted to be connected to the bottom of the dump body and to depend therefrom, said main plate extending to the top of the dump body in spaced relation



to the rear edge thereof, and end plates connected to the main plate and adapted to be connected to the dump body for guiding material into the hopper, the end walls of the hopper extending upwardly to a position adjacent the bottom end of the end plates, said end plates being laterally adjustably attached to the main plate for varying the position thereof thereby enabling the hopper to be mounted on dump bodies having different widths, each of said cut-off plates being hinged to the lower edge portion of the sliding plate, said means for retaining the cut-off plates in extended position including a lock pin, each of said cut-off plates and said sliding plate having a projecting flange spaced from the hinge axis with the projecting flanges having alignable apertures for receiving the lock pin thereby locking the cut-off plate in alignment with the sliding plate for forming an extension thereof.

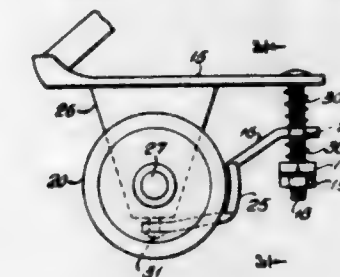
3,000,642
DRILL CHUCK
Kiyoshi Kawasaki, 4619 Shlmada-shi,
Shizuoka-ken, Japan
Filed Nov. 6, 1959, Ser. No. 851,430
Claims priority, application Japan Nov. 26, 1958
3 Claims. (Cl. 279-62)



1. A chuck of the class described comprising a body portion, a plurality of jaws slidably mounted in said body portion and guided for movement along converging paths, a threaded member mounted to said body portion and engageable with said jaws for moving the jaws toward closed and opened position, and a mechanism for

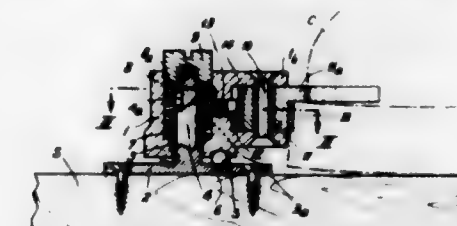
moving said jaws toward closed position for firmly gripping a device after said jaws have been brought into engagement therewith by said threaded member, said mechanism comprising a lever means pivoted at one end to said body portion, an actuating element carried by said body portion and movable in respect thereto in operative engagement with the lever means at the other end thereof, movement of said element relative to said body portion being effective to pivot said lever means relative to said housing, and transmitting means interposed between said threaded member and said lever means for transmitting motion of said lever means directly to said threaded member.

3,000,643
CONTROLLABLE SKATE HAVING CONTINUOUSLY APPLIED BRAKE
Simon Levin, 123 W. 44th St., New York 36, N.Y.
Filed Sept. 2, 1958, Ser. No. 758,266
5 Claims. (Cl. 280-11.2)



1. In a roller skate, the combination which comprises a support connected with a footplate, rotary means attached to said support for providing motion to said skate, a constraining means engaging said rotary means at all times, a shaft like means attached to said footplate, said constraining means having a first portion flexibly attached to said support and a second portion comprising a self-adjustable force transmitting means adapted to move freely on said shaft like means whereby said self-adjustable force transmitting means enables said constraining means to accommodate to said rotary means; and means for applying a controllable force positioned on said shaft like means in engagement with said self-adjustable force transmitting means.

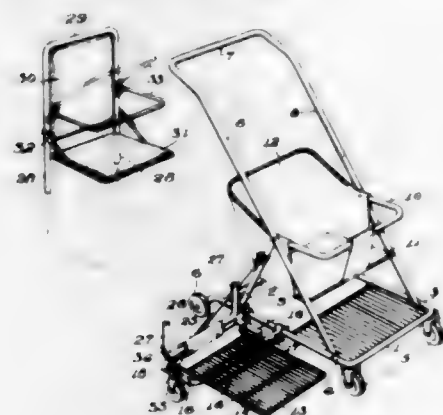
3,000,644
SAFETY SKI BINDER
Jean Joseph Alfred Beyl, Rue des Champs Ferrant,
Nevers, France
Filed Mar. 31, 1960, Ser. No. 19,070
5 Claims. (Cl. 280-11.35)



1. A device for securing on a ski the front end of a ski boot the rear portion of which is urged forward by any suitable means, said device comprising an underlying base plate secured on the ski, at least one recess formed in the top surface of said base plate, a pivot pin extending upward from and at right angles to the top surface of said base plate, an abutment member rotatably mounted about said pivot pin and provided with means for retaining the front end of the sole of the boot and for engaging the upper face of said front end of said sole, at least one projecting member disposed on

the lower face of said abutment member and adapted to partially engage said recess of said base plate when said abutment member is in its normal position, a spring urging said abutment member against said base plate, whereby said abutment member is locked in its normal position due to the engagement of said projection member in said recess of said plate, the unlocking of said abutment member against the resistance of said spring being attended by an upward movement of said abutment member in relation to said fixed base plate.

3,000,645
EXTRA PASSENGER ATTACHMENTS FOR
INFANTS' VEHICLES AND THE LIKE
Carl O. Schmidt, 4116 Old York Road, Philadelphia, Pa.
Filed Aug. 23, 1957, Ser. No. 679,855
3 Claims. (Cl. 280—39)



1. In combination with a propelled wheeled vehicle provided with a base comprised of a framework including, at least, one longitudinally extending tubular member disposed at one side of said vehicle, a generally horizontal weight-supporting platform extending transversely of said vehicle having longitudinally spaced devices mounted thereon detachably embracing said tubular member, said platform adapted for pivotal movement about said tubular member, and a ground-engaging supporting wheel mounted on said platform at a side portion opposite the detachable connection with said vehicle.

3,000,646
COLLAPSIBLE STROLLER
George J. Kummeth, Sr., Owatonna, Minn., assignor to Kummeth Mfg. Co., Owatonna, Minn., a corporation of Minnesota
Filed July 15, 1960, Ser. No. 43,143
4 Claims. (Cl. 280—41)



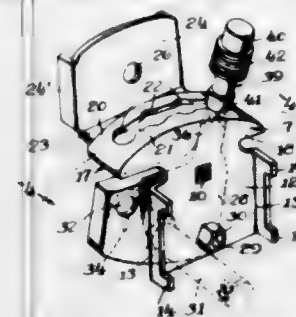
1. In a collapsible stroller, a laterally spaced generally parallel pair of collapsible upright side frames, said side frames being generally X-shaped and each comprising a rigid upwardly and rearwardly extending member and a rigid upwardly and forwardly extending member pivotally connected together at their points of intersection on a horizontal axis common to the other side frame, means connecting corresponding members of opposite side frames

together in lateral alignment and for common pivotal movements, the pivotally connected members of the side frames being pivotally movable from an operative position wherein they are disposed at maximum angles to one another to an inoperative collapsed position wherein they are disposed at materially reduced angles to one another, an inverted U-shaped handle defining laterally spaced depending legs, each leg of said handle being pivotally connected to an upwardly and rearwardly extending member of an opposite side frame at a point spaced materially from the lower end of said leg and above the before-mentioned axis, the portions of the opposite legs of said handle disposed below the said pivotal axis thereof defining depending foot portions disposed behind those portions of their respective upwardly and rearwardly extending members of the side frames, said handle being pivotally movable between an operative position wherein its said foot portions are generally parallel to the upwardly and rearwardly extending members of their associated side frames and an inoperative collapsed position wherein they are angularly disposed with respect to said last mentioned members, substantially identical individually releaseable latches each associated with a different side frame for normally retaining its respective side frame and handle in their respective operative positions, said latches each comprising a plate associated with a different side frame and disposed in a plane generally parallel thereto, said plate being secured on and extending rearwardly from a portion of the upwardly and rearwardly extending member of its respective side frame intermediate the axis of pivotal connection between the crossed members of its respective side frame and the axis of pivotal connection of the handle thereto, an elongated latch arm intermediately pivotally mounted on the outer side of said plate for axial movement and for rocking movement in a plane generally radial of said mounting axis, a mounting pin securing said arm to said plate and having a head spaced from the outer surface of said arm with yielding means therebetween urging said arm in a direction toward said plate, said latch arm having a first inwardly projecting detent spaced upwardly from said mounting pin and a second inwardly projecting detent spaced downwardly from said mounting pin, said plate and said foot portion having alignable apertures for receiving said second detent when said latch and said handle are in the operative position, said first detent lying in the path of travel of said foot portion of said handle whereby it is urged into abutment with an adjacent surface of said foot portion when operatively positioned, as between said second detent and said foot portion of said handle one defines a cam surface causing outward movement of said second detent to allow insertion into the aperture in said front portion when in the operative position, and ground wheels associated with the lower ends of the pivotally connected members of opposite side frames.

3,000,647
MEANS FOR ADJUSTING LAWN MOWER WHEELS
Richard E. Fox, Northbrook, Ill., assignor to Fox Howard Corporation, a corporation of Illinois
Filed Oct. 15, 1958, Ser. No. 767,356
2 Claims. (Cl. 280—43.17)

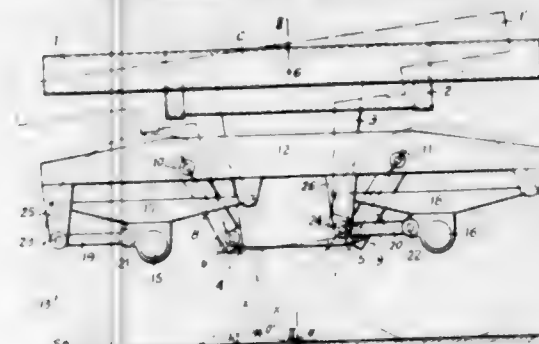
1. In a lawn mower, a housing having a top wall and a pair of side walls depending from said top wall, a plurality of wheels rotatable in planes parallel to said side walls, means for adjusting the height of said wheels relative to said housing, said means comprising a plurality of brackets rigidly secured to said housing, a bell crank pivotally secured to each of said brackets, each of said bell cranks having an aperture on one side of said pivotal connection for supporting an axle, an axle journaled in each of said apertures, each of said wheels being mounted on separate axles, means on the opposite side of said

pivotal connection on each bell crank for pivotally moving said bell crank to vary the height of the axle and wheel associated with said bell crank relative to the



housing, said last mentioned means including a sleeve for holding said bell crank against pivotal movement and a spring urging said sleeve into holding position.

3,000,648
SUPPORTING STRUCTURE FOR THE CHASSIS
OF A ROLLING VEHICLE
André Buisson, Paris, France, assignor to Societe Lorraine des Anciens Etablissements de Dietrich et Cie de Luneville, Paris, France, a French company
Filed Jan. 27, 1959, Ser. No. 789,448
Claims priority, application France Jan. 29, 1958
9 Claims. (Cl. 280—104.5)



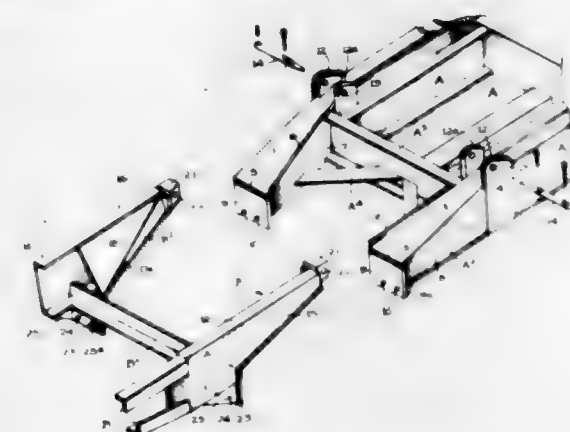
1. A vehicle comprising a chassis, a frame positioned generally below said chassis and movable relative thereto, a pair of spaced axles supported from said frame, wheels journaled on said axles, and a deformable linkage on each side of the vehicle parallel to the wheels and interconnecting said chassis and frame, said linkage being constructed and arranged to cause said relative movement between the chassis and frame to be effected substantially about a momentary virtual axis of rotation positioned transverse to the plane of the wheels and substantially in the plane of rolling engagement of said wheels.

3,000,649
COUPLINGS FOR SECTIONAL HEAVY
DUTY APPARATUS
Ralph W. Heer, Dean T. Otto, and Lloyd W. Mundy, Minneapolis, Minn., assignors to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 4, 1961, Ser. No. 80,574
6 Claims. (Cl. 280—106)

1. Coupling means for the sections of heavy duty crushing plants and the like which are too heavy for highway travel, comprising,
a main section including a frame,
laterally spaced rearwardly extending coupling arms on the frame of said main section having upper rearwardly diverging and downwardly inclined supporting surfaces presenting a narrow forward end and a relatively wide rear end,
spaced pin receiving ears at the narrow ends of said supporting surfaces and having transversely aligned openings,
vertical abutment plates at the wide end of said supporting surfaces;
a trailer section including a frame,

770 O.G.—40

spaced forwarding extending arms on the frame of said trailer section, said arms having upwardly inclined forwardly converging bearing surfaces for registering with and resting on said supporting surfaces of the arms of the main section,



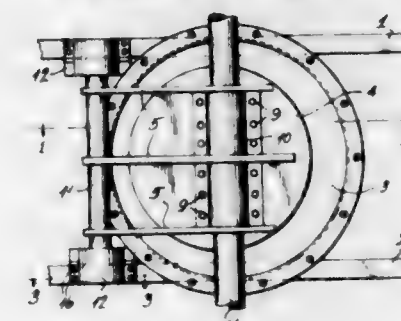
vertical abutment plates at the rear end of said last named arms and adapted for flush engagement with said abutment plates on the first named arms,
and a coupling block at the front end of each of said forwardly extending arms detachably disposed between the said pin receiving ears and each having an opening registering with the related opening of said ears to receive a fastening pin.

3,000,650
VEHICLE FRAME
Godfrey Burrows, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,393
8 Claims. (Cl. 280—106)



2. A vehicle frame having tubular rails operatively secured together and defining an X-shaped section, said rails having their inner walls disposed outwardly against their outer walls throughout the central portion of said section, said rails thereby defining a drive shaft tunnel through said section.

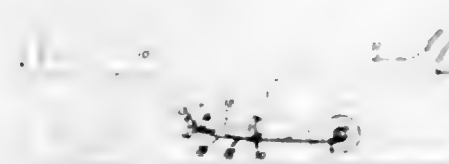
3,000,651
PNEUMATIC SUSPENSION FOR VEHICLES WITH
MEANS FOR PREVENTING UNDUE SWAY OF
THE VEHICLE
Rene Gouirand, 210 W. 88th St., New York, N.Y.
Filed Sept. 12, 1960, Ser. No. 55,270
5 Claims. (Cl. 280—124)



1. A vehicle comprising: a chassis frame, a compressed air chamber connected to the frame, a diaphragm at the

bottom of said chamber, a wheeled axle secured to the diaphragm, arms rigid with the axle and projecting longitudinally of the frame, flexible slings connected to said arms and anchored to the chassis frame, and loop-shaped fittings enclosing said slings.

3,000,652
VEHICLE TOWING EQUIPMENT
Wallace H. Hawkins, P.O. Box 677, Panama City, Fla.
Filed Nov. 6, 1957, Ser. No. 694,781
7 Claims. (Cl. 280-406)

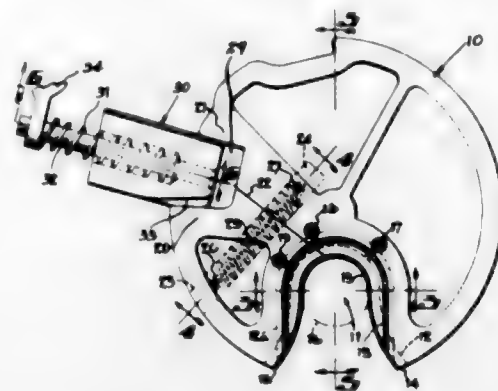


1. Automotive-vehicle towing means comprising, in combination, a tow bar assembly adapted to be connected respectively to the rear bumper of a towing vehicle and the front bumper of a vehicle to be towed and providing a draft connection between said vehicles including a transversely extending draw beam mounting bumper-attaching brackets at its ends for releasably attaching same to said rear bumper and having a central, rearwardly extending tongue affixed thereto, a rigid draft bar pivotally connected to said tongue and extending rearwardly therefrom and divergent draft arms mounting bumper-attaching clamps at their spaced rearward ends and extending between and connecting the rearward end of the draft bar and the front bumper of the towed vehicle, and stabilizer means comprising a flexible chain extending between and interconnecting said towing and towed vehicles and being disposed in the vertical plane of said tongue and draft bar and below said tow bar assembly as a whole, the front end of the chain being connected to the tongue substantially at the point of pivotal connection of the draft bar therewith, the rear end of the chain being connected to the front end of the towed vehicle at a point which is disposed below and rearwardly of the point of connection of the tow bar assembly therewith, and an axially compressible rubber bushing-type shock unit and a chain tension-adjusting means connected in series into the chain along the length thereof, the construction and arrangement being such that said stabilizer means when tensioned by said chain-tension adjusting means is adapted to transfer a portion of the weight of the front end portion of the towed vehicle to the rear end portion of the towing vehicle thereby to engender a holddown force on said rear end which acts in opposition to the tendency of said rear end to lift when the towing vehicle is braked and which further increases the traction of the towing vehicle in accordance with driving and/or road conditions.

3,000,653
FIFTH WHEEL
Robert Wood, Rural Route 3, Lebanon, Ohio
Filed Aug. 29, 1960, Ser. No. 52,538
4 Claims. (Cl. 280-433)

4. A fifth wheel mechanism comprising a pair of plates forming when joined together by resilient means a substantially circular plate, a slot formed by said plates, said slot adapted to receive a kingpin, a pair of lubricating grooves in said slot for receiving said kingpin for continually lubricating said kingpin, said slots filled with felt padding and ports and channels in said plates for supplying heavy weight grease to said padding, a slot formed by said plates, said slot being located on the side opposite the resilient means for joining said

plates and lying substantially in the same plane as said kingpin slot, a spring pressed tapered wedge member



adapted to fit in said slot formed by said pair of plates to hold said plates in locking position about a kingpin.

3,000,654
FIFTH WHEEL ADAPTER
John Keener, Des Moines, Iowa, assignor of thirty-three and one-third percent to George M. Clarkson and thirty-three and one-third percent to Gibson C. Holliday, both of Des Moines, Iowa
Filed Sept. 29, 1959, Ser. No. 843,229
12 Claims. (Cl. 280-433)

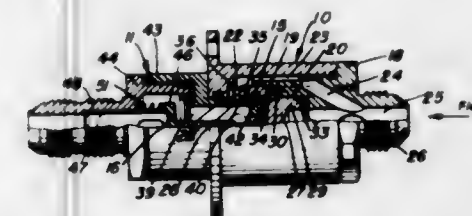


1. A fifth wheel extension adapter for use with the fifth wheel on a trailer pulling prime mover, said adapter comprising a coupling plate member having projecting spaced guide arms which converge from their outer end to terminate in a coupling socket in said coupling plate member, a king pin depending from said coupling plate member near the opposite end thereof relative to said guide arms and spaced from said coupling socket, said king pin adapted for coupling engagement with the fifth wheel on the prime mover, means on said coupling plate member designed to engage the fifth wheel on the prime mover for holding said coupling plate member immovable relative to the fifth wheel, said coupling socket adapted to receive a king pin on a trailer to be pulled by the prime mover, and means on said coupling plate member to secure the king pin of a trailer in operable position within said coupling socket.

3,000,655
QUICK DETACHABLE COUPLING
Meyer Piet, Arcadia, and Murray A. Chilcoat, Monterey Park, Calif., assignors to Futurecraft Corporation, El Monte, Calif., a corporation of California
Filed Mar. 18, 1957, Ser. No. 646,681
5 Claims. (Cl. 284-19)

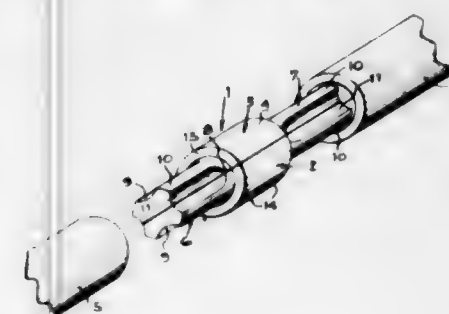
1. In a quick disconnecting coupling for fluid ducts: a first connector part having a first cylindrical side wall defining a bore; a second cylindrical side wall of larger diameter defining a second coaxial bore adjoining the forward end of said first bore, said walls being separated by an annular shoulder; a valve port in the forward end of said second cylindrical wall; a displaceable valve member in said bores having a larger forward annular wall

slidable along said second cylindrical wall between a position covering said port and a position uncovering said port, said valve member having a smaller rearward annular wall slidable along said first cylindrical wall and separated from said second wall by an annular shoulder, the rearward end of said shoulder confronting the annular shoulder between said bores, said valve member having a central portion extending across said first bore; an opening extending through said first connector part from the annular space between said annular shoulders to the exterior of said connector part; and a duct extending through said first connector part from said port to



a portion of said bore rearwardly from said closed position, said central portion of said valve member being subject to fluid pressure entering said bore to normally urge said valve member into a forward position closing said port, the annular shoulder of said valve member being subject to rearward fluid pressure from said bore through said duct and port when said valve member is moved to port opening position, the area of the annular shoulder of said valve member being at least equal to the area of said central portion so that said valve member is subject to substantially equal fluid pressures when said valve member is in port opening position.

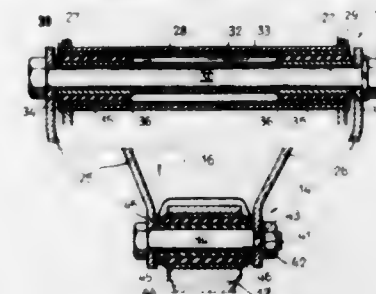
3,000,656
PIPE OR TUBING CONNECTOR
Peter R. Hollaender, Cincinnati, Ohio, assignor to The Hollaender Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 29, 1958, Ser. No. 764,081
5 Claims. (Cl. 287-2)



1. A connector for joining lengths of hollow piping comprising, a central collar of diameter equal to the outside diameter of the piping, generally cylindrical arms extending from the ends of said collar of diameter equal to the inside diameter of the piping, said arms being configured to provide evenly spaced concave flutes extending from the outer ends of the arms toward said collar, said flutes terminating short of the ends of said collar, a longitudinal split dividing said connector into two halves, the collar of one half containing at least one expanding screw disposed at right angles to the plane of said split, whereby the two halves of said connector may be forced apart from one another by said screw when said arms are inserted telescopically into said piping, and the relatively raised portions of said arms between fluten comprising lands to center said arms in said piping and to evenly distribute the pressure exerted by said arms in said piping.

3,000,657
RESILIENT JOINT FOR A SUSPENSION SYSTEM
Antonio Boschi, Alessandro Franceschetti, and Giovanni Martorana, Milan, Italy, assignors to Societa Applicazioni Gomma Antivibranti S.A.G.A., S.p.A., Milan, Italy

Filed Mar. 30, 1960, Ser. No. 18,646
Claims priority, application Italy Apr. 23, 1959
1 Claim. (Cl. 287-85)



A resilient pivotal joint comprising a pair of concentrically arranged rigid bushings, a tubular layer of a resilient rubber interposed between the bushings and bonded thereto, one of the bushings consisting of a hard rubber having a hardness of about 85° Shore containing 45-55% by weight of nitrile rubber, 35-45% mineral filler and 2-5% zinc stearate, the said one of the bushings having a smooth exposed cylindrical surface.

3,000,658
BAR INTERCONNECTION
Verner E. Sprouse, Columbus, Ind., assignor to Vernco Corporation, Columbus, Ind., a corporation of Indiana
Filed Nov. 27, 1959, Ser. No. 855,694
1 Claim. (Cl. 287-103)



A connection between opposing ends of two bars; one bar having a T slot entering an end and opening from both sides and the bar end; a second bar; a T head on the second bar; said head laterally entering said slot from either side and snugly fitting therein, the two bars extending in straight line directions oppositely from said head and slot engagement; a U shaped clip pivotally secured to one of said bars adjacent the connection to swing over both of said bar ends; said clip having a web from which extend two wings, one normally slightly toward the other, and each wing having a finger extending from its lower edge one toward the other and thence outwardly; and said fingers first camming apart said wings in traversing said bar ends as the clip is rocked over said connection, said fingers being located along said wings to pass over said second bar; and said fingers springing under bars yieldingly resisting reverse rocking of the clip, thereby preventing lateral displacement of one bar from the other at said connection.

3,000,659
INTERLOCKING MECHANISM FOR TUBULAR DOOR LOCKS
Ernest L. Schlage, Burlingame, and Robert A. Marotto, Redwood City, Calif., assignors to Schlage Lock Company, a corporation
Filed July 27, 1959, Ser. No. 829,833
5 Claims. (Cl. 292-337)

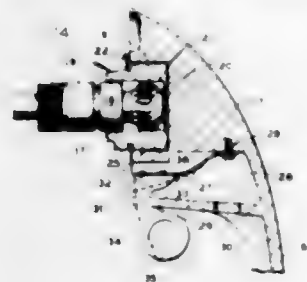
1. In a door lock, having a latch bolt unit and a latch bolt actuating and supporting unit, said supporting unit

comprising a pair of clamping plates engaging opposite faces of a door, a pair of flexible clamping jaws carried by the clamping plates, said jaws being engageable with



the top and bottom sides of the latch bolt unit, and tension means for imparting tension to the clamping jaws, said tension causing the jaws to move into clamping engagement with the latch bolt unit.

3,000,660
DETACHABLE HANDLE DEVICE FOR VEHICLE DOOR LATCHES
Edgar R. Lewis, Jr., 7131 SW. 5th Terrace, Miami, Fla.
Filed Jan. 16, 1961, Ser. No. 82,776
4 Claims. (Cl. 292—353)

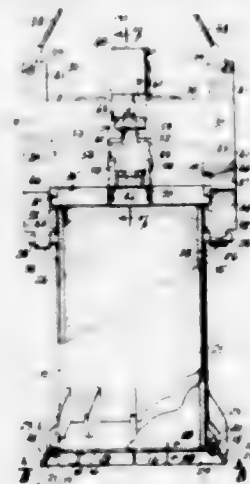


1. A detachable actuating handle for use in connection with latch actuating mechanism of vehicle doors, the combination with a latch actuating shaft that projects inwardly from the inner side of the door, a hub having a splined detachable connection with the projecting end of the shaft, the hub being detachably held in the shaft, the hub having a non-cylindrical head, a handle having a head portion and a depending finger engaging arm, the head of the handle having a relatively flat inner face portion of circular shape, the face axially thereof being recessed and with the recess being shaped and proportioned to receive the head portion of the hub in a non-rotative manner, a spring latch device mounted within a cavity of the handle, the spring latch being biased toward a slot formed in the bottom of the hub and a finger piece connected to the spring and projecting outwardly from the cavity whereby to move the spring from its latched engagement with the hub and to permit the handle to disengage the hub.

3,000,661
BOTTOM DUMP CHARGING BUCKET
Joseph Catania, 3139 N. Fenimore Ave., Covina, Calif.
Filed Apr. 7, 1958, Ser. No. 726,731
4 Claims. (Cl. 294—69)

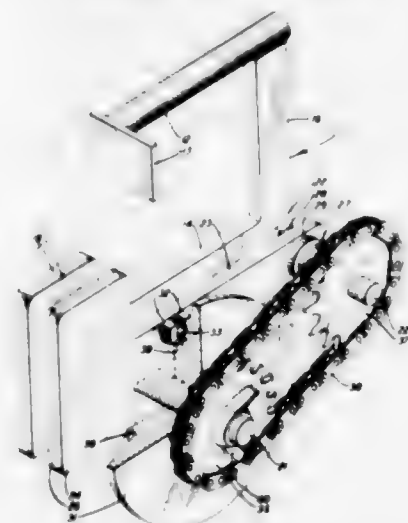
1. A bottom dump bucket apparatus comprising: a cylindrical bucket having open upper and lower ends, a plurality of sector plates, said sector plates forming a closed bottom surface of said bucket when positioned transverse to the longitudinal axis of said bucket, each of said sector plates being pivotally mounted around the periphery of said bucket at the bottom thereof for pivotal movement to open and close said bucket; a lever arm affixed to each of said sector plates, said lever arm extending radially beyond the outside diameter of the bucket; a cylindrical sleeve surrounding said bucket and longitudinally movable from a downward to an upward position with respect thereto, a plurality of circumferentially spaced radially extending actuating arms affixed to said sleeve in bearing contact with said plurality of lever arms whereby downward movement of the actuating arms causes pivotal movement of the sector plates from the open to the closed position; diametrically opposed carrying pins affixed to and extending outwardly from the exterior of said bucket, said carrying pins extending through longitudinal openings in said sleeve; an open-close control section including

dinally movable from a downward to an upward position with respect thereto, a plurality of circumferentially spaced radially extending actuating arms affixed to said sleeve in bearing contact with said plurality of lever arms whereby downward movement of the actuating arms causes pivotal movement of the sector plates from the open to the closed position; diametrically opposed carrying pins affixed to and extending outwardly from the exterior of said bucket, said carrying pins extending through longitudinal openings in said sleeve; an open-close control section including



a frame with depending arms detachably affixed to said carrying pins, a stop plate mounted within said frame and vertically movable with respect thereto from an upper to a lower position, said stop plate at said lower position being in bearing contact with the upper and end of said sleeve to maintain said sleeve in the downward position with respect to said bucket locking means mounted upon said frame and operatively connected to said stop plate for retaining said stop plate in said lower position and means for releasing said locking means to release said stop plate from said lower position, whereby said sleeve is free to move upward to open said bucket.

3,000,662
SHEET GRIP
Robert R. Scarlett, 14881 Altamont Road, San Leandro, Calif.
Filed July 9, 1957, Ser. No. 670,797
6 Claims. (Cl. 294—86)



1. A sheet grip comprising in combination: a U-shaped member having a short leg and a long leg joined by a stem, said short leg forming a handle and said long leg forming the fixed jaw of a pair of gripping jaws; a cheek carried by the free end of said fixed jaw; fixed to and on the grip side of said fixed jaw and extending normal thereto, a pair of spaced apart parallel studs, one of said studs being a pivot-stud placed adjacent said stem and

the other stud being a guide-stud placed adjacent said cheek carried by said fixed jaw; a movable jaw carried by said studs, said movable jaw having a free end and a pivot end; a cheek carried by the free end of said movable jaw, said cheeks being in opposition for gripping a sheet therebetween; a pivot sleeve on said pivot-stud, adapted to move longitudinally along said pivot-stud and the pivot end of said movable jaw being loosely mounted on said pivot sleeve so that it may pivot about said sleeve and may be moved longitudinally along said pivot-stud upon longitudinal movement of said sleeve on said pivot-stud; a camming means engaging the free end of said movable jaw such that a shear load applied to said movable jaw cheek, in tending to pivot said movable jaw about said sleeve, causes said movable jaw free end to engage said camming means to tend to move said movable jaw cheek toward said fixed jaw cheek, said camming means being longitudinally adjustable relative to said guide-stud whereby the spacing between said movable jaw and fixed jaw cheeks may be varied.

3,000,663
VEHICLE AIR DEFLECTOR
Geno J. Lucchesi, P.O. Box 247, South Range, Mich.
Filed June 23, 1959, Ser. No. 822,316
3 Claims. (Cl. 296—1)

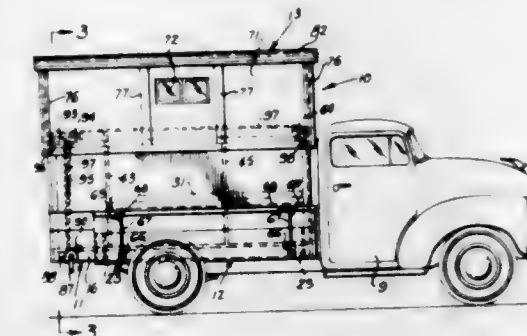


1. A vehicle air deflector comprising a frame, securing means on said frame for removably securing it to the rear portion of a vehicle top extending transversely thereacross, an air deflector panel, means mounting said air deflector panel on said frame a spaced distance from said body in a substantially horizontal position with the rear edge thereof adjacent the rear of said top, said rear edge inclined downwardly a sufficient amount to direct a substantial flow of air downward behind the rear of said top reducing the partial vacuum therebehind when the vehicle is in forward motion, said frame comprising two substantially L-shaped frame members positioned with a leg of one frame member aligned with the corresponding leg of the other leg member, a channel member, and means securing and adjustably positioning longitudinally each of said legs within said channel member.

3,000,664
COLLAPSIBLE HOUSE FOR MOTOR VEHICLES
Charles W. Martin, Rte. 1, Litchfield, Nebr.
Filed Jan. 23, 1959, Ser. No. 788,534
1 Claim. (Cl. 296—23)

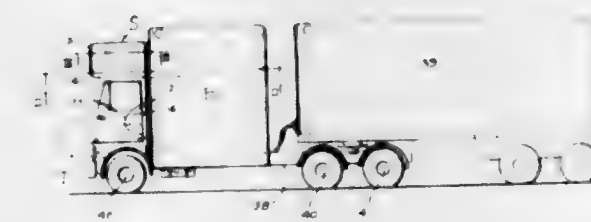
A collapsible housing for mounting on a pick-up truck, said pick-up truck including a load carrying platform with a floor and associated sideboards, said collapsible housing, comprising an oblong lower room section having a floored center portion arranged adjacent to, and parallel with the load carrying platform of said truck between the sideboards thereof, said section including laterally extending side portions overlying said sideboards and a dependent rear end portion extending downwardly below the floor of said center portion, upper and lower reinforcing bars extending along each of said side portions and transverse bars connecting said first named bars, vertical posts disposed adjacent the corners of and rigid with said lower section and extending below

the floor thereof and seating in sockets in said truck platform, an upper section telescopically arranged above said lower section, and means for raising and lowering said upper section comprising a shaft mounted on said dependent end portion and extending transversely of said truck, said shaft having a hand crank at one end thereof,



pulleys mounted on said lower section adjacent the upper edge thereof, there being two pulleys forward and spaced transversely of the truck and two rear pulleys likewise disposed, cables trained over said pulleys and connected to the lower portion of said upper section and to said shaft, and releasable lock means for preventing rotation of said shaft.

3,000,665
DESIGN AND ARRANGEMENT OF A CAB AND SLEEPER COMPARTMENT FOR TRACTOR VEHICLES
Marvin O. Reeves, 2612 E. 9th St., Wichita, Kans.
Filed June 17, 1960, Ser. No. 36,858
3 Claims. (Cl. 296—24)



1. A combination tractor cab and sleeping compartment for a tractor having an engine housing on the front portion thereof; said tractor cab being positioned over the engine housing and having two seats therein, positioned one on either side of the engine housing and door means in opposite sides of the cab and adjacent each of said seats for entrance into and exit from the cab; and having a sleeping compartment thereover, said cab and sleeping compartment having a continuous back wall and having side and end walls and a roof therefor; a division between the cab and the sleeping compartment; said division being a combination ceiling for the cab and floor for the sleeping compartment and upwardly extending means around the division for retaining a mattress on the floor of the sleeping compartment; said division having a manhole therein for passage into and out of the sleeping compartment; a combination ladder element and barricade element being integrally joined together and the two elements being positioned at 90 degrees to each other; said elements being hingedly hung adjacent their point of joinder to said division adjacent one edge of the manhole so that when the ladder element is in a vertical position the barricade element will lay in a horizontal position adjacent the floor of the sleeping compartment and when the ladder element is swung to a horizontal position the barricade element assumes a vertical position along the edge of the manhole as a protection against a sleeper in the sleeping compartment from falling through the manhole.

3,000,666 PROTECTIVE DEVICES FOR DOORS OF SHIPPING CONTAINERS

Charles L. Fernandes, Chicago, Ill., assignor to The Rail-Trailer Co., Chicago, Ill., a corporation of Delaware
Filed Aug. 30, 1960, Ser. No. 52,901
14 Claims. (Cl. 296—106)



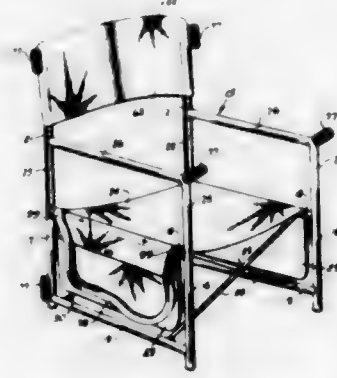
1. In a shipping container including a body defining a lading compartment and a doorway thereinto, and door structure carried by said body and selectively movable between open and closed positions with respect to said doorway; a protective device for said door structure comprising a standard, means for removably securing said standard to said body in an upstanding substantially central position in said doorway, a plurality of vertically spaced-apart first arms respectively pivotally connected at the inner ends thereof to said standard and selectively movable between substantially vertical inactive positions folded adjacent to said standard and substantially horizontal active positions outstanding from one side of said standard and projecting across the corresponding one side of said doorway, a plurality of vertically spaced-apart first keepers carried by said body at said one side of said doorway and respectively receiving the outer ends of said first arms in their active positions, a plurality of vertically spaced-apart second arms respectively pivotally connected at the inner ends thereof to said standard and substantially horizontal active positions outstanding from the other side of said standard and projecting across the corresponding other side of said doorway, and a plurality of vertically spaced-apart second keepers carried by said body at said other side of said doorway and respectively receiving the outer ends of said second arms in their active positions, said standard and said arms and said keepers being disposed in said doorway inwardly of said door structure and in non-interfering relation with the movements thereof between its open and closed positions, whereby said device with said arms in their active positions protects said door structure in its closed position against damage by shifting cargo in said lading compartment.

3,000,667 FOLDING FISHING CHAIR WITH FISHING ACCESSORY MEANS

Dale R. Dryden, 1219 NW. 10th, Oklahoma City, Okla.; said Dryden assignor of one-half to A. E. Warnberg, Oklahoma City, Okla.
Filed Apr. 4, 1958, Ser. No. 726,492
3 Claims. (Cl. 297—45)

3. A portable, collapsible chair comprising a pair of front legs and a pair of back legs; a first horizontal seat support member interconnecting one of said front legs to one of said back legs; a second horizontal seat support member interconnecting the other of said front legs to the other of said back legs, said first and second seat support members being vertically slidable with respect to said front

and back legs; a pair of parallel arms above each of said seat support members rigidly interconnecting said front and back legs; means for moving each of said seat support members vertically when said arms are moved toward and away from each other whereby said chair may be collapsed into compact, portable form and, alternately, opened into operative position; a flexible seat supported by said seat support members; and a flexible carrying strap secured to



one of said seat support members and of sufficient length to pass over said seat and under the arm opposed to the arm directly above the seat support member to which said carrying strap is secured whereby said arms may be biased toward each other to collapse said chair by pulling upward upon the free end of said flexible carrying strap when said strap is passed under the arm upon the opposite side of said chair from its point of connection to said chair.

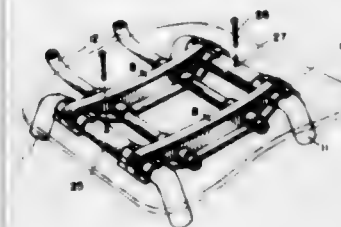
3,000,668 TILT-BACK CHAIR CONSTRUCTION Howard D. Croy, R.D. 3, Bluffton, Ind. Filed Mar. 2, 1959, Ser. No. 796,521 1 Claim. (Cl. 297—320)



A tilt-back chair comprising: a stationary, generally rectangular horizontally disposed base frame; a pair of side panels respectively extending upwardly from the sides of said base frame adjacent its back end, each of said side panels having a bearing-forming opening therethrough spaced from said base frame with said openings being in transverse alignment; a generally rectangular seat frame having its front end hingedly connected to the front end of said base frame whereby the rear end of said seat frame has pivotal motion in a vertical plane; and a tilting mechanism comprising a pair of pivot members respectively journaled in said side panel openings, each of said pivot members being tubular and respectively having an axial length generally coextensive with the thickness of said side panels, a pair of lever members each being attached intermediate its ends to an end of a respective pivot member on the inner side of the respective side panel, a transverse member rigidly connecting the rear ends of said lever members and being fixedly attached to the bottom edges of the sides of said back rest frame so that said back rest frame is pivotally supported by said side panels with the pivotal axis of said pivot members being spaced from the plane of said back rest frame, a pair of link members respectively having their upper ends pivotally connected to the front ends of said lever members, a second transverse member pivotally connected to the lower ends of said link members and attached to the bottom edges of the sides of said seat frame adjacent its rear end whereby backward pivoting of said back rest frame

causes upward pivoting of said rear end of said seat frame and simultaneous upward movement of the lower end of said back rest frame, a pair of pins coaxially disposed in said pivot members each having one end attached to a respective lever member and its other end extending out of the other end of the respective pivot member on the outer side of the respective side panel, a pair of coil springs respectively abutting the other ends of said pivot members on the outer sides of the respective side panels, each of said springs having its inner end connected to the other end of a respective pin, a pair of members respectively engaging the other ends of said springs and respectively attached to said side panels whereby said springs resiliently urge said back rest and seat frames to their most vertical and lowermost positions respectively, a pair of spring retaining members respectively engaging the outer sides of said springs and respectively attached to said side panels, and a pair of stop members respectively attached to the front edges of said side panels and respectively adapted to engage said lever members thereby to limit forward pivoting of said back rest frame, the lower end of said back rest frame engaging the rear end of said seat frame thereby limiting backward pivoting of said back rest frame.

3,000,669 CHAIR BRACKET Rudolph J. Silverman, 1210 Crofton Ave., Highland Park, Ill. Filed Sept. 21, 1959, Ser. No. 841,177 7 Claims. (Cl. 297—451)



1. A preformed furniture bracket of stable material comprising an elongated channel-shaped bridge section having integral oppositely-extending and coplanar-disposed flanges, the flanges and the integrated parallel sides of the bridge section being recessed transversely thereof inwardly from the exposed faces of the flanges toward the base part to provide sockets wherein to seat legs for bonding to the bracket.

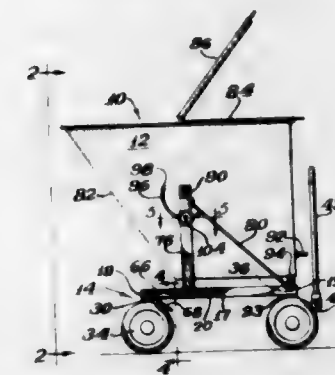
3,000,670 SEAT CONSTRUCTION John M. Clark, Birmingham, Mich., assignor to Curtiss-Wright Corporation, a corporation of Delaware Filed Aug. 26, 1957, Ser. No. 680,179 6 Claims. (Cl. 297—461)



1. A chair structure having a seat cushion portion and a base frame portion, said frame comprising parallel horizontal support elements secured to front and rear chair legs, said cushion portion including a pan member disposed between said support elements and pivotally

secured to one of said elements, blocks of elastomeric foam positioned on said pan member, a continuous fabric band encircling said supports, blocks, and pan.

3,000,671 DUMPING CART Joseph M. Monegato, 4157 Judd Ave., Schiller Park, Ill. Filed Nov. 23, 1955, Ser. No. 548,711 3 Claims. (Cl. 298—2)



1. A dumping cart comprising a wheeled undercarriage, a pair of channel members having relatively sharp edged flanges secured to the sides of said undercarriage and extending upwardly therefrom, the flanges of said members facing each other, a basket pivotally mounted between the upper ends of said channel members, an arcuate rail secured to one side of said basket concentric with the point of pivotal attachment of said basket to the adjacent channel member and standing out from said side to be close to said member, an element extending through the back of said member and having an eye therein containing said rail and means at the other end of said element co-acting with the back of said member to urge said eye outwardly to draw said rail in locking engagement with the flanges of said member.

3,000,672 TIRE TRIM-WHEEL TRIM AUXILIARY ANCHORAGE MEANS Charles B. Aske, Jr., Birmingham, Mich., assignor, by mesne assignments, to Gar Wood Industries, Inc., a corporation of Michigan Filed Feb. 3, 1961, Ser. No. 86,930 4 Claims. (Cl. 301—37)



1. In a vehicle wheel structure including a wheel rim and a tire mounted thereon, the said wheel rim having an outer tire bead seat presenting an axially outwardly disposed annulus, and a radially disposed tire bead seat flange terminating in an axially outwardly extending rim lip, a tire trim-wheel trim assembly comprising a tire trim element including a resilient annular radially disposed tire trim portion and an annular axially disposed anchorage portion having a plurality of circumferentially

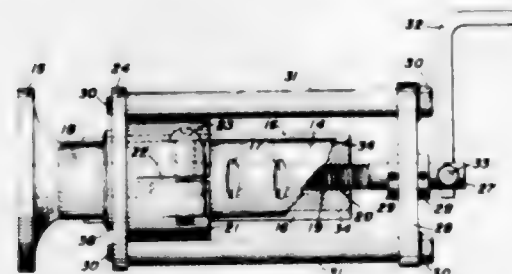
disposed anchorage teeth therearound, and a wheel trim element including an axially disposed relatively rigid annular sleeve portion over which the said anchorage portion of said tire trim element is telescoped to size the same, said wheel trim-tire trim assembly being mounted on the vehicle wheel by telescoping the annular portion thereof within said tire bead seat annulus with the said anchorage teeth flexed against said tire bead seat flange, and a plurality of auxiliary spring clip anchorage means including an open looped head sprung onto the lip of the wheel rim and an anchorage arm having a free stake and extending axially and radially inwardly from said looped head engaging the bottom of the rim lip and disposed against and past the juncture of the tire bead seat flange and said tire bead seat with its free stake end engaged in staked relationship with the outer periphery of said anchorage portion of said tire trim element.

3,000,673

EXTENSION AXLES FOR TRACTORS

Warren S. Lansing, 1528 9th Ave., Greeley, Colo., assignor of one-half to Damon W. Waldhauser, Greeley, Colo.

Filed Mar. 26, 1959, Ser. No. 802,220
1 Claim. (Cl. 301-128)



In a tractor, an extension axle, a concentric base flange formed on said extension axle and having openings positioned to receive the conventional wheel lugs of a tractor to secure said flange in place against the brake drum of the tractor by means of the usual wheel lug nuts, a hub member surrounding said extension axle, a wheel flange formed on said hub member, threaded wheel screw openings in said wheel flange corresponding in position and number to the wheel lugs of the brake drum for attaching the tractor wheel to said flange, and means for securing said wheel hub at preset longitudinal positions along said extension axle, means for moving said hub member along said extension axle comprising: a threaded axial passage in said extension axle; a jack screw threaded into and extending axially outward from said extension axle; a cross head member rotatably mounted and longitudinally fixed on the outwardly extending portion of said jack screw; bolts extending through said cross head member into opposite ones of the threaded wheel screw openings in said wheel flange for tying said cross head member to said wheel flange; spacing tubes surrounding said bolts and means for rotating said jack screw to cause said cross head member and said hub to move longitudinally in unison along said extension axle.

3,000,674

ANTI-FRICTION WAYS FOR MACHINE TOOLS

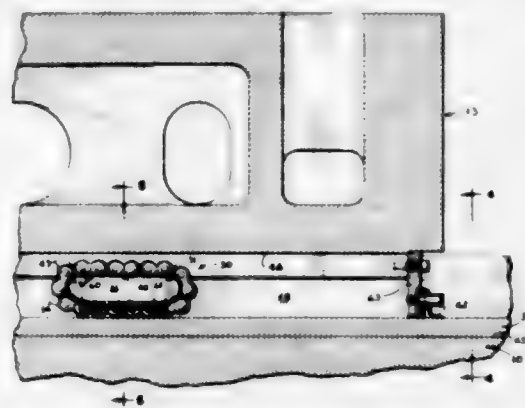
Ralph L. Ford, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin

Filed Dec. 11, 1957, Ser. No. 702,014

2 Claims. (Cl. 308-6)

1. In a machine tool, the combination comprising, a bed, a reciprocating table, flat parallel horizontal ways on said bed for the reception of said table, a plurality of longitudinally spaced anti-friction bearing units mounted beneath said table over each of said ways for sliding in

load bearing relation on the ways, each of said units comprising a block fixed to the table, said block having leading and trailing curved end surfaces, said block also having a straight flat roller contacting load bearing under surface between said curved end surfaces facing the associated way, cylindrical rollers trained in an endless procession around said block which forms a guide therefor, said rollers being trained to travel around the block



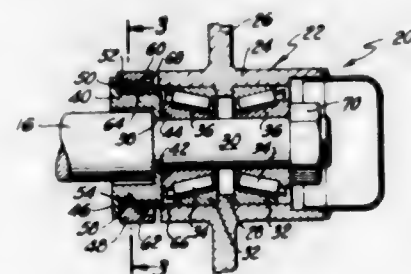
upon movement of the table along the ways, and means on said block defining a planar guide surface for the rollers extending between one of said curved end surfaces and said flat under surface and inclined at an angle to the latter of substantially 18° so that the load on an individual roller is gradually changed as the latter rolls along said planar surface between said one end surface and the load bearing under surface as the rollers travel around the block.

3,000,675

BEARING SEAL STRUCTURES

Artemas McKay Larkin, 1368 Spazier Ave., Glendale, Calif.

Filed Aug. 27, 1959, Ser. No. 836,449
4 Claims. (Cl. 308-187.1)



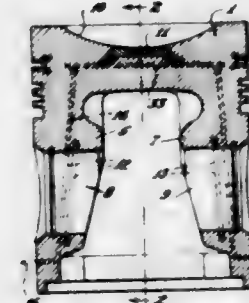
1. A bearing seal structure which includes: an axle having a cylindrical extremity, said axle including an annular shoulder extending around said extremity between said extremity and the remainder of said axle; a retainer positioned around said axle, said retainer including an internal flange engaging said shoulder and fitting around said extremity and an external flange positioned remote from said extremity; an annular collar positioned around said retainer, said collar being movable with respect to said retainer, said collar including a wall defining a groove located between said collar and the exterior of said retainer at the end of said collar adjacent to said extremity, said groove including a bottom wall formed in said collar; spring means engaging said collar and said external flange of said retainer, said spring means urging said collar toward said extremity of said axle; co-acting locking means formed on said collar and said retainer for holding said collar and said retainer with respect to one another with said spring means under compression; an elastomeric O-ring located within said groove between said collar and said retainer; bearing means mounted on said extremity against said internal flange of said retainer; wheel hub means located around said extremity of said axle so as to be carried by said bearing means; cylindrical sleeve means

located around said extremity of said axle and mounted on said hub means, said sleeve means including a rounded edge located around said extremity within said groove adjacent to said O-ring, said edge exerting a slight pressure against said O-ring, said edge being contacted by said O-ring upon release of said locking means as a result of said spring means urging said collar toward said extremity of said axle and said sleeve means so as to form an effective water seal.

3,000,676

HEAVY DUTY PISTONS

Wendell C. Cheney, Lake City, Minn., and Marshall G. Whitfield, Garden City, N.Y.; said Wendell C. Cheney assignor, by mesne assignments, to Gould-National Batteries, Inc., St. Paul, Minn., a corporation of Delaware
Filed June 12, 1958, Ser. No. 741,563
10 Claims. (Cl. 309-14)



1. A light metal piston having a head portion and a skirt portion integral therewith, said skirt portion having inwardly extending wrist pin bosses, and heavy metal strand-like reinforcements embedded in said wrist pin bosses, each of said reinforcements having spaced convolutions the axis of which extends in the direction of the length of said wrist pin bosses.

3,000,677

PISTON RING EXPANDER

Edwin F. Thomas, William W. Rowe, and William J. Wagner, Fort Worth, Tex., assignors to Double Seal Ring Company, Fort Worth, Tex., a corporation of Texas

Filed Jan. 12, 1959, Ser. No. 786,282
3 Claims. (Cl. 309-45)



1. A circumferentially compressible piston ring expander including a split annular axially corrugated ribbon of resilient metal, the corrugations being substantially uniform and having a minimum axial height to pitch ratio of approximately 1 to 1.33, the ribbon having complementary overlapping end portions, each end portion including tabs of less radial thickness than the ribbon for abutment with each other, each end portion having means projecting beyond its tab for engaging an axial surface of the other tab to prevent relative radial movement of the end portion.

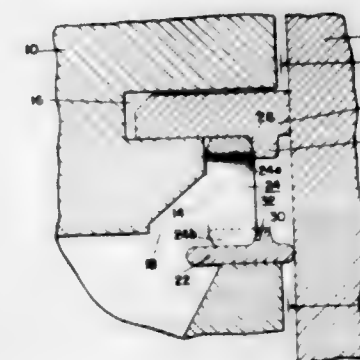
3,000,678

PISTON RING

Helmuth Gunther, Braendel, Malvern, Pa., assignor to Wilkening Manufacturing Co., Philadelphia, Pa., a corporation of Delaware

Filed Nov. 24, 1959, Ser. No. 855,099
3 Claims. (Cl. 309-45)

1. A piston ring comprising an annular compression ring, said compression ring having an annular projection



gated with the opposed peaks thereof being longitudinally spaced apart, the top peaks of said spacer ring being contoured so that the top peaks matingly engage the bottom surface of the compression ring and the inner surface of the compression ring projection, and the bottom peaks of said spacer ring being contoured so that said bottom peaks matingly engage the top surface of said rail ring and the inner surface of the rail ring projection.

3,000,679

FURNITURE BRACKET

Rudolph J. Silverman, 1210 Crofton Ave., Highland Park, Ill.

Filed Sept. 21, 1959, Ser. No. 841,178
9 Claims. (Cl. 311-105)



1. A furniture bracket comprising a base having a pair of arms attached to the base extending outwardly from the base, the arms being of substantially U-shaped cross-section and disposed with the open sides thereof facing oppositely outward, and integral apertured ears on the base whereby a pair of the brackets may be secured in base-to-base relationship by fasteners extending through the apertures in the overlapping ears on the pair of brackets.

3,000,680

FURNITURE

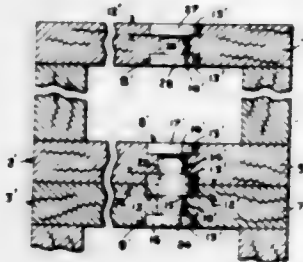
Harry Zelenko, 450 E. 63rd St., New York, N.Y.

Filed Jan. 28, 1959, Ser. No. 789,553

2 Claims. (Cl. 312-111)

1. In a combination as described a pair of casings superposed so that the bottom wall of the upper casing rests on and is aligned with the top wall of the bottom casing, said bottom and top walls having aligned passages counterbored on their adjacent ends to form a radially enlarged chamber and the passageway in the bottom wall being also counterbored at its other end to form an

open recess, and means for laterally locking said casings in said aligned and superposed relation comprising a tubular member lying in and tightly engaging said passages, a disc member surrounding said tubular member



and lying in and tightly engaging said chamber, and a headed locking member lying in and tightly engaging said tubular member and said recess, said locking member being in place in locking position by pressure applied axially of and to said headed locking member.

3,000,681
WASTE RECEPTACLE
John C. Long, 90 Broad St., Charleston, S.C.
Filed Sept. 12, 1957, Ser. No. 683,503
4 Claims. (Cl. 312-194)



4. In a desk of the type having a forwardly open knee-hole space extending between opposed side walls below a centrally mounted slidable desk drawer, parallel guide brackets secured to said desk side walls and formed to provide upwardly open support and guide channels, a rearwardly closed waste receptacle formed with an open top substantially flush with the bottom of said drawer and with a forwardly open front, said receptacle extending substantially entirely across said base just below said front drawer, said receptacle being formed with upper side edges which extend between the rear and front of said receptacle and which are formed with downwardly turned lips slidably and interfittingly disposed in said channels for slidably detachably mounting said receptacle on said desk, said guide brackets being forwardly open for ready removal of the receptacle from the desk.

3,000,682
SERVICE PANEL FOR DESKS
Edgar C. Loew and Rudolph H. Willmer, Youngstown, Ohio, assignors to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Filed Oct. 28, 1959, Ser. No. 847,515
2 Claims. (Cl. 312-194)

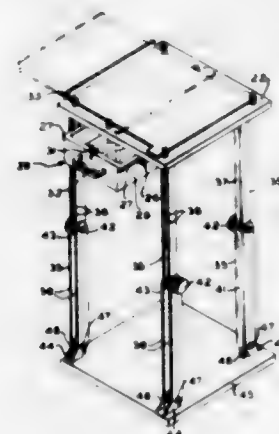
1. As an article of manufacture, a side panel unit forming the outer wall of metal desk pedestals, comprising, a horizontal top rail, legs depending from the ends of the top rail, a cross-piece connecting the legs, an internal wall disposed within the area between said top rail, and the legs above the cross-piece, an outer side wall provided with wire passage openings and having intumed top, side, and bottom flanges, said outer side wall coextensive with the area between the inner sides of the top rail and

legs whereby, the said flanges telescopically fit therein, and cooperating keeper and latch means respectively on



the rail and top flange and the cross-piece and bottom flange to releasably hold the outer side wall in place.

3,000,683
COMBINED PORTABLE TYPEWRITER AND TABLE WITH CARRYING CASE AND STOOL
Joan K. MacNeary, 67 Small Ave., Caldwell, N.J., assignor of one-half to Rose C. MacNeary, Caldwell, N.J.
Filed Oct. 30, 1958, Ser. No. 770,643
12 Claims. (Cl. 312-235)

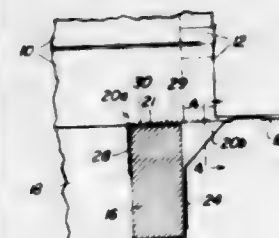


1. A combined typewriter and carrying case, comprising a box opening downwardly for enclosing a typewriter, a generally rectangular base for said typewriter, four lugs depending one from adjacent each corner of said base, collapsible legs, the upper ends of which are respectively connected to said lugs, means individually associated with each of said legs for holding them extended when so desired, a base for closing the box opening and completing the case upon collapse of said legs, four lugs upstanding from said box base, the lower ends of said legs being respectively connected to said upstanding lugs and when in supporting positions extending approximately vertical between said upstanding and depending lugs.

3,000,684
BASE STRUCTURE FOR MULTIPLE UNIT STORAGE FILE
Robert S. Shelly, Logan, Utah, assignor to Pack Manufacturing Company, Logan, Utah, a corporation of Utah
Filed Apr. 30, 1958, Ser. No. 731,988
13 Claims. (Cl. 312-253)

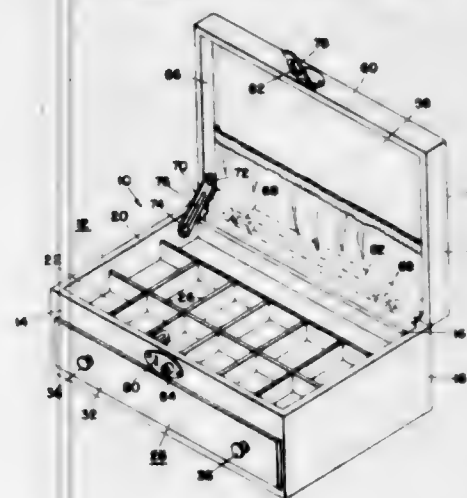
1. A multiple unit storage file, comprising a multiplicity of individual storage receptacle units interlocked

in horizontal and vertical courses, each unit including an elongate body of paperboard material and end caps of a structurally rigid material; and a supporting base upon which the interlocked storage receptacle units rest, said base comprising a frame having a front frame member, and a series of individual supporting units mounted on and secured to said front frame member in side-by-side, contiguous formation, each of said supporting units having a rearwardly disposed, frame member attach-



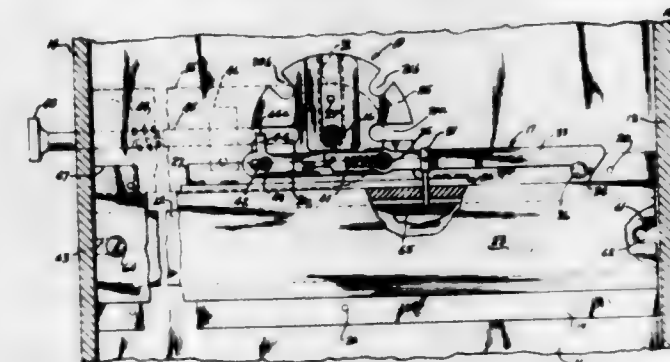
ment portion engaging said front frame member, a toe portion projecting forwardly from said attachment portion in cantilever fashion, and means for securing the supporting unit to said front frame member, said toe portion being of triangular formation, having a scuff plate extending diagonally downwardly and inwardly of the unit from the forward edge thereof providing the hypotenuse of the triangle, and a scuff apron depending from the lower edge of said scuff plate.

3,000,685
JEWEL BOX
William L. Gross, Great Neck, N.Y., assignor to Bond Street Jewel Case Corporation, New York, N.Y., a corporation of New York
Filed Apr. 10, 1959, Ser. No. 805,485
12 Claims. (Cl. 312-290)



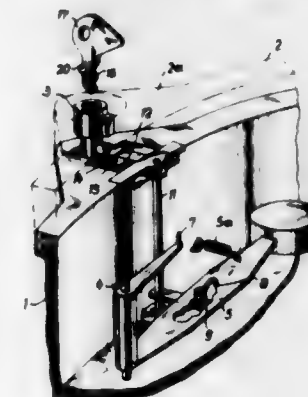
1. A jewel box comprising a substantially rectangular box having an open top, a drawer slidably fitting into said box through an opening in the front wall of the box, a latch strap secured to the inner surface of the front wall of said drawer, said latch strap lying in a plane parallel to the plane of said front wall, a vertically extending latch rod slidably mounted on the inner surface of the front wall of the box vertically above said latch strap, said latch rod being selectively slidable by manual manipulation between a lowermost position in which the latch rod engages said latch strap to prevent the drawer from being pulled open, and an uppermost position in which the bottommost end of the latch rod is above the latch strap, a cover on said box movable between an open position and a closed position, said latch strap being accessible only when said cover is in its opened position, and means for locking said cover to said box in the closed position of said cover, said cover having a front wall lying in the plane of the front wall of said box in the closed position of said cover.

3,000,686
SLIDE BRACKET MECHANISM
Henry J. Kobitter, 834 Northwoods Drive, Deerfield, Ill.
Filed July 10, 1959, Ser. No. 826,274
8 Claims. (Cl. 312-333)



6. A slide bracket mechanism for pivotally mounting a tray from a cabinet and releasably locking said tray thereto, comprising a slide assembly and a locking device; the slide assembly including a stationary member attached to the cabinet and at least one movable member slidable relative to the stationary member during extension and retraction of the slide assembly; the locking device including a quadrant member secured to the stationary member and having notches formed therein, a slidable rod supported by the tray and having one end engageable with the notches to maintain the tray in a particular position relative to the cabinet after extension and rotation with respect thereto, a lever member and cooperating means on said lever member and on said quadrant member for supporting said lever member and providing straight line and horizontal movement of said lever member relative to said quadrant member, said lever member having a turned portion received in one of the notches to be driven therealong by movement of the slidable rod, a latching arm pivotally mounted on the quadrant member, and means connecting the latching arm to the lever member and translating straight line movement of the lever member into pivotal movement of the latching arm when the lever member is moved by said slidable rod, the tray being thereby locked to and released from the stationary member and the latching arm and lever member being free of pivotal connection one to the other.

3,000,687
RECORDER FOR DIFFERENT TYPES OF INFORMATION
Wilhelm Haupt, Villingen, Black Forest, Germany, assignor to Kienzle Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed May 22, 1957, Ser. No. 660,817
Claims priority, application Germany Mar. 12, 1957
13 Claims. (Cl. 346-7)



4. In an information recorder, in combination, a support adapted to be mounted on an apparatus vibrating during operation; marking means for automatically

marking information on a record carrier during relative movement between the record carrier and said marking means, said marking means being mounted on said support for oscillatory movement so as to oscillate when the apparatus vibrates; manually operated means movable between a normal first position of rest, a second position and a third position, one of said last mentioned two means having a control edge including two control portions and an intermediate connecting portion between said control portions and the other of said means including a control member engaging said control edge, said control member engaging one of said control portions when said manually operated means is in said first position, and engaging first said connecting portion and then

the other control portion when said manually operated member is moved through the second position to said third position, said one control portion having such a shape as to limit oscillatory movement of said marking means to produce a first characteristic recording, said other control portion having such a shape as to limit oscillatory movement of said marking means to produce a second characteristic recording, and said connecting portion of said control edge having such a shape as to produce a third characteristic recording by said marking means on said record carrier for determining the time period between the operation of said manually operated means and the start of said second characteristic recording.

CHEMICAL

3,000,688

PROCESS FOR VATTING OF VAT DYESTUFFS
Friedrich Schubert, Leverkusen, Dieter Goerrig, Lohmar, and Manfred Söll, Leverkusen, Germany; said Schubert and said Söll assignors to said Goerrig
No Drawing. Filed Jan. 21, 1958, Ser. No. 710,197
Claims priority, application Germany Feb. 2, 1957
6 Claims. (Cl. 8—34)

1. In the process for the reduction of vat dyestuffs the improvement which comprises employing as the reducing agent a borohydride in the presence of a compound of tetravalent sulfur.

3,000,689

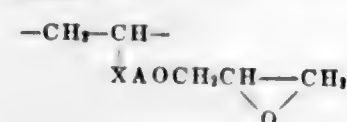
PROCESSES FOR THE TANNING OF HIDES USING ZINC COMPOUNDS
Harlan A. Depew, Kirkwood, Mo., assignor to American Zinc, Lead & Smelting Company, St. Louis, Mo., a corporation of Maine
No Drawing. Filed Oct. 23, 1957, Ser. No. 691,799
9 Claims. (Cl. 8—94.25)

1. In a process for tanning hides the steps of soaking the hides prepared for tanning in an aqueous solution of a base selected from the group consisting of $\text{Ca}(\text{OH})_2$, NaOH , KOH , LiOH , $\text{Ba}(\text{OH})_2$, NH_4OH , dimethylamine hydroxide and tetramethyl ammonium hydroxide having an alkalinity not above an approximate pH of 11 and then soaking the hides in an aqueous solution of a zinc salt selected from the group consisting of zinc chloride, zinc sulphate, zinc nitrate, a solution of zinc chloride in ammonia, a solution of basic zinc chloride in ammonia, a solution of zinc sulphate in ammonia, and a solution of basic zinc sulphate in ammonia and precipitating basic zinc compound in the hides by reacting in the hides the base with the zinc salt forming zinc hydroxide which reacts with the zinc salt to form basic zinc compounds whereby the hides are tanned.

3,000,690

NEW POLYMERS OF UNSATURATED GLYCIDYL ETHERS AND METHODS FOR PRODUCING THEM
Guy C. Murdoch, Levittown, and Henry J. Schneider, Hatboro, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Original application Feb. 7, 1956, Ser. No. 563,425. Divided and this application Jan. 16, 1958, Ser. No. 709,179
17 Claims. (Cl. 8—128)

1. A thermoplastic addition polymer comprising polymerized in the chain of the polymer molecule a plurality of units of the formula



where

X is selected from the group consisting of O and S, and

A is selected from the group consisting of alkylene groups having 2 to 12 carbon atoms; alkylene groups having 2 to 12 carbon atoms substituted with a member selected from the group consisting of cyclohexyl, phenyl, chlorophenyl, and benzyl; and groups of the general formula $-(\text{C}_n\text{H}_{2n}\text{X})_x\text{C}_n\text{H}_{2n}-$ wherein n is an integer having a value of 2 to 12 and x is an integer having a value of 1 to 5, any other units present being units of copolymerizable unsaturated molecules having a single carbon to carbon unsaturation.

3,000,691

FLUID TREATMENT OF RECTANGULARLY PILED POLYACRYLONITRILE TOW
Arthur Cresswell, Stamford, Percival W. Cummings, Jr., Cos Cob, and Rodney T. Swain, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Oct. 5, 1955, Ser. No. 538,618
5 Claims. (Cl. 8—152)

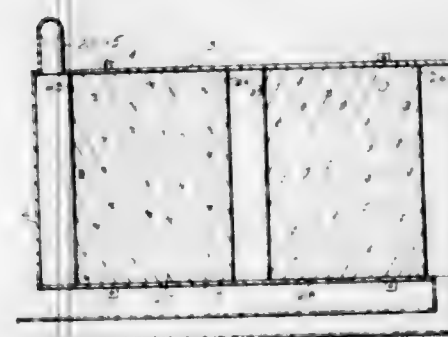


1. The method of continuously removing residual shrinkage from a tow of continuous filaments consisting essentially of a thermoplastic polymer of acrylonitrile and said filaments being capable of being further shrunk, said method comprising continuously introducing said tow, in a relaxed state, downwardly into the inlet end of a treating zone in the form of a J-box; causing a traverse motion to be applied to said tow as it enters said inlet end of said zone; depositing the tow in a four-sided pattern in which opposite sides are approximately parallel to each other by applying a spray of an inert liquid to the side of said downwardly, traversely moving tow at frequent, regular intervals as the tow approaches the limit of its traverse motion, said spray being applied first from one side of said inlet end and then from the opposite side, and said inert liquid from said spray being at a temperature of from about 99° C. to about 110° C. and being collected in a bottom portion of said treating zone where it is maintained at said temperature; and maintaining a

portion of said tow in said zone for a period of at least 5 seconds while continuously introducing untreated tow as above described into the inlet end of said treating zone and continuously withdrawing treated tow from the outlet end of said zone.

3,000,692

METHOD OF AND FILTER FOR PURIFYING EXHAUST GASES OF INTERNAL COMBUSTION ENGINES
Daymond D. Duncan and Don E. Wood, both of Box 392, Kellogg, Idaho
Filed Nov. 16, 1959, Ser. No. 853,230
3 Claims. (Cl. 23—2)



1. A two stage filter for internal combustion engines wherein the first stage is composed of vermiculite coated with a dried mixture of bentonite, sodium chloride and water, the second stage being composed of vermiculite coated with a dried mixture of slaked lime, sodium chloride and water.

3,000,693

METHOD OF REMOVING AND DISPOSING OF AMMONIA FROM COKE OVEN GAS
Elwood V. Schulte, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 762,672
8 Claims. (Cl. 23—2)



1. A process for treating gas evolved from the coking of coal which comprises contacting the gas with a wash oil for removing substantially all of the naphthalene from the gas, thereafter contacting the naphthalene-free gas with water to absorb substantially all of the ammonia and a portion of the water soluble impurities therefrom, stripping the ammonia and said water soluble impurities as vapors having a water vapor to ammonia ratio ranging between about 3.7:1 to 1:1 from said water, and burning said ammonia under temperature and heat-evolving conditions substantially precluding the formation of oxides of nitrogen.

3,000,694

ADDUCTS OF SF₆ AND METHOD FOR PREPARING THE SAME
William Channing Smith, Wilmington, Del., and Earl Leonard Muettterties, Chadds Ford, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 25, 1957, Ser. No. 647,981
12 Claims. (Cl. 23—14)

1. A compound of the formula $n\text{SF}_6\text{MF}_x$, wherein M is a member of the group consisting of hydrogen, boron and an element of Groups IV-A and V-A of an atomic number of at least 15 and which forms a binary fluoride boiling below 800° C. at 760 mm. of mercury pressure, n is a whole number from 1 to 3, inclusive, and x is a whole number whose value is the valence of M.

3,000,695

COMPOUNDS AND COMPOSITIONS CONTAINING PLUTONIUM
Glenn T. Seaborg, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Dec. 27, 1945, Ser. No. 637,485
44 Claims. (Cl. 23—14.5)

1. A process for controlling the oxidation state of plutonium in an aqueous solution containing plutonium ions, which comprises incorporating in said solution an agent of the class consisting of oxidizing agents selected from the group consisting of bromate, permanganate, ceric ions, dichromate and peroxydisulfate plus silver cation and reducing agents selected from the group consisting of hydrogen peroxide, ferrous ions, sulfite ions and sulfur dioxide.

3,000,696

PROCESS FOR RECOVERY OF URANIUM FROM FOSSIL FUELS
Charles F. Teichmann, Crestwood, N.Y., assignor to Texaco Development Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 27, 1956, Ser. No. 600,392
12 Claims. (Cl. 23—14.5)

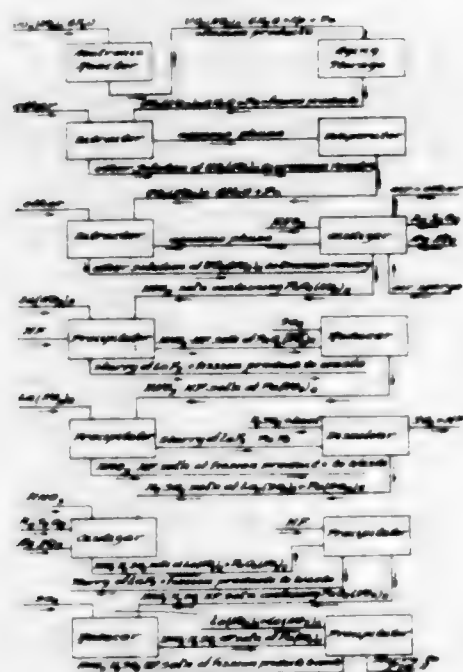
1. A process for the simultaneous production of carbon monoxide and recovery of uranium from a lignite containing uranium which comprises subjecting said lignite to reaction with oxygen at a temperature above about 2000° F. in relative proportions such that carbon contained therein is converted to carbon monoxide, separating residual non-combustible solid from resulting gaseous products of reaction, and extracting the residual solid with an aqueous solution of a reagent capable of forming a water soluble salt of uranium.

3,000,697

TRANSURANIC ELEMENT, COMPOSITION THEREOF, AND METHODS FOR PRODUCING, SEPARATING AND PURIFYING SAME
Arthur C. Wahl, Santa Fe, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Dec. 27, 1945, Ser. No. 637,487
4 Claims. (Cl. 23—14.5)

1. A process of separating plutonium values from fission product values contained in an aqueous acid solution, comprising securing said plutonium values in a maximum valence state of +4; incorporating a first carrier into said solution whereby said fission product values and said plutonium values are precipitated on said first carrier, said first carrier being selected from the group consisting of lanthanum fluoride, lanthanum oxalate, cerous fluoride, cerous phosphate, ceric iodate, zirconyl phosphate, thorium iodate and thorium fluoride; separating said plutonium- and fission-products-containing first carrier from the solution; dissolving said first carrier in mineral acid; adding to the mineral acid solution formed an

oxidizing agent selected from the group consisting of potassium permanganate, potassium dichromate, ceric nitrate and potassium persulfate plus silver nitrate whereby said plutonium values are oxidized to the hexavalent state; adding a second carrier to said mineral acid solution whereby said fission product values precipitate on said second carrier, said second carrier being selected from the group consisting of lanthanum fluoride, lanthanum oxalate, cerium fluorides, cerous phosphate, ceric iodate, zirconyl phosphate, thorium iodate and thorium fluoride; separating said second carrier from the plutonium values-containing solution; adding to the plutonium-values-containing solution a reducing agent selected from the group consisting of hydrogen peroxide, oxalic acid,



sulfur dioxide, sulfur trioxide derived by heat-decomposition of persulfate and sodium nitrite whereby the plutonium values are reduced at least to the tetravalent state; incorporating a third carrier into said aqueous solution whereby the plutonium values are precipitated on said third carrier, said third carrier being selected from the group consisting of lanthanum fluoride, lanthanum phosphate, lanthanum oxalate, lanthanum hydroxide, cerous fluoride, cerous phosphate, cerous oxalate, cerous hydroxide, ceric iodate, zirconyl phosphate, zirconyl iodate, zirconium hydroxide, thorium fluoride, thorium oxalate, thorium iodate, thorium peroxide, uranium iodate, uranium oxalate and uranium peroxide, said second carrier being a different carrier than said first and said third carriers; and separating the plutonium-values-containing third carrier from the solution.

3,000,698 PRECIPITATION OF DENSE AMMONIUM DIURANATE

Gordon A. Crowe, Kansas City, Mo., assignor to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

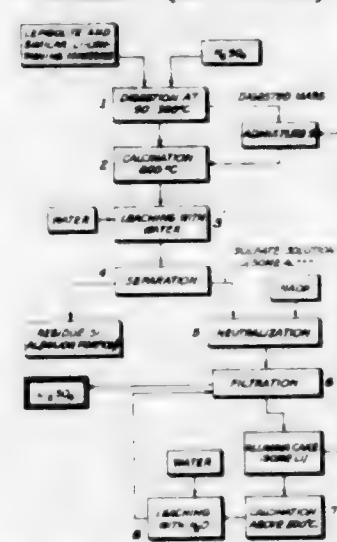
No Drawing. Filed Mar. 12, 1959, Ser. No. 798,859
10 Claims. (Cl. 23-14.5)

1. The process which comprises preparing an aqueous solution of a uranium salt of a mineral acid at an acidic pH at which the uranium salt is soluble, introducing ammonium hydroxide in the mixture to a pH above 5 at which appreciable ammonium diuranate precipitates, adding a mineral acid to the mixture until an acidic pH less than 5 is reached to partially redissolve the ammonium diuranate precipitate, then introducing ammonium hydroxide to a pH above 5 before the precipitate completely redissolves, and separating the dense ammonium diuranate precipitate so formed from the aqueous medium.

3,000,699 PURIFYING LITHIUM SALTS

Roland Gauguier, Neuilly-sur-Seine, and Jacques Claus, Aubervilliers, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France

Filed Oct. 13, 1958, Ser. No. 766,940
Claims priority, application France Oct. 18, 1957
6 Claims. (Cl. 23-32)



4. In a process for the production of lithium sulfate from lepidolite ore by (a) digestion of the ore with sulfuric acid, (b) calcination at temperatures about 800° C., (c) leaching with water, (d) precipitation of aluminum hydroxide occluding a portion of the lithium content from the aqueous solution by adjusting the pH of the latter to between 4 and 12, and (e) separation of the aluminum hydroxide precipitate from the solution containing the major portion of the lithium content of the lepidolite; the steps of admixing the separated aluminum hydroxide precipitate to a new charge of lithium-containing ore digested with said acid, heating the resulting mixture to a temperature between 200° and 900° C., and repeating the aforesaid steps (c) to (e) inclusive, thereby obtaining an aqueous lithium salt solution containing practically the total amount of solubilized lithium from said ore.

3,000,700 METHOD FOR PRODUCING SODIUM BORATES OF LOWERED IRON CONTENT

George W. Campbell, Jr., Santa Ana, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed May 13, 1960, Ser. No. 28,819
4 Claims. (Cl. 23-59)

1. The method of producing sodium borates having a lowered iron content which comprises contacting an aqueous solution of sodium borate having a pH of at least 8.5 and containing iron as a contaminant with a metal selected from the group consisting of zinc, aluminum, magnesium and manganese, and crystallizing substantially iron-free sodium borate from said solution.

3,000,701 PRODUCTION OF SODIUM BORATES

Nelson P. Nies, Laguna Beach, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed May 13, 1960, Ser. No. 28,846
3 Claims. (Cl. 23-59)

1. The method for producing sodium borates which comprises adding probertite to an aqueous solution of sodium borate containing calcium as a contaminant, allowing the probertite to settle whereby substantially all of the calcium in said solution is carried down with said probertite, separating the sodium borate solution from said probertite and calcium contaminant and crystallizing sodium borate from said solution.

3,000,702 MANUFACTURE OF SODIUM FLUORIDE

George L. Cunningham, Burtonville, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed May 23, 1958, Ser. No. 737,196
4 Claims. (Cl. 23-88)

1. The method of preparing silica-free sodium fluoride comprising the steps of adding to fluosilicic acid at a temperature of about 50-90° C. an equivalent amount of ammonia, adjusting the pH to about 8-9 by further addition of ammonia, thereby producing a slurry of silica in an aqueous solution of ammonium fluoride, filtering said slurry to remove silica, cooling the filtrate to about room temperature, adding thereto sodium chloride equivalent to the ammonium fluoride whereby a slurry of solid sodium fluoride in aqueous ammonium chloride solution is formed, filtering the slurry to remove said solid sodium fluoride, admixing with the filtrate the filtrate from the ammonium chloride filtration step described below comprising an aqueous solution of ammonium chloride and sodium fluoride, evaporating the resulting mixed solution to yield a slurry of sodium fluoride and ammonium chloride in an aqueous solution saturated with respect to both salts, adding sufficient anhydrous ammonia to dissolve the ammonium chloride, thereby depressing the solubility of sodium fluoride, filtering off the sodium fluoride, evaporating the ammonia from the filtrate, thereby causing ammonium chloride to crystallize, filtering off the ammonium chloride, returning the filtrate to the filtrate from the first step above, and washing the sodium fluoride residues free of soluble salts, thereby obtaining substantially pure sodium fluoride.

3,000,703 MANUFACTURE OF ZIRCONIUM OXIDE

Wilhelm Brügger, Essen, Germany, assignor to Th. Goldschmidt A.G., Essen, Germany, a company of Germany

No Drawing. Filed Nov. 5, 1957, Ser. No. 694,525
10 Claims. (Cl. 23-140)

1. A process for the production of zirconium oxide which comprises:

- introducing solid zirconium tetrachloride into a reaction zone,
- simultaneously introducing into the reaction zone a hydrolyzing agent,
- said hydrolyzing agent having the formula ROH wherein R is selected from the group consisting of hydrogen and alkyl radicals containing between one and five carbon atoms,
- maintaining the temperature in the reaction zone above the boiling point of the hydrolyzing agent but below the sublimation point of the zirconium tetrachloride,
- maintaining the said reactants in the reaction zone for from about 1-5 hours in order to substantially eliminate the chloride from the resulting zirconium oxide product, and
- thereafter calcining the resulting product to convert hydrous zirconia to zirconium oxide.

3,000,704 PURIFICATION OF HYDROUS TITANIA

Alan Stanley, Savannah, Ga., and Herbert A. McKenzie, Madison Heights, Va., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 21, 1959, Ser. No. 807,770
10 Claims. (Cl. 23-202)

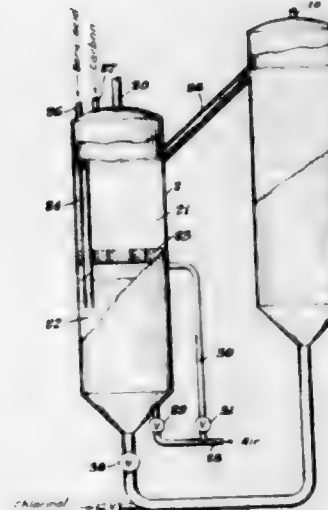
1. A process of beneficiating washed hydrous titania containing adsorbed di- and polyvalent metal ions including iron ions which comprises contacting said hydrous

titania first with aqueous acidic titanous sulfate solution until said titania has an adsorbed content of titanous titanium, and then contacting said hydrous titania with an aqueous solution of an organic surface-active agent until some of said ions are desorbed from said oxide into said solution.

3,000,705 PREPARATION OF BORON TRICHLORIDE

Paul R. Juckless, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 22, 1959, Ser. No. 788,372
5 Claims. (Cl. 23-205)

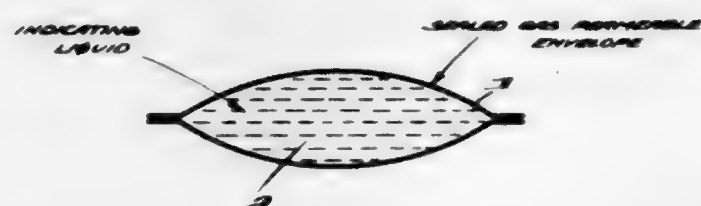


5. A process for the preparation of boron trichloride which comprises continuously charging carbon and boric acid in particulate forms and a recycle mixture of carbon and boric oxide recycled from a third fluidized bed in the process into a first fluidized bed of the mixture resulting from the partial oxidation of the charged carbon and boric acid and the recycle mixture, introducing air into the bottom of the fluidized bed to fluidize the bed and to oxidize a portion of the carbon to heat the bed to a temperature in the range of 800° to 900° C. to decompose the major portion of boric acid to boric oxide and water vapor and to vaporize any volatile constituents the carbon may contain, passing a portion of the first fluidized bed into a second fluidized bed of a mixture resulting from the further oxidation of the constituents of the first fluidized bed, introducing air into the bottom of the second bed to further heat the mixture to a temperature of 900° to 1200° C. to substantially decompose all of the boric acid to boric oxide and water vapor and vaporize any volatile constituents the carbon may contain, said carbon and boric acid being introduced into the first fluidized bed in proportions such that after partial oxidation of the carbon in the first and second fluidized bed a mixture of carbon and boric acid is obtained containing from 2 to 7 weight percent of boric oxide, discharging from the first and second bed the water vapor, the volatile constituents from the carbon, and the oxidation product from the oxidation of the carbon, passing a portion of the heated carbon and boric oxide from the second fluidized bed to a third fluidized bed comprising essentially carbon and boric oxide at a temperature in the range of 800° C. to 1000° C., charging chlorine into the third fluidized bed to fluidize the bed and to react the chlorine with the boric oxide and carbon to form a gaseous effluent containing boron trichloride, recovering the boron trichloride from the gaseous effluent, and recycling a portion of the third fluidized bed to the first fluidized bed to be intermixed with the carbon and boric acid being introduced in the first step.

3,000,706 CONTROL OF BACTERIOLOGICAL STERILISATION

Alec Royce, Nottingham, England, assignor to Boots Pure Drug Company Limited, Nottingham, England, a British company

Filed Apr. 17, 1959, Ser. No. 807,252
Claims priority, application Great Britain Apr. 22, 1958
23 Claims. (Cl. 23—232)

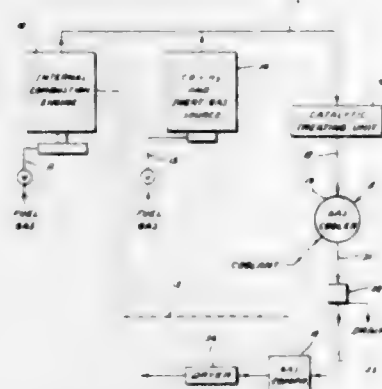


1. An indicating device for use in determining the end point of a fumigation or bacteriological sterilisation process which utilises a gas lethal to the contaminating organism, which device comprises an aqueous liquid indicating composition capable of absorbing the lethal gas thereby producing a change in the composition which is visibly detectable, the indicating composition being contained in an envelope which is permeable by the gas but is chemically resistant to the gas and the indicating composition.

3,000,707 PROCESS FOR GENERATING INERT GAS

William F. Barstow, Houston, Tex., assignor to Southwest Industries, Inc., Houston, Tex., a corporation of Texas

Filed May 29, 1959, Ser. No. 816,911
3 Claims. (Cl. 23—281)



1. The process of manufacturing inert gas suitable for injecting into earth formations comprising, burning hydrocarbon gases in an internal combustion engine to provide engine exhaust gases, adding to said exhaust gases additional exhaust gases from a hydrocarbon gas-fired inert gas generator, said additional exhaust gases containing compounds selected from the group consisting of carbon-monoxide and hydrogen, and reacting said combined exhaust gases over a catalyst selected from the group consisting of platinum and palladium.

3,000,708 PROCESS FOR THE PREPARATION OF SODIUM CHLORIDE BY THE EVAPORATION OF SOLUTIONS

Hans Kapsenberg, Hengelo, Netherlands, assignor to N.V. Koninklijke Nederlandsche Zoutindustrie, Hengelo, Netherlands, a limited liability company of the Netherlands

No Drawing. Filed June 25, 1956, Ser. No. 593,362
Claims priority, application Netherlands July 19, 1955
6 Claims. (Cl. 23—303)

1. Process for the manufacture of sodium chloride having a relatively high bulk density, said process resulting

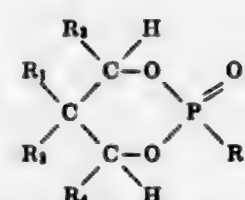
in salt having improved strewability and further resulting in minimized encrustation during processing, said process comprising adding to a solution of sodium chloride a compound supplying nitrilotriacetate and evaporating the solution.

3,000,709 ANTI-KNOCK GASOLINE COMPOSITIONS

Harold D. Orloff, Oak Park, and James B. Hinkamp, Birmingham, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 24, 1956, Ser. No. 617,927
4 Claims. (Cl. 44—63)

1. A hydrocarbon fuel of the gasoline boiling range adapted for use in spark ignition internal combustion engines containing an antiknock quantity of an alkyl-lead antiknock compound, said quantity being from about 0.02 to about 6.5 grams of lead per gallon of said fuel and, in amount sufficient to reduce surface ignition, a cyclic pentavalent phosphorus compound having the general formula



wherein R is selected from the group consisting of amino, monoalkyl amino groups in which the alkyl portion contains from 1 to 2 carbon atoms, and dialkyl amino groups in which each of the alkyl portions contains from 1 to 2 carbon atoms, R₁ and R₂ are selected from the group consisting of hydrogen and methyl; and R₃ and R₄ are selected from the group consisting of hydrogen, methyl and ethyl.

3,000,710 MINERAL BASE VANADIUM-CONTAINING RESIDUAL FUEL OIL COMPOSITION AND METHOD OF PREPARATION

James H. Kirk, Dyer, Ind., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 16, 1956, Ser. No. 565,786
3 Claims. (Cl. 44—72)

1. The method of producing a mineral base vanadium-containing residual fuel oil composition containing magnesium, on a weight basis, in an amount equivalent to at least about three times the amount of vanadium present which comprises contacting at a temperature in excess of about 212° F. to 900° F. and for at least about 10 minutes a vanadium containing residual oil and magnesium nitrate in an amount sufficient to provide at least three parts of magnesium in the resulting product per part of vanadium present, said product being substantially anhydrous and filtering the product.

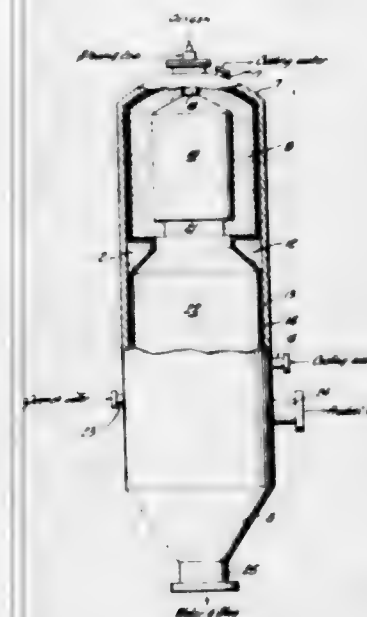
3,000,711 COAL GASIFICATION APPARATUS

Du Bois Eastman, Whittier, and Bruce H. Sage, Altadena, Calif., assignors to Texaco Inc., a corporation of Delaware

Filed Dec. 13, 1957, Ser. No. 702,664
2 Claims. (Cl. 48—63)

1. Apparatus for the production of carbon monoxide and hydrogen from a solid carbonaceous fuel comprising an incombustible residue by direct partial oxidation with uncombined oxygen and steam at an autogenously maintained temperature above about 2000° F. and above the fusion point of said residue wherein said fuel in particle form is reacted with said gaseous reactants while in suspension therein and in the resulting reaction products, which comprises, in combination, a vertically extending cylindrical pressure vessel shell having a reaction chamber in its upper portion and a gas outlet port in its lower

portion, said reaction chamber having a refractory heat insulating wall defining a vertical cylindrical reaction space therewithin and having an axially disposed inlet for reactants at the upper end thereof, a water-containing slag quench chamber immediately below said reaction chamber in the lower portion of said vessel through which

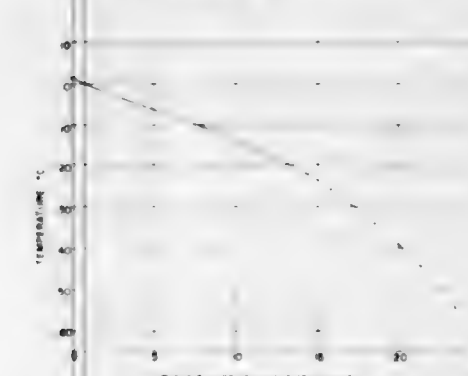


products of reaction from said reaction chamber are discharged to said outlet, and an annular deflector of refractory material extending inwardly from the inner wall of said reaction chamber above said quench chamber and providing a free opening therebetween within the range of 0.4 to 0.9 times the cross-sectional area of said reaction chamber.

3,000,712 HYDRAZINIUM BOROHYDRIDE SOLUTION AND METHOD OF MAKING IT

Scott B. Kilner, Corona, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed Mar. 17, 1952, Ser. No. 276,969
12 Claims. (Cl. 52—5)



1. A hydrazine base fuel consisting of a solution of hydrazine and hydrazinium borohydride.

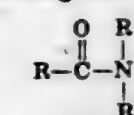
3,000,713 SOLID COMPOSITE PROPELLANT CONTAINING ACRYLAMIDE POLYMERS

Marvin H. Gold, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Nov. 16, 1953, Ser. No. 392,472
11 Claims. (Cl. 52—5)

1. A smokeless solid propellant composition which comprises a cured intimate mixture of from about 5% to about 95% of a solid inorganic oxidizing salt selected from the group consisting of ammonium, alkyl ammonium, alkylaryl ammonium, alkylaryl alkyl ammonium, anilinium, and alkylanilium perchlorates, chlorates, and

nitrates; and from about 95% to about 5% of a polymerizable monomer having the formula:



wherein R is a radical selected from the group consisting of hydrogen, lower alkenyl, and lower alkenyloxy; R' is a radical selected from the group consisting of hydrogen, lower alkyl, lower alkenyl, and nitro radicals; and R'' is a radical selected from the group consisting of hydrogen, lower alkyl, and lower alkenyl groups; at least one R being an unsaturated radical.

3,000,714 PROPELLANT COMPOSITIONS

George W. Batchelder, Glendora, and Gilbert A. Zimmerman, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Dec. 21, 1953, Ser. No. 399,596
3 Claims. (Cl. 52—5)

1. A solid propellant composition comprising a cured intimate mixture of ammonium perchlorate and a polyester resin consisting of the condensation product of diethylene glycol, adipic acid, and maleic anhydride, heteropolymerized with n-butyl acrylate and methyl acrylate; said ammonium perchlorate being present in an amount of from about 45% to about 90% and said polyester resin being present in an amount of from about 55% to about 10% and a mixture of from about 1.0% to about 50% by weight of ammonium dichromate and from about 99% to about 50% by weight of ethyl silicate in an amount of 2.0% by weight of the total propellant composition.

3,000,715 PROPELLANT COMPOSITIONS

Ralph W. Lawrence, Glendora, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed May 10, 1954, Ser. No. 428,791
6 Claims. (Cl. 52—5)

1. An improved solid propellant composition consisting of a cured intimate mixture of from about 45% to about 90% by weight of the total propellant composition; a non-metallic solid inorganic oxidizing salt; from about 55% to about 10% by weight of a polyester resin consisting of the condensation product of diethylene glycol, adipic acid, and maleic anhydride; heteropolymerized with styrene; and from about 0.5 to about 2.0% by weight of tricalcium phosphate.

3,000,716 BURNING RATE CATALYSTS FOR SOLID PROPELLANT COMPOSITIONS

Ralph W. Lawrence, Glendora, and Gilbert A. Zimmerman, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed June 20, 1955, Ser. No. 516,793
13 Claims. (Cl. 52—5)

1. A solid, smokeless propellant composition comprising a cured, intimate mixture of from about 45% to about 90% by weight solid, non-metallic, inorganic oxidizing salt, from about 10% to about 35% by weight combustible, organic resin selected from the group consisting of:

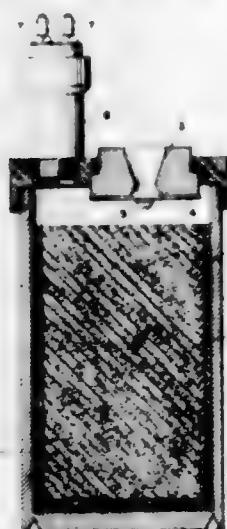
- asphalt;
- olefinic polymers;
- alkyl alkenoate heteropolymerized with olefin;
- unsaturated polyester resin consisting of the condensation product of saturated polyhydric alcohol and polycarboxylic acid heteropolymerized with an unsaturated compound; and
- alkenoamide polymers;

and from about 0.5% to about 5.0% by weight of a burn-

ing rate acceleration catalyst selected from the group consisting of the perchlorate salts of iron, cobalt, chromium, manganese, silver, copper and mixtures thereof.

3,000,717 ASPHALT BASE SOLID COMPOSITE PROPELLANTS

Harry W. Mace, Glendale, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 12, 1945, Ser. No. 634,609
9 Claims. (Cl. 52—5)



1. An asphalt base propellant containing from about 8% to about 12% by weight, based on the weight of the total propellant, of an asphalt having a softening point between 180° F. and 190° F. and a penetration at 77° F. of from 70 to 90 tenths of a mm./5 sec. loading under 100 grams; from about 25% to about 130% by weight, based on the weight of the asphalt, of an alkyl resin comprising a condensation product of sebacic acid with a polyhydric alcohol selected from the group consisting of glycol and glycerol; from a trace to about 35% by weight of castor oil, based on the weight of the condensation product; from about 20% to about 125% by weight, based on the weight of the condensation product, of a wax having a melting point between 160° F. and 260° F.; and the balance being an inorganic oxidizing salt.

3,000,718 PROPELLANT COMPOSITIONS

William E. Campbell, Jr., Pasadena, Lloyd H. Brown, Altadena, and Adolph L. Antonio, Pasadena, Calif., assignors to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 20, 1948, Ser. No. 66,392
12 Claims. (Cl. 52—5)

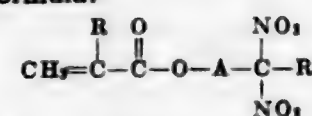
2. A propellant comprising an intimate mixture of about 15 to 30% by weight of the mixture of polymerized furfuryl alcohol condensation resin, and about 15 to 30% by weight of the mixture of 2,2-dinitropropane, and about 50 to 70% by weight of the mixture of one or more organic oxygen donor substances from the group consisting of pentaerythritol-tetranitrate, cyclotrimethylene trinitramine, and tetranitrobutane.

3,000,719 DESENSITIZED COATED CYCLONITE AND PROCESS OF PREPARATION

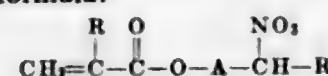
Marvin H. Gold and Milton B. Frankel, Pasadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Dec. 8, 1953, Ser. No. 397,008
13 Claims. (Cl. 52—5)

1. As compositions of matter, cyclonite coated with a desensitizing resin prepared by condensing a composition

selected from the group consisting of monomers having the structural formula:



and mixtures of said monomers with monomers having the structural formula:



wherein A is an alkylene radical having from 1 to 2 carbon atoms, R is a radical selected from the group consisting of hydrogen and lower alkyl radicals, and R' is a lower alkyl radical.

3,000,720 DESENSITIZATION OF CYCLOTRIMETHYLENE-TRINITRAMINE WITH DINITROETHYLBENZENE

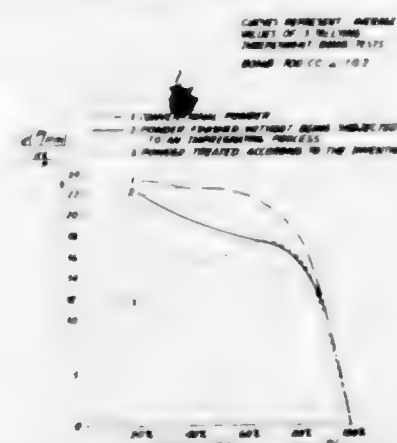
Maurice Baer, Rockaway, Paul B. Tweed, Morristown, Seymour Lerner, Landing, and Louis Jablonsky, Fair Lawn, N.J., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Filed Apr. 9, 1959, Ser. No. 805,347
1 Claim. (Cl. 52—5)

(Granted under Title 35, U.S. Code (1952), sec. 266)

The method of desensitizing granular cyclotrimethylene trinitramine by coating which comprises the steps of (a) preparing a slurry by pouring slowly twenty pounds of cyclotrimethylene trinitramine into a kettle with water while the water is being agitated, (b) preparing a separate mixture by pouring approximately two hundredths of a pound of a wetting agent comprising an oxygenated hydrocarbon consisting fundamentally of mixtures of organic acids and their esters having from five to thirty-five carbon atoms in the chain, into three to five pounds of dinitroethylbenzene, (c) pouring the mixture into the slurry while the slurry is being agitated until thoroughly mixed, (d) filtering the said product through a close-weave cotton cloth, and (e) drying the filtered product by circulating air of approximately 60° C. therethrough.

3,000,721 METHOD OF MANUFACTURING PROGRESSIVE BURNING MOLDED NITROCELLULOSE GUN POWDER

Hendrik Jean Louis Donker, Muiden, Netherlands
Filed June 13, 1960, Ser. No. 35,524
5 Claims. (Cl. 52—20)



1. A method of imparting progressive burning properties to molded nitrocellulose gun powder which comprises entirely submerging the molded nitrocellulose gun powder in a solution consisting of ethanol, which ethanol contains 80–100% by volume of alcohol, and about 10–21% of at least one ethanol-soluble phlegmatizing agent at a temperature of 35 to 50° C. for 7 to 48 hours for nitrocellulose having a wall thickness of 0.75 mm., and for other wall thicknesses for a duration proportional to the square of the ratio of 0.75 to said other thicknesses.

3,000,722 COMPOSITION FOR SUPPORTING AND EXTENDING THE LIFE OF CUT FLOWERS

Alexander Linnolt, Ballston Spa, N.Y., assignor to Tuff-lite Plastics, Inc., Ballston Spa, N.Y., a corporation of New York
No Drawing. Filed June 23, 1958, Ser. No. 743,969
6 Claims. (Cl. 71—11)

1. A composition for supporting cut flowers in a container in the presence of water that comprises expanded polystyrene of a density of around 1 to 2 pounds per cubic foot and a cell size of around 0.01 to 0.1 inch, the expanded polystyrene being in the form of cut particles having a size of around 1 to 5 inches in length, ¼ to ¾ inch in width and ¼ to ¼ inch in thickness.

2. A composition for supporting cut flowers in a container in the presence of water which composition comprises around 90 parts by weight of expanded polystyrene cuttings the particles of which are approximately ¼ by ¼ by 2 inches, about 3 parts by weight of cane sugar, about 3 parts by weight of potassium chloride and about 4 parts by weight of diammonium phosphate.

3,000,723 FERTILIZER COMPOSITION COMPRISING A NITROGENOUS COMPOUND AND HYDRAZINE OR HYDRAZINE SALTS

Peter C. Stevenson, 4352 Emory Way, Livermore, Calif., and Edward R. Hewitt, deceased, late of 435 E. 52nd St., Parkville, N.Y., by Abram S. Hewitt, executor, New York, N.Y.
No Drawing. Filed Apr. 19, 1957, Ser. No. 654,046
10 Claims. (Cl. 71—30)

1. A fertilizer composition comprising (1) a nitrogenous compound selected from the group consisting of ammonia, ammonium nitrate, and urea and (2) a compound selected from the group consisting of hydrazine and hydrazine salts; the relative amounts of said compounds being about one part by weight of compound (2) for each 6000 to 8000 parts by weight of compound (1).

6. A process for increasing the nitrogen available in soil for plant consumption comprising adding per acre of soil from about 50 pounds to about 300 pounds of nitrogen in the form of a fertilizer composition comprising (1) a nitrogenous compound selected from the group consisting of ammonia, ammonium nitrate, and urea and (2) a compound selected from the group consisting of hydrazine and hydrazine salts; the relative amounts of said compounds being about one part by weight of compound (2) for each 6000 to 8000 parts by weight of compound (1).

3,000,724 MANUFACTURE OF NITROGEN CONTAINING COMPLEX FERTILIZERS

Pierre Louis Eugene Langlois, Grand-Quevilly, France, assignor to Compagnie de Saint-Gobain, Paris, France
No Drawing. Filed May 4, 1956, Ser. No. 582,650
Claims priority, application France May 6, 1955
8 Claims. (Cl. 71—39)

1. A method of making porous complex, ternary granular fertilizers containing N and K salts that comprises reacting phosphate of fertilizer grade with an acid comprising nitric acid, reacting the sludge resulting from the reaction by adding thereto a quantity of ammonia sufficient to transform substantially all of the calcium nitrate therein to ammonium nitrate without neutralizing the acid phosphate salts present in the reaction mass, permeating the sludge throughout its mass, after the ammoniation, with a substantial quantity of bubbles, of substantially inert gas, and recycling fine particles of finished product to the cellular insulfated sludge, said gaseous bubbles remaining substantially unreacted in the product, and recovering the porous fertilizer.

3,000,725 METALLURGICAL CONCENTRATION OF MANGANESE

Karl Helge Sigfrid Löfquist, Filipstad, Sweden, assignor to Tholand, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 27, 1958, Ser. No. 717,828
Claims priority, application Germany June 29, 1956
5 Claims. (Cl. 75—30)

1. A process for concentrating manganese of an alloy essentially composed of a major proportion of iron, said alloy containing at least 10% by weight of manganese, which comprises establishing a melt of said alloy containing from 1% to 3% by weight of silicon and introducing into said melt below the surface thereof a finely divided ferrous metal sulfate to produce a relatively fluid slag which is composed predominantly of manganese oxide and manganese sulfide with a small amount of silica.

3,000,726 PRODUCTION OF METALS

Frank H. Spedding, Harley A. Wilhelm, and Wayne H. Keller, Ames, Iowa, assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Nov. 14, 1945, Ser. No. 628,652
5 Claims. (Cl. 75—84.1)

1. A process for the production of massive metal of group IVA of the periodic table which consists of preparing a mixture consisting essentially of a fluoride of said metal, a reducing metal of the group consisting of alkali and alkaline earth metals, and a material thermally capable of reacting with said reducing metal to develop a temperature above the temperature which can be developed by reaction of the reducing metal with the fluoride of the group IVA metal, placing said mixture in a reactor, closing the reactor, heating the reactor and said mixture to initiate reaction of the components of said mixture whereby the reaction raises the temperature of the reaction product to a temperature above the melting point of said metal of group IVA, and superatmospheric pressure builds up maintaining the temperature and permit substantial separation of a molten metal phase and a molten slag phase, cooling to solidify said phases, opening said reactor, and removing said phases.

3,000,727 SEPARATION OF IRON IMPURITY FROM COBALT-BEARING SOLUTIONS

Raphael F. Matson, New Orleans, La., assignor to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 27, 1958, Ser. No. 711,173
10 Claims. (Cl. 75—108)

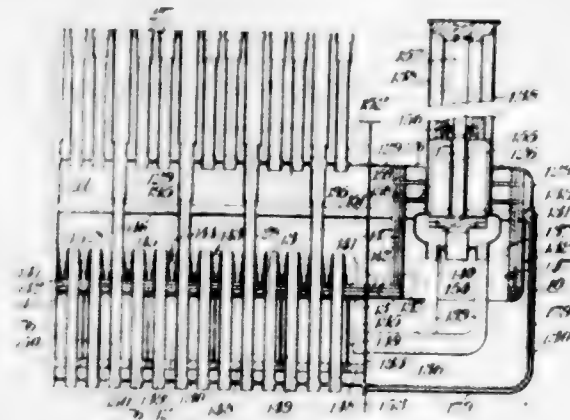
1. In the separation of iron impurity from acidic cobalt-bearing aqueous solutions wherein the iron is selectively precipitated by adjusting the hydrogen ion concentration of the solution to a level at which such precipitation takes place, the improvement in which the ferrous iron as well as any ferric iron impurity present in the solution is separated which comprises, oxidizing the ferrous iron impurity in said solution by reacting the same with cobaltic pentammine before the selective precipitation treatment is completed.

3,000,728 TANKS FOR HOLDING A COOLANT TO BE CIRCULATED THROUGH A NUCLEAR REACTOR

Everett Long, Culcheth, near Warrington, and Ronald Scott Challender, Appleton, near Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed June 24, 1958, Ser. No. 744,185
Claims priority, application Great Britain June 24, 1957
1 Claim. (Cl. 204—193.2)

In combination with the reacting core of a nuclear

reactor cooled by a liquid coolant, a unitary storage, circulating and heat exchange device for said coolant comprising a tank above the core; a heat insulated diaphragm dividing the tank into upper and lower compartments; a diaphragm dividing the lower compartment into a center core part and an outer annular part; a pump comprising a casing and an impeller supported in the tank, said casing being integral with the tank and said impeller being withdrawable from the casing from above the tank, a duct connecting the inlet side of the pump with the outer annular part of the tank and a duct connecting the outlet side of the pump with the core part of the tank; a heat exchanger comprising a shell and tubes supported



in the tank, said shell being integral with the tank and said tubes being withdrawable from the shell from above the tank, means defining an opening connecting the inlet side of the heat exchanger with the upper compartment of the tank and means defining an opening connecting the outlet side of the shell with the outer annular part of the tank; vertical tubes extending into the core having their bottom ends closed and their top ends connecting with the core part of the tank for coolant flow into the core; and open ended vertical tubes extending from the upper compartment of the tank coaxial with and inside said vertical tubes with closed bottom ends for coolant flow out from the core.

3,000,729 STAINLESS STEEL

Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, a corporation of Ohio
No Drawing. Filed Dec. 3, 1959, Ser. No. 856,925
5 Claims. (Cl. 75-128)

5. A straight-chromium stainless steel having quench-hardening properties and wherein temper hardness can be closely controlled within required value wherein improved toughness and strength are had in the hardened and tempered condition, said steel comprising about 10.0% to 14.0% chromium, about 0.07% to 0.14% carbon, about 0.10% to 1.25% manganese, about 0.001% to 0.050% phosphorus, about 0.001% to 0.050% sulphur, about 0.10% to 1.00% silicon, nickel up to 1.00%, columbium and tantalum together in the amount of 0.05% to 0.35%, vanadium about 0.05% to 0.15%, with columbium and tantalum together with vanadium in sum total about .05% to .35%, and up to about three times the carbon content of the steel, and the remainder substantially all iron.

3,000,730 FREE-MACHINING STAINLESS STEEL

Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, a corporation of Ohio
No Drawing. Filed Dec. 3, 1959, Ser. No. 856,926
4 Claims. (Cl. 75-128)

1. A quench-hardenable free-machining stainless steel in which the response to tempering treatment is broadened, said steel essentially consisting of carbon .07% to .14%, manganese .10% to 1.25%, ingredient of the group

sulphur and selenium in the amount of .07% to .50%, silicon .10% to 1.00%, chromium 10.0% to 14.0%, nickel 1.00% maximum, ingredient of the group columbium-tantalum .03% to .35%, and vanadium .03% to .50%, molybdenum up to .60%, zirconium up to .60%, and the remainder substantially all iron.

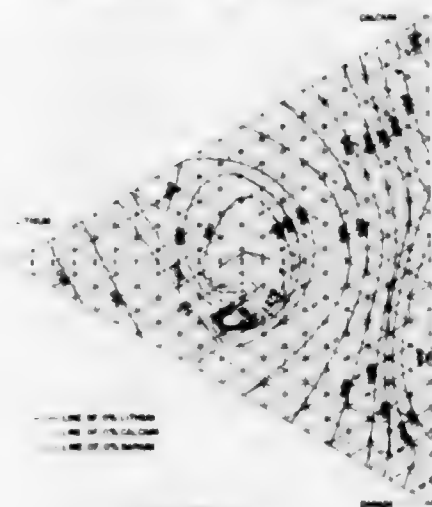
3,000,731 FINE-GRAINED STEELS

Tobei Ototani, Tokyo, Japan, assignor to The Research Institute for Iron, Steel and Other Metals of The Tohoku University, Sendai City, Japan
No Drawing. Filed June 10, 1958, Ser. No. 740,995
Claims priority, application Japan Feb. 3, 1958
2 Claims. (Cl. 75-129)

1. A method of manufacturing a fine-grained steel, which comprises adding to a molten bath of steel containing less than about 1.7% of carbon, an iron-calcium-silicon-manganese alloy consisting essentially of at least 10% of iron, 5 to 40% of calcium and 5 to 55% of manganese and silicon respectively so as to retain 0.001 to 0.05% of calcium in the casting, and then casting the molten steel into a mold.

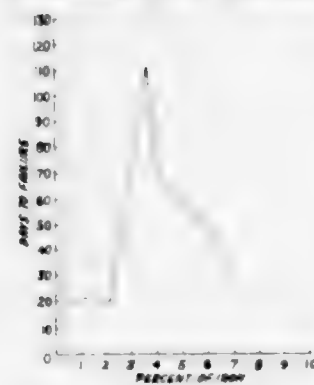
3,000,732 HYDROFUEL

Robert B. Cox, Pomona, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Aug. 31, 1953, Ser. No. 377,509
5 Claims. (Cl. 75-134)



1. A low melting, high energy content lithium alloy hydrofuel consisting of from about 35% to 55% by weight of lithium, 25% to 45% by weight of barium, and 10% to 35% by weight of calcium.

3,000,733
BRONZE ALLOYS CONTAINING IRON
Cyril H. Hannon, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,709
4 Claims. (Cl. 75-162)



1. A bronze alloy characterized by excellent working characteristics and high resistance to chemical and stress

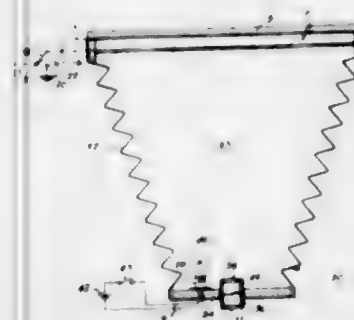
corrosion comprising approximately 6 to 8% aluminum, 1.8 to 2.2% silicon, 3 to 6% iron, and the balance copper.

3,000,734 SOLID STATE FABRICATION OF HARD, HIGH MELTING POINT, HEAT RESISTANT MATERIALS

Nicholas J. Grant, Winchester, Mass., and Claus G. Goetzel, Hastings on Hudson, and Eugene J. Kalil, New York, N.Y., assignors to 134 Woodworth Corporation, a corporation of New York
No Drawing. Filed Oct. 11, 1956, Ser. No. 615,224
6 Claims. (Cl. 75-201)

1. In a method of producing by solid state fabrication heat resistant alloys based on a ductile metal of melting point above 1250° C. containing slip-inhibiting hard phases which normally render such alloys difficult to hot work, the improvement which comprises forming a powder mixture of the desired alloying constituents with the ductile metal making up the major portion of at least 60% by weight of the composition of the mixture, the remaining constituents comprising alloying and hard phase-forming ingredients which confer heat resisting and slip-inhibiting properties to the finally produced alloy through subsequent heat treatment, the hard phase-forming ingredients being those which form at least one of the slip-inhibiting compounds selected from the group consisting of carbides, borides, silicides and nitrides of Cr, W, Mo, V, Nb, Ta, Ti, Zr, Hf and oxides of Al, Be, Ce, Mg, Zr, Ti and Th, consolidating said mixture into a hot workable compact and encasing it in a gas tight ductile metal sheath, hot shaping said sheathed compact to a desired shape at an elevated temperature under protective conditions by utilizing the ductile characteristics of said metal making up the substantial portion of said compact before appreciable alloying sets in, and then subjecting said hot worked shape to a diffusion and reaction heat treatment at an elevated temperature not exceeding the melting point of any one of the ingredients present to form the desired alloy composition with discrete slip-inhibiting hard phases distributed throughout said alloy.

3,000,735
METHOD AND APPARATUS FOR THE REPRODUCTION OF IMAGES
Harry E. Gunning, Hazel Crest, Ill., and Daniel Franklin Keller, 525 Sheridan Road, Kenilworth, Ill., assignors, by mesne assignments, to Daniel Franklin Keller, Kenilworth, Ill.
Filed June 11, 1956, Ser. No. 590,621
16 Claims. (Cl. 96-1)



1. The method of electrophotographically producing an electrostatic image which includes the steps of (1) bringing into confronting proximate adjacency two layers of substantially coextensive area including a first photoconductive insulating layer and a second layer formed from an electrostatically volume-polarized electret material possessing permanent electrostatic fields of opposite polarities at opposed surfaces thereof, (2) inducing an

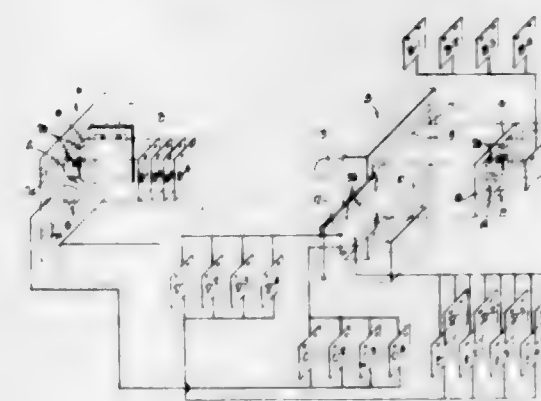
electrostatic charge on the photoconductive layer with said electret material and (3) while said photoconductive insulating layer is grounded, projecting radiation on said photoconductive insulating layer in an image to be reproduced by exposure to light, said steps being performed sequentially in the order named.

3,000,736 PHOTOGRAPHIC SILVER HALIDE DIFFUSION TRANSFER PROCESS

Richard W. Karlson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,815
8 Claims. (Cl. 96-29)

1. A method of forming a photographic image which comprises exposing to a subject an element including a support, a silver precipitating stratum on the support, and adhered to said stratum a light-sensitive emulsion layer containing silver halide uniformly dispersed in an alkali-soluble acid-insoluble dibasic acid ester of a member of the class consisting of cellulose ethyl ether and cellulose acetate, developing a latent image in the emulsion layer with a silver halide developing solution containing a silver halide developing agent and a silver halide solvent in contiguity with a member of the class consisting of 5-nitroindazole, 6-nitroindazole and 5,6-dinitroindazole to form a silver image and imagewise distribution of a soluble silver complex in the emulsion layer, allowing a portion of said silver complex to diffuse imagewise to said silver precipitating stratum and the silver of said portion of silver complex to be precipitated in said stratum as a silver image of improved tone, and removing the emulsion layer from said stratum.

3,000,737
MECHANICAL REGISTRATION OF PROCESS COLOR
Homer W. Barnhart, 418 E. Maynard Ave., Columbus 2, Ohio
Filed Jan. 4, 1957, Ser. No. 632,436
2 Claims. (Cl. 96-30)

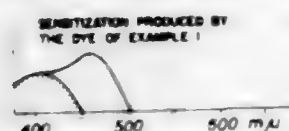


1. A process which comprises exposing, in a removable frame in a camera, a photosensitive sheet through and in contact with a transparency registered therewith by means of correspondingly spaced holes in each which engage nibs on said frame, developing said exposed film to form a mask and re-positioning it in register on the transparency in said frame, moving said frame to a position for photographing by said camera, positioning a second photosensitive sheet having corresponding openings, on protuberances in a positioning bar, inserting said protuberances in corresponding sockets in a back on said camera, fixedly adhering the photosensitive sheet to said back, and photographing on said film the combined transparency and mask in said frame.

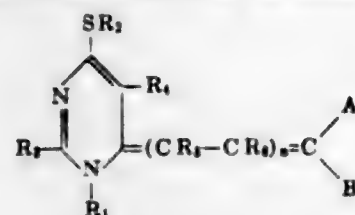
3,000,738 OPTICALLY SENSITIZED PHOTOGRAPHIC SILVER HALIDE EMULSION

Harald Von Rintelen, Köln-Riehl, and Oskar Riemer, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft

Filed Jan. 31, 1956, Ser. No. 562,579
Claims priority, application Germany Feb. 7, 1955
3 Claims. (Cl. 96—102)



1. A photographic material comprising a silver halide emulsion layer containing as an optical sensitizer a neutrocyanine dye corresponding to the formula:



wherein

R₁ stands for a member selected from the group consisting of alkyl and aralkyl;
R₂ stands for a carboxy substituted alkyl;
R₃ and R₄ stand for members selected from the group consisting of hydrogen, alkyl, aryl and aralkyl;
R₅ and R₆ stand for members selected from the group consisting of hydrogen, alkyl and aryl;
A and B stand for members selected from the class consisting of nitrile, ester and keto groups as well as groups which constitute with the carbon to which they are linked a hetero-cyclic ring system selected from the group consisting of rhodanine, thio-oxazolidone, thiohydantoin, thiobarbituric acid, and pyrazolone;
n is a whole number between 0 and 2.

3,000,739 PROCESS FOR PREPARING SILVER HALIDE EMULSIONS

Vere Maffet, Milltown, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 2, 1957, Ser. No. 650,081
11 Claims. (Cl. 96—108)

1. A process for improving the low intensity response of a light-sensitive silver halide dispersion having a pAg from 6.5 to 8.75 in a water-permeable organic colloid that has been ripened and digested at a temperature from about 110° F. to 180° F. for 35 to 70 minutes which comprises (1) adjusting the pAg of the precipitated, ripened and digested aqueous dispersion upwardly by 0.2 to 2.0 pAg units by the addition of a water-soluble inorganic halide taken from the group consisting of hydrogen, ammonium, lithium, sodium, potassium and cadmium chloride and bromide and (2) subjecting the resulting dispersion to an auxiliary digestion at a temperature of 110° F. to 200° F. for a period of about 3 to about 30 minutes prior to coating.

3,000,740 PHOTOGRAPHIC MATERIAL

Maurice Hector De Belder, Mechlin, and Rene Maurice Hart, Wilrijk-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a Belgian company

No Drawing. Filed Sept. 25, 1956, Ser. No. 612,047
Claims priority, application France Oct. 1, 1955
3 Claims. (Cl. 96—114)

1. A process for making a composition for use in the manufacture of light-sensitive photographic material,

which comprises the steps of preparing a solution of a copolymer of vinyl chloride, vinyl acetate and maleic anhydride in a water-immiscible organic solvent, mixing an aqueous gelatin silver halide dispersion with said solution for the purpose of emulsifying said dispersion, and mixing the emulsion thus obtained, for the purpose of emulsifying said emulsion, with an aqueous solution of a hydrophilic layer-forming binding agent selected from the group consisting of gelatin and polyvinyl alcohol.

3,000,741 PREPARATION OF SILVER HALIDE EMULSIONS

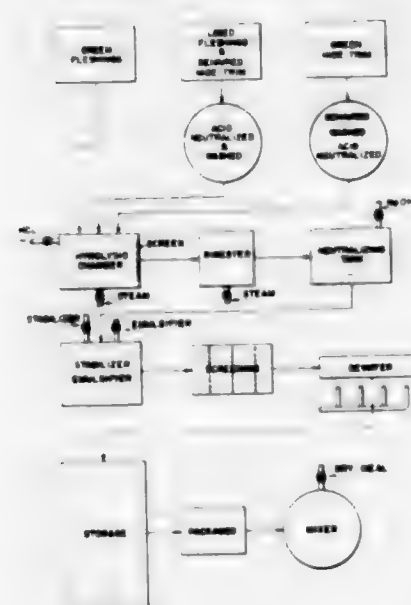
Alfons Jozef De Pauw and René Maurice Hart, Wilrijk-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a Belgian company
No Drawing. Filed May 27, 1959, Ser. No. 816,032
Claims priority, application Belgium May 30, 1958
9 Claims. (Cl. 96—114)

1. A method of forming a photographic silver halide emulsion, which comprises mixing together a water-soluble silver salt and a water-soluble inorganic halide in a dilute aqueous solution of a mono-ester resulting from the esterification of polyvinyl alcohol and a member selected from the group consisting of an aliphatic dicarboxylic acid, a hydroxy-substituted aliphatic dicarboxylic acid, an aromatic dicarboxylic acid and a tribasic carboxylic acid, the hydroxyl groups of polyvinyl alcohol being esterified for 0.5% to 15% of the total amount of the hydroxyl groups present, ripening the silver halide dispersion in said aqueous solution, freeing the silver halide dispersion from the water-soluble by-product salts, and adding to the silver halide dispersion a layer-forming binding agent therefor, said layer-forming binding agent being selected from the group consisting of gelatin, polyvinyl alcohol and said mono-ester.

3,000,742 METHOD OF PRODUCING NUTRITIONAL SUPPLEMENT FROM TANNERY FLESHINGS, HIDE TRIM AND OTHER ANIMAL BY-PRODUCTS AND THE RESULTING PRODUCT

William Kuster, Hillsborough, Calif., assignor to Cal-Tan Research Products Corporation, Napa, Calif., a corporation of California

Filed Feb. 13, 1959, Ser. No. 793,147
22 Claims. (Cl. 99—7)



1. A method of producing a food supplement rich in protein and fats for addition to animal feed comprising, neutralizing animal by-products, hydrolyzing said animal by-products by treating with a hydrolyzing acid at atmospheric pressure and at an elevated temperature under 300° F. until the protein content reaches the polypeptide state of hydrolysis and the fat is liquified,

separating mechanically the foreign residual matter from the protein and fat, neutralizing the hydrolyzed mixture, forming an emulsion of the protein and fat, and removing water from the emulsion to form a paste.

3,000,743 SMOKED HYDROLYZED VEGETABLE PROTEIN MATERIALS

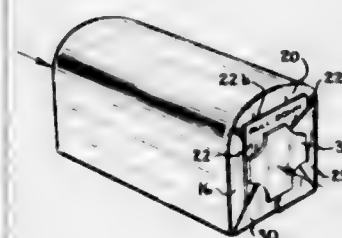
Stanley Tolin, Northbrook, Ill., assignor to Vico Products Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Apr. 2, 1959, Ser. No. 803,564
12 Claims. (Cl. 99—140)

1. A new and useful product comprising a hydrolyzed vegetable protein material impregnated with wood smoke, said product having the capacity of imparting a natural smoke flavor to food products with which it may be admixed.

3,000,744 FOOD PACKAGE AND METHOD OF MAKING SAME

Charles J. Lingelbach, Jr., Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Sept. 8, 1958, Ser. No. 759,758
5 Claims. (Cl. 99—172)



1. A method of packaging a loaf of bread comprising bringing the loaf into predetermined aligned relationship with a sheet of heat-sealable wrapping material; moving said loaf horizontally into contact with said sheet and both into contact with a pair of rigid supporting surfaces to form on both ends of the loaf a first end flap, said movement concomitantly positioning one edge of the sheet longitudinally along the bottom of the loaf; moving said loaf upwardly while still in engagement with said rigid supporting surfaces to form on both ends a second overlapping transverse end flap on top of the supporting surface; adhering a tear card to at least one of said second flaps in a preselected position; moving said loaf horizontally out of engagement with said supporting surfaces to concomitantly form on both ends a third overlapping flap opposed to said first flap and to close the bottom panel of the wrapper; folding the one remaining flap on both ends to close the package; and sealing both ends of said package by means of heat and pressure.

3,000,745 VITREOUS MATERIALS

Alfredo Luigi Giuseppe Clanchi, Ashridge Park, Little Gaddesden, England, assignor to Welwyn Electrical Laboratories Limited, Bedlington Station, England, a company of Great Britain and Northern Ireland

Filed Sept. 12, 1956, Ser. No. 609,473
Claims priority, application Great Britain Feb. 25, 1955
10 Claims. (Cl. 106—39)

1. A process for the production of a vitreous dielectric material which contains a crystalline phase as evidenced by its X-ray diffraction pattern, has a softening point below 700° C. and has a high coefficient of thermal expansion matching that of copper, which comprises

forming a glass batch of the following oxides in the proportions specified:

Parts by weight		Parts by weight	
TiO ₂	14-35	Sb ₂ O ₃	0.5-3
PbO	10-30	K ₂ O	7-20
BaO	10-30	Na ₂ O	1-5
SiO ₂	6-25	Li ₂ O	1-5
SnO ₂	2-25	MgO	0.5-5
CaO	2-10	P ₂ O ₅	0-5
SrO	2-10	B ₂ O ₃	0-5
ZrO ₂	1-6		

the oxides of titanium, barium, lead, tin, calcium and strontium constituting from 50 to 70% by weight of the mixture and the oxides of potassium, sodium and lithium constituting from 6 to 25% by weight of the mixture, intimately mixing said constituents, heating them in a non-reducing atmosphere to a temperature of 900 to 1300° C., keeping them at that temperature for a period at least sufficient to ensure that the resulting liquid mass has become uniform and quenching the uniform mass.

3,000,746 INHIBITION OF FALSE SET IN PORTLAND CEMENT

Joseph P. Copes, Easton, Pa., and Raymond L. Mayhew, Phillipsburg, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

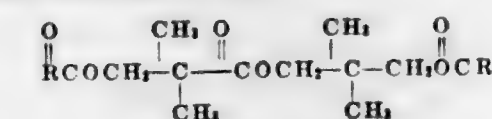
No Drawing. Filed June 26, 1957, Ser. No. 668,021
6 Claims. (Cl. 106—94)

1. A Portland cement composition consisting essentially of a Portland cement having the characteristic of "false set" together with from 0.001 to 0.5% by weight of said Portland cement of an additive selected from the group consisting of N-methyl taurides of tall oil acids and sulfonated oleic acids, said composition being characterized by freedom from "false set" when mixed with water and aggregate.

3,000,747 ESTER OF 2,2 DIMETHYL-HYDRACRYLIC ACID, 3 HYDROXY 2,2 DIMETHYLPROPYL ESTER AND RESINOUS MATERIALS PLASTICIZED THEREWITH

James C. Martin and Kent C. Brannock, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 14, 1958, Ser. No. 721,363
12 Claims. (Cl. 106—180)

1. A plastic composition comprising a resinous material selected from the class consisting of cellulose esters of fatty acids having 2 to 4 carbon atoms and polyvinyl chloride, said resinous material being plasticized with an ester having the formula



wherein R is an alkyl radical having 1 to 10 carbon atoms.

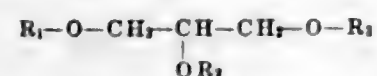
3,000,748 STRIPPABLE COATINGS

Walter L. Clark, Ramsey, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 8, 1959, Ser. No. 785,575
13 Claims. (Cl. 106—180)

1. A transparent coating composition consisting essentially of from about 40 to about 85 parts by weight of a

glyceride selected from the group consisting of (a) glycerides represented by the formula



wherein R_1 and R_2 are selected from the group consisting of hydrogen and the acyl radicals of aliphatic monobasic and polybasic acids of from one to about six carbon atoms, not more than one of R_1 and R_2 being hydrogen, and R_3 is the acyl radical of an aliphatic, long-chain fatty acid having one unsaturated double bond and a chain length of from about ten to about 30 carbon atoms, and (b) mixtures of such glycerides in which the average unsaturated double bond content of the long-chain fatty acids is from about 0.5 to about 1.5; and from about 15 to about 60 parts by weight of a cellulose ester component having a hydroxyl content of from about 0.5% to about 2.5%, an acetyl content of from about 6% to about 32%, and from about 15% to about 50% of an aliphatic acyl radical of from three to about eighteen carbon atoms, said ester having a viscosity of from about 0.25 to about 35 seconds and being present in amount to comprise from about 15 to about 50 weight percent of the composition.

3,000,749

REACTION PRODUCT OF SILICA PIGMENT WITH ACIDIC HALIDES AND PRODUCTION THEREOF

John H. Bachmann and Bernard J. De Witt, Akron, and Franklin Strain, B. Robertson, Ohio, assignors, by mesne assignments, to Pittsburgh Plate Glass Company
No Drawing. Filed Sept. 30, 1957, Ser. No. 686,860
8 Claims. (Cl. 106—288)

1. A method which comprises contacting a silica pigment which has an average ultimate particle size below 0.1 micron, contains in excess of 80 percent by weight of SiO_2 , measured on the anhydrous basis, and one mole of bound water per 3 to 85 moles of SiO_2 , the free water content of the pigment being less than about 2 percent by weight, with a halide of an element of the group consisting of silicon, titanium, tin, aluminum, boron, antimony, phosphorus, arsenic, germanium, niobium, and sulfur, said contact being conducted substantially in the absence of liquid water and being continued until the bound water content in the pigment is reduced, hydrogen halide is evolved, and a solid siliceous reaction product containing acid halide is obtained, and recovering the solid siliceous reaction product thus obtained.

3,000,750

PROCESS OF PREPARING DISPERSIONS OF PULVERULENT MATERIAL AND PREPARATIONS OBTAINED THEREBY

Günter Felletschin, Düsseldorf-Wersten, Germany, assignor to Dehydag, Deutsche Hydrierwerke G.m.b.H., Düsseldorf, Germany, a corporation of Germany
No Drawing. Filed Mar. 2, 1954, Ser. No. 413,697
Claims priority, application Germany Mar. 6, 1953
13 Claims. (Cl. 106—308)

1. In a process of producing stable dispersions of pulverulent materials in liquid to plastic organic vehicles, used in paint compositions, rubber compositions and plastic compositions, the steps comprising impregnating said pulverulent material with a salt of an acid phosphoric acid ester of aliphatic hydrocarbon alcohols containing from 8 to 18 carbon atoms and dispersing said impregnated pulverulent material in said organic vehicles.

3,000,751 PREVENTION OF TARNISH OF BRONZE PRINTING

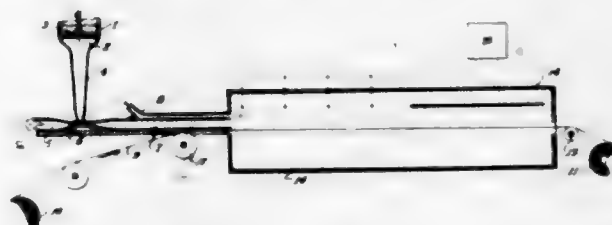
David Robert Davies and Henry Herbert Evers, London, England, assignors to British-American Tobacco Company Limited, London, England
No Drawing. Filed May 14, 1958, Ser. No. 735,126
Claims priority, application Great Britain May 15, 1957
2 Claims. (Cl. 117—13)

1. The method of printing on paper with bronze powder which comprises treating the paper with a composition consisting essentially of a substance selected from the group consisting of metaborate of sodium and metaborate of potassium, the amount of anhydrous metaborate applied being between 2% and 6% by weight of the paper and printing on the treated paper with said powder.

3,000,752

COATING METALLIC SHEET OR STRIP MATERIAL WITH POWDERED ANNEALING SEPARATOR SUBSTANCES

John M. Jackson, Middletown, and Philip A. Macklin, Oxford, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Dec. 30, 1957, Ser. No. 706,090
12 Claims. (Cl. 117—17)



1. A process of forming on the surface of metallic sheet or strip stock a coating of annealing separator in dry form and devoid of water of constitution which coating is adherent to the said surface, which comprises creating between the said surface and at least one electrode spaced therefrom an electrostatic field by applying to said electrode an electrical potential sufficiently positive with respect to the potential of said surface to produce a positive corona about the said electrode without producing a negative corona at the said surface, and introducing into the space between the said electrode and the said surface an annealing separator in finely divided form entrained in a dry, non-reactive gas, the position of introduction being closer to the said surface than to the said electrode and outside the area of the said corona.

3,000,753

EMULSIFIED WAX COMPOSITIONS

Louis B. Rockland, 600 Castano Ave., Pasadena 8, Calif.
Filed Feb. 21, 1957, Ser. No. 641,483
7 Claims. (Cl. 117—18)

1. A method of preparing a candle for decoration, the steps comprising: coating said candle with a layer of a fluid, high solids emulsified wax composition, said composition comprising a mixture of 35% to 60% by weight wax, at least two nonpolar surface active agents and water, one of said surface active agents being chosen from the group consisting of sorbitan esters of fatty acids having 12 to 18 carbon atoms, another of said nonpolar surface active agents being selected from the group consisting of polyoxyethylene derivatives of sorbitan esters of fatty acids having from 12 to 18 carbon atoms, the total by weight amount of said surface active agents being in the range from 10% to 5%, the by weight amount of said water being in the range of from 60% to 30%; removing the aqueous phase from said layer at ambient temperature to produce a dry wax layer on said candle; applying a second layer of said emulsified wax composition; applying

decorative material to said second layer prior to the drying thereof whereby the said second layer acts as an adhesive base for the said decorative materials and drying said second layer.

3,000,754

PLASTIC SURFACE COVERING HAVING EMBOSSED APPEARANCE AND METHOD OF MAKING SAME

David T. Zentmyer, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Jan. 22, 1959, Ser. No. 788,272
13 Claims. (Cl. 117—21)



8. The method of forming a surface covering material having an embossed appearance which comprises depositing separate granules of at least two polymerized vinyl chloride resins onto a backing, at least about 5% by weight of the total weight of said separate granules having a specific viscosity different from the specific viscosity of the balance of said granules by at least 0.12, and subjecting said backed granules to heat and pressure whereby said granules fuse together to form a coherent decorative wearing surface affixed to said backing, said wearing surface having an embossed appearance.

3,000,755

OXIDATION-RESISTANT TURBINE BLADES

Dean K. Hanink, Indianapolis, Ind., and Erwin R. Price, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 11, 1956, Ser. No. 615,417
15 Claims. (Cl. 117—51)



1. A method of making a high temperature oxidation-resistant turbine blade which comprises applying a coating metal selected from the class consisting of aluminum and aluminum base alloys to surfaces of a turbine blade formed of a base metal selected from the class consisting of nickel base alloys and cobalt base alloys, heating said blade to diffuse a portion of said coating metal into said base metal, removing excess coating metal from said surfaces with an acid solution, and thereafter heating said blade for a period of time sufficient to diffuse the remaining coating metal into said surfaces to form with the base metal of said turbine blade an oxidation-resistant surface layer of an alloy of said coating metal and said base metal having a thickness not in excess of approximately 0.0025 inch.

3,000,756

HOT DIP ALUMINUM COATING

John E. Logan, Pittsburgh, Pa., assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio
No Drawing. Filed Aug. 9, 1957, Ser. No. 677,214
18 Claims. (Cl. 117—51)

1. The method of coating a metal with aluminum which comprises fluxing the metal with a member selected from the group consisting of phosphorus and compounds of phosphorus with sulphur, and then immersing the metal in molten aluminum.

3,000,757

PROCESS FOR COATING SUBSTRATES WITH A VAPOR PERMEABLE POLYMERIC COATING

Robert Alexander Johnston, Cornwall on Hudson, and Ellsworth Kissam Holden and Ronald Albert Moltendrey, Newburgh, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 28, 1957, Ser. No. 636,481
10 Claims. (Cl. 117—63)

1. A process which comprises forming a polymeric solution having as essential constituents a hygroscopic solvent and up to 30 percent by weight of a polymer formed by chain-extending the reaction product of at least one polyalkyleneether glycol and at least one diisocyanate with at least one compound having two active hydrogen atoms, coating a substrate with said polymeric solution, exposing said coated substrate to an atmosphere characterized by having a relative humidity of about from 15 to 100% at a dry bulb temperature of about from 50° to 100° F. and removing residual hygroscopic solvent from the resulting microporous coating.

3,000,758

PROCESS FOR CONFERRING ANTISTATIC PROPERTIES AND THE RESULTING PRODUCTS

Georg Hennemann, Velp, and Albertus Gerardus Lutgerhorst, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Filed July 23, 1956, Ser. No. 599,307
Claims priority, application Netherlands Aug. 3, 1955
6 Claims. (Cl. 117—72)

1. In a process for imparting antistatic properties to dielectric products in which the products are treated with an aqueous solution of polyacrylic acid at a temperature less than 100° C., thereafter drying the thus pretreated products, subsequently heating them to an elevated temperature above 100° C., then treating them with an aqueous solution of a quaternary alkyl ammonium compound and finally drying them, the improvement comprising incorporating 1%—3% based on the weight of the polyacrylic acid of an organic compound selected from the group consisting of hexamethylene diamine and ethylene diamine in the aqueous solution of polyacrylic acid.

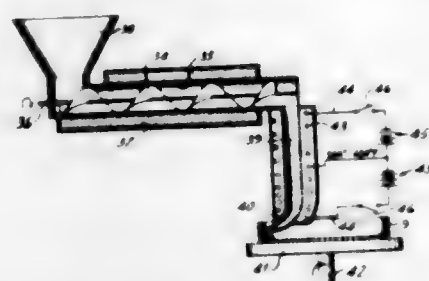
3,000,759

METHOD OF FORMING PLASTISOL GASKETS ON METAL MEMBERS

George Barsky, New York, and Harry C. Bierman, New Rochelle, N.Y.
Original application Oct. 9, 1951, Ser. No. 250,524, now Patent No. 2,888,366, dated May 26, 1959. Divided and this application Oct. 20, 1958, Ser. No. 768,135
4 Claims. (Cl. 117—97)

1. A method of forming plastisol gaskets on metal members which comprises providing a heterogeneous mixture containing a resin and a plasticizer, maintaining the same in fluid state by heating said mixture to a temperature below the gelation point of said mixture, feeding said heated mixture through a heating zone to a point

adjacent to said member and at said point raising said mixture to a temperature at which said mixture becomes gelled, simultaneously depositing said mixture onto said

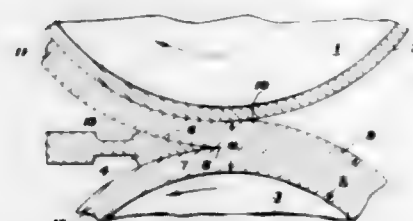


member whereby said mixture becomes gelled as it is deposited, while preventing the bulk of said metal from becoming heated to said temperature.

3,000,760 METHOD AND APPARATUS FOR COATING A SURFACE

Jack F. Greiller, Wealdstone, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed May 27, 1958, Ser. No. 738,120
Claims priority, application Great Britain June 28, 1957
10 Claims. (Cl. 117-111)



1. The method of applying a smooth layer of a given thickness of a coating solution to a surface at high speed comprising the steps of moving the surface to be coated in transfer relation with the surface of a transfer member whereby a nip is provided between said surfaces of greater dimension than the thickness of the layer of coating to be applied to said surface to be coated; moving said transfer surface into said nip in the same direction as said surface to be coated and applying thereto ahead of said nip a layer of coating solution substantially at said nip into the dimension of said nip; and physically splitting the layer of coating solution substantially at said nip into two individual layers, one of said layers being a smooth layer of desired thickness which is transferred to the surface to be coated while the other of said layers remains on the transfer surface to be carried away from said nip thereby.

3,000,761 METHOD OF STAINING BOROSILICATE GLASS AND RESULTANT ARTICLE

Ormonde S. Levi, Toledo, Ohio, assignor to Verd-A-Ray Processing Company, Toledo, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 4, 1957, Ser. No. 694,066
6 Claims. (Cl. 117-124)

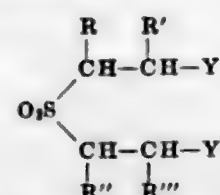
1. A method for staining a borosilicate glass which is substantially completely free of arsenic, which method comprises applying to such glass a dispersion which consists essentially of copper sulfide, silver sulfide and a dispersing medium, the copper sulfide constituting at least 10 percent of the dispersion, and the silver sulfide constituting at least 5 percent of the dispersion, based upon the total weight of copper sulfide and silver sulfide, and firing the glass and applied dispersion in air to a temperature sufficiently high to effect staining of the glass.

3,000,762 PROCESS FOR REACTING POLYMERIC MATERIALS WITH SULFONES AND PRODUCTS RESULTING THEREFROM

Giuliana C. Tesoro, Dobbs Ferry, N.Y., assignor to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 25, 1960, Ser. No. 51,778
14 Claims. (Cl. 117-139.5)

1. A process for insolubilizing non-cellulosic natural and synthetic polymers containing a plurality of hydroxyl groups per polymeric molecule by reacting said polymers in the presence of an alkaline catalyst with a sulfone corresponding to the formula



where R, R', R'', and R''' are selected from the group consisting of hydrogen and methyl and Y is a polar residue derived from a reagent of weak nucleophilic character.

3,000,763 CELLULOSIC MATERIALS PLASTICIZED WITH HYDROXYPROPYLGLYCEROL

Arthur W. Anderson, George K. Greminger, Jr., Garth H. Beaver, and Samuel M. Rodgers, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

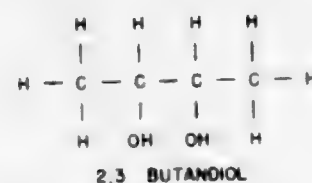
No Drawing. Filed May 28, 1957, Ser. No. 662,005
2 Claims. (Cl. 117-144)

1. Paper containing an effective amount of a plasticizer consisting of 1,2,3-tris(2-hydroxypropoxy)propane.

3,000,764 TOBACCO COMPOSITIONS

William Anthony Drucker, New York, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Nov. 30, 1959, Ser. No. 856,185
7 Claims. (Cl. 131-17)

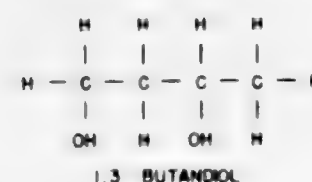


1. A composition of matter comprising tobacco and a glycol selected from at least one of the group consisting of 2,3 butandiol, 1,4 butandiol and 2 methyl 1,2 propandiol said glycol acting as a humectant.

3,000,765 TOBACCO COMPOSITION

Sheldon Rosenberg, Westport, Conn., assignor to International Cigar Machinery Company, Inc., a corporation of New Jersey

Filed Nov. 30, 1959, Ser. No. 856,248
2 Claims. (Cl. 131-17)



1. A composition of matter comprising tobacco and 1,3 propandiol which acts as a humectant.

3,000,766 METAL CLEANING PROCESS

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,124
2 Claims. (Cl. 134-2)

1. A process for removing adherent non-metallic adherent organic materials from pieces of metal to which they are bonded which comprises: preparing a fused salt melt consisting principally of alkali metal nitrite; immersing the pieces of metal with accompanying non-metallic material in said melt, while maintaining the melt at a temperature below the melting point of the metal and then withdrawing the metal from said melt after the non-metallic organic material has been removed therefrom; and maintaining the coating-removing efficiency of said fused nitrite melt by bubbling air into said melt.

3,000,767 METHOD OF CLEANING INTERNAL FERROUS METAL SURFACES OF STEAM GENERATING EQUIPMENT

William R. Elliott, Poland, Ohio, assignor to Solvent Service Inc., Painesville, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 30, 1959, Ser. No. 809,917
3 Claims. (Cl. 134-3)

1. The method of removing copper-containing incrustations deposited upon the ferrous metal surfaces of high pressure steam generating equipment which comprises the steps of first inundating the incrustated surfaces with an aqueous ammonia solution containing ammonium hydroxide, potassium bromate and ammonium nitrate as an oxidizing agent and allowing the solution to remain in contact with the incrustation until the solution no longer increases in copper content, removing the spent aqueous ammonia solution of the oxidizing agent from the treated ferrous metal surface and rinsing the same, subsequently inundating the ferrous metal surfaces with an aqueous solution of hydrochloric acid containing 5% to 25% of HCl and containing thiourea ($\text{H}_2\text{NCS}\cdot\text{NH}_2$) as a sequestering agent and allowing the acid to act upon the incrustation until the dissolving action has substantially ceased, removing the resulting spent acid and sequestered copper from the treated surface and rinsing the same.

3,000,768 SEMICONDUCTOR DEVICE WITH CONTROLLED ZONE THICKNESS

John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 28, 1959, Ser. No. 816,573
1 Claim. (Cl. 148-1.5)



A method of providing a thin region having a precise dimension between two junctions in a semiconductor body of a first conductivity type comprising the steps of forming a first semiconductor to semiconductor PN junction the exact location of which in said semiconductor body is unknown, applying an electrical connection to said first junction in said semiconductor body, electrolytically etching under a predetermined magnitude of reverse bias condition correlated with a depletion region corresponding to a predetermined dimension said semiconductor body until no appreciable reverse current flows forming thereby an etched interface spaced a distance determined by

said predetermined dimension from said first PN junction, and epitaxially depositing opposite conductivity type semiconductor material in the etched region of said semiconductor body whereby said semiconductor body is reinforced in the region adjacent said predetermined dimension and a second semiconductor to semiconductor PN junction is formed precisely at said etched interface.

3,000,769 FLUX AGENTS FOR SOFT SOLDERS

Horst Melchior, Wesseling, Germany, assignor to Kuppers Metallwerk G.m.b.H., Bonn (Rhine), Germany, a German corporation

No Drawing. Filed May 12, 1959, Ser. No. 812,581
Claims priority, application Germany May 14, 1958
6 Claims. (Cl. 148-23)

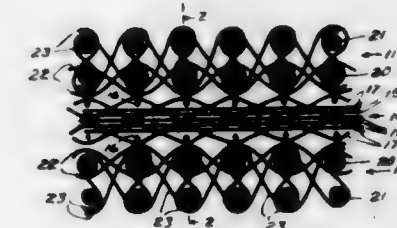
1. In a soldering flux for soft solder having an activating agent and a carrier selected from the group consisting of resins and waxes the improvement which comprises the activating agent essentially consisting of a hydrohalide salt of an N,N-di-lower alkyl substituted cyclohexylamine.

1. As a new composition of matter a malleable white hard cast iron alloy essentially consisting of iron, between 2.5 and about 3.5% by weight of carbon substantially all in the form of nodular graphite, between 1.5-3.0% by weight of silicon and between 0.3-1% by weight of sulfur, said malleable alloy being substantially free of cementite.

3,000,771 CONVEYOR BELTS

Leslie A. Runtun, Middle Haddam, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut

Filed May 1, 1958, Ser. No. 732,271
1 Claim. (Cl. 154-52.1)



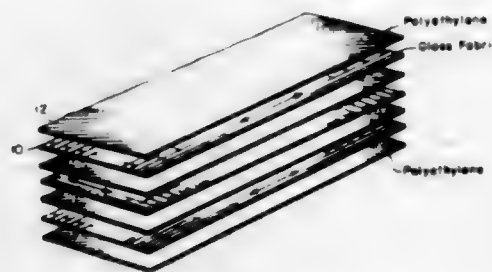
A conveyor belt comprising inner and outer plies of woven fabric, said inner ply having groups of straight, parallel cords of dimensionally stable material, filler yarns disposed above and below said cords and bound by binder yarns extending between the upper and lower filler yarns and passing between said cords, the outer plies each comprising inner and outer rows of filler yarns, chain yarns binding the filler yarns of the inner row, binder yarns binding each outer filler yarn to an inner filler yarn with the outer filler yarns free to shift longitudinally to permit flexing of the belt said inner and outer plies being mechanically independent to permit relative longitudinal displacement as the belt flexes around a pulley, and an elastomeric resin impregnating said plies and bonding the plies into a unitary structure.

3,000,772

LIGHTWEIGHT NONMETALLIC ARMOR

Richard H. Lunn, Hampton, S.C., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 30, 1956, Ser. No. 625,287
5 Claims. (Cl. 154—52.5)



3. A lightweight laminated armor plate capable of delamination under the impact of a projectile, said armor plate comprising a plurality of alternately crossed layers of fabric comprising warp of closely packed continuous glass yarn and spaced fill yarn, the number and thickness of said glass warp yarns exceeding the number and thickness of said fill yarns and a matrix of tough polyethylene embedding and bonding together the layers of fabric into a unitary member, the bond between the layers of fabric being substantially uniform throughout the member and the member being tough and flexible.

3,000,773

METHOD OF DESEALING LAMINATED OPTICAL ELEMENTS

Arthur M. Shapiro, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Oct. 22, 1959, Ser. No. 848,166
1 Claim. (Cl. 154—120)

(Granted under Title 35, U.S. Code (1952), sec. 266)

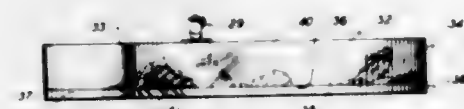
A method of descaling optical elements bonded by a cement selected from the group consisting of a polyester resin dissolved in styrene in the ratio of about 3 to 2 respectively and a polysulfide rubber, which comprises the steps of: placing said bonded elements in dimethyl sulfoxide, heating said dimethyl sulfoxide to a temperature of about 225 to 250° F. and maintaining said temperature until said bonded elements separate.

3,000,774

LAMINATED OBJECTS AND METHOD FOR FABRICATING SAME

Theodore Swedlow, 628 Alameda St., and Svend Sondergaard, 575 Stonehurst Drive, both of Altadena, Calif.

Filed May 12, 1958, Ser. No. 734,546
11 Claims. (Cl. 154—121)



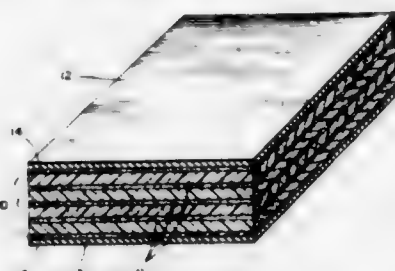
9. An article of manufacture comprising a first layer of light transmitting material, fracture interfaces therein emanating from localized areas of a face of the layer, a second pigmented adhesive layer, and a third layer adapted to cover the fractured face of the first layer, the second layer lying between the first and third layers so as to bond them together.

3,000,775

SHEATHED POLYESTER LAMINATES

Fred B. Shaw, Jr., Milwaukee, and John B. Merriam, Menomonee Falls, Wis., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Nov. 21, 1956, Ser. No. 623,578
5 Claims. (Cl. 154—139)



1. The method of preparing a laminated structure having a surface layer of linear polymeric ethylene glycol terephthalate which comprises coating a surface of a sheet of the said linear polymeric material with a bonding composition consisting of components of at least 20 percent by weight of liquid polyester with alkylene substitution, at least 18 percent by weight of monomeric diallyl ester of a dibasic organic acid, and at least 20 percent by weight of polyvinyl acetal, together with a catalyst consisting of a per-compound effective for polymerizing the composition and selected from the group consisting of peroxides, hydroperoxides and perbenzoates, in a volatile solvent for the said components; exposing the coating at a temperature for volatilization of the solvent, applying the coated surface of the said linear polymeric material to core lamination material including reinforcing material and having a saturant in and on said reinforcing material of a curable liquid polyester composition with said coating composition in contact with the core material, and heating for effecting concurrent curing of said bonding composition and said polyester composition and thereby effecting adhesion of the surface layer to the cured core lamination material.

3,000,776

APPARATUS FOR FORMING ASBESTOS-CEMENT PIPE

John H. Swensen, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Oct. 15, 1956, Ser. No. 616,052
12 Claims. (Cl. 162—122)



10. A method of forming asbestos-cement pipe comprising collecting wet asbestos-cement stock on a mandrel, contacting said stock with a press roll having a peripheral surface of resiliently compressible material roughened to provide therein a multiplicity of lands and corresponding valleys, applying pressure resiliently through said press roll and said multiplicity of lands on the peripheral surface thereof to condense the stock on the mandrel, the pressure so applied to said stock being at least about 300 lbs. per foot of pipe length.

3,000,777

METHODS OF MAKING WEBS OF FIBROUS MATERIALS

Harold Malcolm Gordon Williams, Whitechurch, England, assignor to Portals Limited, Whitechurch, England, a British company

No Drawing. Filed Dec. 16, 1957, Ser. No. 702,784
8 Claims. (Cl. 162—135)

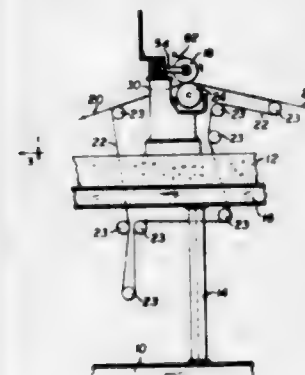
1. A method of making filter paper having high flexibility and bursting strength said paper comprising at least 50% by weight of synthetic fibre, which method comprises impregnating the fibres of the paper with a binder of an alcoholic solution of an alcohol-soluble methyl methoxy derivative of nylon and subsequently subjecting the paper to heat treatment in which the paper is heated to a temperature within the range of 100° to 160° C. in order to render the binder substantially insoluble in alcohol, the binder being present in an amount of between 5 and 20% on the weight of the fibres.

3,000,778

WET PRESS FOR PAPER MACHINE

Andrew Milton Sively, Luke, and Sheridan James McNamara, Bloomington, Md., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed July 27, 1959, Ser. No. 829,861
11 Claims. (Cl. 162—205)



1. A wet press for paper machines comprising, in combination, a nip forming press couple composed of a comparatively soft roll, a comparatively hard paper-web-engaging squeeze roll opposed thereto, an endless carrying belt of felt for the paper web, driven through the nip by the press couple, and means driving the web-engaging squeeze roll at a surface speed at least 3 to 20% over the speed at which the wet paper web is driven, the squeeze roll having a surface so slippery that picking is completely avoided by the driving of the squeeze roll at a minimum surface speed in the range of 3 to 20% over the speed at which the wet paper web is driven by the press couple.

3,000,779

INSECT COMBATANT SULFOXIDES

Lyle D. Goodhue and Rector P. Louthan, Bartlesville, and Kenneth E. Cantrel, Dewey, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,188
76 Claims. (Cl. 167—22)

1. A method of combating an insect which comprises subjecting said insect to an effective amount of a compound having the formula



wherein R₁ is selected from the group consisting of unsaturated alicyclic and acyclic hydrocarbon radicals containing at least one bond selected from the group consisting of ethylenic and acetylenic bonds and having 3-10,

inclusive, carbon atoms, wherein R₂ is selected from the group consisting of R₁, saturated and unsaturated aliphatic and alicyclic hydrocarbon radicals having 3-20, inclusive, carbon atoms, and R₂ in which a hydrogen atom is replaced by



and wherein the total number of carbon atoms in the compound is in the range 6-30.

3,000,780

FUNGICIDAL COMPOUND OF THE FORMULA C₈N₄S₂

Albert van Schoor, Traisa, near Darmstadt, and Ernst Jacobi, Siegmund Lust, Horst Flemming, and Otto Wilhelm Müller, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany

Filed Apr. 28, 1959, Ser. No. 809,481
2 Claims. (Cl. 167—33)

1. A method of controlling the growth of fungi on materials subject to fungal growth which comprises applying thereto an effective amount of a sulfur containing cyanide of the formula C₈N₄S₂ having a melting point of about 181-183° C., said compound being insoluble in water and petroleum ether but soluble in acetone, methylene chloride, chloroform, ethyl acetate, benzene and hot alcohol and the ultra violet spectrum of said compound having four distinct absorption maxima at the following wave lengths 347 mμ, 284.5 mμ, 236.5 mμ and 216 mμ and the infra red absorption spectrum of said compound being substantially in accordance with the spectrum given in the accompanying drawing.

2. A sulfur containing cyanide of the formula C₈N₄S₂ having a melting point of about 181-183° C., said compound being insoluble in water and petroleum ether but soluble in acetone, methylene chloride, chloroform, ethyl acetate, benzene and hot alcohol and the ultra violet spectrum of said compound having four distinct absorption maxima at the following wave lengths 347 mμ, 284.5 mμ, 236.5 mμ, and 216 mμ and the infra red absorption spectrum of said compound being substantially in accordance with the spectrum given in the accompanying drawing.

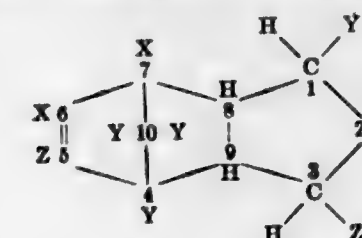
3,000,781

FLUORINE-CONTAINING OCTAHALOGENOUS ENDOMETHYLENE-TETRAHYDROPHthalANES

Hans Feichtinger, Duisburg-Beeck, and Hans-Werner Linden, Moers, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a German corporation

No Drawing. Filed July 14, 1959, Ser. No. 826,901
Claims priority, application Germany Jan. 7, 1956
11 Claims. (Cl. 167—33)

11. A method for controlling insect pests which comprises applying a compound of the formula:



in which X represents chlorine, at least one of the Y's and Z's represents fluorine, each of the other Y's and Z's is a member selected from the group consisting of chlorine and fluorine atoms, the number of fluorine atoms being from one to four, and the number of chlorine atoms being from four to seven, and always containing identical substituents at position 10 and at the positions 4 and 5, to at least one of the insects in its habitat.

3,000,782

MATERIALS FOR EMBALMING HUMAN CORPSES

Argo E. Landau, Westwood Village, Mo., Eugene C. Roberts, Belleville, Ill., and Joseph A. Zeilmann, Hillsdale, Mo., assignors to Royal Bond, Inc., St. Louis, Mo., a corporation of Missouri

Filed Apr. 18, 1958, Ser. No. 729,445

23 Claims. (Cl. 167-49.5)

1. An embalming fluid containing a tissue preservative agent and approximately 40 grams of a blood-simulative coloring material per 100 pounds of fluid, said coloring material consisting of a blend of approximately 10 grams of rose bengale, 3 grams of erythrosine, and 26 grams of tartrazine.

3,000,783

PROCESS OF STABILIZING SOLUTIONS OF CHLOROPROCAINE AND THE LIKE

Henry C. Marks, Glen Ridge, and Robert R. Joiner, Belleville, N.J., assignors to Wallace & Tiernan Inc., a corporation of Delaware

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,144

8 Claims. (Cl. 167-52)

4. A method of preparing a stable, clear aqueous solution which is to comprise water, 2-chloroprocaine hydrochloride and sodium bisulfite as an antioxidant, comprising reacting sodium sulfite and hydrochloric acid in a body of water to produce sodium bisulfite in solution, and immediately thereafter combining said solution with an aqueous solution of 2-chloroprocaine hydrochloride, said reactants, which are said sodium sulfite and said hydrochloric acid, being employed in amounts for substantially complete reaction thereof to produce sodium bisulfite in solution.

3,000,784

PHENOTHIAZINE AND WHEAT MIDDLING COMPOSITIONS

Arlie C. Todd, Shorewood Hills, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

No Drawing. Filed Nov. 22, 1957, Ser. No. 698,047

2 Claims. (Cl. 167-53)

1. A composition consisting essentially of about 1 part of phenothiazine, 1 part of a mixture of wheat middlings and molasses containing about 45-55% of wheat middlings, and about 9 parts of salt.

3,000,785

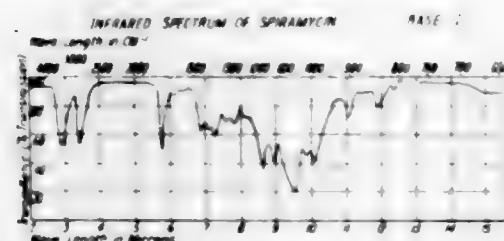
SPIRAMYCINS AND THEIR PRODUCTION

Leon Ninet, Sylvie Pinnert, and Jean Preud'homme, Paris, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

Filed Jan. 12, 1956, Ser. No. 558,753

Claims priority, application France July 31, 1953

8 Claims. (Cl. 167-65)



1. An antibiotic selected from the group of substances having the following characteristic properties:

A basic substance spiramycin I soluble in chlorinated solvents, alcohols, hexane, aromatic hydrocarbons, ketones, ethyl acetate and amyl acetate and capable of forming salts with acids, which basic substance contains the

elements carbon, hydrogen, oxygen and nitrogen in substantially the following proportions by weight:

Carbon	60.3
Hydrogen	8.7
Oxygen	28.5
Nitrogen	3.2

which basic substance displays, in ethyl alcohol solution a maximum absorption at 232 mμ,

E₁% at 232 millimicrons=322

has a molecular weight determined by the ebullioscopic method of about 800, a neutral equivalent of 463, a dissociation constant pk. b. of 7.7, a melting point on the Maquenne block of 134-137° C., has optical rotations [α]_D²⁰ in methanol (c.=1%) of -96°, in ethanol (c.=1%) of -91 and in chloroform (c.=1%) of -57°, and which in solid form exhibits characteristic absorption in the infra-red region of the spectrum at the following frequencies expressed in reciprocal centimetres: 3470 strong, 2970 strong, 2940 strong, 1735 strong, 1455 medium, 1378 medium, 1317 medium, 1275 medium, 1237 medium, 1160 strong, 1122 strong, 1090 strong, 1052 very strong, 1015 strong, 993 strong, 905 medium, 865 feeble, 840 medium, 810 feeble, 782 medium; and the acid salts of said basic substance;

A basic substance spiramycin II soluble in chlorinated solvents, alcohols, hexane, aromatic hydrocarbons, ketones, ethyl acetate and amyl acetate and capable of forming salts with acids, which basic substance contains the elements carbon, hydrogen, oxygen and nitrogen in substantially the following proportions by weight:

Carbon	61.6
Hydrogen	8.5
Oxygen	26.8
Nitrogen	3.1

which basic substance displays, in ethyl alcohol solution a maximum absorption at 232 mμ,

E₁% at 232 millimicrons=307

has a molecular weight determined by the ebullioscopic method of about 800, a neutral equivalent of 464, a dissociation constant pk. b. of 7.6, a melting point on the Maquenne block of 130-133° C., has optical rotations [α]_D²⁰ in methanol (c.=1%) of -86°, in ethanol (c.=1%) of -80° and in chloroform (c.=1%) of -55°, and which in solid form exhibits characteristic absorption in the infra-red region of the spectrum at the following frequencies expressed in reciprocal centimetres: 3460 strong, 2970 strong, 2940 strong, 1740 strong, 1457 medium, 1372 medium, 1300 medium, 1275 medium, 1232 strong, 1160 strong, 1122 strong, 1085 strong, 1052 very strong, 1015 strong, 993 strong, 940 medium, 905 medium, 860 medium, 840 medium, 810 feeble, 782 medium, 685 medium; and the acid salts of said basic substance;

A basic substance spiramycin III soluble in chlorinated solvents, alcohols, hexane, aromatic hydrocarbons, ketones, ethyl acetate and amyl acetate and capable of forming salts with acids, which basic substance contains the elements carbon, hydrogen, oxygen and nitrogen in substantially the following proportions by weight:

Carbon	61
Hydrogen	8.5
Oxygen	26.7
Nitrogen	3.0

which basic substance displays, in ethyl alcohol solution a maximum absorption at 232 mμ,

E₁% at 232 millimicrons=327

has a molecular weight determined by the ebullioscopic method of about 900, a neutral equivalent of 473, a dis-

sociation constant pk. b. of 7.6, a melting point on the Maquenne block of 128-131° C., has optical rotations [α]_D²⁰ in methanol (c.=1%) of 83°, in ethanol (c.=1%) of -79° and in chloroform (c.=1%) of -50°, and which in solid form exhibits characteristic absorption in the infra-red region of the spectrum at the following frequencies expressed in reciprocal centimetres: 3470 strong, 2970 strong, 2940 strong, 1740 strong, 1460 medium, 1380 medium, 1370 medium, 1300 medium, 1280 medium, 1240 medium, 1185 medium, 1162 strong, 1122 strong, 1085 strong, 1052 very strong, 1015 strong, 995 strong, 906 medium, 865 feeble, 842 medium, 810 medium, 782 medium, 695 feeble, 685 feeble; and the acid salts of said basic substance.

3,000,786

PROCESS FOR MAKING TETRAHYDRO-SPIRAMYCIN A

Albert Wettstein and Ernst Vlacher, Basel, and Hans Bickel, Binningen, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed June 2, 1958, Ser. No. 738,935

Claims priority, application Switzerland June 14, 1957

13 Claims. (Cl. 167-65)

1. Process for the manufacture of a hydrogenated antibiotic in unitary form named tetrahydrospiramycin A and salts thereof, wherein a member selected from the group consisting of tetrahydrospiramycin B, tetrahydrospiramycin C and tetrahydrospiramycin D and a mixture of any of tetrahydrospiramycins A, B, C and D is hydrolysed with at most 1.3 equivalents of a basic agent.

3,000,787

HEPARINOID ANTICHOLESTOLEMIC FACTOR

Pietro Bianchini, Milan, Italy, assignor to Crinos Industria Farmacobiologica S.p.A., Milan, Italy

No Drawing. Filed Nov. 4, 1958, Ser. No. 771,768

Claims priority, application Great Britain Nov. 6, 1957

3 Claims. (Cl. 167-74)

1. A method for the preparation of a heparinoid factor which comprises the steps of comminuting a mammalian duodenum suspending the comminuted material in water at pH of approximately 8, heating said suspended material for about 15 minutes at a temperature of from about 70-90° C., removing the solid residue after heating, dialysing the filtrate and precipitating said heparinoid factor in partially purified form from the dialysed filtrate at a pH of about 5 by the addition of a suitable precipitant therefor.

3,000,788

PROPAGATION OF MODIFIED INFECTIOUS CANINE HEPATITIS VIRUS IN TISSUE CULTURES OF PIG KIDNEY AND THE PREPARATION OF A VACCINE THEREFROM

Jerrell B. Emery, Zionsville, Ind., assignor, by mesne assignments, to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 15, 1958, Ser. No. 735,386

7 Claims. (Cl. 167-78)

1. A method of preparing a vaccine for immunizing dogs against infectious canine hepatitis which comprises the steps of introducing an infectious canine hepatitis virus that has been modified by about 50 serial passages in tissue cultures of dog kidney and followed by at least 10 serial passages in tissue cultures of pig kidney into a pig kidney tissue culture in a nutrient fluid which will support pig kidney tissue growth and which is non-toxic to said virus, incubating said tissue-containing nutrient fluid and allowing the virus to grow therein for a period of at least 2 days and until there has been sufficient growth of the said modified virus to produce a useful concentration thereof, and then harvesting a material

containing the virus in relatively high concentration to produce a live modified infectious canine hepatitis virus vaccine.

3,000,789

PROTEIN HYDROLYSIS

Victor H. Bertullo, Rio de la Plata 1615, A.4, and Fernando Perez Hettich, Larranaga 3972, both of Montevideo, Uruguay

No Drawing. Filed Apr. 27, 1959, Ser. No. 888,947

6 Claims. (Cl. 195-29)

1. A process for hydrolyzing proteins comprising inoculating proteinaceous material with *Saccharomyces platensis proteolytica* in the presence of a fermentable sugar and fermenting the mixture.

3,000,790

METHOD OF PRODUCING AN ATYPICALLY SALT-RESPONSIVE ALKALI-DEACETYLATED POLYSACCHARIDE

Allene R. Jeanes, Peoria, and James H. Sloneker, Minier, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 30, 1959, Ser. No. 863,054

3 Claims. (Cl. 195-31)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of preparing the substantially deacetylated derivative of the polymeric polysaccharide B-1459 comprising the steps of, under nitrogen, dissolving 0.67 parts of native polysaccharide B-1459 in 100 parts of air-free water containing 1.35 parts of potassium chloride, vigorously stirring in 34 parts of 0.20 N potassium hydroxide solution, maintaining the mixture at 25° C. for 2 hours under nitrogen, adjusting the pH to neutrality, and precipitating the deacetylated polysaccharide by adding methanol to provide a concentration thereof of 44 percent by weight, said native polysaccharide B-1459 having been precipitated by the addition of methanol and potassium chloride to provide respective concentrations of 56 percent and 2 percent thereof in a centrifuged 72-96 hour aerobic whole culture fermentation of *Xanthomonas campestris* NRRL B-1459.

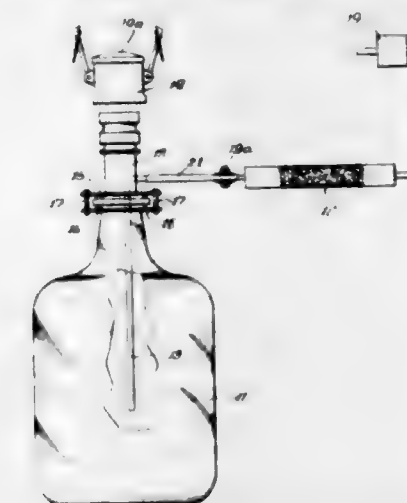
3,000,791

SPORE CULTIVATION

Leonard B. Schweiger, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

Filed Mar. 25, 1958, Ser. No. 723,906

3 Claims. (Cl. 195-36)



1. A method of preparing inocula for use in the submerged fermentation of citric acid which comprises inoculating sterilized corn bran with spores of *Aspergillus niger* in the presence of sufficient sterile water to wet the bran, and incubating the resulting mixture in the presence of air until a substantial crop of the spores has been produced.

3,000,792

ANTIBIOTIC ADSORPTION PROCESS

Robert G. Denkwalter and James Gillin, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed May 21, 1957, Ser. No. 660,467
4 Claims. (Cl. 195—80)

1. A process for recovering novobiocin from an aerated fermentation broth which comprises adding to said fermentation broth a strongly basic highly porous anion exchange resin capable of adsorbing novobiocin, allowing the fermentation to proceed in the presence of the resin for a minimum period of about 1 hour, separating said ion exchange resin, and eluting from said ion exchange resin the novobiocin adsorbed thereon.

3,000,793

PRODUCTION OF COBALAMINS

Lloyd E. McDaniel, Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Continuation of application Ser. No. 512,875, June 2, 1955. This application Jan. 22, 1957, Ser. No. 635,087
5 Claims. (Cl. 195—114)

3. In a bacteriological process for synthesizing cobalamins by fermenting a nutrient medium by means of a LLD activity-producing strain of *Pseudomonas denitrificans*, the step of adding 5,6-dimethylbenzimidazole.

3,000,794

EXTRACTIVE DISTILLATION OF VINYL ACETYLENE IN THE PURIFICATION OF BUTADIENE
Lloyd D. Tschopp, Houston, Tex., assignor to Petro-Tex Chemical Corporation, Houston, Tex., a corporation of Delaware
Filed May 19, 1958, Ser. No. 735,970
10 Claims. (Cl. 202—39.5)



1. A method for preparing high purity butadiene containing a small amount of vinyl acetylene which comprises fractionally distilling in a fractional distillation zone a mixture of hydrocarbons containing a substantial portion of butadiene and vinyl acetylene as an impurity, withdrawing a side stream from said fractional distillation zone of said hydrocarbon mixture containing a higher concentration of vinyl acetylene than the vinyl acetylene content of the total hydrocarbon mixture being fractionally distilled, extractively distilling said side stream with a polar solvent for the vinyl acetylene under conditions such that at least a portion of said vinyl acetylene is extracted from the hydrocarbon mixture, and returning the overhead, which is the extractively distilled hydrocarbon mixture, containing reduced vinyl acetylene to said fractional distillation zone and removing the butadiene-1,3 overhead from said fractional distillation zone.

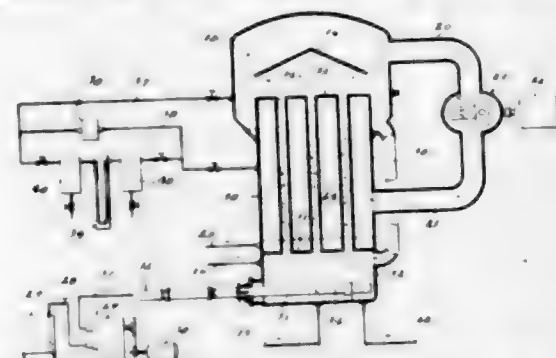
3,000,795

ACID FEED TREATMENT

Richard W. Goeldner, Milwaukee, Wis., assignor, by mesne assignments, to Aqua-Chem, Inc., Waukesha, Wis., a corporation of Wisconsin
Filed Feb. 29, 1956, Ser. No. 568,578
4 Claims. (Cl. 202—57)

1. The method of controlling scale formation within a vapor compression distilling metal apparatus in order to permit generally constant distillate output from the

apparatus, comprising the steps feeding an anti-scaling acidic material capable of hydrolyzing calcium carbonate and magnesium hydroxide into boiling solution within the distilling apparatus, varying the rate of said feeding to increase the same with increase of scale formation



in excess of a predetermined scale condition upon heated metal surfaces within the apparatus by controlling the rate of said feeding in response to pressure difference across the vapor compressor of said apparatus to provide increase of said feed upon increase of scale formation in excess of said predetermined scale condition.

3,000,796

PROCESS FOR INHIBITING THE POLYMERIZATION OF α -CHLORACRYLATE ESTERS

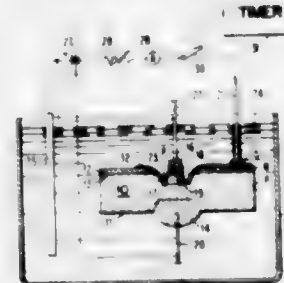
Harry D. Anspen, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 3, 1957, Ser. No. 650,306
7 Claims. (Cl. 202—57)

1. A process for purifying a liquid ester of α -chloroacrylic acid which comprises distilling said ester and contacting the distillate in a fractionation zone with copper oxide.

3,000,797

METHOD OF SELECTIVELY PLATING PN JUNCTION DEVICES

Sol Gilman, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 1, 1959, Ser. No. 810,441
2 Claims. (Cl. 204—15)



1. The method of selectively plating a transistor of semiconductor material which includes in succession a collector region, a rectification barrier, a diffused base region, a rectification barrier, and an emitter region comprising: exposing said transistor to the influence of a metal plating solution while simultaneously applying selected potentials which maintain said base region (a) cathodic with respect to an electrode immersed in said solution and (b) more cathodic by an adjustable amount with respect to said emitter region than it is with respect to said collector region, whereby the flow of plating current for an interval of time is ineffective to plate with said metal of said solution said collector and emitter regions and said barriers but is effective to plate with said metal an area of said base region having a size which is controllable by the selected potential difference appearing between said base region and said electrode and also by the selected potential difference between said emitter and collector regions.

3,000,798

ELECTRICAL CONTACT TO SEMICONDUCTOR BODY

Stanley Pessok, Rolling Hills, and Manlio B. Melillo, Inglewood, Calif., assignors to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed June 9, 1959, Ser. No. 819,142
2 Claims. (Cl. 204—15)

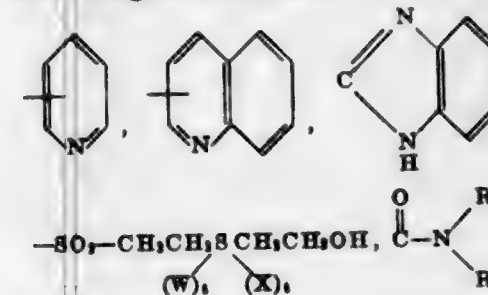
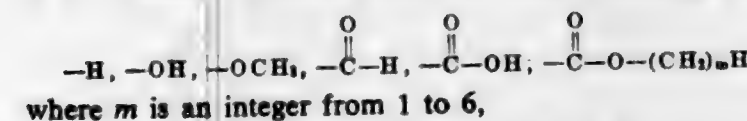
1. The method of depositing a conducting metal upon a predetermined portion of a body of semiconductive material including the steps of: wetting the semiconductive body with an aqueous solution of argentous fluoride to thereby deposit upon said body a coating of silver, said solution consisting of one part of argentous fluoride to from about 60 to 250 parts of distilled water, the temperature of said solution being maintained in the range from 50° C. to 60° C.; removing said coating of silver from all but a first predetermined portion of the surface of said body; contacting an electrode to said coating of silver; and thereafter electroplating a conducting metal upon a second surface of said body opposite said first surface upon which said silver coating is deposited in accordance with the pattern of said coating of silver.

3,000,799

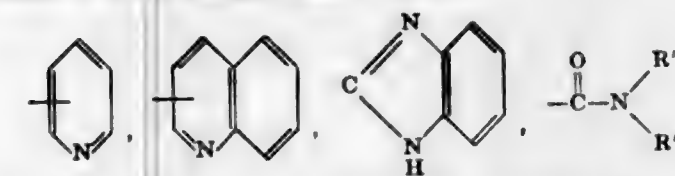
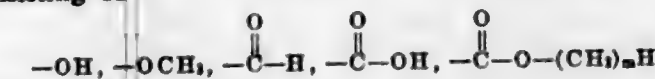
NICKEL PLATING SOLUTIONS

Jack L. Towle, Cleveland, Ohio, assignor to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Feb. 10, 1960, Ser. No. 7,783
12 Claims. (Cl. 204—49)

1. An aqueous acid nickel plating solution comprising a source of nickel ions selected from the class consisting of nickel sulfate, nickel chloride and mixtures thereof, said solution also containing cooperating additives for enhancing the brightness of nickel deposits produced therein, one of said additives being chosen from the class consisting of aromatic sulfonates, aromatic sulfonamides, aromatic sulfimides, aliphatic sulfonates and sulfonic acids and the second being chosen from the class of compounds having the formula $R-(CH_2)_n-S(CH_2)_m-R'$, where n is an integer from 1 to 6, m is an integer from 1 to 6, R is a member selected from the group consisting of



where W is a hydrocarbon radical, X is an acidic radical selected from the group consisting of sulfate, sulfonate, halide and perchlorate radicals, and r is an integer from 0 to 1 inclusive, where R'' and R''' are independently selected from the group consisting of hydrocarbon radicals and hydrogen; R' is a member selected from the group consisting of



where R'' and R''' are independently selected from the group consisting of hydrocarbon radicals and hydrogen; R' is a member selected from the group consisting of

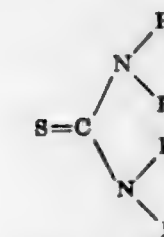
group consisting of hydrocarbon radicals and hydrogen wherein said second mentioned additive is present in solution in concentrations of from 0.0025 to 0.075 gram per liter, and said first mentioned additive being present in solution in concentrations of from 0.05 to 20 grams per liter.

3,000,800

COPPER-ELECTROPLATING BATHS

Wenemar Strauss and Hans Wedell, both of Dusseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany
No Drawing. Filed Apr. 14, 1958, Ser. No. 728,033
Claims priority, application Germany Apr. 16, 1957
14 Claims. (Cl. 204—52)

1. A process for producing a smooth, bright copper electroplate on a rough surface metal base from acidic copper plating baths containing a sulfonic acid brightening agent having a carbon atom linked exclusively to heteroatoms, said carbon atom being further linked through a sulfur atom to a lower aliphatic chain which carries the sulfonic radical which comprises adding to said bath a derivative of thiourea as a smoothing agent of the formula

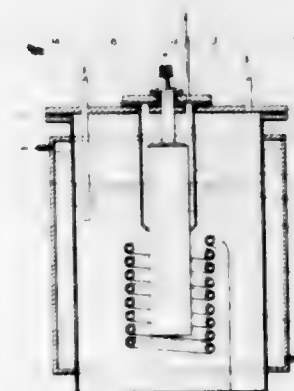


wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, alkyl, aryl, aralkyl, cycloalkyl, hydroxyalkyl, hydroxyaryl, and hydroxyalkoxyalkyl radicals, at least one of R_1 through R_4 not being hydrogen, said smoothing agent being added in sufficient amount to effect said smoothing of the copper plate.

3,000,801

PROCESS FOR THE ELECTROLYTIC PRODUCTION OF FLUORINE

Albert Davies and Alfred John Rudge, Widnes, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed July 15, 1959, Ser. No. 827,402
Claims priority, application Great Britain July 30, 1958
8 Claims. (Cl. 204—60)



1. A method of producing fluorine by electrolysis in a cell having an electrically-conductive body, at a substantially vertical gas-permeable carbon anode, the upper portion of which is surrounded by, but out of contact with, a gas impermeable barrier and the lower portion of which is adjacent a cathode, which comprises placing in the cell an electrolyte composition containing about 1 part potassium fluoride and about 1.8 to 2.2 parts hydro-

gen fluoride, maintaining the composition at a temperature of 80 to 110° C., passing electric current between the anode and the cathode and internally cooling said cathode by passing cooling medium therethrough.

3,000,802

CONTROL OF NUCLEAR REACTIONS

David K. Worn, Solihull, England, and Ralph E. Battress, Glasgow, Scotland, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 16, 1958, Ser. No. 780,686
Claims priority, application Great Britain Jan. 3, 1958
13 Claims. (Cl. 204—154.2)

1. The method for producing a composite neutron-absorbing device in tubular form which comprises assembling in substantially concentric relation tubes made of corrosion resistant metal such that an annular space is provided therebetween, packing said annular space with a mixture of powdered neutron-absorbing material having a particle size between about 60 and about 200 mesh and a metal powder from the group consisting of nickel, copper and iron, subjecting the resulting assembly to at least one cold working operation and at least one annealing operation subsequent to said cold working operation to compact and bond together said powder mixture, whereby a tubular neutron-absorbing device is obtained having a neutron-absorbing phase substantially uniformly dispersed through a metal matrix which is clad on both the interior and exterior faces with corrosion resistant metal and which is produced to close dimensional tolerance.

ERRATUM

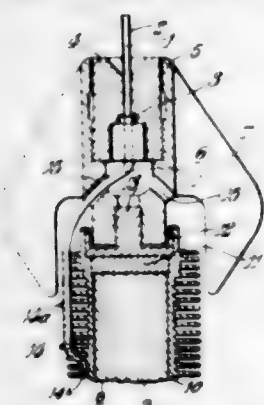
For Class 204—193.2 see:
Patent No. 3,000,728

3,000,803

THERMOCOUPLE CABLE ARRANGEMENTS

Harry Morris, Sale, and Herbert Chilvers Knights, Meebrow, Risley, Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed June 24, 1957, Ser. No. 667,352
Claims priority, application Great Britain June 23, 1956
2 Claims. (Cl. 204—193.2)



1. In combination with a fuel element and a thermocouple cable associated with said fuel element, apparatus for remotely inserting into and removing from a charge tube said fuel element along with said thermocouple cable comprising means coupled to said fuel element for transmitting the load during the inserting and removing operation, said thermocouple cable extending from said fuel element in non-load bearing engagement within said load transmitting means and terminating with a portion thereof extending outside said load transmitting means, and means for inserting and removing said fuel element along with said thermocouple cable including a first coupling detachably coupled to said load transmitting means and a flexible load bearing tube connected to said first coupling and having said terminal portion of the thermocouple cable extending therewithin a second coupling to which the flexible load bearing tube is connected, said first and second couplings being connected at opposite ends of said flexible load bearing tube, and a third coupling having a lifting cable connected therewith, said second and third couplings being detachably coupled together.

plunging and having said terminal portion of the thermocouple cable extending therewithin a second coupling to which the flexible load bearing tube is connected, said first and second couplings being connected at opposite ends of said flexible load bearing tube, and a third coupling having a lifting cable connected therewith, said second and third couplings being detachably coupled together.

3,000,804

REFERENCE HALF-CELL

Nelson C. Caboon, Fairview Park, and John P. Oliver, Berea, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed May 22, 1958, Ser. No. 737,013
18 Claims. (Cl. 204—195)



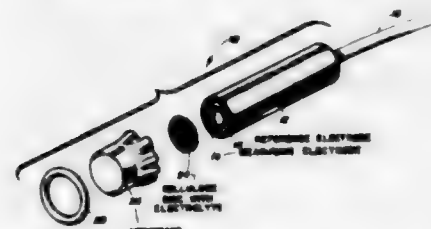
1. A reference half-cell for measuring electric potentials comprising at least one electrode and an immobilized electrolyte at least partially composed of a salt of said electrode material, said electrode and said electrolyte being in physical contact and being encased in a substantially impervious, insulating, break-resistant container, said container having conduit means extending therethrough filled with additional immobilized electrolyte which additional electrolyte is in electrical contact with said electrolyte and which additional electrolyte is exposed through said conduit means at a point external to said container, said exposed additional immobilized electrolyte forming a salt bridge for contacting a material, the electric potential of which is sought, said electrode and said electrolyte each being attached to separate conductive connections, said half-cell being characterized by its substantially constant reference potential, low temperature coefficient of voltage, corrosion resistance and by its ability to avoid diffusion of electrolyte containing a salt of a metal which will plate out on said material.

3,000,805

ELECTRODE MEASURING DEVICE

Dayton E. Carritt, 635 Colorado Ave., Baltimore, Md., and John W. Kanwisher, Box 234, Woods Hole, Mass., assignors of twenty percent to Walter G. Finch, Baltimore, Md.

Filed Aug. 30, 1957, Ser. No. 681,292
12 Claims. (Cl. 204—195)



1. A device for determining the content of dissolved reducible gas in a solution composed of at least one

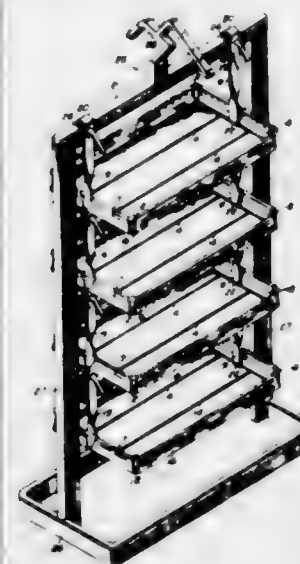
reducible gas in a liquid, comprising, electrolytic cell means including a pair of spaced electrodes, one of said spaced electrodes being a reference electrode and the other a measuring electrode, an alkaline electrolyte bridging said spaced electrodes, said electrolyte having a constituent identical with the substance formed at the measuring electrode and consumed in chemically equivalent quantity at the reference electrode of said spaced electrodes, a membrane for encasing said spaced electrodes and said electrolyte and for separating from solution said dissolved reducible gas in said solution from said dissolved salts in the same solution, said membrane being gas permeable to said dissolved reducible gas in said solution but non-permeable to said dissolved salts in said solution, and an electric circuit including a source of potential for said spaced electrodes and a temperature compensating device electrically associated with said electrolytic cell means for abetting and detecting an electrical change in said electrolytic cell means resulting from the reduction of the dissolved reducible gas which passes through said membrane into said electrolytic cell means, with said temperature compensating device compensating for changes in temperature in the environment of said membrane.

3,000,806

ELECTROPLATING BASKET AND CARRIER ASSEMBLY

George J. Marotta, North Reading, and Lloyd S. Ray, East Haverhill, Mass., and Arthur R. Swenson, Hampton, N.H., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 2, 1959, Ser. No. 803,706
2 Claims. (Cl. 204—297)



1. In a plating system, the combination of a carrier and a plurality of baskets supported thereon, each basket comprising an open frame, a taut porous fabric of insulating material impervious to the solution covering the frame and constituting the sole support for parts placed in the basket while permitting the solution to have full access to substantially all the surfaces of the parts while the parts remain in a fixed position on the fabric during the plating operation, a conductor connected to the frame and extending along the bottom surface of the basket and being of such small dimension as to produce substantially no shielding on the parts in electrical contact therewith, metal supporting hooks having an uninsulated inner surface and insulated portions attached to the frame, the carrier comprising an insulated base, a pair of insulated upwardly extending supports mounted on the base, a plurality of insulated lateral members disposed between the supports and connected thereto, each member having uninsulated contacting areas in contact with the uninsulated inner sur-

faces of the hook portions for the passage of current therethrough, and means for supporting the carrier and passing therethrough current to parts in baskets supported on the lateral members.

3,000,807

BLENDED TRANSFORMER OIL

Jones I. Wasson, Union, and James E. Kehoe, Clark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 4, 1958, Ser. No. 778,085
6 Claims. (Cl. 208—14)

1. An improved transformer oil having, when tested in the absence of inhibitors in the Doble oxidation test for electrical insulating oils, an interfacial tension of at least 15 dynes per centimeter, a neutralization number less than 0.2, and less than a trace of sludge after 48 hours, consisting essentially of a blend of 50-80 volume percent of a hydrofined oil boiling in the range of 460° to 775° F., having an API gravity in the range of 27° to 30°, a viscosity at 100° F. in the range of about 55 to 60 SSU and 50-20 volume percent of an acid-treated oil boiling in the range of 460° to 775° F. having an API gravity in the range of 27° to 30°, a viscosity at 100° F. in the range of 55 to 60 SSU; said hydrofined oil being produced by contacting a distillate boiling in the range of 450° to 900° F. from a naphthenic crude with a hydrofining catalyst at a temperature in the range of 550° to 650° F. and a feed rate in the range of 1 to 3 v./v./hr. in the presence of about 500 to 900 s.c.f./bbl. of free hydrogen, followed by treating the oil so hydrofined with in the range of 0.6 to 1 lb./gal. of an absorbent clay at a temperature in the range of 250° to 300° F., and said acid-treated oil being produced by treating at a temperature in the range of 85 to 105° F. a distillate boiling in the range of 450° to 900° F. from a naphthenic crude with 0.5 to 1.0 lb./gal. of sulfuric acid having a concentration in the range of 96-105% and recovering the acid treated oil in yields in the range of 97 to 98 volume percent and further treating it by neutralization, steaming and clay percolation within the range of 0.6 to 1.0 lb./gal. of an absorbent clay at a temperature in the range of 80° to 105° F.

3,000,808

PETROLEUM-BASED AMORPHOUS COMPOSITIONS

Harry Roden, Fort Neches, Tex., assignor to Texaco Inc., a corporation of Delaware
No Drawing. Filed May 20, 1957, Ser. No. 660,427
13 Claims. (Cl. 208—23)

1. An amorphous composition comprising oxidized macrocrystalline paraffin wax having naphtha solubility not substantially above 40% and heavy asphaltic petroleum residuum selected from the group consisting of solid asphalt and viscous liquid residuum reducible to asphalt in a weight ratio of said oxidized wax: said heavy petroleum residuum from about 0.1:1 to about 4:1, said oxidized wax and said petroleum residuum mixed under stripping conditions at a temperature from about 450° F. to about 530° F.

3,000,809

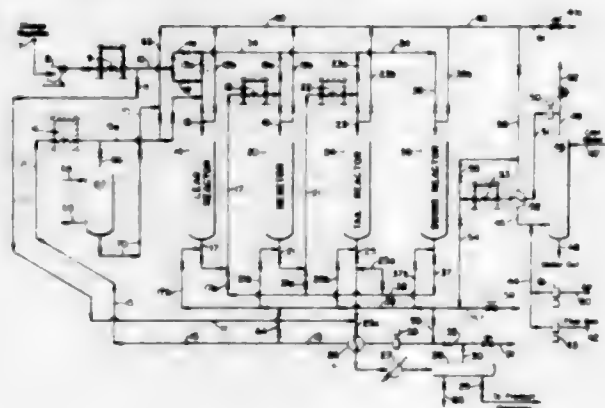
AVOIDING HEAT-FRONT DAMAGE IN PLATINUM CATALYST REFORMING

John A. Ridgway, Jr., Texas City, and William F. Curran, Jr., Galveston, Tex., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 1, 1958, Ser. No. 777,439
12 Claims. (Cl. 208—65)

1. In a platinum-catalyst naphtha reforming system including lead, intermediate, and tail reaction zones, a gas-separation zone, a compression zone for recycling hy-

drogen-rich separated gas, said separated gas containing hydrocarbons having more than one carbon atom per molecule, a method of bringing a reaction zone containing platinum catalyst on stream at reforming temperatures during operation of the reforming system which comprises purging said reaction zone with flue gas to remove oxygen therefrom; purging said reaction zone with a hydrocracking-resistant gas prepared by contact-

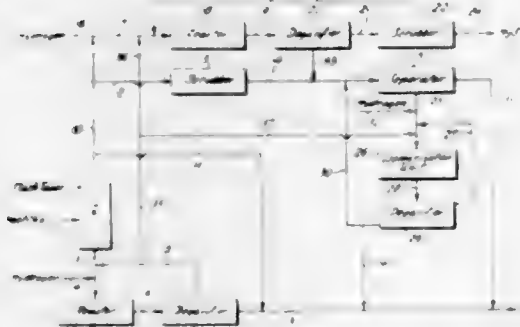


ing in a separate cracking zone at least a portion of said separated gas at least intermittently with a cracking catalyst and under conditions effective for cracking hydrocarbons in said separated gas to methane, whereby the resulting contacted gas contains substantially no hydrocarbons having more than one carbon atom per molecule; pressuring up said reaction zone to about reforming pressure; and introducing naphtha vapors therein.

3,000,810

UPGRADING A NAPHTHA BY SEPARATION INTO TWO FRACTIONS AND SEPARATE TREATMENT OF EACH FRACTION

Edward R. Christensen, Beacon, Jack Ryer, Wappingers Falls, and Howard V. Hess, Glenham, N.Y., assignors to Texaco Inc., a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,732
4 Claims. (Cl. 208-79)



1. A process for upgrading a naphtha which comprises separating said naphtha into a light fraction having a final boiling point between 200° F. and 280° F. and a heavy fraction having an initial boiling point between 200° F. and 280° F., contacting the heavy fraction with a catalyst comprising zinc oxide and zinc chromite and containing between about 10 and 90% zinc oxide based on the combined weights of zinc oxide and zinc chromite at a temperature between about 900-1050° F., a pressure between about 400 and 600 p.s.i.g. in the presence of added hydrogen to effect the substantial saturation of olefins present in said heavy fraction and to effect the substantial production of aromatic hydrocarbons, desulfurizing the light naphtha fraction, introducing the desulfurized light naphtha fraction to a separation zone wherein straight chain hydrocarbons are separated from non-straight chain hydrocarbons, combining the separated non-straight chain hydrocarbons with the treated heavy fraction, contacting the straight chain hydrocarbons in

an isomerization zone with an isomerization catalyst and returning the products of said isomerization zone to said separation zone.

3,000,811

CONVERSION PROCESS

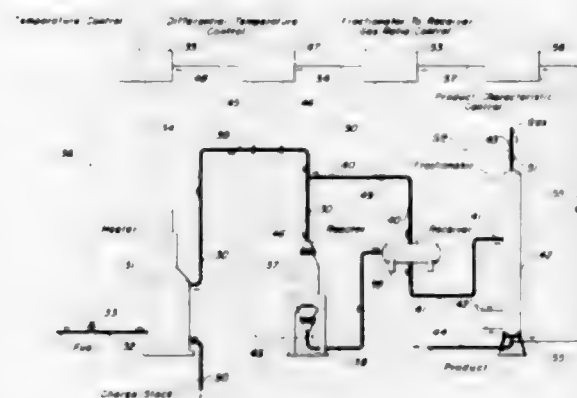
Maurice J. Murray, Palatine, and Howard A. Plagge, Mount Prospect, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Apr. 28, 1958, Ser. No. 731,110
5 Claims. (Cl. 208-90)

1. The method of converting an arsenic-containing naphtha distillate charge which comprises contacting said charge, prior to conversion treatment thereof, with sulfuric acid at a temperature of from about atmospheric to about 200° F. to remove arsenic from the charge, separating therefrom a charge fraction having an arsenic content of less than 0.05 part per million and less than that of said charge, and subjecting said charge fraction to conversion in the presence of a catalyst comprising a noble metal.

3,000,812

METHOD FOR CONTROLLING A PROCESS SUCH AS THE REFORMING OF LOW OCTANE NAPHTHAS

David M. Boyd, Jr., Clarendon Hills, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Dec. 20, 1956, Ser. No. 629,731
6 Claims. (Cl. 208-138)



6. In a continuous hydrocarbon reforming process wherein a hydrocarbonaceous charge is passed through a reforming zone at reforming conditions and a product stream is separated from the resulting reformed charge, said reforming process comprising a series of at least three separate hydrocarbon processing zones including said reforming zone and each of said zones having at least one hydrocarbon input stream and at least one hydrocarbon output stream, a hydrocarbon output stream of each zone excepting the last of said series comprising an input stream to the next succeeding zone and a hydrocarbon output stream of said last zone constituting said product stream whereby a change in a significant processing condition of a hydrocarbon input stream to the first zone of said series is manifested first in a change in a first stream property of a first zone hydrocarbon output stream and successively later in a change in a stream property of a hydrocarbon output stream of each succeeding zone, the method of controlling a stream property of said product stream which comprises producing a reference signal corresponding to the desired magnitude of said product stream property, producing a first control signal responsive both to said reference signal and to the actual magnitude of said product stream property, producing a second control signal responsive both to said first control signal and to the magnitude of a stream property of a hydrocarbon output stream from a zone other than said first and last zones, producing a third

control signal responsive both to said second control signal and to the magnitude of said first stream property, and varying said significant processing condition in response to said third control signal.

3,000,813

PLATINUM REFORMING CATALYST AND PROCESS FOR PREPARING THE SAME

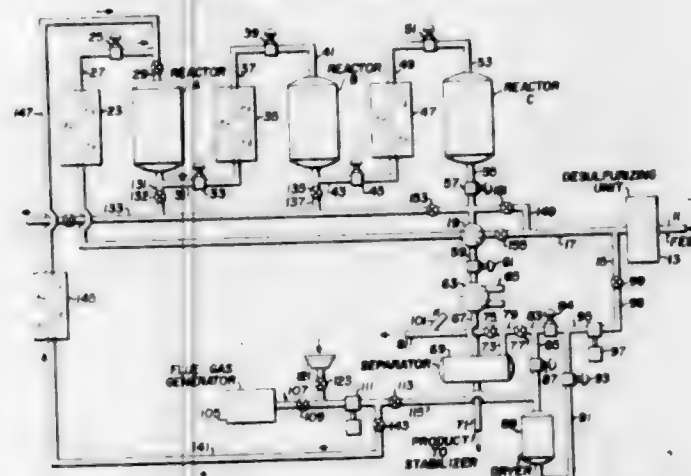
Malden W. Michael, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 8, 1958, Ser. No. 765,942
4 Claims. (Cl. 208-139)

4. A process for reforming petroleum hydrocarbons under reforming conditions with a platinum-alumina catalyst characterized by improved crush strength retention properties and containing from between 0.05 and 1% of platinum and from between about 0.25 and about 2.5% of aluminum chloride on the dry weight of the catalyst, said catalyst being prepared by impregnating a dry aged alumina capable of being converted to eta alumina upon calcination with a platinum containing compound and aluminum chloride and thereafter pelletizing the resulting mixture and calcining the pellets.

3,000,814

PROCESS FOR REFORMING HYDROCARBONS

Charles E. Hemminger, Westfield, Donald D. MacLaren, Scotch Plains, and Albert B. Welty, Jr., Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 18, 1955, Ser. No. 522,492
2 Claims. (Cl. 208-140)



1. A semi-regenerative process for improving the octane rating of hydrocarbons of the naphtha boiling range by hydroforming them to levels of about 95 Research octane number, which comprises, in combination, the steps of desulfurizing said hydrocarbons to a sulfur content not substantially greater than 0.002% by weight, preheating the desulfurized naphtha feed and a stream of hydrogen-containing gas so that the feed and gas together attain an inlet temperature of at least 910° F., passing the feed and gas at a pressure of about 400 p.s.i.g. over a first stage catalyst consisting primarily of platinum supported on an alumina, to cause some conversion and endothermic reaction, reheating the effluent from the first stage catalyst to the same inlet temperature and passing it over at least an additional stage of similar catalyst, whereby the catalyst gradually accumulates carbon and loses activity in all stages, gradually raising the inlet temperature of the feed and gas to compensate for such loss of activity until an inlet temperature of about 960° to 975° F. has been reached, then cutting off the feed, purging with the first-mentioned gas, cutting off the first-mentioned gas, purging with an inert gas substantially free of carbon oxides, feeding a gas containing 1 to 2 mole percent of oxygen through said catalyst stages in series until said carbon is sub-

stantially removed from the catalyst, then feeding dry gas containing 5 to 20 mole percent of oxygen and preheated to 850 to 1100° F. through said catalyst stages in series for an extended period to rejuvenate said catalyst and substantially improve its activity, and recycling rejuvenation effluent gas through a drier back to the reactors.

3,000,815

PROCESS FOR THE HYDROGENATION OF A KEROSENE TYPE FUEL

Stanley C. Haney, Harvey, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 22, 1959, Ser. No. 847,903
2 Claims. (Cl. 208-144)

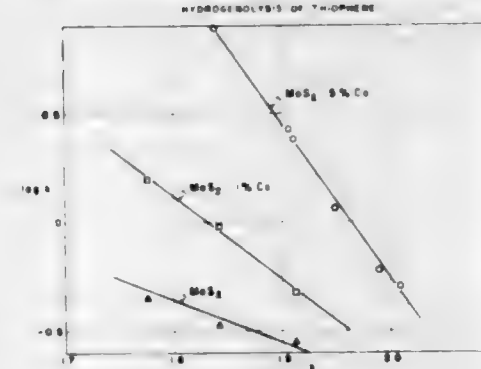
1. A process for the production of a fuel of improved burning qualities when burned in a gas turbine engine which comprises contacting a straight run kerosene type petroleum distillate fraction with a cobalt-molybdate supported on alumina catalyst at a temperature within the range from about 620° F. to 670° F., a pressure within the range from about 450 p.s.i.g. to 750 p.s.i.g. and at a weight hourly space velocity within the range from about 0.1 to 1.0 while in admixture with hydrogen fed in amount within the range from 1500 to 4000 standard cubic feet per barrel of said distillate fraction whereby the luminosity number of said fraction is increased at least 8.

2. The process of claim 1 in which the distillate fraction has an initial boiling point within the range from 275° F. to 400° F. and an end point within the range from 450° F. to 600° F.

3,000,816

DESULFURIZATION WITH A MODIFIED MOLYBDENUM DISULFIDE CATALYST

Lionie W. Vernon and James T. Richardson, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed June 24, 1959, Ser. No. 822,651
10 Claims. (Cl. 208-216)



3. A process for the desulfurization of a sulfur containing hydrocarbon feed stock which comprises contacting said feed stock in the presence of added hydrogen under hydrodesulfurization conditions with a modified molybdenum disulfide comprising hexagonal crystalline molybdenum disulfide having from 1 to 10 percent of the molybdenum atoms of the crystalline molybdenum disulfide replaced with lowerervalent metal atoms.

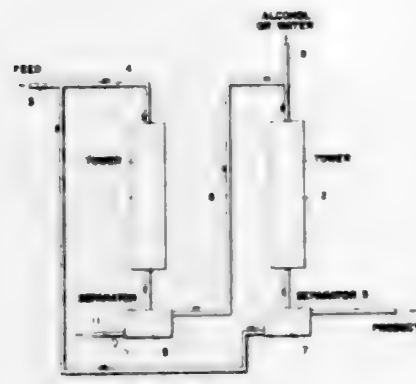
3,000,817

METHOD OF SWEETENING PETROLEUM DISTILLATE

Paul E. E. De Rycke and Jacques M. L. Rombaut, Antwerp, Belgium, assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,013
Claims priority, application Belgium Mar. 26, 1958
13 Claims. (Cl. 208-232)

1. A process for removing sulfur impurities from a petroleum distillate which comprises adjusting the com-

position of said distillate whereby said distillate contains in the range of about 0.01 to 5.0 wt. percent of a compound selected from the group consisting of water and C_1 to C_4 alcohols, passing said distillate over a fixed bed



of a solid alkali metal hydroxide selected from the group consisting of potassium hydroxide, sodium hydroxide and mixtures thereof, and recovering a petroleum distillate reduced in sulfur impurities.

3,000,818

WELL COMPLETION AND WORKOVER FLUID
Robert H. Abbott, Jr., Houma, La., assignor to Texaco Inc., a corporation of Delaware
No Drawing. Filed Sept. 18, 1958, Ser. No. 761,698
7 Claims. (Cl. 252-8.55)

1. A well completion and workover fluid consisting essentially of an aqueous solution substantially free from suspended and colloidal solids, said aqueous solution being substantially saturated with calcium hydroxide and containing dissolved therein a water-soluble calcium salt having a solubility in water greater than that of calcium hydroxide in an amount sufficient to yield a total calcium ion concentration in excess of 200 but below 2,000 parts per million by weight, and having dissolved therein a substantial amount up to the point of saturation of a water-soluble alkali metal compound compatible and non-reactive with said aqueous phase to materially increase the specific gravity of said aqueous solution, said compound being selected from the group consisting of the alkali metal nitrates, nitrites, chlorates, acetates, citrates, potassium chloride and lithium chloride, said solution having a pH in the range of 10.2 to 12.6 and an alkalinity above 0.70 cc. of N/50 sulphuric acid per cc. of solution to phenolphthalein end point, the said fluid being effective to solidify and harden shaley and bentonitic type material in contact therewith in spite of the high alkali metal ion concentration thereof.

3,000,819

FINELY DIVIDED METAL SALTS AS ANTI-OXIDANTS FOR OILS AND GREASES
James H. Norton, Corunna, Ontario, and Lorne W. Sproule, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Jan. 11, 1954, Ser. No. 403,432
6 Claims. (Cl. 252-25)

1. In the method of inhibiting an oil selected from the group consisting of mineral and synthetic ester oils of lubricating grade by dispersing therein an oxidation inhibiting mildly alkaline polyalkali-metal phosphate salt which is insoluble in said oil, an improved method of dispersing said salt which comprises slowly adding to said oil in a dry undissolved solid state a crystallized hydrate of said salt containing in the range of 6 to 12 moles of water of crystallization per mole of hydrate, at a tempera-

ture 50 to 400° F. higher than the dehydration temperature of said hydrate to dehydrate and disintegrate said hydrate.

3,000,820

THIXOTROPIC OLEAGINOUS COMPOSITIONS CONTAINING THE REACTION PRODUCT OF AN ABIETYL AMINE AND AN ORGANIC PHOSPHATE

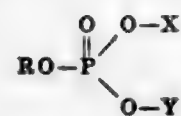
Roy J. Eisenhower, Chicago, Ill., and Stephen J. Zajac, Whiting, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,418
15 Claims. (Cl. 252-32.5)

1. A thixotropic oleaginous composition comprising a major amount of an oleaginous base and a minor amount of the reaction product formed by reacting an abietyl amine with an organic phosphate selected from the class consisting of dialkyl phosphate, diaryl phosphates and alkyl aryl phosphates having from about 1 to about 20 carbon atoms in each alkyl and aryl substituent and a fatty acid having from about 10 to about 18 carbon atoms at a temperature in the range of from at least about 80° F. and less than about 190° F., said minor amount being effective in imparting thixotropy to said composition.

3,000,821

GREASE COMPOSITION CONTAINING LITHIUM SALT OF AN ESTER OF AN ACID PHOSPHATE
Francesco Giovanni Bonmartini, Elizabeth, N.J., and Warren C. Pattenden, Moorestown, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 24, 1959, Ser. No. 822,436
6 Claims. (Cl. 252-32.5)

1. A lubricating grease composition having an ASTM penetration of 100 to 350 mm./10 when worked 60 strokes at 77° F. and having a dropping point of about 400° F. to 500+° F. comprising a major proportion of a lubricating oil and about 10 to 30 wt. percent of a lithium salt of an ester of an acid phosphate which contains a total of 2 to 10 carbon atoms having the formula

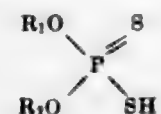


wherein R is a C_2 to C_6 aliphatic hydrocarbon radical, Y is lithium, and X is selected from the group consisting of R, hydrogen and lithium.

3,000,822

PHOSPHORODITHIOATE INHIBITORS
William A. Higgins and William M. Le Sueur, Cleveland, Ohio, assignors to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
No Drawing. Filed Jan. 22, 1957, Ser. No. 635,102
7 Claims. (Cl. 252-32.7)

1. The zinc salts of a mixture of phosphorodithioic acids having the structure



in which R_1 and R_2 are selected from the class consisting of lower molecular weight primary aliphatic hydrocarbon radicals having less than five carbon atoms and higher molecular weight primary aliphatic hydrocarbon radicals having at least five carbon atoms, the mole ratio of lower molecular weight radicals to higher molecular weight radicals in the zinc salt mixture being within the range of 1:1 to 3:1.

3,000,823

PREPARATION OF LUBRICATING GREASES FROM UNSATURATED FATTY ACID MATERIALS
Louis A. Clarke, Fishkill, and George W. Eckert, Glenham, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Mar. 7, 1955, Ser. No. 492,766
11 Claims. (Cl. 252-35)

1. The method of preparing lubricating greases from unsaturated fatty acid materials as the saponifiable materials which comprises epoxidizing an unsaturated fatty acid material of the class consisting of high molecular weight fatty acids containing an olefinic double bond and the esters thereof so as to convert at least a major portion of the olefinic double bonds into oxirane groups, hydrogenating the resulting epoxidized material under mild conditions so as to convert at least a major portion of the oxirane groups into hydroxyethane groups, saponifying with a metal compound the resulting hydrogenated product and thickening an oleaginous liquid lubricating base to a grease consistency with the resulting saponification product.

3,000,824

LUBRICATING OIL COMPOSITION
Arnold J. Morway, Clark, and John J. Koffenbach, North Plainfield, N.J., and John O. Smith, Jr., Swampscott, Mass., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 13, 1957, Ser. No. 696,047
4 Claims. (Cl. 252-40.7)

1. A lubricating oil composition suitable for use in the crankcase of internal combustion engines, comprising a major proportion of mineral lubricating oil, about 2.5 to 8.0 weight percent of a dehydrated alkaline earth metal mixed salt of C_7 - C_8 fatty acid and a C_7 - C_{12} fatty acid in a molar ratio of about 2.5 to 20 moles of said C_7 - C_8 fatty acid per mole of said C_7 - C_{12} fatty acid, about 1 to 5 weight percent of a C_{14} to C_{24} tertiary alkyl primary amine, and about 0.5 to 5 wt. percent of a material selected from the group consisting of alkoxypolyalkyleneoxy mono- and diesters of phosphoric acid and mixtures thereof, wherein said alkoxy group contains 2 to 10 carbon atoms, said alkyleneoxy group contains 2 to 4 carbon atoms and the number of alkyleneoxy groups per ester group is about 8 to 18.

3,000,825

LUBRICANTS CONTAINING METAL SALTS OF OXONATED POLYMERS
Graham G. Wanless, Westfield, Arnold J. Morway, Clark, Jeffrey H. Bartlett, New Providence, and Clifford W. Muenig, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 23, 1958, Ser. No. 782,372
8 Claims. (Cl. 252-41)

1. A lubricating oil composition comprising a major amount of lubricating oil and a thickening amount of alkali metal salt formed by the alkali fusion of an oxonated polymer of a C_3 to C_{20} aliphatic olefin, said polymer having a molecular weight of about 500 to 10,000 and said oxonated polymer having been prepared by reacting said polymer with carbon monoxide and hydrogen at a temperature of about 200 to 400° F. and a pressure of about 30 to 400 atmospheres, the volume of hydrogen per volume of carbon monoxide being in the ratio of about 0.5 to 10.0 volumes of hydrogen per volume of carbon monoxide.

3,000,826

TRANSPARENT METAL WORKING LUBRICANT COMPOSITION
Melvin E. Gilliland, Fort Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware
No Drawing. Filed Apr. 2, 1957, Ser. No. 650,098
9 Claims. (Cl. 252-49.3)

1. A metal working lubricant composition consisting essentially of water as the main component, 5 to 40

weight percent of a polyglycol selected from a group consisting of polyethylene glycols, polypropylene glycols, and mixtures thereof having an average molecular weight between 200 and 800, 3 to 18 weight percent alkali metal nitrite, and 2 to 15 weight percent of an alkanol amine having the general formula: $RR'R''N$ wherein R is selected from a group consisting of hydrogen, an alkyl radical and a hydroxy alkyl radical; R' is selected from a group consisting of an alkyl radical, a hydroxy alkyl radical and an amino alkyl radical; and R'' is a hydroxy alkyl radical, said alkyl, hydroxy alkyl, and amino alkyl radicals containing 1 to 4 carbon atoms.

3,000,827

METHOD OF LUBRICATING A GAS TURBINE ENGINE

Edwin S. Moler, Jr., Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,171
3 Claims. (Cl. 252-56)

1. A method of lubricating a gas turbine engine which comprises maintaining on the bearings and other points of wear of the engine a film of a dipentaerythritol ester of an alkanolic acid selected from the group consisting of alkanolic acids having from 5 to 10 carbon atoms and mixtures of alkanolic acids having from 2 to 12 carbon atoms in proportions to provide an average chain length of from 5 to 10 carbon atoms.

3,000,828

MANUFACTURE OF METAL OXIDES AND OF FERRITES

Sidney Ernest Buckley and Douglas Hilley Owen, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
No Drawing. Filed Mar. 3, 1955, Ser. No. 492,019
Claims priority, application Great Britain Mar. 12, 1954
20 Claims. (Cl. 252-62.5)

1. Process of manufacturing a ferrite which comprises heating iron powder in a current of steam at a temperature between 400° C. and 650° C. for a time dependent upon the temperature, milling the resultant product in water, calcining the milled product in air at a temperature between 150° C. and 1000° C.

3,000,829

COMPOSITION AND PROCESS FOR DESCALING METAL PARTS

Benjamin Arden, Los Angeles, Calif., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California
No Drawing. Filed June 12, 1958, Ser. No. 741,475
12 Claims. (Cl. 252-103)

1. A composition of matter which when dissolved in water forms an alkaline solution suitable for removal or conditioning of heat scale from engine component parts, which consists essentially of alkali metal hydroxide, a soluble permanganate and a soluble fluoride which produces the fluoride ion in said alkaline solution.

3,000,830

USE OF POLYVINYLPYRROLIDONE AS A SOIL-SUSPENDING AGENT

Willie Fong, Richmond, and Wilfred H. Ward and Harold P. Lundgren, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Dec. 5, 1952, Ser. No. 324,423
7 Claims. (Cl. 252-117)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A process for removing soil from a textile material and minimizing the re-deposition of removed soil which

comprises washing the material with a solution comprising water, an organic surface-active detergent, and polyvinylpyrrolidone.

3,000,831

DETERGENT COMPOSITIONS

Melvin E. Tuvell, Los Angeles, Calif., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware.

No Drawing. Filed July 22, 1957, Ser. No. 673,161
13 Claims. (Cl. 252—138)

1. A built detergent composition comprising (1) 20 to 60 parts of an alkali metal polyphosphate selected from the group consisting of sodium tripolyphosphate, tetrasodium pyrophosphate, potassium tripolyphosphate, tetrapotassium pyrophosphate, and mixtures thereof; (2) 10 to 25 parts of an alkaline material from the group consisting of sodium carbonate, sodium bicarbonate, sodium sesquicarbonate, and mixtures thereof; (3) 2 to 9 parts of a water-soluble silicofluoride; and (4) 5 to 35 parts of a surface-active agent from the group consisting of anionic and nonionic surface-active agents, and mixtures thereof; wherein all parts are parts by weight; and which detergent composition is characterized by the stability thereof against the formation of a deleterious quantity of insoluble compounds when subjected to storage conditions and elevated temperatures, and by a substantial freedom from corrosion of soft metals.

3,000,832

DETERGENT COMPOSITIONS

Pieter L. Kooijman, Cornelis Kortland, and Petrus W. Slokker, Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware.

No Drawing. Filed Sept. 10, 1956, Ser. No. 608,707
Claims priority, application Netherlands Sept. 16, 1955
8 Claims. (Cl. 252—161)

1. A detergent composition forming cold stable aqueous solutions of about 10% to about 50% detergent content, consisting essentially of an alkyl aryl hydrocarbon mono-sulfonic acid water-soluble salt having an alkyl group of 8 to 9 carbon atoms but essentially free of alkyl aryl sulfonate salts containing alkyl groups of less than 8 and more than 13 carbon atoms, together with a secondary alkyl sulfate salt consisting essentially of a secondary alkyl sulfate water-soluble salt having at least 8 to 9 but not more than 18 carbon atoms per molecule, said sulfonate and alkyl sulfate salt being present in a weight ratio of from 60:40 to 20:80, and an alkyl phenol polyethylene glycol monoether having 7 to 9 carbon atoms in the alkyl group and 8 to 10 ethylene glycol units in the molecule, the amount of said ether being between about 2% and about 30% of the total weight of the detergent composition.

3,000,833

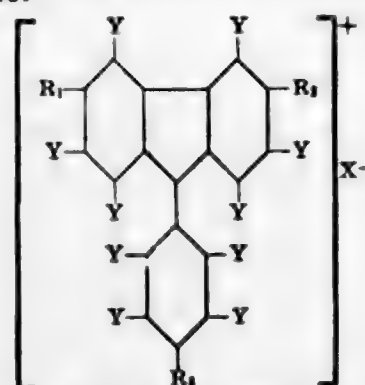
COLOR SALTS OF FLUOREN-9-OLS AS INFRARED ABSORBERS

Ralph A. Coleman, Middlesex, and Peter V. Susi, Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine.

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,738
5 Claims. (Cl. 252—300)

2. A method of protecting materials from incident infrared rays which comprises interposing between the source of said infrared rays and the material to be protected, a barrier containing at least 0.005 gram per

square foot of barrier of a salt of a 9-phenylfluoren-9-ol of the structure:



in which R_1 , R_2 , and R_3 are selected from the group consisting of H, OCH_3 , NH_2 and dialkylamino, at least two of such R's being selected from the group consisting of NH_2 and dialkylamino, the Y's being each selected from the group consisting of hydrogen, alkyl, alkoxy, halogen, nitro, acetamido, acetyl and sulfonamide and X is an anion.

3,000,834

METHOD OF PREPARING A GREEN ELECTROLUMINESCENT ZINC SULPHIDE PHOSPHOR
Manuel Aven, Lyndhurst, Ohio, assignor to General Electric Company, a corporation of New York
No Drawing. Filed Apr. 18, 1958, Ser. No. 729,227
6 Claims. (Cl. 252—301.6)

1. The method of preparing a green electroluminescent phosphor having a large particle size for improved resistance to water depreciation which comprises preheating at a temperature in the range of 1150 to 1250° C. a mixture of ZnS and 10 to 40% ZnO by weight, cooling the preheated material and adding copper and chloride salts to provide 0.1 to 0.75 mole percent and 1 to 3 mole percent respectively, and reheating at a temperature in the range of 850–950° C. for a length of time sufficient to assure substantial transformation from the hexagonal to the cubic phase in the refined material.

3,000,835

DEFOAMER COMPOSITION AND METHODS FOR USING SAME

Raymond L. Mayhew, Phillipsburg, and Norman F. Ottley, Metuchen, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware.

No Drawing. Filed Jan. 8, 1957, Ser. No. 632,968
13 Claims. (Cl. 252—321)

1. A defoaming agent consisting essentially of a mixture of a fatty oil containing at least 25% doubly unsaturated fatty acids and a polyoxyalkylated derivative thereof containing from 6 to 20 moles of oxyalkylating agent per mole of fatty oil, the ratio of the oil to the polyoxyalkylated derivative thereof being within the range of from 4:1 to 1:4.

8. A method for reducing undesirable foam in aqueous systems which comprises adding from about 0.5% to about 2% of a composition as defined in claim 1 to such systems.

3,000,836

STABILIZED WHOLE BLOOD STANDARD AND METHOD OF MAKING THE SAME

Ben Ginsburg, 6010 Wilshire Blvd., Los Angeles 36, Calif.

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,549
4 Claims. (Cl. 252—408)

1. The method of preparing a stabilized whole blood which is standardized for use as a hemoglobin standard comprising the steps of: alternately freezing and thawing a blood sample to rupture and separate the hemoglobin in a blood sample from the cellular tissue in which said hemoglobin is contained; adding preservative to said sample; removing the cellular tissue from said sample; and

adjusting the hemoglobin content of said sample to a known concentration by dilution with chemical compounds which do not affect the chemical analysis of the blood, whereby said sample of known concentration can be utilized as an internal standard and control in the hemoglobin analysis of an unknown sample by clinical methods.

3,000,837

POLYMERIZATION CATALYST

Armand Edward Brachman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 23, 1957, Ser. No. 654,470
1 Claim. (Cl. 252—429)

A composition of matter suitable for promoting the polymerization of ethylenically unsaturated monomers consisting essentially of a copper chloride and aluminum triisobutyl.

3,000,838

PLATINUM REFORMING CATALYST AND PROCESS FOR PREPARING THE SAME

Malden W. Michael, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 8, 1958, Ser. No. 765,943
5 Claims. (Cl. 252—441)

1. A process for improving platinum-alumina reforming catalysts having high activity and low fluorine content, which comprises impregnating aged alumina sol constituting from between about 20% and about 80% of the Al_2O_3 content of the final catalyst composition with fluoride, said impregnation being sufficient to add from between about 0.1 and less than about 0.6% of fluoride by weight to the final catalyst composition, thoroughly mixing said impregnated sol with dry aged alumina sol that has not been fluoride impregnated, said additional alumina constituting from between about 80% and about 20% of the Al_2O_3 content of the final catalyst composition, co-mingling the mixture with a solution of a platinum compound, said platinum compound being sufficient to provide from between 0.05% and 1% of platinum based on the weight of the final catalyst composition, drying the resulting mixture, pelleting the mixture and calcining the pellets.

3,000,839

POLY-(AROMATIC ETHER) COMPOSITIONS AND METHOD OF MAKING SAME

Earl H. Rosenbrock, Auburn, and James D. Doedens, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Sept. 28, 1959, Ser. No. 842,608
4 Claims. (Cl. 260—2.5)

1. A method for making a foamed condensation product by heating at a temperature between about 50° and 150° C. for a time sufficient to evolve hydrogen halide and to form a foamed, resinous, condensation product, a member of the group consisting of poly(halomethyl) diphenyl oxides having more than 1 and up to 4 halomethyl substituents of the group consisting of chloromethyl and bromomethyl per diphenyl oxide unit and mixtures thereof containing from about 1/4 to about 2 weight percent of one of the group consisting of ferrous phosphate, ferric phosphate and mixtures thereof dispersed therein.

3,000,840

DISPERSING AGENTS

John H. Johnson and Joseph E. Fields, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 20, 1957, Ser. No. 704,003
2 Claims. (Cl. 260—8)

2. A coating composition comprising an organic film-forming binding agent, water, a water-insoluble inorganic

pigment and a dispersing agent which is the half-ammonium salt, half-amide of ethylene-maleic anhydride copolymer having an average molecular weight of less than 13,000, said dispersing agent being present in a quantity of from 0.01% to 2.0% by weight of the pigment, said film-forming material being present in a quantity of from 10% to 35% by weight of the pigment, and the total solids content of said coating composition being from 20% to 70% by weight of the composition.

3,000,841

COMPOSITION AND METHOD FOR INCORPORATING POWDERED MATERIAL IN RUBBER AND PLASTIC COMPOSITIONS

John Ware, 72 Myrtle Ave., Westport, Conn.
No Drawing. Filed July 1, 1958, Ser. No. 745,820
9 Claims. (Cl. 260—23)

1. A preparation for use in the incorporation of a powdered material in a plastic composition during milling of said composition at a temperature within the range of about 90° to about 150° F., said preparation consisting essentially of a uniform dispersion of a powdered solid material in a vehicle composed of thermoplastic material thermo-responsive for transition of said preparation from a solid at a temperature of about 77° F. to a soft, smooth, pasty consistency at a temperature within said range of about 90° F. to about 150° F. whereby said preparation is readily dispersible in said plastic composition during milling at a temperature within said range.

3,000,842

POLYVINYL BUTYRAL-AMYL POLYSILOXANE RESIN BLENDS FOR TREATING ASBESTOS-CEMENT SHINGLES AND METHOD FOR USING SAME

Paul A. Homier, Tarlin, N.J., and Samuel Sterman, Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 24, 1958, Ser. No. 744,057
8 Claims. (Cl. 260—29.6)

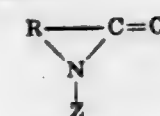
5. A composition consisting of an aqueous emulsion of a polyvinyl butyral resin and an amylpolysiloxane resin, said emulsion containing a total resin content of from about 1.6 percent to about 32 percent by weight of said emulsion, said total resin content consisting of from about 33 percent to about 95 percent by weight of said polyvinyl butyral resin and from about 5 percent to about 67 percent by weight of said amylpolysiloxane resin, said amylpolysiloxane resin being selected from the class consisting of (a) mono-amylpolysiloxane resins prepared by hydrolyzing and condensing amyltrichlorosilane and (b) mono-amylpolysiloxane resins prepared by hydrolyzing and condensing a mixture of amyltrichlorosilane and tetraethyl silicate.

3,000,843

FILM-FORMING COMPOSITION COMPRISING AN ADMIXTURE OF PARTICULATE POLYVINYL FLUORIDE AND A LACTAM

Lester Ray Bartron, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 18, 1959, Ser. No. 813,669
13 Claims. (Cl. 260—30.2)

1. A film-forming composition capable of being formed into self-supporting film comprising essentially an admixture of particulate polyvinyl fluoride and at least one organic compound selected from the class represented by the structural formula



wherein Z is selected from the group consisting of hydro-

gen and alkyl radicals containing up to 8 carbon atoms and R is a divalent, saturated hydrocarbon radical of from 3 to 5 carbon atoms, 3 to 4 carbon atoms of R being in the ring, the polyvinyl fluoride particles having a minimum average diameter of not less than about 0.005-0.010 micron.

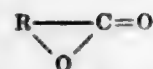
3,000,844

FILM-FORMING COMPOSITION COMPRISING PARTICULATE POLYVINYL FLUORIDE DISPERSED IN A LACTONE

Manville Isager Bro, Wilmington, Del, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 21, 1959, Ser. No. 814,679
10 Claims. (Cl. 260-30.4)

1. A film-forming composition capable of being formed into self-supporting film by coalescence comprising essentially a two phase system consisting of particulate polyvinyl fluoride as a discontinuous phase, and as a continuous phase in which the polyvinyl fluoride particles are uniformly distributed at least one organic compound selected from the class represented by the structural formula



where R is a divalent hydrocarbon radical of from 2 to 7 carbon atoms, 2 to 5 carbon atoms of R being in the ring, the polyvinyl fluoride particles having a minimum average diameter of not less than about 0.005-0.010 micron.

3,000,845

PROCESS OF PROMOTING CRYSTALLIZATION OF ISOTACTIC POLYSTYRENE WITH A CRYSTALLIZATION ENHANCER

Kenneth W. Doak and Arnold E. Jeltsch, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Sept. 17, 1959, Ser. No. 840,522
6 Claims. (Cl. 260-30.6)

1. A process for promoting the crystallization of isotactic polystyrene comprising forming a homogeneous mixture of isotactic polystyrene and a crystallization enhancer that is an organic compound containing at least 12 carbon atoms which is selected from the class consisting of triaryl phosphates and alkyl diesters of dibasic acids, said crystallization enhancer being present in an amount of from 0.275 to 0.667 part per part of crystallizable polystyrene, forming said homogeneous mixture into a desired configuration and thereafter annealing said formed mixture until said isotactic polystyrene reaches maximum crystallinity.

3,000,846

HIGH TEMPERATURE MOLDED FABRIC PACKING GLAND

Leslie A. Runton, Middle Haddam, and Henry C. Morton, Branford, Conn., assignors to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut

Filed Nov. 19, 1957, Ser. No. 697,421
1 Claim. (Cl. 260-41)

A high temperature packing gland comprising a cement selected from the group consisting of sodium silicate and magnesium oxychloride; a fabric composed of yarns of ceramic fibers selected from the group consisting of aluminum silicate fibers and quartz fibers, graphite particles and short lengths of yarn composed of polytetrafluoroethylene, said fabric, graphite particles and short lengths of polytetrafluoroethylene yarn being embedded in and impregnated with said cement, the short lengths of polytetrafluoroethylene yarn, in the form of a flock, being additionally exposed on the surface of said gland.

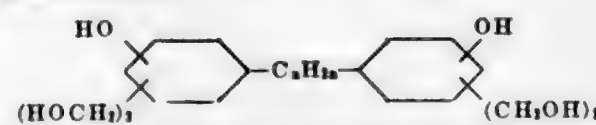
3,000,847

SYNTHETIC RUBBER CURE USING A TETRAMETHYLOL BIS-PHENOL AND PRODUCT THEREOF

Galen E. Graham, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

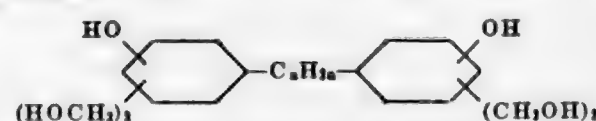
No Drawing. Filed May 28, 1958, Ser. No. 738,321
19 Claims. (Cl. 260-41.5)

13. A vulcanizable composition of matter comprising relative proportions of 100 parts by weight synthetic rubber selected from the group consisting of butadiene-styrene copolymers, butadiene-acrylonitrile copolymers, copolymers of isobutylene with a minor proportion of a multi-olefinic unsaturate having from 4-14 carbon atoms per molecule, polychloroprene, and chlorosulfonated polyethylene and 2-18 parts by weight of a compound having the formula



wherein n is a number from 1-5, inclusive.

19. A vulcanized rubber flooring composition comprising a synthetic rubber selected from the group consisting of butadiene-styrene copolymers, butadiene-acrylonitrile copolymers, copolymers of isobutylene with a minor proportion of a multi-olefinic unsaturate having from 4-14 carbon atoms per molecule, polychloroprene, and chlorosulfonated polyethylene and mineral fillers therefor, vulcanized with from 2-18 parts by weight per 100 parts by weight of said rubber of a compound having the formula



wherein n is a number from 1-5, inclusive.

3,000,848

COMPOSITION COMPRISING BIS(2,3-EPOXYCYCLOPENTYL) ETHER, A POLYCARBOXYLIC ACID ANHYDRIDE AND A POLYOL, AND CURED PRODUCT THEREOF

Charles W. McGary, Jr., and Charles T. Patrick, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 20, 1956, Ser. No. 629,475
9 Claims. (Cl. 260-42)

1. A curable composition comprising bis(2,3-epoxycyclopentyl) ether, a polycarboxylic acid anhydride, and a polyol selected from the group consisting of polyhydric alcohols and polyhydric phenols, in such relative amounts so as to provide from about 0.33 to 4.0 carboxy equivalents of said polycarboxylic acid anhydride and up to 3.0 hydroxyl equivalents of said polyol per epoxy equivalent of said bis(2,3-epoxycyclopentyl) ether.

3,000,849

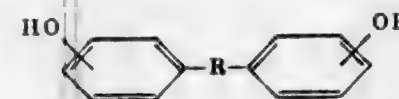
LINEAR COPOLYCONDENSATION PRODUCT COMPRISING RECURRING AROMATIC CARBONATE AND CARBOXYLIC ACID ESTER UNITS IN THE POLYMER CHAIN, AND ARTICLE FORMED THEREOF

Margaret Loudon Clachan, Norman Spencer McPherson, Keith Reid Tatchell, and Terence Arnold Abbott, all of Manningtree, England, assignors to Bexford Limited, Manningtree, England, a British company

No Drawing. Filed Jan. 7, 1959, Ser. No. 785,338
Claims priority, application Great Britain Jan. 13, 1958
5 Claims. (Cl. 260-45.4)

1. Linear copolycondensation product comprising recurring aromatic carbonate units and carboxylic acid ester units in the polymer chain, the carbonate units being the

products of condensing a (dimonohydroxy-aryl)-alkane of the formula:



in which R is an alkane radical selected from the group consisting of methane, ethane, propane, butane and cyclohexane radicals, with a compound selected from the group consisting of phosgene, dialkyl carbonates, diaryl carbonates and bis-chlorocarbonic alkyl esters of alkanes of the above formula, and the carboxylic acid ester units being the products of condensing glycols containing 2 to 10 carbon atoms with a dibasic acid selected from the group consisting of terephthalic acid and isophthalic acid, the ester units constituting 3 to 70% by weight of the copolyester.

3,000,850

BRIDGED RING PHOSPHITE STABILIZERS FOR VINYL RESINS

Bruce S. Almsworth, Jr., Mountain Lake, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,442
16 Claims. (Cl. 260-45.7)

1. In a process for stabilizing a halogenated vinyl resin against heat degradation the steps which comprise admixing said vinyl resin and a small amount of a bridged-ring phosphite ester having a carbon atom directly attached to the carbon atoms of three oxymethylene groups and each of the oxygen atoms of said three oxymethylene groups being directly attached to the same trivalent phosphorus atom.

3,000,851

COMPOSITIONS OF MONOVINYL AROMATIC COPOLYMERS HAVING IMPROVED HEAT RESISTANCE

William K. Schweitzer, Jr., Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 14, 1957, Ser. No. 689,776
8 Claims. (Cl. 260-45.9)

1. A thermoplastic composition comprising a homogeneous blend of (1) a copolymer prepared from a monomeric mixture consisting essentially of a monovinyl aromatic monomer of the benzene series together with from about 0.5 to about 30 percent by weight of a comonomeric monoethylenically unsaturated carboxylic acid and (2) from 0.25 to about 2.0 percent of the weight of said copolymer of an additive compound containing at least two substituent groups capable of hydrogen bonding with the pendant carboxyl groups of said copolymer and which contains no groups which react with carboxyl groups of said copolymer to form a covalent bond.

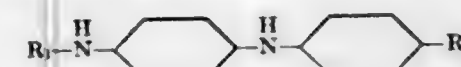
3,000,852

N-(ALKYL)-N'-(p-ALKYL PHENYL)-p-PHENYLENE-DIAMINES AS STABILIZERS FOR RUBBERS

Paul L. Merz, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 12, 1957, Ser. No. 695,517
14 Claims. (Cl. 260-45.9)

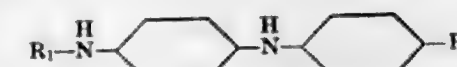
2. A compound represented by the formula



where R₁ is a saturated aliphatic hydrocarbon radical having from 3 to 9 carbon atoms; and R₂ is an alkyl radical having from 1 to 12 carbon atoms and in which

the alpha-carbon atom is directly attached to at least one hydrogen atom.

6. A compound represented by the formula



where R₁ is a saturated aliphatic hydrocarbon radical having from 3 to 9 carbon atoms; and R₂ is a tertiary alkyl radical having from 4 to 12 carbon atoms.

11. A composition of matter comprising a sulfur-vulcanizable diolefin polymer rubber containing a compound as set forth in claim 2.

12. A composition of matter comprising a sulfur-vulcanizable diolefin polymer rubber containing a compound as set forth in claim 6.

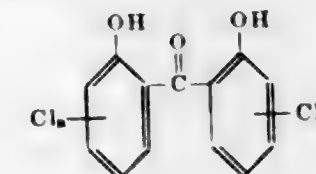
3,000,853

THERMOPLASTIC COMPOSITIONS HAVING IMPROVED LIGHT STABILITY

Carl B. Havens, Hope, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 24, 1956, Ser. No. 630,073
1 Claim. (Cl. 260-45.95)

A light stable composition comprising a polymeric vinylidene chloride product and stabilizing quantities of a substituted dihydroxy benzophenone derivative having the general formula



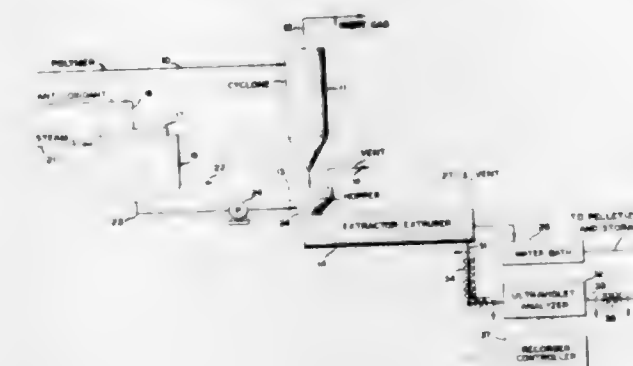
wherein n is a whole number of from 1 to 4 and wherein said derivative is prepared by the direct chlorination of 2,2'-dihydroxy benzophenone.

3,000,854

STABILIZATION OF POLYMERS

John A. Favre, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 20, 1957, Ser. No. 641,400
8 Claims. (Cl. 260-45.95)



1. In a process wherein an alkyl-substituted phenolic antioxidant is added to a normally solid polymer of an olefin, the improvement which comprises subjecting a sample of the resulting mixture to ultraviolet absorption analysis while said sample is maintained in the liquid state, thus determining the concentration of said antioxidant in said polymer, producing a control output which is proportional to said concentration, and varying the rate of addition of said antioxidant to said polymer in proportion to said control output, and thus maintaining said concentration substantially constant.

3,000,855

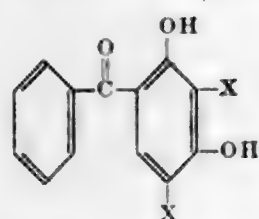
LIGHT STABLE POLYMERIC COMPOSITIONS

Gerald A. Clark and Carl B. Havens, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Original application Apr. 23, 1956, Ser. No. 579,771, now Patent No. 2,891,996, dated June 23, 1959. Divided and this application Sept. 24, 1958, Ser. No. 762,944

5 Claims. (Cl. 260—45.95)

1. A thermoplastic composition comprising a thermoplastic chloroethylene polymer containing essentially at least one polymerized monomer selected from the group consisting of vinylidene chloride and vinyl chloride and from 6 to 0.25 percent of the weight of said polymer of a stabilizer having the general formula:



wherein one X is an organic aliphatic acyl group derived from a carboxylic acid having from 1 to 8 carbon atoms and the remaining X is selected from the group consisting of hydrogen and organic aliphatic acyl groups derived from carboxylic acids having from 1 to 8 carbon atoms.

3,000,856

POLY- α -OLEFIN COMPOSITION STABILIZED AGAINST ULTRAVIOLET LIGHT DETERIORATION

Gordon C. Newland and John W. Tamblin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 15, 1959, Ser. No. 820,130

5 Claims. (Cl. 260—45.95)

1. A solid poly- α -olefin composition comprising a poly- α -olefin selected from the group consisting of polyethylene and polypropylene containing .001% to 10% by weight based on said poly- α -olefin of a stabilizer combination comprising 2,2'-methylene-bis(6-methylcyclohexyl-p-cresol) and 2-hydroxy-5-octylbenzophenone.

3,000,857

HEAT AND LIGHT STABILIZATION OF SOLID POLYPROPYLENE

William J. Craven, Elizabeth, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 26, 1959, Ser. No. 848,519

3 Claims. (Cl. 260—45.95)

3. A composition of matter comprising a solid polypropylene, low pressure polymer prepared by utilizing a partially reduced, heavy, transition metal halide catalyst, admixed with a synergistic combination of a minor amount of both di-*t*-butyl-p-cresol and 2,2'-dihydroxy-4-octoxybenzophenone.

3,000,858

ORGANOPOLYSILOXANE COMPOSITION

John F. Brown, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Jan. 21, 1959, Ser. No. 788,067

3 Claims. (Cl. 260—46.5)

1. The chemical composition dodecaphenylsilsesquioxane having the formula $(C_6H_5SiO_{3/2})_{12}$.

3,000,859

PREPARATION OF RESINS FROM AROMATICS AND ALDEHYDES

Stanley B. Mirviss, Roselle, and Ober C. Slotterbeck, Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 12, 1956, Ser. No. 627,913

5 Claims. (Cl. 260—67)



1. In a process for manufacturing resins in which an aromatic hydrocarbon is condensed with an aldehyde in the presence of an acid catalyst selected from the group consisting of sulfuric acid, aryl sulfonic acids, sulfonated polystyrene, formic acid, zinc chloride in acetic acid, hydrofluoric acid, hydrochloric acid, boron trifluoride, boron trifluoride etherate, aluminum chloride, ferric chloride, phosphoric acid, and acidic clays, the improvement which comprises admixing alkyl substituted aromatics of 1 to 3 rings having 1 to 4 alkyl substituents per ring and up to about 4 carbon atoms per substituent with an aldehyde and 1 to 20 weight percent, based on total reactive charge, of an inert water-azeotropic agent selected from the group consisting of C_1 to C_3 chlorinated hydrocarbons, polychlorinated aromatic hydrocarbons, saturated cyclic and acyclic hydrocarbons, cyclic and acyclic ethers, and benzene, and maintaining the resulting mixture in liquid form at a reaction temperature in the range of 75° to 212° F. in the presence of said catalyst while continuously removing an azeotropic vapor mixture of water and said azeotropic agent from the liquid reaction mixture as the reaction proceeds.

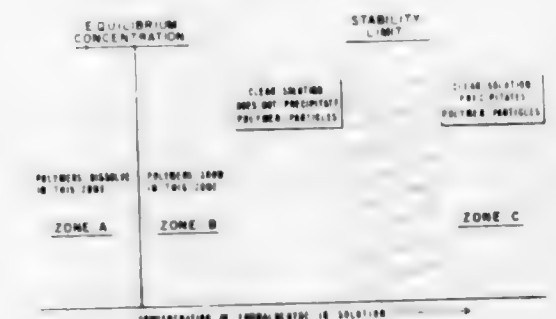
3,000,860

POLYMERIZATION OF ALCOHOL SOLUTIONS OF FORMALDEHYDE TO PRODUCE HIGH MOLECULAR WEIGHT POLYOXYMETHYLENE

Northrop Brown, Dennis Light Funck, and Carl Earle Schweitzer, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 3, 1957, Ser. No. 700,338

9 Claims. (Cl. 260—67)



1. The process of polymerizing an alcoholic solution of formaldehyde which comprises forming a starting solution of formaldehyde, an alcohol, and a non-aromatic amine free of carbonyl groups and of nitro groups and having a pK_b of less than 7 as a polymerization catalyst, the pH of said starting solution being from 3.5 to 10.0,

adjusting the temperature, pressure and formaldehyde concentration of said solution such that the said concentration is from 25%–85% by weight of formaldehyde based on the total weight of alcohol and formaldehyde, and the said solution is sufficiently supersaturated with respect to formaldehyde that polyoxymethylene seed particles form spontaneously therein, maintaining that supersaturated condition until said solution becomes visibly cloudy with seed particles, placing said seed particles in a reaction medium comprising formaldehyde, alcohol and a non-aromatic amine free of carbonyl groups and of nitro groups and having a pK_b of less than 7, the temperature of said reaction medium being from 60° C. to 125° C., the pH of said reaction medium being from 3.5–10, the formaldehyde concentration of said reaction medium, at the reaction temperature and pressure, being from about 0.5% to about 7.0% greater than the weight percentage of formaldehyde required to saturate said reaction medium with respect to formaldehyde but less than the lowest concentration at which seed particles of polyoxymethylene form spontaneously therein, and maintaining the reaction temperature, pressure, and formaldehyde concentration of said reaction medium for a period of time sufficient for said seed particles to grow to a number average molecular weight of at least 15,000.

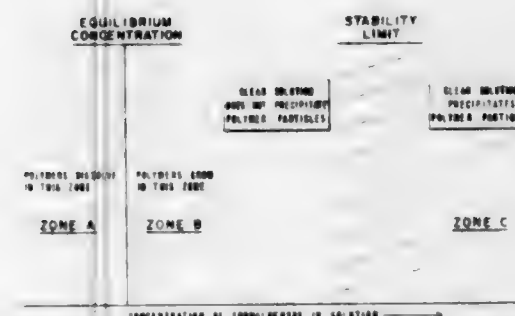
3,000,861

POLYMERIZATION OF AQUEOUS FORMALDEHYDE TO PRODUCE HIGH MOLECULAR WEIGHT POLYOXYMETHYLENE

Northrop Brown, Dennis Light Funck, and Carl Earle Schweitzer, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 3, 1957, Ser. No. 700,339

10 Claims. (Cl. 260—67)



1. The process of polymerizing aqueous formaldehyde which comprises forming a starting solution of formaldehyde, water, and a polymerization catalyst, adjusting the temperature, pressure and formaldehyde concentration of said solution such that the said concentration is from 30%–75% by weight of formaldehyde based on the total weight of water and formaldehyde, and the said solution is sufficiently supersaturated with respect to formaldehyde that polyoxymethylene seed particles form spontaneously therein, maintaining that supersaturated condition until said solution becomes visibly cloudy with seed particles, placing said seed particles in a reaction medium comprising formaldehyde, water, and a polymerization catalyst, the temperature of said reaction medium being from 60° C. to the boiling point of said medium, the formaldehyde concentration of said reaction medium, at the reaction temperature and pressure, being from about 0.5% to about 7.0% greater than the weight percentage of formaldehyde required to saturate said reaction medium with respect to formaldehyde but less than the lowest concentration at which seed particles of polyoxymethylene form spontaneously from said reaction medium, maintaining the reaction temperature, pressure,

and formaldehyde concentration of said reaction medium for a period of time sufficient for said seed particles to grow to a number average molecular weight of at least 15,000, said polymerization catalyst being a chemical substance which is non-reactive with formaldehyde to form a substantial amount of irreversible by-products under the reaction conditions, and which is selected from the group consisting of (1) an acid/base combination in which the acid has a pK_a of at least 2 for any hydrogen on said acid and the base has a pK_b of less than 7, and said combination being in such an amount and such proportions that the pH of said solution and of said reaction medium is from 3.5–8.0, (2) a basic material and a diluent, said basic material having a pK_b of 2–7 and in an amount sufficient to cause the pH of said solution and of said reaction medium to be from 8–11, and said diluent being an inert organic liquid boiling above 100° C., and (3) an acidic material in sufficient concentration in said solution and in said reaction medium to produce a pH of 0.5–3.0.

3,000,862

POLYMETHACROLEIN DERIVATIVES

Robert Lee Eifert and Barnard Mitchell Marks, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 13, 1958, Ser. No. 708,373

5 Claims. (Cl. 260—67)

1. A normally solid, high molecular weight polymethacrolein acylate substantially free from aldehyde groups, as measured by infrared spectrographic analysis, and containing less than 65% of the maximum theoretical acyl groups, as measured by hydrolysis, said polymethacrolein acylate being characterized by the presence of tetrahydropyran rings in the polymer chain, the molecular weight of said polymethacrolein acylates being at least high enough to result in an inherent viscosity of 0.55 as measured by a 0.5 weight percent solution of the polymethacrolein acylate in dimethyl formamide at 35° C., the acylate groups in said polymethacrolein acylate containing from 2 to 10 carbon atoms.

3,000,863

DYE FIXING AGENT

Edgar E. Lineken, Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 4, 1956, Ser. No. 582,669

4 Claims. (Cl. 260—69)

1. A water-soluble copper adduct produced by suspending in an aqueous acid medium containing a dissolved cupric salt a known per se water-insoluble cyanamide-formaldehyde condensation product formed at about pH 7.5–8; heating the resultant suspension to an elevated temperature in the range between about 80° and about 100° C.; maintaining the reaction mixture at said elevated temperature until the resultant reaction product is substantially free of CN groups detectable by infra red means; and then isolating the so-formed copper adduct.

3,000,864

HYDROXYNORCAMPHANECARBOXYLIC ACIDS AND ESTERS, AND POLYESTERS THEREOF

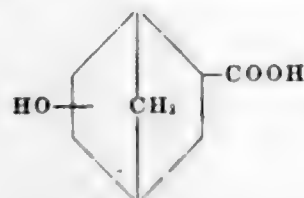
John R. Caldwell and Winston J. Jackson, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,340

4 Claims. (Cl. 260—76)

1. A linear fiber-forming polyester selected from the group consisting of (1) a homopolyester of a hydroxy-

camphanecarboxylic acid represented by the following general formula:



and (2) a copolyester of (a) said hydroxycamphanecarboxylic acid, (b) a dicarboxylic acid selected from the group consisting of an alkanedicarboxylic acid containing from 4-8 carbon atoms and terephthalic acid and (c) a glycol selected from the group consisting of an alkane glycol containing from 2-6 carbon atoms and 1,4-cyclohexane dimethanol in proportions of not less than 5 mole percent of each of said (a), (b) and (c) components and wherein the sum of said components (a), (b) and (c) equals 100 mole percent.

3,000,865

COPOLYMERS OF PROPYLENE OXIDE AND ALKYLENE SULFIDES

Arthur E. Gurgiol, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 3, 1958, Ser. No. 746,333
10 Claims. (Cl. 260-79)

1. A solid polymeric composition having an average molecular weight over 100,000 and a softening point above 60° C. which comprises propylene oxide copolymerized with an alkylene sulfide selected from the group consisting of ethylene sulfide, propylene sulfide, isobutylene sulfide, 1,2-butylene sulfide, 2,3-butylene sulfide, styrene sulfide, and mixtures thereof, containing in combined form from 5 to 95 weight percent of propylene oxide and the remainder the alkylene sulfide.

3,000,866

COPOLYMERS OF ETHYLENE

Robert Edward Tarney, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 26, 1959, Ser. No. 848,501
3 Claims. (Cl. 260-80.5)

1. A rubbery copolymer of ethylene consisting of ethylene, at least one alpha olefin having the structure $R-CH=CH_2$, in which alpha olefin R is a C_1-C_6 alkyl radical, and dicyclopentadiene, there being at least about 20% to about 74.5% ethylene units by weight and at least about 25% to about 79.5% of said alpha olefin units by weight, and, about 0.5 to 10% of dicyclopentadiene units by weight in said copolymer.

3,000,867

NOVEL ETHYLENE-PROPYLENE COPOLYMER AND METHOD FOR PRODUCING SAME

Bruce S. Fisher, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,458
4 Claims. (Cl. 260-88.2)

1. An ethylene-propylene copolymer which is capable of being cured to an elastomer, said copolymer having an intrinsic viscosity in tetrachloroethylene at 30° C. of at least 1 and exhibiting an infrared absorbance ratio ranging from about 0.85 to about 2.0, said infrared absorbance ratio being the ratio of the infrared absorbance at 8.65 microns to the absorbance at 2.3 microns of a film of said copolymer about 0.1 mm. thick, said copolymer being prepared by a process which comprises contacting ethylene and propylene, in a molar ratio of 1:1 to 1:5.7, in tetrachloroethylene at a temperature of between about 20° C. and 60° C. with a catalyst prepared from aluminum tri-

isobutyl, aluminum chloride and vanadyl chloride, the mole ratio of aluminum chloride to aluminum triisobutyl being 2:1 and the mole ratio of aluminum to vanadium being 5:1.

3,000,868

VINYL TOLUENE-ALPHA METHYL STYRENE POLYMERS

Paul O. Powers, Pittsburgh, Pa., assignor to Pennsylvania Industrial Chemical Corporation, Clairton, Pa., a corporation of Pennsylvania
No Drawing. Filed Dec. 30, 1959, Ser. No. 862,774
4 Claims. (Cl. 260-88.2)

4. Resin consisting essentially of a copolymer of, by weight, 25 to 35 percent of alpha methyl styrene and 75 to 65 percent of vinyl toluene, said resin being of low color, of 100° to 130° C. softening point (Ball and Ring), and of good solubility in low odor mineral spirits and low kauri-butanol solvents down to 0° C.

3,000,869

CROSS-LINKING OF ALKYL VINYL ETHER POLYMERS

George C. Wright, Bel Air, Md., and John Hunsberger, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 15, 1957, Ser. No. 646,194
10 Claims. (Cl. 260-91.1)

1. The process which comprises forming a clear, homogeneous solution of an alkyl vinyl ether polymer wherein the alkyl group contains from 1 to 6 carbon atoms and about 0.1 to 5% by weight of said polymer of a Friedel-Crafts catalyst in a mutual solvent for said polymer and said catalyst at room temperature, removing said solvent from said solution to form a dry residue containing said polymer and said catalyst, and heating said dry residue for a time sufficient to effect cross-linking in said polymer.

3,000,870

ALKYL AND ARYL BIS (CYCLOPENTADIENYL) TITANIUM-TITANIUM TETRACHLORIDE POLYMERIZATION CATALYSTS AND PROCESS FOR POLYMERIZING OLEFINS THEREWITH

Piero Pino and Giorgio Mazzanti, Milan, Italy, assignors to Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy
No Drawing. Filed June 10, 1958, Ser. No. 741,012
Claims priority, application Italy June 14, 1957
13 Claims. (Cl. 260-93.5)

8. The process for producing linear, high molecular weight, highly crystalline polymerizates of alpha-olefins selected from the group consisting of ethylene, propylene, butene-1 and styrene, which comprises polymerizing the alpha-olefin in the presence of a catalyst consisting of the reaction product of (1) a titanium complex selected from the group consisting of alkyl and aryl bis(cyclopentadienyl) complexes of titanium and (2) titanium tetrachloride, in a molar ratio of (1) to (2) of from 1:1 to 10:1.

3,000,871

METHOD FOR PURIFYING POLYOLEFIN

Willem F. Engel, Amsterdam, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 9, 1959, Ser. No. 785,789
Claims priority, application Netherlands Jan. 17, 1958
6 Claims. (Cl. 260-93.7)

1. A process for the separation of a catalyst consisting essentially of chromium oxide carried on a alumina-silica carrier from olefin polymers and a hydrocarbon solvent comprising, adding an aqueous solution of from 0.1 to 1% by weight of a non-ionic surface-active agent to said catalyst-polyolefin mixture, heating said mixture and said solution to a temperature above the softening point of the polyolefin while increasing the pressure in an amount

sufficient to prevent boiling of the water present in the medium, agitating the medium to transfer catalyst from the organic phase comprising polyolefin to the aqueous phase, and separating the organic phase containing polymer from the aqueous phase.

3,000,872

PREPARATION OF CARBOXYMETHYL DEXTRAN-IRON COMPLEXES

Leo J. Novak, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio
No Drawing. Original application June 15, 1956, Ser. No. 591,540, now Patent No. 2,856,398, dated Oct. 14, 1958. Divided and this application Aug. 12, 1958, Ser. No. 754,515
2 Claims. (Cl. 260-209)

1. A method of making an iron carboxymethyl dextran complex which comprises dissolving 48.9 parts by weight of sodium carboxymethyl dextran in 400 parts by volume of water and acidifying the resultant solution by the addition of hydrochloric acid, admixing thereto an aqueous solution containing 17.1 parts by weight of ferric chloride and adding aqueous alkali solution to bring the pH of the solution to approximately pH 11.5, thereafter filtering the resultant solution, precipitating ferric carboxymethyl dextran by the addition of isopropyl alcohol to the filtrate, and filtering the mass to recover iron-dextran complex.

3,000,873

ANTIBIOTIC RECOVERY PROCESS

Frank J. Wolf, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed May 21, 1957, Ser. No. 660,471
5 Claims. (Cl. 260-210)

1. In an ion exchange process for the recovery of novobiocin from mixtures containing the same wherein the novobiocin is adsorbed on a strongly basic anion exchange resin the improvement which comprises eluting the adsorbed novobiocin from the resin with an acidic eluting solution consisting of an aqueous organic solvent mixture containing about 70 percent to about 98 percent of an organic solvent selected from the group consisting of lower aliphatic alcohols and lower aliphatic ketones and an acid present in the said acidic eluting solution in a concentration of from about 1 weight/volume percent to about 10 weight/volume percent.

3,000,874

SULFATE SALT OF ERYTHROMYCIN MONOESTER

Malcolm D. Bray, Noblesville, and Verlin C. Stephens, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
No Drawing. Filed Apr. 8, 1959, Ser. No. 804,874
9 Claims. (Cl. 260-210)

1. A sulfate salt of a lower aliphatic carboxylic acid monoester of the group consisting of erythromycin and erythromycin B, said sulfate salt being an aliphatic hydrocarbonsulfate salt in which the aliphatic group has from 8 to 31 carbon atoms.

3,000,875

METHOD OF REDUCING THE DEGREE OF POLYMERIZATION OF CELLULOSIC MATERIALS

John H. E. Herbst, L'Orignal, Ontario, and Warren B. Beazley and Hans A. Krässig, both of Hawkesbury, Ontario, Canada, assignors to Canadian International Paper Company, Montreal, Canada, a corporation of Quebec
No Drawing. Filed Apr. 23, 1959, Ser. No. 808,293
11 Claims. (Cl. 260-212)

1. A process for lowering the degree of polymerization and the viscosity of cellulosic material which comprises reacting in an aqueous medium at a pH below 7.0, sodium chlorate, sulfur dioxide and the cellulosic material.

3,000,876

HEAT STABLE CELLULOSE ACETATE SULFATES

George P. Touey and John E. Klefer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed May 14, 1959, Ser. No. 813,061
5 Claims. (Cl. 260-215)

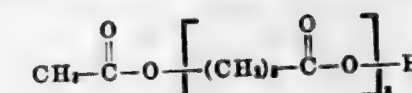
1. A water soluble cellulose acyl sulfate salt having a combined sulfur content of at least 5% containing a stabilizing amount of urea.

3,000,877

PRODUCTION OF EPSILON-CAPROLACTAM FROM 6-ACETOXYCAPROIC ACID AND ITS LACTONE ADDUCTS

Benjamin Phillips, Charleston, Samuel W. Tinsley, South Charleston, and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 8, 1959, Ser. No. 818,504
4 Claims. (Cl. 260-239.3)

1. A process for the production of epsilon-caprolactam which comprises reacting a member of a group consisting of 6-acetoxycaproic acid, and 6-acetoxycaproic acid lactone adducts, said members characterized by the formula:



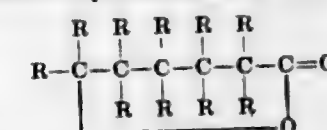
wherein x represents 1 through 5 units, with aqueous ammonia under pressures in the range consisting of autogenous pressure to 680 atmospheres and in the temperature range from about 300° C. to about 475° C. for a sufficient period of time to produce epsilon-caprolactam.

3,000,878

PRODUCTION OF ALKYL-SUBSTITUTED EPSILON-CAPROLACTAMS

Benjamin Phillips, Charleston, Samuel W. Tinsley, South Charleston, and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 8, 1959, Ser. No. 818,538
5 Claims. (Cl. 260-239.3)

1. A process for the production of alkyl-substituted epsilon-caprolactams, which comprises reacting an alkyl-substituted epsilon-caprolactone, of the formula



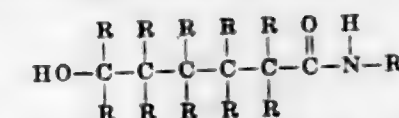
wherein R represents hydrogen atoms and at least one lower alkyl group, with aqueous ammonia in a temperature range of about 300° C. to about 475° C. and under superatmospheric pressures.

3,000,879

PROCESS FOR THE PRODUCTION OF EPSILON-CAPROLACTAMS

Benjamin Phillips, Charleston, Samuel W. Tinsley, South Charleston, and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed June 8, 1959, Ser. No. 818,540
6 Claims. (Cl. 260-239.3)

1. A process for the production of an epsilon-caprolactam which comprises heating a 6-hydroxycaproamide, characterized by the structural formula:



wherein R represents members selected from the group

consisting of hydrogen and lower alkyl groups, in water at temperatures ranging from about 300° C. to about 475° C. at superatmospheric pressures.

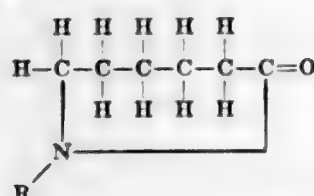
3,000,880

PRODUCTION OF EPSILON CAPROLACTAMS

Benjamin Phillips, Charleston, Samuel W. Tinsley, South Charleston, and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 8, 1959, Ser. No. 818,545
5 Claims. (Cl. 260—239.3)

1. A process for the production of epsilon-caprolactams characterized by the formula



wherein R represents a member of a group selected from the class consisting of hydrogen and lower alkyl groups which comprises heating epsilon-caprolactone with an aqueous solution containing a nitrogen compound characterized by the formula



wherein R represents a member selected from the group of hydrogen and lower alkyl groups within the temperature range of T_c to T_c+100° C. where T_c is the critical temperature of water and at a pressure above the critical pressure of water for a sufficient length of time to produce the corresponding epsilon-caprolactams.

3,000,881

PROCESS FOR PREPARING AN α -HALOGENO-LACTAM

Johannes H. Ottenbeym, Sittard, and Johan W. Garritsen, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,075
Claims priority, application Netherlands Sept. 25, 1958
5 Claims. (Cl. 260—239.3)

1. A process for preparing an α -halogeno-lactam which comprises reacting an azacyclo-2.3.alkene-2-chloro-N-carbochloride in which the alkene group contains up to 12 carbon atoms and a hypohalogen compound selected from the group consisting of hypohalogenic acid and alkali metal and alkaline earth metal hypochlorites by mixing the reactants together in the presence of water.

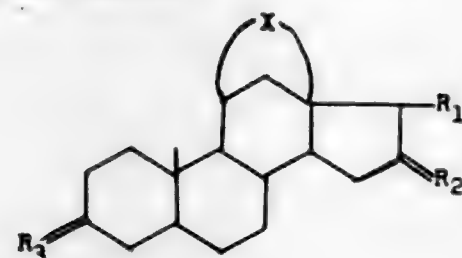
3,000,882

PROCESS FOR THE SYNTHESIS OF 18-HOMO-ANDROSTANE-COMPOUNDS

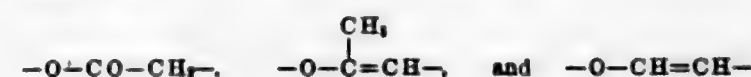
Albert Wettstein, Georg Anner, and Karl Heusler, Basel, Hellmut Ueberwasser, Riehen, and Peter Wieland, Julius Schmidlin, and Jean-Rene Billeter, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed July 11, 1955, Ser. No. 521,398
Claims priority, application Switzerland July 30, 1954
17 Claims. (Cl. 260—239.55)

17. A member of the group consisting of the compounds of the formula:



wherein —X— represents a member of the group consisting of



R_1 stands for a member of the group consisting of hydrogen, carboxy, carbomethoxy and carboethoxy; R_2 for a member of the group consisting of two hydrogen atoms and an oxygen atom, and R_3 for a member of the group consisting of oxo and ethylenedioxy, and having a double bond extending from carbon atom 5, said double bond being selected from the group consisting of a 4,5-double bond when R_2 is oxo and a 5,6-double bond when R_2 is ethylenedioxy, and the corresponding 14,15-dehydro compounds.

3,000,883

PREPARATION OF 17 α -HYDROXYPROGESTERONE AND INTERMEDIATES

Raymond L. Pederson, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Mar. 18, 1957, Ser. No. 646,562
1 Claim. (Cl. 260—239.55)

3-keto-17(20)-epoxy-4-pregnen-20-ol, 20-formate.

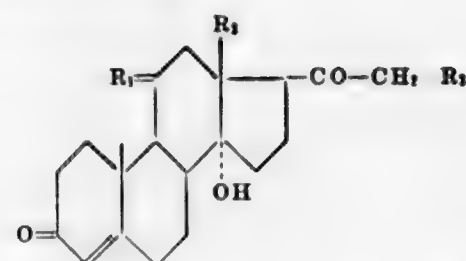
3,000,884

14 α -HYDROXY-18-OXYGENATED PREGNENES

Albert Wettstein and Ernst Vischer, Basel, and Charles Meystre, Arlesheim, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Sept. 26, 1956, Ser. No. 612,112
Claims priority, application Switzerland Sept. 30, 1955
6 Claims. (Cl. 260—239.57)

6. A member selected from the group consisting of a compound of the formula



in which R_1 is a member selected from the group consisting of (1) two hydrogen atoms, (2) a free hydroxy group together with a hydrogen atom, (3) a hydroxy group lactonized with a 13-carboxy group together with a hydrogen atom, (4) a hydroxy group acetalized with a 13-aldehyde group together with a hydrogen atom and (5) an oxo group, R_2 is a member selected from the group consisting of hydroxymethyl group, an aldehyde group, an aldehyde group hemi-acetalized with an 11-hydroxy group and its derivatives derived from esterification with an organic acid having from 1 to 8 carbon atoms, said acid being a member selected from the group consisting of formic acid, acetic acid, chloroacetic acids, trifluoroacetic acid, propionic acid, butyric acids, valeric acids, trimethyl acetic acid, diethyl acetic acid, caproic acids, oenanthic acids, caprylic acids, palmitic acids, crotonic acid, undecanic acid, undecylenic acid, oxalic acid, succinic acid, pimelic acid, maleic acid, lactic acid, carbamic acids, alkoxy-carboxylic acids, β -cyclopentylpropionic acid, hexahydrobenzoic acid, benzoic acid, phenylacetic acid, cyclohexylacetic acid, phenylpropionic acids, trimethylgallic acid, phthalic acid, furane-2-carboxylic acid, isonicotinic acid, methane sulfonic acid, toluene sulfonic acid, sulfuric acids, hydrohalic acids and phosphoric acids, a carboxyl group and a carboxylic acid group lactonized with an 11-hydroxy

group, and R_3 is a member selected from the group consisting of hydrogen, a hydroxy group, a hydroxy group esterified with an organic acid having from 1 to 8 carbon atoms, said acid being a member selected from the group consisting of formic acid, acetic acid, chloroacetic acids, trifluoroacetic acid, propionic acid, butyric acids, valeric acids, trimethyl acetic acid, diethyl acetic acid, caproic acids, oenanthic acids, caprylic acids, palmitic acids, crotonic acid, undecanic acid, undecylenic acid, oxalic acid, succinic acid, pimelic acid, maleic acid, lactic acid, carbamic acids, alkoxy-carboxylic acids, β -cyclopentylpropionic acid, hexahydrobenzoic acid, benzoic acid, phenylacetic acid, cyclohexylacetic acid, phenylpropionic acids, trimethylgallic acid, phthalic acid, furane-2-carboxylic acid, isonicotinic acid, methane sulfonic acid, toluene sulfonic acid, sulfuric acids, hydrohalic acids and phosphoric acids, and a lower alkoxy group, and the 1:2-dehydro derivatives thereof.

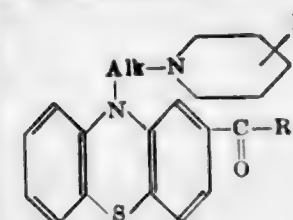
3,000,885

2-ACYL-10-OXYALKYLPIPERIDINOALKYL-PHENOTHIAZINES AND PROCESS

John W. Cusic, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,611
11 Claims. (Cl. 260—243)

1. A compound of the formula



wherein R is a lower alkyl radical solely substituted by a member of the group consisting of hydroxy and lower alkanoyloxy radicals, Alk is a lower alkylene radical containing more than 1 carbon atom and separating the radicals attached thereto by at least 2 carbon atoms, and R' is a lower alkyl radical.

3,000,886

SUBSTITUTED AROYLALKYL PHENOTHIAZINYL-ALKYL PIPERAZINES

William H. Edgerton, Strafford-Wayne, Maxwell Gordon, Philadelphia, and James W. Wilson, Wayne, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,295
2 Claims. (Cl. 260—243)

1. 1 - (2 - benzoyl-ethyl) - 4 - [3 - (2 - trifluoromethyl-10-phenothiazinyl)-propyl]-piperazine.

3,000,887

PURIFICATION OF PHENOTHIAZINE

Richard Rigby, Ledsham, Wirral, England, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 10, 1959, Ser. No. 851,961
Claims priority, application Great Britain Mar. 20, 1959
1 Claim. (Cl. 260—243)

Process for the purification of phenothiazine which comprises steam distilling said phenothiazine at a pressure of at least about 3 atmospheres with superheated steam and at a temperature of at least about 280° C. to form a gaseous overhead stream comprising pheno-

thiazine and steam, and expanding the gaseous overhead stream substantially adiabatically to substantially atmospheric pressure and a temperature at which all of the phenothiazine solidifies.

3,000,888

PROCESS FOR THE PRODUCTION OF AMINO ACIDS

Ernst Bieker, Munich, Germany, assignor, by mesne assignments, to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 1, 1958, Ser. No. 764,532
Claims priority, application Germany Oct. 17, 1957
10 Claims. (Cl. 260—247.2)

1. Process for the production of α -amino acids, which comprises reacting in a first stage glyoxylic acid with a secondary amine under ice-cooling, thereafter in a second stage reacting the reaction mixture with a cyclic compound containing active hydrogen at a pH of from 3–5, and recovering the α -amino acid thereby formed.

4. Process for the production of 1-phenyl-2,3-dimethyl-5-pyrazolonyl-(4)-morpholine-acetic acid, which comprises reacting in a first stage under ice-cooling glyoxylic acid and morpholine, thereafter in a second stage reacting the reaction mixture with 1-phenyl-2,3-dimethyl-5-pyrazolone at a pH of from 3–5, and recovering the 1-phenyl-2,3-dimethyl-5-pyrazolonyl-(4)-morpholine acetic acid thereby formed.

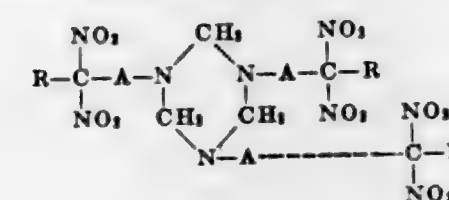
3,000,889

TRIS N-ALKYLENEPOLYNITRO HEXAHYDRO S-TRIAZINES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

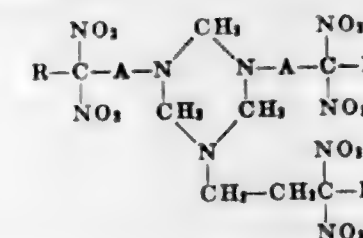
No Drawing. Filed Jan. 28, 1957, Ser. No. 636,838
16 Claims. (Cl. 260—248)

1. As compositions of matter, the N-nitroalkyl-1,3,5-triazines having the formula:

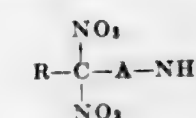


wherein A is a lower alkylene radical and R is a radical selected from the group consisting of lower alkyl and nitro radicals.

9. The method of preparing N-nitroalkyl-1,3,5-triazines having the formula:



which comprises condensing formaldehyde with a nitro-containing amine having the formula:



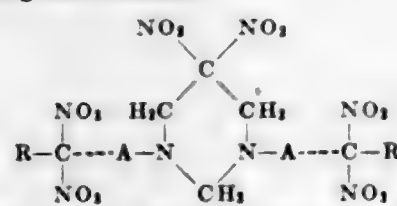
wherein A is a lower alkylene radical and R is a radical selected from the group consisting of lower alkyl and nitro radicals.

3,000,890 1,3-BIS-(NITROALKYL) 5,5-DI-NITRO- HEXAHYDRO PYRIMIDINES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Jan. 28, 1957, Ser. No. 636,837
10 Claims. (Cl. 260-251)

1. As compositions of matter, the N-nitroalkyl-1,3-diazines having the formula:



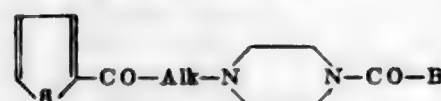
wherein A is a lower alkylene radical and R is a radical selected from the group consisting of lower alkyl and nitro radicals.

3,000,891 1-THENOYLALKYL-4-AROYLPIPERAZINES

Paul A. J. Janssen, Antwerpse Steenweg 16, Vosselaar, near Turnhout, Belgium

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,952
5 Claims. (Cl. 260-268)

1. A compound of the formula



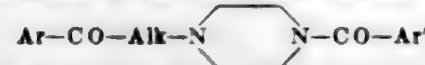
wherein Alk is a lower alkylene radical, and B is a member of the class consisting of halophenyl, thienyl, and pyridyl radicals.

3,000,892 1-AROYLALKYL-4-AROYLPIPERAZINES

Paul A. J. Janssen, Antwerpse Steenweg 16, Vosselaar, near Turnhout, Belgium

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,956
5 Claims. (Cl. 260-268)

1. A compound of the structural formula



wherein Alk is a lower alkylene radical, Ar is a member of the class consisting of phenyl, halophenyl, and methoxyphenyl, and Ar' is a member of the class consisting of phenyl, halophenyl, methoxyphenyl, dimethoxyphenyl, and trimethoxyphenyl.

3,000,893 METHYL O-PIPERONYLOYL-RESERPATE

Emil Schlittler, Madison, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

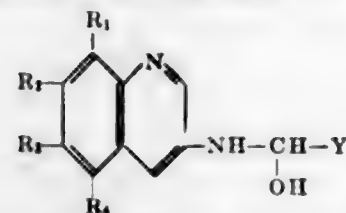
No Drawing. Filed Nov. 14, 1957, Ser. No. 696,315
1 Claim. (Cl. 260-287)

Methyl O-piperonyloyl-reserpate.

**3,000,894
CHLORAL DERIVATIVES OF AMINO QUINOLINE**
Russell M. Bimber, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 31, 1957, Ser. No. 693,541
2 Claims. (Cl. 260-288)

1. A compound of the structure:



wherein R₁, R₂, R₃, and R₄ are selected from the group in which A stands for a lower alkylene radical and R

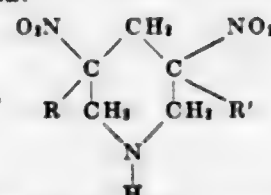
consisting of lower alkyl and hydrogen atoms, and Y is an alpha halo lower alkyl wherein the halogen is selected from the group consisting of chlorine and bromine.

3,000,895 POLYINITROPYPERIDINES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Oct. 3, 1957, Ser. No. 688,808
11 Claims. (Cl. 260-293)

1. As compositions of matter, the polynitropiperidines having the formula:



wherein R and R' are radicals selected from the group consisting of hydrogen and nitro radicals.

3,000,896 PROCESS FOR THE MANUFACTURE OF SECOND- ARY DIPHENYL-PIPERIDYL-CARBINOLS

Karl Hoffmann and Jules Heer, Binningen, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Jan. 16, 1957, Ser. No. 634,415
Claims priority, application Switzerland Jan. 19, 1956

2 Claims. (Cl. 260-294.7)

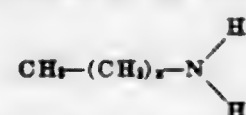
1. A process for the manufacture of diphenyl-piperidyl-(4)-carbinol, wherein the N-acyl-piperidine-4-carboxylic acid lower alkyl ester, acyl being selected from the group consisting of lower alkanoyl and benzoyl, is condensed with phenyllithium and the resulting diphenyl-(N-substituted-4-piperidyl)-carbinol is hydrolyzed with an inorganic base selected from the group consisting of an alkali metal hydroxide and ammonia.

3,000,897 CITRAZINIC ACID-AMINE-OXYGEN DYES

Frederick L. Thomas, 609 Piper Drive, Madison, Wis.

No Drawing. Filed Oct. 23, 1958, Ser. No. 769,060
18 Claims. (Cl. 260-295)

This invention relates to methods for making citrazinic acid-amine dyes comprising, reacting citrazinic acid with a primary amine as defined in the following formula:



where x is an integer from 0 to 17, in the presence of aqueous hydrogen peroxide at a temperature of about 50° C. to about 100° C.

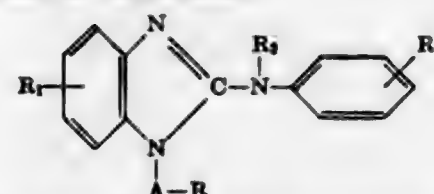
3,000,898 NEW BENZIMIDAZOLES

Karl Hoffmann, Binningen, and Alfred Hunger, Jindrich Kehrle, and Alberto Rossi, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,923
Claims priority, application Switzerland Sept. 19, 1958

6 Claims. (Cl. 260-309.2)

1. A member selected from the group consisting of benzimidazoles of the formula



for a member selected from the group consisting of piperidino, pyrrolidino, morpholino, piperazino, thiomorpholino, and di-lower alkylamino, and in which R₁ and R₂ stand for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, the nitro group and halogen and R₃ for a member selected from the group consisting of hydrogen, a lower alkyl, benzyl, carbo-lower alkoxy-lower alkyl, lower alkanoyl, and lower carbalkoxy, and the therapeutically useful acid addition salts thereof.

3,000,899 1-R-2-AMINO-INDOLES

Karl Hoffmann, Binningen, and Jindrich Kehrle, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Original application July 10, 1956, Ser. No. 597,047, now Patent No. 2,875,212, dated Feb. 24, 1959. Divided and this application July 14, 1958, Ser. No. 748,134

Claims priority, application Switzerland July 18, 1955
6 Claims. (Cl. 260-319)

1. A member selected from the group consisting of 1-methyl-2-amino-5-methoxy-indole, 1-carbethoxymethyl-2-amino-indole, 1-benzyl-2-amino-indole, 1-methyl-5-benzyl-2-amino-indole, 1-methyl-5-hydroxy-2-amino-indole, and therapeutically useful acid addition salts thereof.

3,000,900 2,6-DI-t-BUTYL-4-(N-MALEIMIDO- METHYL)-PHENOL

Pliny Otto Tawney, Passaic, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,115
1 Claim. (Cl. 260-326.5)

2,6-Di-t-butyl-4-(N-maleimidomethyl)-phenol.

3,000,901 DEHYDRATION OF PENTAERYTHRITOL

Joseph A. Wyler, Blooming Grove, Pa., assignor to Trojan Powder Company, Allentown, Pa., a corporation of New York

No Drawing. Filed May 4, 1959, Ser. No. 810,556
7 Claims. (Cl. 260-333)

1. The method of the dehydration of a pentaerythritol to provide a completely water-soluble, low molecular weight dehydration product of enhanced bodying power which is substantially free of aldehydic and double bond material which comprises heating a mixture of a pentaerythritol selected from the class consisting of monopentaerythritol, dipentaerythritol, and tripentaerythritol with a catalyst selected from the class consisting of stannous chloride, magnesium chloride, and magnesium bromide, in a proportion of from about 0.01% to not exceeding 0.25% by weight of the mixture, calculated on the weight of the said catalyst as the hydrate thereof, to a temperature below about 290° C., effective to liberate water of constitution in an amount of from about 3% to about 10% by weight of the mixture has been evolved from said mixture.

7. The product of the process of claim 1.

3,000,902 CROWEACIC ACID DERIVATIVES

Arthur F. Wagner, Princeton, and Frederick A. Kuehl, Jr., Rumson, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,597
1 Claim. (Cl. 260-340.5)

A process which comprises (1) treating 1-methoxy-2,3-methylenedioxybenzene with an N-disubstituted formamide in the presence of a Lewis acid catalyst, (2) hydrolyzing the addition product thereby obtained to pro-

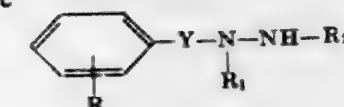
duce 2-methoxy-3,4-methylenedioxy-benzaldehyde, (3) oxidizing this product to produce 2-methoxy-3,4-methylenedioxy benzoic acid and, (4) nitrating this product to produce 2-methoxy-3,4-methylenedioxy-6-nitrobenzoic acid, (5) esterifying this product to produce the corresponding benzoate, (6) reducing the benzoate to produce an alkyl 6-amino-3,4-methylenedioxybenzoate, (7) diazotizing this product, (8) hydrolyzing the thus formed diazonium salt to produce an alkyl 6-hydroxy-2-methoxy-3,4-methylenedioxybenzoate, (9) methylating this product to produce an alkyl 2,6-dimethoxy-3,4-methylenedioxybenzoate and (10) hydrolyzing this product to produce 2,6-dimethoxy-3,4-methylenedioxybenzoic acid.

3,000,903 PHENYLALKYLHYDRAZINES AND USE AS PSYCHOTHERAPEUTICS

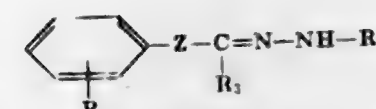
John H. Biel, Milwaukee, Wis., assignor, by mesne assignments, to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Sept. 15, 1959, Ser. No. 840,016
15 Claims. (Cl. 260-340.5)

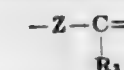
2. 3,4-methylenedioxyphenyl isopropylhydrazine.
9. Compounds of the group consisting of compounds of the formulae



and



and nontoxic acid addition salts thereof, wherein R is a member of the group consisting of hydrogen and at least one of the group consisting of lower alkyl, lower alkoxy, phenyl, phenyl-lower alkyl, phenylmethoxy, phenoxy, hydroxy, lower alkylendioxy, bromine and chlorine, R₁ is a member of the group consisting of hydrogen, low alkyl, cyclohexyl, cyclopentyl, phenethyl, phenylpropyl and phenylisopropyl, R₂ is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl, phenyl, hydroxyphenyl, methoxyphenyl, chlorophenyl, acetoxypheyl, phenethyl, phenylpropyl, phenylisopropyl, cyclopentyl and cyclohexyl, Y is a branched alkylene group having at least two carbons thereof in a direct line between the phenyl and hydrazine groups and said alkylene group having not more than a total of 5 carbons in the whole chain, Z is alkylene, R₂ is a member of the group consisting of hydrogen and lower alkyl groups, and



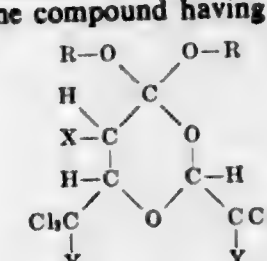
has the same number of carbons as Y.

3,000,904 DIOXANES

Donald G. Kundiger, Manhattan, Kans., and John H. Hennes, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 3, 1958, Ser. No. 746,332
6 Claims. (Cl. 260-340.7)

1. A 1,3-dioxane compound having the structure



wherein R is lower alkyl, X is a member selected from

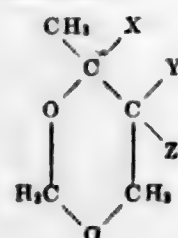
the group consisting of hydrogen and lower alkyl radicals, and Y is a member selected from the group consisting of chlorine, chloromethyl and α -chloroethyl.

3,000,905

PRODUCTION OF HYDROXYMETHYL-DIMETHYL-META-DIOXANES

Edward S. Wheeler, Secane, and Norbert H. Ellis, Philadelphia, Pa., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 2, 1959, Ser. No. 784,424
11 Claims. (Cl. 260—340.7)

1. A method for producing hydroxymethyl-dimethyl-meta-dioxanes of the formula



wherein one of the groups X, Y and Z is CH₃, one is CH₂OH, and one is H, from the products boiling above 135° C. at atmospheric pressure obtained by reacting at least one butene selected from the group consisting of isobutylene and butene-2 with an aldehyde selected from the group consisting of formaldehyde and substances yielding formaldehyde in the presence of an acid catalyst which comprises hydrolyzing said products in the presence of an acidic catalyst and recovering the compounds so formed.

3,000,906

PURIFICATION OF PIVALOLACTONE

Robert H. Hasek and Ronald G. Nations, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 5, 1960, Ser. No. 6,887
3 Claims. (Cl. 260—343.9)

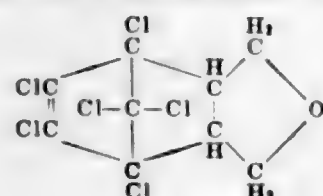
1. A method of purifying pivalolactone compositions resulting from the reaction of dimethylketene and formaldehyde and containing tetramethyl-1,3-cyclobutanedione as an impurity which comprises hydrogenating said pivalolactone composition in the presence of a hydrogenation catalyst consisting essentially of elemental ruthenium at a temperature up to about 100° C. and thereby converting a substantial proportion of said tetramethyl-1,3-cyclobutanedione to a hydrogenated dione selected from the group consisting of 3-hydroxy-2,2,4,4-tetramethyl-cyclobutanone, 2,2,4,4-tetramethyl-1,3-cyclobutanediol and mixtures thereof, and thereafter separating pivalolactone from said hydrogenated dione in the resulting reaction mixture.

3,000,907

CHLORINATED 4,5,6,7,10,10-HEXACHLORO-4,7-ENDOMETHYLENE - 4,7,8,9 - TETRAHYDRO-PHTHALANE INSECTICIDES

Hans Feichtinger, Duisburg-Beeck, Hans Tummes, Duisburg-Meiderich, and Siegfried Puschhof, Duisburg-Beeck, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a German corporation
No Drawing. Filed May 27, 1955, Ser. No. 511,776
Claims priority, application Germany June 2, 1954
14 Claims. (Cl. 260—346.2)

14. The compound of the structural formula



3,000,908

CATALYSIS OF THE VAPOR PHASE PARTIAL OXIDATION OF NAPHTHALENE TO PHTHALIC ANHYDRIDE

Robert F. Ruthruff, 18530 Klimm Ave., Homewood, Ill.
No Drawing. Filed Aug. 7, 1959, Ser. No. 832,138
10 Claims. (Cl. 260—346.4)

1. A process for the vapor phase catalytic oxidation of naphthalene to phthalic anhydride which comprises passing air containing from about 0.75 to about 2.25 mole percent naphthalene vapors into contact with a catalyst maintained in the approximate temperature range 320° C. to 420° C., said catalyst being a solution, distributed on silica gel, of vanadium pentoxide in a mixture of alkali metal salts of pyrosulfuric acid, the alkali metal portion of said mixture of salts comprising from about 65 to about 90 mole percent potassium and from about 35 to about 10 mole percent of at least one alkali metal selected from the group consisting of rubidium and cesium.

3,000,909

PROCESS OF PREPARING BUTYLENE OXIDE FROM BUTYLENE CHLOROHYDRIN

George B. Roberts, Wilmington, Del., and Philip H. Moss, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
No Drawing. Filed Oct. 29, 1958, Ser. No. 770,267
1 Claim. (Cl. 260—348.6)

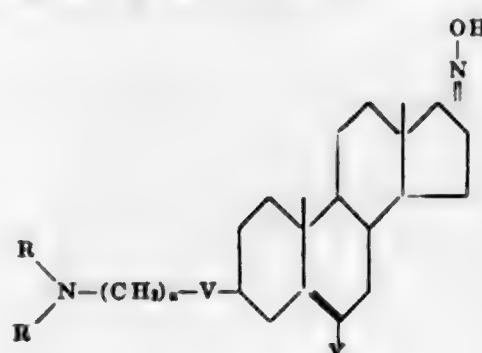
A method for preparing butylene oxide which comprises providing an aqueous solution of a butylene chlorohydrin, said solution consisting of less than about 15% by weight of said chlorohydrin, adding a solution of an alkaline compound selected from a group consisting of the alkali and alkaline earth metal hydroxides and carbonates to form a reaction mixture, said alkaline compound being employed in a 10% to 100% excess of the molar amount of said butylene chlorohydrin, maintaining said mixture at a temperature from 0° to 35° C. for a period of time in excess of 10 minutes up to about 50 minutes to effect substantially complete reaction, and distilling said reaction mixture to recover a distillate consisting essentially of butylene oxide whereby said chlorohydrin is substantially selectively converted to said butylene oxide with minimized by-product formation.

3,000,910

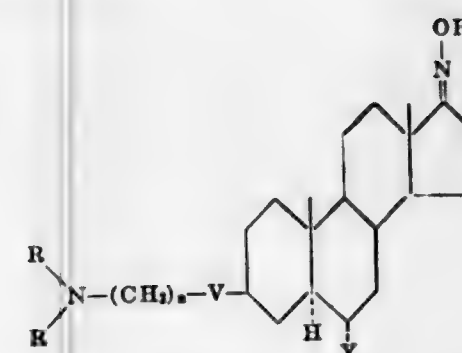
17-ISONITROSE-3-AMINOETHERS OF THE ANDROSTANE SERIES

Robert D. Birkenmeyer, Daniel Lednicer, and Fred Kagan, Kalamazoo, and Barney J. Magerlein, Portage Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Apr. 7, 1961, Ser. No. 101,342
7 Claims. (Cl. 260—397)

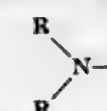
1. Steroid compounds selected from the group consisting of compounds of the formulae:



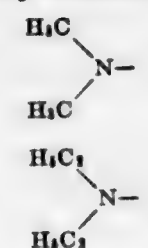
and



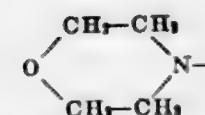
wherein n has a value of 2 to 6, inclusive, wherein



is selected from the group consisting of



and



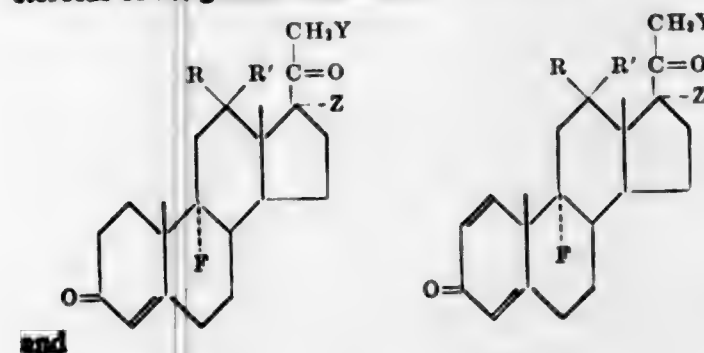
wherein V is selected from the group consisting of the elements oxygen and sulfur and wherein Y is selected from the group consisting of methyl and hydrogen.

3,000,911

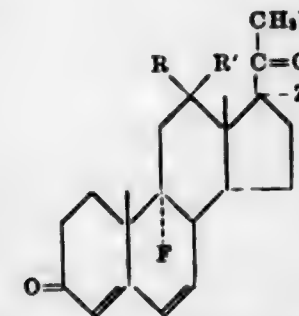
9 α -FLUORO-12 β -HYDROXY DERIVATIVES OF THE PREGNANE SERIES

Josef Fried and Josef E. Herz, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed June 23, 1957, Ser. No. 668,612
12 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of steroids of the general formulae



and



wherein individually R is hydrogen, R' is selected from the group consisting of β -hydroxy and β -acyloxy, and together R and R' is keto, Y is selected from the group consisting of hydrogen, hydroxy and acyloxy, and Z is selected from the group consisting of hydrogen and α -hydroxy.

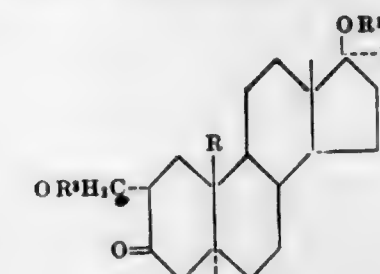
3. 9 α -fluoropregnane-3,12,20-trione.

3,000,912

2 α -SUBSTITUTED METHYL ANDROSTANES

Lawrence H. Knox, Mexico City, Mexico, assignor to Syntex, S.A., Mexico City, Mexico, a corporation of Mexico
No Drawing. Filed Jan. 4, 1961, Ser. No. 80,528
Claims priority, application Mexico Jan. 6, 1960
18 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and methyl; R¹ is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl radical of less than 12 carbon atoms; R² is selected from the group consisting of hydrogen and a lower alkyl radical; and R³ is selected from the group consisting of hydrogen, lower alkyl, monocyclic aralkyl containing up to 12 carbon atoms and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms.

3,000,913

10-ACETYLOXY DERIVATIVES OF $\Delta^{1,4}$ -ESTRADIENE 10-XI-17 BETA DIOL-3-ONE DERIVATIVES

Karl Küster-Sange, Berlin-Lichterfelde-Ost, Germany, assignor to Firma Schering A.G., Berlin, Germany
No Drawing. Filed Apr. 11, 1957, Ser. No. 652,089
Claims priority, application Germany Apr. 20, 1956
8 Claims. (Cl. 260—397.4)

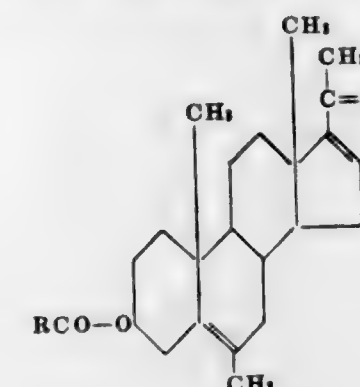
3. As a new composition of matter, a compound selected from the group consisting of $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10-acetate, $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10,17-diacetate, 2,4-dibromo- $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10-acetate, $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10-acetate-17-enanthate, 17 α -ethyl- $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10,17-diacetate, 17 α -ethyl- $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10-propionate-17-acetate and $\Delta^{1,4}$ -estradiene-10-xi-17 β -diol-3-on-10-propionate.

3,000,914

3 β -ALKANOXYLOXY-6-METHYL-5,16-PREGNADIEN-20-ONES

Luis E. Miramontes, Miguel A. Romero, and Fortunato Ahuad Farjat, all of Mexico City, Mexico, assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed May 28, 1958, Ser. No. 738,287
4 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein R is a member of the class consisting of hydrogen and lower alkyl radicals.

3,000,915

9 α -HALO-21-ALKANE SULFONATES OF THE PREGNANE SERIES AND PROCESS THEREFOR

Josef E. Herz and Josef Fried, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
 No Drawing. Filed June 17, 1955, Ser. No. 516,333
 16 Claims. (Cl. 260-397.45)

1. 9 α -halo-hydrocortisone 21-(lower alkane)sulfonate, wherein the halogen has an atomic weight greater than 18 and less than 36.

3,000,916

COMPOSITION OF MATTER PREPARED BY REACTING POLYMERIZED LINOLEIC ACID WITH AN AMINE AND SUBSEQUENTLY REACTING THE MIXTURE WITH BORIC ACID

Donald L. Klass, Libertyville, Ill., and William L. Sleker, Crown Point, and Roger W. Watson, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
 No Drawing. Filed June 3, 1958, Ser. No. 739,480
 1 Claim. (Cl. 260-404.5)

A new composition of matter prepared by mixing polymerized linoleic acid with an amine having the general formula $RNHCH_2CH_2CH_2NH_2$, wherein R is an alkyl radical containing 12 to 18 carbon atoms, said amine being mixed with said acid in a mole ratio of from about 0.5 mole to about 1.5 moles of said amine per mole of said acid at a temperature of from about 100° F. to about 300° F., subsequently reacting the mixture with boric acid in a mole ratio of from about 0.8 mole to about 2.5 moles of said boric acid per mole of said amine, and recovering a product therefrom.

3,000,917

LINEAR MIXED ESTER LUBRICANTS

Vigen K. Babayan, Livingston, N.J., assignor to E. F. Drew & Co., Inc., New York, N.Y., a corporation of Delaware
 No Drawing. Filed Mar. 15, 1957, Ser. No. 646,199
 6 Claims. (Cl. 260-404.5)

1. A synthetic lubricant which is the product of reacting an acyclic polyhydric alcohol having at least 3 OH groups with a dibasic carboxylic acid having 4 to 10 carbon atoms, in the molar ratio of about 1-2 of said alcohol to 1 of said acid, and then reacting the product with 1-6 mols. of monobasic acid per mole of alcohol having 6 to 10 carbon atoms to form fully esterified mixed linear esters having a flash point of above 500° F. and being liquid below 0° F.

3,000,918

VINYL ESTER SYNTHESIS

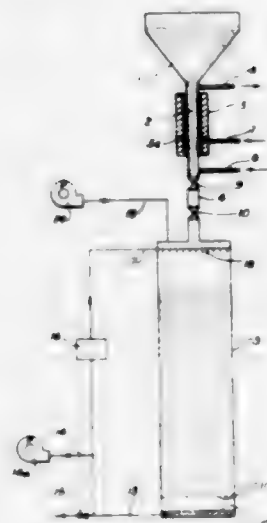
Elmar K. Willip, Cambridge, David Rubinstein, Brookline, John L. Olson, Bedford, and Charles A. Carey, Cambridge, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
 No Drawing. Filed May 15, 1958, Ser. No. 735,378
 9 Claims. (Cl. 260-410.9)

9. The process for making vinyl esters by reacting vinyl acetate with a carboxylic acid in the presence of catalytic amounts of a mercury salt of a strong acid and thereafter recovering the vinyl ester by distillation, which includes the step of removing the mercury salt from the reaction mixture prior to the distillation of the vinyl ester by treating the said reaction mixture with an acidified aqueous solution of sodium bromide, at a pH such that a water-soluble mercury-sodium bromide complex salt is formed.

3,000,919

PRODUCING ORGANIC DERIVATIVES OF ALUMINUM

Georges Wetroff, Le Thillay, and Emile Trebillon, Paris, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France
 Filed Nov. 28, 1958, Ser. No. 777,044
 Claims priority, application France Dec. 3, 1957
 20 Claims. (Cl. 260-448)



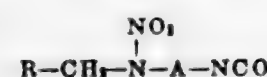
19. A process for preparing organo-aluminum compounds, comprising the steps of: treating metallic aluminum commercially available in small pieces with at least one halogen containing substance, at least part of the halogen atoms of which are capable of reacting with said commercial aluminum to form the corresponding aluminum halide on the surfaces of the aluminum pieces, separating the residual activated aluminum metal from the formed aluminum halide by vaporizing said halide in an atmosphere inert to both the halide and the activated aluminum, and reacting the resulting halogen-free activated aluminum pieces with an olefin and hydrogen to obtain a determined organo-aluminum compound.

3,000,920

NITRAZAIISOCYANATES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
 No Drawing. Filed June 9, 1955, Ser. No. 514,384
 23 Claims. (Cl. 260-453)

1. As compositions of matter, nitraza-isocyanates having the formula:



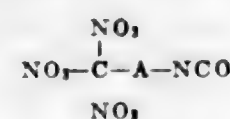
wherein R is a radical selected from the group consisting of hydrogen, lower alkyl and lower nitroalkyl radicals and A is a lower alkylene radical.

3,000,921

NITRO ISOCYANATES

Marvin H. Gold, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
 No Drawing. Filed June 5, 1957, Ser. No. 664,885
 10 Claims. (Cl. 260-453)

1. As compositions of matter, the nitro containing monoisocyanates having the formula:



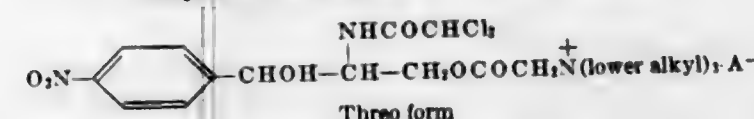
wherein A is a lower alkylene radical.

3,000,922

QUATERNARY SALTS OF CHLORAMPHENICOL ESTERS OF AMINO ACIDS

Horace A. De Wald, Grosse Pointe Woods, and David P. Hylander, Harper Woods, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
 No Drawing. Filed Aug. 11, 1958, Ser. No. 754,180
 11 Claims. (Cl. 260-459)

1. A compound having the structural formula



wherein A⁻ is a non-toxic inorganic anion.

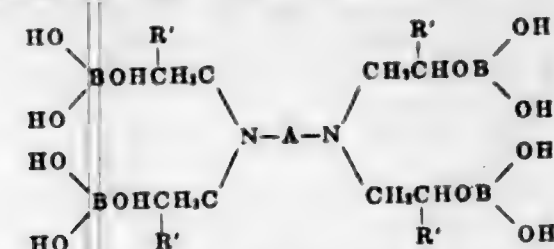
10. D-threo-1-p-nitrophenyl-2-dichloroacetamido-3-dimethylaminoacetoxypropan-1-ol methosulfate.

3,000,923

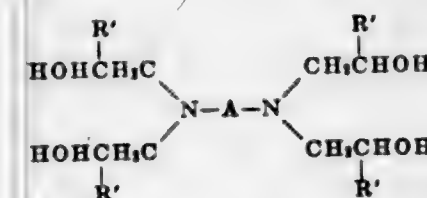
TETRAKIS(DIHYDROXYBOROXYALKYL)-ALKYLENE DIAMINE PREPARATION

Mead S. Moores, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
 No Drawing. Filed June 20, 1960, Ser. No. 37,071
 5 Claims. (Cl. 260-462)

1. A method of making a tetrakis(dihydroxyboroxyalkyl)alkylene diamine of the formula:



wherein R' is lower alkyl and A is a divalent normal lower alkylene chain having from 2-6 carbon atoms which is attached to each nitrogen atom through a different carbon atom comprising reacting in a liquid medium at an elevated temperature up to the boiling point of the reaction mixture an aminotetrol of the formula:



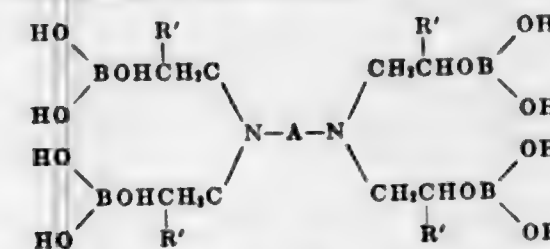
wherein R' and A are as defined aforesaid with boric acid, and recovering said tetrakis(dihydroxyboroxyalkyl)alkylene diamine from the reaction mixture.

3,000,924

TETRAKIS(DIHYDROXYBOROXYALKYL)-ALKYLENEDIAMINES

Bernard Radner and Mead S. Moores, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
 No Drawing. Filed June 20, 1960, Ser. No. 37,072
 6 Claims. (Cl. 260-462)

1. A compound of the formula:



wherein R' is lower alkyl and A is a divalent normal lower alkylene chain having 2-6 carbon atoms.

3,000,925

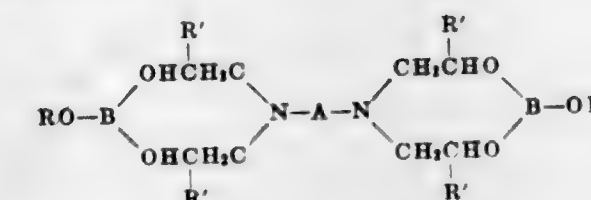
ALKYLENE-BIS-BORACYCLOOCTANE PREPARATION

Bernard Radner and Mead S. Moores, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

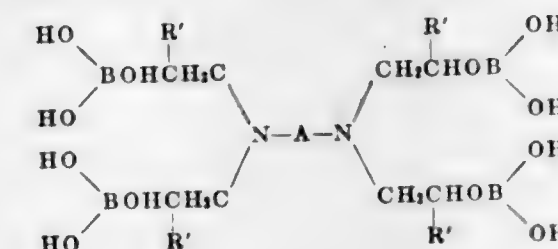
No Drawing. Filed June 20, 1960, Ser. No. 37,073

7 Claims. (Cl. 260-462)

1. A method of making alkylene-bis-boracyclooctanes of the formula:



wherein R is a member selected from the group consisting of alkyl radicals having from 1-20 carbon atoms, furfuryl, tetrahydrofurfuryl, benzyl, and cyclohexyl, R' is lower alkyl and A is a divalent normal lower alkylene chain having from 2-6 carbon atoms which is attached to each nitrogen atom through a different carbon atom, comprising reacting an N,N,N',N'-tetrakis(dihydroxyboroxyalkyl)alkylenediamine of the formula:



wherein R' and A are as defined aforesaid with an alcohol of the formula ROH, wherein R is as defined aforesaid at an elevated temperature, removing water from the reaction mixture substantially as it is formed during the reaction, and recovering said alkylene-bis-boracyclooctane from the residue.

3,000,926

PREPARATION OF ALKYL BORATE ESTERS

Allen L. McCloskey, Orange, and Lowell L. Petterson, Whittier, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed June 23, 1958, Ser. No. 743,984

7 Claims. (Cl. 260-462)

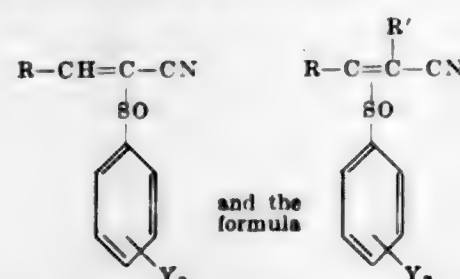
1. The method of directly producing substantially pure alkyl borate esters which comprises mixing boron trifluoride diethyl etherate with an alkali alkoxide in the presence of a hydrocarbon solvent inert to said etherate and said alkoxide and having a boiling point in the range of from about 35 to about 200° C., the alkyl group of said alkoxide having a maximum of three carbon atoms, said solvent and said borate ester having a boiling point differential of at least about 20° C., and heating said mixture to form said borate ester.

3,000,927

TOXIC ARYLSULFINYL ALKENENITRILES

Gail H. Birum and Samuel Allen Heininger, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,239
8 Claims. (Cl. 260-465)

1. An arylsulfinyl alkenenitrile selected from the class consisting of compounds of the formula



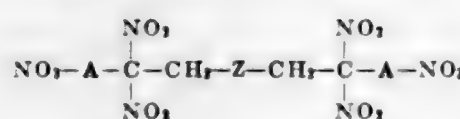
wherein R and R' are selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation and containing from 1 to 6 carbon atoms, Y is selected from the class consisting of chlorine, bromine, iodine, fluorine, hydrogen and alkyl radicals having from 1 to 6 carbon atoms, and n is an integer from 1 to 5.

3,000,928

POLYNITRO NITRATE COMPOUNDS AND METHOD OF PREPARATION

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 18, 1958, Ser. No. 715,988
8 Claims. (Cl. 260-467)

1. As compositions of matter, the aliphatic polynitro-nitrates having the formula:



wherein A is a lower alkylene radical and Z is a radical selected from the group consisting of nitromethylene, dinitromethylene and nitramine radicals.

3,000,929

O-(3-PHENYL CARBAZYL) SERINE

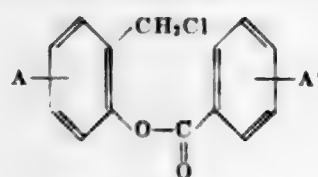
William Shive and Charles Gordon Skinner, Jr., Austin, Tex.
No Drawing. Filed Dec. 15, 1959, Ser. No. 859,583
1 Claim. (Cl. 260-472)
O-(3-phenylcarbazyl)serine.

3,000,930

 α -CHLOROTOLYL BENZOATES

Laurence A. Pursglove, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Sept. 3, 1958, Ser. No. 758,673
5 Claims. (Cl. 260-476)

1. A compound corresponding to the formula:



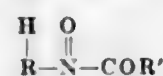
wherein each of A and A' is independently selected from the group consisting of hydrogen, bromine, chlorine, and a nitro group.

3,000,931

PROCESS FOR THE PREPARATION OF NITROCARBAMATES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Jan. 17, 1955, Ser. No. 482,408
8 Claims. (Cl. 260-482)

1. The method of preparing nitrocarbamates having the formula:



which comprises reacting a nitro-isocyanate having the formula:



with an alcohol having the formula:



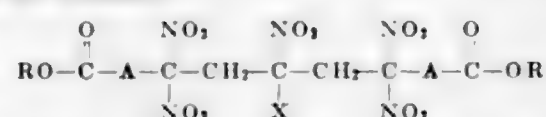
wherein R is a lower nitroalkyl radical and R' is a radical selected from the group consisting of lower alkyl, cycloalkyl and unsubstituted aryl hydrocarbon radicals.

3,000,932

POLYNITRO-SUBSTITUTED DIBASIC ACIDS AND ESTERS

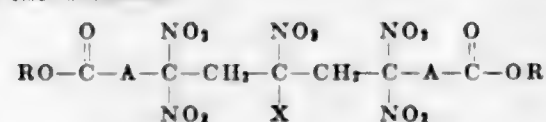
Karl Klager, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Jan. 28, 1957, Ser. No. 636,839
20 Claims. (Cl. 260-485)

1. As compositions of matter, the polynitro compounds having the formula:

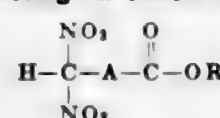


wherein R is a radical selected from the group consisting of hydrogen and lower alkyl radicals, A is a lower alkylene radical and X is a radical selected from the group consisting of hydrogen and nitro radicals.

9. The method of preparing the polynitro compounds having the formula:



which comprises reacting an ester having the formula:



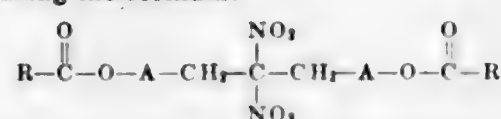
with an ester selected from the group consisting of esters of nitroallyl acetate and diesters of 2-nitro-1,3-propane diol in the presence of an alkali or alkaline earth metal ion, wherein R is a radical selected from the group consisting of hydrogen and lower alkyl radicals, A is a lower alkylene radical, and X is a radical selected from the group consisting of hydrogen and nitro radicals.

3,000,933

GEMINAL DINITROALKANOATES AND PROCESS OF MAKING SAME

Levonna Herzog, Mountain View, N.J., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Apr. 11, 1957, Ser. No. 652,308
6 Claims. (Cl. 260-488)

1. As compositions of matter, the geminal dinitro compounds having the formula:

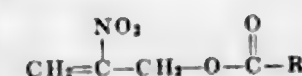


wherein R is a lower alkyl radical and A is a lower alkylene radical.

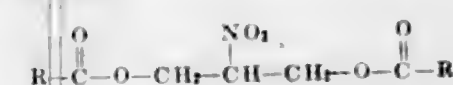
3,000,934
NITROALLYL ALCOHOL ESTERS AND METHOD OF MAKING SAME

Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 15, 1957, Ser. No. 672,538
11 Claims. (Cl. 260-488)

5. The method of preparing an ester of nitroallyl alcohol having the formula:



which comprises distilling a diester of 2-nitropropanediol having the formula:



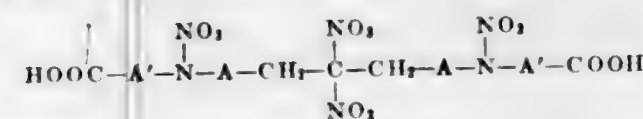
wherein R is a lower alkyl radical, at reduced pressures.

3,000,935

POLYNITRAZA DIBASIC ACIDS

Clinton R. Vanneman, Claremont, and Karl Klager, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Sept. 6, 1955, Ser. No. 532,731
13 Claims. (Cl. 260-534)

1. As compositions of matter, the polynitroaza dibasic acids having the formula:



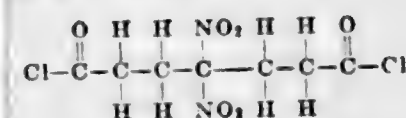
wherein A and A' are lower alkylene radicals.

3,000,936

4,4-DINITRO 1,7-HEPTANEDIOYL CHLORIDE AND METHOD OF MAKING IT

Levonna Herzog, Rutherford, N.J., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Nov. 30, 1950, Ser. No. 198,492
6 Claims. (Cl. 260-544)

1. A new composition of matter comprising 4,4-dinitro-1,7-heptanedioyl chloride



2. The method of synthesizing 4,4-dinitro-1,7-heptanedioyl chloride which comprises mixing 4,4-dinitro-1,7-heptanedioic acid with a substance selected from the group consisting of SOCl_2 , PCl_3 , POCl_3 , PCl_5 and mixtures thereof, heating the mixture slowly to a temperature of about 55°C ., holding the mixture at a temperature of about 55°C ., until all of the acid has gone into solution for a sufficient time to permit substantially complete reaction, cooling the solution to room temperature, filtering the solution, lowering the temperature of the filtrate to about -20°C ., thereby crystallizing 4,4-dinitro-1,7-heptanedioyl chloride, and filtering said crystals.

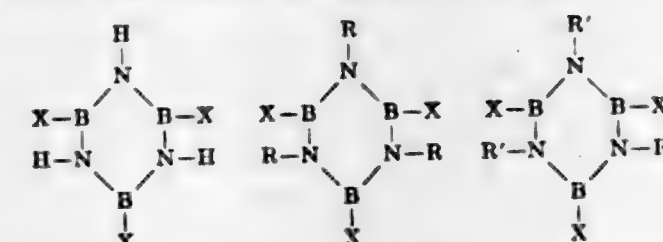
3,000,937

PROCESS FOR THE PRODUCTION OF ARYLBORAZOLES

William D. English, Garden Grove, and Allen L. McCloskey, Orange, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed June 3, 1959, Ser. No. 817,714
2 Claims. (Cl. 260-551)

1. In the method for producing arylborazoles which

comprises refluxing, in an organic solvent, a B-haloborazole selected from the group consisting of



where R is an alkyl radical, R' is an aryl radical and X is halogen with a Grignard reagent and wherein at least one of the reactants contains an aryl group in its molecule, the improvement which comprises adding to the reaction mass from about 0.01 mole to about 1 mole per mole of Grignard reagent of a material selected from the class consisting of tertiary aliphatic amines having alkyl groups of from 2-20 carbon atoms, N,N-dimethyl aniline, pyridine and quinoline.

3,000,938

 α -CYCLOPROPYLBENZYLUREA

Warren J. Close, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Original application Oct. 9, 1956, Ser. No. 614,803. Divided and this application Oct. 22, 1959, Ser. No. 16,908
1 Claim. (Cl. 260-553)

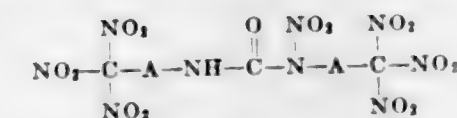
The compound α -cyclopropylbenzylurea.

3,000,939

N-NITRO,N,N'-BIS(TRINITROALKYL)-UREA

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 8, 1957, Ser. No. 670,853
10 Claims. (Cl. 260-553)

1. As composition of matter, the nitroureas having the formula:



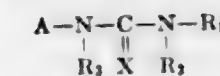
wherein A is a lower alkylene radical.

3,000,940

PERCHLORYLARYLUREAS

Maynard S. Raasch, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 17, 1959, Ser. No. 793,662
6 Claims. (Cl. 260-553)

5. Compounds of the formula



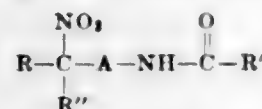
wherein A is an aryl group of 6 to 10 carbons in which one of its nuclear carbon atoms is attached to the perchloryl group and the remaining nuclear carbons are attached to members of the group consisting of hydrogen, alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms and halogen, R₁ and R₂ are members of the class consisting of hydrogen and alkyl of from 1 to 4 carbon atoms, R₃ is a member of the class consisting of hydrogen and lower alkyl and X is a chalcogen of atomic number of 8-16.

3,000,941

N-(NITROALKYL)-ALKENOYL AMIDES

Karl Klager, Sacramento, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 10, 1957, Ser. No. 665,624
12 Claims. (Cl. 260-561)

1. As compositions of matter, the N-nitroalkyl amides of alkenoic acids having the formula:



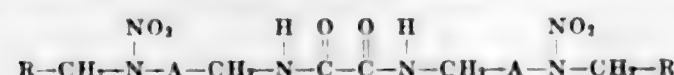
wherein A is a lower alkylene radical, R' is a lower alkenyl radical, and R and R'' are radicals selected from the group consisting of hydrogen, a lower alkyl and nitro radicals.

3,000,942

N,N'-(NITRAZAALKYL) OXAMIDES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 13, 1957, Ser. No. 666,269
12 Claims. (Cl. 260-561)

1. As a new composition of matter, an N,N'-bis (nitrazaalkyl) oxamide having the formula:



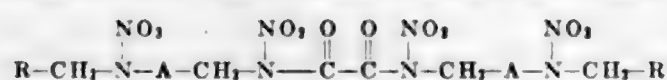
wherein each R is a radical selected from the group consisting of hydrogen, lower alkyl, and lower nitroalkyl radicals and each A is a lower alkylene radical.

3,000,943

N,N'-BIS(NITRAZAALKYL)-N,N'-DINITRO OXAMIDES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 13, 1957, Ser. No. 666,270
14 Claims. (Cl. 260-561)

1. As a new composition of matter, an N,N'-bis (nitrazaalkyl)-N,N'-dinitro oxamide having the formula:



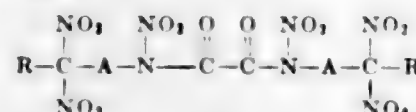
where each R is a radical selected from the group consisting of hydrogen, lower alkyl, and lower nitroalkyl radicals and each A is a lower alkylene radical.

3,000,944

N,N'-POLYNITROALKYL OXAMIDES

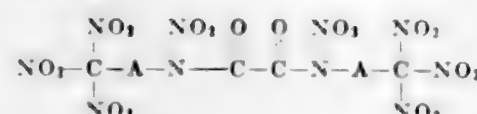
Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 15, 1957, Ser. No. 672,541
15 Claims. (Cl. 260-561)

1. As compositions of matter, the polynitro nitramides having the formula:

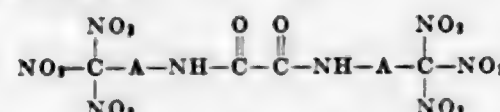


wherein A is a lower alkylene radical and R is a radical selected from the group consisting of nitro, lower alkyl, and lower nitroalkyl radicals.

9. The method of preparing polynitro nitramides having the formula:



which comprises nitrating an aliphatic polynitro oxamide having the formula:



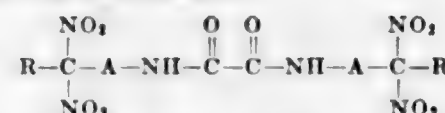
wherein A is a lower alkylene radical.

3,000,945

N,N'-BIS-NITROALKYL OXAMIDES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Oct. 30, 1957, Ser. No. 693,783
15 Claims. (Cl. 260-561)

1. As compositions of matter, the aliphatic polynitro oxamides having the formula:



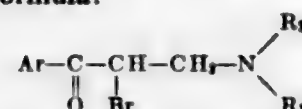
wherein R is a radical selected from the group consisting of hydrogen, nitro, lower alkyl, and lower nitroalkyl radicals and A is a lower alkylene radical.

3,000,946

 β -AMINO- α -BROMO-PROPIOPHENONES

George de Stevens, New Providence, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 18, 1958, Ser. No. 722,152
6 Claims. (Cl. 260-570.5)

1. A member of the group consisting of α -bromo ketones of the formula:



in which Ar stands for a phenyl radical substituted in the 4-position by lower alkoxy and each of the radicals R₁ and R₂ stand for lower alkyl, addition salts thereof with therapeutically acceptable acids.

3,000,947

OPTICAL RESOLUTION OF ALPHA-NAPHTHYLETHYLAMINES

Robert R. Bottoms, Crestwood, Ky., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 23, 1957, Ser. No. 685,367
5 Claims. (Cl. 260-570.8)

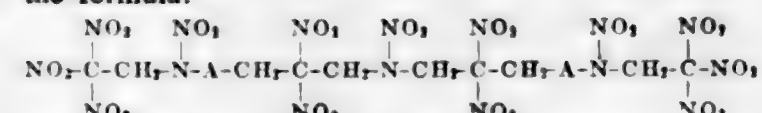
1. A method of resolving 1-amino-1-naphthylethane into optically active forms which comprises forming a salt of 1-amino-1-naphthylethane with an optically active menthyl hydrogen phthalate in benzene, crystallizing the less soluble salt of an optically active 1-amino-1-naphthylethane with said optically active menthyl hydrogen phthalate from the benzene solution, separating said salt from said solution and liberating the optically active 1-amino-1-naphthylethane from said salt by treatment with acid.

3,000,948

NITRAMINES

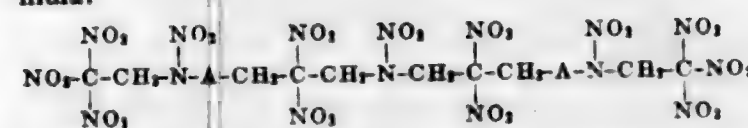
Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 19, 1957, Ser. No. 641,437
11 Claims. (Cl. 260-583)

1. As compositions of matter, the nitramines having the formula:

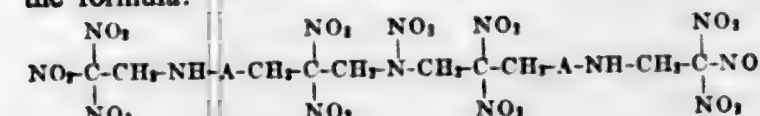


wherein A is a lower alkylene radical.

6. The method of preparing nitramines having the formula:



which comprises nitrating a secondary diamine having the formula:



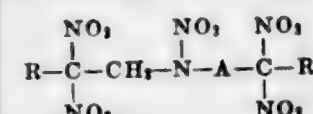
wherein A is a lower alkylene radical.

3,000,949

NITRAMINES

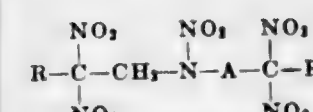
Milton B. Frankel, Pasadena, and Karl Klager, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 19, 1957, Ser. No. 641,438
16 Claims. (Cl. 260-583)

1. As compositions of matter, nitramines having the formula:

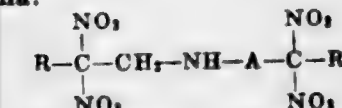


where A is a lower alkylene radical and R and R' are radicals selected from the group consisting of lower alkyl and nitro radicals, at least one R being lower alkyl.

10. The method of preparing nitramines having the formula:



which comprises reacting nitric acid with an amine having the formula:



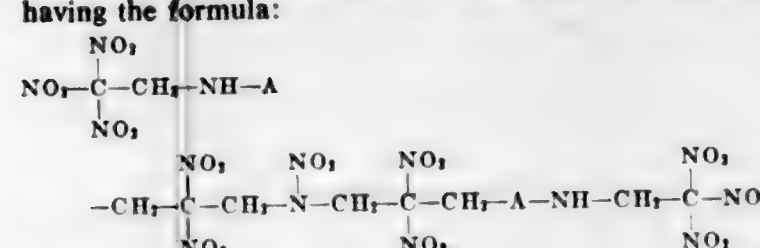
wherein A is a lower alkylene radical and R and R' are radicals selected from the group consisting of lower alkyl and nitro radicals, at least one R being lower alkyl.

3,000,950

ALIPHATIC NITRAZA POLYNITRO DIAMINES

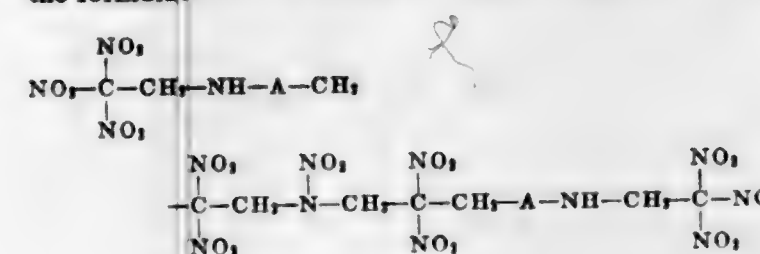
Milton B. Frankel, Pasadena, and Karl Klager, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Mar. 4, 1957, Ser. No. 643,893
17 Claims. (Cl. 260-583)

1. As compositions of matter, the secondary diamines having the formula:

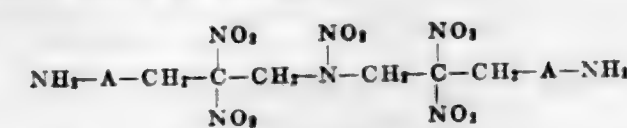


wherein A is a lower alkylene radical.

6. The method of preparing secondary diamines having the formula:



which comprises condensing 2,2,2-trinitroethanol with a diamine having the formula:



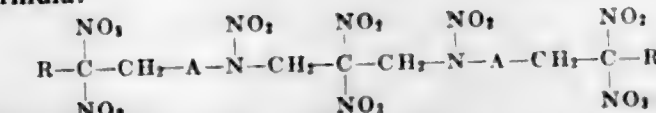
wherein A is a lower alkylene radical.

3,000,951

NITRAMINES

Milton B. Frankel, Pasadena, and Karl Klager, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Mar. 7, 1957, Ser. No. 644,692
10 Claims. (Cl. 260-583)

1. As compositions of matter, nitramines having the formula:



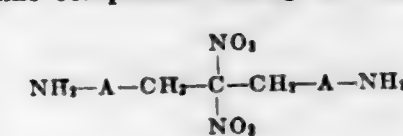
wherein R is a radical selected from the group consisting of nitro and lower alkyl radicals and A is a lower alkylene radical.

3,000,952

GEM-DINITROALKANEDIAMINES

Marvin H. Gold, Pasadena, Calif., and Levonna Herzog, Mountain View, N.J., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Apr. 11, 1957, Ser. No. 652,305
5 Claims. (Cl. 260-583)

1. As new compositions of matter the geminal dinitro alkanediamine compounds having the formula:



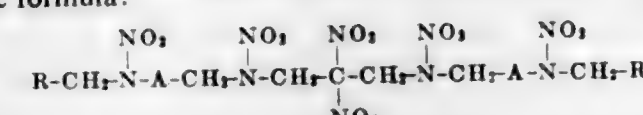
wherein A is a lower alkylene radical.

3,000,953

TETRANITRAMINES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 13, 1957, Ser. No. 666,271
16 Claims. (Cl. 260-583)

1. As a composition of matter, a tetranitramine having the formula:



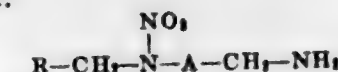
wherein R is a radical selected from the group consisting of hydrogen, lower alkyl and lower nitroalkyl radicals and A is a lower alkylene radical.

3,000,954

NITRAZA AMINE COMPOUNDS

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 13, 1957, Ser. No. 666,273
13 Claims. (Cl. 260-583)

1. As a composition of matter, a nitraza compound selected from the group consisting of nitraza amines having the formula:

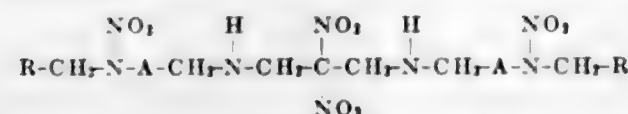


wherein R is a radical selected from the group consisting of hydrogen, lower alkyl and lower nitroalkyl radicals, and A is a lower alkylene radical, and strong mineral acid salts thereof.

3,000,955 DINITRAMINES

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed June 13, 1957, Ser. No. 666,275
17 Claims. (Cl. 260-583)

1. As a composition of matter, a dinitramine having the formula:

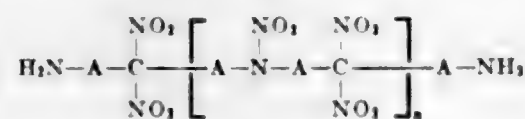


wherein R is a radical selected from the group consisting of hydrogen, lower alkyl and lower nitroalkyl radicals, and A is a lower alkylene radical.

3,000,956

ALIPHATIC NITRAZA POLYNITRO COMPOUNDS
Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Oct. 28, 1957, Ser. No. 694,692
20 Claims. (Cl. 260-583)

1. As compositions of matter, nitraza compounds selected from the group consisting of aliphatic nitraza polynitro diamines having the formula:



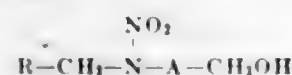
wherein the A radicals are lower alkylene and n is a small whole number from 1 to 3, inclusive; and strong mineral acid salts thereof.

3,000,957

POLYNITRO ALCOHOLS

Marvin H. Gold and Gustave B. Linden, Pasadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 25, 1957, Ser. No. 675,797
14 Claims. (Cl. 260-584)

1. As compositions of matter, the polynitro alcohols having the formula:



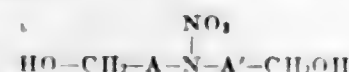
wherein R is a lower nitroalkyl radical and A is a radical selected from a group consisting of lower alkylene and lower nitroalkylene radicals.

3,000,958

POLYNITRODIOLS

Marvin H. Gold and Gustave B. Linden, Pasadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 25, 1957, Ser. No. 675,798
8 Claims. (Cl. 260-584)

1. As compositions of matter the polynitro diols having the formula:

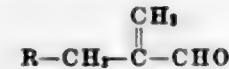


wherein A and A' are radicals selected from the group consisting of lower alkylene and lower nitroalkylene radicals, at least one being a nitroalkylene radical.

3,000,959 NITRO-CONTAINING UNSATURATED ALDEHYDES

Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Jan. 22, 1957, Ser. No. 635,544
15 Claims. (Cl. 260-601)

1. As compositions of matter, the nitro aldehydes having the formula:



wherein R is a nitrosubstituted lower alkyl group.

3,000,960

FORMALDEHYDE PRODUCTION

Edward N. Wheeler, Corpus Christi, and Lonnie S. Richardson, Pampa, Tex., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 24, 1959, Ser. No. 794,868
8 Claims. (Cl. 260-606)

1. In the method of generating substantially pure monomeric formaldehyde from a polymer of formaldehyde which comprises metering said polymeric form into a heated generating zone as a suspension of finely divided particles in a liquid carrier having a vapor pressure of not exceeding 15 mm. Hg at 200° C., whereby the polymeric form is converted to formaldehyde and the liquid carrier remains substantially unchanged, the improvement which comprises inhibiting the formation of solids in said carrier by including in said carrier an acid which is stable at the temperature of heating and has an ionization constant above about 1×10^{-8} .

3,000,961

TRIALKYLBORANE PROCESS

Elmer H. Dobratz, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
No Drawing. Filed Dec. 16, 1958, Ser. No. 780,659
12 Claims. (Cl. 260-606.5)

1. Method of making trialkylboranes comprising adding boron trichloride to at least about a stoichiometric quantity of alkylaluminum compound having the general formula $\text{R}_n\text{AlCl}_{3-n}$ wherein R is alkyl and n is an integer having a value of at least one and not more than three in the presence of an anhydrous saturated aliphatic hydrocarbon solvent having from 5-12 carbon atoms at a temperature between about 25° C. and below the decomposition temperature of said aluminum compound, heating the reaction mixture after the addition of said boron trichloride is complete at an elevated temperature below the melting point of the aluminum chloride formed during the course of the reaction to effect precipitation of at least about 95% of said aluminum chloride, separating said aluminum chloride by filtration and recovering trialkylborane from the filtrate.

3,000,962

PREPARATION OF TRIALKYLBORINES

Mack W. Hunt, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Aug. 3, 1959, Ser. No. 831,035
12 Claims. (Cl. 260-606.5)

1. The method of preparing a trialkylborine which comprises reacting an alkyl borate ester with an alkyl aluminum chloride at a temperature of about 20 to 100° C., wherein the alkyl groups of said borate ester and said chloride contain from 1 to 10 and 1 to 28 carbon atoms respectively.

3,000,963 PROCESS FOR REFINING CRUDE POLYMERS AND ADDUCTS OF PROPYLENE OXIDE

George P. Speranza, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
No Drawing. Filed May 11, 1959, Ser. No. 812,126
7 Claims. (Cl. 260-615)

1. A method for refining a crude alkaline reaction product selected from the group consisting of crude alkaline polypropylene glycols and adducts thereof consisting of carbon, hydrogen and oxygen as hereinbelow defined, which comprises adding a solid organic acid to said crude product, said acid being insoluble in said product and producing salts that are insoluble in said product in an amount 10% to about 200% in excess of the alkaline equivalent of said crude product to effect a reaction between said alkaline-reacting material and said acid and form said insoluble salts in said crude product, and filtering said reaction product to remove said insoluble salt and excess organic acid thereby leaving a substantially ash-free, stabilized polypropylene oxide addition product, said polypropylene glycols and adducts being represented by the formula:



in which n has a value from 4 to about 400, x is a whole number from 1 to 3 and R represents a member selected from the group consisting of hydrogen, alkyl and hydroxy alkyl radicals.

3,000,964

PROCESS OF RECOVERING BORON FLUORIDE CATALYST FOR THE ALKYLATION OF PHENOLS

John G. Milligan, Austin, Tex., assignor to Jefferson Chemical Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 8, 1953, Ser. No. 347,607
2 Claims. (Cl. 260-624)

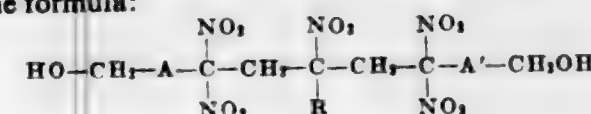
1. In the alkylation of phenol with propylene polymer in the presence of a catalyst consisting essentially of BF_3 , the method of recovering BF_3 from the alkylation reaction mixture which comprises adding 30% to 200% by weight based on the reaction mixture of a liquid entrainer, boiling within the range 30 to 200° C. selected from the group consisting of pentane, hexane, heptane, octane, nonane, cyclohexane, hydrogenated propylene polymer boiling within the range of 50° to 130° C., inert hydrocarbons associated with propylene polymer boiling within the range 50° to 130° C., benzene and toluene, effective to result in boiling of the reaction mixture plus entrainer at a temperature within the range of 50 to 175° C., refluxing the reaction mixture within said temperature range to evolve as vapor a mixture of the BF_3 and entrainer while subjecting said vapor mixture to cooling to condense the entrainer while leaving the BF_3 in the vapor state, returning the condensed entrainer to the refluxing mixture, removing the BF_3 as vapor from the condensation zone, continuing the refluxing until substantially all of the BF_3 has been removed, and absorbing the BF_3 vapor in liquid phenol for reuse in the process.

3,000,965

POLYNITRO DIOLS

Marvin H. Gold and Gustave B. Linden, Pasadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 25, 1957, Ser. No. 675,796
12 Claims. (Cl. 260-635)

1. As compositions of matter the polynitro diols having the formula:



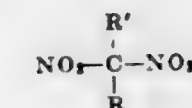
wherein A and A' are lower alkylene radicals and R is a radical selected from the group consisting of hydrogen and nitro radicals.

3,000,966

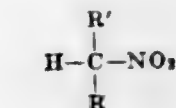
METHOD OF PREPARING POLYNITRO COMPOUNDS

Karl Klager, Monrovia, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Oct. 1, 1952, Ser. No. 312,651
3 Claims. (Cl. 260-644)

2. The method of preparing a polynitro compound having the formula:



wherein R and R' are radicals selected from the group consisting of hydrogen, lower alkyl, monocyclic alkyl and lower hydroxyalkyl radicals, which comprises adding an alkali metal nitrite to a mixture of an alkali metal hydroxide and a nitro compound having the formula:



wherein R and R' are as defined above, and subsequently introducing the resultant nitrite complex into a solution of silver nitrate while maintaining the pH in the range of from about 4.0 to 5.0.

3,000,967

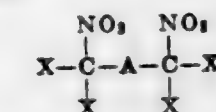
ALPHA-OMEGA-DINITROALKANES

Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Nov. 9, 1953, Ser. No. 391,129
4 Claims. (Cl. 260-644)

1. The method of preparing α,ω -dinitro alkanes having the formula:



wherein A is a lower alkylene radical having at least 2 carbon atoms, which comprises reducing a nitroalkane having the formula:



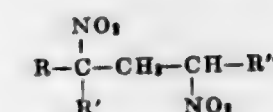
wherein A is a lower alkylene radical having at least 2 carbon atoms and X is a radical selected from the group consisting of chloro and bromo radicals with a reducing agent selected from the group consisting of lithium aluminum hydride, aluminum isopropoxide and sodium borohydride in acid media.

3,000,968

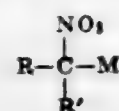
METHOD OF PREPARING NITRO COMPOUNDS

Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Mar. 5, 1956, Ser. No. 570,204
13 Claims. (Cl. 260-644)

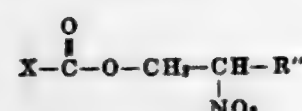
1. The method of preparing nitro compounds having the formula:



which comprises reacting an aci-salt having the formula:



with an ester having the formula:



wherein R is a radical selected from the group consisting of nitro, halogen, hydrogen and lower alkyl radicals; R' is a radical selected from the group consisting of hydrogen and lower alkyl radicals; R'' is a radical selected from the group consisting of hydrogen and lower alkyl radicals; M is a metal selected from the group consisting of the alkali and alkaline earth metals; and X is an organic radical selected from the group consisting of lower alkyl, phenyl and lower arylalkyl radicals.

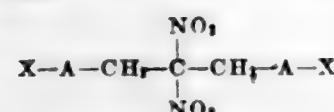
3,000,969

ALPHA,OMEGA-DIHALO-GEMINAL-DINITRO COMPOSITIONS

Levonna Herzog, Mountain View, N.J., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

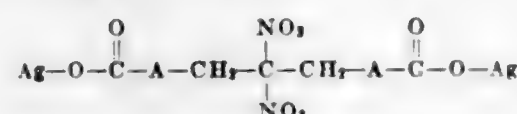
No Drawing. Filed Apr. 11, 1957, Ser. No. 652,307
6 Claims. (Cl. 260-644)

1. As compositions of matter, the dihalo-nitroalkanes having the formula:



wherein A is a lower alkylene radical and X is a halogen radical selected from the group consisting of bromine and chlorine.

4. The method of preparing a dihalo-nitroalkane which comprises reacting a halogen selected from the group consisting of chlorine and bromine with a silver nitroalkanoate having the formula:



wherein A is a lower alkylene radical.

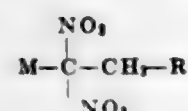
3,000,970

METAL-ACI-SALTS OF NITRO COMPOUNDS

Milton B. Frankel, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Aug. 7, 1957, Ser. No. 677,193
20 Claims. (Cl. 260-644)

1. As compositions of matter, the alkali and alkaline earth metal-aci-salts of nitro compounds, having the formula:

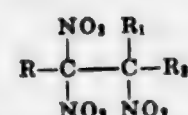


wherein R is a lower nitroalkyl radical and M is a metal radical selected from the group consisting of alkali and alkaline earth metals.

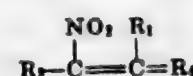
3,000,971 METHOD OF PREPARING POLYNITRO COMPOUNDS

Milton B. Frankel, Pasadena, and Karl Klager, Sacramento, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Dec. 19, 1957, Ser. No. 704,228
15 Claims. (Cl. 260-644)

1. The method of preparing polynitro compounds having the formula:



which comprises reacting a nitroolefin having the formula:



with nitric acid; wherein R₂ and R₃ are radicals selected from the group consisting of hydrogen, lower alkyl, lower nitroalkyl, and lower nitroalkenyl radicals; R₁ is a radical selected from the group consisting of hydrogen and lower alkyl radicals; and R and R₃ are radicals selected from the group consisting of hydrogen, lower alkyl, and lower nitroalkyl radicals.

3,000,972

PRODUCTION OF TRINITROTOLUENE

Giovanni A. Bonetti, Wilmington, Del., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 6, 1958, Ser. No. 713,550
8 Claims. (Cl. 260-645)

1. A method for the production of trinitrotoluene which comprises contacting under anhydrous conditions a mononuclear aromatic compound from the group consisting of toluene and mononitrotoluene with a nitration mixture composed of fuming nitric acid and fuming sulfuric acid at a temperature between 80° C. and 140° C., the amount of fuming nitric acid ranging between 1.05 and 3.0 mols of acid for each gram-atom of hydrogen to be replaced in the nucleus of the mononuclear aromatic compound and the amount of free SO₃ contained in the fuming sulfuric acid ranging between 0.25 and 3.0 mols of free SO₃ for each gram-atom of hydrogen to be replaced in the nucleus of the mononuclear aromatic compound and recovering the trinitrotoluene from the reaction mixture.

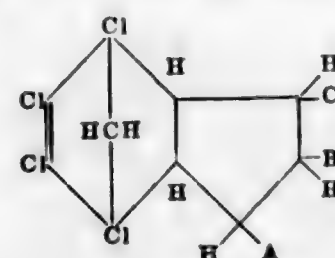
3,000,973

CHLORINATED DERIVATIVES OF DIELS-ALDER ADDUCT OF TETRACHLOROCYCLOPENTADIENE AND CYCLOPENTADIENE

Arthur Goldman and Morton Kleiman, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,700
4 Claims. (Cl. 260-648)

1. As a new composition of matter a compound of the formula:



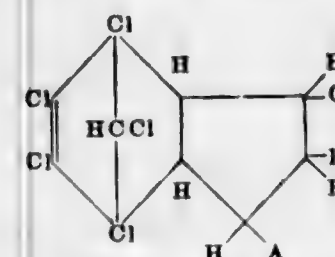
wherein at least one of the substituents A, B, and C is chlorine and the remainder are selected from the group consisting of hydrogen and chlorine and wherein B and C constitute a carbon-to-carbon bond when A alone is chlorine.

3,000,974 CHLORINATED DERIVATIVES OF DIELS-ALDER ADDUCT OF PENTACHLOROPENTADIENE AND CYCLOPENTADIENE

Morton Kleiman and Arthur Goldman, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,701
4 Claims. (Cl. 260-648)

1. As a new composition of matter a compound of the formula:



wherein at least one of the substituents A, B, and C is chlorine and the remainder are selected from the group consisting of hydrogen and chlorine and wherein B and C constitute a carbon-to-carbon bond when A alone is chlorine.

3,000,975

CHLORINATION OF TOLUENE

Eugene P. Di Bella, Garfield, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 4, 1959, Ser. No. 817,991
14 Claims. (Cl. 260-650)

1. A process for the production of a mixture of ortho- and para-chlorotoluenes containing at least 70% of ortho-chlorotoluene which comprises contacting toluene with chlorine in the amount of about 1 gram atom of chlorine per mole of toluene in the presence of a catalyst selected from the group consisting of the chlorides of titanium, thallium, tin, zirconium, tungsten, and mixtures thereof.

3,000,976

MANUFACTURE OF FLUORINATED AROMATIC COMPOUNDS

Colin Russell Patrick, Maurice Stacey, and John Colin Tatlow, all of Birmingham, England, assignors to National Research Development Corporation, London, England, a British corporation

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,712
Claims priority, application Great Britain Nov. 5, 1958
8 Claims. (Cl. 260-650)

1. A process for the manufacture of a highly fluorinated aromatic compound from a vaporized highly fluorinated alicyclic compound containing at least one ring which is a member of the group consisting of hexane and hexene rings and wherein a said alicyclic compound is reacted at a temperature of between about 350° and 600° C. with a metal reactive with fluorine to produce a stable fluoride.

3,000,977

METHOD OF STABILIZING TRICHLOROETHYLENE AND STABILIZING COMPOSITION THEREFOR

Germano Patron and Antonio Ferri, Milan, Italy, assignors to Sicedison S.p.A., Milan, Italy

No Drawing. Filed Dec. 17, 1958, Ser. No. 780,957
Claims priority, application Italy June 13, 1958
6 Claims. (Cl. 260-652.5)

1. A trichloroethylene composition stabilized against acidic decomposition, particularly during its use for degreasing metals, which comprises small quantities, intimately mixed and synergetically active, of N,N-dimethylhydrazine, isobutyl alcohol, butylene oxide, and phenol.

3. A trichloroethylene composition stabilized against acidic decomposition, particularly during its use for the

degreasing of metals, which comprises small quantities, intimately mixed and synergetically active, of N,N-dimethylhydrazine, isobutyl alcohol, propylene oxide and o-nitrophenol.

3,000,978

NOVEL COMPOSITION

Robert H. Fredenburg, Barberton, Ohio, assignor, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,179
4 Claims. (Cl. 260-652.5)

1. Methylchloroform containing tertiary-butyl alcohol in stabilizing concentration.

3,000,979

ISOMERIZATION OF FLUOROOLEFINS

Hugh Harper Gibbs, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 12, 1958, Ser. No. 773,169
5 Claims. (Cl. 260-653.3)

1. A process for preparing fluoroolefins consisting essentially of passing a fluoroolefin having the general formula $\text{XC}_n\text{F}_{2n}\text{CF}=\text{CF}_2$, wherein n is an integer of greater than one and X is a member of the group consisting of hydrogen and fluorine, in vaporized form over a catalyst selected from the group consisting of fluorides of metals of groups I-A and II-A of the periodic table of elements, at a temperature of 200° to 400° C., and recovering an internally unsaturated fluoroolefin.

3,000,980

PREPARATION OF ALKYL BROMIDES

Arthur A. Asadorian, Midland, and George A. Burk, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 7, 1958, Ser. No. 726,607
7 Claims. (Cl. 260-658)

1. A process for preparing bromine-containing compounds which comprises contacting an organic compound selected from the group consisting of aromatic, halogenated aromatic, paraffinic and halogenated paraffinic hydrocarbons and having a replaceable carbon bound H atom in the molecule, which compound may also contain halogen atoms, with bromine and a saturated aliphatic halohydrocarbon containing at least one chlorine atom in the presence of ferric chloride.

3,000,981

SYNTHESIS OF HYDROCARBON TYPE LUBRICATING OILS

Dimitrios V. Favis, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,773
6 Claims. (Cl. 260-666)

1. A process for synthesizing a lubricating oil comprising: reacting a substantially straight chain alpha olefin having in the range of 6 to 30 carbon atoms with an organic material selected from the group consisting of branched and unbranched, halogenated hydrocarbon ring compounds, containing 5 or more carbon atoms in the ring and having substituted directly upon the hydrocarbon ring at least one halogen atom per molecule, the mole ratio of said organic material to said olefin being in the range of .1 to 5.0; the reaction being carried out in the liquid phase at a temperature between the melting point and boiling point of the reaction mixture in the presence of catalyzing amounts of a metal halide catalyst until a yield of at least 50 wt. percent based upon alpha olefin added of a halogen-containing reaction product is obtained; catalytically hydrogenating said product to a hydrogenated oil having a halogen content below 0.1 weight percent; and recovering from said hydrogenated

oil a synthetic lubricant boiling in the range of 600° to 1000° F. having a viscosity in the range of 30 to 100



SUS at 210° F., a viscosity index above 130, and a pour point below +20° F.

3,000,982

PREPARATION OF CAROTENOID COMPOUNDS

Joseph Donald Surmatz, West Caldwell, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Original application Oct. 24, 1958, Ser. No. 769,323, now Patent No. 2,945,888, dated July 19, 1960. Divided and this application Dec. 1, 1959, Ser. No. 856,491

5 Claims. (Cl. 260-666)

4. A process of making β -carotene which comprises condensing 2,7-dimethyl-2,4,6-octatriene-1,8-di(-ylidene triphenylphosphine) with approximately two molar proportions of 5-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-methyl-2,4-pentadien-1-ol.

3,000,983

PROCESS FOR THE HYDROGENATION OF NAPHTHALENE

Robert A. Sanford, Homewood, and Stephen M. Kovach, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 12, 1958, Ser. No. 754,540

7 Claims. (Cl. 260-667)

1. A process for selectively hydrogenating naphthalene, by controlling conditions of temperature, pressure and WHSV, to a hydrogenated product selected from the group consisting of (1) a product containing at least about 57.9 percent tetralin and (2) a product containing at least 55.7 percent decalin, the step comprising contacting the naphthalene in vapor phase with a catalyst comprising about 0.1 to 2 weight percent of platinum on activated alumina, under hydrogenating conditions including the presence of free hydrogen; said product predominating in decalin being prepared by hydrogenating conditions including temperatures from about 400-700° F., pressures from about atmospheric to about 700 p.s.i. and a WHSV from about 0.1 to 4; and said product predominating in tetralin being prepared by conditions including temperatures from about 550 to 700° F., pressures from about 100 to 500 p.s.i. and a WHSV from about 10 to 20.

3,000,984

CONDENSED AROMATIC HYDROCARBONS

André Laurent Halleux, Brussels, Belgium, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 12, 1957, Ser. No. 702,233
8 Claims. (Cl. 260-668)

1. A condensed aromatic hydrocarbon having the general formula $C_{4m}H_m$ wherein m is an even-numbered

integer within the range of 18 through 28, said condensed aromatic hydrocarbon having at least one triphenylene nucleus and having a minimum of four rings condensed together and a maximum of 13 rings condensed together, with the total number of rings present in the compound being from 8 to 13.

3. The chloro-derivatives of the compounds as claimed in claim 1.

8. The process of catalytically cyclodehydrogenating hexaphenylbenzene, which comprises conducting said cyclodehydrogenation in a liquid melt of a mixture comprising an alkali chloride and aluminum trichloride, the weight ratio of said alkali chloride to said aluminum trichloride being from about 1:3.5 to 1:5.0.

3,000,985

PREPARATION OF DIARYLALKANES

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed June 24, 1958, Ser. No. 744,045

16 Claims. (Cl. 260-668)

1. A process which comprises reacting p-xylene with an alkylating agent selected from the group consisting of t-alkyl mono-halides and cycloalkyl mono-halides in the presence of a catalyst selected from the group consisting of aluminum chloride, aluminum bromide, boron fluoride and zirconium chloride at a temperature in the range of from about -20° to about 150° C. and at a pressure in the range of from about atmospheric to about 50 atmospheres, and recovering the resultant reaction products.

3,000,986

ALKYLATION OF AROMATIC COMPOUNDS

George Andrew Olah and Steven Joseph Kuhn, Saratua, Ontario, Canada, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,754

5 Claims. (Cl. 260-671)

1. A method which comprises interacting, in a liquid reaction mixture at temperatures below 50° C., (a) an aromatic compound having only nuclear benzoid unsaturation and selected from the group consisting of hydrocarbons and nuclear halogenated hydrocarbons and that is, per se, substantially inert to boron trifluoride at such temperatures and that contains at least one replaceable hydrogen atom on an aromatic nucleus, (b) an alkyl fluoride, and (c) boron trifluoride in molar proportion approximately equivalent to the amount of the alkyl fluoride, and recovering from the resulting reaction mixture an alkyl-substituted aromatic compound corresponding to the organic starting materials.

3,000,987

HYDROCARBON CONVERSION PROCESS

Milton M. Wald, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,722
6 Claims. (Cl. 260-673.5)

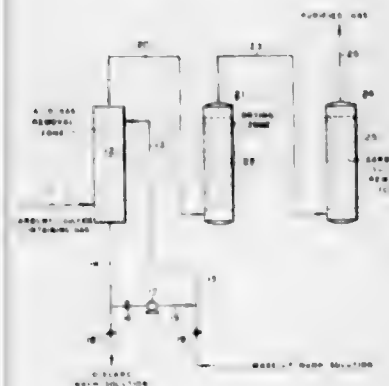
1. A process for converting alkene hydrocarbons having 7 to 18 carbon atoms per molecule and containing a chain of at least 4 carbon atoms, the total number of carbon atoms in the chain plus the number of quaternary carbon atoms in the chain being at least 6, the longest chain containing no more than 5 contiguous non-quaternary carbon atoms into corresponding aromatic hydrocarbons, which comprises contacting said alkene hydrocarbon with a catalytic amount comprising about 0.5-2.5 mole percent of a reaction iodine species at a temperature in the range of from about 400° to about 550° C. and a pressure in the range of from about 0 to about 250 p.s.i. for a time in the range of from 0.25 to about 10 minutes.

3,000,988

PURIFICATION OF GAS

Joan H. Karchner, Houston, and Marjorie T. Walker, Baytown, Tex., now by change of name Marjorie W. Eastwood, assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 7, 1959, Ser. No. 845,011
9 Claims. (Cl. 260-677)



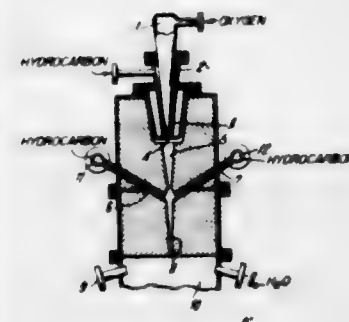
1. A method for purifying an olefinic gas containing carbonyl sulfide which comprises contacting said gas with soda-lime containing from about 90% to about 99.5% by weight of hydrated lime and from about 0.5% to about 10% by weight of sodium hydroxide, the hydrated lime containing from about 0.1% to about 5.0% by weight of water.

3,000,989

PROCESS AND APPARATUS FOR THE THERMAL CRACKING OF LIQUID OR GASEOUS HYDROCARBONS

Silvio Larcher, Milan, and Mario Compostella, Terni, Italy, assignors to Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

Filed June 24, 1959, Ser. No. 822,696
Claims priority, application Italy June 27, 1958
12 Claims. (Cl. 260-679)



1. In a process for endothermal cracking of a hydrocarbon, the improvement comprising impacting an extended-surfaced wide sheet of hot combustion gas with an extended-surfaced wide sheet of a hydrocarbon to be cracked, the sheets being directed transversely to each other and intersecting along a line longitudinal to their widths, at least the major part of the heat required for the cracking being supplied by pre-heat of the hydrocarbon and the heat of the said combustion gases, said hydrocarbon being taken from the group consisting of gasoline and liquefied natural gas, the combustion gas being derived by burning a fuel taken from the group consisting of hydrogen, carbon monoxide and methane with an oxygen-containing gas, the gases produced being abruptly chilled, the products of the process comprising acetylene and ethylene.

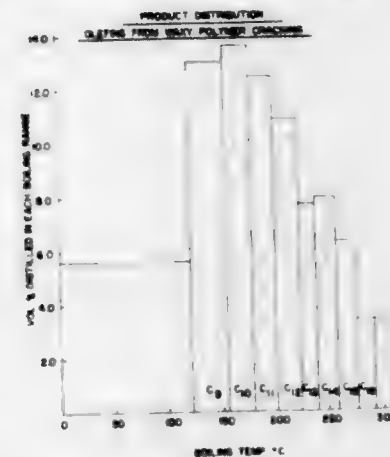
770 O.G.—44

3,000,990

PRODUCTION OF OLEFINS FROM AMORPHOUS LINEAR POLYMERS

Ralph M. Hill, Mountlake, Joseph M. Kelley, Jr., Cranford, and John R. Lovett, Metuchen, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,007
5 Claims. (Cl. 260-683)



1. A process for preparing monoolefins predominantly of the general formulae



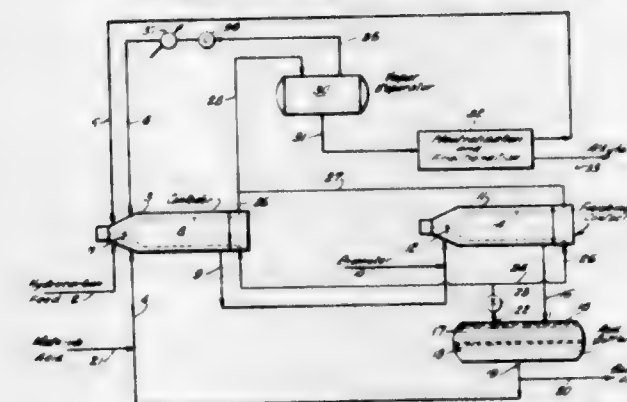
and, where R is an alkyl group, in the C_8 through C_{18} range which comprises heating an amorphous, substantially linear polypropylene having a molecular weight in the range of 1000 to 100,000 in the presence of a group IV-B salt and an aluminum salt at a temperature in the range of 250° to 500° C., the group IV-B salt and the aluminum salt each being utilized in an amount of from 1 to 25 wt. percent based on the polypropylene.

3,000,991

ALKYLATION PROCESS

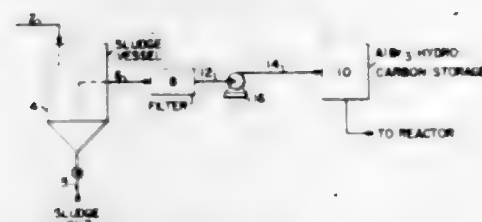
Arthur R. Goldsby, Chappaqua, and Louis A. Clarke, Fishkill, N.Y., assignors to Texaco Development Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,981

3 Claims. (Cl. 260-683.46)



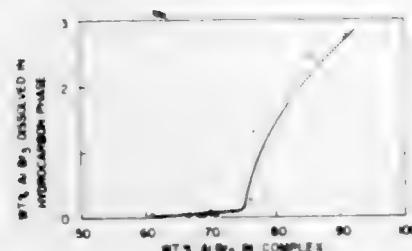
1. In an alkylation process wherein an olefinic feed stock comprising propylene is contacted with an isoparaffin in the presence of an alkylation catalyst in a first reaction zone under alkylating conditions, and at least a part of the effluent from said first reaction zone is passed to a second reaction zone in the absence of additional olefinic feed stock comprising propylene whereby propyl acid esters in the effluent from said first reaction zone are converted to alkylate and released catalyst in said second reaction zone, the improvement which comprises introducing an alkylation promoter selected from the group consisting of butylene and low boiling butylene polymers into said second reaction zone in an amount less than about 80.0 weight percent of the propyl acid ester content of the effluent from said first reaction zone passed to said second reaction zone.

3,000,992
STORAGE OF ALUMINUM BROMIDE
 Marvin B. Glaser and Charles W. Tyson, Jr., Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
 Filed July 2, 1959, Ser. No. 824,558
 6 Claims. (Cl. 260-683.53)



1. A process for stabilizing a solution of aluminum bromide in light saturated naphtha which comprises maintaining said solution at a temperature of from about 40° to about 110° F. for a period of from about two to about five hours in a sludge precipitation zone, precipitating a sludge, withdrawing said sludge from said zone, withdrawing from said zone said naphtha containing a major portion of the $AlBr_3$ originally dissolved therein, passing said withdrawn and now stabilized naphtha and $AlBr_3$ to a storage zone, and thereafter passing said naphtha containing $AlBr_3$ to Friedel-Crafts reaction zone.

3,000,993
PARAFFIN ALKYLATION PROCESS
 John E. Hofmann, Summit, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
 Filed Sept. 28, 1959, Ser. No. 842,914
 4 Claims. (Cl. 260-683.57)

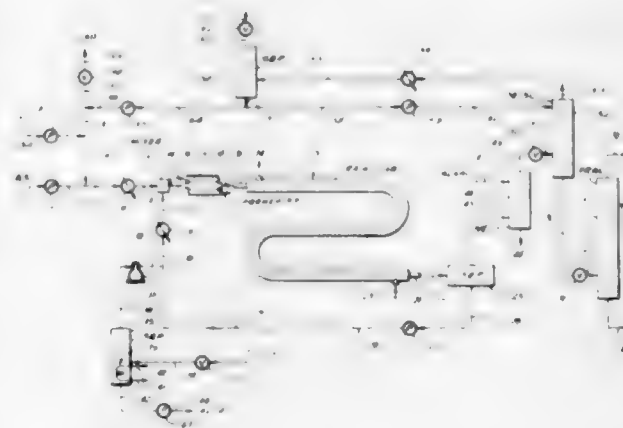


1. A process for the preparation of branched chain paraffin hydrocarbons of 5 to 7 carbon atoms which comprises reacting a minor proportion of a straight chain paraffin hydrocarbon of from 6 to 18 carbon atoms with a major proportion of a lighter hydrocarbon selected from the group consisting of C_4 to C_8 paraffin hydrocarbons in a reaction zone in the presence of an aluminum bromide-hydrocarbon complex containing at least about 75 wt. percent aluminum bromide, withdrawing from said reaction zone a hydrocarbon stream enhanced in C_5 to C_7 branched chain paraffin hydrocarbons and continuously maintaining in said reaction zone free aluminum bromide whereby said withdrawn hydrocarbon stream will contain at least about 0.1 wt. percent free aluminum bromide.

3,000,994
ALKYLATION OF ISOPARAFFINS WITH ALKYL SULFATES
 Claude W. Watson, 5000 Lakeshore, Port Arthur, Tex.; Myrtle H. Watson, executrix of said Claude W. Watson, deceased
 Filed Sept. 23, 1957, Ser. No. 685,693
 10 Claims. (Cl. 260-683.61)

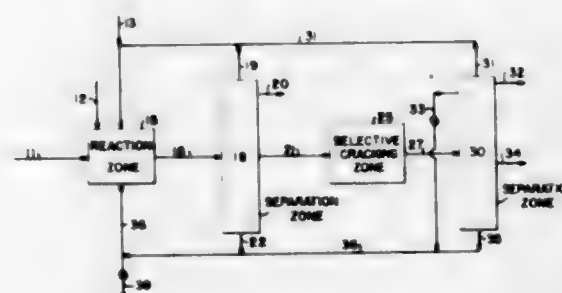
1. A process for the alkylation of reaction isoparaaffins containing at least one tertiary hydrogen atom with alkyl sulfates prepared by the reaction of olefins of at least three carbon atoms per molecule with aqueous sulfuric acid in which the sulfuric acid content is within the range of 96.4 percent to 98.2 percent sulfuric acid by weight,

comprising the steps of dissolving the alkyl sulfates in the mixture of the reactant isoparaaffins, mixing the solution of the alkyl sulfates in the isoparaaffins with a recycle stream of the acid which is a product of the alkylation reaction, maintaining the temperature in said mixing step at less than 100° F. during the mixing in the preparation of the alkylation reaction mixture, preheating the resulting mixture to initiate the alkylation reaction, completing the alkylation reaction in a flowing stream at a constantly increasing temperature, flowing the alkylation reaction mixture during the alkylation reaction through a confined linear flow path to maintain effective contact between the components of the reacting mixture while simultaneously maintaining a minimum of back-mixing of the alkylation reaction mixture from a point at which the reaction mixture is in a more advanced stage of reaction to a point



at which the reaction is less advanced, thereafter separating alkylate containing unreacted isoparaaffins from the acid phase, withdrawing the acid phase in two portions, cooling one of said acid portions with water, recycling and mixing with the solution of alkyl sulfates in the isoparaaffins, reducing the pressure and temperature of the other portion of the separated acid phase to recover isoparaaffins in the acid phase, conducting the said other portion of acid substantially free from isoparaaffins to storage for reuse in the alkylation step at a temperature substantially less than the temperature at which the reaction is complete in the formation of the alkylate, withdrawing the alkylate following the separation of the acid phase, and fractionating the withdrawn alkylate for recovery of various fractions of the alkylate and the non-reactive substances introduced into the process with the isoparaaffins.

3,000,995
COMBINED ISOMERIZATION AND CRACKING PROCESS
 John E. Hofmann, Summit, and Henry T. Brown, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
 Filed July 23, 1959, Ser. No. 829,081
 3 Claims. (Cl. 260-683.74)



1. A process for obtaining an upgraded heptane fraction which comprises converting paraffinic hydrocarbons in a conversion zone in the presence of aluminum bromide to form C_6 - C_7 branched chain hydrocarbons where-

in the C_7 fraction containing trimethyl butane, dimethyl pentane, from 40 to 60 percent methyl hexanes and less than 10 percent of normal heptane, segregating said C_7 fraction from said hydrocarbons and subjecting said C_7 fraction to a selective cracking action in the presence of an aluminum halide selected from the class consisting of

aluminum chloride and aluminum bromide at a temperature in the range of from about 150° F. to about 250° F. whereby selective cracking of said methyl hexanes to isomers of butane, pentane and hexane is effected, while said trimethyl butane and said dimethyl pentane remain substantially unchanged.

ELECTRICAL

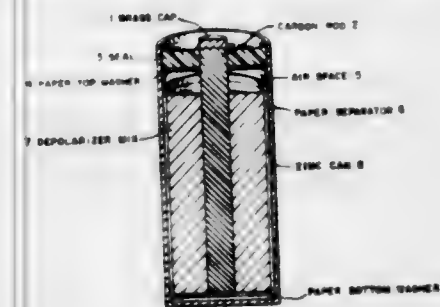
3,000,996
ACCUMULATORS
 Hubert Stephan Usel, Sistrans (Tyrol), Austria
 Filed June 27, 1957, Ser. No. 668,505
 Claims priority, application Austria July 2, 1956
 6 Claims. (Cl. 136-9)



Field- and Gas-Tight
 Accumulator containing
 Electrolyte,
 Electrodes,
 Adsorbing Substances
 and
 Redox System Formers

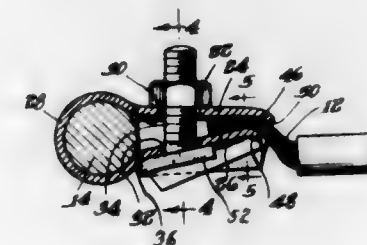
1. A fluid and gas-tightly enclosed accumulator comprising, in combination, a fluid and gas-tightly closed casing; electrodes of opposite polarity arranged in said casing spaced from each other; an aqueous electrolyte located in said casing in contact with said electrodes, whereby during operation of said accumulator hydrogen and oxygen is generated; an adsorbent substance adapted to adsorb said thus generated hydrogen and oxygen, said adsorbent substance being insoluble in said electrolyte and dispersed in said electrolyte in finely subdivided state so as to at least retard accumulation of hydrogen and oxygen gas within said casing; and at least one oxidizable and reducible material selected from the group consisting of Ti_2O_3 : TiO_2 and of a heteropoly acid formed of substantially equal weights of vanadic and per-iodic acid, being located in said casing in contact with said electrolyte and present in a quantity sufficient to react with substantially all of said hydrogen gas and oxygen gas generated during operation of said accumulator while said gases are at least partly adsorbed by said finely dispersed adsorbent substance, so as to prevent accumulation of hydrogen and oxygen gas within said casing.

3,000,997
LECLANCHÉ TYPE DRY CELLS OF HIGH STORAGEABILITY
 Clifton T. Trigg, Belford, N.J., assignor to the United States of America as represented by the Secretary of the Army
 Filed Jan. 5, 1960, Ser. No. 673
 6 Claims. (Cl. 136-107)
 (Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a Leclanché type dry cell comprising a zinc can, a depolarizer mix consisting essentially of manganese dioxide, carbon black and ammonium chloride, and an electrolyte consisting essentially of an aqueous solution of ammonium chloride and zinc chloride, characterized

3,000,998
BATTERY TERMINAL CLAMP
 Joseph A. Wiora, Almond, Wis., assignor to Wiora Products Corporation, Almond, Wis., a corporation of Wisconsin
 Filed Apr. 16, 1959, Ser. No. 806,941
 2 Claims. (Cl. 136-135)

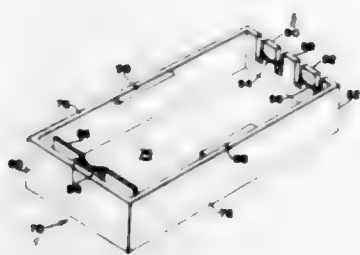


1. A battery terminal clamp comprising a one-piece sheet metal member including first and second elongated opposing sections for clamping a wire therebetween and a one-piece bendable loop section between and integrally joined to ends of said clamping sections for encircling a battery terminal or the like, said clamping sections including substantially aligned apertures therethrough at locations between said loop section and outer end portions of said clamping sections, a bolt including a head overlying one of said clamping sections and a threaded shank extending through said apertures, and a nut threaded onto an outer end of said shank for drawing said clamping sections together, said outer end portions of said clamping sections extending diagonally from the remainder of said clamping sections for imparting a bend to a wire secured between said clamping sections, said bolt head being relatively thin and deformable for conforming to said one clamping section when the nut is tightened for distributing clamping forces more uniformly over said one clamping section.

3,000,999
BATTERY BOX
 Floyd E. Schlau, Moline, Ill., assignor to Strombeck-Becker Mfg Co., Moline, Ill., a corporation of Illinois
 Original application Feb. 23, 1959, Ser. No. 795,839.
 Divided and this application Mar. 24, 1960, Ser. No. 17,275
 3 Claims. (Cl. 136-173)

1. A battery carrier for use in a toy vehicle, comprising: a one-piece box of non-metallic material having a bottom, opposite side and end walls and an open top and of such length, width and depth as to carry a pair of cylindrical dry-cell batteries side-by-side therein and lengthwise thereof, one of said end walls having a plurality of upright slots therein opening at the upper marginal edge of said end wall and providing a pair of

upright fingers having free upper terminal ends and spaced apart laterally on the order of the spacing between the axes of a pair of batteries carried in the box, said fingers being adapted to respectively receive loops of electrical conductors for contact respectively with the ends of the batteries adjacent to said fingers, and a metal-



lic element disposed laterally across the inner face of the opposite end wall of the box to bridge and make electrical contact with the ends of the batteries proximate to said end wall, said element being of springy metal biased to urge the batteries toward the fingers and said box being of such length as respects the length of the batteries that the batteries are forced into contact with the loops.

3,001,000

ELECTRICAL COMPRESSION CONNECTORS

Harley R. Wantz, Jr., Centralia, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

Filed May 28, 1958, Ser. No. 738,537
8 Claims. (Cl. 174-71)



1. An electrical compression connector comprising an elongate trough-like body of malleable conductive metal having a generally C-shaped cross section and adapted to be slipped over and substantially encompass a portion of a length of bare electrical conductor, said body having formed integrally therewith a pair of half studs, one of which projects therefrom at one side of the opening of the C and the other of which projects therefrom at the other side of the opening of the C, said half studs being spaced and opposed to one another, the opposed surfaces thereof all being substantially flat and lying in a single continuous plane, said body portion being adapted to be crimped around said bare conductor and said half studs being brought together with said flat opposed surfaces in close contact thereby to form a complete stud of substantially solid cross section adapted to have a compression sleeve applied thereto.

3,001,001

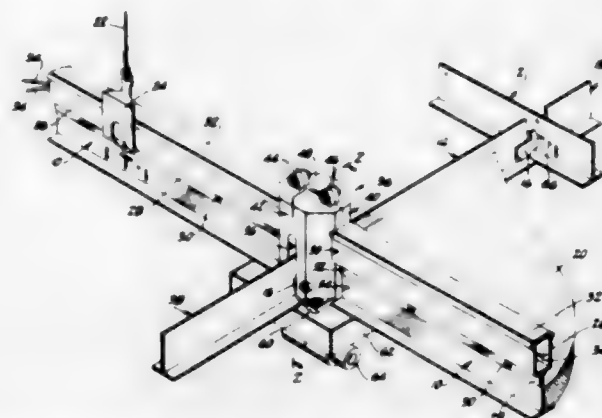
LIGHT FIXTURE FOR SUSPENDED GRID CEILING

John T. Bibb, La Canada, Calif., assignor to Tok-Products Co., Los Angeles, Calif., a corporation of California

Filed June 2, 1958, Ser. No. 739,425
11 Claims. (Cl. 174-71)

1. In a ceiling of the type having flanged runners supporting removable ceiling forming members the combination of: a wire supporting member extending along

one of said runners, a wire box extending from the flange of said runner to said wire supporting member enclosing



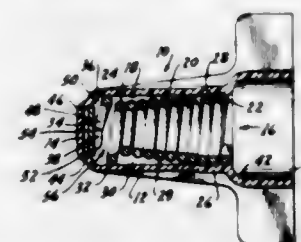
a wire received from said wire supporting member to below said flange.

3,001,002

SCREW-ON CONNECTOR

William G. Schliske, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware

Filed Dec. 3, 1959, Ser. No. 857,176
3 Claims. (Cl. 174-87)



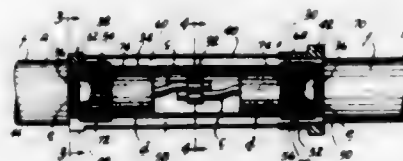
1. In an article of manufacture, a connector for joining the stripped ends of two or more electric wires or the like, including a cap made of a stiffly flexible insulating material, the cap having a generally center bore open at one end and closed by an end wall at the other end, a generally cylindrical wire coil in the bore, means for holding the coil in the bore so that the coil and cap may be manually turned down on the stripped ends of a plurality of electric wires, and an impervious disk separate from the cap otherwise freely positioned next to the end wall behind the coil and having a diameter on the order of the bore to prevent the stripped ends of the wires from damaging the end wall.

3,001,003

COAXIAL CABLE SPLICE

Samuel C. Robinson, New Albany, Ind., assignor to Robinson Machine Works, Inc., New Albany, Ind., a corporation of Indiana

Filed Jan. 14, 1960, Ser. No. 2,529
8 Claims. (Cl. 174-88)



1. In a splice for a pair of coaxial cables, the combination comprising: means integrating the stripped and contiguously disposed end portions of the primary conductors of said cables; a tubular insulator of resilient plastic material having its ends disposed about the opposed exposed end portions of the inner insulation of said cables, said insulator having an end to end longitudinal slot therein so that it may be spread whereby to effect the disposi-

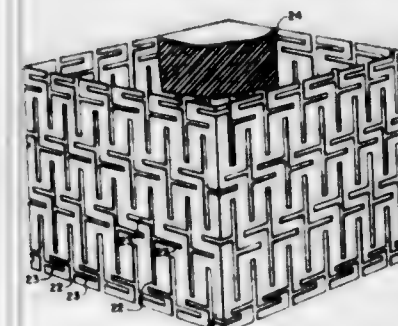
tion thereof aforesaid; a tubular housing of conductive material having a pair of diametrically opposite longitudinal slots therein, one of said slots extending from end to end of the housing and the other of said slots terminating short of one end thereof whereby to form a hinge segment about which the thus formed half sections of the housing may be spread and thereafter realigned, said last named end of the housing having an enlarged polygonal external periphery; a pair of longitudinally spaced annular recesses formed in the inner periphery of the housing; a pair of ring elements each encompassing part of one of the opposed exposed ends of the electrostatic sheathings of said cables and having portions of said sheathings reversely bent and combed to overlie the peripheries of said rings, said sheathing portions being disposed in intimate contact with the annular recesses aforesaid of the housing in said realigned disposition thereof; an enclosing sleeve slidably fitted over the tubular housing; an externally threaded slightly reduced section constituting the opposite end of the housing; and an internally threaded nut having an outstanding polygonal flange integral therewith, said nut engaging the threaded end section of the housing whereby to maintain said sleeve in place about said housing between that end of the housing having the polygonal external periphery and the body of said nut.

3,001,004

ELECTRICAL COMPONENTS COMPRISING RESIN CAST INSIDE A SHELL

Richard G. Black, Churchill Boro, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 23, 1959, Ser. No. 828,991
7 Claims. (Cl. 174-137)



2. An electrical component comprising a metal shell having a plurality of slots around its periphery, a thermoset resin body adhered to the inside of the shell, and said slots having overlapping portions to permit the shell to contract during shrinkage of the resin.

3,001,005

TERMINAL BUSHINGS

Charles F. Sonnenberg, Penn Hills Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 23, 1959, Ser. No. 829,991
5 Claims. (Cl. 174-142)

1. In an insulating bushing, in combination, a cylindrical metal sleeve having a metal flange secured thereto, said sleeve having a plurality of elongated longitudinal slots therein, a conductor extending longitudinally through and spaced from the sleeve, a thermoset epoxide resin body filling the space between the conductor and the sleeve and adhering to the inside of the sleeve, said slots

permitting the sleeve to contract with the resin body, said resin body extending beyond the ends of the sleeve, and



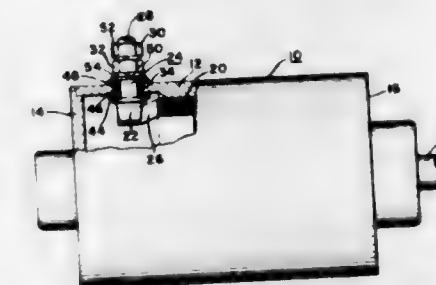
said conductor extending beyond the ends of said resin body.

3,001,006

TERMINAL CONNECTION

William E. Brown, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 27, 1958, Ser. No. 769,662
10 Claims. (Cl. 174-153)



1. A terminal connection for electrically connecting opposite sides of a plate member comprising a hole in said plate member having a circular cross section over a portion of its length and a polygonal cross section over the remainder of its length, a terminal stud passing through said hole having a head located adjacent the polygonal side of the hole, a compressible washer interposed between said head and said plate member, and fastener means engaging said stud member, and reactive against said plate member for causing said compressible washer to be forced axially into the polygonal side of said hole when said means is tightened.

3,001,007

SELF-LOCKING BUSHING

Ferdinand Klumpp, Jr., Union, and William H. Jemison, Berkeley Heights, N.J., assignors to Heyman Manufacturing Company, Kenilworth, N.J., a corporation of New Jersey

Filed Nov. 13, 1959, Ser. No. 852,689
16 Claims. (Cl. 174-153)

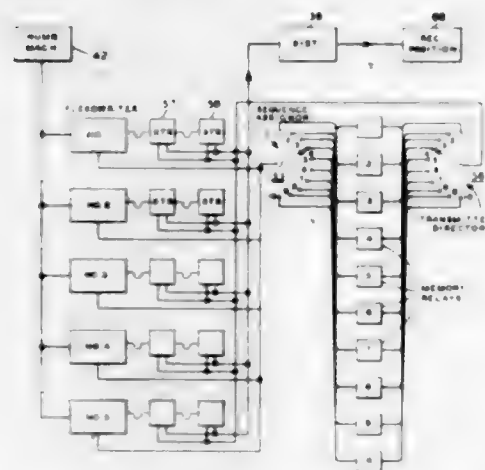


3. An insulating and self-locking bushing of the character described; said bushing being made of relatively flexible material, said bushing comprising a substantially cylindrical body portion hollow end-to-end thereof and non-split in the sense that the wall structure of said body portion is solid throughout 360° circumferentially about the longitudinal axis of said body portion, said body portion at one end thereof and integral therewith being

provided with a relatively flexible head, the outside edge portion of said head being in the form of a flange the outside edge of which is positioned toward the other end of said body portion, said body portion being provided with locking steps protruding radially outwardly from its outside surface and being disposed to be complementary with respect to said outside edge of said flange whereby after assembly of said bushing said locking steps and said outside edge of said flange function to hold said bushing locked in the operating position thereof, said outside edge of said flange extending radially outwardly beyond the radial extent of said locking steps.

3,001,008 TELEGRAPH SYSTEM

Frank L. Currie, Plainfield, N.J., assignor to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed June 29, 1956, Ser. No. 594,995
12 Claims. (Cl. 178-2)



1. In a telegraph system, a plurality of tape controlled transmitting means each having an individual control storage tape for storing signals representing messages, means for generating a single sequence of message number signals, means for randomly requesting message numbers from said sequence of numbers for association with stored messages with the individual sequence numbers distributed to said storage tapes in the random order in which requests are made therefor, a sending circuit adapted to have signals transmitted thereover, means for individually connecting said transmitting means to said sending circuit for the transmission over said sending circuit of the signals of one stored message at a time, and means for automatically controlling said connections to transmit said messages to said circuit in the order of the sequence of message number signals appended thereto.

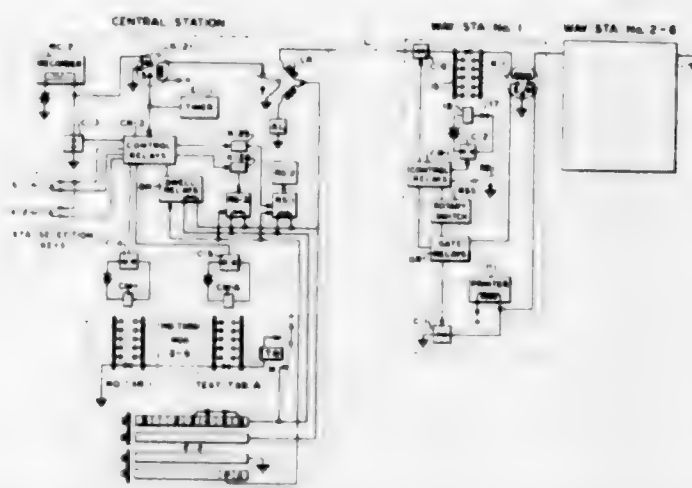
3,001,009 TELEGRAPH WAY STATION SELECTOR

George G. Light, Scarsdale, and William J. Wichtendahl, New York, N.Y., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York

Filed Dec. 19, 1957, Ser. No. 703,899
14 Claims. (Cl. 178-2)

1. A telegraph system comprising a central office, a plurality of tributary stations, a way circuit connecting each of said central office with said tributary stations, a message transmitter at each of said tributary stations, a message recorder at the central office, each of said message transmitters being normally inoperative over said way circuit, selective control means at each tributary station to select such station for operation of its transmitter over the way circuit, means at the central office for sending an invitation to transmit sequence of alternate spacing and marking intervals to said tributary stations, said

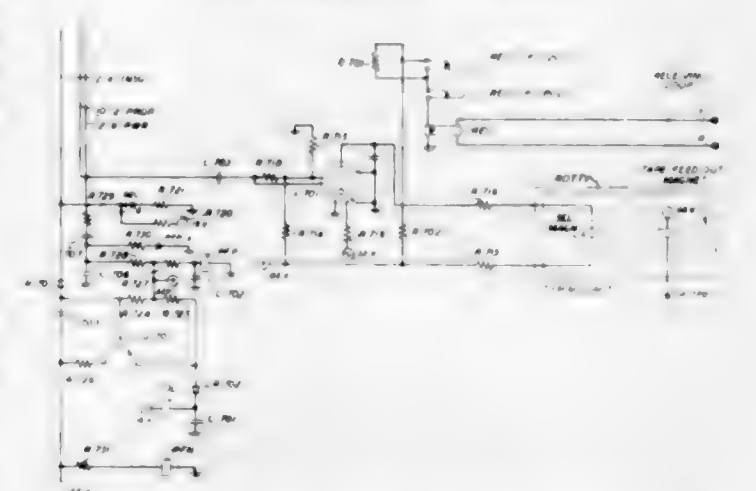
sequence including at least one spacing and one marking interval individual to each tributary station on the way circuit, said selective control means at each station being responsive to said invitation sequence to effect a cycle of operation and further responsive to its individual spacing and marking intervals to select its station for transmission over the way circuit whenever said station has a message waiting to be transmitted, other means in the selected station initiated into operation during such indi-



vidual spacing and marking intervals to transmit an invitation acceptance signal to said central office and means at the central office responsive to said acceptance signal to modify the length of succeeding marking intervals of said invitation sequence in a manner to prevent selection of other stations on said way circuit for transmission, said selective control means being further responsive to the termination of said invitation sequence to initiate the transmitter of the selected station into operation.

3,001,010 STATION CONTROL CIRCUIT FOR MULTISTATION LINE

John P. Mahony, Weehawken, N.J., Bernard Ostendorf, Jr., Stamford, Conn., George Parker, New York, N.Y., and Richard A. Vanderlippe, San Mateo, Calif., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 11, 1958, Ser. No. 760,510
32 Claims. (Cl. 178-2)



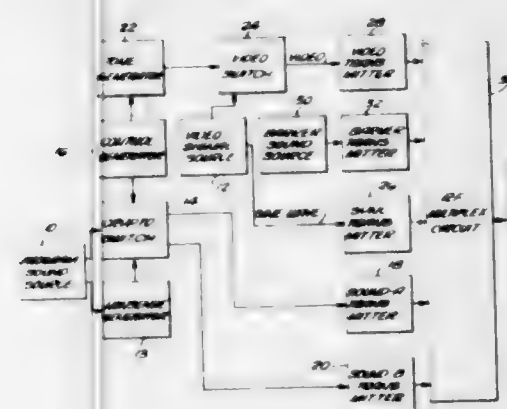
1. A telegraph station on a two-way multistation line including a telegraph receiver, a code generator for transmitting supervisory code signals to said line, a tape transmitter for transmitting telegraph messages to said line, a perforator for supplying perforated tape messages to said transmitter, a multistage shift register for storing code signals received from said line, a receiver control circuit for applying said stored code signals to said receiver in response to the storage of a predetermined code signal

by said shift register, a normally disabled transmitter start circuit for starting said transmitter, a normally disabled generator start circuit for starting said code generator, a transmitter control circuit for disabling said receiver control circuit and momentarily selecting said transmitter start circuit in response to the storage of a predetermined sequence of code signals by said shift register, a pulse circuit for selecting said generator start circuit in response to the storage of a subsequent code signal by said shift register, a perforator message mounting circuit for counting the messages supplied by said perforator to said transmitter, a transmitter message counting circuit for counting the messages transmitted by said transmitter and a comparison circuit jointly responsive to said perforator message counting circuit and said transmitter message counting circuit for enabling said transmitter start circuit and said generator start circuit.

3,001,011 SUBSCRIPTION TELEVISION SYSTEM

Phil H. Welas, Panorama City, and Abraham M. Reiter, Reseda, Calif., assignors, by mesne assignments, to Paramount Pictures Corporation, New York, N.Y., a corporation of New York

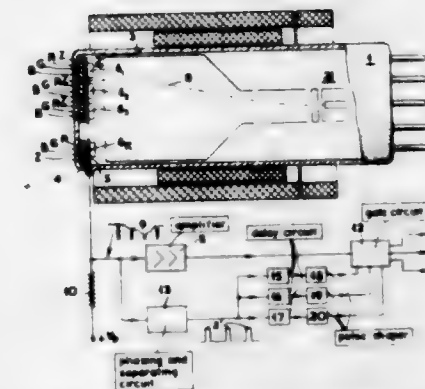
Filed June 16, 1958, Ser. No. 742,114
19 Claims. (Cl. 178-5.1)



1. A subscription television system comprising a transmitter and a receiver, said transmitter having means for generating television program signals including a composite video signal having horizontal blanking and synchronizing signals, means connected to receive the output of said means for generating for replacing said horizontal blanking and synchronizing signals with grey-level signals to produce modified composite video signals, means for generating reconstituting signals having the frequency of said synchronizing signals, and means connected to receive the output of said means to produce modified composite video signals for transmitting said modified composite video signals and said reconstituting signal respectively modulated on separate carriers; said receiver including means for receiving said modified composite video and said reconstituting signals respectively modulated on said separate carriers, means connected to receive the output of said means for demodulating said reconstituting signals from their carrier, means connected to receive the output of said means for demodulating for shaping said reconstituting signals into pulse signals, a coinbox including means for establishing the price for viewing said television program, and means connected to the output of said means for receiving said modified composite video and to the output of said means for shaping said reconstituting signals into pulse signals which is operable upon payment of said established price for reconstituting responsive to said pulse signals as horizontal synchronizing signals the grey level signals in said modified composite video modulated on said carrier.

3,001,012 COLOR TELEVISION CAMERA TUBE WITH INDEXING STRUCTURE

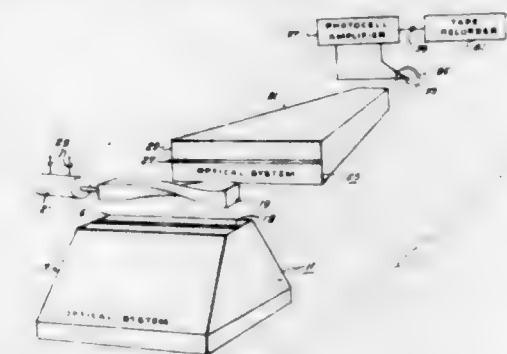
Johan Wim Braicks, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,067
Claims priority, application Netherlands Apr. 28, 1958
6 Claims. (Cl. 178-5.4)



3. A color television camera tube of the vidicon type comprising a radiation-responsive, electron-receiving target, said target comprising a radiation-transparent, plate-shaped electrode and on its back a plurality of spaced, elongated, generally-parallel photo-conductive strips, a color filter in front of said transparent electrode, said color filter comprising plural groups of different-color-component-transparent filter strips each being elongated and generally parallel to one another and the photo-conductive strips, each group of filter strips being in registration with one photo-conductive strip, a radiation-opaque strip between each group of filter strips and in registration with each space between the photo-conductive strips, means for producing an electron beam and for scanning the said target with said beam transverse to the elongated photo-conductive strips, and output means coupled to the transparent electrode for deriving output signals when said target is scanned.

3,001,013 OPTICAL TRANSLATING SYSTEM

Austin N. Stanton, P.O. Box 638, Garland, Tex.
Filed Aug. 4, 1955, Ser. No. 526,427
3 Claims. (Cl. 178-7.1)

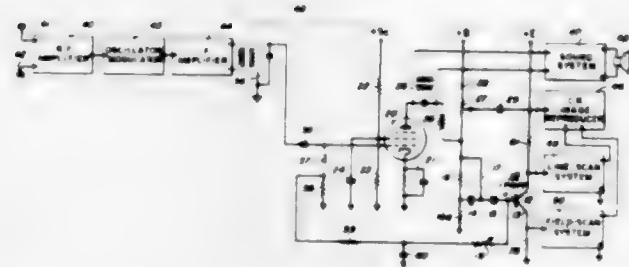


1. A system for translating image representations into electrical energy comprising a first optical device for receiving images and having a focal means and a slit arranged to present a longitudinal view of a subject, a second optical device having a focal means and a slit, scanning means arranged between said two optical devices to transfer the light intensity variations of an image representation from said first optical device to said second optical device, said scanning device being in the form of a rectangular rod having four reflecting continuous faces with each of the faces being twisted uniformly along the length of the bar one quarter revolution, means to rotate said scanning rod, and an electric sensing means associated with said second optical device to translate the light intensity variations into electrical energy.

3,001,014

SYNCHRONIZING-SIGNAL SEPARATOR

Walter J. Stroh, Barrington, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,397
7 Claims. (Cl. 178-7.3)

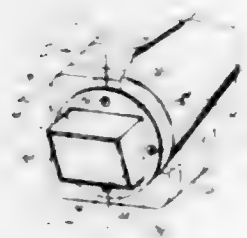


6. A synchronizing-signal separator for a television receiver comprising: a video detector; a transistor including a semi-conductor body having two conductivity zones of one type and another conductivity zone of opposite type constituting therewith base-emitter and base-collector junctions, having a charge-storage characteristic dependent upon operating bias and further having base, emitter and collector electrodes coupled in signal-translating relation to said junctions; potential-supply means for applying operating bias to said electrodes to establish a saturation condition at said base-collector junction and to establish in said transistor a charge-storage time long with respect to the line-synchronizing components of a television signal but short relative to the several pulses comprising the serrated field-synchronizing components of said signal, said potential-supply means including means for deriving from said detector and for applying to said base electrode a D.C. potential which varies in a particular sense with the video content of said signal; signal-stabilizing means, including a coupling condenser and a series-connected diode, for applying said signal from said detector to said base electrode with a polarity and amplitude to bias said transistor to cut off in the presence of said synchronizing components and with said signal stabilized as to a reference amplitude level but subject to variations with video content in an opposite sense to compensate said variations in said potential supply means; and a load impedance series connected with one of said emitter and collector electrodes to derive one of said two types of synchronizing components effectively separated from the other.

3,001,015

UNIDIRECTIONAL LIGHT TRANSMITTING SYSTEM FOR C.R.T. DISPLAYS

Ralph A. E. Weiss, Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1959, Ser. No. 810,199
3 Claims. (Cl. 178-7.85)



1. In combination with a cathode ray tube having a viewing screen from which image light emanates, a light shielding device for limiting the degrading effects of ambient light on such image, which device comprises a first

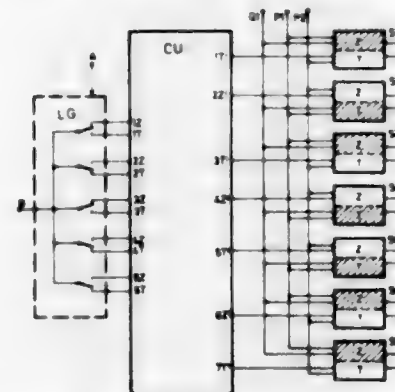
prism; a second prism; first optical means carried on one face of said first prism having an index of refraction greater than one; second optical means carried on one face of said second prism having an index of refraction greater than one and differing from the index of refraction of the said first optical means; light absorbing means carried on other faces of said first and second prisms; mounting means for holding the said prisms in a juxtaposed position whereby the faces of the prisms carrying the optical means are opposite to each other and separated by an air gap, the means mounting said prisms being so constructed and arranged that said optical means on the face of the said first prism define a critical angle whereby ambient light striking said first prism in excess of a predetermined angle to the normal to said cathode tube screen will be reflected into said light absorbing means and that said optical means on said opposing face of said second prism defines a critical angle whereby light from a display on said tube screen striking said second prism in excess of a predetermined angle will be reflected into said light absorbing means; and means connected to said mounting means for securing said prisms in assembly in close proximity to the screen of said cathode ray tube.

3,001,016

TELEPRINTER SIGNAL TRANSMISSION APPARATUS

Hans Rudolph, Munich-Solln, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a German company

Filed Mar. 26, 1959, Ser. No. 802,250
Claims priority, application Germany Apr. 2, 1958
10 Claims. (Cl. 178-17.5)



1. Teleprinter signal transmission apparatus comprising a tape-reading machine for reading a tape on which is recorded a pulse combination in accordance with a first teleprinter code, said machine including a plurality of switching means which are settable to reproduce said combination, a code converter for translating teleprinter signals from said first teleprinter code to a second teleprinter code under the control of said machine, the input and output of said code converter being connected to the output of said machine and the input of a storage means, respectively, the storage means consisting of a plurality of elements each of which has two stable states of which one is the rest state thereof, the rest state of the storage means corresponding to a combination of teleprinter signals of said second teleprinter code.

3,001,017

METHOD AND MEANS FOR THE AUTOMATIC REPETITION OF SIGNAL TRANSMISSIONS

Gerhard Dirks, 44 Marfelder Landstrasse,

Frankfurt am Main, Germany

Filed Aug. 6, 1956, Ser. No. 602,395
Claims priority, application Great Britain Aug. 5, 1955
6 Claims. (Cl. 178-23)

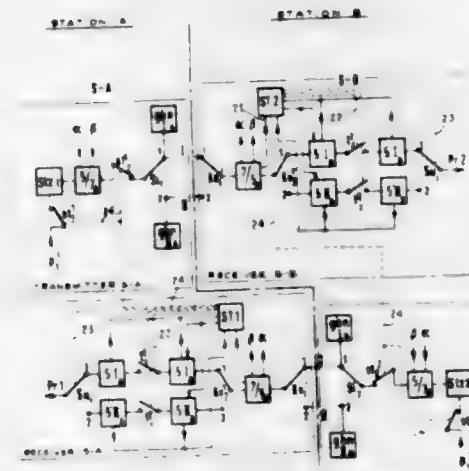
1. A transmission system between a transmitter station and a receiver station comprising, in combination, record

3,001,018

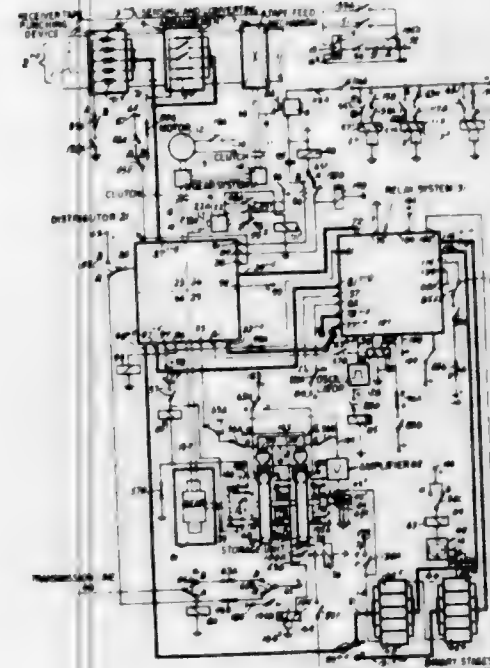
TYPE PRINTING TELEGRAPH SYSTEM

Christiaan Johannes Van Dalen, Leidschendam, Netherlands, assignor to De Staat der Nederlanden, ten deze Vertegenwoordigd door de Directeur-Generaal der Posterijen, Telegrafie en Telefonie, The Hague, Netherlands

Filed Nov. 14, 1958, Ser. No. 773,925
Claims priority, application Netherlands Nov. 21, 1957
12 Claims. (Cl. 178-23)



carrier means in said transmitter station and having recorded thereon a plurality of sequences of individual character-representing code combination records, transmitter converting means in said transmitter station and positioned in operative proximity to said record carrier means for converting a first and consequent sequences of the character-representing records recorded on the said record carrier means into corresponding pulse sequences respectively representing said individual code combination records; transmitter storage means in said transmitter station connected to said transmitter converting means and adapted to have erasably recorded thereon recordings of a plurality of said individual character-representing pulse sequences for storing the said pulse sequences; transmitting means connected to said transmitter converting means for transmitting said pulse sequences from said transmitter station to said receiver station; receiver storage means in said receiver station adapted to have erasably recorded thereon recordings of a plurality of said individual character-representing pulse sequences for storing the said pulse sequences; first computing means for producing a first check signal at said transmitter station and for producing another first check signal at said receiver station; comparing means for causing comparing



of said first check signals for identity and non-identity between the said first check signals and for causing repeating of said pulse sequences stored in said transmitter storage means when said comparing means indicates non-identity; transmitting means for transmitting said repeated pulse sequences to said receiver station; second computing means for producing a second check signal at said transmitter station and for producing another second check signal at said receiver station; recomparing means for causing recomparing of said second check signals for identity and non-identity between the said second check signals; and receiver converting means in said receiver station and positioned in operative proximity to said receiver storage means for converting pulse sequences stored in said receiver storage means into output signals, said transmitter converting means, transmitter storage means and transmitting means substantially simultaneously converting the next sequence of the character-representing records recorded on said record carrier means into further pulse sequences, storing said last-mentioned character-representing records in said transmitter station, and transmitting the said last-mentioned character-representing records to said receiver station for storage in said receiver storage means when said recomparing means indicates identity.

770 O.G.—45

4. An automatic mutilation correction system for a two way telecommunication system of signals between two stations each having a receiver and a transmitter for said signals, comprising: means connected to each transmitter for storing a plurality of successive signals as they are transmitted; means connected to each transmitter storing means for receiving said stored signals in a given sequence for transmission, means connected to each receiver for storing a plurality of signals before they are removed from that receiver, means connected to each receiver and its corresponding receiver storing means for detecting mutilation of received signals and for comparing received signals with stored signals, means connected to said detecting and comparing means for determining which signal is to be repeated from the associated transmitter storing means at the same station for requesting a repetition of a detected mutilated signal, and further means connected to said detecting and comparing means for selecting stored signals for removal from said receiver storing means in the same sequence as said signals were given to the transmitter storing means at the other station from which they were transmitted regardless of signal repetitions for correcting of mutilations.

3,001,019

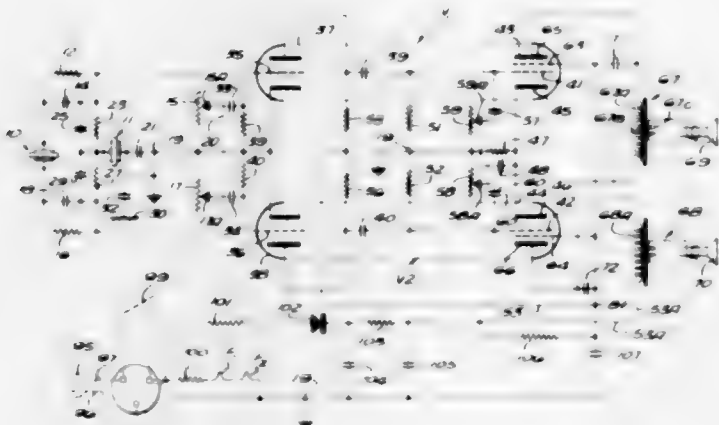
STEREO SYSTEM

Edward H. Uecke and Jiri M. Nessel, Los Angeles, Calif., assignors to Capitol Records, Inc., Los Angeles, Calif., a corporation of California

Filed Oct. 26, 1959, Ser. No. 848,741
2 Claims. (Cl. 179-1)

1. In a stereophonic system, an amplifying channel comprising a pair of amplifying devices, each of which includes a control element, said channel having three input terminals, one of which is a common terminal and the other two of which comprise respectively said control element of a corresponding one of said devices, a first transducer for producing a first signal, said first transducer having one of its terminals coupled to said common terminal and the other one of its terminals coupled to said control element of each of said devices to produce in-phase components of said first signal on said control elements, a second transducer for producing a second signal, said second transducer having a corresponding one of its two terminals coupled respectively to a correspond-

ing one of said control elements to produce thereon out-of-phase components of said second signal, each of said devices having an output element, said amplifying channel comprising a three-terminal output circuit of which two terminals are coupled respectively to the output element of each device and the third terminal is common to each output element, means coupled to said three-terminal output circuit for reproducing amplified in-phase components of said first signal on said output elements and for producing amplified out-of-phase components of said second signal on said output elements, the last-mentioned means comprising: a first center tapped winding and a

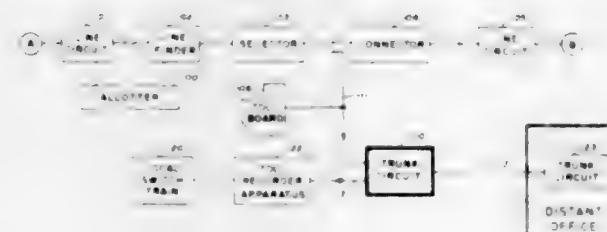


second winding, the outside terminals of said first winding being coupled to corresponding ones of said output elements, the second winding having one of its terminals coupled to the center tap on said first winding and the other one of its terminals coupled to said third terminal, first signal reproducing means coupled to said first winding, and second signal reproducing means coupled to said second winding, said terminals of said second transducer being coupled to corresponding control elements through corresponding resistances of equal values, and each of said resistances being shunted by a corresponding condenser of equal values.

3,001,020 TRUNK CIRCUIT

Ben A. Harris, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Mar. 7, 1956, Ser. No. 570,096
2 Claims. (Cl. 179-7)



1. In a telephone system, a first office, a second office, a trunk line extending between said offices, a trunk circuit at said first office coupled to one end of said trunk line, a toll recorder at said first office for recording information relating to calls forwarded by said trunk circuit, said trunk circuit having an output circuit coupled to said toll recorder for forwarding calls received from said second office and means for preventing seizure of said trunk circuit by equipment at said second office over said trunk line as long as said toll recorder is unable to receive information relating to calls forwarded by said trunk circuit.

3,001,021 ELECTRICAL INFORMATION STORAGE ARRANGEMENTS

Edmond Philip Goodwin Wright and Joseph Rice, London, England, assignors to International Standard Electric Corporation, New York, N.Y.

Filed Mar. 18, 1954, Ser. No. 417,193
Claims priority, application Great Britain Mar. 20, 1953
19 Claims. (Cl. 179-7.1)



1. Interconnecting equipment comprising a number of first equipments, a second equipment, means for connecting any selected one of said first equipments to said second equipment in a time position of a recurrent cycle of time positions which is different for each of said first equipments, a group of stores, said stores being fewer in number than the number of first equipments, recording and reading means for scanning said stores in different time positions in said recurrent cycle, means for operating said recording means to record a signal representing the identity of any connected first equipment in the store corresponding to the time position in which said connection has occurred, and means responsive to said reading means reading a signal recorded in a store for operating said connecting means to reconstitute the connection of the corresponding first equipment to said second equipment in the respective time position in each successive cycle during which connection is to persist.

3,001,022 MULTI-SWITCH CONTACT MECHANISM

Jakob Kruithof, Louis Jacques Ghislain Nys, and Jules Louis Joseph Douceel, Antwerp, Belgium, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 18, 1952, Ser. No. 321,125
Claims priority, application Netherlands Nov. 23, 1951
3 Claims. (Cl. 179-27.54)

1. A three-dimensional multi-switch for telecommunications systems comprising a first set of fixed, spaced parallel conductors extending in a first plane and representing an outlet, a second set of fixed, spaced parallel conductors extending in a second plane substantially perpendicular to said first plane, said second set of conductors representing an inlet, a pair of fixed, spaced parallel conductors extending in planes parallel to said second plane, each of the conductors of said pair representing a test lead, said second conductor set and said conductor pair comprising movable contacts adjacent coordinate points defined with respect to said first conductor set, first means for selectively actuating the movable contacts of said second conductor set into contact with conductors of said first set, means for moving said first actuating means in opposite directions, select means for selecting the coordinate switch point among said first conductor set and the contacts associated with said second conductor set and said pair of conductors, clutch

means intermediate said first actuating means and said moving means for clutching said first actuating means with said moving means, said clutch means under control of said select means, separate means for actuating the movable contacts associated with said conductor pair into contact respectively with different conductors of

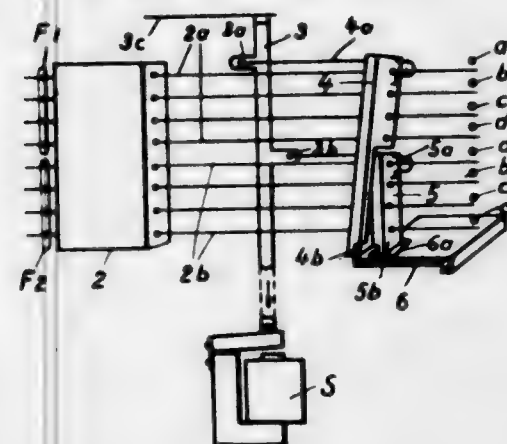


said first set, common coupling means among said last named actuating means and said select means, whereby movement of said select means causes closure of said last named movable contacts and operation of said clutch means and independent of the direction of operation of said moving means.

3,001,023 SELECTING MEANS IN CROSS BAR SWITCHES

Karl Axel Lundkvist, Eric Arvid Ericsson, and Karl Georg Johnson, Stockholm, and Harald Valdemar Alexandersson, Lidings, Sweden, assignors to Telefonaktiebolaget L. M. Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Apr. 23, 1957, Ser. No. 654,477
4 Claims. (Cl. 179-27.54)



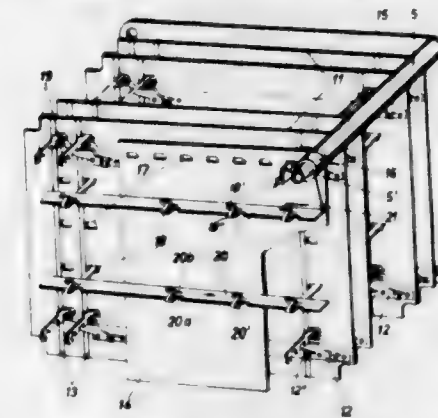
1. In an automatic telephone system cross bar switch having operating bars with operating magnets, selecting bars with selecting magnets for a switch multiple, and an additional selecting bar with at least one selecting magnet; at least two parallel sets of contact bands for each operating bar crossing all of said selecting bars, a contact spring set including contact springs for at least two lines in each crossing point in the multiple, means simultaneously actuating said contact springs, a contact spring stack for said additional selecting bar in each said crossing point including a separately actuated driver and a corresponding group of contact springs for each of at least two of the groups of contact bands in the crossing point, and a selecting finger common to said drivers movable by said additional selecting bar from a rest position to at least one side position, said finger in said rest position coupling a first one of said drivers to

the operating bar of the crossing point and in a side position coupling a second one of said drivers to the operating bar.

3,001,024 MULTISWITCH OF THE CROSSBAR TYPE

Heinz Steinbach, Kornwestheim, and Johannes Bernutz, Ludwigsburg-Hoheneck, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 24, 1957, Ser. No. 654,912
Claims priority, application Germany Apr. 28, 1956
8 Claims. (Cl. 179-27.54)

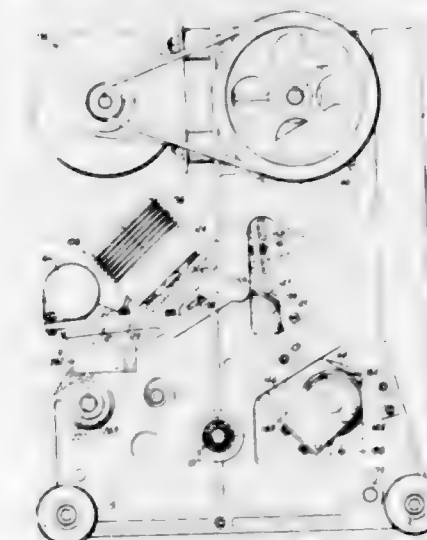


1. A multiswitch of the crossbar type comprising a plurality of insulating cards arranged in spaced relation with one another, each card including a plurality of intersecting horizontal and vertical electrical conductor multiples mounted thereon in the same plane with each horizontal multiple including bridge means for electrically isolating it from the associated intersecting vertical multiples, contact means on each horizontal multiple for respective ones of the intersecting verticals, individual actuating means for each contact means for moving them from a first position to a second position to establish electrical contact between their associated horizontal multiple and their respective vertical multiple, common actuating means for each group of individual actuating means associated with any horizontal multiple, selecting means for mechanically linking any desired individual actuating means with the associated common actuating means, and means for operating the last-said common actuating means to cause the selected individual actuating means to move its associated contact means from its first position and its second position.

3,001,025 MAGNETIC TAPE APPARATUS

Rene J. Gaubert, 4206 Oakmore Road, Oakland, Calif.

Filed Nov. 28, 1956, Ser. No. 626,071
25 Claims. (Cl. 179-100.2)

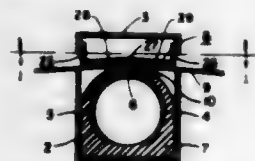


1. A magnetic tape apparatus comprising a plurality of magnetic tape magazines each serving to carry mag-

netic tape, a carriage transducing means adapted to operate on said tape mounted on said carriage, means for driving the tape past the transducing means mounted on said carriage, and means for moving the carriage to bring the transducing and driving means into cooperative relationship with the tape whereby the tape is driven past the transducing means.

3,001,026

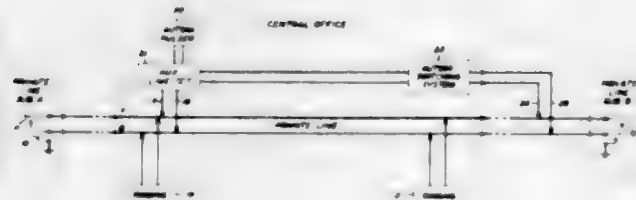
HALF-TRACK MAGNETIC RECORDING
Joseph W. Gratian and Richard J. O'Brien, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Aug. 14, 1957, Ser. No. 678,158
10 Claims. (Cl. 179-100.2)



1. A magnetic transducer head in which a magnetic recording medium is transported past said head comprising, a core of magnetic material having a full-track gap therein in contact with said medium, a low reluctance magnetic element of half-track width and means for supporting said element adjacent said recording medium on the other side of said recording medium from said gap, said supporting means positioning said element over an area adjacent said gap.

3,001,027

PRIVATE LINE TRANSFER SWITCHING CIRCUIT
James M. Armstrong, Brooklyn, N.Y., and Myron C. Goddard, Westerville, Ohio, assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 7, 1960, Ser. No. 20,670
7 Claims. (Cl. 179-18)



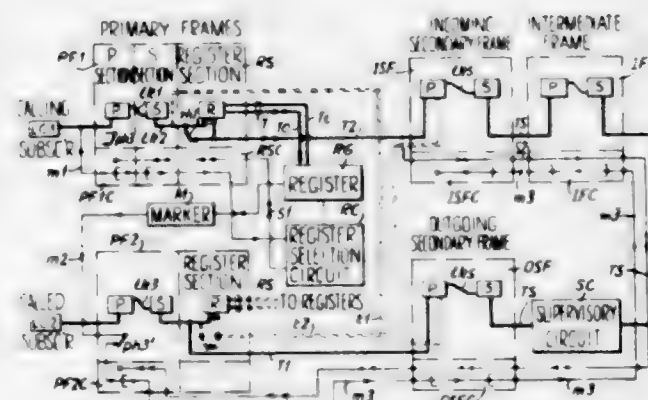
1. In a telephone system, a first subscriber's station and a second subscriber's station, means for establishing a connection between said two stations under normal conditions, means at the first of said stations for indicating an abnormal condition, an auxiliary connecting path, an automatic pulser associated with said auxiliary path and operable to pulse the number of the second of said stations only, means effective upon operation of said indicating means for disconnecting said first station from said first connecting means and for connecting it to said auxiliary connecting path and for operating said pulser to transmit into said auxiliary connecting path the number of said second station, thereby to complete an alternative connection between said two stations.

3,001,028

AUTOMATIC TELEPHONE AND LIKE EXCHANGE SYSTEMS
Ronald William Stanley Kinsey, West Dulwich, London, England, assignor, by means assignments, to Siemens Edison Swan Limited, London, England, a British company
Filed June 14, 1957, Ser. No. 665,774
Claims priority, application Great Britain June 14, 1956
10 Claims. (Cl. 179-18)

1. A selective switching system including, a switching frame having a primary side and a secondary side, con-

nections terminating at the primary side and at the secondary side of the frame, a frame control circuit for controlling selective operation of the frame to establish access therethrough between an identified primary-side connection and a selected secondary-side connection, a



further control circuit operable to control the effective selection of such secondary-side connection, and a co-ordinate marking arrangement which comprises N groups of signal wires containing M_1, M_2, \dots, M_N wires respectively, where N equals at least two and

$$M_1 \times M_2 \times \dots \times M_N$$

is at least equal to the total number of primary-side connections, and by which can be signalled to the frame control circuit, as a combination of co-ordinate markings on a unique and individual combination of N signal wires taken one from each of said N groups, the identity of a particular primary-side connection in respect of which access through the frame is required, the frame control circuit being operable in response to a received combination of co-ordinate markings to extend an initiating signal condition to said further control circuit, and said further control circuit being operable in response to said initiating signal to initiate the effective selection of a particular free secondary-side connection and to revert to the frame control circuit a setting signal by which that connection is identified, the frame control circuit responding to said setting signal to control the establishment through the frame of a connection between the identified primary-side connection and the selected secondary-side connection.

3,001,029

AUTOMATIC TELECOMMUNICATION EXCHANGES

Frederick Harry Bray and Ronald George Knight, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Nov. 25, 1957, Ser. No. 698,493
Claims priority, application Great Britain Dec. 21, 1956
8 Claims. (Cl. 179-18)



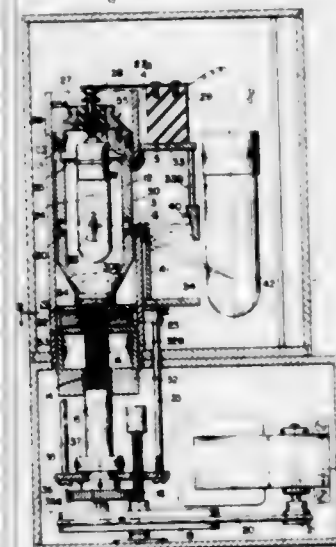
1. An automatic telecommunication exchange comprising numbered subscribers' lines divided into first sets each consisting of a block of sequentially numbered lines corresponding groups of lines having the same sub-blocks

of numbers within all of said first sets constituting second sets, a first detector common to all of said lines, means in said detector for examining the conditions of each second set of lines taken as a whole, means in said detector responsive to a calling condition on a line of a second set, a plurality of second detectors each individual to a first set of lines, means in said second detectors for examining their respective sets of lines simultaneously, means in each second detector responsive to a calling condition on a line in its associated first set for marking corresponding lines in each sub-block of its associated first set, and means in one of the two detectors which thus mark a calling line for rendering the marking means operative only if said calling line has been marked by the other of said detectors.

3,001,030

SOUND REPRODUCER FOR REPRODUCING SOUND FROM A SOUND TRACK AREA ON FILM

John A. Maurer, New York, N.Y., assignor to The Kalart Company Inc., Plainville, Conn.
Filed Dec. 11, 1958, Ser. No. 779,676
21 Claims. (Cl. 179-100.3)



1. In a device for reproducing sound from a sound record area formed on a section of film by parallel record lines, cylindrically curved stationary guide means for supporting and constraining in a predetermined position a curved film section having a sound record area thereon, and a scanning assembly including a source of light and optical means for directing a beam of light upon the sound record area supported in said guide means, said optical means being rotatable about and axially displaceable along the center axis of said guide means, and drive means drivingly coupled with said optical means for imparting to the same a combined rotary and axial motion, the rates of said rotary and said axial motions being so correlated that said beam sequentially scans said parallel record lines.

3,001,031

SELF-SUPPORTING ELECTRO-MECHANICAL TRANSDUCER ASSEMBLY

James M. Jacque, Conneaut, Ohio, assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Nov. 18, 1954, Ser. No. 469,618
10 Claims. (Cl. 179-100.41)



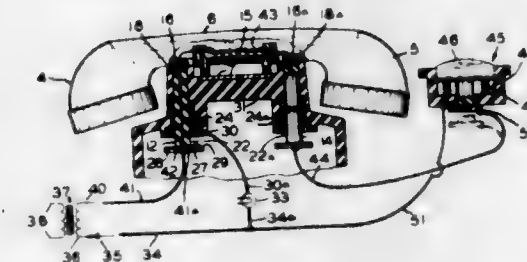
1. In a phonograph tone arm assembly of the type having a substantial unsupported length the combination

of an elongated ceramic piezo-electric element, means to mount said piezo-electric element at one end for pivotal movement whereby said tone arm is adapted for limited vertical movement and lateral swinging movement, a record engaging stylus mounted on said piezo-electric element at the other end thereof, electrode means contacting spaced surface portions of said piezo-electric element, and said piezo-electric element forming an active structural load supporting portion of said substantial unsupported length of said tone arm.

3,001,032

MAGNETIC HOLDER FOR TELEPHONE HAND SET

William G. Hockett, 2322 N. 9th St., Phoenix, Ariz.
Filed Nov. 9, 1959, Ser. No. 851,837
6 Claims. (Cl. 179-147)

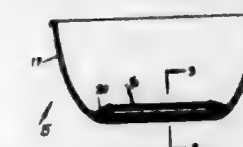


1. In a telephone instrument having a base, including a ringing circuit and a talking circuit and a cradle and a hand set adapted to be supported in said cradle and connected electrically to said base, a magnet energizing circuit including an electro-magnet in the handle portion of said hand set, an armature for said magnet in the top of said base and disposed in magnetic relation to said magnet in said hand set when the hand set is in the cradle of said base, means including wiring connected to an outside source of electricity for energizing said electro-magnet when resting in said cradle, a switch on said base adjacent to said cradle for disconnecting the magnetic means energizing said magnet, a signal light on said base connected to an outside source of power and a switch operated by the weight of said hand set when in said cradle energizing said signal lamp and disconnecting said magnet energizing circuit when the hand set is removed from said cradle.

3,001,033

TELEPHONE STERILIZERS

Harold Rosenblum, 35 West St., White Plains, N.Y.
Filed Nov. 3, 1958, Ser. No. 771,271
2 Claims. (Cl. 179-185)



1. In a sterilizer device for the transmitter of a telephone instrument, a tubular member having an annular groove in its inside wall near an end of said member, a perforated container within said tubular member across said end and in frictional engagement with said member; said container having a perimetral flange of material having some resilient quality; said flange being within and engaged by said annular groove, and yieldable so that it enters said groove when the perforated container is forced into said tubular member and so that it leaves said groove when the perforated container is forced out of said tubular member; said container being comprised of at least two gauze discs in spaced relation, with at least one washer between them and each disc between washers and pasted to them; the washer between said discs, extending

beyond the other washers to form the mentioned flange and solid particles having a volatile content of sterilizing quality, housed within said container between the gauze discs; said tubular member being adapted to be set on the cap of the transmitter end of a telephone instrument, so that said container is adjacent said transmitter cap.

3,001,034

MECHANISM FOR MECHANICALLY MAINTAINING TAUT AN ELECTRICAL CABLE BETWEEN TWO RELATIVELY ROTATABLE MEMBERS

George Lewis Aitken, Edinburgh, Scotland, assignor to Ferranti, Limited, Lancashire, England, a company of Great Britain and Northern Ireland

Filed Dec. 21, 1959, Ser. No. 860,904

Claims priority, application Great Britain Jan. 2, 1959

8 Claims. (Cl. 191-12)



1. Mechanism for mechanically maintaining taut an electrical cable between two members capable of relative rotation about a given axis comprising an epicyclic train of wheel elements including a sun wheel element rigid with one of said members and concentric with said given axis, an annular wheel element rigid with the other of said members and concentric with said given axis and a planet wheel operatively interengaging said sun wheel element and said annular wheel element, said annular wheel element having at least one groove around the concave surface thereof and each of the sun wheel element and planet wheel having at least one groove around the convex surface thereof, and at least one electrical connecting cable passing along a groove in the annular wheel element from a fixed point on the concave surface thereof to the point of engagement with the planet wheel, and thereafter passing sequentially and in opposite directions along a groove in the planet wheel and a groove in the sun wheel element to a fixed point on the convex surface of the sun wheel element.

3,001,035

DISTRIBUTOR CAP

Anderson W. Butts, 814 W. Church St., Champaign, Ill.

Filed Oct. 21, 1958, Ser. No. 768,813

3 Claims. (Cl. 200-19)



1. A distributor cap for use in an automotive vehicle with a distributor in an upright position, said cap comprising an inverted cup of dielectric material with a circumferential wall and a dome-shaped top sloping downwardly to said wall, said cup having a plurality of rigid

upright terminal posts sealed in said dome-shaped top and having upper end portions projecting upwardly from said top, each of said posts having a substantially smooth peripheral surface and also having a recess positioned inwardly from the terminal end of the post and defining a retaining shoulder to hold a snap-on wire connector thereon, whereby to prevent collection of moisture at the terminal posts and thereby prevent formation of insulating corrosion and splitting of the dielectric cup.

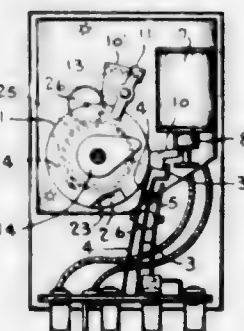
3,001,036

CONTROL MEANS FOR DEFROSTING REFRIGERATORS

Joseph J. Everard, Two Rivers, Wis., assignor to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Original application Oct. 1, 1956, Ser. No. 613,186, now Patent No. 2,975,612, dated Mar. 21, 1961. Divided and this application Sept. 21, 1959, Ser. No. 845,587

1 Claim. (Cl. 200-38)



A switch construction comprising a contact blade assembly including a first blade, a second blade, and a third blade biased towards contact with said second blade, said third blade being normally in contact with said second blade and out of contact with said first blade, a one day cam and a plural day cam each having a notch, gearing positively connecting said cams to produce registry of said notches after a predetermined number of days, said contact blade assembly having a cam follower portion arranged to drop into said notches upon registry thereof to interrupt contact between said third blade and second blade and to establish contact between said third and first blades, a latching pawl for holding said third blade in contact with said first blade and out of contact with said second blade, and electromagnetic means for releasing said latching pawl, said one day cam having a projecting arm for releasing said latching pawl in the event of failure of said electromagnetic means, said projecting arm being arranged independently of said electromagnetic means and being wholly independent in its operation of the operation of said electromagnetic means.

3,001,037

RETRACTABLE FINGER BUS DUCT PLUG WITH THREE POSITION HANDLE

John B. Cataldo, Birmingham, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 13, 1956, Ser. No. 609,590

13 Claims. (Cl. 200-50)

1. A plug-in unit for a bus duct system being comprised of a housing, a handle, disconnect means, a conducting finger; said housing being comprised of a casing having a cover; said operating handle being operatively mounted on said cover; said disconnect means being comprised of a pair of cooperating contacts and an operating mechanism; said operating mechanism operatively associated with said cooperating contacts for moving said cooperating contacts into engaged and disengaged position; a

latch means operatively associated with said handle for selectively connecting said handle to said conducting finger; said operating handle having a first, second and third position; said latch means being operative to connect said handle to said conducting finger when said handle is moved from said first to said second position and operative to disconnect said handle from said finger when said handle is moved between said second and said third position; said operating mechanism of said discon-



nect means being positioned for engagement by said operating handle only when said operating handle is moved from said second to said third position and when said operating handle is moved from said third to said second position to thereby move said cooperating contacts to said disengaged position; said conducting finger being positioned to operatively engage an electrical conducting means disposed externally of said casing when said operating handle is in said second position.

3,001,038

OVERHEAD CLOSURE SAFETY HALTING SYSTEM AND ACTUATOR THEREFOR

Glenn F. Geasell, 930 Lake Shore Road, Grosse Pointe Shores, Mich.

Filed Apr. 14, 1958, Ser. No. 729,048

3 Claims. (Cl. 200-61.43)



1. An obstruction-responsive actuator for a safety closure travel interrupting system of an electric-motor-operated overhead closure, comprising a plurality of support-guiding attachment members adapted to be secured to the closure near the leading edge thereof in laterally-spaced relationship, a forwardly-urged support guidedly and slidably mounted in each attachment member and having electric switch means thereon, and an elongated safety-obstruction-engaging member adapted to be disposed substantially parallel to the leading edge of the closure and slidably mounted on said supports for travel from an advanced position disposed at a predetermined distance rearwardly from the forward ends of said supports to a retracted position operatively engaging said switch means, said supports having forward stop elements thereon restraining said obstruction-engaging member from moving forwardly on said supports beyond said advanced position whereby said forward ends of said supports project forwardly from and shield said obstruction-engaging member from engagement with normal building structure during normal operation of the closure.

3,001,039

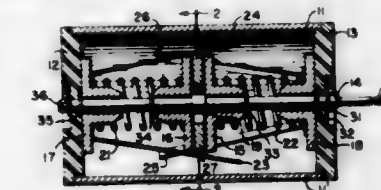
OMNI-DIRECTIONAL INERTIAL SWITCH

Arthur E. Johnson, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 30, 1959, Ser. No. 863,056

11 Claims. (Cl. 200-61.45)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A normally open switch comprising a rigid, hollow conducting element having an inner contact surface, a rod like conducting element, a first means for maintaining said rod like element within said hollow element and insulated therefrom, resilient means engaging said rod like element and electrically connected thereto for making contact selectively with said surface, an inertial member disposed on said rod like element, means for preventing longitudinal movement of said inertial member with respect to said rod like means, said last named means and said inertial member constituting a central member, a portion of said resilient means engaging said central member, a second means for maintaining said central member and a second portion of said resilient means apart, whereby said contact means engages said surface selectively in accordance with the intensity and direction of force suddenly applied to said switch.

3,001,040

SWITCH

Gregory J. Campbell, Freeport, Ill., assignor to William T. Nelman, Freeport, Ill.

Filed May 2, 1957, Ser. No. 656,534

17 Claims. (Cl. 200-67)



1. A blade for a snap acting mechanism comprising a resilient leaf spring having one end portion adapted to be fixedly mounted, said leaf spring having a longitudinally extending slot therein terminating short of said one end portion and integrally connected at the outer end to said side portions having a longitudinally extending slot therein terminating short of the ends of said side portions, and forming each of the side portions into inner and outer strips integrally connected at one end to said one end portion and integrally connected at the outer end to each other, and means displacing the outer ends of the side portions in the plane of said blade a preselected amount from the normal position thereof to tension some of said strips and compress the other of said strips.

3,001,041

SNAP-ACTION DEVICES

David Alexander Wilson, Sunderland, England, assignor to Burgess Products Company Limited, Hincley, England, a company of Great Britain and Northern Ireland

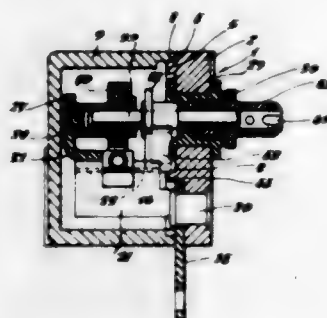
Filed Sept. 3, 1958, Ser. No. 758,825

Claims priority, application Great Britain Sept. 30, 1957

3 Claims. (Cl. 200-67)

1. In a snap-action switch comprising two spaced fixed stops of which at least one is an electrical contact, a substantially flat rigid member having one end disposed be-

tween said fixed stops, a fixed abutment which is engaged by the other end of said rigid member, at least one contact carried by said one end of said rigid member to be engageable with said fixed contact, a link resiliently extensible under tension anchored at one end to said rigid member remotely from said abutment, a fixed anchorage to which the other end of said tension link is anchored, a

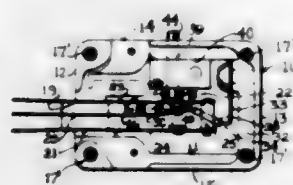


rotary operating cam disposed to bear on one side of said tension link, and a spindle with which said cam is assembled, the combination of a snap-action mechanism separable from the switch in sub-assembly, comprising said rigid member and said tension link with a unitary element affording said fixed abutment for said rigid member, said fixed anchorage for said tension link, and at least one bearing for said cam-and-spindle assembly.

3,001,042 SNAP-ACTION SWITCH

Walter L. Cherry, Jr., Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois

Filed Aug. 3, 1959, Ser. No. 831,142
4 Claims. (Cl. 200-67)

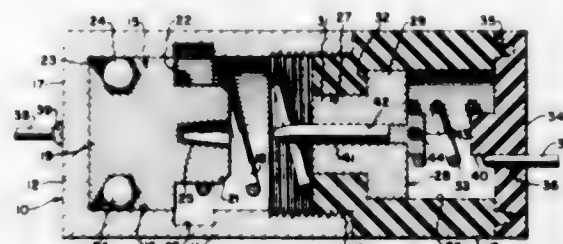


1. A snap-action switch comprising a pair of parallelly extending spaced apart contact-bearing members, an element providing connection between corresponding end portions of said contact-bearing members, a switch blade positioned between said contact-bearing members in spaced relation with respect thereto and having a contact engageable with the contacts of said contact bearing members, means carried by one of said contact-bearing members and engaging said switch blade to impart flexing of said switch blade upon flexing of said contact-bearing members, a supporting member extending in a vertical plane with respect to said contact-bearing members and having an end portion angled in a direction toward the contact-bearing end portion of said switch blade, a substantially rigid link connecting said angled end portion and said contact-bearing end portion of said switch blade and of a length greater than the distance between said angled end portion and the said end of said switch blade so as to effect snap-action of said switch blade in either direction past its long axis, a fixed mounting for corresponding ends of said contact-bearing members and an adjacent end portion of said switch blade, said switch blade engaging means when forced against said switch blade adapted to deform said switch blade in the direction of its length so as to cooperate with said link to effect a snap-action movement of the switch blade on either side of its said long axis, and an actuating member for said contact-bearing members.

3,001,043 INERTIAL AND CENTRIFUGALLY OPERATED SWITCH

Harold E. Evans, Greenbelt, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed June 8, 1954, Ser. No. 435,362
6 Claims. (Cl. 200-80)
(Granted under Title 35, U.S. Code (1952), sec. 266)

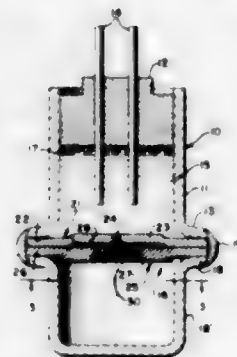


1. A combination centrifugal and inertia actuated switch for use in a projectile comprising a pair of inertial elements movable selectively from an initial position to a moved position under setback force, means responsive to centrifugal force for locking one of the elements in said moved position, means in engagement with the other one of the elements for moving said other element from said moved position to said initial position when said setback force has decreased to a predetermined value, and means carried by said elements for establishing an electrical circuit through said switch when said other element has been returned to said initial position.

3,001,044 LOW SPIN DOUBLE PURPOSE MERCURY SWITCH

Calvin F. Brown, Millersville, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed June 29, 1954, Ser. No. 440,306
4 Claims. (Cl. 200-80)
(Granted under Title 35, U.S. Code (1952), sec. 266)



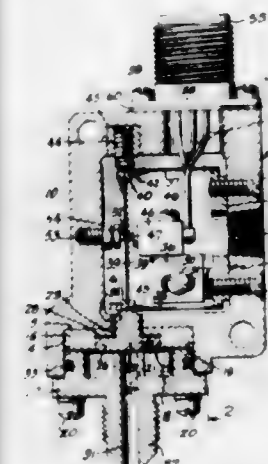
3. A mercury switch comprising a hermetically sealed casing having a quantity of mercury disposed therein, an apertured disc disposed within said casing, a second disc in abutting subadjacency with said first named disc, said discs having a chamber formed therebetween, an annular porous element forming a portion of said second disc and being characterized to pass said mercury under a high sustaining pressure, and a centrally disposed dense portion forming a part of said second disc and enclosed by said annular element for preventing passage of said mercury through said second disc as the switch is subjected to a sudden shock.

3,001,045 PRESSURE SENSITIVE SWITCH

Edward J. Kosowicz, 10 Rose Terrace, Trumbull, Conn.
Filed Apr. 8, 1959, Ser. No. 804,989
9 Claims. (Cl. 200-83)

1. A pressure-sensitive switch comprising a housing enclosing a chamber, a unit assembly mounted in the chamber comprising a bracket, means securing the

bracket to a wall of the housing, a pair of substantially parallel vertically spaced flexible supports extending laterally from the bracket, a vertical column comprising a thin flexible spring plate extending between and supported at its upper and lower ends by said supports, an electric

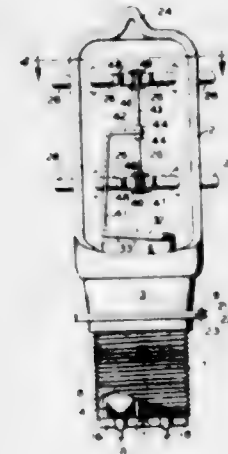


switch mounted on the bracket between said supports including an operating means projecting therefrom and located closely adjacent one side of the column, and a movable pressure-responsive means engaging the under side of the lower support in substantial alignment with the column.

3,001,046 VACUUM RELAY

Louis J. Racz and Clark T. Roessler, San Jose, Calif., assignors to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California

Filed May 7, 1958, Ser. No. 733,721
12 Claims. (Cl. 200-87)

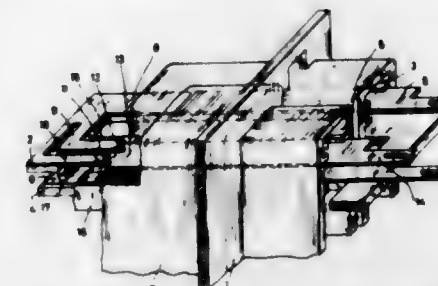


1. A vacuum relay comprising a dielectric bulb closed on one side with a metallic wall and therewith enclosing a vacuumized chamber, a magnetic core integral with the metallic wall and extending on both sides thereof, an armature pivotally mounted within the chamber adjacent the inner end of the core, means pressing the armature away from the core, core energizing means adjacent the external end of the core and operable to move the armature toward the core, spaced contact points within the chamber and mounted on the bulb and each said point being continuous with a lead external to the bulb, a movable contact rollably engaging one of the contact points and rollable thereon into and out of engagement with another contact point to close a circuit therebetween, and means mounting the movable contact on the armature and insulating it therefrom.

3,001,047 ELECTROMAGNETIC RELAY

Gundakar Braumann, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed Mar. 24, 1959, Ser. No. 801,483
Claims priority, application Germany Apr. 24, 1958
12 Claims. (Cl. 200-87)

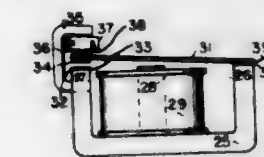


1. An electromagnetic relay comprising a magnet including a flux member and a core member, an armature extending with the free end thereof between the poles of said magnet, a magnetizing winding common to said magnet and said armature, said armature being utilized as an electrical conductor and closing in its attracted position an electrical circuit by engagement with contact means cooperating therewith, a structural member carrying said last named contact means normally positioned adjacent said core member, a contact spring which is in normal position of said armature in engagement with said structural member, movement of the latter, responsive to operative actuation of said armature, effecting disengagement of said structural member with said contact spring.

3,001,048 MINIATURE MODULAR RELAY

Chester R. Rhodes, Whittier, Calif., assignor to Electro-Mechanical Specialties Co., Inc., Whittier, Calif., a corporation of California

Filed July 29, 1959, Ser. No. 830,350
11 Claims. (Cl. 200-87)



1. In a relay structure having one magnetic member of an insulative ferrite material and means to magnetize said member for the actuation of said relay, plural armatures of magnetic spring material each rigidly fastened to one extremity of said member to extend to the opposite extremity of said member as a cantilever for attraction to said member upon energization of said means to magnetize, a magnet of fixed magnetomotive force adjacent the free end of each said armature to attract the free end of each said armature away from said opposite extremity save when said means to magnetize is excited, a first contact upon each said magnet, a second contact mating therewith upon the free end of each said armature and a third contact mating with said second contact oppositely to said first contact, the spring of each said armature causing a wiping action at each pair of mating contacts.

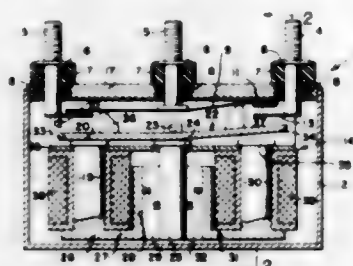
3,001,049 MAGNETIC LATCH

Robert G. Dittler, West Covina, Calif., assignor to Leach Corporation

Filed Nov. 30, 1959, Ser. No. 856,259
9 Claims. (Cl. 200-98)

1. A latching device comprising a magnetically operable pivotal member alternately movable between a first

and a second position; a first fixed magnet having a magnetic flux field; a first magnetic circuit for the flux of said first magnet; a first means for producing a flux in said first circuit in opposition to the flux of said first magnet; a second fixed magnet having a magnetic flux field; a second magnetic circuit for the flux of said second magnet; and a second means for producing a flux in said second circuit in opposition to the flux of said second



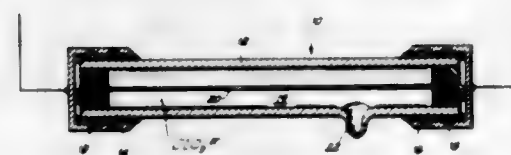
magnet, said first and said second means for producing a flux being selectively and independently operable, said pivotal member having portions forming portions of said first and second magnetic circuits for movement by the fixed magnet in either one of said circuits when the flux of the fixed magnet in the other of said circuits is opposed by the means for producing flux in such other circuit.

3,001,050

ARC INTERRUPTING DEVICE

Donald W. Collier, Wayne, N.J., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed July 2, 1959, Ser. No. 824,497
3 Claims. (Cl. 200-120)



1. A circuit interrupting device having a container, a fusible element disposed within said container and adapted to be connected in an electrical circuit, and a gaseous arc extinguishing medium disposed within said container and including perchloryl fluoride.

3,001,051

TEMPERATURE RESPONSIVE DEVICES

William Hawarden Fisher, Manchester, England, assignor to The General Electric Company Limited, London, England

Filed Jan. 18, 1960, Ser. No. 3,030
Claims priority, application Great Britain Jan. 16, 1959
7 Claims. (Cl. 200-138)



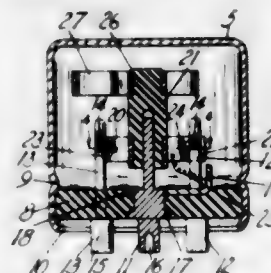
3. A temperature responsive device comprising a body, a bimetallic strip-like element, a carriage fixed to said element at one end thereof and pivoted on said body on

an axis between the ends of said bimetallic element and nearer said one end, a U-shaped spring supported by and applying a compressive force between the other end of said bimetallic element and a point on said body lying on that side of said axis nearer said one end of said element, means to determine the pivotal position of said carriage, and a movable electrical contact carried by the said other end of said bimetallic element and arranged to make and break contact with a fixed electrical contact.

3,001,052

HEAT RESPONSIVE SWITCHES

Ernest F. Swanson, R.R. 1, Bristol, Ind.
Filed May 5, 1960, Ser. No. 27,103
8 Claims. (Cl. 200-138)



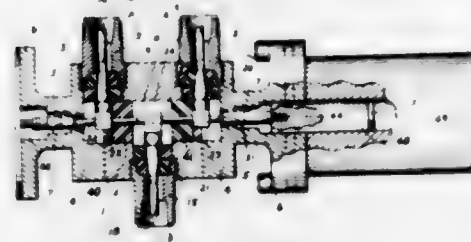
1. In a thermostatic switch assembly, a circular insulating base having a central terminal pin projecting there-through and additional terminal pins projecting through said base in radially and angularly spaced relation to said central pin, an insulating hub rotatably mounted on the inner end of said central pin, a contacting element having a U-shaped bend adjustably and embracingly engaging said hub and having angularly spaced flexible contact arms projecting from the hub between said other terminal pins, means electrically connecting said contacting element with said central pin and permitting rotation of said hub, non-corrosive silver coatings on said contact arms and the coating portions of said other pins, a spiral thermally responsive driving spring having one end fixedly anchored relative to said base and having its other end drivingly engaged with said hub and positioned beyond the ends of said terminal pins, and a case enclosing said spring and hub and sealed to said base around the inner ends of said terminal pins.

3,001,053

COAXIAL SWITCH

Richard Rubin, Natick, Mass., assignor to Andrew Alford, Winchester, Mass.

Filed June 20, 1957, Ser. No. 666,939
2 Claims. (Cl. 200-153)



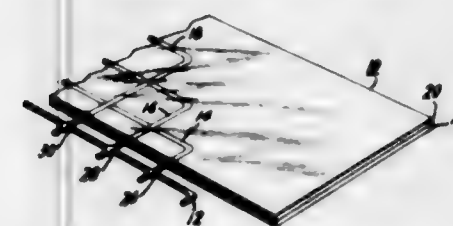
1. A multiposition switch for selectively connecting a plurality of coaxial transmission lines comprising an elongated hollow body, a plurality of spaced coaxial transmission lines, the inner conductors of which extend into said body to a position substantially centrally thereof and terminate in conducting loops aligned symmetrically about a common longitudinal axis of said body with the plane of each loop generally perpendicular to said axis, an elongated member mounted for longitudinal movement in said body substantially centrally in sliding contact with all said loops solely along an inside surface of each loop which

surrounds and contacts the outside surface of said member, the maximum cross section of said elongated member lying within a projection of said loop inside surfaces, said member having alternate electrically insulating and electrically conducting sections, one of said conducting sections having a length substantially equal to the distance between adjacent ones of said inner conductors, and means for causing longitudinal movement of said member.

3,001,054

HEATING PANEL HAVING A PLURALITY OF CURRENT PATHS

Engene Charles Fehner, Wayne, Pa., assignor to General Electric Company, a corporation of New York
Filed Aug. 1, 1958, Ser. No. 752,688
1 Claim. (Cl. 219-19)



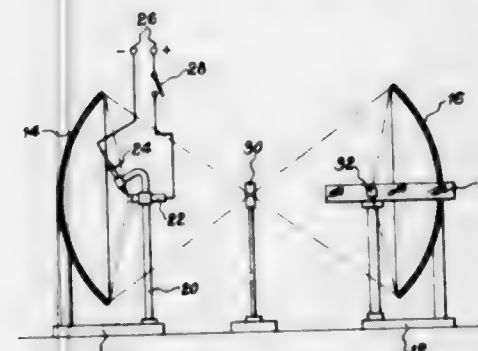
A heating panel comprising a number of resistance wires disposed to form a heating element, said resistance wires being formed into a series of runs, said wires crossing at the end of each run at crossover segments whereby each of said wires crosses each of the other wires of said run, each of said wires being in electrical contact with every other wire at said crossover segments, the length of each run being substantially larger than the length of the crossover segment, the ratio of the run to the segment being greater than 20.

3,001,055

ELLIPSOIDAL RADIATION IMAGE FURNACE

William W. Lozier, Rocky River, and Myron R. Null, Berea, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Oct. 18, 1957, Ser. No. 690,920
9 Claims. (Cl. 219-34)

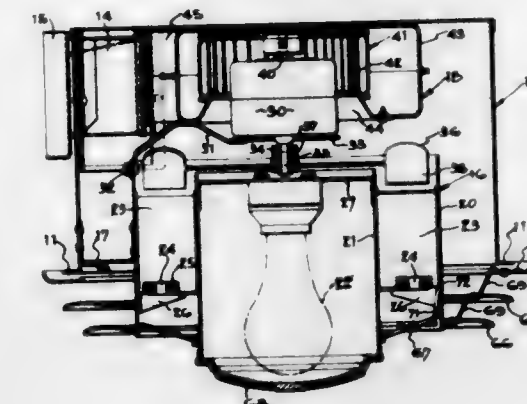


6. A radiation image furnace comprising a heating zone defined by the transverse cross-sections of two mutually facing ellipsoidal mirrors having substantially coincident far foci and substantially common optic axis, a source of radiant heat substantially at the near focus of one of said mirrors, heat-resistant transparent means for holding a sample, said means being positioned substantially at the near focus of the other of said mirrors, means for moving said transparent means toward and away from the hottest point in said heating zone, and shutter means intermediate said mirrors in the path of energy reflected thereby, substantially at the coincident far foci of said mirrors, for controlling radiation upon a sample in said transparent means, whereby radiation incident upon said sample converges upon the small figure of confusion of the second focus of one of said mirrors and diverges to the second mirror to be reconverged upon said sample.

3,001,056

CEILING HEATER AND VENTILATOR

Walter A. Spear, Cincinnati, Ohio, assignor to Nutone, Inc., Cincinnati, Ohio, a corporation of New York
Filed Oct. 1, 1958, Ser. No. 764,680
5 Claims. (Cl. 219-39)



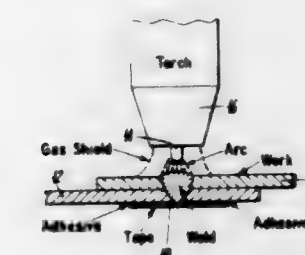
3. An appliance comprising a frame, a motor mounted by said frame, an exhaust fan and a circulating fan driven by said motor in opposition to each other, said exhaust fan being of greater air propelling efficiency than said circulating fan and tending to starve said circulating fan, an exhaust port formed in said frame, said exhaust fan tending to drive air through said exhaust port, a gate movable to open and closed positions such that when said gate is in open position said exhaust fan starves said circulating fan and propels air through said port and such that when said gate is closed said exhaust fan is rendered ineffective to starve said circulating fan, a heating element in the path of air flow from said circulating fan, and means automatically closing said gate when said heating element is energized.

3,001,057

SIGMA SPOT WELDING

Robert L. Hackman, Morris Plains, and Lester J. O'Brien, Maplewood, N.J., assignors to Union Carbide Corporation, a corporation of New York

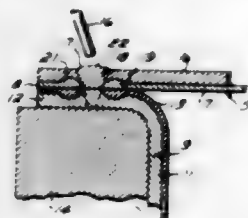
Filed Nov. 12, 1957, Ser. No. 695,938
2 Claims. (Cl. 219-127)



1. The method of spot welding metal plates which comprises arranging said plates in overlapping relation, one above the other, adhesively applying directly to the underside of the lower of said plates below the weld zone a single layer of a woven glass fiber tape, said tape being permeable to the flow of gas therethrough and free of adhesive in the zone of the weld, striking an arc between the top plate and a wire electrode to melt the top of said plate, advancing the wire toward the top plate at a speed no less than the burn off rate of said wire electrode to cause the weld to penetrate through the upper plate and into said lower plate whereby said glass tape alone supports the molten weld zone and prevents molten metal in the weld zone from dropping through the lower plate.

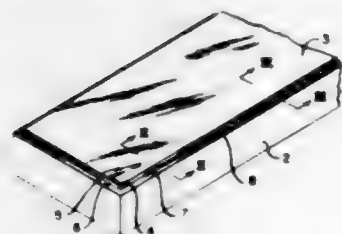
3,001,058 METHOD OF WELDING INTERLINED STRUCTURES

Robert E. Faber, Chicago, and John R. Thomson, Park Forest, Ill., assignors to Rheem Manufacturing Company, Richmond, Calif., a corporation of California
Filed July 3, 1959, Ser. No. 824,822
4 Claims. (Cl. 219-127)



1. In the art of fabricating tanks and the like with different sections each having a backing sheet of steel and a separate liner at one side thereof formed of a non-corrosive material having a melting point lower than the steel, the method of joining said sections which comprises placing the sections in engagement with the steel sheets in opposing spaced relation and the liners interposed therebetween and in contact with each other, and applying heat to the exposed exterior face of the backing sheet of one of the engaged sections for conduction therebetween simultaneously while generating internal thermal expansion pressures within the heated area of the sections sufficient to expel substantially all of the liner portions therefrom and to weld the sheets together in such area while forming thoroughly fused sealed thickenings of the expelled liner material in regions adjacent the welded sheet area.

**3,001,059
MANUFACTURE OF BIMETALLIC BILLETS**
Joseph H. Jones, Canton, Ohio, assignor to Copperweld Steel Company, a corporation of Pennsylvania
Filed Aug. 20, 1956, Ser. No. 685,071
8 Claims. (Cl. 219-137)



1. A method of making a bimetallic billet comprising, all while the billet components except at and adjacent the welding zone are at room temperature, assembling billet components in face to face relation, peripherally sealing the joint between the components by fluxless welding and thereafter applying flux and firmly joining the billet components by peripherally welding them together by submerged arc welding.

**3,001,060
FLOODLIGHT**
Buell Moore, Houston, Tex., assignor, by mesne assignments, to Esquire, Inc., a corporation of Delaware
Filed July 22, 1957, Ser. No. 673,356
2 Claims. (Cl. 240-3)

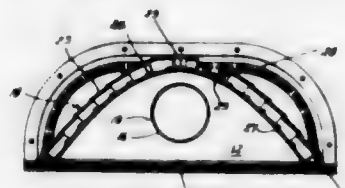
1. A floodlight, comprising a case having a top and bottom and a laterally elongate opening across one side, a reflecting surface in the case and curved concavely of the open side from one end to the other thereof, an opening in the bottom of the case, a well extending downwardly from the bottom of the case in alignment with said opening, an electrical socket mounted in the well so that its open end is aligned with the opening in the case bottom, a cylindrical socket on the top of the case facing

downwardly and axially aligned with the electrical socket, heat insulating and cushioning material lining the inside of the cylindrical socket, and a lamp mounted in front of the reflecting surface having its upper end fitted closely



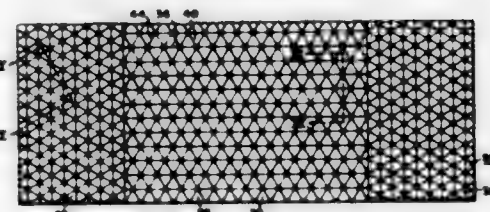
within the heat insulating and cushioning material of the cylindrical socket and its lower end fitted into the electrical socket whereby the portion of the lamp intermediate its opposite ends is out of engagement with the case.

**3,001,061
FLOODLIGHT HAVING SEGMENTED REFLECTOR**
Buell Moore, Houston, Tex., assignor, by mesne assignments, to Esquire, Inc., a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 687,011
3 Claims. (Cl. 240-41.35)



2. A floodlight comprising a case having a top and bottom and being open at a front side, an electrical socket for mounting a lamp within the case, upper and lower parallel grooves of substantially equal length and being respectively in the top and bottom of the case, the grooves each extending from one lateral side of the case to the other lateral side and curving concavely inwardly from the open front side intermediate their ends, and a plurality of separate substantially rectangular strips of highly polished sheet metal arranged in side-by-side relationship and having their opposite ends removably disposed in said grooves so that the strips are vertically extending, said strips being flat in transverse cross-section and being bowed longitudinally away from said front side to reflect light from said lamp out the open front side of the case in a broad beam.

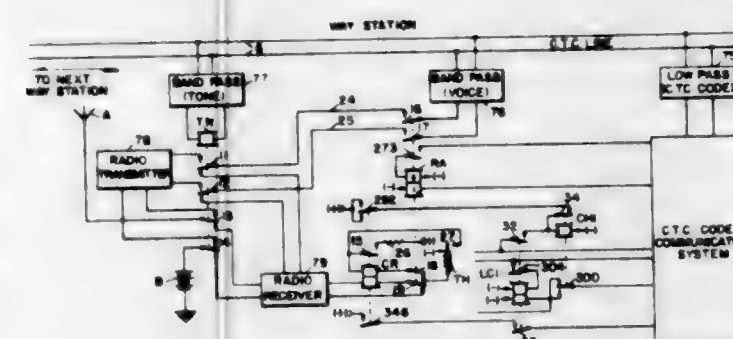
**3,001,062
LIGHT REFRACTOR**
Frederic C. Winkler, Cleveland, Ohio, and Nick Stuffer, Vicksburg, Miss., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 15, 1955, Ser. No. 534,526
1 Claim. (Cl. 240-106)



A refractor adapted for use with an elongated light source comprising a flat elongated panel of light transmitting material, a plane surface on one side of said panel, a plurality of prisms on the other side of said panel the

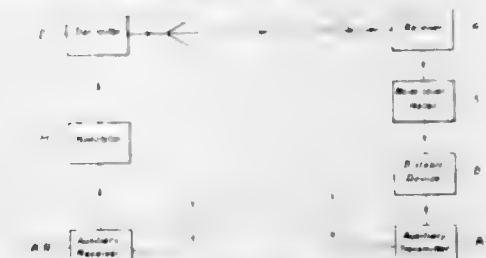
outer edges of said prisms being located in a common plane substantially parallel to the said one side of said panel, said prisms being disposed in a pattern having the outer edges of three adjacent prisms located to form an equilateral triangle, each outer edge of each said adjacent prism also forming a side of other equilateral triangles, respectively, each prism of each said equilateral triangle having a side thereof extending depthwise into said material and inwardly of said equilateral triangle to a common point, each said side forming an isosceles triangle including an outer edge of each said prism and each said side being located at such an angle that said panel serves as a refractor, said panel divided into a central portion and opposite side portions, said central portion comprising spaced parallel rows of said prisms, said side portions comprising spaced parallel rows of said prisms with said parallel rows of the latter prisms extending angularly with respect to the corresponding parallel rows of prisms of said central portion, and the prisms of each of said side portions being of a size smaller than said central portion prisms so that said central portion is adapted to control the brightness of said light source in one direction and said side portions are adapted to control brightness of said light source in other directions.

**3,001,063
SELECTIVE RADIO COMMUNICATION BETWEEN
WAY STATIONS AND CONTROL OFFICE**
Franklin George, Tarrytown, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Aug. 30, 1956, Ser. No. 607,070
11 Claims. (Cl. 246-7)



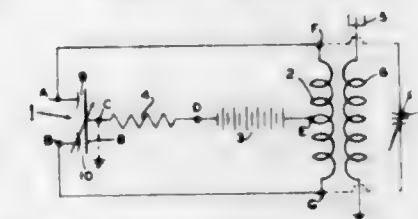
1. In a communication system for railroads, a control office and a plurality of way stations located along a trackway, a line circuit extending between the control office and said way stations, a code communication system for transmitting control codes from said control office to any selected way station over said line circuit and also to transmit indication codes from any particular way station to the control office, a radio transmitter and receiver at each way station and on a moving vehicle travelling along the trackway, means at each way station acting in response to the reception of a radio signal from said vehicle for causing the transmission of a distinctive indication code over said code communication system to said control office to give an indication characteristic of that particular way station receiving the radio signal, means manually operable for causing the transmission of a distinctive code over said code communication system to select any desired way station for radio communication with the moving vehicle within range of that way station, and telephone communication means operative over said line circuit with any selected way station for causing said telephone communication to be relayed through the radio transmitting and receiving means at that selected way station.

**3,001,064
OVER-THE-HORIZON RADIO SYSTEM HAVING
AUTOMATIC FREQUENCY SHIFT AT PREDETERMINED SIGNAL-NOISE RATIOS**
Roger Alexis and Jean Claude Simon, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Mar. 20, 1957, Ser. No. 647,333
Claims priority, application France Apr. 9, 1956
2 Claims. (Cl. 250-6)



1. An ultra high frequency communication system comprising a broad band electronically tunable transmitter; a modulator generator for said transmitter for providing a modulating voltage of a predetermined recurrent wave form; an auxiliary receiver associated with said transmitter and having means for actuating said generator upon reception of a signal of a predetermined frequency; a receiver for receiving signals from said broad band transmitter, said receiver comprising a limiter for limiting the amplitude of the received signal to a predetermined level, means for filtering noise frequencies outside the frequency band of said signals and means for measuring the level of said noise; an auxiliary transmitter associated with said receiver for transmitting a signal having said predetermined frequency and means for initiating transmission by said auxiliary transmitter upon said noise level reaching a predetermined value and for causing said auxiliary transmitter to stop transmission upon said level becoming lower than said value.

**3,001,065
METHOD AND MEANS OF TRANSDUCING
ELASTIC WAVES**
Glen Peterson, 502 S. 83rd East Ave., Tulsa, Okla.
Filed Apr. 28, 1958, Ser. No. 731,484
27 Claims. (Cl. 250-17)



1. A differential transducer comprised of a divided spark gap having at least one movable element in circuit arrangement with a radio-frequency circuit, a source of electric power and an antenna, said movable element being responsive to frequencies other than those to which said radio-frequency circuit and antenna are responsive, said movable element being actuated by elastic waves, said transducer producing and radiating damped electromagnetic waves.

**3,001,066
REMOTE CONTROL TRANSMITTING DEVICE**
Joseph S. Naber, Wheeling, and Arthur H. Maciszewski, River Forest, Ill., assignors to A.R.F. Products, Inc., River Forest, Ill., a corporation of Illinois
Filed May 22, 1958, Ser. No. 737,069
3 Claims. (Cl. 250-17)

1. A radio-frequency generator comprising, a direct current power source, a buzzer having a pair of circuit breaking contacts and a frequency of at least 200 cycles per second, a periodic interrupter having a pair of circuit breaking contacts and a frequency between 5 and 60

cycles per second, a tank circuit having a coil and condenser connected in parallel with a resonant frequency of approximately 300 kilocycles per second, the direct



current power source, circuit breaking contacts of the buzzer, circuit breaking contacts of the periodic interrupter, and tank circuit being connected in a series circuit, and a vacuum tube oscillator having a frequency of approximately 900 megacycles having power input terminals connected across the coil.

3,001,067

PULSED MAGNET SATURATION SIGNAL SEEKING TUNER

Max J. Manahan, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 23, 1958, Ser. No. 710,725
10 Claims. (Cl. 250-20)



1. In radio receiving means having a plurality of inductance means for tuning tuned circuits to scan the band for which the means is designed, common core means upon which the inductance means are mounted, said core means being of magnetic material having high retentivity and low coercive force and maintaining a magnetic charge indefinitely, a magnetizing winding on said core means, and means connected to said magnetizing winding for generating and applying a series of sequential pulses of gradually increasing amplitude to tune the receiving means over a band.

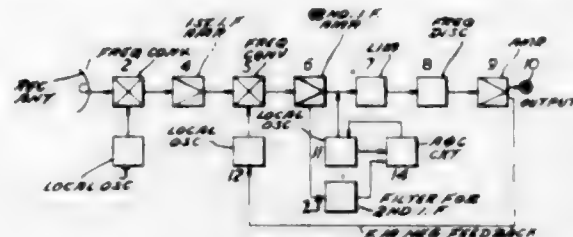
3,001,068

F.M. RECEPTION SYSTEM OF HIGH SENSITIVITY
Masamuke Morita and Sekehiro Ito, Minato-ku, Tokyo, Japan, assignors to Nippon Electric Company Limited, Tokyo, Japan, a corporation of Japan

Filed July 15, 1958, Ser. No. 748,748
Claims priority, application Japan Aug. 12, 1957
10 Claims. (Cl. 250-20)

1. A receiving system of high sensitivity for receiving and recovering the signal from a frequency modulated wave in the presence of interfering random noise comprising: means for translating the received waves on which waves representing said random noise is superimposed to waves of intermediate frequencies, said means including a first local oscillator; a source of local oscillations having a frequency equal to that of the carrier component of said intermediate frequency waves, the amplitude of said local oscillations having a minimum predetermined value; means for combining said intermediate frequency waves and said local oscillations; means for maintaining substan-

tially constant the phase difference between the carrier component of the intermediate frequency waves and said local oscillations; means for limiting the amplitude of

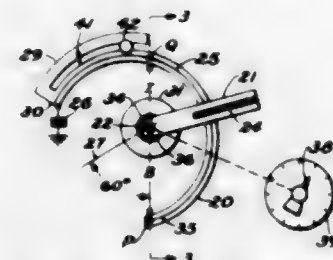


said combined waves and oscillations and discriminator means connected to said limiting means for reproducing said signal.

3,001,069

STRAIGHT-LINE-FREQUENCY TUNER
Merle R. Hubbard, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed July 17, 1956, Ser. No. 598,272
5 Claims. (Cl. 250-40)



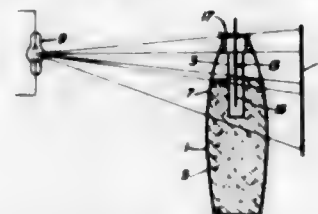
1. A straight-line-frequency tuner comprising an inductance member formed as a circular arc, with said circle having a chord, a pivoting point dividing said chord into two parts having a ratio of about 0.717, and the center of said circular arc being located on a line positioned about 60 degrees from the larger of said two chord parts and passing through said pivoting point, the distance between said center point and said pivoting point having a ratio to said chord length of about 0.1622, a wiper arm of conducting material having one end rotatable about said pivoting point, a ground-plane insulatingly supported substantially parallel to the plane of said inductance member, means for maintaining the pivoted end of said arm at substantially ground potential for radio frequencies, and said wiper arm slideably and conductively engaging said inductance member, with the straight-line-frequency characteristic of said tuner being obtained by rotation of said arm over the circular arc portion of said inductance member.

3,001,070

METHOD OF GAGING FILLING HEIGHTS IN CLOSED CONTAINERS

William H. Davis, Jr., Edgewood, Harry J. De Mull, Havre de Grace, and Pasquale R. Proto, Bel Air, Md., assignors to the United States of America as represented by the Secretary of the Army

Filed Feb. 9, 1956, Ser. No. 564,591
4 Claims. (Cl. 250-67)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of measuring the height of fill in a container wherein the filling is not accessible for direct meas-

urement comprising positioning within said container a gage having indicia visible on an X-ray negative and radiographing said receptacle and gage.

3,001,071

X-RAY FILM CASSETTE

Karl Hans Reiss, Erlangen, Germany, assignor to Siemens-Reiniger-Werke Aktiengesellschaft, Erlangen, Germany
Filed Oct. 22, 1956, Ser. No. 617,564

Claims priority, application Germany Mar. 23, 1956
5 Claims. (Cl. 250-68)



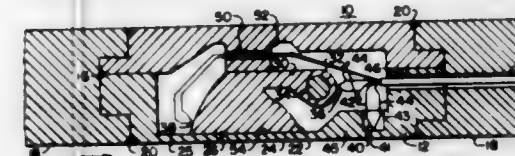
1. An X-ray film cassette comprising a unitary molded structure including a bottom wall through which X-rays pass to an X-ray film to be disposed in said cassette for the purpose of making an X-ray exposure and also including side walls extending from said bottom wall and having laterally inwardly extending bottom border portions merging with said bottom wall, said side walls and the border portions thereof merging with said bottom wall being formed of synthetic material reinforced by fibrous material which impedes the passage of X-rays and the portion of the bottom wall extending inwardly from said border portions of said side walls being reinforced by material which favors the passage of X-rays, a cover made of synthetic material also reinforced by fibrous material which impedes the passage of X-rays, and means for hingedly connecting said cover with one of said side walls for opening and closing motion with respect to the remaining side walls.

3,001,072

DEVICE FOR METERING NEUTRONIC FLUX, TEMPERATURE, AND COOLANT FLOW RATE

Harvey L. Glick, Pittsburgh, Pa., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed June 20, 1958, Ser. No. 743,271
7 Claims. (Cl. 250-83.1)



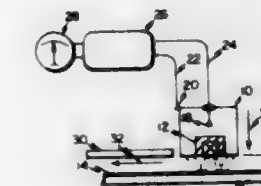
1. A neutron-sensitive device comprising a housing capable of maintaining a vacuum therein, heat-conductive means mounted within said housing having relatively thin and thick sections which constitute regions of high and low temperature gradients respectively, a material capable of producing heat upon impingement of neutrons coupled in heat-conductive relationship to said high gradient region at a place remote from said low gradient region, said housing having a relatively thin wall portion to facilitate the transfer of heat therethrough, said low gradient region being mounted in heat-conductive relation to said thin wall portion whereby a relatively low temperature gradient is maintained between said low gradient region and the outer surface of said thin wall portion, and temperature-sensing means for measuring the differential temperature between a point in said high gradient region adjacent said material and a point in said low gradient region, said temperature difference being proportional to the neutronic flux in the region in which said device is placed.

3,001,073

REFLECTIVITY COMPARISON SYSTEM

Frank M. Alexander, Columbus, and Bernard C. Holben, Dublin, Ohio, assignors to Industrial Nucleonics Corporation

Filed May 23, 1957, Ser. No. 661,139
8 Claims. (Cl. 250-83.3)



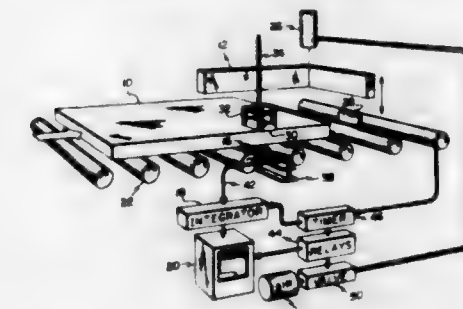
1. An apparatus for gauging a material by directing a beam of penetrative radiation into a surface of said material from one side of the same and quantitatively detecting radiation reflected from said material and returned backwardly from the same side thereof to provide a quantitative indication of a variable property of said material, comprising a source and detector assembly including a radioactive source for providing said radiation beam, a radiation detector having an output functional of radiation reflected from matter in the path of said beam, and a common supporting structure for said source and said detector; a shutter substantially opaque to said radiation beam; bearing means for supporting said shutter for movement parallel to at least one portion of said material surface, means for supporting said bearing means in fixed spaced relation to said material surface; a mechanical linkage interconnecting said shutter and said source and detector assembly for effecting relative movement therebetween, said linkage including means for moving said shutter between a first position blocking the path of said radiation beam and a second position removed from the path of said radiation beam, and means for moving said source and detector assembly between a first alternate position spaced a predetermined distance from a surface of said shutter when said shutter is in said first position and a second alternate position spaced substantially the same distance from said material surface when said shutter is in said second position; means for actuating said linkage, indicating means responsive to said detector output for providing an indication of the value of said variable property of said material when said shutter is in said second position and for providing a reference indication when said shutter is in said first position, and means for compensating said indicating means for changes in said reference indication to restore the accuracy of said variable property indication.

3,001,074

MEASURING SYSTEM

James E. Reider, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Oct. 31, 1958, Ser. No. 770,973

9 Claims. (Cl. 250-83.6)



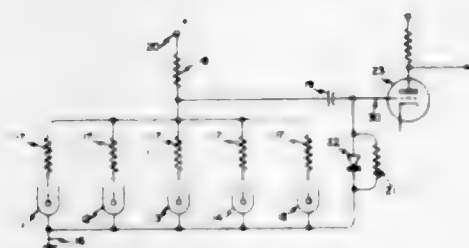
5. In a steel forming process wherein a rectangular steel slab is unidirectionally transported by a roller conveyor, measuring apparatus comprising: a source of nuclear radiation positioned adjacent one side of said

slab, a G-M tube, means for mounting said G-M tube perpendicular to a first edge of said slab and in alignment with said source for receiving radiation, said source and said G-M tube defining a measuring station, means for passing said slab between said source and said G-M tube, means for stopping said slab in said measuring station, said last named means further including locating means to affix a second edge of said slab at a predetermined distance from said measuring station, said G-M tube adapted to generate an output current proportional to the radiation impinging thereupon, an integrator, means for connecting said integrator to said G-M tube for developing an electrical potential having an amplitude indicative of the linear distance between said edges of said slab.

3,001,075

RADIATION DETECTOR CIRCUIT

Jack G. Crump, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Feb. 19, 1958, Ser. No. 716,185
6 Claims. (Cl. 250-83.6)

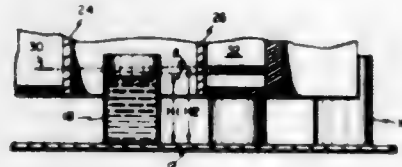


1. A radiation detector circuit comprising first and second common circuit points, a plurality of ionization detector tubes each having first and second electrodes, said first electrode being connected directly to said first common point, an equal plurality of load resistance elements each connecting a corresponding one of said second electrodes to said second common point, a source of operating potential for said tubes, a resistive element connecting said source to said second common point, an output circuit responsive only to the variable component of signals coupled thereto and a differentiating coupling circuit connecting said second common point to said output circuit.

3,001,076

MEASURING SYSTEM

Jack G. Crump, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 23, 1958, Ser. No. 730,347
9 Claims. (Cl. 250-83.6)



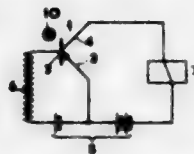
1. A measuring system for determining the fill height of units successively being processed, comprising: means for conveying said units being processed through said measuring system, a source of radiation positioned immediately adjacent said conveyor means and at a height above said means determined by the optimum fill height of said units; a detector circuit, said detector circuit comprising a plurality of individually operative detectors each having an elongated configuration, said detectors having their longitudinal axes in parallel coplanar relationship with one another and parallel to said line of travel of said units, means for positioning said detectors on the opposite side of said conveyor from said source and at a height above said conveyor means to restrict the radiation

detected from said source to that attenuated by said units at said optimum fill height, utilization means and means connecting in parallel the outputs of said detectors to said utilization means.

3,001,077

ENERGY DETECTOR

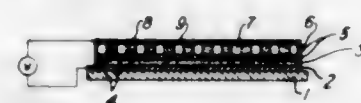
Adrianus Johannes Wilhelmus Marie van Overbeek and Helme Andries Rodrigues de Miranda, both of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 22, 1956, Ser. No. 586,499
Claims priority, application Netherlands May 26, 1955
5 Claims. (Cl. 250-211)



1. A radiation intensity indicating circuit arrangement comprising a transistor having emitter and base electrodes defining an input electrode system and a collector electrode defining with one of said electrodes an output electrode system, said transistor undergoing variations in collector current in response to radiations impinging thereon, means for impinging radiations on said transistor, means for biasing the base electrode of said transistor to a substantially non-conductive condition whereby a relatively small leakage current flows through the said transistor, impedance means connected in said input electrode system for conducting said leakage current when said transistor is in said substantially non-conductive condition and for providing a voltage sufficient to bias said transistor to a conductive condition upon the intensity of said impinging radiations increasing to a magnitude sufficient to cause said leakage current to increase to a point at which the said leakage current exceeds a predetermined value, said impedance means having an impedance value which is high relative to the base-emitter forward resistance of said transistor and which is low relative to the base-emitter inverse resistance of said transistor, said transistor in said conductive condition providing a collector current of sharply increasing magnitude, and utilization means responsive to said collector current and coupled to said output electrode system.

3,001,078

LIGHT AMPLIFICATION AND STORAGE DEVICE
Richard M. Rulon, Hamilton, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Apr. 1, 1957, Ser. No. 649,876
3 Claims. (Cl. 250-213)



1. An information-displaying device comprising an extended transparent conductive layer, an electroluminescent layer thereover, a series of separated transparent conductive areas over said electroluminescent layer, a layer of opaque insulating glaze covering the area between said separated transparent conductive areas, a foraminous photoconductive layer thereover having holes in register with said separated conductive areas, at least some of the separated conductive areas being in electrical contact with the photoconductive material around the surface of the holes, and a light-transmissive electrode connected to the outer surface of said photoconductive layer.

3,001,079

OPTICAL DEVICES FOR PRODUCING PARALLEL BEAMS

Harald W. Stramb, Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed June 19, 1959, Ser. No. 821,615
2 Claims. (Cl. 250-216)
(Granted under Title 35, U.S. Code (1952), sec. 266)

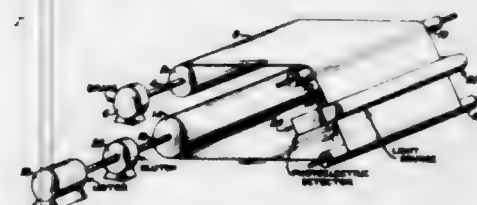


1. A compact and rugged light detection device having a parallel beam sensitivity of predetermined constant cross section out to a relatively large predetermined distance, said device comprising in combination: a rectangular cylinder of optical glass having one end curved and the other end flat, a concave mirror formed on the curved end of said cylinder with a small area at the center of the curved end being left uncovered, said mirror having substantially said predetermined cross section, a light detector cemented to the uncovered small area with its light sensitive surface in contact with the optical glass, and a flat mirror formed on the flat end of said cylinder having a cross section whose dimensions are equal to substantially one-half of the dimensions of the cross section of said mirror, said rectangular cylinder of optical glass being chosen to have a length equal to one-third the distance from said mirror at which an image would be formed of an object placed at said predetermined distance and having substantially said predetermined cross section, said light detector having a cross section substantially equal to the cross section of said image.

3,001,080

INSPECTION APPARATUS

Hugh G. Nell, Knoxville, Tenn., assignor to Special Instruments Laboratory, Incorporated, Knoxville, Tenn., a corporation of Tennessee
Filed Jan. 11, 1956, Ser. No. 558,529
16 Claims. (Cl. 250-219)

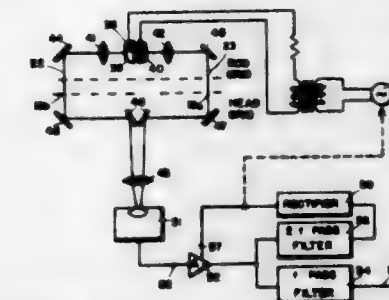


16. Apparatus for examining textile fabrics comprising means for advancing a fabric along a path, light-sensitive means on one side of said path, an arc discharge lamp on the other side of said path opposite said light-sensitive means, said lamp extending across the entire width of the advancing fabric, circuit means for supplying energizing current to said lamp at a frequency above 20 kilocycles per second so that the lamp will not flicker at a frequency of an order close to the frequencies of the light variations resulting from the passage of light through spaces between the threads of the advancing fabric, and amplifier means connected to said light-sensitive means and operating to amplify signals from said light-sensitive means having frequencies corresponding to those of the light variations resulting from the passage of light through the spaces between the threads of the advancing fabric.

3,001,081

PHOTOELECTRIC GAGE

John L. Bower, Downey, Calif., assignor to North American Aviation, Inc.
Filed Aug. 19, 1957, Ser. No. 678,886
11 Claims. (Cl. 250-222)

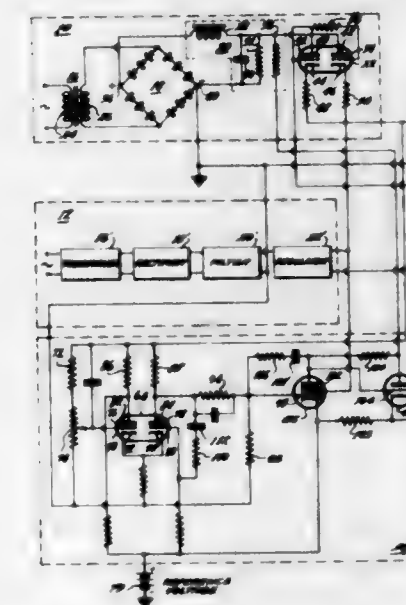


1. In a photo electric gage, a phototube system comprising a pair of terminals for connection to a source of alternating current, gaseous discharge glow lamp means having opposite electrodes operatively connected to said terminals to become luminous on alternate cycles of alternating current supplied to such terminals, a gage head grid and a rod grid, relatively movable, a photoelectric responsive device, optical light occulting means mounted to form two independent paths between said photoelectric responsive device and said lamp means with one electrode included in one path and an opposite electrode included in the other path, different portions of said grids being interposed in said optical paths for occulting light in one or the other of the optical paths according to the relative position of the grids, a counter system input line including a phase-sensitive demodulator operatively connected to said photoelectric response device for receiving fundamental frequency pulses in response to relative movement of said grids, a fundamental frequency filter interposed in said counter system input line, a voltage-responsive control terminal for controlling output to said counter system input line, and a filter having a pass band at twice fundamental frequency, interconnecting said control terminal and said counter system input line for compensating variations in light transmission to maintain substantially constant output to said counter system input line.

3,001,082

REGULATED POWER SUPPLY SYSTEMS

Herbert A. Clarke, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 4, 1957, Ser. No. 700,728
5 Claims. (Cl. 307-19)



1. Voltage regulating apparatus comprising in combination a plurality of unidirectional voltage supply circuits, each said circuit including an electronic variable

impedance regulating device, separate load means connected to each of said circuits, an electronic sensing device responsive to changes in potential across one of said load means to provide a plurality of control effects and means for separately applying said control effects to control said regulating devices.

3,001,083

SYSTEM FOR PROTECTING ELECTRICAL EQUIPMENT AGAINST SHORT CIRCUITS

Jean Emile Trotter, Paris, France, assignor to Société à responsabilité limitée dite: Société Gram-Electric, Pantin (Seine), France, a corporation of France
Filed Feb. 19, 1959, Ser. No. 794,411

Claims priority, application France Mar. 15, 1957
9 Claims. (Cl. 307-57)



1. System for protecting electrical equipment against short circuits for use in connection with installations comprising at least one high reactance polyphase alternator having a field winding the excitation for which is derived from an exciting circuit, which system comprises a plurality of quick acting relays connected in series in said exciting circuit, each of which is provided with electrical actuating means connected across one phase of said alternator and energized to hold said relay closed when the voltage drop across said phase is normal, but adapted to automatically open said relay when said phase voltage falls substantially below normal, said relays being incapable of automatically reclosing, means for varying the exciting current in said exciting circuit, which is normally maintained in a first position in which a normal exciting current is supplied to said field windings but movable to a second position in which a reduced exciting current is supplied thereto, means for mechanically closing said quick-opening relays, which is normally biased to a position permitting said relays to open, power means for moving said current varying means to said second position and driving said mechanical relay closing means, an electric circuit for supplying said power means, slowly acting relays in said last mentioned circuit which are automatically opened by the flow of current in said phases and closed in the absence of such flow, thereby energizing said power means to institute a reduced excitation of said field coils and reclose said quick acting relays when said phase current fails, but de-energizing said power means and permitting restoration of said normal excitation when said reduced excitation results in restoration of said phase current to a predetermined fraction of its normal value.

3,001,084

MAGNETIC AMPLIFIER WITHOUT RINGBACK

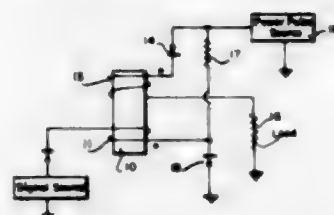
Theodore H. Bonn, Philadelphia, Pa., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed June 28, 1955, Ser. No. 518,488

7 Claims. (Cl. 307-88)

1. A magnetic amplifier having a saturable core with a substantially rectangular hysteresis loop, a coil on the

core, a rectifier in series with said coil to allow flow of current through said coil in only one direction, a source of alternating voltage connected in series with said rectifier and coil and which voltage has a waveform that on a first portion of each cycle causes flow of current through said rectifier and on the second portion of each cycle



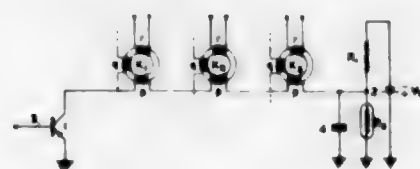
cuts off the rectifier, said source having a voltage waveform that pauses for a fraction of a cycle as it passes the zero axis on its way from the first to the second portions of each cycle, and means including a signal source for periodically resetting the core during second portions of the cycle.

3,001,085

STATIC MAGNETIC TRIGGERS WITH CONSTANT OUTPUT

Regnerus Agnus Koolhof, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 23, 1957, Ser. No. 673,643

Claims priority, application Netherlands Sept. 4, 1956
7 Claims. (Cl. 307-88)



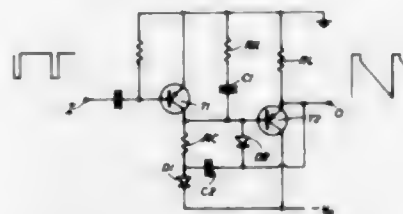
1. A static magnetic trigger comprising a core of ferromagnetic material having a substantially rectangular hysteresis loop, at least one input winding coupled to said core, a supply circuit for supplying current pulses to said input winding, said core and said supply circuit both being exposed to the ambient temperature, said supply circuit comprising means operative to decrease the amplitude of said input winding current pulses upon an increase in the ambient temperature, an output winding coupled to said core, and means for deriving an output voltage from said output winding, said output voltage remaining substantially constant with varying ambient temperatures.

3,001,086

LINEAR SWEEP CIRCUIT ARRANGEMENTS

Antonio Martinez, Chelmsford, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Filed Mar. 30, 1960, Ser. No. 18,669

Claims priority, application Great Britain July 20, 1959
7 Claims. (Cl. 307-88.5)



7. A substantially linear sweep circuit comprising a first and a second transistor, the first transistor being connected to a load circuit so as to produce thereacross a potential which is a replica of its base potential, a first condenser, a second condenser, said second condenser

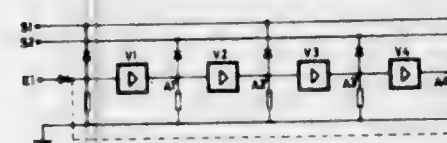
being connected between the base electrode and the output circuit, means to charge said first condenser at substantially constant current from said second condenser during the sloping flank of the waveform produced by said circuit, means to apply the potential of said first condenser to said base electrode, means to render said second transistor non-conductive normally, means to apply timing pulses to said second transistor to render it conductive, means connecting said first condenser with the second transistor so that the first condenser is discharged during the flyback period of the waveform produced, a unilaterally conducting device, and means to connect said device in the charging circuit of the second condenser in series with the collector-emitter path of the second transistor.

3,001,087

IMPULSE TIMING CHAINS

Hans-Joachim Harloff, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany
Filed Oct. 4, 1957, Ser. No. 688,281

10 Claims. (Cl. 307-88.5)



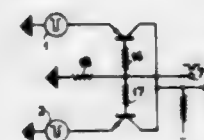
1. An impulse timing chain comprising a plurality of diode amplifiers connected in cascade chain circuits in successive stages thereof, coupling members disposed in the series branches of said chain circuit, means for conducting to said diode amplifiers feed impulses which are from stage to stage mutually displaced, means for conducting to the first diode amplifier in the chain a control impulse to produce, responsive to a feed impulse conducted thereto, an output impulse which is directed to the next successive coupling member, said coupling member giving off said output impulse to the next successive diode amplifier as an input impulse therefor, said operation being repeated in the successive stages of said chain circuit, said coupling members being operative to continuously transmit voltage and current fluctuations derived from said feed and output impulses in forward direction, while blocking such fluctuations in rearward direction whereby said first noted output impulse is passed from stage to stage of said chain circuit in synchronism with the feed impulses respectively supplied to said diode amplifiers.

3,001,088

DEVICE RESPONDING TO THE DIFFERENCE BETWEEN TWO INPUT SIGNALS

Pieter Johannes Wilhelmus Jochems and Heine Andries Rodrigues de Miranda, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 21, 1957, Ser. No. 691,487

Claims priority, application Netherlands Nov. 27, 1956
10 Claims. (Cl. 307-88.5)



1. A circuit arrangement for responding to the difference between two input signals, comprising two transistors of the same conductivity type, each transistor including an output electrode and two input electrodes, said output electrodes being directly connected together, an output terminal connected to said output electrodes, one corresponding pair of input electrodes being connected to-

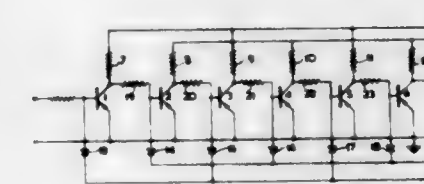
gether through a D.C. connection, and means to apply input pulses to the remaining input electrodes, said input pulses having a polarity and a magnitude such that no output pulse is present at said output terminal except under the condition that the magnitude in the absolute sense of a pulse applied to one transistor exceeds, by a predetermined amount, that applied to the other transistor, said condition causing breakdown of the input electrode path of said other transistor and consequent operation of said one transistor in the forward direction.

3,001,089

TRANSISTOR MEMORY SYSTEM

Theodorus Joannes Tulp, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 1, 1957, Ser. No. 693,884

Claims priority, application Netherlands Nov. 27, 1956
2 Claims. (Cl. 307-88.5)



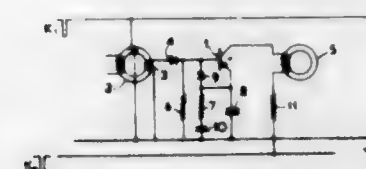
1. A transistor memory system comprising at least two stages connected in cascade arrangement, each stage including a transistor having an emitter, a collector and a base, said base having the property of storing a free charge in response to current passed therein, means connected to apply current to the base of a first one of said transistors to cause a free charge to be stored therein, means for applying interrogating pulses to the respective emitter-collector circuits of said transistors, said interrogating pulses being the sole means of potential supply for said emitter-collector circuits, load resistors connected respectively in the collector circuit of each transistor, and bi-directionally conducting coupling resistors each connected respectively between the base of each transistor and the collector of the transistor of the preceding stage, the value of each coupling resistor and its associated load resistor being sufficiently large to prevent a free charge stored in the base to which the coupling resistor is connected from leaking away during the time interval between two successive interrogating pulses applied to the transistor containing said base, each coupling resistor operating to couple pulses to the next one when an interrogating pulse is applied to the preceding stage dependent on the presence of free charge in the base of the transistor of the preceding stage.

3,001,090

TRANSISTOR MEMORY DEVICE

Theodorus Joannes Tulp, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,841

Claims priority, application Netherlands Jan. 5, 1957
6 Claims. (Cl. 307-88.5)



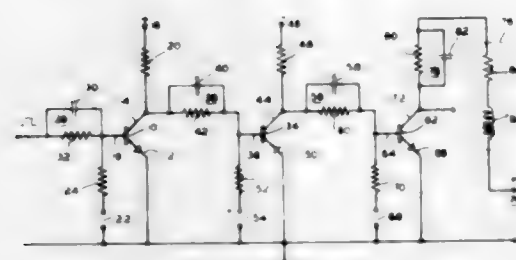
1. A memory device comprising a transistor having a base zone, a base electrode connected to said base zone and to a base circuit, and emitter and collector electrodes,

said transistor having a collector-emitter current amplification factor greater than one, means for applying read-in pulse between said base and emitter electrodes whereby a storage of free charge carriers is produced in said base zone, means for applying a read-out pulse to said collector electrode after each read-in pulse, said read-out pulse being the sole source of supply voltage for said collector electrode, regenerative feed-back means connected in the base circuit of the transistor, said feed-back means being operative to increase the forward bias voltage effective between the base and emitter electrodes during the occurrence of a read-out pulse, and a network having a predetermined time constant connected in operative relation with said feedback circuit and operating to limit the duration of the increased forward bias voltage and to abruptly reverse the polarity of the bias voltage effective between the base and emitter electrodes, said bias voltage of reversed polarity substantially expelling any free charge carriers still present in the base zone.

3,001,091

CURRENT PULSE GENERATOR

Arthur Kaiser, Trumbull, and Carl Tishler, Bridgeport, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 12, 1958, Ser. No. 721,005
5 Claims. (Cl. 307-88.5)



1. A transistor circuit for providing a chosen current through an inductive load comprising an output transistor having said inductive load, a parallel combination of a resistance and a capacitance in series with said load, the value of said capacitance being in accordance with the expression

$$C = L \frac{\left(\frac{R}{R_1} + 2 - 2\sqrt{1 + \frac{R}{R_1}} \right)}{R^2}$$

wherein C is the value of said capacitance, L is the inductance of said load, R is the value of the resistive component of said load, and R_1 is the value of said resistance, the power dissipation of said output transistor being in accordance with the expression

$$\frac{T f P_{\max}}{3} + V_e I_{\text{ave}}$$

wherein T is transit time, f is pulse repetition frequency, P_{\max} is the maximum power in the load when said transistor is conducting at saturation, and I_{ave} is the average current through the load, the voltage rating of said transistor being in accordance with the expression $I(R_1 + R)$ wherein R_1 and R have their previous significance and I is peak current, said rise time being a function of the expression

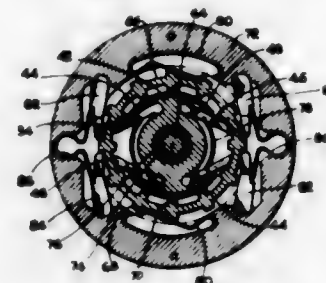
$$\frac{L}{R_1 + R}$$

wherein L, R_1 and R have their previous significance, and means for applying biasing potentials to said output transistor whereby said transistor is maintained at collector current cutoff during quiescent states and wherein said transistor is rendered conductive at saturation upon the application of an appropriate input signal thereto.

3,001,092

STEPPER MOTOR

Otto R. Nemeth, 2225 S. Carmelina Ave.,
Los Angeles, Calif.
Filed Sept. 25, 1957, Ser. No. 686,101
12 Claims. (Cl. 310-37)



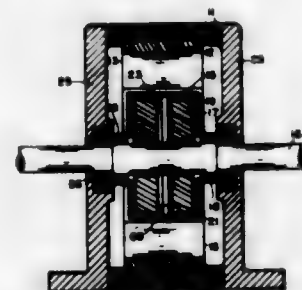
1. In an automatic bi-directional incremental stepper motor having an armature balanced for rotation about a given axis; electromagnetic means in said motor adapted to effect movement of said armature, respectively, from a first position to a second position in one direction or to a third position in an opposite direction; and force means coupled to said armature acting to bias and return said armature to said first position from said second position or said third position, respectively, a first pawl means coupled for movement with said armature; a star wheel mounted for rotation in said motor, said star wheel having a first set of circumferentially spaced teeth positioned for driving engagement by said first pawl means during movement of said armature from said first position to said second position or said third position, respectively; second pawl means mounted in said motor and normally disposed in a locking position with said star wheel preventing said driving engagement until said armature has rotated an initial angular distance; and, releasing means effecting unlocking of said second pawl means during movement of said armature through said angular distance whereby said motor is adapted for precise, high speed stepping operation.

3,001,093

LOW SPEED SYNCHRONOUS MOTOR

Doyle E. Wilcox, Puente, and Joseph A. Mehm, Huntington Park, Calif., assignors to North American Aviation, Inc.

Filed Aug. 30, 1956, Ser. No. 607,221
5 Claims. (Cl. 310-158)



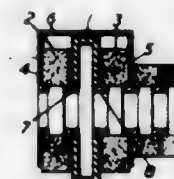
1. A low speed synchronous motor comprising in combination a stator having a plurality of salient poles equaling in number at least four times the number of phases of the system; windings on said poles; polyphase terminals, connections from adjacent windings to successive phase terminals, oppositely poled rectifiers being included in the connections to alternate windings; a rotor having slots with a pitch small in relation to the pole pitch of the salient poles, the salient poles having pole faces with slots of the same pitch as the rotor slots, the spacing between the adjacent pole tips being of the same order of magnitude as the slot pitch, and the pole slots being advanced in the direction of rotation in angular pitch from one pole to the next by a fraction equalling one divided by twice the number of phases.

3,001,094

MAGNETIC FOCUSING DEVICE

Susumu Yasuda, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Jan. 7, 1960, Ser. No. 1,040
Claims priority, application Japan Jan. 14, 1959
1 Claim. (Cl. 313-84)



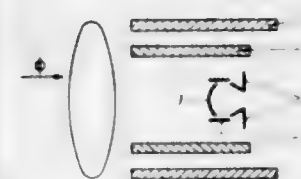
A periodic magnetic focusing device for long electron beams comprising a pair of cylindrical magnets positioned with unlike poles adjacent one another, a wave guide disposed between said pair of cylindrical magnets, first pole pieces located at the extreme ends of said magnets, second pole pieces located between said magnets and said wave guide, the external diameter of said first and second pole pieces being smaller than the external diameter of the cylindrical magnets, and a magnetic shorting connection between said first pole pieces bridging across said cylindrical magnets and said wave guide.

3,001,095

HIGHLY COMPRESSIVE GUN SYSTEM COMPRISING A COMBINED ELECTROSTATIC AND MAGNETIC FOCUSING

Werner Klein, Korntal, Germany, and Walter Fritz, Fairborn, Ohio, assignors to C. Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany, a corporation of Germany

Filed Feb. 12, 1958, Ser. No. 714,789
Claims priority, application Germany Feb. 15, 1957
1 Claim. (Cl. 313-84)

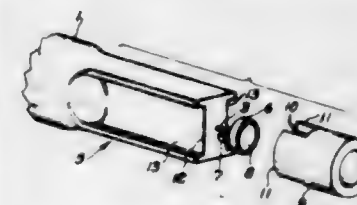


A highly compressive gun system for producing a beam in a predetermined direction having electrostatic focusing means including a cathode, an accelerating anode and magnetic focusing comprising a first substantially cylindrical shield portion of a given diameter surrounding said gun throughout its length and terminated substantially at the anode, and a second substantially cylindrical shield portion of a larger diameter parallel to and surrounding said first shield portion and extending beyond said first shield portion in a direction of the beam.

3,001,096

TERMINAL STRUCTURE FOR DOUBLE-ENDED LAMPS

Frederick A. Mosby, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed July 2, 1959, Ser. No. 824,498
3 Claims. (Cl. 313-318)



1. An electric lamp comprising a sealed envelope of vitreous material containing electric energy translation

means and having an external pinch seal portion at opposite ends thereof and a lead-in conductor extending therethrough from said energy translation means, said seal portions having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, a contact member carried by each of said lead-in conductors at the outer end of the respective pinch seal portion, and a tubular base member of insulating material at each end of the lamp and having a diametrically slotted end portion snugly straddling the said web portion of the pinch seal and fitting snugly between the sides of the channel portions of said pinch seal, said base member surrounding the associated external portion of said lead-in conductor and contact and extending beyond said contact, and means securing said base member to said pinch seal.

3,001,097

LAMP BASE AND TERMINAL STRUCTURE

Leon J. Smialek, Chagrin Falls, Ohio, assignor to General Electric Company, a corporation of New York
Filed July 2, 1959, Ser. No. 824,499
4 Claims. (Cl. 313-318)

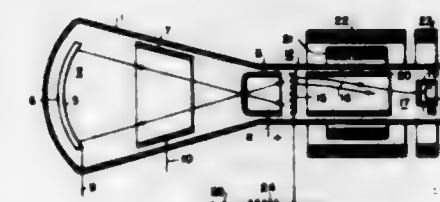


1. An electrical device comprising a sealed envelope of vitreous material containing electric energy translation means and having an external pinch seal portion at an end thereof and a lead-in conductor extending therethrough from said electric energy translation means, said seal portion having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, and a terminal structure mounted on said end of the envelope and comprising a base member having leg portions snugly straddling the said web portion of the pinch seal and fitting snugly between the sides of the said channel portions.

3,001,098

X-RAY IMAGE INTENSIFYING DEVICE

Robert J. Schneeberger, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1954, Ser. No. 416,879
3 Claims. (Cl. 315-11)



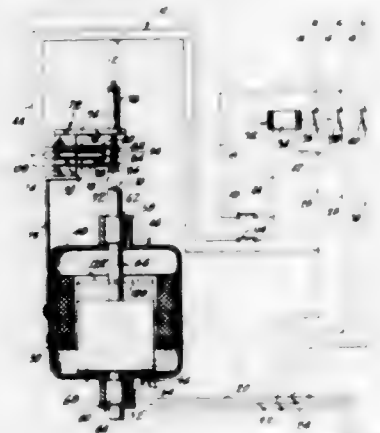
1. An image reproducing device comprising a photoelectrically-emissive screen, a target comprising a metallic support mesh, a thin electron permeable layer of electrically conductive material positioned on the side of said mesh remote to said screen, a layer of material having a property altered by electron impact supported on said electron permeable layer, an electron-lens system for accelerating electrons from said screen into impact upon said support, said metallic mesh having a surface layer

of a material which emits secondary electrons copiously when struck by said electrons on the side facing said screen.

3,001,099

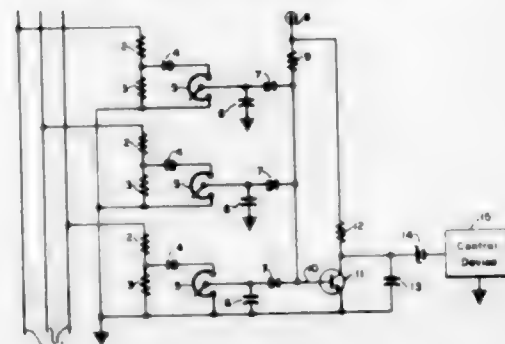
PROTECTING DEVICE FOR THREE PHASE MOTOR HAVING SHIFTABLE ROTOR AS A PART OF THE ASSEMBLY

Riley E. Larkey, 209 S. Montgomery St., Clarksville, Ark.
Filed Mar. 23, 1959, Ser. No. 801,323
12 Claims. (Cl. 317-13)



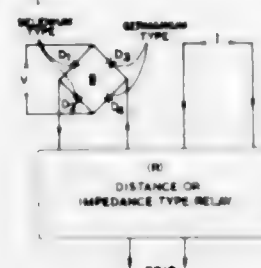
1. In apparatus for controlling a main, three phase, alternating current electric motor having three electrical power input terminals adapted for coupling with the three corresponding electrical power source terminals of a three phase, alternating current power source and for protecting said main motor against operation during application to said power input terminals thereof of electrical power of other than three phase characteristics or of excessive or inadequate potential level in any phase of said power, first circuit means operably coupling said input terminals with corresponding source terminals; first switching means interposed in said first circuit means; electrically responsive means operably coupled with said first switching means for controlling actuation of the latter; second circuit means operably coupling said electrically responsive means with said source terminals; second switching means interposed in said second circuit means; an auxiliary, three phase, alternating current, electric motor having field windings coupled with control input terminals and a rotor mounted in said housing for rotation upon and reciprocation along an axis through said windings, said rotor occupying a first position of reciprocation when said auxiliary motor is deenergized, a second position of reciprocation spaced from said first position thereof when said auxiliary motor is energized by electrical power of other than three phase characteristics or of inadequate potential level in any phase of said power, a third position of reciprocation spaced from said first and second positions thereof when said auxiliary motor is energized by three phase, electrical power of predetermined, proper potential level in all phases of said power, and a fourth position of reciprocation spaced from said first, second and third positions thereof when said auxiliary motor is energized by three phase, electrical power of excessive potential level in any phase of said power; actuating means connected to said rotor for reciprocation therewith and extending out of said windings; and third circuit means interconnecting said input terminals of the auxiliary motor with corresponding circuit means interconnecting said source terminals and the input terminals of said main motor, said second switching means being disposed to be actuated by said actuating means connected to said rotor for maintaining said second switching means in an open condition except when said rotor is in said third position thereof.

3,001,100
UNDervOLTAGE SENSING CIRCUIT
Niles F. Schuh and Lewis R. Lowry, Jr., Lima, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 27, 1958, Ser. No. 769,649
4 Claims. (Cl. 317-31)



1. An undervoltage sensing circuit for responding to the lowest phase voltage of a polyphase alternating current system, said circuit including means connected to each phase of said system for providing a unidirectional voltage proportional to the corresponding phase voltage, rectifier means for each phase for connecting a direct current source to ground, means for connecting said unidirectional voltages to the corresponding rectifier means to bias the rectifier means in the reverse direction, whereby a direct current signal is provided when all of the phase voltages are above a predetermined value, and a transistor controlled by said direct current signal to provide an output signal in the absence of the direct current signal.

3,001,101
ELECTRICAL PROTECTIVE RELAYS
Eric Paddon, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Mar. 2, 1959, Ser. No. 796,694
Claims priority, application Great Britain Mar. 4, 1958
8 Claims. (Cl. 317-52)

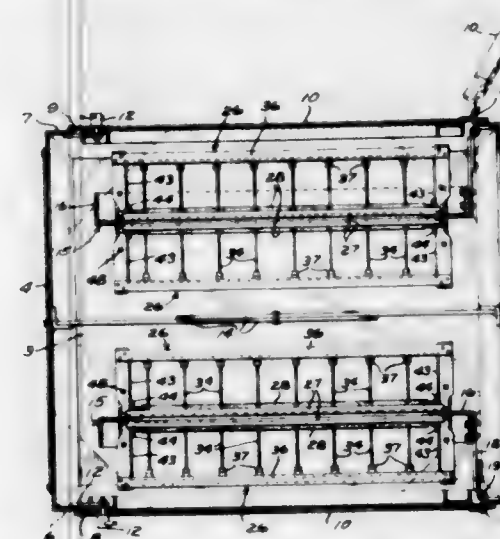


1. A protective relay of the kind which operates in accordance with an amplitude comparison made between an operating signal and a D.C. restraining signal comprising, as means by which the D.C. restraining signal is derived, a full wave bridge rectifier having an asymmetrical electrical configuration formed by half wave rectifier elements of different type but matched in respect of their inherent forward resistance characteristics so as to improve the performance of the relay when operating and restraining signals of low amplitude are compared.

3,001,102
INTEGRATED PLUG-IN UNIT
Rudy C. Stiefel, New York, Dmitri A. Strakhov, Flushing, and Peter A. Carbone, New City, N.Y., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Nov. 12, 1958, Ser. No. 773,493
8 Claims. (Cl. 317-99)

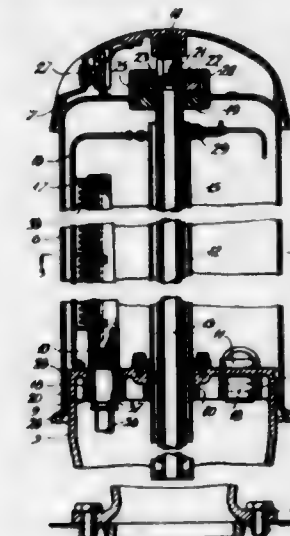
1. An apparatus of the character described comprising a rectangular cabinet, a doorway in a wall of said cabinet,

a rectangular rack supporting frame having a pair of spaced parallel vertical side members normally disposed in said cabinet behind said doorway, hinge means within said cabinet by which said frame is mounted for swinging movement into and out of said cabinet through said doorway, a plurality of aligned vertically spaced similar brackets secured to each side member of said frame, a plurality of multiple contact sockets one of which is secured to each of said brackets, a plurality of elongated narrow supporting members secured to and extending from side member to side member between adjacent brackets, cushioning strips of pliable rubber secured to each of said supporting members, a plurality of racks



each having means by which a plurality of printed circuit cards are removably mounted in said racks, interengaging means between said racks and said brackets by which said racks are removably mounted on said rectangular frame, latching means carried by said racks by which said racks are releasably secured on said frame, plug-in circuit cards permanently secured to said racks in position to be received in said multiple contact sockets when said racks are mounted on said frame, means by which the circuits on said removable printed circuit cards are electrically connected to said permanently secured plug-in circuit cards, and means by which said multiple contact sockets are electrically connected together.

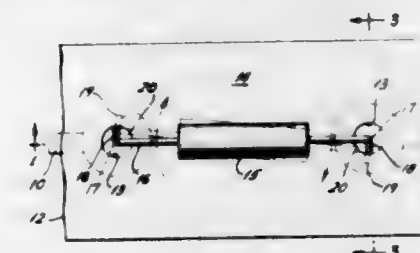
3,001,103
CROSS-CONNECTING CABINET
Harold Melville Fitzpatrick, Essendon, Victoria, Australia, assignor to Electrical Communication Enterprises Pty. Limited, Essendon, Victoria, Australia
Filed May 13, 1959, Ser. No. 812,966
Claims priority, application Australia May 14, 1958
21 Claims. (Cl. 317-99)



1. A cross-connecting cabinet of the hermetically sealed type comprising a base portion having a cylindrical sur-

face adapted to receive a rolling ring seal, a face containing circular apertures adapted to receive rolling ring seals whereby terminal units and sealing plugs may be selectively retained and hermetically sealed therein, a cover adapted to fit over the base portion, a rolling ring seal on the said cylindrical surface adapted to be rolled into a sealing position between the said surface and the cover by movement of the cover over the base portion in the axial direction of the said surface, means to locate, guide and move the cover over the base portion, and means to secure the cover in position on the base portion.

3,001,104
WIRING SYSTEMS COMPRISING PANELS, COMPONENTS, AND BENT LEAD WIRES
Reynolds D. Brown, Jr., Ambler, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 5, 1956, Ser. No. 596,021
2 Claims. (Cl. 317-101)



1. In a wiring system, at least one electrical component; a wiring panel structure; and means for mounting said component upon, and upstanding from, one side of said panel structure, said means comprising a pair of lead wires both extending from said electrical component on said one side of the panel, through the panel structure and to the other side thereof to hold the component to the panel, each lead wire having a portion projecting on and engaging said other side; the latter wire portions extending in directions substantially parallel to the panel and lateral of a straight line between the points where the wires extend through the panel.

3,001,105
GLASS BEADS AS POTTING MATERIAL FOR ELECTRONIC ASSEMBLIES
Arthur B. Fox, Fairport, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 30, 1956, Ser. No. 625,564
7 Claims. (Cl. 317-101)



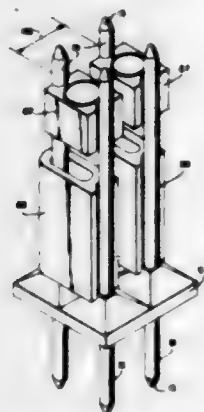
1. A shock proof electronic assembly comprising a container, an electronic component within said container, dry fluid-like potting material filling said container and disposed about said electronic component, the apparent densities of said component and material being substan-

tially equal, said potting material consisting of spherical pellets of matter in closely packed condition and having air interstices therebetween, and the diameter of the pellets being less than one-sixteenth of an inch.

3,001,106

COMPATIBLE COMPONENTS SYSTEM

Harold P. Higgs, 178 Lincoln Ave., Newark, N.J., assignor of one-fourth to Moore, Hall & Pollock, Washington, D.C., a firm
Filed Apr. 30, 1957, Ser. No. 656,083
12 Claims. (Cl. 317-101)



1. In combination a compatible components electronic system of interchangeable standardized basic electronic circuit components constructed for assembly by programmed automatic machinery into at least a portion of a selected electronic circuit being mass produced, comprising a base member, mounting elements of electrically conductive material constructed as part of said base member for electrical connection upon contact with circuit completing terminal elements of any of a group of compatible circuit components consisting of resistance, inductance, capacitance, impedance and combinations thereof; said mounting elements being positioned on said base member in accordance with a selected set of coordinates and spaced to cooperate with the circuit completing terminal elements of members of said group, compatible circuit components of a group consisting of resistance, inductance, capacitance, impedance and combinations thereof having circuit completing terminal elements spaced to correspond to the spacing of said mounting elements when positioned according to said set of coordinates, said compatible circuit components being standardized and constructed for interchangeable frictional fitted mounting between selected mounting elements, heat-responsive circuit completing and holding means in contact with at least one of said compatible circuit components and at least one of said mounting elements for forming a permanent electrical contact therebetween and holding said compatible circuit components firmly in position on said base member and in good electrical contact with their respective mounting elements and means providing free space around at least one permanent contact between said mounting elements and said compatible circuit elements for eliminating undesired short circuits between circuit components mounted on said base member, whereby at least said portion of a selected electronic circuit can be assembled repetitively on successive base members by automatic machinery.

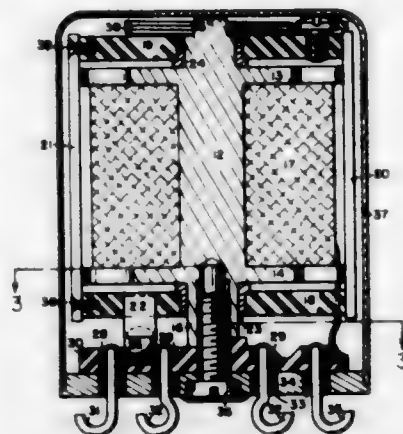
3,001,107

ELECTROMAGNETIC STRUCTURE

Chester R. Rhodes, Whittier, Calif., assignor to Electro-Mechanical Specialties Co., Inc., Whittier, Calif., a corporation of California
Filed Sept. 12, 1958, Ser. No. 760,621
15 Claims. (Cl. 317-189)

1. An electromagnetic motor comprising a magnetic core, at least one group of exclusively radially projecting

poles formed by radially shallow scallops in a disk of magnetic material, said disk connected to said core, wound electro-magnetomotive-force-producing means to produce magnetic flux in said core, said wound means having an axial length along said core approximately twice the external diameter of said wound means, a rotatable arma-



ture, and only slat members of magnetic material equal in number to the number of said poles, said slat members mounted upon said armature radially beyond said poles; said members and said poles related to rotate said armature to the lowest reluctance position therebetween upon said electro-magnetomotive-force-producing means being energized.

3,001,108

ELECTROLYTIC CAPACITOR AND ELECTROLYTE THEREFOR

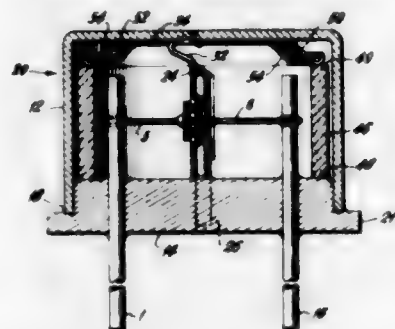
Donald Mohler, Saratoga Springs, and Norman W. Cronquist, Glen Falls, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,704
8 Claims. (Cl. 317-230)

4. An electrolytic capacitor comprising a pair of electrodes at least one of which is composed of a film-forming metal, and an electrolyte consisting essentially in percent by weight of about 99.99%-97% of diethyl cyanamide and .01-3% of potassium thiocyanate.

3,001,109

TRANSISTOR PACKAGE DESIGN

Robert L. Trent, Mountain View, Calif., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,936
6 Claims. (Cl. 317-234)

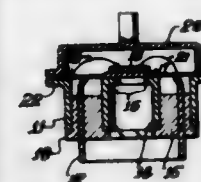


1. A transistor package comprising a header member, a can member concentrically mounted on said header member, supporting means mounted on said header and biasing the interior top portion of said can, a semiconductor element mounted on said supporting means and thermally coupled to said can, desiccant means mounted within the package radially spaced from said supporting means, and resilient means biasing said desiccant means and said interior top portion to prevent relative movement therebetween.

3,001,110

COAXIAL SEMICONDUCTORS

Henry D. Frazier, Rolling Hills Estates, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Nov. 3, 1960, Ser. No. 67,882
5 Claims. (Cl. 317-234)



1. In an encapsulated semiconductor device: a first tubular electrode; a second tubular electrode coaxially disposed at least partially within said first electrode and electrically insulated therefrom; a third tubular electrode coaxially disposed at least partially within said second electrode and electrically insulated from said first and second electrodes; a metallic member for mounting a semiconductor body, said member being disposed across one end of said third electrode and in electrical contact therewith; a semiconductor body mounted to said metallic member and in electrical contact therewith; first electrical conducting means connecting said first electrode with a first predetermined active region of said semiconductor body; and second electrical conducting means connecting said second electrode with a second predetermined active region of said semiconductor body.

3,001,111

STRUCTURES FOR A FIELD-EFFECT TRANSISTOR

Marc A. Chappey, 12 Blvd. Jean Mermoz, Neuilly-sur-Seine, France
Filed Sept. 26, 1960, Ser. No. 58,316
Claims priority, application France Sept. 30, 1959
6 Claims. (Cl. 317-235)



1. An unipolar field-effect transistor for very high frequencies comprising within a single body of semiconductive material a channel region having source and drain connections, and a gate region forming a junction therewith, said gate region having the configuration of two parallel thin strips of a given thickness separated by a narrow region, said source connection being directly connected to said narrow region and said drain connection having a large area of contact with at least one portion of said body which is external to said gate and said narrow regions whereby said channel region is included between said parallel thin strips and has a length substantially reduced to the thickness of said strips.

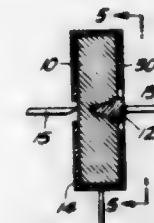
3,001,112

TRANSISTOR AND METHOD OF MAKING SAME

Emil M. Murad, Glendale, Calif., assignor, by direct and mesne assignments, to Orbitec Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 19, 1956, Ser. No. 560,120
8 Claims. (Cl. 317-235)

1. In the art of producing a transistor having a semiconductor body and a pair of spaced electrodes, diffusing

one of said elements into said body, adjusting the position of the other element on the surface of the body, observing an electrical characteristic of said transistor



while the position of said other element is being adjusted, and bonding said other element to said body when said characteristic is optimum.

3,001,113

SEMICONDUCTOR DEVICE ASSEMBLIES

Charles W. Mueller, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 6, 1959, Ser. No. 844,663
6 Claims. (Cl. 317-236)

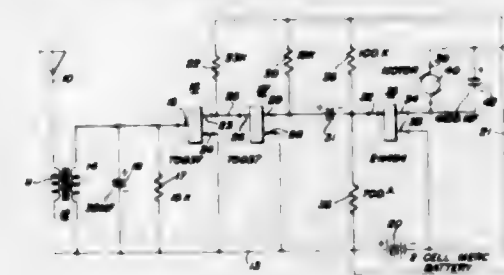


1. A semiconductor device assembly comprising a first conductive plate, an insulating washer peripherally sealed to said plate, a semiconductor wafer bonded to said plate within said washer, an annular conductive member having one side sealed to said washer, said member having at least one interior lobe, said lobe being bent toward said wafer and forming an electrical contact with said wafer, and a second conductive plate sealed to the opposite side of said annular member, said second plate covering the opening of said annular member and sealing said wafer in the space between said first and second plates.

3,001,114

TRANSISTOR CONTROLLED ELECTRONIC CLOCK

Lee N. Hermann, 707 Mosedale St., St. Charles, Ill., and Richard P. Landgraf, 9948 S. Hayne, Chicago, Ill.
Filed Apr. 16, 1959, Ser. No. 806,934
3 Claims. (Cl. 318-16)



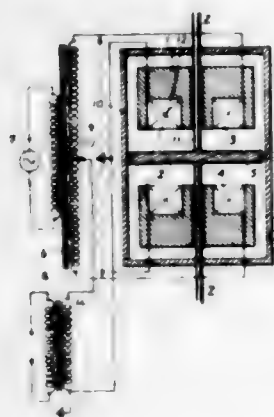
1. A system for maintaining synchronism of a synchronous motor with a stray sixty cycle per second electric field, comprising a probe responsive to said field to generate a sixty cycle voltage, an impedance step-down transformer having a primary winding and a secondary winding, a condenser for resonating with said secondary winding at sixty cycles per second, said condenser being connected across said secondary winding, said primary winding being connected in series with said probe, a transistor voltage amplifier coupled in cascade with said secondary winding, said transistor voltage amplifier having an output terminal, a double base diode having an emitter and a pair of bases, means consisting of a coupling capacitor for connection between said output terminal and said emitter, means biasing said emitter at a fixed voltage adjacent a reference value and slightly

positive with respect thereto, said last means including a battery having a positive and a negative terminal, means connecting said positive terminal via a relatively small resistance to said emitter, said positive terminal being at said reference value of voltage, a relatively high resistance connected between said negative terminal and said emitter, and leads connecting said synchronous clock motor in series with said battery and with said pair of base electrodes.

3,001,115

LINEAR MOTOR SYSTEM

Robert Gendron, Etienne Honore, and Emile Torcheux, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France, and Societe Marocaine de Recherches, d'Etudes et de Developpements "Somarode," a corporation of Morocco
Filed Dec. 31, 1958, Ser. No. 784,160
Claims priority, application France Jan. 7, 1958
12 Claims. (Cl. 318-137)

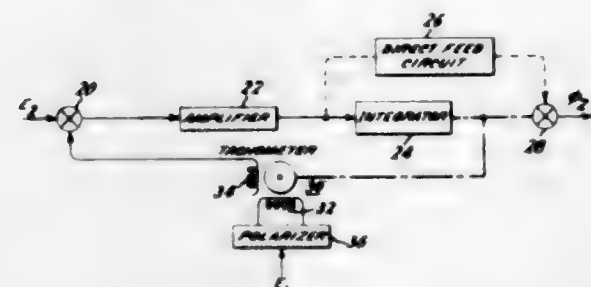


1. A translation servomotor comprising: two magnetic pieces symmetrical with respect to a plane and having a common axis, each having at least one polar surface parallel to said plane; two coils respectively supported by said pieces and having turns coaxial therewith; a non magnetic shaft movable along said axis and carrying at least one magnetic body for completing respective magnetic circuits with said pieces; means for providing a fixed voltage and a variable voltage having the same frequency and phase shifted by $K\pi$ with respect to each other, K being an integer; means for feeding to said coils respectively the sum and the difference of said voltages; and means for balancing the acceleration energy of said movable shaft.

3,001,116

SERVOSYSTEM INVERSE GAIN CHANGER

Usang L. Shih, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 28, 1957, Ser. No. 692,594
5 Claims. (Cl. 318-448)



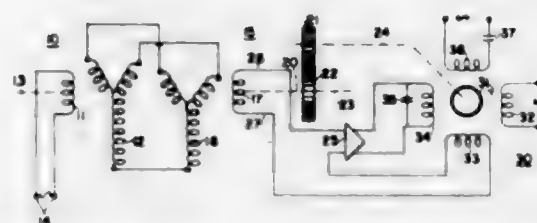
3. In a control system including a non-linear element, and a command signal for said control system, said non-linear element having a gain proportional to said command signal, an inverse gain changer comprising an amplifier and integrator in series forming a part of the control system, a tachometer for providing stabilizing feed-

back for said integrator and amplifier, and means for exciting said tachometer by said command signal, the relationship between said means and tachometer being such that the feedback signal supplied to said control system will vary the gain of said amplifier and integrator in a manner inversely proportional to said command signal.

3,001,117

SERVOSYSTEM WITH TACH GENERATOR DAMPER

Daniel J. Sikorra, Champlin, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 22, 1959, Ser. No. 828,741
8 Claims. (Cl. 318-448)



1. A position following system, comprising: means for producing a first signal proportional to a positional error; a signalling device including a case, a stator and a core carried by said case and having complementary cylindrical adjacent surfaces defining an air gap therebetween, a shaft rotatably carried by said case, a cup-shaped rotor carried by said shaft and provided with a cylindrical portion rotatably positioned in said air gap, a pair of motor windings symmetrically wound on said stator, and a pair of generator windings symmetrically wound on said stator in integral relation with said motor windings; means for energizing one motor winding and one generator winding with a fixed alternating current; error changing means connected to said shaft for changing said positional error; first circuit means connected to energize the other motor winding with a variable alternating current proportional to said first signal and thereby, responsive to said fixed alternating current in said one motor winding and variable alternating current in said other motor winding, create a rotating magnetic field in said signalling device and drive said motor and shaft in a direction to cause said error changing means to reduce said positional error and said first signal, the second generator winding being effective, responsive to said fixed alternating current in said one generator winding, to produce a second signal proportional to the rotational rate of said rotor and independent of said rotating magnetic field, whereby said second signal is reduced to zero as said rotor assumes a static position; and second circuit means for differentially combining said first and second signals whereby said second signal is effective to provide rate damping in said system and thereby prevent overcorrection of said positional error.

3,001,118

SEEKING SWITCH SYSTEM

John L. Goetz, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed May 25, 1960, Ser. No. 31,667
8 Claims. (Cl. 318-467)

1. A seeking switch system comprising a common control unit and a plurality of seeking switch units connected in parallel with respect to said control unit and each controllable by said common control unit, each of said control units comprising a plurality of first switches, each of said first switches including an arm and a grounded contact, each seeking switch unit comprising a rotatable shaft and a first rotary element mounted on said rotatable shaft, said first rotary element having a plurality of

notches in the periphery thereof spaced substantially equidistant apart around said periphery, a plurality of first sliding contacts arranged to make contact with the periphery of said first rotary element and spaced apart substantially equidistant in such a manner that the total angular distance spanned by said plurality of first sliding contacts is less than the angular distance between two adjacent ones of said notches, a plurality of diodes individually connecting each of said plurality of said first sliding contacts to an individual one of said arms of said first switches of said control unit, second sliding contact means constructed and arranged to make continuous contact with said first rotary element, motor means including a rotor coupled to said rotatable shaft, said motor means responsive to ground potential being supplied to said second sliding contact means to cause energization of said motor means, said first rotary element responsive to energization of said motor means to rotate until one of said notches passes underneath a grounded one of said plurality of first sliding contacts, individual ambiguity



resolving means for each of said seeking switch units, each ambiguity resolving means constructed to supply ground potential to said second sliding contact means during a selectable one half cycle of the two half cycles forming a complete revolution of said first rotary element, thus maintaining energization of said motor means during said selected half cycle regardless of any notch passing under the grounded contact of said first plurality of sliding contacts, each of said ambiguity resolving means comprising a second rotary element, third sliding contact means connected to ground potential, fourth sliding contact means connected with said second sliding contact means, and fifth sliding contact means continuously in contact with said second rotary element, said rotary element being constructed to have a 180° sector of its periphery make contact with the third and fourth sliding contact means, and other switching means for selectively applying ground potential to the fifth sliding contact or to connect said fifth sliding contact to at least one of the contacts of said plurality of first sliding contact in contact with said first rotary element.

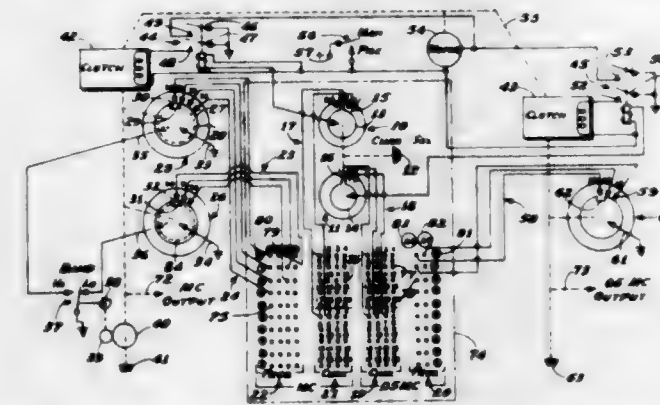
3,001,119

CONNECTION-BOARD-SELECTOR SHAFT POSITIONING SERVOSYSTEM

Eric A. Teddlie, Dallas, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 19, 1959, Ser. No. 814,333
6 Claims. (Cl. 318-467)

1. A shaft positioning control system comprising a selectively positionable control switching means, an open seeking switching means operably connected to a controlled shaft, controlled shaft driving means and control means therefore including an energizing source, said

energizing source connected to the rotor of said control switching means, the rotor of said control switching means selectively engageable with individual ones of a plurality of peripherally disposed stator contacts on said control switching means, a matrix jackfield comprised of a first group of n jacks and a second group of m jacks, each of said first group of n jacks individually connected to one of said control switch stator contacts, each of said second group of m jacks individually connected to like peripherally disposed stator contacts of said open seeking switching means, the rotor of said seeking switch means connected to ground and maintaining peripheral

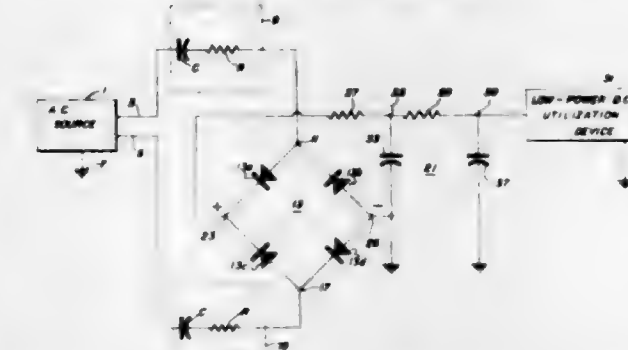


sliding contact with each of said seeking switch stator contacts, said seeking switch rotor formed with a peripherally disposed insulating slot therein, said seeking switch rotor operably connected to rotate with said controlled shaft such that said peripherally disposed slot therein is successively juxtaposed with individual ones of said stator contacts and patch cord means for effecting preselected interconnections between said first and second groups of jacks respectively whereby said control switch stator contacts may be selectively interconnected with selected ones of said seeking switch stator contacts in any of $n \times m$ permutable combinations.

3,001,120

POWER SUPPLIES

Alexander B. Bereskin, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 16, 1957, Ser. No. 690,461
20 Claims. (Cl. 321-8)



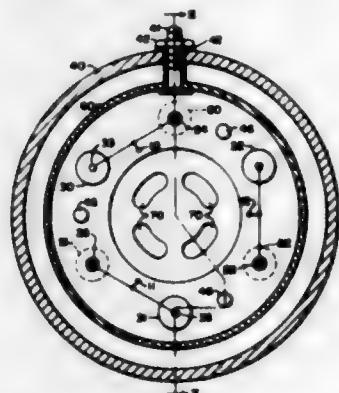
1. A D.C. power supply operative from two A.C. lines to supply a relatively low impedance load comprising, a full wave bridge rectifier, said bridge rectifier having two input terminals for alternating current and having output terminals conjugate to said input terminals, one of said output terminals being connected to ground, a first relatively high current limiting impedance connected in series between one of said input terminals and one of said two A.C. lines, and a second relatively high current limiting impedance connected in series between the other of said input terminals and the other of said two A.C. lines, the impedance of said load and of said current limiting impedances being taken at the fundamental frequency of said A.C. lines.

3,001,121

RECTIFIER APPARATUS

Charles Kerr, Jr., Edgewood, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 24, 1958, Ser. No. 730,670
5 Claims. (Cl. 321-8)



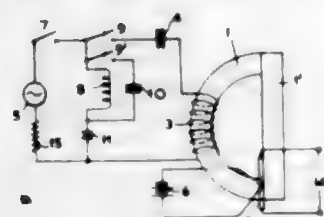
1. In a rectifier apparatus; in combination; an outer metal housing; an inner metal housing; means supporting said inner housing within said outer housing with said inner housing electrically insulated from said outer housing; a first plurality of rectifier diodes each having an anode connection and a cathode connection; a second like plurality of rectifier diodes each having a cathode connection and an anode connection; means electrically and mechanically connecting said cathode connections of said first plurality of diodes to one of said metal housings; and means electrically and mechanically connecting said anode connections of said second plurality of diodes to the other of said metal housings, means connecting the anode of each of said first plurality of diodes to a cathode of one of said second plurality of diodes to provide a plurality of associated pairs of diodes, means for applying an alternating current voltage to each of said associated pairs of diodes; means connecting the outputs of said associated pairs of diodes in parallel circuit relationship, and means comprising said outer and inner metal housings for obtaining a direct current voltage from said parallel connected pairs of diodes.

3,001,122

FREQUENCY TRANSFORMATION DEVICE

Simon Duinker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., Irvington on Hudson, N.Y.

Filed Feb. 13, 1957, Ser. No. 639,952
Claims priority, application Netherlands Mar. 13, 1956
14 Claims. (Cl. 321-69)



1. A device for stepping down the frequency of the voltage produced by a generator comprising, in combination, a generator having a frequency p , an inductance comprising a core of ferromagnetic material having a narrow air-gap and an input circuit, said air-gap being included in said input circuit, circuit means for connecting said generator to said input circuit, said circuit means comprising a capacitor, the minimum natural frequency of the circuit including said capacitor and said inductance being at least 1.5 times lower than p and having a maximum value equal to the desired stepped-down frequency, means for substantially isolating the device from a load connected thereto comprising a plate of a material ex-

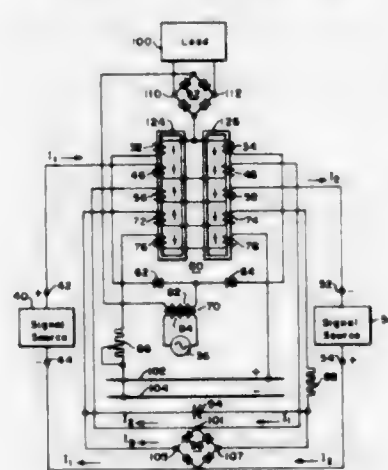
hibiting unidirectional magneto-electric transmission properties arranged in said air-gap, means for establishing a direct current electrostatic field across said plate having a direction transverse to the direction of the magnetic field set up through said plate by the current in said input circuit, and a first pair of electrodes arranged on opposite sides of said plate and coupled to output terminals of the device, whereby a variation in the magnetic field through the plate produces a corresponding voltage variation between said first pair of electrodes, said voltage variation being at the desired stepped-down frequency, the magnetic field through the air-gap being independent of any load connected to said output terminals.

3,001,123

ELECTRICAL CONTROL APPARATUS

John F. Reuther, Penn Hills Township, Allegheny County, and James T. Carleton, Forest Hills Borough, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 25, 1959, Ser. No. 822,886
22 Claims. (Cl. 322-25)



22. In a regulator system for maintaining the output voltage of a dynamoelectric machine having output terminals and an excitation field winding at substantially a predetermined value, the combination comprising, first means for obtaining an error signal which varies with the deviation of said output voltage from said predetermined value, magnetic amplifier means having first, second and third control windings connected in circuit relation between said first means and said field winding for controlling the excitation current supplied thereto in accordance with the signals applied to said control windings, second means connected in circuit relation with said output terminals for obtaining a limiting signal, said error and limiting signals being applied to said first and second control windings, respectively, and rectifier means connected in circuit relation with said third control winding for applying thereto the difference between said error and limiting signals, the output of said magnetic amplifier means varying with only the larger of said error and limiting signals.

3,001,124

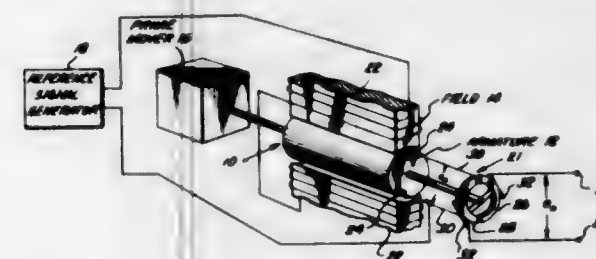
APPARATUS FOR PRODUCING ALTERNATING CURRENT

Leopold J. Johnson, Anaheim, Calif., assignor to The Siegler Corporation, Anaheim, Calif., a corporation of Delaware

Filed Jan. 5, 1959, Ser. No. 785,041
11 Claims. (Cl. 322-61)

7. Apparatus for producing alternating current comprising a generator having an armature and at least one field winding for producing a magnetic field for the armature, means for driving the generator to produce rotary motion between the field windings and the armature,

means for applying an alternating current reference signal to the field winding to cause the armature to produce an alternating current output in the form of a modulated wave wherein the frequency of the modulated wave is proportional to the speed of the driving means and the frequency of the modulating wave is equal to the frequency of the reference signal, electronic phase-sensitive demodulator means having power input terminals, control input terminals and output terminals for supplying power



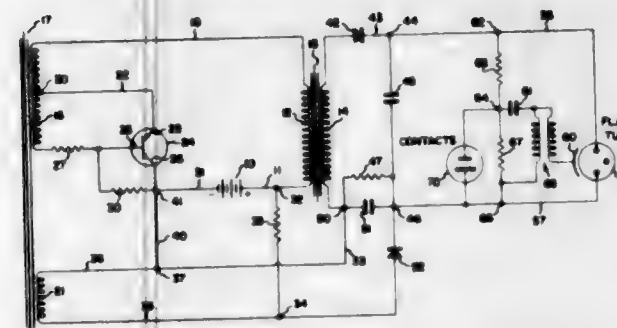
to a load, means for connecting the power input terminals to the armature, electrical signal generating means coupled to the generator for producing an electrical signal having a frequency equal to the frequency of the reference signal and means for connecting the electrical signal generator to the control input terminals of the demodulator means for controlling the operation of the demodulator means to produce a signal across the output terminals having a frequency equal to the frequency of the reference signal.

3,001,125

ELECTRICAL APPARATUS

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 28, 1958, Ser. No. 776,818
12 Claims. (Cl. 323-66)



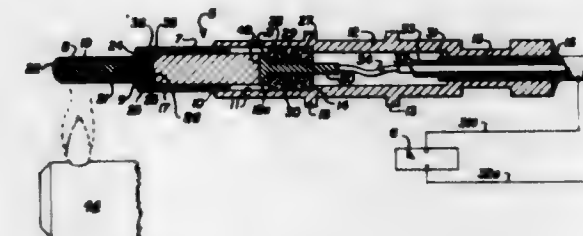
1. Battery conserving power supply apparatus for an electronic photographic flash unit of the type converting a low voltage battery source to a high potential for energizing a high voltage load means comprising: a low voltage source of unidirectional energy; output means having input and output terminals; high voltage load means, first circuit means connecting said output terminals to said load means in energizing relation thereto; semiconductor current controlling means having a plurality of electrodes including a control electrode and output electrodes; second circuit means including saturable impedance means connecting said source of energy, the input terminals of said output means and said semiconductor current controlling means in an oscillating type circuit for producing a pulsating type current at said output means, said oscillatory circuit having an operating cycle comprising a first portion in which said semiconductor means is conductive and a second portion for flux reset of said saturable impedance means; low voltage energized core reset means for said saturable impedance means; and adjustable voltage limiter means connected to sense the magnitude of load power demand and control the energization magnitude to said core reset means as a function thereof.

3,001,126

THERMOELECTRIC CONTROL CIRCUIT

Robert W. Fritts, Elm Grove, Wis., and Sebastian Karrer, Port Republic, Md., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Aug. 12, 1957, Ser. No. 677,625
4 Claims. (Cl. 323-69)



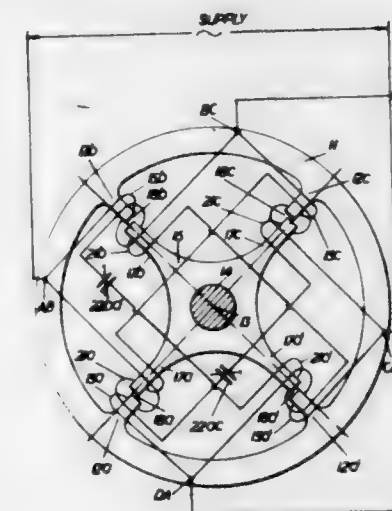
1. A thermoelectric generator assembly adapted for connection to a circuit to be energized and having a high temperature coefficient of current output, comprising a first elongated thermoelement, means including a second thermoelement affording a sheath-like enclosure for said first thermoelement and having an end portion, and means within said end portion of said enclosure affording a hot thermojunction joining said thermoelements, said last-mentioned means including a thermistor having a high negative temperature coefficient of resistivity in series circuit with said thermoelements.

3,001,127

ELECTROMAGNETIC PICK-OFF DEVICES

Brian Edward Pitches, Edinburgh, and Charles Ian Crawford, Newton-Stewart, Scotland, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland

Filed Mar. 9, 1959, Ser. No. 798,092
Claims priority, application Great Britain Mar. 15, 1958
8 Claims. (Cl. 323-90)

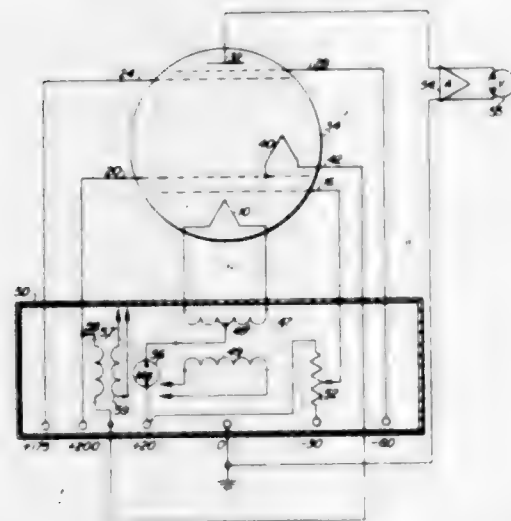


1. A pick-off device of the type for providing an alternating-current output voltage which represents by its amplitude and phase with respect to a source voltage the magnitude and direction of the angular position of a shaft with respect to a datum position, the device having at least one pair of wound stator poles of unlike polarity which are located diametrically opposite one another with respect to the axis of said shaft and which are adapted to co-operate with two rotor poles, each to each, secured to said shaft, so that the fluxes in the airgaps between the stator poles and the rotor poles are equal when the rotor is in its true axial position, including for each stator pole an auxiliary winding in addition to the main winding, and interconnections between the two auxiliary windings of said pair such that the voltages induced in the auxiliary windings by the respective main windings

are in counterphase with one another, the arrangement being such that on a radial displacement of the rotor from its true axial position towards either stator pole of said pair an out-of-balance current flows in the auxiliary windings tending to restore to equality the fluxes in said airgaps.

3,001,128 MEASURING

Wayne B. Nottingham, Cambridge, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Aug. 27, 1958, Ser. No. 757,583
6 Claims. (Cl. 324—33)



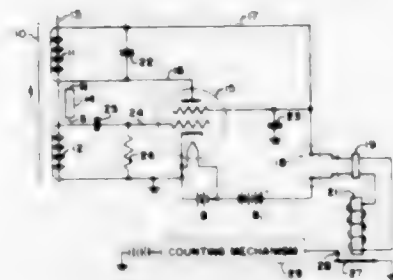
1. An ionization gauge for measuring vacuum comprising a sealed envelope connected to a vacuum chamber through an opening for admission of gas whose pressure is to be measured, said envelope containing a thermionic cathode, four sequentially arranged grids, and a plate, the first grid operating as a control electrode and being maintained at a negative voltage with respect to the cathode by power supply means for the grids, plate and cathode, the second grid operating as an electron collecting grid and being maintained at a positive potential, the third grid being maintained at a positive potential similar to the positive potential on the second grid and being spaced therefrom to provide a region between said second and third grids where electrons travel back and forth producing ions by bombardment of gas molecules present in that region, the fourth grid being maintained at a lower negative potential than the plate, said negative potential forcing photo-electrons back to the plate which are produced by X-rays hitting the plate thereby reducing the amount of background current, the plate being maintained at a negative potential with respect to the cathode and acting as an ion collector, the thermionic cathode being operated at so high a temperature that its electron emission is space charge limited, and power supply means for heating said cathode to said high temperature.

3,001,129 ELECTRONIC OSCILLATOR METERING DEVICE

Hugh S. Knowles, Glen Ellyn, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 21, 1957, Ser. No. 698,013
10 Claims. (Cl. 324—34)

1. An electronic oscillator of the character disclosed comprising an electronic tube having a plate, a cathode, and a pair of grids therebetween, a tuned primary circuit comprising an induction coil connected to said plate, a tuned secondary circuit comprising a grid coil connected to one of said grids, said induction and grid coils being disposed at a distance sufficient to insure air coupling therebetween, a core of ferromagnetic material

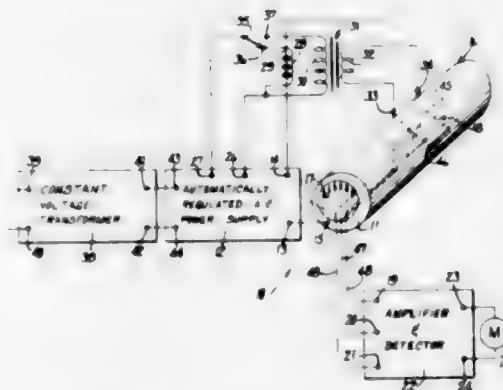
disposed within said coils, means for magnetically biasing the magnetization of said core just below the knee of the magnetization curve thereof whereby said tube oscillates, means for magnetically saturating said core



thereby to effectively reduce the coupling between said coils and cause the tube to cease oscillations, and means including a relay in the plate circuit of said tube and adjusted to operate in response to an increase in current flowing therethrough as the tube ceases oscillation.

3,001,130 ECCENTRICITY TESTER

Glenn O. McClurg, Evanston, and John O. Brown, Rolling Meadows, Ill., assignors to Magnaflex Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 21, 1958, Ser. No. 756,352
6 Claims. (Cl. 324—34)



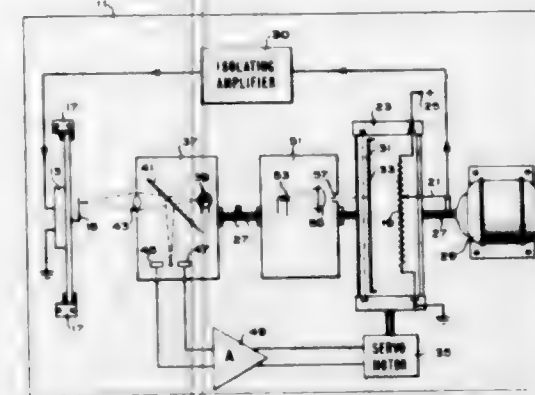
1. In a system for measuring eccentricity of a tube, means for passing alternating current longitudinally through the tube, a pair of field-measuring devices within the tube arranged for producing output signals respectively proportional to magnetic field components along mutually perpendicular axes in a plane transverse to the tube, and indicating means responsive to said output signals and arranged to produce an indication proportional to the square root of the sum of the squares thereof.

3,001,131 AUTOMATIC METER CALIBRATOR

Bernard M. Oliver, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed June 30, 1958, Ser. No. 745,407
4 Claims. (Cl. 324—74)

1. In a system for calibrating and printing a scale for a meter designed to measure a physical condition applied thereto: a base, means to mount said meter fixedly upon said base, a source of the physical condition to be measured by said meter, connecting means to connect said source to said meter, movable mounting means for said source, said movable mounting means being adapted to hold a master scale for said meter, means to mount a blank scale fixedly upon said base, tracking means to track the indication of said meter, printing means to reproduce the master scale readings on said blank scale,

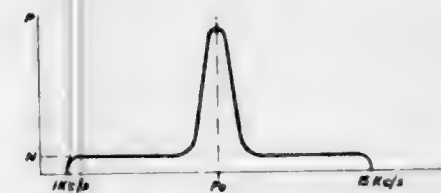
means to move said connecting means in synchronism with said tracking and printing means, and means to alter



the position of said mounting means in response to the output of said tracking means.

3,001,132 FREQUENCY MEASURING AND RESPONSIVE CIRCUIT ARRANGEMENTS

Ronald Howard Britt, Chelmsford, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Filed July 31, 1958, Ser. No. 752,287
Claims priority, application Great Britain July 1, 1958
10 Claims. (Cl. 324—77)



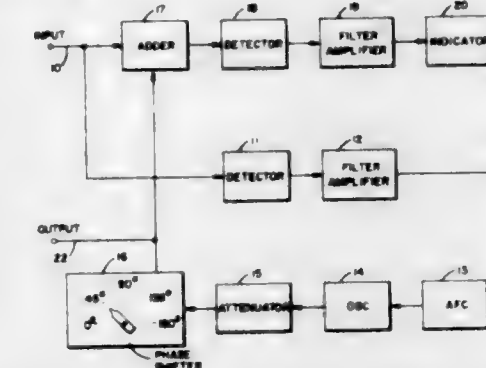
1. A device for ascertaining the frequency of a signal present in a predetermined band of frequencies, comprising a plurality of narrow band resonators resonant at different frequencies within a predetermined band of frequencies and between them substantially covering said band of frequencies; a leaky condenser circuit; a plurality of rectifiers connected each between one side of said condenser circuit and one side of a different resonator; a plurality of output circuits each fed from a different resonator; means for feeding input signals to all the resonators; a variable group selector, adapted in each position of adjustment, to connect the output circuits in two groups, one consisting of output circuits appropriate to resonators resonant at frequencies on one side of one frequency and the other consisting of output circuits appropriate to resonators resonant at frequencies on the other side of said one frequency, said selector leaving unconnected the output circuit appropriate to the resonator which is resonant at said one frequency; and control means responsive to the signals present in that group which includes that output circuit connected to that resonator which is predominately responsive to the input signals for adjusting said selector until neither group includes that output circuit.

3,001,133 PHASE DETECTORS

Archie F. Boesla, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 24, 1956, Ser. No. 630,132
2 Claims. (Cl. 324—83)

1. In combination in a system for detecting the phase of a sinusoidal component of a complex wave received from a source, and for isolating at an output terminal

said sinusoidal component, said system comprising an oscillator of the free running type adapted to generate a substantially pure sinusoidal wave, said oscillator having a frequency control circuit, two single-frequency selection circuits each designed to attenuate all frequencies except the frequency of the sinusoidal component of said wave, an adder circuit with two input circuits, said input circuits being coupled, respectively, to said source and to the output of said oscillator for comparing said wave and the output wave of said oscillator, a phase-shifting means connected in one of said input



circuits for shifting the phase of the wave in said one of said input circuits with respect to the other, indicator means, one of said single-frequency selection circuits being coupled between said adder and said indicator means, the other of said single-frequency selection circuits being coupled between said frequency control circuit of said oscillator and said source so that the phase relation of two substantially pure sinusoidal waves only are indicated by said indicator means, said output terminal being connected to the output of said phase-shifting means.

3,001,134 SEMICONDUCTOR DEVICE

Esther Conwell, Bayside, and Abraham Many, Jamaica, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,452
2 Claims. (Cl. 324—95)



1. In combination with a microwave chamber responsive to incident microwave energy supplied thereto during discretely spaced intervals of time whereby a pulsating electromagnetic field is established within said chamber, means to produce an output signal uniquely identifying the duty cycle mean power during any said interval comprising a semiconductor body of one conductivity type inserted within said chamber and having first and second spaced apart electrodes secured thereto, the resistivity of said body varying in accordance with the instantaneous value of the magnitude of the electric field during any said interval, said resistivity decreasing as said value increases.

3,001,135 DEVICE FOR MEASURING ELECTRICAL POWER

Abraham Many, Jamaica, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed May 21, 1958, Ser. No. 736,821
2 Claims. (Cl. 324—95)

1. In combination with a microwave chamber responsive to incident microwave energy supplied thereto dur-

ing discretely spaced intervals of time whereby a pulsating electromagnetic field is established within said chamber, means to produce an output signal uniquely identifying the duty cycle mean power during any said interval comprising a semiconductor body of one conductivity

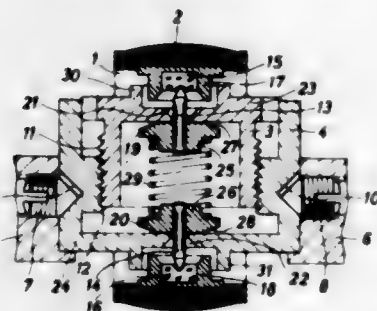


type inserted within said chamber and having first and second spaced apart electrodes secured thereto, the resistivity of said body varying in accordance with the instantaneous value of the magnitude of the electric field during any said interval, said resistivity increasing as said value increases.

3,001,136

BEARING ARRANGEMENT

Fritz Rümpelein, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Nov. 3, 1958, Ser. No. 771,357
Claims priority, application Germany Nov. 8, 1957
5 Claims. (Cl. 324-155)



1. In an electrical instrument, in combination, a hollow rotor having inner opposed surface portions; a pair of opposed bearing blocks carried by said inner opposed surface portions of said rotor; a hollow core surrounded by said rotor and having a pair of opposed end walls respectively located between and adjacent said blocks and respectively formed with openings aligned with said blocks; a pair of coaxial bearing pins extending with clearance through said end wall openings into abutting engagement with said blocks, said pins extending substantially in a plane of symmetry of said rotor from the interior to the exterior of said core; a pair of pin carrier means located in said hollow core, respectively carrying said pins, and being tiltable with respect to said end walls of said hollow core; and spring means extending between and engaging with opposite ends thereof said carrier means and urging the latter apart from each other into engagement with said end walls, so that said bearing pins are axially yieldable toward and away from each other as well as radially yieldable with respect to their common axis.

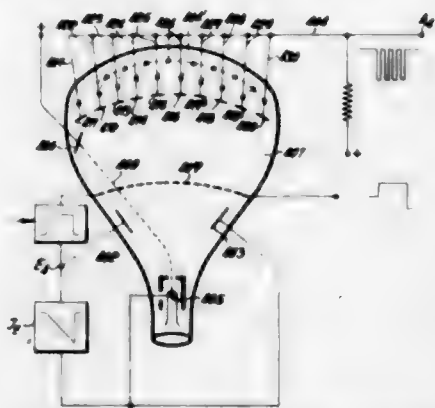
3,001,137

PROCESS FOR GENERATING SERIES OF ELECTRICAL PULSES WITH A SELECTABLE NUMBER OF INDIVIDUAL PULSES

Martin Kassel, Berlin-Charlottenburg, Günter Martens, Schliersee, Upper Bavaria, and Hans Joachim Hildenbrand, Berlin-Steglitz, Germany, assignors to Keinzle Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed June 11, 1956, Ser. No. 590,663
Claims priority, application Germany June 13, 1955
22 Claims. (Cl. 328-38)

1. A device for generating pulse sequences wherein the number of pulses is the multiplication product of

a whole number of input pulses and a preselectable whole number factor, comprising, in combination, as a pulse repeating means an electron beam producing cathode ray tube means having an input for receiving a primary pulse and beam deflector means connected with said input for deflecting the beam in response to said primary pulse and having parameters predetermining the deflection time required for a primary pulse to cause the beam to be deflected from an initial direction transversely across the tube to a final direction at maximum deflection, said cathode ray tube means having a plurality of anode means located in consecutive alignment along the path of said beam to be successively impinged by said beam during its deflection from said initial to said final direction, a plurality of anode leads respectively con-

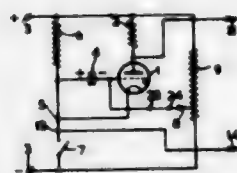


nected to said anode means for delivering said primary pulse, during said deflection of said beam, repeatedly in timed succession through said individual anode leads, respectively, as a series of as many successive pulses as there are anode means; common output means connected with all of said anode leads for receiving therefrom any of said pulses and for delivering a sequence of said successive pulses; and control means adjustable for selectively blocking the delivery of any desired number of pulses out of said series of successive pulses furnished by said anode leads, whereby at said output means a sequence of pulses is available, the number of pulses whereof is the multiplication product of the number of introduced primary pulses, as one factor, and of the number of not blocked pulses derived from said anode leads, as the other factor.

3,001,138

TIME SWITCH CIRCUIT ARRANGEMENT

Henri Joseph Antonius Marie Jacobs and Leonardus Franciscus van de Weijdeven, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 18, 1958, Ser. No. 729,409
Claims priority, application Netherlands May 8, 1957
5 Claims. (Cl. 328-72)



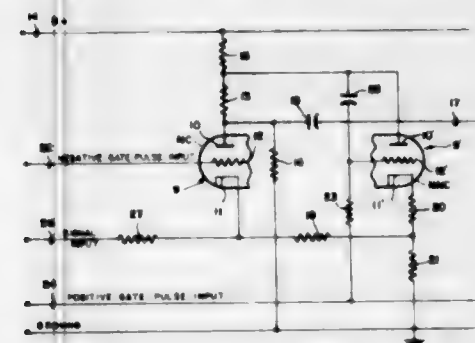
1. A time switch circuit arrangement comprising an electron discharge device having an anode, a cathode and a control grid, means for supplying a direct voltage having a positive polarity terminal and a negative polarity terminal, a first resistor connecting said anode to said positive polarity terminal, a potentiometer connected between said positive and negative polarity terminals, said potentiometer having a tapping point thereon connected to said grid, a second resistor connected to said positive polarity terminal, a capacitor for applying a

negative biasing potential to said grid connected in series between said second resistor and the said grid, means connecting a point in said series connection common to said second resistor and said capacitor to said cathode, a second electron discharge device having an anode, a cathode and a control grid, means connecting the anode of said second discharge device to said common point, a third resistor connecting the anode of said second discharge device to said positive polarity terminal, a second potentiometer connected between said positive and negative polarity terminals, said second potentiometer having a tapping point thereon connected to the grid of said second discharge device, a fourth resistor connected to said positive polarity terminal, a second capacitor for applying a negative biasing potential to the grid of said second discharge device connected in series between said fourth resistor and said grid of said second discharge device, means connecting a point in said series connection common to said fourth resistor and said second capacitor to the cathode of said second discharge device, switching means connected between said last-mentioned common point and said negative polarity terminal, means for deriving a first output voltage from said switching means, means for deriving a second output voltage from the anode of said second discharge device, and means for deriving a third output voltage from the anode of said first-mentioned discharge device

3,001,139

DUO-SWITCH GATE CIRCUIT OPERABLE WITH POSITIVE OR NEGATIVE PULSES

John E. Bigelow, Hales Corners, Wis., assignor to General Electric Company, a corporation of New York
Filed May 27, 1957, Ser. No. 661,706
2 Claims. (Cl. 328-101)



1. An electronic switching device for providing off-control of the passage of a pulse train therethrough comprising: first and second electronic switches, each having input, output, and control electrodes; means for applying said pulse train to the input electrode of said first switch; biasing means for biasing said first and second switches to render said first switch normally conducting and said second switch normally nonconducting; first means for applying a pulse of a given polarity to said control electrode of said first switch to render said first switch non-conducting; second means for applying a pulse of polarity opposite to said given polarity to said control electrode of said second switch to render said second switch conducting; the time and frequency of application of said pulses of opposite polarities to their respective control electrodes, being independent of each other; means comprising a resistive element in series with said output electrodes of said first and second switches, for reducing the potential at said output electrode of said first switch with respect to a reference level when said second switch is conducting and means comprising a resistive element in series with said input electrodes of said first and second switches for increasing the potential at said input electrode of said first switch with respect to said reference level when said second

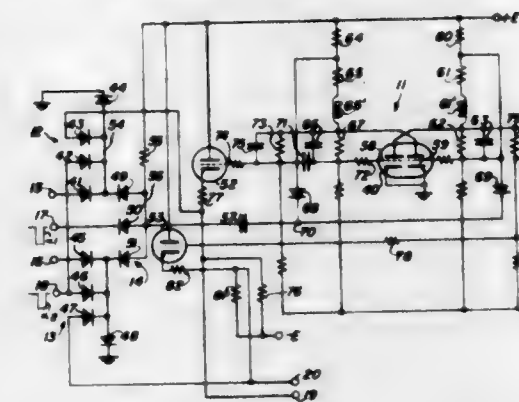
770 O.G.-47

switch is conducting; whereby said first switch will be cut-off by the application of a pulse of said given polarity to the control electrode of said first switch, or by the application of a pulse of polarity opposite to said given polarity to the control electrode of said second switch, or by both.

3,001,140

DATA TRANSMISSION

John W. Beck, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 29, 1957, Ser. No. 699,795
2 Claims. (Cl. 328-135)

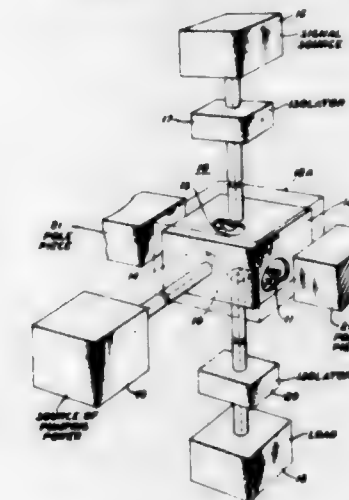


1. Apparatus for receiving digital information in the form of input voltage levels and for transmitting the digital information in the form of timed changes in output voltage levels, said apparatus comprising a multivibrator having two stable states of conduction and having two output terminals for passing the output voltage levels, two AND gates each coupled to receive output voltages from one of the output terminals and further coupled to receive input voltages, a means for receiving and passing a first train of timed pulses to the multivibrator independently of said AND gates for reversing the conduction states of said multivibrator, and a means for receiving and passing a second train of pulses to both of the AND gates, each of said AND gates being operable to pass pulses to the multivibrator to reverse the conduction state thereof when both the input voltage and the output voltage are of a predetermined polarity.

3,001,141

SOLID STATE MASER AMPLIFIER

Robert C. Fletcher, Summit, Henry E. D. Scovill, New Vernon, and Harold Seidel, Fairwood, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 15, 1958, Ser. No. 709,143
5 Claims. (Cl. 330-4)



1. In combination, a paramagnetic medium whose electron spin population is characterized by at least four

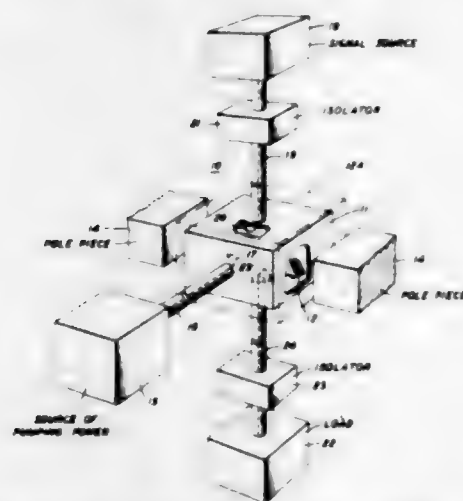
levels of successively higher energies E_1 , E_2 , E_3 and E_4 , respectively, and in which the spin lattice relaxation time between one pair of alternate levels of said four levels is much shorter than the spin lattice relaxation time between the higher one of said one pair and the lower one of the remaining pair of levels of said four levels, means for applying to the medium pumping power of the frequency corresponding to the separation between one pair of adjacent energy levels of said four levels for substantially equalizing the populations of these two levels and means for applying to and abstracting from the medium power of a frequency corresponding to the separation of the remaining pair of adjacent energy levels of said four levels.

3,001,142

SOLID-STATE MASER

William B. Mims, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 24, 1959, Ser. No. 822,604
6 Claims. (Cl. 330-4)



1. A solid-state maser comprising means forming a steady magnetic field, a paramagnetic crystal positioned in the magnetic field such that the crystal includes a first pair of energy levels whose separation is an integral multiple of the separation of a second pair of levels and a third pair whose separation is greater than that of said second pair, means for applying to the crystal pumping energy only of the frequency corresponding to the separation of the second pair of levels for creating a negative temperature at the frequency corresponding to the separation of the third pair of levels, and means for abstracting for utilization output energy of the frequency corresponding to the separation of the third pair of levels.

3,001,143

LOW NOISE RADIO FREQUENCY AMPLIFIER

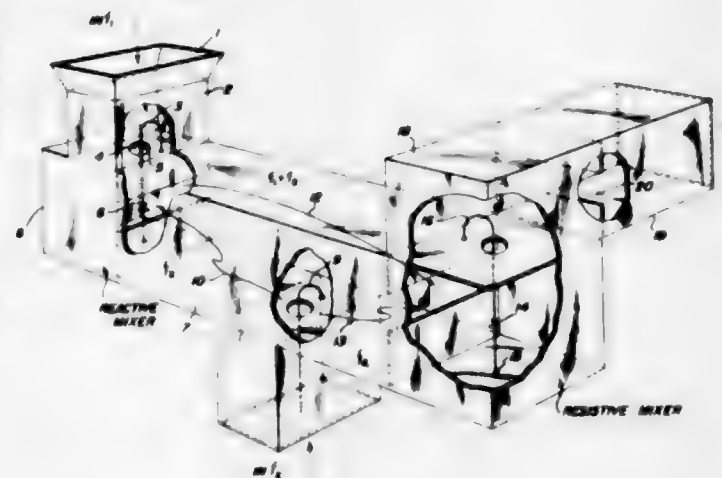
George Bruck, Wyoming, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Feb. 4, 1959, Ser. No. 791,077
2 Claims. (Cl. 330-7)

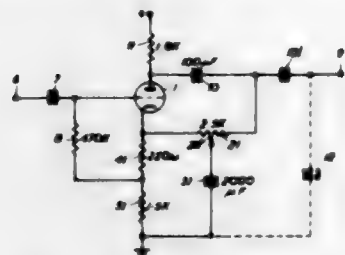
2. A low-noise ultra-high-frequency amplifier construction comprising, in combination:
an input conduit for accepting input signals of frequency f_1 to be amplified,
a resonant output cavity for the transmission of output signals of frequency f_1 ,
a source of local oscillations of frequency f_2 ,
a wave guide first and second coupling means on the wave guide adjacent respectively to the input conduit and output cavity, a third coupling means on the wave guide in circuit with the source of local oscillations and intermediate the first and second coupling means,
a reactive non-symmetrical, non-inverting mixer located in the wave guide and comprising a voltage-sensitive

capacitor in circuit with the first coupling means for converting the input signals to amplified signals of a sum frequency $f_1 + f_2$.

said wave guide being proportioned to pass signals of a local oscillator frequency and signals of said sum frequency but to reject input signals or signals of the difference frequency,



anode circuit connected to said anode, a resistance having one end connected to the anode circuit and the other end connected to the cathode of said valve, and means for varying the gain of said amplifier independently of frequency, which means include a non-resonant cathode return circuit, said cathode return circuit including a movable gain controlling tap on said resistance, that por-

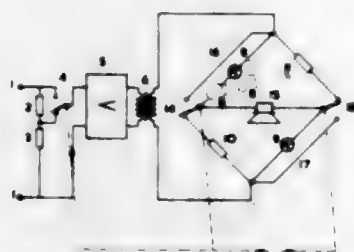


tion of said resistance between said cathode and said tap, a condenser having one end connected to said tap and a resistance connected between said cathode and the other end of said condenser, whereby the effective valve output impedance is maintained substantially constant for each position of said tap for all frequencies within said broad band.

3,001,149

LOW-FREQUENCY AMPLIFIER

Hans De Quant, Elmhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 22, 1958, Ser. No. 730,078
Claims priority, application Germany May 4, 1957
7 Claims. (Cl. 330-143)



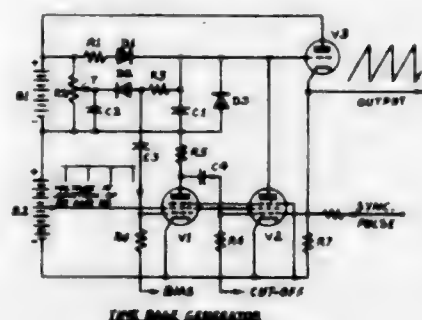
1. An amplifier for an audio frequency signal, comprising input means for said audio signal, output means for audio utilization means, means arranged between said input and output means for controlling the volume level of said signal at said output means, an actuator for said control means, means responsive to said signal for compressing the volume of said signal at said output means, an actuator for said compressing means, said compressing means being adjustable to a first condition imparting a given compression characteristic to said signal at said output means and to a second condition imparting to said signal at said output means a less compressed characteristic relative to said first characteristic, said volume level control being adjustable to a first condition producing an audio signal of given means intensity at said output means and adjustable to a second condition producing an audio signal of substantially greater mean intensity at said output means, means for actuating simultaneously said compressing means and said volume level control selectively to said first positions at which an audio signal of said given mean intensity is produced at said output means and the said compressing means imparts said given compression characteristic to said signal and to said second positions at which an audio signal of substantially greater mean intensity is produced at said output means and the said compressing means imparts said relatively less compressed characteristic to said signal, said compressing means comprising a temperature responsive element and a plurality of resistors arranged in bridge formation, means applying said audio signal to said bridge whereby the temperature and resistance of said element is determined by the intensity of said audio

signal, and means comprising said resistors for adjusting the extent of contrast variations produced by said compressing means.

3,001,150

TIME BASE GENERATOR

Meguer V. Kalfalnia, 962 Hyperton Ave., Los Angeles 29, Calif.
Filed Nov. 10, 1958, Ser. No. 773,063
6 Claims. (Cl. 331-153)

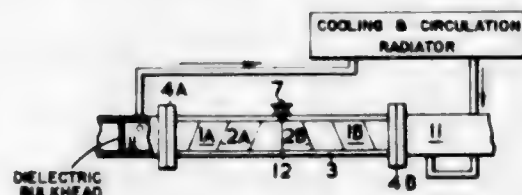


1. In a repetitious voltage wave production system where the starting point of each wave depends upon a reference voltage, the system of maintaining this reference voltage constant regardless of the variations in the source derived from, which comprises a parent voltage source; means for deriving a first voltage-ratio from across the parent voltage source; a network across said parent voltage source for producing a rising voltage across the parent voltage; means for deriving a second voltage-ratio from said rising voltage; a comparison means between the first and second voltage-ratios and means therefor for deriving a signal pulse when the second voltage-ratio is negligibly larger than the first voltage-ratio; and means utilizing said signal pulse for the starting point of said rising voltage, thereby rendering said starting point dependent solely upon the differences in said voltage-ratios regardless of the variations in said parent voltage source.

3,001,151

ELECTROMAGNETIC WAVE MODULATING DEVICES

Arthur Langley Morris, Malvern, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Mar. 12, 1958, Ser. No. 720,892
Claims priority, application Great Britain Mar. 15, 1957
10 Claims. (Cl. 332-51)



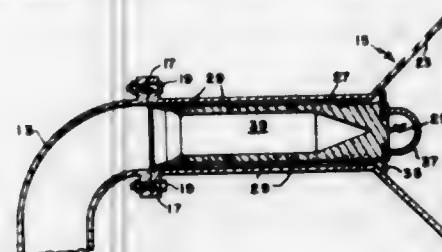
1. A modulating device of the kind referred to, comprising a waveguide and a mass of gyromagnetic material located within the waveguide wherein the wall of the waveguide defines a current path for a modulating signal extending in one-handed direction around the axis of propagation of the waveguide and along the length thereof.

3,001,152

INSERTABLE WAVEGUIDE TERMINATION

Eric H. Winkler, 1004 Elm St., Rome, N.Y.
Filed May 13, 1960, Ser. No. 29,119
13 Claims. (Cl. 333-22)
(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A dummy load for insertion into a waveguide transmission line, said dummy load comprising a hollow struc-

ture of lossy material, and a plurality of flat metallic contacts extending from the outer surface of said structure for contacting the inner surface of said waveguide

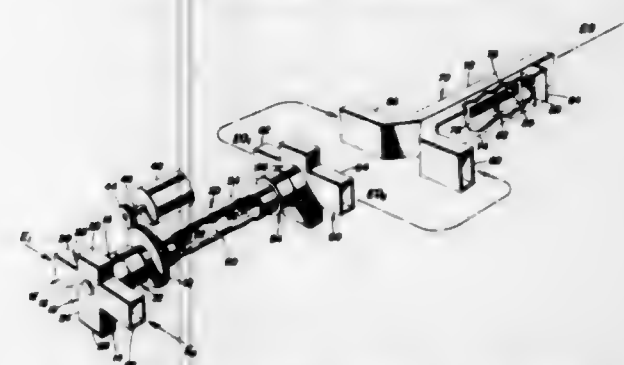


transmission line, said hollow structure with the contacts extending therefrom being dimensioned to be slidably insertable into a section of waveguide transmission line.

3,001,153

MICROWAVE PHASE SHIFTER

George W. Lake, Jr., Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 13, 1954, Ser. No. 443,184
6 Claims. (Cl. 333-31)

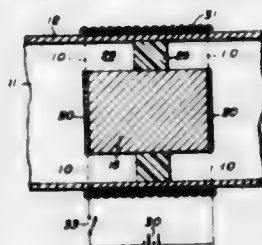


1. A microwave phase shifter, comprising a rotatable section of circular waveguide, means for continuously rotating said section, means connected to said section at one end thereof for radiating two microwave signals having opposite senses of circular polarization into said section, means in said section for producing an advance in phase of one of said signals and a delay in phase of the other of said signals as said section is rotated, and means combining the signals altered in phase thereby providing a single amplitude modulated signal having a modulation frequency fourfold the frequency of rotation of said circular waveguide section.

3,001,154

ELECTRICALLY TUNED MICROWAVE BAND-PASS FILTER USING FERRITES

Frank Reggia, Chevy Chase, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 22, 1959, Ser. No. 788,472
3 Claims. (Cl. 333-73)
(Granted under Title 35, U.S. Code (1952), sec. 266)



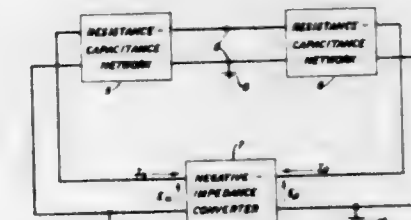
1. A continuous rectangular waveguide having an input end and an output end, means for coupling input energy at a frequency f within a particular band of frequencies to the input end of said waveguide, and filter

means inserted in the center of a section of said waveguide for passing only energy within said band of frequencies to the output end of said waveguide, said filter means consisting of: a ferrite rod mounted in said waveguide section, metal reflecting plates mounted on said rod and spaced from each other in the direction of propagation of electromagnetic energy in said waveguide, and electrical means for applying a variable magnetic field to said rod.

3,001,155

ACTIVE ONE-PORT NETWORK

Jack M. Sipress, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 29, 1960, Ser. No. 46,284
2 Claims. (Cl. 333-80)

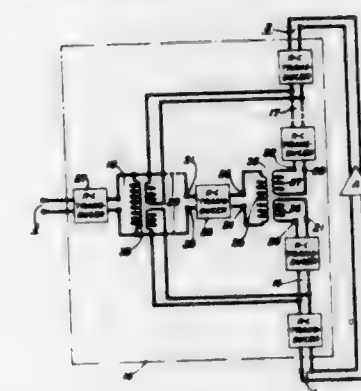


1. An active one-port network with unrestricted driving-point admittance Y comprising three two-port, three-terminal, wave transmission networks connected in tandem to form a transmission loop, one of the networks being a negative-impedance converter, the other two networks being passive, having a common port, and comprising only resistors and capacitors, and when the common port is short-circuited the admittances looking in both directions at a port of the converter being equal in magnitude but opposite in sign at the frequencies of the poles of Y and the sum of the admittance looking into the near end of the first passive network facing the common port and the transfer admittance from the near end of the first passive network to the common port being equal in magnitude but opposite in sign to the sum of the admittance looking into the near end of the second passive network and the transfer admittance from the near end of the second passive network to the common port at the frequencies of the zeroes of Y .

3,001,156

ACTIVE IMPEDANCE BRANCH

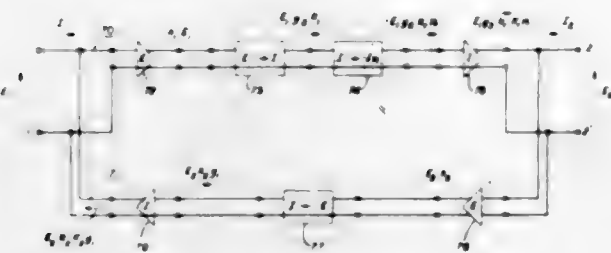
Bharat K. Kinnariwala, Bedminster, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 1, 1958, Ser. No. 777,402
6 Claims. (Cl. 333-80)



1. A two-terminal impedance branch of unrestricted impedance comprising a passive network, an active network, and a capacitor, the passive network having four ports and including only resistors interconnecting each port with each of the other ports, respectively, the capacitor terminating one of the ports, and the active network being connected between two of the other ports.

3,001,157 NONRECIPROCAL WAVE TRANSLATING NETWORK

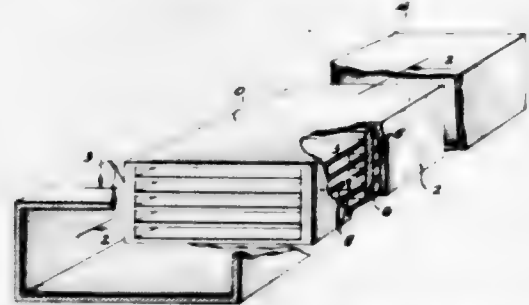
Jack M. Sipress and Francis J. Witt, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 30, 1959, Ser. No. 849,818
5 Claims. (Cl. 333-80)



1. A nonreciprocal signal translating network comprising two signal paths, the input of one of said paths being connected in parallel with the output of the other of said paths, the input of the other of said paths being connected in parallel with the output of said one path, said one path comprising a voltage-to-current transducer and phase inverter, and said other path comprising in cascade a voltage amplifier, a voltage-to-current transducer and a current amplifier.

3,001,158 WAVEGUIDE PRESSURIZING PLUG

Thomas Kinaga, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 1, 1956, Ser. No. 562,684
5 Claims. (Cl. 333-98)



1. A closure member for a waveguide comprising: an elongated dielectric box member having lateral walls and open ends and having the lateral walls supported adjacent and hermetically sealed to the inner walls of said waveguide; a thin dielectric septum located within said box member perpendicular to the lateral walls of the same, said septum being hermetically affixed at its edges to the lateral walls of said box member; and a plurality of parallel, planar dielectric strips separated from one another and affixed perpendicularly to the opposing faces of said septum and extending across said box member, said closure member being of predetermined length.

3,001,159 STEP TWIST WAVEGUIDE ROTARY JOINT

Harry A. Hilsinger, Jr., East Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,448
2 Claims. (Cl. 333-98)

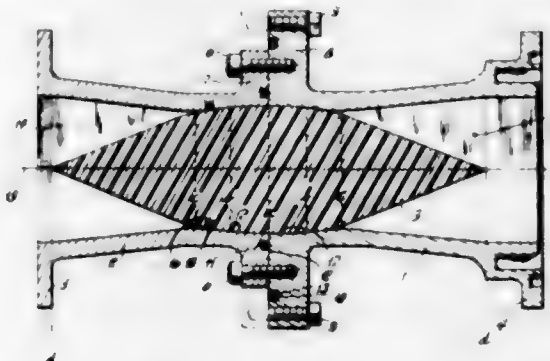
2. A waveguide rotary joint for coupling two sections of a waveguide which comprises a plurality of axially aligned discs, each of said discs in an initial position having an aperture aligned with the apertures in adjacent discs, and means for successively initiating each succeeding disc into rotation upon rotation of a first waveguide section in a first direction whereby the apertures are ro-

tated into predetermined angular positions with respect to each other and for successively stopping in reverse order each succeeding disc from rotation upon rota-



tion of the first waveguide section back to the initial position in a direction opposite to said first direction whereby the discs are returned to said initial position and the apertures are returned to alignment.

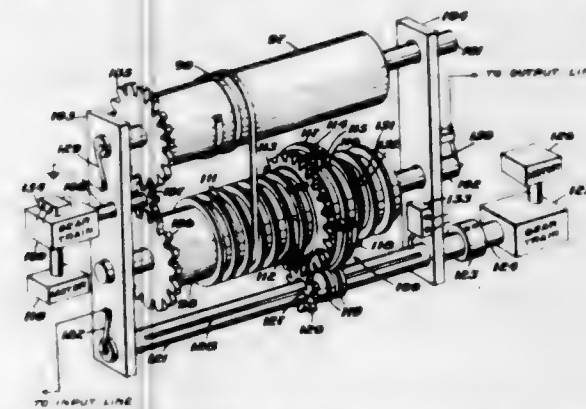
3,001,160
HIGH PRESSURE WAVEGUIDE WINDOW
John E. Trousdale, Lexington, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 20, 1959, Ser. No. 828,424
8 Claims. (Cl. 333-98)



1. A waveguide window construction resisting fluid leakage along a portion of it between sections thereof that may be subjected to a fluid pressure differential between such sections, which comprises hollow waveguide sections disposed in end to end relationship and coupled together to form a continuous guide passage, a plug of electrically insulating material disposed across and substantially filling said passage adjacent the coupled sections and confined therein by said coupled sections against movement along the sections, said plug having a peripherally extending channel, an endless elastic sealing member disposed in said channel under substantial compression between the bottom of said channel and the passage wall and forming a seal preventing passage of fluid along the passage past said plug.

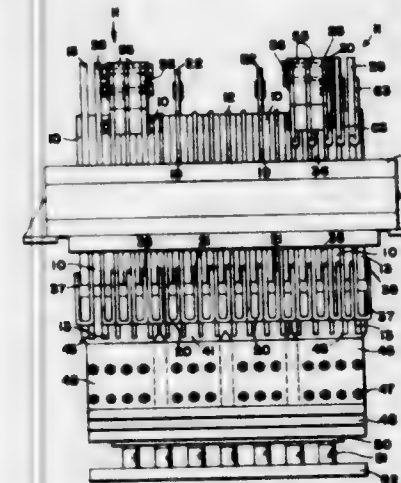
3,001,161
VARIABLE INDUCTOR HAVING A VARIABLE TAP
Samuel L. Broadhead, Jr., and Merrill T. Ludvigson, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Original application Nov. 19, 1956, Ser. No. 623,088, now Patent No. 2,921,273, dated Jan. 12, 1960. Divided and this application Feb. 3, 1958, Ser. No. 712,997
1 Claim. (Cl. 336-15)
A variable inductor of the type having a conducting cylinder, a non-conducting cylinder, a conducting ribbon in a continuous helical winding on the circumference of

both of said cylinders, and first means for rotating said cylinders to vary inversely the number of turns of ribbon thereon; a tap assembly operable for providing a continuously variable electrical contact to that portion of the ribbon which is wound on said non-conducting cylinder, said tap assembly having a ring gear and an attached insulating collar coaxially encircling on said non-conducting cylinder, a plurality of rollers mounted on the inner surface of said collar, said non-conducting cylinder having a helical groove on the outer surface thereof for receiving said ribbon, said tap assembly being threaded



to said non-conducting form by having said rollers in said groove so that when said assembly is rotated the rollers travel over said ribbon and follow said groove, an electrical contact fixed to said tap assembly and extending inward to contact said ribbon within the groove, a conducting ring mounted on the circumference of said insulating collar, said contact being electrically connected to said conducting ring, terminal means for connecting said conducting ring, a driving gear engaging said ring gear, and second means operating through said driving gear for rotating said tap assembly.

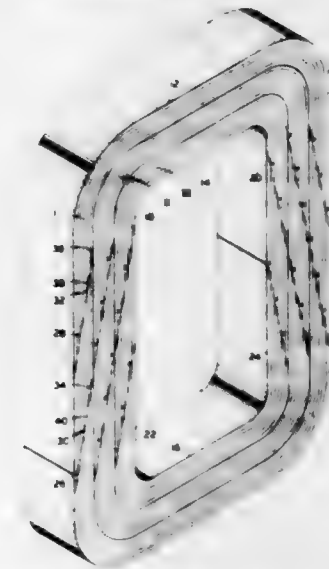
3,001,162
WELDING TRANSFORMER
Joseph J. Riley, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Nov. 24, 1959, Ser. No. 855,070
6 Claims. (Cl. 336-61)



1. A welding transformer comprising a plurality of flat spaced parallel generally oval shaped multi-turn primary windings, a plurality of flat spaced parallel generally U-shaped current conductive secondary loops, said secondary loops being interposed between said primary windings, said secondary loops each having a pair of spaced leg portions projecting beyond the physical outlines of said primary windings, said leg portions defining secondary terminal portions, at least a portion of said secondary loops each having a pair of spaced terminal connector portions, said terminal connector portions extending beyond said physical outlines of said primary wind-

ings, and removable terminal current conducting means bridging said terminal connector portions of said portion of said secondary loops.

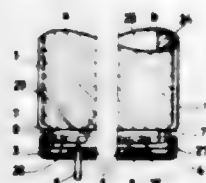
3,001,163
MAGNETIC CORE CONSTRUCTION
Richard A. Pfuntner, Lynn, and Franklin R. D'Entremont, Lynnfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Nov. 19, 1958, Ser. No. 774,977
2 Claims. (Cl. 336-217)



1. In a laminated magnetic core of the type including a plurality of superposed groups of laminates, each laminate group comprising a plurality of layers of magnetic material, each layer comprising a respectively associated pair of substantially U-shaped sections each having a pair of leg portions with the U-shaped sections of each respectively associated pair thereof being arranged with the leg portions thereof in end to end relation to form a closed loop with a separated butt joint between the ends of each pair of respectively associated legs, the jointed legs of said U-shaped members forming the legs of the core; the joints in each core leg being staggered relative to each other along the core leg in a pattern characterized by the joints in each laminate group being arranged so that the joints in next adjacent layers are alternately offset relative to each other first in one direction and then in the opposite direction along the core leg, so that the joints in alternate layers are offset longitudinally of the core leg progressively in the same direction, and so that the joints in each laminate group are arranged in two sets of joints with the joint sets respectively tending to lie in a pair of parallel joint locating lines extending obliquely of the core leg, and by the joint pattern in next adjacent laminate groups being disposed substantially side by side with the joint locating oblique lines in each laminate group being offset longitudinally of the core leg relative to the joint locating oblique lines in the next adjacent laminate group and in a direction opposite the direction of progression of the joints in alternate layers of each laminate group, and by the joint pattern in each laminate group extending over substantially the entire joint locatable portion of the core leg.

3,001,164
ROTATABLE BASE FOR FLUORESCENT LAMPS
Herbert Pietzsch, Berlin, Germany, assignor to Patent-Treuhand-Gesellschaft für elektrische Glühlampen m.b.H., Munich, Germany
Filed May 12, 1958, Ser. No. 734,809
Claims priority, application Germany May 17, 1957
7 Claims. (Cl. 339-2)
3. A fluorescent lamp with irregularly distributed light radiation and a rotatable base of elastic material secured

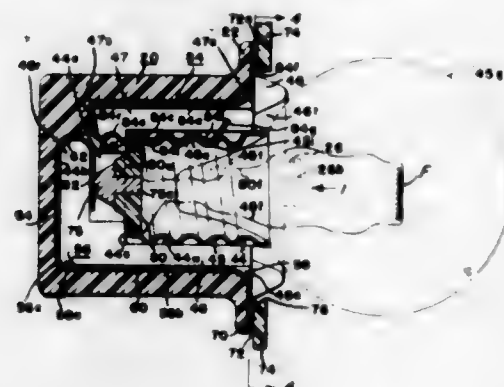
thereto, characterized in that said base comprises a cylindrical shell with a circular disk part bearing the electrical contacting means outside the center of the disk, said cylindrical shell provided at its free rim with an inwardly extending angular flange engaging into a corresponding



annular recess formed at the cylindrical end of the lamp envelope, said flange and said recess extending only over parts of the circumference enabling twisting of said base and said cylindrical end of the lamp envelope against each other within a restricted angle.

3,001,165 LAMP SOCKET AND TERMINAL MEANS FOR PRINTED CIRCUITS

Robert C. Woofter, Cortland, and Raymond Helle, Warren, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 717,004
2 Claims. (Cl. 339-17)

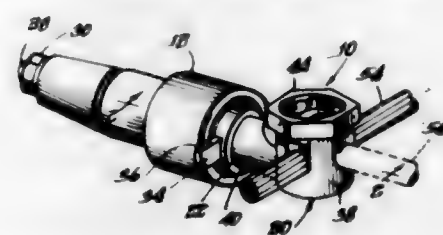


1. In combination, a printed-circuit-type conducting means carried on an insulating board mounting and screw-base-type-lamp-bulb socket and terminal means, including an insulating body providing a smooth cylindrical inner surface defining an outer periphery of a main axially extending chamber, a closed end of said body having a smaller-diameter auxiliary chamber axially adjacent to said main chamber, a shoulder extending radially inwardly at a location intermediate said main and auxiliary chambers and adapted to be engaged by the lamp bulb base as a limit for insertion of the bulb relative to said body, first terminal means carried by said body and extending longitudinally therein, one end of said first terminal means being adapted to engage said printed-circuit-type conducting means and another end thereof being adapted to be fitted into said auxiliary chamber so as to engage axially and to be urged resiliently against a contact tip of the screw-type lamp bulb base, and second terminal means carried by said body and having a longitudinally extending body portion fitted into a longitudinally-extending undercut groove in said smooth cylindrical inner surface, a secondary shoulder portion being formed in said body at one end of the groove, a flag portion extending laterally outwardly and substantially transversely to one side of said body portion and adapted to engage part of said printed-circuit-type conducting means, a corrugated contact portion extending substantially parallel and spaced radially inwardly relative to said body portion of said terminal, and a resilient substantially radially extending lateral arm segment adapted to connect said longitudinal body portion and corrugated contact portion as well as to abut against said secondary shoulder portion of said body for limiting insertion of said terminal relative to said body,

said corrugated contact portion being adapted to hold said screw-base-type lamp bulb relative to said body and in electrical connection relative to said printed-circuit-type conducting means.

3,001,166 TRANSFORMER CONNECTOR

Edward S. Cornell, Jr., Westport, Conn., assignor to Penn-Union Electric Corporation, Erie, Pa., a corporation of Pennsylvania
Filed July 28, 1958, Ser. No. 751,344
4 Claims. (Cl. 339-32)



1. A transformer connector including a one-piece electricity conducting body member comprising an externally threaded section, first and second angularly disposed slot means in said section and extending generally along a central axis of said threaded section and opening at sides of said threaded section, bottoms of said slot means providing first and second angularly disposed wire accommodating seats facing axially of said section and extending transversely of said axis in first and second directions and to sides of said section, said one-piece body member including a second section integrally joined to said threaded section adjacent the bottoms of said slot means and extending laterally therefrom at an angle with respect to said axis, said second section including means for receiving and detachably securing an electrical conductor extending in a direction disposed transversely with respect to said axis and generally parallel to one of said first and second directions, a clamping member including angularly disposed legs slidably disposed in said first and second slot means and having end portions projecting beyond said sides, said legs including angularly disposed wire accommodating seats paired with and facing said first mentioned seats for selectively accommodating wires disposed so as to extend in said first and second directions with respect to the connector, and a nut member threaded onto said threaded section and engageable with said leg end portions for shifting said clamping member toward said first mentioned seats when the nut member is tightened for securing a wire between the clamping member and one of said first mentioned seats.

3,001,167
MULTI-CONDUCTOR ELECTRICAL CONNECTOR
James R. Chemutt, P.O. Box 107, Star Route, Orange, Calif., and Paul J. Pflahner, Cavalry Road, Westport, Conn.; said Chemutt assignor to said Pflahner
Filed Feb. 7, 1958, Ser. No. 713,820
13 Claims. (Cl. 339-89)

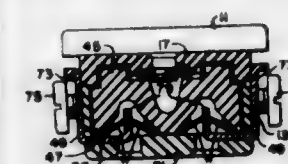


1. An electrical connector comprising a socket member, a plurality of longitudinally spaced mutually insulated first contact elements disposed within said socket member, a slidably mating plug member, a plurality of longitudinally spaced mutually insulated second contact ele-

ments disposed along said plug member, and separate means other than the contact elements to maintain a single predetermined angular orientation between said plug and socket members during sliding coupling thereof and limiting relative rotation thereof at the terminus of said sliding coupling to a single predetermined directional sense, said means including a plurality of grooves differently shaped in transverse section extending longitudinally of one of the plug and socket members, and a plurality of protuberances correspondingly differently shaped in transverse section extending from the other of the plug and socket members, said first and second contact elements being out of engagement at said predetermined orientation and in engagement upon rotation from said predetermined relative orientation to a closed contact position.

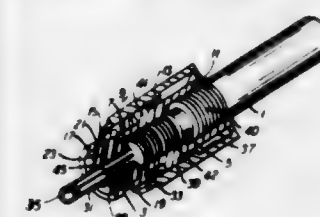
3,001,168 WIRING DEVICE

Clarence M. Smith, Trumbull, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Filed Oct. 21, 1957, Ser. No. 691,305
6 Claims. (Cl. 339-164)



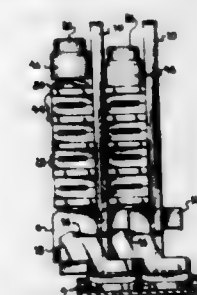
4. A wiring device comprising a hollow casing of insulating material, an elongated terminal member disposed in fixed relationship within said casing, a pair of spring locking tongues formed longitudinally on said terminal member and spaced apart to engage firmly a conductor inserted therebetween, a terminal plate having at least a portion thereof exposed to the exterior of said casing and having another portion firmly engaged by said locking tongues on said terminal member.

3,001,169
TRANSMISSION-LINE CONNECTOR
Isaac S. Blonder, 526 North Ave., Westfield, N.J.
Filed Mar. 29, 1956, Ser. No. 574,906
9 Claims. (Cl. 339-177)



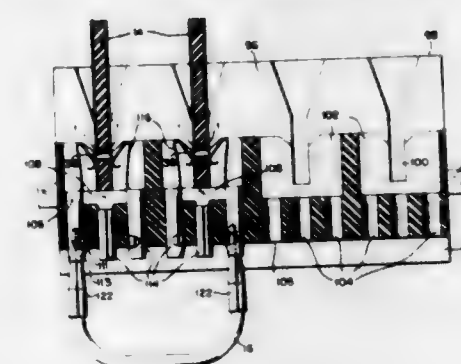
1. A transmission-line connector for receiving and threadedly engaging a transmission line comprising a tubular conductive member having a first interiorly threaded portion adjacent one end of the member, a second interiorly threaded portion adjacent and of slightly less internal diameter than the internal diameter of the first portion, a third portion extending from the second portion to the other end of the member and containing and supporting both a transverse wall provided with a conductor-receiving aperture, and a further tubular member extending beyond the said transverse wall and in-line with the said conductor-receiving aperture, the further tubular member being of outer diameter less than the inner diameter of the said third portion, and a resilient member engaging the further tubular member for maintaining in fixed position a conductor passed through the conductor-receiving aperture and into the said further tubular member.

3,001,170
ELECTRICAL CONNECTING DEVICE
Denzel L. Eyre and Glenn H. Glantz, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed July 20, 1959, Ser. No. 828,384
2 Claims. (Cl. 339-198)



2. An electrical connecting device for connecting a plurality of wires having terminals on their ends comprising, a support having a threaded opening therein and a bearing surface adjacent said opening, a post having a threaded end extending into said opening and having a head at its opposite end, a plurality of pairs of conducting socket members having aligned openings intermediate their ends, said post extending through said socket members, a spacer having a central bore and a counterbore surrounding said post, a coil spring surrounding said post and extending into said counterbore, said coil spring being effective between said spacer and one of said socket members whereby, upon insertion of an electrical terminal into one of the sockets formed by said socket member, said terminal is resiliently clamped by virtue of said spring, and upon rotation of said screw, said spring is compressed until said socket members are clamped between said spacer and said support and rigidly clamp said terminal.

3,001,171
ELECTRICAL CONNECTOR
Frederick A. Schultz, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1955, Ser. No. 555,456
1 Claim. (Cl. 339-217)



A connector for electrically connecting, within a non-metallic socket, a pair of electrically connected conductive edge strips on each side of a circuit card to three external electrical wire terminals: comprising a non-metallic socket having a plurality of equi-diameter holes therethrough; a unitary strip of conductive flexible metallic stock having a shoulder; three sleeves extending in parallel relation from said shoulder; each sleeve engageable with one of said electrical wire terminals; said center sleeve being connected to the center of said shoulder and notched on each side in a position near said shoulder; each of the outer two sleeves having a notch close to its end; the portion of each outer sleeve below said notch being bent in the form of a locking tab; the outside diameter of the locking tab just below the notch being greater than the diameter of the socket hole and tapering downwardly to a diameter less than the socket hole;

said locking tab adapted to be depressed as said connector is inserted forwardly, sleeve end first, into the holes of said socket; said locking tab adapted to restore to a position, when the connector is in the fully inserted condition, so that the top of the locking tab at the notch bears against the non-metallic socket to lock the connector against backward movement in the non-metallic socket; and a pair of tongues; each tongue extending from the side of the outside sleeve facing the center sleeve; said tongues curled inwardly towards each other to form a conductive spring contact engageable with said pair of conductive edge strips.

3,001,172

NEUTRAL BAR CONNECTOR

Edward S. Cornell, Jr., Westport, Conn., assignor to Penn-Union Electric Corporation, Erie, Pa., a corporation of Pennsylvania

Filed Feb. 1, 1960, Ser. No. 5,713
7 Claims. (Cl. 339-242)



1. A neutral bar connector structure comprising an elongated solid body member of electricity connecting material and including an upstanding longitudinally extending web portion and a flange portion integrally joined to an upper margin of said web portion and extending laterally therefrom, said web portion having a plurality of transverse openings therethrough partially defined by upwardly facing wire accommodating seats extending substantially continuously across said web portion, a plurality of internally threaded aperture means extending through said flange portion and into said web portion and respectively intersecting said openings directly opposite from said seats, and screw elements threaded into said aperture means for positively securing wires directly against said seats when the wires are inserted into said openings and said screw elements are tightened.

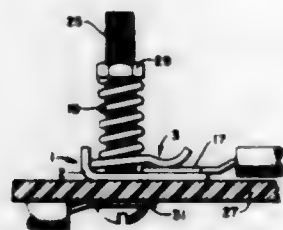
3,001,173

ADJUSTABLE CLAMP

Alfred H. Swengel, 1852 41st St., Rock Island, Ill.
Filed Oct. 2, 1958, Ser. No. 765,003

2 Claims. (Cl. 339-253)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electrical connector comprising a pair of sheet metal clamping members adapted to receive a terminal member therebetween, one of said members having an end portion angularly related to the remaining portion thereof to provide an apex, the other of said members having a flat portion and an arcuate portion, a free end of the flat portion fulcrumed at said apex and overlying said one member remaining portion, said flat portion being angularly disposed relative to said remaining portion for reception of said terminal thereunder, said arcuate

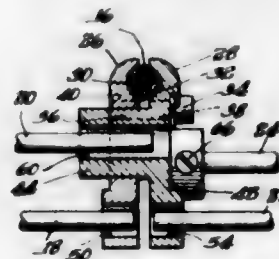
portion extending outwardly from an end of said flat portion remote from said fulcrumed end and providing a convex contact surface extending toward said remaining portion for engagement with said terminal, a member extending from said remaining portion freely through said flat portion, and adjustable spring means on said last named member biasing said clamping members together.

3,001,174

CONNECTOR

Edward S. Cornell, Jr., Westport, Conn., assignor to Penn-Union Electric Corporation, Erie, Pa., a corporation of Pennsylvania

Filed Aug. 29, 1958, Ser. No. 758,015
4 Claims. (Cl. 339-263)



1. A connector adapted to be applied to a plurality of work elements such as wires comprising first and second adjacently disposed body members, means providing opposed work element accommodating seats on said body members, means for drawing said body members together for clamping a work element between said seats, guide means extending between said body members and including an element projecting laterally from one of said body members and opening means in the other of said body members slidably receiving said projecting element, means providing an opening extending entirely through said one body member and said element and aligned with said first mentioned opening means and offset from said seats for accommodating a wire which may selectively be inserted into the last named opening from opposite sides of the connector, and securing means mounted on said one body member and associated with said last named opening for clamping a wire within said last named opening.

3,001,175

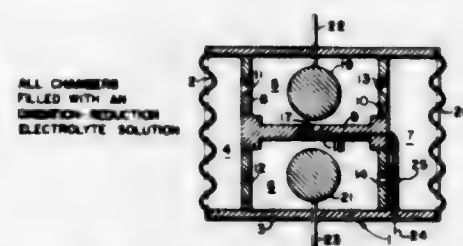
HYDRAULIC RECTIFYING BRIDGE CIRCUIT

Walter P. Christoph, Riverdale, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 29, 1956, Ser. No. 568,683

7 Claims. (Cl. 340-13)

(Granted under Title 35, U.S. Code (1952), sec. 266)



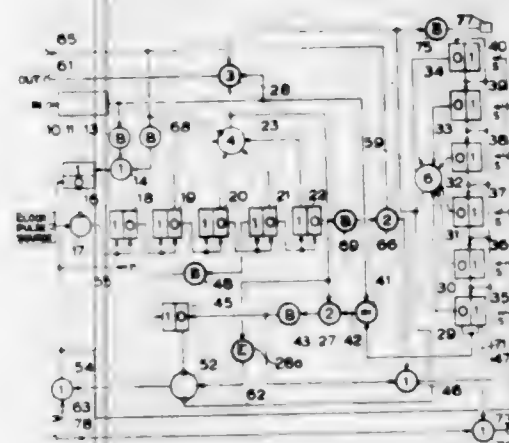
1. An underwater sound detection device of the character disclosed comprising, in combination, a plurality of hydraulic conducting elements each providing a preferred direction of fluid flow and connected in a rectifying bridge arrangement, means including a compliant member for applying hydro-acoustic signals to the input of said bridge, and means including an electrolytic detector connected across the output of said bridge circuit for providing a unidirectional electrical current output in response to unidirectional fluid flow in said bridge.

3,001,176

MESSAGE SELECTION IN ELECTRICAL COMMUNICATION OR CONTROL SYSTEMS

William Ellis Ingham, Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Aug. 4, 1954, Ser. No. 447,803
Claims priority, application Great Britain Aug. 6, 1953
13 Claims. (Cl. 340-147)



2. Electrical communication or control apparatus having means for selecting messages in dependence upon multi-element binary code recognition signals, comprising a store for individually storing elements of a predetermined binary code recognition signal, a co-incidence device, means for applying an element of the recognition signal of a received message to said co-incidence device, means for applying the corresponding recognition signal element from said store to said co-incidence device, said co-incidence device being arranged to produce an output signal of one kind if signal elements applied to said co-incidence device are similar and to produce an output signal of a different kind if signal elements applied to said co-incidence device are dissimilar, means responsive to an output signal of the first kind from said co-incidence device for applying the next element of said predetermined recognition signal from said store to said co-incidence device for comparison with the next element of a received recognition signal, a utilisation channel, means for applying the remainder of a received message to said utilisation channel in response to an output signal of the first kind from said co-incidence device with the last recognition signal element applied to said co-incidence device from said store, and means for resetting said store in response to an output signal of said different kind from said co-incidence device to recondition the message selecting means.

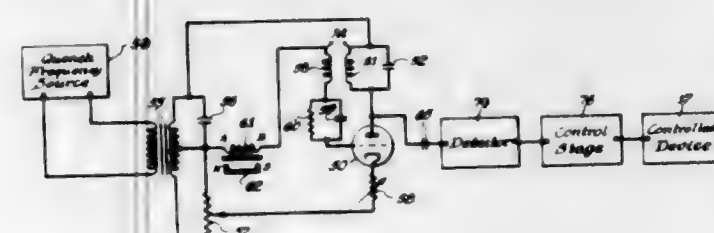
3,001,177

SUPERREGENERATIVE REMOTE CONTROL RECEIVER

Robert Adler, Northfield, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Apr. 7, 1958, Ser. No. 726,689

6 Claims. (Cl. 340-171)



1. A wave signal receiver for a remote control system to be actuated only in response to a received signal of a given

frequency, said receiver comprising: a superregenerative amplifier including an electron-discharge device having a cathode, a control electrode and at least one other electrode and further including associated circuitry constituting with said device an oscillatory circuit; a quench-signal source external to said amplifier for supplying a quench signal, having a frequency low with respect to the oscillatory frequency of said circuit, to effect conductance variations therein for the purpose of establishing superregenerative amplification of the linear-mode type; frequency-selective means, responsive substantially only to said received signal and connected in series with said control electrode in said oscillatory circuit, for applying said received signal to said amplifier; a control stage coupled to said amplifier for deriving a control effect in response to said received signal; and means coupled to said control stage for utilizing said control effect.

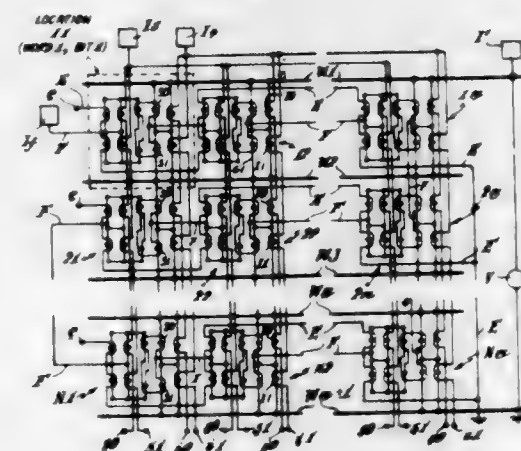
3,001,178

ELECTRICAL MEMORY CIRCUITS

Dudley A. Beck, North Wilmington, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Dec. 9, 1957, Ser. No. 701,503

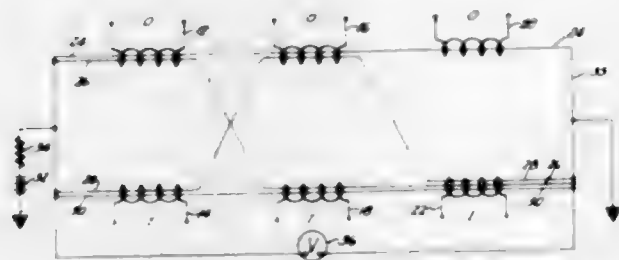
23 Claims. (Cl. 340-173.1)



15. A superconductive electrical memory comprising at least three current-supply and current-collection means, between each adjacent two current means a plurality of locations, each location comprising superconductors connected between said two current means and forming a pair of superconductive paths, said superconductors being responsive to a predetermined magnetic field to change from superconducting, zero resistance state to a state of finite resistance, for each location a bistable device including two output inductive means disposed alternatively to apply said predetermined magnetic field to superconductors in said respective paths, and said device including two set cryotrons for selecting one of said output inductive means, and a shunt cryotron for disabling said set cryotrons, said locations forming a word-series between each adjacent pair of current means and a place-series extending through the same bit of each of the several word series, the shunt cryotrons for all locations of a word-series being connected in series and one set cryotron of a place-series being connected in series with one set cryotron for the same bit in each other word, so that a single location may be selected by applying current to enable cryotrons of one word and the set cryotron of one place-series, interrogation means comprising two interrogation inductive means for each location, each interrogation inductive means controlling one path of each location, and one inductive means of each interrogation means in a place-series being connected in series with one inductive means of each other interrogation inductive means in the same series, so that the same location of all words may be interrogated simultaneously.

3,001,179 PRE-WIRED CRYOTRON MEMORY

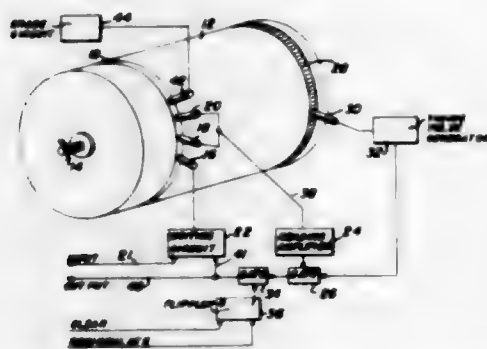
Albert E. Slade, Cohasset, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass.
Filed Mar. 13, 1957, Ser. No. 645,776
19 Claims. (Cl. 340-173.1)



1. A cryotron memory comprising, in combination, a plurality of stations, a plurality of control groups at each station, each of said control groups including a control conductor, magnetically independent gate conductors associated with said control conductors and adapted to transfer between superconductive and resistive states under the influence of changes in the magnetic fields developed by currents flowing in control conductors associated therewith, each of said gate conductors being associated with a single control group in each of said stations and with a different combination of control groups in said memory, superconductive means connecting one end of each of said gate conductors to one end of every other gate conductor, superconductive means connecting the other end of each of said gate conductors to the other end of every other gate conductor, said gate conductors being connected together only at said ends, thereby forming a composite conductor composed of said gate conductors connected in parallel, and sensing means for determining whether said composite conductor is resistive or superconductive.

3,001,180 DATA REVOLVING

Gerald I. Williams, Roseville, Minn., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Aug. 23, 1954, Ser. No. 451,617
18 Claims. (Cl. 340-174.1)

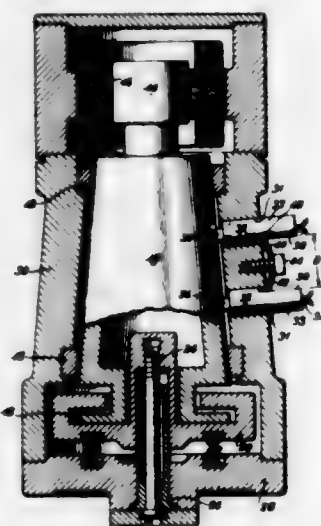


1. An information recording system comprising a movable record member, means for writing information in a given path on said record member only once each time said information is received by the writing means, means for reading said information from said record path at the end of a given time interval which begins with the writing of said information, means coupling said reading means to the writing means whereby the information read by the reading means is re-written in said given path on the record member at the end of said given time interval, and means coupled between said record path and writing means for returning any written information in said path back to the writing means for rewriting thereof in said given path after a second time interval which begins with the writing of such information but which is greater than said given time interval, said given and second time intervals being related to cause information

to be repeatedly re-recorded only once in each of successive discrete time periods each of which is less than said given time interval.

3,001,181 MEANS AND METHOD FOR SETTING AND LOCKING MAGNETIC TRANSDUCER HEADS IN A MAGNETIC DRUM DEVICE

Hugh M. Taft, Springfield, Vt., assignor, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 16, 1957, Ser. No. 684,278
10 Claims. (Cl. 340-174.1)



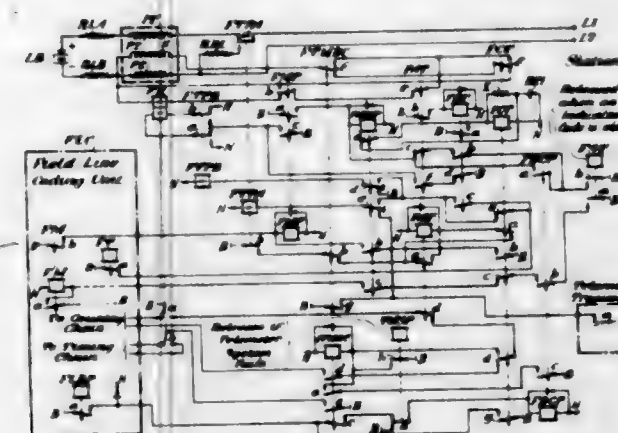
1. In a magnetic data storage device having a magnetizable record surface movable in relation to a stationary member and a plurality of transducer heads having substantially cylindrical bodies adapted to be adjustably positioned in apertures through the said stationary member with their flux path elements in close proximity with the said record surface, an improved transducer head setting and locking device comprising: a bowed fastener clip constructed of spring material, the said bowed fastener clip having two end portions conforming with the shape of and contacting a portion of the surface of the bodies of two adjacent transducer heads while bearing on the surface of the said stationary member and a portion intermediate the said two ends arched away from the said surface of the stationary member; and means adjustably compressing and flattening the said arched portion whereby the said adjacent transducer heads are maintained in a set position by the locking and holding force exerted by the said ends.

3,001,182 COORDINATION CIRCUITS FOR REMOTE CONTROL AND INDICATION SYSTEMS

Arthur P. Jackel and Donald E. Stark, Penn Township, Allegheny County, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Oct. 1, 1957, Ser. No. 687,478
14 Claims. (Cl. 340-180)

4. In combination, an office and a station location connected by a single communication channel, a normally active telemetering system having connections to said station to said office, a normally inactive centralized control system operable to transmit codes in either direction between two locations, a gating means at each location responsive to the operation of said telemetering system for periodically opening a gating period during said telemetering transmissions, a pulsing means at each location responsive to the operation of said gating means during said gating period for transmitting a coordinating pulse only when a control system code is stored for transmis-

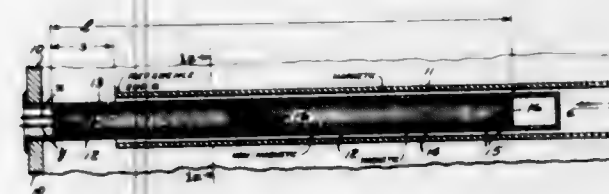
sion from the corresponding location, and a transfer means at each location responsive to the reception of a coordinating pulse from either location for transferring



the channel connections from said telemetering system to said control system to effect the transmission of said stored control system code.

3,001,183 REMOTE INTERNAL LINEAR POSITION INDICATOR

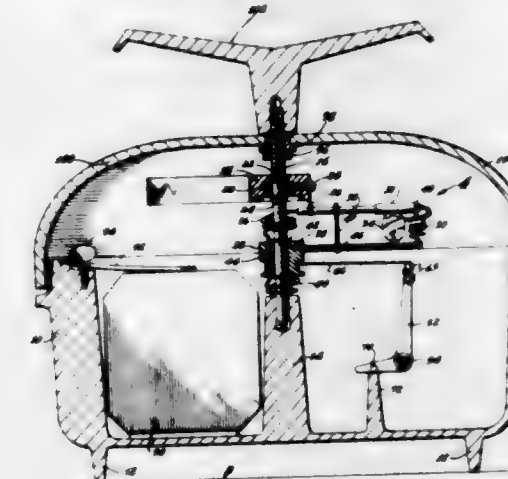
Henry F. McKenney, Weston, Mass., and Wolfram G. Stenzel, Bellerose, Milton Lowenstein, New York, and Albert Richter, Lynbrook, N.Y., assignors to Ford Instrument Company, Division of Sperry Rand Corporation, Long Island City, N.Y., a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,554
1 Claim. (Cl. 340-195)



A position indicator of the character described comprising an elongated non-magnetic tubular well having closed and open ends and a longitudinal axis; means mounting said well in fixed position in a sealed vessel with the open end thereof secured to the wall of said vessel; a tubular magnetic sleeve disposed about said well, coaxially therewith, for longitudinal back and forth movement along said well between pre-established inner and outer limits of movement adjacent the closed and open ends respectively of said well; an elongated inductive sensing element comprising an elongated magnetic core, having a longitudinal axis, and a single coil which is wound lengthwise on said core from end to end thereof with the axis of said coil disposed perpendicular to the longitudinal axis of said core; said sensing element being mounted in fixed position in said well with their axes coaxial, the length and position of said sensing element within said well being such that one end thereof is disposed substantially coincident with the outer limit of movement of the outer reference end of said sleeve, and the other end thereof is disposed substantially coincident with the inner limit of movement of the outer reference end of said sleeve; the back and forth movement of said sleeve along said well varying the inductance of said sensing element in accordance with the position of the outer reference end of said sleeve with respect to said one end of said sensing element; and means by which the inductance variation of said sensing elements is sensed to thereby indicate the position of the outer reference end of said sleeve.

3,001,184 SWIMMING POOL ALARM UNIT

Aaron P. Edelmann, 6443 Columbus Ave., Van Nuys, Calif.
Filed Feb. 2, 1959, Ser. No. 790,520
12 Claims. (Cl. 340-261)



7. A unit for providing an indication of the presence of waves on the surface of a body of liquid, said unit including: sensing means including a float adapted to be supported on the surface of the body of liquid, a stationary platform adjacent the body of liquid, electric switch means, actuating means for the switch, an inertial mass at the stationary platform and coupled to the switch actuating means, a control means coupled to the sensing means, means coupling the switch actuating means to the control means to cause the actuating means to actuate the switch upon relative movement between the control means and the actuating means, the inertial mass being freely rotatable to render the actuating means unresponsive to relatively slow movements of the sensing means, and said inertial mass providing relative movement between the actuating means and control means to cause the switch to be actuated upon relatively fast movement of the sensing means, and means including electrically actuated alarm means electrically coupled to the switch to be activated upon actuation of the switch by the actuating means.

3,001,185 MORSE CODE HAND SIGNALING DEVICES

Charles L. Cleek, Los Angeles, Calif.
(1540 Sagebrush Road, Palm Springs, Calif.)
Filed Sept. 14, 1959, Ser. No. 839,880
4 Claims. (Cl. 340-366)



1. A hand signaling device comprising a receptacle having one end thereof open, a light source in said receptacle, normally open circuit means for energizing said light source comprising a source of energy, normally closed shutter closure means mounted in the light path between said light source and the open end of said receptacle, a pistol grip depending from said receptacle, a trigger being mounted on said pistol grip, and means operatively connected with said trigger for simultaneously closing said

circuit means and opening said shutter closure means to thereby simultaneously energize said light source and open said shutter closure means.

3,001,186

MISSILE GUIDANCE SYSTEM

Otto J. Baltzer, Austin, Tex., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 17, 1951, Ser. No. 242,255
8 Claims. (Cl. 343-6)

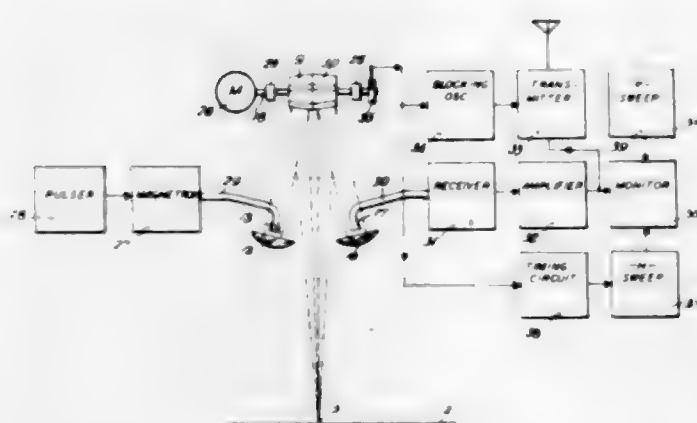


1. A system for guiding a missile to intercept a target, comprising a source of electromagnetic wave energy carried by the missile, a control station remote from the missile, means on said missile for projecting part of the energy from the missile into the region containing the target, means for projecting a portion of the energy from the missile toward said control station, and means at the control station combining the energy reflected from the target and the energy projected toward said control station from the missile for controlling the missile.

3,001,187

MICROWAVE TELERECONNAISSANCE

John Hays Hammond, Jr., % Hammond Research Corporation, Gloucester, Mass., and Emory Leon Chaffee, Belmont, Mass.; said Chaffee assignor to said Hammond
Filed Oct. 21, 1955, Ser. No. 541,978
1 Claim. (Cl. 343-6)



A ground survey system comprising a first transmitter having means producing a radio beam in the microwave range, a first receiver adapted to receive said beam after reflection from a ground area, and a second transmitter having means producing and transmitting a radio carrier wave, all to be carried along a line of flight above the

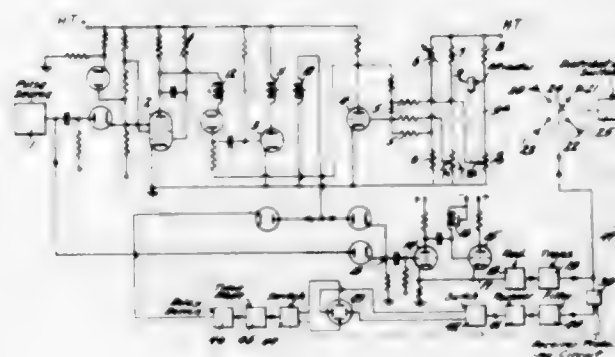
ground area to be surveyed, and a remote second receiver for receiving said carrier wave, said first transmitter having means projecting said beam onto said ground area to be reflected therefrom, means sweeping said beam in a direction transverse to said line of flight for scanning said ground area, means directing said reflected energy to the input of said first receiver, means in said first receiver demodulating said reflected energy to produce an electrical effect proportional to the intensity of said reflected energy and means modulating said carrier wave by said electrical effect derived from said reflected energy, said second receiver having means to demodulate said carrier to obtain a signal representing changes in the energy level of said reflected energy, a cathode ray tube at said second receiver having a source of a cathode ray, means modulating said ray by said signal, sweep means to cause said ray to sweep across said tube and means synchronizing said sweep means with the sweep of said radio beam so that the trace of said ray represents the reflection characteristics of the area of the ground scanned by said radio beam.

3,001,188

ANTI-COLLISION RADIO EQUIPMENT FOR AIRCRAFT USE

Jack Wild, Chelmsford, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Filed Oct. 23, 1958, Ser. No. 769,264
Claims priority, application Great Britain Feb. 3, 1958
6 Claims. (Cl. 343-6.5)



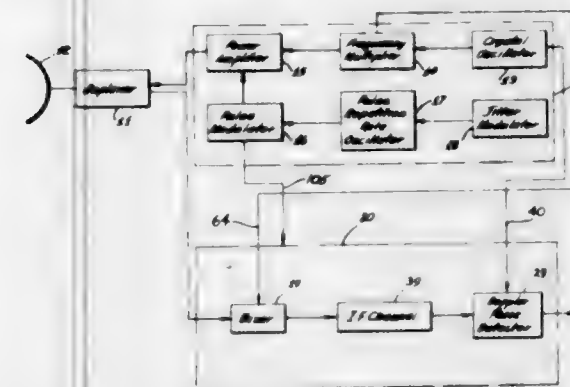
1. An aircraft anti-collision radio equipment comprising means for transmitting an interrogating sequence of at least two pulsed transmissions time-spaced by an interval exceeding twice the radio propagation time over the maximum intended operating height, said interval consisting of a constant portion equal to twice said propagation time and a variable portion representative of a predetermined selected height; a radio receiver; means adapted to be actuated upon receipt of the first transmission of an interrogating sequence from a similarly equipped co-operating aircraft for rendering said receiver inoperative for a period equal to twice said propagation time over the maximum intended operating height; means adapted to be actuated upon receipt of said first transmission of said sequence from a co-operating aircraft for producing a control signal occurring later than said receipt by an amount substantially equal to twice said propagation time over the maximum intended operating height plus an additional time representative of and dependent on the flying height; a response signal transmitter; means jointly controlled by said receiver and said control signal for causing said response signal transmitter to transmit a response signal if the second transmission of the interrogating sequence from the co-operating aircraft is received at a predetermined time with reference to the time of production of said control signal; and means for receiving and indicating receipt of a response signal from a similarly equipped co-operating aircraft.

3,001,189

DOPPLER RADAR TRANSMITTER

Denny D. Pidhayny, Los Angeles, Calif., assignor, by means assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Original application May 28, 1956, Ser. No. 587,768.
Divided and this application Dec. 26, 1957, Ser. No. 705,247

13 Claims. (Cl. 343-8)

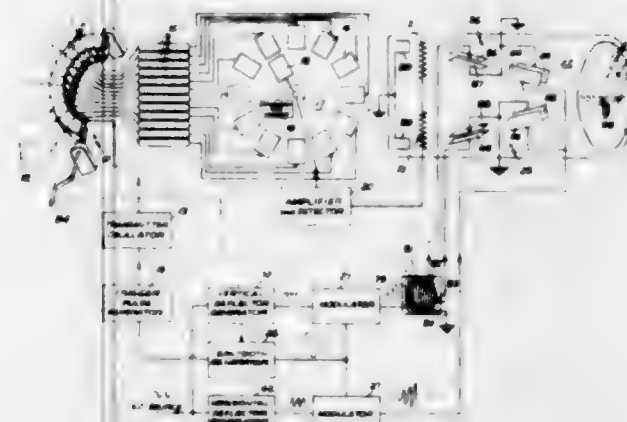


1. In a Doppler radar system wherein received echo signals are heterodyned in a receiver against reference signals to produce a Doppler frequency signal indicative of moving objects, a radar transmitter for producing reference signals capable of being applied directly to the above-said receiver, said transmitter comprising: oscillator means for generating a first signal at a highly stable predetermined frequency; and frequency-multiplier means receptive of said first signal and operable in response thereto to produce a second signal at a highly stable frequency a predetermined number of times higher than the frequency of said first signal, said second signal being utilized to transmit signals toward objects and also being directly applied to the receiver for direct heterodyning therein with the received echo signals to produce an intermediate-frequency Doppler signal against which said first signal is directly heterodyned to produce a Doppler frequency signal indicative of a moving object.

3,001,190

ECHO RANGING DEVICES

Robert A. Fryklund, Dedham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Jan. 29, 1953, Ser. No. 333,941
13 Claims. (Cl. 343-10)



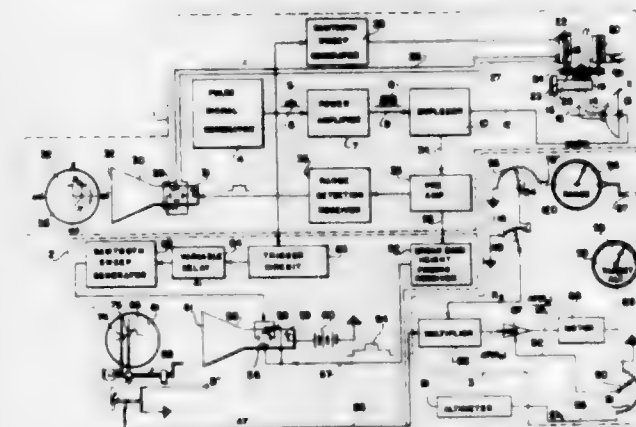
1. An electron discharge system comprising a cathode ray tube comprising electron beaming means and a target, means for cyclically scanning a first portion of said target with electrons from said electron beaming means, means for cyclically scanning a second portion of said target with electrons from said electron beaming means, means for modulating the electron beam elements produced by said electron beaming means in accordance with signals from a signal source, said source comprising means for transmitting signals omnidirectionally in a predetermined

plane, means for continuously varying said predetermined plane, and means for varying the position of impingement of electrons on said portions in accordance with the orientation of said signal source.

3,001,191

HEIGHT FINDING RADIO DETECTION AND RANGING DEVICE

Elvin O. Richter, San Fernando, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 28, 1955, Ser. No. 497,067
10 Claims. (Cl. 343-10)



1. A radar device for determining the altitude of a remote object comprising, antenna means, transmitting means for directing electromagnetic energy through said antenna means and toward the remote object, receiving means connecting with said antenna means and being responsive to the electromagnetic energy reflected by the remote object from two energy paths, one path being on a direct line of sight between the antenna means and the remote object and the other path being indirect from the object to the antenna means via a reflection off the surface of the earth, detector means coupled with said receiver means and measuring the time difference in receipt of the energy from the two paths, means responsive to both the transmitted and received energy and providing an output representing the range of the remote object, and means responsive to the output from said detector means and said last mentioned means for determining the height of the remote object.

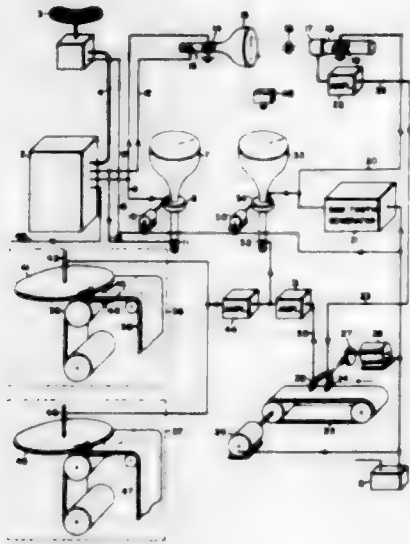
3,001,192

NAVIGATIONAL COURSE INDICATOR

John Hays Hammond, Jr., % Hammond Research Corp., Gloucester, Mass., and Emory Leon Chaffee, Belmont, Mass.; said Chaffee assignor to said Hammond
Filed Apr. 8, 1957, Ser. No. 651,459
4 Claims. (Cl. 343-11)

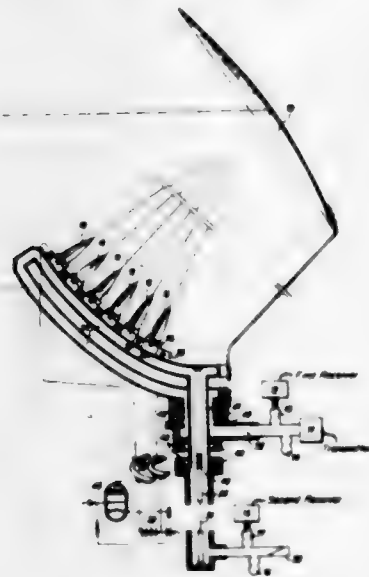
1. A system for indicating the course of an object relative to an observation point, comprising a radar transmitter and rotating radiator which emits a beam of radio waves having timed pulses, said beam being swept over the surrounding area by said radiator in repeated radar scans, and having receiver means to receive echo radar pulses having time characteristics representing respectively the bearing and range of said object at successive radar scans, a cathode ray tube having a screen traversed by an electron beam, means causing said beam to sweep across said screen linearly in synchronism with said timed pulses, means responsive to said echo pulse to produce on said screen a spot having a timing and linear displacement representing respectively the bearing and range of said object at each radar scan, means sweeping said screen linearly at a predetermined sweeping rate lower than the rate of said timed pulses, to produce a series of electric pulses, a magnetic recorder having a track repeatedly traversed by a recording head at a rate to

effect a complete traverse during a single scan of said radiator, means responsive to said last sweeping means to actuate said head to record a series of pulses in positions along said track representing the timing of said electric pulses, a reproducing head responsive to said recorded magnetic pulses, a second cathode-ray tube having a screen traversed by an electron beam, means causing



radial displacement of said beam at said predetermined sweep rate, means rotating the radial displacement of said beam in synchronism with the rotation of said radiator and means responsive to said reproducing head to produce a series of spots on said last screen having positions representing the bearing and range of said object at successive radar scans.

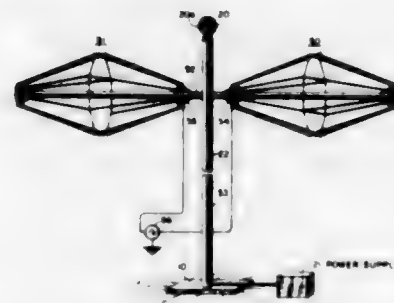
3,001,193
CIRCULARLY POLARIZED ANTENNA SYSTEM
Pierre G. Marie, 16 Rue de Varize, Paris, France
Filed Mar. 13, 1957, Ser. No. 645,773
Claims priority, application France Mar. 16, 1956
5 Claims. (Cl. 343-100)



1. An antenna system adapted to transmit and receive circularly-polarized waves of a given carrier frequency and to discriminately switch said waves according to the sense of rotation of their polarization, comprising in combination, a filtering circular polarization directional coupler composed of a stub of rectangular guide having first and second terminals and of a stub of circular guide coupled to the rectangular guide by a system of slots respectively transforming waves propagated in both directions in the rectangular guide stub into circularly-polarized waves rotating in both directions in the circular guide stub, the direction of propagation in the rec-

tangular guide stub and the direction of rotation in the circular guide stub being unambiguously interrelated; at least one cavity resonator, included in said circular guide stub, having a resonance frequency equal to said carrier frequency, ferrite means associated with said cavity-resonator, means for selectively applying constant magnetic fields of opposite directions to said ferrite means and polarizing the same to vary the permeability of said cavity-resonator for said circularly-polarized waves according to the sense of direction of their polarization and a dielectric rod antenna, coaxial with said circular guide stub axis and having asymmetry of revolution about said axis and fitted into said stub just above said cavity-resonator, whereby waves having circular polarization of both senses of rotation received by said dielectric rod antenna are switched towards only a single one of said first and second terminals according to the sense of rotation of their polarization.

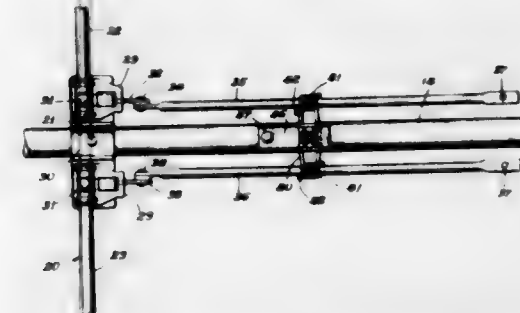
3,001,194
BROADBAND DISCAGE ANTENNA
Melvin L. Leppert, 4012 1st Place SW.,
Washington 24, D.C.
Filed Sept. 8, 1958, Ser. No. 759,832
17 Claims. (Cl. 343-792)
(Granted under Title 35, U.S. Code (1952), sec. 266)



9. Means for radiating electromagnetic energy in a selected band of wave lengths comprising a grounded base plate of conductive material, a center pole of conductive material mounted on said base plate, a crossarm of conductive material mounted symmetrically on said center pole, at least two first rings of conductive material, a plurality of conductive first supporting means for supporting each of said first rings symmetrically about a respective portion of said crossarm furthest from said center pole in a plane perpendicular to the longitudinal axis of the crossarm, at least two second rings of conductive material, a plurality of means for positioning each of said second rings about a respective portion of said crossarm nearest said center pole in a plane parallel to the plane of a respective first ring, at least two third rings of conductive material, a plurality of second conductive supporting means for supporting each of said third rings between a respective second ring and first ring in a plane parallel to the plane of the respective first ring to form a set of rings, the third rings having a greater diameter than the first rings and the second rings, a plurality of conductors connected to the first ring and the second ring and third ring in each set of rings, each of said conductors positioned coplanar with the longitudinal axis of the crossarm, each of said conductors connected to a first ring at the same point as a respective one of said plurality of first supporting means and to a respective third ring at the same point as a respective one of said plurality of second supporting means, a source of luminous energy mounted on said center pole, a power source positioned outside the volumes enclosed by said conductors, and means for connecting said power source to said source of luminous energy, the last mentioned means being positioned adjacent to and along the length of said center pole.

3,001,195
ANTENNA STRUCTURE
John R. Winegard, Burlington, Iowa, assignor to Winegard Company, Burlington, Iowa, a corporation of Iowa

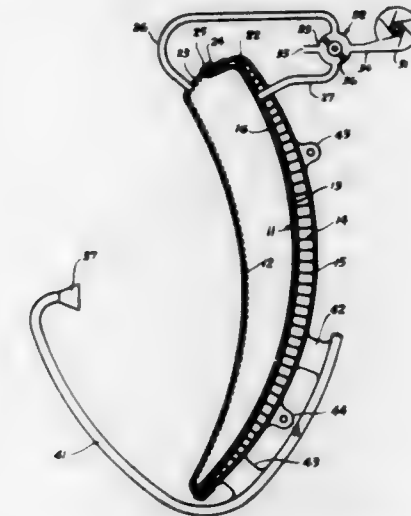
Filed Apr. 20, 1960, Ser. No. 23,488
7 Claims. (Cl. 343-864)



6. In an antenna including a horizontal boom, a driven element and a parasitic element, which may be mounted singly on a mast or stacked on the mast with a like antenna and connected by a pair of lead wires to radio wave equipment, the improvement comprising: a pair of fixed, spaced, connector posts extending parallel to said boom and to either side of said boom, said posts having extending ends in a plane normal to said boom with the plane being spaced from said driven element, said posts being electrically connected to said driven element; a pair of elongated relatively rigid bars, one end of each of said bars being secured to an extending end of a post respectively for pivotal movement about an axis parallel to said plane; an insulator extending between said bars intermediate the ends thereof; means releasably connecting said insulator to said bars and positioning said bars generally parallel to said boom, said means providing connectors for said lead wires when said antenna is used singly; clip means to releasably engage said insulator and said boom, said clip means positioning bars in a generally horizontal plane when engaged; and means at the other

ends of said bars for connecting the bars of one antenna with the respective bars of a second antenna when the antennas are to be stacked on a mast.

3,001,196
DUAL PATTERN ANTENNA
John H. McIlroy and Robert L. Moore, San Diego, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Jan. 16, 1959, Ser. No. 787,163
12 Claims. (Cl. 343-915)



5. A radiant energy reflector comprising first and second bulkheads defining a chamber, said first bulkhead having a first predetermined shape, said second bulkhead having a second predetermined shape, said bulkheads being transparent to said radiant energy, a flexible reflective diaphragm in said chamber between said first and second bulkheads, and means for selectively urging said diaphragm against one of said first and second bulkheads to assume the predetermined shape thereof.

DESIGNS

SEPTEMBER 19, 1961

191,347

LADY'S SLIP

Bernard Herman, East Meadow, N.Y., assignor to Stardust, Inc., New York, N.Y., a corporation of New York

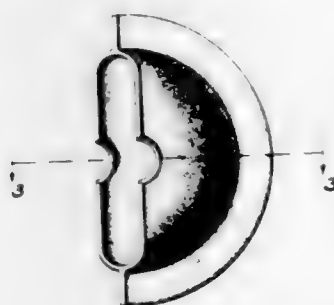
Filed Oct. 4, 1960, Ser. No. 62,369
Term of patent 14 years
(Cl. D3—26)



191,348

EDIBLE DIPPING CONTAINER

Paul Ambrette, Haddington Drive, Old Westbury, N.Y.
Filed Sept. 9, 1960, Ser. No. 62,079
Term of patent 14 years
(Cl. D8—1)



191,349

LEVER OPERATOR FOR JALOUSIE WINDOWS

Charles E. Spencer, Chicago, Ill., assignor to The Casement Hardware Co., Chicago, Ill., a corporation of Illinois

Filed Feb. 9, 1960, Ser. No. 59,324
Term of patent 14 years
(Cl. D10—10)



191,350

SHOPPING CENTER

Alexander P. Horvat, Richmond Heights, Mo.
(7235 Glades St., St. Louis, Mo.)
Filed Apr. 19, 1961, Ser. No. 64,824

Term of patent 14 years
(Cl. D13—1)



191,351

AUTOMOBILE

Friedrich K. H. Nallinger, Stuttgart, and Karl Wilfert, Stuttgart-Degerloch, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Jan. 4, 1960, Ser. No. 58,903
Claims priority, application Germany July 4, 1959
Term of patent 7 years
(Cl. D14—3)

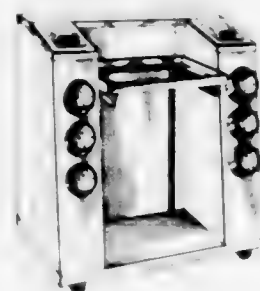


191,352

DISPENSER FOR TRAYS, SILVERWARE, AND NAPKINS OR THE LIKE

Phillip Golden, Teaneck, N.J., assignor to S. Blickman, Inc., Weehawken, N.J., a corporation of New York

Filed Dec. 1, 1960, Ser. No. 63,059
Term of patent 7 years
(Cl. D14—3)



SEPTEMBER 19, 1961

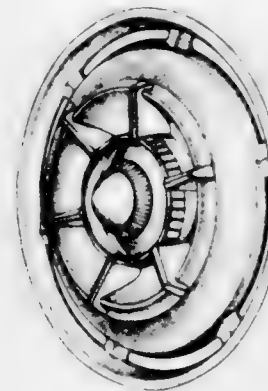
U. S. PATENT OFFICE

731

191,353

WHEEL COVER

Henry G. Haga, Royal Oak, and Bernard N. Smith, Oak Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 63,847
Term of patent 7 years
(Cl. D14—30)

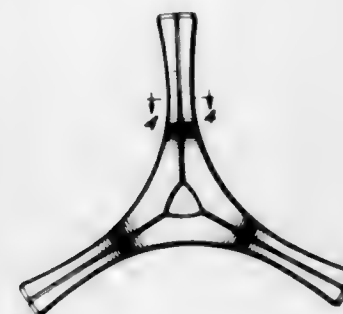


191,354

ORNAMENT FOR WHEEL COVERS

Clarence D. Zierhut, Granada Hills, Calif., assignor to Shore-Calnevar, Inc., Paramount, Calif., a corporation of California

Filed Feb. 13, 1961, Ser. No. 63,903
Term of patent 14 years
(Cl. D14—30)



191,355

CHAIR

Nathan Sussman, 69 2nd Ave., Brooklyn, N.Y.
Filed Dec. 19, 1960, Ser. No. 63,253
Term of patent 3½ years
(Cl. D15—1)



191,356

COMBINED ARM REST AND STORAGE RECEPTACLE

Martin Krone, 60 E. 42nd St., New York, N.Y.
Filed June 20, 1960, Ser. No. 61,027
Term of patent 14 years
(Cl. D15—8)



191,357

RAZOR OR THE LIKE

Milton M. Sidney, White Plains, and David Woolley, Bronxville, N.Y., assignors to Mailman Bros., Mystic, Conn., doing business as Durham Enders Razor Company, a partnership

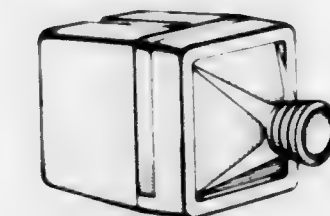
Filed Mar. 16, 1961, Ser. No. 64,346
Term of patent 14 years
(Cl. D22—3)



191,358

REMOTE CONTROL SWITCH UNIT OR SIMILAR ARTICLE

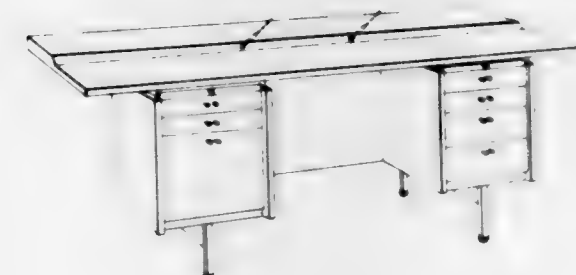
Allen R. Obergfell, Niles, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 24, 1960, Ser. No. 62,591
Term of patent 14 years
(Cl. D26—13)



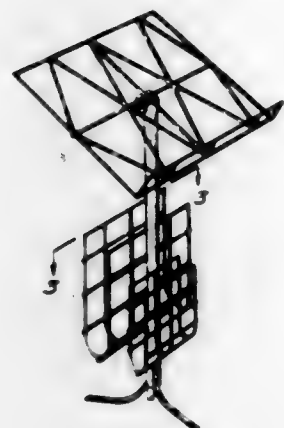
191,359

DESK

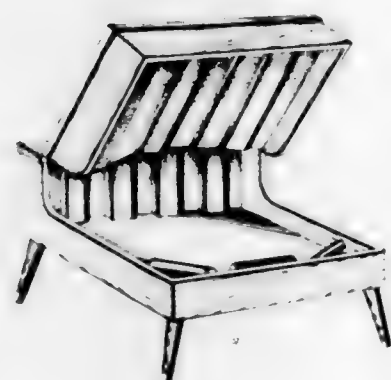
Charles U. Deaton, Jefferson County, Colo.
(Genesse Mountain Rte. 3, Golden, Colo.)
Filed Sept. 28, 1960, Ser. No. 62,293
Term of patent 14 years
(Cl. D33—7)



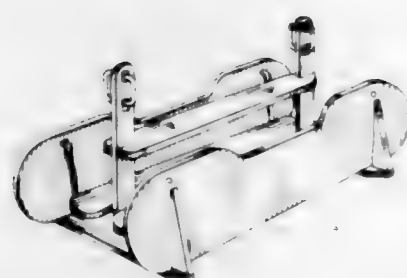
191,360
READING STAND
Stanton B. Bolcom, Minneapolis, Minn.
Filed Sept. 12, 1960, Ser. No. 62,122
Term of patent 14 years
(Cl. D33—10)



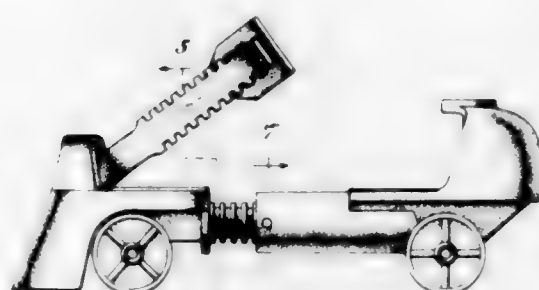
191,361
COLOR CONSOLE TABLE OR SIMILAR ARTICLE
George G. Kinzler, 2202 E. San Rafael St.,
Colorado Springs, Colo.
Filed May 31, 1960, Ser. No. 60,791
Term of patent 14 years
(Cl. D33—14)



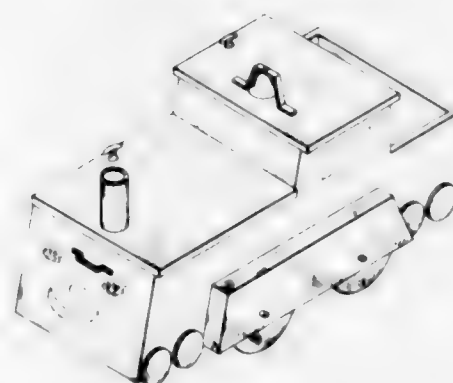
191,362
GLIDER SWING
Taylor W. Jackson, Denver, Colo., assignor to
Marjorie Jackson, Denver, Colo.
Filed Apr. 14, 1961, Ser. No. 64,737
Term of patent 14 years
(Cl. D34—5)



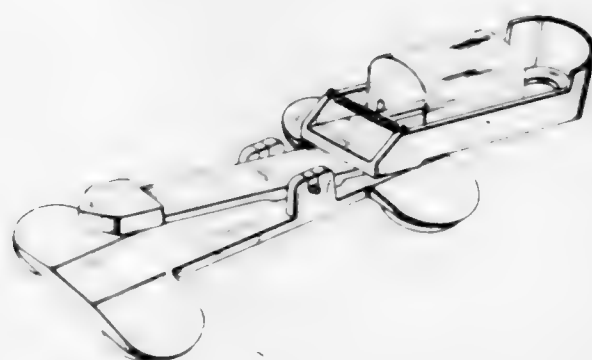
191,363
ROLLER SKATE
Daniel S. Williams, 394 Spruce St., Pottstown, Pa.
Filed Nov. 22, 1960, Ser. No. 62,925
Term of patent 14 years
(Cl. D34—5)



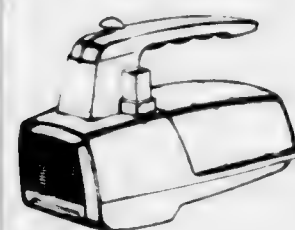
191,364
TOY CHEST
John Schoendorf, 180 Bedford Ave., Merrick, N.Y.
Filed Mar. 15, 1961, Ser. No. 64,314
Term of patent 7 years
(Cl. D34—15)



191,365
BALL THROWING DEVICE
Myron Fleishman, 3471 Fenton Ave., New York, N.Y.
Filed Oct. 27, 1960, Ser. No. 62,638
Term of patent 7 years
(Cl. D34—15)



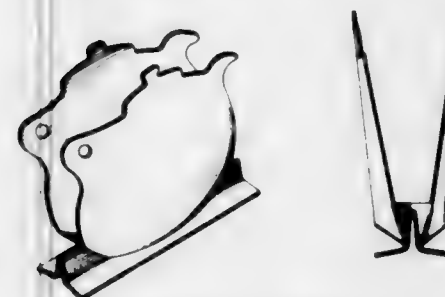
191,366
FOOD MIXER OR THE LIKE
Robert O. Ernest, Oak Park, Ill., assignor to Sunbeam
Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 17, 1960, Ser. No. 61,788
Term of patent 14 years
(Cl. D44—1)



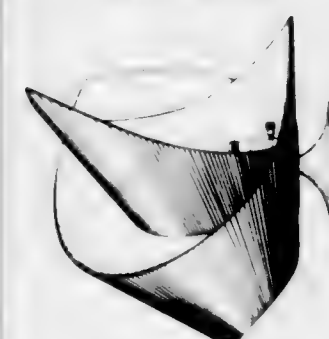
191,367
MEAT PATTY MOLD
Hubert W. Heuck, % Heuck Industrial, 4823 Industrial
Court, Cincinnati, Ohio
Filed Nov. 6, 1958, Ser. No. 53,282
Term of patent 14 years
(Cl. D44—1)



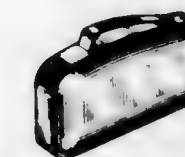
191,368
TEA BAG HOLDER
Nori Sinoto, 345 W. 58th St., New York, N.Y.
Filed Sept. 27, 1960, Ser. No. 62,278
Term of patent 3½ years
(Cl. D44—24)



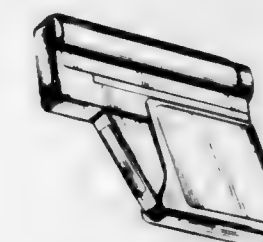
191,369
LIGHTING FIXTURE
William B. Martin, 261 Robbins St., Milton, Mass.
Filed Nov. 4, 1960, Ser. No. 62,733
Term of patent 14 years
(Cl. D48—4)



191,370
CIGARETTE LIGHTER
Stanley H. Newman, 19 E. 70th St., New York, N.Y.
Filed June 1, 1959, Ser. No. 56,172
Term of patent 14 years
(Cl. D48—27)



191,371
CIGARETTE LIGHTER OR SIMILAR ARTICLE
Alfred Racek, Zwerngasse 59, Vienna XVII, Austria, and
Johann Raganitsch, Haas Richterergasse 1a, Vienna
XIX, Austria
Filed Mar. 29, 1960, Ser. No. 59,925
Claims priority, application Austria Oct. 10, 1959
Term of patent 14 years
(Cl. D48—27)



191,372
HASP LOCK
William Robert Storey, 110 West Ave., Handsworth,
Birmingham, England
Filed Mar. 18, 1960, Ser. No. 59,791
Claims priority, application Great Britain Nov. 25, 1959
Term of patent 14 years
(Cl. D50—7)



191,373
SPOON OR SIMILAR ARTICLE
Frank R. Perry, Oneida, N.Y., assignor to Oneida Ltd.,
Oneida, N.Y., a corporation of New York
Filed Sept. 6, 1960, Ser. No. 62,016
Term of patent 14 years
(Cl. D54—12)



191,374
STRAP TENSIONING TOOL
 Thomas J. Karas, 2450 Paton St., St. Laurent,
 Quebec, Canada
 Filed May 9, 1960, Ser. No. 60,507
 Term of patent 14 years
 (Cl. D54—13)



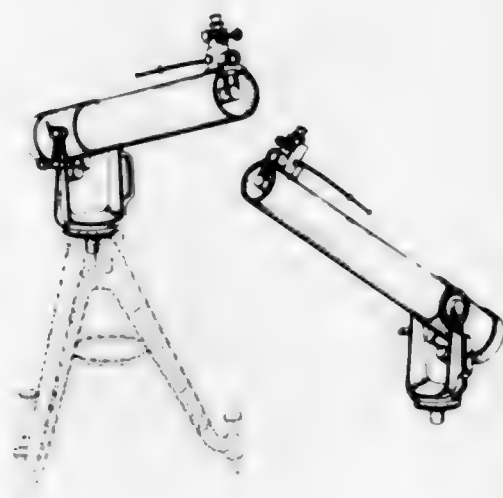
191,375
**IMPELLER HAMMER FOR SILO UNLOADER
 OR THE LIKE**
 Floyd E. Buschbom, R.R. 3, Albert Lea, Minn.
 Filed June 20, 1957, Ser. No. 46,661
 Term of patent 14 years
 (Cl. D55—1)



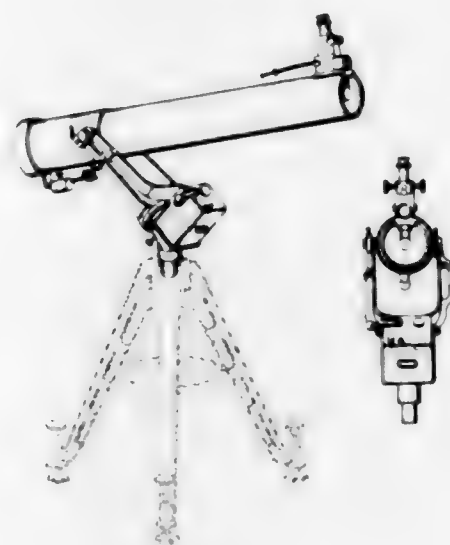
191,376
**IMPELLER HAMMER FOR A SILO UNLOADER
 OR THE LIKE**
 Floyd E. Buschbom, Rte. 1, Long Lake, Minn.
 Filed Feb. 1960, Ser. No. 59,537
 Term of patent 14 years
 (Cl. D55—1)



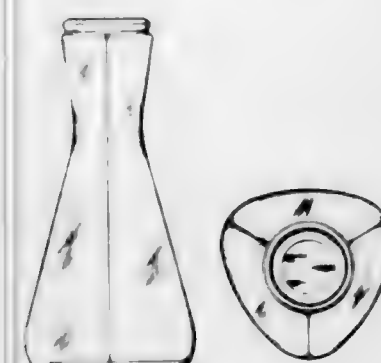
191,377
TELESCOPE OR SIMILAR ARTICLE
 Heinz Kraus, Altenmarkt (Alz), Germany, assignor to
 Fa. Dr. Johannes Heidenhain Feinmechanik und Optik,
 Traunreut, uber Traunstein, Germany, a corporation
 of Germany
 Filed Dec. 5, 1960, Ser. No. 63,099
 Claims priority, application Germany Sept. 12, 1960
 Term of patent 14 years
 (Cl. D57—1)



191,378
TELESCOPE OR SIMILAR ARTICLE
 Heinz Kraus, Altenmarkt (Alz), Germany, assignor to
 Fa. Dr. Johannes Heidenhain Feinmechanik und Optik,
 Traunreut, uber Traunstein, Germany
 Filed Dec. 5, 1960, Ser. No. 63,100
 Claims priority, application Germany Sept. 12, 1960
 Term of patent 14 years
 (Cl. D57—1)



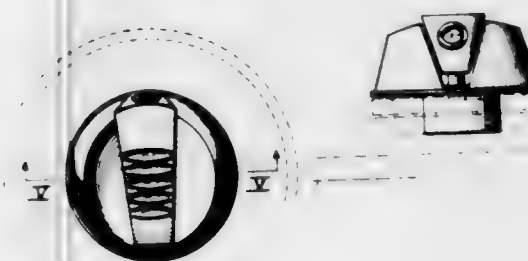
191,379
BOTTLE
 Robert D. Stanley, New York, and Jack Goldstein, Bronx-
 ville, N.Y., assignors, by mesne assignments, to Gen-
 eral Foods Corporation, White Plains, N.Y., a corpo-
 ration of Delaware
 Filed Feb. 3, 1960, Ser. No. 59,258
 Term of patent 14 years
 (Cl. D58—7)



191,380
TRIPOD OR SIMILAR ARTICLE
 Heinz Kraus, Altenmarkt (Alz), Germany, assignor to
 Fa. Dr. Johannes Heidenhain Feinmechanik und Optik,
 Traunreut, uber Traunstein, Germany, a corporation
 of Germany
 Filed Dec. 5, 1960, Ser. No. 63,098
 Claims priority, application Germany Sept. 12, 1960
 Term of patent 14 years
 (Cl. D61—1)



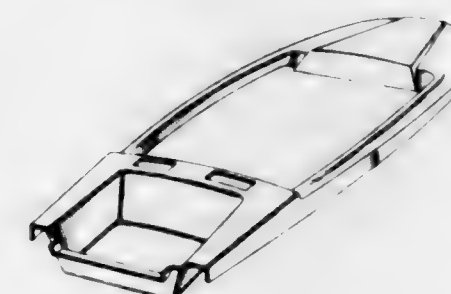
191,381
SPRAY VALVE HEAD OR SIMILAR ARTICLE
 Manley K. Hardison, Glenview, Ill., assignor to Dupli-
 Color Products Company, Inc., Chicago, Ill., a corpora-
 tion of Illinois
 Filed Jan. 30, 1961, Ser. No. 63,744
 Term of patent 14 years
 (Cl. D62—2)



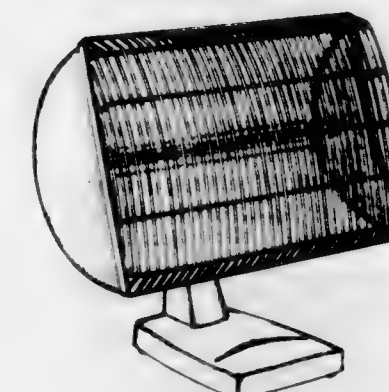
191,382
TAPE EMBOSSEING TOOL
 Dalay Travaglio, Berkeley, Calif., assignor to Dymo In-
 dustries, Inc., Berkeley, Calif., a corporation of Cali-
 fornia
 Filed Jan. 27, 1961, Ser. No. 63,727
 Term of patent 14 years
 (Cl. D64—10)



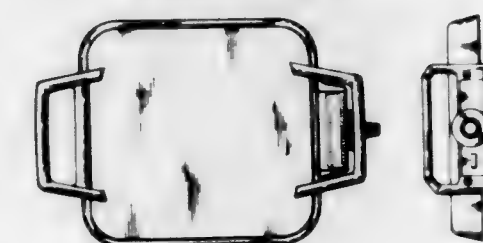
191,383
UNITARY MOTOR BOAT DECK
 Frederick S. Brennan, Evanston, Ill., assignor to Textron
 Inc., Providence, R.I., a corporation of Rhode Island
 Filed Feb. 6, 1959, Ser. No. 54,476
 Term of patent 7 years
 (Cl. D71—1)



191,384
RADIANT HEATER
 Jon W. Hauser, St. Charles Township, Kane County, Ill.,
 assignor to McGraw-Edison Company, Elgin, Ill., a
 corporation of Delaware
 Filed Feb. 6, 1959, Ser. No. 54,481
 Term of patent 14 years
 (Cl. D81—10)



191,385
ELECTRIC HOTPLATE OR SIMILAR ARTICLE
 Jerry E. Wright, Corning, N.Y., assignor to Corning
 Glass Works, Corning, N.Y., a corporation of New
 York
 Filed Oct. 20, 1960, Ser. No. 62,553
 Term of patent 14 years
 (Cl. D81—10)

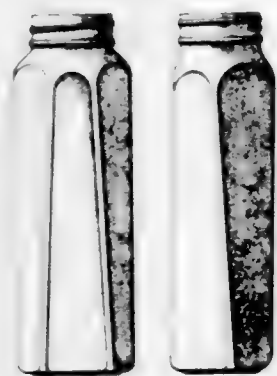


191,386

NURSING BOTTLE

Eugene R. Luedtke, Reedsburg, Wis., assignor to Hanksraft Company, Reedsburg, Wis., a corporation of Wisconsin

Filed July 20, 1960, Ser. No. 61,449
Term of patent 14 years
(Cl. D83-8)



191,387

SPOON ATTACHMENT FOR A DISPENSING CONTAINER

Harold Milton Hansen, Mountainside, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 18, 1960, Ser. No. 61,804
Term of patent 14 years
(Cl. D83-12)

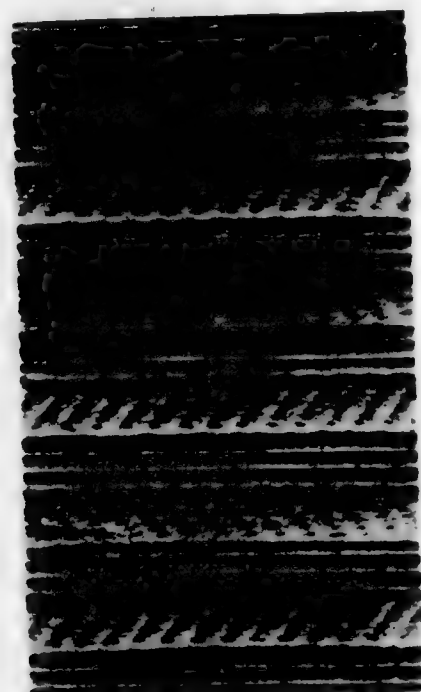


191,388

PUFFED TEXTILE FABRIC

Thomas Richard Lynch, Ware Shoals, S.C., assignor to Riegel Textile Corporation, a corporation of Delaware

Filed Aug. 5, 1959, Ser. No. 57,069
Term of patent 14 years
(Cl. D92-1)



191,389

HARD SURFACE FLOOR COVERING OR SIMILAR ARTICLE

Harry A. Shortway, Glen Rock, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

Filed Sept. 16, 1960, Ser. No. 62,174
Term of patent 14 years
(Cl. D92-17)



191,390

TABLECLOTH

Richard A. Fees, Ardrey, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.

Filed May 9, 1961, Ser. No. 65,078
Term of patent 14 years
(Cl. D92-26)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 19TH DAY OF SEPTEMBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Clapp, Archie J., Jr. Aircraft payload computer. Re. 25,041, 9-19-61, Cl. 235-61.
Frank, Anton R., and W. H. Giles, to Van Buren Machine Corp. Wrapping mechanism and a method of wrapping articles. Re. 25,040, 9-19-61, Cl. 53-27.
Frost, Frederick H., and P. S. Leighton, to S. D. Warren Co. Method of producing high gloss mineral-coated paper and resultant product. Re. 25,039, 9-19-61, Cl. 117-64.
Giles, William H.: See—
Frank, Anton R., and Giles. Re. 25,040.
Leighton, Philip S.: See—
Frost, Frederick H., and Leighton. Re. 25,039.
Ramey, Robert A., Jr. Magnetic amplifier control circuit. Re. 25,038, 9-19-61, Cl. 307-88.
Van Buren Machine Corp.: See—
Frank, Anton R., and Giles. Re. 25,040.
Warren, S. D., Co.: See—
Frost, Frederick H., and Leighton. Re. 25,039.

LIST OF PLANT PATENTEEES

- Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 2,093, 9-19-61, Cl. 47-61.
Jackson & Perkins Co.: See—
Boerner, Eugene S. 2,093.
Scanlon, Edward H. Littleleaf Linden tree. 2,092, 9-19-61, Cl. 47-59.

LIST OF DESIGN PATENTEEES

- Ambrette, Paul. Edible dipping container. 191,348, 9-19-61, Cl. D8-1.
American Can Co.: See—
Hansen, Harold M. 191,387.
Bell & Howell Co.: See—
Oberfell, Allen R. 191,358.
Blickman, S. Inc.: See—
Golden, Philip. 191,352.
Bolcom, Stanton B. Reading stand. 191,360, 9-19-61, Cl. D33-10.
Brennan, Frederick S., to Textron Inc. Unitary motor boat deck. 191,383, 9-19-61, Cl. D71-1.
Buschbom, Floyd E. Impeller hammer for silo unloader or the like. 191,375, 9-19-61, Cl. D55-1.
Buschbom, Floyd E. Impeller hammer for a silo unloader or the like. 191,376, 9-19-61, Cl. D55-1.
Casement Hardware Co. The: See—
Spencer, Charles E. 191,349.
Congoleum-Nairn Inc.: See—
Shortway, Harry A. 191,389.
Corning Glass Works: See—
Wright, Jerry E. 191,385.
Daimler-Benz Aktiengesellschaft: See—
Nallinger, Friedrich K. H., and Wilfert. 191,351.
Deaton, Charles U. Desk. 191,359, 9-19-61, Cl. D33-7.
Dupli-Color Products Co., Inc.: See—
Hardison, Manley K. 191,381.
Durham Enders Razor Co.: See—
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Herman, Bernard, to Stardust, Inc. Lady's slip. 191,347, 9-19-61, Cl. D3-26.
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Altken, George L., to Ferranti, Ltd. Mechanism for mechanically maintaining taut an electrical cable between two relatively rotatable members. 3,001,034, 9-19-61, Cl. 191-12.

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Alexis, Roger, and J. C. Simon, to Compagnie Generale de Telegraphie Sans Fil. Over-the-horizon radio system having automatic frequency shift at predetermined signal-noise ratios. 3,001,064, 9-19-61, Cl. 250-6.
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Alm, Erhard J., to Vulcan Equipment Co. Ltd. Tire spreader and inverter. 3,000,615, 9-19-61, Cl. 254-50.3.
Alsager, Leslie E., and E. S. Sheridan, to United States of America. Navy. Control means comprising a resilient coupling for cooling system elements. 3,000,389, 9-19-61, Cl. 137-68.
Altman, Jacob I., to Deb Shoe Co., Inc. Instep straps. 3,000,119, 9-19-61, Cl. 36-58.5.
Altmann, Heinz C., and G. S. Rugg, to Eastman Kodak Co. Rotary cutter for producing a progressive transverse cut on a web. 3,000,250, 9-19-61, Cl. 83-341.
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Anderson, Arthur W., G. K. Greminger, Jr., G. H. Beaver, and S. M. Rodgers, Jr., to The Dow Chemical Co. Cellulosic materials plasticized with hydroxypropylglycerol. 3,000,763, 9-19-61, Cl. 117-144.

Anderson Bros. Mfg. Co.: See—
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Morgan, Elmer A., and Anderson. 3,000,449.

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Harris, William C., and Anderson. 3,000,035.

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Anner, George: See—
Wettstein, Albert, Anner, Heusler, Ueberwasser, Wieland, Schmidlin, and Billeter. 3,000,882.

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Anthony, John W., and N. W. Lewis, to General Electric Co. Electric lamp mount making method and apparatus. 3,000,407, 9-19-61, Cl. 140-71.8.

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Aris, John J. B., to N.V. Koninklijke Nederlandse Vlieg tuigenfabriek. Machine for joggling shaped metal or metal profiles. 3,000,423, 9-19-61, Cl. 153-11.

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Arnoldy, Roman F. Methods of producing hardfaced surfaces. 3,000,094, 9-19-61, Cl. 29-52.8.

Arpin, Leon G. Speed control for automotive vehicles. 3,000,475, 9-19-61, Cl. 192-3.

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Asadorian, Arthur A., and G. A. Burk, to The Dow Chemical Co. Preparation of alkyl bromides. 3,000,980, 9-19-61, Cl. 260-65.8.

Aske, Charles B., Jr., to Gar Wood Industries, Inc. Tire trim wheel trim auxiliary anchorage means. 3,000,672, 9-19-61, Cl. 301-67.

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Aven, Manuel, to General Electric Co. Method of preparing a green electroluminescent zinc sulphide phosphor. 3,000,834, 9-19-61, Cl. 252-301.6.

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Babayan, Vigen K., to E. F. Drew & Co., Inc. Linear mixed ester lubricants. 3,000,917, 9-19-61, Cl. 260-404.8.

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Bachmann, John H., B. J. De Witt, and F. Strain, to Pittsburgh Plate Glass Co. Reaction product of silica pigment with acidic halides and production thereof. 3,000,749, 9-19-61, Cl. 106-28.8.

Bachlin, Clarence R., to Willcox & Gibbs Sewing Machine Co. Rotary tension device for sewing machines. 3,000,591, 9-19-61, Cl. 242-155.

Bader, Samuel M., to The Carlson Fabrication & Welding Co., Inc. Trailer. 3,000,524, 9-19-61, Cl. 214-512.

Badger Mfg. Corp.: See—
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Baer, Maurice, P. B. Tweed, S. Lerner, and L. Jablansky, to United States of America, Army. Desensitization of cyclotrimethyloltrinitramine with dinitroethylbenzene. 3,000,720, 9-19-61, Cl. 52-5.

Baker, Donald R., and C. E. Loebel, to The Marley Co. Liquid collection structure for use in treating the wood components of cooling towers. 3,000,619, 9-19-61, Cl. 261-10.8.

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Baker, Max P., and F. W. Sampson, to General Motors Corp. Method of assembling a torque transmitting device. 3,000,089, 9-19-61, Cl. 29-43.6.

Baldwin Piano Co. The: See—
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Baltzer, Otto J., to United States of America, Navy. Missile guidance system. 3,001,186, 9-19-61, Cl. 343-6.

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Banoczi, Joseph A. Sound emitting flying saucer and top. 3,000,135, 9-19-61, Cl. 46-63.

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Barry, Kenneth B. Switch operated brake control. 3,000,476, 9-19-61, Cl. 192-3.

Barsky, George, and H. C. Bierman. Method of forming plastic gaskets on metal members. 3,000,759, 9-19-61, Cl. 117-97.

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Bartron, Lester R., to E. I. du Pont de Nemours and Co. Film-forming composition comprising an admixture of particulate polyvinyl fluoride and a lactam. 3,000,843, 9-19-61, Cl. 260-30.2.

Basile, Carmen L., P. Terry, R. R. Tullgren, and R. R. Kaufmann, to Taylor Spring and Mfg. Co. Apparatus for stripping insulation from wire. 3,000,405, 9-19-61, Cl. 140-1.

Batchelder, George W., and G. A. Zimmerman, to Aerojet General Corp. Propellant compositions. 3,000,714, 9-19-61, Cl. 52-5.

Bauerlein, Carl C., to The Dole Valve Co. Pneumatically controlled diaphragm shut off valve. 3,000,607, 9-19-61, Cl. 251-28.

Baughner, Charles E. Propeller mechanism for marine vessels. 3,000,447, 9-19-61, Cl. 170-160.43.

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Baumann, Albert, to Durkoppwerke Aktiengesellschaft. Conveyor distributing system with station selector. 3,000,518, 9-19-61, Cl. 214-11.

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Bennett, Howard J. Sliding multiple door assembly and interior cabinet. 3,000,437, 9-19-61, Cl. 160-33.

Bereskin, Alexander B., to The Baldwin Piano Co. Power supplies. 3,001,120, 9-19-61, Cl. 321-8.

Bergen Telephone Corp.: See—
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Berkley Machine Co.: See—
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Berlin, Milton, and L. M. Rheingold, to Templet Industries, Inc. Die, and method of making same. 3,000,251, 9-19-61, Cl. 83-69.0.

Bernutz, Johannes: See—
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Bert, Samuel. Snow making machine having syrup dispenser. 3,000,189, 9-19-61, Cl. 82-38.0.

Bertullo, Victor H., and F. P. Hettich. Protein hydrolysis. 3,000,789, 9-19-61, Cl. 195-29.

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Bell, Alfred J., and Besserer. 3,000,597.

Bethlehem Steel Co.: See—
Hottenstein, Carl C. 3,000,254.

Bewley, Lawrence L., and J. F. Foster, to Burroughs Corp. Data conversion system. 3,000,556, 9-19-61, Cl. 235-61.8.

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Clachan, Margaret L., McPherson, Tatchell, and Abbott. 3,000,849.

Beyl, Jean J. A. Safety ski binder. 3,000,644, 9-19-61, Cl. 280-11.35.

Bezzerides, Paul A. Machine for applying hot caps and the like. 3,000,139, 9-19-61, Cl. 47-1.

Blanchini, Pietro, to Crinos Industria Farmacobiologica S.p.A. Heparinoid anti-cholesterolemic factor. 3,000,787, 9-19-61, Cl. 167-74.

Bibb, John T., to Tok-Products Co. Light fixture for suspended grid ceiling. 3,001,001, 9-19-61, Cl. 174-71.

Bickel, Hans: See—
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Biekert, Ernst, to Hoffmann-La Roche Inc. Process for the production of amino acids. 3,000,888, 9-19-61, Cl. 260-247.2.

Biel, John H., to Lakeside Laboratories, Inc. Phenylalkylhydrazines and use as psychotherapeutics. 3,000,903, 9-19-61, Cl. 260-340.5.

Bierman, Harry C.: See—
Barsky, George, and Bierman. 3,000,759.

Bigelow, John E., to General Electric Co. Duo-switch gate circuit operable with positive or negative pulses. 3,001,139, 9-19-61, Cl. 328-101.

Billeter, Jean-Rene: See—
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Bimber, Russell M., to Diamond Alkali Co. Chloral derivatives of amino quinoline. 3,000,894, 9-19-61, Cl. 260-288.

Bird, Raymond, and P. Wood, to International Computers and Tabulators Ltd. Electronic divider. 3,000,563, 9-19-61, Cl. 235-187.

Birkenmeyer, Robert D., D. Lednicer, F. Kagan, and B. J. Magrelin, to The Upjohn Co. 17-isonitroso-3-aminoethers of the androstane series. 3,000,910, 9-19-61, Cl. 260-397.

Birmingham Sound Reproducers Ltd.: See—
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Birum, Gail H., and S. A. Heininger, to Monsanto Chemical Co. Toxic arylsulfinyl alkenenitriles. 3,000,927, 9-19-61, Cl. 260-465.

Bischoff, Waldemar O., to American Bosch Arma Corp. Fuel injection apparatus. 3,000,369, 9-19-61, Cl. 123-139.

Bishop, Basil T., G., to D. Napier & Son Ltd. Turbine blade rings and methods of assembly. 3,000,612, 9-19-61, Cl. 253-77.

Ritting, Jesse L. Differential pressure cargo and luggage container. 3,000,418, 9-19-61, Cl. 150-52.

Black, Richard G., to Westinghouse Electric Corp. Electrical components comprising resin cast inside a shell. 3,001,004, 9-19-61, Cl. 174-137.

Blackburn, Walter L. Opposed piston engine. 3,000,366, 9-19-61, Cl. 123-51.

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Boeing Airplane Co.: See—
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Bolt Beranek and Newman Inc.: See—
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Romag Boppardler Maschinenbaugesellschaft m.b.H.: See—
Kaltenegger, Benno. 3,000,278.

Bond Street Jewel Case Corp.: See—
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Bonetti, Giovanni A., to The Atlantic Refining Co. Production of trinitrotoluene. 3,000,972, 9-19-61, Cl. 260-645.

Bonmartini, Francesco G., and W. C. Pattenden, to Esso Research and Engineering Co. Grease composition containing lithium salt of an ester of an acid phosphate. 3,000,821, 9-19-61, Cl. 252-32.5.

Bonn, Theodore H., to Sperry Rand Corp. Magnetic amplifier without ringback. 3,001,084, 9-19-61, Cl. 307-88.

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Borg-Warner Corp.: See—
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Paul, Albert. 3,000,543.

Borletti, F.H. S.p.A.: See—
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Bosch, Robert, G.m.b.H.: See—
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Boschi, Antonio, A. Franceschetti, and G. Martorana, to Societa Applicazioni Gomma Antivibranti S.A.G.A. S.p.A. Resilient joint for a suspension system. 3,000,657, 9-19-61, Cl. 287-85.

Boscia, Archie F., to General Dynamics Corp. Phase detector. 3,001,133, 9-19-61, Cl. 324-53.

Bottoms, Robert R., to Chemetron Corp. Optical resolution of alpha-naphthylethylamines. 3,000,947, 9-19-61, Cl. 260-870.8.

Bouchard, Blanche E.: See—
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Boughton, Lee M., & P. H. Sharp, to P. H. Sharp. Pile casing cutters. 3,000,248, 9-19-61, Cl. 83-101.

Bovay, Harry E., Jr., C. A. Lawler, and L. H. Wheeler, to H. E. Bovay, Jr., Consulting Engineers. Lumber sorter. 3,000,489, 9-19-61, Cl. 200-80.

Bovay, H. E., Jr., Consulting Engineers: See—
Bovay, Harry E., Jr., Lawler, and Wheeler. 3,000,489.

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Bower, John L., to North American Aviation, Inc. Photoelectric gage. 3,001,081, 9-19-61, Cl. 250-222.

Bowers, Roy L., to General Motors Corp. Vapor separation units for internal combustion engines. 3,000,467, 9-19-61, Cl. 183-25.

Bowman, Mark M., Jr., to Phillips Petroleum Co. Thread protector. 3,000,402, 9-19-61, Cl. 138-96.

Boyd, David M., Jr., to Universal Oil Products Co. Method for controlling a process such as the reforming of low octane naphthas. 3,000,812, 9-19-61, Cl. 208-138.

Brachman, Armand E., to E. I. du Pont de Nemours and Co. Polymerization catalyst. 3,000,837, 9-19-61, Cl. 252-429.

Bradmillar, Richard W., to Avco Mfg. Corp. Multistage transistor amplifier. 3,001,145, 9-19-61, Cl. 330-19.

Bradshaw, John A. Machine and method of winding and coiling textile strand material. 3,000,075, 9-19-61, Cl. 28-21.

Brady, Stephen A. Multiple reeling device. 3,000,588, 9-19-61, Cl. 242-86.5.

Braendel, Helmut G., to Wilkening Mfg. Co. Piston ring. 3,000,078, 9-19-61, Cl. 309-45.

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Bray, Frederick H., and R. G. Knight, to International Standard Electric Corp. Automatic telecommunication exchanges. 3,001,029, 9-19-61, Cl. 79-18.

Bray, Malcolm D., and V. C. Stephens, to Eli Lilly and Co. Sulfate salt of erythromycin monoester. 3,000,874, 9-19-61, Cl. 280-210.

Brede, Dwight W., to Ampex Corp. Tape reel hold down device. 3,000,582, 9-19-61, Cl. 242-55.11.

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Eisen, Stefan. 3,000,404.

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British-American Tobacco Co. Ltd.: See—
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Britt, Ronald H., to Marconi's Wireless Telegraph Co. Ltd. Frequency measuring and responsive circuit arrangements. 3,001,132, 9-19-61, Cl. 324-77.

Bro, Manville L., to E. I. du Pont de Nemours and Co. Film-forming composition comprising particulate polyvinyl fluoride dispersed in a lactone. 3,000,844, 9-19-61, Cl. 260-30.4.

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Broadhead, Samuel L., Jr., and M. T. Ludvigson, to Collins Radio Co. Variable inductor having a variable tap. 3,001,161, 9-19-61, Cl. 336-15.

Brown, Calvin F., to United States of America, Navy. Low spin double purpose mercury switch. 3,001,044, 9-19-61, Cl. 200-80.

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Brown, John F., Jr., to General Electric Co. Organopolysiloxane composition. 3,000,858, 9-19-61, Cl. 260-46.5.

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Brown, Northrop, D. L. Funck, and C. E. Schweitzer, to E. I. du Pont de Nemours and Co. Polymerization of aqueous formaldehyde to produce high molecular weight polyoxymethylene. 3,000,861, 9-19-61, Cl. 260-67.

Brown, Reynolds D., Jr., to Philco Corp. Wiring systems comprising panels, components, and bent lead wires. 3,001,104, 9-19-61, Cl. 317-101.

Brown, William E., to General Motors Corp. Terminal connection. 3,001,006, 9-19-61, Cl. 174-153.

Bruck, George, to Avco Mfg. Corp. Low noise radio frequency amplifier. 3,001,143, 9-19-61, Cl. 330-17.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Pressure reducing device for hydraulic servomechanisms. 3,000,356, 9-19-61, Cl. 121-38.

Brugger, Wilhelm, to Th. Goldschmidt A.G. Manufacture of zirconium oxide. 3,000,703, 9-19-61, Cl. 23-140.

Brunker, Clayton J. Lock proof two position spool valve. 3,000,390, 9-19-61, Cl. 137-625.48.

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- Bryant, Austin U., to Grove Valve and Regulator Co. Method for the manufacture of valves. 3,000,083, 9-19-61, Cl. 29-157.1.
- Bryant, Austin U., to Grove Valve and Regulator Co. Valve construction. 3,000,609, 9-19-61, Cl. 251-306.
- Bryant, Austin U., to Grove Valve & Regulator Co. Valve construction. 3,000,610, 9-19-61, Cl. 251-327.
- Bryant Electric Co., The: See—
- Smith, Clarence M.: See—
- Bryant, William C., and H. P. Sherman; said Bryant assor. to said Sherman. Printing by diazotization. 3,000,298, 9-19-61, Cl. 101-129.
- Buchter, Hugo H., to Monsanto Chemical Co. High pressure valve. 3,000,227, 9-19-61, Cl. 74-101.
- Buck, Dudley A., to Arthur D. Little, Inc. Electrical memory circuits. 3,001,178, 9-19-61, Cl. 340-173.1.
- Buckley, Sidney E., and D. H. Owen, to International Standard Electric Corp. Manufacture of metal oxides and of ferrites. 3,000,828, 9-19-61, Cl. 252-62.5.
- Buehler, John H.: See—
- Peters, Edward L., Weinstein, and Buehler. 3,000,216.
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- Buie, John C., and R. M. Rault. Pipeline cleaning device. 3,000,028, 9-19-61, Cl. 15-104.06.
- Builders Equipment Co.: See—
- Thomas, Paul M., and Wright. 3,000,520.
- Buisson, André, to Societe Lorraine des Anciens Etablissements de Dietrich et Cie de Luneville. Supporting structure for the chassis of a rolling vehicle. 3,000,648, 9-19-61, Cl. 280-104.5.
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- Bullard, Edward C., A. A. Tomenceak, and J. E. Ettore, to The Bullard Co. Transmission. 3,000,228, 9-19-61, Cl. 74-364.
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- Burgess Products Co., Ltd.: See—
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- Asadorian, Arthur A., and Burk. 3,000,980.
- Burrell, Ellis: See—
- Power, Walter C., and Burrell. 3,000,310.
- Burrroughs Corp.: See—
- Bowley, Lawrence L., and Foster. 3,000,556.
- Innes, Frank T.: See—
- Burrows, Godfrey, to General Motors Corp. Vehicle frame. 3,000,650, 9-19-61, Cl. 280-106.
- Burnett, Everett R., to Borg-Warner Corp. Transmission mechanism. 3,000,234, 9-19-61, Cl. 74-688.
- Bush, George B., to United States of America, Navy. Roll stabilization system. 3,000,598, 9-19-61, Cl. 244-14.
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- Buswell, Richard F., to United Aircraft Corp. Can burner design. 3,000,182, 9-19-61, Cl. 60-39.65.
- Butkiewicz, Sophie. Pom pon ring. 3,000,074, 9-19-61, Cl. 28-2.
- Butler, Hardie T., Jr. Golf game device. 3,000,636, 9-19-61, Cl. 273-176.
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- Worn, David K., and Buttress. 3,000,802.
- Burta, Anderson W. Distributor cap. 3,001,035, 9-19-61, Cl. 200-19.
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- Schulze, John H., and Bye. 3,000,386.
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- Volossevich, George. 3,000,484.
- Cahoon, Nelson C., and J. P. Oliver to Union Carbide Corp. Reference half-cell. 3,000,804, 9-19-61, Cl. 204-195.
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- Camp, S. H., & Co.: See—
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- Campbell, George W., Jr., to United States Borax & Chemical Corp. Method for producing sodium borates of lowered iron content. 3,000,700, 9-19-61, Cl. 23-59.
- Campbell, Gregory J., to W. T. Neiman. Switch. 3,001,040, 9-19-61, Cl. 200-67.
- Campbell Soup Co.: See—
- Sillars, Frederick S.: See—
- Campbell, William E., L. H. Brown, and A. L. Antonio, to Aerojet-General Corp. Propellant compositions. 3,000,718, 9-19-61, Cl. 52-5.
- Canadian International Paper Co.: See—
- Hierbet, John H. E., Beazley, and Krausig. 3,000,875.
- Cantrel, Kenneth E.: See—
- Goodhue, Lyle D., Louthan, and Cantrel. 3,000,779.
- Capitol Records, Inc.: See—
- Uecker, Edward H., and Nessel. 3,001,019.
- Carbone, Peter A.: See—
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- Carey, Charles A.: See—
- Wilp, Elmar K., Rubinstein, Ohlson, and Carey. 3,000,918.
- Cargill Detroit Corp.: See—
- Ducker, William H., and Fisher. 3,000,426.
- Carleton, James T.: See—
- Reuther, John F., and Carleton. 3,001,123.
- Carlsen, Earl W., H. Ryder, and A. Baum, to United States of America, Agriculture. Pallet box filler. 3,000,162, 9-19-61, Cl. 53-248.
- Carlsen, Helmuth W., to AB Interconsult. Transport tanks having a substantially spherical wall. 3,000,530, 9-19-61, Cl. 220-1.
- Carlson Fabrication & Welding Co., Inc., The: See—
- Bader, Samuel M.: See—
- Carlson, Walter. Cleaning device for floors and the like. 3,000,039, 9-19-61, Cl. 15-534.
- Carlson, Walter. Cleaning device. 3,000,040, 9-19-61, Cl. 15-567.
- Carnvale, Anthony: See—
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- Carpigiani, Poerio. Continuous ice-cream machine. 3,000,194, 9-19-61, Cl. 62-342.
- Carrier Corp.: See—
- Garland, Robert J.: See—
- Carritt, Dayton E., and J. W. Kanwisher. 20% to Walter G. Finch. Electrode measuring device. 3,000,805, 9-19-61, Cl. 204-195.
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- Casavan Industries: See—
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- Case, E. M.: See—
- Heavner, Earl R.: See—
- Cataldo, John B., to I-T-E Circuit Breaker Co. Retractable finger bus duct plug with three position handle. 3,001,037, 9-19-61, Cl. 200-50.
- Catania, Joseph. Bottom dump charging bucket. 3,000,661, 9-19-61, Cl. 294-69.
- Cathey, Carol M., W. H. Finch, and A. R. Bechtold. Spherical amusement device. 3,000,022, 9-19-61, Cl. 9-310.
- Catri, Thomas P., to West Virginia Pulp and Paper Co. Display stand. 3,000,546, 9-19-61, Cl. 229-16.
- Celanese Corp. of America: See—
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- Chaffee, Emory L.: See—
- Hammond, John H., Jr., and Chaffee. 3,001,187.
- Hammond, John H., Jr., and Chaffee. 3,001,192.
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- Chance, A. B. Co.: See—
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- Chappey, Marc A. Structures for a field-effect transistor. 3,001,111, 9-19-61, Cl. 317-235.
- Charlton, Norman K., to Hudson Pulp & Paper Corp. Valve sleeve for bags. 3,000,550, 9-19-61, Cl. 229-62.5.
- Check, Mathias M., to The Yale and Towne Mfg. Co. Door closer with back check. 3,000,043, 9-19-61, Cl. 16-64.
- Chemtron Corp.: See—
- Bottoms, Robert R.: See—
- Chemische Fabrick L. van der Grinten N.V.: See—
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- Cheney, Wendell C., and M. G. Whitfield; said Cheney assor. to Gould-National Batteries, Inc. Heavy duty pistons. 3,000,676, 9-19-61, Cl. 309-14.
- Cherry Electrical Products Corp.: See—
- Cherry, Walter L., Jr.: See—
- Cherry, Walter L., Jr., to Cherry Electrical Products Corp. Snap-action switch. 3,001,042, 9-19-61, Cl. 200-67.
- Chesnut, James R., and P. J. Plishner; said Chesnut assor. to said Plishner. Multi-conductor electrical connector. 3,001,167, 9-19-61, Cl. 339-89.
- Chicago Bridge and Iron Co.: See—
- Zick, Leonard P.: See—
- Chicago Mfg. Corp.: See—
- Mulholland, William G., and Osmar. 3,000,381.
- Chilcoat, Murray A.: See—
- Piet, Meyer, and Chilcoat. 3,000,655.
- Christensen, Edward R., J. Ryer, and H. V. Hess, to Texaco Inc. Upgrading a naphtha by separation into two fractions and separate treatment of each fraction. 3,000,810, 9-19-61, Cl. 208-79.
- Christgau, Arthur, to West Virginia Pulp and Paper Co. Apparatus for drying paper by electrical conductivity. 3,000,106, 9-19-61, Cl. 34-1.
- Christian, Joseph D., to Halo Flite International Inc. Speed change device. 3,000,229, 9-19-61, Cl. 74-421.
- Christie, Chester D., to Eaton Mfg. Co. Axle mechanism. 3,000,456, 9-19-61, Cl. 180-22.
- Christoph, Walter P., to United States of America, Navy. Hydraulic rectifying bridge circuit. 3,001,175, 9-19-61, Cl. 340-13.
- Chrysler Corp.: See—
- Frostie, Leonard E.: See—
- Chrysler Corp. of Canada, Ltd.: See—
- McMahon, Thomas C.: See—
- Cianchi, Alfredo L. G., to Welwyn Electrical Laboratories Ltd. Vitreous materials. 3,000,745, 9-19-61, Cl. 100-39.
- Ciba Pharmaceutical Products, Inc.: See—
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- Hoffmann, Karl, and Keble. 3,000,899.
- Schittler, Emil. 3,000,893.
- Wettstein, Albert, Vischer, and Bickel. 3,000,786.
- Wettstein, Albert, Anner, Heuser, Ueberwasser, Wieland, Schmidlin, and Billeter. 3,000,882.
- Wettstein, Albert, Vischer, and Meyer. 3,000,884.
- Cinestat Corp.: See—
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- Cislo, Casimer J., to General Motors Corp. Dual height leveling valve for vehicle air suspension. 3,000,400, 9-19-61, Cl. 137-627.5.
- Cislo, Casimer J., to General Motors Corp. Air spring assembly and control device therefor. 3,000,624, 9-19-61, Cl. 267-65.
- Clachan, Margaret L., N. S. McPherson, K. R. Tatchell, and T. A. Abbott, to Bexford Ltd. Linear copolycondensation product comprising recurring aromatic carbonate and carboxylic acid ester units in the polymer chain, and article formed thereof. 3,000,840, 9-19-61, Cl. 260-45.4.
- Clancy, John F., deceased, by M. F. Clancy, executrix, to General Motors Corp. Annul accumulator instruments. 3,000,580, 9-19-61, Cl. 235-117.
- Clancy, Marie F.: See—
- Clancy, John F.: See—
- Clarage Fan Co.: See—
- Foskett, Maynard L.: See—
- Clark Equipment Co.: See—
- Ross, Walter E.: See—
- Clark, Gerald A., and C. B. Havens, to The Dow Chemical Co. Light stable polymer compositions. 3,000,855, 9-19-61, Cl. 260-45.95.
- Clark, John M., to Curtiss-Wright Corp. Seat construction. 3,000,670, 9-19-61, Cl. 297-461.
- Clark, Walter L., to American Cyanamid Co. Strippable coatings. 3,000,748, 9-19-61, Cl. 106-180.
- Clark, William E.: See—
- Marlo, Vernon L., Luthy, and Clark. 3,000,037.
- Clarke, Herbert A., to United States of America, Navy. Regulated power supply systems. 3,001,082, 9-19-61, Cl. 307-19.
- Clarke, Louis A.: See—
- Goldsky, Arthur R., and Clarke. 3,000,991.
- Clarke, Louis A., and G. W. Eckert, to Texaco Inc. Preparation of lubricating greases from unsaturated fatty acid materials. 3,000,823, 9-19-61, Cl. 252-35.
- Clarkson, George M.: See—
- Keener, John. 3,000,654.
- Claus, Jacques: See—
- Gauguin, Roland, and Claus. 3,000,699.
- Cleek, Charles L., Morse code hand signaling devices. 3,001,185, 9-19-61, Cl. 340-366.
- Clem, Everett W., to Rice Barton Corp. Windup roll drive. 3,000,584, 9-19-61, Cl. 242-66.
- Close, Warren J., to Abbott Laboratories. a-cyclopropylbenzylurea. 3,000,938, 9-19-61, Cl. 260-553.
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- Cochran, Clarence W., to United-Carr Fastener Corp. Molding and the like fastening devices. 3,000,066, 9-19-61, Cl. 24-73.
- Cochran, Clarence W., to United-Carr Fastener Corp. Fastening device. 3,000,231, 9-19-61, Cl. 74-502.
- Coaders, Johann. Clutching device for washing and drying machines. 3,000,483, 9-19-61, Cl. 192-103.
- Cohn, David, to Model Plastic Corp. Doll's head and eye mounting means therefor. 3,000,136, 9-19-61, Cl. 46-169.
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- Collier, Donald W., to McGraw-Edison Co. Arc interrupting device. 3,001,050, 9-19-61, Cl. 200-20.
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- Collins, Marlon C. Detachable ear plugs for stethoscopes. 3,000,463, 9-19-61, Cl. 181-24.
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- Cornell, Edward S., Jr., to Penn-Union Electric Corp. Neutral bar connector. 3,001,172, 9-19-61, Cl. 339-242.
- Cornell, Edward S., Jr., to Penn-Union Electric Corp. Connector. 3,001,174, 9-19-61, Cl. 339-263.
- Couey, Tom T. Fishing apparatus. 3,000,133, 9-19-61, Cl. 43-37.
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- Crabb, Merle W., to General Precision, Inc. Autopilot simulator. 3,000,112, 9-19-61, Cl. 35-12.
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- Craven, William J., to Esso Research and Engineering Co. Heat and light stabilization of solid polypropylene. 3,000,857, 9-19-61, Cl. 260-45.95.
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- Cusick, John W., to G. D. Searle & Co. 2-acyl-10-oxalkyl-piperidinoalkylphenothiazines and process. 3,000,865, 9-19-61, Cl. 260-243.
- Dahlen, Sven E., and G. Nilsson. Method for packing products and a device for carrying out said method. 3,000,153, 9-19-61, Cl. 53-33.
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- Danzinger, William, and H. Roth, to Continental Vending Machine Corp. Vending machine. 3,000,539, 9-19-61, Cl. 221-129.
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- De Benedetti, Harold B., to Tidewater Oil Co. Cleaning tool. 3,000,036. 9-19-61. Cl. 15-314.
- De Boalt, Fred F., to Aluminum Co. of America. Sampling apparatus. 3,000,219. 9-19-61. Cl. 73-422.
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- Delany, Frank M., and K. Daulzidas, to National Pneumatic Co., Inc. Push door mechanism. 3,000,361. 9-19-61. Cl. 121-44.
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- Denkewalter, Robert G., and J. Gillin, to Merck & Co., Inc. Antibiotic adsorption process. 3,000,792. 9-19-61. Cl. 195-80.
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- Depew, Harlan A., to American Zinc Lead & Smelting Co. Process for the tanning of hides using zinc compounds. 3,000,689. 9-19-61. Cl. 8-94.25.
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- De Quant, Hans, to North American Philips Co., Inc. Low-frequency amplifier. 3,001,149. 9-19-61. Cl. 330-143.
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- De Vito, Angelo R., to L. W. Mensimer, trustee. Door control mechanism. 3,000,204. 9-19-61. Cl. 70-264.
- De Wald, Horace A., and D. P. Hylander, to Parke, Davis & Co. Quaternary salts of chlorophenol esters of amino acids. 3,000,922. 9-19-61. Cl. 260-459.
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- Dietert, Harry W., and R. L., to Harry W. Dietert Co. End point moisture content control for sand. 3,000,064. 9-19-61. Cl. 22-89.
- Dietert, Harry W., and R. L., to Harry W. Dietert Co. End point moisture control for solid granular material. 3,000,065. 9-19-61. Cl. 22-89.
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- Dietert, Harry W., and R. L. 3,000,064.
- Dietert, Harry W., and R. L. 3,000,065.
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- Dietert, Harry W., and R. L. 3,000,064.
- Dietert, Harry W., and R. L. 3,000,065.
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- Dixon, Reginald J., and L. Jones, to Wickman Ltd. Apparatus for automatically transferring workpieces to and from a lathe or other machine tool. 3,000,516. 9-19-61. Cl. 214-1.
- Doak, Kenneth W., and A. E. Jeltsch, to Koppers Co., Inc. Process of promoting crystallization of isotactic polystyrene with a crystallization enhancer. 3,000,845. 9-19-61. Cl. 260-30.6.
- Dobrats, Elmer H., to Koppers Co., Inc. Trialkylborane process. 3,000,961. 9-19-61. Cl. 260-606.5.
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- Donker, Hendrik J. L. Method of manufacturing progressive burning molded nitrocellulose gun powder. 3,000,721. 9-19-61. Cl. 52-20.
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- Downing, Alan H. Packaging method and means. 3,000,495. 9-19-61. Cl. 208-59.
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- Dubuisson, Bernard L. Y., to Societe Francaise d'Optique et de Mecanique. Device for determining the orientation in space of an apparatus at a given time. 3,000,284. 9-19-61. Cl. 95-12.5.
- Ducker, William H., and L. K. Fisher, to Cargill Detroit Corp. Method and apparatus for truing circular rings. 3,000,426. 9-19-61. Cl. 153-32.
- Du Grenier, Francis C., and F. B. Perri, said Perri assor. to B. E. Bouchard. Multi-price vending machine. 3,000,485. 9-19-61. Cl. 194-92.
- Duinker, Simon, to North American Philips Co., Inc. Frequency transformation device. 3,001,122. 9-19-61. Cl. 321-69.
- Duncan, Daymond D., and D. E. Wood. Method of and filter for purifying exhaust gases of internal combustion engines. 3,000,692. 9-19-61. Cl. 23-2.
- Dunlap, Charles K., W. B. Broadbent, and J. K. Taylor, to Sonoco Products Co. Pirn barrel and method of forming same. 3,000,590. 9-19-61. Cl. 242-118.31.
- Dunlap, Henry F., W. D. Crozier, and R. M. Bleakney, to United States of America, Navy. Projectile. 3,000,316. 9-19-61. Cl. 102-93.
- Dunn, Charles B., to Anglers Mfg. Co. Fishing reel brake. 3,000,477. 9-19-61. Cl. 192-14.
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- Brown, Northrop, Funk, and Schweitzer. 3,000,861.
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- Dyer, Charles H., to Western Alloy Products Co. Sintered tungsten carbide alloy product. 3,000,087. 9-19-61. Cl. 29-182.8.
- Eagleson, Hodge M. Double acting two-stroke cycle engine. 3,000,367. 9-19-61. Cl. 123-83.
- Ealet, Pierre, to Societe Anonyme dite: Etablissements Gustin Flis. Machine for cutting up wood, especially sawmill scraps. 3,000,411. 9-19-61. Cl. 144-176.
- Eastman, du Bois, and B. H. Sage, to Texaco Inc. Coal gasification apparatus. 3,000,711. 9-19-61. Cl. 48-43.
- Eastman Kodak Co. See—
- Altman, Heinz C., and Rugg. 3,000,250.
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- Hart, Robert H., and Nations. 3,000,906.
- Hodges, Howard T., and McGuire. 3,000,425.
- Karlson, Richard W. 3,000,736.
- Martin, James C., and Brannock. 3,000,747.
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- Edelman, Aaron P. Swimming pool alarm unit. 3,001,184. 9-19-61. Cl. 340-261.
- Edelmann, Hans, to Siemens-Schuckertwerke Aktiengesellschaft. Economic dispatch computer for electric intermeshed power distribution system. 3,000,566. 9-19-61. Cl. 235-185.
- Edgerton, William H., M. Gordon, and J. W. Wilson, to Smith Kline & French Laboratories. Substituted arylalkyl phenothiazinylalkyl piperazines. 3,000,886. 9-19-61. Cl. 260-243.
- Eggers, Gerhard, and E. Haberkorn, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Carrier aircraft having an annular wing. 3,000,593. 9-19-61. Cl. 244-2.
- Elfert, Robert L., and B. M. Marks, to E. I. du Pont de Nemours and Co. Polymethacrolein derivatives. 3,000,862. 9-19-61. Cl. 260-67.
- Elsen, Stefan, to Bridgeport Fabrics, Inc. Weaving machine. 3,000,403. 9-19-61. Cl. 139-124.
- Elsen, Stefan, to Bridgeport Fabrics, Inc. Narrow fabric. 3,000,404. 9-19-61. Cl. 139-383.
- Eisenhauser, Ray J., and S. J. Zajac, to Standard Oil Co. Thixotropic oleaginous compositions containing the reaction product of an abietyl amine and an organic phosphate. 3,000,820. 9-19-61. Cl. 252-32.5.
- Electric & Musical Industries Ltd. See—
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- Elliott Addressing Machine Co. See—
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- Wheeler, Edward S., and Ellis. 3,000,905.
- Elphick, George S., to Bush and Rank Cintel Ltd. Apparatus for photographic printing. 3,000,286. 9-19-61. Cl. 95-73.
- Elvestrom, Victor, to Cinesat Corp. Pictorial display device. 3,000,125. 9-19-61. Cl. 40-137.
- Emanuel, Roberto. Vehicle washing plant. 3,000,025. 9-19-61. Cl. 15-21.
- Emenaker, Leo J., and M. M. Siera, to The Bendix Corp. Method of making magnetic transducer heads. 3,000,078. 9-19-61. Cl. 29-155.5.
- Emery, Jerrell B., to The Dow Chemical Co. Propagation of modified infectious canine hepatitis virus in tissue cultures of pig kidney and the preparation of a vaccine therefrom. 3,000,788. 9-19-61. Cl. 167-78.
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- English, William D., and A. L. McCloskey, to United States Borax & Chemical Corp. Process for the production of arylborazoles. 3,000,937. 9-19-61. Cl. 260-551.
- Entin, Leonard P., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,000,221. 9-19-61. Cl. 73-517.
- Erdmann, August. Tool or tackle box. 3,000,535. 9-19-61. Cl. 220-55.7.
- Ericsson, Eric A. See—
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Poland, Charles O. 3,000,296.

Industrial Nucleonics Corp.: See—
Alexander, Frank M. 3,000,438.
Alexander, Frank M., and Holben. 3,001,073.
Crump, Jack G. 3,001,075.
Crump, Jack G. 3,001,076.
Reider, James E. 3,001,074.
Industrial Tool Engineering Co.: See—
Celovsky, Michael J. 3,000,147.
Ingham, William E. to Electric & Musical Industries Ltd.
Message selection in electrical communication or control systems. 3,001,176, 9-19-61, Cl. 340-147.
Innes, Frank T., to Burroughs Corp. Digital computer input. 3,000,555, 9-19-61, Cl. 235-61.6.
International Business Machines Corp.: See—
Beck, John W. 3,001,140.
Gillman, Sol. 3,000,797.
Marinace, John C. 3,000,798.
May, Gordon H. 3,000,359.
Schreiner, Kenneth E. 3,000,564.
Schultz, Frederick A. 3,001,171.
Trapnell, Frederick M., Jr., and Bonner. 3,001,147.
International Cigar Machinery Co., Inc.: See—
Rosenberg, Sheldon. 3,000,765.
International Computers and Tabulators Ltd.: See—
Bird, Raymond, and Wood. 3,000,563.
International Nickel Co., Inc.: See—
Worn, David K., and Buttress. 3,000,802.
International Standard Electric Corp.: See—
Bray, Frederick H., and Knight. 3,001,029.
Buckley, Sidney E., and Owen. 3,000,828.
Kruitbof, Jakob, Nys, and Donceel. 3,001,022.
Steinbach, Heins, and Bernutz. 3,001,024.
Wright, Ramond P. G., and Rice. 3,001,021.
Interplanetary Research & Development Corp.: See—
Sedlaczek, John, Jr. 3,000,574.
Iowa, State of, for the use and benefit of the State University of Iowa: See—
Schulze, John H., and Bye. 3,000,386.
Iron Lung Ventilator Co.: See—
Hill, Francis U., and Simon. 3,000,109.
Ito, Sukehiro: See—
Morita, Masasuke, and Ito. 3,001,068.
Jablonsky, Louis: See—
Bae, Maurice, Tweed, Lerner, and Jablonsky. 3,000,720.
Jackel, Arthur P., and D. E. Stark, to Westinghouse Air Brake Co. Coordination circuits for remote control and indication systems. 3,001,182, 9-19-61, Cl. 340-180.
Jackson, John M., and P. A. Macklin, to Armco Steel Corp. Coating metallic sheet or strip material with powdered annealing separator substances. 3,000,752, 9-19-61, Cl. 117-17.
Jackson, Winston J., Jr.: See—
Caldwell, John R., and Jackson. 3,000,864.
Jacobi, Ernst: See—
Van Schoor, Albert, Jacobi, Lust, Flemming, and Muller. 3,000,780.
Jacobs, Henri J. A. M., and L. F. van de Weijden, to North American Philips Co., Inc. Time switch circuit arrangement. 3,001,138, 9-19-61, Cl. 328-72.
Jacque, James M., to The Astatic Corp. Stylus securing means for phonograph pickup cartridges. 3,000,639, 9-19-61, Cl. 274-37.
Jacque, James M., to The Astatic Corp. Self-supporting electro-mechanical transducer assembly. 3,001,031, 9-19-61, Cl. 179-100.41.
Jahn, Carl M.: Scaffold jack. 3,000,805, 9-19-61, Cl. 248-240.
Janssen, Paul A. J. 1-thenoylalkyl-4-aryloxyperazines. 3,000,891, 9-19-61, Cl. 260-268.
Janssen, Paul A. J. 1-aryloxyalkyl-4-aryloxyperazines. 3,000,892, 9-19-61, Cl. 260-268.
Jaschke, Aurelia. Wool-wool producing machine. 3,000,412, 9-19-61, Cl. 144-185.
Jaynes, Arthur R.: See—
Jaynes, William L., Jr. 3,000,558.
Jaynes, William L., Jr., to A. R. Jaynes. Pressure computers. 3,000,558, 9-19-61, Cl. 235-86.
Jeanes, Aileen R., and J. H. Sloneker, to United States of America, Agriculture. Method of producing an atypically salt-responsive alkali-deacetylated polysaccharide. 3,000,790, 9-19-61, Cl. 195-31.
Jefferson Chemical Co., Inc.: See—
Milligan, John G. 3,000,964.
Roberts, George B., and Moss. 3,000,909.
Speranza, George P. 3,000,963.
Jeltsch, Arnold E.: See—
Doak, Kenneth W., and Jeltsch. 3,000,845.
Jemison, William H.: See—
Klumpp, Ferdinand, Jr., and Jemison. 3,001,007.
Jennings Radio Mfg. Corp.: See—
Racz, Louis J., and Roesser. 3,001,046.
Jennings, Webb C., I. T. Swartwood, and R. A. Sampson, to Sun Industries, Inc. Handle for containers. 3,000,527, 9-19-61, Cl. 215-100.
Jensen, James L., to Minneapolis-Honeywell Regulator Co. Electrical apparatus. 3,001,125, 9-19-61, Cl. 323-66.
Jochema, Pieter J. W., and H. A. B. de Miranda, to North American Philips Co., Inc. Device responding to the difference between two input signals. 3,001,088, 9-19-61, Cl. 307-86.5.
Jodock, Marvin S., to W. E. Rockhill and A. D. Peterson, d.b.a. Globe Plastic Co. Engine inlet plug. 3,000,533, 9-19-61, Cl. 220-24.5.
Johna-Manville Corp.: See—
Swenson, John H. 3,000,776.
Johna-Manville Fiber Glass Inc.: See—
Sokal, Andrew L. 3,000,585.
Johnson, Arnold E., and L. Peretti, to Arvey Corp. Page turning device. 3,000,124, 9-19-61, Cl. 40-104.

Johnson, Arthur E., to United States of America, Navy. Omnidirectional inertial switch. 3,001,039, 9-19-61, Cl. 200-61.45.
Johnson, Ernest A. Sampling mechanism. 3,000,220, 9-19-61, Cl. 73-424.
Johnson, John H., and J. E. Fields, to Monsanto Chemical Co. Dispersing agents. 3,000,840, 9-19-61, Cl. 280-8.
Johnson & Johnson: See—
Ganz, Henry, Pasquine, and Belden. 3,000,430.
Johnson, Karl Georg: See—
Lundkvist, Karl A., Ericsson, Johnson and Alexandersson. 3,001,023.
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Johnson, S. C. & Son, Inc.: See—
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Johnson, Stanley L., to Minnesota Mining & Mfg. Co. Contact wheel for abrasive belts. 3,000,149, 9-19-61, Cl. 51-141.
Johnson, Wallace J. S., and R. E. Fisher, to Up-Right, Inc. Folding scaffold. 3,000,466, 9-19-61, Cl. 182-118.
Johnston, Robert A., E. K. Holden, and R. A. Moltenbrey, to E. du Pont de Nemours and Co. Process for coating substrates with a vapor permeable polymeric coating. 3,000,757, 9-19-61, Cl. 117-63.
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Jones, John P., C. A. Cobb, and J. T. Williams, to Whirlpool Corp. Coaxial flow drier. 3,000,108, 9-19-61, Cl. 34-133.
Jones, Joseph H., to Copperweld Steel Co. Manufacture of bimetallic billets. 3,001,059, 9-19-61, Cl. 219-137.
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Jongeneel, Albert M. Plant thinning machine. 3,000,450, 9-19-61, Cl. 172-94.
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Riches, Denis G., and Jorgensen. 3,000,578.
Joswig, Frederic W.: See—
Gay, Jacob D., Jr., and Joswig. 3,000,531.
Joy Mfg. Co.: See—
Densmore, Neal W. 3,000,620.
Juckless, Paul R., to The Dow Chemical Co. Preparation of boron trichloride. 3,000,705, 9-19-61, Cl. 23-205.
Kafka, Bedrich, to Meopta Prerov, narodni podnik. Photoelectric exposuremeter for photographic or moving-picture pickup camera. 3,000,283, 9-19-61, Cl. 95-10.
Kagan, Fred: See—
Birkenmeyer, Robert D., Lednicher, Kagan, and Magerlein. 3,000,910.
Kaiser Aluminum & Chemical Corp.: See—
Duskey, Edmund L., and Halter. 3,000,274.
Kaiser, Arthur, and C. Tishler, to Sperry Rand Corp. Current pulse generator. 3,001,091, 9-19-61, Cl. 307-88.5.
Kalamazoo Mfg. Co.: See—
Winkel, Herbert C., and McAlpine. 3,000,341.
Kalart Co., Inc.: See—
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Kalfalan, Meguer V. Time base generator. 3,000,150, 9-19-61, Cl. 331-153.
Kalil, Eugene J.: See—
Grant, Nicholas J., Goetzl, and Kalil. 3,000,734.
Kalle Aktiengesellschaft: See—
Selfried, Walter, and Ott. 3,000,054.
Kaltenegger, Benno, to Bomag Hoppard Maschinenbaugesellschaft m.b.H. Movable device for rolling road surfaces and the like. 3,000,278, 9-19-61, Cl. 94-50.
Kanwisher, John W.: See—
Carritt, Dayton E., and Kanwisher. 3,000,805.
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Karchner, Jean H., and M. T. Walker, now by change of name M. W. Eastwood, to Emo Research and Engineering Co. Purification of gas. 3,000,988, 9-19-61, Cl. 260-677.
Karlson, Richard W., to Eastman Kodak Co. Photographic silver halide diffusion transfer process. 3,000,736, 9-19-61, Cl. 96-29.
Karrer, Sebastian: See—
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Kassel, Martin, G. Martens, and H. J. Hildenbrand, to Keinzle Apparate G.m.b.H. Process for generating series of electrical pulses with a selectable number of individual pulses. 3,001,137, 9-19-61, Cl. 328-38.
Kaufmann, Robert R.: See—
Basile, Carmen L., Terry, Tullgren, and Kaufmann. 3,000,405.
Kawasaki, Kiyoshi. Drill chuck. 3,000,642, 9-19-61, Cl. 279-62.
Kaweco Badische Feuillefederfabrik Friedrich Grube: See—
Grube, Wilhelm and F. 3,000,352.
Kebrie, Jindrich: See—
Hoffmann, Karl, and Kebrie. 3,000,899.
Keener, John, 33 1/4% to G. M. Clarkson, and 33 1/4% to G. C. Holliday. Fifth wheel adapter. 3,000,654, 9-19-61, Cl. 280-433.
Kehoe, James E.: See—
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Kassel, Martin, Martens, and Hildenbrand. 3,001,137.
Keller, Daniel F.: See—
Gunning, Harry E., and Keller. 3,000,735.
Keller, Richard: See—
Ruegg, Hans, Keller, and Klopfer. 3,000,197.
Keller, Wayne H.: See—
Spedding, Frank H., Wilhelm, and Keller. 3,000,726.
Kelley, Joseph M., Jr.: See—
Hill, Ralph M., Kelley, and Lovett. 3,000,990.

Kellogg, Loren P. Bow stringer. 3,000,628, 9-19-61, Cl. 260-205.
Kellogg, M. W. Co.: See—
Greco, Saverio G. 3,000,188.
Kemper, Ray T. Thermal insulation for pipe. 3,000,433, 9-19-61, Cl. 154-28.
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Maurer, Leslie B. 3,000,019.
Kennedy Van Saun Mfg. & Eng. Corp.: See—
Ferguson, Lester R. 3,000,577.
Kerr, Charles, Jr., to Westinghouse Electric Corp. Rectifier apparatus. 3,001,121, 9-19-61, Cl. 321-8.
Kerr-McGee Oil Industries, Inc.: See—
Brinkmann, Emile J., Jr. 3,000,185.
Klecker, Raymond R. Combined corn picking and stalk severing device. 3,000,164, 9-19-61, Cl. 56-16.
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Touey, George P., and Klefer. 3,000,876.
Klenzie Apparate G.m.b.H.: See—
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Kliner, Scott B., to Aerojet-General Corp. Hydrazinium borohydride solution and method of making it. 3,000,712, 9-19-61, Cl. 52-5.
Kinaga, Thomas, to Hughes Aircraft Co. Waveguide pressurizing plug. 3,001,158, 9-19-61, Cl. 333-98.
Kinariwala, Bharat K., to Bell Telephone Laboratories, Inc. Active impedance branch. 3,001,156, 9-19-61, Cl. 333-80.
Kinghurst Ltd.: See—
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Kinsey, Ronald W. S., to Siemens Edison Swan Ltd. Automatic telephone and like exchange systems. 3,001,028, 9-19-61, Cl. 179-18.
Kirchner, Werner R., to United States of America, Navy. Tapered tubular propellant grain. 3,000,317, 9-19-61, Cl. 102-98.
Kirk, James H., to Sinclair Refining Co. Mineral base vanadium-containing residual fuel oil composition and method of preparation. 3,000,710, 9-19-61, Cl. 44-72.
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Kitko, Bartholomew J., to Thompson Ramo Wooldridge Inc. Seal means for a rotary heat exchanger. 3,000,617, 9-19-61, Cl. 257-269.
Kitson, Gerald L. Egg grader. 3,000,500, 9-19-61, Cl. 209-121.
Kitson, Joseph R., to Casavan Industries. Composite panels for building constructions. 3,000,144, 9-19-61, Cl. 50-268.
Klager, Karl: See—
Frankel, Milton B., and Klager. 3,000,948.
Frankel, Milton B., and Klager. 3,000,949.
Frankel, Milton B., and Klager. 3,000,950.
Frankel, Milton B., and Klager. 3,000,951.
Frankel, Milton B., and Klager. 3,000,971.
Vanneman, Clinton R., and Klager. 3,000,935.
Klager, Karl, to Aerojet-General Corp. Polynitro-substituted dibasic acids and esters. 3,000,932, 9-19-61, Cl. 260-485.
Klager, Karl, to Aerojet-General Corp. Nitroalkyl alcohol esters and method of making same. 3,000,934, 9-19-61, Cl. 260-488.
Klager, Karl, to Aerojet-General Corp. N-(nitroalkyl)-alkenyl amides. 3,000,941, 9-19-61, Cl. 260-561.
Klager, Karl, to Aerojet-General Corp. Nitro-containing unsaturated aldehydes. 3,000,959, 9-19-61, Cl. 260-601.
Klager, Karl, to Aerojet-General Corp. Method of preparing polynitro compounds. 3,000,966, 9-19-61, Cl. 260-644.
Klager, Karl, to Aerojet-General Corp. Alpha-omega-dinitroalkanes. 3,000,967, 9-19-61, Cl. 260-644.
Klager, Karl, to Aerojet-General Corp. Method of preparing nitro compounds. 3,000,968, 9-19-61, Cl. 260-649.
Klaus, Donald L., W. L. Sieker, and R. W. Watson, to Standard Oil Co. Composition of matter prepared by reacting polymerized linoleic acid with an amine and subsequently reacting the mixture with boric acid. 3,000,916, 9-19-61, Cl. 260-404.5.
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Goldman, Arthur, and Kleiman. 3,000,973.
Kleiman, Morton, and A. Goldman, to Velsicol Chemical Corp. Chlorinated derivatives of diels-alder adduct of pentachloropentadiene and cyclopentadiene. 3,000,974, 9-19-61, Cl. 260-148.
Klein, Werner, and W. Friz, to C. Lorenz, Aktiengesellschaft. Highly compressive gun system comprising a combined electrostatic and magnetic focusing. 3,001,095, 9-19-61, Cl. 313-84.
Klopper, Albert: See—
Ruegg, Hans, Keller, and Klopfer. 3,000,197.
Klumpp, Ferdinand, Jr., and W. H. Jemison, to Heyman Mfg. Co. Self-locking bushing. 3,001,007, 9-19-61, Cl. 179-153.
Knapp, Heinrich, and L. Steinke, to Robert Bosch, G.m.b.H. Fuel injection apparatus for internal combustion engines. 3,000,368, 9-19-61, Cl. 123-119.
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Knol, Kornelis S., and H. van de Weg, to North American Philips Co., Inc. Transistor amplifier. 3,001,146, 9-19-61, Cl. 330-31.
Knowles, Hugh S., to United States of America, Navy. Electronic oscillator metering device. 3,001,129, 9-19-61, Cl. 324-34.
Knox, Lawrence H., to Syntex, S.A. 2a-substituted methyl androstanes. 3,000,912, 9-19-61, Cl. 260-397.4.
Kobitter, Henry J. Slide bracket mechanism. 3,000,686, 9-19-61, Cl. 313-833.
Kogel, Wilhelm G., to Aktiebolaget Electrolux. Absorption refrigeration. 3,000,196, 9-19-61, Cl. 62-487.
Kolstinen, George H. Dipless minnow bucket. 3,000,122, 9-19-61, Cl. 43-53.
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Morway, Arnold J., Koltenbach, and Smith. 3,000,824.
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Dobrats, Elmer H. 3,000,961.
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Rudner, Bernard, and Moores. 3,000,925.
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Kooljman, Pieter L., Kortland, and Slokker. 3,000,832.
Koschmann, Robert B.: See—
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Kosowicz, Edward J. Pressure sensitive switch. 3,001,045, 9-19-61, Cl. 200-83.
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Krasig, Hans A.: See—
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Kritchever, Mathew F. 25% to H. Dawson. Thermoplastic bag closure and method. 3,000,415, 9-19-61, Cl. 150-3.
Kruithof, Jakob L. J. G. Nys, and J. L. J. Donceel, to International Standard Electric Corp. Multi-switch contact mechanism. 3,001,022, 9-19-61, Cl. 179-27.54.
Kuebel, Daniel J.: See—
Hain, Paul, and Kuebel. 3,000,631.
Kuehl, Frederick A., Jr.: See—
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Kuhl, Henry Y., and P. R. Egg tray. 3,000,528, 9-19-61, Cl. 217-26.5.
Kuhl, Paul R.: See—
Kuhl, Henry Y., and P. R. 3,000,528.
Kuhn, Steven J.: See—
Olsh, George A., and Kuhn. 3,000,986.
Kuhrt, Wesley A., to United Aircraft Corp. Ducted fan engine. 3,000,176, 9-19-61, Cl. 60-35.6.
Kummeth, George J., Sr. to Kummeth Mfg. Co. Collapsible stroller. 3,000,646, 9-19-61, Cl. 280-41.
Kummeth Mfg. Co.: See—
Kummeth, George J., Sr. 3,000,646.
Kundiger, Donald G., and J. H. Hennes, to The Dow Chemical Co. Dioxanes. 3,000,904, 9-19-61, Cl. 260-340.7.
Kunetka, Robert E., to Texaco Inc. In situ combustion. 3,000,441, 9-19-61, Cl. 166-11.
Kunzog, Theodore W., to General Motors Corp. Cylinder liner and valve seat assembly. 3,000,370, 9-19-61, Cl. 123-193.
Kuppers Metallwerk G.m.b.H.: See—
Melchior, Horst. 3,000,769.
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Kuster-Sange, Karl, to Firma Schering A.G. 10-acetyloxy derivatives of $\Delta^{1,4}$ -estradiene-10 α -17 β diol-3-one derivatives. 3,000,913, 9-19-61, Cl. 260-387.4.
Kvet, Otto, to General Electric Co. Lamp base solder trimming apparatus. 3,000,272, 9-19-61, Cl. 90-14.
La Forge, Ray F., Jr., to Anderson Bros. Mfg. Co. Boxing machine. 3,000,156, 9-19-61, Cl. 53-153.
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Lampuzzi, Alfeo: See—
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Land, William E., and R. O. Phillips, to United States of America, Navy. High explosive composition. 3,000,308, 9-19-61, Cl. 102-56.
Landau, Argo E., E. C. Roberts, and J. A. Zellmann, to Royal Bond, Inc. Materials for embalming human corpses. 3,000,782, 9-19-61, Cl. 167-49.5.
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Lang, Charles. Combination boat fender and boat step. 3,000,021, 9-19-61, Cl. 9-1.
Landy, George D.: See—
Granados, Frank D. 3,000,202.
Langley Corp.: See—
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Langlois, Pierre L. E., to Compagnie de Saint-Gobain. Manufacture of nitrogen containing complex fertilizers. 3,000,724, 9-19-61, Cl. 71-89.
Lansing, Warren S., 1/2 to D. W. Waldhauser. Extension axles for tractors. 3,000,673, 9-19-61, Cl. 301-128.
Larcher, Silvio, and M. Compostella, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Process and apparatus for the thermal cracking of liquid or gaseous hydrocarbons. 3,000,969, 9-19-61, Cl. 260-679.
Larreau, Norman N., and P. J. Ernaese, to United States of America, Navy. Delayed arming self-destruction type fuse. 3,000,818, 9-19-61, Cl. 102-70.2.
Larson, Ernest R., to Holley Carburetor Co. Engine governor control valve. 3,000,388, 9-19-61, Cl. 137-56.
Larkey, Riley E. Protecting device for three phase motor having shiftable rotor as a part of the assembly. 3,001,099, 9-19-61, Cl. 317-18.
Larkin, Artemas McKay. Bearing seal structures. 3,000,675, 9-19-61, Cl. 308-187.1.

- Larsen, Walter C.: See—
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- Larson, Louis F., to Crown Zellerbach Corp. Recessed bottom container. 3,000,496, 9-19-61, Cl. 206-65.
- Larter, Raymond B. Sorting device. 3,000,509, 9-19-61, Cl. 211-11.
- Larue, Herschel C., and W. C. Peterson, to A. Telchert & Son, Inc. Canal excavating apparatus. 3,000,120, 9-19-61, Cl. 37-103.
- Lawler, Charles A.: See—
Bovay, Harry E., Jr., Lawler, and Wheeler. 3,000,499.
- Lawrence Bros., Inc.: See—
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- Lawrence, Owen N., to Joseph Lucas (Industries) Ltd. Liquid fuel supply system for aerial bodies. 3,000,436, 9-19-61, Cl. 158-36.3.
- Lawrence, Ralph W., to Aerojet-General Corp. Burning rate acceleration catalysts for solid propellant compositions. 3,000,175, 9-19-61, Cl. 60-35.4.
- Lawrence, Ralph W., to Aerojet-General Corp. Propellant compositions. 3,000,715, 9-19-61, Cl. 52-5.
- Lawrence, Ralph W., and G. A. Zimmerman, to Aerojet-General Corp. Burning rate catalysts for solid propellant compositions. 3,000,716, 9-19-61, Cl. 52-5.
- Leach Corp.: See—
Didier, Robert G. 3,001,049.
- Le Blond, E. K. Machine Tool Co. The: See—
McCurdy, Harry C. 3,000,362.
- Lednicer, Daniel: See—
Birkenmeyer, Robert D., Lednicer, Kagan, and Magerlein. 3,000,910.
- Le Materiel De Cablerie Societe Anonyme: See—
Richeud, Elie A. 3,000,169.
- Leppert, Melvin L. Broadband discage antenna. 3,001,194, 9-19-61, Cl. 343-792.
- Lerner, Seymour: See—
Baez, Maurice, Tweed, Lerner, and Jablansky. 3,000,720.
- Leslie-Smith, Laurence. Vacuum flask. 3,000,525, 9-19-61, Cl. 215-13.
- Le Suer, William M.: See—
Higgins, William A., and Le Suer. 3,000,822.
- Levey, Gustave S., and S. F. Harvey, to The Spec-Flo Co. Spray gun. 3,000,576, 9-19-61, Cl. 239-499.
- Levi, Ormonde S., to Verd-A-Ray Processing Co. Method of staining borosilicate glass and resultant article. 3,000,761, 9-19-61, Cl. 117-124.
- Levin, Simon. Controllable skate having continuously applied brake. 3,000,643, 9-19-61, Cl. 280-11.2.
- Lewis, Edgar R., Jr. Detachable handle device for vehicle door latches. 3,000,660, 9-19-61, Cl. 292-353.
- Lewis, Norman W.: See—
Anthony, John W., and Lewis. 3,000,407.
- Libman, Max L.: See—
Rabinow, Jacob, and Morse. 3,000,262.
- Light, George G., and W. J. Wichtendahl, to The Western Union Telegraph Co. Telegraph way station selector. 3,001,009, 9-19-61, Cl. 178-2.
- Lill, Etchison G., to Sunbeam Corp. Lawn mower. 3,000,165, 9-19-61, Cl. 56-25.4.
- Lilly, Eli, and Co.: See—
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- Lofquist, Karl H. S., to Tholund, Inc. Metallurgical concentration of manganese. 3,000,725, 9-19-61, Cl. 75-30.
- Logan, John M., to The Wean Engineering Co., Inc. Hot dip aluminum coating. 3,000,754, 9-19-61, Cl. 117-61.
- Lorgerot, René P., and H. G. Munzberg, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Multiple-flow jet-propulsion engines. 3,000,177, 9-19-61, Cl. 60-35.6.
- Lorgerot, René P., to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Ejection nozzles having variable cross-sectional area. 3,000,178, 9-19-61, Cl. 60-35.6.
- Lombard, Charles F., and K. E. Green, to United Tanks, Inc. Safety cushion. 3,000,020, 9-19-61, Cl. 155-178.
- Long, Bernard, to Societe des Glaces de Bouscoul. Process for producing flat glass. 3,000,142, 9-19-61, Cl. 49-83.1.
- Long, Everett, and R. S. Challenger, to United Kingdom Atomic Energy Authority. Tanks for holding a coolant to be circulated through a nuclear reactor. 3,000,728, 9-19-61, Cl. 204-193.2.
- Long, John C. Waste receptacle. 3,000,681, 9-19-61, Cl. 312-194.
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- Lunn, Richard H., to Westinghouse Electric Corp. Lightweight nonmetallic armor. 3,000,772, 9-19-61, Cl. 154-52.5.
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- Maffet, Vere, to E. I. du Pont de Nemours and Co. Process for preparing silver halide emulsions. 3,000,739, 9-19-61, Cl. 96-108.
- Maffet, Vere, to E. I. du Pont de Nemours and Co. Process for preparing silver halide emulsions. 3,000,739, 9-19-61, Cl. 96-108.
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- Malcomb, Robert H., to Regan Forge and Engineering Co. Deep well orienting tool. 3,000,440, 9-19-61, Cl. 166-4.
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- Maluf, Taufik G. Cloth drilling device. 3,000,238, 9-19-61, Cl. 77-5.
- Manahan, Max J., to General Motors Corp. Pulsed magnet saturation signal seeking tuner. 3,001,067, 9-19-61, Cl. 250-20.
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- Manetti, Guglielmo, to Comerio Ercole S.p.A. Machine for washing spread out printed cloth. 3,000,201, 9-19-61, Cl. 68-62.
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- Marinac, John C., to International Business Machines Corp. Semiconductor device with controlled zone thickness. 3,000,768, 9-19-61, Cl. 148-1.5.
- Marini, Richard, to Guild Arts and Crafts, Inc. Toy building blocks. 3,000,134, 9-19-61, Cl. 46-26.
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- Marks, Henry C., and R. B. Joiner, to Wallace & Tiernan Inc. Process of stabilizing solutions of chloropropane and the like. 3,000,783, 9-19-61, Cl. 167-52.
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- Marlow, Michael J., to Lowry Mining Equipment Ltd. Hydraulic props or struts. 3,000,358, 9-19-61, Cl. 121-40.
- Marotta, George J., L. S. Ray, and A. R. Swenson, to Western Electric Co., Inc. Electroplating basket and carrier assembly. 3,000,806, 9-19-61, Cl. 204-297.
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- Michael, Malden W., to American Cyanamid Co. Platinum reforming catalyst and process for preparing the same. 3,000,838, 9-19-61, Cl. 252-441.
- Miklich, Louis. Multiple tray serving device. 3,000,532, 9-19-61, Cl. 220-23.4.
- Milan, Joseph M. Water cooled disc type brake assembly. 3,000,470, 9-19-61, Cl. 188-72.
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Mirvis, Stanley B., and O. C. Slotterbeck, to Esso Research and Engineering Co. Preparation of resins from aromatics and aldehydes. 3,000,859, 9-19-61, Cl. 260—67.
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Rudner, Bernard, and Moore. 3,000,925.
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Morita, Masasuke, and S. Ito, to Nippon Electric Co. Ltd. P. M. reception system of high sensitivity. 3,001,068, 9-19-61, Cl. 250—20.
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 Slate, Robert C. Paper separating mechanism and method. 3,000,630, 9-19-61, Cl. 271-64.
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 Smith, Alonso L. Air-conduction hearing aid clamps. 3,000,462, 9-19-61, Cl. 181-23.
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 Smith, William H., R. Frohner, and R. T. Adolphson, to O.E.M. Corp. Incubators for infants. 3,000,376, 9-19-61, Cl. 128-1.
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 South, Frank C., to United States of America, Navy. Target sleeve. 3,000,834, 9-19-61, Cl. 273-106.3.
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 Stanley, Alan, and H. A. McKenzie, to American Cyanamid Co. Purification of hydrous titania. 3,000,704, 9-19-61, Cl. 23-202.
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 Phillips, Benjamin, Tinsley, and Starcher. 3,000,879.
 Phillips, Benjamin, Tinsley, and Starcher. 3,000,880.
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Stiefel, Rudy C., D. A. Strakhov, and P. A. Carbone, to Sperry Rand Corp., Ford Instrument Co. Division. Integrated plug-in unit. 3,001,102, 9-19-61, Cl. 317-99.

Stiglic, Paul M., to Thompson Ramo Wooldridge Inc. Turbine engine acceleration control apparatus. 3,000,181, 9-19-61, Cl. 40-39.28.

Stinson, Harold S. Attachment for ashbooks. 3,000,131, 9-19-61, Cl. 43-44.8.

Stirrup, Frank A. Type cleaning device with reversible cleaning element. 3,000,031, 9-19-61, Cl. 15-210.

Stirrup, Frank A. Device for selecting recorded sections of recording strips. 3,000,105, 9-19-61, Cl. 33-189.

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Stott, Albert M., and H. A. Magnus, to United States of America, Army. Gunlight retracting thruster. 3,000,173, 9-19-61, Cl. 60-26.1.

Stout, Ellarson B., to Curtiss-Wright Corp. Flexible coupling for drive shafting. 3,000,198, 9-19-61, Cl. 64-15.

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Strakhov, Dmitri A.: See—

Stiefel, Rudy C., Strakhov, and Carbone. 3,001,102.

Straub, Harold W., to United States of America, Army. Optical devices for producing parallel beams. 3,001,079, 9-19-61, Cl. 250-218.

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Strauss, Wennemar, and H. Wedell, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Copper-electroplating baths. 3,000,800, 9-19-61, Cl. 204-52.

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Warren, Elmer F. 3,000,446.

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Coleman, Ralph A., and Sust. 3,000,833.

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Talgiatferri, Frank P. Toy device. 3,000,188, 9-19-61, Cl. 46-244.

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Tanczyn, Harry, to Armco Steel Corp. Free-machining stainless steel. 3,000,730, 9-19-61, Cl. 75-128.

Tarney, Robert E., to E. I. du Pont de Nemours and Co. Copolymers of ethylene. 3,000,866, 9-19-61, Cl. 260-50.5.

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Tatlow, John C.: See—

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Taylor, Cecil A., to The Rawlplug Co. Ltd. Rotary drill heads. 3,000,225, 9-19-61, Cl. 74-22.

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Taylor, Joseph K.: See—

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Taylor-Winfield Corp.: See—

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Texaco Inc.: See—

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Christensen, Edward R., Ryer, and Hess. 3,000,810.

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Plasser, Frans, and Theurer. 3,000,327.

Plasser, Frans, and Theurer. 3,000,328.

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Thomas, Edwin F., W. W. Rowe, and W. J. Wagner, to Double Seal Ring Co. Piston ring expander. 3,000,577, 9-19-61, Cl. 309-45.

Thomas, Frederick L. Citrazinic acid-amine-oxygen dyes. 3,000,897, 9-19-61, Cl. 260-295.

Thomas, Paul M., and L. W. Wright, to Builders Equipment Co. Probing device for block machine pallet handler. 3,000,520, 9-19-61, Cl. 214-16.4.

Thomasco, Paul R. Measuring device for granular and like materials. 3,000,409, 9-19-61, Cl. 141-373.

Thompson, Archie E., to Dresser Industries, Inc. Bridging plug. 3,000,443, 9-19-61, Cl. 166-135.

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Thuse, Erik, and E. L. Winkie, to Granberg Corp. Temperature compensating coupling means for liquid meters. 3,000,211, 9-19-61, Cl. 73-233.

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Federighi, George J. 3,000,195.

Tidewater Oil Co.: See—

De Benedetti, Harold B. 3,000,036.

Tinsley, Samuel W.: See—

Phillips, Benjamin, Tinsley, and Starcher. 3,000,877.

Phillips, Benjamin, Tinsley, and Starcher. 3,000,878.

Phillips, Benjamin, Tinsley, and Starcher. 3,000,879.

Phillips, Benjamin, Tinsley, and Starcher. 3,000,880.

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Tolbert, Bert M., M. R. Kirk, and E. M. Baker, to United States of America, Atomic Energy Commission. Method and apparatus for metabolic assay. 3,000,377, 9-19-61, Cl. 128-207.

Tolin, Stanley, to Vico Products Co. Smoked hydrolyzed vegetable protein materials. 3,000,743, 9-19-61, Cl. 69-140.

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Toney, George P., and J. E. Kiefer, to Eastman Kodak Co. Heat stable cellulose acetate sulfates. 3,000,876, 9-19-61, Cl. 260-215.

Tower, Henry M., and A. J. Nicholas, to Worthington Corp. Cylinder liner and valve service design for high speed reciprocating compressors. 3,000,553, 9-19-61, Cl. 230-238.

Towle, Jack L., to The Harshaw Chemical Co. Nickel plating solutions. 3,000,799, 9-19-61, Cl. 204-49.

Trade-Wind Motors, Inc.: See—

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Trasnik, William J. Within-the-shoe sock. 3,000,013, 9-19-61, Cl. 2-240.

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Russo, Carl J., Trifunovic, and Sinski. 3,000,059.

Trigg, Clifton T., to United States of America, Army. Le Clanche type dry cells of high storageability. 3,000,997, 9-19-61, Cl. 136-107.

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Trotter, Herbert, Jr., to United States of America, Navy. Device for correcting the course of a missile. 3,000,307, 9-19-61, Cl. 102-60.

Trottier, Jean E., to Societe a responsabilite limitee dite: Societe Gram-Electric. System for protecting electrical equipment against short circuits. 3,001,063, 9-19-61, Cl. 307-57.

Trousdale, John E., to United States of America, Navy. High pressure waveguide window. 3,001,160, 9-19-61, Cl. 333-98.

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Trubert, Michel. Thermostatic fluid mixing cock. 3,000,570, 9-19-61, Cl. 236-12.

Trubert, Nicole: See—

Fresson, Nicole, and Trubert. 3,000,571.

Tschopp, Lloyd D., to Petro-Tex Chemical Corp. Extractive distillation of vinyl acetylene in the purification of butadiene. 3,000,794, 9-19-61, Cl. 202-39.5.

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Tullgren, Ralph R.: See—

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Tulp, Theodorus J., to North American Phillips Co. Inc. Transistor memory device. 3,001,090, 9-19-61, Cl. 307-88.5.

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Turula, Eugene, and G. B. Lynch, to Revere Camera Co. (formerly Samica Corp.). Zoom projection lens. 3,000,260, 9-19-61, Cl. 88-57.

Tuvell, Melvin E., to Monsanto Chemical Co. Detergent compositions. 3,000,831, 9-19-61, Cl. 252-138.

Tweed, Paul B.: See—

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Uecker, Edward H., and J. M. Nessel, to Capitol Records, Inc. Stereo system. 3,001,019, 9-19-61, Cl. 179-1.

Ullisberger, Edmund. Device for threading fixed needles particularly sewing machine needles. 3,000,515, 9-19-61, Cl. 223-99.

Ullman, Roy: See—

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Union Carbide Corp.: See—

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Hackman, Robert L., and O'Brien. 3,001,057.

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Phillips, Benjamin, Tinsley, and Starcher. 3,000,878.

Phillips, Benjamin, Tinsley, and Starcher. 3,000,879.

Phillips, Benjamin, Tinsley, and Starcher. 3,000,880.

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Van Overbeek, Adrianus J. W. M., and H. A. R. de Miranda, to North American Philips Co., Inc. Energy detector. 3,001,077, 9-19-61, Cl. 250-211.
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Von Kintelen, Harald, and O. Riester, to Agfa Aktiengesellschaft. Optically sensitized photographic silver halide emulsion. 3,000,738, 9-19-61, Cl. 96-102.
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Walner, Eugene, to Horizons Inc. Metal cleaning process. 3,000,768, 9-19-61, Cl. 134-2.
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Wald, Milton M., to Shell Oil Co. Hydrocarbon conversion process. 3,000,987, 9-19-61, Cl. 260-873.5.
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Warnken, Elmer P., to Studebaker-Packard Corp. Helicopter rotor blades. 3,000,448, 9-19-61, Cl. 170-159.
Warshawsky, Leon M., and W. G. Braun, to United States of America, Air Force. Computer plugboard verifier. 3,000,297, 9-19-61, Cl. 101-93.
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Webb, Edmund F., to The Delman Co. Windshield clearing system. 3,000,034, 9-19-61, Cl. 15-250.02.
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Welch, Clifford A. Portable visual board assembly. 3,000,115, 9-19-61, Cl. 35-60.
Welsh, Harvey W., to General Motors Corp. Rotor blade lock. 3,000,613, 9-19-61, Cl. 253-77.
Welsh, Harvey W., to General Motors Corp. Rotor blade locks. 3,000,614, 9-19-61, Cl. 253-77.
Welsh, Warren A., to Western Electric Co., Inc. Positioning devices. 3,000,241, 9-19-61, Cl. 77-64.
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Wettstein, Albert, E. Vischer, and H. Bickel, to Ciba Pharmaceutica Products Inc. Process for making tetrahydro spiramycin. 3,000,786, 9-19-61, Cl. 187-65.
Wettstein, Albert, G. Anner, K. Heusler, H. Ueberwasser, P. Wieland, J. Schmidlin, and J. R. Billeter, to Ciba Pharmaceutica Products, Inc. Process for the synthesis of 18-homo-androstane-compounds. 3,000,882, 9-19-61, Cl. 260-239.55.
Wettstein, Albert, E. Vischer, and C. Meystre, to Ciba Pharmaceutica Products Inc. 14a-hydroxy-18-oxygenated pregnenes. 3,000,884, 9-19-61, Cl. 260-239.57.
Wheeler, Edward N., and L. S. Richardson, to Celanese Corp. of America. Formaldehyde production. 3,000,960, 9-19-61, Cl. 260-606.
Wheeler, Edward S., and N. H. Ellis, to The Atlantic Refining Co. Production of hydroxymethyl-dimethyl-metadioxanes. 3,000,905, 9-19-61, Cl. 260-340.7.
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Wild, Jack, to Marconi's Wireless Telegraph Co. Ltd. Anti-collision radio equipment for aircraft use. 3,001,188, 9-19-61, Cl. 343-8.5.
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Wilson, Gurney L. Poultry drinking fountain. 3,000,350, 9-19-61, Cl. 110-81.
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Winkler, Frederic C., and N. Stuffer, to Westinghouse Electric Corp. Light refractor. 3,001,062, 9-19-61, Cl. 240-106.
Winkler, Richard, and K. Dunnebler, to Berkley Machine Co. Method and apparatus for forming and wrapping packs of envelopes and similar articles. 3,000,151, 9-19-61, Cl. 53-3.
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Winter, David H., to United States of America, Navy. Aircraft carrier. 3,000,343, 9-19-61, Cl. 114-43.5.
Wlora, Joseph A., to Wlora Products Corp. Battery terminal clamp. 3,000,998, 9-19-61, Cl. 136-135.
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Witzig, Karl E., and R. Frank. Worktable. 3,000,273, 9-19-61, Cl. 90-15.1.
Wojan, Clifford A., to Norbute Corp. Fume hood. 3,000,292, 9-19-61, Cl. 98-115.
Wolf, Frank J., to Merck & Co., Inc. Antibiotic recovery process. 3,000,873, 9-19-61, Cl. 260-210.
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Wood, Robert. Fifth wheel. 3,000,653, 9-19-61, Cl. 280-433.
Wood, Stuart G. Bath tub cleaning brush. 3,000,029, 9-19-61, Cl. 15-172.
Woolter, Robert C., and R. Helle, to General Motors Corp. Lamp socket and terminal means for printer circuits. 3,001,165, 9-19-61, Cl. 339-17.
Worn, David K., and R. E. Buttress, to The International Nickel Co., Inc. Control of nuclear reactions. 3,000,802, 9-19-61, Cl. 204-154.2.
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Wright, Edmond P. G., and J. Rice, to International Standard Electric Corp. Electrical information storage arrangements. 3,001,021, 9-19-61, Cl. 179-7.1.
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 Zsarnoff, Sander J. Ventilator-air purifier combination. 3,000,291, 9-19-61, Cl. 98-37.
 Zuck, Matthew M., and J. E. Waterman, to Winsor & Jerauld Mfg. Co. Tenter clip. 3,000,073, 9-19-61, Cl. 26-62.

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ISSUED SEPTEMBER 19, 1961

NOTE.—First number=class, second number=subclass, third number=patent number

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224- 3,001,044	3,000,551	406: 3,000,836	467: 3,000,928	711: 3,000,999	139: 3,001,142
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226- 87: 3,001,046	238: 3,000,553	441: 3,000,838	476: 3,000,930	713: 3,000,999	141: 3,001,144
227- 3,001,047	54: 3,000,554	51: 3,000,839	482: 3,000,931	714: 3,000,999	142: 3,001,145
228- 3,001,048	61: Re 25,041	77: 3,000,840	485: 3,000,932	715: 3,000,999	143: 3,001,146
229- 98: 3,001,049	61: 6: 3,000,555	3,000,841	488: 3,000,933	716: 3,000,999	144: 3,001,147
230- 120: 3,001,050	63: 3,000,556	254- 50: 3: 3,000,615	534: 3,000,934	717: 3,000,999	145: 3,001,148
231- 138: 3,001,051	86: 3,000,558	257- 12: 3,000,616	544: 3,000,935	718: 3,000,999	146: 3,001,149
232- 3,001,052	113: 3,000,559	260- 9: 3,000,617	551: 3,000,937	719: 3,000,999	147: 3,001,150
233- 153: 3,001,053	117: 3,000,560	260- 2: 5: 3,000,839	553: 3,000,938	720: 3,000,999	148: 3,001,151
234- 202- 39: 5: 3,000,794	137: 3,000,561	260- 23: 3,000,841	561: 3,000,941	721: 3,000,999	149: 3,001,152
235- 57: 3,000,795	155: 3,000,562	29: 6: 3,000,842	5,000,942	722: 3,000,999	150: 3,001,153
236- 3,000,796	167: 3,000,563	30: 2: 3,000,843	3,000,943	723: 3,000,999	151: 3,001,154
237- 204- 15: 3,000,797	176: 3,000,564	30: 4: 3,000,844	3,000,944	724: 3,000,999	152: 3,001,155
238- 49: 3,000,799	178: 3,000,565	30: 6: 3,000,845	3,000,945	725: 3,000,999	153: 3,001,156
239- 52: 3,000,800	185: 3,000,566	41: 3,000,846	570: 5: 3,000,946	726: 3,000,999	154: 3,001,157
240- 60: 3,000,801	193: 3,000,568	42: 3,000,848	570: 8: 3,000,947	727: 3,000,999	155: 3,001,158
241- 154: 2: 3,000,802	194: 3,000,569	45: 4: 3,000,849	583: 3,000,948	728: 3,000,999	156: 3,001,159
242- 193: 2: 3,000,728	12: 3,000,570	45: 9: 3,000,851	3,000,949	729: 3,000,999	157: 3,001,160
243- 3,000,803	15: 3,000,571	45: 9: 3,000,852	3,000,950	730: 3,000,999	158: 3,001,161
244- 195: 3,000,804	10: 3,000,573	45: 95: 3,000,853	3,000,951	731: 3,000,999	159: 3,001,162
245- 297: 3,000,806	15: 3,000,574	46: 5: 3,000,858	3,000,952	732: 3,000,999	160: 3,001,163
246- 15: 1: 3,000,491	225: 3,000,575	67: 3,000,859	3,000,953	733: 3,000,999	161: 3,001,164
247- 46: 3,000,492	499: 3,000,576	3,000,860	3,000,954	734: 3,000,999	162: 3,001,165
248- 52: 3,000,493	3: 3,001,060	3,000,861	3,000,955	735: 3,000,999	163: 3,001,166
249- 3,000,494	41: 35: 3,001,061	3,000,862	3,000,956	736: 3,000,999	164: 3,001,167
250- 59: 3,000,495	108: 3,001,062	46: 5: 3,000,858	584: 3,000,957	737: 3,000,999	165: 3,001,168
251- 65: 3,000,496	32: 3,000,577	67: 3,000,859	601: 3,000,958	738: 3,000,999	166: 3,001,169
252- 14: 3,000,807	92: 3,000,578	3,000,860	606: 3,000,959	739: 3,000,999	167: 3,001,170
253- 23: 3,000,808	275: 3,000,579	3,000,861	606: 5: 3,000,961	740: 3,000,999	168: 3,001,171
254- 65: 3,000,809	4: 3,000,580	3,000,862	3,000,962	741: 3,000,999	169: 3,001,172
255- 79: 3,000,810	27: 3,000,581	69: 3,000,863	3,000,963	742: 3,000,999	170: 3,001,173
256- 90: 3,000,811	55: 11: 3,000,582	76: 3,000,864	615: 3,000,963	743: 3,000,999	171: 3,001,174
257- 138: 3,000,812	55: 12: 3,000,583	79: 3,000,865	624: 3,000,964	744: 3,000,999	172: 3,001,175
258- 139: 3,000,813	66: 3,000,584	80: 5: 3,000,866	635: 3,000,965	745: 3,000,999	173: 3,001,176
259- 140: 3,000,814	72: 3,000,585	88: 2: 3,000,867	644: 3,000,966	746: 3,000,999	174: 3,001,177
260- 216: 3,000,815	84: 2: 3,000,586	91: 1: 3,000,868	3,000,967	747: 3,000,999	175: 3,001,178
261- 232: 3,000,817	86: 5: 3,000,587	93: 5: 3,000,870	3,000,968	748: 3,000,999	176: 3,001,179
262- 17: 3,000,497	115: 3,000,588	93: 7: 3,000,871	3,000,969	749: 3,000,999	177: 3,001,180
263- 81: 3,000,498	118: 31: 3,000,590	209: 3,000,872	3,000,970	750: 3,000,999	178: 3,001,181
264- 90: 3,000,499	155: 3,000,591	210: 3,000,873	3,000,971	751: 3,000,999	179: 3,001,182
265- 121: 3,000,500	157: 3,000,592	212: 3,000,874	645: 3,000,972	752: 3,000,999	180: 3,001,183
266- 169: 3,000,501	2: 3,000,593	215: 3,000,875	648: 3,000,973	753: 3,000,999	181: 3,001,184
267- 458: 3,000,502	12: 3,000,594	215: 3,000,876	650: 3,000,975	754: 3,000,999	182: 3,001,185
268- 94: 3,000,503	14: 3,000,595	239: 8: 3,000,877	652: 5: 3,000,977	755: 3,000,999	183: 3,001,186
269- 132: 3,000,504	82: 3,000,596	3,000,878	653: 3: 3,000,979	756: 3,000,999	184: 3,001,187
270- 133: 3,000,505	110: 3,000,597	3,000,879	658: 3,000,980	757: 3,000,999	185: 3,001,188
271- 402: 3,000,507	477: 3,000,598	3,000,880		758: 3,000,999	186: 3,001,189
272- 477: 3,000,508	248- 38: 3,000,599	3,000,881		759: 3,000,999	187: 3,001,190
273- 11: 3,000,509	54: 3,000,600			760: 3,000,999	188: 3,001,191
274- 13: 3,000,510				761: 3,000,999	189: 3,001,192

CLASSIFICATION OF DESIGNS

D 2—	26: 191, 347	D15—	1: 191, 355	D34—	5: 191, 363	D48—	27: 191, 370	D57—	1: 191, 377	D81—	10: 191, 384
D 8—	1: 191, 348		8: 191, 356		15: 191, 364		191, 371		7: 191, 378		191, 385
D 10—	10: 191, 349	D22—	3: 191, 357		191, 365	D50—	7: 191, 372	D58—	7: 191, 379	D83—	8: 191, 386
D13—	1: 191, 350	D28—	13: 191, 358	D44—	1: 191, 366	D54—	12: 191, 373	D61—	1: 191, 380		12: 191, 387
D14—	3: 191, 351	D33—	7: 191, 359		191, 367		13: 191, 374	D62—	2: 191, 381	D92—	1: 191, 388
	191, 352		191, 360		191, 368	D55—	1: 191, 375	D64—	10: 191, 382		17: 191, 389
	30: 191, 353		14: 191, 361	D48—	24: 191, 369		191, 376	D71—	1: 191, 383		26: 191, 390
	191, 354	D34—	5: 191, 362								

organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,

Director of Administration.

Aug. 17, 1961.

Forms and Rules of Practice in Patent Cases

[37 CFR Parts 1, 3]

Notice is hereby given that the United States Patent Office proposes to amend several of its rules relating to patents. The amendments are proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 31, and other authority.

All persons who desire to submit written data, views, arguments or suggestions, for consideration in connection with the proposed amendments, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C., on or before October 2, 1961. An oral hearing will not be scheduled unless sufficient requests for the same are received.

The texts of the proposed amendments follow:

§ 1.203. [Amendment]

1. Paragraph (a) of § 1.203 is proposed to be amended by cancelling the last sentence and inserting the following sentence in lieu thereof: "Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation."

§ 1.232 [Amendment]

2. Paragraph (a) of § 1.232 is proposed to be amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form," and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)."

§ 1.233. [Amendment]

3. Paragraph (d) of § 1.233 is proposed to be amended to read as follows:

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

4. Section 1.235 is proposed to be amended to read as follows:

§ 1.235. Motions relating to burden of proof.

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the filing date of an earlier domestic or foreign application,

or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration. (See § 1.224.)

§ 1.341 [Amendment]

5. Paragraph (g) of § 1.341 is proposed to be amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein."

6. Section 3.47 is proposed to be amended to read as follows:

§ 3.47. Interference; notice of taking testimony.

v. ----- Interference No. -----
-----, 19-----

(Name of opposing attorney)

(Address of opposing attorney)

Sir: You are hereby notified that on -----, 19-----, at ----- o'clock in the forenoon at the office of ----- Street, -----, I shall proceed to take testimony on behalf of the party ----- in the above identified interference.

The witnesses to be examined are:

(Name of witnesses)

(Residence of witnesses)

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

(Signature of attorney)

PROOF OF SERVICE

I hereby certify that on -----, 19-----, I served a copy of the foregoing notice of taking testimony upon -----, the attorney for the party -----, by mailing a copy thereof to him at his address as set out in the notice.

(Signature of attorney)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,

Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 61-7740; Filed, Aug. 14, 1961; 8:48 a.m.]

Published in 26 F.R. 7550, 7551, Aug. 10, 1961

Service by Publication

A petition to cancel the registration identified below having been filed, and it failing to appear that service of notice thereof has been duly effected, notice is hereby given that unless registrant, its assigns, or legal representatives, shall enter an appearance therein within thirty days from the date of this publication, the cancellation will be proceeded with as in the case of default.

Catelli Food Products Ltd., by mesne assignments from La Cie. C. H. Catelli, Limited, Montreal, Quebec, Canada, Reg. No. 174,951, Canc. No. 7712

H. B. FAY, JR.,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 184,655 (GOLDEN FLAKE), H. E. Mosher, doing business as Memphis Potato Chip Company, Potato chips and horseradish, filed Aug. 10, 1961, D.C., N.D. Ala. (Birmingham), Doc. 9978, *Golden Flake, Inc. v. American Foods, Inc. et al.*

Reg. No. 335,406 (DAIR-E), J. F. Laxier Manufacturing Co., Inc., Nonalcoholic maltless extracts and concentrated fruit syrups used in the preparation of soft drinks, particularly for orange beverage, filed July 20, 1961, D.C., E.D. Mo.

(St. Louis), Doc. 61-C-251(3), *Natural Set-Up Sales Corporation v. Rocket Citrus Products, Inc. et al.*

Reg. No. 391,779 (UNISTRUT), Decelecto, Inc., Building units, filed Feb. 18, 1955, D.C., N.D. Calif. (San Francisco), Doc. 34/460, *Unistrut Corporation et al. v. Equestre Company*. Dismissed with prejudice (notice Aug. 1, 1961).

Reg. No. 442,288 (BULLS EYE AND DESIGN), John Reuter, Jr., Golf clubs, filed Aug. 15, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1051/61-WM, *John Reuter, Jr., Inc. v. Bull's Eye Golf Ball Company*.

Reg. No. 547,331 (AAA AND DESIGN), American Automobile Association, Emergency road service and repairing of motor vehicles, etc., filed July 21, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5212, *American Automobile Association v. Tulsa Motel*.

Reg. No. 547,704 (VESPA), Piaggio & Co. Societa per Azioni, Car bodies, motor cars, bicycles, frameworks and parts thereof, pneumatic tires, saddles for bicycles and motorcycles, etc., filed Aug. 4, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/102, *Vespa of California v. Vic Brincot et al.*

Reg. No. 595,002 (DRI-FRI), E. F. Drew & Co., Inc., Vegetable fat for edible purposes, filed Apr. 30, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c695, *E. F. Drew & Co., Inc. v. Pam Industries, Inc.* Order of dismissal June 26, 1961.

Reg. No. 617,131 (VOLKSWAGEN), Volkswagenwerk G.m.b.H., Land, air and water craft, motor cars, vehicle parts and spares, etc., filed Apr. 17, 1961, D.C., N.D. Calif. (San Francisco), Doc. 39/854, *Volkswagenwerk Aktiengesellschaft v. August Schmidt*. Consent judgment; trademark held infringed; injunction granted July 26, 1961.

Reg. No. 621,917 (ALLSTATE), Allstate Insurance Company, Underwriting of insurance risks, filed Aug. 1, 1961, D.C., W.D. La. (Bhreveport), Doc. 8396, *Allstate Insurance Company v. Allstate Investment Corporation*.

Reg. No. 622,726 (BETTER HOMES AND GARDENS CHRISTMAS IDEAS), Meredith Publishing Company, Periodic publication, filed May 28, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c966, *Meredith Publishing Company v. Fawcett Publications, Inc.* By agreement cause dismissed Jan. 21, 1960.

Reg. No. 645,211 (SAFEWAY), Safeway Stores, Incorporated, Fresh, cured and cooked meat, luncheon meats and fresh and frozen fowl, filed June 5, 1961, D.C., N.D. Calif.

(Sacramento), Doc. 8311, *Safeway Stores, Inc. v. Safe-Way Real Estate Agency*.

Reg. No. 662,490 (THE ROMER), R. Romer, House trailers, filed June 15, 1961, D.C., N.D. Calif. (Sacramento), Doc. 8319, *Honorbuilt Trailer Manufacturing Company v. Robert Romer*.

Reg. No. 676,088 (TASK FORCE), Statistical Tabulating Corporation, Preparing punched data cards, analyzing data on such cards, bookkeeping and accounting and stenographic services, operation of business machines, etc., filed Aug. 10, 1961, D.C., S.D.N.Y., Doc. 61/2859, *Statistical Tabulating Corporation v. Task Force, Incorporated et al.*

Reg. No. 672,307 (TIME INSURANCE COMPANY), Time Insurance Company, Underwriting of health, hospital casualty and life insurance, filed July 19, 1961, D.C., N.D. Calif. (Sacramento), Doc. 8342, *Time Insurance Company (Wisconsin corporation) v. Time Insurance Company (California corporation)*.

Reg. No. 679,342 (PHOTOGENIC), Photogenic Machine Company, Photographic lighting equipment for use in photographic studios and photographic accessories for use in photographic camera rooms, filed Apr. 5, 1961, D.C., S.D.N.Y., Doc. 61/1217, *Photogenic Machine Company v. Indez Corporation*. Consent judgment; defendant enjoined Aug. 15, 1961.

Reg. No. 680,377 (PLINKIES), F. M. Mattingly, Pliers, filed Aug. 19, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1341, *Flora M. Mattingly v. Marshall Field & Company et al.* Cause transferred to D.C., S.D.N.Y. Aug. 26, 1960.

Reg. No. 687,371 (HARVEY HOUSE), F. Harvey, Restaurant services, filed June 20, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1044, *Fred Harvey v. Harvey House*. Consent judgment; trademark held valid and infringed; defendant restrained Aug. 9, 1961.

Reg. No. 689,648 (ALL-JERSEY), National All-Jersey, Inc., Indicating membership in applicant, filed June 21, 1961, D.C., N.D. Calif. (Sacramento), Doc. 8327, *National All-Jersey Inc. v. All-Jersey Farms of Stockton, Inc. et al.*

Reg. No. 712,132 (DESIGN OF AN EYE), Norman Industries, Inc., Eye design, filed Apr. 28, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c732, *Norman Industries, Inc. v. Best Industries, Inc. et al.* Consent judgment; defendant enjoined June 23, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 85,162. Johns-Manville Perlite Corporation, Joliet, Ill. Filed Nov. 12, 1959.



Seven Hills of Taos

For Perlite Ore.
First use on or about Nov. 10, 1958.

SN 104,823. Flower Show Farm, Inc., Carversville, Pa. Filed Sept. 20, 1960.

THE FAITH TREE

The word "Tree" is disclaimed apart from the mark as shown.
For Trees.
First use in August 1959.

SN 100,317. The B. F. Goodrich Company, Akron, Ohio. Filed Nov. 30, 1960.

ABSON

For Terpolymers and Blends of Copolymers Produced From Monomeric Acrylonitrile, Butadiene and Styrene or Substituted Derivatives of These Monomers.
First use Sept. 14, 1960.

SN 118,871. The Dow Chemical Company, Midland, Mich. Filed Apr. 28, 1961.

ZETAFIN

For Synthetic Resins.
First use Apr. 14, 1961.

Class 2—Receptacles

SN 117,322. West Virginia Pulp and Paper Company, New York, N.Y. Filed Apr. 6, 1961.

KRAFTSMAN

Owner of Reg. Nos. 391,623, 684,462, and others.
For Paper Bags.
First use in February 1958.

SN 118,134. The Cal-Dak Company, Los Angeles, Calif. Filed Apr. 19, 1961.

HIDE-A-BASKET

For Waste Basket With Detachable Lower Container.
First use Apr. 3, 1961.

TM 84

SN 118,386. West Virginia Pulp and Paper Company, New York, N.Y. Filed Apr. 21, 1961.

BALEX

For Paper Bags.
First use Apr. 7, 1961.

SN 118,405. Brookpark, Inc., Cleveland, Ill. Filed Apr. 24, 1961.

PERMACLEAN

For Plastic Dinnerware Cups.
First use Mar. 31, 1961.

SN 118,686. The Greif Bros. Cooperage Corporation, Delaware, Ohio. Filed Apr. 26, 1961.

ALL-FI

For Fibre Drums.
First use on or about Dec. 19, 1960.

SN 118,748. Whirlpool Corporation, Benton Harbor, Mich. Filed Apr. 26, 1961.

PROFITAINER

For Material Handling Containers for Storing and Shipping Materials.
First use May 28, 1959.

SN 119,035. The Mt. Pitt Company, Medford, Oreg. Filed May 1, 1961.

MINIT-BIN

For Wooden Shipping Containers.
First use Mar. 6, 1961.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 116,131. Wallace M. L. Johnson, d.b.a. Kennel-Aire Mfg. Co., St. Paul, Minn. Filed Mar. 21, 1961.

MUNCH-N-AIRE

For Self-Feeders for Small Animals.
First use Jan. 25, 1961.

Class 4—Abrasives and Polishing Materials

SN 87,384. John C. Stallfort & Sons, Inc., Baltimore, Md. Filed Dec. 15, 1959.

"ALERT"

Owner of Reg. No. 711,058.
For Silicone Cream Polish and Cleaner and Polish for Porcelain, Glass and Metal.
First use June 15, 1959.

SEPTEMBER 19, 1961

U. S. PATENT OFFICE

TM 85

SN 112,792. Trade Paper Company, Inc., New York, N.Y. Filed Jan. 30, 1961.

SLIDE-CONE

For Liquid Preparation for Preserving, Polishing and Renewing Cutting Tables and Finished and Non-Absorbent Wood and Composition Surfaces and To Give a Slippery Surface Thereto.
First use Nov. 25, 1959.

SN 116,733. C. Klingendor G.m.b.H. Naxos-Schmigelwerke, Haiger, Dillkreis, Germany. Filed Mar. 29, 1961.



Owner of German Reg. No. 660,642, dated July 27, 1954.
For Grinding and Polishing Media, Grinding and Polishing Compounds, Grinding and Polishing Wheels, Grinding and Polishing Compounds in Flake Form, Grinding and Polishing Cloths, Grinding and Polishing Ropes, Flint Ropes, Glass-Paper, Emery Paper and Sandpaper, Grinding and Polishing Granules.

Class 6—Chemicals and Chemical Compositions

SN 53,311. Allied Research Products Incorporated, Baltimore, Md. Filed June 11, 1958.



The drawing is lined for green and yellow.
For Solution for Imparting Corrosion Resistance and Paint Bonding to Metals.
First use Feb. 1, 1958.

SN 73,664. Dehydtag Deutsche Hydrierwerke GmbH, Dusseldorf, Germany. Filed May 14, 1959.

DEHEXAN

Owner of German Reg. No. 560,361, dated July 23, 1943; and U.S. Reg. No. 644,026.
For Wetting, Emulsifying, Anti-Settling and Anti-Skinning Agents for Use in the Manufacture of Varnishes.

SN 73,669. Dehydtag Deutsche Hydrierwerke GmbH, Dusseldorf, Germany. Filed May 14, 1959.

PERAMON

Owner of German Reg. No. 536,782, dated Sept. 20, 1941.
For Chemical Products for Industrial and Scientific Uses as Emulsifying, Wetting and Dispersing Agents in Solvents and in Coating, Cleaning, Polishing and Detergent Preparations.

SN 81,044. Brilco Laboratories, Brooklyn, N.Y. Filed Sept. 9, 1959.

COLLOID-ALK

For Liquid Chemical for Treatment of Boiler Water To Bring About Desired Alkalinity and Remove Suspended Solids.
First use Aug. 9, 1950.

SN 82,182. American Chemical Corporation, Los Angeles, Calif. Filed Sept. 28, 1959.

American

For Cyclohexane, Naphthenic Acid, Cresylic Acid, Poly-Stearate, Ethylene Glycol and Tri-Chlor Ethylene.
First use July 17, 1959.

SN 86,841. Shulton, Inc., Clifton, N.J. Filed Dec. 7, 1959.

FLOWER GUARD

For Combination Insecticide, Fungicide and Miteicide.
First use Oct. 15, 1959.

SN 88,435. Southland Chemical Company, Los Angeles, Calif. Filed Jan. 4, 1960.

T ab it

For Chlorine Tablets Used as a Disinfectant-Algaecide in Swimming Pool Waters.
First use Sept. 15, 1959.

SN 88,617. Polychrome Corporation, Yonkers, N.Y. Filed Jan. 7, 1960.

QUICK-STEP

For Developing Solution for Use on Offset Plates.
First use Dec. 2, 1959.

SN 90,155. Gelgy Chemical Corporation, Ardsley, N.Y. Filed Feb. 2, 1960.

REOPLEX

For Reagent for Gas Chromatography.
First use Jan. 11, 1960.

SN 95,102. Master Automotive Chemicals, Inc., Brooklyn, N.Y. Filed Apr. 14, 1960.

PRO TEX

For Brake Fluid.
First use Feb. 15, 1946.

SN 96,361. Martens Chemical Corp., College Point, N.Y., assignee of Oscar J. Roth, d.b.a. Serval Products Co., College Point, N.Y. Filed May 3, 1960.

SOFT SPUN

For Fabric Softener Consisting of Dihydrogenated Tallow, Methyl Ammonium Chloride, and Urea and Scent.
First use in the year 1954.

SN 98,276. N. T. Gates Company, d.b.a. N. T. Gates Co., Camden, N.J. Filed June 2, 1960.

SORB-IT

For Moisture and Odor Absorbents Made of Materials Such as Silica Gel and Activated Charcoal.
First use Jan. 1, 1957.

SN 98,467. The Glidden Company, Cleveland, Ohio. Filed June 6, 1960.

SYLFAT

For Tall Oil Fatty Acids.
First use Feb. 12, 1958.

SN 101,044. Shell Oil Company, New York, N.Y. Filed July 18, 1960.

PENT-OXONE

For Solvents for Use in the Manufacture of Paints and for Other Industrial Uses.
First use July 8, 1960.

SN 101,798. Nash & Kinsella Laboratories, Inc., St. Louis, Mo. Filed Aug. 1, 1960.

2-WAY

Owner of Reg. No. 401,488.
For Insecticides, Rodenticides, Herbicides.
First use Mar. 13, 1942.

SN 101,931. Ciba Limited, Basel, Switzerland. Filed Aug. 3, 1960.

ARITA

Owner of Swiss Reg. No. 111,474, dated July 23, 1945.
For Insect Repellent.

SN 107,408. Chlorine Solutions Company, d.b.a. General Pool Supply Company, Los Angeles, Calif. Filed Oct. 31, 1960.



Owner of Reg. No. 205,846.
For Household Germicide for Tile, Glass, Tubs and Pools.
First use June 13, 1925.

SN 111,669. Hyland Laboratories, Los Angeles, Calif. Filed Jan. 11, 1961.

LST

For Diagnostic Reagents for Laboratory Use.
First use Dec. 5, 1960.

SN 112,541. Geigy Chemical Corporation, Ardsley, N.Y. Filed Jan. 28, 1961.

GESARAN

Owner of Reg. Nos. 406,217 and 409,820.
For Chemical Composition Used as an Ingredient for Herbicides.
First use Jan. 3, 1961.

SN 112,841. Geigy Chemical Corporation, Ardsley, N.Y. Filed Jan. 31, 1961.

SUPRACIDE

Owner of Reg. No. 716,317.
For Chemical Composition Used as an Ingredient for Insecticides.
First use Jan. 3, 1961.

Class 10 — Fertilizers

SN 103,570. Hoff Chemical Corporation, Flat Rock, Mich. Filed Aug. 29, 1960.

G-73

For Concentrated Plant Food.
First use May 24, 1960.

Class 12 — Construction Materials

SN 73,501. Pall Corporation, Glen Cove, N.Y. Filed May 12, 1959.

FIT RITE

For Preformed Thermal Insulation for Pipe Fittings.
First use December 1957.

SN 99,678. Sun Chemical Corporation, New York, N.Y. Filed June 24, 1960.

CRETE-FIX

For Heavy Duty Floor Resurfacer.
First use 1930.

SN 103,252. A.R.B. Window Sales Co., Detroit, Mich. Filed Aug. 23, 1960.



For Spring Sash Balances for Double-Hung Windows.
First use on or about Sept. 11, 1956.

SN 105,205. Pomona Tile Manufacturing Company, Los Angeles, Calif. Filed Sept. 28, 1960.

ENCORE

For Ceramic Tile.
First use Sept. 15, 1960.

SN 106,086. Precision Metal Fabricators Co., Memphis, Tenn., assignee of S. H. Frensdorf, d.b.a. Precision Metal Fabricators, Memphis, Tenn. Filed Oct. 10, 1960.

PERMCO

For Metal Forms Used in the Pouring of Concrete.
First use Jan. 1, 1960.

SN 109,222. Vaughan Interior Walls, Inc., Los Angeles, Calif. Filed Nov. 28, 1960.

VAUGHAN WALLS

No claim is made to the word "Walls" except in association with the mark as shown. Owner of Reg. No. 704,169.
For Ceiling, Floor, and Enclosure Runners of Metal for Use With Partitions and Wall Constructions.
First use Nov. 16, 1960.

SN 110,183. The W. B. Tyler Company, Cleveland, Ohio. Filed Dec. 13, 1960.



Owner of Reg. No. 52,388.
For Woven Wire Metal Having a High Degree of Light Reflectivity Used as Decorative Paneling for Walls and Ceilings.
First use Oct. 25, 1960.

SN 115,016. The Trenton Corporation, Ann Arbor, Mich. Filed Mar. 6, 1961.

DURA-PLY

For Protective Covering for Underground Pipe Lines.
First use Dec. 21, 1959.

SN 115,282. A.R.B. Window Sales Co., Detroit, Mich. Filed Mar. 10, 1961.

"REMOV-A-TILT"

For Tilting Windows.
First use on or about Dec. 7, 1960.

SN 115,416. The Babcock & Wilcox Company, New York, N.Y. Filed Mar. 13, 1961.

INSALCOR

For Refractory Brick Shapes.
First use Feb. 23, 1961.

SN 116,103. Ateo Ceramics Corp., Keyport, N.J. Filed Mar. 21, 1961.



For Ceramic Tiles.
First use Dec. 16, 1960.

SN 116,671. Rock Island Millwork Company, Rock Island, Ill. Filed Mar. 28, 1961.

RESINCORE

Owner of Reg. Nos. 546,846, 643,404, and others.
For Artificial Lumber Molded From Wood Particles and Synthetic Resins.
First use Jan. 19, 1956.

SN 119,517. Husky Oil Company, Cody, Wyo. Filed May 8, 1961.

HUSKYLITE

For Aluminized Fiberglass Asphalt Roof Coating.
First use July 2, 1954.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 105,996. Milwaukee Faucets, Inc., Milwaukee, Wis. Filed Oct. 7, 1960.



For Faucets, Sink Strainers, Bath Waste Fixtures, Tub and Other Shower Fixtures, Tub Fillers, Mixing Valves, Shower Heads, Volume Regulators, No-Swet Toilet Tank Valves, Back Water Valves, Sump Dehydrators.
First use on or about Aug. 23, 1960.

SN 113,723. M. Greenberg's Sons, Inc., San Francisco, Calif. Filed Feb. 15, 1961.

GREENBERG

For Water Hydrants, Valves, Pipe and Fittings, and Fire Hose Nozzles and Reels.
First use about 1854 on hydrants.

SN 115,108. Accurate Tool Company, Summit, N.J. Filed Mar. 8, 1961.

BUGHOZZER

For Metal Cylinder, Pipe Lines and Valves Sold as a Unit To Be Connected to the Water Line To Be Used for Mixing Water With Insecticides, Fungicides, Fertilizers and the Like, and for Spreading the Mixture.
First use Apr. 13, 1949.

SN 115,111. American Chain & Cable Company, Inc., Bridgeport, Conn. Filed Mar. 8, 1961.

RP & C

For Ball Valves.
First use Dec. 15, 1960.

SN 115,151. Josam Manufacturing Co., Michigan City, Ind. Filed Mar. 8, 1961.

GENIE

For Plumbing Fittings and Supplies, Including Water Hammer Arresters or Shock Absorbers.
First use Oct. 3, 1960.

Class 14 — Metals and Metal Castings and Forgings

SN 107,713. Union Carbide Corporation, New York, N.Y. Filed Nov. 2, 1960.

CHROMSILTEMP

Owner of Reg. No. 690,086.
For Alloying Composition for Addition to Molten Metal.
First use on or about June 2, 1959.

TM 88

OFFICIAL GAZETTE

SEPTEMBER 19, 1961

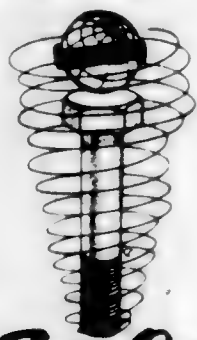
Class 15—Oils and Greases

SN 107,877. R.J. Oil & Refining Company, Inc., Terre Haute, Ind. Filed Nov. 4, 1960.



The drawing is lined for the colors red and blue, and claim is made to such colors. Owner of Reg. No. 587,072. For Gasoline. First use Feb. 1, 1960.

SN 116,973. Climax Specialty Manufacturing Company, Houston, Tex. Filed Apr. 3, 1961.



For Penetrating Oils Used as Valve Lubricants, Rust Inhibitors, Engine Cleaners and Knuckle Joint Lubricants. First use Oct. 1, 1960.

Class 16—Protective and Decorative Coatings

SN 119,087. Earnest Machine Products Company, d.b.a. Nu-Ma-Sheen Industrial Enamels Co., Cleveland, Ohio. Filed May 10, 1961.

NU-MA-SHEEN

For Paints, Enamels, and Thinners. First use on or about Oct. 1, 1956.

SN 121,930. Marine Development, Inc., New York, N.Y. Filed June 13, 1961.

MARGLOSS

For Catalyzed Resin Coating Compositions Similar to Paints, Especially for Marine Use. First use Apr. 7, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 60,204. C. L. Clifton, Sr., d.b.a. R & M Laboratories of Georgia, Avondale Estates, Ga. Filed Oct. 7, 1958.

NUMOL

For Pharmaceutical Product for the Relief of Coughs, Colds and Bronchial Irritations. First use June 18, 1944.

SN 76,973. The Pillsbury Company, Minneapolis, Minn. Filed July 2, 1959.

LIV-N-LAY

For Medicated Poultry Feeds for the Control and Prevention of Infections and Diseases. First use Apr. 7, 1959.

SN 78,145. Lydia E. Pinkham Medicine Company, Lynn, Mass. Filed July 21, 1959.

Lydia E. Pinkham

VARADAN

The facsimile signature is that of Lydia E. Pinkham, the founder, now deceased. Owner of Reg. Nos. 45,450, 633,056, and others. For Vitamin and Mineral Preparation. First use June 19, 1959.

SN 84,265. Ubiotica Corporation, Detroit, Mich. Filed Oct. 29, 1959.

UMORPHOID-B

For Medicinal Preparations for the Treatment of Monogolism. First use Sept. 14, 1959.

SN 91,500. Apotheker A. Diedenhofen K.G., Bad Godesberg (Rhine), Germany. Filed Feb. 24, 1960.

RHEILA

Owner of German Reg. No. 315,369, dated June 10, 1924. For Medicinal Tablets, Medicinal Lozenges, and Licorice Preparations.

SN 100,383. Nicholas International Limited, Toronto, Ontario, Canada. Filed July 6, 1960.

POTANTOL

Owner of U.S. Reg. No. 404,794. For Antibiotic-Vitamin-Iron Preparation Which Alleviates Stress Setbacks in Swine, Poultry and Ruminants. First use Mar. 1, 1960; in commerce Mar. 1, 1960.

SN 102,186. Birs Betteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. Filed Aug. 8, 1960.



Owner of Swiss Reg. No. 178,851, dated Nov. 6, 1959. For Medicines, Chemical-Pharmaceutical, Hygienic Agents, Pharmaceutical Drugs, Hormones and Vitamins.

SN 102,255. Mochida Pharmaceutical Mfg. Co., Ltd., Chiyoda-ku, Tokyo, Japan. Filed Aug. 8, 1960.

ZONOLYSIN

Owner of Japanese Reg. No. 543,420, dated Oct. 29, 1959. For Enzyme Preparation of Ophthalmic Crystalline Alpha-Chymotrypsin Used in the Amputation of Zinn's Ligament in the Total Resection of the Crystalline Lens. Subj. to Intf. with SN 108,914.

SEPTEMBER 19, 1961

U. S. PATENT OFFICE

TM 89

SN 108,372. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Nov. 14, 1960.

KETTRAN

Owner of Reg. No. 629,418. For Tetrahydrozoline as an Ingredient for Therapeutic Ophthalmic Preparations. First use Aug. 17, 1960.

SN 108,373. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Nov. 14, 1960.

BEAM

For Therapeutic Ophthalmic Preparation. First use June 8, 1960.

SN 108,914. S. Maw Son and Sons Limited, Barnet, England. Filed Nov. 22, 1960.

ZONULYSIN

For Pharmaceutical Preparations and Substances Specially for Ophthalmic Use. First use October 1958; in commerce Oct. 27, 1958. Subj. to Intf. with SN 102,255.

SN 109,061. Sylvan M. Edison, d.b.a. Pedetrix Pharmacal Co., Chicago, Ill. Filed Nov. 25, 1960.

PED'ETRIN

For Medicated Ointment for Treating the Feet. First use Sept. 5, 1931.

SN 115,574. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Mar. 14, 1961.

CORTIPHATE

For Adrenal Cortical Steroids. First use Feb. 10, 1961.

SN 115,913. Grove Laboratories Incorporated, St. Louis, Mo. Filed Mar. 17, 1961.

DBQ

For Medicinal and Pharmaceutical Preparations—Namely, a Preparation for the Relief of Sinus and Nasal Congestion, Headache, Feverish Feeling, Muscular Aches and Pain, and Temporary Constipation. First use Feb. 8, 1961.

SN 116,336. P-M Laboratories, Inc., Hampton, Iowa. Filed Mar. 23, 1961.

teen-clear HIDE-AWAY

The words "Hide-Away" are disclaimed apart from the mark as shown. Owner of Reg. No. 660,295. For Medicated Cream Ointment as an Antiseptic for Pimples and Acne. First use Feb. 27, 1961; Mar. 1, 1957, as to "Teen Clear."

SN 118,775. Ethical Veterinary Supply Co., Long Island City, N.Y. Filed Apr. 27, 1961.

EUTHANOL

For Chemical Product Used Only for Veterinary Euthanasia. First use at least as early as Dec. 31, 1951.

TM 770 O.G.—9

DRICON

For Decongestant Capsules. First use Mar. 15, 1961.

SN 119,317. Shulton, Inc., Clifton, N.J. Filed May 4, 1961.

COLFAX

For Decongestant Capsules. First use Mar. 15, 1961.

SN 119,340. Allergan Pharmaceuticals, Inc., Los Angeles, Calif. Filed May 5, 1961.

BLEFAMIDE

For Medicated Eye Solutions. First use Apr. 21, 1961.

SN 119,556. Pharmac Laboratories, Inc., Los Angeles, Calif. Filed May 8, 1961.

PROCTO-JEL

For Rectal Ointment. First use Apr. 17, 1961.

SN 119,579. Valmas Drug Co., Inc., Rochester, N.Y. Filed May 8, 1961.

BON-OPTO

For Eye Lotion. First use 1914.

SN 120,199. E. Fougere & Co., Inc., Hicksville, N.Y. Filed May 17, 1961.

DISCOPAUQUE

For Preparation for a Radiopaque Contrast Medium. First use May 5, 1961.

SN 120,299. Dr. Salisbury's Laboratories, Charles City, Iowa. Filed May 18, 1961.

SOLUVAC

For Biological Products for Veterinary Use, Especially Fowl Pox Vaccine. First use Feb. 1, 1961.

SN 120,322. Merck & Co., Inc., Rahway, N.J. Filed May 18, 1961.

DRONACTIN

For Medicinal Preparations for Use in the Treatment of Allergic and Dermatologic Conditions. First use Apr. 24, 1961.

SN 120,344. Schering Corporation, Bloomfield, N.J. Filed May 18, 1961.

ADVICIN

For Topical Antifungal Preparation. First use May 5, 1961.

SN 120,846. American Cyanamid Company, New York, N.Y. Filed May 26, 1961.

PHOSCOLIN

For Phoscolic Acid. First use May 12, 1961.

SN 120,847. American Cyanamid Company, New York, N.Y. Filed May 26, 1961.

PHOSCOLINS

For Phoscolic Acid and Related Compounds.
First use May 12, 1961.

SN 120,934. Allergan Pharmaceuticals, Inc., Los Angeles, Calif. Filed May 29, 1961.

EPIFRIN

For Medicated Eye Solutions.
First use Apr. 21, 1961.

SN 121,013. McHale Pharmaceutical, Inc., Wilmington, Del. Filed May 29, 1961.

DIVARG

For Dietary Supplement—Namely, a Vitamin-Mineral Preparation in Capsule Form.
First use May 5, 1961.

SN 121,076. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed May 31, 1961.

PELLAR

For Antifungal Preparation.
First use June 30, 1960.

SN 121,077. Crookes-Barnes Laboratories, Wayne, N.J. Filed May 31, 1961.

OPTIHIST

For Sterile Ophthalmic Solution.
First use July 21, 1960.

SN 121,121. Richardson-Merrell Inc., New York, N.Y. Filed May 31, 1961.

CONTERGAN

For Sedative in Tablet Form.
First use June 2, 1960.

Class 19—Vehicles

SN 107,727. Richard D. Avery, Dearborn, Mich. Filed Nov. 3, 1960.

GO BOAT

Applicant disclaims the word "Boat" apart from the mark as shown.
For Boat.
First use Nov. 20, 1959.

Class 20—Linoleum and Oiled Cloth

SN 115,894. Congoleum-Nairn Inc., Kearny, N.J. Filed Mar. 17, 1961.

SCINTILLATION

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Jan. 25, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 102,172. American Enka Corporation, Enka, N.C. Filed Aug. 8, 1960.

BRAND
REX

For Electrical Supplies—Namely, Insulated Wire and Cable, Insulating and Jacketing Compounds, Conductors With the Insulating Material, Insulated Cords, Jacketing, Shielding; Multi-Strand and Twin Lead Transmission Lines in Electronic Fields—Namely, Antenna Wire for Television and Radio Reception and Hook-Up; Lacquered Braid Wire, Glass Braid Wire, High Voltage Hook-Up and Appliance Wire, Instrument Wire; Plastic and Coated Tubing and Sleeving.
First use June 15, 1960.

SN 103,320. Berg Manufacturing Corporation, New Cumberland, Pa. Filed Aug. 24, 1960.



The lining on the drawing indicates the color red. No claim is made to any trademark rights in such red color.
For Strip Terminals for Electric Conductors.
First use March 1960.

SN 103,321. Berg Manufacturing Corporation, New Cumberland, Pa. Filed Aug. 24, 1960.



For Strip Terminals for Electric Conductors.
First use July 1960; June 1957 in a different display.

SN 103,554. Firelogs, Inc., Highland, N.Y. Filed Aug. 29, 1960.

EMBER - GLO

For Electrically Operated Simulated Log Fires, Comprising Log Members, a Movable Hollow Drum-Like Transparent Reflecting Member Arranged Adjacent the Log Members, and a Light Source Associated With the Reflecting Member.
First use Oct. 1, 1949.

SN 104,188. Premier Instrument Corp., Port Chester, N.Y. Filed Sept. 9, 1960. SN 107,074. Rheem Manufacturing Company, Richmond, Calif. Filed Nov. 7, 1960.

FLATLINE

For Mixers, Filters, and Couplers for Microwave Electronic Circuits.
First use Aug. 30, 1960.

SN 104,439. Dover Corporation, Washington, D.C. Filed Sept. 14, 1960.



For Elevator Parts and Components—Namely, Control Panels, Power Units, Electric Control Valves, Motor Generator Sets, Limit Switches, and Signal Controls.
First use July 1, 1960.

SN 104,669. American Battery, Inc., d.b.a. Nitro Battery Manufacturing Co., Kansas City, Kans. Filed Sept. 19, 1960.

Nitro

For Electric Storage Batteries.
First use Aug. 28, 1928.

SN 105,289. Clarence H. Kehm, Chicago, Ill. Filed Sept. 27, 1960.

RADIO-DIRECTOR

For Electronic Radio Transmitting and Receiving Equipment, Particularly for Communicating Directions or Information From One Location to a Plurality of Locations.
First use Aug. 25, 1960.

SN 106,746. Raytheon Company, Waltham, Mass. Filed Oct. 19, 1960.

apelco

For Electrical Apparatus Such as Radiotelephones, Receivers, Transducers, Automatic Pilots, Crystals, Antennas, and the Like.
First use in or about August 1946 for radiotelephones.

SN 107,340. The Hy-Glow Company, d.b.a. Hy-G Products Co., Los Angeles, Calif. Filed Oct. 28, 1960.

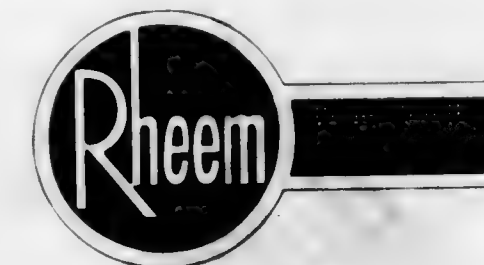
Fiesta LIGHTS

The word "Lights" is hereby disclaimed apart from the mark as shown.
For Decorative Lights for Indoor and Outdoor Use.
First use Oct. 14, 1948.

SN 107,376. H. H. Scott, Inc., Maynard, Mass. Filed Oct. 28, 1960.

EZ - A - LIGN

For Electronic Tuners and Alignment Apparatus Therefor.
First use on or about May 4, 1960.



Owner of Reg. No. 705,521.
For Electronically Operated Automation Systems and Equipment for Machine Tools, Data Processing, and Process Control and the Like.
First use Apr. 6, 1960.

SN 108,412. Telautograph Corporation, Los Angeles, Calif. Filed Nov. 14, 1960.

TELEMEMO

For Telescribing Apparatus Wherein Handwriting or Drawings Are Converted to Electrical Signals and Transmitted Electrically From One Location to Another Location Where the Handwriting or Drawings Are Reproduced.
First use Oct. 24, 1960.

SN 108,791. Kel Corporation, Burlington, Mass. Filed Nov. 21, 1960.



For Radio Receivers, Radio Transmitters, and Signal Processing Devices Used in Connection With Either or Both of the Foregoing.
First use Sept. 28, 1960.

SN 109,976. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed Dec. 9, 1960.

MINI-DUCT

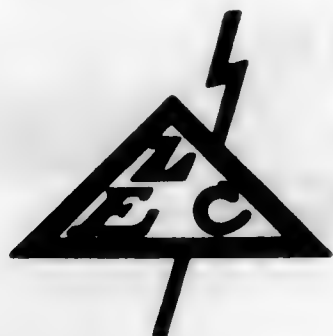
For Speaker and Speaker Cabinets for Electronically Generated Sounds.
First use July 28, 1959.

SN 112,571. Sonitrol Corporation, Anderson, Ind. Filed Jan. 26, 1961.



For Pest Control Devices Operating by Ultrasonic Sound and Including an Electrical Drive Motor.
First use Aug. 3, 1960.

SN 112,600. Lew Coren, d.b.a. Zenith Electric Company, Chicago, Ill. Filed Jan. 27, 1961.



For Automatic Control Equipment—Namely, Automatic Transfer Switches, Magnetic Contactors, Ground Detectors, Laundry Reversing Controls, Program Clocks and Switches, Interval Timers, Automatic Reset Timers, Cycle Timers, Percentage Timers, Multipole Relays, and the Like.
First use in or about 1959; in or about 1945 without the lightning bolt.

SN 112,872. Afa Corporation of Florida, Miami, Fla. Filed Feb. 1, 1961.

FOGMASTER

For Hand Carried Electric Power Sprayer.
First use Dec. 5, 1960.

SN 117,085. Berko Electric Manufacturing Corp., Jamaica, N.Y. Filed Apr. 4, 1961.

V.O.H.

For Electric Heaters.
First use in January 1961.

SN 117,291. Mitsui & Co., Ltd., New York, N.Y. Filed Apr. 6, 1961.

SOLFA

For Dry Cell Batteries.
First use May 20, 1959.

SN 117,425. AMP Incorporated, Harrisburg, Pa. Filed Apr. 10, 1961.

AMP-BLADE

Owner of Reg. Nos. 405,714, 702,856, and others.
For Electrical Connectors.
First use Feb. 8, 1961.

SN 117,512. Madison Associates, Inc., Madison, N.J. Filed Apr. 10, 1961.

WAVE -  - GRAPH

For Multiple Signal Oscillator for Demonstrating Wave Motion Phenomena.
First use Dec. 7, 1957.

SN 117,566. Texon, Inc., South Hadley Falls, Mass. Filed Apr. 10, 1961.

Texon

Owner of Reg. No. 522,749.
For Battery Separator Plates.
First use prior to 1953.

SN 117,583. Whiteway Manufacturing Company, Inc., Cincinnati, Ohio. Filed Apr. 10, 1961.

Cobra

For Fluorescent Lighting Fixtures.
First use Oct. 15, 1960.

SN 117,913. Servo Development Corp., Hicksville, N.Y. Filed Apr. 14, 1961.

MICROJUSTER

For Remote Control Mechanisms in the Nature of Servo Systems and Parts Thereof.
First use Mar. 20, 1961.

SN 118,090. Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. Filed Apr. 18, 1961.



Owner of U.S. Reg. No. 640,961.
For Radio and Television Receiving Sets.
First use Mar. 15, 1961; in commerce Mar. 15, 1961.

SN 118,158. Lightoller Incorporated, New York, N.Y. Filed Apr. 19, 1961.

OPTICON

For Fluorescent Lighting Fixtures.
First use Mar. 23, 1961.

SN 118,183. Elcond, Inc., Le Roy, N.Y. Filed Apr. 19, 1961.

THERMO-PURE

For Electric Dish Driers.
First use Nov. 1, 1960.

Class 22 — Games, Toys, and Sporting Goods

SN 108,459. Columbia Plastics Corp., Culver City, Calif. Filed Nov. 15, 1960.

GOLDEN GALLEON

For Toy Plastic Boats.
First use Sept. 5, 1960.

SN 81,130. Fiber-Foam Marine Products, Inc., Elm Grove, Wis. Filed Sept. 10, 1959.

PLAY-BUOY

For Floating Supports and Rafts for Supporting Persons and Objects on Water.
First use July 5, 1958.

SN 90,008. Louise Hull Claire, San Clemente, Calif. Filed Feb. 1, 1960.

MERRY SANTA MERRIE

For Dolls.
First use Dec. 1, 1959.

SN 92,986. Ideal Toy Corporation, Hollis, N.Y. Filed Mar. 16, 1960.

MONKEY STIX

For Interlocking Toy Elements Having a Characteristic Terminal Structure for Selective Interlocking Engagement With Companion Interlocking Elements Used To Construct Buildings, Animals and Other Toy Figures and Objects.
First use Oct. 22, 1959.

SN 102,604. Max Amsler, Neuallschwill, Switzerland. Filed Aug. 15, 1960.

CONSTRI

For Toy Building Blocks, Construction Sets and Parts Thereof.
First use Mar. 27, 1960; in commerce July 27, 1960.

SN 102,824. Edward L. Brody, d.b.a. Ed Brody & Co., Chicago, Ill. Filed Aug. 17, 1960.

KANTRECK

For Toys for Animal Pets.
First use on or about Mar. 15, 1960.

SN 103,161. Sandy F. Kraemer, Colorado Springs, Colo. Filed Aug. 22, 1960.

SQUATTER'S RIGHTS

For Apparatus Sold as a Unit for Playing a Board Game.
First use June 20, 1960.

SN 103,949. J. R. O'Neill, San Francisco, Calif. Filed Sept. 6, 1960.

"EYE-Q"

For Equipment Sold as a Unit for Playing a Ring Toss Game.
First use July 7, 1960.

SN 106,254. Atlanta Novelty Manufacturing Corp., New York, N.Y. Filed Nov. 14, 1960.

Stuggly

For Stuffed Dolls.
First use Oct. 11, 1960.

SN 108,459. Columbia Plastics Corp., Culver City, Calif. Filed Nov. 15, 1960.

GOLDEN GALLEON

For Toy Plastic Boats.
First use Sept. 5, 1960.

SN 109,065. Ideal Toy Corporation, Hollis, N.Y. Filed Nov. 25, 1960.

ASTRO BASE

For Motorized Mechanical Toy Astronaut Space Capsule.
First use Sept. 12, 1960.

SN 110,465. The Porter Chemical Company, Hagerstown, Md. Filed Dec. 19, 1960.

TOOLCRAFT

For Children's Tool Sets Comprising Hammers, Saws, Screw Driver, Pliers, Planes, Brace and Bits, Wooden Mallets, Try-Squares, Rulers, and Other Such Usable Items.
First use Feb. 25, 1948.

SN 111,552. Ron-Vik, Incorporated, Minneapolis, Minn. Filed Jan. 9, 1961.

ANKOR

For Water Ski Bindings.
First use on or about Aug. 15, 1960.

SN 112,904. Paul A. Lobel, New York, N.Y. Filed Feb. 1, 1961.

PAPERTEER

For Paper Toys and Paper Cut-Outs in the Nature of Toys and Novelties.
First use June 2, 1958.

SN 112,955. Dennis & Dorst, San Francisco, Calif. Filed Feb. 2, 1961.

MI-KUP

For Equipment Sold as a Unit for Playing a Game of the Type Including a Ball, a Catching Element and an Elastic Connecting the Two.
First use Oct. 8, 1960.

SN 113,046. Aeroplastics Corporation, Venice, Calif. Filed Feb. 6, 1961.

SWIM GUARD

For Flotation Device To Be Attached to the Body for Use as a Swimming Aid.
First use Dec. 28, 1960.

SN 113,148. Seacraft Industries Incorporated, Wilmington, Mass. Filed Feb. 6, 1961.

SEACRAFT

For Underwater and Skin-Diving Equipment, Parts and Accessories—Namely, Supporting Harnesses and Supporting Back Boards for Air Tanks; Regulator Valves and Parts and Actuators Thereof; Weights and Belts Thereof; Skin-Diving Exposure Suits, Helmets, Socks and Gloves.
First use Dec. 16, 1957.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 87,065. Franklin L. Lebus, Sr., Longview, Tex. Filed S.R. Dec. 10, 1959; Am. P.R. Sept. 28, 1960.



Owner of Reg. Nos. 525,543, 653,226, and 643,700. For Hoisting Equipment in General, Including Cable or Wire Spooling on Rotary Drums of All Kinds and Oil Field Drilling and Fishing Tools—Namely, Pivotal Knuckle Joints, Overshots and Releasing Wash Overshots and Spears. First use June 1, 1946.

SN 87,295. Truecraft Tool Company, Chicago, Ill. Filed Dec. 14, 1959.

SELECT-A-TOOL

For Tools of the Type Including Pliers, Wrenches, Screw Drivers, Clamps and Snips. First use Oct. 25, 1959.

SN 99,352. E. Morris Manufacturing Co., Detroit, Mich. Filed June 20, 1960.

TEMPERITE

For Haircutting Shears and Razors. First use Nov. 22, 1934.

SN 100,410. American-Lincoln Corporation, Toledo, Ohio. Filed July 7, 1960.

GOLD LINE

For Electrical Apparatus Such as Electric Floor Sanders, Edgers, Polishers, and Hedge Trimmers. First use June 18, 1960.

SN 105,911. Mulligram, Inc., Richmond, Calif. Filed Oct. 6, 1960.

"LITTLE ALGAE"

For Underwater Chemical Applicator for Removing Rust, Stain and Algae From Swimming Pools. First use Apr. 21, 1960.

SN 110,184. The W. S. Tyler Company, Cleveland, Ohio. Filed Dec. 13, 1960.



Owner of Reg. No. 52,388. For Screening Machinery and Apparatus, Woven Wire Screens for Various Industrial Uses, and for Woven Wire Metal Having a High Degree of Light Reflectivity Used for Elevator Cabs, Doors, Entrances, Wall and Ceiling Paneling. First use Oct. 25, 1960.

SN 116,957. American Photocopy Equipment Company, Evanston, Ill. Filed Apr. 3, 1961.

ELECTRO-STAT

For Duplicating Machines of the Type Intended Primarily for Office Use in Making Copies. First use Oct. 25, 1960.

Class 26—Measuring and Scientific Appliances

SN 97,481. General Precision, Inc., Binghamton, N.Y. Filed May 19, 1960.

TRACER

For Electronic Communications Equipment, Especially Inductive Identification and Control Interrogator-Responder Signalling Equipment Using Passive Responder Units, Interrogator Units, Coils, Registers, Data Processing Equipment Used Therewith and Parts Thereof. First use Mar. 24, 1960.

SN 103,784. Heraeus Quarzschmelze G.m.b.H., Hanau am Main, Germany. Filed Sept. 1, 1960.

INFRASIL

For Ultraviolet- and Infrared-Transparent Optical Articles, Such as Prisms, Lenses, Plates, Mirrors, Rods and Ingots of Optical Material, and Ultraviolet- and Infrared-Transparent Laboratory and Industrial Articles, Such as Tubing, Containers and Receptacles and Crucibles. First use in May 1952; in commerce in May 1957.

SN 103,786. Heraeus Quarzschmelze G.m.b.H., Hanau am Main, Germany. Filed Sept. 1, 1960.

HERALUX

For Optical Articles, Such as Prisms, Lenses, Plates, Mirrors, Rods and Ingots of Optical Material and Transparent or Translucent Laboratory and Industrial Articles, Including Those Transparent or Translucent for Infrared or Ultraviolet Radiation, Such as Tubes, Containers and Receptacles and Crucibles. First use July 17, 1956; in commerce Dec. 5, 1956.

SN 106,235. Ernest G. Vetter, d.b.a. Columbia Graphics, McLean, Va. Filed Sept. 26, 1960.

PresentaVue

For Portable Transparency Viewer. First use Aug. 1, 1960.

SN 106,664. U.S. Industries, Inc., New York, N.Y. Filed Oct. 18, 1960.

DIGIFLEX

For Electro-Mechanical Keyboard Training Apparatus Used to Instruct Persons in Manual Jobs by Stimulation of Their Conditioned Reflexes. First use Sept. 8, 1960.

SN 111,556. Scientific Development Corp., Cambridge, Mass. Filed Jan. 9, 1961.



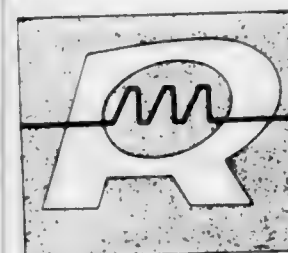
For Educational Apparatus for Electrically Simulating Physical Operations, Games and the Like, Including Relays; Indicator Lamps and Dials; Switches of the Fixed, Stepping and Rotary Types; Electric Terminals, Conductors and Contacts; Power Supplies; and Chassis and Housings Thereof. First use on or about Sept. 1, 1960.

SN 113,958. Stewart-Warner Corporation, Chicago, Ill. Filed Feb. 17, 1961.

VOLT GUARD

For Electrical Gauges for Checking Batteries, Generators and Voltage Regulators. First use at least as early as Jan. 9, 1961.

SN 114,534. Radiation, Inc., Melbourne, Fla. Filed Feb. 27, 1961.



For Analog to Digital Converter. First use December 1959.

SN 114,740. Akatron Corporation, Inglewood, Calif. Filed Mar. 2, 1961.

UNICASE

For Accessory Case for Contact Lenses. First use Dec. 9, 1960.

SN 117,061. Thomas Instrument Company, Inc., New York, N.Y. Filed Apr. 3, 1961.

BALCAR

For Electronic Flash Apparatus and Accessories for Photographic Lighting. First use on or about Sept. 21, 1959.

SN 117,264. Eversharp, Inc., Milford, Conn. Filed Apr. 6, 1961.

EVERSHARP

For Photographic Cameras and Photographic Film. First use Feb. 24, 1961.

SN 117,333. Auto Data Company, San Diego, Calif. Filed Apr. 7, 1961.

DECAMETER

For Voltmeters. First use Nov. 18, 1960.

SN 117,351. Fielden Electronics Limited, Wythenshawe, Manchester, England. Filed Apr. 7, 1961.

PNEUTRONIC

Owner of British Reg. No. 735,438, dated Oct. 26, 1954. For Electrical Apparatus for Measuring Variable Quantities, for Indicating and Recording Such Measurements and for Controlling the Operation of Other Apparatus in Order to Take Account of the Variations so Measured.

SN 117,355. General Controls Co., Glendale, Calif. Filed Apr. 7, 1961.

MERCURY

For Electrically Actuated Numerical Counters. First use Sept. 27, 1940.

SN 117,384. The Marquardt Corporation, Pomona, Calif. Filed Apr. 7, 1961.

MARQATRON

For Data Display Equipment. First use Mar. 24, 1961.

SN 117,480. General Aniline & Film Corporation, New York, N.Y. Filed Apr. 10, 1961.

AUTOSET

For Photographic Apparatus, Particularly Cameras. First use Mar. 8, 1961.

Class 27—Horological Instruments

SN 114,807. Sunbeam Corporation, Chicago, Ill. Filed Mar. 2, 1961.

THE TOWN HOUSE

For Clocks. First use Feb. 13, 1961.

SN 117,164. Belforte Watch Company, Inc., New York, N.Y. Filed Apr. 5, 1961.



For Watches. First use Feb. 1, 1960.

SN 117,335. Belove Watch Case Co., Inc., Brooklyn, N.Y. Filed Apr. 7, 1961.



For Watch Cases and Watch Dials. First use October 1935.

Class 28 — Jewelry and Precious-Metal Ware

SN 118,112. Swank, Inc., Attleboro, Mass. Filed Apr. 18, 1961.

TIE MAGIC

For Men's Jewelry—Namely, Tie Holders.
First use Apr. 3, 1961.

Class 32 — Furniture and Upholstery

SN 103,344. Leelite, Inc., Westbrook, Maine. Filed Aug. 24, 1960.

LEELITE

For Aluminum Lawn Furniture.
First use June 18, 1960.

SN 117,067. Vertical Blinds Corporation of America, Santa Monica, Calif. Filed Apr. 3, 1961.



For Vertical Blinds.
First use June 15, 1960.

SN 117,091. Cadmus & Engelhardt, Inc., New York, N.Y. Filed Apr. 4, 1961.

CECO

For Folding Tables.
First use Sept. 12, 1960.

SN 117,882. Kroehler Mfg. Co., Naperville, Ill. Filed Apr. 14, 1961.

CAPRICE

For Living Room, Dining Room, Bedroom and Occasional Living Room Wood Furniture.
First use on or about Dec. 15, 1960.

SN 118,012. Sturdilite Products, Inc., Chicago, Ill. Filed Apr. 17, 1961.

MODULITE

For Units for the Erection of Cabinets, Desks, and Benches.
First use Mar. 24, 1961.

SN 118,230. Excel Wood Products Co., Inc., Lakewood, N.J. Filed Apr. 20, 1961.

EMBASSY

For Kitchen Cabinets.
First use Jan. 19, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 105,759. Peabody Engineering Corporation, New York, N.Y. Filed Oct. 4, 1960.

PEABODY

For Direct Fired Air Heater Furnaces; Gas, Liquid and Solid Fuel Burners for Industrial Furnaces, for Process Furnaces and for Steam Boilers; Liquid and Gaseous Fuel Atomizers for Such Fuel Burners; Air Registers for Such Fuel Burners; Systems Controls for Such Fuel Burners; Gas-Electric and Oil Electric Ignitors for Such Fuel Burners; Fuel Oil Pumping and Heating Sets; Gas Scrubbers, Gas Coolers and Gas-Absorbers of the Gas-Liquid Contact Type.
First use January 1920.

SN 109,253. General Fittings Company, Warwick, R.I. Filed Nov. 29, 1960.

P-X

For Expansion Tank Used in Domestic Hot Water Heating Systems.
First use September 1960.

Class 36 — Musical Instruments and Supplies

SN 103,360. Santa's Village, Arcadia, Calif. Filed Aug. 24, 1960.

SANTA'S VILLAGE

For Mechanically Grooved Phonograph Records.
First use June 1, 1955.

SN 104,364. Brilhart Musical Instrument Corporation, Carlsbad, Calif. Filed Sept. 13, 1960.

FIBERWOOD

Owner of Reg. Nos. 693,519 and 693,521.
For Drumsticks.
First use June 2, 1960.

SN 105,019. Pamper Music, Inc., Goodlettsville, Tenn. Filed Sept. 22, 1960.

NEW-STAR

For Phonograph Records.
First use Sept. 6, 1960.

Class 37 — Paper and Stationery

SN 76,347. Spencer Gifts, Inc., Atlantic City, N.J. Filed June 23, 1959.

SPENCER GIFTS

The word "Gifts" is disclaimed apart from the mark as shown.
For Paper and Stationery—Namely, Gift Wrapping Paper, Novelty Note Papers, and Novelty Envelopes.
First use September 1941.

SN 79,344. The Magnavox Company, Fort Wayne, Ind. Filed Aug. 11, 1959.

MAGNACARD

Owner of Reg. No. 667,704.
For Magnetized Index Cards Used in Conjunction With Data Processing Equipment To Record Information and Subsequently Retain a Reproduction of Such Information.
First use May 20, 1959.

SN 81,051. A. J. Fagard & Cie, Paris, France. Filed Sept. 9, 1959.

JIF-MATIC

Priority claimed under Sec. 44(d) on French Reg. No. 479,032, dated Mar. 13, 1959 (Seine); Natl. Inst. No. 122,527. Owner of U.S. Reg. No. 618,237.
For Fountain Pens, Ball Point Pens, Mechanical Pencils, Portable and Desk Pen and Pencil Sets, Lead Pencils, Pencil Lengtheners and Clips, Drawing Charcoal, Erasers, Ink Cartridges, Inks and Leads.

SN 100,295. The Rytex Company, Indianapolis, Ind. Filed July 5, 1960.

RYTEX-HYLITED

Owner of Reg. No. 330,736.
For Writing Paper and Correspondence Envelopes.
First use on or about Dec. 1, 1958.

SN 113,317. Waterman-Bic Pen Corporation, Seymour, Conn. Filed Feb. 8, 1961.

DYAMITE

For Ball Which Is Incorporated in Ball Point Pens.
First use Jan. 12, 1961.

SN 114,867. Roger D. Marshall, d.b.a. Electronics Systems Company, Arlington, Va. Filed Mar. 3, 1961.

SEESORT

For Punched Cards for Designating a Special Numbering System Format.
First use Dec. 2, 1960.

SN 116,775. Whitting-Plover Paper Company, Stevens Point, Wis. Filed Mar. 29, 1961.

MILEAGE

For Printing and Writing Papers.
First use July 13, 1936.

SN 117,087. Bliss-Nielsen, Chicago, Ill. Filed Apr. 4, 1961.

SPEE-D-TAX

For Business Forms Particularly Intended for Tax Accounting and Reporting.
First use Aug. 30, 1960.

SN 117,194. Kimberly-Clark Corporation, Neenah, Wis. Filed Apr. 5, 1961.

TERI

For Absorbent Tissue Suitable for Hygienic, Cosmetic, or Cleaning Purposes.
First use Mar. 31, 1961.

SN 117,629. First-Citizens Bank & Trust Company, Smithfield, N.C. Filed Apr. 11, 1961.

READI-CHECK

For Bank Checks.
First use Mar. 27, 1961.
Subj. to Intf. with SN 121,708.

RITEWORTHY

For Notebook Paper.
First use Dec. 1, 1960.

SN 121,708. Consolidated Business Systems, Inc., New Brunswick, N.J. Filed June 9, 1961.

REDI-CHECK

For Continuous Tabulating Business Forms, With Provision for Reproduction Between Parts, With Overlaid Tabulating Card Checks.
First use on or about Oct. 20, 1958.
Subj. to Intf. with SN 117,629.

Class 38 — Prints and Publications

SN 60,977. Howard W. Sams & Co., Inc., Indianapolis, Ind. Filed Oct. 20, 1958.

CIRCUITRACE

For Diagrams, Photographs and Lists of Key Numbers, Relating to Electrical Circuits, Which Are Incorporated in Technical Information Folders.
First use Sept. 12, 1958.

SN 94,769. Ideal Publishing Corporation, New York, N.Y. Filed Apr. 11, 1960.

Teen Time

For Magazine Produced Quarterly.
First use Apr. 4, 1960.

SN 103,280. Kennedy Sinclair, Inc., Montclair, N.J. Filed Aug. 23, 1960.

FRIENDLY REMINDERS

For Pamphlets Published From Time to Time.
First use July 12, 1960.

SN 106,298. Incentive Publishing Company, Inc., Princeton, N.J. Filed Oct. 11, 1960.

INCENTIVE

For Periodical Magazine Distributed Primarily to Students as Information and Inducement To Consider Various Fields of Endeavor to Which Their Talents May Be Directed After Graduation.
First use June 28, 1960.

SN 106,421. Lancet Publications, Inc., Minneapolis, Minn. Filed Oct. 14, 1960.

WORLD NEUROLOGY

For Periodical Publication in the Form of a Magazine, Comprising the Official Journal of the World Federation of Neurology, Published and Issued Monthly.
First use June 17, 1960.

SN 107,097. Arnold Alpert Publications, Inc., New York, N.Y. Filed Oct. 25, 1960.



Owner of Reg. No. 689,921.
For Periodical, Issued Monthly, and Containing News and Articles Relating to FM Broadcasting and Advertising.
First use Sept. 12, 1960.

SN 108,851. Richard G. Milford, d.b.a. Richard G. Milford & Associates, Chicago, Ill. Filed Nov. 17, 1960.

THE GRAPHIC ARTS BUYER

of Chicago

For Trade Magazine.
First use Jan. 13, 1958.

SN 109,366. Welcome Wagon International, Inc., Memphis, Tenn. Filed Nov. 30, 1960.

The Welcome Wagon

VISITOR - NEWS

Owner of Reg. Nos. 439,421 and 631,491.
For Magazine Published Periodically.
First use in November 1959; Jan. 1, 1943, as to "The Welcome Wagon Visitor."

SN 110,738. Chamber of Commerce of the United States of America, Washington, D.C. Filed Dec. 23, 1960.

NATION'S BUSINESS

For Monthly Periodical.
First use Sept. 2, 1912.

SN 113,475. Thomas Ashwell & Company, Inc., New York, N.Y. Filed Feb. 13, 1961.

EXPORT TRADE

Owner of Reg. No. 617,495.
For Trade Magazine Published From Time to Time.
First use Nov. 3, 1958.

Class 39 - Clothing

SN 103,516. Baker-Cammack Hosiery Mills, Inc., Burlington, N.C. Filed Aug. 29, 1960.

SAABA

For Hosiery for Men.
First use June 10, 1960.

SN 103,662. Elliot Knitwear Corp., New York, N.Y. Filed Aug. 30, 1960.



The word "Sox" is disclaimed as the name of the goods.
For Slipper Socks.
First use August 1952.

SN 105,726. Deering Milliken, Inc., New York, N.Y. Filed Oct. 4, 1960.

BOWLONS

For Women's Skirts, Slacks, Shorts and Blouses.
First use June 27, 1960.

SN 110,999. G. R. Kinney Corporation, New York, N.Y. Filed Dec. 29, 1960.

TOWN DALES

For Women's Shoes.
*First use in November 1960.

Class 40 - Fancy Goods, Furnishings, and Notions

SN 112,642. Solo Products Corporation, New York, N.Y. Filed Jan. 27, 1961.

SLEEPING BEAUTY

For Non-Electric Curlers.
First use Jan. 2, 1937.

Class 42 - Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 92,867. Compax Corp., Woodside, N.Y. Filed Mar. 15, 1960.

PACSET

For Finished Textile Fabric, Particularly for Use in the Manufacture of T Shirts, Polo Shirts, Various Undergarments and the Like.
First use Dec. 29, 1959.

SN 109,468. Berven Carpets Corporation, San Francisco, Calif. Filed Dec. 2, 1960.

BERVEN

For Textile Carpets and Rugs.
First use on or about Dec. 1, 1958.

SN 111,453. Gorina, Sociedad Anonima, Barcelona, Spain. Filed Dec. 21, 1960.

GORINA, S.A.

Owner of Spanish Reg. No. 209,651, dated Nov. 25, 1948.
For Fabrics of Wool and of Blends of Wool for Making Outer Garments.

SN 114,857. Ivy Fabrics Corp., New York, N.Y. Filed Mar. 3, 1961.

SuedeKin

For Piece Goods—Namely, Cotton Suede.
First use Oct. 24, 1960.

SN 115,773. Burlington Industries, Inc., New York, N.Y. Filed Mar. 16, 1961.

THE ROVING I

For Textile Fabrics in the Piece Suitable for Use in the Manufacture of Men's Suits, Slacks, Jackets and Topcoats; and Women's Suits, Dresses and Coats.
First use Jan. 17, 1961.

SN 116,111. Federated Department Stores, Inc., New York, N.Y. Filed Mar. 21, 1961.

PARK EAST

For Comforters, Blankets, Bed Sheets, Bed Spreads, Table Linens, Place Mats of Cloth, Pillow Cases and Towels.
First use July 29, 1960.

SN 117,753. Kabushiki Kaisha Matsuzakaya, Naka-ku, Nagoya, Japan. Filed Apr. 5, 1961.



Owner of Japanese Reg. No. 383,027, dated Apr. 24, 1950.
For Towels.

Class 44 - Dental, Medical, and Surgical Appliances

SN 116,659. Physio-Control Company, Inc., Seattle, Wash. Filed Mar. 28, 1961.

NERV-TEK

For Nerve Locating Instruments.
First use May 26, 1960.

Class 45 - Soft Drinks and Carbonated Waters

SN 93,705. PepsiCo Limited, Isleworth, England. Filed Mar. 25, 1960.

SPREE

Owner of British Reg. No. B.638,879, dated July 25, 1945.
For Fruit Concentrates in Liquid Form Used for Making Soft Drinks.

SN 102,489. Ma Cherie Sales Corporation of America, St. Louis, Mo. Filed Aug. 11, 1960.



Applicant disclaims exclusive right to use of the word "Grape" in its usual descriptive form, except in the combination shown.
For Grape-Flavored Flavoring Concentrate Used in Making Soft Drink Beverages.
First use June 15, 1960.

SN 111,922. Recipe Foods, Inc., Baltimore, Md. Filed Jan. 16, 1961.

BENNETT'S FIX-A DRINK

Owner of Reg. Nos. 595,737 and 634,150.
For Fruit Syrups for Use in the Preparation of Non-Alcoholic, Maltless Soft Drinks.
First use Nov. 24, 1952; May 1, 1933, as to "Bennett's," and Nov. 24, 1952, as to "Fix-a-Drink."

Class 46 - Foods and Ingredients of Foods

SN 55,272. H. A. Schultz, d.b.a. Schultz Poultry Farm and as Iris' Eggs, Huntland, Tenn. Filed July 14, 1958.



For Fresh Eggs.
First use Feb. 24, 1958.

SN 62,921. The Frito Company, Dallas, Tex., assignee of Frito-Nicolay, Dancoy Company, Detroit, Mich. Filed Nov. 21, 1958.



For Potato Chips, Dehydrated Potatoes, and Shoe String Potatoes, in Packages and Cans.
First use May 1, 1935.

SN 82,662. The Glidden Company, d.b.a. Durkee Famous Foods, Cleveland, Ohio. Filed Oct. 5, 1959.

HI-RISE

For Oleomargarine Sold for Use by Industrial and Institutional Users.
First use Nov. 13, 1924.

SN 89,353. Golden Crown Citrus Corporation, Evanston, Ill. Filed Jan. 20, 1960.



The drawing is lined for orange.
For Fresh Orange Juice.
First use Sept. 21, 1959.

SN 89,708. The Sugardale Provision Company, Canton, Ohio. Filed Jan. 26, 1960.

Sugardale

CONEYS

The word "Coneys" is disclaimed apart from the mark as shown.
For Wieners.
First use on or about Apr. 17, 1939.

SN 92,284. N.V. Cacao- en Chocoladefabriek "Baronie," Alphen aan den Rijn, Netherlands. Filed Mar. 7, 1960.



Priority claimed under Sec. 44(d) on Dutch application filed Nov. 25, 1959; Reg. No. 136,053 dated Dec. 31, 1959.
For Candy, Eating and Cooking Chocolate, Cocoa, Cakes, Wafers and Crackers.

SN 98,492. Knapp & Lawrence Supply Company, Birmingham, Ala. Filed June 6, 1960.



For Base or Concentrate for Making an Orange Food Drink.
First use on or about Apr. 18, 1960.
Subj. to Intf. with SN 103,856.

SN 98,585. Hyb A. Jossem, d.b.a. Kubik Company, Rochester, N.Y. Filed June 7, 1960.

MAGIC POTATO FRYS

The words "Potato Frys" are disclaimed.
For Anhydrous Potato Flakes for Quick Frying.
First use Feb. 29, 1960.
Subj. to Intf. with SN 107,369.

TALLYHO

Owner of Reg. No. 629,499.
For Ice Cream and Sherbets.
First use June 15, 1960.

SN 100,848. A. A. Hoffman, d.b.a. Hoffman Kitchens, Prescott, Wis. Filed July 14, 1960.



Applicant disclaims the word "Spice."
For All-Purpose Food Seasoning Consisting of Herbs, Spices, and Other Ingredients.
First use May 2, 1960.

SN 102,105. Diamond Walnut Growers, Inc., Stockton, Calif. Filed Aug. 5, 1960.



The word "Brand" is disclaimed apart from the mark.
Owner of Reg. Nos. 106,834, 130,162, and 511,213.
For Shelled and Unshelled Nuts Comprising Pecans, Peanuts, Brazil Nuts, Walnuts, Cashews, and Filberts.
First use July 9, 1959.

SN 102,744. Dean's Pride, Incorporated, Denver, Colo. Filed Aug. 16, 1960.

DEAN'S PRIDE

For Dog Food.
First use May 3, 1960.

SN 103,856. Holly-Pak, Inc., Hollywood, Calif. Filed Sept. 2, 1960.



For Frozen Citrus Fruit Juice Concentrates and Other Frozen Fruit Concentrates.
First use May 11, 1960.
Subj. to Intf. with SN 98,492.

SN 104,927. Johnston Pie Company, New York, N.Y. Filed Sept. 21, 1960.



The words "Frozen" and "Pies" are disclaimed apart from the mark as shown.
For Frozen Pies.
First use March 1939; Oct. 8, 1931, as to the words "Johnston's Pies."

SN 106,133. Pet Milk Company, d.b.a. Pet Dairy Products Co., St. Louis, Mo. Filed Oct. 10, 1960.



The drawing is lined for blue and brown but no claim is made to color.
For Frozen Confections on a Stick.
First use February 1932.

SN 106,383. Bevan Enterprises, Inc., d.b.a. J. Baarth & Company, Canoga Park, Calif. Filed Oct. 14, 1960.

TRIMMER-U

For Combination Package Containing a High Protein Food Concentrate in Tablet Form and Vitamin-Mineral Capsules, for Use in Weight Control.
First use Sept. 21, 1960.

SN 107,220. Southeastern Syrup Company, Jackson, Tenn. Filed Oct. 26, 1960.



For Table Syrup.
First use December 1935.

SN 107,369. Parker Potato Packing Corp., Parker, Idaho. Filed Oct. 28, 1960.

Magic Fry

For Canned Potatoes.
First use Dec. 21, 1959.
Subj. to Intf. with SN 98,585.



The drawing is lined for blue and brown but no claim is made to color. Aside from the mark as shown, no claim is made to the representation of the goods.
For Frozen Confections on a Stick.
First use June 1948.

SN 107,747. El Molino Mills, Alhambra, Calif. Filed Nov. 3, 1960.

CARA-COA

For Candy; Carob (St. John's Bread) Powder for Human Consumption and for Animal Use.
First use Oct. 26, 1960.

SN 107,833. Coastal Valley Canning Co., Oxnard, Calif. Filed Nov. 4, 1960.

ORTEGA

Owner of Reg. Nos. 331,470 and 607,388.
For Canned Pimientos, Canned Chiles, Canned Chile Salsa (Sauce); Canned Chile Peppers, Canned Taco Sauce, Canned Sauce for Fish and Meats, Canned Tomatoes and Green Chiles, and Canned Tomato Juice Food Beverage.
First use at least as early as the year 1907.

SN 108,553. The Grace Kent Corporation, Chicago, Ill. Filed Nov. 16, 1960.



For Dietary Food Concentrate for Weight Control.
First use on or about June 19, 1959.

SN 109,354. Rogers Brothers Company, d.b.a. Rogers, Idaho Falls, Idaho. Filed Nov. 29, 1960.

TEEQ:17

For Dehydrated Potatoes.
First use Sept. 13, 1960.

SN 109,432. The Quaker Oats Company, Chicago, Ill. Filed Dec. 1, 1960.



Owner of Reg. Nos. 26,253, 531,694, and others.
For Food Concentrate in Powder Form Consisting Principally of Milk, Sucrose, Egg, Corn Oil, Salt, Artificial Flavoring, and Added Vitamins and Minerals for Use as a Weight Reducing Diet.
First use Sept. 13, 1960.

SN 110,568. Wallingford Corporation, New York, N.Y. Filed Dec. 20, 1960.

Da-cal

For Dietary Food Concentrate for Weight Control, Containing as Some of Its Main Ingredients Carbohydrates and Proteins, With Vitamins and Minerals Added.
First use on or about Nov. 1, 1960.

SN 111,195. Knudsen Creamery Co. of California, d.b.a. Knudsen Creamery Co., Los Angeles, Calif. Filed Jan. 3, 1961.

Petite

For Dairy Products—Namely, Liquid Milk, Yogurt and Cottage Cheese.
First use Feb. 1, 1960.

SN 111,196. Knudsen Creamery Co. of California, d.b.a. Knudsen Creamery Co., Los Angeles, Calif. Filed Jan. 3, 1961.

DIET-IZED

For Dairy Products—Namely, Liquid Milk, Yogurt and Cottage Cheese.
First use Feb. 1, 1960.

SN 111,197. Knudsen Creamery Co. of California, d.b.a. Knudsen Creamery Co., Los Angeles, Calif. Filed Jan. 3, 1961.



For Dairy Products—Namely, Cottage Cheese, Ice Cream, Ice Milk, Sherbet, and Yogurt.
First use Jan. 8, 1951.

SN 111,330. Gibraltar Foods, Inc., d.b.a. Slenda Products, Chicago, Ill. Filed Jan. 5, 1961.

SLEND A

For Calorie-Free Fat Substitute Which Is Sprayed on the Cooking Surfaces of Pots or Pans To Prevent Foods From Sticking, Although Some Fat or Shortening May Also be Added if Desired.
First use Aug. 22, 1960.

SN 111,508. Leaf Brands, Inc., Chicago, Ill. Filed Jan. 9, 1961.

FORE

Owner of Reg. No. 569,148.
For Candy.
First use Aug. 2, 1960.

SN 112,014. Beatrice Foods Co., Chicago, Ill. Filed Jan. 13, 1961.

COW-POKE

For Candy Products, Specifically Caramel Suckers.
First use Nov. 18, 1960.

SN 112,419. B. F. Trappey's Sons Inc., New Iberia, La. Filed Jan. 24, 1961.

BULL

The drawing is lined for green.
For Hot Sauce and Pickled Chilies.
First use on or about Jan. 1, 1936, on hot sauce.

SN 112,547. J.F.G. Coffee Company, Knoxville, Tenn. Filed Jan. 26, 1961.

Sabro

For Decaffeinated Instant Coffee.
First use Jan. 10, 1961.

SN 115,229. General Mills, Inc., Minneapolis, Minn. Filed Mar. 9, 1961.

TOTAL

For Wheat Flakes.
First use Feb. 23, 1961.

SN 117,423. Alexander Stoller, d.b.a. Oriemonte Products, Housatonic, Mass. Filed Apr. 7, 1961.

HURRY-CURRY

For Condiment Sauce Mix.
First use at least as early as Nov. 10, 1956.

SN 117,614. Coffee Instants, Inc., Long Island City, N.Y. Filed Apr. 11, 1961.

GOLD CUP

For Instant Coffee.
First use Jan. 3, 1958.

SN 117,865. Waples-Platter Company, Fort Worth, Tex. Filed Apr. 11, 1961.

GOLD "N" GOOD

Owner of Reg. No. 623,746.
For Oleomargarine.
First use Oct. 30, 1954.

SN 117,727. National Licorice Company, Brooklyn, N.Y. Filed Apr. 12, 1961.

HI-FIVE

Owner of Reg. Nos. 324,918 and 665,164.
For Candy.
First use Mar. 30, 1961.

SN 117,969. August C. Kirchhoff & Co., d.b.a. A. C. Kirchhoff & Co., Chicago, Ill. Filed Apr. 17, 1961.

FRENSSTAR

Owner of Reg. Nos. 591,361, 553,585, 638,846, and others.
For Roquefort Cheese Salad Dressing.
First use Feb. 3, 1952.

SN 118,023. The Winorr Canning Company, Circleville, Ohio. Filed Apr. 17, 1961.

FLAVOR HELD

Owner of Reg. No. 387,593.
For Canned Sweet Corn, Peas, Tomatoes, Lima Beans, Kidney Beans, and Pumpkin.
First use June 2, 1940.

Class 47—Wines

SN 88,570. Sovereign Importers Ltd., d.b.a. De Ville & Cie, Long Island City, N.Y. Filed Feb. 1, 1960.

DE VILLE

Owner of Reg. No. 582,105.
For Wines.
First use 1948.

SN 100,195. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. Filed July 1, 1960.



No claim is made to the words "California Wine." Owner of Reg. No. 696,858.
For Wines.
First use May 24, 1960; June 24, 1959, as to "Paree."

JA-JA

"Ja-Ja" is the German translation of "yes-yes."
For Wine.
First use Nov. 28, 1955.

Class 48—Malt Beverages and Liquors

SN 91,601. Hans Kördl G.m.b.H., Zurich, Switzerland. Filed Feb. 25, 1960.



Priority claimed under Sec. 44(d) on Swiss Reg. No. 178,334, dated Nov. 4, 1959.
For Beer and Non-Alcoholic Beverages Having a Malt Base.

Class 49—Distilled Alcoholic Liquors

SN 83,201. Benedictiner-Abtei Ettal, Ettal, near Oberammergau, Germany. Filed Oct. 14, 1959.



"Ettal Kloster" means "the cloister in Ettal." Owner of German Reg. No. 356,047, dated Aug. 24, 1926.
For Liqueurs.

SN 111,418. Licoreria Trigo, Inc., San Juan, Puerto Rico. Filed Jan. 6, 1961.

El Comandante

The English translation of "El Comandante" is the title for commanding officer in the army.
For Rum.
First use Nov. 10, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 118,932. Affiliated Machine & Tool Company, New York, N.Y. Filed May 1, 1961.

STRUC-TUBE

For Dismountable Display Structural Tubing.
First use May 17, 1950.

SN 118,933. Affiliated Machine & Tool Company, New York, N.Y. Filed May 1, 1961.

QUAD-TUBE

For Dismountable Display Structural Tubing.
First use August 1956.

SN 119,520. A. F. Klinzing Co. Inc., Milwaukee, Wis. Filed May 8, 1961.

BOSSIE BOWL

For Animal Drinking Fountains.
First use on or about Aug. 15, 1960.

SN 119,560. Safeway Stores, Incorporated, Oakland, Calif. Filed May 8, 1961.

CRAGMONT

Owner of Reg. No. 385,219.
For Flexible Drinking Straws.
First use Dec. 9, 1960.

Class 51—Cosmetics and Toilet Preparations

SN 69,765. Beecham Products Inc., Clifton, N.J., by change of name from Harold F. Ritchie, Inc., Clifton, N.J. Filed Mar. 17, 1959.



Applicant disclaims exclusive rights to the wording "For Smart Hair Grooming" and the representation of a carton and a tube, apart from the mark as shown. Owner of Reg. Nos. 398,474, 337,709, and others.
For Hair Dressing and Hair Tonic.
First use Jan. 21, 1959.

SN 80,449. S. S. Pierce Co., Boston, Mass. Filed Aug. 28, 1959.

LAVENDER REFRESHER

No registration rights are claimed for the word "Lavender" apart from the mark shown, but applicant waives none of its common law rights in the mark shown or any feature thereof. Owner of Reg. No. 592,056.
For All-Purpose Skin Lotion.
First use Mar. 24, 1953.

SN 91,496. The Abletson Manufacturing Company Limited, London, England. Filed Feb. 24, 1960.

FLAROMA

Owner of British Reg. Nos. 533,352, dated July 11, 1932; and 687,499, dated Mar. 22, 1950.
For Perfumes, Toilet Waters, Lavender Water, Bath Salts, Bath Oils and Bath Powders.

SN 92,645. Melvin G. Richardson, d.b.a. Richard's Beauty Center, Los Angeles, Calif. Filed Mar. 11, 1960.

Twinkle Tips

For Hair Tinting Preparation.
First use Oct. 18, 1959.

SN 109,023. Angee Manufacturing Company, d.b.a. Angee Mfg. Corp. and Angee Laboratory, Carmi, Ill. Filed Nov. 25, 1960.

Angee

For Face Creams—Namely, Cleansing Creams, Foundation Creams, and Powder Base, for Dry, Normal and Oily Skin; Skin Lotion; Complexion Pack; Hand Lotion and Hand Cream; Suntan Oil and Lotion; Spray Deodorant; Bath Powder; Face Powder, Loose and Compact; Liquid Make-Up; Cream and Powdered Rouge; Lip Rouge and Lipsticks; Eyelash Darkening Cream, Eye Shadow and Eyebrow Pencils; and Cologne and Perfume.
First use September 1956.

SN 109,766. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Dec. 7, 1960.

PARICAN

Owner of German Reg. No. 729,432, dated Sept. 28, 1959.
For Cosmetic Skin Creams and Skin Lotions.

SN 110,020. Angee Manufacturing Company, d.b.a. Angee Mfg. Corp. and Angee Laboratory, Carmi, Ill. Filed Dec. 12, 1960.

WILDWIND

For Men's Cologne and After Shave Lotion.
First use April 1960.

SN 110,840. The Fuller Brush Company, East Hartford, Conn. Filed Dec. 27, 1960.

HOUSE OF FULLER

Owner of Reg. Nos. 202,196, 528,990, and 704,384.
For Deodorant Stick for Personal Use.
First use on or about June 20, 1960.

SN 111,207. Natone Company, Los Angeles, Calif. Filed Jan. 3, 1961.

Acigena

For Skin Lotion and Toilet Cream for the Face and Hands.
First use Nov. 22, 1960.

SN 112,708. Conrad Gaiser, d.b.a. Malibu Products Company, La Mirada, Calif. Filed Jan. 30, 1961.

PEARLS OF MALIBU

For Rinse Concentrate.
First use Oct. 11, 1960.

SN 113,746. The Mennen Company, Morristown, N.J. Filed Feb. 15, 1961.

FOOT-SURE

For Personal Deodorant for the Feet.
First use Dec. 19, 1960.

SN 113,749. The Mennen Company, Morristown, N.J. Filed Feb. 15, 1961.

ACTIVON

For Hair Dressing.
First use Dec. 19, 1960.

SN 114,005. Johnson & Johnson, New Brunswick, N.J. Filed Feb. 20, 1961.

ZON

Owner of Reg. Nos. 52,955, 526,581, and others.
For Dental Bridge Cleaners.
First use Jan. 24, 1961.

SN 114,301. Alvar Carlsson Aktiebolag, Stockholm, Sweden. Filed Feb. 23, 1961.

CALARAN

Owner of Swedish Reg. No. 90,597, dated Oct. 21, 1960.
For Dyeing, Coloring and Shade Changing Cosmetic Products for Use on Eyebrows and Eyelashes.

SN 114,417. Avon Products, Inc., New York, N.Y. Filed Feb. 27, 1961.

NEVER BEFORE

For Cologne.
First use Feb. 7, 1961.

SN 114,440. Colonial Dames Company, Ltd., d.b.a. Colonial Dames, Los Angeles, Calif. Filed Feb. 27, 1961.

ESTRATONE

For Cosmetic Skin Lotions.
First use Oct. 7, 1959.

Class 52—Detergents and Soaps

SN 83,257. Jacques Wolf & Co., Newark, N.J. Filed Oct. 14, 1959.

WETSIT

Owner of Reg. No. 373,432.
For Chemical Preparation Which Is a Synthetic Wetting Agent, Detergent and Penetrant.
First use Aug. 10, 1938.

SN 87,383. John C. Stalford & Sons, Inc., Baltimore, Md. Filed Dec. 15, 1959.

"ALERT"

Owner of Reg. No. 711,058.
For Window Cleaner and Prewax Cleaner for All Types of Floors.
First use June 15, 1959.

SN 102,116. International Chemical Company, Philadelphia, Pa. Filed Aug. 5, 1960.

FLO-STRYP

For Paint Remover Particularly Adapted for Removal of Lacquer and Enamel From Large Metal Surfaces.
First use Dec. 4, 1958.

SN 102,747. Dean's Pride, Incorporated, Denver, Colo. Filed Aug. 16, 1960.

DEAN'S PRIDE

For Pet Shampoo.
First use May 3, 1960.

SN 111,060. Beutron Corporation, Dallas, Tex. Filed Dec. 30, 1960.



For Toilet Soap.
First use Dec. 12, 1960.

SN 112,860. The Procter & Gamble Company, Cincinnati, Ohio. Filed Jan. 31, 1961.

INSTITUTION X

Owner of Reg. No. 144,895.
For Sudsing Cleaner, Cleanser and Detergent.
First use Dec. 15, 1914.

SN 114,664. Yardley & Company Limited, London, England. Filed Feb. 28, 1961.

CAPTIVE BEAUTY

Owner of British Reg. No. 771,216, dated Nov. 15, 1957.
For Toilet Soap.

SN 118,876. Fels and Company, Philadelphia, Pa. Filed Apr. 28, 1961.

Fels-matic

Owner of Reg. Nos. 55,478, 694,030, and others.
For Detergent for Laundry Purposes.
First use Nov. 21, 1960.

SERVICE MARKS

Class 100 — Miscellaneous

SN 93,865. Satellite Service Co., Minneapolis, Minn. Filed Mar. 28, 1960.

SATELLITE

For Leasing Portable Commodes and for Servicing and Maintaining the Same.
First use Mar. 29, 1958.

SN 100,750. Sumner H. Bates, d.b.a. Bates Packaging Services, La Grange, Ill. Filed July 13, 1960.

BPS

For Packaging Services—Namely, Packaging of Ice Cream Sandwiches, Ice Cream Cones, Push-Ups, and Individual Serving Containers.
First use June 1, 1959.

Class 101 — Advertising and Business

SN 76,272. Simplex Advertising Company, Midland, Tex. Filed June 22, 1959.

SIMPLEX

For Promoting the Sale of Goods and/or Services of Others Through the Medium of Trading Stamps Redeemable in Cash or Merchandise.
First use Mar. 17, 1959.

SN 111,097. Arthur J. Girdia, d.b.a. Dataman Associates, Boston, Mass. Filed Dec. 30, 1960.

DATAMAN

For Employment Service—Namely, Recruiting Data Processing Personnel and Providing Job Opportunities for Such Personnel.
First use Dec. 11, 1960.

SN 112,884. Data Patterns, Incorporated, New York, N.Y. Filed Feb. 1, 1961.

LEADMASTER

For Preparation of Special Mailing Lists and Marketing Information Using Electronic Data Processing Equipment.
First use Aug. 10, 1960.

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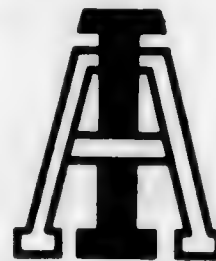
Class 102 — Insurance and Financial

SN 69,464. Allstate Life Insurance Company, Skokie, Ill. Filed Mar. 13, 1959.

ALLSTATE LIFE

Without waiver of common law rights, applicant disclaims the word "Life," except as part of the mark as shown. Owner of Reg. No. 717,683.
For Underwriting of Life Insurance.
First use in April 1957.

SN 84,835. American Investofunds, Inc., New York, N.Y. Filed Nov. 9, 1959.



For Providing Investment Advice by Means of Consultation and Dissemination of Information Incidental to the Promotion of Investments in Mutual Funds and Securities.
First use Feb. 1, 1959.

SN 114,493. La Salle Casualty Company, Chicago, Ill. Filed Feb. 27, 1961.

LaSalle

For Insurance Services Including Accident and Health Insurance, Hospital and Medical Care, Automobile Liability Including Physical Damage and Garage Liability, Malpractice and General Liability Including Dram Shop and Manufacturers and Contractors Liability, Plate Glass Insurance, Burglary and Fidelity Insurance, and Workmen's Compensation Insurance.
First use in June 1938.

Class 104 — Communication

SN 112,481. National Broadcasting Company, Inc., New York, N.Y. Filed Jan. 25, 1961.



Owner of Reg. Nos. 370,295, 382,991, and 624,201.
For Radio and Television Broadcasting Services.
First use Jan. 14, 1959.

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Class 105 — Transportation and Storage

Class 106 — Material Treatment

SN 111,605. Oilfields Trucking Company, Bakersfield, Calif. Filed Jan. 10, 1961. SN 107,834. Cold Spring Bleachery, Yardley, Pa. Filed Nov. 4, 1960.



For Transporting and Delivering Petroleum and Petroleum Products, Chemicals, and Other Bulk Liquids in Tank Trucks and Trailers.
First use March 1930.

SN 114,961. Imperial Household Shipping Co., Inc., Long Beach, Calif. Filed Mar. 6, 1961.



For Picking Up Goods, Packaging Such Goods, Placing Such Packaged Goods on a Carrier and Delivering Such Goods After They Have Been Shipped by Such Carrier on an International and National Basis.
First use on or about Feb. 1, 1960.



Owner of Reg. Nos. 511,071, 695,442, and others.
For Finishing Services—Namely, Bleaching, Mercerizing, Dyeing, Printing, Shrinking, Crease Resisting, Spot Resisting, Wash and Wear, and/or Calendering of Cotton, Rayon and Mixture Fabrics.
First use Oct. 10, 1960.

Class 107 — Education and Entertainment

SN 99,139. Great Commission Gospel Association, Inc., Atlanta, Ga. Filed June 16, 1960.

THE GREAT COMMISSION HOUR

For Title of a Radio Program.
First use Mar. 1, 1956.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 95,351. Ancient Order of Hibernians in America, Brooklyn, N.Y. Filed Apr. 19, 1960.



The drawing is lined for green and gold.
For Indicating Membership in the Organization.
First use Aug. 1, 1952.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

721,464. DIAMOND A DESIGN. Kern County Land Company. SN 111,410. Pub. 7-4-61. Filed 1-6-61.
721,465. BLUE MIST FUR FARM AND DESIGN. Alvin E. Johnston. SN 113,644. Pub. 7-4-61. Filed 2-14-61.

Class 2—Receptacles

721,466. FLEXEEL. Buckeye Molding Company. SN 12,705. Pub. 11-4-58. Filed 7-24-56.
721,467. W AND DESIGN. The Warner Brothers Company. SN 94,535. Pub. 12-27-60. Filed 4-6-60.
721,468. CELANESE. Celanese Corporation of America. SN 101,744. Pub. 7-4-61. Filed 8-1-60.
721,469. HUMIGARD. Olin Mathieson Chemical Corporation. SN 104,544. Pub. 7-4-61. Filed 9-15-60.
721,470. PERMA PRESSURE. Metal Coating Corporation. SN 105,186. Pub. 7-4-61. Filed 9-26-60.
721,471. TESTWOOD. Rhoads Molded Products Inc. SN 112,566. Pub. 7-4-61. Filed 1-26-61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

721,472. KEY-KACHE AND DESIGN. Leaf Plastics, Inc. SN 110,158. Pub. 7-4-61. Filed 12-13-60.
721,473. MERRY WINDOW. Clarice Fox, d.b.a. Foxy Products. SN 110,426. Pub. 7-4-61. Filed 12-19-60.
721,474. LENCRAFT. Lennox Manufacturing Company. SN 110,864. Pub. 7-4-61. Filed 12-27-60.

Class 5—Adhesives

721,475. TEC. The Eckel Corporation. SN 63,215. Pub. 6-16-59. Filed 11-26-58.
721,476. HUGHSON. Lord Manufacturing Company. SN 91,697. Pub. 7-4-61. Filed 2-26-60.
721,477. AUTOPRINT. Societe Rhodiaceta. SN 111,132. Pub. 7-4-61. Filed 12-30-60.
721,478. SAFEGUARD. Wilco Company. SN 114,066. Pub. 7-4-61. Filed 2-20-61.
721,479. SEAM-RESIST. The Roberts Co. SN 114,536. Pub. 7-4-61. Filed 2-27-61.

Class 6—Chemicals and Chemical Compositions

721,480. REAL E-Z. Cook Chemical Company. SN 70,869. Pub. 7-4-61. Filed 4-6-59.
721,481. 10 BELOW. Garry Laboratories, Inc. SN 89,845. Pub. 7-4-61. Filed 1-28-60.
721,482. HUGHSON. Lord Manufacturing Company. SN 91,699. Pub. 7-4-61. Filed 2-26-60.
721,483. METHYL TRITHION. Stauffer Chemical Company. SN 96,992. Pub. 7-4-61. Filed 5-12-60.
721,484. CFS AND DESIGN. California Farm Supply Company. SN 100,222. Pub. 7-4-61. Filed 7-5-60.

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721,485. GESAMIL. Geigy Chemical Corporation. SN 102,111. Pub. 7-4-61. Filed 8-5-60.
721,486. SPECTRO. Geigy Chemical Corporation. SN 102,112. Pub. 7-4-61. Filed 8-5-60.
721,487. IPATONE. Geigy Chemical Corporation. SN 102,113. Pub. 7-4-61. Filed 8-5-60.
721,488. AIR CON. Ira C. Allstadt, Jr., d.b.a. Allstadt Mfg. Co. SN 102,162. Pub. 7-4-61. Filed 8-8-60.
721,489. ACRIBINDER. Jersey State Protective Coating Co. Inc. SN 102,599. Pub. 7-4-61. Filed 8-2-60.
721,490. MOUSER. M.F.A. Oil Company. SN 105,990. Pub. 7-4-61. Filed 10-7-60.
721,491. CYNEM. American Cyanamid Company. SN 107,306. Pub. 7-4-61. Filed 10-28-60.
721,492. HYDRAR. Universal Oil Products Company. SN 107,524. Pub. 7-4-61. Filed 10-31-60.
721,493. AEROCARB. American Cyanamid Company. SN 108,440. Pub. 7-4-61. Filed 11-15-60.
721,494. PERMA-LIFE. Atlas Supply Company. SN 108,534. Pub. 7-4-61. Filed 11-16-60.
721,495. SMAK. Chemical & Electronic Research Corporation. SN 109,168. Pub. 7-4-61. Filed 11-28-60.
721,496. ACCURAC. American Cyanamid Company. SN 109,288. Pub. 7-4-61. Filed 11-30-60.
721,497. PREGNOSTICON. N.V. Organon. SN 113,235. Pub. 7-4-61. Filed 2-7-61.

Class 7—Cordage

721,498. KNO-KINK. American Manufacturing Company, Inc. SN 97,360. Pub. 7-4-61. Filed 5-18-60.

Class 8—Smokers' Articles, Not Including Tobacco Products

721,499. JENFRED-WARE. Levco Metal Finishers, Inc. SN 111,511. Pub. 7-4-61. Filed 1-9-61.
721,500. SILVER K. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,884. Pub. 7-4-61. Filed 1-11-61.

Class 9—Explosives, Firearms, Equipments, and Projectiles

721,501. TROJAN WARRIOR HEAD DESIGN. Trojan Powder Company. SN 99,466. Pub. 7-4-61. Filed 6-21-60.
721,502. TROJATOL. Trojan Powder Company. SN 100,820. Pub. 7-4-61. Filed 7-13-60.
721,503. MAGICLICK. Minnesota Rubber Company. SN 102,254. Pub. 7-4-61. Filed 8-8-60.
721,504. TROJEL. Trojan Powder Company. SN 106,773. Pub. 7-4-61. Filed 10-19-60.
721,505. CYAGEL. American Cyanamid Company. SN 111,461. Pub. 7-4-61. Filed 1-9-61.
721,506. PERIMEX. American Cyanamid Company. SN 111,462. Pub. 7-4-61. Filed 1-9-61.
721,507. UNI-SEAL. Alcan Company, Incorporated. SN 111,838. Pub. 7-4-61. Filed 1-16-61.
721,508. COMBOWAD. Alcan Company, Incorporated. SN 111,839. Pub. 7-4-61. Filed 1-16-61.

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Class 10—Fertilizers

721,509. SEA-BORN ETC. AND DESIGN. Joakim Lehmkuhl, d.b.a. Skod Co. SN 104,463. Pub. 7-4-61. Filed 9-14-60.
721,510. COMINCO AND FANCIFUL REPRESENTATION OF AN ELEPHANT. The Consolidated Mining and Smelting Company of Canada Limited. SN 105,839. Pub. 7-4-61. Filed 9-28-60.

Class 11—Inks and Inking Materials

721,511. FRESH-PAK. The Egly Register Company. SN 110,042. Pub. 7-4-61. Filed 12-12-60.

Class 12—Construction Materials

721,512. RSC. Permagile Corporation of America. SN 109,893. Pub. 7-4-61. Filed 12-8-60.
721,513. PEELCOTE. Elwin G. Smith & Co., Inc. SN 110,288. Pub. 7-4-61. Filed 12-14-60.
721,514. TREASURETILE. Treasuretile Inc. SN 110,903. Pub. 7-4-61. Filed 12-27-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

721,515. CLARY DYNAMICS ETC. AND DESIGN. Clary Dynamics Corporation, by change of name from Flo-Ball Pen Corporation. SN 99,320. Pub. 7-4-61. Filed 6-20-60.
721,516. URSUS. Trelleries Leon Bekaert, S.P.R.L. SN 105,395. Pub. 7-4-61. Filed 9-28-60.

Class 14—Metals and Metal Castings and Forgings

721,517. VANADIUM TYPE N. Vanadium-Alloys Steel Company. SN 97,349. Pub. 7-4-61. Filed 5-17-60.
721,518. NS AND GLOBE DESIGN. National-Standard Company. SN 108,503. Pub. 7-4-61. Filed 11-15-60.
721,519. SMOOTHCOTE. All-State Welding Alloys Co., Inc. SN 108,687. Pub. 7-4-61. Filed 11-18-60.
721,520. UNIBRITE. Universal-Cyclops Steel Corporation. SN 109,013. Pub. 7-4-61. Filed 11-23-60.
721,521. SOFTWELD. The Lincoln Electric Company. SN 109,082. Pub. 7-4-61. Filed 11-25-60.
721,522. E-CONO-CORE. Wheeling Steel Corporation. SN 109,224. Pub. 7-4-61. Filed 11-28-60.

Class 15—Oils and Greases

721,523. EFTON. Dura Commodities Corporation. SN 111,593. Pub. 7-4-61. Filed 1-10-61.

Class 16—Protective and Decorative Coatings

721,524. PERMA-RESIN AND DESIGN. Photo Chemical Products, Inc. SN 48,577. Pub. 3-24-59. Filed 3-27-58.
721,525. HEXABOR. Elektroschmelzwerk Kempten, G.m.b.H. SN 84,877. Pub. 3-29-60. Filed 11-9-59.
721,526. GALVANIDE. Sun Chemical Corporation. SN 99,671. Pub. 7-4-61. Filed 6-24-60.
721,527. AQUANAMEL. Duralux Paints Pty. Limited. SN 110,319. Pub. 7-4-61. Filed 12-16-60.

721,528. VARATHANE. The Flecto Company, Inc. SN 110,424. Pub. 7-4-61. Filed 12-19-60.
721,529. MIRACOLOR. Inland Steel Products Company. SN 111,190. Pub. 7-4-61. Filed 1-3-61.

Class 17—Tobacco Products

721,530. VOORTREKKERS AND DESIGN. Theodorius Niemeljer N.V. SN 106,523. Pub. 7-4-61. Filed 10-17-60.
721,531. CAMBRIDGE. Philip Morris Incorporated. SN 111,678. Pub. 7-4-61. Filed 1-11-61.

Class 18—Medicines and Pharmaceutical Preparations

721,532. ZESTAN. White Laboratories, Inc., assignee of Standex Laboratories, Inc. SN 59,143. Pub. 9-22-59. Filed 9-18-58.
721,533. OCTASIL. Viobin Corporation. SN 100,824. Pub. 7-4-61. Filed 7-13-60.
721,534. K-CILLIN. Bristol-Myers Company. SN 103,533. Pub. 7-4-61. Filed 8-29-60.
721,535. BUEBLECITHIN. Firma Carl-Heinz Buer Chemisch-Pharmazeutische Fabrik. SN 111,595. Pub. 7-4-61. Filed 1-10-61.
721,536. NUTRIGAIN. Nicholas International Limited. SN 112,065. Pub. 7-4-61. Filed 1-18-61.
721,537. PRELUVIT. C. H. Boehringer Sohn. SN 113,078. Pub. 7-4-61. Filed 2-6-61.
721,538. KALAVERT. Don Baxter, Inc. SN 115,119. Pub. 7-4-61. Filed 3-8-61.
721,539. LICARAN. Union Chimique Belge, S.A. SN 116,272. Pub. 7-4-61. Filed 3-22-61.
721,540. FERROCEBRIN. Eli Lilly and Company. SN 116,536. Pub. 7-4-61. Filed 3-27-61.
721,541. DERM-OFF. Vogarell Products, Inc. SN 116,610. Pub. 7-4-61. Filed 3-27-61.
721,542. DERMA-SOFT. Vogarell Products, Inc. SN 116,611. Pub. 7-4-61. Filed 3-27-61.
721,543. PLEXAQUIN. The Purdue Frederick Company. SN 116,666. Pub. 7-4-61. Filed 3-28-61.
721,544. POLYQUIDIN. The Purdue Frederick Company. SN 116,667. Pub. 7-4-61. Filed 3-28-61.
721,545. LIDA-MANTLE. Dome Chemicals, Inc. SN 116,809. Pub. 7-4-61. Filed 3-30-61.
721,546. LIDA-MANTLE-HC. Dome Chemicals, Inc. SN 116,810. Pub. 7-4-61. Filed 3-30-61.
721,547. NEO-LIDA-MANTLE-HC. Dome Chemicals, Inc. SN 116,811. Pub. 7-4-61. Filed 3-30-61.

Class 19—Vehicles

721,548. N ZETA. Ceske Zavody Motocyklove, Narodni Podnik. SN 110,402. Pub. 7-4-61. Filed 12-19-60.
721,549. OLSONETTE. J. B. E. Olson Corporation. SN 111,122. Pub. 7-4-61. Filed 12-30-60.
721,550. 880. General Dynamics Corporation. SN 113,278. Pub. 7-4-61. Filed 2-8-61.
721,551. TORKAR. National Mine Service Company. SN 113,288. Pub. 7-4-61. Filed 2-8-61.
721,552. FLEXITOR. George Spencer Moulton & Co. Limited. SN 113,434. Pub. 7-4-61. Filed 2-10-61.

Class 20—Linoleum and Oiled Cloth

721,553. ROTO-RUG. New London Mills, Inc. SN 111,679. Pub. 7-4-61. Filed 1-11-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 721,554. GO-GO. Renato Bialelli S.p.A. SN 95,277. Pub. 6-27-61. Filed 4-18-60.
 721,555. SCENT-N-SMELL. The Fragrance Process Company, Inc. SN 98,989. Pub. 7-4-61. Filed 6-14-60.
 721,556. KOVER GARD. Textron, Inc. SN 100,438. Pub. 7-4-61. Filed 7-7-60.
 721,557. SOLAGRID. Hoffman Electronics Corporation. SN 101,871. Pub. 7-4-61. Filed 8-2-60.
 721,558. MAGNA-DIP. Twachtman & Company. SN 106,063. Pub. 7-4-61. Filed 10-18-60.
 721,559. AMOUR AND DESIGN. Acme Sales Company. SN 109,286. Pub. 7-4-61. Filed 11-30-60.
 721,560. TRI-PLATE. Sanders Associates, Incorporated. SN 109,739. Pub. 7-4-61. Filed 12-8-60.
 721,561. TURBULATOR. Acme Engineering and Manufacturing Corporation. SN 109,755. Pub. 7-4-61. Filed 12-7-60.
 721,562. CINEBEAM. Zenith Radio Corporation. SN 110,130. Pub. 7-4-61. Filed 12-12-60.
 721,563. COLOR GARD. Standard Motor Products, Inc. SN 111,236. Pub. 7-4-61. Filed 1-3-61.
 721,564. DYNACODE. U.S. Industries, Inc. SN 112,179. Pub. 7-4-61. Filed 1-19-61.

Class 22—Games, Toys, and Sporting Goods

- 721,565. SAFE-T-SWIMMER. Silby-Dolcourt Industries, Inc. assignee of Caribbean Products Corporation. SN 93,522. Pub. 7-4-61. Filed 12-2-58.
 721,566. HI-FLI. Caprico International, Inc. SN 88,295. Pub. 7-4-61. Filed 12-31-59.
 721,567. FORREST'S AND DESIGN. Forrest Earl Roof, d.b.a. Forrest Products Company. SN 88,312. Pub. 7-4-61. Filed 12-31-59.
 721,568. MATCHMAKER. Stebco Industries, Inc. SN 100,068. Pub. 7-4-61. Filed 6-30-60.
 721,569. RESIN SEAL. A. G. Spalding & Bros., Inc. SN 105,707. Pub. 7-4-61. Filed 9-8-60.
 721,570. FIBERLITE. The Harry Gill Company. SN 105,881. Pub. 7-4-61. Filed 10-6-60.
 721,571. GIVE-A-SHOW. Bromo Mint Company, d.b.a. Kenner Products Co. SN 108,021. Pub. 7-4-61. Filed 11-8-60.
 721,572. INSTANT BASS. John R. James. SN 108,124. Pub. 7-4-61. Filed 11-9-60.
 721,573. BOOMER. William C. Peterson, d.b.a. Pet Toy of N.H. SN 108,370. Pub. 7-4-61. Filed 11-14-60.
 721,574. REMCO. Reynolds Manufacturing Company, Incorporated, assignee of J. H. Reynolds. SN 110,172. Pub. 6-13-61. Filed 12-13-60.
 721,575. GLASS-LITE. Plas-Steel Products, Inc. SN 111,123. Pub. 7-4-61. Filed 12-30-60.
 721,576. FLORENTINE. Kingsway, Inc. SN 111,505. Pub. 7-4-61. Filed 1-9-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 721,577. HYDRODYN. Constantin Ranch Ulmer Schraubenfabrik. SN 83,285. Pub. 7-4-61. Filed 10-15-59.
 721,578. REPRESENTATION OF CHEMICAL FLASK AND DESIGN. Hagan Chemicals & Controls, Inc. SN 100,122. Pub. 7-4-61. Filed 7-1-60.
 721,579. AUTOVENER. Roberts Company. SN 100,466. Pub. 7-4-61. Filed 7-7-60.
 721,580. PARABLENDER. Roberts Company. SN 100,467. Pub. 7-4-61. Filed 7-7-60.

- 721,581. SUPER-D-HYDRATOR. The Sharples Corporation. SN 102,948. Pub. 7-4-61. Filed 8-18-60.
 721,582. MAX. U.S. Import Equipment Distributors, Inc. SN 104,777. Pub. 7-4-61. Filed 9-19-60.
 721,583. WEDAPUMP. Aktiebolaget W. Dan Bergman. SN 105,326. Pub. 7-4-61. Filed 9-28-60.
 721,584. SP AND DESIGN. Simmonds Precision Products, Inc. SN 105,683. Pub. 7-4-61. Filed 10-3-60.
 721,585. ETIPRINT AND DESIGN. Guhl & Scheibler A.G. SN 106,712. Pub. 7-4-61. Filed 10-19-60.
 721,586. DITTO BRAND AND PANEL BLOCK DESIGN. Ditto, Incorporated. SN 109,047. Pub. 7-4-61. Filed 11-25-60.
 721,587. VANI-VIEWER. National Laboratories, Inc. SN 110,558. Pub. 7-4-61. Filed 12-20-60.
 721,588. READ-O-MAT-JUNIOR. Publisher's Vending Services, Inc. SN 110,786. Pub. 7-4-61. Filed 12-23-60.
 721,589. EIRICH AND DESIGN. Firma Maschinenfabrik Gustav Eirich. SN 111,088. Pub. 7-4-61. Filed 12-30-60.
 721,590. G GENERAL. The General Fire Extinguisher Corporation. SN 111,092. Pub. 7-4-61. Filed 12-30-60.
 721,591. NOVAR. Kable Engineering Co. SN 111,112. Pub. 7-4-61. Filed 12-30-60.
 721,592. TOOL-FAIR AND DESIGN. Fuller Tool Co. Inc. SN 111,180. Pub. 7-4-61. Filed 1-3-61.
 721,593. LT AND DESIGN. Lido Tools. SN 111,746. Pub. 7-4-61. Filed 1-12-61.
 721,594. BOND-O-LOC. Zollner Corporation. SN 113,171. Pub. 7-4-61. Filed 2-6-61.
 721,595. ZOLLNER. Zollner Corporation. SN 113,173. Pub. 7-4-61. Filed 2-6-61.

Class 26—Measuring and Scientific Appliances

- 721,596. ARISTO. Dennert & Pape Aristo-Werke K.G. SN 91,194. Pub. 7-4-61. Filed 2-18-60.
 721,597. PRODAC. Westinghouse Electric Corporation. SN 95,658. Pub. 7-4-61. Filed 4-22-60.

Class 27—Horological Instruments

- 721,598. ALLURE. Hamilton Watch Company. SN 103,927. Pub. 7-4-61. Filed 6-6-60.

Class 31—Filters and Refrigerators

- 721,599. MICRO-WYND. American Machine & Foundry Company, assignee of The Cuno Engineering Corporation. SN 90,744. Pub. 7-4-61. Filed 2-11-60.
 721,600. ORBIT. Roy O. Brugh, d.b.a. Brugh Engineering Co. SN 96,391. Pub. 7-4-61. Filed 5-4-60.
 721,601. ARCTIC STAR AND STAR DESIGN. Arctic Star, Inc. SN 96,919. Pub. 7-4-61. Filed 5-12-60.
 721,602. FROST-ARID. Ranney Refrigerator Company. SN 99,092. Pub. 7-4-61. Filed 6-15-60.
 721,603. W AND DESIGN. Whirlpool Corporation. SN 100,330. Pub. 7-4-61. Filed 7-5-60.

Class 32—Furniture and Upholstery

- 721,604. CSS. Herman Miller, Inc., by change of name from Herman Miller Furniture Company. SN 81,299. Pub. 7-4-61. Filed 9-14-59.
 721,605. QUADRALITE. National Steel Cabinet Company. SN 98,726. Pub. 7-4-61. Filed 6-9-60.

- 721,606. SAS AND DESIGN. Ortho-Dynamics, Inc. SN 101,121. Pub. 7-4-61. Filed 7-19-60.
 721,607. VERSAPLY. Gulf Laminates, Incorporated. SN 101,391. Pub. 7-4-61. Filed 7-25-60.
 721,608. ORDERFLEX ORDEREST. Orders Mattress Co., Inc. SN 101,639. Pub. 7-4-61. Filed 7-28-60.
 721,609. KEYFORM. Keyston Bros. SN 111,979. Pub. 7-4-61. Filed 1-17-61.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 721,610. 025. Noll Manufacturing Company. SN 97,234. Pub. 7-4-61. Filed 5-16-60.
 721,611. NOLL. Noll Manufacturing Company. SN 97,235. Pub. 7-4-61. Filed 5-16-60.
 721,612. QT AND DESIGN. Jenn Air Products Company, Inc. SN 98,100. Pub. 7-4-61. Filed 5-31-60.
 721,613. KEY LINE. Jenn Air Products Company, Inc. SN 98,291. Pub. 7-4-61. Filed 6-2-60.
 721,614. W AND DESIGN. Whirlpool Corporation. SN 100,331. Pub. 7-4-61. Filed 7-5-60.
 721,615. STRATOSTEEL. Carrier Corporation. SN 107,406. Pub. 7-4-61. Filed 10-31-60.
 721,616. HENRY PRATT. Henry Pratt Company. SN 108,509. Pub. 7-4-61. Filed 11-15-60.
 721,617. IMPELO-KING AND DESIGN. The Fire King Company, Incorporated. SN 109,573. Pub. 7-4-61. Filed 12-5-60.
 721,618. MONAX. Corning Glass Works. SN 110,408. Pub. 7-4-61. Filed 12-19-60.
 721,619. CNX. Corning Glass Works. SN 110,409. Pub. 7-4-61. Filed 12-19-60.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 721,620. SURE-CROP. The Carlisle Corporation. SN 111,724. Pub. 7-4-61. Filed 1-12-61.
 721,621. MONOLOK. The Monarch Rubber Company. SN 113,432. Pub. 7-4-61. Filed 2-10-61.

Class 37—Paper and Stationery

- 721,622. FUN TIME. R. Rosenbloom Paper Co., Inc., d.b.a. R & R Paper Co. SN 74,154. Pub. 7-4-61. Filed 5-20-59.
 721,623. OMNIGRAPH. J. B. Staedtler. SN 74,959. Pub. 7-4-61. Filed 6-2-59.
 721,624. NAROPA. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products. SN 108,655. Pub. 7-4-61. Filed 11-17-60.
 721,625. CON-BLEND. Continental Can Company, Inc. SN 109,671. Pub. 7-4-61. Filed 12-6-60.
 721,626. SERENE. American Can Company. SN 113,059. Pub. 7-4-61. Filed 2-6-61.

Class 38—Prints and Publications

- 721,627. HAIRDO. Dell Publishing Co., Inc. SN 92,874. Pub. 7-4-61. Filed 3-15-60.
 721,628. STORM WINDOW DEALERS LEADER. The Bell Company. SN 100,175. Pub. 7-4-61. Filed 7-1-60.
 721,629. CLOWN DESIGN. United Printers and Publishers (Incorporated). SN 101,054. Pub. 7-4-61. Filed 7-18-60.

- 721,630. SOLART AND DESIGN. Paul Solomons, d.b.a. S. P. Solomons Decorative Art Co. SN 101,822. Pub. 7-4-61. Filed 8-1-60.
 721,631. STAINGLAS GRANT AND DESIGN. Grant Publishing Corporation. SN 107,444. Pub. 7-4-61. Filed 10-31-60.
 721,632. AIR CURRENTS. Bay Area Air Pollution Control District. SN 107,728. Pub. 7-4-61. Filed 11-3-60.
 721,633. GREETINGS BY ADRIANE ST. PAUL AND DESIGN. Greetings Unlimited, Inc. SN 110,431. Pub. 7-4-61. Filed 12-19-60.
 721,634. PIPE LINE INDUSTRY. Gulf Publishing Company. SN 110,432. Pub. 7-4-61. Filed 12-19-60.
 721,635. HANDI-STIK. Paramount Paper Products Co. SN 110,462. Pub. 7-4-61. Filed 12-19-60.
 721,636. MODERN TEACHER. Simplicity Pattern Co. Inc. SN 110,480. Pub. 7-4-61. Filed 12-19-60.

Class 39—Clothing

- 721,637. COOLTEMP. Joseph H. Cohen & Sons, Inc. SN 55,641. Pub. 8-4-59. Filed 7-21-58.
 721,638. "RIP-SNORTER" AND DESIGN. Wells Lamont Corporation. SN 80,465. Pub. 7-4-61. Filed 8-28-59.
 721,639. JEANIES. Blue Bell, Inc. SN 89,999. Pub. 7-4-61. Filed 2-1-60.
 721,640. MAGILAINE. David Crystal, Inc. SN 99,844. Pub. 7-4-61. Filed 6-28-60.
 721,641. DESIGN OF THREE GRACES. Nina Reed S.A.R.L. SN 104,753. Pub. 7-4-61. Filed 9-19-60.
 721,642. URBAN LADY. Mosinger-Cohn, Inc. SN 114,244. Pub. 7-4-61. Filed 2-23-61.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

- 721,643. PATITE. Miss Pat & Co. SN 110,455. Pub. 7-4-61. Filed 12-19-60.
 721,644. WESCO-RIZED. West Coast Woollen Mills Ltd. SN 110,509. Pub. 7-4-61. Filed 12-19-60.
 721,645. SUPERLUXE. M. Lowenstein & Sons, Inc. SN 113,648. Pub. 7-4-61. Filed 2-14-61.
 721,646. YOUTHCAL. M. Lowenstein & Sons, Inc. SN 113,847. Pub. 7-4-61. Filed 2-16-61.
 721,647. APPLESKIN. Burlington Industries, Inc. SN 113,902. Pub. 7-4-61. Filed 2-17-61.
 721,648. TUDOR. Beacon Manufacturing Company. SN 114,169. Pub. 7-4-61. Filed 2-23-61.
 721,649. BEVERLY. Beacon Manufacturing Company. SN 114,172. Pub. 7-4-61. Filed 2-23-61.
 721,650. SCREENART. Stevens Linen Associates, Inc. SN 114,365. Pub. 7-4-61. Filed 2-24-61.

Class 43—Thread and Yarn

- 721,651. LIRELLE. Courtaulds, Limited. SN 111,651. Pub. 7-4-61. Filed 1-11-61.
 721,652. STRATELLA. Beaunit Mills, Inc. SN 114,173. Pub. 7-4-61. Filed 2-23-61.

Class 44—Dental, Medical, and Surgical Appliances

- 721,653. YOUNG LADY. Kimberly-Clark Corporation. SN 111,502. Pub. 7-4-61. Filed 1-9-61.

Class 46 — Foods and Ingredients of Foods

- 721,654. PROZ-O-LOG. Komberce & Fiedler Enterprises, Inc., assignee of Harold L. Komberce. SN 77,928. Pub. 7-4-61. Filed 7-17-59.
- 721,655. JUNGLE MELON. Fritzsche Brothers, Inc. SN 78,196. Pub. 6-27-61. Filed 7-22-59.
- 721,656. MORO. Coastal Valley Canning Co. (partnership), assignee of Coastal Valley Canning Co. (California corporation). SN 78,688. Pub. 7-4-61. Filed 7-30-59.
- 721,657. PIC-A-PEP AND DESIGN. Francesco Buttitta, d.b.a. California Pacific Food Products and Buttitta Olive Oil Company. SN 79,324. Pub. 7-4-61. Filed 8-11-59.
- 721,658. GEBOTT'S. Drake Bakeries Incorporated. SN 80,971. Pub. 7-4-61. Filed 9-8-59.
- 721,659. DONUTCOTE. The Griffith Laboratories, Inc. SN 84,224. Pub. 7-4-61. Filed 10-29-59.
- 721,660. BOB'S MOCHA BOY COFFEE ETC. AND DESIGN. Robert C. Wian Enterprises, Inc. SN 91,894. Pub. 7-4-61. Filed 2-29-60.
- 721,661. PRIZE-PACK. Idaho Potato Packers Corp. SN 92,022. Pub. 7-4-61. Filed 3-2-60.
- 721,662. BRINK. N.V. Gebroeders van den Brink, Biscuit-, Wafel- en Banketfabrieken. SN 93,941. Pub. 7-4-61. Filed 3-29-60.
- 721,663. HASTY HEARTH. Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation). SN 93,976. Pub. 7-4-61. Filed 3-30-60.
- 721,664. FANCIFUL L DESIGN. Lawry's Foods, Inc. SN 98,107. Pub. 7-4-61. Filed 5-31-60.
- 721,665. GUSTAMATE. U.S. Vitamin & Pharmaceutical Corporation. SN 98,177. Pub. 7-4-61. Filed 5-31-60.
- 721,666. JOLLY FARMER. Di Giorgio Fruit Corporation. SN 100,584. Pub. 7-4-61. Filed 7-11-60.
- 721,667. LARRY'S. Larry's Sandwiches, Incorporated. SN 101,332. Pub. 7-4-61. Filed 7-22-60.
- 721,668. BEST SAIL ONIONS AND DESIGN. Caruso, Rinelia, Battaglia Co., Inc. SN 101,603. Pub. 7-4-61. Filed 7-28-60.
- 721,669. SARA BROWN. Bake-Line Products. SN 102,368. Pub. 7-4-61. Filed 8-10-60.
- 721,670. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 102,549. Pub. 7-4-61. Filed 8-12-60.
- 721,671. BROADWAY. Broadway Confections. SN 102,731. Pub. 7-4-61. Filed 8-16-60.
- 721,672. STUART'S AND DESIGN. Stuckey's Inc. SN 102,800. Pub. 7-4-61. Filed 8-16-60.
- 721,673. DINNER ROUNDS. The Pacific Union Association of Seventh-Day Adventists, d.b.a. Loma Linda Food Company. SN 103,045. Pub. 7-4-61. Filed 8-19-60.
- 721,674. COMPLETO. C. J. Van Houten & Zoon, N.V. SN 106,364. Pub. 7-4-61. Filed 10-13-60.
- 721,675. MARDI-GRAS. Greensboro Ice Cream Co. SN 107,008. Pub. 7-4-61. Filed 10-24-60.
- 721,676. DINTY MOORE. Dinty Moore Products Company. SN 107,744. Pub. 7-4-61. Filed 11-3-60.
- 721,677. ROYAL VELVET. Consolidated Foods Corporation, d.b.a. Lawson Milk Company. SN 108,116. Pub. 7-4-61. Filed 11-9-60.
- 721,678. BOB WHITE. Sunnyland Packing Company. SN 108,146. Pub. 7-4-61. Filed 11-9-60.
- 721,679. SUISSE CHALET AND DESIGN. Foremost Dairies, Inc. SN 109,784. Pub. 7-4-61. Filed 12-7-60.
- 721,680. M-F. Blue Mountain Growers, Inc. SN 109,940. Pub. 7-4-61. Filed 12-9-60.
- 721,681. FLAV'R-FROST. National Biscuit Company. SN 112,559. Pub. 7-4-61. Filed 1-26-61.
- 721,682. SORRENTO. Pan Pacific Fisheries, Inc. SN 112-763. Pub. 7-4-61. Filed 1-30-61.
- 721,683. NECCO. New England Confectionery Company. SN 112,855. Pub. 7-4-61. Filed 1-31-61.
- 721,684. GRANARY. English Grains Co., Limited. SN 112,893. Pub. 7-4-61. Filed 2-1-61.

Class 48 — Malt Beverages and Liquors

- 721,685. FROM CHESAPEAKE BAY LAND OF PLEASANT LIVING. The National Brewing Company. SN 99,224. Pub. 7-4-61. Filed 6-17-60.
- 721,686. "HANDY" WAY TO ORDER AND DESIGN. P. Ballantine & Sons. SN 104,223. Pub. 7-4-61. Filed 9-12-60.
- 721,687. GRENAY. Century Brewery Corporation. SN 104,986. Pub. 7-4-61. Filed 9-22-60.

Class 49 — Distilled Alcoholic Liquors

- 721,688. OLD GRAND-DAD. National Distillers and Chemical Corporation, d.b.a. National Distillers Products Co. SN 108,657. Pub. 7-4-61. Filed 11-17-60.

Class 50 — Merchandise Not Otherwise Classified

- 721,689. FERN AND VASE DESIGN. Hawaiian Fern-Wood, Ltd. SN 46,057. Pub. 7-4-61. Filed 2-18-58.
- 721,690. SILVER PINE. Anton Fasbinder, d.b.a. Stainless Metal Craft Company. SN 82,941. Pub. 7-4-61. Filed 10-8-59.
- 721,691. PAINT-A-PET. Bachmann Bros., Inc. SN 89,401. Pub. 7-4-61. Filed 1-21-60.
- 721,692. CROW. Universal Scientific Company, Inc. SN 90,964. Pub. 7-4-61. Filed 2-15-60.
- 721,693. CROW AND DESIGN. Universal Scientific Company, Inc. SN 90,965. Pub. 7-4-61. Filed 2-15-60.
- 721,694. COLOR-TEX. Burgess Cellulose Company. SN 98,430. Pub. 7-4-61. Filed 6-6-60.
- 721,695. CARVETTES. Alfred Schifftan, Inc. SN 100,162. Pub. 7-4-61. Filed 7-1-60.
- 721,696. SET-A-TYPE. Consolidated Stamp Manufacturing Company. SN 100,834. Pub. 7-4-61. Filed 7-14-60.
- 721,697. THIS IS A MEMORY LANE MEMORIAL "TRULY THE BEST" AND DESIGN. Lacky & Sons. SN 102,565. Pub. 7-4-61. Filed 8-12-60.
- 721,698. FANTASYLAND. Silvestri Art Mfg. Co. SN 105,553. Pub. 7-4-61. Filed 9-30-60.
- 721,699. LITH-RITE. Ball Brothers Company, Incorporated. SN 108,257. Pub. 7-4-61. Filed 11-14-60.
- 721,700. DALLAS EMBLEM DALLAS, TEXAS AND DESIGN. Dallas Uniform Cap & Emblem Mfg., Inc. SN 113,504. Pub. 7-4-61. Filed 2-13-61.

Class 51 — Cosmetics and Toilet Preparations

- 721,701. CAFE SOCIETY. International Products Corporation. SN 105,166. Pub. 7-4-61. Filed 9-26-60.
- 721,702. COLORZON. Associated Brands, Inc. SN 107,815. Pub. 7-4-61. Filed 11-4-60.
- 721,703. BEAUTY PROMISE. Chemway Corporation. SN 110,033. Pub. 7-4-61. Filed 12-12-60.
- 721,704. DUSHARME AND DESIGN. Dusharme Products, Inc. SN 110,143. Pub. 7-4-61. Filed 12-13-60.
- 721,705. WATER BALANCE. Clairol Incorporated. SN 112,359. Pub. 7-4-61. Filed 1-24-61.

Class 52 — Detergents and Soaps

- 721,706. DYLAN WASH 'N DYE. Mayborn Products Limited. SN 104,538. Pub. 7-4-61. Filed 9-15-60.
- 721,707. VESTASOL. Vestal Laboratories, Inc. SN 107,082. Pub. 7-4-61. Filed 10-24-60.

Class 105 — Transportation and Storage

- 721,708. EL AND DESIGN. Economics Laboratory, Inc. SN 110,419. Pub. 7-4-61. Filed 12-19-60.
- 721,709. HAIR-O-SOL. H. Clay Glover Co., Inc. SN 110,606. Pub. 7-4-61. Filed 12-21-60.
- 721,710. GRAND. The Grand Union Company. SN 110,849. Pub. 7-4-61. Filed 12-27-60.
- 721,711. RENELLE. Renelle, Inc. SN 111,216. Pub. 7-4-61. Filed 1-3-61.
- 721,712. LADY LEONE. A. Robinson, Inc. of Altoona, d.b.a. Aludon Products Co. SN 111,223. Pub. 7-4-61. Filed 1-3-61.

- 721,718. EUROPA BUS AND DESIGN. Europabus (Overseas) Inc. SN 67,330. Pub. 7-4-61. Filed 2-9-59.

Collective Membership Marks**Class 200**

- 721,719. AMERICAN PHILOSOPHICAL INSTITUTE OF COSOLARGY ETC. AND DESIGN. American Philosophical Institute of Cosolargy. SN 75,141. Pub. 7-4-61. Filed 6-1-59.
- 721,720. THE CROSS OF GENERAL ASSEMBLY ETC. AND DESIGN. American Philosophical Institute of Cosolargy. SN 83,199. Pub. 7-4-61. Filed 10-14-59.
- 721,721. I.E.S. AND DESIGN. The Illuminating Engineering Society. SN 100,777. Pub. 7-4-61. Filed 7-13-60.

Certification Marks**Class A — Goods**

- 721,722. BIOLOGICAL STAIN COMMISSION AND DESIGN. Biological Stain Commission, Inc. SN 68,632. Pub. 7-4-61. Filed 2-11-59.
- 721,723. ATC ENCLOSED IN A SHIELD DESIGN. American Pewter Guild. SN 102,003. Pub. 7-4-61. Filed 8-4-60.
- 721,724. CERTIFIED CP PRODUCTS ETC. AND DESIGN. The Crayon, Water Color and Craft Institute, Inc. SN 105,145. Pub. 7-4-61. Filed 9-26-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6 — Chemicals and Chemical Compositions

- 721,725. Consolidated Research and Manufacturing Corporation, New Haven, Conn. SN 94,260. Filed P.R. 4-4-60; Am. S.R. 7-19-61.

Class 21 — Electrical Apparatus, Machines, and Supplies

- 721,727. Neff Instrument Corporation (Delaware corporation), Wilmington, Del., assignee of Neff Instrument Corporation (California corporation), Pasadena, Calif. SN 78,486. Filed P.R. 7-27-59; Am. S.R. 6-29-61.

FREE O'MIST

For Aerosol Containing a Chemical for the Prevention of Mist or Fog on Glass Articles Such as Mirrors and Vehicle Windshields.

First use on or about Oct. 15, 1959.

- 721,726. Consolidated Research and Manufacturing Corporation, New Haven, Conn. SN 94,261. Filed P.R. 4-4-60; Am. S.R. 7-19-61.

FREE O'ICE

For Aerosol Containing a Chemical for the Prevention or Removal of Ice From Vehicle Windshields.

First use on or about Oct. 15, 1959.

TM 770 O.G.—10



For Electrical Apparatus Including Electrical Signal Amplifiers, D-C Amplifiers, A-C Amplifiers, Carrier Amplifiers and Electrical Power Supplies.

First use May 12, 1959, on electrical signal amplifiers.

Class 22—Games, Toys, and Sporting Goods Class 47—Wines

721,728. Louis Marx & Company, Inc., New York, N.Y. SN 56,890. Filed P.R. 12-8-59; Am. S.R. 7-10-61.

721,732. Andrea Brocta, Brooklyn, N.Y. SN 90,987. Filed 2-16-60.

DINNAWINE

For Wine.
First use on or about Sept. 1, 1949.

ELEGANT MINIATURES

For Small Toys Simulating Passenger Vehicles, Military Vehicles, Road Construction Machinery, Trucks, Airplanes, Domestic Animals, and Animal Pets.
First use Feb. 19, 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

721,729. Charles Bloom, Inc., New York, N.Y. SN 101,657. Filed P.R. 7-29-60; Am. S.R. 7-13-61.

PARISIAN TAFFETA

For Taffeta Cloth.
First use Mar. 9, 1960.

Class 46—Foods and Ingredients of Foods

721,730. The Quaker Oats Company, Chicago, Ill. SN 103,683. Filed P.R. 8-30-60; Am. S.R. 6-22-61.

HOLSUM

For Livestock and Dairy Feeds.
First use at least as early as Apr. 9, 1956.

721,731. C. Shippam Limited, Chichester, Sussex, England. SN 110,237. Filed P.R. 12-14-60; Am. S.R. 6-8-61.

SHIPPAM'S

Owner of British Reg. No. 658,788, dated May 3, 1947.
For Meat Pastes, Fish Pastes, Beef Tea, Sausages, Tongues, Brawn, Briskets, Galantines, Whole Roast Chicken in Chicken Jelly, Chicken Breasts in Chicken Jelly, Filleted Chicken in Chicken Jelly, Chicken Livers, Calves' Sweetbreads, Calves' Feet Jelly and Soups.

TRADEMARK REGISTRATIONS RENEWED

19,634. CLICQUOT CLUB. Cl. 45. 6-2-1891.
144,194. SEMINOLE. Cl. 14. 6-28-21.
144,697. BRILLIANTSHINE. Cl. 4. 7-19-21.
144,746. DIXIE ICE CREAM. Cl. 46. 7-19-21.
145,077. PROTOLAC. Cl. 46. 7-26-21.
145,215. SCINTILLA. Cl. 23. 7-26-21.
146,322. TREMIER MAIL. Cl. 51. 9-6-21.
146,821. FAMOUS. Cl. 46. 9-20-21.
146,966. CAPPI. Cl. 51. 9-27-21.
147,112. HOUBIGANT. Cl. 51. 10-4-21.
147,780. ROGERS & BRO. Cl. 28. 11-1-21.

147,923. MULTIPASS AND DESIGN. Cl. 23. 11-8-21.
148,306. WAXIDE. Cl. 37. 11-8-21.
148,657. RESPIROL ETC. AND DESIGN. Cl. 18. 11-22-21.
149,538. VAN VLEET'S AND DESIGN. Cl. 18. 12-13-21.
149,712. CORTICELLI AND DESIGN. Cl. 42. 12-20-21.
149,954. KENWOOD CLOTH. Cl. 42. 12-27-21.
150,034. OHIO. Cl. 14. 12-27-21.
150,063. BULL DOG AND DESIGN. Cl. 6. 12-27-21.
150,920. RAPINWAX. Cl. 37. 1-10-22.
386,638. RAMSEN AND DESIGN. Cl. 44. 4-22-41.
387,124. MILLION-AIRS. Cl. 38. 5-6-41.



The mark consists of the conformation of a crock used as the container for applicant's wine.
For Carbonated Rose Wine.
First use March 1945.

Class 51—Cosmetics and Toilet Preparations

721,734. Richard Hudnut, Morris Plains, N.J. SN 76,322. Filed P.R. 6-23-59; Am. S.R. 7-10-61.

BURNISHED BRONZE

For Hair Coloring.
First use June 8, 1959.

Service Mark**Class 100—Miscellaneous**

721,735. Doane Agricultural Service, Inc., St. Louis, Mo. SN 97,045. Filed P.R. 5-13-60; Am. S.R. 4-24-61.

PRECISION FARM PROGRAMMING

For Selecting the Most Profitable Enterprises for Farms.
First use Apr. 16, 1960.

387,977. VELVETEX. Cl. 44. 6-10-41.
389,022. WONDER PUTTY. Cl. 12. 7-22-41.
389,073. FEATHERFLEX. Cl. 42. 7-22-41.
389,077. TYKIE TOY AND DESIGN. Cl. 22. 7-22-41.
389,160. ICE KING. Cl. 46. 7-29-41.
389,206. CELANESE. Cl. 39. 7-29-41.
389,282. MICHEL. Cl. 49. 7-29-41.
389,347. RU-EX. Cl. 18. 8-5-41.
389,376. ENECO. Cl. 4. 8-5-41.
389,380. THE KNICKERBOCKER. Cl. 38. 8-5-41.
389,754. GIRLING. Cl. 19. 8-19-41.
389,936. MASTER. Cl. 44. 8-26-41.
390,192. FERTI-LOME. Cl. 10. 9-9-41.
390,284. SERV-U-RITE. Cl. 46. 9-16-41.
390,373. TAKEDA AND DESIGN. Cl. 18. 9-23-41.
390,450. COUNTRY PLAID. Cl. 39. 9-23-41.
390,451. COUNTRY PLAID. Cl. 3. 9-23-41.
390,694. STORY BOOK QUILTS AND DESIGN. Cl. 42. 9-30-41.
390,837. DI-NITROL. Cl. 6. 10-7-41.

390,923. BORDEN'S AND COW DESIGN. Cl. 46. 10-14-41.
391,034. SEMCO. Cl. 26. 10-21-41.
391,182. WAXFOLD. Cl. 37. 10-28-41.
391,199. ETCHENE. Cl. 6. 10-28-41.
391,377. POSTUR-MATIC. Cl. 32. 11-4-41.
391,532. COOLERATOR. Cl. 31. 11-11-41.
391,683. SPEEDIE AND DESIGN. Cl. 43. 11-18-41.
391,761. CADET BLUE AND DESIGN. Cl. 39. 11-25-41.
392,065. GOLD STAR AND DESIGN. Cl. 46. 12-9-41.
392,214. TENDEES. Cl. 44. 12-16-41.
392,204. SERGELLA. Cl. 42. 12-16-41.
392,345. SEPCOTE. Cl. 16. 12-23-41.
392,384. SPORTSMAN. Cl. 51. 12-23-41.
392,467. FEATHERS. Cl. 49. 12-30-41.
392,533. REPRESENTATION OF A KITTEN'S HEAD. Cl. 43. 12-30-41.
392,534. GRACE ADORN. Cl. 39. 12-30-41.
392,628. TOPSALL. Cl. 15. 1-6-42.
392,644. ARMIPAC. Cl. 42. 1-6-42.
392,645. DOUBLPAC. Cl. 42. 1-6-42.
392,712. THRIFTICHECK. Cl. 37. 1-13-42.

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Section 8
102,025. WUNDERBAR. Cl. 48. 1-26-15.
439,783. RELIANCE. Cl. 39. 7-20-48.
The following registrations issued August 2, 1955
609,756. BAR-B-Q MAGIC AND DESIGN. Cl. 1.
609,757. ERICH NEUMANN'S ROTER JAMES GRIEVE. Cl. 1.
609,768. COMMAND PERFORMANCE. Cl. 1.
609,777. PETRIK. Cl. 3.
609,779. THE TRIPLE HIT. Cl. 3.
609,780. MARCO POLO. Cl. 3.
609,781. CHAMPION. Cl. 3.
609,782. DEXTER. Cl. 3.
609,784. WONDERHIDE. Cl. 3.
609,789. COVER-COTE. Cl. 6.
609,801. LU-VENT AND DESIGN. Cl. 12.
609,805. ARISTO-BATH. Cl. 12.
609,808. CI IN TRIANGLE DESIGN WITHIN A CIRCLE. Cl. 12.
609,809. CADMUS STEEL JOISTS AND DESIGN. Cl. 12.
609,811. COLORFLEX. Cl. 12.
609,814. ZIP-DECK. Cl. 12.
609,816. UNIVAC. Cl. 14.
609,823. CHEM-CUT. Cl. 15.
609,824. SLO-FLO. Cl. 15.
609,828. CORO-NIEL. Cl. 15.
609,830. RUF-SEAL. Cl. 16.
609,848. SALS. Cl. 18.
609,854. SLIM-TRIM. Cl. 18.
609,857. PEP PA MIN IT AND DESIGN. Cl. 18.
609,859. FLORWEAVE. Cl. 20.
609,860. BROILATRON. Cl. 21.
609,864. WASTE-ESCAPE. Cl. 21.
609,867. PMI AND DESIGN. Cl. 21.
609,872. VARLAR THE PEAK OF QUALITY AND DESIGN. Cl. 21.
609,873. DECORATOR. Cl. 21.
609,874. ELECTRINATOR. Cl. 21.
609,876. VALVALITE. Cl. 21.
609,878. WILLIAMS. Cl. 21.
609,880. BOWL A DART AND DESIGN. Cl. 22.
609,881. PATHFINDER. Cl. 22.
609,885. SPACE STATION. Cl. 22.
609,886. KID GERSON. Cl. 22.
609,889. PARK-O-MAT AND DESIGN. Cl. 23.
609,892. WEED-O-MATIC & DESIGN. Cl. 23.
609,893. WEDGEWOOD. Cl. 24.
609,894. CONTRA-BLEND. Cl. 26.
609,895. MIROSAN. Cl. 26.
609,896. MAGIC WAND. Cl. 29.
609,899. BAND BOX. Cl. 36.
609,900. SHORTY-TUNES. Cl. 36.
609,907. BUSINESS BUILDERS. Cl. 37.
609,912. LOAFER JACK. Cl. 39.

609,913. LOAFER JEANS. Cl. 39.
609,915. A SIGNATURE ORIGINAL AND DESIGN. Cl. 39.
609,923. MELLOGAB. Cl. 39.
609,924. CAUGHEY. Cl. 39.
609,926. SHAWLERO. Cl. 39.
609,928. SULTAN. Cl. 39.
609,932. BELT'EMS. Cl. 39.
609,938. BUNTIKINS. Cl. 39.
609,939. JAMIE LEE. Cl. 39.
609,947. NYL-TWIST. Cl. 42.
609,950. ACRYLOCOTTON. Cl. 42.
609,951. TALISMANO. Cl. 42.
609,953. COLOR-GAY. Cl. 42.
609,954. WEARS LONGEST CLEANS EASIEST AND DESIGN. Cl. 42.
609,955. JONI-GOWNS. Cl. 42.
609,956. NYL-PLUSH. Cl. 42.
609,957. SAILMAKER. Cl. 42.
609,958. PARLIAMENT. Cl. 42.
609,960. EZE-PANEL. Cl. 42.
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609,963. CRINNETTE. Cl. 43.
609,964. SPIRO GLO. Cl. 43.
609,975. FLEXTTEL. Cl. 44.
609,985. CUPLETS. Cl. 46.
609,989. ALBA AND DESIGN. Cl. 46.
609,995. PRIDE OF MINNESOTA. Cl. 46.
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610,018. MONA LISA AND DESIGN. Cl. 46.
610,019. TEETHING BISCUITS AND DESIGN. Cl. 46.
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610,027. ORCHARD TREASURE AND DESIGN. Cl. 46.
610,029. CHIFFON VELVET. Cl. 46.
610,030. P.I.C. 77. Cl. 46.
610,031. VEGALUBE. Cl. 46.
610,032. LUCKY FISHERMAN AND DESIGN. Cl. 46.
610,033. FIRMERIZED. Cl. 46.
610,034. EVERGLADES CREST. Cl. 46.
610,046. POCONO AND DESIGN. Cl. 46.
610,047. WONDAGREEN. Cl. 46.
610,049. TRICKS OR TREAT. Cl. 46.
610,051. BRACE. Cl. 46.
610,061. B SAFE-SAY BALDWIN. Cl. 100.
610,064. LISTEN & LIVE. Cl. 101.
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610,068. CTIS ETC. AND DESIGN. Cl. 103.
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610,073. YOUR NITE OF NIGHT. Cl. 105.
610,076. NYLETTE. Cl. 106.
610,077. PEER SET AND DESIGN. Cl. 106.
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610,080. ESPUELAS DE PLATA. Cl. 107.
610,081. KINGO. Cl. 107.
610,084. GREENLAND SEA LEOPARD. Cl. 1.
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610,094. SIDLES SAFETY SUN SHADE. Cl. 19.
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 610,105. TOG-L-LOK. Cl. 29.
 610,109. FROZEN FOOD CENTER. Cl. 38.
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 610,133. CLASS. Cl. 39.
 610,134. CUB CRAFTEE CASUALS AND DESIGN. Cl. 39.
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610,139. PHOTO MOLD. Cl. 44.
 610,144. NAPLES OF HOLLYWOOD AND DESIGN. Cl. 46.
 610,147. TREE MAT. Cl. 50.

Erratum

In the OFFICIAL GAZETTE, issue of Aug. 22, 1961, page TM 135, under the heading "Trademark Registrations Canceled, Sec. 8" the following should be deleted:

608,127. "THE LUBE HORMONE." Cl. 15.

INDEX OF REGISTRANTS

SEPTEMBER 19, 1961

(Registered; Renewed; Canceled; Amended; Disclaimed; Corrected, etc.; New Certificates; 12c Publications.)

Acme Engineering and Mfg. Corp., Muskogee, Okla. 721,561, pub. 7-4-61. Cl. 21.
 Acme Sales Co., Camden, N.J. 721,559, pub. 7-4-61. Cl. 21.
 Aktiebolaget W. Dan Bergman, Sodertalje, Sweden. 721,583, pub. 7-4-61. Cl. 23.
 Albudon Products Co.: See—
 Robinson, A., Inc. of Altoona.
 Alcan Co., Inc., Alton, Ill. 721,507-8, pub. 7-4-61. Cl. 9.
 Aldon Rug Mills, Inc., Lenni Mills, Pa. 609,947, can. Cl. 42.
 Aldon Rug Mills, Inc., Lenni Mills, Pa. 609,956, can. Cl. 42.
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 Allstadt, Ira C., Jr., d.b.a. Allstadt Mfg. Co., Dallas, Tex. 721,488, pub. 7-4-61. Cl. 6.
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 Allstadt, Ira C., Jr.
 All-Steel Welding Alloys Co., Inc., White Plains, N.Y. 721,519, pub. 7-4-61. Cl. 14.
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 American Cyanamid Co., New York, N.Y. 721,493, pub. 7-4-61. Cl. 6.
 American Cyanamid Co., New York, N.Y. 721,496, pub. 7-4-61. Cl. 6.
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 American Hospital Association, Chicago, Ill. 610,066, can. Cl. 102.
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 American Pewter Guild, Columbus, Ohio. 721,723, pub. 7-4-61. Cl. A.
 American Philosophical Institute of Cosology, New Smyrna Beach, Fla. 721,719-20, pub. 7-4-61. Cl. 200.
 Anderson, William A., Hayward, Calif. 609,781, can. Cl. 3.
 Arctic Star, Inc., Ft. Worth, Tex. 721,601, pub. 7-4-61. Cl. 31.
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 Associated Brands, Inc., Brooklyn, N.Y. 721,702, pub. 7-4-61. Cl. 51.
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 Atlantic Coast Fisheries Co., The, Boston, Mass. 610,017, can. Cl. 46.
 Atlas Putty Products Co., Chicago, Ill. 389,022, ren. 9-19-61. Cl. 12.
 Atlas Supply Co., Newark, N.J. 721,494, pub. 7-4-61. Cl. 6.
 Bachmann Bros., Inc., Philadelphia, Pa. 721,691, pub. 7-4-61. Cl. 50.
 Bake-Line Products, Chicago, Ill. 721,669, pub. 7-4-61. Cl. 46.
 Baldwin Laundry, The, to The Baldwin Overall Service, Inc., Philadelphia, Pa. 610,061, can. Cl. 100.
 Baldwin Overall Service, Inc., The: See—
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 Ball Brothers Co., Inc., Muncie, Ind. 721,699, pub. 7-4-61. Cl. 50.
 Ballantine, P. & Sons, Newark, N.J. 721,686, pub. 7-4-61. Cl. 48.
 Bankers Development Corp., to Thriftcheck Service Corp., New York, N.Y. 392,712, ren. 9-19-61. Cl. 37.
 Bartels Brewing Co., Edwardsville, Pa. 102,025, can. Cl. 48.
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 Bekaert, Trefleries L., S.P.R.L., Zvevegem, Belgium. 721,516, pub. 7-4-61. Cl. 13.
 Bekol Chemicals, Inc., Houston, Tex. 609,823, can. Cl. 15.
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 Belding Hemmway Co., Inc.: See—
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 Blue Bell, Inc., Greensboro, N.C. 721,639, pub. 7-4-61. Cl. 39.
 Blue Mountain Growers, Inc., Milton-Freewater, Ore. 721,680, pub. 7-4-61. Cl. 46.
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 Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 721,537, pub. 7-4-61. Cl. 18.
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 Buttitta Olive Oil Co.: See—
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 California Farm Supply Co., Berkeley, Calif. 721,484, pub. 7-4-61. Cl. 6.
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 Caprico International, Inc., New York, N.Y. 721,566, pub. 7-4-61. Cl. 22.
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 Consolidated Foods Corp., d.b.a. Lawson Milk Co., Cuyahoga Falls, Ohio. 721,677, pub. 7-4-61. Cl. 46.
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 Continental Can Co., Inc., New York, N.Y. 721,625, pub. 7-4-61. Cl. 37.
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 Dell Publishing Co., Inc., New York, N.Y. 721,627, pub. 7-4-61. Cl. 38.
 Delson Imports Ltd., Teaneck, N.J. 610,084, can. Cl. 1.
 Dennert & Pape Aristo-Werke K.G., Hamburg-Altona, Germany. 721,596, pub. 7-4-61. Cl. 26.
 Denney, Frances, Philadelphia, Pa. 609,854, can. Cl. 18.
 Denton, Richard C., d.b.a. Talk-A-Letter Co., Detroit, Mich. 610,071, can. Cl. 104.
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 Ditto, Inc., Chicago, Ill. 721,586, pub. 7-4-61. Cl. 23.
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 Eastern New England Co.: See—
 Goldberg, Harris
 Ebinger Brothers Leather Co., Rowley, Mass. 609,768, can. Cl. 1.
 Eckel Corp., The, Cambridge, Mass. 721,475, pub. 6-16-59. Cl. 5.
 Economics Laboratory, Inc., St. Paul, Minn. 721,708, pub. 7-4-61. Cl. 52.
 Egly Register Co., The, Dayton, Ohio. 721,511, pub. 7-4-61. Cl. 11.
 Elektroschmelzwerk Kempten, G.m.b.H., Munich, Bavaria, Germany. 721,525, pub. 3-29-60. Cl. 16.
 English Grains Co., Ltd., Burton-on-Trent, England. 721,684, pub. 7-4-61. Cl. 46.
 Europabus (Overseas) Inc., New York, N.Y. 721,718, pub. 7-4-61. Cl. 105.
 Everfast Fabrics, Inc., New York, N.Y. 392,264, ren. 9-19-61. Cl. 42.
 Fabrique de Machines Andre Bechler S.A.: See—
 Bechler, Andre.
 Fasbinder, Anton, d.b.a. Stainless Metal Craft, Chicago, Ill. 721,690, pub. 7-4-61. Cl. 50.
 Faultless Rubber Co., The, also d.b.a. Ashland Rubber Works, Ashland, Ohio. 439,783, can. Cl. 39.
 Ferro Corp., The, Cleveland, Ohio. 610,091, can. Cl. 10.
 Fey, Wilhelm, Meckenheim, near Bonn, Germany. 609,757, can. Cl. 1.
 Fidelity Chemical Corp., Houston, Tex., to Hunt Foods and Industries, Inc., New Orleans, La. 390,192, ren. 9-19-61. Cl. 10.
 Fire King Co., Inc., The, Littleton, Colo. 721,617, pub. 7-4-61. Cl. 34.
 Firma Carl Heinz Buer Chemisch-Pharmazeutische Fabrik, Koln-Braunsfeld, Germany. 721,535, pub. 7-4-61. Cl. 18.
 Firma Maschinenfabrik Gustav Eirich, Hardheim, Nordbaden, Germany. 721,589, pub. 7-4-61. Cl. 23.
 Five Fishermen Inc., San Francisco, Calif. 610,032, can. Cl. 46.
 Flako Products Corp., New Brunswick, N.J., to The Quaker Oats Co., Chicago, Ill. 609,985, can. Cl. 46.
 Flecto Co., Inc., The, Berkeley, Calif. 721,528, pub. 7-4-61. Cl. 16.
 Flo-Ball Pen Corp.: See—
 Clary Dynamics Corp.
 Folds, Milton W., d.b.a. The Ru-ex Co., Chicago, Ill., to Ruex, Inc., St. Paul, Minn. 389,347, ren. 9-19-61. Cl. 18.
 Foremost Dairies, Inc., San Francisco, Calif. 721,679, pub. 7-4-61. Cl. 46.
 Forrest, Earl R., d.b.a. Forrest Products Co., Piqua, Ohio. 721,567, pub. 7-4-61. Cl. 22.
 Forrest Products Co.: See—
 Forrest, Earl R.
 Fox, Clarice, d.b.a. Foxy Products, Bedford, Mass. 721,473, pub. 7-4-61. Cl. 3.
 Foxy Products: See—
 Fox, Clarice.
 Fragrance Process Co., Inc., The, New York, N.Y. 721,555, pub. 7-4-61. Cl. 21.
 Franklin Products, Inc., Acton, Ind. 609,892, can. Cl. 23.
 Frias, Rogelio, San Antonio, Tex. 610,080, can. Cl. 107.
 Fritzsche Brothers, Inc., New York, N.Y. 721,655, pub. 6-27-61. Cl. 46.
 Fuller Tool Co., Inc., New York, N.Y. 721,592, pub. 7-4-61. Cl. 23.
 Garry Laboratories, Inc., Buffalo, N.Y. 721,481, pub. 7-4-61. Cl. 6.
 Gasinotor Mfg. Co., Cleveland, Ohio. 609,874, can. Cl. 21.
 Geigy Chemical Corp., Ardsley, N.Y. 721,485-7, pub. 7-4-61. Cl. 6.
 General Dynamics Corp., San Diego, Calif. 721,550, pub. 7-4-61. Cl. 19.
 General Electric Co., New York, N.Y. 609,860, can. Cl. 21.
 General Fire Extinguisher Corp., The, Detroit, Mich. 721,590, pub. 7-4-61. Cl. 23.
 Geratetechnik-Anstalt, Balzers, Balzers, Liechtenstein. 609,894-5, can. Cl. 26.
 Gerber Products Co., Fremont, Mich. 610,019, can. Cl. 46.
 Gill, Harry, Co., The, Urbana, Ill. 721,570, pub. 7-4-61. Cl. 22.
 Girling Ltd.: See—
 New Hudson Ltd.
 Glenn & Thomas Co.: See—
 Margoles, Edward I.
 Glenn Thomas Co., Inc.: See—
 Margoles, Edward I.
 Glover, H. Clay, Co., Inc., Garden City, N.Y. 721,709, pub. 7-4-61. Cl. 52.
 Goldberg, Harris, d.b.a. Eastern New England Co., Middletown, Conn., to Humble Oil & Refining Co., Houston, Tex. 389,376, ren. 9-19-61. Cl. 4.
 Grand Union Co., The, East Paterson, N.J. 721,710, pub. 7-4-61. Cl. 52.
 Grant Publishing Corp., Chicago, Ill. 721,631, pub. 7-4-61. Cl. 38.
 Great Northern Supply Co., The, Cleveland, to P. B. Osenbaugh, Hemlock, Ohio. 148,657, ren. 9-19-61. Cl. 18.
 Green Hickory Mill, Slapout, Ala. 609,756, can. Cl. 1.
 Greensboro Ice Cream Co., Greensboro, Md. 721,675, pub. 7-4-61. Cl. 46.
 Greetings Unlimited, Inc., St. Paul, Minn. 721,633, pub. 7-4-61. Cl. 38.
 Greisen, Denver C., d.b.a. Tog-L-Lok Co., Portland, Ore. 610,105, can. Cl. 29.
 Griffith Laboratories, Inc., The, Chicago, Ill. 721,659, pub. 7-4-61. Cl. 46.
 Grosvenor, Richard B.: See—
 Tykle Toy Co.
 Guhl & Scheibler A.G., Basel, Switzerland. 721,585, pub. 7-4-61. Cl. 23.
 Gulf Laminates, Inc., Piquette, Miss. 721,607, pub. 7-4-61. Cl. 32.
 Gulf Publishing Co., Houston, Tex. 721,634, pub. 7-4-61. Cl. 38.
 Gustafson, Everett G., d.b.a. Gustafson Food Products, La Grange, Ill. 610,027, can. Cl. 46.
 Gustafson Food Products: See—
 Gustafson, Everett G.
 H. & W. Associates, Chicago, Ill. 609,880, can. Cl. 22.
 Hazan Chemicals & Controls, Inc., Pittsburgh, Pa. 721,578, pub. 7-4-61. Cl. 23.
 Hambaugh, Stephen D., Wickenburg, Ariz. 610,131, can. Cl. 39.
 Hamilton Watch Co., Lancaster, Pa. 721,598, pub. 7-4-61. Cl. 27.

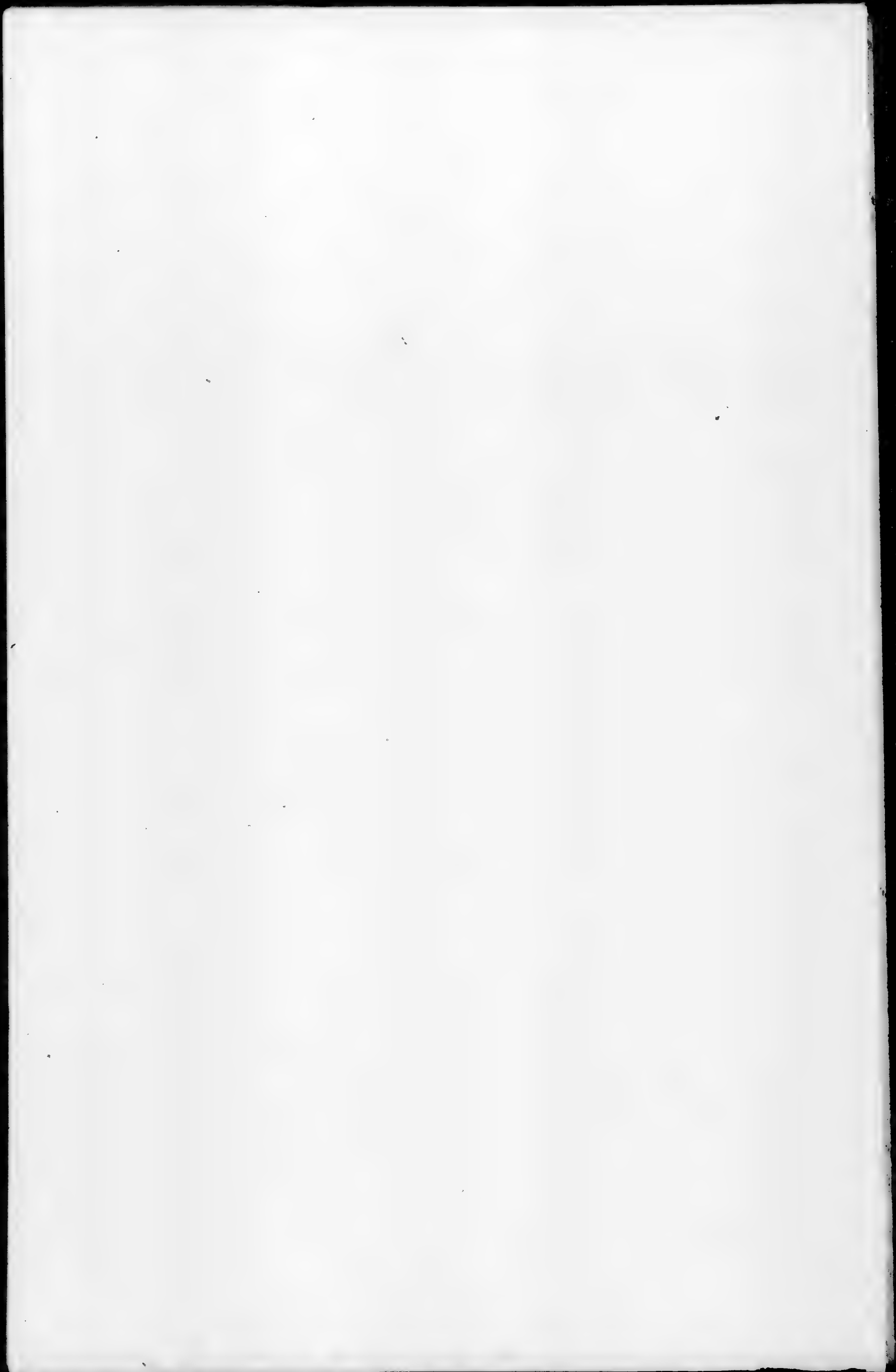
Harvey, Earle K., d.b.a. Earle K. Harvey & Sons, Homestead, Fla. 610,034, can. Cl. 46.
 Harvey, Earle K. & Sons: See—
 Harvey, Earle K.
 Hawaiian Fern Wood, Ltd., Hilo, Hawaii. 721,689, pub. 7-4-61. Cl. 50.
 Henney Motor Co., Inc., New York, N.Y. 609,878, can. Cl. 21.
 Higham-Tong Ltd., Manchester, England. 609,928, can. Cl. 39.
 Hoffman Electronics Corp., Los Angeles, Calif. 721,557, pub. 7-4-61. Cl. 21.
 Hotel Piccadilly Operating Co., Inc., New York, N.Y. 610,073, can. Cl. 105.
 Houbigant, Inc.: See—
 Parfumerie Houbigant.
 Houbigant, Inc., New York, N.Y. 147,112, ren. 9-19-61. Cl. 51.
 Hubrite Informal Frocks, Inc., Boston, Mass. 610,136, can. Cl. 39.
 Hudnut, Richard: See—
 Moore, John Hudson, Inc.
 Hudnut, Richard, Morris Plains, N.J. 721,734. Cl. 51.
 Humble Oil & Refining Co.: See—
 Goldberg, Harris.
 Hunt Foods and Industries, Inc.: See—
 Fidelity Chemical Corp.
 Huyck, E. C. & Sons, Albany, N.Y., to Chatham Mfg. Co., Elkin, N.C. 149,954, ren. 9-19-61. Cl. 42.
 Idaho Potato Packers Corp., New York, N.Y. 721,661, pub. 7-4-61. Cl. 46.
 Illuminating Engineering Society, The, New York, N.Y. 721,714, pub. 7-4-61. Cl. 19.
 Illuminating Engineering Society, The, New York, N.Y. 721,721, pub. 7-4-61. Cl. 200.
 Imperial Lighting Products Co., Greensburg, Pa. 609,876, can. Cl. 21.
 Industrial Chemical Products Co., Detroit, Mich. 391,199, ren. 9-19-61. Cl. 6.
 Industrial Chemical Products Co., Detroit, Mich. 392,345, ren. 9-19-61. Cl. 16.
 Inland Steel Products Co., Milwaukee, Wis. 721,529, pub. 7-4-61. Cl. 16.
 International Products Corp., New York, N.Y. 721,701, pub. 7-4-61. Cl. 51.
 International Silver Co., Meriden and Waterbury, to The International Silver Co., Meriden, Conn. 147,780, ren. 9-19-61. Cl. 28.
 International Silver Co., The: See—
 International Silver Co.
 J.L.S. Co.: See—
 Swain, J. L., Sr.
 James, John R., Maud, Okla. 721,572, pub. 7-4-61. Cl. 22.
 Jenn Air Products Co., Inc., Indianapolis, Ind. 721,612-13, pub. 7-4-61. Cl. 34.
 Jersey State Protective Coating Co., Inc., Haledon, N.J. 721,489, pub. 7-4-61. Cl. 6.
 Johnston, Alvin E., Warroad, Minn. 721,465, pub. 7-4-61. Cl. 1.
 Justl, H. D. & Son, Inc., Philadelphia, Pa. 610,139, can. Cl. 44.
 Kahle Engineering Co., Union City, N.J. 721,591, pub. 7-4-61. Cl. 23.
 Kalamazoo Pant Co., Kalamazoo, Mich. 609,912-13, can. Cl. 39.
 Kenner Products Co.: See—
 Bromo Mint Co.
 Kern County Land Co., San Francisco, Calif. 721,464, pub. 7-4-61. Cl. 1.
 Kerr, Raymond W., d.b.a. Kerco Products, Hastings, Nebr. 609,811, can. Cl. 12.
 Kerro Products: See—
 Kerr, Raymond W.
 Keystone Bros., San Francisco, Calif. 721,609, pub. 7-4-61. Cl. 32.
 Kimberly-Clark Corp., Neenah, Wis. 721,653, pub. 7-4-61. Cl. 44.
 King Soopers, Inc., Denver, Colo. 610,081, can. Cl. 107.
 Kingsway, Inc., Chicago, Ill. 721,576, pub. 7-4-61. Cl. 22.
 Kluth, Karl F., d.b.a. Kluth-Southwest Converters, Los Angeles, Calif. 609,960, can. Cl. 42.
 Kluth-Southwest Converters: See—
 Kluth, Karl F.
 Komberec & Fiedler Enterprises, Inc., from Harold L. Komberec, Spokane, Wash. 721,654, pub. 7-4-61. Cl. 46.
 Komberec, Harold L.: See—
 Komberec & Fiedler Enterprises, Inc.
 Krier Preserving Co., The, Belgium, Wis. 390,284, ren. 9-19-61. Cl. 46.
 Lacky & Sons, Galesburg, Ill. 721,697, pub. 7-4-61. Cl. 50.
 Lannom Mfg. Co., Inc., The, Tullahoma, Tenn. 610,095, can. Cl. 22.
 Larry's Sandwiches, Inc., Culver City, Calif. 721,667, pub. 7-4-61. Cl. 46.
 Lawry's Foods, Inc., Los Angeles, Calif. 721,664, pub. 7-4-61. Cl. 45.
 Lawson Milk Co.: See—
 Consolidated Foods Corp.
 Leaf Plastics, Inc., Yonkers, N.Y. 721,472, pub. 7-4-61. Cl. 3.
 Leggett, Francis H. & Co., New York, N.Y. 610,047, can. Cl. 46.
 Lehmkuhl, Joakim, d.b.a. Skod Co., Greenwich, Conn. 721,509, pub. 7-4-61. Cl. 10.
 Lennox Mfg. Co., St. Louis, Mo. 721,474, pub. 7-4-61. Cl. 3.
 Leveo Metal Finishers, Inc., Long Island City, N.Y. 721,499, pub. 7-4-61. Cl. 8.
 Levy, J. H. & Son Co., The, Cleveland, Ohio. 609,932, can. Cl. 39.
 Licht and Kaplan, Inc., Newburgh, N.Y. 609,779, can. Cl. 3.
 Lido Tools, Costa Mesa, Calif. 721,593, pub. 7-4-61. Cl. 23.
 Lilly, E.H. and Co., Indianapolis, Ind. 721,540, pub. 7-4-61. Cl. 18.
 Lincoln Electric Co., The, Cleveland, Ohio. 721,521, pub. 7-4-61. Cl. 14.
 Locker Management, Inc., St. Louis, Mo. 610,109, can. Cl. 38.
 Loma Linda Food Co.: See—
 Pacific Union Association of Seventh-Day Adventists, The.
 Lord Mfg. Co., Erie, Pa. 721,476, pub. 7-4-61. Cl. 5.
 Lord Mfg. Co., Erie, Pa. 721,482, pub. 7-4-61. Cl. 6.
 Lowenstein, M. & Sons, Inc., New York, N.Y. 721,645-6, pub. 7-4-61. Cl. 42.
 Ludlum Steel Co., Watervliet, N.Y., to Allegheny Ludlum Steel Corp., Pittsburgh, Pa. 144,194, ren. 9-19-61. Cl. 14.
 Lyons, John L., d.b.a. National Distributors, Louisville, Ky. 609,896, can. Cl. 29.
 M.F.A. Oil Co., Columbia, Mo. 721,490, pub. 7-4-61. Cl. 6.
 Mallet & Co., Inc., Pittsburgh, Pa. 610,029-31, can. Cl. 46.
 Mantell, H., Inc.: See—
 Mantell, Herman.
 Mantell, Herman, to H. Mantell, Inc., New York, N.Y. 392,534, ren. 9-19-61. Cl. 39.
 Margoles, Edward I., d.b.a. Glenn & Thomas Co., to Glenn Thomas Co., Inc., New York, N.Y. 609,955, can. Cl. 42.
 Marlboro Shirt Co., Inc., Baltimore, Md. 609,923, can. Cl. 39.
 Marx, Louis & Co., Inc., New York, N.Y. 721,728. Cl. 22.
 Mayborn Products Ltd., London, England. 721,706, pub. 7-4-61. Cl. 52.
 McGraw-Edison Co., The: See—
 Coolerator Co., The.
 McKesson & Robbins, Inc.: See—
 Van Fleet-Mansfield Drug Co.
 Medusa Portland Cement Co., Cleveland, Ohio. 609,830, can. Cl. 16.
 Metal Coating Corp., Chicago, Ill. 721,470, pub. 7-4-61. Cl. 2.
 Metallurgical Products Co., Philadelphia, Pa. 609,789, can. Cl. 6.
 Midwest Industrial Products Corp., Chicago, Ill. 609,814, can. Cl. 12.
 Miller, Herman, Furniture Co.: See—
 Miller, Herman, Inc.
 Miller, Herman, Inc., by change of name from Herman Miller Furniture Co., Zeeland, Mich. 721,604, pub. 7-4-61. Cl. 32.
 Millis, Henry L., to Cliequot Club Co., Millis, Mass. 19,634, ren. 9-19-61. Cl. 45.
 Minnesota Rubber Co., Minneapolis, Minn. 721,503, pub. 7-4-61. Cl. 9.
 Miss Pat & Co., Los Angeles, Calif. 721,643, pub. 7-4-61. Cl. 42.
 Modesto Produce Packing Co., Inc., Modesto, Calif. 610,033, can. Cl. 46.
 Mona Lisa Furs, Inc., New York, N.Y. 609,926, can. Cl. 39.
 Monarch Rubber Co., The, Hartsville, Ohio. 721,621, pub. 7-4-61. Cl. 35.
 Moore, John Hudson, Inc., New York, N.Y., to Richard Hudnut, Morris Plains, N.J. 392,384, ren. 9-19-61. Cl. 51.
 Morosan, Aurella V., d.b.a. Broadway Sound Productions, Denver, Colo. 609,899, can. Cl. 36.
 Morris, Philip, Inc., New York, N.Y. 721,531, pub. 7-4-61. Cl. 17.
 Moschetti Bros.: See—
 Moschetti, Edward.
 Moschetti, Edward, d.b.a. Moschetti Bros., Brooklyn, N.Y. 610,018, can. Cl. 46.
 Mosinger-Cohn, Inc., St. Louis, Mo. 721,642, pub. 7-4-61. Cl. 39.
 Moulton, George Spencer, & Co. Ltd., Bradford-on-Avon, England. 721,552, pub. 7-4-61. Cl. 19.
 Mueller, John, Licorice Co., The, Cincinnati, Ohio. 146,821, ren. 9-19-61. Cl. 46.
 Munro, Walter J., New York, N.Y. 609,936, can. Cl. 39.
 Myers, Herbert G., d.b.a. My Len Sales Co., Chicago, Ill. 609,829, can. Cl. 39.
 My Len Sales Co.: See—
 Myers, Herbert G.
 N.V. G. broeders van Brink, Breda, Wilhel- en Banket-fabriek, Roosendaal, Netherlands. 721,662, pub. 7-4-61. Cl. 46.
 N.V. Organon, Oss, Netherlands. 721,497, pub. 7-4-61. Cl. 6.
 Naples of Hollywood: See—
 Rocca, Ralph.
 Narrow Fabric Co., The, d.b.a. Wyomissing Paper Products, West Reading, Pa. 721,624, pub. 7-4-61. Cl. 37.
 Nash Inc., Jersey City, N.J. 609,782, can. Cl. 3.
 National Appliance & Radio Dealers Association, Inc., Chicago, Ill. 610,068, can. Cl. 103.
 National Biscuit Co., New York, N.Y. 721,681, pub. 7-4-61. Cl. 46.
 National Brewing Co., The, Baltimore, Md. 721,685, pub. 7-4-61. Cl. 48.
 National Distillers and Chemical Corp., d.b.a. National Distillers Products Co., New York, N.Y. 721,688, pub. 7-4-61. Cl. 49.
 National Distillers Products Co.: See—
 National Distillers and Chemical Corp.
 National Distributors: See—
 Lyons, John L.
 National Laboratories, Inc., Toledo, Ohio. 721,587, pub. 7-4-61. Cl. 23.
 National Mine Service Co., Pittsburgh, Pa. 721,551, pub. 7-4-61. Cl. 19.

National Standard Co., Niles, Mich. 721,518, pub. 7-4-61. Cl. 14.
 National Steel Cabinet Co., Chicago, Ill. 721,605, pub. 7-4-61. Cl. 32.
 Neff Instrument Corp., Wilmington, Del., from Neff Instrument Corp., Pasadena, Calif. 721,727. Cl. 21.
 Netherlands Publishing Corp.: See—
 Netherlands-American Digest, Inc. The.
 Netherlands-American Digest, Inc. The, to Netherlands Publishing Corp., to Netherlands Publishing Corp., New York, N.Y. 389,380, ren. 9-19-61. Cl. 38.
 New England Confectionery Co., Cambridge, Mass. 721,683, pub. 7-4-61. Cl. 46.
 New Hudson Ltd., to Girling Ltd., Birmingham, England. 389,754, ren. 9-19-61. Cl. 19.
 New Jersey Wood Finishing Co., Woodbridge, N.J. 609,872, can. Cl. 21.
 New London Mills, Inc., New London, Conn. 721,553, pub. 7-4-61. Cl. 29.
 Newton, Marion W., New York, N.Y. 390,694, ren. 9-19-61. Cl. 42.
 Nicholas International Ltd., Toronto, Ontario, Canada. 721,536, pub. 7-4-61. Cl. 18.
 Nieleo Laboratories: See—
 Nielsen, Claudius.
 Nielsen, Claudius, d.b.a. Nieleo Laboratories, Detroit, Mich. 609,828, can. Cl. 15.
 Nielsen, Poul, d.b.a. Stanwell Briar Pipes, Kyringe, near Ringsted, Denmark. 721,500, pub. 7-4-61. Cl. 8.
 Niemelä, Theodor, N.V., Groningen, Netherlands. 721,530, pub. 7-4-61. Cl. 17.
 Nienhauser, Bernard A., St. Paul, to The Rap-In-Wax Co., Minneapolis, Minn. 150,920, ren. 9-19-61. Cl. 37.
 Noll Mfg. Co., Berkeley, Calif. 721,610-11, pub. 7-4-61. Cl. 34.
 Nonotuck Silk Co., Northampton, Mass., to Belding Hemlin-Way Co., Inc., New York, N.Y. 149,712, ren. 9-19-61. Cl. 42.
 Northwest Pre-pak Co., Wenatchee, Wash. 610,049, can. Cl. 46.
 O'Hare, Eugene F.: See—
 Wizard Electronics.
 Ohio Steel Foundry Co., The, Lima, Ohio. 150,034, ren. 9-19-61. Cl. 14.
 Oldetyme Distillers Corp.: See—
 Oldetyme Distillers, Inc.
 Oldetyme Distillers, Inc., to Oldetyme Distillers Corp., to Schenley Industries, Inc., New York, N.Y. 392,467, ren. 9-19-61. Cl. 49.
 Olin Mathieson Chemical Corp., East Alton, Ill. 721,469, pub. 7-4-61. Cl. 2.
 Olson, J. B. E., Corp., Garden City, N.Y. 721,549, pub. 7-4-61. Cl. 19.
 Olson, Kenneth E., Racine, Wis. 387,124, ren. 9-19-61. Cl. 38.
 Orders Mattress Co., Inc., Greenville, S.C. 721,608, pub. 7-4-61. Cl. 32.
 Orsi, Domenico, New York, N.Y. 609,951, can. Cl. 42.
 Ortho-Dynamics, Inc., San Marino, Calif. 721,606, pub. 7-4-61. Cl. 32.
 Osenbaugh, P. B.: See—
 Great Northern Supply Co., The.
 PM Industries, Inc., Stamford, Conn. 609,867, can. Cl. 21.
 Pacific Union Association of Seventh-Day Adventists, The, d.b.a. Loma Linda Food Co., Glendale, Calif. 721,673, pub. 7-4-61. Cl. 46.
 Pan Pacific Fisheries, Inc., Terminal Island, Calif. 721,682, pub. 7-4-61. Cl. 46.
 Pappas, C., Co., Inc., Boston, Mass. 392,065, ren. 9-19-61. Cl. 48.
 Paramount Paper Products Co., Omaha, Neb. 721,635, pub. 7-4-61. Cl. 38.
 Parfumerie Houbigant, to Houbigant, Inc., Paris, France, to Houbigant, Inc., New York, N.Y. 146,322, ren. 9-19-61. Cl. 51.
 Park-O-Mat, Inc., San Diego, Calif. 609,889, can. Cl. 23.
 Paroni & Murray, Denver, Colo. 609,864, can. Cl. 21.
 Peerless Finishing Corp., Paterson, N.J. 610,077, can. Cl. 106.
 Pen Argyl Milling Co., Inc., Pen Argyl, Pa. 610,046, can. Cl. 46.
 Pep-Pa-Min-It Co., The: See—
 Schloss, Herbert A.
 Permagile Corp. of America, Woodside, N.Y. 721,512, pub. 7-4-61. Cl. 12.
 Pet Toy of N.H.: See—
 Peterson, William C.
 Peterson, William C., d.b.a. Pet Toy of N.H., Claremont, N.H. 721,573, pub. 7-4-61. Cl. 22.
 Phoenix Trimming Co., Chicago, Ill. 609,777, can. Cl. 3.
 Photo Chemical Products, Inc., Garden City, N.Y. 721,524, pub. 3-24-59. Cl. 16.
 Plac-Steel Products, Inc., Walkerton, Ind. 721,575, pub. 7-4-61. Cl. 22.
 Plee-Zing, Inc., Evanston, Ill. 392,214, ren. 9-19-61. Cl. 44.
 Powell-Gayek Advertising, Inc., Detroit, Mich. 610,064, can. Cl. 101.
 Pratt, Henry, Co., Chicago, Ill. 721,616, pub. 7-4-61. Cl. 34.
 Premiuma, Inc., Minneapolis, Minn. 721,715, pub. 7-4-61. Cl. 101.
 Prescott, J. L., Co., Passaic, N.J. 140,063, ren. 9-19-61. Cl. 6.
 Publisher's Vending Services, Inc., Minneapolis, Minn. 721,588, pub. 7-4-61. Cl. 23.
 Purdue Frederick Co., The, New York, N.Y. 721,543-4, pub. 7-4-61. Cl. 18.
 Quaker Oats Co., The: See—
 Flako Products Corp.

Quaker Oats Co., The, Chicago, Ill. 721,730. Cl. 46.
 R & R Paper Co.: See—
 Rosenbloom, R., Paper Co., Inc.
 Ranney Refrigerator Co., Greenville, Mich. 721,602, pub. 7-4-61. Cl. 31.
 Rap-In-Wax Co.: See—
 Nienhauser, Bernard A.
 Reliable Textile Co., Inc., New York, N.Y. 609,957, can. Cl. 42.
 Renato Bialelli S.p.A., Crusinallo Omegna, (Novara), Italy. 721,554, pub. 6-27-61. Cl. 21.
 Renelle, Inc., Dayton, Ohio. 721,711, pub. 7-4-61. Cl. 52.
 Reynolds, J. H.: See—
 Reynolds Mfg. Co., Inc.
 Reynolds Mfg. Co., Inc., Clisco, from J. H. Reynolds, San Antonio, Tex. 721,574, pub. 6-13-61. Cl. 22.
 Rheem Mfg. Co., Richmond, Calif. 609,893, can. Cl. 24.
 Rhoads Molded Products Inc., Wilmington, Del. 721,471, pub. 7-4-61. Cl. 2.
 Riecl, Nina, S.A.R.L., Paris, France. 721,641, pub. 7-4-61. Cl. 39.
 Roberts Co., Sanford, N.C. 721,579-80, pub. 7-4-61. Cl. 23.
 Roberts Co., The, Industry, Calif. 721,479, pub. 7-4-61. Cl. 5.
 Robinson, A., Inc. of Altoona, d.b.a. Aludon Products Co., Altoona, Pa. 721,712, pub. 7-4-61. Cl. 52.
 Rosenbloom, R., Paper Co., Inc., d.b.a. R & R Paper Co., Lowell, Mass. 721,622, pub. 7-4-61. Cl. 37.
 Roxy Thread Corp., New York, N.Y. 391,683, ren. 9-19-61. Cl. 43.
 Ru-ex Co., The: See—
 Folds, Milton W.
 Ruex, Inc.: See—
 Folds, Milton W.
 Safeway Stores, Inc., Oakland, Calif. 721,716, pub. 7-4-61. Cl. 101.
 Sanders Associates, Inc., Nashua, N.H. 721,560, pub. 7-4-61. Cl. 21.
 Schenley Industries, Inc.: See—
 Oldetyme Distillers, Inc.
 Schifftan, Alfred, Inc., New York, N.Y. 721,695, pub. 7-4-61. Cl. 50.
 Schloss, Herbert A., d.b.a. The Pep-Pa-Min-It Co. of Baltimore, Baltimore, Md. 609,857, can. Cl. 18.
 Schmid, Julius, Inc., New York, N.Y. 386,638, ren. 9-19-61. Cl. 44.
 Schmid, Julius, Inc., New York, N.Y. 387,977, ren. 9-19-61. Cl. 44.
 Scintilla, Solothurn, Switzerland, to The Bendix Corp., Detroit, Mich. 145,215, ren. 9-19-61. Cl. 23.
 Sharples Corp., The, Philadelphia, Pa. 721,581, pub. 7-4-61. Cl. 23.
 Sherin-Williams Co., The, Cleveland, Ohio. 390,837, ren. 9-19-61. Cl. 6.
 Shippam, C., Ltd., Chichester, Sussex, England. 721,731. Cl. 46.
 Sidles Mfg. Co.: See—
 Sidles, Richard H.
 Sidles, Richard H., d.b.a. Sidles Mfg. Co., Laredo, Tex. 610,094, can. Cl. 19.
 Silby-Dolcourt Industries, North Miami, from Caribbean Products Corp., Hialeah, Fla. 721,565, pub. 7-4-61. Cl. 22.
 Silvestri Art Mfg. Co., Chicago, Ill. 721,698, pub. 7-4-61. Cl. 50.
 Simmonds Precision Products, Inc., Tarrytown, N.Y. 721,584, pub. 7-4-61. Cl. 23.
 Simplicity Pattern Co., Inc., New York, N.Y. 721,636, pub. 7-4-61. Cl. 38.
 Skod Co.: See—
 Lehmkuhl, Jonkim.
 Smith, Alexander, Inc., White Plains, N.Y. 609,958, can. Cl. 42.
 Smith, Elwin G., & Co., Inc., Pittsburgh, Pa. 721,513, pub. 7-4-61. Cl. 12.
 Soetele Rhodiaceta, Paris, France. 721,477, pub. 7-4-61. Cl. 5.
 Solomons Decorative Art Co.: See—
 Solomons, Paul.
 Solomons, Paul, d.b.a. S. P. Solomons Decorative Art Co., New York, N.Y. 721,630, pub. 7-4-61. Cl. 38.
 Southeastern International Corp., Cleveland, Ohio. 609,885, can. Cl. 22.
 Spaulding, A. G., & Bros., Inc., Chicopee, Mass. 721,569, pub. 7-4-61. Cl. 22.
 Spaulding Moss Co., Boston, Mass. 391,034, ren. 9-19-61. Cl. 26.
 Staedler, J. S., Nuernberg, Germany. 721,623, pub. 7-4-61. Cl. 37.
 Stainless Metal Craft: See—
 Fasbinder, Anton.
 Standard Knitting Mills, Inc., Knoxville, Tenn. 610,133, can. Cl. 39.
 Standard Motor Products, Inc., Long Island City, N.Y. 721,563, pub. 7-4-61. Cl. 21.
 Standard Radio Transcription Services, Inc., Chicago, Ill. 609,900, can. Cl. 38.
 Standex Laboratories, Inc.: See—
 White Laboratories, Inc.
 Stanley, Carol, Inc., New York, N.Y. 609,915, can. Cl. 39.
 Stanwell Briar Pipes: See—
 Nielsen, Poul.
 Stauffer Chemical Co., New York, N.Y. 721,483, pub. 7-4-61. Cl. 6.
 Stecco Industries, Inc., Chicago, Ill. 721,568, pub. 7-4-61. Cl. 22.
 Stevens Linen Associates, Inc., Webster, Mass. 721,650, pub. 7-4-61. Cl. 42.

Stewart-Hall Corp., Chicago, Ill. 609,805, can. Cl. 12.
 Storer Broadcasting Co., Miami Beach, Fla. 721,717, pub. 3-21-61. Cl. 104.
 Stryker, Auriol M., Chicago, Ill. 609,780, can. Cl. 3.
 Stuckey's Inc., Eastman, Ga. 721,672, pub. 7-4-61. Cl. 46.
 Sun Chemical Corp., New York, N.Y. 721,526, pub. 7-4-61. Cl. 16.
 Sunnyland Packing Co., Thomasville, Ga. 721,678, pub. 7-4-61. Cl. 46.
 Surgical Instrument Co., Oakland, Calif. 609,975, can. Cl. 44.
 Swain, J. L., Sr., d.b.a. J.L.S. Co., Plymouth, N.C. 609,848, can. Cl. 18.
 Swan-Finch Oil Co., New York, N.Y. 609,824, can. Cl. 15.
 Takeda, Ch., & Co., Ltd., to Takeda Chemical Industries, Ltd., Osaka, Japan. 390,373, ren. 9-19-61. Cl. 18.
 Takeda Chemical Industries, Ltd.: See—
 Takeda, Ch., & Co., Ltd.
 Talk-A-Letter Co.: See—
 Denton, Richard C.
 Tallo, Joe, Jr., d.b.a. D & D Association, Hammond, La. 610,022, can. Cl. 46.
 Textron, Inc., Providence, R.I. 721,556, pub. 7-4-61. Cl. 21.
 Thritcheck Service Corp.: See—
 Bankers Development Corp.
 Tog-Lok Co.: See—
 Greisen, Denver C.
 Topsall Lubricants, Inc., Kemmore, N.Y. 392,628, ren. 9-19-61. Cl. 15.
 Treasurelle Inc., Salem, Ore. 721,514, pub. 7-4-61. Cl. 12.
 Trojan Powder Co., Allentown, Pa. 721,501-2, pub. 7-4-61. Cl. 9.
 Trojan Powder Co., Allentown, Pa. 721,504, pub. 7-4-61. Cl. 9.
 Twachtman & Co., Grain Valley, Mo. 721,558, pub. 7-4-61. Cl. 21.
 Tykie Toy Co., Piqua, Ohio, to R. B. Grosvenor, Decatur, Ga. 389,077, ren. 9-19-61. Cl. 22.
 Ullman Research Corp., Norwalk, Conn. 610,098, can. Cl. 22.
 Union Chimique Belge, S.A., Brussels, Belgium. 721,539, pub. 7-4-61. Cl. 18.
 Union Wadding Co., Pawtucket, R.I. 610,147, can. Cl. 50.
 United Merchants and Manufacturers, Inc.: See—
 Cohn-Hall-Marx Co.
 United Printers and Publishers (Inc.), Dedham, Mass. 721,629, pub. 7-4-61. Cl. 38.
 U.S. Import Equipment Distributors, Inc., Portland, Ore. 721,582, pub. 7-4-61. Cl. 23.
 U.S. Industries, Inc., New York, N.Y. 721,564, pub. 7-4-61. Cl. 21.
 U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 721,665, pub. 7-4-61. Cl. 46.
 Universal-Cyclops Steel Corp., Bridgeville, Pa. 609,816, can. Cl. 14.
 Universal-Cyclops Steel Corp., Bridgeville, Pa. 721,520, pub. 7-4-61. Cl. 14.

Universal Oil Products Co., Des Plaines, Ill. 721,492, pub. 7-4-61. Cl. 6.
 Universal Scientific Co., Inc., Vincennes, Ind. 721,692-3, pub. 7-4-61. Cl. 50.
 Van Houten, C. J., & Zoon, N.V., Weesp, Netherlands. 721,674, pub. 7-4-61. Cl. 46.
 Van Vleet-Mansfield Drug Co., Memphis, Tenn., to McKesson & Robbins, Inc., New York, N.Y. 149,538, ren. 9-19-61. Cl. 18.
 Vanadium-Alloys Steel Co., Latrobe, Pa. 721,517, pub. 7-4-61. Cl. 14.
 Veiveray Corp., New York, N.Y. 610,076, can. Cl. 106.
 Vestal Laboratories, Inc., St. Louis, Mo. 721,707, pub. 7-4-61. Cl. 52.
 Vintage Wines, Inc., New York, N.Y. 721,733. Cl. 47.
 Viobin Corp., Monticello, Ill. 721,533, pub. 7-4-61. Cl. 18.
 Vogarell Products, Inc., Los Angeles, Calif. 721,541-2, pub. 7-4-61. Cl. 18.
 Warner Brothers Co., The, Bridgeport, Conn. 721,467, pub. 12-27-60. Cl. 2.
 Waxide Paper Co., Kansas City, Mo., to Crown Zellerbach Corp., San Francisco, Calif. 148,306, ren. 9-19-61. Cl. 37.
 Weather Products Inc., Hialeah, Fla. 609,801, can. Cl. 12.
 Weldon Farm Products, Inc., New York, N.Y. 609,989, can. Cl. 46.
 Wells Lamont Corp., Chicago, Ill. 721,638, pub. 7-4-61. Cl. 39.
 West Coast Woollen Mills Ltd., Vancouver, British Columbia, Canada. 721,644, pub. 7-4-61. Cl. 42.
 Western Corral Industries: See—
 Chicago Belt & Leather Novelties Co.
 Westinghouse Electric Corp., Pittsburgh, Pa. 721,597, pub. 7-4-61. Cl. 26.
 Wheeling Steel Corp., Wheeling, W. Va. 721,522, pub. 7-4-61. Cl. 14.
 Whirlpool Corp., St. Joseph, Mich. 721,603, pub. 7-4-61. Cl. 31.
 Whirlpool Corp., St. Joseph, Mich. 721,614, pub. 7-4-61. Cl. 34.
 White Laboratories, Inc., Kenilworth, N.J., from Standex Laboratories, Inc., Columbus, Ohio. 721,532, pub. 9-22-59. Cl. 18.
 White, S. S., Dental Mfg. Co., The, Philadelphia, Pa. 389,936, ren. 9-19-61. Cl. 44.
 Wian, Robert C., Enterprises, Inc., Glendale, Calif. 721,660, pub. 7-4-61. Cl. 46.
 Wilco Co., Los Angeles, Calif. 721,478, pub. 7-4-61. Cl. 5.
 Wizard Electronics, to E. F. O'Hare, University City, Mo. 609,873, can. Cl. 21.
 Wyomissing Paper Products: See—
 Narrow Fabric Co., The.
 Zenith Radio Corp., Chicago, Ill. 721,562, pub. 7-4-61. Cl. 21.
 Zollner Corp., Fort Wayne, Ind. 721,594-5, pub. 7-4-61. Cl. 23.



PATENTS NOTICES

Claims in Subparagraph Form

The presentation of claims divided into subparagraphs and indented according to structure, ingredients or process steps contained in the application is approved. An example of this form of claim is as follows:

"1. A device which is designed to receive fuel and air from suitable sources of supply and to transform said fuel and air into a mixture suitable for combustion, said device comprising in combination:

- (a) an air manifold,
- (b) a throttle valve located within said air manifold and mounted on an axis, each end of the throttle valve extending a substantial distance from said axis,
- (c) said air manifold being of substantially constant cross section in the throttle area,
- (d) said throttle valve having a mid portion of considerable thickness as compared with its end portions, whereby a venturi effect is created in said air manifold,
- (e) means to move said throttle so that its ends move beyond the center position in each direction through arcuate paths about an axis,
- (f) a fuel passageway leading to said air manifold,
- (g) said fuel passageway merging into an orifice as it enters the air manifold, and
- (h) the front portion of said throttle being adapted to move through a first arcuate path toward one side of said air manifold, and the rear portion on said throttle being adapted to move through a second arcuate path toward the other side of said air manifold, said orifice being located between planes drawn through the points where the extensions of said first and second arcuate paths would intersect the inner walls of said air manifold, said planes being normal to the axis of said air manifold."

No claim will be objected to solely because it is cast in this form.

Claims in allowed applications will be printed in subparagraph form if so presented by the applicant.

Aug. 3, 1961. M. C. ROSA,
Director, Patent Examining Operation.

Tabular Form of Claims

The Director of the Patent Examining Operation has advised the examining corps that "the presentation of claims divided into subparagraphs, ingredients, or process steps contained in the application is approved. * * * Accordingly, no claim should be objected to solely because it is cast in this

form. Claims in allowed applications will be printed in subparagraph form if so presented by the applicant."

This order was promulgated because claims presented in this form had on occasion been printed in the patent in the traditional continuous form. The order is consistent with the recommendations of a group of Primary Examiners filed last year with the Commissioner of Patents. These recommendations, which were published in the May 1961 issue of the Journal of the Patent Office Society (43 J.P.O.S. 317,319), read in part:

"In order to facilitate consideration of the claims it is recommended that applicant be strongly urged or required to present the claims in a form convenient for the Examiner to consider such as in an orderly sequence as well as an orderly internal arrangement. Within the claims, the clauses thereof shall be separated, in order that the Examiner may readily determine those individual factors which are essential to the claim."

The order is also consistent with Resolution 2(c) of the Patent Office Affairs (Patents) Committee adopted by the Section of Patent, Trademark and Copyright Law of the American Bar Association in St. Louis—viz.,

"2.(c) Resolved, That the Section recommends, at least in the case of lengthy or complex claims, more extensive use of the tabular form of claim wherein individual elements, steps or features are set forth by indentations or other clarifying format."

While it is somewhat more expensive to print patents containing claims in this recommended form, such expense seems to be more than offset by the advantages in facilitating examination.

The cooperation of all patent practitioners is asked in encouraging the presentation of claims in the "clarifying format."

DAVID L. LADD,
Commissioner.

Aug. 24, 1961.

Patent Office Telephone Numbers

A new series of numbers has recently been assigned to telephone extensions in patent examining divisions. Telephone calls to division personnel should be handled as follows:

1. To reach the Primary and Assistant Primary Examiner, dial "28" followed by the division number. The Primary Examiner of Division 3, for example, may be reached by dialing "2803."
2. To reach the division clerk, assistant examiners and all other employees, dial "25" followed by the division number.

STerling 3-0200 should no longer be used in placing telephone calls to the Patent Office. Any Office extension may be reached directly by dialing "WO-7" plus the desired extension number. For example, the Primary Examiner of Division 3 may be reached by dialing WO 7-2803. Station-to-station long distance calls may be dialed directly by preceding the Office number with Area Code "202."

Aug. 28, 1961. C. A. KALK,
Director of Administration.

New Applications Received During July 1961

Patents	7,054
Designs	369
Plant Patents	7
Reissues	30
Total	7,460

Issue

Patents	995—No. 3,001,197 to No. 3,002,191, incl.
Designs	40—No. 191,391 to No. 191,430, incl.
Plant Patents	1—No. 2,094
Reissues	2—No. 25,042 to No. 25,048, incl.
Total	1,038

Board of Appeals Decisions Rendered in the Month of July 1961

Examiner affirmed.....	206
Examiner affirmed in part.....	42
Examiner reversed.....	61
Total.....	309

CORRECTED NOTICE**Punched Cards for Organic Phosphorus Compounds**

Sets of punched cards recording the Patent Office analysis of the subject matter of the U.S. Patents pertaining to organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,

Director of Administration.

Aug. 17, 1961.

Patents Available for Licensing or Sale

2,993,571. Roof Anchor. Elgin C. Hawkins, 108 E. Flora St., Tampa 4, Fla.

2,927,040. Non-Staining Triarylmethane Color Base and Method of Printing Therewith. Chester Davis, 415 E. 5th St., Newport, Ky.

Correspondence concerning the following 2 patents should be directed to: Howson and Howson, Attention: Henry H. Skillman, 123 S. Broad St., Philadelphia 9, Pa.

2,596,187. Bark-Removing Machine Having Horizontally and Vertically Guided Cutter. William J. Watts.

2,765,903. Log Feeding Apparatus for a Debarking Machine. William J. Watts.

General Electric Company is prepared to grant non-exclusive licenses under the following 9 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,937,994. Lubricating Oil Composition Containing a Silicon-Tin-Containing Compound.

2,949,361. Photosensitive Compositions.

Applications for license under the following 7 patents may be addressed to: General Electric Company, Housewares and Commercial Equipment Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,933,237. Compressor.

2,938,990. Electric Cooking Vessel.

2,950,375. Percolator Brew Strength Control.

2,961,123. Handle Mounting for Liquid Vessel.

2,974,344. Pushing or Pulling Arrangement for a Mobile Vacuum Cleaner.

2,975,456. Vacuum Cleaning Nozzle Attachment for High Pile Rugs.

2,987,639. Motor Brush Assembly.

Licenses for Filing of Applications in Foreign Countries

The Patent Office continues to receive petitions for retroactive licenses to file applications in foreign countries. It therefore seems desirable to call attention to the fact that the filing of such applications is still governed by the provisions of 35 U.S.C. 184, which reads, as follows:

§ 184. Filing of application in foreign country.

Except when authorized by a license obtained from the Commissioner a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country. A license shall not be granted with respect to an invention subject to an order issued by the Commissioner pursuant to section 181 of this title without the concurrence of the head of the departments and the chief officers of the agencies who caused the order to be issued. The license may be granted retroactively where an application has been inadvertently filed abroad and the application does not disclose an invention within the scope of section 181 of this title.

The term "application" when used in this chapter includes applications and any modifications, amendments, or supplements thereto, or divisions thereof.

M. L. REYNOLDS,

First Assistant Commissioner.

Aug. 24, 1961.

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

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CONDITION OF PATENT APPLICATIONS AS OF JULY 31, 1961

Total number of pending applications (excluding Designs)	194,691
Total number of pending Design applications	5,245
Total number of applications awaiting action (excluding Designs)	91,822
Total number of Design applications awaiting action	1,450
Date of oldest new application	April 18, 1960
Date of oldest amended application	April 15, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS		6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64, 16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.	
(II) EVANS, N. E., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		7, 11, 17, 27, 34, 35, 39, 53, 62.	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		5, 8, 20, 29, 33, 36, 40, 52, 66.	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		1, 4, 9, 10, 18, 22, 23, 28, 45, 47.	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		3, 15, 19, 25, 30, 32, 49, 55, 67.	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE		91, 92, 93, 94, 95.	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.			
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working		12-16-60	12-2-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps		1-27-61	11-14-60
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors		9-23-60	10-3-60
4. (VI) FALLER, E. A., Material or Article Handling		12-27-60	12-27-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics		8-11-60	8-2-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides		9-6-60	9-19-60
7. (IV) ANDERSON, E. G., Optics		11-16-60	11-21-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds		1-23-61	2-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines		1-16-61	10-18-60
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making		11-15-60	11-3-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits		9-7-60	9-1-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls		8-15-60	8-11-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning		9-9-60	9-23-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics		8-26-60	8-3-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus		2-14-61	2-14-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems		7-26-60	7-25-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering		9-13-60	9-21-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors		2-1-61	2-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners		9-27-60	10-10-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors		2-2-61	2-1-61
21. (III) MADER, R. C., Textiles		11-28-60	11-3-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows		11-1-60	10-17-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education		1-3-61	1-4-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders		1-4-61	1-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making		10-10-60	10-7-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers		10-3-60	9-19-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids		12-16-60	11-16-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes		9-22-60	9-6-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings		11-9-60	10-31-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)		1-23-61	1-23-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)		Oldest Application	
		New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....		9-13-60	9-22-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....		10-5-60	10-3-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....		10-13-60	9-1-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders, Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....		10-25-60	11-3-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....		11-29-60	12-5-60
36. (V) EVANS, R. L., Measuring and Testing (part).....		9-19-60	9-19-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....		9-19-60	9-6-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....		8-2-60	7-29-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....		10-31-60	10-27-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....		2-3-61	1-19-61
41. (II) LOVEWELL, N. N., Records; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....		10-20-60	10-31-60
42. (II) SRAHOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....		9-9-60	9-15-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....		7-14-60	8-1-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....		4-18-60	4-15-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....		2-16-61	2-1-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....		8-17-60	8-2-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles.....		12-16-60	12-16-60
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....		6-29-60	7-5-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....		9-9-60	9-12-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....		10-4-60	10-5-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....		7-26-60	7-12-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....		1-24-61	2-1-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....		12-6-60	1-4-61
54. (II) NELSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....		6-20-60	7-11-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....		10-17-60	10-7-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....		7-18-60	8-2-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....		8-12-60	8-8-60
58. (III) BRONAUH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....		11-29-60	11-17-60
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....		9-15-60	10-6-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.....		9-6-60	8-15-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.....		1-4-61	1-3-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.....		11-7-60	10-17-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....		9-13-60	9-22-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....		7-13-60	9-6-60
65. (II) SAX, E. J., Wave Guides, Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....		9-1-60	9-8-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales.....		5-2-60	5-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....		11-4-60	11-14-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....		5-26-60	4-28-60
81. (III) MONCURE, J. A., Industrial Arts.....		4-7-61	4-6-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts.....		4-10-61	4-14-61
91. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.....		9-13-60	8-19-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners.....		2-1-61	2-2-61
93. WAHL, R. A., Wire Working.....		1-30-61	1-19-61
94. BERLOWITZ, W., Gas Separation.....		11-21-60	11-14-60
95. REZNEK, J. (acting), Metallic Building Structures.....		12-2-60	12-1-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....		12-23-60	12-1-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during September 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1961*.

Patents.....Numbers 2,357,282 to 2,359,276, inclusive
Plant Patents.....Numbers 638 to 642, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE FRED N. HILL

No. 6594. Decided December 22, 1960

[48 CCPA —; 284 F.2d 955; 128 USPQ 197]

1. PATENTABILITY—CRITICALITY—SINGLE COMPARISON—TEMPERATURE DIFFERENCE.

"Merely showing in one instance that a lower yield of ethylene oxide is obtained with a catalyst reduced at 12° C. above the claimed temperature range (150°–250° C.) is not adequate to establish the criticality of that range. A sufficient number of tests at various temperatures above 250° C. should have been presented to clearly show the criticality of the range at which the alleged unobvious results were obtained. * * * Moreover, the one comparison made lacks evidentiary value since the times of reduction of the compared catalysts differ considerably. Consequently, it is inconclusive as a showing that the temperature difference is responsible for the lower yield."

2. SAME—PARTICULAR SUBJECT MATTER—CATALYST AND METHOD FOR THE PRODUCTION OF ETHYLENE OXIDE.

The decision of the Board of Appeals refusing all of the claims in an application entitled "Catalyst and Method for the Production of Ethylene Oxide" is affirmed.

APPEAL from the Patent Office. Serial No. 338,883.

AFFIRMED.

Louis C. Smith, Jr., and Paul A. Rose for appellant.
Clarence W. Moore (Joseph Schimmel of counsel)
for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

WORLEY, Chief Judge, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the Primary Examiner's rejection of claims 1–5 and 7–12, all of the claims in appellant's application for a patent entitled "Catalyst and Method for the Production of Ethylene Oxide" on the ground that the claims are unpatentable over certain prior art.

Claims 1, 7, and 12 are representative of the appealed claims and read:

1. Process for preparing an active silver catalyst effective for the oxidation of ethylene to ethylene oxide which comprises forming an aqueous solution of silver nitrate, immersing particles of a porous catalyst support in said solution, heating the solution and immersing particles to degasify the support particles and to impregnate the catalyst support particles uniformly with said solution, drying said particles in the absence of any substantial amount of supernatant silver nitrate solution, and reducing the silver nitrate content of said particles to silver by treating with hydrogen gas at an elevated temperature between 150° C. and 250° C.

7. Process for preparing a promoted silver catalyst effective for the oxidation of ethylene to ethylene oxide which comprises forming an aqueous impregnating solution of silver nitrate and a water-soluble salt of an alkaline-earth metal of the group consisting of barium, calcium and strontium, immersing particles of a porous catalyst support in said solution, heating the solution to impregnate the catalyst support particles uniformly with said solution, drying said particles in the absence of any substantial amount of supernatant impregnating solution, and reducing the silver nitrate in the impregnated particles to silver and the alkaline-earth metal salt in the particles to the oxide by treating with hydrogen gas at an elevated temperature between 150° C. and 250° C. to form a reduced catalyst containing an amount of the oxide equivalent to about 0.1% to about 1.5% of the alkaline-earth metal by weight of the silver.

12. A promoted silver catalyst effective for the oxidation of ethylene to ethylene oxide comprising a porous support throughout the pores of which reduced silver is uniformly

deposited without completely filling and clogging said pores so as to hinder access of gas thereto, said reduced silver being also intimately mixed with an oxide of an alkaline-earth metal of the group consisting of calcium, barium and strontium in an amount equivalent to between 0.1% and 1.5% of the alkaline-earth metal by weight of the silver, the ratio of silver to alkaline-earth metal oxide being constant throughout the catalyst mass and the silver content of said catalyst mass being between 5% and 16% by weight.

The references relied on are:

Carter, 2,125,333, August 2, 1938.

Aries, 2,477,435, July 26, 1949.

Murray: "Australian J. Science Research," vol. 3A, page 437, 1950.

The claims relate to a process for preparing promoted and unpromoted silver catalysts said to possess a high degree of selectivity and activity for the oxidation of ethylene to ethylene oxide. Claim 12 defines the catalyst specifically. The basic steps in preparing the catalyst involve immersing a suitable catalyst support in an aqueous solution of silver nitrate, heating the mixture to degasify the support and insure uniform impregnation, removal of any excess silver nitrate solution from the impregnated support, followed by drying and reduction of the silver nitrate to silver metal in the presence of hydrogen gas at a temperature between 150° and 250° C. The promoted catalysts are prepared by adding a small amount of a water soluble salt of the promoter metal (calcium, strontium or barium) to the silver nitrate solution and co-impregnating the support with the solution. In the reduction step the promoter salt is converted to the corresponding oxide of calcium, strontium or barium.

The Carter patent, which is the basic reference, discloses a method for preparing a silver catalyst used in oxidizing ethylene to ethylene oxide by soaking a suitable carrier in an aqueous solution of silver nitrate, evaporating the mixture to dryness and subjecting the dried carrier impregnated with silver nitrate to reduction with hydrogen gas at approximately 300° C. It is further disclosed that the catalyst may be promoted by the addition of small amounts of alkali or alkaline earth metal compounds to the carrier material.

The Aries patent discloses a process for preparing a silver catalyst effective in the oxidation of ethylene to ethylene oxide by soaking a porous carrier in a solution of a silver salt of an organic acid at 100°–125° C. to impregnate the carrier, separating excess liquid followed by drying the carrier. The silver salt is then thermally decomposed to silver-silver oxide at 300°–500° C. in the presence of an inert gas. It states that hydrogen should not be used as the blanket gas during the decomposition step.

The Murray article describes co-precipitating a mixture of silver and barium carbonates from a solution of the corresponding nitrates, followed by drying the mixture and reduction with hydrogen gas to form a catalyst.

The Examiner divided the claims into two groups, rejecting claims 1–5, inclusive, the unpromoted catalyst group, as unpatentable over Carter in view of

Aries, and claims 7-12, inclusive, the promoted catalyst group, as unpatentable over the same combination of references plus Murray. The Board relied solely on Carter and Aries in affirming the Examiner's rejection of all the claims and, accordingly, we will limit our discussion to those two references.

The Board found that the step of heating the silver nitrate with the support immersed therein to degasify the support and insure uniform impregnation, and the step of separating the excess liquid before drying, were anticipated by Aries, and that it did not "involve invention" to use those expedients in the Carter process. As to the lower reduction temperature claimed in appellant's process over the 300° C. disclosed by Carter, the Board was of the opinion that did not "amount to invention" and stated "that it is within the province of the skilled chemist to experiment to determine conditions that will give optimum results and that is what appellant appears to have done in the present case." With respect to claims 7-12 the Board found that Carter taught the use of very small amounts of alkaline earth metal compounds as promoters, and that, since the amounts stated in the claims did not appear to be critical, that feature did not constitute a patentable distinction over the amounts disclosed by Carter.

Appellant contends that the references cannot properly be combined and that, therefore, the rejection was improper. It is urged that there is nothing in the references which would attain the object of the claimed invention which is to produce a catalyst for the oxidation of ethylene to ethylene oxide having both a high degree of activity and selectivity. It is further urged that even if the references are properly combined they still do not meet the claims which call for a lower rejection temperature than shown by Carter, and that this has been shown to be critical.

The applicable law determinative of whether references are properly combined is set forth in *In re Edwards*, 43 CCPA 884, 232 F.2d 641, 109 USPQ 380:

It is well settled that prior patents may be combined to anticipate claims. *In re Delaney*, 37 C.C.P.A. (Patents) 760, 177 F.2d 377, 83 USPQ 388. However, a question which should be considered when references are combined is whether these references suggest doing the thing which applicant has done. *In re Fridolph*, 30 C.C.P.A. (Patents) 939, 134 F.2d 414, 57 USPQ 122. It has also been stated that when references are combined to negate patentability, it should be considered whether one skilled in the art with the references before him could have made the combination of elements claimed without the exercise of invention. *In re Goepfrich*, 30 C.C.P.A. (Patents) 1181, 136 F.2d 918, 58 USPQ 324. Furthermore, a claim may be sometimes properly rejected on a combination of references even though that combination does not show all the limitations in the claim, providing such limitations as are not shown are not inventive and patentable over the disclosures of the prior art. *In re Bieley*, 39 C.C.P.A. (Patents) 982, 197 F.2d 355, 94 USPQ 80; *In re Oakes*, 31 C.C.P.A. (Patents) 833, 140 F.2d 669, 60 USPQ 453.

Applying the law as set forth above to the facts of this case it is our opinion that the references were properly combined and that the rejection of the claims based on that combination was proper.

Carter discloses appellant's basic process except that the impregnating and drying steps are slightly different and the reduction is carried out at a higher temperature. However, the first two steps in appellant's process are clearly old in Aries which teaches impregnating a catalyst support by soaking it in a silver salt solution at 100°-125° C. and drawing off excess liquid before drying the impregnated carrier. It is stated in the reference that "the oxidation of the olefin to the corresponding olefine oxide employ-

ing molecular oxygen is dependent on the use of a porous carrier coated with a uniform layer of uniformly sized small particles of silver-silver oxide," (emphasis added). That statement fairly suggests the desirability of having a uniformly coated carrier in silver catalyst preparations and we are of the opinion that it would be obvious to a worker skilled in the art to use the Aries impregnating and drying steps where uniform distribution of catalytic material on a carrier is desired. Accordingly, we think it would be obvious to use those expedients in the Carter process. Appellant's argument that the references are mutually exclusive since they utilize different silver salts and methods of activating the catalyst (thermal decomposition v. hydrogen reduction) has been considered but is not deemed significant. It is clear that the operational method of impregnating is old in Aries, and, in our opinion, substituting that method in the Carter process would be obvious to a worker skilled in the art.

Appellant further urges that the claimed reduction temperature range of 150°-250° C. is critical, and that the use of reduction temperatures of "approximately 300° C." disclosed by Carter results in catalysts which give significantly lower yields of ethylene oxide in the catalytic oxidation of ethylene. To support that contention appellant relies on his own affidavit which compares the yield of ethylene oxide obtained using a catalyst reduced in the presence of hydrogen gas for 14 hours at 262° C. with the yield of ethylene oxide obtained using the catalyst described in Example IV of the application which was reduced in the presence of hydrogen gas at 204° C. for 18 hours and then at 250° C. for 6 hours. On the basis of those two tests alone appellant argues that a 10% lower yield of ethylene oxide is obtained by using catalysts reduced at temperatures above the claimed range.

[1] In our opinion that single comparison is insufficient to establish criticality or patentability over the reference. Merely showing in one instance that a lower yield of ethylene oxide is obtained with a catalyst reduced at 12° C. above the claimed temperature range is not adequate to establish the criticality of that range. A sufficient number of tests at various temperatures above 250° C. should have been presented to clearly show the criticality of the range at which the alleged unobvious results were obtained. That appellant has not done. All the Hill affidavit shows is a single test involving a catalyst reduced at 262° C. for 14 hours, and that affords no basis for assuming that other catalysts reduced at higher temperatures such as the 300° C. reduction temperature of Carter would be less efficient than catalysts reduced at temperatures of 250° C. or below. Moreover, the one comparison made lacks evidentiary value since the times of reduction of the compared catalysts differ considerably. Consequently, it is inconclusive as a showing that the temperature difference is responsible for the lower yield.

In our opinion the selection of lower reduction temperatures over those disclosed by Carter was merely a matter of choice within the ordinary skill of the art. Appellant has not established that the difference is productive of any unobvious or unexpected result. It is our view that such difference represents an unpatentable variation over the prior art and since the other features of claims 1-5 are taught by the references,

the feature which is not shown cannot render the claims patentable because it is not itself unobvious. *In re Edwards*.

Claims 7-11 have the additional element of co-impregnating the support with a solution of water soluble salt of a promoter metal and the silver nitrate. While it is not argued by appellant that Carter does not teach the use of small amounts of alkaline earth metal compounds as promoters, it is urged that Carter does not teach the simultaneous co-impregnation of the support with the promoter compound and the silver nitrate. We cannot agree with appellant's argument on that point since, in view of the desirability of uniformly impregnating the support with the silver salt solution as is evident from Aries, we think it would be suggested to those skilled in the art to add the promoter to the silver salt solution to obtain simultaneous co-impregnation of the support. Furthermore, we do not think that the specific proportions of promoter recited in the claims represent a patentable distinction over the "small amount" disclosed by Carter. Accordingly, we agree with the Board as to the unpatentability of claims 7-11.

Claim 12 defines the promoted catalyst specifically without any limitations as to how it is made. We see nothing in that claim which is not anticipated by the prior art as previously discussed. It is, therefore, unpatentable.

[2] The decision is affirmed.
AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE RAYMOND G. ROSEHONG

No. 6631. Decided January 13, 1961

[49 CCPA — 285 F.2d 819; 128 USPQ 401]

1. CLAIMS—CONSTRUCTION OF CLAIMS.

With respect to the claims on appeal, Held that "Each of those claims is drawn to a method of controlling or changing the contour of a lap surface by positively rotating a tool at a speed other than that imparted to it by the lap"; and "Such a limitation in a method claim of this type cannot be disregarded."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—METHOD OF CONTROLLING THE CONTOUR OF THE OPERATING SURFACE OF A LAP PLATE.

The refusal of claims to a method of controlling the contour of the operating surface of a lap plate as unpatentable over the cited reference is reversed.

APPEAL from the Patent Office. Serial No. 418,647.
REVERSED.

Charles F. Voytech, Horton, Davis & McCaleb, for appellant.

Clarence W. Moore (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

WORLEY, Chief Judge, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office, affirming the rejection by the Primary Examiner of claims 15, 16, and 18 of appellant's application for a patent on a method of controlling the contour of the operating

surface of a lap plate. Claim 15 is representative of the appealed claims and reads:

15. The method of controlling the contour as to flatness, convexity, or concavity of the operating surface of a lap plate rotating about a fixed axis, by means of a rigid dressing tool which comprises positioning the tool to rest upon the lap surface, constraining the tool to rotate about an axis eccentric to the axis of rotation of the lap while allowing the tool to move through an angle with respect to the axis of the lap so that the dressing face of the tool may follow the contour of the lap, positively rotating the tool about its axis, and regulating the linear velocity between the contacting lap and tool surfaces to produce different degrees of wear of the lap surface by the tool along a radius of the lap surface.

The single reference relied on by the Board is:

Bullard, 2,565,590, August 28, 1951.

Appellant's application discloses a lapping machine comprising a flat, annular, horizontal plate which is rotated about its vertical axis. In operation the articles to be lapped are placed on the surface of the plate and are held against rotating with the plate by heavy wear rings which surround them and which also rest on the surface of the plate, the rings being mounted on vertical spindles journaled in the arms of a spider which is fixedly supported above the plate. An abrasive slurry is supplied to the surface of the plate to grind the articles as the plate moves under them. It appears that such action tends to wear the surface of the plate unevenly, thus it is desirable to provide means to prevent such uneven wearing.

As explained in appellant's application, one means of effecting that result is to make the wear rings of greater diameter than the width of the lap plate so that they overhang the inner and outer edges of the plate. With that arrangement the friction between the rings and the plate causes the rotation of the rings at a speed which may be varied by adjusting the rings radially inwardly or outwardly to vary the amount by which they overhang the inner and outer edges of the plate. Such adjustment varies the manner in which the rings wear down the surface of the plate, and thus controls the contour of the surface.

In the application at bar the rings are not radially adjustable but the spindles on which they are mounted are provided at their upper ends with sheaves which are connected by a belt. The belt is driven by a reversible motor at any desired speed so that the relative movement between the wear rings and the plate, hence the contour to which the plate will be worn, may be varied as desired. Because of the independent drive it is not necessary for the wear rings to overhang the edges of the lap plate. As shown, the rings extend only across the radial dimension of the plate.

The Bullard patent discloses, in FIGS. 1 to 3, a lapping machine comprising a combination of an annular lap plate and wear rings, surrounding the articles to be lapped, resting on the plate and mounted on spindles journaled in a supporting structure above the plate, the general arrangement being similar to that in appellant's application. The diameter of the wear rings is substantially equal to the width of the annular lap plate, so that the rings do not overlap the edges of the plate. Sheaves are provided at the upper ends of the spindles and are connected by a belt, but there are no external means for applying a driving force to the belt as in appellant's device.

Means are provided for adjusting the position of the spindles on which Bullard's wear rings are mounted toward or away from the axis on which the lap plate rotates, and the patent specification states that when

the rings are located in an inner position the lap plate surface will be ground to a concave form. When they are in an outer position a convex surface will result, and when they are in an intermediate position the surface will be worn plane. Thus by regulating the position of the wear rings the contour of the lap plate surface may be controlled.

Bullard states that the speed of the wear rings relative to lap rotation may be controlled by the relative size of the sheaves on the spindles on which the rings are mounted. He correctly notes that if those sheaves are all of the same diameter the rings will rotate at the same speed. He then suggests, by way of example, that one sheave be given a diameter half that of the others and states that with such arrangement the speed of the wear rings relative to the lap plate is found to be reduced from 50 to 40 revolutions per minute. As to that arrangement it is correctly stated in appellant's brief that "If the same belt passes around all of the sheaves, the smaller sheaves will rotate faster than the larger sheaves, and hence if some of the rings are slowed down the rings with the smaller sheaves will be speeded up." [Emphasis quoted.]

In FIG. 4 of the Bullard patent, which is described as "a fragmentary plan view of the lapping machine and showing a truing ring on the lap surface," there is shown a single ring of a diameter considerably larger than the width of the lap plate. The only specific description of that modification is found in the following paragraph of the specification:

In FIGURE 4, I have illustrated a method and means whereby a lap surface may be dressed, and I accomplish this by providing a truing ring 31 which may be supported by one of the cross arms carried by the bar 30, and which truing ring has considerable weight, by way of example, 250 pounds, the truing ring overlapping the forty-one inch diameter lap surface as illustrated. This truing ring will recondition or dress the lap surface without the necessity of removing the lap from the table, thus saving expense and time of workmen in this regard.

The Board was of the opinion that the appealed claims recite methods in such broad terms as to be anticipated by the inherent operation of the Bullard device. The correctness of that holding is the sole issue here. The Board originally relied on the embodiment of FIGS. 1 to 3 of Bullard but, in response to a petition for rehearing, agreed that the pertinence of those figures alone was doubtful, and relied only on the embodiment of FIG. 4. Accordingly, the disclosure of the former embodiment is pertinent here only so far as it also applies to the latter.

While the Board did not state in detail how it interpreted the disclosure of Bullard's FIG. 4, it apparently took the position set forth in the Commissioner's brief that the "truing ring" of that figure was to be used in place of one of the five wear rings of FIGS. 1 to 3. We do not think that conclusion correct. While FIG. 4 is described as a fragmentary view of the machine, it shows the complete lapping plate, and there is no suggestion, even by dotted lines, that the use of more than one truing or wear ring is contemplated. The showing of one ring corresponds with the description of FIG. 4 which refers to a truing ring which "will recondition or dress the lap surface without the necessity of removing the lap from the table." That language

clearly indicates that all the dressing is accomplished by one ring. Moreover, the truing ring is so large that it would not be possible to use four wear rings of that size in association with it.

Bullard's description of the variation of ring speeds by changing the size of one or more sheaves relates solely to wear rings which enclose the work to be ground. Apparently his reason for changing the speed of the rings is that it "directly affects the rate of revolution of the work." The truing ring of FIG. 4, as shown, does not enclose any work, thus there would be no apparent reason for varying its speed. Further, the truing ring is of much greater size and weight than the wear rings, and if it were connected with a belt to several wear rings it is not clear what effect, if any, they would have on its speed of rotation. It is quite possible that it would continue to rotate at approximately its normal speed and the wear rings would conform to that speed.

We have carefully considered the Bullard patent but are unable to find therein a fair disclosure of varying the speed of a truing ring of the kind shown in FIG. 4. The entire disclosure is consistent with the idea that the ring is to be used alone and rotated solely by its frictional engagement with the lap. It is true that a sheave is shown at the top of the spindle on which the ring is mounted, but that is apparently because the spindle is one of those on which wear rings are mounted during the lapping operation. There is no suggestion that power is to be applied to the sheave to affect the speed of rotation of the truing ring.

Even if it be assumed, however, that Bullard does disclose an arrangement in which a truing ring is rotated at a variable speed by means of its connection with other rings, we are unable to agree with the Board that such operation would satisfy the requirements of the appealed claims. [1] Each of those claims is drawn to a method of controlling or changing the contour of a lap surface by positively rotating a tool at a speed other than that imparted to it by the lap. Such a limitation in a method claim of this type cannot be disregarded. *Clarence A. Hall v. Genzo Shimadzu*, 19 CCPA 1288, 59 F.2d 225, 13 USPQ 259; *Kropa v. Robie et al.*, 38 CCPA 858, 187 F.2d 150, 88 USPQ 478. There is no suggestion whatever in the Bullard patent that variation of the contour of the lap is effected by the use of sheaves of different diameters, and it is by no means clear that such result is inherent. Since no external power is supplied to the system by the change in size of the sheaves, it is evident that any increase in the speed of one wear ring must be compensated for by a corresponding decrease in the speed of one or more other rings. Accordingly, since all the rings move over the same part of the lap surface there is no reason to suppose that their combined effect would be materially different, regardless of the relative sizes of the sheaves. In our opinion the appealed claims recite methods of operation which are not disclosed in or suggested by Bullard, or inherent in the operation of the machine disclosed by that patent.

[2] The decision is reversed.
REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE LAWRENCE P. BIEFELD

No. 8607. Decided January 13, 1961

[48 CCPA —; 285 F.2d 826; 128 USPQ 391]

1. PATENTABILITY — PARTICULAR SUBJECT MATTER — SIZED GLASS FIBERS.

The refusal of certain claims to sized glass fibers as unpatentable over cited prior art is reversed.

APPEAL from the Patent Office. Serial No. 200,417. REVERSED.

James H. Littlepage, Herman Hersh, Ooms, McDougall, Williams & Hersh (Stackin & Overman of counsel) for appellant.

Clarence W. Moore (J. E. Armore of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

MARTIN, J., delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals of the United States Patent Office affirming the Examiner's rejection of claims 8 and 9 of appellant's application Serial No. 200,417, for "Sized Glass Fiber Products." Two claims were allowed by the Examiner.

It appears that newly manufactured thin glass fibers are quickly destroyed by abrasion from contact with other fibers or with parts of machines, and that certain resinous substances do not adhere properly to glass fiber surfaces. Appellant's invention relates to glass fibers sized with or bearing a thin surface film of a particular organic chemical composition. Such fibers are said to possess superior properties particularly when used as a reinforcement in plastics and laminates.

The appealed claims are as follows:

8. Continuous glass fibers sized in forming to provide a thin film on the glass fiber surfaces with 1-5 percent by weight of a composition containing in admixture 1-10 parts by weight of a butadiene-styrene copolymer formulated of 60-70 parts by weight styrene and 40-30 parts by weight of butadiene and 0.2-2.0 parts by weight of a lubricant selected of a fatty acid amine in which the alkyl group is unsaturated in a carbon to carbon linkage and has more than 8 carbon atoms.

9. Glass fibers having a thin film on the surfaces thereof in the form of a size with a butadiene-styrene copolymer in admixture with a cationic amine lubricant having an organic group attached directly to the basic nitrogen atom containing more than 8 carbon atoms and an unsaturated carbon to carbon linkage.

The two allowed claims relate to the sized glass fibers recited in the appealed claims in combination with particular resinous materials.

Claims 8 and 9 stand rejected as being unpatentable over a combination of the following references:

Sloan, 2,356,542, August 22, 1944.

Steinman, 2,552,910, May 15, 1951.

Biefeld et al., 2,678,823, March 30, 1964.

The Biefeld et al. patent, which is the principal reference relied on, discloses leather substitutes prepared by contacting glass fibers, for example, in the form of a woven fabric or unwoven mat, with two "incompatible" substances, a "treating material" and an "impregnant." It is contemplated that the fibers be coated first with the treating material and that a thin space or "pore-like opening" would remain between each coated fiber and the incompatible impregnant. This "microporous" structure would give the final fabric its desired leather-like properties. Pertinent

among the suitable treating materials are "cationic active compounds based upon the ionizable salt of a basic nitrogen . . . atom." Pertinent among the impregnants is butadiene-acrylonitrile copolymer which may also serve as a treating material in combination with some other incompatible impregnant. Treating material and impregnant may be added in that order or together in intimate mixture. Biefeld et al. also teach that the degree of permeability of the finished fabric may be influenced by treatment with a third substance, a hydrophobic or hydrophilic agent, before or after impregnation or by incorporation of the agent into the impregnant. Pertinent among the hydrophobic agents are:

. . . a cationic active compound of the type described by Sloan, No. 2,356,542, [or] a Werner or chrome-complex of the type described by Her, No. 2,278,040 in which the acido group coordinated with a trivalent chromium atom is constituted with at least 10 atoms . . .

The Steinman patent relates to the coating of glass fiber surfaces with certain "Werner complexes" of the type described in certain patents to Her, including the Her patent cited in the above excerpt from Biefeld et al. It appears that normally non-adherent resinous substances will adhere to glass fibers so coated. Steinman also teaches the use of Werner complexes with "acido groups" containing fewer than 10 carbon atoms. A pertinent part of the Steinman disclosure relates to the strong adherence of certain resinous substances including butadiene-acrylonitrile and butadiene-styrene copolymers to glass fibers coated with a particular Werner complex prepared from cyanoacetic acid.

The Sloan patent, in pertinent part, relates to the treatment of glass surfaces with certain long-chain amines, including unsaturated amines, whereby the surfaces become hydrophobic and organophilic. It is noted that this patent is cited in the quoted portion of Biefeld et al., supra.

With this prior art background, we turn to the appealed claims. It is noted that these recite glass fibers "sized in forming to provide a thin film on the glass fiber surfaces" (claim 8) or "having a thin film on the surfaces thereof in the form of a size" (claim 9). The size or thin film consists of a butadiene-styrene copolymer in combination with a particular type of amine.

The Examiner rejected the appealed claims "as lacking invention over Biefeld in view of Steinman and Sloan." The Board affirmed this rejection. The position of the Patent Office appears to be represented fairly by the following excerpts from the Solicitor's brief:

It is believed to be beyond dispute that Biefeld et al. . . . teach at a minimum that glass fibers are coated or sized with a mixture of a treating material and impregnant . . . the former being a cationic active compound of the type described by Sloan . . . and the latter being an elastomer of the type of butadiene-acrylonitrile copolymer (Buna N) . . . and that the mixture may be wiped onto the glass fibers as they are formed . . . The product so formed is essentially the product defined in appealed claim 9, except for the butadiene copolymer. The defined copolymer is an old material and is recognized by the art as an equivalent of the butadiene-acrylonitrile (Buna N) of the reference, as clearly evidenced by the disclosure of Steinman . . . where both copolymers are taught as useful in coating glass fibers. . . .

We do not agree with this rejection. It is important to keep in mind what is being claimed. The claims clearly recite glass fibers bearing a thin surface film of a mixture of a butadiene-styrene copolymer and an

¹ Omitted portions are references to particular portions of the named patents.

amine. We do not find in the Biefeld et al. patent information or advice which would lead one skilled in the art for any reason to form a thin film on glass fibers with such a mixture or even a mixture of a butadiene-acrylonitrile copolymer and an amine. Biefeld et al. contact glass fibers with a treating material, an impregnant, and, if desired, a hydrophobic or hydrophilic agent. In discussing application of the treating material, Biefeld et al. state:

These substances may be applied from water or solvent solution or as dispersions or emulsions of various concentrations depending upon the method of application. Application, in turn, may be carried out by various methods commonly used in the coating or sizing industry; that is, the solution of treating material may be wiped onto the fibers as they are formed, it may be sprayed onto the fibers, or the fibers may be carried through a bath of the treating material. The treating material may be applied after the fibers have been formed into a fabric. We have even secured the desired results when the incompatible treating material and impregnant are applied together in intimate mixture to the glass fibers in fabric form or with the glass fibers suspended therein. Ordinarily, an air-dry is sufficient to remove the diluents, or, when desired, elevated temperature may be employed for such purposes.

It is clear to us that "These substances" in this excerpt refers to the treating material. This paragraph is relied on by the Patent Office as a teaching of the addition of a mixture of treating material plus impregnant to glass fibers by a wiping process, presumably thereby forming a film on the glass. In our opinion, this represents an unduly distorted construction of this excerpt. A careful reading of the Biefeld et al. patent as a whole and in individual parts leads us to the conclusion that the patentees neither contemplate nor teach the coating or sizing of glass fibers in such a manner as to produce a thin film of impregnant either separately or in combination with a treating material. Nowhere in Biefeld et al. do we find use of an impregnant other than as "a substantially continuous phase" in which the glass fibers are dispersed. This is clearly not use as a thin film or size. Neither do we find in Biefeld et al. a definite teaching of glass fibers coated with thin films of treating material plus hydrophobic agent.

We turn next to a consideration of the Steinman patent which is relied on by the Patent Office as a teaching of the equivalence of butadiene-styrene and butadiene-acrylonitrile copolymers as glass fiber additives. It is our opinion that Steinman does not teach this equivalence generally enough so that it is reasonably applicable to the factual situation before us. According to the extent of Steinman's teaching, these two copolymers are equivalent only when applied to glass fibers coated with a particular Werner complex, that formed from cyanoacetic acid. We do not believe that Steinman teaches one skilled in the art to use a butadiene-styrene copolymer in place of a butadiene-acrylonitrile copolymer, either as an impregnant or as a treating material, in the Biefeld et al. process.

In our opinion, it has not been shown that coating glass fibers with a thin film of a mixture of an amine and a resinous material such as butadiene-acrylonitrile copolymer is old or obvious. It has further not been shown that butadiene-styrene and butadiene-acrylonitrile copolymers are known to be generally equivalent as glass fiber additives. [1] Because of this dual deficiency in the prior art, we reverse the rejection of claims 8 and 9. Holding as we do, it is unnecessary to consider the other arguments of appellant and the Patent Office.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE JACQUES SEJOURNET

No. 6522. Decided January 13, 1961

[48 CCPA —; 285 F.2d 823; 128 USPQ 398]

1. PATENTABILITY—INVENTION—35 U.S.C. 103.

In regard to appellant's claims to a method of extruding a composite steel billet, standing rejected under 35 U.S.C. 103 as being drawn to a method which was obvious from the disclosure of the prior art, *Held* that the "issue thus presented requires us to consider the claimed subject matter as a whole and to determine whether it would have been obvious at the time the invention was made to a person having ordinary skill in the art of steel extrusion."

2. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—ADMISSION BY APPELLANT—ISSUE BEFORE COURT.

"At the oral argument, counsel for appellant admitted that at the time of making the invention in issue the extrusion of heated composite steel billets was old and that the use of a glass-like lubricant in extruding a single steel billet was old. Thus, the only feature of asserted novelty in the appealed claims lies in the use of a glass-like lubricant in extruding a composite steel billet, or as called for in claim 7 the extrusion of a composite steel billet having an inner part formed of low carbon steel and an outer part formed of stainless steel."

3. PATENTABILITY—INVENTION.

"While the Sejournet et al. reference does not describe the extrusion of composite billets specifically, the invention is illustrated and described for use with steel billets formed from a single type of steel. The disclosure in the description is broadly directed to the extrusion of metals and alloys of high melting point by the use of an effective glass-like lubricant between the billet and the metal container and between the billet and the extrusion die. Inasmuch as the extrusion of composite billets, especially composite stainless and carbon steel billets, was well known, as shown by Phillips, the concept of applying the method of Sejournet et al. to the composite stainless carbon steel billet of Phillips appears to us to be an obvious step within the skill of the art at the time the present invention was made."

4. SAME—SAME—RESULT FROM OBVIOUS METHOD.

"The recitation in the appealed claims with respect to the relative thicknesses of the metals in the billet and in the extruded product is but the statement of a result of carrying out a method which we hold it would have been obvious to try in view of the teachings of prior art."

5. SAME—SAME—COMMERCIAL SUCCESS.

"* * * the rule is that commercial success is of no moment unless patentability is in doubt."

6. SAME—PARTICULAR SUBJECT MATTER—METHOD OF EXTRUDING A COMPOSITE STEEL BILLET.

The refusal of certain claims to a method of extruding a composite steel billet as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 375,706. AFFIRMED.

Joseph R. Robinson, Jr. (Spencer B. Michael, Morton Burden, Jr., Webb, Mackey & Burden, of counsel) for appellant.

Clarence W. Moore (Jack E. Armore, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania.

SMITH, J., delivered the opinion of the court.

Both the Examiner and the Board of Appeals denied claims to appellant on a method of extruding a composite steel billet. This appeal was taken as to all of the rejected claims but has been withdrawn except as to claims 6 and 7. In his brief appellant presented claim 6 as an "example" claim and rewrote it in the form of claim 1, upon which it was dependent, sub-

stituting the word "steel" of claim 6 for the word "metal" in claim 1, as follows:

6. A method of extrusion, which comprises placing in a container having a die located adjacent one end thereof through which the billet is extruded, a composite steel billet heated to extrusion temperature and composed transversely of at least two thicknesses of different steels, and extruding the billet so as to produce in the different cross sections of the extruded article substantially the same relative thicknesses of the different steels as in the corresponding cross sections of the original billet, by providing, prior to extrusion, a layer of glass-like lubricating material between the end of the billet and the die, said glass-like lubricating material melting at least partially but remaining viscous during extrusion.

Claim 7 is similar to claim 6 except that it specifies the inner part of the composite billet as being low carbon steel and the outer part as being stainless steel.

It will be seen that the method of extrusion covered by the claims specifically relates to the extrusion of a composite steel billet composed transversely of at least two thicknesses of different steels, each having different physical characteristics and properties. This billet is heated to extrusion temperatures and placed in the container of an extrusion press. An extrusion die is located adjacent one end of the container. A layer of glass-like lubricating material is placed between the billet and the inside walls of the container and between the end of the billet and the die. When the billet is extruded through the die, a product is said to be formed which has the different steels distributed in cross section in substantially the same relative thickness and proportion as they existed in a cross section of the composite starting billet. During extrusion, the glass-like lubricating material forms a viscous layer which acts as a lubricant between the billet and the die and between the billet and the inside walls of the container.

The problem is the art which appellant asserted was solved by his invention is summarized in his brief as follows:

Prior to appellant's invention, extrusion as a method for fabrication of composite steel workpieces composed transversely of at least two thicknesses of different steels was seldom used due to extremely low yield of useable product. The low yield resulted from differential rates of metal flow which in turn caused substantial differences in distribution and proportion of the component steels in cross section between the workpiece and the product and from inability to predict the resulting distribution and proportion of the component steels in the product relative to those of the workpiece.

While the Examiner relied upon twelve prior art references in finally rejecting the claims, the Board of Appeals affirmed the rejection upon the following three references:

Winston, 2,023,496, December 10, 1935.

Phillips, 2,138,528, November 29, 1938.

Sejournet et al., 2,538,917, January 23, 1951.

The Winston patent discloses a method for producing composite metal articles of magnesium and magnesium alloys. As shown in the patent, a magnesium alloy core is placed within a sheath of another magnesium alloy different in composition from the core metal and the core and sheath are extruded through the die without the use of any lubricant. The patent points out that in order to produce a composite extruded product having a continuous layer of sheath metal of uniform thickness overlaid upon the core metal, the core and sheath "are so shaped that as they are extruded through a common die opening, a continuous layer of uniform thickness will be produced upon the core metal in the extruded billet."

The Phillips patent relates to a method for manu-

facturing metal valves for internal combustion engines, which valves have a core of soft steel and a sheath of stainless steel. The valve shown in the drawings is a poppet valve which normally is less than 6 inches in length and its method of manufacture involves extruding a previously heated billet composed of a core of soft steel and a sheath of stainless steel through the die to form the valve without using any lubricant in the extrusion operation.

The Sejournet patent relates to a method of extruding from a container through a die located at one end thereof a heated single metal workpiece whose melting point is above 900° C. Prior to extrusion, a layer of glass-like lubricating material, which becomes viscous during the extrusion operation, is placed between the die and the heated workpiece and between the container and the heated workpiece to reduce friction between the workpiece and the die and between the container and the workpiece.

[1] The claims stand rejected under 35 U.S.C. 103 as being drawn to a method which was obvious from the disclosures of the prior art. The issue thus presented requires us to consider the claimed subject matter as a whole and to determine whether it would have been obvious at the time the invention was made to a person having ordinary skill in the art of steel extrusion.

Appellant asserts primarily that the prior art patents neither teach nor suggest the method of extruding composite steel billets as set forth in the appealed claims. With respect to the patent of Sejournet et al., appellant contends that there is no basis for the assumption by the Board that one skilled in the art would turn to that patent to improve the extrusion of a composite steel billet so as to produce an extruded product having the same proportions and distribution of the component steels as in the composite billet despite the different rates of flow of the component steels thereof through the die. Appellant also indicates that where each steel has a different resistance to deformation, it would be expected that the steel with a lower resistance to deformation would flow faster and extrude at a faster rate and that even if lubricated with a glass-like material, it would reasonably be expected that the peripheral stainless steel sheath would flow at a slower rate than the plain carbon steel core. With respect to Phillips, appellant asserts that he merely shows the extrusion of small composite steel billets without the use of a lubricant.

[2] At the oral argument, counsel for appellant admitted that at the time of making the invention in issue the extrusion of heated composite steel billets was old and that the use of a glass-like lubricant in extruding a single steel billet was old. Thus, the only feature of asserted novelty in the appealed claims lies in the use of a glass-like lubricant in extruding a composite steel billet, or as called for in claim 7 the extrusion of a composite steel billet having an inner part formed of low carbon steel and an outer part formed of stainless steel.

As pointed out by the Board of Appeals, appellant's method as claimed comprises but three steps (1) placing a heated composite billet in an extrusion press (2) providing a glass-like lubricant between the billet and the press and (3) extruding the billet.

All of the steps of the claimed method are taught

by the Sejournet et al. reference except for the specific use of a composite billet. Sejournet et al.'s use of a glass-like lubricant for reducing friction between the billet, the container and the extrusion die permits the peripheral metal of the billet to flow more readily, and reduces the temperatures and pressures required to extrude the billet. The Sejournet et al. reference points out that this reduces deformity of the die, permits better control of product dimensions and the production of a smoother extruded article with improved yield.

[3] While the Sejournet et al. reference does not describe the extrusion of composite billets specifically, the invention is illustrated and described for use with steel billets formed from a single type of steel. The disclosure in the description is broadly directed to the extrusion of metals and alloys of high melting point by the use of an effective glass-like lubricant between the billet and the metal container and between the billet and the extrusion die. Inasmuch as the extrusion of composite billets, especially composite stainless and carbon steel billets, was well known, as shown by Phillips, the concept of applying the method of Sejournet et al. to the composite stainless carbon steel billet of Phillips appears to us to be an obvious step within the skill of the art at the time the present invention was made.

[4] The recitation in the appealed claims with respect to the relative thicknesses of the metals in the billet and in the extruded product is but the statement of a result of carrying out a method which we hold it would have been obvious to try in view of the teachings of the prior art. *In re Kepler*, 30 CCPA 726, 132 F.2d 130, 56 USPQ 177; *In re Eisenhut*, 44 CCPA 974, 245 F.2d 481, 114 USPQ 287.

In a case such as the present, we have the duty referred to by Judge Learned Hand in *Kirsch Mfg. Co. v. Gould Mersereau Co., Inc.*, 6 F.2d 793 (C.C.A. 2d, 1925): "Of divining as best we can what the day to day capacity of the ordinary artisan will produce."

After reviewing the art cited here and after giving

careful consideration to all of appellant's arguments we must, as Judge Hand did in the *Kirsch* case, fall back upon such good sense as we may have, and come to the "point where the question must be resolved by a subjective opinion as to what seems like an easy step and what does not. We must try to correct our standard by such objective references as we can, but in the end the judgment will appear, and no doubt be, to a large extent personal, and in that sense arbitrary."

Our judgment is that the method here claimed is but an obvious adaptation of the Sejournet et al. process to the extrusion of the composite billets taught by Phillips.

Appellant, in seeking to avoid such a rejection of the claims, has emphasized what are asserted to be the new and unexpected results which have been achieved by the method called for in claims 6 and 7. This argument as stated in appellant's brief is as follows:

The outstanding, new and unexpected results of the invention in issue together with the new function performed by glass-like lubricating material is convincing evidence of invention especially where extrusion is rendered feasible as a method for fabrication of composite steel billets for the first time. Thus, Sejournet's invention is that last step which converts failure into success.

In support of this position, appellant cites: *Folberth Auto Specialty Co. v. Mayo-Skinner Mfg. Co.*, 292 Fed. 883, 890 (D.C., N.D. Ill., 1923); *Kelley et al. v. Coe*, 99 F.2d 435, 440 (C.A., D.C., 1938); *Oliver United Filters, Inc. v. Silver*, 206 F.2d 658, 664, 667 (C.A. 10th, 1953).

[5] While we recognize the validity of the principles enunciated in these authorities, the rule is that commercial success is of no moment unless patentability is in doubt. *In re Venner et al.*, 46 CCPA 754, 262 F.2d 91, 120 USPQ 192; *In re Jaeger et al.*, 44 CCPA 767, 241 F.2d 723, 112 USPQ 477. Since we do not here find the question of obviousness a matter of doubt we find it unnecessary to consider the alleged commercial success as evidence of patentability of the claimed invention.

[6] For the foregoing reasons, the decision of the Board of Appeals is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,595,230, J. C. Koci, Barrier means for a shuffleboard; 2,643,894, same, Miniature bowling alley; 2,829,898 (added by order of June 19, 1959), Movable support and latch for a simulated bowling pin; 2,879,864 (included by counterclaim Aug. 24, 1959), M. P. Wolverton, Ball retarding device, filed Jan. 21, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c94, *Chicago Dynamic Industries, Inc. (formerly Chicago Coin Machine Company) v. United Manufacturing Company*. Pursuant to written agreement, complaint and counterclaim dismissed with prejudice (notice Aug. 5, 1961).

2,614,188, Sefton and Zimsky, Magnetic core; 2,700,397, J. J. Zimsky, Method of making magnetic cores for transformers or the like; Re. 23,967 (included by amendment May 6, 1955), Sefton and Zimsky, Magnetic core, filed Mar. 25, 1955, D.C., E.D. Ark. (Little Rock), Doc. 2960, *McGraw Electric Company v. Central Transformer Corporation*. Decree dismissing complaint June 24, 1961.

2,699,643, W. I. Nissen, Gas lighter; 2,697,996, A. H. Aronson, Gas fueled cigar lighter; 2,882,940, C. Zellweger, Filling valves for liquefied gas lighters; Re. 24,163, same, Valves for filling pyrophoric lighters for liquefied gas, filed Aug. 4, 1961, D.C., S.D.N.Y., Doc. 61/2767, *Renson Corporation et al. v. Bend Street, Ltd.*

2,687,999. (See 2,620,643.)

2,639,128, J. A. Dow, Heat treating apparatus; 2,839,865, F. E. Harris, same, filed Aug. 16, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/549, *The Dow Furnace Company v. Industrial Furnace Corporation, et al.*

2,643,534. (See 2,565,238.)

2,700,397. (See 2,614,158.)

2,722,570, H. W. Vogl, Machine for manufacturing parcel carriers having looped handles; 2,800,553, same, Automatic device for the manufacture of parcel carriers, filed July 1, 1960, D.C.N.J. (Newark), Doc. 589/60, *Hugh W. Vogl et al. v. Hugo Beecher et al.* Consent judgment as to Lilly Beecher; injunction granted; counterclaim dismissed Aug. 15, 1961.

2,754,530, A. J. Toti, Fowl defeathering method; 2,805,443, same, Fowl defeathering apparatus, filed Oct. 21, 1960, C.C.A., 4th Cir., Doc. 8237, *Honolulu Oil Corporation et al. v. Shelby Poultry Company et al.* Decree of District Court reversed Aug. 4, 1961.

2,805,443. (See 2,754,530.)

2,829,898. (See 2,565,238.)

2,899,995. (See 2,620,133.)

2,899,553. (See 2,722,870.)

2,879,094. (See 2,565,238.)

2,882,940. (See 2,620,643.)

2,951,145, R. L. Anspach, Method and apparatus for fabricating honeycomb core; 2,975,363, K. E. Kreen et al., Method for producing honeycomb structures, filed Aug. 2, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 985/61-Y, *Teel Research and Engineering Corporation v. Hencor Corporation*.

2,975,363. (See 2,951,145.)

Re. 23,967. (See 2,614,158.)

Re. 24,163. (See 2,620,643.)

Re. 24,697 (of 2,755,900), A. W. Seyfried, Flexible coupling means for separable shafts, filed Aug. 2, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1294, *Scovill Manufacturing Company v. Goldblatt Bros. Inc.* Same, filed same, Doc. 61/1295, *Scovill Manufacturing Company v. Carson Pirie Scott & Company*.

REISSUES

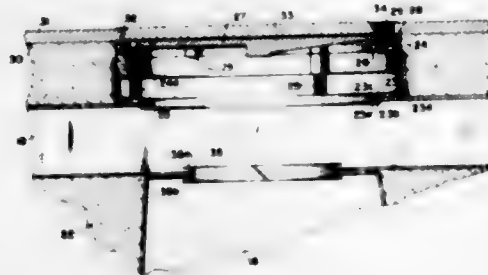
SEPTEMBER 26, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,042 ACCESS UNIT FOR USE IN UNDERFLOOR DUCT SYSTEMS

Glenn E. Blinn, Teaneck, N.J., and Charles Flachbarth, deceased, late of Narberth, Pa., by Charles T. Flachbarth, executor, Springfield, Pa.; said Glenn E. Blinn and Charles Flachbarth assigns to Walker Brothers, Conshohocken, Pa., a corporation of Pennsylvania. Original No. 2,824,578, dated Feb. 25, 1958, Ser. No. 484,784, Jan. 28, 1955. Application for reissue Feb. 3, 1959, Ser. No. 791,784.

7 Claims. (Cl. 138-92)



3. An access unit for closing an opening in a duct of an underfloor duct system, which comprises a sleeve adapted to be secured to the top of the duct to surround the opening and having a radial, inwardly-extending section and a top section extending upwardly from the outer portion of the radial section, a ring disposed telescopically within the top section of the sleeve, a plurality of adjustment screws mounted within the sleeve in both the radial

section of the sleeve and the ring and lying parallel to the axis of the sleeve, the screws being rotatable to cause the ring to move vertically upwardly and downwardly relative to the sleeve, whereby rotation of the screws will cause relative vertical adjustment of the ring relative to the sleeve, said adjustment screws having the same axial position when being rotated to move the ring upwardly as when they are rotated to move the ring downwardly, and a cover plate attached to the ring to close the upper end thereof.

4. The access unit of claim 3, in which the adjustment means are screws extending into threaded vertical openings through the ring and having slotted upper ends, the cover plate has openings in axial alignment with the adjustment screws, and the slotted upper ends of the adjustment screws are accessible through the openings in the cover plate.

25,043 ANTI-BIOFOULING COPPER-BASE ALLOY

Carl L. Bulow, Trumbull, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a corporation of Connecticut.

No Drawing. Original No. 2,887,375, dated May 19, 1959, Ser. No. 557,441, Jan. 5, 1956. Application for reissue Feb. 26, 1960, Ser. No. 11,397.

11 Claims. (Cl. 75-157.5)

11. An anti-biofouling alloy of copper, nickel, and mercury consisting of mercury in the approximate range of from .001 to 1%, nickel up to a maximum percentage of approximately 29%, with the balance being copper.

PLANT PATENTS

GRANTED SEPTEMBER 26, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,094 CLEMATIS PLANT

Percival-Thomas James, deceased, late of Kelowna, British Columbia, Canada, by Percival George James, administrator, Kelowna, British Columbia, Canada, assignor to The Wayside Gardens Company, Mentor, Ohio.

Filed Apr. 13, 1960, Ser. No. 22,070.

1 Claim. (Cl. 47-60)

A new and distinct variety of Clematis plant substantially as herein shown and described.

750

PATENTS

GRANTED SEPTEMBER 26, 1961

GENERAL AND MECHANICAL

3,001,197 SHIELD FOR FASTENER DRIVING TOOL

Elmer F. Pfaff, Mantua, Ohio, assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia.

Filed June 11, 1956, Ser. No. 590,602.

12 Claims. (Cl. 1-44.5)



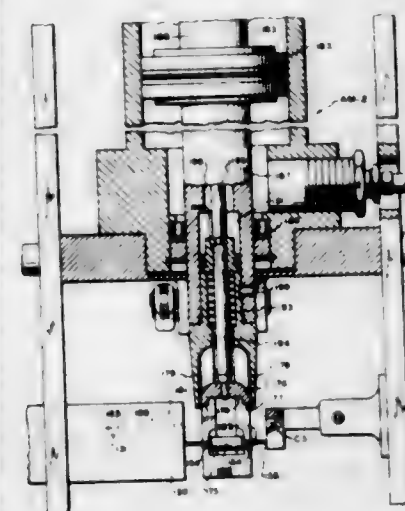
1. A shield for the fastener discharge end of a power actuated fastener driving tool, including a box-like member surrounding the discharge end of the tool and having side walls forwardly extending with edges adapted to engage a workpiece, said side walls forming a rectangle in a plane extending transverse to the direction of fastener drive, said workpiece engagement edges of all side walls having grooves for accommodating a projection on the workpiece at either of two 90 degree positions relative to said shield with the projection located just inside of either of two adjacent side walls, said grooves in said adjacent side walls being located at the corner formed by said adjacent side walls and extending continuously as a single groove into both said adjacent side walls.

3,001,198 WAFER FEED AND INSERTION

Bernd Vossen, Arlington, Va., assignor to Melpar, Inc., Alexandria, Va., a corporation of New York.

Filed Apr. 10, 1956, Ser. No. 577,328.

6 Claims. (Cl. 1-323)



6. A device for feeding wafers in controlled succession to a stapling machine and there stapling electrical components to said wafers, comprising an endless conveyor, means for actuating said conveyor in discrete steps, said conveyor having an endless series of discrete wafer retaining devices distributed at equal spacings along the

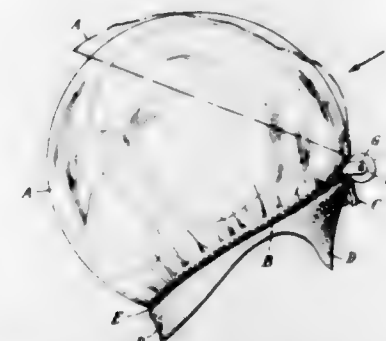
length of said conveyor, each of said devices including two wafer clamping jaws, means for separating said jaws at a wafer loading station in response to travel of said conveyor, means for gravity feeding one wafer to each wafer retaining device at said loading station while said clamping jaws are separated, means responsive to travel of said wafer retaining devices beyond said loading station for closing said clamping jaws into clamping relation to said wafers, and means for synchronizing operation of said means for supplying wafers with said means for actuating said conveyor in discrete steps, wherein is further provided a device for stapling electrical components to said wafers, said device including a station, means for transferring said wafers one at a time from said conveyor to said stapling station, means for actuating said conveyor in steps so as to bring successive ones of said wafers opposite said stapling station in sequence, said conveyor being stationary in the intervals between said discrete steps, means for transferring said wafers from said stapling station to said conveyor after completion of stapling at said stapling station, and means for synchronizing operation of said means for supplying wafers to said conveyor with said means for actuating said conveyor in each discrete step and with said means for transferring said wafers from said stapling station to said conveyor so that wafer transfer and wafer supply occur only during said intervals between said discrete steps.

3,001,199 HEAD-PIECES FOR PROTECTIVE CLOTHING

Kenneth G. Williams, Heath End, Farnham, and Leonard Fisher, Purley, England, assignors to Vickers Limited, Westminster, S.W. 1, England.

Filed Sept. 5, 1958, Ser. No. 759,363.

8 Claims. (Cl. 2-6)



1. In a protective garment having an open neck the improvement comprising, a threaded member rotatably supported on the garment adjacent the open neck, a pair of threaded stiffnuts on said threaded member, said nuts being threaded to rotate with said threaded member until their rotation is restricted and being thereafter movable in opposite directions therealong, a flexible hoop having ends connected to respective stiffnuts, a casing of flexible transparent material attached to said hoop along a major portion of the periphery of said casing and adapted to completely enclose the head of the wearer, and means to rotate said threaded member to rotate said stiffnuts and to bring said hoop into alignment with the open neck of said garment, said hoop being thereafter constrained whereby the stiffnuts move closer together to tighten said hoop.

751

3,001,200
EYE PROTECTIVE SPECTACLE TYPE GOGGLES
 Paul Amundsen, Wonder Lake, and John N. Lantand, Chicago, Ill., assignors to Fendall Company, Chicago, Ill., a corporation of Illinois
 Filed Oct. 17, 1958, Ser. No. 767,879
 3 Claims. (Cl. 2-14)



3. An eye protective spectacle type goggle comprising a frame front including a pair of lens frames and a nose bridge member extending between and interconnecting said lens frames, each of said lens frames having a front surface and a rear surface and including an outer side wall and an inner side wall and each of said inner side walls having a nose bridge pad on the rear surface thereof, said nose bridge pads being disposed in substantial horizontal alignment with said nose bridge member, each of said lens frames including a temple-mounting portion, a pair of temples each hingedly mounted on one of said temple-mounting portions, and means including a bendable substantially flat metallic element cooperating with each of said lens frames and temples extending forwardly of said hinged mounting and rearwardly from adjacent the front surface of the said lens frame when in use and bendable toward and away from the outer side wall of said lens frames to position and maintain each of said temples in a pre-selected position relative to said frame front and relative to each other.

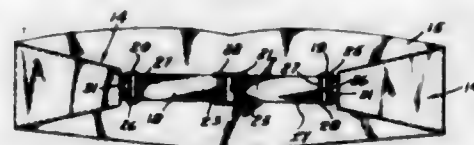
3,001,201
GARMENT SHIELD
 Viola C. Hauser, Evanston, Ill.
 (1507 Edgewood Lane, Winnetka, Ill.)
 Filed June 1, 1959, Ser. No. 817,254
 4 Claims. (Cl. 2-56)



2. A disposable garment shield adapted to absorb body secretions comprising an inner layer of black, heat, and fluid absorbent material conforming to and for facing an area of the body which emits secretions, and an outer layer of metallic fluid-proof and heat radiating material conforming to the shape of and secured with respect to said inner layer.

3,001,202
VEST OF THE CUMMERBUND TYPE AND ADJUSTING MEANS THEREFOR
 Ricardo A. Serrano, 252 S. Robertson Blvd., Beverly Hills, Calif.
 Filed Nov. 9, 1959, Ser. No. 851,792
 1 Claim. (Cl. 2-102)
 In a vest of the cummerbund type having an elongated wide main body of non-elastic material and of sufficient

length to embrace the front and either side of the waist of the wearer; that improvement in attached adjustable means for securing the cummerbund detachably to the wearer which comprises similar loops secured to each end of said wide main body, a toggle type over-center adjusting buckle held permanently assembled to each end of said main body by said loops, a pair of elongated narrow straps having one end of each permanently assembled to one of a pair of mating fast-action coupling members quickly en-



gageable and disengageable with respect to one another, the other ends of said pair of straps extending in opposite directions from one another and being normally interlocked in a desired adjusted position within an associated one of said toggle type adjusting buckles with the free remote ends of said straps positioned against the interior surface of the main body of said cummerbund, and keeper means carried by the interior of said main body at either end thereof embracing said strap ends to hold the same concealed when the cummerbund is fitted to a wearer.

3,001,203
WEARING APPAREL
 Norah Hassler, 6813 Riverdale Road, Riverdale, Md.
 Filed May 20, 1959, Ser. No. 814,439
 4 Claims. (Cl. 2-239)



1. In combination with a pair of matching hose, each member of said pair of hose being provided with a double ply welt portion and an opening in one of said plies of said welt portion, and a pair of matching markers respectively adapted to be inserted in said welt portions and retained between said plies while being otherwise unattached to said hose, each member of said pair of matching markers consisting essentially of a substantially flat main portion formed of soft, yielding material, each member of said pair of matching markers being of such size that it extends over only a minor part of the circumference of the welt portion when inserted therein, each member of said pair of matching markers bearing distinctive matching insignia.

3,001,204
DEMI-BELT FOR NETHER GARMENTS
 Harry Harrison, 60 Yale Ave., Irvington 11, N.J.
 Filed Sept. 28, 1959, Ser. No. 842,930
 1 Claim. (Cl. 2-309)

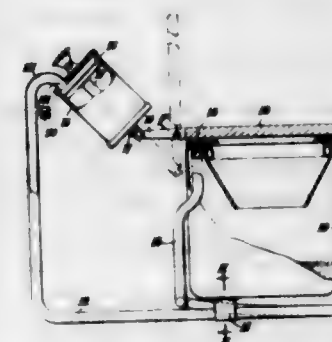
A demi-belt for nether garments comprising: a pair of cooperative anchoring clips of substantially inverted U-shape having opposed inner and outer jaws adapted to embrace and be supported by the waist portion of a nether garment at selected girthwise spaced positions, the outer jaw of each anchoring clip having a part cut away to provide a large aperture, and a flat loop-forming member

pivotally mounted on each outer jaw to swing inwardly toward and outwardly away from the aperture thereof on an axis arranged at the opposite side of the aperture with respect to the cooperative anchoring clip, said loop-forming member having a loop at the side opposite to the pivotal axis; a connecting band extending girthwise between said anchoring clips to determine the degree of spacing thereof and having end loops threaded through



the respective loops of the said anchoring clips and arranged in a manner to overlie the outer jaws of said clips, whereby tightening of the connecting band will press each loop-forming member inwardly toward the aperture in the outer jaw of the corresponding anchoring clip; and teeth-like gripping means carried by the loop-forming member of each anchoring clip and projecting inwardly therefrom for penetration of the aperture in the corresponding outer jaw into positive gripping engagement with the clip-embraced waist portion of a nether garment.

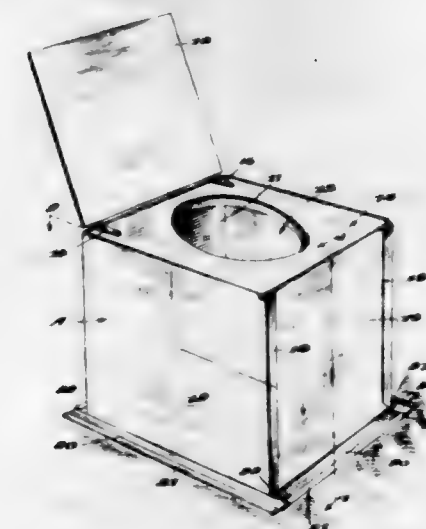
3,001,205
FLUSHING APPARATUS FOR A SELF-CONTAINED CLOSET
 William Donald Hicks, Christchurch, England, assignor to Vickers-Armstrongs (Aircraft) Limited, London, England
 Filed Nov. 26, 1958, Ser. No. 776,586
 Claims priority, application Great Britain Dec. 2, 1957
 1 Claim. (Cl. 4-90)



In a flushing device, including a closet pan having a waste deflecting upper rim portion and a lower reservoir portion, a flushing gallery extending around the top of the waste deflecting upper rim portion and including a downwardly extending annular portion to direct liquid over said waste deflecting portion, duct means communicating with said gallery and said waste deflecting upper rim portion and extending outwardly of the pan and downwardly past the bottom of said pan, a one-way valve positioned in the bottom wall of said pan and communicating with the lower reservoir portion and operable for permitting flow only from said pan, pipe reservoir means extending from and communicating with the lower end of said duct means and travelling an extended path for providing a separate reservoir below said pan and communicating with said one-way valve means, said pipe reservoir including a portion extending therefrom and laterally with respect to said pan and upwardly with respect to said pan to extend adjacent the top portion thereof, an air pump supported adjacent the top of said pan and including a reciprocating piston and an air outlet port on one side thereof, the upwardly extending portion of said pipe reservoir communicating with the air outlet port of said air

pump, an air intake port in the upper end of said upwardly extending portion of said pipe reservoir means and including one-way valve means for permitting inflow of air, and a lid member for said pan pivotally mounted at one end and connected at said one end to said reciprocating piston of said air pump on the other side thereof.

3,001,206
OUTDOOR TOILET SEAT UNIT
 Robert W. Strehlke, Bond Falls Road, P.O. Box 17, Paulding, Mich.
 Filed Oct. 24, 1960, Ser. No. 64,321
 4 Claims. (Cl. 4-116)



1. A toilet seat enclosure comprising a pair of opposing sheet metal panels, each having its vertical edges folded inwardly at substantially 90° to the panel, and an end portion thereof folded beneath the inwardly folded portion to provide a runway between said folds, and a second pair of opposing sheet metal panels each having its vertical edges bent outwardly and then inwardly for providing a runner adapted to freely slide in the runway provided by the double folds of the associated vertical edges of the aforementioned opposing panels, whereby the pairs of panels may be slidably and detachably secured together for providing a knock-down toilet seat enclosure.

3,001,207
WADING POOL
 Walter P. Nail, 54 Oser Ave., Toronto 9, Ontario, Canada
 Filed July 17, 1957, Ser. No. 672,388
 3 Claims. (Cl. 4-172)



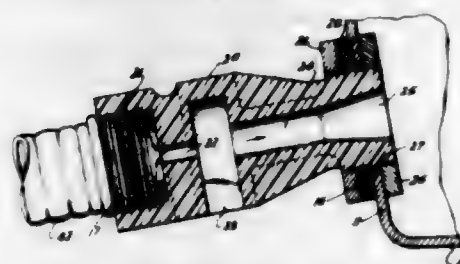
1. In the manufacture of a wading pool from heat sealable sheet plastic material in the form of a thin walled tube, the step of severing a band of plastic material therefrom to define a straight edge perpendicular to the tube axis at one edge and a plurality of appended bottom panel sections of like outline and bounded by straight edges along the opposite edge perpendicular to the tube axis, the step of folding over the band of plastic material upon itself to present the straight edge towards the opposite edge and heat sealing the straight edge portion to the band completely therearound to form a tubular air tight chamber, and the step of folding the appended sections inwardly of the chamber to disposed their next adjacent straight edges in overlapped relation and the step of heat

sealing such overlapped straight edges together to provide a substantially planar bottom wall with said tubular wall to define a leak-proof receptacle.

3,001,208

HYDRO-THERAPY EQUIPMENT

Samuel Rosoff, 1548 Westchester Ave., New York, N.Y.
Filed Oct. 29, 1957, Ser. No. 693,194
2 Claims. (Cl. 4-182)



1. A portable hydro-therapy unit comprising a tank having a floor and a wall rising therefrom, said tank having a water-flow inlet comprising an aerator affixed in a corresponding aperture in the side wall of the tank near the floor, extending at its inner end but slightly into the tank and protruding outwardly from the tank and discharging substantially horizontally into the tank, said aerator being an integral one-piece structure of type having facilities at its inlet for mounting the outlet end of a hose, the inlet of which is adapted to be connected to the faucet of the bath tub in which the tank is used, said aerator being of the type having a water inlet bore and a water discharge bore, the discharge bore being in the order of twice the diameter of the inlet bore, and an air inlet port larger than the water inlet bore and communicating with the discharge bore beyond the water inlet bore, the lateral air inlet port being in the order of the cross-sectional area of the water discharge bore, whereby the device in use will propel a forceful generally horizontal, thoroughly aerated stream of water to impinge against the wall of the tank at point opposed to the aerator with resultant reflection and direction of the aerated stream against and about the feet, hands, legs or arms of the user, as the case may be, rested upon the bottom of the tank.

3,001,209

SINK CLAMPS

Samuel Hammer, 8 E. 36th St., New York, N.Y.
Filed Feb. 2, 1959, Ser. No. 790,484
3 Claims. (Cl. 4-187)



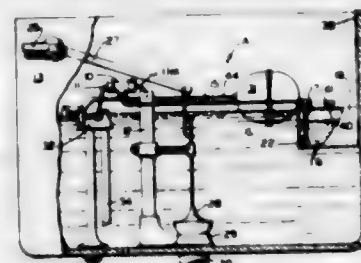
1. A combination of a countertop having an opening and a sink having a flange disposed opposite to but spaced from the margin of said opening, a trim frame for said opening, said trim frame having a cross-sectional sickle shape providing upper and lower reaches respectively overlying the proximate edges of said countertop and sink flange respectively, said lower reach having a longitudinal aperture, a detent longitudinally of said aperture, and a clamp comprising a cleat and a stud, said cleat engaging said countertop and sink flange in opposition to said reaches, and said stud protruding into said aperture and in part overlying and engaging said lower reach

adjacent to an end of said aperture, and another part of said stud having a declivity engaged by said detent for thereby retaining the blade end of said stud assembled with said trim frame.

3,001,210

DEODORANT SUPPLY MECHANISM FOR TOILETS AND URINALS

Charles C. Diehl, 904 Ruth St., Belmont, Calif.
Filed May 12, 1958, Ser. No. 734,571
2 Claims. (Cl. 4-225)

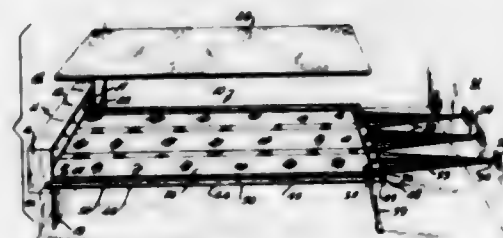


1. For combination with a flush tank having a water inlet line, a float valve in said inlet line for controlling the depth of water in the tank, an overflow standpipe, and a by-pass line from the float valve into the standpipe for replenishing water in a toilet bowl after a flushing operation; an injector adapted to be mounted in the by-pass line from the float valve into the overflow standpipe, a container for containing a supply of deodorant liquid at atmospheric pressure and adapted to be mounted within such flush tank below the level of the injector, a suction line for connecting the suction side of the injector to the interior of the container and extending to a low level in the container, whereby after each flushing operation of the tank, any deodorant liquid in the suction line drains by gravity back into the container, and means for limiting the flow rate of deodorant liquid through the suction line under the action of the injector when the float valve is open, whereby the length of time required for deodorant liquid to be drawn from the container to the injector after an opening of the float valve corresponds to the flushing time of the tank, so that liquid from the container will be supplied only to water flowing from the by-pass line into the standpipe after the completion of a flushing operation.

3,001,211

ROLL-UP BED

Edgar J. Goldenthal, 225 W. 86th St., New York, N.Y.
Filed Aug. 22, 1960, Ser. No. 51,178
1 Claim. (Cl. 5-202)



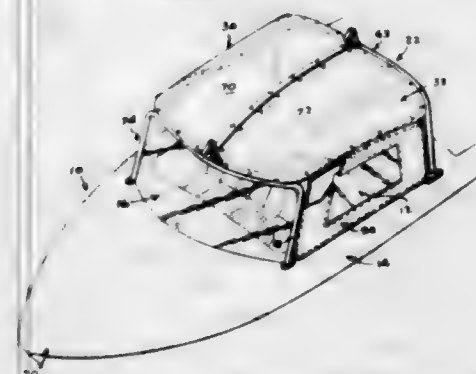
A roll-up bed comprising, in combination, a multi-compartment cabinet structure, a spring-biased roller mounted in one of said compartments, a fabric support member having one end attached to said roller and adapted to be rolled onto the same when the bed is in inoperative position, the free end of said fabric support member being folded upon itself to form a hem having an opening therein, a reinforcing bar in said opening, a plurality of cords fastened to said reinforcing bar and loops carried by said cords whereby said cords may be attached to a wall, means for increasing the stability of said fabric

support member including removably mounted telescoping slotted side bars positioned parallel and adjacent to said fabric support member on both sides thereof, said slotted side bars being secured to projections affixed to said cabinet and reinforcing bar, additional removably mounted means for supporting the free end of said fabric support member when the bed is in operative position, said means including folding legs and means on said fabric support member and said legs for holding said legs in operative position, a mattress adapted to be placed on said fabric support member, said mattress adapted to be rolled up and contained in the other of said compartments when not in use, said telescoping bars and said folding legs also being contained in said compartments when the bed is not in use.

3,001,212

BOAT TOPS

Herman E. Towne, 218 Main St., Nysa, Ore.
Filed May 29, 1959, Ser. No. 816,877
4 Claims. (Cl. 9-1)



3. In combination, an open-cockpit boat having a forward deck and side portions extending rearwardly from said forward deck, a windshield frame fixed to and upstanding from said forward deck, an inverted U-shaped rear support fixed to and upstanding from said side portions behind the cockpit, said rear support and said windshield frame having horizontal transverse support bars, a top comprising a fixed frame extending longitudinally between and fixed to said transverse bars and a movable frame extending longitudinally between said transverse bars at one side of said fixed frame, said fixed frame and said movable frame having forward and rear transverse bars positioned along said transverse support bars, fixed upstanding hinge brackets on said front and rear transverse bars at their inner ends, said brackets having overlapped upper ends, pivots secured through the overlapped upper ends of the brackets, a rest fixed on the support bar of the rear support upon which the rear transverse bar of the movable section is adapted to rest in a closed position of the movable top section, and latch means on the front transverse bar of the movable section engageable with the support bar of the windshield frame.

3,001,213

LAMINATED BONDING MEMBER

Howard J. Stark, 920 N. Lebanon St., Arlington, Va., and Charles E. Miller, R.F.D. 1, Rockville, Md.
Filed Apr. 18, 1957, Ser. No. 653,715
1 Claim. (Cl. 9-11)

(Granted under Title 35, U.S. Code (1952), sec. 266)



In an inflatable boat comprising a body of fabric coated with synthetic rubber of the type known as polymerized

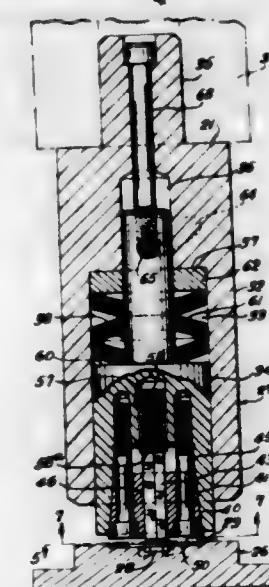
2-chlorobutadiene 1,3 and a canopy member composed of fabric coated with polyvinyl chloride-polyvinyl acetate resin material, the improvement comprising a bonding structure between said body and said canopy member, said canopy member being bonded to said body on three of its four edges, said bonding structure comprising a sheet of woven fabric having bonded to one surface thereof a layer of polyvinyl chloride-polyvinyl acetate resin material and having bonded to its opposite face a layer of synthetic rubber of the type known as polymerized 2-chlorobutadiene 1,3; said resin material on being bonded to the layer of resin on said bonding structure and said synthetic rubber on said body being bonded to the layer of synthetic rubber on said bonding structure.

3,001,214

METHOD AND APPARATUS FOR FORMING WELDING PROJECTIONS ON A NUT BLANK

Edward A. Anderson, Cleveland Heights, and Cecil W. Walton, Lakewood, Ohio, assignors to The Lamson & Sessions Company, Cleveland, Ohio, a corporation of Ohio

Filed Dec. 19, 1958, Ser. No. 781,702
4 Claims. (Cl. 10-72)



1. In die apparatus for use in a punch press for forming welding lug projections on a nut; a work support member adapted to hold a nut body having a flat end face and a tap opening extending into the body from said face substantially centrally of the body; a punch unit movable toward and away from said support member along the axis of said opening and comprising a holder member and a punch member having limited axial and rotary movements relative to said holder member; gouge-forming elements on said punch member for engagement with said face and disposed in an annular group around said axis; and means for causing concomitant closing and rotational movement of said punch member relative to said support member for rotatively penetrating said elements into said body including co-operating cam and cam follower elements connected with said holder member and punch member and effective to produce the limited rotary relative movement of said punch member in response to the limited relative axial movement between said holder member and punch member.

3,001,215

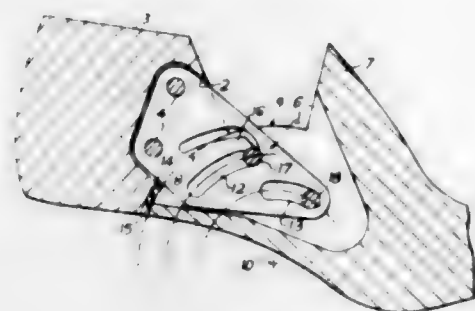
LASTS

Frank H. Holley, Somerset, England, assignor, by mesne assignments, to Strode Components Limited, Somerset, England, a company of Great Britain

Filed May 4, 1959, Ser. No. 810,757
Claims priority, application Great Britain May 21, 1958
6 Claims. (Cl. 12-136)

1. A two-part hinged last comprising a heel part having a longitudinally curved front end of circular arc form

and a recess extending in from said front end; a forepart having an arch portion and a sole portion and having a curved rear end complementary to said curved front end of said heel part and a recess extending in from said rear end, said curved front and rear ends remaining substantially in sliding contact throughout their whole lengths, at least two cross pins bridging said forepart recess; and a link plate having one end secured in said heel part re-



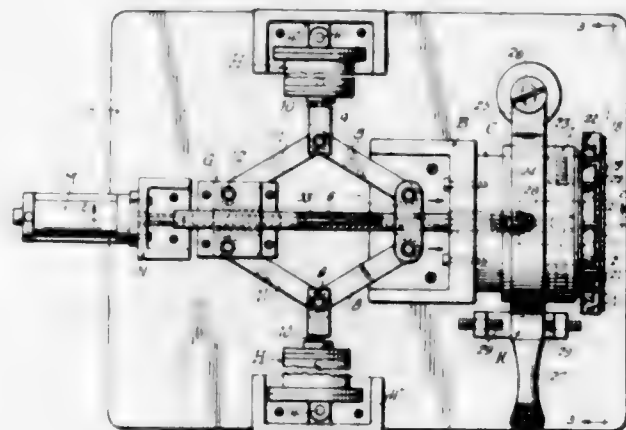
cess and having its other end movable within said forepart recess, said link plate having at least two slots therein each embracing a forepart cross pin, said pin and slot connection guiding said heel part as it pivots in relation to said forepart, the centre of pivoting of said heel part and the centre of curvature of said circular arc heel front end and forepart rear end being substantially coincident and located outside and beneath the arch portion of the forepart of the fast.

3,001,216
SPACE BAND CLEANING MACHINE
Maurice H. Hartzell, 814 W. 11th St., Chester, Pa.
Filed May 25, 1959, Ser. No. 815,500
17 Claims. (Cl. 15—77)



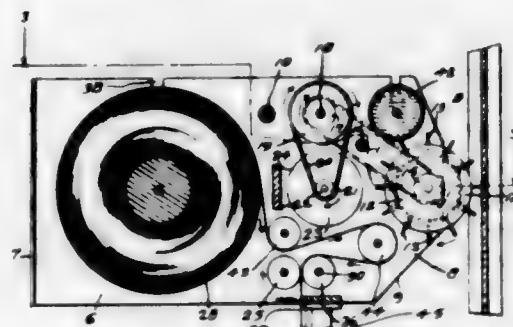
1. A machine for cleaning space bands having a usual elongated slotted body portion which tapers from a thick rear end to a thin forward end and a sleeve longitudinally slidably supported on the body, the sleeve being provided with ears at its forward end and with a rear edge extending across the body slot comprising, in combination, magazine means for supporting a stack of bands with their sleeves in a forward position, endless chain means extending in the direction of the length of the bands, and a band carriage connected to the chain means, the carriage having means for entering the slot of the lowermost band in the stack and engageable with the rear edge of the sleeve thereof to move the lowermost band out of the magazine during movement of the chain means, whereby the chain means and carriage operate in one continuous movement to engage and feed the lowermost band in the stack.

3,001,217
COMMUTATOR SLOT CLEANER
William Tooker, Mountainside, N.J., assignor to Fransam Realty Corporation, Newark, N.J., a corporation of New Jersey
Filed Sept. 14, 1959, Ser. No. 839,798
12 Claims. (Cl. 15—93)



1. Apparatus for cleaning the slots between the conductor segments of a cylindrical commutator, comprising a main support, a blade for each slot having a point to enter the slot, means mounted on said support including a circular blade holder for holding said commutator and all of said blades with the point of each blade in a common plane with one of said slots, and means for causing coaxial relative movement longitudinally of the commutator, of said commutator and said blade holder with all of said blades with the point of each blade in one of said slots providing for the ejection from each slot of all material accumulated therein.

3,001,218
MOTOR DRIVEN DEVICE FOR CLEANING WINDOWS
Clyde H. Tarney, 205 E. Market St., San Antonio, Tex.
Filed Jan. 23, 1961, Ser. No. 84,262
3 Claims. (Cl. 15—103)



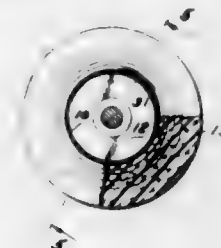
1. A window cleaning apparatus comprising a frame embodying side walls, a rear wall and an open front, a motor mounted between the side walls, a rotary roller mounted within said frame adjacent to said open front, flexible wiping blades disposed longitudinally of said rotary roller operating through said open front in wiping contact with a window, against which said frame is held, a hollow porous roller in which liquid is contained saturating said hollow roller mounted between said side walls for wiping contact by said blades supplying moisture to said blades, a roller on which a roll of cleaning paper is mounted within said frame for wiping contact by said blades maintaining said blades clean.

3,001,219
HANDLE MEANS FOR WINDOW CLEANING DEVICE
Herman J. Miller, Kenosha, Wis., assignor to Worldsbest Industries, Inc., Cudahy, Wis., a corporation of Wisconsin
Filed Feb. 14, 1958, Ser. No. 715,241
6 Claims. (Cl. 15—121)



3. In an elongated window cleaner having a squeeze at one end thereof and a sponge at the other end thereof, the combination of: an elongated handle formed of a round wire bent back upon itself to present two adjacent parts in side by side relation that are joined to one another at longitudinally spaced points to present an indentation between the adjacent parts, said wire having a loop formed therein where it is bent back upon itself and having its ends spread apart to extend normally of said handle; a squeeze support member rigidly mounted upon said spread apart ends of said wire handle and supporting said squeeze; a sponge support mounting said sponge and including a pivot pin connected to the loop of said handle to swivel with respect thereto; and a plurality of angularly spaced detents on said sponge support and projecting toward the indentation that are selectively engageable with said indentation of said handle to releasably hold said sponge support member in any of a plurality of angular positions relative to said handle.

3,001,220
PAINT ROLLER AND SLEEVE
Frederick N. Canning, 1121 Paritan Drive, and Walter L. Canning, 550 N. Glenhurst Drive, both of Birmingham, Mich.
Filed Aug. 11, 1958, Ser. No. 754,195
8 Claims. (Cl. 15—244)



1. A paint applicator sleeve for a paint roller wheel comprising a support and clamping tube having an inside face and an outside face; said inside face being adapted to slide forceably over a paint roller wheel in gripping relationship thereto; a cylindrical resin foam paint applicator pad disposed over said tube outside face and bonded thereto; said tube internal diameter when unmounted being less than the paint roller wheel outside diameter to be received therein; said tube being split longitudinally for circumferentially tensionally expanding said tube to receive a paint roller wheel therein in forced engagement therewith to hold said sleeve on a paint roller wheel in clamping relationship, said cylin-

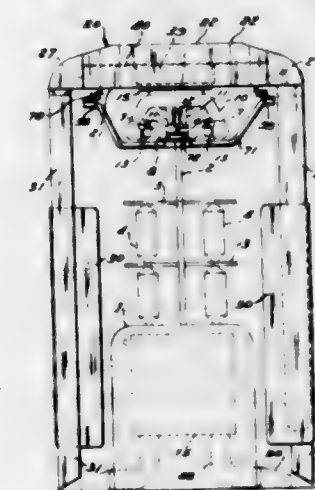
dricl pad circumferentially resiliently tensionally stretching with said tube particularly in the area of said pad adjacent said tube when said tube is forceably circumferentially expanded; said pad stretching being greatest adjacent said tube and diminishing radially outwardly therefrom to a point approximately mid-way of the radial extent of said pad; said pad resiliently stretching producing a tension in said pad to augment the clamping force of said tube on a paint roller wheel; said pad in stretching causing said pad to become more dense adjacent said tube with the density diminishing radially outwardly with the diminishing of the tensional stretching; said dense area of said pad adjacent said tube lending support to the unstressed radially outer area of said pad especially under paint rolling stresses so as to prevent lapping of the soft foam and to expel the paint radially outwardly toward a surface being painted; said tube being overlapped in the area of its longitudinal split.

3,001,221
WINDSHIELD WIPER BLADE AND METHOD FOR MAKING SAME
Mieczyslaw Wojciechowski, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 10, 1956, Ser. No. 627,480
8 Claims. (Cl. 15—250.36)



1. A windshield wiper blade comprising an elongated, flexible rubber body and a coating on said rubber body of a thin hard layer consisting of chlorinated rubber containing at least 40% by weight chlorine to provide said blade with increased surface hardness and abrasion resistance, said layer not exceeding .002 inch in thickness and thereby being freely flexible with said rubber body.

3,001,222
VACUUM CLEANER FOR TEXTILE MACHINES
David S. Preston, Lakewood, Ohio, assignor to The American MonoRail Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 25, 1959, Ser. No. 842,420
5 Claims. (Cl. 15—312)



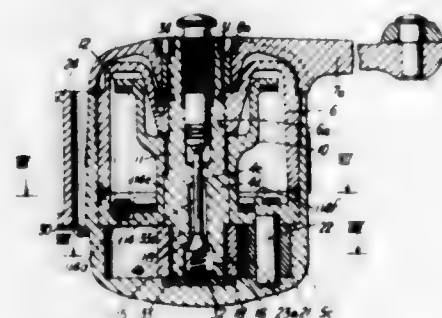
5. Apparatus for handling lint which comprises a carriage adapted to travel on a trackway over a row of aligned textile machines, a casing mounted on said carriage and including a plurality of interior walls forming in the casing a fan chamber, a vacuum chamber communicating with said fan chamber and outlet and inlet passages connecting the fan chamber and vacuum cham-

ber, respectively, with separate openings in one end of said casing, outlet and inlet tubes communicating with said outlet and inlet passages and depending from said casing, means in the fan chamber for creating a flow of air under high pressure from said fan chamber through said outlet passage and tube and for creating a vacuum-induced flow of air through said inlet tube and passage and into the vacuum chamber, a screen extending across said inlet passage to separate lint from a lint carrying stream of air flowing in said passage, means to admit said high pressure stream of air into the inlet passage and inlet tube to discharge lint from said inlet passage through said inlet tube, fixed means adjacent to said trackway to actuate said high pressure air stream admitting means, and means to store lint discharged from the lower end of said inlet tube including a nozzle disposed adjacent to the lower end of the inlet tube, a storage chamber communicating with said nozzle and means to create a vacuum induced flow of air through said nozzle and into said chamber.

3,001,223

DOOR-OPERATING APPLIANCE

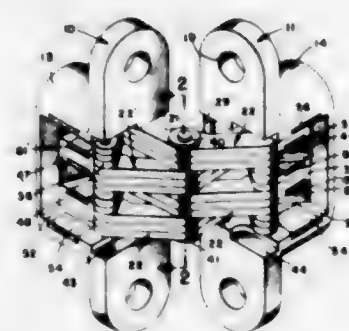
John Rollett, Copmanthorpe, York, England, assignor to Armstrong Patents Co. Limited, Beverley, England, a British company
Filed Sept. 16, 1957, Ser. No. 684,276
Claims priority, application Great Britain Oct. 31, 1956
3 Claims. (Cl. 16—52)



1. In a spring door closer, a casing, a stationary diaphragm fitted within said casing and dividing said casing into a spring chamber and a vane chamber, said diaphragm being provided with a central aperture, an upstanding annular flange surrounding said central aperture, a shaft rotatably mounted in said casing and passing through said central aperture with said flange forming a bearing for said shaft, an upstanding annular projection on said diaphragm concentrically surrounding said shaft and co-operating therewith to define a recess in said diaphragm, a ring seated within said recess, said ring having a radially projecting tongue, said annular projection having a gap therein and said tongue projecting into said gap, a helical torsion spring surrounding and extending along said shaft and disposed within said spring chamber, one end of said spring being connected to the spring chamber end of said shaft and the other end of said spring being anchored to said projecting tongue, a vane fitted to said shaft within said vane chamber, a stop arranged in said chamber, said stop constituting a partition and co-operating with said vane to divide said vane chamber into two compartments, said shaft being formed with a passage to provide communication between opposite sides of the vane, a valve member arranged within said passage, resilient means urging said valve member in one direction along said passage to offer a predetermined resistance to flow of fluid through the passage in said one direction and to permit relatively free flow of fluid through the passage in the opposite direction, and valve means in said diaphragm to permit the leakage of fluid therethrough for avoiding the formation of a partial vacuum to the rear of the vane when said vane is rotated away from said valve means.

3,001,224
CONCEALED HINGE

Charles J. Soos, 805 N. Alta Drive, Beverly Hills, Calif.
Filed May 16, 1960, Ser. No. 29,372
3 Claims. (Cl. 16—164)



1. In a concealed hinge of the type comprising butt plates having compartments formed therein, means comprising elbow levers, a hinge pin, said elbow levers being pivotally mounted on the said hinge pin, means pivotally mounting one end of each of the elbow levers within the respective butt plates and means comprising spaced apart links pivotally mounted at one end within the respective butt plates, the other ends of said spaced links having moving pivots pivotally connected to the other ends of said elbow levers, the improvement comprising: means rigid with said butt plates and defining abutments within said compartments and extending between adjacent spaced links, extending substantially to said moving pivots and having bearing support surfaces slidably engaging said spaced links, along the major part of their lengths, the edges of said abutments adjacent said moving pivots being curved to lie adjacent and parallel to the path of movement of said moving pivots.

3,001,225

DUAL PIVOT FREEZER HINGE

Herbert D. Squire, Galesburg, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 10, 1958, Ser. No. 708,089
4 Claims. (Cl. 16—166)



1. A hinge construction for a cabinet having a back wall and a top opening and a lid for closing the top opening comprising a first support secured to the back wall and formed with a pair of pivot pin guideways therein, a second support secured to the lid and having a pair of pivot pins carried thereby and disposed in said

guideways, spring means connected between the cabinet and said second support, said guideways being arcuate in form, each of said guideways being generated by a radius having its fixed point at the corresponding end of the other guideway.

3,001,226
FREEZER CHEST HINGE

Herbert D. Squire, Galesburg, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 10, 1958, Ser. No. 708,280
3 Claims. (Cl. 16—190)

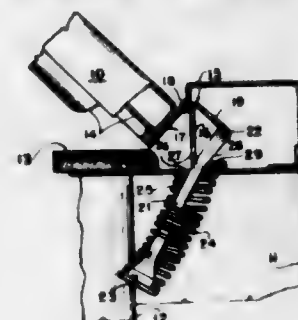


1. A counterbalance structure for a lid that is rotatable about horizontal pivot means at one edge thereof between a substantially horizontal closed position wherein the weight of said lid effects a seal with support means therebeneath and a substantially non-horizontal open position, said structure comprising lever means having a fulcrum end spaced from said pivot means and rotatable thereabout with said lid and a free end, first and second stop means mounted for rotation with said lid for limiting the angular movement of said lever means about said fulcrum end between corresponding first and second positions, and tensioning means mounted to act between external reaction means and said free end for alternatively biasing said lever means against said first and second stop means and for applying moment to said lid through said stop means counter to the moment produced by the weight of said lid, said lever means being biased into said first position when said lid is in said closed position, the line of action of said tensioning means passing closer to said pivot means in said first position than in said second position whereby said counter moment is lessened when said lid is in said closed position.

3,001,227

DISHWASHING APPARATUS

Olan L. Long, Hilliard, and Hal H. Dronberger, Columbus, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 16, 1959, Ser. No. 827,558
3 Claims. (Cl. 16—190)



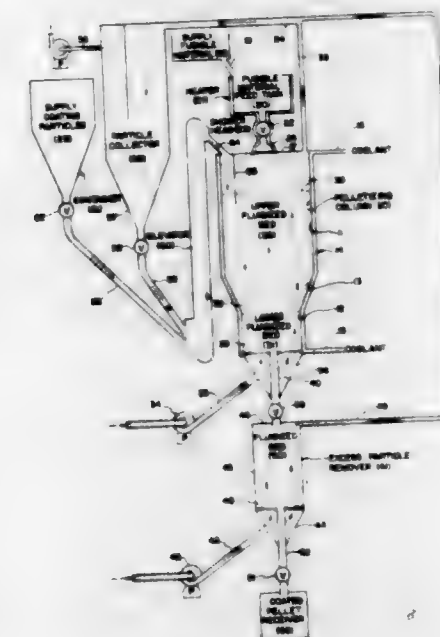
1. In a counterbalancing mechanism, the combination with a member movable from a horizontal position to a

substantially vertical position, a hinge having a movable portion fixed to the member and a fixed portion, a hinge pin pivotally connecting the fixed and movable portions of the hinge and pivotally supporting said member, an arm extending from said movable portion of the hinge, a helical compression spring having one end anchored adjacent the fixed portion of the hinge and its other end free, a tension rod pivoted to said arm and bearing against the free end of the spring for biasing the member toward its vertical position and a fulcrum engaging an intermediate portion of the rod during at least a portion of its travel for offsetting the free end of the spring and modifying the biasing effect of the spring upon said member.

3,001,228

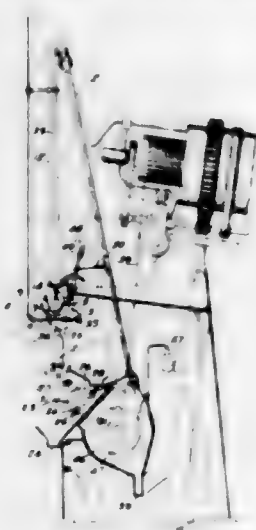
COATING AND PELLETIZING OF FUSIBLE MATERIALS

Herman Nack, Columbus, Ohio, assignor, by mesne assignments, to G & A Laboratories, Inc., Savannah, Ga., a corporation of Georgia
Filed Jan. 8, 1959, Ser. No. 785,712
8 Claims. (Cl. 18—2.7)



7. In an apparatus for pelletizing, coating, and cooling of molten droplets of a fusible material, characterized as a liquid at elevated temperatures and a solid at atmospheric temperatures, the combination comprising: an upper section for enclosing a fluidized bed of finely divided coating solids; a means adjacent the upper section for maintaining the temperature of the fluidized bed of said coating solids; a lower section for enclosing a fluidized bed of coated pellets, the lower section enclosing a cross-sectional area smaller than the cross-sectional area enclosed by the upper section; a means for joining the upper section and the lower section, the upper section communicating with the lower section with the upper and lower sections free from physical means for separating said fluidized bed of finely divided coating material enclosed in the upper section and said fluidized bed of coated pellets enclosed in the lower section; a means for melting the fusible material, breaking the melted fusible material into molten droplets, and introducing the molten droplets in an enclosed upper region of the upper section for downward passage of the molten droplets through the enclosed fluidized bed of said coating solids into the enclosed fluidized bed of said pellets; a means for introduction of a fluidizing gas at atmospheric temperatures into said fluidized bed of said pellets and for passage of the gas upwards through the fluidized bed of said pellets and the fluidized bed of said coating solids for maintaining the fluidized beds in a fluidized condition; and a means for withdrawal of coated pellets from said fluidized bed of said pellets.

3,001,229
STRETCH SPINNING EQUIPMENT
 Otto V. Drtina, 11426 W. Clifton Blvd.,
 Cleveland 2, Ohio
 Filed Dec. 19, 1958, Ser. No. 781,804
 4 Claims. (Cl. 18-8)



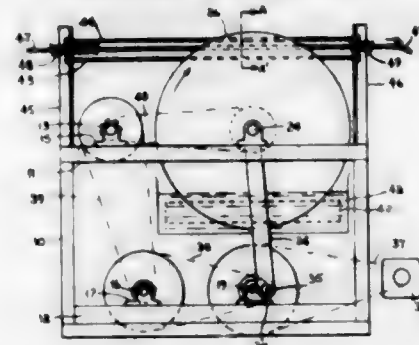
1. An improved wet spinning apparatus of the character described comprising a substantially closed spinning chamber having an access opening formed therein, a spinning tube including a first upwardly extending leg having a lower trailing feed end communicating with the interior of said chamber and a second downwardly extending leg communicating with the upper end of said first leg and terminating in a bottom discharge opening at a lower level than said first leg feed end, said spinning tube having a transverse cross sectional area diminishing from the feed end to the discharge end thereof, a spinning head carrying a spinnerette and movable into separable engaging registry with said chamber access opening to seal said opening, means connecting said spinning head to a source of spinning solution, valved conduit means connecting the interior of said chamber to a source of spin-bath and valved venting means communicating with the interior of said chamber.

3,001,230
SPINNERETTE NOZZLES
 Irving Rossi, Morristown, N.J., assignor to Eltherma A.G.,
 Vaduz, Liechtenstein, a corporation of Liechtenstein
 Filed Jan. 29, 1959, Ser. No. 789,821
 10 Claims. (Cl. 18-8)



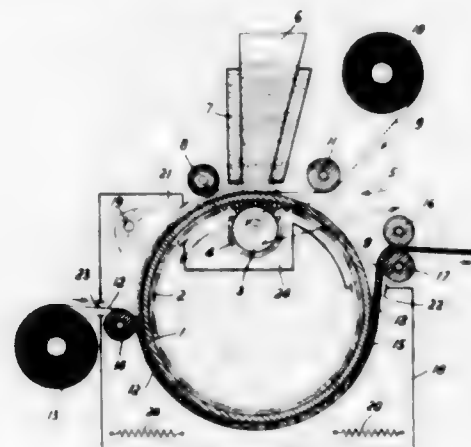
1. A spinnerette nozzle extending through a plate from the pressure face to the discharge face thereof, comprising a discharge orifice extending inwardly from the discharge face to a plane between the discharge and pressure faces of the plate, a wall portion integral with the discharge orifice at said plane and flaring outwardly therefrom to the pressure face of said plate, and a plurality of guide channels formed in said outwardly flared wall portion, said channels extending from said pressure face and terminating in said discharge orifice below said plane.

3,001,231
APPARATUS FOR ROLLING FIBROUS ROD-LIKE MATERIAL
 Selwyn George Hawtin, Spondon, Edward James Upton, Derby, and John Downing, Spondon, England, assignors to British Celanese Limited, London, England, a British company
 Filed Apr. 23, 1959, Ser. No. 808,499
 Claims priority, application Great Britain May 2, 1958
 6 Claims. (Cl. 18-11)



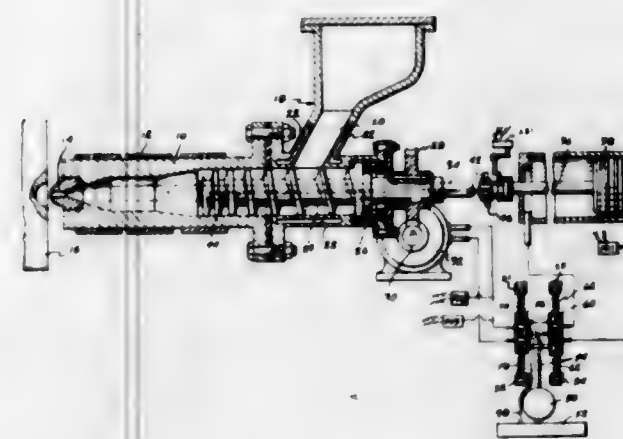
6. Apparatus for propelling and rolling a continuous length of rod-like material between two surfaces, said apparatus comprising a first driven shaft, two arms pivoted about said shaft, two axially spaced substantially parallel discs, one carried by each arm and each rotatable about an axis parallel with the said first driven shaft, chains and sprockets for driving said discs from said first driven shaft, a second driven shaft parallel with said first driven shaft, cranks carried 180° apart by said second driven shaft, connecting rods between said cranks and said arms for oscillating said arms continuously, and a pair of guide bars extending across and between said discs for guiding the rod-like material to be propelled and rolled.

3,001,232
APPARATUS FOR THE CONTINUOUS MANUFACTURE OF MICROPOROUS PLASTIC WEBS
 Norbert Martinak, Carinthia, Austria, assignor to Akkumulatorenfabrik Dr. Leopold Jungfer, Carinthia, Austria
 Filed May 26, 1959, Ser. No. 815,986
 Claims priority, application Austria May 28, 1958
 13 Claims. (Cl. 18-15)



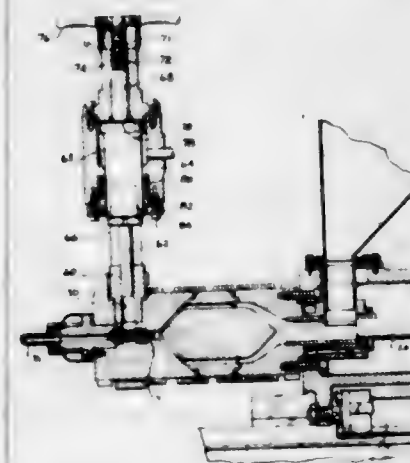
1. Apparatus for the continuous manufacture of a microporous plastic web by sintering a plastic powder layer, comprising a spokeless rigid cylindrical shell ring with an axis extending horizontally, means for heating said ring, means for applying plastic powder to the outside periphery of said ring at a feeding point disposed adjacent to the upper most portion of said ring, and suspending means comprising at least one carrying roller which engages the inside periphery of said ring adjacent to the uppermost portion of said ring to support and rotate the latter around the horizontal axis.

3,001,233
APPARATUS FOR PLASTIC INJECTION
 Walter Ernst, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
 Filed Jan. 22, 1959, Ser. No. 788,443
 6 Claims. (Cl. 18-30)



1. In an apparatus for handling heat plasticizable material, a heated cylinder having a discharge nozzle at one end, a hopper structure attached to the cylinder at the other end, said hopper structure having a bore co-axial with the cylinder, a screw in the bore in the hopper structure having its one end disposed in the cylinder so that rotation of the screw will convey material from the hopper structure into the cylinder and compact the material therein, said screw being hollow and there being an injection plunger mounted in the screw adapted to project therefrom into the cylinder, a rotary hydraulic motor connected with the screw, a reciprocating hydraulic motor connected with the injection plunger, a source of fluid under pressure, and valves connecting the said source of fluid with the motors shiftable for causing selective actuation of said motors, the said valve for the rotary motor being of the closed center type so that the rotary motor is locked when its valve is centered and the other said valve for the reciprocating motor being of the open center type so that the pressure fluid from the source is by-passed when the said other valve is centered.

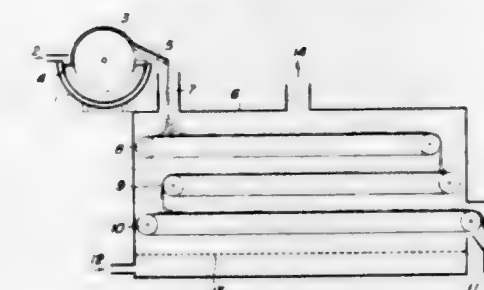
3,001,234
INJECTION MOLDING MACHINE
 William S. Renier, Bay Village, Ohio, assignor to Baldwin-Lima-Hamilton Corporation, Hamilton, Ohio, a corporation of Pennsylvania
 Filed July 23, 1959, Ser. No. 829,072
 6 Claims. (Cl. 18-30)



1. In a machine for the injection molding of plastic material having a frame, means movable on said frame to support a mold in position to receive an injected charge of molding material, a charging plunger, a heated plas-

ticizing chamber, means to supply material to said plasticizing chamber, and means to operate said charging plunger to force material into, through and out of said plasticizing chamber, the improvement comprising, a valve chamber carried ahead of said plasticizing chamber, an inlet passage between said plasticizing chamber and said valve chamber, a discharge passage leading from said valve chamber to a nozzle and said mold, a metering chamber in constant open communication with said valve chamber, means to force a precise predetermined quantity of material from said metering chamber through said valve chamber and discharge passage into said mold, and valve means within said valve chamber operable solely by the application and release of fluid pressures imparted to the plasticized material, said valve means including a member shiftable from a first position wherein said inlet passage is open and said discharge passage is closed to a second position wherein said inlet passage is closed and said discharge passage is open, and a second movable member for selectively opening and closing said inlet passage when said first movable member is in said first position.

3,001,235
METHOD FOR THE MANUFACTURE OF A FORMALDEHYDE POLYMER IN A CRAPE-CHIP FORM
 Daisuke Komiyama, Takumi Takaki, Tatsuo Ando, and Toru Ni, all of Kaneko, Niihama-shi, Japan, assignors to Sumitomo Chemical Company, Ltd., Higashi-ku, Osaka, Japan, a corporation of Japan.
 Filed Feb. 4, 1959, Ser. No. 791,222
 Claims priority, application Japan July 26, 1958
 5 Claims. (Cl. 18-47.5)



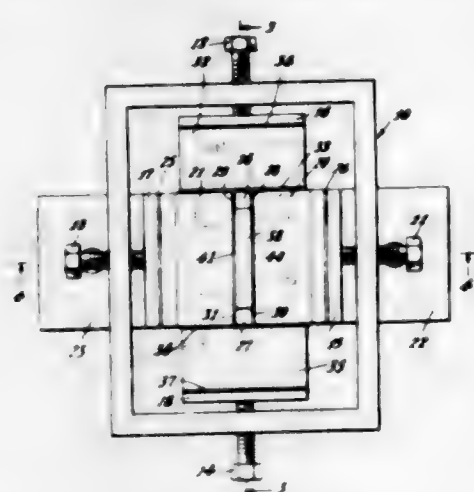
1. A method of manufacturing a formaldehyde polymer in a crape-chip form which comprises casting a hot aqueous solution of formaldehyde polymer having a concentration of 60 to 95% calculated as formaldehyde over a smooth surface of a body maintained at temperatures below non-fluidity temperature $T_1 = 83.5 + 3.35F$, wherein T_1 is an absolute temperature and F is a percent by weight concentration of formaldehyde polymer calculated as formaldehyde, such that the solution is formed into a uniform thin layer, scraping said thin layer of the solidified material before the surface portion thereof is perfectly solidified, thus shaping the material into a crape-chip form, providing a bed to carry the material and passing a dry inert gas penetratingly through the bed to dry the material.

3,001,236
HOT STRETCHING OF POLYACRYLONITRILE YARNS WITH DRAW POINT LOCATED ON FEED ROLLER
 Walter Maier and Kurt Bernklaus, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
 Filed July 16, 1958, Ser. No. 748,966
 Claims priority, application Germany July 26, 1957
 1 Claim. (Cl. 18-48)

Process for the hot stretching of yarns consisting of a copolymer of 95% of acrylonitrile, 5% of vinylacetate and an average solvent content of about 6% dimethylformamide, wherein the yarns are heated in contact with a

positively driven supply roller which has a surface temperature of about 150° C. and a peripheral speed of about 100 ft. per minute, then led over a slightly curved frame having a surface temperature of about 165° C. and then to a stretching roller which is positively driven at a peripheral speed about 6 times as high as the speed of said supply roller, whereby the point of stretch is localized on the surface of the supply roller and permanently remains thereon.

3,001,237
METHOD OF MAKING CARBON ARTICLES
Rodolfo Rodriguez Balaguer, Union de Reyes, Cuba, assignor to James D. Hedges, Havana, Cuba
Filed Dec. 31, 1956, Ser. No. 631,735
17 Claims. (Cl. 18—54.7)

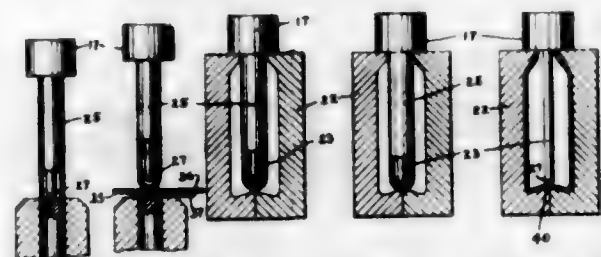


1. A process for making a formed carbon article from comminuted particles of carbonaceous raw material including a first carbonaceous material which is fusible and which decomposes to form an appreciable amount of fixed carbon and contains appreciable volatile combustible matter and a second carbonaceous material having a low volatile matter content, comprising the steps of placing the comminuted particles of carbonaceous raw material in a mold, subjecting the material within the mold to a high mechanical pressure not less than about 1000 p.s.i. to compress the same, and rapidly heating the material in the mold while maintaining said pressure thereon by passing an electrical current through said compressed material so that the heat is generated within the raw material itself, said heating step and said pressure maintenance being continued until said fusible carbonaceous material is carbonized.

3,001,238
METHOD OF MAKING METAL BONDED CARBON BODIES
Walter V. Goeddel, San Diego, and Masoud T. Simnad, La Jolla, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Dec. 31, 1958, Ser. No. 784,071
7 Claims. (Cl. 18—54.7)

1. The method of making a carbon body for use in a nuclear reactor which comprises making a finely divided mixture of carbon, and of less than about 10 weight percent of a diffusional bonding material selected from the class consisting of zirconium, niobium, molybdenum, titanium, nickel, chromium, silicon and decomposable compounds thereof, heating said mixture to a temperature of at least 1500° C. at which temperature diffusional bonding will be effected while maintaining it under a mechanical pressure of over about 3,000 pounds per square inch, the entire body of said mixture being heated to a substantially uniform temperature.

3,001,239
METHOD FOR BLOWING PARISONS
Thomas R. Santelli and Leonard D. Soubler, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 28, 1958, Ser. No. 777,543
5 Claims. (Cl. 18—55)



5. The method of blow molding a hollow tubular parison formed by extrusion of heated thermoplastic material comprising the steps of: closing one end of said parison, then enclosing the closed end portion of said parison within a blow mold, positively pressing said closed end of said parison against the adjacent end face of said blow mold by pressure exerted internally of the parison, thereby positioning said parison relative to said blow mold, and expanding the mold enclosed portion of said parison to conform to said blow mold while continuing the pressing of said closed end of the parison against the adjacent end face of the blow mold.

3,001,240
PROCESS FOR PRODUCING DENTAL RESTORATIONS
Harold C. Emerick, 5007 Wayne Trace, Fort Wayne, Ind.
Filed Mar. 21, 1957, Ser. No. 647,692
13 Claims. (Cl. 18—55.1)

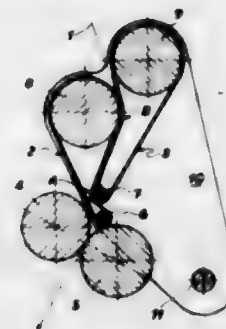


11. A process for making dental restoratives comprising the steps of: inserting polymerizable mixture of polymeric and monomeric resin plastic material within a dental stone investment mold of the gypsum type having moisture therein, disposing said mold and its contents within an enclosed chamber, effecting subatmospheric pressure within said chamber to remove constantly gaseous impurities within said plastic material conducive to impairment thereof, and polymerizing at elevated temperatures and above the volatilization temperature of the monomeric fraction of said plastic material at said subatmospheric pressure within said chamber, said gypsum mold being also subjected to subatmospheric pressure to suppress calcination as an incident to said polymerization at elevated temperature.

3,001,241
DRAFTING TRAIN ON CONTINUOUS SPINNING MACHINES
Juan Comerma Aymerich, Paseo del Conde de Egara No. 12, Terrasa (Barcelona), Spain
Filed May 2, 1958, Ser. No. 732,568
Claims priority, application Spain May 21, 1957
2 Claims. (Cl. 19—131)

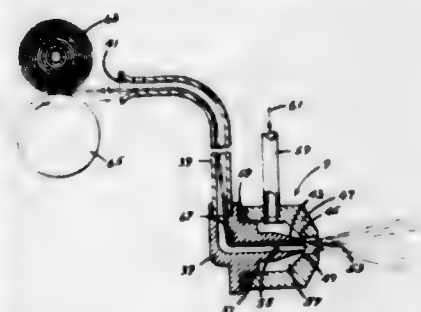
1. A drafting train on continuous spinning machines for textile roving, including oppositely disposed drafting rollers having a point of contact therebetween, means for retaining and accompanying the textile roving to a location closely adjacent said point of contact of the drafting rollers, said means comprising a pair of endless flexible

aprons, rearward and forward rollers for each apron with the aprons passing about the rollers, the rollers being so arranged that run sections of the aprons are adjacent each other between the rearward roller of one apron and the forward roller of the other apron, the forward roller of said other apron coacting with said one apron to provide a re-entrant angle, the forward roller of said one apron being substantially closer to one of said drafting



rollers than the forward roller of said other apron so that the textile roving prior to leaving said one apron travels applied against said one apron at its forward roller over a path defining a pronounced convex arch and with the textile roving leaving said one apron at a point closer to said one drafting roller than to the other drafting roller so that the roving prior to reaching the point of contact of the drafting rollers travels along an arch-shaped path on said one drafting roller.

3,001,242
FIBROUS WEB MANUFACTURE
Robert D. Heffelfinger, Lansdowne, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 3, 1956, Ser. No. 582,557
1 Claim. (Cl. 19—146)

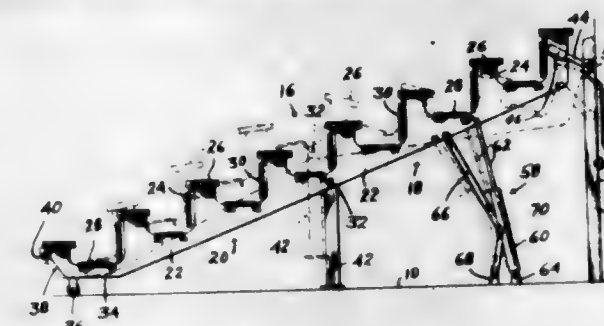


A process for providing a uniform dispersion of individual fibers from a continuous yarn bundle formed of preformed fibers extending generally longitudinally of the bundle including the steps of advancing the leading end of a yarn bundle into a turbulent fluid stream to loosen the fibers thereof and passing the yarn bundle through an angular path to retard its rate of advancement at a location spaced from its leading end to permit the turbulent stream to pluck the loosened fibers from the yarn bundle and disperse the same as a mass of individual fibers.

3,001,243
FOLDING BLEACHERS
Alfred J. Conn, Chicago, Ill., and Harold N. Wiklund, Des Moines, Iowa, assignors, by direct and mesne assignments, to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed June 5, 1957, Ser. No. 663,831
9 Claims. (Cl. 20—1.126)

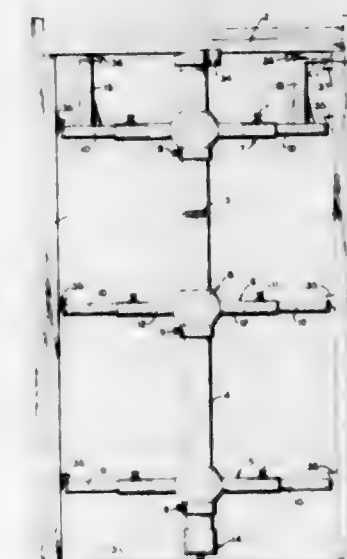
7. Folding bleachers, comprising, front and rear seat carrying bleacher sections pivotally connected to present a combined bleacher assembly disposed on an inclined

plane downwardly from rear to front with the seats in stepped relationship, and means for moving said assembly upwardly at its pivotal connection into a jack-knifing position whereby said sections can be vertically disposed



and adjacent each other, said means including a fulcrum bar and a hydraulic jack each pivotally secured at respective opposite ends to the floor and to said rear section with said fulcrum bar intermediate said hydraulic jack and the pivotal connection of said bleacher sections.

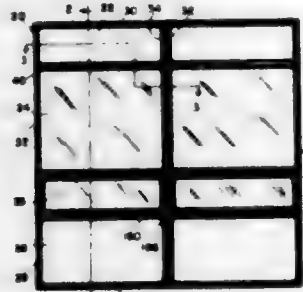
3,001,244
DOORJAMB STRUCTURE AND METHOD OF SETTING DOORJAMBS INCLUDING STOPS
Alfred J. Kronquist, 2470 Ivanhoe Drive, Los Angeles 29, Calif.
Filed Dec. 31, 1956, Ser. No. 631,528
13 Claims. (Cl. 20—11)



1. The method of installing a doorjamb having jamb-sides and a jamb-head and the door trim for said doorjamb in a door opening in which the lateral sides of said opening are defined by the oppositely facing surfaces of a pair of studs and the upper side of which opening is defined by the lower surface of a header that comprises the steps of; pre-fixing vertically spaced side-jamb engaging surfaces spaced within said opening along said oppositely facing surfaces rigid with the latter and with said jamb-side engaging surfaces aligned along vertical lines, pre-fixing horizontally spaced jamb-head engaging surfaces spaced within said opening along said lower surface rigid therewith and aligned along a horizontal line extending between the upper end portions of said oppositely facing surfaces, securing the door trim to the jamb-sides and jamb-head of said doorjamb and thereafter inserting said jamb-head into said opening and securing it rigidly against said jamb-head engaging surfaces with the door trim on said jamb-head extending over opposite lateral sides of said header, then inserting said jamb-sides into said opening and securing them rigidly against said jamb-side engaging members with the door trim on said jamb-sides extending over opposite sides of said studs.

3,001,245 BUILDING STRUCTURE

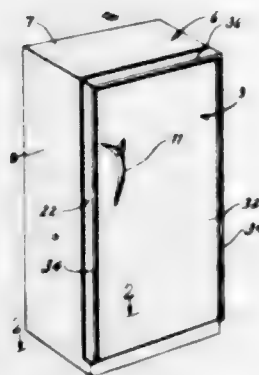
William Gillett, Grosse Pointe Farms, and Clyde W. Kelly, Detroit, Mich., and Ralph Eldon Sechler, Berkeley, Calif., assignors to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Dec. 8, 1958, Ser. No. 778,936
3 Claims. (Cl. 20-11)



1. A building panel comprising a frame including head, jamb and sill members providing a rectangular opening, each of said members having a longitudinal channel therein, each of said channels having a bottom portion, a side perpendicular to said bottom, a second side extending at an angle to said bottom and toward said first mentioned side, said first mentioned side extending a greater distance away from said bottom than said second side, said head and sill members being joined to said jamb members with said channels being in alignment with each other, the terminal ends of the bottom portion of the channels on said sill members being spaced from the bottom portion of the channels on said jamb members, a closure for said opening having first surfaces adjacent the peripheral edges abutting the first mentioned side of said channel, a closure strip in each of said channels, each of said strips having a first portion bearing against the second side of said channels and a second portion bearing against second surfaces opposite the first mentioned surfaces of said closure, each of said strips having a third portion between the first and second portion and spaced away from the bottom of said channel, with the third portion of said strip in said jamb members being substantially in alignment with the terminal end of said bottom portions of said sill member channels to provide an open channel for substantially the complete height of said jamb members in communication with open channels in said sill member.

3,001,246 TRIM STRIP

Harold C. Mather, Gilbert Park, Ill., assignor to Midwest Manufacturing Corporation, Galesburg, Ill.
Filed June 11, 1958, Ser. No. 741,395
2 Claims. (Cl. 20-35)

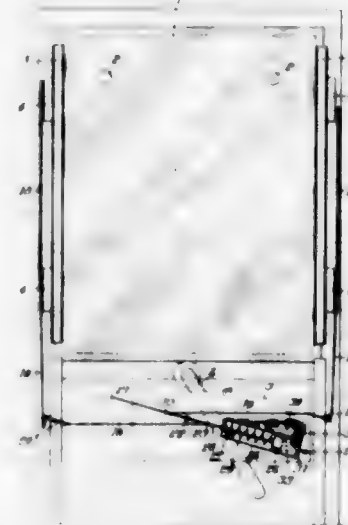


1. In combination with a door having a front wall, a rear wall, and a side wall interconnecting outer marginal edges of said front and rear walls, wherein said front and rear walls are each provided with latch receiving means adjacent said edges and disposed therealong; a

channel-shaped trim strip therefor comprising a front flange, a rear flange, and a web portion interconnecting said front and rear flanges, each of said flanges being provided with latch means adapted to engage said latch receiving means; said trim strip having an unstressed preassembled position wherein said front flange loosely engages said front wall, said rear flange loosely engages said rear wall, and said web portion is inwardly bowed toward said side wall; said trim strip having a stressed assembled position wherein said latch means engage said latch receiving means, said web portion engages said side wall and is resiliently urged into planar configuration, and said flanges are resiliently urged toward convergence by said web portion.

3,001,247 SYSTEMS FOR CONTROLLING SLIDING GLASS PANES

Charles Ulmann, Paris, France, assignor to Etablissements Georges Klein & Cie, Paris, France, a French society
Filed May 15, 1958, Ser. No. 735,536
Claims priority, application France May 18, 1957
2 Claims. (Cl. 20-52.3)



1. A window construction comprising a frame, a pane slidably movable relative to said frame, members adjacent said pane and displaceable to urge said pane against said frame to lock said pane in position, lever systems coupled to said members to displace the same, control means coupled to said lever systems to control the displacement of said members, said control means having release and lock positions and being manually displaceable from said lock to said release position, and delay means connected to said control means and urging the same from said release to said lock position with a determinable delay.

3,001,248 DOUBLE GLAZED SASH

Christian M. Verhagen and Yale W. Ehret, Elkhart, Ind., assignors to The Adlake Company, Elkhart, Ind., a corporation of Illinois
Filed May 2, 1960, Ser. No. 26,236
9 Claims. (Cl. 20-56.5)



1. In a multiple glass sash, a rubber-like glazing unit having spaced glazing channels, panes of glass seated in the glazing channels, the glazing unit extending around

the periphery of the glass panes and encompassing the margins thereof so as to seal the edges and form an air pocket between the panes, and a breather for venting said air pocket comprising a pair of needle-like breather tubes embedded in the glazing unit, one of said breather tubes having its inner end extending into the air pocket, the other one of said tubes having its inner end extending outside the panes, said glazing unit having a pocket forming recess in its outer edge, said tubes having their outer ends extending to said pocket forming recess, a cover member over said recess and said recess and cover member being completely enclosed by a seal forming patch vulcanized to the outer edge face of the glazing unit.

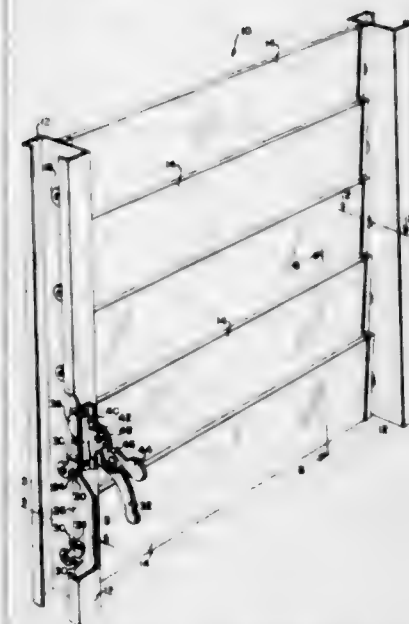
3,001,249
MULTIPLE GLASS SHEET GLAZING UNITS
William L. Elton, Maumee, Theodore J. Motter, Genoa, and James D. Gwyn, Perrysburg, Ohio, and Howard F. Goeckel, Temperance, Mich., assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Oct. 1, 1959, Ser. No. 843,692
10 Claims. (Cl. 20-56.5)



1. A multiple glass sheet glazing unit, comprising two sheets of glass held in spaced face-to-face relation by separator means disposed around the edges thereof to form a closed air space therebetween, a tubular container formed of a moisture permeable plastic material disposed in said air space, and a desiccant material in said container.

3,001,250 WINDOW CONSTRUCTION AND CONTROL

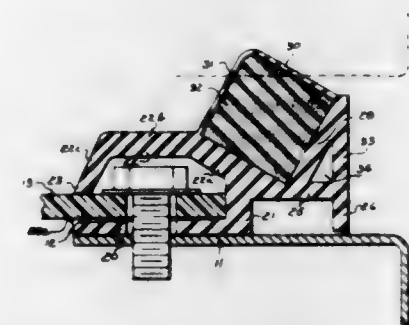
Stanhope S. Kenny, 1537 La Mesa Drive, Burlingame, Calif.
Filed July 17, 1959, Ser. No. 827,834
4 Claims. (Cl. 20-62)



1. In a jalousie window, a plurality of elongated window sections, rotary supports on the ends of said sections, side frame members having apertures to receive and support said rotary supports, crank means secured to each rotary support at a common end of said window sections, the extending ends of said crank means having partially rounded and partially flattened cam surfaces converging

to form the apex and sides of a generally heart-shaped configuration, an operating bar extending in a direction parallel to said side frames and slidably mounted adjacent one of said frames, substantially planar flange means extending outwardly from said operating bar in a plane transverse to the slidable movement of said operating bar, said flange means slidably and rotatably receiving the extending ends of said crank means when in contact with said rounded surface and resisting further rotation of said crank means when in contact with said flattened surface, an operating lever pivotally mounted on a side frame, said operating lever having a rounded end protruding inwardly through an opening in said side frame, and means on said operating bar slidably and rotatably engaging the rounded end of said operating lever, whereby pivotal movements of said operating lever produce rotary movements of said jalousie window sections between extreme open and closed positions determined by said flattened cam surfaces and planar flange means.

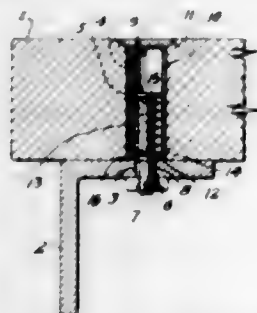
3,001,251
WEDGE TYPE DOOR GASKET
Leslie M. Johnson, Galesburg, Ill., assignor to Midwest Manufacturing Corporation, Galesburg, Ill.
Filed Aug. 6, 1957, Ser. No. 676,661
1 Claim. (Cl. 20-69)



A gasket for sealing a door member when said door member is in closed position with respect to a door frame member, said gasket being arranged for attachment to one of said members and for engagement with the other of said members, said door member being mounted for pivotal movement with respect to said door frame member whereby said gasket may be subjected to sliding movement with respect to the other of said members during final relative closing movement of said members, said gasket comprising a base portion arranged for attachment to one of said members and a sealing portion of generally rectangular cross-section arranged to engage a face on the other of said members when said members are in substantially closed relative positions, said sealing portion being integral with said base portion and so oriented with respect thereto that a single edge thereof is arranged for engagement with said face of said other member, said sealing portion being substantially filled with flexible, resilient material, the two inner sides of said sealing portion adjacent said base portion being relatively stiff and firmly oriented with respect to said base portion, and the two outer sides of said sealing portion adjacent said single edge being relatively flexible and resilient, whereby distortion of said gasket accompanying final closing movement of said door member is substantially confined to distortion of said filling material and of said two outer sides of said sealing portion, the outer side of said sealing portion which faces generally in the direction of sliding movement of said gasket with respect to said other member during final relative closing movement of said members being disposed at a smaller angle relative to said face of said other member than the other of said two outer sides.

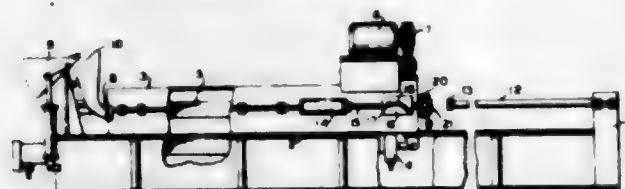
3,001,252 FASTENING DEVICE

Rita A. Erickson and Joseph A. La Valley, Baton Rouge, La.; said La Valley assignor to Southern Seating Corp., Baton Rouge, La., a corporation of Louisiana
Filed Mar. 11, 1958, Ser. No. 720,694
1 Claim. (Cl. 20-92.4)



A grandstand comprising in combination an understructure and boards, said boards provided with a device adapted to fasten the boards to the understructure and further adapted to be stored within said boards when not in use as a fastener, said device comprising a T-head toggle mechanism including a body member having at one end thereof a pivoted head piece which can be aligned with the body members when in one position on the pivot and adapted to form a T-head when displaced to a second position on said pivot, a channel in said board leading to the plane of the board to be presented to the understructure, said channel being of a length which will permit the entire toggle mechanism to be received within the board when the head piece is aligned with the body members and having an opening at one end thereof through which the end of the toggle mechanism carrying the head piece can project when the board is in position to be fastened to the understructure, resilient means interposed between reaction points on the toggle body and on the channel wall, said resilient means being uncompressed when the entire toggle mechanism is positioned within the channel and also when the toggle projects outwardly through the channel opening sufficiently far to permit the leading end of the aligned head piece to pass through and partially project from a hole in the understructure, said resilient means tending to react between said reaction points to retract the toggle into the channel when the head piece projects outwardly from the hole in the understructure a distance which will permit the head piece to be displaced from the toggle body to form a T-head abutting and acting against the face of the understructure which is away from the board channel opening, and means to prevent tilting of the head piece from alignment with the toggle body when the entire toggle mechanism is positioned in the channel said means comprising a cross sectional restriction of the channel wall in the area adjacent that occupied by the head piece when the entire toggle mechanism is within the channel.

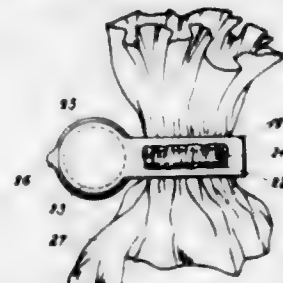
3,001,253
CENTRIFUGAL MOLD END CLOSURE MEANS
John H. Beyer, Beverly, N.J., assignor to United States Pipe and Foundry Company, Birmingham, Ala., a corporation of New Jersey
Filed Sept. 29, 1959, Ser. No. 844,604
4 Claims. (Cl. 22-65)



1. A closure means for closing the spigot end of a cylindrical metal mold for casting tubular members com-

prising a sleeve mounted in fixed relation to the spigot end of the mold with its longitudinal axis parallel to the longitudinal axis of the mold, a shaft slidably mounted in said sleeve, guide pin and guide slot means provided along the adjacent surfaces of the sleeve and shaft for directing the movement of the shaft with respect to the sleeve, said guide slot having a substantially axially extending portion which guides the shaft longitudinally preventing rotation and a helical portion which causes the shaft to rotate as the guide pin follows the helical path, means for reciprocating the shaft back and forth longitudinally in the fixed sleeve, an arm attached to the shaft and positioned so that an end dam mounted at its free end is aligned with the end of the mold when said guide pin is in the longitudinal portion of the guide slot and is moved transversely with respect to the mold when the guide pin moves along the helical portion of said guide groove, said end dam being rotatably mounted on said arm.

3,001,254
CLOSURE FOR BAGS OF SYNTHETIC MATERIAL
Erich Schumm, 17 Siegersberger Strasse, Murrhardt, Wurttemberg, Germany
Filed July 31, 1957, Ser. No. 675,362
Claims priority, application Germany Aug. 4, 1956
3 Claims. (Cl. 24-30.5)



1. A closure device for a bag or the like, comprising, in combination, two substantially rigid closure portions hingedly connected by an integral flexible portion, and movable relative to each other between a non-overlapping disengaged position and an engaged substantially abutting position, substantially superimposed upon each other, one of said closure portions being formed with an opening therethrough having a predetermined circumferential outline; a rigid and solid projection on the other closure portion having a circumferential outline which is throughout the height thereof similar to but slightly smaller than the circumferential outline of said opening in said one closure portion and arranged so that in engaged superimposed position of said closure portions said projection projects through said opening and beyond the edge of said opening a slot; and releasable locking means for locking said closure portions in said engaged superimposed position thereof whenever desired whereby a bag or the like may be securely closed by placing an end portion of the bag over said opening in said one closure portion and on the side thereof facing in the engaged position the other closure portion so that during moving of said portions of said engaged position the bag and portion will be partly deflected through said opening by engagement with said projection without being subjected to excessive stresses during this deflection.

3,001,255
PLASTIC BUTTON WITH THROUGH-PATTERN
Hans Schäfer, Wuppertal-Barmen, Germany, assignor to Pfennig-Schumacher-Werke, Wuppertal-Barmen, Germany, a firm
Filed July 1, 1957, Ser. No. 669,209
Claims priority, application Germany Aug. 10, 1956
1 Claim. (Cl. 24-90)

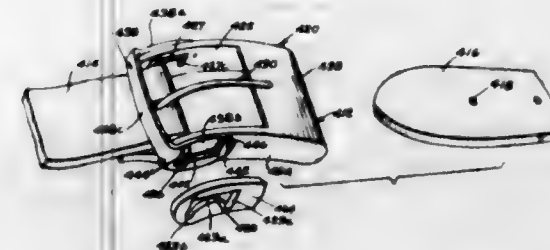
A button having substantially flat top and bottom faces and simulating buffalo horn material, said button con-

sisting of a plurality of curved synthetic bodies of different appearance integral with each other and each extending throughout the thickness of said button under an oblique angle to the axis thereof, at least some of said curved synthetic bodies being of crescent shaped cross



section, the lines of intersection of said curved synthetic bodies with said top and bottom faces respectively being differently located with respect to the axis of the button due to the oblique angle of extension of said bodies, whereby the configuration of the exposed portions of said bodies on both said faces is different in appearance.

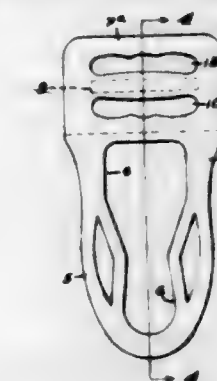
3,001,256
ADJUSTABLE BUCKLE
Don Laviano, 119 Washington Place, New York, N.Y.
Filed June 12, 1957, Ser. No. 665,161
2 Claims. (Cl. 24-178)



1. A buckle for achieving between size adjustments for use with a strap having a series of spaced-apart tongue-receiving apertures comprising a buckle frame having spaced sides and a clasp section, there being opposed bayonet slots formed in said sides, a pin having its opposite ends extending into said slots and movable between limit positions, a tongue swingably mounted on said pin for movement into engagement with said clasp section, said tongue being adapted to be extended through one of said apertures for attaching said strap to said buckle, and means operatively engaging said pin for locking said pin in a limit position toward said clasp section whereby the effective separation between said pin and said clasp section is foreshortened to enable a between size adjustment of said buckle and strap.

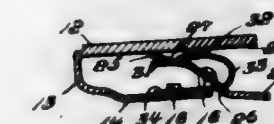
3,001,257
METHOD AND MEANS FOR REMOVABLY SECURING THE CLIP OF A STOCKING OR SOCK SUSPENDER OR THE LIKE TO ITS LOOP
Henri Marcel Girodet, 23, Rue Emile Clermont, Saint-Etienne, France
Filed June 4, 1958, Ser. No. 739,845
Claims priority, application France June 12, 1957
1 Claim. (Cl. 24-247)

A garment supporting assembly formed of molded flexible plastic including a loop portion and a clip portion, said clip portion comprising a base having an integrally formed stud on one lateral surface adjacent one distal end and a transverse bar extending across the opposite end of said base, said loop portion having a downwardly tapered opening with the smaller portion adjacent its free end adapted for sliding engagement with said stud to retain a garment therebetween, and an upper section having a transverse slot defining parallel half sections of equal thickness, longitudinal strap receiving slots formed therein and a recess in spaced parallel relation to said strap receiving slots, said recess forming an ex-



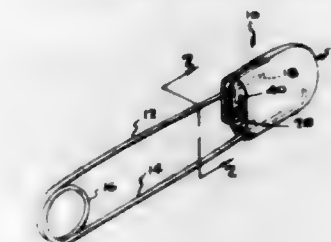
tension of said transverse slot, said transverse slot extending through the edge of said upper section, and said recess being adapted to retain said transverse bar between said half sections.

3,001,258
JEWELRY CLASP
Olof V. Anderson, Forge Road, North Kingston, R.I.
Filed Dec. 17, 1958, Ser. No. 781,086
2 Claims. (Cl. 24-252)



1. A jewelry clasp comprising a body member generally U shaped in the form of a jaw and provided with an ornament receiving face and a platform portion, a pivotal jaw provided with two spaced apart parallel slots, a U-shaped spring member, one end of said U-shaped spring member passing through one of said two spaced apart parallel slots, the other end of said U-shaped spring member passing through the other of said two parallel slots and extending beyond said slot to abut said platform portion, means to secure said other end of said U-shaped spring member to said platform portion and means positioned between said two parallel slots to pivotally mount said pivotal jaw to said platform portion whereby said spring member resiliently urges one end of said pivotal jaw against the underside of said ornament receiving face.

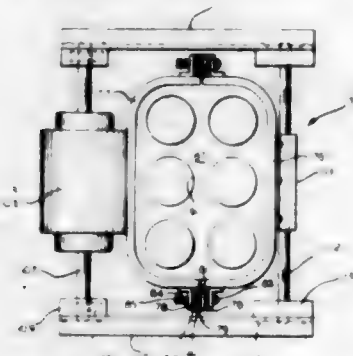
3,001,259
SAFETY PIN
Emile Scheemaecker, P.O. Box 114, Howard, R.I.
Filed Oct. 2, 1959, Ser. No. 843,986
1 Claim. (Cl. 24-156)



In a safety pin comprising a pair of straight spaced legs, a resilient helix spacing and connecting one of the complementary ends of said legs for movement of said legs away from each other, a head fixedly secured to the free end portion of one of said legs, said head having a retaining slot for releasably engaging the free end part of the other leg, said slot comprising a straight portion having one end opening out of said head, a main pocket portion parallel to said straight portion and having an entrance portion, and a reversely bent arcuate portion

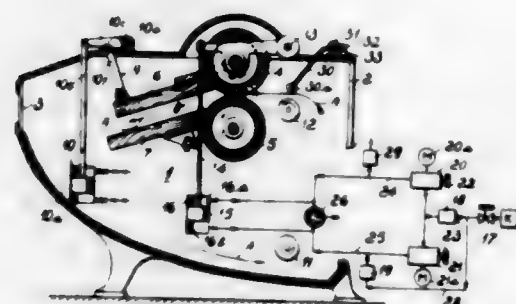
connecting the other end of said straight portion to said entrance portion, the improvement consisting in providing an auxiliary pocket portion parallel to said main pocket portion and in communication with said entrance portion, said entrance portion being located between said arcuate portion and said auxiliary pocket portion, said other leg being shiftable from the main pocket portion through said entrance portion and into said auxiliary pocket portion responsive to the application thereto in turn of a partial compressive force, a lateral force, and subsequent release of said compressive and lateral forces.

3,001,260
APPARATUS FOR THE VIBRATORY MOLDING OF CONCRETE SHAPES
Archie R. Gagne, Franklin Park, Ill., assignor to Amplus, Inc., Naperville, Ill., a corporation of Illinois
Filed Sept. 15, 1958, Ser. No. 761,059
6 Claims. (Cl. 25-121)



4. In apparatus of the class described for molding articles from concrete mixes, a mold composed of mold halves which are spaced laterally of each other, each of said mold halves including a longitudinally extending flange along the edges of each mold half and in confronting relationship with a flange of the contiguous mold half, elastomeric means disposed between said mold halves and adapted to form a seal for the material being molded, means for connecting said mold halves together with said elastomeric means disposed between said flanges and enabling said mold halves to move toward and away from each other while so connected, said means comprising resilient means between one end of said fastening means and the proximate flange, and means for vibrantly moving said mold halves toward and away from each other through a known distance comprising a rotating shaft supported on one of said mold halves, an eccentric rotating upon said shaft and a yoke surrounding said mold halves and connected between said eccentric and the other of said mold halves.

3,001,261
CONTROL AND PROTECTION DEVICE FOR FULLING MACHINES
Attilio Bertoldi, Via Griffani 29, Recoaro Terme, Italy
Filed May 15, 1959, Ser. No. 813,533
3 Claims. (Cl. 26-24)



1. A device for the protection and control of fulling machines having a pair of rotating pressure rollers and

a pair of walls delimiting a channel into which a fabric piece is passed by the driving action of said pressure rollers, comprising in combination a swingable member pivotally supporting one of said pressure rollers; a feeler device contacting said piece of fabric and able to detect the presence of knots and entanglements thereon; a compressed air circuit for controlling the pressure between said pressure rollers through said swingable member and for displacing said one of said pressure rollers when said feeler device detects the presence of knots, entanglements and the like; the said compressed air circuit comprising in combination a source of compressed air; two pipes connected to said source; two pressure reducers branched respectively to said two pipes, each pressure reducer being provided with manual control means and associated each to a pressure indicating device; a pneumatic cylinder fed by said two pipes; a piston mounted in said pneumatic cylinder and subject to differential pressure generated by air supplied through said two pipes, one of said pipes being connected to the lower portion of said cylinder below said piston and the other of said pipes being connected to the upper portion of said cylinder above said piston; mechanical means connecting said piston to said swingable member so as to cause variation of pressure between said pressure rollers.

3,001,262
PROCESS FOR MAKING ELASTIC TEXTILE MATERIALS
Charles Schwabe Parker, Bradshaw, near Bolton, and Alexander Melville, Southport, England, assignors of one-half each to Bleachers' Association Limited, Lancashire, England, a British company, and Bradford Dyers' Association Limited, Yorkshire, England, a British company
No Drawing. Original application Sept. 7, 1954, Ser. No. 454,620. Divided and this application July 8, 1957, Ser. No. 670,387
Claims priority, application Great Britain Sept. 12, 1953
8 Claims. (Cl. 28-72)

1. The process for imparting elastic characteristics to a textile material containing a plurality of synthetic thermoplastic fibres to permit said material to be stretched and to also recover completely, consisting of the steps of (1) mechanically shrinking said material to a length shorter than the normal length of said material, (2) subjecting said material to heat sufficient to set the material in its shrunken condition but insufficient to render said thermoplastic material tacky, and (3) allowing said material to cool, the fibres of said material being crimped and retaining their original freedom of movement relative to each other.

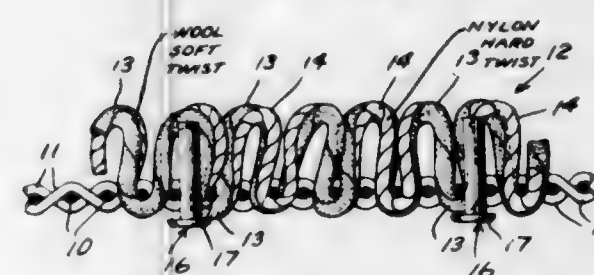
3,001,263
SHEET MATERIAL FOR PRINTING AND WRITING PURPOSES AND THE LIKE COMPRISING A SYNTHETIC FIBER FABRIC
Massimiliano Noverasco, Milan, Italy, assignor to Sola Viscosa Società Nazionale Industria Applicazioni Viscosa—Società per Azioni, Milan, Italy
Filed Dec. 20, 1955, Ser. No. 554,320
Claims priority, application Italy Dec. 23, 1954
4 Claims. (Cl. 28-74)



4. Method of manufacturing a sheet material for use as a paper substitute comprising providing a fabric having weft and warp threads of a synthetic linear polymer chosen from the group consisting of polyamide and

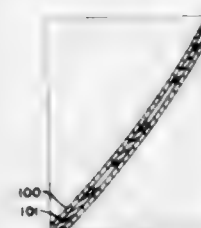
acrylic fibres; scouring the fabric for substantial removal therefrom of any substance other than the synthetic fibre material; drying the fabric and calendering it at a temperature and rate sufficient to bring the weft and warp threads to their incipient melting point whereby they are mutually sealed; coating both faces of the resulting sheet with a synthetic resin layer and thereupon coating at least once more at least one face of the sheet with a further synthetic resin layer containing a coloring pigment filler; drying each time the coating layer applied and finally calendering the coated sheet.

3,001,264
PILE FABRIC
Godfrey Bloch, 38 E. 75th St., New York, N.Y.
Filed May 11, 1959, Ser. No. 812,395
2 Claims. (Cl. 28-78)



1. A pile fabric comprising a backing material and pile loops anchored in said backing material over substantially the whole area thereof, said loops being arranged in pairs and each pair being formed by a pair of yarns in untwisted parallel relationship and in close contact, one of said yarns being composed of bulked synthetic continuous filaments having high static retentivity, and the other of said yarns being spun yarns composed essentially of wool having good static discharge properties.

3,001,265
FLAT LOW MELTING POINT METAL FILAMENT HAVING AN ORIENTED SYNTHETIC RESIN SHEATH
Robert Wendel Bundy, Greenville, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 25, 1957, Ser. No. 648,374
6 Claims. (Cl. 28-82)

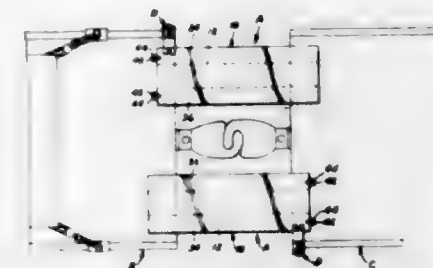


1. A substantially flat, composite filament comprising a substantially oriented sheath of synthetic linear polymer and a flat core of metal having a melting point below the decomposition point of the polymer.

3,001,266
BRIDGING PLATE AND METHOD OF MAKING THE SAME
James A. Kilbane, 4455 Ellerdale Road, Hopkins, Minn., and Sidney H. Palmer, 2729 N. Griggs, St. Paul, Minn.
Filed July 1, 1960, Ser. No. 40,381
4 Claims. (Cl. 29-155)

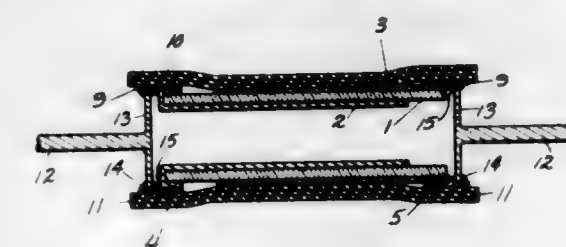
1. The method of making a bridging plate having deflected longitudinal portions consisting in forming a primary plate portion and forming a secondary plate portion of a width less than the primary plate portion,

then positioning said secondary plate portion on the primary plate portion and securing the same thereto by spaced tack welds along the longitudinal edges of said secondary plate, then forming spaced weld sections of relatively short lengths alternately and progressively



along the longitudinal edges of said secondary plate portion to form a continuous weld on both edges of said secondary plate portion, the formation of said continuous welds causing portions of the primary plate portion extending longitudinally thereof and outwardly from the continuous welds to deflect and provide a bridging plate which is arched transversely.

3,001,267
METHOD OF MAKING ELECTRICAL COMPONENTS
Jerome D. Heibel and Nello Coda, Erie, Pa., assignors to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Dec. 8, 1954, Ser. No. 473,832
2 Claims. (Cl. 29-155.5)

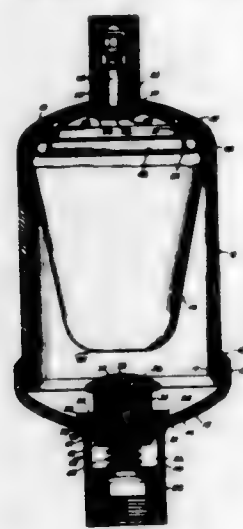


1. The method of making an electrical circuit component having a cylindrical insulating case with leads projecting axially from opposite ends from an element having a rigid cylindrical body with an external terminal surface at each end of the body, which comprises wrapping a metal band over the terminal surface at one end of the body, wrapping another metal band over the terminal surface at the opposite end of the body, each of the bands having a part overhanging the end on which it is wrapped and providing an open ended pocket, wrapping a plurality of layers of adhesive tape of insulating material around the body and bands, positioning a pair of leads to project axially from opposite ends of the element with one end of each lead in one of the pockets, and soldering said one end of each lead to the pocket in which it is positioned.

3,001,268
METHOD OF ASSEMBLING PRESSURE ACCUMULATOR
Edward M. Greer, Great Neck, N.Y., assignor to Greer Hydraulics, Inc., a corporation of New York
Filed Apr. 2, 1958, Ser. No. 725,986
1 Claim. (Cl. 29-157)

The method of assembling pressure accumulators of the type having a substantially cylindrical shell open at one end and with a port through its closed end, said shell having a deformable bladder of resilient material secured at one end in said shell to the port and an end cap having a port, said end cap being secured to the open end of the shell, which comprises the steps of pushing the free end of the bladder toward the closed end of the shell, placing the end cap on the open end of the shell to completely

close the latter while retaining the partially assembled pressure accumulator in such position that the free end of the bladder will be adjacent the closed end of the shell, circumferentially welding the joint between the shell and the end cap at the exterior of the pressure vessel only



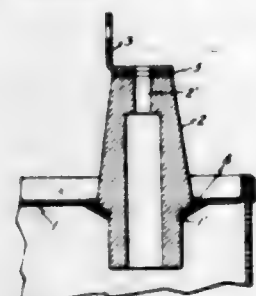
while retaining the pressure accumulator in such aforementioned position and completing the welding in a relatively short period of time such that the temperature of the portion of the shell adjacent the pushed-in bladder will not have risen to a value to injure the bladder and then plunging the welded pressure accumulator into a cooling bath.

3,001,269

COMPOSITE MATERIAL, BRAZING ALLOYS AND PROCESS OF MANUFACTURE

Hugh S. Moore and Vincent F. Procopio, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York

Filed Sept. 28, 1954, Ser. No. 457,262
6 Claims. (Cl. 29-180)



5. The method of bonding a ceramic to an aluminum member which comprises metallizing the surface of the ceramic with a fusible alloy consisting essentially of 2-10% by weight of a metal selected from the group consisting of titanium and zirconium and combinations and alloys thereof; about 10-85% of a ductile metal selected from the group consisting of lead, zinc, bismuth, cadmium, indium, and tin, and combinations and alloys thereof; and the remainder a metal selected from the group consisting of copper, silver and nickel, and combinations and alloys thereof; and brazing the aluminum member to the fusible alloy thus bonded to the ceramic surface, thereby forming a tightly adherent hermetic ceramic-to-aluminum seal.

3,001,270

DEVICE FOR TAGGING GARMENTS

Merrill P. Friedman, Chicago, Ill., assignor to Identification, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 28, 1956, Ser. No. 629,619
5 Claims. (Cl. 29-241)

1. A garment tagging structure comprising a stand adapted to be mounted upon a table surface, a horn

mounted upon said stand and having an inclined portion extending upwardly and away from the stand, said inclined portion being flat and tapered at the free end thereof, said inclined portion providing a pair of upstanding tapered side flanges for directing tag strips of flexible material therebetween and for spreading the button holes of garments suspended therefrom, stop means provided by said horn for limiting longitudinal move-



ment of the tag strips carried thereby, and means provided by said horn intermediate said stop means and the free end of said inclined portion and spaced above the tag-supporting surface of said horn for limiting movement away from said end of garments suspended from said structure by said horn projecting through the button holes thereof while at the same time permitting longitudinal sliding movement of tag strips carried therebelow by said horn to the extent permitted by said stop means.

3,001,271

BRUSH ASSEMBLY TOOL

Joe F. Perrin, Taylor, Tex.
Filed Mar. 12, 1958, Ser. No. 720,911
4 Claims. (Cl. 29-283)



1. A device for spreading commutator brushes including, a generally conical body member having an upper end and a substantially circular base with a recess therein, the body member being provided with a pair of opposed brush receiving grooves tapering downwardly and outwardly from the upper portion of the body member toward the base thereof and merging with the substantially circular base of the body member, each of said grooves extending from a point on one side of the axis of the body member at the upper portion thereof to a point on the opposite side of said axis at the base of the body member.

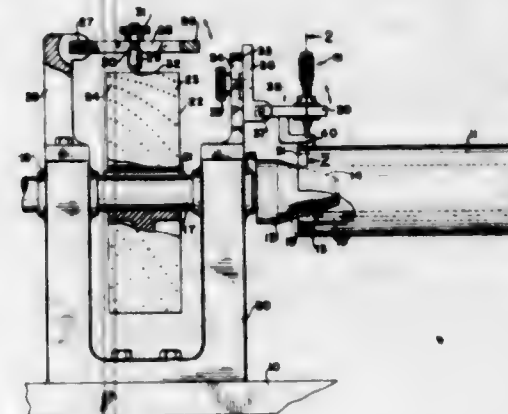
3,001,272

METHOD OF ENGRAVING PRINT ROLLER

Ray Picola, 1615 Augusta St., West Columbia, S.C.
Filed Nov. 4, 1957, Ser. No. 694,454
5 Claims. (Cl. 29-497)

1. In the method of engraving a print roller, wherein the roller is turned to size in a lathe and then transferred to and supported upon a pantograph apparatus for engraving, the improvement characterized by forming dividing marks on said print roller while the roller is mounted in the lathe, thereafter transferring the roller to the

pantograph apparatus, and aligning said print roller with respect to parts of the pantograph apparatus at one or more times during the engraving operation by aligning said dividing marks with an aligning member carried by said pantograph apparatus.



3,001,273

APPARATUS AND METHODS FOR ERECTING SUSPENSION ROOFS

John H. Wiggins, Woodside, Calif.
(801C El Camino Real, Menlo Park, Calif.)
Filed June 13, 1958, Ser. No. 741,946
5 Claims. (Cl. 29-428)



3. A method of building a metal storage tank of the type having a double suspension roof wherein two roof portions are suspended to meet at the lowest circle of the tank in which a drain trough is provided and wherein the location of said circle is predetermined, characterized by erecting a circular side wall provided at its top edge with an annular compression member designed to carry a predetermined percentage of the roof load, erecting a vertical roof support at the center of the tank designed to carry a predetermined percentage of the roof load, suspending an erection framework between the top edge portion of the tank side wall and the upper end portion of the center roof support, said framework including a rigid erection support member for said peripheral roof portion, assembling roof plates on said framework and joining said plates together so as to form a central roof portion of arced shape extending downwardly and outwardly from said center support and attached at its upper end to said support, assembling and joining roof plates on said framework and joining said plates together so as to form a peripheral roof portion of frusto conical shape extending downwardly and inwardly from the compression member on the side wall and attached at its upper end to said member, joining the outer edge of said arced central roof portion to the inner edge of said frusto conical peripheral roof portion on a substantially circular line that constitutes the lowest circle of the roof's area, and at the completion of the operation of fabricating the roof removing the erection framework and utilizing the roof load to impart a downward sag to the lowest portion of the roof to reform the peripheral roof portion from said frusto conical shaped peripheral roof portion to an arced

3,001,274

BRAZING ARTICLE AND METHOD

Edmund T. Price, James R. Woodward, and Richard M. Messer, San Diego, Calif., assignors to Solar Aircraft Company, San Diego, Calif., a corporation of California
Filed Jan. 18, 1957, Ser. No. 634,988
8 Claims. (Cl. 29-455)

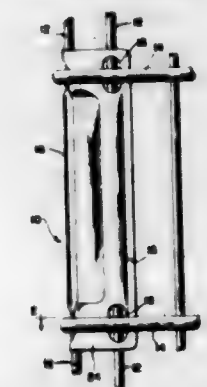


1. In a method of joining a metal cellular type honeycomb structure to a metal surface by brazing, the steps comprising: positioning on a metal surface the cell edges of one side of the honeycomb structure to be joined to the metal surface; placing a sheet of heat-resisting material, having a predetermined thickness of brazing compound in sufficient amount to form bonding fillets between the honeycomb and said metal surface retained on one side of said sheet by an adhesive, with said latter side of the sheet on the opposite cell edges of the honeycomb; applying pressure to the other side of said sheet of heat-resisting material so that the cell edges of the honeycomb structure are maintained in substantially continuous line contact with the metal surface; and heating the assembly to a temperature sufficient to volatilize the adhesive and melt the thus-freed braze compound causing it to flow by capillary action down the nodes of the honeycomb and form bonding fillets between the honeycomb structure and said metal surface.

3,001,275

METHOD OF ASSEMBLING A THIN SHEET BETWEEN TWO THICK RODS

Houston Rehrig, Los Angeles, Calif., assignor to Rehrig Pacific Company, Los Angeles, Calif., a corporation of California
Filed Dec. 31, 1956, Ser. No. 631,721
1 Claim. (Cl. 29-482)



The method of assembling a relatively thin sheet metal member between two relatively thick rod-like metal members comprising the steps of forming an opening through said sheet metal member, deforming said sheet metal member to form an elongated depression in said sheet metal member interrupted by said opening, said depression being formed to locate one of said rod members against one side of said sheet metal member with the portion of said one of said rod members extending across said opening being located to abut within said opening the other of said rod-like members when said other of said members is engaged against the opposite side of said sheet metal member, locating said other of said rod mem-

bers on the opposite side of said sheet metal member to extend across said opening in transverse relationship with said one of said rod members, and welding the abutting portions of said rod members to each other within said opening to clamp said rod members against the opposite sides of said sheet metal member.

ERRATUM

For Class 29—483 see:
Patent No. 3,002,191

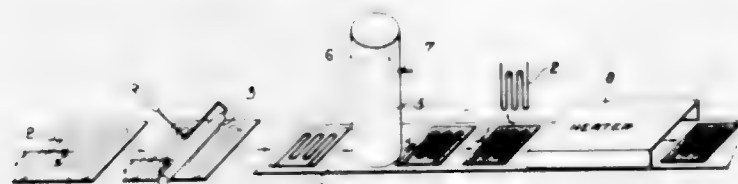
3,001,276

WELDING FLUX AND METHOD OF USING
Stuart G. McGriff, Gibsonia, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed May 12, 1955, Ser. No. 507,991
2 Claims. (Cl. 29—495)

1. In a method of gas welding metals, the step which comprises supplying trimethoxyboroxine to one of the welding gases and burning the trimethoxyboroxine with the welding gases in the welding zone to produce a boric oxide flux.

3,001,277

PROCESS FOR PATTERN BRAZING METAL SURFACES TOGETHER
Julius L. Giovannucci, Stratford, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a corporation of Connecticut
Filed Aug. 18, 1955, Ser. No. 529,224
6 Claims. (Cl. 29—495)



1. A process for pattern brazing metal surfaces together, said process including positioning a pattern shield on one of the surfaces, applying a wet flux to said surface to wet it excepting where protected by the pattern shield, dusting said surface with powdered brazing metal while wet with the flux so that this metal adheres thereto, drying the wet flux, superimposing the two surfaces, the pattern shield being removed from said surface after said dusting and prior to said superimposing, and applying brazing heat and pressure to the superimposed surfaces to braze them together excepting for the area that was protected by the pattern shield.

3,001,278
METHOD OF PREPARING METAL BLANKS FOR DRAWING
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Nov. 23, 1955, Ser. No. 548,710
7 Claims. (Cl. 29—552)

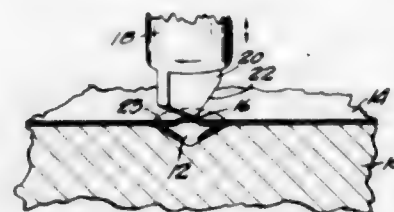


2. In a method of reshaping a flat rolled blank of polygonal outline into a circular outline of smaller diam-

eter than the distance between opposite corners of the blank, dishing the blank to draw the corners radially inwardly within such circular outline, and then flattening the blank while confining the corners to said circular outline and redistributing the marginal areas of the blank into said circular outline to afford a conforming circular perimeter for the blank.

3,001,279

METHOD OF WORKING HARD BRITTLE METALS
John F. Sherrill, Plymouth, Ind., assignor to Eva R. Lemert, Plymouth, Ind.
Filed May 28, 1956, Ser. No. 587,687
7 Claims. (Cl. 29—552)



1. The method of working sheet metal characterized by hardness and brittleness while cold and selected from the group consisting of titanium alloys, magnesium alloys, aluminum alloys and stainless steel, consisting of the step of hammering the sheet metal, while it bears on a supporting surface surrounding an interruption, at an area of the sheet metal registering with said interruption with a hammer having an elongated narrow work-engaging surface whose area is small compared to the area being hammered, said hammering occurring while said metal is cold and substantially uniformly at a rate in the range between 400 blows per minute and 16,000 blows per minute and at a force less than the fatigue limit of the metal to deform said sheet metal at the hammered area thereof, said hammer being continuously rotated to successively engage different parts of the area registering with said support interruption as long as said hammering continues and in a manner to contact all of the surface of the area registering with said support.

3,001,280

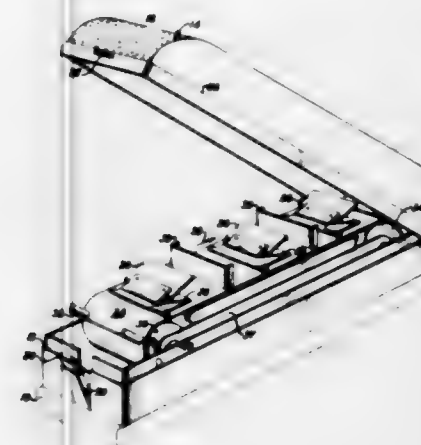
METHOD OF AND APPARATUS FOR CLEANING INGOT PIECES
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Nov. 23, 1955, Ser. No. 548,708
5 Claims. (Cl. 29—556)



1. In a method of descaling and/or removing surface impurities from an ingot piece having longitudinal side walls, compressing the piece axially between pressure members to shorten the piece and displace material thereof laterally for bulging the longitudinal side walls and thus cracking to initiate displacement of surface impurities therefrom, as an incident to the compression locking the piece to one of the members, while locked and held between the members rotating the piece by said one member, and while rotating the piece subjecting the

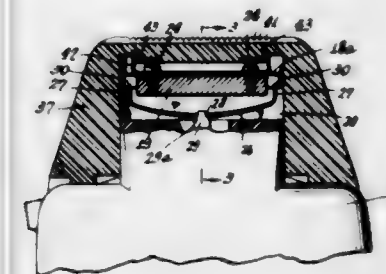
longitudinal side walls thereof to progressively increasing abrading pressure of a rotating wire brush for cleaning the longitudinal side walls of any remaining impurities.

3,001,281
DRY SHAVING RAZOR WITH BELT DRIVEN BLADES AND COOLING MEANS
James M. Nahon, Fez 9 bis, Tangier, Morocco
Filed Mar. 5, 1959, Ser. No. 797,433
Claims priority, application Morocco May 7, 1958
6 Claims. (Cl. 30—34)



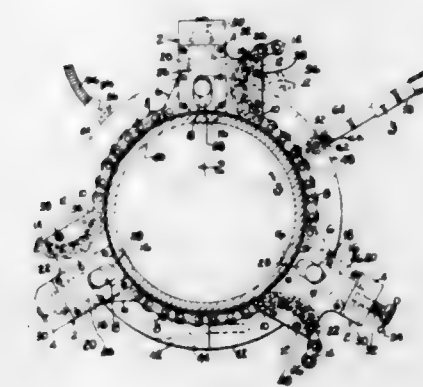
1. A dry shaver comprising a casing, an apertured grill on said casing for the admission of hairs to be cut, an endless belt in the casing adjacent to but spaced from said grill, blades on said belt for movement between the latter and said grill, and driving means coupled to said belt and driving the same unidirectionally whereby the blades cut said hair, the blades being spaced longitudinally along said belt, said shaver further comprising ventilating members on the belt between the blades.

3,001,282
ELECTRIC SHAVER HAVING A HAIR-COLLECTING MEANS AND COMB
David Pinkas, 122 Washington St., Norwalk, Conn.
Filed Mar. 26, 1956, Ser. No. 573,906
9 Claims. (Cl. 30—41)



1. A dry shaver having an elongate shearing head comprising a fixed outer cutter having an outer channel shell of E-shaped cross-section provided with longitudinally extending slotted cutter portions disposed on the stem of the E on each side of the center bar of the E, a bridge connected to the center bar of the E and to the outside bars of the E to form a rigid unit, and a reciprocating inner cutter disposed in the space between the center bar and each of the end bars of the E and engaging the inner surface of said longitudinally extending cutter portions to sever hair extending through said slots, and means for reciprocating said inner cutters comprising an oscillating lever and means drivingly connecting the inner cutters to said lever to be driven thereby.

3,001,283
PIPE CUTTING APPARATUS AND THE LIKE
Marvin W. Woods, 2117 Medford St., Escondido, Calif., and Adolph F. Graf von Soden, 4529 Noyes St., San Diego, Calif., assignors of twenty-five percent to Raymond A. Turner
Filed Feb. 13, 1961, Ser. No. 88,774
4 Claims. (Cl. 30—97)



1. In a pipe cutting apparatus of the class described, the combination of, a plurality of pipe cutting units, a roller chain interconnecting and locking said cutting units around a pipe, a pipe cutting disc adjustably mounted in said pipe cutting units, means in said pipe cutting units for adjusting the position of said pipe cutting discs progressively into cutting position; a split collar secured around said pipe and disposed in an adjacent position to said plurality of cutting units, and means in said split collar for engaging and for forcing said cutting units around said pipe.

3,001,284
TAPE CUTTER
Raymond C. Marotz, 111 15th St., Clintonville, Wis.
Filed Mar. 25, 1959, Ser. No. 801,902
5 Claims. (Cl. 30—124)



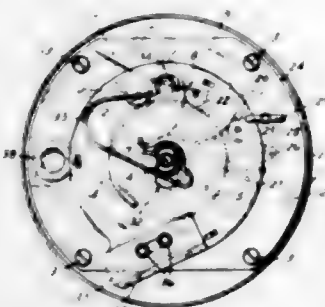
1. In a tape cutter, a single flat-faced plate, means on said plate to support a roll of tape, a one-piece cutter assembly connected with said plate and including a fixed cutter member lateral to one face of said plate, and a movable cutter member, said fixed cutter member having a slot, said movable cutter member having a blade movable into said slot and adjacent to an edge of said slot to sever the tape, resilient means connected with said movable cutter member and said plate for opposing the movement of said movable cutter in one direction and for returning said movable cutter to a rest position, a finger attached to one end of said blade and always occupying a portion of said slot to guide said movable cutter and also to prevent said movable cutter from becoming misaligned relative to said slot.

3,001,285

TIME DELAY CORD CUTTER

Carmen P. Calirelli, Waterbury, Conn., assignor to M. H. Rhodes, Inc., Hartford, Conn., a corporation of Delaware

Filed Sept. 4, 1958, Ser. No. 758,943
6 Claims. (Cl. 30-127)



1. A time delay rotary cord cutter comprising a frame, a shaft journaled for rotation in said frame, a spring operatively connected to said shaft to impart rotation thereto, a cutting edge, means operatively connecting said cutting edge to said shaft for rotation therewith, including means permitting limited radial movement of said cutting edge toward and away from said shaft, guide means in said frame engageable with a cord to be cut, said guide means positioning the cord for engagement with said cutting edge during rotation thereof and means for controlling the speed of rotation of said shaft by said spring, said means including a mutilated gear secured to said shaft, said mutilated gear having a toothed portion engageable in said means for controlling the speed of rotation of said shaft and a mutilated portion for disengaging said mutilated gear therefrom, whereby the control means is rendered inoperative by the mutilated portion of said gear thereby to release said cutting edge for uncontrolled rotation into engagement with the cord.

3,001,286

APPARATUS FOR TRIMMING GRASS ADJACENT TO WATER SPRINKLER HEADS

Richard T. Peaslee, 1210 Polk St., Salinas, Calif.

Filed Aug. 18, 1960, Ser. No. 50,524
1 Claim. (Cl. 30-207)



A grass trimmer for water sprinkler heads of the permanently-installed type, comprising: a stator unit consisting of a plurality of fixed non-rotary circumferentially-spaced radially outwardly directed blades, each terminating in a substantially horizontal cutting edge portion lying in a common horizontal cutting plane; a rotor unit consisting of a plurality of manually rotatable circumferentially-spaced radially outwardly directed blades, each terminating in a substantially horizontal cutting edge portion lying in the common horizontal cutting plane immediately above and in shearing relationship with respect to the corresponding top cutting edge portions of the blades of the stator unit; means for rotatably mounting the rotor unit immediately above and in concentric rotatable relationship with respect to the stator unit, said means for rotatably mounting the rotor unit with respect to the stator unit comprising an upwardly directed inner tubular member concentrically carried by the stator unit

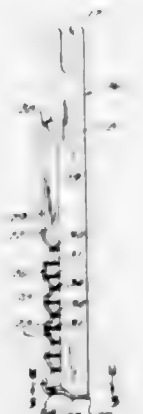
and provided with a hollow cylindrical portion at the bottom thereof adapted to encompass and surround a fixed water sprinkler head, and further comprising an outer upwardly directed tubular member carried by the rotor unit and rotatably exteriorly concentrically mounted on the upwardly directed inner member carried by the stator unit; adjustable biasing spring means effectively acting between the outer tubular member connected to the rotor unit and the inner tubular member connected to the stator unit and controllably adjustably biasing them toward each other in a manner tending to force the rotor blades against the stator blades; and actuating means for manually placing the superimposed and concentrically rotatably mounted rotor and stator units immediately around the fixed water sprinkler head and in a position for horizontal planar shearing action with respect to surrounding grass, said actuating means including manually actuable means for rotating the rotor unit with respect to the stator unit for shearing grass extending through the common horizontal cutting plane and lying around the fixed water sprinkler head.

3,001,287

VINYL STOCK CUTTING BLADE

Daniel M. Rocovich, Lake Orion, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed May 26, 1958, Ser. No. 737,579
1 Claim. (Cl. 30-355)



A straight knife cutter blade adapted to be mounted for reciprocatory movement comprising a blade member having a leading edge portion provided with a first bevelled portion forming a cutting edge and a second bevelled portion extending rearwardly of said first bevelled portion, said bevelled portions having a series of serrations of uniform longitudinal dimension, the depth of said serrations being less than the depth of said bevelled portions, and air entrapment means extending inwardly from the peak and base of adjacent serrations substantially for the depth of said bevelled portions, said air entrapment means comprising a plurality of slots extending in a direction normal to the longitudinal axis of said blade.

3,001,288

DENTAL MIRROR

Hyman Freedman, 200 W. 58th St., New York, N.Y.

Filed June 17, 1958, Ser. No. 742,684
1 Claim. (Cl. 32-69)

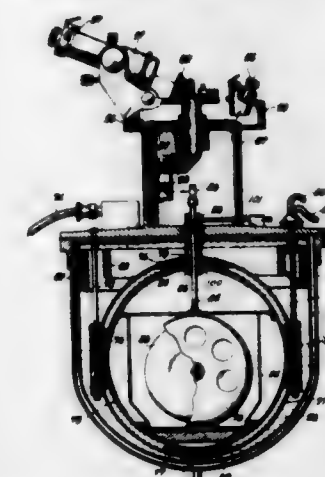
In a dental appliance, a supporting block, air and water supply tubes extended through the block, a sleeve mounted in the block, a switch contained in the sleeve, a hollow post fitted at one end into the sleeve, a mirror adjustably mounted in said post, the ends of the air and water supply tubes being connected to a spray nozzle located adjacent to the mirror, said nozzle having means to divide the spray of air and water into two streams and to direct one stream toward the mirror and to direct

3,001,290

GYROSCOPIC COMPASS

Otto Rellennmann, Clausthal-Zellerfeld, and Karl-Heinrich Stier, Dortmund, Germany, assignors to Lear, Incorporated, Santa Monica, Calif., a corporation of Illinois

Filed Aug. 8, 1956, Ser. No. 602,847
Claims priority, application Germany Dec. 28, 1955
6 Claims. (Cl. 33-72)



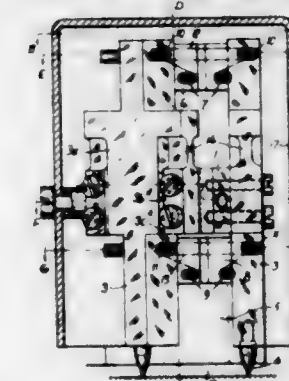
1. A gyroscopic surveying compass comprising in combination, a container; a housing in said container; means for supporting said housing in said container; a casing and means supporting the same for universal movement within said housing; a gyro in said casing, said gyro including a rotor having a horizontal spin axis; means disposed within and fixed relative to said casing for rotatably supporting said rotor for rotation about the horizontal spin axis thereof; a vertical shaft rigidly connected with said casing, a mirror secured to said shaft near the upper end thereof, a sighting telescope having autocollimator means alignable with said mirror, and means fixed with respect to said housing for supporting said telescope and adapting the same to be pivoted about a vertical axis, substantially coinciding with the axis of said vertical shaft.

3,001,291

EXTENSOMETERS

Sverker Wison Sjöström, Varsta, Sweden, assignor to Aktiebolaget Scania-Vabis, Södertälje, Sweden, a corporation of Sweden

Filed July 18, 1957, Ser. No. 672,751
Claims priority, application Sweden July 19, 1956
6 Claims. (Cl. 33-174)



1. An extensometer including a device comprising a central body part and three deflectible legs connected to the body part and having indentors to be placed on a surface to be tested, means supported by the central body part for attaching the extensometer to the surface to be tested, all of said legs being independently deflectible in different non-parallel planes each in only one plane extending substantially at right angles to said surface, the said planes crossing each other along the central axis of the body part, said indentors being located at the corners of a triangle, whereby each leg is movable independently of the others but only in one plane and

a second stream toward the area of tooth-operation, the post being provided with a movable switch arm operative on the switch, the water supply tube having an opening and the switch arm carrying a valve for closing said



opening after the said arm is moved to switch-actuating position, and an electrically-controlled valve for controlling the flow of air through the air supply tube, the operation of said valve being controlled by the switch.

3,001,289

AUTOMATIC NAVIGATOR

Victor E. Carbonara, Manhasset, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York

Filed Dec. 19, 1950, Ser. No. 201,581
4 Claims. (Cl. 33-61)



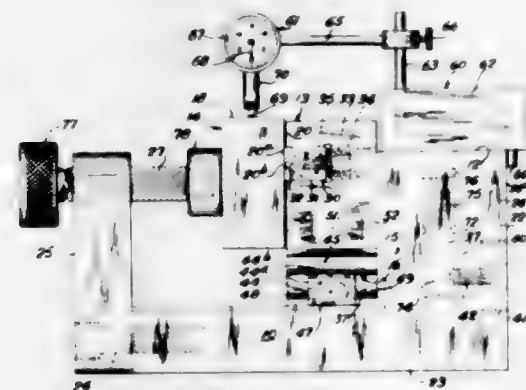
1. In an automatic navigator, a support having three mutually perpendicular axes of rotation, means mounting said support for rotation about a fourth axis, a plurality of telescopes mounted on said support in fixed angular relationship, said angular relationship being predetermined so that said telescopes are directable toward preselected celestial points of reference, radiant energy responsive means associated with said telescopes, means energized by said radiant energy responsive means for positioning said support about said mutually perpendicular axes, means providing a horizontal reference, means for positioning said horizontal reference into coincidence with the local horizontal, means responsive to deviation of said reference from the horizontal for energizing said reference positioning means, means for rotating said support about said fourth axis, and means for energizing said last mentioned means from said deviation responsive means.

radial of said central axis; in combination with electric sensing members operatively connected between said legs at a distance from the centers of deflectible movement of the legs in order to be responsive to changes in the relative positions of the indentors.

3,001,292

ARTICLE CHECKING AND MACHINING FIXTURE
Edward A. Anderson, Cleveland Heights, and Cecil W. Walton, Lakewood, Ohio, assignors to The Lamson & Sessions Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 8, 1958, Ser. No. 753,899
3 Claims. (Cl. 33-174)



1. A device for use in checking a thread rolling die or the like having a side face and coextending ridge and groove die elements extending in an angular relation to said side face, comprising a frame having a reference surface thereon, a sine bar having a longitudinal guide slot therein, pivot means connecting said bar with said frame for swinging relative thereto, positioning means comprising an insert member slidable in said slot and having a longitudinal ridge projection engageable in at least one of said die element grooves for locating the die on said bar at a predetermined position angle, spring means biasing said insert member in a direction to extend said ridge projection from said slot, holding means engageable with the die for retaining the same at the position angle established therefor on said bar by said insert member, contact means on said bar, and abutment means of a predetermined height on said frame and engageable by said contact means at a contact point spaced a predetermined distance from said pivot means, said height being equal to the product of said predetermined distance and a trigonometric function of said position angle whereby said die is positioned by said bar with said side face located in an accuracy comparison relation to said reference surface.

3,001,293

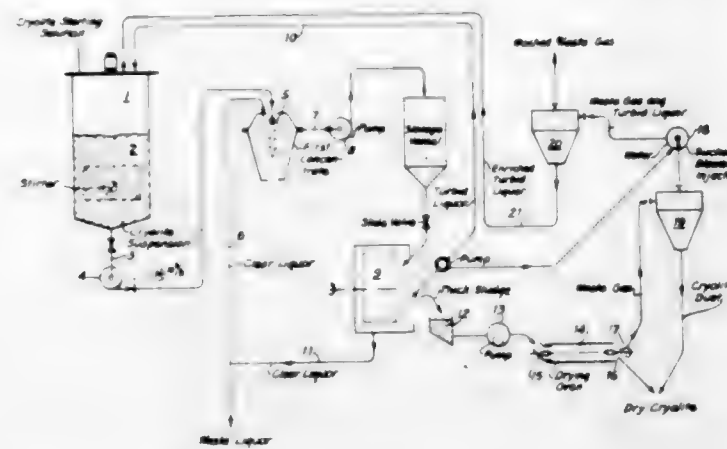
PROCESS AND INSTALLATION FOR THE DEHYDRATION OF SLUDGES

Guenter Wendt, Toeing (Inn), Germany, assignor to Vereinigte Aluminium-Werke Aktiengesellschaft, Bonn, Germany

Filed Jan. 23, 1958, Ser. No. 710,721
Claims priority, application Germany Aug. 17, 1954
4 Claims. (Cl. 34-8)

1. A method for the stepwise dehydration of an aqueous suspension of cryolite, said suspension having a solids content of about two to five percent by weight, and wherein the major portion of said cryolite has a particle size of less than 100 microns, which method comprises the steps of continuously centrifuging said suspension in thin layers under simultaneous application of capillary forces in said layers, thereby obtaining a concentrated sludge having a solids content of about 10 to 30% by weight, in which the solid matter has undergone structural changes enhancing the further concentra-

tion of the resulting centrifugate due to the combined effect of the occurring centrifugal and capillary forces, thereafter centrifuging the concentrated sludge batch-



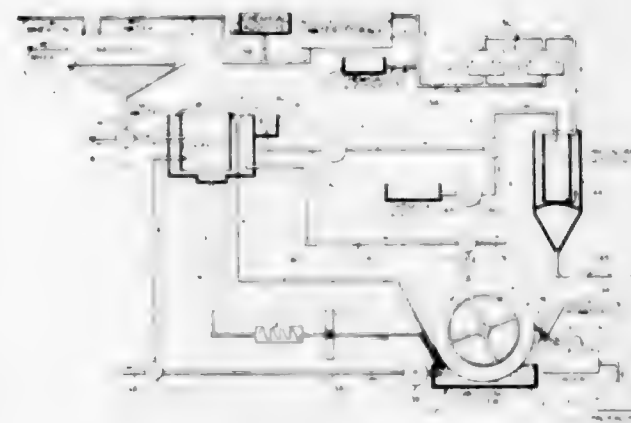
wise so as to cause reliquification of the concentrated sludge due to said structural changes, and then obtaining a thick sludge having a solids content of 60 to 80% by weight.

3,001,294

APPARATUS FOR THE RECOVERY OF SOLIDS AND LIQUID FROM FLOUR MILL WASTES

Frank R. Ofner, Portland, Oreg., assignor to Industrial Processes, Inc., Portland, Oreg., a corporation of Washington

Filed May 26, 1958, Ser. No. 737,727
7 Claims. (Cl. 34-56)



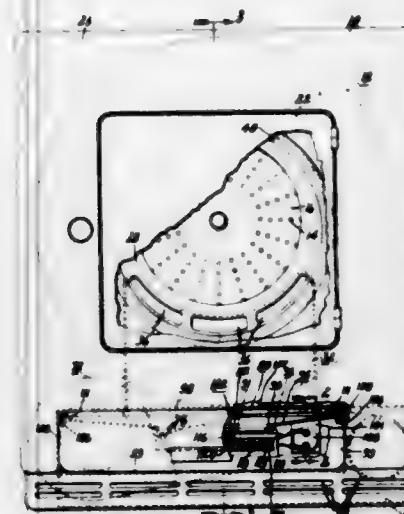
1. In a system for recovering raw wheat solids from the washer wastes of a flour mill, a wheat washer from which wastes comprising wheat solids and water are discharged, a thickener connected with said washer for receiving such discharge therefrom and being operative to concentrate the wheat solids, a filter connected with said thickener for receiving such concentrated wheat solids therefrom and being operative to remove moisture from the concentrated wheat solids, feed structure interposed between said thickener and filter for controlling the movement of such concentrated wheat solids to the filter, sensing apparatus responsive to the movement of such concentrated wheat solids to said filter for measuring the volume of the solids flow and being connected with said feed structure for controlling the same in accordance with such flow to provide a relatively uniform movement of solids to said filter during selected flow periods, pump control apparatus responsive to the quantity of material in said filter and being connected between said filter and thickener for returning material to the latter to maintain the volume of material in said filter below a predetermined quantity, and a drier connected with said filter for receiving wheat solids therefrom to further reduce the moisture content thereof.

3,001,295

CLOTHES DRIER WITH LINT ELIMINATOR

James L. Miller, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 22, 1957, Ser. No. 698,193
8 Claims. (Cl. 34-82)



1. In combination, a lint collector and eliminator adapted to be supported in the air stream of a clothes drier comprising a perforated plate for collecting the lint from said air stream, a heating element adjacent said plate to burn said lint, and a smoke altering means adjacent said heating element and downstream from said perforated plate in series air flow relationship to said perforated plate to alter the products of combustion during said burning; said perforated plate having a greater mass than said smoke altering means whereby said heating element is disposed in faster heat conducting relationship to said smoke altering means than said plate to activate said altering means before burning said lint.

3,001,296

DOCTOR ARRANGEMENT

Richard E. Carvill, Dedham, Mass., assignor to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts

Filed Aug. 18, 1958, Ser. No. 755,464
7 Claims. (Cl. 34-85)



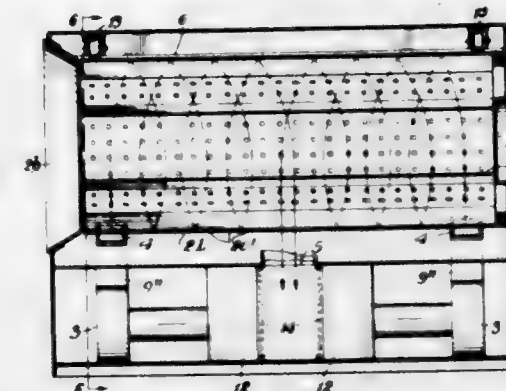
6. A doctor arrangement for use in doctoring a heated roll which comprises an angle beam supporting member of L-shaped cross-sectional configuration pivotally mounted adjacent its ends for rotation about a longitudinal axis, a doctor blade mounted along one margin of said beam and extending therefrom in position to doctor the surface of said roll, and an imperforate wall extending between the margins of the two webs of said beam to form therewith an elongated chamber of generally triangular cross-sectional configuration, means for sealing the open ends of said chamber, and a mass of liquid substantially filling said chamber and hermetically sealed therein.

770 O.G.—51

3,001,297

LAUNDRY DRYING APPARATUS

Franz Plümer, Fabriciusstrasse 180, Hamburg, Germany
Filed July 18, 1957, Ser. No. 672,835
6 Claims. (Cl. 34-133)



1. In a drying apparatus comprising a stationary housing having opposing openings, a horizontal partition wall in the lower portion thereof providing a heating chamber and a drying chamber thereabove, an open ended drum rotatably mounted above the horizontal partition wall in said housing provided with a plurality of perforations distributed throughout the periphery thereof, spaced longitudinal sealing strips between the housing and drum forming a series of chambers, openings formed in said partition wall at each end thereof, means for heating and circulating air through said drum, duct means below said partition wall for directing air toward each end of said drum and to the openings in said partition wall, said air heating and circulating means being disposed to one side of a vertical plane extending through the axis of said rotating drum and communicating with one of said chambers, said partition wall being provided with an outlet opening located on the other side of said vertical plane at a point substantially mid-way between the end of said drum communicating with another of said chambers and fan means for circulating air through said air inlets and out of said air outlet.

3,001,298

DRYER WITH BURNER

Charles A. Blesch, Burlingame, and Clark K. Benson, San Francisco, Calif., assignors to Heat and Control, Inc., San Francisco, Calif., a corporation of California
Filed Feb. 10, 1958, Ser. No. 714,124
7 Claims. (Cl. 34-212)



1. In a dryer, a housing through which the material to be dried is adapted to be passed, the material being of a type containing volatiles, a duct within the housing, burner means mounted within the duct for heating gases in the duct, means for recirculating the heated gases in the duct about the material in said housing and past said burner means in said duct, means extending into said duct adjacent the flame of the burner means for continuously supplying an excess of air to cause combustion of the volatiles driven from the material being dried and carried by the gases recirculated past said burner means, and an open-ended baffle means within said duct and surrounding said burner means to direct a portion of the gases in said duct to and past said burner and for concentrating the heat from said burner means to a

limited space within said duct to maintain therein a predetermined high temperature to insure combustion of the volatiles carried through said space.

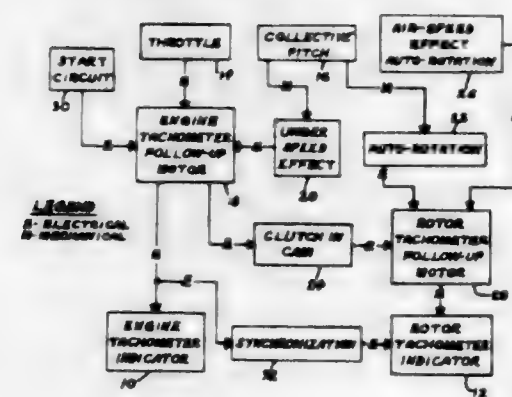
3,001,299

HELICOPTER-DUAL TACHOMETER SYSTEM TRAINING DEVICE

William O. Packer, Silver Spring, Md., and Charles W. McKee, Buffalo, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed May 11, 1960, Ser. No. 28,503

4 Claims. (Cl. 35-12)



2. A dual tachometer indicator simulation system comprising a time delay relay, an ignition switch series coupled to said relay, a first potentiometer, a second potentiometer in parallel with said first potentiometer to form a first bridge circuit, a first micropositioner connecting the movable contacts of said potentiometers, a fixed impedance interposed between said time delay relay and said first potentiometer, a first motor fed by said first micropositioner and coupled to said second potentiometer, a first tachometer coupled to said first motor, a third potentiometer coupled to said time delay relay, a fourth potentiometer in parallel with said third potentiometer to form a second bridge circuit, a second micropositioner connecting the movable contacts of said third and fourth potentiometers, a second control fed by said second micropositioner, a second tachometer coupled to said second motor, impedance means coupled to said second motor, shaft means coupled to said first and third mentioned potentiometers, control means connected to said second and fourth potentiometers, control voltages connected across the resistor portions of said potentiometers, and said driving voltages operatively connected to said motors and tachometers, said tachometers being operatively coupled to a visual indicator, and sound simulation means operatively connected to said first motor.

3,001,300

APPARATUS FOR SIMULATING THE INSTRUMENT FLYING CONDITIONS IN OPERATIONAL AIRCRAFT

Robert G. Green, R.R. 1, New Carlisle, Ohio

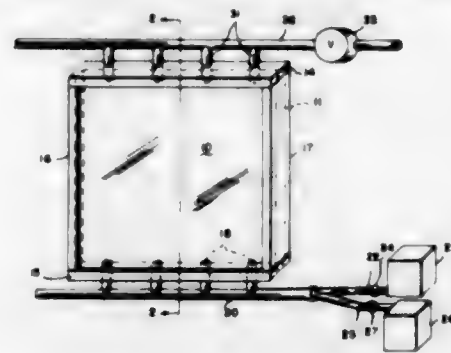
Filed Aug. 30, 1960, Ser. No. 53,015

1 Claim. (Cl. 35-12)

(Granted under Title 35, U.S. Code (1952), sec. 266)

In an aircraft windshield assembly that simulates a plurality of visibility limitations inclusive of limitations that require instrument flying and the windshield assembly comprising: a plurality of transparent members defining a closed reservoir therebetween and having edges; a plurality of channel means in sealing relation with the edges of the transparent members to provide the closed reservoir; injection nozzle means mounted in the channel means at one edge of the closed reservoir; outlet pipe means mounted in the channel means at one edge of the closed reservoir remote from the injection nozzle means;

an exhaust line connected to the outlet pipe means for evacuating the closed reservoir; a pressure relief valve in the exhaust line and controlling the pressure therein; an inlet line connected with the injection nozzle means; an air storage tank valved into the inlet line for filling the



closed reservoir with air to be removed over the exhaust line; and a closed fluid storage tank valved into the inlet line for mixing controlled quantities of colored fluid with air from the air storage tank fed into the closed reservoir to replace evacuations through the exhaust line and to impart a desired opacity to the closed reservoir.

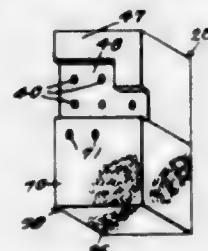
3,001,301

EDUCATIONAL DEVICE FOR TEACHING ARITHMETIC

Edward L. Carl, 2432 16th Ave., Vero Beach, Fla.

Filed Aug. 3, 1960, Ser. No. 47,276

9 Claims. (Cl. 35-31)



1. An educational device comprising three sets of objects each including a corresponding number of objects, means carried by each of the objects for detachably inter-fitting any one of the objects of a first set of said objects with any one of the objects of a second set and a third set of said objects, each of the objects of said first set containing a numerical indicia, certain of the objects of said first set containing spots representing the numerical indicia of said objects, each of the objects of the second set including numerical indicia to provide a problem in addition when combined with any one of the objects of the first set, certain of said objects of the second set having an area provided with spots cooperating with the spots of the object of the first set to provide a solution to the addition problem, each of the objects of said third set including indicia to provide a problem in subtraction when associated with an object of the first set, and all but one of the objects of said third set having an extension forming a screen for covering all or a portion of the spotted area of the object of the first set with which the third set object is combined and whereby the unobscured spotted area will disclose the solution of the problem in subtraction.

3,001,302

BROADLY TO WEARING APPAREL AND MORE PARTICULARLY TO FOOTWEAR OF THE TYPE KNOWN AS A SANDAL OR SLIPPER

Aileen Benay Farley, 1825 19th St., Vero Beach, Fla.

Filed Sept. 23, 1959, Ser. No. 841,850

3 Claims. (Cl. 36-11.5)

1. A sandal comprising a sole portion of such size and shape that it underlies substantially the entire foot of the

wearer, and a single elastic strap having the ends thereof connected to the sole portion and being connected at spaced points throughout its length alternately to opposite side edges of the sole at points spaced progressively rear-



wardly of the sole to provide a series of elastic loops above the upper surface of the sole, the strap being disposed above the upper surface of the sole portion throughout its length.

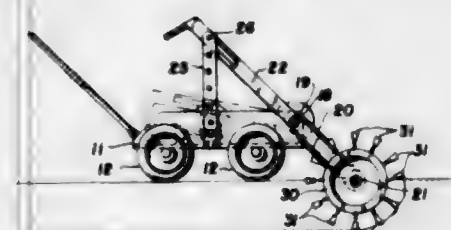
3,001,303

DITCHING MACHINE

Leroy S. Frederick, Oakvale Blvd., Butler, Pa., assignor of ten percent to Joseph E. Hampton, ten percent to Harry F. Smith, and twenty percent to Howard W. Patterson, all of Butler, Pa.

Filed Nov. 27, 1959, Ser. No. 855,776

7 Claims. (Cl. 37-94)



1. A ditching machine that comprises a frame suitable for traveling movement, a boom pivotally mounted on the frame on a horizontal axis adjacent to its inner end and its outer end projecting in the direction of travel and movable in a vertical plane about the pivotal mounting, a drum rotatably mounted on said outer end, on an axis parallel to the pivot at said mounting, digging elements disposed peripherally on the drum and having link connections with the drum that support them in radially-projected positions by centrifugal force, during rapid rotation of the drum, means for rotating the drum in a direction to move the digging elements in a direction to move earth from the ditch upon contact thereof with the ground, the elements having cutting edges on their outer ends, a semi-circular shield carried by the boom and disposed above the upper portion of the drum, and a trough carried by the boom in vertically spaced relation to one edge of the shield and extending upwardly in a sloping direction from a point below the drum to a plane above the axis of the drum.

3,001,304

ROTARY PRESSING MACHINE

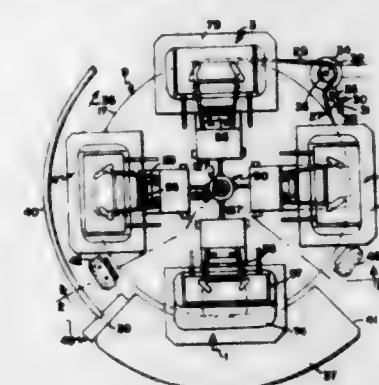
William M. Turner, Excelsior, and Donald B. Lucius, Bloomington, Minn., assignors to The Unipress Company, Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 12, 1958, Ser. No. 760,777

17 Claims. (Cl. 36-5)

1. In a rotary pressing machine having a frame mounted for rotation about a fixed axis on a stationary base, said frame having thereon a plurality of separate presses, each having cooperating pressing elements at least one of which is a steam heated element, a stationary steam pipe, a stationary condensate return line, and power means connected to said pressing elements and controls therefor, for moving one of said pressing elements into

pressing engagement with the other pressing element, the improvement comprising vertical concentric steam and condensate pipes which are fluidly connected to said steam pipe and condensate return pipe, a rotary gland having means for being mounted on said vertical concentric pipes and forming two fluid channels therein, a



plurality of annular manifolds fluidly connected to said rotary gland, said manifolds being mounted on the frame coaxially with the rotary gland, a branch feeder extending from one of said manifolds to each heated pressing element of said presses for supplying steam to said element to heat the heated pressing element and a connecting line from each steam heated element to a second of said manifolds for returning the condensate.

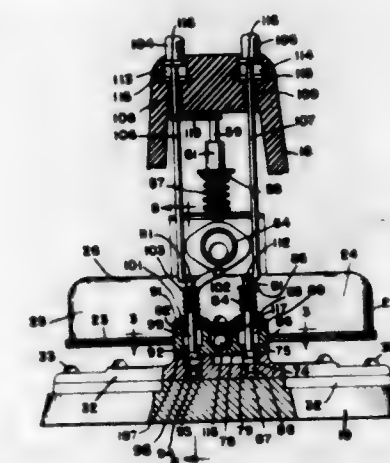
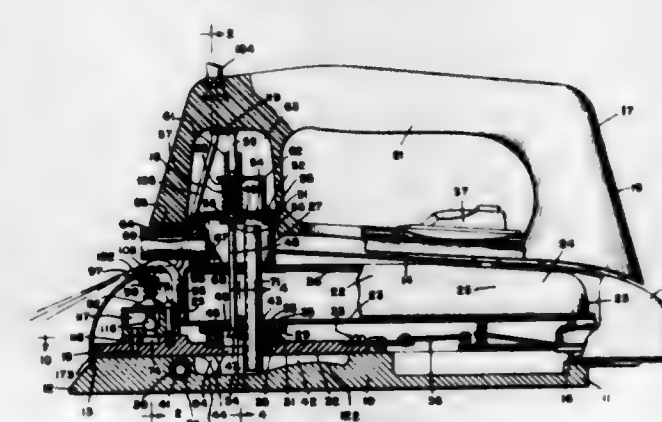
3,001,305

PRESSING IRONS

Robert Sardeson, R.R. 3, Box 474B, Mound, Minn.

Filed Jan. 12, 1959, Ser. No. 786,154

14 Claims. (Cl. 38-77)



1. In a pressing iron having a sole plate, heating means supported by and in heat conducting relation with reference to said sole plate, means forming a steam generating chamber receiving heat from said heater, steam delivery means connected to said steam generating chamber and delivering steam to the work, manually

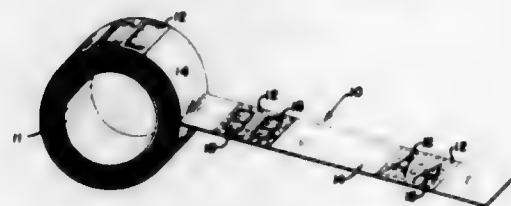
controlled valve means in said steam delivery means, a water tank disposed above said sole plate, water conducting means connected to said water tank and communicating with said steam generating chamber, the combination of a water regulating valve disposed in said water conducting means for controlling the flow of water into said steam generating chamber and having a valve seat and a valve member engageable therewith, and pressure responsive means subject to the pressure in said steam generating chamber connected to and operating said valve member to meter the flow of water into said chamber in accordance with the amount of steam used.

12. In a pressing iron having a sole plate, heating means supported by and in heat conducting relation with reference to said sole plate, said sole plate having a cavity therein, a cover for said cavity attached to said sole plate and forming with said cavity a steam generating chamber, means for feeding water to said chamber, a block overlying and attached to said cover, a steam delivery valve mounted in and carried by said block, a spray valve mounted in and carried by said block, a safety valve mounted in and carried by said block, said sole plate, cover and block being formed with passageways leading to said valves, said sole plate having steam discharge ports therein, said sole plate, cover and block having passageways communicating with said ports and steam valve, a spray nozzle, means forming a passageway between said spray nozzle and spray valve and means for detachably securing said block in overlying position on said cover.

13. In combination, a pressing iron having a sole plate, heating means in heat transfer relation with reference to said sole plate, means forming a steam generating chamber receiving heat from said heating means, water conducting means having an inlet communicating with and feeding water to said steam generating chamber, said chamber having a zone disposed in proximity to and receiving water from said water inlet and producing a mixture of water and steam, and a dry steam producing zone removed from said water inlet, distributing means connected to said steam generating chamber at the locality of said first named zone and delivering a mixture of water and steam to the work, separate delivery means connected to said steam generating chamber at the locality of said second named zone and delivering dry steam to the work, and control means for selectively controlling the flow of dry steam and the mixture of water and steam.

3,001,306

INDEX TABS AND PRODUCTION THEREOF
Walter B. Wilkinson, Wilmet Woods, near Evergreen, Colo., assignor of small interests to various assignees
Filed Feb. 20, 1956, Ser. No. 566,612
4 Claims. (Cl. 40—23)

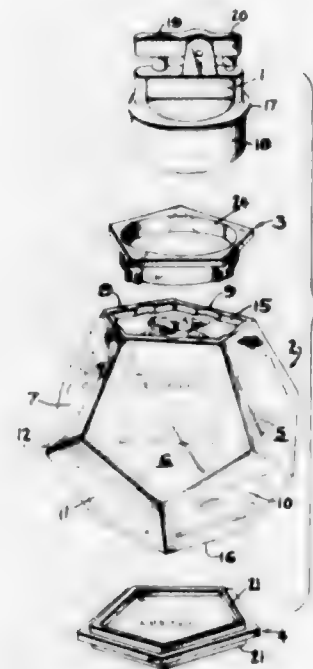


1. An index tab selectively coactable with and in partial projection beyond the margin of a sheet member, comprising a flexible, transparent strip coated on one surface with pressure sensitive adhesive, a rectangular, opaque area defined centrally of the uncoated strip surface length, and duplicate indicia defined on said area in symmetrical relation with the transverse median line thereof, said area being foldable on its transverse median line to constitute a pressure-consolidated, bilaminar,

opaque tab legibly exhibiting said indicia on its opposite faces between and projecting from the convergence of transparent strip terminal portions disposed to adhesively embrace a sheet margin therebetween.

3,001,307

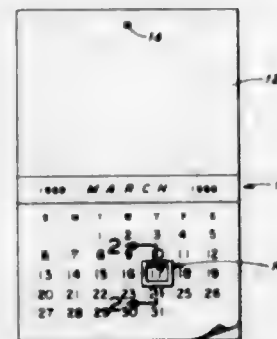
DESK CALENDAR AND LIGHTER
Fredda F. S. Steve, 450 E. 63rd St., New York 21, N.Y.
Continuation of application Ser. No. 809,849, Apr. 29, 1959. This application Mar. 10, 1961, Ser. No. 94,944
3 Claims. (Cl. 40—107)



1. As an article of manufacture, a regular dodecahedron lighter base and desk calendar having a top surface with an opening therein, an adapter in said opening to hold a lighter, the eleven remaining sides having five months of the year on the top half thereof, five months of the year on the bottom half thereof and a reversible insert on the bottom surface having one of the remaining months on one side and the other remaining month on the other side, said adapter and said reversible insert being interchangeable.

3,001,308

DATE MARKING DEVICE FOR CALENDARS
Clinton H. Potter, 89 Birch Ave., Corte Madera, Calif.
Filed Apr. 1, 1960, Ser. No. 19,298
10 Claims. (Cl. 40—110)



1. A date marking device for wall calendars having at least one page with a face having date indicia thereon comprising a focus member adapted to overlay the face of a wall calendar and substantially encircle a date on said calendar, a first plurality of magnetic poles associated with said member adjacent to said calendar, a backing member adopted to overlay the back of a page of said calendar in alignment with said marked member and a second plurality of magnetic poles associated with said

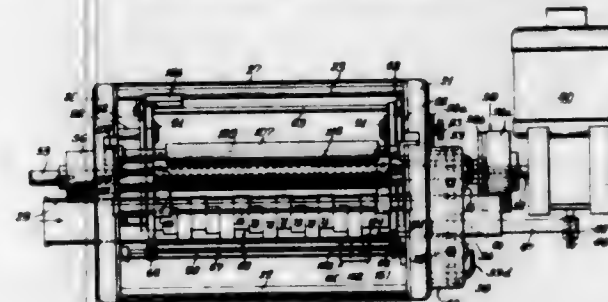
backing member, each of the north poles of said pluralities being in alignment with a south pole of the other plurality.

3,001,309
DISPLAY APPARATUS
Elvin J. Schnefers, 5 Maywood Place, St. Paul, Minn.
Filed June 6, 1956, Ser. No. 589,610
1 Claim. (Cl. 40—129)



Apparatus for displaying advertising or identification material upon an automobile having a rain gutter, comprising a supporting member adapted for upright affixation to the rain gutter of an automobile, the upper end portion of said supporting member being offset, at an angle, to extend inwardly over said automobile, on a plane substantially parallel to the curved edge portion of the roof top of said automobile, when said supporting member is affixed thereto, the offset upper end portion of said supporting member being apertured, a shaft passing through said aperture and extending downwardly therefrom toward said automobile roof top and at an angle of approximately 90° thereto, the lower end of said shaft being provided with a resilient cup adapted to bear upon the top surface of said automobile, said shaft being threaded and being provided with a first nut positioned below said offset upper end portion, and a second nut positioned above said offset upper end portion, said nuts being adjustable along the length of said shaft to cause the same to extend a greater or less distance downwardly, said shaft serving to maintain said supporting member in upright position, the lower end of said supporting member being adapted to lie against the outer surface of said rain gutter, the inwardly lying face of the lower end of said supporting member being provided with rain gutter clamping means, said means including a pair of strips fixed at right angles to each other in generally cruciform relationship, said strips being formed with a plurality of differently hooked gutter engaging tips, said means being rotatable for positioning of any desired tip into gutter engaging position, and means whereby said gutter clamping means and the lower end of said supporting member may be drawn toward each other to pinch said rain gutter between them, the outer face of said supporting member being provided with bracket means for holding advertising or identification material.

3,001,310
MACHINE FOR APPLYING TRANSFERS
Kenneth H. Brownlee, Skokie, Ill., assignor to The Meyer-cord Co., Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 572,937, Mar. 21, 1956. This application Oct. 19, 1959, Ser. No. 847,860
28 Claims. (Cl. 156—361)



1. A machine for applying transfers to groups of articles simultaneously comprising a frame, an elongated

rotatable platen for applying transfers to said articles and being movable to and from transfer applying position, said platen having a pair of platen shafts extending from its opposite ends and having groups of transfer applying means on a plurality of its sides adapted to be brought successively into operable position upon rotation of said platen for engagement with successive groups of transfers, rocker means supported on said frame and including spaced rocker plates having said platen shafts journaled therein and rockable to and from transfer applying position, a driving shaft, means operably connecting said driving shaft and said rocker means for rocking said plates to and from transfer applying position, and means operable upon rocking movement of said rocker means for rotating said platen to present a successive group of transfer applying means in operable position, said last-named means comprising a pawl and ratchet mechanism supported on one of said platen shafts and operatively connected to said platen for rotating the latter, and stationary gear means mounted in fixed relation on said frame and operatively connected to said pawl and ratchet mechanism for actuating the latter in response to rocking movement of said rocker means.

3,001,311
FLUORESCENT ARTICLE FOR USE IN THE GRAPHIC ARTS AND METHOD OF MAKING SAME

Harvey T. Holsapple, Minneapolis, Minn., assignor to Kemart Corporation, San Francisco, Calif., a corporation of California

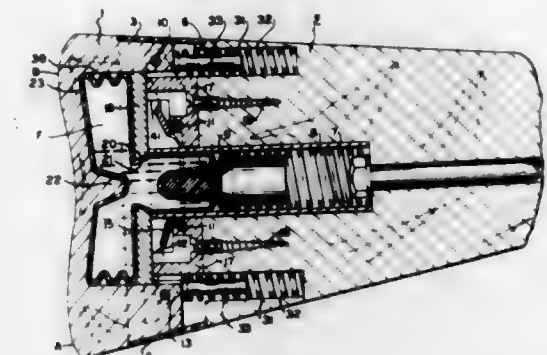
Filed Aug. 27, 1957, Ser. No. 680,578
5 Claims. (Cl. 41—26)

1. An article of manufacture comprising a transparent, colorless, plastic film; a normally colorless, normally fluorescent, layer excitable in response to ultraviolet and overlying at least one surface of said plastic film; and a transparent, colored, ultraviolet-absorbing, fluorescence-quenching material disposed in preselected portions only of said fluorescent layer.

3,001,312
FIREARM BUTT PLATE WITH LIQUID RECOIL ABSORBING DEVICE

Clark S. Campbell, Ilion, N.Y., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

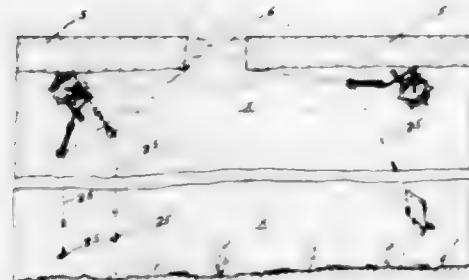
Filed Mar. 24, 1958, Ser. No. 723,225
3 Claims. (Cl. 42—74)



1. A shock-absorbing device for a firearm comprising in combination a first member adapted to be secured to a firearm, a second member aligned with said first member and attached thereto for limited movement with respect to said first member in the general line of recoil between an extended and a retracted position, a flexible container having a first portion and a second portion separated by an abutment and having a restricted passageway connecting said first and said second portions, a liquid in said flexible container, said passageway positioned to control flow of the liquid in the container and to brake relative

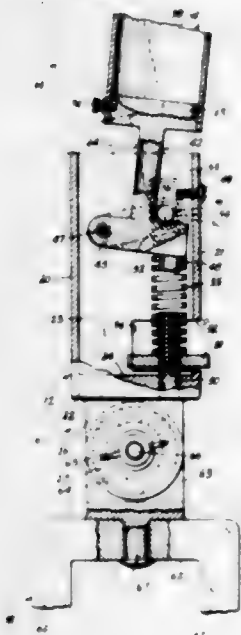
movement between said first and second members, resilient means urging said second member toward the extended position, and means cooperating with said first and second members to maintain the alignment thereof.

3,001,313
UNDER-ICE FISHING DEVICE
Ben J. Long, 4911 Osseo Road, Minneapolis, Minn.
Filed Feb. 11, 1960, Ser. No. 8,096
7 Claims. (Cl. 43-4)



1. An under-ice fishing device comprising in combination, a mounting frame a pawl mounted on said frame, a buoyant member rotatably mounted in said frame, a pair of transversely opposed toothed wheels mounted on said buoyant member activated by an actuating and fishing line, ratchet means on the buoyant member cooperating with a pawl on the frame whereby the buoyant member is rotated by the action of the pawl thereon as the frame is manually activated to engage the pawl and the ratchet, and weight means on the frame to return the same to normal position after said frame has been manually activated by an actuating and fishing line.

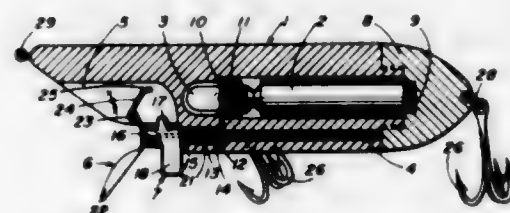
3,001,314
FISHING ROD HOLDER
Hermann A. Nahrstedt, 8619 Green Springs Drive, Afton 23, Mo.
Filed Nov. 10, 1958, Ser. No. 772,969
1 Claim. (Cl. 43-15)



In combination, a fishing rod holder comprising a supporting member of hollow rectangular cross section, a fishing rod holder member including a socket portion, a stem connected to the lower end of said socket and a transversely extending head secured to the lower end of said stem, said holder member being mounted on the supporting member in such a manner that the stem and the head extend downwardly thereinto, means pivotally connecting one end of the head to the supporting member

at one side of the longitudinal axis of the stem, locking means including a pin slidably mounted in the supporting member and adapted to releasably engage the head at a point thereon remote from the pivot pin so as to hold the same in one position of movement, said pin being spring biased into an inoperative position out of contact with said head, a cap member mounted on the pin and disposed exteriorly of said rod supporting member for setting said locking means, spring means disposed in said support member and engaging the head for snapping said fishing rod holding member from a locked position wherein the pin engages the head to an unlocked position upon said pin being moved to its inoperative position and means within said supporting member for adjusting the effective force of said spring means.

3,001,315
FISHING LURES
Oskar Zimmermann, 438 New St., Renfrew, Ontario, Canada
Filed Aug. 8, 1960, Ser. No. 48,170
4 Claims. (Cl. 43-17.6)



1. A fishing lure comprising a hollow body, at least a portion of which is translucent, a lamp and an electric circuit for energizing said lamp mounted in said body, a contact in said electric circuit movable between open and closed positions, a control member secured to said movable contact, said body having a recess in its outer surface to accommodate said control member, transverse deflector means pivotally mounted in said recess and swingable downwardly and rearwardly into engagement with said control member, first resilient means normally urging said contact into its open position but yieldable to allow the contact to close under pressure of said deflector means on the control member on passage of the lure through the water, an abutment in said recess adjacent the control member, means retaining said control member and said contact against removal from the lure, said control member being pivotable into engagement with said abutment when said contact is in open position, and second resilient means serving to retain the control member in engagement with said abutment, whereby the contact may be held open regardless of the pressure exerted by the deflector means on the control member.

3,001,316
MECHANICAL WEIGHT AND BAIT-HOOK CASTER
Frieda F. Fefelov, 3915 W. 192nd St., Homewood, Ill.
Filed Mar. 8, 1960, Ser. No. 13,532
2 Claims. (Cl. 43-19)



1. A rifle type gun bait-caster comprising, in combination, a rifle type gun frame structure, a spinning type reel including a non-rotatable line carrying spool removably mounted upon the exterior surface of said gun frame structure, said gun frame structure including an

integral barrel formed at the outer end thereof, a gun stock rigidly secured to the rear end of said gun frame structure, a long line attached at one end to said spool, a sinker with a line attaching means attached to the opposite end of said line, a bait-hook attached to a short second line which is attached to said first line in the proximity of said line sinker, said sinker having a rear end portion of semi-spherical configuration and a forward end portion of cone-shaped structure, said line attaching means attached to the apex of said cone-shaped structure, means within said gun frame structure to mechanically cast said line, said line sinker and bait hook having connected therewith a releasable power means within said gun frame structure adjacent the rear end thereof, said barrel being integrally formed with said frame structure and having an internal diameter that is less than the internal diameter of said frame structure and providing a stepped portion therebetween and forming an interior abutment, a line sinker housing rigidly secured within said barrel, said sinker housing being tubular with an enlarged hub portion at the rear end thereof and the forward annular portion of said hub arranged in contact with said interior abutment, said line sinker frictionally retained wholly within said line sinker housing, an intermediate solid, one piece movable plunger mounted within said frame structure connected to said power means, said releasable power means comprising a releasable compressible spring and trigger means, said plunger having a forward end portion and a rearward end portion with a grooved collar intermediate its ends and of a greater diameter than that of said end portions, said forward end portion of said plunger being larger in diameter than that of said rear end portion thereof, said collar arranged with its outer side in contact with said interior abutment, the inner side of said collar in engagement with the outer end of said spring, and the outer end of said forward end portion of said plunger adapted to strike the said line sinker whereby said line sinker is projected to carry the long line and also the short line with the bait-hook therewith for casting purposes.

3,001,317
VIBRATING FISH POLE SUPPORT
Nolan E. Boughton, 1003 Walnut St., Three Rivers, Mich.
Filed May 21, 1959, Ser. No. 814,867
6 Claims. (Cl. 43-19.2)



1. A vibratory support for a fish pole comprising a case including an upright wall and a top wall, an electromagnetic motor mounted on said upright wall and having a horizontal rock shaft, an electro-magnetic coil below said shaft, a bow secured transversely to the shaft and extending through the coil, a magnetizable weight carried by the bow and biasing the rock shaft to neutral position with the weight in the coil, a switch actuated by the rock shaft and closed in the neutral position of the shaft, a saddle secured to the rock shaft and projecting laterally to each side thereof, a leaf hingedly connected to said case and swingable in a vertical plane over said rock shaft, a fixed support on said motor limiting downward motion of said leaf, a forked actuating member secured to said leaf and engageable with said saddle on opposite sides of said rock shaft as said rock shaft oscillates to raise said leaf, a rubber pole rest secured to said leaf

and projecting through said top wall, and a battery mounted on the frame of said motor and connectable through said switch to said coil.

3,001,318
LURE WITH SPINNERS
Herman Miller, General Delivery, Wheeler, Tex.
Filed Oct. 28, 1958, Ser. No. 770,204
2 Claims. (Cl. 43-42.13)



1. A fishing lure comprising an elongated body representing a minnow and having an axial bore extending therethrough and screw-threaded from end-to-end, axially aligned readily applicable and removable forward and rearward shafts having adjacent inward end portions screw-threaded and threaded into the respective forward and rearward portions of the screw-threaded bore, the rearward shaft having an ornament fixed thereon at an outward end of the shaft and having a median smooth portion constituting a spindle, a first sleeve slidable and rotatable on said spindle, a large spinner pivotally hitched to said sleeve, a plurality of circumferentially spaced fishhooks having shank portions joined at equidistant places to the rearward end portion of said body, a coil spring surrounding the shank of each fishhook, the inner end of said spring bearing against said body and the outer end of the spring being spaced from a barb on the hooked end portion of said fishhook, a clevis slidable on said fishhook between the barb and a cooperating outer end of the coil spring, and a spinner pivotally attached to said clevis, the spinners on said fishhooks being relatively small compared to the first-named spinner.

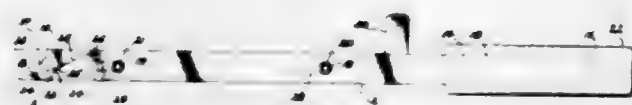
3,001,319
FISHHOOK HOLDER
Edwin W. Sonner, Jr., 91-19 Hollis Court Blvd., Queens Village, N.Y.
Filed July 8, 1957, Ser. No. 670,505
1 Claim. (Cl. 43-42.74)



In combination with a fishing line, fishhook, leader and sinker, an easily attachable and removable device for holding the leadered hook to the line but away from it, comprising a resilient wire bent into two substantially straight shank portions having ends intersecting each other at about a right angle with a closed loop between the shanks and lying in the plane thereof but outside the angle, communicating the two shanks, one shank portion, the leader portion of the device, having an eye at the end thereof for joinder to the leadered fishhook and the other shank, the attachment portion, having an end bent back on itself twice to form first and second return bends providing a flat elongated S-curve, the loop of the first return

bend of the S nearer said other shank being opened at said other shank end to a shape approximating the circular and the first return bend of the S-curve being close to said other shank, the hook being attached to the leader which in turn is held to the eye of the device, the sinker being fastened to the fishline and the line being held in easily removable relationship with the fishhook holding device by being slipped through the circular portion of the first return bend of the S-curve, turned around said other shank and first return bend of the S-curve under the second return bend, turned around the intersection of the shanks exterior to the closed loop, looped through the closed loop over the hook, leader, eye and said one shank and then being drawn tight.

3,001,320
FISH HOOK EXTRACTOR
Edwin W. Sonner, Jr., 91-19 Hollis Court Blvd.,
Queens Village, N.Y.
Filed June 9, 1958, Ser. No. 740,663
4 Claims. (Cl. 43-53.5)



1. A fish hook extractor comprising a pair of opposed flat elongated external members and an elongated flat internal member held between and connected to the external members in limited reciprocally and longitudinally slidable relationship therewith, the internal member having at its end a notch opening extending from the sides of the internal member at the end thereof inwardly to a point of joinder, and, spaced inwardly from the end of the internal member and extending sidewardly, another notch in the side of the first opening, and the external members being tapered from the end thereof toward one side in such a manner that when the external members are moved forward relative to the internal member, tapered end first, the bight of a fish hook in the joinder of the sides of the first notch opening will be forced by the tapered external member into the other, sidewardly extending notch where it will be held tightly between the tapered external members and the wall of the sidewardly extending notch.

3,001,321
MOTORIZED BUG CATCHING DEVICE
Edward Mauro, 1961 78th St., and William Mauro,
1072 E. 93rd St., both of Brooklyn, N.Y.
Filed July 7, 1959, Ser. No. 825,526
1 Claim. (Cl. 43-139)



An insect catching device comprising a rectangular-shaped base, an air blower supported on the end thereof, said blower having an axial air inlet and lateral air outlet, an electric motor on said base in line with and closely spaced from said air blower, means of connection be-

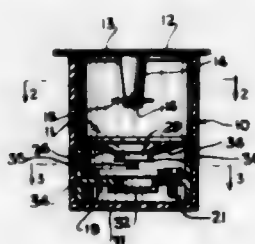
tween the motor and the blower for actuating the blower, a C-shaped air conduit having one end communicating with the lateral outlet of the air blower so that air entering said air inlet by-passes the motor, an extension on the other end of the conduit, a conical-shaped fitting having its large end in overlapping relation with the end of said extension, and an air-pervious insect receiving bag removably supported on the small end of said fitting in line with the air blower and motor, a casing mounted on the base and enclosing the blower, motor, conduit and bag, said casing having an opening at one end thereof in line with the inlet to the blower, a door on said casing in line with the removable bag, and a lamp bulb in the end opening of the casing to attract insects thereto.

3,001,322
GAME BIRD CALLING DEVICE
Lowell S. Sanders, 1508 Marsh, Kansas City, Mo.
Filed Nov. 28, 1958, Ser. No. 776,902
2 Claims. (Cl. 46-180)



1. A calling device for game birds comprising a tubular mouthpiece, a sounding pipe telescopically fitted in said mouthpiece, a grooved tongue extending longitudinally from that end of the sound pipe within the mouthpiece, a recess within the sounding pipe having an opening adjacent the tongue, the recess having a base which forms an extension and continuation of the tongue within the sounding pipe, a shoulder surface within the recess disposed normal to the base of the recess, a reed lying longitudinally of the tongue and extending into said recess, that end of the reed within the recess having portions which engage the shoulder and prevent further movement of the reed into the recess, and a V-shaped resilient clip force fitted into said recess with the apex of the V toward the inner end of the recess, one leg of the clip in contact with and compressing the reed into firm engagement with the base, and the other leg contacting and pressing against the top of the recess, said other leg extending outside the recess and spaced above the tongue, said clip having portions which engage said shoulder in the recess to index the position of the clip relative to the base.

3,001,323
SOUND PRODUCING DEVICES
Herbert R. Beebe, Richmond Hill, N.Y., assignor to
American Doll & Toy Corp., Brooklyn, N.Y., a corporation of New York
Filed May 17, 1960, Ser. No. 29,752
2 Claims. (Cl. 46-187)



1. In a sound producing device, a housing having a peripheral wall and end walls, one of said end walls being

foraminated, a hollow slide member consisting of a peripheral wall and end walls closing the ends of said slide member, said peripheral wall of said slide member frictionally fitting throughout its length the inside face of the peripheral wall of said housing for sliding movement of said slide member in opposite directions towards said end walls of the housing respectively, one of the said end walls of said slide member having a central opening with a rolled flange of arcuate shaped formation in cross-section extending peripherally about said opening, a sound producing means of hollow formation carried by the other wall of said slide member with one end of said sound producing means opening into said slide member and the opposite end of the sound producing means opening into said housing for the flow of air therethrough, said foraminated wall of the housing having a centrally disposed inwardly extending stem, a thin flexible resilient member affixed to the inner end of said stem, said resilient member being slightly larger in size than the area of said central opening and which is adapted to frictionally engage said rolled flange to close said central opening during the movement of said slide member away from the foraminated end wall of the housing for interrupting the emission of sound through said central opening produced by said sound producing means with the flow of air through said sound producing means and into said hollow slide member with the movement of said sound producing means away from said foraminated wall of said housing, a weight disposed between the end walls of said slide member for gravitationally moving said slide member toward and away from said foraminated end wall, and one of said end walls of said slide member having a bleed opening for the flow of air from said slide member during the time that said central opening is closed by said flexible member.

3,001,324
HOOP PROPELLING DEVICE
Willie Charles Walker, 532 12th Ave., Tuscaloosa, Ala.
Filed May 2, 1957, Ser. No. 656,658
2 Claims. (Cl. 46-220)



2. A toy comprising a round hoop and propelling device therefor, said hoop being made of stiff material, said propelling device consisting of a rod of stiff material with one end designated as a handle and the other end as a fork, said fork being formed U-shaped with one of the U-shape ends integral with the rod and with the plane of the back face of the U-shape positioned at a 90 degree angle compared with the straight plane of the rod; the arms of the U being parallel and similarly formed with the rod terminating at the upper end of the arm which is spaced from the body portion of the rod; said fork being of a size to fit loosely upon the hoop with the bottom of its U in contact with the hoop.

3,001,325
HOOP-ROLLING AND GUIDING DEVICE
Joseph M. Riccobono, Brooklyn, and Vincent Sbirolli,
Astoria, N.Y., assignors to Di-Rect-Aire Corp., Jackson
Heights, N.Y.
Filed Oct. 10, 1958, Ser. No. 766,583
1 Claim. (Cl. 46-220)

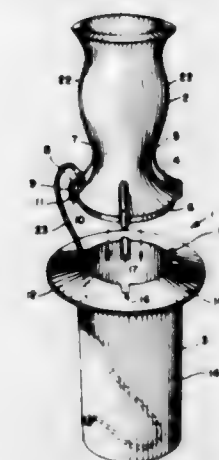
A hoop rolling device of the character described, said device being made of a single length of round wire and

comprising an elongated wire shank, the upper end of said wire shank being bent over upon itself to form a handle, the lower end of said wire shank being bent outwardly and downwardly therefrom at an angle of approximately 40° relative to the longitudinal axis of said wire shank and a U-shaped element projecting laterally and upwardly from said bent end portion, the legs of said U-shaped element being parallel and disposed in a common plane which is situated at an angle of less than 90° relative to said longitudinal axis of the wire shank, each of said legs comprising a single straight length of wire, one of said legs of the U-shaped element being continuous with said lower bent end portion, the



other leg of said U-shaped element having an extended portion projecting laterally and upwardly therefrom in a common plane with said lower bent end portion of the wire shank, said extension portion having an end piece which is bent laterally out of said last mentioned plane and in a direction away from said lower bent end portion of the wire shank, whereby said U-shaped element is adapted to receive and guide a hoop between its legs, each of said legs being adapted to contact the hoop along only a single narrow bearing line, the lower bent end portion of the wire shank being adapted to bear against the side of said hoop to steady it, said extended portion being also adapted to bear against and steady the hoop, said laterally bent end piece being pointed outwardly to prevent digging into said hoop.

3,001,326
CEMETERY VASE UNIT
William P. O'Brien, Western Springs, and Daniel Byrne,
Elmhurst, Ill., assignors to W. D. Allen Manufacturing
Co., Chicago, Ill., a corporation of Illinois
Filed July 25, 1958, Ser. No. 751,041
2 Claims. (Cl. 47-41)



1. A cemetery vase unit embodying a vase and a lower receptacle to support the vase in a position projecting upwardly out of the receptacle or to support the vase within the receptacle in an inverted position in either of said positions comprising, an outwardly radially bowed annular flange surrounding the receptacle, said receptacle having at least three notches on its inner surface, legs on the vase receivable in said notches and supporting the vase in vertical position on the receptacle at the top thereof, and a radially bowed closure surface on the vase integral with said legs, the fit of said legs and said notches being such that they normally maintain the vase in flower-hold-

ing position and prevent the vase from being tipped easily by wind pressure but such that the vase may be tipped from supporting position on the receptacle when the vase is hit violently by an article such as a lawn mower.

3,001,327 METHOD OF GROWING AND HARVESTING SUGAR CANE

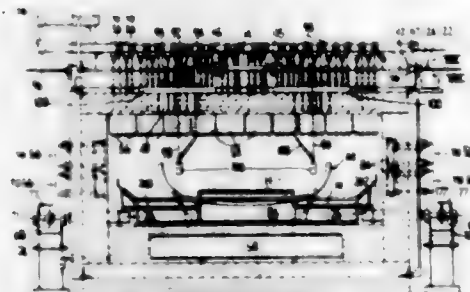
Tobias Grother, Rte. 2, Box 182A, Camarillo, Calif.
Filed Oct. 12, 1959, Ser. No. 845,900
4 Claims. (Cl. 47-58)



3. The method of growing and harvesting sugar cane which includes the step of applying burnable flexible elements to opposite sides of a row of sugar cane during the growth of the cane stalks, connecting said elements through the row at spaced intervals to bind cane stalks together in groups, the stalks of which mutually cooperate to maintain each other upright, and burning said elements at the time that the foliage of the sugar cane is burned in preparation for harvest.

3,001,328 GLASS BENDING LEHR'S AND CONVEYORS THEREFOR

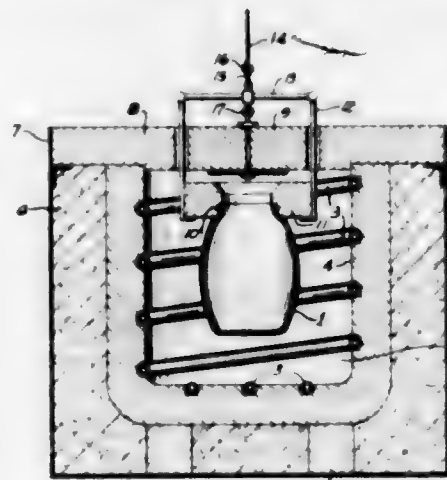
John A. Berseth, Whitehall, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 612,863, Sept. 28, 1956. This application July 25, 1958, Ser. No. 751,057
7 Claims. (Cl. 49-7)



2. In a tunnel-like lehr for bending glass sheets to non-uniform shapes comprising a conveyor for transporting glass sheet supporting molds having spaced support rails and a local electrical heating element interconnected between the support rails through said lehr and grounded stub rolls for said conveyor, the improvement comprising a set of insulated stub rolls spaced from one another longitudinally of said conveyor in laterally spaced relation to certain grounded stub rolls along one side of at least a portion of said conveyor and electrical means coupled to said set to establish a potential difference between said insulated stub rolls and said certain grounded stub rolls, whereby, the local electrical heating element is energized upon contact between the spaced rails and the laterally opposed stub rolls when a potential difference is provided.

3,001,329 PROCESS OF MANUFACTURING HOLLOW GLASS BODIES

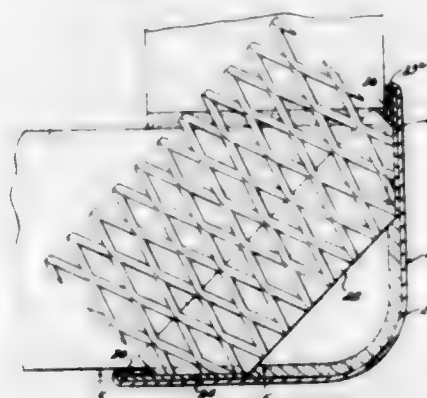
Bernard Long, Paris, France, assignor to Glaces de Boussols, Paris, France, a corporation of France
Filed July 21, 1958, Ser. No. 749,669
Claims priority, application France July 30, 1957
3 Claims. (Cl. 49-83)



1. A process of manufacturing hollow bodies of untempered glass of small wall thickness and high mechanical strength, said process comprising in combination, the steps of in a first stage forming a hollow glass body and heating it by radiation in a heating chamber to a temperature at which the viscosity of the glass is below 10^8 poises, then transferring said hollow body to a mould and cooling it therein from its external surfaces to produce a continuous reduction in the viscosity of glass from said external surfaces to the internal surfaces of said glass body while maintaining the mean value of the viscosity at from 10^9 to 10^{12} poises, in a second stage subjecting said internal surfaces to a gas under pressure at a temperature at least equal to that of said internal surfaces to expand the volume of said hollow body, and in a third stage rapidly solidifying the external walls of said hollow body at an early stage of its viscous deformation caused by the internal pressure of said gas, said rapid solidification progressing throughout the thickness of said hollow body from said external surfaces to said internal surfaces thereof.

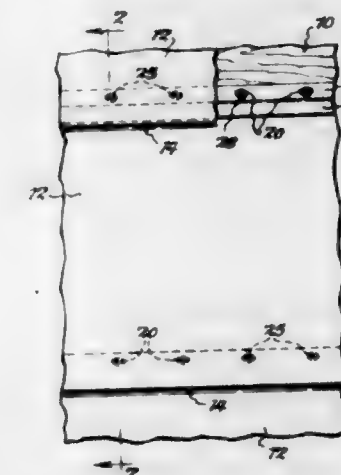
3,001,330 CORNER GUARD ASSEMBLY

Edwin J. Czaplicka, Cuyahoga Falls, Ohio, assignor to Wilkinson Chutes, Inc., Akron, Ohio, a corporation of Ohio
Filed Apr. 23, 1958, Ser. No. 730,396
2 Claims. (Cl. 50-166)



2. A corner guard assembly for positioning at a corner formed by a pair of walls each made from a plurality of superimposed courses of blocks and where the walls are in angular relation to each other and have flat vertically extending outer surfaces; the corner guard as-

sembly comprising an anchor bar of generally trapezoidal shape and having a front edge, a back edge longer than the front edge, and side edges; the side edges having parallel rear portions and converging front portions connecting to said front edge, said anchor bar having integral vertically and laterally extending wings thereon extending from said side edge front portions and adapted for positioning parallel to but outwardly of the vertical wall surfaces in which the anchor bar is assembled, said wings protruding laterally beyond parallel portions of said side edges, said anchor bar being adapted to be horizontally positioned between different vertical courses of blocks in the walls to secure said anchor bar to but to protrude from vertically spaced portions of the walls at a corner in spaced vertical alignment when a plurality of said anchor bars are used between different vertical courses of the wall blocks, and a vertically extending guard of generally V-shape in horizontal section adapted to conform to the wall outer surfaces with which the guard is to be assembled, said guard having reversely extending edge flanges thereon extending inwardly thereof shaped complementary to the inner surfaces of and engaging said wings to secure said guard to a positioned said anchor bar by telescopic engagement of said anchor bar by said guard, said edge flanges of said guard being adapted to abut on wall outer surfaces at a corner formed thereby.



and provided with apertures through which said fastening members pass to hold said units on said wall and to provide air passages extending from the interior of the wall to the exterior surfaces of said units.

3,001,331 THERMAL COVERING FOR ROOFS

Donald C. Branton, Pennington, N.J., assignor to The Pendennis Company Limited, Toronto, Canada, a corporation of Ontario, Canada
Filed June 19, 1959, Ser. No. 821,580
2 Claims. (Cl. 50-192)



1. A pitched roof having sheathing and a series of roofing material units thereon arranged in horizontal rows and in overlapping relationship pitchwise thereof, each of said units including an exposed area having high light and heat reflective characteristics and extending of the order of horizontally, an exposed light and heat absorptive area below and integral with said first area and extending of the order of vertically, said first area having an integral flap extending upwardly from its upper edge, resting on and secured to the roof sheathing and the lower edge of the second area having a flap resting on the horizontal area of the unit below it adjacent its junction with its secured flap.

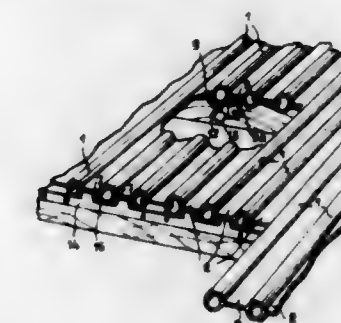
3,001,332 VENTILATING DEVICES FOR HOLLOW BUILDING WALLS

Shepard J. Wilder, Rte. 1, Concord, N.H.
Filed Jan. 23, 1959, Ser. No. 788,682
2 Claims. (Cl. 50-230)

1. A hollow building wall construction including an outer wall part having a sheathing layer, siding units applied to said sheathing, and hollow tubular fastening members driven through said siding units and through said sheathing and having their inner ends cut at an angle to their lengths and extending into the hollow interior of the wall and having their outer ends flanged outwardly and terminating at the outer face of a siding unit to provide an air passage extending through said hollow members from the interior of a wall to the exterior thereof, said siding units being made of sheet metal having

3,001,333 ROOF COVERING COMPRISING STRUCTURAL MEMBERS MADE FROM PLASTICS

Renato Piana, Turin, Italy, assignor to Edit, di Ing. Renato Piana & C., S.A.S., Turin, Italy
Filed Aug. 3, 1956, Ser. No. 601,876
Claims priority, application Italy May 5, 1956
14 Claims. (Cl. 50-268)



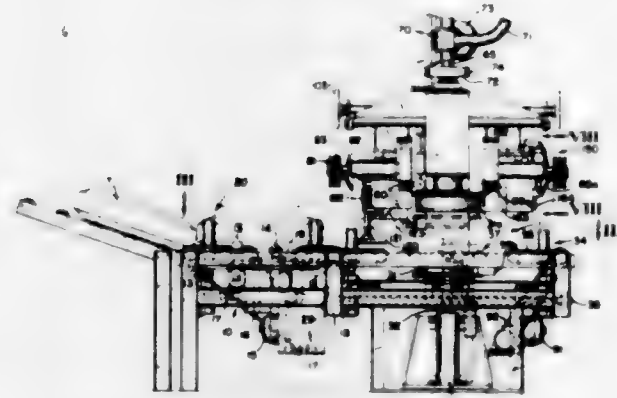
1. A roof structure for buildings and the like comprising in combination with a supporting structure first and second roof-covering members of synthetic plastic, supported on said structure in parallel relationship with one another with the first members alternating with the second members in their assembled position upon said structure, each first roof-covering member comprising three interconnected parallel tubular elements having coplanar axes, said tubular elements being equally laterally spaced, and flat ribs integral with said tubular elements and disposed between said tubular elements in a plane extending through the axes of said tubular elements to interconnect the latter, whereby the lateral configuration of each first member is defined by said three tubular elements with said intervening integral flat ribs, the lateral dimension of each of said first members being at least equal to the lateral dimension of each second member, the tubular elements at the edges of each of said first members each having a longitudinal slit therein diametrically opposite said ribs to provide communication between the cylindrical recess inside said tubular elements with the exterior of said elements, the central tubular element of each of said first members having on one side of the member a pair of wing-shaped continuous longitudinal projections symmetrically arranged with respect to a plane perpendicular to said member and extending

through the axis of said central tubular element, mechanical clamp means secured to said supporting structure and engaging each of said wing-shaped projections and being effective to secure firmly but removably and detachably said first roof-covering members to said supporting structure, and each second roof-covering member comprising a flat strip provided with integral longitudinal edge beads disposed interiorly of the cylindrical recesses of the tubular elements at the edges of the adjacent first roof-covering members, the tubular element at the edge of one first member being spaced from the opposed element of the next adjacent first member by a distance equalling the spacing between the beads of each of said second members.

3,001,334

TIRE SIDEWALL-ABRADING APPARATUS

George R. Giusti, Springfield, Mass., and Elwood A. Stiegler, Grosse Pointe Park, and Alf C. Hirsch, Grosse Pointe, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 9, 1959, Ser. No. 798,148
5 Claims. (Cl. 51-3)



1. Apparatus for precisely abrading the sidewalls of tires comprising a lower rim for engaging one bead of a tire to support the tire thereon; means for conveying tires to and from said bead-engaging rim; means actuated by the tire along said conveying means for automatically positioning the tire over said lower bead-engaging rim; an upper rim disposed above said lower rim for engaging the other bead of the tire; means actuated by the positioned tire for raising said lower bead-engaging rim toward said upper rim to grip the tire therebetween; means for inflating the tire; means for rotating the tire and means for precisely abrading the sidewall of the tire.

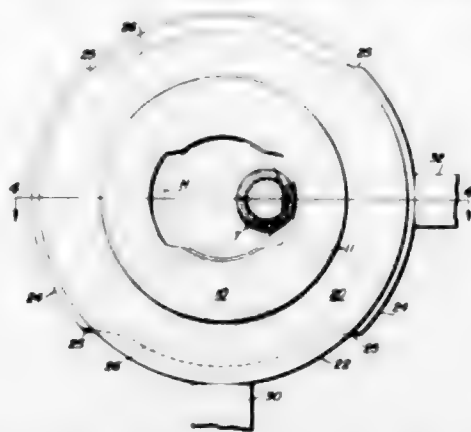
3,001,335

APPARATUS FOR MAKING A DUAL DIAMETER RING GAGE OR THE LIKE

John W. Lovely, Springfield, Vt., assignor to Bryant Chucking Grinder Company, Springfield, Vt., a corporation of Vermont
Original application Feb. 13, 1957, Ser. No. 639,902, now Patent No. 2,925,659, dated Feb. 23, 1960. Divided and this application June 2, 1959, Ser. No. 818,245
7 Claims. (Cl. 51-101)

1. An apparatus for generating a dual diameter hole in a ring gage or the like comprising: a rotatable work holder fixture for fixedly holding said gage, said fixture having its outer perimeter divided on a plane perpendicular to the fixture axis into first and second concentric surfaces, said first surface being a cylinder, said second surface being a cam having effective perimeter portions of larger diameter than that of the cylinder disposed in two diametrically opposite quadrants, said effective portions connected by ineffectual portions relieved to a dimension below and lesser than that of the cylinder; a first fixed shoe radially supporting the fixture in frictional relationship to said

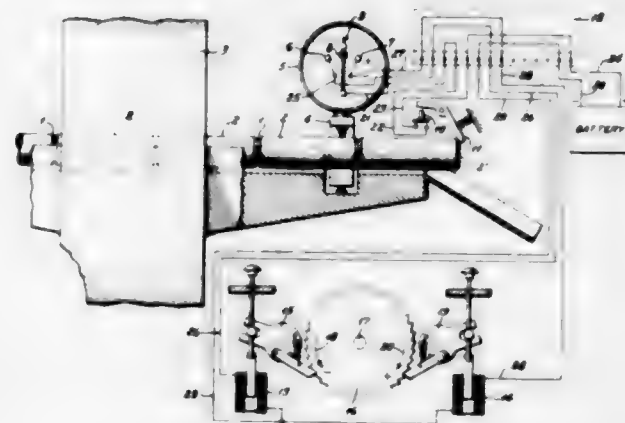
cylinder only; and a second shoe spaced peripherally 90° from said first shoe and extending across both said first and second surfaces to radially support the fixture in frictional relationship alternately with the first and second surfaces, and a grinding tool adapted to be positioned in working relationship to the dual diameter hole to be generated.



3,001,336

AUTOMATIC CONTROL DEVICE FOR CENTERLESS GRINDING MACHINE

Alfred Ernst Richard Emil Bauer, Berlin-Marienthorf, Germany, assignor to Aktiebolaget Malcus Holmquist, a corporation of Sweden
Filed Mar. 9, 1960, Ser. No. 13,784
3 Claims. (Cl. 51-103)



1. In a device for automatically controlling the distance between the grinding wheel and the counter support roller in a centerless grinding machine of the type in which work pieces are fed in succession past the grinding wheel and substantially parallel to the axis thereof, and wherein a gauging device disposed after the grinding wheel measures the diameter of each ground work piece in succession and, through a suitable electrical circuit between said gauging device and said controlling device, automatically changes the distance between the grinding wheel and the counter support as the measured diameter varies from a predetermined value, the improvement which comprises a switch disposed after the grinding wheel and actuated by one of the work pieces for interrupting the circuit between the gauging device and the automatic controlling device whenever a gap between two work pieces occurs at the gauging device and whenever a gap or shoulder in a work piece passes the gauging device.

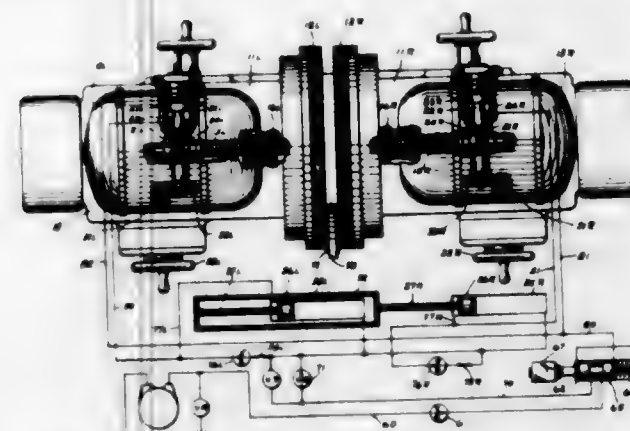
3,001,337

OPPOSED DISC GRINDER WITH CO-ORDINATING FEED CONTROL

Elman R. Dunn, Beloit, Wis., assignor to Gardner Machine Company, Beloit, Wis.
Filed Nov. 16, 1959, Ser. No. 853,304
5 Claims. (Cl. 51-111)

1. In a double discs grinder, a pair of disc supporting members, means for feeding said discs toward each other

for grinding parallel sides of a workpiece comprising a piston and cylinder for each of said disc supporting members, means for synchronizing the movement of said disc supporting members comprising means to maintain an equal rate of exhaust from both of said cylinders during

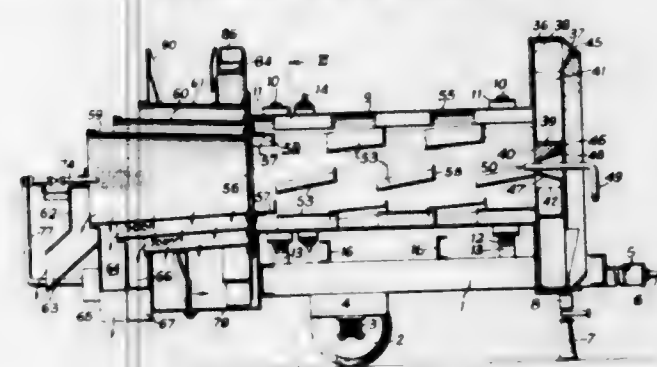


said feeding movement, said means comprising a pair of displacement cylinders, a piston in each of said displacement cylinders, a yoke for connecting said displacement pistons so that they move in unison, a conduit connecting the rod ends of each of said disc positioning cylinders with the corresponding rod and of one of said displacement cylinders.

3,001,338

PLANT FOR WASHING STONE

Frederick William Parker, Leicester, England, assignor to Frederick Parker Limited, Leicester, England, a British company
Filed Oct. 17, 1955, Ser. No. 540,919
Claims priority, application Great Britain Oct. 28, 1954
3 Claims. (Cl. 51-164)



1. In apparatus for washing bulk material and having a rotary drum within which the material is commingled with water, means for feeding the material into one end of the drum comprising a rotatably mounted feed ring having inwardly extending flanges, an inner delivery ring mounted to rotate co-axially with the feed ring and having ports therein, ducts extending radially between the ports and the feed ring for carrying the bulk material from the feed ring to the delivery ring, a conical member so mounted centrally within the delivery ring as to guide bulk material emanating from the ports into the drum, and partitions extending radially between the conical member and the delivery ring intermediate the ports to separate the flow of one port from another.

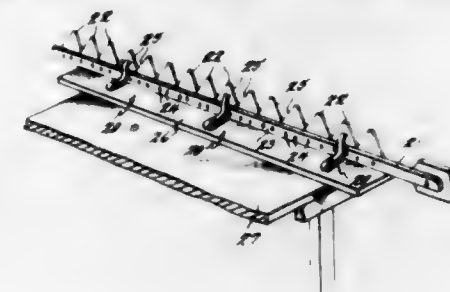
3,001,339

SICKLE AND MOWER KNIFE SHARPENING SUPPORT

Cornelius D. Vreeland III, Thunder Hill, Middlefield, Mass.
Original application June 19, 1958, Ser. No. 743,077. Divided and this application Feb. 3, 1959, Ser. No. 790,966
1 Claim. (Cl. 51-222)

A support for holding a sickle bar for mowers having cutter blades thereon while the latter are being sharpened,

comprised by an elongated base having a top and a side at right angles, a plurality of mounting brackets on said base, each bracket being comprised by a resilient strip of medium gauge sheet metal doubled back on itself and including a bottom section adapted to rest on said base and having a hole therein, a first curved portion on said bottom section positioned beyond the side of said base, and an upwardly and inwardly extending first clamping end integral with said first curved portion and terminating in a vertical plane parallel to the side of said base, and said strip including a top section having a hole

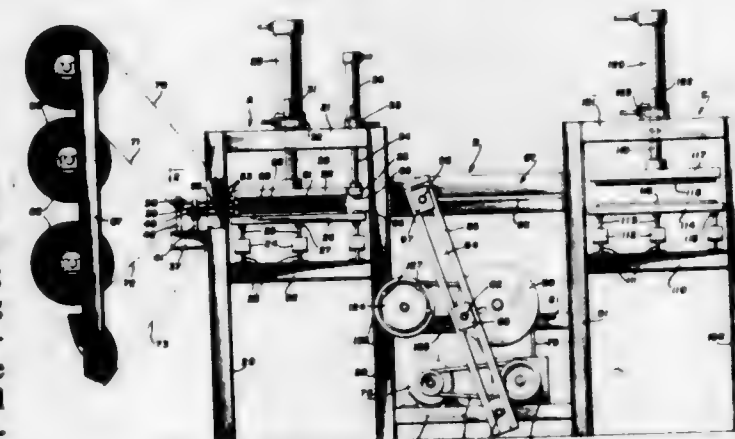


therein aligned with the hole in the bottom section, a second curved portion integral with said top section, a vertically positioned portion integral with said second curved portion, and an upwardly and outwardly extending second clamping end integral with said vertically extending portion and terminating in a vertical plane parallel to the vertical plane of the first clamping end and spaced from the latter at a distance approximately equal to the combined thickness of the sickle bar and the blades, and a bolt extending through the aligned holes in the top and bottom sections of the strips for securing the latter to the base.

3,001,340

METHOD OF AND APPARATUS FOR MAKING INFLATED ARTICLES

Clarence B. Gosman, Brentwood, N.Y., assignor to Air Pillow & Cushions, Inc., a corporation of New York
Filed Apr. 15, 1960, Ser. No. 22,519
7 Claims. (Cl. 53-28)



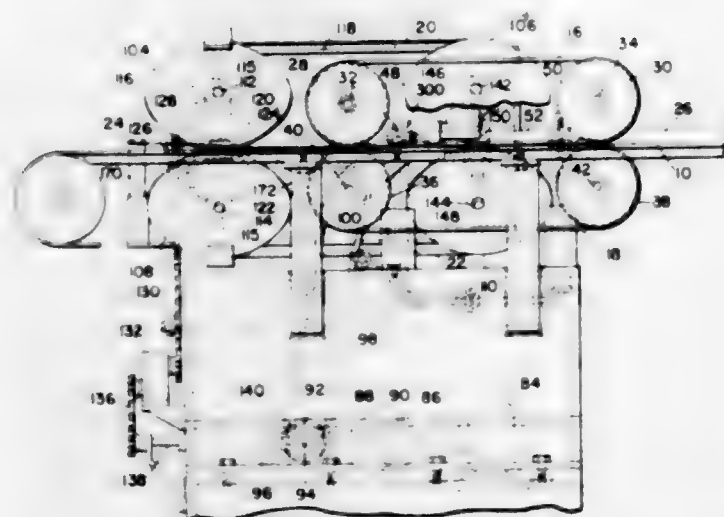
1. A method of producing air inflated bodies comprising the steps of feeding more than a pair of sheets of air impervious heat sealable material into superposed relation, engaging the superposed sheets between opposed faces thereof and along laterally spaced and vertically staggered lines to support the sheets in partially separated relation and to form them into a plurality of long longitudinal honeycomb-like interfitting separate tubular compartments, heat sealing the sheets along said engaging lines to permanently connect the sheets and render said long tubular compartments laterally non-communicating throughout their entire lengths, inflating said tubular compartments with air while engaging the sheets along said lines and heat sealing the sheets transversely at corresponding ends of the tubular compartments to permanently close such

ends while continuing to maintain the compartments inflated, and then feeding the sheets longitudinally so that additional areas of the sheets are brought into superposed relation preparatory to repeating the cycle of operation.

3,001,341 BAG CLOSING MACHINE AND CONTROL MEANS THEREFOR

Ralph L. Wing, Burlington, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

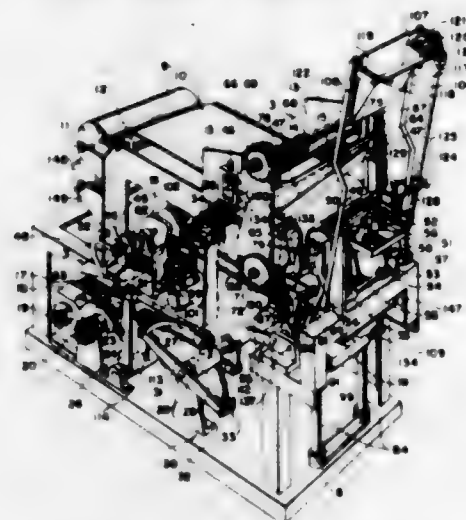
Filed Dec. 17, 1959, Ser. No. 860,116
14 Claims. (Cl. 53-76)



1. In a machine of the character described, in combination, means for closing the mouth portion of a container containing an article of merchandise, means engageable with the mouth portion for gripping and advancing containers into operative relation to said closing means, and control means cooperating with said mouth gripping and advancing means adapted to discontinue the operation of the machine in the event that a portion of the container and merchandise is engaged by said gripping and advancing means.

3,001,342 PACKAGING MACHINE

Karl V. Forsberg, Kristallvagen 114, Hagersten, Sweden
Filed Oct. 17, 1958, Ser. No. 767,989
Claims priority, application Sweden May 20, 1954
27 Claims. (Cl. 53-112)

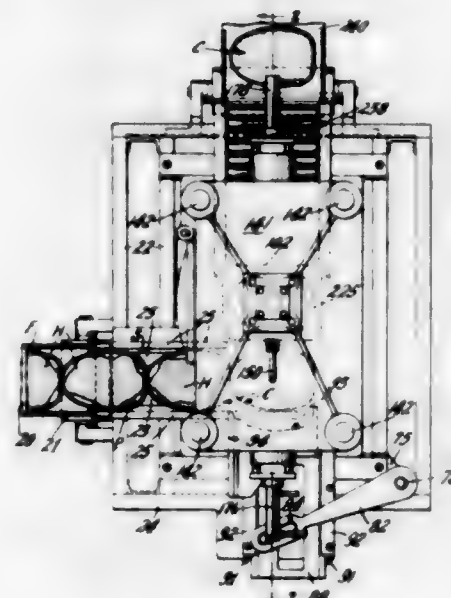


1. A wrapping machine, comprising in combination, a pair of pliers, means for periodically advancing a strip of wrapping material towards said pair of pliers, said pliers having means operable and arranged to catch and hold the foremost end of the strip, means for forming a trans-

verse fold of the strip between the feeding means and the pliers, clamping members arranged to press together the two opposite open ends of the fold somewhat inside the longitudinal edges of the strip, cutting means for removing the fold from the rest of the strip, and means for sealing the three open ends of the fold outside said clamping members.

3,001,343 CANNING MACHINE

James Henry Gordon, West Orange, N.J., Stanley Arthur Peterson, Rochester, Minn., and George Martin Stone, Westfield, N.J., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 16, 1959, Ser. No. 840,318
9 Claims. (Cl. 53-112)

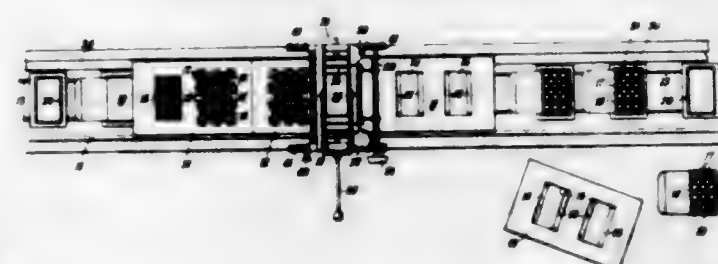


1. In a machine wherein a movable presser plate is utilized to apply pressure against the exposed surface of a loosely fitted irregularly shaped ham disposed within an open can of different shape, to conform the ham to the shape of said can, said machine having movable means engageable with said can to prevent deformation of the can body walls during the application of pressure to the ham: the improvement comprising a fixed apertured vacuumizing chamber for receiving said presser plate and said can engaging means, means for elevating said can and its contained ham through said aperture into said chamber, and means for vacuumizing said chamber prior to the application of pressure to said ham by the presser plate to remove residual air from said can.

3,001,344 PACKAGING APPARATUS

David Charles Morton, Reading, and Percival James Packman, Twyford, England, assignors to The Forgrave Machinery Company Limited, Leeds, England, a company of Great Britain

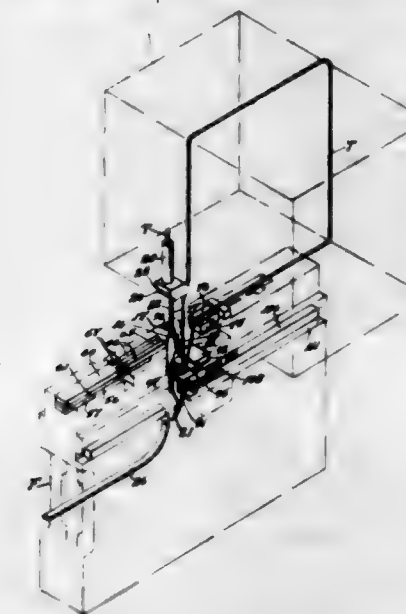
Filed June 16, 1959, Ser. No. 820,789
7 Claims. (Cl. 53-124)



1. Apparatus for packing into boxes or the like assemblies of articles to be packed, each of said assemblies rest-

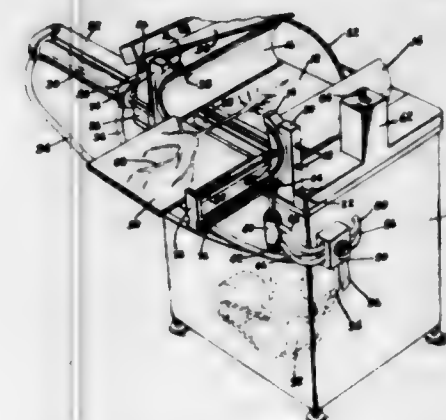
ing on the upper surface of a flat sheet and said apparatus comprising carriers, each having a recess in its upper surface for the reception of said sheet and the assembly resting thereon, an aperture in the base of the recess and flexible leaves projecting inwardly from the periphery of the recess, said leaves serving to support the undersurface of said flat sheet and being capable of yielding to permit of downward passage of the sheet and the articles through the aperture, an intermittently operable conveyor for feeding said carriers in succession to a transfer station, another intermittently operable conveyor situated at a lower level for feeding boxes in succession to the transfer station, mechanism for compacting the assembly of articles on each carrier to reduce its overall area on arrival of said carrier at the transfer station, and mechanism, operable while the conveyors are dwelling at the transfer station with a carrier in register with a box, for transferring the sheet and the compacted assembly downwards through the aperture in the carrier and into the box.

into a clip in gripping engagement with parallel cords, and a cord severing device interposed between said hold-



ing members and said clip forming members for severing parallel portions of the cord beyond the clip.

3,001,345
BUSH PACKING MACHINE
Zella C. Zeller, Des Moines, Iowa, assignor, by mesne assignments, to Jack Scoonover, Des Moines, Iowa
Filed June 17, 1959, Ser. No. 820,922
16 Claims. (Cl. 53-124)

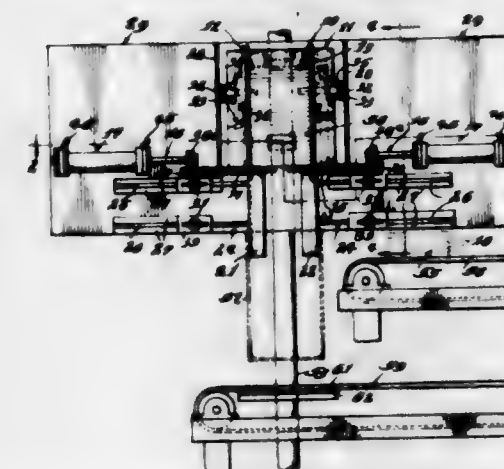


1. In a bush packing machine, a loading table, a pair of shoes movably secured to said loading table, a cover plate movably secured to said loading table and selectively secured down against said shoes and releasable to move away from said shoes; means secured to said loading table and at least one of said shoes for spacing and placing said shoes adjacent to each other selectively; means secured to said loading table and one of said shoes for moving said shoes away from said loading table when they are adjacent to each other; an ejecting member movably secured to said loading table to move between said shoes when they are adjacent to each other; and means secured to said loading table and said ejecting member for moving said ejecting member.

3,001,346
SECURING APPARATUS
Walter Kivi, Torresdale Manor, Pa., assignor to R. H. Hood Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 2, 1959, Ser. No. 824,610
18 Claims. (Cl. 53-135)

1. Securing apparatus for applying and securing a cord in encircling relation to an article comprising a frame, a supply of strip material, members in said frame for forming a portion of said strip material into a U-shaped form and severing the same from the strip, cord end holding members below said forming members, a needle guiding and holding the cord and advancing the cord to a position for engagement by said holding members, members for forming the severed strip material

Apparatus for collecting and bagging a stack of articles to be shipped in bags containing a predetermined number of said articles, comprising a hopper for receiving and confining said articles in stacked relation, spaced parallel plates forming an enclosure for said hopper, said plates including a rear plate having a vertical standard for supporting said apparatus, front plates disposed in a plane parallel to the rear plate and spaced apart leaving an opening for access to the hopper, parallel side plates extending between said front and rear plates to enclose the frame structure, said side plates being placed at the outer edges of the front and rear plates and at the edges of the front plates defining the access opening, said inner side plates and said rear plate defining the maximum area enclosed by the hopper, said hopper comprising a rear wall and spaced side walls with an open front, brackets for adjustably mounting the rear and spaced side walls of said hopper on said spaced front and rear plates, a pair of horizontal reciprocating slides mounted below said hopper which when retracted release the stack from the hopper, pneumatic actuating means mounted in said enclosure to simultaneously advance or retract said slides, spaced vertically-projecting L-shaped guides mounted below said reciprocating slides, means on said front and rear



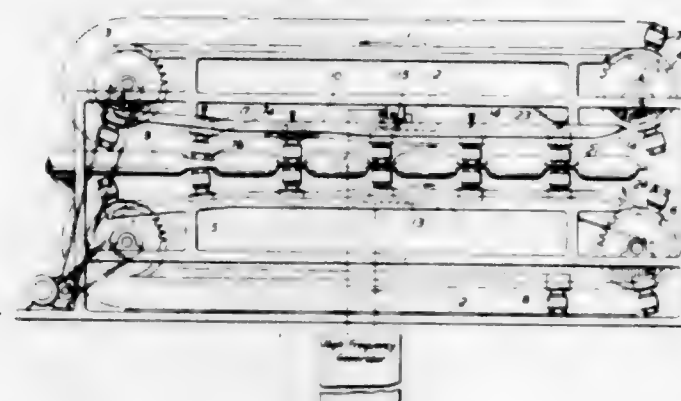
plates for adjustably mounting each of said guides, said guides being mounted in substantial alignment with the sides, rear and front of said hopper for receiving and guiding said stack into a bag into which said guides extend, a moving conveyor disposed below and adjacent the bottom of the bag and in vertical alignment with said hopper and guides, and a cushioning means below the surface of the conveyor in alignment with said hopper and guides for cushioning the fall of the filled bag, whereby as the stack of articles is discharged from the hopper said stack passes in vertical alignment through said guides and drops by gravity into the bag and carries along the bag with the articles onto and is carried away by the conveyor.

3,001,348

APPARATUS FOR THE CONTINUOUS PRODUCTION OF FILLED CONTAINERS

Leopold Rado, deceased, late of London, England, by Dorothy F. Pickering, executrix, 212 St. John St., London, England

Filed June 13, 1957, Ser. No. 665,882
7 Claims. (Cl. 53-182)



4. A machine for the continuous production of pliable, liquid-filled and airtightly sealed containers, formed from a tubing made at least in part of a thermoplastic material and which is filled with the liquid to be packaged, comprising a pair of opposed endless conveyors each comprising a continuous conveyor member mounted to move in a loop-shaped path with runs of the two conveyor members extending in opposed relationship, a plurality of pressing members extending transversely across and secured to each of the conveyor members at equally spaced distances from one another, means for driving both conveyor members simultaneously so that said opposed runs move in the same direction and at the same linear speed from the inlet end of the conveyors to the outlet end thereof and with the spaced pressing members on one conveyor member disposed directly opposite to the spaced pressing members on the other conveyor member, guiding means, operative while the conveyors are being driven, for moving the opposed pairs of pressing members on said runs of the conveyor members progressively closer together from a spaced apart relationship at said inlet end of the conveyors where a liquid-filled tubing is introduced therebetween to an intermediate position between said inlet and outlet ends of the conveyors at which the opposed pairs of pressing members are close together and press therebetween said tubing and bring the inner walls of said tubing into contact, said guiding means maintaining the pressing members pressed together during further movement beyond said intermediate position for a length of travel exceeding the spacing between adjacent pressing members on a conveyor member whereafter the pressing members of each pair move apart at said outlet end of the conveyors, electrically energized means for heating the parts of the tubing pressed together between opposed pairs of pressing members and sealing together the contacting wall thereof, and regulating means controlling the energization of said heating means for each pressed part

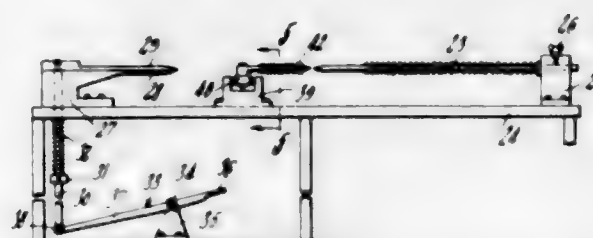
of the tubing for a part only of the period during which said pressed part is pressed between its associated pair of pressing members and stopping said energization before said associated pressing members complete the said length of travel beyond said intermediate position and move apart.

3,001,349

APPARATUS FOR PACKAGING RUBBER BANDS

Roderick W. Hong, 37 Elm St., Melrose 76, Mass.

Filed Nov. 27, 1959, Ser. No. 855,666
12 Claims. (Cl. 53-197)



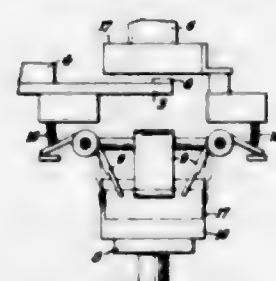
1. Apparatus for disposing a predetermined number of rubber bands on a rectangular body portion of a card having opposed band retaining end portions, comprising means operative to arrange a plurality of rubber bands on an elongated rod in co-axial relation thereto, means for supporting said rod with said plurality of rubber bands thereon in a horizontal position on a bench, a pair of normally disposed spindles supported on said bench in horizontally spaced relation to said rod, said spindles being normally in contacting relation, a transfer spindle disposed on said bench intermediate said rod and said pair of spindles for transferring a predetermined number of rubber bands from said rod to said spindles, means supported by said bench for separating said pair of spindles for expanding said plurality of rubber bands into elongated flat form, said card being inserted into said predetermined number of rubber bands when in their expanded condition, and means for automatically returning said spindles to normal contacting relation for removal of the bands with the card therein from said spindles.

3,001,350

PACKAGING MACHINES

Hendrik Johannes Hebl, Rotterdam, Netherlands, assignor to The Forgrave Machinery Company Limited, Leeds, England, a company of Great Britain

Filed June 8, 1959, Ser. No. 818,586
Claims priority, application Great Britain June 10, 1958
5 Claims. (Cl. 53-245)



5. Apparatus for loading groups of articles into cartons in successive layers, comprising a lifting platform, a conveyor for feeding open mouthed cartons in succession on to said lifting platform with their open mouths upwards, a suction head aligned with the lifting platform, means for feeding a procession of articles to a position beneath said suction head, a plurality of resilient guide fingers positioned at a fixed level in the apparatus between the article feeding means and the lifting platform and extending in downwardly converging relationship, suction head actuating means for periodically moving the

suction head to engage a group of articles beneath it and thereafter downwards to load said group of articles into the open mouth of the carton on the lifting platform and thereafter returning said suction head to its initial position, and platform actuating means operating in timed relationship with said suction head actuating means for raising said platform and a carton thereon towards said suction head and thereafter lowering said platform in stages to permit of successive introduction of layers of articles into said carton and finally to return the loaded carton to the conveyor, said platform actuating means raising said cartons to a level at which said fingers enter the open mouth of the carton to facilitate entry of articles into said cartons and said suction head actuating means moving said suction head downwardly to an extent sufficient to move said articles past said fingers, said articles in passing said fingers displacing them into parallel relationship and said fingers returning resiliently after said articles have passed them into converging relation to strip said articles from said suction head on return movement thereof to its initial position.

3,001,351

WRAPPING MACHINES

Leonard Brook, Bramhope, and Rowland Walker, Dewsbury, England, assignors to The Forgrave Machinery Company Limited, Leeds, England, a company of Great Britain

Filed Nov. 18, 1960, Ser. No. 70,244
Claims priority, application Great Britain Nov. 18, 1959
8 Claims. (Cl. 53-370)



1. A twist wrapping machine comprising a rotary carrier head carrying a plurality of pairs of article grippers and, associated with each pair of article grippers, two pairs of twister jaws mounted on opposite sides of the article grippers and operable to twist the ends of wrappers surrounding articles held in the article grippers, means for imparting continuous rotation to the carrier head, feed mechanism at a loading station for feeding in continuous succession articles, each enclosed in an open-ended tube of wrapping material, into the article grippers with the tubes of wrapping material extending tangentially to the carrier head as they enter the article grippers, means for rotating each pair of article grippers in relation to the carrier head, after it leaves the loading station, into position to present the ends of the tube of wrapping material to the associated twister jaws and for returning said pair of grippers to its original orientation after the twister jaws have operated and before it returns to the loading station to receive another entubed article, and means for closing the article grippers upon articles received by them at the loading station and opening them again after the twister jaws have operated.

3,001,352

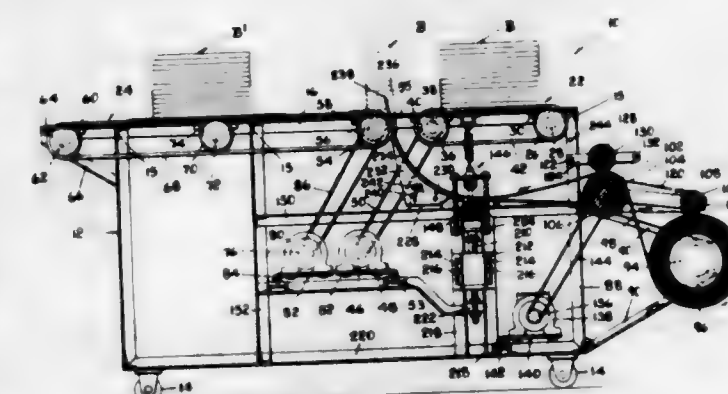
APPARATUS FOR POSITIONING AN UNDERWRAP SHEET BENEATH MATERIAL TO BE WRAPPED

James Harrison, Thornhill, Ontario, Canada, assignor to The Globe and Mail Limited, Toronto, Ontario, Canada, a corporation of Ontario

Filed Sept. 16, 1959, Ser. No. 840,279
4 Claims. (Cl. 53-389)

1. Apparatus for positioning an underwrap-sheet beneath material to be wrapped comprising horizontally dis-

posed conveying means for transporting material to be wrapped along a predetermined path of travel from one station to another, means for supporting a continuous web of wrapping material, web dispensing means for dispensing the continuous web of wrapping material from beneath said conveying means into transverse intersecting relation with respect to the path of travel of said conveying means, cutting means parallel to said web dispensing means, to sever uniform lengths of said wrapping material, power means connected to said conveying means, means for operating said web dispensing and cutting means, sequence-timing means connected to and automatically operating said power means to operate said conveying, web dispensing and cutting means in timed sequence, said conveying means comprising a pair of independently driven



endless conveyors disposed in longitudinally spaced end-to-end relation with upper runs in substantially coplanar relation, and guide means interposed between said cutting means and said path of travel of said conveying means and directed toward adjacent ends of said two endless conveyors, said guide means comprising an arcuate plate mounted on a horizontal axis of rotation and having one end adjacent said cutting means and terminating in an upper edge movable longitudinally between the adjacent ends of said spaced conveyors and below said substantially coplanar conveyor runs, said guide plate including means for locking retaining said plate in an adjusted position for orienting the leading end of the uniform lengths of wrapping material at different elevations with respect to the upper runs of said endless conveyors.

3,001,353

METHOD OF AND APPARATUS FOR MANUFACTURING DYNAMICALLY BALANCED, STRANDED ELECTRICAL CONDUCTORS

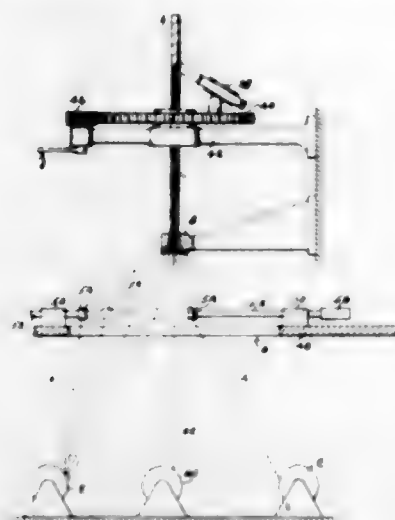
Rhea P. Lapsley, Ridgewood, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of New Jersey

Filed Mar. 2, 1959, Ser. No. 796,580
5 Claims. (Cl. 57-12)

4. An apparatus for manufacturing stranded electric conductors, said apparatus comprising, in combination, a plurality of let-off reels, each carrying a conductor strand; a closing die; a take-up reel; means intermediate the said die and said take-up reel for advancing the conductor strands simultaneously from the let-off reels through said die to compact the strands and for twisting the compacted strands uni-directionally and progressively to provide a conductor in which the strands are laid up in layers; and non-rotatable guiding means intermediate the let-off reels and said die for guiding each strand to the die, said guiding means being adjustable to deflect the conductor strands sequentially in a direction which is restricted to straight-line movement toward and away from the conductor axis, so to vary the angle of approach of each strand to the die that, in a complete transposi-

tion length of conductor, all strands will have substantially the same length of lay, each strand will occupy all

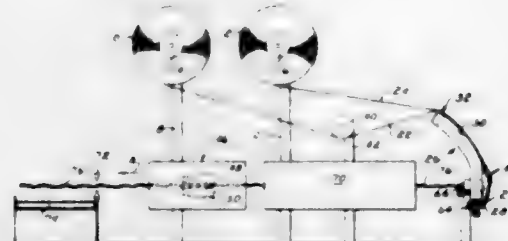
yarn length between said twist arresting point and said twister-winder takeup, and permitting the real twist to freely feed backwardly substantially unimpededly into



strand positions in each layer, and all strands will have substantially equal electrical impedance.

3,001,354 METHOD AND APPARATUS FOR MAKING TWISTED PLASTIC STICKS

Harry E. Davis, 510 E. Cuyahoga Falls Ave.,
Akron 10, Ohio
Filed June 2, 1958, Ser. No. 739,258
9 Claims. (Cl. 57-31)



1. A continuous method of making a substantially rigid rod-like article of manufacture from one or more adhesively coated strips of cellulosic material, which comprises continuously drawing the strip or strips over an arcuate surface and through an elongated die member, heating said die member and surface to a temperature sufficient to activate the adhesive coatings on the strip or strips, simultaneously twisting said strip or strips as they are drawn through the die member to cause adherence between all the folds of the twisted strip or strips and to compact them, and continuously cooling the resultant material to set the adhesive and stiffen the material.

3,001,355 METHOD AND APPARATUS FOR PROCESSING YARN

Cyril G. Evans, Clemson, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware

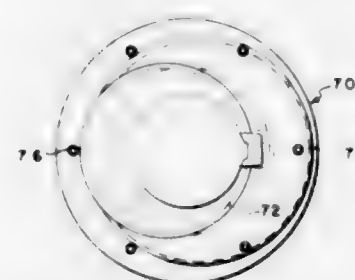
Filed June 8, 1959, Ser. No. 818,658
7 Claims. (Cl. 57-34)

1. The method of producing a textured yarn comprising passing a thermoplastic substantially continuous filament yarn from a supply source through a heating zone and past a substantially abrupt twist arresting point to a twister-winder takeup device, heating said yarn in said heating zone to a temperature such that the temperature of said yarn on the outflow side of said twist arresting point is between the first and second order transition points for said yarn for a distance beyond said twist arresting point which is relatively short compared to the

said relatively short length of yarn adjacent to said twist arresting point and maintaining said relatively short length of yarn free and unrestricted in immediate subsequent flow relation adjacent said twist arresting point.

3,001,356 YARN TWISTING APPARATUS

Norman E. Klein, Pendleton, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed Oct. 23, 1957, Ser. No. 691,864
9 Claims. (Cl. 57-58.84)

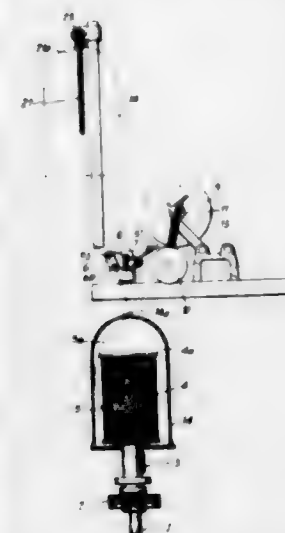


4. In a two-for-one twister for yarn, a rotatable spindle, a dish-shaped member to assist in determining the shape of the yarn balloon, a yarn storage member carried by said spindle adjacent said dish-shaped member, said yarn storage member having a first generally cylindrical yarn engaging surface positioned eccentrically with respect to the axis of rotation of said spindle and a second generally cylindrical yarn engaging surface, of larger diameter than said first generally cylindrical surface, disposed between said first cylindrical surface and said dish-shaped member, said second generally cylindrical yarn engaging surface also being positioned eccentrically with respect to the axis of rotation of said spindle, said first and second generally cylindrical surfaces merging into a continuous surface at one locality in their peripheries, the locality of the merger including the point on said first generally cylindrical surface at the greatest radial distance from the central axis of said spindle and the point on said second generally cylindrical surface at the smallest radial distance from the central axis of said spindle, said spindle being provided with an axially extending yarn passageway terminating at one end as an orifice in the peripheral surface of said spindle, and guide means to guide an end of yarn from said orifice onto said first generally cylindrical surface at substantially the point at which said first generally cylindrical surface is at the smallest radial distance from the central axis of said spindle.

3,001,357 TWISTING MACHINE

Pierre Bourgeois, 110 Ave. Maurice Faure,
Valence, France

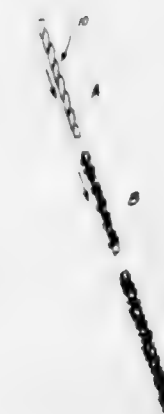
Filed Nov. 17, 1959, Ser. No. 853,492
Claims priority, application Luxembourg Nov. 25, 1958
5 Claims. (Cl. 57-62)



1. In a twisting mill for the twisting of previously assembled yarns, the combination of a rotary spindle, a double flanged spool removably carried by said spindle to be controlled thereby and carrying a winding of assembled yarns, a normally stationary bell-shaped cover removably secured in coaxial relationship with the spindle to enclose the spool on the latter, said cover being provided at its upper end with an eye lying on the axis of the spindle above the spool and through which the twisted yarn is drawn off, the said assembled yarns unwinding from the spool forming a balloon within the cover between the spool and said eye, an auxiliary support for the bell-shaped cover when removed away from its spool-enclosing position, and means carried by said auxiliary support for the transient attachment thereto of the assembled yarns carried by the new spool before insertion on the spindle.

3,001,358 BULKED CONTINUOUS MULTI-FILAMENT YARN

Thomas S. Mayner, Russell Township, Geauga County, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 28, 1956, Ser. No. 624,929
3 Claims. (Cl. 57-140)



1. A bulky continuous multi-filament yarn comprising, an inner core of continuous filaments, and an outer surface of loops and ends entwined in position and formed by sweeping back severed peripheral filaments along the length of the yarn.

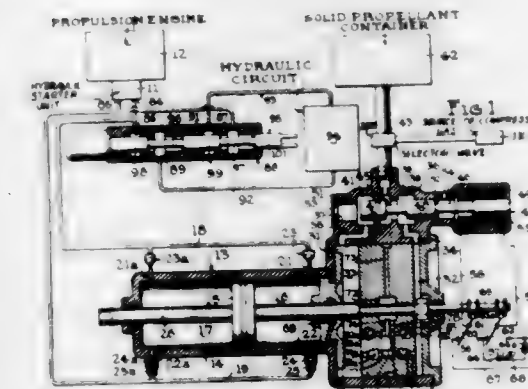
3,001,359 METHOD OF PRODUCING THREADS OF FOAMED MATERIAL

Werner Simon, Wuppertal-Vohwinkel, Germany, assignor, by mesne assignments, to Ceolon-Gesellschaft K. E. Merckle, Leonberg, Wurttemberg, Germany
Filed Nov. 4, 1955, Ser. No. 545,054
Claims priority, application Germany Nov. 4, 1954
7 Claims. (Cl. 57-157)

1. A method for making threads of cellular polyurethane plastic which comprises winding a plastic sheet of the thread thickness into a roll of a plurality of layers which contact each other, substantially simultaneously securing said layers together with a binder, thereby forming a rigid roll of said cellular material, cutting said roll in a direction perpendicular to the axis of said roll to the desired width of thread to form a plurality of wound strips, and thereafter unwinding said strips into threads, said cutting exposing the pores in the thread.

3,001,360 ENGINE STARTING SYSTEM

Tadeusz Budzich, Cleveland, Ohio, and Melvin L. Kent, Watertown, N.Y., assignors to The New York Air Brake Company, a corporation of New Jersey
Filed June 8, 1959, Ser. No. 818,604
7 Claims. (Cl. 60-18)



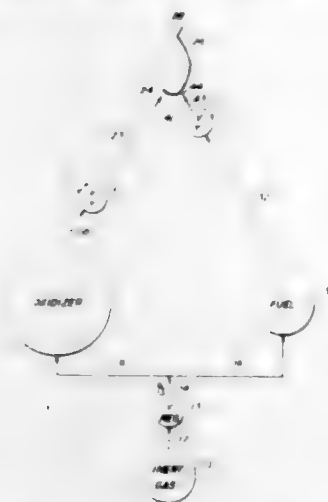
1. In a vehicle having an internal combustion propulsion engine, an overcenter hydraulic motor-pump unit arranged to drive and be driven by the propulsion engine, and a hydraulic work circuit, the improvement which comprises a double-acting reciprocating piston pump; self-contained motor means for reciprocating the piston pump; and a flow circuit, including shiftable valve means, connected with the motor-pump unit, the piston pump and the hydraulic work circuit, said flow circuit being effective in one position of the shiftable valve means to interconnect the motor-pump unit and the piston pump and isolate the work circuit, and in another position of the shiftable valve means to interconnect the motor-pump unit, the piston pump and the work circuit.

3,001,361 BORON TRIAMIDE ROCKET FUEL

Don R. Carmody, Crete, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Jan. 29, 1952, Ser. No. 268,844
14 Claims. (Cl. 60-35.4)

1. A reaction propulsion method, which method comprises injecting separately and simultaneously into a combustion chamber a hypergolic fuel consisting essentially of an N,N',N''-boron triamide having the generic formula $(R_2N)_3B$, wherein B represents the element boron, N represents the element nitrogen and R represents

hydrocarbon radicals selected from the group consisting of aliphatic radicals containing from 1 to 4 carbon atoms



and cycloaliphatic radicals containing from 3 to 4 carbon atoms, and a nitric acid oxidizer which contains not more than about 10 weight percent of non-acidic materials.

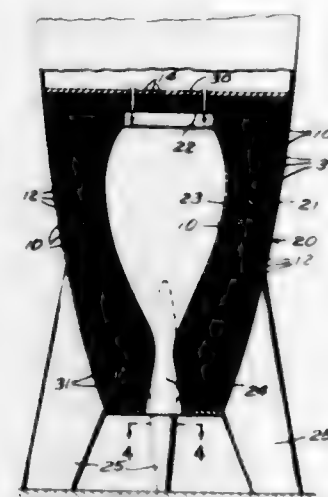
3,001,362

INSULATOR FOR ROCKET MOTOR

Leslie A. Runtz, Middle Haddam, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut

Filed July 26, 1957, Ser. No. 674,352

4 Claims. (Cl. 60—35.6)



3. In a rocket having outer walls and a motor combustion chamber disposed therein having walls spaced from said rocket walls, reinforcing members for said combustion chambers walls comprising a layer of bonded refractory fiber disposed around said chamber walls and having transverse columns of refractory cement spaced along the surface thereof and extending entirely through said sheet normal to said walls, said bonded refractory fibers filling the spaces between said columns and maintaining said columns in parallel spaced relationship, and additional refractory material disposed between said sheet and said rocket walls to transfer the thrust of said columns to said rocket walls.

3,001,363

SPHERICAL SOLID-PROPELLANT ROCKET MOTOR

Joseph G. Thibodaux, Jr., and Robert L. Swain, Warwick, and Carl M. Styles, Hampton, Va., assignors, by mesne assignments, to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

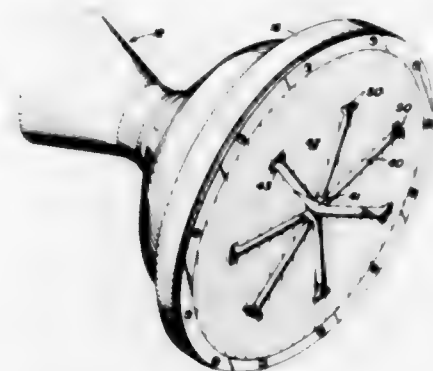
Filed Mar. 4, 1958, Ser. No. 719,173

2 Claims. (Cl. 60—35.6)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A solid propellant rocket motor comprising a pair of hemispherical casings rigidly secured together to form

a substantially spherical casing, an aperture formed in one of said hemispherical casings, an internally threaded cylindrical annular plate secured to said one of said hemispherical casings adjacent to and surrounding said aperture, a nozzle for said motor comprising an externally threaded frusto-conical body having an axis and being in threaded engagement with said annular plate, an annular graphite insert of predetermined cross-sectional area mounted internally of said frusto-conical body; and a solid propellant filling said substantially spherical casing, said solid propellant forming a continuous layer of propellant adjacent the interior surface of said substantially



spherical casing and having a cavity therein, said cavity having the shape of a central portion having an axis which is collinear with a diameter of said substantially spherical casing and coaxial with said nozzle axis, and further having the shape of a plurality of semi-circular disks extending radially outwardly from said central portion, each of said disk-shaped portions having an outer periphery defined by a substantially semi-circular arcuate edge and extending inwardly to open into said central cavity portion, and each of said disk-shaped portions being of greater thickness at and adjacent to said arcuate semi-circular edge thereof than at the portion thereof between said arcuate semi-circular edge and said central portion.

3,001,364

METHOD OF GAS STABILIZING A SUPERSONIC INLET

Lee R. Woodworth, Calabasas, Calif., assignor to the United States of America as represented by the Secretary of the Air Force

Filed July 18, 1958, Ser. No. 749,572

3 Claims. (Cl. 60—35.6)



1. A method for improving the operation of supersonic air inlet having a wall adjacent to which there is turbulent boundary layer flow, said wall defining an entrance to said inlet, said method comprising the steps of cooling at least a portion of the air which flows into said inlet and of simultaneously reducing the Mach number in said turbulent boundary layer, said cooling and said reducing of the Mach number being achieved by injecting a stabilizing gas having lower temperature and molar value than said air.

3,001,365

SHUT-OFF VALVE

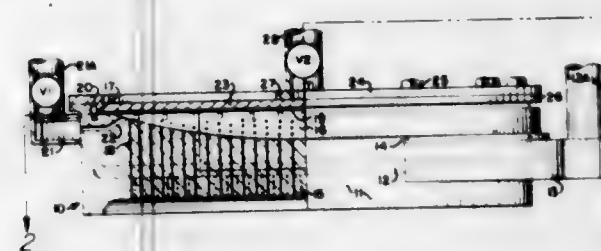
Ray R. Kellogg, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed May 27, 1957, Ser. No. 661,962

3 Claims. (Cl. 60—39.09)

1. An injector plate assembly for liquid propellant rocket engines comprising a face portion having concen-

tric grooves therein for the flow of propellant therethrough, and holes drilled from said grooves to the face of said face portion for spraying propellant into a combustion chamber; a back portion having concentric grooves matching the grooves in the face portion, said face grooves and back grooves together forming channels; a unitary diaphragm of resilient material clamped between the face and back portions of the injector plate by the peripheral portions of said face and back portions surround-



ing the channels therein; fastening means clamping said face and back portions together around the channels in said injector plate; conduit means leading propellant into said channels between the flexible diaphragm means and the face portion of the injector plate; and means for directing pressure fluid at times into said channels between the flexible diaphragm means and the back portion of said injector plate whereby said diaphragm may be urged into a position obstructing said holes in said face portion to obstruct the further flow of propellant therethrough.

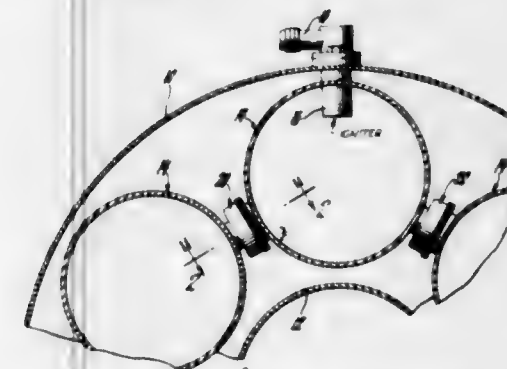
3,001,366

COMBUSTION CHAMBER CROSSOVER TUBE

Leroy W. Shotts, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 15, 1958, Ser. No. 735,555

5 Claims. (Cl. 60—39.82)



1. A combustion apparatus comprising, in combination, means defining a compressed air chamber, a plurality of flame tubes in the chamber, and crossover tube means interconnecting adjacent flame tubes, in which each crossover tube means comprises a first tube member extending from one flame tube, a second tube member extending from an adjacent flame tube, and parts of the tube members providing an air labyrinth between the tube members, the said tube members being out of contact with each other in normal operation of the combustion apparatus to accommodate thermal distortion and minimize wear by preventing engagement of the members, and the air labyrinth restricting air flow into the crossover tube means from the compressed air chamber.

3,001,367

HYDRAULIC ELEVATOR CONTROL SYSTEM

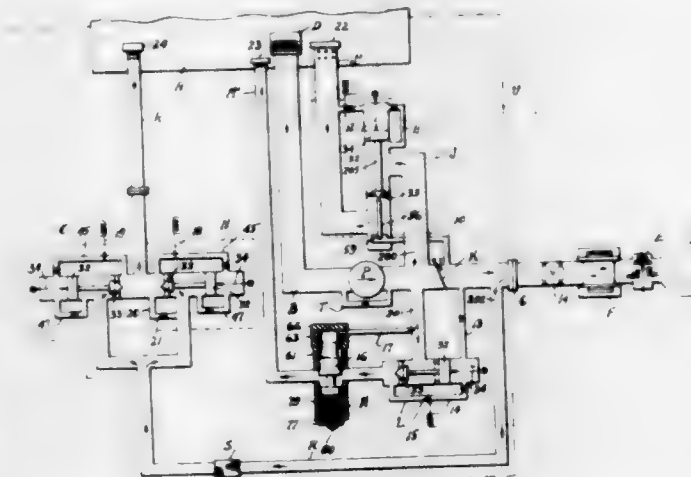
James H. Bartholomew, Greensboro, N.C., assignor to Monarch Elevator & Machine Co., Inc., Greensboro, N.C.

Filed Oct. 1, 1956, Ser. No. 613,003

8 Claims. (Cl. 60—52)

1. In an operating system for hydraulic elevators, the combination of a fluid reserve tank, a jack, a manifold

having a fluid receiving end in communication with said tank and connected at its other end to said jack, a pump in said manifold, a check valve in the manifold between said pump and said jack to permit flow of fluid only in the direction of the jack, said check valve being closed by the fluid pressure in the jack when said pump is inactive, a restricted pump by-pass line extending to said tank from a point in the manifold at the pump side of the check



valve, a pump by-pass valve in said pump by-pass line, means responsive to holding pressure in said manifold downstream of said check valve for holding said pump by-pass valve open until the pump builds up sufficient pressure to open the check valve, means responsive to pressure developed by the pump upstream of the check valve for progressively creating a pressure which gradually closes the pump by-pass valve, and controlled means for relieving pressure from the jack side of said check valve to permit downward travel of the jack.

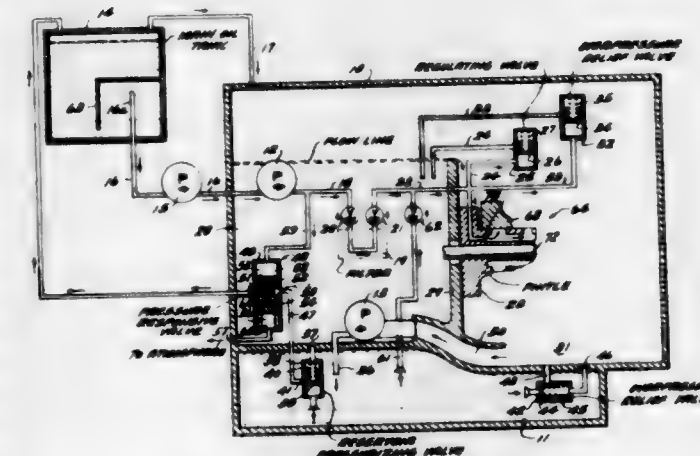
3,001,368

NEGATIVE GRAVITY HYDRAULIC SYSTEM

Samuel Rothrock Barr, Swampscott, Max Joseph Loehle, Nahant, and Peter Francis Frassica, East Boston, Mass., assignors to General Electric Company, a corporation of New York

Filed Aug. 13, 1959, Ser. No. 833,586

10 Claims. (Cl. 60—53)



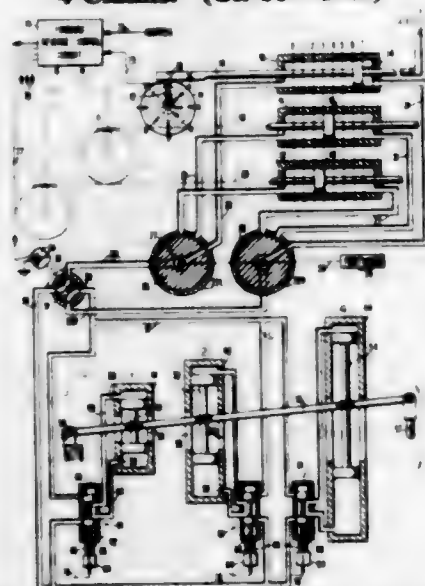
1. A fluid system for a hydraulic drive comprising a supply pump for supplying fluid under pressure from a main supply source to said drive, a reservoir associated with said drive, a scavenge pump connected to scavenge fluid from said drive and discharge it into said reservoir, a pressurizing valve connected to return fluid from said reservoir to said main supply source when the pressure in said reservoir exceeds a preselected level, and a pressure responsive valve connected to respond to the fluid pressure in said fluid system on the discharge side of said

supply pump, said pressure responsive valve being connected in series with said pressurizing valve to shut off flow from said reservoir to said main supply source when the pressure on the discharge side of said supply pump falls below a preselected level.

3,001,369

HYDRAULIC SYSTEM FOR DRIVING SEVERAL ACTUATORS

David C. Allais and Norman Vogel, Saratoga, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 7, 1960, Ser. No. 1,052
4 Claims. (Cl. 60-54.5)



1. A hydraulic system comprising a plurality of slave cylinders, each said slave cylinder having a movable piston therein, a first and second manifold alternately conditioned respectively to pressure and exhaust, fluid distribution means selectively coupling said manifolds hydraulically to opposite ends respectively of any one of said slave cylinders to drive the piston thereof, a fluid actuator system for conditioning said manifolds as aforesaid, said system comprising a plurality of actuator cylinders, piston means within each actuator cylinder and arranged to provide pairs of expansible fluid chambers, both chambers of each pair having a port therein arranged for fluid communication therewith, a mechanical drive bail directly coupled to said piston means and constructed and arranged to be driven alternately to opposite extremes to exhaust fluid from one chamber of each pair while admitting a commensurate amount of fluid into the other chamber of the pair, means defining a first fluid path hydraulically coupling the ports of both chambers in each pair to said first and second manifolds respectively to condition one of said manifolds to pressure and the other to exhaust thereby operating a selected slave cylinder, means defining a second fluid path hydraulically coupling the ports of both chambers in each pair and by passing said manifolds, and valve means common to both said paths for each pair of chambers, said valve means being arranged to select one or the other path for its associated pair of chambers, whereby said slave piston is displaced in proportion to the aggregate volume of fluid moved via said first paths under action of said drive bail.

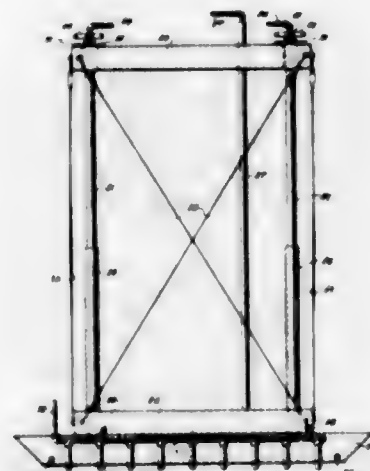
3,001,370

MARINE DRILLING METHODS AND APPARATUS

John B. Templeton, 1000 Singleton Blvd., Dallas 1, Tex.
Filed Sept. 23, 1954, Ser. No. 457,955
10 Claims. (Cl. 61-46.5)

1. A marine drilling foundation comprising: a floatable and submergible base barge; a plurality of vertical columns carried by said base barge and extending upwardly thereabove; a deck framework disposed above the base barge and having a guide means slidably engageable

with said vertical columns of said base barge, whereby said deck framework may move vertically with respect to the base barge between a position adjacent the base barge and a position spaced a substantial distance vertically thereabove; means on said deck framework and the upper ends of said vertical columns for releasably securing said deck framework to said columns adjacent the upper ends thereof; a submergible float chamber disposed between said deck framework and said barge and having vertically upwardly extending sleeves slidably engaging said vertical columns of said barge, said float chamber being movable vertically with respect to said barge between a position adjacent said barge and a position spaced from said barge; means on said deck framework engageable with the upper ends of said sleeves for limiting up-



ward movement of said sleeves relative to said deck framework when said float is in said position adjacent said barge when said barge is submerged; means for selectively admitting water and air into said float chamber; and means for selectively admitting water and air into said base barge whereby said base barge may be lowered to a submerged position in a body of water independently of said float chamber, and said float chamber may be permitted to float on the surface of the water and support the deck framework, said float chamber being submergible and floatable independently of said base barge whereby said float chamber may be first sunk then floated to elevate said deck framework to a position adjacent the upper ends of said vertical columns of said base barge, said connecting means on said columns and said deck framework then being connectible to secure said deck framework in said elevated position adjacent the upper ends of said columns.

3,001,371

OFFSHORE DRILLING RIG MOORING

Walter T. Gilmore, Jr., P.O. Box 497, Morgan City, La., Caesar S. Thorgerson, 639 Utah St., Berwick, La., Anthony J. Guarisco, 1013 Ditch Ave., Morgan City, La., and Roland A. Verret, Amelia, La.
Filed Feb. 26, 1958, Ser. No. 717,595
8 Claims. (Cl. 61-48)

1. A mooring buoy for use with offshore drilling rigs comprising a vertically elongated buoyant body having a central vertical opening therethrough for loosely receiving a stationary, vertically elongated guide member, a pair of cross members, support means secured to and projecting vertically from the top and bottom of said body and each rigidly supporting one of said cross members, each cross member having an opening therethrough aligned with the axis of said vertical opening for receiving said vertically elongated guide member, and pulleys

journaled in each cross member and disposed in the opening therein for embracing said guide member, a fasten-

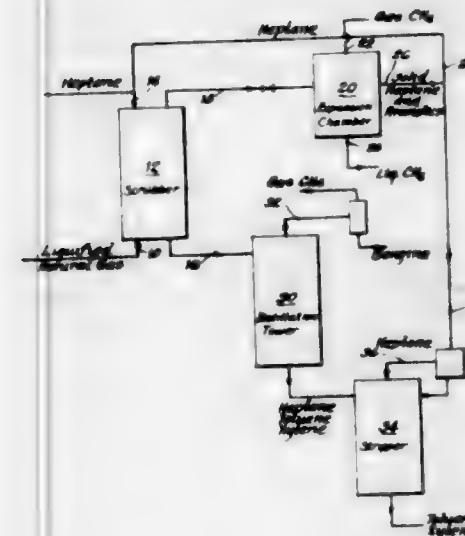


ing means attached to said body to which the mooring line of a boat may be attached.

3,001,372

REMOVAL OF AROMATICS FROM LIQUEFIED NATURAL GAS

Fred Kurata, Lawrence, Kans., assignor to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed Dec. 6, 1957, Ser. No. 701,271
13 Claims. (Cl. 62-15)

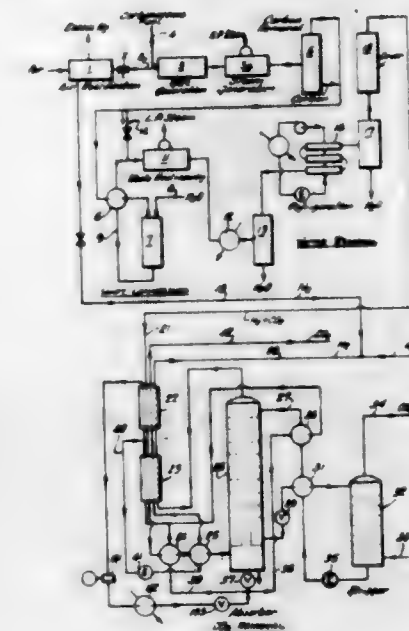


1. A process for the removal of aromatics and higher hydrocarbons from a liquefied natural gas comprising the steps of scrubbing the liquefied natural gas with a liquid hydrocarbon having at least 7 carbon atoms and having a freezing point temperature below the critical temperature for the natural gas and relatively insoluble and immiscible with the liquefied natural gas and in which the aromatics and higher hydrocarbons are preferentially soluble by comparison with the liquefied natural gas, maintaining the conditions during the scrubbing operation between the critical temperature for the liquefied natural gas and the freezing point temperature for the scrubbing liquid and the liquefied natural gas, and then separating the scrubbing liquid from the remainder.

3,001,373

SEPARATION OF CARBON DIOXIDE FROM GASEOUS MIXTURES

De Bois Eastman, Whittier, and Warren G. Schlinger, Altadena, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed Apr. 11, 1958, Ser. No. 727,997
6 Claims. (Cl. 62-17)



1. A process for the separation of carbon dioxide from a gas stream comprising carbon dioxide in admixture with hydrogen which comprises cooling said mixture at a pressure of at least 200 p.s.i.g. to a temperature sufficiently below the dew point of carbon dioxide in said mixture that condensation of a major portion of said carbon dioxide from said mixture is effected, withdrawing resulting liquefied carbon dioxide from contact with residual gas comprising hydrogen and a minor portion of said carbon dioxide, contacting said residual gas in an absorption zone with an organic liquid absorbent effective for selective absorption of carbon dioxide at said pressure and at said reduced temperature effecting substantially complete absorption of said carbon dioxide, withdrawing from said absorption zone said absorbent containing absorbed carbon dioxide, reducing the pressure on said withdrawn carbon dioxide to a pressure at which the boiling point of liquid carbon dioxide is below the condensation temperature of carbon dioxide in said feed gas mixture but above atmospheric pressure, effecting heat exchange between said liquid carbon dioxide at said reduced pressure and the incoming feed gas mixture effecting condensation of carbon dioxide from said feed gas, effecting expansion of gaseous carbon dioxide resulting from vaporization of liquid carbon dioxide at said reduced pressure to a substantially lower pressure whereby the temperature of the gaseous carbon dioxide is substantially lowered, and passing resulting low temperature gaseous carbon dioxide in indirect heat exchange with said feed gas following cooling of said feed gas by vaporization of said liquid carbon dioxide whereby the temperature of said feed gas is further reduced.

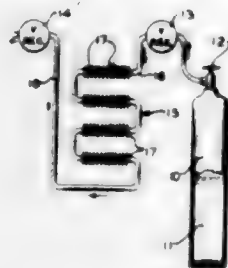
3,001,374

CARBON DIOXIDE PRESSURE REDUCING METHOD AND APPARATUS

Harry T. Hutton, Jr., Franklin Park, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 3, 1959, Ser. No. 803,899
6 Claims. (Cl. 62-50)

1. A method for expanding gaseous carbon dioxide in equilibrium with liquid at superatmospheric pressure at substantially the temperature of the ambient air to a pre-

determined lower delivery pressure where the pressure differential between the said equilibrium pressure and the said lower delivery pressure is sufficient to cause the formation of solid carbon dioxide if the gaseous carbon dioxide is expanded without addition thereto of heat which comprises expanding said gaseous carbon dioxide to an intermediate pressure low enough to reduce the



temperature of the gas by at least 70° F. but not less than 80 pounds per square inch absolute, supplying heat to said gas by heat exchange with said ambient air to raise the temperature thereof to a value whereby further expansion of said gas will not cause the formation of solid carbon dioxide, and further expanding said gas from said intermediate pressure to said predetermined delivery pressure.

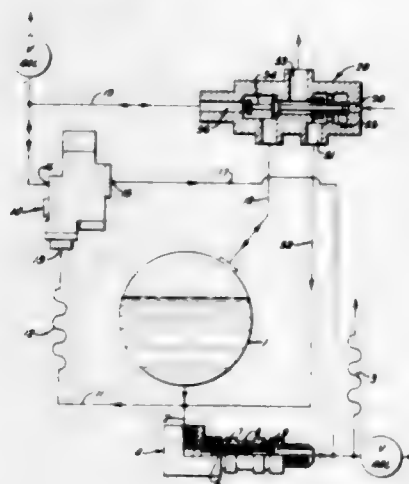
3,001,375

OXYGEN DISTRIBUTION SYSTEM

Clark B. Tauscher, West Covina, Calif., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 14, 1959, Ser. No. 833,839

7 Claims. (Cl. 62-51)



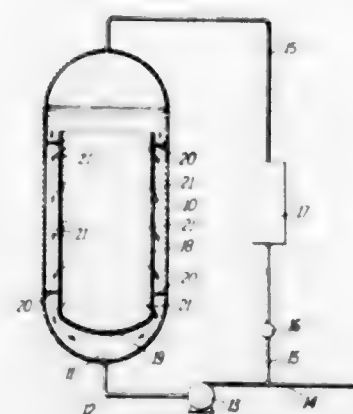
1. An oxygen system for supplying oxygen gas to a point of consumption, comprising a liquid oxygen tank having an opening in its bottom and an opening in its top, a first warming conduit connected with said bottom opening for vaporizing liquid oxygen from the tank and delivering the resulting gas to said point, a valve unit having an inlet and an outlet and a combined inlet and outlet, a second warming conduit for vaporizing some of the liquid oxygen from the tank and connecting its bottom opening with the valve inlet, a first gas conduit connecting said tank top opening with said combined inlet and outlet, a normally open valve for said inlet, a normally closed valve for said outlet, means responsive to a predetermined gas pressure in said valve unit for closing the inlet valve and opening the outlet valve in succession, and a second gas conduit connected with said valve outlet for delivering gas from said top opening to said point of consumption.

3,001,376
STORAGE TANKS FOR LIQUID OXYGEN AND THE LIKE IN ROCKETS

Thomas John Webster, Ashford, England, assignor to The British Oxygen Company Limited, a British company

Filed Nov. 20, 1958, Ser. No. 775,319

3 Claims. (Cl. 62-54)



1. Apparatus for storing a body of low-temperature liquefied gas for uninterrupted draw-off of the whole of said body of liquefied gas with suppression of boiling during draw-off, comprising the combination of a liquid gas storage tank having top, side and base walls, a draw-off conduit connected to an outlet port located substantially centrally of said base wall, a baffle assembly extending over at least half the height of the storage tank and comprising an imperforate base wall and side walls having perforations throughout their height, and support means locating said baffle assembly within said tank with the base and side walls of the baffle assembly in closely spaced relation to the base and side walls of the tank, said baffle assembly being operative to constrain substantially the whole of the draw-off flow of liquefied gas from said body to said outlet port to be confined to the vicinity of the walls of the tank for continuous removal with the liquefied gas of heat entering thereto via the walls of the tank.

3,001,377

METHOD OF COOLING HOT METALLIC PARTS

Robert G. DiQuattro, Elizabeth, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey

Filed June 10, 1958, Ser. No. 741,197

1 Claim. (Cl. 62-64)



The method of cooling an extremely hot metallic part of aircraft to prevent a fire when an inflammable fluid comes in contact with the part, which method comprises pressurizing and propelling an aqueous medium with a gas under pressure to produce a flowing stream of aqueous medium, the aqueous medium having a salt dissolved therein to maintain the same in liquid state at high alti-

tude temperatures, injecting between about 3 and about 6 parts by weight of non-flammable gas into the flowing stream of about one hundred parts by weight of the aqueous medium, the gas being injected at a rate of between about 1.0 and about 1.25 pounds in about 25 to 30 seconds and the gas being at a pressure of about 300 p.s.i. to thereby admix the aqueous medium with a relatively large amount of gas, the flow of the gas and the flowing stream of aqueous medium being metered to proportion the gas and aqueous medium to attain the desired admixture, and immediately spraying a stream of the mixture of gas and aqueous medium through a screen on the hot metallic part, the mixture of gas and aqueous medium being characterized in that the gas breaks up the stream and spreads the aqueous medium as it contacts the hot metallic part, that the aqueous medium readily diffuses through the screen, that the gas expands and is cooled and thereby extracts heat from the aqueous medium to condition the aqueous medium to remove more heat from the hot metallic part and that the gas also extracts heat directly from the hot metallic part, whereby the cooling effectiveness of the aqueous medium is increased from about 50% to 75%, the amounts of gas and aqueous medium available and the flow rates thereof being such that the flow of gas and the flow of aqueous medium terminate almost simultaneously.

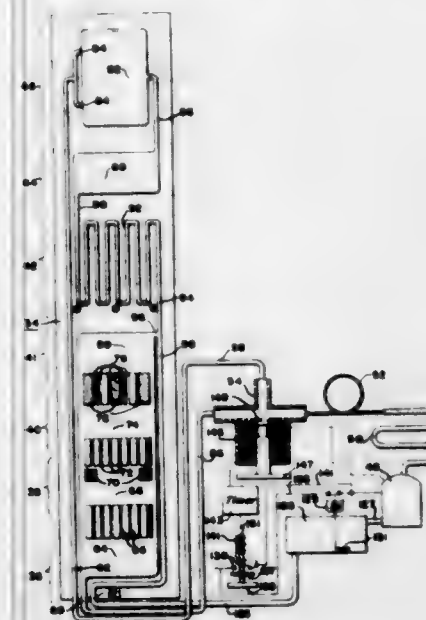
3,001,378

REFRIGERATING APPARATUS

Lynn O. Stutrud, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 12, 1959, Ser. No. 792,845

9 Claims. (Cl. 62-157)



1. Refrigerating apparatus including evaporating means arranged in two sections having a conduit connection connecting their outlets together, an outlet conduit connecting to said conduit connection, separate liquid supply conduits connecting individually to said two sections remote from the conduit connection connecting them together, conduit and valve means having one position for delivering refrigerant to both of said supply conduits and a second position for delivering refrigerant to only one of said supply conduits, refrigerant liquefying means for withdrawing evaporated refrigerant from said outlet conduit and delivering liquefied refrigerant to said valve means, manual control means for moving said valve means from said one position to said second position, and timing means for limiting the period of time said valve means is in said second position.

770 O.G.-52

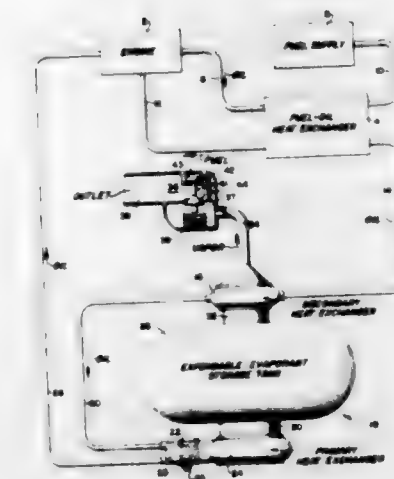
3,001,379

HEAT TRANSFER SYSTEM

Jan Fukazawa, Monterey Park, and William J. O'Reilly, Los Angeles, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Jan. 26, 1959, Ser. No. 788,867

6 Claims. (Cl. 62-196)



1. An expendable evaporant engine oil cooling system for aircraft of the type described comprising; means establishing a path of flow of the engine oil from the engine and back thereto, primary evaporative oil cooling means in said path for vaporizing the evaporant in a heat transfer operation with the oil, secondary oil cooling means connected prior to and in series with said primary oil cooling means in said path, and means establishing a discharge path of flow for said evaporant vapor from the primary cooling means through the secondary cooling means whereby heat from the oil is absorbed in the secondary cooling means in superheating the evaporant vapor.

3,001,380

FUR STORAGE APPLIANCE

Joan Gilliam Ramey, Skokie, Ill.
(512 Whitegate Lane, Wayzata, Minn.)

Filed Sept. 5, 1958, Ser. No. 759,214

11 Claims. (Cl. 62-261)

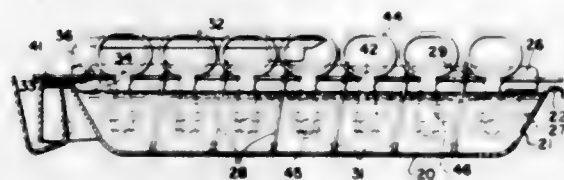


9. As an article of manufacture, a fur storage appliance comprising a bag-type unit having an interior storage space, and a refrigeration means enclosed in a casing, means securing the bag unit to said casing, and means affording communication between said bag unit and said refrigeration means.

3,001,381

FREEZING DEVICE

Arthur J. Frei, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 17, 1960, Ser. No. 9,244
1 Claim. (Cl. 62-355)



In a freezing device, a tray having imperforate walls adapted to receive and retain a body of liquid therein, an open bottom grid structure removably disposed in said tray, said grid structure comprising a longitudinal wall, spaced apart flat walls inclined with respect to the vertical extending transversely across said longitudinal wall and tiltably anchored thereto, a manually actuated lever adapted to tilt said transverse walls and a plate unattached to said tray removably supported upon the top edge of said transverse grid walls in spaced relation to said lever, said grid walls cooperating with said imperforate tray walls to divide the interior of the tray into a row of compartments on each side of said longitudinal wall in which liquid contained in the device is to be congealed into separated frozen pieces, said tray walls forming the bottom and at least one upright wall of the compartments on each side of said longitudinal grid wall, each outer peripheral side edge of said plate having a series of open end slots therein extending toward said longitudinal grid wall with one of said slots disposed over each of said compartments, a plurality of elements removably associated with said plate, each of said elements having an enlarged end part, a shank part and a mounting portion intermediate said parts, said mounting portion of the elements being located in a slot of said plate to detachably hold them thereon with said enlarged end part projecting thereabove for suspendingly supporting said shank part from the plate in spaced relation to the bottom of said tray and depending into a compartment so as to be immersed in liquid therein, the freezing of liquid within said device causing the frozen pieces in said compartments to bond to said shank part of said elements, actuation of said lever tilting the transverse walls of said grid structure within and relative to the tray toward the vertical whereby to enlarge said compartments and loosen all of the frozen pieces in said device from their separating and confining tray and grid walls, said grid structure and said plate together with the frozen pieces loosened from said confining walls and bonded to said elements only being removable as a unit from said tray, said plate and the longitudinal wall of said grid, after removing said unit from said tray, preventing separation of the frozen pieces bonded to said elements in all directions from the unit other than laterally in a straight line direction away from said longitudinal grid wall, and the enlarged end part of said elements serving as a handle on the frozen pieces for sliding said mounting portion of the elements in said straight line direction sideways with respect to said longitudinal grid wall out of the open end of said slots in said plate and for selectively removing individual loosened frozen pieces in uncovered fashion from their confining walls of the enlarged compartments of said removed unit.

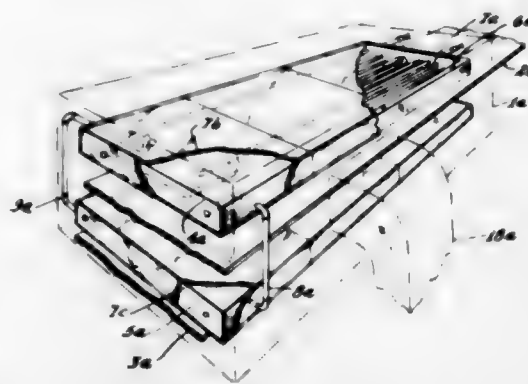
3,001,382

RADIANT COOLING SYSTEMS

Clarence A. Mills, Cincinnati, Ohio, assignor to Reflecto-therm, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed June 16, 1958, Ser. No. 742,123
4 Claims. (Cl. 62-380)

3. A system for continuously controlling radiant cooling in an open ended conveyor cooling tunnel which is

provided with a conveyor belt penetrable to ultra long heat waves radiation and which has a pair of flat carbon black coated cooling plates, one spaced above and the other below the conveyor belt, which includes the step of in-

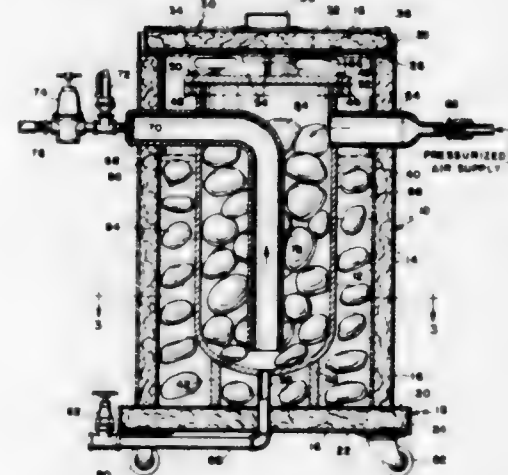


roducing into the tunnel air currents of air treated so as to reduce the dew point below that temperature at which moisture would otherwise be condensed on the cooling plates.

3,001,383

PRESSURIZED AIR COOLER

John F. Reeser, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed May 25, 1959, Ser. No. 815,457
7 Claims. (Cl. 62-384)



1. An air cooler, comprising: a casing; an inner container mounted in said casing in spaced relation thereto and defining a chamber between the inner container and the casing; said inner container having a closed end and an open end; a removable cover secured in sealed relation to said open end; an inlet communicating with the interior of said inner container and connected to a source of pressurized air; an outlet communicating with the interior of said inner container; a valve connected to said outlet to control the flow of air therethrough; and a quantity of generally solid coolant in said inner container between said inlet and said outlet.

3,001,384

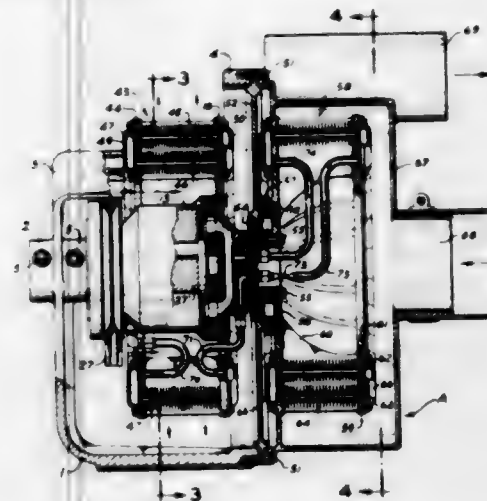
SPACE COOLERS

Roy R. Hanson, Rte. 1, Box 588, Maryland Heights, Mo., and Elmer A. Braden, 2153 S. 6th St., Springfield, Ill., assignors of one-sixth to William H. Anderson, Glen-coe, Mo., one-fourth to Joseph H. Schierman, and one-fourth to George A. Blase, St. Louis, Mo.
Filed June 14, 1957, Ser. No. 665,744
14 Claims. (Cl. 62-499)

8. A space cooler comprising a rotatable housing, a heat transfer unit rotatable with said housing, said unit comprising a pair of spaced plates, air impeller elements connecting said spaced plates, a plurality of fluid con-

ducting conduits joining said plates and projecting there-through, and hollow cap members secured to said plates and enclosing the ends of the conduits, said cap mem-

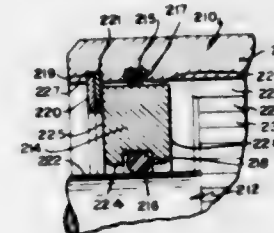
bers thereby forming headers interconnecting the enclosed ends of the conduits to form a single path through which a fluid may flow.



3,001,385

FLEXIBLE COUPLING AND SEAL THEREFOR

Edward E. Allen, Erie, Pa., assignor to Zarn Industries, Inc., Erie, Pa., a corporation of Pennsylvania
Filed Oct. 13, 1958, Ser. No. 767,044
17 Claims. (Cl. 64-9)



1. In combination, a gear type coupling comprising a hub having external teeth thereon, a sleeve having internal teeth engaging said external teeth on said hub, a shaft, said hub being disposed on said shaft, a washer generally rectangular in cross section disposed around said shaft, said sleeve having a flange extending beyond the ends of said external and internal teeth and overlying said shaft, a first groove in one of said flange and said washer, a first sealing ring in said first groove, said first sealing ring making sealing engagement with said flange and said washer, means to limit said washer against axial movement in said flange, a second sealing ring, and a second groove in one of said shaft and said washer, said second sealing ring making sealing engagement with said shaft and said washer, said washer being adapted to be engaged by said hub.

3,001,386

UNIVERSAL JOINT

Kenneth K. King, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 860,896
1 Claim. (Cl. 64-17)

In a double Cardan universal joint a yoke comprising first and second end plates and a pair of side plates, said first end plate extending between said side plates and having centering means formed thereon, said side plates being integral with said first end plate and having aligned spider and bearing assembly receiving openings formed therethrough, a tab formed from the end of each of said

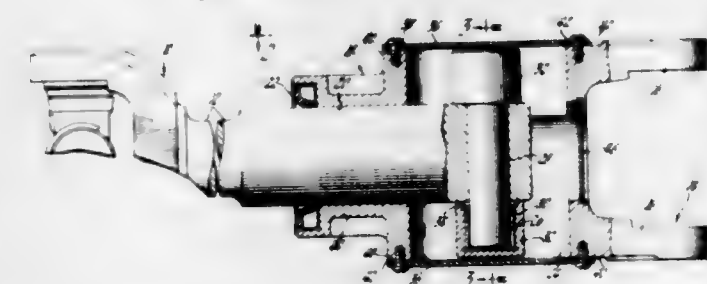


to said first end plate, a flange formed from each end of said second end plate, each of said flanges engaging a surface of one of said side plates beyond the end thereof to locate said second end plate with respect to said side plates, each of the engaging surfaces on said second end plate and said side plates being finished to provide dimensional accuracy in the securement of said second end plate to said side plates.

3,001,387

TORQUE TRANSMITTING SLIP JOINT

Raymond J. Schultz, Bay City, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,416
10 Claims. (Cl. 64-23)



1. In a motor vehicle, a universal joint having a plurality of parts angularly movable with respect to each other, one of said parts having a housing axially extending therefrom and in a direction away from the other of said parts, said housing having a transverse slot therethrough and an axial shaft receiving bore therein intersecting said transverse slot, a shaft receivable in said bore and having a bearing trunnion extending transversely therethrough, a bearing cap and bearing assembly rotatably mounted on each end of said bearing trunnion and received in said transverse slot to provide relatively low friction axial movement of said shaft in said housing, and means retaining said bearing caps on said trunnion and within said slot against centrifugal force acting on said bearing caps when said universal joint and said housing are rotated.

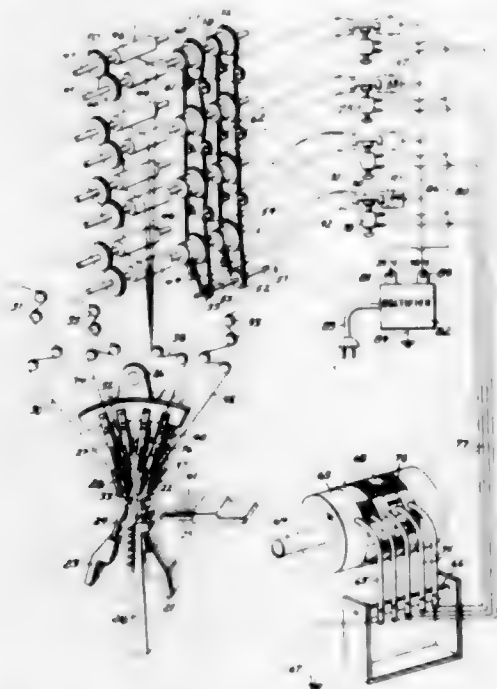
3,001,388

PILE FABRIC FORMATION WITH VARYING HEIGHT

Rex S. MacCaffray, Jr., Boiling Springs, Pa., assignor to C. H. Masland and Sons, Carlisle, Pa., a corporation of Pennsylvania
Filed June 13, 1958, Ser. No. 741,810
5 Claims. (Cl. 66-84)

1. A mechanism for forming pile loops of different heights from the yarns of a pile warp comprising a united

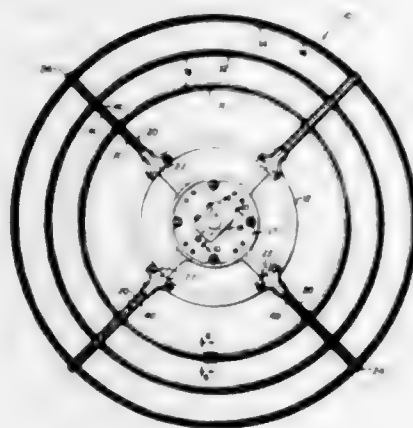
series of aligned, cyclically moved pile loop formers receiving said yarns and adapted each to form one of a row of pile loops with each cycle of its movement, a plurality of variable speed yarn feeding mechanisms for feeding yarn to said loop formers, a high speed and a low speed drive means, a pair of electrically operable clutches for each yarn feeding mechanism adapted to selec-



tively engage the associated feeding mechanism with said high or low speed drive, a circuit to energize each said clutch, a relay connected to selectively energize the pair of circuits to each said pair of clutches accordingly as said relay is actuated or not, an actuating circuit for each said relay and timing means for selectively closing said actuating circuits for various intervals all of which are shorter than the cycle period of said loop formers.

3,001,389 STOP-MOTION HEAD FOR USE ON KNITTING MACHINES

Edward Vossen, Malverne, N.Y., assignor to Stop-Motion Devices Corp., Brooklyn, N.Y.
Filed Apr. 6, 1959, Ser. No. 804,186
5 Claims. (Cl. 66-163)

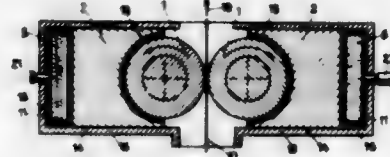


1. A stop-motion head, comprising a circular frame adapted to be mounted on a knitting machine having a stop-motion system, a plurality of radially outwardly extending arms detachably secured to said frame, a plurality of arcuate channels detachably secured to said arms in concentric relation to said frame, a plurality of yarn defect detectors detachably and adjustably secured to said channels, a plurality of electrical conductors mounted on said arms and adapted to be connected to said stop-

motion system, a plurality of bare electrical conductors mounted in and insulated from said channels, electrical connecting members on said electrical conductors on the arms and complementary electrical connecting members on said bare electrical conductors in the channels, said first mentioned connecting members being in frictional engagement with the second mentioned connecting members, and electrical connecting members on said yarn defect detectors in frictional engagement with said bare electrical conductors in said channels.

3,001,390 DEVICE PROVIDED WITH ROLLERS FOR THE TREATMENT OF WEBS

Franz Peter Zimmer, Kufstein, Austria, assignor to Zimmer's Erben K.G., Kufstein, Austria, a trading company of Austria
Filed Oct. 24, 1957, Ser. No. 692,231
Claims priority, application Austria Nov. 2, 1956
9 Claims. (Cl. 68-258)

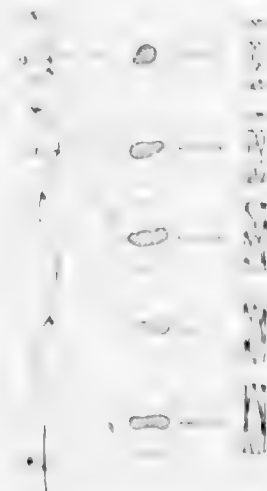


4. In an apparatus for treating continuous webs, the combination of a pair of opposed cylindrical rollers, and plain journal bearings engaging a part of the circumferential surface of each of said rollers along the entire length of said rollers, said plain journal bearings supporting said rollers against sagging and urging said rollers toward each other, and adjusting means bearing on at least one of said plain journal bearings for moving the one bearing and cylindrical roller relative to the other cylindrical roller and bearing.

3,001,391 FUR SEAL AND PROCESS FOR PREPARING SAME

Samuel J. Pingree, St. Louis, Mo., assignor to Fouke Fur Company, St. Louis, Mo., a corporation of Delaware

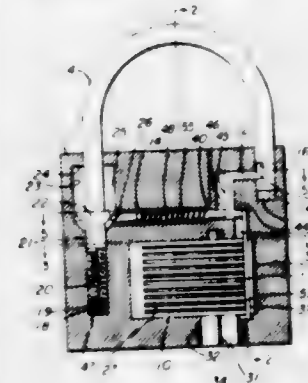
Filed Mar. 18, 1959, Ser. No. 800,311
4 Claims. (Cl. 69-22)



1. A fur product consisting of a fur seal pelt sheared on the fur side throughout its entire area to a substantially uniform level at which the fur fibers of the product are not substantially longer than 7-9.5 mm. (0.28-0.37 in.) measured in situ and at which level the kinky pigmented tips of the fur fibers of the pelt are removed and a surface of substantially uniform golden color and improved texture and luster is exposed throughout the entire area of the product.

3,001,392 LOCK WITH PERFORATED PLATE MOVING WITH BOLT

Philip J. Brewington, 4204 Place Ave., Austin, Tex.
Filed Feb. 20, 1958, Ser. No. 716,385
8 Claims. (Cl. 70-38)



1. In a lock of the type having a spring pressed bolt, the combination with a retaining plate extending at right angles to the axis of the bolt, said plate moving at all times with the bolt and having a series of spaced openings therein, of a channel-shaped comb with two side flanges each having an integral series of spaced resilient fingers equal in number to the openings, each finger having a cross section sufficiently small so as to permit the finger to slide within its respective opening and adapted to be moved laterally by a key so that each finger is in alignment with its respective opening whereupon the plate slides on the fingers and the bolt is withdrawn by urge of its spring, a revolving member located between the two side flanges of the comb and turning with the key to limit inward resilient movement of the fingers, and means to move the bolt against the urge of the spring.

3,001,393 LINEAR ACCELERATION TEST FACILITY

Wesley C. Greayer, Torrance, Calif., assignor to Northrop Corporation, a corporation of California
Filed July 30, 1956, Ser. No. 600,931
3 Claims. (Cl. 73-12)

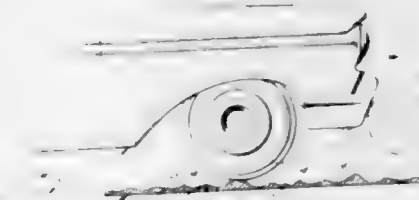


1. In a test facility the combination comprising: an elongated tube having fore and aft ends; fore and aft closure members mounted in the respective ends of said tube defining a partially closed operating chamber; a driving piston operationally mounted in said tube dividing said chamber into fore and aft chambers, a length of vinyl-covered cable; the end portions of said cable extending through said closure members in a near fluid tight and sliding relation therewith and being secured to respective sides of said driving piston; a pair of pulleys mounted externally of and adjacent the fore and aft ends of said tube, respectively; the intermediate portions of said cable passing over said pulleys and extending parallel to the axis of said tube; track means mounted externally of and extending lengthwise of said tube; a sled assembly mounted on said track means and secured to said intermediate portion of said cable whereby said sled assembly is moved between the ends of said tube at such times as said driving piston is actuated from one end to the other end of said tube; a braking piston mounted in said forward

chamber dividing the latter into an intermediate chamber located between said driving and braking pistons and an auxiliary chamber located between said forward closure member and said braking piston; said braking piston including means allowing said cable to pass therethrough in sliding and near fluid tight relation; said braking piston being further characterized by including valve means allowing fluid flow from said intermediate chamber to said auxiliary chamber at such times as the fluid pressure in said intermediate chamber exceeds the fluid pressure in said auxiliary chamber; a source of pressurized fluid; port and valve means whereby fluid may be directed from said fluid source to said auxiliary and intermediate chambers and exhausted from said auxiliary and intermediate chambers to ambient atmosphere; said port and valve means including valve and conduit means allowing fluid to be stored in said auxiliary chamber at a predetermined pressure and exhausted therefrom at such times as the fluid pressure in said auxiliary chamber exceeds said predetermined pressure.

3,001,394 ROAD SIMULATING APPARATUS FOR VIBRATION TESTING OF MOTOR VEHICLES

Walter J. Nelson, 4809 23rd Place, Cicero, Ill.
Filed May 23, 1958, Ser. No. 737,411
4 Claims. (Cl. 73-71.7)

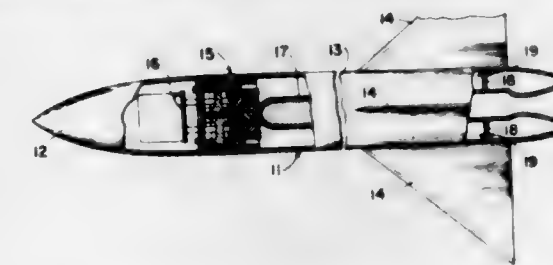


1. A road simulating apparatus for motor vehicles comprising a body member fabricated of laminated layers of resilient material, said body member having a flat lower surface that is positioned in contactual relation to a ground surface, said body member having a plurality of raised portions in its upper surface at points spaced longitudinally of the body, said raised portions being formed by each of the layers being of increased thickness, thereby defining between such points a plurality of recesses.

3,001,395 AIR FRAME DRAG BALANCE

Abraham Leiss, Hampton, Joseph H. Judd, Newport News, and Robert S. Freeman, Yorktown, Va., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Jan. 15, 1960, Ser. No. 2,792
7 Claims. (Cl. 73-147)
(Granted under Title 35, U.S. Code (1952), sec. 266)

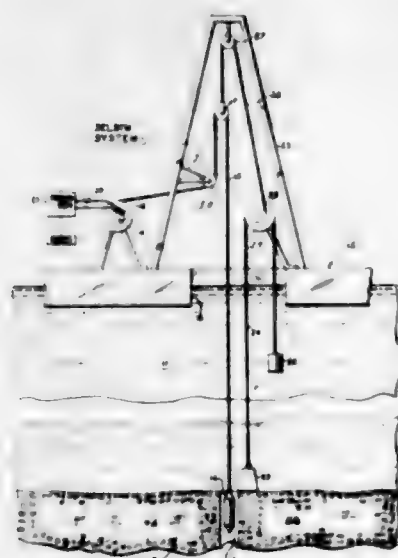


1. A drag balance for measuring drag forces developed upon the external surfaces of an elongate vehicle provided with propulsion means moving through a fluid medium, comprising a housing member adapted to be transversely positioned within said vehicle and rigidly interconnected with said external surfaces, a mount positionable within said vehicle adjacent said housing member and adapted

for rigid connection with said propulsion means, an element having a perimetrical portion rigidly connected to said housing member, a central portion rigidly connected to said mount, and a flexible portion between said perimetrical portion and said central portion to permit limited relative movement between said housing member and said mount in the direction of travel of said vehicle, said mount being forwardly movable with respect to said housing member upon the development of drag forces a distance proportional to the magnitude of said forces, and means comprising one portion rigidly positioned with respect to said mount and another portion rigidly positioned with respect to said housing member for generating an electrical signal proportional to the relative movement of said housing member and said mount.

3,001,396

APPARATUS FOR MAINTAINING PROPER DEPTH CORRELATION IN WELL LOGGING APPARATUS
James L. Cleveland, 277 Boulevard, Scarsdale, N.Y.
Filed Feb. 14, 1958, Ser. No. 715,381
4 Claims. (Cl. 73-152)



2. An apparatus for movably supporting an instrument in an off-shore drill hole in the earth from a floating structure that moves vertically in response to wave and tide action, which apparatus comprises a sheave supported on said floating structure in a position adjustable along a predetermined path, a pay-out take-up drum rotatably mounted on said structure, means for suspending the instrument in the drill hole and effecting a controlled movement thereof including cable means attached to the instrument and extending therefrom over said sheave to said drum for movement in response to rotation of the latter and arranged with those portions of the cable adjacent said sheave on both sides thereof being parallel with each other and said predetermined path, an element movably supported on said floating structure, second cable means anchored to the earth and connected to said element to move it in response to movement of said structure and in direct proportion thereto, and means responsive to movement of said element to adjust the position of said sheave along said path an amount equal to one-half the movement of said structure and in a direction to avoid movement of the instrument in response to such movement of the structure.

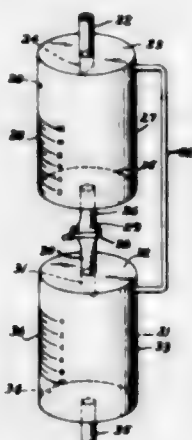
3,001,397

METHOD AND APPARATUS FOR MEASURING LIQUID FLOW VOLUME
Joe H. Leonard, 12242 Lesley St., Garden Grove, Calif.
Filed Jan. 29, 1958, Ser. No. 711,923
15 Claims. (Cl. 73-194)

14. A method for measuring liquid flow volume within a continuous full flowing liquid flow path comprising the

steps of: establishing upper and lower reservoir zones, at least one of which has a known volume, in series; filling both of said zones with a gas which is limitedly absorbable in and inert to the liquid being measured; partially filling the lower zone with said liquid; connecting said reservoirs in series within the liquid flow path; blocking liquid communication between said zones for a fixed time interval without halting overall continuous liquid flow through said flow path; venting gas from the zone being filled to the zone being depleted; measuring the change in volume in at least one of the reservoir zones which occurs during said fixed time interval; re-establishing liquid communication between the zones; and venting gas from the zone being filled into the zone being emptied.

15. A method for measuring liquid flow volume comprising the steps of establishing an upstream and a downstream reservoir zone in series, at least one of said zones



being of known volume; establishing a liquid level in said downstream zone using the same liquid as that which will be measured; allowing the balance of said downstream reservoir and the totality of said upstream reservoir to be filled with an inert, limitedly absorbable gas and maintaining thereafter a substantially constant total gas volume within said reservoirs; connecting said filled reservoirs in series within a continuous full-flowing liquid flow circuit; blocking liquid communication between said reservoir zones for a fixed time interval without interrupting the continuity of downstream discharge; shunting gas from the upstream reservoir into the downstream reservoir as it is displaced from said upstream reservoir by continuous liquid inlet flow; measuring the change in liquid volume in at least one of the reservoir zones which occurs during said fixed time interval; re-establishing liquid communication between said zones and shunting gas back from the downstream zone into the upstream zone.

3,001,398

METERING SEPARATOR
Roy Shepherd, Tulsa, Okla., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 10, 1958, Ser. No. 708,293
3 Claims. (Cl. 73-200)

3. A metering separator comprising a vertical closed tank, plate means located intermediate the ends of said tank to provide a separation chamber and a metering chamber, a second plate means vertically arranged in the tank and coacting with said first plate means to provide a first passageway means between the metering chamber and the separation chamber, said first plate means being inclined to the horizontal to guide gas in the metering chamber into said first passageway means, inlet means associated with said tank to accommodate flow of fluid into the separation chamber, second passageway means interconnecting the separation chamber and the metering chamber, outlet means associated with said closed tank to accommodate flow of fluid out of the metering cham-

ber, a first motor valve operatively connected with the second passageway means, a second motor valve operatively connected with the outlet means, a first controller means including a float arrangement located in said first passageway means, a second controller means vertically spaced from the first controller means and including a float arrangement located in said metering chamber, relay valve means operative in response to the first and

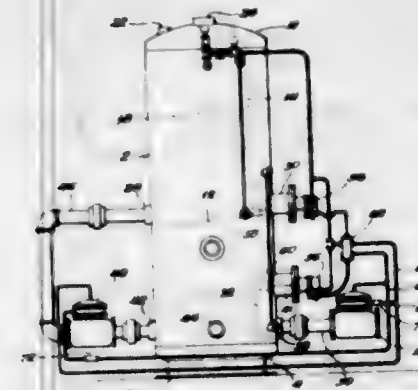
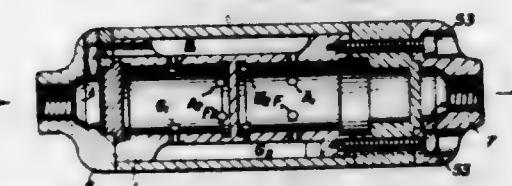
control means upon predetermined movement of the movable member said snap acting mechanism including lost motion linkage.

3,001,400

FLUID METERS

Pieter de Graaf, Dordrecht, Netherlands, assignor to N.V. Vloekstofmeetapparatenfabriek, Rotterdam, Netherlands

Filed Mar. 24, 1960, Ser. No. 17,315
8 Claims. (Cl. 73-242)

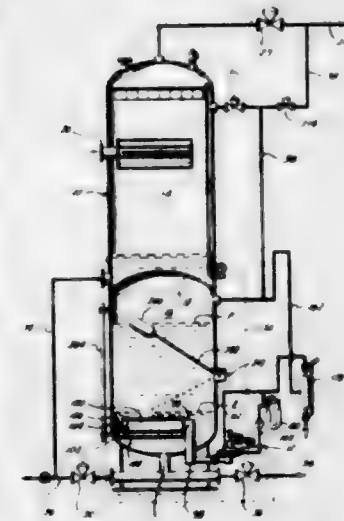


second controller means for controlling the operation of the first and second motor valves, and first and second delay check valve means respectively operatively connected between said relay valve means and said first and second motor valves, said delay check valve means being operable to slightly delay the energizing of one of said motor valves until the other of the motor valves is de-energized in response to operation of one of said controller means.

3,001,399

METERING APPARATUS AND HYDROSTATIC HEAD CONTROL SYSTEM

Horace V. Smith, Houston, Tex., assignor to Oil Metering and Processing Equipment Corp., Houston, Tex., a corporation of Texas
Filed Feb. 3, 1958, Ser. No. 712,823
3 Claims. (Cl. 73-223)



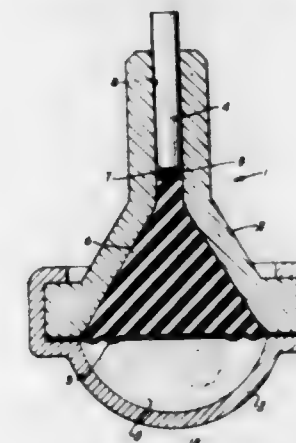
1. In combination, a liquid container, a flow line communicating with said liquid container, a valve in said flow line, a control means connected to and adapted to actuate the said valve, a housing, a movable member in the housing movable in response to pressure differentials on each side of the member and dividing the housing into first and second chambers, a liquid line communicating between a lower part of the liquid container and the first chamber, a conduit between the second chamber and an upper part of the liquid container, resilient means urging the movable member toward the first chamber, and a snap acting mechanism connected to the movable member and the control means adapted to actuate the

1. In a fluid meter: a housing formed with a fluid inlet and a fluid outlet and with first and second cylinders, the axes of the cylinders being substantially coaxial; two pistons respectively disposed in said cylinders for movement back and forth therein, the pistons and cylinders being constructed and arranged whereby measuring chambers are formed at the opposite ends of each of the cylinders; means for preventing rotation of the pistons; and for each piston, a first and a second pair of axially spaced slots formed on the piston each constituting a fluid passage, the first pair being arranged to receive fluid from said inlet and the second pair being arranged to transfer fluid to said outlet, fluid-carrying conduits in said housing respectively interconnecting said first pair of slots with the respective measuring chambers for the other piston in accordance with the position of the said piston to transfer fluid in a direction from a slot to a measuring chamber, fluid carrying conduits in said housing respectively interconnecting said second pair of slots with the respective measuring chambers for the other piston in accordance with the position of the said piston to transfer fluid in a direction from a measuring chamber to a slot; and for each of first said fluid carrying conduits, means forming a port providing, when the piston is at one end of a measuring chamber, for conducting fluid from the conduit to the measuring chamber and means forming a port of larger capacity than the first said port operative to also conduct fluid from the conduit to the measuring chamber in accordance with the movement of the piston.

3,001,401

MULTI-RANGE EXPANSION MATERIAL

Sergius Vernet, James Fay Corwin, and George Asakawa, Yellow Springs, Ohio, assignors, by direct and mesne assignments, to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Filed July 11, 1956, Ser. No. 597,293
8 Claims. (Cl. 73-358)



1. A power element comprising a container and connected sleeve; thermally expansible material within said

container; a metal diaphragm sealing the expansible material in the container; a piston in said sleeve; and a force-transmitting material between the diaphragm and piston; said force-transmitting material being operable at temperatures in the neighborhood of 250° F.; and said thermally expansible material being a mixture of 1,2,4,5 tetrachlorobenzene and a straight chain paraffin wax having a molecular weight above 400, the tetrachlorobenzene and paraffin wax each accounting for a substantial percentage of the weight of the thermally expansible material.

3,001,402

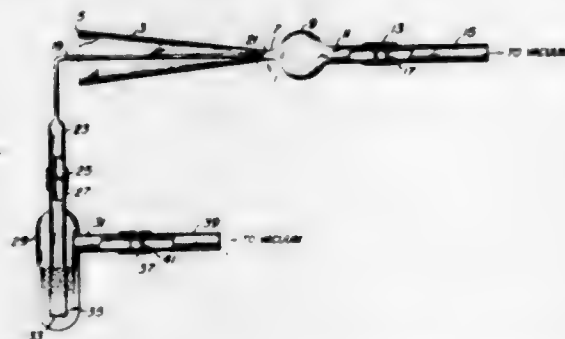
VAPOR AND AEROSOL SAMPLER

Abraham Koblin, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Aug. 6, 1959, Ser. No. 832,126

3 Claims. (Cl. 73-421.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A separator for aerosol particles comprising an intake cone converging from an enlarged open inlet end to a restricted throat, means for drawing a main air stream at a constant rate through said intake cone from said inlet end, a probe within and substantially coaxial with said inlet cone and having an open end adjacent said throat and facing in the direction of convergence of said cone, said probe having a diameter substantially less than that of said throat, and means for drawing a secondary air stream at a constant rate from said main air stream through said open end into said probe.

3,001,403

LIQUID SAMPLER

Jennings B. Edwards, Wilmington, N.C., assignor of ninety percent to William R. Kiser, Jr., and ten percent to Jackson L. Kiser

Filed July 1, 1957, Ser. No. 669,126

7 Claims. (Cl. 73-425.6)



7. The method of collecting milk samples from a milk producer's vat cooler comprising the steps of: drawing a milk into a previously evacuated and sealed container

through an elongated passage whereby the exterior of said container may remain out of contact with the milk, affixing identifying indicia to said container, and transporting said container away from the site of said vat cooler for testing.

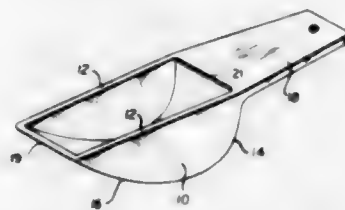
3,001,404

SELF-LEVELING MEASURING SPOON

Joseph F. McDonnell, Jr., Rockville Centre, N.Y., and Harry McNeilly, Summit, N.J., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 29, 1959, Ser. No. 789,836

3 Claims. (Cl. 73-426)



1. A spoon with bowl and handle comprising substantially straight sides of the bowl that extend at approximately a right angle to and downwardly from the plane of the open face of the bowl, a straight forward end of the bowl extending transversely thereacross, and an arcuate bottom of the bowl extending between the said sides, the width between the said sides and also the width of the arcuate bottom being less at the forward end than at the rear end of the bowl, the handle being joined to the said rear end, and the spoon being substantially self-leveling when the bowl is inserted into and filled with a powder and then withdrawn with the plane of the face of the bowl in vertical position.

3,001,405

UNBALANCE COMPENSATOR

Philip K. Trimble, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 18, 1956, Ser. No. 559,817

5 Claims. (Cl. 73-464)



5. Balancing apparatus for providing a rotating workpiece with a predetermined residual unbalance, said apparatus comprising drive means for rotating said workpiece, a vibration pickup arranged to produce a first signal indicative of the actual unbalance in said workpiece, residual unbalance simulating means responsive to the angular position of said workpiece to produce a second signal having a predetermined amplitude and a predetermined phase relationship to the angular position of a fixed point on said workpiece, circuit means adding said

first and second signals to produce a resultant third signal indicative of the actual unbalance and predetermined residual unbalance, reference means operatively connected to said drive means for producing a reference signal indicative of the position of said drive means, said reference means including means for varying the phase relationship between said reference signal and the angular position of said drive shaft, phase sensitive means operatively connected to and responsive to said third signal and said reference signal for indicating when said third signal and said reference signal are in phase, and means for indicating the phase relationship between said drive means and said reference signal when said resultant third signal and said reference signal are in phase, said phase sensitive means including means for indicating the relative magnitude of said third signal when said third signal and reference signals are in phase.

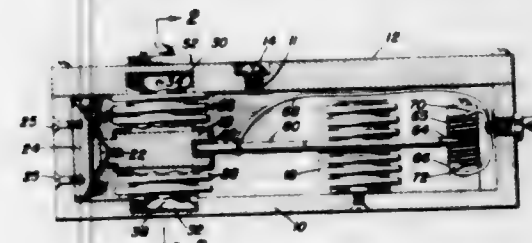
3,001,406

ACCELEROMETER

Frederick A. Oyhus, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 5, 1952, Ser. No. 324,188

7 Claims. (Cl. 73-497)



1. An accelerometer comprising a sealed casing containing damping fluid, a mass pivotally supported on a wall of said casing, a resistance winding in said casing, an elongated arm carried by said mass, said arm having a contact adapted to slide along said winding, evacuated means in said casing for compensating for changes in volume of the fluid contained therewithin, and an arrangement for damping the motion of said mass, said arrangement including a pair of expansible chambers abutting the opposite sides of said mass, said chambers being filled with damping fluid, a passageway interconnecting the chambers to permit the flow of said damping fluid between them and means in said passageway for compensating for changes in viscosity of said damping fluid.

3,001,407

ACCELEROMETER

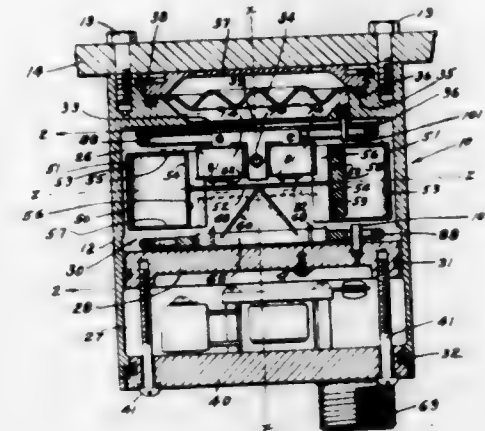
Thomas H. Wiancko, Altadena, William J. Riha, Monrovia, and Ludwig R. Vreugde, Arcadia, Calif., assignors, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Filed Feb. 21, 1957, Ser. No. 641,545

3 Claims. (Cl. 73-497)

1. In an accelerometer, the combination of:
a housing containing fluid;
an inertia member immersed in said fluid, said inertia member comprising a pair of pontoons interconnected by a magnetic armature;
a resilient torsion member connected to support said inertia member in said fluid for rotation relative to said housing about an axis of rotation, said pontoons being of unequal mass but of substantially the same external shape and being symmetrically located relative to said axis of rotation, said pontoons and said armature defining a neutral plane transverse to an acceleration axis, said inertia member having a substantially zero buoyancy factor in said fluid but being dynamically unbalanced about said axis of rotation whereby said inertia member rotates about

said axis of rotation in response to acceleration of said housing in a direction parallel to said acceleration axis; and



means including a detecting coil mounted in inductive relationship with said armature for detecting rotation of said inertia member about said rotation axis.

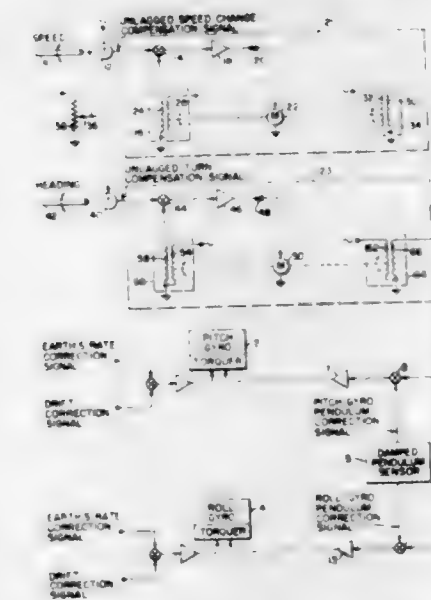
3,001,408

GYRO STABILIZATION

Sabine L. Baring-Gould, Boston, Mass., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California

Filed Nov. 23, 1959, Ser. No. 854,873

10 Claims. (Cl. 74-5.4)



1. In combination with a gyro stabilized platform mounted on a dirigible craft, a damped pendulum having a predetermined damping constant, means controlled by said pendulum for adjusting the position of said platform with respect to a vertical reference, means responsive to the acceleration of said craft along a horizontal axis fixed with respect to the craft for generating a first signal in accordance with said acceleration, time delay means controlled by said acceleration responsive means for generating a second signal in accordance with said first signal and delayed by an amount selected in accordance with the damping constant of said pendulum, and means controlled by said second signal for adjusting said platform to compensate for deviations from said vertical reference caused by said acceleration.

3,001,409

POWER TAKE-OFF

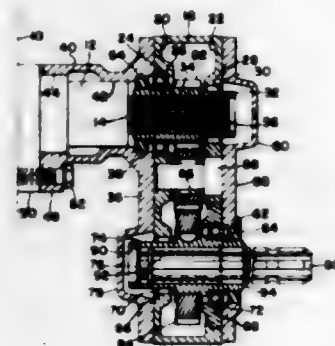
Cyril W. Von Fumetti, Dubuque, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Oct. 29, 1959, Ser. No. 849,545

3 Claims. (Cl. 74-11)

1. For use in the power take-off system of a tractor and associated implement including a fore-and-aft power

take-off shaft provided with external splines and a rearwardly offset fore-and-aft driven shaft at a lower elevation and having external splines different from those of the power take-off shaft; a drive attachment for disposition between the shafts, comprising a housing having generally upright front and rear walls, a top and a bottom, each wall having upper and lower openings respectively coaxial with the power take-off and driven shafts; bearings respectively in the openings; upper hollow shaft means journaled in the bearings in the upper openings and having front and rear ends and internally splined to match and to telescope forwardly onto the power take-off shaft; lower hollow shaft means journaled in the bearings in the lower openings and having front and rear ends and internally splined to match and to axially forwardly receive the driven shaft; drive mechanism within the casing for causing rotation of the upper and lower shaft means in the same direction but at different speeds and including upper and lower gears of different sizes



respectively fixed to said upper and lower shaft means; front and rear covers removably secured respectively to the front and rear walls, said front cover having an upper opening to expose the front end of the upper shaft means and a lower closure for the front end of the lower shaft means, and the rear cover having an upper closure for the rear end of the upper shaft means and a lower opening to expose the rear end of the lower shaft means; and said housing being symmetrical at opposite sides of a transverse median plane extending from the lower front to the upper rear thereof so that said housing, with the covers removed and the shaft means disconnected from the power take-off and driven shafts, is reversible from front to rear as well as from top to bottom whereby the upper shaft means becomes lowermost and has its front end to the rear and coaxial with the originally positioned rear cover lower opening and the lower shaft means becomes uppermost and has its rear end to the front and coaxial with the originally positioned front cover upper opening.

3,001,410

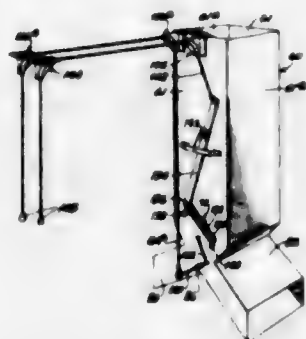
OSCILLATING FEED CONTROL FOR MILKING PARLOR STALLS

Clarence Letson, Cedar Falls, Iowa, assignor to Clay Equipment Corporation, Cedar Falls, Iowa, a corporation of Iowa

Filed July 28, 1958, Ser. No. 751,298
2 Claims. (Cl. 74-96)

2. A remote control for a device which is arranged to be selectively moved in a pair of opposite directions, said remote control comprising an elongated member connected to the device, for driving said device, said elongated member having a longitudinal traverse thereon, said elongated member having a pair of upwardly inclined, operative positions, which are transverse to each other, a second member having a traverse-engaging portion adapted for movement along said traverse, dog means on said elongated member adjacent the ends of said traverse so that when the elongated member is in either of its operative positions one of said dog means is at a

high position and the other dog means is at a low position, each dog means being arranged relative to the

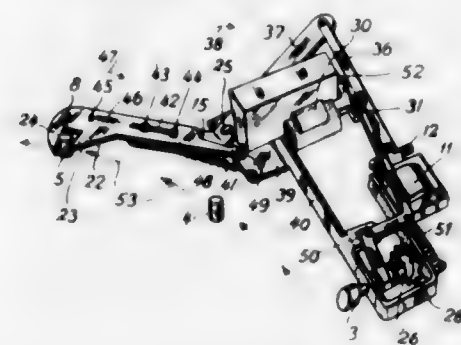


traverse so that when the dog means is in high position it is inoperative and when the dog means is in low position it is operative to engage the traverse-engaging portion of said second member to effect an operative connection between the second member and the elongated member, means for effecting movement of said traverse-engaging portion of the second member from high position to low position, and means connected to said second member of effect selective movement of said elongated member between its pair of operative positions while simultaneously reversing the high and low positions of the pair of dog means.

3,001,411

ACTUATING AND LOCKING MECHANISM FOR MERCHANDISE DRUMS IN AUTOMATIC VENDING MACHINES

Erik Wittenborg, 1-3 Seebladsgade, Odense, Denmark
Filed May 19, 1960, Ser. No. 30,110
Claims priority, application Denmark July 24, 1959
6 Claims. (Cl. 74-112)



1. Actuating and locking mechanism for electric motor driven merchandise drums in automatic vending machines having coin slot control comprising, locking pins on the drums, a forked locking member for engagement with the locking pins, and a movable arm carrying the forked locking member, the mechanism characterized in that the forked locking member during its engagement with a locking pin is prevented from closing an electrical circuit through the driving motor of the drum, and the movable arm withdraws the forked locking member from the path of the locking pins for a brief interval by means of electric pulses from the coin slot control.

3,001,412

LOST MOTION CONNECTION BETWEEN SPROCKET WHEEL AND VALVE OPERATING WHEEL

John I. Babbitt, South Westport, Mass., assignor to Babbitt Steam Specialty Co., New Bedford, Mass., a corporation of Massachusetts

Filed Mar. 6, 1959, Ser. No. 797,718
2 Claims. (Cl. 74-243)

1. An attachment for a valve-operating wheel, comprising a disk, means for securing said disk to said wheel coaxially therewith, a series of lugs equiangularly ar-

ranged on a face of said disk about the axis thereof, a sprocket wheel coaxial with said disk and rotatable relatively thereto, said sprocket wheel having a rim with sprockets thereon, a hub, and a series of spokes equal in number to said series of lugs and similarly spaced around the axis, the angular spacing between successive



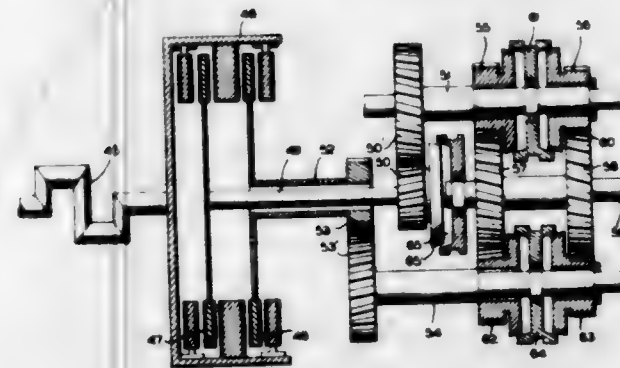
spokes being materially greater than the angle subtended by any one of said lugs, an endless chain meshing with said sprockets, and means holding said sprocket wheel against axial movement relative to said disk, said spokes and lugs being in a common plane whereby relative rotation between said sprocket wheel and disk is limited.

3,001,413

TRANSMISSION INCLUDING DISENGAGING CLUTCH CONSTRUCTION

Manfred H. Burckhardt, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed June 16, 1958, Ser. No. 742,196
Claims priority, application Germany June 26, 1957
31 Claims. (Cl. 74-359)



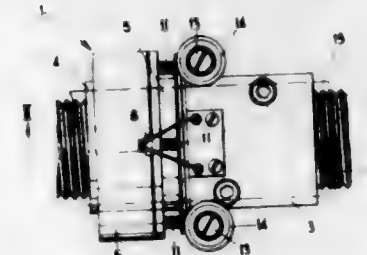
25. A change-speed transmission for motor vehicles comprising input means, output means, means forming two normally inoperative paths of power flow each including a pair of meshing gears, clutch means for selectively connecting said input means with a respective one of said two paths of power flow, one of each pair of meshing gears being operatively connected with said output means, and means including disengageable shifting clutch means for selectively rendering each path of power flow operative with a respective pair of meshing gears, each shifting clutch means including at least two clutch parts relatively movable with respect to each other in the engaging and disengaging directions thereof, said clutch parts including means forming conically shaped synchronizing and force-locking surfaces and inclined surfaces for producing an axial thrust from the torque for one of the two movable clutch parts effective in the engaging direction, shifting means for shifting said one clutch part, and actuating means including said first-mentioned means and auxiliary means for selectively pretensioning said shifting means to provide by each shifting clutch means, in the respective shifting directions thereof, a lockable free-wheeling-like effect automatically engageable or disengageable during synchronism in speed of the clutch parts or during reversal of torque.

3,001,414

ANTI-BACKLASH DEVICES

William Albert Bourne, Kenton, England, assignor to The General Electric Company Limited, London, England

Filed Mar. 11, 1960, Ser. No. 14,238
Claims priority, application Great Britain Mar. 13, 1959
5 Claims. (Cl. 74-441)

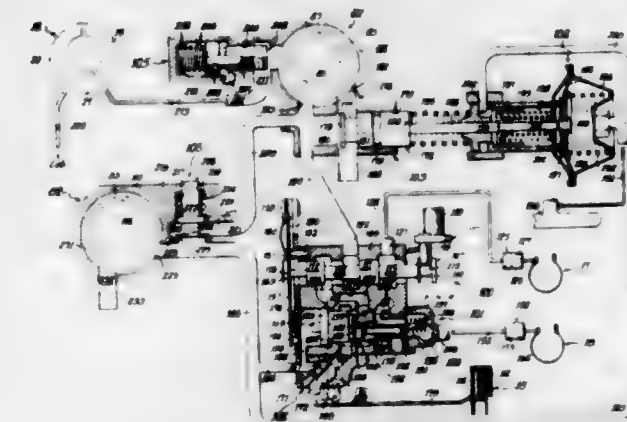


1. An anti-backlash device, which is adapted to cooperate with a threaded member, said device including two parts each of which has threads adapted to cooperate with the threads on said member for the purpose of transmitting a movement between said device and said member, the two parts of said device being movable relative to one another during operation for the purpose of varying the slack between said device and said member, said device also including electromagnetic means the energization of which causes relative movement between said parts so that the slack between said device and said member is thereby varied.

3,001,415

TRANSMISSION

Richard L. Smirl, La Grange, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 11, 1954, Ser. No. 428,917
17 Claims. (Cl. 74-472)



1. In a transmission for a vehicle having a driving engine with a fuel inlet manifold, the combination of a drive shaft, a driven shaft, means for providing a power train between said shafts and including a fluid pressure operated friction engaging means for completing the power train, a pump for supplying fluid under pressure to said friction engaging means, a regulator valve for regulating the output pressure of the pump as applied to said friction engaging means, a vacuum motor connected with the manifold of the vehicle engine so as to have the vacuum of the manifold applied thereto and mechanically connected with said regulator valve so as to cause the output pressure of the pump as applied to the friction engaging means to vary with changes in the manifold vacuum, a pump driven by said driven shaft and connected with an orifice so as to cause the output pressure of the pump to vary with the speed of the driven shaft, and means for

connecting said driven shaft pump with said motor so as to further cause the output pressure of said first-named pump as applied to the friction engaging means to vary with the speed of the driven shaft.

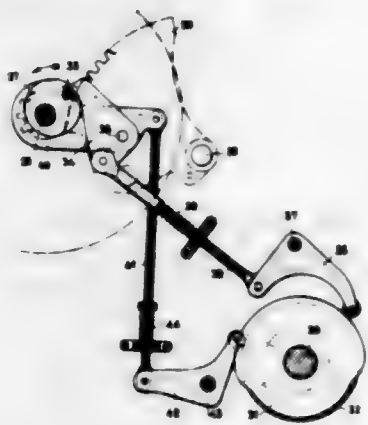
3,001,416

MACHINES OPERATING ON SHEETS

Bruno de Kalbermatten, Lausanne, Switzerland, assignor to J. Bobst and Son S.A., Lausanne, Switzerland, a corporation of Switzerland

Filed June 29, 1959, Ser. No. 823,526

Claims priority, application Switzerland June 30, 1958
5 Claims. (Cl. 74-527)



1. A detent mechanism for a conveyor comprising a rotatable shaft for driving the conveyor, a cam having a peripheral notch supported on said shaft, a lever pivoted on said shaft, a pivot on said lever, a second lever pivoted on said pivot, a roller on said second lever for engaging said notch and immobilizing said shaft, a rod pivoted to said second lever, a bearing supporting the rod for longitudinal displacement, a further cam, a cam follower on said rod engaging and controlled by said further cam, a second shaft supporting said further cam, a third cam on said second shaft, a second cam follower engaging said third cam, a rod coupled to said second cam follower, and a bearing supporting the latter said rod for longitudinal displacement, the latter said rod being pivoted to the first said lever for pivoting the latter about the first said shaft, said further cam controlling engagement of the roller in said notch, said third cam controlling a pivoting of the first said lever and thereby a movement of said pivot to rotate said rotatable shaft.

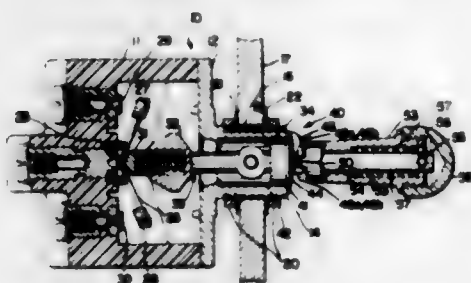
3,001,417

SWITCH APPARATUS

Robert F. Becker and Bert L. Smiley, Freeport, Ill., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 14, 1958, Ser. No. 715,302

5 Claims. (Cl. 74-528)



1. The combination comprising: a switch having a casing including a mounting bushing cooperable with a mounting panel; an insert secured in said bushing, the outer periphery of said insert being no greater than the outer periphery of said bushing; a first operated lever

pivoted in said bushing and including a portion extending through said insert beyond said bushing; and a second operating lever in axial telescoping relationship with the extending portion of said first lever, said second lever being spring biased toward and a pointed extremity thereof engaging said insert; the portion of said insert engaged by the extremity of said second lever having at least one high surface and one low surface connected by a surface of abrupt slope as compared to the slope of said high surface and said low surface so that oscillatory movement of said first lever and said second lever about said pivot from at least one position to another requires an abrupt relative axial movement between said levers.

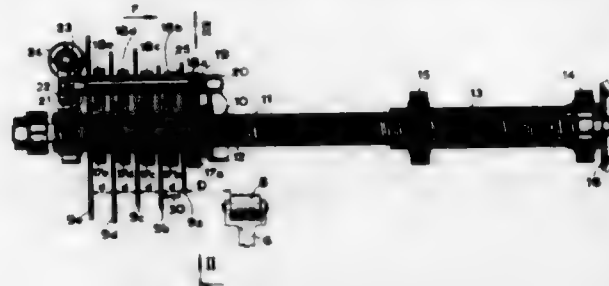
3,001,418

LEVEL SELECTOR FOR A MULTIPLE-LEVEL HOISTING MACHINE

André Nectoux, Le Creusot, France, assignor to Societe des Forges et Ateliers du Creusot, Paris, France, a company of France

Filed Oct. 14, 1958, Ser. No. 767,188

Claims priority, application France Oct. 18, 1957
2 Claims. (Cl. 74-568)



1. A level selector for multi-level hoisting machines for mine hoisting cages comprising a rotatable threaded shaft, a sleeve mounted on and engaging the threads of said shaft for rotation on and by said shaft and for movement along said shaft, a plurality of cams of differing radii mounted on said sleeve, means for spacing said cams from one another on said shaft, a plurality of contact mechanisms adjacent said cams, a single selector, means actuated by said cams for selectively energizing one of said contact mechanisms and for moving said selector into engagement with said contact mechanisms and manually actuated means coupled to and rotating said cams with respect to said shaft for adjusting the angular spacing of said cams on said shaft.

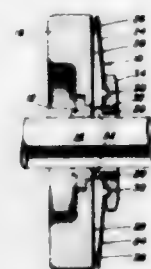
3,001,419

OSCILLATION OR INERTIA DAMPER

Harold Hymans and Jafar Devlet-Muraz, Paramus, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Apr. 29, 1960, Ser. No. 25,812

3 Claims. (Cl. 74-574)



1. An attachment for damping both large and small oscillations from a rotor shaft comprising a bushing fixed to said shaft and having a threaded sleeve with a key-way therein, a lock nut threaded onto said sleeve and

having a plurality of indentations on the inner face thereof, an inertia member rotatively mounted on said bushing to damp large oscillations from said shaft, concave resilient resilient means having a hub keyed to said sleeve and disposed between said lock nut and said inertia member and a plurality of radially extending resilient fingers, each of said fingers having a button pressed therefrom for engaging said inertia member adjacent the outer periphery thereof to damp out small oscillations of the shaft, said resilient means having a plurality of buttons on said hub and extending in a direction opposite to that of the buttons on said fingers, said buttons being of such configuration as to project into said indentations on said lock nut whereby relative rotation between said lock nut and said hub is normally prevented and tension on said fingers may be adjusted by the rotation of said lock nut to increase or decrease the concavity of said resilient means.

3,001,420

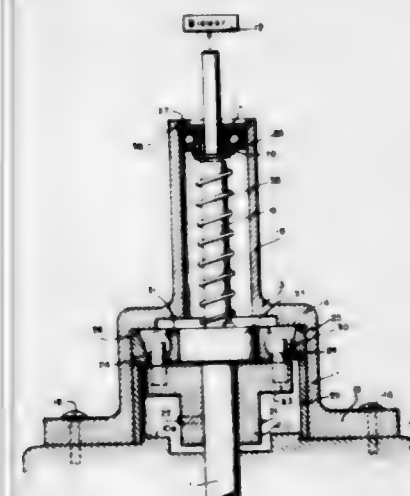
BALL PLANETARY DRIVE UNIT

Vern S. Juenke, Reno, Nev., assignor to Nevada Air

Products Co., Reno, Nev.

Filed Sept. 1, 1959, Ser. No. 837,480

5 Claims. (Cl. 74-798)



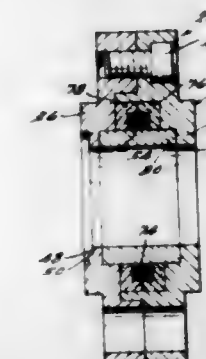
1. In a single ratio speed changing mechanism of the type comprising a hollow substantially cylindrical housing having inner and outer bearing races therein at a position between the ends of said housing, said bearing races having bearings therebetween separated from one another by a cage, and said mechanism having a first rotatable shaft in said housing attached to said cage as well as a second rotatable shaft in said housing attached to said inner race and disposed substantially in alignment with said first shaft, the improvement which comprises a hollow cylindrical ring slidably disposed in said housing in surrounding relation to said first shaft, said ring having outer walls of lesser diameter than and extending parallel to the inner walls of said housing, and said ring extending from a position adjacent one end of said housing to and into engagement with one end of said outer race, the outer diameter of said outer race being less than the inner diameter of said housing whereby said outer race is normally slidable within said housing, being retained in spaced relation to said one end of said housing substantially solely by forces exerted on said outer race by said ring, and a spring surrounding said second shaft and rotatable therewith, one end of said rotatable spring being held against axial movement adjacent the other end of said housing, and the other end of said rotatable spring applying a resilient force urging said inner race and bearings toward said outer race against the restraint of said ring.

3,001,421

COIL MOUNTING FOR ELECTRONIC TOOL DETECTOR

Herbert A. Martens, Birmingham, Mich., assignor to The Cross Company, Fraser, Mich., a corporation of Michigan

Filed Apr. 15, 1959, Ser. No. 806,466
20 Claims. (Cl. 77-22)



2. In an electronic tool detector, a metal housing having an opening therein, an oscillatory circuit having a sensing coil in said opening adapted to receive a tool in use, and a shield interposed between said coil and said housing composed of a material selected from the group consisting of ferrite and insulated powdered iron, said shield preventing flux loss from said coil to said metal housing and consequential interference with the normal condition of said circuit.

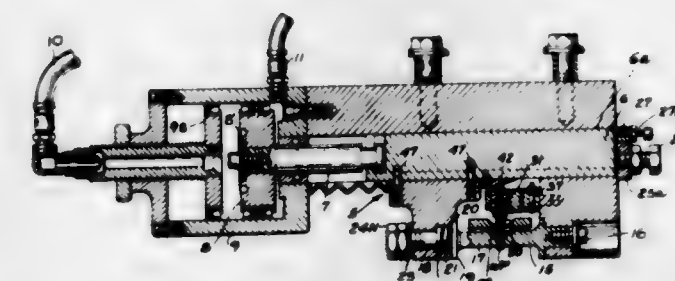
3,001,422

MACHINE TOOLS

Adolph V. Klancnik, 1020 Glenview Road, Glenview, Ill.

Filed Mar. 2, 1959, Ser. No. 796,634

12 Claims. (Cl. 77-63)



1. A work support for reciprocating machine tools, including a support and a pair of work engaging jaws mounted on said support, one of said jaws being fixedly mounted on said support and the other jaw being carried by a slide on said support for movement toward and away from said fixed jaw, power means for moving said slide and said movable jaw toward said fixed jaw so as to clamp and hold a work piece in said jaws, a stop movably mounted on said fixed jaw and adapted for movement into backing relation to a work piece engaged by said jaws, and camming means for moving said stop toward said work piece including a camming surface having an inclined portion and a flat dwell portion movable with said slide and engageable with a cooperable camming member carried by said stop during final closing movement of said movable jaw, and means biasing said stop away from said jaws.

3,001,423

METHOD OF FORMING A BLIND RECESS

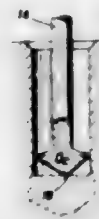
William B. Elliott, St. Catharines, Ontario, Canada

Filed Mar. 16, 1959, Ser. No. 799,628

17 Claims. (Cl. 77-67)

1. The method of forming a blind recess with at least an intermediate parallel portion and an internal continuously tapered enlargement thereof which comprises form-

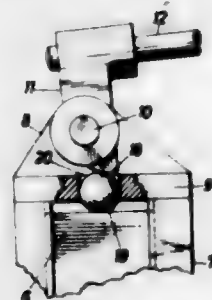
ing an initial blind hole by conventional means, said initial blind hole having an intermediate portion not wider than the width of the intermediate parallel portion required, subsequently deepening said initial hole by introducing a tool having an eccentric cutting point into said initial blind hole to the extent necessary to engage said eccentric cutting point with the bottom of said initial



blind hole, advancing said eccentric cutting point beyond the bottom of said initial blind hole, and bending the lower portion of said tool carrying said cutting point always away from the axis of said initial blind hole, while maintaining the shank of said tool at least substantially unmovable transversely to form said continuously tapered enlargement.

3,001,424 PRESSURE ROLLERS

John Pickles, Huddersfield, England, assignor to Carding Specialists (Canada) Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed May 25, 1959, Ser. No. 815,699
Claims priority, application Great Britain June 5, 1958
4 Claims. (Cl. 80-56)



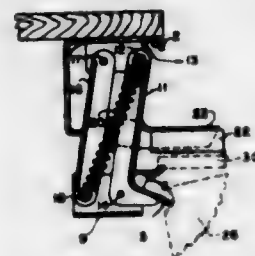
1. Pressure-applying means for loading a roller having its shaft ends movably guided, said means comprising a pair of pivotal double-ended members, each said member having one end engaging a guided ball, said ball being adapted to apply a load to the adjacent roller shaft, the other end of each pivotal member having an extension arm, and a weight member extending between and common to both of said extension arms, said weight member being adjustable to like positions along said extension arms for exerting like leverage through said two pivotal members on said guided balls, whereby multiplied pressure is applied to said balls and thus said roller through its shaft ends.

3,001,425 WALL MOUNTED FRICTION CAP REMOVER

Eugene S. Chapman, Louisville, Ky.
(2832 Christie Place, Owensboro, Ky.)
Filed Oct. 9, 1958, Ser. No. 766,297
10 Claims. (Cl. 81-3.3)

1. A tool for removing frictional caps from closed containers presenting a horizontal outwardly-open prying space which is delimited on its lower side by the upper surface of a shoulder on the container and on its upper side by the lower edge of the rim of the cap, comprising: a wall bracket; a pair of jaws spaced from said wall bracket and connected together for jaw opening and closing movements, said jaws being adapted, when closed, to fit into the prying space of a closed container which is operatively positioned for the cap removal operation;

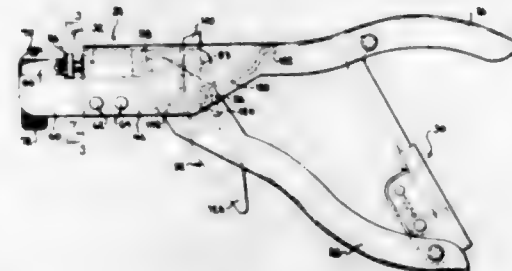
and interconnecting means extending across the space between said wall bracket and said jaws and connected to both so as to mount said jaws on said wall bracket for backward and forward movement relative thereto and bodily between a forward cap-receiving position, wherein



said jaws are closed, and a rear cap-off position wherein said jaws are open, said interconnecting means being operative, during said backward movement, to open said jaws for cap-removing purposes and, during said forward movement, to close said jaws.

3,001,426 HAND CRIMPING TOOL

Henry W. Demler, Lebanon, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Original application Nov. 23, 1956, Ser. No. 624,151, now Patent No. 2,947,207, dated Aug. 2, 1960. Divided and this application Jan. 7, 1960, Ser. No. 1,034
3 Claims. (Cl. 81-15)



1. In a hand tool for crimping electrical connectors in combination, a crimping head having a first crimping die therein, a plunger mounted for reciprocating motion in said head and having a second crimping die positioned to cooperate with said first die to crimp a connector placed in the path of said plunger, a pair of handles connected to said head and plunger to reciprocate said plunger, one of said handles being fixed to said head and the other handle having a first pivot near one end thereof, and a link connected to said other handle by a second pivot spaced from said first pivot, said link having a third pivot near one end thereof, said first pivot being connected to said head and the third pivot being connected to said plunger, whereby relative movement of said handles reciprocates said plunger, said link, when said handles are open, being substantially perpendicular to the path of movement of said plunger and having a manually operable extension by which it can be rotated about said second pivot, whereby said handles are locked in open position and can be closed only after said link has been manually rotated to move said plunger toward its crimping position, said first pivot connected to the head and said third pivot connected to said plunger, and the axis of the plunger disposed parallel to the axis of the head whereby closing movement of the handles causes the plunger to move in a direction away from the handles.

3,001,427 EARRING ADJUSTING DEVICE

Otto M. Dyer, Jr., 1 Lafayette Place, Detroit, Mich.
Filed Sept. 2, 1960, Ser. No. 53,681
10 Claims. (Cl. 81-15)

1. A device for adjusting a spring on an earring clamp arm, said device comprising a frame provided with a screw-threaded aperture, a clamp arm seat provided on

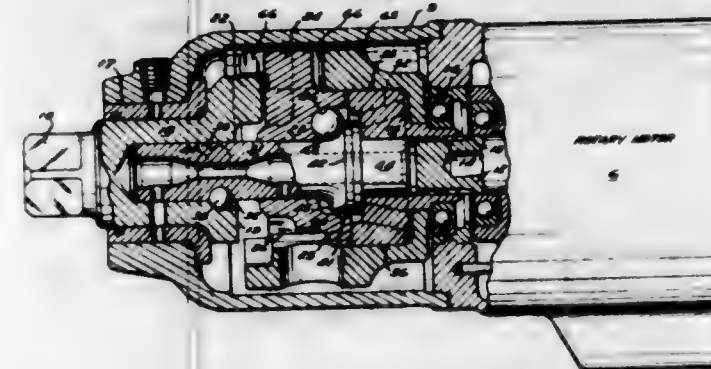
said frame in spaced relation to said aperture, and an adjusting screw provided in said aperture and adapted to



engage a clamp arm spring whereby to set the spring at a selected angular relation to the clamp arm.

3,001,428 ROTARY IMPACT WRENCH

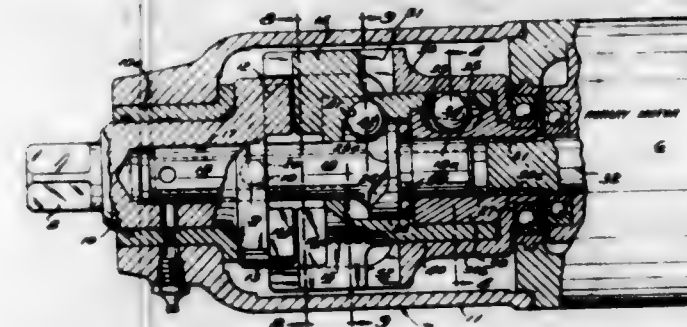
William F. Sindelar, Cleveland, Ohio, assignor to Master Power Corporation, Bedford, Ohio, a corporation of Maryland
Filed Feb. 23, 1960, Ser. No. 10,390
7 Claims. (Cl. 81-52.3)



1. An impact wrench comprising a driver element, a driven element having an anvil carried thereby, said anvil having axially projecting lugs, a hammer dog mounted for axial movement between said driver and driven elements in and out of the path of said anvil lugs, a first cam means including a spiral surface on said hammer dog and a cooperating abutting spiral surface on said driver element for rotating the hammer dog and retracting the hammer dog from the path of the anvil lugs away from said driven element and toward said driver element, second cam means connecting said hammer dog and anvil to advance the hammer dog into the path of said anvil lugs for delivery of an impacting blow to said lugs.

3,001,429 ROTARY IMPACT WRENCH

William F. Sindelar, Cleveland, Ohio, assignor, by mesne assignments, to Master Power Corporation, Bedford, Ohio, a corporation of Maryland
Filed Apr. 16, 1959, Ser. No. 806,852
19 Claims. (Cl. 81-52.3)



16. In an impact wrench, a motor driven driver element, a driven element having an anvil carried thereby in a rotary path, a rotatable hammer, a hammer dog mounted within said hammer between said driver element

and said driven element for axial movement in and out of said anvil path, a first cam and cam follower means connecting said hammer dog to said driver element for rotating the hammer dog and hammer and retracting the hammer dog from the anvil path, and a second cam and cam follower means connecting said hammer dog to said anvil to advance the hammer dog into the path of the anvil for delivery of an impact blow.

3,001,430 PREDETERMINED TORQUE RELEASE TOOL

James W. Cranford, 5565 N. Charlotte Ave., San Gabriel, Calif.
Filed Dec. 22, 1958, Ser. No. 782,020
6 Claims. (Cl. 81-52.4)



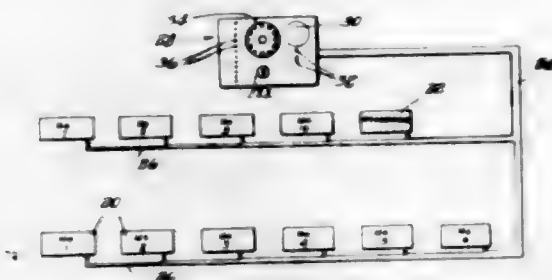
5. A torque limiting tool for driving a part, comprising: a shank member defining an axis; a cylindrically shaped member defining an axis, said shank member being disposed within said shaped member with axes coinciding; a disc-like cam plate member having a face portion radially disposed; a disc-like ball cage member having a face portion radially disposed, one of said disc-like members being secured to said shank member and the other secured to said shaped member with said face portions adjacent and facing each other, both said disc-like members defining recesses projecting inwardly from said face portions; a torque transmitting ball element interposed between said face portions in said recesses; means adjustably secured relative to one of said disc-like members for adjusting the relationship between the facing surfaces of said disc-like members; an adjusting sleeve member threadably received and freely rotative within said shaped member, one of said sleeve and shaped members defining an elongate groove and the other defining a depression adjacent said groove; a detent ball disposed in said depression; resiliently biased means urging said detent ball outwardly of said depression to engage said groove and thus prevent rotation of said sleeve member relative to said shaped member; means for releasing said biased means to permit said detent ball to disengage said groove and thus permit rotation of said sleeve member relative to said shaped member; and spring means interposed between said adjusting sleeve and said ball element.

3,001,431 MUSICAL INSTRUMENT SYSTEM

Clifford W. Andersen, De Kalb, Ill., assignor to The Randolph Wurlitzer Company, North Tonawanda, N.Y., a corporation of Ohio
Filed Sept. 22, 1954, Ser. No. 457,728
8 Claims. (Cl. 84-1.01)

1. A musical instrument system comprising a plurality of individually operable musical instruments, each such

instrument having means providing electrical oscillations corresponding to the tones of that instrument, means at each instrument operatively connected to the oscillation providing means for individually listening to the tones of that instrument, a station located remotely of said instruments, means at said station for transducing said electrical oscillations into audible instrument tones, connecting



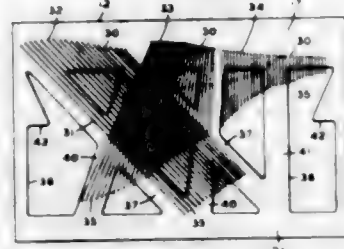
switch means at said station for selecting which of the oscillations is to be transduced at said station, means at said station for operating said selecting means, means remote relative to said station and respectively at said instruments and respectively operatively connected to said selecting means for operating the selecting means, and means connecting said electrical oscillation providing means to said selecting means.

3,001,432
ATTACHMENT FOR AUTOMATICALLY PLAYING
ROOT TONES OF CHORDS IN BASS SECTION OF
ORGAN
Jean A. Greff, % Northwestern Organ & Chime Co., Fox
Theater Bldg., Spokane, Wash.
Filed Aug. 12, 1957, Ser. No. 677,604
4 Claims. (Cl. 84-1.01)



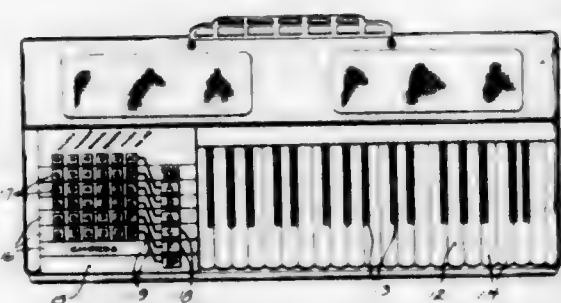
1. An attachment for electric organs, operable automatically, when a chord is played on the keyboard, to cause the sounding of the root tone of the chord in a lower octave in the bass section of the organ than that in which the chord is played, said attachment comprising a series of switch blocks operable by depression of the keys of the keyboard used in playing chords, each switch block including a normally open pair of contacts and a plurality of normally closed pairs of contacts, the normally open pair of contacts of each switch block being connected in the control circuit for the corresponding tone in a lower octave of the organ, the normally closed pairs of contacts of said switch being interconnected with normally open contact pairs of the switch blocks operable by depression of keys used to play certain related tones of said chord whereby depression of the root tone key of the chord prevents the sounding of the tones corresponding to said related tones in said lower octave.

3,001,433
PIANO BACK STRUCTURE
Louis J. Merkel, 7505 Big Bend Blvd.,
Webster Groves 19, Mo.
Filed June 24, 1957, Ser. No. 667,374
2 Claims. (Cl. 84-186)



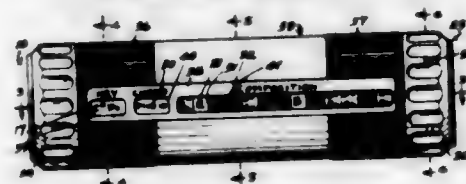
1. A piano back for a piano having a plurality of string sections each of which is comprised of a plurality of substantially parallel strings and each of which is arranged in a different angular relation, the piano back comprised of a panel having openings therethrough, said openings defining top and bottom strips, and defining a plurality of braces extending between said strips and connected integrally therewith, at least one brace extending parallel to and disposed directly behind in depthwise alignment with the strings of each of the string sections in the piano to which the back is attached.

3,001,434
KEYBOARD FOR CHORD ORGAN
Thomas S. Lo Duca, 2245 N. 24th Place, Milwaukee, Wis.
Filed Mar. 23, 1959, Ser. No. 801,354
1 Claim. (Cl. 84-443)



A chord keyboard comprising a panel, a plurality of chord keys arranged in rows rectangularly on said panel, and a plurality of bass bars related to the chord rows spaced vertically relative to each other disposed to the right of said chord keys and arranged two rows closer to the player on said panel whereby the thumb may engage a bass bar and the fingers the related chord keys of the same musical key.

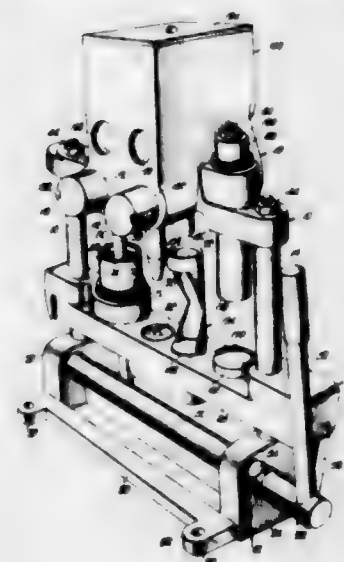
3,001,435
MUSIC TRANPOSITION AND CHORD
CONSTRUCTION DEVICE
Frank E. Duffy, Highland Mills, N.Y. (10601 Vose St.,
Reseda, Calif.), and Joseph Thomas Haczek, 5 Gennis
Drive, Rochester, N.Y.
Filed Nov. 18, 1959, Ser. No. 853,908
4 Claims. (Cl. 84-474)



1. In a music transposition and chord construction device, a first element comprising a cylindrical member having adjacent one end a circumferential series of key signature note designations representing selected notes of a chromatic scale, and having between said circumfer-

ential series and the other end chord composing note designations representing selected notes of a plurality of chromatic scales arranged in a plurality of longitudinal series respectively in longitudinal line with said key signature designations, and with the note designations of said plurality of longitudinal series circumferentially aligned to provide a plurality of circumferential series of chromatic scales, said longitudinal series and said circumferential series each having their note designations arranged in predetermined staggered relation, the first note designation of each longitudinal series corresponding to the longitudinally aligned key signature note designation, and second and third elements each comprising a cylindrical tubular member, said second element being disposed in surrounding relation to said first element for rotation relative thereto, and said third element being disposed in surrounding relation to said second element for rotation relative to said first and second elements, one of said second and third elements having a sight opening for register with a selected key signature designation of said first element and a second sight opening in longitudinal line with said first sight opening and co-extensive with the longitudinal series of chord composing note designations in longitudinal line with said selected key signature designations in register with said first sight opening, and the other of said second and third elements having a circumferential series of chord designations for selective longitudinal alignment with said sight openings of said one element, and means in longitudinal line with each of said chord designations and co-extensive with said second sight opening for exposing the first note designation and additional predetermined chord composing note designations of said longitudinal series in line with said selected key signature designation in register with said first sight opening and concealing the remaining note designations thereof.

3,001,436
SHOT SHELL LOADER
Robert R. Deitemeyer, 5440 Sumner St., Lincoln, Nebr.
Filed Aug. 25, 1958, Ser. No. 757,033
2 Claims. (Cl. 84-25)



1. Mechanism for reloading shotgun shells comprising a base; a pair of upright, horizontally spaced standards mounted on said base; a support secured to said standards in vertically spaced relationship to said base; a cross member reciprocally carried by said standards between the base and said support, said cross member and the support having a number of opposed, aligned loading stations, the stations on said support including in successive order a stop, a shell guide and power delivery tube, a wad press and shot feed tube and resizing and crimping components, the stations on said cross member in

said order including resizing and de-priming elements, a primer holder, and a pair of spaced shell holders, said support having a pair of spaced, horizontally disposed, elongated passages therein, each of said passages communicating with a corresponding tube; individual powder and shot compartments mounted on said support in overlying relationship to corresponding passages, said compartments being provided with openings into respective passages disposed in spaced relationship to the areas of intercommunication of the passages with said tubes; means closing one end of each passage; measuring valve means in each of said passages for permitting only predetermined quantities of powder and shot to gravitate from corresponding compartments into said tubes, said valve means including an elongated bar longitudinally shiftable in the corresponding passage and provided with a transverse bore therethrough intermediate the ends thereof, said bore being of a predetermined volume and alternately alignable with openings in the respective compartment and area intercommunicating the passage with the corresponding tube, and a coil spring in said passage between the inner end of said bar and the corresponding closing means for biasing said bar in a position with the bore therethrough in alignment with one of said openings; and crank structure rotatably carried by said base and coupled with the cross member for reciprocating the latter toward and away from the support.

3,001,437
DIFFUSION SCANNER
Philip H. Taylor, Santa Ana, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California
Filed Aug. 31, 1953, Ser. No. 377,448
5 Claims. (Cl. 88-1)

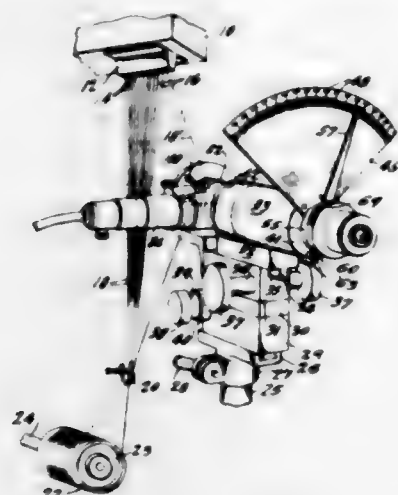


5. A scanning device of the class described, comprising: a disc having at least two distinct portions, one of said portions being a light diffusing section and another of said portions being a specular transmitting section, said specular transmitting section being constructed of a transparent material the surfaces of which are coated with an evaporative film.

3,001,438
APPARATUS FOR DETERMINING DIAMETERS
OF MOVING BODIES
William P. Warthen, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Filed July 9, 1957, Ser. No. 670,732
9 Claims. (Cl. 88-14)

1. Apparatus for measuring the size of a linear body while the same is moving in the direction of its length including, in combination, a frame, a movable carriage supported on the frame, an image multiplying element mounted on the carriage, a magnifying lens system associated with the element, means for guiding the linear body through the optical field of the lens system, a light source, means for directing an annular beam of light onto the linear body in the optical field, a member bearing graduations mounted on said carriage, an indicating means for cooperation therewith, means for rotating said element relative to the carriage for establishing a predetermined relation of the optical positions of the multiple images of the linear body and concomitantly actu-

ating the indicating means relative to the member bearing graduations for indicating the size of the linear body when



said predetermined relation of the optical positions of the images is attained.

3,001,439

APPARATUS AND METHOD FOR POLARIMETRIC ANALYSIS

Auguste Louis Marie Antoine Rouy, Scarsdale, N.Y., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Oct. 15, 1957, Ser. No. 690,395
17 Claims. (Cl. 88-14)



1. A method of determining the rotation of the plane of polarization of polarized light by a substance which method comprises passing a polarized light beam along a single axis through the substance and through a light-polarizing member having a known plane of light polarization, said light beam being centered along said axis; abruptly and alternately changing the plane of polarization of the said light beam as it enters the substance in positive and negative directions at a constant frequency and without displacement relative to the said axis; converting the light beam emerging from the said light-polarizing member into corresponding electrical variations which variations include A.C. and D.C. components; and measuring the ratio of the said A.C. to D.C. components to determine the extent to which said substance rotates the plane of polarization of polarized light.

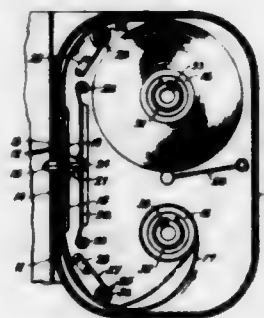
7. Polarimetric apparatus comprising a light source; means forming light from said source into a first light beam centered about a given axis and along a given axis and impinging on a first light transducer; means interposable into the first light beam and adapted to contain a solution under test; an analyzer having a predetermined plane of light polarization and interposed in the first light beam between the said first light transducer and the solution under test; means polarizing the first light beam as it enters the solution; means abruptly changing the plane of polarization of the light beam entering the solution at a constant frequency and without displacement of the said axis within a range defined by known but opposite angles with respect to the plane of polarization of the analyzer;

a second light transducer; means forming light from said source into a second light beam impinging on the second light transducer; and measuring means simultaneously responsive to the outputs of both of the said light transducers.

3,001,440

FILM MAGAZINE

Edwin E. Foster, % Math-Kroners Inc., 402 Capital National Bank Bldg., Austin, Tex.
Filed Feb. 18, 1957, Ser. No. 640,877
5 Claims. (Cl. 88-17)

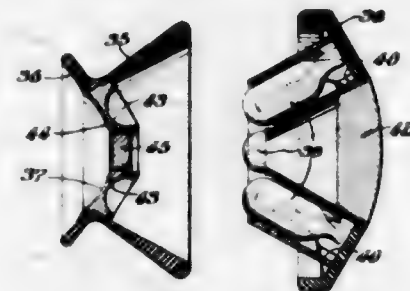


1. A film magazine for motion picture cameras comprising a casing having a lateral wall formed with an exposure aperture, film guiding means in the casing to guide a film past the exposure aperture, a pair of film spools in the casing on which film may be wound with the film between the spools passing through the film guiding means, a pair of friction rollers rotatably mounted in the casing adjacent to opposite ends of the film guiding means and over which the film passes between the guiding means and the spools respectively, and one-way acting means engaging the rollers to prevent rotation thereof by the film in a direction toward the adjacent spools respectively while permitting rotation thereof in the opposite direction.

3,001,441

ANHYDRO-BLEPHAROSTATIC CONTACT LENS

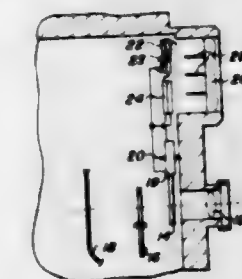
John Frederick Herbert, 605 Ashbourne Road, Elkins Park, Pa.
Filed Aug. 5, 1957, Ser. No. 676,343
3 Claims. (Cl. 88-20)



1. An optical illuminating device comprising two separable parts in combination, the first part comprising a generally hollow eye-contacting holder containing light-refracting and light-diffusing elements, and the second part comprising an illuminator adapted to be held by said first part, said first part or holder comprising a frusto-conical shell of opaque material having axially positioned therein at the smaller diameter forward end thereof an annular body of translucent light-diffusing material having a concave surface shaped and adapted to be placed adjacent substantially all of the corneal surface of the human eye except for the central opening, a light-refracting lens element mounted within said central opening, and a plurality of depressions formed in the rearward surface of said annular body of translucent light-diffusing material at spaced-apart locations along a circular path sur-

rounding said lens element, said second part or illuminator comprising a generally frusto-conical body of translucent material adapted to fit into the rearward open end of said frusto-conical holder, said frusto-conical translucent body having a frusto-conical bore extending axially therethrough, said bore having an opaque wall, said frusto-conical translucent body having a plurality of spaced-apart cavities therein open at the forward end but closed at the rearward end for receiving illuminating elements, the forward open ends of said cavities being adapted, when said second part is fitted into said first part, to match with and be closed by said depressions in the light-diffusing material, said depressions being adapted to receive the front portion of said illuminating element, said second part having an annular opaque backing having a peripheral extension forming a flange for abutment and ready separation with the rearward annular edge of said first part when the two parts are placed in, and taken out of, interfitted engagement.

said pivotal mounting means, whereby the sensitivity of said circuit increases with rotation of said first photocell

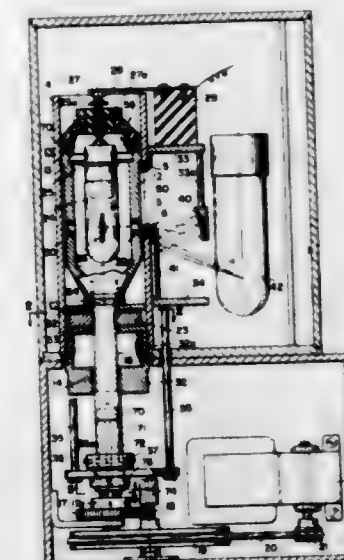


away from physically parallel relation to said second photocell.

3,001,444

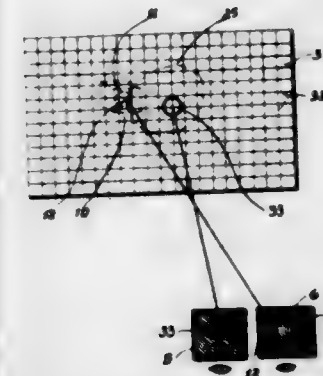
SOUND PROJECTOR FOR PROJECTING STILL TRANSPARENCIES ON FILM AND REPRODUCING SOUND FROM A SOUND RECORD AREA

William Castedello and Werner K. Bender, Plainville, Conn., assignors to The Kalart Company Inc., Plainville, Conn.
Filed Apr. 27, 1959, Ser. No. 809,043
13 Claims. (Cl. 88-28)



METHOD FOR MEASURING VISUAL DISCREPANCY

Frederick W. Brock, 39 Victory Blvd., Staten Island 1, N.Y.
Filed Oct. 16, 1959, Ser. No. 847,019
6 Claims. (Cl. 88-20)



1. A method for inducing fusionless vision which includes placing a test device of a certain color having an intensity brighter than the background within the field of vision of an individual, placing a second test device having the same certain color of an intensity darker than the background within said field of vision of said individual, placing a light filter for said certain color before one eye of said individual, and placing a light filter for a color complementary to said certain color before the other eye of said individual, thereby said first named test device is visible only to said one eye of said individual and said second test device is visible only to the other eye of said individual and fusionless vision is induced.

3,001,443

EXPOSURE METER COMPENSATING DEVICE

Allen G. Stinson, John H. Eagle, and Norman N. Lareau, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 1, 1959, Ser. No. 824,351
2 Claims. (Cl. 88-23)

1. In an exposure meter having a housing, the combination comprising: an electrical photocell circuit including first and second photocells normally disposed in physically parallel relation to each other for illumination of front surfaces thereof by light from the exterior of said housing and electrically connected in opposed parallel relation to each other; and means for adjusting the sensitivity of said photocell circuit, comprising means for pivotally mounting said first photocell in said housing, and means for moving said first photocell angularly about

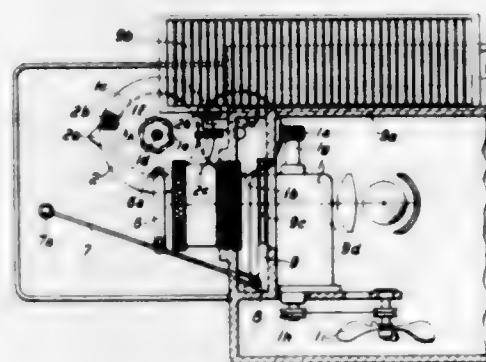
1. A sound projector for projecting images and reproducing sound respectively from a stationary single strip of transparent film bearing both several photographic picture areas and associated photographically recorded sound record areas alternating in longitudinally spaced uniform relationship, each picture area and the associated sound record area constituting a program, said projector comprising film guide means including a picture gate and a scanning gate, scanning means for optically scanning a sound record area in registry with said scanning gate, film transport means for moving the film step-by-step through the guide means and past said gates, drive means for driving said transport means, self-releasing coupling means for intermittently coupling said drive means to said transport means, said self-releasing coupling means comprising a coupling member drivingly coupled with said transport means and movable between a position drivingly engaged by the drive means and a position disengaged from the drive means, and spring means biasing the coupling member into the disengaged position, each activation of said coupling means coupling the transport means and the drive means for movement of the transport means through a predetermined distance thereby moving another sound record area and picture area on the film into registry with the respective gates, actuating means for actuating said coupling means, and coupling control means operating said actuating means and controlled by said scanning means upon completion

of the scanning of the sound record area, said actuating means when operated by the control means moving the coupling member into the engaged position, and stop means disengaging and arresting the coupling member after a predetermined distance of movement thereof.

3,001,445

SLIDE PROJECTOR

Hans Mulch and Dieter Nissel, Wetzlar (Lahn), Germany, assignors to Ernst Leitz Gesellschaft mit beschränkter Haftung, Wetzlar (Lahn), Germany
Filed Oct. 26, 1959, Ser. No. 848,749
Claims priority, application Germany Oct. 30, 1958
7 Claims. (Cl. 88—28)



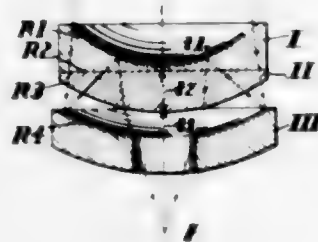
1. In a slide projector, the combination of a reversible motor having a main terminal, a contact terminal for one sense of rotation and a contact terminal for the opposite sense of rotation, cooling means for said projector driven by said motor, a magazine for slides and movable in both directions, means for removing and returning slides to and from said magazine, and clutch means for drivingly connecting said slide changing means and said magazine advancing means to said reversible motor, with a driven disk in said clutch means being impelled in only one direction, a cam on said driven disk, a first switch and a second switch associated with said driven disk and each comprising a contact blade, a first fixed contact point and a second fixed contact point, a manually operable reversing switch, comprising a first contact point, a second contact point, and a switch contact, said contact blades of said first and said second switch being connected with said first and said second contact point, respectively, of said reversing switch, said switch contact of said reversing switch being connected with said main terminal of said reversible motor, said contact terminal for one sense of rotation of said motor being connected with said first fixed contact points of said first and said second switch, said contact terminal for the opposite sense of rotation of said motor being connected with said second fixed contact points of said first and said second switch.

3,001,446

OPTICAL SYSTEMS COMPRISING A SPHERICAL CONCAVE MIRROR AND A MENISCUS LENS
Albert Bouwers, The Hague, and Johannes Becker, Delft, Netherlands, assignors to N.V. Optische Industrie de Oude Delft, Delft, Netherlands
Filed Jan. 6, 1959, Ser. No. 785,294
Claims priority, application Netherlands Oct. 15, 1951
6 Claims. (Cl. 88—57)

1. An optical system comprising in optical alignment a spherical concave reflecting mirror axially air spaced from a meniscus corrector lens positioned between the said concave reflecting mirror and its center of curvature with the refracting surfaces of said meniscus corrector lens substantially concentric with said concave reflecting mirror and a secondary reflecting mirror axially positioned between the concave surface of said meniscus

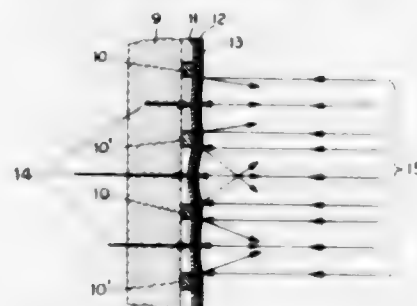
corrector lens and the center of curvature of said concave mirror whereby the imaging light rays from the



object to the image plane are refracted three times by the said meniscus corrector lens in said optical system.

3,001,447

IMAGE REPRODUCING DEVICE FOR VISIBLE AND INVISIBLE RADIATION IMAGES
Martin Ploke, Preetz, Holstein, Germany, assignor to Zeiss Ikon A.G. Stuttgart, Stuttgart, Germany
Filed Aug. 26, 1958, Ser. No. 757,428
Claims priority, application Germany Aug. 29, 1957
15 Claims. (Cl. 88—61)



1. In an image reproducing device, a photo-semiconducting light ray receiving layer on one side of which is projected an optical radiation image to produce an electrical resistance image made up of numerous area portions distributed over said photo-semiconducting layer, and means forming a reflecting surface arranged on the other side of said light ray receiving layer which is illuminated by a separate source of light, said means comprising a foil coated with a mirror layer for light modulation, a support on which said foil is mounted, said support being formed of spaced parallel strips which in dependence of the resistance distribution effected by the image in said photo-semiconductive layer cause a local deformation in said foil so that micro-mirrors of different focal length are formed in the latter.

3,001,448

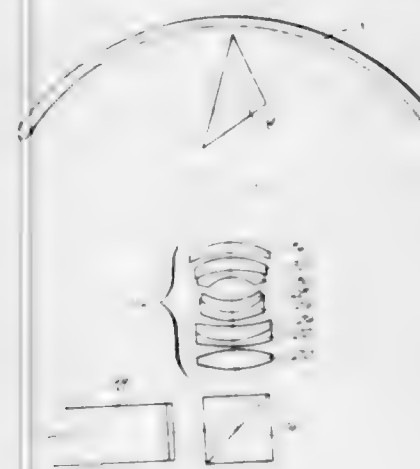
TORIC SURFACE FOR THE ASTIGMATIC CORRECTION OF A SHALLOW DOME AND PRISM COMBINATION

Pierce B. Day, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 24, 1958, Ser. No. 751,599
5 Claims. (Cl. 88—72)

1. In an optical system for a bombsight or the like including a composite high aperture lens having a predetermined optical axis, a shallow transparent dome covering said composite lens and having a geometrical center coinciding with the optical axis of said composite lens, the inner peripheral surface of said shallow dome having one predetermined radius of curvature and the outer peripheral surface of said dome having another predetermined radius of curvature, and a substantially triangular-shaped scanning prism positioned between said dome and

said composite lens in the optical path of said composite lens, said scanning prism being rotatable about a fixed axis between a plurality of scanning positions with the hypotenuse face of said prism serving as a reflecting surface, said fixed axis of rotation of said scanning prism being spaced a first predetermined distance from the inner peripheral surface of said dome and being offset a second predetermined distance from said optical axis of said composite lens which is about one-fifteenth that of said first

plane intermediate said components, whereby an inversion of said light rays without a side-to-side reversal thereof at said focal plane will be produced, said plane mirror being positioned in said system intermediate said optical components and so angularly disposed as to intercept said rays and invert and direct said rays toward said second optical component, said second optical component being so positioned as to direct said rays toward said predetermined eye position.

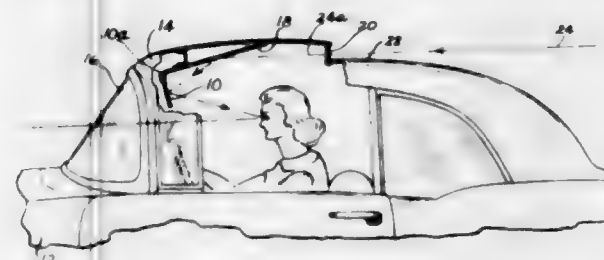


predetermined distance, said hypotenuse face of said scanning prism having a predetermined concavity defined by a predetermined longitudinal radius of curvature and a predetermined transverse radius of curvature, said predetermined position of said scanning prism together with said predetermined concavity of said hypotenuse face thereof being operable to compensate for the astigmatism contribution and deviation error of said dome over a predetermined range of movement of said scanning prism.

3,001,449

OPTICAL SYSTEM

Walter Lewis Hyde, East Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Sept. 30, 1957, Ser. No. 687,014
16 Claims. (Cl. 88—86)



1. A rear view optical system for use in a vehicle or the like and providing an upright realistically appearing image at a predetermined eye position in said system, said system comprising a first cylindrically curved positive refracting optical component, a plane mirror and a second cylindrically curved positive reflecting optical component arranged in optical alignment with each other along a common optical axis, said positive optical components having their respective axial meridians extending substantially horizontally and in transverse directions relative to said optical axis so as to be in substantially parallel relation to each other, each optical component having a predetermined focal length and said optical components being axially spaced from each other a distance approximately equal to the sum of their focal lengths, said first optical component being disposed so as to admit light rays from an object field rearwardly of said vehicle and direct same as convergent rays focused at a focal

1. A rear-view optical system in a vehicle or the like and adapted to provide an upright realistically appearing view of an object field to the rear of said vehicle, said system comprising first, second and third cylindrically curved positive optical components and a plane mirror disposed in said vehicle and adjacent a roof portion thereof so as to be in spaced optically aligned relation to each other along a common optical axis, said cylindrically curved components being of appreciable lengths in the directions of their axial meridians and having their respective axial meridians extending substantially horizontally and in transverse relation to said optical axis so as to be in substantially parallel relation to each other, said first and third components having substantially equal focal length and being axially spaced from each other a distance approximately equal to the sum of their respective focal lengths so as to have a common focal plane substantially midway therebetween and providing a substantially unit magnification for said system, said first component being a refracting component in the form of an objective lens positioned adjacent an opening in said roof portion so as to admit light rays from said object field into the interior of said vehicle and focus said light rays at said focal plane, whereby an inversion of said light rays without a side-for-side reversal thereof at said focal plane will be produced, said second component being a refracting component disposed in said system substantially at said common focal plane so as to function as a field lens in said system, said plane mirror being disposed in said system at a selected axial location intermediate said first and third components in such a manner as to produce a second inversion of said light rays travelling therebetween without a side-for-side reversal thereof, said third component being in the form of a cylindrically curved eye mirror positioned in said vehicle adjacent an upper edge of the windshield thereof so as to receive said light rays passing beyond said focal plane and inverted by said plane mirror and direct same downwardly and rearwardly as parallel light rays toward a conventional eye position for the driver of said vehicle, said second component having a predetermined focal length so related to the focal lengths of said first and third components as to conveniently locate the exit pupil of said system near said eye position.

3,001,451

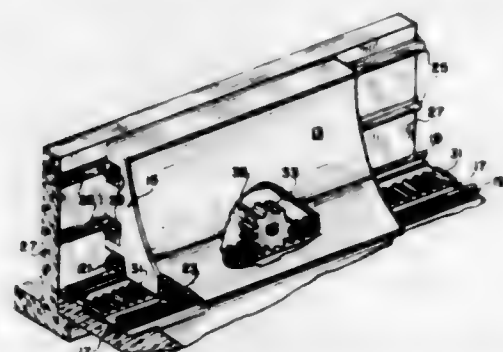
TRANSITORY EXHAUST DEFLECTOR

John A. Urban, San Pedro, and Richard C. Randall, Torrance, Calif., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Jan. 28, 1959, Ser. No. 789,756

4 Claims. (Cl. 89-1.7)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An exhaust deflector for deflecting the blast issuing from the exhaust nozzle of a rocket comprising, a base portion, a plurality of upright members supported by said base portion and extending upwardly therefrom, a platform having at least one opening therein held in spaced relation to said base portion by said upright members, a rocket disposed over the opening in said platform so that its exhaust blast issues through said opening, an elongated laterally movable concave surfaced deflector member disposed between said base and said platform, said deflector member being placed so that the blast issuing from said rocket and passing through said opening impinges on the concave surface of said deflector member, a plurality of tracks, a series of wheels mounted on said deflector member and engaging said tracks for guiding said deflector in a lateral direction, and means for transmitting lateral transitory motion to said deflector.

3,001,452

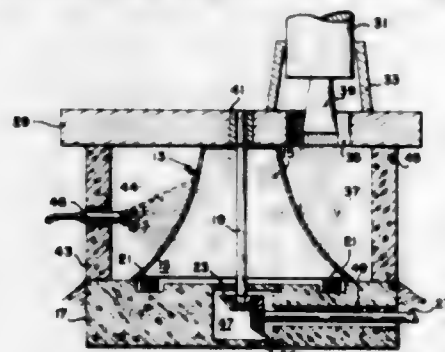
ROTARY EXHAUST DEFLECTOR

John A. Urban, San Pedro, and Richard C. Randall, Torrance, Calif., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Jan. 28, 1959, Ser. No. 789,757

3 Claims. (Cl. 89-1.7)

(Granted under Title 35, U.S. Code (1952), sec. 266)



3. An exhaust deflector for deflecting the blast issuing from the exhaust nozzle of a rocket comprising a base portion, a plurality of upright members supported by said base portion and extending upwardly therefrom, a platform having at least one opening therein held in spaced relation to said base portion by said upright members, a rocket disposed over the opening in said platform so that its exhaust blast issues through said opening, a truncated right circular conical deflector member rotatably disposed between said base and said platform, said deflector member comprising a plurality of individually replaceable concentric annular members of progressively varying diametrical dimensions and a series of shaped support members serving as inner ribs to hold said an-

nular members in place to form the conical deflector member, the blast issuing from said rocket and passing through said opening impinging on the outer surface of said annular members forming the deflector member, a rotatable shaft, said deflector member being mounted on said shaft for rotation therewith, and means for rotating said rotatable shaft.

3,001,453

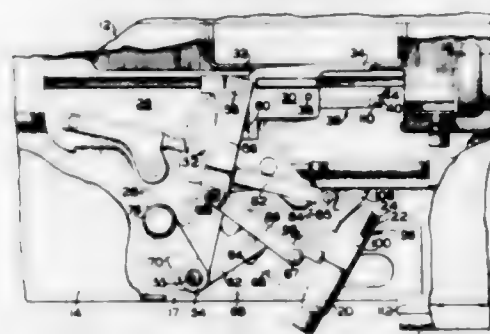
DEVICE FOR JETTISONING FIRED CASES FROM AUTOMATIC FIREARMS

Richard H. Colby, South Hadley, and Raymond W. Hegarty, Springfield, Mass., assignors to the United States of America as represented by the Secretary of the Army

Filed Sept. 29, 1959, Ser. No. 843,317

11 Claims. (Cl. 89-33)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a firearm including a receiver with an ejection port for the passage of fired cases therefrom, a barrel for the discharge of cartridges and an extractor for removing the fired cases from the barrel, a crane device actuable by the forces produced by the discharge of the cartridges in the barrel, said crane device including a jib with a retainer mounted thereon for releasably carrying the fired cases in a controlled path through the receiver and lever means connected with said retainer to cooperate with said jib for turning the cases end for end during passage thereof through the receiver.

3,001,454

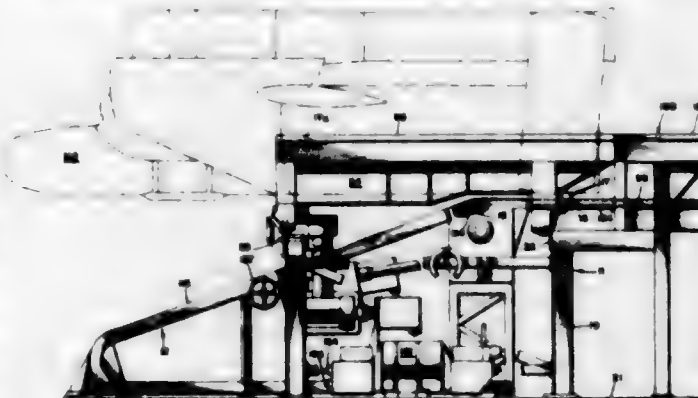
RAMMER DEVICE FOR MISSILE LOADING SYSTEMS

Robert E. Carlberg, Falls Church, Va., and Sidney Hersh, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Original application Oct. 7, 1953, Ser. No. 384,801, now Patent No. 2,985,072, dated May 23, 1961. Divided and this application Nov. 2, 1954, Ser. No. 466,462

6 Claims. (Cl. 89-47)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A ramming mechanism for ramming a missile onto a missile launcher including a ramming chain, a power driven sprocket wheel drivingly connected to said chain, a rammer head connected to one end of said chain, means including a normally locked member pivotally mounted on said rammer head for positively coupling said head to the missile to be loaded onto the launcher, a spring biased element having a lug in locking engagement with said member for maintaining the member in a locked condition until said spring biased element is moved a predetermined amount, a recess formed in said member in the path of travel of said lug and cooperating with said lug for releasing the member as the lug is moved into alignment with said recess in response to movement of the spring biased element said predetermined amount, and means in engagement with said member for moving the member an amount sufficiently to uncouple said head and chain from a missile as the member is released, said ramming chain being mounted in longitudinal alignment with the longitudinal axis of the launcher when the latter is in loading position.

on said rammer head for positively coupling said head to the missile to be loaded onto the launcher, a spring biased element having a lug in locking engagement with said member for maintaining the member in a locked condition until said spring biased element is moved a predetermined amount, a recess formed in said member in the path of travel of said lug and cooperating with said lug for releasing the member as the lug is moved into alignment with said recess in response to movement of the spring biased element said predetermined amount, and means in engagement with said member for moving the member an amount sufficiently to uncouple said head and chain from a missile as the member is released, said ramming chain being mounted in longitudinal alignment with the longitudinal axis of the launcher when the latter is in loading position.

adjacent inner surfaces of said collet members having inclined portions adapted to abut opposite sides of said cutter for tilting it to enable machining of a wider cut by the cutter than the normal cutting width, said inner surfaces of said collet members each having additional flat



segment portions which are operative, when in alignment, to flatly abut the opposite faces of said milling cutter to hold it at right angles to the axis of said arbor at zero inclination to produce the normal minimum width of cut.

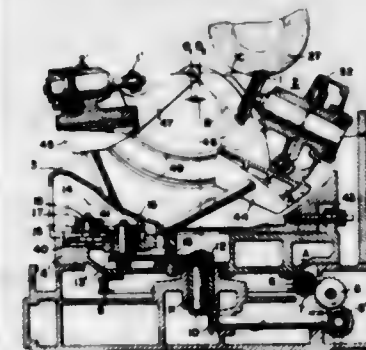
3,001,455

AUTOMATIC BEVEL GEAR TOOTH GENERATING MACHINE

Shozo Ishioka, Genjiro Matsumoto, and Masamoto Akeyama, Tokyo, Japan, assignors to Hitachi Limited, Tokyo, Japan

Filed Feb. 27, 1959, Ser. No. 795,937

2 Claims. (Cl. 90-3)



1. An automatic self-indexing continuously operating bevel gear generating machine for processing a bevel gear blank including a supporting shaft and having a pitch cone with an apex, said machine comprising a table, a base slidably engaging said table for movement along a straight line, first means arranged on said table for rotating said bevel gear blank on said supporting shaft, said first means being mounted on said base, second means including and adapted for moving a cutter in predetermined relation with respect to said bevel gear blank, a stationary base supporting said table, third means arranged on said stationary base for rotating said first means with respect to said second means around a central axis defined by said table, and means for shifting said slidable base with respect to said table along a straight line, and thereby shifting the apex of the pitch cone of the bevel gear blank from the center of an imaginary crown gear on a straight line containing one side edge of the pitch cone of the bevel gear blank while maintaining the said imaginary crown gear in stationary condition.

3,001,456

MILLING MACHINE CUTTER

Henry C. Bober and Charles A. Bober, both of 253 Fairview St., New Britain, Conn.

Filed Aug. 14, 1959, Ser. No. 833,800

1 Claim. (Cl. 90-11)

In a milling machine, a milling cutter, a pair of cylindrical collet members adapted to be mounted in spaced relation on an arbor for supporting said milling cutter therebetween, said arbor having a driving engagement with said cutter, one of said collet members being fixed on said arbor, and the other collet member being twistable with respect to said arbor, means to keep said other collet member in adjusted abutment with said cutter, the

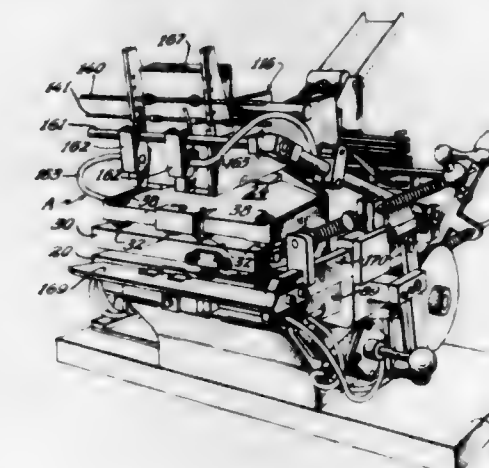
3,001,457

JAW TYPE HEAT SEALING MACHINES

John J. Grevich, New Richmond, and Paul O. Jordan, Hudson, Wis., assignors to Doughboy Industries, Incorporated, New Richmond, Wis., a corporation of Wisconsin

Filed Apr. 9, 1958, Ser. No. 727,497

21 Claims. (Cl. 93-27)



1. A heat sealing machine including a frame, a pair of jaws, means supporting said jaws on said frame for movement toward or away from each other, jaw heating means, and clamping means supported adjacent to said jaws, said clamping means being movably supported by said frame for movement toward and away from one of said jaws, said clamping means being operable to clamp a member to be sealed by said jaws in fixed relation to said one jaw, means for moving said clamping means, and means between said clamping means and said one jaw and in the path of movement of a member to be sealed in a direction parallel to said jaws to operate said moving means.

3,001,458

COMPACTORS AND THE LIKE

Antony Harry Croucher, Esher, England, assignor to Compactors Engineering Limited, London, England

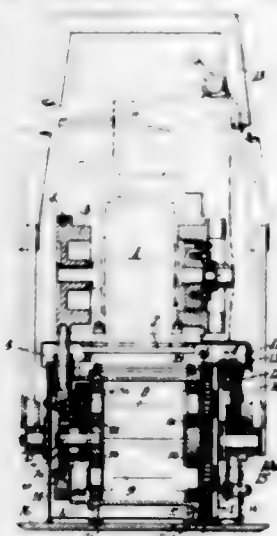
Filed Nov. 4, 1957, Ser. No. 694,236

Claims priority, application Great Britain Nov. 9, 1956

1 Claim. (Cl. 94-48)

A compactor comprising compactor means, a framework rigidly secured thereto, a prime mover spring mounted on the framework for movement in the up and down direction in relation to the framework, a casing rotatably mounted in the framework, a pair of eccentric weights mounted on parallel axes in the casing and coupled to be rotated by the prime mover to provide a reciprocating force and means mounted in the framework for rotating the casing to change the direction of the reciprocating force, said means comprising a reversible guid-

ing and control handle for the compactor pivotally secured to the framework for rotation about an axis transversely thereof, a fixed sprocket mounted on one end of the casing, an arc member of larger radius than the fixed sprocket mounted on the framework concentric with the handle, a pair of rotatable sprockets mounted on the framework at the ends of the arc member, a roller chain passing around the arc member, the rotatable sprockets and the fixed sprocket and a member mounted to rotate with the handle and fixed to the chain where it passes over the arc member whereby a small angular movement

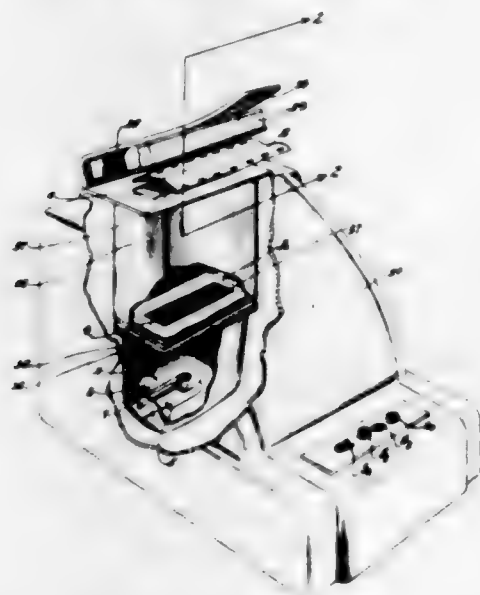


of the handle in one direction of rotation from a position on one side of the compactor effects a large angular displacement of the direction of the reciprocating force from the vertical in one direction and a small angular movement of the handle in the other direction of rotation effects a large displacement of the direction of the reciprocating force, from the vertical in the other direction and displacement of the handle from one side of the compactor to the other turns the direction of the reciprocating force through 180° whereby the compactor may be controlled for self-propelled forward and backward movement with the handle on either side.

3,001,459 METHOD OF AND APPARATUS FOR SENSITOMETRY

Charles W. Wyckoff, Needham, Mass., assignor to Edgerton, Germeshausen & Grier, Inc., Boston, Mass., a corporation of Massachusetts

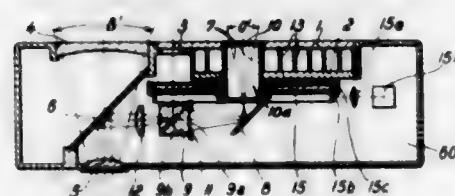
Filed Jan. 17, 1958, Ser. No. 709,691
17 Claims. (Cl. 95-10)



1. A film calibration apparatus having, in combination, an electric flash lamp provided with a pair of principal

electrodes between which an electrical discharge may pass to produce a flash of light, a film support spaced from the flash lamp in the path of the light produced thereby, a member having a plurality of areas of different optical densities supported at the film support, means for light-sealing a film to the said member at the film support with the said member interposed between the flash lamp and the film, and means controlled upon the sealing by the light-sealing means for initiating an electrical discharge between the principal electrodes to produce a flash of light that effects the momentary exposure of the film on the film support through the said plurality of areas of different optical densities.

3,001,460
EXPOSURE METER FOR PHOTOGRAPHIC OR
CINEMATOGRAPHIC PURPOSES
Heinrich Broschke, Wetzlar (Lahn), Germany, assignor to Ernst Leitz, G.m.b.H., Wetzlar, Germany, a corporation of Germany
Filed July 16, 1958, Ser. No. 748,837
Claims priority, application Germany July 20, 1957
13 Claims. (Cl. 95-10)



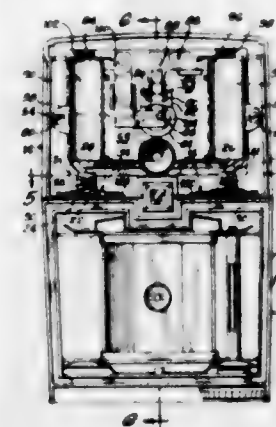
1. A photographic exposure meter device for determining the requisite illumination for the photographic taking of pictures comprising, in combination, an optical comparison photometer for determining the light value of the object to be photographed, a photoelectric exposure meter for photoelectrically determining the ambient brightness, a picture finder for observing the object to be photographed, optical means in said picture finder for viewing the field of view of said optical comparison photometer in the path of the finder bundle of light rays, optical means in said optical comparison photometer for producing a non-sharp image of predetermined size of a portion of the object in the field of view of the comparison photometer concentric with the comparison light spot of the comparison photometer, light weakening means in said comparison photometer, means in said photoelectric exposure meter for holding and releasing the pointer of the photoelectric instrument in its indicating position in response to the measuring operation of said optical comparison photometer, and means for illuminating uniformly the comparison surface of the comparison photometer and the photo cell of the photoelectric exposure meter.

3,001,461
FLASH CAMERA
George Irwin, Highland Park, Ill., assignor to Herbert George Company, Chicago, Ill., a corporation of Illinois

Filed June 30, 1959, Ser. No. 824,014
3 Claims. (Cl. 95-11.5)

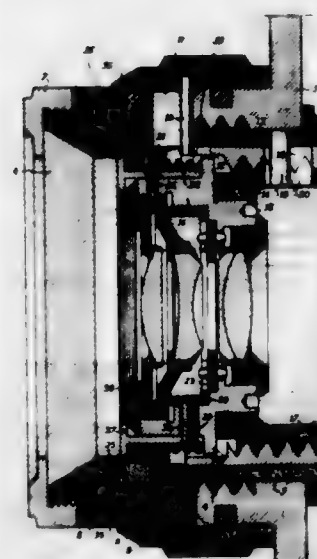
1. A camera housing, said camera housing formed from two sub-housings, one sub-housing having the lens and film-moving mechanism mounted therein and the other sub-housing having the flash equipment mounted therein, a plurality of bosses extending out from one surface of one sub-housing, a surface of the other sub-housing provided with boss-receiving openings for receiving said bosses, said sub-housings positioned so that portions of said bosses extend through said boss-receiving openings, said sub-housings provided with terminal-receiving openings, terminals extending through said ter-

minal-receiving openings into both sub-housings, portions of said terminals in one sub-housing connected to the camera shutter mechanism, portions of said terminals in said other sub-housing adapted to be connected to the flash equipment so that the flash equipment and the camera shutter mechanism may operate simultaneously, and electrically conductive clips for embracing the por-



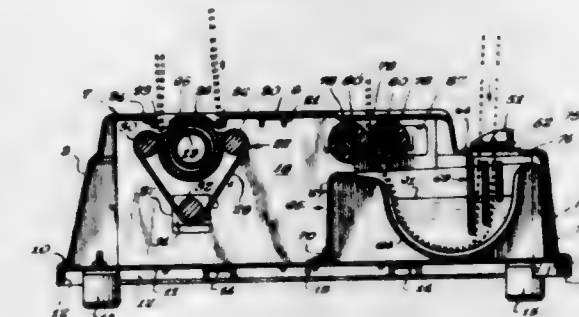
tions of said bosses extending through said boss-receiving openings to lock said sub-housings together, said terminals positioned so that when said clips embrace said portions of said bosses they also engage said terminals, other portions of said clips adapted to both electrically engage terminals of electric batteries and help support the batteries in their sub-housing.

3,001,462
LIQUID-TIGHT OBJECTIVE FOR UNDERWATER
PHOTOGRAPHIC APPARATUS
Jean G. M. J. de Wouters d'Opinter, Roquefort-les-Bains, France, assignor to La Spirotechnique, Paris, France
Filed July 23, 1958, Ser. No. 750,509
2 Claims. (Cl. 95-45)



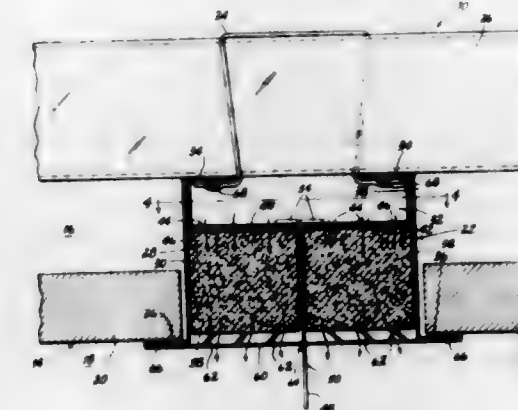
1. In an underwater photographic apparatus of the type enclosed in a fluid tight casing, a liquid tight objective provided with a lens tube rigidly secured in an aperture of the front wall of said casing, an objective mount contained within said lens tube and axially movable with respect thereto, means for securing the rear end of the lens tube to the housing of the internal chamber of the photographic apparatus without contact of the latter with the outer fluid tight casing, and resilient means interposed between the lens tube and the objective mount, for constantly urging the latter against a reference surface provided on said housing at a constant distance from the image forming plane of the photographic apparatus.

3,001,463
PHOTOCOPY APPARATUS
Kenneth R. Reick, 634 S. Main St., Lombard, Ill.
Filed Jan. 23, 1958, Ser. No. 710,706
5 Claims. (Cl. 95-77.5)



1. In photocopy apparatus including supporting structure, a pair of spaced parallel rollers, an endless belt looped over said rollers and providing a depending cradle loop therebetween, a translucent hollow cylinder rotatably supported by said cradle loop, means for driving the rollers and belt for thereby driving said cylinder, and means for supporting a light source lamp longitudinally within said cylinder, said rollers being spaced with the nip portions adjacent to said cylinder spaced apart slightly more than the diameter of the cylinder but less than the combined diameter of the cylinder and two thicknesses of the endless belt so that in running of the belt over the rollers with the cylinder cradled in said cradle loop the cylinder is drawn to an axis thereof below a plane through the axes of the rollers whereby to effect snug gripping engagement of the cradle loop of the belt over more than 180° of the periphery of the cylinder, whereby cradling of the cylinder can be effected simply by placing the cylinder generally parallel between said rollers against the portions of the belt trained over the rollers and applying digital pressure against the cylinder toward said cradle loop.

3,001,464
AIR DIFFUSER CONSTRUCTION
James P. Moore, St. Louis, Mo., assignor to C. W. Fawcett Acoustical Company, Inc., St. Louis, Mo., a corporation of Missouri
Filed Nov. 6, 1957, Ser. No. 694,809
3 Claims. (Cl. 98-40)



1. In a room having an overlying, substantially air impervious structure, an air distributing ceiling assembly comprising a plurality of parallel horizontal panels, each panel having parallel sides and opposite ends and having a plurality of air openings through it with vanes adjacent each opening for directing air laterally as well as downwardly as the air passes through the openings, each panel having ceiling supporting side edge flange means defined by an extension of the sides of each panel beyond the openings, a pair of spaced, substantially vertical side wall plates extending between the ends of and upwardly

from each panel, each pair of side wall plates being joined to its respective panel along a line located horizontally inwardly of the side edge flange means, a substantially horizontal top plate suspended between each pair of side wall plates and extending between the ends of the side wall plates in spaced relation to the tops and bottoms of the side wall plates, a plurality of slots through each top plate for admitting air to the panels from the space above each top plate, a slidable closure plate slidably overlying each top plate, each closure plate having a plurality of slots through it and alignable with the slots through the top plate below it in one position of the closure plate, each closure plate being slidable to another position for covering the top plate slots, closure plate sliding means connected to each closure plate and accessible from below the panels for sliding the closure plates to adjust the amount of air passing through the top plate, a filter mass disposed within the spaces between each pair of side wall plates and between the corresponding panel and top plate, a suspension system for supporting each pair of side wall plates, and a ceiling panel supported between each pair of adjacent panels by the opposing side wall edge flange means of each pair of adjacent panels.

3,001,465

MATERIAL SPREADER FOR CONFINED AREAS

Harlan J. Donelson, Jr., West Highway 330,
Marshalltown, Iowa

Filed Nov. 8, 1960, Ser. No. 68,059
10 Claims. (Cl. 98-55)



1. In combination, a building having a top opening and a source of air pressure in its bottom area, a material receiving unit having an open bottom in the top opening of said building and of a diameter less than that of the diameter of the top opening in said building, a vertical bearing means supported in the lower central area of said material receiving unit, a vertical shaft rotatably mounted in said bearing, a material scattering plate secured to the lower end portion of said shaft, and a plurality of air vanes operatively secured to said shaft and capable of being rotated by the upward movement of air within said building.

3,001,466

FASTENING STRIP FOR A VENTILATOR

Willem Hendrik Braskamp, Voorburg, Netherlands, assignor to N.V. Industriële Onderneming W. H. Braskamp, Rijswijk, Handelskade, Netherlands, a limited liability company of the Netherlands

Filed June 2, 1959, Ser. No. 817,539
Claims priority, application Netherlands June 19, 1958
1 Claim. (Cl. 98-96)

Apparatus comprising a casing having a longitudinal axis and a fastening strip comprising a resilient body adapted for engaging in an opening in a flat structure and

supporting said casing therein, the casing including an outwardly extending flange, said body having an inner surface engaging against said casing and being provided with an outwardly directed groove engaging said flat structure and an inwardly directed groove engaging said flange, and a lip on said body at a position spaced from



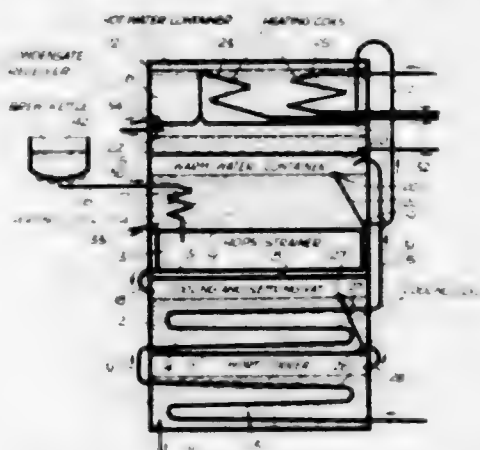
said inner surface and diverging outwardly from said axis and from adjacent said inwardly directed groove whereby a pulling on said lip opens said groove, said lip having a substantially linear inclination relative to said inner surface and thereby serving as a guide for inserting said casing and for subsequent airflow.

3,001,467

METHOD AND APPARATUS FOR UTILIZING WASTE HEAT IN BREWERIES

Heinrich Stäckler, Ruhrblick 8, Herdecke
(Ruhr), Germany

Filed Sept. 12, 1957, Ser. No. 683,546
Claims priority, application Germany Sept. 14, 1956
15 Claims. (Cl. 99-278)



12. Brewery apparatus, comprising means for preparing and heating wort including at least one wort heating vessel and a hops strainer, means for conducting heated wort from said heating vessel to the hops strainer, at least one container communicating with said hops strainer for receiving wort therefrom, cooling means arranged within said one container and providing cooling water passages separated from the wort for cooling the latter, a water tank disposed above said first-mentioned means for receiving heat therefrom and means for conducting water from said cooling passages in said container to said tank.

3,001,468

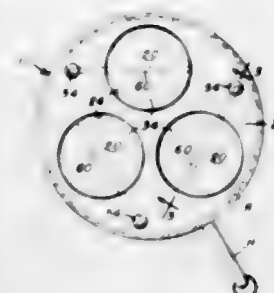
DEEP FAT COOKING APPARATUS HAVING COOKING PLATE OF ADJUSTABLE HEIGHT

William J. Hood, Austin, Tex.
(Round Rock, Tex.)

Filed Mar. 28, 1960, Ser. No. 17,871
2 Claims. (Cl. 99-407)

1. A deep fat cooking apparatus comprising a receptacle and a cover member engaging the rim of the re-

ceptacle, said cover member having an opening therein, a flat imperforate cooking plate positioned under said cover member in alignment with said opening, said cover member having a second opening, substantially smaller than said first opening, adjacent said first opening, a longitudinally slotted sleeve attached to said cover member about said second opening and depending therefrom, a shaft slidably and rotatably disposed in said sleeve, the



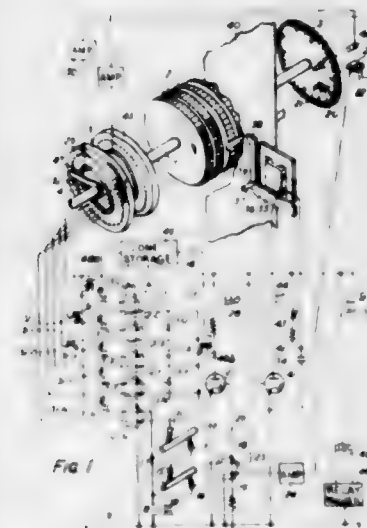
upper end of said shaft bearing operating means, an arm attached to the lower end of said shaft and supporting said imperforate cooking plate, said shaft having a stud extending perpendicularly therefrom, said sleeve having spaced transverse stud-receiving notches adjacent said slot, whereby the shaft can be moved vertically to adjust the height of said imperforate plate and can be rotated to move the stud into a selected notch to fix the height of the plate.

3,001,469

DATA REGISTERING APPARATUS

Roger Arthur Davis and Alan Robert Hewitt, Letchworth, England, assignors to International Computers and Tabulators Limited

Filed June 22, 1959, Ser. No. 822,092
Claims priority, application Great Britain June 25, 1958
17 Claims. (Cl. 101-93)



1. A cyclically operable character recording apparatus of the kind specified for operation in combination with a signal source providing character representing signals in which a character is represented by a pulse at one of a first set of n time positions distributed over a first signal period and in some cases by an additional pulse at one of a second set of m time positions distributed over a second signal period, the signal source feeding the signals so that the first set of time positions are each nominally at a predetermined time prior to the times at which the first character of the associated group is presented for recording during an operative cycle of the apparatus and the second signal period precedes the first, the apparatus being provided with first storage means having m separate stages each of which is associated with one of the second set of time positions and is set on receipt of a pulse at the associated time position in a second signal period and a

further stage which is set during each second signal period, second storage means having a single stage which is set during a first signal period at the time of receipt of a pulse at one of the first time positions, means rigidly synchronised to the operation of the apparatus for generating group pulses which are accurately timed with respect to the times of presentation of the first characters of each group, and character pulses which are accurately timed with respect to the time of presentation of successive characters and are distributed cyclically over $(m+1)$ channels corresponding one to each of the character positions in a group, means for applying the group pulses to the second storage means so that the stage is reset by the first group pulse generated after it is set, means responsive to resetting of the second storage means for rendering resetting circuits for the stages of the first storage means operable, means coupling each of said $(m+1)$ channels to the resetting circuit of the corresponding stage of the first storage means so that each stage that has been set, is reset by the first character pulse applied to its resetting circuit after it has been rendered operable, and means for applying an actuating signal to the recording apparatus in response to the resetting of the first stage reset in the first storage means during the first signal period, the timing of the character pulses being such that an actuating signal causes recording of the character represented by the input signal giving rise to it.

3,001,470

BOOKKEEPING MACHINE

Jiri M. Nessel, Los Angeles, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Mar. 7, 1958, Ser. No. 719,900
3 Claims. (Cl. 101-96)



1. In a machine of the class described having a platen and means for guiding a record medium past said platen; the combination comprising a printer including printing elements movable toward and away from said platen; a cover for said printer, means for moving said cover from one position to a second position preparatory to movement of said printer elements toward said platen, and means on said cover effective upon movement of said cover to said second position to press said record medium against said platen, said cover extending over said printing elements in both of said positions of said cover and during said movement of said printing elements.

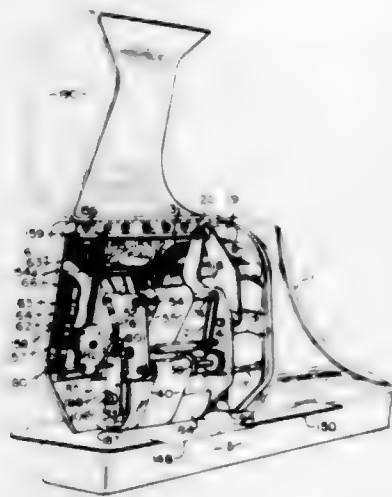
3,001,471

PRINTER

Geoffrey T. Gray, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed June 26, 1958, Ser. No. 744,754
6 Claims. (Cl. 101-96)

1. In a printer, in combination, a frame, a shaft attached to the frame, a plurality of printing members that are rotatably mounted in selected axial locations on the

shaft and that are adapted to be selectively positioned approximately in a printing station, detent means for finally aligning and locking the printing members in the printing station, a freely removable auxiliary printing mechanism that includes at least one printing member and that is mounted on the shaft by sliding it on the end of the shaft remote from the frame into a position adjacent the plurality of printing members, means con-



necting the detent means to the printing member of the auxiliary printing mechanism whereby the detent means functions additionally to position such printing member in the printing station automatically, means for preventing rotation of the auxiliary printing mechanism about the axis of the shaft, and means for retaining the plurality of printing members and the printing mechanism on the shaft.

3,001,472

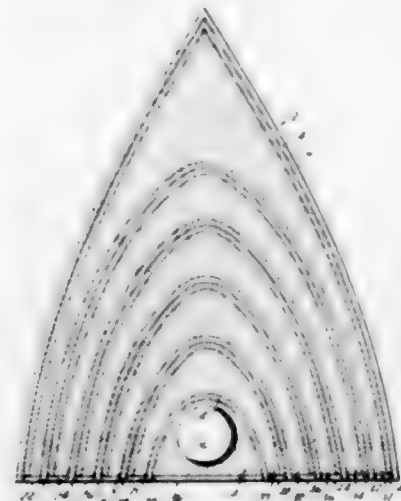
CIRCUMFERENTIALLY GROOVED PRINTING PLATE CYLINDER

J Russell Parrish, Ankeny, Iowa, assignor to Meredith Publishing Company, a corporation of Iowa
Filed July 22, 1957, Ser. No. 673,437
5 Claims. (Cl. 101—378)



1. A printing roll assembly capable of carrying a variable number of printing plates comprising in combination a cylinder having printing plates secured thereto, a plurality of circumferential grooves cut in the surface of said cylinder, said grooves lying in parallel planes perpendicular to the axis of said cylinder, each of said plates having at least three scarfs, one adjacent one edge and two adjacent the other edge, each said scarf being parallel with the axis of the cylinder and overlying one of said grooves, securing means comprising hooks disposed within said scarfs and a carriage adapted to run in each said groove completely around the circumference of the cylinder independently of carriages in other grooves, and including gear means for driving the carriage within said groove and means carried by the carriage and operable in any position of the carriage within said groove for actuating said gear means, each of said hooks being detachably connected to one said carriage, whereby said hooks are adjustable to exert tension forces on said plates when mounted at any place on the circumference to hold them securely to the surface of the cylinder during high speed rotation.

3,001,473
ROCKET CONSTRUCTION
William L. Shephard, 3040 Broad Creek Road,
Norfolk, Va.
Filed Mar. 26, 1956, Ser. No. 573,948
6 Claims. (Cl. 102—49)



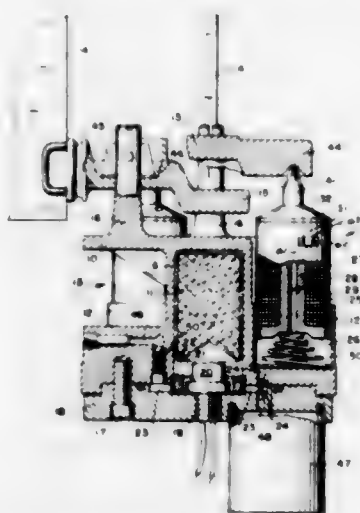
1. In a rocket, a front portion comprising an outer shell of metal, having a forwardly disposed outer surface of substantially conical configuration, a nucleus for containing instruments centrally disposed within the outer shell, said nucleus having a forwardly disposed surface of semi-spherical configuration, a plurality of metallic intermediate shells of graduated size disposed between the outer shell and said nucleus, said intermediate shells being spaced from one another, and fibrous insulating material respectively disposed between at least some of said intermediate shells and the next outwardly succeeding shells.

3,001,474

PROPELLANT SERVO AND POWER SUPPLY FOR MISSILE GUIDANCE

William B. McLean, 510 Lexington, and Sydney R. Crockett, 107A Mitscher, both of China Lake, Calif.,
Howard A. Montank, Los Angeles, Calif. (6043 Fulton, Van Nuys, Calif.), and Michael Kamimoto, 306A McIntyre, China Lake, Calif.
Filed Jan. 18, 1954, Ser. No. 404,814
18 Claims. (Cl. 102—50)

(Granted under Title 35, U.S. Code (1952), sec. 266)

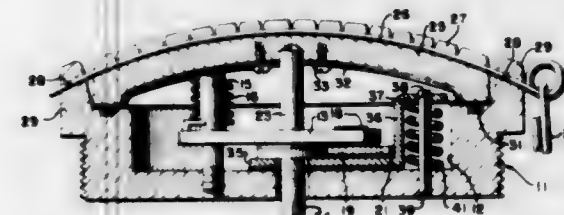


1. A steering apparatus for bodies propelled through a fluid comprising a control surface having a pivoted actuating lever attached thereto, a pair of fluid operated means operatively connected to said lever for pivotally moving said surface in opposite directions, said means opposing each other in operation whereby the amount and direction of the torque applied to said lever is de-

termined by the pressure differential existing between said means, a pressure fluid supply connected to each of said means, and electromagnetically operated valve means associated with each of said fluid operated means for bleeding pressure fluid therefrom to atmosphere whereby said pressure differential and hence control surface torque may be varied by a change in the current to said valve means.

3,001,475

TIME DELAY MEANS FOR A HAND GRENADE
Howard T. Hodges, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 5, 1957, Ser. No. 644,189
6 Claims. (Cl. 102—64)

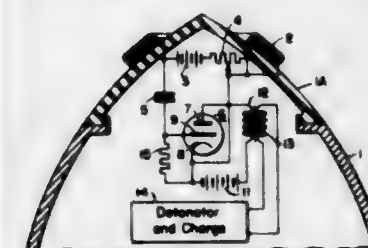


1. In a hand grenade having a housing and an arming pin supported for linear movement therein, an escapement type time delay mechanism therefor, said mechanism comprising, in combination, a bar in said housing engaging said pin, expandable spring means engaging said bar and housing for urging upon expansion thereof said bar and pin in a direction to forcibly withdraw the pin from a safe position, a plate supported for pivotal movement in said housing, means connected to said plate for urging pivotal movement thereof, a detachable cover for said housing, a stop carried by said cover and positioned to engage said plate for normally holding the plate in a locked position, said plate when in said locked position being disposed to constrain said spring means and obstruct withdrawal of said pin from said safe position, detachment of said cover and stop being effective to initiate pivotal movement of said plate to a deopillant position to deobstruct said pin and enable expansion of said spring means thereby to effectuate forcible withdrawal of said pin from said safe position, and escapement means operatively connected to said plate for controlling pivotal movement thereof in predetermined timed sequence from said locked position to said deopillant position whereby said pin is forcibly withdrawn and the hand grenade becomes armed a predetermined time after detachment of said cover and stop.

3,001,476

MAGNETIC FUZE

John R. Boykin, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application June 4, 1945, Ser. No. 597,451.
Divided and this application Nov. 19, 1948, Ser. No. 60,918
8 Claims. (Cl. 102—70.2)



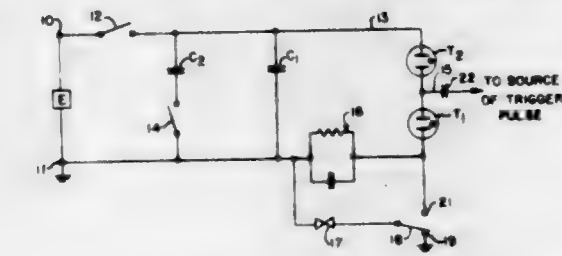
4. In combination with a projectile intended for rapid movement through the air, and adapted for detonation within a predetermined proximity to a target, a

source of power for setting up substantially steady or constant magnetic flux lines about said projectile, said flux lines adapted to induce eddy currents in said target, an amplifier circuit including a control circuit and a load circuit, a detonator in said load circuit, and antenna means responsive to said eddy currents which are induced in said target and connected to govern said control circuit.

3,001,477

STABILIZED CIRCUIT FOR ELECTRICAL RELAY FUZE

Herbert E. Ruehlmann, Allentown, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 6, 1956, Ser. No. 563,814
11 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electrical fuze for an ordnance device comprising a pair of input terminals for connection to a source of voltage, a normally open switch connected to one of said terminals, a storage condenser connected to one element of said switch and to the other terminal whereby the condenser is charged to the potential of said voltage source as the switch is momentarily closed, a pair of serially connected diodes, a high impedance voltage stabilization device, a circuit including said diodes and stabilization device connected in series across the terminals of said condenser, the breakdown voltage of said serially connected diodes being less than the voltage of said condenser as initially charged, an electroresponsive detonator having one terminal thereof connected in said circuit intermediate said stabilization device and the condenser, means connected to the other terminal of said electroresponsive device for switching the electroresponsive detonator in parallel with the voltage stabilization device when the voltage of said diode has been stabilized, and a firing conductor connected in said circuit intermediate said diodes for firing the diodes in response to a weak impulse supplied thereto whereby the detonator is actuated by discharge current from said condenser.

3,001,478

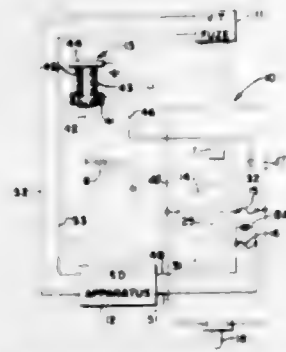
SAFETY DEVICE FOR ROCKET STEERED PROJECTILES

Norman Czajkowski, Chevy Chase, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 19, 1956, Ser. No. 592,470
6 Claims. (Cl. 102—70.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a safety fuze system for an explosive rocket steered projectile, a normally shorted firing circuit and a normally shorted timing circuit, means movable in response to an explosive force for unshorting said circuits, explosive means for applying said force to said movable means as the explosive means is fired, means including a device operatively connected to said explosive means and actuated in response to lateral acceleration of the projectile resulting from an initial rocket blast as the projectile is steered along its trajectory for firing said explosive means, a firing apparatus included in said firing circuit and initiated when said projectile is in proximate spaced relation with respect to a target for exploding said

projectile, a timing device included in said timing circuit, means included in said timing circuit for initiating said timing device as said timing circuit is unshorted, said tim-



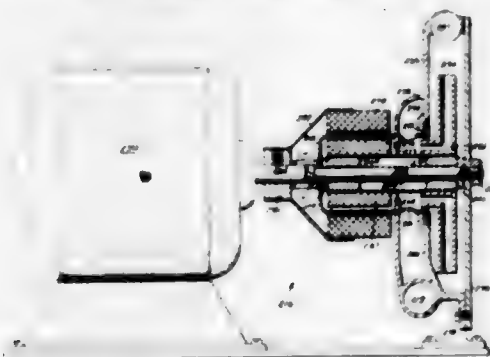
ing device being operatively connected to said firing apparatus for initiating the firing apparatus a predetermined period of time after initiation of the timing device.

3,001,479

SPACE AIR CONDITIONING MEANS

Paul F. Swenson, Cleveland Heights, and Myron T. Cooperrider, Cleveland, Ohio, assignors to Iron Fireman Manufacturing Company, Portland, Oreg., a corporation of Oregon

Filed Dec. 29, 1958, Ser. No. 783,404
13 Claims. (Cl. 103-87)



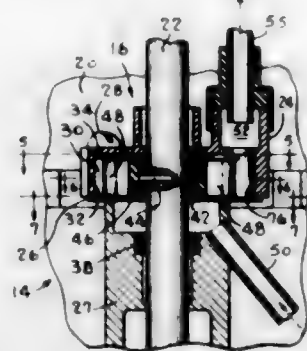
1. The combination of a fluid pump with an electric motor and magnetic means driven by said motor to drive said pump; said motor including a stator secured in a motor frame, and a rotor including a shaft rotatably supported in said frame on an axis coaxial with said stator; said pump including a hollow casing, an impeller and shaft means for rotatably supporting said impeller in said casing; said casing including a partition formed across the interior thereof to divide said interior into a fluid inlet space and an impeller space, said partition being formed with a first circular hole therethrough and the outer wall of said inlet space of said casing being formed with a second circular hole therethrough coaxial with said first hole; said shaft means including a dead shaft supported on said casing at the outer wall of said impeller space to extend across both said spaces coaxially through both said holes and a hollow shaft rotatably supported on said dead shaft coaxially therewith; said impeller including a radial vane part normal to said shafts and a cylindrical hub part coaxial with said hollow shaft secured on said hollow shaft to rotate therewith; said hub part extending through said first circular hole into said inlet space and said hub part being formed with a fluid inlet hole therethrough from its end in said inlet space to its vane part in said impeller space; said casing being formed with a fluid inlet passage to said inlet space and a fluid outlet opening from said impeller space; said magnetic means including a tubular cylindrical first magnet secured over said hollow shaft to rotate therewith on the end thereof outside said inlet space; and said combination including means for securing said motor frame and said pump casing in axial alignment of said motor shaft with said dead shaft.

3,001,480

ROTARY PUMP

Kenneth R. Pike, Hartford, Wis., assignor to West Bend Aluminum Co., West Bend, Wis., a corporation of Wisconsin

Filed June 12, 1959, Ser. No. 819,879
1 Claim. (Cl. 103-117)

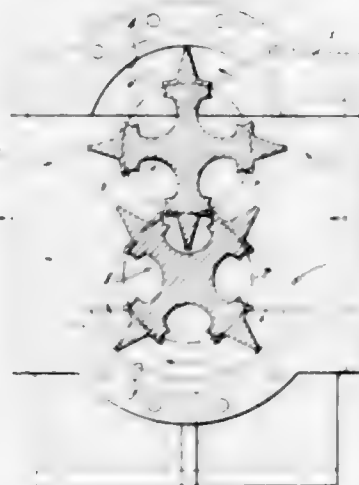


In a rotary pump, a housing having a substantially cylindrical cavity therein, a first metal stamping fitted in said cavity, a second metal stamping mounted on said housing over said cavity, said first and second stampings forming the end walls of a substantially cylindrical pump chamber with the wall of said cavity forming the side wall of said pump chamber, an inlet port and an outlet port communicating with said chamber, an impeller having a plurality of flexible and resilient vanes rotatably mounted in said chamber and adapted to pump fluid from said inlet port to said outlet port when rotated, means for rotating said impeller, said impeller having opposite end face areas which rotate in contact with said first and second stampings, said vanes having peripheral edges which wipe against said side wall of the pump chamber, a plurality of cut-out portions in each of said end stampings providing edges for wiping sand and other foreign material from said impeller, said wiping edges extending radially across said entire end face areas of said impeller, at least one cut-out portion in each stamping communicating with said inlet and outlet ports to allow liquid to flow to and from said pump chamber through said end stampings, and at least one depression in the side wall of said chamber forming a wiping edge to wipe sand and other foreign material from the peripheral edges of said impeller vanes.

3,001,481
PUMP

Walter N. Thompson, Mont Vernon, N.H., assignor to Improved Machinery Inc., Nashua, N.H., a corporation of Maine

Filed Sept. 2, 1958, Ser. No. 758,311
9 Claims. (Cl. 103-126)



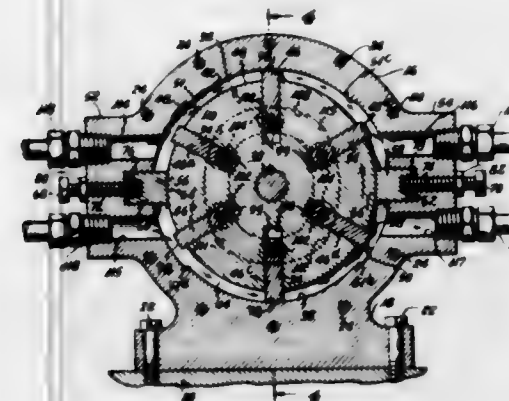
1. A rotary piston pump comprising a housing having end walls and a pair of opposed concave surface portions

of circular cross section extending between said end walls defining a rotor chamber with inlet and outlet ports in opposite walls of said housing between said circular surface portions, a pair of like interacting rotors mounted in said chamber for rotation about spaced parallel axes parallel to the circular surface portions of said chamber, and means for synchronously driving said rotors for interacting rotation in opposite directions, each of said rotors having a circumferential series of upstanding vane elements with concave valley elements therebetween, said vane elements including vane blade portions with a tip portion cooperating with said circular surface portions of said rotor chamber in closely spaced pumping relationship thereto to pump fluid through said housing and extended vane shoulder portions at each side of a blade portion adjacent a valley element and spacing said tip portion from said valley element for controlling back flow of fluid in the region between said rotors by cooperation with the shoulder portion of the interacting rotor of said pair, said shoulder portions each comprising a concavely curved axially extending sealing shoulder surface terminating at its radially outer side in an axially extending projecting angular edge adjacent said vane blade portion and at its inner side terminating in an inner edge at said valley element with said outer side edge spaced radially outwardly with respect to said inner side edge and with said inner side edges on opposite sides of a vane element located closer to the center line of said vane element than are said outer side edges, and having an angular extent in terms of degrees of rotation of said rotors of more than 180 degrees divided by the number of said vane elements, said valley elements being spaced radially inwardly for substantial clearance between a blade tip portion and said valley element throughout the entire extent of said valley element, with at least one vane shoulder portion of one rotor cooperating with one vane shoulder portion of the other rotor with said projecting angular edge of said other rotor advancing progressively along said shoulder surface in sealing relationship therewith from one edge to the other edge thereof to provide a scraping action for cleaning without jamming with substantial control of back flow in the region between said rotors throughout complete rotation of said rotors.

3,001,482

HYDRAULIC DEVICE

William M. Osborn, 3349 Zuni St., Denver 11, Colo.
Filed Jan. 24, 1958, Ser. No. 710,959
5 Claims. (Cl. 103-136)



1. A hydraulic device, comprising: a housing having side walls and an annular member forming a rotor chamber; a shaft journaled in said side walls and extending through said rotor chamber; a rotor in said chamber fixed to said shaft, said rotor having a plurality of recesses extending radially inwardly around the periphery thereof for the full width of said rotor; vanes mounted in said recesses for radially inward and outward movement with

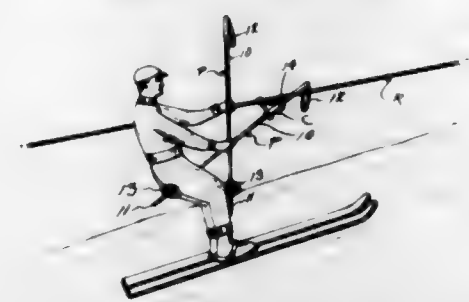
respect to said rotor, said rotor chamber being concentric with the rotor and having a diameter greater than that of said rotor forming a working chamber surrounding the rotor to accommodate the radially outward movement of said vanes; means in a side wall forming a closed, liquid-filled channel separated from the working chamber connecting the lower portions of said recesses for fluid pressure equalization below said vanes, said vanes having a radial length shorter than the radial length of the recesses so that, when in their retracted position with the outer ends of the vanes flush with the periphery of the rotor, the inner ends of the vanes provide a clearance permitting an uninterrupted connection between the respective recesses and the channel at all times, the vanes being related with each other so that, as one or more vanes move outwardly, another or other vanes move inwardly to maintain the total volume of the recesses beneath the vanes constant; a pair of diametrically opposed, radially movable abutments mounted within said housing and extending inwardly from the periphery of said rotor chamber and adapted to contact the periphery of said rotor to thereby define the limits of a pair of working chambers for said rotor vanes; means for adjusting the radial position of said abutments with respect to said rotor; and fluid inlet and outlet means through said housing on each side of said abutments.

5. A hydraulic device, comprising: a housing having side walls and an annular member forming a rotor chamber; a shaft journaled in said side walls and extending through said rotor chamber; a rotor in said chamber fixed to said shaft, said rotor chamber having a diameter greater than that of said rotor to form a fluid chamber surrounding said rotor; a pair of spaced abutments carried by said housing and extending across said fluid chamber to divide said chamber into two separated sections; movable vanes, carried by said rotor, and extending into said fluid chamber to form, in cooperation with said abutments, expansible and contractible working chambers; fluid inlet and outlet means for each section on each side of said abutments; the inlet means to one of said sections connected to a source of fluid at a very high or very low temperature; means to connect the inlet and outlet means of the other section in a closed circuit independent of said one of said sections; and a heat exchange means in said closed circuit.

3,001,483

TOW CLAMP FOR SKI POLE

James E. Gmeiner, 103 W. College Ave., Appleton, Wis.
Filed Apr. 4, 1958, Ser. No. 726,504
6 Claims. (Cl. 104-173)

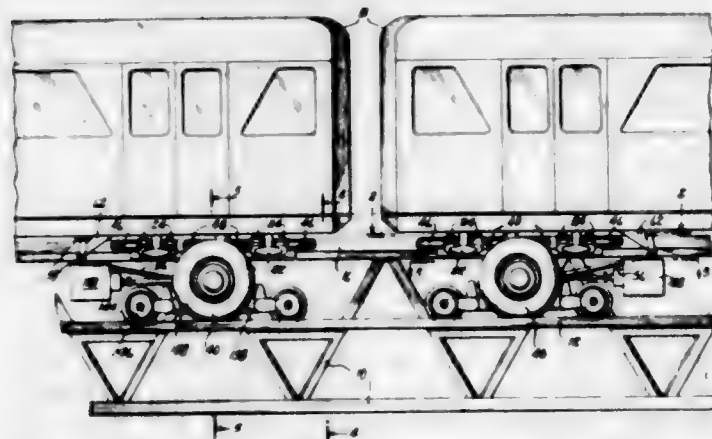


1. A device for facilitating the pulling of skiers up inclines by tow ropes comprising a ski pole including a shaft, means carried by the shaft for releasably clamping a tow rope including, an arm having its inner end pivotally carried by the shaft, adjacent to the upper end of said pole, a hook-shaped rigid jaw carried by the outer end of said arm for partially receiving the tow rope, a second arm having its inner end pivotally carried by the shaft in spaced relation to the first mentioned arm, a U-shaped jaw formed on the outer end of the second arm for movement toward and away from the hook-shaped rigid

jaw for engaging the tow rope on the opposite side of the rope from said hook-shaped rigid jaw, said first mentioned arm being provided with a longitudinally extending guide slot, and said second arm having guide ears intermediate its length embracing the first mentioned arm, and a slide pin carried by the ears received in said slot, said U-shaped jaw being movable toward and away from the rigid jaw upon swinging movement of the shaft and said U-shaped jaw in one of its positions partially closing the hook-shaped rigid jaw.

3,001,484 MONORAIL CAR

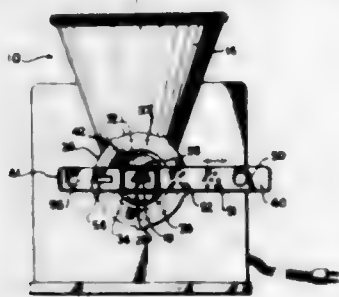
Sidney H. Bingham, 109 E. 35th St., New York 16, N.Y.
Filed Sept. 18, 1958, Ser. No. 761,710
25 Claims. (Cl. 105-145)



1. A vehicle assembly comprising a body, a rectangular frame, yielding members attaching said frame at its corners to said body, a pair of main wheels, an axle for said wheels, means providing a universal pivoted connection between said axle and frame, means providing a linkage connection between said axle and body permitting relatively pivotal motion therebetween on a vertical axis, and spring suspension means for supporting said frame and body on said axle.

3,001,485 CHANGEABLE COOKIE FORMERS

Emanuel N. Czkh, 85-39 66th St., Rego Park,
Long Island, N.Y.
Filed Apr. 7, 1960, Ser. No. 20,594
2 Claims. (Cl. 107-14)

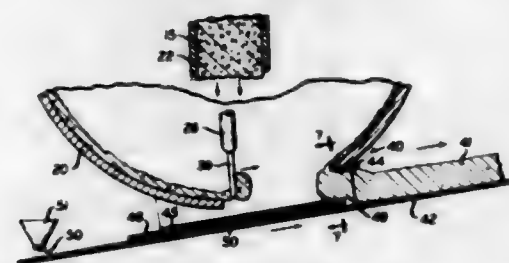


1. A device for forming dough comprising, a food grinder having a tubular head, dough driving means in the head, a flanged cap ring removably mounted on an open end of the head, a cup-shaped slide holder having an annular flange engaged between the ring and said end of the head, said holder having a flat forward end, a U-shaped frame portion supported on the center of said flat forward end, said frame portion having a pair of slots in the side walls thereof and having a pair of slots in the leg portions thereof, the base portion of said frame portion having a central aperture, a flat slide having a plurality of longitudinally spaced apertures of different shape slidably disposed in the slots in the leg portions

of the U-shaped frame portion, and another apertured slide disposed in crossed disposition to the first-named slide and inserted through the side wall slots to modify the shape of the aperture in the base portion through which dough is extruded.

3,001,486 APPARATUS FOR PROCESSING DOUGH

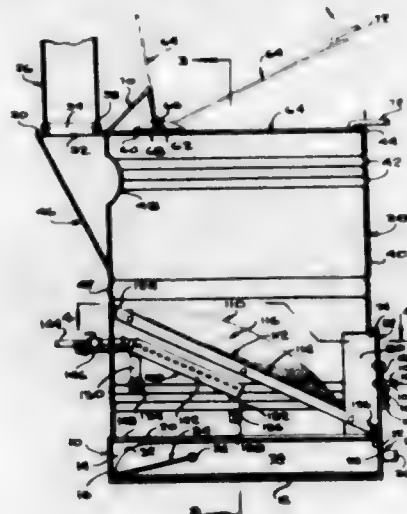
Robert E. Duncan, Milltown, N.J., and Arthur B. Erikson, Scarsdale, N.Y., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed July 8, 1958, Ser. No. 747,140
4 Claims. (Cl. 107-40)



1. A machine for continuously developing a moistened cereal flour dough for baking, the machine comprising a generally cylindrical container for the dough, a dough inlet at one end of said container, a dough outlet disposed the opposite end of said container from said dough inlet, means positioned adjacent said dough outlet for receiving and retaining dough expelled from said outlet, a rotatable shaft extending through said container, mixing elements mounted on said shaft in spaced relationship to each other to move the dough from said inlet to said outlet, and means for rotating said elements so that the elements act to knead and stretch the dough as it moves to said outlet, at least one of said mixing elements being in registry with said dough outlet and approximately parallel to the longitudinal axis of said shaft to centrifugally expel the dough along a tangential path through said dough outlet onto said retaining means.

3,001,487 INCINERATOR

Paul J. Meyer, 401 N. Vale St., Jefferson, Tex.
Filed Apr. 15, 1960, Ser. No. 22,579
1 Claim. (Cl. 110-8)

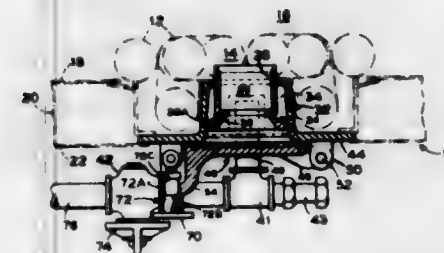


An incinerator comprising a vertical casing having a sidewall, open upper and lower ends, a downwardly angled grate assembly mounted within and extending across the interior of the lower part of the casing, said casing sidewall having an emptying opening located at the lower end of the casing, said grate assembly having an elevated end supportably engaged with the casing sidewall opposite said opening at a level above said opening,

said grate assembly having a depressed end reaching to and supported on the casing at the bottom of said opening, said assembly comprising a central grate and imperforate ramp plates declining to the opposite sides of the grate, said grate not being wider than said emptying opening, and a burner mounted in the casing beneath said grate, and a pan-shaped base having a top wall on which the casing rests, said top wall having an opening therein wider than said grate but smaller than said grate assembly, said pan-shaped base having a drawer opening therein, and an ash drawer adapted to slide through said drawer opening to receive ashes falling from the grate through said emptying opening, an external frame fixed to the casing side wall around said emptying opening into which a part on the depressed end of the grate extends, said frame having first and second end walls, and a door hinged on said first end wall.

3,001,488 LATCHING MECHANISM FOR ACCESS DOOR

Russell L. Goldhawk, Akron, Ohio, and Robert E. Lowe, Westport, Conn., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 15, 1958, Ser. No. 722,683
6 Claims. (Cl. 110-176)



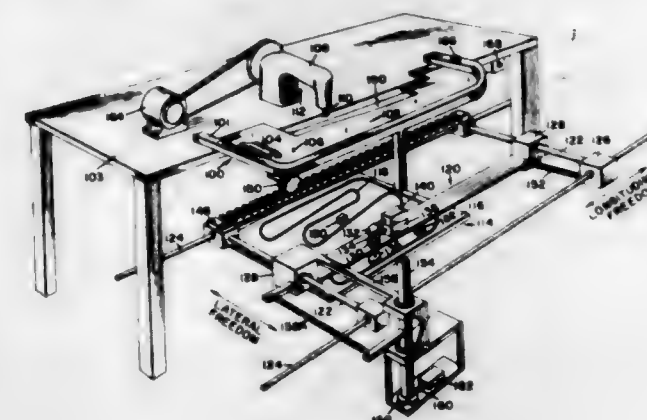
1. In combination with a wall having an opening therein and providing a boundary for a chamber confining high temperature gases under superatmospheric pressure, a door pivotally connected to said wall and normally closing the outer end of said opening, means for introducing a gaseous fluid under pressure into said opening in the direction of said chamber, and door latching means comprising latch guide means including a stop secured to said wall, a latch normally interlocked with said door and pivotally connected to said latch guide means for movement into and out of locking relation with said door, and latch adjusting means associated with said latch and cooperating therewith to lock and unlock said door, said latch adjusting means coacting with said latch to effect outward movement of said door, while cooperating with said stop of said latch guide means to prevent pivotal movement of said latch until the door is at least partially opened and maintain said latch in interlocking relation with door until the door is at least partially opened.

3,001,489 AUTOMATIC GUIDED SEWING APPARATUS

Joseph N. Bond, Mineola, N.Y., and John H. Bachmann, Baltimore, Md., assignors, by mesne assignments, to Western Coat Pad Company, Baltimore, Md., a corporation of Maryland
Filed Feb. 17, 1958, Ser. No. 722,113
10 Claims. (Cl. 112-2)

1. An apparatus for joining together a plurality of layers of material, comprising, means including a visually unobstructed work holder for holding layers of material in a lamellar relationship to be joined together along a joining path, a flat templet spaced from said work holder for establishing a continuous complex pattern having at least one excursion by which said layers of material can be joined together and by which said apparatus can be returned to its original starting position, with said pattern

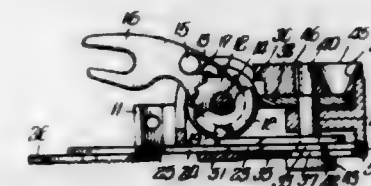
of said templet being a projected image of the joining path and located in a plane parallel with the layers of material being joined together, a framework arranged substantially parallel to said work holder and templet and spaced therefrom, said work holder having a spindle extending transversely therefrom and rotatably mounted in said framework for changing the direction of the principal axes of said work holder with respect to said framework, a stylus rotatably mounted on said framework for engaging and



following said continuous complex pattern on said templet; means for moving said work holder with its layers of materials and framework longitudinally as well as laterally so said stylus can follow said pattern on said templet, means fixed with respect to said templet for automatically joining said layers of material together in a continuous pattern corresponding to said continuous pattern followed by said stylus on said templet, and means for reversing said moving means for said work holder at the end of an excursion of said pattern.

3,001,490 BUTTONHOLE ATTACHMENT FOR SEWING MACHINES

Gerhard Brauer, M. Gladbach, Germany, assignor to Fremaco International, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 3, 1958, Ser. No. 771,613
5 Claims. (Cl. 112-77)



1. In a sewing machine attachment, the combination comprising a frame, a first shaft rotatably mounted on said frame, means for rotating said first shaft, a cloth holding member pivoted intermediate its ends having a cloth engaging foot thereon, template means driving said first shaft operatively engaging and for reciprocating said cloth holding member longitudinally, said template means slidably connected to said first shaft at one end, a second shaft journaled in and for movements relative to said first shaft, manually operable means at the other end of said first shaft secured to said second shaft, and shifting means connected to said second shaft at said one end of said first shaft and engaging said template means for slidably shifting said template means relative to said first shaft to vary the position of the vertical axis about which said template means rotates so as to change the length of the longitudinal stroke of said cloth holding member.

3,001,491

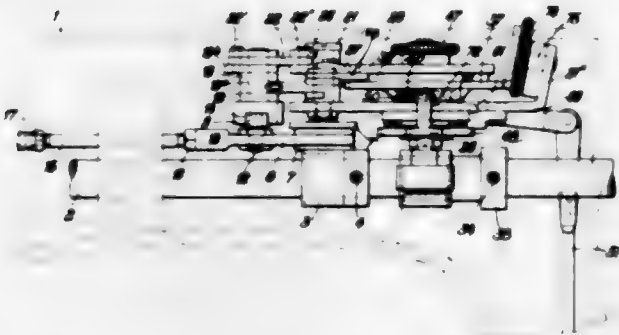
CONTROL MEANS FOR ZIG-ZAG SEWING MACHINE HAVING AUTOMATICALLY DISCONNECTABLE CONTROL MECHANISM

Wolfgang Engel, Bielefeld, Germany, assignor to Anker-Phoenix Nähmaschinen AG, Bielefeld, Germany

Filed Jan. 18, 1956, Ser. No. 560,011

Claims priority, application Germany Jan. 19, 1955

8 Claims. (Cl. 112-158)



1. In a sewing machine for zig-zag stitching of the type having a feed dog mounted below the stitch plate for feeding the material being sewed, a needle bar and a needle bar oscillator, a main drive shaft for reciprocating the needle bar, a needle bar oscillator cam, and a push rod having a forked end in engagement with said oscillator cam and extending intermediate said oscillator cam and said needle bar oscillator, control means including a cam mechanism operatively connected to said main drive shaft and including a first cam disk for controlling the lateral oscillations of the needle bar by way of said oscillator cam, a second cam disk for varying the center position of the needle bar oscillator, a third cam disk having a member movable into engagement with a level bar connected to the adjustment means for said feed dog, a control shaft supporting said first, second and third cam disk and a shaft driving gear provided on said shaft; said control means including an intermediate shaft having a pinion in engagement with said driving gear and a geared connection with said main drive shaft, and one said cam disk having a conformation operative to engage and shift said intermediate shaft for disengaging said pinion and said driving gear to automatically disconnect and render said control mechanism inoperative, and manual means operative to rotate said disks and said control shaft and disengage said conformation from said intermediate shaft, thereby restoring the connection between said pinion and said driving gear.

3,001,492

SHUTTLE FEEDER FOR EMBROIDERING MACHINES

Karol Lindner, 9209 Hudson Blvd., North Bergen, N.J.

Filed Aug. 5, 1960, Ser. No. 47,694

6 Claims. (Cl. 112-186)



1. A shuttle feeding device for embroidery machines comprising a rectangular frame formed with a series of aligned shuttle receiving openings therethrough, said openings being inclined from the upper face to the lower face of said frame, an elongated shuttle obstructing strip disposed adjacent to and under said openings and normally closing at least a portion of said openings from the bottom, and actuating means for shifting said strip to an opening unobstructing position whereby shuttles disposed in said openings may be released downwardly therefrom,

at least one end of said frame having a close topped cut-out formed therein for receiving a shuttle which is in an upward position in said machine while succeeding shuttles may be fed to the machine by the device.

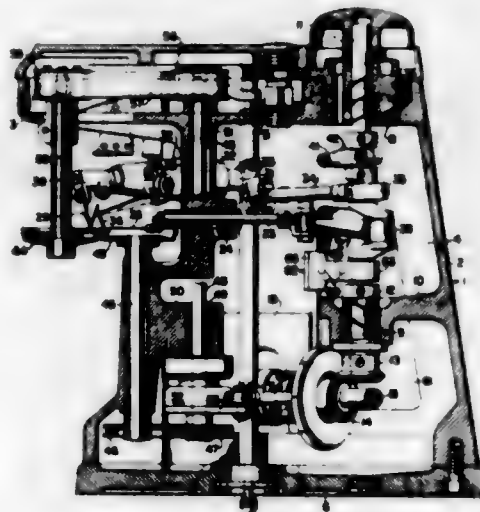
3,001,493

SEWING MACHINE COUNTERWEIGHTS

Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Application Mar. 26, 1957, Ser. No. 648,578, now Patent No. 2,891,578, dated June 23, 1959, which is a division of application Ser. No. 553,806, Dec. 19, 1955, now Patent No. 2,947,270, dated Aug. 2, 1960. Divided and this application Oct. 21, 1958, Ser. No. 768,674

1 Claim. (Cl. 112-220)



In a sewing machine having a frame, stitching mechanism, feeding mechanism for advancing work past said stitching mechanism, a shaft journaled in said frame, operative connections between said shaft and said stitching and feeding mechanisms, and a counterbalance secured to said shaft and comprising a hub, an arm extending laterally from said hub, and a weight portion at the free end of said arm, said counterbalance being bisected into two complementary parts having opposed surfaces and each including substantially equal and identical portions of said hub, said arm and said weight portion, said weight portions having substantially linear contacting surfaces on the opposed surfaces and adjacent to the free ends thereof, said contacting surfaces being disposed substantially parallel to the axis of said shaft, the opposed surfaces of said hub having shaft-engaging surfaces parallel to the axis of said shaft and spaced at a maximum from the plane defined by said contacting surface and the axis of said shaft at a distance less than one half the diameter of said shaft, the opposed surfaces of said parts being spaced from said plane except at said contacting surfaces, means acting between said contacting surfaces and said shaft-engaging surfaces for releasably securing said parts together in assembled relation to clamp the shaft-engaging surfaces against said shaft, whereby the shaft-engaging surfaces may be clamped to said shaft with the contacting surfaces of said weight portions in abutting relation and the remainder of said opposed surfaces in spaced apart relation and said counterbalance may be removed from and secured to said shaft by separating and assembling said parts.

3,001,494

METHOD OF MAKING WHEEL COVERS

George Albert Lyon, 13881 W. Chicago Blvd.,

Detroit 28, Mich.

Filed Nov. 5, 1956, Ser. No. 620,289

5 Claims. (Cl. 113-116)

1. In a method of making wheel covers from thin sheet metal, centering a blank over a lower drawing die

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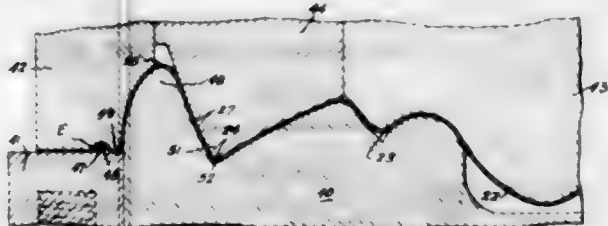
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assembly including marginal holddown and shaping portions as well as central and intermediate shaping portions, and then drawing the blank by driving a punch die structure first against the margin of the blank to clamp the same between the holddown and marginal shaping portions of the lower die structure, then subjecting the central portion of the blank to drawing pressure against

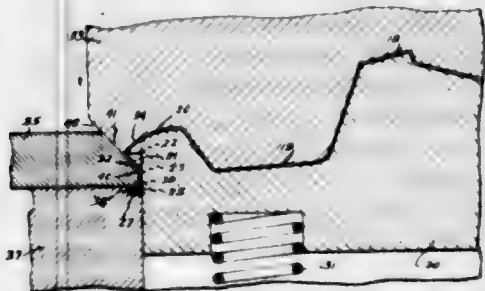


the central portion of the lower die structure, and finally while maintaining the central and marginal portions of the blank under compression drawing an intermediate portion of the blank into said intermediate shaping portion of the lower die structure and thereby working the marginal material of the blank inwardly past the holddown and marginal shaping portions of the die structure.

3,001,495
METHOD OF AND MEANS FOR MAKING WHEEL COVERS

George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.

Filed Jan. 24, 1957, Ser. No. 636,008
3 Claims. (Cl. 113-116)



1. In a method of making sheet metal wheel covers, shaping a sheet metal blank into a circular cover form with a generally cylindrical axially inwardly extending peripheral flange, forming on the inner extremity portion of the flange cover retaining means, supporting the cover form with said inner extremity portion of the flange from an intermediate annular line axially inwardly held stationary against both axial and radial movement, and applying axially inward pressure against the flange toward said inner extremity portion of the flange to collapse the flange along said intermediate annular line to bulge radially outwardly into a circular retaining-means-concealing larger diameter marginal cover perimeter.

3,001,496
METHOD OF MAKING WHEEL COVERS

George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.

Filed June 11, 1958, Ser. No. 741,384
1 Claim. (Cl. 113-116)

In a method of forming trim rings for disposition upon the outer side of a vehicle wheel and being of the type having retaining fingers integral with a radially inner ring margin of each of the rings, the steps of slitting a length of stock along its length on a serpentine line forming lengths of material leaving one of the marginal edges of the length of material undulated, spiraling the length of material and transversely dishing the length of material forming annular radially outwardly extending flange

areas axially spaced along the opposite margins of the length of material with the axially outermost flange area projecting radially outwardly of the axially innermost flange area and with the axially innermost flange area bearing the undulated marginal edge, transversely cutting the length of material along its length forming split-ring portions, butt fastening the ends of each of the split-ring portions to form a trim ring blank with the undulated marginal edge disposed at the axially and radially inner



end of the trim ring blank, and reverse bending the radially inner marginal flange as well as the undulated marginal edge while forming the undulated marginal edge into retaining fingers thereby converting the trim ring blank into a trim ring, the fingers being reverse bent so as to each comprise an axially extending extension portion overlying an inner margin of the trim ring blank and an axially and radially outwardly extending extension terminal portion for biting engagement with the wheel.

3,001,497
INSERT WELDING RINGS
Helmut J. Thielsch, Cranston, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Division of application Ser. No. 794,675, Feb. 24, 1959.
Continuation of application Ser. No. 472,911, Dec. 3, 1954. This application Mar. 14, 1960, Ser. No. 15,513
2 Claims. (Cl. 113-136)



1. An insert ring for the butt welding together of aligned and adjacent metal pipe ends, said ring being formed of a fusible metal which when heated, together with metal pipe ends, fuses with the metal of pipe ends, said ring being circular and of uniform inside and outside diameters, the width of the ring being relatively small with respect to both the said inside and outside diameters, the thickness of the ring being less than its width, and a plurality of axially extending projections extending outwardly at right angles from the axial faces of the ring, the projections having a cross-sectional area smaller than the cross-sectional area of the ring, the projections being formed of material having the same fusible property as that of the ring whereby the pins will also fuse with metal of pipe ends upon being heated, the projections being symmetrically angularly located around the ring, certain of the projections being adapted to contact the outside of pipe ends to be joined by welding and the remainder being adapted to contact the inside of pipe ends to be joined by welding, whereby the projections position the ring with respect to pipe ends.

3,001,498

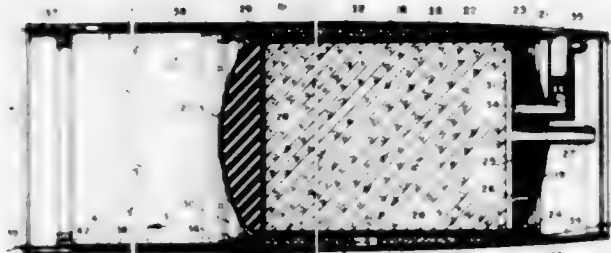
TORPEDO INTERMEDIATE SECTION

Raymond E. Karp, San Marino, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed May 17, 1960, Ser. No. 29,771

6 Claims. (Cl. 114-20)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A torpedo intermediate hull section comprising a first annular metallic portion adapted to be connected at one end thereof to a rearward hull section, a second annular metallic portion spaced axially from said first portion adapted to be connected at one end thereof to a forward hull section, an annular portion of fiberglass material connecting adjacent ends of said portions and bridging the space therebetween and surrounding said first portion in engagement therewith, a bulkhead slidably disposed within said first portion adjacent each end thereof, means for sealing the periphery of each bulkhead to said first portion to prevent gas leakage, a solid propellant grain disposed within said first portion and between said bulkheads, and electrical conductors embedded within said fiberglass material extending longitudinally of same adapted to connect electrically operated components disposed within said rearward and forward hull sections.

3,001,499

REAR MOUNTED PLANING AND STABILIZING STRUCTURE FOR POWER BOATS

Marcellus L. Jacobs, 2532 Columbus Drive, and Joseph H. Jacobs, 1445 El Prado St., both of Fort Myers, Fla.

Filed Mar. 16, 1959, Ser. No. 799,497

3 Claims. (Cl. 114-66.5)



1. A readily attachable, rear-mounted planing and stabilizing structure for power boats of the type having a conventional one-piece hull including a bow, stern and bottom portions and an upstanding stern plate, said planing and stabilizing structure comprising a pair of transversely spaced, rigid mounting frames adapted to be securely clamped to the upstanding stern plate of a power boat and each having a substantial depending frame portion disposed in contacting relation with the rear and exterior of such a stern plate and terminating at each instance at the lower end portion thereof and hinge elements located transversely of the boat and in close relation to the bottom edge of the stern plate when said structure is so attached to a power boat, a pair of displacement bodies of box-like configuration each having a rearwardly inclined front face and each being attached at the lowermost edge of its front face to respective hinge elements of the associated mounting frames for swinging movement on substantially horizontal axes transversely of the boat, said water-displacement bodies

being transversely spaced apart and extending longitudinally rearwardly from opposite sides of said stern plate when said planing and stabilizing structure is mounted on a boat, a pair of rigid substantially planar planing plates each being attached and sealed to the bottom of one of said displacement bodies for swinging movement therewith, and actuating mechanism operatively connected with said displacement bodies and being controllable from within the boat hull for simultaneously varying the angulation of said displacement bodies and its associated planing plates.

3,001,500

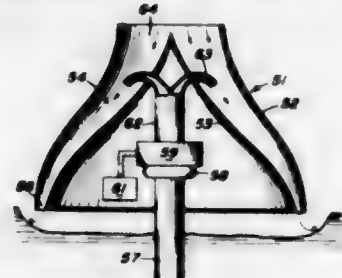
GROUND-EFFECT MACHINE USING STEAM AS WORKING FLUID

Robert W. Pinnes, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 10, 1959, Ser. No. 858,838

5 Claims. (Cl. 114-67)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a ground-effect machine for operation over water having an exterior housing and an interior housing arranged within said exterior housing, sustaining means comprising in combination intake means projecting from the inner housing of said machine, said intake means connecting the interior of said inner housing with the water below said machine, means mounted within said inner housing connected to said intake means for pumping water up from below said machine, evaporating means communicating with said pumping means, said pumping means forcing said water under pressure into said evaporating means, whereby steam is generated therefrom, and means for directing said steam downwardly to exit from a nozzle having the exit portion thereof in the shape of a closed plane curve adjacent the base of said interior housing, said last-named means comprising a plurality of tubes leading from said evaporating means and terminating in nozzle jets, a duct formed between the interior and exterior housings, said nozzle jets being directed downwardly into said duct, said duct communicating with the atmosphere above said machine.

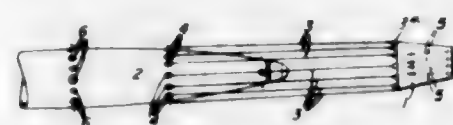
3,001,501

FLEXIBLE BARGES

William Rede Hawthorne and John Christopher Shuldham Shaw, Cambridge, England, assignors to Draconic Developments Limited, London, England

Filed Apr. 21, 1958, Ser. No. 729,983

2 Claims. (Cl. 114-74)



1. A flexible barge for the transport of liquids and pourable solids comprising a water-tight hull of non-rigid material having a stern end, at least the stern end being tapered to provide a substantially streamlined shape, and means for counteracting yawing and sinuous motions of

the barge when towed, said means comprising a drogue, a plurality of lines fixing the drogue to the barge, means securing the said lines to points circumferentially spaced around the forward end of the drogue, and means attaching the said lines to points circumferentially spaced around the skin of the barge at an intermediate position along the said tapered stern end, the length of said lines being such that the forward end of the drogue is spaced from the extreme after end of the barge when the lines are taut.

3,001,502

VARIABLE AREA RUDDER

Nelson D. Stoker, 416 Sheridan Road, Kenilworth, Ill.

Filed Jan. 14, 1960, Ser. No. 2,412

11 Claims. (Cl. 114-167)



1. A variable area rudder comprising a first rudder section, a second rudder section connected to the first rudder section for pivotal movement in variably lapping relationship with the first section about a horizontal axis and in a plane parallel to the first rudder section, steering means on the first rudder section for turning said rudder about a vertical axis and means responsive to fluid pressure on said second rudder section for varying its pivotal position relative to the first rudder section in accordance with the rate of movement of the rudder relative to an ambient fluid medium.

3,001,503

INSTRUMENT DIAL

Herman Hezel, Fort Washington, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York

Filed Aug. 21, 1958, Ser. No. 756,415

7 Claims. (Cl. 116-129)



1. In a display instrument; a dial surface, an indicator and a driving means operatively connected to said indicator for driving said indicator with respect to said dial surface; said indicator being a pointer rotatably movable with respect to said dial surface in a plane parallel to

said dial surface; said pointer having a first and second end; said dial surface having a predetermined portion of its area calibrated with information functionally related to the position of said pointer; a first angular displacement of said pointer by said driving means sweeping said first end of said pointer through said predetermined area of said dial surface; a continuing angular displacement of said pointer sweeping said second end of said pointer through said predetermined area of said dial surface; said first end of said pointer leaving said predetermined area when said second end of said pointer enters said predetermined area; a camouflaging means; said camouflaging means being associated with said dial surface to obscure said first pointer end when said second pointer end is in said predetermined area of said dial surface.

3,001,504

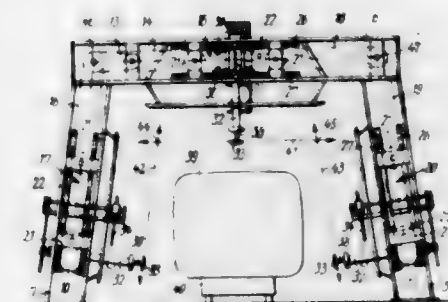
ELECTROSTATIC COATING APPARATUS

Otto Gengenbach, Sindelfingen, Kreis Boblingen, and Kurt A. Fleisch, Maichingen, Kreis Boblingen, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Dec. 24, 1956, Ser. No. 630,181

Claims priority, application Germany Dec. 23, 1955

13 Claims. (Cl. 118-2)



1. An apparatus for electrostatically spraying large objects with paint, enamel or the like comprising a plurality of spary electrode units, means for supplying a high electric tension to said units, and means for moving said units during the spraying positively and simultaneously along intersecting paths, said moving means comprising a separate operating mechanism for each of said electrode units, a single motor for synchronously driving all of said units, each said separate operating mechanism comprising a separate drive element continuously movable during a spraying operation, means for connecting said motor to continuously drive each said drive element and means operatively connecting said drive element and the respective spray electrode unit to reciprocally move the latter along a longitudinal axis corresponding to one of said paths in response to continuous movement of said drive element during said spraying operation and for controlling the movement of said units in a positive relation to each other, said first mentioned connecting means at all times during said spraying operation positioning said spray electrodes relative to each other to maintain them at a minimum distance from each other to prevent mutual interference during spraying due to the field of high tension of each electrode.

3,001,505

VISCOUS LIQUID APPLICATOR

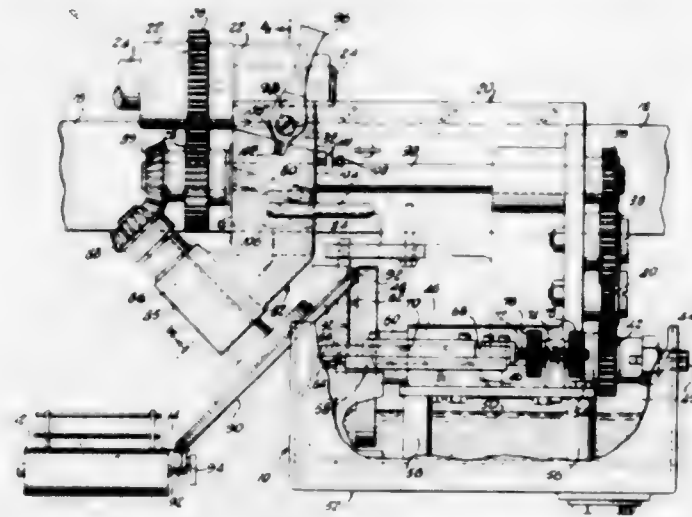
Abraham Novick, Flushing, N.Y., assignor to F. L. Smithe Machine Co., Inc., New York, N.Y., a corporation of New York

Filed Apr. 15, 1958, Ser. No. 728,637

14 Claims. (Cl. 118-212)

1. An applicator for a viscous liquid, such as adhesive or the like, comprising a liquid reservoir, a reservoir roller having a side transfer face arranged to rotate in said reservoir with the lower portion thereof dipping

into the liquid of said reservoir, a rotating applicator die member arranged with the axis of rotation disposed at an angle to the axis of rotation of said reservoir roller and having an adhesive transferring contact face arranged to rotate through an arc substantially tangent to said reservoir side transfer face and extending laterally to one side of said reservoir, means to shift said applicator die roller to move said contact face toward and away



from said reservoir roller side transfer face, and drive means connected to said reservoir roller and said applicator roller die member and effective to drive said applicator roller die member in any one of its adjustable positions, said applicator die roller being shiftable a substantial amount without disengaging it from said drive means.

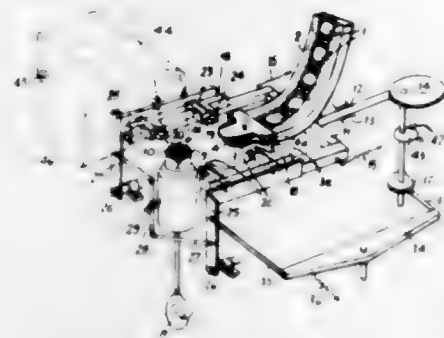
3,001,506

MACHINE FOR APPLYING SEALING COMPOUND TO BOTTLE CAPS

Geoffrey Ewart Ford, Bedford, England, assignor to Fords (Finsbury) Limited, Bedford, England, a British company

Filed Feb. 5, 1959, Ser. No. 791,367

Claims priority, application Great Britain Feb. 6, 1958
11 Claims. (Cl. 118—318)



1. A machine for applying sealing compound to the interior of caps for receptacles, comprising a retainer device, means for feeding caps to the retainer device so that the leading cap will be located in a predetermined position with the cap horizontal but inverted, a chuck arranged in front of said retainer device, means for rotating the chuck about a vertical axis, means for positioning and holding a cap on said chuck to rotate therewith, a nozzle for applying sealing compound to a cap when positioned on the chuck, and a cap transfer mechanism comprising a carriage mounted for movement in guides in a direction parallel to the line joining the centres of two caps when positioned respectively in the retainer device and on the chuck, means for reciprocating said carriage through a distance equal to the distance between said centres, two pairs of gripper members supported on said carriage with the pairs of gripper members spaced apart in the direction

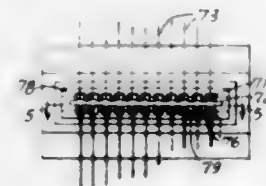
of reciprocation of the carriage by a distance corresponding to the said distance between the said centres, the gripper members of each pair being mounted on said carriage for movement relative thereto transversely to the direction of reciprocation of the carriage and normally spaced apart by a distance greater than the diameter of the caps to be transferred, and means for moving the gripper members of each pair towards one another when the carriage is in the rearward position with the rear pair of gripper members opposite the cap in the retainer device whereby to grip two caps positioned respectively in the retainer device and on the chuck, and to move the pairs of gripper members apart when the carriage has been advanced to its forward position with the rear pair of gripper members opposite the chuck.

3,001,507

MOLTEN METAL APPLICATORS FOR GLASS FILAMENTS

Harry B. Whitehurst and William H. Otto, Newark, Ohio, assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Filed Aug. 4, 1954, Ser. No. 447,864
7 Claims. (Cl. 118—401)



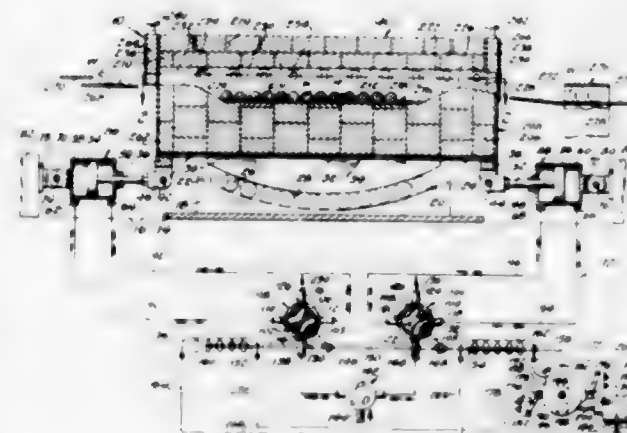
3. An applicator for coating glass fibers or the like with metal comprising a surface forming a face across which fibers are drawn for a coating, said face having a longitudinal slot therein from which molten metal is supplied for coating the fibers, said slot having a sufficiently small dimension transverse to its longitudinal dimension such that the fluid coating material issuing therefrom is blocked from freely flowing from said face by its own surface tension, said face having fiber-accommodating grooves therein having a generally right-angular orientation with respect to said slot, said slot and grooves being bounded and defined by material which is substantially non-wettable by said metal.

3,001,508

MOLTEN MATERIAL COATING FURNACE

Ernest F. Elliott, Rte. 1, Houghton Lake, Mich.

Filed Aug. 13, 1958, Ser. No. 754,875
11 Claims. (Cl. 118—417)



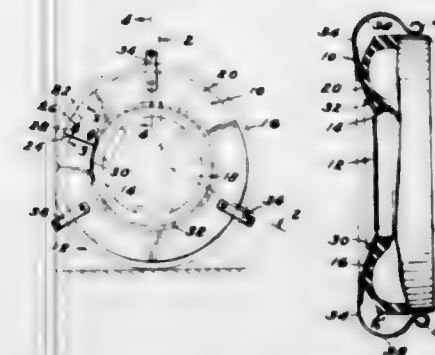
1. A molten material coating furnace for rollable articles comprising a base, a furnace support rockably mounted on said base, mechanism for rocking said support alternately in opposite directions in timed relationship relatively to said base, and an elongated furnace structure

mounted on said support and rockable therewith, the rocking axis of said support being disposed transversely to the length of said furnace structure, said furnace structure having therein an elongated chamber with a rollable article entrance and with an elongated molten material receptacle extending from said entrance along said chamber in the direction of rocking of said furnace support, said furnace structure including a mainly-horizontal generally-rectilinear rollable article guideway extending through said chamber lengthwise of said furnace structure, and means for supplying heat to said chamber to render and maintain molten the coating material in said receptacle.

3,001,509

ADJUSTABLE MASKING DEVICE

Edward W. Carpenter, 35318 Main St., and George E. Lane, 34811 Ash St., both of Wayne, Mich.
Filed May 11, 1959, Ser. No. 812,264
4 Claims. (Cl. 118—503)



1. An adjustable masking device for a vehicle wheel and tire assembly adapted to be applied to the assembly to cover and thereby protect one side of the tire from paint applied to the corresponding sides of the central body portion and tire-carrying rim of the wheel of said assembly; said adjustable masking device comprising a shield in the form of a thin substantially annular flexible band of one-piece construction having concentric radially inner and outer curved edges, said band being transversely split at one point only of its circumferential extent to render the same contractible, said band having overlapping end portions at the split circumferentially adjustable relative to each other when said band is contracted, the inner curved edge of said band when contracted being thin enough to be inserted between said rim and one side of said tire to position said band in masking position over said one side of the tire, means for holding said overlapping end portions in adjusted position when said inner edge of said band is inserted between said rim and said one side of the tire, and spring means secured to said band, said spring means having portions displaced axially from said band for frictional engagement with the tread of the tire when said inner edge of said band is inserted between said rim and said one side of the tire, to center said masking device with respect to the wheel and tire assembly in proper masking position.

3,001,510

IMPROVEMENTS IN LEAD DROPPING PENCILS

Casimiro Chelazzi, Via della Muratte No. 25, Rome, Italy
Filed Apr. 12, 1957, Ser. No. 652,550
1 Claim. (Cl. 120—22)

A draftsman's lead dropping pencil comprising a lead containing tube having lead gripping members with exterior cam faces thereon at the drawing end of the pencil, a pencil body coaxially mounted about said tube, said body being in threaded engagement with said tube whereby said body is adjustable axially relative to said tube, a clamping sleeve coaxially mounted around said tube between the latter and said body, said sleeve being axially

slideable relative to both said tube and said body and having one end engaging said cam faces, a stop ring on the tube, a compressible helical spring mounted around said tube and acting axially between it and the other end of said sleeve to exert pressure therebetween and contacting the clamping sleeve and the stop ring, whereby said sleeve engages said cam faces to grip the lead in said tube, a stop positioned between said tube and said body and secured to the latter and spaced axially from said other end of said sleeve, said space being adjustable by means of said threaded engagement of said tube and said body,



whereby pressure axially upon said sleeve in a direction toward the other end of the pencil and simultaneously pressure axially by the draftsman's fingers upon said body without movement of the fingers therefrom in the opposite direction moves said sleeve axially through said space to disengage said sleeve from said cam faces and release the lead in said tube, and said body being provided with axially parallel ridges spaced about the inner surface thereof and axially slideable in corresponding grooves provided in said sleeve, whereby rotation of the latter relative to said body is prevented.

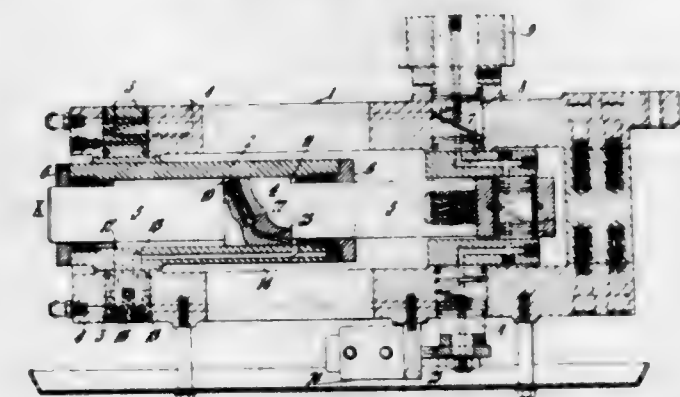
3,001,511

INDEXING MECHANISM FOR MACHINE PARTS

William Francis Poyner, Blackburn, England, assignor to Foster, Yates & Thom Limited, Blackburn, England

Filed June 13, 1960, Ser. No. 35,717

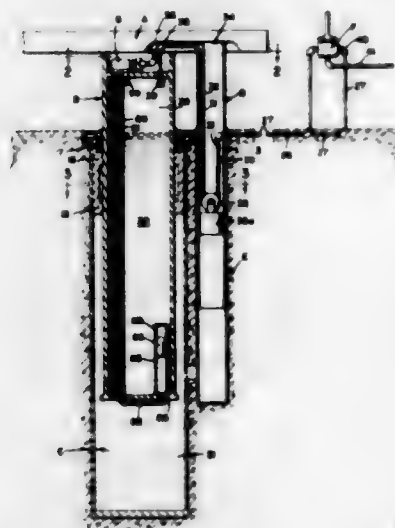
Claims priority, application Great Britain June 12, 1959
17 Claims. (Cl. 121—38)



1. In an indexing mechanism for indexing machine parts, fluid operated cylinder and piston means including first and second piston areas for action in opposite directions, crank means operatively connected with said piston means, a machine part to be indexed having a driving connection with said crank means, means for controlling the supply of pressure fluid to said piston means, and directional valve means having an actuating connection with said cylinder and piston means, said directional valve means being arranged so that upon ac-

tuation thereof from a position corresponding to an indexed position of the mechanism the first said piston area is opened to said supply controlling means and the said second piston area is opened to exhaust during the first part of an indexing movement, and on subsequent further movement both said piston areas are opened to supply and exhaust simultaneously, and subsequently during the latter part of the movement the said second piston area is opened to the pressure fluid supply, the said crank means being arranged to be operable over 180° through one of the dead centre positions of said crank during such movement of the mechanism.

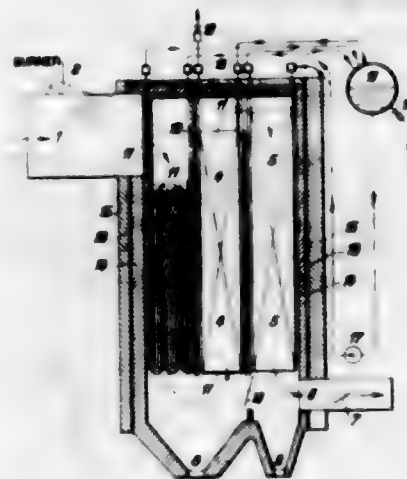
3,001,512
PACKAGED VEHICLE LIFT
John D. Cochran, 205 E. Grand Ave.,
South San Francisco, Calif.
Filed Apr. 1, 1960, Ser. No. 19,273
12 Claims. (Cl. 121-46)



11. In a lift of the type having a cylinder, a hollow piston slidably mounted for said vertical reciprocal movement within said cylinder, hydraulic fluid within said cylinder partially filling said piston, fluid communication means opening between said cylinder and said piston to establish fluid communication between the interior of said piston and said cylinder, check valve means within said fluid communication means, means to bias said check valve means to normally allow fluid communication to pass only from the interior of said piston into said cylinder, air release means mounted on said cylinder to allow air to escape from said piston, a pneumatic motor operable when actuated by pneumatic pressure to release said air release valve means and to open said check valve means, control valve means located at a position remote from said lift, means to supply air pressure to said control valve means, said control valve means having a first check valve section connected in fluid communication with the interior of said piston and operable to normally prevent the air under pressure within said control valve from passing through said check valve section, a second check valve section in fluid communication with said pneumatic motor, said second check valve section operable in closed position to block fluid communication from the air pressure within said control valve to said pneumatic motor and to open the fluid communication from said pneumatic motor to atmosphere, and operating means on said control valve means movable to a first position of operation to open said first valve section, said operating means also movable to a second position of operation to open said second valve section to establish fluid communication between the air pressure within said control valve to said pneumatic motor and to also close fluid communication between said pneumatic motor to atmosphere.

3,001,513
METHOD OF PRODUCTION AND ARRANGEMENT OF STEAM BOILERS HEATED BY HIGHLY AGGRESSIVE GASES

Otto Wolf, Walter Wenzel, Karl Schmidt, Rudolf Hebenstreit, Werner Hülme and Rolf Dörfling, Gummersbach, Germany, assignors to L. & C. Steinhilber G.m.b.H., Gummersbach, Germany
Filed Aug. 9, 1954, Ser. No. 448,626
4 Claims. (Cl. 122-7)



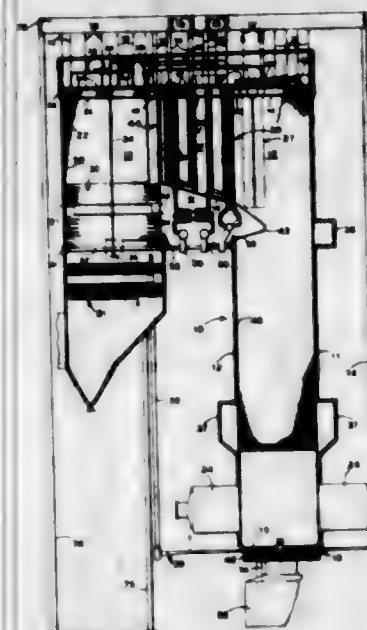
1. A steam boiler installation adapted to be heated by strongly aggressive gases having a high condensation point and an ingress temperature above said point, said boiler installation comprising several flues arranged parallel to each other and to be passed in succession by the heating gases, the first flue including evaporator surfaces, the second superheater surfaces and the third again evaporator surfaces, said heating surfaces forming parts of a steam generating plant, dust separating cones disposed below the lower points of the gas reversal, an inlet duct for the admission of the heating gases into the boiler, an outlet duct for the gases, a flue control valve in the outlet duct, metal walls covered with an impervious coating enclosing said flues, and an inner layer and an outer layer of insulation disposed on opposite sides of said walls, said layers maintaining the temperature of the underlying metal walls at all points thereof at a predetermined value above the condensation point of the heating gases.

3,001,514
SUPPORT AND EXPANSION APPARATUS FOR A VAPOR GENERATING AND SUPERHEATING UNIT

Elmer J. Forman, Wadsworth, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 13, 1959, Ser. No. 812,890
5 Claims. (Cl. 122-510)

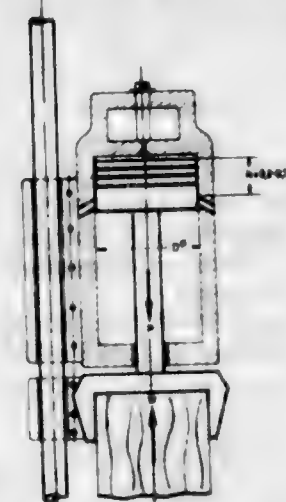
1. In a fluid heating unit, in combination, walls including fluid heating tubes defining a gas pass, said walls including a pair of oppositely disposed upright walls, means supplying high-temperature heating gases to said gas pass, means supplying fluid to said fluid heating tubes, a horizontally extending header disposed outside of said gas pass, a superheater connected for series flow of fluid from said fluid heating tubes and to said header, said superheater comprising a first group of looped tubes disposed in said gas pass and a second group of looped tubes disposed outside of said gas pass and adjacent said first group of tubes and constructed and arranged to compensate for relative movements between said superheater and said fluid heating tubes, with the first and second groups of tubes being arranged in laterally spaced panels serially connected to define parallel flow paths for fluid flow to said header, and means for supporting said fluid heating tubes and said superheater including means for

transmitting the load of and securing said header to the fluid heating tubes of said pair of walls, means for top



supporting the fluid heating tubes of said pair of walls, and means for top supporting said superheater.

3,001,515
METHOD OF DRIVING PILES
Konrad Hange, Esslingen-Königsplatz, Germany, assignor to Firma Delmag-Maschinenfabrik Reinhold Dornfeld, Esslingen (Neckar), Germany
Filed Apr. 24, 1959, Ser. No. 807,674
Claims priority, application Germany Apr. 24, 1958
1 Claim. (Cl. 123-7)

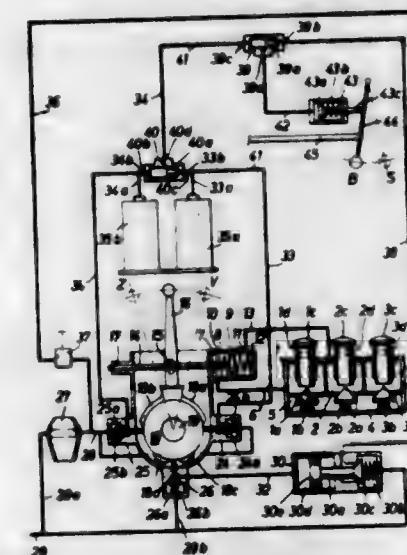


A high pressure diesel pile driver for driving a pile by combustion pressure only, which includes a piston having an effective piston surface and a piston rod provided with a pile-engaging member, and which also includes a cylinder receiving said piston, said cylinder being movable with respect to said piston, said effective piston surface confining with said cylinder a compression and combustion chamber, in which pile driver the stroke of the cylinder relative to said piston divided by the piston diameter is within the range of from 0.7 to 0.2.

3,001,516
CONTROL SYSTEMS FOR INTERNAL COMBUSTION ENGINES
Friedrich Henninger, Mannheim-Wallstadt, Germany, assignor to Motoren-Werke Mannheim A.G. vorm. Benz Akt. Ges. Motorenwerke, Mannheim, Germany, a German company
Filed Feb. 24, 1960, Ser. No. 10,777
Claims priority, application Germany Feb. 25, 1959
1 Claim. (Cl. 123-41)

A power operator for connection to the cam shaft of an internal combustion engine, said cam shaft having

first and second positions according to the direction of rotation of said engine, said power operator comprising a cylinder having ports in opposite ends thereof, a piston reciprocable in said cylinder, two separate reservoirs connected one to each of said ports for supplying an operating liquid to and for receiving return flow of liquid from said cylinder through said ports thereof, means for supplying fluid pressure to said reservoirs, a multiple cam operationally coupled to said piston whereby reciprocation of the piston effects first and second displacements of the cam whilst simultaneously changing the position of said control shaft as between said first and second positions, a plurality of cam surfaces formed on said multiple cam, selectively actuatable means coupled to said multiple cam for displacing said multiple cam by third and fourth displacements according to the desired

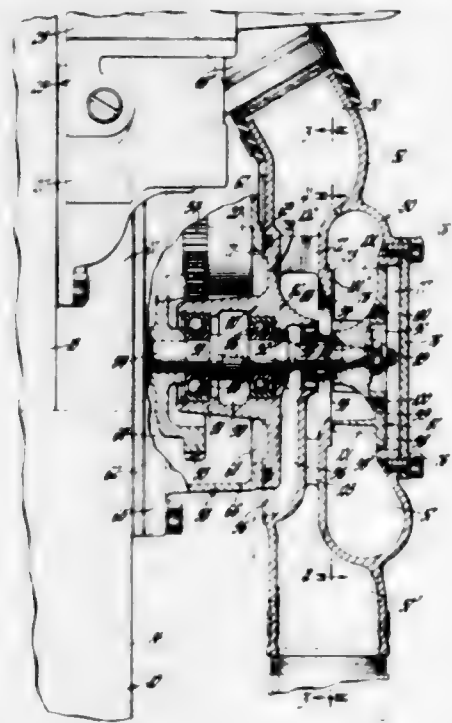


direction of rotation of said engine, the direction of said third and fourth displacements being perpendicular to the direction of said first and second displacements, a first valve means actuatable by a first cam surface of said multiple cam upon said third displacement to supply said fluid pressure to one of said reservoirs, a second valve means actuatable by a second cam surface of said multiple cam upon said fourth displacement to supply fluid pressure to the other of said reservoirs, a first blocking cam surface on said multiple cam for actuating said first valve means, a second blocking cam surface on said multiple cam for actuating said second valve means, said first and second blocking cam surfaces actuating said first and second valve means upon an undesired displacement of said cam shaft out of said first and second positions in order to effect return of said shaft to the desired position.

3,001,517
CENTRIFUGAL PUMP
Richard E. Baker, Detroit, and William R. Fox, Wayne, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 13,601
15 Claims. (Cl. 123-41.47)

1. A centrifugal coolant pump for an internal combustion engine having a full-flow by-pass engine cooling system, an engine driven means for driving various engine accessories, and a casing member housing said engine driven means and providing an accessory mounting location, said centrifugal coolant pump being mountable on the casing member in accessory drive location and comprising a housing member defining a pumping chamber at least partially embraced by a discharge scroll and an inlet chamber separated from said pumping chamber and discharge scroll by a partition web having a central pump inlet opening therethrough, the peripheral dimension of said inlet chamber being substantially greater than said inlet opening, said housing having inlet ports opening laterally into said inlet chamber on

opposite sides thereof, one of said inlet ports being connectable to a thermostatic valve controlled by-pass and the other of said inlet ports being connectable to the outlet of a heat exchange unit, a flow dividing vane located inwardly of each of said inlet ports and extending longitudinally and radially between the partition web and the opposite inlet chamber wall and terminating in spaced radial relation to said central inlet opening, the pump chamber defining wall of said housing member opposite said partition web having an access opening therethrough in axial alignment with said central inlet opening, a cover member secured to said housing member and closing said access opening to define one wall of said pumping chamber, the inlet chamber defining wall of said housing member opposite said partition web being adapted to be mounted on said drive casing in mating relation with said accessory drive location and having a cylindrical hub portion extending therefrom in axial alignment with said central inlet opening and pro-



jecting into said drive casing, an impeller shaft rotatably journaled within said hub and extending into said pumping chamber and drive casing, the drive casing end of said shaft being drivably connectable to said engine driven means, and a vane impeller drivably secured to the opposite end of said impeller shaft within said pumping chamber, said impeller being insertable through said access opening and having rotative pumping clearances with the partition web and the opposite pump chamber defining wall, said impeller having a plurality of vanes curved radially inwardly in the direction of impeller rotation and terminating inwardly adjacent said inlet opening, said inlet chamber housing vanes limiting the swirl induced into the fluid coolant in the inlet chamber by the rotative suction effected by the impeller to the fluid adjacent said inlet opening and the curved configuration of said impeller vanes coacting with the limited fluid swirl permitted by said housing vanes to prevent cavitation under and at the trailing edge of the several impeller vanes.

3,001,518

ENGINE STRUCTURE

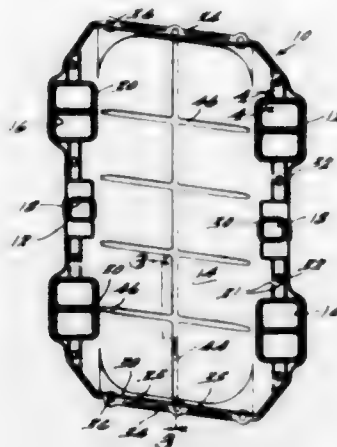
Harold R. Payne, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Aug. 18, 1958, Ser. No. 755,478

3 Claims. (Cl. 123-55)

1. A unitary structure providing a combined intake manifold gasket and tappet chamber cover for a V-engine

having a block, opposed cylinder banks and heads, and an intake manifold positioned on said heads intermediate said banks, said structure comprising a troughlike body arranged below said intake manifold when installed on said engine, said body having opposite end flanges extending outwardly from said body in a plane substantially parallel to the bottom of said body for seating on said block and having opposite side flanges diverging from each other at a substantially right angle for seating on



said heads between said heads and said manifold, said flanges being coextensive to surround said troughlike body, a plurality of stiffening ribs running longitudinally and transversely of said body, a plurality of apertures in said side flanges for coinciding with apertures in said heads, and a bead-like projection on the upper face of said flanges extending around the periphery of said co-extensive flanges, and a break in said projection between each of said apertures in said side flanges to prevent the transfer of oil along said projection.

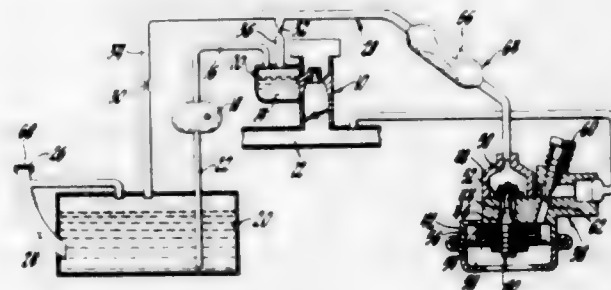
3,001,519

FUEL VAPOR LOSS ELIMINATION SYSTEM

Howard H. Dietrich, Rochester, N.Y., and Charles J. Brady, Phoenix, and Philip J. Garthe, Mesa, Ariz., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 8, 1960, Ser. No. 48,238

10 Claims. (Cl. 123-136)



1. A fuel system for an internal combustion engine comprising an intake manifold, a carburetor for supplying a combustible mixture to said intake manifold, said carburetor including a fuel reservoir, a fuel tank, a pump for delivering fuel from the fuel tank to the carburetor fuel reservoir, vent conduit means communicating with the fuel reservoir and fuel tank above the fuel level, said vent conduit means being adapted to communicate with said intake manifold, a fuel vapor storing device disposed in said vent conduit means intermediate the carburetor and intake manifold, said device including means for causing fuel vapors to flow through said conduit means for a predetermined period after said engine has been rendered inoperative.

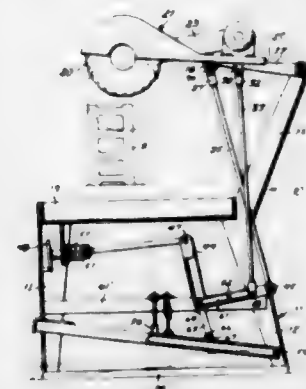
3,001,520

TILTING SAW

Edward A. Zazelo, 652 Broad Acres Road, Narberth, Pa.

Filed Aug. 30, 1960, Ser. No. 53,591

10 Claims. (Cl. 125-14)



1. Mechanism for compensating for angular change in orientation of a pivotally mounted cutter assembly upon a change in the height of the pivotal mount therefor above a work surface, comprising a pivotal support at fixed height, an arm connected pivotally thereto at one end and pivotally connecting at its opposite end to the pivotal mount for the cutter assembly, lever means supported to swing about a fixed fulcrum and linked at one end to another portion of the mount for the cutter assembly, the lever means being adapted upon swinging movement thereof about the fulcrum to raise and lower the cutter assembly, means for adjustably swinging the lever means about the fulcrum, a tilt lever supported to swing about a separate fixed fulcrum, the tilt lever being linked to the cutter assembly at a location other than at the location of the pivotal mount by linkage operatively connected to the tilt lever and including a member pivotally supported by the lever means, whereby swinging adjustment of the lever means is adapted to be transmitted through the linkage to the cutter assembly to pivot the cutter assembly in a direction counter to the direction in which it is pivoted by virtue of the same swinging adjustment of the lever means transmitted to the mount for the cutter assembly.

3,001,521

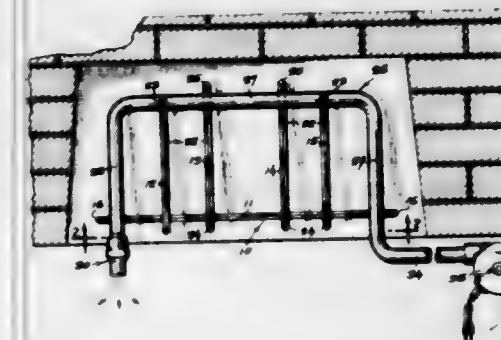
AIR-HEATING FIREPLACE GRATE

Arthur L. Reilly, 28455 Pacific Highway S.,

Anuburn, Wash.

Filed Feb. 7, 1958, Ser. No. 713,890

1 Claim. (Cl. 126-121)



In a fireplace grate, a grate frame fabricated from rod stock, one of said rods extending as a transverse stringer across the front of the grate and having the two ends downturned to provide footing legs, others of said rods extending longitudinally as rails in spaced paralleling relation to one another with the front portion shouldering on said stringer and having the rear end of at least one of said rails bent downwardly to form a footing leg, said stringer being formed to present a stirrup-shaped seat of substantial depth adjacent each of said legs, and a heat-

exchange pipe having a U-shape in plan configuration seating by the cross-arm of the U upon the rails at the rear ends of the latter and by the side arms of the U upon said stringer adjacent the side limits of the stringer, said stringer, rails and pipe being integrally joined, means being provided for passing air through said pipe, said side arms of the heat-exchange pipe being received in said stirrup-shaped seats, at least one of said rails occurring at each of the opposite sides of the longitudinal median line of the grate having its rear end turned upwardly to produce a guard paling, the cross-arm of the pipe seating in the crotch defined between the upturned palings and the horizontal sections of the rails from which said palings stem, the upper surfaces of said longitudinally extending rods occupying a plane throughout their length sloping downwardly toward the rear so that logs resting upon said rods as the same are being burned upon the grate will tend to gravitate toward said cross-arm of the U-shaped pipe, the plane occupied by the upper surfaces of the side arms of the U-shaped pipe being substantially above the plane of said surfaces on which the logs rest, at least in the area adjacent said cross-arm, to provide end walls resisting lateral shifting of the logs being burned.

3,001,522

BIOPSY DEVICE

Irving Silverman, 2726 Bedford Ave., Brooklyn, N.Y.

Filed Dec. 26, 1957, Ser. No. 705,450

9 Claims. (Cl. 128-2)



1. In a biopsy instrument, a biopsy needle including a cannula beveled at one end providing a tissue piercing point, an elongated needle for slidable entry into the cannula, said elongated needle including a pair of resilient arms of unequal length and joined at one end, the free ends of said arms being oppositely beveled to be urged apart on entry into tissue, the beveled end of the longer arm being of such area and being so disposed as to close said cannula in the manner of an obturator, and the beveled end of the shorter arm being wholly shielded by the beveled end of the longer arm when the arms are brought together.

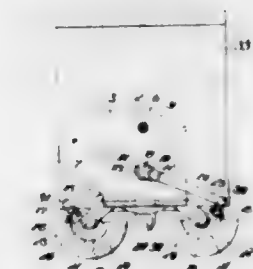
3,001,523

APPARATUS FOR THE CORRECTION OF DISPLACED SPONDYLS

Kasuke Sugimoto, 79 9-chome, Mabuchi-machi, Shizuoka-shi, Shizuoka-ken, Japan

Filed May 7, 1958, Ser. No. 733,588

2 Claims. (Cl. 128-49)



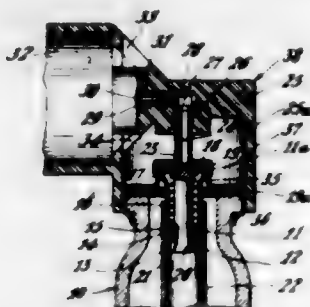
1. Apparatus for the correction of displaced spindyls of a spinal column comprising a frame, a bracket integral with said frame, a motor mounted on said bracket, a shaft journaled in said frame, a gear train for connecting said motor and said shaft, an arm attached to each end of said shaft, a connecting rod attached to each arm, an

adjusting pin carried by the free end of each connecting rod, a support mounted on each adjusting pin, a spindle on which each of said supports is pivotally attached, brackets on said frame in which said spindles are mounted, semicylindrical friction members on said supports, the construction and arrangement being such that the friction members reciprocate in a direction opposite to each other with a rolling motion.

3,001,524

AEROSOL DISPENSING APPARATUS

George Louis Maison and Irving Porush, Los Angeles, Calif., assignors to Riker Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Mar. 5, 1957, Ser. No. 643,954
6 Claims. (Cl. 128—173)



2. A dispensing and administering apparatus suitable for use with a medicament-containing, self-propelling liquid composition for inhalation therapy, comprising in combination an aerosol dispensing container equipped with a control valve means and charged with a medicament-containing, self-propelling liquid composition, said valve means having an operating member having a discharge opening, and an applicator means comprising an actuating means and a delivery tube member, said actuating means being capable of actuating said operating member and having a seat which engages said operating member, said seat having a channel communicating with said discharge opening and said delivery tube member and terminating at the end adjacent said delivery tube member through a narrow orifice, said delivery tube member extending forwardly from said actuating means and providing an unobstructed passage for the aerosol which forms upon discharge of the medicament-containing, self-propelling liquid composition through said discharge means and said channel, said delivery tube means having a substantially straight longitudinal axis, said applicator means having air inlet means proximate to said actuating means, said delivery tube member being capable of administering into a body cavity a dose of medicament in aerosol form to accomplish inhalation therapy without substantial loss of medicament-containing aerosol to the surrounding atmosphere.

3,001,525

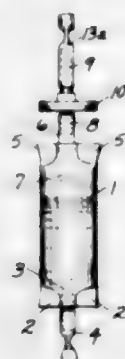
PARENTERAL EQUIPMENT

Gerald E. Hendricks, Erie, Pa., assignor to American Sterilizer Company, Erie, Pa., a corporation of Pennsylvania

Filed Nov. 5, 1957, Ser. No. 694,551
5 Claims. (Cl. 128—214)

1. A container having a tubular flexible walled body of resilient transparent material hermetically sealed at both its upper and its lower end, the structure for sealing the lower end of the body including a depending tube of size for connection to tubing for dispensing solutions and a removable cap seal over the lower end of the tube, the structure for sealing the upper end of the body including a drip tube nozzle depending within the upper end of the body and an upwardly extending conducting means leading to said nozzle and a removable cap seal

over the liquid conducting means, a concentrate within the body for reconstitution into a solution, the container and concentrate being sterilized and sealed, the liquid conducting means being connectable to a liquid containing flask much larger than the shipping container, the body of the container when connected to the flask by



the liquid conducting means serving as an expandable chamber pump for surging liquid back and forth between the container and flask to mix the concentrate with the liquid for reconstitution into a solution and the container thereafter serving as a drip chamber, and the tube being connectable to tubing for dispensing the solutions flowing through the drip chamber.

3,001,526

PIVOT ACTION BRASSIERE

Larry L. Krieger, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware

Filed July 17, 1958, Ser. No. 749,258
7 Claims. (Cl. 128—489)



1. A brassiere comprising a front section having cups for enclosing the breasts, a body band for supporting the front section to the body, said body band forming an inelastic anchorage with each side of the front section substantially in line with the horizontal median of the cups and a pair of elastic members positioned between the front section and the body band; one of said elastic members being positioned above the inelastic anchorage and joining an upper front section to an upper portion of the body band; and the other of the elastic members being below the inelastic anchorage and joining a lower front section to a lower portion of the body band; whereby relative angular movement is provided between the front section of the brassiere and the body band substantially about the inelastic anchorage.

3,001,527

CORN HARVESTER ROLLS

Frank D. Jones, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 13, 1958, Ser. No. 766,829
5 Claims. (Cl. 130—5)

2. A harvesting device composed of a pair of harvesting rolls, each of the rolls comprising: a pair of support shafts spaced apart and coextensive axially, said shafts having at their adjacent ends diametrical slots; an elongated plate member disposed in a plane containing the axis of the shafts and having opposite ends inserted in the respective diametrical slots to thereby bridge the space between the shafts and further having diametrical opposite longitudinal edges; a pair of elongated shell mem-

bers substantially of the length and positioned on opposite sides of the plate member, each of said shell members having longitudinal corrugations and opposite edge flanges lying adjacent to the plate member and terminating sub-



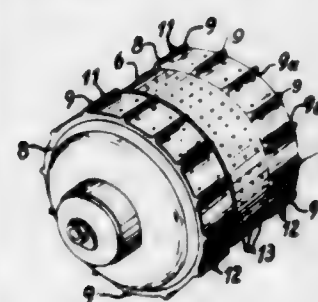
stantially at the respective opposite edges of the plate member; means rigidly fixing said plate member in said slots; and means rigidly fixing said flanges to the plate member.

3,001,528

DEVICE FOR ROLLING A CONNECTOR SHEET AROUND THE BUTTING POINTS OF CIGARETTES AND FILTERS

Bernhard Schubert, Hamburg-Lohbrügge, Germany, assignor to Hauni-Werke Körber & Co., K.G., Hamburg-Bergedorf, Germany

Filed May 23, 1958, Ser. No. 737,406
Claims priority, application Germany June 14, 1957
3 Claims. (Cl. 131—94)



3. A device for attaching connector sheets around the butting ends of aligned pairs of cigarettes and mouthpiece attachments interposed between said pairs, said connector sheets being wider than said attachments and of a sufficient length to completely enwrap the attachments and to unite them with the cigarettes on each side, a rotary conveyor drum having a smooth central portion to receive successive adhesive connector sheets, uniformly spaced and fixed axially extending projections on the circumference of said conveyor drum on each side of said smooth central portion of the same, said conveyor drum receiving the cigarettes and attachments with the attachments and the end parts of the two cigarettes overlying the connector sheets and with the two cigarettes in engagement with the trailing faces of the projections, a stationary counter surface adjacent the conveyor drum to cause the cigarettes and attachments to roll relatively to the conveyor drum and thereby to roll the connector sheets around the attachments to unite them with the cigarettes, the mutual spacing of said projections being such as to allow the cigarettes to roll to an extent which completely enwraps the connector sheet around the butting ends, feeder means adapted to feed aligned groups consisting of cigarettes with interposed mouthpieces against the trailing faces of the projections on the conveyor drum, the mouthpieces being held by the connector sheets previously placed on the smooth central portion of the conveyor drum, each group being rolled by the counter surface until the cigarettes are engaged by the leading faces of the next following projections, said projections having cigarette holding means thereon for retaining the groups in engagement with said leading faces of the next following projections, and means to remove the assembled aligned groups from said conveyor drum after being enwrapped by the connector sheets.

3,001,529

GOLF SMOKE TEE

Harrison T. Watson, 467 Lincoln, Grosse Pointe, Mich.
Filed May 9, 1958, Ser. No. 734,255
2 Claims. (Cl. 131—257)

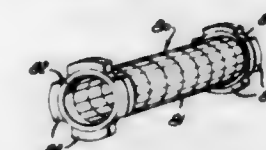


1. A cigarette supporting device having an elongated body member provided with spaced parallel walls defining therebetween a U-shaped channel for the reception of a lighted cigarette or cigar, an enlarged portion on one side of the elongated body member, and a leg pivotally mounted on the enlarged portion of the body member and movable angularly between a folded carrying position parallel to the body member and a cigarette supporting position substantially at right angles to the body member, the enlarged portion on one side of the body member defining a channel shaped section to receive the leg when moved to the folded carrying position parallel to the body member.

3,001,530

HAIR STYLING DEVICES

Sanford Julian, 97—07 67th Ave., Forest Hills, N.Y., assignor of two-thirds to Eugene J. Goldberg, Flushing, and Marc William Saffern, Port Jervis, N.Y.
Filed Jan. 12, 1959, Ser. No. 786,146
1 Claim. (Cl. 132—33)



A hair styling device, comprising a non-magnetic latticed cylindrical body portion and two end members located on opposite ends of said body portion and firmly connected therewith, each of said end members comprising a plurality of magnets maintaining permanent magnetic fields in the space around said end members.

3,001,531

MULTI-COLOR LIPSTICK AND LIP ROUGE APPLICATOR

Eva Gazdik, 42 Roosevelt Ave., Carteret, N.J.
Filed Sept. 18, 1959, Ser. No. 840,838
2 Claims. (Cl. 132—79)

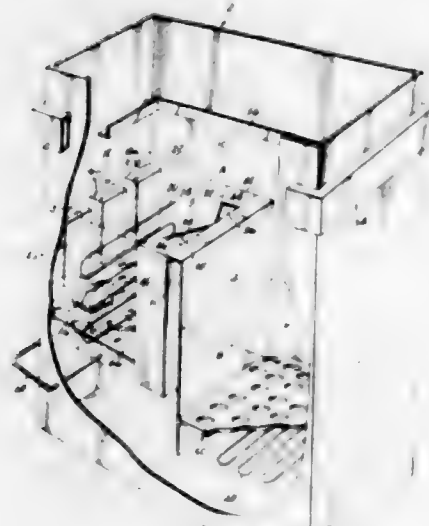


1. A multipurpose cosmetic applicator comprising a hollow cylindrical casing with outlets at both ends, elongated tubular devices movably mounted in the casing, each device having a socketed bearing at one end for holding one end of a lipstick and a socketed bearing at the other end for holding one end of a lip outline pencil, a sleeve encircling each device at the end supporting the lipstick, a slot and pin connection between the sleeve and the tubular device encircled thereby, said casing having radially spaced openings therein in alignment with the

sleeves, spaced buttons radially movably supported in said openings and engageable with said sleeves for selectively moving one of the devices to a position in alignment with the outlets, said casing having elongated slots therein, and buttons slidably mounted along said slots and adapted to engage fixed portions of the centered device for sliding said device in either direction longitudinally of the casing for ejecting either a lipstick or a pencil through one of the outlets.

3,001,532

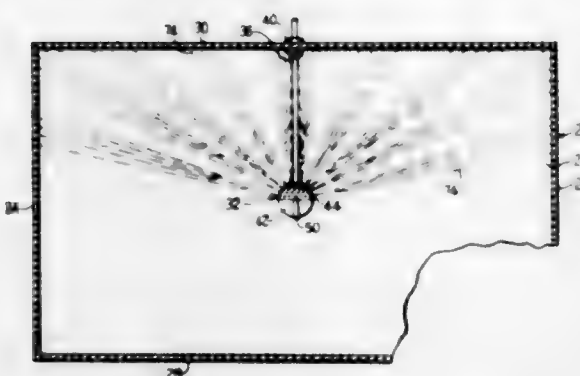
ULTRASONIC DEGREASING APPARATUS
Louis Edward Plassmeyer, Evanston, Ill., assignor to Phillips Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1959, Ser. No. 796,002
13 Claims. (Cl. 134-108)



11. An ultrasonic degreaser for cleaning a work piece comprising, in combination, an ultrasonic chamber for containing a solvent therein, means for generating ultrasonic vibrations in said solvent and means for reflecting the ultrasonic vibrations through said solvent in predetermined directions, said reflecting means including a gaseous cushion fixedly positioned below the level of said solvent in said chamber.

3,001,533

SPRAY BALL CONSTRUCTION
Donald R. Holdren, West Liberty, Ohio, assignor to Holdren Brothers, Inc., West Liberty, Ohio, a corporation of Ohio
Filed Jan. 15, 1958, Ser. No. 709,159
3 Claims. (Cl. 134-166)

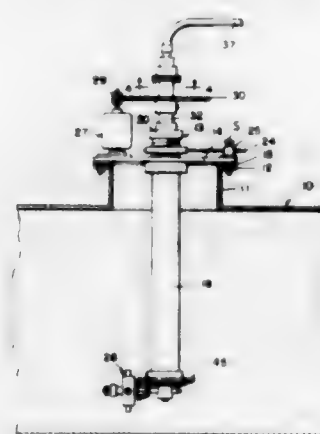


1. An apparatus for cleaning the interior of a tank comprising a hollow spray head ball formed of thin walled sections; means joining said sections together at a junction; supporting means for mounting the spray head ball within the tank and spaced from the interior walls of the tank, said means including an inlet tube for sup-

plying cleansing fluid to the interior of the spray head ball, one of said sections including a flat wall portion surrounding said inlet tube, said flat wall portion including perforations for releasing liquid in directions substantially parallel with said inlet tube, said spray head ball having other perforations spaced from one another throughout other portions thereof.

3,001,534

TANK CAR CLEANING APPARATUS
Edward D. Grant, Jr., P.O. Box 263, Baton Rouge, La.
Filed Aug. 5, 1959, Ser. No. 847,443
4 Claims. (Cl. 134-167)



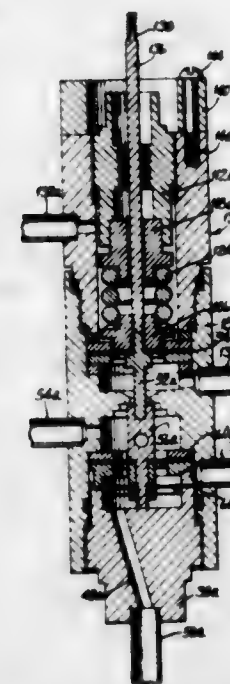
1. A tank cleaning assembly comprising a base plate adapted to rest upon and be secured to and over an opening in the tank, a tube mounted on said base plate and depending therefrom for extension into the tank, a pipe concentrically disposed within said tube and journaled therewithin and extending at its extremities beyond the opposite extremities of said tube, a motor mounted on said base plate, means connecting said motor and the upper extremity of said pipe for rotating the pipe in response to operation of said motor, a branch pipe fixed to the lower extremity of said pipe and projecting laterally therefrom, a spray head journaled adjacent the free end of said branch pipe and being in communication, through said branch pipe, with said pipe, the upper extremity of said pipe being adapted for connection to a source of water under pressure, means connecting the lower extremity of said tube and said spray head for causing rotation of said spray head about the axis of said branch pipe as said pipe is rotated about its axis by the motor, and means for selectively altering the rotational position of said tube relative to said base plate so as to alter the spray pattern of said spray head.

3,001,535

TEST REGULATOR
Milton W. Mueller, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Apr. 30, 1958, Ser. No. 732,028
3 Claims. (Cl. 137-51)

1. A pressure regulator comprising a casing having a valve orifice, a valve, a diaphragm, resetting means for said diaphragm, a double diaphragm structure, means connecting said double diaphragm structure, said diaphragm and said valve for mutual movement in each direction axially in response to resetting by said resetting means and fluid pressures on said diaphragm and said double diaphragm structure, said casing having an inlet orifice on one side of said valve orifice adapted to introduce fluid to be pressure controlled into contact with the diaphragm of said double diaphragm structure adjacent said resetting diaphragm, said casing defining an orifice adapted to introduce fluid at the same pressure as the fluid entering the inlet orifice into contact with the other

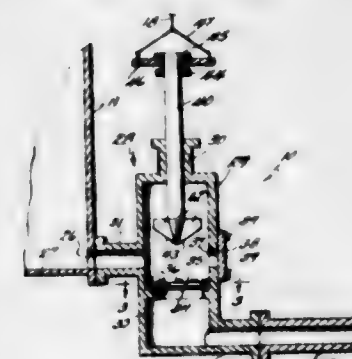
diaphragm of said double diaphragm structure, an orifice adapted to introduce pressure regulating fluid into contact with said double diaphragm structure and an orifice.



1. In a pressure relief vent, a body terminating at its lower end in a fitting of a size to receive a vent pipe, said body terminating at its upper end in a vent opening, a pressure cap overlying said vent opening, means mounting said pressure cap for limited vertical movement from a first position in which said cap is seated against the upper end of said body so as to close said vent opening, to a second position in which said cap is displaced upwardly from said vent opening so as to permit gases to flow outwardly between said vent opening and said cap, a centrally disposed opening in said cap in vertical alignment with said vent opening, and a blow-off disc normally closing the opening in said cap, said blow-off disc being sealed to said cap by means of a low melting point fusible metal.

3,001,536

OIL TANK SAFETY VALVE
John W. Casey, 1013 E. Monroe St., Harlingen, Tex.
Filed July 23, 1959, Ser. No. 829,054
1 Claim. (Cl. 137-68)

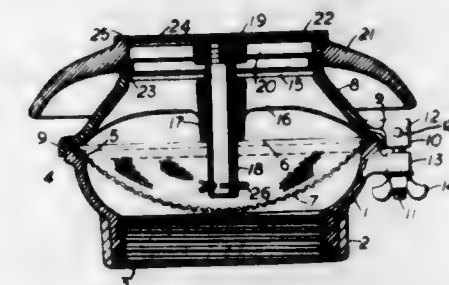


A gravity-actuated safety valve adapted for use with oil tank drainage systems comprising an upright housing, an inlet conduit disposed within one wall of said housing and spaced above the bottom of said housing, an outlet conduit extending outwardly from the lower end of said housing, an inwardly extending, horizontal annular flange arranged within said housing, a frangible disk secured to said annular flange with a clamping ring and a plurality of securing elements which extend through said clamping ring and said disk into said flange, said frangible disk forming a seal between said inlet and said outlet conduits, a shaft bushing on the top of said housing, a gravity-actuated shaft extending through said shaft bushing for vertical reciprocation in said housing to rupture said disk upon a downward movement of said shaft, a plurality of outwardly extending, tapered cutter blades extending over an area of substantially the same size as said disk rigidly secured to the lower end of said shaft for direct engagement with said disk, a pair of parallel collars with central holes received on and secured in spaced relation on said shaft, a weight loosely disposed between said collars, said housing having an access opening therein adjacent said disk to permit replacement of said disc, and a closure plate for said opening.

3,001,537

PRESSURE RELIEF VENT

Raymond P. Shepherd, Loveland, and Robert W. Guertin, Cincinnati, Ohio, assignors to OPW Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 27, 1960, Ser. No. 25,025
6 Claims. (Cl. 137-73)

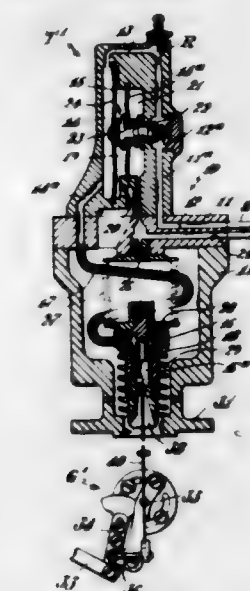


1. In a pressure relief vent, a body terminating at its lower end in a fitting of a size to receive a vent pipe, said body terminating at its upper end in a vent opening, a pressure cap overlying said vent opening, means mounting said pressure cap for limited vertical movement from a first position in which said cap is seated against the upper end of said body so as to close said vent opening, to a second position in which said cap is displaced upwardly from said vent opening so as to permit gases to flow outwardly between said vent opening and said cap, a centrally disposed opening in said cap in vertical alignment with said vent opening, and a blow-off disc normally closing the opening in said cap, said blow-off disc being sealed to said cap by means of a low melting point fusible metal.

3,001,538

ERROR DETECTOR FOR PNEUMATIC TRANSMISSION SYSTEM

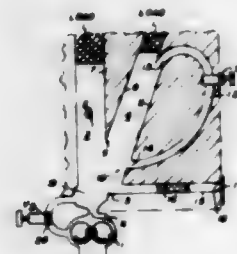
Robert C. Du Bois, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed June 22, 1956, Ser. No. 593,113
4 Claims. (Cl. 137-82)



1. In combination in a pressure transmitting system which includes a nozzle device having therein a chamber to which pressure fluid is supplied, a delivery passage leading outwardly from said chamber, valve means for controlling the escape of pressure fluid from the chamber through said passage, the valve means comprising a main valve and an auxiliary valve, a pressure-responsive device, and motion-transmitting means between the pressure-responsive device and the main valve, the main valve being of a size such that it may move freely, with clearance, along the delivery passage, both of said valves being normally within said chamber, the main valve having a

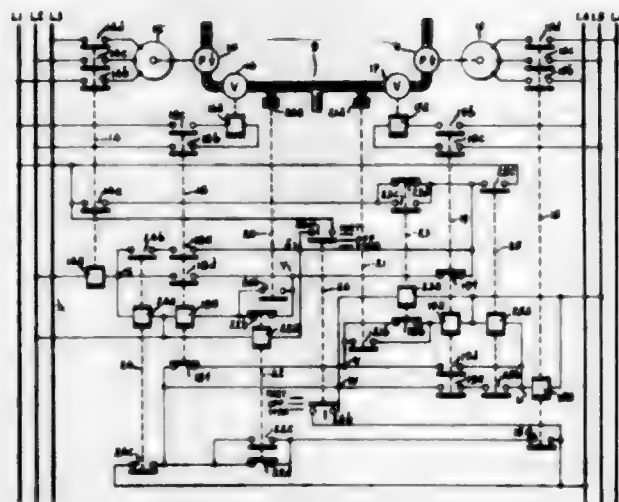
spherical surface so disposed that so long as the pressure to which the pressure responsive device is exposed is within a predetermined range, the effective size of the delivery passage progressively varies as the maximum transverse dimension of the main valve moves toward or from the entrance to the delivery passage, the motion-transmitting connections being operative to move the main valve to a position such as to permit free, unrestricted escape of pressure fluid through the delivery passage, if the fluid pressure, which acts upon the pressure responsive device, drop below the lower limit of said range.

3,001,539
SUCTION AMPLIFIER
Hyman Harvitz, 1313 Juniper St. NW.,
Washington, D.C.
Filed Aug. 15, 1960, Ser. No. 49,752
21 Claims. (Cl. 137-83)



1. A fluid device, comprising a passage, an offset in a wall of said passage arranged to provide a reduced fluid pressure offset region in response to flow of fluid along said passage, a control channel communicating with said offset region, said control channel communicating with a region of lower ambient pressure than is present in said offset region, and a variable fluid resistance in series with said control channel.

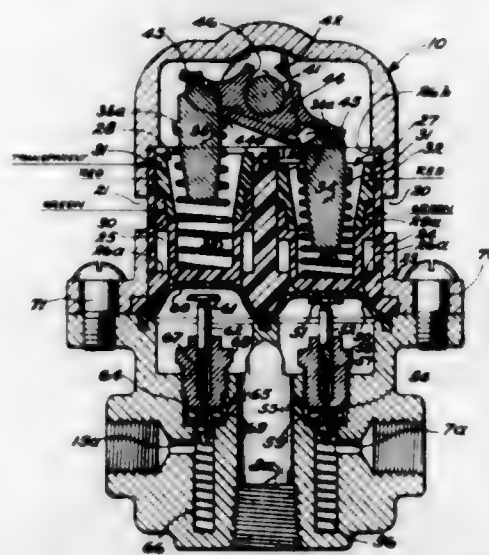
3,001,540
ELECTRICAL CONTROLLER FOR STEERING APPARATUS
Arthur K. Barnickel, Milwaukee, Wis., and William A. Hooks, Pascagoula, Miss., assignors, by direct and meane assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,787
4 Claims. (Cl. 137-112)



2. In combination, a pair of electrical translating devices each of which comprises a motor and a pump, an independent source of electrical power supply for each of said devices, a valve associated with each pump and adapted to operate concurrently therewith, and control means having means for selectively effecting operation of one or the other of said devices and its valve at any given time, said control means also including means to

effect automatic permanent transfer of operation from one device to the other in the event of a failure of the valve associated with the pump of said one device, and said control means further including means to effect temporary transfer of operation from one device to the other in the event of low voltage in the power supply for the motor of said one device until said normal voltage in the power supply is restored.

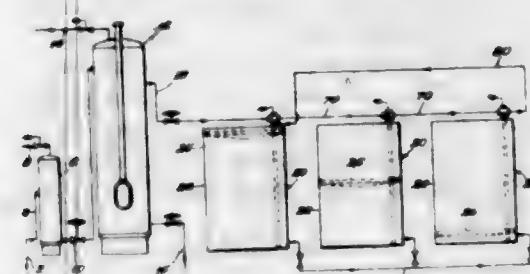
3,001,541
AUTOMATIC REGULATOR ASSEMBLY
Theodore A. St. Clair, Chagrin Falls, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 18, 1957, Ser. No. 646,760
11 Claims. (Cl. 137-113)



1. A changeover regulator for sequentially using two separate sources of liquefied petroleum gas comprising a body formed of upper and lower complementary sections, said lower section having a pair of diaphragm cavities arranged side-by-side and opening into a common outlet, a diaphragm for each of said diaphragm cavities clamped between said upper and lower complementary sections, said lower section having a first inlet adapted to be connected to one source of supply and a regulating valve for said inlet having a stem portion extending upwardly from the inlet to be engaged by the underside of one of said diaphragms, said lower section having a second inlet adapted to be connected to said other source of supply and a second regulating valve having a stem portion thereof extending upwardly towards said other diaphragm to be engaged by the underside of said other diaphragm, said upper body section having a pair of cylindrical bores co-axially arranged individually with respect to said diaphragms and said regulating valves, respectively, a spring assembly in each bore comprising a telescopic cup-like section engaging the upper side of the respective diaphragm, an expansion spring in said cup-like section and an elongated core biased upwardly by said expansion spring, a manually operable cam member carried in said upper body section between said spring assemblies and adjacent that end of the spring assembly remote from the diaphragm, a tilting plate overhanging both of said spring assemblies and engageable with the respective cores thereof, said tilting plate being tiltable by said manually operable member downward toward one of said diaphragms and upward away from the other diaphragm to selectively bias one of said spring assemblies toward the lower body section more than the other spring assembly is biased towards the lower body section, whereby that spring assembly having the maximum downward bias moves its diaphragm downward into regulating engagement with its regulating valve to effect withdrawal and regulation of the supply through the corresponding inlet before withdrawal

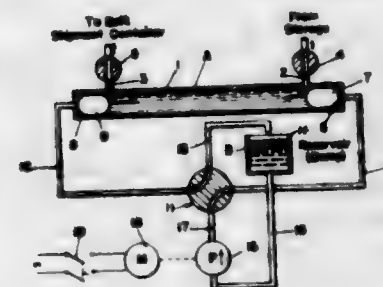
and regulation of the supply through the other inlet is effected.

3,001,542
LIQUID VOLUMETRIC MEASURING SYSTEM
Roy Shepherd, Tulsa, Okla., Henry F. McCabe, Fort Worth, Tex., and Jack E. Fogarty, Tulsa, Okla., assignors, by meane assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 29, 1956, Ser. No. 625,186
6 Claims. (Cl. 137-122)



1. In a battery of measuring tanks for use in an oil well production system, first and second tank shells having open upper ends, first and second movable roofs in said first and second shells, respectively, arranged to float on and move vertically with the surfaces of product in the shells, said roofs including means engaging the inner peripheries of the tank shells to provide vapor seals, first conduit means in communication with a product supply, a first fill line in communication with said first shell and in communication with said first conduit means, a first valve located in said first conduit means, a second fill line in communication with said second tank shell, a second valve in communication with said second fill line, a second conduit means communicating between said first valve and said second valve, a return conduit means establishing communication between said second valve and said first mentioned fill line, said valves being normally arranged to direct product flow to each related fill line, means mounted on said first roof and arranged to operatively engage the first valve to halt the flow of product into the first fill line and the first shell when the first roof is in a predetermined position and to direct product flow to the second conduit means and to the second tank shell, and means mounted on said second roof and arranged to operatively engage the second valve to halt the flow of product into the second fill line and the second shell when the second roof is in a predetermined position and to direct product flow to the return conduit means and to the first tank shell.

3,001,543
SYSTEM FOR TRANSFERRING PREDETERMINED QUANTITIES OF FLUIDS
Paul D. Barton, Phoenixville, and Elmer T. Young, Newtown Square, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Aug. 25, 1958, Ser. No. 756,916
6 Claims. (Cl. 137-242)

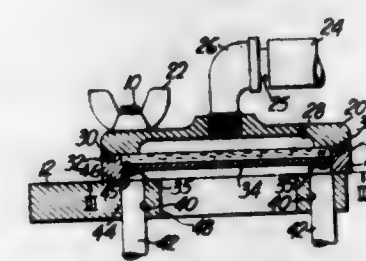


1. In a system for transferring predetermined quantities of fluids, a main length of pipe having a respective

side connection near each of its two ends but spaced therefrom, said side connections serving to respectively permit entry of fluid into the main pipe and egress of the fluid therefrom, a valve in each of said side connections closely adjacent said main pipe, the space between the entry side connection and its adjacent end providing a socket; a free imperforate piston normally disposed in said socket in such a position as not to impede fluid flow through the entry side connection, said piston being constructed and arranged to fit tightly in the bore of said main pipe as a cylinder, a hydraulic connection to the closed end of said socket, and means for coupling said hydraulic connection selectively and at will to a hydraulic fluid pump or to a hydraulic fluid dump.

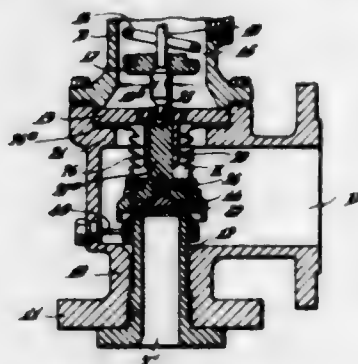
5. An arrangement for scavenging a length of pipe which is adapted to carry alternatively any one of a plurality of different fluids, comprising a first free imperforate piston constructed and arranged to fit tightly in the bore of said pipe as a cylinder, a first side connection serving to permit entry of fluid into said pipe, said connection being so located that it is unobstructed by said first piston when the latter is in its original position; means for applying a hydraulic fluid, different from the fluids normally carried by said pipe, under pressure to one side of said piston, to thereby force said piston in one direction through the entire length of said pipe, a second free imperforate piston constructed and arranged to fit tightly in the bore of said pipe as a cylinder, a portion of said second piston engaging said first piston when the latter has completed its travel in said one direction, a second side connection serving to permit egress of fluid from said pipe, said second connection being so located that it is unobstructed by said second piston when the latter is in its original position; and means for applying a hydraulic fluid, different from the fluids normally carried by said pipe, under pressure to an opposite portion of said second piston so as to move it, and thereby also said first piston, in a direction opposite to said one direction through the entire length of said pipe.

3,001,544
MOISTURE DISTRIBUTOR
Rector C. Ferguson, La Porte, Ind., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 5, 1960, Ser. No. 40,726
6 Claims. (Cl. 137-262)



1. A moisture distributing device comprising: a distribution plate having top and bottom surfaces at opposite sides thereof and a series of bosses extending downward from said bottom surface with openings through the extremities of said bosses, a layer of porous material engaging said top surface of said plate; a series of conduit means respectively facing said bosses in moisture receiving relation to the openings therein; a fluid supply conduit in fluid communication with said series of conduit means through said layer of porous material and said boss openings; and individual venting means associated respectively with said conduit means.

3,001,545
SPRING LOADED POP-ACTION SAFETY VALVES
 Norman E. Zieg, Tulsa, Okla., assignor to Manning,
 Maxwell & Moore, Incorporated, Stratford, Conn., a
 corporation of New Jersey
 Filed Oct. 22, 1958, Ser. No. 768,887
 3 Claims. (Cl. 137-478)



1. In a spring loaded pop-safety valve of the kind which has a body provided with a discharge passage and comprising a fixed nozzle which defines an unobstructed inlet passage and whose upper edge forms the valve seat, a rigid fixed guide within the valve body whose lower end is spaced above the plane of the valve seat, a rigid valve holder comprising an integral elongate stem, coaxial with the valve seat, and having sliding engagement with said fixed guide as the holder moves toward and from the plane of the valve seat, a valve head or disc which normally makes leak-tight contact with the valve seat, a coupling so connecting the disc or head to the holder as to permit the disc or head to rock relatively to the holder, and an adjustable blow-down ring external to and coaxial with the nozzle and having screw-threaded engagement with the nozzle, the holder being of a maximum outside diameter approximating the external diameter of the nozzle, in combination, an annular skirt, independent of the holder, which has screw-threaded engagement with the periphery of the holder so that it may be adjusted axially, relatively to the latter, the undersurface of said skirt being contoured to provide an annular flat roof for a huddling chamber, said roof being always accurately parallel to the plane of the valve seat, and cooperating elements operative to retain said skirt in selected position of adjustment, at which when the disc is seated the roof of the huddling chamber is at a predetermined distance above the plane of the valve seat.

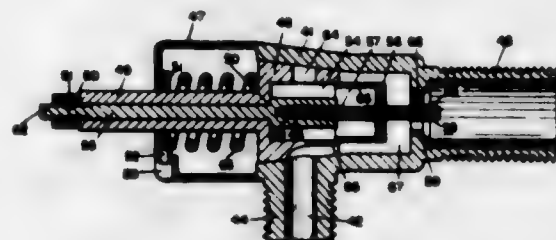
3,001,546
CHECK VALVE
 Clifford A. Salisbury, 1110 N. Main St.,
 Tonkawa, Okla.
 Filed Oct. 6, 1958, Ser. No. 765,566
 2 Claims. (Cl. 137-541)



1. A check valve for preventing retrograde flow of a stream of liquid, comprising a body having a passageway therethrough for the liquid and an inlet end and an outlet end, a flange extending circumferentially around the inner periphery of the body and having the face thereof nearest the outlet end of the body tapered to form an annular valve seat in said passageway, a guide skirt extending from said flange toward the inlet end of the

body, a movable valve head in the body having an annular-shaped tapered area for mating with the valve seat and preventing flow of the liquid through the valve seat toward the inlet end of the body, a plurality of guide legs extending from the valve head through the seat and the skirt in circumferentially spaced relation with the outer edges of said legs arranged on the arc of a circle having a diameter slightly less than the inner diameter of the skirt to loosely support the valve head in the body, said guide legs being longer than said skirt, a snap ring secured around said guide legs adjacent their free ends, and a helical spring telescoped over said skirt with one end thereof against said flange and its other end against said snap ring, said spring having a diameter substantially equivalent to the outside diameter of said skirt at its end adjacent said flange, and diminishing to a diameter substantially equal to the diameter of said circle determined by the outer edges of said legs at its other end.

3,001,547
UNIVERSAL GAS VALVE
 Isaac V. Brumbaugh, Clayton, Mo.
 (6906 Avondale Road, Baltimore 12, Md.)
 Original application Aug. 23, 1955, Ser. No. 530,123, now
 Patent No. 2,893,426, dated July 7, 1959. Divided
 and this application Jan. 2, 1959, Ser. No. 784,626
 3 Claims. (Cl. 137-614.17)

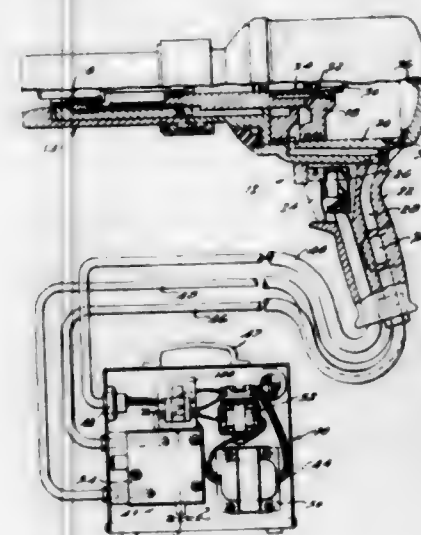


1. In a control valve for fuel flow, the combination of a valve casing having an inlet and an outlet for fuel, a rotatable valve member in said casing having a fuel passage affording communication between said inlet and said outlet in the open position of said valve member and defining a metering edge on said valve member, an adjusting element carried by said valve member and projecting into said fuel passage, a metering member mounted for slidable but non-rotatable movement in said fuel passage and having a tapered port movable across said metering edge upon said slidable movement for metering flow of fuel between said inlet and said outlet, said metering member and said adjusting element having interengaging means for causing said slidable movement upon rotation of said valve member, and means operably engageable between said adjusting element and said valve member for normally preventing independent rotation of said adjusting element but being selectively disengageable for adjusting the relative positions of said port and metering edge upon said independent rotation.

3,001,548
APPARATUS FOR DRIVING LOCKBOLTS AND THE LIKE
 George J. Van Hecke, Detroit, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan
 Filed June 10, 1959, Ser. No. 819,402
 5 Claims. (Cl. 137-620)

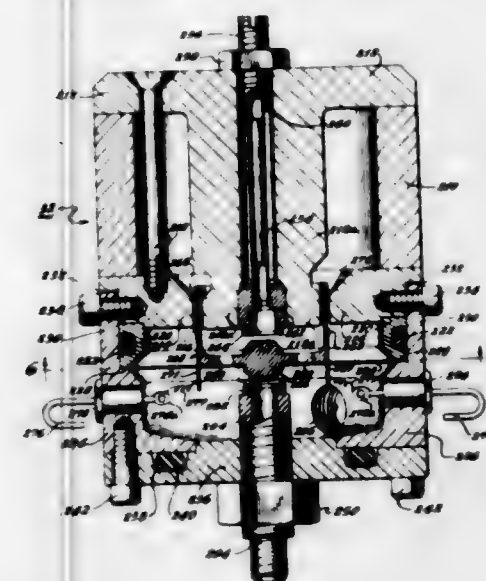
1. In apparatus for driving lockbolts and the like which includes a hydraulically operated tool; a valve body having an inlet for fluid under pressure and a return to tank outlet, a first valve member mounted in said body for movement between two positions for controlling the flow of fluid to said tool, a second valve member mounted in said body and fluid-communicated with said first valve

member and said inlet in only one of said positions, said second valve member communicating with said outlet and being movable to an open position by a fluid pres-



sure above a predetermined pressure exerted thereon, and a pressure relief valve member mounted on said body and communicating with said inlet in both positions of said first valve member.

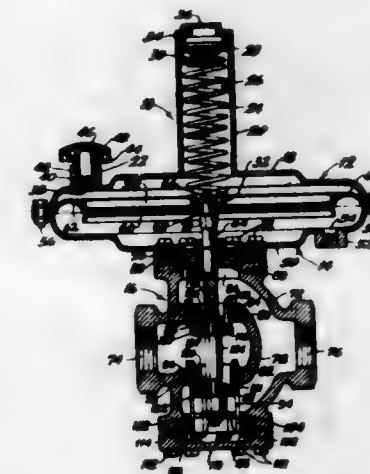
3,001,549
HIGH SPEED VALVE ASSEMBLY
 Alfred M. Nelson, Torrance, Vernon E. Mondt, Los Angeles, and Hans M. Stern, Culver City, Calif., assignors to Magnavox Company, Los Angeles, Calif., a corporation of Delaware
 Filed Sept. 23, 1957, Ser. No. 685,581
 14 Claims. (Cl. 137-625.27)



1. In combination, a housing constructed to provide a single chamber, a flexible spider supported by the housing and disposed in the single chamber in the housing for flexure in a direction transverse to the plane of support of the spider, there being a valve port within the single chamber of the housing on one side of the spider, a single closure member supported by the spider for movement in accordance with the flexure of the spider and disposed in contiguous relationship to the valve port for movement to a first position in cooperative relationship with the port to close the port, there being an exhaust port within the single chamber of the housing on the other side of the spider from the valve port, the spider being constructed to provide a uniform pressure on opposite sides of the closure member, the closure member also being disposed in contiguous relationship to the exhaust port for movement to a second position in cooperative relationship with the port to close the port, and means

operative upon the closure member for applying an instantaneous force to the closure member to move the closure member to the first position in cooperative relationship with the valve port for the first operating condition of the closure member and to move the closure member to the second position in cooperative relationship with the exhaust port for the second operating condition of the closure member.

3,001,550
GAS REGULATOR
 Raymond A. Engel and Cecil M. Johnson, Marshalltown, Iowa, assignors to Fisher Governor Company, a corporation of Iowa
 Filed July 28, 1959, Ser. No. 828,270
 8 Claims. (Cl. 137-625.34)

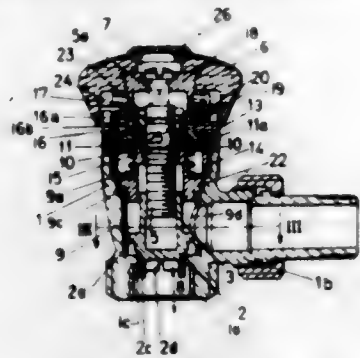


1. A gas regulator valve body assembly comprising a generally hollow valve body having a flow inlet and a flow outlet and a double-ported separating internal wall therebetween defining an upper opening and a lower opening, an upper valve seat member received in axially fixed relation within said upper opening, a cage assembly providing a lower valve seat member and received in axially slidable relation within said lower opening, a valve stem carrying a pair of valve members in spaced relation and extending axially movably through said cage for cooperation with said valve seat members, adjustable stop means carried by said cage assembly and engaging said valve body to position said lower valve seat member relative to said upper valve seat member and to the spacing between said pair of valve members, said valve body having an access opening permitting free removal of said cage assembly therefrom, and a blind flange providing a sealing closure for said access opening.

3,001,551
VALVE FOR RADIATORS AND THE LIKE
 Walter Wyser, Bachthalstrasse 8, Ennetbaden, Aargau, Switzerland
 Filed Sept. 14, 1959, Ser. No. 839,957
 Claims priority, application Switzerland Sept. 16, 1958
 14 Claims. (Cl. 137-635)

1. A valve assembly comprising, in combination: a housing for the passage of a fluid, said housing having an inlet opening and a discharge opening; a threaded spindle having an axis and extending into said housing; a handle non-rotatably connected with and axially slidable relative to said spindle; a first valve member meshing with the spindle and non-rotatably received in said housing so that said valve member is axially movable with respect to said spindle when the spindle is rotated for alternately exposing and sealing one of said openings to the flow of fluid therethrough; a second valve member for controlling the flow of fluid between said openings in the housing, said second valve member being non-rotatably fixed to the first

valve member and the latter being movable with respect to the second valve member in the axial directions of said spindle; means for releasably holding the second valve member against rotation in said housing; coupling means for connecting the second valve member with said handle when the latter is axially moved with respect to said

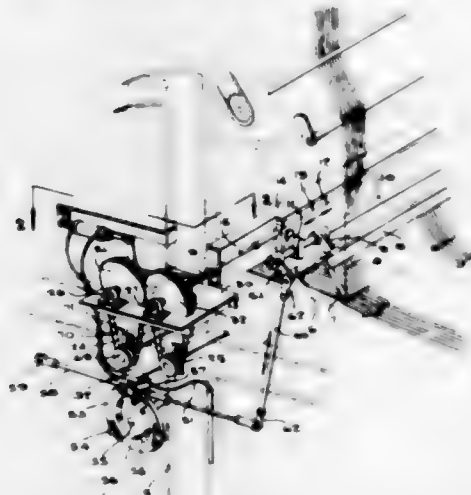


spindle; and means connected with the handle for disconnecting said holding means from the second valve member upon axial movement of the handle with respect to said spindle whereby the second valve member is rotatable with said handle to adjust the flow of fluid between said openings.

3,001,552

PATTERN CHAIN CONTROL MECHANISM FOR GAUGE LOOMS

Orrin J. Park and Basil U. Cotner, Bloomsburg, Pa., assignors to The Magee Carpet Company, Bloomsburg, Pa., a corporation of Pennsylvania
Filed July 24, 1959, Ser. No. 829,409
7 Claims. (Cl. 139-46)



1. A pattern control mechanism for gauge looms having gauge wires and yarn carrying arms for carrying the yarns down between the gauge wires into the fabric being woven comprising a reciprocating oscillating shaft supporting the yarn carrying arms, a pair of pattern chains having mating links of varying curvature, a rock lever having one end connected to said shaft and its opposite end disposed between said pattern chains, means for driving said pattern chains to impart movement to said rock lever and vary the stroke of said shaft, and means operable in synchronism with said pattern chains to oscillate said shaft.

3,001,553

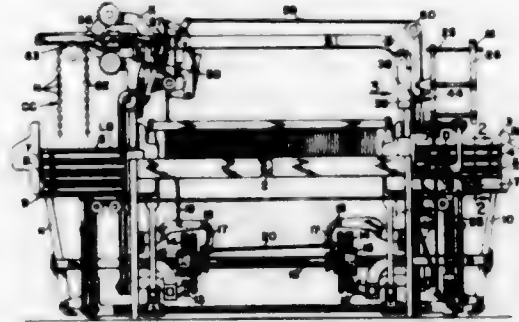
PICK AND PICK WFT REPLENISHING LOOM

William E. Kimmel, Milbury, Mass., assignor to Crompton & Knowles Corporation, a corporation of Massachusetts

Filed Dec. 9, 1955, Ser. No. 552,233
14 Claims. (Cl. 139-232)

14. In an automatic bobbin changing loom including a lay movable between forward and rear positions, first and second shiftable shuttle boxes disposed at opposite

ends of said lay and movable therewith, said first shuttle box having four vertically stacked shuttle receiving cells and said second shuttle box having three vertically stacked shuttle receiving cells in vertical communication with each other to permit the vertical passage of a bobbin through said three cells, a multistack magazine located above said second shuttle box when in forward position, means for sensing a depleted bobbin in the top-

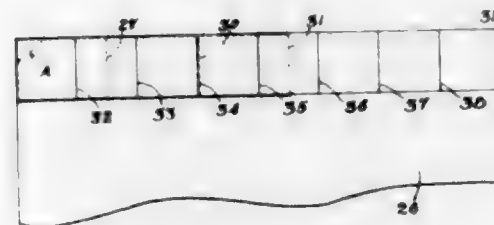


most cell of said second shuttle box when in its forward position, means responsive to said sensing means for releasing a bobbin from a preselected bobbin stack upon the lower two cells of said second shuttle box being empty during the next successive forward position of said lay, and means for replacing said depleted bobbin by said released bobbin whereby said depleted bobbin falls through said cells of said second shuttle box.

3,001,554

METHOD FOR CONTROLLING AN AUTOMATIC RUG MAKING MACHINE

Harold W. Gotobed, Main St., Tribes Hill, N.Y.
Filed Dec. 31, 1956, Ser. No. 631,722
1 Claim. (Cl. 139-317)



In a method for controlling an automatic rug making machine to incorporate a linearly repeated design into the rug being fabricated, said method comprising the steps of, first, producing a primary design on a surface laid out in squares and repeating said design in end-to-end arrangement a sufficient number of times to correspond to the length of the width of the design portion of the completed rug, second, transposing the data of said end-to-end repeated design arrangement to a series of punch cards, and third, feeding said series of punch cards to said machine to control the operation thereof for producing said repeated design across said rug, the improvement in said first step comprising: the sub-steps of producing the primary design manually, then reproducing a plurality of duplicates of said design from the manually produced design, and finally assembling the reproductions in end-to-end relationship with said primary design for use in said second step.

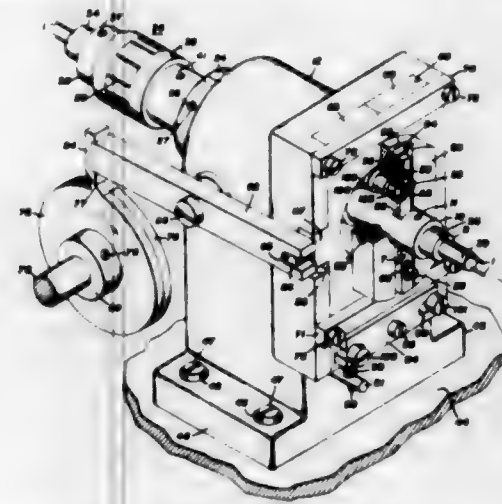
3,001,555

AUTOMATIC GRID MAKING MACHINE

Junius B. Neale, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 13, 1957, Ser. No. 702,597
6 Claims. (Cl. 140-71.5)

1. For use in a machine for making grid electrodes, of the type comprising a mandrel rotatably supported for receiving support rods of indefinite length, means for

continuously feeding the support rods parallel to the axis of rotation of the mandrel; means for forming deformations in the support rods at pre-selected longitudinally spaced points thereon comprising, in combination; a head supported for rotation with said mandrel, swaging means slidable in said head into swaging engagement with said support rods, follower means affixed to each of said swaging means for rotation therewith, cam members having complementary arcuate surfaces defining in one relative

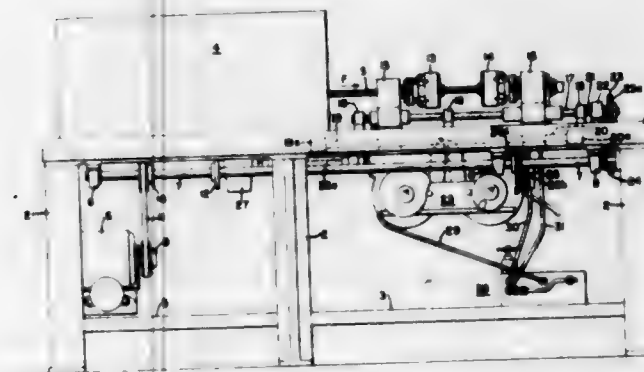


position thereof a smooth surface of revolution and in another relative position a surface having a pair of opposed discontinuities, said cam members being slidably supported for movement in a plane perpendicular to said axis of rotation, control cam means rotatable in synchronism with said head, and means operable by said control cam means to oppositely displace said cam members toward said other position in which said cam members engage said follower means to actuate said swaging means into swaging engagement with said support rods.

3,001,556

AUTOMATIC GRID MAKING MACHINE

Marvin C. Egan, Jr., and Junius B. Neale, Owensboro, Ky., assignors to General Electric Company, a corporation of New York
Filed Dec. 16, 1957, Ser. No. 702,945
10 Claims. (Cl. 140-71.5)



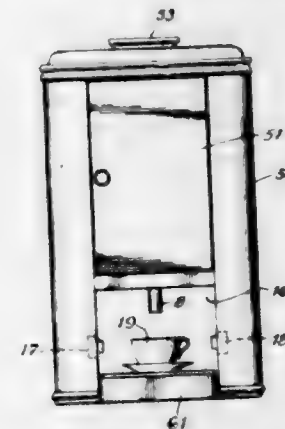
1. For use in a machine for making grid electrodes of the type comprising parallel support rods and a helix of wire wound thereabout; a continuous feeding device for grid electrodes of indefinite length comprising, in combination; a first and second head; means supporting said heads for combined continuous rotation about, and reciprocatory movement along, a common axis; driving means for continuously rotating said heads; said heads formed with openings for receiving a grid electrode along said axis; first and second pairs of clamping jaws for said first and said second heads, respectively, said jaws radially slidable in said heads perpendicular to said axis; actuating means for selectively sliding said clamping jaws into clamping engagement with said grid electrode; control means for said actuating means; and

cam-controlled means for producing selective reciprocatory movement of said heads conjointly with the rotation thereof and along said axis; said driving means driving said control means and said cam-controlled means in synchronism to effect progressive movement of said indefinite length of grid electrode along said common axis.

3,001,557

COFFEE DISPENSER RESPONSIVE TO PRESENCE OR ABSENCE OF A CUP

Alexander Kückens, Hamburg, Germany, assignor to Dagmar & Co., G.m.b.H., Hamburg, Germany
Filed Nov. 7, 1958, Ser. No. 772,501
Claims priority, application Germany Nov. 14, 1957
1 Claim. (Cl. 141-94)



In an automatic coffee machine, a hot water tank, a liquid coffee concentrate container adjacent to said tank, separate electromagnetic valve means connected with said hot water tank and said concentrate container to control the discharge therefrom, electronic timing means connected with said electromagnetic valve means, a cup stand, first light sensitive resistance means adjacent to said cup stand and adapted to be controlled according to the presence or absence of a cup on said cup stand, empty-indication means associated with said liquid coffee concentrate container, second light sensitive resistance means adjacent to said liquid coffee concentrate container and adapted to be controlled according to the emptiness or non-emptiness of said liquid coffee concentrate container, first electronic switch means connecting said electronic timing means with said first light sensitive resistance means, second electronic switch means connecting said electronic timing means with said second light sensitive resistance means, and stabilizing circuit means in said electronic timing means including a stabilizer tube, a condenser, and adjustable resistance means, whereby said first light sensitive resistance means causes opening of said electromagnetic valve means and energization of said stabilizing circuit means to charge said condenser when a cup is placed on said cup stand unless said second electronic switch means is in its empty-indication condition, said electronic timing means and said first and second electronic switch means each including a cold cathode electronic tube, and said electromagnetic valve means being instantly closed when said cold cathode electronic tube in the electronic timing means ignites following the charging of said condenser during a predetermined period of time as accurately controlled by the setting of said adjustable resistance means.

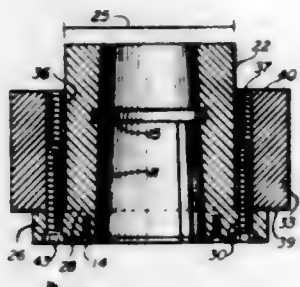
3,001,558

INTERCHANGEABLE WOOD CUTTER HEAD

William W. Showler, 2007 Thayer Circle, Greensboro, N.C.
Filed Oct. 25, 1960, Ser. No. 64,886
2 Claims. (Cl. 144-218)

2. A cutter head for wood cutting machines having various shaped arbors comprising in combination a hub

unit and a bit unit, said hub unit having a main cylindrical body with a vertical flange at one end and a central bore concentric therewith adapted to a particular shape arbor, fastening means for fixedly positioning said hub unit on said arbor, said bit unit having a cylinder-like body with a central bore concentric therewith adapted

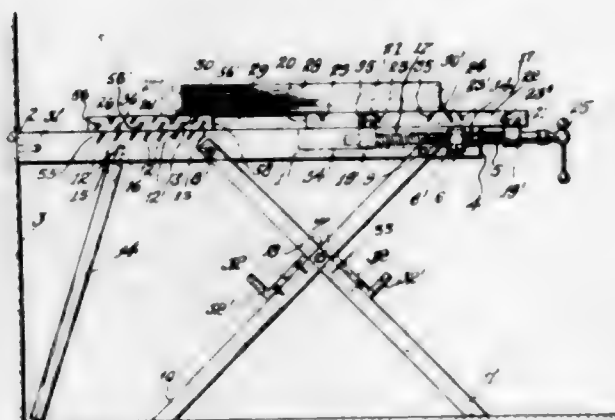


to snugly fit over the cylindrical body of said hub unit, said bit unit further including bits of given shape made integral with said cylinder-like body, additional fastening means wherein either end of said bit unit may be fixedly positioned against said flange to bring said bits in fixed vertical and concentric alignment with respect to the axis of said arbor.

3,001,559

PORTABLE COMBINATION CARPENTER'S WORK BENCH

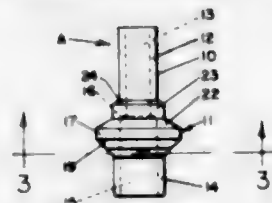
Alexander Szopo, 346 Sudan St., New Brunswick, N.J.
Filed June 29, 1960, Ser. No. 39,636
2 Claims. (Cl. 144—286)



1. A portable combination carpenter's work bench in which a workpiece may be mounted, comprising a narrow board base, legs attached to the sides thereof and disposed wider apart at their bottoms, parallel grooves cut laterally into the upper surface of the rear portion of said base and directed upwardly at a forward angle, a vise screw housed in the forward end of said base in a manner so as to move longitudinally with respect thereto, a narrow vise board mounted over the forward end of said base and connected to said vise screw in a manner so as to move longitudinally therewith, a rigid plate of size sufficient to slide into a groove and to project thereabove sufficiently to serve as a stop for a workpiece disposed between said plate and said board, and to hold said workpiece when said board is clamped against said workpiece by means of said vise screw, and a hollow rigid sleeve adapted to fit and slide loosely over said base, and having a top, a partial bottom, and sides, and having a downwardly-directed flap projecting rearwardly from the rear of the top at an angle such as to enable fitting of said flap into a groove when the forward end of said sleeve is raised to serve as a stop for a workpiece.

3,001,560 COUNTERSINKING TOOL

Harry L. Bergeron, St. Paul, Minn., assignor to Sifo Company, St. Paul, Minn., a corporation of Minnesota
Filed Aug. 11, 1958, Ser. No. 754,221
2 Claims. (Cl. 145—123)

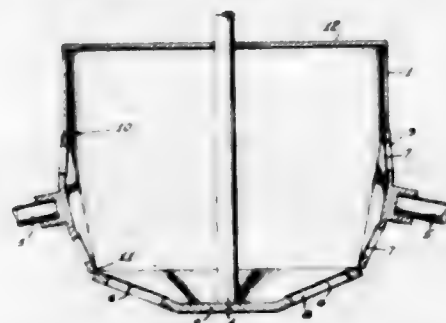


1. A countersinking tool including an elongated shank, a head on said shank having an axial aperture extending therethrough from the lower end thereof, a frusto-conical surface on the undersurface of said head having a series of angularly spaced apertures therethrough communicating with said axial aperture, and grooves in said frusto-conical surface between said angularly spaced apertures, said grooves gradually increasing in depth from the trailing edges of said angularly spaced apertures to the leading edge of the next angularly spaced aperture.

3,001,561

PEELING MACHINE

Albertus Van Raay, Uft, Netherlands, assignor to N.V. Machinefabriek "Fink," Uft, Netherlands, a Dutch liability company
Filed May 4, 1960, Ser. No. 26,803
Claims priority, application Netherlands May 6, 1959
8 Claims. (Cl. 146—43)



1. A machine for peeling tuberous crops, hard fruit and similar articles comprising a cylindrical vessel, a rotatable bottom closure for said vessel, said bottom closure having slots therethrough and cutters adjacent said slots, at least one opening in the side walls of said vessel, a rotatable disk fitted in each opening, each disk comprising at least one slot and cutter adjacent the slot, said disk having a plane of rotation substantially parallel to the side wall, and means to rotate said bottom closure and disks.

3,001,562

APPARATUS FOR PEELING FRUIT AND VEGETABLE ARTICLES

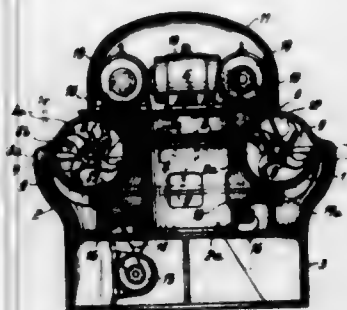
Earl R. Anderson, Quito and Pollard Road, Campbell, Calif.
Original application Nov. 13, 1953, Ser. No. 391,879.
Divided and this application Nov. 15, 1956, Ser. No. 622,403
2 Claims. (Cl. 146—43)



1. An annular peeling knife structure for a fruit or a vegetable article for removing a strip of peel from

the surface of the fruit or vegetable article and having an internal opening whereby the peel will pass inside said internal opening in the knife structure, the annular knife structure being constructed to contact the surface of the fruit or vegetable article throughout its annular extent, said structure including a peeling knife comprising a support providing an axis of rotation for said peeling knife, said peeling knife including an annular cutting edge carried by said support located generally at right angles to said axis of rotation, and also forming a part of an end structure of said knife for contact with the surface of the article with said axis disposed at right angles to said surface, whereby the peel will be removed as a strip as the knife is passed over the surface of the article in contact therewith and extend through said opening; and said end structure also including annular end surface means located adjacent said cutting edge and disposed thereabout for engaging and positioning the article with respect to said cutting edge, and said end structure including article receiving means providing a central open recessed construction with respect to said cutting edge with said edge defining said central recess and providing for entry of a portion of an article engaged with said end surface means inside of said cutting edge to present the peel of the article for removal of a strip thereof by said cutting edge.

3,001,563
MEAT CHOPPERS
Josef Karpf, Salvatorstr. 18, Würzburg, Germany
Filed Sept. 16, 1959, Ser. No. 840,320
5 Claims. (Cl. 146—67)



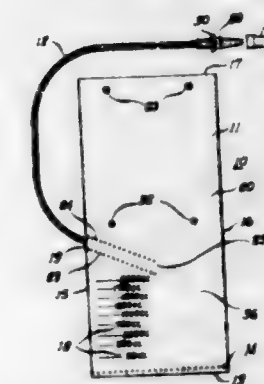
1. A meat chopper comprising a rotatable annular meat bowl substantially semi-circular in cross-section defining a relatively wide axial duct in the center region thereof; a frame structure including a radially outer portion having a diameter exceeding the radially outer diameter of said bowl and a radially inner portion projecting into said duct; means on said frame structure rotatably supporting said bowl; a superstructure arranged above said bowl and covering said bowl, said superstructure comprising a radially inner portion supported by said radially inner portion of said frame structure and said superstructure further comprising a plurality of angularly displaced arms each having a radially outer end supported by said radially outer portion of said frame structure; a plurality of relatively short shafts confined to the region within the outline of said superstructure each rotatably supported by one of said plurality of arms on the side thereof adjacent said bowl; a plurality of rotary meat-cutting knife structures each supported by one of said plurality of shafts; a plurality of motors equal in number to the number of said arms supported by said radially inner portion of said superstructure; a plurality of endless drive means each transmitting power from one of said plurality of motors to one of said plurality of shafts, and each of said plurality of arms defining an aperture for the passage of one of said plurality of drive means from one of said plurality of motors to one of said plurality of shafts.

3,001,564
QUICK-DETACHABLE MULTI-CONTAINER ASSEMBLY
David M. Hopkins, Hilltown Township, Pa.
(R.D. 1, Hatfield, Pa.)
Filed May 13, 1959, Ser. No. 812,862
4 Claims. (Cl. 150—5)



1. In a container for articles, a unitary envelope of material having elastic properties similar to those of soft rubber and defining a substantially fully closed interior volume comprising a cross-axially extending bottom wall having a raised central area and a marginal area with a radially inwardly facing recess extending about the inner periphery thereof, a cross-axially extending top wall having a through slit extending diametrically thereacross, an axially extending outer peripheral wall interconnecting said bottom and top walls, and means protruding radially outwardly from said container at the top thereof, said radially inwardly facing recess and radially outwardly protruding means being disposed approximately the same radial distance from the principal axis of said container, the bottom of said container being thereby adapted for being snapped over the top of a second identical container and thereby detachably seated thereon with the radially outwardly protruding means of the second identical container removably nested in said radially inwardly facing recess.

3,001,565
DRAINAGE BAG
Janet L. Beach, Pittsburgh, Pa., assignor to Hospital Supply and Development Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1959, Ser. No. 842,298
6 Claims. (Cl. 150—1)



1. A drainage bag comprising, in combination, an open-topped transparent flexible plastic tube bag having a heat-sealed bottom closure seam, quantity graduation markings on said bag, a drainage tube opening at one side of said bag above said markings, a pair of heat-sealed drainage channel parallel seams extending from the top and bottom of said opening respectively in a downwardly sloping manner toward the opposite side of said bag and

defining a drainage channel, the inner end of said channel terminating at least a quarter of the width of said bag from said opposite side, a transparent plastic drainage tube having its discharge end inserted in said channel with said discharge end positioned adjacent the end of said channel to drain into the bottom of said bag, said drainage tube being heat-sealable in said channel, a pair of snap fastener parts joining the back and front of said bag above said channel, said parts being in horizontal spaced alignment, a pair of snap fastener mating parts for said first-named parts joining the front and back of said bag a spaced distance above said first-named parts, said mating parts also being in horizontal spaced alignment, the vertical distance between said first-named parts and said mating parts being sufficient to go around a rail or other member to support said bag when said mating parts are snap fastened to said first-named parts.

3,001,566

ARTICLE CARRYING BAGS

Robert J. Lipitz, Ladue, Mo., assignor to Towa Trading Co., Ltd., Tokyo, Japan, a corporation of Japan
Original application Aug. 10, 1956, Ser. No. 603,439, now Patent No. 2,960,137, dated Nov. 15, 1960. Divided and this application July 24, 1959, Ser. No. 829,367
5 Claims. (Cl. 150-12)



3. An article carrying bag comprising a bottom wall and opposed side walls, a first pair of spaced rectangular securing rings on said bottom wall, a second pair of spaced rectangular securing rings, one on each of said side walls, a carrying strap mounted on said bag and having a pair of opposite end portions each of which is provided with a cross-bar that extends crosswise of the strap and projects outwardly therefrom on each end, said cross-bars being substantially longer than the length of the rectangular securing rings and being insertable through said rings by twisting the strap and threading the bar through such ring, each bar being thereby optionally engageable with either of said securing rings on said bottom wall or one of said securing rings on said side walls, whereby the useful length of the carrying strap may be varied.

3,001,567

SELF-LOCKING AND SELF-SEALING PLASTIC FASTENING DEVICES

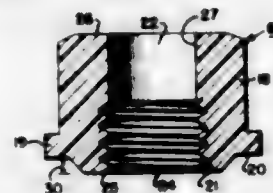
John K. Brill, 46 Hopkins Ave., Jamestown, N.Y.; Adelaide E. Brill, administratrix of said John K. Brill, deceased

Filed Oct. 6, 1955, Ser. No. 538,986

2 Claims. (Cl. 151-7)

2. A one-piece wrench receiving type of nut having a main body portion, said main body portion being provided with a bore for reception, with intimate contact,

the thread of a screw threaded shank, said main body portion having a planar work engaging face normal to the axis of the bore, and an annular frusto-conical protuberance extending from said body portion at said face,



concentric with said bore, the height of the protuberance equalling substantially

$$\text{Thread pitch} = \frac{1}{\text{No. of threads per inch}}$$

the minor diameter of the protuberance equalling substantially major diameter of shank at threaded portion, plus .250 pitch and, the major diameter of the protuberance equalling substantially major diameter of shank at threaded portion, plus 2.250 pitch, said nut consisting solely of synthetic linear polyamide and provided with at least opposite, parallel wrench receiving faces to facilitate turning the nut circumferentially with respect to the shank.

3,001,568

TIRE FOR VEHICLE WHEELS

Lauri Leevi Ensio Suominen, Nakkila, Finland
Filed Jan. 28, 1959, Ser. No. 789,637

Claims priority, application Sweden Jan. 30, 1958
15 Claims. (Cl. 152-209)



1. A tire for wheels of vehicles having an inner carcass portion and an outer road engaging material having a treated pattern thereon, said tread pattern comprising: first and second alternating adjacent tread portions, said first portions having a higher elevation than said second portion, said first and second portions defining groove-like intervening spaces therebetween, said spaces having an equal depth of penetration, said first portion being provided with further groove-like intervening spaces having a depth of a penetration equal to the depth of penetration of said intervening spaces between the first and second portions, said spaces in said first portion forming a plurality of relatively narrow flexible members so that with said tire loaded, said flexible members are enabled to be compressed to a higher degree than said second portion whereby said portions are compressed to equal elevations, thereby providing an increased gripping action of the tread pattern.

3,001,569

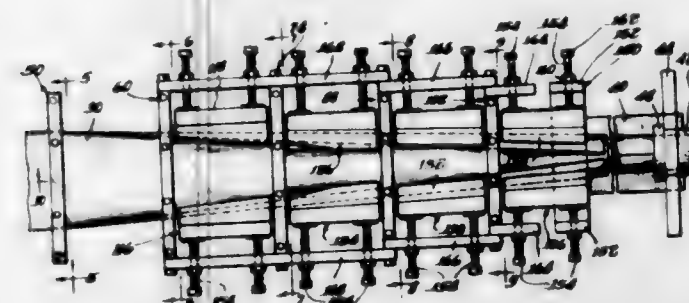
TUBE FORMING TOOL

Richard A. Gradt, Elgin, Ill., assignor to Flexonics Corporation, Maywood, Ill., a corporation of Illinois
Filed Apr. 29, 1958, Ser. No. 731,826

11 Claims. (Cl. 153-32)

1. A die assembly for forming a strip of flat sheet metal stock into a tube upon movement of the stock longitudinally through the assembly, comprising, die means defining a generally straight elongated tube forming throat having an inlet end shaped to receive flat sheet metal stock and having an outlet end shaped to discharge a generally cylindrical tube, said throat defining means comprising a series of principal forming stages and a

series of auxiliary forming stages disposed in alternate relation to each other, said throat as defined by said principal and auxiliary forming stages having a curvature in transverse section which progressively increases from said inlet end to said outlet end to shape into a tube sheet metal stock moved longitudinally through the throat, each of said principal forming stages including



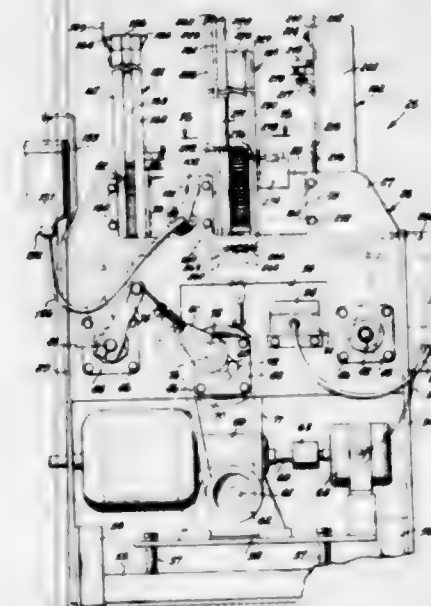
relatively hard surface forming means defining relatively hard male and female forming surfaces spaced from each other to define a short longitudinal section of said throat, and each auxiliary forming stage including relatively soft surface forming means defining a progressively tapered longitudinal section of the throat much longer than said short throat sections.

3,001,570

GLUING MACHINE

Floyd G. Paxton, P.O. Box 2698, Yakima, Wash.
Filed July 2, 1959, Ser. No. 824,677

17 Claims. (Cl. 156-378)



1. In a machine for gluing together an element A of sheet material and an element B of sheet material to produce an assembled unit, the combination of: a hopper for holding a stack of elements A; a hopper for holding a stack of elements B; means for simultaneously feeding a pair of elements A and B from said hoppers into a fixed overlapping relation; means for applying glue to one of said elements to lie between said elements when thus related; means to press said elements together as so related to glue said elements together as an assembled unit; hopper for holding a stack of said units; means for delivering said pairs of elements related as aforesaid to said unit hopper to form, from one direction, a stack of units therein; and means for applying pressure in the opposite direction to said stack, as it is being formed in said hopper to compress the elements in each unit together to cause said elements in each unit to be glued together as said glue dries.

3,001,571

SYNTHETIC MICA FLAKES AND STRUCTURES

Robert A. Hatch, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Aug. 5, 1957, Ser. No. 676,426

22 Claims. (Cl. 154-2.6)

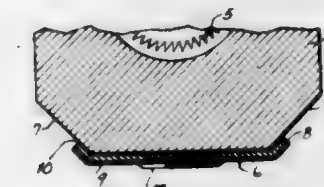
1. A method of forming extremely thin discrete flexible platelets of synthetic fluorine mica comprising exposing water-swelling synthetic tetrasilicic fluorine mica to sufficient water to pass by absorption into the crystal-line structure of said mica along planes of potential basal cleavage thereof, to thereby hydrate said mica with sufficient water absorbed along said planes of potential basal cleavage to effect swelling of said mica, and then heating said hydrated mica to a temperature in the range of about 300 to 550° C., whereby said water absorbed along the cleavage planes of said mica is converted to steam and causes exfoliation of said synthetic mica along said basal cleavage planes.

3,001,572

HEAT SEALING DEVICES

William E. Young, Ramsey, N.J., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
Filed July 24, 1956, Ser. No. 599,710

6 Claims. (Cl. 156-386)



1. A heat sealable material sealing device including a tool providing a surface adapted to press against said material, means for heating said surface, a layer, comprising a metal foil, arranged with one surface thereof facing said tool's surface and the other surface of said layer facing outwardly so as to press against said material, means for removably attaching said layer to said surface, and a coating on said layer's other surface, said coating being less adherent with respect to contamination than said tool's surface and being replaceable by removal of said layer and replacement thereof by a corresponding but unused layer.

ERRATA

For Class 156-66 see:
Patent No. 3,001,904

For Class 156-93 see:
Patent No. 3,001,905

For Class 156-201 see:
Patent No. 3,001,906

For Class 156-222 see:
Patent No. 3,001,901

For Class 156-361 see:
Patent No. 3,001,310

For Class 156-378 see:
Patent No. 3,001,570

For Class 156-386 see:
Patent No. 3,001,572

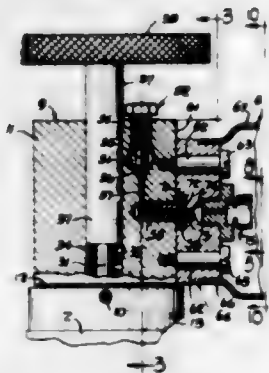
For Class 156-444 see:
Patent No. 3,001,660

3,001,573

EXTENSION TUBE TORCH

Robert H. Hunter, Gates Mills, Ohio (% Hunter Manufacturing Co., 30525 Aurora Road, Solon, Ohio), Abe J. Hanje, Northfield, and Harris W. Smith, Bainbridge, Ohio; said Hanje and said Smith assignors to said Hunter

Filed Apr. 22, 1957, Ser. No. 654,322
24 Claims. (Cl. 158-33)



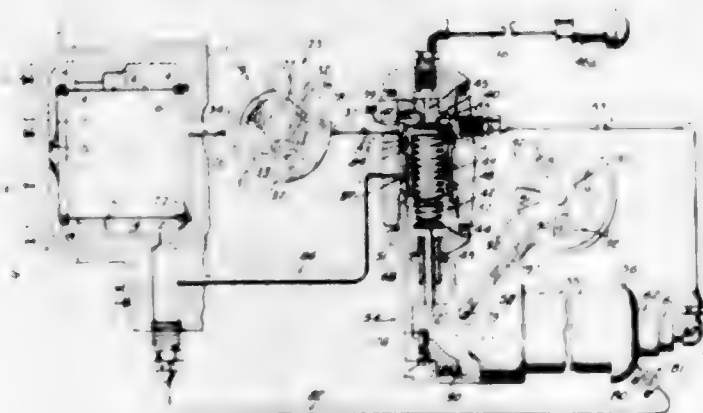
15. In a torch the combination comprising a mixing block formed with a mixing chamber and having means defining a fluid passage in communication with the chamber; means carried by the block controlling the flow of fluid through the chamber; the mixing block having an external, substantially planar coupling face formed with and surrounding an outlet, the fluid passage extending between the chamber and the face and being continuous with the outlet; a combustion tube assembly comprising a mounting base provided with a substantially planar coupling face mating with the coupling face on the mixing block in confronting relation, a combustion tube secured to the base and providing a combustion chamber, nozzle means having a fuel orifice, the nozzle means being mounted on the base for projection of fuel from said orifice into the combustion chamber along a predetermined axis; said assembly including means defining a passage in the base having an inlet in and surrounded by the coupling face of the base; means coupling the combustion tube assembly to the block for facile removal and replacement, said coupling means being adapted to effect said coupling with said inlet automatically registering with the outlet when the assembly is coupled to the block; and said base passage being adapted to receive fuel from said outlet and conduct the same under pressure to the nozzle means for said projection.

3,001,574

OIL BURNER FUEL SUPPLY SYSTEM

Frederick L. Runniger, Parma, Ohio, assignor to Iron Fireman Manufacturing Company, a corporation of Oregon

Filed Mar. 27, 1959, Ser. No. 802,534
5 Claims. (Cl. 158-36.3)



1. A pressure atomizing type of oil burner fuel supply system including an oil pump enclosure including

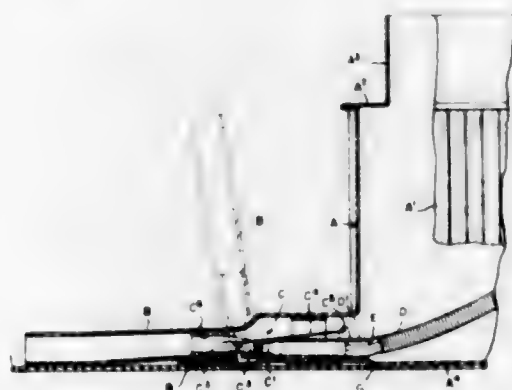
means forming an oil inlet space, means forming an oil outlet space, pump means for withdrawing oil from said oil inlet space and discharging said oil under pressure to said outlet space, means forming a nozzle oil port leading from said oil outlet space to the outside of said structure, means forming a return oil port connecting said oil outlet space with said oil inlet space, a valve piston slidably sealed within said oil outlet space for movement in one direction serially to close said return oil port and said nozzle oil port and movement in the other direction serially to open said nozzle oil port and said return oil port and said piston being biased by the oil under pressure in said oil outlet space towards its open position of both said ports, adjustable means resiliently biasing said valve piston against the pressure of oil in said oil outlet space, means limiting the adjustment of said adjustable means between selected high and low values of the oil pressure in said oil outlet space, said adjustable means including a hydraulic cylinder with a free piston slidably sealed therein, resilient means biasing said free piston towards one end of said cylinder, a restricted oil passageway connecting said one end of said cylinder with said oil outlet space, a free piston rod shorter than said cylinder extending from the other end of said cylinder to be moved outwardly thereof by said free piston after said free piston has been moved inwardly of said cylinder for a time preset by the flow of oil through said restricted passageway from said oil outlet space, and means adapting said free piston rod to increase the bias of said adjustable means on said valve piston as said free piston rod moves outwardly of said cylinder.

3,001,575

AUXILIARY RESERVOIR FOR FUEL TANKS

John G. Warhol, 14041 Vernon, Oak Park, Mich.

Filed Dec. 9, 1957, Ser. No. 701,500
9 Claims. (Cl. 158-46.5)



8. The combination with a main liquid fuel tank of an auxiliary fuel reservoir therewithin resting on the bottom thereof, a reservoir discharge tube connected at one end to a low portion of said reservoir, the other end of said tube being open and in a lower position thereof lying adjacent to said bottom of said main fuel tank whereby said reservoir is adapted to be filled with the filling of said main tank, and mechanism operably associated with said tube for selectively raising and lowering the open end of said tube.

3,001,576

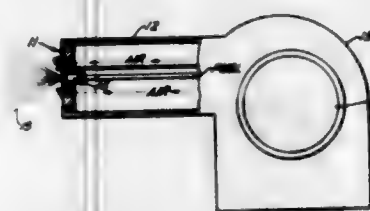
AIR DIRECTING APPARATUS

Albert Biber, Penn Hills Township, Allegheny County, and Bruce R. Walsh, Wilkinsburg, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Nov. 17, 1958, Ser. No. 774,418
9 Claims. (Cl. 158-76)

6. In combination with a fuel burner having an air blast tube and burner nozzle which delivers a fuel spray,

an air directing device comprising a plate which is adapted for mounting over the discharge end of said air blast tube, said plate having a relatively large circular orifice located centrally of said plate in axial alignment with said nozzle, said plate having an elongated horizontally extending slot-



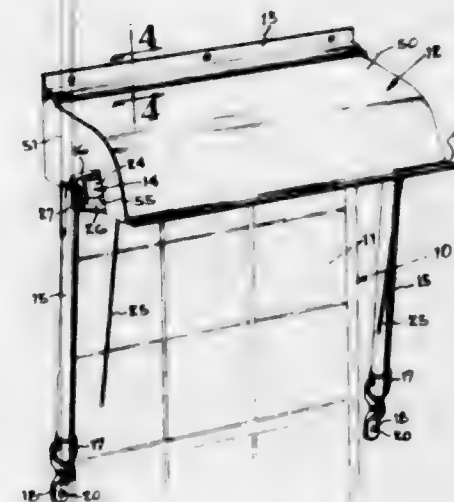
like opening located above said central orifice and means within said plate including a plurality of orifices surrounding said central orifice having their axes disposed at an angle to the axis of said central orifice for delivering a plurality of forwardly converging streams of air which impinge upon the said fuel spray.

3,001,577

AWNING

James A. Anderson, Muskegon, Mich., assignor to Brennan-Hartshorn, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Oct. 13, 1958, Ser. No. 766,795
11 Claims. (Cl. 160-29)



1. An awning mounted above a window frame comprising, a pair of spaced parallel arms, means at one end of said arms for pivoting said arms to a window frame, a roller rotatably mounted to the other ends of said arms, a canopy projecting outwardly from said window frame for covering said roller when said awning is in raised position, said canopy having a pair of spaced side walls and an outwardly and downwardly projecting wall fixed between said side walls, means for hinging said canopy to said window frame above the location of said roller when pivoted to raised position, an awning sheet connected at one end to said roller and at the other end to said hinge, a torsion spring connected between said roller and said arms to wind said awning on said roller, the forward edge of said canopy lying in the path of said roller when said roller is swung toward and away from said raised position, said canopy being pivotable upwardly on its hinge upon engagement with said roller to permit said roller to pass to and from raised position, and means on said arms engageable with said canopy side walls to hold said canopy in a downward position over said roller when said roller is in raised position.

3,001,578

DRAPERY SPACER AND PLEAT FORM

Leslie B. Ratliff, St. Louis, Mo.

(Rte. 2, Box 90, Paragould, Ark.)
Filed Sept. 24, 1959, Ser. No. 842,078
6 Claims. (Cl. 160-126)



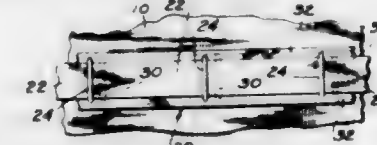
5. In a drapery device, a drapery section, a hem carried by the lower end of the drapery section and being open at one vertical edge of the drapery section, said hem being mitered at its open end, a substantially rigid plate-like element insertable within the open end of said hem, and a permanent magnet part carried by said plate-like element and constituting a clip and clampingly engaging said hem and being exposed between said vertical edge and the mitered edge of said hem.

3,001,579

SWAGGING TAPE FOR DRAPERY CONSTRUCTION

Ruth M. Van Doren, 440 S. Kenilworth, Elmhurst, Ill.

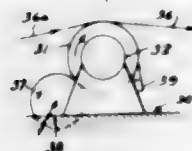
Filed Feb. 24, 1959, Ser. No. 795,127
1 Claim. (Cl. 160-344)



A swagging tape comprising an elongated fabric tape body having longitudinal thread members and transverse thread members interwoven substantially throughout the area thereof, said longitudinal thread members being uniformly disposed in side-by-side position throughout said tape body, said tape body having longitudinally extending opposite edge portions with a multiplicity of said longitudinal thread members disposed intermediate said opposite edge portions, certain ones of said transverse thread members being disposed entirely on one side only of said tape body between said opposite edge portions thereof and freely bridging on that side only of said tape body all of said multiplicity of said longitudinal thread members that are intermediate said edge portions whereby said certain ones of said transverse thread members form loops disposed on said one side only of said tape body and substantially transversely thereof, and a fabric draw tape threaded between certain of said loops and said tape body and overlying on said one side only of said tape body substantially all of said multiplicity of said longitudinal thread members that are intermediate said edge portions of said tape body.

3,001,580

WIRE DRIVE ROLL MOUNTING AND METHOD
Edward D. Beachler, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed May 19, 1958, Ser. No. 736,371
4 Claims. (Cl. 162—348)

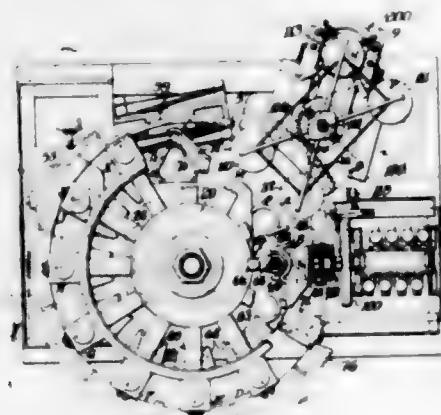


1. In a paper machine, a drive roll, a forming wire passing over the top of the roll, drive means rotating said drive roll to drive the wire thereover, the weight load on the drive roll and the driving thereof against said wire tending to deflect the roll in a direction downwardly and toward the oncoming wire, and a back-up roll engaging the underside of said drive roll to counteract its tendency to deflect.

3,001,581

PULP MOLDING APPARATUS

Walter H. Randall and Richard L. Emery, Waterville, Maine, assignors to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Original application Oct. 15, 1951, Ser. No. 251,411, now Patent No. 2,752,830, dated July 3, 1956. Divided and this application Oct. 7, 1955, Ser. No. 539,096
16 Claims. (Cl. 162—377)

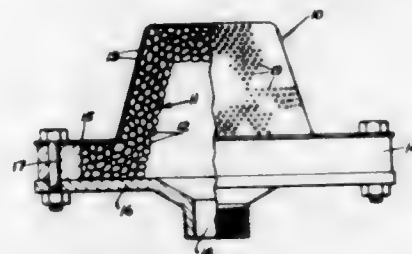


1. A transfer mechanism for supplying molded pulp articles one at a time to a handling device, said mechanism including a plurality of holders including means to receive and discharge articles therefrom and connected together in spaced relation in a plane to form a single unit, impelling elements associated with said unit to rotate the unit about an axis perpendicular to said plane to move the individual holders through a path including a loading zone, an unloading zone, a feed assembly at said loading zone for holding a nested group of articles to be supplied, an unloading receiver at the unloading position, and a transfer receiver at the transfer position, said impelling elements being also associated with said unit to intermittently stop the rotation of the holder unit with a holder positioned at each of the loading zones, the transfer zone and the unloading zone, and to reciprocate the unit in a direction that carries the holder positioned at the loading zone toward and away from the nested group to pick up the first article of the group and return to the rotation position.

3,001,582

MOLDING FORM

Harold V. Kindseth and John A. Johnson, Minneapolis, and Thomas B. Ludlow, St. Paul, Minn., assignors to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Feb. 6, 1958, Ser. No. 713,762
9 Claims. (Cl. 162—411)



1. A mold for forming fibrous pulp articles comprising a rigid perforated thermoplastic and thermoformable resinous sheet formed to the shape of an article to be molded, supporting means for said sheet and means communicating through said supporting means for applying suction to said mold.

3,001,583

PROCESS OF DRILLING AND TREATING WELLS
Michael J. Nevins and Earl E. Huebottter, Houston, Tex., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 26, 1957, Ser. No. 698,932
10 Claims. (Cl. 166—30)

4. A process of treating a well having an exposed invadable stratum therein, comprising the steps of introducing into said well opposite said invadable stratum a carrier fluid carrying in suspension therein a fragmented substance in solid, undissolved form chosen from the group of substances consisting of polyethylene, polypropylene, and polystyrene, and having a particle size larger than the openings of said invadable stratum and further having the property of possessing solid form insoluble in a petroleum hydrocarbon mixture consisting of two parts Bunker No. 6 fuel oil and one part diesel No. 2 oil below a characteristic dispersing temperature but dispersible in said mixture above said characteristic dispersing temperature, said introduction of said carrier fluid being at a temperature less than said characteristic dispersing temperature, permitting said carrier fluid with its said fragmented substance to remain opposite said exposed invadable stratum for a period of time sufficient to permit the sealing of said stratum by said fragmented substance; thereafter contacting the said fragmented substance with a hydrocarbon fluid; and thereafter applying heat to said exposed invadable stratum so as to raise its temperature above said characteristic dispersing temperature.

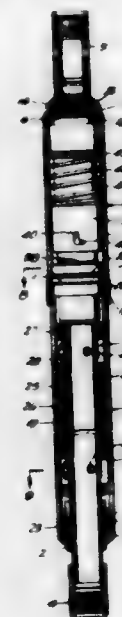
3,001,584

APPARATUS FOR TREATING WELLS

Lyle B. Scott, South Gate, Calif., assignor to BJ Service, Inc., Long Beach, Calif., a corporation of Delaware
Filed Apr. 11, 1957, Ser. No. 652,286
13 Claims. (Cl. 166—63)

1. Fluid injection apparatus for a well, comprising a tube, means defining with said tube a container for a material capable of generating gas upon ignition, said container having an opening to permit the discharge of gas into the well, firing means for said gas-generating material carried by said tube and including an actuator sleeve disposed in said tube for axial movements, a seat on said sleeve, and a valve engageable with said seat to prevent the flow of fluid through said sleeve for causing said

sleeve to be moved axially by said fluid, said sleeve having means for by-passing fluid around said valve upon



limited axial movement of the sleeve to actuate said firing means.

3,001,585

DEEP WELL CEMENTING APPARATUS

Levi F. Shiplet, Fort Worth, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 17, 1957, Ser. No. 703,371
2 Claims. (Cl. 166—142)

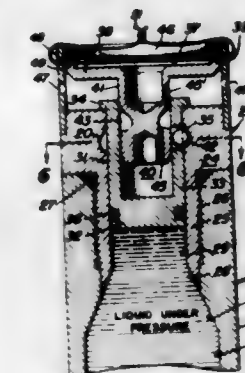


1. Simplified deep well casing cementing apparatus for cementing said casing in a well, but omitting the cement at a predetermined zone along the length of said well, comprising a plurality of openings through said casing above said zone, a plurality of openings through said casing below said zone, said casing being impermeforate throughout the length of said zone, annular sealing means between the walls of said well and said casing and located axially between said zone and said openings thereabove, second annular sealing means between the walls of said well and said casing located axially between said zone and said openings therebelow, a single drillable material tube located concentrically within said casing and extending from above the uppermost of said openings to below the lowermost of said openings, means for connecting the top of said tube to the inner walls of said casing to direct cement slurry through said tube and a float valve located at the bottom of said tube for preventing reverse flow of cement upward through said tube.

3,001,586

BLAST ACTUATED NOZZLE

Adlai F. Kyle, Box 79, Dahlgren, Va.
Filed Feb. 24, 1960, Ser. No. 10,816
11 Claims. (Cl. 169—2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

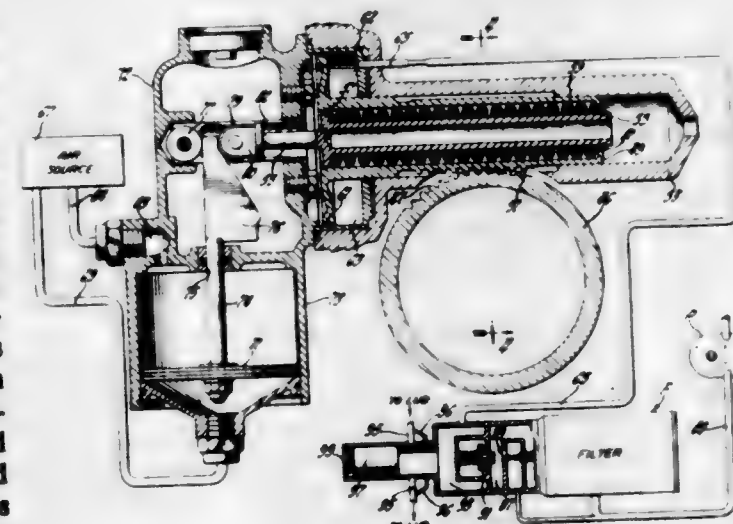


1. A fluid discharge device comprising a tubular casing having fluid under pressure contained therein, a discharge nozzle on one end of the casing, a sealing plug for said nozzle and releasably locked thereto, means including a plurality of locking elements for releasably locking said sealing plug to the nozzle, a shock wave responsive device in sealing engagement with said nozzle and movably mounted in said plug in engagement with said locking elements for maintaining said sealing plug locked to said nozzle, and a frangible safety wire carried by said nozzle in engagement with the shock wave responsive device for preventing accidental displacement of the device and release of said sealing plug, said responsive device being movable out of engagement with said locking elements to unlock the sealing plug from the nozzle as the responsive device is actuated by a shock wave and said frangible wire is severed in response to movement thereof, whereupon said sealing plug and responsive device is forcibly ejected from the nozzle by said fluid under pressure to allow the discharge of the fluid from the nozzle.

3,001,587

PROPELLER BRAKE

Robert G. Larkin, Plainfield, and Victor W. Peterson and Herbert H. Schnepel, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Apr. 19, 1957, Ser. No. 653,885. Divided and this application Aug. 26, 1958, Ser. No. 757,377
4 Claims. (Cl. 170—135.75)



2. In a propeller drive, a propeller, an engine, gearing driven by said engine connected to drive said propeller, brake means for said propeller including means for brak-

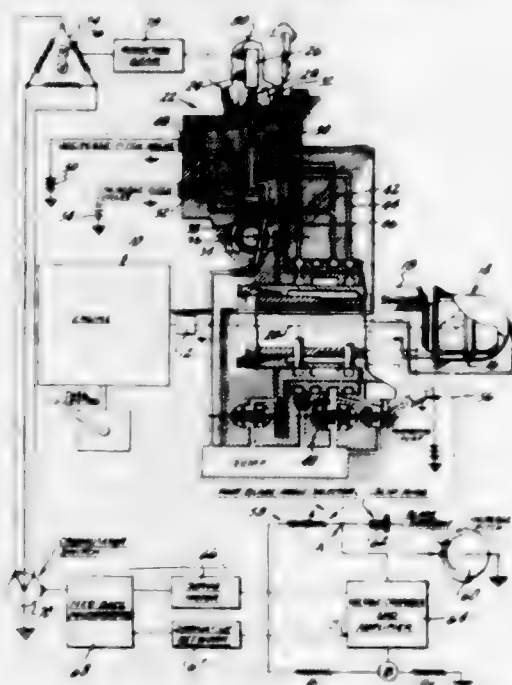
ing said gearing, means for actuating said brake means, manually controlled means for controlling said brake actuating means for releasing said brake means and for applying said brake means independently of rotation of said gearing, and means connected to said brake actuating means responsive to rotation of said propeller above a predetermined speed for rendering said manually controlled means ineffective to control said brake actuating means to actuate said brake means and ensuring said brake release.

3,001,583

PROPELLER BLADE ANGLE CONTROL

Richard L. Fischer, Suffield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed July 27, 1959, Ser. No. 829,709
5 Claims. (Cl. 170-160.14)



1. A variable blade pitch propeller, pitch change means to vary propeller blade pitch through a first pitch range which includes the full negative pitch range and the first few degrees of the positive pitch range and a second pitch range which includes the remainder of said positive pitch range, a governor including speed selecting means and propeller speed error sensing means operatively connected to said pitch change means to vary blade pitch and maintain propeller speed constant throughout said second pitch range, and pilot operated pitch selecting means including pitch error sensing means operatively connected to said governor and causing said governor to become pitch error sensitive throughout said first range.

3,001,589

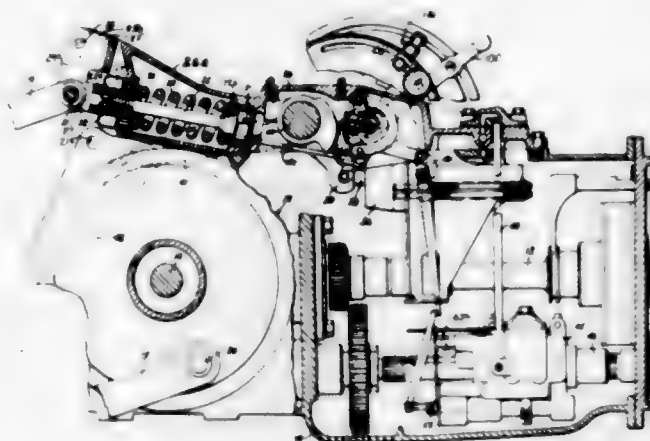
CONTROL SPRING ASSEMBLY FOR TRACTOR HYDRAULIC SYSTEMS

Ernest V. Bunting, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Original application Aug. 20, 1954, Ser. No. 451,276.
Divided and this application June 4, 1958, Ser. No. 739,910

4 Claims. (Cl. 172-7)

1. In a tractor having a power lift mechanism for operating a hitch link, the combination of a control plunger supported on the tractor for axial movement, spring means interposed between a part of said tractor and said plunger yieldably resisting movement of the plunger, means for controlling the operation of said power lift mechanism, a linkage interposed between said controlling means and said plunger for actuating the controlling means in response to changes in stress applied to said plunger, and means for applying stress to said plunger in-

cluding a rocker supported in depending relation from a pivot on the tractor above one end of said plunger, a hitch link, and means for pivotally connecting said last



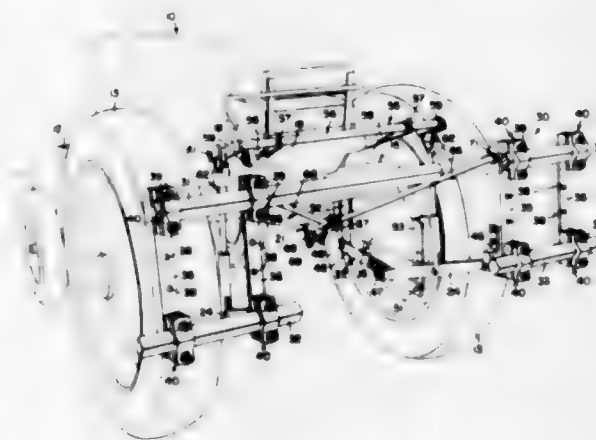
mentioned hitch link, a depending portion of said rocker, and said plunger, all at a common pivot point, to thereby minimize variations, incident to vertical swing of such link, in stress applied by the latter to said plunger.

3,001,590

UNIT CARRIERS

William S. Tsuchiya, Los Angeles, Calif., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed Jan. 13, 1958, Ser. No. 708,444
2 Claims. (Cl. 172-451)



1. A tool carrier for a tractor of the three-point hitch type having an upper generally centrally disposed thrust-receiving means, a pair of lower draft-receiving means, and a power-actuated lifting rockshaft having a pair of arms fixed to the ends thereof, said lower draft-receiving means being spaced apart farther than the length of said lifting rockshaft whereby said lower draft-receiving means lie laterally outwardly of the ends of said rockshaft, said carrier comprising a rigid transverse frame extending laterally outwardly beyond said lower draft-receiving means and including generally transversely extending rigid bars, one disposed above the other and rigidly interconnected, a pair of draft links swingably connected at their rear ends with certain of said rigid bars and adapted to be connected at their forward ends with the tractor through said lower draft-receiving means, a rigid generally Y-shaped yoke arranged in rearwardly diverging relation and swingably connected at its laterally spaced apart portions with said upper transverse bar, the forward end of said Y-shaped yoke being connected with the tractor at said upper centrally disposed thrust-receiving means and a transverse auxiliary lift assembly releasably attachable to the tractor rockshaft and including a transverse shaft, inner arm sections fixed to said latter shaft and attachable, respectively, to said rockshaft arms, said

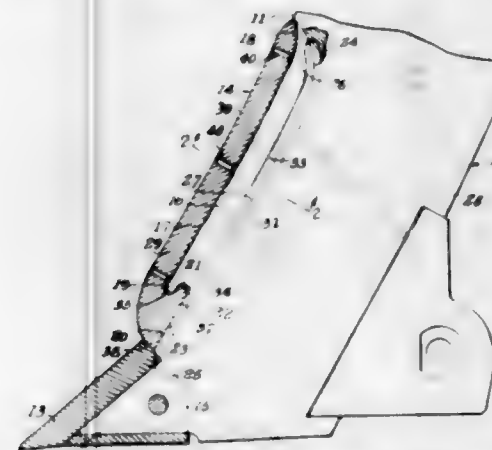
transverse shaft extending laterally beyond said inner arm sections, and outer lift arm sections fixed to said transverse shaft and connectible with said draft links respectively.

3,001,591

RIPPER SHANK WITH WEAR PLATE

Forrest A. Johnson, Buena Park, Calif., assignor to Double J. Breaker Co., Bell, Calif., a corporation of California

Filed Oct. 6, 1958, Ser. No. 765,585
7 Claims. (Cl. 172-700)



7. A ripper structure comprising, in combination, a ripper blade including a portion having a forwardly directed edge, a wear plate disposed on said edge to cover the same, complementary and interengaged means on both the ends of the wear plate and on the opposite ends of said blade edge to hold the wear plate against displacement from the blade edge in a direction normal to the longitudinal extent of said blade edge and also against longitudinal displacement in a direction away from the lower end of the ripper blade, the ripper blade having another portion below the lower end of said forwardly directed edge of said blade, and a ripper tooth removably carried by said another portion and in contact with the lower end of the wear plate to hold said wear plate against longitudinal displacement in a direction toward the lower end of the ripper blade.

3,001,592

WELL DRILLING AND SERVICING BARGE INCLUDING BRIDGE AND RIG STRUCTURE AND METHODS

Joseph E. Lucas, Caracas, Venezuela, assignor to De Long Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 3, 1954, Ser. No. 454,098
19 Claims. (Cl. 175-8)



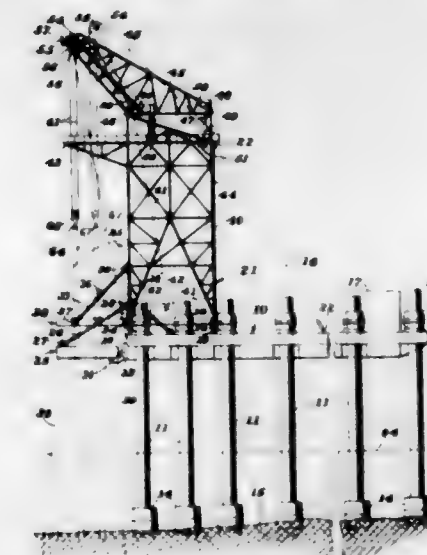
1. A method of erecting an over-water platform comprising: raising a barge above the water at a well site;

sinking at least one platform caisson while guiding the same from said barge; positioning a platform upon said caisson; lowering said barge back onto the water; moving said barge a safe working distance away from said platform; again raising said barge above the water; and extending a bridge over the water from and outboard of said barge to a position wherein one end thereof overlies said platform and the center of gravity of said bridge is inboard of said barge.

3,001,593

OFF-SHORE DRILLING BARGE

George E. Suderow, Staten Island, N.Y., assignor to De Long Corporation, a corporation of Delaware
Filed Nov. 17, 1953, Ser. No. 392,592
7 Claims. (Cl. 175-9)



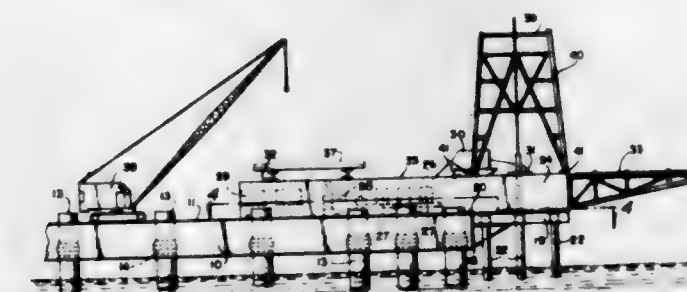
1. A floating barge for subaqueous operations including a derrick mounted on the barge, said barge having spaced supporting brackets extending outwardly from one side thereof, a producing platform spaced laterally from said barge and arranged releasably to rest on said supporting brackets, said producing platform having rows of horizontally spaced drill openings, a table pivotally mounted on the derrick and movable to a horizontal position above said producing platform, said table having a spaced pair of vertical drill openings arranged selectively to register with a pair of drill openings in the producing platform when the table is in its horizontal position, said registering drill openings arranged to receive a drilling tool, means for rotating said drilling tool, said producing platform having spaced holes for the reception of marine-bottom-engageable caissons to support said producing platform independently of said barge.

3,001,594

OFF-SHORE DRILL RIG

George E. Suderow, New York, N.Y., assignor to De Long Corporation, New York, N.Y., a corporation of Delaware

Filed May 4, 1954, Ser. No. 427,554
16 Claims. (Cl. 175-9)



8. The method of drilling a marine well, the steps comprising: floating to the drilling site a drilling barge

carrying all necessary equipment to drill a well; at least partially supporting the barge on the marine bottom with the working deck of the barge above water; supporting a producing platform outboard of and adjacent the barge; moving from an inoperative position on the barge to an operative position over the platform a drilling table, a rotary, and a derrick while supporting the table, rotary, and derrick on the barge; drilling a well downwardly through the platform with the table, rotary, and derrick moving the table, rotary, and derrick back to their inoperative position; refloating the barge; and floating the barge away from the site leaving the platform in situ.

3,001,595
MULTI-PURPOSE DERRICK BARGE AND METHOD OF USE IN OIL WELL DRILLING AND SERVICING

Joseph E. Lucas, Caracas, Venezuela, assignor to De Long Corporation, New York, N.Y., a corporation of Delaware

Filed May 26, 1954, Ser. No. 432,543
24 Claims. (Cl. 175-9)



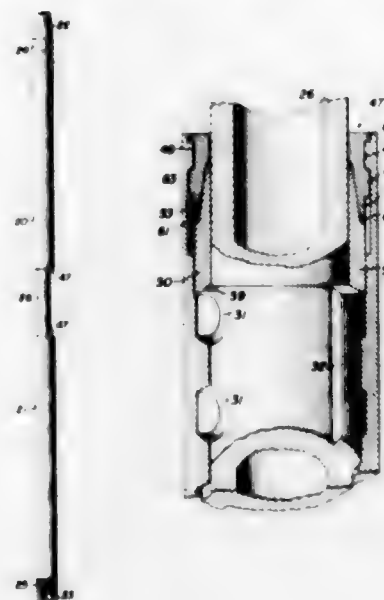
11. The method of drilling a marine well, the steps comprising: floating a drilling barge having a working deck to the drilling site; at least partially supporting the barge on the marine bottom with the deck above water; temporarily and releasably supporting a producing platform from, and outboard of, the barge; drilling a well in the marine bottom by operating downwardly through the platform; installing a plurality of marine-bottom-engaged supporting legs for the platform and supporting the latter thereon; releasing the support of the platform from the barge; refloating the barge; and floating the barge away from the site.

3,001,596
EXTENSIBLE DRILL COLLAR
Julius S. Beck, Long Beach, Calif., assignor, by mesne assignments, to J. Ed Hill, Inc., Houston, Tex., a corporation of Texas

Filed Feb. 20, 1958, Ser. No. 716,404
4 Claims. (Cl. 175-300)

3. In a drill string collar, the combination of a tubular body having a first end adapted for connection to a drill string section and an open second end, a tubular mandrel having one end portion thereof rotatably and slidably positioned in said body and projecting outwardly therefrom at said second end of the latter for connection to another drill string section, a set of longitudinally spaced body lugs provided intermediate the ends of said body on its inside surface, a longitudinal rib provided on the inside surface of the body at one side of and contiguous with said set of body lugs, a set of longitudinally spaced

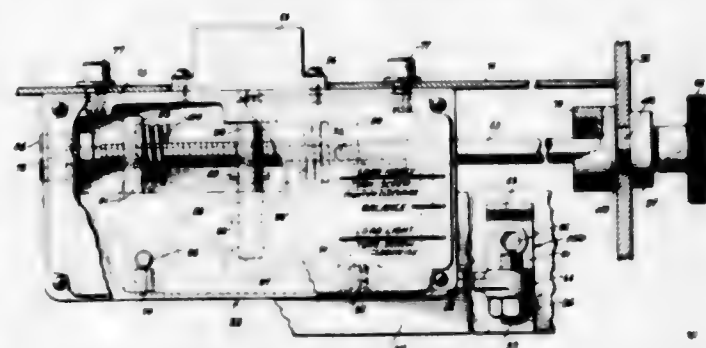
mandrel lugs provided on said one end portion of said mandrel, said mandrel lugs being selectively disposed in the spaces between said body lugs in engagement with said rib whereby to lock said mandrel against sliding in said body and prevent rotation of the mandrel in the body in one direction but whereby to permit rotation of the mandrel in the relatively opposite direction for withdrawal of the mandrel lugs from said spaces between the body lugs and facilitate sliding of the mandrel in the body, a split locking collar positioned in said body at a point between the body lugs and said second end



of the body, means in the body and on said locking collar for retaining the collar at a fixed point in the body, said locking collar slidably receiving said mandrel and the adjacent mandrel lug in the set being engageable with the locking collar to limit the extent of outward sliding of the mandrel in said body, and an inwardly projecting shoulder provided in said body at a point between said first end of the body and said body lugs, a mandrel lug in the set adjacent said shoulder being engageable with the latter to limit the extent of inward sliding of the mandrel in said body.

3,001,597
SPRING LOADED COMPENSATOR
Arthur J. Stock, Lakewood, Ohio, assignor to Stock Equipment Company, Cleveland, Ohio, a corporation of Ohio

Filed Mar. 25, 1958, Ser. No. 723,684
5 Claims. (Cl. 177-120)

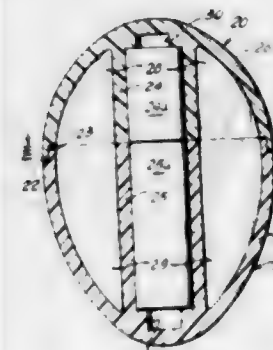


4. Apparatus for feeding predetermined weights of material which comprises a dust-tight housing, a weighing lever pivotally mounted intermediate its ends on a fixed pivotal support in said housing, said lever being pivotal in a substantially vertical plane, a hopper suspended from one end of said lever in said housing, a calibrated weight suspended from the other end of said lever in said housing, means for feeding material to said hopper, a substantially vertical rod operatively connected to said other

end of said lever, a helical spring surrounding one portion of said rod, an abutment on said rod, a movable platform mounted within said housing, one end of said spring being operatively connected to said abutment at least prior to the time that said hopper receives said predetermined weight, the other end of said spring bearing against said movable platform, a fixed support in said housing, means coaxing between said fixed support and said movable platform for varying the position of said platform to vary the compression in said spring, means extending externally of said housing for adjusting said position-varying means, and means responsive to the vertical movement of said rod for actuating said feeding means.

3,001,598
TESTING WEIGHTS FOR THE SCALES OF EGG-GRADING MACHINES
Werner H. Henzler, P.O. Box 284, Fishkill, N.Y.

Filed May 28, 1956, Ser. No. 587,669
6 Claims. (Cl. 177-264)

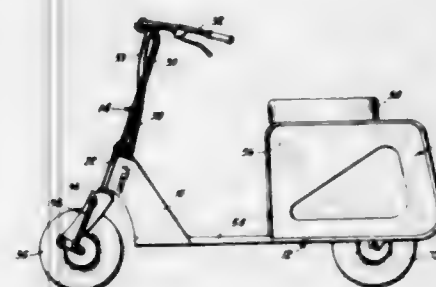


1. A test weight for testing the weighing scales of egg-grading machines, comprising a hollow egg-shaped body formed of two shell sections united to each other and containing longitudinal reinforcing webs, the total weight of the egg-shaped body being equal to that of a natural egg for which a weighing scale has been set, said weight including aligned cylindrical portions molded in the two halves of the egg-shaped body and united to the longitudinal reinforcing webs.

3,001,599
COLLAPSIBLE MOTOR SCOOTER
James B. Fryar, 1122 S. 119 East Ave., Tulsa, Okla.

Substituted for abandoned application Ser. No. 571,693, Mar. 15, 1956. This application June 25, 1959, Ser. No. 823,802

1 Claim. (Cl. 180-33)



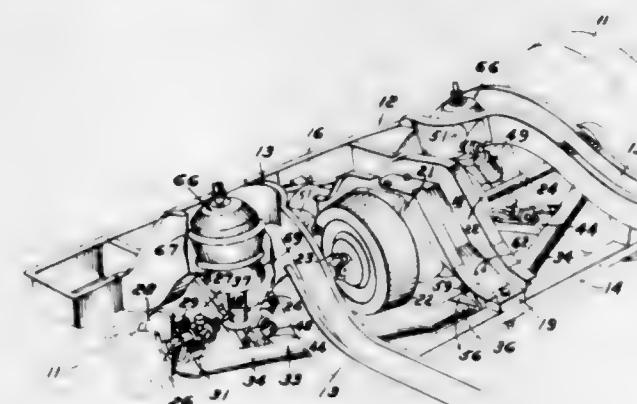
A collapsible motor scooter comprising a steering assembly journaled in a tubular sleeve member, a frame member removably secured to the sleeve member, a seat member removably secured to the frame member, a housing supported by the frame, a prime mover disposed within the housing, a rear wheel, means for removably suspending the wheel within the housing, said means

770 O.G.-58

comprising a wheel support member, a helical spring secured thereto and having a block member at the opposite end thereof, means for holding the block member to the frame member, latch means cooperating with the last mentioned means for alternately securing and releasing the block member to permit the removable suspension of the wheel within the housing, means for transmitting power from the prime mover to the rear wheel, said power transmitting means comprising a drive pulley removably secured to the prime mover for rotation thereby, a follower pulley connected to the drive pulley for rotation thereby, said follower pulley adapted to rotate the rear wheel, and means for intermittently interconnecting the drive and follower pulley members.

3,001,600
REAR WHEEL SUSPENSION FOR MOTOR VEHICLE
Earle S. MacPherson, Huntington Woods, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed June 25, 1956, Ser. No. 593,490
1 Claim. (Cl. 180-73)



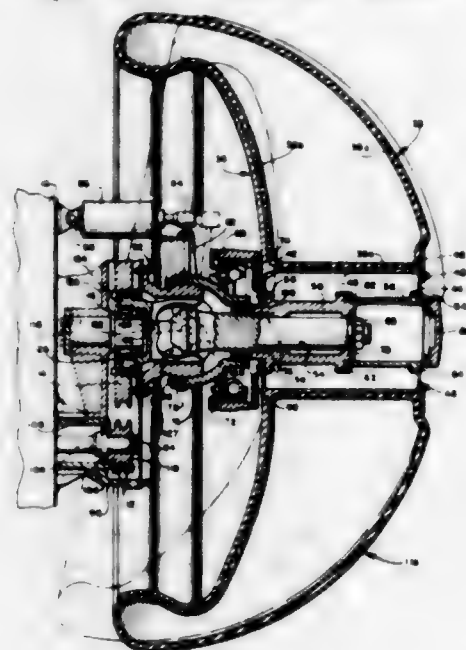
A wheel suspension for a motor vehicle comprising a vehicle frame, a pair of road wheels on opposite sides of said frame, transversely extending driving means for said road wheels, a rigid transversely extending axle rearwardly of said driving means and interconnecting said wheels, a pair of generally longitudinally extending suspension arms each pivotally connected at one end to said frame and at the opposite end to said axle adjacent the outer ends of the latter, and a relatively short link having its opposite ends pivotally connected directly to said frame and to said axle adjacent the transverse mid-point of the axle, said link lying generally in a vertical plane through the longitudinal center-line of the vehicle, the pivotal connections between said suspension arms and said axle lying substantially in a vertical plane containing the common axis of said road wheels and being spaced equal distances beneath said axis.

3,001,601
VEHICLE WITH TILTABLE WHEELS
Elie P. Aghnides, 46 W. 54th St., New York, N.Y.

Filed Dec. 20, 1954, Ser. No. 476,239
7 Claims. (Cl. 180-75)

1. A vehicle comprising a structure, load-carrying ground-engaging wheels disposed respectively on opposite sides of said vehicle, means mounting said wheels on said structure and maintaining the axes of rotation of the wheels tilting outwardly and downwardly thereby placing the lower inner ends of the wheels under the vehicle structure to at least partially shield the lower portion of said vehicle structure, said means including means for varying the angle of tilt of at least one of the wheels, each said wheel having a maximum thickness which approximates the radius of the wheel and also having a gen-

erally decreasing diameter, perpendicular to the axis of rotation, as the distance from the vehicle structure in-

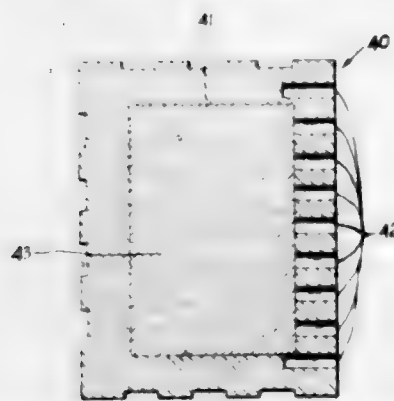


creases to thereby provide a large ground-contacting surface thereof as well as a stable vehicle.

3,001,602

LOAD BEARING SOUND ABSORBING CLAY TILE UNIT

Robert B. Taylor, Elmhurst, Ill., assignor to Structural Clay Products Research Foundation, Geneva, Ill.
Filed Jan. 25, 1960, Ser. No. 4,478
5 Claims. (Cl. 181-33)



1. A load bearing acoustical tile comprising a tile body having top, bottom, front and rear walls of clay-like material, said walls having thicknesses such as to have substantial strength and to be load bearing when a plurality of such bodies are superimposed upon one another to form a building wall, said front wall providing an exposed front face, said body having an opening there-through from end to end, said opening being substantially filled with low density fibrous material, the front face of said body having apertures therein over substantially its entire area extending from the opening through said front face.

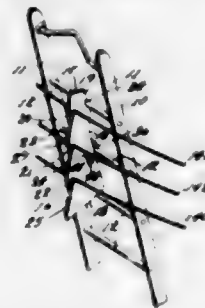
3,001,603

CONDUCTOR SPREADERS AND LADDER HANGERS

Eugene S. Kraus, Jr., Media, Pa. (% Philadelphia Electric Co., 1000 Chestnut St., Philadelphia 5, Pa.)
Filed July 14, 1958, Ser. No. 748,509
1 Claim. (Cl. 182-46)

An electrical conductor spreader and ladder support comprising an elongated plate of electrical non-conductive material having a first side marginal edge with a plurality of spaced rung engaging means for engagement with spaced rungs of a ladder, an opposite side marginal

edge having a plurality of spaced recesses therealong with interior sockets each for engagement with an electrical conductor, said sockets being disposed in a common plane, one of said rung engaging means being an integral

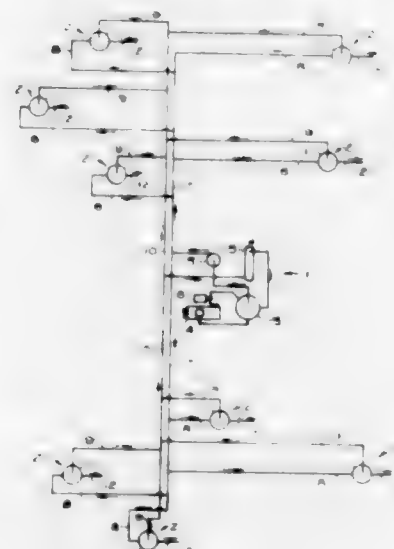


hook and the other of said rung engaging means comprising a clamping plate, a bolt extending through said clamping plate and into the body of said elongated plate, and a nut on said bolt and in an aperture in said elongated plate for tightening said clamping plate.

3,001,604

METHOD AND APPARATUS FOR DEHYDRATING OIL AND WATER EMULSIONS

Marvin S. Worley, Oklahoma City, Okla., assignor to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,544
8 Claims. (Cl. 183-2.7)



1. The method of dehydrating crude oil and water emulsion comprising, flowing said emulsion into a contacting zone, intimately contacting said emulsion in said contacting zone with a dried hydrocarbon gas stream to dehydrate said emulsion, discharging the dehydrated crude oil from said contacting zone, discharging said hydrocarbon gas from said contacting zone subsequent to its intimate contact with said emulsion, drying said discharged hydrocarbon gas, and recirculating said dried hydrocarbon gas to said contacting zone.

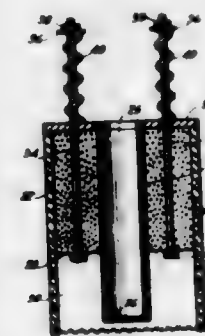
3,001,605

DEHYDRATING APPARATUS

Philip J. Hill, 7340 E. King St., Tulsa, Okla.
Filed Feb. 12, 1958, Ser. No. 714,799
1 Claim. (Cl. 183-4.3)

An apparatus for removing from fluid flowing from a well bore hydrates and water suspended therein, comprising a cylindrical vessel having closed ends, the vessel provided with an inlet pipe in the lower portion thereof for directing fluid into the interior thereof, said vessel provided with an outlet pipe in the upper portion thereof, the vessel further provided with a filter and dehydrating

cartridge comprising an outer cylindrical fiberglass housing having one end thereof closed by a screen member and the opposite end thereof closed by an apertured cover member, an inner fiberglass tube member concentrically disposed within the outer housing and having one end thereof closed and the opposite end thereof open, a second screen member slidably disposed around the inner tube in the annular space between the inner tube and the outer housing, a plurality of spaced stud members secured to the second screen member and extending through the cover member, a circumferential flange member rigidly secured to the outer end of each stud member, a helical spring member disposed between the flange and the cover member, a dehydrating chemical disposed above the sec-



ond screen member in the annular space between the inner tube and the outer housing, said spring constantly urging the flange member in a direction away from the cover member to urge the slidably screen member into contact with the chemical thereabove for maintaining the compression of the chemical constant for efficient dehydration of the fluid, said apparatus adapted to direct the flow of the well fluid radially inward through the outer filter housing for removing hydrates therefrom, to further direct the well fluid through the dehydrating chemical contained in said annular space for removing the water suspended therein, and then to direct the well fluid through the inner tube for a further cleansing thereof of hydrates, and a conduit connected from the interior of the cartridge to the outlet pipe for discharging from the vessel the filtered and dehydrated well fluid.

3,001,606

HAMMOCK FILTER

Henry C. Bierwirth and Norman L. Rutgers, Marshalltown, Iowa, assignors to Lennox Industries, Inc., a corporation of Iowa
Filed Apr. 21, 1958, Ser. No. 729,935
1 Claim. (Cl. 183-49)



In combination with an air processing unit having a housing and a blower mounted therein, a filter assembly

comprising a first arcuately-shaped semi-cylindrical wire mesh rack including first longitudinal arcuate wires, the opposite ends of said first wires being bent to provide hook ends on said first rack, first sheath members enclosing the respective hook ends to provide end flanges on said first rack, a second arcuately-shaped semi-cylindrical wire mesh rack including second longitudinal arcuate wires, the opposite ends of said second wires being bent transversely inwardly for assembling said first and second racks together in nested spaced-apart relation, means pivotally connecting said second wire bent ends at one end of said second rack to said first wires proximate to and inwardly of one said flange on said first rack, a second sheath member enclosing said second wire bent ends at the remaining end of said second rack to provide an end flange on said second rack, a lock channel formed in said second sheath member adapted to receive the remaining said flange on said first rack, a mat of compressible filter material having an uncompressed thickness normally greater than the spacing between said racks and disposed between said racks, the lateral width of said filter material being greater than the width of said racks, said racks when locked in nested, spaced-apart relation serving uniformly to lightly compress and conform said filter material therebetween in arcuately semi-cylindrical form with the arcuate side edges thereof projecting laterally beyond the sides of said racks, said racks when unlocked and pivotally separated permitting free removal and replacement of said filter material, a pair of support channels carried by said housing for mounting said filter assembly in the air flow path to said blower, one said support channel being adapted to transversely slidably receive therein said one flange on said first rack, and the remaining said support channel being adapted to transversely slidably receive therein said flange on said second rack, for laterally removable and replaceable mounting of said filter assembly in arcuately surrounding relation to said blower.

3,001,607

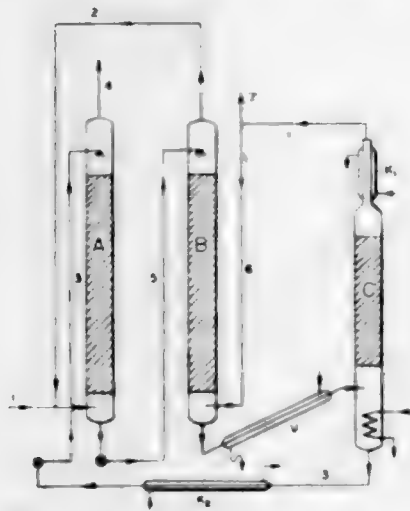
CHLORINE SEPARATION PROCESS

Jackson Eng and Sydney H. J. Greenwood, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 4, 1958, Ser. No. 771,767
4 Claims. (Cl. 183-114.2)



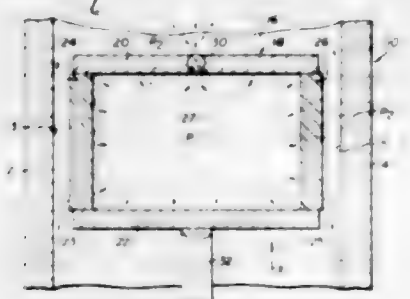
1. An improved process for purifying chlorine gas contaminated with hydrogen chloride which comprises contacting said mixture with a crystalline metallic aluminosilicate zeolite having uniform pore openings from 4 to 5 Angstrom units at a temperature of about 50° to 200° F., selectively adsorbing said hydrogen chloride, withdrawing unadsorbed chlorine, thereafter raising the temperature of said zeolite to about 700° to 1000° F., and recovering substantially pure hydrogen chloride.

3,001,605
SOLVENTS FOR THE SEPARATION OF DIOLEFINES FROM MIXTURES OF HYDROCARBONS
 Lothar Lorenz, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
 Filed Feb. 24, 1958, Ser. No. 717,039
 Claims priority, application Germany Feb. 23, 1957
 9 Claims. (Cl. 183-115)



3. In a method for the separation of dioléfines having from 4-6 carbon atoms from gaseous hydrocarbon mixtures which mixtures contain oléfines in addition to said dioléfines the improvement which comprises using as a solvent for said dioléfines a material selected from the group consisting of lactams having a boiling point above 100° C., lactones having a boiling point above 100° C., and formylpyrrolidine.

3,001,609
FLUID SUPPORTED DEVICE
 Elmer Fred Macks, Willow Lane, Vermillion, Ohio
 Filed Mar. 30, 1956, Ser. No. 575,185
 10 Claims. (Cl. 184-18)

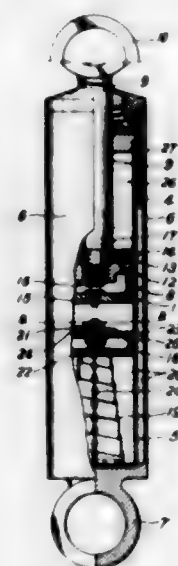


1. A piston for use in a gas actuated mechanism comprising, a tubular body having first and second ends and a gas accumulating cavity therebetween, said body including wall means defining at least one radial extremity of said cavity, said wall means including a gas compensating foraminous wall portion having an outer guided surface and means for the pressure compensating passage of gas from the cavity through the guided surface in sufficient quantity to generate a load carrying gas film to hold the piston out of contact with a guide, at least one of the body ends being a pressure end, and said one body end including an inlet passage for the conduction of gas from an adjacent pressure chamber to said cavity.

3,001,610
OIL DAMPER
 Tatsuya Takagi, 63 Araebisu-machi, Nishinomiyaz-shi, Japan
 Filed Mar. 23, 1959, Ser. No. 801,079
 3 Claims. (Cl. 188-88)

1. An oil damper effective for natural vibration damping and attachable to the frame and chassis spring of a

vehicle, comprising inner and outer cylinders filled with oil, a main piston, an auxiliary piston cooperating with said main piston, both pistons being slidably fitted in said inner cylinder, a pressure spring inserted between the lower face of said auxiliary piston and the bottom face of said inner cylinder, said main piston and said auxiliary piston being provided with one way valves which respectively permit oil to flow upward only, said main piston having a piston rod at the center of its upper portion, the upper end of said piston rod being extended from the cylinders to be attached to the vehicle frame, said outer cylinder having a cap member screwed in its upper end and a fitting member at its lower end to be attached to



the vehicle axle, a valve port bored through the upper and lower faces of said main piston at the center of the bottom end of said piston rod against which a one way valve is fitted, a lift valve provided at the bottom of said main piston to act upwardly against said valve port of said bottom end of said piston rod, said lift valve closing said valve port when its bottom touches said auxiliary piston, a small hole bored through upper and lower faces of said auxiliary piston, wherein the rising speed of said auxiliary piston due to said pressure spring is limited by oil flowing through said small holes to a speed less than the speed of said main piston due to the high speed motions of the wheel upon rough roads, and where said rising speed is made larger than the speed of said main piston when the wheel vibrates in the state of its natural rotation.

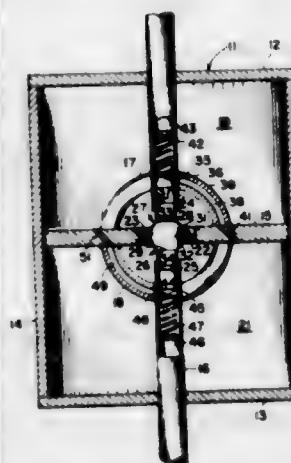
3,001,611
DOUBLE-ACTING LOW BAND PASS SHOCK ABSORBER
 Emanuel Schnitzer, 926 19th St., Newport News, Va.
 Original application Sept. 30, 1957, Ser. No. 687,308, now Patent No. 2,937,724, dated May 24, 1960. Divided and this application May 5, 1960, Ser. No. 27,231
 6 Claims. (Cl. 188-96)

(Granted under Title 35, U.S. Code (1952), sec. 266)
 1. A shock absorber adapted for connection between two relatively movable machine parts, comprising a hollow cylinder adapted to be filled with an incompressible fluid and connectable to one of said machine parts, a main piston slidably movable within said cylinder, said main piston dividing said cylinder into two regions and having a main orifice therein for passage of fluid between said regions, an elongate piston rod section slidably extending into said cylinder along an axis centrally positioned with respect to said main piston main orifice, the length of said piston rod section disposed externally of said cylinder being connectable to the other of said machine parts, the remaining length of said piston rod section having at least a tubular terminal portion and extending partially through one of said cylinder regions and terminating in an open end spaced from said main piston,

said tubular terminal portion of said piston rod section defining a control chamber side wall, a piston head slidably movable within said tubular terminal portion of said piston rod section in a region spaced from said open end thereof defining a control chamber movable end wall, a control valve movably positioned in said main piston main orifice for controlling fluid flow therethrough, a cylindrical valve piston connected to said control valve and extending therefrom into said open end of said tubular terminal portion of said piston rod section when said control valve is equidistantly positioned between the

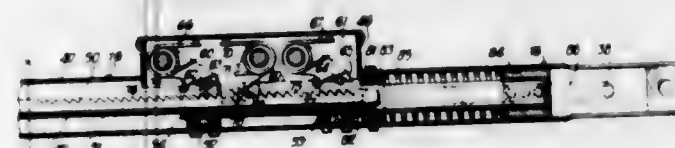
thereof, engaging and holding said locking pawl out of engagement with said teeth and permitting said load pawl to engage said teeth, and means acting between said member and said actuator for urging said actuator in a predetermined direction.

3,001,613
INTERLOCKING METAL BUILDING PANEL
 Robert K. McBerty, P.O. Box 183, Rockbridge, Ohio
 Original application July 24, 1952, Ser. No. 300,663.
 Divided and this application June 25, 1958, Ser. No. 744,482
 5 Claims. (Cl. 189-34)

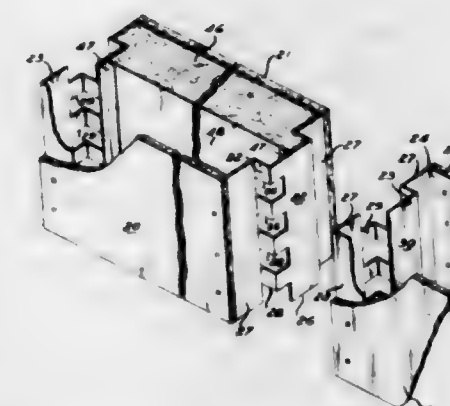


opposed faces of said main piston thereby defining another control chamber movable end wall, a bleed orifice in said control chamber side wall for passage of fluid therethrough, a rigid tubular member having an end connected concentrically around said bleed orifice to said control chamber side wall and having another end connected to the adjacent face of said main piston, and a bleed orifice through said main piston communicable with the interior of said rigid tubular member, said rigid tubular member serving to maintain said piston rod section and said main piston in fixed relation and providing for fluid communication between said control chamber and the other of said cylinder regions.

3,001,612
SLACK ADJUSTER FOR POWER TRANSMISSION SYSTEMS
 Everard C. Merverson, Westfield, N.J., assignor, by mesne assignments, to Robert M. Holloway and Robert L. Ladington, both of Michigan City, Ind.
 Filed Oct. 14, 1959, Ser. No. 846,431
 9 Claims. (Cl. 188-196)

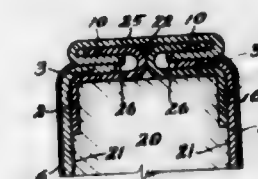


1. A slack adjusting device comprising a support member; a rack bar having rack teeth thereon at one side thereof, said rack bar being movably mounted on said support member; spring means acting between said member and said bar for urging said bar in a predetermined direction; a locking pawl and a load pawl mounted on said member adjacent said teeth and engageable respectively with opposite sides of said teeth for respectively preventing movement of said bar in said direction and in an opposite direction; means engaging said pawls for moving said pawls into engagement with said teeth; an actuator movably mounted on said member and engageable with said pawls, said actuator, in a first position thereof, engaging and holding said load pawl out of engagement with said teeth and permitting said locking pawl to engage said teeth, and said actuator, in a second position



1. A panel for building structures comprising spaced inner and outer walls secured to each other by means of metal frames secured to the edges of said walls, one edge of said panel having a metal frame with edge portions immediately adjacent each of the panel walls disposed normal to the panel walls and an intermediate portion in the form of a rectangular projecting channel spaced from said inner and outer walls, said panel having a frame member at its opposite edge provided with edge portions normal to the panel walls and an intermediate portion in the form of a re-entrant rectangular channel spaced from said inner and outer walls, said re-entrant rectangular channel having a web normal to the panel walls that is narrower than the corresponding web on the projecting channel, one edge of said re-entrant channel being notched to provide a series of openings extending parallel to the panel walls and the corresponding edge of the projecting channel being notched to provide portions adapted to enter the openings in the re-entrant channel in a similar adjoining panel whereby the projecting channel is embraced by and housed within said last-mentioned re-entrant channel and defines therewith a pocket for receiving a locking bar.

3,001,614
REINFORCED WELDED PANEL ASSEMBLY
 Morris Shane, Westbury, N.Y., assignor to Flush-Metal Partition Corp., Long Island City, N.Y.
 Filed Aug. 15, 1958, Ser. No. 755,306
 4 Claims. (Cl. 189-34)



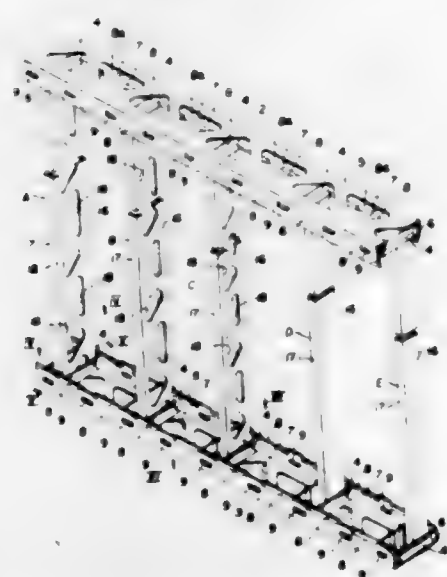
1. A panel unit comprising a pair of opposed pans, an edging clip member permanently secured to a corresponding edge portion of each pan and constituting in part a reinforcing border therefor, said edging clip mem-

bers being disposed in opposed abutting relation, means securing said edging clip members together and lying on the side thereof opposite said reinforcing border parts to maintain the opposed pans in fixed assembled relation, an edging strip superposed over said edging clip members in interfitting relation therewith and concealing said securing means, each said edging clip member being of a length corresponding to the length of the edge of the pan, the edge portion of each pan including a flange, one part of said edging clip member defining said reinforcing border and another part of said edging clip member being normal to the plane of said first part and defining an elongated channel receiving an adjacent pan flange, the bottoms of said channels in their abutting relation defining an elongated recess, said means for securing said edging clip members together being constituted by spaced welds in said recess, said edging strip being formed with inwardly directed marginal portions each frictionally interfitting between an adjacent pan flange and the outer channel wall of the channel of an edging clip member, a filler body disposed interiorly of said opposed pans adhesively secured to the interior surfaces thereof, said pans being formed of sheet metal of relatively thin gauge and said edging clip members being formed of relatively heavier gauge metal, the permanent securing of said edging clip members to said pans being effected by spot welding the reinforcing border part thereof directly to the pans from the inside of said pans whereby the exterior surface of said pans will be free of markings and/or indentations.

3,001,615 STUDDING

William M. Ries, Wheeling, W. Va., assignor to Wheeling Steel Corporation, Wheeling, W. Va., a corporation of Delaware

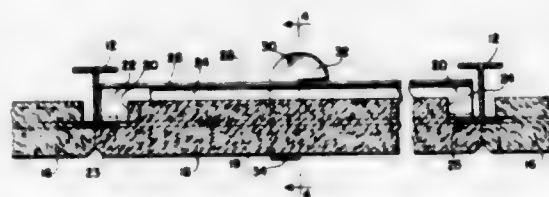
Filed Apr. 24, 1959, Ser. No. 808,781
10 Claims. (Cl. 189-35)



1. Studding comprising a generally horizontal runner having a length substantially greater than its width, the runner having a center portion and side portions at both edges of the center portion, the center portion being disposed in a generally horizontal plane, a generally vertical stud having one of its ends disposed crosswise of the runner and a clip fitted to the runner and having opposed generally vertically extending portions extending across the runner, each of said opposed generally vertically extending portions being of generally constant height across the runner, said opposed generally vertically extending portions of the clip gripping the end portion of the stud, so that the clip may be used to mount to the runner studs of various dimensions crosswise of the runner.

3,001,616
SPLINE
Robert J. Griffin, Seattle, Wash., assignor to Noise Control of Seattle, Inc., Seattle, Wash., a corporation of Washington

Filed May 25, 1959, Ser. No. 815,731
3 Claims. (Cl. 189-88)



1. An inverted T-shaped spline assembly for disposition between edge-abutting tiles and to extend between supporting ledges at the ends of the abutted tile edges, comprising:

- a first elongated L-shaped bar of a length to rest at its ends on said supporting ledges;
- a second shorter L-shaped bar of a length less than the distance between said supporting ledges;
- said L-shaped bars being arranged together with their upstanding legs juxtaposed and the foot elements directed oppositely, thus defining the inverted T-shape;
- the leg of said first bar having a lateral flange on the side of said bar adjacent and above the upstanding leg of said second bar, said flange including a slot accessible from below and intermediate the ends of the flange;

an upstanding tongue member, non-pivotally secured on said second bar and insertable in said slot when said second bar is moved vertically upward between the supporting ledges, said tongue including a horn on one side overlying a portion of said flange at an end of said slot when the ends of said L-shaped bars toward which said horn is directed are disposed substantially co-terminal in said assembly and their foot elements are resting upon a supporting ledge.

3,001,617
ANGULAR STAKE AND ADJUSTABLE COLLAR
Merton L. Cleve, Jr., East Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed Aug. 3, 1954, Ser. No. 447,685
1 Claim. (Cl. 189-90)
(Granted under Title 35, U.S. Code (1952), sec. 266)



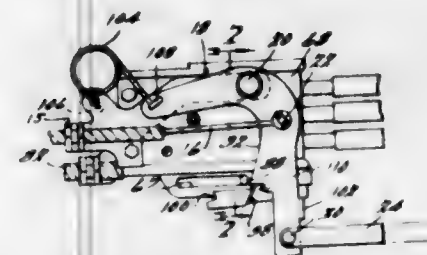
In combination, a metal guy-line stake of angular cross-section, a substantially cylindrical metal collar provided with an angular passage corresponding in shape and size with the angular cross-section of the stake, said stake having its upper end positioned in said passage, an arcuate enlargement on the upper end of the collar, said enlargement extending only partially around said collar to provide a corresponding partial shoulder, said shoulder

der terminating in laterally spaced ends formed with upwardly inclined convergent surfaces, and means for securing the collar in position on the stake.

3,001,618 PARKING SPRAG ACTUATOR

James R. McCordle, Royal Oak, William L. Allen, Birmingham, and Robert E. Walker, Madison Heights, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

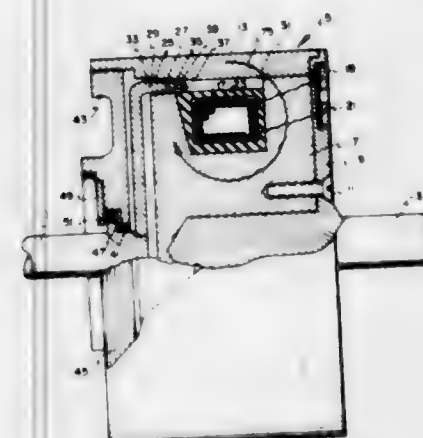
Filed July 7, 1959, Ser. No. 825,553
3 Claims. (Cl. 192-4)



1. In a push button transmission selector unit having neutral selection slide means, sprag lock actuating means associated with said neutral selection slide means for actuating a sprag lock, said lock being operable only when said neutral selection slide means is in its neutral selection position, shoulder means on said actuating means engageable with abutment means on said slide means for moving said slide means to its neutral selection position.

3,001,619
MAGNETIC CLUTCH
Aldo P. Imperi, Grand Rapids, Mich., assignor to Lear, Incorporated

Filed Apr. 9, 1959, Ser. No. 805,307
1 Claim. (Cl. 192-21.5)

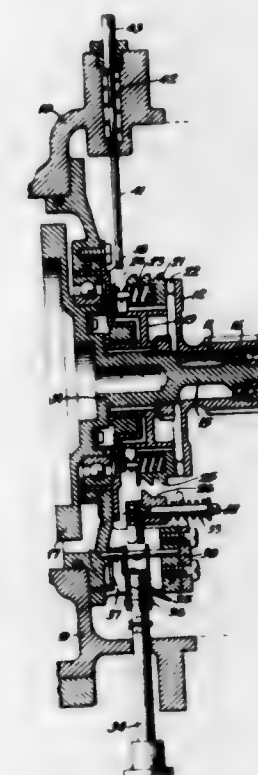


In combination: a first shaft member; a second shaft member, substantially coaxial with and rotatable relative to said first shaft member; a ferromagnetic spool attached to said first shaft member for symmetrical rotation about the axis of said first shaft member, said spool having a first end and a second end, said first shaft extending from said first end of said spool, said spool having a portion of its peripheral surface bevelled at its second end whereby the outside diameter of said spool is increased with increasing distance from said second end over the length of said bevelled portion; a coil of electrical conductors, adapted to receive electrical current, wound around said spool; a pair of slip rings connected to said coil to carry electrical current thereto; a flux plate member of ferromagnetic material symmetrical about the axes of said shafts and attached by its first end to said first end of said spool and spaced apart from said spool at its second end to form an annular slot symmetrically disposed about the axes of rotation of said shafts, said flux plate

having a portion of its inner surface adjacent its second end bevelled to provide an increasing internal diameter of said flux plate with increasing distance from said second end over the length of said flux plate having screw threads on the inner periphery thereof; a second ferromagnetic clutch member attached to said second shaft for rotation therewith; said second clutch member having a first part extending radially from said second shaft to said slot and a second part extending axially into said slot, said second part being a continuation of said first part, said second part having surfaces contoured to complement the bevelled surfaces of said spool and of said flux plate; said second clutch member being positioned so as to provide for annular spaces between said second portion of said spool, and between said second portion of said clutch member and said bevelled surface of said flux plate; a centering member having threads on the outer periphery thereof, adapted to engage said first mentioned threads and having bearing means symmetrical about the axis thereof adapted to receive said second shaft member and including bearing means to support said second shaft member in centered relation relative to said slot, said centering member having shoulders adapted to engage said second shaft and to move said second shaft in response to the axial position of said screw member and axially to move the contoured surfaces of said second clutch member relative to said bevelled surfaces of said spool and said flux plate.

3,001,620
TORQUE DISCONNECT
Joseph M. Olchawa, Chicago, Ill., and Homer J. Wood, Sherman Oaks, Calif., assignors to Foote Bros. Gear & Machine Corp., Chicago, Ill., a corporation of Delaware

Filed Oct. 14, 1957, Ser. No. 689,863
3 Claims. (Cl. 192-24)



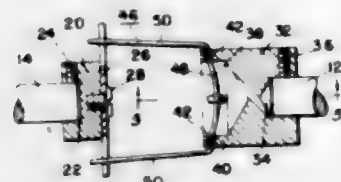
3. A torque disconnect comprising coaxial driving and driven members, cooperating clutch members drivably connected to the driving and driven members respectively, means mounting one of the clutch members for axial movement into and out of driving engagement with the other clutch member, said one of the clutch members having peripheral cam surfaces thereon, a follower mem-

ber movable radially into and out of engagement with the cam surface, means mounting the follower member for limited movement axially of the clutch members, a spring urging the follower member axially in one direction resiliently to absorb the initial shock when the follower member engages the cam surface, and means controlling radial movement of the follower member.

3,001,621

SHAFT DRIVE COUPLING

Jerome G. Burns, Media, Pa., assignor to International Resistance Company, Philadelphia, Pa.
Filed Jan. 27, 1960, Ser. No. 4,966
7 Claims. (Cl. 192-56)

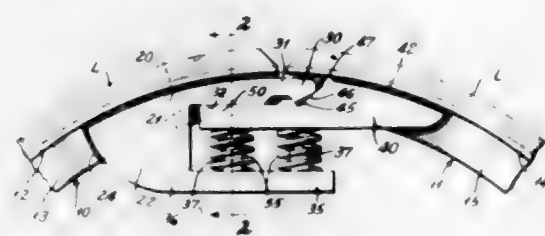


1. A torque limiting shaft drive coupling comprising a pair of rotatable shafts mounted with the end of one of said shafts being adjacent an end of the other of said shafts, means on one of the shafts providing a pair of diametrically aligned slots extending radially of the shaft, a U-shaped drive member pivotally mounted on the end of the other shaft, said drive member being pivotally mounted for rotation about the axis of the base of the drive member with the base of the drive member extending diametrically of the other shaft, the arms of said drive member being of a stiff but resilient wire, each of the arms of the drive member being adapted to fit into a separate one of the slots provided on the one shaft, and spring means engaging the drive member to rotate the drive member when the arms of the drive member become free of the slots so as to pivot the arms away from the one shaft.

3,001,622

BRAKE OR CLUTCH ASSEMBLY PARTICULARLY ADAPTED FOR VEHICULAR USE

David N. Goldberg, 1510 Main St., Wheeling, W. Va.
Filed July 16, 1958, Ser. No. 748,954
11 Claims. (Cl. 192-76)



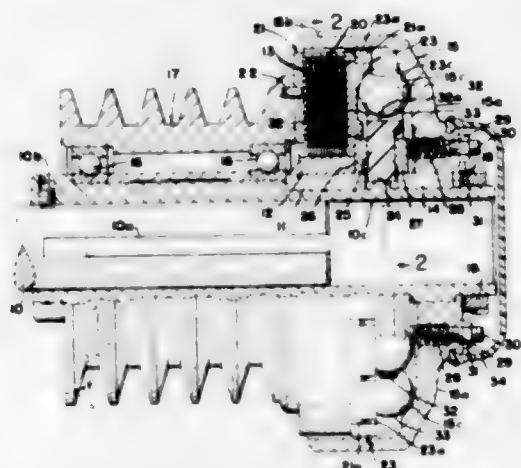
1. In a brake or clutch structure, a friction unit assembly adapted to be selectively engaged with a drum comprising first and second arcuate shoe sections, each of said sections having a cylindrical segment for friction lining material and a web element extending radially inwardly from and longitudinally of said cylindrical segment, a pair of guide elements secured respectively on opposite sides of the web element of one of said shoe sections and extending beyond such web element to form a pocket therebetween opening outwardly of the end of said one of said shoe sections and in which the web element on the other of said shoe sections is received, the inner walls of said pocket slidably engaging opposite sides of said received web to prevent movement of said web about its longitudinal axis, socket means at the end of said first shoe section providing a pivot axis disposed transversely

of the end of said first shoe section, connecting pins means at the end of said second shoe section with the axis thereof disposed transversely of the end of said second shoe section, said pin means being engaged in said socket means to interconnect said first and second shoe sections in end to end longitudinal alignment, and means biasing said pin means into engagement with said socket means, said first shoe section and said second shoe section being stabilized against relative movement about their aligned longitudinal axis by said slidably engaged, pocket received web.

3,001,623

CENTRIFUGAL CLUTCH

Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Filed Dec. 23, 1958, Ser. No. 782,480
3 Claims. (Cl. 192-105)



1. In a centrifugal clutch assembly, the combination of a rotary input drive element, a rotary driving member coupled to said input drive element to be driven thereby, a rotatable driven member mounted for axial movement toward and away from said driving member and for relative rotation with respect to said input drive element, said driving and driven members presenting axially spaced apart, confronting annular cam faces which converge toward each other in radially outward direction and which define between them an annular cam space which is progressively narrower radially outward, a rotatable cam carrier mounted for relative rotation with respect to said input drive element, a plurality of circumferentially spaced cam members carried by said cam carrier in said cam space for engagement with said cam faces, said cam members being mounted on said cam carrier for centrifugal movement between said cam faces to force said driven member axially away from said driving member upon rotation of the cam carrier, a pair of axially spaced rotatable friction drive members which are separate from said driving and driven members and which are coupled to said input drive element to be driven thereby and which frictionally engage opposite sides of said cam carrier to rotate the latter, and means for maintaining said friction drive members continuously in frictional engagement with said cam carrier irrespective of the position of said cam members.

3,001,624

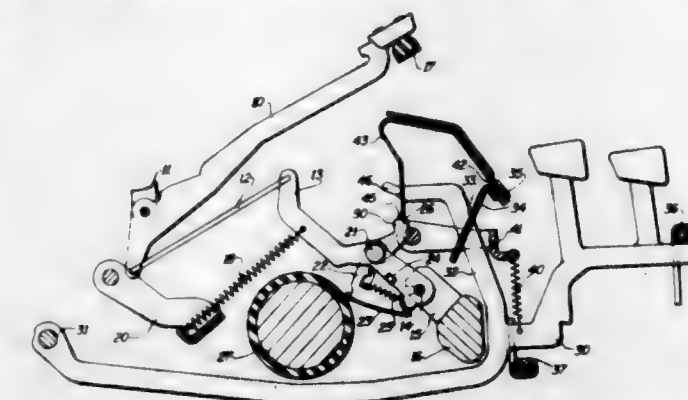
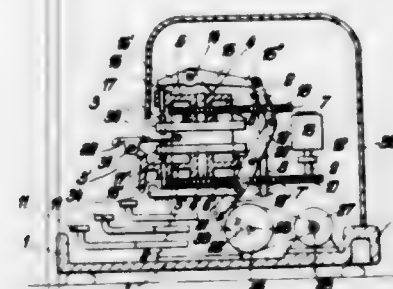
KEYBOARD EMBOSSING MACHINE

Gerhard Güttel, Berlin, Heinrich Schulz, Berlin-Steglitz, and Heinrich Ditzel, Berlin-Niederschönhausen, Germany, assignors to Adrema-Werke G.m.b.H., Berlin, Germany

Filed June 26, 1959, Ser. No. 823,032
Claims priority, application Germany July 3, 1958
3 Claims. (Cl. 197-6.6)

1. In a machine for embossing printing plates, in combination, a machine base plate, a keyboard carried on

said base plate, a framework secured to said base plate, two rotatable die carrier disks mounted on said framework in concentric alignment and capable of being turned in a horizontal plane, a printing plate carrier slidably arranged on said framework between said carrier disks,



said power roll and a greater length of said finger being adapted to be flexed so as to provide a by-pass action.

3,001,627

TYPE ACTION

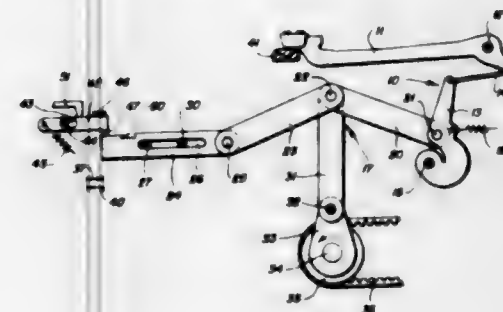
Kenneth R. Frechette, Bristol, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Apr. 11, 1961, Ser. No. 102,265
8 Claims. (Cl. 197-17)

first means adapted to rotate said carrier disks in synchronism to bring dies to an embossing position in accordance with a depressed key of the keyboard, second means to force the opposing dies of the carrier disks at said position in opposite directions against said printing plate, a first electric motor for driving said first means and a second electric motor for driving the second means.

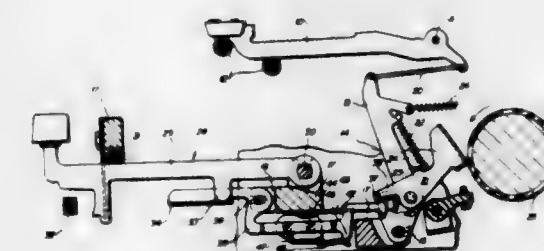
3,001,625

TYPE ACTION

Louis Cetran, Newington, and Anthony D'Onofrio, West Hartford, Conn., and Lloyd J. Lapointe, Rochester, N.Y., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed June 6, 1960, Ser. No. 34,087
5 Claims. (Cl. 197-17)



1. In a type action; a type bar linkage, a movably mounted slide, a toggle linkage having one end connected to said type bar linkage and the other end connected to said slide, means for actuating said toggle linkage, said movably mounted slide being normally permitted to reciprocate in response to the operation of said toggle linkage actuating means while said type bar linkage remains stationary, and means for temporarily immobilizing said slide so that said type bar linkage is power operated through a printing stroke by said toggle linkage.



1. In a power action for an electric typewriter having a power roll, an actuating linkage adapted to engage and be operatively driven by said power roll, and a control linkage for controlling the initiation of power operated strokes of said actuating linkage; said control linkage comprising a non-flexible lever which is mounted for control movement in one plane and for lateral swinging movement in a different plane, said lever being constructed and arranged so that one of said movements serves to bring said actuating linkage into operative engagement with said power roll while the other of said movements serves to effect a non-repeat action when the said control linkage is held in its operated condition.

3,001,628

PRINTING MECHANISM

Russell W. Rice, Jr., Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 27, 1960, Ser. No. 65,424
3 Claims. (Cl. 197-52)

3,001,626
TYPE ACTION FOR ELECTRIC TYPEWRITERS AND THE LIKE

Kenneth R. Frechette, Bristol, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Filed Sept. 2, 1960, Ser. No. 53,753
6 Claims. (Cl. 197-17)

1. A type action comprising a type bar, a power roll, drive means engageable with said power roll for power actuating said type bar, and means for controlling the engagement of said drive means with said power roll, said control means including a flexible finger, a relative-

1. A single element print head comprising, in combination, a truncated spherical shell open at one end and

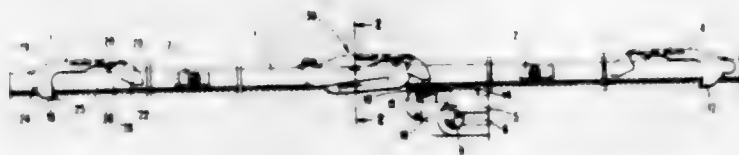
closed at its other end except for an opening extending axially therethrough, characters formed on the spherical portion of said shell, a cap mounted on the closed end of said shell, a spring element arranged between said cap and said shell, said spring element having a spring arm normally flexing to a position overlying said opening, and a handle portion on said spring element adapted to be actuated manually for forcing said spring arm to a position free of said opening.

3,001,629

MARGIN STOP FOR TYPEWRITER

Robert H. Mimmlich, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 31, 1959, Ser. No. 837,178
3 Claims. (Cl. 197-63)



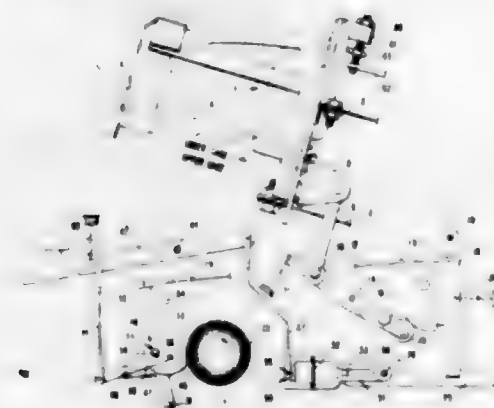
1. The combination with a typewriter carriage and a rack fixed to said carriage, of a stop movable to different positions along said rack and adjustable to be either effective or ineffective in actuating a control lever for stopping said carriage, said stop comprising a stop member slidably mounted on said rack and having an abutment portion engageable with said control lever during movement of said carriage for actuating said lever, teeth on said stop member cooperating with teeth on said rack for holding said stop member in the position to which it is moved, and a member pivotally mounted on said rack and movable along the latter with said stop member, said pivotally mounted member arranged to pivot between a first position exposing said abutment portion for engagement with said control lever and a second position in front of said abutment portion for deflecting said control lever out of its path.

3,001,630

CASE SHIFT MECHANISM FOR TYPEWRITERS

Ronald D. Dodge, Lexington, Ky., and Eugene S. Pearson, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 12, 1959, Ser. No. 833,337
6 Claims. (Cl. 197-74)



1. A case shift mechanism comprising, in combination, a case shiftable part, means for shifting said part between upper and lower case positions, said means including a pivoted member having a roller attached thereto, means for connecting said member to said shiftable part, control means having as an integral part a secondary cam cooperating with said roller, a latching element engageable with said control means when said shiftable part is in one

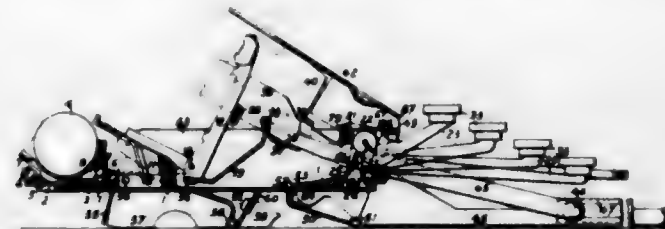
of said case positions, a power roller rotating continuously in one direction, a primary cam engageable with said roller, a cam lever supporting said primary cam, means linking said lever to said control means, a key lever, and means operable by said key lever for controlling the engagement of said primary cam with said power roller and for actuating said latching element.

3,001,631

PORTABLE TYPEWRITER

Marcel Fresard, Geneva, Switzerland, assignor to Mefina S.A., Fribourg, Switzerland, a corporation of Switzerland

Filed Feb. 20, 1959, Ser. No. 794,623
Claims priority, application Switzerland Mar. 7, 1958
15 Claims. (Cl. 197-186)



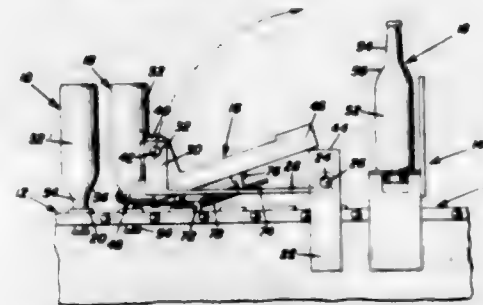
4. In a portable collapsible typewriter, the combination comprising a casing, including a top wall constituting a cover, a bottom wall, side walls and opposite end walls, said end walls respectively pivotally connected with said bottom wall and with the cover and having opening movement to set up the typewriter for use and closing movement when the typewriter is collapsed for storage, a frame on the bottom wall of the casing, a platen supporting carriage on the frame, a plurality of type bars coaxially pivoted on the frame, a shaft supported transversely of the frame, a plurality of rocker levers mounted on said shaft and connected at one end to the type bars at the end opposite the type face, a plurality of key bars also mounted coaxially on said shaft with the rocker levers, coupling means normally spring biased to a position between the rocker levers and key bars at one side of their axes to place them in operative relation when the casing is open, and means on said rocker levers for moving said coupling means to an inoperative position when it is desired to collapse the casing by moving the cover and all of the key bars through an angle of 180° to overlie the rocker levers.

3,001,632

BOTTLE LIFT FOR BOTTLE WASHING MACHINES

Lawrence J. Bell, 1205 Schilling Ave., Belleville, Ill.

Filed Oct. 6, 1959, Ser. No. 844,762
7 Claims. (Cl. 198-33)



1. In a bottle washing machine including an intermittently movable supply conveyor provided with upwardly opening sockets for receiving inverted bottles and a delivery conveyor with a transfer mechanism being provided for transferring bottles from an inverted position on said intermittently movable conveyor to an upright position on said delivery conveyor which includes a pair of spaced supports positioned on opposite sides of said intermit-

tently movable conveyor having an oscillating operating shaft journaled therethrough to which one end of each of a pair of lift arms is secured for movement therewith at each side of said intermittently movable conveyor, the other ends of said lift arms being provided with apertured flanges whose apertures are aligned, said transfer mechanism also including an intermittently reciprocating lift rod, said lift rod, operating shaft and said intermittently movable conveyor being movable in timed sequence; a lift plate comprising a generally U-shaped plate having two upstanding side walls interconnected at their lower edges by means of a bottom wall, means on said side walls for mounting said plate for pivotal movement about a horizontal axis extending between said flanges, said means being positioned adjacent one end of said bottom wall, the other end of said end wall being adapted to overlie and be supported by said supports, whereby said lift plate will be mounted for swinging movement through an arc and for swinging movement relative to said lift arms, at least one U-shaped opening adapted to receive the neck of an inverted bottle carried by said conveyor formed in said one end of said bottom wall defined by a pair of outwardly projecting spaced shoulders, the base ends of each of said shoulders being provided with an upwardly projecting backturned portion adapted to engage the side of a neck of a bottle remote from said bottom positioned in said opening whereby as lifting movement of said lift arms lifts said plate said backturned portions will lift a bottle from one of said sockets and tilt the bottom of the bottle over said plate in a single motion so as to cause said bottle to fall in a reclined position on said plate.

3,001,633

SCREW CONVEYOR ASSEMBLY

Daniel C. Heitsch, Shippensburg, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Mar. 22, 1960, Ser. No. 16,744
8 Claims. (Cl. 198-64)



1. In a conveyor for forage or the like, a hopper having a discharge opening, a tube communicating with said opening to receive material therefrom, said tube having a flanged female end and a flanged male end, said female end having a socket and said male end an outwardly projecting portion, and means for selectively connecting either end of said tube to said hopper comprising a sleeve affixed to said hopper, said sleeve surrounding said opening and projecting outwardly therefrom, an adapter member, means connecting said adapter member to that flanged end of the tube connected to the hopper, said adapter member having a collar which projects axially beyond said tube and slidably fits onto said sleeve, means supporting said adapter on said hopper, and means for adjusting said supporting means toward and away from said hopper.

3,001,634

LOCKING SWIVEL HANGER

Carl J. Bauder, Syracuse, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 14, 1959, Ser. No. 859,287
6 Claims. (Cl. 198-177)

1. In a monorail apparatus including the combination of a monorail mounted adapter, a clevis rotatively secured to said adapter, cam plates carried by said clevis, and cam actuators in spaced relation to said cam plates en-

gageable with and selectively rotating said cam plates, the improvement comprising a latching means pivotally attached to said adapter and engaging said clevis means to positively lock the same against rotation relative to said adapter, a handle means on said latching means



and operating said latching means out of engagement with said clevis means whereby said latching means may be disengaged from said clevis means rendering said clevis means rotatable relative to said adapter, and camming means comprising a cam located adjacent said monorail apparatus for raising said handle means to thereby disengage said latching means.

3,001,635

CONVEYOR

Aaron P. Beller, Gap, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Aug. 13, 1959, Ser. No. 833,604
9 Claims. (Cl. 198-188)



1. Bale conveying apparatus comprising a generally horizontally extending frame having a forward end and a rear end, a conveying means supported on said frame and operable to move bales toward said frame rear end, a carriage mounted on said frame and adjustable longitudinally relative thereto, side rails on said frame to guide each bale as it is conveyed, a ramp on said carriage for elevating each bale when it reaches said carriage relative to said side rails, a swingable deflector on said carriage and overlying said ramp for engagement by each bale as it moves up the ramp to effect discharge of the bale laterally of the conveyor, means pivotally supporting said deflector for placement, selectively, in one of two positions to discharge bales to either side of said conveyor, means for swinging said deflector from one position to the other position, and a resilient member holding said deflector in one and the other of said two positions.

3,001,636

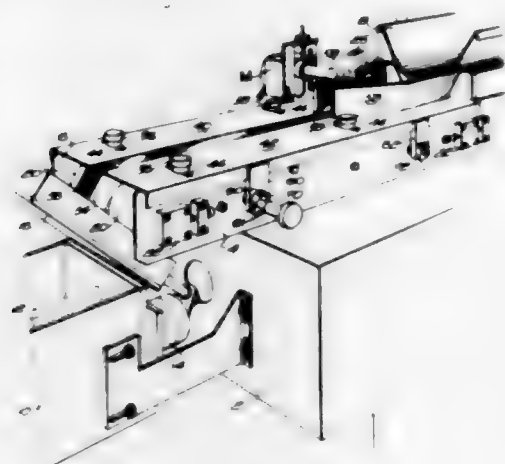
APPARATUS FOR CHANNELING ARTICLES

Michael C. Klapes, Lynnfield Center, Mass., assignor to Delta Engineering Corporation, Melrose, Mass., a corporation of Massachusetts

Filed Jan. 15, 1959, Ser. No. 787,025
10 Claims. (Cl. 198-204)

1. In combination with an endless belt conveyor having a substantially straight run, a pair of guide members

for channeling articles on said substantially straight run into a single column, each guide member movable toward and away from the other guide member, means supporting said guide members in a plane parallel to the plane



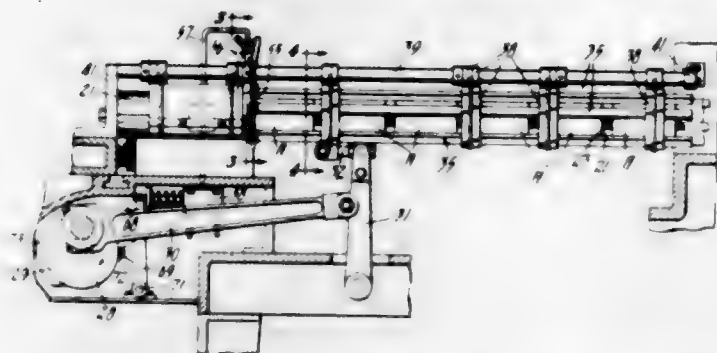
of said straight run, first and second means connected to both guide members at spaced-apart points for moving said guides toward and away from each other, and third means for indicating the instantaneous spacing between said guide members, said third means operatively connected to said first means.

3,001,637

CONVEYOR MECHANISMS

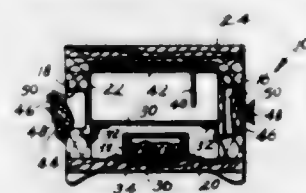
John Eric Socke, Pelham Manor, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 17, 1958, Ser. No. 781,031
6 Claims. (Cl. 198-225)



1. In a machine for making sheet material articles, a support for the articles, feeding means adjacent said support for engaging and intermittently moving the articles in step-by-step advancement and in spaced and timed processional order along a predetermined path on the support, and a pressure device disposed adjacent said support, said pressure device including an elongated retainer bar spaced from and extending along said path of the articles on said support, said retainer bar being provided with a plurality of pressure blocks slidably mounted therein each having a pressure face projecting from said bar toward said support for engagement with the articles in said path, an inflatable tube confined between said blocks and said retainer bar, and means for inflating and deflating said tube in time with said intermittent movement of the feeding means for uniformly distributing yieldable pressure to each of said blocks and for alternately clamping said articles against said support to keep them stationary at rest intervals and for relieving the pressure on said articles during the intervals at which they are advanced by said feeding means to protect said articles against damage by said feeding means.

3,001,638
PLEASURE CHEST
Eli D. Kuzmich, 1140 E. Dunlap, Phoenix, Ariz.
Filed Aug. 25, 1958, Ser. No. 756,984
4 Claims. (Cl. 206-38)

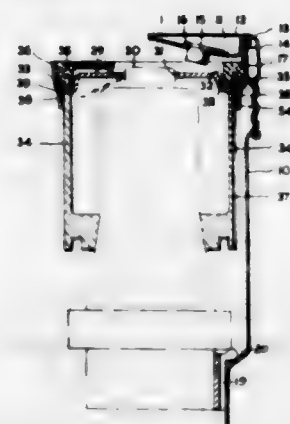


1. An article storage and carrying case comprising, in combination, a case housing constructed of a horizontal bottom plate and vertical rectangular shaped front, rear, and end walls rigidly secured together and defining a cubical enclosure, a rectangular shaped closure member pivotally connected by a plurality of hinges to the upper edge of the rear wall, a handle attached to the upper surface of said closure member, bracket means connected to the inside of the end walls and spaced a short distance above said bottom plate removably supporting horizontally a perforated plate of rectangular configuration, said perforated plate providing the case housing with a central compartment surrounded by the walls and closure member for retaining bulky items, a bail member secured to said bottom plate and below said perforated plate removably retaining a receptacle to receive a sponge moistened with a suitable solution, each of said vertical walls provided with a horizontally arranged cylindrical recess extending partially therein and open at the exterior surface thereof, said recesses providing cylindrical shaped compartments for retaining small items, a circular shaped door closure for each compartment pivotally connected to the outer surface of the respective wall by means of hinge and latch assembly attached to the wall adjacent the respective recess in said wall, rigid handle means attached to each door closure for actuation of the door closure between the open and closed position, a plurality of latch means attached to the upper edge portion of said front wall for selectively locking said closure member in the closed position, and a handle attached to the upper surface of said closure member for carrying said case.

3,001,639
LOCATING DEVICE FOR ARTICLES IN A CONTAINER

Charles Edmund Addis, Birmingham, England, assignor to Bulpitt and Sons Limited, Birmingham, England, a British company

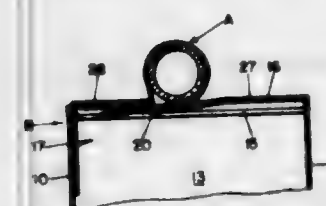
Filed Dec. 12, 1956, Ser. No. 627,871
Claims priority, application Great Britain Dec. 17, 1955
4 Claims. (Cl. 206-46)



1. In a container for supporting an article therein, a rigid tubular collar surrounding the article and having an inwardly extending shoulder to support said collar on the article, a rigid cover member extending across the collar

adjacent the container opening and having a peripheral flange in engagement with the outer wall of the collar, at least one axially extending groove in the outer wall of the collar, the cover member having at least one opening therein to provide a passageway from the groove to the interior space of the collar and a vent opening disposed substantially centrally thereof, the container having means forming a shoulder internally thereof spaced from the cover member, a resilient member seated on the cover member and having its periphery engageable with the inner wall of the container and axially compressed between the shoulder and the cover member.

3,001,640
ARTICLE ATTACHING DEVICE
Harold G. Zastrow, Minneapolis, Minn., assignor to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota
Filed Aug. 11, 1958, Ser. No. 754,320
7 Claims. (Cl. 206-47)



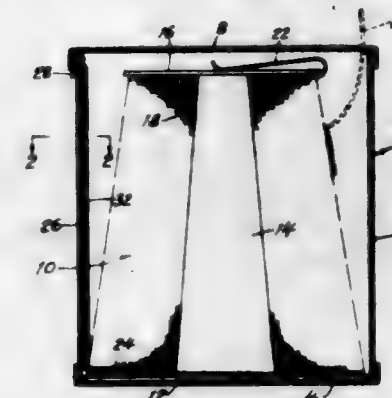
4. An article attachment connecting an article to a carton having a tubular body and closing flaps on one end thereof, one of said flaps having a U-shaped cut line therein including a base portion parallel to the line of fold connecting this flap to its side wall and including spaced end cuts, aligned fold lines parallel to said line of fold and extending from the ends of the U-shaped cut line to opposite edges of said one flap, the article being of smaller dimensions than the area defined by said U-shaped cut line, a wrapping sheet secured to the under surface of said one flap between said cut line and the free edge of said one flap which is parallel to said line of fold, said wrapping sheet extending through said U-shaped cut line, around said article overlying the area defined by said cut line, and back through said U-shaped cut line to terminate beneath said one flap.

3,001,641
TORQUE TRANSMISSION FROM AN END MEMBER
Theodore P. Kensler, Rancocas, N.J.
(226 Chester Ave., Moorestown, N.J.)
Filed Dec. 9, 1957, Ser. No. 701,657
16 Claims. (Cl. 206-51)



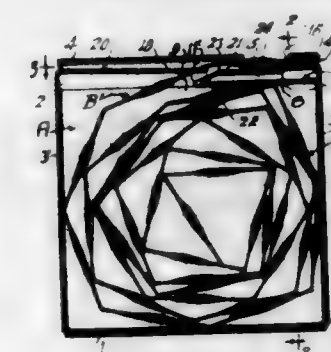
15. A carton comprising an elongated outer cover of four equal rectangular sides, two similar end panels each secured to the outer cover, a cardboard tube extending from one end panel to the other axially of the carton, a support plate secured centrally to each end panel and having prongs with V notches to receive and grip the tube, and four substantially radially positioned hook plates on each end panel to engage the tube and spaced to prevent lateral movement thereof, whereby when either end panel is rotated the tube will transmit torque to the other end panel.

3,001,642
WIRE PACKAGE
Donald A. Hirst, R.D. 1, Lambertville, N.Y.
Filed Feb. 24, 1960, Ser. No. 10,723
4 Claims. (Cl. 206-52)



1. A package for storing, handling and feeding wire directly from an open end package comprising a cylindrical container open at one end, a body of wire in the form of coils therein having an initial maximum diameter less than the internal diameter of the container, the leading end of the wire being located near the top of the container and the tail end of the wire being positioned along the cylindrical side wall of the container and extending from a point near the bottom of the container to a point near said open end, and means forming a protective shield secured to said wall and enclosing said tail end.

3,001,643
DISPENSING CARTON FOR CONTINUOUS PACKAGE STRIPS
John R. O'Meara, North Caldwell, and Frank J. Lefebvre, West Caldwell, N.J., assignors to Ivers-Lee Company, Newark, N.J., a corporation of Delaware
Filed Mar. 16, 1960, Ser. No. 15,320
4 Claims. (Cl. 206-56)



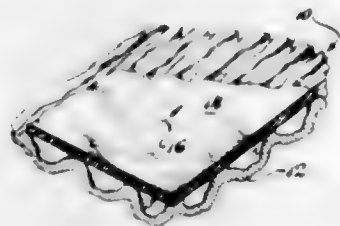
1. A package including a thin, flexible continuous package strip folded into a plurality of layers and including a plurality of sections spaced apart longitudinally of the strip each containing a commodity, said strip having openings between said sections, and a carton having a bottom wall, side walls, end walls and a top wall providing a chamber in which said folded package strip is enclosed, one of said end walls and said top wall being disposed at a right-angle to each other and each having an end spaced from an end of the other providing an outlet opening between said ends through which said package strip must move forwardly out of the carton, a guide support in said chamber having a wall under-lying said top wall providing an outlet passage between them leading to said outlet opening, said wall of the guide support having a guide lip in spaced relation to said outlet opening at the inner end of the said outlet passage over which said package strip must move out of said chamber through said outlet passage, and a stop member on one of said walls overlying said package strip with the package strip between said stop member and said lip of the guide support.

port wall, said stop member being yieldingly biased into contact with said strip and having a portion to enter one of said openings in the package strip upon movement of the strip backwardly from the outlet opening, thereby to prevent such backward movement of the strip into said chamber.

3,001,644

CELLULOSIC PRODUCT

Charles A. Fourness and Cephas B. Sitterson, Jr., Appleton, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,686
7 Claims. (Cl. 206—56)

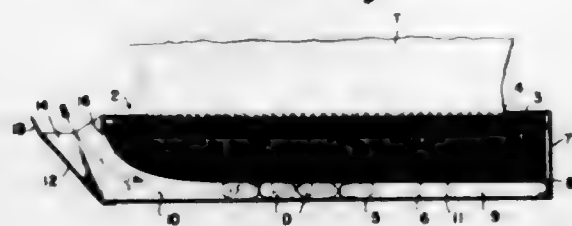


1. In combination, a light weight compactable article and a package formed of a plastic film product maintaining said article partially compacted, said plastic film product consisting of a film of polyethylene of thickness within the range of about .35 to 2.5 mils forming the outer surface of the package and a sheet of creped wadding disposed inwardly of the film and bonded at the crests thereof to the film, said wadding having a basis weight of about 6 to 14 pounds per 3000 square feet and a crepe ratio of about 1.1 to 3, the fibers forming said wadding being disposed in a manner to define a grain direction in which the tear resistance in the grain direction is less than one third the tear resistance in a direction across the grain, said product being applied to encircle said compacted article in a direction requiring maximum constraining forces, and a tear tab associated with said product and positioned to permit said product to be torn in the grain direction along a desired path for exposure of said article.

3,001,645

BOX FOR DISPENSING AND RECEIVING DISPOSABLE TISSUES

Herman T. Herberg, 5323 Tabor Road, Philadelphia, Pa.
Filed June 13, 1960, Ser. No. 35,471
2 Claims. (Cl. 206—57)



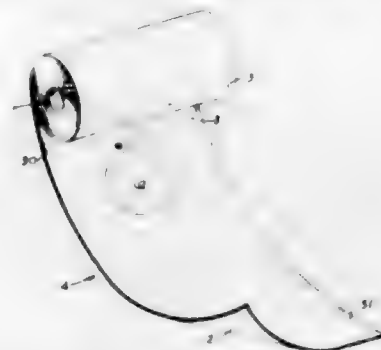
2. A box for the dispensing and receiving of disposable tissues comprising a box structure of substantial rigidity provided by a top panel, a bottom panel and a plurality of side panels, one of the sides of said box structure being open, said top panel being arranged to be opened for removal of clean tissues, a partition curved to extend downwardly and inwardly at said open side and across the interior of said box structure to divide it into upper and lower compartments, an operable flap originally closing said open side of the box and, when opened, providing access to said lower compartment for the reception of soiled tissues, and means limiting opening of said flap thereby to provide a funnel-like entrance between it and said partition, said partition having a width corresponding substantially to that of said open side and being adapted to flatly engage the top panel when said upper

compartment has been completely exhausted of clean tissues, whereby the capacity of said second compartment may be expanded to substantially that of the entire box structure.

3,001,646

DISPOSABLE BIB AND PACKAGE

Jack A. Cooper, 65 Valley View, San Rafael, Calif.
Filed Feb. 9, 1959, Ser. No. 792,088
1 Claim. (Cl. 206—58)

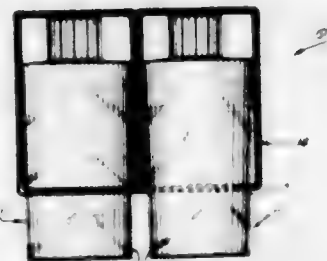


An elongated strip of readily disposable, relatively thin sheet paper-like material suitable for providing protective bibs for infants and rolled lengthwise on itself to provide a roll, said strip being of a width adapted to substantially cover the front of an infant and being cut through at spaced points along lines extending transversely across said sheet relative to its length to provide lines of weakness defining bib-length sections of said strip between adjacent of said lines and along which lines successive of said portions are adapted to be torn from one end of said strip, a generally circular line of spaced cuts formed in each of said sections closely adjacent the line defining one end of each section and positioned centrally between the longitudinally extending edges of said strip and defining a line of weakness to facilitate removal of the material enclosed by said circular line, said circular line defining the outline of a neck opening in said sheet adapted to receive the neck of such infant, a relatively narrow, solid, imperforate portion of said strip being interposed between each of said circular lines of cuts and the adjacent transverse line of cuts and extending to said transverse line of cuts and adapted to be broken subsequently by the user for tearing each portion from said strip, and means forming a line of weakness between said imperforate portion and said circular line of spaced cuts to facilitate breaking said imperforate portion.

3,001,647

PACKAGE

Jack Lim, Chicago, Ill.
Filed Oct. 22, 1958, Ser. No. 768,929
3 Claims. (Cl. 206—65)



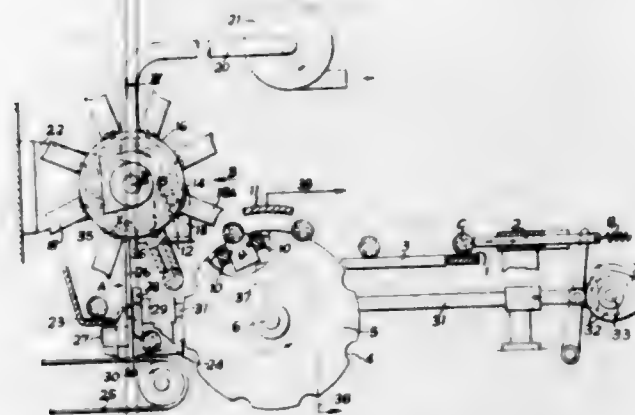
3. Packaged goods comprising a plurality of generally cylindrical bottles which converge toward the bottoms thereof, a container formed of a relatively stiff board having therein a plurality of apertures arranged in two adjacent rows, said apertures corresponding in cross section to the respective cross sections of said bottles at locations between the tops and bottoms thereof, said bottles being positioned in said apertures and supported

only by the wedging of said bottles along their converging sides with the edges of said board forming said apertures, said bottles being spaced apart by said apertures, the spacing between said rows being such that the minimum distance between the bottles in adjacent rows is slightly greater than twice the thickness of said board, the inner surface of said board being provided with a first pair of scores lying parallel to said rows and respectively disposed between said rows and the ends of said board and being respectively displaced from the apertures in the adjacent rows by a distance equal to the corresponding distance between the adjacent edges of said bottle at the location of said apertures and the edges of said bottles at the location of maximum cross sectional dimension in the longitudinal direction of said board, a second pair of scores respectively provided in the upper surface of said board between said first scores and the longitudinal ends of said board, said second scores being spaced from said first scores by a distance equal to the distance between the tops of said bottles and points thereon disposed substantially at the upper surface of said board in the immediate vicinity of said apertures, a third pair of scores respectively provided in the upper surface of said board between the second scores and the longitudinal ends of said board, said third scores being spaced from said second scores by a distance substantially equal to the maximum width of said bottles in the direction longitudinal to said board, and said third scores being spaced from the longitudinal ends of said board by a distance which is no greater than the distance between said first and second scores, said board being folded over said bottles along said scores with the end portions thereof interposed between said rows of said bottles to lock said board in an enclosing condition and also to provide a flat top on which similar packaged goods may be stacked.

3,001,648

DEVICE FOR SEGREGATING SELECTED CIGARETTES

Desmond Walter Molins and Gordon Francis Wellington Powell, Deptford, London, England, assignors to Molins Machine Company Limited, London, England, a British company
Filed Feb. 23, 1956, Ser. No. 567,369
Claims priority, application Great Britain Feb. 25, 1955
3 Claims. (Cl. 209—81)



3. A device for segregating cigarettes of incorrect weight from a quantity of cigarettes composed of correct and incorrect weight cigarettes, comprising a cigarette conveyor which conveys cigarettes laterally with respect to their length and in positively spaced relationship, a plurality of plates of electrically conductive material spaced apart and movable therewith, a fixed plate of said material mounted in a position such that each successive moving plate passes the fixed plate and forms a condenser therewith, and means for feeding cigarettes to the conveyor, wherein each successive cigarette lies near

each successive moving plate and in a position to constitute at least the major part of the condenser dielectric when passing the fixed plate, a first conductor connected to a moving plate at the detecting position and a second conductor connected to the fixed plate, a high-frequency generator connected to said conductor, and a detecting system connected to said second conductor, whereby the capacity of the condenser having at least part of a cigarette between the plates causes a signal whose amplitude is compared in the detecting system with a signal having an amplitude equivalent to that which would have been produced by a correct cigarette positioned between the plates and means for segregating cigarettes of incorrect weight from the quantity fed to said conveyor, said means operating in response to an output from the detecting system resulting from a predetermined difference between the compared signals.

3,001,649

APPARATUS FOR SORTING SWITCH TIES

Thomas Gibbs Rogers, Atlanta, Ga., assignor to Southern Wood Preserving Company, Atlanta, Ga., a corporation of Georgia
Original application Apr. 16, 1958, Ser. No. 728,879.
Divided and this application Aug. 10, 1959, Ser. No. 832,664
3 Claims. (Cl. 209—90)

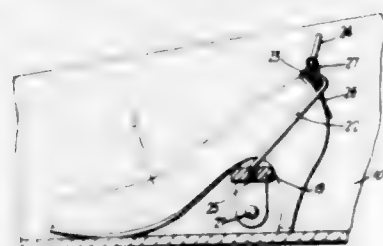


1. Apparatus for automatically sorting switch ties trimmed to various predetermined lengths, with each tie differing in length from the next longer tie by an equal predetermined increment comprising an elongated conveyor having a plurality of longitudinally spaced power driven rollers mounted thereon over which the ties pass as they travel lengthwise down the conveyor from its receiving end; a plurality of unloading stations located at longitudinally spaced positions along the conveyor at each of which all ties of two predetermined lengths are ejected from the conveyor; each of said unloading stations including a pair of downwardly inclined ramps positioned on opposite sides of the conveyor in position to receive the ties ejected from the conveyor at the loading station, a pair of kick-off devices, one for ejecting ties of one predetermined length on one side of the conveyor and one for ejecting ties of another predetermined length on the other side of the conveyor, each of said kick-off devices including a shaft rotatably mounted on the conveyor on the side thereof adjacent the ramp onto which the kick-off device ejects the tie and carrying a plurality of axially spaced kick-off arms projecting inwardly therefrom, said arms normally being maintained in a "down" position below a tie moving along the conveyor and being swingable by the rotation of said shaft to an "up" position whereby they will engage and kick off a tie positioned thereabove onto the ramp associated therewith; a double acting compressed air cylinder connected to rotate said shaft in both directions; and a valve operated by a pair of solenoids connected in separate circuits for controlling the flow of compressed air to and from said cylinder; and electrical control means for operating both of the solenoid operated valves including a plurality of limit switches connected to control the energizing and deenergizing of the solenoid operated valves; and a plurality of actuators mounted on the conveyor in longitudinally spaced rela-

tion and with each actuator positioned to operate one of said limit switches when engaged by a tie passing through the unloading station.

3,001,650 PORTABLE SHOWCASES

Charles Keymer Turner, Thurmaston, England, assignor to A. Potterton Limited, Leicester, England
Filed June 27, 1958, Ser. No. 745,195
1 Claim. (Cl. 211—34)



In a portable showcase for footwear, means for retaining footwear samples comprising tray means, a crossbar mounted in said tray means at a distance from the bottom of said tray means, elastic strap means having each end thereof secured to said crossbar for detachably holding a sample in place by its intermediate portion extending around the rear part of the sample to embrace the heelward end of the sample so that the latter is urged downwardly and forwardly into firm engagement with said crossbar, said crossbar engaging the heelward underpart of the sample and being pivotably mounted in said tray means, thereby being adaptable to the shape of the footwear sample attached thereto.

3,001,651 WORK TRANSFER APPARATUS

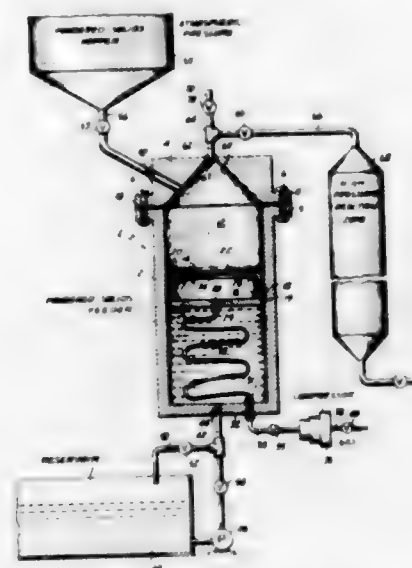
Francis A. Fekete, Detroit, Henry J. Mansell, Davison, and John P. Moco, River Rouge, Mich., assignors to Moco Industrial Equipment, Inc., Melvindale, Mich., a corporation of Michigan
Filed July 26, 1957, Ser. No. 674,379
4 Claims. (Cl. 214—1)



1. A work transfer apparatus for transferring workpieces from a first machine to a second machine, comprising a supporting framework adapted to be positioned between the machines, an elongated guideway mounted on said framework, a carriage mounted on said guideway for travel therealong between the machines, a pivot element pivotally mounted on said carriage for turning motion relatively thereto, a support element mounted on said pivot element for swinging motion therewith, said support element having a part mounted on said pivot element for axial movement relatively to said pivot element, a workpiece gripping device mounted on said support element, motive mechanism operatively connected to said carriage for moving said carriage along said guideway, means responsive to the travel of said carriage along said guideway for swinging said support element and workpiece gripping device relatively thereto from alignment with one machine into alignment with the other machine and means mounted at a predetermined location on said guideway for moving said support element part axially relatively to said pivot element, said axial moving means including a reciprocatory fluid pressure motor having a reciprocable piston operatively connected to said pivot element.

3,001,652 APPARATUS FOR FEEDING FINELY DIVIDED SOLIDS

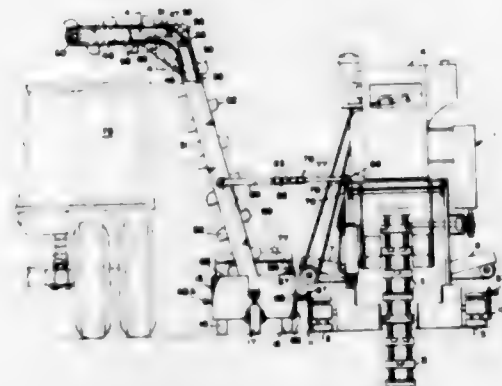
Wilburn C. Schroeder, College Park, Md., and Harold D. Levene and Thomas G. Stephenson, El Paso, Tex., assignors to Fossil Fuels, Inc., a corporation of Delaware
Filed Oct. 24, 1958, Ser. No. 769,380
7 Claims. (Cl. 214—17)



1. Apparatus for feeding finely divided solids from a reservoir zone at substantially atmospheric pressure to a high-pressure reaction zone, comprising: a feed vessel having a cylindrical feed chamber, a piston mounted in said chamber for movement throughout substantially its entire length, valved inlet means communicating with one end of said chamber for introduction of said finely divided solids from said reservoir zone, valved outlet means communicating with the same end of said chamber for feeding said solids therefrom to said high-pressure zone upon advancement of said piston, means for admitting hydraulic fluid into said chamber on the side of said piston opposite said inlet and outlet means to force said piston through said chamber and displace solids therein, means for withdrawing hydraulic fluid from said chamber to permit said piston to retract, and means for introducing a pressure-equalizing and aerating gas through said piston and into said chamber ahead of said piston before and during the forward movement of said piston.

3,001,653 TRUCK LOADING CONVEYOR FOR DITCHING MACHINES

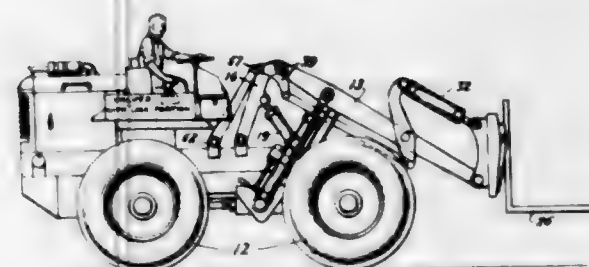
Herbert C. Wilton, 7800 SE. Luther Road, Portland 6, Oreg.
Filed Mar. 20, 1959, Ser. No. 800,759
1 Claim. (Cl. 214—83.36)



A power driven conveyor and a portable support therefor both adapted for attachment to one side of and for traveling with a ditch digging machine having a self-contained conveyor, said support comprising a receptacle

having a bottom wall, front, rear and side walls and supported upon two forward ground-engaging idling wheels and a rearward ground-engaging idling caster wheel, said front and rear walls having forwardly and rearwardly aligned upwardly opening recesses therein, means carried by one of said side walls cooperating with means carried by the ditch digging machine for hingedly attaching the support to said machine, whereby said power driven conveyor and support therefor will travel along with and depend upon guidance by the digging machine during a digging operation, said power driven conveyor having a top end and a bottom end and comprising parallel side plates held in spaced relation to each other at their top and bottom ends, a bearing block gravitationally held within each of said recesses, a driving shaft journaled through said bearing blocks, a roller secured to said shaft between said plates and adapted to maintain said bottom end of the plates in said spaced relation and whereby the power driven conveyor is swingably supported by said receptacle, a prime mover carried by said support and operatively connected to said driving shaft, longitudinally adjustable means attached at one of its ends to one of said side plates and adapted for connection at its opposite end to a structural element of said digging machine and adapted at said opposite end for selective attachment to one of said side walls of the receptacle, whereby said power driven conveyor can be held in various angular positions off the vertical relative to said digging machine and to said support by said adjustable means when attached to said digging machine or held in a balanced position relative to said support by attachment of said opposite end of said adjustable means to said support.

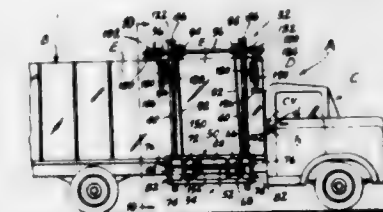
3,001,654
REACHING AND SELF-LEVELING LOADER
William E. Albert, Bensenville, Ill., assignor to Pettibone Mulliken Corporation, a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,306
2 Claims. (Cl. 214—140)



1. Load handling apparatus including a main frame and a link pivoted thereto near the bottom of the link, a boom extending forwardly from the link and pivoted to the link near the top of the link, a load carrying device carried by the boom near the front of the boom and pivoted thereto, means for raising and lowering the boom extending between the boom and the main frame and in at least one boom position being generally parallel to but spaced from the link, and means for pivoting the link about its pivotal connection to the frame, characterized by the provision of linkage for pivoting the load carrying device on the boom approximately inversely and equal to and directly in response to changes in the angularity of the boom to the frame, whereby the load carrying device is maintained at a given relationship with respect to the horizontal in spite of movements of the boom and movements of the link; said linkage including a first pantograph type of linkage including the link as one element and a second pantograph type of linkage including the boom as one element, with a common element coupling the two linkages and providing in the first linkage two parallel pivotal axes spaced along a plane generally parallel to a plane common to axes by which said

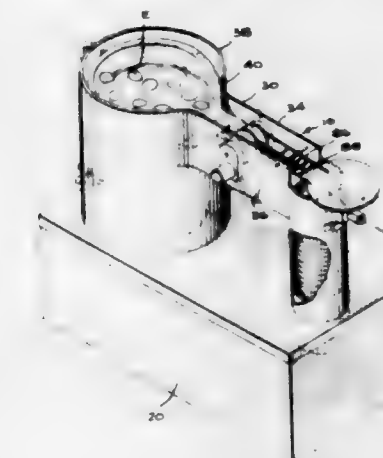
first linkage is pivoted to the frame, and providing in the second linkage two parallel pivotal axes spaced along a plane generally parallel to a plane common to axes by which the second linkage is pivoted to the load carrying device.

3,001,655
LOADING APPARATUS FOR REFUSE COLLECTION TRUCKS
George B. Tippet, Jennings, Mo., assignor to North Side Haulers, Inc., St. Louis County, Mo., a corporation of Missouri
Filed Feb. 29, 1960, Ser. No. 11,750
7 Claims. (Cl. 214—302)



5. In a loading apparatus of the character disclosed, container tilting and inverting mechanism including in combination: a pair of dump arms journaled in horizontally spaced relationship on a rotatably supported overhead shaft; a pair of hydraulic cylinders; a pivotal mounting for the lower end of each cylinder; and a pivotal connection between the outer end of the piston of each cylinder and one of the dump arms aforesaid.

3,001,656
EGG BASKET UNLOADER
Carl W. Brooks, Rte. 1, Box 91, Orange Cove, Calif., and Elmer W. Brooks, Rte. 1, Box 3607T, Willits, Calif.
Filed Aug. 29, 1958, Ser. No. 758,037
5 Claims. (Cl. 214—309)



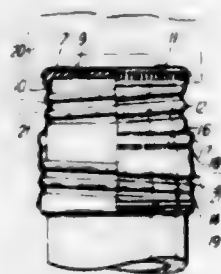
1. An apparatus for unloading eggs from a basket in which they are placed as they are removed from the nests, said apparatus comprising a housing including a reservoir for a fluid and a compartment in which the basket with eggs is seated, a horizontally-disposed semi-circular discharge piping extending about the interior of said compartment adjacent to and spaced below the top of said compartment, pump means conveying fluid from the reservoir to said piping and establishing a flowing fluid pool in the compartment for floating eggs out of the basket, said compartment having an upper end formed with a convergent passage establishing an overflow outlet means through which the eggs are floated in one-by-one fashion, a narrow, elongated trough of a width to only accommodate the eggs in single fashion extending from the compartment and having a bottom formed with openings large enough for the fluid and any nest debris to flow out through but small enough to pre-

vent the eggs from passing therethrough, said trough being inclined downwardly and outwardly from the compartment for the gravity sliding in one-by-one fashion of the eggs, said trough having an inner upper end and an outer lower end, said inner end being disposed above and outwardly from and in alignment with the outlet means and means for raising the eggs in one-by-one fashion onto the inner end of the trough.

3,001,657 CLOSURES FOR BOTTLES AND LIKE CONTAINERS

William Robert Gamble, Little Aston, England, assignor to Metal Closures Limited, West Bromwich, England, a British company

Filed Apr. 25, 1955, Ser. No. 503,740
Claims priority, application Great Britain Jan. 10, 1955
8 Claims. (Cl. 215-42)



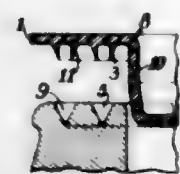
1. A closure for a bottle or like container of the kind referred to comprising a one-piece cup-like member the skirt of which includes an upper portion adapted with the base of the said member to provide a re-closure for the container, a lower portion adapted to provide a security ring and an intermediate outwardly dished portion weakened to permit ready separation of the upper and lower portions, the upper and lower portions being adapted respectively to cooperate with screw thread formations of opposite hand on the container when the closure is in operative position on the container and the internal diameter of the upper portion of the skirt being less than the internal diameter of the lower portion of the skirt to such an extent that after separation of the upper and lower portions the lower portion can be removed from the container by movement lengthwise thereof.

3,001,658 BOTTLE SEALING DEVICES

William Jacques Herter, 90 Ridge Drive, Livingston, N.J.

Filed Mar. 8, 1960, Ser. No. 13,546

Claims priority, application Switzerland Dec. 28, 1959
3 Claims. (Cl. 215-47)



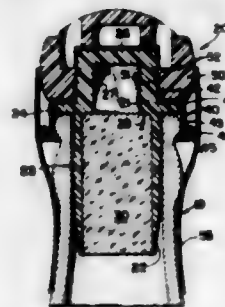
1. Stopper for a container having formed in the upper edge of its neck at least one peripheral circular groove of open-cone configuration in section, said stopper consisting of a flexible plastic capsule having formed on its sealing surface, at a radial distance corresponding to that of said neck groove, at least one lip of frustoconical section of which the base width is at least equal to that of the cone of said neck groove, the height of said frustoconical-sectioned lip being smaller than that of said groove, the vertex angle of said lip being inferior to that of said groove, a peripheral groove being formed in said frustoconical-sectioned lip.

3,001,659 BOTTLE CLOSURE WITH CORK

Charles A. Schultz, New York, N.Y., assignor to Lok-Seal, Inc., New York, N.Y., a corporation of New York

Filed Oct. 16, 1959, Ser. No. 846,860

5 Claims. (Cl. 215-48)



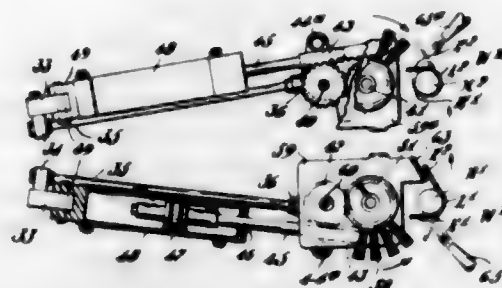
1. A closure for the neck of a bottle comprising a stopper having an externally ribbed, hollow axial extension defining a first chamber, an outstanding annular flange at the upper end of said extension, a relatively thick-walled, hollow crown above said flange, said hollow crown being of lesser internal diameter than said axial extension, said crown defining a second chamber coaxial with said first chamber and of less diameter than said first chamber to thereby provide a shoulder, said first and second chambers communicating with each other at said shoulder, a cork member in said first chamber and substantially occupying said first chamber, said shoulder defining a stop for said cork member, a securing member on said stopper for securing said stopper to a bottle, and a head secured to the exterior of said crown securing said member on said stopper, whereby upon insertion of said closure into the neck of a bottle the saturated atmosphere in said bottle will cause moisture to penetrate said cork member towards the drier atmosphere in said second chamber to thereby uniformly saturate and expand said cork member.

3,001,660 LABEL-WIPING MEANS FOR LABELING MACHINES

Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin

Filed Jan. 24, 1958, Ser. No. 710,958

12 Claims. (Cl. 156-440)



1. A labeling machine of the kind which is capable of applying to the neck portion of a bottle a label which embraces the neck portion through an arc exceeding 360°, and wherein bottles to be labeled stand upright in spaced relation upon a conveyor which advances the bottles intermittently along a rectilinear path from one operating station to another at each of which a bottle dwells, and wherein neck labels are removed, one after another, from a magazine located at one side of said path and each is coated on one face with adhesive in readiness to be applied to the bottle neck, and wherein, at a dwell station which a bottle reaches before arriving at the first of two label wiping stations, a label-applying element, located at one side of said path and which

moves substantially horizontally for applying the label, functions to contact the central portion only of the adhesively coated face of a neck label with the neck portion of the bottle, leaving the opposite ends of the neck label projecting in divergent relation toward the other side of the conveyor path, characterized in that, at the last-named side of the conveyor path, that is, at the opposite side from said label-applying element, there are two rotary wipers located, one at each, respectively, of two wiping stations, and power driven mechanism which turns the two wipers in directions such that one wiper is effective to wipe one end portion of the neck label about a bottle neck while the bottle dwells at the first of the wiping stations, and the other wiper is effective to wipe the other end of the same neck label about the bottle while the latter dwells at the other of said wiping stations.

3,001,661 EGG CRATE OR CASE FILLERS OR TRAYS

Stanley F. Flynn, Valley Forge Army Hospital, Phoenixville, Pa.

Original application June 4, 1958, Ser. No. 739,955, now Patent No. 2,951,605, dated Sept. 6, 1960. Divided and this application Mar. 23, 1960, Ser. No. 20,798

1 Claim. (Cl. 217-27)

(Granted under Title 35, U.S. Code (1952), sec. 266)



An egg tray adapted to be assembled with other like trays inside an egg crate or case to support and protect eggs against breakage, comprising a flat plate made of a relatively stiff material, said plate having parallel regular rows and alternate regular rows, in which every other row consists of egg-seating perforations and interposed resilient flexible tubular members upstanding from one side only of said plate, said perforations and said tubular members being arranged in alternate relationship, the regular rows in between the alternate regular rows each consisting of a plurality of like resilient flexible tubular members arranged side by side in the row and also upstanding from said flat plate, and all of the tubular members in all of the rows being disposed at one and the same side of said flat plate with their axes substantially perpendicular to the plane of the plate.

3,001,662 CONTAINERS

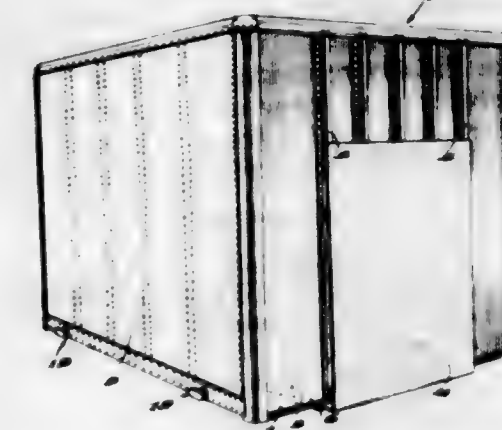
William A. Herpich, Knoxville, Tenn., assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee

Filed Oct. 8, 1956, Ser. No. 614,759

1 Claim. (Cl. 220-1.5)

A container of the type to be lifted and transported by a mobile hoisting means comprising an enclosing structure having opposite side walls of sheet material and a bottom, a supporting frame structure connected with said bottom and including longitudinally spaced cross beams interconnected by pairs of transversely spaced tie members adjacent said side walls, separate lifting pins mounted in said supporting structure at the lower end of said opposite side walls, said mounting means comprising an elongated sleeve of slightly less length than said pins for each lifting pin slidably receiving the lift-

ing pin therein for lengthwise movement relative thereto, said sleeve rigidly mounted between a pair of tie members with its outer end substantially flush with the adjacent



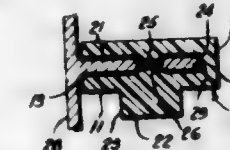
side wall, a wing of greater area than said sleeve on the outer end of the pin, and means for limiting the outward sliding movement of the lifting pin with respect to the sleeve.

3,001,663 SHIELD FOR THREADED FLANGES OF ELECTRIC OUTLET BOXES

Aram Takvorian, 348 Walsh Court, and Edward Rosenberg, 1160 Ocean Ave., both of Brooklyn 30, N.Y.

Filed Oct. 7, 1960, Ser. No. 61,231

3 Claims. (Cl. 220-3.4)



1. A shield for enclosing the threaded flange of an electric outlet box and the like, said shield comprising two substantially flat side portions, edge sections integral with said side portions and maintaining said side portions in parallel spaced relationship for enclosing said flange, whereby each of said side portions has inner and outer surfaces, and opposed projections integral with said side portions and located upon the inner surfaces thereof, said projections fitting into the threaded portion of the flange, and an elongated shoulder integral with one of said side portions and projecting outwardly from the outer surface thereof, said shoulder having at least one side extending substantially perpendicularly to said outer surfaces.

3,001,664 HOUSING FOR DOOR CLOSING DEVICE

Russell C. Flint, Princeton, Ill., assignor to LCN Closers, Inc., Princeton, Ill., a corporation of Illinois

Filed Jan. 14, 1957, Ser. No. 634,062

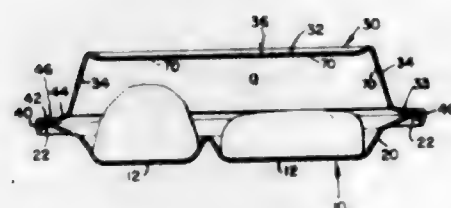
1 Claim. (Cl. 220-4)



A housing for a door closing device comprising a base member; means for securing said base member to a door; a cover member for enclosing said door closing device having two end wall members, a side wall member, a

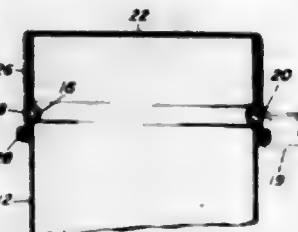
bottom wall member, and an open top, said end wall members spaced apart a distance greater than the length of said base member; said base member having at each end a flat horizontal portion, said flat horizontal portions extending outwardly to positions adjacent said end walls of said cover member; a slot at the upper portion and on the interior surface of each of said end wall members positioned for slidably receiving said flat horizontal portions therebetween; and screw means coaxing with said cover member and said flat horizontal portions for removably securing said cover member to said base member.

3,001,665
CONTAINER AND COVER THEREFOR
Harry A. Tomarin, 7210 Parkdale, Cincinnati, Ohio
Filed June 12, 1957, Ser. No. 665,312
2 Claims. (Cl. 220-4)



1. A two-piece container comprising a lower portion and an upper portion, said lower portion including an upstanding side wall, said lower portion also including a pair of upwardly convergent portions supported by the upper portion of said upstanding side wall, said upwardly convergent portions defining a substantially inverted V-shaped panel and one of said upwardly convergent portions having an outer periphery defining a rim portion, said upper portion of the container including a depending side wall, said upper container portion also including a pair of downwardly convergent portions supported at the lower portion of said depending side wall and defining a substantially V-shaped panel, the outer edge of one of said downwardly convergent portions of the top portion of the container including a depending portion adapted to overlappingly engage said rim portion of the lower portion of the container with the apex portions of said V-shaped panels in engagement with one another to provide a secure sealing interlock between said upper and lower portions of the container.

3,001,666
CONTAINER CLOSURE
Raymond C. E. Caproni, 7102 Vivian Ave., Dallas, Tex.
Filed June 9, 1959, Ser. No. 819,157
4 Claims. (Cl. 220-48)



1. The combination of a container having a side wall provided at its upper edge with a downturned continuation superposed on the upper end portion of said side wall and exteriorly of the latter to provide a side wall portion of double thickness, said side wall portion being provided with an outwardly opening circumferential groove in a plane spaced downwardly from the upper edge of the side wall and upwardly from the lower edge of said downturned continuation, and a closure having a top wall extending across the upper end of said container

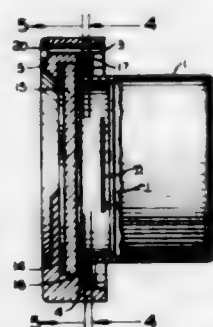
and a circumferential skirt depending from said top wall in surrounding relation with said side wall portion of double thickness, the lower edge of said skirt being connected to the lower edge of said downturned continuation and a circumferential portion of the skirt above its lower edge spanning said circumferential groove, whereby said circumferential portion of the skirt may be severed by a rolling cutter entering said groove without penetrating said side wall portion of double thickness.

3,001,667
PORTABLE GRAIN HOPPER
Harry W. Whiting, Rural Route, Lamont, Okla.
Filed Sept. 14, 1959, Ser. No. 839,743
3 Claims. (Cl. 220-69)



1. A portable grain hopper device for temporarily storing grain received from trucks or the like prior to the elevation of the grain by a grain elevator comprising a base member adapted to rest on the ground at a location where it is desired to dump grain from the truck, said base member having a frustospherical indentation centrally positioned in its upper surface; a generally conical hopper having a spherically rounded apex resting on said base member with its apex in said indentation for tilting movement of said hopper in response to inadvertent blows from said trucks; and elastic means connected between said hopper and the base member for constantly urging the hopper into an upright position.

3,001,668
ELECTRIC METER CASE
Lawrence R. Burk and Wilson A. Charbonneau, Dayton, Ohio, assignors to WacLine, Inc., Dayton, Ohio, a corporation of Ohio
Filed July 28, 1958, Ser. No. 751,290
3 Claims. (Cl. 220-82)



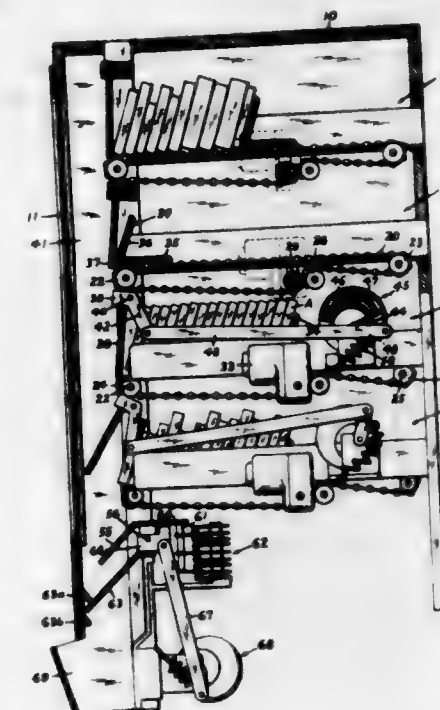
3. A meter case comprising a substantially hollow housing provided with a forwardly presented opening surrounded by a diametrically enlarged radially extending planar flange, said flange in turn being provided at spaced intervals around its periphery with radially projecting ears which are of substantially the same thickness as the flange and are coplanar therewith, an annular bezel having an external diametral size substantially larger than the diametral distance between the outermost peripheral margins of the ears, said bezel including a cylindrical collar-like portion, the inside diameter of which is slightly larger

than the outside diametral size of the annular flange of the housing so as to fit snugly but slidably around the periphery of said flange, said bezel being provided along its forward margin with an inwardly extending annular shoulder framing a relatively large viewing opening formed within the bezel, said shoulder having a rearwardly presented flat planar surface adapted for presentation abuttingly toward the outwardly presented face of the flange on the housing, the collar-like-portion of the bezel being further provided adjacent its rearward margin with a planar annular groove of substantially the same axial width as the thickness of the ears, said collar also being provided with spline-like axially extending recesses of slightly greater arcuate width than the ears and located around the collar-like portion in registering position with relation to the ears so that the ears may be slid into the recesses, said recesses being deeper in the axial direction than the axial distance between the groove and the rearwardly presented margin of the collar-like portion so that the ears can be pushed into the recesses past the groove, a transparent circular window-element having an outer diametral size approximately equal to the outside diametral size of the flange on the housing, a pair of resilient sealing rings disposed on opposite sides of the window-element, said sealing rings having an outside diametral size substantially similar to the outside diametral size of the window-element and being of relatively narrow radial width so as to abut respectively against the rearwardly presented face of the flange without obscuring the window opening of the bezel or the forwardly presented opening of the housing, and a planar locking ring having a thickness substantially equal to the thickness of said groove, said locking ring having an internal diametral size slightly greater than the outside diametral size of the housing so as to fit snugly but nevertheless rotatably and slidably upon the housing so that it can be slid forwardly along the housing into abutment against the rear face of the flange thereof, said ring having an external diametral size slightly smaller than the internal diametral size of the collar on the bezel, said ring furthermore being provided with radially outwardly extending ears sized and positioned for slidable disposition within the recesses of the collar so as to be slid inwardly within the recesses into alignment with the groove and then rotated into engagement with the groove for locking the flange, the resilient rings and the window-like element into sealed position with the bezel, the combined uncompressed thickness of the two sealing rings, the window-element and the flange being greater than the axial distance between the planar surface and the groove of the bezel so that the housing and bezel are pressed axially together placing the sealing rings under compression when the ears of the locking ring are engaged in the groove, said bezel and said locking ring respectively having apertures for the reception of turning tools whereby the bezel and sealing ring can be rotated relative to each other to bring the ears of the locking ring into engagement within portions of the groove between the recesses.

3,001,669
VENDING AND DISPENSING DEVICE
William S. Tandler, New York, David S. Walker, Little Neck, and Morris Grossman, Brooklyn, N.Y., assignors to Rowe Manufacturing Co., Inc., Whippany, N.J., a corporation of New York
Continuation of application Ser. No. 196,428, Nov. 18, 1950. This application Nov. 19, 1957, Ser. No. 697,389
13 Claims. (Cl. 221-12)

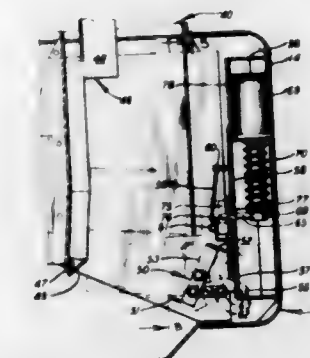
12. A merchandising machine including in combination a delivery chute having an opening through which an article is delivered, an article supply, a dispensing unit for moving an article from said supply into said chute, a flap, means mounting said flap between said chute and

said unit for movement to an open position at which the flap permits an article to be moved into the chute and to a closed position at which the flap prevents movement of an article into the chute, means responsive to actuation of said unit for moving said flap to its open position, a gate, means mounting said gate for movement to a closed position at which it prevents communication between said



opening and said supply and to an open position at which it permits an article to be delivered through said opening, means responsive to the presence of an article in said chute for moving said gate to its open position, means responsive to contact by an article moving through said chute for moving said flap to its closed position and time delay means for moving said gate to its closed position a predetermined time after its movement to open position.

3,001,670
AUTOMATIC VENDING MACHINE
Kenneth John Brady, 22236 Baywood Ave., Hayward, Calif., and Neal Townsend, San Francisco, Calif.; said Townsend assignor to said Brady
Filed Mar. 14, 1957, Ser. No. 646,050
4 Claims. (Cl. 221-116)



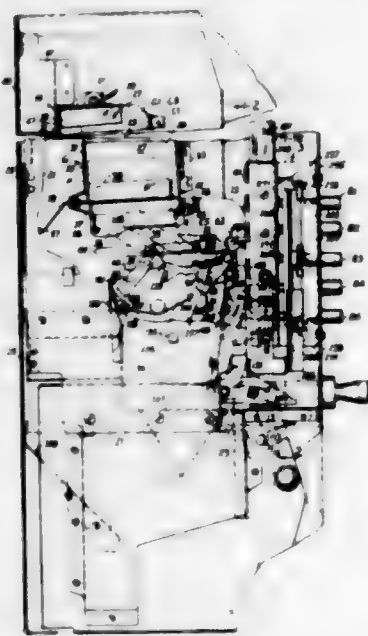
1. A vending machine which comprises a chute arranged to slidably encompass side-by-side laterally-continuous columns of similar articles, means at the end of each column operative to release an article from such column in said chute, means operative to actuate individually said article-releasing means, and means for establishing operative connection of said actuating means to one of said article-releasing means upon completion of actuation of another of said article-releasing means.

3,001,671

ARTICLE DISPENSING APPARATUS

Harry H. Pryor, St. Louis, Mo., assignor to National Vendors, Inc., St. Louis, Mo., a corporation of Missouri
Filed May 12, 1958, Ser. No. 734,693
14 Claims. (Cl. 221-125)

1. Article dispensing apparatus comprising a pair of side walls, article ejector means slidable forward and rearward between said side walls, a rock shaft extending between said side walls below said ejector means, arms on said rock shaft having a connection with said ejector means for moving the latter upon rocking of the rock shaft, a draw bar at the front of said side walls movable forward and rearward, a pusher for pushing the draw bar

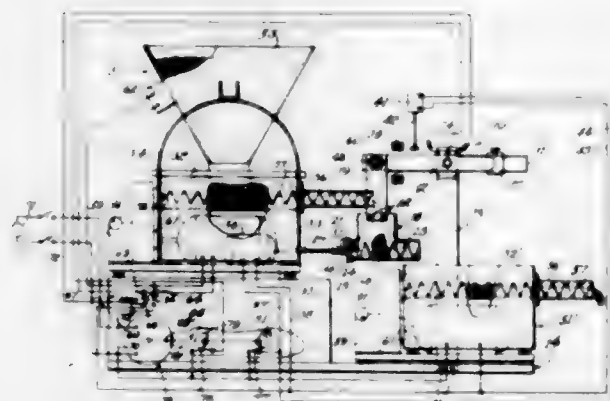


forward, a manually operable pull-out rod extending slidably through the pusher, a ratio arm on said rock shaft, a first link connecting the pull-out rod and said ratio arm, and a second link connecting the ratio arm and the pusher, the connection of the second link to the ratio arm being nearer the axis of the rock shaft than the connection of said first link to the ratio arm.

3,001,672

METHOD AND APPARATUS FOR POWDER FEEDING

Eugene A. Wahl, 294 Forest Ave., Glen Ridge, N.J.
Filed July 1, 1958, Ser. No. 746,002
9 Claims. (Cl. 222-1)



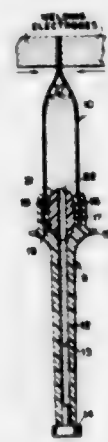
1. A method of dispensing granular material, or the like, comprising weighing out a batch of material into a deenergized screw-type batch weigher feeder during one portion of a weighing cycle, energizing the batch weigher feeder thereby discharging the weighed out batch into a continuously energized screw-type distributor feeder during the remaining portion of said weighing cycle, and continuously distributing the discharged

weighed out batch of material from the distributor feeder in an interval of time substantially equal to the sum of said portions of the weighing cycle.

3,001,673

COLLAPSIBLE CONTAINER PROVIDED WITH FLUID-TIGHT JOINT

Frank E. Brown, Glendale, Calif., assignor to Unette Corporation, Burbank, Calif., a corporation of Delaware
Filed May 9, 1957, Ser. No. 658,042
3 Claims. (Cl. 222-107)



1. A dispenser-container which includes a thin-walled flexible tubular container body sealed at one end thereof and open at the other end thereof, a relatively rigid discharge member for said container having an open ended discharge passageway therethrough, a first cylindrical skirt on said member surrounding an opening therein of said discharge passageway, a second cylindrical skirt on said member coaxially positioned about and spaced outwardly from said first skirt, said skirts defining between them a cylindrical recess in said member freely receiving said open end of said container body, a plug having a bore therethrough disposed inside said first skirt with said bore registering with said discharge passageway to communicate the interior of said container body with said passageway, said plug having a transverse dimension sufficiently great to maintain said first skirt deformed outwardly into contact with said open end of said container body to maintain said open end of said container body expanded into contact with said second skirt.

3,001,674

CONTAINER AND COVER THEREFOR WITH REMOVABLE BAND

Barbara C. Wooten, College Station, Tex.
(Rte. 4, Box 24, Bryan, Tex.)
Filed Oct. 4, 1957, Ser. No. 688,206
1 Claim. (Cl. 222-541)



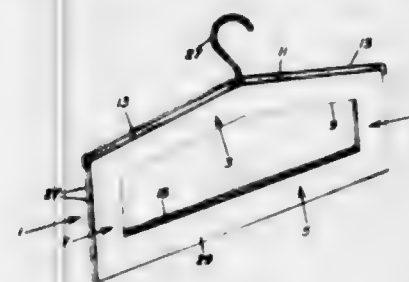
A container comprising a cylindrical body including a reduced upper portion providing a horizontal shoulder, said reduced upper portion having a plurality of circumferentially spaced dispensing openings therein, a cylindri-

cal cover removably mounted on the body, said cover including a top and an annular peripheral flange depending therefrom, said flange telescopically receiving said reduced upper portion of said body and having its lower end resting on the shoulder, said flange having a plurality of circumferentially spaced dispensing openings therein registering with the first named openings, and a band encircling the flange and having its upper portion affixed thereto for closing the registering openings, said band having its lower end abutting the shoulder and detachably affixed thereto, said band being circumferentially scored at a point above a horizontal plane immediately above the upper edge of the openings whereby the lower portion of said band may be wholly or partially torn off for exposing any desired number of the openings.

3,001,675

GARMENT HANGER

Marcy F. Ayres and Teale E. Ayres, both of
1265 Cresthaven Drive, Pasadena, Calif.
Filed Feb. 3, 1960, Ser. No. 6,440
5 Claims. (Cl. 223-88)

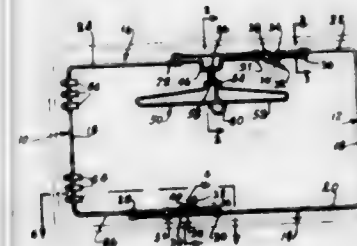


1. A garment hanger comprising an elongated body having an upper edge for hanging garments thereon and a central hanger hook rising from said body, said body being formed of double thicknesses of adhesively secured together stiff sheet material, and a pair of strips of resilient compressible friction gripping material extending along said edge at opposite sides of the hanger hook and projecting above said edge to engage and prevent a garment from slipping on said edge, and being interposed under compression between said thicknesses of the material.

3,001,676

ADJUSTABLE PANTS AND COAT HANGER

Jack Glotzer, 306 W. 24th St., New York, N.Y.
Filed May 29, 1959, Ser. No. 816,840
1 Claim. (Cl. 223-90)



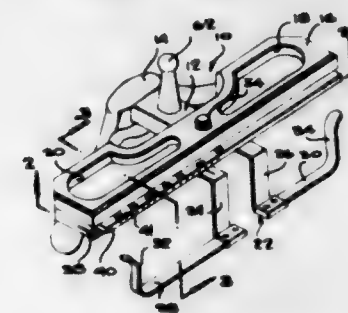
A garment hanger assembly, comprising a rectangular flat sectional frame including opposed generally rectangular U-shaped telescoping sections, each section having a crosspiece and inwardly extending parallel leg portions, a first closely spaced pair of releasable spring clips on the crosspiece of one section for engaging the leg end of a pair of trousers, a second more widely spaced pair of releasable spring clips on the crosspiece of the one section for engaging the waist end of the pair of trousers while the trousers legs are folded and tensioned around the crosspiece of the other section, extensible and retractable means connecting the juxtaposed leg portions of the frame sections, said means including sleeves on the ends

of the respective leg portions, the sleeves on the leg portions of the one section slidably receiving the leg portions of the other section and vice versa, one leg portion having a loop formed therein extending inwardly of the frame and coplanar therewith; an endless wire body defining a hanger for a coat, said wire body having an outwardly extending bent portion, a first hook rotatably secured on said bent portion of the wire body and engaged rotatably around said loop of the one leg portion, whereby said frame is supported by said hook, and a second hook secured rotatably on said bent portion of the wire body and engageable on a rail, whereby both the trousers and coat hangers are supportable by the second hook.

3,001,677

GARMENT HANGER

Robert H. Reynolds, Key Largo, Fla.
(2530 Malone Ave., Memphis, Tenn.)
Filed Dec. 11, 1959, Ser. No. 859,028
4 Claims. (Cl. 223-95)

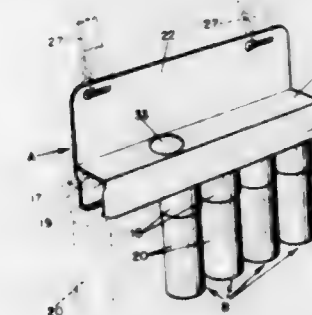


1. In a garment hanger, a vertically disposed holding member embodying a pair of segments arranged in side by side relation, a pair of bars arranged in confronting end to end aligned relation positioned horizontally with respect to said holding member and each having the portion adjacent the confronting end fixedly attached to the adjacent segment, a horizontally disposed trackway adapted to be attached to a vertical supporting surface, a pair of racks slidably supported in said trackway, one of said racks being attached to one of said segments and the other of said racks being attached to the other of said segments, hand operable means in meshing engagement with said racks, and an arm projecting vertically from the nonconfronting end of each of said bars, the portion adjacent the free end of each arm being inwardly bowed, the bowed portions together with said arms providing means for frictionally engaging opposed parts of the waistband of a garment when applied thereto.

3,001,678

SHELL HOLDERS

George Earl Maxwell, 1003 4th St.,
White Bear Lake, Minn.
Filed June 11, 1958, Ser. No. 741,412
8 Claims. (Cl. 224-15)



1. A shotgun shell holder for use with shotgun shells of a predetermined diameter having flanged ends, including a pair of elongated side members, connecting means

supporting said side members in spaced parallel relation, intumed flanges on said side members spaced beneath said connecting means at a distance approximating the diameter of the peripheral flange on the shotgun shell casings, said flanges being spaced apart a distance equal to the diameter of shotgun shell casings but less than the diameter of the peripheral flange on the shotgun shell casings, and stop shoulders on the ends of said side members adjoining the ends of said flanges to prevent shotgun shells from sliding from the ends of said flanges, said stop shoulders terminating substantially below the connecting means connecting said side members and substantially above the flanges whereby shotgun shells may be inserted between said side members or removed from between said side members by passing the peripheral flange of the shotgun shell between said side members above said stop shoulders.

3,001,679

CAR TOP CARRIER

Frederick N. Canning, 1121 Puritan Drive, and Walter L. Canning, 550 N. Glenhurst Drive, both of Birmingham, Mich.

Filed June 10, 1959, Ser. No. 819,366
7 Claims. (Cl. 224-42.1)



1. A rack for supporting and securing deck loads such as on automobile tops comprising paired spaced parallel horizontal bars having opposite ends and having opposed adjacent inner sides and remote outer sides, paired first clamp portions transversely disposed across said bars intermediate the ends thereof; said first clamp portions having hooked outer ends at least partially enveloping said bars' outer sides providing an outer abutment preventing sidewise outer movement of said bars, paired second clamp portions transversely disposed across said bars in opposition to said first clamp portions; said second clamp portions having outer camming ends contacting said bars' inner sides providing an inner abutment preventing sidewise inner movement of said bars; both said first and said second clamp portions having aligned apertures in their area between said bars, a bolt disposed between both said clamp portions lying in said apertures, a nut on said bolt; said bolt and nut forceably drawing both said clamp portions toward one another with said second clamp portions' ends camming said bars against first clamp portions' ends to lock said bars therebetween; and supports on said rack positioning said rods above a supporting surface; both said clamp portions being longitudinally adjustable on said rods by loosening and tightening said nuts and bolts.

3,001,680

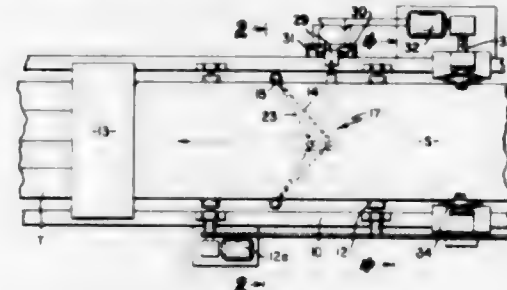
AUTOMATIC STRIP GUIDE AND CENTERING DEVICE

Stanley L. Nitkiewicz, Toledo, Ohio, assignor to Abbey Etna Machine Company, Perrysburg, Ohio, a corporation of Ohio

Filed Oct. 30, 1959, Ser. No. 849,819
6 Claims. (Cl. 226-15)

1. In a machine for horizontally advancing a strip of sheet material which has a tendency to creep laterally, a device for maintaining the strip in a predetermined path of travel, said device comprising a bell-crank lever pivot-

ally mounted at its apex centrally of the path of travel of the strip and spaced vertically from same, one arm of said lever being parallel to the longitudinal axis of the strip and the other arm extending toward a side edge thereof, strip edge engaging means along which the strip passes during advancing movement thereof, arm means extending from said strip engaging means to the pivotal



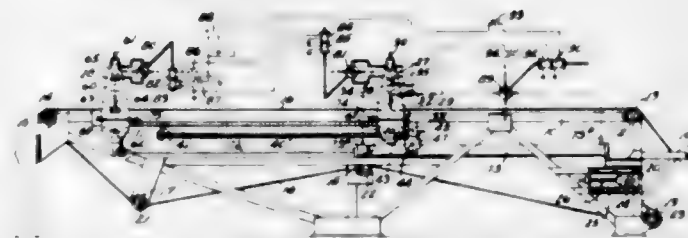
axis of said bell-crank lever, other arm means extending from said strip engaging means to an intermediate point on said first bell-crank arm, motor means for effecting lateral bodily shifting movement of the strip, and means responsive to predetermined rocking movement of said bell-crank lever due to lateral shifting of the strip from a normal position for energizing said motor means for causing the strip to be shifted back to a normal position.

3,001,681

STOCK FEEDING MECHANISM

David C. Wright, Cuyahoga Falls, Ohio, assignor to The Falls Engineering & Machine Company, Cuyahoga Falls, Ohio, a corporation of Ohio

Filed Nov. 4, 1959, Ser. No. 850,964
14 Claims. (Cl. 226-150)



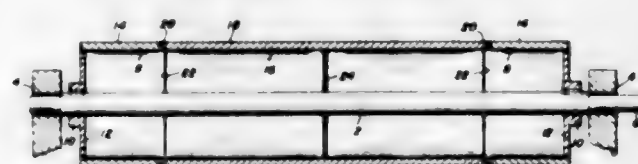
11. Sheet stock feeding mechanism comprising a table, an endless belt having a reach extending over and along said table, a pair of clamping mechanisms movable independently of one another along said table each adapted to independently clamp sheet material against said belt, means for alternately actuating said clamping mechanisms into clamping relation, and means for advancing one of said clamping mechanisms in clamped relation to said belt in regular equal advance movements while the other said clamping mechanism is released.

3,001,682

SELF-CENTERING ROLLS

Martin J. Carroll, Ben Avon Heights, and Edwin T. Lorig, Ross Township, Allegheny County, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

Filed Oct. 21, 1959, Ser. No. 847,792
4 Claims. (Cl. 226-192)



1. A roll for centering and aligning strip comprising a straight shaft, a pair of spaced apart rotatable end sec-

tions mounted on said shaft, each of said end sections including a rim and a web extending from said shaft to the end of said rim toward the adjacent end of said shaft, said web being relatively non-compressible in a radial direction and the end of said rim remote from said web being free to deflect toward said shaft so that said sections under load rotate on axes that diverge away from the direction of strip approach, an intermediate rotatable rim section extending between and supported by the rims of said end sections, and means at the center of said intermediate rim section extending radially between said shaft and the inner periphery of said intermediate rim section.

3,001,683

PAPER CONTAINER

Carl W. Goodwin, North Plainfield, N.J., and John P. Campanelli, Levittown, N.Y., assignors to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware

Filed Jan. 23, 1959, Ser. No. 788,568
2 Claims. (Cl. 229-2.5)

1. A paper receptacle formed from a single treated blank and comprising a bottom wall, an upwardly extending annular side wall integral with said bottom wall, said side wall comprising upwardly extending contiguous corrugations which progressively increase in depth upwardly from said bottom wall, said corrugations being in the compressed, compacted and interfelted state and forming an annular wall having a dense, rigid structure which progressively increases in thickness upwardly from said bottom wall and terminates in an integral outwardly



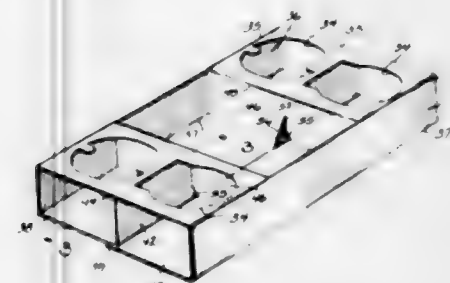
extending annular flange having an integral upwardly extending annular bead disposed about the outer rim thereof thereby providing a smooth flat annular shoulder between the upper end of said side wall and said upwardly extending annular bead.

3,001,684

SERVICE TRAY

Frederick A. Wenzel, Milwaukee, Wis., assignor to St. Regis Paper Company, a corporation of New York

Filed Apr. 13, 1959, Ser. No. 806,179
2 Claims. (Cl. 229-28)



1. A blank for a compartmented service tray having end portions with beverage container support structure and an intermediate portion open to receive food items, said blank comprising a plurality of panels connected on score lines, one of said panels comprising a top for the tray, next adjacent panels at either side of said top panel comprising side walls for the tray and panels next adjacent to said side walls constituting bottom panels for the tray which overlap, one of said bottom panels having a partition panel which in the beverage container support

end portions of the erected tray is parallel to said side panels, said partition panel being cut out centrally in the intermediate portion of the erected tray and having offset portions constituting struts, said top panel having transverse flaps foldable toward said bottom panels to define said intermediate portion, each such flap having a central slit which interlocks with the offset strut portion of the partition panel for interlocking said flaps in transverse relation to said side panels.

3,001,685

POP CASE

William E. Blount, Des Moines, Iowa, assignor to Hoerner Boxes, Inc., Keokuk, Iowa, a corporation of Delaware

Filed Oct. 8, 1959, Ser. No. 845,205
5 Claims. (Cl. 229-34)



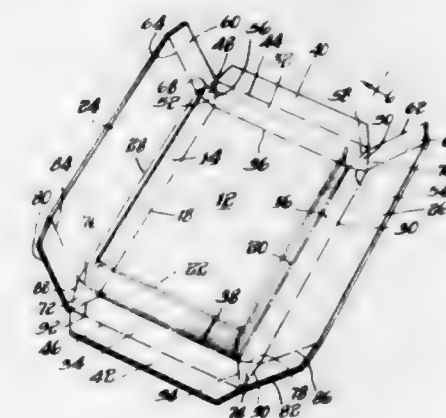
1. A carton comprising an integral sheet cut, scored and folded to provide a substantially rectangular central section and interlocked side and end walls extending upwardly from opposite edges of the central section, said side and end walls being intermediately folded into outer and inner portions, end wall flaps articulated to each end of each portion of the end walls, opposite flaps on each portion being folded inwardly, substantially joining each other centrally of the end walls and providing doubled flap ends projecting from the sides of the end portions for folding from each end of the carton toward the other, said side wall portions being folded over said end wall projecting flaps in covering relation, the inner portions of the side walls having articulated inner bottom portions proportioned together to be commensurate with the central section and in mutual abutment to secure the side walls in assembled relation and with both portions parallel to each other around the projecting end wall flaps.

3,001,686

FOLDING CARTON STRUCTURE

Charles John Shepherd, Hometown, Ill., assignor to Labels Incorporated, Boston, Mass., a corporation of Massachusetts

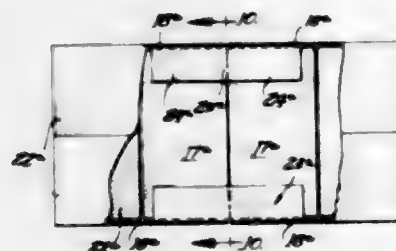
Filed Apr. 8, 1957, Ser. No. 651,536
3 Claims. (Cl. 229-40)



1. A one-piece sheet material blank adapted for forming on automatic machinery into a carton for a book or

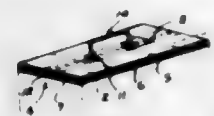
the like, and comprising a central substantially rectangular main body member, a pair of opposite side sections articulated to opposite edges of said body member along substantially parallel scored bend lines, a pair of complementary members respectively articulated to edges of said side sections along scored bend lines substantially parallel to each other and to the first mentioned bend lines and having a combined width similar to the width of said body between said first mentioned bend lines, a pair of end sections respectively articulated to opposite ends of said body member along substantially parallel end scored bend lines which are substantially perpendicular to said first mentioned bend lines, additional pairs of opposite end portions respectively articulated to opposite ends of said complementary members along scored bend lines which are substantially in alignment with the last named end bend lines, pairs of generally triangular end elements articulated to opposite ends of said side sections in alignment with said end bend lines, said end portions and said end section being articulated directly to said triangular elements along scored bend lines converging from the end bend lines and the bend lines along said complementary members.

3,001,687
DOUBLE CARTON CONSTRUCTION
Stephen L. Eifrid, 641 61st Place, La Grange, Ill.
Filed July 7, 1959, Ser. No. 825,506
2 Claims. (Cl. 229—51)



1. A container assembly comprising a first box having side walls joined along opposite edges and throughout the length of such edges to adjacent side walls and along intervening edges to end flaps, a second similar box having a first one of its side walls disposed parallel to and closely adjacent a first one of the side walls of said first box, and four flat connectors each having a slot extending inwardly from one longitudinal edge and receiving said first walls adjacent a different end of said opposite edges, the other longitudinal edge portion of each connector being folded over onto said intervening edges after the adjacent ones of said flaps have been folded away from each other to close at least partially the openings in the boxes defined by said side walls.

3,001,688
CARTON HANDLE
Lynn Hokenson, 2905 Dogwood Road, Springfield, Ohio
Filed Aug. 14, 1958, Ser. No. 754,994
10 Claims. (Cl. 229—52)



1. A carton carrying device comprising, a board unit, at least a portion thereof being corrugated, apertures in

said board unit communicating with the space between adjacent corrugations, handle means having spaced projecting portions disposed through said apertures into said space between said adjacent corrugations and means lying between said adjacent corrugations threaded through said projecting portions of said handle whereby lifting up said handle will effect a lift of said board unit through the medium of said means threaded through the projecting portions thereof.

3,001,689
MOUTH CLOSURE MEANS FOR BAGS COMPRISING HEAT SEALABLE MATERIAL
Drury R. Burton, Bay Village, Ohio, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Oct. 24, 1958, Ser. No. 769,447
3 Claims. (Cl. 229—62)



3. An article of manufacture including a bag comprising heat sealable material and having a mouth closure which is to be opened to allow materials contained in the bag to be removed from the bag, the mouth closure being defined by a pair of overlaying web portions of the heat sealable material, which web portions are held in overlaying relationship but which web portions are to be stripped away from each other to open the mouth closure, a fibrous web piece between said web portions and heat sealed on its opposite faces to each of them to releasably hold them in said overlaying relationship, the heat seal on one face of said fibrous web piece being wider than the heat seal on the opposite face of said fibrous web piece, the heat seals on the opposite faces of said fibrous web piece being themselves located in at least partially overlaying relationship with respect to each other whereby pulling apart said web portions subjects said fibrous web piece to acute prizing and splitting forces.

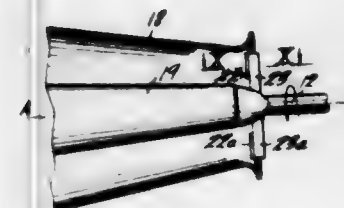
3,001,690
GREETING CARD AND DISPLAY
Alexander J. Paterson, 2730 Brooks St., Salem, Oreg.
Filed Mar. 21, 1958, Ser. No. 723,060
2 Claims. (Cl. 229—92.8)



2. The combination of a pair of greeting cards comprised of stiff flexible material and having substantially flat backing portions of rectangular outline, the backing portions of said cards being secured to each other by a

pair of interlocking tabs integral one with the backing portion of each of the cards, each tab being defined by an elongated arched cut formed in the backing portion of the card next to but inwardly from one edge thereof with the cut arching toward the center of the backing portion, the cut in one card providing a slot means receiving the tab of the other card, the cut in said other card providing a slot means receiving the tab of said one card, one of said cards having a cover portion joined at one edge through a fold line to an edge of its backing portion which extends normally to the said one edge of its backing portion, the backing portion of the card with the cover portion having an additional cut arching toward said fold line and defining a tab opposite said fold line that is in position to hold the free end of said cover portion in place.

3,001,691
JET OPERATED DEVICE FOR CIRCULATING OR COMPRESSING A FLUID
Benjamin Jean Marcel Salmon, Suresmes, and Jean Henri Bertin, Neuilly-sur-Seine, France, assignors to Societe Bertin & Cie, Paris, France, a company of France
Filed Jan. 6, 1959, Ser. No. 785,279
Claims priority, application France Jan. 9, 1958
2 Claims. (Cl. 230—108)

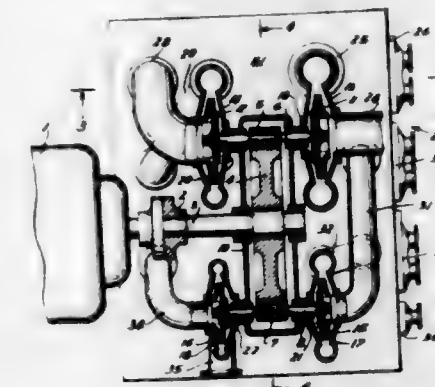


1. An ejector device comprising, in combination, a longitudinally-extending duct having a peripheral wall with said wall defining a convergent inlet end for said duct and said duct being generally divergent away from said convergent inlet end, a hollow rotary shaft coaxial with said duct and disposed at said inlet end, a plurality of hollow vane-shaped arms integral with and extending radially from said hollow shaft toward said wall at said inlet end but the ends of said arms terminating short of said wall and the trailing edges of said vane-shaped arms extending substantially in the transverse plane of smallest cross-section of said duct wherein the convergent portion of said wall is connected to the divergent portion thereof, the interior of said hollow arms communicating with the interior of said hollow shaft, slot-like nozzles formed on said arms and extending along the trailing edges thereof, said nozzles communicating with the interior of said hollow arms, said shaft being adapted to be connected to a supply of fluid under pressure for supplying pressure fluid to said nozzles through the interior of said shaft and said arms, whereby the fluid in issuing from said nozzles forms thin laminar jets directed to move along said duct in a generally helical path.

3,001,692
MULTISTAGE COMPRESSORS
Otto Schierl, Leonhardtstrasse 107, Graz, Austria
Filed Aug. 22, 1958, Ser. No. 756,660
Claims priority, application Germany July 26, 1949
8 Claims. (Cl. 230—130)

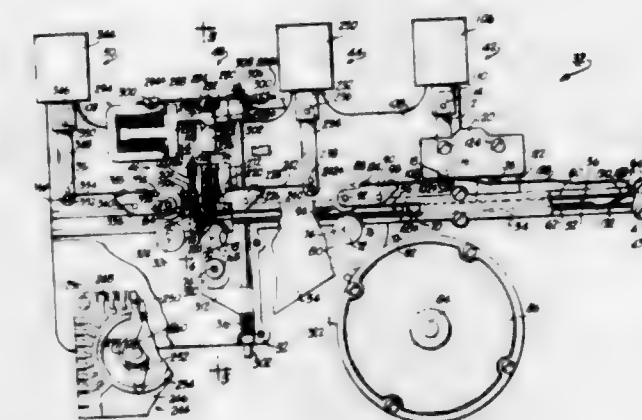
1. In a multistage compressor, in combination, first and second stage compressors arranged on a first common axis; third and fourth stage compressors arranged on a second common axis parallel to said first axis; elongated first, second and third air cooling means extending parallel to each other and to said axes with said first air cooling means located nearer to said first axis than said third

cooling means and said third cooling means located nearer to said second axis than said first cooling means and said second cooling means located between said first and third cooling means; a first stage discharge conduit leading from said first stage compressor to an inlet of said first air cooling means; a second stage supply conduit leading from an outlet end of said first cooling means to an inlet of said



second stage compressor; a second stage discharge conduit leading from said second stage compressor to an inlet end of said second cooling means; a third stage supply conduit leading from an outlet end of said second cooling means to an inlet of said third stage compressor; a third stage discharge conduit leading from said third stage compressor to an inlet of said third cooling means; and a fourth stage supply conduit leading from an outlet of said third cooling means to an inlet of said fourth stage compressor.

3,001,693
DATA HANDLING SYSTEM
John T. Parsons, Traverse City, and Floyd E. Harwood, Ypsilanti, Mich., assignors to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed July 25, 1957, Ser. No. 674,131
12 Claims. (Cl. 234—58)



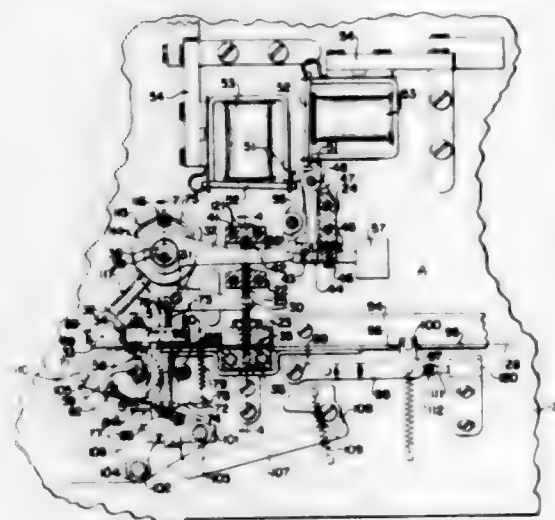
2. A recording apparatus using a badge having a code, a signal controlled punching mechanism, a card transport mechanism for feeding a card to and ejecting said card from said punching mechanism, a receptacle adapted to removably receive said badge, sensing means disposed adjacent said receptacle for sensing the code on said badge, timing means for supplying signals representing instant time, circuit means for connecting said sensing means and said timing means to said punching mechanism, control means for rendering said sensing means and said timing means effective to supply signals representing instant time and said code to said punching mechanism over said circuit means, and contact means in said receptacle operated by the insertion of said badge into said receptacle for placing said control means in operation.

3,001,694

PUNCHING APPARATUS

Richard C. Simmerman, Melvin T. Roudsbush, and William L. Moyer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed June 15, 1959, Ser. No. 820,539
9 Claims. (Cl. 234-110)



3. Perforating apparatus comprising a punch; a lever pivotally supported intermediate its ends by said punch and having means located at one end for oscillating said lever about the punch to move the free end through an elliptical path; engaging means located adjacent the free end of said oscillating lever; means for moving said engaging means to a position engageable by the free end of said lever such that further elliptical movement of the free end of said lever will be prevented and the lever will pivot about said engaging means, thereby operating the punch; and means pivotally connected to said punch for normally urging said punch towards said lever and engageable with the lever for restoring the punch to its original position.

3,001,695

TOTALIZER CONTROLLING MECHANISM FOR CASH REGISTERS AND ACCOUNTING MACHINES

Frank R. Werner and Walter G. Sterzer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Apr. 14, 1955, Ser. No. 501,226
10 Claims. (Cl. 235-8)



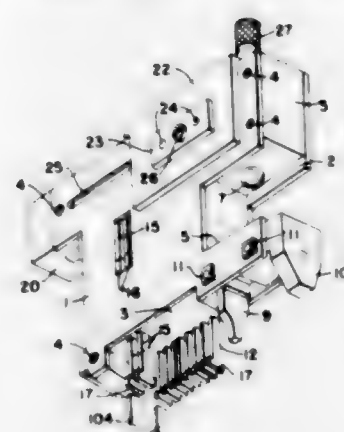
1. In a machine of the class described, capable of several types of operations, said machine having amount keys and actuators adapted to be positioned under influence of the amount keys upon machine operation, the combination of an item totalizer and a group totalizer; means to selectively shift the item totalizer or the group totalizer into alignment with the actuators; an arm connected to the selective shifting means; a shaft, said shaft and said arm being secured together; a second arm se-

cured on said shaft; a control member movable from home position to one of several different positions for controlling the type of operation of the machine according to its position; a stop member having a finger which in one position is in the path of movement of the control member and coacts therewith to determine the position of the control member to control one type of operation of the machine, and which finger in another position is out of the path of movement of the control member to control another type of operation of the machine; a flexible connection between said second arm and said stop member; a cam surface on said stop member; and means on said second arm to coact with said cam surface, whereby rotation of the second arm in one direction causes movement of the stop member, through the flexible connection, such as to position the finger of the stop member in the path of movement of the control member, and whereby movement of the second arm in the opposite direction causes movement of the stop member such as to position the finger of the stop member out of the path of movement of the control member.

3,001,696

ADJUSTABLE CARRIAGE CONTROL STOP FOR ACCOUNTING MACHINES

William Henry Harbor, Edgware, England, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed May 19, 1958, Ser. No. 736,184
Claims priority, application Great Britain June 13, 1957
5 Claims. (Cl. 235-60.5)



1. A function control device constructed and arranged to be detachably mounted in any selected columnar position on the traveling carriage of an accounting machine, said accounting machine having means, including sensing fingers positionable to control the various functions thereof, said device comprising in combination a framework; a function control plate for each sensing finger, said plates freely mounted in the framework, and displaceable by the sensing fingers during positioning movement thereof; and manually operable means mounted on the framework and adjustable to coact with any selected control plate to limit movement of said control plate and the corresponding sensing finger to control the machine for a corresponding function.

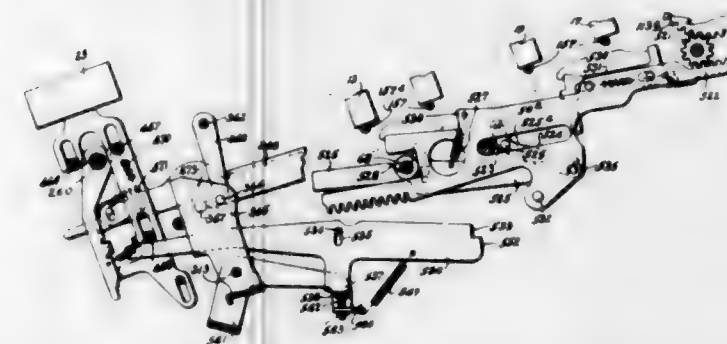
3,001,697

DIFFERENTIAL ACTUATOR CONTROL

Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, a corporation of California
Filed Apr. 14, 1955, Ser. No. 501,395
5 Claims. (Cl. 235-60.18)

1. In a calculating machine, differential actuating mechanism comprising the combination of a differential actuator, means for yieldably advancing said actuator, a blocking lever having a plurality of shoulders at one end thereof adapted to arrest said actuator in different posi-

tions, respectively, a first fulcrum means normally in a first position and adapted to fulcrum said lever intermediate the ends thereof, a second fulcrum means adapted to fulcrum said lever adjacent the end thereof opposite said shoulders, a machine control element operable to fulcrum said blocking lever about said second fulcrum

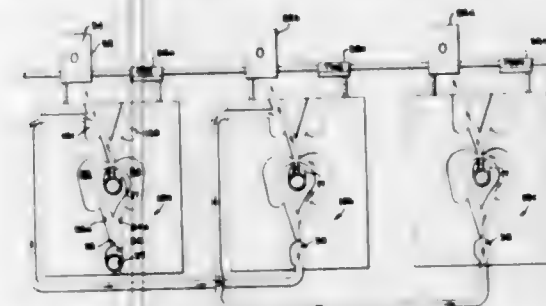


means to locate one of said shoulders in the path of said actuator and to locate said first fulcrum means in a second position, and a second machine control element operable to fulcrum said blocking lever about said first fulcrum means to locate another of said shoulders in the path of said actuator only when said first fulcrum means is in said second position.

3,001,698

FLUID PULSE CONVERTER

Raymond W. Warren, 2515 Seneca Ave., McLean, Va.
Filed Oct. 5, 1960, Ser. No. 60,763
19 Claims. (Cl. 235-61)
(Granted under Title 35, U.S. Code (1952), sec. 266)



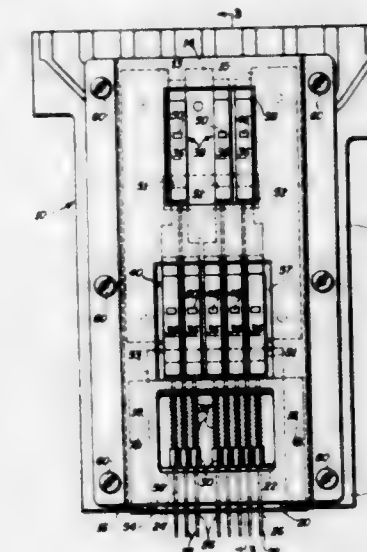
15. A fluid binary counter adapted to count a series of successive fluid pulses received from a source of pulsed fluid signals, comprising a series of fluid pulse converters, each converter having an input tube and a pair of output tubes, said converters being constructed and arranged so as to switch fluid flow into certain of said output tubes when sequential fluid pulses are received by the input tube of the first converter comprising the series, and indicator means actuated by fluid issuing from said output tubes.

3,001,699

BLOCK SENSING ASSEMBLY

Ronald H. Arthur, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Continuation of application Ser. No. 665,986, June 17, 1957. This application Apr. 20, 1960, Ser. No. 23,454
6 Claims. (Cl. 235-61.11)

1. In a perforated record reading device; a block sensing assembly comprising, a thin frame plate having a plurality of electrical conduit lines printed on each side thereof, a plurality of elongated tape sensing fingers slidably mounted on each side of said plate, spring means normally biasing said fingers to their respective extended positions, a lower set of slide housings respectively connected to some of said fingers, the other of said fingers respectively extending between and past said housings, an upper set of slide housings respectively connected to

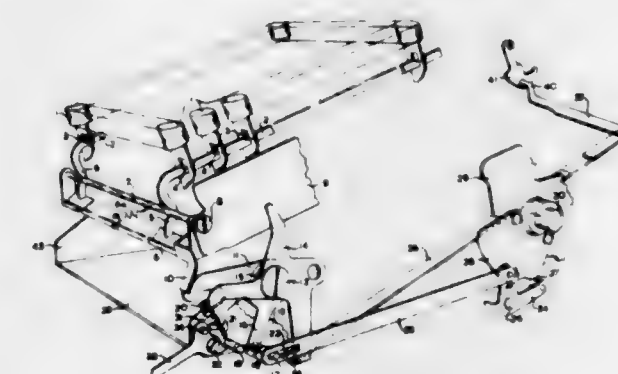


to slidably engage one face of said plate to operatively connect at least two of said lines in response to the respective axial displacements of said fingers.

3,001,700

KEY-RESPONSIVE CYCLE INITIATING MECHANISM

James Bovaird Pow, Tayport, Fife, Scotland, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Sept. 6, 1957, Ser. No. 682,390
4 Claims. (Cl. 235-62)

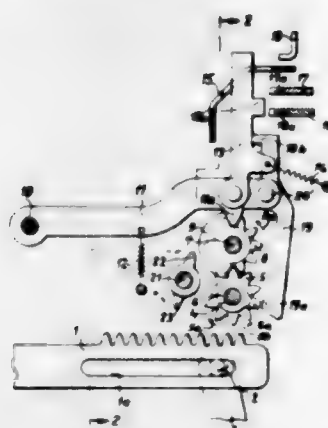


1. In a machine of the class described, the combination of a machine drive means capable of cyclic operation for entering data into the machine; an electric motor energizable for driving said drive means through its cycles of operation upon the closing of an electric circuit; a machine cycle initiating means operable to close said electric circuit to energize said motor; a rockable trip lever for operating said machine cycle initiating means; a rockable impact lever axially aligned and operably connected with said trip lever, said impact lever being yieldingly urged from a home position to a second position, in which it will operate the trip lever; a bail member operably associated with said impact lever and being movable from a latching position to an unlatching position in relation thereto, said bail member being yieldingly urged to the latching position for retaining the impact lever in its home position; a plurality of rows of selectively operable digit keys, each key being operable from a home position to a second position for controlling the entry of data into the machine during a cycle of operation of said drive means; means intermediate and connected to the digit keys and the bail member, and operable by the digit keys, so that when any digit key is operated to a second position the bail member is moved to its unlatching position in relation to said

impact lever, thereby enabling said impact lever to be rocked from its home position to its second position for operating the trip lever and initiating a cycle of operation of said machine drive means; and means operated by said machine drive means for restoring the impact lever to its home position where it is retained by the bail member when yieldingly returned to its latching position upon the release of operated digit keys.

3,001,701 COUNTER MECHANISM FOR SHORTENED MULTIPLICATION

Artur Fröbel, Oberndorf (Neckar), Germany, assignor to Firma Olympia Werke A.G., Wilhelmshaven, Germany
Filed Sept. 26, 1958, Ser. No. 763,577
Claims priority, application Germany Sept. 27, 1957
14 Claims. (Cl. 235-63)



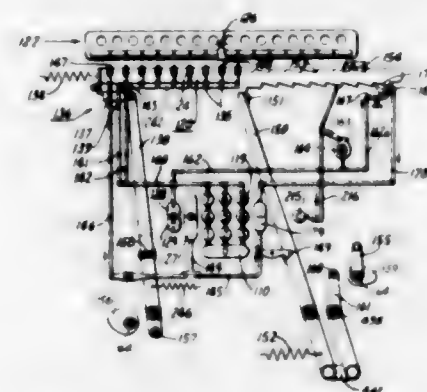
1. In a short-cut multiplying mechanism, in combination, a denominational series of digital counter means turnable between a plurality of digital positions and adapted to be turned by input means in a forward direction from a zero position to digital positions representing introduced multiplier digits and adapted to be turned from said digital position for counting the number of steps between said digital position and the final position thereof; and a denominational series of control and transfer means respectively engaged and controlled by the counter means to stop the counting movement of the counter means of the respective order in said zero position, or in a transfer position following said zero position in a direction opposite to said forward direction, respectively, when the respective control and transfer means is in a position representing a lower digit, or a higher digit, respectively, with reference to a selected median digit; and means controlled by the counter means of each order and operatively connected to the control and transfer means of the respective next higher order to shift the same between said positions for representing a lower digit or a higher digit registered in the respective counter means of the next lower order so that the introduced digit augmented by a unit is counted in any order whose next lower order represents a digit greater than the median digit.

3,001,702 CALCULATING MACHINES

Howard M. Dustin, Phoenix, Ariz., assignor to Smith-Corona Marchant Inc., a corporation of New York
Application Oct. 11, 1954, Ser. No. 461,414, now Patent No. 2,896,846, dated July 28, 1959, which is a division of application Ser. No. 275,259, Mar. 7, 1952, now Patent No. 2,702,668, dated Feb. 22, 1955. Divided and this application Feb. 16, 1959, Ser. No. 793,379
4 Claims. (Cl. 235-63)

1. In a calculating machine having a shiftable carriage, and spring means for shifting said carriage in either of two opposite directions, selectively, including

the combination of, a first spring for urging said carriage in one direction, and a second spring capable of overcoming said first spring and in so doing shifting the carriage in the opposite direction, with means including a manually operable key for connecting said second spring



to the carriage for shifting the carriage in said opposite direction toward a given position, means for disconnecting said second spring from the carriage, means for retaining the carriage in said given position against the power of said first spring during said disconnecting, and a second manually operable key for releasing said carriage from restraint of said retaining means.

3,001,703 DUPLICATE BRIDGE SCORING MACHINE

Frederick H. Flam, Sherman Oaks, Calif.
(4510 Callada Place, Tarzana, Calif.)
Filed Apr. 7, 1958, Ser. No. 726,740
3 Claims. (Cl. 235-92)

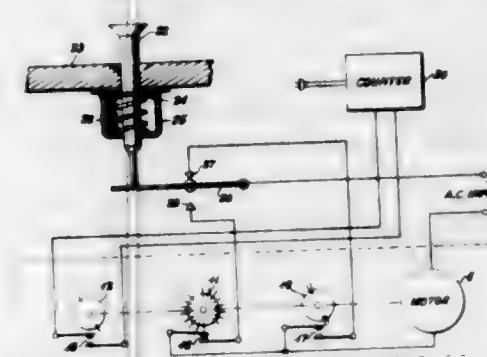


1. In apparatus for assigning numerical values, by the aid of pulse counters, in accordance with the unpredictable sequence in which information, as in the form of pulses, reaches a series of terminals corresponding to the counters: a series of counters designated for reference herein I, II, III, IV etc.; a set of two state devices for each counter, and each occupying a first state until a pulse of energy flows relative to the device, unless locked in its said one state, and occupying a second state of placed in said second state until reset; the devices of the set for the first counter being designated for reference herein, 2a1, 2b1, 3a1, 3b1, 4a1, 4b1, etc.; the devices of the set for the second counter being designated for purposes of reference herein, 1a1, 2b1, 3a1, 3b1, 4a1, 4b1, etc.; the devices of the sets for successive counters being similarly designated; there being two families of devices 1aII, 1aIII, 1aIV, etc., and 1bII, 1bIII, 1bIV, etc. derived from said sets of devices and corresponding to counter No. I; there being two families of devices 2aI, 2aIII, 2aIV, etc., and

2bI, 2bIII, 2bIV, etc. derived from said sets of devices and corresponding to the counter No. II; . . . there being two families of devices NaI, NaII, NaIII, . . . Na(N-I) and NbI, NbII, NbIII, . . . Nb(N-I) derived from said sets of devices and corresponding to the counter No. N; means operative in response to arrival of information at the terminal for each counter for routing energy pulses relative to the corresponding "a" family of devices, and at a predetermined time interval thereafter to lock the corresponding set of devices in their first positions, and thereafter for routing energy pulses relative to the corresponding "b" family of devices; and means applying to the pulse counters impulses and corresponding to the number of devices in its set that are in one of the two positions; and means for resetting said devices after pulses have been applied to said counters.

3,001,704 TIME DELAY PACKING COUNTER

Michel J. Lafaurie, Redwood City, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1957, Ser. No. 705,878
1 Claim. (Cl. 235-98)



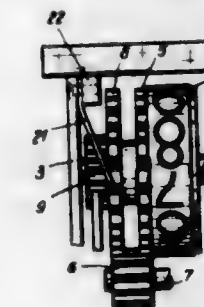
In a device for counting packing cases to be filled, a timing motor, a circuit for said motor including a source of power and first and second parallel branch circuits, detector means including an operating element adapted to be moved to an operated position by placement of a packing case in a filling station and to be moved to a non-operated position upon removal of the packing case from the filling station, said detector means including switching means in said first branch circuit closed when said operating element is in its operated position and switching means in said second branch circuit closed when said operating element is in its non-operated position, first timing switch means controlling said first branch circuit, second timing switch means controlling said second branch circuit, timing means operated by said motor and including means to close said first and second timing switch means during alternative periods of operation of said timing means, the period of time during which said first timing switch means is closed by said timing means being substantially the same as the minimum time required to fill a packing case, a counter, and means activated by said motor during the operation of said motor by the supply of power thereto through one of said branch circuits to operate said counter.

3,001,705 IMPULSE COUNTER

Karl Füglistner, Geneva, Switzerland, assignor to Sodeco, Societe des Compteurs de Geneve, Geneva, Switzerland
Filed Mar. 14, 1956, Ser. No. 571,403
Claims priority, application Switzerland Mar. 15, 1955
1 Claim. (Cl. 235-131)

In an impulse counter comprising a plurality of successive coaxial digit-carrying drums provided with peripheral teeth, transfer pinions meshing with any two successive drums and a unit transfer pinion controlling the in-

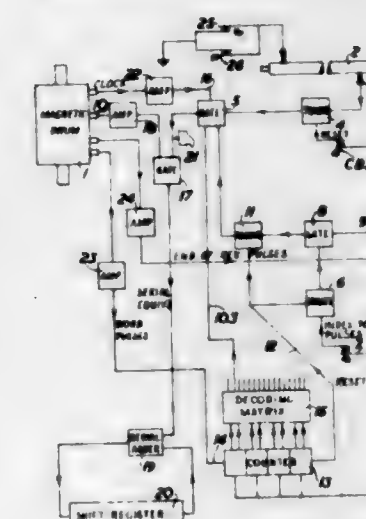
put drum, the combination of a toothed wheel coaxial with the drums meshing permanently with the unit transfer pinion, a star-shaped member coaxially rigid with said toothed wheel, means controlled by electric impulses to shift angularly in a predetermined direction the star-



shaped member through successive half pitches, a single blade spring extending obliquely with reference to the plane of said toothed wheel and the tip of which is adapted to engage in succession the intervals between the teeth of said toothed wheel and means securing the end of said spring opposed to the tip thereof to a stationary point.

3,001,706 APPARATUS FOR CONVERTING DATA FROM A FIRST TO A SECOND SCALE OF NOTATION

Alec Trussell, Letchworth, England, assignor to International Computers and Tabulators Limited, London, England
Filed Dec. 9, 1953, Ser. No. 397,243
Claims priority, application Great Britain Jan. 30, 1953
20 Claims. (Cl. 235-155)



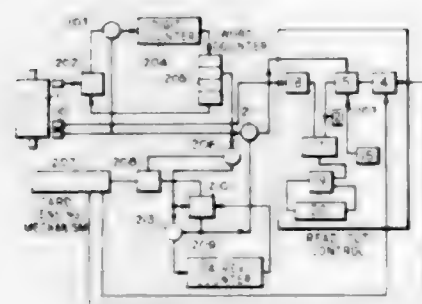
1. Data translating apparatus comprising a source of value-representing electrical signals, occurring at discrete time instants, and each representing a different digital value according to its instant occurrence, a plurality of storage devices settable to register different denominational values of a multi-denominational value to be translated, means for applying said value representing signals from said source to set said storage devices, a source of electrical signals representing translation equivalents of digital values, means for reading out all said equivalents-representing signals in each of a plurality of translating cycles, an accumulator, gating means controlling read out of said equivalents-representing signals to said accumulator, a separate control device for each said storage device, and sequencing means for scanning said control devices in sequence in each said translation cycle, all the control devices of storage devices representing the same given digital value being effective in the same translation cycle to operate said gating means in turn under the control of said sequencing means, said given value changing in each said translation cycle and the translation

of said multi-denominational number being formed in said accumulator only at the end of said translation cycles.

3,001,707 ELECTRONIC DIGITAL CALCULATING EQUIPMENT

Raymond Bird, Letchworth, England, assignor to International Computers and Tabulators Limited, a British company

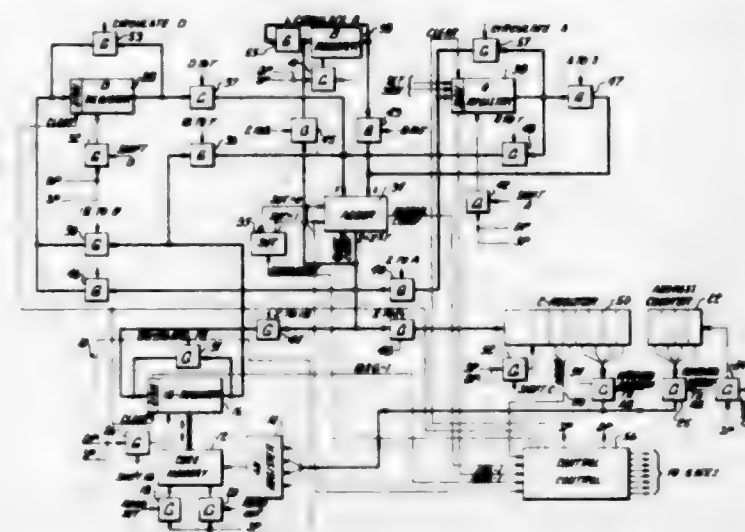
Filed Nov. 5, 1956, Ser. No. 623,516
Claims priority, application Great Britain Nov. 11, 1955
22 Claims. (Cl. 235-155)



1. In data conversion apparatus having a source of cyclically generated signals, each cycle of signals representing a predetermined total number of conversion equivalents appearing successively, equivalent-forming means, control means for controlling read-out of said equivalent signals to said equivalent-forming means, and means for generating an initiating signal for initiating read-out at any point in said cycle; the combination comprising a source of fraction signals corresponding in time to predetermined fractions of said cycle, each fraction containing a whole number including one of said equivalents and said predetermined total number comprising an integral number of said fractions, means for counting said fraction signals and for producing an output signal upon registering a count equivalent to said predetermined total, means operated by said initiation signal for gating said fraction signals to said counting means, and means controlled by said fraction signals and said output signal for rendering said control means operative by the first said fraction signal appearing after an initiation signal and for rendering said control means inoperative by said output signal, whereby read-out of a whole cycle of said conversion equivalents is initiated by the first fraction signal appearing after the initiation signal.

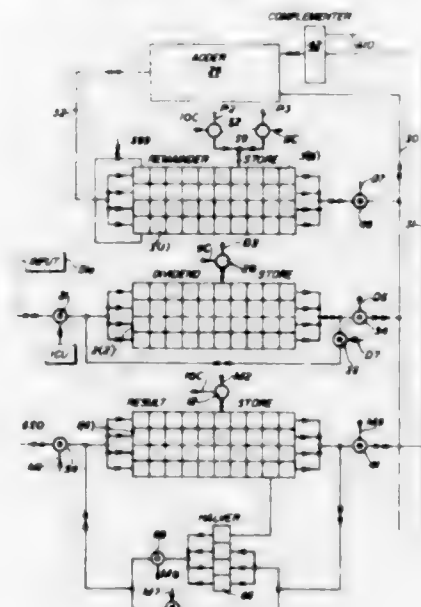
3,001,708
CENTRAL CONTROL CIRCUIT FOR COMPUTERS
Edward L. Glaser, Altadena, and Lloyd W. Cali, Monrovia, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1959, Ser. No. 788,823
7 Claims. (Cl. 235-157)

7. A central control for a digital computer comprising a sequence counter, a digit counter, means controlled by the digit counter for periodically stepping the sequence counter only when the digit counter is in a predetermined count condition, means for setting the digit counter to any one of a plurality of other count conditions in response to a signal on any one of a corresponding plurality of setting inputs, means controlled by the digit counter for periodically stepping the digit counter when the digit counter is set to any of said other count conditions, whereby the stepping of the sequence counter is interrupted until the digit counter is stepped back to said predetermined count condition, means controlled by the sequence counter for generating an output signal at each of succes-



output of said output signal generating means to any selected input of said digit counter setting means.

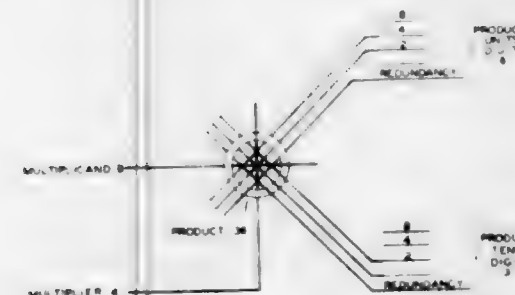
3,001,709
ELECTRONIC SQUARE ROOT DEVICE
Alec Trussell, Letchworth, England, assignor to International Computers and Tabulators Limited, London, England
Filed Dec. 18, 1956, Ser. No. 629,001
Claims priority, application Great Britain Dec. 28, 1955
5 Claims. (Cl. 235-158)



1. Apparatus for calculating the square root of a decimal dividend value including three storage registers for storing representations of the dividend value, a remainder value and a result value, respectively; read out means for each storage register operative, when energised, to read out in succession the digits of the value held in the register, the digits being represented by successively occurring electrical signals; a two input subtractor operative to form an output signal train representing the algebraic sum digit by digit of two signal trains applied to the two inputs thereof; calculating cycle control means operable to perform a series of major cycles, each of which includes at least one subtraction cycle; a quotient counter operable by the cycle control means to count the number of subtraction cycles in each major cycle; read out means for the quotient counter operable to read out electrical signals representing twice the value registered by the quotient counter; sign detection means responsive

to the output signals of the subtractor to determine the sign of the value represented by such signals; and a unity pulse source operable to provide a signal representing unity; the cycle control means further including means operative during the first subtraction cycle of a major cycle to energise simultaneously the read out means of the dividend, remainder and result stores, the quotient counter and the unity pulse source to apply concurrently to one input of the subtractor signals representing a predetermined pair of digits registered in the dividend store and the value registered in the remainder store, and to apply concurrently to the other input of the subtractor signals representing the value registered by the result store, twice the value registered by the counter and unity and means operative on subsequent subtraction cycles of a major cycle to render the dividend register read means ineffective, the signals applied to each input of the subtractor forming a single signal train whereby the output signal train of the subtractor represents the result of subtracting the sum of unity and the values registered by the result storage register and quotient counter from the sum of two predetermined digits of the dividend and the value registered by the remainder storage register on the first subtraction cycle, and from the value registered by the remainder storage register on subsequent subtraction cycles; and further including means operative to apply the output signals from the subtractor to the remainder storage register to enter said algebraic sum therein; and means controlled by the detecting means and operative to apply a control signal to the cycle control means to cause termination of one major cycle, initiation of the next major cycle, and energisation of the quotient counter read out means to apply signals to the result storage register to enter a value therein.

3,001,710
MAGNETIC CORE MATRIX
Munro King Haynes, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 25, 1957, Ser. No. 667,837
17 Claims. (Cl. 235-160)



1. In a data handling device, a matrix of magnetic binaries, having threaded therethrough in each row in one coordinate direction, a different value input conductor for a first factor and likewise threaded therethrough in each row in another coordinate direction a different value input conductor for another factor, means responsive to coincident signals on two of said input conductors, one in each said factor group, for selectively operating one of said binaries, means for following said signals with reverse current signals for restoring said operated binary and output circuit conductors threaded through each of said binaries, certain of said output conductors being threaded through said binaries in one direction to transmit output pulses on the operation of each said binary and the remainder thereof being threaded through said binaries in the opposite direction to transmit output pulses on the restoration of each said binary to express an expected data handling result.

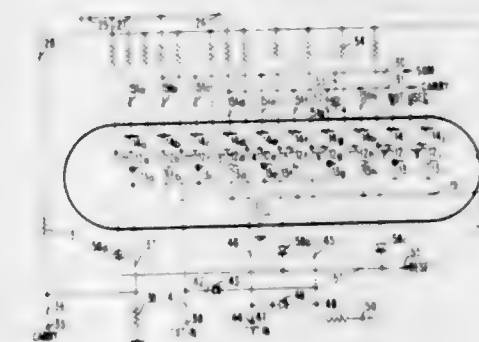
770 O.G.-58

3,001,711
TRANSISTOR ADDER CIRCUITRY
Robert Frohman, Gardena, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Dec. 3, 1956, Ser. No. 625,847
12 Claims. (Cl. 235-176)



1. An electronic computer circuit for serially adding binary digits comprising: sum and carry output terminals and first, second, and third input terminals, said input terminals adapted to receive, respectively, first input signals representative of an addend, second input signals representative of an augend, and third input signals representative of a carry-in digit; a first logical gating means responsive to said first and second input signals for producing an intermediate signal representing that said first and second input signals are different; a second logical gating means responsive to said third input signal and said intermediate signal for producing at said sum output terminal signals representative of the sum digits; means for providing an inverted form of said third input signal; a third logical gating means responsive to either one of said first or second input signals, said intermediate signal and the inverted form of said third input signal for producing at said carry output terminal signals representative of the carry-out digits; and delay means for connecting said carry output terminal to said third input terminal.

3,001,712
BEAM SWITCHING TUBE LOGIC CIRCUIT
Thomas B. Horgan, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 861,004
6 Claims. (Cl. 235-176)



1. A basic logical element for deriving a desired output function, comprising a beam switching tube, said tube having beam directing means for forming and maintaining an electron beam in any one of a plurality of stable positions, a plurality of output targets associated each with a different one of said stable positions, each of said targets being located so as to be impinged upon by said beam when the beam is in the related stable position, said beam directing means comprising means including a plurality of locking means each for advancing said beam to related one of said stable positions and holding it there, means including said locking means for initially setting said beam to a first one of said stable positions, first input means adapted to impress a signal

on one of said locking means for advancing said beam to a second stable position, second input means adapted to impress a signal on a second one of said locking means for advancing said beam to a third one of said stable positions, means for activating a third one of said locking means in response to the combined action of signals on both of said input means to advance said beam to a fourth one of said positions, and means for coupling selected ones of said output targets to derive therefrom a desired output function.

3,001,713
INTEGRATORS
Richmond J. McGonegle, Old Ovoca Road,
Tullahoma, Tenn.
Filed Sept. 24, 1956, Ser. No. 611,545
2 Claims. (Cl. 235-183)

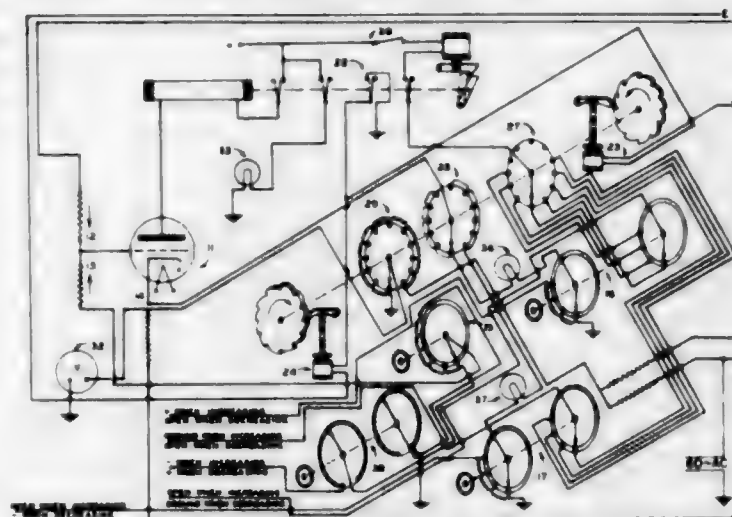


1. A continuous integrating device consisting of a moving surface of low light reflectance, a means for moving the surface at a predetermined speed, a means for changing the surface to high light reflectance as the surface moves at said predetermined speed so that the area changed has its dimensions perpendicular to the moving axis proportional to the instantaneous magnitudes of an electrical potential, a light source to continuously illuminate a predetermined area of said surface including the high reflectance area, said predetermined area being limited by a cover, a photoelectric cell means to measure the total reflected light from said predetermined area under said cover at any instant of time as said moving surface moves along, the output of said photoelectric cell means being proportional to the average magnitude of said electrical potential over the period of time corresponding to said predetermined area under said cover as said moving surface moves along.

3,001,714
ECONOMIC POWER GENERATION ASSIGNMENT DEVICES
John L. McKinley, 660 Onelda, and Dale O. Ballinger,
1690 Lewis, both of Denver, Colo.
Filed Dec. 19, 1956, Ser. No. 629,404
19 Claims. (Cl. 235-184)

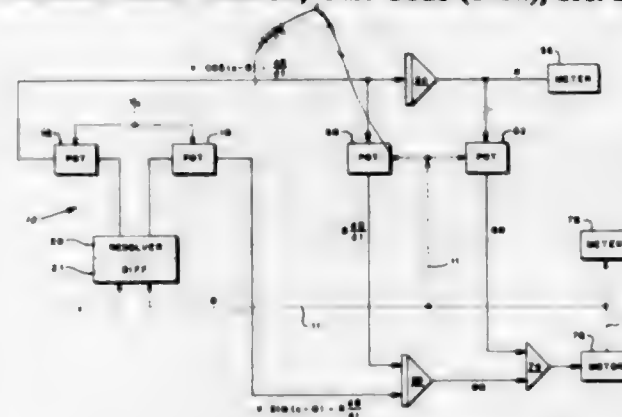
1. Means for allocating the most economic power generation assignment among a plurality of electric generators comprising in connection with each generator the combination of a thyratron tube having a cathode, a grid and an anode; a first means supplying current to the grid of said tube at a voltage which is proportional to the incremental cost of the power being generated by the generator; a second means supplying current to the grid of said tube at a voltage which is proportional to the cost of the fuel being used by said generator, so that the total voltage supplied to said grid will be proportional to the incremental cost of the generated power; a third means supplying current to the cathode of said tube at a voltage

proportional to the minimum generating setting if the incremental cost is increasing and proportional to the maximum generating setting if the incremental cost is decreasing so that current conduction to the anode of said tube



will be a function of the fuel cost of the generator, and a variable resistance fuel cost adjusting device in circuit with the second means for supplying current to the grid of said tube, said resistance being calibrated in cost per B.t.u.'s.

3,001,715
AUTOMATIC DEAD RECKONING SYSTEM
Cyrus Beck, 7756B Wagner Way, Elkins Park, Pa.
Filed Aug. 29, 1957, Ser. No. 681,144
10 Claims. (Cl. 235-186)
(Granted under Title 35, U.S. Code (1952), sec. 266)

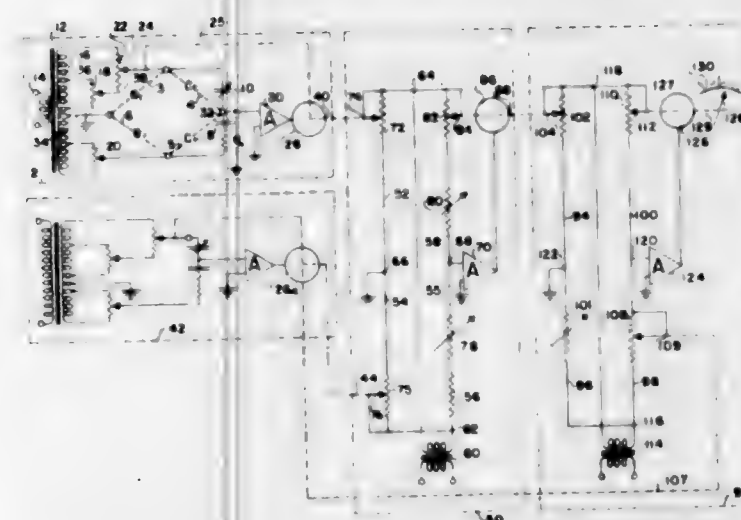


1. A self-balancing servo system operating in response to a plurality of inputs each of which is a vector of particular magnitude and direction, comprising, in combination, servo motor means having a first shaft angular position, differential means for each of said vectors connected to said servo motor means and producing a second shaft angular position which is the algebraic difference between the particular vector directions and said first shaft angular position, resolver means having input means connected to each said differential means for producing a pair of sine and cosine voltage outputs for each of said vectors as a function of each respective second shaft angular position, means multiplying each of said sine and cosine outputs by the magnitude of each respective vector producing a plurality of sine and cosine voltage terms and providing a proportional voltage output, means for summing each of said cosine terms and providing a proportional voltage output, means for summing each of said sine terms and providing a proportional voltage output, first integrator means for integrating the output of said cosine summing means, means also multiplying the output of said cosine summing means by said first shaft angular position producing a first output voltage, means multiplying the output of said first integrating means also by said first shaft angular position

producing a second output voltage, second integrating means for integrating the sum of said first output voltage and the output of said sine summing means, and servo amplifier means for amplifying the difference between said second output voltage and the output of said second integrating means for driving said servo motor means in the direction of cancelling said difference.

2. A self-balancing servo system for integrating with respect to a function t the polar vector having a magnitude V and a direction x both varying with respect to said function t , comprising, in combination: servo motor means having a null position θ ; means connected to said servo motor means for producing a pair of signal voltages $V \cos (x-\theta)$ and $V \sin (x-\theta)$; first potentiometer means for converting signal voltage $V \cos (x-\theta)$ into a voltage $\theta V \cos (x-\theta)$; first integration means for integrating with respect to function t , the sum of signal voltage $V \sin (x-\theta)$ and $\theta V \cos (x-\theta)$ and obtaining a first voltage θR ; second integrating means for integrating the signal voltage $V \cos (x-\theta)$ and obtaining a voltage R ; second potentiometer means for converting signal voltage R into a second voltage θR ; and servo amplifier means responsive to the difference between said first and second voltages θR and connected to and driving said servo motor means in the direction of reducing said difference to zero, said voltage R being the magnitude and θ the direction of the resultant vector after said integration.

3,001,716
THRUSTMETER
Leo A. Welas, Klags Point, N.Y., assignor to Avlen, Inc.,
Woodside, N.Y.
Filed Oct. 26, 1954, Ser. No. 464,685
1 Claim. (Cl. 235-193)



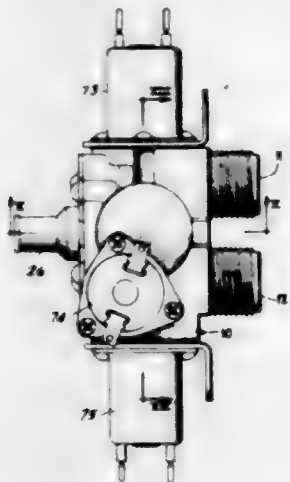
Computer means for providing an indication related to a first and a second condition to be sensed comprising: a first variable capacitor arranged to be varied in accordance with the said first condition to be sensed; a second variable capacitor arranged to be varied in accordance with the said second condition to be sensed; a first self-balancing means responsive to said first condition to be sensed including, a fixed capacitor, first and second sources of voltage, one of which is fixed during such normal measuring operation and the other of which is variable in accordance with said first condition to be sensed, a circuit arranged to be connected to said first variable capacitor and one of said sources of voltage and a further circuit including said fixed capacitor and the other of said sources of voltage, said circuits having a common impedance with respect to which said voltage sources are in opposition so that when the currents through the two circuits are the same no voltage appears across the said common impedance portion, a voltage responsive motor controlling means connected across said common impedance portion of said circuit, a motor controlled by

said motor controlling means, means positioned by said motor to adjust said variable source of voltage in a direction to reduce the voltage impressed on said voltage responsive means until the latter is ineffective to cause operation of said motor; a second self-balancing means responsive to said second condition to be sensed including a fixed capacitor, first and second sources of voltage, one of which is fixed and the other of which is variable in accordance with the condition to be sensed, a circuit including said second variable capacitor and one of said sources of voltage and a further circuit including said fixed capacitor unit and the other said sources of voltage, said circuits having a common impedance portion with respect to which said voltage sources are in opposition so that when the currents through the two circuits are the same no voltage appears across said common impedance portion, a voltage responsive motor controlling means connected across said common impedance portion of said circuit, a motor controlled by said motor controlling means, means positioned by said motor to adjust said variable source of voltage in a direction to reduce the voltage impressed on said voltage responsive means until the latter is ineffective to cause operation of said motor; a ratio bridge having a first pair of terminals across which a potential is impressed and a conjugate pair of terminals across which an output voltage is taken, means to vary the output voltage between said conjugate pair of terminals comprising a variable resistance device under the control of said first self-balancing means motor and in series therewith, a second variable resistance device under the control of said second self-balancing means motor, a third variable resistance device having a movable tap, a fourth resistance device in series with said third variable resistance device, said third and fourth resistance devices being in series with said first pair of terminals, a voltage responsive motor controlling means connected across said ratio bridge output terminals, a motor controlled by said motor controlling means connected in operative relation with said movable tap to move said tap in a direction to reduce the said ratio bridge output voltage until the latter is ineffective to cause operation of said motor; a product bridge comprising a four arm Wheatstone bridge circuit in which one arm includes a variable resistance which is varied by said second self-balancing means motor, a second arm including a variable resistor which is varied by said ratio bridge rebalancing motor, a source of operating voltage applied to one pair of diagonal terminals of the bridge, voltage responsive means connected to the conjugate terminals of the bridge responsive to a difference in voltage thereacross, a motor controlled by said voltage responsive means, a rebalancing third arm including a variable resistor having a movable arm positioned by said motor to adjust said variable resistance in a direction to reduce the voltage impressed on said voltage responsive means until the latter is ineffective to cause operation of said product bridge motor, a fourth resistance arm in series with said third arm; and indicating means positioned by said product bridge motor.

3,001,717
THERMOSTATIC MIXING VALVE
Victor E. Rimsha and James E. Kozel, Chicago, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed May 10, 1956, Ser. No. 584,092
1 Claim. (Cl. 236-12)

In a mixing valve for delivering fluid at various selected temperatures, a one-piece molded valve body having a generally cylindrical mixing chamber therein opening to a first face of said valve body and axially extending substantially therethrough closed at its inner end by a second face of said valve body, hot and cold fluid inlets leading into said valve body through a third face thereof, an outlet from said valve body through a

fourth face thereof opposite said third face, passageways in said valve body from said hot and cold water inlets respectively communicating with said mixing chamber through ports in the cylindrical wall thereof spaced from each other circumferentially and axially of said mixing chamber, a passageway in said valve body from said cold fluid inlet opening to said second face of said valve body, a passageway in said valve body from said hot fluid inlet opening to a fifth face of said valve body, a passageway in said valve body leading from a port in the cylindrical wall of said mixing chamber and opening to a sixth face of said valve body opposite said fifth face, a hollow piston valve in said mixing chamber having annular faces at opposite ends thereof, said valve body having an annular hot fluid valve seat at the inner end of said mixing chamber for cooperation with the valve face on one end of said piston valve to control flow from said hot fluid inlet to said mixing chamber, a generally cylindrical insert in said mixing chamber providing an annular cold fluid valve seat spaced from said hot fluid valve seat a greater distance than the length of said piston valve for cooperation with the valve face



on the other end of said piston valve to control flow from said cold fluid inlet to said mixing chamber, a spring seated on said valve body at the inner end of said mixing chamber within said hot fluid valve seat and operatively associated with said piston valve to bias said piston valve away from said hot fluid valve seat, a thermally responsive element in said mixing chamber in sensing relation with mixed fluid therein and operatively associated with said piston valve to move said piston valve toward said hot fluid valve seat upon predetermined increases in the temperature of the mixed fluid, a cover plate secured to said valve body on said first face thereof for closing the outer end of said mixing chamber, the axis of said mixing chamber extending parallel to said fifth and sixth faces of said valve body and perpendicular to a plane containing the axis of said inlets, ports in said valve body communicating with said outlet and respectively opening to said second, fifth, and sixth faces of said valve body, and independently operable solenoid control pressure operated diaphragm valves covering the ends of said passageways and said ports opening to said second, fifth, and sixth faces and operable singly and in combination to supply fluid at various selected temperatures through said outlet.

3,001,718

RADAR RANGE CONVERTER

Melville C. Creusere and John H. Gregory, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy

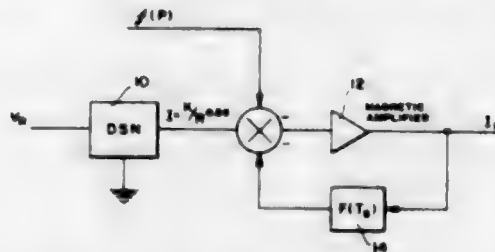
Filed Mar. 22, 1956, Ser. No. 573,303

7 Claims. (Cl. 236-61.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A data converter adapted to receive a voltage proportional to the range of an aerial target as supplied by a

range-only radar and to provide a current to a computing sight which is a function of said range, said data converter comprising a diode shaping network to which a voltage from the range-only radar is applied and a magnetic amplifier for amplifying the output from said shap-



ing network, means to apply a bias current which is a function of altitude to said magnetic amplifier, means to vary the gain of said amplifier as a function of the temperature of said sight, whereby the output of said magnetic amplifier which provides current to said computing sight will reflect the combined functions of range, altitude and temperature.

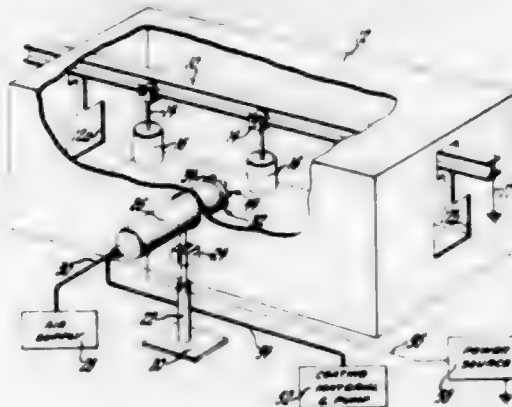
3,001,719

ELECTROSTATIC COATING APPARATUS WITH ROTARY IMPELLER

Bejron K. G. Sigvardson, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 30, 1959, Ser. No. 830,646

7 Claims. (Cl. 239-15)



1. Electrostatic coating apparatus of the character described, including: feed means for distributing liquid coating material in an atomizing plane; a rotary impeller comprising a hub and a plurality of blades mounted thereon, said blades lying closely adjacent said atomizing plane for rotation about an axis transverse thereto, each of said blades lying in a plane which intersects said atomizing plane at an acute angle, with the leading edge of each blade being closer to said atomizing plane than is the trailing edge of the blade, and each blade being curved in its longitudinal extent in the direction of rotation of the impeller; means for rotating said impeller at a speed sufficient to atomize said coating material which is distributed in said atomizing plane; and means for charging the coating material with a high voltage.

3,001,720

HEADER CONSTRUCTION FOR SPRAYING EQUIPMENT

Horace A. Cartwright, Forest Hills, N.Y., assignor to City Tank Corporation, Corona, N.Y., a corporation of New York

Filed Aug. 11, 1958, Ser. No. 754,229

8 Claims. (Cl. 239-112)

1. In spray apparatus for spreading bituminous road surfacing material to a roadway in a fluidic state from a

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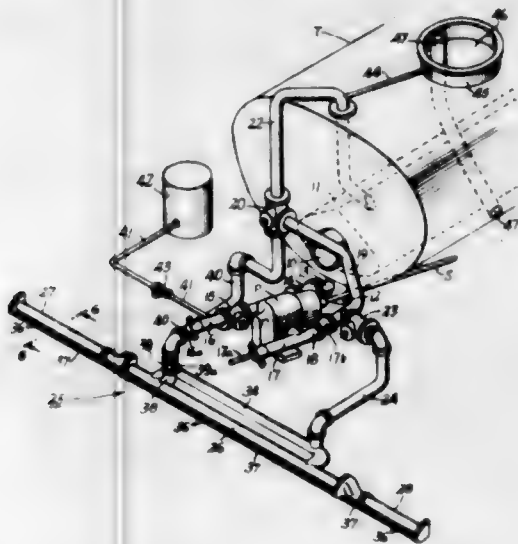
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main tank to provide a first supply means, the combination comprising a main conduit spray bar assembly arranged to be in a low point spraying position and a header assembly connected to provide a line between said main tank and spray bar assembly, and having conduit sections terminating with said spray bar, said header assembly having a conduit section having an inlet to an auxiliary



tank to provide another supply means of fluidic material to said spray bar assembly and common circulating means for the header and spray bar assembly connecting said supply means having interposed in the lines leading to and from the same interconnecting valve means for said conduit sections to and from said circulation means and supply means to provide single, undiverted flow and return passage lines to and from said supply means and to said spray bar assembly.

3,001,721
SELF-PROPELLED SPRINKLING IRRIGATION APPARATUS
Frank Louis Zybach, 1471 18th Ave., Columbus, Nebr.
Filed June 24, 1957, Ser. No. 667,585
25 Claims. (Cl. 239-177)



22. In a self-propelled sprinkling and irrigation apparatus, which includes a movable distributing pipe having means for spraying water, a plurality of supports for said pipe and having drive means, and a control device at an intermediate support responsive to movement of said intermediate support ahead or behind another support, the improvement comprising means for terminating operation of said drive means at said supports and actuated by said control device upon movement of said intermediate support greater than a predetermined extent ahead or behind another support; and means for delaying the operation of said terminating means.

3,001,722
DEVICE FOR DISTRIBUTING SEWERAGE WATER OVER AN OUTDOOR FILTER BED
Joseph P. Lawlor and Hans C. Albertsen, Ames, Iowa, assignors to General Filter Company, Ames, Iowa, a corporation of Iowa
Filed Dec. 5, 1958, Ser. No. 778,476
5 Claims. (Cl. 239-254)

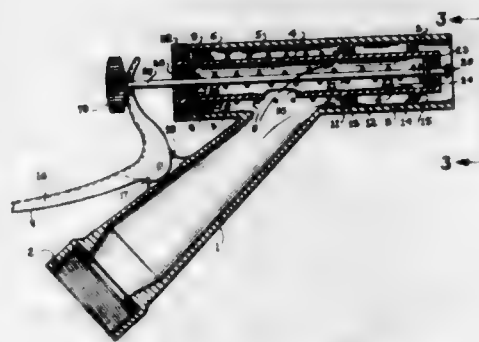
1. In a reaction propulsion device for distributing sewerage water over a filter bed wherein there is provided a horizontally-extending manifold arm supported

for axial rotation about a central hub and adapted to move in an established direction over the upper surface of said filter bed in close proximity thereto, a plurality of separate reactors mounted on said arm at spaced intervals therealong, each of said reactors providing a chamber communicating with the interior of said arm, a discharge spout extending downwardly from said chamber in a direction opposite to the direction of rotation of said arm, and a spreader plate mounted on the lower end of said spout and extending outwardly therefrom below said arm and in the same general direction as said spout, means for each of said reactors interconnecting the lower end of said spout and the inner end of said



spreader plate permitting said spreader plate to swing freely around a horizontal axis over an arc of movement between a point at which the outer end of the spreader plate is below its inner end and a point at which the outer end is above its inner end, and positive stop means respectively limiting the downward and upward swinging movement of said spreader plate, the stop means limiting the upward movement of said spreader plate, being arranged to prevent said plates from swinging upwardly beyond a point at which it will automatically swing downwardly after passing over an upwardly-extending obstruction on said filter bed, said spreader plate providing a smooth and normally downwardly inclined undersurface slidably engageable with an obstruction on said filter bed.

3,001,723
VALVES AND NOZZLES
Wallace A. Bounds, 3726 135th Ave. SE., Bellevue, Wash.
Filed Oct. 30, 1958, Ser. No. 770,793
9 Claims. (Cl. 239-448)



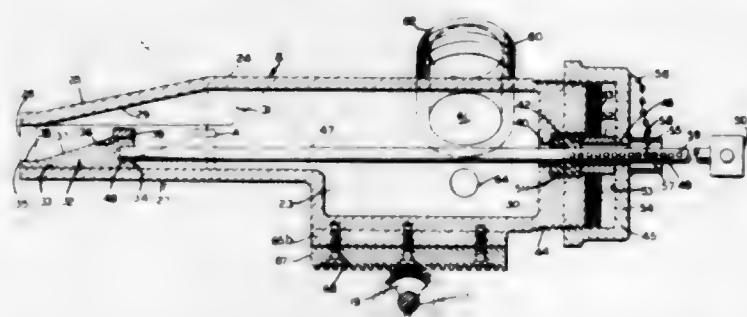
1. A combination nozzle of the character described comprising an outer barrel, an inner barrel reciprocally contained within said outer barrel in spaced relationship thereto, a fluid passage into said inner barrel, coacting valve means on adjacent surfaces of said barrels, locking means on adjacent surfaces of said barrels releasably engageable in locking relationship, a shaft extending coaxially through said inner barrel and beyond the opposite ends thereof, means connected to the shaft for causing axial movement of said shaft, valve means on said shaft adjacent one end of the inner barrel, a first resilient means to urge said valve means on said shaft toward the discharge end of the inner barrel and a second

resilient means to urge said coating valve means on the outer surface of said inner barrel into engagement with the coating valve means on said outer barrel.

3,001,724

ADJUSTABLE SLAG DISINTEGRATING NOZZLE
Fred Osborne, Jefferson County, Ala., assignor to S. P. Kianey Engineers, Inc., Carnegie, Pa., a corporation of Pennsylvania
Original application Dec. 28, 1954, Ser. No. 478,137.
Divided and this application June 25, 1959, Ser. No. 822,773

2 Claims. (Cl. 239-455)

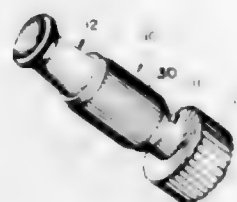


1. An ejection nozzle for projecting an adjustable stream of vapor and mixture of a vapor and liquid under pressure, comprising a mixing and pressurizing chamber for receiving the mediums to be ejected, one end of said chamber being closed by a casing end wall and the other end of the chamber opening into an elongated hollow casing portion terminating in a casing discharge opening remote from said mixing and pressurizing chamber, said elongated casing portion having a bottom wall, side walls and a top wall connecting said side walls, a member depending from said casing top wall in spaced relation to said casing bottom wall and extending inwardly of the casing from adjacent the casing discharge opening, a member extending transversely of said casing to adjacent said side walls and slidably mounted on said casing bottom wall for movement beneath said casing depending member and relative to said casing discharge opening, means connected with said slidably mounted member and extending rearwardly through said mixing and pressurizing chamber wall for selectively positioning said slidable member beneath said casing depending member and relative to said casing discharge opening, said slidable member having a vertically disposed rear portion deflecting flow of vapor upwardly and to opposite sides of said top wall depending member during passage through said casing.

3,001,725

HOSE NOZZLE

William L. Lockett, Downers Grove, Ill., assignor to W. D. Allen Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed May 8, 1958, Ser. No. 733,960
1 Claim. (Cl. 239-458)



In an adjustable garden hose nozzle, an inner tubular member having a hose coupling member on one end and a spray stem on the other end, an outer tubular member telescopically and rotatably carried on said inner mem-

ber and having a portion coacting with the spray stem for regulating the discharge stream, said members having threaded means whereby relative rotation thereof causes relative axial movement thereof, said outer tubular member having an elongated annular recess, said recess including a cylindrical bottom and longitudinally spaced, opposed radial faces integral with said outer tubular member, an elongated resilient plastic sleeve tightly fitted in said recess, the opposite ends of said sleeve abutting the opposed radial faces of said recess, said sleeve having generally longitudinally extending and circumferentially spaced ridges on the outer face thereof, and knurling extending around said cylindrical bottom of said recess for inhibiting relative rotation between the plastic sleeve and the outer member.

3,001,726

MANIFOLD ATTACHMENT

Augustus Hasbrouck, Middletown, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,379
7 Claims. (Cl. 239-468)

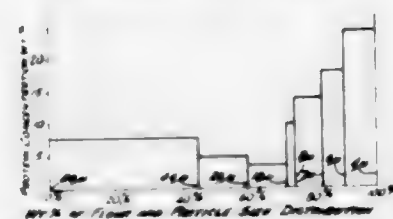


1. An attachment for connecting a plurality of tubes to a collector extending transversely of the tubes with the tubes in closely arranged side-by-side relation and all extending at substantially the same angle to the collector, said attachment including a mounting forming a section of the collector wall and having a row of openings therein to receive the ends of the tubes, the axis of each of said openings making a relatively small angle with the wall of the collector, and diffuser elements within the collector and forming extensions of said openings.

3,001,727

FLOUR MILLING PROCESS

Zenas Block, Larchmont, and Walter H. Harte, White Plains, N.Y., and James F. Walsh, Daytona Beach, Fla., assignors to DCA Food Industries Inc., New York, N.Y., a corporation of New York
Filed Nov. 20, 1957, Ser. No. 697,717
2 Claims. (Cl. 241-9)



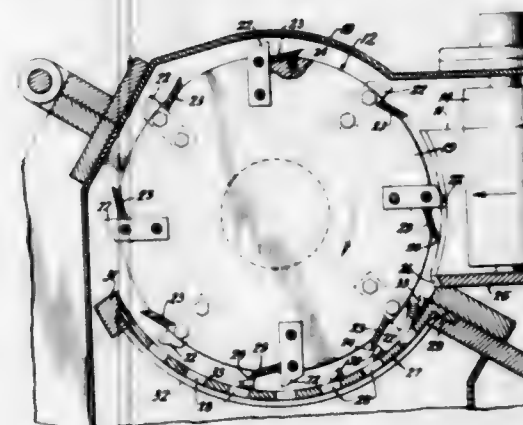
1. An improved process for the milling of flour comprising recirculating airborne fragments of a cereal endosperm in a closed path, comminuting said fragments while airborne, continuously removing substantially all of the fine comminuted particles below a predetermined size from said closed path, continuously introducing cereal endosperm fragments into said closed path at a predetermined rate of feed, and continuously withdrawing coarse particles at a predetermined rate from said closed path, said fine particles having a higher average protein concentration than said coarse particles and defining a main constituent of the high protein finished product stream

of said milling process, said fine particles not exceeding substantially 12 microns in size, the ratio of the rate of withdrawal of said coarse particles to said rate of feed being approximately 80:100.

3,001,728

CUTTER FOR ELASTIC MATERIALS

Albert Kircher, Jr., Downers Grove, Ill., assignor to The Fitzpatrick Company, a corporation of Illinois
Filed May 9, 1960, Ser. No. 27,658
5 Claims. (Cl. 241-73)

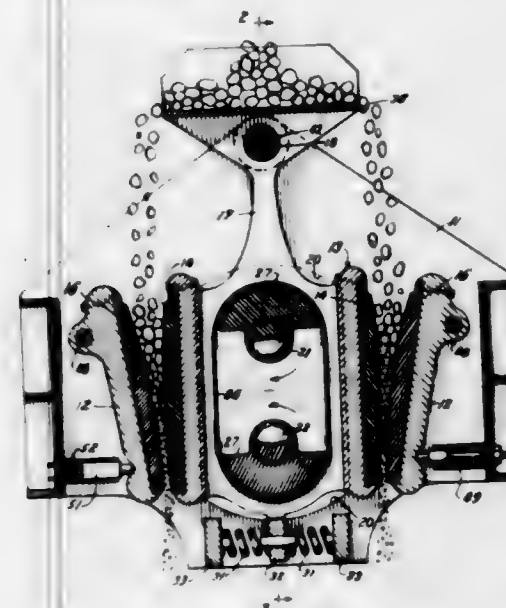


1. A cutter for elastic materials comprising a cylindrical rotor, means to drive the rotor for rotation about its axis, means for feeding a block of elastic material radially toward the periphery of the rotor, a series of axially spaced cutters projecting radially from the rotor to cut grooves across the face of the block, a series of axially extending blades at the periphery of the rotor with their leading edges angling outward from the rotor to cut off the material at the face of the block between the grooves, an arcuate screen underlying the bottom of the rotor and formed with openings therein through which the cut material may pass, and a plurality of circumferentially spaced cutter bars carried by the screen spaced radially closely adjacent to the leading edges of the blades and having notches therein through which the cutters may pass.

3,001,729

FREE VIBRATORY CRUSHER

Robert D. Conway, Cedar Rapids, Iowa, assignor to Pettibone Mulliken Corporation, a corporation of Delaware
Filed Aug. 19, 1958, Ser. No. 755,972
3 Claims. (Cl. 241-148)



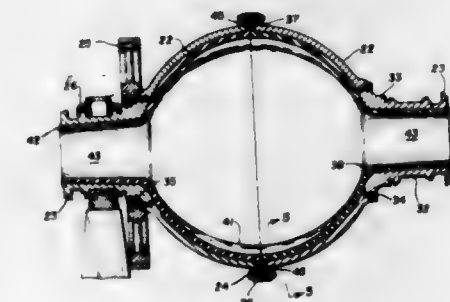
3. A crusher including a pair of anvils horizontally spaced apart, a carriage hanging between them to be

generally freely movable toward one anvil and then away from it toward the other, jaws carried by the carriage having faces facing the anvils and forming with each a crusher pass, and means to oscillate the carriage including a pair of shafts carried by the carriage to be rotatable about parallel axes in a plane generally parallel to the passes, said shafts being eccentrically weighted, coupled for rotation in opposite directions and being balanced and phased to exert force only in a direction generally perpendicular to the plane to move the jaws toward and from the anvils, and means for driving the shafts including a driven pulley on one shaft, a drive pulley having an axis in said plane, and belt means driven by the drive pulley and driving the driven pulley, and spring means urging the carriage to a neutral position with both jaws spaced from their anvils.

3,001,730

DUPLICATE SECTION GRINDING MILL

Arthur C. Daman, Denver, Colo., assignor, by mesne assignments, to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed Jan. 24, 1958, Ser. No. 710,999
8 Claims. (Cl. 241-183)



5. In a symmetrical grinding mill, a hollow body formed of two duplicate sections joined in end-to-end arrangement to provide a single chamber and mounted for rotation about a substantially horizontal axis, each section having a flanged end for joining with the duplicate section and each section having a trunnion portion at its opposite end, an exterior surface of each trunnion being formed as a journal for support of the mill during rotation, an integral liner shaped in conformity with and bonded to the interior surface of each section to form a continuous fluid-tight liner when joined, means on each said trunnion for attachment to a power-transmission member, and means for holding said sections for conjoint rotation in fluid-tight engagement so as to permit uninterrupted flow of pulp from one trunnion to the other.

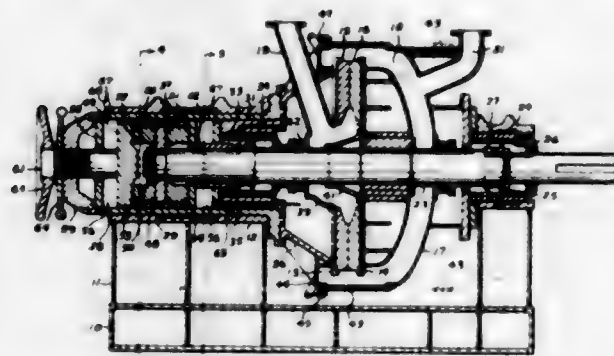
3,001,731

ATTRITION MILL

Frank C. Vaughan, Richmond, Va., and Maurice D. Woodruff, Springfield, Ohio, assignors to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Filed Oct. 29, 1953, Ser. No. 389,054
8 Claims. (Cl. 241-256)

1. A disc mill, including a relatively stationary housing, a pair of grinding discs in adjacent parallel relation, a shaft extending longitudinally through said grinding discs, and projecting at its opposite ends beyond said discs, one of said discs being secured to said shaft, a radial bearing in said housing for one projecting end of said shaft, a tubular sleeve extending from the other one of said discs in surrounding spaced relation to the other projecting end of said shaft and supported in said housing, a radial bearing in said tubular sleeve for the other projecting

end of said shaft, said tubular sleeve being supported in said housing for relative rotary motion, and means for



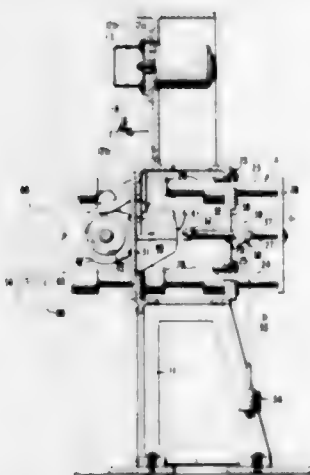
releasably holding said tubular sleeve in selected positions of rotary adjustment.

3,001,732

CONTINUOUS YARN WINDUP APPARATUS
Walter C. Hill, Jr., Wilmington, Del., and Gerald W. Ibbes, Newtown Square, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 9, 1957, Ser. No. 651,702

4 Claims. (Cl. 242-18)



1. A yarn windup and doffing apparatus comprising in combination a frame provided with a power-actuated yarn drive roll, a movable support biased toward said yarn drive roll, a rotatable swivel arm journaled on said movable support adjacent said yarn drive roll, and a pair of yarn windup chucks, one of said chucks being attached at each end of said swivel arm in disposition to present bobbins mounted on said chucks into driven contact with said yarn drive roll, said swivel arm being dimensioned with respect to said yarn drive roll to permit both individual and simultaneous frictional driving of said bobbins, depending upon the orientation of said swivel arm in relationship to said yarn drive roll.

3,001,733

TAPE TRANSPORT MECHANISM IN MAGNETIC RECORDING AND/OR REPRODUCING APPARATUS

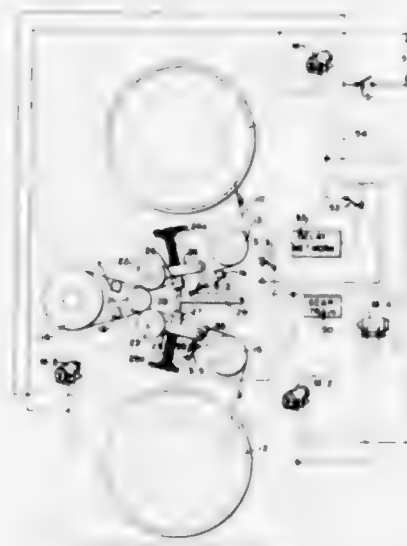
Peter E. Axon, London, Cecil Henocq, Haywards Heath, and Douglas Ireland, London, England, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 13, 1959, Ser. No. 806,123

Claims priority, application Great Britain Apr. 14, 1958
13 Claims. (Cl. 242-55.12)

1. In a tape transport mechanism having a rotary supply reel and a rotary take-up reel, the improvement which comprises means for driving said reels at speeds

effective to advance the tape from the supply reel to the take-up reel under the action of the reels only at a speed slightly less than the required speed, a rotary capstan located along the path of movement of the tape between the supply and take-up reels, means for driving the capstan at a peripheral speed equal to the required speed for the tape, a pair of pinch rollers located at opposite sides of the capstan and at the opposite face of the tape from the capstan and mounted to selectively pinch the tape against said opposite sides of the capstan,



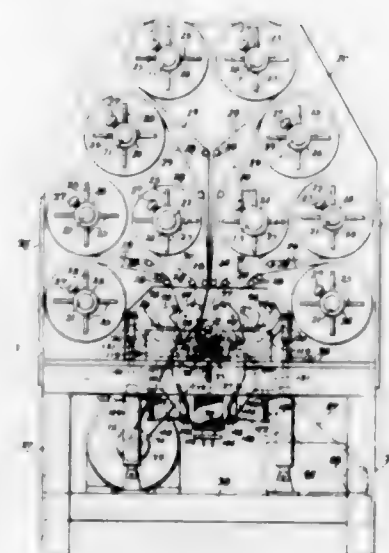
movable cam means, a pair of cam followers which engage said cam means and which are coupled respectively to said pinch rollers to control the respective positions of the latter, and means operative when the supply and take-up reels are started rotating to cause said cam means to maintain the respective cam followers positioned to hold the pinch rollers away from the tape-pinch positions until the tape has reached said speed slightly less than the capstan speed, said last mentioned means being operative after the tape has reached said slightly less speed to move said cam means to permit the pinch rollers to pinch the tape against the capstan.

3,001,734

AUTOMATIC WINDING MACHINE AND METHOD
Cary L. Wellington, Stamford, Conn., assignor to Wellington Electronics, Inc., a corporation of New York

Filed Apr. 29, 1957, Ser. No. 655,718

29 Claims. (Cl. 242-56.1)



1. A winding machine comprising supply means for continuous material to be spirally wound, a pair of parallel winding arbors arranged with their axes lying in a plane, a deflectable supply path for continuous ma-

terial from the supply means and adapted to intersect the plane from one side and to terminate at alternate arbors on successive windings a pair of deflection means operable one at a time adapted to move against the continuous material attached to one arbor and deflect it into the other arbor and adapted to alternate from one to the other such that the effective deflection means lies on the opposite side of the path of the continuous material from the arbor into which the continuous material is to be deflected, and cut-off means positioned to sever the continuous material only after it extends from one arbor across the other.

3,001,735

TEARABLE TABS FOR PREPARATION OF NEWSPRINT ROLLS

Carl John Francik, Palos Heights, Ill., assignor, by mesne assignments, to R. Hoe & Co., a corporation
Filed Oct. 23, 1957, Ser. No. 691,862
2 Claims. (Cl. 242-58.5)



2. A tearable tab for temporarily attaching the web end of a roll of printing paper to the next wrap of the roll, comprising a T-shaped tab member of paper having on one side an adhesive coating extending substantially from the bottom of the T-shape upward a distance short of the horizontal bar portion of said T-shape, two adhesive coatings on the other side of said member, said two latter coatings extending along the respective vertical edges of said horizontal bar portion of said T-shape and being horizontally spaced from each other a distance at least equal to the width of said vertical portion of said T-shape, and a reinforcing strip bonded to said other side of said member and extending centrally over the entire vertical length of said tab member, said strip being horizontally spaced from each of said latter two adhesive coatings a distance greater than the width of said strip, whereby said strip prevents tearing of the tab across its width but permits tearing of the tab substantially along said strip.

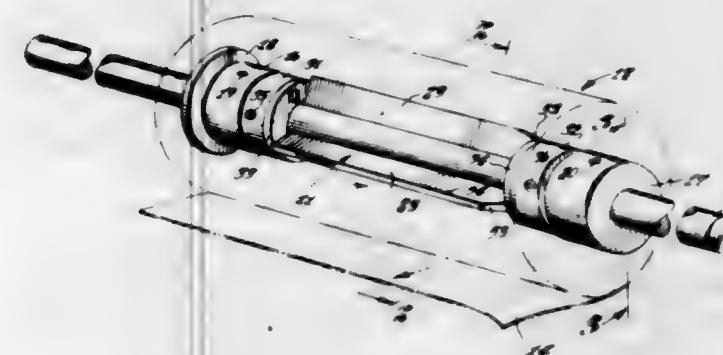
3,001,736

SELF-ADJUSTING MILL-ROLL SUPPORTING MANDREL

Rudolph H. Schultz, 225 Highland Blvd., Brooklyn, N.Y., and Adam James Siebert, 171-01 Courtney Ave., Flushing, N.Y.; Bertha E. Siebert, executrix of said Adam James Siebert, deceased

Filed Feb. 8, 1956, Ser. No. 564,255

8 Claims. (Cl. 242-72)



1. A mandrel for supporting a roll of web material wound on a tubular core, said mandrel comprising in

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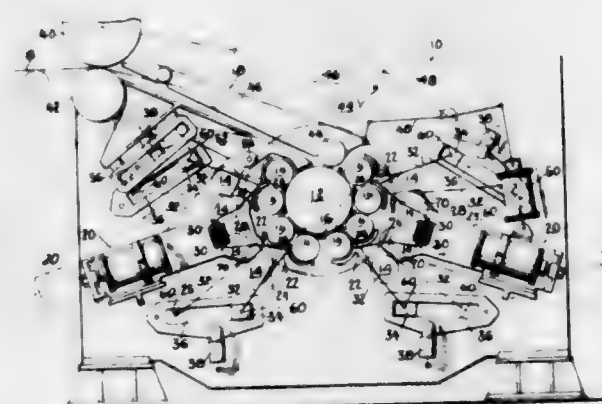
combination: a main shaft adapted to have a control torque applied thereto for regulating the tension in said web during the unwinding of said web from said roll; a plurality of gripping members carried by said shaft for rotation therewith, each of said gripping members being pivoted for movement about an axis parallel to the axis of said main shaft each of said gripping members comprising a free edge portion which moves outwardly from the axis of said main shaft during said pivotal movement; resilient means yieldingly urging pivotal movement of said gripping members to move said free edge portions outwardly for engagement with the internal surface of said core when said roll is mounted on said mandrel with a pressure which increases in accordance with increased tension in said web as said web is pulled from said roll against the action of said control torque, said pivotal axes being disposed with respect to the longitudinal axis of said main shaft to cause said pressure to increase sufficiently to lock said roll to said mandrel; and a pair of collars fixed to said shaft and disposed in proximity to opposite ends of said gripping members, said collars each having a portion of external diameter slightly less than the internal diameter of said core for sliding freely through said core to permit insertion of said mandrel in said core and removal of said mandrel therefrom, said collars being arranged to support said roll on said mandrel independently of said gripping members.

3,001,737

APPARATUS FOR COILING STRIP MATERIAL
John André Tracy, Bournemouth, England, assignor to The Loewy Engineering Company Limited, Bournemouth, England, a corporation of Great Britain

Filed Feb. 17, 1960, Ser. No. 9,280

4 Claims. (Cl. 242-78.4)



1. An apparatus for coiling strip material comprising a framework structure, a central mandrel, a plurality of guide rollers surrounding said mandrel, a plurality of carriers for supporting said guide rollers at the ends thereof which are adjacent said mandrel, a reciprocator carried by said framework structure for movement towards and away from the surface of said mandrel along a path radially oriented with respect to said mandrel, a linking member connecting said reciprocator and at least one of said carriers for moving said one carrier towards and away from the surface of said mandrel upon movement of said reciprocator, and a mechanism carried by said framework structure and connected to said one carrier at the other end thereof which is away from said mandrel so that the said carrier moves along a path which is inclined with respect to the radial path of said reciprocator, said mechanism cooperating with said reciprocator to move said carrier with simultaneous motion of translation and rotation so that while said reciprocator moves radially said mechanism simultaneously traverses and rotates said carrier.

tilts said other end of said one carrier so that said one carrier is given a curvilinear translation motion and held continuously radially oriented with respect to said mandrel during and throughout coiling.

3,001,738
MEASURING TAPE

Michel Quenot, Besancon, France, assignor to Societe a Responsabilite Limitee dite: Quenot & Cie, Besancon, France

Filed Aug. 26, 1958, Ser. No. 757,376
2 Claims. (Cl. 242-84.8)



1. A measuring apparatus comprising a gripping handle, a pair of parallel side plates rigid therewith, a drum having a spindle rotatably mounted between said side plates, a graduated tape wound on said drum, a flat diametrically extending tenon formed at one end of said drum spindle, a radial yoke mounted for loose rotation on said spindle, a transverse hinge pin carried by the outer end of said yoke and spaced laterally from the drum axis, an elongated crank for winding and unwinding said graduated tape on said drum, said crank being hingedly mounted on said transverse hinge pin and having an elongated slot formed in its arm, said slot being so positioned for engagement by said tenon in the operative position of said crank, said crank being selectively adapted to occupy either of two positions namely, an operative position in which said slot receives said tenon therein and is rotationally connected with said drum, and an inoperative position in which said crank is folded along said gripping handle and said slot is removed from said tenon whereby said crank is disconnected from said drum, an eccentric transverse pin secured on said drum and adapted to have anchored thereon the inner end of said graduated tape, a locking member slidably mounted on one of said side plates which is substantially parallel thereto but eccentric on the side where the winding is effected in the direction of the gripping handle, said sliding locking member being adapted to occupy selectively either an operative position and an inoperative position, said sliding member having a portion extending perpendicularly thereto, which is adapted to be engaged by said eccentric transverse pin to prevent the rotation of said drum in the tape unwinding direction when said sliding member is in its operative position, said eccentric transverse pin being adapted to cause said sliding member to move to its inoperative position when said drum rotates in the tape winding direction.

ERRATUM

For Class 242-150 see:
Patent No. 3,001,946

3,001,739
AERIAL CAPSULE EMERGENCY SEPARATION DEVICE

Maxime A. Faget and Andre J. Meyer, Jr., Newport News, Va., assignors to the United States of America as represented by the Administrator of National Aeronautics and Space Administration

Filed Oct. 16, 1959, Ser. No. 847,027
8 Claims. (Cl. 244-1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

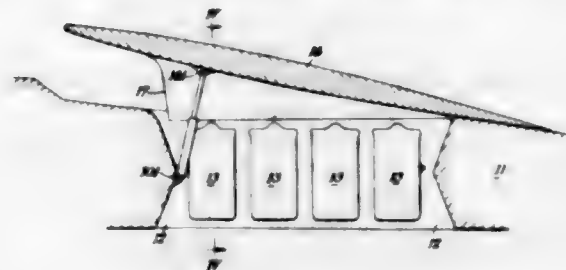


1. In combination with an aerial vehicle, an emergency unit comprising first propellant motor means for rapidly lifting the aerial vehicle a predetermined distance, second propellant motor means for effecting spatial separation between the emergency unit and the aerial vehicle, means for supporting said first and second motor means above the aerial vehicle, and means for normally attaching said last recited means to the aerial vehicle and for selectively detaching said last recited means therefrom.

3,001,740
AEROPLANE WITH VERTICAL LIFT ENGINE INTAKE STRUCTURE

Ronald Montgomery, Belfast, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company

Filed June 9, 1960, Ser. No. 35,010
Claims priority, application Great Britain June 23, 1959
3 Claims. (Cl. 244-12)



1. An aircraft incorporating in its fuselage or body one or more vertically disposed jet-lift engines and an engine bay having an opening at its top, said engines being housed in said bay, and a wing system which is capable of adjustment with respect to incidence in relation to the fuselage and which constitutes a closure for the engine bay opening.

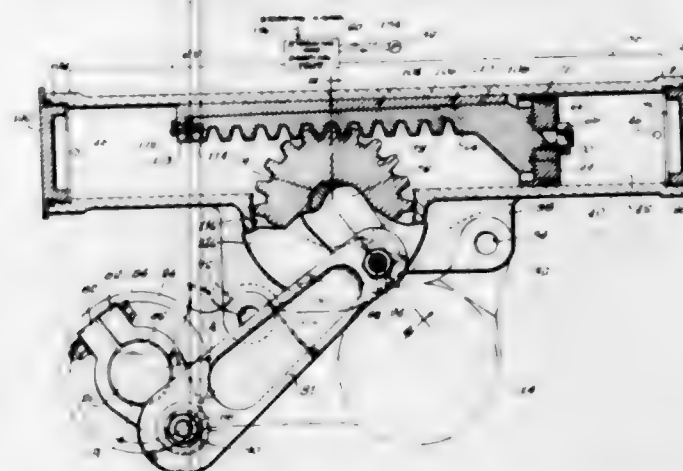
3,001,741
AIRCRAFT LINEAR STEER DAMPER

Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan

Filed Jan. 20, 1958, Ser. No. 710,022
4 Claims. (Cl. 244-50)

1. A linear type steer damper for aircraft or the like comprising a piston, a cylindrical hydraulic chamber

slidably containing the piston and containing a piston controlling fluid, said piston movable within the chamber to various damping positions, means for conducting a piston position controlling fluid into the ends of the chamber, means for controlling the flow of fluid through said means and preventing rapid escape of fluid at pressures below a predetermined maximum damping pressure, said maximum pressure obtained by shocks transmitted to the pis-



ton, a rack connected to the piston, a gear in mesh with the rack, a first crank arm connected to the gear, a second crank arm adapted to be connected to control the position of a rotatable member positioned to rotate about an axis parallel to the axis of said segment gear, a link connecting the ends of said cranks, a wedge-shaped lash adjusting member within the chamber between the rack and chamber wall, and means within the chamber for adjusting the position of the wedge-shaped member with respect to the rack to control back lash.

3,001,742
CATAPULTED AIRCRAFT

John P. Fossness, Columbus, Ohio, assignor to North American Aviation, Inc.

Filed May 1, 1958, Ser. No. 732,309
14 Claims. (Cl. 244-63)



1. An airplane having an airframe, a center of gravity, and a catapult bridle attached to said airframe for transmitting a resultant launching force comprised of a catapult force and a reaction force to said airplane along a line passing substantially through said center of gravity, said catapult bridle including a first member attached to said airframe for transmitting said catapult force thereto, a second member attached to said airframe for transmitting said reaction force thereto, and means connecting said second member to said first member for causing said catapult force to induce said reaction force.

3,001,743
DISENGAGE SYSTEM FOR AIRCRAFT TAIL HOOK

William H. Simmons, 1107 Roberts Ave., Fenesterville, Pa.

Filed Apr. 20, 1960, Ser. No. 23,583

1 Claim. (Cl. 244-110)

(Granted under Title 35, U.S. Code (1952), sec. 266)
In a gear for arresting a moving vehicle by engagement between a fixed cable and a hook attached to said vehicle, the combination of a hook having a tip and a shank with a groove therebetween for receiving said fixed

cable, an actuator supported on said shank and including gas pressure generating means, said actuator including a member movable away from said tip by said pressure,

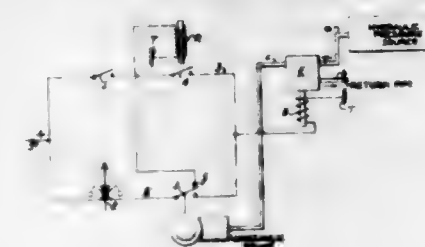


and a disengaging cable fixed at one end to said tip and at the other end to said movable member, said disengaging cable extending transversely of said groove and resting thereagainst in its standby position.

3,001,744
AUTOMATIC CONTROL DEVICE FOR BRAKING THE WHEEL OF AN AIRCRAFT

René Lucien, Neuilly-sur-Seine, France, assignor to Société à responsabilité limitée: Recherches Etudes Production R.E.P., Paris, France, a corporation of France

Filed Dec. 18, 1956, Ser. No. 629,173
Claims priority, application France Feb. 21, 1956
4 Claims. (Cl. 244-111)



2. In a wheel braking system including control means actuatable to render said system inoperative and further including first means coupled to said control means and responsive to deceleration of the wheel for actuating said control means, and second and third means coupled to said control means and responsive respectively to wheel speed and wheel position for cooperatively actuating said control means; means operatively associated with said first and third means and operated by the latter to render said first means ineffective.

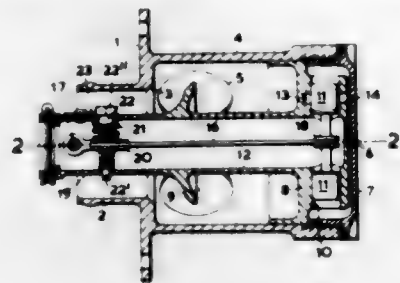
3,001,745
AUTOMATIC SHUT-OFF VALVES

Ronald Alexander Saunders, Penwortham, near Preston, Anthony Thomas Frederic Simmons, Preston, and Reginald John Victor Soell, Farnworth, England, assignors to The English Electric Company Limited, London, England, a British company

Filed Dec. 23, 1957, Ser. No. 704,610
Claims priority, application Great Britain Mar. 6, 1957
1 Claim. (Cl. 244-117)

In an aircraft capable of supersonic flight but having subsonic normal climbing and cruising speed, a shut-off valve arrangement controlling the supply of ram air to equipment of the said aircraft requiring a working temperature below a predetermined maximum for continuous operation, comprising in combination: an intake duct in operation scooping up ram air, an air delivery duct

connecting the said arrangement to the said equipment, a cylinder closed at the rear end and connected between the said ducts at the front end, a main valve arranged between the said intake duct and the said cylinder isolating the same from one another in the closing position, a piston of an area larger than the effective area of the said main valve fixedly connected to the said valve and slidable in the said cylinder, a heat-sensitive element arranged in the said intake exposed to ram air temperature, a pilot valve arranged in the said piston operatively connected to the said heat sensitive element and controlling a pilot duct arranged in the said piston in the sense of, when open, connecting both ends of the said cylinder with one another, the said pilot valve being kept in the



closed position by the said heat-sensitive element below the said predetermined maximum temperature at ram air temperatures corresponding to subsonic speeds and the said main valve being biased by the ram air pressure acting on its effective area from the side of said air intake into the open position and the said pilot valve being opened by the thermal expansion of the said heat-sensitive element above the said maximum temperature at ram air temperatures corresponding to supersonic speeds, exposing the rear face of the said piston of an area exceeding the said effective area of the main valve to ram air pressure in the sense of closing the said main valve, thus exposing the said equipment to cooling ram air scooped up at subsonic speeds and automatically shutting off the ingress of ram air at periods of supersonic speed when the ram air would have an adverse temperature effect on the said equipment.

3,001,746
TRIPLE PURPOSE PARACHUTE VEHICLE
Herschel D. King, 1103 Juniper, Alamogordo, N. Mex.
Filed July 15, 1958, Ser. No. 748,775
5 Claims. (Cl. 244-149)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a parachute vehicle having in combination a container closed at one end, a folded parachute packed therein, a weighted member secured to said parachute for closing the open end of said container, means for securing said weighted member in container closing position, means acting on said container for reducing its volume for longitudinally compressing said parachute in said container, and means on said securing means for severing said securing means at a predetermined interval of

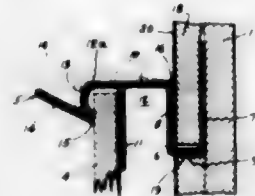
time after launching to allow the pressure of said compressed parachute to force the said weighted member from said vehicle to deploy said parachute.

3,001,747
AEROPLANE KITES
Ralph D. Hockett, P.O. Box 433, Bristow, Okla.
Filed Oct. 9, 1959, Ser. No. 845,506
2 Claims. (Cl. 244-154)



1. An aeroplane kite comprising an elongated hollow fuselage having forward and rear ends, said fuselage having top and bottom walls and side walls, wing stubs extending from opposite sides of the fuselage and fixed thereon, an elevator hinged upon said top wall at the rear end of the fuselage, a single operating lever on and extending downwardly from said elevator, the top wall having an opening through which said lever extends, a single vertical lever pivoted intermediate its ends on the fuselage side walls on an axis extending crosswise of the fuselage at a location spaced forwardly from said operating lever, said vertical lever having upper and lower ends, a weight fixed on said lower end, and a rigid link extending between the upper end of the vertical lever and said operating lever.

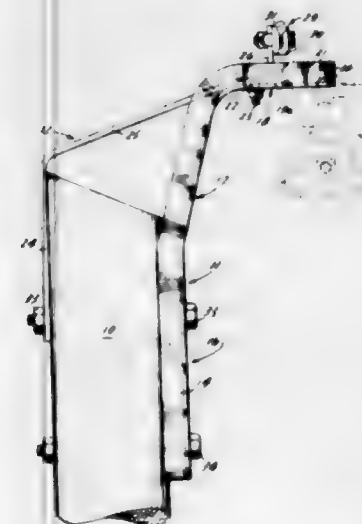
3,001,748
SNAP-IN MIRROR HOLDER
Thomas John Austin, Rolling Hills, Calif., assignor to Armored Luggage Mfg. Co., Hawthorne, Calif., a corporation of California
Filed Aug. 3, 1959, Ser. No. 831,091
4 Claims. (Cl. 248-28)



3. In a device for resiliently supporting a mirror in a traveling case so as to minimize breakage while affording ready means for replacement: the combination with a mirror of two spaced parallel strips of molding, the lower strip holding the bottom edge of the mirror spaced from and parallel to a wall of the traveling case, the upper strip being a unitary piece of flexible plastic having a side wall for engagement with said wall of the traveling case, said upper strip having two side-by-side channels with a common flat leg between them, one of the channels including said side wall as one leg and the common flat leg as the other leg and the other channel including the common flat leg and an inwardly concave outer leg to press the upper edge of the mirror against said common flat leg, the two channels having their tops

formed by a portion of the strip extending from the side wall thereof to the concave leg, said outer leg having a shelf-like lip meeting the proximate portion of the outer leg at an acute angle to form against the mirror a rounded vertex edge, the two molding strips being spaced apart by a distance greater than the height of the mirror so that the top of the mirror will be below the inside surface of the portion of the strip forming the top of the mirror receiving channel and the outer leg of the mirror receiving channel is out of contact with the mirror except at its rounded vertex edge, whereby when said shelf-like lip is lifted the mirror may readily be removed from the upper strip of molding.

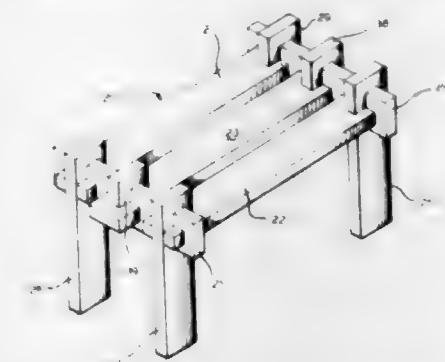
3,001,749
POLE TOP EXTENSION FOR AERIAL CABLE
Clifford W. Petersen, Wauwatosa, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Feb. 25, 1959, Ser. No. 795,533
5 Claims. (Cl. 248-49)



2. A pole top extension bracket for attachment to a vertically aligned utility pole comprising in combination, a channel like support member having a web portion and side portions, said channel like support member having a generally vertically aligned pole engaging portion, an angularly divergent second portion and a generally horizontal extending end portion, brace means having a generally vertical pole engaging portion disposable on the side of the pole opposite from the pole engaging portion of said support member, a second portion fixedly mounted to said horizontal end portion of said support means, and a third portion extending vertically above said horizontal end portion, the end of said horizontal portion of said support member being characterized by removal of the web portion, the remaining side portions forming an integral clevis means, and neutral messenger wire clamp means attached to said vertically extending third portion of said brace means.

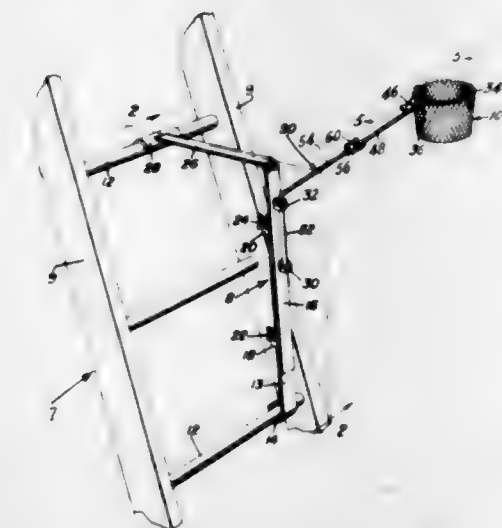
3,001,750
ARTICLE OF FURNITURE
Ronald W. Hedlund, River Forest, Ill., assignor to Donald F. Duncan, Inc., Chicago, Ill.
Filed Sept. 16, 1959, Ser. No. 840,385
3 Claims. (Cl. 248-165)

1. A readily assembled article of furniture including a plurality of supporting leg members and a multi-cornered supporting frame joined to said leg members and extending transversely thereto, said frame being comprised of longitudinally extending members and transversely extending members, each leg member being joined to the end of one longitudinally extending member and of one transversely extending member at a corner of said frame, the transversely extending member, longitudinally ex-



tending member and leg member at each corner of said frame having slots therein, each slot receiving one of the other members at the junction of said leg member, longitudinally extending member and transversely extending member, one of said slots opening to the end edge of one of said members and the slots in the other members being spaced inwardly of the end edges of the members, and means for hindering the removal of the member received by said open ended slot from that slot.

3,001,751
PAINT CAN HOLDER
Fred F. Bozik, 559 S. Union St., Aurora, Ill.
Filed May 19, 1960, Ser. No. 30,344
7 Claims. (Cl. 248-210)



2. An attachment for a painter's ladder comprising an adapter bracket embodying a substantially J-shaped member providing a straight leg and a hook at the lower end of the leg engageable with a ladder rung, a generally L-shaped member having a vertical leg overlapping and adjustably connected with the first-named leg and having a horizontal portion terminating in a jaw connectible with a ladder rung, and arm means detachably and hingedly mounted on the bracket and provided at an outer end thereof with a paint bucket receiver and holder, said arm means embodying a tubular extension, the outer end of said extension providing a socket, said receiver having a frame provided with a shank, said shank having spaced axially aligned head members swivelly mounted in said socket and held therein by a setscrew cooperating with an existing space between the heads.

3,001,752
HINGED SUPPORT BRACKETS
Roy L. Loy, 2836 Dodd St., Knoxville, Tenn.
Filed Mar. 10, 1958, Ser. No. 720,335
5 Claims. (Cl. 248-218)

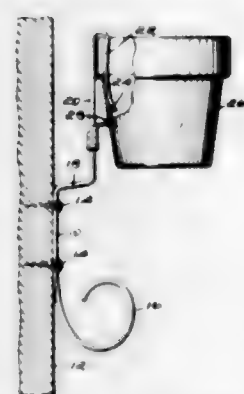
5. A support bracket for scaffolding, comprising an L-shaped member having a horizontally disposed leg adapted to support a member thereon, a vertically extend-

ing leg having fastening means hingedly secured to its upper end, said fastening means having a prong at one end and an opening in the other end, whereby said fastening means may be swung to a substantially horizontal



position for insertion of the prong into a wall or may be swung to a substantially vertical position to lie flush against a wall so that securing means may be inserted through said opening to attach the fastening means to the wall.

3,001,753
HOLDER FOR FLOWER POTS AND OTHER ARTICLES
Joseph H. Smith, 336 Quincy St., Brockton, Mass.
Filed May 17, 1960, Ser. No. 29,624
2 Claims. (Cl. 248—313)



1. A supporting holder for open topped containers comprising a free-standing upright downturned at its upper end to form a hook with a downwardly presented throat to receive from below an edge portion of the container top, the parts of the hook being relatively resiliently yieldable, and a member slidably mounted on the upright having a forwardly presented detent portion in vertical alignment with the hook throat for manual adjustment toward the hook into engagement with the body of a container the edge of which is inserted in the hook to apply clamping pressure thereto in a direction crosswise to the hook.

3,001,754
MOUNTING MEANS FOR TELESCOPING POLE SUPPORT
Dewalt W. Fowler, St. Louis, Mo., assignor to Paul Flum Merchandising Ideas Inc., St. Louis, Mo., a corporation of Missouri
Filed Nov. 26, 1958, Ser. No. 776,588
1 Claim. (Cl. 248—357)

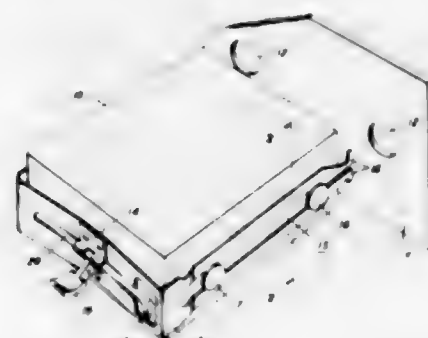
A rod adapted to be mounted between opposed rigid surfaces; means connected to the rod for resisting forces applied to the rod having components of various magnitudes normal to the axis of the rod comprising a rigid cup member attached to at least one end of the rod; said cup member having a concave inner surface of substantially arcuate shape with the rim of the cup member defining substantially a circle, the diameter of the concave inner

surface being considerably greater than the diameter of the rim of the cup, a resilient spherical compressible member mounted in the cup member, the diameter of the compressible member being considerably less than the diameter of the rim of the cup but greater than the maximum depth of the inner surface relative to the rim of the cup; resilient means holding the compressible member in the cup member; said compressible member being in continual contact with said inner surface; the resilient hold-



ing means being sufficiently long and resilient to permit the compressible member to move across a portion of the inner surface when a force is applied having a component normal to the rod; the arrangement being such that when the compressible member is in engagement with a rigid surface and a force is applied to said rod having a component normal to the axis of the rod and parallel to the rigid surfaces, the compressible member will become more tightly compressed, thus applying a greater holding pressure against said rigid surface.

3,001,755
FASTENING DEVICE
Edmund F. Doyle, Landing, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 22, 1959, Ser. No. 822,150
4 Claims. (Cl. 248—360)

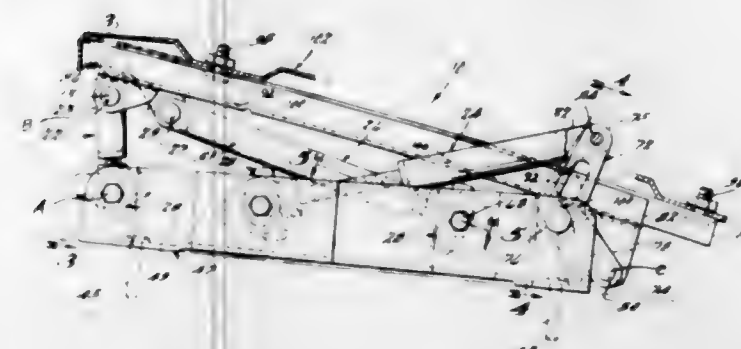


1. In combination, a subassembly, a mounting base, a fastener comprising a piece of spring material being substantially U-shaped and fitted around said subassembly with the extremities of said material projecting through holes in said mounting base, each of the legs of said U-shaped material being bifurcated and having a pair of sidewardly extending latching portions at the extremity thereof, means securing said material to said subassembly at substantially the midpoint between said extremities, means for causing said legs to project to a lesser degree beyond said subassembly, and means for causing the bifurcated portions of said legs to spread apart when said legs project to a lesser degree beyond said subassembly.

3,001,756
ADJUSTABLE SEAT MOUNT
John L. Saffer, Madison Heights, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 1, 1959, Ser. No. 817,291
6 Claims. (Cl. 248—394)

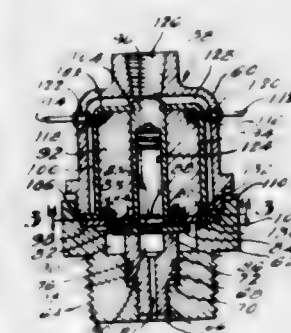
1. A seat adjusting mechanism comprising a channel shaped base, seat supporting means, first power jack means

having its power intake end pivotally mounted on the forward end portion of said base between the sides thereof and having its extensible end pivotally connected to the forward end portion of said seat supporting means, said first power jack means providing the main vertical support for the front end portion of said supporting



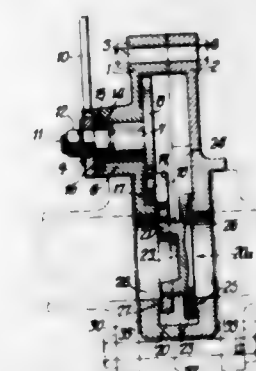
means, bellcrank means pivotally mounted between the sides of said base on the rear of said base and having one arm pivotally connected to said seat supporting means and having another arm pivotally connected to a second power jack means, said second jack means being also pivotally connected between the sides of said base to said base.

3,001,757
MAGNETIC FUEL INJECTION NOZZLE
Thomas M. Ball, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,484
3 Claims. (Cl. 251—140)



1. A post acting low inertia solenoid valve for controlling the flow of fluids in relatively small quantities comprising a housing, a flow control port therein, a freely shiftable valve disc having one side engageable with said port to close the same, the edges of said disc being spaced from said housing to enable limited and comparatively frictionless movement of said disc toward and away from said port, the other side of said disc being substantially flat and continuous, the space between said disc and housing comprising conduit means for passage of fuel therethrough upon movement of said disc from said port, means yieldingly urging said disc toward said valve port, said disc being of a magnetic material susceptible of being shifted from said port by a magnetic field, a plate of magnetic material having its peripheral portion secured to the inside of said housing and spaced from said disc, apertures in said plate forming part of said conduit means, and an electrical coil in said housing having an armature extending through said plate and spaced from said disc, said coil being spaced from the inside of said housing to form part of said conduit means.

3,001,758
GATE VALVE
Hans Ringgenberg, 34 Talhofweg, Winterthur, Switzerland
Filed Dec. 17, 1958, Ser. No. 780,968
Claims priority, application Switzerland Dec. 18, 1957
15 Claims. (Cl. 251—168)

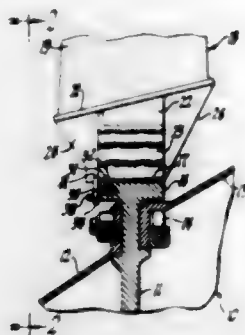


1. A gate valve interposed between two pipes and comprising a housing forming a valve chamber having aligned ports provided with opposed parallel valve seats in the chamber and forming a passage, said housing being divided into two parts in a plane normal to said passage and having a substantially flat pocket communicating with said passage and extending in a direction transverse to said passage, an expansible valve gate assembly mounted for guided rectilinear movement in the chamber transversely to said seats and ports to open and close the valve, said assembly including a first part and a second part adapted to individually bear on the valve seats, said first part being rotatably connected to and supporting said second part, the rotation axis substantially coinciding with the axis of said passage when said assembly is in valve closing position, each of said parts being provided with a helical surface substantially coaxial of said passage when said assembly is in valve closing position, the helical surface of one part being complementary to and engaging the helical surface of the other part for affording relative axial movement of said parts upon rotation of one part relative to the other part in one or in the opposite direction, said first part being rotatable in said housing around the axis of said helical surfaces, said second part being unrotatable and slidable in said housing, and a crank gear mounted on said housing and having a crank arm placed in said pocket and being articulated to said first part for swivelling said first part on said second part and moving said assembly into said pocket for opening the valve and simultaneously allowing movement of said parts towards one another and moving said assembly out of said pocket for closing the valve and simultaneously spreading said parts apart.

3,001,759
ROTOR BLADE LOCK
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,290
4 Claims. (Cl. 253—77)

1. A rotor assembly for a turbomachine comprising, in combination, a rotor having a slot in the periphery thereof, a blade mounted in said slot for an axial but non-radial sliding movement relative to said rotor, and retainer means to prevent the axial relative sliding movement between said blade and rotor, said rotor periphery having an opening therein adjacent said slot, said retainer means having a body portion rotatably and slidably mounted in said opening for rotation about the axis of the opening to a plurality of positions and sliding in a plurality of directions, said retainer means also having a plurality of circumferentially spaced head portions extending radially from said body portion, a plurality of

engageable means on said blade and said rotor engaging said head portions in one rotative position of said retainer means preventing relative sliding movement in said directions between said blade, retainer means and rotor,



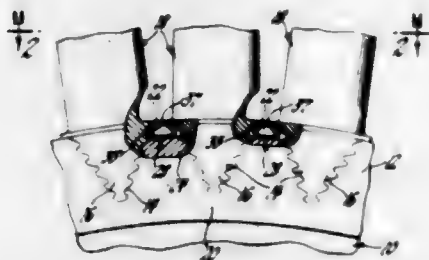
rotation of said retainer means to another position disengaging said head portions from said engageable means, one of said head portions being deformable to abut one of said engageable means when said retainer means is in said one rotative position to prevent rotation of said retainer means.

3,001,760

TURBINE BLADE LOCK

Robert W. Guernsey, George W. Mason, and Earle R. Wall, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 7, 1959, Ser. No. 832,256
1 Claim. (Cl. 253—77)



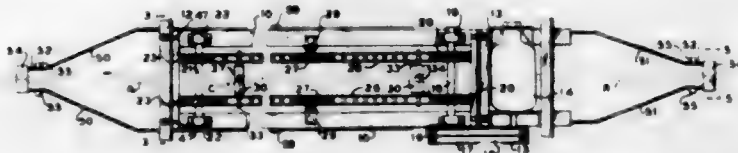
A turbine rotor assembly comprising a wheel member having a rim, a plurality of circumferentially spaced tapered dovetailed recesses formed in said rim, said recesses extending axially of said wheel and opening into the periphery of said rim, a plurality of turbine buckets adapted to be supported within said recesses, each of said buckets including a platform having a tapered dovetailed cross section corresponding to the cross section of said wheel rim recesses, said recesses and platform coacting to retain the turbine buckets against radial movement relative to said wheel, a second set of recesses formed in the periphery of said rim intermediate the turbine bucket receiving recesses, each platform including portions overhanging subadjacent second set recesses, said second set of recesses having circumferentially extending opposed shoulders, a notch formed in each bucket platform, said notch being of substantially the same length as the second set of recesses and adapted to be aligned therewith when the turbine bucket is in the proper axial position on said rim, and a spring clip member disposed in each of said second recesses, each of said clips being of substantially the same length as the platform notch and being disposed between said recess shoulders, said clip including a substantially flat base portion adapted to seat within one of the second rim recesses, a short curved section extending from one end of the base portion and another curved section extending from the other end of the base portion, said other curved section terminating in a tongue portion adapted to engage said bucket platform notch, said short curved section and said other

curved section of the clip being disposed in subadjacent abutting relation respectively with the overhanging portions of adjacent turbine blade platforms.

3,001,761

CONDUIT ROD PUSHER

Harold S. Pittman, Rte. 1, Kenly, N.C., assignor of forty percent to Frank C. Moessner, Jonesboro, Ga.
Filed Aug. 22, 1958, Ser. No. 756,695
3 Claims. (Cl. 254—29)



3. A rod pusher including a frame having a pair of spaced rails, a motor mounted on said frame, a pair of axles mounted transversely on said frame in spaced parallel relationship to each other, means journaling said axles, drive means connected between said motor and one of said axles for rotating the same upon actuation of said motor, a pair of space sprockets on said one of said axles, a pair of spaced sprockets on the other of said axles and aligned respectively with the first mentioned pair of sprockets, all of said sprockets being within said frame, a pair of continuous chains trained over said sprockets, one flight of each of said chains being aligned with said rails, rod supporting means carried by said frame for supporting a line of tandem coupled rods in parallel relationship to said one flight of each of said chains, spring means operatively positioned between said frame and said rod supporting means for resiliently resisting movement of said coupled rods outwardly of said frame, a plurality of spaced blocks carried between said chains, a fixed yoke at one end of said frame for insertion into the mouth of a conduit, and bearing means on said fixed yoke for reaction against said first mentioned conduit.

3,001,762

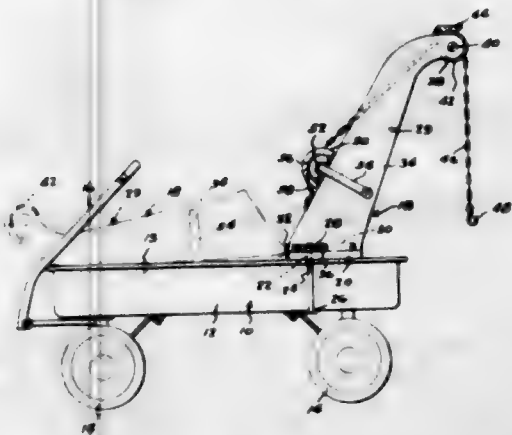
CARPET STRETCHER

Harry Skolnick, 2612 W. 2nd St., Brooklyn 23, N.Y.
Filed Nov. 10, 1959, Ser. No. 852,089
8 Claims. (Cl. 254—62)



7. A portable carpet stretching device for stretching carpeting into engagement with a tacking strip comprising a carriage and a face plate mounted on the forward end thereof, a carpet gripping plate mounted in said carriage, said face plate having a laterally extending lower edge to be disposed in abutment with the tacking strip, means for moving said carpet gripping plate into engagement with carpeting to be stretched and for applying a stretching force thereto, the abutment of the lower edge of said face plate with said tacking strip reacting to the application of said stretching force whereby said carpeting is caused to be stretched in the direction of said tacking strip, the rearwardly directed face of said face plate being provided with a channel for receiving a portion of said carriage in laterally movable relation and locking means for releasably securing said portion with respect to face plate in any selected position along the lateral extent of said channel.

3,001,763
HOIST AND TOWING ATTACHMENT FOR
CHILDREN'S WAGONS
 Andrew A. Pilot, 30 Hamboldt, Port Colborne,
 Ontario, Canada
 Filed Oct. 10, 1958, Ser. No. 766,620
 2 Claims. (Cl. 254-139.1)

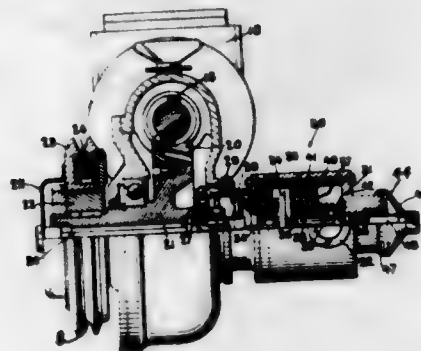


1. A hoist attachment for a child's wagon, comprising: a flat, horizontal base plate having an elongated form, whereby the same may extend transversely of a child's wagon with the ends of the plate projecting laterally outwardly from the respective, opposite sides of the wagon, said base plate having end portions each of which has at least one row of openings, the openings of each row being spaced longitudinally along the base plate; clamping means associated with the respective rows for securing the base plate to the wagon, said means including L-shaped bolts removably engaged in selected openings of said rows and extending downwardly from the base plate so as to be disposed in embracing relation to the wagon, said means further including nuts threaded on the bolts in engagement with the base plate, whereby to draw the base plate and the lower ends of the bolts toward each other into gripping engagement with the respective sides of the wagon, said base plate having a leading longitudinal edge; and a boom assembly having an inner end formed with a flat bottom plate disposed between the clamping bolts, said bottom plate being approximately coextensive in width with the base plate and having a leading edge portion registered with and having a hinge connection to said leading edge of the base plate, a pair of arms affixed to and converging in a direction away from the bottom plate, a sheave mounted on the convergent ends of the arms, a drum carried by the arms intermediate their ends, and a flexible element wound upon the drum and reeved about said sheave, said boom assembly being swingable about the axis of said hinge connection between an inoperative position in which the boom assembly projects approximately horizontally forwardly from the base plate, and an operative position in which the boom assembly extends upwardly rearwardly from the base plate with its bottom plate in face-to-face contact with the base plate.

3,001,764
PULL-OUT DEVICES FOR METAL EXTRUSION
PRESSES WITH TENSION CONTROL
 Ronald Frederick Worlidge, Lower Parkstone, England,
 assignor to The Loewy Engineering Company Limited,
 Bournemouth, England, a corporation of Great Britain
 Filed Jan. 13, 1958, Ser. No. 768,414
 Claims priority, application Great Britain Jan. 22, 1957
 5 Claims. (Cl. 254-172)

1. An automatic pulling mechanism for drawing with substantially constant unidirectional force and with fluctuating speed, and comprising a driven member moving in one direction with fluctuating speed, a driver member for pulling said driven member in one said direction and including a pulley, and a linking member secured to said

driven member and received by said pulley for connecting said driven and driver members; said driver member comprising a motor having a power output which varies inversely with the speed thereof and a hub driven by said motor, said motor being provided with a throttle mechanism in the power supply thereto, an overrunning coupling provided between said hub and said pulley, said overrunning coupling including a spring respectively secured to said pulley and to said hub to transmit power from said motor to said pulley and provide limited overrun



between said hub and said pulley in accordance with the difference between said fluctuating speed which is transmitted through said linking member and said speed of said motor, and connecting mechanism linking said overrunning coupling and said throttle mechanism to operate said throttle mechanism and to vary said power output of said motor in direct proportion with the direction and magnitude of the overrun between said hub and said pulley thereby providing substantially constant pulling force in the pulling mechanism irrespective of the speed of said motor.

3,001,765
POST FOR AN ELECTRIC FENCE
 Samuel M. Shobert, R.R. 2, Ireland Road,
 Mishawaka, Ind.
 Filed May 22, 1959, Ser. No. 815,134
 3 Claims. (Cl. 256-10)

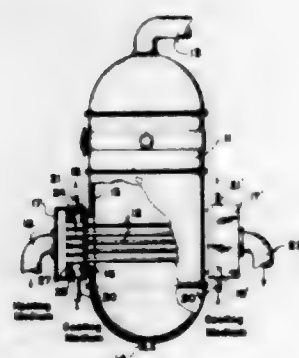


1. An electric-fence post comprising an elongated rod composed of a bundle of elongated glass threads under tension imbedded in and bonded together by a solidified resinous material, said rod being of circular cross-section and provided with a point on its lower extremity; a metallic eyelet secured to the upper end of said rod and comprising a length of stiff wire having opposite end portions, one end portion being coiled tightly around said rod to fix said length of wire thereto, the other end portion of said length of wire being formed into an enlarged helical coil of one turn which extends in a plane substantially parallel to said rod; a step secured to said rod inter-

mediate the ends thereof, said step comprising a second length of stiff wire having opposite end portions tightly wrapped around said rod at spaced apart portions thereon, said second length extending radially outwardly from the upper end portion and angling downwardly to the lower end portion, whereby said rod may be driven into the earth by a downward force on said step.

3,001,766 HEAT EXCHANGE DEVICE FOR CORROSIVE LIQUORS

Frederick Laist, Los Angeles, Calif., assignor, by mesne assignments, to The Anaconda Company, New York, N.Y., a corporation of Montana
Filed Nov. 14, 1955, Ser. No. 546,467
9 Claims. (Cl. 257-1)



1. A heat exchange device for handling corrosive liquors comprising a receptacle having a corrosion-resistant lining of rubber-like material, means for introducing into the receptacle and withdrawing therefrom the corrosive liquor to be handled by the device, a plurality of corrosion-resistant heat exchange tubes extending between and through opposite walls of said receptacle, manifolds communicating respectively with the opposite ends of said tubes and positioned respectively in spaced relation with said opposite walls of the receptacle, the space between each manifold and the adjacent wall of the receptacle being enclosed to form a cooling chamber, means for supplying a cooling medium to each of said cooling chambers, means for supplying a heating medium to one of said manifolds and for withdrawing the heating medium from the other manifold, each of said manifolds and the adjacent cooling chamber having a common wall provided with heat insulation, and heat insulation surrounding those portions of the heating tubes which are positioned within said cooling chambers.

3,001,767 TUBULAR STRUCTURE

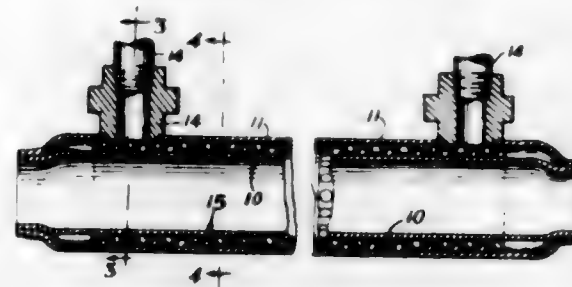
Charles R. Straubing, Sodus Point, N.Y., assignor to Kenmore Machine Products, Inc., Lyons, N.Y., a corporation of New York

Filed Nov. 16, 1959, Ser. No. 853,162

1 Claim. (Cl. 257-246)

A tubular structure comprising an inner tube, an outer tube of greater diameter throughout its central portion and permanently affixed to said inner tube at their end portions, a pair of pipe fittings each mounted in said outer tube adjacent an opposite end portion thereof, and a pair of imperforate semi-cylindrical sleeves extending through the central portion of said structure medially between and in good heat-exchange contact with the adjacent walls of said tubes, said semi-cylindrical sleeves having a plurality of longitudinally and circumferentially spaced indentations alternating with a plurality of longitudinally and circumferentially spaced protuberances each

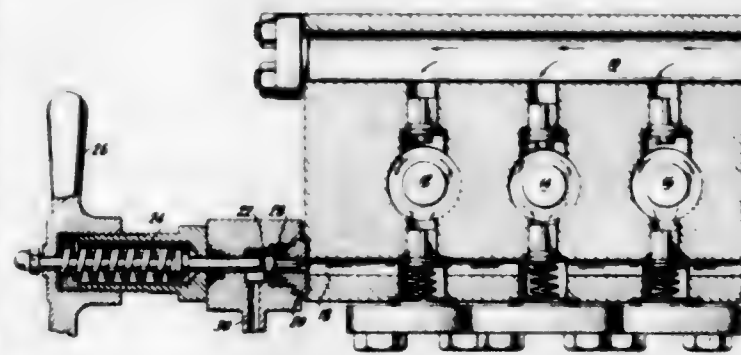
having relatively large and flat end portions providing said good heat-exchange contact with said adjacent tube walls, said indentations and protuberances being in staggered patterns to provide longer circuitous fluid-flow



paths on both sides of said semi-cylindrical sleeves and the sleeve portions between said indentations and protuberances being longitudinally undulated for further increasing the turbulence of the fluid-flow and thus improving the heat transfer.

3,001,768 METHOD AND MEANS FOR SUBJECTING A LIQUID MEDIUM TO VIOLENT VIBRA- TIONAL PRESSURE EFFECTS

Albert F. Stevenson, 79 N. Main St., Wolfeboro, N.H., and Kurt S. Lion, 9 Herbert Road, Belmont 78, Mass.
Filed Jan. 22, 1957, Ser. No. 635,354
9 Claims. (Cl. 259-1)



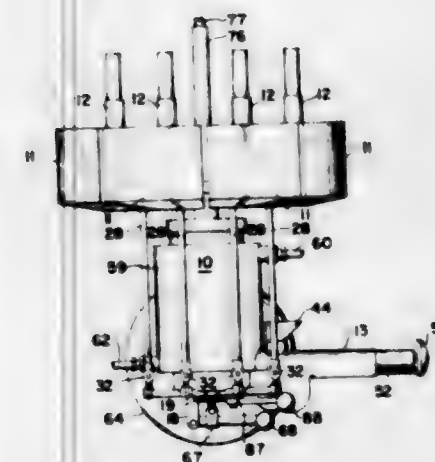
5. An apparatus for subjecting a liquid medium to the disintegrating effects of violent ultrasonic oscillating pressures, which comprises two resilient vibratable metal valve members whose peripheral portions are adapted to form a liquid-tight band seal when in contact with each other, spring means for resiliently pressing said members together by a pressure in excess of 5000 pounds per square inch, a passage through one of said members located centrally therein and opening into a cavity of substantial size defined by opposing walls of said valve members, the cavity having a maximum height adjacent the passage and diminishing gradually in height to its edge at the point of sealing contact of said walls at the periphery of the members, and having an overall width equal to at least one and one-half times the diameter of the passage, a pump for forcing a liquid medium in a continuous stream under a pressure in excess of 5000 pounds per square inch and greater than the pressure holding the resilient members together through said passage and into said cavity at least one of said resilient members deforming and bending under the effect of such pressure on said liquid without such resilient member undergoing substantial bodily movement.

3,001,769
ULTRASONIC DEGREASER
Louis Edward Plasmeier, Evanston, Ill., assignor to Phillips Manufacturing Company, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 557,267, Jan. 4, 1956. This application Feb. 27, 1959, Ser. No. 797,006
4 Claims. (Cl. 259-1)



1. A degreaser comprising a sump having a wall, a housing, a row of ultrasonic wave generating means mounted in said housing, each means having an ultrasonic radiating surface directed outwardly of the housing, an opening in the said wall of the sump capable of passing a direct band of ultrasonic waves moving at right angles to the radiating surfaces in any vertical, horizontal or intermediate position, and means for fastening the housing interchangeably in any of several selected positions on the outside of the opening and in liquid-tight connection therewith.

3,001,770
ICE CREAM FLAVOR MIXING MACHINE
Alfred Mueller, 524 Center St., Reading, Pa.
Filed Apr. 16, 1959, Ser. No. 806,948
2 Claims. (Cl. 259-7)



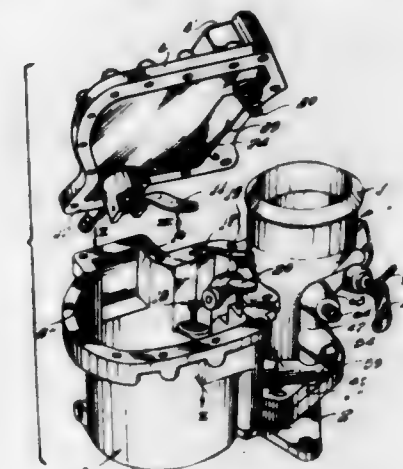
1. An ice cream flavor mixing machine comprising a substantially cylindrical mixing chamber, a plurality of flavor chambers associated therewith and connected thereto and containing different flavors, valve means for introducing a supply of ice cream into said chamber, conduit means and pump means controlled by additional valve means for selectively introducing one of said flavors into the mixing chamber, a plurality of vertical posts extending through the mixing chamber parallel to the axis thereof, a piston vertically slidable in said mixing chamber and guided by said posts and closely fitting the inner walls of the mixing chamber for extruding the ice cream mix and discharging it downwardly and outwardly from said chamber, agitating means rotatably mounted axially within and slidably fitted in said chamber and including scraper means for scraping ice tending to form on the inner walls of said mixing chamber, and discharge outlet means at the bottom of said chamber through which the ice cream is extruded and discharged by said piston.

3,001,771
DISCHARGE RECEIVER FOR AIR MOTIVATED
MATERIALS
George M. Pro, Leawood, Kans., assignor to Air Placement Equipment Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 17, 1958, Ser. No. 774,422
7 Claims. (Cl. 259-151)



1. A combined receiver and feeder assembly for materials containing a number of ingredients, said assembly comprising an upright body provided with a cylindrical side wall having an inlet through which said materials may be directed horizontally into the body with force, the body having a bottom outlet through which said materials may gravitate from the body; and baffle structure in said body within the path of travel of the incoming materials, said structure including a pair of normally upright portions joined to present a leading, vertical edge aligned with and spaced inwardly from said inlet, said portions having concave surfaces facing said inlet and diverging from said edge away from the inlet and having terminal edges merging with the inner face of said wall, whereby all the incoming materials are intersected, deflected laterally in opposite directions and caused to impinge on said wall prior to gravitation through said outlet.

3,001,772
CARBURETOR
Antonio Juan Guillermo Perotti, 1058 Amenbar St., Buenos Aires, Argentina, and Arturo Americo Monaccl, 2722(61) Angel J. Murga St., Necochea, Argentina
Filed Aug. 17, 1959, Ser. No. 834,159
8 Claims. (Cl. 261-34)



1. A carburetor for internal combustion engines of the ignition type, said carburetor comprising a tube including a Venturi member and having a lower end adapted to be connected to the intake manifold of an engine and an upper end adapted to be connected to an air filter, a fuel float chamber having a fuel inlet, a throttle valve including an axis pin and a disc mounted on said axis pin, said throttle valve being housed in said tube, a first fuel injector nozzle in said tube and ending in said Venturi member between said throttle valve and said lower end, said first fuel injector nozzle being connected to said float chamber, a second fuel injector nozzle connected to said float chamber and ending in said tube above

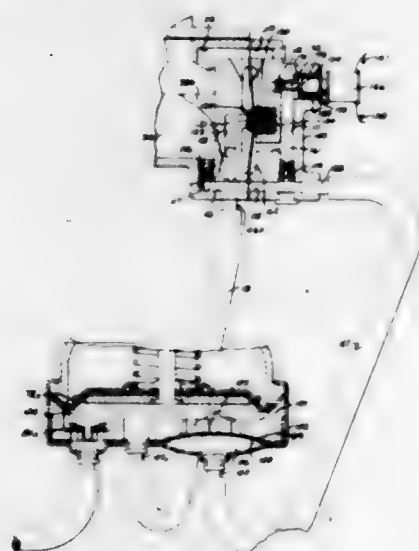
said axis pin and within the control range of said disc, a vacuum connection between said Venturi member and said float chamber, and valve means for controlling the flow of fuel from said float chamber to said injector nozzles and connected to said throttle valve.

3,001,773

FUEL SYSTEM

Eldon A. Johnson, Sunset Hills, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Oct. 2, 1958, Ser. No. 764,978
15 Claims. (Cl. 261—36)



11. A fuel supply system for an internal combustion engine, said system comprising a carburetor having a constant level fuel bowl of the overflow type and a spill bowl for receiving overflow fuel from said fuel bowl, means forming a mixture conduit extending through said carburetor, a throttle valve operatively mounted within said mixture conduit, a main fuel pump having a pumping chamber and an outlet therefrom, said carburetor including a pair of chambers, fuel passage means connecting one of said chambers to said main fuel pump outlet and said fuel bowl, said fuel passage means including a valve seat surface and a check valve element within said one chamber, means biasing said check valve element against said valve seat surface to close said fuel passage, a scavenging pump means including fuel duct structure connecting said spill bowl and said fuel bowl with the other one of said chambers, an inlet valve within said duct structure between said spill bowl and said other chamber, means forming a restricted orifice within said duct structure between said other chamber and said fuel bowl, a diaphragm exposed to fuel in said pumping chamber and to fuel in said duct structure for exerting pumping pressures to the fuel in said duct structure, a valve device in said duct structure for controlling fuel flow through said orifice, an electrical circuit including a solenoid and a switch for closing said circuit to open said valve device, air motor means operatively connected to said switch, and means forming a passage from said air motor to a point in said mixture conduit downstream of said throttle valve.

3,001,774

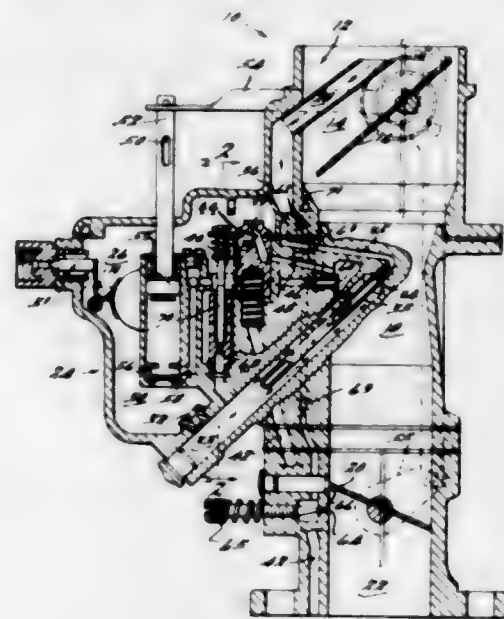
CARBURETOR

Jorma O. Sarto, Orchard Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,418
11 Claims. (Cl. 261—39)

1. In a carburetor having an air intake passage, a choke valve pivotally off center mounted in said passage and

having means resiliently urging it to a position closing off said passage, a throttle valve operatively mounted in said air passage, a fuel bowl having an air section restrictively vented to the atmosphere and a fuel section communicating across a fuel jet with said passage intermediate said valves, conduit means connecting said air



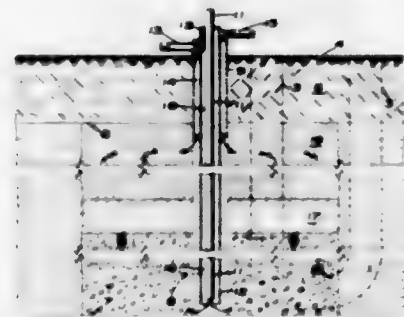
section to said passage intermediate said valves, and pressure responsive valve means in said conduit communicating with said passage downstream of said throttle valve and responsive to the pressure therein to adjust the fluid flow through said conduit and thereby the pressure differential between said air section and said passage intermediate said valves to thereby regulate the fuel flow through said jet.

3,001,775

VERTICAL FLOW PROCESS FOR IN SITU RETORTING OF OIL SHALE

Victor D. Alfred, Littleton, Colo., assignor to The Ohio Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Dec. 8, 1958, Ser. No. 778,868
13 Claims. (Cl. 262—3)



8. The method of in situ retorting of oil shale deposits, which comprises forming at least one hole extending from the surface through the vertical extent of an oil shale formation, forming a cavern encompassing said hole at the base of said formation and of substantial vertical extent by removal of material therefrom, caving shale overlying said cavern after material removal so as to fall loosely into said cavern, thereby forming voids increasing permeability in the loosened shale and defining a retort zone above said cavern, initiating combustion at one end of said retort zone with gas introduced at the opposite end thereof for the support of combustion therein, thereby inducing a progressive combustion front movement through said zone countercurrent to the gas flow therein with educed oil moving through the pyrolyzed

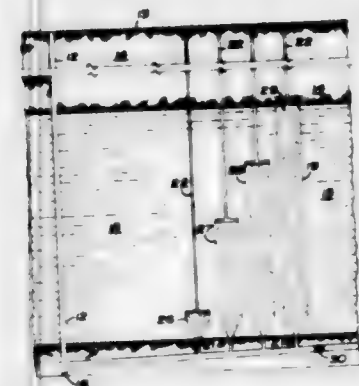
shale in the gas flow following passage of the front, and withdrawing evolved products of the combustion and educed oil from an end of said zone through a passage to the surface.

3,001,776

METHOD OF PREPARATION FOR AND PERFORMANCE OF IN SITU RETORTING

Hendrik K. van Poolen, Englewood, Colo., assignor to The Ohio Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Apr. 10, 1959, Ser. No. 805,396
12 Claims. (Cl. 262—3)



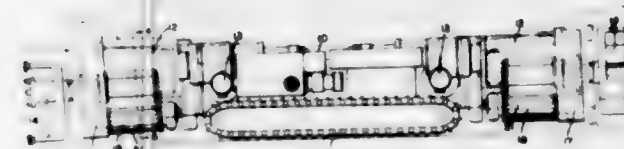
1. In the art of in situ retorting of oil shale, the steps of forming an underground retort by removal of a substantial portion of contained shale from the bottom of a substantially upright retorting zone so as to increase permeability within said zone by gravitational descent of the contained shale in said zone, inducing a heat front movement upwardly through said zone for recovery of evolved products, and returning the removed shale to the surface and into the top of said zone during progress of the gravitational descent and heat front movement therein.

3,001,777

MINERAL MINING AND LOADING MACHINE HAVING A TRANSVERSE CONVEYOR ON A VERTICALLY ADJUSTABLE MINING HEAD

Ronald Cameron, Cappelow, Greenock, Scotland, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 15, 1958, Ser. No. 728,700
8 Claims. (Cl. 262—9)



1. A mineral mining and loading machine comprising a mobile base, a mining head pivotally secured to said mobile base adjacent one end thereof to be vertically movable with respect thereto, said mining head extending outwardly beyond said one end of said mobile base, said head having a cutting or disintegrating means for removing material from the mineral face to provide a passage-way in the material being mined to permit the machine to advance, means for adjusting said head vertically relative to said mobile base, a conveyor carried by said head and positioned on said head immediately to the rear of said cutting means for receiving the disintegrated material, and said conveyor extending transversely of said mobile base to convey such material to one side of said machine in advance of said mobile base.

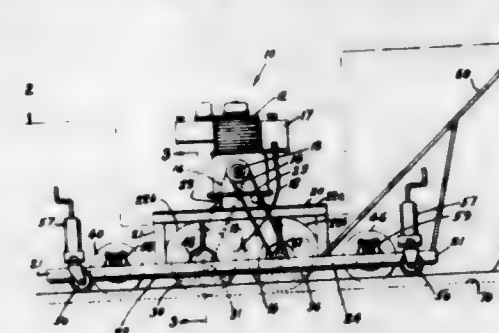
3,001,778

CONCRETE PAVEMENT JOINT CLEANER

Hisao Tomita, 142 Clara, and Robert J. Breshears, 733 Pleasant Valley Road, both of Port Huoneme, Calif., and Edgar E. Breshears, 4723 Paramount, Lakewood, Calif.

Filed Nov. 3, 1959, Ser. No. 850,743
2 Claims. (Cl. 262—20)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A pavement joint cleaner, comprising, in combination:

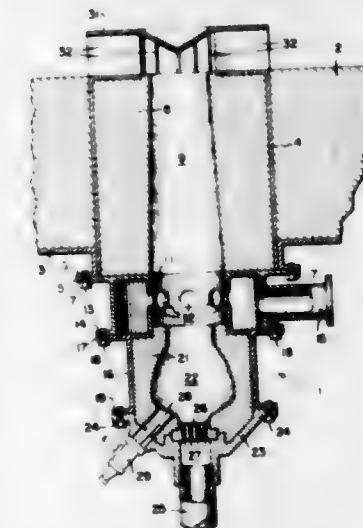
a structural framework adapted to be moved over a pavement, said framework having a longitudinal axis parallel to its principal direction of travel along a joint in said pavement;
height adjustable swivel casters supporting said framework for vertical and translational movement thereof;
a prime mover mounted centrally on said framework;
a pair of thin, flexible abrasive wheels mounted substantially in tandem on said framework along the longitudinal axis thereof;
transverse shaft means mounted on said framework for supporting and rotating said abrasive wheels;
means associated with said shaft means for moving said abrasive wheels laterally of each other and said longitudinal axis;
connecting means between said prime mover and said transverse shaft means; and
means for moving said joint cleaner over said pavement and along said pavement joint.

3,001,779

AIR HEATER

John Roger Williams, Ambler, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania

Filed June 6, 1958, Ser. No. 740,251
3 Claims. (Cl. 263—19)



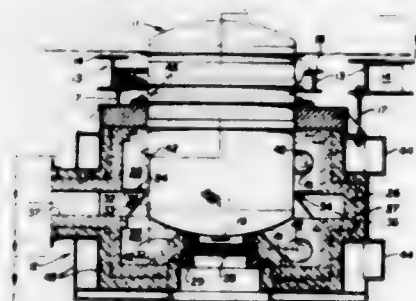
1. In combination, an oven having a wall provided with an opening therein, a heater having a portion thereof received in said opening, said heater having a gas distributor on an end thereof which distributor extends into

said oven, means to attach said heater to said oven, said heater being provided with means forming a path for gases including a refractory lined combustion chamber, an annular chamber surrounding said path, a refractory lined passage and said distributor, means to supply fuel to said combustion chamber to be burned therein, the products of combustion flowing through said path into said oven, means to withdraw gas from said oven and introduce it into said annular chamber, and means through which said gas is moved radially inward from said annular chamber to mix with the products of combustion traveling in said path.

3,001,780

HEATING UNIT AND METHOD

Clark K. Benson, San Francisco, and Andrew A. Caridis, Millbrae, Calif., assignors to Heat and Control Inc., San Francisco, Calif., a corporation of California
Filed Feb. 10, 1958, Ser. No. 714,345
9 Claims. (Cl. 263-42)

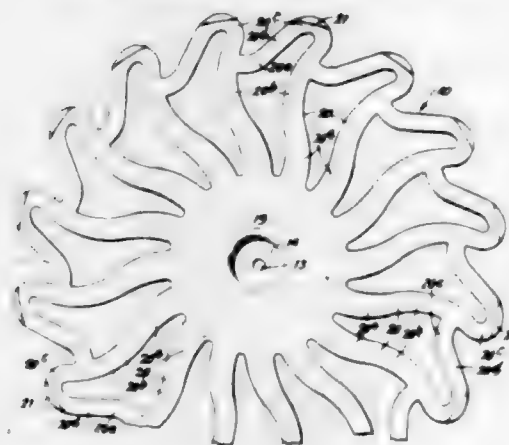


1. In a heating unit, a vessel adapted to hold a quantity of material and having heat conductive walls, first means enclosing a predetermined portion of said vessel to provide an enclosed space about the vessel, and means dividing the enclosed space into at least two separate compartments each enclosing different areas of said vessel, each compartment being adapted to receive a gaseous medium for effecting a heat exchange with respect to said different areas of said vessel, said last-named means defining an enclosed flue passage, separating the same from said compartments and providing an inlet to said flue passage from each of said compartments for withdrawing gases from the compartments.

3,001,781

SPIDER STRUCTURE

Douglas B. Walker, Portland, Oreg., assignor to Esco Corporation, a corporation of Oregon
Filed July 21, 1959, Ser. No. 828,615
3 Claims. (Cl. 263-47)



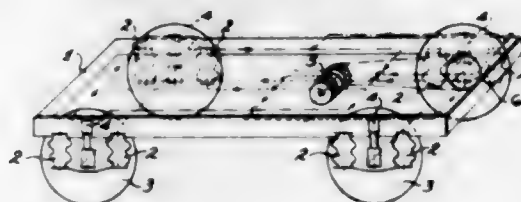
1. A spider, comprising a unitary metal body having a central hub and a plurality of generally radially-extending, identical arms, each of said arms having a first end connected to said hub and a second end connected to an adjacent arm intermediate the ends of the adjacent arm, each of said arms having a portion intermediate its ends

projecting radially outward a distance beyond the connection of said second end with said adjacent arm, each of said arms, in proceeding from said first end to said intermediate portion, diminishing in cross-sectional area and having first a portion concavely related to said adjacent arm, second a portion convexly related to said adjacent arm, third a portion concavely related to said adjacent arm and providing said intermediate portion, and fourth a portion interconnecting the third portion and said adjacent arm.

3,001,782

CONTROLLED SPRING SYSTEM

Gustav A. Gaebler, Friedrich-Ebert-Strasse 2, Langen, Germany
Filed Jan. 2, 1958, Ser. No. 706,711
4 Claims. (Cl. 267-11)



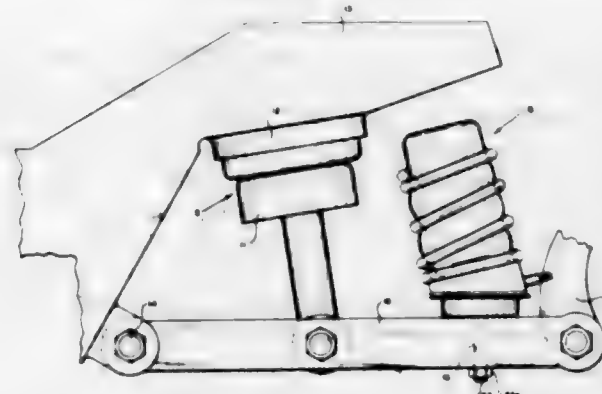
1. In a spring system for a vehicle which comprises a chassis, an axle, a spring supporting the chassis from the axle, and a double-acting hydraulic shock absorber connected to said chassis and axle and having cylinder means with opposed cylinder ends connected by a metered passage and piston means connected to be moved into either of said cylinder ends to resist movement of said axle either toward or away from said chassis; means actuable to supply an increased restoring force comprising pressure liquid supply means, valved inlet passage means adapted to connect said supply means with either of said cylinder ends, valved exhaust passage means adapted to be connected with either of said cylinder ends and valve means having relatively movable parts connected to said chassis and to said axle, respectively, and arranged to connect either one of said cylinder ends with said inlet passage means and disconnect the same from said exhaust passage means and at the same time disconnect the remaining cylinder end from said inlet passage means and connect said remaining cylinder end with said exhaust passage means upon a predetermined amount of movement of said piston means into said one cylinder end.

3,001,783

SPRING SUSPENSION DEVICES FOR MOTOR VEHICLES

George William Moody, Lansing, Mich., assignor to Universal Air Lift, Inc., Lansing, Mich., a corporation of Michigan

Filed Oct. 6, 1958, Ser. No. 765,578
7 Claims. (Cl. 267-34)



7. In a shipping bumper assembly; an elongate coil spring; an inflatable, cylindrical, hollow bag within said

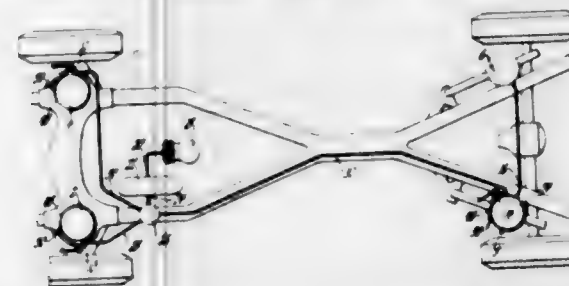
spring having a fluid pressure chamber bounded by end portions and elastic side walls; one end portion of said bag being substantially inexpandible under pressure in said chamber; means communicating with the interior of the bag for inflating the bag with fluid under pressure; the substantially inexpandible end portion projecting axially outwardly from said spring but having a portion thereof laterally braced by the end convolution of the spring.

3,001,784

AIR SPRING ASSEMBLY

Von D. Polhemus, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 18, 1960, Ser. No. 15,987
6 Claims. (Cl. 267-65)



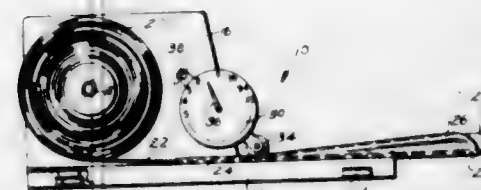
1. In combination with an air spring having a rigid casing, means forming an aperture in the wall of said casing, a leveling valve assembly having a pilot portion extending through said aperture, an endless band encircling said casing and said assembly, and cam means disposed between said casing and said band operable to tension said band and thereby urge said assembly into firm engagement with said casing.

3,001,785

PAPER FOLDER AND CREASER

Vance W. Gee, Chittenden, Vt.
(R.F.D. No. 1, Rutland, Vt.)

Filed Aug. 25, 1959, Ser. No. 835,890
3 Claims. (Cl. 270-86)



1. A tape folding and creasing device comprising, in combination, a main supporting base, an elongated guide body having folding guide means for directing a strip of tape into a folded position from one inlet end to an opposite outlet end, said guide body being supported upon said main support base, said guide body folding a paper strip about its longitudinal axis during movement of said strip through said guide means from said one inlet end to said opposite outlet end thereof, presser means carried by said main support base overlying the inlet end of said guide to crease said strip passing through said guide means, means responsive to said presser means for measuring the length of the strip of tapered tape through said guide means, said presser means precreasing said tape along said central longitudinal axis thereof during movement of said tape into and through said guide means, said main support base comprising a substantially stable base section, a perpendicularly related upstanding supporting flange having a transversely extending shaft rollably supporting a roll of paper thereupon, said folding guide means comprising a substantially tubular member having a slot at said inlet end slidably

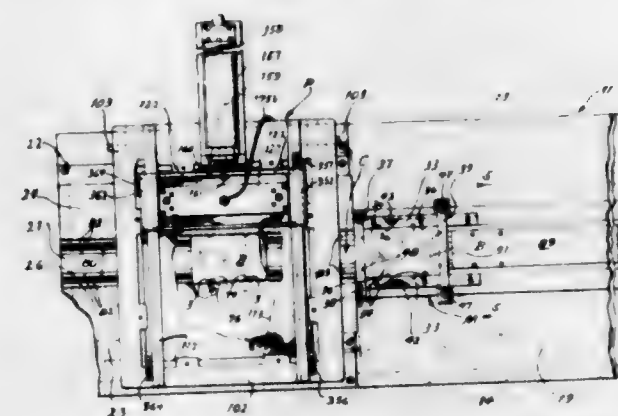
receiving said strip of paper tape therethrough, and the opposite outlet end of said guide including a pair of upwardly diverging wings slidably receiving the opposite lateral sides of said tape longitudinally therethrough from said inlet end of said guide means.

3,001,786

PRINTED CIRCUIT PRINTING MACHINE

Roy J. Carrozza and Stanley J. Potocki, Chicago, and Joseph W. Campagna, Berwyn, Ill., assignors to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Aug. 26, 1957, Ser. No. 680,277
1 Claim. (Cl. 271-44)



A printing mechanism comprising a horizontal bed, a pair of guides fixed to the bed, said guides being spaced to provide a course therebetween for a rectangular plate-like blank to slide in over said bed, said blank being formed with a notch at one of its edges, a reciprocated ejector member for rapidly moving the blank substantially to a predetermined position in the course during its forward stroke, a friction augmenting member, said last-named member being arranged to engage said blank adjacent said position and reduce its momentum on reversal of movement of said ejector member by increasing the frictional resistance offered said blank by said course adjacent said predetermined position, and a clamp member normally beside the course at said predetermined position and being arranged to be moved laterally into the course to engage the notch for indexing the blank accurately into said predetermined position and for clamping said blank in its predetermined position while a printing operation is performed on said blank.

3,001,787

SLITTING MACHINE

John Eric Socke, Pelham Manor, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 17, 1958, Ser. No. 781,052
2 Claims. (Cl. 271-49)



1. In a machine for slitting sheet material having two oppositely disposed and accurately dimensioned parallel

side edges into strips of can body blanks and the like, said machine having a support for said sheets a conveyor for propelling said supported sheets in spaced relation along a predetermined line of travel, a row of fixed rollers disposed adjacent and in parallelism with said line of travel for gauging one of said side edges of a said sheet, and a row of yieldable gauge rollers pivotally mounted adjacent said line of travel for engaging the oppositely disposed side edge of said sheet to urge the sheet into engagement with said fixed rollers to precisely dispose said parallel side edges of the sheet in parallelism with said line of sheet travel to eliminate the necessity for trimming said sheet side edges, the improvement comprising pivotally mounting a transversely spaced longitudinally offset pair of said yieldable gauge rollers on said support on opposite sides of said line of sheet travel, said pair of rollers being disposed in advance of and offset laterally outwardly from said rows of fixed and yieldable gauge rollers, whereby to facilitate initial aligned engagement of said sheet with said rows of fixed and yieldable rollers and to precisely align the opposite side edges of said sheet respectively with said rows of gauge rollers.

3,001,788

SHEET REGISTERING METHOD AND MEANS
Jack Enos Vandeman, Berea, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Jan. 14, 1954, Ser. No. 404,054
9 Claims. (Cl. 271—58)



3. In mechanism for feeding sheets to a printing machine or the like, means for feeding a stream of evenly spaced underlapped sheets forward at a given stream speed, bottom front stops, side register means disposed rearwardly of said front stops, said means being adapted to grip a sheet and move it transversely for side registration, means for moving said front stops downwardly after each sheet is front and side registered and for raising the front stops thereafter beneath the first sheet to intercept and front register the second sheet of the stream, means acting upon the previously registered first sheet of the stream for grasping it and forwarding it past said front stops toward the said machine, and means for temporarily advancing the tail end of said first sheet at a speed greater than that of its forward end to cause the tail end to assume a maximum advanced position relative to the forward end at approximately the time the tail end of the first sheet passes said side register means, said side register means instituting side registration of the second sheet approximately at the time the tail end of the first sheet passes the side register means.

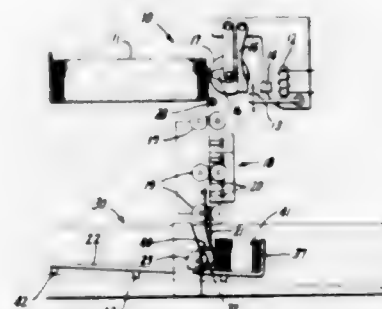
3,001,789

CARD HANDLING APPARATUS
Norman M. Emalle, Yardley, and Frank J. Reed, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 14, 1959, Ser. No. 813,147
6 Claims. (Cl. 271—88)

1. In high speed card handling apparatus, the combination comprising: a card receiving structure supported

for gravitational movement along a downwardly inclined path; means for delivering cards individually to said card-receiving structure; holding means with respect to which said card-receiving structure moves; means interposed between said card-receiving structure and said holding means comprising means cooperating with said card-receiving structure to hold it against gravitational movement and a friction spring member releasably locking said last men-



tioned means to said holding means; means deflectably movable by cards accumulating in said structure; and means coupling said deflectable means to said spring member in such manner as normally to provide for holding said structure against gravitational movement and effective, in response to movement of said deflectable means, to release said structure for incremental gravitational advance to positions of progressively increasing card storage capacity.

3,001,790

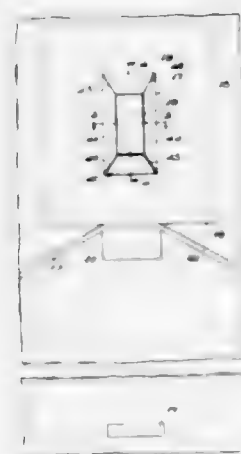
PRACTICE DEVICE FOR BASEBALL PITCHERS

William D. Pratt, Forest Park, Ga.

Filed Dec. 22, 1959, Ser. No. 861,730

2 Claims. (Cl. 273—26)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A practice device for baseball pitchers for use with a standard or simulated homeplate and pitcher's box, comprising a rectangular target, means mounting said target in a vertical position above said home plate transversely of the same, said target having a width equal to that of said home plate, said target having free upper and lower edges defining the upper and lower limits of a strike zone, said target including a relatively wide central panel and fixed relatively narrower border panels completely surrounding said central panel, said border

panels being rearwardly inclined relative to said central panel, whereby said target causes a ball thrown thereat from said pitcher's box to rebound from said target in a direction commensurate with the panel struck thereby as modified by the angle at which said ball strikes said panel.

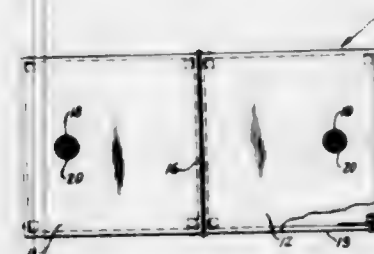
3,001,791

TABLE GAME

Giles K. Atwood, 812 Tice Place, Westfield, N.J.

Filed Jan. 4, 1960, Ser. No. 449

1 Claim. (Cl. 273—30)



A table for a table tennis game including the use of a table tennis ball and paddles comprising a continuously flat planar rectangular playing surface having barrier-free edges, a demarcated transverse area extending along the small axis of said playing surface and dividing said surface into two playing areas and adapted to locate a vertical barrier member extending substantially across said playing surface and dividing it into two substantially equal playing areas, said vertical barrier member having a lower boundary edge separated from said playing surface by a distance at most less than the diameter of said table tennis ball, and each of said playing areas being provided with an opening substantially larger than the cross-sectional area of said table tennis ball and located on the long axis of said rectangular playing surface at a point closer to the respective ends of said rectangular playing surface than to said vertical barrier and in symmetrical relationship to the opening in the other playing area so as to present the same conditions to each player of said game.

3,001,792

SUPPORT FOR BOWLING ALLEY PIT CUSHION

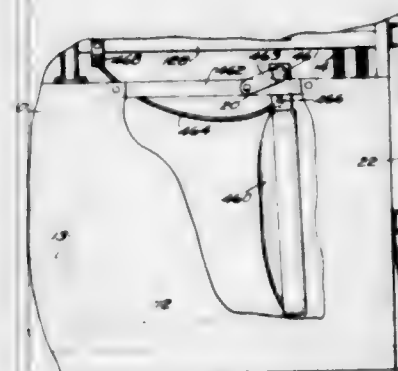
Kenneth C. Sherman, Glen Burnie, Md., assignor to Sherman Enterprises, Inc., Worcester, Mass., a corporation of Massachusetts

Original application Aug. 2, 1955, Ser. No. 526,033, now

Patent No. 2,920,891, dated Jan. 12, 1960. Divided

and this application Jan. 7, 1960, Ser. No. 971

1 Claim. (Cl. 273—53)



In a bowling alley having a pit with a kick-back on each side thereof, a cushion extending transversely of said pit, means for supporting said cushion vertically,

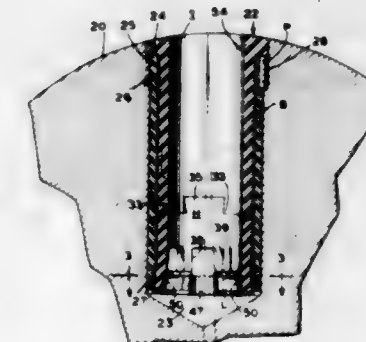
3,001,793

BOWLING BALL CONSTRUCTION

Frank C. Insetta, 232 Fingerboard Road, Staten Island, N.Y., assignor of twenty-five percent to Francis J. Pisarra, Ridgewood, N.J., and fifteen percent to John Insetta, Brooklyn, N.Y.

Filed Mar. 28, 1960, Ser. No. 18,140

14 Claims. (Cl. 273—63)



1. In combination with a ball including means defining a bore which extends inwardly and downwardly from the peripheral surface of the ball, a portion of the inner surface of said means being flared downwardly and outwardly, tubular means positioned in said bore, said tubular means being formed with a plurality of circumferentially spaced slots which extend upwardly from its lower extremity to obtain a plurality of fingers which are adapted to be flexed, a portion of each finger being positioned adjacent said flared surface, a rotary lock unit carried by the tubular means, camming means responsive to rotational movement of the lock unit in one direction for flexing the fingers outwardly and into frictional holding engagement with said flared surface, and means carried by the fingers and engageable by the lock unit for preventing movement of the lock unit axially of the tubular means.

3,001,794

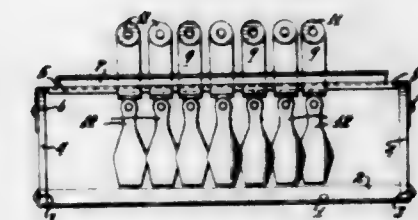
BOWLING GAMES

Salvatore Alu, Bronx, N.Y., assignor to Gotham Pressed

Steel Corporation

Filed June 10, 1959, Ser. No. 819,437

1 Claim. (Cl. 273—127)



In a bowling game, a support, a plate held in elevated position on said support, and formed with a plurality of transverse rows of apertures, said plate lying normally in horizontal position, means pivotally connecting said plate to the support, a plurality of rows of bowling pin replicas under said plate, a lever arm connected to the top end of

each of said bowling pin replicas, said lever arm having a rearwardly extending upwardly inclined area which directly passes through one of said apertures, and which inclined area merges into a second area, extending upwardly above the plate, said second area carrying a weight at its end, the center of gravity of the bowling pin replica and connected lever and weight, in each case, being midway between the bowling pin replica and the weighted upstanding area of the lever, a pivotal connection between the plate and the first named area of the lever, and at the said center of gravity, and the weight of the lever, with its applied weight, at its area extending rearwardly of the said pivotal connection with the plate, being greater than the weight of the bowling pin replica and that part of the lever extending forwardly of said pivotal connection.

3,001,795
GOLF PRACTICE DEVICE
Warren E. Johnson, Jr., 1913 5th St., Bay City, Mich.
Filed June 4, 1959, Ser. No. 818,155
1 Claim. (Cl. 273-181)



A practice device for use when practicing games employing a ball adapted to be propelled along a flight path, said device comprising a pair of spaced, generally upright members extending a substantial distance above ground level and inclined upwardly in the direction of flight; means supporting said members in generally upright position; a flexible net interposed between said members so as to lie in the flight path of said ball; means fixedly connecting one end of said net adjacent the upper ends of said members; means slideably connecting the other end of said net to said members, said net having a length greater than the length of said members so that the excess length of said net normally forms a fold at the lower ends of said members; and means slideably connecting said net along its side edges to said upright members to permit the other end of said net to slide along said members towards and away from said one end when said net is struck by said ball.

3,001,796
RETRACTABLE TRAILER UNDERCARRIAGE
Ernest P. Martin, Wooster, Ohio, assignor to The Gerstenslager Company, Wooster, Ohio, a corporation of Ohio
Filed Oct. 8, 1959, Ser. No. 845,224
9 Claims. (Cl. 280-43.18)

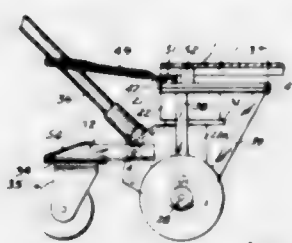
1. In combination with a semi-type trailer having a frame, a retractable rear wheel undercarriage comprising, individual running gear assemblies each having an axle support sub-assembly and a suspension support sub-assembly pivoted at one end on said frame to form said running gear assembly, cushioning means for interconnecting said sub-assemblies, an arcuately circumflexed guide channel fixedly mounted to said frame, locking

means on each of said suspension support sub-assemblies for interconnecting the suspension support sub-



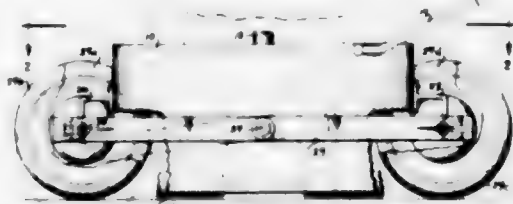
assembly with its cooperating guide channel in selected positions, and means for extending and retracting said running gear assembly.

3,001,797
PALLET TRANSPORTING APPARATUS
John W. Kappen, 243 Kenwood Ave., Dayton, Ohio
Filed Sept. 30, 1958, Ser. No. 764,358
7 Claims. (Cl. 280-46)



4. Material handling equipment including a skid having longitudinally extending corrugations on its underside and a transversely disposed channel bar on its underside, a portable skid spotter including a frame, wheels on said frame, a handle attached to said frame to move the spotter about, a swivel plate pivotally mounted on said frame, and interengageable means on the upper surface of said swivel plate adapted to interfit with said longitudinal corrugations and said channel bar on said skid.

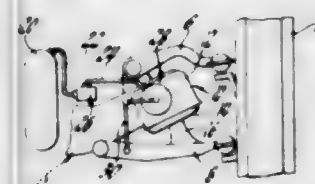
3,001,798
VEHICLE SUSPENSION SYSTEM HAVING INTER-CONNECTED ROCKING AXLES
Laurence E. Logan, 7034 122nd Ave. NE., Kirkland, Wash.
Filed June 17, 1960, Ser. No. 36,917
3 Claims. (Cl. 280-104)



1. In a vehicle, a frame, a pair of side rails pivotally connected to said frame at opposite sides thereof for individual swinging movement relative to the frame about a common transverse axis, said side rails each presenting

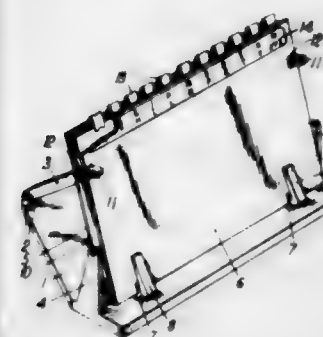
a respective vertically elongated opening adjacent each of its ends and each having respective generally V-shaped inner face portions in the areas surrounding said elongated openings, front and back axle assemblies pivotally connected to said frame at the front and back thereof for individual swinging movement relative to the frame about a common fore-and-aft axis, said axle assemblies having end faces shaped to coact with said generally V-shaped inner face portions of the side rails and to permit limited swinging movements of said side rails and axle assemblies relative to one another, and said axle assemblies having terminal shaft portions projecting from said end faces laterally of said side rails through respective of said vertically elongated openings therein, and wheels carried by said shaft portions.

3,001,799
AIR SUSPENSION CONTROL APPARATUS
Robert W. Plume, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,401
15 Claims. (Cl. 280-124)



1. In an air spring suspension system of the type having a circuit connecting a source of fluid pressure with the intake side of a height sensing leveling valve adapted to regulate flow of fluid to and from the springs, a master control valve in said circuit acting to restrict fluid flow responsive to short term operation of said leveling valve and to provide increased fluid flow responsive to prolonged operation of said leveling valve.

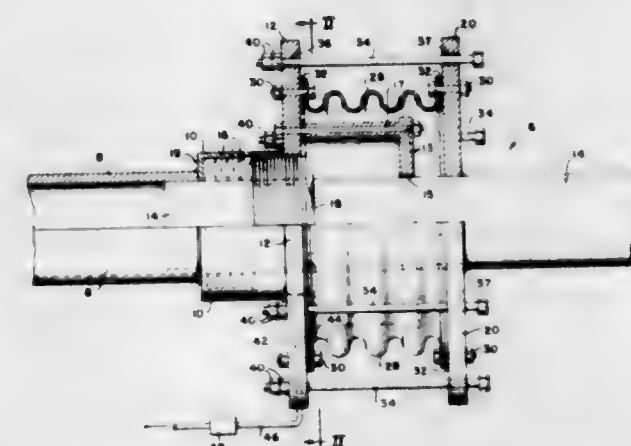
3,001,800
INDEXED MEMORANDA DEVICE
Howard Reginald Pearce, 36 Finchley Way, London, England
Filed Dec. 10, 1958, Ser. No. 779,502
Claims priority, application Great Britain Dec. 10, 1957
3 Claims. (Cl. 281-33)



1. A foldable rack for supporting index cards, including a base member, a pair of substantially similar plates adapted to hold between them a plurality of the said index cards in arrangement for individual inspection, hinge means furnishing a connection between adjacent edges of said plates and said cards, said plates being relatively pivoted from face-adjacent closed position with said cards confined between them to open position in substantial planar alignment with the cards displayed upon them, arm means for swingingly mounting said plates, as a unit, upon said base member, said arm mounting means including a pivotal connection between one of said plates and said base member, and bracket means of a length not greater than one-half the extent of said arm connect-

ed to said other plate at a point spaced from said hinge means and adjacent to the lateral edge thereof cooperating with said base member for guiding said plates, as a unit, from closed to open position, and vice versa, during their swinging movement with respect to said base member.

3,001,801
EXPANSION JOINT WITH BELLOWS SEAL AND LEAKAGE DISPOSAL
Willis T. Downing, 307 Beverly Drive, Alexandria, Va.
Filed June 26, 1958, Ser. No. 744,882
3 Claims. (Cl. 285-13)
(Granted under Title 35, U.S. Code (1952), sec. 266)



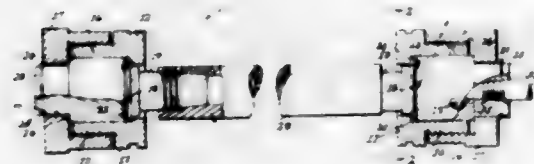
1. An expansion pipe joint comprising, a first pipe member, a bell portion, said bell portion being secured in gas tight relationship to the end of said first pipe member and forming an integral part of said first pipe member, a second pipe member having an end portion telescopically mounted within an end portion of said first pipe member and the remainder thereof being located externally of said bell portion, a packing gland within said first pipe member bell portion and surrounding said second pipe member, said second pipe member extending axially inwardly into said first pipe member beyond said bell portion, an externally threaded nut rotatably mounted on said second pipe member and threadably engaged within said bell portion in adjustable, abutting relation with said packing gland, whereby said packing gland may be tightened against the interior of said bell portion and the exterior of said second pipe member so as to be maintained in moisture and gas tight relationship; a first coupling flange fixedly connected to the bell portion on the end portion most remote from the end of said first pipe member, a second coupling flange fixedly connected to said second pipe member and spaced from the first coupling flange, means attached to the flange on said first pipe member radially outward of said attachment of said flange to said bell portion and extending between said flanges, said latter means having radially inwardly extending means secured thereto embracing and slidably supporting said second pipe member against lateral movement relative to said first pipe member, a gasket, said gasket being placed between said flange on said bell portion and said latter means; a cylindrical austenitic bellows extending between the spaced juxtaposed faces of said coupling flanges and fixedly connected to said faces in moisture and gas tight relation with both, a second and third gasket, said second and third gaskets being placed between the end portion of said bellows and said first and second flanges respectively thereby forming said first and second flanges having one end thereof in communication with the interior of said bellows and extending laterally through said flange to the exterior of said bellows, whereby accumulations of moisture and/or gas within said bellows may escape therefrom.

3,001,802

HYDRO-SEAL TEST COUPLING

Joseph H. Reberman, S.C.A.T.S., West Columbia, S.C., and Sidney E. Shensky, 880 NE. 181st St., P.O. Box 607, North Miami Beach, Fla.

Filed Apr. 8, 1959, Ser. No. 804,976
1 Claim. (Cl. 285—35)



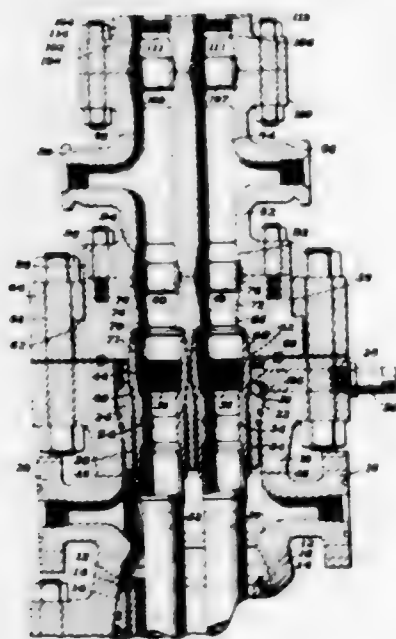
In a coupling for a pair of pipes, the combination which comprises an externally threaded sleeve having a semi-circular portion integrally extended from one end and the semi-circular portion having the threads continued thereon, an external semi-circular flange on the end opposite to the end on which the externally threaded sleeve is positioned, a semi-circular member having complementary semi-circular flange and a semi-circular externally threaded portion extended therefrom, the semi-circular flange and semi-circular portion being positioned to nest against the semi-circular portion of the externally threaded sleeve and semi-circular flange thereof, a link positioned with ends thereof extended into recesses of the flanges, pins extended through the flanges and ends of the links for pivotally connecting the semi-circular flange and sleeve, a positioning pin extended from one end to the semi-circular flange and positioned to extend into an opening in the extended end of the complementary semi-circular flange, and an internally threaded sleeve having a knurled external flange on one end adapted to be threaded on the externally threaded portions, internal flanges on the internally threaded sleeve, the semi-circular portion and the semi-circular member adapted to clampingly engage flanges on the ends of said pipes.

3,001,803

WELLHEAD

John D. Watts, James C. Ireland, and Erwin F. Hill, Houston, Tex., assignors to Gray Tool Company, Houston, Tex., a corporation of Texas

Filed May 7, 1956, Ser. No. 583,104
4 Claims. (Cl. 285—137)



1. In apparatus for multiple completion of wells, a tubing head of size to receive and support a plurality of strings of flow tubing, said tubing head having a hanger seat therein, a hanger bushing supported in said

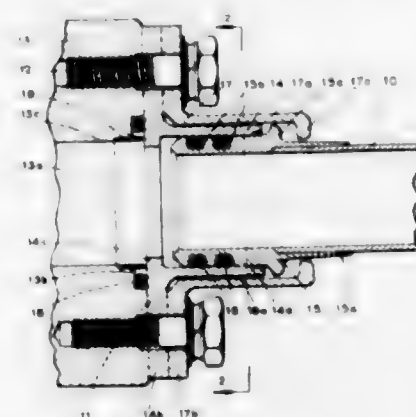
seat and having exterior means to form a seal therewith, said hanger bushing having a plurality of separate passages extending vertically therethrough, said passages having smaller hanger seats formed therein, a unitary smaller tubular hanger bushing for each of the tubing strings suspended and sealed in the seats formed in said passages, said smaller hangers having means to connect with the upper ends of the strings of tubing to support and seal same in said tubing head, a tubing head top element secured on and above said tubing head, said top element having vertical passages and sockets with inwardly tapered walls therein in alignment with said smaller hanger seats, and said smaller hangers being provided with upwardly extending flexible lips having exterior sealing surfaces of a taper slightly steeper than the taper of said sockets, said tubing head being provided with means for drawing said top element toward said tubing head to inwardly flex said lips of said smaller hangers into sealing engagement with the walls of said sockets.

3,001,804

PIPE END FITTINGS

Alan Bernard Tomlinson, Chaddesden, Derby, and Gerard George Elms, Alvaston, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Mar. 14, 1958, Ser. No. 721,526
Claims priority, application Great Britain Mar. 18, 1957
4 Claims. (Cl. 285—159)



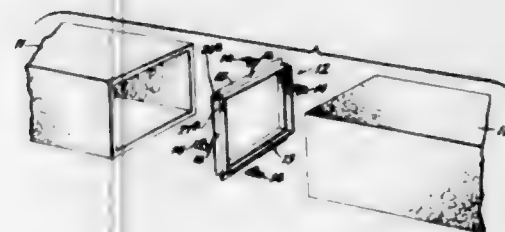
1. A fitting for connecting a pipe end to a body having a passageway coaxial with the pipe through a surface substantially normal to the axis of the passageway, in combination a cylindrical sealing sleeve terminating in a radial flange having a surface abutting and conforming to said surface on said body, a cylindrical ferrule on the pipe end closely slidably received in said sealing sleeve, a rubberlike sealing ring interposed in sealing relation between the ferrule and the internal surface of the sleeve, a radial external flange on said ferrule beyond the sealing sleeve outer end, a retaining sleeve surrounding the sealing sleeve and spaced radially therefrom throughout the length of the sealing sleeve to provide a clearance between the sleeves to assist in insulating the sealing ring from high temperatures occurring externally of the fitting, said retaining sleeve having a radial flange on one end adapted to be superimposed on and to bear against the radial flange of the sealing sleeve and having on the opposite end an intumed flange spaced from the sealing sleeve end a distance greater than the thickness of the radial flange on the ferrule but not substantially greater than the spacing between said sealing ring and the flange on the ferrule to thereby loosely trap the ferrule flange between itself and said sealing sleeve end, and means extending through said superposed flanges and engaged in said body to hold the flanges tightly against the said body.

3,001,805

DUCT CONNECTOR

Jo B. Jones and Robert H. Buehler, Wichita, Kans., assignors to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas

Filed Nov. 18, 1957, Ser. No. 697,285
2 Claims. (Cl. 285—397)



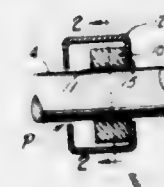
1. A connector for polygonal ducts constructed of semi-rigid material, comprising a polygonally configured frame provided by uniting together in overlapping relation the ends of an elongated sheet metal strip formed into a T-shaped cross-section by folding said strip upon itself along a plurality of spaced, parallel, longitudinally extending lines, said T-shaped strip having its base interrupted at least at points corresponding to the corners of the polygonal configuration, said base also being equipped with at least two spaced-apart, transversely aligned openings therein intermediate the points of interruption, and a T-shaped clip mounted in said base in one of said transversely aligned openings, said clip being equipped with an ear portion which lockingly engages another of said transversely aligned openings.

3,001,806

SEAL

Elmer Fred Macks, Cleveland, Ohio
(Willow Lane, Vermillion, Ohio)

Filed Oct. 14, 1954, Ser. No. 462,195
16 Claims. (Cl. 286—10)



1. A fluid seal assembly comprising a movable body having a smooth surface, a housing, and a foraminous member carried within the housing in floating relationship both longitudinally and transversely with both said body and said housing, the foraminous member having a smooth surface complementary to the body surface and another surface exposed to a quantity of fluid under pressure when the device is in operation, said member smooth and exposed surfaces being in communication with one another through said foraminous member, said complementary surfaces defining a fluid film producing region, said complementary surfaces being in at least partial contact when the device is not in operation, said complementary surfaces being held in spaced relationship by a spacing film of the fluid being sealed generated in said region when the device is in operation, the fluid in said film being supplied at least in part by fluid flowing from said exposed surface through said member to said region, and said housing being spaced from said shaft a greater distance than said smooth complementary surface of said foraminous member.

3,001,807

SEALING DEVICES BETWEEN A ROTATING PART AND A FIXED PART

Maxime Amirault, 4 Impasse des Saubergeaux, Antony, France, and Paul Destoumieux, 46 Blvd. Inkermann, Neuilly-sur-Seine, France

Filed July 31, 1957, Ser. No. 675,313
Claims priority, application France Aug. 6, 1956
1 Claim. (Cl. 286—11)



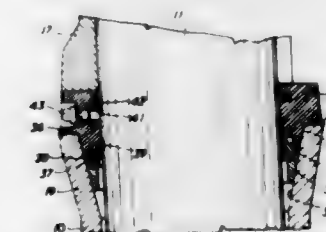
A seal between a fixed part and a part rotatable about an axis, which comprises a first friction ring rigid with one of said parts and having a plane, annular friction face perpendicular to said axis, a second friction ring, flexible means causing said second friction ring to be rotatably fast and in sealing engagement with the other of said parts, said second friction ring having a plane, annular friction face perpendicular to said axis, means bearing on said other part and exerting an elastic axial thrust against said second friction ring to urge said second friction ring towards said first friction ring and to cause the two annular friction faces of said friction rings to engage each other with a sealing frictional relative engagement, said first part having a cylindrical recess formed therein to a predetermined diameter for receiving said first friction ring, said first friction ring comprising a rigid annular element carrying said annular friction face on its front side and being bound at its periphery by a cylindrical surface of a diameter smaller than that of said cylindrical recess of said first part, said cylindrical surface having a circular groove formed therein down to a predetermined diameter, and a ring member of elastic material formed with an inner radial extension having an inner diameter greater than that of said circular groove, said ring of elastic material being secured to said rigid annular element by resiliently forcing said inner radial extension of said ring of elastic material into said circular groove of said rigid annular element, said first friction ring being fastened to said first part by resiliently forcing said ring of elastic material into the cylindrical recess of said first part.

3,001,808

TELESCOPIC TUBULAR PIT PROPS

Colin Michael Frye, St. Andrews, Milton, near Tewkesbury, England., assignor to Dowty Mining Equipment Limited, Ashchurch, Tewkesbury, England, a British company

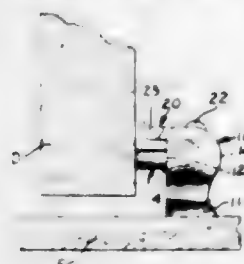
Filed Jan. 27, 1958, Ser. No. 711,456
Claims priority, application Great Britain Jan. 31, 1957
1 Claim. (Cl. 286—26)



A fluid pressure operated prop comprising an outer tube having a main portion with substantially uniform internal and external diameters and an upper end portion which is outwardly flared on its internal and external surfaces, said upper end portion terminating in a transverse abutment face, a bearing ring having a spigot portion seated against the internally flared surface of the upper end portion, a radially directed flange seated upon the transverse abutment face, a cylindrical bore concentric with but of lesser diameter than the internal surface

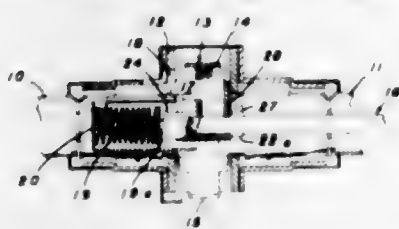
of the outer tube, and a rebate between the upper surface of the bearing ring and the bore, a resilient wiper ring seated in the rebate, a retaining ring having an inwardly directed portion overlying the upper surface of the bearing ring and the wiper ring and a skirt portion extending over the outer portion of the bearing ring into overlapping engagement with the external surface of the upper end portion of the outer tube, and a ram tube extending through the upper end portion of the outer tube in slidable engagement with the cylindrical bore of the bearing ring and with the wiper ring.

3,001,809
COMBINATION DOOR STOP AND HOLDER
Lawrence A. Dieleman, 1837 Milford St., NW.,
Grand Rapids, Mich.
Filed Mar. 6, 1959, Ser. No. 797,602
7 Claims. (Cl. 292-70)



1. In combination with a plunger member, a door control unit selectively operable as a door stop and a door holder, comprising: an engagement body; one of the plunger member and said engagement body secured to a door and the other mounted in the path traversed by said one of the plunger member and said engagement body when the door is moved; an opening formed in said body, the lip of said opening including a plurality of resilient prongs, said opening aligned with the longitudinal axis of the plunger and of a size sufficient to frictionally envelop and hold the plunger; and a selector lever operably secured to the top of said body, said lever covering said opening in one position and lying away from said opening in another position.

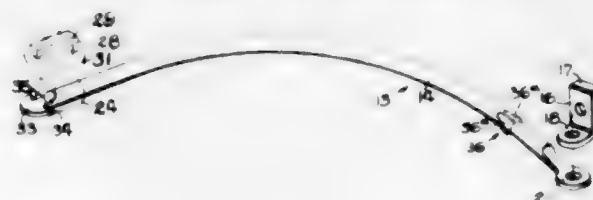
3,001,810
RETAINING DOG FOR AXIALLY-MOVABLE LOCKING MEMBER IN A DOOR LOCK MECHANISM
Murray E. Williams, 1065 Washtenaw NE.,
Grand Rapids, Mich.
Filed Aug. 8, 1960, Ser. No. 48,155
4 Claims. (Cl. 292-169)



1. In a latch mechanism having opposite and substantially coaxial knob assemblies and a locking bar slideable axially with respect to said knob assemblies between locked and unlocked positions, said mechanism also having a retractor mounted for reciprocating movement on a path perpendicular to the axis of said knob assemblies, a system for positioning said locking bar, comprising: means forming a shoulder on said locking bar; a locking dog having a transverse portion provided with an opening receiving said locking bar, and also having opposite detent portions disposed alongside said locking bar on the opposite sides thereof and extending from said transverse portion, said locking dog being normally disposed with said transverse portion resting against said shoulder and having a cam portion at the side of said detent portions adjacent said transverse portions, said locking dog also

having a stop extending laterally between said detent portions for engagement with said locking bar to limit the angular movement of said locking dog with respect to said locking bar; and biasing means urging said locking bar axially to unlocked position, said biasing means including a spring applying force to said locking bar via said transverse portion whereby a moment is generated between said spring and said shoulder tending to rotate said locking dog in a direction to engage said stop, said position presenting said detent portions on the opposite side of said locking bar from said stop and extending beyond the edge thereof for engagement with said retractor in the locked position of said locking bar, said retractor normally moving away from said detent portions and thereby releasing said locking bar on actuation of said latch mechanism, said cam portions having an inclined face engageable with said retractor on movement of said locking bar toward locked position to induce rotation of said locking dog with respect to said locking bar away from the position determined by said stop, and a holding face axially opposite from said inclined face.

3,001,811
COMBINED DOOR LATCH AND STOP
Karl H. Erickson, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Dec. 29, 1958, Ser. No. 783,385
1 Claim. (Cl. 292-275)

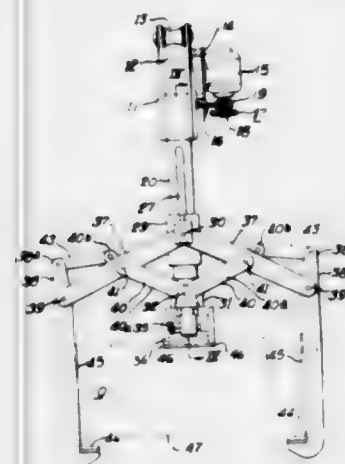


The combination of a door adapted to swing about a predetermined axis, a frame supporting said door and having top, bottom and side walls, said top wall having a circular opening with a rectangular slot contiguous therewith extending along the diameter and having a length greater than the diameter, a curved rod pivotally connected to said door to swing relative to said door about a second and parallel axis, a guide having a circular portion to fit into said opening and a rectangular flange to project through said slot and to bear against the top of the frame thereby to journal said guide in said frame to turn through a predetermined angle about a third and parallel axis, said slot being disposed outside of the predetermined angle to prevent disengagement of the guide from the frame, two downwardly projecting fingers formed integral with said guide and straddling said rod to support the rod for endwise sliding, an enlargement formed on the free end of the rod to constitute an abutment coacting with said guide to check the outward movement of the door, and a second enlargement on said rod spaced from said door so that said guide is disposed between said door and the second enlargement and abutting the second enlargement when the door is in the closed position, said fingers being resilient to yield and pass over said second enlargement as the door is closed and to snap behind said second enlargement thereby to hold the door closed.

3,001,812
TONGS
John R. Anderson, Pittsburgh, Pa., assignor to Heppentall Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1957, Ser. No. 685,595
7 Claims. (Cl. 294-67)

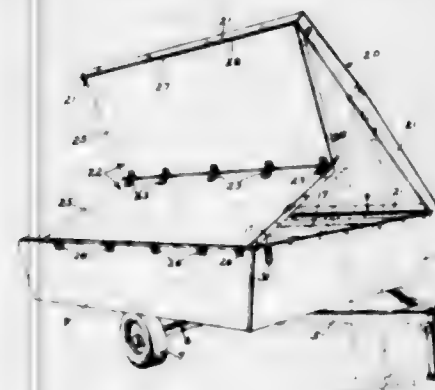
3. In a tongs, apparatus comprising, in combination, a frame including a vertically extending column, a screw

shaft extending parallel to said column, a motor mounted on said tongs in fixed relation to said column, a low starting torque and fast releasing coupling operatively connected between said motor and said shaft, a brake on the driven side of said coupling operatively connected to said shaft to hold it unmoved when said motor is stopped, a sleeve member operatively connected to said shaft and movable up and down on said column by the rotation of said shaft, symmetrical linkage extending to each side of said tongs and pivotally connected at the upper and lower central portions thereof to said sleeve member and lower portion of said frame respectively,



two laterally downwardly and outwardly extending levers in said linkage pivotally connected at the upper portions thereof to said sleeve, lift arms pivotally connected to the lower portions of said levers respectively, two laterally upwardly and outwardly extending strut members pivotally connected at the lower portions thereof to said frame below said sleeve, the upper portions of said strut members being pivotally connected to intermediate portions of said levers respectively, said strut members having projecting ends extending above the pivotal connection with said levers respectively, said lift arms having extensions extending above the pivotal connections with said levers respectively, and links pivotally connecting said projecting ends and said extensions respectively.

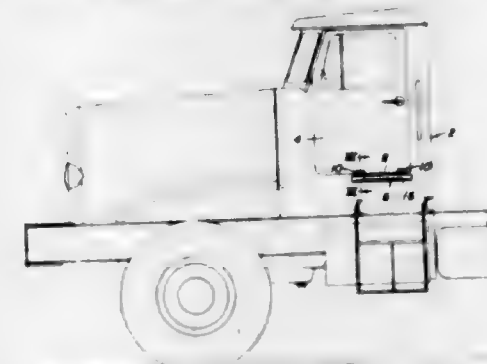
3,001,813
VEHICULAR CAMPING TRAILERS
Maurice F. Johnson, 6820 Auto Club Road,
Minneapolis, Minn.
Filed Dec. 19, 1958, Ser. No. 781,756
2 Claims. (Cl. 296-23)



1. A vehicular trailer comprising in combination, a wheeled chassis, a trailer body mounted on said chassis, said body having a bed, an upstanding front panel, and a pair of rear panels, the inner end portions thereof being transversely spaced apart, to afford an access opening to the interior of the trailer body, a vertically mounted door hingedly mounted on one of the rear panels to normally

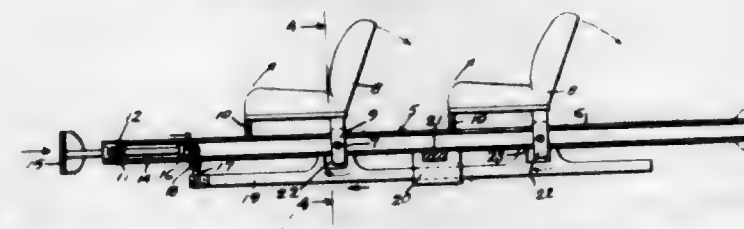
close the access opening, an elevated platform in the forward end portion of the trailer body supported by the bed and the front and side panel members, the longitudinal central part of said platform affording a bed frame for a mattress, a pair of storage compartments, one at each side of the bed frame, said compartments being longitudinally shorter than the bed frame section to afford open rear end portion rearwardly of each compartment, the side portions of the elevated platform being longitudinally divided to provide hingedly mounted access doors to the storage compartments, a superstructure hingedly mounted for folding movements on the trailer body, said superstructure comprising a solid unitary panel and a longitudinally divided sectional panel having upper and lower sections hingedly connected along the respective longitudinal meeting edges thereof and mounted to fold downwardly, the upper section upon the lower section, said sectional panel and the solid panel being hingedly connected at the respective upper edge portions thereof and at the respective lower edge portions, one of each upper edge portion of the opposite side panels of the trailer body, latch means on the upper section and the lower section of the divided panel whereby said section may be rendered a solid panel to cooperate with the first noted solid panel to form a pyramidal roof over the trailer body and held so positioned by the said latch means on the divided sectional panel.

3,001,814
SAFETY BUMPER FOR VEHICLE DOOR
Michael Skalko, Leoneth, Minn., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 23, 1959, Ser. No. 861,697
2 Claims. (Cl. 296-44)



1. In a door of a vehicle body having a bottom edge the combination therewith of a safety bumper for said door bottom edge which comprises an elongated resilient member pivotally hinged to the outer surface of said bottom edge and normally projecting laterally and downwardly therefrom, the pivotal axis of said member extending generally parallel with said bottom edge whereby said member abuts the vehicle body adjacent said door when said door is closed and pivots downwardly to hang below said bottom edge when the door is opened.

3,001,815
BUMPER ACTUATED VEHICLE SAFETY SEAT
Robert C. Weber, 3429 Patrick St., Lake Charles, La.
Filed Feb. 25, 1958, Ser. No. 717,359
3 Claims. (Cl. 296-65)



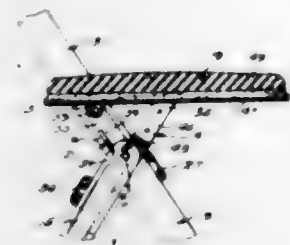
1. A motor vehicle comprising a chassis embodying side rails, a seat pivotally supported thereon, horizontally slidable actuating bars mounted on said chassis chassis, a bumper slidably mounted on said chassis side rails, actu-

ating mechanism pivotally connected between the forward ends of said bars and bumper for transmitting forward movement to said actuating bars upon rearward movement of said bumper caused by the impact of the bumper with an object, and means for transmitting movement of said bars to said seat, swinging said seat upwardly simultaneously with the movement of the horizontally slidable actuating bars.

3,001,816

FOLDING CHAIR

Werner E. Clarin, White Pigeon, Mich., assignor to Clarin Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 29, 1960, Ser. No. 11,818
1 Claim. (Cl. 297—56)



A chair which is foldable between a collapsed storage condition and an extended seating condition, said chair comprising pairs of front and rear legs pivotally connected intermediate their ends, with the front pair of said legs extending upwardly and rearwardly to support a back rest for the chair, a seat hinged intermediate its forward and rearward edges to said front legs at a position below said seat and above the pivotal connection of said front and rear legs for swinging movement of the seat between a forwardly extending seating position and an upwardly folded position in generally parallel relation with said front legs, a stop means comprising a horizontally extending member fixedly carried by each of said front legs at positions thereon above the pivotal connection of said front and rear legs and below the hinged connection of said seat to said front legs, said stop member having a downwardly facing surface positioned for engagement with the upper edge of said rear legs to at least partially determine the angular relation of said front legs to said rear legs when said chair is in its extended condition, having a rearwardly facing surface positioned for engagement with the rearward part of said seat to prevent over-travel of said seat from its seating position and beyond its folded position in generally parallel relation to said front legs, and having a forwardly facing surface positioned for engagement with said rear legs to limit inward folding of said rear legs relative to said front legs when collapsing said chair to its storage condition, and a cross brace connecting said front legs at a position below the pivotal connection of said front and rear legs and in position for engagement with the lower edge of said rear legs to cooperate with said stop members in determining the angular relation of said legs to each other when said chair is in its extended condition, said rear legs extending upwardly and forwardly from the pivotal connection of said front and rear legs in supporting engagement with the forward part of said seat when said chair is in its extended condition and said seat is in its seating position.

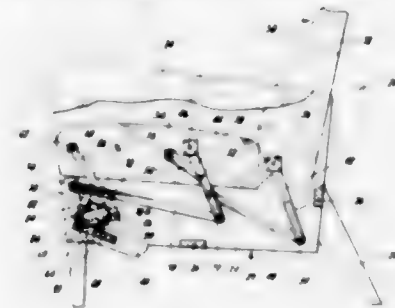
3,001,817

LEG-REST AND ACTUATING MECHANISM

Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Continuation of applications Ser. No. 612,406, Sept. 27, 1956, and Ser. No. 615,538, Oct. 12, 1956. This application Feb. 14, 1958, Ser. No. 715,386
10 Claims. (Cl. 297—75)

1. A reclining chair comprising a support, body-supporting means including a seat, back-rest and leg-rest

rockably mounted on said support, a first linkage mechanism connected to said leg-rest for coordinating said leg-rest for movement to an elevated position in response to reclining movement of said back-rest from a sitting position into a reclining position, a leg-rest extension normally disposed below said seat in a stored position and mounted on said leg-rest for turning movement from said stored position into an extended position in substantial alignment with said leg-rest, and a further linkage mechanism controlled by said first linkage mechanism and operatively connected to said leg-rest extension for effecting the turning movement of the latter in response to reclining movement of said back-rest, said further linkage mechanism including an intermediate coupling member having a rocker arm and a driver arm, means mounting said coupling member for oscillating movement with respect to said leg-rest, means including a first connect-

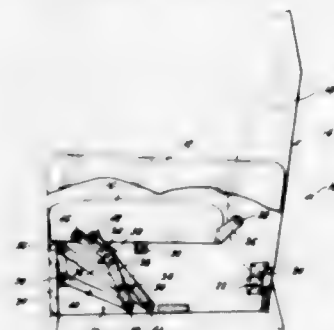


ing link coupling said rocker arm to said first linkage mechanism whereby an actuating force is applied to said rocker arm in response to reclining movement of said back-rest, said first connecting link and said rocker arm being positioned substantially in alignment with each other in said stored position of said leg-rest extension and arranged to produce a reverse toggle effect in response to reclining movement of said back-rest, and means coupling said driver arm to said leg-rest extension whereby a turning force is applied to said leg-rest extension in response to the oscillating movement of said coupling member, said first connecting link and said rocker arm being effective in response to uniform motion imparted to said first connecting link to bring about a rapid movement of said leg-rest extension from said stored position to said extended position with said first connecting link and said rocker arm moving into a position approaching right angles with respect to each other.

3,001,818

LEG-REST AND SELF ACTUATING CONTROL ARRANGEMENT FOR RECLINING CHAIR

Peter S. Fletcher, Boynton Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Filed May 31, 1957, Ser. No. 662,811
10 Claims. (Cl. 297—85)



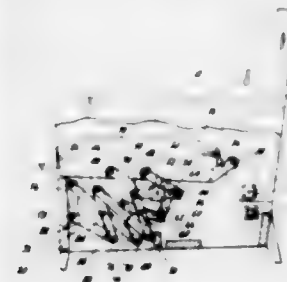
1. In a reclining chair, a support, a back-rest, means movably mounting said back-rest on said support for movement into various reclined positions, a seat operatively connected to said back-rest and movable rearwardly relative to said support in response to reclining movement of said back-rest, a leg-rest disposed beneath

the forward end of said seat, and control means operatively connected between said seat and said leg-rest for moving said leg-rest upwardly and outwardly in response to movement of said seat rearwardly relative to said support, said control means including first and second link pairs with one link of said first link pair crossing over one link of said second link pair, means pivotally connecting the crossing links of said first and second link pairs to each other at the cross-over point, the first link of each of said first and second link pairs being pivotally connected to said seat at spaced apart locations, means pivotally connecting the crossing one of said first links to said support, and the second link of each of said first and second link pairs being operatively connected to said leg-rest at spaced apart locations.

3,001,819

RECLINING CHAIR INCLUDING IMPROVED SEAT CONTROL

Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz
Continuation of application Ser. No. 662,811, May 31, 1957. This application Aug. 11, 1959, Ser. No. 832,976
11 Claims. (Cl. 297—85)



8. In a reclining chair, a support, a back-rest, means movably mounting said back-rest on said support for movement into various reclined positions, a seat operatively connected to said back-rest and movable rearwardly relative to said support in response to reclining movement of said back-rest, a leg-rest disposed beneath the forward portion of said seat, and control means operatively connected to said seat and said leg-rest for guiding said seat relative to said support and for moving said leg-rest upwardly and outwardly in response to movement of said seat relative to said support, said control means including a first link movable relative to said back-rest and said seat and having a first pivotal connection to said seat, a second link movable relative to said back-rest and said seat and spaced from said first link and having a second pivotal connection to said seat spaced from said first pivotal connection, a third link having respective pivotal connections to said first and second links at a point spaced from said first and second pivotal connections, a direct pivotal mount between said third link and said support, said first, second and third links and the portions of said seat intermediate said first and second pivotal connections constituting a four-bar control linkage for said seat, and means operatively connecting said control linkage to said leg-rest.

3,001,820

FOLDABLE SEAT

Laurence R. Morphew, Harlow, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 21, 1959, Ser. No. 841,127
Claims priority, application Great Britain Apr. 23, 1959
2 Claims. (Cl. 297—324)

1. A folding seat comprising a back portion and a seat portion, means pivotally mounting each of said portions for pivotal movement about respective fixed pivot axes, linkage means linking said portions together, said linkage

means being so constructed and arranged that pivotal movement of said seat portion forwardly from a normal generally horizontal position causes said back portion to be pivoted forwardly and downwardly to a generally



horizontal position, said linkage means comprising a link pivotally connected to each portion, the line of thrust defined by the points of pivotal connection of said link passing close to and above the fixed axis about which the seat portion is pivoted whereby the seat is rendered inherently stable in either the seating or open position.

3,001,821

ADJUSTABLE SEAT STRUCTURE

Robert Marechal, Paris, France, assignor to Societe Industrielle & Commerciale R. Marechal S.I.C.M.A., Issoudun (Indre), France
Filed June 29, 1959, Ser. No. 823,436
Claims priority, application France June 30, 1958
12 Claims. (Cl. 297—366)



1. In an adjustable seat structure having a bottom section and a back section pivoted thereto, a tilt-adjusting member having one end connected with one of said sections and another end, means for releasably connecting the other end of said member with the other section, and means for adjusting the effective length of said member whereby to adjust the tilt angle of said other section, said connecting means responsive to manual pressure to release the other end of said member from said other section whereby said other section is freely pivotable for collapse over said one section.

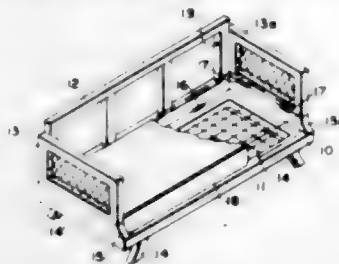
3,001,822

FOLDING SOFA LOUNGE AND KNOCKDOWN FURNITURE

Paul Pagliaro, Whitestone, and Nathan Friedman, Brooklyn, N.Y., assignors to Nu Era Wood Products, Inc., West Hempstead, N.Y., a corporation of New York
Filed Sept. 22, 1960, Ser. No. 57,723
3 Claims. (Cl. 297—381)

1. A frame for knock-down furniture, comprising a base frame member, at least one side arm member hingedly connected to said base frame member for swinging inwardly relative thereto, and a back member removably attachable to said side-arm member for supporting same in upright unfolded position, the overall folded thickness of said frame being approximately the sum of the thickness of said base member, plus the thickness of one of said arm members, plus the thickness of said back member, hinge means attaching said arm member to said base frame member and provided with two flanges having fastenings and mounted so as to over-

lap each other in parallel relation when the swingable members are in said upright unfolded position, whereby vertical load forces of said unit in unfolded condition do



not stress the fastenings of said hinge flanges in shear, said two flanges of a respective hinge being in mutually non-overlapping position at an angle to each other when said frame is in folded condition.

3,001,823
DENTAL CHAIR SEAT
Reece W. Johnston, 3040 Glen Garden Drive N.,
Fort Worth, Tex.
Filed Apr. 24, 1959, Ser. No. 808,630
2 Claims. (Cl. 297-433)

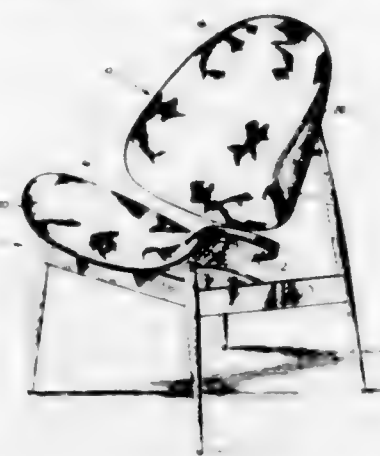


1. A dental chair seat comprising a seat portion and a leg rest portion, said leg rest portion being substantially longer than said seat portion, means mounting said leg rest portion to said seat portion for pivoting movement about a transverse horizontal axis, a pivot bracket fixed to said seat portion at the front portion of the seat portion bottom and transversely centered thereon, a leg rest adjust lever comprising a brace portion in the form of a stiff rod pivoted at one end about a horizontal axis on said pivot bracket and curved upwardly at the other end portion and terminating in a tongue and a handle portion integrally fixed to said brace at its free end portion and extending forwardly beneath said tongue to a point beneath and adjacent the front end of said leg rest, a step notch bracket fixed to the underside of said leg rest portion and having a plurality of step notches facing and adapted for selective engagement with said tongue, and means for urging said brace upwardly into engagement with a respective one of said notches.

3,001,824
CHAIR AND METHOD OF UPHOLSTERING
Seymour James Wiener, 3730 NW. 54th St., Miami, Fla.
Filed Aug. 25, 1960, Ser. No. 51,985
1 Claim. (Cl. 297-458)

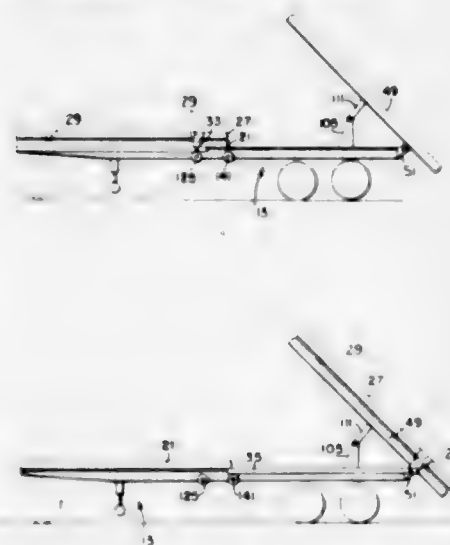
An upholstered laterally curved chair back or seat having a shape conforming substantially to a section of an ovoidal form comprising a rigid wooden member, a groove formed in the center of the peripheral edge of said member which extends entirely around the periphery thereof, said groove being formed along the center line of said peripheral edge and being of a width exceeding one-half the thickness of said member, and being at least

as deep as the width of said groove, and of substantial width at the bottom of the groove, and adapted to receive the upholstery material and stitching nails at said bottom, the upholstery material covering one face of said member and the inner peripheral edge of one side of said groove and extending into being securely fastened to the



wide bottom of said groove, the outer peripheral edge on the other side of said groove and the other face of said member being plain and uncovered, and a finishing strip having a cross-sectional area with the dimension of said finishing strip depthwise of said groove not substantially less than the maximum dimension of said finishing strip widthwise of said groove.

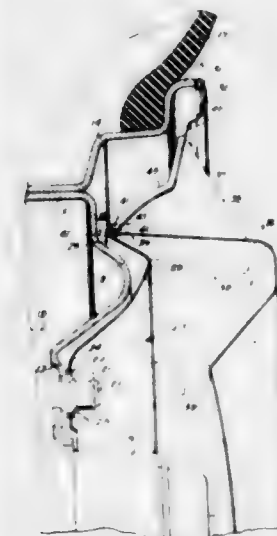
3,001,825
TANDEM DUMPING-PLATFORM TRUCK
William D. Rouse, Dover-Foxcroft, Maine
(Box 31, Rte. 1, Burke, Va.)
Filed Jan. 7, 1957, Ser. No. 632,752
3 Claims. (Cl. 298-8)



1. A dump truck including, in combination, a supporting framework having a forward portion and a rearward portion, wheels movably carrying said framework, said framework including longitudinally extending transversely spaced side members, a rack slidably mounted on each side member for longitudinal movement therealong, a pair of pinions mounted on said framework, one in engagement with each rack and means for rotating said pinions to cause longitudinal movement of said racks, a supporting platform adapted to support a load, said supporting platform movably supported on said framework, pivot means on said racks, means fixed to said supporting platform and connected to said pivot means for pivotally supporting and connecting said supporting platform to said racks for longitudinal movement therewith, said racks and platform being normally positioned at the forward portion of said framework and being movable to and from normal position to a position at the rear por-

tion of said framework, and a further platform adapted to support a load, said further platform pivotally mounted at the rear portion of said side members in a plane below said supporting platform and tiltable on said side members for dumping its load, and said first mentioned platform being tiltable on said racks only when it is in position at the rear portion of the framework for dumping its load, and means for tilting said platforms.

3,001,826
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd.,
Detroit 28, Mich.
Filed Mar. 20, 1958, Ser. No. 722,666
11 Claims. (Cl. 301-37)

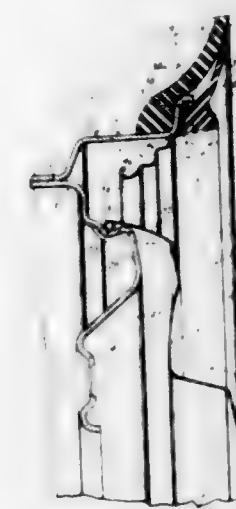


1. In a wheel structure including a tire rim and a wheel body supporting the same and having a bolt-on flange for attachment by means of retaining bolts to a vehicle axle part, a cover assembly for disposition in overlying relation to the wheel including a circular cover member for overlying the tire rim and the wheel body and having a central bolt-on flange for attachment to the wheel by means of the wheel bolts, and a second cap cover member for overlying the central portion of the circular cover member, said circular cover member having retaining groove structure thereon, said cap cover member having a plurality of retaining terminal flanges on a generally axially inwardly projecting edge thereof engageable in snap-on, pry-off relation with said groove structure, said edge structure of the cap cover member having a configuration providing a plurality of generally radially extending hollow spoke-like projections opening into the interior of the cap cover member and through said edge and thereby dividing the edge into intervening resilient segmental areas with the retaining terminal flanges on said segmental areas and spaced from one another by the hollow projections.

3,001,827
WHEEL AND TIRE TRIM ASSEMBLY
George Albert Lyon, 13881 W. Chicago Blvd.,
Detroit 28, Mich.
Filed Nov. 9, 1959, Ser. No. 851,669
11 Claims. (Cl. 301-37)

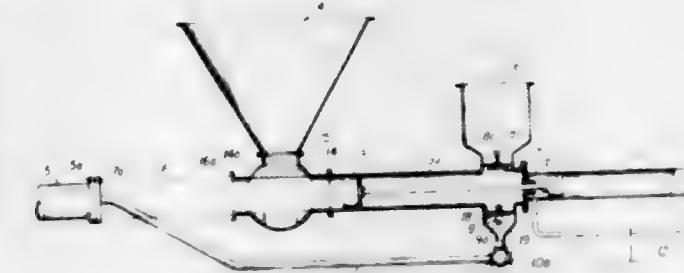
1. In a wheel structure including a tire rim having a radial rim flange as well as an axially extending terminal rim flange and a tire carried on the tire rim, a cover structure for retained disposition on the tire rim including a radially inner cover member and a tire side wall simulating ring member, the cover member having a generally radially outwardly extending cover portion terminating in an offset radially outer cover margin, the offset radially outer cover margin confronting the radial rim flange and being separated from the generally radially outwardly ex-

tending cover portion by an axially outwardly extending cover portion disposed at the radially inner end of said offset radially outer cover margin, and circumferentially spaced resiliently deflectable retaining extensions turned radially outwardly from the axially outwardly extending cover portion for cover retaining engagement with the



terminal rim flange and concealed by said members, the ring member being bridged over the terminal rim flange and having a radially outer ring margin engaged against the tire and a radially inner thickened ring margin retainingly engaged in a cover pocket area defined by said extensions as well as said axial cover portion and said offset radially outer cover margin.

3,001,828
DEVICE FOR CONVEYING CONCRETE, MORTAR OR SIMILAR VISCOUS MATERIALS
Otto Stadlaender, Frankfurt am Main, Germany, assignor to Beton-Spritz-Maschinen G.m.b.H., Frankfurt am Main-Ginnheim, Germany
Filed Dec. 22, 1959, Ser. No. 861,307
7 Claims. (Cl. 302-14)



1. A device for conveying viscous materials such as concrete, mortar and the like, comprising a pump having a cylinder and a reciprocable piston therein, a supply container for the material to be conveyed connected with one end of said cylinder, a discharge pipe connected to said end of said cylinder, valve means at the junction of said supply container, cylinder, and discharge pipe adapted to selectively connect said cylinder with said supply container and with said discharge pipe, means for reciprocating said piston, a wash water container in communication with the other end of said cylinder for flushing one face of said piston and the inside of said cylinder, a pressure pipe connected with one of its ends to said other end of said cylinder, the other end of said pressure pipe being adapted to be connected to said discharge pipe upon disconnection of said discharge pipe from the pump, a check valve between said wash water container and said cylinder opening towards said cylinder, and another check valve between said cylinder and said discharge pipe for

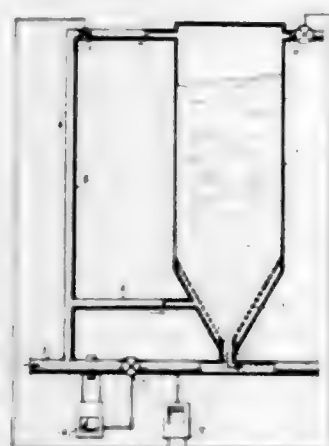
permitting the flow of said wash water under pressure into said pressure pipe and into said discharge pipe for emptying and cleaning of said discharge pipe.

3,001,829

ARRANGEMENT FOR THE AUTOMATIC ADJUSTMENT OF A DISTRIBUTOR OF PULVERULENT MATERIAL UNDER PRESSURE

Lucien de Saint-Martin, Le Pecq, France, assignor to Institut de Recherches de la Siderurgie Francaise, Saint Germain-en-Laye, France, a professional institution of France

Filed Mar. 8, 1960, Ser. No. 13,538
Claims priority, application France Mar. 21, 1959
3 Claims. (Cl. 302-53)



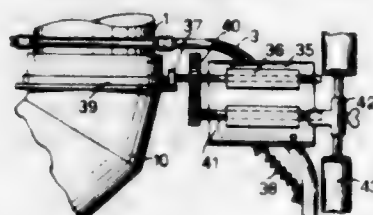
1. In a distributor of pulverulent material, the combination of a container, a pipe conveying a fluid under pressure and into which said container opens, branch pipes connecting said pipe ahead of the point into which the container opens into the latter, respectively with the upper end of the container to set the latter under pressure and with a point slightly above the bottom of the container to set the particles of material to be conveyed into a fluidized condition, pressure sensing means communicating with a checking point of the conveyor pipe located just before the point at which the container opens into said pipe for sensing the pressure of the fluid passing through said conveyor pipe at said checking point, a control valve in the first branch pipe, a blow-off pipe opening into the upper end of the container, a valve controlling said blow-off pipe, and means operatively connected to said pressure sensing means and both of said valves for selectively controlling said valves in dependence on the fluid pressure at said checking point so as to automatically maintain the pressure in said container at a preselected relation to the fluid pressure at said point.

3,001,830

DEVICE FOR SPREADING MATERIAL AT THE DISCHARGE END OF PNEUMATIC CONVEYOR TUBES

Ernst Weichel, Bahnhofstr. 1, Heiningen near Goeppingen, Germany

Filed Aug. 1, 1958, Ser. No. 752,609
Claims priority, application Germany Aug. 1, 1957
5 Claims. (Cl. 302-61)



1. In combination with a pneumatic conveyor pipe operating with a pneumatic medium; a spreader compris-

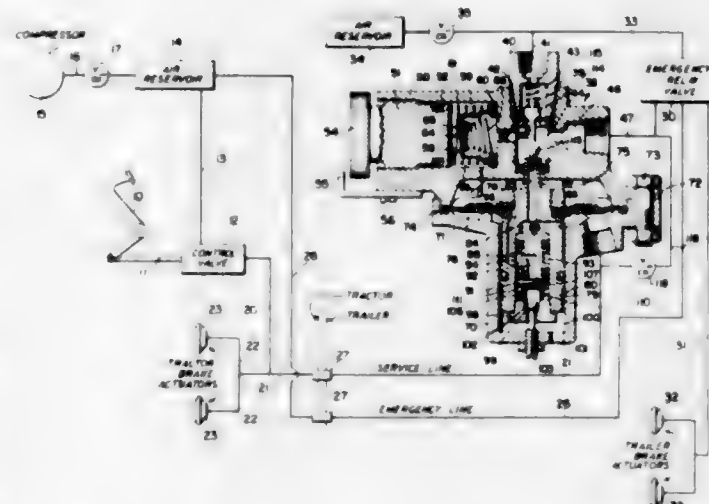
ing an elbow shaped pipe adjustably and rotatably connected to said conveyor pipe and adapted to deflect the pneumatic medium and be rotated thereby, means engaging said elbow shaped pipe and being rotated thereby, and adjustable speed control means coupled to and driven by the first said means, said speed control means providing an adjustable resistance to being driven by the first said means and thereby to the rotation of the latter by said elbow shaped pipe in order to control the rotation of the elbow shaped pipe.

3,001,831

TRACTOR-TRAILER BRAKE SYSTEM

William Stetzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,109
19 Claims. (Cl. 303-7)



1. In a remote control pressure operated brake system having a control line to control a portion of the brakes of the entire system, a relay device interposed in said control line to divide said control line into a primary control line for transmitting controlling pressures and a secondary control line to transmit pressures regulated by said relay device in response to said controlling pressures, said relay device including means to augment a light pressure impulse in said primary control line to a predetermined pressure in said secondary control line and to boost said predetermined pressure proportionally with an increase in said controlling pressure with a gradually decreasing ratio, said relay device further including means operative when said ratio has been decreased to a predetermined extent for opening said primary control line to direct communication with said secondary control line.

3,001,832

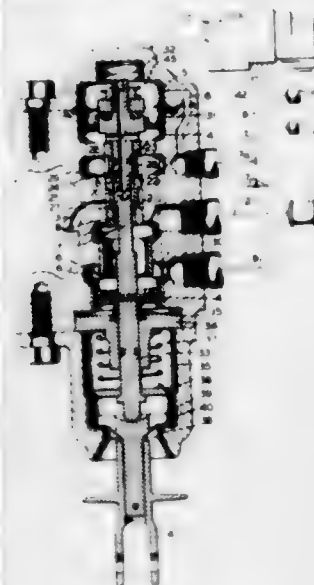
BRAKE CYLINDER RELEASE VALVE DEVICE

Glenn T. McClure, McKeesport, and Thomas F. Hursen, Monroeville, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Oct. 26, 1959, Ser. No. 848,775
7 Claims. (Cl. 303-68)

1. In a brake equipment including a brake pipe, a source of fluid under pressure, and a brake cylinder: a brake cylinder release valve device comprising a casing providing a lock-up chamber, another chamber communicating with the brake pipe, an inlet chamber communicating with the source, and an outlet chamber communicating with the brake cylinder, a valve controlling connection of the inlet chamber with the outlet chamber, a piston subject opposingly to pressures of fluid in said other chamber and in said lock-up chamber, valve means operatively connected to said piston and having a normal

position in which it connects said lock-up chamber to atmosphere and disconnects said outlet chamber from atmosphere and also operatively opens said valve, bias means urging said valve means to normal position against opposition of lock-up chamber pressure acting on said piston, and actuator means manually operable against a resilient bias to operatively close said valve and shift said valve means to another position in which it disconnects said lock-up chamber from atmosphere and



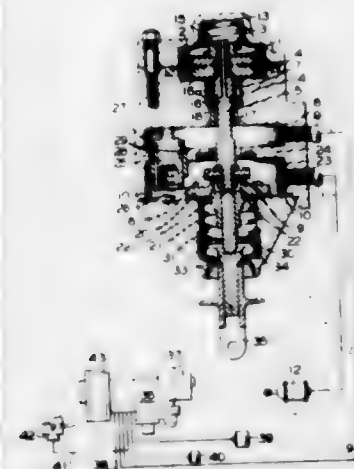
connects said lock-up chamber with said inlet chamber and connects said outlet chamber with atmosphere, whereby said valve means will be maintained biased to normal position so long as said lock-up chamber is vented, and will upon actuation to said other position by said actuator means be maintained in said other position by lock-up chamber pressure acting on said piston provided and so long as lock-up chamber pressure exceeds the pressure in said other chamber by at least a predetermined degree sufficient to overcome said bias means.

3,001,833

BRAKE CYLINDER RELEASE VALVE DEVICE

Walter B. Kirk, Pitcairn, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Dec. 22, 1959, Ser. No. 861,279
10 Claims. (Cl. 303-68)



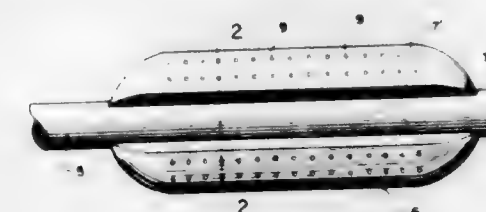
1. For interposition between a brake control pipe and a brake cylinder, a brake cylinder release valve device comprising, in combination, valve means having a normal position in which it connects the control pipe with the brake cylinder and a release position in which it disconnects the control pipe from the brake cylinder and

connects the latter to a vent, bias means exerting on said valve means a relatively light bias toward normal position, means operable to move said valve means to release position, a double-acting fluid pressure motor operatively connected to said valve means, said valve means being effective in normal position to cause equalization of opposing fluid pressures acting on said motor to render said motor inert, and effective in release position to cause a differential fluid pressure corresponding substantially to the value of control pipe pressure to be established between said opposing fluid pressures to cause said motor to hold said valve means in release position against opposition of said bias means provided and so long as control pipe pressure is above a predetermined low value, means including a valve providing a restricted communication via which pressure fluid may flow at a restricted rate from the control pipe to the brake cylinder in bypass of said valve means, and means subject to control pipe pressure acting in opposition to brake cylinder pressure and a heavy bias pressure and biased by the latter to a normal position to permit flow via said valve through said communication and operative to an abnormal position to prevent such flow when control pipe pressure exceeds brake cylinder pressure by a preselected degree substantially greater than said predetermined low value, whereby if said valve means is operated to release position while control pipe pressure is less than a predetermined higher value, somewhat greater than said preselected degree, the last introduced means will remain in normal position and cause control pipe pressure to bleed down via said restricted communication and permit return of said valve means to normal position, and whereby if said valve means is operated to release position while control pipe pressure exceeds said predetermined higher value said last introduced means will operate to abnormal position to cause said valve means to be maintained in release position indefinitely until after said last introduced means is returned to normal position responsively to a reduction in control pipe pressure to within said preselected degree of brake cylinder pressure.

3,001,834

SUCKER ROD GUIDES

Hulle E. Bowerman, P.O. Box 152, Arlington, Tex.
Filed May 14, 1958, Ser. No. 735,312
2 Claims. (Cl. 308-4)



1. In oil well equipment, a guide for a sucker rod comprising a cylindrical body molded of rubber-like material and having a longitudinal bore therethrough to receive the rod, said body having narrow pierced radial punctures extending deeply inwardly to depths short of said bore, said punctures being distributed over substantially all of said body and mutually spaced by distances not exceeding said depths of the punctures.

3,001,835

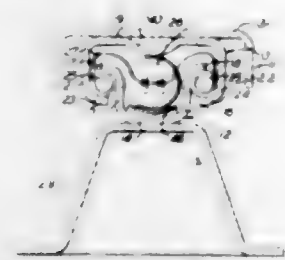
SEAT ADJUSTER TRACK MECHANISM

Clarence F. Kramer, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed July 20, 1959, Ser. No. 828,387
3 Claims. (Cl. 308-6)

2. In a seat track unit comprising a pair of substantially U-shaped channel members, one invertedly en-

passing the other, said members being provided with complementary laterally extending race forming flanges thereon, ball means interposed between said flanges providing lateral bearing means between said channel members, said upper channel member being shiftable laterally relative to said lower channel member to the extent of the clearances between said ball means and said race forming flanges, and a ball element interposed between said base portions maintaining said channel members in vertical

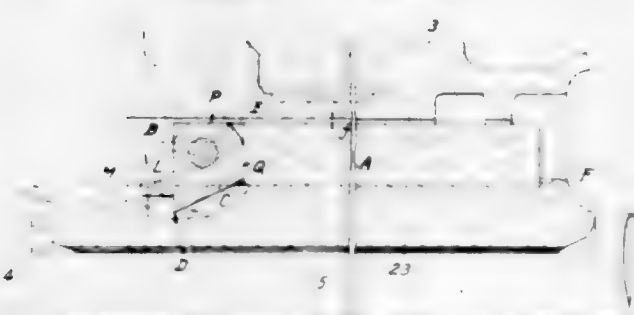


spaced relationship, said upper channel member having a convexly laterally curved ball element engageable means integral therewith and the lower channel member base portion a concavely laterally curved ball element engageable means supported thereon, the relationship between said upper channel member base portion means and said ball element creating an unstable condition whereby said upper channel member shifts laterally to take up said clearances and a part of any vertical load carried by said ball element is distributed to the lateral bearing means on at least one side of said channel members.

3,001,836

KEYS FOR ASSEMBLING THE UPPER HALF-BEARING OF AN AXLE-BOX

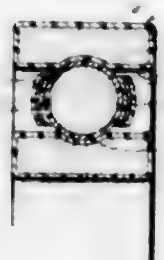
Jean Bouvat-Martin, Paris, France, assignor to Societe Generale Isothermos, Paris, France
Filed Feb. 5, 1960, Ser. No. 7,051
Claims priority, application France Feb. 11, 1959
4 Claims. (Cl. 308-54)



1. A key for assembling the upper half-bearing of an axle-box, which is adapted to fit in position so as to lock itself automatically in the longitudinal direction after the slight lifting of the box-body with respect to the stub shaft of the axle and to the upper half-bearing, this slight lifting movement being permitted only by taking up the play between the counter-bearing and the stub shaft, said key comprising a prismatic body of substantially rectangular cross-section which has a lower face adapted to bear against the upper half-bearing, an upper face adapted to support said box body and a front end formed with a vertical intermediate slot so as to constitute a strap having a flat, vertical bottom face in said key, a cylindrical transversal pin fitted in said strap and a pawl pivotally mounted in said strap on said pin and adapted to lock said key in relation to said upper half-bearing, said pawl being formed at its lower portion with a stop-forming catch adapted, during the gravity pivoting movement of said pawl, to engage a slot formed in said upper half-bearing and, being formed, at its front end, with a lug adapted, when lifted, to retract said stop-forming catch above said slot in said upper half-bearing, during the fitting and removal of said key.

3,001,837 ANTI-FRICTION BEARINGS LUBRICATED WITH BONDED LUBRICANT FILMS

Edward R. Lamson, Greentree Road, Box 88, R.R. 4, Sewell, N.J., and Martin J. Devine, 2560 Prescott Road, Havertown, Pa.
Original application Apr. 16, 1958, Ser. No. 729,040, now Patent No. 2,969,264, dated Jan. 24, 1961. Divided and this application Oct. 28, 1958, Ser. No. 770,240
7 Claims. (Cl. 308-188)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A self-contained lubricated anti-friction bearing having component parts comprising an inner race element having a raceway therein; an outer race element having a raceway therein; a plurality of rolling elements carried in said raceways and being moveable relative thereto; cage means associated with said rolling elements to separate said rolling elements, the improvement therewith of a dry film lubricant of substantially uniform thickness being bonded to at least one of said elements, said bonded film lubricant being comprised of a solid comminuted lubricant dispersed in a cured thermosetting resin; and a bonded film of tetrafluoroethylene having a substantially uniform thickness carried by and completely enveloping said cage means.

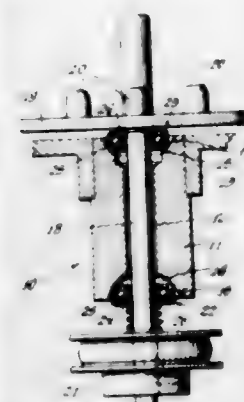
3,001,838

LUBRICATED ANTI-FRICTION BEARINGS
Edward R. Lamson, Greentree Road, Box 88, R.R. 4, Sewell, N.J., and Martin J. Devine, 2560 Prescott Road, Havertown, Pa.
Original application Apr. 16, 1958, Ser. No. 729,041, now Patent No. 2,978,793, dated Apr. 11, 1961. Divided and this application Oct. 28, 1958, Ser. No. 770,241
8 Claims. (Cl. 308-188)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A self-contained lubricated anti-friction bearing having component parts comprising an inner race element having a raceway therein; an outer race element having a raceway therein; a plurality of rolling elements carried in said raceways and being moveable relative thereto; cage elements associated with said rolling elements for separating said rolling elements, the improvement therewith having at least one of said elements roughened on the bearing surface thereof and completely enveloped by a bonded film lubricant having a predetermined thickness which is carried on the said roughened surface, said bonded film lubricant being comprised of a solid comminuted lubricant dispersed in a thermosetting resin and being substantially uniform in thickness.

3,001,839
BEARING STRUCTURE
William Horberg, Trumbull, Conn., assignor to Horberg Grinding Industries, Inc., Bridgeport, Conn., a corporation of Connecticut
Filed June 2, 1958, Ser. No. 739,164
8 Claims. (Cl. 308-189)



1. A self-aligning preloaded bearing structure comprising a rotatable member, a plurality of bearing means mounted on said rotatable member, each of said means including an inner and outer race and bearing members therebetween, said inner and outer races having bearing member engaging surfaces thereon, a stationary support member having a plurality of socket means therein provided with inclined faces, each of said socket means being adapted to receive one of said bearing means for shiftable movement about a transverse axis relative to said rotatable member and resilient means acting on said bearing means for forcing the same into shiftable engagement with said sockets so that said bearing structure is preloaded and said bearing member engaging surfaces of said outer races are aligned with said bearing member engaging surfaces of the respective inner races.

3,001,840

ELLIPTICAL BEARING

C. Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Original application Dec. 10, 1958, Ser. No. 779,454, now Patent No. 2,983,162, dated May 9, 1961. Divided and this application May 16, 1960, Ser. No. 29,475
3 Claims. (Cl. 308-193)



1. An anti-friction bearing comprising an inner race of elliptical contour, an outer race of elliptical contour surrounding and cooperating with an inner race, and anti-friction bearing elements located between the inner race and outer race and running on the inner and outer races, one of said inner and outer races being radially deflectable.

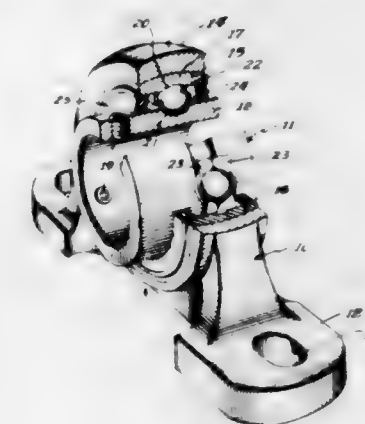
3,001,841

PILLOW BLOCK ROLLING BEARING OF SELF-ALIGNING TYPE

Richard Glavan, Joliet, and Robert Lee King, Aurora, Ill., assignors to Stephens-Adamson Mfg. Co., a corporation of Illinois
Filed Nov. 21, 1957, Ser. No. 697,841
4 Claims. (Cl. 308-194)

1. A self-aligning ball bearing unit comprising a one piece pillow block massive structure housing mem-

ber, said housing member including a planar base portion, an upstanding web normal to said base portion, and an annular bearing housing portion, said web integrally uniting said base portion and said housing portion, said housing portion extending normally of said web, with its central axis parallel to the plane of said base portion, said housing portion being formed with a circular opening defined by a spherically contoured continuous and uninterrupted annular internal wall defining a continuous and uninterrupted concave spherically contoured wall surface of uniform width axially of said opening and ter-

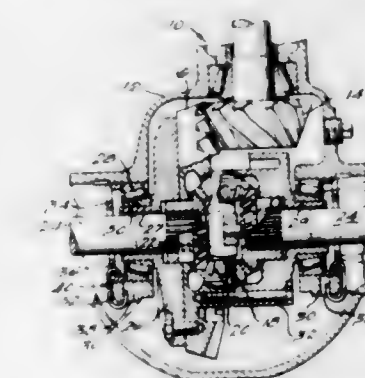


minating in continuous and uninterrupted circular side edge portions that correspond to the side edge portions of said wall, said wall surface defining a spherically contoured bearing seat, and a ball bearing assembly swivelly mounted in said bearing seat, said ball bearing assembly comprising a one-piece outer race having a spherically contoured outer periphery that is complementary to the configuration of said housing member wall surface, an inner race received within said outer race, said inner and outer races being formed with concentrically arranged perfectly circular grooves, a plurality of bearing balls received in said grooves about said inner race, and a retainer device for holding said balls in spaced relation about said inner race.

3,001,842

DIFFERENTIAL BEARING ASSEMBLY

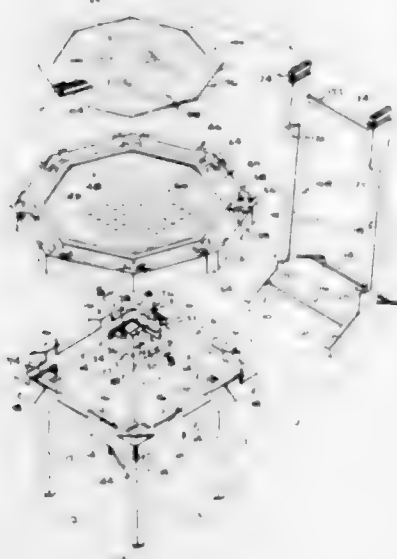
William E. Boyd, Warren, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Sept. 24, 1958, Ser. No. 763,004
3 Claims. (308-236)



1. In a differential assembly the combination of a bearing mount, a bearing mounted therein, a bearing retaining ring threaded into said mount and abutting said bearing, and a unitary snap spring means rigidly connecting said ring to said mount to prevent rotation of said ring relative to said mount, said snap spring means comprising a resilient wire formed at its longitudinal center portion into a loop to produce two substantially parallel arms, said loop and short lengths of each of said arms adjacent thereto being formed into a unitary mount

hook, and the portion of each of said arms adjacent the free ends thereof being formed into a retaining ring hook, said mount and retaining ring hooks lying on the same side of a common plane through the longitudinal axis of both said arms and converging toward each other, and each of said retaining ring hooks being formed outwardly from a plane lying intermediate said substantially parallel arms and normal to said common plane.

3,001,843
CONVERTIBLE TABLE
Sudie D. Davis, 4160 S. Ellis Ave., Chicago, Ill.
Filed Apr. 24, 1959, Ser. No. 808,801
5 Claims. (Cl. 311-3)

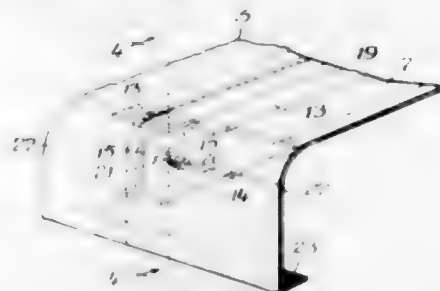


1. A convertible table including a base, said base including a frame and legs depending therefrom; a table top removably seating on said frame in engagement therewith; said legs being rectangularly spaced on the base, the frame being of rectangular configuration with the legs being disposed at the corner of the frame, said legs being connected to the frame for swinging movement between vertically depending, operative positions and horizontal collapsed positions in which the legs are disposed in the general plane of the frame, said frame including locking plate means at the several corners thereof adapted for releasably engaging the several legs in the operative and inoperative positions of the legs so as to lock the legs in said positions, said locking plate means comprising a plurality of locking plates disposed adjacent the several corners of the frame and mounted upon the frame for vertical sliding movement between locking and-unlocking positions respectively, each locking plate having an extension, the adjacent leg having slots one of which registers with said extension in the operative position of the leg and the other of which registers with the extension in the inoperative position of the leg, said extension engaging in a selected slot responsive to sliding of the plate to its locking position.

3,001,844
CABINET STRUCTURE
Carl E. Spring, Itasca, Ill., assignor to Leitner Equipment Company, Franklin Park, Ill., a corporation of Illinois
Filed May 27, 1959, Ser. No. 816,204
4 Claims. (Cl. 312-111)

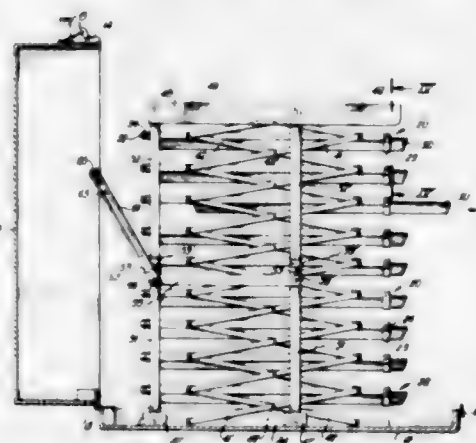
1. A cabinet assembly comprising a plurality of cabinets assembled in side by side relationship, each of said cabinets having a cabinet base, a top plate spaced above said base, said top plate having a front edge portion curved downwardly in forwardly spaced relationship to the front edge portion of said base to completely conceal the top of said base, and a supporting member permanently

secured to said base and said top plate at each end of each of said cabinets, said supporting members extending forwardly of said cabinet base to support said downwardly curved portion of said top plate, each of said supporting



members having a recess, the recesses in adjoining supporting members being in registration, and a flat rigid strip inserted into said registering recesses to reinforce the joint between two adjacent top plates.

3,001,845
COLLAPSIBLE DRAWER FILE
Daniel T. Thompson, 10584 Bradbury Road, Los Angeles 64, Calif.
Filed Oct. 23, 1959, Ser. No. 848,314
9 Claims. (Cl. 312-272.5)

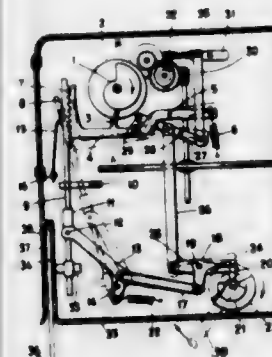


1. A collapsible drawer file, comprising: a plurality of stacked, horizontal drawer guides, each guide having opposite channel members adapted to receive a drawer; a removable drawer slidably carried in each of said guides, each drawer having horizontal flanges slidably received in said channel members and inwardly tapering walls connecting said horizontal flanges and the bottom of said drawer so that the drawers are nestable in a collapsed position; linkage means for interconnecting adjacent guides for limited vertical and substantially parallel movement with respect to each other between extended and collapsed position; and drawer guide positioning means for moving said guides between a collapsed position where said guides are substantially stacked on one another and said drawers are nested and an extended position where said guides are vertically spaced and each drawer is adapted to be removed from its respective guide.

3,001,846
SEALED MAGNETIC RECORDING DEVICE
Lorenzo Franceschini, Florence, Italy, assignor to Officine Galileo Società per Azioni, Florence, Italy, a corporation of Italy
Filed Feb. 5, 1958, Ser. No. 713,430
Claims priority, application Italy Feb. 11, 1957
5 Claims. (Cl. 346-14)

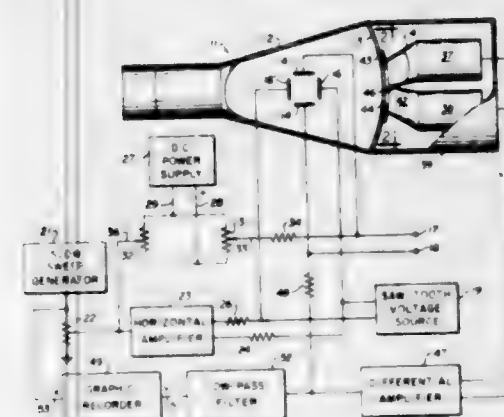
1. A metering and data recording device, comprising a closed case, an envelope on the exterior of the case for receiving a magnetically sensitive card to be impressed

with said data, said envelope including a non-magnetic wall portion of the case, a plurality of rotatable inter-operating members mounted in the case and movable to different angular positions representative of data to be recorded, feeler means operatively associated with said members and selectively movable into and out of engagement with said members, actuating means for said feeler



means, said feeler means being responsive to move according to the angular positions assumed by said members when in engagement with said feeler means, and magnetic recording members actuated by said feeler means and supported for movement wholly within the case adjacent to said non-magnetic wall portion to magnetize selected zones of said card when inserted in said envelope adjacent to and outside of said non-magnetic wall portion.

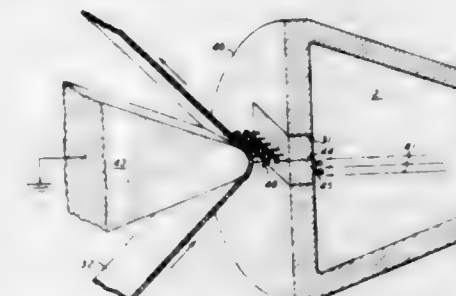
3,001,847
OPTICAL TRANSCRIBING OSCILLOSCOPE
Quentin A. Keras, Orinda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 12, 1959, Ser. No. 833,362
15 Claims. (Cl. 346-33)



1. In electronic apparatus for displaying the wave shapes of fast pulses, the combination comprising a cathode ray tube having means for deflecting a cathode ray beam in a pattern representative of said fast pulse, detector tube means sensing movement of said beam pattern to either side of a fixed reference axis and producing an output signal varying in accordance therewith, scanning means acting in the direction of said axis and sequentially exposing narrow portions of said beam pattern to said detector tubes, a beam deflection control receiving signals from said detector tubes and acting on said cathode ray tube to continually center said beam pattern on said axis, and a graphical recorder having an input coupled to the output of said detector tube means for plotting a trace of the variations in output signal of said detector tube means.

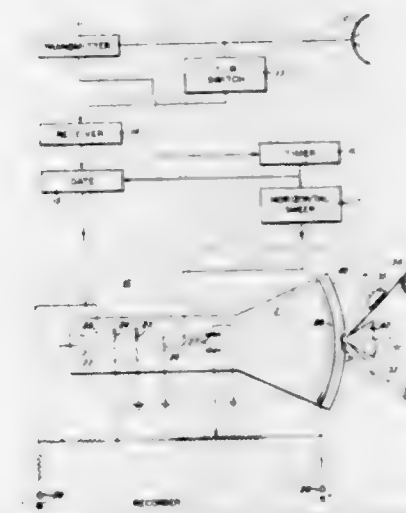
770 O.G.-61

3,001,848
ELECTRON BEAM RECORDING APPARATUS
Lewis E. Walkup, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed July 15, 1958, Ser. No. 748,655
2 Claims. (Cl. 346-74)



1. A cathode ray device comprising an envelope, an electron gun in said envelope for projecting a beam of electrons, and a target in the face of said envelope to which said beam is directed, said target comprising a block of material essentially non-transmissive of electrons impinged thereon by said beam and having a high electrical resistance, a plurality of electrically conducting pins embedded in said block extending through said block from the interior of said envelope to the exterior thereof and arranged in a line, the ends of said pins extending to the interior of said envelope having portions extending exteriorly of said block and angularly disposed relative to the portions thereof embedded in said block, said angularly disposed portions being substantially parallel to each other, whereby said electron beam may scan said pins by traversing said angularly disposed portions, means to modulate said electron beam and an electrically conductive mandrel adjacent said pins but spaced therefrom and adapted to support a web of electrically insulating material in spaced parallel relation to said pins at a distance of from about 6 to about 50 microns, said mandrel being in electrical circuit with said gun whereby a charge established on said pins by scanning thereof by said beam will disrupt the air between said pins and web and thereby induce an electrostatic charge on said web in accordance with the electron charge carried by said pins.

3,001,849
APPARATUS FOR ELECTROSTATIC RECORDING
Lewis E. Walkup, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed July 15, 1958, Ser. No. 748,739
4 Claims. (Cl. 346-74)



1. An electron beam recorder comprising a sealed and evacuated cathode ray tube having an electron gun for

generating an electron beam and an electron beam target area, said target area having a narrow elongated slit therein, a thin air impervious membrane covering said slit, said membrane being of uniform and continuous electrical properties and being of high electrical resistance and substantially impervious to electrons from said beam, and an electrically conducting mandrel adjacent said membrane but spaced therefrom and adapted to support a web of insulating material in spaced relation to said membrane, said mandrel, being in electrical circuit with said gun, whereby said web and mandrel are in capacitive relation to said membrane, and a charge established on said membrane by scanning thereof by said beam will disrupt the air between said membrane and web and thereby induce a line of electrostatic charge on said web in accordance with the electron charge carried by said membrane.

3,001,850

END-DRIVEN RESILIENT RECORDING DEVICE

Ralph E. Marrs, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 27, 1959, Ser. No. 796,114
11 Claims. (Cl. 346-74)

11. Apparatus for use in magnetic recording comprising a substantially cylindrical resilient member having a magnetizable material on one surface thereof, a rotatable

driving end bell for receiving one end of said resilient member to drive said member at a predetermined speed, said end bell having a protruding portion extending around the interior thereof for engaging said resilient member to hold said resilient member firmly when said



end bell rotates, and an air bearing ring member disposed around but spaced from the other end of said cylindrical member to form an air bearing for supporting said other end as said resilient member expands during rotation of said cylindrical member.

CHEMICAL

3,001,851

PRODUCTION OF ARTIFICIAL FILAMENTS, YARNS, THREADS AND THE LIKE

John H. Givens, Harry R. Hardy, and David N. Tyler, Coventry, England, assignors to Courtaulds Limited, London, England, a British company
Filed June 27, 1958, Ser. No. 744,982
Claims priority, application Great Britain July 1, 1957
5 Claims. (Cl. 18-54)



1. A method for making high tenacity rayon filaments which comprises extruding viscose containing at least 0.5% of a modifier which is capable of producing filaments having a thick skin, from said viscose, into an aqueous acid coagulating bath to form filaments, and immediately stretching the filaments, while they are still wet, in a series of at least five stretching steps, the filaments being stretched from 4% to 20% in each stretching step, there being a relaxing step between each of said stretching steps in which the filaments are permitted to contract by an amount not exceeding 4%, the total stretch imparted to said filaments over said series of stretching and relaxing steps being greater than the stretch imparted by the first of said stretching steps.

3,001,852

CLAY BLEACHING

Robert F. Conley, Elizabeth, N.J., assignor to Georgia Kaolin Company, Elizabeth, N.J., a corporation of New Jersey
No Drawing. Filed May 22, 1959, Ser. No. 814,987
3 Claims. (Cl. 23-110)

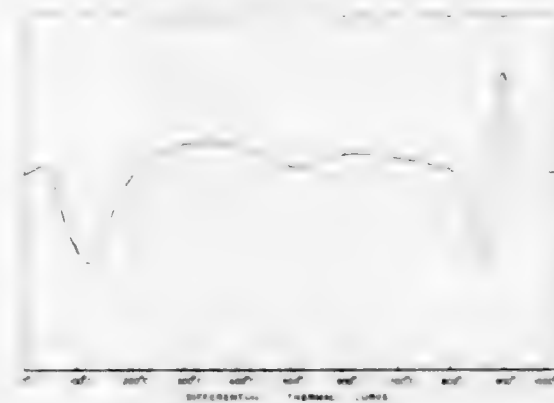
1. The process of bleaching, during a bleaching period in an acid solution, of a clay containing iron coloring

impurities capable of being bleached, comprising the steps of first adding only a portion of sodium dithionite not exceeding one-half of the total dithionite used, then subjecting the dithionite and said clay to a mixing operation for a period of not over 80% of the total bleaching period, then adding at least one additional portion and not over two successive portions of dithionite, in amounts substantially equal to that of the first portion, in the presence of substantially the entire bleaching mixture resulting from the preceding dithionite additions, and stirring for the remainder of the bleaching period.

3,001,853

SYNTHETIC MAGNESIUM ALUMINUM SILICATE PRODUCT

Glen Alton Hemstock, East Brunswick, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland
Filed Apr. 6, 1960, Ser. No. 20,310
4 Claims. (Cl. 23-112)



1. A novel adsorbent material which comprises a colloidal complex hydrated magnesium aluminum silicate having a water of crystallization of 6.0 to 6.5 percent, a V.F. analysis substantially the same as attapulgite clay, and is further characterized by undergoing an intense endothermic reaction at about 850° C. and having a crystal structure such that a glycolated oriented specimen thereof gives an X-ray diffraction peak in the vicinity of 17 Å.

3,001,854

METHOD FOR PURIFYING TITANIUM SULFATE SOLUTIONS

Lester A. Kenworthy, Baltimore, Md., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed May 18, 1959, Ser. No. 813,643
7 Claims. (Cl. 23-117)

1. A method of separating tetravalent titanium values in an aqueous sulfuric acid feed solution from associated metallic impurities therein, said impurities having valency state below 4, which comprises contacting said feed solution with a water-insoluble cation exchange resin in the hydrogen form, and recovering from the contacting a product solution reduced in said metallic impurities and containing the bulk of said titanium values.

3,001,855

PRODUCTION OF HIGH QUALITY BORON

Joseph C. Schumacher, Los Angeles, and Rodger W. Baier, Whittier, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware
No Drawing. Filed Apr. 21, 1958, Ser. No. 729,493
8 Claims. (Cl. 23-209)

1. A process for refining crude boron containing as an impurity a metal selected from the class consisting of alkali metals, alkaline earth metals, magnesium, aluminum, titanium, zirconium, and hafnium comprising: heating the said crude boron to a temperature of between about 650° C. and 900° C. in a dry, non-oxidizing atmosphere, passing a gaseous halogen selected from the class consisting of chlorine and bromine over the said crude boron for a time sufficient to allow substantially all of the said metal impurity to react with the said halogen; cooling the boron and the metal halide so formed; and thereafter leaching the said metal halide from the said boron with 1-10% boiling HCl.

3,001,856

METHOD OF BRIQUETTING SOLID FUELS

Wilhelm Reerink, 2 Ruttelskamp, Essen-Bredeney, Germany, Walter Muschenborn, 39 Elfriedenstrasse, Essen, Germany, and Erich Notzold, 36 Ehrenau, Essen-Haarzopf, Germany
No Drawing. Filed Nov. 30, 1956, Ser. No. 631,987
4 Claims. (Cl. 44-23)

1. A method of briquetting coal with a hard binder from the group consisting of coal tar pitch, hard bitumen and asphalt, which comprises separating an amount of the coal to be briquetted into a minor fraction not exceeding 20% of the whole and a major fraction, wetting said minor fraction with a mineral oil in which said hard binder is soluble and in quantity sufficient to cover the surface of the coal particles at least of said minor fraction, said oil film replacing the water film previously surrounding the particles of the minor fraction, while simultaneously dispersing the mixture in water to form a flowable dispersion by forcing the water-containing mixture through openings of narrow cross section, mechanically separating the resulting dispersion into oil-wetted coal fraction and ash-containing waste water, discarding the ash-containing waste water, mixing said oil-wetted fraction with the unwetted major fraction of the initial coal, mixing the whole with said hard binder being in the ground state, heating the mixture to a temperature above the softening point of said hard binder, and pressing the heated mixture to form briquettes.

3,001,857

UP-GRADING OF DIESEL FUELS

Robert T. Pollock, 11 E. 87th St., Apt. 6B, New York, N.Y.
No Drawing. Filed June 5, 1958, Ser. No. 739,990
11 Claims. (Cl. 44-57)

1. The method of up-grading a low-grade diesel fuel which comprises incorporating in the low-grade diesel fuel

a preformed composite diesel additive in a quantity which, by weight, is in the range of from about 0.1% to about 6% of the total weight of the low-grade diesel fuel with its content of composite additive, said composite additive consisting essentially of a high-grade hydrocarbon diesel oil and a substance selected from the group of substances consisting of alkyl nitrates and N-alkyl, N-nitro, alkyl carbamates, in a ratio by weight of from about 1:1 to about 1:4.

3,001,858

MOTOR FUEL COMPOSITIONS

Donald H. Antonsen, New Castle, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,189
2 Claims. (Cl. 44-69)

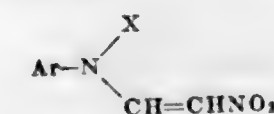
1. A spark ignition internal combustion engine fuel composition consisting essentially of petroleum hydrocarbons boiling within the gasoline range, an antiknock amount of a tetra-alkyl lead antiknock compound, and a small amount, sufficient to provide a synergistic octane quality improvement in combination with said organo-lead compound, of hexamethylbenzene molybdenum tri-carbonyl.

3,001,859

METHOD OF STIMULATING PLANT GROWTH

Marvin Paulshock, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 14, 1958, Ser. No. 735,131
2 Claims. (Cl. 71-2.3)

2. The method for stimulating the growth of plants comprising applying to the plants, in an amount sufficient to stimulate the growth of the plants, a compound represented by the formula



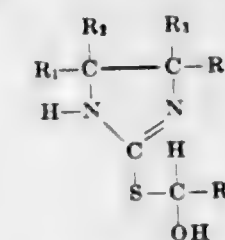
wherein Ar is selected from the group consisting of phenyl, chlorophenyl, dichlorophenyl, trichlorophenyl, methoxyphenyl, ethoxyphenyl, propoxyphenyl, hydroxyphenyl, aminophenyl, tolyl or cumyl; and X is selected from the group consisting of hydrogen, alkyl groups of from one through four carbon atoms and 2-nitrovinyl.

3,001,860

METHOD FOR CONTROLLING PESTS

Russell M. Bimber, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Apr. 4, 1960, Ser. No. 19,486
7 Claims. (Cl. 71-2.5)

1. A method of controlling pests which comprises contacting said pests with a pesticidal amount of a compound having the structure



wherein R₁, R₂, R₃ and R₄ are selected from the group consisting of hydrogen, lower alkyl, phenyl, naphthyl, thienyl, benzyl, phenethyl, tolyl and xylyl halogen-substituted radicals of the foregoing types and mixtures thereof, each of which radicals contains no more than 16 carbon atoms; and R is a halogen-substituted lower alkyl radical.

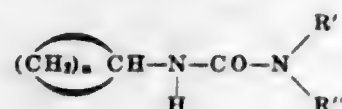
3,001,861

METHOD FOR DESTRUCTION OF WEEDS

Adolf Fischer, Mutterstadt, Pfalz, Guenter Schenker and Otto Schlichting, Ludwigshafen (Rhine), and Herbert Stummeyer, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 6, 1957, Ser. No. 700,946
Claims priority, application Germany Dec. 14, 1956
3 Claims. (Cl. 71-2.6)

1. A method for the destruction and prevention of weeds which comprises applying to a locus to be protected, in an amount sufficient to exert a herbicidal action, a urea derivative represented by the formula



where n is one of the integers 6 and 7 and R' and R'' are selected from the group consisting of hydrogen and alkyl having from 1 to 2 carbon atoms.

3,001,862

METHOD FOR REDUCING THE MOISTURE CONTENT OF CROPS

Frank J. Sowa, 305 E. 46th St., Cranford, N.J.
No Drawing. Filed July 28, 1954, Ser. No. 446,423
2 Claims. (Cl. 71-2.7)

1. The method of treating crops preparatory to harvesting thereof which comprises the step of spraying onto the standing crops an aqueous solution containing from about 0.1 to 10 pounds per gallon of 2-ethylhexanoic acid together with a wetting agent, said solution being sprayed onto the crops at the rate of approximately $\frac{1}{2}$ to 100 pounds of the active ingredient per acre.

3,001,863

PROCESS FOR OBTAINING FERROUS METALS AND ALLOYS FROM THEIR ORES

André Greffe, Ancey, France, assignor to Societe d'Electro-Chimie d'Electro-Metallurgie et des Aciéries Electriques d'Ugine, Paris, France, a corporation of France

No Drawing. Filed July 28, 1959, Ser. No. 829,975
Claims priority, application France Aug. 1, 1958
12 Claims. (Cl. 75-11)

1. A continuous process for obtaining low carbon ferrous metals and alloys from their ores which comprises charging an electric furnace having carbon electrodes but walls and bottom of refractory non-carbonaceous material with a mixture containing the ore and a solid carbonaceous reducing agent in an amount insufficient to reduce all of the oxides of the ore, heating the charge to fuse it and form a layer of molten metal on the bottom of the furnace and a layer of molten thermally conductive slag on top of the layer of metal, periodically adding said mixture containing ore and reducing agent to the layer of molten slag, producing in the upper part of the slag layer the heat necessary for the reduction and fusion of said mixture, said heat being that required for keeping said metal at a temperature slightly above its melting point, and being that which produces a temperature gradient between the upper and lower part of said slag layer with said lower part having a relatively low temperature compared to said upper part and being carried out by maintaining said carbon electrodes slightly below the upper surface of said layer of slag, the depth of the thermally conductive slag layer under the heating conditions being sufficient to maintain a substantial difference in temperature between the upper and lower surface of the slag layer, maintaining a predetermined minimum depth in said layer of slag by periodically withdrawing a part only of said slag and a part only of said molten metal from

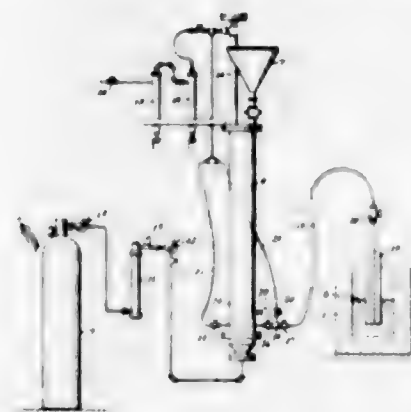
two tapping levels of said furnace disposed apart vertically a distance corresponding to said predetermined minimum depth of said layer of slag, with said lower tapping member being disposed a distance from said furnace bottom corresponding to a predetermined minimum depth of said layer of molten metal, said minimum depth of said slag layer being maintained at a greater depth for slags of high thermal conductivity and at a lesser depth for slags of low thermal conductivity.

3,001,864

METHOD FOR INTRODUCING SOLID MATERIALS INTO MOLTEN METAL

Albert Muller, Plainfield, Philip M. Hulme, Morristown, and Harold R. Fisher, Metuchen, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 9, 1952, Ser. No. 324,998
13 Claims. (Cl. 75-53)



1. The method of bringing a finely divided solid having substantially the density of calcium carbide into direct contact with a molten metal which comprises forming a fluidized bed of said solid and a gaseous medium, drawing a fluidized stream of said solid out of said bed, transporting said stream through a feed line, said stream having an apparent density of at least one-half pound per cubic foot and containing insufficient gas in relation to the weight of solid material for the solid material to become suspended in the gas, and projecting said stream from said feed line into the molten metal beneath the surface thereof at a velocity exceeding 25 feet per second, whereby the particles of solid material are caused to penetrate completely through the interface between the gaseous medium and the molten metal and to pass a substantial distance into the molten metal beyond such interface and thus are separated from the gas bubbles rising to the surface of the molten metal.

3,001,865

METHOD OF REFINING METALS

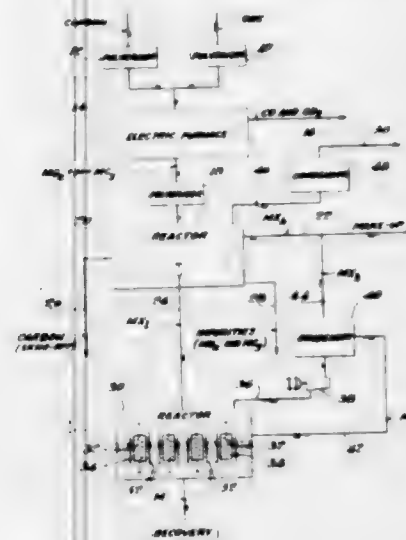
Karl J. Korpi, Pasadena, Calif., and Raymond C. Johnson, Orwigsburg, Pa., assignors to The Lummus Company, New York, N.Y., a corporation of Delaware

Filed June 23, 1958, Ser. No. 743,734
7 Claims. (Cl. 75-84.1)

1. The method of producing a metal selected from the group consisting of titanium, zirconium, hafnium, vanadium and uranium by the disproportionation of a lower iodide of the metal to form the metal and a higher iodide of the metal which comprises: halogenating a crude mixture of said metal with a higher iodide of said metal to form a lower iodide of said metal; effecting said halogenation in a first reaction zone at substantially atmospheric pressure and at a temperature above the melting point and below the boiling point of said lower iodide of the metal and above the boiling point of said higher iodide of the metal thereby to form said lower iodide of said metal in said zone; withdrawing said lower iodide

as a liquid from said first reaction zone and introducing it into a second reaction zone for disproportionation therein to said metal and a higher iodide of said metal; effecting said disproportionation in said second zone at substantially atmospheric pressure in the presence of a heated body of said metal by forming a pool consisting primarily of said lower iodide around said body and maintaining

of said higher bromide of the metal thereby to form said lower bromide of said metal in said zone; withdrawing said lower bromide as a liquid from said first reaction zone and introducing it into a second reaction zone for disproportionation therein to said metal and a higher bromide of said metal; effecting said disproportionation in said second zone at substantially atmospheric pressure in the presence of a heated body of said metal by forming a pool consisting primarily of said lower bromide around said body and maintaining the liquid in said pool at a temperature above the melting point and below the boiling point of said lower bromide, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher bromide formed during disproportionation to said first reaction zone to provide the higher bromide utilized for said halogenation.



the liquid in said pool at a temperature above the melting point and below the boiling point of said lower iodide, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher iodide formed during disproportionation to said first reaction zone to provide the higher iodide utilized for said halogenation.

3,001,866

METHOD OF REFINING METALS

Karl J. Korpi, Pasadena, Calif., and Raymond C. Johnson, Orwigsburg, Pa., assignors to The Lummus Company, New York, N.Y., a corporation of Delaware

Filed June 23, 1958, Ser. No. 743,735
7 Claims. (Cl. 75-84.1)



1. The method of producing a metal selected from the group consisting of titanium, zirconium, hafnium, tungsten and uranium by the disproportionation of a lower bromide of the metal to form the metal and a higher bromide of the metal which comprises: halogenating a crude mixture of said metal with a higher bromide of said metal to form a lower bromide of said metal; effecting said halogenation in a first reaction zone at substantially atmospheric pressure and at a temperature above the melting point and below the boiling point of said lower bromide of the metal and above the boiling point of said higher bromide of the metal thereby to form said lower bromide of the metal and above the boiling point

1. The method of producing a metal selected from the group consisting of titanium, zirconium and uranium by the disproportionation of a lower chloride of the metal to form the metal and a higher chloride of the metal which comprises: halogenating a crude mixture of said metal with a higher chloride of said metal to form a lower chloride of said metal; effecting said halogenation in a first reaction zone at substantially atmospheric pressure and at a temperature above the melting point and below the boiling point of said lower chloride of the metal and above the boiling point of said higher chloride of the metal thereby to form said lower chloride of said metal in said zone; withdrawing said lower chloride as a liquid from said first reaction zone and introducing it into a second reaction zone for disproportionation therein to said metal and a higher chloride of said metal; effecting said disproportionation in said second zone at substantially atmospheric pressure in the presence of a heated body of said metal by forming a pool consisting primarily of said lower chloride around said body and maintaining the liquid in said pool at a temperature above the melting point and below the boiling point of said lower chloride, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher chloride formed during disproportionation to said first reaction zone to provide the higher chloride utilized for said halogenation.



3,001,863

RECOVERY OF METALS FROM CYANIDE SOLUTION BY ANION EXCHANGE

John Aveston, Pyrford, David Anthony Everest, Ruislip, and Ronald Alfred Wells, Walton on Thames, England, assignors to National Research Development Corporation, London, England, a British corporation
No Drawing. Filed Feb. 10, 1958, Ser. No. 714,021
Claims priority, application Great Britain Feb. 19, 1957
6 Claims. (Cl. 75-105)

1. A method of treating an aqueous solution containing at least one of the desired metals nickel, cobalt, silver, palladium, iridium, osmium, rhodium and selenium complexed in cyanide solution, and also containing at least one of the metals iron and copper as a complex cyanide, gold being substantially absent from said aqueous solution, in order to facilitate the recovery of at least one of the desired metals therefrom which comprises bringing the solution at a pH above 7 into contact with a nitrogenous anion exchange resin having both weakly basic and strongly basic amine exchange groups in a relative proportion such that the ratio R of strongly basic groups to total basic (i.e. strongly basic plus weakly basic) groups lies between 10 and 75 percent, thereby to effect a preferential adsorption of metal other than iron and copper, and thereafter recovering from the resin a product containing the desired metal in increased proportion relative to such iron and copper as is present in the original aqueous solution.

3,001,869

NODULAR IRON MANUFACTURE

William G. Longstreth, Pontiac, and Royal A. Van Patten, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
No Drawing. Filed Aug. 7, 1959, Ser. No. 832,142
3 Claims. (Cl. 75-130)

1. The process of imparting a nodularizing addition of magnesium to a cast iron base metal comprising placing within a ladle a layer of metallic magnesium, superimposing upon this layer of metallic magnesium a layer of ferrous metal at a temperature substantially below the temperature of molten cast iron, and pouring molten cast iron base metal into the ladle.

3,001,870

NIOBIUM-TITANIUM REFRACTORY ALLOY

Douglas G. McCullough, Rochester, and Neil M. Lottridge, Jr., Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Jan. 15, 1960, Ser. No. 2,601
3 Claims. (Cl. 75-174)

1. A ductile, oxidation-resistant alloy having a high strength-to-weight ratio, said alloy comprising about 35% to 45% titanium, 9% to 12% chromium, 2% to 8% aluminum, 0.5% to 2% manganese and the balance substantially all niobium.

3,001,871

MANUFACTURE OF MICROPOROUS METALLIC TUBES CONSISTING MAINLY OF NICKEL

Nguyen Thien-Chi and Pierre Plurien, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a state administration
No Drawing. Filed May 1, 1958, Ser. No. 732,141
Claims priority, application France May 3, 1957
7 Claims. (Cl. 75-211)

1. The method of making a thin-walled microporous tube which comprises starting from a powder obtained by reduction of a nickel salt of the group consisting of nickel formate and nickel oxalate at a temperature ranging from 150 to 750° C. at atmospheric pressure in a reducing atmosphere, adding water to the powder thus

obtained to form a paste and crushing paste until the nickel particle agglomerates have been destroyed, leaving only grains the means diameter of which is of an order of magnitude not higher than 0.1 micron, mixing with this paste a binder of the group consisting of gum tragacanth and alginates so that said grains are coated individually with said binder, extruding the paste thus obtained through fine nozzles to form vermicular threads, said threads being reagglomerated into a paste and this last mentioned paste being again passed through said nozzles, this last operation being repeated a plurality of times, adding to said vermicular threads, between at least some of these repeated extrusion operations, a binder of the group consisting of gum tragacanth and alginates so as to form a paste, extruding the last mentioned paste to give it the form of a tube, this last mentioned extrusion being effected under a pressure ranging from 600 to 1000 kgs. per sq. mm. of extrusion area, dehydrating and drying said tube, placing said tube on a smooth cylindrical support of a diameter corresponding to the desired inner diameter of the finished tube, and subjecting the dried tube to a sintering treatment, performed at a temperature ranging from 500 to 900° C. for a time ranging from 30 to 90 minutes.

3,001,872

PREPARING PLANOGRAPHIC PLATES AND SOLUTION THEREFOR

Philip F. Kurz, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
No Drawing. Filed Mar. 18, 1957, Ser. No. 646,542
21 Claims. (Cl. 96-1)

1. A process for preparing a planographic printing plate from a xerographic plate, said xerographic plate comprising a relatively electrically conductive backing sheet coated on at least one side with a photoconductive insulating material comprising an electrically insulating resin binder having suspended therein a finely divided photoconductive pigment selected from the group consisting of photoconductive insulating metal oxides and metal sulfides, said process comprising producing an electrostatic latent image on said photoconductive material, developing said electrostatic image with a hydrophobic developer powder, fixing said powder image to said material, and then treating the powder image-bearing material with an aqueous solution of an acid that reacts with said pigment to form cations of the metal thereof and said solution also containing anions forming a hydrophilic compound with the metal cations released from the pigment by the acid, said hydrophilic compound being insoluble in said aqueous solution.

3,001,873

PHOTO-PRINTING PROCESS AND MATERIAL

Peter L. Foris, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Mar. 22, 1956, Ser. No. 573,172
3 Claims. (Cl. 96-29)

1. The method of photo-printing, including the steps of exposing to light, through a negative of the image to be reproduced, a sheet coated with microscopic capsules of gelled colloid material containing inclusions of a solid printing substance dispersed in a liquid vehicle which is volatile above room temperature but below the degradation temperature of the colloid material, and said colloid material including gelatin which has been treated with a photo-sensitizing material, so that when the capsules are exposed to light they are resistant to swelling by water, whereas those not exposed to light are not resistant to swelling by water and, hence, if treated with water swell and increase the pore size of the capsule walls; treating the exposed sheet with water; heating the sheet suffi-

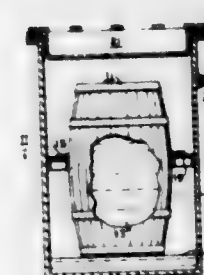
ciently to drive out the volatile vehicle from the capsules not exposed to light, which leaves within those capsules the solid printing substance; and finally placing the coated surface on top of a receiving sheet and passing the two

comprising dispersing a hydrocolloid having high milk reactivity into an aqueous slurry including resolubilized milk protein, and spray drying the resulting mixture.

3,001,877

METHOD FOR AGING LIQUIDS

Zalman M. Shapiro, 5452 Bartlett St., Pittsburgh, Pa.
Filed Jan. 30, 1957, Ser. No. 637,200
3 Claims. (Cl. 99-48)



together through pressure calender rolls, whereby the light-exposed capsules containing liquid are burst, transferring the liquid and carried printing substance to the receiving sheet.

3,001,874

POULTRY FEED

Robert J. Wheman, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 15, 1957, Ser. No. 671,713
6 Claims. (Cl. 99-4)

1. A poultry feed comprised of methionine deficient vegetable products and not more than a minor quantity of product derived from animal sources supplemented with alkali metal salts of 2-hydroxy-4-methylthiobutyric acid.

3,001,875

METHOD OF EXTRACTING PROTEIN FROM DEFATTED SOYBEAN MATERIAL

Louis Sair, Evergreen Park, Ill., assignor to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed May 28, 1956, Ser. No. 587,482
2 Claims. (Cl. 99-17)

1. The method comprising dissolving glycinin from defatted soybean material by action of an aqueous solution having a pH in the range from 6 to 10.5 and at a temperature in the range from normal room temperature up to about 140° F., separating the liquid from undissolved solids, precipitating the extracted protein by adding an acidic agent to reduce the pH to the vicinity of the isoelectric pH of the glycinin content which lies in the approximate range of pH from 4.0 to 4.8, washing the resulting precipitated curd with water, adding an edible agent to elevate the pH to a value in the range upwardly from 6.0 in the presence of suspending water, rendering the resulting glycinin-base protein dispersible and the mass a translucent viscous liquid by heating, and de-watering to provide a dry protein mass, said edible agent being selected from the group consisting of edible inorganic alkalies and edible inorganic buffering agents.

3,001,876

PROTEIN-HYDROCOLLOID POWDER AND PROCESS FOR PRODUCING THE SAME

Morrison Loewenstein, Ashton, Ill., assignor to Crest Foods Co., Inc., Ashton, Ill., a corporation of Illinois
No Drawing. Filed Jan. 9, 1959, Ser. No. 785,787
20 Claims. (Cl. 99-20)

1. A process for the production of powder including a milk protein having improved water-binding capacity

3,001,878

STABILIZER FOR EDIBLE FATS

Alexander W. Williams, Syracuse, Richard H. Beckman, Arcade, and Donald E. Mook, Dewitt, N.Y., assignors to The Borden Company, a corporation of New Jersey
Filed July 3, 1959, Ser. No. 825,395
10 Claims. (Cl. 99-163)

1. In making a stabilizer for fats, the process which comprises forming a dry mixture of 0.2-25 parts by weight of protein, 0.2-50 parts of sugar and 100 parts of a fatty glyceride, heating the mixture so formed in vacuo at about 300°-500° F. and in a current of steam, so as to remove heat volatilizable materials and cause charring of the said mixture and forming a fat soluble reaction product, the said product as formed dissolving in part at least in the fatty glyceride, and then filtering the resulting solution of the stabilizer in the said glyceride away from remaining fat-insoluble material.

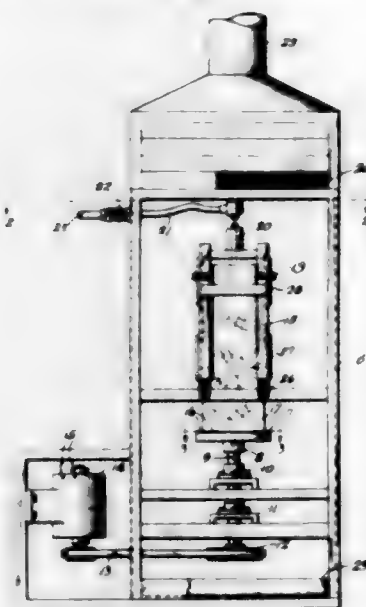
3,001,879

TREATING OF FOOD PRODUCTS WITH SMOKE

Harvey R. Rasmussen, Roselle, and Harvey J. Rasmussen, Arlington Heights, Ill., assignors, by mesne assignments, to Meat Packers Equipment Co., Oakland, Calif., a corporation of California
Original application June 9, 1958, Ser. No. 740,820. Divided and this application Aug. 7, 1959, Ser. No. 833,367
3 Claims. (Cl. 99-229)

1. The method of treating meats and other food prod-

ucts which comprises subjecting them to smoke produced by frictionally abrading a piece of wood while maintain-



ing said wood below combustion temperature except at the point of abrasion.

3,001,880

FLEXIBLE GLASS COMPOSITIONS

Simon Lyon Ruskin, New York, N.Y., assignor to Union Carbide Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 3, 1957, Ser. No. 662,967
7 Claims. (Cl. 106—50)

5. Flexible soda-lime-silica type glass produced by a process for making glass from a glass batch, in which said glass batch is irradiated with from about 100 million roentgens to about 400 million roentgens before said batch is fused into glass.

3,001,881

PRE-REACTION GLASS BATCH AND METHOD FOR PRODUCING SAME

Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware
No Drawing. Filed Aug. 29, 1955, Ser. No. 531,287
4 Claims. (Cl. 106—52)

2. A method for producing a uniform, homogeneous glass batch material which comprises: admixing an aqueous silicic acid and particulate glass-forming ingredients including silica and at least one compound which is a particulate glass-forming ingredient and is selected from the group consisting of the oxides of sodium, potassium, magnesium, calcium, aluminum, boron, and compounds which yield such oxides upon fusion, at least 50 percent of said silica being in a combined form, and wherein substantially all free silica has a particle size finer than about 10 microns, wherein the silicic acid is present in an amount effective to act as a binder for the silica and other glass-forming ingredients, and wherein all ingredients are present in proportions in which the admixture forms a glass upon fusion; and calcining the admixture at a temperature not higher than about 1600° F. to evaporate substantially all free water therefrom.

3,001,882

THERMAL INSULATING MATERIAL AND METHOD OF MAKING SAME

William C. Taylor, Toledo, Ohio, assignor, by mesne assignments, to Owens-Corning Fiberglass Corporation, a corporation of Delaware
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,772
17 Claims. (Cl. 106—120)

2. An insulating product consisting essentially of the reaction product of a lime-silica slurry, the lime-silica

molar ratio of which is from 0.6:1 to 1:1, said reaction product having dispersed therein a finely particulated additive which is chemically inert to the slurry and to the final product and which has a particle size not greater than 74 microns.

3,001,883

CELLULOSE ACETATE BUTYRATE GASKET

Harold F. Vivian and Martin Salo, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 11, 1958, Ser. No. 779,729
4 Claims. (Cl. 106—162)

1. A container closure comprising a shell having a cushion liner consisting essentially of 20–35% by weight cellulose acetate butyrate and 50–75% by weight sucrose acetate isobutyrate having 1–6 acetyl groups and 2–7 isobutyryl groups per sucrose unit.

3,001,884

MIXTURES OF CELLULOSE ETHERS AND STARCH ETHERS

Gerard J. J. Nijhoff, Nijmegen, Netherlands, assignor to Kunstzijdespinnerij Nyma N.V., Nijmegen, Netherlands, a limited liability company of the Netherlands
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,145
4 Claims. (Cl. 106—188)

1. A sizing composition consisting essentially of a solution in water of a mixture of carboxymethyl cellulose and from 0.1 to 20 parts by weight, based on the carboxymethyl cellulose, of carboxymethyl starch prepared by mixing alkali cellulose with an amount of an etherifying reagent selected from the group consisting of chloroacetic acid and sodium chloroacetate, said amount being at least substantially equivalent to the alkali of said alkali cellulose, reacting said etherifying reagent with said alkali cellulose until said alkali is substantially consumed, whereby a reaction mixture containing a cellulose ether is formed, providing an unreacted amount of said etherifying reagent in said reaction mixture, adding starch to said reaction mixture, and reacting said starch with the unreacted etherifying reagent in said mixture to form a starch ether.

3,001,885

MANUFACTURE OF ARTIFICIAL ICICLES

Joseph R. Ehrlich, 1793 Riverside Drive, New York, N.Y.
No Drawing. Filed Dec. 24, 1958, Ser. No. 782,672
9 Claims. (Cl. 106—189)

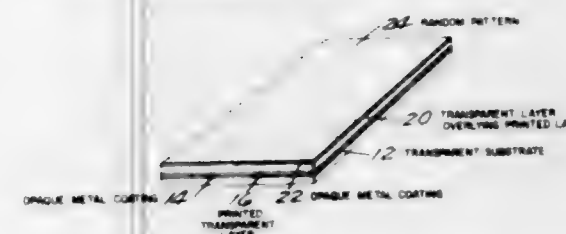
1. A viscous solution which is liquid and free flowing at normal room temperature in a closed container and which increases in viscosity rapidly and spontaneously to a point of gelation when released from said container and exposed to air at room temperature and normal atmospheric pressure consisting of a non-inflammable, high evaporation rate solvent system consisting of methylene chloride and a secondary solvent selected from the group consisting of methanol, ethanol, n-propanol, isopropanol, cyclohexane, carbontetrachloride, ethylene dichloride and mixtures thereof, and a cellulose ester component dissolved therein, the ratio of methylene chloride to secondary solvent being in the range of from about 9.3:0.7 to 8:2, said methylene chloride and secondary solvent having a substantial difference in vapor pressure, said solvent system having a vapor pressure in the range of about 30 mm. to 360 mm. of Hg. at 20° C., said cellulose ester component containing as a principal and essential constituent a cellulose ester selected from the group consisting of cellulose acetate having an acetyl content of from 39 to 40.35% and a viscosity of from 1 to 8 seconds, cellulose acetate-butyrate having 6% combined acetyl and 48% combined butyryl content and cellulose acetate-butyrate having 13% combined acetyl and 37% com-

bined butyryl content, said solution having a total solids content of from about 30% to 50%.

3,001,886

ARTICLE INCORPORATING CONCEALED INFORMATION THEREWITHIN

Raymond W. Shrewsbury and Douglas N. Anderson, White Bear Lake, and William E. Sobl, Birchwood, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,823
5 Claims. (Cl. 117—1)

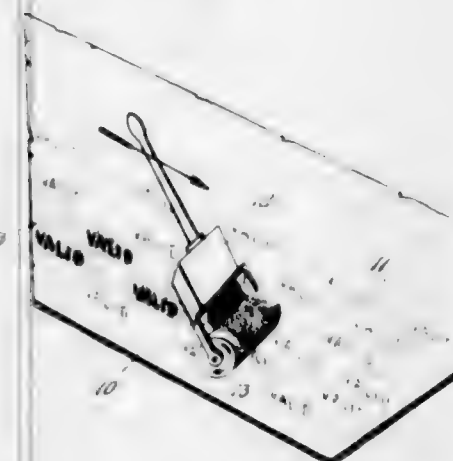


1. As a means for concealing recorded information, and enabling ready revelation thereof, an article comprising a substrate carrying recorded information readable from at least one surface thereof and resistant to removal therefrom by mild abrasive action, and opaque metallic covering layer adhered to said one surface of said substrate and overlying and concealing said recorded information, said opaque covering layer containing contaminants forming a random patterned exposed surface and being removable from said substrate by mild abrasive action.

3,001,887

PAPER MANUFACTURE

Carl E. Ahlm, Jr., and Earl B. Brookbank, Jr., Chillicothe, Ohio, assignors to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Sept. 20, 1957, Ser. No. 685,067
4 Claims. (Cl. 117—1)

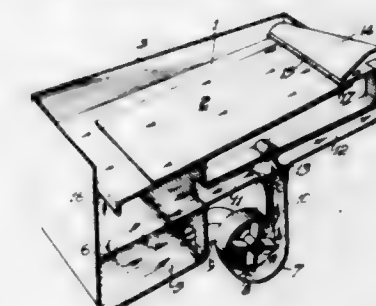


3. A process for authenticating a paper article comprising the steps of printing an authenticating design on the surface of said article with a colloidal silica containing about 10 to 30% colloidal silica as SiO₂ and having the silica particles thereof provided with an average diameter of about 0.015 to 0.1 micron, and applying a colorless organic reactant in solution to said surface of said article to color said particles and thus make said design readily visible for authentication purposes, said colorless organic reactant being selected from the group consisting of Michler's hydrol, lactone of malachite green, leuco of malachite green, lactone of crystal violet, and lactone of Rhodamine B.

3,001,888

METHOD OF DEVELOPING AN ELECTROSTATIC IMAGE

Kenneth Archibald Metcalfe, Graymore, South Australia, and Robert John Wright, Hectorville, South Australia, Australia, assignors to The Commonwealth of Australia, care of the Secretary of the Department of Supply, Melbourne, Victoria, Australia
Filed Sept. 24, 1958, Ser. No. 763,016
Claims priority, application Australia Sept. 25, 1957
5 Claims. (Cl. 117—37)

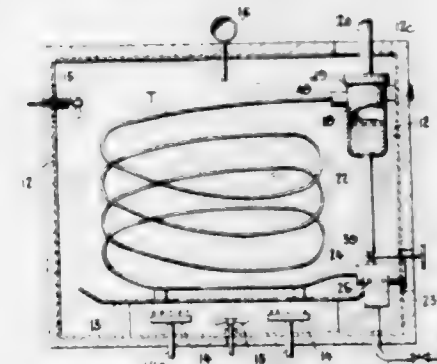


1. A method of developing an electrostatic image which comprises applying to a body having a latent electrostatic image thereon an emulsion formed by: mixing a pigment in a liquid to form a developer and placing the developer in a carrier liquid with which the developer is immiscible to form an emulsion of the developer and carrier liquid in which the developer coats globules of said carrier liquid.

3,001,889

METHOD AND APPARATUS FOR APPLYING METAL COATINGS TO THE INNER SURFACES OF METAL TUBES

Myron L. Robinson, Monterey Park, Calif., assignor to Phelps Dodge Copper Products Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,420
14 Claims. (Cl. 117—51)



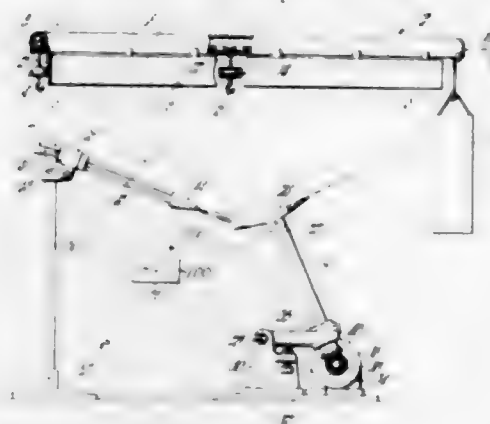
1. A method of coating the interior surface of a metal tube with a coating metal having a melting point substantially lower than that of said tube, which comprises inserting a coiled length of the tube in a heating chamber and there pre-heating the tube to a temperature at least as high as the melting point of said coating metal, withdrawing a molten mass of said coating metal, withdrawing from said mass a slug of molten metal in excess of the quantity required to coat said interior surface, inserting in the tube a porous wiper saturated with a liquid adapted to treat said interior surface for coating with said coating metal, and blowing the slug preceded by the wiper and in contact therewith through the tube in said chamber while the tube is at substantially said temperature, thereby depositing first said treating liquid and then a film of the coating metal on said interior surface.

3,001,890

ELECTROSTATIC DEPOSITION

John Sedlacsik, Jr., Garfield, N.J., assignor to Interplanetary Research & Development Corp., Garfield, N.J., a corporation of New Jersey

Filed July 27, 1956, Ser. No. 600,633
12 Claims. (Cl. 117-93)

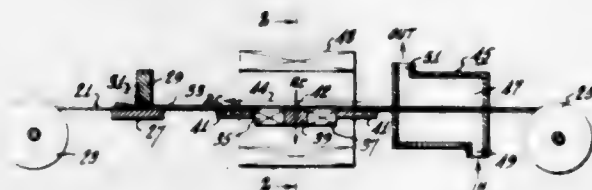


10. The method of electrostatically coating articles comprising atomizing coating material into a spray by urging coating material and compressed air through a nozzle, directing the particles of said spray unconfined through free air onto a rotating disc forming a film thereon and centrifugally atomizing said particles, and thereafter charging said particles electrostatically to facilitate deposition thereof onto said articles.

3,001,891

METHOD AND APPARATUS FOR PREPARING MAGNETIC RECORDING ELEMENTS

Arthur I. Stoller, New Brunswick, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 30, 1959, Ser. No. 823,969
13 Claims. (Cl. 117-93)



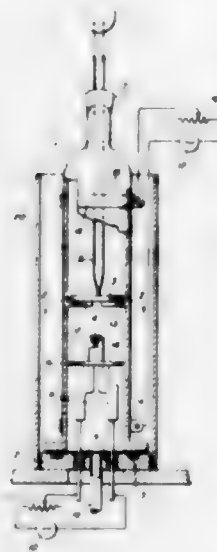
8. In the manufacture of magnetic recording elements of the type having a solid layer of magnetic particles in a non-magnetic binder, and having a predetermined direction of recording and playback along said layer, the method comprising coating a surface of a support with a liquid layer including said magnetic particles and said binder, simultaneously applying superimposed magnetic fields including an A.C. magnetic field and a D.C. magnetic field to said layer while still in a liquid condition, said A.C. magnetic field having a strength sufficient to move said particles in said liquid layer, said D.C. magnetic field having a major component parallel to said direction for recording and playback, and then solidifying said layer.

3,001,892

EVAPORATION METHOD AND APPARATUS
Lewis R. Koller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 26, 1958, Ser. No. 724,149
10 Claims. (Cl. 117-106)

6. The method of coating thin films of evaporable materials having a high degree of crystal perfection upon a heated substrate which method comprises: exposing the surface of said substrate to be coated to the interior of an evacuable enclosure; heating a quantity of material with which said substrate is to be coated within said substrate to a first temperature sufficient to cause the evolution of

vapors thereof; and simultaneously and, independently of the heating of said quantity of material, heating the walls of said enclosure, including said substrate, to a second



temperature below said first temperature and sufficiently high to facilitate the formation of high perfection crystalline layers of said material upon said substrate.

3,001,893

FORMATION OF FIRMLY ADHERENT COATINGS OF REFRACTORY MATERIALS ON METALS

Karl Helmut Robert Christian Kreuchen, Hounslow, and Philip Cecil Barrett, Hayes, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Mar. 20, 1959, Ser. No. 800,753
Claims priority, application Great Britain Mar. 25, 1958
17 Claims. (Cl. 117-217)



1. A method of providing an exposed coating of a refractory material on a surface of a metal body having a melting point above 600° C. comprising coating said surface with said refractory material in powder form and an active metal, heating said coated surface under non-oxidizing conditions to a temperature below the melting point of said body to form an alloy solder comprising said active metal and said metal body, said alloy having a lower melting point than said active metal and said metal body and maintaining said temperature for such a time as to cause said solder to flow around said refractory particles joining them together and to said metal body, allowing said solder to set and thereafter treating the coated surface so as to expose surfaces of the outermost of said refractory particles.

3,001,894

SEMICONDUCTOR DEVICE AND METHOD OF MAKING SAME

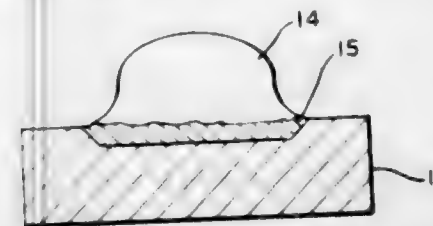
Milton Becker, Melvin Cutler, and John R. Glessman, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 1, 1956, Ser. No. 613,102
10 Claims. (Cl. 148-1.5)

4. A method for producing fused junction semiconductor bodies having a thin regrown region of relatively

3,001,896

DIFFUSION CONTROL IN GERMANIUM

John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1958, Ser. No. 782,849
2 Claims. (Cl. 148-1.5)

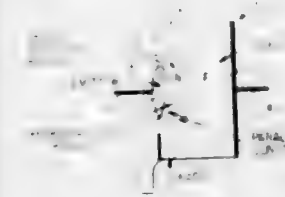


above the eutectic temperature of said body and said gold but below the melting point of said body to melt said gold whereby a portion of said body adjacent thereto along with said antimony and boron is dissolved, and cooling said body to precipitate at least a portion of said dissolved material upon said body whereby a regrown region is formed within said body and in which the dominant active impurity is boron.

3,001,895

SEMICONDUCTOR DEVICES AND METHOD OF MAKING SAME

Robert S. Schwartz and Bernard N. Slade, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 6, 1957, Ser. No. 664,069
5 Claims. (Cl. 148-1.5)



2. The process of making a transistor comprising the steps of first, forming by diffusion a surface of opposite conductivity-type on an original conductivity-type semiconductor body; second, heating said body in contact with, on said surface, a quantity of material comprising a carrier, capable of forming an alloy with said body at a temperature less than the melting temperature of said body, and a quantity of an original conductivity-type directing impurity and a quantity of an opposite conductivity-type directing impurity, the diffusion co-efficient of said opposite conductivity-type directing impurity being greater than the diffusion co-efficient of said original conductivity-type directing impurity and the segregation co-efficient of said original conductivity-type directing impurity being greater than the segregation co-efficient of said opposite conductivity-type directing impurity, said heating step being carried out at a temperature greater than the melting temperature of said carrier and less than the melting temperature of said body whereby a molten alloy is formed on said body, said quantities of said original and said opposite conductivity-type directing impurities being so selected and said heating step being continued at said temperature for such a time that only said opposite conductivity-type directing impurity diffuses significantly from said molten alloy into said body so as to form by said diffusion only a single region in said body which region is of opposite conductivity-type to said body; and third, cooling said body forming thereby a re-crystallized region of said original conductivity-type and applying ohmic contacts to each of said original conductivity-type portion of said body, said opposite conductivity-type surface, and said re-crystallized region.

3,001,897

STEELS AND METHOD OF PROCESSING SAME

Elliot S. Nachtman, Park Forest, Ill., assignor to La Salle Steel Company, Hammond, Ind., a corporation of Delaware
No Drawing. Filed Oct. 22, 1956, Ser. No. 617,270
11 Claims. (Cl. 148-12)

3. The metallurgical process for the improvement of mechanical and physical properties of steel which steel strain hardens and which hardens by some mode of precipitation when worked at a temperature between 200° F. and the lower critical temperature of the steel composition, consisting of the following combination of steps in the order specified of advancing the steel through a die to effect reduction in cross-sectional area in a cold reduction step, and, without any intermediate heat treatment, advancing the cold reduced steel through a die to effect a further reduction in cross-sectional area while the steel is heated to a temperature within the range of 200° F. to the lower critical temperature for the steel composition.

3,001,898

WELDING WITH WASHING EFFECT

Wallace C. Johnson, Hamden, Conn., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1958, Ser. No. 774,001
5 Claims. (Cl. 148-23)

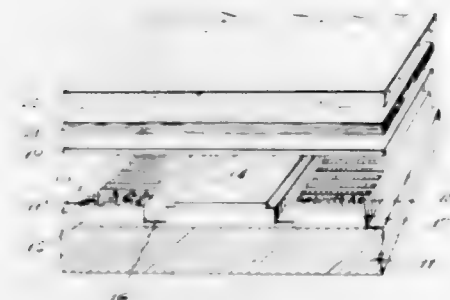
1. A flux composition free of constituents having exothermic reactivity with respect to each other, said flux composition adapted to be introduced for submerged arc welding and consisting of agglomerated particles which consist essentially of, 50 to 90% of wollastonite having a basic particle size in excess of 200 mesh per linear inch and being in the form of native calcium silicate of fibrous character free from conversion by heat or chemical change, 2 to 40% of limestone, and of 9 to 13% of sodium silicate calculated as dry weight disregarding the water in which it is initially dissolved, the sodium silicate being baked at a temperature of 600 to 1000° F. in contact with the wollastonite and limestone, and the agglomerated

particles themselves having a particle size between 10 and 80 mesh per linear inch and having the fibrous wollastonite therein unfused and the limestone retained as calcium carbonate.

3,001,899

STEREOTYPE MAT

Paul B. Hansen, Neenah, and Sedgwick C. Rogers, Appleton, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Wisconsin
Filed Apr. 16, 1956, Ser. No. 578,293
5 Claims. (Cl. 154-46)

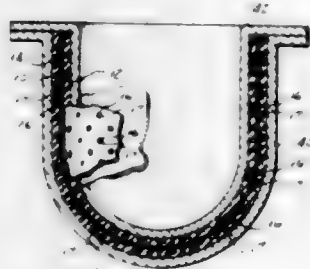


1. A backing for a stereotype mat comprising a plurality of creped, cellulosic sheets impregnated with from about 15 to 75 percent, by weight on a dry basis, of a resinous material including from about 65 to 95 percent of a phenol-aldehyde resin and 5 to 35 percent of a styrene-maleic anhydride copolymer, said phenol-aldehyde resin being in a state of low polymerization and substantially completely water dispersible in such state, said phenol-aldehyde resin being substantially stable at temperatures below about 20° C. and being capable of becoming substantially cured at temperatures of between 250° and 400° F., whereby said backing is moisture permeable and said resinous material is subject to little change in physical characteristics below temperatures of about 20° C., and said resinous material becomes rigid at temperatures of about 350° F.

3,001,900

LAMINATED PLASTIC ARTICLE

Leonard P. Frieder, 145 Station Road, Great Neck, N.Y., and Walter S. Finken, Brooklyn, N.Y.; said Finken assignor to said Frieder
Filed May 19, 1954, Ser. No. 430,938
9 Claims. (Cl. 154-52.5)



1. A laminated plastic article including in combination a pair of fibrous layers impregnated with a synthetic resin, a thin smooth film of material nonadherent with respect to said layers and impervious to said resin in its uncured state separating said layers, the surfaces of said film being free with respect to said layers to permit relative movement between the layers, said thin film being provided with perforations spaced over its surface and bonds of synthetic resin passing through said perforations for securing said layers to each other to permit them to deflect differentially with respect to each other under the impact of a missile.

3,001,901
METHOD OF PRODUCING ELECTRICALLY CONDUCTIVE ARTICLES

Dwight W. Barkley, Cheswick, Pa., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Dec. 1, 1955, Ser. No. 550,258
9 Claims. (Cl. 156-222)



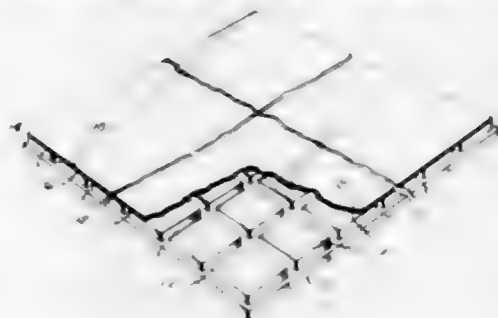
1. The method of producing a bent article comprising a transparent electrically conductive coating on a plastic sheet which has releaseable volatile materials contained therein that normally tend to prevent strong adherent coatings from being applied to the sheet, which comprises the steps of depositing upon the plastic sheet a sealer coating which is substantially impervious to the volatile material contained in the sheet, depositing an adhesive layer formed of a metallic oxide in contact with the sealer coating, depositing a transparent electrically conductive film on the adhesive layer, heating the composite structure to an elevated temperature above the normal temperature at which the sheet will be heated by the electrically conducting film when power is passed therethrough during operation, placing electrodes in contact with the electrically conductive film at the elevated temperature, allowing the article to cool to place the electrodes in compression such that they will remain in compression when the composite structure is heated by the electrically conducting film to normal operating temperature, and bending the composite structure to place the electrically conducting film in compression.

3,001,902

LIGNOCELLULOSIC TILE AND METHOD FOR ITS MANUFACTURE

William H. Cooke and Ronald G. Frashour, Roseburg, Oreg., assignors to Pacific Plywood Co., Dillard, Oreg., a corporation of Oregon

Filed June 23, 1958, Ser. No. 743,786
13 Claims. (Cl. 154-45.9)



11. The method of making a flexible dimensionally stable lignocellulosic tile which comprises consolidating a mat comprising a mixture of lignocellulosic particles and adhesive to a specific gravity of from 0.6 to 1.25, and forming the resulting consolidated product into flat tile-shaped sheets having in their back sides a criss-cross pattern of grooves defining a plurality of spaced back surfaces adapted to be secured adhesively to a support, the tile being characterized by being substantially rigid throughout the areas of the spaced back surfaces and flexible in the areas of the grooves.

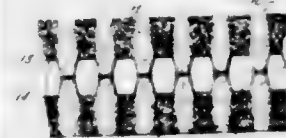
3,001,903

MANUFACTURE OF WALL BOARD

William R. Matthews, W. 417 2nd Ave., Spokane, Wash.
Filed Nov. 25, 1955, Ser. No. 549,034
7 Claims. (Cl. 154-45.9)

1. A process for manufacture of fibrous boards comprising compressing fibrous material and thermo setting

adhesive into boards, partially curing the adhesive, adhering thin flexible, vapor tight sheets to one face of each of said boards thereby covering said face, heat embossing the covered faces of the boards, whereby to provide a plurality of indentations in said faces and whereby to

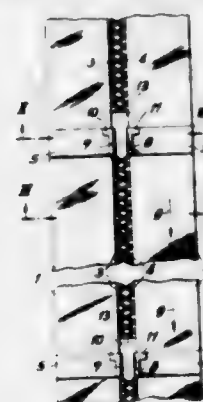


completely cure the thermo setting adhesive, and adhering the raised portions of the embossed faces of two boards together to form a wall board having hermetically sealed air spaces and a heat reflecting and moisture sealing barrier between two fiber layers.

3,001,904

METHOD OF MAKING SLIDING CLASP FASTENERS

Hans Forepp, Eszen-Bredene, Germany, assignor to Opti-Holding A.G., Glarus, Switzerland
Filed Jan. 13, 1959, Ser. No. 786,567
Claims priority, application Germany Feb. 10, 1958
6 Claims. (Cl. 156-66)



1. A method for manufacturing sliding clasp fasteners having two fastener stringer tapes which are each provided with a row of teeth made of a molecularly orientable plastic material and which are adapted to be brought into engagement by means of a slider, wherein strips of a thermoplastic material are welded on to at least one side of the two engaged fastener chains at distances corresponding to the desired fastener lengths, said strips extending transversely to the longitudinal direction of the fastener, next heat and pressure molding the strips and rows of teeth therebetween to form a longitudinally directed separating portion centrally between the two toothed rows and a longitudinally directed bead on the internal edge of the textile stringer tape which is widened outwardly at the edge of the strips remote from the direction of advance in order to form a stop member, and finally transversely severing the tapes adjacent the stop members.

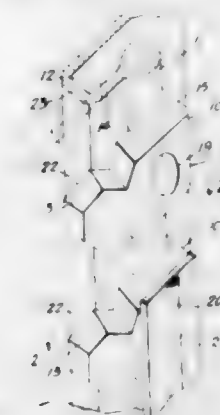
3,001,905

METHOD OF PRODUCING INVISIBLE-TYPE PLASTIC SCOOP STRINGERS

Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 28, 1960, Ser. No. 5,217
5 Claims. (Cl. 156-93)

1. The method of producing separable fastener stringers of the character described, which consists in first casting plastic scoops at spaced intervals along the beaded edge portion of a stringer tape with coupling end portions at one side of the scoops lying upon one surface of the tape inwardly of the beaded edge thereof, forming each of the scoops with fold controlling parts at the other side of the

scoops and disposed upon the other surface of the tape inwardly of the beaded edge thereof, then removing part of the tape from the surface of the coupling end portions

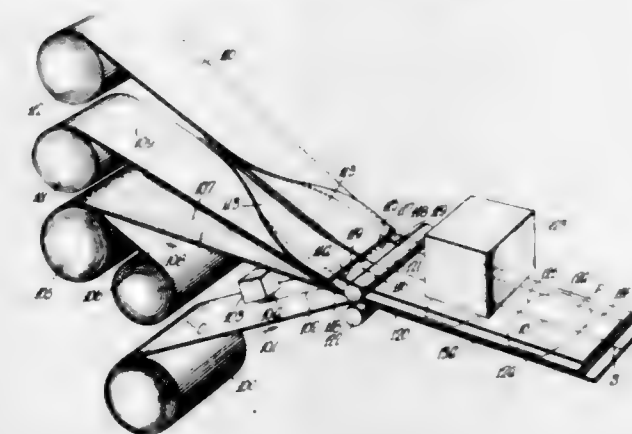


of the scoops and reversely folding the same around said fold controlling parts to dispose the tape on the surface of the second named side of the scoops, and then securing the tape to said scoops.

3,001,906

METHOD OF MAKING DOUBLE FACED ADHESIVE CUT-OUTS

Primo Capella, Whitestone, and Lawrence Blank, Forest Hills, N.Y. (both % Transparent Products Co. Inc., 324 E. 24th St., New York 10, N.Y.)
Filed Nov. 8, 1955, Ser. No. 545,603
3 Claims. (Cl. 156-201)



1. A process of making a coiled double faced adhesive cut out label dispensing strip which comprises feeding together in parallelism to an assembly position a base carrier strip, a double faced adhesive strip of the same width and two tabbing strips which are folded over so that the folds will meet at the longitudinal center line of the dispensing strip with the lower portions of the tabbing strips contacting the adhesive face of the adhesive strip and the upper portions will be folded outwardly, centrally slitting the base strip before the assembly position and then die cutting the assembled adhesive strip and folded tabbing strips to form said label, the meeting folds of the tabbing strip extending along the longitudinal central axis of the carrier strip and the outer edges of the upper portions terminating inside of the edge of the carrier strip and inside of the outer edge of the label.

3,001,907

MANUFACTURE OF FIRE-RETARDANT BOARD

Frederick S. Bergstrom, Cloquet, Minn., assignor to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,134
6 Claims. (Cl. 162-175)

3. A fire-retardant board comprising one part of cellu-

losic fibers interfelted in the presence of approximately three parts of expanded vermiculite particles and 0.4 part of colloidal clay predominating in montmorillonite, said materials being bonded together by starch from grains gelatinized in situ.

3,001,908

GLYOXIME SEED DISINFECTANT

Jean Bradley Harrison, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 12, 1960, Ser. No. 21,583
3 Claims. (Cl. 167-22)

1. The method of treating seeds comprising applying glyoxime to said seeds.

3,001,909

COCCIDIOSIS CONTROL COMPOSITION

Lewis H. Saret, Princeton, N.J., William J. Leanza, Staten Island, N.Y., and Edward F. Rogers, Middletown, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 12, 1957, Ser. No. 683,448
4 Claims. (Cl. 167-53.1)

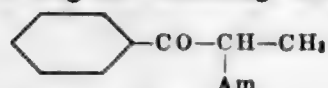
1. A composition of matter comprising sulfaquin-oxaline and 2,4-diamino-5-(5'-chloro-2'-thienyl)-6-ethylpyrimidine, the amount of said pyrimidine being sufficient to potentiate the sulfa drug in coccidiosis control in poultry.

3,001,910

ANOREXIGENIC PROPIOPHENONES

Jandirk Schütte, Hamburg-Neugraben, Germany, assignor to Firma Temmler-Werke, Hamburg-Neugraben, Germany
No Drawing. Filed Apr. 16, 1958, Ser. No. 728,790
12 Claims. (Cl. 167-55)

8. A method useful in the treatment of overweight persons to cause loss of appetite and thereby loss of weight which comprises administering to such person at least one substance selected from the group consisting of compounds having the following structural formula:



wherein Am is selected from the group consisting of dialkyl-substituted amino groups the alkyl groups of which each contain 2 to 5 carbon atoms, 5- and 6-member nitrogen-containing heterocyclic ring radicals linked to the propanone side chain by a nitrogen atom and being selected from the group consisting of piperidyl, pyrrol, pyrrolidyl, pyrrolidyl, morpholino, piperazino and N-methyl piperazino radicals, and non-toxic acid addition salts thereof.

3,001,911

HYDRATED CALCIUM ACID NOVOBIOCIN AND PROCESS OF MAKING SAME

John W. Shell, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,835
7 Claims. (Cl. 167-65)

1. A stable aqueous suspension of micropulverized hydrated calcium acid novobiocin.

3,001,912

PROCESS FOR THE PRODUCTION OF BETA-CAROTENE

Guldo M. Miescher, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,125
3 Claims. (Cl. 195-28)

1. In a process for the production of β -carotene, by cultivation of + and - strains of the microorganism

Choanephora trisporea in an aerated liquid nutrient medium, the step which consists of cultivating the microorganism in an aerated liquid nutrient medium to which from about 0.05 to 0.3% by volume β -ionone and from about 0.1 to about 1.0% by weight of an acetate equivalent of a carboxy additive selected from the group consisting of acetic acid and glycine and the ammonium, alkali metal and alkaline earth metal salts thereof have been added.

3,001,913

PROCESS FOR PREPARING A NUCLEIC ACID

Roland F. Beers, Jr., 4309 Wendover Road, Baltimore, Md.
No Drawing. Filed Mar. 20, 1958, Ser. No. 722,627
2 Claims. (Cl. 195-29)

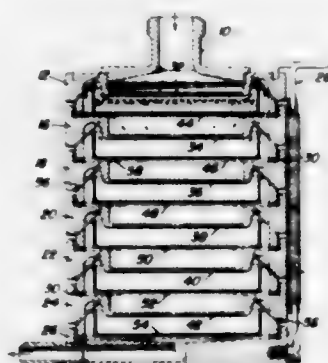
1. A process for preparing deoxyribonucleic acid which comprises the steps of lysing cells of *Micrococcus lysodeikticus* in the presence of lysozyme and orthophosphate ions at a pH within the range of 8.3 to 8.7, incubating the mixture at a temperature of from 30 to 40° for from 30 to 60 minutes, adding to the heated mixture sodium chloride and water, raising the temperature to one within the range of from 85 to 95° C. and maintaining that temperature for from 20 to 30 minutes, separating the residue from the mixture at room temperature, precipitating the deoxyribonucleic acid from the solution obtained with a material selected from the group of ethanol and acetone, and purifying the deoxyribonucleic acid thus obtained.

3,001,914

BACTERIAL AEROSOL ANALYZER

Ariel A. Andersen, 1074 Ash Ave., Provo, Utah
Filed Mar. 5, 1956, Ser. No. 569,661
6 Claims. (Cl. 195-103.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A method of classifying according to size and identifying viable microscopic particles suspended in air, which comprises passing a volume of air through a series of stages, each stage containing a Petri dish of solid nutrient medium below a perforated plate having a fixed number of holes, the size of which is constant in each stage but which decreases in size in each succeeding stage, whereby jets of air, produced by drawing air through the device, increase in velocity with each succeeding stage and wherein said velocity increase in each succeeding stage is utilized to separate the microscopic particles into groups of decreasing size and mass, such that the groups of particles are collected by impaction on the nutrient medium of each succeeding stage and particles which are of insufficient size and mass to be impacted on a given stage follow the air stream around the dish into the next stage where the velocity is increased so that by the time the last stage is reached, all viable particles will have attained a velocity sufficient for impaction on one stage or another with the particles having the smallest mass being collected on the last stage, thereafter incubating the Petri dishes whereby viable

microscopic particles will grow into visible colonies, the number of which represent the number of viable particles collected on that stage.

3,001,915

DIAGNOSTIC COMPOSITION

Dale E. Fonner, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,819
3 Claims. (Cl. 195-103.5)

1. A test indicator for biological fluids which comprises a bibulous strip having at least two test portions separately impregnated with a reagent material capable of detecting abnormality of said biological fluid, each test portion being separated from the other by a barrier portion to prevent co-mingling of said reagent material when contacted by said biological fluid, said barrier portion having been formed by dissolving in a solvent therefor a barrier material selected from the group consisting of ethyl cellulose, polystyrene, rosin and paraffin, impregnating said bibulous strip with said dissolved material so that said material completely saturates the cross-sectional area of said bibulous strip and removing said solvent from said impregnated bibulous strip.

3,001,916

RETORTING PROCESS CONTROL

George D. Cheadle, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Sept. 8, 1958, Ser. No. 759,705
20 Claims. (Cl. 202-6)



1. In a process for retorting solids in which said solids are fed upwardly and successively as a compact bed through a combustion zone and an ash cooling zone, and in which oxygen is passed downwardly through said ash cooling zone into said combustion zone, the improvement which comprises measuring the average temperature of the upper surface of the ash cooling zone, and varying the upward solids feed inversely with the variation of average temperature so measured.

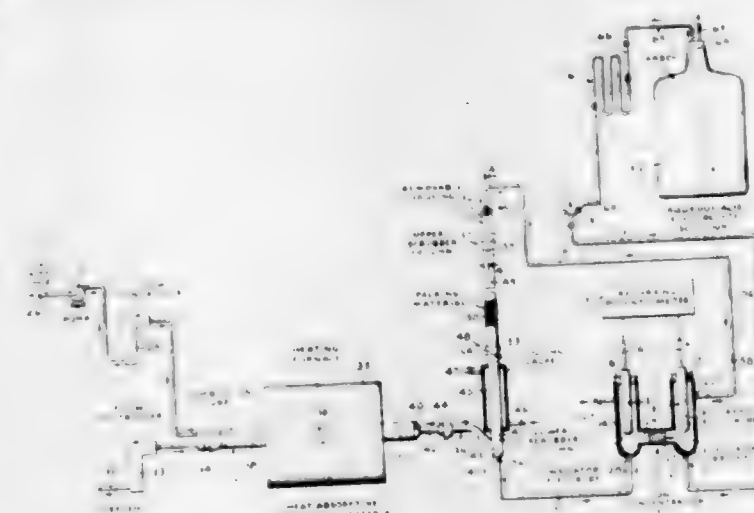
3,001,917

CONTINUOUS RAPID QUANTITATIVE DETERMINATION OF HALOGENATED ORGANIC COMPOUND INHIBITOR IN ETHYLENE OXIDE PLANT RECYCLE GAS

David E. Scheirer, Chester, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Jan. 13, 1959, Ser. No. 786,645
7 Claims. (Cl. 204-1)

1. A method for continuously and rapidly quantitatively determining the concentration of a halogenated

organic compound present in a gaseous mixture, which comprises continuously passing a separate stream of a sample of said gaseous mixture containing the halogenated organic compound at a constant low rate of flow and continuously passing a separate stream of oxygen-containing gas at a constant low rate of flow into admixture with one another, heating and burning the gaseous admixture of said oxygen-containing gas and said gaseous sample to obtain hot gaseous combustion products including a hydrogen halide capable of readily ionizing in a liquid aqueous electrolyte solution, continuously passing said hot gaseous combustion products into a lower portion of a lower scrubbing zone connected in series with an upper packed scrubbing zone, continuously passing a liquid stream of an aqueous electrolyte solution at a constant low rate of flow into one compartment of a two compartment ion-concentration cell, said compartment having a silver-containing reference electrode immersed in said electrolyte solution, continuously withdrawing a liquid stream of said electrolyte solution from said ref-



erence electrode compartment at a point spaced from the point of introducing said electrolyte solution therein and passing said electrolyte solution at a constant low flow rate approximately that at which the electrolyte solution is introduced into said reference electrode compartment into an upper portion of said upper scrubbing zone, passing said hot gaseous combustion products including the hydrogen halide upwardly within said lower and upper scrubbing zones in intimate countercurrent contact with said liquid aqueous electrolyte solution passing downwardly within said upper and lower scrubbing zones to dissolve said hydrogen halide in said aqueous electrolyte solution, the hot gaseous combustion products being concomitantly cooled in said lower scrubbing zone by indirect heat exchange with a cooling liquid, continuously withdrawing a liquid stream of said aqueous electrolyte solution containing the hydrogen halide dissolved and ionized therein from a lower portion of the lower scrubbing zone and passing the same into the other compartment of said concentration cell into exposure to a silver-containing electrode therein, and measuring the electrical potential difference between the two electrodes.

3,001,918

METHOD AND APPARATUS FOR WATER CONTENT DETERMINATION

Michael Czuba, Jr., Temple City, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed July 13, 1959, Ser. No. 826,557
10 Claims. (Cl. 204-1)

1. An improvement in the method of determining water content of substances by the absorption of mois-

ture therefrom by a hygroscopic substance, the quantitative electrolyzation of the absorbed moisture, and the measurement of the current required for said quantitative electrolysis, comprising diffusing the moisture through a



porous member which is substantially nonabsorbent with respect to water in order to limit the rate of mass transfer of moisture between the substance whose water content is to be determined and the hygroscopic substance.

3,001,919

METHODS FOR PROTECTING IMMERSED METALLIC STRUCTURES AGAINST CORROSION

Denis Dimitri Petrockino, 11 bis Ave. Victor Hugo, Paris, France

Filed Aug. 27, 1959, Ser. No. 836,543

4 Claims. (Cl. 204-148)

1. A process of protecting a metallic structure immersed in a liquid from corrosion, said process comprising the step of applying to the structure a protective aqueous coating containing per 100 parts by weight substantially 45 to 55 parts of orthophosphoric acid containing about 55% P_2O_5 , substantially 5 parts by weight of magnesium orthophosphate, substantially 1 part by weight of calcium orthophosphate, substantially 20 parts by weight of ethanol and substantially 5 parts by weight of triethanol amine, the step of drying the surface of the structure after the protective coating has reacted to neutrality, and the step of immersing the structure and a cathodic protective anode in the corrosive bath.

3,001,920

CONVERSION OF DIBORANE

John P. Faust, Kenmore, N.Y., Jack R. Gould, Morristown, N.J., and Kalman M. Held, Bronx, N.Y.; said Faust and said Held assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia, and said Gould assignor, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

No Drawing. Filed May 21, 1956, Ser. No. 586,327

2 Claims. (Cl. 204-157)

1. A process for the conversion of diborane to a product mixture containing tetraborane and other higher boron hydrides which comprises subjecting the diborane at a temperature of about 0° to 40° C. to a source of gamma radiation of suitable intensity and for a sufficient time to provide a total radiation of about 1 to 50 million roentgens.

3,001,921

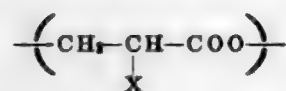
HALOGENATED LACTONE POLYMER AND METHOD OF PREPARATION

Charles J. Pennino, Monroeville, Pa., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed May 3, 1960, Ser. No. 26,417

8 Claims. (Cl. 204-158)

1. A process for preparing a linear homopolymer of alpha-halo beta-hydroxypropionic acid having the unit structure



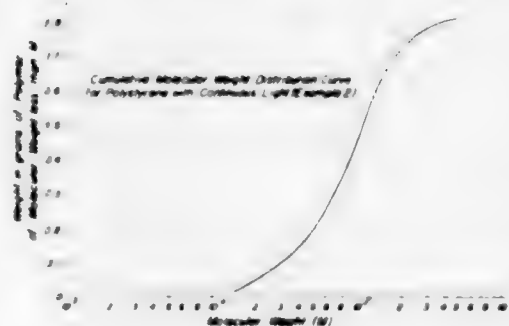
wherein X is selected from the group consisting of chlorine and bromine said method comprising reacting

100 parts of the linear homopolymer of beta-hydroxypropionic acid having a molecular weight of at least 800 with a member selected from the group consisting of about 103 parts of chlorine and about 232 parts of bromine at a temperature of from about 60° C. to about 150° C. in the presence of ultraviolet light.

3,001,922

POLYMERS

Bruno H. Zimm, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 19, 1955, Ser. No. 553,917
5 Claims. (Cl. 204-162)



1. The method of preparing polymers having a narrow molecular weight range from olefinic monomers which comprises (1) preparing an aqueous emulsion of the monomer, (2) exposing the emulsion to ultraviolet light having a wavelength in the range of 2500-5000 Angstrom units to initiate the formation of growing polymer chains by rapidly producing free radicals in the monomer-containing micelles, (3) terminating the exposure to ultraviolet light, thereby interrupting the generation of the free radicals, for a time determined to produce a polymer of the desired molecular weight, (4) initiating the generation of free radicals in the micelles of the emulsion by the same means as in (2) in sufficient quantity to (a) react with and terminate the growth of substantially all of the polymer chains at the desired molecular weight and (b) initiate growth of new polymer chains in the monomer-containing micelles, and (5) repeating steps (3) and (4) in consecutive order until the desired amount of monomer is converted to polymer.

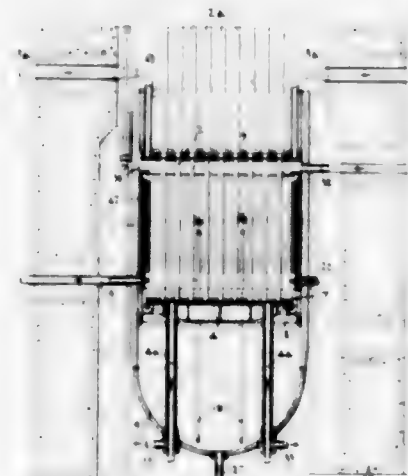
3,001,923

CONTROL OF ATOMIC POWER REACTORS

Philip R. Tunncliffe, Ernest Siddall, Melville Douglas Berry, and Stanley James Whittaker, all of Deep River, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a company

Filed July 25, 1956, Ser. No. 600,081

Claims priority, application Canada Aug. 6, 1955
10 Claims. (Cl. 204-193.2)



1. An atomic power reactor comprising a core vessel, coolant circulating tubes therein, a storage chamber dis-

posed at a level below the floor of said vessel, fine control means for effecting transfer of liquid between said vessel and said chamber in either direction at a slow rate, an uninterrupted passageway of large cross-sectional area extending between the lower part of said vessel and the upper part of said chamber, said passageway including a downwardly projecting loop, means for maintaining a gaseous pressure in said chamber in excess of a gaseous pressure in said vessel sufficient to support a body of liquid in said vessel by action against a stable free surface of such liquid in said passageway adjacent said loop, and means for rapidly eliminating said gaseous pressure.

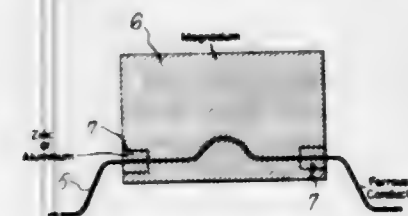
3,001,924

SACRIFICIAL MAGNESIUM ANODES

Walter T. Battis, Metuchen, Thomas J. Lennox, Jr., Plainfield, and Edmund C. Reichard, Holmdel, N.J., assignors to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 1, 1959, Ser. No. 803,505

3 Claims. (Cl. 204-197)



1. In a sacrificial anode having a body of sacrificial metal comprising magnesium and a ferrous metal conductor projecting from the anode with a portion of the conductor embedded in the body of said sacrificial metal, the improvement comprising a plug of metal which is less active galvanically than magnesium and more active galvanically than said ferrous metal conductor, said plug being at least partially embedded in said body of magnesium metal and surrounding said conductor in the portion of the anode where the conductor emerges therefrom.

3,001,925

ANODE STRUCTURE

Ernest V. Berry, 1717 E. Slauson Ave., Los Angeles, Calif.
Original application Feb. 23, 1955, Ser. No. 489,968.
Divided and this application Nov. 21, 1957, Ser. No. 697,931

4 Claims. (Cl. 204-224)



1. An anode structure for use in chromium electroplating a cylindrical cathode surface in a chromic acid electrolyte, which structure includes a plurality of circumferentially spaced, electrical conducting anode ribs capable of being so disposed as to encircle a major portion of said cathode surface when positioned longitudinally relative thereto, said anode structure being characterized by: two crescent-shaped side pieces formed of an electrical conducting material that are disposed on opposite ends of said ribs and bonded thereto, said side pieces serving to hold said ribs in said circumferentially spaced

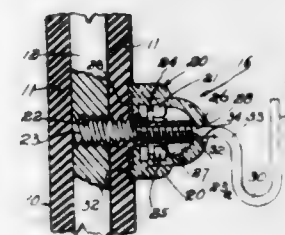
relationship, and cooperating with said ribs to increase the anode-cathode surface ratio to minimize the formation of trivalent chromium during said electroplating operation; two parallel spaced shafts extending between said end pieces; two rollers rotatably mounted on said shafts; said rollers rotatably engaging said cathode surface and supporting said anode ribs and side pieces at a fixed distance therefrom; an electrical conductor extending upwardly from said ribs and side pieces and electrically connected to said side pieces; two horseshoe-shaped side shields formed from a non-electrical conducting material that abut against the outer surfaces of said end pieces, the inner edges of which side shields are in rubbing contact with said cathode surface, with said shields limiting the area of said cathode surface to be electroplated; and means on said side shields that engage said side pieces for removably holding said side shields on said side pieces, said side shields being separated from said side pieces by downward movement of said side shields relative thereto.

3,001,926

ELECTROPLATING RACKS

William E. Belke, Chicago, Ill., assignor to Belke Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 4, 1960, Ser. No. 239

2 Claims. (Cl. 204-297)



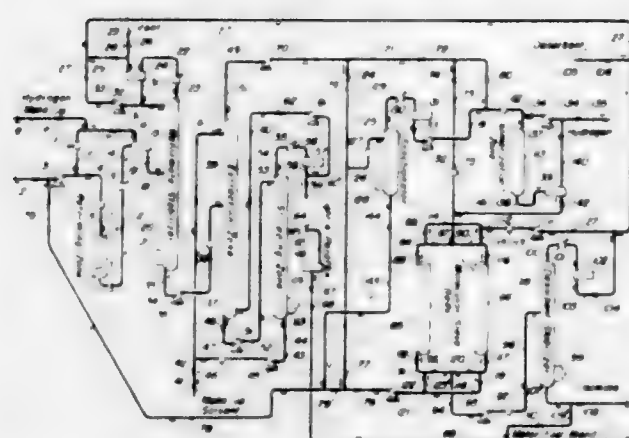
1. An electroplating tip assembly, comprising a smooth cylindrical wire of high electrical conductivity formed with a straight shank and a supporting hook at its outer end, the said shank having a threaded portion at its extreme end and a supporting bolt provided with a head and a threaded shank of larger size than the tip shank, the head of said bolt being formed with a threaded bore complementary to and receiving all of the threaded ends of said tip, said head also having a pair of radially projecting, non-circular flanges separated by an annular groove of rectangular cross section, and the said head having a tapered end portion opposite to said shank and a molded plastic insulating member covering said head on its rear side and extending into engagement with the threaded shank of said bolt, said insulating member having a non-circular body having its inner portion engaging said non-circular flanges on said head and extending into said rectangular groove, said body also engaging and covering the tapered portion of said head and extending outwardly beyond the end of said head, where said body has a tapered end portion and a centrally located cylindrical bore registering with the threaded bore in said head and having sealing engagement with the cylindrical wire of said tip outwardly of the threaded end portion of the tip shank, the said body also being provided on its rear side with a cylindrical outwardly projecting flange provided at its outer edge with a rear projecting annular flange, forming a central depression surrounding the threaded shank of the bolt, said annular flange being adapted to engage in and deform a plastisol covering on a spine, forming an annular groove in the plastisol to effect a seal therewith, the said outer non-cylindrical surface of said member being adapted to cooperate with a wrench, for driving or removing the threaded shank of the bolt from the spine without stripping the insulating member from the head.

3,001,927

CONVERSION OF HYDROCARBON DISTILLATES TO MOTOR FUEL MIXTURES RICH IN AROMATIC AND ISOPARAFFINS

Clarence G. Gerhold, Palatine, and Donald B. Broughton, Chicago, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,483
3 Claims. (Cl. 208—64)



1. A process for producing a hydrocarbon mixture rich in aromatic and isoparaffinic hydrocarbons from a straight run gasoline fraction rich in straight-chain paraffinic hydrocarbons which comprises catalytically reforming said gasoline fraction at reaction conditions whereby at least a portion of said gasoline fraction is converted to an aromatic hydrocarbon, extracting the resulting reformate with a solvent selective for aromatic hydrocarbons, separating a paraffinic raffinate from a rich solvent containing the aromatic component of said reformate, recovering an extract rich in aromatic hydrocarbon from the fat solvent produced by said extraction, separating said raffinate into a light fraction consisting of relatively volatile components and a heavy fraction boiling above said light fraction, recycling said heavy fraction to the reforming step, subjecting said light fraction to isomerization in the presence of an isomerizing catalyst at isomerizing conditions, contacting the isomerized light fraction with a solid molecular sieve sorbent capable of selectively retaining within the pores of the sorbent the relatively straight-chain paraffins contained in said raffinate, withdrawing from the resulting spent sorbent a paraffinic effluent rich in isoparaffins, contacting the spent sorbent at desorption conditions with a normal paraffinic hydrocarbon having a molecular weight different from the sorbed paraffin, recovering a desorbed sorbate stream rich in relatively straight-chain components and combining said paraffinic effluent rich in isoparaffins with said extract rich in said aromatic hydrocarbon.

3,001,928

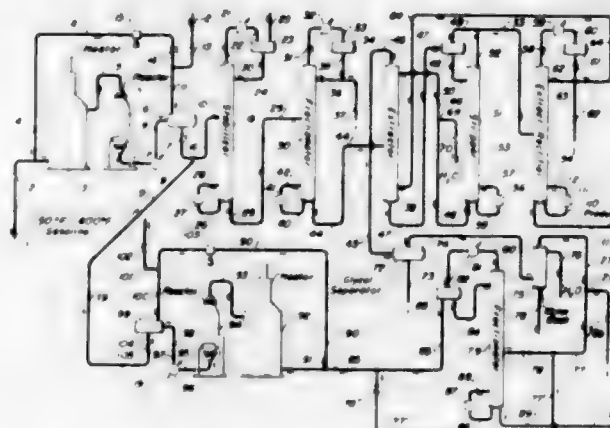
REFORMING PROCESS

Henry W. Grote, Hinsdale, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Aug. 7, 1959, Ser. No. 832,887
9 Claims. (Cl. 208—65)

4. A process for effecting an improved yield of aromatic hydrocarbons from a hydrocarbon stream boiling within the gasoline boiling range which comprises subjecting said stream and hydrogen to reforming in the presence of a catalyst comprising platinum, alumina and combined halogen, at conditions that promote dehydrogenation of naphthenes and hydrocracking of paraffins, fractionating the resulting reformed stream and removing normally gaseous components therefrom in a first fractionating zone, passing the remaining stream from said first fractionating zone to a second fractionating zone, separating a low-boiling stream containing isohex-

ane and lighter hydrocarbons from the aromatic-rich portion of said stream, passing the aromatic-rich portion to a solvent extraction zone and countercurrently contacting said portion with a selective solvent to remove a substantial portion of the aromatics therefrom, subjecting the resulting paraffinic raffinate, containing normal hexane and five-membered ring naphthenes, to reforming in the presence of hydrogen and with a catalyst



comprising platinum, alumina and combined halogen at dehydrocyclization conditions and a pressure at least 100 pounds per square inch lower than in the first-mentioned reforming zone, effecting the conversion thereof to form additional aromatic hydrocarbons and isohexane, separating the resulting stream to provide a gaseous hydrogen stream and a hydrocarbon stream and recycling at least a portion of this latter stream to said first fractionating step to recover said additional isohexane from said process.

3,001,929

CATALYTIC REFORMING OF NON-AROMATIC HYDROCARBONS

John Arthur Edgar Moy, Peter Thomas White, and Bernard Whiting Burbridge, all of Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Feb. 17, 1958, Ser. No. 715,504
Claims priority, application Great Britain Feb. 19, 1957
10 Claims. (Cl. 208—136)

1. A process for the treatment of a hydrocarbon feedstock containing at least a major proportion of non-aromatic hydrocarbons to produce a product having an increased aromatic content comprising contacting the hydrocarbon feedstock in a reaction zone with a catalyst consisting essentially of, by weight of the total catalyst stable at 1020° F., 5 to 25% chromium oxide, 0.1 to 10% of a spinel having a face-centered cubic crystal structure and having the general formula $MM'M_2O_4$, wherein M and M' are different metal radicals, and balance alumina, the amount of said spinel being less than that of the chromium oxide, at a temperature of from about 450 to 580° C., at a pressure not in excess of about 50 p.s.i. ga., and in the absence of added hydrogen to the reaction zone, and recovering a product having an increased aromatic content.

3,001,930

DEHYDROGENATION OR DEHYDROCYCLIZATION OF NON-AROMATIC HYDROCARBONS

Peter Thomas White and Ernest Carlton Housam, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed Sept. 17, 1958, Ser. No. 761,460
Claims priority, application Great Britain Sept. 20, 1957
5 Claims. (Cl. 208—136)

1. A process for the treatment of non-aromatic hydrocarbons to produce a product having an increased aro-

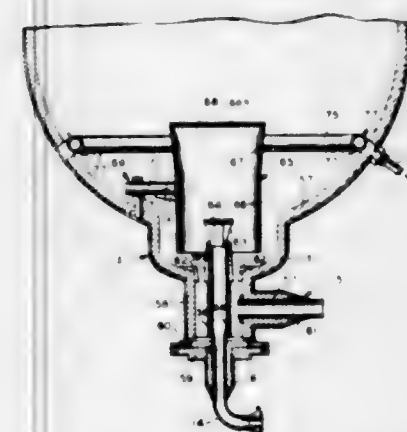
matic content comprising contacting the hydrocarbon feedstock in a reaction zone with a freshly regenerated catalyst consisting essentially of 5 to 25% chromium oxide and balance alumina with up to about 10% by weight of the chromium content of said catalyst being in hexavalent form as CrO_3 , at a temperature of from about 840° to 1075° F., at a pressure not in excess of about 50 p.s.i. ga., and in the absence of added hydrogen to said reaction zone, said amount of hexavalent chromium oxide being reduced during said contacting operation to the trivalent state as Cr_2O_3 with release of oxygen and evolution of heat from combustion of carbonaceous constituents with the released oxygen in said reaction zone, recovering a product having an increased aromatic content, regenerating the catalyst, when spent, in a regeneration zone by contacting same at a temperature between 800° to 1300° F. with an oxygen medium for a period of time between 15 to 100 min. to burn off substantially all of the carbonaceous deposits formed during said contacting operation, oxidizing said catalyst to effect a conversion of no more than about 10% by weight of the chromium content from its trivalent state to the hexavalent state, re-using the thus oxidized regenerated catalyst in the absence of any further treatment as said freshly regenerated catalyst in a further processing operation of the feedstock under the conditions enumerated to produce an aromatic-enriched product.

3,001,931

METHOD AND APPARATUS FOR ENDOTHERMIC CATALYTIC REACTION

John B. Osborne, South Orange, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed June 22, 1954, Ser. No. 438,538
6 Claims. (Cl. 208—164)



3. A process which comprises contacting a chemical reactant with a fluidized mass of finely divided solid contact material in a reaction zone under endothermic conditions to produce a desired product, flowing a stream of gas through a confined region in communication with the bottom of said reaction zone at a velocity controlled to reduce the pressure thereat sufficiently to move finely divided solid contact material at the bottom of the reaction zone thereinto, intermixing the finely divided solid contact material moved into said region with the gas flowing therethrough to provide a fluidized stream, injecting a chemical reactant into said fluidized stream, and directing the resulting fluidized mixture into the lower end of said reaction zone to maintain the fluidized condition of said mass therein, the temperature of said finely divided contact material moving into said confined zone being in the order of the reaction temperature, the temperature of said chemical reactant as it is injected into said fluidized stream being in the order of the reaction temperature but below the temperature of significant thermal decomposition thereof, and the temperature of

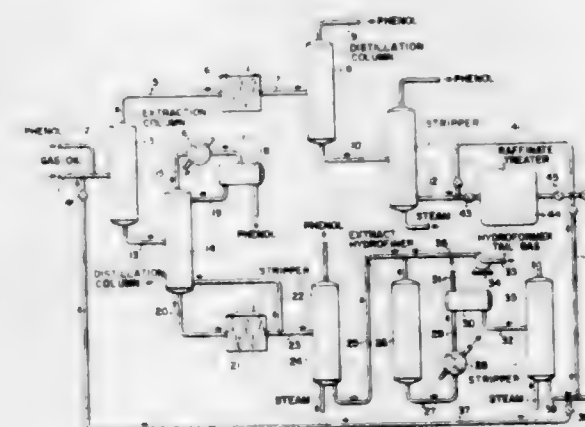
said stream of gas as it is supplied to said confined region being sufficiently above the reaction temperature of supply the heat required by the endothermic reaction and not supplied by the finely divided contact material.

3,001,932

TREATMENT OF HYDROCARBON OILS

Robert Brooke Pietsch, Baltimore, Md., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 15, 1959, Ser. No. 827,363
14 Claims. (Cl. 208—211)



1. An improved method for upgrading hydrocarbons boiling in the gas oil boiling range which comprises extracting aromatics in the gas oil boiling range feed with a suitable solvent, stripping residual solvent from the raffinate to produce a low aromatics content raffinate stream, removing and recovering solvent from the aromatics-rich extract, passing the solvent-free extract into a hydrofining zone charged with an active hydrofining catalyst operating under conditions so as to obtain substantial conversion of aromatics to naphthenes of temperatures of from 600° to 900° F., pressures of from 200 p.s.i.g. to 1600 p.s.i.g. and in the presence of hydrogen-rich treat gas supplied at rates of from 200 to 6000 s.c.f./barrel of liquid oil feed.

3,001,933

FLOCCULATION

Theodore P. Malinowski, Wilbraham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 19, 1955, Ser. No. 553,703
2 Claims. (Cl. 210—54)

1. A process for flocculating finely divided solid particles in aqueous dispersions thereof which comprises adding to said dispersions a cyanoethylated starch containing from about 0.2 to about 1.0 cyanoethyl group per glucose unit in the amount of from about 0.01% to about 0.1% by weight of the finely divided solid particles.

3,001,934

PROCESS FOR THE CONTROL OF BACTERIA IN WATER FLOODING OPERATIONS

Edward O. Bennett, Houston, Tex., and Edward B. Hodge, Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,558
2 Claims. (Cl. 252—8.55)

1. In a process of secondary oil recovery characterized by the step of injecting flooding water into oil-bearing subterranean formations to displace portions of the residual oil therein, the improvement comprising having present in said injected flooding water in excess of 2-5 p.p.m. of 1-nitrocyclohexane methanol to inhibit the growth of sulfate reducing bacteria within said formations.

3,001,935

PROCESS FOR THE CONTROL OF BACTERIA IN WATER FLOODING OPERATIONS

Edward O. Bennett, Houston, Tex., and Edward B. Hodge, Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed May 13, 1959, Ser. No. 812,822
2 Claims. (Cl. 252-8.55)

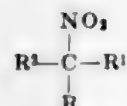
1. In the process of secondary oil recovery characterized by the step of injecting flooding water into oil-bearing subterranean formations to displace portions of the residual oil therein, the improvement which comprises adding to said injected flooding water in excess of about 2-5 p.p.m. of bis(2-nitrobutyl)succinate to inhibit the growth of sulfate reducing bacteria within said formations.

3,001,936

PROCESS FOR THE CONTROL OF BACTERIA IN WATER FLOODING OPERATIONS

Edward O. Bennett, Houston, Tex., and Edward B. Hodge, Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed May 13, 1959, Ser. No. 812,819
8 Claims. (Cl. 252-8.55)

1. In the process of secondary oil recovery characterized by the step of injecting flooding water into oil-bearing subterranean formations to displace portions of the oil therein, the improvement comprising having present in said injected flooding water in excess of about 2-5 p.p.m. of a nitroalcohol having the following structural formula:



where R is a member selected from the group consisting of lower alkyl containing up to and including three carbon atoms, hydrogen, and hydroxymethyl; R¹ is a member selected from the group consisting of hydroxymethyl and hydroxyethyl; and R² is a member selected from the group consisting of methyl and hydroxymethyl.

3,001,937

WEAR-REDUCING LUBRICATING COMPOSITION

Albert G. Rocchini, Oakmont, and Charles E. Trautman, Cheswick, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Oct. 17, 1958, Ser. No. 767,793
3 Claims. (Cl. 252-32)

1. A method of reducing wear in diesel engines operating on fuels containing vanadium in amount sufficient to produce a corrosive ash upon combustion thereof which method comprises introducing into said engine as a lubricant a composition comprising a uniform blend of a major amount of a lubricating oil and a minor amount of a vanadium-free organic manganese compound sufficient to reduce corrosion by reaction of the manganese compound with the vanadium to form a non-corrosive ash.

3,001,938

LUBRICANTS CONTAINING SALTS OF ORGANIC-SUBSTITUTED PHOSPHORUS-CONTAINING ACIDS

Arnold J. Morway, Clark, and Jeffrey H. Bartlett, New Providence, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Apr. 1, 1958, Ser. No. 725,489
12 Claims. (Cl. 252-32.5)

1. A lubricant composition comprising a major proportion of lubricating oil and an extreme-pressure imparting amount of a mixed-salt complex material comprising metal salts of fatty acids selected from the group

consisting of intermediate and high molecular weight fatty acids and mixtures thereof, and metal salts of a phosphorus containing acid containing 1 to 5 carbon atoms selected from the group consisting of 1-hydroxy alkyl phosphonic acid and 1-hydroxy alkyl phosphinic acids, wherein the molar ratio of said fatty acids to said phosphorus-containing acid is about 0.1 to 10.0 moles of fatty acid per mole of said phosphorus-containing acid and wherein said metal is selected from the group consisting of alkali metals and alkaline earth metals.

3,001,939

EXTREME PRESSURE LUBRICANT ADDITIVE

Rosemary O'Halloran, Union, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 31, 1957, Ser. No. 693,537
3 Claims. (Cl. 252-32.7)

1. An improved hypoid gear lubricant having enhanced load-carrying, wear reducing and rust preventive properties which comprises a major portion of mineral lubricating oil having a viscosity at 210° F. in the range of 60 to 300 SUS and as the sole load-carrying additive a synergistic mixture consisting of: (A) 6 to 12 wt. percent of a sulfochlorinated product having 4 to 8 wt. percent sulfur and 20 to 35 wt. percent chlorine, said product being obtained by treating a blend of chlorinated kerosene and chlorinated wax with an inorganic sulfide and elemental sulfur, and 2 to 8 wt. percent of a zinc dialkyl dithiophosphate wherein each alkyl group contains 6 to 15 carbon atoms.

3,001,940

METHOD AND COMPOSITION FOR LUBRICATING UNDER WET CONDITIONS

Harold J. Watson, Danville, Va., and Raymond B. Tierney, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Jan. 21, 1958, Ser. No. 710,171
6 Claims. (Cl. 252-32.7)

1. A method of lubricating a machine wherein the lubricant is exposed to water contamination which comprises circulating an oil composition through the bearings and gears of said machine consisting essentially of a mineral lubricating base oil, a detergent amount of a compound selected from the group consisting of alkaline earth metal, magnesium, zinc, and amine salts of dinonylnaphthalene sulfonic acid wherein the nonyl groups are highly branched, and an antioxidant compound in an amount sufficient to inhibit mineral oil oxidation, periodically removing that portion of water which readily separates from the oil composition, and then recirculating said composition through the bearings and gears of said machine.

5. A circulating oil composition for lubricating machinery under wet conditions which comprises a mineral base oil having an SUS viscosity at 100° F. of from 50 to 2500, barium dinonylnaphthalene sulfonate wherein the nonyl groups are highly branched, in an amount ranging from 0.1 to 4 percent by weight of the composition, and an oil-soluble zinc dialkyl dithiophosphate wherein the alkyl groups contain from 3 to 12 carbon atoms in an amount ranging from 0.1 to 3.0 weight percent based on the composition.

3,001,941

LUBRICANTS CONTAINING A DEPOSIT-CONTROL ADDITIVE

Kenneth L. Dille, Stanley R. Newman, and Robert Y. Heisler, Fishkill, and Norman Alpert, Poughkeepsie, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Dec. 23, 1955, Ser. No. 554,920
16 Claims. (Cl. 252-56)

1. A lubricating oil containing a polyglycol carbonate

ester having a carbon to oxygen ratio below 2.5, a boiling point above 650° F. and the following general formula



wherein R is a divalent aliphatic hydrocarbon radical containing at least 2 carbon atoms, R' and R'' are aliphatic hydrocarbon radicals containing between 3 and 18 carbon atoms and n is an integer having a value of 2 to 10, said glycol carbonate ester being present in an amount sufficient to impart deposit-control properties to said lubricating oil.

3,001,942

LUBRICANT COMPOSITION

Paul K. Mulvany, Richmond, and William W. West, El Cerrito, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,216
4 Claims. (Cl. 252-56)

1. A lubricant composition comprising a major portion of an oil of lubricating viscosity and a minor portion sufficient to enhance the detergent characteristics of the composition and depress the pour point thereof of an oil-soluble polymer which comprises (A) an alkyl ester of a lower aliphatic α,β -unsaturated monocarboxylic acid of from 3 to 8 carbon atoms, said alkyl ester being characterized by an alkyl group of from 4 to 30 carbon atoms, (B) an alkyl ester of a lower aliphatic α,β -unsaturated monocarboxylic acid of from 3 to 8 carbon atoms, said alkyl ester being characterized by an alkyl group of from 4 to 30 carbon atoms, which is from 4 to 16 carbon atoms more than the alkyl group of said (A) alkyl ester, (C) a lower aliphatic α,β -unsaturated monocarboxylic acid of from 3 to 8 carbon atoms, and (D) a monoester of a polyoxy-1,2-alkylene glycol and a lower aliphatic α,β -unsaturated monocarboxylic acid of from 3 to 8 carbon atoms, in which the polyoxy-1,2-alkylene glycol is selected from the group consisting of polyethylene glycols, poly-1,2-propylene glycols and alkyl ethers thereof having a molecular weight between 106 and 10,000, said (A) and (B) components being present in the ratio of from 50 to 80 mole percent of (A) to 20 to 50 mole percent of (B) and amounting to a total of from 75 to 97 mole percent and the (C) and (D) components represent a total of from 3 to 25 mole percent of the polymer, there being at least one unit of each of said (C) and (D) components in the copolymer, said copolymer having a molecular weight of at least 2,000.

3,001,943

PROCESS OF HEAT TREATING FERROMAGNETIC MATERIAL

Klaus Julius Sixtus, Valparaiso, Ind., assignor to Indiana General Corporation
Filed Nov. 18, 1954, Ser. No. 469,680
4 Claims. (Cl. 252-62.5)

1. The method of producing a permanent magnet having an increased intrinsic coercive force and maximum usable energy product which comprises sintering mixed non-cubic polyoxide crystals of ferric oxide and an oxide selected from the group consisting of the oxides of barium, strontium, and lead at a temperature in the range from about 2300 to 2500° F., rapidly cooling the sintered crystals in air at a rate in excess of 50° F. per minute, reheating the crystals to a temperature in the range from 1500 to 2000° F. in a non-reducing atmosphere for at least 10 minutes, and thereafter rapidly cooling the crystals in air at a rate in excess of 50° F. per minute.

3,001,944

CONTROLLING VISCOSITY OF SYNTHETIC DETERGENT-SOAP SHAMPOOS

Ling Wei, North Bergen, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 12, 1957, Ser. No. 671,414
12 Claims. (Cl. 252-117)

10. An aqueous liquid shampoo comprising a soap of higher fatty acids of 10 to 18 carbon atoms in which the soap forming cation is selected from the group consisting of sodium, potassium and triethanolamine, and a non-soap detergent selected from the group consisting of water soluble salts of sulfated and sulfonated synthetic organic anionic detergents, the ratio of soap to synthetic detergent being from 9:1 to 1:9, the total amount of soap and anionic synthetic organic detergent being 5 to 50% of the shampoo, and 0.01 to 1% of a soluble aliphatic polyoxyalkylene compound of the formula



wherein R and R' are selected from the group consisting of hydrogen and lower aliphatic hydrocarbon radicals of up to 6 carbon atoms, $(\text{OC}_n\text{H}_{2n})_x$ is a polyoxyalkylene chain of lower monoxyalkylene groups of up to 6 carbon atoms, n, the average number of carbon atoms in the lower oxyalkylene constituents of the chain, is from 2 to 3, and x, the total number of lower monoxyalkylene groups, is such as to give a product of average molecular weight of at least about 400 in which the sum of R and R' comprises up to 10% of the molecular weight and water.

3,001,945

LIQUID DETERGENT COMPOSITION

Howard F. Drew and Roger E. Zimmerer, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 29, 1959, Ser. No. 809,628
20 Claims. (Cl. 252-152)

1. A substantially clear homogeneous liquid detergent composition consisting essentially of: from about 2% to about 20% of an amine oxide having the general formula $\text{R}_1\text{R}_2\text{R}_3\text{N}\rightarrow\text{O}$, wherein R₁ contains from 10 to 16 carbon atoms with at least 50% of R₁ containing 12 carbon atoms, and wherein R₂ and R₃ are each selected from the group consisting of methyl and ethyl radicals; from about 10% to about 45% of alkali metal salt of aminopolycarboxylate selected from the group consisting of ethylenediaminetetraacetate, N-(2-hydroxyethyl)-ethylenediaminetriacetate, nitrilotriacetate, and N-(2-hydroxyethyl)-nitrilotriacetate; an amount of an alkali metal salt of a hydrotrope anion sufficient to render the liquid detergent homogeneous at room temperature, but not to exceed 12%, selected from the group consisting of benzene sulfonate, toluene sulfonate and xylene sulfonate; and from about 40% to about 80% water; the sum of said amine oxide and said aminopolycarboxylate salt being less than about 55%.

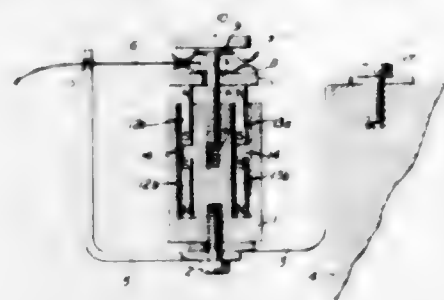
3,001,946

THREAD TENSIONING DEVICE FOR THREAD PROCESSING MACHINES AND DEVICES

Jakob Jentschmann, Zurich, Switzerland, assignor to Rudolf Burger, Zurich, Switzerland
Filed July 14, 1958, Ser. No. 748,419
1 Claim. (Cl. 242-150)

A thread tensioning device comprising a block of non-magnetic material, a bolt secured in said block, said bolt having a bolt head, an annular disc loosely mounted on said bolt, two friction discs placed loosely between said bolt head and said annular disc, said block having bores therein parallel to said bolt, a pair of magnets in each of said bores with like poles opposite one another with

an intervening air gap so that when said bolt is threaded into said block the size of said air gap is varied to



thereby vary the tensioning force exerted by said discs upon a thread therebetween.

3,001,947

AQUEOUS AMMONIUM HYDROXIDE DETERGENT COMPOSITION

Alvin Stahler and Leonard Stahler, both of
637 Monroe Ave., Scranton, Pa.

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,867
21 Claims. (Cl. 252-152)

1. An aqueous ammonium hydroxide detergent composition consisting essentially of ammonium hydroxide in a concentration of about 1 to 26% by weight, at least about 0.1% by weight of a water-dispersible anionic surface-active detergent having substantial foaming properties, said anionic detergent being the alkali metal salt of a compound selected from the group consisting of higher-alkyl sulfates, higher alkyl sulfonates, alkylaryl sulfonates, alkylaryloxy sulfates, and alkylaryloxy sulfonates, a water-soluble dye consisting essentially of a mixture of a phthalein dye and a basic triphenylmethane dye, said dye components being present in a weight ratio of about 2 to 1, said mixture of dyes being present in amount sufficient to tint visually said detergent composition, a colloiddally-dispersed, water-insoluble terpene compound characterized by substantial vapor pressure at ordinary temperatures, a boiling point above 100 degrees C. and fragrant odor, said water-insoluble material being present in an amount comprising at least about 0.1% by weight of the detergent composition and being dispersed in said aqueous composition by means of a water-dispersible non-ionic surface-active agent, in amount at least about 0.1% by weight, said non-ionic agent being selected from the group consisting of higher fatty acid esters of a polyhydric alcohol, and the polyoxyalkylene derivatives of higher fatty acids, higher fatty alcohols, polyhydric alcohol esters of higher fatty acids, alkylphenols and alkyl-naphthols, said non-ionic agent being effective to disperse said terpene compound, said composition being characterized by stably tinted opalescence at lower atmospheric temperatures and stably tinted, substantial optical clarity at higher atmospheric temperatures.

3,001,948

SYNTHETIC DETERGENT BAR

Everett Clippinger, San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Nov. 26, 1957, Ser. No. 700,250
4 Claims. (Cl. 252-152)

1. A synthetic detergent bar consisting essentially of (1) ammonium n-alkyl sulfonate; (2) a second metal n-alkyl sulfonate to enable milling and molding in an amount of 10 to 75 weight percent based on (1) and (2); and (3) 1% to 10% water, by weight, based on (1) and (2); the alkyl groups in each of (1) and (2) being primary straight-chain radicals of about 8 to 20 carbon atoms and averaging 12 to 16 carbon atoms, the metal of said second metal n-alkyl sulfonate being selected from the group consisting of alkali and alkaline earth metals.

3,001,949

SHAMPOO COMPOSITION

Kenneth Richard Hansen, Staten Island, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 24, 1957, Ser. No. 635,982
5 Claims. (Cl. 252-153)

1. A liquid shampoo consisting essentially of about 5 to 35% of a water soluble higher fatty acid monoglyceride monosulfate detergent having 8 to 18 carbon atoms in the higher fatty acid group and a minor proportion of water soluble polyacrylamide, in an aqueous medium, the proportion of water soluble polyacrylamide being sufficient to form a stable shampoo of increased viscosity.

3,001,950

REAGENT FOR DETERMINING THE AMOUNT OF CHOLESTEROL IN SERUM AND METHOD OF PREPARING SAME

Quentin R. Hopper, 8849 Long Point, Houston 24, Tex.

No Drawing. Filed Aug. 18, 1958, Ser. No. 755,395
6 Claims. (Cl. 252-408)

1. A reagent for determining the amount of cholesterol in blood serum consisting essentially of, between approximately 4.5% and 22.5% reagent grade sulfuric acid by volume, at least approximately 1% reagent grade glacial acetic acid by volume, and at least approximately 40% reagent grade acetic anhydride by volume.

3,001,951

PREPARATION OF CATALYST WITH REMOVAL OF HALIDE

Erik Tornqvist, Westfield, and Arthur W. Langer, Jr., Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 7, 1958, Ser. No. 719,981
7 Claims. (Cl. 252-429)

1. In the preparation of a catalyst composition by the reduction of a titanium halide to a lower valence state with a finely divided aluminum powder at a temperature of 150° to 500° C., a pressure in the range of 0 to 500 p.s.i.g. and in an inert atmosphere, the improvement which comprises at least partially removing the resultant aluminum halide from the reaction mixture and admixing the reduced titanium halide with an aluminum trialkyl.

3,001,952

NICKEL-KAOLIN-HYDRAULIC CEMENT CATALYST

Ronald E. Reitmeyer, Middletown, and Paul E. Huber, Louisville, Ky., assignors to Catalysts and Chemicals Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Filed May 22, 1958, Ser. No. 736,990
10 Claims. (Cl. 252-455)

1. A method of preparing a tableted supported nickel catalyst having improved strength comprising mixing a nickel salt and kaolinitic clay in the presence of sufficient water to form a mud, calcining said mud for a time and at a temperature to provide a dry product in powder form, mixing said dry product with about 12-30% of hydraulic cement and about 30 to about 40% of water based upon the weight of mud dry product to form a cement-containing mud, said mixing being continued for a period of time to cause the cement in said mud to absorb water from said mud to form a mass which is readily granulated through a screen, granulating said mass after said time through said screen and tableting said granulated mass into the desired shape, the time for tableting said granulated mud being within six hours from the time said cement is added.

3,001,953

TABLETED KAOLIN-HYDRAULIC CEMENT CATALYST

Ronald E. Reitmeyer, Middletown, and Paul E. Huber, Louisville, Ky., assignors to Catalysts and Chemicals Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Filed May 22, 1958, Ser. No. 736,991
4 Claims. (Cl. 252-455)

1. A method of preparing a tableted supported nickel catalyst having improved strength comprising mixing a nickel salt and kaolinitic clay in the presence of sufficient water to form a mud, calcining said mud for a time and at a temperature to provide a dry product in powder form, mixing said dry product with about 12-30% of hydraulic cement and about 30 to about 40% of water based upon the weight of mud dry product to form a cement-containing mud, adding from 5-10% by weight of the catalyst of a dry powdered adsorbent selected from the group consisting of kieselguhr, starch, charcoal, methyl cellulose, and wood flour, said mixing being continued for a period of time to cause the cement in said mud to adsorb water from said mud to form a mass which is readily granulated through a screen, said adsorbent cutting down the time for forming a granulated mass by adsorbing water from said mud, granulating said mass after said time through said screen and tableting said granulated mass into the desired shape, the time for tableting said granulated mass being within six hours from the time said cement is added to said mud.

3,001,954

DIFFICULTLY INFLAMMABLE EXPANDABLE STYRENE POLYMER AND PROCESS FOR MAKING SAME

Karl Buchholz and Fritz Stastny, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rheinland-Pfalz, Germany

No Drawing. Filed Mar. 4, 1957, Ser. No. 643,553
Claims priority, application Germany Mar. 10, 1956
15 Claims. (Cl. 260-2.5)

1. A difficultly inflammable expandable styrene polymer containing an ester selected from the group consisting of tri-(2,3-dibromopropanol-1)-ortho-phosphoric acid ester and tri-(2,3-dibromopropanol-1)-isocyanurate, the amount of bromine-containing ester being sufficient to provide a bromine content of between 0.2 and 6% by weight of the styrene polymer, and an expanding agent which is a volatile nonsolvent for the styrene polymer and has a boiling point below about 60° C.

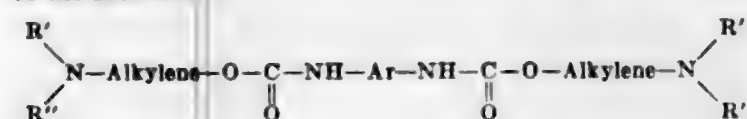
3,001,955

PREPARATION OF POLYURETHANE FOAM USING ARYLENEDICARBAMIC ACID ESTER CATALYST

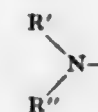
Bernard Taub, Buffalo, N.Y., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed Feb. 26, 1958, Ser. No. 717,566
6 Claims. (Cl. 260-2.5)

1. In a process for the production of polyurethane foams involving the reaction of a polyester prepared from polycarboxylic organic acids and polyhydric alcohols and an organic polyisocyanate in an amount of at least 20% by weight of the polyester, and water, the improvement which comprises effecting said reaction in the presence of an arylenedicarbamic acid ester catalyst of the formula:



wherein



is selected from the class in which R' and R'' are lower alkyl radicals with from 1 to 5 carbon atoms, and a heterocyclic group in which R' and R'' together with the attached N atom form part of a heterocyclic ring, alkylene means a divalent non-cyclic saturated hydrocarbon radical having the general formula C_nH_{2n} in which n represents an integer greater than 1 and less than 5, and Ar is an aromatic ring system containing at least ten nuclear carbon atoms and not more than twenty nuclear carbon atoms.

3,001,956

PROCESS FOR THE PRODUCTION OF FOAMED ACRYLAMIDE POLYMERS

Karl Meinel, Burghausen, Upper Bavaria, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Germany, a German firm

No Drawing. Filed Dec. 16, 1959, Ser. No. 859,836
Claims priority, application Germany Dec. 18, 1958
5 Claims. (Cl. 260-2.5)

1. In a process for the production of foamed plastic structures of polymers selected from the group consisting of a homopolymer of acrylamide monomer and copolymers of acrylamide monomer with at most 70% by weight of said copolymer of a member of the group consisting of acrylonitrile, acrylic acid and styrene monomer, which monomeric materials are polymerized at a temperature of 20° C. to 110° C. in an aqueous acid medium within an acidity range of an aqueous 0.5% to 60% sulfuric acid solution and containing ammonium persulfate as polymerization catalyst and up to 4% on the weight of the monomers of ferrous sulfate, the polymers obtained being then washed free of acid and dried, the steps which comprise heating the so-obtained polymer to a temperature of 160° C. to 190° C., while rapidly and continuously applying to the heated polymer a pressure of up to about 2 tons per sq. cm. and then immediately and continuously releasing the pressure and allowing the softened polymer to expand at the temperature attained.

3,001,957

AQUEOUS LATEX COMPRISING VINYL ACETATE POLYMER AND AMINO ETHER OF STARCH AND METHOD OF COATING FIBROUS SHEET MATERIAL THEREWITH

Raymond Joseph Kray, Summit, and Frank Michael Berardinelli, South Orange, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 8, 1957, Ser. No. 695,232
15 Claims. (Cl. 260-17.4)

1. An aqueous latex comprising particles of a dispersed polymer of vinyl acetate containing at least about 50% vinyl acetate polymerized therein, a cationic surface active agent and colloidal particles of a cationic protective colloid comprising an amino ether of starch.

3,001,958

MODIFYING DRYING OIL

Alexander Schwarzman, Buffalo, N.Y., assignor to Spencer Kellogg and Sons, Inc., Buffalo, N.Y.

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,480
6 Claims. (Cl. 260-18)

1. The process of manufacturing a drying oil from castor oil which comprises first heating the castor oil at an elevated alcoholizing temperature with from 1% to 20% by weight of a glycol having 2 to 4 carbon atoms until ester interchange is substantially complete and then reacting such alcoholized oil by contact in the environment of the so alcoholized oil and in the presence of an inert organic solvent with an amount of an organic di-isocyanate stoichiometrically equivalent to the hydroxyl groups of the glycol added for alcoholysis plus twice the amount of organic di-isocyanate stoichiometrically equivalent to the hydroxyl groups of the initial castor oil so alcoholized and after said reaction has proceeded

and before formation of film from said so treated oil adding to the reaction mixture about 6% by weight based on the weight of castor oil and glycol of an N-substituted diethanolamine.

3,001,959

COATING COMPOSITIONS

Adolph Heck, Skokie, Ill., assignor, by mesne assignments, to Reichhold Chemicals, Inc., White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 6, 1957, Ser. No. 700,986
9 Claims. (Cl. 260—18)

1. The method comprising mixing a solution of a metal compound into a solution of an ester which is diglycidyl ether of diphenylol propane esterified with acid selected from the group consisting of soybean oil fatty acids and tall oil acids, said ester having an acid number in the range from 3.8 to 5.2, said metal compound being aluminum isopropylate chelated with ethyl acetoacetate and being dissolved in a solvent compatible with the solution of said ester, the ratio of aluminum metal to ester solids being in the range from 0.3 to 1.0 part of aluminum metal per 100 parts of ester, whereby gel particles form, and agitating the resulting mass until the gel particles are dissolved.

3,001,960

LIQUID POLYAMIDE COMPOSITION AND PROCESS FOR PREPARING SAME

Almon G. Hovey, Northford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Aug. 31, 1959, Ser. No. 836,901
15 Claims. (Cl. 260—18)

1. The method of forming a polyamide of relatively high amine number which comprises reacting a copolymer formed as the reaction product of a conjugated alicyclic diene monomer and an alkali refined natural glyceride oil of polyunsaturated fatty acids selected from the group having an iodine number in excess of 130 and consisting of vegetable drying oils, vegetable semi-drying oils and marine oils, with an alkylene polyamine having at least three amino nitrogens and at least four carbons.

3,001,961

WATER DISPERSIBLE OIL MODIFIED ALKYD RESINS CONTAINING OXYALKYLATED GLYCOLS AND METHOD OF MANUFACTURE OF THE SAME

Frank Armitage, Chingford, London, and Leslie George Trace, Leigh-on-Sea, England, assignors, by mesne assignments, to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed July 12, 1956, Ser. No. 597,326
Claims priority, application Great Britain July 15, 1955
12 Claims. (Cl. 260—22)

1. A process for the production of a water-dispersible drying oil modified alkyd resin which is emulsifiable in water without further addition of surfactants to form emulsion coating compositions characterized by their emulsion stability in the absence of protective colloids which comprises reacting at temperatures above about 350° F. but below about 600° F. a mixture comprising about 35 to not more than about 80% by weight of the total reactants of a drying oil fatty acid radical containing alkyd modifying agent selected from the group consisting of drying oil fatty acids, drying oil fatty acid monoglycerides, drying oil fatty acid diglycerides, drying oil fatty acid triglycerides and the drying oil fatty acid total and partial esters of equivalent polyfunctional polyols; an alkyd-forming organic dicarboxylic acid selected from the group consisting of single ring containing aromatic dicarboxylic acids and difunctional aliphatic dicarboxylic acids; a combination of at least two different

alkyd-forming polyols in an amount such that the reactive hydroxyl groups available from said polyol combination are at least stoichiometrically equivalent to the free acid groups present in the reaction mass, at least one of said polyols an alkyd-forming monomeric polyol containing a number from three to not more than six hydroxyl groups, said hydroxyl groups containing the sole oxygen atom in said polyol and a second essential polymeric polyol which contains a plurality of repeating ether oxygen atoms in the monomeric groups of said polymeric chain and which is a dihydric alcohol containing at least four oxyalkylene groups wherein said oxyalkylene groups contain at least two but not more than three carbon atoms in a hydrocarbon chain unit and which polymeric polyol has a molecular weight in excess of 300 but not in excess of 6000 and which polyol constitutes a quantity of at least 10% by weight of the alkyd-forming reactants; and continuing the esterification under the conditions stated to form a polymeric product having repeating polymeric units in the polymer; said polymeric units repeated in said polymer having the second polymeric polyol ester residue interspersed in the final polymeric product, said final product having a hydroxyl value of not more than about 60 nor less than about 10, and having an acid value of less than about 75 but not less than about 5.

3,001,962

PROCESS OF PREPARING ALKYD RESINS INVOLVING THE ACIDOLYSIS OF THE TRIGLYCERIDE OILS AND PHTHALIC ANHYDRIDE

Earl F. Carlston, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,922

2 Claims. (Cl. 260—22)

1. Process for the preparation of an oil-modified alkyd resin which comprises heating to a temperature within about the range 465° F. to 500° F. a mixture of a triglyceride oil, phthalic anhydride, and at least 1 mol, but below 3 mols, of a fatty acid per mol of the triglyceride oil, said fatty acid having 8 to 22 carbon atoms in the molecule, then adding, while maintaining the above-specified temperature, a saturated aliphatic polyhydric alcohol to the heated mixture slowly and continuously to avoid incompatible gel formation, and then continuing the heating to effect esterification and to produce a resin having an acid number below 25, the polyhydric alcohol being present in an amount sufficient to react with all of the carboxyl groups and the phthalic anhydride up to a 25% stoichiometric excess over the phthalic anhydride, the triglyceride being present in an amount, based on total resin weight, within the range 20% to 90%.

3,001,963

NON-FOAMING WAX COMPOSITION

Francis J. Higgins, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed June 22, 1959, Ser. No. 821,627

4 Claims. (Cl. 260—23)

1. A substantially anhydrous wax composition of improved antifoaming properties intended to be used in the molten state comprising a paraffin wax and an antifoamant comprising a mixture of polyvinyl caproate and stearic acid wherein the relative proportions of said polyvinyl caproate and said stearic acid in said mixture varies from .5 to 99.5% and 50 to 50% respectively characterized further in that the amount of polyvinyl caproate in said wax composition varies from 1 to 25 p.p.m.

3,001,964

CHLOROSULFONATED LINEAR POLYETHYLENE EXTENDED WITH CHLORINATED WAX

Kenneth Leroy Miller, Beaumont, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,940
3 Claims. (Cl. 260—28.5)

1. A highly elastomeric composition consisting essentially of (A) chlorosulfonated linear polyethylene having, by weight thereof, a chlorine content between 25 and 55% and a sulfur content between 0.1 and 3.0% and (B) a non-solid chlorinated aliphatic hydrocarbon paraffin wax containing 15 to 55% by weight of chlorine, said paraffin wax being present in said elastomeric composition in a proportion between 30 and 200 parts by weight per 100 parts of said chlorosulfonated linear polyethylene.

3,001,965

CHLOROSULFONATED POLYETHYLENE COMPOSITIONS

James Kall, Beaumont, Tex., and Kenneth L. Miller, Lyndon, Ky., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 9, 1959, Ser. No. 805,134

14 Claims. (Cl. 260—28.5)

1. A curable elastomeric composition comprising a substantially uniform reaction product of a chlorosulfonated highly linear polyethylene and from about 0.0017 to about 0.017 gram mol of an aliphatic diamine for each 100 grams of the chlorosulfonated polyethylene admixed with from about 30% to about 200% by weight of a normally liquid chlorinated paraffin wax based on the weight of the chlorosulfonated polyethylene; the chlorosulfonated polyethylene containing from about 25% to about 55% by weight of chlorine and from about 0.3% to about 2.0% by weight of sulfur; the polyethylene being highly linear and having a density greater than 0.935 and a melt index between 0.5 and 20; the diamine being a saturated, aliphatic hydrocarbon diamine containing 2 to 20 carbon atoms; and the chlorinated paraffin wax containing from about 15% to about 55% by weight of chlorine.

3,001,966

THERMALLY-STABILIZED POLYACETALDEHYDE ELASTOMERS, PROCESS FOR THEIR PREPARATION AND MIXTURES OF SAME WITH POLY-CARBONAMIDES

Dennis Light Funck and Otto Franz Leopold Vogl, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 18, 1958, Ser. No. 755,437

15 Claims. (Cl. 260—42)

5. An elastomer consisting essentially of a mixture of amorphous polyacetaldehyde having a number average molecular weight between about 1×10^5 and 3×10^6 , having molecular chains consisting of a succession of alternate carbon atoms and oxygen atoms with methyl side groups attached to the chain carbon atoms in random configuration along the polymer chains, and having carboxylic ester groups as terminating groups on the ends of the polymer chains, with from 0.1 to 10% by weight of a synthetic linear polymeric carbonamide which contains recurring carbonamide groups as an integral part of the main polymer chain separated by at least two carbon atoms, said polymeric carbonamide having a melting point below 225° C. and being selected from the group consisting of monocarboxylic acid amides, dicarboxylic acid diamides, and fiber-forming synthetic linear polymeric carbonamides which contain recurring carbonamide groups as an integral part of the main polymer chain separated by at least two carbon atoms, said elastomer having a thermal degradation constant, k_{1111} , of less than 0.35% per minute at 111° C.

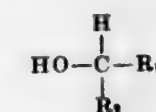
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3,001,967

METHOD OF COPOLYMERIZING POLYESTER, ETHYLENICALLY UNSATURATED MONOMER AND METAL SALT OF ACID HALF ESTER OF ALPHA, BETA-ETHYLENICALLY UNSATURATED DICARBOXYLIC ACID AND A MONOHYDRIC ALCOHOL AND COPOLYMERS THEREOF

Herbert Willersinn, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Aug. 19, 1958, Ser. No. 755,858
Claims priority, application Germany Aug. 27, 1957
5 Claims. (Cl. 260—45.4)

1. In the method of producing copolymers of (1) unsaturated polymerizable polyesters derived from α, β -ethylenically unsaturated dicarboxylic acids and polyhydric alcohols and (2) monomeric ethylenically unsaturated compounds copolymerizable with said polyesters and containing the group $\text{CH}_2=\text{C}$ the improvement which comprises copolymerizing with said polyesters and said monomeric compounds from 0.1% to 40% by weight, with respect to the total weight of said polyesters and said monomeric compounds, of a metal salt of an acid half ester of an α, β -ethylenically unsaturated dicarboxylic acid with a monohydric alcohol having the formula



wherein R_1 and R_2 are selected from the group consisting of aliphatic, cycloaliphatic, aliphatic-aromatic, aromatic, ethoxylated aliphatic, ethoxylated cycloaliphatic, ethoxylated aliphatic-aromatic, and ethoxylated aromatic hydrocarbon radicals with 1 to 18 carbon atoms, and hydrogen; said metal being selected from the group consisting of beryllium, magnesium, calcium, strontium, barium, aluminum, copper, silver, zinc, cadmium and mercury, said metal also being in its highest valency stage.

3,001,968

STABILIZED HALOGENATED POLYETHYLENE

Peter J. Canterino and Kenneth R. Mills, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Sept. 27, 1957, Ser. No. 686,605

7 Claims. (Cl. 260—45.7)

1. A composition ranging in properties from rubbery to leathery to resinous, said composition consisting essentially of a chlorinated polyethylene having a chlorine content ranging from 5 weight percent to 75 weight percent and being thermally stabilized with 0.5 to 5 weight parts per 100 weight parts of the chlorinated polyethylene of an organophosphate as the sole thermal stabilizer, said organophosphate having the structural formula selected from the group consisting of



wherein M is a metal selected from the group consisting of alkali and alkaline earth metals, x is the valence of the metal M, and R is an alkyl radical containing from 1 to 5 carbon atoms.

3,001,969

HEAT-STABILIZATION OF POLYETHYLENE AND POLY-MONO- α -OLEFINS USING CERTAIN ZINC DIALKYL-DITHIOCARBAMATES

Clarence E. Tholstrup and John W. Tamblin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 8, 1957, Ser. No. 670,375
1 Claim. (Cl. 260—45.75)

In a process for shaping a thermoplastic, normally solid, highly polymeric material normally subject to oxi-

dative deterioration at temperatures above 150° C. which is essentially composed of polypropylene, the improvement which consists in performing said shaping upon said highly polymeric material while in a stable molten condition containing from about 0.1% to about 3% by weight of zinc dibutylthiocarbamate, said shaping being performed while said molten condition is maintained at least until said polymeric material would normally suffer deleterious oxidative deterioration.

3,001,970

STABILIZATION OF POLYMERS OF VINYLIDENE CHLORIDE

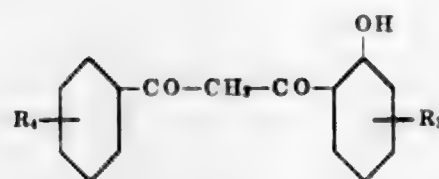
Friedrich Ebel, Mannheim-Feudenheim, and Karl Burger and Karl Herrie, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Apr. 20, 1956, Ser. No. 579,453

Claims priority, application Germany Apr. 27, 1955

6 Claims. (Cl. 260-45.95)

1. A composition of matter containing a polymer of 40% to 100% vinylidene chloride and 60% to 0% of at least one other monomeric olefinic compound having a terminal methylene group and, as a light stabilizer, a 2-hydroxy-dibenzoylmethane of the general formula



in which R₂ and R₄ are members of the group consisting of hydrogen, methyl and chlorine; said stabilizer being present in an amount of 0.01 to 5% with reference to the weight of the vinylidene chloride polymer.

3,001,971

POLYESTERURETHANES

Harvey Scott and Glenn R. Moore, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 11, 1957, Ser. No. 639,234

13 Claims. (Cl. 260-47)

1. An improved weather resistant polyesterurethane comprising the reaction product of one mol equivalent of an essentially hydroxyl terminated saturated aliphatic polyester of an unsubstituted dicarboxylic acid having from 2 to 10 carbon atoms and an alkylene diol having from 2 to 10 carbon atoms, said polyester having a molecular weight of between about 500 and 5,000, an acid number of less than 10 and a plurality of ester groups in the main polymer chain, from about 1.0 to 5.0 mol equivalents of an aromatic dihydroxyl compound selected from the class consisting of 1,4-bis(2-hydroxy ethoxy) benzene, 4,4'-bis(2-hydroxy ethoxy)diphenyl dimethyl methane, 1,3-bis(2-hydroxy ethoxy)benzene, 1,2-bis(2-hydroxy ethoxy)benzene, 1,4-bis(6-hydroxy hexoxy)benzene, 1,4-bis(3-hydroxy propoxy)benzene, and 1,4-bis(3-hydroxy butoxy)benzene, and from about 2.0 to 6.0 mol equivalents of an aromatic diisocyanate selected from the class consisting of m-phenylene diisocyanate, p-phenylene diisocyanate, tetrachloro m-phenylene diisocyanate, durene diisocyanate, and bitolylene diisocyanate, the molar amount of said diisocyanate being substantially equivalent to the molar amount of said polyester and of said aromatic di-hydroxyl compound combined.

3,001,972
EPOXY RESINS WITH HIGH HEAT DISTORTIONS
Roger M. Christenson and Marco Wimmer, Richland Township, Allegheny County, and William R. Hydro, New Kensington, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,730
9 Claims. (Cl. 260-47)

1. A resinous polyglycidyl ether of a polyphenol of the structure



wherein Ar represents a phenylene radical, and each Ar₁ represents a radical derived by removing a hydrogen atom from a nuclear carbon atom of a phenol containing at least two phenolic hydroxyl groups.

3,001,973

PRODUCTION OF CROSS-LINKED PLASTICS

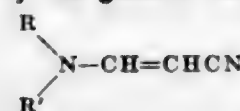
Hans-Frank Piepenbrink, deceased, late of Leverkusen, Germany, by Ursula B. Piepenbrink, administratrix, Leverkusen, Germany, and Erwin Windemuth, Leverkusen-Bayerwerk, Germany, assignors, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed May 19, 1954, Ser. No. 430,982
Claims priority, application Germany May 23, 1953
3 Claims. (Cl. 260-75)

1. A method for the preparation of a novel crosslinked plastic which comprises mixing as the sole reactive ingredients: (1) an organic compound carrying alcoholic hydroxyl groups, said organic compound being selected from the group consisting of a hydroxyl-terminated polyester prepared by the esterification of a polycarboxylic acid with a polyhydric alcohol, said polyester having a maximum acid number of about 1.2, and a poly-(alkylene ether) glycol with (2) an aliphatic diisocyanate, the ratio of NCO groups to active hydrogen atoms being 1.4-2 NCO groups per one active hydrogen atom, effecting chemical reaction to form an adduct having terminal NCO groups, and then catalytically polymerizing the NCO groups of the adduct with one another under anhydrous conditions employing ferric acetyl acetate as catalyst, all of said polyisocyanate being added to the first reactant in one stage.

3,001,974

COPOLYMERS OF BETA-CYANOVINYLAMINES
Everett J. Frazza, Yorktown Heights, N.Y., and John A. Price, Swarthmore, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 24, 1957, Ser. No. 704,873
13 Claims. (Cl. 260-85.5)

1. A composition comprising a copolymer of copolymerizable ingredients including (1) a beta-cyanovinylamine represented by the general formula



where R represents an alkyl radical and R' represents a member of the class consisting of hydrogen and alkyl radicals, and (2) a compound that contains a CH₂=C< grouping.

3,001,975

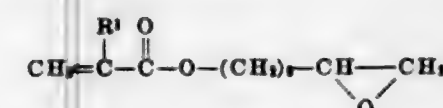
MONOPOXIDATION OF ESTERS, MONOMERS, AND POLYMERS THEREOF

Ellington M. Beavers and Joseph L. O'Brien, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 5, 1957, Ser. No. 650,819
15 Claims. (Cl. 260-86.1)

1. A method for preparing 4,5-epoxypentyl methacrylate which comprises admixing 1.0 to 1.5 moles of a per-

acetic acid solution to 4-pentenyl methacrylate in the presence of 0.5 to 10% of sodium acetate on the weight of the peracetic acid and maintaining the temperature in the range of 30° to about 50° C. until monoepoxidation is completed.

5. A monomer of the formula



in which R¹ is selected from the group consisting of a hydrogen atom and a methyl group.

3,001,976

RECOVERY OF HIGH MOLECULAR WEIGHT OLEFIN POLYMERS

Arthur Walter Langer, Jr., and Charles Martin White, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed May 17, 1957, Ser. No. 659,855
5 Claims. (Cl. 260-93.7)

1. In a process in which C₃ to C₄ olefin hydrocarbons hydrocarbon diluent chosen from the group consisting with a catalyst comprising a reducing metal compound of a metal of the group consisting of groups I, II and III of the periodic table and a reducible metal compound of a heavy metal of the group consisting of groups IV, V, VI and VIII of the Periodic Table in the presence of a hydrocarbon diluent chosen from the group consisting of the C₆ to C₁₂ paraffinic and naphthenic hydrocarbons having specific gravities of about 0.60 to about 0.80 and in which a reactor effluent is obtained which contains a slurry of polymer particles solvated with the hydrocarbon diluent and contaminated with catalyst and in which the polymer slurry is contacted with a catalyst deactivating agent and the polymer filtered from the slurry, the improvement which comprises washing the catalyst from the filtered polymer with a mixture of a C₁ to C₄ alcohol and a C₆ to C₁₂ hydrocarbon chosen from the group consisting of paraffinic and naphthenic hydrocarbons, said mixture containing 40 to 75 volume percent of alcohol, and centrifuging the mixture.

3,001,977

RECOVERY OF PURE OLEFINE POLYMERS

Karl Wasseroth, Ernst-Guenther Kastning, and Hans-Georg Trieschmann, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Aug. 6, 1957, Ser. No. 676,499
Claims priority, application Germany Aug. 17, 1956
12 Claims. (Cl. 260-93.7)

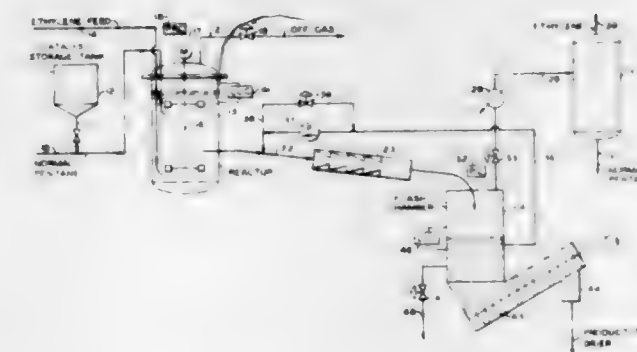
1. The process for reducing the ash content of a polymerized monoolefine containing from 2 to 4 carbon atoms, having metal-containing catalyst residue remaining therein from the polymerization of said olefine, which comprises providing an organic solvent solution of said polymerized olefine containing said catalyst residue, incorporating water with said solution and heating at a temperature above 80° C., incorporating with the thus-treated solution an inorganic solid adsorbent filter-aid at a temperature above 80° C., and separating said solid filter-aid containing said catalyst residue thereon from the resulting solution of said polymerized olefine having reduced ash content.

7. The process defined in claim 1 wherein said polymerized olefine is a polymer of propylene, said organic solvent is cumene, and said filter-aid is selected from the group consisting of gamma-aluminum oxide, silicon dioxide, kieselguhr, bleaching earth, bentonite, and montmorillonite.

3,001,978

PROCESS AND APPARATUS FOR REMOVAL OF REACTANT MATERIAL FROM A POLYMERIZATION PRESSURE VESSEL

Norman F. McLeod, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 13, 1958, Ser. No. 766,822
16 Claims. (Cl. 260-94.9)



12. In a process which is carried out in a closed reaction zone at an elevated pressure, the improvement in recovering liquid material from said reaction zone which comprises withdrawing liquid material from said reaction zone through a transfer zone at said elevated pressure; passing said withdrawn liquid material through a pressure reduction zone associated with said transfer zone so that said liquid material is thereafter at a pressure lower than said elevated pressure; flowing said liquid material at said lower pressure into a flash zone; recycling a portion of said liquid material from said flash zone to said transfer zone at a point upstream from said pressure reduction zone; controlling the rate at which said liquid material is recycled to said transfer zone in response to pressure in said reaction zone so that the recycle rate is decreased when said pressure increases above a desired value and is increased when said pressure decreases below a desired value; and withdrawing another portion of said liquid material from said flash zone.

3,001,979

PREPARATION OF A UREA-DIALDEHYDE STARCH DERIVATIVE

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Oct. 6, 1958, Ser. No. 765,274
4 Claims. (Cl. 260-96.5)

1. A process for the preparation of a urea-dialdehyde starch compound which comprises reacting in slurry a concentration of about from 20% to 30% of dialdehyde starch with urea, in the presence of a medium selected from the group consisting of acetone and lower alcohols wherein said urea is dissolved and said dialdehyde starch is slurried, at a pH of about 4 to 5 and a temperature of about from 70° C. to room temperature for about from 1 to 24 hours, and recovering the urea-dialdehyde starch product thereby obtained.

3,001,980

LUBRICATING OILS

Robert Tirtiaux, Notre-Dame de Gravenchon, and Jean Baptiste Signouret, Pau, France, assignors to Esso Standard Societe Anonyme Francaise, Paris, France, a body corporate of France

No Drawing. Filed July 22, 1957, Ser. No. 673,137

Claims priority, application France Aug. 4, 1956

7 Claims. (Cl. 260-125)

3. A material, useful as a lubricating oil additive, obtained by reacting a polymeric material prepared from an ester with phosphorus sulfide and then reacting the phosphosulfurized derivative so obtained with an alkylene oxide containing 2 to 6 carbon atoms, wherein said ester is the ester of an α,β-unsaturated carboxylic acid having

1 to 2 carboxylic groups and containing a maximum of 4 carbon atoms and an unsaturated aliphatic alcohol containing 3 to 20 carbon atoms, and wherein the unsaturation of said acid and said alcohol is due to double bonds.

3,001,981

OIL-SOLUBLE METAL SULFONATES AND PROCESS FOR THE PREPARATION THEREOF

William M. Le Seer, Cleveland, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,983
9 Claims. (Cl. 260—139)

1. The process of preparing oil-soluble metal sulfonates containing relatively large amounts of metal which comprises the reaction of a neutral oil-soluble metal salt selected from the class consisting of alkaline earth metal and alkali metal salts of acids selected from the class consisting of phosphorus- and chlorine-containing acids prepared by the reaction of a chlorinated substantially aliphatic olefin polymer with phosphorus trichloride and phosphorus-containing acids prepared by the reaction of a substantially aliphatic olefin polymer with phosphorus and a sulfur halide, with a sulfonating agent selected from the class consisting of oleum, concentrated sulfuric acid, sulfur trioxide, chlorosulfonic acid, and complexes of sulfur trioxide to form an acidic metal salt, and treatment of said acidic metal salt with a stoichiometrically excessive amount of an inorganic basically reacting compound selected from the class consisting of alkali metal compounds and alkaline earth metal compounds in the presence of a promoter selected from the class consisting of phenolic compounds, alcohols, aliphatic nitro compounds, and oximes.

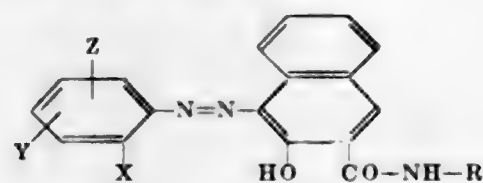
3,001,982

AZO DYESTUFFS

Hans Krzikalla, Heidelberg, and Guenter Lange and Bernd Elstert, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 8, 1955, Ser. No. 527,131
Claims priority, application Germany Aug. 11, 1954
5 Claims. (Cl. 260—151)

1. A member selected from the group consisting of an azo dyestuff of the general formula:



wherein X represents a member from the group consisting of carboxy, methoxy and hydroxy, Y represents a sulfonic acid group, Z represents a member from the group consisting of hydrogen, chlorine, lower alkyl, lower alkoxy, and nitro- groups, and R is a hydroxy lower alkyl group; and its copper, chromium, and cobalt complexes.

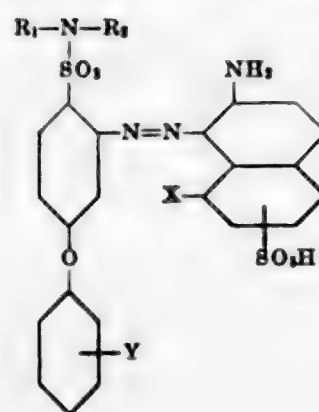
3,001,983

MONOAZO DYESTUFFS

Otto Schmid, Muttens, near Basel, and Melchior Hürbin, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed May 18, 1959, Ser. No. 813,680
Claims priority, application Switzerland June 2, 1958
6 Claims. (Cl. 260—196)

1. The monoazo dyestuff of the formula



wherein

R₁ and R₂ each represent a member selected from the group consisting of phenyl, cyclohexyl and alkyl radicals of 2 to 4 carbon atoms and, both together with —N—, a piperidyl radical,

X represents a member selected from the group consisting of H and OH,

Y represents a member selected from the group consisting of H, halogen and alkyl.

3,001,984

PROCESS FOR PREPARING NITRIC ACID ESTERS OF CELLULOSE

Ira T. Clark, 119 Ash St., and Merrill A. Millett, 322 N. Hillside Terrace, both of Madison, Wis.

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,947
8 Claims. (Cl. 260—220)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process of preparing a nitric acid ester of cellulose comprising reacting cellulose with a nitrating mixture obtained by combining about from 10% to 50%, by weight, of anhydrous nitrogen tetroxide with about from 90% to 50%, by weight, of anhydrous hydrogen fluoride, employing a ratio of about from 10 to 175 parts, by weight, of nitrating mixture to one part, by weight, of cellulose, at a temperature of about from —50° C. to 50° C., and removing all nitrating mixture from the resulting wet nitric acid ester of cellulose to obtain a nitric acid cellulose ester in a 97% to 99% yield, and which has an average degree of polymerization of about from 300 to 800, which contains about from 11.0% to 13.5% nitrogen, by weight, which is substantially completely soluble in acetone, and which is stable at 134.5° C. for about 17 minutes.

3,001,985

METHOD FOR PRODUCING A HIGH VISCOSITY STARCH

Ernest A. Sowell, John E. Voigt, and Raymond J. Horst, St. Louis, Mo., assignors to Anheuser-Busch, Incorporated, St. Louis, Mo., a corporation of Missouri

No Drawing. Filed Dec. 17, 1958, Ser. No. 780,931
4 Claims. (Cl. 260—233.3)

2. A process for making a granular starch which, when cooked provides a dispersion of desired viscosity, comprising the step of reacting a starch slurry with from about 0.01% to about 2.5% dimethylol ethylene urea by weight based on the weight of dry starch at a pH of from about 2 to about 10 and a temperature below the gelatinization temperature of the starch and above about 70° F.

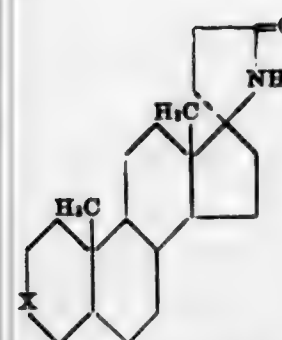
3,001,986

3-OXYGENATED 17-AMINO-17-CARBOXYETHYL-ANDROSTANE LACTAMS AND Δ⁴ COMPOUNDS CORRESPONDING

Robert R. Burtner, Skokie, and Leonard N. Nysted, Highland Park, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 14, 1960, Ser. No. 42,774
12 Claims. (Cl. 260—239.5)

1. A compound selected from the group consisting of 5α and 5β steroids of the formula



and Δ⁴ steroids otherwise identical, X in the formula being selected from the group consisting of carbonyl, β-hydroxymethylene and β-(lower alkanoyloxy)methylene radicals.

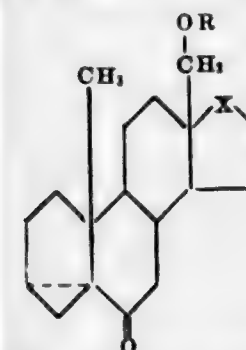
3,001,987

17-SUBSTITUTED 18-HYDROXY-3,5-CYCLOANDROSTAN-4-ONES, DERIVATIVES THEREOF, AND INTERMEDIATES THEREOF

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 11, 1960, Ser. No. 41,733
6 Claims. (Cl. 260—239.55)

1. A compound of the structural formula



wherein X is selected from the group consisting of carbonyl, β-hydroxymethylene, β-(lower alkenoyl)oxymethylene, and α-chloromethylene radicals; and R is selected from the group consisting of hydrogen and lower alkanoyl radicals.

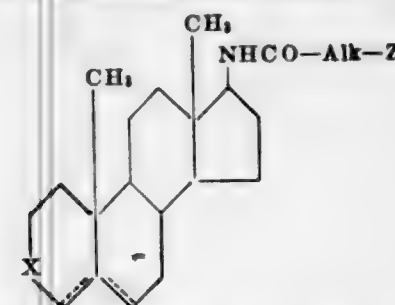
3,001,988

3-OXYGENATED 17β-AMINOALKANAMIDOANDROST-4/5-ENES, 5α-ANDROSTANES CORRESPONDING, AND INTERMEDIATES THEREOF

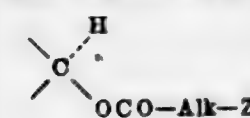
Leonard N. Nysted, Highland Park, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 19, 1960, Ser. No. 43,727
8 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of Δ⁴ and Δ⁵ androstanes of the formula



and 5α-androstanes identical therewith except for the indicated hydrogen, Alk in the formula being a lower alkylene radical; Z in the formula being selected from the group consisting of di(lower alkyl)amino, morpholino, and 3-methyl-2-phenylmorpholino radicals; X in the formula being selected from the group consisting of carbonyl, β-hydroxymethylene, and β-(lower alkanoyloxy)-methylene radicals and radicals of the formula



wherein Alk and Z have the meanings previously assigned; and the dotted line in the compound formula representing a double bond in the 4-position when X is a carbonyl radical and in the 5-position otherwise.

3,001,989

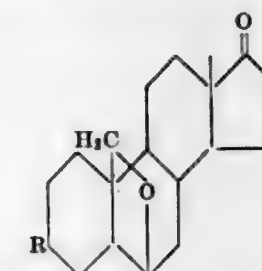
6β,19-OXIDO ANDROSTANE DERIVATIVES

Howard J. Ringold and Albert Bowers, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed July 29, 1960, Ser. No. 46,076
Claims priority, application Mexico Jan. 6, 1960

13 Claims. (Cl. 260—239.55)

1. A compound of the following formula:



wherein R is selected from the group consisting of keto, β-hydroxy and a β-hydrocarbon carboxylic acyl group containing up to 12 carbon atoms.

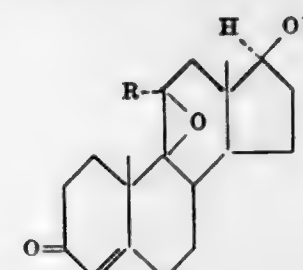
3,001,990

9α-HALO-11α-ALKYL-11β-HYDROXY STERIODS OF THE ANDROSTANE SERIES AND INTERMEDIATES THEREFOR

Gordon H. Thomas, New Brunswick, and Josef Fried, Princeton, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 6, 1957, Ser. No. 700,935
7 Claims. (Cl. 260—239.55)

4. A steroid of the general formula



wherein R is lower alkyl.

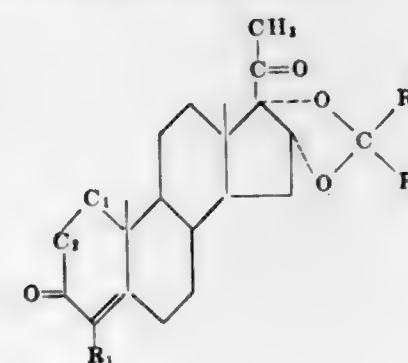
3,001,991

16α,17α-ISOALKYLIDENEDIOXY-4-PREGNENE-3,20-DIONES

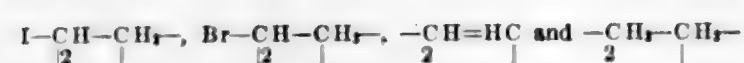
George R. Allen, Evansville, Ind., and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 13, 1959, Ser. No. 846,055
7 Claims. (Cl. 260—239.55)

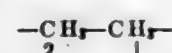
7. A compound having the formula:



wherein $-C_1-C_2-$ is selected from the group consisting of



R_1 is selected from the group consisting of hydrogen and bromine and when $-C_1-C_2-$ is



then R_1 is bromine, and R_2 and R_3 are lower alkyl radicals.

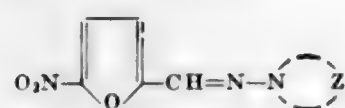
3,001,992

NEW SERIES OF N-(5-NITRO-2-FURFURYLIDENE)-AMINO HETEROCYCLES

Elizabeth A. Bellamy, Belleville, N.J., and Kenyon J. Hayes and Julian G. Michels, Norwich, N.Y., assignors to The Norwich Pharmacal Company, Norwich, N.Y., a corporation of New York

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,112
6 Claims. (Cl. 260-240)

1. The compounds having chemotherapeutic activity on oral administration of the formula:



in which Z represents the atoms which are necessary to complete a six-membered heterocyclic ring selected from the group consisting of 2-piperidone, hydouracil, tetrahydro-2(1)-pyrimidine, morpholine, piperidine and 4-methyl piperazine.

3,001,993

METHOD FOR PREPARING SECONDARY AMINOAZOLEDISULFIDES

Charles Malcolm Hendry and Earl C. Gregg, Jr., Cuyahoga Falls, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

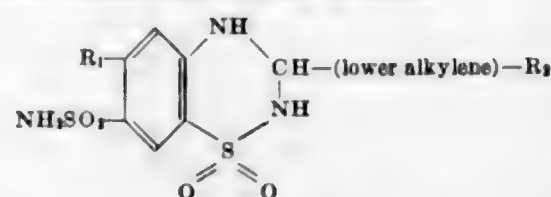
No Drawing. Filed Aug. 28, 1958, Ser. No. 757,669
7 Claims. (Cl. 260-243)

2. The method for preparing secondary aminothiazole disulfides comprising reacting substantially one molar quantity of a member of the group consisting of 2-mercaptobenzothiazole, 2-mercapto-4-methylthiazole, 2-mercapto-4-ethylthiazole, 2-mercapto-4-n-propylthiazole, 2-mercapto-4-n-butylthiazole, 2-mercapto-4,5-dimethylthiazole, 2-mercapto-4,5-diethylthiazole, 2-mercapto-4,5-di-n-propylthiazole, 2-mercapto-4,5-di-n-butylthiazole, 4-phenyl-2-mercaptobenzothiazole, 4-phenyl-5-methyl-2-mercaptobenzothiazole, 2-mercaptobenzothiazole, 4-phenyl-2-mercaptobenzothiazole, 6-phenyl-2-mercaptobenzothiazole, 2-mercaptotetrahydrobenzothiazole and 2-mercaptanaphthothiazole; at least three molar quantities of a secondary amine selected from the group consisting of morpholine, thiomorpholine, N-methyl piperazine, N-ethyl piperazine, piperidine, 5-ethyl-2-methyl piperidine and pyrrolidine; substantially one molar quantity of a member of the group consisting of 2-benzothiazyl-N-morpholinyl sulfide, 2-thiazyl-N-morpholinyl sulfide, 4,5-dimethyl-2-thiazyl-N-morpholinyl sulfide, 4-ethyl-2-thiazyl-N-thiomorpholinyl sulfide, 2-benzimidazolyl-N-morpholinyl sulfide, 2-benzothiazyl-N-piperidyl sulfide, 2-benzothiazyl-N,N-dicyclohexyl sulfenamide, 2-benzothiazyl-N,N-dibenzylsulfenamide and 2-benzothiazyl-N,N-diisopropylsulfenamide; and substantially one molar quantity of a sulfur monohalide at a temperature of from about 30° C. to about 110° C. in an inert organic diluent.

3,001,994
SUBSTITUTED DIHYDROBENZOTHIADIAZINES
Frederick Y. Wiselogle, North Brunswick, and Harry L. Yale and Jack Bernstein, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 30, 1959, Ser. No. 823,856
10 Claims. (Cl. 260-243)

1. A compound selected from the group consisting of dihydrobenzothiadiazines of the formula



and alkali metal salts thereof, wherein R_1 is selected from the group consisting of chloro and trifluoromethyl, and R_2 is selected from the group consisting of furyl and thienyl.

3,001,995

β -CYANOVINYLAMINES

Everett J. Frazza, Yorktown Heights, N.Y., and Lorence Rapoport, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 24, 1957, Ser. No. 704,878
8 Claims. (Cl. 260-247)

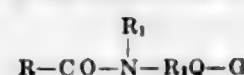
7. N- β -cyanovinyl morpholine.

3,001,996

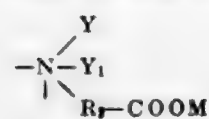
SULFATES AND SULFONATES OF N-TERTIARY AMINO ALKYL-CARBOXYLIC ACID AMIDES
Hans S. Mannheimer, 905 West End Ave., New York, N.Y., assignor to himself and John J. McCabe, Jr., jointly

No Drawing. Filed Feb. 8, 1957, Ser. No. 638,904
6 Claims. (Cl. 260-247.1)

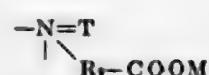
1. A compound of the following formula:



in which R is a hydrocarbon radical of 4-18 carbon atoms, R_1 is selected from the class consisting of (a) hydrogen, (b) alkyl hydrocarbon radicals and hydroxy alkyl hydrocarbon radicals of 1-4 carbon atoms, (c) alkyl ether groups of 2-4 carbon atoms, (d) hydroxyl alkyl ether groups of 2-4 carbon atoms, (e) alkyl keto groups of 2-4 carbon atoms, (f) hydroxy alkyl keto groups of 2-4 carbon atoms; R_2 is selected from the class consisting of (a) alkylene and hydroxy alkylene groups of 1-8 carbon atoms, (b) alkylene ether groups of 2-8 carbon atoms, (c) hydroxyalkylene ether groups of 2-8 carbon atoms, (d) alkylene keto groups of 2-8 carbon atoms and (e) hydroxyalkylene keto groups of 2-8 carbon atoms; Q is selected from the class consisting of:



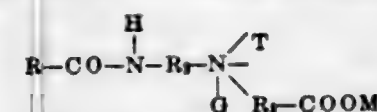
and



in which Y and Y_1 are each selected from the class consisting of R_4 and $R_2-\text{COOM}$; R_4 is selected from the class consisting of alkyl, aromatic and alkyl-aromatic hydrocarbon radicals of 1-12 carbon atoms, hydroxy alkyl radicals of 2-12 carbon atoms, alkyl ether radicals of 2-12 carbon atoms and hydroxy alkyl ether groups of 2-12 carbon atoms, T is selected from the class consisting of the hydrocarbon portions of piperidine ring, alkyl piperidine ring, pyrrole ring, alkyl pyrrole ring, and oxy-

hydrocarbon portion of morpholine ring; G is connected to the nitrogen of Q and is selected from the class consisting of sulfate and sulfonate radicals of detergent sulfate and sulfonic acid salts; and M is an alkali metal.

6. A compound of the following formula:



with R being a hydrocarbon radical of 4-18 carbon atoms, each R_2 being an alkylene group of 1-4 carbon atoms, T being oxyhydrocarbon portion of morpholine ring, M being an alkali metal, and G being a sulfate radical of a detergent sulfate salt.

3,001,997

CARBOXYLIC ACID AMIDES OF N-AMINO-ALKYLENE-HETEROCYCLIC AMINES
Hans S. Mannheimer, 23 Haines Cove Drive, Toms River, N.J., assignor to John J. McCabe, Jr., and Hans S. Mannheimer

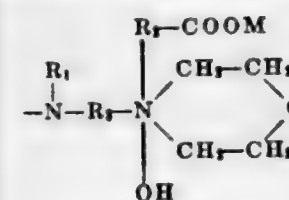
No Drawing. Filed Apr. 6, 1960, Ser. No. 20,258
4 Claims. (Cl. 260-247.2)

1. A compound of the following formula:

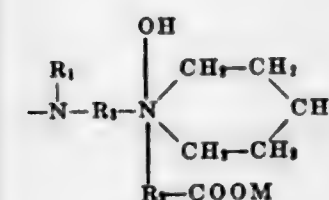


wherein W is selected from the group consisting of

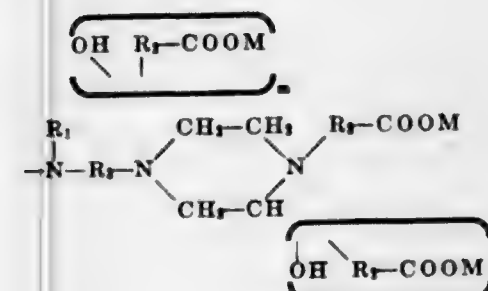
(1)



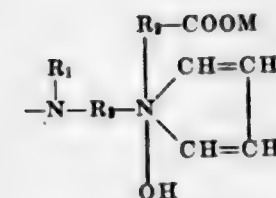
(2)



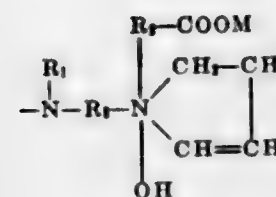
(3)



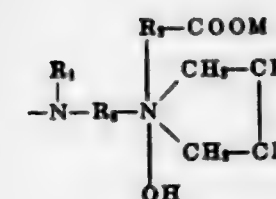
(4)



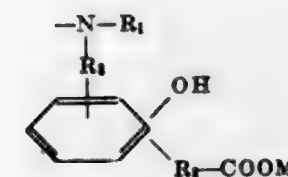
(5)



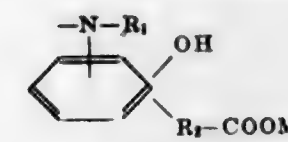
(6)



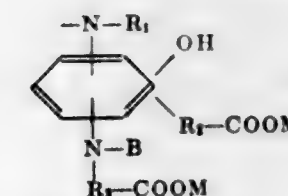
(7)



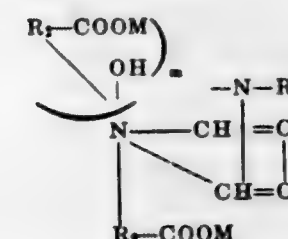
(8)



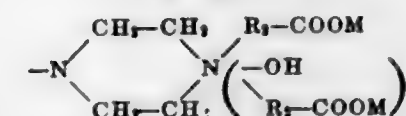
(9)



(10)

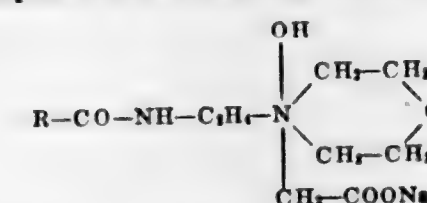


(11)



(12) said (1)-(11) respectively in which at least one of the hydrogens in the hydrocarbon portions of the rings thereof are substituted by a member selected from the group consisting of hydroxy, alkyl, and hydroxy alkyl, with said alkyl and hydroxy alkyl radicals being of 1-4 carbon atoms; in which R is hydrocarbon of 4-18 carbon atoms, R_1 is selected from the group consisting of hydrogen and alkyl radicals of 1-4 carbon atoms, R_2 is an alkylene group of 2-4 carbon atoms, R_3 is selected from the group consisting of alkylene groups of 1-4 carbon atoms, hydroxy alkylene groups of 2-4 carbon atoms, ether groups, each of said ether groups having a single oxygen linkage and being alkylene of 3-4 carbon atoms, ether groups, each of said mentioned ether groups having a single oxygen linkage therein and being hydroxy alkylene of 3-4 carbon atoms; B is selected from the group consisting of hydrogen and $-\text{R}_2-\text{COOM}$, M is selected from the group consisting of hydrogen and alkali metals, m is selected from the group consisting of zero and one.

2. A compound of the following formula:



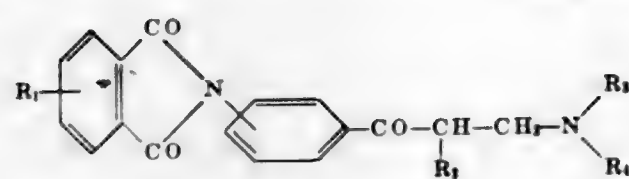
in which R is hydrocarbon of 4-18 carbon atoms.

3,001,998

PHthalimide DERIVATIVES AND PROCESS FOR THEIR MANUFACTURE

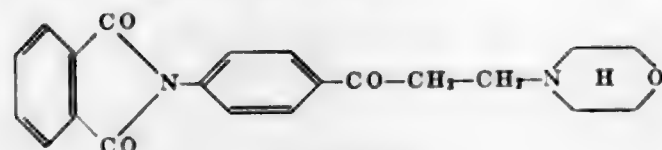
Heinrich Ruschig, Bad Soden (Taunus), Karl Schmitt and Ernst Lindner, Frankfurt am Main, and Willi Meixner, Hofheim (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Mar. 31, 1959, Ser. No. 803,109
Claims priority, application Germany Apr. 5, 1958
6 Claims. (Cl. 260-247.2)

1. A member of the group consisting of phthalimide derivatives of the formula



in which R_1 is a member of the group consisting of hydrogen and chlorine, R_2 is a member of the group consisting of hydrogen and alkyl groups of one to three carbon atoms and R_3 and R_4 are members of the group consisting of alkyl groups of one to four carbon atoms and, together with the nitrogen atom, members of the group consisting of pyrrolidine, piperidine and morpholine, and non-toxic acid addition salts of these compounds.

5. The compound of the formula



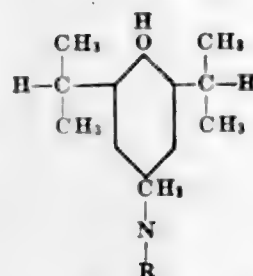
3,001,999

PRODUCTS OF PHENOL DERIVATIVES WITH FORMALDEHYDE AND AMINES

Charles F. Geschickter, Kensington, Md., and Jacob R. Meadow, Lexington, Ky., assignors to The Geschickter Fund for Medical Research Inc., Washington, D.C., a corporation of New York

No Drawing. Filed Dec. 1, 1955, Ser. No. 550,485
1 Claim. (Cl. 260-247.7)

As a novel composition of matter, a compound selected from the group consisting of compounds having the formula:



where N-R is selected from the group consisting of the morpholino, piperidino, pyrrolidino and N'-methyl piperazino radicals.

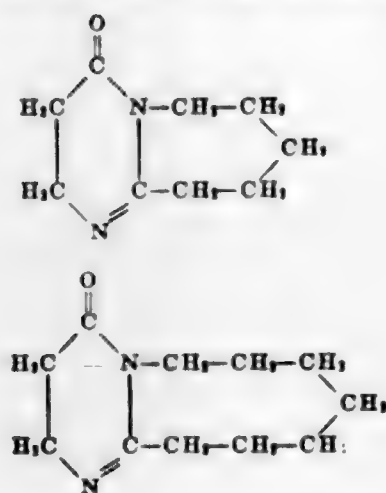
3,002,000

1,2-ALKYLENE-DIHYDROPYRIMIDONE-6, AND 1,2-ALKYLENE-IMIDAZOLINONES(5)

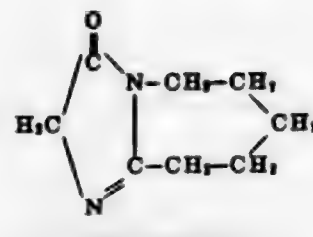
Ernst Tietze and Siegfried Petersen, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,202
Claims priority, application Germany Nov. 8, 1958
4 Claims. (Cl. 260-251)

4. A compound selected from the group consisting of



and



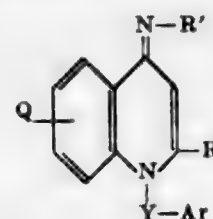
3,002,001

4-ALKYLIMINO-1-AROMATIC-(LOWER-ALKYL)-1,4-DIHYDROQUINOLINES AND THEIR PREPARATION

Alexander R. Surrey, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 3, 1958, Ser. No. 726,032
16 Claims. (Cl. 260-288)

1. A composition of matter selected from the group consisting of: (a) the 4-alkylimino-1-aromatic-(lower-alkyl)-1,4-dihydroquinoline having the structural formula



where Q is selected from the group consisting of H and from one to two substituents at positions 3, 5, 6, 7 and 8 of the quinoline nucleus selected from the group consisting of halo, lower-alkoxy, lower-alkylmercapto, lower-alkyl, nitro and trifluoromethyl radicals, R' is an alkyl radical having from four to ten carbon atoms inclusive, R is a member selected from the group consisting of H and lower-alkyl radicals, Y is a lower-alkylene radical, and Ar is an aromatic radical selected from the group consisting of phenyl, naphthyl, biphenyl, thienyl, furyl, pyridyl and pyrimidyl radicals; and, (b) acid-addition salts thereof.

3,002,002

REDUCTION OF THE THIOPHENE NUCLEUS

Irving Wender, Pittsburgh, Pa., and Milton Orchin, Cincinnati, Ohio, assignors to the United States of America as represented by the Secretary of the Interior

No Drawing. Filed Apr. 2, 1957, Ser. No. 650,283
5 Claims. (Cl. 260-332.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for reducing a lower alkyl 2-thiophenecarboxylate to the corresponding lower alkyl 2-thiacyclopentanecarboxylate which comprises, reacting said lower alkyl 2-thiophenecarboxylate with hydrogen in the presence of a cobalt carbonyl catalyst at a temperature of about 110° C. to about 220° C. under a pressure of at least about 500 p.s.i., while maintaining a concentration of carbon monoxide in the reaction zone at least sufficient to prevent decomposition of the cobalt catalyst.

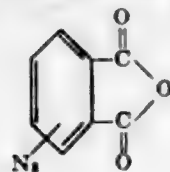
3,002,003

AZIDOPHTHALIC ANHYDRIDES

Stewart H. Merrill and Cornelius C. Unruh, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 2, 1959, Ser. No. 843,928
3 Claims. (Cl. 260-346.3)

1. An azidophthalic anhydride of the formula:



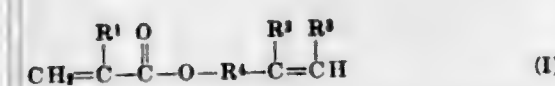
3,002,004

SELECTIVE MONOPOXIDATION

Ellington M. Beavers and Joseph L. O'Brien, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 5, 1957, Ser. No. 650,841
9 Claims. (Cl. 260-348.5)

1. A process of selective monoepoxidation of the ethylenic bond in the alcohol portion of an ester of the formula



where R' and R^2 are selected from the class consisting of a hydrogen and a methyl group, R^3 is selected from the class consisting of a hydrogen atom and an alkyl radical containing from 1 to 11 carbon atoms, and R^4 is a divalent alkylene radical containing from 1 to 13 carbon atoms, the selection of R^3 and R^4 being such that when one is alkyl, the other is hydrogen, and R^3 plus R^4 together contain no more than 20 carbon atoms, which comprises the steps of admixing, in the presence of a water-soluble basic agent which, in a 0.1 normal concentration in water imparts thereto a pH of at least 8, at 25° C., and which is selected from the group consisting of alkali metal oxides, alkali metal hydroxides, alkaline earth metals and salts of weak saturated aliphatic monocarboxylic acids, an ester of Formula I with 1.0 to 1.5 mole of peracetic acid per mole of ester and maintaining the temperature within the range of 30° to 50° C. until monoepoxidation of the ethylenic bond in the ester is completed.

3,002,005

7-METHYLPROGESTERONE

J. Allan Campbell, Kalamazoo Township, Kalamazoo County, and John C. Babcock, Portage Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Oct. 24, 1958, Ser. No. 769,292
1 Claim. (Cl. 260-397.3)

7 α -methylprogesterone melting at 191-199° C.

3,002,006

PROCESS OF PREPARING 17 α -BROMO-6 α -FLUOROPROGESTERONE

David J. Marshall, Westmount, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,944
1 Claim. (Cl. 260-397.3)

The process for the preparation of 17 α -bromo-6 α -fluoroprogesterone which comprises converting 3 β -acetoxy-5 α -hydroxy-6 β -fluoropregnan-20-one to 3 β ,5 α ,20-triacetoxy-6 β -fluoro-17(20)-pregnene by reaction with acetic anhydride and an acid catalyst; reacting the thus formed triacetate with bromine in acetic acid solution, said reaction being carried out at substantially room temperature to obtain 17 α -bromo-3 β ,5 α -diacetoxy-6 β -fluoropregnan-20-one; selectively hydrolyzing the thus obtained 17 α -bromo-3 β ,5 α -diacetoxy-6 β -fluoropregnan-20-one with perchloric acid to obtain 17 α -bromo-3 β -hydroxy-5 α -acetoxy-6 β -fluoropregnan-20-one; reacting the thus obtained 17 α -bromo-3 β -hydroxy-5 α -acetoxy-6 β -fluoropregnan-20-one with sodium dichromate in acetic acid solution to obtain 17 α -bromo-5 α -acetoxy-6 β -fluoropregnan-3,20-dione; and reacting the thus obtained 17 α -bromo-5 α -acetoxy-6 β -fluoropregnan-3,20-dione with anhydrous hydrogen chloride to obtain 17 α -bromo-6 α -fluoroprogesterone.

770 O.G.-63

3,002,007

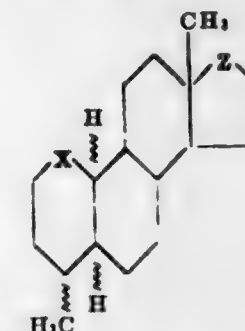
OXYGENATED DERIVATIVES OF 4-METHYLESTRANES

Willard M. Hoehn, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,933
9 Claims. (Cl. 260-397.3)

5. 4 β -methyl-5 α ,10 α -estrane-1,17-dione.

6. A compound of the structural formula



wherein X is selected from the group consisting of carbonyl, α -hydroxymethylene, and α -(lower alkanoyl)oxy methylene radicals, and Z is selected from the group consisting of carbonyl, β -hydroxymethylene, and β -(lower alkanoyl)oxy methylene radicals.

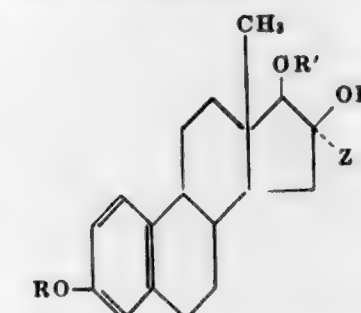
3,002,008

16-ALKENYL AND 16-ALKYNYLESTRATRIENE-3,16,17-TRIOLS AND ETHERS THEREOF

David A. Tyner, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 16, 1960, Ser. No. 49,815
7 Claims. (Cl. 260-397.5)

1. A compound of the formula



wherein R' is a member of the class consisting of hydrogen and lower alkyl, R is lower alkyl, and Z is a member of the class consisting of lower alkenyl and lower alkynyl.

3,002,009

1,3,5(10)-ESTRATRIEN-3,16,17-TRIOL-3-ALKENYL ETHERS

Max N. Huffman, Colorado Springs, Colo., assignor to Lasdon Foundation, Inc., Yonkers, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,159
6 Claims. (Cl. 260-397.5)

1. 1,3,5(10)-estratrien-3,16,17-triol - 3 - alkenyl ether, wherein the alkenyl radical contains 3 to 5 carbon atoms.

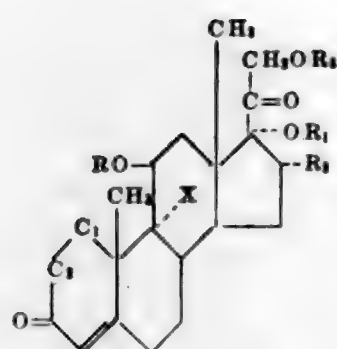
3,002,010

ACYLATED STEROIDS AND METHOD OF PREPARING THE SAME

Victor Emil Orizoni, Emerson, N.J., and Sidney Fox, Spring Valley, and Leland Leroy Smith, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 18, 1958, Ser. No. 742,743
6 Claims. (Cl. 260-397.45)

1. A process of preparing compounds having the general formula:



in which R is a lower alkanoyloxy radical, R₁ and R₂ are members of the group consisting of hydrogen and lower alkanoyl radicals, R₃ is a member of the group consisting of hydroxyl and lower alkanoyloxy radicals, X is a member of the group consisting of hydrogen and a halogen atom and —C₁—C₂— is a divalent radical of the group consisting of —CH=CH— and —CH₂—CH₂— radicals which comprises reacting the corresponding 11β-hydroxy steroid with an excess of a lower aliphatic acylating agent in the presence of pyridine for from sixteen to thirty-two hours at a temperature within the range of 60° C. to 100° C.

3,002,011

INTERMEDIATES AND PROCESSES FOR PRODUCING α-LIPOIC ACID

Frederick W. Holly, Cranford, and Arthur F. Wagner, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application Dec. 4, 1953, Ser. No. 396,333, now Patent No. 2,853,497, dated Sept. 23, 1958. Divided and this application Nov. 23, 1956, Ser. No. 623,823

24 Claims. (Cl. 260-399)

1. Compounds having the formula—



wherein X is selected from the group consisting of alkali and alkaline earth metals, hydrogen, and alkyl, aryl and aralkyl groups having up to eight carbon atoms and R and R' are selected from the class consisting of alkyl, alkenyl, alkynyl, aryl and aralkyl groups having up to eight carbon atoms.

3,002,012

METHOD FOR THE PREPARATION OF NORMAL LEAD STYPHATE

Joseph R. Backensto, Marion, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
No Drawing. Filed Jan. 16, 1958, Ser. No. 709,209

5 Claims. (Cl. 260-435)

1. A method for the preparation of normal lead styphate which comprises intermixing a glycerin solution of a lead salt selected from the group consisting of lead acetate and lead nitrate with a solution of styphnic acid in a solvent that is miscible with glycerin and water, in the presence of acetic anhydride, the reaction mixture having a pH below about 4.5, and subsequently adding water to the reaction mixture.

3,002,013

PREPARATION OF ISOCYANATES

Henry Feuer, Lafayette, Ind., Harry Rubinstein, Wyandotte, Mich., and Arnold T. Nielsen, Lexington, Ky., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana
No Drawing. Filed Oct. 8, 1958, Ser. No. 765,922

7 Claims. (Cl. 260-453)

1. In a process for the preparation of isocyanato derivatives of saturated hydrocarbons containing from 1 to 3

isocyanato groups inclusive, the steps of interacting ozone and corresponding isocyanide derivatives of saturated hydrocarbons containing from 1 to 3 isocyanide groups inclusive the said hydrocarbons containing up to about 20 carbon atoms at about -10° to about 75° C. and recovering the thus produced isocyanato derivatives.

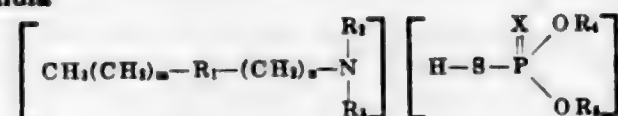
3,002,014

S-AMINE PHOSPHOROTHIOATES

David W. Dinsmore, Alfton, and Alvin Howard Smith, Glendale, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 30, 1958, Ser. No. 751,902

13 Claims. (Cl. 260-461)

1. S-amine O,O-dialiphatic phosphorothioates of the formula



wherein m is an integer from 0 to 17, n is an integer from 0 to 17, the sum of m and n being from 9 to 17; R₁ is selected from —CH₂—CH₂—, sulfurized

—CH=CH— and —CH=CH—

R₂ and R₃ are selected from hydrogen and aliphatic radicals containing from 1 to 4 carbon atoms; X is selected from the group consisting of oxygen and sulfur; and R₄ and R₅ are each aliphatic radicals containing from 1 to 12 carbon atoms, the sum of the carbon atoms of R₄ and R₅ being at least 3, but when the sum of m and n is 9, R₄ and R₅ each contain not more than 9 carbon atoms.

3,002,015

PROCESS FOR PREPARING PHOSPHORUS COMPOUNDS

James O. Clayton, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed July 20, 1959, Ser. No. 828,055

3 Claims. (Cl. 260-461)

3. A process for producing a composition containing esters of mixed acids of phosphorus which comprises reacting one mole of nonaromatic hydrocarbon containing from four to ten carbon atoms with from one to five moles of phosphorus trichloride in the presence of oxygen at temperatures lying between about 0° C. and 80° C. to form a mixture containing acid chlorides of phosphorus and esterifying said mixture with cresol, about three moles of said cresol being added for each mole of phosphorus trichloride.

3,002,016

PREPARATION OF ETHYL ACRYLATE

George A. Elliott, Petersburg, and Seymour A. Furbush, Hopewell, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 8, 1959, Ser. No. 818,547

1 Claim. (Cl. 260-486)

A process for preparation of ethyl acrylate which comprises mixing and simultaneously reacting acetylene, ethyl alcohol, carbon monoxide, nickel carbonyl and hydrogen chloride at a temperature of about 30° C.-65° C. and under pressure from about atmospheric to about 15 p.s.i.g., said acetylene being in the ratio of 0.9 to 1.1 mols acetylene per mol of total CO from carbon monoxide and nickel carbonyl, said ethyl alcohol being in the ratio of 2.0 to 3.0 mols ethyl alcohol per mol of total CO from carbon monoxide and nickel carbonyl, said carbon monoxide being in an amount to provide about 60-80% of the total CO from carbon monoxide and nickel carbonyl, said nickel carbonyl being in an amount to provide about 20-40% of the total CO from carbon monoxide and nickel carbonyl, and said hydrogen chloride being in the ratio of 1.4 to 3.0 mols hydrogen

chloride per mol nickel carbonyl in the presence of about 0.5%-10% by weight based on ethyl alcohol of mercuric chloride as promoter, the carbon monoxide being present from the outset of the reaction, and recovering ethyl acrylate from the reaction mixture.

3,002,017

METHOD FOR PREPARING ACRYLIC ACID

Norman C. Wearsch, Avon, and Anthony J. De Paola, Lorain, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed July 13, 1959, Ser. No. 826,768

6 Claims. (Cl. 260-526)

1. In a method of preparing glacial acrylic acid monomer by depolymerization at a temperature of from about -115 to about 260° C. of a homopolymer of beta-propiolactone, the step of rapidly quenching vapors of acrylic acid monomer by condensation with sufficient pre-cooled acrylic acid to reduce the temperature below 70° C.

3,002,018

SEPARATION OF ALIPHATIC ACIDS

Funston G. Lum, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,212

4 Claims. (Cl. 260-537)

1. Process for recovering sebamic acid from "isosebamic acid" which comprises concentrating an aqueous solution of the full alkali metal salt of "isosebamic acid" to precipitate the full alkali metal salt of sebamic acid but discontinuing the concentration before the precipitation of the full alkali metal salt of the isomers of sebamic acid contained in the "isosebamic acid," separating the precipitate from the liquid phase and regenerating sebamic acid from the precipitate.

3,002,019

ALIPHATIC ACID SEPARATION

Funston G. Lum, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,240

5 Claims. (Cl. 260-537)

1. Process for separating a full alkali metal salt of sebamic acid from the full alkali metal salt of "isosebamic acid" which comprises mixing the full alkali metal salt of "isosebamic acid" with an unsubstituted water miscible aliphatic monohydric alcohol and water, the volume ratio of alcohol to water being in the range 2:1 to 20:1, the amount of alcohol and water employed being sufficient to dissolve substantially all of the full alkali metal salt of the isomers of sebamic acid contained in the "isosebamic acid" salt but insufficient to dissolve a substantial quantity of the full alkali metal salt of sebamic acid, separating the dissolved salt from the undissolved full alkali metal sebamic acid salt.

3,002,020

SEPARATION OF ISOMERIC ALIPHATIC DICARBOXYLIC ACIDS OF TEN CARBON ATOMS

Funston G. Lum, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,241

4 Claims. (Cl. 260-537)

1. Process for separating a full alkali metal salt of sebamic acid from a full alkali metal salt of "isosebamic acid," which comprises saturating an aqueous solution of a full alkali metal salt of "isosebamic acid" with a water-soluble inorganic salt of the same alkali metal as in the salt of the "isosebamic acid," to form a liquid phase and a solid phase of the full alkali metal salt of sebamic acid, and separating the phases.

3,002,021

NEW DERIVATIVES OF THE TETRACYCLINE-TYPE ANTIBIOTICS

Hans H. Rennhard, Lyme, Lloyd H. Conover, Quaker Hill, Philip N. Gordon, Old Lyme, and Charles R. Stephens, Jr., Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

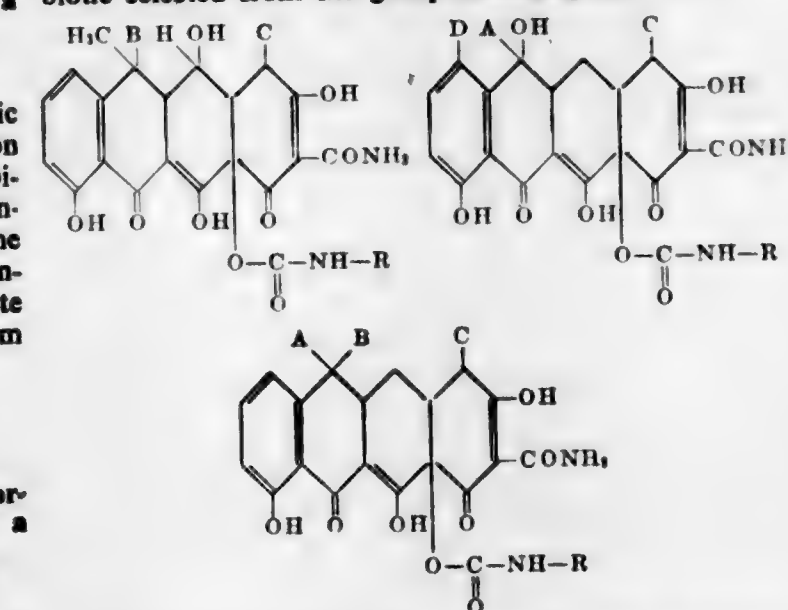
No Drawing. Filed May 18, 1959, Ser. No. 813,654

3 Claims. (Cl. 260-559)

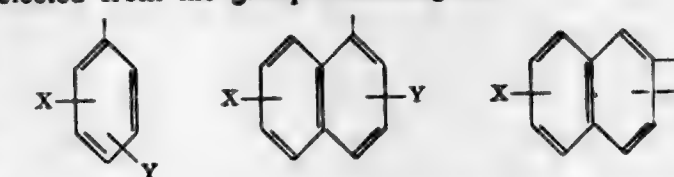
1. The process which comprises treating a compound selected from the group consisting of 12a-(O-monoformyl)-tetracycline, 12a-(O-monoformyl)-7-chlorotetracycline, 12a-(O-monoformyl)-7-bromo-tetracycline, 12a-(O-monoformyl)-6-demethyltetracycline, 12a-(O-monoformyl)-6-deoxytetracycline, 12a-(O-monoformyl)-6-deoxy-6-demethyltetracycline, 12a-(O-monoformyl)-6-demethyl-7-chlorotetracycline, 12a-(O-acyl)-tetracycline, 12a-(O-acyl)-7-chlorotetracycline, 12a-(O-acyl)-5-hydroxytetracycline, wherein the acyl radical is of the formula



and R' is alkyl of from 1 to 5 carbon atoms; and a 12a-(O-arylcabamyl)-derivative of a tetracycline-type antibiotic selected from the group consisting of:



wherein A is selected from the group consisting of hydrogen and methyl; B is selected from the group consisting of hydrogen and hydroxyl; C is selected from the group consisting of hydrogen and dimethylamino; D is selected from the group consisting of chloro and bromo; R is selected from the group consisting of:



wherein X and Y are selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, nitro and amino, with hydrogen in the presence of a hydrogenolysis catalyst selected from the group consisting of palladium, platinum black, and platinum oxide in a substantially anhydrous reaction-inert solvent at a temperature of from about 45° C. to about 100° C. and a pressure of from about atmospheric to about 2000 p.s.i. and recovering resulting 12a-deoxytetracycline compound.

3,002,022

γ-TRINITROBUTYRAMIDE

Robert H. Saunders, West Chester, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Feb. 28, 1952, Ser. No. 274,071

1 Claim. (Cl. 260-561)

γ-Trinitrobutyramide.

3,002,023 PRODUCTION OF ALPHA, BETA-UNSATURATED ACYL COMPOUNDS

Hans Fikentscher and Hans Wilhelm, Ludwigshafen, (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Feb. 10, 1958, Ser. No. 714,027
Claims priority, application Germany Feb. 13, 1957
4 Claims. (Cl. 260-561)

1. The method of producing methacrylamide which comprises heating a mixture of acetone cyanhydrin and sulfuric acid to temperatures of from 120° to 140° C. in the presence of an alkali metal salt of an acid selected from the group consisting of an acid of pentavalent phosphorus and an acid of hexavalent sulfur, the ratio of sulfuric acid to the alkali metal salt being 100:0.5 to 100:10 parts by weight and the duration of heating being from 1 second to a few minutes.

3,002,024 BIS-KETENES AND METHOD OF PREPARATION

Alfred T. Blomquist, Ithaca, N.Y., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 12, 1957, Ser. No. 645,397
20 Claims. (Cl. 260-585.5)

1. Bis-ketenes in which the beta carbon atom of each ketene group is attached by substitution for hydrogen to a nuclear carbon atom of at least one aromatic hydrocarbon group and in which each such beta carbon atom of each ketene group is spaced from the other by a hydrocarbon group selected from the class consisting of the following groups: alkylene in which each said beta carbon atom is separated from the other by at least two carbon atoms; lower alkylene attached to a nuclear carbon atom of a phenylene group; arylene in which each said beta carbon atom is separated from the other by at least two carbon atoms; cycloalkyl in which each said beta carbon atom is separated from the other by at least two carbon atoms; aliphatic unsaturated groups having at least two carbon atoms; and aliphatic hydrocarbon groups having 4 to 18 carbon atoms.

3,002,025 SYNTHESIS OF CITRAL FROM GERANYL ALKYL ETHERS

Paul G. Bay, Skokie, Ill., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed July 9, 1958, Ser. No. 747,337
4 Claims. (Cl. 260-601)

1. A process for preparing citral which comprises treating geranyl alkyl ethers with lower tertiary alkyl chromates in a solvent for said ethers and chromates under substantially anhydrous conditions and maintaining the mixture at a reaction temperature of from about 0° to below 55° C. for a period of time sufficient to produce said citral, the amount of tertiary alkyl chromate employed in the reaction being at least about one mole per mole of alkyl ether.

3,002,026 PREPARATION OF BENZYL DECABORANES

Robert J. Falchak, Tonawanda, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Aug. 19, 1958, Ser. No. 757,175
7 Claims. (Cl. 260-606.5)

1. A method for the preparation of a compound of the class $C_6H_5CH_2B_{10}H_{12}X$ which comprises reacting a benzyl halide and a compound of the class $B_{10}H_{12}(X)M$ at a temperature within the range from 25° C. to 100° C. while the reactants are in admixture with a solvent which is inert under the reaction conditions, X being selected from the

group consisting of hydrogen and benzyl and M being an alkali metal.

7. Benzyl decaborane of the formula $C_6H_5CH_2B_{10}H_{12}$ having a melting point of about 63.5° C. to 64.5° C.

3,002,027 NUCLEAR DICHLORINATION OF XYLENES

Robert F. Lindemann and Alex Hlynsky, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 5, 1958, Ser. No. 732,832
5 Claims. (Cl. 260-650)

1. The method of producing a dinuclear chlorinated xylene which comprises combining the following:

	Parts by weight
Glacial acetic acid.....	2.7 to 10.0
Xylene	1.0
Chlorine	0.8 to 2.0
Catalyst selected from the group consisting of ferric chloride and iodine.....	0 to 0.4

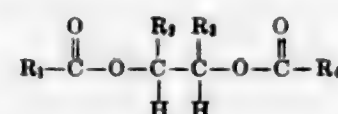
and effecting chlorination of said xylene.

3,002,028 STABLE SOLVENT COMPOSITION

Albert J. Haefner and Leslie L. Sims, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 27, 1958, Ser. No. 769,547
3 Claims. (Cl. 260-652.5)

1. A stabilized composition for degreasing aluminum and other metals comprising 1,1,1-trichloroethane having dissolved therein a glycol diester compound having the formula



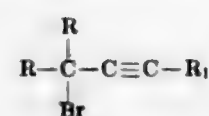
wherein R_1 , R_2 , R_3 , and R_4 are selected from a group consisting of hydrogen, and aliphatic and aromatic hydrocarbon radicals having up to 10 carbon atoms, said glycol diester compound being present at a concentration of from about 0.5 to about 10 weight percent.

3,002,029 STABILIZER FOR BROMO-SUBSTITUTED ACETYLENIC COMPOUNDS

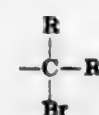
Roger F. Kleinschmidt, Bartlesville, Okla., and Sam H. Pitts, Jr., Idaho Falls, Idaho, assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,019
8 Claims. (Cl. 260-652.5)

1. The method of stabilizing a compound having the formula



wherein each R is an alkyl radical containing from 1 to 3 carbon atoms, R_1 is selected from the group consisting of hydrogen, -R, and



wherein R is as defined above and wherein two R groups on a propargylic carbon contain not over 5 carbon atoms and can together with the propargylic carbon form a cycloalkyl radical which comprises adding to said compound 4-tert-butylcatechol.

3,002,030 HALOGENATED ORGANIC COMPOUNDS

Murray Hauptschein, Glenside, and Milton Bradd, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 9, 1958, Ser. No. 747,342
7 Claims. (Cl. 260-653)

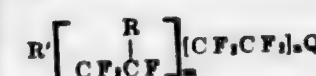
1. A method for preparing the iodide $CF_3CICFCl$ comprising the step of reacting $CF_3=CFCl$ with iodine monochloride at a temperature of from -40° C. to +10° C.

3,002,031 HALOGENATED ORGANIC COMPOUNDS

Murray Hauptschein, Glenside, and Milton Bradd, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,080
10 Claims. (Cl. 260-653.1)

1. Cotelomers of the formula



where R' is selected from the class consisting of perfluoroalkyl and perfluorochloroalkyl radicals having from 1 to 6 carbon atoms; where R is a perfluoroalkyl radical having from 1 to 4 carbon atoms; where Q is selected from the class consisting of iodine, chlorine and fluorine, and where n and m are integers, the value of n+m being in the range of from 3 to 40 and the ratio n:m being in the range of from 7:1 to 1:4.

3,002,032 PROCESS FOR SEPARATING FLUORINATED ETHYLENES BY MEANS OF MERCURY COMPOUNDS

Otto Scherer and Helmut Hahn, both of Frankfurt am Main, and Gunter Schneider, Buchschlag, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,223
Claims priority, application Germany Dec. 5, 1956
10 Claims. (Cl. 260-653.3)

1. A process which comprises separating halogen-containing olefins (A) selected from the group consisting of 1,1-difluoroethylene, 1,1-difluoro-2-chloroethylene, 1-fluoro-1-chloroethylene, 1-fluoroethylene and mixtures thereof from halogen-containing olefins (B) selected from the group consisting of tetrafluoroethylene, trifluoroethylene, trifluorochloroethylene, 1,1-difluoro-2,2-dichloroethylene, 1-fluoro-1,2-dichloroethylene and mixtures thereof by contacting mixtures of said olefins (A) and (B) at a temperature in the range from about 0° C. to about 100° C. with mercuric compounds selected from the group consisting of mercuric oxide, mercuric salts of strong inorganic acids, mercuric salts of aliphatic hydrocarbon monocarboxylic acids having from 2 to 10 carbon atoms, mercuric salts of cycloaliphatic hydrocarbon monocarboxylic acids having from 6 to 8 carbon atoms and containing isocyclic rings of 5 to 6 carbon atoms, mercuric salts of aromatic hydrocarbon monocarboxylic acids having from 7 to 8 carbon atoms and mixtures thereof.

3,002,033 PREPARATION OF 300 TO 500 MOLECULAR WEIGHT ALKYL CHLORIDES

George C. Feighner, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Feb. 9, 1959, Ser. No. 791,801
4 Claims. (Cl. 260-658)

1. A process of preparing alkyl halides having a molecular weight varying from 300 to 500 which comprises

reacting 3 to 5 moles of propene per mole of an alkyl chloride, said alkyl chloride being selected from the group consisting of tertiary butyl chloride and highly branched nonyl chloride and being further characterized in that said reaction is conducted at a temperature of 50 to -70° C. in the presence of a catalyst selected from the group consisting of aluminum chloride and ferric chloride, the process being still further characterized in that when the catalyst selected is aluminum chloride at least .75 mole percent based on propene is employed, and when the catalyst selected is ferric chloride at least 2.5 mole percent based on propene is employed.

3,002,034 PROCESS FOR PRODUCING DIARYL PARAFFINS

Johann Gustav David Schulz, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 17, 1958, Ser. No. 780,927
4 Claims. (Cl. 260-668)

1. A process for preparing a diaryl paraffin which comprises dissolving acetaldehyde in toluene and thereafter bringing the solution obtained in contact with a catalyst selected from the group consisting of sulfuric acid having a concentration of at least 85 percent, boron trifluoride, hydrogen fluoride, phosphoric acid and zinc chloride for reaction therewith at a temperature above 5° C.

3,002,035 PROCESS FOR PREPARING PARA-XYLENE

Ernst Hieronymus, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 10, 1957, Ser. No. 658,220
Claims priority, application Germany May 16, 1956
4 Claims. (Cl. 260-673.5)

1. A process for the manufacture of para-xylene, which comprises aromatizing a compound selected from the group consisting of diisobutylene, triisobutylene, hydrogenation products thereof and mixtures thereof, in the presence of a solid, chromium oxide-containing aromatization catalyst, at a temperature in the range from 450° C. to 650° C. at a charge per volume and time of 0.4 to 0.9 liter of liquid hydrocarbon per liter of contact space and hour in the presence of 65% to 80% by volume of a diluent selected from the group consisting of nitrogen, methane and mixtures thereof, the percentage figure being calculated upon the total volume of the diluent and the vaporized starting material.

3,002,036 PROCESS FOR PREPARING AROMATIC HYDROCARBONS

Ernst Hieronymus, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 10, 1957, Ser. No. 658,222
Claims priority, application Germany May 16, 1956
15 Claims. (Cl. 260-673.5)

1. A process for the manufacture of p-xylene which comprises aromatizing a compound of the group consisting of diisobutylene, triisobutylene, hydrogenation products thereof and mixtures thereof in the presence of a solid aromatization catalyst comprising at least one oxide of a metal of the group consisting of chromium, molybdenum and tungsten at a temperature in the range of 450° C. to 650° C. and in the presence initially of at least one mol of mononuclear aromatic hydrocarbon per mol of said aliphatic hydrocarbon.

3,002,037

CATALYTIC TREATMENT OF HYDROCARBONS IN THE PRESENCE OF NAPHTHENES

Paul Greiff, Long Branch, and Charles E. Jahnig, Rumson, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,025
8 Claims. (Cl. 260—683.53)



1. In the catalytic treatment of paraffinic hydrocarbons in the presence of aluminum bromide catalyst, in a reaction zone, wherein the products of the reaction comprise principally branched chain saturated paraffin hydrocarbons in the range of from 4 to 7 carbon atoms, and including the steps of removing from the reaction zone hydrocarbon products containing dissolved aluminum bromide, separating hydrocarbons from the removed product and recycling aluminum bromide to the reaction zone, and wherein at least one feed stream to the reaction zone contains naphthene hydrocarbons, thereby resulting in the presence of naphthene hydrocarbons in said reaction products, the improvement which comprises distilling the reaction products in a distillation zone whereby a bottoms fraction containing naphthene hydrocarbons and aluminum bromide is obtained, removing a portion of the naphthenes from the said bottoms fraction, recycling at least a portion of the remaining material to the reaction zone and recycling a portion of the naph-

thenes removed from said bottoms fraction to said distillation zone thereby increasing the naphthene concentration in that zone.

3,002,038

REACTIVATION OF PARAFFIN ALKYLATION CATALYSTS

Peter J. Lucchesi, North Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 28, 1959, Ser. No. 830,053
7 Claims. (Cl. 260—683.53)



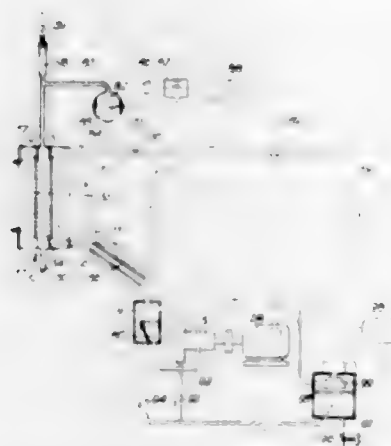
1. A process for the preparation of high octane naphtha components consisting largely of branched chain paraffin hydrocarbons of 5 to 7 carbon atoms which comprises reacting in liquid phase a minor proportion of a straight chain paraffin hydrocarbon of from 6 to 18 carbon atoms with a major portion of a lighter hydrocarbon selected from the group consisting of butanes and pentanes, at temperatures no higher than about 140° F., in a reaction zone in the presence of an aluminum bromide catalyst and maleic anhydride.

ELECTRICAL

3,002,039

ELECTRICAL BATTERIES

Francis Thomas Bacon, Westfield, Little Shelford, England, assignor to National Research Development Corporation, London, England
Filed Apr. 7, 1960, Ser. No. 20,691
12 Claims. (Cl. 136—86)



1. In a hydrogen-oxygen fuel cell having porous electrodes in which differential pressure between the gases and the electrolyte is balanced by capillary attraction in the pores of the electrodes, the cell being provided with

a hydrogen circulation system which includes a condenser for the steam carried by the circulating hydrogen, the improvement comprising a valve for controlling the discharge of condensate from said condenser, means for interrupting the circulation of the hydrogen in said hydrogen circulation system when the condensate reaches a predetermined level in said condenser, and control means responsive to the differential pressure between the electrolyte and the hydrogen for operating said valve to discharge the condensate when the differential pressure drops below a predetermined value.

3,002,040

BATTERY SEPARATOR

Joseph A. Orsino, Mountain Lakes, N.J., and Charles E. Mandel, Ridgewood, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

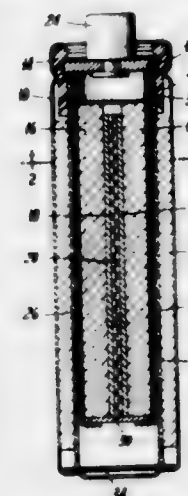
No Drawing. Filed Feb. 25, 1959, Ser. No. 795,369
3 Claims. (Cl. 136—146)

1. A storage battery cell containing a positive electrode, a negative electrode and a crystalline polypropylene porous separator where the porosity of said separator is such that it allows the passage of electrolyte but is impervious to the passage of solid active electrode material, wherein said separator is disposed between said positive and negative electrodes.

3,002,041

METHOD OF CONSTRUCTING NICKEL-CADMIUM CELLS

John L. S. Daley, Bay Village, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed Aug. 10, 1959, Ser. No. 832,616
4 Claims. (Cl. 136—176)



1. In a method of assembling a sealed nickel cadmium secondary cell which comprises as components a container, a cover for said container, a seal gasket therebetween; a negative cadmium electrode, a positive nickel electrode, a separator between said positive electrode and said negative electrode and an alkaline electrolyte throughout; the improvement which comprises dimensioning said components to fit loosely within said container upon assembling said cell in order that said positive electrode is free to swell to approximately the point of optimum electronic conductivity and electrolytic efficiency to achieve maximum output upon the initial cycling of said cell subsequent to the sealing of said cell; said dimensions of said components being such that said swelling results in tight intra-cell contacts when further swelling of said positive electrode is constrained by said negative electrode and said container.

3,002,042

ELECTRIC ACCUMULATOR

Robert Rowe, Paris, France, assignor to Societe de l'Accumulateur Fulmea, Clichy, France, a corporation of France

Filed July 23, 1958, Ser. No. 750,474
Claims priority, application France Aug. 5, 1957
20 Claims. (Cl. 136—181)



1. An electric accumulator comprising at least one cell having a cover and charge-regulating means associated therewith, the charge-regulating means being actuated by the pressure of the gases evolved by the cell, and comprising a body defining a chamber subjected to the pressure of the gases, the entire regulating means being secured to the cover of the cell, the regulating means further comprising a gas inlet duct in the cover of the cell of the accumulator and connecting the interior of the accumulator with the chamber of the regulating means which is subjected to the pressure of the gases, means comprising a calibrated gas discharge tube being disposed

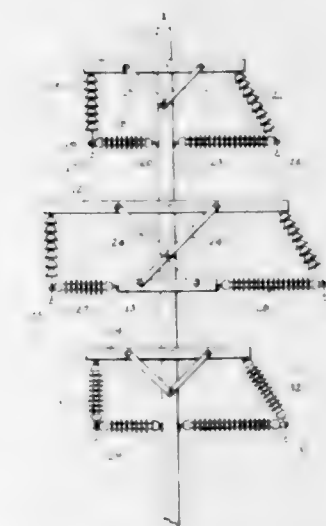
in the body of the regulating means forming a communication between the said chamber and the ambient medium, normally closed contact means for controlling the charging of the accumulator, means disposed within a cover cavity and acting as a function of the pressure of the evolution of gas to actuate said contact means, and return means returning the contact means to their normal position.

3,002,043

ELECTRICAL TRANSMISSION SYSTEM

Ralph L. Jenner and Simpson Breat Mills, Le Roy, N.Y., assignors to Lapp Insulator Company, Inc., Le Roy, N.Y., a corporation of New York
Continuation of abandoned application Ser. No. 546,043, Nov. 10, 1955. This application Dec. 14, 1960, Ser. No. 76,440

8 Claims. (Cl. 174—40)



1. An electrical high voltage power transmission system comprising a transmitting conductor therefor, upright supporting means spaced apart longitudinally of said conductor and each including a cross arm extending transversely of said conductor, a first elongated member of insulating material having one end connected to said cross arm and depending therefrom with its other end connected to said conductor for tensile stressing to support the weight thereof and space said conductor from said cross arm and a second elongated substantially rigid member of insulating material having a connection at one end with said conductor and extending at an angle to said first member, and means at the other end of said second member movably connecting the same to said supporting means, for stressing in both tension and compression, to restrain lateral movement of said conductor and maintain its insulating clearance, said members being movable relative to said supporting means to accommodate limited longitudinal movements of said conductor.

3,002,044

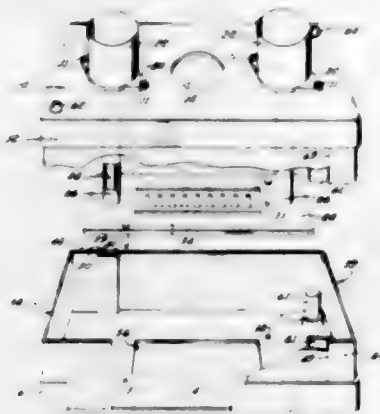
CASE FOR ELECTRONIC MODULAR UNITS

Ray R. Scoville, 5083 Commonwealth Ave., La Canada, Calif.

Original application Nov. 26, 1954, Ser. No. 471,296, now Patent No. 2,892,009, dated June 23, 1959. Divided and this application Oct. 16, 1958, Ser. No. 767,550
8 Claims. (Cl. 174—50)

1. A modular electronic unit including an electronic assembly and a case for housing said electronic assembly, said case comprising a rectangular box having identical top and bottom covers, said covers including apertures therein for receiving portions of said assembly whereby said electronic assembly includes elements within said case as well as further elements protruding from said case adjacent said apertures, each cover having a continuous bent-over flange, and four mutually perpendicular

lar side-walls composed of two identical unitary substantially L-shaped members having a central portion integrally connected to bent-over long and short portions corresponding to the long and short legs of said L. said short portion including, and terminating, in an integral inwardly offset rabbet, the long portion of each L over-

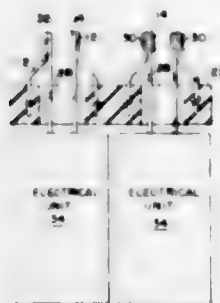


lying the rabbet portion of the other L for making up four walls, said covers closing off said walls, and post means extending between said covers within the area bounded by said four walls for holding the covers and side walls of said case in rigid engagement with respect to each other thereby to encase those portions of said assembly which are located within said case.

3,002,045

ELECTRICAL CONNECTOR

William H. Ayer, Scituate, Mass., assignor, by mesne assignments, to The Shippican Corporation, Marion, Mass., a corporation of Massachusetts
Filed Dec. 3, 1959, Ser. No. 857,008
5 Claims. (Cl. 174-88)



1. An electrical connector comprising male and female members made of insulating material, at least one upstanding substantially rectangular terminal embedded in said female member adjacent an aperture therein, at least one substantially rectangular terminal embedded in said male member extending through a corresponding aperture in said female member and adjacent a portion of a corresponding upstanding terminal in said female member, multi-turn spirally wrapped conductive wire means electrically and mechanically connecting adjacent terminals, and a plurality of conductors embedded in the male and female members connecting said terminals in predetermined fashion.

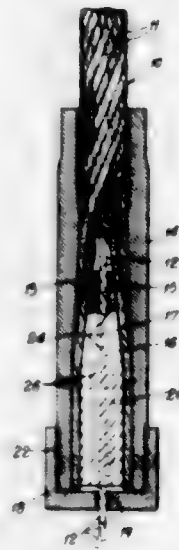
3,002,046

SWAGED END FOR STRANDED METAL MECHANICAL CABLE

Homer W. Clapper, Wayne, N.J.
(% Bergen Wire Rope Co., Gregg St., Lodi, N.J.)
Filed Apr. 20, 1959, Ser. No. 807,676
6 Claims. (Cl. 174-89)

1. A swaged end for a stranded metal mechanical cable having an electrical conductor in the center thereof comprising a stranded spirally wound cable, said cable being comprised of two ends and a running portion be-

tween said ends, an electrical conductor in the center of said spirally wound cable, a cylindrical metallic core, one end of said core being tapered, said core carrying an opening therein from end to end thereof and coaxial therewith, said core being inserted in the end of said cable with the tapered end thereof pointed toward the running portion of said cable, said electrical conductor being fed through and loosely contained in the opening in said core, said strands of said cable being

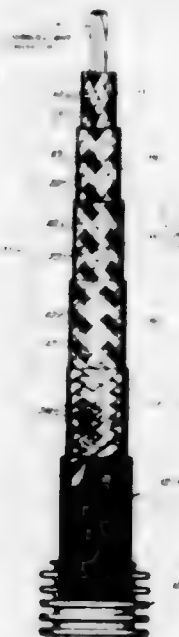


carried out around said core such that each of them is in pressure contact with said core at the untapered end thereof, and a hollow cylindrical metallic sleeve around the outside of said cable and said core, the inner surface of said sleeve being tapered such that the wall of said sleeve is thicker toward the running portion of said cable than toward the end thereof, all of the strands of said cable being in pressure contact with the inner surface of said sleeve, said strands which are in pressure contact with said core and said sleeve being swaged thereto.

3,002,047

COAXIAL CABLE

Orlando A. Mannella, Forest Park, Ill., assignor to Amphol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Oct. 15, 1959, Ser. No. 846,696
4 Claims. (Cl. 174-124)



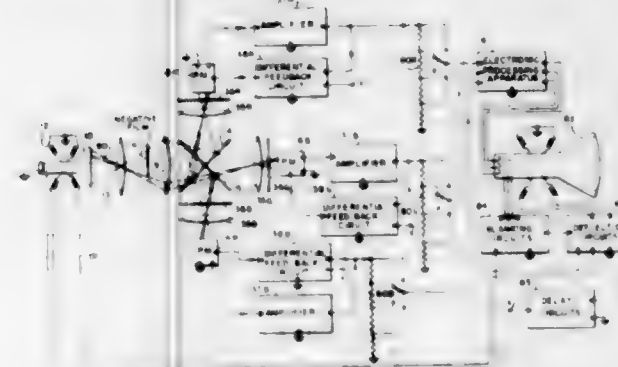
1. A high temperature radio frequency transmission system comprising an airtight flexible metallic jacket of corrugated stainless steel hose extending between a pair of terminal connectors and hermetically sealed thereto, together with a flexible coaxial transmission line intercon-

necting said connectors and housed within said jacket; the coaxial line consisting of a central conductor of stranded flexible wire, an outer tubular conductor of high conductivity woven metallic wire braid, with the central and outer conductors held in coaxial spaced relation to each other by a semi-solid silica dielectric resistant to temperatures of 1000° F. and resistant to repeated bending; said dielectric consisting of a plurality of continuous sheaths of braided fiberglass yarn surrounding each other and affording plural dielectric layers between the central and outer conductors; with each of the interior sheaths composed substantially 75% of yarn consisting of bonded staple sliver fiberglass and 25% of yarn consisting of continuous filament fiberglass, and the outer sheath consisting of continuous filament fiberglass.

3,002,048

STABILIZED IMAGE SCANNER

William F. Bailey, Valley Stream, Bernard D. Loughlin, Huntington, and Ian G. MacWhirter, Great Neck, N.Y., assignors to Hazeltine Research Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 14, 1957, Ser. No. 678,190
7 Claims. (Cl. 178-5.2)



2. A stabilized image scanner comprising: means for scanning an image with a small beam of scanning light which also periodically overscans the image so that periodic samples of the scanning light by-pass the image; photoelectric means responsive to the scanning light from the image for developing electrical signals representative of the light values of successive elements of the image and responsive to the image-by-passed scanning light for developing periodic electrical pulses having amplitudes representative of the intensity of the scanning light; means for amplifying the electrical signals including the pulses; means for supplying a reference voltage; means for the setting one portion of the light intensity-representative signals at a stable voltage with respect to the reference voltage; means for comparing the amplitude of the amplified pulses with the reference voltage for developing a control signal representative of the difference therebetween; and means responsive to the control signal for varying the gain of the amplifying means in an inverse manner for stabilizing the product of scanning light intensity and signal gain of the scanner.

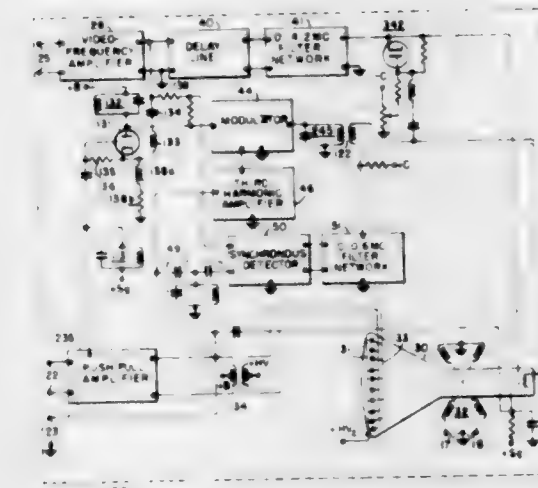
3,002,049

CHROMINANCE SUBCARRIER COMPONENT-SELECTION SYSTEM

Bernard D. Loughlin, Lynbrook, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Original application Oct. 5, 1953, Ser. No. 384,237, now Patent No. 2,734,940, dated Feb. 14, 1956. Divided and this application Jan. 20, 1956, Ser. No. 560,412
11 Claims. (Cl. 178-5.4)

6. In a color-television receiver, a system for selecting a chrominance subcarrier component along a predetermined axis of a received chrominance subcarrier signal

comprising: first circuit means for supplying a chrominance subcarrier signal; second circuit means for supplying a reference signal having a second harmonic frequency relation to said subcarrier signal; and third circuit means coupled to said first and second circuit means and including a normally nonconductive triode circuit periodically conditioned for conduction by said reference signal for periodically shunting said first circuit means during given phase angles when a selected subcarrier signal com-



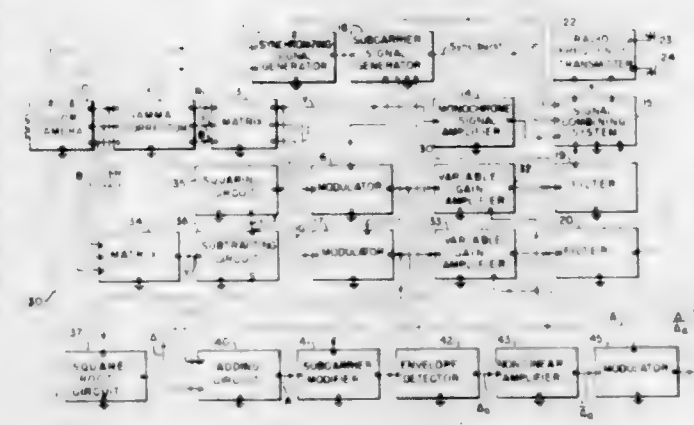
ponent along a predetermined axis has a maximum magnitude substantially to prevent translation of said subcarrier component along a first path while allowing translation of its quadrature component along said first path and periodically effective to translate said subcarrier signal along a second path during said given phase angles and effective to prevent translation of said subcarrier signal along said second path during intervening phase angles for developing along said second path a subcarrier signal representative of said selected component to the substantial exclusion of said quadrature component.

3,002,050

GAIN CONTROL OF TRANSMITTER SUBCARRIER CHANNEL FOR MINIMIZING BRIGHTNESS DISTORTION

Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

Filed Mar. 28, 1956, Ser. No. 574,465
6 Claims. (Cl. 178-5.4)

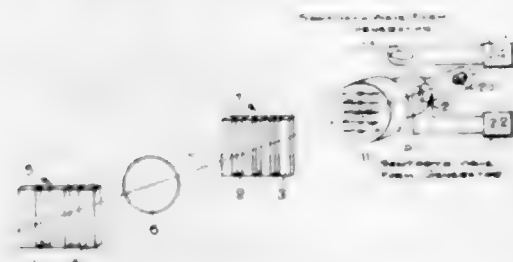


5. Transmitting apparatus for use in a color-television transmitting system where color camera apparatus is utilized for developing electrical signals representative of the color image and these signals are used to generate a relatively wide band monochrome signal for primarily conveying brightness information and a relatively narrow band subcarrier signal for primarily conveying coloring information and where some brightness information is conveyed by the subcarrier signal, the transmitting appa-

ratus comprising: gamma-correcting apparatus for pre-correcting the camera signals in a nonlinear manner to subsequently compensate for the nonlinear transfer characteristic of an image-reproducing device in a receiver, such nonlinear pre-correction causing some of the image information to be conveyed by higher frequency harmonic components of the camera signals; a relatively narrow band subcarrier signal channel responsive to the gamma-corrected camera signals for generating and transmitting the normal subcarrier signal where the limited band width of such channel tends to produce visible brightness distortions in the reproduced image by suppression of subcarrier signal components corresponding to said higher frequency harmonic components; nonlinear matrixing apparatus for matrixing the uncorrected camera signals and the generated monochrome signal for developing a first signal representative of the brightness information which should be conveyed by the subcarrier signal; circuit means including an envelope detector responsive to the generated subcarrier signal components for developing a second signal representative of the brightness information actually carried by the subcarrier signal; circuit means for combining said first and second signals to produce a control signal; and gain-control apparatus included in the subcarrier signal channel and responsive to said control signal for altering the magnitude of the subcarrier signal in accordance with the brightness information that should be carried by such signal, thereby to minimize said brightness distortions in the reproduced image.

3,002,051

SINGLE TUBE COLOUR TELEVISION CAMERAS
David Russell Tait, Ottawa, Ontario, Canada, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed Feb. 21, 1957, Ser. No. 641,565
Claims priority, application Great Britain Feb. 24, 1956
6 Claims. (Cl. 178-5.4)



1. An arrangement for generating simultaneous signals representing different colour components of a light image, comprising an image pick-up tube including means for converting a light image to a charge image and means for scanning said charge image in lines of predetermined direction to produce image signals, optical means for projecting a light image to said pick-up tube, and two gratings positioned in the path of projection of said optical means, said gratings extending over the whole cross sectional area of said path at their respective positions, one grating being such that when illuminated by a light scene of at least two predetermined colours, light of both said colours is transmitted in parallel strips separated by strips in which light of at least one colour is substantially absent, the other grating being such that when illuminated by light of said two colours, light of both colours is transmitted in parallel strips separated by strips in which said one colour is substantially absent and said other colour is present, and said gratings being positioned in collimating relationship so that when a light image including components of said two predetermined colours is projected on the pick-up tube the component of said one colour is substantially divided into strips transverse to said predetermined direction and the component of the other colour is not so divided, whereby operation of the pick-up tube

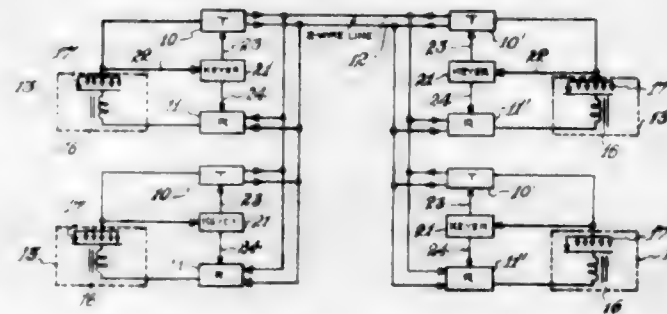
produces simultaneous signals representing said two components, which signals can be separated on a frequency basis.

3,002,052

PARTY LINE KEYING CIRCUIT

Henry H. Enker, Pompton Plains, and George L. King, Morris Plains, N.J., assignors to Radio Frequency Laboratories, Inc., Boonton, N.J., a corporation of New Jersey

Filed Apr. 2, 1959, Ser. No. 803,686
9 Claims. (Cl. 178-66)

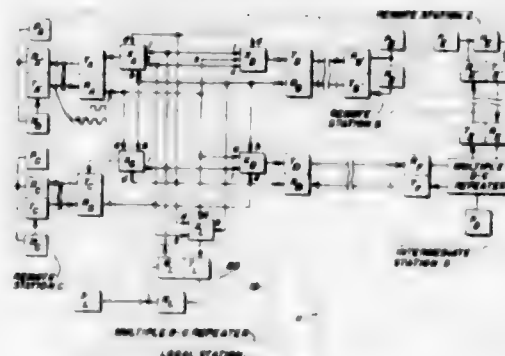


1. In an alternating current telegraph system, a transmitter comprising a continuously operating source of marking and spacing signal frequencies, a normally disabled means connecting the transmitter to a communication link, a telegraph signal generator controlling the said source of signal frequencies, and keying means connected to and controlled by the said telegraph signal generator, and means connecting the keying means to the said normally disabled connecting means, the said keying means enabling the said normally disabled connecting means during operation of the telegraph signal generator.

3,002,053

MULTIPLE D.-C. REPEATER

Robert J. Gilman, Wayne, and Everett A. Gilbert, Denville, N.J., assignors to Radio Frequency Laboratories, Inc., Boonton, N.J., a corporation of New Jersey
Filed June 9, 1959, Ser. No. 819,064
10 Claims. (Cl. 178-73)



1. A repeater for use as a junction between a plurality of telegraph terminals each of which includes a receiver and transmitter, the said repeater comprising a plurality of "or" circuits each of which is responsive to each of the receiver outputs except one, each of the said transmitters being responsive to an individual "or" circuit whereby the receiver output of each receiver is sent to every transmitter except its associated terminal transmitter.

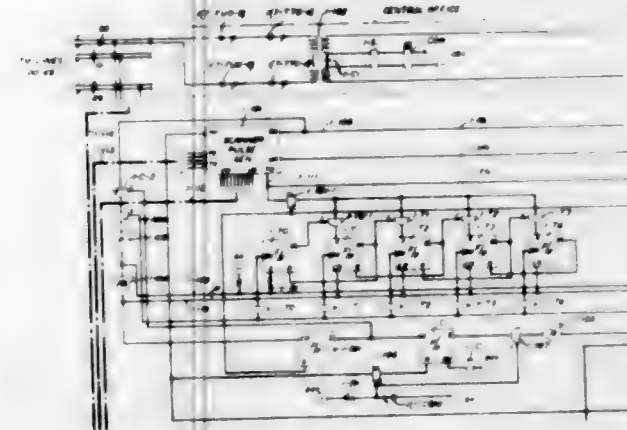
3,002,054

TRUCK CONCENTRATOR FOR TELEPHONE ANSWERING SERVICE

Myron E. Krom, Convent Station, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 29, 1958, Ser. No. 764,148
13 Claims. (Cl. 179-27)

2. In a central office, a plurality of subscriber lines incoming thereto, an answering service center remote

from said central office, a trunk extending to said center, a scanner for repeatedly and sequentially testing each line to ascertain whether it is in an idle or a ringing condition, means responsive to said scanner for trans-

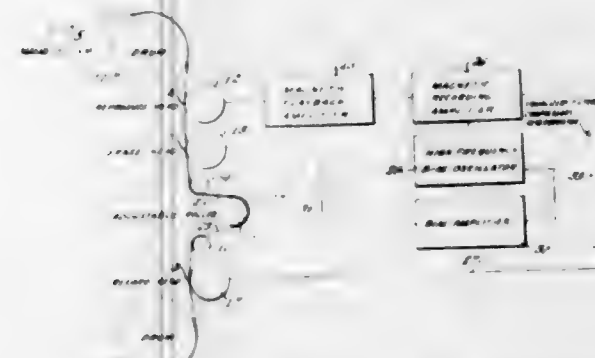


mitting information over said trunk pertaining to the idle or ringing condition of each line, and means at said center responsive to the receipt of said information for simultaneously manifesting all of said lines currently in a ringing condition.

3,002,055

SINGLE FILM RERECORDING SYSTEM

Olin Brittingham Gumbly, Los Angeles, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 30, 1956, Ser. No. 607,148
4 Claims. (Cl. 179-100.2)



1. A sound rerecording system for simultaneously detecting a sound record and recording said sound record on the same record medium comprising rollers adapted to guide a record medium having a sound record thereon from a first position to a second position, means adapted to detect said sound record at one position with respect to said medium guiding means, means adapted to erase said sound record from said medium after detection, means adapted to record said sound record on said medium after the erasing thereof, and means for connecting said detecting means and said recording means, means being included in said medium guiding means and intermediate said detection means and said recording means for varying the amount of said sound record medium between said detecting means and said recording means, said last-mentioned means being a film guiding roller between said first-mentioned rollers and adjustable to vary the length of said medium between said rollers.

3,002,056

TONE ARM ASSEMBLY

Helmut Batsch and August Freise, Hannover, Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed May 28, 1959, Ser. No. 816,602
Claims priority, application Germany Aug. 23, 1958
4 Claims. (Cl. 179-100.41)

1. A tone arm piezoelectric pickup assembly for use with groove-type stereophonic recordings having two

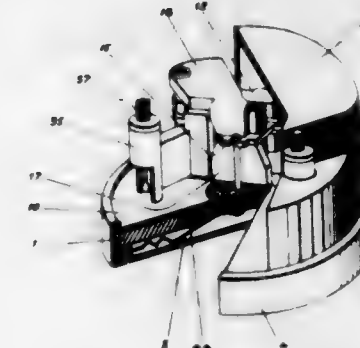
sound channels mutually displaced by 90° transversely of the groove and the recording directions being symmetrically oriented with respect to the axis of the tone arm needle, said assembly comprising a housing; two flat-type crystals each associated with one of said channels and fixed at one end to said housing and said crystals having their larger surfaces oriented in mutually adjacent parallel relation; a clamp fixed to the other end of each crystal at right angles to a longitudinal torsional axis thereof disposed parallel to said larger surfaces; pivot



3,002,057

POLARIZED ELECTROMAGNETIC DEVICE

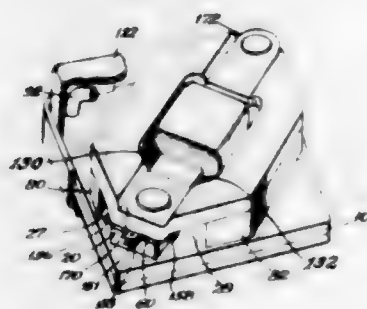
Sten Daniel Vigren, 16-18 Mose Backetorg, Stockholm, Sweden, Per Harry Elias Claesson, 4 Sportstugevagen, Danderyd, Sweden, and Rolf Albin Zander, 5 Ivar Vildfarnesgatan, Stockholm, Sweden
Filed Mar. 25, 1957, Ser. No. 648,056
Claims priority, application Sweden Mar. 29, 1956
11 Claims. (Cl. 179-114)



1. A polarized electromagnetic device comprising in combination: a pair of spaced members of magnetic material having pole faces defining an air gap; a permanent magnet positioned between said members for producing a polarizing flux through said members and across said air gap; an armature mounted between said members and extending from said permanent magnet into said air gap; said armature having two arms with a cross sectional area much smaller than that of the armature; supporting means for said arms; said arms extending from that part of the armature which is located nearest to the permanent magnet in alignment with each other and at right angles to the longitudinal direction of the armature and having their ends only fixedly attached to said supporting means, thereby permitting oscillation of the armature through

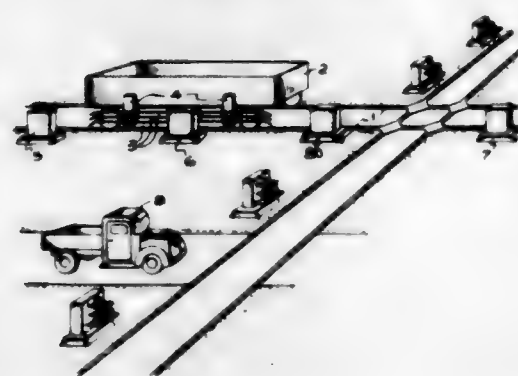
torsional deflection in said arms; and an energizing coil surrounding part of the armature and located between the permanent magnet and said air gap.

3,002,058
ELECTRO ACOUSTIC TRANSDUCER
Hugh S. Knowles, Glen Ellyn, Ill.
(9400 Belmont Ave., Franklin Park, Ill.)
Filed Mar. 7, 1958, Ser. No. 719,958
17 Claims. (Cl. 179-114)



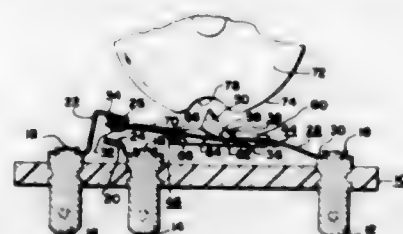
1. An electro transducer comprising a magnet, a pole piece flux-conductively associated with each pole of the magnet, one pole piece having a pair of portions facing positioned to the other pole piece to form two gaps of low flux conductivity, one pair called a clamped gap and the other a working gap, an armature having one portion clamped in the clamped gap along a line transverse to the length of the armature and another portion vibratable in the working gap, there being an open space adjacent that edge of the armature in the clamped gap and between the pole pieces, a coil around the armature, means holding the said components in assembled relationship, and means mounted on the armature on the working gap side of said clamping line and extending toward an external surface of the transducer for moving the vibratable end of the armature in the working gap.

3,002,059
DISTRIBUTED CONTACT SYSTEM
Harry Yale Magoech, Havertown, Pa., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,328
9 Claims. (Cl. 191-6)



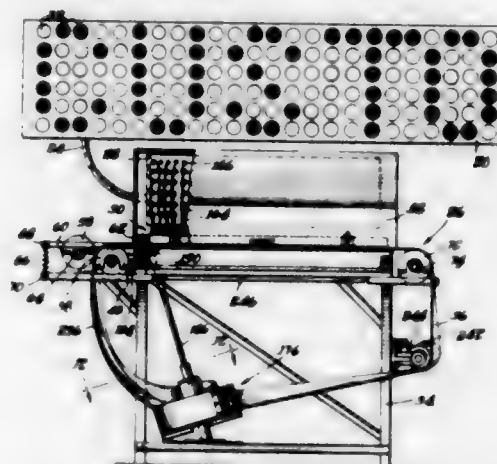
7. A distributed contact power system including a plurality of spaced identical power posts with contact shoes mounted thereon, a plurality of movable current-collector rails and means for supporting said movable rails for motion from one post to another, said rails being adapted to engage the contact shoes of said power posts and being of sufficient length to engage corresponding contact shoes on first and second adjacent power posts, each of said rails having a first and a second section and means for electrically isolating said first and second sections from each other.

3,002,060
SWITCH ASSEMBLY
Donald W. Lavina, Pittsford, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,372
11 Claims. (Cl. 200-38)



1. A cam operated switch including, a base, a leaf spring having one end attached to said base and pre-stressed adjacent its attachment in one direction, and a member attached to said leaf spring so as to bend the medial portion thereof in said one direction whereby said leaf spring has a low spring rate in said one direction and a high spring rate in the opposite direction.

3,002,061
MOVING ELECTRIC SIGN APPARATUS
Forrest G. Perkins, Elmore, Calif., assignor to Leonard L. Bishop, St. Joseph, Mich.
Filed Nov. 17, 1958, Ser. No. 775,675
19 Claims. (Cl. 200-46)

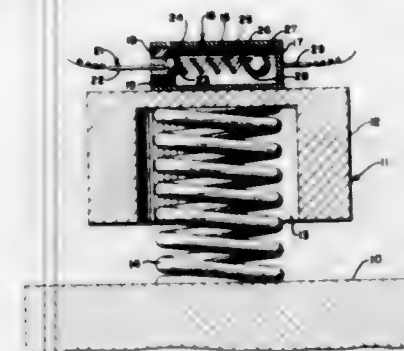


7. A transcription apparatus for a moving electric sign or the like comprising a bed, feed means arranged at the opposite ends of the bed for feeding a continuous tape to and across and from the bed, detecting means associated with the bed for detecting coded signals from the tape while on the bed, tape storage means for storing a quantity of tape in a spiral coil, said tape storage means including a drum having a rotary coil supporting bottom for controlling the action of the tape in said storage means, and means for driving said feed means and said bottom in predetermined timed relation, said driving means being constructed to drive said bottom in the rotary direction in which a coil supported on said bottom spirals radially outward.

3,002,062
METHOD OF INCREASING SENSITIVITY OF VIBRATION SENSITIVE ELEMENT
Samuel Globe, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 7, 1955, Ser. No. 486,740
8 Claims. (Cl. 200-61.01)

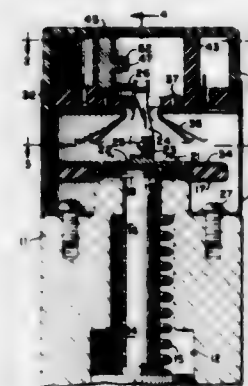
8. In a vibratory system, in combination, a source of vibrations, a first vibratory element coupled to said source and vibratable in any direction, a second vibratory ele-

ment fixedly coupled at a right angle to said first vibratory element, said second element being vibratable in any direction with respect to said first element and having a device in defining a sealed chamber on the side of said further area thereof remote from said vacuum chamber, and a control device actuatable by said devices in response



less inertia than said first vibratory element, whereby the vibration of the first vibratory element is amplified by said second element.

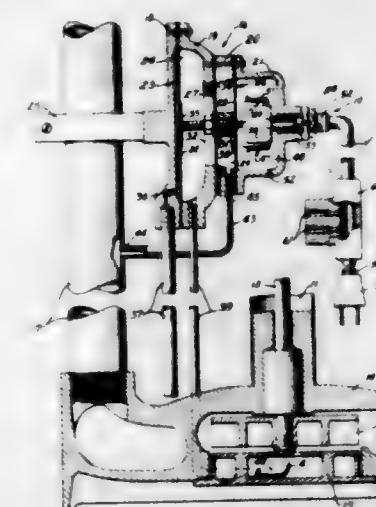
3,002,063
MULTIPLE CIRCUIT SWITCH
Leo V. Gladett, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 26, 1957, Ser. No. 648,751
14 Claims. (Cl. 200-81.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electric switch of the class disclosed, comprising, in combination, a support, a switch mechanism including a member movably mounted on said support, shorting means resiliently carried by said member and movable therewith, cam means mounted on said support and disposed in alignment with said shorting means, said cam means having surfaces adapted to engage and deflect said shorting means during movement of said member in one direction, said movement being sufficient to carry said shorting means past said cam means, a pair of contacts, one contact being supported on said cam means and the other contact being supported on said support adjacent said one contact, said cam means having other surfaces adapted to engage and deflect said shorting means during movement thereof in an opposite direction for effectuating shorting of said contacts and closing an electrical circuit.

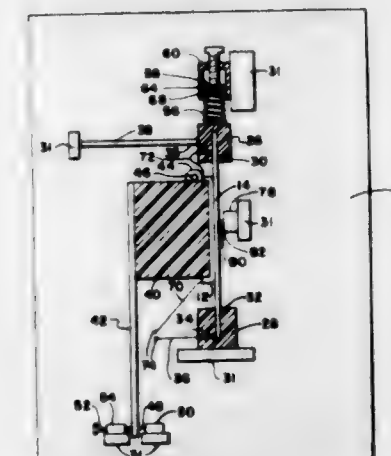
3,002,064
SUMP PUMP AND FLOOD CONTROL EQUIPMENT
Axel L. Nielsen, 1316 E. Elza, Hazel Park, Mich.
Filed Mar. 26, 1958, Ser. No. 724,193
14 Claims. (Cl. 200-83)

1. A control for a pump comprising a control unit including first and second flexible, pressure responsive devices having areas of effective flexibility facing and at least in part defining a vacuum chamber, and being movable in opposite directions in response to evacuation of said chamber, said second device having a further area of effective flexibility spaced from and facing oppositely of said vacuum chamber, means coacting with said second



to evacuation of said vacuum chamber, said control unit having means placing said vacuum and sealed chambers in communication with one another, thereby subjecting said second device to vacuum on both of its areas.

3,002,065
ELECTRICAL DEVICE EMPLOYING STRESSED COLUMN
John La Tour, Jr., 124 Emmett St., Daytona Beach, Fla.
Filed Mar. 16, 1959, Ser. No. 799,776
1 Claim. (Cl. 200-87)

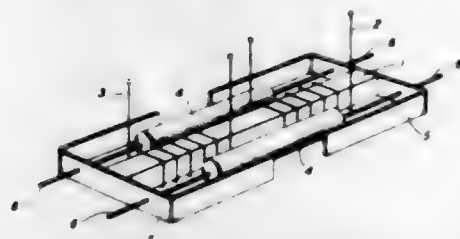


An overload switch comprising a normally rigid elongated electrically conductive column; a pair of end block insulators for receiving the ends of said column; a first contact means carried by the center of said column; an adjustable coil spring connected to one of said end blocks for compressively stressing said first column along the longitudinal axis thereof to a point beyond its elastic stability; an elongated electrically conductive member pivotally mounted at one end and adjustably spring biased away from said column at the other end; said member positioned adjacent to said column and insulated therefrom; said member supporting said column in a flexed position; a current source; a device to be protected; first D.C. electrical means connecting in series relationship, said current source, member, column and device; second contact means spaced from said column on the side thereof opposite from said member and in alignment with said first contact means; second D.C. electrical means for coupling said column and said second contact means to provide a parallel path around said device, whereby overload current flow will be shunted around said device.

3,002,066 MAGNETICALLY CONTROLLED SWITCHING DEVICE

Raymond W. Ketchledge, Whippany, and Clarence A. Lovell, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 1, 1959, Ser. No. 824,224
12 Claims. (Cl. 200-87)



1. An electrical switching device comprising a rod of a magnetic material capable of assuming a plurality of stable remanent magnetization states, a reed switch, magnetically permeable means affixing each of the terminals of said switch to a corresponding end of said rod, and current-conducting means comprising a plurality of coils wound on said rod for establishing selected magnetization states in individual portions of said rod to activate said switch.

3,002,067 MAGNETICALLY BIASED SWITCH

John A. Baldwin, Jr., Murray Hill, and Alexander Feiner, Whippany, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 1, 1959, Ser. No. 824,225
11 Claims. (Cl. 200-87)



1. An electrical switching device comprising a magnetically responsive switch having oppositely disposed terminals, means adjacent one terminal of said switch comprising a magnetic member of a material exhibiting two stable remanent magnetization conditions for producing a selected one of first and second oppositely directed magnetic fields in said switch, and a permanent magnet positioned adjacent another terminal of said switch so that the field of said permanent magnet reinforces said first magnetic field and substantially cancels said second oppositely directed magnetic field in said switch.

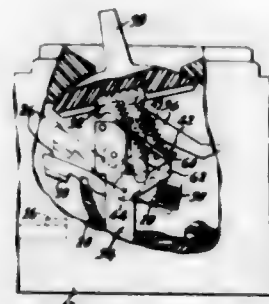
3,002,068 CIRCUIT BREAKERS

Alfred E. Maler, Colonia, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Aug. 4, 1960, Ser. No. 47,435
8 Claims. (Cl. 200-88)

1. Switching apparatus including companion contacts, a movable contact member carrying one of said contacts, a pair of toggle links pivoted to each other at a knee and including one link pivoted to said movable contact member for effecting operation thereof, a manual operating member movable between "open" and "closed" positions, a spring connected to the knee of the toggle and arranged to be overcentered relative to the other of said toggle links by operation of said operating member, and a part carried by said manual operating mem-

ber and engageable with the toggle in driving relation thereto during only part of the movement of the operat-



ing member from "open" toward "closed" position for assisting the erecting operation of the toggle links.

3,002,069 ELECTRIC SWITCH

Charles A. Burrus, Red Bank, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1959, Ser. No. 862,525
1 Claim. (Cl. 200-112)



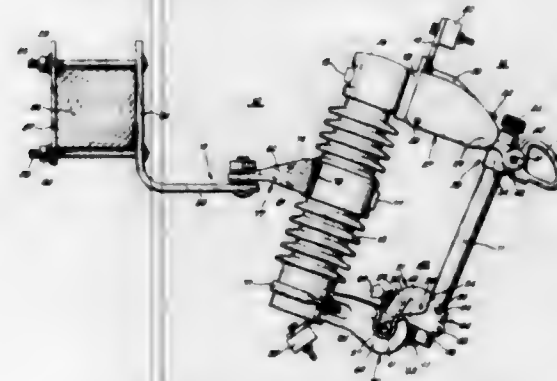
An electric switch comprising an envelope member containing at one end a pool of mercury, a terminal having a portion extending outside said envelope and another portion projecting inside said envelope and submerged in said pool, a U-shaped member of magnetic material positioned in said pool and attached to the terminal portion therein, said U-shaped member having two arms and an interior bottom portion, means for elevating a section of said mercury above the surface of said pool with the bottom of said section contiguous with the surface of said pool, said means comprising a bifurcated member of non-magnetic material having forked portions, said bifurcated member being mounted on the interior bottom portion of said U-shaped member and between the arms thereof, the forked portions of said bifurcated member being so proportioned as to project above the tops of the arms of said U-shaped member and also to protrude above the surface of said pool while their bottom portions remain submerged in said pool of mercury, magnetic means external to said envelope for oppositely polarizing the arms of said U-shaped member, an armature of magnetic material mounted above said pool for movement of its tip transversely between the forks of said bifurcated member, and electromagnetic means external to said envelope for cyclically changing the polarity of said armature tip, said armature having a length suffi-

cient for the maximum downward extent of travel of its tip to reach only to an intermediate point between the surface of said pool and the top of said elevated section of mercury.

3,002,070 FUSE CUTOUT

Raymond J. Bronikowski and George R. McCloud, South Milwaukee, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Sept. 1, 1960, Ser. No. 53,473
4 Claims. (Cl. 200-114)

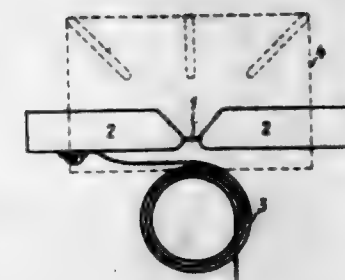


1. In a fuse cutout assembly of the type comprising a mounting bracket, an insulating member mounted thereon, an upper terminal contact assembly mounted on one end of said insulating member, fuseholder supporting means fixedly mounted on the other end of said insulating member, lower terminal contact means affixed to said support means, and a fuseholder assembly comprising a gas evolving fuse tube with a rupturable fuse link therein and an upper contact member and a lower contact assembly mounted at opposite ends thereof respectively for engagement with said upper terminal contact assembly and said lower terminal contact means; the improvement comprising, said upper terminal contact assembly and said upper contact member comprising respectively, resilient stationary contact means, downwardly biased latch means mounted on said insulating member, means affixed to said insulating member for limiting movement of said resilient contact means and said latch means, and an upper movable contact member normally engaging said resilient contact means and having a portion thereof engageable with a portion of said latch means to retain engagement of said resilient contact means and said upper contact member, said resilient contact means further characterized by being operable to bias said upper contact member into engagement with said latch means, in combination with said lower terminal contact means and said lower contact assembly, said lower terminal contact means comprising resilient contacts and means for limiting movement of said resilient contacts, and said lower contact assembly comprising, means affixed to said fuse tube, cam contact means pivotally mounted on said means affixed to said fuse tube and engageable with said resilient contacts, trunnion means associated with said cam contact means and receivable in said fuseholder supporting means in such a manner that axial movement of said fuseholder is substantially prevented, link flip means associated with said cam contact means and pivotally movable with respect thereto and engageable with a portion of said means affixed to said fuse tube to normally prevent relative motion between said cam contact means and said fuse tube, and means for limiting pivotal movement of said cam contacts with respect to said fuse tube, whereby during current interruption of the type accompanied by unbalanced thrust forces said fuse cutout assembly moves substantially as a unitary mass, the energy so generated being dissipated in said mounting bracket.

3,002,071 HEAVY DUTY FUSE

Bjorne Stenlund, Zurich, Switzerland, assignor to Oerlikon Engineering Company, Zurich, Switzerland, a corporation of Switzerland

Filed Oct. 7, 1958, Ser. No. 765,897
Claims priority, application Switzerland Nov. 11, 1957
1 Claim. (Cl. 200-120)



In a rapid-acting heavy-duty protective device for semiconductor rectifier installations in which a current-surge-limiting coil is in series with a fuse wire mounted in an arc chimney, and in which the current density in the fuse wire exceeds 300 amperes per square millimeter, a fuse wire whose length is no greater than

$$l = \sqrt{\frac{6t_a \lambda n^3 T}{c T_f + c_0}}$$

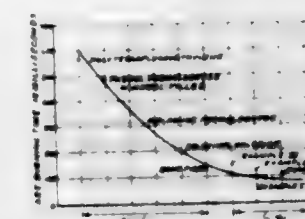
where

l = length of fuse wire (centimeters),
 t_a = time delay before fuse response (seconds),
 λ = thermal conductivity of the fuse wire (calories/centimeter degree centigrade),
 n = maximum surge current/rated current (amperes),
 T = permissible maximum excess temperature at the center of the fuse wire (degree centigrade),
 c = specific heat of the fuse wire (calories/degree centigrade cubic centimeters),
 T_f = fusing temperature of the fuse wire (degree centigrade), and
 c_0 = heat of fusion of the fuse wire (calories/cubic centimeter).

3,002,072 ARC-QUENCHING COMPOUND AND ELECTRICAL EQUIPMENT UTILIZING SAME

Joseph A. Nava, Villa Park, William E. Exner, Elmhurst, and Irwin R. Levinson, Chicago, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey

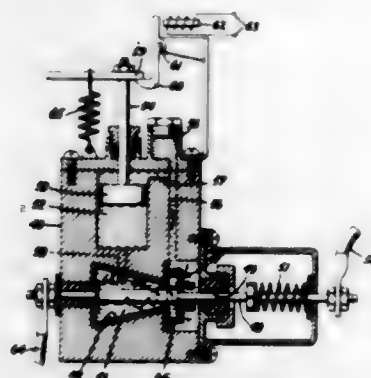
Filed Feb. 12, 1959, Ser. No. 792,882
6 Claims. (Cl. 200-144)



1. In an electrical connector having separable current-continuing means, the improvement comprising means forming an energy sink adjoining the point of separation of said current carrying means, said energy sink including a combination of a cross-linked organic polymer and a dienic copolymer, said combination having the properties of vaporizing without carbonization or flaming in the presence of an electrical arc discharge.

3,002,073 ELECTRIC CIRCUIT INTERRUPTION DEVICE AND METHOD

James D. Cobble, Rexford, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 16, 1958, Ser. No. 728,815
5 Claims. (Cl. 200-150)



1. An electric circuit interrupting device comprising: a pair of arc-electrodes, at least one of which is movable to separate said electrodes and cause the initiation of an electric arc therebetween; an arc chamber surrounding said electrodes and having an orifice within the wall thereof; means associated with said orifice for causing a fluid flow therethrough and tangentially within said chamber to establish therein an arc-extinguishing fluid vortex, the walls of said arc chamber tapering in the region thereof laterally surrounding said arc-electrodes in circuit-closed position to create thereat a nozzle in which fluid is forced past said electrodes when in circuit opened position at high velocity creating a region of high fluid turbulence to rapidly extract energy from said arc; and means responsive to a flow of fluid within said chamber for separating said arc-electrodes to initiate said arc after the establishment of said-vortex.

3,002,074 RELAY CONTACT SYSTEM

Edward M. Eadie, Jr., Westfield, N.J., assignor to Daystrom Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed June 8, 1959, Ser. No. 818,735
3 Claims. (Cl. 200-166)

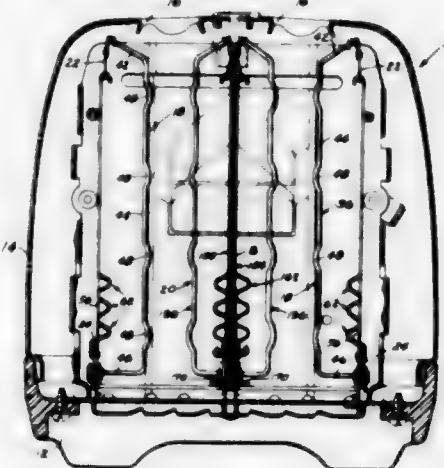


1. A sensitive relay type instrument comprising a back-up strip, an elongated first flexible contact element secured at one end thereof to the said back-up strip, a second flexible contact element secured to the back-up strip adjacent the secured end of the said first flexible member, the free end of the said second flexible contact element normally being spaced from the said back-up strip, a third contact element having a corner formed thereon which is adapted to successively engage the said first and second flexible contact elements upon relative movement of the said third contact element with the said first and second flexible contact elements, the first and second contact elements flexing under pressure exerted thereon by the third contact element to effect a scraping engagement between the corner on the said third contact element and the respective first and second flexible contact elements

after initial contact engagement with the respective first and second flexible contact elements and upon relative movement of the engaged contacts, the said second flexible contact element being adapted to be flexed into abutting engagement with the said back-up strip by the said third contact element.

3,002,075 HEATING ELEMENT FOR TOASTER

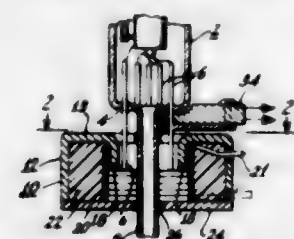
Charles D. Viseo, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,783
12 Claims. (Cl. 219-19)



7. A heater-element for a toaster or the like comprising, a preformed heater-element formed of a continuous length of resilient, shape-sustaining, resistance wire that is preformed to sustain itself in a plurality of elongated sinuosities, which define a plurality of elongated heater leg-segments, there being two end leg-segments, and a plurality of intermediate leg-segments each of which is connected at its ends by a bight portion to an adjacent leg-segment, and each intermediate leg-segment of the heater-element being crimped over only a portion of the length thereof to increase the effective heating length and the per-unit-area heat output of the heater-element adjacent the region of said crimped length, the bight portions of the heater-element affording resilient lateral spreading of the heater leg-segments against the inherent resilience of the wire tending to restore itself to its preformed condition, and the crimped portions of the intermediate leg-segments affording resilient, longitudinal, elongation thereof.

3,002,076 ELECTRICAL HEATER UNIT

Milton K. Massey, Marion, Ind., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,098
9 Claims. (Cl. 219-19)



1. A heater unit comprising a heater coil, indexing means disposed adjacent said coil for angularly indexing the insertion of an electron tube stem having a cylindrical array of wire conductors concentrically into said coil, and a plurality of heat shield straps disposed in a hollow cylindrical array concentrically within said coil,

each of said straps lying alongside a different conductor between its conductor and said coil when said stem is in its indexed inserted position.

3,002,077 HEATING DEVICE

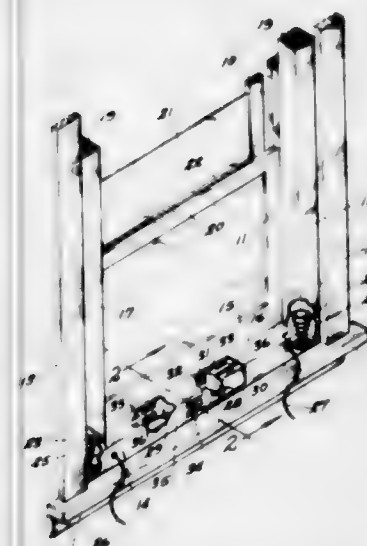
Gregory Caliri, % Caliri Inc., 447 Essex St., Lawrence, Mass.
Filed Dec. 31, 1959, Ser. No. 843,287
5 Claims. (Cl. 219-26)



3. A heating device including a hollow casing of heat conductive material, and within said casing a multi-layer winding formed from an elongated insulated electrical heating element comprising an inner heating member having predetermined electrical resistance characteristics, an imperforate tube of substantially pure nickel clad upon said inner member to encase same throughout its length, and a coating of flexible ceramic material surrounding said tube throughout its length.

3,002,078 ROOM VENTILATING UNIT

James C. Procter, Cumberland, Ind.
Filed Aug. 1, 1958, Ser. No. 752,489
2 Claims. (Cl. 219-34)



1. A room ventilator device for application to an installed window frame having vertical side members between which is carried a sash vertically shiftable from a sill or stool, comprising a horizontal conduit extending across the frame on the stool and in sliding contact with the sash room side when shifted from and to said stool; said conduit having an approximately central zone closed off from the conduit on either side thereof and opening to both the room and sash sides; a damper across one of said zone openings; said conduit having two spaced apart side openings on its sash side outside of said zone, the zone being intermediate said conduit side openings; a vertical side conduit extending upwardly from each end of said horizontal conduit and along said frame members and terminating by open ends above the top of said sash; said horizontal conduit opening by its end portions respectively into said vertical conduits; and an electrical heating element at the lower ends of said side conduits; said sash in its lowered, closed position closing off all three of said horizontal conduit openings, the sash being raised to have its bottom edge approximately to the top of said horizontal conduit for full opening of said horizontal conduit openings.

3,002,079 TERMINAL ASSEMBLIES FOR ELECTRIC SURFACE HEATING UNITS

Elmore Stanley Smith and David Gibbons Smith, Weston, Ontario, Canada, assignors to Moffats Limited, Weston, Ontario, Canada
Filed Dec. 14, 1959, Ser. No. 859,445
8 Claims. (Cl. 219-37)



1. A terminal assembly for use with an electric surface heating unit and comprising a block of electrically insulating material extending longitudinally between two ends and having an upper surface and an under surface, a plurality of vertically extending channels in one end of the block, a plurality of open-topped, substantially horizontal channels in the upper surface of the block extending longitudinally from the vertical channels to the other end of the block, each horizontal channel leading into, and being aligned with, one of said vertical channels, an aperture in the base of each horizontal channel between the ends thereof, each aperture leading from the channel to the under surface of the block, the base of each horizontal channel providing first and second lower abutments separated by the aperture in said base, each first abutment extending between a vertical channel and one of said apertures and each second abutment extending between one of said apertures and the other end of the block, a bridge member extending between the side walls of each horizontal channel above the aperture in the base thereof, and an upper abutment on the underside of the bridge member defined in longitudinal extent by edges nearer to and further from said vertical channels; a contact strip of resilient metal received in each horizontal channel and having one end portion located within the vertical channel aligned therewith, the other end portion of the strip being engaged by the upper abutment and the second lower abutment of the channel in which the strip is received, each strip being bendable, by engagement of an electric surface heating element, about said nearer edge of the upper abutment from a first position in which the strip is in contact with a first lower abutment to a second position in which the strip is lifted substantially clear of said first lower abutment; and means to prevent substantially bodily movement of the strips longitudinally relative to the block.

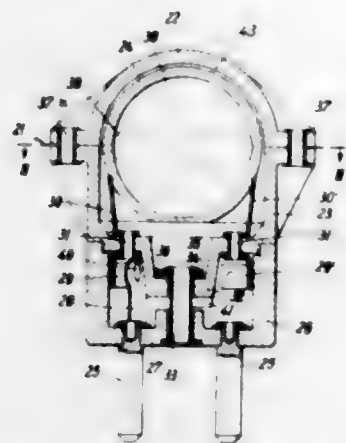
3,002,080 ELECTRIC VAPORIZER FOR DISINFECTANT, INSECTICIDAL OR OTHER SUBSTANCES

Erich Heinzig, 1 Auf der Welle, Rahden, Germany
Filed Feb. 24, 1960, Ser. No. 10,678
Claims priority, application Germany Aug. 10, 1956
1 Claim. (Cl. 219-43)

In an electric vaporizer for disinfectant, insecticidal or other substances the improvement comprising a top-open and substantially cylindrical vaporizing vessel made of ceramic material; a housing made of insulating material and completely encasing said vessel; said housing and said vessel arranged to leave an air passageway therebetween; said housing being composed of a first and a second component contacting each other in a division plane passing through the longitudinal axis of said vessel; an opening each in the top wall and in the bottom wall of said housing permitting cooling air to pass therethrough and along the outer surface of said vessel; an electric heating spiral upon said vessel; a cupshaped socket ro-

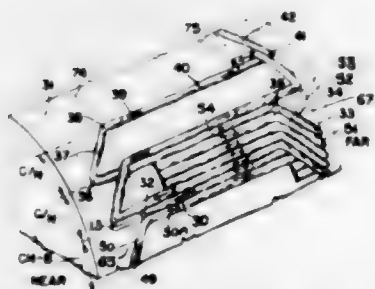
tably attached to the second component of said housing and extending therefrom with its longitudinal axis perpendicular to said division plane; a pair of contact plugs mounted in the bottom of said socket and extending outwardly therefrom perpendicular to said division plane; two pairs of sliding contacts each composed of a stationary contact member attached to said second housing

complete revolution of the roller subsequent to the first revolution of the roller rotating said roller through a number of degrees of rotation which is sufficient to bring the weld bead of the first stroke of said successive pass closely into proximity with the weld bead of the preceding pass, and continuing the process until the whole effective area of the drum is covered with beads of weld material.



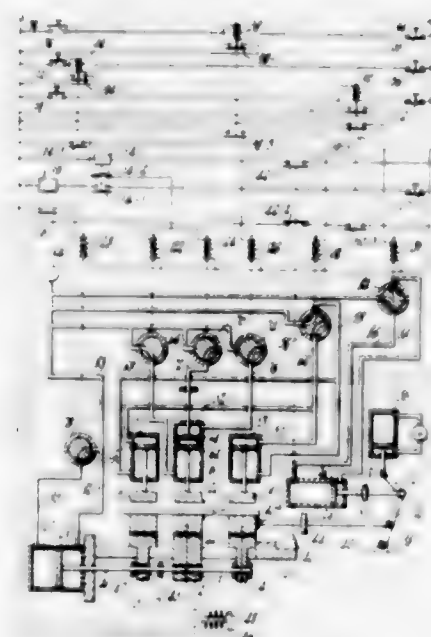
component and electrically connected to said heating spiral, and of a sliding contact member attached to said socket and electrically connected to one of said plugs; said sliding contact member adapted to slide upon said stationary contact member when said cupshaped socket is rotatably displaced; and depressions in said stationary contact member and projections on said sliding contact member adapted to engage each other and thus to define the position of said plugs relative to said housing.

3,002,081
METHOD AND APPARATUS FOR WELDING
Victor A. Wenzel, Rosemount, Minn.
Filed Oct. 5, 1960, Ser. No. 60,664
18 Claims. (Cl. 219-76)



1. The method of weld-surfacing the outer surface of cylindrical rollers of roller-type rock crushers and the like for construction or repair, which comprises moving an electric arc welding tip for depositing a substantially continuous bead of weld material, said weld material being deposited in a number of passes sufficient to cover the effective area of the roll, each pass comprising a plurality of connected strokes wherein the weld material is deposited back and forth along lines of substantially equal length from adjacent one end to adjacent the other end of the roller, the strokes being straight and parallel to the roller axis when the bead of weld material is deposited when the roller is stationary and spiral when deposited when the roller is rotated, at the beginning of each stroke rotating the roller through a predetermined number of degrees of rotation, said number of degrees of rotation being several times the number of degrees of circumference of the roller spanned by the width of one weld bead, said rotations being at a substantially constant rate so as thereby to provide a spiral path of weld material throughout the first part of each stroke with the balance of the stroke parallel to the roller axis, at the beginning of each successive pass as determined by each

3,002,082
WELDING MACHINE
Marshall Sheer, Brookline, Mass., assignor to Seton Corporation, Providence, R.I., a corporation of Delaware
Filed Oct. 9, 1959, Ser. No. 845,437
6 Claims. (Cl. 219-97)

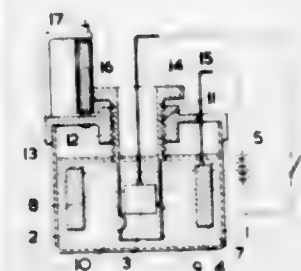


1. A flash-butt welding machine including three spaced linearly relatively movable platens each having a clamp for holding a pair of workpieces to be welded together, with one of said workpieces on one side platen and the central platen and the other on the other side platen, said clamps being movable between a closed position for clamping said workpieces and an open position for removal of said workpieces, the central one of said clamps being linearly positioned between said other clamps and having an intermediate clamp opening position in which it is opened a predetermined limited distance from said workpiece, fluid motor means for advancing one of said side platens relatively to the other two of said platens and said side platens relatively to said central platen for successive welding and weld zone shearing, control means operable following the said welding to open said central clamp said predetermined limited distance while maintaining clamping pressure on the other clamps, for further simultaneous advance by said fluid motor means of said side platens with said other clamps carrying said workpiece and advancing it relatively to said central clamp while maintaining positioning support for said workpiece by said central clamp.

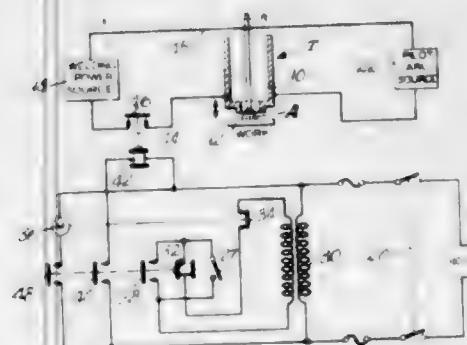
3,002,083
HEAT TREATMENT OF METALS IN AN ELECTROLYTIC BATH
John Keith Lancaster, Tilehurst, Reading, David Conrad Milner, Reading, and Wallace Hirst, Tadley, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company
Filed Oct. 22, 1959, Ser. No. 847,922
Claims priority, application Great Britain Oct. 24, 1958
10 Claims. (Cl. 219-121)

1. A process for the heat treatment of a metal object, comprising the steps of immersing said object in an electrolytic bath containing an anode, interposing between said object and said anode an insulating shield so as to

leave unshielded from the anode only a relatively small area of said object, and thereafter applying a sufficiently high voltage between said anode and said object to cause



3,002,084
ELECTRIC ARC WORKING
Raymond P. Sullivan, Jersey City, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Jan. 28, 1959, Ser. No. 789,575
8 Claims. (Cl. 219-127)



1. Work-in-circuit arc welding which comprises establishing a temporary surface-to-surface electrical ground contact between the work to be welded and an annular contact member in the arc welding circuit, adjacent the site to be welded, for a least the duration of the arc welding operation, by moving such annular contact member into such surface-to-surface contact with the work as an arc welding electrode in such circuit is advanced toward such welding site, and conducting arc welding current through such surface-to-surface contact between said member and such work for the duration of the welding operation, while flowing an annular stream of arc shielding gas through said annular member and around the end of said arc welding electrode.

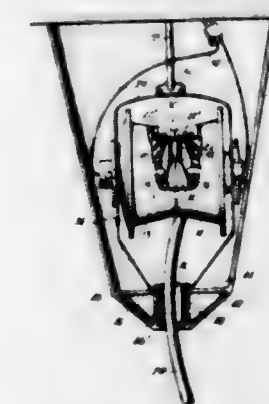
3,002,085
GAS-SHIELDED METAL-ARC WELDING PROCESS
Roscoe R. Lobosco, Elizabeth, Thomas McElrath, Jr., Chatham, and Wilbur H. Helmbrecht, Union, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed May 29, 1951, Ser. No. 228,888
6 Claims. (Cl. 219-130)

1. Process of metal-arc welding which comprises striking a metal fusing arc between a fusible metal electrode and fusible work, supplying arc welding current through such electrode and the work of sufficient intensity to overcome gravity in the transfer of metal from the electrode to the work, shielding such arc and the adjacent metal from the atmosphere with relatively dry oxy-argon gas having a water vapor content of less than 6 grains of moisture per 1000 cubic feet of gas, and automatically feeding the electrode toward the arc in response



volt of a selected arc voltage of not less than 20 volts and not more than 30 volts.

3,002,086
PULLING-LAMP-FIXTURE
Karl Reeber, Oenecker Weg 9, Luedenscheid, Westphalia, Germany
Filed June 16, 1959, Ser. No. 820,710
Claims priority, application Germany Apr. 25, 1959
4 Claims. (Cl. 240-71)



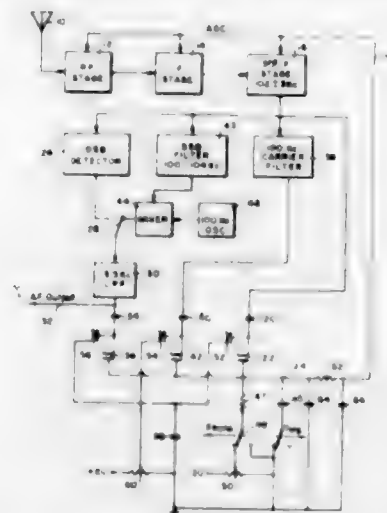
1. A pulling-lamp-fixture, comprising in combination a spring-pull effective in one direction and including a winding drum, a spring-pull frame, two axle members supported by said spring-pull frame and disposed at the same axis and rotatably supporting said winding drum in said frame, a lamp cord supporting a lamp socket at one end and wound on said winding drum, said winding drum comprising two halves and each of said axle members being inserted through the end face of the corresponding half of said winding drum, and disposed in said drum, a radially disposed contact spring secured to each half of said winding drum and engaging, adjacent one of its ends, the inner end of the corresponding of said axle members, the other end of said axle members being connected with current feeding wires, a contact screw on each half of said winding drum for securing said contact springs and the other end of said lamp cord, with a ceiling canopy receiving said spring pull and having a bottom portion, a bushing connected to the lower end of said frame, and said bushing supported by said spring-pull frame and projecting downwardly from said bottom portion of said canopy, and a covering and centering cap receiving said

bushing by means of an inner engaging cylindrical member, said cap covering said bottom portion of said canopy and having a color different than that of said canopy.

3,002,087

SELF-POWERED RADIO TRANSMITTER

James F. Holt, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Filed May 1, 1953, Ser. No. 352,392
7 Claims. (Cl. 250-17)

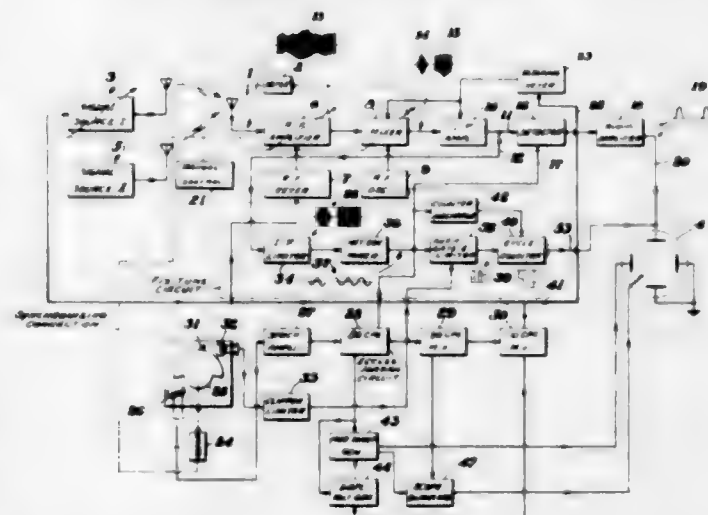


the maximum gain in said receiver in the absence of any signal without an objectionable noise output.

3,002,089

METHOD AND APPARATUS FOR ACCURATE COMPARISON OF FREQUENCIES

Emile Labin, New York, N.Y., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Filed Sept. 16, 1944, Ser. No. 554,408
5 Claims. (Cl. 250-20)



1. A self-powered radio transmitter comprising a transistor device having collector, emitter and base electrodes, circuit means coupled to said electrodes for producing radio frequency oscillations, said means including a resonant tank circuit operatively coupled to said collector electrode, a feedback circuit inductively coupled to said tank circuit and operatively coupled to said emitter electrode for feeding energy in predetermined phase relation from the tank circuit to the emitter electrode, a time constant biasing circuit comprised of a condenser and a resistor connected in parallel and connected in series between said feedback circuit and said base electrode in such a manner that the current conducted by said base electrode will pass through said resistor; a transformer having primary and secondary windings, the secondary winding being connected in series between said resistor and said tank circuit respectively whereby a potential provided by said secondary winding will cause a current to flow between said collector and base electrodes, and a microphone operatively coupled to said primary winding for producing an A.C. potential in said secondary winding in response to mechanical vibrations imparted to said microphone.

3,002,088

AGC FOR SINGLE SIDEBAND RECEPTION

Bertram A. Trevor, Tucson, Ariz., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 15, 1960, Ser. No. 8,893
7 Claims. (Cl. 250-20)

2. An automatic gain control for single sideband reception comprising a radio receiver having a variable gain means and an IF output, a first AGC rectifier connected to said IF output for varying said variable gain means, a carrier frequency filter connected to said IF output, a second AGC rectifier connected to said filter for varying said variable gain means, detecting means connected to said IF output for providing an audio frequency output, a third AGC rectifier connected to said detecting means

3. In a radio system for indicating the signal frequency of two signal sources the combination comprising an intermediate frequency circuit, means for alternately energizing said intermediate frequency circuit from said two sources, a heterodyne oscillator and mixer circuit, means operatively connecting said intermediate frequency circuit and said oscillator mixer circuit, a cycle counting circuit for counting the beat frequency of the output of said mixer circuit, means for generating aperture pulses, and means for operatively connecting said cycle counting circuit and said means for generating aperture pulses, whereby the signal frequencies may be indicated as to the respective number of beat cycles within each aperture pulse.

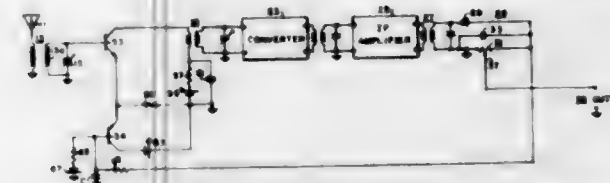
3,002,090

AUTOMATIC-GAIN-CONTROL SYSTEM

Charles J. Hirsch, Locust Valley, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 27, 1958, Ser. No. 757,633
11 Claims. (Cl. 250-20)

1. An automatic-gain-control system for a wave-signal receiver, comprising: transistor amplifying means having

an input terminal, an output terminal, and a common terminal; means for applying a received signal between the input terminal of said amplifying means and a point of signal reference potential; detecting means coupled to the output terminal of said amplifying means for deriving a control voltage dependent on the strength of the amplified signal; and transistor control means having an input terminal coupled to said detecting means to receive said control voltage and having an output ter-

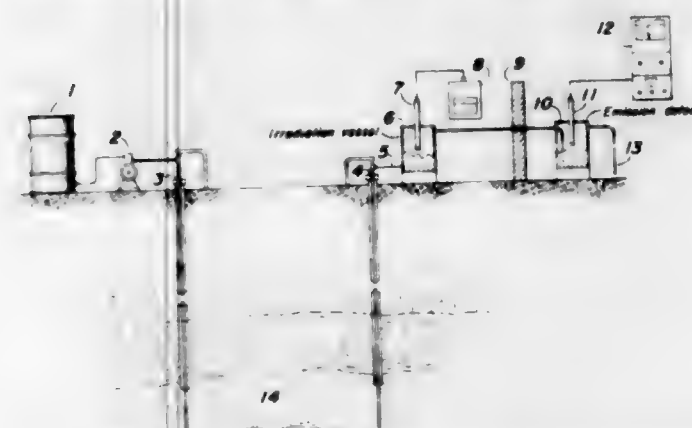


minial coupled to the common terminal of said amplifying means, said control means being of opposite type conductivity with respect to said amplifying means and responsive to said control voltage to control the proportion of the received signal applied between the input and common terminals of said amplifying means relative to the proportion of said received signal applied between said common terminal and said point of signal reference potential whereby the over-all system gain is controlled to compensate for variation of the received signal strength from a preselected level.

3,002,091

METHOD OF TRACING THE FLOW OF LIQUIDS BY USE OF POST RADIOACTIVATION OF TRACER SUBSTANCES

Frederick E. Armstrong, Bartlesville, Okla., assignor to the United States of America as represented by the Secretary of the Interior
Filed Nov. 3, 1958, Ser. No. 771,683
8 Claims. (Cl. 250-83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for tracing the flow of fluids underground which comprises enriching the fluid at one underground point with a tracer element capable of yielding a radioactive isotope when irradiated with neutrons having a flux density of at least 10^7 neutrons per cm^2 per second, withdrawing a sample of the fluid at a second underground point, irradiating said sample with neutrons having a flux density of at least 10^7 neutrons per cm^2 per second for a period of time sufficient to produce radioactive isotopes from said tracer element, and measuring the resulting radiation.

3,002,092

OPTICAL SYSTEM FOR INFRARED TARGET TRACKING APPARATUS

Donald S. Cary, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 30, 1954, Ser. No. 459,565
7 Claims. (Cl. 250-83.3)

1. An improved optical system for transmitting infrared energy received from a target to infrared responsive de-

tection means comprising in spaced optical alignment, a spherical window with the convex surface thereof directed toward said target, a convex meniscus objective element with the more strongly curved surface thereof directed toward said target, a mask for said objective element and provided with an aperture, a plano-convex field element with the plano surface thereof lying in the focal plane of said objective element and directed toward said target, a scanning mask provided with an aperture and positioned

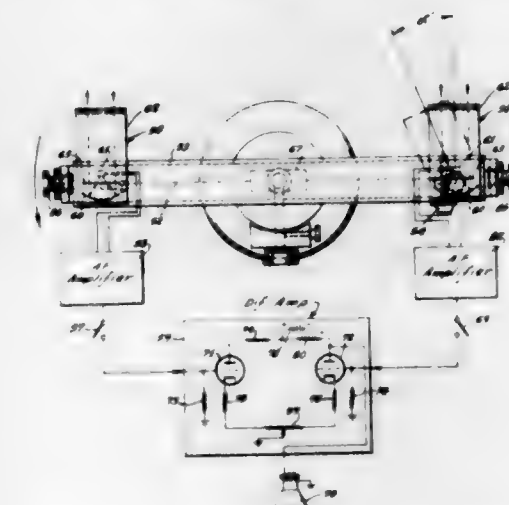


in said focal plane adjacent said plano surface for modulating the infrared energy received from said target, a convex meniscus collecting element with the more strongly curved surface thereof directed toward said target, a plano-convex collecting element with the curved surface thereof directed toward said target, and an infrared responsive detection means having a surface lying immediately adjacent the plano surface of said plano-convex collecting element and in a plane conjugate to said mask for said objective with respect to said elements between said focal plane and said means.

3,002,093

INFRARED NAVIGATION SYSTEM

George Kis, Santa Monica, and Melvin H. Murphy, Encino, Calif., assignors to Packard Bell Electronics Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 29, 1959, Ser. No. 789,855
7 Claims. (Cl. 250-83.3)

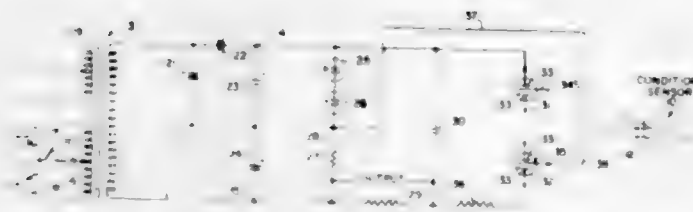


6. A navigation instrument for determining the range of an object emitting infrared radiation, including, first and second infrared detectors spaced along a base line, means coupled to said first detector for disabling said first detector, means effective when said first detector is disabled for providing an audible indication of the magnitude of the infrared radiation received at said second detector, means effective when said first detector is operative for providing an audible indication of the relative magnitudes of the infrared radiation received at said first and said second detectors, and means for obtaining an indication from said detectors that both detectors are simultaneously receiving infrared radiation from the same object, said last mentioned means including means for obtaining a rotation of said first and said second detectors about an axis through said base line.

3,002,094

ELECTRIC APPARATUS

Arlo D. Kompellen, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,467
9 Claims. (Cl. 250-83.6)



1. Electric apparatus for use with a normally non-conductive nonselfquenching condition sensor of the type having a pair of electrodes disposed in an ionizable gaseous medium and arranged when subjected to an ionizing condition to conduct electrical current between the electrodes until the operating voltage applied thereto is substantially reduced, the apparatus comprising: a source of operating voltage, a normally conducting voltage divider connected to said source of voltage, circuit means including an intermediate terminal on said normally conducting voltage divider adapted to be connected to one electrode of the condition sensor, a second voltage divider connected to said source of voltage and having a normally nonconducting gas tube including a control electrode, and circuit means including a further terminal connected to said control electrode and adapted to be connected to the other electrode of the condition sensor, the potential difference between said intermediate and said further terminals being sufficient to apply an operating voltage to the electrodes of the condition sensor, and the condition sensor being effective upon being subjected to a condition to which it is sensitive to render said gas tube conductive and thereby alter the potential level of said further terminal and substantially reduce the voltage applied to the electrodes of the condition sensor.

3,002,095

SINGLE-CRYSTAL NEUTRON SPECTROMETER

David L. Holcomb, Powell, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 2, 1960, Ser. No. 53,859
2 Claims. (Cl. 250-108)



1. Means for transmitting a beam of radiation from a point within a reactor through a surrounding shield to external utilization means comprising a first stepped cylindrical shielding plug disposed in said shield and provided with an off-axis longitudinal passageway, the axes of said member and said passageway intersecting at said point; a second stepped, cylindrical shielding plug provided with an off-axis longitudinal channel, said second plug being disposed within said passageway and fixed to said first plug to rotate therewith, the axis of said channel passing through said point; first gear means including a gear mounted to rotate about the axis of said first plug for rotating said first plug about its axis within said shield; a second gear carried by the outer end of

and mounted to rotate about the axis of said second plug; and a fixed arcuate gear sector mounted concentric to the axis of said first plug and engaging said second gear to rotate said second member about the axis thereof while said second member is rotating about the axis of said first member, thereby translating said channel across said first plug.

3,002,096

LIGHT TRACKING DEVICE

Howard J. Eckweiler, Manhasset, Louis E. Sharpe, Flushing, James B. O'Maley, Mineola, and John W. Barnes, Floral Park, N.Y., assignors to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed Nov. 18, 1952, Ser. No. 321,218
13 Claims. (Cl. 250-203)



1. A system for tracking a source of light located in a field of non-uniform background illumination comprising optical means producing an image of the source and its background field of illumination; and means interrupting said image to provide a composite light flux that includes positional data of the source with respect to the principal axis of said optical means; said interrupting means including a rotatable member with a plurality of alternate opaque and light-passing areas of width at least substantially that of the source image at said areas for interrupting the image at a relatively high frequency, and an opaque shutter element in optical series with said member arranged for interrupting the member-interrupted image at a substantially lower frequency rate.

3,002,097

DISPERSION SCANNER

August Nuut, Glendale, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California
Filed Feb. 9, 1953, Ser. No. 335,647
21 Claims. (Cl. 250-203)

15. A star tracker comprising a platform mounted in gimbals, an optical means for focusing the image of an interesting star mounted on said platform, a scanner disk positioned adjacent the focal plane of said optical means with the disk center as a control point intersected by the optical axis thereof, said scanner disk having two portions having opposite radiant energy translating characteristics, the sides of said portions intersecting said center and bounding a light-active flared area having an increasing angular arc width at increasing distances from said center to a predetermined distance, the sides of said portions outwardly from said predetermined distance being the dividing lines outwardly from said predetermined distance being on scanner disk radii and forming a thin slot with relation to the width of said flared area at said predetermined distance, a reference frequency supply, a synchronous motor for rotating said scanner disk about its center at said reference frequency, said scanner disk chopping light caused by deviation of said image from the

3,002,099

LIGHT INTENSITY CONTROLLER

Charles A. Gregory, Jr., and Walter R. Bullington, Richmond, Va., assignors to Flight Research, Incorporated, Richmond, Va., a corporation of Virginia
Filed Aug. 18, 1960, Ser. No. 50,474
13 Claims. (Cl. 250-205)



1. A power control system, for use in controlling the power supplied from an alternating current supply to a load device, comprising: a means for sensing a physical characteristic which is a function of a load device and transforming into an electrical parameter a quantitative measure of said physical characteristic, means for comparing said electrical parameter with a standard and producing an output electrical signal which is a function of the difference indicated by said comparison, means for converting said output electrical signal into a series of functionally dependent electrical triggers, at least one semiconductor device located in the current path between said alternating current supply and said load device and adapted to be controlled by said series of electrical triggers so as to vary in accordance therewith the amount of power supplied from said alternating current supply to said load device, whereby said quantitative measure of said physical characteristic which is a function of said load device tends to be maintained at a constant level.

3,002,098

RETICLE SYSTEM FOR OPTICAL GUIDANCE SYSTEMS

Robert A. Watkins, Santa Barbara, Calif., assignor to Raytheon Company, a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,046
7 Claims. (Cl. 250-203)



1. In a reticle system the combination comprising: first means for receiving and transmitting an optical image and effecting rotation of any portion of said image located off the optical axis of said first means; second means for supplying to said first means an optical image of space forwardly of said body; third means rotatable about an axis offset from said optical axis and having opaque and transparent portions whereby rays originating from said first means and incident on said third means is periodically obstructed as said third means rotates; fourth means for receiving an image transmitted by said first means and focusing said image as a spot on said third means; and a photo detector operative from light transmitted by said third means whereby the image of a target on the longitudinal axis of said body produces a constant frequency output signal from said photo detector and a target off the longitudinal axis of said body produces a deviation from said constant frequency the phase of which is proportional to target orientation angle and the magnitude of which is proportional to target angle.

3,002,100

TRANSISTOR CIRCUIT ELEMENT

Richard F. Rutz, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Sept. 27, 1954, Ser. No. 458,619, now Patent No. 2,889,499, dated June 2, 1959. Divided and this application Sept. 26, 1958, Ser. No. 763,620
4 Claims. (Cl. 250-211)

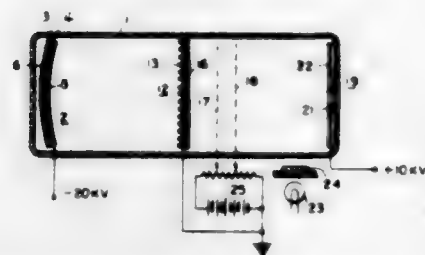


4. A thermo and photosensitive semiconductor circuit element comprising a semiconductive body including a first zone of one conductivity type, means applying an essentially uniform potential throughout said first zone, a second zone of opposite conductivity type having a thickness near the diffusion distance for the average lifetime of the semiconductor carriers, a barrier separating said first and said second zones, an electroformed point contact collector making current amplifying contact with said second zone on the surface parallel to said barrier, an ohmic base connection to an extremity of said second zone remote from said collector and means establishing a potential gradient in said second zone parallel to said barrier such that portions of said barrier are positively and negatively biased with respect to said unipotential first zone.

3,002,101

IMAGE AMPLIFIER

Arthur E. Anderson and William Altar, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1954, Ser. No. 416,826
11 Claims. (Cl. 250-213)



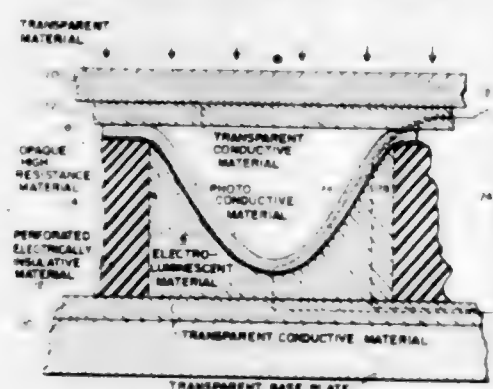
1. In combination with a vacuum-tight container, an input screen of transparent material having a fluorescent coating on one side and a photoelectrically-emissive surface on its other side, a target screen having a layer of material which has the property of electron-bombardment-induced-conductivity, an electrical conductive layer on the surface of said electron-bombardment-induced conductivity layer facing said input screen, and a mosaic of islands having photoelectrically-emissive surfaces on the side of said electron-bombardment-induced conductivity layer remote from said input screen, photo-means for irradiating said mosaic of islands to cause electron emission from their surfaces, an output screen comprising an electron phosphor, a grid electrode between said mosaic of islands and said output screen, and inleads for impressing potential differences between said target and said input screen, and between said output screen and said grid electrode, said photo-means for irradiating operates intermittently.

3,002,102

LIGHT AMPLIFIER

Richard C. Palmer, Pompton Plains, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, Syoset, N.Y., a corporation of Delaware

Filed July 9, 1959, Ser. No. 826,065
10 Claims. (Cl. 250-213)



1. In a light amplifier for producing visible light in response to impinging radiation, the combination comprising: a base plate having a contiguous electrically conductive coating on one surface thereof, said base plate and said coating being transparent to visible radiations; a sheet of perforated electrically insulative material positioned with its lower surface contiguous with said coating; an electroluminescent material, having a plano-concave meniscus configuration, positioned in said perforations, said concave portions being contiguous with the unperforated portion of the upper surface of said sheet, and said planar portion being in contact with said coating; a thin layer of opaque, high resistance material positioned contiguously with the upper unperforated surface of said sheet and said concave surface of said elec-

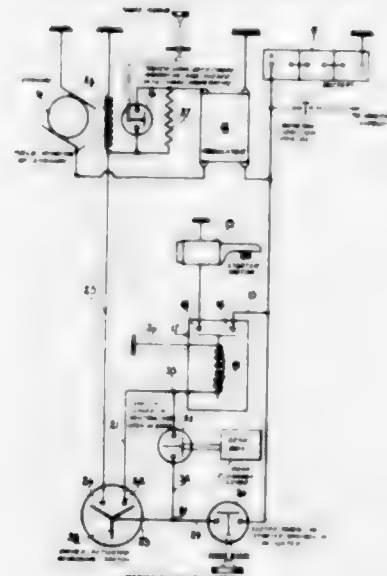
tro-luminescent material; a film of photoconductive material positioned contiguously with said layer of opaque material, said photoconductor having the characteristic that its electrical resistance decreases when irradiated by said impinging radiation; a plate of backing material having a second contiguous coating of electrically conductive material on one surface thereof, said second coating touching the portions of said photoconductor that are on said unperforated portions of said upper surface of said sheet, and not touching said concave surface of said photoconductor, said backing material and said second coating being transparent to said impinging radiation; and a source of alternating potential connected between said electrically conductive coatings.

3,002,103

CONTROL CIRCUIT FOR THE STARTER MOTOR OF AN AUTOMOBILE VEHICLE

Jean Maurice and Michel Rist, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France

Filed Dec. 17, 1957, Ser. No. 703,328
Claims priority, application France Nov. 17, 1953
5 Claims. (Cl. 290-36)



2. A control circuit for the starter motor of an automobile vehicle having a gear-box, a lever for changing gears, an automatic clutch, and means for declutching said clutch when said lever is actuated, comprising a safety switch operably connected to said gear-box for opening said circuit when said gear-box is in a position other than the neutral and a switch actuatable by said de-clutching means for short-circuiting said safety switch when said lever is actuated.

3,002,104

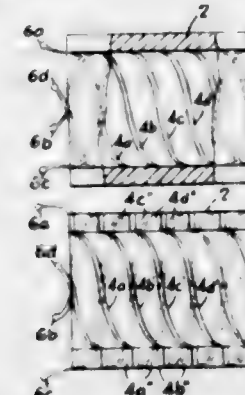
POSITION SENSING DEVICES

Dennis James Mynall, Rugby, England, assignor to The British Thomson-Houston Company Limited, London, England, a British company

Filed May 27, 1959, Ser. No. 816,271
Claims priority, application Great Britain, June 4, 1958
10 Claims. (Cl. 307-43)

1. A position sensing device comprising a first member having a circumferential surface provided with at least one continuous, electrically conductive path passing round and progressing along the member in a manner analogous to that of a helix round a cylinder, together with a second member arranged for relative longitudinal movement with respect to the first member and defining a surface facing and substantially conforming to said surface of the first member over at least a portion of the circumference thereof, which second member is provided with at least three separate continuous con-

ductive paths at least portions of each of which, located on said surface of the second member and substantially conforming in shape and spacing to corresponding portions from adjacent turns in said path on the first mem-



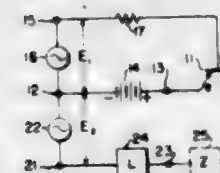
ber, are disposed so as to have sensible electrical capacitance between them and the path on the first member, the arrangement being such that relative movement between the members in the said direction will produce cyclical variation of the capacitance between conductive paths on different members.

3,002,105

EMERGENCY POWER SUPPLY

Charles A. Cady, Shaw Drive, Wayland, Mass.

Filed Aug. 20, 1959, Ser. No. 835,109
10 Claims. (Cl. 307-64)



8. An automatic emergency power supply comprising a transformer having a primary winding, a main secondary winding and a pair of supplemental secondary windings, a load connected to said primary winding, means for energizing said load and said primary winding from a normal A.C. power source, a pair of transistors each including an emitter, a base and a collector, the base and collector of each of said transistors being connected across one of said supplemental windings, said collectors being tied to a common junction point, said main secondary winding including first and second end terminals and a third terminal disposed therebetween, each of said emitters being connected to one of said end terminals, a pair of oppositely poled diode rectifiers connected between said common junction point and respective ones of said end terminals, a D.C. storage battery connected between said common junction point and said third terminal, an oscillating circuit including said secondary windings, said D.C. storage battery being adapted upon the failure of said normal A.C. power source to render said transistors alternately conductive at a frequency determined by said oscillating circuit, the resultant oscillations being adapted to transmit emergency A.C. power to said load by means of said transformer.

3,002,106

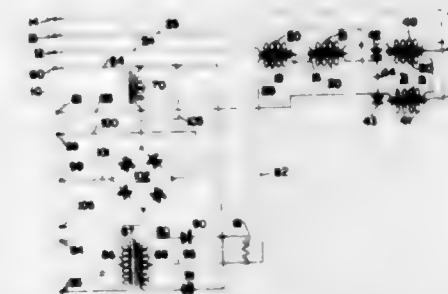
STATIC SWITCHING APPARATUS

Donald T. Longland, Sudbury, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Jan. 27, 1958, Ser. No. 711,233
16 Claims. (Cl. 307-88)

1. A static control device comprising: a plurality of closed circuit magnetic core structures, a power winding on each of said core structures, a control winding on each

of said core structures, at least two of said power windings having oppositely poled rectifiers connected in series therewith with said rectifiers and windings connected in a parallel relationship with one another to provide a first circuit adapted to be connected to an external load, other of said power windings being adapted to be connected directly



to an external load to provide a second circuit, an additional circuit means connecting all of said control windings on said magnetic core structure in a series circuit, said first named circuits having a high impedance to current flow and said second named circuit having a low impedance to current flow with a flow of an input signal through said additional circuit to all of said control windings.

3,002,107

TRANSFORMER COUPLING OF LOGICAL CIRCUITS

Robert A. Henle, Hyde Park, Edward H. Valentine, Hopewell Junction, and Peter Halpern, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 2, 1958, Ser. No. 739,174
3 Claims. (Cl. 307-88)



3. A switching circuit comprising: in combination, a reference potential; a two-terminal source of current having one terminal coupled to said reference potential; first and second current paths, each comprising a switching element having, at least, an input, an output, and a control electrode, signal input means applied to only one switching element control electrode; means coupling the second switching element control electrode to said reference potential; means comprising an impedance, coupling said source of current to the input electrode of each switching element of each current path; inductive load coupled in series with the switching element in the first current path; an inductive load coupled in series with the switching element in the second path; and magnetic coupling between the inductive loads.

3,002,108

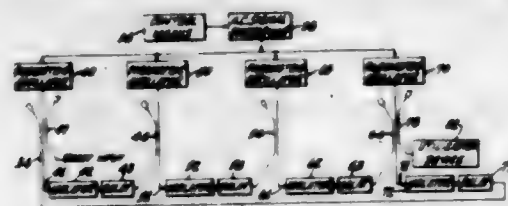
SHIFT CIRCUITS

Fred Sterzer, Monmouth Junction, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Feb. 4, 1959, Ser. No. 791,082
12 Claims. (Cl. 307-88)

1. The combination comprising a plurality of parametric oscillators, each of said oscillators having at least two distinct phases of oscillation at the same one frequency, translating means coupling said oscillators in cascade, said translating means including separate non-reciprocal energy translating devices connected between

adjacent ones of said oscillators, means applying alternating current signals substantially simultaneously to said

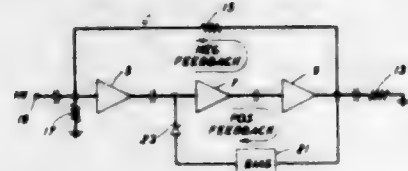


oscillators to sustain parametric oscillations therein at said one frequency, and control means for intermittently effecting damping of said parametric oscillations.

3,002,109

AMPLIFYING TRIGGER CIRCUIT

Jack A. Baird, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 1, 1957, Ser. No. 643,474
16 Claims. (Cl. 307—88.5)

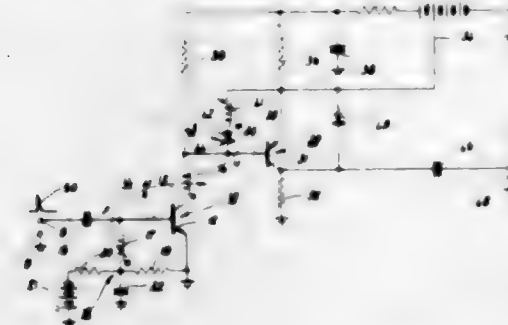


1. An amplifying trigger circuit comprising a pair of transistor amplifiers of opposite conductivity, each of said amplifiers adapted to normally operate in its substantially linear range, means for applying the output of a first of said amplifiers to the second amplifier, input circuit means for applying a signal voltage to said first amplifier, a load, means for applying the output of said second amplifier to said load, a positive feedback path for regeneratively transmitting the output of said second amplifier to said first amplifier, switching means connected in said path, said switching means being adapted to permit transmission through said path only after the amplitude of the signal voltage exceeds a predetermined triggering level, said amplifiers and said feedback path forming a positive feedback loop, and timing means connected in said loop for causing the regenerative transmission around the loop to be blocked at the end of a predetermined interval after the regenerative transmission begins.

3,002,110

TRANSISTOR PULSE GENERATOR

Douglas J. Hamilton, Redwood City, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 12, 1957, Ser. No. 678,265
9 Claims. (Cl. 307—88.5)



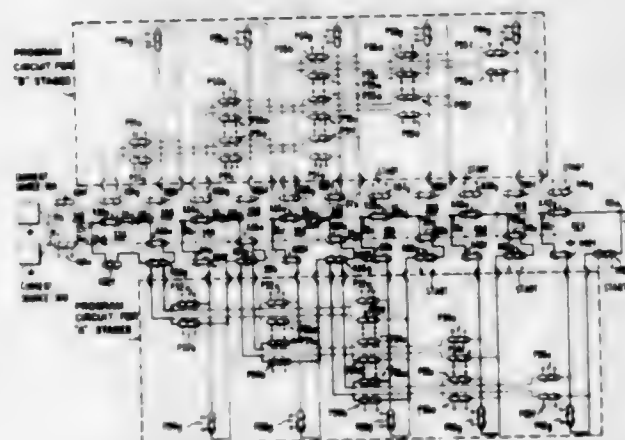
1. A pulse generator comprising in combination, a first transistor of one conductivity type having base, collector, and emitter electrodes, a second transistor of another conductivity type having base, collector and emitter electrodes, first, second, and third inductors electromagneti-

cally coupled, said first inductor being connected between the base and emitter electrodes of said first transistor, said second inductor being directly connected between the base electrode of said second transistor and the collector electrode of said first transistor, a diode, said third inductor and said diode being connected in series between the emitter and base electrodes of said second transistor, bias means for rendering said first and said second transistors normally nonconductive, a control circuit coupled with the base of said first transistor, and a load circuit coupled with the collector of said second transistor.

3,002,111

PROGRAMED SUPERCONDUCTOR RING COMMUTATOR

David J. Dumin, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,430
15 Claims. (Cl. 307—88.5)



5. A superconductor commutator ring for producing a series of sequential outputs in response to the application of a start signal; said ring including a plurality of bistable superconductor stages each maintained at a superconductive temperature and each capable of assuming an On stable state and an Off stable state; each of said stages including first control means effective when energized to turn the stage On and second control means effective when energized to turn the stage Off; means coupling each of the stages to the first control means for a particular one of the stages succeeding it in said ring to render it effective when it is turned On to turn said succeeding stage On; output means for each of a group of said stages for producing outputs the stages are successively turned On; programmable coupling means connecting the second control means for each of said group of stages to a plurality of stages succeeding it in the ring; and means for programming said coupling means for rendering each of said group of stages selectively responsive to be turned Off when particular one of the succeeding stages to which it is coupled by said coupling means is turned On and thereby controlling the outputs produced by said output means.

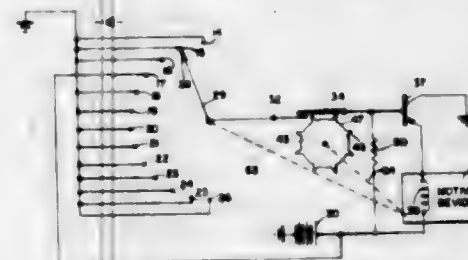
3,002,112

DRIVING CIRCUIT FOR ELECTROMECHANICAL SWITCHING DEVICES

Martin Rubin, Garden Grove, Calif., assignor to North American Aviation, Inc.
Filed July 22, 1959, Ser. No. 828,856
12 Claims. (Cl. 307—93)

12. A driving circuit for a stepping switch having a plurality of fixed contacts and at least one movable contact comprising, an electromagnetic motive device, an electronic valve having control, electron emitting, and electron collecting electrodes, the mechanical output of said motive device being coupled to drive said movable

contact of said stepping switch into successive engagement with each of said fixed contacts, a power source, one terminal of said power source being connected to one of said electron collecting and electron emitting electrodes of said electronic valve, said motive device being con-

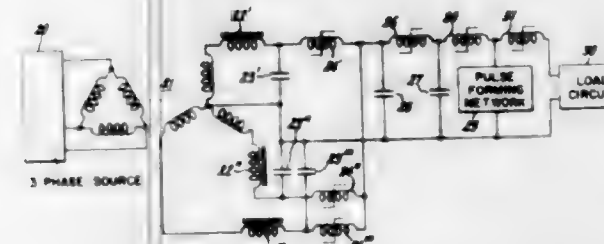


nected between the other terminal of said power source and the other of said electron emitting and electron collecting electrodes of said power source, said control electrode of said electronic valve being connected to said movable contact of said stepping switch, and a pulse generator, the output of said pulse generator being connected to all but one of said fixed contacts.

3,002,113

PULSE FORMING APPARATUS

Oliver H. Winn, Whitesboro, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 26, 1956, Ser. No. 573,903
3 Claims. (Cl. 307—106)



1. In combination, a source of alternating electric voltage, a transformer having a primary winding and a center-tapped secondary winding, said secondary winding having a first and second terminal at opposite ends and a third terminal intermediate said ends, means coupling said source to said primary winding, a first and second tuned circuit comprising a serially coupled inductance and capacitance dimensioned to be resonant at the frequency of said source, said first tuned circuit being coupled between said first and third terminals on said secondary winding, said second tuned circuit being coupled between said second and third terminals on said secondary winding, a first saturable inductor, a pulse shaping network, said saturable inductor and said pulse shaping network being serially connected, means coupling said first saturable inductor and said pulse shaping network across said capacitance in said first tuned circuit, a second saturable inductor, said second saturable inductor and said pulse shaping network being serially connected, means coupling said second saturable inductor and said pulse shaping network across said capacitance in said second tuned circuit, an output circuit, means coupling said output circuit to said pulse shaping network.

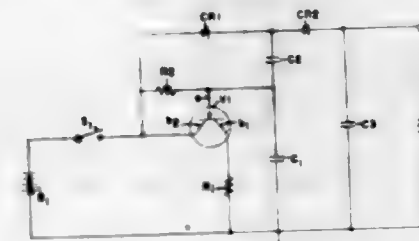
3,002,114

D-C. TO D-C. VOLTAGE MULTIPLIER

Arvid E. Englund, Jr., North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 16, 1957, Ser. No. 703,041
9 Claims. (Cl. 307—110)

9. Apparatus for transforming the output of a direct current voltage source having a given terminal voltage

to a second voltage across a load greater than said terminal voltage comprising a unijunction transistor comprising an emitter and first and second bases, the first capacitance connecting said emitter to said second base, means for connecting said source across said bases to provide a potential gradient across said transistor from said first to said second base and for applying voltage from said source to said emitter and said first capacitance, the application of a given value of voltage to said emitter resulting in a low impedance path to current flow from said emitter to said second base and the discharge of said first capacitance through said emitter to second base path, with a decrease in voltage level at

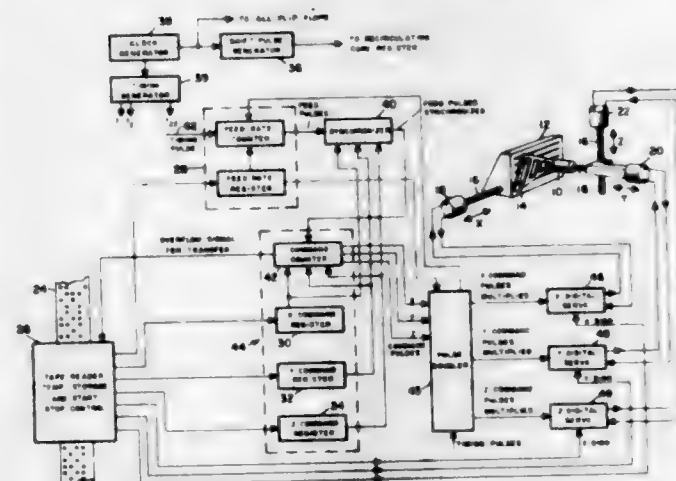


said emitter below said chosen value, said first capacitance being caused to be recharged thereby, a second capacitance in circuit with said source to be charged thereby and connected in series arrangement with said first capacitance, first unidirectional conducting means connected between said source and said second capacitance to permit its charging and to prevent its discharging, a third capacitance connected across the series arrangement of said first and second capacitances, second unidirectional current means connected between the junction of said second and third capacitances to permit the charging and to prevent the discharging of said third capacitance, the voltage across said third capacitance being substantially the sum of said terminal voltage and the charge on said first capacitance.

3,002,115

ELECTRICAL SYSTEM FOR CONTROLLING MOVEMENT OF OBJECTS

Ewell Calvin Johnson and Yu Chi Ho, Royal Oak, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,677
16 Claims. (Cl. 307—149)



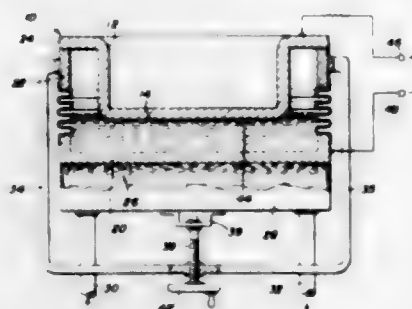
1. A control system for producing a plurality of separate trains of control pulses, including means for generating a first train of uniform electrical pulses at regular intervals with respect to one another; a first multiplier device for multiplying said first uniform train of pulses and an electrical representation of a first number which is proportional to the rate at which it is desired to generate control pulses to produce at its output a second

train of electrical pulses which are in number fewer than the number of pulses in said first train and which are spaced at roughly regular intervals with respect to one another; and a second multiplier unit for multiplying said second train of pulses and electrical representations of a plurality of second numbers, each number being proportional to the number of pulses in said second train which it is desired to utilize as control pulses to produce at its output a plurality of separate trains of control pulses, each of which contains fewer pulses than said second train, the control pulses in each of said separate trains being spaced roughly equally with respect to one another.

3,002,116

THERMIONIC GENERATOR

John C. Fisher, Schenectady, N.Y., assignor to General Electric Company, a New York corporation
Filed Nov. 3, 1958, Ser. No. 771,514
13 Claims. (Cl. 310-4)



1. An apparatus comprising a conductive cathode electrode and a conductive vaporizable anode electrode spaced from said cathode electrode in a vacuum tight chamber, means for disposing said anode electrode in close proximity to said cathode electrode, said cathode being responsive to the close disposition of the anode thereto and the application of heat thereto to radiate heat to said anode electrode and vaporize the surface portion thereof in proximity to said cathode electrode to form a thin gaseous film under pressure between said electrodes for maintaining the spacing therebetween.

3,002,117

CRYSTAL OVENS

Günther A. Vogt, Whitby, Ontario, Canada
(706 Forrest St., Charlottesville, Va.)
Filed July 16, 1959, Ser. No. 827,651
14 Claims. (Cl. 310-9)



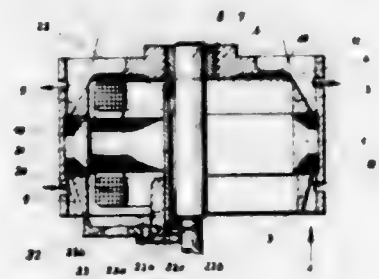
1. A crystal oven comprising a base of insulating material, a cover to fit over the base and form therewith an

enclosure, cooperating means on the cover and the base to releasably attach the cover to the base, a plurality of terminals carried by the base to project from the enclosure, crystal supporting means on the base to support a crystal within the enclosure, electrical connections between the crystal supporting means and some of the terminals, and electrical heating means connected between a pair of the terminals and mounted on the base to be within the enclosure; the heating means including: two electrically operable heater elements each of which is capable of operating separately, upon a voltage different from the other element, to maintain a crystal mounted in the crystal supporting means at substantially a predetermined temperature within a predetermined range of ambient conditions, switch means operable to selectively connect one of said heater elements into circuit between said pair of terminals, and a thermostat to control the operation of the heater element which is in circuit to maintain the crystal substantially at said predetermined temperature.

3,002,118

ROTATING FIELD MOTOR

Hermann Papet, Pavillonweg 3, St. Georgen, Black Forest, Germany
Filed Sept. 18, 1956, Ser. No. 610,508
Claims priority, application Germany Oct. 24, 1955
1 Claim. (Cl. 310-61)

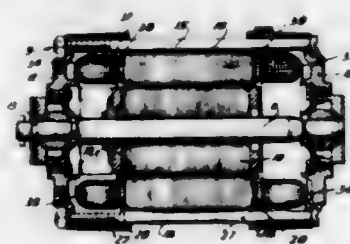


A rotating field motor comprising an inner stator; means for supplying electrical current to said stator; and an outer, integral, cup-shaped, non-magnetic, metallic rotor housing having a circumferential wall defining a cavity about the stator; an axially central annular magnetic portion in said circumferential wall and forming a mechanical and electrical unit with said housing; the housing having annular recesses in its axial ends to define cooling spaces adjacent said magnetic portion, a plurality of radial cooling fins in said spaces and integral with said housing and the cooling spaces being open in a radial and an axially outward direction.

3,002,119

INSULATED FIELD WINDING FOR DYNAMO-ELECTRIC MACHINES AND METHOD OF MAKING SAME

Ernst Olof Lindström, Stockholm-Vällingby, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Dec. 9, 1957, Ser. No. 701,429
Claims priority, application Sweden Dec. 13, 1956
10 Claims. (Cl. 310-260)



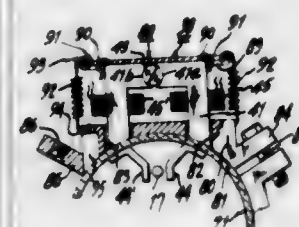
1. In a dynamo-electric machine, a magnetic field structure of annular form having a yoke and inwardly

extending pole pieces which terminate in concave-shaped pole faces defining a bore adapted to receive a rotor, each of the pole pieces having leading and lagging pole tips which are spaced from the yoke to provide wall surfaces defining spaces, the pole pieces having field coils including first portions in the spaces and second portions which project beyond the end faces of the magnetic field structure, and an open-ended insulating member of annular form which in section includes a closed end and spaced arms extending toward its open end, said member being disposed about and in intimate physical contact with the second portions of the field coils at one end of the magnetic field structure, the closed end of said insulating member of annular form being positioned about the outermost projecting parts of the second portions of the field coils and the spaced arms thereof extending toward the end face at said one end of the magnetic field structure.

3,002,120

BEAM CONVERGENCE APPARATUS FOR TRI-COLOR KINESCOPE

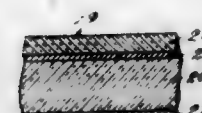
Burton R. Clay, Woodbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 2, 1954, Ser. No. 447,330
7 Claims. (Cl. 313-77)



1. A magnet assembly for adjusting beam convergence in a multibeam picture receiving tube, comprising a frame having a section for each beam symmetrically disposed about a common center, magnets supported within each frame section, each magnet comprising a pair of pole pieces movably supported on a frame section radially of said center, a permanent magnet bridging two adjacent ends of said pole pieces, said permanent magnet being adapted to be rotated with respect to said pole pieces.

3,002,121

ELECTROLUMINESCENT DEVICE
Arthur Bramley and Jenny Bramley, both of Van Houten Ave., Passaic, N.J.
Filed Apr. 20, 1956, Ser. No. 579,570
9 Claims. (Cl. 313-108)



1. In an electroluminescent voltage device, an electroluminescent semitransparent layer having a breakdown voltage exceeding 30,000 volts per centimeter, comprising electroluminescent phosphor particles embedded in a semiconductor making contact with the phosphor particles, the phosphor particles constituting between 1 and 50 percent by weight of the total of phosphor and semiconductor, and means for applying a voltage differential less than the breakdown voltage across the semitransparent layer and thereby producing light.

3,002,122

SHOCK RESISTANT ELECTRON TUBE MOUNTING
Hilbert J. Unger, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 1, 1950, Ser. No. 159,221
6 Claims. (Cl. 313-312)

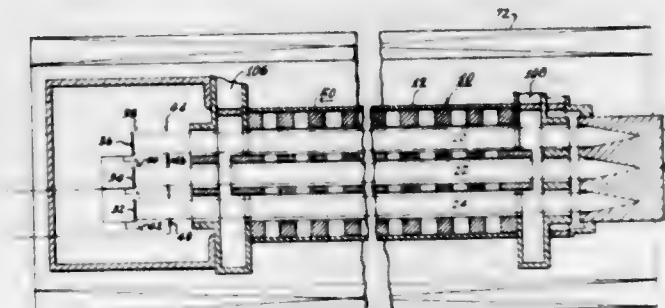


6. A shock-absorbing protector for an electron discharge tube, consisting of a multi-ply tubular sheath made of resilient material.

3,002,123

TRAVELING WAVE TUBE STRUCTURE

Rolf W. Peter, Cranbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 11, 1957, Ser. No. 633,604
3 Claims. (Cl. 315-3.6)



1. A traveling wave tube comprising an evacuated envelope containing a signal wave propagating structure adapted to propagate slow waves therealong in each of three coordinate directions, and means for projecting a beam of electrons along a path through said structure and in interaction relation with waves propagated in one of said directions along said structure, said structure comprising conducting means defining a three dimensional lattice of intersecting passageways therethrough for reducing the phase velocity of said structure in any direction therethrough to a velocity substantially less than the velocity of light in free space, said conductive means comprising at least three parallel conductive plates each having a two-dimensional array of transverse conductive fingers interleaved with the fingers of an adjacent plate, the intermediate plate having apertures aligned with the fingers of the two adjacent plates, one of said passageways containing said path of said electron beam for interaction of said beam with a signal wave traveling along said structure.

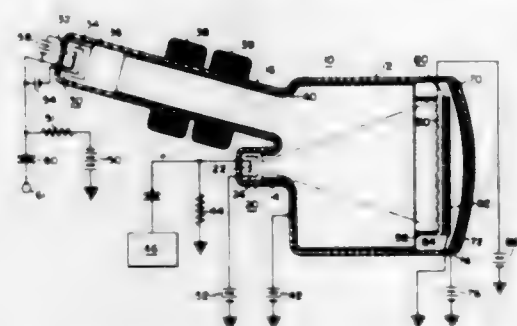
3,002,124

DISPLAY STORAGE TUBE

Robert J. Schneeberger, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1956, Ser. No. 576,847
5 Claims. (Cl. 315-12)

1. An electron discharge tube apparatus comprising an apertured storage grid, said storage grid comprised of an apertured conductive back plate and a potential storage target coating thereon, means for applying a po-

tential to said conductive back plate, a first electron gun having at least a cathode for providing an electron beam for flooding the entire surface of the target coating of said target, means for producing an electron beam potential on said flooding gun with respect to said target surface to produce emission of secondary electrons of a less number than incident primaries so that said target surface tends to charge negatively with respect to said potential applied to said back plate to assume a potential value more negative than said back plate potential, a second electron gun having at least a cathode for generating an electron beam of elemental area, means for sweeping said second electron beam in a point-to-point

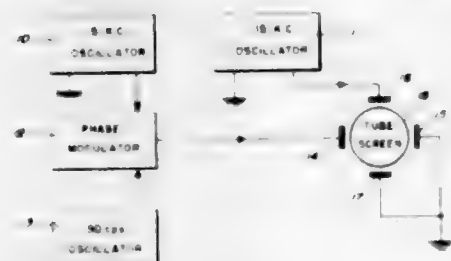


manner over said target surface in a predetermined manner, means for producing an electron beam potential on said second gun with respect to said target surface to produce emission of secondary electrons of a less number than incident primaries so that said target surface tends to charge more negatively with respect to said back plate potential, the electron beam potential of said second electron gun of a value so as to penetrate said target surface to cause bombardment induced conductivity within said potential storage target coating so that said target surface tends to charge positively toward the potential of said back plate, and means for modulating the electron beam potential of said second gun by electric signals to set up on said surface an electric potential record of said signals.

3,002,125

APPARATUS FOR PRODUCING A SCANNING SEQUENCE

Norman B. Stevens, Corona, and Samuel R. Bradshaw, Arlington, Calif., and Charles H. Davison, Fargo, N. Dak., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 22, 1955, Ser. No. 536,056
6 Claims. (Cl. 315-23)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for electronically scanning the image formed on the face of a television camera tube comprising a first and a second oscillator each operating at a radio frequency, a television tube comprising a television tube screen, a pair of vertical deflection plates, and a pair of horizontal deflection plates; an oscillator to produce voltage in the audio frequency range, a phase modulator, A.-C. voltage from one of said radio frequency oscillators being applied to one pair of the deflection plates of said tube, the radio frequency output of the other oscillator being phase modulated by voltage from the audio frequency oscillator to produce a resultant A.-C. voltage having the fundamental frequency of the radio frequency

oscillator, but which is phase displaced sinusoidally at the audio rate from a mean of $\pi/2$ radians to a maximum of π radians and a minimum of zero radians from the voltage supplied by the radio frequency oscillators.

3,002,126

MECHANICAL MEMBERS CONNECTED TO FORM AN ELECTRICAL CIRCUIT

René Nohr, Levallois-Perret, France, assignor to Indufi S.A. de Participations, Geneva, Switzerland, a firm of Switzerland
Filed Apr. 25, 1958, Ser. No. 730,981
Claims priority, application France June 20, 1957
6 Claims. (Cl. 315-58)

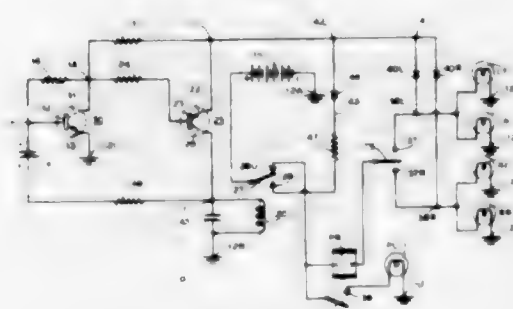


1. A connection between the connecting post of a spark plug and the splayed projecting end of a sheathed wire, comprising a current-filtering element including conductive ends engaging directly and by mere mechanical contact respectively the connecting post and the splayed end of the wire, said conductive ends being independent of said post and wire, and an elastic sheath fitted in direct contact over its entire length and tightly over the inter-engaging parts constituted by said post, current filtering element and splayed end of the sheathed wire to clamp same under tensioned conditions together in electrically and mechanically contacting relationship.

3,002,127

OSCILLATOR CONTROLLED FLASHING SIGNAL LAMP CIRCUIT

Raymond B. Gronkowski, Bronx, N.Y., assignor to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Filed Oct. 14, 1959, Ser. No. 846,374
16 Claims. (Cl. 315-77)



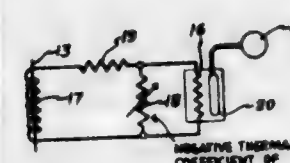
1. An intermittently energized signal lamp circuit comprising, in combination, a source of substantially unidirectional electric potential; a lamp load; a relay including an operating coil and an armature movable, upon energization of said coil, from a normal position to a transferred position; a normally open manually operable switch; first circuit means, including said armature in its normal position, effective, immediately upon closure of said switch, to connect said lamp load to said source; a transistorized oscillator in circuit with said relay coil and effective, when connected to a selected polarity terminal of said source, to cyclically intermittently establish current flow from said source through said relay coil to cyclically energize and deenergize the latter to transfer said armature between its two positions; second circuit

means effective, during closure of said switch, to connect said oscillator to said selected polarity terminal; and solid state gating diode means included in said second circuit means and polarizing the latter.

3,002,128

OVERLOAD PROTECTIVE MEANS FOR ELECTRICAL APPARATUS

Kurt W. Elsmann, Dalton, Mass., assignor to General Electric Company, a corporation of New York
Filed Aug. 29, 1957, Ser. No. 680,935
5 Claims. (Cl. 317-14)

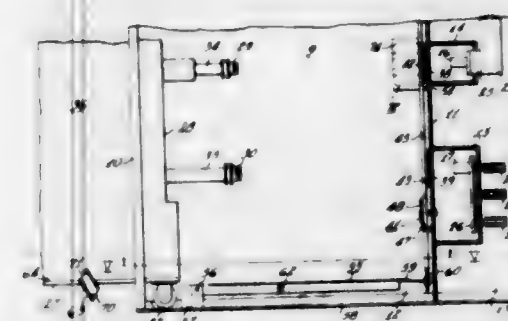


1. Thermal overload protective means for electrical apparatus of the type immersed in a dielectric fluid comprising, first and second serially connected resistance heating means, said first heating means comprising a tubular resistance element, thermally responsive means in said tubular element, current transformer means having a secondary winding connected in series with said second heating means, a lead of said apparatus comprising the primary winding of said transformer, and resistance means having a negative temperature coefficient of resistance immersed in said fluid in heat transfer relation with said second resistance heating means and connected in parallel with said first resistance heating means.

3,002,129

COUNTERBALANCED SHUTTER BLADE ARRANGEMENT FOR ENCLOSED SWITCHBOARD STRUCTURES

Walter K. Mueller, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 28, 1958, Ser. No. 776,895
5 Claims. (Cl. 317-103)

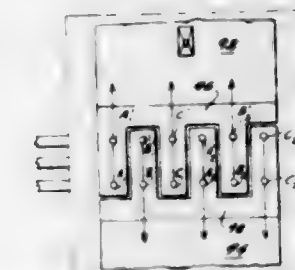


1. An enclosed switchboard having two communicating compartments, a shutter mechanism controlling communication between said compartments and movable between open and closed positions, said mechanism comprising a pair of spaced vertically arranged rods mounted to reciprocate axially, a pair of shutter blades, said blades being arranged to extend between said rods in substantially the same plane with each of said blades being fixedly attached to a different one of said rods, means for actuating said rods in unison in opposite directions in a counterbalancing arrangement to move said blades in their planes, said means comprising a lever pivotally mounted intermediate its ends and loosely connected in a lost motion connection at each end thereof to one of said rods, and means for rotating said lever in two directions to reciprocally move said rods and said blades.

3,002,130

ADAPTATION MEANS FOR PANEL BOARDS HAVING LOW CAPACITY TERMINALS

William M. Scott, Jr., Bryn Mawr, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 20, 1958, Ser. No. 722,801
8 Claims. (Cl. 317-119)

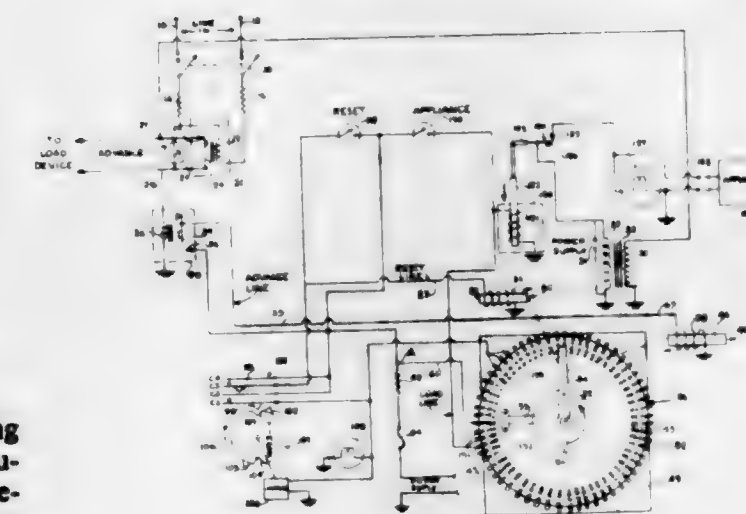


1. An adaptation means for connecting a relatively high capacity circuit breaker to a panel board having relatively low capacity terminals; said panel board comprising a first, second and third pair of said low capacity terminals corresponding to a first, second and third phase respectively of a multiphase power source; each of said low capacity terminals being energizable by means independent of said adaptation means; one terminal of each of said pairs of terminals being connectible to a respective phase of a first relatively low capacity circuit breaker, the other terminal of each of said pairs of terminals being connectible to a second relatively low capacity circuit breaker; said adaptation means for connecting said relatively high capacity circuit breaker being constructed to connect said one terminal of each of said pairs of terminals in parallel with said other terminal of the same pair and to the respective phase of said relatively high capacity circuit breaker only.

3,002,131

REMOTE CONTROL DEVICE FOR ELECTRIC CIRCUITS

Salvatore R. Gerosolima, 1209 E. 96th St., Brooklyn, N.Y.
Filed Apr. 15, 1958, Ser. No. 728,639
2 Claims. (Cl. 317-141)



1. A remote control device, comprising a first means responsive to received timed signal pulses, a ratchet switch having a plurality of spaced, fixed contacts and a rotatable contact arm adapted to contact each of the fixed contacts in turn during rotation of the arm, a first solenoid operatively connected to ratchet for rotating said arm from a starting position at one of said fixed contacts to successive fixed contacts in turn, said means being operatively connected to said solenoid for initiating rotation of said arm a first predetermined time interval after each of said signal pulses is received by said means.

a solenoid reset means for resetting said arm to the starting position, said reset means including a timing device having a preset timing cycle in circuit with certain of said fixed contacts so that the timing cycle of said device is initiated at the end of a second predetermined time interval when said arm reaches said certain fixed contacts, said timing device being operative at the end of a third predetermined time interval set by said timing device to actuate the reset means, release the ratchet and reset the arm to the starting position, an appliance load circuit, and a switching means in circuit with at least one other of said fixed contacts for operating said load circuit at the end of a fourth predetermined time interval and when said arm reaches said one other fixed contact, said first means comprising a time delay circuit and switch means arranged in circuit with said first solenoid.

3,002,132

CRYSTAL DIODE ENCAPSULATION

Maurice Belliveau and Frank E. Grace, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1956, Ser. No. 630,414
1 Claim. (Cl. 317-234)



A glass encapsulated semiconductor diode comprising in combination a first rigid Kovar electrode; a germanium semiconductor crystal ohmically bonded to said first rigid Kovar electrode; a second rigid Kovar electrode; a gold rectifying electrode ohmically bonded to said second rigid Kovar electrode; a Pyrex glass bead fused to and forming a hermetic seal with said first and second rigid electrodes; a gold bonded rectifying contact formed between said rectifying electrode and said germanium crystal, and a Pyrex glass housing surrounding said rectifying electrode and said germanium crystal and fused to said Pyrex glass bead.

3,002,133

MICROMINIATURE SEMICONDUCTOR DEVICES

Clinton E. Malden and Elmo E. Malden, Canoga Park, Calif., assignors to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,355
8 Claims. (Cl. 317-234)



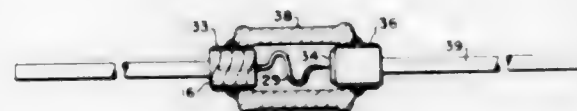
1. An improved semiconductor device comprising: a semiconductor crystal element having first and second opposed contact surfaces, said first surface being of one conductivity type, said second surface being of a second conductivity type; first and second leads each having a portion longitudinally extending from one end thereof which portion defines a substantially planar surface; said planar surface of said first lead being directly bonded in ohmic connection to said first surface, said planar surface of said second lead being directly bonded in ohmic

connection to said second surface, and an esterified surface formed on said crystal at those portions of the crystal surface not in contact with said leads.

3,002,134

ELECTRICAL TRANSLATOR DEVICE AND METHOD OF MANUFACTURE

David Stevens Jenkins, Melrose, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Sept. 19, 1957, Ser. No. 684,926
13 Claims. (Cl. 317-236)



1. A method for connecting a filamentary wire to an eyelet which comprises, forming a lead wire into a coil, inserting said filamentary wire within said coil, compressing said coil upon said filamentary wire, inserting said coil in said eyelet and sealing said coil into said eyelet.

3,002,135

SEMICONDUCTOR DEVICE

William B. Warren, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,355
9 Claims. (Cl. 317-240)

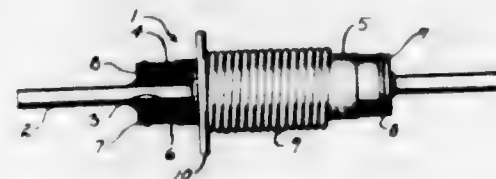


1. In a semiconductor device the combination comprising: a silicon semiconductor body of one conductivity type having in at least one surface thereof a region of the opposite conductivity type, a layer of metal upon at least a portion of said opposite conductivity type region, an electrical contact element in contact with said layer, and a eutectic alloy containing cadmium between said element and said layer whereby said element is bonded to said region.

3,002,136

ELECTRICAL CIRCUIT COMPONENT HAVING RESILIENT WOUND SLEEVE

William W. Garstang, Fox Point, Wis., assignor to Allen Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 5, 1958, Ser. No. 772,089
3 Claims. (Cl. 317-242)



1. In a capacitor the combination comprising a dielectric of tubular configuration having an electrode on the inner surface thereof and a second electrode on the

outer surface thereof, an elongated sleeve encircling the dielectric and second electrode which is formed from a resilient wire extending in tight helical turns about the surface of the dielectric along a major length thereof and which at one end of the sleeve spirals radially outward from the dielectric in closely adjacent turns to form a flange substantially normal to the dielectric that presents a substantially plane face adapted for mounting the capacitor, and a coat of solder on the surface of the sleeve stiffening the flange and adhering the sleeve to the second electrode.

3,002,137

VOLTAGE DEPENDENT CERAMIC CAPACITOR

Manfred Kahn and Glenn F. Cooper, North Adams, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Sept. 4, 1957, Ser. No. 681,921
6 Claims. (Cl. 317-261)



1. A ceramic capacitor comprising a thin high-dielectric-constant ceramic disc having opposed flat surfaces, a first electrode covering a minor area of one of said surfaces, a second electrode covering a major area of the other of said surfaces and being in capacitive relation to the entire area of said first electrode, an insulating annulus positioned on said one surface so that the exposure through the annulus opening is limited to said first electrode, and a conductive layer overlying said annulus and said exposed first electrode.

3,002,138

ELECTRICALLY POWERED OSCILLATORY BALANCE

William P. Byrnes, Glenview, and Roy Witte, West Hartford, Ill., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,262
8 Claims. (Cl. 318-132)



1. In an oscillatory balance, the combination comprising a rotor journaled for rotation, a spring connected with said rotor, a permanent magnet fixed to said rotor and having a plurality of pairs of poles, a pair of stationary drive windings each fixedly mounted adjacent said magnet and disposed opposite a different pair of said poles when said rotor is in its dead center position, a pick-up winding fixedly mounted adjacent said magnet and disposed opposite one pair of said poles when the rotor is in its dead center position, means for preventing magnetic flux from all of said poles except said one pair from linking with said pick-up winding as the rotor turns, and means responsive to voltage of one polarity induced in said pick-up winding for supplying current pulses to said drive windings, so that torque pulses for

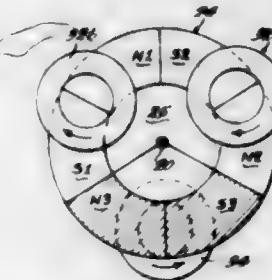
770 O.G.—85

sustaining oscillations of said rotor are imparted to the latter only when it is passing through substantially its dead center position.

3,002,139

ELECTRICALLY POWERED BALANCE MECHANISM

William P. Byrnes, Glenview, Ill., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed July 2, 1958, Ser. No. 746,196
6 Claims. (Cl. 318-132)

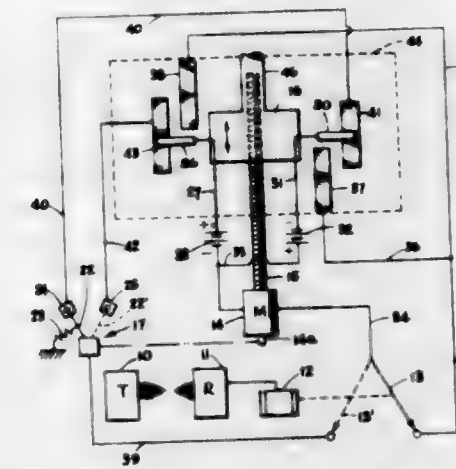


1. An electrically powered balance mechanism comprising, in combination, a stator part and a rotor part mounted for rotation relative thereto, a spring interconnected between said parts to make them have oscillatory relative rotation, a permanent magnet on one of said parts, a drive winding and a pick-up winding, means for mounting said windings on the other of said parts closely adjacent the poles of said magnet and for precluding substantial inductive coupling between said windings, a controlled amplifying discharge device connected to receive input signals induced in said pick-up winding as said magnet moves thereby, and means connecting said discharge device to supply current pulses to said drive winding in response to said input signals, said last-named means including means for causing said discharge device to be driven beyond current saturation by said input signals when said parts are oscillating through a predetermined angular amplitude.

3,002,140

SIGNAL CONTROLLED APPARATUS

Howard T. Bonner, 2900 Tilden Ave., Los Angeles, Calif.
Filed Jan. 21, 1959, Ser. No. 788,221
13 Claims. (Cl. 318-267)



11. In a signal controlled apparatus: driving means for actuating a movable member from a given neutral position in a first direction and second direction, respectively; control means responsive to a first said signal to effect energization of said driving means so as to effect actuation of said movable member in said first direction; said control means being responsive to cessation of said first signal to effect automatic return movement of said member to said neutral position, and said control means

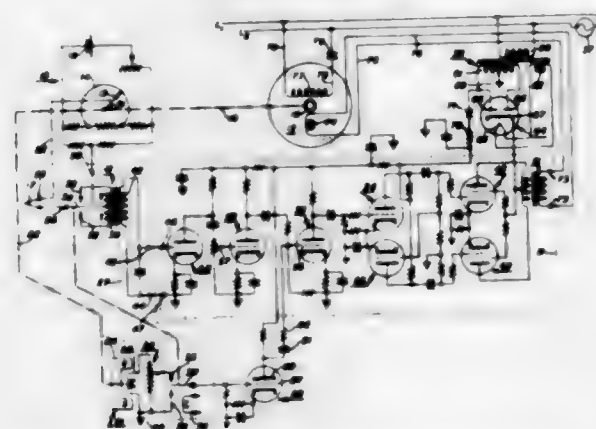
being responsive to a second successive signal during said return movement to effect energization of said driving means so as to effect actuation of said movable member past said neutral position in said second direction, said control means being responsive to cessation of said second signal to effect automatic return movement of said member to said neutral position, said control means including inertia means coupled to said driving means co-operating therewith to effect actuation of said movable member past said neutral position in response to said second signal.

3,002,141

DAMPING ARRANGEMENT

Ernesto Allaga-Moyano, Bronx, N.Y., assignor to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Filed Apr. 1, 1958, Ser. No. 725,745
6 Claims. (Cl. 318-448)



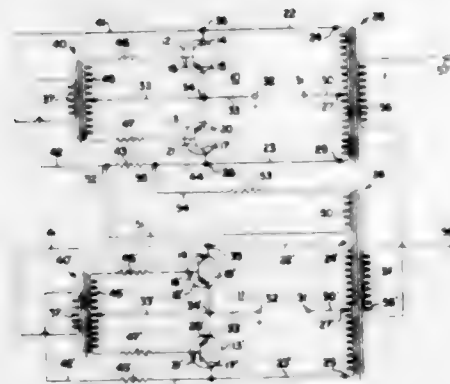
1. In a motor control apparatus, a controlled motor, a control signal source, a high-gain amplifier which saturates at low values of control signal, the said amplifier including a plurality of stages of amplification connecting the said control signal source to the said controlled motor, a source of motor damping signal having a D-C. output signal proportional to the speed of rotation of the said motor and of a polarity dependent upon the direction of rotation of the motor, and means connecting the said motor damping signal to the said amplifier at an intermediate stage of amplification thereof, the said damping signal having no effect on the amplifier output so long as the amplifier is saturated.

3,002,142

SEMICONDUCTOR APPARATUS

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 3, 1959, Ser. No. 850,586
1 Claim. (Cl. 321-9)



Direct current to alternating current power inverter apparatus comprising in combination: first square-wave oscillator means for converting a direct current potential

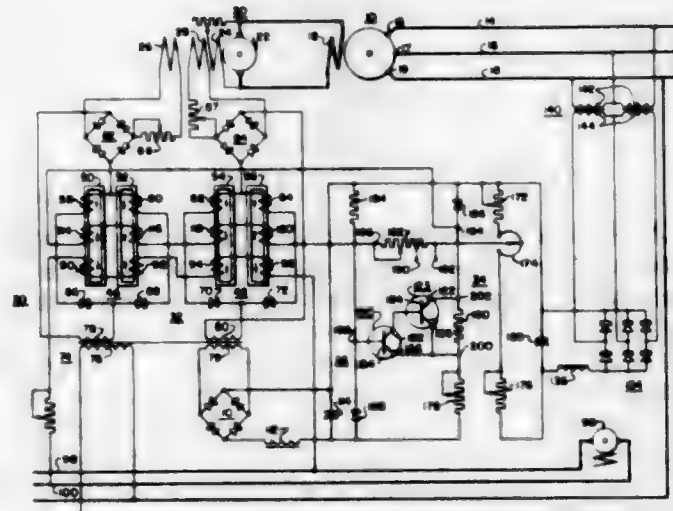
to a square-wave alternating type potential of a first frequency; triple frequency square-wave oscillator means for converting said direct current potential to a square-wave alternating type potential of a frequency three times said first frequency; synchronizing means connecting a portion of the output signal of said triple frequency oscillator means to the control circuit of said first frequency oscillator means to maintain a predetermined phase relation between said oscillators and means for summing the output potentials from said first and triple frequency oscillator means in a relationship to provide a resultant stepped output wave form which tends to approach sine wave.

3,002,143

VOLTAGE REFERENCE CIRCUIT FOR GENERATORS

John F. Reuther, Swanton, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 20, 1956, Ser. No. 629,664
16 Claims. (Cl. 322-36)



1. In a regulator system for a dynamoelectric machine having a field winding and output terminals, the combination comprising circuit means for obtaining a measure of the terminal voltage of the dynamoelectric machine, a semiconductor device, circuit means for producing a substantially constant voltage across the semiconductor device, means for maintaining current through the semiconductor device substantially constant, circuit means for comparing a measure of the terminal voltage of the dynamoelectric machine with the voltage across the semiconductor device to obtain a net voltage, and further circuit means for controlling the field winding of the dynamoelectric machine in accordance with said net voltage to maintain the terminal voltage of said dynamoelectric machine at substantially a predetermined voltage.

3,002,144

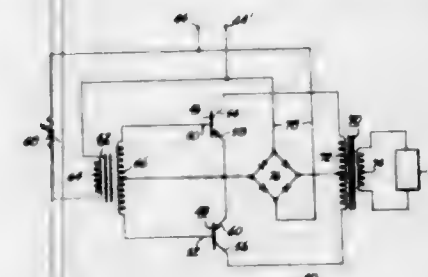
CONTROLLABLE IMPEDANCES

Bruce M. Benton, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Aug. 21, 1957, Ser. No. 679,425
1 Claim. (Cl. 323-16)

In a full-wave transistor controllable impedance connected in common emitter configuration for connection to a source of alternating voltage to effect an alternating voltage across a load, the combination comprising, a first and a second transistor each of which has a control electrode, a first load electrode and a second load electrode, a first transformer having a primary winding and a secondary winding having two portions, circuit means for connecting one portion of said secondary winding be-

tween the control electrode and the first load electrode of said first transistor and for connecting the other portion of said secondary winding between the control electrode and the first load electrode of said second transistor, other circuit means for interconnecting said primary winding with said source to thus render said second transistor conductive and said first transistor non-conductive during one-half cycle of operation and render said first transistor conductive and said second transistor non-conductive during the next half-cycle of operation, a second transformer including a secondary winding and a primary winding having two portions, a full-wave rectifier having an input and output, further circuit means for connecting said input of said full-wave rectifier to said source, still further circuit means for connecting one portion of said primary winding of said second transformer and the first and the second load electrode of said first transistor in series circuit relationship with one



another across said output of said full-wave rectifier, still other circuit means for connecting the other portion of said primary winding of said second transformer and the first and the second load electrode of said second transistor in series circuit relationship with one another across said output of said full-wave rectifier, so that during said one-half cycle of operation when said second transistor is conductive and said first transistor is non-conductive current flows from said source through said full-wave rectifier, the first and the second load electrode of said second transistor, said other portion of said primary winding of said second transformer, and said full-wave rectifier back to said source, and so that during said next half-cycle of operation when said first transistor is conductive and said second transistor is non-conductive current flows from said source through said full-wave rectifier, the first and the second load electrode of said first transistor, said one portion of said primary winding of said second transformer, and said full-wave rectifier back to said source, and still further circuit means for connecting said secondary winding of said second transformer to said load.

3,002,145

FULL-WAVE MAGNETIC AMPLIFIERS

Robert M. Hubbard, Kent, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed July 22, 1959, Ser. No. 828,749
11 Claims. (Cl. 323-89)



1. In a two-stage magnetic amplifier adapted to be connected to a source of alternating voltage to effect a voltage across a load, the combination comprising, a first magnetic amplifier stage including a magnetic core

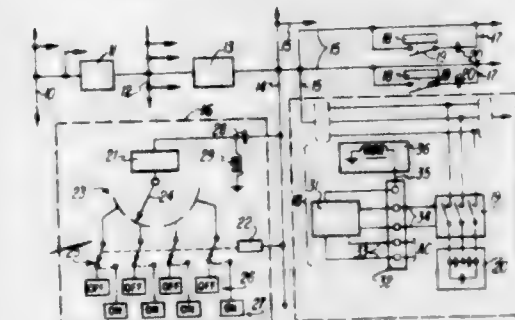
member having a gate winding disposed in inductive relationship therewith, circuit means for connecting said load and said gate winding in circuit relationship with said source so that during alternate half-cycles of the output of said source said magnetic core member is gated and said first stage effects a flow of current through said load, means for resetting the flux level in said magnetic core member in accordance with a control signal during the other alternate half-cycles of the output of said source, a second magnetic amplifier stage including a magnetic core member having a reset winding disposed in inductive relationship therewith, other circuit means interconnected with said load and with said source for effecting a gating of the magnetic core member of said second stage during said other alternate half-cycles of the output of said source so that said second stage effects a flow of current through said load during this portion of the operation, and further circuit means for so interconnecting said gate winding and said winding of said second magnetic amplifier stage in parallel circuit relationship with respect to one another that the magnetic core member of said second stage is reset during the same alternate half-cycles, of the output of said source, that the magnetic core member of said first stage is gated and the amount of reset being in accordance with the gating effected by said gate winding.

3,002,146

REMOTE CAPACITOR SWITCHING SYSTEM

Robert J. Lorr, Oak Park, and Charles Keith Stenerson, Park Ridge, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

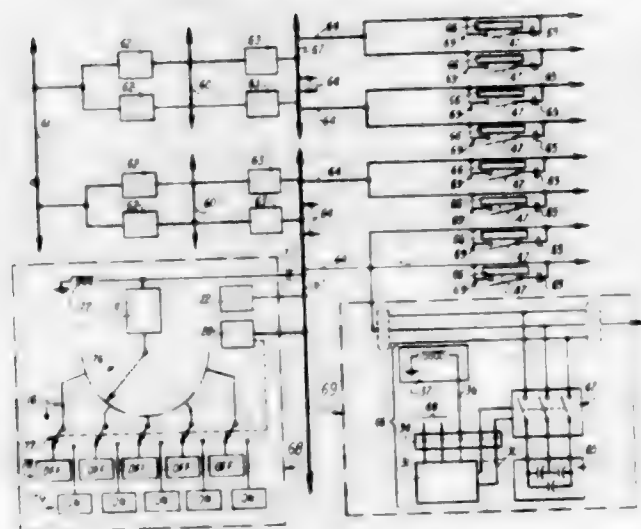
Filed Oct. 13, 1958, Ser. No. 766,797
8 Claims. (Cl. 323-105)



1. Automatic remote control apparatus for use in a power distribution system which includes transmission lines having a plurality of power factor correcting capacitors for connection thereto, and sensing apparatus responsive to a predetermined load characteristic of the transmission lines to indicate when more or less capacitors are needed on the lines; said remote control apparatus controlling the connection of such capacitors to the line and including in combination, a plurality of switching control stations each associated with a capacitor, and a central control station remotely located from said switching control stations, said central control station including carrier transmitting apparatus for supplying to the transmission lines a carrier wave modulated by control signals, and coding apparatus including frequency controlling means for providing sets of "on" and "off" control signals each of a different frequency, and sequence control circuit means including first and second stepping switch means for scanning in response to indications of the sensing apparatus to apply said control signals to said transmitting apparatus in a sequence determined by the load characteristics of the transmission lines, and means for causing said second stepping switch means to step along with said first stepping switch means during a portion of the scan thereof and stop in a position indicating the condition of the capacitors for remem-

bering the sequence in which the capacitors are connected, and said switching control stations each including receiver means for deriving the control signals from the carrier wave received from said central station, and frequency selective control means responsive to control signals of predetermined frequencies to control the connection of the associated capacitor.

3,002,147
REMOTE CAPACITOR SWITCHING APPARATUS
FOR POWER DISTRIBUTION SYSTEM
 Charles Wasserman, 3615 Clarineth Road,
 Baltimore 15, Md.
 Filed June 9, 1958, Ser. No. 740,799
 18 Claims. (Cl. 323-105)



1. An automatic remote control system for use in a power distribution system which includes a power distribution station for supplying power to transmission lines, and which system includes a plurality of power factor correcting capacitors for connection to the transmission lines and sensing apparatus at the power distribution station responsive to predetermined load characteristics of the transmission lines to indicate when more or less capacitors are needed on the lines; said remote control system controlling the connection of such capacitors to the lines and including in combination, a plurality of switching control stations each associated with a capacitor, and a central control station associated with the power distribution station, said central control station including modulated carrier transmitting apparatus for supplying to the transmission lines a carrier wave modulated by control signals, and coding apparatus responsive to the sensing apparatus for selectively applying control signals of different frequencies to said transmitting apparatus in a controlled sequence, whereby the carrier wave is modulated by signals determined by the load characteristics of the transmission lines, said switching control stations each having a control unit including carrier receiver means for deriving the control signals from the received carrier wave, and control means connected to said receiver means and including frequency selective means responsive to received control signals of predetermined frequencies for controlling the connection of said capacitors to the transmission lines.

3,002,148
EARTH FORMATION LOGGING METHOD
AND APPARATUS
 Arthur E. Nall, Jr., Houston, Tex., assignor to Halliburton Company, a corporation of Delaware
 Filed Apr. 30, 1958, Ser. No. 731,953
 16 Claims. (Cl. 324-1)

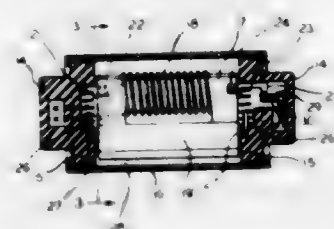
1. In apparatus for obtaining a porosity characteristic of earth formations traversed by a well bore, means for creating an electric field in the earth formations at se-

lected points within the well bore, means for detecting a first potential signal within said field representative of the influence of a predetermined volume of adjacent earth formation, means for detecting a second potential signal within said field representative of the influence of a substantially smaller volume of said adjacent formation, means connected with said first and second signal detecting means for producing a third potential signal related to said first and second potential signals as a sum including, a fourth potential signal that is a ratio of the logarithm of a ratio of said first potential signal and a first predetermined constant potential partly representative of the deposited mud filter cake influence of said adjacent formation, and a second predetermined constant potential, said second constant potential being of representative relation to a first predetermined function relating said third potential signal to a second predetermined function, said second function relating said first potential



signal to the product of said first and said second potential signals, a fifth potential signal that is a ratio of the logarithm of a ratio of said second potential signal and said first constant potential, a third predetermined constant potential, said third constant potential being of representative relation to said first function, and a fourth predetermined constant potential, said fourth constant potential being of representative relation to said first function, means connected with said third potential signal producing means for producing a sixth potential signal that is the sum of said third potential signal, a fifth constant potential signal representative of the mud filtrate within said adjacent formation, and a minus signal related as the logarithm of said first constant potential, and means connected to said sixth signal producing means for producing a seventh potential signal that is the anti-logarithm of the sum of said sixth potential signal and a sixth predetermined constant potential representative of residual oil saturation of said adjacent formation, and means connected to said seventh signal producing means for indicating potential signal as an indication of said characteristic.

3,002,149
DETECTOR FOR MAGNETIC METAL
 Richard A. Christian, Milwaukee, Wis.
 (R.R. 2, Box 35, Union Grove, Wis.)
 Filed Apr. 22, 1958, Ser. No. 730,211
 1 Claim. (Cl. 324-41)



In a detector structure for locating magnetically-susceptible objects normally concealed by a relatively thin

covering layer of non-magnetically-susceptible material, a frame equipped with a pair of laterally spaced legs extending longitudinally therefrom in substantially parallel relation, said legs respectively providing a pair of inwardly facing and laterally aligned bearings having a common axis defined therethrough, a hollow substantially cylindrical roller extending between said bearings and being supported thereon for rotation about said common axis and being formed of a non-magnetically-susceptible material, an elongated handle secured to said frame and extending longitudinally therefrom in a direction opposite from said legs and defining a hand-grip to facilitate manipulation of said detector structure, said handle being provided with a compartment adapted to receive a battery therein, each of said bearings along the inner facing surfaces thereof and within said roller being provided with a recess, a pair of resilient members respectively constrained within said recesses and being compressible in a common direction substantially normal to said axis, magnet structure supported within said hollow roller for movement along such common direction between a first position remote from the surface of said roller and a second position displaced theretoward, said magnet structure being equipped with a pair of pins respectively extending laterally outwardly from said magnet structure and into said recesses and seating against said resilient members, said resilient members being effective to bias said magnet structure toward such first position thereof remote from the surface of said roller and being compressed by movement of said magnet structure toward the second position thereof, an electrically actuated signal device carried by said frame to afford sensible indicia to an operator of said detector structure, a normally open circuit including said signal device as a component thereof, and a circuit closure element included in said circuit and being mounted within one of said recesses along the path of movement of said magnet structure from the first to the second position thereof so as to be operated by the associated pin upon such displacement of said magnet structure toward its second position to close said circuit, said detector structure being movable over relatively large surface areas provided by such concealing layer while said roller is maintained in continuous rolling engagement therewith whereby a magnetically-susceptible object concealed by such layer and traversed by said roller will effect displacement of said magnet structure from its first toward its second position with the result that said circuit will be closed and said signal device energized to indicate the location of such concealed object.

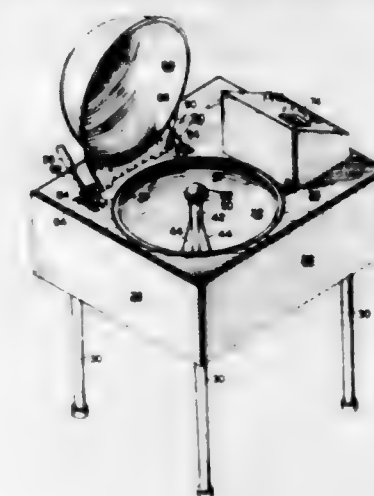
3,002,150
APPARATUS FOR DETERMINING THE MOISTURE
CONTENT OF INSULATED BOOTS AND SIMILAR ARTICLES

Dwight W. Battens, Cambridge, Mass., assignor to Flow Corporation, Arlington, Mass., a corporation of Massachusetts

Filed Aug. 28, 1959, Ser. No. 836,723
 2 Claims. (Cl. 324-61)

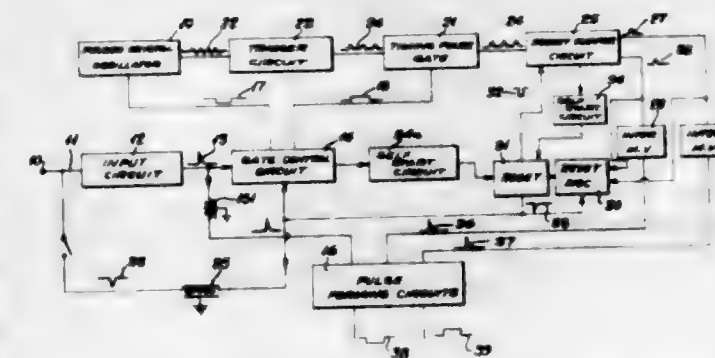
1. Apparatus for measuring the relative water content of articles by measuring their relative capacitance, said apparatus having in combination; a base; a capacitor mounted on said base having a first and second electrode in electrically insulated relation, said first electrode being substantially spherical in configuration, said second electrode being hollow and at least in part spherical and arranged around and concentrically with said first electrode; said electrodes being spaced apart to receive said articles, whereby the capacitance of said articles placed between said electrodes is added to the fixed capacitance between said electrodes and distortions in the combined capacitance of said electrodes and said articles due to variations in the position of said articles are minimized;

means including a balanced bridge circuit for measuring an unknown capacitance; and said capacitor connected



to said measuring means in the position of the said unknown capacitance.

3,002,151
PULSE GENERATOR
 Donald L. Broderick, Menlo Park, Dexter C. Harthe, Saratoga, and Marvin J. Willrodt, Menlo Park, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
 Filed June 18, 1957, Ser. No. 666,432
 5 Claims. (Cl. 328-58)



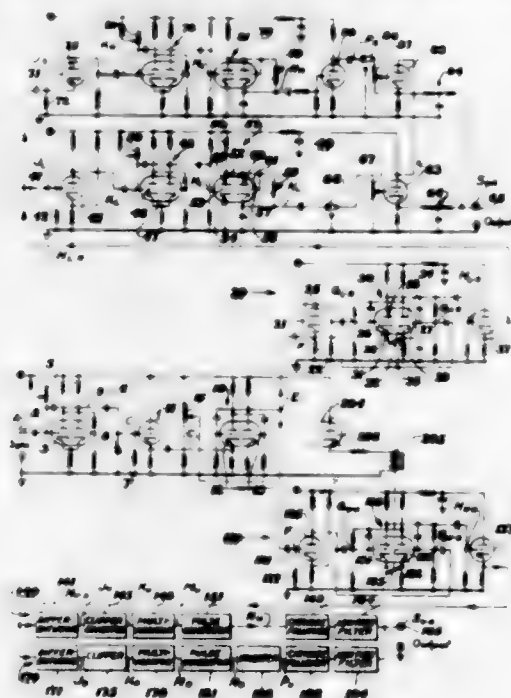
1. A pulse generator for generating pulses having controllable duration comprising means for generating first and second pulses which have a time separation which is adjustable in digital increments, a pair of plate coupled blocking oscillators each serving to receive one of said pulses and each forming an output pulse, a bistable circuit connected to said blocking oscillators and adapted to be triggered from one stable condition to another in response to the output pulses, said bistable circuit serving to form an output pulse having a duration corresponding to the time separation of the first and second pulses, amplifying means, and a frequency sensitive coupling network serving to couple said amplifying means to the bistable circuit.

3,002,152
ELECTRONIC SIGNAL GENERATOR
 Edward C. Yeaton and Hans C. Neumann, Rochester, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 25, 1955, Ser. No. 490,704
 5 Claims. (Cl. 328-62)

2. A pulse generator for generating a voltage pulse of generally triangular waveform, comprising an electronic tube having at least an anode, a cathode and a control electrode, means including a plate resistor connected to the anode of said tube for applying a positive potential between the anode and cathode whereby said tube is

normally conducting, a condenser and a rectifier connected in series between said anode and cathode, said rectifier having its anode connected directly to the anode of said tube and said condenser being connected directly between the cathode of said rectifier and the cathode of

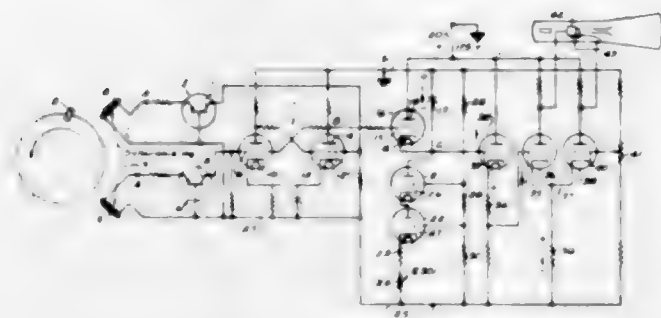


said tube, a resistor connected directly in parallel with said rectifier, and trigger pulse generating means for driving said control element negative relative to said cathode for rendering said tube non-conducting to cause charging of said condenser.

3,002,153

HORIZONTAL SWEEP GENERATOR

Walter J. Williams, Jr., Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed July 8, 1958, Ser. No. 747,283
11 Claims. (Cl. 328-63)



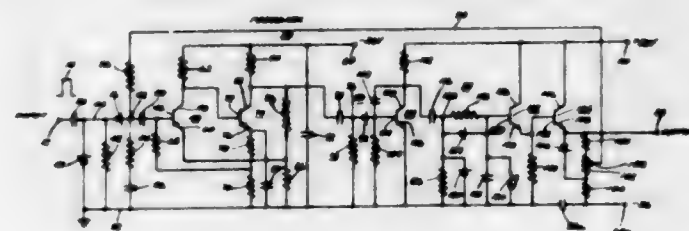
3,002,154

PULSE AMPLITUDE DETECTION SYSTEM

William D. Schmitz and Kenneth C. Schlansker, Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation
Filed June 10, 1960, Ser. No. 35,166
4 Claims. (Cl. 329-109)

1. A system for detecting the amplitude of a train of recurrent pulses comprising: an input circuit for receiving

said pulse; a diode coupled in series with said input circuit and polarized to pass said pulses; pulse stretching means and alternating current voltage amplifier means serially coupled with said diode; full wave peak-to-peak detector means coupled to said pulse stretching and amplifier means; an output circuit including a filter capacitor coupled to said detector means for providing a direct current output signal; and a feedback connection between said output circuit and the side of said diode remote from

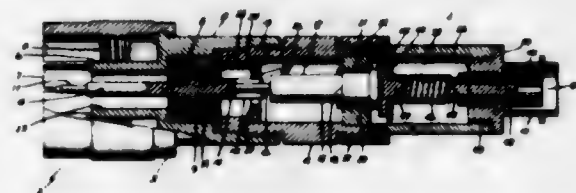


said input circuit for back-biasing said diode with a feedback signal proportional to said output signal and having the same polarity as said input pulses; said pulse stretching and amplifying means, detector means, output circuit and feedback connection forming a servo loop controlling conduction of said diode to provide difference signal pulses having an amplitude between the input pulse amplitude and the feedback signal amplitude which are amplified, stretched and detected to maintain said output signal at a direct current level proportional to the peak-to-peak amplitude of said input pulses.

3,002,155

MICROWAVE BROADBAND CRYSTAL HOLDER FOR CARTRIDGE TYPE CRYSTALS

Julian W. Dees, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed Mar. 21, 1958, Ser. No. 722,893
11 Claims. (Cl. 329-162)



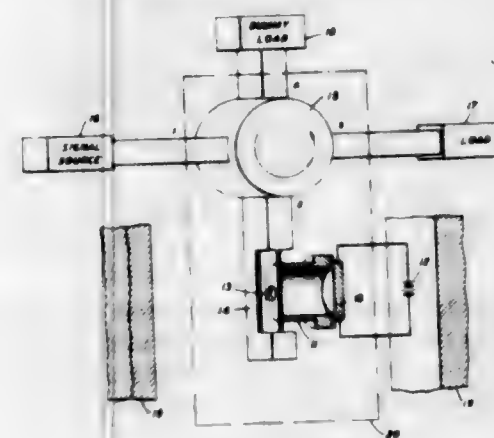
1. For use with a coaxial microwave transmission line having concentric inner and outer conductors, a crystal holder for cartridge type crystals comprising: an outer generally tubular member formed of conductive material and adapted to be connected to said outer conductor of said transmission line; a crystal coaxially disposed within said tubular member and having one terminal adapted to be connected to said inner conductor of said transmission line; said tubular member having a first portion toward said transmission line providing a first characteristic impedance for said holder, said tubular member having a second portion remote from said transmission line providing a second characteristic impedance greater than said first characteristic impedance; said crystal being concentrically and axially disposed inside said second portion; capacitor means between said tubular member and said one crystal terminal; capacitor means between said tubular member and the other terminal of said crystal; and a spiral conductor having its inner end connected to said one terminal of said crystal and its other end connected to said tubular member for providing a high radio frequency impedance return path for rectified current passed by said crystal.

3,002,156

D.C. PUMPED SOLID STATE MASER

Willard S. Boyle, Berkeley Heights, and George E. Smith, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 8, 1960, Ser. No. 7,144
3 Claims. (Cl. 330-4)



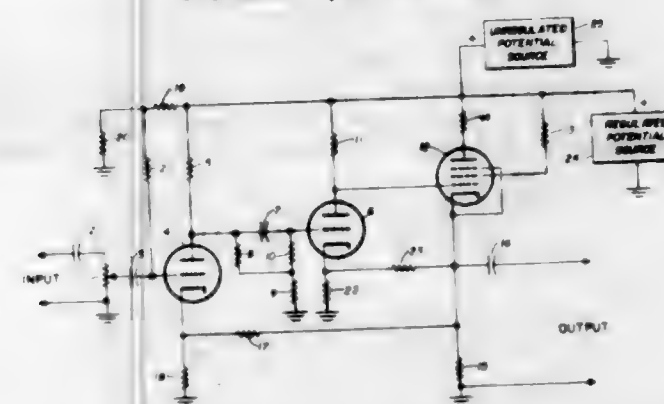
1. In combination, an active element of a material taken from the class consisting of bismuth, arsenic and antimony, means for forming a steady magnetic field through said element for creating in said element an energy level system which includes at least four levels of which the first and second represent opposite spins of the lowest cyclotron resonance level and the third and fourth opposite spins of the succeeding cyclotron resonance level, the strength of the magnetic field applied and the temperature of the element being such that in the absence of an applied electric field only the first of said levels is significantly populated, means for providing a D.C. electric field in the element of such strength as to induce transitions from said first to third levels for creating a population inversion between said second and third levels, and means for supplying for amplification to the element an input signal of the frequency corresponding to the separation of said second and third levels and for abstracting therefrom an amplified replica of the input signal.

3,002,157

LOW DISTORTION AMPLIFIER

Louis W. Erath, Houston, and Lawrence T. Fleming, Bellaire, Tex., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Sept. 9, 1957, Ser. No. 682,718
8 Claims. (Cl. 330-89)



1. An amplifier including a first and a second vacuum tube each having at least a cathode control grid and plate, means supplying high potential for the plates of both said tubes including a plate resistor at least for said first tube, a first cathode resistor for said first tube and a second cathode resistor for said second tube, a direct connection between the plate of the first tube and the con-

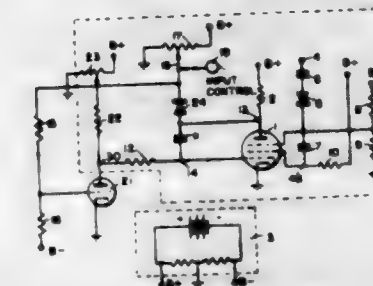
trol grid of the second tube, and a resistor having a resistance at least as great as that of said plate resistor connected between the cathodes of said tubes and operable effectively to bypass the cathode resistor of said first tube for A.C.

3,002,158

TIME MODULATION CIRCUIT

Ottie C. Mitchell, Whittier, and Gary J. Himler, Lakewood, Calif., assignors to North American Aviation, Inc.

Filed Dec. 31, 1956, Ser. No. 631,593
4 Claims. (Cl. 332-14)

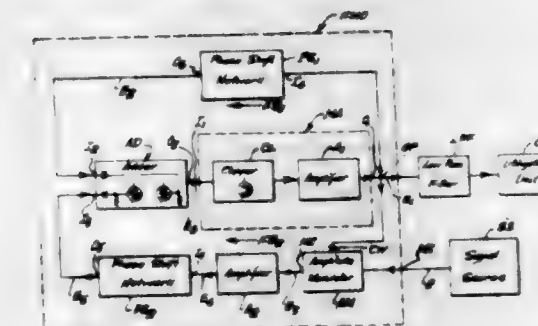


3. A variable wave form generator comprising a normally nonconductive electron discharge tube having in successive dispositions a cathode, a first control grid, a screen grid, a second control grid and an anode, means connected to said anode and cathode for establishing operating potentials on said tube according to an electrical signal representing a function of a continuously variable input control signal, biasing means connected to said second control grid to prevent conduction of said tube, means coupled to said second control grid for applying an electrical triggering pulse to said tube for rendering said tube conductive, positive feedback means including a capacitor coupling said second control grid to said screen grid to aid said triggering means, negative feedback means including a resistance-capacitance timing circuit connecting said anode and said first control grid for decreasing the output of said tube, and variable impedance means coupled to said resistance-capacitance circuit to vary the resistance of said negative feedback means as a function of said continuously variable input control signal.

3,002,159

OSCILLATOR

Thomas H. Wiancko, Alhambra, and Keith L. Winsor, Pasadena, Calif., assignors, by mesne assignments, to Daystrom Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Dec. 30, 1957, Ser. No. 705,891
8 Claims. (Cl. 332-22)



1. An oscillator comprising: a main negative feedback amplifier having an input and an output; adding means for feeding the vector sum of two signals to the amplifier input; first feedback means including a first phase-shift circuit for feeding an output signal from the amplifier

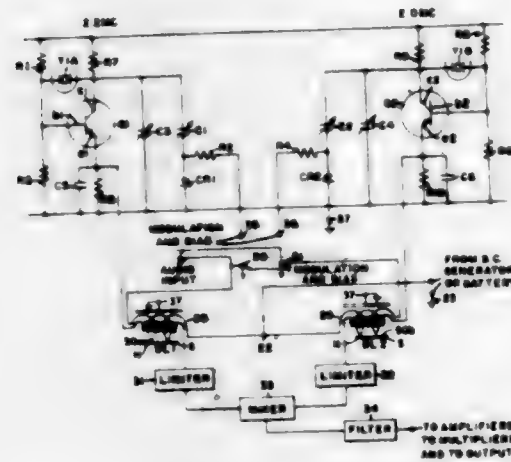
output to said adding means with a phase that varies in accordance with the frequency of said output signal;
a source of control signal voltage having components of modulating frequency low compared with said output signal frequency;
modulating means controlled by the amplifier output signal and the control signal voltage for generating an amplitude-modulated signal having a carrier frequency equal to said output signal frequency and being amplitude modulated in accordance with the varying magnitude of said control signal voltage;
second feedback means including a second phase-shift circuit and an auxiliary negative feedback amplifier for applying said amplitude-modulated signal to said adding means with a phase that varies in accordance with said output signal frequency; and
signal clipping means connected between said adding means and said main negative feedback amplifier.

3,002,160

PHASE MODULATION SYSTEM

Paul R. Crocker, East Syracuse, and Richard Ocko, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York

Filed Jan. 29, 1958, Ser. No. 712,001
20 Claims. (Cl. 332-29)



1. A phase modulation system comprising a first oscillator to generate a first carrier frequency wave, a second oscillator to generate a second carrier frequency wave, a first and a second transmission delay line whose time delay can be varied to vary phase by changing one or more of its parameters, means to impress a first modulation signal on said first transmission line, means to impress a second modulation signal on said second transmission line, means to modulate said carrier waves with respective transmission lines outputs and means to provide a difference frequency between the output of said first and said second transmission lines modulated carrier waves said output being a required phase modulated wave.

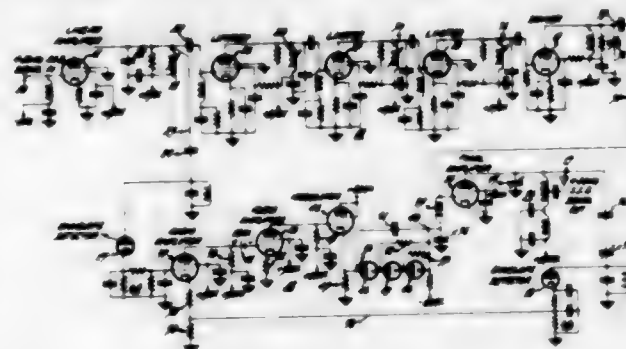
3,002,161

TRANSMITTER

Max S. Ferynska, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 10, 1957, Ser. No. 651,872
10 Claims. (Cl. 332-45)

1. In a transmitter, means for generating a complex wave which is amplitude modulated and phase modulated by intelligence to be transmitted, means for eliminating amplitude variations from said wave to provide a resultant phase modulated wave, means for amplifying said resultant wave, means for detecting the amplitude modulation envelope of said complex wave, a direct current amplifier coupled to said detecting means over a direct current path for amplifying said detected envelope, a

grid-bias modulated stage having an input circuit coupled to said amplifying means and over a direct current path to said direct current amplifier to amplitude modulate said amplified resultant phase modulated wave with said



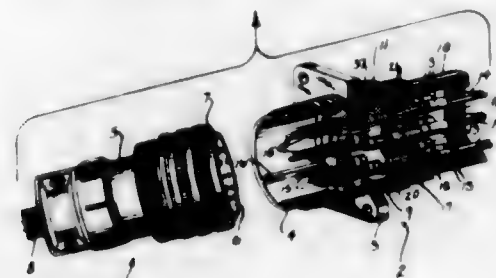
amplified detected amplitude modulation envelope, and means coupled between said stage and said direct current amplifier to alter the operation of said amplifier in response to said detected envelope according to the output of said stage.

3,002,162

MULTIPLE TERMINAL FILTER CONNECTOR

William W. Garstang, Fox Point, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Nov. 20, 1958, Ser. No. 775,192
8 Claims. (Cl. 333-1)



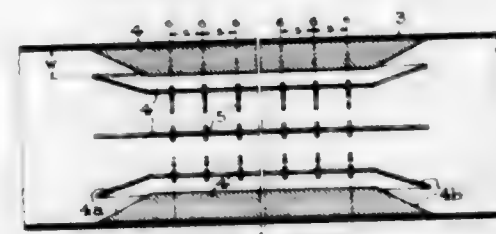
1. In a multi-conductor feed-through the combination comprising a ferrite block; and a plurality of filter components each embedded in said block and including a conductor extending through the block, a dielectric encircling said conductor and extending into said block, a first electrode on the dielectric in electrical connection with said conductor, and a second electrode on the dielectric disposed adjacent said ferrite which is of a length that exposes the dielectric for coupling between the ferrite and the fields of the filter component.

3,002,163

MODE COUPLER FOR CIRCULAR WAVEGUIDES

Walter K. Kahn, Brooklyn, N.Y., assignor to Polytechnic Institute of Brooklyn, Brooklyn, N.Y., a corporation of New York

Filed Jan. 8, 1960, Ser. No. 1,343
5 Claims. (Cl. 333-21)



1. A mode coupler comprising a section of circular waveguide, first conducting means distributed throughout an annular portion of the space enclosed within said

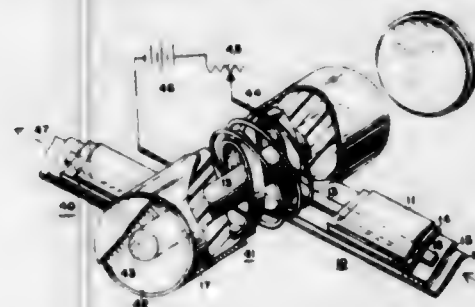
waveguide adjacent the wall thereof and operating to make the cut-off frequency of the E_{01} mode equal to that of the H_{01} mode, and second conducting means mounted within the central space enclosed by said first conducting means, said second conducting means being distributed along a linear section of said wave guide and operating to couple the E_{01} mode with the H_{01} mode.

3,002,164

HIGH FREQUENCY TRANSMISSION LINE COUPLING DEVICE

William J. Wilson, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Continuation of application Ser. No. 538,559, Oct. 5, 1955. This application May 24, 1960, Ser. No. 31,453
2 Claims. (Cl. 333-24)



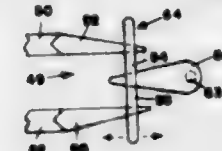
1. A high frequency transmission line coupling device comprising, a pair of transmission lines each having a pair of elongated plane outer conductors providing ground planes and an elongated plane inner conductor for carrying signal current, said inner conductor being narrower than said outer conductors and disposed in insulated spaced relation between and in parallel with said outer conductors, and an elongated hollow circular wave guide having a pair of axially oriented rectangular slots formed in the wall thereof, one outer conductor of each pair of said outer conductors being tangentially positioned in contact with the outer surface of said guide in proximity to one side of a pair of opposite sides of one of said slots, the remaining outer conductors being positioned in contact with the outer surface of said guide in proximity to a slot side opposite said one side, said inner conductor entering tangentially through its corresponding slot into said wave guide and spirally curved about the longitudinal axis of said guide, the flat sides of said inner conductor being parallel to said axis.

3,002,165

VARIABLE ATTENUATOR

Donald R. Ayer, Nashua, and Arnold N. McDowell, Amherst, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Nov. 17, 1960, Ser. No. 69,863
12 Claims. (Cl. 333-81)



1. A strip transmission line attenuator comprising, in combination, a transmission line outer conductor, a transmission line inner conductor having a first adjustable resistance section, a second adjustable resistance section, means connecting one end of said second section to said outer conductor, a movable section in sliding contact with said first and second sections, and means for moving said movable section in such manner as to affect the

3,002,166

INSIDE-OUT ATTENUATOR FOR HIGH-FREQUENCY COAXIAL LINES

Bruno O. Weinschel, Bethesda, Md., assignor to Weinschel Engineering Co., Inc., Kensington, Md., a corporation of Delaware

Filed Aug. 11, 1959, Ser. No. 833,041
2 Claims. (Cl. 333-81)



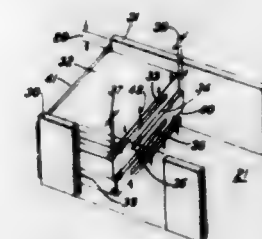
1. A wide-band coaxial high-frequency attenuator unit for connection to a coaxial line, comprising a low-resistance central conductor, a tubular member of high-dielectric ceramic material of substantial thickness coaxially surrounding and spaced from said central conductor, a thin conductive film of relatively high resistance uniformly coating the interior surface of said tubular member and of a thickness which is negligibly small compared to the depth of the high-frequency current penetration, coaxial connector means having an inner terminal and a coaxial outer terminal, inner contact means connecting said inner terminal to one end of said central conductor, outer contact means connecting said outer terminal to one end of said thin conductive film, and a coaxial low-resistance outer conductive shield coaxially conductively connected to said outer terminal by a contact having a low effective impedance over a wide spectrum of frequencies comprising the full useful frequency range of the attenuator, said shield surrounding said metal film and spaced therefrom, the ceramic material of said tubular member substantially filling the space between said film and said shield to provide a propagation path between the film and outer shield having a different mode of propagation from the path between the central conductor and film such that there is a sufficiently large difference in propagation velocity between the inner and outer paths to effectively decouple the metal film from the outer shield over a wide frequency band.

3,002,167

ELECTROMAGNETIC WAVE TUNER

Edward W. Houghton, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 5, 1958, Ser. No. 733,092
9 Claims. (Cl. 333-83)



1. Means for introducing a controlled reactance into a microwave structure comprising, an elongated conductively bounded channel having dimensions too small to support the dominant mode of wave propagation therein coupled to said structure, and movable means disposed in said channel for loading a one-quarter wave length long

center portion of said channel sufficiently to support the dominant mode of wave propagation in said center portion.

3,002,168 POTENTIOMETER

James X. Green, Burbank, and Keith L. Herbert, Inglewood, Calif., assignors, by mesne assignments, to Airline Electric, Inc., Gardena, Calif., a corporation of California

Filed Nov. 13, 1959, Ser. No. 852,691
3 Claims. (Cl. 330-180)

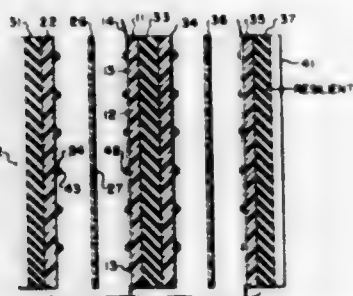


1. A rectilinear potentiometer for use in an electrical circuit, including: a block of dielectric material, said block provided with one end wall and hollowed centrally to provide an elongated cavity, defined by first and second opposed sides in a direction transverse to the end wall; a linear resistance element disposed within said cavity; a screw displaced from the linear resistance element and disposed to extend through the end wall of said block and into said cavity in a direction substantially parallel to said resistance element; a conductive contacting member mounted on said screw within said cavity for slidable movement relative to said screw upon rotation of said screw, the slidable movement of the contacting member relative to the screw being in a direction which substantially parallels said element; first and second closing means each closing said cavity on a different one of the first and second sides of said cavity and in a direction transverse to the end of said cavity, each of said first and second closing means being of dielectric material and having an inner surface facing the cavity and provided with at least one area of a conductive coating, said area extending parallel and adjacent to said linear resistance element, said member having means to effect simultaneous slidable contact with said resistance element and said coatings on said first and second closing means; and conduit means electrically coupled to said resistance element and said conductive coatings to enable said resistance element and said conductive coatings to be connected in the electrical circuit.

3,002,169 ELECTRICAL INTERCONNECTION DEVICE

Lawrence J. Kamm, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

Filed Mar. 6, 1957, Ser. No. 644,405
6 Claims. (Cl. 339-18)

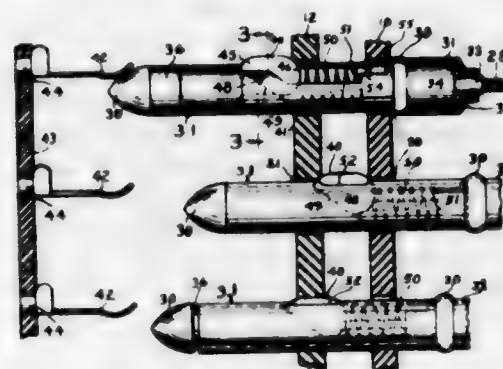


1. An electrical interconnecting device including a first conductor panel comprising an insulating flexible supporting surface and a first plurality of conductive elements spaced from one another and fixed to said supporting surface, a second conductor panel comprising an insulating flexible supporting surface and a second plurality of con-

ductive elements adapted to cooperate with said first plurality of conductive elements, each of said first plurality of conductive elements having a first plurality of conductive projections and each of said second plurality of conductive elements having a second plurality of conductive projections in cooperative relationship with said first plurality of conductive projections, means for establishing circuit paths between said first plurality of conductive elements and said second plurality of conductive elements, said means including a circuit interconnection defining panel disposed between said first plurality of conductive elements and said second plurality of conductive elements, said circuit interconnection defining panel including a plurality of predetermined electrical contact enabling means cooperating with said first and second pluralities of projections for selectively enabling interconnection between said first plurality of conductive elements and said second plurality of conductive elements, and compression means for applying a compressive force urging said first and second pluralities of conductive projections toward contact with one another to establish circuit paths selected by said circuit interconnection defining panel, said compression means comprising first and second resilient layers connected to said first and second conductor panels on the surfaces opposite said first and second pluralities of conductive elements, and first and second rigid backing plates fastened to said first and second resilient layers, whereby opposing forces applied to said backing plates enables a compressive force to be applied to said first and second conductor panels.

3,002,170 ELECTRONIC DATA PROCESSING MACHINE CONTROL PANEL AND ELECTRICAL CONTACT THEREFOR

Robert G. Clouthier, 3 W. Fairhill Road, Holden, Mass.
Filed Dec. 21, 1959, Ser. No. 861,094
2 Claims. (Cl. 339-18)

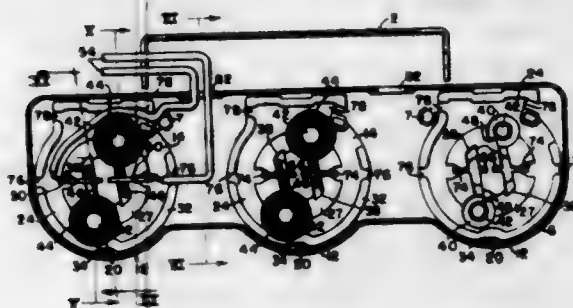


1. In an electronic data processing machine, an electric circuit making apparatus comprising a fixed panel on the machine having spaced electrical contact members arranged in a pattern, a replaceable plug supporting panel having two perforated plates in a fixed spacing and removably separable as a unit from the fixed panel, said plates having sets of axially aligned holes in the same pattern arrangement of said contact members, and a set of circuit making wires, each having a contactor plug at each end which is insertable through selected aligned holes into electrical contact with the adjacent contact member of the fixed panel, each contactor plug having a spring pressed detent sized relative to the plate spacing to lie between said plates and arranged to hold a plug on the panel in an intermediate position out of contact with said members, the inner face of the plate adjacent to the fixed panel being so spaced therefrom that the detent may be moved to engage said inner face and hold the plug in electrical contact with the associated contact member.

3,002,171 WIRING DEVICE

George C. Lemmon, Southbury, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Filed Aug. 17, 1956, Ser. No. 604,745
19 Claims. (Cl. 339-52)

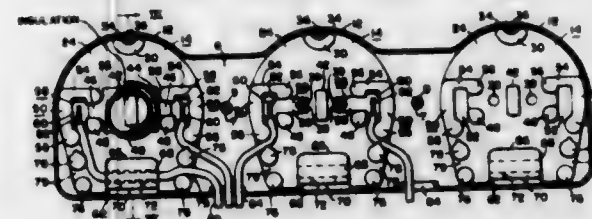


19. A wiring device comprising an insulating support having at least one opening, an elongated contact member spanning said opening, guide means being provided adjacently of one side of said support for the purpose of generally locating said contact in its spanning position, and a separate elongated spring arm for biasing said contact inwardly and to one side of said support opening, and means for supporting said spring arm relative to said support so as to enable said spring arm to extend generally parallel to said one support side and generally laterally through an opening in said contact, said spring arm engaging said contact so as resiliently to hold said contact relative to said support opening as previously described, said guide means enabling said contact to be pivotable about its opening relative to said spring arm, whereby a load terminal inserted through said support opening from the support side opposite said one support side resiliently deflects said contact unitarily relative to said guide means and pivotally relative to said spring arm so as to be provided with an effective electrical engagement with said contact.

3,002,172 RETRACTABLE LAMPHOLDER

George C. Lemmon, Southbury, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Filed Mar. 4, 1957, Ser. No. 643,769
3 Claims. (Cl. 339-52)



3. A wiring device comprising a housing having oppositely spaced walls, at least one of which has an opening therein, a plunger of insulating material located between said walls having an outer side adjacent said opening, said plunger having a portion engageable with said one wall to limit movement of said plunger through said opening, at least one contact supported on the inner side of said plunger for electrically energizing a contact of an electric lamp, a passage extending through said plunger to the inner side thereof to expose at least a portion of said contact, means for limiting motion of said contact in a plane parallel to said inner side of said plunger, an integral lateral shoulder extending from said inner side of said plunger and located in proximity to said contact, insulating means having an aperture therein receiving said shoulder and having at least a portion thereof in engagement with at least a portion of said contact,

a resilient coil spring having one end thereof in engagement with said insulating means and having the other end thereof in engagement with the other of said spaced walls to bias said contact toward said plunger and said plunger toward said one wall.

3,002,173 ELECTRICAL CONNECTION

Robert Kilgannon Allen, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed June 25, 1957, Ser. No. 667,829
6 Claims. (Cl. 339-95)

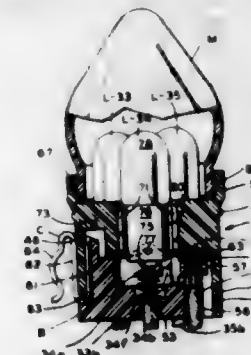


1. An electrical joint comprising a pair of conductors adapted to be clamped together in an overlapping relationship, the first of said conductors being provided with ridge means on a surface thereof, said ridge means presenting at least a pair of oppositely disposed surface portions such that planes tangent to such surface portions respectively will intersect the axis of assembly of the joint at an acute angle, the second of said pair of conductive members being provided with oppositely disposed edge portions located to engage said surface portions of said ridge means, and clamping means for urging and holding said edge and surface portions together under sufficient pressure to cause said edge portions to engage said surface portions to produce a wiping action to remove film from the contacting area of said surface and edge portions and deform such contacting area to increase the effective electrically conductive contact area.

3,002,174 DISPLAY LIGHTING APPARATUS

Louis J. Rafter, Jr., % Amelco Corp., Mill and Center Sts., South Toms River, N.J.

Filed Mar. 16, 1959, Ser. No. 799,774
6 Claims. (Cl. 339-119)



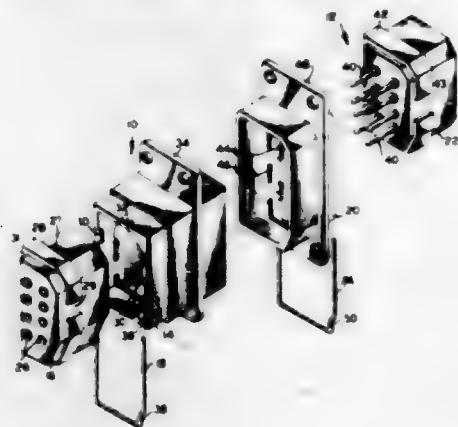
1. In a socket assembly for receiving and supporting a plurality of electric lamps each of which includes a pair of spaced electric contacts, said socket assembly comprising an upstanding, one-piece sleeve including a partition dividing its interior into an upper compartment and a lower compartment, said partition having a plurality of through openings formed therein, a base positioned at least partly in the lower compartment, said base and sleeve comprising an electrical insulating material, an electrically conductive element intermediate the base and the partition and positioned wholly within the confines of the sleeve, a plurality of first electric terminals and a single second electric terminal in the

lower compartment, said second terminal being electrically connected to the conductive element, each of said lamps being adapted to register with a corresponding opening in the partition with one of its contacts electrically connected to a corresponding first terminal and its other contact electrically connected to the conductive element.

3,002,175

ELECTRICAL CONNECTOR HOUSING

Joseph J. Bertram, Norwalk, Conn., and Seymour Rosenfeld, New York, N.Y., assignors to Burndy Corporation, a corporation of New York
Filed Sept. 24, 1958, Ser. No. 763,071
4 Claims. (Cl. 339-126)



2. A connector assembly comprising an insulating plug having an external shoulder with at least one discontinuity therein, a shell having at least one projection on its inner surface to cooperate with said shoulder to limit forward movement of said plug into said shell, and at least one additional projection longitudinally spaced from said first mentioned internal projection a distance greater than the longitudinal width of said shoulder and disposed opposite and in longitudinal alignment with said discontinuity in said plug shoulder; and a removable locking member insertable between the rear of said plug shoulder and said additional projection when said plug is inserted in said shell to limit rearward movement of said plug within said shell.

3,002,176

MULTIPLE-CONTACT ELECTRICAL CONNECTOR

Robert S. Yopp, Riverside, Ill., assignor to Amphenol-Borg Electronics Corporation, a corporation of Delaware
Filed Nov. 13, 1956, Ser. No. 621,895
11 Claims. (Cl. 339-176)



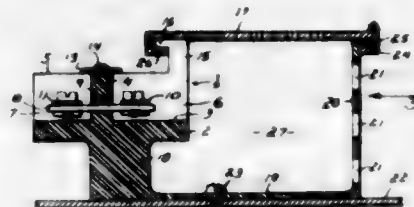
10. In an electrical connector, in combination, an insulating contact mount consisting of a single, integral di-

electric molding having a bottom portion and at least one relatively broad, smooth, flat rigid dielectric backing wall perpendicular to the bottom portion, with a plurality of high conductivity cadmium bronze metallic contacts aligned against said backing wall; each of said contacts comprising a relatively rigid mounting shank of channel shaped conformation fitted within a cavity extending through the bottom of the molding, with a terminal portion of channel shaped form projecting therefrom; each of said contacts having a thin, narrow, yieldable blade integral with said mounting shank and extending therefrom in a free-standing curved bow disposed across the aforementioned dielectric backing wall, with the end of the bow adjacent to the mounting shank lying flush against the backing wall and with said blade curving gradually outwardly therefrom in a concave root portion extending to a reversely curved convex face segment; terminating in a horseshoe bend having a slidable rocker end supporting the leading end of the blade engaging an anchor pocket disposed behind the aforementioned dielectric backing wall; the curvature of the root portion of the contact blade being no more abrupt than the curvature of the convex face thereof, and the horseshoe bend of the blade being of dimensions to be received within the anchor pocket of the dielectric without substantial flexing.

3,002,177

TERMINAL BOARD WITH WIRE CHANNEL

Oswald M. Bundy, Cleveland Heights, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 1, 1957, Ser. No. 693,962
8 Claims. (Cl. 339-198)



1. A terminal board construction for use in control panels of electrical control apparatus, comprising a longitudinal floor portion having integral substantially parallel first and second sidewalls, the free end of the first of said sidewalls including a longitudinal flange, said second sidewall being spaced from said first sidewall and including oppositely extending shelf portions substantially parallel to and spaced above said floor portion, a longitudinal web integral with said shelf portions, a series of transverse walls radially extending from the opposed sides of and intersecting said web, a plurality of straps extending through said web substantially parallel to said shelf portions with one each of said plurality positioned within the confines formed by the shelf portions, the web and said transverse walls, said transverse walls including posts having offstanding flanges substantially coplanar with the flange carried by the free end of the first sidewall, said sidewalls thereby being adapted to receive a cover and to form a wire-receiving chamber in the area therebeneath.

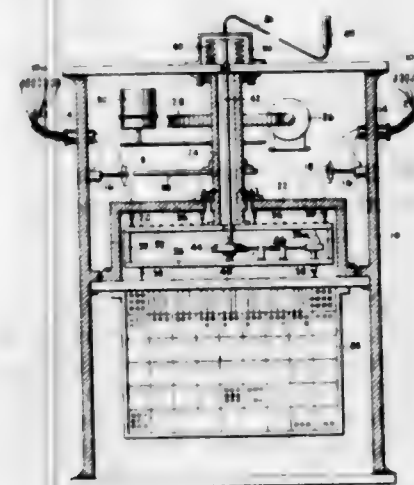
3,002,178

VELOCITY COMPENSATING APPARATUS FOR SONAR SYSTEMS

Robert E. Peterson, Old Lyme, Conn., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 16, 1956, Ser. No. 559,491
19 Claims. (Cl. 340-6)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A device for determining the direction from which sounds come in a fluid medium, which comprises electro-

mechanical transducer means adapted to be placed in a selected array in a fluid medium which transmits mechanical vibrations therethrough with a velocity which is a function of a physical characteristic of said fluid medium; signal translating means including mechanically adjustable time delay means for delaying a signal passing therethrough, and means for effectively coupling said time delay means in series with said transducer means;



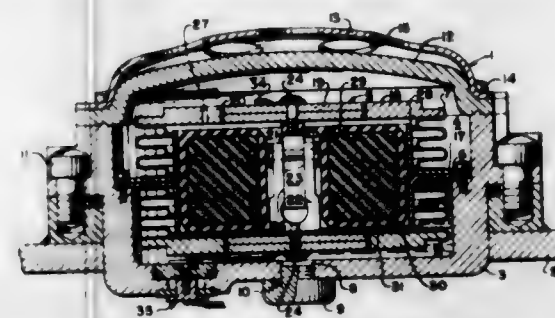
movable means coupled to said translating means for adjusting the magnitude of the delay provided by said time delay means in order to compensate for variations in velocity of said mechanical vibrations through said fluid medium, and means sensitive to said characteristic of said medium which affects the rate of sound transmission operable, when said sensitive means is immersed in said medium, on said movable means to adjust the latter in the magnitude of the delay in accordance with variations in said characteristic of said medium.

3,002,179

LOW FREQUENCY HYDROPHONE

Donald W. Kuester, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 3, 1952, Ser. No. 307,727
11 Claims. (Cl. 340-10)

(Granted under Title 35, U.S. Code (1952), sec. 266)

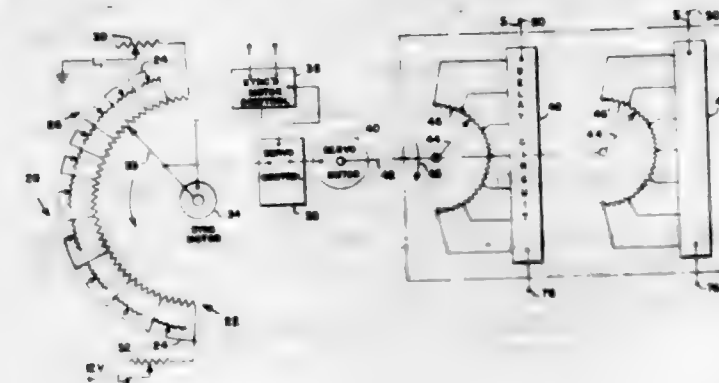


4. In a hydrophone of the character disclosed, a casing, a yieldable cover therefor, a Bimorph ceramic crystal microphone therein, suspension means for said microphone whereby the same is suspended from said casing, fluid means for signal energy coupling between said cover and said microphone, said microphone comprising a pair of parallel supported Bimorph ceramic crystal elements, a pair of annular driver means for said crystals and arranged respectively in concentric radially extending relationship thereto, an expansible bellows means peripherally attached to said pair of driver elements at the respective ends of the bellows and supported by said supporting means in the casing, and an axial loading means for said pair of crystals which is yieldable under excess loading conditions.

3,002,180

METHOD AND APPARATUS FOR REPRODUCTION OF SEISMIC RECORDS

Alfred C. Winterhalter and William T. Evans, Beaumont, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Oct. 14, 1957, Ser. No. 690,121
18 Claims. (Cl. 340-15)

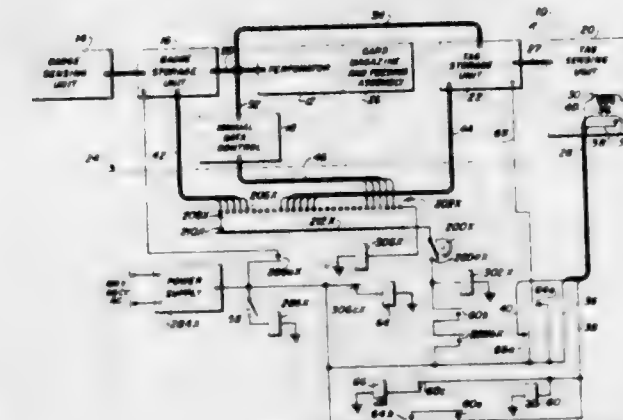


1. Apparatus for the reproduction of seismic records comprising pickup means constructed and arranged to provide electrical signals from a seismic record, a multi-section electrical delay line arranged to receive said electrical signals, variable impedance means arranged to pick up signals serially from various parts of said delay line and including a member movable to vary the impedance thereof, means for moving said member to vary said impedance, and means including a function generator having a variable output for controlling said moving means to vary said movement of said member to provide varying delays between portions of signals received by the delay line and their counterpart signals picked up by said variable impedance means.

3,002,181

AUTOMATIC INVENTORY RECORDER

John T. Parsons, Traverse City, and Floyd E. Harwood, Ypsilanti, Mich., assignors to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed Jan. 10, 1958, Ser. No. 708,141
3 Claims. (Cl. 340-173)

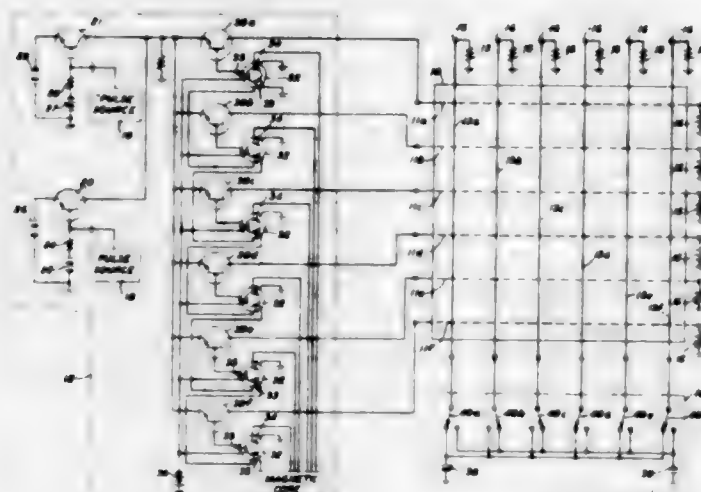


1. An inventory unit for use with tags bearing data representing indicia comprising a recorder using a record medium, first data storing means for storing a plurality of fixed items of information, second data storing means for storing variable items of information, portable sensing means remote from said recorder and connected to said second data storing means, said sensing means being adapted to removably receive one of said tags, means responsive to the insertion of a tag into said sensing means for operating said sensing means to sense the indicia on the inserted tag and to store the data represented by the sensed data in said second data storing means, switching

means controlled by the storage of data in said second data storing means for connecting said recorder to said first and second data storing means in sequence so that said recorder records the data from the sensed tag in conjunction with the fixed items of information, means for clearing said second data storing means, means for advancing said record medium, and means controlled by said switching means for operating said clearing means and said record medium advancing means following the recording of the items of information stored in said first and second data storing means.

3,002,182 FERROELECTRIC STORAGE CIRCUITS AND METHODS

John R. Anderson, Dayton, Ohio, assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 10, 1956, Ser. No. 627,163
12 Claims. (Cl. 340-173.2)



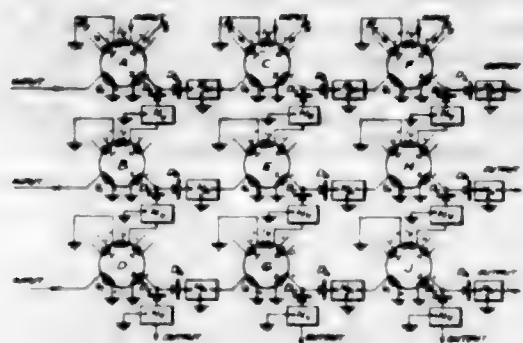
9. An information storage circuit comprising a plurality of ferroelectric capacitors connected between row and column electrodes in a matrix array, first and second pulse means connected to said row and column electrodes respectively, means for causing said first pulse means to apply to a selected row electrode a partial store pulse of magnitude less than the switching voltage of said capacitors but greater than one-half said switching voltage, means for causing said second pulse means to apply to selected column electrodes a complementary store pulse of magnitude less than one-half the switching voltage of said capacitors to selected column electrodes, said partial and complementary store pulses being sufficient in combination to switch the capacitors between said selected row and column electrodes, and means for subsequently causing said second pulse means to apply disturbance compensation pulses to all of said column electrodes of amplitude sufficient to compensate for disturbing pulses in unswitched capacitors.

3,002,183 DIGITAL COMPUTING

Sadie Sydney Guterman, Dorchester, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Dec. 15, 1954, Ser. No. 475,521
7 Claims. (Cl. 340-174)

1. A system comprising a plurality of magnetic flux sustaining elements, first and second windings on each of said elements, diverging means including a delay network in circuit with said second winding for feeding signals from the second winding of any one of said elements to the first winding of each of two other elements, and means including third and fourth oppositely poled

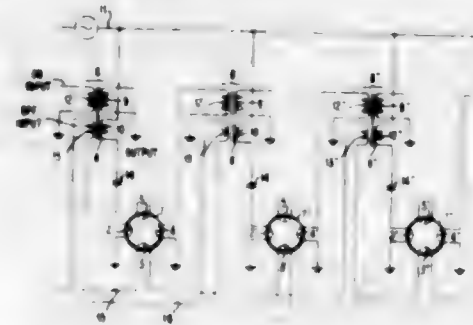
windings on said elements for activating a selected one of said two diverging means, said diverging means in-



cluding unidirectional impedance means of opposite polarities in circuit with said delay network.

3,002,184 PULSE GATING DEVICE

Walter E. Proebster, Zollikon, Zurich, Switzerland, assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Nov. 14, 1957, Ser. No. 696,500.
Divided and this application Mar. 23, 1959, Ser. No. 801,411
Claims priority, application Switzerland Feb. 18, 1957
6 Claims. (Cl. 340-174)



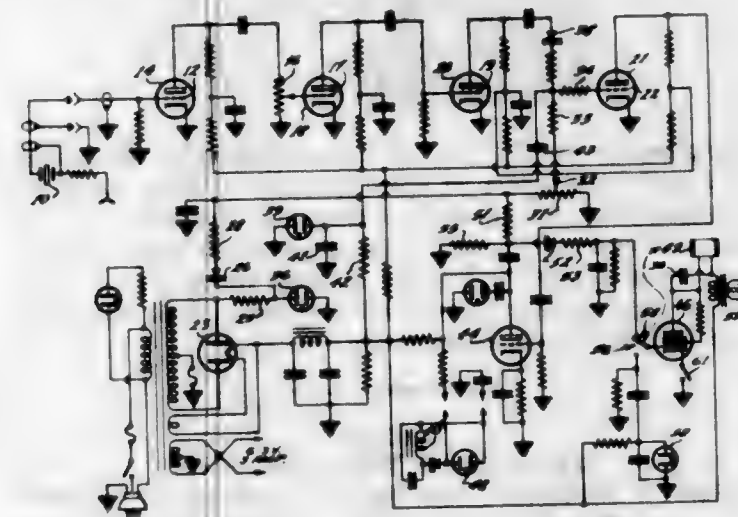
1. A chain of magnetic elements for storing a plurality of pulses including the combination of: a plurality of ferro-resonant flip-flops each having an On input winding, an Off input winding and an output winding, each said flip-flop producing an alternating current output having a greater magnitude when said flip-flop is On and having a lesser magnitude when said flip-flop is Off; a plurality of magnetic pulse gates each provided with a control winding, a bias winding, an input winding and an output winding; the control winding of each said gate being coupled to the output winding of the previous flip-flop of said chain and the output winding of each said gate being coupled to the On input winding of a subsequent flip-flop of said chain; the input winding of each of said gates being connected in series with the Off input winding of the preceding flip-flop; the input winding of said gate and the Off input winding of the preceding flip-flop of even-numbered stages being connected in series to a first transfer terminal and corresponding windings of odd-numbered stages being connected in series to a second transfer terminal whereby the application of a current pulse to one of said transfer terminals causes a flip-flop in the On state to be turned Off and simultaneously causes the pulse gate coupled to the output of a flip-flop which is switched, to transfer a pulse through said gate to the succeeding flip-flop in the chain thereby turning said succeeding flip-flop On.

3,002,185 LOW FREQUENCY PULSE DETECTOR

Samuel M. Baes, 19 Standish Ave., Yonkers, N.Y.
Filed June 13, 1957, Ser. No. 665,406
5 Claims. (Cl. 340-213)

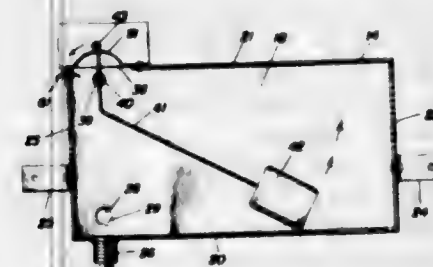
5. A pulse detector comprising means to provide a source of electrical signal pulses, an amplifier, means to

supply said pulse signals to said amplifier, means to bias said amplifier to its nonconductive state, said amplifier being conductive upon occurrence of a pulse, a voltage waveform source, means to couple said waveform source to said amplifier, a second amplifier, means to couple said first amplifier to said second amplifier, said second amplifier having an output circuit, said output circuit of said second amplifier having means to develop a bias voltage when said first amplifier conducts, a third



amplifier having an input circuit, means for supplying said bias voltage to said input circuit of said third amplifier, a second voltage waveform source, means operative upon excitation thereof to couple said second waveform source to said input circuit of said third amplifier, said last named means becoming operative upon occurrence of a change in said developed bias voltage, and a reproducer for the output of said second waveform source, said reproducer being coupled to the output of said third named amplifier.

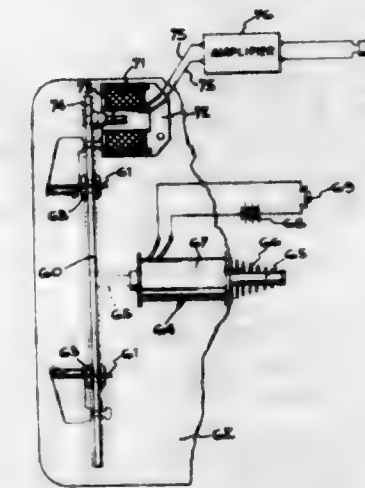
3,002,186
OIL GAUGE
Alphonse J. Schlagen, Box 37, Oak Park, Minn.
Filed Apr. 14, 1958, Ser. No. 728,379
5 Claims. (Cl. 340-244)



1. A gauge to indicate the liquid level in a supply of liquid especially in an engine or transmission, said gauge comprising a receptacle that has means near the bottom thereof to register and communicate the interior of the receptacle with the interior of the liquid supporting device, a float arm, means mounting said float arm in said receptacle for oscillation, a wiper attached to said float arm, a group of stationary contacts, means supporting said stationary contacts adjacent to said wiper and in a position so that said wiper moves over and on said contacts, an electrical circuit within which said wiper and said group of stationary contacts are connected, an instrument in said circuit and actuated in response to movement of said wiper onto said contacts, said arm having an upper part, means including an insulated device attaching said wiper to said upper part of said arm, a graduation plate mounted adjacent to said upper part of said float arm and provided with a visually inspectable group of graduations adjacent to said part of said float

arm and adapted to be referenced by said part of said float arm to provide a direct means of observing the fluid level condition in said receptacle, said means supporting said group of contacts comprising an insulating wall attached to said receptacle, said circuit including a group of circuit conductors attached individually to said fixed contacts and extending from said insulating wall, said instrument having a plurality of color coded lamps, an instrument case within which said lamps are supported, a base in said case and separating said case into a plurality of pockets, one of said lamps located in each pocket, and each of said circuit conductors connected to one of said lamps.

3,002,187
DOOR CHIME
Walter A. Spear, Cincinnati, Ohio, assignor to Nutone, Inc., Cincinnati, Ohio, a corporation of New York
Filed Aug. 7, 1958, Ser. No. 753,779
1 Claim. (Cl. 340-328)

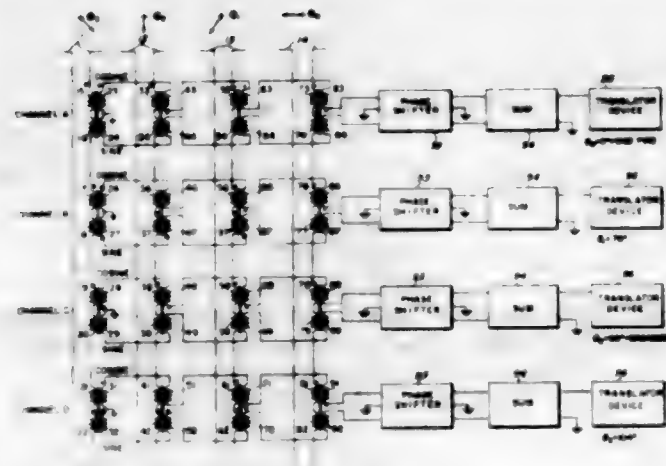


A door chime comprising a base, a reed, means mounting said reed for vibrations on said base, a striker transversely engageable with said reed to vibrate said reed transversely of its length, an elongated permanent magnet mounted substantially normal to said reed, a pick-up coil mounted on said base having a central axis substantially normal to the length of said reed and having a central opening along said axis receiving said elongated magnet, such that transverse vibrations in said reed causes said magnet to vibrate substantially along said central axis of said coil, an electrical signal amplifier connected to said coil, amplifying the current generated by the flux of said magnet cutting said coil during said vibrations, and at least one speaker connected to said amplifier.

3,002,188
HARMONIC WAVE BEAM-STEERING SYSTEM
Frank R. Abbott, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 14, 1959, Ser. No. 806,412
11 Claims. (Cl. 343-100)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A multi-beam energy sensing and transmitting system comprising a plurality of energy sensing elements capable of sensing energy of a given frequency, said sensing elements spacially disposed for sensing said energy from a given direction substantially equal in phase, a plurality of pairs of reactive coupling means, each of said pairs coupling energy from a respective one of said sensing means, each of said pairs comprising sine and cosine coupling elements, said sine and cosine elements coupling signals of an amplitude directly proportional to the sine and cosine functions of an angle of phase displacement of said sensed energy resulting from a source angularly displaced from said given direction, the number of pairs of said coupling means connected to each sensing means being equal to the number of source directions of interest,

all of said sine coupling elements corresponding to each of said directions of interest connected in additive relationship forming a sine channel for each direction of interest, all of said cosine coupling elements corresponding to each of said directions of interest connected in



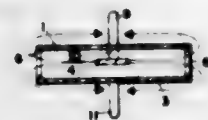
additive relationship forming a cosine channel for each direction of interest and each sine channel and cosine channel for each direction of interest shifted 90° relative to one another and connected in a series aiding output, and means for indicating the amplitude of each of said outputs.

3,002,189

THREE CONDUCTOR PLANAR ANTENNA

Jesse L. Butler, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Continuation of application Ser. No. 513,223, June 6, 1955. This application Nov. 18, 1959, Ser. No. 853,840
3 Claims. (Cl. 343-793)



1. An antenna comprising the combination of a waveguide, rectangular in cross section, with two parallel sides much greater in length than the other two and comprised of a first elongated, outer conductor providing a ground plane; a second elongated, outer conductor providing a second ground plane; an elongated inner conductor of less than half the width of said outer conductors centrally disposed in insulated spaced relation between said outer conductors, the width of said inner conductor being sufficiently less than that of said ground planes to provide maximum electric field intensity substantially along the center lines of said ground planes, the field intensity decreasing substantially exponentially from said center lines; a pair of side conductive means disposed less than one-half of a wavelength apart at the operating frequency connecting the sides of said outer conductors together adjacent their opposite edges to suppress extraneous modes of propagation; a resonant radiating element disposed in the path of propagation; and discontinuity means disposed in the path of propagation to excite said radiating element.

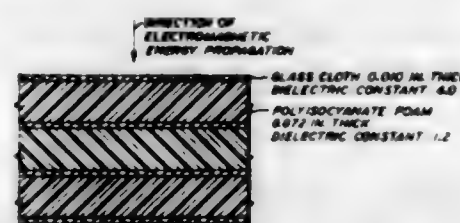
3,002,190

MULTIPLE SANDWICH BROAD BAND RADOME

Sammuel S. Oleesky, Charles E. Peach, Gerald E. Speen, and Donald H. McClure, Los Angeles County, Calif., assignors, by mesne assignments, to Zenith Plastics Company, Gardena, Calif., a corporation of Delaware
Filed Apr. 15, 1955, Ser. No. 501,629
8 Claims. (Cl. 343-907)

1. A dielectric wall for the transmission of a major proportion of electromagnetic energy transversely there-

through over a broad band of frequencies comprising an outermost skin layer of material having a dielectric constant of from 3.5 to 4.5 and a thickness of from 0.01 to 0.02 inch, an inwardly adjacent core layer of material having a dielectric constant of from 1.05 to 1.4 and a



thickness of 0.06 to 0.075 inch, and inwardly alternating skin and core layers of said materials having dielectric constants and thicknesses substantially the same as said first skin and core layers, respectively, there being at least four of said skin layers and at least three of said core layers, and thicknesses of 0.01 to about 0.02 inch and 0.06 to 0.075 inch, respectively.

3,002,191

METHOD OF WELDING PIPE

Helmut J. Thielech, Cranston, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware

Continuation of abandoned application Ser. No. 472,911, Dec. 3, 1954. This application Feb. 24, 1959, Ser. No. 794,675

3 Claims. (Cl. 29-483)



1. The method of butt welding together metal pipes whose ends lie in other than horizontal planes, said method including the steps of forming on the interior portion of said ends integral axially extending roots having root faces aligning the pipes with their root faces presented to each other and spaced apart; eccentrically inserting a preformed fusible flat metal ring between said root faces to provide a greater ring mass projecting above the lower half of the interior surfaces of the aligned and adjacent pipe ends than any which projects below the upper half of the said interior surfaces, said ring having an inner diameter smaller than the inner diameter of the pipe and an outer diameter greater than the outer diameter of the root faces but less than the outer diameter of the pipes and being of a composition such that when both it and the adjacent root faces are raised to a sufficiently high temperature the metal of the ring will fuse with the metal of the roots, whereby the asymmetrical distribution of ring metal with respect to the said interior surfaces will compensate for the gravitational sag of the ring metal upon its being heated to a molten state when the pipe ends lie in other than horizontal planes; applying welding heat to said ring and ends and fusing substantially all of said ring with the metal at the roots while the ends are held stationary in substantially aligned position and then depositing additional filler metal in the joint between said pipe ends while said ends are stationary to complete the welded joint.

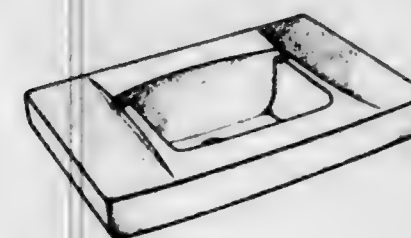
DESIGNS

SEPTEMBER 26, 1961

191,391

LAVATORY

Gerard D. Phillips, Jr., Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 63,155
Term of patent 14 years
(Cl. D4-2)

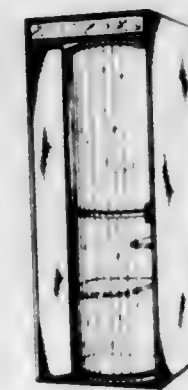


191,392

TELEPHONE BOOTH

Henry Dreyfuss, South Pasadena, Calif., and Donald Genaro, Fort Lee, and Douglas H. King, Short Hills, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 12, 1960, Ser. No. 59,382
Term of patent 14 years
(Cl. D13-1)



191,393

DISH CART

Victor D. Molitor, 2829 S. Santa Fe Drive, Englewood, Colo.
Filed Feb. 27, 1961, Ser. No. 64,064
Term of patent 14 years
(Cl. D14-3)



191,394

HUB CAP SPINNER OR THE LIKE

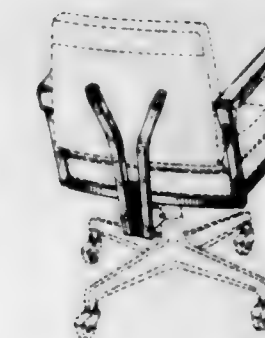
Philip Garcia, Centerline, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 24, 1961, Ser. No. 64,047
Term of patent 7 years
(Cl. D14-30)



191,395

SWIVEL CHAIR OR SIMILAR ARTICLE

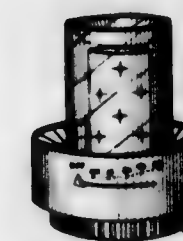
Fehr J. Anderson, St. Charles, Ill., assignor to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
Filed July 5, 1960, Ser. No. 61,240
Term of patent 14 years
(Cl. D15-1)



191,396

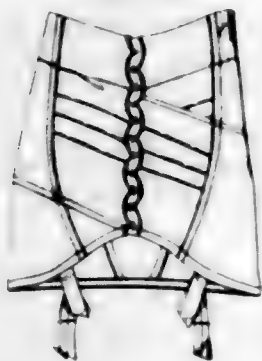
ELECTRICALLY HEATED LIQUID VAPORIZER FOR DISPENSING SMELLS OR THE LIKE

Robert L. Weber III, 19 Judson Court, Huntington, Conn.
Filed Apr. 27, 1960, Ser. No. 60,344
Term of patent 14 years
(Cl. D16-2)

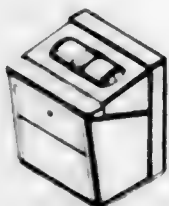


**191,397
GIRDLE**

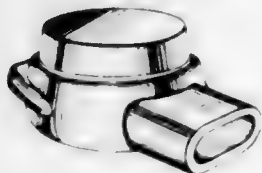
Anne Marie Lobbenberg, Shrewsbury, England, assignor
to Corsets Silhouette Limited, London, England
Filed Nov. 15, 1960, Ser. No. 62,843
Term of patent 14 years
(Cl. D26-2)

**191,398
COMBINED ELECTROMAGNET AND
HOUSING THEREFOR**

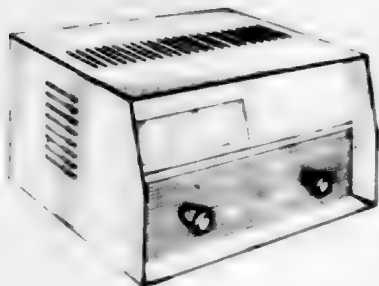
Hugh J. Hall, Los Altos, Calif., assignor to Varian Asso-
ciates, Palo Alto, Calif., a corporation of California
Filed Feb. 20, 1961, Ser. No. 63,999
Term of patent 14 years
(Cl. D26-1)

**191,399
SOLDERLESS ELECTRICAL CONNECTOR**

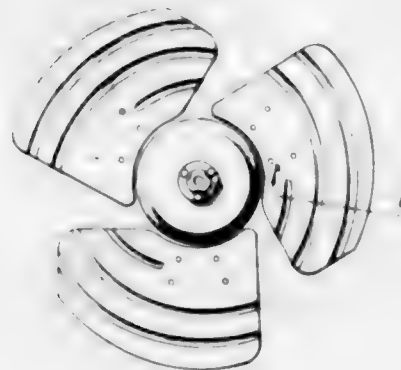
Edward E. Leach, White Bear Lake, Minn., assignor to
Minnesota Mining and Manufacturing Company, St.
Paul, Minn., a corporation of Delaware
Filed Feb. 21, 1961, Ser. No. 64,012
Term of patent 14 years
(Cl. D26-1)

**191,400
CABINET FOR ELECTRICAL COMPONENTS
OR THE LIKE**

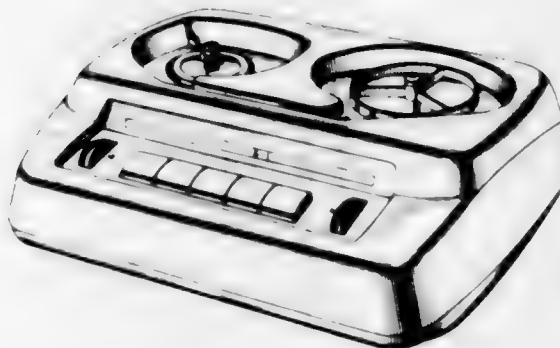
Paul M. Platzman, Brookville, N.Y. (% Ultrasonic In-
dustries, Inc., 141 Albertson Ave., Albertson, N.Y.)
Filed July 5, 1960, Ser. No. 61,215
Term of patent 14 years
(Cl. D26-5)

**191,401
FAN BLADE AND HUB ASSEMBLY OR
SIMILAR ARTICLE**

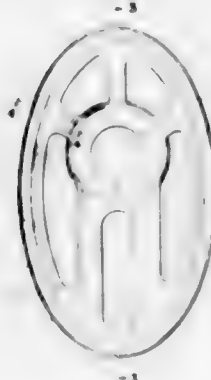
Jorgen Gesmar, Westport, Conn., assignor to General
Electric Company, a corporation of New York
Filed Dec. 17, 1959, Ser. No. 58,709
Term of patent 14 years
(Cl. D26-7)

**191,402
DICTATING MACHINE**

Heinz Huebner, Furth, Bavaria, Germany, assignor to
Max Grundig, Furth, Bavaria, Germany
Filed Apr. 18, 1960, Ser. No. 60,238
Claims priority, application Canada Dec. 8, 1959
Term of patent 14 years
(Cl. D26-14)

**191,403
DIAPHRAGM HOUSING FOR A LOUD SPEAKER
OR THE LIKE**

Charles A. Perry, North Olmsted, Ohio, assignor to The
Muter Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 5, 1961, Ser. No. 63,452
Term of patent 14 years
(Cl. D26-14)



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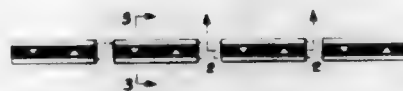
U. S. PATENT OFFICE

1019

191,404
INSECTICIDE SPRAYER OR SIMILAR ARTICLE
Robert C. Hudson, Glencoe, Ill., assignor to H. D. Hudson Manufacturing Company, Chicago, Ill., a corporation of Minnesota
Filed Apr. 2, 1959, Ser. No. 55,328
Term of patent 14 years
(Cl. D31—3)



191,407
EXPANSIBLE LINK CHAIN FOR A BRACELET OR THE LIKE
Stanley Meyerson, 1350 Ocean Parkway, Brooklyn, N.Y.
Filed Mar. 15, 1960, Ser. No. 59,747
Term of patent 14 years
(Cl. D45—4)



191,408
EXPANSIBLE LINK CHAIN FOR A BRACELET OR THE LIKE
Stanley Meyerson, 1350 Ocean Parkway, Brooklyn, N.Y.
Filed Mar. 15, 1960, Ser. No. 59,748
Term of patent 14 years
(Cl. D45—4)



191,405
PADDLE FOR GAMES
Richard E. Wagner, 131 Mayer Drive, Savannah, Ga.
Filed Apr. 12, 1961, Ser. No. 64,765
Term of patent 14 years
(Cl. D34—5)



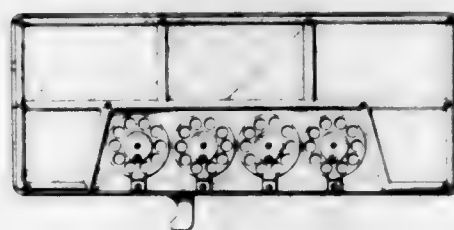
191,409
LENS FOR VEHICLE MARKER LAMP OR THE LIKE
Donald S. Bruce, Holliston, Mass., and John B. Dickson, Kew Gardens, N.Y., assignors to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Filed Apr. 4, 1960, Ser. No. 60,025
Term of patent 7 years
(Cl. D48—32)



191,406
TEETHING SPOON
Nancy A. Newmark, San Diego, Calif., assignor to Progressive Products, Inc., La Mesa, Calif., a corporation of California
Filed Sept. 14, 1960, Ser. No. 62,133
Term of patent 14 years
(Cl. D44—29)



191,410
MARKET BASKET COMPUTER
Leonard Katz, 5040 N. Maroa, Fresno, Calif.
Filed Dec. 19, 1957, Ser. No. 48,967
Term of patent 14 years
(Cl. D52—1)



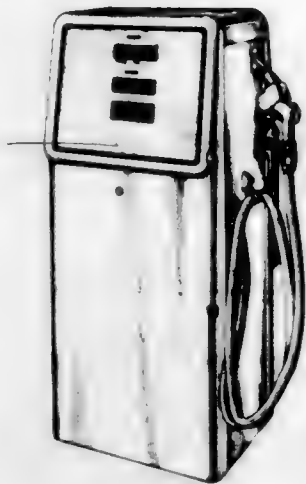
191,411

GASOLINE PUMPAlbert E. Spitzberg and Charles E. Hutchins,
Fort Wayne, Ind.

Filed Feb. 26, 1959, Ser. No. 54,751

Term of patent 14 years

(Cl. D52-2)



191,412

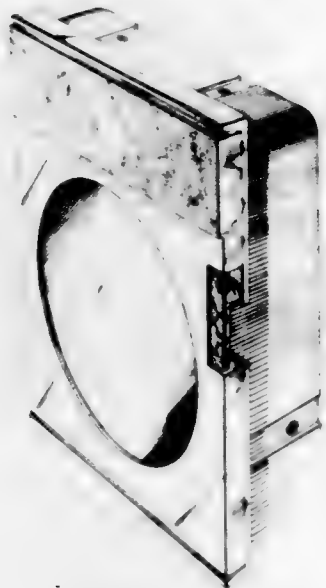
MEASURING INSTRUMENT CASE

Norman Porter, 159 Lawn Ave., Sellersville, Pa.

Filed Jan. 7, 1960, Ser. No. 58,954

Term of patent 14 years

(Cl. D52-6)



191,413

SPOON OR SIMILAR ARTICLE

Frank R. Perry, Oneida, N.Y., assignor to Oneida Ltd.,

Oneida, N.Y., a corporation of New York

Filed Mar. 2, 1960, Ser. No. 59,594

Term of patent 14 years

(Cl. D54-12)



191,414

RIVET REMOVER FOR ROLLER CHAINSGeorge A. Arnett and Richard E. Lanning, Wichita,
Kans., assignors to Rains Manufacturing Company,

Inc., Newton, Kans., a corporation of Kansas

Filed Mar. 14, 1960, Ser. No. 59,712

Term of patent 14 years

(Cl. D54-13)



191,415

POWER TRANSMISSION

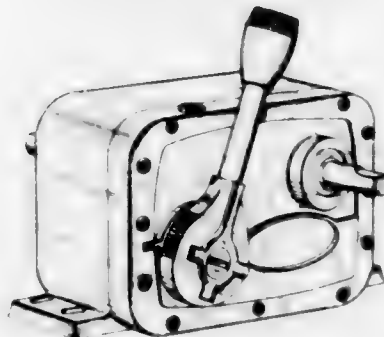
Harold W. Darr, Hopkins, Minn., assignor to Revco,

Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Feb. 13, 1961, Ser. No. 63,905

Term of patent 14 years

(Cl. D55-1)



191,416

SPECTACLE FRAME

Beryl B. Knowles, North Attleboro, Mass., assignor to

Fairfield Optical Company, Mansfield, Mass., a corpo-

ration of Massachusetts

Filed May 19, 1960, Ser. No. 60,649

Term of patent 14 years

(Cl. D57-1)

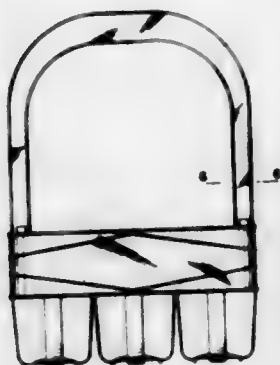


SEPTEMBER 26, 1961

U. S. PATENT OFFICE

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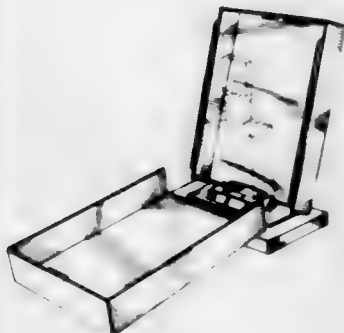
191,417
BOTTLE CARRIER
Michael T. Russo, 2520 Alveston Drive,
Bloomfield Hills, Mich.
Filed Mar. 23, 1961, Ser. No. 64,454
Term of patent 14 years
(Cl. D58-5)



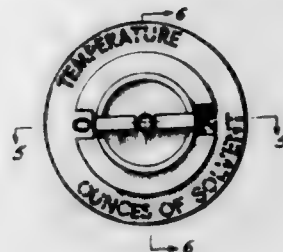
191,418
BOTTLE
William Nassour, Los Angeles, Calif., assignor to Nas-
sour Studios, Inc., Los Angeles, Calif., a corporation
of California
Filed Oct. 17, 1960, Ser. No. 62,514
Term of patent 14 years
(Cl. D58-8)



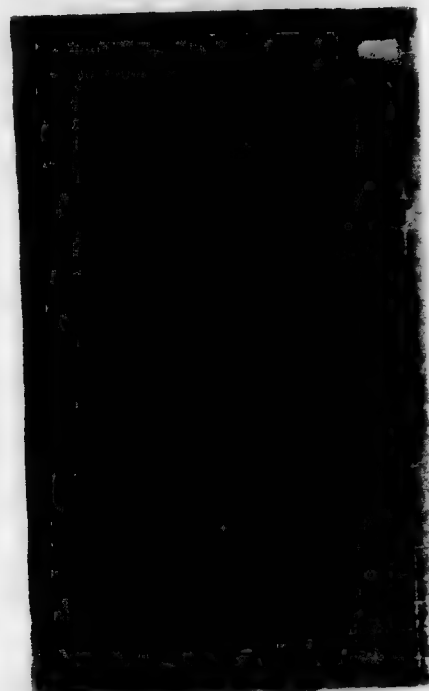
191,419
DISPLAY CASE FOR A PERFUME BOTTLE
Walter Langer, New York, N.Y., assignor to Evyan
Perfumes, Inc., New York, N.Y., a corporation of
New York
Filed June 17, 1959, Ser. No. 56,399
Term of patent 14 years
(Cl. D58-12.7)



191,420
**CLOSURE FOR WINDSHIELD WASHER
RESERVOIR OR THE LIKE**
Edward C. Shaar, Detroit, Mich., assignor to The Del-
man Company, Cookeville, Tenn., a corporation of
Tennessee
Filed Sept. 19, 1960, Ser. No. 62,177
Term of patent 14 years
(Cl. D58-26)



191,421
WALLPAPER PANEL
Peter D. Van Scozza, Orchard Park, and George K.
Birge, Buffalo, N.Y., assignors to George K. Birge
Co., Inc., Buffalo, N.Y.
Filed July 21, 1960, Ser. No. 61,479
Term of patent 7 years
(Cl. D59-10)



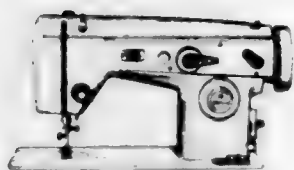
191,422
MOVIE LIGHT
Albert J. Michaud, Assonet, Mass., assignor to Sylvania
Electric Products Inc., a corporation of Delaware
Filed Oct. 31, 1960, Ser. No. 62,671
Term of patent 14 years
(Cl. D61-1)



191,423

SEWING MACHINE

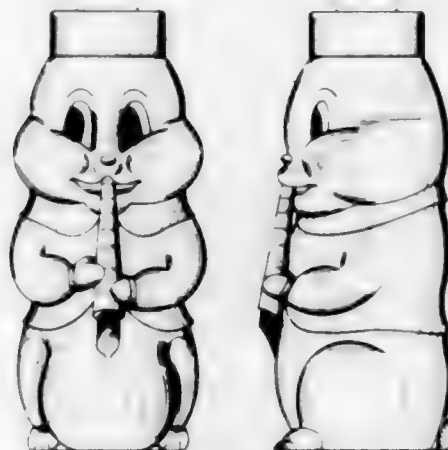
Philip S. Morse, 193 Wyndcliff Road, Scarsdale, N.Y.
 Filed Nov. 16, 1960, Ser. No. 62,860
 Term of patent 14 years
 (Cl. D70—1)



191,426

COMBINED NIPPLE AND NURSING BOTTLE FOR A BABY

Sten S. Swanson, 1741 Walnut Circle, Northbrook, Ill.
 Filed July 14, 1960, Ser. No. 61,356
 Term of patent 14 years
 (Cl. D83—8)

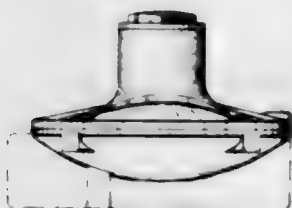


191,424

REGULATOR OR SIMILAR ARTICLE

Leila Rae Davies, East Cleveland, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio

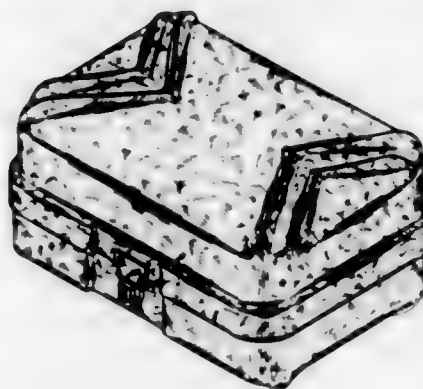
Filed Nov. 2, 1960, Ser. No. 62,713
 Term of patent 14 years
 (Cl. D78—1)



191,427

PROTECTIVE CONTAINER

Milton J. Peterman, 6616 Sausalito, and Kermitt D. Miller, 22101 Burton St., both of Canoga Park, Calif.
 Filed Mar. 18, 1960, Ser. No. 59,827
 Term of patent 14 years
 (Cl. D87—5)

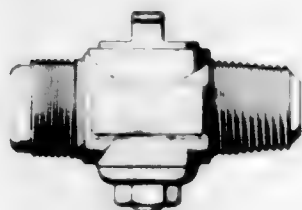


191,425

FLUID VALVE OR SIMILAR ARTICLE

Leonard E. Popp, Sierra Madre, Calif., assignor to James Jones Company, El Monte, Calif., a corporation of California

Filed Nov. 14, 1960, Ser. No. 62,817
 Term of patent 14 years
 (Cl. D78—1)



191,428

SHOWER HEAD

Allen Leighton, Chatham, N.J., assignor to Spartan Electric Radiator Corp., Maspeth, N.Y., a corporation of New York

Filed Nov. 20, 1959, Ser. No. 58,411
 Term of patent 14 years
 (Cl. D91—3)



SEPTEMBER 26, 1961

U. S. PATENT OFFICE

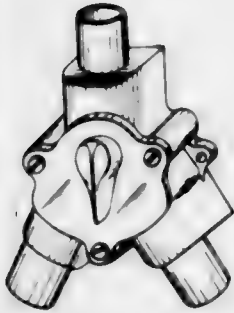
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191,429

TWO WAY VALVE

Linus E. Russell, Springfield, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio

Filed Sept. 8, 1958, Ser. No. 52,538
Term of patent 14 years
(Cl. D91—3)

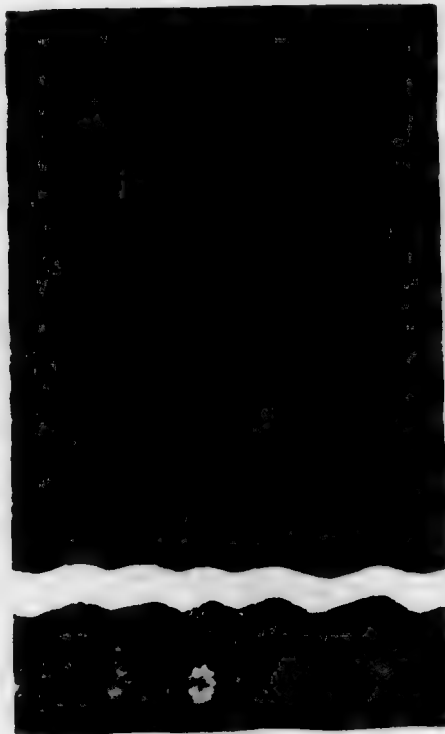


191,430

FLOCKED TEXTILE FABRIC

Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island

Filed Mar. 13, 1961, Ser. No. 64,266
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26TH DAY OF SEPTEMBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Blinn, Glenn E., and C. Flachbarth, deceased (by C. T. Flachbarth, executor), to Walker Brothers. Access unit for use in underfloor duct systems. Re. 25,042, 9-26-61, Cl. 138-92.
Flachbarth, Charles: See—
Blinn, Glenn E., and Flachbarth. Re. 25,042.

Bridgeport Brass Co.: See—
Bulow, Carl L. Re. 25,043.
Bulow, Carl L., to Bridgeport Brass Co. Anti-biofouling copper-base alloy. Re. 25,043, 9-26-61, Cl. 75-157.5.
Walker Brothers: See—
Blinn, Glenn E., and Flachbarth. Re. 25,042.

LIST OF PLANT PATENTEES

James, Percival G.: See—
James Percival T. 2,094.
James, Percival T., deceased, by P. G. James, administrator, to The Wayside Gardens Co. Clematis plant. 2,094, 9-26-61, Cl. 47-60.

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James, Percival T. 2,094.

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All-Steel Equipment Inc.: See—
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Phillips, Gerard D., Jr. 191,391.
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Arnett, George A., and E. E. Lanning, to Raina Mfg. Co., Inc. Rivet remover for roller chains. 191,414, 9-26-61, Cl. D54-13.
Bell Telephone Laboratories, Inc.: See—
Dreyfuss, Henry, Genaro, and King. 191,392.
Birge, George K.: See—
Van Scozza, Peter D., and Birge. 191,421.
Birge, George K., Co., Inc.: See—
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Lobbenberg, Anne M. 191,397.
Darr, Harold W., to Revco, Inc. Power transmission. 191,415, 9-26-61, Cl. D65-1.
Davies, Lella R., to The Weatherhead Co. Regulator or similar article. 191,424, 9-26-61, Cl. D78-1.
Decorative Fabrics Co. Inc.: See—
Leavy, Natalie. 191,430.
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Dickson, John B.: See—
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Langer, Walter. 191,419.
Fairfield Optical Co.: See—
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Garcia, Philip, to General Motors Corp. Hub cap spinner or the like. 191,394, 9-26-61, Cl. D14-30.
Genaro, Donald: See—
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Grundig, Max: See—
Huebner, Heinz. 191,402.
Hall, Hugh J., to Varian Associates. Combined electromagnet and housing therefor. 191,398, 9-26-61, Cl. D26-1.
Hudson, H. D., Mfg. Co.: See—
Hudson, Robert C. 191,404.
Hudson, Robert C., to H. D. Hudson Mfg. Co. Insecticide sprayer or similar article. 191,404, 9-26-61, Cl. D31-3.
Huebner, Heinz, to M. Grundig. Dictating machine. 191,402, 9-26-61, Cl. D26-14.
Hutchins, Charles E.: See—
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Jones, James, Co.: See—
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Katz, Leonard. Market basket computer. 191,410, 9-26-61, Cl. D52-1.
King, Douglas H.: See—
Dreyfuss, Henry, Genaro, and King. 191,392.
Knowles, Beryl B., to Fairfield Optical Co. Spectacle frame. 191,416, 9-26-61, Cl. D57-1.
Langer, Walter, to Evyan Perfumes, Inc. Display case for a perfume bottle. 191,419, 9-26-61, Cl. D68-12.7.

Lanning, Richard E.: See—
Arnett, George A., and Lanning. 191,414.
Leach, Edward E., to Minnesota Mining and Mfg. Co. Solderless electrical connector. 191,399, 9-26-61, Cl. D26-1.
Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 191,430, 9-26-61, Cl. D92-1.
Leighton, Allen, to Spartan Electric Radiator Corp. Shower head. 191,428, 9-26-61, Cl. D91-3.
Lobbenberg, Anne M., to Corsets Silhouette Ltd. Girdle. 191,397, 9-26-61, Cl. D20-2.
Meyerson, Stanley. Expandible link chain for a bracelet or the like. 191,407, 9-26-61, Cl. D45-4.
Meyerson, Stanley. Expandible link chain for a bracelet or the like. 191,408, 9-26-61, Cl. D45-4.
Michaud, Albert J., to Sylvania Electric Products Inc. Movie light. 191,422, 9-26-61, Cl. D61-1.
Miller, Kermit D.: See—
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Mollitor, Victor D. Dish cart. 191,393, 9-26-61, Cl. D14-3.
Morse, Philip S. Sewing machine. 191,423, 9-26-61, Cl. D70-1.
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Perry, Charles A. 191,403.
Nassour Studios, Inc.: See—
Nassour, William. 191,418.
Nassour, William, to Nassour Studios, Inc. Bottle. 191,418, 9-26-61, Cl. D58-8.
Newmark, Nancy A., to Progressive Products, Inc. Teething spoon. 191,406, 9-26-61, Cl. D44-29.
Oneida Ltd.: See—
Perry, Frank R. 191,413.
Perry, Charles A., to The Muter Co. Diaphragm housing for a loud speaker or the like. 191,403, 9-26-61, Cl. D26-14.
Perry, Frank R., to Oneida Ltd. Spoon or similar article. 191,413, 9-26-61, Cl. D54-12.
Peterman, Milton J., and K. D. Miller. Protective container. 191,427, 9-26-61, Cl. D87-5.
Peters & Russell, Inc.: See—
Russell, Linus E. 191,429.
Phillips, Gerard D., Jr., to American Radiator & Standard Sanitary Corp. Lavatory. 191,391, 9-26-61, Cl. D4-2.
Platzman, Paul M. Cabinet for electrical components or the like. 191,400, 9-26-61, Cl. D26-5.
Popp, Leonard E., to James Jones Co. Fluid valve or similar article. 191,425, 9-26-61, Cl. D78-1.
Porter, Norman. Measuring instrument case. 191,412, 9-26-61, Cl. D52-6.
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Russell, Linus E., to Peters & Russell, Inc. Two way valve. 191,429, 9-26-61, Cl. D91-3.
Russo, Michael T. Bottle carrier. 191,417, 9-26-61, Cl. D58-5.
Shaar, Edward C., to The Delman Co. Closure for windshield washer reservoir or the like. 191,420, 9-26-61, Cl. D58-26.
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Spartan Electric Radiator Corp.: See—
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 Sylvania Electric Products Inc.: See—
 Michaud, Albert J. 191,422.
 Van Scozia, Peter D., and G. K. Birge, to George K. Birge Co., Inc. Wallpaper panel. 191,421, 9-26-61, Cl. D69-10.
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Wagner, Richard E. Paddle for games. 191,405, 9-26-61, Cl. D34-5.

Weatherhead Co., The: See—
 Davies, Lella B. 191,424.

Weber, Robert L., III. Electrically heated liquid vaporizer for dispensing smells or the like. 191,396, 9-26-61, Cl. D16-2.

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LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26TH DAY OF SEPTEMBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- ACF Industries, Inc.: See—
Johnson, Eldon A. 3,001,773.
- AMP Inc.: See—
Demler, Henry W. 3,001,426.
- Abbey Etna Machine Co.: See—
Nicklewicz, Stanley L. 3,001,680.
- Abbott, Frank R., to United States of America, Navy. Harmonic wave beam-steering system. 3,002,188, 9-26-61, Cl. 343-100.
- Addis, Charles R., to Bulpitt and Sons Ltd. Locating device for articles in a container. 3,001,639, 9-26-61, Cl. 206-46.
- Adlake Co., The: See—
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- Admiral Corp.: See—
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Guttel, Gerhard, Schulz, and Ditzel. 3,001,624.
- Aerojet-General Corp.: See—
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- Aghnides, Ellie P. Vehicle with tiltable wheels. 3,001,601, 9-26-61, Cl. 180-75.
- Ahlm, Carl E., Jr., and E. B. Brookbank, Jr., to The Mead Corp. Paper manufacture. 3,001,887, 9-26-61, Cl. 117-1.
- Air Pillow & Cushion, Inc.: See—
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- Air Placement Equipment Co.: See—
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- Air Reduction Co., Inc.: See—
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- Airline Electric, Inc.: See—
Green, James X., and Herbert. 3,002,168.
- Akeyama, Masamoto: See—
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- Akkumulatorenfabrik Dr. Leopold Jungfer: See—
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- Aktiebolaget Electrolux: See—
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- Aktiebolaget Malcus Holmquist: See—
Bauer, Alfred E. R. E. 3,001,336.
- Aktiebolaget Scania-Vabis: See—
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- Albert, William E., to Pettibone Mulliken Corp. Reaching and self-leveling loader. 3,001,654, 9-26-61, Cl. 214-140.
- Albertsen, Hans C.: See—
Lawlor, Joseph P., and Albertsen. 3,001,722.
- Allaga-Moyano, Ernesto, to Daystrom, Inc. Damping arrangement. 3,002,141, 9-26-61, Cl. 318-448.
- Allais, David C., and N. A. Vogel, to International Business Machines Corp. Hydraulic system for driving several actuators. 3,001,369, 9-26-61, Cl. 60-54.5.
- Allen-Bradley Co.: See—
Garstang, William W. 3,002,136.
Garstang, William W. 3,002,162.
- Allen, Edward E., to Zurn Industries, Inc. Flexible coupling and seal therefor. 3,001,385, 9-26-61, Cl. 64-9.
- Allen, George R., and M. J. Weiss, to American Cyanamid Co. 16a, 17a - isocylidenedioxy - 4 - pregnene - 3,20 - diones. 3,001,991, 9-26-61, Cl. 239-55.
- Allen, Robert K., to General Electric Co. Electrical connection. 3,002,173, 9-26-61, Cl. 339-95.
- Allen, W. D., Mfg. Co.: See—
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- Allen, William L.: See—
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- Allied Chemical Corp.: See—
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- Allis-Chalmers Mfg. Co.: See—
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- Allred, Victor D., to The Ohio Oil Co. Vertical flow process for in situ retorting of oil shale. 3,001,775, 9-26-61, Cl. 262-3.
- Alpert, Norman: See—
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- Altar, William: See—
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- Alu, Salvatore, to Gotham Pressed Steel Corp. Bowling games. 3,001,794, 9-26-61, Cl. 273-127.
- American Can Co.: See—
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- American Doll & Toy Corp.: See—
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- American Seal-Kap Corp. of Delaware: See—
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- American Sterilizer Co.: See—
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- American Viscose Corp.: See—
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- Amerock Corp.: See—
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- Amlrault, Maxime, and P. Destoumieux. Sealing devices between a rotating part and a fixed part. 3,001,807, 9-26-61, Cl. 286-11.
- Amphenol-Borg Electronics Corp.: See—
Mannella, Orlando A. 3,002,047.
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- Amplus, Inc.: See—
Gagne, Archie R. 3,001,260.
- Amundsen, Paul, and J. N. Liautaud, to Fendall Co. Eye protective spectacle type goggles. 3,001,200, 9-26-61, Cl. 2-14.
- Anaconda Co., The: See—
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- Andersen, Ariel A. Bacterial aerosol analyzer. 3,001,914, 9-26-61, Cl. 195-103.5.
- Andersen, Clifford W., to The Rudolph Wurlitzer Co. Musical instrument system. 3,001,431, 9-26-61, Cl. 84-1.01.
- Anderson, Arthur E., and W. Altar, to Westinghouse Electric Corp. Image amplifier. 3,002,101, 9-26-61, Cl. 250-213.
- Anderson, Douglas N.: See—
Shrewsbury, Raymond W., Anderson, and Sohl. 3,001,886.
- Anderson, Earl R. Apparatus for peeling fruit and vegetable articles. 3,001,562, 9-26-61, Cl. 146-43.
- Anderson, Edward A., and C. W. Walton, to The Lamson & Sessions Co. Method and apparatus for forming welding projections on a nut blank. 3,001,214, 9-26-61, Cl. 10-72.
- Anderson, Edward A., and C. W. Walton, to The Lamson & Sessions Co. Article checking and machining fixture. 3,001,292, 9-26-61, Cl. 33-174.
- Anderson, James A., to Breneman-Hartshorn, Inc. Awning. 3,001,577, 9-26-61, Cl. 160-29.
- Anderson, John R., to Heppenstall Co. Tonga. 3,001,812, 9-26-61, Cl. 294-67.
- Anderson, John R., to Bell Telephone Laboratories, Inc. Ferroelectric storage circuits and methods. 3,002,182, 9-26-61, Cl. 340-173.2.
- Anderson, Olof V. Jewelry clasp. 3,001,258, 9-26-61, Cl. 24-252.
- Anderson, William H.: See—
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- Antioch College: See—
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- Arco Corp.: See—
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- Armitage, Frank, and L. G. Trace, to The Sherwin-Williams Co. Water dispersible oil modified alkyd resins containing oxyalkylated glycols and method of manufacture of the same. 3,001,961, 9-26-61, Cl. 260-22.
- Armored Luggage Mfg. Co.: See—
Austin, Thomas J. 3,001,748.
- Armstrong, Frederick E., to United States of America, Interior. Method of tracing the flow of liquids by use of post radioactivation of tracer substances. 3,002,091, 9-26-61, Cl. 250-83.
- Armstrong Patents Co. Ltd.: See—
Rollitt, John. 3,001,223.
- Arthur, Ronald H., to Royal McBee Corp. Block sensing assembly. 3,001,699, 9-26-61, Cl. 235-61.11.
- Asakawa, George: See—
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- Atomic Energy of Canada Ltd.: See—
Tunncliffe, Philip R., Siddall, Berry, and Whittaker. 3,001,923.
- Atwood, Giles K. Table game. 3,001,791, 9-26-61, Cl. 273-80.
- Austin, Thomas J., to Armored Luggage Mfg. Co. Snap-in mirror holder. 3,001,748, 9-26-61, Cl. 248-28.
- Australia, Commonwealth of, care of the Secretary of the Department of Supply, The: See—
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Avien, Inc.: See—

Weiss, Leo A. 3,001,716.

Axon, Peter E., C. Henocq, and D. Ireland, to Clevite Corp. Tape transport mechanism in magnetic recording and/or reproducing apparatus. 3,001,733, 9-26-61, Cl. 242-55.12.

Ayer, Donald R., and A. N. McDowell, to Sanders Associates, Inc. Variable attenuator. 3,002,165, 9-26-61, Cl. 333-81.

Ayer, William H., to The Sippican Corp. Electrical connector. 3,002,045, 9-26-61, Cl. 174-88.

Aynes, Tessie E.: See—

Aynes, Marcy F. and T. E. 3,001,675.

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BJ Service, Inc.: See—

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Babcock, John C.: See—

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Bacon, Francis T., to National Research Development Corp. Electrical batteries. 3,002,039, 9-26-61, Cl. 136-86.

Badische Anilin- & Soda Fabrik Aktiengesellschaft: See—

Buchholz, Karl, and Stastny. 3,001,954.

Ebel, Friedrich, Burger, and Herrie. 3,001,970.

Fikentscher, Hans, and Wilhelm. 3,002,023.

Fischer, Adolf, Scheuerer, Schlichting, and Stummeyer. 3,001,861.

Krzakalla, Hans, Lange, and Elstert. 3,001,982.

Lorenz, Lothar, and Weltz. 3,001,608.

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Wissinger, Karl, Kastning, and Trieschmann. 3,001,977.

Baler, Rodger W.: See—

Schumacher, Joseph C., and Baler. 3,001,855.

Bailey, William F., B. D. Loughlin, and I. G. MacWhirter, to Hazeltine Research, Inc. Stabilized image scanner. 3,002,048, 9-26-61, Cl. 178-52.

Baird, Jack A., to Bell Telephone Laboratories, Inc. Amplifying trigger circuit. 3,002,109, 9-26-61, Cl. 307-88.5.

Baker, Richard E., and W. R. Fox, to General Motors Corp. Centrifugal pump. 3,001,517, 9-26-61, Cl. 123-41.47.

Balaguer, Rodolfo R., to J. D. Hedges. Method of making carbon articles. 3,001,237, 9-26-61, Cl. 18-54.7.

Baldwin, John A., Jr., and A. Feiner, to Bell Telephone Laboratories, Inc. Magnetically biased switch. 3,002,067, 9-26-61, Cl. 300-87.

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- Parker, Charles S., and A. Melville, 1/2 each to Bleachers' Assn. Ltd., and Bradford Dyers' Assn. Ltd. Process for making elastic textile materials. 3,001,262, 9-26-61, Cl. 28-72.
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- Parker, Frederick W. 3,001,338.
- Parker, Frederick W., to Frederick Parker Ltd. Plant for washing stone. 3,001,338, 9-26-61, Cl. 51-164.
- Parrish, J. Russell, to Meredith Publishing Co. Circumferentially grooved printing plate cylinder. 3,001,472, 9-26-61, Cl. 101-378.
- Parsons Corp.: See—
- Parsons, John T., and Harwood. 3,001,693.
- Parsons, John T., and Harwood. 3,002,181.
- Parsons, John T., and F. E. Harwood, to Parsons Corp. Data handling system. 3,001,693, 9-26-61, Cl. 234-58.
- Parsons, John T., and F. E. Harwood, to Parsons Corp. Automatic inventory recorder. 3,002,181, 9-26-61, Cl. 340-173.
- Paterson, Alexander J. Greeting card and display. 3,001,690, 9-26-61, Cl. 229-92.8.
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- Frederick, Leroy S. 3,001,303.
- Paulshock, Marvin. Method of stimulating plant growth. 3,001,859, 9-26-61, Cl. 71-2.3.
- Paxton, Floyd G. Gluing machine. 3,001,570, 9-26-61, Cl. 158-378.
- Payne, Harold R., to Chrysler Corp. Engine structure. 3,001,518, 9-26-61, Cl. 123-55.
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- Hauptschlein, Murray, and Braid. 3,002,031.
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- Perotti, Antonio J. G., and A. A. Monacci. Carburetor. 3,001,772, 9-26-61, Cl. 281-34.
- Perrin, Joe F. Brush assembly tool. 3,001,271, 9-26-61, Cl. 29-283.
- Peter, Rolf W., to Radio Corp. of America. Traveling wave tube structure. 3,002,123, 9-26-61, Cl. 315-3.6.
- Petersen, Clifford W., to McGraw-Edison Co. Pole top extension for aerial cable. 3,001,749, 9-26-61, Cl. 248-49.
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- Plassmeyer, Louis E. 3,001,769.
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- Canterino, Peter J., and Mills. 3,001,968.
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- Piepenbrink, Hans-Frank, deceased (by U. Piepenbrink, administratrix), and E. Windemuth, 1/2 to Farbenfabriken Bayer Aktiengesellschaft, and 1/4 to Mobay Chemical Co. Production of cross-linked plastics. 3,001,973, 9-26-61, Cl. 260-75.
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- Pingree, Samuel J., to Fouke Fur Co. Fur seal and process for preparing same. 3,001,391, 9-26-61, Cl. 69-22.
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- Pinnes, Robert W., to United States of America, Navy. Ground-effect machine using steam as working fluid. 3,001,500, 9-26-61, Cl. 114-87.
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- Plassmeyer, Louis E., to Phillips Mfg. Co. Ultrasonic degreaser. 3,001,769, 9-26-61, Cl. 259-1.
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- Kurz, Philip F. 3,001,872.
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- Yale, Harry L.: See—
- Wiselogle, Frederick Y., Yale, and Bernstein. 3,001,994.
- Yeaton, Edward C., and H. C. Neumann, to United States of America, Navy. Electronic signal generator. 3,002,152, 9-26-61, Cl. 328-62.
- Yopp, Robert S., to Amphenol-Borg Electronics Corp. Multiple-contact electrical connector. 3,002,176, 9-26-61, Cl. 339-176.
- Young, Einar T.: See—
- Barton, Paul D., and Young. 3,001,543.
- Young, William E., to Standard Packaging Corp. Heat sealing devices. 3,001,572, 9-26-61, Cl. 156-386.
- Zastrow, Harold G., to Waldorf Paper Products Co. Article attaching device. 3,001,640, 9-26-61, Cl. 206-47.
- Zeiss Ikon A.G. Stuttgart: See—
- Ploke, Martin. 3,001,447.
- Zeller, Zellis C., to J. Scoonover. Bush packing machine. 3,001,345, 9-26-61, Cl. 53-124.
- Zander, Rolf A.: See—
- Vigren, Sten D., Claesson, and Zander. 3,002,057.
- Zenith Plastics Co.: See—
- Olesky, Samuel S., Peach, Speen, and McClure. 3,002,190.
- Ziege, Norman E., to Manning, Maxwell & Moore, Inc. Spring loaded pop-action safety valves. 3,001,545, 9-26-61, Cl. 137-478.
- Zimm, Bruno H., to General Electric Co. Polymers. 3,001,922, 9-26-61, Cl. 204-162.
- Zimmer, Franz P., to Zimmer's Erben K.G. Device provided with rollers for the treatment of webs. 3,001,390, 9-26-61, Cl. 68-258.
- Zimmerer, Roger E.: See—
- Drew, Howard F., and Zimmerer. 3,001,945.
- Zimmermann, Oskar. Fishing lures. 3,001,315, 9-26-61, Cl. 43-17.6.
- Zimmer's Erben K.G.: See—
- Zimmer, Franz P. 3,001,390.
- Zletz, Alex: See—
- Carmody, Don R., and Zletz. 3,001,861.
- Zurn Industries, Inc.: See—
- Allen, Edward E. 3,001,885.
- Zuzelo, Edward A. Tilting saw. 3,001,520, 9-26-61, Cl. 125-14.
- Zybach, Frank L. Self-propelled sprinkling irrigation apparatus. 3,001,721, 9-26-61, Cl. 239-177.

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ISSUED SEPTEMBER 26, 1961

NOTE.—First number=class, second number=subclass, third number=patent number

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60.18: 3,001,697	108: 3,002,095	53: 3,001,792	3,002,127	311-3: 3,001,843	328: 3,002,187
60.5: 3,001,696	203: 3,002,096	63: 3,001,793	3,002,128	312-111: 3,001,844	343-100: 3,002,188
61: 3,001,698	203: 3,002,097	127: 3,001,794	3,002,129	272.5: 3,001,845	793: 3,002,189
61.11: 3,001,699	212: 3,002,098	181: 3,001,795	3,002,130	313-108: 3,002,121	907: 3,002,190
61.5: 3,001,718	213: 3,002,099	240: 3,001,992	3,002,131	315-3.6: 3,002,123	14: 3,001,846
62: 3,001,700	205: 3,002,099	243: 3,001,993	3,002,132	12: 3,002,124	33: 3,001,847
63: 3,001,701	211: 3,002,100	247: 3,001,995	3,002,133	23: 3,002,125	74: 3,001,848
63: 3,001,702	212: 3,002,101	247.1: 3,001,996	3,002,134	58: 3,002,126	3,001,850
92: 3,001,703	3,002,102	247.2: 3,001,997	3,002,135		
98: 3,001,704	251-140: 3,001,757				
131: 3,001,705	168: 3,001,758				
155: 3,001,706	252-8.55: 3,001,934				
3,001,707	3,001,935				
157: 3,001,708	3,001,936				
158: 3,001,709	32: 3,001,937				
160: 3,001,710	32.5: 3,001,938				
176: 3,001,711	32.7: 3,001,939				

CLASSIFICATION OF DESIGNS

D4-2: 191,391	D26-1: 191,398	D34-5: 191,405	D52-6: 191,412	D58-12.7: 191,419	D78-1: 191,425
D13-1: 191,392	191,399	D44-29: 191,406	D54-12: 191,413	26: 191,420	8: 191,426
D14-3: 191,393	5: 191,400	D45-4: 191,407	13: 191,414	D59-10: 191,421	5: 191,427
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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

September 26, 1961 Volume 770 Number 4

TRADEMARKS NOTICES

CORRECTED NOTICE

Trademark Suits

Punched Cards for Organic Phosphorus Compounds

Sets of punched cards recording the Patent Office analysis of the subject matter of the U.S. Patents pertaining to organic phosphorus compounds in Class 260, subclass 461 may be purchased by the public from the Patent Office.

The punchings in the cards are designed to admit of their mechanical selection by commercially available equipment on the basis of specific or generic categorization of any organic phosphorus compound disclosed in these patents. A description of the system of punch coding is in Patent Office Research and Development Report No. 18, "Mechanized Searching of Phosphorus Compounds" which is available from the U.S. Department of Commerce, Washington 25, D.C., price 25 cents.

A complete set of 3142 eighty-column cards may be obtained upon order addressed to the Commissioner of Patents, Washington 25, D.C. The price is \$25.00. It includes the basic set, such addition and correction cards as may be issued through June 1962, and a copy of R. & D. Report No. 18. Purchasers are invited to submit their suggestions for improvement.

C. A. KALK,
Director of Administration.

Aug. 17, 1961.

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 159,108 (AMERICAN), Louis Blaustein, doing business as American Oil Company, Motor oil and greases, auto oil and greases for lubricating purposes, motor fuel and other named combinations of gasoline; Reg. No. 434,923 (FANCIFUL DESIGN), Standard Oil Company, Lubricating oils for nonmedicinal purposes; Reg. No. 443,955, same, Petroleum and products of petroleum with or without admixtures of other substances for lubricating, etc.; mineral wax and candles; Reg. No. 500,033 (AMERICAN), American Oil Company, Gasoline, kerosene, lubricating oils, soluble oil, lubricating greases and quenching oil, filed Aug. 1, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1290, American Oil Company et al. v. Angelo Silvestri et al.

Reg. No. 311,230 (AMBASSADOR), Bloch Bros., Whisky; Reg. No. 331,231 (AMBASSADOR AND DESIGN), Bloch Bros. (Distillers) Limited, same; Reg. No. 655,923 (AMBASSADOR), Taylor and Ferguson Limited, Gin, filed Aug. 4, 1961, D.C., S.D.N.Y., Doc. 61/2768, Taylor and Ferguson Limited v. Ambassador Liquors, Inc. et al.

Reg. No. 300,512 (PEPPERIDGE FARM), Margaret F. Rudkin, Bread and cereal food products, particularly breakfast cereals, cracked wheat flour and corn meal; Reg. No. 688,816 (PEPPERIDGE FARM), Pepperidge Farm Incorporated, Biscuits, bread, bread crumbs, cake, coffee cake, cookies, melba toast, muffins, pastries, pie, rolls and stuffing,

CONDITION OF TRADEMARK APPLICATIONS AS OF JULY 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	13,364
Date of oldest new application	January 16, 1961
Date of oldest amended application	January 12, 1961

J. H. MERCHANT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50		1-16-61	1-12-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 27, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B		2-2-61	2-2-61
Renewals (All Classes)		7-3-61	7-21-61
Sec. 12 (e) Publications (All Classes)		6-7-61	6-29-61

Applications filed during the month of July 1961—1870

Registrations Issued..... 359—No. 721,736 to No. 722,094
Renewals Issued..... 66

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, \$10.00 per annum, foreign mailing \$3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Filed Aug. 7, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/103, *Pepperidge Farm, Inc. v. Oroweat Baking Company*.

Reg. No. 427,500 (MR. DONUT AND DESIGN), Finis L. Ragsdale, Doughnuts; Reg. No. 608,784 (MISTER DONUT), Mister Donut of America, Inc., Snack bar services; Reg. No. 673,398 (DESIGN OF HUMAN), same; Reg. No. 683,370 (MISTER DONUT), same, Flour, filling and jellies for doughnuts, coffee and vegetable shortening, filed Feb. 2, 1961, D.C.N.J. (Newark), Doc. 75/61, *Mister Donut of America, Inc. v. Mrs. Donut, Inc. et al.* Consent decree; injunction granted Aug. 10, 1961.

Reg. No. 434,833. (See Reg. No. 150,168.)

Reg. No. 443,835. (See Reg. No. 150,168.)

Reg. No. 523,578 (ONE A DAY AND DESIGN), Miles Laboratories, Inc., Vitamin tablets; Reg. No. 634,318, same, filed Aug. 4, 1961, D.C. Mass. (Boston), Doc. 61/608-C, *Miles Laboratories, Inc. v. Dr-Deb, Inc.*

Reg. No. 576,616 (CONTINENTAL), Continental Merchandise Co., Inc., Pyrophoric lighters, ash trays, cigarette boxes,

combined cigarette lighter and writing implement, etc.; Reg. No. 670,005 (CONTINENTAL CITATION), same, Cigarette and cigar lighters; Reg. No. 670,006 (CONTINENTAL CLASSIC), same, filed Aug. 9, 1961, D.C., S.D.N.Y., Doc. 2826, *Continental Merchandise Co., Inc. v. Charles Brown & Company Inc. et al.*

Reg. No. 509,023. (See Reg. No. 150,168.)

Reg. No. 501,381. (See Reg. No. 311,230.)

Reg. No. 623,293 (AMERICAN HERITAGE AND DESIGN), American Heritage Publishing Co., Inc., Periodical; Reg. No. 600,904 (AMERICAN HERITAGE), same, Grooved phonograph records; Reg. No. 602,929, same, Books and periodicals; Reg. No. 600,400, same, Films; Reg. No. 712,163 (AMERICAN HERITAGE JUNIOR LIBRARY AND DESIGN), same, Books and periodical publications; Reg. No. 713,165 (AMERICAN HERITAGE), same, Tape recordings, filed May 23, 1961, D.C., W.D. Tex. (Austin), Doc. 1202, *American Heritage Publishing Co., Inc. v. American Heritage Book Store*. Defendant enjoined Aug. 7, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 74,513. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed May 26, 1959.

VELVET GREEN

For Seed Mixture for Lawns.
First use June 1, 1928.

SN 77,000. Borg-Warner Corporation, Chicago, Ill. Filed July 17, 1959.

BLENDEX

For Synthetic Resinous Compositions for use in the Industrial Arts.
First use on or prior to June 23, 1959.

SN 85,129. E. K. Hardison Seed Company, Nashville, Tenn. Filed Nov. 12, 1959.



Owner of Reg. No. 425,382.
For Field and Garden Seeds.
First use 1933.

SN 106,300. Acme Backing Corporation, New York, N.Y. Filed Oct. 13, 1960.

TERATHENE

For Flexible Laminated Synthetic Resin Sheet Material.
First use Sept. 19, 1960.

SN 106,380. Coast Pro-Seal & Manufacturing Co., Compton, Calif. Filed Oct. 14, 1960.

EPOWELD

For Epoxy Based Resins.
First use Apr. 13, 1959.

SN 107,455. Imperial Briquet Corporation, Kenbridge, Va. Filed Oct. 31, 1960.



For Charcoal Briquets Produced From Hickory and Other Hardwoods.
First use March 1959.

SN 109,525. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Dec. 2, 1960.



Priority claimed under Sec. 44(d) on French Reg. No. 490,588 dated Sept. 16, 1960 (Paris); Natl. Inst. No. 150,808. For Synthetic Resins Sold in the Form of Powder, Blocks, Sheets and Solutions.

SN 114,600. The Chemstrand Corporation, Decatur, Ala. Filed Feb. 28, 1961.

CHEMSTRAND

Owner of Reg. No. 660,842.
For Synthetic and Natural Resinous Materials in the Form of Sheets, Films, Bands, Tubing, and Hollow Bodies, for General Use in the Industrial Arts.
First use Oct. 10, 1949.

Class 6—Chemicals and Chemical Compositions

SN 79,564. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-ROTT

For Active Chemical Ingredient Incorporated and Used in the Manufacture of Fungistats and Bacteriostats.
First use July 28, 1959.

SN 83,858. Alexander Chemical Corp., Chicago, Ill. Filed Oct. 23, 1959.

ALGAECIDEX

For Chemicals for Control of Algae.
First use March 1956.

SN 95,428. Florasynth Laboratories, Incorporated, New York, N.Y. Filed Apr. 20, 1960.

AQUASOLAROME

Owner of Reg. Nos. 286,411, 353,939, and 354,154.
For Water Soluble Compound for use in Manufacturing Floral Waters and Toilet Lotions and as a Flavor Ingredient Intended for Food Purposes.
First use on or about Mar. 23, 1938.

SN 95,657. J. H. Weiler Inspection Service, Inc., Denver, Colo. Filed Apr. 22, 1960.

POLE-AID

For Wood Preserving Compound.
First use on or about Mar. 11, 1960.

SN 101,043. Shell Oil Company, New York, N.Y. Filed July 18, 1960.

PENT-OXOL

For Solvents for use in the Manufacture of Paints and for Other Industrial Uses.
First use July 8, 1960.

SN 102,474. Gray Realty Corporation, Myzon Laboratories Division, Chicago, Ill. Filed Aug. 11, 1960.

MYZON

Owner of Reg. No. 600,657.
For Insecticides and Rodenticides.
First use on or about May 31, 1960.

SN 103,290. Nuclear Products Company, Cleveland, Ohio. Filed Aug. 23, 1960.

SNOOP

For Compound for Detecting Leaks in Fluid Lines.
First use July 26, 1960.

SN 103,408. Nationwide Chemical Company Inc., Fort Myers, Fla. Filed Aug. 25, 1960.

PYRELLIN

For Wettable Powder Insecticide.
First use Aug. 5, 1960.

SN 104,449. Geigy Chemical Corporation, Ardsley, N.Y. Filed Sept. 14, 1960.

PRAMITOL

For Chemical Compound Used as an Ingredient for Herbicides.
First use Aug. 4, 1960.

SN 106,526. Park & Tilford, New York, N.Y. Filed Oct. 17, 1960.

TINTEX



The drawing is lined for red, yellow and brown. Owner of Reg. Nos. 112,936, 511,724, and others.
For Chemical Coloring Agent, or Dye, Used in the Tinting of Fabrics.
First use July 31, 1951; in May 1915 as to "Tintex."

SN 108,970. J. P. Frank Chemical & Plastic Corp., New York, N.Y. Filed Nov. 23, 1960.



For Chemicals and Chemical Compositions for Resins, Consisting of Polyvinyl Chloride, Stabilizers, Plasticizers and Co-Polymers of Vinyl Chloride.
First use Oct. 1, 1960.

SN 109,526. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Dec. 2, 1960.



Priority claimed under Sec. 44(d) on French Reg. No. 490,588, dated Sept. 16, 1960 (Paris); Natl. Inst. No. 150,808.

For Chemical Products Used in Conjunction With Photography, Tanning Materials, and in the Manufacture of Plastic Materials, Coloring Matters for Use in the Textile Industry and in the Manufacture of Bleaching, Dressing and Printing Materials, India Rubber, Refrigerating Devices, Fire Extinguishers, Ceramic, Glass, Crystal and Enameling Industries, Antiseptics, Insecticides and Fungicides.

SN 109,929. Carson Chemical Corporation, Brooklyn, N.Y. Filed Nov. 10, 1960.

Lavender and Old Lace

For Preparation for Killing Moths, Preventing Mildew, and an Air Deodorant for Clothing Closets.
First use July 2, 1957.

SN 110,100. Robil Chemical Corporation, Lincoln, R.I. Filed Dec. 12, 1960.



For Laundering Sanitizer.
First use June 1, 1959.

Class 7 - Cordage

SN 113,147. Schermerhorn Bros., Inc., Portland, Oreg. Filed Feb. 6, 1961.

ALPINE SUPREME

For Baler Twine.
First use March 1959.

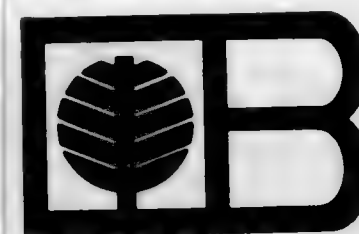
Class 12 - Construction Materials

SN 87,407. Golay & Co., Inc., Cambridge City, Ind., by change of name from Chore-Boy Manufacturing Co., Inc., Cambridge City, Ind. Filed Dec. 16, 1959.

Lactorium

For Prefabricated Building Unit for Cow Milking and Milk Handling.
First use on or about July 30, 1957.

SN 101,570. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed July 27, 1960.



The mark includes the capital letter "B" and a rectangle integral with the "B" and having a side common to the left vertical line in the "B." A tree is shown within the rectangle.

For Wood Panels.
First use June 24, 1960.

SN 103,242. The Van Dorn Iron Works Company, Cleveland, Ohio. Filed Aug. 22, 1960.

VAN DORN

For Jail and Prison Equipment, Including the Cages, Doors, Operators, and Remote Controls Therefor.
First use in or around 1900.

SN 115,983. American Felt Company, Glenville, Conn. Filed Mar. 20, 1961.

PERF-O-GRIP

For Vibration Absorbing Felt.
First use Jan. 10, 1961.

SN 115,987. American-Marietta Company, Chicago, Ill. Filed Mar. 20, 1961.

PRESST-O-CEL

For Insulation for Tubes and Pipes.
First use June 27, 1958.

SN 116,151. Peace Flooring Company, Inc., Magnolia, Ark. Filed Mar. 21, 1961.



No claim is made to the words "Mosaic Wood Flooring" apart from the trademark.
For Mosaic Wood Flooring.
First use at least as early as Mar. 1, 1958.

SN 116,403. Johns-Manville Corporation, New York, N.Y. Filed Mar. 24, 1961.

BESTO-TAK

For Pressure Sensitive Asbestos Tape.
First use Dec. 5, 1960.

SN 116,406. Keasbey & Mattison Company, Ambler, Pa. Filed Mar. 24, 1961.

EXCLUSIVE

For Asbestos Siding.
First use Mar. 8, 1961.

Class 13 - Hardware and Plumbing and Steam-Fitting Supplies

SN 111,217. Resistoflex Corporation, Roseland, N.J. Filed Jan. 3, 1961.

DYNATUBE

For Couplings for Fluid Conduits.
First use Nov. 28, 1960.

SN 111,447. United States Concrete Pipe Company, Cleveland, Ohio. Filed Jan. 6, 1961.

POLY STOP

No claim is made to the word "Poly" except in association with the word "Stop."
For Plastic End Closure for Concrete and Vitrified Clay Pipes.
First use Sept. 2, 1960.

SN 115,561. Stephen A. Young Corporation, Flora, Ind. Filed Mar. 13, 1961.

FIXTURE FASHIONS

Owner of Reg. No. 612,808.
For Plumbing Fixtures—Namely, Tub Filler Valve Units, Spouts, Shower Valves and Heads, Diverter Valves, Combination and Plain, Sink, Bath, Lavatory and Laundry Faucets, Pop-Up and Bath Drains, Bibbs and Compression Stops, and Parts Therefor.
First use on or about Mar. 22, 1949.

SN 115,868. Stephen A. Young Corporation, Flora, Ind. Filed Mar. 16, 1961.

SATURN

For Plumbing Fixtures—Namely, Lavatory Valves, Faucets and Drains, and Parts Therefor.
First use on or about Feb. 10, 1961.

Class 14 - Metals and Metal Castings and Forgings

SN 113,530. Inland Steel Company, Chicago, Ill. Filed Feb. 13, 1961.

INCOR

For Sheet Steel.
First use Sept. 30, 1960.

SN 114,762. Foote Mineral Company, Philadelphia, Pa. Filed Mar. 2, 1961.

Alumang

For Manganese-Aluminum Alloy for Use in Aluminum-Killed Steel.
First use Oct. 12, 1960.

SN 114,936. The Dayton Steel Foundry Company, Dayton, Ohio. Filed Mar. 6, 1961.

DAYTON

For Metal Castings, Including Cast Wheels, Fifth Wheels for Attachments of Trailers to Vehicles, Landing Gear Assemblies for Trailers, and Certain Other Types of Articles Used in the Field of Automotive and Vehicle Construction. First use in or about 1918.

SN 115,114. American Zinc Sales Company, St. Louis, Mo. Filed Mar. 8, 1961.

AZCO

For Galvanic Zinc Anodes and Die Cast Zinc Alloy Ingots. First use June 24, 1954, on galvanic zinc anodes.

SN 115,158. Mount Isa Mines, Limited, Brisbane, Australia. Filed Mar. 8, 1961.

ISA

For Electrolytic Copper Wire Bars and Electrolytic Copper Cathodes. First use Oct. 3, 1959; in commerce Oct. 30, 1959.

SN 115,724. Poore & Company, Chicago, Ill. Filed Mar. 15, 1961.

POORCO

For Rail Joint Bars. First use Sept. 23, 1960.

SN 115,927. Johnson & Johnson, New Brunswick, N.J. Filed Mar. 17, 1961.

PERMACEL

Owner of Reg. Nos. 388,238, 597,932, and others. For Metal Foils. First use Nov. 11, 1935.

Class 15—Oils and Greases

SN 94,244. Khalil Behraves, d.b.a. United Manufacturers Co., New York, N.Y. Filed Apr. 4, 1960.



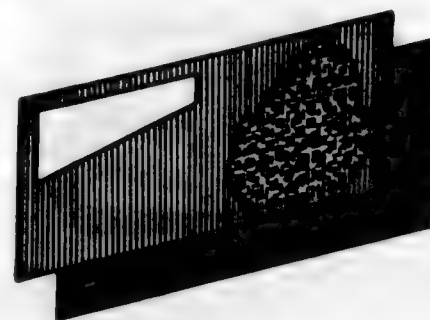
For Motor Oils. First use March 1958.

SN 113,384. The Wickes Corporation, Saginaw, Mich. Filed Feb. 9, 1961.

MEXACOTE

Owner of Reg. No. 404,386. For Graphite-Containing Quick Drying Lubricant. First use Dec. 27, 1960.

SN 113,814. Desmud Chemical Co., Bellingham, Wash. Filed Feb. 16, 1961.



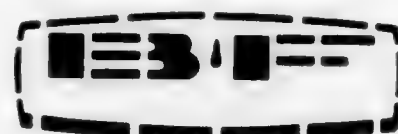
The drawing is lined for red and yellow. For Fuel Oil Additive. First use Feb. 8, 1961.

SN 114,677. Bridgeport Fabrics, Inc., Bridgeport, Conn. Filed Mar. 1, 1961.

SLIKKIT

For All-Purpose Lubricant. First use Aug. 30, 1960.

SN 114,678. Bridgeport Fabrics, Inc., Bridgeport, Conn. Filed Mar. 1, 1961.



For Lubricants Having a Molybdenum Disulfide Base. First use June 30, 1960.

Class 16—Protective and Decorative Coatings

SN 87,744. Troy Chemical Corporation, Newark, N.J. Filed Dec. 21, 1959.

TROYSAN

For Paint Additives, Driers, Stabilizers, and Inhibitors. First use July 15, 1955.

SN 109,159. D. A. Bennett Company, d.b.a. B & B Products, Fort Lauderdale, Fla. Filed Nov. 28, 1960.



The lines on the drawing indicate the color red. For Plastic Coating Material for the Protection of Tanks Against Rust. First use Sept. 21, 1960.

SN 110,315. Creo-Dipt Company, Inc., North Tonawanda, N.Y. Filed Dec. 16, 1960.

SUR FA-KOTE

For Exterior Paint for Shingles and the Like. First use on about Dec. 13, 1960.

Class 17—Tobacco Products

SN 115,829. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

MARINE

Owner of Reg. No. 712,899. For Cigarettes. First use Mar. 13, 1961.

SN 115,832. Philip Morris Incorporated, New York, N.Y. Filed Mar. 16, 1961.

BLUE SHIP

Owner of Reg. No. 712,897. For Cigarettes. First use Mar. 13, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 86,570. American Home Products Corporation, New York, N.Y., assignee of Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Filed Dec. 8, 1959.

CAP-TABS

For Large Dosage Capsule Containing a Medicament for Veterinary Use. First use July 7, 1960.

SN 92,672. M. A. Wright Co., Inc., Brooklyn, N.Y. Filed Mar. 11, 1960.

QUIETABS

For Preparation in Tablet Form To Relieve Tension, Sleeplessness and Restlessness Due to Nervousness. First use February 1953.

SN 93,265. Arthur Bennett, d.b.a. Bennett Pharmacy, Santa Monica, Calif. Filed Mar. 21, 1960.

ARBEN

For Medicinal Preparations—Namely, Prescription Merchandise, Vitamins, Reducing Preparations, and Internal Medications Consisting of Various Compounds and Drugs. First use Jan. 1, 1958.

SN 95,159. Bepe Fabrik Pharmazeutischer Präparate, Seefeld, Upper Bavaria, Germany. Filed Apr. 15, 1960.

UBIQUIN

Owner of German Reg. No. 675,784, dated May 11, 1955. For Medical Agents Promoting Diffusion To Be Applied Independently as Injectable Solutions, Ointments and Aerosols, or in Addition to Drugs.

SN 96,160. Vitamix Pharmaceuticals, Incorporated, Philadelphia, Pa., assignee of Wynn Pharmacal Corporation, Philadelphia, Pa. Filed Apr. 29, 1960.

HISTADUR

Assignee owner of Reg. No. 666,777. For Antihistamine—Namely, Pharmaceutical Preparation Containing Chlorpropeniramine. First use Apr. 27, 1960.

SN 98,202. John C. Carnes, d.b.a. 4-C Specialties, Topeka, Kans. Filed June 1, 1960.

ORALIS

For Antiseptic Preparation for Treating Canker Sores and Other Minor Mouth Irritations. First use March 1959.

SN 100,470. Wayne L. Seaver, d.b.a. Seaver Laboratories, South Bend, Ind. Filed July 7, 1960.



For Foot Powder for Treating Athlete's Foot and the Like. First use on or before Dec. 1, 1934.

SN 102,721. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Aug. 16, 1960.

MUCAINE

For Preparation for the Treatment of Gastro-Intestinal Disorders. First use Aug. 8, 1960.

SN 104,119. Schieffelin & Co., New York, N.Y. Filed Sept. 8, 1960.

L.C.D.

For Topical Therapeutic Preparations. First use Mar. 10, 1947.

SN 104,514. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories, Stamford, Conn. Filed Sept. 15, 1960.

SORBACID

For Pharmaceutical Preparation—Namely, an Anti-Acid Preparation. First use Aug. 24, 1960.

SN 104,750. The Pfeiffer Co., St. Louis, Mo. Filed Sept. 19, 1960.

MYCINETTES

For Preparation for the Treatment of the Throat. First use Sept. 7, 1960.

SN 106,427. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed Oct. 14, 1960.

NICKERSON'S

For Diagnostic Reagent for Human Diagnosis. First use July 1953.

SN 108,745. Cal-Off Corporation, Chicago, Ill. Filed Nov. 21, 1960.

CAL-OFF

For Medicine for the Relief of Foot Callous Disorders. First use Sept. 15, 1959.

SN 100,777. Drugmaster, Inc., St. Louis, Mo. Filed Dec. 7, 1960.

DOUBLE-E

For Medicinal Preparation in Capsule Form Especially Prepared To Relieve Drowsiness.
First use Dec. 2, 1960.

SN 109,780. J. E. Eichelberger, d.b.a. Home-Health Equipment Co., Lewistown, Ill. Filed Dec. 7, 1960.

LYDIEM COMPOUND

The word "Compound" is hereby disclaimed apart from the trademark as shown.

For Tonic Described as a Special Dietary Food Supplement Consisting Essentially of Vitamin Additives.
First use Nov. 7, 1960.

SN 110,560. National Remedy Products Company, Inc., Springfield, Mo. Filed Dec. 20, 1960.

TSC

For Veterinary Compositions for Use in Animal Feed and Drinking Water for Combatting Infections in Poultry and Livestock.

First use Aug. 12, 1957.

Class 19—Vehicles

SN 98,901. Preston W. Hovey, d.b.a. Hovey Machine Products, Berkeley, Calif. Filed June 13, 1960.

Hawk

For Power Driven Karts.
First use on or about Oct. 1, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 52,314. James R. Kearney Corporation (Delaware corporation), St. Louis, Mo., assignee of James R. Kearney Corporation (Missouri corporation), St. Louis, Mo. Filed May 26, 1958.

AIRSEAL

For Dielectric Compound for Electrically Insulating and Protecting Electrical Connectors and Conductors.
First use in October 1960.

SN 61,514. Sir W. G. Armstrong Whitworth Aircraft Limited, Baginton, near Coventry, England. Filed Oct. 22, 1958.



Priority claimed under Sec. 44(d) on British Reg. No. 782,696, dated Oct. 13, 1958.

For Electronic Control Equipment for Industrial Machinery; Power Supplies; Radio Communication Equipment including Radio Transmitters, Radio Receivers, Aerials for Fixed Sites and Vehicles, Intercommunication Equipment; and Telemetry Transducers and Senders including Instrument and Industrial Television.

SN 79,351. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Aug. 11, 1959.

COMPUTER

For Remote Tuning Controls for Television Receivers.
First use June 12, 1959.

SN 79,694. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Aug. 17, 1959.

COMPUTER DIAL

Applicant disclaims the use of the word "Dial" apart from the use of the word "Computer."

For Tuners for Television Receivers, and Particularly Remote Tuning Controls for Television Receivers.
First use June 19, 1959.

SN 80,138. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Aug. 24, 1959.

Life-Line

Owner of Reg. No. 573,600.
For Electrical Motor Starters and Combination Starters.
First use on or about Sept. 25, 1957.

SN 89,711. Truck-Lite Co., Inc., Jamestown, N.Y. Filed Jan. 26, 1960.



No claim is made to the words "Truck-Lite" apart from the mark as a whole.

For Clearance, Marker, Stop, Tail and Directional Lamps for Automotive Vehicles.
First use May 1, 1956.

SEPTEMBER 26, 1961

U. S. PATENT OFFICE

TM 125

SN 91,938. Guaranteed Parts Company, Inc., Seneca Falls, N.Y. Filed Mar. 1, 1960. SN 98,529. Harris B. Randall, d.b.a. Action Systems Company, Meriden, Conn. Filed June 6, 1960.



Applicant disclaims the words "Guaranteed Parts Co., Inc." For Ignition Coils, Distributor Parts, Condensers, Generator Cutouts, Voltage Regulators, Electric Automotive Ignition, Starting, and Lighting Equipment—Namely, Motor and Generator Brushes, Bushings for Starters and Generators, Contact Arms and Screws, Condensers, Distributor Covers, Distributor Leads, Distributor Rotors, Coils, Generator Cutouts, Voltage Regulators, Relays, Switches for Auto and Radio, Starter and Dimmer Switches, Stop Light Switches, Starter Springs, and Starter Bolts and Washers. First use in January 1945.

SN 92,117. St. Louis Janitor Supply Co., St. Louis, Mo. Filed Mar. 3, 1960.

PIGGY BACK

For Floor Scrubbing Machines and Vacuum Cleaners. First use Feb. 15, 1960.

SN 92,400. Protectomatic, Inc., Minneapolis, Minn. Filed Mar. 8, 1960.

PROTECTOMATIC

For Electrical Punch Press Safety Switch Control Apparatus to Insure That the Operator's Hands are Clear of the Machine. First use Feb. 23, 1960.

SN 92,581. Asahi Musen Denki Kabushiki Kaisha, Toshima-ku, Tokyo, Japan. Filed Mar. 11, 1960.

ASAHI

The English translation of the word "Asahi" means "Morning Sun." For Radio-Receiver, Television-Receiver, and Radio-and-Television Transmitters. First use May 1960; in commerce May 1950.

SN 97,308. David E. Hoover, d.b.a. Hoover Enterprises, Mercury Electronics Division, Pasadena, Calif. Filed May 17, 1960.



The drawing is lined for red, but that color forms no part of the mark. For Combustion Engine Electronic Control Devices for Ignition Systems. First use Sept. 19, 1959.

TM 770 O.G.—12

ACTION!

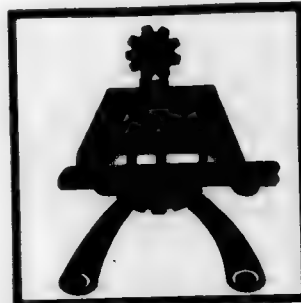
For Interoffice Telephone Communication and Paging System. First use Jan. 5, 1959.

SN 98,530. Harris B. Randall, d.b.a. Action Systems Company, Meriden, Conn. Filed June 6, 1960.



For Interoffice Telephonic Communication and Paging System. First use Jan. 5, 1959.

SN 99,393. Blue Giant Products Corp., New York, N.Y. Filed May 12, 1960.



For Automotive Parts Comprising Electrical Automotive Switches, Connectors; Fuses, Terminal and Junction Blocks; Panel, Map and Pilot Lamps; Plugs and Sockets; and Voltage Reducers. First use Jan. 2, 1958.

SN 99,612. C.G.S. Laboratories, Inc., Wilton, Conn. Filed June 24, 1960.

AIR TRAK

Owner of Reg. No. 662,539. For Electrical Chokes. First use May 5, 1960.

SN 102,258. National Sales, Inc., Indianapolis, Ind. Filed Aug. 8, 1960.

MIRA

For Electrically Operated Garbage Disposers for Domestic Use. First use Apr. 20, 1960.

SN 107,339. The Hy-Glow Company, d.b.a. Hy-G Products Co., Los Angeles, Calif. Filed Oct. 28, 1960.

St. Nick Lights

The word "Lights" is hereby disclaimed apart from the mark as shown. For Decorative Lights for Indoor and Outdoor use. First use Aug. 1, 1947.

SN 110,175. Scovill Manufacturing Company, Racine, Wis. Filed Dec. 13, 1960.

Port-A-Vac

For Electric Motor Driven Vacuum Cleaners and Accessories.
First use on or about Nov. 17, 1960.

SN 110,247. Western Plastics Corporation, Hastings, Nebr. Filed Dec. 14, 1960.

SPLICAP

For Housing for Hermetically Sealing Electrical Connections.
First use at least as early as Nov. 3, 1960.

SN 111,885. Hoffman Electronics Corporation, Los Angeles, Calif. Filed Jan. 16, 1961.

BI-SWITCH

For Semiconductor Switches, Four-Layer Semiconductors, Gated-Off Controlled Rectifiers.
First use Jan. 3, 1961.

SN 112,546. Hughes Aircraft Company, Culver City, Calif. Filed Jan. 26, 1961.

XYTAN

For Silicon and Germanium Type Semiconductor Diode and Transistor Devices.
First use on or about June 2, 1960.

SN 112,626. The Lincoln Electric Corporation, Cleveland, Ohio. Filed Jan. 27, 1961.

MULTIGUARD

For Electric Motors and the Windings Thereof.
First use Dec. 12, 1957.

Class 22—Games, Toys, and Sporting Goods

SN 89,993. Avery Adhesive Products, Inc., Monrovia, Calif. Filed Feb. 1, 1960.

Stikadoo's

For Toy—Namely, a Package or Kit Comprising Colored Self-Adhesive Die Cut Shapes for Making Various Figures and Designs.
First use Jan. 5, 1960.

SN 110,482. James W. Smith, Columbus, Miss. Filed Dec. 19, 1960.

LITTLE PRO

For Baseball Batting and Practice Device, Comprising a Spinnable Member To Be Struck by a Bat Useful for Playing a Simulated Baseball Game and for Batting Practice.
First use Nov. 28, 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 102,184. Birs Beteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. Filed Aug. 8, 1960.



Owner of Swiss Reg. No. 178,851, dated Nov. 6, 1959.
For Dryers, Electrical and Electronic Control Devices.

SN 112,145. Dieter Haubold, d.b.a. Dieter Haubold Industrielle Nagelgerate, Hannover, Germany. Filed Mar. 24, 1961.



1961.
Owner of German Reg. No. 692,806, dated July 13, 1956.
For Nailing and Stapling Machines.

SN 114,940. Deschner Co., Los Angeles, Calif. Filed Mar. 6, 1961.

UNICHECK

For Hydraulic Checks.
First use Dec. 7, 1960.

SN 114,956. Eleanor S. Hammerlund, d.b.a. Sew-Meter Company, Hopkins, Minn. Filed Mar. 6, 1961.

SEW-METER

Owner of Reg. No. 643,072.
For Sewing Machines.
First use June 11, 1954.

SN 115,552. The Vendo Company, Kansas City, Mo. Filed Mar. 13, 1961.

VISI-VEND

For Vending Machines.
First use Feb. 8, 1961.

SN 115,707. Machine Control, Inc., Minneapolis, Minn. Filed Mar. 15, 1961.

DRYGEAR VES

For Power Transmission Mechanisms.
First use Dec. 10, 1960.

SN 115,759. Alkon Products Corporation, Hawthorne, N.J. Filed Mar. 16, 1961.



Owner of Reg. No. 638,388.
For Pneumatic and Hydraulic Drill Units, Pneumatic and Hydraulic Cylinders, and Pneumatic and Hydraulic Control Valves.
First use Feb. 17, 1961.

SN 115,771. Buehler Ltd., Evanston, Ill. Filed Mar. 16, 1961.

SURFMET

For Machine for Grinding and Polishing Metals.
First use Sept. 15, 1960.

SN 115,859. The Thomas & Betts Co., Elizabeth, N.J. Filed Mar. 16, 1961.

MAGIC MARK

For Conduit Bending Tools for Use in Connection With Bending and Shaping Conduit and Tubing Employed in the Installation of Electrical Wiring-Raceway Systems.
First use Apr. 26, 1960.

Class 26—Measuring and Scientific Appliances

SN 61,513. Sir W. G. Armstrong Whitworth Aircraft Limited, Baginton, near Coventry, England. Filed Oct. 28, 1958.



Priority claimed under Sec. 44(d) on British Reg. No. 782,696, dated Oct. 13, 1958.

For Electronic Recording Equipment; Data Handling and Instrumentation; Radar and Allied Equipment; Electronic Measuring Equipment; Electronic Recording Equipment Including Cathode Ray Tube Recording Display Units, Continuous Film Cameras, Galvanometers and Galvanometer Amplifiers; Data Handling and Instrumentation Including Telemetry Test Gear Including Displays, De-Multiplexing "Strobing" Equipment, Computer Type Simulators Including Telemetry Signal Simulators; Radar and Allied Equipment Including Radar Transmitters and Receivers, Radar Display and Simulation Equipment, Ground and Airborne Radar Aerial Systems; Electronic Equipment for Industrial and Similar Control Applications Including Industrial Electronic Monitoring Equipment Including Electronic Display Gauging Systems, Analogue and Digital Data Control Systems; Electronic Measuring Equipment Including "Decimetre" and Microwave Test Equipment, Electronic Frequency and Time Measuring Equipment (e.g., Accelerometer Calibrating Systems and Wave-Meters); Electronic Equipment for Industrial and Similar Control Applications Including Data Reading (e.g., Perforated Tape Reader) and Allied Equipment,

Electro-Mechanical Data Presentation Equipment (e.g., Print Out Equipment) and Specialized Cathode Ray Tube Oscilloscope Equipment.

SN 110,298. Textile-Kraft Products Co., Milwaukee, Wis. Filed Dec. 15, 1960.



For Programming Tape Used on Tape Controlled Automatic Tool Machine.
First use Apr. 29, 1957.

SN 115,584. Colorvision Plastics, Inc., Boston, Mass. Filed Mar. 14, 1961.

COLORVISION

For Indoor and Outdoor Microwave Shields; Television Receiving Sets; Television Filters and Picture Magnifiers; Television Booster Shields; Electronic Coil Covers; and Radarscope Overlay Maps, Said Maps Being Primarily Intended for Use With Radarscopes Used at Airports and Which Comprise Specially Formed Clear Transparent Plastic Shields Upon Which Ground Approach Patterns, Runways and Hazardous Objects Have Been Reproduced.
First use May 1949 on television picture magnifiers.

SN 116,558. Ordinance Optics, Inc., Los Angeles, Calif. Filed Mar. 27, 1961.

THE RIFLEMAN

For Telescopic Sights for Rifles.
First use Dec. 14, 1960.

Class 29—Brooms, Brushes, and Dusters

SN 114,758. Essex Graham Company, Chicago, Ill. Filed Mar. 2, 1961.

PAINT-EZE

For Paint Brushes.
First use Feb. 1, 1961.

Class 31—Filters and Refrigerators

SN 115,377. Purolator Products (Canada) Limited, Toronto, Ontario, Canada. Filed Mar. 10, 1961.

TURBOMONITOR

For Filters, Elements and Parts Thereof for Gasoline, Liquid Hydrocarbons, and Other Liquid Fuels.
First use Jan. 1, 1960; in commerce Jan. 1, 1960.

Class 32—Furniture and Upholstery

SN 85,222. George Friedman, d.b.a. Slat-Fix Company, Hicksville, N.Y. Filed Nov. 13, 1959.

Slat-Fix

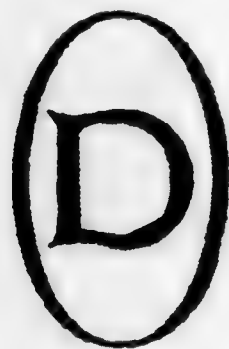
For Replacement Ladders for Venetian Blinds.
First use Oct. 26, 1959.

SN 102,454. Continental Silver-Line Products, Houston, Tex. Filed Aug. 11, 1960.

SILVER-LINE

For Cots, Lawn Furniture, Couches, Mattresses, Springs, and Bed Frames.
First use at least as early as August 1937.

SN 112,608. Donnelly Mirrors, Inc., Holland, Mich. Filed Jan. 27, 1961.



The drawing is lined merely for shading and not for color.
For Mirrors.
First use Jan. 13, 1961.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 99,806. W. J. Voit Rubber Corporation, Los Angeles, Calif. Filed June 23, 1960.



Owner of Reg. Nos. 530,087 and 630,007.
For Retreading Rubber, Camel Back, Cord Repair Fabric, Cushion Gum, Tread Repair Stock, Stripping Stock, Filler Strip, Padding Stock, Vulcanizing Tube Gum Used in the Repair, Renovating, and Manufacture of Vehicle Tires; Belting, Hose, Machinery Packing, Non-Metallic Tires.
First use January 1923.

SN 114,054. Selberling Rubber Company, Barberton, Ohio. Filed Feb. 20, 1961.

CARBO-PREME

Owner of Reg. Nos. 685,940 and 704,316.
For Retreading Rubber.
First use Nov. 16, 1960.

Class 36—Musical Instruments and Supplies

SN 93,167. Sir W. G. Armstrong Whitworth Aircraft Limited, Baginton, near Coventry, England. Filed Sept. 14, 1959.



Priority claimed under Sec. 44(d) on British Reg. No. 782,696, dated Oct. 13, 1958 (claim based on copending application SN 61,514, filed Oct. 28, 1958).
For Magnetic Tape Recorders and Magnetic Tape Reproducers and Parts Thereof.

Class 37—Paper and Stationery

SN 94,713. Weyerhaeuser Company, Tacoma, Wash. Filed Apr. 8, 1960.

POLARTEX

For Paperboard Designed Especially for Use in Manufacturing Frozen Food Cartons.
First use Apr. 16, 1959.

SN 104,281. Bernard Klein, Inc., d.b.a. Crown Paper Company, Yonkers, N.Y. Filed Sept. 12, 1960.

DARLING

For Bathroom and Facial Tissue.
First use December 1959.

SN 106,369. Wausau Paper Mills Company, Brokaw, Wis. Filed Oct. 13, 1960.



Disclaimer is made of the words "Papers" and "Made With Extra Care" apart from the mark as shown. Owner of Reg. Nos. 547,013 and 616,865.

For Bond, Mimeograph, Duplicating, Index, Ledger, Text and Offset Paper.
First use Feb. 1, 1960.

SN 108,170. The Grand Union Company, East Paterson, N.J. Filed Nov. 10, 1960.

GRAND

Owner of Reg. Nos. 638,790, 665,407, and 706,020.
For Aluminum Foil for Use in Wrapping Food and Other Articles and as Covers for Food and Other Containers, for Use in Cooking and Freezing Foods and in Storing Foods and Other Articles, for Use as Liners for Baking Pans and Other Utensils, Electric and Other Burners, Shelves, and the Like.
First use on or about June 10, 1960.

SN 110,638. Zavody Bohemia, Narodni Podnik, d.b.a. Bohemia Works, National Corporation, Ceske Budejovice, Czechoslovakia. Filed Dec. 21, 1960.

TELE-DATA

For Technical Newsletter Publication.
First use on or about June 1, 1960.

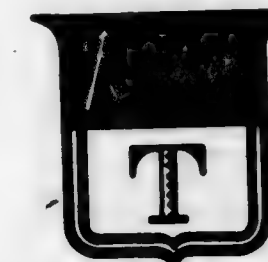
Class 39—Clothing

SN 71,722. Boston Royal Petticoat Co., Boston, Mass. Filed Apr. 17, 1959.



For Ladies' Maternity Lingerie.
First use in February 1940.

SN 71,723. Boston Royal Petticoat Co., Boston, Mass. Filed Apr. 17, 1959.



For Ladies' Maternity Lingerie.
First use in February 1940.

SN 75,561. Joanne Kiddy Dress Mfg. Co., Inc., Chicago, Ill. Filed June 11, 1959.

FLIRTEES

For Children's Combination Panty and Skirt.
First use May 20, 1959.

SN 84,470. Shoe Corporation of America, Columbus, Ohio. Filed Nov. 2, 1959.



No claim is made to the term "Pre-Teens" apart from the mark in its entirety. Owner of Reg. No. 549,112.
For Children's Shoes.
First use Sept. 12, 1959.

SN 92,868. Compax Corp., Woodside, N.Y. Filed Mar. 15, 1960.

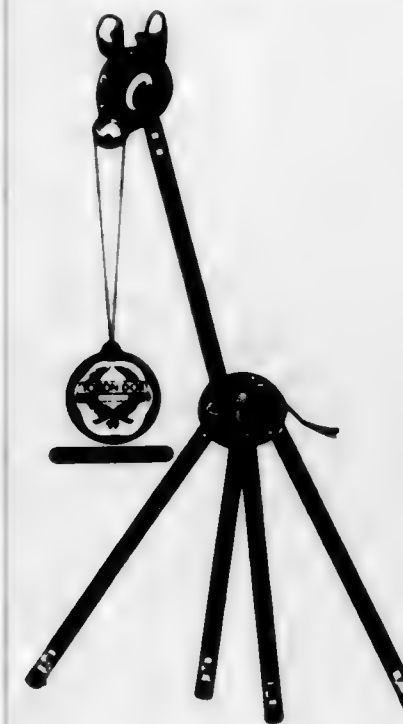
PACSET

For Knitted Textile Garments—Namely, T-Shirts, Polo Shirts, Briefs and Similar Garments Made of Knitted Fabric.
First use Feb. 15, 1960.

SN 96,601. Majestic Specialties, Inc., Cleveland, Ohio. Filed May 6, 1960.

TRULY YOURS

For Blouses, Skirts, Shorts, Pants, Jackets, Sweaters and Dresses.
First use June 15, 1938.

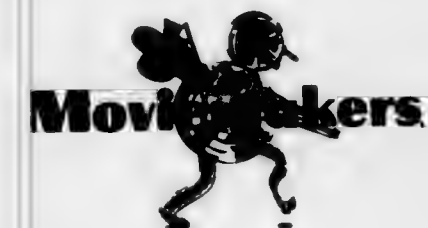


The French words "Tolison d'Or" mean "golden fleece." The representation of the goods and all wording, except "Tolison d'Or," are disclaimed apart from the mark as shown. Owner of Czechoslovakian Reg. No. 154,318, dated July 28, 1960; and U.S. Reg. No. 678,461.

For Pencils, Pencil Leads, Mechanical Pencils, Ball Point Pens and Refills, Fountain Pens, Pencil Holders, Extensions and Protectors, Chalk, Erasers.

Class 38—Prints and Publications

SN 108,501. Moviemakers, Inc., Jackson Heights, N.Y. Filed Nov. 15, 1960.



For Moving Picture Films.
First use October 1959.

SN 108,502. Moviemakers, Inc., Jackson Heights, N.Y. Filed Nov. 15, 1960.



For Moving Picture Films.
First use October 1959.

SN 99,965. A. Sagner's Son, Frederick, Md. Filed June 29, 1960.

PERMA-POCKET

For Men's Suits, Coats, Trousers and Slacks.
First use in January 1960.

SN 101,747. Beattique Stockings, Inc., Paducah, Ky., assignee of Claussner Hosiery Company, Paducah, Ky. Filed Aug. 1, 1960.



For Women's Hosiery.
First use July 14, 1960.

SN 102,699. Sharpe Manufacturing Co., Minneapolis, Minn. Filed Aug. 15, 1960.



Owner of Reg. No. 583,315.
For Girls' Clothing—Namely, Slacks, Pants, Pedal Pushers, Jamaica Shorts, Bermuda Shorts and Shirts, Skirts, and Jackets and Blouses.
First use July 5, 1960.

SN 110,213. Kilbanon Corporation, Wayland, Mass. Filed Dec. 14, 1960.

KILBANON LTD.

For Women's Suits, Jackets, Shirts, Blouses, Coats, Sweaters, Dresses, and Men's Sweaters.
First use May 1, 1960.

SN 110,322. Genesco Inc., Nashville, Tenn. Filed Dec. 16, 1960.

SAVOIA

For Boots, Shoes, and Slippers of Leather, Rubber, Fabric, or a Combination of Those Materials, for Men, Women and Children.
First use Dec. 29, 1959.

SN 110,323. Genesco Inc., Nashville, Tenn. Filed Dec. 16, 1960.

MARCA D' ORO

The English equivalent of "Marca d'Oro" is "mark of gold."
For Boots, Shoes, and Slippers of Leather, Rubber, Fabric, or a Combination of Those Materials, for Men, Women and Children.
First use Dec. 29, 1959.

SN 110,369. Maxwell Sachs, d.b.a. Spring-O-Ling Mfg. Co., West Roxbury, Mass. Filed Dec. 16, 1960.

SPRING-O-LINGS

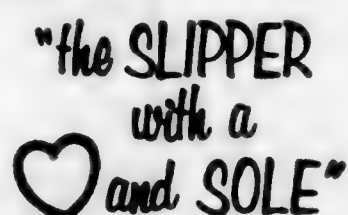
Owner of Reg. Nos. 574,715, 714,766, and others.
For Shoe Parts—Namely, Heels, Soles, Counters and Uppers.
First use Dec. 9, 1960.

SN 111,601. The Hettrick Manufacturing Company, Toledo, Ohio. Filed Jan. 10, 1961.



For Sports Wear for Men, Women and Children, in Particular Jackets and Pants.
First use Dec. 23, 1960.

SN 111,737. S. Goldberg & Co. Inc., Hackensack, N.J. Filed Jan. 12, 1961.



For House Slippers for Men, Women, and Children.
First use Dec. 20, 1960.

SN 112,039. N. Farah & Sons, Inc., New York, N.Y. Filed Jan. 18, 1961.

CAMESE

For Pajamas and Robes for Toddlers, Children, Girls, Juniors, and Women.
First use Oct. 25, 1959.

SN 112,073. Peter Pan Foundations, Inc., New York, N.Y. Filed Jan. 18, 1961.

CULOTTE

For Girdles.
First use Nov. 16, 1960.

SN 112,222. Cluett, Peabody & Co., Inc., New York, N.Y. Filed Jan. 23, 1961.

WONDER DOZEN

For Handkerchiefs.
First use Jan. 28, 1960.

SN 112,397. The Perry Knitting Company, Perry, N.Y. Filed Jan. 24, 1961.

FABRICOOOL

For Infants' and Children's Pajamas and Sleepers.
First use Jan. 6, 1961.

SN 112,575. Superba Cravats, Inc., Rochester, N.Y. Filed Jan. 26, 1961.

BLENDEEN

For Neckwear.
First use Dec. 23, 1960.

SN 113,360. Premier Knitting Co., Inc., New York, N.Y. Filed Feb. 9, 1961.



For Men's, Women's, and Children's Knitted T-Shirts, Sweaters, and Knitted Jackets.
First use October 1959.

SN 113,505. David Crystal, Inc., New York, N.Y. Filed Feb. 13, 1961.

TROPICANA

Owner of Reg. No. 395,134.
For Women's Suits.
First use 1958.

Class 40—Fancy Goods, Furnishings, and Notions

SN 94,847. Steels & Busks Limited, Leicester, England. Filed Apr. 11, 1960.

ROCARDETTE

Priority claimed under Sec. 44(d) on British Reg. No. 801,837, dated Feb. 18, 1960. Owner of U.S. Reg. No. 663,207.
For Fittings for Suspenders, Brassieres and Corsets.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 111,621. Societe de la Viscose Suisse, Emmenbrucke, Switzerland. Filed Jan. 10, 1961.

NYLSUISSE

For Woven, Netted and Knitted Fabrics for Men's, Women's, and Children's Underwear and Outer Garments, Bed and Table Covers, Curtains, Carpets, Tapestry and for Decorative Purposes.
First use August 1957; in commerce in or about February 1958.

SN 116,335. Onondaga Silk Company, Incorporated, New York, N.Y. Filed Mar. 23, 1961.

PAVIANTE

For Silk Fabrics in the Piece.
First use Sept. 15, 1959.

Class 43—Thread and Yarn

SN 116,363. Union Carbide Corporation, New York, N.Y. Filed Mar. 23, 1961.

AERESS

For Synthetic Filament Yarn.
First use about Feb. 17, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 104,733. Jean Leclabart, Paris, France. Filed Sept. 19, 1960.

PERMABEL

Owner of French Reg. No. 488,329, dated May 18, 1960 (Seine); Natl. Inst. No. 144,717.
For Hair Waving Apparatus—Namely, Hair-Curlers, Clamps, Heating Sleeves, Devices for Heating These Sleeves.

SN 115,646. Welch Allyn, Inc., Skaneateles Falls, N.Y. Filed Mar. 14, 1961.



For Electrically Illuminated Diagnostic Instruments—Namely, Ophthalmoscopes, Otoscopes, Illuminators, Transilluminators, Professional Pocketlights, Battery Handles, Cord Handles, Wall Transformer Units, Rheostat Transformer Units, Battery Handle Transformers, Laryngoscopes, Proctoscopes, Sigmoidoscopes, Biopsy Forceps, Anoscopes, Headlamps; and Cases, Parts and Accessories Therefor.
First use on or before Dec. 31, 1950.

SN 115,675. Electronic Aids, Inc., Baltimore, Md. Filed Mar. 15, 1961.

CARDIOMATIC

For Heart Monitor.
First use Jan. 16, 1961.

SN 116,053. The Motiloid Company, Inc., Chicago, Ill. Filed Mar. 20, 1961.



For Acrylic Denture Base Material.
First use Feb. 3, 1961.

SN 116,054. The Motiloid Company, Inc., Chicago, Ill. Filed Mar. 20, 1961.



For Acrylic Denture Base Material.
First use Feb. 3, 1961.

SN 116,055. The Motiloid Company, Inc., Chicago, Ill. Filed Mar. 20, 1961.



For Acrylic Denture Base Material.
First use Feb. 3, 1961.

Class 45—Soft Drinks and Carbonated Waters

SN 110,571. David C. Smith, Des Plaines, Ill. Filed Dec. 16, 1960.



No claim is made to the word "Cola."
For Soft Drinks.
First use Sept. 25, 1959.

Class 46—Foods and Ingredients of Foods

SN 76,410. John Lund and Company, Denver, Colo. Filed June 24, 1959.

**JOHN LUND'S MIX
SINCE 1911**

The expression "mix since 1911" is disclaimed apart from the mark as shown.
For Pancake Mix.
First use Apr. 22, 1955.

SN 80,861. Consolidated Dairy Products Company, Seattle, Wash. Filed Sept. 4, 1959.

DARIGOLD

Owner of Reg. No. 375,997.
For Dairy Products—Namely, Cultured Dairy Products—Namely, Buttermilk, Sweet Cream Buttermilk Powder, Cultured Buttermilk Powder, Sour Cream, Cottage Cheese, Yogurt, Cream in Fluid Form, Anhydrous Milk Fat, Butter and Cheese; Ice Cream, Sherbet and Frozen Ice Milk and Water Ices; Milk in Fluid and Evaporated Form and Dehydrated Milk Products (Including Dry Formulated Milk Products); Fresh Eggs, and Orange, Chocolate, and Egg-nog-Flavored Drinks; Milk Replacer for Calves and Animal Food, Developing Scratch for Poultry and Dairy Feed for Livestock.

First use at least as early as Dec. 17, 1921.

SN 84,850. City Products Corporation, d.b.a. Midwest Dairy Products, Chicago, Ill. Filed Nov. 9, 1959.

MISS LIBERTY

For Ice Cream.
First use on or before May 14, 1959.

SN 85,264. Gilbert P. Williamson, d.b.a. Minimax Foods, Walnut Creek, Calif. Filed Nov. 12, 1959.

MINIMAX

For Spices—Namely, Cloves and Dried Mint; and Frozen Foods—Namely, Berries, Vegetables, and Fish.
First use about Nov. 8, 1955.

SN 90,650. Norton & McElroy Produce, Inc., Glendale, Ariz. Filed Feb. 9, 1960.

SHOW

Owner of Reg. No. 437,955.
For Fresh Vegetables—Namely, Lettuce.
First use Dec. 21, 1957.

SN 93,423. Filler Products, Inc., Atlanta, Ga. Filed Mar. 22, 1960.



The drawing is lined for the colors red and blue, but no claim is made to color. Owner of Reg. No. 572,158.
For Snacks—viz., Fried Bacon Rinds, Cornmeal Wafers and Puffs, Popcorn, and Roasted Corn.
First use July 1, 1953.

SN 93,721. Shell Oil Company, d.b.a. Shell Chemical Company, New York, N.Y. Filed Mar. 25, 1960.

BEEFSUP

For Nutrient for Animal Feeds Containing Denatured Alcohol.
First use Mar. 9, 1960.

SN 95,379. Marshall Dairy Laboratory, Inc., Madison, Wis. Filed Apr. 19, 1960.



Owner of Reg. No. 414,258.
For Rennet Extract, Meat Tenderiser, Phosphate Buffer Solution Used To Prevent Bacteriophage Growth in Lactic Acid Producing Cultures Which Are Used in the Manufacture of Cheese and Cultured Milk Products, a Distilled Compound, Prepared From Lactic Acid Culture and Fortified With Aromatic or Volatile Compounds Found in Such Culture, Used to Intensify the Flavor of Butter, Cottage Cheese, Margarine, and Buttermilk, Cottage Cheese Coagulator, Vegetable Coloring for Food Products, and Pancreas Powder Used for the Inhibition of Oxidized Flavor in Dairy Products.
First use on or about Apr. 1, 1957, on rennet extract.

SN 98,633. C-K Products, Inc., St. Louis, Mo. Filed June 8, 1960.

TENN

For Composition Containing Monosodium Glutamate, and Proteolytic Enzymes From Natural Sources To Be Used as a Meat Tenderiser and Sold in Spray Containers.
First use Dec. 18, 1959.

SN 99,987. Johnston's Products, Los Angeles, Calif. Filed June 29, 1960.

KENTROL

For Dietary Food Composed of Vitamins, Minerals, Proteins, Fats, and Carbohydrates in Balanced Amounts for Use as a Weight-Controlled Diet.
First use May 18, 1960.

SN 101,197. Pils-Konserven AG. vorm. Stofer & Söhne, Pratteln, Switzerland. Filed July 20, 1960. SN 103,581. Maxlotte Corporation, Chicago, Ill. Filed Aug. 29, 1960.

MAXLOTTE

For Poultry and Parts Thereof, Prepared and Packaged in Either Fresh or Frozen, Cooked or Uncooked, Boned or Unboned Form.
First use Nov. 18, 1958.

SN 103,998. Zappia-Paradiso, S.A., Lugano, Switzerland, assignee of Ludwig Von Kleydork, d.b.a. Paradiso, Norwalk, Conn. Filed Sept. 6, 1960.

PARADISO

The Italian word "Paradiso" may be translated as "paradise."
For Coffee.
First use July 15, 1960; in commerce July 15, 1960.

SN 104,371. Central Soya Company, Inc., Fort Wayne, Ind. Filed Sept. 13, 1960.



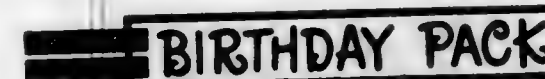
For Canned Mushrooms.
First use in October 1951; in commerce May 14, 1952.

SN 101,826. Talmadge Farms, Incorporated, Lovejoy, Ga. Filed Aug. 1, 1960.

TALMADGE

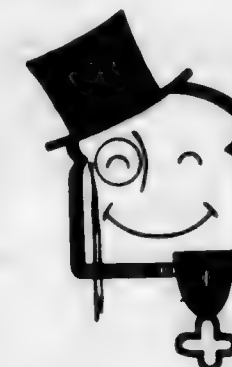
Owner of Reg. No. 591,510.
For Cured Hams, Cured Bacon and Cured Sausage.
First use Feb. 28, 1952.

SN 101,834. Welcome Arrival Products Co., Inc., Minneapolis, Minn. Filed Aug. 1, 1960.



The words "Birthday Pack" are disclaimed apart from the mark as shown. Owner of Reg. No. 710,680.
For Candy.
First use June 18, 1960.

SN 103,303. Walter M. Sherman, d.b.a. Walter M. Sherman and Company, Oradell, N.J. Filed Aug. 23, 1960.



The drawing is lined for the color red, but no claim is made as to any particular color.
For Bread.
First use June 26, 1960.

SN 103,304. Walter M. Sherman, d.b.a. Walter M. Sherman and Company, Oradell, N.J. Filed Aug. 23, 1960.



The drawing is lined for the color red, but no claim is made as to any particular color.
For Bread.
First use June 26, 1960.

The drawing is lined for the color gray, but no claim is made to color. Owner of Reg. Nos. 323,074, 667,843, and others.
For Livestock and Poultry Feeds, Dog, Rabbit, and Other Pet and Laboratory Animal Foods.
First use Aug. 19, 1960.

SN 106,114. Margarine-Union Gesellschaft mit beschränkter Haftung, Hamburg, Germany. Filed Oct. 10, 1960.

RAMA

Owner of German Reg. No. 47,344, dated Jan. 15, 1901.
For Butter, Margarine, Edible Fats and Edible Oils.

SN 106,351. Sidney's Food Products Inc., Kansas City, Mo. Filed Oct. 13, 1960.

SIDNEY'S

For Salad Dressings Including Italian Salad Dressing, Creole French Dressing and Creamy French Dressing.
First use June 1948.

SN 106,678. National Biscuit Company, New York, N.Y. Filed Sept. 29, 1960.

ROYAL CRESTS

For Biscuits.
First use Apr. 15, 1959.

SN 106,901. J. V. D'Albora Company, Inc., d.b.a. J. V. D'Albora Company, Cocoa, Fla. Filed Oct. 24, 1960.



Applicant disclaims any exclusive rights in the word "Brand" apart from the mark as shown. Owner of Reg. No. 266,648.

For Fruits in Their Natural State—Namely, Oranges, Grapefruit, Tangerines, Lemons, Kumquats, Pineapples, and Avocado Pears.

First use Dec. 5, 1926.

SN 107,013. Hayden Flour Mills, Tempe, Ariz. Filed Oct. 24, 1960.



The words "Baking Powder" and "Salt" are disclaimed apart from the mark as shown. Owner of Reg. No. 694,333. For Fried Bread Flour Containing Baking Powder and Salt.

First use Aug. 14, 1960.

SN 108,158. Colonna Brothers, North Bergen, N.J. Filed Nov. 10, 1960.

COLONNA

Owner of Reg. No. 658,844. For Spaghetti Sauce and Grated Cheese. First use July 18, 1939, on cheese.

SN 108,208. The Pillsbury Company, Minneapolis, Minn. Filed Nov. 10, 1960.

COUNTRY MORNING

For Fresh Eggs. First use Sept. 19, 1960.

SN 108,456. Colgate-Palmolive Company, New York, N.Y. Filed Nov. 15, 1960.

AWEIGH

For Dietary Food Concentrate for Weight Control. First use Oct. 11, 1960.

SN 109,175. Evans Honey & Olive Co., Inc., d.b.a. Evans Honey Company, Los Angeles, Calif. Filed Nov. 28, 1960.

CALIFORNIA GIFT

Owner of Reg. No. 604,572. For Olives, Honey, Bottled and Canned Food Condiments—Namely, Pickles, Onions, Cauliflower; Peppers, Peperoncini; Relishes—Namely, Vegetable and Olive Relish, Olive, Onion, Cauliflower, Carrot and Sweet Pepper Relish. First use Apr. 25, 1949, on olives and honey.

SN 109,183. Guest Quality Foods, Inc., Waterloo, Iowa. Filed Nov. 28, 1960.



The word "Quality" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 661,719 and 698,706. For Pecans, Mixed Nuts in the Shell, Barbecue Sauce, Barbecue Spices and Vienna Sausage. First use Mar. 1, 1960.

SN 109,402. Fant Milling Company, d.b.a. Gladiola Biscuit Company, Sherman, Tex. Filed Dec. 1, 1960.

BISCUIT TIME

No claim of exclusive right is made to the word "Biscuit" as the name of the goods herein. For Packaged, Ready To Bake Biscuits. First use June 30, 1960.

SN 110,147. Fair View Packing Company, Inc., Hollister, Calif. Filed Dec. 13, 1960.

Jeresita

Owner of Reg. Nos. 553,635 and 646,882. For Canned Fruits. First use Sept. 7, 1960.

SN 110,354. P & C Food Markets, Inc., Syracuse, N.Y. Filed Dec. 16, 1960.

GOLDEN ACRES

For Dairy Products—Namely, Butter, Fresh Eggs, and Cheese. First use at least as early as January 1953.

SN 110,355. P & C Food Markets, Inc., Syracuse, N.Y. Filed Dec. 16, 1960.

SUNNY SQUARE

For Canned Foods—Namely, Fruit, Vegetables, Orange Juice, Tomato Juice, and Milk; Ketchup and Margarine. First use at least as early as January 1953.

SN 110,423. Flavor Corporation of America, Chicago, Ill. Filed Dec. 19, 1960.

DOGNECTAR

Owner of Reg. No. 695,008. For Flavoring Material Containing Extractives of Beef and Bone, for Use in Dog Food. First use Oct. 17, 1960.

SN 110,723. Normandy Farm Restaurant, Inc., d.b.a. Normandy Farm, Potomac, Md. Filed Nov. 25, 1960.

Normandy Farm

For Canned Onion Soup. First use September 1954.

SN 110,858. Japan Food Corporation, San Francisco, Calif. Filed Dec. 27, 1960.

Maru

The word "Maru" may be translated to mean "circle" in English. Owner of Reg. No. 609,994. For Canned Fruits, Canned Vegetables, Canned Water Chestnuts, Canned Sukiyaki, Cakes and Crackers. First use 1952.

Class 47—Wines

SN 98,608. Witten Brothers, Inc., Philadelphia, Pa. Filed June 7, 1960.



Applicant disclaims the word "Rose" apart from the word "Flame." For Grape Wine. First use on or about Apr. 25, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 98,809. National Marker Corporation, East Providence, R.I. Filed June 10, 1960.

PLAZMARK



For Printed Plastic Signs Sold in Roll or Sheet Form. First use Mar. 20, 1960.

SN 107,549. Boyertown Packaging Service Corp., Boyertown, Pa. Filed Nov. 1, 1960.

Boyertown Bag

For Cushioned Shipping Pads. First use Sept. 13, 1960.

SN 115,744. R. D. Werner Co., Inc., Greenville, Pa. Filed Mar. 15, 1961.

ARDEE

Owner of Reg. No. 615,076. For Aluminum Ladders. First use Apr. 23, 1960.

Class 51—Cosmetics and Toilet Preparations

SN 64,431. Park & Tilford, d.b.a. Tilford Toiletries, New York, N.Y. Filed Dec. 16, 1958.

TILFORD



For Cologne. First use Oct. 23, 1958.

SN 92,588. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

FOUNTAIN OF YOUTH

For Hair Tinting, Dyeing and Coloring Preparations, not including Soaps, Soap Powders or Perfumed Soaps. First use Nov. 24, 1959.

SN 94,243. Bal Masque Cosmetics, Inc., New York, N.Y. Filed Apr. 4, 1960.



Bal Masque

The translation of "Bal Masque" is "masked ball." For Deep Pore Cleanser, Skin Refresher, Astringent, Skin Moisturizer, Liquid Make-Up, Creme Make-Up, Pressed Powder, Cover Up Stick, Liquid Rouge, Liquid Eye Shadow, Liquid Lid Liner and Its Brush, Eyeshadow Stick, Eyeliner Pencil, Eyebrow Pencil, Mascara, Eye Cleansing Pads, Lipstick, Lipliner Pencil, Lip Gloss, Combination Liner and Brush, Facial Film Masque, Lubrication Creme for Dry Skin, Facial Creams, Body Creams, Shampoo, Sun Tan Preparation, Bath Oil, Deodorants. First use Jan. 2, 1960.

SN 105,337. Capri Cosmetics, Incorporated, Memphis, Tenn. Filed Sept. 28, 1960.



For Nail Polish and Nail Polish Remover, Lipstick, Cleansing Lotion and Cream, Hand and Body Lotion, Shampoo, Body Deodorants, Rouge, Face Powder, Mascara, Eye Shadow, Eyebrow Pencil, Moisturizer, and Liquid Make-Up. First use May 15, 1960.

SN 108,559. The Mennen Company, Morristown, N.J. Filed Nov. 16, 1960.

RANCHO TAN

Applicant disclaims all exclusive rights under the statutes which might accrue from the registration sought in the word "Tan" apart from the mark as shown. For Tanning After Shave Lotion. First use July 11, 1960.

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SN 110,841. The Fuller Brush Company, East Hartford, Conn. Filed Dec. 27, 1960.

MIDNIGHT MOOD

For Cologne.
First use on or about June 20, 1960.

Class 52 — Detergents and Soaps

SN 68,151. Lanolin Plus, Inc., Chicago, Ill. Filed Feb. 20, 1959.



For Hair Shampoo.
First use Feb. 26, 1958.

SN 91,682. Foodland, Inc., Cleveland, Ohio. Filed Feb. 26, 1960.



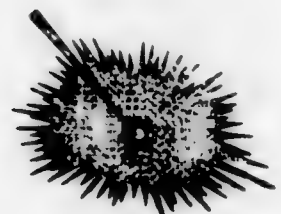
Owner of Reg. No. 567,839.
For Liquid Detergent.
First use in September 1959.

SN 91,886. Driftmier Company, Shenandoah, Iowa, assignee of Triple K Manufacturing Company, Shenandoah, Iowa. Filed Feb. 29, 1960.

KITCHEN-KLATTER

Owner of Reg. No. 383,303.
For All-Purpose Household Cleaners.
First use Jan. 4, 1960.

SN 96,167. Daggett & Ramsdell, Inc., New York, N.Y. Filed Apr. 21, 1960.

*Sparkling Gold*

The drawing is lined for red and gold.
For Soap Containing Lanolin and Hair Shampoo.
First use at least as early as September 1952.



For Concentrated Cleaning Pellets for Use on Glass, Hard Surfaces, Walls, and Fabrics.
First use February 1955.

SN 96,809. Process Solvent Company, Inc., Kansas City, Kans. Filed May 10, 1960.



Owner of Reg. No. 392,054.
For Chemical Compounds for Use in Cleaning Masonry Surfaces, Air Conditioning and Refrigeration Equipment, Automobile Cooling Systems, Marine Equipment, Boilers and Oil Wells.
First use during April 1940.

SN 96,960. J.A.M. Cleaner Company, Arlington, Tex. Filed May 12, 1960.



For Chemical Composition for Cleaning Floor Coverings, Upholstery, Ceramic Tile, Plastic and Painted Surfaces.
First use June 5, 1959.

SN 99,446. Mvurgia, S.A., Barcelona, Spain. Filed June 21, 1960.



Priority claimed under Sec. 44(d) on Spanish application filed Dec. 29, 1959; Reg. No. 358,349, dated Dec. 12, 1960. Owner of U.S. Reg. Nos. 196,997 and 418,369.
For Soaps.

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SN 103,501. Allen B. Wrisley Company, Chicago, Ill. Filed Aug. 26, 1960.

GAY BOUQUET

For Toilet Soap.
First use July 14, 1960.

TANDEM GOLD

Owner of Reg. No. 711,730.
For Hair Shampoo.
First use June 21, 1960.

SN 104,508. Bristol-Myers Company, New York, N.Y. Filed Sept. 15, 1960.

TANDEM GREEN

Owner of Reg. No. 711,330.
For Hair Shampoo.
First use June 21, 1960.

BI-FAR

For All Purpose Household Detergent.
First use Oct. 6, 1959.

SERVICE MARKS**Class 100 — Miscellaneous****Class 101 — Advertising and Business**

SN 91,423. National Research and Development Corporation, Atlanta, Ga. Filed Feb. 23, 1960.



The drawing is lined for green and black but no claim is made to color as an integral part of the mark.
For Research and Development Services in the Fields of Astronautics, Bioastronautics, Geoscience and Biological Products.
First use in or about 1956.

SN 106,350. Sidney's, Incorporated, Kansas City, Mo. Filed Oct. 13, 1960.

SIDNEY'S

For Restaurant Service.
First use May 1941.

SN 110,508. Fred Wellman, d.b.a. National Studio, Huntington, W. Va. Filed Dec. 19, 1960.



For Photographic Services—Namely, Portrait Photography.
First use Oct. 25, 1960.



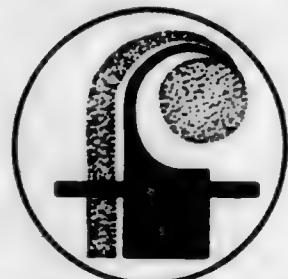
For (1) the Inspection of Real or Personal Property; (2) the Issuance of Certificates or Representations About Property; (3) the Assumption of Interim Ownership of Property, or Supervision, Custody or Control Over Property; and (4) Inspecting Merchandise or Equipment Which Is To Be Shipped Overseas To Insure That the Items Inspected Meet Certain Requirements.
First use Mar. 24, 1959.

SN 81,281. F. S. Howland, d.b.a. Educational Stamp Company, Houston, Tex. Filed Sept. 14, 1959.



The drawing is lined for blue. Applicant disclaims the word "Stamp" apart from the mark as shown.
For Sales Promotion Through the Medium of Trading Stamps Which Are Redeemable in Items of Value.
First use Aug. 12, 1959.

SN 95,363. Filper Corporation, San Ramon, Calif. Filed Apr. 18, 1960.



The mark consists of a fanciful letter "F" enclosed within a circle.
For Leasing of Machinery and Equipment Service.
First use Jan. 8, 1960.

SN 110,740. Consolidated Foods Corporation, Chicago, Ill. Filed Dec. 23, 1960.



For Counseling and Promoting the Business of Retail Grocers; Retail Grocery Store Services.
First use July 15, 1948.

SN 110,741. Consolidated Foods Corporation, Chicago, Ill. Filed Dec. 23, 1960.

CARDINAL FOOD STORES

For Counseling and Promoting the Business of Retail Grocers; Retail Grocery Store Services.
First use July 15, 1948.

Class 102—Insurance and Financial

SN 105,474. Boma Incorporated, Minneapolis, Minn. Filed Sept. 21, 1960.



For Insurance Agency Services in Selling Sickness, Hospitalization, Surgical and Accidental Death Insurance.
First use in June 1958.

Class 103—Construction and Repair

SN 90,630. Fairway Dormers, Inc., d.b.a. Fairway Construction, Detroit, Mich. Filed Feb. 9, 1960.

FAIRWAY

For Construction of Dormers on Existing Buildings.
First use Jan. 26, 1958.

Class 104—Communication

SN 102,729. Boom Electric Corporation, Chicago, Ill. Filed Aug. 16, 1960.

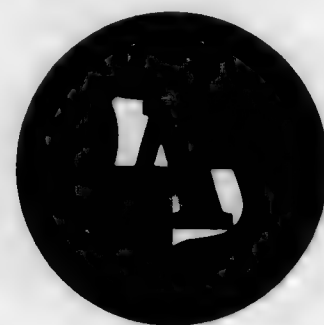
PlanCom

Owner of Reg. No. 702,855.
For Surveying and Planning Communication Facilities, Including Music Systems, Paging and Program Distribution

Systems, Intercommunication Systems, Public Address Systems, Sound Recording Systems, and Closed Circuit Television; and Installing Such Systems.
First use Dec. 10, 1959.

Class 105—Transportation and Storage

SN 82,189. Atlantic States Motor Lines, Inc., Charlotte, N.C. Filed Sept. 28, 1959.



For Transportation of Goods by Motor Vehicle.
First use Sept. 10, 1959.

SN 102,351. Security Messenger Service, Inc., New York, N.Y. Filed Aug. 9, 1960.



For Messenger Services.
First use on or about May 31, 1960.

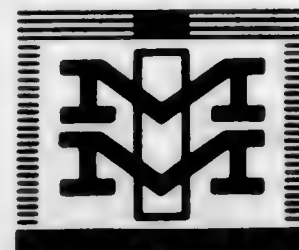
Class 107—Education and Entertainment

SN 91,462. Space Technology Laboratories, Inc., Los Angeles, Calif. Filed Feb. 23, 1960.

EDGE OF SPACE

For Title of a Television Program.
First use Oct. 10, 1959.

SN 110,552. Materials Management Institute, Boston, Mass. Filed Dec. 20, 1960.



The lining in the drawing is part of the mark and is not symbolic of color.
For Educational Services—Namely, Conducting Seminars on Industrial Techniques.
First use Aug. 1, 1959.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 92,903. National Assistance League, Hollywood, Calif. Filed Mar. 15, 1960.

NATIONAL ASSISTANCE LEAGUE

For Indicating Membership of Applicant's Chartered Chapters in the National Organization.
First use in the year 1919.

SN 92,904. National Assistance League, Hollywood, Calif. Filed Mar. 15, 1960.

ASSISTANCE LEAGUE

For Indicating Membership of Applicant's Chartered Chapters in the National Organization.
First use in the year 1919.

SN 106,736. National Federation of Grandmother Clubs of America, Inc., Chicago, Ill. Filed Oct. 19, 1960.

NATIONAL FEDERATION OF GRANDMOTHER CLUBS OF AMERICA

For Indicating Membership in Applicant.
First use October 1949; April 1938 as to "National Grandmothers Club."

SN 106,071. National Federation of Grandmother Clubs of America, Inc., Chicago, Ill. Filed Nov. 8, 1960.



For Indicating Membership in Applicant.
First use about January 1953.

CERTIFICATION MARKS

Class A—Goods

SN 75,268. Certified Alfalfa Seed Council, Inc., Chicago, Ill. Filed June 8, 1959.

IVP

The mark certifies that the person using the mark is a member of applicant and that seed on which the mark is used has been inspected and certified for varietal purity by a state agency.

For Certified Alfalfa Seed.
First use Jan. 15, 1959.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 721,736. NALCON. National Lead Company. SN 74,448. Pub. 10-18-60. Filed 5-25-59.
- 721,737. CELECON. Celanese Corporation of America, assignee of Comet Fibers, Inc. SN 76,652. Pub. 12-29-59. Filed 6-29-59.
- 721,738. D-POXY. U.S. Vehicle & Chemical Company. SN 99,821. Pub. 7-11-61. Filed 6-27-60.
- 721,739. LAST-A-FOAM. General Plastics Manufacturing Co. SN 100,245. Pub. 7-11-61. Filed 7-5-60.

Class 2—Receptacles

- 721,740. QUIK FORM. Robertson Paper Box Company Incorporated. SN 97,097. Pub. 7-11-61. Filed 5-13-60.
- 721,741. FLEXI-PAK. Royal Industries, Inc. SN 105,551. Pub. 6-6-61. Filed 9-30-60.
- 721,742. CONSOBARR. Consolidated Water Power & Paper Company. SN 108,462. Pub. 7-11-61. Filed 11-15-60.
- 721,743. SOUTHERN STATES. Reynolds Aluminum Supply Company. SN 111,998. Pub. 7-11-61. Filed 1-17-61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 721,744. FRENCH. The French Co. SN 83,877. Pub. 7-11-61. Filed 10-23-59.
- 721,745. SLIM-JIM. Rexbilt Leather Goods, Inc. SN 110,948. Pub. 7-11-61. Filed 12-28-60.

Class 4—Abrasives and Polishing Materials

- 721,746. GY-WIX. Geigy Chemical Corporation. SN 85,846. Pub. 7-5-60. Filed 11-23-59.
- 721,747. RONKA. N.V. Maatschappij Voor Wasverwerking. SN 107,690. Pub. 7-11-61. Filed 11-2-60.
- 721,748. TREET. Albert Irving Wigler, d.b.a. Addison-Proctor Company. SN 111,774. Pub. 7-11-61. Filed 1-12-61.

Class 5—Adhesives

- 721,749. VAUGHAN WALLS. Vaughan Interior Walls, Inc. SN 109,221. Pub. 7-11-61. Filed 11-28-60.

Class 6—Chemicals and Chemical Compositions

- 721,750. DITTO AND PANEL BLOCK DESIGN. Ditto, Incorporated. SN 108,934. Pub. 7-11-61. Filed 11-23-60.

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Class 8—Smokers' Articles, Not Including Tobacco Products

- 721,751. SCENE WITH MOUNTAIN BACKGROUND AND REPRESENTATION OF BUILDINGS. Treibacher Chemische Werke Aktiengesellschaft. SN 89,816. Pub. 7-11-61. Filed 1-27-60.
- 721,752. SILVER S. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,681. Pub. 7-11-61. Filed 1-11-61.
- 721,753. K AND CROWN DESIGN. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,683. Pub. 7-11-61. Filed 1-11-61.
- 721,754. KINGSWELL. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,685. Pub. 7-11-61. Filed 1-11-1961.
- 721,755. SILVER KING. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,686. Pub. 7-11-61. Filed 1-11-61.
- 721,756. ROYAL PRINCE. Poul Nielsen, d.b.a. Stanwell Briar Pipes. SN 111,687. Pub. 7-11-61. Filed 1-11-61.

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 721,757. QUICKIE. P. W. Gray Co. Inc. SN 104,386. Pub. 7-11-61. Filed 9-13-60.

Class 10—Fertilizers

- 721,758. GARD N STIK. Gansco Products Limited. SN 88,033. Pub. 7-11-61. Filed 12-28-59.

Class 11—Inks and Inking Materials

- 721,759. DITTO BRAND AND PANEL BLOCK DESIGN. Ditto, Incorporated. SN 108,953. Pub. 7-11-61. Filed 11-23-60.

Class 12—Construction Materials

- 721,760. LEV-A-LOK. Hughes Industries. SN 75,729. Pub. 7-11-61. Filed 6-15-59.
- 721,761. TIMBER-TOPPER. Elliot Clarke. SN 96,509. Pub. 7-11-61. Filed 5-6-60.
- 721,762. POX-A-CRETE. Midwest Industrial Products Corp. SN 98,805. Pub. 7-11-61. Filed 6-10-60.
- 721,763. HORN FLEX. Sun Chemical Corporation. SN 99,677. Pub. 7-11-61. Filed 6-24-60.
- 721,764. ARISTEX. The Proko Company. SN 101,976. Pub. 7-11-61. Filed 8-3-60.
- 721,765. CARIBBEAN. Southeastern Tool and Die Company, Inc., d.b.a. Southeastern Tool and Die Co. SN 102,146. Pub. 7-11-61. Filed 8-5-60.
- 721,766. LODYTE. William M. Temple, d.b.a. LodYTE Chemical Company. SN 104,867. Pub. 7-11-61. Filed 9-20-60.
- 721,767. FOAMTHANE. Pittsburgh Corning Corporation. SN 105,667. Pub. 7-11-61. Filed 10-3-60.
- 721,768. BIOTOX. Simpson Timber Company, d.b.a. Simpson Logging Company. SN 106,352. Pub. 7-11-61. Filed 10-13-60.

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- 721,769. CHARTER. United States Plywood Corporation. SN 108,100. Pub. 7-11-61. Filed 11-8-60.
- 721,770. PIT-TILE. Jones & Brown, Inc. SN 108,178. Pub. 7-11-61. Filed 11-10-60.
- 721,771. TULCO AND DESIGN. Tully Construction Company, Inc., assignee of Nathaniel Klasfeld. SN 108,493. Pub. 7-11-61. Filed 11-15-60.
- 721,772. ZIRMUL. The Chas. Taylor's Sons Company. SN 109,304. Pub. 7-11-61. Filed 11-30-60.
- 721,773. MIRRO. Mirro Aluminum Company. SN 109,806. Pub. 7-11-61. Filed 12-7-60.
- 721,774. PATRICIAN. United States Plywood Corporation. SN 112,092. Pub. 7-11-61. Filed 1-18-61.
- 721,775. VIEWWITE. Curtis Companies Incorporated. SN 112,364. Pub. 7-11-61. Filed 1-24-61.
- 721,776. KOOL'S. Kools Brothers, Inc. SN 112,386. Pub. 7-11-61. Filed 1-24-61.
- 721,777. JET SHIELD. Allied Materials Corporation. SN 112,671. Pub. 7-11-61. Filed 1-30-61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 721,778. MULTI-FIT. The Hopp Press, Inc. SN 97,059. Pub. 7-11-61. Filed 5-13-60.
- 721,779. TY-TWIST. The W. S. Tyler Company. SN 101,139. Pub. 7-11-61. Filed 7-19-60.
- 721,780. IT TAKES A STAR TO DO IT BEST. Star Expansion Company. SN 107,709. Pub. 7-11-61. Filed 11-2-60.
- 721,781. WEATHER-MATIC. Telasco Industries. SN 108,413. Pub. 7-11-61. Filed 11-14-60.
- 721,782. EVERBRITE. A. Cohen & Sons Corp. SN 109,955. Pub. 7-11-61. Filed 12-9-60.
- 721,783. CRANE AND DESIGN. Crane Co. SN 110,040. Pub. 7-11-61. Filed 12-12-60.
- 721,784. MIRACLE. Twentieth Century Products Corporation. SN 111,445. Pub. 7-11-61. Filed 1-6-61.
- 721,785. ADORN. Kenney Manufacturing Company. SN 111,501. Pub. 7-11-61. Filed 1-9-61.
- 721,786. HEADLINE. Ross Operating Valve Company. SN 111,553. Pub. 7-11-61. Filed 1-9-61.
- 721,787. STELLAR. Washington Steel Products, Inc. SN 111,704. Pub. 7-11-61. Filed 1-11-61.
- 721,788. PHANTOM. Coats & Clark Inc. SN 111,726. Pub. 7-11-61. Filed 1-12-61.
- 721,789. TRYMTOL AND DESIGN. Robert Carroll Hockaday, d.b.a. Trymtol. SN 111,741. Pub. 7-11-61. Filed 1-12-61.
- 721,790. BESTO-BOND. The Atlas Bolt & Screw Company. SN 112,018. Pub. 7-11-61. Filed 1-18-61.
- 721,791. PSC. Perfecting Service Company. SN 113,300. Pub. 7-11-61. Filed 2-8-61.

Class 14—Metals and Metal Castings and Forgings

- 721,792. AMERLOY INC. AND DESIGN. Amerloy Inc. SN 92,851. Pub. 9-27-60. Filed 8-15-60.
- 721,793. NICROTUNG. Westinghouse Electric Corporation. SN 96,543. Pub. 2-14-61. Filed 5-6-60.
- 721,794. VANADIUM TYPE BB. Vanadium-Alloys Steel Company. SN 97,350. Pub. 7-11-61. Filed 5-17-60.
- 721,795. POLY-SHELL. Precision Metalsmiths, Inc. SN 107,697. Pub. 6-20-61. Filed 11-2-60.
- 721,796. ROCOLOY AND DESIGN. Mellon Institute of Industrial Research. SN 109,192. Pub. 7-11-61. Filed 11-28-60.
- 721,797. IOC AND MONOGRAM DESIGN. Indiana General Corporation. SN 111,108. Pub. 7-11-61. Filed 12-30-60.

Class 15—Oils and Greases

- 721,798. DE-MAR. Humble Oil & Refining Company. SN 101,103. Pub. 7-11-61. Filed 7-19-60.
- 721,799. MOLY-XL AND DESIGN. Paul H. McDanel, d.b.a. Moly-XL Company. SN 101,690. Pub. 7-11-61. Filed 7-29-60.
- 721,800. RX. Pyroll Company, Inc. SN 110,625. Pub. 7-11-61. Filed 12-21-60.

Class 16—Protective and Decorative Coatings

- 721,801. MELVAR. Melpar, Inc. SN 98,115. Pub. 5-23-61. Filed 5-31-60.
- 721,802. K AND DESIGN. Kaybar, Inc. SN 99,629. Pub. 7-11-61. Filed 6-24-60.
- 721,803. DEOX. Standard Torch Industries, Inc. SN 104,123. Pub. 7-11-61. Filed 9-8-60.
- 721,804. BEEKOLLOID. Bee Chemical Company. SN 104,982. Pub. 7-11-61. Filed 9-22-60.
- 721,805. GIL-THANE. Gilman Paint and Varnish Company. SN 108,311. Pub. 7-11-61. Filed 11-14-60.

Class 17—Tobacco Products

- 721,806. KING EDWARD AND PORTRAIT. Jno. H. Swisher & Son, Inc. SN 117,555. Pub. 7-11-61. Filed 4-10-61.

Class 18—Medicines and Pharmaceutical Preparations

- 721,807. DUOCAINE. Graham Chemical Corp. SN 782. Pub. 12-30-58. Filed 1-16-60.
- 721,808. FORT DODGE MYZIN AND DESIGN. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,756. Pub. 9-27-60. Filed 12-7-59.
- 721,809. COMPATABLE. University Laboratories, Inc. SN 101,057. Pub. 7-11-61. Filed 7-18-60.
- 721,810. CUPERTIN. Cooper, Tinsley Laboratories, Inc. SN 113,691. Pub. 5-23-61. Filed 2-15-61.
- 721,811. VELBAN. Eli Lilly and Company. SN 114,971. Pub. 5-23-61. Filed 3-6-61.

Class 19—Vehicles

- 721,812. SUN X. Ford Motor Company. SN 60,729. Pub. 5-30-61. Filed 10-16-58.
- 721,813. LAND CRUISER. Custom Coach Corporation. SN 91,243. Pub. 7-11-61. Filed 2-19-60.
- 721,814. REPRESENTATION OF A CHAUFFEUR. Armstrong Hydraulics, Inc. SN 100,086. Pub. 7-11-61. Filed 7-1-60.
- 721,815. FACELLIA. Facel, S.A. SN 104,079. Pub. 7-11-61. Filed 9-8-60.
- 721,816. SHOCK BUOY. Moog Industries Inc. SN 110,216. Pub. 7-11-61. Filed 12-14-60.
- 721,817. DESIGN OF WINGS. Chrysler Corporation. SN 113,494. Pub. 7-11-61. Filed 2-13-61.
- 721,818. REMPAR. Chrysler Corporation. SN 113,496. Pub. 7-11-61. Filed 2-13-61.

Class 20—Linoleum and Oiled Cloth

- 721,819. ELEGANTE. Armstrong Cork Company. SN 111,377. Pub. 7-11-61. Filed 1-6-61.

Class 21—Electrical Apparatus, Machines, Class 23—Cutlery, Machinery, and Tools, and Supplies, and Parts Thereof

- 721,820. K-LINE. I-T-E Circuit Breaker Company. SN 78,458. Pub. 7-11-61. Filed 7-27-59.
- 721,821. C-D-I AND DESIGN. Chicago Dynamic Industries, Inc. SN 91,524. Pub. 8-9-60. Filed 2-24-60.
- 721,822. VANGUARD. Hoffman Electronics Corporation. SN 92,377. Pub. 7-11-61. Filed 3-8-60.
- 721,823. KANT SHOCK AND DESIGN. The American Monorail Company. SN 93,481. Pub. 7-11-61. Filed 3-23-60.
- 721,824. MAGNESTAT. Republic Electric Development Company. SN 94,815. Pub. 7-11-61. Filed 4-11-60.
- 721,825. CONOCO AND DESIGN. Continental Oil Company. SN 98,869. Pub. 7-11-61. Filed 6-13-60.
- 721,826. LIFE-GUARD AND DESIGN. Westinghouse Electric Corporation. SN 99,549. Pub. 7-11-61. Filed 6-22-60.
- 721,827. UNI-TUNNEL. Hoffman Electronics Corporation. SN 101,872. Pub. 7-11-61. Filed 8-2-60.
- 721,828. GP AND DESIGN. General Precision, Inc. SN 102,021. Pub. 7-11-61. Filed 8-4-60.
- 721,829. SPANWAY. Anaconda Wire and Cable Company. SN 102,177. Pub. 7-11-61. Filed 8-8-60.
- 721,830. MAGDISC. The Strong Electric Corporation. SN 105,225. Pub. 7-11-61. Filed 9-28-60.
- 721,831. VEC-O-TEX. Coast Manufacturing and Supply Co. SN 106,692. Pub. 7-11-61. Filed 10-19-60.
- 721,832. FLEX-LITE. Aero-Motive Manufacturing Company. SN 108,591. Pub. 7-11-61. Filed 11-17-60.
- 721,833. DESIGN-LITE. Great Western Products Corporation. SN 108,775. Pub. 7-11-61. Filed 11-21-60.
- 721,834. DITTO BRAND AND DESIGN. Ditto, Incorporated. SN 109,046. Pub. 7-11-61. Filed 11-25-60.
- 721,835. PERMA-FORM. W. J. Ruscoe Company. SN 109,106. Pub. 5-30-61. Filed 11-25-60.
- 721,836. CON AVIONICS AND DESIGN. Consolidated Avionics Corporation. SN 109,393. Pub. 7-11-61. Filed 12-1-60.
- 721,837. KODAK. Eastman Kodak Company. SN 110,202. Pub. 7-11-61. Filed 12-14-60.
- 721,838. IGC AND MONOGRAM DESIGN. Indiana General Corporation. SN 111,103. Pub. 7-11-61. Filed 12-30-60.
- 721,839. MICRO-MIXER. Atlantic Research Corporation. SN 111,719. Pub. 7-11-61. Filed 1-12-61.
- 721,840. DAYSTROM. Daystrom, Incorporated. SN 112,603. Pub. 7-11-61. Filed 1-27-61.
- 721,841. AREA/LITER. Curtis-Allbright Lighting, Inc. SN 112,831. Pub. 7-11-61. Filed 1-31-61.
- 721,842. REMPAR. Chrysler Corporation. SN 113,497. Pub. 7-11-61. Filed 2-13-61.
- 721,843. DARK EYE. Transistor Devices, Inc. SN 114,278. Pub. 7-11-61. Filed 2-23-61.
- 721,844. EYE SPY. Transistor Devices, Inc. SN 114,279. Pub. 7-11-61. Filed 2-23-61.
- 721,845. SPRAROD. Sprarod Corporation. SN 84,812. Pub. 7-11-61. Filed 11-6-59.
- 721,850. SIMCAMATIC. Simca. SN 89,809. Pub. 7-11-61. Filed 1-27-60.
- 721,851. FLASH. Simca. SN 89,810. Pub. 7-11-61. Filed 1-27-60.
- 721,852. QUIK FORM. Robertson Paper Box Company Incorporated. SN 97,098. Pub. 7-11-61. Filed 5-13-60.
- 721,853. SMP AND DESIGN. Star Metal Products Co., Inc. SN 98,681. Pub. 7-11-61. Filed 6-8-60.
- 721,854. HX. Manton Gaulin Manufacturing Company, Inc. SN 99,592. Pub. 7-11-61. Filed 6-23-60.
- 721,855. WINTHROP. Winthrop's, Inc. SN 100,559. Pub. 7-11-61. Filed 7-8-60.
- 721,856. HS. Hi-Shear Corporation, by change of name from Hi-Shear Rivet Tool Company. SN 100,846. Pub. 7-11-61. Filed 7-14-60.
- 721,857. ECONOSTAT. Solex. SN 104,559. Pub. 7-11-61. Filed 9-15-60.
- 721,858. POSITRAN. Accuron Company (Ohio corporation), assignee of Accuron Company (partnership). SN 106,023. Pub. 7-11-61. Filed 10-10-60.
- 721,859. NACHI. Fujikoshi Kozai Kogyo Kabushiki Kaisha, d.b.a. Fujikoshi Steel Industry Co., Ltd. SN 107,254. Pub. 7-11-61. Filed 10-27-60.
- 721,860. PERCO. MacMillan, Bloedel and Powell River Limited. SN 107,470. Pub. 7-11-61. Filed 10-31-60.
- 721,861. ELNITA. Tavarro S.A. SN 107,890. Pub. 7-11-61. Filed 11-4-60.
- 721,862. CS. Hydril Company. SN 107,999. Pub. 7-11-61. Filed 11-7-60.
- 721,863. KELONITE. Kearney Industries. SN 108,492. Pub. 7-11-61. Filed 11-15-60.
- 721,864. LAKE BALER AND DESIGN. Arlo Manufacturing Corp. SN 108,902. Pub. 7-11-61. Filed 11-22-60.
- 721,865. SWIRL-AWAY. Huth Mfg., Inc. SN 110,277. Pub. 7-11-61. Filed 12-16-60.
- 721,866. "BRIXIA." Seamless Knitting Machinery Corporation. SN 110,891. Pub. 7-11-61. Filed 12-27-60.
- 721,867. LAND SHAPED. Darf Corporation. SN 111,073. Pub. 7-11-61. Filed 12-30-60.
- 721,868. LE. Arlo Manufacturing Corp. SN 111,114. Pub. 7-11-61. Filed 12-30-60.
- 721,869. RING-O-MAT. Waldes Kohinoor, Inc. SN 111,829. Pub. 7-11-61. Filed 1-13-61.
- 721,870. LECCO VIB. Lecco Machinery and Engineering Company. SN 112,154. Pub. 7-11-61. Filed 1-19-61.
- 721,871. RED HEAD. Chicago Boiler Company. SN 112,217. Pub. 7-11-61. Filed 1-23-61.
- 721,872. FROG DESIGN. Dealer Associates, Inc. SN 112,233. Pub. 7-11-61. Filed 1-23-61.
- 721,873. MOTEK. Minneapolis-Moline Company. SN 112,287. Pub. 7-11-61. Filed 1-23-61.
- 721,874. MOLINE. Minneapolis-Moline Company. SN 112,290. Pub. 7-11-61. Filed 1-23-61.
- 721,875. GEOMETRIC DESIGN. Stanray Corporation. SN 112,416. Pub. 7-11-61. Filed 1-24-61.
- 721,876. DURA-TUF. The Valeron Corporation. SN 112,508. Pub. 7-11-61. Filed 1-25-61.
- 721,877. DAYSTROM. Daystrom, Incorporated. SN 112,604. Pub. 7-11-61. Filed 1-27-61.
- 721,878. MOTOMATIC. The Vaughn Machinery Company. SN 112,658. Pub. 7-11-61. Filed 1-27-61.
- 721,879. JET-CLIP AND DESIGN. The Garden-er Corporation. SN 112,710. Pub. 7-11-61. Filed 1-30-61.
- 721,880. THUNDERBIRD. Ford Motor Company. SN 112,895. Pub. 7-11-61. Filed 2-1-61.
- 721,881. LAN-NU-ROL AND DESIGN. Landis Machine Company. SN 112,903. Pub. 7-11-61. Filed 2-1-61.

Class 22—Games, Toys, and Sporting Goods

- 721,845. VIKING. W. J. Volt Rubber Corp. SN 88,701. Pub. 7-19-60. Filed 1-8-60.
- 721,846. JUDO. Clifford J. Zwickey, d.b.a. Zwickey Archery Co. SN 98,320. Pub. 7-11-61. Filed 6-2-60.
- 721,847. BOUNCELAND. American Trampoline Company. SN 99,032. Pub. 7-11-61. Filed 6-15-60.
- 721,848. DIVE-O-LIN. Jacques E. Bohrmann, d.b.a. Bohrmann Manufacturing and Engineering Co. SN 100,006. Pub. 7-11-61. Filed 6-30-60.

- 721,882. REMPAR. Chrysler Corporation. SN 113,495. Pub. 7-11-61. Filed 2-13-61.
- 721,883. HRH. The Gleason Works. SN 113,517. Pub. 7-11-61. Filed 2-13-61.
- 721,884. SERVADOR. The Vendo Company. SN 113,582. Pub. 7-11-61. Filed 2-13-61.
- 721,911. CATCHER'S MITT. Edwin P. Kuhwald. SN 108,644. Pub. 7-11-61. Filed 11-17-60.
- 721,912. MONROBOT MARK XI. Monroe Calculating Machine Company. SN 106,802. Pub. 7-11-61. Filed 11-21-60.
- 721,913. COPY-DRI. Eugene Dietzgen Co. SN 109,396. Pub. 7-11-61. Filed 12-1-60.
- 721,914. VU GAGE. Frederick Trina. SN 109,442. Pub. 7-11-61. Filed 12-1-60.
- 721,915. BENNETT SERIES 57. John Wood Company. SN 109,657. Pub. 7-11-61. Filed 12-5-60.
- 721,916. FILEMATE. John H. Maier. SN 109,804. Pub. 7-11-61. Filed 12-7-60.
- 721,917. R+T AND DESIGN. Heat Timer Corporation. SN 110,334. Pub. 7-11-61. Filed 12-16-60.
- 721,918. NORTHERN-AIRE. Domar Products, Inc. SN 111,170. Pub. 7-11-61. Filed 1-3-61.
- 721,919. DEA-GRAPH. The Tokyo Malkuro Shashin Kaisha Ltd. (The Tokyo Microphoto Works Ltd.). SN 111,290. Pub. 7-11-61. Filed 1-4-61.
- 721,920. HEET-SENTRY. George Ulanet, d.b.a. Gedi Research Laboratories. SN 111,300. Pub. 7-11-61. Filed 1-4-61.
- 721,921. TRONA. American Potash & Chemical Corporation. SN 111,374. Pub. 7-11-61. Filed 1-6-61.
- 721,922. CINE-PAC. Cher-O-Kee Photofinishers, Inc. d.b.a. Cine-Pac Processing Lab. SN 111,389. Pub. 7-11-61. Filed 1-6-61.
- 721,923. FLO-MOTION. Flo-Tronics, Inc. SN 111,489. Pub. 7-11-61. Filed 1-9-61.
- 721,924. AUTOFLO. Howell Instruments, Inc. SN 111,499. Pub. 7-11-61. Filed 1-9-61.
- 721,925. HARMON-A-SCOPE AND DESIGN. Music-Masters, Inc. SN 111,604. Pub. 7-11-61. Filed 1-10-61.
- 721,926. BIG JACK ETC. AND DESIGN. Precision Scientific Company. SN 111,690. Pub. 7-11-61. Filed 1-11-61.
- 721,927. LITTLE JACK ETC. AND DESIGN. Precision Scientific Company. SN 111,691. Pub. 7-11-61. Filed 1-11-61.
- 721,928. COMPU/MATIC. Tracerlab, Inc. SN 111,700. Pub. 7-11-61. Filed 1-11-61.
- 721,929. VERSA/MATIC. Tracerlab, Inc. SN 111,701. Pub. 7-11-61. Filed 1-11-61.
- 721,930. BEACON. Whitehouse Products, Inc. SN 111,706. Pub. 7-11-61. Filed 1-11-61.
- 721,931. C. E. JOHANSSON. Brown & Sharpe Manufacturing Company. SN 111,852. Pub. 7-11-61. Filed 1-16-61.
- 721,932. JOHANSSON. Brown & Sharpe Manufacturing Company. SN 111,853. Pub. 7-11-61. Filed 1-16-61.
- 721,933. BURSON. Shoel Burshtein, d.b.a. Burson Industries. SN 111,854. Pub. 7-11-61. Filed 1-16-61.
- 721,934. OPTIFLOW. Pneumodynamics Corporation. SN 111,997. Pub. 7-11-61. Filed 1-17-61.
- 721,935. DYNAMOUNTER. Dynacolor Corporation. SN 112,239. Pub. 7-11-61. Filed 1-23-61.
- 721,936. ELECTROTAPE. Cubic Corporation. SN 112,363. Pub. 7-11-61. Filed 1-24-61.
- 721,937. SAFE FLIGHT. Safe Flight Instrument Corporation. SN 112,405. Pub. 7-11-61. Filed 1-24-61.
- 721,938. X-RITE. Foresight Enterprises, Inc. SN 112,450. Pub. 7-11-61. Filed 1-25-61.
- 721,939. EBONRITE. Stowe-Woodward, Inc., d.b.a. Ebonite Company. SN 112,499. Pub. 7-11-61. Filed 1-25-61.
- 721,940. DUOMASTER. Radiant Manufacturing Corporation. SN 112,771. Pub. 7-11-61. Filed 1-30-61.
- 721,941. GLAMMOUR GLIMMERS. Neo Novelty Co. SN 112,854. Pub. 7-11-61. Filed 1-31-61.
- 721,942. MIKROSPRAY. Economics Laboratory, Inc. SN 112,892. Pub. 7-11-61. Filed 2-1-61.
- 721,943. VOL-U-METER. Oil Metering and Processing Equipment Corporation. SN 112,914. Pub. 7-11-61. Filed 2-1-61.
- 721,944. HUSKY. Art-Craft Optical Company, Inc. SN 113,074. Pub. 7-11-61. Filed 2-6-61.

Class 24—Laundry Appliances and Machines

- 721,865. COMPACT-COMBO. McGraw-Edison Company. SN 108,701. Pub. 7-11-61. Filed 11-18-60.

Class 26—Measuring and Scientific Appliances

- 721,886. AUTOMATICKET CONTROL SYSTEMS. General Register Corporation. SN 67,340. Pub. 7-11-61. Filed 2-9-59.
- 721,887. VANGUARD. Spartus Corporation, by change of name from Herold Products Company, Inc. SN 69,890. Pub. 7-11-61. Filed 3-19-59.
- 721,888. ATRONICS AND DESIGN. General Atronics Corporation. SN 78,990. Pub. 7-11-61. Filed 8-4-59.
- 721,889. CARI MICHELLE. Cool-Ray, Inc. SN 83,353. Pub. 7-11-61. Filed 10-16-59.
- 721,890. PIKE. E. W. Pike & Co., Inc. SN 86,595. Pub. 7-11-61. Filed 12-3-59.
- 721,891. PROJECTOLAB. Edmund Scientific Co. SN 91,248. Pub. 7-11-61. Filed 2-19-60.
- 721,892. TD AND DESIGN. Thermal Dynamics Corporation. SN 91,878. Pub. 7-11-61. Filed 2-29-60.
- 721,893. DEPTH PROBE. Curtiss-Wright Corporation. SN 93,670. Pub. 7-11-61. Filed 3-25-60.
- 721,894. KWIK-CHEK. Hamilton Watch Company. SN 95,591. Pub. 7-11-61. Filed 4-22-60.
- 721,895. Q-LINE. Columbia Technical Corporation. SN 96,570. Pub. 7-11-61. Filed 5-6-60.
- 721,896. TRI-D SCANNER. C. W. Reed Company, Inc., d.b.a. Atomation, Inc. SN 97,573. Pub. 7-11-61. Filed 5-20-60.
- 721,897. INDUSTRONICS AND DESIGN. Seatronics, Inc. SN 98,240. Pub. 7-11-61. Filed 6-1-60.
- 721,898. CHANGE MASTER. Standard Change-Makers, Inc. SN 100,943. Pub. 7-11-61. Filed 7-15-60.
- 721,899. 1824. Xerox Corporation, by change of name from Haloid Xerox Inc. SN 102,386. Pub. 6-27-61. Filed 8-10-60.
- 721,900. ROLLEIMAGIC. Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate. SN 102,756. Pub. 7-11-61. Filed 8-16-60.
- 721,901. ZERO-BEAT AND DESIGN. The Haddam Manufacturing Co. SN 102,841. Pub. 7-11-61. Filed 8-17-60.
- 721,902. SPEC. Computer Control Company, Inc. SN 103,395. Pub. 7-11-61. Filed 8-25-60.
- 721,903. TRI-WING. Noma Lites, Inc., d.b.a. The American Screw Company. SN 103,735. Pub. 7-11-61. Filed 8-31-60.
- 721,904. LAFAYETTE. Lafayette Radio Electronics Corporation. SN 104,837. Pub. 7-11-61. Filed 9-20-60.
- 721,905. CLICO. Clieo Laboratory Supply Company, Inc. SN 105,704. Pub. 7-11-61. Filed 8-29-60.
- 721,906. GALAXY. General Merchandise Company. SN 106,802. Pub. 7-11-61. Filed 10-20-60.
- 721,907. CHEST-O-COLOR. Wm. F. Zummach, Inc. SN 106,965. Pub. 7-11-61. Filed 10-21-60.
- 721,908. '900'. Monroe Calculating Machine Company. SN 107,872. Pub. 7-11-61. Filed 11-4-60.
- 721,909. VU-BOARD. Wausell Organisation, Inc. SN 108,102. Pub. 7-11-61. Filed 11-8-60.
- 721,910. VIBRAMITE. Textron Electronics, Inc. SN 108,416. Pub. 7-11-61. Filed 11-14-60.

- 721,945. ULTIMA. Gary Lehmann, Inc. SN 115,121. Pub. 7-11-61. Filed 2-6-61.
- 721,946. AMI AND DESIGN. Appalachian Electronic Instruments, Inc. SN 113,181. Pub. 7-11-61. Filed 2-7-61.
- 721,947. RADAC. The Budd Company. SN 113,185. Pub. 7-11-61. Filed 2-7-61.
- 721,948. COPYGRAPH. General Aniline & Film Corporation. SN 113,276. Pub. 7-11-61. Filed 2-8-61.
- 721,949. REPROCOPY. General Aniline & Film Corporation. SN 113,277. Pub. 7-11-61. Filed 2-9-61.
- 721,950. ORTHOPLEX. Pfandler Permutit, Inc., d.b.a. Simplex Valve & Meter Company. SN 113,358. Pub. 7-11-61. Filed 2-9-61.
- 721,951. MINOX. Don O. Thayer, Inc. SN 113,379. Pub. 7-11-61. Filed 2-9-61.
- 721,952. BROOKS. Brooks Instrument Company, Inc. SN 113,625. Pub. 7-11-61. Filed 2-14-61.
- 721,953. STRANDUCER. Minneapolis-Honeywell Regulator Company. SN 113,652. Pub. 7-11-61. Filed 2-14-61.
- 721,954. DADE-STAT. Dade Reagents, Inc. SN 113,693. Pub. 7-11-61. Filed 2-15-61.
- 721,955. MODULEDRA. Arthur L. Loeb. SN 113,739. Pub. 7-11-61. Filed 2-15-61.

Class 27—Horological Instruments

- 721,956. LACE. General Time Corporation. SN 80,544. Pub. 5-3-60. Filed 8-31-59.
- 721,957. PIERRE MARQUETTE. Dalin Jewelers. SN 108,281. Pub. 7-11-61. Filed 11-14-60.
- 721,958. HERITAGE. Gus Kroesen, Inc. SN 111,413. Pub. 7-11-61. Filed 1-6-61.
- 721,959. RAMBLER. Benrus Watch Company, Inc. SN 111,954. Pub. 7-11-61. Filed 1-17-61.

Class 28—Jewelry and Precious-Metal Ware

- 721,960. COPLEY CREATIONS. Samuel Platzer Co., Inc. SN 97,781. Pub. 7-11-61. Filed 5-24-60.
- 721,961. ENDLESS LOVE. Paramount Wedding Ring Company. SN 111,428. Pub. 7-11-61. Filed 1-6-61.
- 721,962. PREMIER. Albert F. Long Co. SN 112,389. Pub. 7-11-61. Filed 1-24-61.
- 721,963. SLIDE-O-FLEX. Speldel Corporation. SN 112,494. Pub. 7-11-61. Filed 1-25-61.
- 721,964. CADENZA. Speldel Corporation. SN 112,495. Pub. 7-11-61. Filed 1-25-61.
- 721,965. INTERLUDE. Speldel Corporation. SN 112,496. Pub. 7-11-61. Filed 1-25-61.
- 721,966. NEW FRONTIER. American Charm Corporation. SN 112,581. Pub. 7-11-61. Filed 1-27-61.

Class 30—Crockery, Earthenware, and Porcelain

- 721,967. BAUSCHER WEIDEN AND DESIGN. Porzellanfabrik Weiden Gebr. Bauscher, Zweigniederlassung der Porzellanfabrik Lorenz Hutschenreuther A.G. SN 643,786. Pub. 7-11-61. Filed 3-17-53.
- 721,968. WARDROBE OF CHINA. Castleton China, Inc. SN 77,266. Pub. 7-11-61. Filed 7-8-59.
- 721,969. IGC AND DESIGN. Indiana General Corporation. SN 111,107. Pub. 7-11-61. Filed 12-30-60.

Class 31—Filters and Refrigerators

- 721,970. ADB. The Marley Company. SN 107,956. Pub. 7-11-61. Filed 11-7-60.

Class 32—Furniture and Upholstery

- 721,971. TRU-ART. Polaron Products, Inc. SN 101,123. Pub. 7-11-61. Filed 7-19-60.
- 721,972. MODAVANTI. Drexel Enterprises, Inc., by merger and change of name from Heritage Furniture, Inc. SN 103,452. Pub. 7-11-61. Filed 8-26-60.
- 721,973. REGIONAL AND DESIGN. Jamestown Lounge Company. SN 111,742. Pub. 7-11-61. Filed 1-12-61.
- 721,974. DEILCRAFT. Dominion Electrohome Industries Limited. SN 113,097. Pub. 7-11-61. Filed 2-6-61.

Class 33—Glassware

- 721,975. DURO-GLAS. Spiegelglaswerke Germania A.G. SN 67,093. Pub. 8-9-60. Filed 2-4-59.
- 721,976. GLAMOUR COAT. Brockway Glass Company, Inc. SN 79,466. Pub. 7-11-61. Filed 8-13-59.
- 721,977. CLEARFORM. Corning Glass Works. SN 95,882. Pub. 7-11-61. Filed 4-27-60.
- 721,978. AIRCON. Pittsburgh Plate Glass Company. SN 109,001. Pub. 7-11-61. Filed 11-23-60.
- 721,979. POLYSEAL. Twin Pane Corporation. SN 112,090. Pub. 7-11-61. Filed 1-18-61.
- 721,980. DESERT GOLD. Anchor Hocking Glass Corporation. SN 114,398. Pub. 7-11-61. Filed 2-27-61.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 721,981. SUBURBAN AND DESIGN. Suburban Propane Gas Corporation. SN 104,770. Pub. 3-28-61. Filed 9-19-60.

Class 36—Musical Instruments and Supplies

- 721,982. SOUL. S. B. Carter, d.b.a. Soul Records. SN 112,357. Pub. 7-11-61. Filed 1-24-61.
- 721,983. PERRY. Howard L. Lafer, d.b.a. Lafer Enterprises. SN 113,929. Pub. 7-11-61. Filed 2-17-61.

Class 37—Paper and Stationery

- 721,984. INTERIORLY BLUE COLORED CORE. American Can Company. SN 93,405. Pub. 7-11-61. Filed 3-22-60.
- 721,985. FLXOL. H. P. Smith Paper Co. SN 94,108. Pub. 7-11-61. Filed 3-31-60.
- 721,986. DAYSTROM. Daystrom, Incorporated. SN 112,605. Pub. 7-11-61. Filed 1-27-61.

Class 38—Prints and Publications

- 721,987. PLAYMATE. HMH Publishing Co., Inc. SN 40,119. Pub. 5-6-58. Filed 11-5-57.
- 721,988. IGC AND MONOGRAM DESIGN. Indiana General Corporation. SN 111,106. Pub. 7-11-61. Filed 12-30-60.

Class 39—Clothing

- 721,989. TAPER-T. Norwich Mills Inc. SN 68,316. Pub. 1-17-61. Filed 9-3-58.

- 721,990. HAGGAR FORECAST FLANNELS AND DESIGN. Haggar Company. SN 87,800. Pub. 7-11-61. Filed 12-22-59.
- 721,991. MISS EUROPA. Kishel Bros. Trading Co. SN 96,230. Pub. 1-24-61. Filed 5-2-60.
- 721,992. CONTI. Banks Bros. Corp. SN 99,709. Pub. 7-11-61. Filed 6-27-60.
- 721,993. IMPULSE. Genesco Inc. SN 100,019. Pub. 7-11-61. Filed 6-30-60.
- 721,994. HELIX. Phrix-Werke Aktiengesellschaft. SN 101,573. Pub. 7-11-61. Filed 7-27-60.
- 721,995. DUCHESSA D'OSTIA. S. Klein Department Stores, Inc. SN 103,160. Pub. 7-11-61. Filed 8-23-60.
- 721,996. MERRILL. Rock River Woolen Mills. SN 104,483. Pub. 7-11-61. Filed 9-14-60.
- 721,997. MAC-JAC. Rock River Woolen Mills. SN 104,485. Pub. 7-11-61. Filed 9-14-60.
- 721,998. SALVINI AND DESIGN. Louis H. Salvage Shoe Company, Inc. SN 105,215. Pub. 7-11-61. Filed 9-26-60.
- 721,999. PENDLEFLEWCE. Pendleton Woolen Mills. SN 107,964. Pub. 7-11-61. Filed 11-7-60.
- 722,000. PARISMART. Edison Brothers Stores, Inc. SN 108,033. Pub. 7-11-61. Filed 11-8-60.
- 722,001. SUN DEB. Gold Seal Rubber Company. SN 108,042. Pub. 7-11-61. Filed 11-8-60.
- 722,002. MULTI-MIXER. Teplick Clothes, Inc. SN 108,231. Pub. 7-11-61. Filed 11-10-60.
- 722,003. PEDI BARES. Pedit-Bares, Inc. SN 108,369. Pub. 7-11-61. Filed 11-14-60.
- 722,004. MARIE-MARTINE. Marie-Martine, Societe a Responsabilite Limitee. SN 108,989. Pub. 7-11-61. Filed 11-23-60.
- 722,005. TRAV-LITE. Lewis Knitting Company. SN 109,080. Pub. 7-11-61. Filed 11-25-60.
- 722,006. KAMP-IT. Utica Duxbak Corporation. SN 109,125. Pub. 7-11-61. Filed 11-25-60.
- 722,007. PEN SQUIRE. Pendleton Woolen Mills. SN 109,345. Pub. 7-11-61. Filed 11-29-60.
- 722,008. THE BARREL RACER. Eddy Bros. Co., Inc. SN 109,399. Pub. 7-11-61. Filed 12-1-60.
- 722,009. NEW STREET. Roberts Sportswear Mfg. Co. SN 109,435. Pub. 7-11-61. Filed 12-1-60.
- 722,010. THORO-FIT. Weinbrenner Corporation. SN 109,653. Pub. 7-11-61. Filed 12-5-60.
- 722,011. FREE LAND AND DESIGN. Freeland Manufacturing Company. SN 110,605. Pub. 7-11-61. Filed 12-21-60.
- 722,012. LINDA CAROL. Gordon Peters Co., Inc. SN 110,623. Pub. 7-11-61. Filed 12-21-60.
- 722,013. ANNE CARTER. Jo-Beth Fashions, Inc., assignee of Anne Carter Dresses, Inc. SN 110,663. Pub. 7-11-61. Filed 12-22-60.
- 722,014. CARA MIA. Lilyette Brassiere Co., Inc. SN 110,772. Pub. 7-11-61. Filed 12-23-60.
- 722,015. BRIARSPUN. Garland Knitting Mills. SN 112,248. Pub. 7-11-61. Filed 1-23-61.
- 722,016. GUY SPRITES. Gay Sprites, Inc. SN 114,324. Pub. 7-11-61. Filed 2-24-61.
- 722,017. ZIPKEE. Carmen Foundations, Inc. SN 114,428. Pub. 7-11-61. Filed 2-27-61.
- 722,018. LITTLE SET AND REPRESENTATION OF A BABY. Associated Dry Goods Corporation. SN 114,589. Pub. 7-11-61. Filed 2-28-61.

Class 40—Fancy Goods, Furnishings, and Notions

- 722,019. TRAUM. David Traum Company, Inc. SN 90,378. Pub. 7-11-61. Filed 2-4-60.
- 722,020. EYES-UP. L. M. Rabinowitz & Company, Inc. SN 103,958. Pub. 7-11-61. Filed 9-6-60.
- 722,021. LILY AND DESIGN. Lily Mills Company. SN 108,128. Pub. 7-11-61. Filed 11-6-60.

Class 42—Knitted, Notted, and Textile Fabrics, and Substitutes Therefor

- 722,022. BEAUTYLIFT. Rubber Fabrics Corporation. SN 89,804. Pub. 7-11-61. Filed 1-27-60.
- 722,023. RIVIERA. Dan River Mills, Incorporated. SN 101,346. Pub. 7-11-61. Filed 7-21-60.
- 722,024. BRINYLON. British Nylon Spinners Limited. SN 101,538. Pub. 7-11-61. Filed 7-27-60.
- 722,025. MERRILL. Rock River Woolen Mills. SN 104,482. Pub. 7-11-61. Filed 9-14-60.
- 722,026. MATCHLESSE. Bates Manufacturing Company. SN 105,787. Pub. 7-11-61. Filed 10-5-60.
- 722,027. HIDE-A-PILLOW. The U.S. Pillow Corporation. SN 108,520. Pub. 7-11-61. Filed 11-15-60.
- 722,028. GOLDEN FRESH. Allen Knitting Mills, Inc. SN 109,143. Pub. 7-11-61. Filed 11-28-60.
- 722,029. EXCELLO. Charles Schwartz & Company. SN 110,370. Pub. 7-11-61. Filed 12-16-60.
- 722,030. CORDANA. Dan River Mills, Incorporated. SN 110,667. Pub. 7-11-61. Filed 12-22-60.
- 722,031. SUPER "96." Couristan Inc. SN 111,069. Pub. 7-11-61. Filed 12-30-60.
- 722,032. SUPER "100." Couristan Inc. SN 111,070. Pub. 7-11-61. Filed 12-30-60.
- 722,033. WINSTON. Chatham Manufacturing Company. SN 111,388. Pub. 7-11-61. Filed 1-6-61.
- 722,034. FLOOR-HUG. The Wool "O" Co. SN 113,042. Pub. 7-11-61. Filed 2-3-61.
- 722,035. SATIN SOFT. Associated Dry Goods Corporation. SN 114,586. Pub. 7-11-61. Filed 2-28-61.
- 722,036. HOMECREST. Associated Dry Goods Corporation. SN 114,587. Pub. 7-11-61. Filed 2-28-61.
- 722,037. LITTLE SET AND REPRESENTATION OF A BABY. Associated Dry Goods Corporation. SN 114,590. Pub. 7-11-61. Filed 2-28-61.

Class 43—Thread and Yarn

- 722,038. ENKATRON. American Enka Corporation. SN 111,779. Pub. 7-11-61. Filed 1-13-61.
- 722,039. CRAFTSMAN. Emile Bernat & Sons Company. SN 112,021. Pub. 7-11-61. Filed 1-18-61.
- 722,040. NYLO GERMANTOWN. Emile Bernat & Sons Company. SN 112,113. Pub. 7-11-61. Filed 1-19-61.
- 722,041. POLYRON. American Viscose Corporation. SN 112,516. Pub. 7-11-61. Filed 1-26-61.

Class 44—Dental, Medical, and Surgical Appliances

- 722,042. PRESTON WEIGHT CADDY. J. A. Preston Corporation. SN 100,391. Pub. 7-11-61. Filed 7-6-60.
- 722,043. BENIFLEX. Mead Johnson & Company. SN 107,029. Pub. 7-11-61. Filed 10-24-60.
- 722,044. DYNAWAVE. Dynawave Corporation. SN 109,480. Pub. 7-11-61. Filed 12-2-60.
- 722,045. PORT-A-DENT. Fairfax Manufacturing Company, Inc. SN 109,686. Pub. 7-11-61. Filed 12-6-60.
- 722,046. DRYLITE. The Martin Brothers Electric Company. SN 111,518. Pub. 7-11-61. Filed 1-9-61.
- 722,047. DERMASHIELD AND DESIGN. Perry Rubber Company. SN 111,989. Pub. 7-11-61. Filed 1-17-61.
- 722,048. UREAPHIL. Abbott Laboratories. SN 112,016. Pub. 7-11-61. Filed 1-18-61.
- 722,049. ADJUSTRIX. Medical Appliance Enterprises. SN 112,286. Pub. 7-11-61. Filed 1-23-61.

- 722,060. REPRESENTATION OF A CROWNED LAMB'S HEAD. Youngs Rubber Corporation. SN 112,929. Pub. 7-11-61. Filed 2-1-61.
- 722,051. NATURALAMB. Youngs Rubber Corporation. SN 112,930. Pub. 7-11-61. Filed 2-1-61.

Class 46—Foods and Ingredients of Foods

- 722,052. VILLA BELLA. Joseph Limeri, d.b.a. La Tosca Products Co. and as Linda Food Products Co. SN 83,524. Pub. 5-31-60. Filed 10-19-59.
- 722,053. VILLA. La Gondola Food Corp. SN 85,140. Pub. 5-31-60. Filed 11-12-59.
- 722,054. CHEF ALLENS AND DESIGN. Allen-Bell Food Products. SN 88,451. Pub. 5-2-61. Filed 1-5-60.
- 722,055. MAITRE D'. The Rath Packing Company. SN 89,462. Pub. 2-28-61. Filed 1-21-60.
- 722,056. ESKIMO TOTEM POLE. Eskimo Pie Corporation. SN 90,040. Pub. 7-11-61. Filed 2-1-60.
- 722,057. DIXIE FRY. Prepared Products Company, Inc. SN 91,441. Pub. 9-13-60. Filed 2-23-60.
- 722,058. INDEPENDENCE FLOUR AND DESIGN. General Mills, Inc. SN 93,068. Pub. 7-11-61. Filed 3-17-60.
- 722,059. BORDEN'S. The Borden Company. SN 94,247. Pub. 7-11-61. Filed 4-4-60.
- 722,060. LANAL. Dole Corporation, by assignment and change of name from Hawaiian Pineapple Company, Limited. SN 99,586. Pub. 7-4-61. Filed 6-23-60.
- 722,061. PURA-LEC. Ralston Purina Company. SN 99,656. Pub. 7-11-61. Filed 6-24-60.
- 722,062. MARS HOLIDAY AND DESIGN. Mars, Incorporated. SN 100,712. Pub. 7-11-61. Filed 7-12-60.
- 722,063. CHARM-CAL. Market Merchandisers, Inc., assignee of William Wolf, d.b.a. Market Merchandisers. SN 103,886. Pub. 7-11-61. Filed 9-2-60.

Class 49—Distilled Alcoholic Liquors

- 722,064. EZRA BROOKS. Frank Silverman & Company, d.b.a. Ezra Brooks Distilling Co. SN 56,354. Pub. 1-5-60. Filed 7-30-58.
- 722,065. BROOKS. Frank Silverman & Company, d.b.a. Ezra Brooks Distilling Co., assignee of Kraus Bros. & Co., Inc. SN 61,149. Pub. 1-5-60. Filed 10-20-58.
- 722,066. OLD STAGG. Schenley Distillers, Inc. SN 96,890. Pub. 7-11-61. Filed 5-11-60.
- 722,067. GAVILAN. Foreign Vintages Inc. SN 99,205. Pub. 7-11-61. Filed 6-17-60.

Class 50—Merchandise Not Otherwise Classified

- 722,068. RAINBOW. The Henry Hanger & Display Fixture Corporation of America. SN 109,061. Pub. 7-11-61. Filed 11-25-60.
- 722,069. DINOLITE. Di-Noe Chemical Arts, Inc. SN 109,854. Pub. 7-11-61. Filed 12-8-60.
- 722,070. CASKA ROL. Eaton Brothers Corp. SN 109,858. Pub. 7-11-61. Filed 12-8-60.
- 722,071. SWAT'N PICK. Ramrod Products, Inc. SN 111,549. Pub. 7-11-61. Filed 1-9-61.
- 722,072. TRAILBLAZER EMBLEMS AND DESIGN. B & B Enterprises. SN 111,722. Pub. 7-11-61. Filed 1-12-61.
- 722,073. FASHION-FORM. Waldorf Paper Products Co. SN 114,285. Pub. 7-11-61. Filed 2-23-61.

- 722,074. COMPLAKS. Award Incentives, Inc. SN 114,307. Pub. 7-11-61. Filed 2-24-61.
- 722,075. BARDEX. Ralph Hays. SN 114,482. Pub. 7-11-61. Filed 2-27-61.
- 722,076. GIBRALTAR PALLETS AND DESIGN. Flow Products, Inc. SN 115,226. Pub. 7-11-61. Filed 3-9-61.
- 722,077. FLORART. Duncan Tong, d.b.a. Reliance Trading Corporation. SN 116,689. Pub. 7-11-61. Filed 3-9-61.

Class 51—Cosmetics and Toilet Preparations

- 722,078. SUNBEAM. Sunbeam Corporation. SN 90,956. Pub. 7-11-61. Filed 2-15-60.
- 722,079. SAUCI. Paula Payne Products Company. SN 92,042. Pub. 7-11-61. Filed 3-2-60.
- 722,080. YOUNGER THAN SPRINGTIME. Aquamint Laboratories, Inc. SN 96,657. Pub. 7-11-61. Filed 5-9-60.
- 722,081. VERVENA. Swiss Pine Importing Co., Inc. SN 97,139. Pub. 7-11-61. Filed 5-13-60.
- 722,082. GIBBS S.R. D. & W. Gibbs Limited. SN 98,083. Pub. 7-11-61. Filed 5-31-60.
- 722,083. SMARTLY SOFT. The Realistic Company. SN 99,465. Pub. 7-11-61. Filed 6-21-60.
- 722,084. SPARKLEEN AND DESIGN. Geneva S. Lyon, d.b.a. Alca Chemical Co. SN 100,528. Pub. 7-11-61. Filed 7-8-60.
- 722,085. RAVEEN. Johnson Publishing Company, Inc. SN 100,609. Pub. 7-11-61. Filed 7-11-60.

Class 52—Detergents and Soaps

- 722,086. W AND DESIGN. Whirlpool Corporation. SN 100,329. Pub. 7-11-61. Filed 7-5-60.

Service Marks**Class 100—Miscellaneous**

- 722,087. AMERICAN CHARBRAY BREEDERS ASSN. ETC. AND DESIGN. American Charbray Breeders Association. SN 95,225. Pub. 7-11-61. Filed 4-18-60.
- 722,088. POLY-VIRONMENTAL. Rototest Laboratories, Inc. SN 97,960. Pub. 7-11-61. Filed 5-26-60.
- 722,089. CABANA INN AND DESIGN. Stiles-McAlpin Hotel Co., Inc. SN 100,168. Pub. 7-11-61. Filed 7-1-60.

Class 101—Advertising and Business

- 722,090. AW. Williams and Associates, Inc. SN 91,895. Pub. 7-11-61. Filed 2-29-60.
- 722,091. CANNON LINE AND DESIGN. Garrison House, Inc. SN 92,750. Pub. 5-30-61. Filed 3-14-60.
- 722,092. MOTIVATIONAL MEASUREMENT AND DESIGN. Motivational Measurement Industrial Research Foundation. SN 96,719. Pub. 7-11-61. Filed 5-9-60.

Class 106—Material Treatment

- 722,093. HEKEPE. Tom Heinze & Associates, Inc. SN 97,392. Pub. 7-11-61. Filed 5-18-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 39—Clothing

- 722,094. Fiorella's Inc., New York, N.Y. SN 102,015. Filed P.R. 8-4-60; Am. S.R. 7-19-61.

Fiorella's

For Women's Shoes.
First use June 1960.

TRADEMARK REGISTRATIONS RENEWED

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| 141,854. GRIFFIN AND DESIGN. Cl. 14. 5-3-21. | 388,438. SPLENDOR. Cl. 39. 6-24-41. |
| 142,049. ODOR NEVER. Cl. 51. 5-3-21. | 388,691. FLEX CRAFT. Cl. 39. 7-9-41. |
| 143,938. DRACCO. Cl. 23. 6-21-21. | 389,293. KORDEK. Cl. 5. 7-29-41. |
| 145,814. CASTOLAY. Cl. 52. 8-2-21. | 389,477. JORDAN ADAL AND CARTON DESIGN. Cl. 18. 8-5-41. |
| 145,427. ALUNDUM. Cl. 12. 8-2-21. | 389,705. SALYSAL AND DESIGN. Cl. 6. 8-19-41. |
| 145,467. KWATTAL. Cl. 46. 8-2-21. | 389,734. EXQUISITEL. Cl. 46. 8-19-41. |
| 145,748. MINER AND DESIGN. Cl. 51. 8-16-21. | 389,857. TOP TO BOTTOM INSUL-MASTIC AND DESIGN. Cl. 12. 8-26-41. |
| 146,007. DODGEM. Cl. 22. 8-23-21. | 390,026. TROPHY. Cl. 23. 9-2-41. |
| 146,385. BARRELED SUNLIGHT. Cl. 16. 9-6-21. | 390,118. BEARING DESIGN. Cl. 23. 9-9-41. |
| 148,188. CRYSTOLON. Cl. 4. 11-8-21. | 390,122. GEOLOGRAPH. Cl. 26. 9-9-41. |
| 148,277. ICE-MINT. Cl. 18. 11-8-21. | 390,476. COCAROO. Cl. 39. 9-23-41. |
| 148,676. CASTOLAY. Cl. 51. 11-22-21. | 390,489. LILY. Cl. 6. 9-23-41. |
| 148,819. DU PONT. Cl. 6. 11-29-21. | 390,559. MOTHER HUBBARD AND DESIGN. Cl. 46. 9-30-41. |
| 148,980. CHICKERING. Cl. 36. 12-6-21. | 390,686. THE SQUIRT REPORTER. Cl. 38. 9-30-41. |
| 148,981. KNABE. Cl. 36. 12-6-21. | 391,224. PORTRAIT DESIGN. Cl. 23. 10-28-41. |
| 149,010. WINTER KING. Cl. 42. 12-6-21. | 391,361. ONE GRAND. Cl. 46. 11-4-41. |
| 149,011. VACATION. Cl. 42. 12-6-21. | 391,856. THE PLEEZING ANSWER AND DESIGN. Cl. 46. 11-25-41. |
| 149,012. CARAVAN. Cl. 42. 12-6-21. | 391,874. THE MAGIC NUT AND DESIGN. Cl. 46. 11-25-41. |
| 149,142. GRO CORD AND DESIGN. Cl. 39. 12-6-21. | 391,990. QUIKRETE. Cl. 12. 12-2-41. |
| 149,336. A-F AND DESIGN. Cl. 23. 12-13-21. | 392,112. SPORTSMAN. Cl. 52. 12-9-41. |
| 149,430. PRISCILLA WARE SPEAKS FOR ITSELF. Cl. 13. 12-13-21. | 392,129. TOPPER. Cl. 16. 12-9-41. |
| 149,707. ROYAL LUNCH. Cl. 46. 12-20-21. | 392,179. IRONWEAR. Cl. 42. 12-16-41. |
| 149,848. REX. Cl. 23. 12-27-21. | 392,328. CAPEWELL. Cl. 23. 12-23-41. |
| 150,323. DAVEYITE. Cl. 6. 1-3-22. | 392,466. THREE FEATHERS. Cl. 49. 12-30-41. |
| 150,932. RED THREAD. Cl. 7. 1-10-22. | 392,480. GARDEN CLUB. Cl. 23. 12-30-41. |
| 385,576. JINTAN. Cl. 26. 3-11-41. | 392,498. NATIONAL AND DESIGN. Cl. 11. 12-30-41. |
| 386,637. AERODYNAMIC. Cl. 21. 4-22-41. | 392,505. NATIONAL. Cl. 11. 12-30-41. |
| 387,469. KOAGAMIN. Cl. 18. 5-20-41. | 392,786. DULIQUE. Cl. 39. 1-13-42. |
| 387,619. LA NEGRA. Cl. 46. 5-27-41. | 392,787. NYLOFAIR. Cl. 39. 1-13-42. |
| 387,620. PROTINARINA. Cl. 46. 5-27-41. | 392,788. SLUNBRO. Cl. 39. 1-13-42. |
| 387,964. SAWING MAN DESIGN. Cl. 40. 6-10-41. | 392,973. MR. MUSTARD. Cl. 46. 1-20-42. |
| 388,101. CELSHIRE. Cl. 42. 6-10-41. | |
| 388,293. CELASTRAND. Cl. 42. 6-17-41. | |
| 388,294. CELASTREAM. Cl. 42. 6-17-41. | |
| 388,398. TEX-DELTA. Cl. 46. 6-24-41. | |

TRADEMARK REGISTRATIONS CANCELED**Section 8**

The following registrations issued Aug. 9, 1955

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| 610,158. JANE-ART ETC. AND DESIGN. Cl. 1. | 610,203. H AND DESIGN. Cl. 10. |
| 610,161. BONNIE BURNS. Cl. 1. | 610,204. TETRA LIFE AND DESIGN. Cl. 10. |
| 610,162. TAPESTRY. Cl. 1. | 610,208. UNION MADE ETC. AND DESIGN. Cl. 12. |
| 610,169. CARIE-ART AND DESIGN. Cl. 2. | 610,210. CLEMENTS MODULAR PANELS ETC. AND DESIGN. Cl. 12. |
| 610,170. "CELLO-FACE." Cl. 2. | 610,213. AJAX. Cl. 12. |
| 610,172. REPRESENTATION OF HOUR GLASS. Cl. 3. | 610,215. RHM BROAD-BAND. Cl. 12. |
| 610,173. LIBERTY TRUTH JUSTICE EQUALITY ETC. AND DESIGN. Cl. 3. | 610,216. RHM MEDIUM-BAND. Cl. 12. |
| 610,174. TOLA. Cl. 4. | 610,217. FLAGSTONE. Cl. 12. |
| 610,176. STANLEY IN DIAMOND DESIGN. Cl. 4. | 610,218. CONSTEL. Cl. 12. |
| 610,177. PENN-STANDARD THERMO DYNAMIC CE-MENT. Cl. 5. | 610,222. DE SPHINX. Cl. 12. |
| 610,179. ENVA-LOK. Cl. 5. | 610,227. ANDREA FINGERTROL AND DESIGN. Cl. 12. |
| 610,191. MF. Cl. 6. | 610,245. JACK-O. Cl. 13. |
| 610,193. NEUTRAGRAPH. Cl. 6. | 610,248. INCONEL "W." Cl. 14. |
| 610,200. PUFF-A-LITE. Cl. 8. | 610,249. INCO INCONEL W AND DESIGN. Cl. 14. |
| 610,201. FERT-O-FISH AND DESIGN. Cl. 10. | 610,260. HAMP-TONE AND DESIGN. Cl. 16. |
| | 610,269. RE-JUV-O. Cl. 16. |
| | 610,270. ME-T-CO. Cl. 18. |
| | 610,273. MOOSE. Cl. 18. |
| | 610,277. AMBEROL. Cl. 18. |

610,278. CHARM-ON. Cl. 18.
 610,282. PROVERA. Cl. 18.
 610,285. SPORT-O-BABE. Cl. 19.
 610,290. EXCEL ETC. AND DESIGN. Cl. 19.
 610,292. SMITTY'S ARM-CAR-REST. Cl. 19.
 610,296. AICO AND DESIGN. Cl. 21.
 610,297. SAV-A-BATTERY. Cl. 21.
 610,303. SCREW BALL. Cl. 21.
 610,306. DATACORD. Cl. 21.
 610,307. HUNTER SINCE 1886 AND DESIGN. Cl. 21.
 610,308. GROUNDSAFE. Cl. 21.
 610,309. NOVELITE. Cl. 21.
 610,310. CHARGATROL. Cl. 21.
 610,312. CERATAB. Cl. 21.
 610,316. ROCKETS AWAY AND DESIGN. Cl. 22.
 610,317. "PERMA-ROOT." Cl. 22.
 610,318. BUNNY. Cl. 22.
 610,319. SUPER MARKET. Cl. 22.
 610,320. ASSEMBLY LINE. Cl. 22.
 610,321. BLAST OFF THE MOVING PLANET SPACE GAME AND DESIGN. Cl. 22.
 610,324. ANI-MOBILE. Cl. 22.
 610,325. ROCKET ROCKY. Cl. 22.
 610,327. BARREDCRAFTERS. Cl. 22.
 610,329. SUN RAY HAMMOCK AND DESIGN. Cl. 22.
 610,331. FISHIN' BUDDY. Cl. 22.
 610,334. SELECT-A-TRAIN. Cl. 22.
 610,337. DAV'N NYT. Cl. 22.
 610,338. GINEROO AND DESIGN. Cl. 22.
 610,347. LAWNCO AND DESIGN. Cl. 23.
 610,361. OIL MATE. Cl. 23.
 610,363. INSERT-O-MATIC AND DESIGN. Cl. 23.
 610,364. PANZER. Cl. 23.
 610,366. CURITE. Cl. 23.
 610,369. AUTOMAR. Cl. 26.
 610,379. ACTION-FIT AND DESIGN. Cl. 26.
 610,385. ECHO. Cl. 26.
 610,387. REDDY AND DESIGN. Cl. 29.
 610,398. THE GUEST SLEEPER AND DESIGN. Cl. 32.

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 General Mills, Inc., Minneapolis, Minn. 722,058, pub. 7-11-61. Cl. 46.
 General Plastics Mfg. Co., Tacoma, Wash. 721,739, pub. 7-11-61. Cl. 1.
 General Plywood Corp., Louisville, Ky. 610,208, can. Cl. 12.
 General Precision, Inc., New York, N.Y. 721,828, pub. 7-11-61. Cl. 21.
 General Register Corp., Long Island City, N.Y. 721,886, pub. 7-11-61. Cl. 26.
 General Time Corp., New York, N.Y. 721,956, pub. 5-3-60. Cl. 27.
 Genesco Inc.: See—
 Berland Shoe Stores, Inc., The.
 Genesco Inc., Nashville, Tenn. 721,993, pub. 7-11-61. Cl. 39.
 Geograph Co., The: See—
 Indian Territory Illuminating Oil Co.
 Gillette Co., The: See—
 Autostrop Sales Co., Inc.
 Gillette Co., The: See—
 Gillette Safety Razor Co.
 Gillette Safety Razor Co., to The Gillette Co., Boston, Mass. 391,224, ren. 9-26-61. Cl. 23.
 Gilman Paint and Varnish Co., Chattanooga, Tenn. 721,805, pub. 7-11-61. Cl. 16.
 Glasta Corp. of America, New York, N.Y. 610,338, can. Cl. 22.
 Glouco Co., Inc., Brooklyn, N.Y. 391,361, ren. 9-26-61. Cl. 46.
 Gleason Works, The, Rochester, N.Y. 721,883, pub. 7-11-61. Cl. 23.
 Gold Seal Rubber Co., Boston, Mass. 722,001, 7-11-61. Cl. 39.
 Graham Chemical Corp., Springfield Gardens, N.Y. 721,807, pub. 12-30-58. Cl. 18.
 Grand Aerie Fraternal Order of Eagles, Kansas City, Mo. 610,173, can. Cl. 3.
 Gray, P. W., Co., Inc., Nantucket, Mass. 721,757, pub. 7-11-61. Cl. 9.
 Great Western Products Corp., Jamestown, N.Y. 721,833, pub. 7-11-61. Cl. 21.
 Greve, Andrew M., San Mateo, Calif. 610,379, can. Cl. 26.
 Gro-Cord Rubber Co.: See—
 Lima Cord Sole & Heel Co., The.
 HMM Publishing Co., Inc., Chicago, Ill. 721,987, pub. 5-8-58. Cl. 38.
 Haddam Mfg. Co., The, New York, N.Y. 721,901, pub. 7-11-61. Cl. 26.
 Haggar Co., Dallas, Tex. 721,990, pub. 7-11-61. Cl. 39.
 Haloid Xerox Inc.: See—
 Xerox Corp.
 Hamilton Watch Co., Lancaster, Pa. 721,894, pub. 7-11-61. Cl. 26.
 Hampton Paint Mfg. Co.: See—
 Lieberman, Arthur R.
 Hansen Glove Corp., Milwaukee, Wis. 610,459, can. Cl. 39.
 Harmon, F. S., Mfg. Co., Tacoma, Wash. 610,400, can. Cl. 32.
 Hart Metal Products Corp., Elkhart, Ind. 610,510, can. Cl. 2.
 Hawaiian Pineapple Co., Ltd.: See—
 Dole Corp.
 Hays, Ralph, Glendale, Calif. 722,075, pub. 7-11-61. Cl. 50.
 Heat Timer Corp., New York, N.Y. 721,917, pub. 7-11-61. Cl. 26.
 Heinze, Tom, & Associates, Inc., Washington, D.C. 722,093, pub. 7-11-61. Cl. 106.
 Henkel-Clauss Co., The, to Clauss Cutlery Co., Fremont, Ohio. 392,480, ren. 9-26-61. Cl. 23.
 Henry Hanger & Display Fixture Corp. of America, The, New York, N.Y. 722,068, pub. 7-11-61. Cl. 50.
 Heritage Furniture, Inc.: See—
 Drexel Enterprises, Inc.
 Herold Products Co., Inc.: See—
 Spartus Corp.
 Hiroshi Morishita, Higashi-ku, Osaka-Shi, to Morishita Jintan Co., Ltd., Osaka, Japan. 385,576, ren. 9-26-61. Cl. 26.
 Hi-Shear Corp., by change of name from Hi-Shear Rivet Tool Co., Torrance, Calif. 721,856, pub. 7-11-61. Cl. 23.
 Hi-Shear Rivet Tool Co.: See—
 Hi-Shear Corp.
 Hockaday, Robert C., d.b.a. Trymtool, San Diego, Calif. 721,789, pub. 7-11-61. Cl. 13.
 Hoffman, A. H., Inc., Landisville, Pa. 610,203, can. Cl. 10.
 Hoffman Electronics Corp., Los Angeles, Calif. 721,822, pub. 7-11-61. Cl. 21.
 Hoffman Electronics Corp., Los Angeles, Calif. 721,827, pub. 7-11-61. Cl. 21.
 Hopp Press, Inc., The, New York, N.Y. 721,778, pub. 7-11-61. Cl. 13.
 Hovey, C. F. Co., also d.b.a. C. F. Hovey Co. Down Stairs Store and Hovey's Downstairs Store, to Jordan Marsh Co., Boston, Mass. 392,179, ren. 9-26-61. Cl. 42.
 Hovey, C. F. Co. Down Stairs Store: See—
 Hovey, C. F. Co.
 Hovey's Downstairs Store: See—
 Hovey, C. F. Co.
 Howell Instruments, Inc., Fort Worth, Tex. 721,924, pub. 7-11-61. Cl. 26.
 Hubbard, J., Co., Inc.: See—
 Miller, Louise.
 Hudnut, Richard: See—
 Moore, John Hudson, Inc.
 Hughes Industries, Farmington, Mich. 721,760, pub. 7-11-61. Cl. 12.
 Humble Oil & Refining Co., Houston, Tex. 721,798, pub. 7-11-61. Cl. 15.
 Hunter Fan and Ventilating Co., Memphis, Tenn. 610,307, can. Cl. 21.
 Huth Mfg., Inc., Burbank, Calif. 721,865, pub. 7-11-61. Cl. 23.
 Hydril Co., Los Angeles, Calif. 721,862, pub. 7-11-61. Cl. 23.
 I-T-E Circuit Breaker Co., Philadelphia, Pa. 721,820, pub. 7-11-61. Cl. 21.
 Indian Territory Illuminating Oil Co., Bartlesville, to The Geograph Co., Oklahoma City, Okla. 390,122, ren. 9-26-61. Cl. 26.
 Indiana General Corp., Valparaiso, Ind. 721,797, pub. 7-11-61. Cl. 14.
 Indiana General Corp., Valparaiso, Ind. 721,838, pub. 7-11-61. Cl. 21.
 Indiana General Corp., Valparaiso, Ind. 721,969, pub. 7-11-61. Cl. 30.
 Indiana General Corp., Valparaiso, Ind. 721,968, pub. 7-11-61. Cl. 38.
 Insul-Mastic Inc.: See—
 McGraw Paint & Asphalt Co.
 International Bedding Co., The, Baltimore, Md. 610,398, can. Cl. 32.
 International Nickel Co., Inc., The, New York, N.Y. 610,248-9, can. Cl. 14.
 Jamestown Lounge Co., Jamestown, N.Y. 721,973, pub. 7-11-61. Cl. 32.
 Jane-Art Inc., Elmhurst, N.Y. 610,158, can. Cl. 1.
 Jergens, Andrew, Co., The, Cincinnati, Ohio. 145,814, ren. 9-26-61. Cl. 52.
 Jergens, Andrew, Co., The, Cincinnati, Ohio. 148,676, ren. 9-26-61. Cl. 51.
 Jewell, J. D., Inc., Gainesville, Ga. 610,270, can. Cl. 18.
 Jo-Beth Fashions, Inc., from Anne Carter Dresses, Inc., New York, N.Y. 722,013, pub. 7-11-61. Cl. 39.
 Johnson Publishing Co., Inc., Chicago, Ill. 722,085, pub. 7-11-61. Cl. 51.
 Jones & Brown, Inc., Pittsburgh, Pa. 721,770, pub. 7-11-61. Cl. 12.
 Kaybar, Inc., Birmingham, Mich. 721,802, pub. 7-11-61. Cl. 16.
 Kearney Industries, Baritan, N.J. 721,863, pub. 7-11-61. Cl. 23.
 Kenney Mfg. Co., Cranston, R.I. 721,785, pub. 7-11-61. Cl. 13.
 Klafel Bros. Trading Co., New York, N.Y. 721,991, pub. 1-24-61. Cl. 39.
 Klafel, Nathaniel: See—
 Tully Construction Co.
 Klein, S., Department Stores, Inc., New York, N.Y. 721,995, pub. 7-11-61. Cl. 39.
 Koels Brothers, Inc., Appleton, Wis. 721,776, pub. 7-11-61. Cl. 12.
 Kraus Bros. & Co., Inc.: See—
 Silverman, Frank, & Co.
 Kroesen, Gus, Inc., Oakland, Calif. 721,958, pub. 7-11-61. Cl. 27.
 Kubel, J., Co.: See—
 Kubel, Jack.
 Kubel, Jack, d.b.a. J. Kubel Co., Omaha, Nebr. 610,273, can. Cl. 18.
 Kuhwald, Edwin P., Wilmington, Del. 721,911, pub. 7-11-61. Cl. 26.
 Lafayette Radio Electronics Corp., Jamaica, N.Y. 721,904, pub. 7-11-61. Cl. 26.
 Lafer Enterprises: See—
 Lafer, Howard L.
 Lafer, Howard L., d.b.a. Lafer Enterprises, Port Clinton, Ohio. 721,983, pub. 7-11-61. Cl. 36.
 La Gondola Food Corp., Syracuse, N.Y. 722,053, pub. 5-31-60. Cl. 46.
 Landis Machine Co., Waynesboro, Pa. 721,881, pub. 7-11-61. Cl. 23.
 La Tosca Products Co.: See—
 Limeri, Joseph.
 Lawn Supply Co., Birmingham, Ala. 610,347, can. Cl. 23.
 Lecco Machinery and Engineering Co., Bluefield, W. Va. 721,870, pub. 7-11-61. Cl. 23.
 Lehmann, Gary, Inc., San Francisco, Calif. 721,945, pub. 7-11-61. Cl. 26.
 Leyne Aluminum Co., Kewaunee, Wis. 149,430, ren. 9-26-61. Cl. 13.
 Lewis Knitting Co., Reno, Nev. 722,005, pub. 7-11-61. Cl. 39.
 Lieberman, Arthur R., d.b.a. Hampton Paint Mfg. Co., Hampton, Va. 610,260, can. Cl. 16.
 Lilly, Eli, and Co., Indianapolis, Ind. 721,811, pub. 5-23-61. Cl. 18.
 Lily Mills Co., Shelby, N.C. 722,021, pub. 7-11-61. Cl. 40.
 Lilyette Brassiere Co., Inc., New York, N.Y. 722,014, pub. 7-11-61. Cl. 39.
 Lima Cord Sole & Heel Co., The, to Gro-Cord Rubber Co., Lima, Ohio. 149,142, ren. 9-26-61. Cl. 39.
 Limeri, Joseph, d.b.a. La Tosca Products Co. and as Linda Food Products Co., Buffalo, N.Y. 722,052, pub. 5-31-60. Cl. 46.
 Linda Food Products Co.: See—
 Limeri, Joseph.

- Linen Guild, Inc., New York, N.Y. 610,469, can. Cl. 42.
 Lodyte Chemical Co.: See—
 Temple, William M.
 Loeb, Arthur L., Cambridge, Mass. 721,955, pub. 7-11-61. Cl. 26.
 Long, Albert F., Co., Denver, Colo. 721,962, pub. 7-11-61. Cl. 28.
 Loomtogs, Inc., New York, N.Y. 610,448, can. Cl. 39.
 Lovico, Salvatore A., d.b.a. Durable Canvas Products Co., Brooklyn, N.Y. 610,329, can. Cl. 22.
 Lucky Bunny Bait Co., Chicago, Ill. 610,318, can. Cl. 22.
 Lyndale Co., The, to Burton, Parsons Chemicals, Inc., Washington, D.C. 679,451, new cert. Cl. 6.
 Lyon, Geneva S., d.b.a. Alca Chemical Co., East Jillsnoct, Maine. 722,084, pub. 7-11-61. Cl. 51.
 MacMillan & Bioedel Ltd., to MacMillan Bioedel and Powell River Ltd., Vancouver, British Columbia, Canada. 587,350, new cert. Cl. 12.
 MacMillan & Bioedel Ltd., to MacMillan, Bioedel and Powell River Ltd., Vancouver, British Columbia, Canada. 608,185, new cert. Cl. 12.
 MacMillan, Bioedel and Powell River Ltd.: See—
 MacMillan & Bioedel Ltd.
 MacMillan, Bioedel and Powell River Ltd., Vancouver, British Columbia, Canada. 721,860, pub. 7-11-61. Cl. 23.
 MacMillan Clements, Bethel, Conn. 610,210, can. Cl. 12.
 Magic Nut Shop, The, to Samuel J. Saul, Los Angeles, Calif. 391,874, ren. 9-26-61. Cl. 46.
 Maier, John H., Vancouver, British Columbia, Canada. 721,916, pub. 7-11-61. Cl. 26.
 Mail-Well Envelope Co. of Texas, Houston, Tex. 610,419, can. Cl. 37.
 Maintenance Products, Inc.: See—
 Southern States Portland Cement Co.
 Manton Gault Mfg. Co., Inc., Everett, Mass. 721,854, pub. 7-11-61. Cl. 23.
 Marie-Martine, Societe A Responsabilite Limitee, Paris, France. 722,004, pub. 7-11-61. Cl. 39.
 Market Merchandisers: See—
 Market Merchandisers, Inc.
 Market Merchandisers, Inc., from William Wolf, d.b.a. Market Merchandisers, Newark, N.J. 722,063, pub. 7-11-61. Cl. 46.
 Marley Co., The, Kansas City, Mo. 721,970, pub. 7-11-61. Cl. 31.
 Mars, Inc., Chicago, Ill. 722,062, pub. 7-11-61. Cl. 46.
 Marsh, Jordan, Co.: See—
 Hovey, C. F. Co.
 Martin Brothers Electric Co., The, Cleveland, Ohio. 722,046, pub. 7-11-61. Cl. 44.
 Martin, Rodman H., Co., Inc., Philadelphia, Pa. 610,215-16, can. Cl. 12.
 Martinson, Uriel F., d.b.a. Tetra-Life Products, Tarzana, Calif. 610,204, can. Cl. 10.
 Mason Envelope Co., Inc., New York, N.Y. 610,170, can. Cl. 2.
 McDaniel, Paul H., d.b.a. Moly-xl Co., Fort Wayne, Ind. 721,799, pub. 7-11-61. Cl. 15.
 McGraw-Edition Co., Elgin, Ill. 721,885, pub. 7-11-61. Cl. 24.
 McGraw Paint & Asphalt Co., Chicago, to Insul-Mastic Inc., Summit, Ill. 389,857, ren. 9-26-61. Cl. 12.
 Mead Johnson & Co., Evansville, Ind. 722,043, pub. 7-11-61. Cl. 44.
 Medical Appliance Enterprises, Berkeley, Calif. 722,049, pub. 7-11-61. Cl. 44.
 Mellon Institute of Industrial Research, Pittsburgh, Pa. 721,796, pub. 7-11-61. Cl. 14.
 Melpar, Inc., Falls Church, Va. 721,801, pub. 5-23-61. Cl. 10.
 Midwest Industrial Products Corp., Chicago, Ill. 721,762, pub. 7-11-61. Cl. 12.
 Miller, Louise, West Somerville, Mass. to J. Hubbard Co., Inc., Nashua, N.H. 142,049, ren. 9-26-61. Cl. 51.
 Miller's Products, Inc., Minneapolis, Minn. 610,269, can. Cl. 16.
 Miner, Est. Henry C., Inc., to Miner's, Inc., New York, N.Y. 145,748, ren. 9-26-61. Cl. 51.
 Miner's, Inc.: See—
 Miner, Est. Henry C., Inc.
 Minneapolis-Honeywell Regulator Co., Philadelphia, Pa. 721,953, pub. 7-11-61. Cl. 26.
 Minneapolis-Moline Co., Hopkins, Minn. 721,873-4, pub. 7-11-61. Cl. 23.
 Mirro Aluminum Co., Manitowoc, Wis. 721,773, pub. 7-11-61. Cl. 12.
 Moly-xl Co.: See—
 McDaniel, Paul H.
 Monroe Calculating Machine Co., Orange, N.J. 721,908, pub. 7-11-61. Cl. 26.
 Monroe Calculating Machine Co., Orange, N.J. 721,912, pub. 7-11-61. Cl. 26.
 Mook Bros. Inc., New York, N.Y. 610,466-7, can. Cl. 42.
 Moog Industries Inc., St. Louis, Mo. 721,816, pub. 7-11-61. Cl. 19.
 Moore, John Hudson, Inc., New York, N.Y. to Richard Hudson, Morris Plains, N.J. 392,112, ren. 9-26-61. Cl. 52.
 Morishita Jintan Co., Ltd.: See—
 Hiroshi Morishita.
 Mother Hubbard Cake Co., Inc., Chicago, Ill. 390,559, ren. 9-26-61. Cl. 46.
 Motivational Measurement Industrial Research Foundation, Chicago, Ill. 722,092, pub. 7-11-61. Cl. 101.
 Music-Masters, Inc., Sewickley, Pa. 721,925, pub. 7-11-61. Cl. 26.
 Mystic Maid Co., Glendale, Calif. 610,501, can. Cl. 52.
 N.V. Betonfabriek "De Meteor" De Steeg, Community of Rheden, Netherlands. 610,218, can. Cl. 12.
 N.V. Chocolate- en Cacaofabriek "Kwatta": See—
 N.V. Stoom Chocolate- en Cacaofabriek "Kwatta."
 N.V. Stoom Chocolate- en Cacaofabriek "Kwatta," Middenlaan, at Breda, to N.V. Chocolate- en Cacaofabriek "Kwatta," Breda, Netherlands. 145,467, ren. 9-26-61. Cl. 46.
 N.V. Maatschappij Voor Wasverwerking, Amerfoort, Netherlands. 721,747, pub. 7-11-61. Cl. 4.
 Naamloze Vennootschap Kristal-Glas- en Aardewerkfabrieken "De Sphinx" Voorheen Petrus Regout & Co., Maastricht, Netherlands. 610,222, can. Cl. 12.
 Narrow Fabric Co., The, Reading, Pa. 610,461, can. Cl. 40.
 National Biscuit Co., New York, N.Y. 149,707, ren. 9-26-61. Cl. 46.
 National Cash Register Co., The, Dayton, Ohio. 392,498, ren. 9-26-61. Cl. 11.
 National Cash Register Co., The, Dayton, Ohio. 392,505, ren. 9-26-61. Cl. 11.
 National Lead Co., New York, N.Y. 721,736, pub. 10-18-60. Cl. 1.
 National Starch Products Inc., New York, N.Y. 610,179, can. Cl. 5.
 Neatform Co. Inc., The, New York, N.Y. 610,437, can. Cl. 39.
 Nielsen, Poul, d.b.a. Stanwell Briar Pipes, Kyringe, near Ringsted, Denmark. 721,752-6, pub. 7-11-61. Cl. 8.
 Neo Novelty Co., New York, N.Y. 721,941, pub. 7-11-61. Cl. 26.
 Noma Lites, Inc., d.b.a. The American Screw Co., Willimantic, Conn. 721,903, pub. 7-11-61. Cl. 26.
 Norton Co., Worcester, Mass. 145,427, ren. 9-26-61. Cl. 12.
 Norton Co., Worcester, Mass. 148,188, ren. 9-26-61. Cl. 4.
 Norwich Mills Inc., Norwich, N.Y. 721,989, pub. 1-17-61. Cl. 39.
 Novelty Signs Animated Inc., Los Angeles, Calif. 610,309, can. Cl. 21.
 Novelty Electric Co., Philadelphia, Pa. 610,308, can. Cl. 21.
 Oil Metering and Processing Equipment Corp., Houston, Tex. 721,943, pub. 7-11-61. Cl. 26.
 Oldetyme Distillers, Inc., to Schenley Industries, Inc., New York, N.Y. 392,486, ren. 9-26-61. Cl. 49.
 Osborne Co., The, Clifton, N.J. 610,172, can. Cl. 3.
 Paramount Wedding Ring Co., Chicago, Ill. 721,961, pub. 7-11-61. Cl. 28.
 Paxton, Frank, Lumber Co., Kansas City, Mo. 610,494, can. Cl. 50.
 Payne, Paula, Products Co., Charlotte, N.C. 722,079, pub. 7-11-61. Cl. 51.
 Peco Mfg. Co., The, Bridgeport, Conn. 610,200, can. Cl. 8.
 Pedi-Bares, Inc., San Francisco, Calif. 722,003, pub. 7-11-61. Cl. 39.
 Pendleton Woolen Mills, Portland, Ore. 721,999, pub. 7-11-61. Cl. 39.
 Pendleton Woolen Mills, Portland, Ore. 722,007, pub. 7-11-61. Cl. 39.
 Penn Pharmaceutical Distributing Co., Chicago, Ill. 610,278, can. Cl. 18.
 Penn-Standard Sole Cementing Process, Inc., Philadelphia, Pa. 610,177, can. Cl. 5.
 Perfecting Service Co., Charlotte, N.C. 721,791, pub. 7-11-61. Cl. 13.
 Perry Rubber Co., Massillon, Ohio. 722,047, pub. 7-11-61. Cl. 44.
 Peters, Gordon, Co., Inc., New York, N.Y. 722,012, pub. 7-11-61. Cl. 39.
 Pfaudler Permutit, Inc., d.b.a. Simplex Valve & Meter Co., Lancaster, Pa. 721,950, pub. 7-11-61. Cl. 26.
 Phillips-Jones Corp., to Phillips-Van Heusen Corp., New York, N.Y. 388,438, ren. 9-26-61. Cl. 39.
 Phillips-Van Heusen Corp.: See—
 Phillips-Jones Corp.
 Phrix-Werke Aktiengesellschaft, Hamburg, Germany. 721,994, pub. 7-11-61. Cl. 39.
 Pike, E. W. & Co., Inc., Elizabeth, N.J. 721,890, pub. 7-11-61. Cl. 26.
 Pittsburgh Corning Corp., Pittsburgh, Pa. 721,767, pub. 7-11-61. Cl. 12.
 Pittsburgh Plate Glass Co.: See—
 United States Gutta Percha Paint Co.
 Pittsburgh Plate Glass Co., Pittsburgh, Pa. 721,978, pub. 7-11-61. Cl. 33.
 Platzler, Samuel, Co., Inc., New York, N.Y. 721,960, pub. 7-11-61. Cl. 28.
 Plee-Zing, Inc., Evanston, Ill. 391,856, ren. 9-26-61. Cl. 46.
 Pneumodynamics Corp., Cleveland, Ohio. 721,934, pub. 7-11-61. Cl. 26.
 Poloron Products, Inc., New Rochelle, N.Y. 721,971, pub. 7-11-61. Cl. 32.
 Portland Cordage Co., The, Portland, Ore. to Tubbs Cordage Co., San Francisco, Calif. 150,932, ren. 9-26-61. Cl. 7.
 Porzellanfabrik Weiden Gebr. Bauscher, Zweigniederlassung der Porzellanfabrik Lorenz Hutschenreuther A.G., Weiden, Bavaria, Germany. 721,967, pub. 7-11-61. Cl. 30.
 Precision Metalmiths, Inc., Cleveland, Ohio. 721,795, pub. 6-20-61. Cl. 14.
 Precision Scientific Co., Chicago, Ill. 721,926-7, pub. 7-11-61. Cl. 26.
 Prepared Products Co., Inc., Pasadena, Calif. 722,057, pub. 9-13-60. Cl. 46.
 Preston, J. A., Corp., New York, N.Y. 722,042, pub. 7-11-61. Cl. 44.
 Printing Devices, Inc., Melrose Park, Ill. 610,363, can. Cl. 23.
 Proko Co., The, Dallas, Tex. 721,764, pub. 7-11-61. Cl. 12.
 Prudential Premium Co., Los Angeles, Calif. 610,434, can. Cl. 38.
 Pyroll Co., Inc., La Crosse, Wis. 721,800, pub. 7-11-61. Cl. 15.
 Quality Products, Inc., La Feria, Tex. 388,398, ren. 9-26-61. Cl. 46.
 RCA Mfg. Co., Inc., Camden, N.J., to Radio Corp. of America, New York, N.Y. 386,637, ren. 9-26-61. Cl. 21.

- Rabinowitz, L. M. & Co., Inc., New York, N.Y. 722,030, pub. 7-11-61. Cl. 40.
 Radeleo Mfg. Co., Cleveland, Ohio. 610,303, can. Cl. 21.
 Radiant Mfg. Corp., Morton Grove, Ill. 721,940, pub. 7-11-61. Cl. 26.
 Radio Corp. of America: See—
 RCA Mfg. Co., Inc.
 Ralston Purina Co., St. Louis, Mo. 722,061, pub. 7-11-61. Cl. 46.
 Ramos, Rodrigo Jordan Y., New York, N.Y. 389,477, ren. 9-26-61. Cl. 18.
 Ramrod Products, Inc., San Mateo, Calif. 722,071, pub. 7-11-61. Cl. 50.
 Rare Chemicals Inc., Flemington, N.J., to White Laboratories, Inc., Kenilworth, N.J. 389,705, ren. 9-26-61. Cl. 6.
 Rath Packing Co., The, Waterloo, Iowa. 722,055, pub. 2-28-61. Cl. 46.
 Realistic Co., The, Cincinnati, Ohio. 722,083, pub. 7-11-61. Cl. 51.
 Reed, C. W., Co., Inc., d.b.a. Atomation, Inc., Los Angeles, Calif. 721,898, pub. 7-11-61. Cl. 26.
 Reliance Trading Corp.: See—
 Tong, Duncan
 Republic Electric Development Co., Seattle, Wash. 721,824, pub. 7-11-61. Cl. 21.
 Reblitt Leather Goods, Inc., New York, N.Y. 721,745, pub. 7-11-61. Cl. 3.
 Reynolds Aluminum Supply Co., Atlanta, Ga. 721,743, pub. 7-11-61. Cl. 2.
 Roberts Sportswear Mfg. Co., Boston, Mass. 722,009, pub. 7-11-61. Cl. 39.
 Robertson Paper Box Co. Inc., Montville, Conn. 721,740, pub. 7-11-61. Cl. 2.
 Robertson Paper Box Co. Inc., Montville, Conn. 721,852, pub. 7-11-61. Cl. 23.
 Rock River Woolen Mills, Janesville, Wis. 721,906-7, pub. 7-11-61. Cl. 39.
 Rock River Woolen Mills, Janesville, Wis. 722,025, pub. 7-11-61. Cl. 42.
 Rogers, Russell H., Corp., Detroit, Mich. 610,480, can. Cl. 46.
 Ross Operating Valve Co., Detroit, Mich. 721,786, pub. 7-11-61. Cl. 13.
 Rototest Laboratories, Inc., Lynwood, Calif. 722,088, pub. 7-11-61. Cl. 100.
 Royal Industries, Inc., Los Angeles, Calif. 721,741, pub. 6-6-61. Cl. 2.
 Rubber Fabrics Corp., New York, N.Y. 722,022, pub. 7-11-61. Cl. 42.
 Ruscoe, W. J., Co., Akron, Ohio. 721,835, pub. 5-30-61. Cl. 21.
 Ryser Bros. Inc.: See—
 Ryser Bros.
 Ryser Bros., to Ryser Bros., Inc., Chicago, Ill. 389,734, ren. 9-26-61. Cl. 46.
 S & G Rubber Co., Inc., Mendham, N.J. 387,964, ren. 9-26-61. Cl. 40.
 Safe Flight Instrument Corp., White Plains, N.Y. 721,937, pub. 7-11-61. Cl. 26.
 Salvador Mathews Zvebil, Sao Paulo, Brazil. 610,213, can. Cl. 12.
 Salvage, Louis H., Shoe Co., Inc., Manchester, N.H. 721,998, pub. 7-11-61. Cl. 39.
 Sansinena, Inc.: See—
 Compania Sansinena, Sociedad Anonima (Carne y Derivados)
 Saul, Samuel J.: See—
 Magic Nut Shop, The.
 Schenley Distillers, Inc., New York, N.Y. 722,066, pub. 7-11-61. Cl. 49.
 Schenley Industries, Inc.: See—
 Oldetyme Distillers, Inc.
 Schmidt, Emil, Washington, D.C. 610,245, can. Cl. 13.
 Schwartz, Charles, & Co., Chicago, Ill. 722,029, pub. 7-11-61. Cl. 42.
 Scott Paper Co., Chester, Pa. 610,416, can. Cl. 37.
 Sea-Land Products Co., Waltham, Calif. 610,201, can. Cl. 10.
 Seamless Knitting Machinery Corp., New York, N.Y. 721,866, pub. 7-11-61. Cl. 23.
 Seatrionics, Inc., Towson, Md. 721,897, pub. 7-11-61. Cl. 26.
 Selchow & Righter Co., New York, N.Y. 610,319-21, can. Cl. 22.
 Shlansky, Philip, & Sons, Inc., New York, N.Y. 610,449, can. Cl. 39.
 Siftar, Robert, Schenectady, N.Y. 610,285, can. Cl. 19.
 Silverman, Frank, & Co., d.b.a. Ezra Brooks Distilling Co., Chicago, Ill. 722,064-5, pub. 1-5-60. Cl. 49.
 Simca, Paris, France. 721,850-1, pub. 7-11-61. Cl. 23.
 Simplex Valve & Meter Co.: See—
 Pfaudler Permutit, Inc.
 Simpson Logging Co.: See—
 Simpson Timber Co.
 Simpson Timber Co., d.b.a. Simpson Logging Co., Seattle, Wash. 721,768, pub. 7-11-61. Cl. 12.
 Sleepy Time Togs Inc., New York, N.Y. 610,456, can. Cl. 39.
 Smith, Albert W., Ontario, Calif. 610,292, can. Cl. 19.
 Smith, H. P., Paper Co., Chicago, Ill. 721,985, pub. 7-11-61. Cl. 87.
 Soler, Neully-sur-Seine, France. 721,857, pub. 7-11-61. Cl. 28.
 Somay Products, Inc., Miami, Fla. 392,129, ren. 9-26-61. Cl. 16.
 Soul Records: See—
 Carter, S. B.
 Southeastern Tool and Die Co.: See—
 Southeastern Tool and Die Co., Inc.

- Southeastern Tool and Die Co., Inc., d.b.a. Southeastern Tool and Die Co., Birmingham, Ala. 721,765, pub. 7-11-61. Cl. 12.
 Southern States Portland Cement Co., Rockmart, Ga., to Maintenance Products, Inc., Worthington, Ohio. 391,990, ren. 9-26-61. Cl. 12.
 Spartus Corp., by change of name from Herold Products Co., Inc., Chicago, Ill. 721,887, pub. 7-11-61. Cl. 26.
 Spindel Corp., Providence, R.I. 721,963-5, pub. 7-11-61. Cl. 28.
 Spiegelglaswerke Germania A.G., Pore-Urbach, Germany. 721,975, pub. 8-9-60. Cl. 33.
 Sprarod Corp., Cleveland, Ohio. 721,849, pub. 7-11-61. Cl. 23.
 Squirt Co., The, Beverly Hills, to The Squirt Co., Sherman Oaks, Calif. 390,686, ren. 9-26-61. Cl. 38.
 Stackpole Carbon Co., St. Marys, Pa. 610,312, can. Cl. 21.
 Standard Change-Makers, Inc., Indianapolis, Ind. 721,898, pub. 7-11-61. Cl. 26.
 Standard Torch Industries, Inc., Staten Island, N.Y. 721,808, pub. 7-11-61. Cl. 16.
 Stanley Home Products, Inc., Westfield, Mass. 610,176, can. Cl. 4.
 Stanray Corp., Chicago, Ill. 721,876, pub. 7-11-61. Cl. 23.
 Stanwell Briar Pipes: See—
 Nielsen, Poul.
 Star Expansion Co., Mountainville, N.Y. 721,760, pub. 7-11-61. Cl. 13.
 Star Metal Products Co., Inc., Cleveland, Ohio. 721,858, pub. 7-11-61. Cl. 23.
 Steinberg, Arthur, Philadelphia, Pa., to Chatham Pharmaceuticals, Inc., Newark, N.J. 387,469, ren. 9-26-61. Cl. 18.
 Stiles-McAlpin Hotel Co., Inc., Sarasota, Fla. 722,089, pub. 7-11-61. Cl. 100.
 Stoehrer & Pratt Dodgem Corp., to Dodgem Corp., Lawrence, Mass. 146,007, ren. 9-26-61. Cl. 22.
 Stowe-Woodward, Inc., d.b.a. Ebonite Co., Newton Upper Falls, Mass. 721,939, pub. 7-11-61. Cl. 26.
 Strong Electric Corp., The, Toledo, Ohio. 721,830, pub. 7-11-61. Cl. 21.
 Suburban Propane Gas Corp., Whippany, N.J. 721,981, pub. 3-28-61. Cl. 34.
 Sun Chemical Corp., New York, N.Y. 721,763, pub. 7-11-61. Cl. 12.
 Sunbeam Corp., Chicago, Ill. 722,078, pub. 7-11-61. Cl. 51.
 Sweet, Ambrose S., Elmira, to Foster-Milburn Co., Buffalo, N.Y. 148,277, ren. 9-26-61. Cl. 18.
 Swisher, Jno. H., & Son, Inc., Jacksonville, Fla. 721,806, pub. 7-11-61. Cl. 17.
 Swiss Pine Importing Co., Inc., New York, N.Y. 722,081, pub. 7-11-61. Cl. 51.
 Tavaro S.A., Geneva, Switzerland. 721,861, pub. 7-11-61. Cl. 23.
 Taylor's Chas., Sons Co., The, Cincinnati, Ohio. 721,772, pub. 7-11-61. Cl. 12.
 Telco Industries, Dallas, Tex. 721,781, pub. 7-11-61. Cl. 13.
 Temple, William M., d.b.a. Lodyte Chemical Co., Washington, D.C. 721,766, pub. 7-11-61. Cl. 12.
 Teplick, Clothes, Inc., Philadelphia, Pa. 722,002, pub. 7-11-61. Cl. 39.
 Tetra-Life Products: See—
 Martinson, Uriel F.
 Textron Electronics, Inc., Providence, R.I. 721,910, pub. 7-11-61. Cl. 26.
 Thayer, Don O., Inc., Forest Hills, N.Y. 721,951, pub. 7-11-61. Cl. 26.
 Thermal Dynamics Corp., Lebanon, N.H. 721,892, pub. 7-11-61. Cl. 26.
 Thompson, Jean B., d.b.a. Jean Bartelme, Northbrook, Ill. 610,444, can. Cl. 39.
 Tokyo Makuro Shashin Kaisha Ltd., The, d.b.a. The Tokyo Microphoto Works Ltd., Nakano-ku, Tokyo, Japan. 721,919, pub. 7-11-61. Cl. 26.
 Tokyo Microphoto Works Ltd., The: See—
 Tokyo Makuro Shashin Kaisha Ltd., The.
 Tong, Duncan, d.b.a. Reliance Trading Corp., Victoria, Hong Kong. 722,077, pub. 7-11-61. Cl. 50.
 Tracerlab, Inc., Waltham, Mass. 721,928-9, pub. 7-11-61. Cl. 26.
 Transistor Devices, Inc., Los Angeles, Calif. 721,843-4, pub. 7-11-61. Cl. 21.
 Traum, David, Co., Inc., New York, N.Y. 722,019, pub. 7-11-61. Cl. 40.
 Treibacher Chemische Werke Aktiengesellschaft, Treibach, Carinthia, Austria. 721,751, pub. 7-11-61. Cl. 8.
 Trinca, Frederick, Middle Village, N.Y. 721,914, pub. 7-11-61. Cl. 26.
 Trouser Corp. of America, Scranton, Pa. 610,445-6, can. Cl. 39.
 Trymtool: See—
 Hockaday, Robert C.
 Tubbs Cordage Co.: See—
 Portland Cordage Co., The.
 Tubin, Eddie S., Burbank, Calif. 610,361, can. Cl. 23.
 Tully Construction, from Nathaniel Kiasfeld, McKeesport, Pa. 721,771, pub. 7-11-61. Cl. 12.
 Twentieth Century Products Corp., Denver, Colo. 721,784, pub. 7-11-61. Cl. 13.
 Twin Pane Corp., Detroit, Mich. 721,979, pub. 7-11-61. Cl. 38.
 Tye, W. S., Co., The, Cleveland, Ohio. 721,779, pub. 7-11-61. Cl. 13.
 Ulanet, George, d.b.a. Gedi Research Laboratories, Newark, N.J. 721,920, pub. 7-11-61. Cl. 26.
 Uneda Doll Co., Inc., New York, N.Y. 610,317, can. Cl. 22.
 United States Gutta Percha Paint Co., Saco, Maine and Providence, R.I., to Pittsburgh Plate Glass Co., Pittsburgh, Pa. 146,885, ren. 9-26-61. Cl. 16.

- U.S. Line Co.: See—
 United States Whip Co.
 United States Plywood Corp., New York, N.Y. 721,769, pub. 7-11-61. Cl. 12.
 United States Plywood Corp., New York, N.Y. 721,774, pub. 7-11-61. Cl. 12.
 U.S. Pillow Corp., The, New York, N.Y. 722,027, pub. 7-11-61. Cl. 42.
 United States Shoe Corp., The, Cincinnati, Ohio. 390,476, ren. 9-28-61. Cl. 39.
 U.S. Vehicle & Chemical Co., St. Louis, Mo. 721,736, pub. 7-11-61. Cl. 1.
 United States Whip Co., d.b.a. U.S. Line Co., Westfield, Mass. 610,337, can. Cl. 22.
 University Laboratories, Inc., Miami, Fla. 721,809, pub. 7-11-61. Cl. 18.
 Upjohn Co., The, Kalamazoo, Mich. 610,282, can. Cl. 18.
 Utica Duxbak Corp., Utica, N.Y. 722,006, pub. 7-11-61. Cl. 39.
 Valeron Corp., The, Detroit, Mich. 721,876, pub. 7-11-61. Cl. 23.
 Van Baerle & Associates, Chicago, Ill. 610,436, can. Cl. 38.
 Van Dalen, Leonard, d.b.a. Van Wood Mfg. Co., Haddonfield, N.J. 610,495, can. Cl. 50.
 Van Wood Mfg. Co.: See—
 Van Dalen, Leonard.
 Vanadium-Alloys Steel Co., Latrobe, Pa. 721,794, pub. 7-11-61. Cl. 14.
 Vanity Fair Mills, Inc.: See—
 Vanity Fair Silk Mills.
 Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 392,786-8, ren. 9-28-61. Cl. 39.
 Vaughan Interior Walls, Inc., Los Angeles, Calif. 721,749, pub. 7-11-61. Cl. 5.
 Vaughn Machinery Co., The, Cuyahoga Falls, Ohio. 721,878, pub. 7-11-61. Cl. 28.
 Vendo Co., The, Kansas City, Mo. 721,884, pub. 7-11-61. Cl. 23.
 Volt, W. J., Rubber Corp., Los Angeles, Calif. 721,845, pub. 7-19-60. Cl. 22.
 Waldes Kohinoor, Inc., Long Island City, N.Y. 721,869, pub. 7-11-61. Cl. 23.
 Waldorf Paper Products Co., St. Paul, Minn. 722,073, pub. 7-11-61. Cl. 50.
 Walker, Sidney E., Dallas, Tex. 610,174, can. Cl. 4.
 Warner Brothers Co., The, Bridgeport, Conn. 610,443, can. Cl. 39.
 Washington Steel Products, Inc., Tacoma, Wash. 721,787, pub. 7-11-61. Cl. 13.
 Wassell Organization, Inc., Westport, Conn. 721,909, pub. 7-11-61. Cl. 26.
 Weinbrenner Corp., Milwaukee, Wis. 722,010, pub. 7-11-61. Cl. 39.
 Westinghouse Electric Corp.: See—
 Westinghouse Electric & Mfg. Co.
 Westinghouse Electric Corp., Pittsburgh, Pa. 721,793, pub. 2-14-61. Cl. 14.
 Westinghouse Electric Corp., Pittsburgh, Pa. 721,926, pub. 7-11-61. Cl. 21.
 Westinghouse Electric & Mfg. Co., East Pittsburgh, to Westinghouse Electric Corp., Pittsburgh, Pa. 390,118, ren. 9-28-61. Cl. 23.
 Wheat, Frank H., Jr., Los Angeles, Calif. 610,464, can. Cl. 42.
 Whirlpool Corp., St. Joseph, Mich. 722,086, pub. 7-11-61. Cl. 52.
 White Laboratories, Inc.: See—
 Rare Chemicals Inc.
 White Laboratories, Inc., Kenilworth, N.J. 610,277, can. Cl. 18.
 Whitehouse Products, Inc., Brooklyn, N.Y. 721,930, pub. 7-11-61. Cl. 26.
 Wigler, Albert I., d.b.a. Addison-Proctor Co., Newark, N.J. 721,748, pub. 7-11-61. Cl. 4.
 Williams and Associates, Inc., Denver, Colo. 722,090, pub. 7-11-61. Cl. 101.
 Williams Mfg. Co., Chicago, Ill. 610,334, can. Cl. 22.
 Winger Dairy Products Processing and Mfg. Corp., Denver, Colo. 610,475, can. Cl. 46.
 Winthrop's, Inc., Paterson, N.J. 721,855, pub. 7-11-61. Cl. 23.
 Wolf, William: See—
 Market Merchandisers, Inc.
 Wood, John, Co., Muskegon Heights, Mich. 721,915, pub. 7-11-61. Cl. 26.
 Wool "O" Co., The, Philadelphia, Pa. 722,034, pub. 7-11-61. Cl. 42.
 Xerox Corp., by change of name from Haloid Xerox Inc., Rochester, N.Y. 721,899, pub. 6-27-61. Cl. 26.
 Youngs Rubber Corp., New York, N.Y. 722,050-1, pub. 7-11-61. Cl. 44.
 Zummach, Wm. F., Inc., Milwaukee, Wis. 721,907, pub. 7-11-61. Cl. 26.
 Zwickery Archery Co.: See—
 Zwickery, Clifford J.
 Zwickery, Clifford J., d.b.a. Zwickery Archery Co., North St. Paul, Minn. 721,846, pub. 7-11-61. Cl. 22.

PATENTS
NOTICES

Patent Office Telephone Numbers

A new series of numbers has recently been assigned to telephone extensions in patent examining divisions. Telephone calls to division personnel should be handled as follows:

1. To reach the Primary and Assistant Primary Examiner, dial "28" followed by the division number. The Primary Examiner of Division 3, for example, may be reached by dialing "2803."

2. To reach the division clerk, assistant examiners and all other employees, dial "25" followed by the division number.

Sterling 3-9200 should no longer be used in placing telephone calls to the Patent Office. Any Office extension may be reached directly by dialing "WO-7" plus the desired extension number. For example, the Primary Examiner of Division 3 may be reached by dialing WO 7-2803. Station-to-station long distance calls may be dialed directly by preceding the Office number with Area Code "202."

C. A. KALK,

Director of Administration.

Aug. 28, 1961.

Patents Available for Licensing or Sale

2,980,696. Phthalein and Fluorecein Derivatives. Jiri Korbl, Lysa nad Labem, Czechoslovakia. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

2,994,320. Cool Stirring Kettle. Leonard R. Poschadel, 139 E. Garfield Ave., Milwaukee, Wis.

2,995,861. Animal Trap. George E. Osborn, 4708 Large St., Philadelphia 24, Pa.

General Electric Company is prepared to grant non-exclusive licenses under the following 15 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 9 patents may be addressed to: General Electric Company, Transformer Division, 100 Woodlawn Ave., Pittsfield, Mass. Attention Patent Counsel.

2,456,986. Protective Arrangement for Electrical Windings.

2,467,823. Magnetic Core.

2,467,824. Magnetic Core.

2,594,872. Stabilization of Halogenated Hydrocarbons.

2,684,993. Parallel Connected Concentric Conductor.

2,879,488. Clamping Arrangement for Cascade Transformer.

2,934,667. Controlled Resistivity Glaze for Ignitor Plugs.

2,937,352. Magnetic Core Structure.

2,990,498. Capacitor.

Applications for license under the following 6 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,928,798. Alkyl Chlorophenylpolysiloxane Water Repellent Compositions.

2,928,799. Composition Comprising an Organopolysiloxane, a Titanate and a Wax and Process for Rendering Textiles Water Repellent Therewith.

2,938,007. Compositions Comprising an Organopolysiloxane, Silica and a Dicarboxylic Acid Ester Plasticizer and the Heat Cured Product Thereof.

2,960,759. Methods of Manufacturing Phonograph Stylus.

2,982,008. Cutting Tool.

2,992,083. Liquid Hydrocarbon Power Fuel Containing Cyanoalkylpolysiloxanes as Foam Depressors.

Foreign Patents Received in the Scientific Library as of
August 31, 1961

Country	Date received	Highest number
Australia:		
(Abstracts)	Apr. 18, 1961	63,890
(Patents)	Aug. 22, 1961	232,501
Austria	Aug. 9, 1961	215,950
Belgium	Aug. 24, 1961	570,100
Canada	Aug. 30, 1961	626,256
Czechoslovakia	Aug. 1, 1961	98,100
Denmark	July 17, 1961	90,390
East Germany	Aug. 30, 1961	21,714
Egypt	July 3, 1961	2,357
Finland	June 1, 1961	31,290
France:		
(Patents)	Aug. 21, 1961	1,257,300
(Additions)	Aug. 16, 1961	75,100
Germany:		
(Auslegeschriften)	July 13, 1961	1,107,160
(Patents)	Feb. 15, 1961	1,084,206
Great Britain	Aug. 25, 1961	874,890
India	Mar. 1, 1961	67,581
Ireland	May 22, 1961	22,700
Italy	June 20, 1961	579,100
Japan	Aug. 1, 1961	8,750/61
Netherlands	Aug. 8, 1961	98,674
Norway	Aug. 22, 1961	98,295
Pakistan	June 9, 1961	108,699
Poland	July 24, 1961	44,675
Rumania	Aug. 10, 1961	41,482
Sweden	June 1, 1961	174,832
Switzerland	Aug. 21, 1961	355,112
U.S.S.R.	July 26, 1961	137,838

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1-10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

New Applications Received During August 1961

Patents	7,067
Designs	431
Plant Patents	10
Reissues	20
Total	7,528

Issue

Patents	958—No. 3,002,192 to No. 3,003,149, incl.
Designs	61—No. 191,431 to No. 191,491, incl.
Plant Patents	4—No. 2,095 to No. 2,098, incl.
Reissues	5—No. 25,044 to No. 25,048, incl.
Total	1,028

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the
Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

Disclaimer

2,777,681.—*Charles F. Ball, Franklin, Pa.* MINING AND
LOADING MACHINE WITH UPPER AND LOWER RELATIVELY

MOVABLE DISINTEGRATING HEAD PORTIONS. Patent dated
Jan. 15, 1957. Disclaimer filed Aug. 22, 1961, by the
assignee, *Joy Manufacturing Company*.

Hereby enters this disclaimer to claims 13, 14, 24, 32, 33
and 34 of said patent.

**Board of Appeals Decisions Rendered in the
Month of July 1961**

Examiner affirmed	206
Examiner affirmed in part	42
Examiner reversed	61
Total	309

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25. (V)

26. (II)

27. (I)

28. (V)

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CONDITION OF PATENT APPLICATIONS AS OF AUGUST 31, 1961

Total number of pending applications (excluding Designs).....	197,748
Total number of pending Design applications.....	5,227
Total number of applications awaiting action (excluding Designs).....	94,168
Total number of Design applications awaiting action.....	1,304
Date of oldest new application.....	May 16, 1960
Date of oldest amended application.....	May 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS.....		6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS.....		16, 26, 37, 41, 42, 44, 48, 51, 64, 65, 68.	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS.....		2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.....		7, 11, 17, 27, 34, 35, 39, 53, 62.	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION.....		5, 8, 20, 29, 33, 36, 40, 52, 66.	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.....		1, 4, 9, 10, 18, 22, 23, 28, 45, 47.	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.....		3, 15, 19, 25, 30, 32, 49, 55, 67.	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.....		91, 92, 93, 94, 95.	
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)		Oldest Application	
		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working.....		2-2-61	1-9-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps.....		2-15-61	1-17-61
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors.....		2-10-61	11-10-60
4. (VI) FALLER, E. A., Material or Article Handling.....		2-6-61	2-1-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics.....		9-26-60	9-12-60
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides.....		10-17-60	10-14-60
7. (IV) ANDERSON, E. G., Optics.....		12-20-60	12-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds.....		3-6-61	3-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines.....		1-16-61	1-5-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making.....		12-21-60	11-14-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits.....		10-10-60	10-3-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls.....		9-20-60	10-3-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning.....		10-10-60	10-31-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics.....		10-24-60	9-2-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus.....		3-10-61	3-2-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems.....		9-9-60	9-8-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering.....		9-13-60	9-26-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors.....		3-1-61	3-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners.....		1-10-61	11-15-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors.....		3-1-61	2-27-61
21. (III) MADER, R. C., Textiles.....		12-8-60	12-6-60
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23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education.....		4-7-61	4-3-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders.....		2-7-61	1-30-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making.....		11-1-60	11-1-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers.....		11-1-60	11-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids.....		1-6-61	12-5-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes.....		10-21-60	12-2-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings.....		11-14-60	11-10-60
30. (VII) O'LEARY, R. A., Commminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part).....		2-27-61	2-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....	10-5-60	11-4-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....	12-2-60	12-1-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....	10-28-60	10-7-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....	11-3-60	11-23-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....	1-17-61	1-10-61
36. (V) EVANS, R. L., Measuring and Testing (part).....	10-11-60	10-5-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....	10-3-60	10-10-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....	9-6-60	9-12-60
39. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....	12-5-60	11-22-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....	2-6-61	1-30-61
41. (II) LOVEWELL, N. N., Records; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....	12-2-60	11-30-60
42. (II) BRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....	10-5-60	10-6-60
43. (I) KNIIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....	8-8-60	8-29-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....	5-16-60	5-3-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....	3-1-61	3-1-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....	9-1-60	9-9-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles.....	12-30-60	1-3-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....	9-8-60	8-1-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....	10-7-60	10-7-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....	11-9-60	12-1-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....	9-6-60	9-6-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....	2-27-61	3-1-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolded; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....	1-5-61	1-6-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....	6-29-60	7-19-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....	10-20-60	10-24-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....	9-1-60	10-14-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....	9-2-60	9-6-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spilltoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....	1-4-61	2-1-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....	10-19-60	10-21-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.....	9-6-60	9-12-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.....	1-4-61	2-2-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.....	11-7-60	11-14-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....	10-24-60	10-11-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....	8-16-60	8-11-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....	9-1-60	9-9-60
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part); Weighing Scales.....	7-5-60	6-9-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....	12-15-60	12-9-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....	9-6-60	9-2-60
69. (III) MONCURE, J. A., Industrial Arts.....	5-12-61	5-12-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts.....	5-12-61	5-9-61
71. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.....	10-4-60	10-28-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners.....	3-6-61	3-6-61
73. WAHL, R. A., Wire Working.....	1-30-61	2-2-61
74. BERLOWITZ, W., Gas Separation.....	1-9-61	12-23-60
75. REZNEK, J. (acting), Metallic Building Structures.....	12-9-60	12-6-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....	2-3-61	1-23-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,359,277 to 2,361,905, inclusive
Plant Patents.....Numbers 643 to 646, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

TAILOR TEE, INC., v. STEDMAN MANUFACTURING CO.

No. 6615. Decided February 6, 1961

[48 CCPA —; 286 F.2d 612; 128 USPQ 540]

1. TRADEMARKS—CONFUSING SIMILARITY—"TAILOR-TEE" AND "TAILORED T."

Held that appellant's mark "TAILOR-TEE" for "ladies' wearing apparel—namely, polo shirts, t-shirts, blouses, skirts and dresses," and appellee's mark, "TAILORED T" used on men's and boys' cotton knit tee shirts, "are so similar in sound, spelling, appearance, and meaning that * * * we are compelled to treat the marks as being without significant differences."

2. SAME—SAME—SAME—DESCRIPTIVENESS.

"Although * * * at some point in this controversy, each party has relied upon the alleged descriptiveness of the other's mark to support its own contentions, we do not believe either party is in a position to press this argument. Both marks have this characteristic when used on tee shirts. Regardless of the descriptiveness of the marks, if their concurrent use on the respective goods is likely to cause confusion among purchasers, appellant cannot prevail since there is no doubt that appellee is the prior user of its mark."

3. SAME—SAME—SAME.

"* * *, although there is evidence that appellant's goods are sold in women's specialty shops, the record also reveals that the products of both parties are sold in department stores although in different departments of the stores. A more significant factor in this connection is the fact that women not only buy for themselves but, according to the record, they purchase a substantial percentage of the underwear for the adult male members of their families and between 90 and 95% of the undergarments of their male youngsters. Obviously under these circumstances, a female purchaser of tee shirts could very easily become confused as to the origin of these garments when one manufacturer uses the trademark Tailor-Tee and the other, TAILORED T."

APPEAL from the Patent Office. Opposition No. 35,709.

AFFIRMED.

Blum, Moscovitz, Friedman & Blum (David J. Moscovitz, Asher Blum and Charles R. Allen, Jr. of counsel) for appellant.

Mason, Fenwick & Lawrence (G. Cabell Busick and Boynton P. Livingston of counsel) for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania.

MARTIN, J., delivered the opinion of the court.

This is an appeal from a decision of the Trademark Trial and Appeal Board, 122 USPQ 160, sustaining an opposition to the registration of a trademark.

Appellant, Tailor Tee, Inc., sought to register "Tailor-Tee" for "ladies' wearing apparel—namely, polo shirts, t-shirts, blouses, skirts, and dresses." In 1952, appellant started using its mark only in connection with sales of women's tee shirts¹ but in 1954, use of the mark was extended to the other items of women's

¹ Items of wearing apparel involved in this case have been variously designated in the record as "T-shirts," "t-shirts," "tee-shirts," and "tee shirts." Solely for consistency, "tee shirt" will be used hereinafter when referring to this general type of garment.

sportswear. National sales of "Tailor-Tee" sportswear for women have amounted to more than \$4,200,000 with a corresponding advertising expenditure in excess of \$100,000.

Appellee, Stedman Manufacturing Company, opposed registration on the ground that "Tailor-Tee" so resembles its own mark, "TAILORED T," used continuously throughout the United States since 1947 as an unregistered trademark for men's and boys' cotton knit tee shirts, as to be likely to cause confusion, mistake, or deception of purchasers. National retail sales of tee shirts bearing appellee's mark have amounted since 1952 to more than \$10,000,000 and appellee has advertised its goods extensively in nationally distributed consumer and trade publications.

The Board sustained the opposition, stating:

Opposer sells T-shirts for men and boys. Appellant sells T-shirts and other articles of sportswear for women. While these goods are not competitive, they are, to some extent, sold in the same stores, and it is a matter of common knowledge that women frequently purchase underwear for the male members of their families. In view thereof, it is concluded that women purchasers familiar with opposer's "TAILORED T" T-shirts, upon seeing appellant's sportswear for women, including the item of T-shirts sold under the substantially identical mark, "TAILOR-TEE," would suppose that such goods emanated from, or were in some manner sponsored by, opposer, or that there is some trade connection between appellant and opposer.

It should be noted that appellee in its notice of opposition alleged that:

Applicant's mark TAILOR-TEE is merely descriptive of the goods for which registration is sought and is not registrable under Section 2(e) of the Trademark Act of 1946.

However, appellee in its brief before this court has stated that it did not press this allegation before the Trademark Trial and Appeal Board. Further, appellee does not argue this point before this court except by stating:

In view of the close similarity in the names TAILORED T and TAILOR-TEE, it is immaterial whether either or both of the marks are descriptive of the products on which they are used.

Appellant, on the other hand, alleged as a defense in answer to appellee's notice of opposition that:

* * * the notation "Tailored T" as allegedly used by opposer is wholly descriptive as applied to men's and boys' tee-shirts, and that the only mark by which opposer and its goods have been known to the trade and public is the name or mark "STEDMAN."

The Board did not discuss these cross allegations as to descriptiveness of the two marks. Appellant in its brief before this court now states:

Appellee's mark "Tailored T" may be characterized as a "weak" mark at best. It is obviously descriptive as applied to T-shirts. This point is not being raised to question or attack the position of appellee to oppose, but rather to emphasize the nature of appellee's mark from the lack of likelihood of confusion aspect.

If appellant's mark "TAILOR-TEE" is descriptive, then appellee's mark "Tailored T" is even more descriptive because "Tailored" is used by appellee as an adjective whereas "Tailor" is used by appellant as a noun.

In the same vein, appellant argues further that since appellee's mark "TAILORED T" is a weak mark, appellee's rights must be restricted to the men's and boys' underwear field and that the ability of appellee's mark to function as an origin indicator is minimal. Appellant also argues that its ladies' tee shirts and other goods are specialties distinct from appellee's men's and boys' tee shirts in that the goods are not competitive, are sold in different stores or different departments of the same store, are different in price,

are advertised in dissimilar publications, are styled differently, and are respectively underwear and underwear. It is the contention of appellant that these several factors minimize any likelihood of confusion in spite of the fact, which appellant admits, that women frequently purchase underwear for the male members of their families.

[1] [2] In our opinion, "TAILORED T" and "Tailor-Tee" are so similar in sound, spelling, appearance, and meaning that, for the purposes of resolving the issues presented here, we are compelled to treat the marks as being without significant differences. Although, as indicated, at some point in this controversy, each party has relied upon the alleged descriptiveness of the other's mark to support its own contentions, we do not believe either party is in a position to press this argument. Both marks have this characteristic when used on tee shirts. Regardless of the descriptiveness of the marks, if their concurrent use on the respective goods is likely to cause confusion among purchasers, appellant cannot prevail since there is no doubt that appellee is the prior user of its mark.

This brings us to another matter. Appellant contends that the only mark by which appellee's goods have been known is "Stedman." We disagree with appellant. There is ample evidence in the record to prove that appellee's tee shirts are identified by its trademark "TAILORED T."

Even though the record reveals that appellant now uses its mark on dresses, blouses, polo shirts and skirts, it originally used the mark on tee shirts and still does. Therefore, irrespective of the other garments for which appellant's mark is now being used and the fact that appellant's tee shirts are intended for women, whereas appellee's are for men and boys, the commercial designation of the garments is the same, that is, tee shirts, and both products might reasonably originate from the same source. It would not be far-fetched to assume that one company manufactures tee shirts for both sexes.

[3] With reference to the marketing of the product, although there is evidence that appellant's goods are sold in women's specialty shops, the record also reveals that the products of both parties are sold in department stores although in different departments of the stores. A more significant factor in this connection is the fact that women not only buy for themselves but, according to the record, they purchase a substantial percentage of the underwear for the adult male members of their families and between 90 and 95% of the undergarments of their male youngsters. Obviously under these circumstances, a female purchaser of tee shirts could very easily become confused as to the origin of these garments when one manufacturer uses the trademark Tailor-Tee and the other, TAILORED T.

Upon consideration of all the facts presented to us, we are of the opinion that appellant's mark so resembles appellee's that when appellant's mark is applied to its goods it is likely to cause confusion or mistake or to deceive purchasers. In view of this conclusion we believe that the registration of appellant's mark would be likely to cause damage to appellee. Therefore we affirm the decision of the Trademark Trial and Appeal Board.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

THE MERCROID CORPORATION

v.

AIRBORNE INSTRUMENTS LABORATORY, INC. (CUTLER-HAMMER, INC., ASSIGNEE, SUBSTITUTED)

No. 6621. Decided February 21, 1961

[48 CCPA —; 287 F.2d 189; 129 USPQ 64]

1. TRADEMARKS—CONFUSING SIMILARITY—DIFFERENCES IN GOODS.

Where applicant's product was electrically operated apparatus designed specifically to measure or guide, or both, the operation of a machine tool, and opposer's products were highly specialized industrial switches designed to be actuated in various ways, *Held* that the goods were of such a nature that "it would not be unreasonable to suppose that one manufacturer would have produced all of them"; and *Held* that, on the issue of confusing similarity of applicant's and opposer's marks, "the differences between the goods of the parties are not of determinative legal significance."

2. SAME—SAME—DISCRIMINATING PURCHASERS.

"While the parties do not sell their goods to the same customers in all cases, their markets overlap to a significant degree. Therefore, for the purposes of determining the issue here presented, we shall consider it on the presumption that there will be common purchasers of MERCONTROLS and MICROtols. Such purchasers are likely to be engineers or skilled artisans who in the purchase of the products will order the particular product required to meet precise specifications required by the particular use to which the device is to be put. Frequently considerable expense will be involved in the purchase. We find, therefore, that the purchasers of applicant's and opposer's products will be discriminating purchasers."

3. SAME—SAME—DISSECTION OF MARKS.

"While we follow the rule that trademarks should not be dissected, but should be dealt with as a whole, that doctrine does not blind the court to those parts of the whole which will be immediately recognized by every English-speaking person in the market place."

4. SAME—SAME.

Applicant's mark, MICROtol, for electrically operated apparatus designed specifically to measure or guide, or both, the operation of a machine tool. *Held* not confusingly similar to opposer's marks, MERCROID, MERCROID CONTROL appearing in a globe design, and MERCONTROL, for highly specialized industrial switches designed to be actuated in various ways.

APPEAL from the Patent Office. Opposition No. 36,964.

AFFIRMED.

Byron, Hume, Groen & Clement, Gerritt P. Groen for appellant.

Pennie, Edmonds, Morton, Barrows & Taylor, Clarence M. Fisher (Harold A. Traver, of counsel) for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court.

Appellee-applicant applied to register, on the Principal Register, the mark MICROtol for "electrical gauging and control apparatus for machine tools."¹ The application alleges first use of the mark in October 1955.

Appellant-opposer opposed the registration on the grounds of likelihood of purchaser confusion or deception as to the source or origin of the goods, citing its

¹ Serial No. 14,040, filed August 18, 1956.

three registered marks: (1) MERCROID² for "Limiting, signalling and safety devices—namely, light actuated flame detectors and mercury contact devices, temperature actuated flame detectors, barometrically operated devices, thermocouple operated devices, timing devices, differential pressure and temperature devices, vacuum actuated controlling and indicating devices and float actuated controlling and indicating devices";³ (2) MERCROID CONTROL, appearing in a globe design with the phrase "used the world over" thereon "for electric controls for electric switches, temperature-operated electric switches, pressure operated electric switches, and parts thereof";⁴ and (3) MERCONTROL for "Controlling devices, employing electric circuit controlling switches—namely, vacuum operated electric switches, pressure operated electric switches, float operated electric switches, mechanically operated electric switches and magnetically operated electric switches, and parts thereof including mercury switches."⁵

Opposer, relying mainly upon its marks MERCROID CONTROL and MERCONTROL, appeals from the decision of the Trademark Trial and Appeal Board (122 USPQ 329), which dismissed the opposition after finding that the potential purchasers of the goods of the parties would be "likely to be conscious of the identity of the manufacturer."

The sole question before us is whether applicant's mark so resembles opposer's marks as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers. Section 2(d) of Trademark Act of 1946, 15 USC § 1052(d).

The products upon which opposer and applicant use their respective marks are different. Applicant's mark is used on electronic apparatus for gauging and controlling the operation of machine tools. The apparatus is used on a single machine tool, and it consists of individual components all or part of which may be purchased and used, depending upon the degree of automation, and the extent of investment desired. Thus a purchaser may wish to buy only gauging apparatus to guide the manual operation of the machine tool, or he may wish to purchase control apparatus which is actuated by the gauging apparatus to provide a completely automatic operation of the machine tool.

The nature of applicant's products is such that they are sold according to the needs and specifications of each individual purchaser. The purchasers of applicant's apparatus generally are technically skilled, at least in the operation of machine tools. While the cost of these products varies according to the complexity of the system involved, the price may be as much as several thousand dollars.

Opposer's products are, primarily, mercury switches, which vary in construction, to be actuated by a variety of means including temperature, pressure, light, magnetic force, fluid level and the like. The evidence

indicates that opposer now has about twenty-five basic lines of controls, of which there are thousands of variations. These controls and switches are ordered by specification and vary in price which sometimes is as high as several hundred dollars. Although opposer's advertising indicates that all of its products contain mercury switches, the description of the goods in the registrations are not so limited.

The goods to which applicant's and opposer's marks are to be applied, as exemplified by the evidence of present use, represent two specialized lines of equipment. Applicant's product is electrically operated apparatus designed specifically to measure or guide, or both, the operation of a machine tool. Opposer's products are highly specialized industrial switches designed to be actuated in various ways.

[1] However, while acknowledging the differences between the products, it seems clear that the goods are of such a nature that it would not be unreasonable to suppose that one manufacturer would have produced all of them. That being the case, the differences between the goods of the parties are not of determinative legal significance so far as the present issue is concerned.

[2] While the parties do not sell their goods to the same customers in all cases, their markets overlap to a significant degree. Therefore, for the purposes of determining the issue here presented, we shall consider it on the presumption that there will be common purchasers of MERCONTROLS and MICROtols. Such purchasers are likely to be engineers or skilled artisans who in the purchase of the products will order the particular product required to meet precise specifications required by the particular use to which the device is to be put. Frequently considerable expense will be involved in the purchase. We find, therefore, that the purchasers of applicant's and opposer's products will be discriminating purchasers. *National Motor Bearing Co., Inc. v. James-Pond-Clark*, 46 CCPA 877, 882, 266 F.2d 799, 121 USPQ 515.

What, then, is likely to be the response of such purchasers to the marks here in issue? Applicant's mark is the obvious combination of the word "micro" with the last syllable of "control." Thus, it describes the hoped-for operation of applicant's product. [3] While we follow the rule that trademarks should not be dissected, but should be dealt with as a whole, that doctrine does not blind the court to those parts of the whole which will be immediately recognized by every English-speaking person in the market place. *Sealy, Inc. v. Simmons Co.*, 46 CCPA 857, 862, 265 F.2d 934, 121 USPQ 456. The word "micro" though derived from the Greek and once used chiefly by scientists, has almost become a household word in our age of precision technology to indicate small measurements. The suffix "TROL" is the same as the suffix of the descriptive word "control." We think, therefore, the word MICROtol, would suggest to a machinist, or to an engineer working in these areas, the meaning of a control operated to "micro" tolerances.

Opposer relies upon three marks, the first of which is MERCROID. This mark consists of the prefix MERC as in mercury, and the suffix "OID" meaning "like" or "related to." As applied to opposer's goods, the mark MERCROID is but slightly suggestive. The second of

² No. 156,669 registered July 11, 1922 and renewed, for "pressure, vacuum, thermostatic, and temperature circuit-controlling devices and switches and pressure-controlling switches and mercury tubes."

³ Reg. No. 614,800, October 25, 1955.

⁴ Registered Oct. 28, 1930, Trademark 276,768 renewed for 20 years from October 28, 1950.

⁵ Registered Apr. 8, 1952, Registration No. 557,178. First use on July 1, 1949.

opposer's mark is MERCOID CONTROL in the globe design, and the third is the obvious contraction of the second, namely: MERCONTROL. In these cases, the prefix "merc-" in each instance appears to have its origin in the mercury switches which opposer features in its advertising as a part of its controls. It seems to us likely, therefore, that the purchaser will associate the prefix of opposer's marks with the word mercury and that as such it is a distinctive association quite different from the likely association with the prefix "micro" of applicant's mark.

As between MERCOID and MICROtrol, there is no similarity. They neither look alike, sound alike nor evoke similar mental associations. The same is true of the MERCOID CONTROL mark and MICROtrol. There remains MERCONTROL which bears a closer visual and aural similarity to MICROtrol. However, for the reasons previously set out in detail we do not believe that it is likely the potential purchasers of the products of these parties will be confused as to the origin of those products by such tenuous similarities between marks, which are so obviously different.

[4] We therefore affirm the decision of the Trademark Trial and Appeal Board.

AFFIRMED.

United States Court of Appeals District of Columbia Circuit

DARISON CORPORATION v. ROBERT C. WATSON,
Commissioner of Patents

No. 15,928. Decided January 26, 1961

[— U.S.App.D.C. —: 287 F.2d 150; 128 USPQ 215]

1. PATENTABILITY—INVENTION—35 U.S.C. 103.

Upon reviewing the denial of certain claims by the District Court to processes for testing milk and milk products by the use of acoustical principles previously known in relation to substances other than milk, Held that "We agree with the District Court that although these claims reflect important developments of substantial value to the industry, they do not meet the standards of invention under controlling decisions interpreting the applicable statute, 35 U.S.C. § 103 (1958)."

2. SAME—PARTICULAR SUBJECT MATTER—PROCESS FOR TESTING MILK AND MILK PRODUCTS.

The judgment of the District Court denying certain claims to a process for testing milk and milk products as unpatentable over prior art is affirmed.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Allen Kirkpatrick, III (James L. Dooley, of counsel) for appellant.

Clarence W. Moore (George C. Roeming, of counsel) for appellee.

Before BAZELON, BASTIAN¹ and BURGER, Circuit Judges
PER CURIAM:

Appellant applied for a patent on processes for testing milk and milk products by the use of acoustical principles previously known in relation to substances other than milk. The District Court reversed the Pat-

¹Circuit Judge Bastian did not participate in the hearing of this case but counsel for the parties stipulated, that in case of disagreement between the two hearing judges as to disposition of the appeal, the case would be submitted to him on the briefs. The two hearing judges were in agreement but decided, nevertheless, to submit the case on the briefs to Circuit Judge Bastian, who joins in this opinion.

ent Office as to one claim asserted, finding it patentable, but held the subject matter of certain other claims unpatentable. This appeal is from the denial of claims 34 and 41 of the patent application.

[1] We agree with the District Court that although these claims reflect important developments of substantial value to the industry, they do not meet the standards of invention under controlling decisions interpreting the applicable statute, 35 U.S.C. § 103 (1958). *Darison Corp. v. Watson*, 182 F.Supp. 513 (D.D.C. 1960); see *Mandel Bros. v. Wallace*, 335 U.S. 291 (1948); cf. *L-O-F Glass Fibers Co. v. Watson*, 97 U.S.App.D.C. 69, 228 F.2d 40 (1955); *In re Dietert*, 44 CCPA (Patents) 808, 241 F.2d 746 (1957). [2] Hence the judgment of the District Court must be affirmed.

AFFIRMED.

Commissioner's Decision

IN RE APPLICATION PAPERS OF PERRET

Decided February 17, 1961

1. APPLICATION—DIVISIONAL—PRACTICE UNDER RULE 147.

35 U.S.C. 121 states that if a divisional application is directed solely to subject matter described and claimed in the original application as filed, the Commissioner may dispense with signing and execution. Rule 147, based thereon, provides the mechanics for filing such an application.

2. SAME—SAME—SAME.

Where the papers presented as a proposed divisional application under Rule 147 contained an amendment presenting claims which admittedly were not present in the parent case, and where it appears that the requirement for restriction in the parent case was made as to claims added by amendment, Held that the proposed divisional application does not meet the basic and primary requirement of the statute that it be for subject matter described and claimed in the original application as filed.

3. SAME—SAME—SAME.

Inasmuch as Rule 147 applications are exceptions to the general statutory requirement that the application must be signed by the applicant (35 U.S.C. 111), Held that an application filed under that rule must clearly meet the requirements to be acceptable.

ON PETITION.

DENIED.

CROCKER, First Assistant Commissioner.

This is a petition to the Commissioner by applicant's counsel, under the provisions of Rule 181, requesting that the Application Branch be instructed to prepare a divisional application from applicant's parent application, Serial No. 654,594, in accordance with Rule 147. The Application Branch refused to prepare and to accord a filing date to such proposed application because of a report by the Examiner that the requirement for restriction in the parent case was made as to claims added by amendment, and not on the claims originally filed, as required by the rule.

Counsel states that the Examiner could and should have made a requirement for restriction in the initial Office action, since the original claims were generic as well as specific to two species; that the subject matter of the original claims was contained in the substitute claims upon which the restriction requirement was based; and that since the applicant would have been entitled to file a Rule 147 application if a restriction requirement had been made in the first Office

action, it is not understood why he is not now entitled to the benefit of the provisions of the rule.

[1] The statute (35 U.S.C. 121) states that if a divisional application is directed solely to subject matter "described and claimed in the original application as filed," the Commissioner may dispense with signing and execution of the application by the inventor. Rule 147 based thereon provides the mechanics for filing such an application where a requirement for restriction has been made under Rule 142. [2] Admittedly, claims 15 and 16 presented in the amendment submitted with the instant application papers were not present in the parent case. It is

clear, therefore, that the proposed divisional application does not meet the basic and primary requirement of the statute that it be for subject matter described and claimed in the original application as filed. [3] Inasmuch as Rule 147 applications are exceptions to the general statutory requirement that the application must be signed by the applicant (35 U.S.C. 111), an application filed under that rule must clearly meet the requirements to be acceptable. Under the facts of this case there was no error committed by the Application Branch in refusing to prepare the proposed divisional application.

The petition is denied.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,129,332, D. Mastini, Telephone systems, filed Aug. 15, 1961, D.C., S.D.N.Y., Doc. 61/2912, *Domenico Mastini v. New York Telephone Company*.

2,410,793, Winnek and Roblin, Jr., Sulfonamido pyrimidines, filed Aug. 22, 1961, D.C.N.J. (Newark), Doc. 698/61, *American Cyanamid Company v. Lit Sales Company, Inc. et al.*

2,486,500, R. B. Gray, Transducer and method of making same, filed Oct. 27, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 1023/58-WB and 1023/58-K, *Erie Resistor Corporation et al. v. Solar Manufacturing Corporation*. Patent held valid as to claims 1 thru 7 and 11, 12 and 15 and infringed as to said claims; injunction granted (notice Aug. 8, 1961).

2,514,618, G. B. Ancell, III, Branding iron, filed Aug. 11, 1961, D.C. Colo. (Denver), Doc. 7224, *L & H Manufacturing Co. v. O. M. Franklin Serum Company*.

2,523,844, H. E. Rohrman, Vertical sliding sectional door and operating means therefor; 2,574,700, same, Door operator, filed Aug. 21, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/133, *Panel-Lift Door Corporation v. Saul B. Rosnov et al.*

2,566,817, E. Yellin, Mold for making plastic grids, filed Dec. 19, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c2169, *Glass Gorham Company v. Sinko Mfg. & Tool Company*. All claims in Patent No. 2,566,817 held invalid; complaint and counterclaim dismissed July 31, 1961.

2,574,700. (See 2,523,844.)

2,664,290, J. G. Helm, Non-drip fluid dispensing vessel, filed Aug. 16, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1053/61-Y, *J. Gaines Helm v. The R. T. French Company*.

2,679,750, R. Gilmont, Absolute and differential manometer, filed Aug. 8, 1961, D.C., S.D.N.Y., Doc. 61/2799, *Manostat Corporation v. Roger Gilmont Instruments, Inc. et al.*

2,704,866, A. Grossman, Sliding closure, filed Aug. 16, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 947/60-T, *Abraham Grossman et al. v. Tucker Aluminum Products, Inc.* Claim 3 of patent held valid and infringed; defendant enjoined (notice Aug. 17, 1961).

2,712,965, A. G. Steinmayer, Ground anchors, filed Mar. 24, 1961, D.C., N.D. Ala. (Birmingham), Doc. 9887, *McGraw-Edison Company v. Dixie Electrical Manufacturing Company*. Decree restraining defendant from infringing claims 1, 2, 3 and 4 of patent Aug. 17, 1961.

2,718,931, A. Boudouris, Loud speaker for outdoor theaters, filed Mar. 16, 1961, D.C. Nebr. (Omaha), Doc. 01194, *Angelo*

Boudouris v. The Ballanfyne Company. Stipulation and order of dismissal Aug. 14, 1961.

2,742,119, J. S. Combs et al., Prefabricated metal window assembly, filed Dec. 19, 1958, D.C., W.D. Wash. (Seattle), Doc. 4756, *Van Tone Millwork Company v. H & D Mill Work, Inc.* Patent held valid; injunction granted Aug. 15, 1961.

2,783,963, G. D. Kalberg, Clamp block, filed Aug. 9, 1961, D.C., N.D. Ohio (Cleveland), Doc. 37/116, *The B & S Screw Products Company v. The Cleveland Metal Stamping Company et al.*

2,826,540, G. F. Keeler, Method and apparatus for electrolytic cutting, shaping and grinding, filed Aug. 7, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/056, *Anocut Engineering Company v. Everite Machine Products Company*. Consent judgment for plaintiff Aug. 14, 1961.

2,828,194, Hopkins and Easley, Etching, filed Feb. 14, 1961, D.C., S.D. Calif. (San Diego), Doc. 2518-K, *The Dow Chemical Company v. Progressive Engraving Company*. Consent judgment; patent held infringed; defendant enjoined Aug. 3, 1961.

2,898,831, Smith, Jr. and Thoms, Lens turret and auxiliary lens for cameras, filed Nov. 24, 1959, D.C., W.D. Wash. (Seattle), Doc. 4954, *Alfred P. Smith, Jr. et al. v. Fisher's Television Company*. Order dismissing cause for lack of prosecution Aug. 15, 1961.

2,961,549, G. R. Hutton, Mobile tool stand, filed Aug. 8, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1319, *George Hutton v. Roll-On Manufacturing Corp. et al.*

2,980,314, L. L. Larson, Broadcast spreader, filed Aug. 15, 1961, D.C. Kans. (Wichita), Doc. W-2465, *Lester L. Larson v. Kenneth A. Hake, doing business as Kent Manufacturing Company*.

2,995,061, T. S. Briskin, Mechanism for adjusting zoom lens assembly, filed Aug. 10, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1340, *Revere Camera Company v. Bell and Howell Company*.

Re. 24,837, E. M. Usab, Floating wharf structure made of concrete float units, filed Aug. 9, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1007/61-WM, *Fibrecrete Corporation v. Oliver M. Bell*.

Des. 185,304, P. J. Mole, Lantern, filed Aug. 16, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1366, *North American Signal Company v. Wall-Able Manufacturing Co., Inc. et al.*

REISSUES

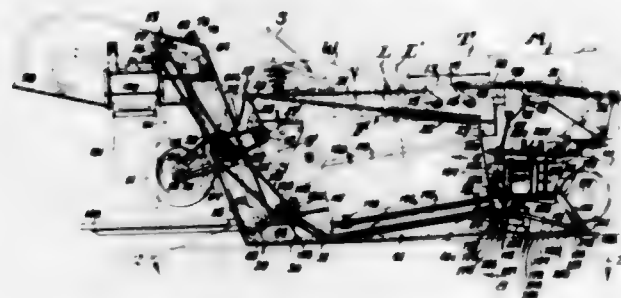
OCTOBER 3, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,044

BEAN PICKER

John William Ward, Vernon, N.Y., assignor, by mesne assignments, to Chisholm-Ryder Company, Inc., Niagara Falls, N.Y., a corporation of New York
Original No. 2,675,663, dated Apr. 20, 1954, Ser. No. 179,145, Aug. 14, 1950. Application for reissue Apr. 6, 1961, Ser. No. 111,885
19 Claims. (Cl. 56—130)



1. A snap bean picker of the type having a picking mechanism including longitudinally spaced picking tines adapted to move upward and inward within the bean plants from one side thereof to sever the pods therefrom, characterized by the provision of a mold board located at the opposite side of the bean plants and having a longitudinally extending [inwardly and upwardly inclined] surface adjacent to and spaced from the ends of the tines and inclined in the upward and inward direction of movement thereof, said surface having a lower longitudinal edge adjacent to the stems of the bean plants at said opposite side, and said surface cooperating with the picking mechanism to lay the bean plants on their sides laterally of the mold board during the picking operation over [a] said longitudinal edge [of said inclined surface] as a fulcrum[], whereby the severed pods are tossed transversely from said picking mechanism and over the top of said mold board for collection beyond said mold board.

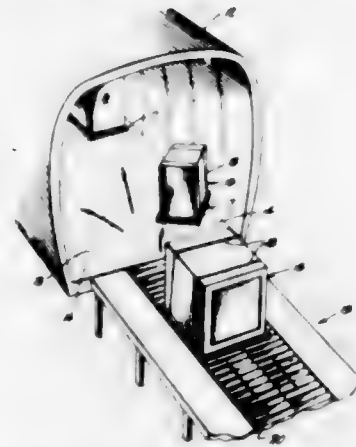
25,045

AIR CUSHION CARGO HANDLING SYSTEM

Thorvald K. Petersen and Paul L. Smith, Santa Monica, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Original No. 2,918,183, dated Dec. 22, 1959, Ser. No. 741,399, June 11, 1958. Application for reissue Sept. 21, 1960, Ser. No. 58,589
12 Claims. (Cl. 214—1)

8. Cargo handling apparatus comprising: a main support adapted to have a load placed thereon; a lower lamina of sheet-like generally planar flexible material affixed to said main support and being adapted to directly contact a surface across which the cargo is to be moved; an intermediate lamina of multicellular material being resiliently compressible and dimensionally-recuperative, said material lying immediately adjacent said lower lamina and being interposed between said main support and lower lamina, said intermediate lamina being adapted to locally expand and be compressed upon flexure of the lower lamina when the latter contacts local irregularities in said surface whereby the lower lamina will have substantially full contact with said surface; and outlet means supplying a flow of a pressurized gaseous medium between the lower lamina and the surface, said outlet means

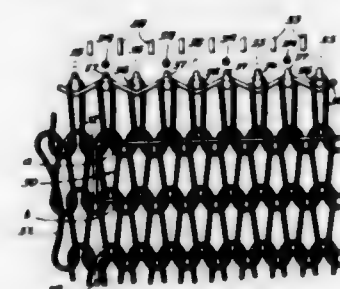
being oriented to effect the presence of a film flow of the gaseous fluid across substantially the entire area of the lower lamina whereby the coefficient of friction between



25,046

ELASTIC GARMENT

Herbert Knohl, Seneca, S.C., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Original No. 2,962,885, dated Dec. 6, 1960, Ser. No. 817,774, June 3, 1959. Application for reissue May 5, 1961, Ser. No. 108,709
21 Claims. (Cl. 66—178)



1. A [knitted] garment comprising a shaped, generally tubular, circumferentially stretchable and retractive non-rib knitted body portion for covering a human body member such as a body joint, leg calf, and the like, said body portion having a stretched stitch density [in excess of 700] of at least about 1000 stitches per square inch and having a plurality of different diameters generally corresponding to the contours of [a portion] the corresponding member of the human form and formed primarily of fine non-elastomeric yarn, such as nylon, silk or the like, knitted in every stitch of said body portion and incorporating substantially throughout said body portion at least one substantially relaxed fine, bare, stretchable, retractive yarn defining the relaxed shape of said body portion and having the major portion thereof extending coursewise of, and locked in, said knitted body portion at frequent intervals in every course in which it occurs, said stretchable and retractive yarn being in sufficient courses of the said body portion so that when [the] said body portion is in a stretched condition around [a]

OCTOBER 3, 1961

U. S. PATENT OFFICE

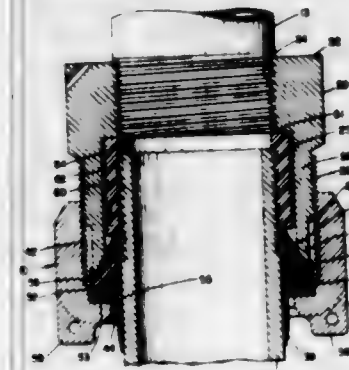
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the corresponding part of the human form of different diameters, it exerts [a definite predetermined] retractive force upon [each portion of] the part.

25,047

FLEXIBLE INSULATING COUPLING FOR THREADED PIPE

Roger E. Riskey, Bradford, Pa., assignor to Dresser Industries, Inc., a corporation of Delaware
Original No. 2,850,299, dated Sept. 2, 1958, Ser. No. 381,704, Sept. 22, 1953. Application for reissue Feb. 9, 1960, Ser. No. 7,736
2 Claims. (Cl. 285—48)



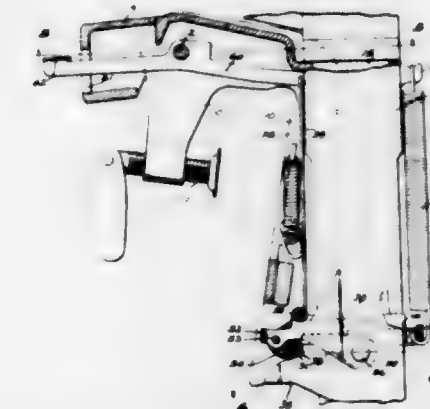
1. An insulating pipe fitting adapted to receive the end of a threaded pipe and to hold said pipe in flexible fluid-tight relationship but with the pipe locked in said fitting against excessive outward axial movement comprising, in combination, a tubular body having at least one end defining a pipe-receiving opening, said body forming a gasket recess with [an inwardly-sloping] a wall adjacent said opening and said body having a chamber with a generally cylindrical wall surface axially inwardly of said gasket recess, a resilient insulating gasket seated in said recess for surrounding and sealingly engaging said pipe, said gasket having [a tapered] an end to bear against said [sloping] wall and having a forward surface facing said chamber [and extending into said chamber], nut means engageable with said body to apply pressure to said resilient gasket to cause said gasket to engage said pipe and said recess in flexible yet sealing relationship, said nut means having a radially-inwardly-extending flange to hold gasket in said gasket recess and defining a central pipe-receiving aperture and the diameter of said chamber being greater than the diameter of said aperture, insulating sleeve means extending axially-outwardly from said gasket and adapted to overlie said pipe and to pass through said pipe-receiving aperture with a clearance between the sleeve means and the surface of said nut means adjacent said aperture sufficient to permit rotation of said nut means relatively to said sleeve means and [with a clearance between the sleeve means and the surface of

said nut means adjacent said aperture] to prevent electrically-conductive contact between the pipe and said nut means, a tubular sleeve member of hard insulating material disposed in said chamber with a clearance between the outer surface of said member and said generally cylindrical wall surface, said sleeve member being internally threaded for threaded engagement with the end of said threaded pipe, said sleeve member being colinear with said gasket and in [lateral] axial engagement with the forward [portion] surface of said gasket [extending into said chamber], whereby outward axial movement of said sleeve member will exert [a lateral] an axial thrust upon said gasket, the external diameter of said hard insulating sleeve member being greater than the diameter of said aperture in said nut means, and means to resist extrusion of said gasket through said aperture.

25,048

OUTBOARD MOTOR TILT RELEASE

Richard P. Hulsebus, Waukegan, Ill., assignor to Outboard Marine Corporation, a corporation of Delaware
Original No. 2,911,938, dated Nov. 10, 1959, Ser. No. 526,232, Aug. 3, 1955. Application for reissue June 21, 1960, Ser. No. 37,820
9 Claims. (Cl. 115—17)



1. In an outboard motor, the combination with a bracket member and a propulsion unit member pivoted to the bracket member for tilting movement, of a detent hook adjustably mounted on one of said members, and a keeper mounted on the other of said members with which the hook is normally engaged, a spring biasing said hook into such engagement, said hook and keeper having complementary camming surfaces mutually releasable when said members are subjected to relative pivotal pressure in excess of the predetermined value and sufficient to displace the detent against the biasing means, a detent releasing lever connected with the detent and a remote operating handle connected with said lever for the transmission of motion therethrough to effect detent release.

PLANT PATENTS

GRANTED OCTOBER 3, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,095

ROSE PLANT

Pedro Dot, Barcelona, Spain, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania

Filed Nov. 22, 1960, Ser. No. 71,109

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the miniature class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a miniature plant habit, miniature flower size, perfectly formed blooms, and a distinctive general

color tonality of the flowers ranging from Rhodamine Red to Spirea Red.

2,096

ROSE PLANT

Dennison H. Morey, Jr., Pleasanton, Calif., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Nov. 25, 1960, Ser. No. 71,850

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described,

characterized particularly as to novelty by the unique combination of a distinctive and attractive Spectrum Red general color tonality of the flowers, a cupped flower form, strong tea fragrance of the flowers, and an unusual and peculiar arrangement of the sepals on the half-open buds, wherein one sepal only is branched and the others are smooth.

2,897

ROSE PLANT

Dennison H. Morey, Jr., Pleasanton, Calif., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Nov. 25, 1960, Ser. No. 71,851

1 Claim. (Cl. 47-61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a habit of growth and foliage generally resembling those of the variety "Peace" (Plant Patent No. 591), but with the plants being not as tall as those

of the variety "Peace," a free blooming habit, quick recurrence of bloom, and a distinctive Empire Yellow general color tonality of the flowers, with the upper half of the flower petals being Martius Yellow and being lightly overcast with Shrimp Pink on the outer edges of the petals.

2,898

ROSE PLANT

William Zombory and Sophia B. Zombory, Detroit, Mich., assignors to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Dec. 5, 1960, Ser. No. 73,942

1 Claim. (Cl. 47-61)

A new and distinct variety of rose plant of the climber class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a pillar type of growth, a recurrent blooming habit on the new wood throughout the entire growing season, a free blooming habit, and a distinctive Eosine Pink general color tonality of the flowers comparable to that of the variety "Fashion" (Plant Patent No. 789).

PATENTS

GRANTED OCTOBER 3, 1961

GENERAL AND MECHANICAL

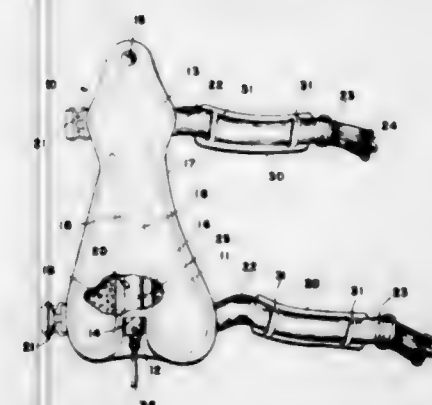
3,002,192

ARCHER'S ARM GUARD

Stanley N. Brower, 558 Nagle St., Ridgewood, N.J.

Filed Jan. 13, 1959, Ser. No. 786,585

7 Claims. (Cl. 2-16)



1. An arm guard for archers comprising, in combination, a pair of elongated mating coverings of wear-resistant material of a length and width to substantially cover the forearm of the archer, said coverings secured together along a pair of laterally spaced parallel longitudinal lines defining a longitudinally extending pocket; an elongated substantially flat strip of resilient metal within said pocket and acting as a stiffening reinforcement for the archer's arm guard; and tie means attached to the sides of the arm guard to secure the latter on an archer's arm.

3,002,193

GARMENT CONSTRUCTION

Edwin H. Brinkman, Phoenix, Ariz., assignor to Lenore Garments Incorporated, a corporation of Illinois

Filed Nov. 3, 1958, Ser. No. 771,399

2 Claims. (Cl. 2-72)



2. In a garment construction, a waist, panties secured thereto, a waistband depending from said waist and overlying the entire upper edge of said panties, and a skirt, the upper edge thereof having exterior buttons and said waistband having exterior buttonholes to receive them for supporting the skirt relative to the waist and its waistband, said panties having buttons underlying said waistband to coact with said exterior buttonholes of said waistband to produce substantially the same waistband appearance of said garment when said skirt is removed.

3,002,194

COLLAPSIBLE BABY POT

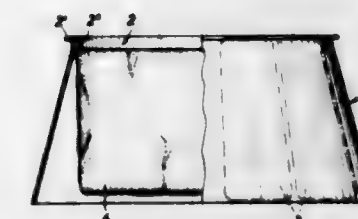
Suzanne Bedetti, née Wuest, 27 Biserstrasse,

St. Gallen, Switzerland

Filed Jan. 28, 1960, Ser. No. 5,176

Claims priority, application Switzerland Jan. 30, 1959

4 Claims. (Cl. 4-111)



1. A collapsible baby pot comprising an annular support having the shape of a circumferentially closed truncated cone, said support being sufficiently rigid in the direction of a generatrix of the cone to resist buckling under the weight of a user and being flexible for forming folds parallel to a generatrix, a seat ring removably mounted on the upper edge of the smaller diameter of said cone-shaped annular support, and a container bag of flexible material depending from said upper edge and from said seat ring, said support being foldable to form a flat structure when the pot is not in use.

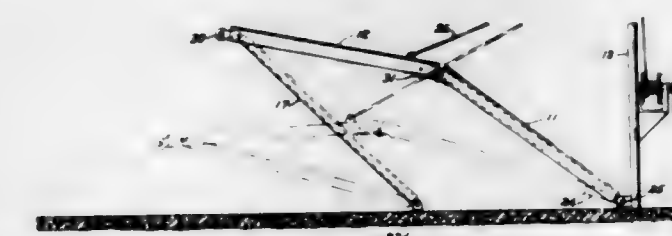
3,002,195

SWIMMING POOL COVER AND SHADE

Jack T. Prudek, 5538 Crescent, Fresno, Calif.

Filed Nov. 28, 1958, Ser. No. 776,950

4 Claims. (Cl. 4-172)

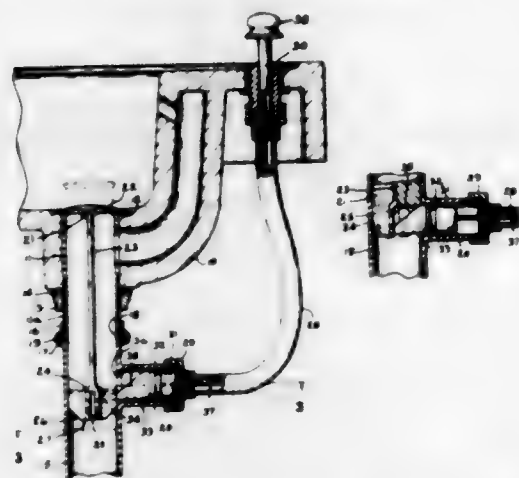


1. A combination pool cover and pool-side shade comprising two panels, a hinged connection between one of said panels and a deck beside the pool whereby said one panel may stand as a wall spaced from an edge of the pool, a hinged connection between the upper edge of said one panel when standing and an edge of the second panel whereby the second panel may extend as a roof toward the pool, substantially vertical telescoping members pivoted to the deck beside the pool and to the roof panel adjacent the edge nearest the pool, means to lower the panels to a coplanar position on the pool deck whereby said telescoping members will be substantially parallel to the deck, and means to move the lowered panels to a pool covering position with said telescoping members in extended condition.

3,002,196

POP-UP DRAIN VALVE

Charles W. Mackey, Jr., Cheshire, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Sept. 29, 1959, Ser. No. 843,257
3 Claims. (Cl. 4-200)



2. In a drain valve mechanism, a tubular drain pipe adapted to be connected to a lavatory bowl or the like, said drain pipe having a valve seat at its upper end, a drain plug having a head for closing said valve seat and a series of uninterrupted radial ribs integrally connected to the underside of said plug head and extending a substantial distance into said drain pipe with their longitudinal outer edges in slidable engagement throughout their length with the inner wall of said drain pipe, the lower portion of each of said ribs having a recess formed upwardly therein and opening outwardly through its longitudinal outer edges and through its bottom edges, a lateral extension connected to said drain pipe at a point adjacent the lower end of said drain plug, a plunger slidably operated in said extension, said plunger having a cam blade movable laterally within said drain pipe in slidable engagement in one of said rib recesses for elevating and retracting said drain valve, means for maintaining said blade in vertical position in said lateral extension, and means for operating said plunger from a remote position.

3,002,197

DISPENSING MECHANISM FOR LIQUID DEODORANTS

Paul C. Tillman, Los Angeles, Calif., assignor to Wayne H. Baker, Los Angeles, Calif.
Filed Dec. 14, 1959, Ser. No. 859,442
3 Claims. (Cl. 4-225)



2. A dispensing mechanism for liquid deodorants for toilets and urinals including a flush pipe, an elbow fixedly

mounted in said flush pipe, said elbow having a small hole at the upper end thereof, and an outlet port at the lower end thereof, a deodorant container, a pipe extending from the deodorant container to said elbow means attaching the pipe to the elbow, and a vent pipe extending into said supply pipe, the vent pipe being positioned adjacent the deodorant container, said deodorant supply pipe extending into the deodorant container, and said supply pipe having a small metering orifice therein, said metering orifice being positioned within the deodorant container.

3,002,198

SOFA BED

John Kaiser, Jr., 2234 S. 61st Court, Cicero, Ill.
Filed Feb. 9, 1959, Ser. No. 792,159
2 Claims. (Cl. 5-41)

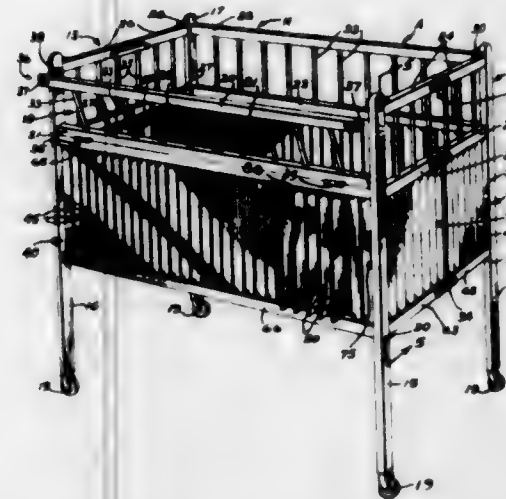


1. A folding sofa bed or the like characterized by being adapted to be positioned with its back close to a wall or the like, said bed comprising: a frame having a front, a back and two spaced ends; a pair of parallel tracks, each of said tracks being attached to the inner side of an end respectively, the forwardly end of said tracks being adjacent said front, the rearwardly end of said tracks being spaced from said back and being at a lower elevation than said forwardly end, said forwardly end having a generally vertical opening therein; a first cushion supporting member of a length to be received between said ends, said member having leg means on the outboard side thereof and a roller on each end thereof adjacent the inboard side thereof, each of said rollers being positioned to ride in one of said tracks respectively; releasable latch means on said member adjacent the outboard side including a downwardly projecting pin receivable in said opening, a second cushion supporting member of a length to be received between said ends of the frame, the outboard side of said second member being contiguous to inboard side of said first member; hinge means connecting said contiguous sides of said members; a third cushion supporting member of a length to be received between said ends of said frame, the outboard side of said third member being contiguous with the inboard side of said second member, said third member being pivotally connected to said frame at points along the ends of said third member and spaced a substantial distance from the outboard side thereof; supporting means associated with said frame and said third member to support said third member generally horizontal when said outboard side is pivoted to a position adjacent said front, including a downwardly projecting pin receivable in said opening; cushion means on said members; whereby said members may be moved from a first position at which the cushion means on said third member is adjacent said back in a generally vertical position, the cushion means on said second member forms the back of a seat and the cushion means on said first member forms the seat of the sofa, to a second position at which the cushion means of all of said members are generally horizontal to form a bed.

3,002,199

BED EQUIPPED WITH GUARD MEANS

Mary Virginia Galloway, 9220 1/2 Beverly Blvd., Beverly Hills, Calif.
Filed Oct. 16, 1959, Ser. No. 846,936
3 Claims. (Cl. 5-100)

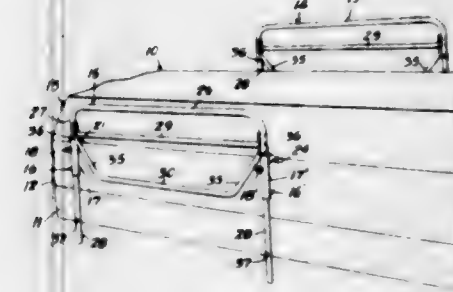


1. A bed including upwardly-extending corner posts, side and end bed panel portions carried by the upper parts of said corner posts; and guard means including a plurality of guard portions carried by said corner posts below said bed panel portions, said guard portions including guard rails, a bank of substantially parallel louvers, with the longitudinal axes of said louvers extending upwardly, and pivot means for each of said louvers, carried by said guard rails and said louvers, pivoting each of said louvers on its longitudinal axis for individual manual rotation of each louver, whereby a selected louver of a guard portion may be manually manipulated to open, closed or partly closed positions independently of all others of the louvers of said guard portion.

3,002,200

ADJUSTABLE GUARD FRAME FOR BEDS AND THE LIKE

Charles E. Marcott, 134 Cabot Road, Manasquan, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,437
3 Claims. (Cl. 5-331)

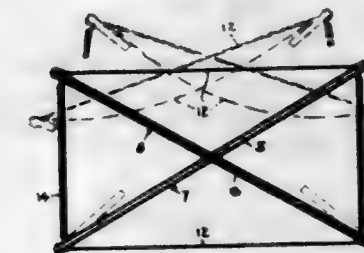


1. A device of the character described comprising a pair of U-shaped frames having widely spaced side members, a pair of spreaders, each spreader comprising telescoping horizontal tubes having vertical tubular posts at ends thereof for detachable and adjustable engagement with the side members of said frames in coupling and spacing said pair of frames, the side members of the frames being movable into different vertical positions with respect to the posts at end portions of said spreaders, the horizontal tubes of said spreaders being fixed to the posts adjacent and below the upper ends of the posts, and said side members and posts having interengaging means for retaining said frames in said different positions.

3,002,201

HEAD REST

Milton T. Nelson, 402 NE. 93rd St., and Edwin E. Tillman, 11401 NE. 3rd Ave., both of Miami, Fla.
Filed Jan. 28, 1959, Ser. No. 789,555
3 Claims. (Cl. 5-337)

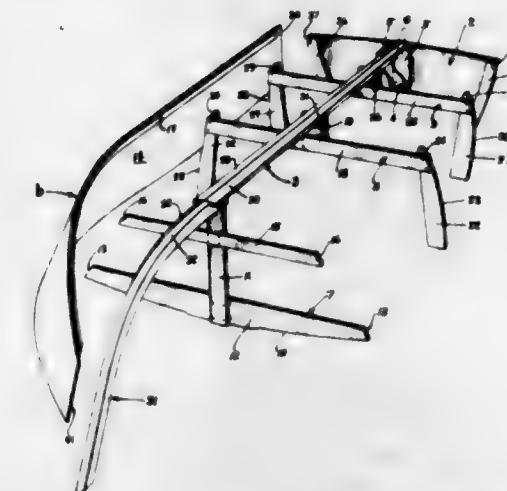


1. A flexible and rockable head rest for use by persons in a reclining position, comprising a pair of rectangular open frames having side rails and connecting head rails, one frame having its side rails offset and whereby to overlap the other frame, the frames being non-pivotal and crossed with respect to each other and unconnected at their points of crossing, the head rails all being parallel and co-extensive, upper and lower flexible fabric panels connected to the frames and with each panel connected to a head rail of each frame at its ends and whereby the panels are parallel when the frames are in crossed unconnected relation, biasing means connected between adjacent end rails and with the biasing means moving the frames to the crossed relation with respect to each other and whereby to extend the panels in taut relation to the frames, the head rest being also foldable to dispose the frames in substantial parallelism, the head rest being also invertible to dispose either of the panels in a head supporting position.

3,002,202

BOAT STRUCTURES

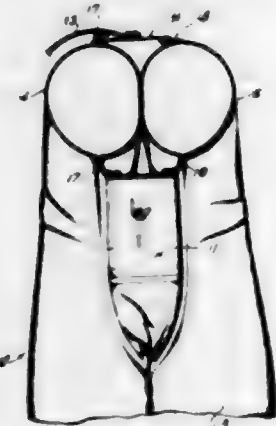
Rennold J. Luger, Jr., 1711 W. 84th St., and Ormond L. Luger, 9612 Oakland Ave. S., both of Minneapolis, Minn.
Filed Mar. 31, 1958, Ser. No. 725,093
3 Claims. (Cl. 9-6)



1. In a boat structure, a skeleton supporting frame comprising in combination, a keelson, a transom, and a plurality of independent cross frame assemblies each having a substantially horizontal cross arm spaced throughout its length substantially above said keelson and having upstanding panel-contouring terminal edges and also a depending central rigidly secured strut support, the strut supports of said assemblies being secured to the keelson in fixed spaced relation lengthwise thereof, a pair of side panels, and means at the opposite ends of the transom engageable with means on the rear ends of said panels for accurately locating the side panels on the supporting frame, thereby to facilitate subsequent

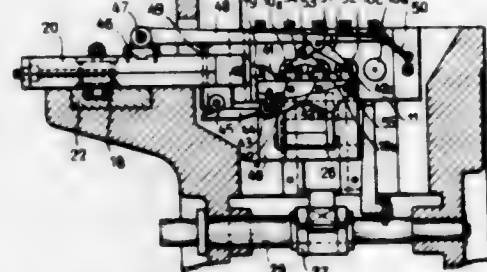
assembly of the parts and means for securing intermediate portions of said side panels in abutment with the respective upstanding terminal edges of said cross frame assemblies.

3,002,203
INFLATABLE LIFE PRESERVER
Harold J. Moran, Trenton, N.J., assignor to Switlik Parachute Company, Inc., Trenton, N.J.
Filed Nov. 18, 1957, Ser. No. 697,252
2 Claims. (Cl. 9—338)



2. A life preserver in the form of a vest comprising a plurality of gas cells having central openings to provide a neck portion shaped to fit around the neck of the wearer and a body portion depending from the neck portion to overlie the front of the body of the wearer, each of said cells comprising superimposed layers of a flexible impervious material having the adjacent faces at their edges sealed to each other to provide a continuous marginal fin extending around its inner and outer edges, means for supplying gas to inflate the cells, the plurality of cells being arranged in superimposed relationship, a neck band of flexible material and of substantial width extending around the central opening with its opposite edges overlying and attached to the marginal fins of adjacent cells around substantially the entire central opening to provide a smooth and substantially flat web adapted to conform comfortably to the neck of the wearer and to control the expansion of the inner edges of the cells, restraining band means attached adjacent the outer edges of the marginal fins at the outer periphery of the cells to control the expansion of the cells at the outer edges, and a harness for attaching the life preserver to the body comprising a strap connected to the portion overlying the front of the body, a strap connected to the rear of the neck portion of said preserver, and means connecting the opposite ends of the straps to the body of the wearer.

3,002,204
MULTIPLE STATION FORGING MACHINE WITH WORK TRANSFER MEANS
Giuseppe Cerutti, 4 Via Cagliero, Milan, Italy
Filed Dec. 29, 1959, Ser. No. 862,632
Claims priority, application Italy July 24, 1959
2 Claims. (Cl. 10—12)



1. In a bolt pressing machine comprising a row of four adjacent successive working stations extending trans-

versely of the machine, each station including a die and cooperating punch axially aligned therebetween, a frame, a slide mounting for reciprocation in a longitudinal direction of said frame, a block adjustably mounted on the machine frame in front of one end of said slide spaced from the latter, said dies being carried by said block and said punches being carried by said slide and arranged in a common plane, a main driving shaft rotatably mounted in said frame transversely thereof, a crank on said shaft, a connecting rod between said crank and said slide for reciprocating the latter, a first carriage slidable in vertical guides provided on the frame beneath said block carrying the dies, a second carriage slidable in horizontal guides provided on said first carriage, three upper-shaped projections on said second carriage, said projections extending upwardly and being arranged at the same level and laterally spaced therebetween by an extent equal to the spacing between the dies, means for transmitting motion from said driving shaft to said first and second carriage, the means for moving said second carriage comprising a longitudinally extending lateral slide arranged at one side of the frame having a longitudinal shaped groove cut at its upper face, an auxiliary cross slide mounted for reciprocation in a transverse guide cut in said lateral slide, a roller rotatable about a vertical axis engaging said shaped groove fast with said auxiliary slide, whereby the latter is reciprocated in said transverse guide on said lateral slide upon reciprocation of the latter, a connecting rod pivoted to said lateral slide, and a crank rotated by a shaft driven from said main driving shaft having the other end of said connecting rod pivoted thereto, a pivot parallel with said dies and punches on the top of said cross slide, an arm hinged by one end to said pivot arranged above the plane in which said dies and said punches are situated, a first beam hinged to said arm intermediate its ends, a second beam hinged to one end of said first beam, said beams being oscillatable, in the same plane as said arm, the ends of said second beam and the other end of said first beam being flattened, a spring acting on the free end of said arm urging it downwardly, a push member mounted slidably in a vertical guide bored in said cross slide abutting said arm by its upper end, a lever hinged at a point intermediate its ends to said cross slide abutting by its one end the lower end of said push member, the other end of said lever being pivoted to said second carriage provided with said upper V-shaped projections, thereby connecting said cross slide and said second carriage and urging said arm upwardly upon displacement of said first carriage downwardly and vice-versa, the parts being so arranged that the flattened ends of said first and second beam are constantly arranged above said V-shaped projections and form with the latter a pincer unit capable of catching the bolts being made and transferring them from one station to the next station, means receiving motion from said main driving shaft being also provided for reciprocating said first carriage.

3,002,205
PIPE THREADING DIE SUPPORT HAVING LIMITED PIVOTAL MOVEMENT ON FRAME CARRIED SLEEVE
Walter Buyer, North Olmsted, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio, a corporation of Ohio
Filed Sept. 30, 1958, Ser. No. 764,343
1 Claim. (Cl. 10—89)

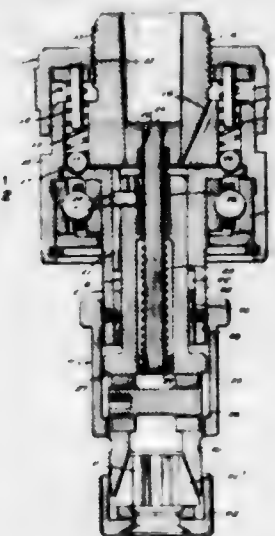
A support for a portable pipe working tool comprising a sleeve having an upstanding leg, and an arm member which is bifurcated at one end and presents a recess thereat which receives said upstanding leg on the sleeve member, said bifurcated end of the arm member being pivotally connected to said upstanding leg on the sleeve member for relative pivotal movement between said mem-

bers perpendicular to the axis of said sleeve member and having a flat surface spaced from and opposite the pivot point along the lower edge, and said arm member having an annular portion at its opposite end for attachment



to the pipe working tool, said sleeve member presenting a flat upwardly-facing surface which is normally spaced below the lower edge of the bifurcated end of the arm member to limit said relative pivotal movement between the arm member and the sleeve member.

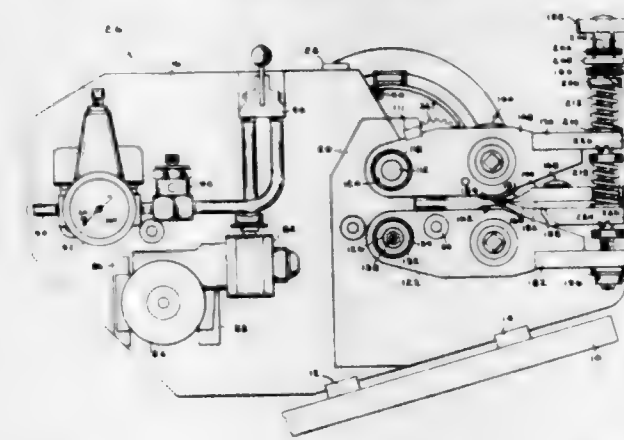
3,002,206
TAPPING ATTACHMENT WITH ADJUSTABLE YIELDABLE CLUTCH MEANS
Allan S. Johnson, Newport Beach, Calif., assignor to Tapmatic Corporation, Costa Mesa, Calif., a corporation of California
Filed Aug. 25, 1958, Ser. No. 756,831
2 Claims. (Cl. 10—135)



1. In a tapping attachment having a first member adapted to be secured to a rotatable spindle for rotation therewith, a second member having a tool-holding means mounted on one end thereof and a clutch means mounted on the opposite end thereof for engaging the second member to the first member for rotation therewith, the improvement which comprises an adjustable means for engaging said clutch means to said first member for rotation therewith, said adjustable means limiting the torque force applied by said first member to said second member through said clutch means to a selected maximum torque force, means slidably mounting the second member on said first member and in and to said clutch means for relative sliding movement therebetween thereby to limit the force applied to the tool to rotary forces, said means for slidably mounting the second member on said first member and in and to said clutch means comprising an axle dependently mounted for axial rotation with said first member about the same axis of rotation, an annular clutch means rotatively and dependently sustained from said first member in end abutting relation thereto to rotate about the axis of rotation of said axle in spaced relation thereto, a substantially tubular second member, the inside and outside diameters thereof permitting the said tubular second member to be seated in the space gap between the clutch means and axle, a plurality of longitudinally extending roller trackways on the inner face of said clutch means, a plurality of rollers mounted at one

end to said tubular second member adjacent the upper end thereof with the roller element thereof seated in and engaging said roller trackways, spaced-apart slide bearings maintaining the axle, tubular second member and clutch means in concentric spaced relation, a strong compression spring means limiting the movement of said tubular second member inwardly along said trackways, a weaker compression spring means for urging the tubular second member inwardly to said limited position, and an annular trackway connecting the bottom end of said trackways.

3,002,207
SOLE SPLITTING MACHINE
Frank B. Sweeney, Rochester, N.Y., assignor to Endicott Johnson Corporation, Endicott, N.Y., a corporation of New York
Filed Aug. 13, 1958, Ser. No. 754,801
7 Claims. (Cl. 12—17)



1. In a thickness reducing machine for soles and the like, including a member having a cutting edge cooperable to reduce one of a plurality of stacked articles to be reduced, which machine further includes a power driven means for feeding said one of said articles to said member such that said one of said articles is reduced by said cutting edge, said power driven means including a differential transmission gear train and two rollers driven by said train for presenting automatically adjustable surface speeds upon engagement of said one of said articles.

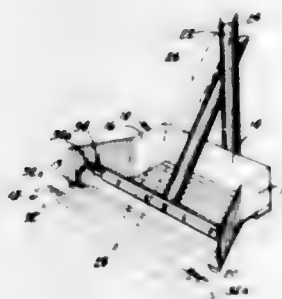
3,002,208
MACHINES FOR APPLYING PRESSURE TO SHOE BOTTOMS
Robert L. Bradley and Hanford R. Carr, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Dec. 7, 1959, Ser. No. 857,598
7 Claims. (Cl. 12—33)



1. A cement sole attaching machine having a main frame, a shoe supporting pad, toe and heel abutments

for a last supported shoe, power operated means for raising the pad toward the abutments to force a sole against the shoe bottom while the shoe and last engage the toe and heel abutments, operator controlled means acting to initiate operation of the power operated means, and a vertically adjustable bracket by which the toe and heel abutments are mounted in the frame, in combination with means connected for operation with the operator controlled means for adjusting the bracket to bring the toe and heel abutments into engagement with the shoe and last and means for locking the bracket rigidly with relation to the frame regardless of the heightwise dimensions of the last on which the shoe is mounted.

3,002,209
CLEANING APPARATUS
William S. McKinstry, 1520 Waterbury Road,
Lakewood, Ohio
Filed June 26, 1959, Ser. No. 823,087
3 Claims. (Cl. 15-1)

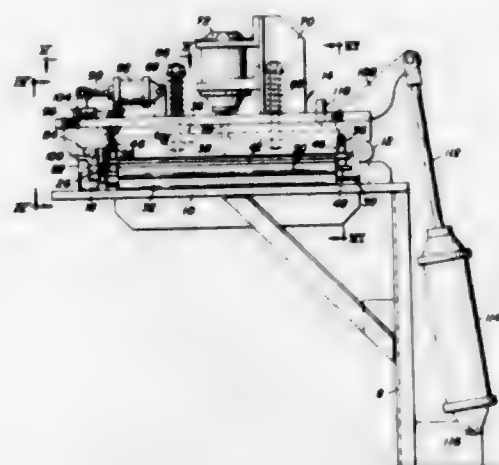


1. A waste cleaning water collection device comprising a receptacle having an open front end for receiving therein waste cleaning water urged thereinto by an associated handle operated squeegee device, said receptacle comprising side walls, a rear end wall and a bottom wall, said side walls diverging with respect to one another in a forward direction to provide a flared open front end on said receptacle, said flared end being adapted to receive the associated squeegee device therein for effective removal of waste cleaning water from the surface being cleaned, said divergent portions of said side walls providing abutments adapted for engagement with the outer end portions of the squeegee device upon movement of the latter into the flared opened end of the receptacle, to limit inward movement of the squeegee device with respect to the receptacle, said receptacle having an operating handle extending upwardly therefrom, said operating handle being off-set a predetermined amount laterally of the vertical longitudinal center plane of said receptacle and adapted for guiding coaction on its innermost side surface with the handle of the squeegee device, for ready alignment of the squeegee device with respect to the open front end of the receptacle, prior to movement of the squeegee device into the receptacle.

3,002,210
APPARATUS FOR WIPING A MOVING STRIP
Robert J. Gawne, Cuyahoga Heights Village, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 10, 1959, Ser. No. 858,618
6 Claims. (Cl. 15-102)

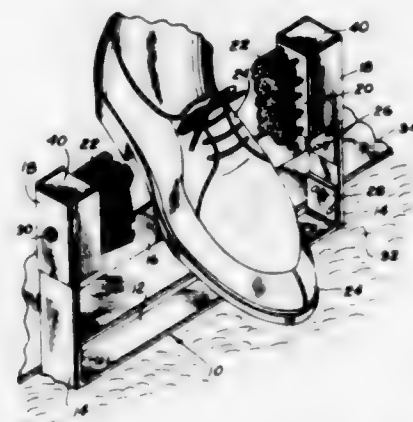
1. Apparatus for wiping a moving strip comprising a fixed frame assembly including a wipe material over which the strip passes, an upper frame assembly mounted on said fixed frame assembly for pivotal movement about an axis generally parallel to and at one side of the path of movement of said strip, said upper frame assembly including a box-shaped member open at its lower end, a platen within said box-shaped member, means biasing said platen upwardly within said box-

shaped member, a fluid cylinder mounted on said box-shaped member, a connection between said fluid cylinder and said platen to move it downwardly against said biasing means, a wipe material supported by said platen, a latch bar mounted on one of said frame assemblies, a latch arm mounted on the other of said frame assem-



blies, means for moving said upper frame assembly about its pivot, means operable by movement of said upper frame assembly to closed position to move said latch arm to locked position and to move said platen downwardly, and means for releasing said latch arm and raising said upper frame assembly to inoperative position.

3,002,211
COMBINATION FOOTGEAR BRUSH AND SCRAPER
Paul G. Mathes, Quincy, Ill., assignor to Trio Manufacturing Co., Griggsville, Ill., a corporation of Illinois
Filed Feb. 18, 1960, Ser. No. 9,486
3 Claims. (Cl. 15-112)



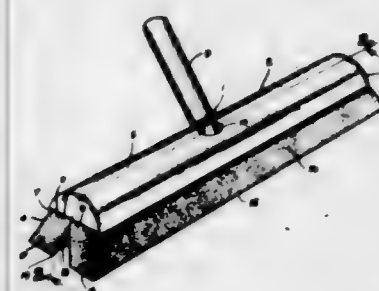
1. A footgear cleaner comprising a pair of elongate stakes each having a right angle bend facing toward each other at one end and bevelled to a point at the other end to permit said stakes to be driven into the earth, a brush mounted under each right angle bend with facing bristles, a bracket partially surrounding each stake adjacent each brush and arranged to clamp each brush to a respective stake without rotation, a U-shaped bar with its legs mounted vertically between said stakes whereby the base of the U serves as a horizontal support bridge and as a stop when said stakes are driven into the earth, and a substantially identical U-shaped bar with its legs mounted parallel to and between said stakes directly beneath and restraining rotation of said brushes when footgear is reciprocated upon its horizontal edge and between said brushes for cleaning.

3,002,212
INTERLOCKED STRIP BRUSH FOR ALL FILL MATERIALS
Ralph F. Tilgner, Ellicott City, Md., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed July 2, 1959, Ser. No. 824,568
5 Claims. (Cl. 15-182)



1. A rotary brush comprising a spirally wound channel backing, having side walls and double length fill material looped about a locking core extending longitudinally of the channel backing and being wound to conform to the turns of the spirally wound channel backing, said core having transverse teeth extending through openings found in the side walls of the channel backing and having the tips thereof clinched upon the side walls to hold the locking core against centrifugal force and to prevent spreading of said side walls.

3,002,213
SWEEPING DEVICE
Robert J. Lindstrom, % Zephyr Manufacturing Co., 400-410 W. 2nd St., Sedalia, Mo.
Filed Nov. 27, 1957, Ser. No. 699,258
1 Claim. (Cl. 15-244)



A cleaning device for sweeping dry surfaces comprising, an elongate rigid head member having a handle extending therefrom, said head member having opposed sides and ends and a bottom surface, a cleaning element having an upper face secured to said bottom surface of the head member, said cleaning element being resilient and composed of a block of elastic solidified synthetic resin foam having side and end faces sloping outwardly and downwardly from adjacent sides and ends of the bottom face of the head member, and a bottom work-engaging surface on said cleaning element with outer edges of said bottom work-engaging surface defining an area greater than the area of the bottom surface of the head member, the bottom surface of the cleaning element forming an acute angle with each of the side and end faces of the cleaning element with the lower edges thereof being outwardly from the respective adjacent sides and ends of the head member, said bottom surface of the cleaning element being in a single plane for normally engaging a flat surface to be cleaned, and an inverted V-shaped channel extending upwardly into the cleaning element from the bottom surface thereof, said inverted V-shaped channel being equally spaced from side faces of the cleaning element and extending lengthwise thereof and cooperating with said side faces to define downwardly diverging flexible blades having inner faces inclined relative to the adjacent side face of the cleaning element to provide a downward taper to said blades with a lesser width at the bottom face surfaces thereof, said sides, ends, inner faces and bottom

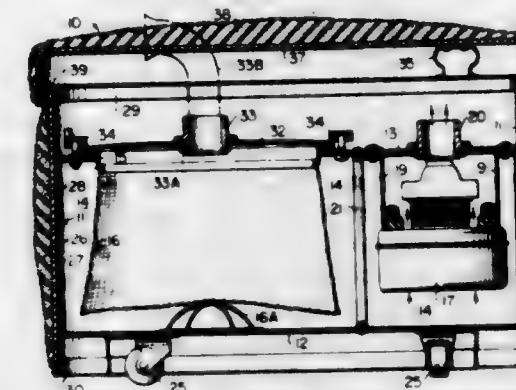
surface of the cleaning element having exposed cellular cavities with edges thereof being sweeping edges as the blades of the cleaning element are flexed during movement over surfaces being cleaned.

3,002,214
SUCTION FLOOR SCRUBBER
Don C. Krammes, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Dec. 17, 1959, Ser. No. 860,272
6 Claims. (Cl. 15-320)



1. A floor washer comprising a water pick-up suction nozzle, suction creating means, means connecting said suction creating means in fluid flow relationship to said nozzle, said connecting means including a water separator interiorly connected to said suction creating means, a propelling handle for said washer, said separator being mounted on said handle and having a top opening, a closure cap for said top opening pivoted to said separator operable to relieve the suction pressure therein and having an extension extending through an opening in said handle, means reciprocally mounted within said handle having a lost motion connection with said extension and constructed to positively close said closure cap.

3,002,215
CANISTER VACUUM CLEANER
Charles H. MacFarland, Rocky River, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 14, 1957, Ser. No. 696,359
7 Claims. (Cl. 15-327)

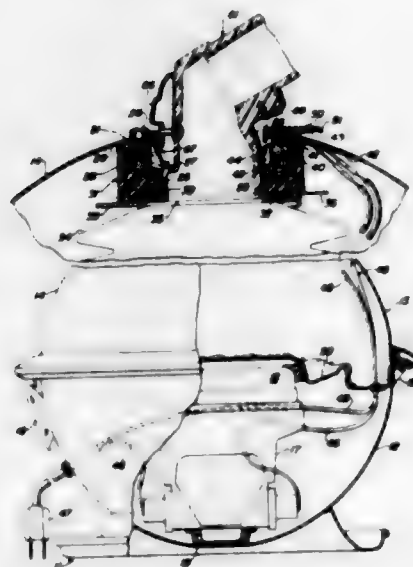


1. Hassock-contained vacuum cleaner means in which there is provided a hollow hassock and a removable hollow lid for the hassock, the hassock having exterior wall means comprising wall members which face on the exterior of the lidded hassock, said exterior wall means including said lid and also side walls, said side walls comprising a tube of substantially rigid material having an upper edge and a lower edge, upholstery material covering the exterior of

said tube, means for attaching said upholstery to said tube, the hassock also having interior wall means comprising wall members which do not face on the exterior of the lidded hassock, said interior wall means including at least a floor and a deck spaced above the floor and below the lid, said floor being above said lower edge of said tube to define a skirt portion of said tube, wheels supported on the underside of said floor and depending below said lower edge of said tube, a cavernous air-tight chamber included within the space enclosed by the side walls, floor and deck, the chamber being defined by air-tight wall means comprising partly of said exterior wall means and also comprising partly of said interior wall means, a well opening in the deck, a dust filter depending into the cavernous chamber from the well opening, motor-fan exhaust means ducted through a wall of the cavernous chamber which last-named wall is comprised by said interior wall means, the output side of said motor-fan exhaust means being vented to atmosphere at least when the hassock lid is removed.

3,002,216

ELECTRICAL CONTROL FOR SUCTION CLEANERS
Justice H. Beach, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Sept. 29, 1958, Ser. No. 763,875
3 Claims. (Cl. 15—327)



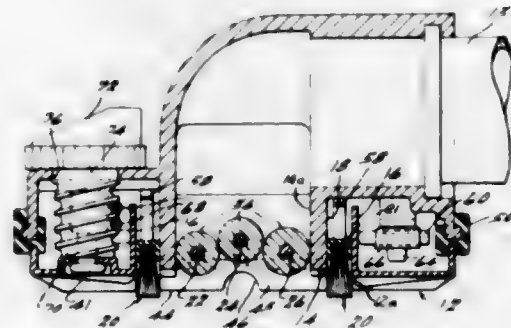
1. A suction cleaner comprising: a casing having an air inlet open at all times to atmosphere and an air outlet, a motor-fan unit in said casing for drawing air through said inlet into said casing and discharging air through said outlet, a hose having a nozzle at one end for cleaning a surface, a connector at the opposite end of said hose insertable in said open air inlet for drawing air through said hose into said casing and insertable in said outlet for discharging air through said hose, first contact means mounted on said casing at said inlet and connected to the motor of said motor-fan unit, first switch means for said first contact means movably mounted on said casing and movable to open and closed circuit positions to control operation of the motor, said first switch means when in closed circuit position arranged with respect to said air inlet to prevent insertion of said connector whereby air passes directly through said open air inlet into said casing and is discharged through said outlet, and said first switch means when moved to open circuit position arranged with respect to said air inlet to permit insertion of said hose connector into said inlet, and second contact means mounted on said connector and engageable with said first contact means when said hose connector is inserted in said air inlet, and second switch means on said hose and electrically connected with

said second contact means to open and close the circuit to said motor when said hose is attached to said air inlet.

3,002,217

VACUUM CLEANER NOZZLE

Charles B. Smithson, Bloomington, and Robert A. McCullum, Normal, Ill., assignors, by mesne assignments, to National Union Electric Corporation, Stamford, Conn., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,600
12 Claims. (Cl. 15—382)

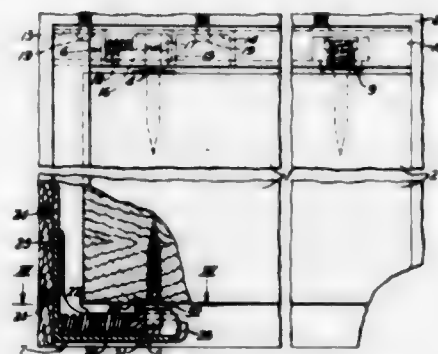


6. A rug cleaning nozzle comprising a hollow body having a bottom face adapted for presentation to the surface of a rug to be cleaned and provided with an elongated air inlet mouth through which dirt laden air flows into the body when suction is applied to the interior thereof, a plurality of flexible springs disposed within and spanning the length of said mouth with the ends of said springs supported by said body at the ends of the mouth, means on said springs spanning said mouth and disposed when at rest to substantially block the flow of air into said body through said mouth and so that such means must be displaced from their at rest position to permit substantial flow of air through said mouth into said body during operation of said nozzle, said means being constructed and arranged so as to be vibrated by and in response to the flow of air through said mouth into said body when suction is applied to the interior thereof, at least some of said means forming beaters and being disposed so as when vibrated to beat a rug presented to the mouth of said nozzle and other of said means offset inwardly from and overlapping said beating means.

3,002,218

FOLDING DOOR MOUNTING

McFerrell Hollansworth, Pittsburgh, Pa., assignor to McKinney Manufacturing Company, a corporation of Pennsylvania
Filed Jan. 22, 1960, Ser. No. 4,032
5 Claims. (Cl. 16—151)



1. The combination with a door having a pivot pin projecting from its top and another pivot pin projecting from its bottom near one edge, of bearings mounted above and at the bottom of the door slidably and rotatably receiving said pins, the bottom bearing having

a circular recess in its top, and a thrust collar encircling the bottom pin and carried thereby below the door, said collar fitting in said recess in engagement with the bottom thereof to support the door, the top of the door being spaced from the top bearing a distance greater than the depth of said recess but less than the length of the bottom pin below the collar, whereby the collar can be lifted out of the recess, and the side wall of the bottom bearing farthest from said door edge being provided with a slot therethrough to permit the bottom pin to be moved laterally out of the bearing when the door raises the bottom pin in its bearings far enough to remove said collar from said recess.

3,002,219

METHOD OF AND APPARATUS FOR PICKING FOWL

Julien A. Bried, Berkeley, Calif., assignor to Honolulu Oil Corporation, a corporation of Delaware
Filed Jan. 10, 1957, Ser. No. 633,437
25 Claims. (Cl. 17—11.1)



1. The method of treating fowls for defeathering which comprises flexibly suspending the fowls each from an extremity of the fowl for moving along in a row above a supporting path below the fowl arranged to take most of their weight to substantially relieve their suspended weight, to thereby maintain the bodies of the fowl free for tumbling about substantially in all directions on said supporting path as they travel along under partial suspension, while mechanically subjecting the fowls to yielding engagement of rapidly moving flexible frictional feather engaging finger means applied in a manner to so tumble the fowls bodily about on said supporting path to expose all feathered parts to the action of the rapidly moving finger means while moving the fowls along on said path.

11. Apparatus for the mechanical defeathering of fowl comprising the combination of traveling carrier means, provided with means flexibly suspending a row of fowls below it, each from an extremity of the fowl, means forming a fowl supporting path extending along below the row of suspended fowls substantially in line therewith arranged to support most of the weight of the fowls to substantially relieve their weight from their carrier suspension and maintain their bodies free for tumbling about as they travel along, said supporting path including an assemblage of fast moving flexible frictional feather engaging finger means movable along said path arranged to engage and tumble the so suspended and supported fowls bodily about in a manner to expose all feathered parts of the fowl to the action of said finger means, including under and over the wings and between the legs, as the fowls move along on said path under their partial carrier suspension, and power means for rapidly moving said finger means.

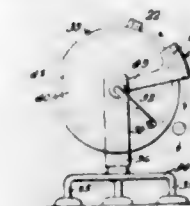
3,002,220

MEAT BALL MAKER

George A. Rikhs, Rte. 2, Box 160, Pueblo, Colo.
Filed July 16, 1959, Ser. No. 826,167
1 Claim. (Cl. 17—32)

A device of the character described comprising a horizontally disposed base, support members depending from said base, a standard extending upwardly from said base, a crank embodying a shaft portion projecting through

said standard, said crank embodying a manually operable handle portion, a wheel on said shaft portion, said wheel having a continuous semi-circular groove in its outer periphery, an L-shaped bar embodying a first portion

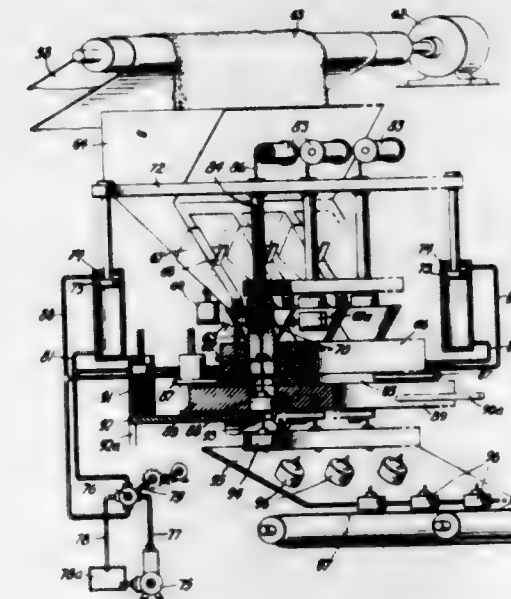


connected to said standard, said bar further embodying a right angularly arranged second portion which has a semi-circular recess for coacting with said groove to define a circular opening, whereby material which emerges from the opening will have a spherical shape.

3,002,221

METHOD AND APPARATUS FOR THE MANUFACTURE OF CANDLES

Arthur Wright, 68 Lookout Road, Mountain Lakes, N.J.
Filed May 19, 1954, Ser. No. 430,900
15 Claims. (Cl. 18—1)



6. Apparatus for making wax candles which comprises a mold for a candle body, means for holding a wick stationary within said mold and longitudinally centered with respect to said mold, means for introducing a friable mass of wax particles into said mold disposed about said wick and means for compacting the friable mass of wax particles within said mold longitudinally with respect to said mold and with respect to said wick while said wick is stationary within said mold to form a candle body composed of at least partially coalesced wax particles disposed about said wick in bonded relation thereto.

3,002,222

DECURLING APPARATUS

Luther E. Severson, Toledo, Ohio, assignor, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed June 30, 1958, Ser. No. 745,523
13 Claims. (Cl. 18—1)

1. A decurling device for a continuous length of plastic sheet material comprising a heater, a roll for advancing the sheet past the heater, means for driving the roll, feed means operable intermittently to pull the sheet forwardly, a floating roll about which the sheet

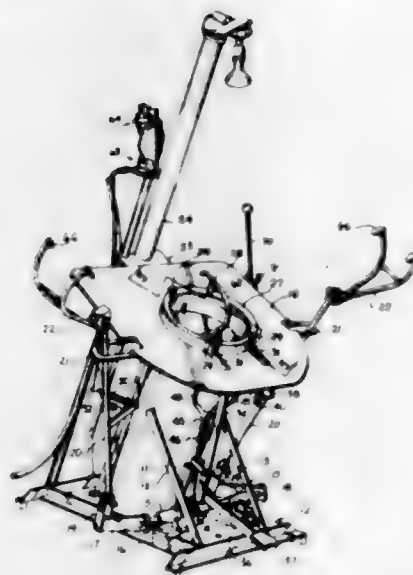
passes and adapted to rise and fall according to the action of the feed means, and means responsive to the



rising and falling movement of said floating roll for controlling said driving means.

3,002,223

APPARATUS FOR HANDLING CURING TUBES
Vaughn Rawls, Lima, Ohio, assignor to Rawls Brothers Company, Lima, Ohio, a corporation of Ohio
Filed Apr. 20, 1959, Ser. No. 807,690
4 Claims. (Cl. 18—2)

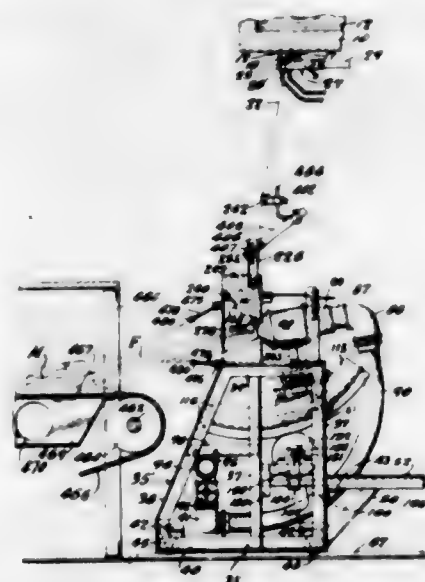


1. Apparatus for removing a curing tube from a tire casing comprising, a generally planar casing support table, said table being inclined upwardly at its rear side, and lying in a generally horizontal attitude, a tubular chamber having an open upper end at the general center of said table with the axis of said chamber substantially normal to the plane of said table, a rim circumscribing the open end of said chamber and extending above the plane of said table, catch means for retaining a casing on said table with its lower bead circumjacent the open end of said chamber, said catch means comprising at least one outwardly directed catch at the upper side of said rim and at least one outwardly directed catch at the lower side of said rim, at least one of said catches being movable radially of said rim for engagement with the bead of said casing, means for moving said movable catch tightly into engagement with said bead, a clamp for retaining said bead in said movable catch, axially movable means engageable with the upper bead of said casing, power mechanism for moving said means axially for separating the beads of said casing, a tube hook having an outwardly extending bar bent downwardly at its outer end, and power means for moving said hook

axially of said tire from an upper position in which said hook extends through the beads of a casing on said table and is adapted to engage over the exterior of a tube that is partially removed radially inwardly between said beads of said casing and a second position at the bottom of said tubular chamber.

3,002,224

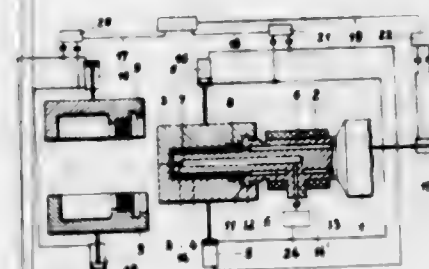
APPARATUS FOR PRODUCING FIBERS
Charles J. Stalego and Harold E. Leaman, Newark, Ohio, assignors to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Filed July 22, 1955, Ser. No. 523,753
3 Claims. (Cl. 18—2.5)



1. Apparatus for forming fibers from heat-softenable mineral material including, in combination, feeder means for flowing groups of streams of fiber forming mineral material, a frame disposed beneath the stream feeding means, burner means providing a plurality of walled combustion chambers arranged in juxtaposed, transversely disposed relation, means for conveying combustible mixture to said combustion chambers, said mixture adapted to be substantially completely burned within said chambers, restricted orifice means formed in the front wall of each of the burners through which the burned gases are discharged as a high velocity sheet-like blast, arcuately shaped track means mounted upon said frame, the curvature of the track means being generated about an axis forwardly and above the orifice regions of said burners, a carriage mounted upon said arcuately shaped track means, drive means for adjusting the position of said carriage in a curved path provided by the arcuately shaped track means, means individual to each burner mounting the burners on said carriage, each of said burner mounting means being individually adjustable for rotating each burner about a vertical axis and for limited tilting movement thereof with respect to the carriage, means carried by the frame for attenuating the groups of streams to groups of solidified primary filaments, said means comprising pairs of filament engaging rolls, a pair of rolls being disposed above the orifice region of each of the burners, a rotatable shaft for driving the pairs of rolls, a guide means for each group of primary filaments arranged to guide the filaments of the groups into the gaseous blasts emanating from the combustion chambers whereby the heat of the gases of the blasts softens the extremities of the advancing primary filaments and the velocity of the gases of the blasts attenuates the softened extremities to fine filaments, and a foraminous endless conveyor having its upper flight moving in the general direction of flow of the gases of the blasts upon which the attenuated fibers are collected.

3,002,225

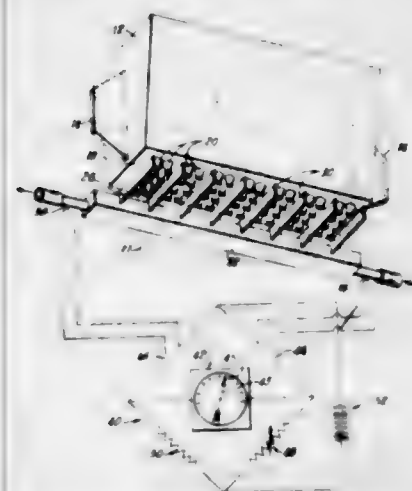
APPARATUS FOR FORMING HOLLOW PLASTIC ARTICLES HAVING AN OPEN NECK PORTION BY INJECTION MOLDING
Herbert Goller, Nurnberg, Bavaria, Germany, assignor to Ankerwerk Gebr. Goller, Nurnberg, Germany, a firm
Filed Apr. 20, 1959, Ser. No. 831,442
Claims priority, application Germany Apr. 26, 1958
3 Claims. (Cl. 18—5)



3. In an apparatus for forming hollow plastic articles having an open neck portion wherein a parison is first formed in an injection mold and the parison is then blown into the finished hollow article in a blow mold, the improvement which comprises in combination a movable plasticizing cylinder, means for axially reciprocating said cylinder, an injection nozzle unit fixed axially of said cylinder upon one end thereof, a nozzle mouth formed in said nozzle unit, conduit means communicating said mouth with said cylinder, an extension fixed upon said nozzle unit so as to extend axially of said unit beyond said mouth whereby said extension acts as a core during production of a parison from plastic material ejected from said mouth and passage means within said extension for feeding pressure fluid out the free end of the extension to blow plastic material surrounding the extension into a final shape.

3,002,226

METHOD AND APPARATUS FOR CONTROLLING FORMATION OF FIBERS BY CALORIMETRY
William F. Warthen, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,451
17 Claims. (Cl. 18—8)

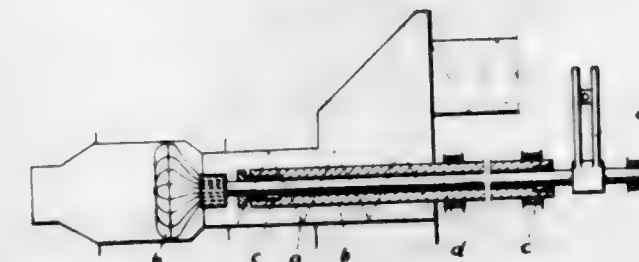


16. Apparatus for determining variations in size of filaments attenuated from streams of heat-softened mineral material including, in combination, a feeder provided with a plurality of orifices through which flow streams of the material, means for attenuating the streams to filaments, heat absorbing fins disposed adjacent the streams, a manifold supporting the fins formed with a passage adapted to accommodate a circulating heat absorbing fluid, thermistors arranged at the inlet and outlet of the passage adapted to be influenced by heat in the

heat absorbing fluid, and an indicator responsive to differentials in current flow through the thermistors for indicating variations in the size of the attenuated filaments by variations in the rate of absorption of heat into the fluid.

3,002,227

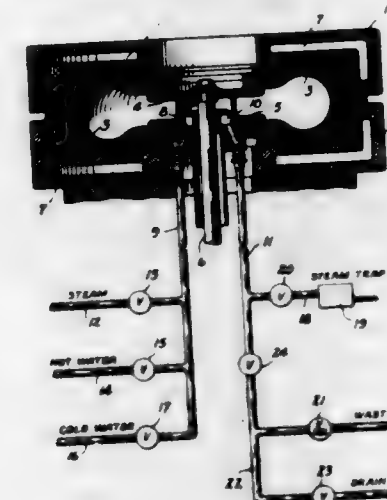
TEXTURE DESTROYING ARRANGEMENT FOR WORM PRESSES
Ernst Brückner, Selb, Bavaria, Germany, assignor to Gebr. Netrach Maschinenfabrik, Selb, Bavaria, Germany, a firm
Filed Jan. 20, 1958, Ser. No. 710,068
6 Claims. (Cl. 18—12)



1. A texture destroying arrangement for worm presses for ceramic pastes, comprising in combination with a press cylinder, a worm arranged in said cylinder, an inside oscillating stirrer in the interior of said cylinder following said press worm, and means for imparting rotary oscillating movement to said stirrer constantly changing its direction.

3,002,228

METHOD OF VULCANIZING NYLON TIRES
Samuel Salem and Rollin Henry Spelman, Akron, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 6, 1958, Ser. No. 740,316
4 Claims. (Cl. 18—53)

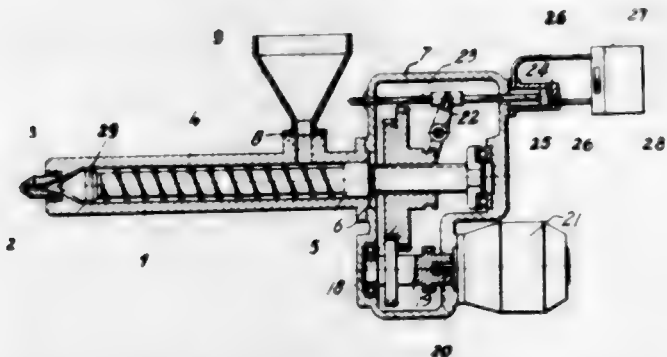


1. The herein described method of vulcanizing tire casings reinforced with prestretched nylon cord fabric which comprises subjecting said casing to a curing temperature in excess of 300° F. for a predetermined time by heating the exterior and interior of the casing in a vulcanizing mold having a cavity that conforms to the exterior of the casing and an expansible core that conforms to the interior of the casing when expanded against the same by fluid pressure while subjecting the casing to an internal curing pressure of at least 100 lbs. per square inch applied by steam in said core, and cooling the fabric plies at the inside of said casing to a temperature below 280° F. by directing cooling fluid only through said core while holding the nylon fabric against shrinkage by applying pressure to the interior of said casing.

3,002,229
METHODS FOR OPERATING WORM-TYPE
DIE-CASTING MACHINES

Ernst Friederich, Darmstadt, Hesse, Germany, assignor to
 Ankerwerk Gebr. Goller, Nurnberg, Bavaria, Germany,
 a firm

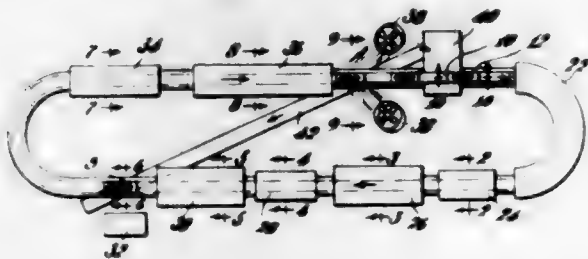
Filed Apr. 27, 1959, Ser. No. 809,157
 Claims priority, application Germany May 6, 1958
 3 Claims. (Cl. 18-55)



1. The method of operating a die-casting machine of the type in which includes a hollow cylinder closed at its front end by a nozzle, a worm rotatably guided in the bore of the cylinder having a packing arrangement at the rear end of the cylinder for closing the cylinder bore, a feeding aperture for the plastic mass in the wall of the cylinder near the rear end closed by the packing arrangement, and with driving means for the worm, which method comprises the steps of first driving the worm at a low speed to plasticize the molding material into a plastic mass behind the nozzle, and then driving the worm at a higher speed to extrude the plastic mass out of the nozzle.

3,002,230
METHOD FOR MAKING RUBBER SHOES
 James W. Stewart, Providence, R.I., assignor to Marbill
 Company, Providence, R.I., a corporation of Rhode
 Island

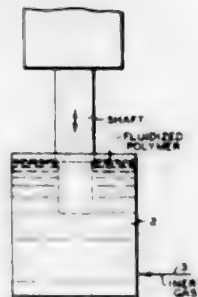
Filed Oct. 11, 1957, Ser. No. 689,733
 1 Claim. (Cl. 18-59)



In a continuous process, that method of making shoes which comprises moving a plurality of open-top, sole molds in succession along a predetermined path, and while the molds are moving, preheating each mold in turn to a uniform predetermined temperature; thereafter depositing a measured quantity of liquid plastic bottom-forming compound in each mold sufficient to form a shell therein without having to discharge any excess; thereafter subjecting each mold to further heating for a sufficient length of time to bring about gelling without fusion of said compound, and at the same time oscillating the mold to cause the entire quantity of liquid compound to spread out uniformly on the bottom and side walls of the mold while it is gelling to form the shell; thereafter depositing a measured quantity of sponge-forming composition in the shell within the mold sufficient, when expanded, to substantially fill the shell without excess; subjecting the mold containing the shell and sponge-forming compound to further heat sufficient to gel the sponge compound without fusion, the sponge-forming compound being gelled substantially to the rim of the shell therewith to form an embryo bottom mem-

ber; thereafter placing on the exposed surface of said sponge an upper which has been assembled on an unsupported last and preheated to a temperature corresponding to the temperature of the bottom member, the last and mold being held together solely by gravity; subjecting the engaged parts to heat to unite and fuse them; and thereafter cooling the united parts, removing the shoe from the mold and stripping it from the last.

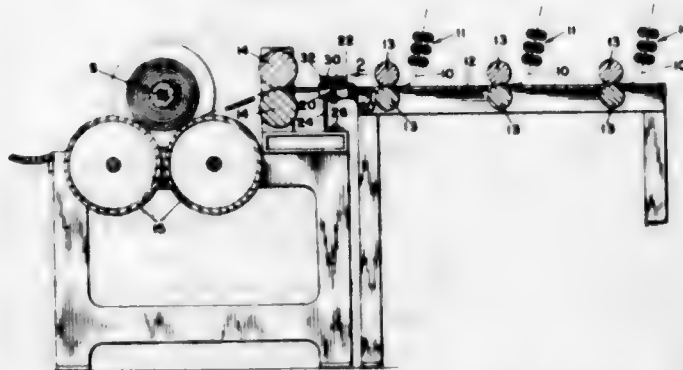
3,002,231
MOLDING PROCESS
 Billy L. Walker, Clovis, N. Mex., and Donald L. Kraft,
 Bartlesville, Okla., assignors to Phillips Petroleum
 Company, a corporation of Delaware
 Filed June 6, 1958, Ser. No. 740,190
 13 Claims. (Cl. 18-59)



1. A method of forming a laminated thermoplastic article comprising heating a mandrel to above the softening temperature of said thermoplastic, inserting the heated mandrel into a bed of powdered thermoplastic polymer thereby causing the polymer to fuse on said mandrel, inserting the thus treated mandrel into the cavity of a matched mold containing a polymeric material with sufficient force to cause said material to flow around said coated mandrel and form said article, and thereafter recovering the thus formed article.

3,002,232
PREVENTION OF SPLIT LAPS
 William W. Werth, Douglas, Mass., assignor to Whitin
 Machine Works, Whitinsville, Mass., a corporation of
 Massachusetts

Filed Oct. 1, 1959, Ser. No. 843,857
 9 Claims. (Cl. 19-130)



1. A lap treating machine comprising drawing rolls for drawing a lap of substantially parallel fibers in the

machine, a condenser, upper and lower bars between the condenser and drawing rolls forming fiber engaging surfaces extending at an angle to the direction of travel of the lap, the upper bar having a free lower edge and the lower bar having a free upper edge, and means to mount said bars in position to engage their free edges with opposite sides of the lap prior to the entrance thereof into the condenser, and means to adjust the relation of the edges of said bars for overlap thereof in the direction of motion of the lap.

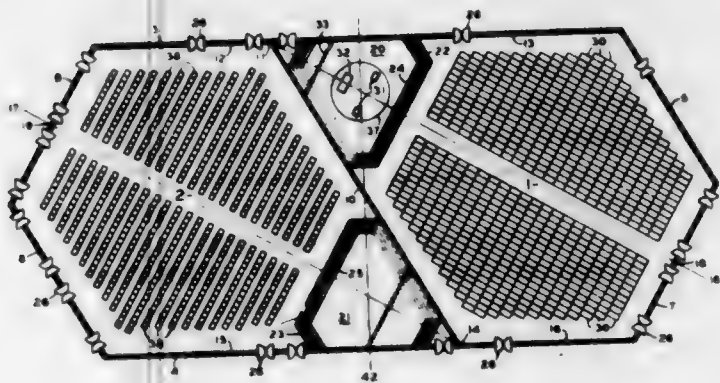
3,002,233

AUDITORIUM STRUCTURES

Gyo Obata, Webster Groves, Mo., assignor to Hellmuth, Obata & Kassabaum, Inc., St. Louis, Mo., a corporation of Missouri

Filed Feb. 6, 1959, Ser. No. 791,663

4 Claims. (Cl. 20-1.12)



3. In a building structure, an elongated hexagonal auditorium space comprising a pair of parallel side walls and two pairs of parallel end walls, each of said end walls being approximately one-third the length of each of said side walls, a removable partition extending through the center of said auditorium space, said partition dividing said space into two pentagonal subchambers of the same size and shape, and a fixed platform in each of said subchambers, said platforms being located in opposed, spaced relation to each other on the transverse medial axis of said auditorium space and on opposite sides of said removable partition, fixed seats in one of said subchambers, facing the platform therein, and movable seats in the other said subchamber adapted to be arranged to face either of said platforms.

3,002,234

CONVERTIBLE STADIUM

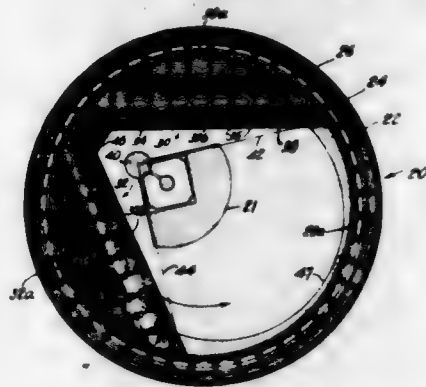
John W. Waterbury, Irvington, N.Y., assignor to Praeger-Kavanagh-Waterbury, New York, N.Y., a partnership

Filed Jan. 13, 1960, Ser. No. 2,202

10 Claims. (Cl. 20-1.126)

1. A stadium comprising two opposed seating sections each having a plurality of tiered seats, said seating sections having their inner edges spaced apart, a playing field between said inner edges, a horizontal track extending entirely outside of said playing field and movably interengaging and supporting the outer edge of one of said seating sections, said track being curved in the form of a circular arc concentric with a vertical axis located in the central portion of said playing field and being of sufficient length to permit endwise arcuate movement of the one said seating section from a point where the inner

edges of the two sections are substantially parallel to a point where they are generally perpendicular, and a



plurality of wheel assemblies removably supporting at spaced points the inner edge of the movable seating section.

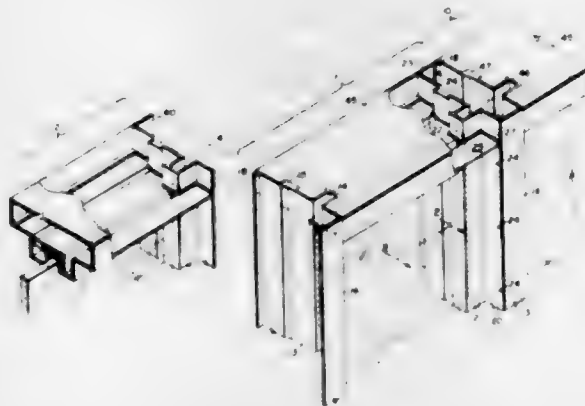
3,002,235

PREFABRICATED STRUCTURAL MODULES

James L. Fountain, Dallas, Tex., assignor to Facade, Inc., Dallas, Tex., a corporation of Texas

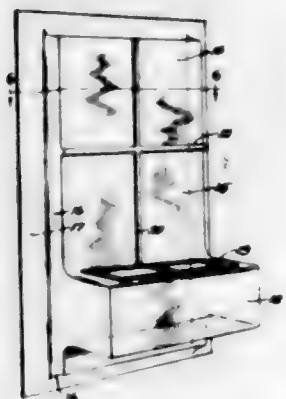
Filed Jan. 5, 1959, Ser. No. 784,944

7 Claims. (Cl. 20-11)



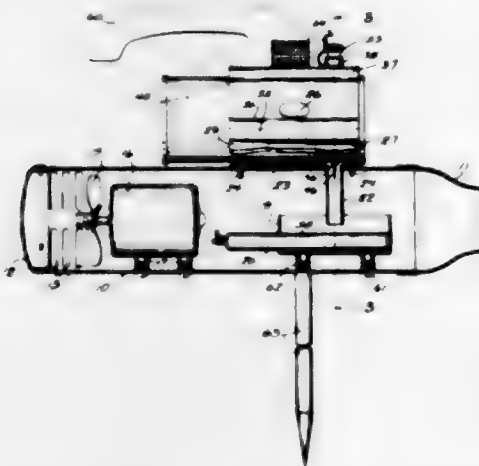
1. In a wall structure the combination which comprises a pair of frames each of which has sides of integrally preformed elongated elements each having a jamb member and a facing strip disposed at an angle to said jamb member with header members interconnecting the upper ends of the elongated elements of each said pair and sill members secured to the lower ends of each of the elements of said pair, each said jamb member having confronting faces and said sill member having a surface facing a surface on said header member each of said frames having a panel stop extending around the inner periphery thereof on the confronting jamb faces of the jamb members thereof and on the confronting surfaces of said header members and said sill members, said elongated elements in each of said frames being alternately oriented with the said facing strips thereof positioned on opposite sides of the plane of said panel stop, a bearing rib formed on the inner surface of each said facing strip along a line set back from the free edges of said facing strips a distance equal the thickness of the free edge of said jamb members extending from said inner surface toward the plane of said panel stops and means extending through adjacent sides of said pair of frames to interlock them with the free edges of said jamb members bearing on the surface of the bearing ribs to form a rigid supporting tube at the boundary between said pair of frames.

3,002,236
WINDOW ENCLOSURE
 Ferdinand W. Humphrey, 1201 Park Ave.,
 River Forest, Ill.
 Filed Mar. 13, 1956, Ser. No. 571,164
 2 Claims. (Cl. 20-40)



1. A window covering adapted to enclose a window and an air conditioning unit mounted in said window, said covering comprising a plastic resin body molded to fit said window frame and having an integral transparent window panel, said body below said panel being projected outwardly to provide a container for said unit, said container and window panel being integral and said container providing a box-like base supporting said window panel.

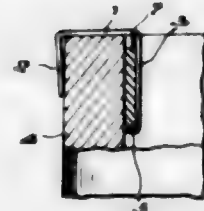
3,002,237
PORTABLE FOGGING DEVICE FOR INSECTICIDES AND THE LIKE
 Christian L. Spexarth, Milwaukee, Wis., assignor to Outdoor Recreation, Inc., Milwaukee, Wis., a corporation of Wisconsin
 Filed May 20, 1957, Ser. No. 660,234
 16 Claims. (Cl. 21-109)



1. A fogging device comprising the combination with an elongated housing internally provided with a motor driven fan and having an air inlet and a vapor discharge port, of vaporizing means in the housing between the inlet and discharge port in the path of air set in motion by the fan, and discharged through said port, means including a supply reservoir having a discharge opening communicating with said vaporizing means for supplying to the vaporizing means a liquid to be vaporized.

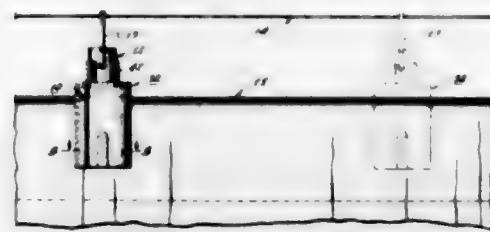
2. The device of claim 1 in which the liquid supplying means includes a replaceable can mounted externally on the housing, clamping means for connecting the can to the housing, a valve fitting mounted on the clamping means and a valve in threaded connection with the fitting and extending through the can, the can providing a seat for said valve in registry with said tube.

3,002,238
INGOT MOLD SIDEBOARD HANGER
 John L. Orrison, Bellevernon, Pa., assignor to Pittsburgh Steel Company, a corporation of Pennsylvania
 Filed July 7, 1960, Ser. No. 41,320
 2 Claims. (Cl. 22-147)



1. The combination with the upper end of an ingot mold having a sidewall, and an exothermic sideboard disposed against the inner surface of said sidewall at its top, of a plurality of spring hangers holding the sideboard in position, each hanger consisting of a bent spring metal rod having a body extending across the tops of said sidewall and sideboard and having downwardly extending legs at the opposite ends of said body straddling the sidewall and sideboard, the outer leg engaging the outside of said sidewall, and the inner leg extending down across the inner surface of said sideboard, the lower end portion of said inner leg projecting outward beneath the sideboard and supporting it, said legs being resiliently urged toward each other.

3,002,239
HANGING DEVICE
 Noboru Yonemoto, 1620 W. 154th Place,
 Gardena, Calif.
 Filed Oct. 6, 1958, Ser. No. 765,376
 18 Claims. (Cl. 24-73)



1. A device for suspending from a horizontal support a vertically disposed fabric, said device comprising a pair of concentrically disposed tubular elements, said elements being at least partially rotatable relative to each other, each said element being slotted along diametrically opposite vertically extending areas from the lower edges thereof upwardly to a predetermined distance, said slotting being of sufficient width to receive the fabrics, the inner of said elements being provided with means to engage said fabric to hold the same against downward movement relative to said inner element upon partial rotation of the inner element relative to the outer element, the outer element being provided with first means, and the inner element being provided further with second means, said first and second means cooperating to limit the relative movement of the inner element upwardly through the outer element, and said second means including a fixture for attaching said inner element for suspension from said support.

3,002,240
CLOSURE DEVICE
 Maxime Laguerre, 11 Rue Berteaux-Dumas,
 Neuilly-sur-Seine, France
 Filed Oct. 19, 1959, Ser. No. 847,222
 Claims priority, application France Nov. 14, 1958
 2 Claims. (Cl. 24-30.5)

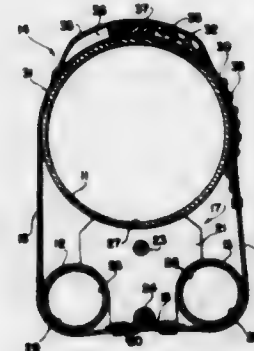
1. A detachable closure device to close the open end of a bag comprising a closed loop-shaped bridle mem-

ber including a plurality of oppositely disposed legs joined in spaced relationship to provide an opening therebetween through which the open end of a bag may be inserted, a seat at the lower portion of the joined legs having a plurality of angularly sloped vertically pointed teeth, a plurality of longitudinally spaced deformable teeth projecting from opposite sides of said legs, the upper surface of each of said teeth being sloped downward and the bottom surface thereof being substantially horizontal, a collar member having an opening therethrough narrower than that of said spaced legs



and adjustable lengthwise along said legs to deform the same inward, said collar including peripheral ridge means defined about said opening adjustably engageable with said tooth projections to prevent the removal of said bridle member from said collar opening, horizontally disposed ridge means on said bridle and collar interior and cooperable to lock the bag end therebetween, and stop means on said legs longitudinally spaced from said teeth and engageable by said peripheral collar ridge to limit the lengthwise adjustment of said bridle member relative to said collar member, said engagement of said collar with said teeth projections being releasable by inward deformation of said legs.

3,002,241
PIPE CLAMP
 Donald K. Scarlock, Burbank, Calif., assignor to Wedge-lock Corporation, North Hollywood, Calif., a corporation of California
 Filed Mar. 20, 1959, Ser. No. 800,783
 6 Claims. (Cl. 24-81)



1. A clamp for clamping together a plurality of elements in fixed, spaced relationship comprising a center member, two side arms each pivotally connected at one end to said center member, a plurality of edges on the periphery of said center member each of which is adapted to engage one of said elements whereby said center member holds said elements in spaced relationship a plurality of surfaces on said arms each of which engages one of said elements, each of said arms having an opening formed in the other end thereof, and wedge means insertable through said openings in the other ends of said arms for clamping each element between one of said

edges and at least one of said surfaces, the pivotal connection of said side arms with said center member causing said center member to assume a position for receiving said elements when said side arms are spread apart and to assume a position such that the binding force is uniformly applied to said elements when said other ends of said side arms are clamped together by said wedge means.

3,002,242
DETACHABLE CONNECTORS
 John Shearman Donaldson, 48 Hedges Ave.,
 Chatham, N.J.
 Filed Mar. 4, 1960, Ser. No. 12,852
 6 Claims. (Cl. 24-84)



1. A detachable connector comprising a pair of arms, a pivotal connection for said arms intermediate their ends, said arms having arm portions extending in opposite directions from the axis of the pivotal connection, the arm portions on one side of said connection having oppositely facing meeting hook portions, the arm portions at the opposite side of the said pivotal connection each having a hook extending outwardly therefrom on the same side thereof with its terminal end disposed toward the pivotal connection, said hooks being movable toward and away from each other upon pivotal movement of said arms, one of said hooks extending toward said pivotal connection to a greater extent than the other of said hooks and having an access opening thereinto along its arm, the other of said hooks having a projection extending from its arm portion in spaced relation to the terminal end thereof and in spaced relation to the terminal end of the other hook, said other hook having an access opening spaced from its arm and between the terminal end of the projection and its own terminal end, and said projection closing said first access opening when said hooks are together.

3,002,243
SAFETY CAP FOR SAFETY-PINS
 Ilse F. Turner and Robert E. Turner, both of
 5 Maple Ave., Leominster, Mass.
 Filed Apr. 24, 1959, Ser. No. 808,837
 4 Claims. (Cl. 24-156)



1. A safety-pin comprising a back leg and a free-ended front leg, a spring coil integral with both legs and connecting the same, the free end of the front leg being pointed, a metallic safety head on said back leg for receiving, latching and shielding said point, a plastic cap mounted on said metallic head and substantially com-

pletely covering the same, said plastic cap being provided with a point-entering slot, said slot directing the pointed end of the pin into said metallic head for latching therein, and said cap having a tear-drop shape in a transverse plane.

3,002,244
CLOTH ARTICLE HAVING CONCEALED
SLIDE FASTENER

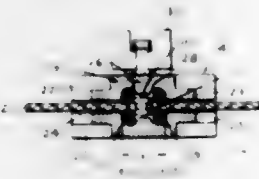
Ambrose J. McNamara, White Plains, N.Y., assignor to Irving Constant, New York, N.Y.
Filed Dec. 15, 1958, Ser. No. 780,506
3 Claims. (Cl. 24—205.1)



1. A cloth article comprising a pair of cloth members, each cloth member being folded along a straight fold line to form a large ply and a smaller overlapping ply, said fold lines being parallel to each other, a separate cord positioned between the large and small ply against the fold line of each cloth member, a slide fastener comprising a pair of tapes carrying fastener elements along juxtaposed edges and a slider for engaging and disengaging the fastener elements, a straight line of stitching joining one tape and one cord to only the small ply on one cloth member, a second line of stitching joining the other cord and the other tape to only the small ply on the other cloth member, said lines of stitching being parallel to each other and adjacent the elements carried by said tapes, a thin pull tab on said slider, said pull tab being disposed between the fold lines with only an edge surface of said pull tab being visible, said cords urging the fold lines into abutting contact to conceal the lines of stitching and the slide fastener elements and thereby simulate a sewn seam, said large and small plies having a portion extending longitudinally beyond one end of the tapes, a sewn concealed seam interconnecting the fold lines of said longitudinally extending portions adjacent to and colinear with the end of the simulated sewn seam.

3,002,245
SLIDE FASTENER

John E. Burbank, Stamford, Conn., assignor to Cue Fastener, Incorporated, Stamford, Conn., a corporation of New York
Filed July 3, 1958, Ser. No. 746,541
3 Claims. (Cl. 24—205.15)

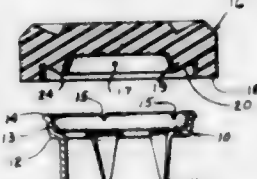


1. A slide fastener comprising a pair of continuous flexible fastening elements composed of springy filaments, each having a plurality of convolutions, said elements being adapted for meshing engagement, a piece of flexible material fixed to each fastening element, at least one compressible guide bead secured to each piece of flexible material and extending adjacent to and lengthwise of said

fastening element, said beads being disposed outwardly of said fastening element, and a slider having internal grooves for receiving said fastening elements and beads, the spacing between the outer opposite sides of at least a portion of the grooves for receiving the beads being about 85% to 95% of the spacing between the outer edges of said beads when the fastening elements are in meshing engagement and said beads are unconfined.

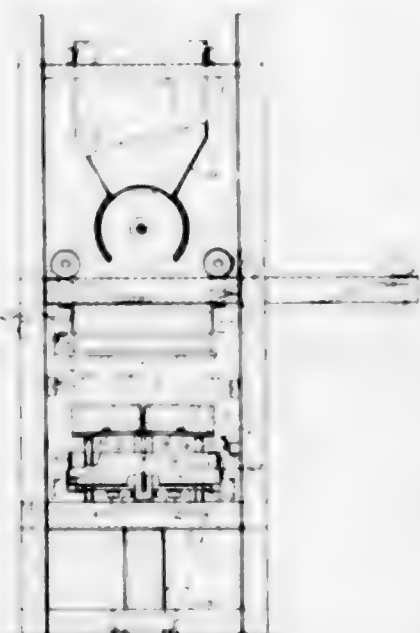
3,002,246
CAPPED PRONG RINGS

Michael J. Carpinella and Leo J. Deshaies, Waterbury, Conn., assignors to Scovill Manufacturing Company, a corporation of Connecticut
Filed Dec. 17, 1959, Ser. No. 860,255
4 Claims. (Cl. 24—216)



1. The combination with a metallic prong ring comprising a ring portion with circumferentially spaced prongs projecting downwardly from the inner edge of said ring portion, and a rim projecting upwardly from the outer edge of said ring portion, of a cap of pliable plastic material covering said prong ring and having a peripheral wall extending around the outer edge of said ring portion, the rim of said ring portion being deformed outwardly to penetrate the plastic material of said peripheral wall and to interlock with the same, the lower surface of the cap having a deep central recess in line with the circular space defined by the inner surfaces of the prongs to allow material penetrated by the prongs to extend into said recess, and a shoulder between said deep central recess and peripheral wall against which the inner edge of said ring portion bears to give support to the prongs when the capped prong ring is being attached to a fastener member.

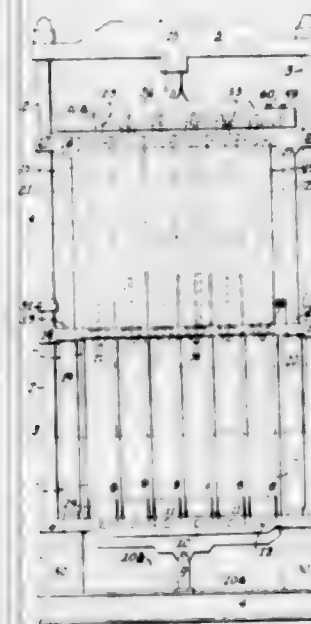
3,002,247
APPARATUS FOR FORMING CONCRETE BLOCKS
James Clayton Dettling, 915 Osage Road, and Edwin J. Dettling, 2535 Allender Ave., both of Pittsburgh, Pa.
Filed Jan. 24, 1958, Ser. No. 710,931
4 Claims. (Cl. 25—41)



1. Apparatus for forming concrete blocks from a relatively dry mix of sand, aggregate and cement comprising,

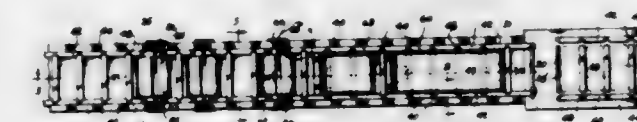
a frame, a mold box mounted on said frame for vertical movement above a fixed member, said box having a bottom plate and side walls, said plate having spaced openings for receiving a plurality of pallet supports that extend from said fixed member, a pair of disjointed imperforate pallets, each one-half the size of the space between the walls of said mold box resting on said bottom plate with their juxtaposed edges abutting, tilting fingers for engaging said pair of pallets adjacent their abutting edges, said fingers being of a height greater than the height of said pallet supports, a pressure platen movably mounted on said frame and horizontally movable to and from a position over said mold and fixed against vertical movement and being of the shape and size of the total area of said pair of pallets in vertical alignment with said mold box, means for charging said mold box with said dry mix mounted on said frame and above said mold box and pressure platen, means engaging said mold box for raising said mold box to force the charge into pressure contact with said pressure platen to mold the block, and means for lowering the mold box to effect engagement of the pallets first with said tilting fingers and subsequently with said pallet supports to raise the pallets above the mold walls and tilt the pallets to thereby strip the molded block from the mold and split it into a pair of blocks with a rough stone-like texture on the split faces thereof.

3,002,248
THERMO-MOLDING APPARATUS
Corwin D. Willson, Flint, Mich.
(525 Goldengate, Lake Orion, Mich.)
Filed Mar. 1, 1954, Ser. No. 413,383
5 Claims. (Cl. 25—45)



1. An apparatus for remotely controlling the thermal formation of a product, which comprises a closed mold having a molding cavity and openable to admit and closable to confine in the cavity a thermo-bindable charge of discrete material, said cavity being double-walled to have a rigid impervious outer wall and a rigid smooth-faced fluid-pervious inner wall contacting the confined charge, accessories to treat fluent matter outside the mold to changes of temperature and pressure and to achieve a hot compressed gas, a conduit to convey the treated fluent matter into the mold, apertures in a rigid length of said conduit in the mold for applying said fluent matter interiorly of said charge and said hot gas in contact with said confined material to consolidate and thermo-bind the material and shape the charge against said inner walls; said apparatus including means making mechanical and remotely controllable the steps in forming said product.

3,002,249
MACHINE FOR THE MANUFACTURE OF
CONCRETE BUILDING UNITS
Clarence W. Jackson, 605 Minor Ave., Apt. 106,
Seattle, Wash.
Filed Mar. 18, 1957, Ser. No. 646,734
3 Claims. (Cl. 25—99)



1. A machine for the manufacture of concrete building units of slab form comprising a conveyor table, means establishing opposite side limits of a straight path of travel of uniform width along the table top, an aggregate storage and feeding hopper supported above and across said path of travel, a compound form disposed on said table for guided endwise advancement in said path of travel along said table, said compound form comprising an easily separable assembly of parts including opposite side rails, a plurality of transverse divisional members extending between the side rails defining a succession of identical compartments in said compound form, and a pallet fitted in the bottom of each compartment, means for advancing the compound form along the guideway for the filling of its compartments from the hopper in passing beneath it, and an aggregate compacting roller mounted above and transversely of said path of travel; said roller having a cylindrical body portion for rolling and compacting contact with the aggregate in the compartments of the form as it is advanced beneath the roller and having diametrically reduced opposite end cylindrical hubs of equal diameter disposed for rolling support on the top surfaces of the opposite side rails of the advancing compound form, and said hubs having teeth formed on their cylindrical surfaces at equal distances of angular spacing; said opposite side rails of the compound forms being provided with notches in their top surfaces, in such lineal spacing as to receive said teeth in interfitting mesh therein as the form advances, thus to synchronize the rotation of the roller with the advancement of the compound form.

3,002,250
CONSTRUCTION OF CAST POSTS, AND PARTICULARLY THE CONSTRUCTION OF CONCRETE
STRUTS BY MEANS OF METALLIC FRAMES
Roger Huet, Paris, France, assignor to Blaw Knox Company, Pittsburgh, Pa.
Filed Mar. 31, 1953, Ser. No. 345,917
Claims priority, application France Aug. 12, 1952
1 Claim. (Cl. 25—121)



A metallic frame for casting concrete struts comprising four like panels of standard dimensions arranged to enclose a rectangular quadrilateral the dimensions of which are adjustable, the said panels being disposed at right angles to each other with the end edge of one abutting against a face of the next inwardly of the adjacent end thereof, a metallic strip disposed on the horizontal edge

of each panel externally of said opening and extending between the two panels at right angles to the panel on which said strip lies, means connecting each strip to its panel externally of the panel walls, a gusset fixed at one end of each metallic strip externally of the panels and having an open-ended channel disposed at a right angle to the longitudinal axis of the strip, each such channel being dimensioned to receive and engage the unguessed end of the next contiguous metallic strip, each of the metallic strips and gussets being provided with a plurality of spaced perforations, and pin means for locking the strips and gussets in adjusted relationship through such perforations.

3,002,251

PROCESS AND APPARATUS FOR THE COMPRESSIVE SHRINKING OF FABRICS

Bertram Everard Sreeton, Worthington, John Frederick Sherriff, Haigh, and Gowan Coendoz Rogers, Bradford, England, assignors to The Bradford Dyers' Association Limited

Filed Mar. 7, 1958, Ser. No. 719,786

Claims priority, application Great Britain Mar. 11, 1957

5 Claims. (Cl. 26—18.6)



1. In an apparatus for compressively shrinking a fabric in the direction of its path of travel, said apparatus including a metal surface and a contractible surface between which the fabric is heated by the metal surface and compressively shrunk, the improvement whereby the glaze normally appearing on the face of the fabric which has been in contact with the heated metal surface is substantially reduced comprising having said metal surface engraved with schreiner lines extending in the direction of the travel of the fabric.

4. In a process for compressively shrinking a fabric by passing said fabric between and in contact with a heated metal surface and a contractible surface, the improvement whereby the glaze normally formed on the face of the fabric which has been in contact with the heated metal surface is substantially reduced, comprising subjecting said face of said fabric at the point of contact between said metal surface and said contractible surface to a plurality of spaced, continuous, compressive forces normal to the direction of travel of said fabric, the spacing between said forces being equivalent to the spacing of schreiner lines commonly used in calendering machines.

3,002,252

METHOD OF PRODUCING HEAT REFLECTIVE FABRIC

Emanuel Scheyer, Brooklyn, N.Y.
(2 Carter Ave., Oceanside, Long Island, N.Y.)
Filed July 9, 1953, Ser. No. 367,055

3 Claims. (Cl. 28—72)



1. The method of producing a heat reflective fabric comprising producing the fabric from filaments spun from

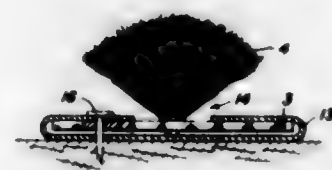
a mixture of plastic material suitable for use in a textile fabric and high heat reflecting flakes, said flakes being oriented in the filaments to have the flat surfaces of the outermost flakes of a filament substantially parallel to its adjacent surface of the filament, calendering the fabric and buffing the calendered fabric, to thin the plastic mainly over the outermost flakes, a sufficient quantity of flakes being present in said mixture whereby a heat reflective leafed surface of flakes in the filaments results.

3,002,253

FLEXIBLE WEATHERSTRIP MEANS

Milton Kessler, 4535 Grove Drive, Youngstown, Ohio
Filed Mar. 26, 1958, Ser. No. 723,992

3 Claims. (Cl. 28—80)



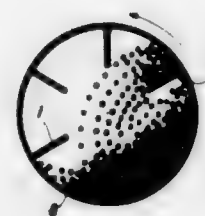
1. Weatherstripping for retention in a re-entrant channel comprising a narrow tape of flexible sheet material of uniform texture along its width and a single row of bushy resilient fiber tufts extending linearly along substantially the center line of said tape intermediate the edges thereof, leaving a bare strip of tape on either side of said row, each said tuft formed of a short bundle of yarn fibers looped through said tape from the middle of the tape, leaving the edges of the tape bare on both sides of the row of tufts with the free ends of said short bundle bushing out on one side of the tape, and the middle of said short bundle bunched together to form a right on the other side of the tape, the bushy bundles of fibers on said one side forming a highly resilient mat of fibers of sufficient depth to accommodate itself to a large range of tolerances of closures to which the weatherstripping is fitted.

3,002,254

METHOD FOR FLATTENING AND ROLLING METAL POWDERS

Emil Podzusz, Leimbachstr. 7, Nürnberg, Germany
Filed Mar. 3, 1953, Ser. No. 340,037

15 Claims. (Cl. 29—18)



1. In the process of producing extremely thin, flat metal and the like powder particles of highest brilliance, wherein pre-comminuted metal and the like particles are continuously subjected to a flattening impact of hard, impact-resistant small flattening bodies having a precision-polished, arcuate surface, the step which comprises continuously rolling the pre-comminuted powder particles between very large numbers of such flattening bodies, said bodies being elongate rolling bodies having a linearly developable central portion of arcuate circumference and of sufficient length to press and roll the particles therebetween while in parallel position to each other, the bodies having arcuate end portions merging with the central portion in arcuate relationship.

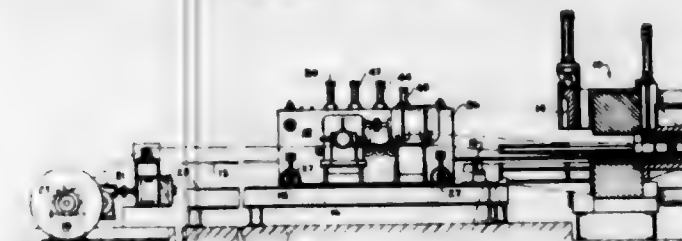
3,002,255

METHOD OF PRODUCING CONTINUOUS METAL STRIP AND THE LIKE

Mircea A. Grooms, Long Beach, Calif., assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio

Original application Oct. 24, 1952, Ser. No. 316,599.
Divided and this application Feb. 16, 1956, Ser. No. 565,954

6 Claims. (Cl. 29—18)



1. In the method of producing a continuous wide flat strip by successively extruding a plurality of billets into a continuous form, the steps of extruding a billet in a shape other than flat but of uniform thickness, progressively flattening said shape subsequent to the extrusion of each billet and prior to the extrusion of the next subsequent billet while the shape is stationary, maintaining said shape under tension during said flattening step, and coiling previously flattened strip during each extrusion step.

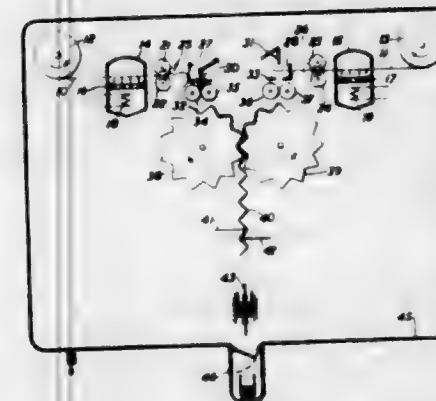
3,002,256

ELECTRICAL CAPACITORS

Norman C. Moore, Greens Norton, England, assignor to The Plessey Company Limited, Ilford, England, a British company

Filed Mar. 4, 1959, Ser. No. 797,305

8 Claims. (Cl. 29—25.42)



1. A continuous method of manufacturing electrical capacitors which comprises applying by vacuum deposition a first conductive layer to the surface of a first strip of flexible dielectric material, and a second conductive layer to the surface of a second strip of flexible dielectric material, feeding the coated first and second strips through first and second apparatus for cutting the strips into elements of a predetermined length, folding each element into a V-shape, interleaving said elements to form a continuous length thereof, compressing a predetermined number of interleaved elements into a unit, sealing the interleaved elements of the unit by the application of heat and maintaining the strip material before and after the coating thereof, and during the folding, interleaving and sealing at a low pressure.

3,002,257

CHUCK-ACTUATING MECHANISM

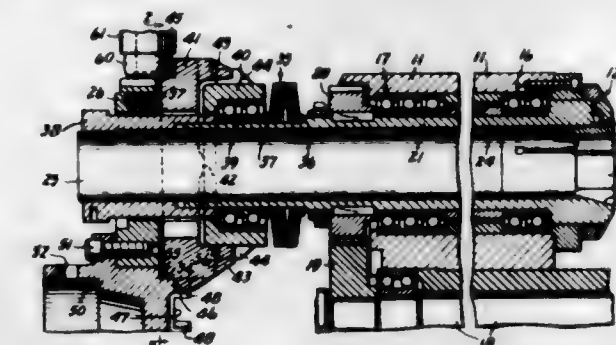
Arthur H. Jobert, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Filed June 4, 1954, Ser. No. 434,524

13 Claims. (Cl. 29—37)

1. In a machine of the character indicated, a spindle carrier mounted for indexing about an indexing axis, a

plurality of spindles revolubly carried by said spindle carrier at spaced locations on a circle of spindle centers about said indexing axis, said spindle carrier having central solid-abutment means for chucking-reaction forces, said abutment means being radially inside the circle of spindle centers, chucking means carried by each of said spindles and actuatable between chucking and unchucking positions; each said chucking means for its associated spindle including opposed frusto-conical spring



washers loading said chucking means for actuation to chucking position, thrust-bearing means carried by said associated spindle and axially shiftable along said spindle to relieve said spring washers, a thrust yoke embracing said spindle and in axial thrust-imparting relation with said bearing means, an inwardly directed fulcrum carried by said yoke and reacting against said fixed central solid abutment part of said spindle carrier, and an actuating surface on said yoke located on the opposite side of said spindle from said fulcrum; the actuating surface for all yokes being in substantially a common radial plane of said indexing axis.

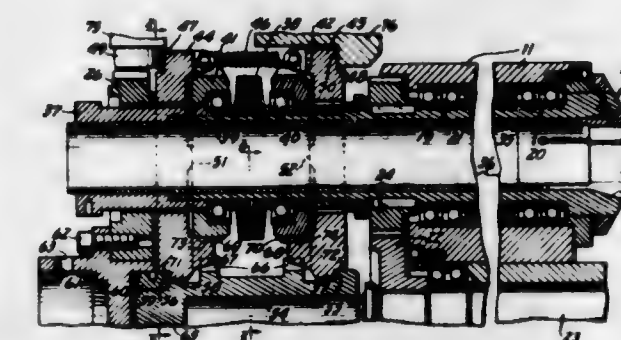
3,002,258

CHUCK-ACTUATING MEANS

Arthur H. Jobert, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Filed June 18, 1954, Ser. No. 437,752

21 Claims. (Cl. 29—37)



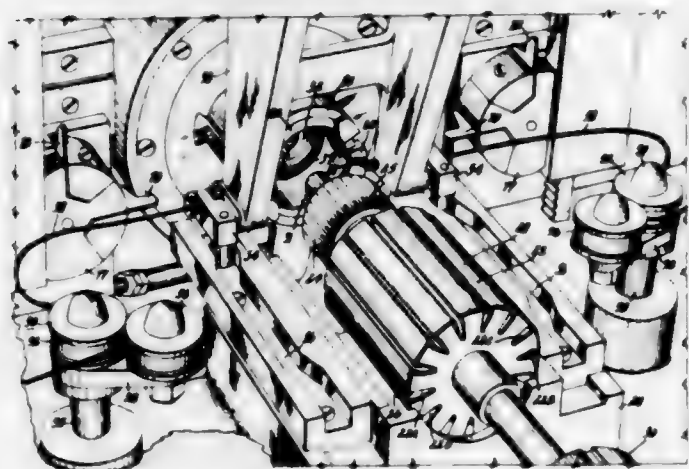
1. In a machine of the character indicated, a spindle carrier indexible about an indexing axis, a plurality of spindles revolubly carried by said spindle carrier at angularly spaced locations, independent chucking means for each spindle, spring means carried by each spindle and preloading the chucking means in the direction to grip a piece of stock, thrust-bearing means independently carried by each spindle on opposite longitudinal sides of said spring means, means carried by said spindle carrier at each spindle location and projecting to externally accessible locations for separately actuating said thrust-bearing means to individually deflect said spring means for a particular spindle, and differential-actuating means external to said spindle carrier and including longitudinally spaced longitudinally acting thrust applicators positioned for longitudinal alignment with said externally projecting parts of said thrust-bearing means for

successive indexed positions of said spindle carrier, whereby chucking means for one of said spindles may be actuated to the exclusion of the chucking means for another spindle without creating any net reaction on any part of the spindle carrier.

3,002,259

METHOD OF MAKING AN ARMATURE

William A. Fletcher, Daleville, and Max E. Todd, Windfall, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 2, 1954, Ser. No. 447,266
11 Claims. (Cl. 29—155.5)



1. In a continuous method for winding an armature assembly having a commutator with notches therein and an armature, the steps comprising: staking the end of a coil winding into a commutator slot, applying a coil winding to said armature beginning with said end, forming a U-shaped loop in a length of wire so the U-shaped loop forms two lengths of wire that are joined by a curved portion having a relatively small radius of curvature, one of said lengths forming the end of said coil winding, aligning one of the lengths of wire of the U-shaped loop with a notch in the commutator, cutting said one length of wire from the curved portion and staking the cut end of the length of wire in the notch with which the length was aligned, rotating the commutator to align another notch with the other length of wire, of the U-shaped loop, cutting the other length of wire from the curved wire portion of the U-shaped loop, and staking the cut end of said other length in the other notch of the commutator so substantially the only material wasted during the staking of the two lengths of wire is the small curved portion of the wire which forms the loop.

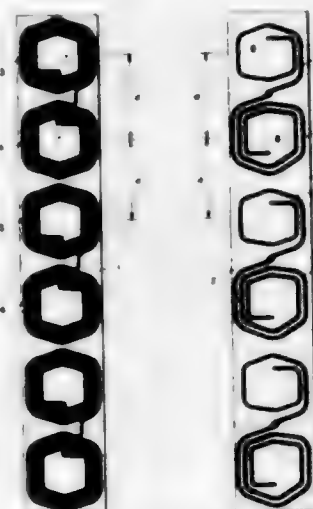
3,002,260

PRINTED CIRCUIT COMPONENT AND A METHOD OF MANUFACTURING SAME

Hubert L. Shortt and John B. Langton, Tarrytown, N.Y., assignors to Technograph Printed Electronics Inc., Tarrytown, N.Y.
Filed Jan. 30, 1956, Ser. No. 562,225
6 Claims. (Cl. 29—155.5)

1. The method of manufacturing an electrical pathway pattern in form of a multiple layer coil, comprising the steps of forming on one side of a first and a second foldable continuous insulation strip a repeat pattern in the form of a single row of longitudinally spaced identical pairs of substantially flat electrical conductive spiral windings connected with their outer ends, the inner end of each winding on one strip being offset relative to the inner end of each corresponding winding on the other strip the distances between the midpoints of the connected windings of each pair on the first strip and between the midpoints of the adjacent windings of each two pairs on the second strip respectively being equal to a distance approximately

twice the maximum radius of the respective windings and the distances between the midpoints of the adjacent windings of each two pairs on the first strip and between the midpoints of the connected windings of each pair on the second strip respectively being at least equal to twice the maximum radius of the respective windings plus a distance $(T_1 + T_2)$, wherein T_1 is the thickness of one strip and T_2 is the thickness of the other strip, superimposing the second strip upon the first strip so that the windings on both strips face the same direction and the windings on one strip are substantially in registry with the windings

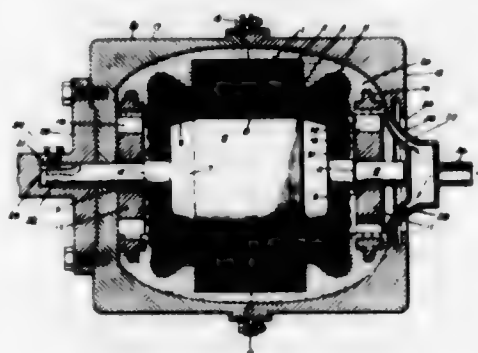


on the other strip but insulated therefrom, providing a layer of insulation material on the exposed side of the windings on the second strip, folding the superimposed strips in accordion fashion transversely along lines located equidistantly from the inner ends and the midpoints of an adjacent winding on each strip, the transverse fold lines on one strip being formed in registry with the corresponding fold lines on the other strip, perforating the insulation strips and interconnecting the inner ends of all the windings on the first strip and the inner ends of all the windings on the second strip through the perforations in the folded insulation strips.

3,002,261

METHOD OF ASSEMBLING A DYNAMO-ELECTRIC MACHINE

Frank C. Avila, Roanoke, and Marshall H. Dole, Hudson, Ind., assignors to General Electric Company, a corporation of New York
Filed Jan. 18, 1957, Ser. No. 635,017
5 Claims. (Cl. 29—155.5)



1. A method of making a dynamoelectric machine comprising the steps of positioning a stator and a rotor having a shaft in concentric relation by providing shim means between them, mounting a bearing assembly about the rotor shaft in rotatable relation therewith, at least part of said bearing assembly extending radially outward beyond the bore of said stator, securing said bearing assembly rigidly with respect to said rotor, securing a mold about said rotor, stator and bearing assembly,

said mold having an opening in at least one end thereof, said mold substantially enclosing at least said stator, said rotor, stator and bearing assembly being associated with said mold in rigid assembly therewith, rotating said mold on the axis of said shaft at a predetermined speed sufficient to retain by centrifugal force any material introduced in said mold in the radially outer part of the mold, introducing a predetermined amount of plastic, non-hygroscopic molding material to the interior of said mold through said opening, said material being introduced by means of a feed member cooperating with said opening, said feed member causing said material to be introduced in a radially outward direction to prevent said material from being introduced between said rotor and said stator, stopping rotation of said mold and said rotor, stator and bearing assembly after said material solidifies, said predetermined amount of material being such that under the centrifugal force of rotation is extends inwardly in the mold beyond the radially outer part of said bearing assembly but no farther inwardly than said stator bore, solidifying said molding material, and subsequently releasing said bearing assembly relative to said rotor and removing said shim means to release said rotor and stator relative to each other.

3,002,262

METHOD OF MAKING A METAL DETECTOR SEARCH HEAD

Andrew Demopoulos and George Richard Stump, Cincinnati, Ohio, assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,641
1 Claim. (Cl. 29—155.5)



The method of making a search head for a metal detector which comprises the steps of positioning, on a board, a transmitter coil in an offset plane with respect to two coplanar receiver coils spaced symmetrically to overlap said transmitter coil; applying electrical signals directly to the transmitter coil and adjusting the position of one receiver coil, while measuring the signal voltage induced in it, until such signal voltage becomes zero; linearly displacing said receiver coil further away from the transmitter coil until such signal voltage attains a predetermined value proportioned to the displacement of said receiver coil away from its zero voltage position; applying electrical signals directly to the transmitter coil and adjusting the position of the other receiver coil, while measuring the signal voltage induced in it, until such zero voltage becomes zero; linearly displacing said other receiver coil further away from the transmitter coil until such signal voltage attains a predetermined value proportioned to the displacement of said other receiver coil away from its zero voltage position; surrounding the assembly of coils and board with encapsulating compound; pressure-molding the compound and assembly into a unitary product; heating the product; and finally cooling the product to room temperature, the above-mentioned values being predetermined in accordance with the counter-displacement of said receiver coils caused by shrinkage in encapsulating, heating, and cooling.

3,002,263

ELECTROMAGNETIC CORE CONSTRUCTION AND METHOD

Albert E. Felsberg and Paul J. Zerwas, Chicago, Ill., assignors to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 14, 1954, Ser. No. 475,043
4 Claims. (Cl. 29—155.61)

1. The method of manufacturing a shell-type core for an electromagnetic device in which the shell is formed

from a plurality of pre-formed electrical steel laminations stacked and secured together such that the shell is substantially rectangular to provide a pair of parallel, continuous side parts and a pair of continuous end parts bridging the side parts, and an elongate continuous central winding leg part fitting into the interior of the shell with the extremities of the winding leg intimately abutting said end parts and said winding leg and side parts having lateral extensions located with end faces thereof aligned and separated to provide air gaps of predetermined dimension on opposite sides of the winding leg: said meth-

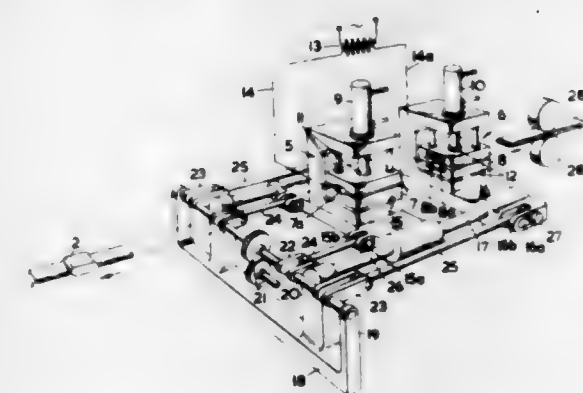


od comprising, stamping from a blank of electrical steel individual laminations of which one corresponds to the shape of the shell and the other corresponds to the shape of the winding leg with said winding leg having been stamped from the blank material between the bridging end parts of the shell lamination, forming at least a transverse crimp in the winding leg lamination to shorten same, said method being performed in a continuous process providing a plurality of said individual laminations capable of being so stacked and secured together so that the crimped winding leg laminations are accommodated on the interior of the shell laminations with the linear distance between the end parts in the core remaining substantially equal to the linear distance between the end parts of the individual shell laminations.

3,002,264

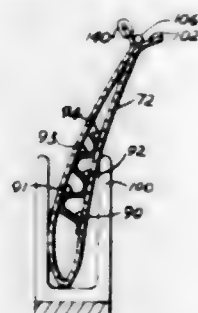
PROCESS FOR MAKING TURBINE OR COMPRESSOR BLADES

William Stephen Hollis, Banstead, and John Owen Mayer, West Drayton, England, assignors to Power Jets (Research and Development) Limited, London, England, a British company
Filed May 25, 1955, Ser. No. 511,083
3 Claims. (Cl. 29—156.8)



1. A process for forming a pair of compressor or turbine blades which comprises forming a blank by gripping with clamps at spaced points a strip of metal of cross-section suitable for rolling to blade section, electrically heating said strip between said clamps, and moving said clamps relative to each other to shorten the distance therebetween to form between the ends of the strip an enlargement of such a size that the roots of the pair of blades can be formed therefrom, rolling the arms of the blank on each side of the enlargement to blade section between blade forming rolls, and dividing the blank through the enlargement.

3,002,265
FABRICATION OF BLADES FOR COMPRESSORS AND THE LIKE
 Edward A. Stalker, Bay City, Mich., assignor to Stalker Corporation, a corporation of Michigan
 Filed Feb. 14, 1957, Ser. No. 640,198
 8 Claims. (Cl. 29-156.8)



1. The process of joining the walls of a blade together by solder adjacent the trailing edge of the blade comprising the steps of bringing the walls into lapping relation to form a joint at the trailing edge having a line of minimum spacing, said walls converging toward said joint and at least one of said walls extending beyond said trailing edge, placing flux at the joint as a substantially discrete entity, the flux being of a lower melting temperature than the solder to be used, positioning the blade with said one wall extending above the joint adjacent thereto, placing solder as a substantially discrete entity above the joint adjacent thereto and contiguous to the other of said walls so that when the solder is melted it will flow downward into the joint between said walls from above to below said line, placing the blade in a muffle with a reducing atmosphere, heating the blade effecting the melting of said flux at a selected temperature followed substantially later by the melting of said solder at a higher temperature, the solder displacing the flux downward ahead thereof as a substantially separate layer and bonding the walls together by the solder at said joint and over a portion of the blade walls inwardly of the trailing edge of said blade and beyond said line of minimum spacing.

3,002,266
METHOD OF CONSTRUCTING PROPELLERS
 Jack E. Lynn, Cromwell, Conn., and Samuel P. Robinson, State College, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
 Filed Apr. 24, 1957, Ser. No. 654,976
 11 Claims. (Cl. 29-156.8)

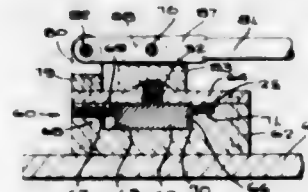


1. The method of manufacturing marine propeller blade elements of the type having integral blade and root sections which comprises: forming first and second side surfaces at a predetermined angle on the root section; arranging a plurality of blade elements having said first and second side surfaces in contiguous relationship to form an annulus and positioning said blade elements about a common axis; forming inner cylindrical surfaces concentric with said annulus on said positioned blade elements; thereafter, using said inner cylindrical surfaces

to accurately orient each of said blade elements with relationship to said cylindrical surfaces and separately forming a blade section from each of said blade elements.

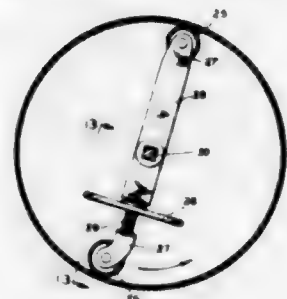
3,002,267
WITHDRAWN

3,002,268
SIDE BAR CYLINDER LOCK ASSEMBLY
 Roy C. Spain, Roanoke, Va., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
 Filed Dec. 18, 1956, Ser. No. 629,112
 9 Claims. (Cl. 29-428)



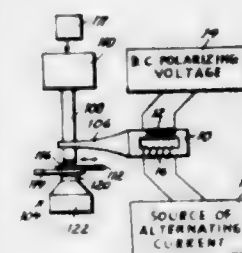
1. The method of making a fence for use in a tumbler lock in which tumblers coating with the fence are positioned by a predetermined bitted key, comprising the steps of arranging a series of forming tools in an order corresponding to the bittings of the key, adjusting the position of each forming tool in accordance with the corresponding bitting of said key, and applying said series of forming tools to the fence to form said fence.

3,002,269
METHOD OF FORMING BALL AND SOCKET JOINTS IN METAL TUBULAR MEMBERS
 William C. N. Hopkins, 1532 SE. 3rd Ave., Portland, Oreg.
 Filed Jan. 9, 1959, Ser. No. 785,837
 10 Claims. (Cl. 29-441)



1. A method of forming a ball and socket connection between adjacent end portions of tubular metal sections, which comprises telescoping the end portion of one metal section within the adjacent end portion of the other metal section, holding the telescoped end portions in rigid and tight relation to each other, inserting a radially expandable member within the telescoped end portion and causing said member to radially expand and spherically deform said portion throughout the overlap and beyond the ends of said telescoping portions with the maximum transverse diameter intermediate the telescoped ends and said ends having a diameter intermediate said maximum diameter and the minimum diameter at the juncture of the spherically deformed portions and the remainder of the tubular metal sections and with the inner telescoped portion snugly engaged spherically within the outer telescoped portion to form a ball and socket metal-to-metal swivel connection between the telescoped portions, whereby a tight seal is maintained within the spherically deformed portions but permitting freedom of angular movement between the tubular sections.

3,002,270
METHOD AND APPARATUS FOR BONDING METALS
 Carmine Frank De Prisco, West Chester, Pa., assignor, by mesne assignments, to Sonobond Corporation, West Chester, Pa., a corporation of Pennsylvania
 Filed Apr. 3, 1957, Ser. No. 650,539
 9 Claims. (Cl. 29-470)



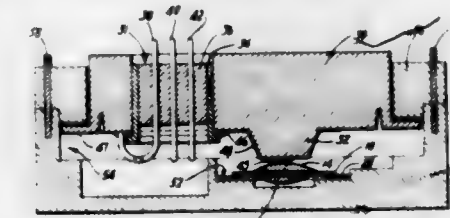
1. A non-fusion method of welding metal members together which method comprises placing to-be-welded faces of the metal members together, applying a force to the metal members in a direction and of a magnitude to hold the contacting to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibratory energy into said zone, introducing through a vibrating element contacting one of the to-be-welded metal members adjacent the weld zone mechanical vibration having a frequency of between 59 and 300,000 cycles per second, said mechanical vibration comprising a vibration component in a direction substantially perpendicular to the direction of applied force, and with such component being of an energy level sufficient to weld the metal members to each other, and varying the frequency of the vibratory energy within a range of 10 to 1,000 cycles per second around the center frequency at which welding is being effected.

4. Apparatus for non-fusion welding contacting metal members together comprising a force-applying member, means for impelling an end portion of said force-applying member against an outer face of one of said contacting metal members with a force in a direction and of a magnitude to hold the to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibratory energy into the intended weld zone, and means for vibrating said end portion of said member at a frequency of between 59 and 300,000 cycles per second in a path substantially perpendicular to the direction of the applied force while such to-be-welded faces of the metal members are being held in intimate contact by engagement with said end portion of said member, means for selectively varying said frequency between 10 and 1,000 cycles per second around the center frequency while the weld is being effected, with said vibrating means furnishing sufficient power so that the mechanical vibration delivered by said end portion in said path is at a sufficient energy level to weld the metal members together.

3,002,271
METHOD OF PROVIDING CONNECTION TO SEMICONDUCTIVE STRUCTURES
 Clarence Gould Thornton, Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
 Filed June 8, 1956, Ser. No. 590,204
 3 Claims. (Cl. 29-488)

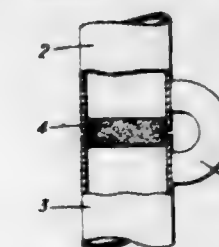
1. In a method for providing an intimate thermal connection between a region of a semiconductive body initially underlying an external, metal portion of an alloy-junction contact to said body and an initially separate body of low thermal impedance, said body of low thermal impedance having an end surface of shape and size to fit within the periphery of and against said underlying region

without engaging other adjacent portions of said semiconductive body and having a lateral surface extending away from said end surface and so shaped as to avoid touching said other adjacent portions of said semiconductive body when said end surface is positioned against said underlying region and entirely within said periphery thereof, the steps of: applying to said end surface a body of a first material having a melting point below that of the material of said metal portion and in which said material of said metal portion is readily soluble when said first material is molten; coating said lateral surface of said body of low thermal impedance with a substance render-



ing said lateral surface readily wettable by said material of said metal portion; placing said metal portion and said body of said first material applied to said end surface in contact with each other; urging said underlying region of said semiconductive body and said end surface toward each other; and heating said body of said first material and said metal portion sufficiently to liquefy said body of said first material and said metal portion, whereby said end surface of said body of low thermal impedance is moved gently to a position closely adjacent said underlying region as said first material dissolves said metal portion and as said material of said metal portion is drawn off onto said lateral surface.

3,002,272
WELDING BY FUSION-DEPOSITION
 Lewis Abraham Hodges, Sheffield, England, assignor to The Birmingham Small Arms Company Limited, Birmingham, England, a British company
 Filed Nov. 21, 1956, Ser. No. 623,696
 Claims priority, application Great Britain Dec. 7, 1955
 7 Claims. (Cl. 29-491)

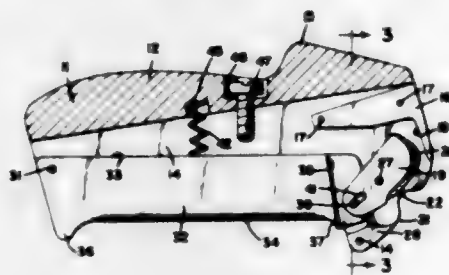


1. A method of welding ferro-magnetic parts, comprising the steps of securing adjoining edges of the parts in correct position for receiving a fusion-deposit of weld metal, applying a magnetic field between said edges, applying to the rear of the parts a powder which is ferro-magnetic as to at least 50% of its composition, for bridging said edges along their rear sides, and effecting welding from the front of the parts, the bridge of powder being maintained essentially only by said magnetic field and serving for providing a support at the rear of the parts for the molten weld metal.

3,002,273
CARTON OPENING TOOL
 Earl L. Merritt, 50 W. Summit Drive, Redwood City, Calif.
 Filed Sept. 12, 1960, Ser. No. 55,405
 9 Claims. (Cl. 30-2)

1. A retractable blade tool comprising a handle formed with a hollow, a blade, means mounting said blade on

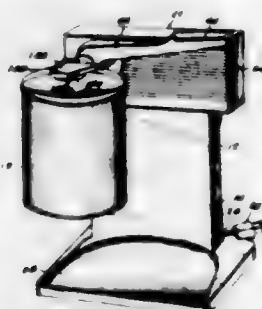
handle for movement between a retracted position within said hollow and an extended position partially projecting outside said handle, a finger grip movably mounted on



said handle, and means articulately connecting said grip and blade whereby on movement of said grip said blade is moved between retracted and extended positions.

3,002,274 CAN OPENER

Ivar Jepson, Oak Park, and Gilbert R. Wolter, Elmhurst, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 30, 1960, Ser. No. 39,888
23 Claims. (Cl. 30-4)



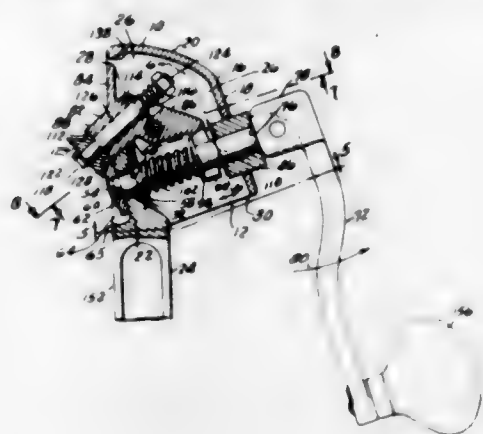
1. A can opener comprising a frame, a serrated feed wheel mounted for rotation about a first axis fixed with respect to said frame, an operating lever pivoted about a second axis on said frame and movable between a load position and a can cutting position, a cutter wheel mounted for rotation on said operating lever and positioned eccentrically with respect to said second axis, said cutter wheel in the can cutting position of said lever being spaced substantially the same distance below said second axis as it is to one side of said second axis, said cutter wheel in said load position of said lever being positioned substantially directly above its can cutting position.

3,002,275 CAN OPENER

Walter W. Edlund, Burlington, Vt.
Filed Nov. 21, 1958, Ser. No. 775,409
10 Claims. (Cl. 30-9)

1. A can opener comprising a housing, said housing having a chamber, a bridging wall positioned in said chamber adjacent one side thereof, said housing having a front face formed by a pair of side walls, said bridging wall being adjacent said front face and being inclined with respect thereto in a vertical plane, said bridging wall and said housing defining a recess, a gear wheel rotatably received in said recess and having an upper portion of its periphery projecting outwardly of said front face with its lower portion being received to the rear of said front face within said recess, a knife holder positioned in said chamber, a knife supported by said knife holder and normally projecting outwardly of said front face, said knife being in relationship with said gear wheel for receiving a can therebetween for severing a por-

tion of said can, said knife holder normally bearing on said bridging wall and extending laterally within said chamber substantially intermediate the two side walls adjacent said front face and having an upstanding portion forming a continuation of said front face in a verti-



cal plane upwardly above said bridging wall but being spaced from said side walls of said housing sufficiently for movement of said knife holder with respect thereto, means for moving said knife holder and the knife connected thereto with respect to said gear wheel for the insertion and removal of a can therebetween.

3,002,276 KNIVES IN MECHANICAL SHAVERS

Paul Kobler, 81 Fenimore St., Lynbrook, N.Y.
Filed Dec. 4, 1957, Ser. No. 700,649
1 Claim. (Cl. 30-43)



A cutting head for a dry shaver, said head comprising an outer shear member and an inner movable cutter co-operable with the outer shear member, said inner movable cutter having a plurality of and transversely spaced cutting teeth, each tooth having indentations on their top surfaces to provide additional cutting surfaces, the distance between the cutting edges on one tooth being considerably smaller than the distance between the cutting edge of said tooth and the cutting edge of the adjacent tooth, said cutting edges formed in a tooth by the indentations being transversely spaced, as well as the cutting surfaces on each side of said tooth, the inner cutter being adapted to be moved within the outer shear member to cut the hair extending through openings in the shear member.

3,002,277 METHOD OF ESTABLISHING THE RELATIONSHIP OF COMPONENTS OF AN ARTIFICIAL DENTAL ARCH OR A NATURAL DENTAL ARCH AND TOOL FOR USE IN SUCH METHOD

Homer Cree Vaughan, 430 Dogwood Lane, Manhasset, N.Y.

Filed Apr. 16, 1956, Ser. No. 578,511
9 Claims. (Cl. 32-40)

1. For use in accurately locating the correct positioning of a mandibular second molar for establishing the anterior-posterior position of a mandibular arch, the muscle arch indicator comprising an elongated and substantially flat handle shank having a measuring scale thereon, said shank having opposed sides and edges, the shank

width being substantially larger than the shank thickness, a substantially enlarged blunt-headed finger rigidly connected thereto and extending transversely therefrom in a direction substantially normal to a plane disposed approximately normal to said sides, the blunt head of said



finger being adapted to engage the anterior contracting border surfaces of the masseter muscle, and said finger presenting other surfaces projecting beyond surfaces of said handle shank for engaging a mandibular second molar while the blunt head of said finger engages said surfaces of said masseter muscle.

3,002,278 METHOD FOR SPACE NAVIGATION

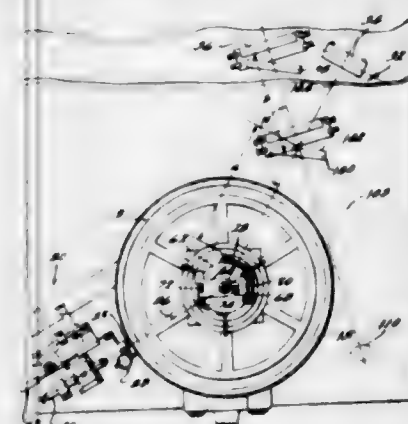
Philip V. H. Weems, Randall House, Annapolis, Md.
Filed Mar. 6, 1959, Ser. No. 797,605
2 Claims. (Cl. 33-1)



1. The method of finding the ground point of a space vehicle comprising the steps of observing the earth and the star field beyond the earth in the direction of observation, orienting a sidereal hour angle and declination angle grid with at least two known stars in said star field and reading the location of ground point on said grid at the center of the earth as observed from said vehicle.

3,002,279 CALIBRATING MECHANISM

Clarence Henry Miller, 1014 Balfour Road, Grosse Pointe, Mich.
Filed July 2, 1957, Ser. No. 669,588
7 Claims. (Cl. 33-19)

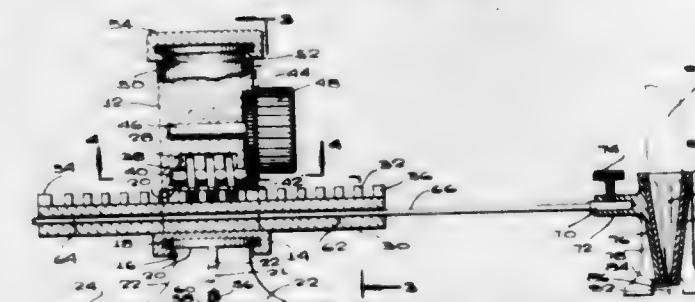


1. Apparatus for calibrating a circular member in angular increments comprising a pair of mirrors operatively

associated with said circular member and arranged in an adjustable angular relationship, an interferometer operatively associated with said mirrors for checking the positions of said mirrors relative to said interferometer, a rotatable support member for said mirrors and said circular member for concurrently rotating the mirrors and the circular member, and means on said support member rotatably supporting the mirrors so that they are rotatable together as a unit independently of the support means and the circular member.

3,002,280 BEAM COMPASS

Albert D. Bennett, Jr., 3109 Cornwall Road, Columbia, S.C.
Filed Feb. 14, 1958, Ser. No. 715,240
3 Claims. (Cl. 33-27)



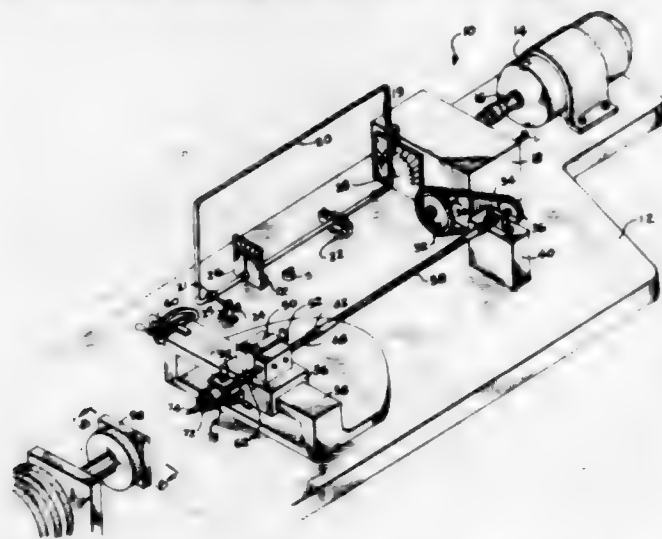
1. A beam compass comprising a relatively stationary base, a pedestal mounted for rotation on the axis of and upstanding from said base, said base having a centering pin for engaging a drawing surface, said pedestal having a radial bore extending therethrough, a rack bar slidably supported through said bore, said rack bar having longitudinally spaced teeth on a side thereof, said pedestal having an internal recess opening to said radial bore, a worm located in said recess and meshed with the rack bar teeth, said worm having a shaft journaled through the pedestal and having thereon a pinion outside of the pedestal, a gear wheel journaled on the pedestal parallel to the worm shaft and meshed with said pinion, a rotating knob secured to said gear wheel, a hand grip cap rotatably mounted on the upper end of the pedestal, said rack bar having an outer end and a longitudinal bore extending to said outer end, a beam having an inner end portion slidably engaged in said longitudinal bore and an outer end portion extending beyond the outer end of the rack bar, means for locking the beam in longitudinally adjusted positions in the rack bar, and drawing surface engaging scriber housing means connected to and depending from the outer end portion of the beam.

3,002,281 GEOMETRICAL CUTTING MACHINE

Charles Stennes, Ridgewood, N.Y.
(80-82 Bowery, Room 504, New York 2, N.Y.)
Filed Aug. 14, 1959, Ser. No. 833,755
8 Claims. (Cl. 33-27)

1. A geometrical cutting machine comprising, in combination, a tool holder having a main block upon the machine adjustably supporting a cutting tool, a drive shaft, motor drive means for rotating said drive shaft, a work piece mount supported for rotation about an axis substantially parallel to the axis of rotation of said drive shaft and the axis of rotation of said cutting tool, said tool holder comprising an apertured tool holder plate slidably receiving cutting tools selectively therewith, a mounting stud fixed to said main block and projecting therefrom, screw thread adjustment means engaging the mounting stud for positioning said cutting tool radially with respect to the longitudinal axis of rotation of said drive shaft, said apertured tool holder

plate having a cup slidably supported upon said main block, a transversely extending threaded shaft rotatably supported upon said main block in threaded engagement with said cup of said apertured tool holder plate for effecting movement of said apertured tool holder plate transversely of said main block in response to rotation of said threaded shaft, said tool holder having a sleeve secured thereto and slidably receiving a portion of said drive shaft therewithin, clutch means drivingly connected

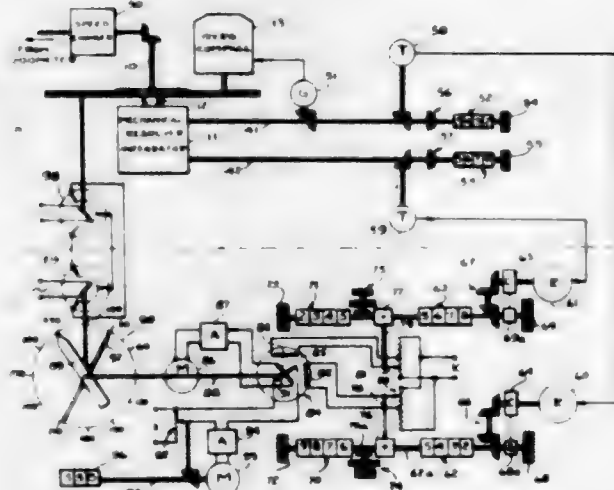


in said drive shaft, said screw thread adjustment means being mounted in said sleeve, bearing block means rotatably mounting said sleeve, said bearing block means being shiftable transversely of the axis of rotation of said sleeve to provide for eccentric rotation of said tool holder with respect to said drive shaft, a push plate connected to said bearing block means for effecting longitudinal movement of a cutting tool with respect to a work piece for selectively engaging and disengaging said cutting tool relative to the surface being engaged.

3,002,282

VEHICLE POSITION INDICATOR

Howard J. Ramrill, Mineola, N.Y., assignor to American Bosch Arms Corporation, a corporation of New York
Filed June 18, 1958, Ser. No. 742,850
2 Claims. (Cl. 33-141.5)

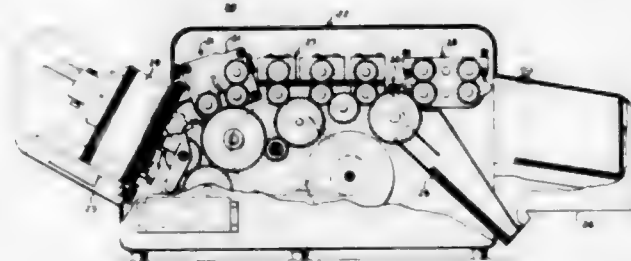


2. A vehicle position indicator comprising a mechanical resolver integrator, a gyro compass connected to said integrator, an odometer, said odometer being operatively connected to and driven by a drive operatively connected to the vehicle, said odometer and said compass being operatively connected to and adapted to drive the inputs of said resolver integrator, and a generator operatively connected to one output of said resolver integrator and electrically adapted to apply correcting torque to said gyro compass.

3,002,283

CARD WIDTH SENSING DEVICE

James L. Quinn, Chicago, and James S. Mentzer, Park Ridge, Ill., assignors to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed July 10, 1957, Ser. No. 670,939
18 Claims. (Cl. 33-143)

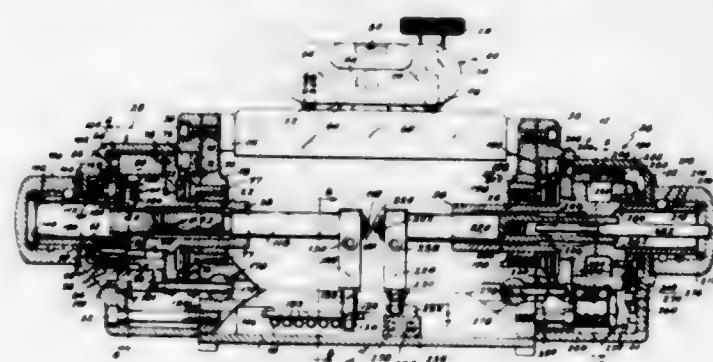


1. Apparatus for detecting business machine cards of improper width dimension comprising, in combination, means for conveying cards serially along a predetermined path, a first series of card presence-sensing elements mutually isolated and spaced closely adjacent one another transversely with respect to the path of movement and in the region of passage of one lateral edge of the cards, a second series of transversely spaced card presence-sensing elements mutually isolated and arranged in the region of passage of the opposite lateral edge of the cards, each of said first series of card presence-sensing elements being assigned to a corresponding one of said second series of card presence-sensing elements to form a plurality of pairs of elements, means mounting said elements with those of each pair spaced apart in a direction transverse to said path by a distance which differs slightly from the nominal width of a business machine card, each of said elements having two conditions depending respectively upon whether a card is substantially clear of or registered with that element, a signal receiving device, and means for energizing said device when the two elements of any pair are simultaneously in a predetermined one of said two conditions.

3,002,284

MEASURING INSTRUMENT

Joseph Sunnen, 400 S. Warren Road, Clayton 5, Mo.
Filed May 21, 1958, Ser. No. 736,787
16 Claims. (Cl. 33-164)



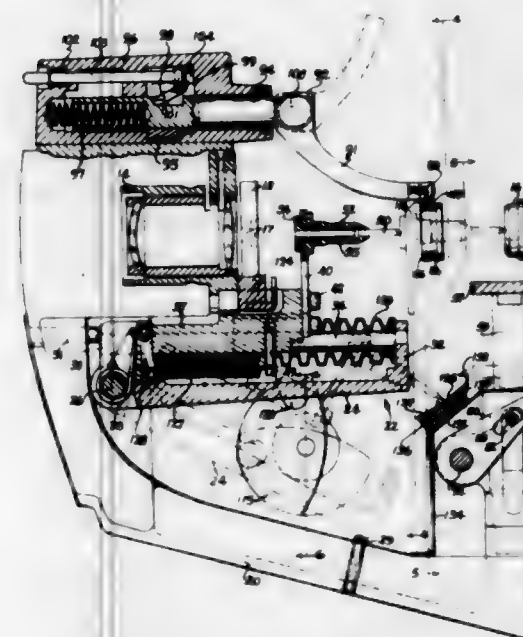
1. A measuring instrument for adjusting the setting of a measurement testing gage comprising a frame having first and second spaced supports and a bridge member connected therebetween, means on the frame for supporting the instrument in an operative position on a measurement testing gage, said means including two spaced rollers rotatively mounted on the instrument and adapted to be positioned on said gage to make a substantially frictionless connection therewith, a coarse adjustment device mounted on the first support, a fine adjustment device mounted on the second support, said coarse and said fine adjustment devices having aligned relatively movable threaded members having opposed measurement defining surfaces thereon, means preventing rota-

tion thereof, and rotating means cooperating with said threaded members for moving said measurement defining surfaces toward and away from each other, said rotating means on the coarse adjusting device have a coarse reading dial associated therewith which usually indicates the position of the associated measurement defining surface, and the rotating member on the fine adjustment device having a fine reading dial associated therewith which usually indicates the position of the surface associated therewith.

3,002,285

LENS TESTING INSTRUMENT

John R. Wright, Eggertsville, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association
Filed June 2, 1958, Ser. No. 739,333
7 Claims. (Cl. 33-174)



1. In a lens testing instrument of the type having a telescope aligned with a collimator, the telescope serving for viewing the image of a target projected by the optical system of the collimator, a lens marking device comprising a bed carrying a track, said bed being movable from a retracted position to an operative position and vice versa, said track in the operative position of said bed extending substantially parallel to the optical axis of said optical system, a marker carriage reciprocable along said track, a marker in a cushion mounting on said carriage for yieldably contacting and marking a lens under test, and actuating mechanism engageable first with said bed for moving said bed to operative position and engageable with said marker carriage after said bed is in operative position for reciprocating said marker carriage along said track to bring said marker into contact with said lens, said actuating mechanism including a manually operable element having a continuous movement for accomplishment of said movement of the bed to operative position and said movement of the marker carriage successively.

3,002,286

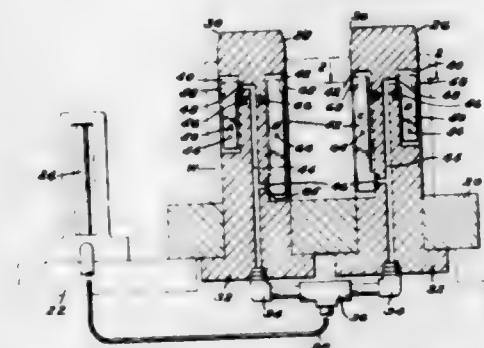
AIR CIRCUIT GAUGE

Robert Y. Altenburg, Detroit, Mich., assignor to Freeland Gauge Company, Detroit, Mich., a corporation of Michigan

Filed July 6, 1959, Ser. No. 825,008
4 Claims. (Cl. 33-174)

4. A device for checking the relative location of spaced walls of spaced holes which comprises a pair of parallel cylindrical posts, each having a pair of surface recesses extending axially of the posts and internal passages connected to said recesses, the first recess of each pair

being connected at the top end of the post to said passages and the second of said recesses being connected at the bottom to said passages, a feeler block in said first recess pivoted at its bottom end having an outside contact surface at its upper end, and an inside surface contact at its upper end affecting the flow from said passages,

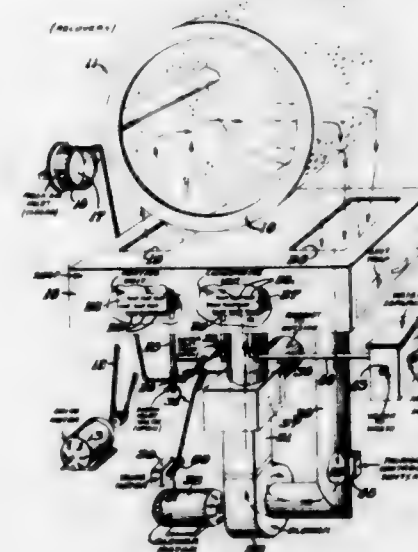


and a feeler block in said second recess pivoted between its ends having an outside surface contact at the upper end and an inside surface contact at its lower end affecting the flow from said passages, the first recess on said pair of posts being formed on the far sides of said posts and the second of said recesses being formed on the near sides of said posts, the passages from said posts being pneumatically associated with a single pneumatic gauge reading device.

3,002,287

CONTROL MEANS FOR SOLVENT RECOVERY MACHINE

Jack C. Smith, Warren County, Ky., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Feb. 18, 1960, Ser. No. 9,532
2 Claims. (Cl. 34-45)



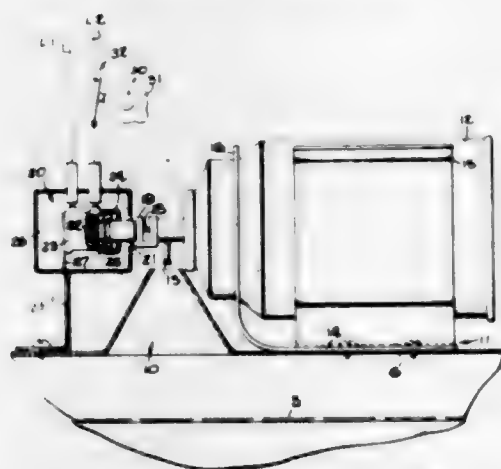
1. In a solvent recovery machine having within a housing a perforated rotatable drum for tumbling clothes, garments and the like which have been previously cleaned with a solvent such as carbon tetrachloride, trichlorethylene, perchlorethylene and the like; motor drive means for rotating said drum; a closed air-flow path within said housing, said path including a blower for circulating air through said drum and its garment contents, a heating unit having control means adapted to couple said heating unit to a source of heat for heating said air within said housing before it enters said drum, said heating unit being disposed in said housing in the air-flow path between said blower and said drum, a condensing unit having control means adapted to couple said condensing unit to a supply of coolant for condensing the solvent from said air, said condensing unit being disposed in said housing in

the air-flow path between said blower and said heating unit, and a single temperature-sensitive switch disposed in said housing in the air-flow path between said drum and said condensing unit, said temperature-sensitive switch having low-temperature and high-temperature contacts; inlet and exhaust vents adapted when open to communicate with the outside of said housing, said inlet vent being located in the air-flow path between said heating unit and said drum, said exhaust vent being located in the air-flow path between said drum and said condensing unit, each of said vents having a damper therein; a linkage connected to both said dampers and also to both said control means; motor drive means for said linkage, said motor drive means including a shaft; multiple-contact switch means connected electrically to the motor of said last-mentioned motor drive means, the individual contacts of said switch means being adapted to be either open or closed according to the angular position of said shaft; and electrical circuit means connecting said temperature-sensitive switch with at least one set of contacts of said multiple-contact switch means for completing a circuit through said motor when said high-temperature switch contacts close, for actuating said motor to move said linkage to open both said dampers and simultaneously to actuate both said control means to decouple said heating unit from its source of heat and said condensing unit from its supply of coolant.

3,002,288

LAUNDRY DRYER WITH AEROSOL CONTAINER
George D. Conlee, Ripon, Wis., assignor to McGraw-Edison Company, Ripon, Wis., a corporation of Delaware

Filed July 1, 1958, Ser. No. 745,929
4 Claims. (Cl. 34-45)



1. In a dryer having a drying chamber with an inlet opening in one wall, means for supporting a valved container for pressurized fluids with its outlet positioned to discharge through said opening, a plunger supported in operative relation to the valve of said container, heat operated means including an element operative to expand when heated and to contract when cooled for advancing and retracting said plunger, and means for supplying heat to said element.

3,002,289

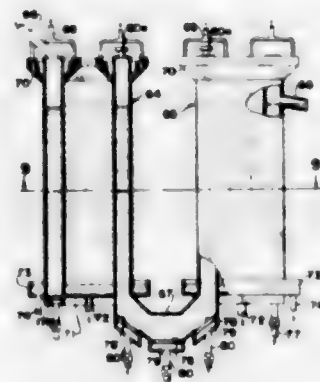
APPARATUS FOR COOLING FINELY DIVIDED MATERIAL

Poul Bessermann Nielsen, Copenhagen, Denmark, assignor to F. L. Smidth & Co., New York, N.Y., a corporation of New Jersey

Filed Feb. 15, 1957, Ser. No. 640,476
6 Claims. (Cl. 34-57)

1. An apparatus for cooling a hot powdered material, which includes a pair of independent chambers, each being of substantial height in relation to its transverse dimensions and having relatively closely spaced opposed

vertical walls of heat-conducting material, one chamber having an inlet for admitting powdered material into the chamber near its upper end and an outlet for discharge of powdered material near its lower end, the other chamber having an inlet for admitting powdered material into the chamber near its lower end and an outlet for discharge



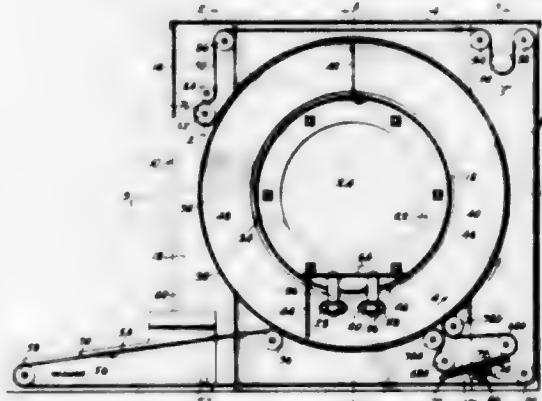
of powdered material near its upper end, a connection outside the chambers between the outlet of the first chamber and the inlet of the second, means for causing a flow of a cooling liquid along the outer surfaces of the heat-conducting walls of the chambers, and means at the bottom of each chamber for introducing air into the powdered material within the chamber to render it fluent.

3,002,290

DRUM-TYPE PRINT DRYERS

Alfred H. Abdoo, 20 Cherry Creek Shopping Center, Denver, Colo.

Filed Sept. 28, 1959, Ser. No. 842,821
11 Claims. (Cl. 34-123)



1. In a drum-type dryer for photographic prints and the like, a housing having spaced side panels, a hollow cylindrical element interconnecting said side panels extending transversely therebetween, a first idler roller journaled for rotation between the side panels near the bottom front of the housing, a second idler roller journaled for rotation in spaced substantially parallel relation to the rear of the first idler roller, said first and second idler rollers being spaced substantially the same distance from the axis of the hollow cylindrical element and on opposite sides thereof, a hollow drum having a substantially cylindrical polished outer surface supported on the first and second idler rollers in coaxial relation thereto and peripherally spaced from and coaxial with the cylindrical element for independent relative rotational movement therearound, said drum having end walls cooperating with the cylindrical surfaces of the drum and element interconnecting the side panels to define an annular chamber therebetween, a main resistance heating unit depending from the hollow cylindrical element and extending into the annular chamber at a point adjacent the first idler roller, a first baffle plate located in fixed position within the annular chamber immediate-

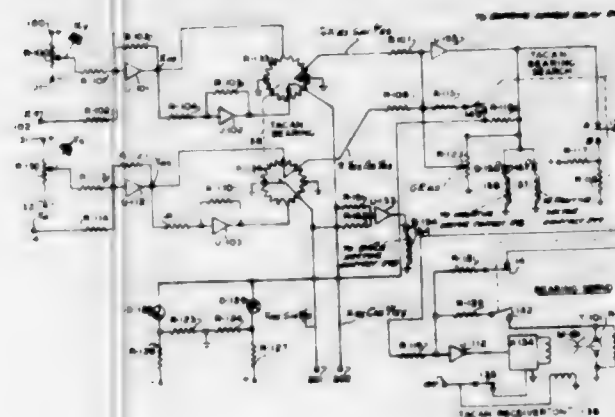
ly in front of the main heating unit, a second baffle plate located in fixed position in the top of the annular chamber cooperating with the first baffle plate to divide said chamber into a heating zone containing the main heater and a cooling zone, a drive roller journaled for rotation between the side panels at the top front of the housing adjacent the drum, drive means operatively connected to the drive roller for rotating same, a third idler roller journaled for rotation between the side panels in spaced substantially parallel relation to the rear of the second idler roller in tangential contact with the cylindrical surface of the drum, a secondary heating unit mounted in spaced substantially parallel relation beneath the second and third idler rollers, a fourth idler roller journaled for rotation adjacent the upper surface of the secondary heater in spaced substantially parallel relation beneath the second and third idler rollers, a fifth idler roller journaled for rotation between the side panels at the top rear of the housing, a sixth idler roller journaled for rotation between the side panels at the bottom rear of the housing behind and underneath the secondary heater unit, a seventh idler roller journaled for rotation in substantially parallel relation to the first idler roller spaced to the front thereof, and an endless canvas belt threaded between the first idler roller and the drum, over the second idler roller and around the underside of the fourth idler roller in position to be dried by the secondary heating unit as it leaves the cylindrical surface of the drum, over the third idler roller and around the drum to the drive roller, around the underside of the drive roller and rearwardly over the top of the fifth idler roller, thence downwardly around the sixth idler roller and forwardly to the seventh idler roller, and finally around the front of the seventh idler roller to the beginning.

3,002,291

TACAN SIMULATION

Robert W. Nash, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware

Filed Apr. 14, 1958, Ser. No. 728,140
5 Claims. (Cl. 35-10.2)



3. A grounded flight trainer including means for simulating the operational and presentation characteristics of a Tacan system comprising means for generating slant range signals and bearing signals representing range and bearing from a simulated aircraft to a simulated Tacan transmitter, means for providing a constant potential, a first shaft, means for simulating the operation of a Tacan system in a plurality of search modes and in a plurality of track modes including a first electromechanical shaft positioning means coupled to said first shaft and responsive to said bearing signals for deriving a first shaft position to represent the bearing track mode or responsive to said constant potential to rotate said first shaft to represent the bearing search mode, a second shaft, a second electromechanical shaft positioning means responsive to

said slant range signals for positioning said second shaft in accordance with slant range to represent the slant range track mode or responsive to said constant potential to rotate said second shaft to represent the search mode or a search for the slant range, means for determining the presence of said simulated aircraft within a first cone of silence and for supplying said constant potential to said first electro-mechanical shaft positioning means to force it from its bearing track mode to its bearing search mode, means for determining the presence of said simulated aircraft within a second cone of silence and for supplying said constant potential to said second electro-mechanical shaft positioning means to force it from its slant range track mode to its slant range search mode, and indicating means for displaying the change over from one mode to another.

3,002,292

SIMULATED NOSE WHEEL STEERING SYSTEM
Charles L. Cohen, Hyattsville, Md., and Robert A. Atchison, Princeton, N.J., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Feb. 27, 1958, Ser. No. 717,933
16 Claims. (Cl. 35-12)

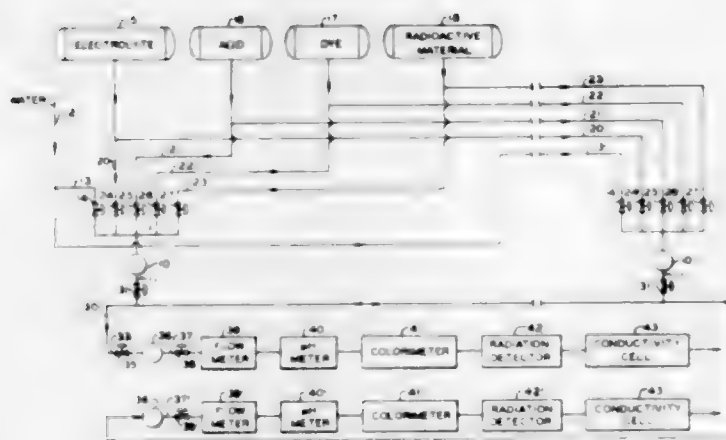


9. In a training device for pilots having a computer for hydraulic pressure, Mach and turning moment, flight simulating apparatus for representing the ground travel condition of an aircraft of the type having three load bearing wheels arranged in a triangle wherein the forward wheel is turnable on an axis to steer the aircraft comprising in combination simulated aircraft controls including a steering wheel member, electromagnetic position means representative of the simulated nose wheel angular position, differential means connected to the two prior mentioned means, output differential means whose position is the difference between the positions of the steering wheel member and the electromagnetic position means, a first electronic means responsive to the position of the output differential means for generating a potential analogous to the hydraulic force available in a simulated aircraft and regulated by the hydraulic pressure computer, a second electronic means responsive to activation of simulated aircraft brake controls for generating a potential analogous to the differential braking force resulting in an actual aircraft from similar operation of the brake controls, a third electronic means responsive to the turning moment computer for generating a potential analogous to the turning moment force which would act upon an actual aircraft under the same operating conditions as present within the simulator, a fourth electronic means responsive to the position of the electromagnetic position means and the Mach computer for generating a potential analogous to the castoring restoring force which would be present on the nose wheel of an actual aircraft under similar circumstances, summing means having an output connection for adding algebraically the potentials generated by the first, second, third and fourth electronic means, means for modifying

the output of the summing means in accordance with the position of the output differential means to produce a potential analogous to the combined hydraulic, differential braking, turning moment and castoring restoring forces, means connecting the last named potential to the electromagnetic position means for activating said electromagnetic position means to move to a position representing the position to which an actual nose wheel would move if subjected to the forces simulated and at the same time drive through the differential means to turn the steering wheel member as it would be turned in on aircraft when the aforementioned forces are present at the nose wheel.

3,002,293

PIPELINE NETWORK WITH FLOW RATE INDICATOR AND CHEMICAL CONTENT ANALYZER
Lyle W. Pollock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 12, 1958, Ser. No. 741,588
4 Claims. (Cl. 35-18)



1. Apparatus for simulating the operation of a pipeline gathering network which comprises a pipeline network analyzer comprising a first conduit means in an analog relationship to the pipeline to be simulated, a source of a first material, a source of a second material, said first material being representative of a first component in said pipeline, said second material being representative of a second component in said pipeline, said materials being each identifiable in the presence of the others, storage vessels for each of the materials representative of the components in the pipeline, second conduit means communicating between said first conduit means and said storage vessels and means in said second conduit means to permit introduction of said materials selectively into said first conduit at a first point, third conduit means communicating with said second conduit means and provided with means to allow additional selective introduction of said materials to said first conduit means at a second point, and analyzing means positioned in said conduit to measure said first and second materials representative of the components in said pipeline.

3,002,294

EDUCATIONAL GAME DEVICE
Calvin D. Jackson, Salt Lake City, Utah
Filed Sept. 21, 1960, Ser. No. 57,478
1 Claim. (Cl. 35-19)

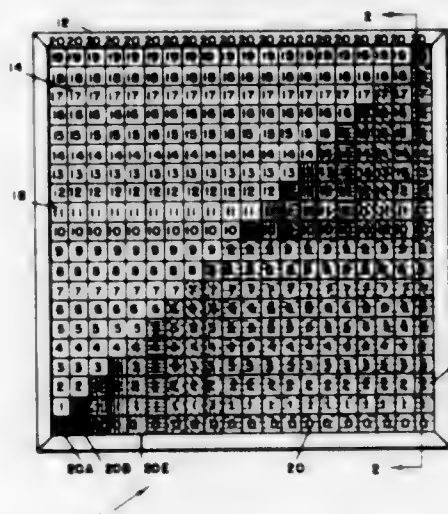


An educational game device comprising an inclined platform, a plurality of rollable target elements arranged

in linear aligned abutting relation on said platform, and an impelling plunger positioned adjacent to and spaced from the lowermost one of said element and in tandem relation thereto, said plunger being connected to said platform for movement toward and away from the lowermost one of said elements, spring means operatively connected to said plunger urging the said plunger toward said lowermost one of said elements, a resilient leaf spring having one end anchored in said platform adjacent said plunger, an abutment carried on the other end of said spring and normally disposed so as to abuttingly engage a target element when the element is disposed adjacent said plunger.

3,002,295

DEVICE FOR TEACHING NUMBER CONCEPTS
Vernon Lee Armstrong, 6390 Brentwood, Arvada, Colo.
Filed Oct. 27, 1958, Ser. No. 769,769
9 Claims. (Cl. 35-31)



1. In an educational device providing at least one row of stationary objects each including a numeral associated therewith and with the numerals arranged to progress by a constant difference of one beginning with zero, a displaceable block for covering a predetermined number of said objects in each row beginning with the lowest numbered object, said block defining a plurality of connectable units with each unit proportioned for disposition over an object and each bearing a numeral so that the highest numbered unit and the first exposed object bear the same numeral designating the physical number of objects covered by said block.

3,002,296

SHOE
Howard M. Goldberg, 1348 Grand Concourse, Bronx, N.Y.
Filed Sept. 24, 1959, Ser. No. 842,089
1 Claim. (Cl. 36-2.5)



A shoe having a flexible inelastic upper, a sole to which the upper is secured, and a horizontally elongated strip

of flexible vertically elastic material extending between the sole and the upper from the shank area of one side of the shoe to the shank area of the other side of the shoe.

3,002,297 FOOTWEAR

Mary D. Nellson, 2035 Crestlake, Ave., South Pasadena, Calif.
Filed Feb. 19, 1960, Ser. No. 9,953
8 Claims. (Cl. 36-11.5)



1. An article of footwear comprising: a flexible bottom sole; a flexible top sole atop the bottom sole, said soles being completely separate from one another and substantially coextensive in shape and area; joinder means at the periphery of the bottom sole providing a plurality of openings; attachment means integral with and extending from the periphery of the upper sole, said attachment means being adapted to pass through said openings so that the bottom sole is suspended from the upper sole by the attachment means, said attachment means being adapted to be fastened around the foot; the joinder means joining the soles at a plurality of locations spaced around their periphery and around less than the entire periphery of either sole; whereby the bottom sole is suspended free of the upper sole except at the joinder means.

3,002,298 SNOW PLOW

Russell B. Baldwin, Rahway, N.J.
(60 McCoy Ave., Metuchen, N.J.)
Filed July 24, 1959, Ser. No. 829,390
3 Claims. (Cl. 37-45)

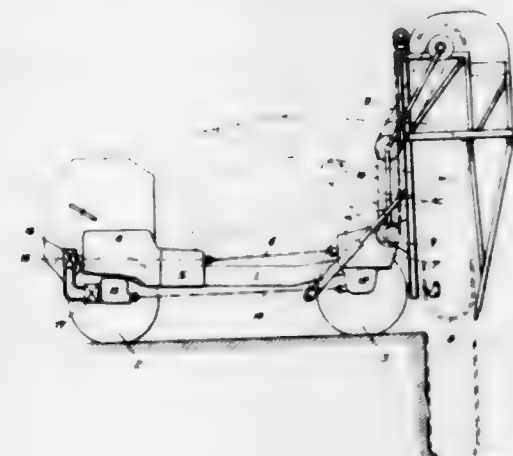


1. In a snow plow, a scoop body having a forward end and a rearward end and including a pair of laterally spaced upstanding walls, one of said walls extending from the forward end to and about the rearward end and the other of said walls extending from the forward end to a point adjacent to and spaced from the rearward end, an endless belt conveyor having an exterior face thereof, a plurality of spaced ridges extending thereacross said face, said conveyor being rotatable about spaced horizontal axes and having an upper flight and a lower flight positioned so that the upper flight is between the lower ends of said walls with the lower flight below and adjacent to the lower ends of said walls, said upper flight extending from the forward end to the rearward end of said walls and carried by said upstanding walls, and a pair of laterally spaced ground-engaging wheels positioned beneath the lower flight of said conveyor, each

3,002,299

TRENCH EXCAVATOR

Bernard Edouard Domagalski, Vanves, France, assignor to Societe Anonyme dite: Etablissements Matenia, Paris, France, a company of France
Filed Nov. 26, 1957, Ser. No. 699,120
Claims priority, application France Jan. 18, 1957
2 Claims. (Cl. 37-86)



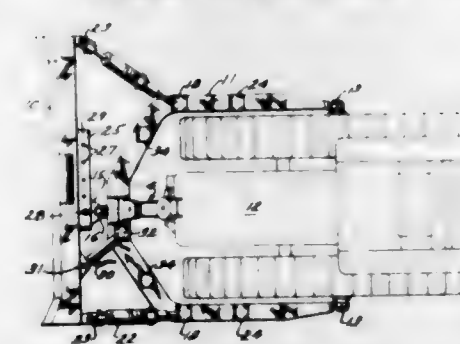
1. In a vehicle of the class described, a main frame, an engine and a fluid torque transmission secured to and driven by said engine, means mounting said engine and fluid torque transmission at the front end of said main frame, a traction unit comprising a rear end housing and traction wheels, said traction unit and rear end housing being mounted at the rear end of said main frame, drive means in said housing for imparting traction to the said traction wheels of said vehicle, excavating machinery, drive means including gearing within said rear end housing for driving said excavating machinery, means mounting said excavating machinery for bodily rotation on said rear end housing on the axis of a gear forming part of said drive means, control means for selecting which of said drive means is to be actuated whereby to actuate said excavating machinery or said traction wheels, and drive means extending from said fluid torque transmission into said rear end housing for contributing traction to said wheels and for actuating said excavating machinery.

3,002,300

BULLDOZER WITH LATERALLY ADJUSTABLE BLADE

Benjamin F. Turbyfill, Moline, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Apr. 28, 1959, Ser. No. 809,380
1 Claim. (Cl. 37-144)



In a bulldozer which includes a blade supported forwardly of a tractor by a C-frame or the like, a clevis

board stock and being separated from each other by an interrupted hinge slot, the free edges of said supporting prop face panel and said display mounting face panel coinciding with the respective edges of said sections defining said hinge slot, a ductile metal hinge plate overlying at least a portion of said display mounting back panel and said supporting prop back panel and bridging said hinge slot, and an adhesively attached flexible binding material extending over a face and about the edges of said mount.

3,002,308

ARTIFICIAL PLANT

André Emile Decamp, 45 Chemin des Peupliers (Caluire), Lyons, France

Filed July 11, 1958, Ser. No. 747,901
7 Claims. (Cl. 41-13)



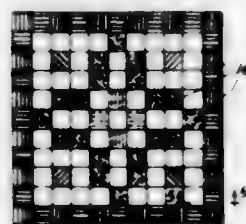
1. In an artificial plant, a foliage bearing stalk mounted on a ring which is integral with said stalk, a centrally pierced cup member having an inner periphery which is slightly larger than the outer periphery of said stalk ring adapting said ring to be inserted into said cup, a stem supporting said cup member and said stalk on its ring within said cup member, said stem being provided with a bore at its end, said stalk ring having its base pierced with a central opening for attachment to said cup member and stem, said cup member being recessed at its bottom surface about its centrally pierced portion for insertion of the end of said stem and fastening means through said central opening and said bore to fasten said stem and cup to said stalk.

3,002,309

METHOD OF MAKING A MOSAIC OF PREDETERMINED DESIGN

Duane W. Snyder, 512 Bader Ave., Waynesboro, Va.

Filed May 19, 1959, Ser. No. 814,337
3 Claims. (Cl. 41-23)



1. A method of making a mosaic, comprising the steps of coating a backing sheet with pressure-sensitive adhesive, applying an overlay sheet to the backing sheet so coated, slitting the overlay sheet with series of parallel and intersecting lines to divide the overlay sheet into a plurality of individually removable overlay elements of a uniform size and shape each covering a pre-

determined portion of the area of the backing sheet, identifying the individual overlay elements in relation to a predetermined pattern with indicia corresponding to predetermined colors, successively removing said overlay elements from the backing sheet, and applying mosaic elements of the same size and shape as the overlay elements and of colors corresponding to the indicia of the respective overlay elements so removed to the pressure-sensitive adhesively coated respective portions of the area of the backing sheet from which the overlay elements with the respective corresponding indicia have been removed.

3,002,310

SPECIAL CATFISH HOOK

Leslie W. Ferguson, Smithwick, S. Dak.

Filed Apr. 2, 1959, Ser. No. 803,746
1 Claim. (Cl. 43-37)



A self locking fish hook comprising, in combination, a pair of similar fish hooks, each one of said fish hooks having an intermediate shank, and a barb at one end, a lever, fastening means securing one end of said lever to the opposite end of each of said fish hooks, said lever being in an initial position angularly related to the shanks of said fish hooks with said barbs being in lateral contact with each other, and twisting means associated with said one end of said lever and said fastening means for spreading said shanks and said barbs apart in response to relative movement between said lever and said shanks of said hooks toward axially aligned positions, said twisting means including a ring integral with said one end of said lever, said fastening means including a pair of loops, one integral with said opposite end of each of said fish hooks and in pivotal engagement with said ring, the opposite end of said lever including an eye lying in a plane substantially perpendicular to the plane of said ring at said one end thereof, said eye receiving one end of a flexible fishing line for attachment thereto, said shanks of said fish hooks converging in a direction toward said barbs in said initial position of said lever, and said loops of said fish hooks converging forwardly on the same side of said shanks as said barbs when in said initial position of said lever, whereby a pull upon the flexible line and a simultaneous pull upon said barbs tends to rotate said hooks and said lever toward alignment with each other, and rotation of said ring within said loops of fish hooks tends to spread said shanks and said barbs apart.

3,002,311

FISHING LURE

James G. Kyper, P.O. Box 355, Huntingdon, Pa.

Filed Mar. 9, 1960, Ser. No. 13,940
4 Claims. (Cl. 43-42.04)

1. Fishing tackle, comprising a spoon, said spoon including means at one end for securement to a fishing leader, said spoon including a longitudinally disposed intermediate slot portion and a notch portion in one edge

thereof in alignment with said slot portion, a two-barbed hook including legs resiliently connected by a bight portion, and a resilient mounting clip including an eye portion extending through said slot portion and resiliently connected by an elongated body portion to an abutment portion received in said notch portion, said eye and abutment portion being longitudinally aligned at one side of



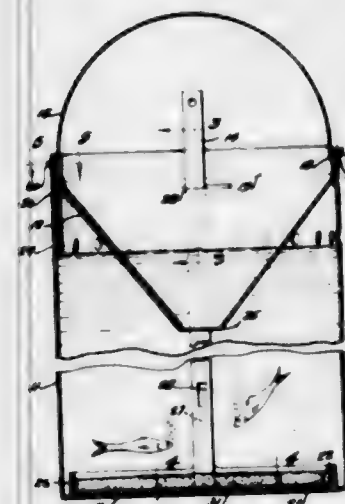
said spoon, the bight portion of said hook extending transversely through said eye portion and the legs of said hook detachably engaging opposite sides of said abutment portion, said abutment portion including a second eye portion extending through said legs, and a fastening element extending transversely through said second eye portion to prevent disengagement of said legs from said second eye portion.

3,002,312

MINNOW TRAP AND BUCKET

Fred Vester Barker, Box 466, Rhodell, W. Va.

Filed Oct. 6, 1958, Ser. No. 765,469
5 Claims. (Cl. 43-56)



1. A minnow bucket including a perforated base with a cylindrical wall extended upwardly therefrom, a frusto conical-shaped element providing a closure positioned in the upper end of the bucket with the small end extended downwardly into the bucket, means for hinging the closure in the bucket, a dipper having a perforated base positioned in the bucket and having a handle extended upwardly through the wall of said frusto-conical-shaped element, the perforations of the dipper being positioned to, selectively, register with the perforations of the base of the bucket or to register with blank areas between the perforations of the base of the bucket for closing the bottom of the bucket and a bail extended upwardly from the upper edge of the wall of the bucket.

3,002,313

GRAVITY FEED COIN BANK

Shelton M. Hutchinson, 4545 Providence Road, Charlotte 7, N.C.

Filed Aug. 14, 1958, Ser. No. 754,968
2 Claims. (Cl. 46-3)

1. In a coin bank, a receptacle for receiving coins, an upright frame mounted upon said receptacle, means on said frame for guiding a coin from a top portion of the frame downwardly into said receptacle, said guiding means comprising a plurality of spaced apart downwardly inclined coin chutes, alternate chutes being substantially parallel and having free lowermost ends directed toward

the same side of said frame, and chime plates removably mounted on the sides of said frame, each of said chime plates being positioned in opposed spaced relation to the free lowermost end of the corresponding chute, said chime



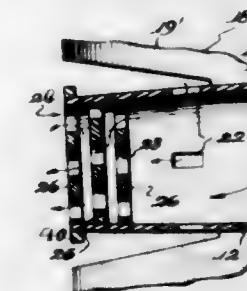
plates having different tonal qualities and being arranged on the sides of said frame in a predetermined sequence, whereby the coin will strike against the corresponding chime plate as it passes between adjacent chutes in its descent toward said receptacle, the complete descent of the coin causing a melody to be played by the striking of the coin against said chime plates.

3,002,314

ROCKET TOY

Irwin Brotzman, 9113 Luella Ave., Chicago, Ill.

Filed Jan. 11, 1960, Ser. No. 1,475
5 Claims. (Cl. 46-6)



1. A rocket toy comprising, an elongate, substantially cylindrical body simulating the configuration of an actual rocket device, said body being hollow and open at both ends thereof, a plurality of outwardly extending stabilizer fins secured to said body at one end thereof, bubble producing means disposed at said one end comprising perforated discs arranged side by side with the perforations thereof at least partially misaligned, said means adapted to absorb and retain a bubble-forming solution after immersion therein of said one end whereupon a flow of air through said means will produce a wake of bubbles simulating a vapor trail during flight of the toy.

3,002,315

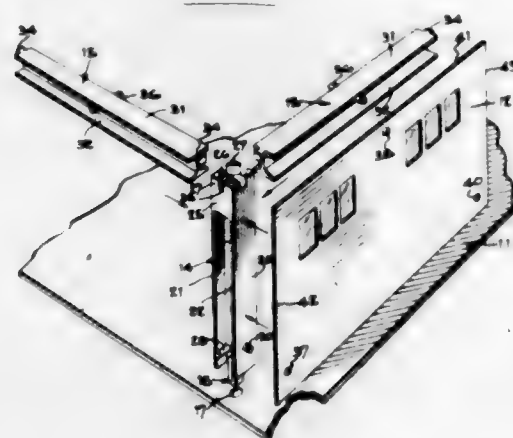
TOY CONSTRUCTION SET

James O. Kuhn, Cincinnati, Ohio, assignor to Bromo Mint Company, Cincinnati, Ohio, a corporation of Delaware

Filed Aug. 13, 1957, Ser. No. 677,885
4 Claims. (Cl. 46-19)

1. In a building toy, a structural unit comprising two vertical columns and a horizontal beam to join said columns to provide a frame, a dove-tail tenon projecting from each of the opposite ends of said beam, a dove-tail mortise which opens upwardly at each of the sides of

each of said columns at the upper ends thereof, the tenons at the ends of said beam engaged down in mortises of the two columns with the beam spanning the space between the upper ends of the columns, an integral pin projecting transversely from a side of the beam, said pin being spaced substantially from an end of the beam, similar pins integral with the columns and projecting transversely therefrom parallel to, and in the same direction as, the first named pin, at places on the columns spaced substantially from the upper ends thereof, a rectangular panel which is as high as the columns and as



long as the beam plus the widths of both columns, said panel having at least three apertures therein, the respective apertures positioned and sized to receive the pin on the beam and the pins on the columns in snap-fit relation, and said pins engaged in the apertures in the panel with the upper edge of the panel coextensive with the top of the beam and the ends of the panel coextensive with the outer sides of the columns, whereby the panel serves as a simulated wall to cover said frame and serves as a locking device to prevent the upward withdrawal of the tenons from the mortises, thereby holding the unit together.

3,002,316

ROCKING TOY

Paul W. Miessler, Sr., Berea, Ohio, assignor to The Patent and Licensing Corporation, New York, N.Y., a corporation of Massachusetts
Filed Dec. 8, 1959, Ser. No. 858,096
6 Claims. (Cl. 46-115)



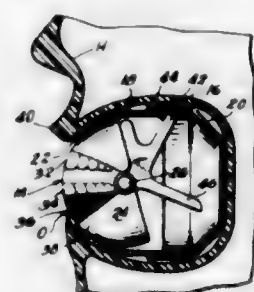
3. A toy of the character described, consisting essentially of a fibreboard base in the form of a rockable member, and a detachable element configured and demarked to simulate an animal, said base comprising an intermediate portion, side portions foldable into depending position with respect to said intermediate portion, the marginal edges of said side portions being of symmetrical convex curvature with respect to the longitudinal center line of said base, said convex edges extending in parallel planes throughout their length when said side portions are in depending position, said intermediate portion comprising a pair of spaced end panels lying in a common plane and constituting the top surface of said base and a pair of panels intermediate said end panels, said intermediate panels being transversely overlappable in a plane spaced below said common plane when said side portions are folded into depending position as aforesaid, and said

intermediate portion being formed with means to engage the lower portion of said detachable element whereby to retain said element in position on said base and in engagement with said overlapped panels.

3,002,317

DOLL MOUTH

Robert I. Prupis, Newton Centre, Mass., assignor to Margon Corporation, Newark, N.J., a corporation of New Jersey
Filed Sept. 14, 1956, Ser. No. 609,835
7 Claims. (Cl. 46-171)

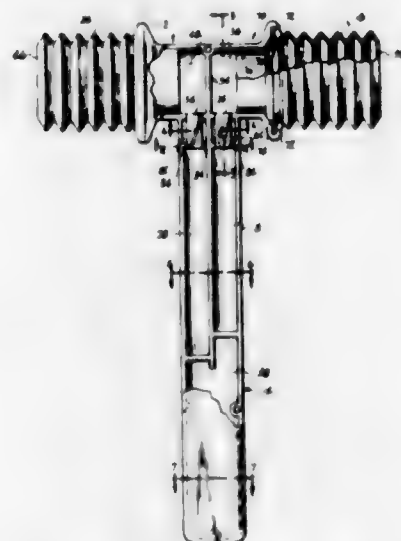


1. Mechanism for simulating a change of facial appearance at the mouth of a flexible doll head having a mouth opening and a socket behind said mouth opening, said mechanism comprising a casing dimensioned to be received with a snug fit in the mouth socket of the head, said casing having an opening at the front conforming generally to the mouth opening, an oscillatable element pivoted in said casing to expose a surface area thereof to view at said mouth opening, a weight member disposed to be upwardly and forwardly of the pivot of said element when the head is erect, whereby the weight is unstable and is adapted to move abruptly when the head is changed from erect to supine position, and stop means to limit the motion of said movable element, said element having simulated mouth parts at said surface area some of which are exposed at the mouth opening of the doll in one position and concealed in another position of said element, said element being molded out of a single piece of material which is hollow and thin walled below the pivot and which is filled in solidly above and forward of the pivot when the head is in erect position, the said solidly filled in part constituting the weight member.

3,002,318

TOY

Richard N. Carver, Erie, Pa., assignor to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 16,480
9 Claims. (Cl. 46-177)



1. A toy mallet comprising a head and a handle extending at right angles to the head, an end part of the

head being a generally cylindrical hollow bellows with a closed soft outer end, said bellows having accordion pleated sides and being molded out of a plastics material having the characteristics of polyethylene, and a wind responsive sound producing device in flow communication with said bellows, whereby when the mallet is struck the bellows is compressed and a sound is produced, said handle and the midportion of said head being molded out of a rigid plastics material.

3,002,319

HAND WEED DESTROYER

Myron P. Laughlin, St. Petersburg, Fla.
Filed Apr. 5, 1956, Ser. No. 576,318
4 Claims. (Cl. 47-57.5)

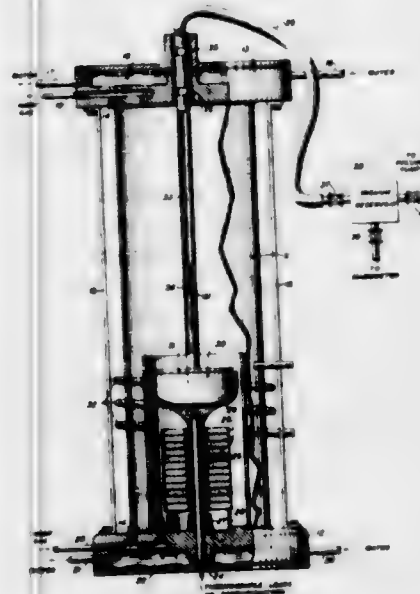


1. In a plant growth control chemical applicator for group plantings, a plant surface abraded-applicator means in combination with a support carrier therefor, said plant surface abraded-applicator including a plant scarifier and a cooperating chemical applicator operating together to vaccinate and inoculate the plant surface above the root growths thereof and said carrier including support means extending to the plant growth area surface to fix the spacing of the abraded-applicator relative to the plant growth from said surface.

3,002,320

PREPARATION OF SILICON MATERIAL

Henry C. Themerer, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1956, Ser. No. 628,186
5 Claims. (Cl. 49-85)



1. The method of casting silicon ingots which comprises introducing molten silicon at a temperature between 1470° C. and 1500° C. into an elongated mold completely closed over its entire length so as to result in an elongated melt in contact with the said mold at substantially the entire surface of the said melt, and rapidly reducing the temperature of said melt to minimize the time of liquid-solid contact with said mold, whereby the volume contraction of said melt on cooling is essentially balanced by the volume expansion of said melt on freezing.

3,002,321

METHOD FOR TREATING MULTIPLE SHEET GLAZING UNITS

Donald W. Dunspace, Ferrysburg, and Frank J. Carson, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Oct. 31, 1957, Ser. No. 693,711
2 Claims. (Cl. 49-89)

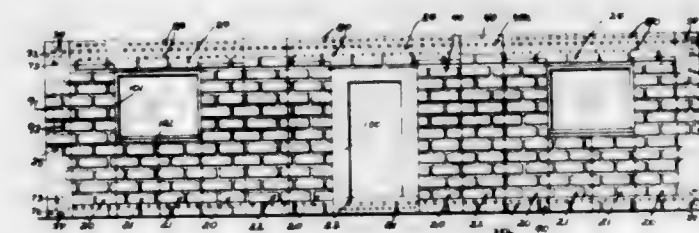


1. A method of differentially heat treating all-glass multiple sheet glazing units composed of two sheets of glass disposed in spaced face-to-face relation and having the edge portions thereof fused to one another to form a sealed edge wall, which comprises first heating the units to a temperature above the annealing point of the glass, arranging a plurality of said heated units on edge in spaced face-to-face substantially parallel relation with respect to one another, passing said units through an annealing lehr while maintaining said spaced face-to-face relation to bring the temperature of said units gradually to room temperature, and during said passage of the units through said annealing lehr causing an accelerated rate of cooling of the edge portions of the units to place said edge portions in compression.

3,002,322

BUILDING CONSTRUCTION

Roscoe Dorsett, Dayton, Ohio, assignor to Anthony S. Candela
Filed Oct. 17, 1956, Ser. No. 616,464
1 Claim. (Cl. 50-132)

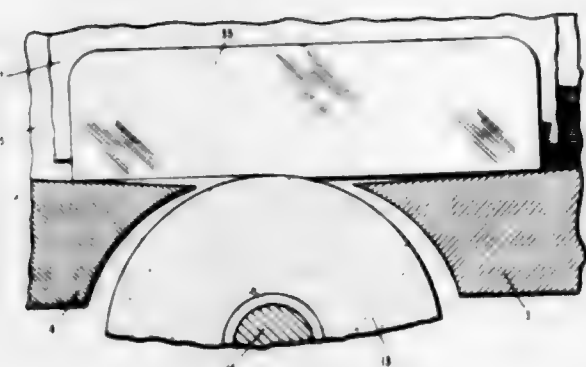


In combination: a plurality of unitary slabs of concrete each in the form of a relatively long, relatively thin, and relatively wide rectangular parallelepiped, said slabs being placed in two closely adjacent parallel horizontal courses, each course comprising a plurality of slabs placed vertically longitudinal edge to vertically longitudinal edge to form a continuous horizontal wall and each slab extending substantially from the bottom to the top of said wall; said slabs having vertical reinforcing metal bars in the form of relatively long, thin and wide ribbons with their thin edges extending toward the sides of said slabs, said ribbons being smooth and of uniform cross-section throughout their length and their edges extending on both sides of the central vertical plane of said slabs which is parallel to said courses, each ribbon having a threaded portion thereof exposed from its respective slab adjacent the top thereof and an opposed portion rigidly secured to said slab adjacent the bottom thereof; a plurality of nuts respectively threadedly received on said threaded portions of said ribbons and placing said ribbons under vertical tension to impose a vertical compression force on said slabs between said opposed portions of said ribbons; and a pair of horizontal metal tension bars ad-

acent the top and bottom of said wall respectively and between said courses and extending the entire length of said wall and pulling the end and intermediate ones of said longitudinal edges of both courses toward each other.

3,002,323 SURFACE GRINDER

Parks M. Adams, 1211 Stevenson Lane, Towson, Md.
Filed Apr. 11, 1955, Ser. No. 500,365
6 Claims. (Cl. 51-102)



6. In a grinding machine, the combination of an elongated table having an upper surface and a narrow opening extending transversely therethrough, the upper surface of said table being formed in two portions extending upwardly and outwardly from opposite sides of said opening at an inclination of not more than .002 inch per foot, said two portions of the upper surface of said table being concavely curved normal to the direction of said inclination, and a cylindrical grinding element rotatably carried within said opening.

3,002,324 MAIL-ROOM METHOD OF PACKAGING NEWS- PAPERS AND NEWSPAPER DISTRIBUTION PACKAGE

James N. Deaconson, 510 Foothill Road, Sellersburg, Ind.,
and Donald D. Ditty, 226 E. Carter Ave., Clarksville,
Ind.

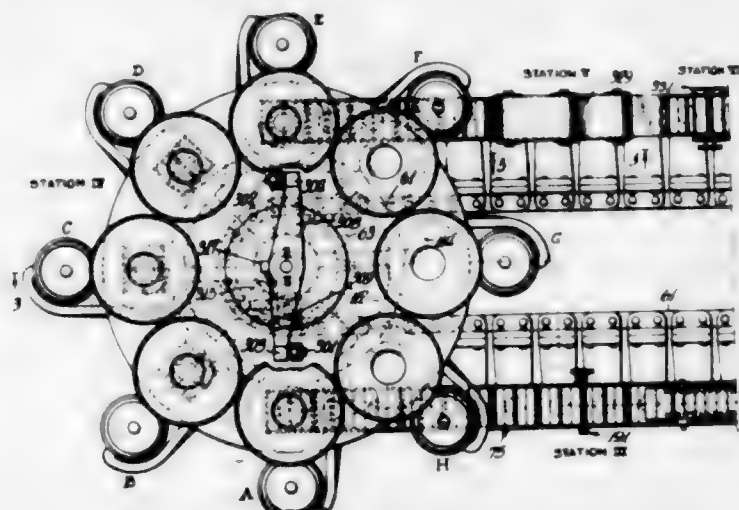
Filed June 29, 1956, Ser. No. 594,795
14 Claims. (Cl. 53-26)



1. A method of packaging a succession of relatively flat flexible printed multi-sheet publications of uniform lengths and widths, such as newspapers and magazines, comprising: providing a succession of said flexible publications in flat partially overlapping relationship to form a row of predetermined width and desired length wherein the top side of each preceding publication is partially exposed and partially covered by the next succeeding publication; and, while said publications remain in row-forming partial overlapping relationship, placing said row over and depositing it on a wrapping material strip of relatively greater length, covering each side margin of the top face of the row with a strip of wrapping material, and securing said top and bottom strips so as to hold them in place and to cause said top strips to cooperate with said bottom strip to package said publications into one elongate relatively flat bundle.

3,002,325 APPARATUS FOR FORMING AND FILLING PACKAGES

Clarence W. Vogt, Kettlecreek Road, Weston, Conn.
Continuation of application Ser. No. 611,231, Sept. 21,
1956. This application Apr. 8, 1959, Ser. No. 804,899
31 Claims. (Cl. 53-124)



1. Equipment of the character described comprising a conveyor carrying a plurality of molding elements, each having a molding cavity therein, and a cover member forming unit comprising a plurality of molding elements, each having a molding cavity therein, said cavities having porous walls for flow of gas therethrough, means for supplying a thin strip of thermo-plastic material to said molding elements in a position overlying molding elements on said conveyor and molding elements of said forming unit, means for clamping such strips to said molding elements at the periphery thereof, means for heating and softening said strips, means for exerting suction through said porous walls to draw such softened strips into the associated molding cavity to define a trough-shaped base member and cover member respectively, a filling head overlying said molding elements on said conveyor, means to effect relative movement between said filling head and said molding elements to effect a seal between the filling head and the periphery of a base member in a molding element aligned with said filling head, means in said filling head to force material therefrom into the trough of said base member to fill such trough in compacted form within the boundaries thereof and to protrude above said base member also in compacted form, said molding cavity in the cover member forming unit being complementary with the protruding portion of the material being packaged, means to move the molding elements of said cover member forming unit toward the molding elements on said conveyor to position the cover member over the protruding portion of the material in said base member and means to seal the peripheries of said base and said cover members.

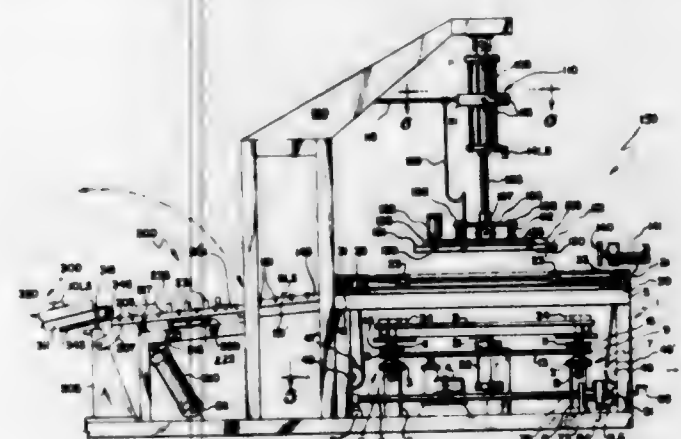
3,002,326 A CARTON FORMING AND HANDLING APPARATUS

Thomas N. Carter and Thomas L. Zillox, Hamilton, Ohio,
assignors to The Champion Paper and Fibre Company,
Hamilton, Ohio, a corporation of Ohio

Filed Feb. 9, 1959, Ser. No. 792,178
14 Claims. (Cl. 53-185)

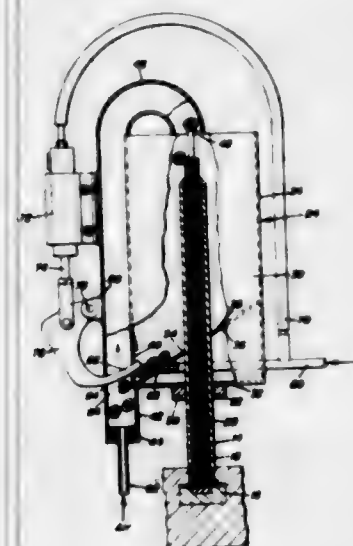
7. A sealing apparatus for closing and sealing a container around the contents to be enclosed therein comprising an open topped, table-like frame, a platen disposed beneath the frame and adjustable vertically toward and away from a horizontal plane passing through the frame adjacent the top thereof, a compressing means mounted above said platen and movable vertically to-

ward and away from said plane, press means disposed in said plane and movable toward and away from the center of the frame and drive means for said press means; said compressing means comprising a flat plate and a hood



3,002,327 PNEUMATIC LOADER

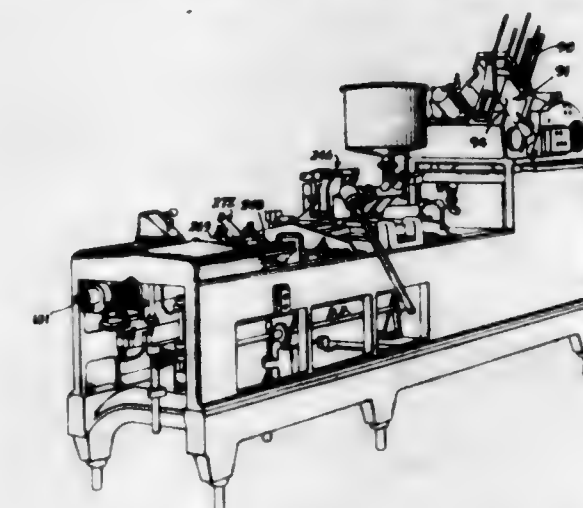
Robert V. Kirby, 957 Magnolia Ave., Bowling Green, Ky.
Filed Oct. 6, 1959, Ser. No. 844,701
8 Claims. (Cl. 53-197)



1. A pneumatic loader for parts comprising a hopper having an inlet opening for receiving a supply of parts disposed in random positions relative to each other, air passage means having one end communicating with said hopper, a discharge opening in said hopper communicating with the other end of said air passage means, said hopper and air passage means defining a pneumatic circuit for recirculating at least a portion of the airflow passing through said air passage means and for effecting circulation of at least a portion of the supply of parts in said hopper out of said discharge opening and in said inlet opening, an air line communicating with said one end of said air passage means and directed to blow parts issuing from said discharge opening through said air passage means and back into said hopper, and means in said pneumatic circuit for receiving and collecting a portion of said parts passing therethrough in a predetermined pattern.

3,002,328 PACKAGING MACHINE FOR ERECTING, FILLING AND SEALING PLASTIC COATED PAPERBOARD CONTAINERS

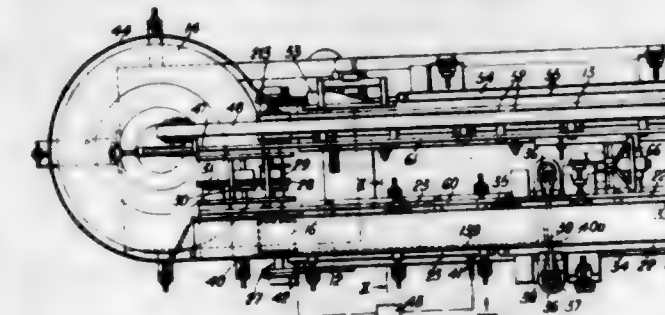
Charles Z. Monroe, Detroit, and Harry B. Egleston,
Livonia, Mich., assignors to Ex-Cell-O Corporation,
Detroit, Mich., a corporation of Michigan
Filed Dec. 9, 1958, Ser. No. 779,229
5 Claims. (Cl. 53-373)



1. In a packaging machine for erecting and closing the closure elements of containers having a coating of a thermoplastic material on the surfaces thereof, the combination comprising, means for preliminarily closing the closure elements of the container, means for heating said thermoplastic coating on the sealing surfaces of the closure elements, means for closing the closure elements to bring said heated surfaces into surface-to-surface contact, and means for applying a sealing pressure to said closure surfaces, said heating means comprising a plurality of parallelly aligned heating elements defining a heating tunnel, a reflector mounting said elements, an insulating material lining said reflector for reducing the heat loss therefrom, a support mounting said reflector and heating elements and supported on the packaging machine for movement relative to the closing mechanism thereon, and heat resistant means on the machine remote from the containers over which said heating means is positioned by said mounting means when said heating means is to be held inactive.

3,002,329 CARTON-CLOSING MACHINE

Harold Cookson, Portsmouth, Richard W. E. Mosse, London, and Bernard Hewlett Osborn, Swindon, England, assignors to The Metal Box Company Limited, London, England, a British company
Filed Apr. 20, 1960, Ser. No. 23,543
Claims priority, application Great Britain May 11, 1959
18 Claims. (Cl. 53-375)



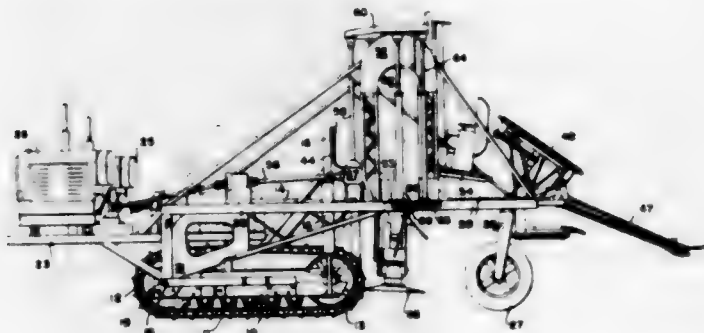
1. Apparatus for sealing a carton having a lid hingedly connected to the rear wall of the carton body and provided with side flaps adapted to overlie and to be heat sealed to side walls of the body and with a front flap adapted to overlie and to be heat-sealed to the front

wall of the body, said apparatus comprising first and second folder devices operable respectively to effect engagement of the side flaps with the body side walls and of the front flap with the body front wall, first and second heater devices associated respectively with said first and second folder devices and operable to effect sealing of the side and front flaps to the side and front walls, first and second conveyors operable respectively to move a carton past the first and second folder devices and the heater devices associated therewith, presser means adapted to apply pressure to the carton lid at least during folding and sealing of the side flaps, and a transfer device arranged to move a carton from the first to the second conveyor and to orientate the carton for operation thereon by the folder and heater devices past which the carton is moved by the second conveyor.

3,002,330

CANE HARVESTER

Byron C. Thomson, Thibodaux, La., assignor, by mesne assignments, to Lamb Industries, Inc., Toledo, Ohio, a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,795
7 Claims. (Cl. 56-17)



1. For use with a crawler type tractor having front and rear axles, a cane harvester comprising a frame straddling said tractor and extending forwardly and rearwardly of said tractor, cane gathering means on the frame forwardly of the tractor, cane topping and cutting means on said frame rearwardly of said gathering means substantially on the longitudinal axis of the tractor, cane conveying means carried by said frame and disposed rearwardly of cane topping and cutting means and positioned to receive said cut cane and convey same in substantially a vertical position in a direction substantially normal to the direction of travel of said tractor to deposit the cane on the ground clear of the path of travel of the tractor, pivotal mount means adjacent the rear of said harvester frame and connecting said harvester frame to said tractor proximate the rear axle of said crawler tractor with a portion of the frame extending forwardly of the pivot and a portion extending rearwardly thereof, harvester drive means carried on one portion of said frame, and harvester elevating and lowering means connecting the crawler tractor to said frame to one side of the pivot between the tractor and harvester frame to elevate the harvester during transport.

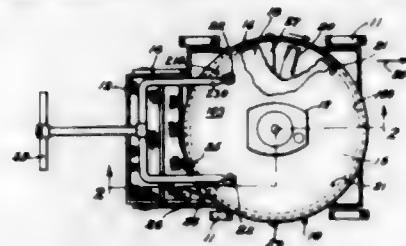
3,002,331

ROTARY POWER MOWER

Ralph E. Denney, Cincinnati, Ohio, assignor of two-fifths to Philip Ganson, Cincinnati, Ohio
Filed July 20, 1959, Ser. No. 828,153
3 Claims. (Cl. 56-25.4)

1. In a mower of the rotary blade type, an inverted dish-shaped housing having an open bottom, said housing having a lateral discharge opening formed therethrough, a power shaft extending through the top of said housing and having a cutter blade thereon within said housing

and an air disk on said shaft above said cutter blade, an imperforate disk-shaped plate below said cutter blade and

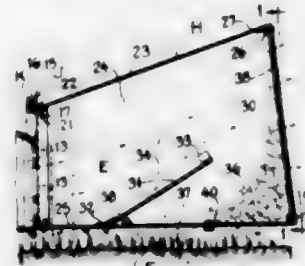


engaging the lower part of said housing, said blade covering substantially the rear half of the bottom of said housing to form a cutter blade guard and a mulching chamber for said mower.

3,002,332

GRASS CATCHER AND GUARD FOR LAWN MOWERS

Nathaniel C. Shane, Valley Road, Oakland, N.J.
Filed Mar. 19, 1957, Ser. No. 647,015
1 Claim. (Cl. 56-203)



A grass catcher or receptacle adapted to be pivotally attached to a lawn mower adjacent the discharge opening thereof, said catcher or receptacle, being substantially frusto-pyramidal in shape, having a bottom plate, side plates and a top cover which together define at one end an inlet opening and at their opposite ends an outlet opening, a foraminous screen secured to said opposite ends and covering said outlet opening, a deflector plate secured to said bottom plate and extending upwardly and away from said inlet opening, said bottom plate having a pivoted mounted door as a part thereof and a horizontal crossbar attached to said top cover adjacent said inlet opening for pivotally attaching said catcher to said mower.

3,002,333

IMPROVED YARN BREAKAGE DETECTION MEANS FOR TEXTILE TWISTING MACHINES

Frank Wright, Keighley, England, assignor to Prince-Smith & Stells Limited, Keighley, England
Filed Aug. 29, 1958, Ser. No. 758,057
Claims priority, application Great Britain Sept. 2, 1957
4 Claims. (Cl. 57-83)

4. A textile twisting machine, including a delivery roller assembly and twisting unit, characterized by the provision in respect of each of two or more single yarns to be twisted together, and in respect of the combined yarns in their passage from the delivery roller assembly, of detectors respectively sensitive to the tension in the single yarns and in the combined yarns and adapted to be actuated by a relaxation of such tension, a cradle adapted to be displaced from an inoperative position by the actuation of any one of said detectors, spring-loaded means for interrupting the delivery roller assembly drive, a catch associated with said cradle and effective when the latter is displaced to engage a moving part of the apparatus so as to be motivated to release said spring-loaded means for interrupting the delivery roller assembly drive, for switching off the spindle-driving motor, and for applying a brake to the spindle, said supply yarn detectors comprising light counterweighted levers having eyes for pas-

sage of the yarns therethrough and adapted to be held by the tension of the yarns in an inoperative position, the machine also comprising a rotary shaft carrying a projecting abutment, said catch being pivoted and normally held out of the path of said abutment by means of said cradle which, when any of the detector levers is released by re-



laxation of yarn tension, is rocked to permit the catch to be engaged by the abutment, a release lever carrying said catch, means engaging said release lever with a spring-loaded operating rod when the catch engages the abutment, said operating rod having operative connections with a clutch in the delivery roller drive, a switch for the spindle motor, and a brake on the spindle.

3,002,334

CORD CONSTRUCTION

Yoshitaro Yasuno, Osaka, Japan, assignor to Toru Nishino, Mozu Umekita-machi, Sakai-shi, Osaka, Japan
Filed June 3, 1959, Ser. No. 817,885
Claims priority, application Japan Aug. 30, 1958
3 Claims. (Cl. 57-149)



1. A cord construction for a mat, said cord construction comprising a plurality of contiguous longitudinally extending inner strands defining a core, a plurality of threads extending longitudinally along the exterior of said core at circumferentially spaced locations thereabout, said threads being substantially completely coated with adhesive, and a plurality of outer yarns helically wound in covering relation about said core and overlying said threads, said outer yarns being secured to said core by said threads.

3,002,335

TOY CLOCK

Leonid Kripak, Elmhurst, Ill., assignor to Marvin I. Glan, Chicago, Ill.
Filed Sept. 8, 1958, Ser. No. 759,793
4 Claims. (Cl. 58-2)

1. A toy clock adapted to be readily assembled and disassembled by a child comprising, in combination, a clockwork gear train, said gear train including a plurality



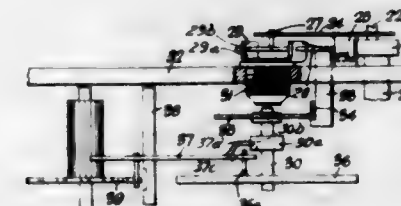
of gears, and means for supporting said gear train so that said gear train may be readily disassembled including a supporting member having a plurality of shafts, each of said shafts being attached at one end to said supporting member, each of said shafts having a different diameter, each of said gears being adapted to be supported on one of said shafts for rotating movement

thereon, each of said gears including a hollow bearing, the bearing of each gear being proportioned to fit the shaft which that gear is adapted to be supported on for rotating movement, whereby the gears and shafts adapted to one another may be assembled in only one manner, said shafts being so positioned with relation to one another that said gears are supported in their proper position to function in said clockwork gear train.

3,002,336

ELECTRICALLY DRIVEN TIMING MECHANISMS

Henry Joseph Lovegrove, Hadley Wood, Barnet, England, assignor, by mesne assignments, to Sangamo Electric Company, Springfield, Ill., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,778
Claims priority, application Great Britain Dec. 20, 1956
4 Claims. (Cl. 58-26)



4. In apparatus of the class described provided with a frequency controlled alternating current synchronizing means, the combination of an escapement mechanism comprising a spirally wound hair spring having its outer extremity anchored to an outer fixed point of attachment, a movable member having hair spring engaging means for engaging an outer convolution of said hair spring at a point removed from the outer fixed point of attachment of said hair spring, motion transmitting means connecting said frequency controlled synchronizing means with said movable member for synchronously moving said adjustable mounting said movable member so as to enable the path of movement of said movable member to be varied whereby the point of coaction of said hair spring engaging means with said hair spring can be adjusted to different points around the engaged convolution of said hair spring.

3,002,337

WORLD CLOCK

Irving Smith, Flushing, N.Y. (% Arrow Art Finishers, 1201 Evergreen Ave., Bronx 72, N.Y.)
Filed Aug. 8, 1957, Ser. No. 677,006
2 Claims. (Cl. 58-44)

1. A clock comprising a member having a broad exterior surface and a broad interior surface, a map on said

exterior surface, said map including representations of principal land and water areas and specific geographic designations denoting specific different cities at different latitudes, most of said cities being spaced different distances from the closest adjacent standard time zone boundaries, said member and said map having view-through portions situated adjacent said specific different cities, every view-through portion being adjacent a different city, a second member having a broad surface juxtaposed against the broad interior surface of the first member and visible through said view-through portions, means mounting said second member for movement with respect to said first member so that said broad surface of said second member can move with respect to the broad interior surface of the first member in an east-west direc-

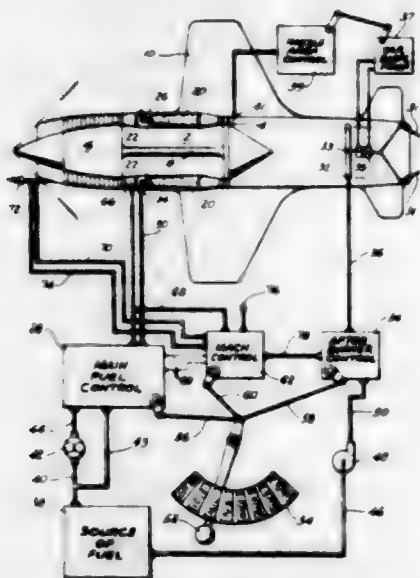


tion with regard to the map, a twenty-four hour clock mechanism, and means coupling said mechanism to said second member, said second member having on said broad surface thereof plural like scaled elongated indicia bands of twenty-four hour time indicia, the longitudinal axes of said bands being disposed parallel to the direction of movement of said second member, said bands being spaced apart transversely of their longitudinal axes, each different band being registered with at least one different view-through portion and each of said view-through portions having a band registered therewith, each band having the time indicia associated therewith so oriented with respect to the time indicia of the other bands and to the associated view-through opening as to show by the time indicia of each such band the correct time for each city at the view-through opening immediately adjacent such city.

3,002,338

FUEL CONTROL APPARATUS

Frank C. Mock, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 26, 1956, Ser. No. 574,030
2 Claims. (Cl. 60-35.6)



1. In fuel control apparatus for a gas turbine engine, said engine including a main combustion chamber and an afterburner combustion chamber and being connected to

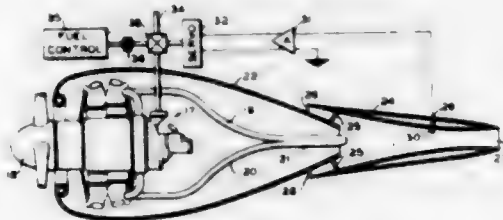
a vehicle for propelling said vehicle through a fluid medium, said engine being provided with a source of fuel, the combination of a main fuel control for controlling the supply of fuel from said source to said main combustion chamber, an afterburner fuel control responsive to an engine operating air pressure for controlling the supply of fuel from said source to said afterburner combustion chamber, means for sensing two pressures whose difference is indicative of vehicle propulsion speed, means for selecting a desired vehicle propulsion speed, and control means connected to the last two named means for producing an error signal representative of the difference between actual and desired vehicle propulsion speed, said control means being connected to said main and said afterburner fuel controls to modify the fuel supplied thereby and control the vehicle to a desired propulsion speed.

3,002,339

COMBUSTION CONTROL IN AIRCRAFT ENGINES

Deslonde R. de Boisblanc, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 21, 1956, Ser. No. 629,955
1 Claim. (Cl. 60-35.6)



In an internal combustion aircraft engine wherein fuel and air are introduced into the engine so that the fuel is burned to provide a source of power and exhaust gases from the engine are directed through an augmenter to give thrust to the engine; a control system comprising means to regulate the introduction of fuel into the engine comprising a valve in a fuel line, means to adjust said valve, and a friction clutch between said means to adjust and said valve; a flame sensing element positioned within the augmenter, said flame sensing element comprising a probe having an electrically conductive casing, an electrode positioned within and electrically insulated from said casing, a tip of ceramic material positioned across one end of said casing and making electrical contact with said casing and with said electrode, and means to provide a signal representative of voltage fluctuations between said casing and said electrode responsive to flame impinging on said tip; and means responsive to said flame sensing means to override said means to regulate so as to prevent flame from impinging on said element, said means to override comprising a motor, means including a second clutch to connect said motor to said valve, means responsive to the output signal of said flame sensing element exceeding a preselected value to actuate said second clutch to connect said motor to said valve, and means responsive to said flame sensing element to drive said motor to tend to close said valve.

3,002,340

ROCKET GAS GENERATOR FOR TURBOFAN ENGINE

Abraham M. Landerman, Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Apr. 5, 1957, Ser. No. 650,909
3 Claims. (Cl. 60-35.6)

1. In a turbine type power plant including an air intake, an axial flow compressor receiving air from said air intake, a main combustion chamber receiving air from

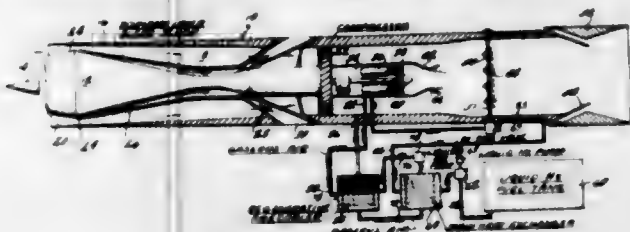
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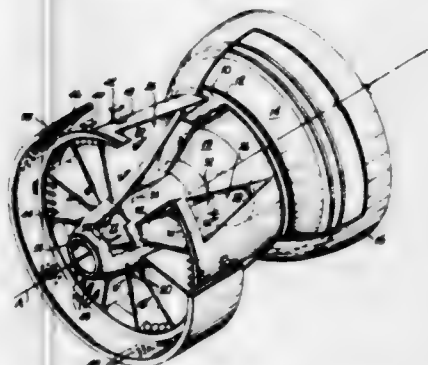
said compressor, a source of hydrogen fuel in a liquid state, an air-to-air regenerative heat exchanger, an air-to-fuel main heat exchanger in series flow connection with said regenerative heat exchanger, means for conducting a part of the air from the discharge end of said compressor to said regenerative heat exchanger to precool said air, means for conducting said precooled air immediately to said main heat exchanger to liquefy said air and to heat said fuel, means for conducting said liquid air to said regenerative heat exchanger to precool the gaseous



air from said compressor and gasify said liquid air, a primary combustion chamber having a primary exhaust nozzle upstream of said main combustion chamber, means for conducting gaseous air from said regenerative heat exchanger and an excess of fuel from said main heat exchanger to said primary combustion chamber, a turbine receiving the gases produced by said primary combustion chamber for driving said compressor, and means for mixing the exhaust gases from said turbine and the air from said compressor for burning in said main combustion chamber including means for injecting fuel from said source into said main combustion chamber.

3,002,341

JET ENGINE NOISE SUPPRESSION NOZZLES
Maurice F. Muzzy, Calvin E. Pfafman, and William E. Young, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Dec. 31, 1957, Ser. No. 706,415
8 Claims. (Cl. 60—35.6)

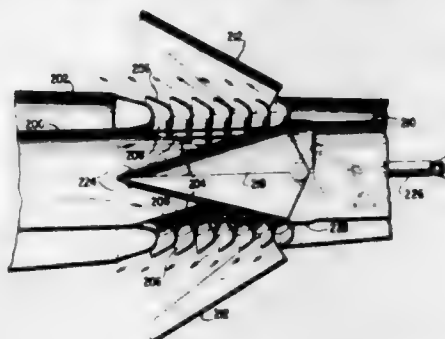


1. A jet engine noise suppression nozzle comprising branch duct means opening rearwardly from said nozzle and forming a plurality of separate engine exhaust gas discharge orifice openings grouped about a central longitudinal axis and spaced apart in a circumferential sense about a central region to discharge a plurality of jet streams separated from each other circumferentially, said nozzle being formed with outer side openings permitting rearward and inward flow of outside air into the circumferential spaces between adjacent jet streams, central duct means forming a rearwardly directed central flow opening situated within the region about which the separate discharge orifices are grouped, and a plurality of duct means arranged in the nozzle in longitudinal alignment with the spaces between jet streams to collect and guide outside atmospheric air to said central duct means to permit such air to escape rearwardly through said central flow opening, thereby to effect mixture of air with the jet streams on the inner sides as well as on the outer sides and the mutually adjacent sides thereof.

3,002,342
MECHANISM FOR CONTROLLING RELATIVELY HIGH VELOCITY FLOW OF FLUIDS LONGITUDINALLY THROUGH AND Laterally FROM AMBULANT CONDUIT MEANS

Erich Schatzki, 68—37 Yellowstone Blvd., Forest Hills, N.Y.

Filed Aug. 12, 1953, Ser. No. 373,724
20 Claims. (Cl. 60—35.54)



1. Mechanism for controlling relatively high velocity flow of fluids through and from ambulant conduit means to apply reverse and side thrust selectively to the conduit means comprising, in combination, a conduit section to define a through path of relatively high velocity fluid flow, means providing lateral outlet openings at least on opposite sides of said section, adjustable flow retarding means movable into the flow path through said section to initiate diverted flow to said lateral openings, flow-directing vanes mounted in said lateral openings, a plurality of separate outside door means each independently associated with one of said vane-equipped lateral openings to cover and uncover it in varying degrees and selectively control flow therefrom, and means independently to operate said outside door means selectively to control flow from the vane-equipped lateral openings selectively to apply reverse and side thrust to said conduit sections.

3,002,343

THRUST-REVERSING MECHANISM FOR JET AIRCRAFT

John Baird, Downey, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Oct. 29, 1956, Ser. No. 619,022
8 Claims. (Cl. 60—35.54)

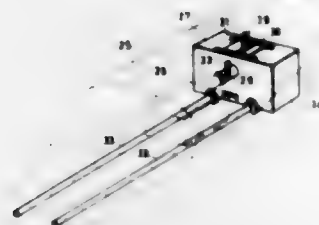


1. In combination with a jet engine having an exhaust nozzle through which an exhaust jet stream is expelled rearwardly, thrust reverser mechanism comprising turning vane means located to the rear of the nozzle outside the jet stream when the mechanism is in thrust-reversing operation and flap means between the exit of the nozzle and the turning vane means when the mechanism is in thrust-reversing operation, said flap means comprising an arm movable to a first position transversely across the jet stream and also to a second position out of the jet stream, and means for so moving said arm to either of said positions, said flap means having a first plurality of spaced deflecting surfaces facing upstream in said first position and being slanted relative to the jet stream to deflect a portion of the jet stream outwardly beyond the normal periphery of the jet stream, a second plurality of deflecting surfaces also facing upstream when the flap is in the first position and being slanted relative to the jet stream to deflect another portion of the jet stream flow inwardly toward the longitudinal axis of the jet stream and

to a position adjacent and downstream from the flap means, and said first plurality of spaced deflecting surfaces positioned substantially perpendicular to said second plurality of deflecting surfaces.

3,002,344
JET PROPULSION APPARATUS FOR BOATS
Joseph Skopyk, % Canadian Research & Development Foundation, 1434 Queen St. W., Toronto, Ontario, Canada

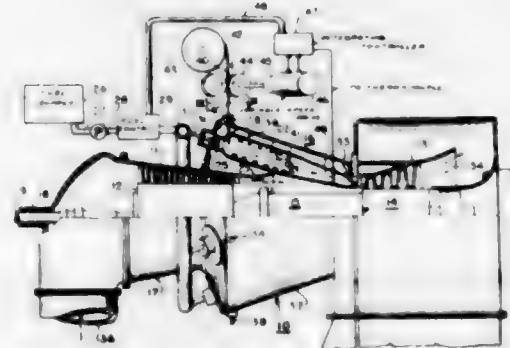
Filed June 10, 1960, Ser. No. 35,321
3 Claims. (Cl. 60—35.56)



1. In a water vessel, jet propulsion apparatus comprising a source of compressed gas, at least one stationary tube located longitudinally of and directly subjacent said water vessel, a secondary tube located, rotatably and axially movable, within said stationary tube, the wall of said secondary tube being concentric with, and in close proximity, of said stationary tube, said stationary tube having a forward end and a stern end, said stern end being closed by closure means, said stationary tube being rigidly attached subjacent said water vessel, said secondary tube projecting from said forward end of said stationary tube into bearing means, carried subjacent said water vessel, said projecting end of said secondary tube being rigidly connected to hollow elbow means, conduits connecting said source of compressed gas to said hollow elbow means, a portion of said conduit means being flexible, axle means extending axially and concentrically from said protruding end of said secondary tube, said axle means having two truncated collars rigidly attached thereto, said truncated collars having their apex facing each other, control handle means pivotally attached in said water vessel, said handle means having its lower end formed as a double pronged fork, said double pronged fork extending below pivot point of said handle, said double pronged fork straddling said axle means at a location between said two truncated collars, said apex of said two truncated collars being directly adjacent to each side of said prongs, lever means extending perpendicular to said secondary tube, actuating means connecting said lever means with manually operable control means, a plurality of holes located in axial alignment along the lowest portion of said stationary tube, said holes being located substantially perpendicular to transverse axis of said water vessel, said holes being alternately directed in a direction extending from internal side of said stationary tube towards the stern end of said water vessel and the forward end of said water vessel respectively, a plurality of corresponding holes located in wall of said secondary tube, said corresponding holes being adapted to selectively communicate with said stern directed holes and said forward directed holes in said stationary tube respectively upon said secondary tube being axially motivated to full stern location and full forward location within said stationary tube respectively, and a plurality of side holes located on each side of said plurality of holes located in said stationary tube, said plurality of side holes being located partly in a

transverse plane containing each of said stern and forward directed holes in said stationary tube and partly substantially midway between said transverse planes, said secondary tube being adapted to be selectively rotatably and axially motivated to permit communication of said corresponding holes in said secondary tube with said forward directed holes, said stern directed holes, said side holes located in said transverse planes in said port side of said stationary tube, said side holes located between said transverse planes in said starboard side of said stationary tube and said side holes located between said transverse planes in said port side of said stationary tube, respectively.

3,002,345
APPARATUS FOR MINIMIZING THE DEPOSITION OF DELETERIOUS COMPOUNDS IN A PETROLEUM FUEL FIRED GAS CHAMBER
William E. Young, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1960, Ser. No. 2,019
8 Claims. (Cl. 60—39.01)

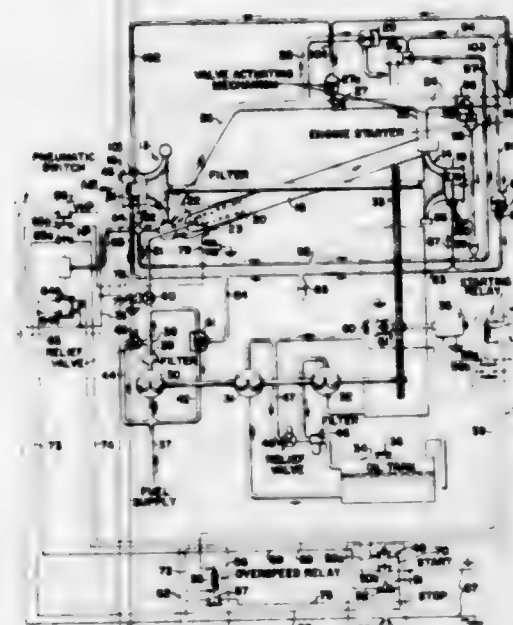


1. A gas turbine power plant comprising an air compressor, a fuel combustion chamber and a gas turbine driven by the gaseous products of combustion formed in said chamber, said gas turbine having metal components subject to corrosion attack by compounds of vanadium, sodium and sulphur, means for injecting a petroleum fuel containing one or more of the above compound forming elements into said combustion chamber for combustion purposes, a coil of composite rod containing at least two materials in preselected proportions, one of said materials being effective to inhibit the formation of at least one of the above compounds and forming another compound and the other of said materials being effective to minimize the deposition of said another compound on said turbine components, means for feeding said rod directly into said combustion chamber, and means for controlling said feeding means in accordance with an operating condition of said power plant.

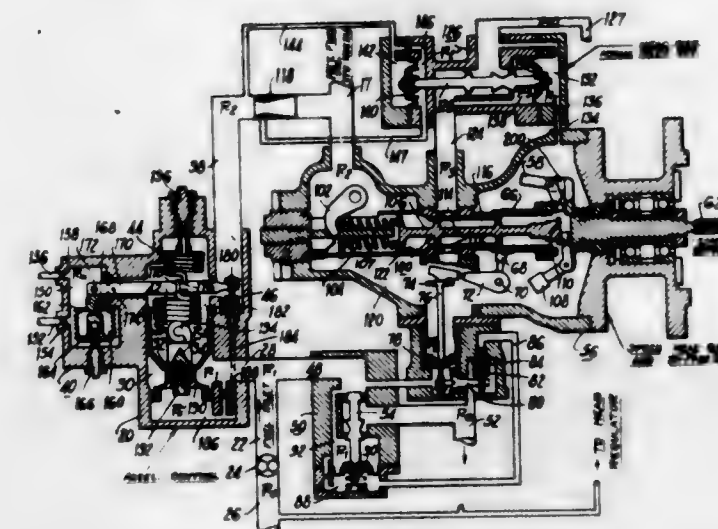
3,002,346
FUEL CONTROL FOR TURBINE DRIVEN COMPRESSOR UNIT
Ivan E. Speer, Phoenix, Ariz., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Original application Feb. 8, 1951, Ser. No. 209,929, now Patent No. 2,763,985, dated Sept. 25, 1956. Divided and this application Sept. 7, 1956, Ser. No. 608,555
14 Claims. (Cl. 60—39.07)

1. A fluid supply unit, comprising: a gas turbine including a combustion chamber; a compressor driven by said turbine having an outlet connected to said combustion

tion chamber; a by-pass around said combustion chamber; a fluid distribution bleed air connection with said by-pass;

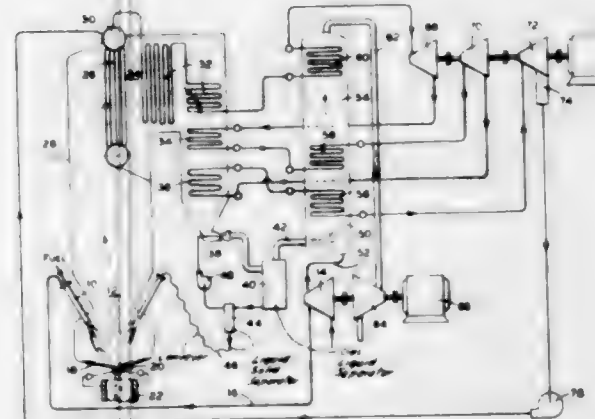


3,002,348
FUEL FEED AND POWER CONTROL SYSTEM FOR GAS TURBINE ENGINES
Elmer A. Haase, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 1, 1955, Ser. No. 544,136
8 Claims. (Cl. 60—39.28)



and pressure responsive means controlled by compressor inlet and bleed air temperature for apportioning fluid flow through said by-pass.

3,002,347
METHOD AND APPARATUS FOR A BINARY FLUID POWER PLANT
Theodore S. Sprague, Hewlett, N.Y., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 24, 1956, Ser. No. 587,005
23 Claims. (Cl. 60—39.12)

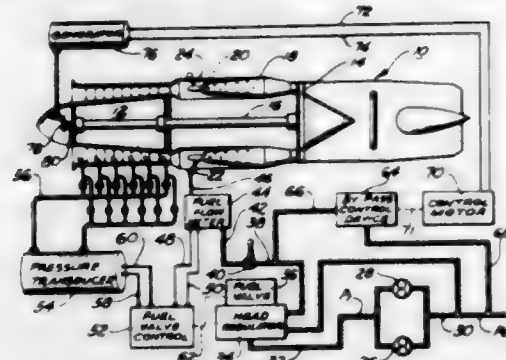


5. A process for producing a clean high temperature gas comprising the steps of passing an ash forming fuel into a first reaction zone, passing a free oxygen-containing gas at superatmospheric pressure into said first reaction zone in a fuel to oxygen ratio insufficient for complete combustion, partially burning said fuel in said first reaction zone to produce gaseous combustible products having entrained solids and vaporized ash products including the vaporized ash, cooling said gaseous products and entrained solids in a first cooling zone to condense substantially all of said vaporized ash products, removing said entrained and condensed solids from said combustible gaseous products, passing the cleaned combustible gaseous products into a second reaction zone, passing a free oxygen-containing gas into said second reaction zone in a fuel to oxygen ratio sufficient to complete combustion, and burning said combustible gas in said second zone to produce a clean high temperature superatmospheric pressure gas.

3,002,349
FUEL CONTROL APPARATUS FOR AN INTERNAL COMBUSTION ENGINE
Samuel E. Arnett and Harry E. Starr, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed July 26, 1956, Ser. No. 600,184
12 Claims. (Cl. 60—39.28)

1. In fuel control apparatus for a combustion engine including a rotatably mounted air compressor having characteristic unstable operation in its intermediate speed range, the combination of a fuel conduit connected to deliver fuel to said engine in accordance with the total fuel requirements thereof, a fuel metering valve operatively connected to said fuel conduit for controlling fuel flow therethrough to said engine in accordance with a predetermined fuel flow schedule, first control means operatively connected to said fuel conduit for creating a substantially instantaneous increase and decrease in the fuel flow through said fuel conduit throughout the operating range of the engine, said increase and decrease in fuel flow being augmentative to said predetermined fuel flow schedule and operative to cause momentary unstable operation of said compressor, and second control means

responsive to a predetermined engine operating variable resulting from the rotational speed of said compressor and said predetermined substantially instantaneous increase and decrease in fuel flow, said second control

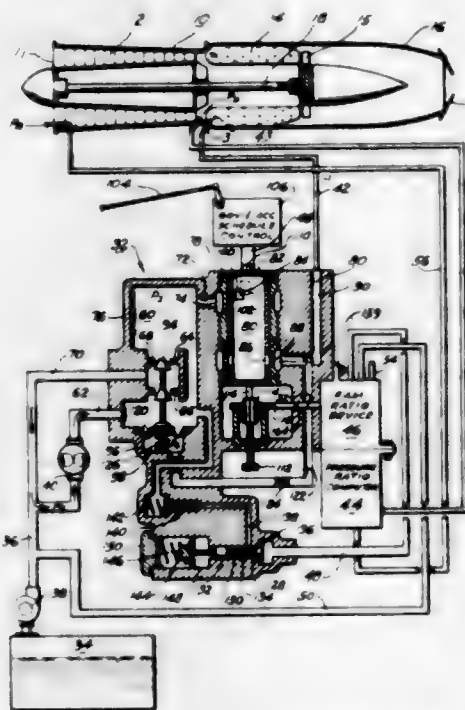


means being operatively connected to said fuel metering valve for controlling the fuel flow regulating function thereof as a function of said predetermined engine operating variable to avoid said characteristic unstable operation.

3,002,350

FUEL CONTROL DEVICE FOR COMBUSTION ENGINES HAVING MEANS FOR AVOIDING COMPRESSOR STALL

Charles S. Longstreet, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,294
11 Claims. (Cl. 60-39.28)



11. In a fuel system for a gas turbine engine having a compressor and a combustion chamber, a fuel pump, a conduit connected to deliver fuel from said fuel pump to said combustion chamber, the combination of a fuel regulating member in said conduit for controlling the fuel flow therethrough to said combustion chamber, first means responsive to a control fluid pressure which varies as a function of a variable condition of engine operation, said first means being operatively connected to said fuel regulating member for controlling the position of said fuel regulating member as a function of said control fluid pressure, second means responsive to ram and ambient pressures of the air entering said compressor, said second means being operatively connected to said fuel regulating member and controlling the position of said fuel regulating member as a function of the ratio of said ram and ambient pressures and third means responsive to compressor pressure ratio operatively connected to said second

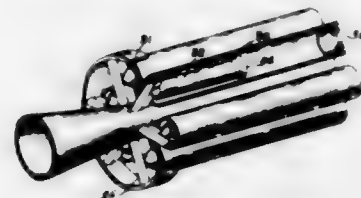
means and operative to render said second means inoperative at a predetermined compressor pressure ratio.

3,002,351

RAMJET DEVICE

David H. Sloan, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Original application Jan. 26, 1951, Ser. No. 207,948.
Divided and this application Jan. 29, 1957, Ser. No. 648,985

2 Claims. (Cl. 60-39.72)



1. A flame holder unit comprising a plurality of flame holders each having a duct and a burner in the duct, said burner having a flared skirt at its aft end and extending in close space relation to the wall of said duct to define an annular orifice for retarding fuel flow at the aft end of said burner, means for spreading flame at the aft end of each of said ducts, and means for supporting said burners in an annularly arranged cluster.

3,002,352

FLAMEHOLDER CONSTRUCTION

William E. Helfrich, Glastonbury, John Chamberlain, Manchester, and Edmund D. Brown, South Glastonbury, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,566
5 Claims. (Cl. 60-39.72)



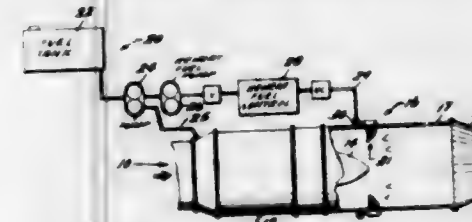
1. Combustion means comprising an inner body of substantially circular cross section, a first duct of substantially circular cross section concentrically enveloping said inner body and cooperating therewith to define a first annular gas passage through which hot gases are passed, a second duct of substantially circular cross section and coaxial with and enveloping and forming a second annular gas passage with said first duct through which cold gases are passed and with said second duct extending rearwardly therefrom to define a combustion chamber, said first and second annular gas passages having substantially radially aligned outlets each with an inner and an outer diameter, a first annular flameholder ring of trough-shaped cross section positioned immediately adjacent said first gas passage outlet and having an inner diameter greater than said inner diameter of said first gas passage outlet and having an outer diameter smaller than said outer diameter of said first gas passage outlet to be wholly located to intercept said hot gases and establish relatively stagnant combustion supporting areas therein in said combustion chamber, a second annular flameholder ring of trough-shaped cross section and axially spaced downstream from said first flameholder and positioned immediately adjacent said second gas passage outlet and having an inner diameter greater than said inner diameter of said second gas passage out-

let and having an outer diameter smaller than said outer diameter of said second gas passage outlet to be wholly located to intercept said cold gases and establish relatively stagnant combustion supporting areas therein in said combustion chamber, and a radially directed and rearwardly tilted flamespreader of trough-shaped cross section joining said flameholders and positioned to establish gas flow from said first to said second flameholder.

3,002,353

FUEL INJECTOR FOR A COMBUSTION CHAMBER

Gregory E. McEneny, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 19, 1957, Ser. No. 703,981
6 Claims. (Cl. 60-39.74)

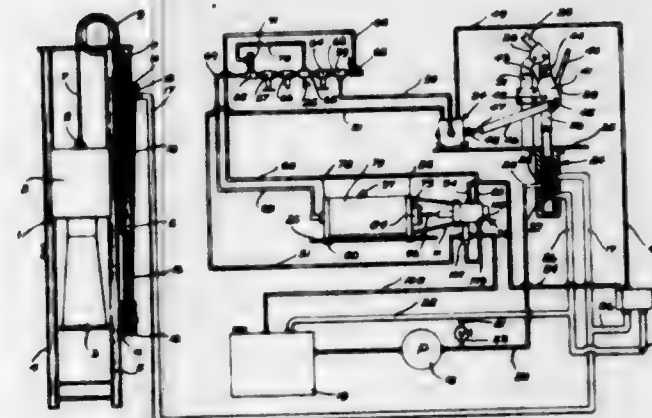


1. A combustion chamber having a casing supporting a plurality of fuel injectors positioned about the casing, the fuel injectors being interconnected by a manifold for receiving fuel, each of the fuel injectors comprising a spray bar assembly and a valve means, the spray bar assembly including a plurality of fuel injection tubes connected directly to the valve means, the valve means including a valve body having a spring loaded valve and a plurality of metering orifices in series with the valve, there being an orifice for each tube, the metering orifices having a large resistance to flow to insure equal distribution of fuel to each of the tubes, the valve being arranged to open at relatively high pressure so as to insure homogeneous fuel in the manifold upstream of the fuel injector.

3,002,354

MOVEMENT CONTROL APPARATUS

Evan E. Dorkins, Ottawa, Kans., assignor to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Filed May 3, 1960, Ser. No. 26,542
11 Claims. (Cl. 60-52)



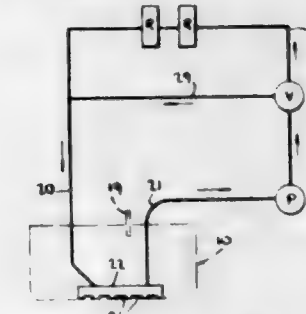
1. In a device for controlling movement of a work member, a fluid motor operatively connected to the work member and responsive to fluid pressure for moving said work member, means including a supply conduit to supply fluid under pressure to said motor, a reservoir, a return conduit communicating with said reservoir, a flow control means in said supply conduit and connected to said return conduit and operative to communicate said fluid supply means with said motor in one position and to communicate said motor with the reservoir in another position whereby the fluid supply to said motor will move the work member when the fluid control means is in said

one position, an actuator operatively connected to said flow control means and responsive to a predetermined quantity of fluid flowed to and from said actuator to move the flow control means to said respective positions, flow means communicating said fluid supply conduit with said actuator for flow of fluid to and from same, first and second fluid metering devices in series in said flow means whereby the volume of fluid metered thereby to said actuator is proportional to the movement of the work member, and a bypass including a check valve around said second metering device whereby the flow of fluid from said actuator is metered only by said first metering device to provide a predetermined time interval between the movement of the flow control means by the actuator from said other position to said one position.

3,002,355

RESERVOIR FOR HYDRAULIC SYSTEM

Richard F. Brackin, Drexel Hill, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Feb. 4, 1958, Ser. No. 713,199
3 Claims. (Cl. 60-52)



2. A hydraulic circulating system comprising, a hydraulic motor, a pump, a fluid reservoir, a high pressure line connecting the high pressure side of the pump with one side of the hydraulic motor, a low pressure line connecting the low pressure side of the pump with the other side of the hydraulic motor, said lines forming a closed circuit whereby the fluid flowing therethrough is not exposed to air, a portion of said low pressure line extending through said reservoir beneath the surface of the fluid in the reservoir, said portion being in the form of a passage member providing a chamber having spaced inlet and outlet openings, said chamber forming a direct passage between said inlet and outlet openings for the circulation of fluid in said circuit through said reservoir without causing turbulence of fluid in said reservoir outside of said chamber, said chamber having a plurality of small holes through the wall thereof, said small holes being open at all times to facilitate passage of heat between the fluid flowing through said circuit and the fluid in the reservoir and to permit interflow of fluid between said circuit and the reservoir as necessary to compensate for changes in the volumetric requirements of the hydraulic system, and said outlet opening of said chamber being at least as large in cross section as said inlet opening whereby the fluid circulating through said circuit passes freely through said chamber from said inlet opening to said outlet opening and is not forced outwardly through said small holes into said reservoir except when necessary to compensate for a change in the volumetric requirements of the hydraulic system.

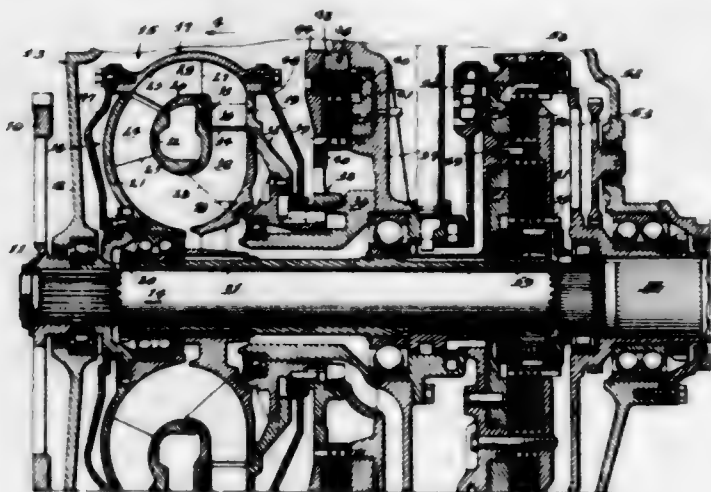
3,002,356

POWER TRANSMISSION

James B. Black and Marvin W. Dundore, Rockford, and Wilbur F. Shurts, Winnebago, Ill., assignors to Twin Disc Clutch Company, Racine, Wis., a corporation of Wisconsin
Filed May 2, 1956, Ser. No. 582,136
11 Claims. (Cl. 60-54)

1. An hydraulic torque converter of the rotating housing type comprising a bladed pump, connected first and

second, bladed turbines and a bladed stator arranged to form a generally ellipsoidal, toroidal circuit whose outward and inward flow portions are connected by outer and inner, U-shaped passages, the pump blades and the inlets of the first turbine blades being located in the outward flow portion and the outlets of the first turbine blades terminating in the outer passage, the stator blades and the inlets of the second turbine blades being positioned in the inward flow portion and the outlets of the second turbine blades terminating in the inner passage, the outlets of the first and second turbine blades being disposed to discharge liquid in directions substantially parallel to the axis of the converter, the outer and inner passages being respectively unbladed between the outlets of the first turbine and the inlets of the stator blades, and the outlets



of the second turbine and the inlets of the pump blades, the entire inlets of the pump blades being located at a distance radially outwardly from the axis of the converter which is greater than the distance from the axis of the entire outlets of the second turbine blades, each blade having an inlet and outlet angle measured at the mean stream flow line of the toroidal circuit respectively between the tangent to the mean camber line of the blade and the tangents to circles determined by the radii of the inlet and outlet tips of the blade, the zero angle extending from the inlet and outlet of each blade opposite to the rotation direction of the converter, the inlet and outlet angles for the pump blades ranging from 19° to 35° and 32° to 65°, respectively, for the first turbine blades from 70° to 110° and 19° to 25°, respectively, for the stator blades from 70° to 110° and 25° to 35°, respectively, and for the second turbine blades from 70° to 110° and 43° to 90°, respectively.

3,002,357

PRESSURE EXCHANGERS

Dudley Brian Spalding, 2 Vineyard Hill Road,
London, England

Continuation of application Ser. No. 567,607, Feb. 24, 1956. This application Sept. 21, 1959, Ser. No. 841,255
Claims priority, application Great Britain Mar. 9, 1955
3 Claims. (Cl. 62-6)



1. Pressure exchanger apparatus comprising a first group of cells, a second group of cells, medium pressure introduction means arranged to introduce fluid at an

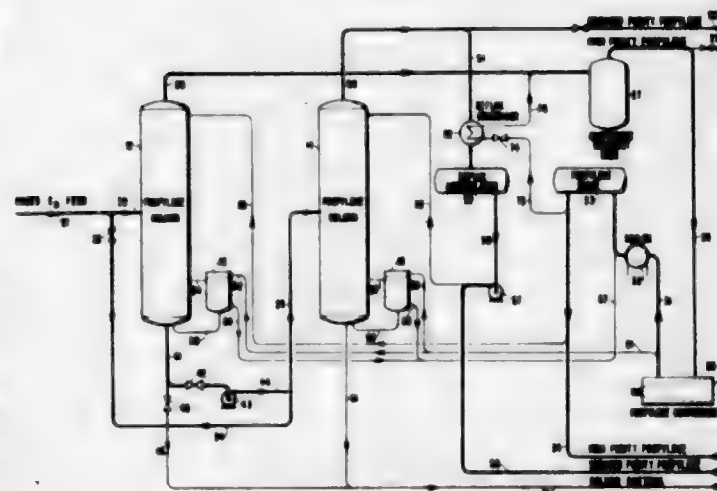
initial pressure to cells of the first group, a high pressure duct interconnecting cells of the first group to cells of the second group and arranged to extract fluid from cells of the first group at a pressure higher than the initial pressure and to introduce the said higher pressure fluid to the cells of the second group, a low pressure duct interconnecting cells of the first group to cells of the second group and arranged to extract fluid from cells of the first group at a pressure lower than the initial pressure and to introduce the said lower pressure fluid to the cells of the second group, medium pressure extraction means arranged to extract fluid from cells of the second group at a pressure intermediate said higher and lower pressures, heat-exchanger means for which the said low pressure duct constitutes the cold path and means for effecting relative motion between each group of cells and the ducts.

3,002,358

PROPYLENE DISTILLATION

Alwien M. H. Dierl, New York, N.Y., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 1, 1960, Ser. No. 46,449
5 Claims. (Cl. 62-23)



1. Process for the production of two propylene products of different propylene purities from a mixed propylene/propane feed stream comprising the steps of introducing mixed propylene/propane feed into a high purity propylene product distillation zone and into a low purity propylene product distillation zone, respectively, the pressure and temperature in said high purity zone being lower than the pressure and temperature in said low purity zone, separating by distillation in each of said zones an overhead vapor product and a bottoms material, passing at least a portion of said overhead product from one of said zones through a compression-heating, indirect cooling and expansion train and thereby producing a propylene stream having a lower temperature than the overhead from the other of said zones and using at least a portion of said lower temperature propylene stream as indirect refrigeration for reflux for the propylene distillation in said other zone.

3,002,359

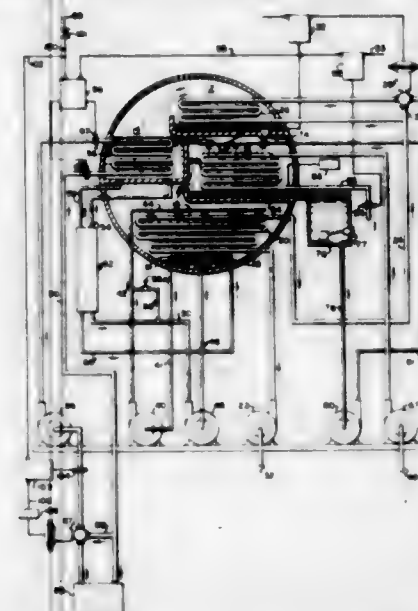
ABSORPTION REFRIGERATING SYSTEM

Robert G. Miner, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed July 28, 1959, Ser. No. 830,109
5 Claims. (Cl. 62-148)

1. In an absorption refrigeration system, the combination of an absorber, an evaporator, a condenser, and a generator placed in a closed circuit, the circuit containing a solution of an absorbent and a refrigerant, means for circulating solution through the system, means for circu-

lating heating liquid from a heating source to said generator and back to the heating source, means for recirculating a portion of the heating liquid leaving the genera-

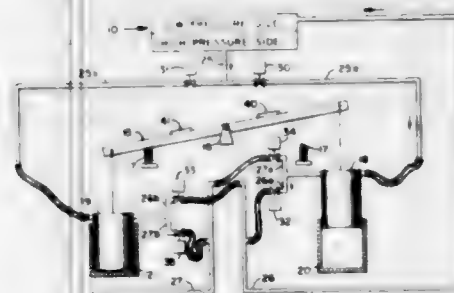


tor directly back through said generator without passing through the heating source, and means for increasing the volume rate of liquid recirculated responsive to a decrease in temperature of said evaporator.

3,002,360

WATER PURGE FOR REFRIGERATION SYSTEMS
Howard E. Caswell, East Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,803
2 Claims. (Cl. 62-160)



1. Apparatus for removing moisture from a refrigerating system comprising a first vessel having moisture absorption material disposed therein, a second vessel having moisture absorption material disposed therein, heater means associated with each vessel, conduit means connecting each vessel with the system so that refrigerant may flow from the system through one of said vessels and return to the system, valve means controlling flow in said conduit means, a control circuit for said apparatus operative to actuate said valve means to automatically establish refrigerant flow from the system selectively to one of said vessels while energizing the heater associated with the other vessel and means responsive to a predetermined relation between the amount of moisture in the respective vessels, regulating operation of said control circuit.

3,002,361

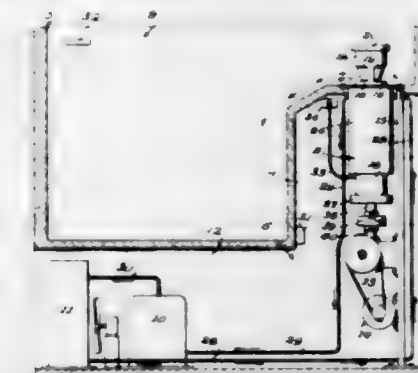
ICE CHIP PRODUCING MACHINE

Guy H. Whetstone, 6048 N. Elwood, Tulsa, Okla.

Filed Feb. 15, 1960, Ser. No. 8,760
5 Claims. (Cl. 62-354)

1. In an ice chip machine, an elongated cylinder means, means for introducing liquid onto the inner surface of said cylinder, means for imparting a freezing temperature to said cylinder for freezing the liquid on the inner surface of said cylinder to solidify the liquid thereon, and

combined feeding-and-chipping means extending axially of said cylinder for chipping the frozen liquid off the inner surface of said cylinder and moving it toward one end thereof, said cylinder including bearing means at opposite ends thereof, said feeding-and-chipping means having opposite ends thereof journaled in said bearing means, said feeding-and-chipping means comprising an auger extending from one of said bearing means to an intermediate portion of said cylinder, said cylinder including at least one lateral opening at the terminal end of said



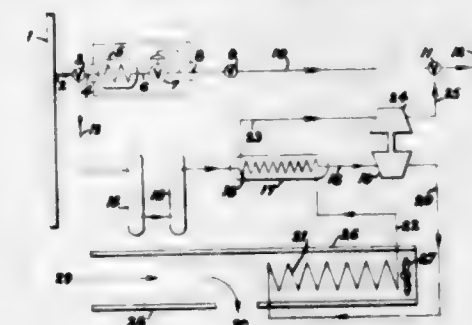
auger and spaced from said other bearing means, said feeding-and-chipping means including an uninterrupted frusto-conical portion diverging from said auger toward said other bearing means and disposed along said lateral opening for receiving chipped frozen liquid from said auger and casting it laterally through said opening, said auger including a continuous helical flange having a terminal cutting edge and extending axially along said cylinder from said one bearing means and terminating at said one lateral opening, said frusto-conical portion diverging from the root of said helical flange at said one lateral opening.

3,002,362

NATURAL GAS EXPANSION REFRIGERATION SYSTEM

Willard L. Morrison, Lake Forest, Ill., assignor to Liquifreeze Company, Inc., New York, N.Y., a corporation of New York

Filed Sept. 24, 1959, Ser. No. 842,129
4 Claims. (Cl. 62-402)



2. A gas refrigeration means including in series a source of high pressure warm gas, means for cleaning it, means for cooling it, means for causing it to do work with resultant reduction in pressure and temperature, means for using the resultant cold gas by heat exchange as a refrigerant, means for warming the gas, means for compressing it and means for discharging it from the system.

3,002,363

AUTOMATIC ICE MAKER

Harold P. Harle, Louisville, Ky., and Stephen Balogh, Lyons, N.Y., assignors to General Electric Company, a corporation of New York

Filed Oct. 27, 1959, Ser. No. 849,071
5 Claims. (Cl. 62-300)

5. A refrigerator comprising an outer shell including a rear wall, inner liners forming a food compartment

and a freezer compartment positioned below said food compartment and spaced therefrom, insulation between said shell and liners and in said space between said compartment, said shell rear wall having an opening therein opposite said space, and removable means for supplying water to said freezer compartment comprising a cover plate for said opening, a valve and water supply line supported on the inner side of said cover plate, and a water feed line adapted to extend from said valve into said space between said compartments and having a de-



pending end portion adapted to pass through an aperture provided in the top wall of said freezer compartment, means providing an open passageway through said insulation for said feed line comprising a tunnel-shaped member extending from said aperture to adjacent said rear wall, and means adjacent the aperture end of said tunnel-shaped member for yieldably directing the depending end portion of said feed line into said aperture when said feed line is inserted into said tunnel-shaped member.

3,002,364
UNIVERSAL JOINT
Andrea Bellomo, Via Torricelli 16, Turin, Italy
Filed May 3, 1956, Ser. No. 582,506
7 Claims. (Cl. 64-21)

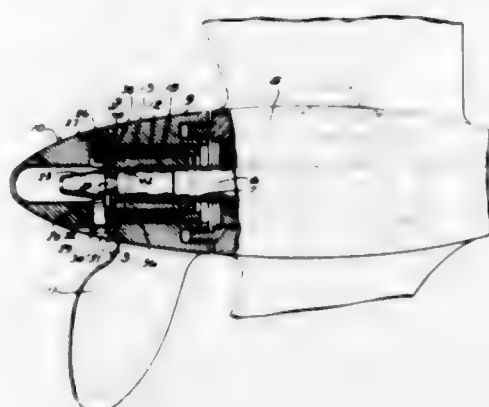


3. A homokinetic universal joint comprising male and female elements, a plurality of driving balls disposed between the male and female elements to effect the drive connection therebetween, each ball being engaged by two crossed grooves, one of which being on the male element and the other of which being on the female element, the axes of the grooves in the male element overlapping the axes of the grooves in the female element upon relative turning of one of the elements through 180° from the assembled position, the direction of circumferential inclination of one or more grooves of each element being opposite to that of the other grooves of the same element.

3,002,365
QUICK CHANGE MARINE PROPELLER
Jon L. Liljequist, Mount Prospect, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,744
10 Claims. (Cl. 64-27)

1. As a quickly detachable connection between a propeller hub member and propeller shaft member, the combination with one of said members provided with a trans-

verse key guideway, of a key confined for movement in the guideway between first and second positions and for which the other of said members has a shoulder, the key being normally engaged with the shoulder in the first key



position and being laterally displaceable from such engagement to said second position in which it registers with the shouldered member to accommodate relative axial movement between said members, the key locking said members against such relative movement when engaged with the shoulder.

3,002,366
CIRCULAR HOSE KNITTING MACHINES
Fritz Brasack and Wilhelm Brall, Rheidt-Odenkirchen, Germany, assignors to G. Stibbe & Co. Limited, Leicester, England, a company of Great Britain
Filed Feb. 1, 1960, Ser. No. 5,837
Claims priority, application Germany Feb. 14, 1959
9 Claims. (Cl. 66-42)



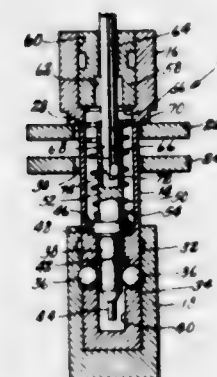
1. A circular hose knitting machine adapted to produce circular fabric by rotary motion as well as heel and toe pouches by reciprocatory motion, comprising, in combination, a rotary needle cylinder, needles with knitting butts working in said cylinder, a stationary cam box surrounding the latter, forward and reverse stitch cams provided in the cam box at a main feed, a withdrawable clearing cam and a stitch cam in the said cam box at a second feed, a heel and toe cam in the cam box adapted, by action on appropriate knitting butts, to bring back into commission needles which are idle during the knitting of a heel or a toe pouch by reciprocatory knitting, an upthrow cam located between the stitch cam at the second feed and the aforesaid heel and toe cam, said upthrow cam having therein a gap and acting on knitting butts to raise needles to a normal run-through height corresponding to tuck height after they have been retracted to knocking-over level by the stitch cam at the second feed, a third feed including a clearing cam piece and a withdrawable stitch cam, the said clearing cam piece being movable into and out of an operative position within the gap in the upthrow cam and serving, when operative, to convert said upthrow cam into a complete clearing cam, and the withdrawable stitch cam at the said third feed being between said upthrow cam and the heel and toe cam, a control unit, and operating connections between said unit and the clearing cam piece and the stitch cam at the third feed.

3,002,367
PHOTOFLASH LAMP
William C. Fink, Williamsport, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 863,250
2 Claims. (Cl. 67-31)



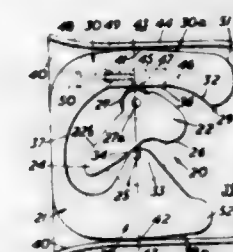
1. A photoflash lamp comprising: a sealed light-transmitting envelope; a combustion-supporting gas filling in said envelope; a corrugated strip of flammable foil disposed in said envelope; a supporting framework for said foil secured to an inner wall of said envelope and depending therefrom, said framework including support wires threaded through apertures provided therefor in said foil, said support wires being shaped to conform to the contour of said corrugations and being substantially in contact therewith along the major portion of their length; and ignition means disposed in said envelope in operative relationship with respect to said foil.

3,002,368
PLUNGER-TYPE LOCK
Sigurd M. Moberg, Pompton Plains, N.J., assignor to E. J. Brooks Company, Newark, N.J., a corporation of New Jersey
Filed Aug. 3, 1960, Ser. No. 47,269
6 Claims. (Cl. 70-14)



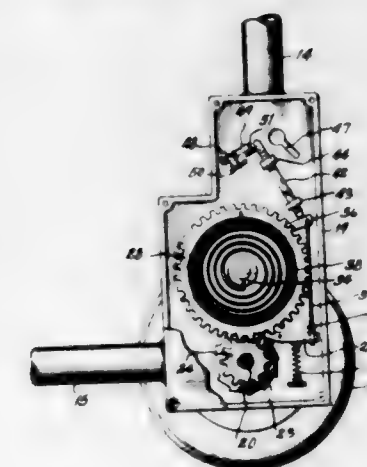
1. A plunger-type lock comprising a body, a tiltable plunger reciprocable endwise in said body between locking and unlocking positions, a portion of said body having an inner abutment surface in position to interfere with said plunger to prevent endwise movement of the latter to its said unlocking position when the plunger is tilted, said body being formed with a recess, coaxial with said plunger and adapted to receive a portion of the plunger when the latter is non-tilted to permit endwise movement of said plunger to its said unlocking position, said plunger being formed with an axial bore, opening toward said recess, and said recess opening at the exterior of the lock and being adapted to receive a key adapted to engage said plunger within said bore to hold the plunger in non-tilted condition and move the plunger from its locking to its unlocking position.

3,002,369
RELEASABLE FASTENING DEVICES
Victor Chanary and Daniel Norman Walker, Birmingham, England, assignors to Wilmot-Breeden Limited, Birmingham, England
Filed June 17, 1957, Ser. No. 666,131
Claims priority, application Great Britain June 22, 1956
20 Claims. (Cl. 70-149)



1. A releasable fastening device comprising first and second parts adapted for relative translatable and angular movement during a fastening operation, said first part having a lobe thereon and being pivoted about an axis lying in a plane transverse to the direction of said relative translatable movement, and said second part having a projecting portion which is adapted to engage with said lobe in an interlocking manner during the fastening operation, and means urging said first part to a resting position which corresponds to the relative coupling position of said parts, said lobe having a surface portion which coacts with an edge surface of said projecting portion substantially at said pivot axis and so that the resultant of the reaction force between said second and first parts when in a relative coupling position, due to any tendency for relative translatable movement between the parts in the reverse direction to that occurring during said fastening operation, passes substantially through said axis and hence applies substantially no torque about that axis to said first part.

3,002,370
AXLE LOCK
Eugene A. La Brie, Jr., 456 Highbridge Road, Stamford, Conn.
Filed Sept. 17, 1958, Ser. No. 761,562
10 Claims. (Cl. 70-183)

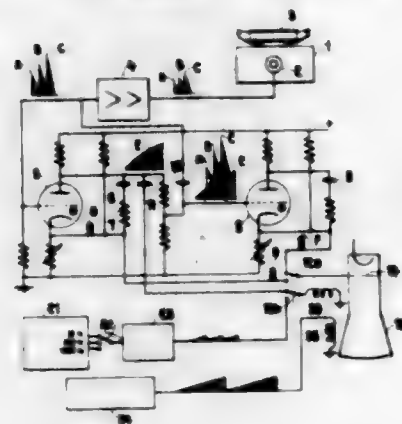


9. An axle lock comprising, an axle member having a pinion gear affixed thereto and means for journalling said axle member for rotation about its axis, a hollow gear member journaled to rotate about its axis and having peripheral gear teeth drivingly engaging said pinion gear, said hollow gear member enclosing a helical ribbon spring attached at one end thereto, a second member positioned to extend within said hollow gear member and journaled to rotate about the axis thereof and having attached thereto the other end of said spring, and means selectively actuable between two positions in one of which said first and second members have unrestricted

rotational movements and in the other of which said first and second members are each constrained to only that relative rotation therebetween which is effective to wrap said spring more tightly about said second member.

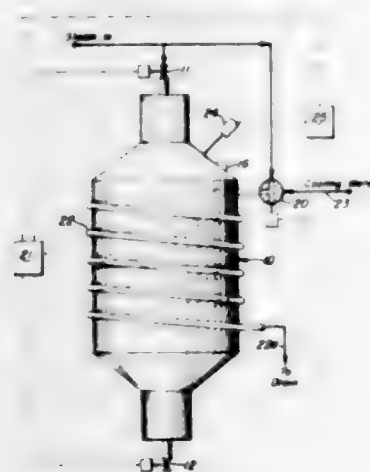
3,002,371
APPARATUS FOR TESTING THE OSCILLATING PROPERTIES OF THE BALANCE WHEEL OF A WATCH OR CLOCK

Anton Borer, Riedholz, Switzerland
Filed June 9, 1959, Ser. No. 819,054
Claims priority, application Switzerland June 18, 1958
6 Claims. (Cl. 73—6)



5. An apparatus for testing and indicating the oscillating properties of the balance wheel of a watch or clock, comprising microphone means for detecting three characteristic noise pulses emitted by the watch or clock during every passage of the balance wheel through its zero or equilibrium position, a standard frequency oscillator, a cathode ray tube having means for producing an electron beam, means for selectively controlling the electron beam of the said cathode ray tube in synchronism with the said first and third noise pulses and with the said standard frequency respectively, selector means having a first position providing for control of the electron beam by one of the said noise pulses and the standard frequency respectively for indicating the balance-wheel frequency, and a second position of the said selector means providing for control of the electron beam by the said first and third noise pulses respectively, for indicating the amplitude of the balance wheel.

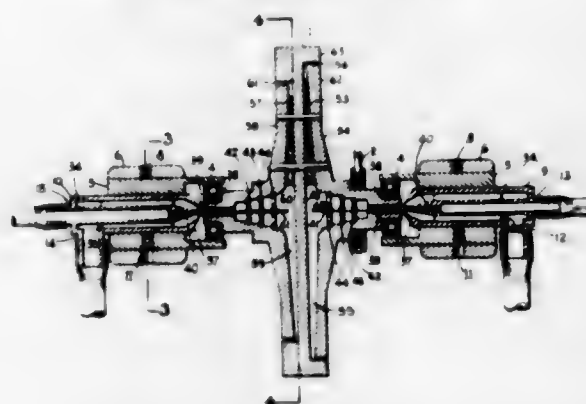
3,002,372
STEAM PURGE INDICATOR METHOD AND APPARATUS
William L. Bulkley, Munster, Ind., and Dan Smith, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Mar. 31, 1958, Ser. No. 724,995
13 Claims. (Cl. 73—29)



12. An apparatus for measuring and indicating the presence of noncondensable gases in admixture with a

condensable gaseous medium which comprises means for trapping a selected volume of said admixture under atmospheric pressure, means for cooling said trapped volume to a preselected temperature well below the condensation temperature of the said gaseous medium, and means for indicating the pressure of said volume at said preselected temperature as a measure of the trapped non-condensable gases.

3,002,373
GAS GRAVITOMETERS
Garman O. Kimmell, 52 NW. 42nd St., Oklahoma City, Okla.
Filed Sept. 27, 1957, Ser. No. 686,664
13 Claims. (Cl. 73—30)

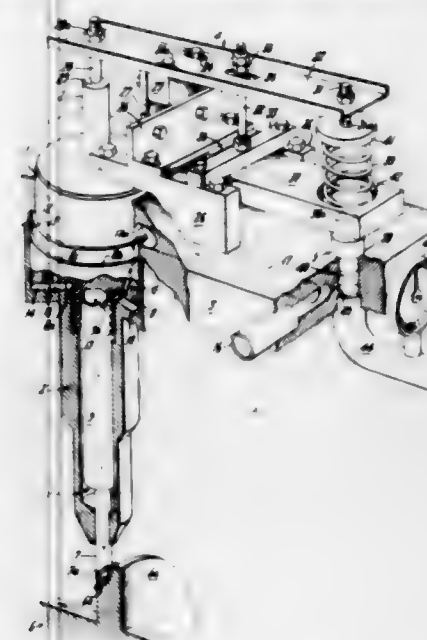


1. A gas gravitometer of the character described including in combination a gas sample centrifuge and a reference gas centrifuge driven at the same speed, each of said centrifuges having a hollow hub, regulating devices having orifices for feeding the gases to the centrifuges, said regulating devices being located in the hubs of the centrifuges, and so arranged that the flow of gases to the centrifuges is determined by the total pressure gradient within the centrifuges, cylindrical discharge slots from both centrifuges, said slots being small so as to function as capillaries, pressure sensing tubes passing through the orifices of said regulating devices into the center of the centrifuges, means for supplying sample gas to one centrifuge through the annulus between its regulating devices and its pressure sensing tube, means for supplying reference gas to the other centrifuge through the annulus between its regulating devices and its pressure sensing tube, and means connected to said pressure sensing tubes for measuring the pressures in the centrifuges.

3,002,374
HYDRAULIC THRUST BEARING WEAR INDICATOR
Stephen Jacobs, Lunenburg, Mass., assignor to General Electric Company, a corporation of New York
Filed Jan. 19, 1960, Ser. No. 3,307
4 Claims. (Cl. 73—37.5)

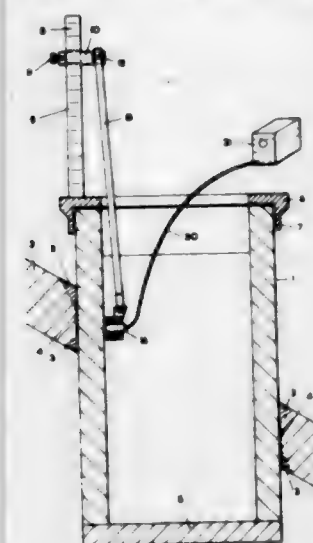
4. A wear indicator for a rotor having thrust bearings and subject to axial movement upon wear of the thrust bearings, comprising a source of fluid under pressure, support block means defining a cylindrical bore, hydraulically positioned means including fluid pressure actuated piston means slidable in said bore and connected to said pressure source following the axial movement of the rotor, nozzle means disposed on the support block and connected to the pressure source, said nozzle means including a projecting hollow frusto-conical portion terminating in a sharp annular edge at the nozzle outlet, a flapper means pivotally mounted on the support block defining a smooth flat surface arranged in juxtaposition and forming close clearances with said nozzle annular edge to define therewith an adjustable annular bleed gap, compression spring means having a known spring constant disposed on the

opposite side of said flapper means from the nozzle means and biasing said flapper means against the fluid issuing from the nozzle means, lever means pivotally mounted on the support block and including a first end portion engaging said piston means and a second end portion engaging said compression spring means, whereby movement of the



piston means will adjust the bias of the compression spring means against the flapper means, and hydraulically actuated indicator means connected to the nozzle means and the pressure source, said indicator means being calibrated to indicate rotor axial displacement, whereby axial rotor movement will be amplified and remotely indicated in a substantially linear relationship by the indicator means.

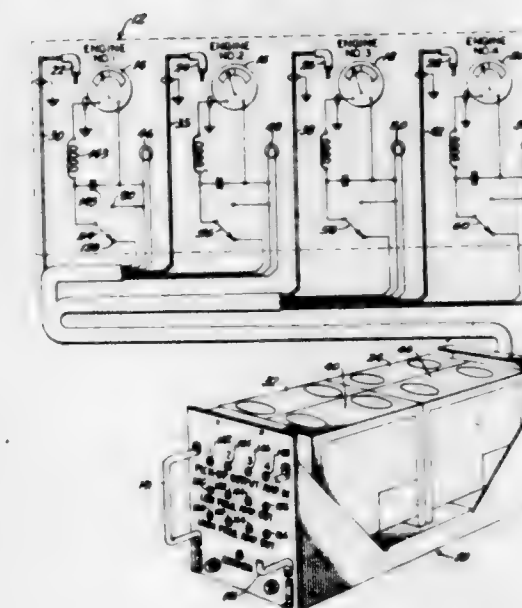
3,002,375
ULTRASONIC TEST APPARATUS
Robert Sydney Martin Moffatt and Kenneth Storer, Darlington, England, assignors to Whessoe Limited, Darlington, England
Filed Dec. 7, 1959, Ser. No. 857,670
Claims priority, application Great Britain Dec. 10, 1958
9 Claims. (Cl. 73—67.8)



1. Apparatus for adjustably supporting an ultrasonic probe so as to couple it successively to a plurality of different points on the wall of a hollow body shaped as a surface of revolution, said apparatus comprising a support member in the form of a ring adapted to be mounted on one end of the body for rotation about the axis thereof, a pillar mounted on the support member which projects away from said body in a direction parallel to the axis thereof, and an arm which extends into the interior of the hollow body, said arm being pivotally mounted on

the pillar at a point adjustable longitudinally of the pillar so that the arm can swing radially of the body, and a probe carried on the arm, the arm being biased to swing about its pivot until the probe is brought into coupled relationship with the wall of the body.

3,002,376
MULTI-ENGINE VIBRATION INDICATING SYSTEM
Gale W. Crampton, Chicago, Ill., and Edward E. Smith, Hayward, Calif., assignors to Land-Air, Inc., a corporation of Illinois
Filed Sept. 25, 1957, Ser. No. 686,162
4 Claims. (Cl. 73—116)



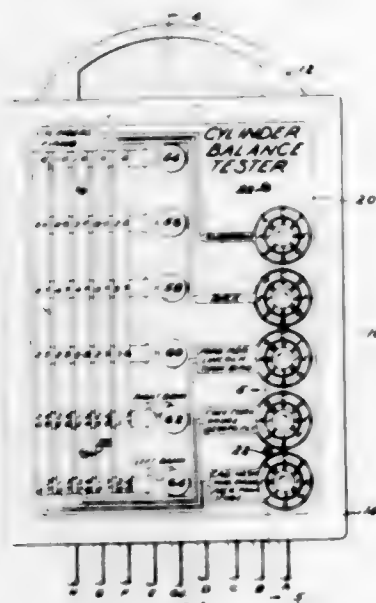
1. A vibration analyzer for a multi-engine system comprising magneto striction vibration pickup means operatively associated with each engine for producing electrical voltages having characteristics corresponding to the acceleration component of engine vibrations, a dual channel amplifier connected to the output of each magneto striction vibration pickup means, said dual channel amplifier comprising a low frequency channel including amplifying means for said electrical voltages, a band pass filter network coupled to said amplifying means to compensate for pickup characteristics, an integrating network coupled to said band pass filter network for integrating said electrical voltages to provide D.C. voltages proportional to engine displacement due to engine vibrations at propeller frequencies, and a relay control circuit coupled to the output of said integrating network and adapted to be energized in response to excessive vibrations for lighting a warning light, said dual channel amplifier further comprising a high frequency channel including amplifying means for said electrical voltages, a band pass filter network coupled to said amplifying means to compensate for the pickup characteristics, an integrating network coupled to said band pass filter network for integrating said electrical voltages to provide D.C. voltages proportional to engine displacement due to engine vibrations at turbine frequencies, and a relay control circuit for lighting a warning light when said turbine vibration frequencies exceed a predetermined displacement value, an indicating meter for producing double amplitude displacement indications of the engine vibrations, a warning light, selectively actuatable switch means for connecting the output of the integrating network in either said high frequency channel or said low frequency channel to said displacement meter and warning light, and a plurality of accessible test points connected to the output of said pickup, said low frequency channel and said high frequency channel for each engine to facilitate checking of the pickup and amplifier operation.

3,002,377

CYLINDER BALANCE TESTER

James S. Lanham, Lathrup Village, and James A. Umbarger, Cheboygan, Mich., assignors to Kent-Moore Organization, Inc., Warren, Mich., a corporation of Michigan

Filed Oct. 30, 1958, Ser. No. 770,694
2 Claims. (Cl. 73-116)



1. A cylinder balance tester for an automobile multi-cylinder internal combustion engine whereby the engine performance can be evaluated by an appropriate indicator responsive to operation of selected cylinder groups, provided with a distributor having a plurality of electric leads extending to a spark plug in each of the cylinders in the engine comprising, in combination, switch mechanism having a switch box provided with eight electric leads, each lead having four contact points disposed within the box and a contact pin outside of the box, said contact pin receivable within the distributor of the engine to make contact with a spark plug lead therein, said eight electric leads constituting four companion pairs of leads, said four companion pairs of leads divided into two separate sets of four leads each, one set consisting of one lead from each of said four companion pairs of leads and the other set consisting of the other lead from each of said four companion pairs of leads, said switch mechanism provided with a ground lead having a part outside of the box adapted to be grounded upon the automobile, said switch mechanism having four independently manually manipulable switch members one for each of three predetermined companion pairs of leads, and four lead contact bridging means one for each switch member and responsive thereto, each contact bridging means responsive to manipulation of its switch member to simultaneously connect the three companion pairs of leads controlled by such switch member with the ground, such switch mechanism also having two additional switch members one for each of said two sets of four leads and having two lead contact bridging means one for each of said additional switch members and responsive to manipulation of its switch member to simultaneously connect the set of four leads controlled by such switch member with the ground.

3,002,378

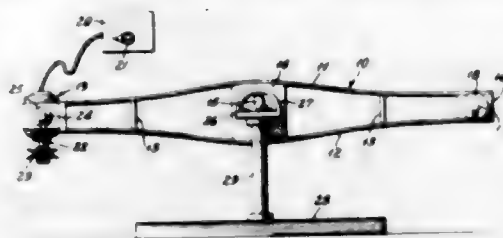
ISOCHRONIC SYSTEM FOR TESTING OF AIRCRAFT

Norman K. Walker, Kensington, and Don F. Widmayer, Bethesda, Md., assignors to Advanced Research Associates, Incorporated, Kensington, Md.

Filed Mar. 25, 1958, Ser. No. 723,685
4 Claims. (Cl. 73-147)

4. A method for preparing a test for determining the aerodynamic and pilot reaction characteristics of a full

scale aerodynamic structure while operating said structure in a structure supporting medium that comprises (1) constructing an n scale model, where n equals the scaling factor, having a mass equal to n^3M where M equals the mass of the full scale structure, said mass being distributed in the same manner as the mass distribution in the full scale model to provide the same relative position of the

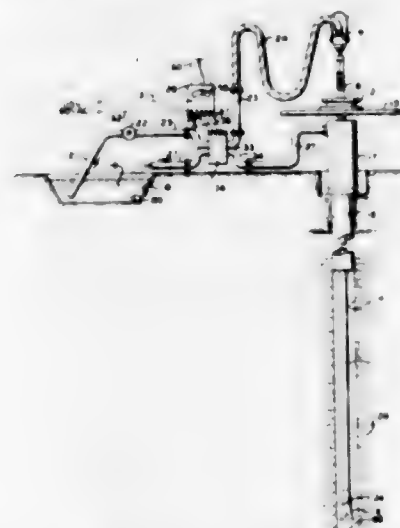


center of gravity and to reduce the radii of gyration of the model about the principal axes to R/n where R equals the radii of gyration of the full scale model, and a weight equal to W/n^4 where W equals the weight of the full scale structure and (2) operating said model in said supporting medium by providing relative movement between said model and said medium, said relative movement having a velocity equal to V/n where V equals the velocity of the full scale structure in said supporting medium.

3,002,379

PROCESS AND APPARATUS FOR MAGNETIC FLOW MEASUREMENT

James R. Hurley, Milwaukee, Wis., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 19, 1958, Ser. No. 781,616
6 Claims. (Cl. 73-155)



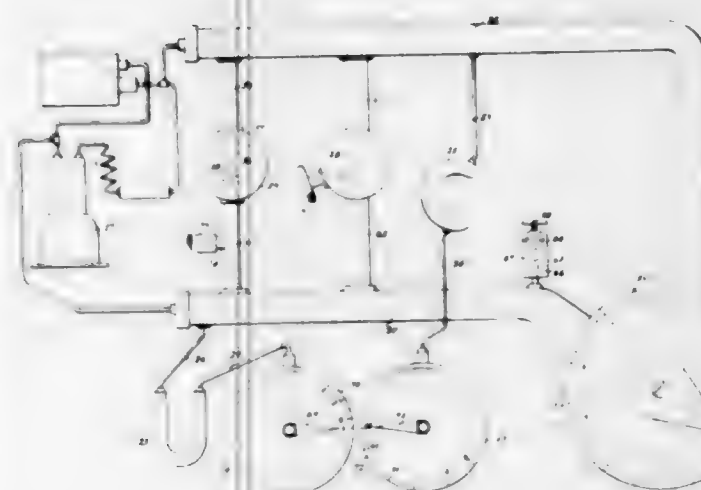
1. A magnetic differential fluid flowmeter for indicating the difference in rate of fluid flow between the fluid flows in two conduits comprising in combination a magnet having two opposite magnetic poles, means to energize said poles comprising a source of alternating electric current and a circuit adjacent said magnet and electrically connected across said source to establish a magnetic field generally along an axis between said poles, a transducer comprising a first fluid conduit disposed with its axis passing through said field generally perpendicular thereto, a first pair of electrodes in said first fluid conduit in contact with the fluid flowing therein and spaced therein along an axis generally perpendicular to said magnetic field and generally perpendicular to the axis of said first conduit, a second fluid conduit disposed with its axis passing through said field generally perpendicular thereto, a second pair of electrodes in said second fluid conduit in contact with the fluid flowing therein and spaced therein along an axis generally perpendicular to said magnetic field and generally perpendicular

to the axis of said second conduit, an electrical signal potential producing circuit connecting the exterior ends of said first and second pairs of electrodes in series so that the resulting electrical potentials appearing across them are opposed, and their difference appears as said signal potential across said signal potential producing circuit, and means to indicate the magnitude and sign of said signal potential comprising servo means to balance out said signal potential in moving to a position indicating said magnitude and sign.

3,002,380

COMPRESSOR EFFICIENCY TESTER

Theron A. Grove, 1108 Franklin Road, La Grange, Ga.
Filed Aug. 13, 1958, Ser. No. 754,786
2 Claims. (Cl. 73-168)



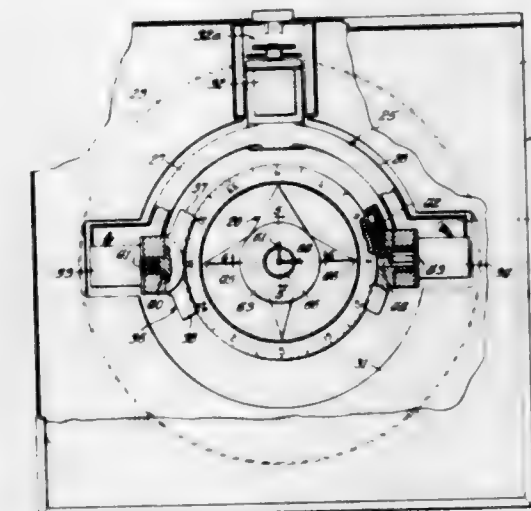
1. In a compressor tester, the combination which comprises a vertically disposed valve body, a shaft threaded in the valve body and extended above the upper end of the body, a dial positioned around the upper end of the shaft, a pointer carried by the upper end of the shaft and positioned to coact with the dial, a venturi seat in the lower end of the valve body, the lower end of the shaft being positioned to coact with the venturi seat for regulating the area of the venturi, a connection extended from the valve body and positioned above the venturi seat, said connection extended to the high pressure or discharge side of the compressor, a connection mounted below the venturi seat for connecting the valve to the low pressure side of the compressor, a pressure gauge having a rotatable pointer thereon, a tube having restricted end portions connecting the high pressure line between the compressor and valve to the gauge, another gauge having a rotatable pointer thereon, said gauge being positioned so that the longitudinal axis of the pointer thereon may lie in a plane extended through the longitudinal axis of the pointer on the other gauge, a tube having restricted end portions between said other gauge and the low pressure connection from the compressor to the valve, the pointers on the gauges being mounted so as to be aligned in a common horizontal plane, each of said gauges having a calibrated dial for coaction with the pointers on the gauges, the calibrations on said dials being so arranged that the pointers will be aligned when there exists in the connections to the high and low pressure sides of the compressor specific high and low pressures, thus the position to which the pointer carried by the upper end of the shaft in the valve body has been adjusted in attaining the alignment of the pointers will be indicative of the capacity of the compressor and thus indicate the efficiency of the system being tested.

3,002,381

AIRCRAFT INSTRUMENTATION

Raoul Castro, Brookfield, Ill. (P.O. Box 414, Winfield, Ill.), and Alexander M. Hasse, 2017 Lincoln, Fort Worth, Tex.

Filed Mar. 15, 1957, Ser. No. 646,464
11 Claims. (Cl. 73-178)

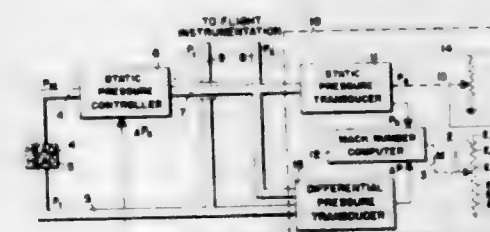


1. In combination with a helicopter, a helicopter attitude indicator comprising, helicopter and swash plate replicas and an artificial horizon adapted to be effectively viewed from an oblique angle, means for mounting said helicopter replica in permanent alignment and relationship with said helicopter, means mounting said swash plate replica and said artificial horizon in movable relationship with each other and with said helicopter replica, means for controlling said swash plate replica so that the latter assumes the same attitude as the swash plate on the helicopter, said artificial horizon surrounding both of said replicas, and means for controlling said artificial horizon to maintain the latter in parallel relationship to the horizon whereby said replicas and artificial horizon when viewed perspectively will assume a 3-dimensional effect of the exact attitude that the helicopter and the helicopter swash plate have with the horizon.

3,002,382

STATIC PRESSURE ERROR COMPENSATOR

Frederick H. Gardner, Long Beach, Calif., assignor to North American Aviation Inc.
Filed Aug. 16, 1955, Ser. No. 528,848
10 Claims. (Cl. 73-182)



8. A static pressure compensating arrangement for an aircraft comprising first and second means respectively connected with external pressure sources of static and total pressures for producing signals respectively indicative of static and total pressure of said sources; output means for communicating a compensated static pressure signal to static instruments in said aircraft; correction generating means operatively connected between said output means and said static pressure signal producing means for generating a correction signal (in accordance with an error signal) algebraically additive to the said static pressure signal to provide said compensated static pressure signal in said output means; computer means responsively connected to said output means and said total

pressure signal producing means for generating a static pressure error signal output in accordance with varying parameters effecting static pressure error as encountered in flight of said aircraft; said correction generating means being responsively coupled with said static pressure error signal output of said computer means to provide a corresponding error control signal to said correction generating means, said error control signal being arranged to control the action of said correction generating means, whereby a controllable compensating static pressure signal comparable to the free-stream static pressure is produced at said output means.

3,002,383

ELECTROMAGNETIC INDUCTION FLOWMETER
Eugene Mittelmann, 427 W. Wrightwood, Chicago, Ill.
Filed Dec. 28, 1956, Ser. No. 631,146
6 Claims. (Cl. 73-194)

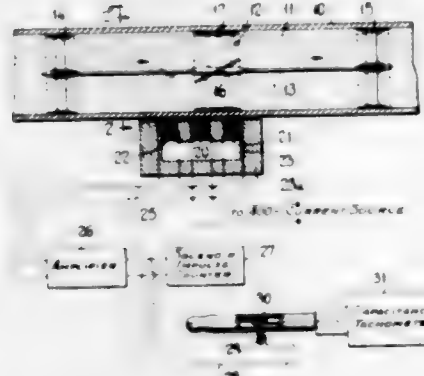


1. Apparatus for measuring fluid flow comprising a conduit for carrying a flowing fluid, means for establishing an alternating magnetic field through a section of said conduit, a plurality of electrodes electrically connecting with a fluid flowing in said conduit to detect an A.C. potential induced in the fluid, an averaging network to integrate the amplitude modulated A.C. potential appearing across said electrodes to obtain an A.C. signal proportional to the mean value thereof, a coil threaded by a part of the flux establishing the alternating magnetic field, a phase shifting network connected to said coil to provide an A.C. voltage therefrom in phase with and proportional to the alternating magnetic field, and means for comparing the output of said averaging network and the A.C. voltage from said phase shifting network whereby to measure the A.C. potential induced in the fluid, the time constant of said averaging network being of the same order as the time constant of said comparing means.

3,002,384

FLOW METER

Dennison H. MacDonald, East Haven, and Richard A. De Pietro, East Hartford, Conn., assignors to Revere Corporation of America, Wallingford, Conn., a corporation of New Jersey
Filed Sept. 19, 1957, Ser. No. 684,975
5 Claims. (Cl. 73-231)



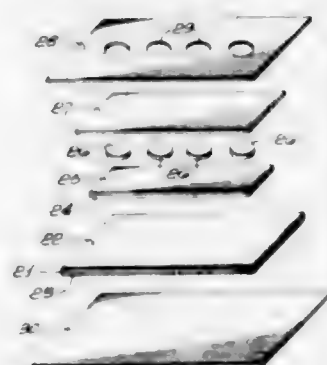
1. A flow meter comprising in combination: a conduit portion through which the flow to be metered is to pass, a rotatable impeller mounted in said conduit portion and having a predetermined axis of rotation; an element mounted on said impeller and formed of a material which will substantially alter the characteristics of a magnetic field when such element traverses such a field, said element having a portion spaced from said axis and

being discontinuous in a direction extending around said axis; a first winding forming the primary of a transformer and adapted to be connected to an electrical energizing source; and two other windings in magnetically coupled relation to said primary; said first winding and said other windings being spaced from each other and being mounted in positions substantially equi-distant from said axis and said primary and at least one of said other windings being mounted in positions adjacent the path of travel of said element such that when said element, upon rotation of the impeller, passes adjacent said one winding and said primary, the magnetic path therebetween will be altered, thereby causing a current to be generated in said one winding different from that generated in the other of said windings.

3,002,385

TEMPERATURE INDICATOR

William Wahl, Pacific Palisades, and Lloyd B. Campbell, Los Angeles, Calif., assignors to Pyrodyne, Incorporated, Los Angeles, Calif., a corporation of California
Filed Feb. 12, 1960, Ser. No. 8,409
14 Claims. (Cl. 73-356)

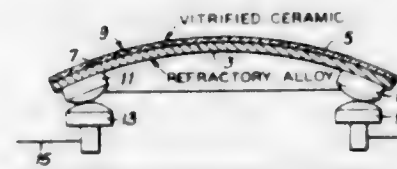


7. A temperature indicator comprising a backing material, a metallic base member disposed on said backing material, a colored pigment material disposed on said metallic base, a plurality of discrete temperature indicating materials in spaced apart relationship disposed on said colored material, said temperature indicating material being of a color which is different from the color of said colored pigment material, a transparent cover material adjacent said temperature indicating material, said cover material being bonded to said base member thereby enclosing said temperature indicating material and said colored material between said base and said cover material, a metallic cover member having perforations therein adjacent said cover material said perforations serving as view holes for observing said temperature indicating material, said cover member being bonded to said backing material thereby enclosing said base member, color indicating material and transparent cover material between said backing material and said cover member.

3,002,386

THERMOSTATS

Charles D. Flanagan, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,131
10 Claims. (Cl. 73-378.3)



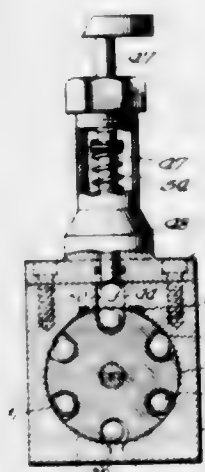
1. A snap-acting thermostatic element comprising two layers of refractory materials having different thermal

coefficients of expansion, one of said layers comprising a nonmetallic material bonded to the other layer, each of said layers being flexible, both of said layers being permanently shaped so that said element is permanently set according to a dished configuration such that said element is capable of snapping in response to temperature change to an oppositely dished configuration, said one layer comprising a vitrified ceramic material.

3,002,387

SEALED SAMPLE INJECTOR FOR GAS CHROMATOGRAPHY

Steno F. Micheletti, Galveston, Tex., assignor, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Nov. 26, 1957, Ser. No. 699,049
2 Claims. (Cl. 73-422)



1. An apparatus for sequentially injecting a plurality of capsule-enclosed analytical samples to a gas chromatographic analyzer comprising a housing, a plurality of capsule-receiving chambers in said housing, said chambers comprising open peripheral channels in a rotatable body, movable ampule crusher means within said housing and operable within said chambers, said crusher means comprising an elongated bar which is substantially co-extensive with the length and width of said channels, which bar is shaped to provide an open channel between said bar and a channel when said bar is depressed, index means for registering individual channels with said crusher means, fluid inlet and outlet means communicating with a channel aligned with said crusher means, and operating means extending through said housing for manipulating said crusher means.

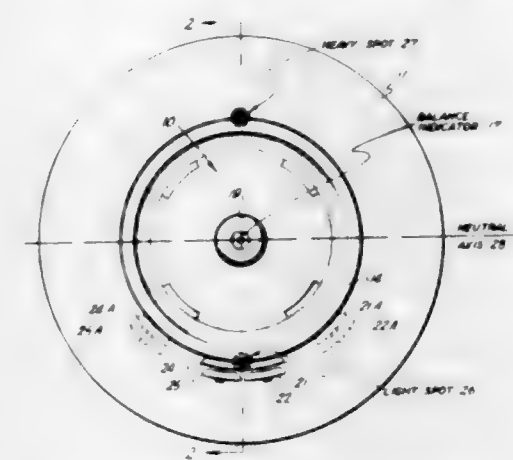
3,002,388

WHEEL BALANCING

Fred J. Bageman, Pasadena, Calif., assignor, by mesne assignments, to The Bada Company, Pasadena, Calif., a corporation of California
Filed Mar. 4, 1957, Ser. No. 643,761
2 Claims. (Cl. 73-483)

1. A process for balancing an automobile wheel comprising positioning the wheel horizontally on a wheel-balancing machine, measuring with a high degree of accuracy any deviation of the plane of the wheel from the horizontal, placing a set of four equal rim weights sufficient to balance the wheel loosely on one rim of the wheel adjacent the point of maximum effectiveness, adjusting the rim weights of said set together in pairs symmetrically and oppositely about said point of maximum effectiveness until said wheel is balanced so that it is in

a horizontal position, and thereafter transposing one weight from each pair to approximately corresponding

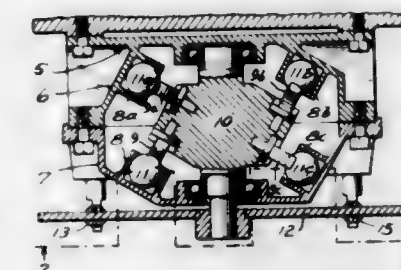


circumferential positions on the rim located on the opposite side of the wheel and connecting the weights to the wheel.

3,002,389

FORCE MEASURING APPARATUS

James D. Tear, Great Neck, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Feb. 19, 1958, Ser. No. 716,241
4 Claims. (Cl. 73-514)



1. A force measuring apparatus comprising a rotor member and a stationary member, a plurality of ball guides disposed in one of said members and a spherical element supported within each ball guide, said ball guides being distributed in said one member according to the vertices of a regular sided and symmetrical polyhedron there being a ball guide at each virtual vertex thereof, a plurality of cams supported by the other of said members, each of said cams being normally in face to surface contact with one of said spherical elements, said cams being disposed with respect to said elements so as to be adapted to impart unidirectional torque to said rotor, and torque indicating means mounted on said rotor member and resiliently connected to said stationary member.

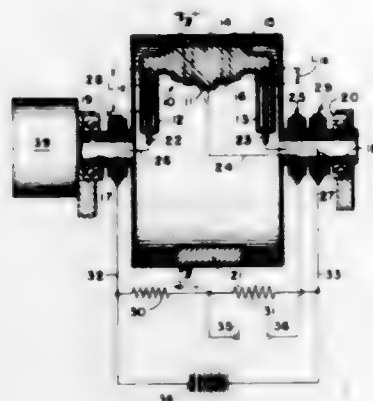
3,002,390

ACCELEROMETER

Harvey G. Miller, Nahant, Mass., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 11, 1959, Ser. No. 792,500
13 Claims. (Cl. 73-516)

1. In an accelerometer for measuring the forces of acceleration along an axis, the combination comprising: a fluid mass; a fluid container spaced from said axis, and having axially spaced tubular portions extending generally radially toward said axis, the end of said tubular portions toward said axis being sealed, said fluid mass being contained by said container and entirely filling said container except for said tubular portions, said tubular portions being partially filled by said fluid mass; means for rotating said container about said axis at a uniform velocity for imparting a constant centrifugal force to said

fluid mass, whereby said fluid mass assumes a first position of equilibrium in said container; and means for



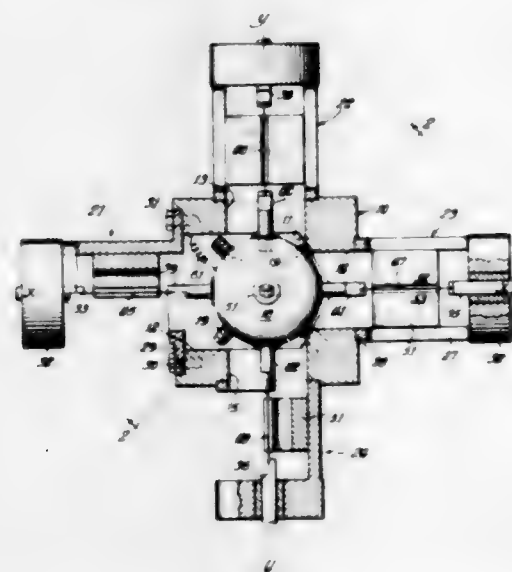
measuring the amount of displacement of said fluid mass from said first position resulting from a force of acceleration along said axis.

3,002,391

PLURAL AXIS TRANSDUCER

Paul J. Holmes, Laguna Beach, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Aug. 7, 1957, Ser. No. 676,824
9 Claims. (Cl. 73-517)

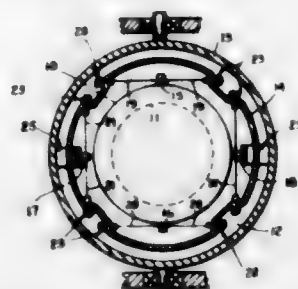


1. In a force measuring system, the combination of a plurality of pairs of stretched strings, the strings of each pair being coaxially disposed and the axis of said string pairs being at angles to each other, a force responsive element connected to each of said strings and joining the two strings of each of said pairs so that as said element is afforded movement, at least a component of which is along the axis of the string pair due to force acting on said element, said element increases the tension in one of said strings of the pair while decreasing the tension in the other of said strings of the pair, the strings of each of said pairs having different natural frequencies of vibration so that the frequency of vibration of one of said strings is always more than the frequency of vibration of the other of said strings throughout a predetermined range of variations in force on said force responsive element, means for vibrating said strings at their natural frequencies of vibration, and means for indicating the difference in the frequencies of vibration of the strings of each pair as an indication of both the magnitude and direction of the force components acting along the pairs of strings for determination of the magnitude and direction of the force acting on said force responsive element.

3,002,392

GYROSCOPE SUSPENSION

Dominik P. Scotti, Plainview, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed May 20, 1959, Ser. No. 814,460
7 Claims. (Cl. 74-5)

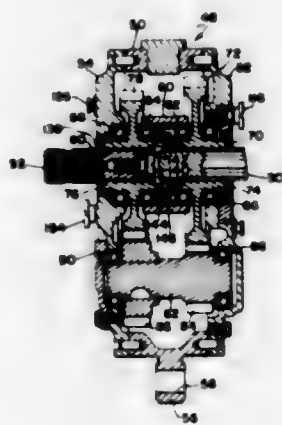


1. In a device of the character described, an outer gimbal ring, an inner gimbal ring within said outer gimbal ring, a gyroscope casing adapted to contain a gyroscope, suspension means for suspending said gyroscope casing and said inner gimbal ring in said outer gimbal ring, said suspension means including tension members arranged substantially quadrilaterally between said outer gimbal ring and said gyroscope and having the ends of said tension members connected to said inner gimbal ring, means for connecting said gyroscope casing to the substantial center of a pair of oppositely disposed tension members and means for connecting said outer gimbal ring to the substantial center of the other pair of oppositely disposed tension members.

3,002,393

POWER TAKE-OFF

Edgar P. Browning, Cedar Falls, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 29, 1959, Ser. No. 849,544
14 Claims. (Cl. 74-11)



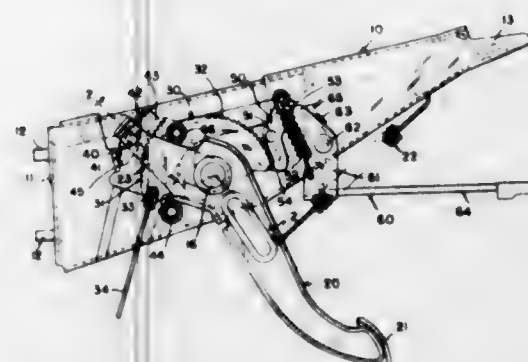
1. In combination with a tractor having a body including a rear wall and a power shaft projecting rearwardly from said wall: a housing positioned rearwardly of the rear wall and having a front face closely spaced behind said wall, said housing having an input shaft projecting forwardly beyond said face and coaxially connectible to and disconnectible from the power shaft; and means removably mounting the housing on the tractor body for forward movement of the housing to connect the power and input shafts and for rearward shifting of the housing to disconnect said shafts, said means including a first element on the tractor wall, a second element on the housing front face, a retaining member insertable in the space between said face and wall in a direction radial to the power shaft axis and engaging both elements for holding the housing against rearward shifting and selectively removable in the opposite direction for disengaging said elements, and a lock device operative between said member and one of the elements for releasably securing the member against removal.

3,002,394

BRAKE ACTUATING MECHANISM

Albert S. Spitz, Livonia, Mich., assignor, by mesne assignments, to Lisle W. Menzimer, trustee, Rockford, Ill.

Filed Mar. 16, 1959, Ser. No. 799,532
2 Claims. (Cl. 74-152)



1. A cable operating device comprising a stationary mounting bracket, a ratchet wheel having a cable secured thereto pivoted to said bracket for incremental pivotal movement in one direction to tension said cable, a stationary pivot pin secured to the bracket, a pawl pivotally mounted on the pivot pin and biased into engagement with said ratchet wheel for securing said ratchet wheel in each incremental position thereof, release means for disengaging said pawl from said ratchet wheel to permit movement of said ratchet wheel in the opposite direction to relieve the tension on said cable, a lever biased into a predetermined position also pivoted to said bracket in a fixed location and having a motion communicating pawl pivoted thereon which pawl is biased to drivingly engage said ratchet wheel on pivoting of said lever in one direction from said predetermined position, and means distinct from said release means for disengaging said motion communicating pawl from said ratchet wheel on return of said lever to said predetermined position whereby said ratchet wheel is caused to move in said one direction in increments on successive pivotal strokes of said lever and to freely move in the opposite direction under influence of said cable on release of said stationary pawl.

3,002,395

VARIABLE SPEED TRANSMISSION

John C. Kaytor, 11088 Eve Ave., Lynwood, Calif.; Rose A. Kaytor, executrix of the estate of John C. Kaytor, deceased, assignor to herself

Filed May 29, 1958, Ser. No. 738,788
8 Claims. (Cl. 74-217)



4. A multiple speed power transmission device comprising a housing having a pair of spaced parallel shafts journaled therein, a plurality of pulleys rigid with each shaft, the pulleys on at least one of said shafts being of varying diameters each aligned with a corresponding pulley on the other shaft, belts received over said aligned

pulleys and loosely engaged therewith, a tensioning lever associated with each belt movable between an inoperative or slack belt position and an operative position in which the slack in the corresponding belt is taken up to effect a drive between the two shafts through the corresponding aligned pulleys, means normally urging said tensioning lever to the inoperative position, means for individually and selectively moving and urging the tensioning levers to the operative position, movable latch means, each of said tensioning levers engageable with a section of said latch means when said levers are in their operative positions to retain that lever in the operative position, said latch means including cam means engageable by said levers in an intermediate portion of their travel from inoperative to operative positions to effect movement of the latch means and the release of any lever being held in its operative position.

3,002,396

BELT AND GEAR DRIVE

Ashton L. Worrall, Jr., Cuyahoga Falls, Ohio, assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 27, 1959, Ser. No. 809,283
3 Claims. (Cl. 74-229)



1. A high power positive drive comprising a flexible toothed belt and gears therefor having teeth on their peripheries adapted to mesh with said belt, said belt teeth and gear teeth having working faces of an involute contour and predetermined pressure angle, the pitch circles for said gears lying respectively outside the tops of said gear, the involute profile for the teeth of each gear being derived from a base circle having a diameter determined by multiplying its pitch circle diameter by the cosine of the pressure angle, the involute profile for said belt teeth being derived from a base circle having a diameter determined by multiplying the pitch circle diameter of the smallest gear by the cosine of the pressure angle.

3,002,397

CONTROL MECHANISM

Wallace H. Du Shane and Lawrence R. Beard, Waterloo, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Mar. 2, 1959, Ser. No. 796,659
13 Claims. (Cl. 74-482)

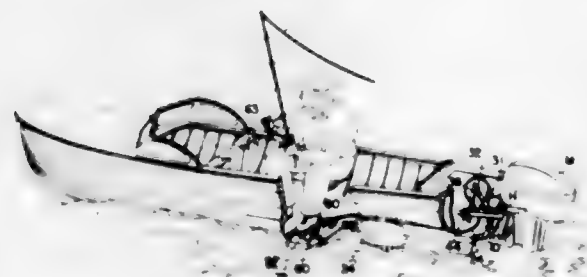
1. Control mechanism for a bidirectionally adjustable regulator means, comprising: a support; a shiftable member carried by the support for movement selectively to either side of an intermediate position; biasing means operative on said member to yieldably retain and recover its

intermediate position; a control element connected to and for adjusting the regulator means; means mounting said element on the member for movement selectively in either direction relative to the member in its intermediate position for adjusting the regulator means, and said mounting means carrying the element on the member to move with the member when said member is shifted to either side of its intermediate position; means connected to and for shifting the member to either side of its intermediate position; a controller adjustable on the support selectively in opposite directions through an adjusting range; means operative on the controller to releasably retain said controller in any selected position of adjustment; and force-transmitting means having a first connection to the con-



troller and a second connection to the element for positioning said element relative to the member while in its intermediate position, said connections being so arranged relative to the mounting means for the element that shifting of the member to either side of its intermediate position carries the element with the member and causes said element to react against the selectively positioned controller so that the element causes adjustment of the regulator means independently of the controller, and said biasing means operating via return of the member to its intermediate position to return the element to the position thereof selected by the controller.

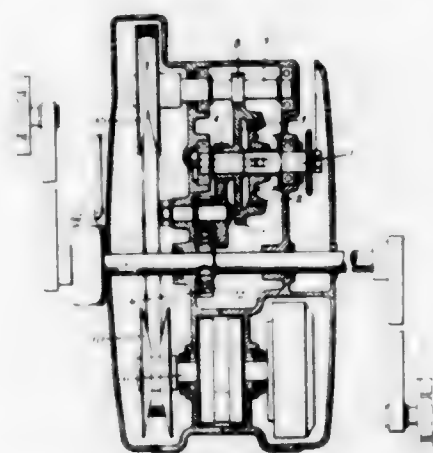
3,002,398
REMOTE CONTROLLED STEERING DEVICE
FOR OUTBOARD MOTORS
Ralph R. Beamer, 15919 25th Ave., SW.,
West Seattle, Wash.
Filed Oct. 20, 1958, Ser. No. 768,371
4 Claims. (Cl. 74-512)



1. A portable, remote control means for outboard motors, comprising: a steering linkage for engaging an outboard motor to partially revolve it about its vertical axis; said linkage having an anchor plate of elongated channel form adapted to be secured to a motor mount and position two forwardly extending pivot supporting arms

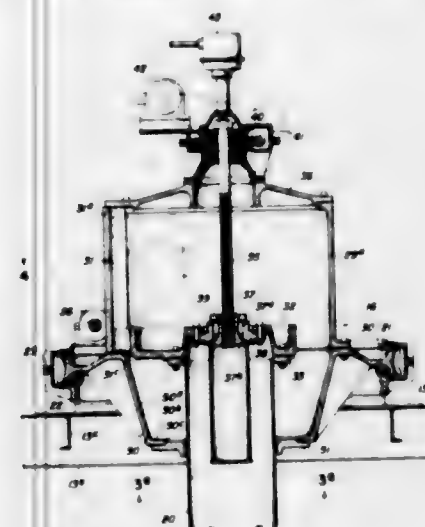
at different lengths and having pivot receiving openings adjacent their ends; an intermediate lever pivoted to the longer of said pivot support arms, said lever having means for adjustably positioning its pivot and for linkage elements secured thereto; a steering arm pivotably secured, at one end, to said intermediate lever by adjustable positioning means provided by said lever; and outboard motor steering handle engaging ring adjustably and pivotably positioned on said steering arm; a power input device for coaction with said steering linkage having a substantially horizontal base plate; an elongated end bracket member secured to one end of said base plate and having spaced openings adapted to engage mounting screws for supporting said input device above the floor of a boat; a bearing supporting bar at the opposite end of said base plate, said supporting bar and said end bracket member adapted to revolvably position a treadle shaft above said base plate; a foot operated treadle fixedly secured to said treadle shaft; a cable operating arm also fixedly secured to said treadle shaft; a flexible push-pull shaft disposed for operatively connecting said steering linkage and said power input device; said flexible shaft having a core and an enclosing sheath adapted to have the ends of both the core and sheath positioned to accommodate the range of movement required to permit the transfer of power from the power input device to said steering linkage; pivoted anchor means for the end of said reciprocating flexible shaft core secured to said operating arm; a pivoted guide block means for said flexible cable core; and an upstanding bearing member secured to said bearing support bar for pivotably supporting said guide means associated with said guide block for adjustably anchoring the sheath of said flexible cable.

3,002,399
MOTOR WITH DRIVE FOR VEHICLES WITH
PEDALS, ESPECIALLY TWO-WHEELED VEHICLES
Leopold Ruess, 20 Egloffstrasse, Munich, Germany
Filed July 21, 1958, Ser. No. 749,775
Claims priority, application Germany July 23, 1957
10 Claims. (Cl. 74-625)



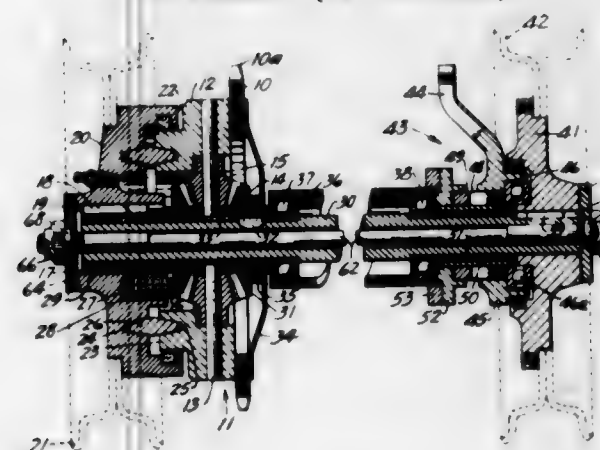
1. A vehicle drive, comprising: a motor crankshaft; a drive output shaft, and means interconnecting it with said motor crankshaft; a pedal drive usable both for starting the motor and for driving said output shaft to assist the motor; said pedal drive including a pedal crankshaft, adapted to have at least one pedal crank mounted thereon, with means for connecting said pedal crankshaft with said motor crankshaft in driving relation in one direction of rotation and for connecting said pedal crankshaft to said output shaft; said last means including a free wheeling clutch adapted to allow turning of said pedal crankshaft in the driving direction in the range of the upper and lower dead center positions of the pedal crank without simultaneously turning the motor crankshaft.

3,002,400
RAKE DRIVING MECHANISM FOR SEDIMENTATION TANKS
Charles H. Scott, Norwalk, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Filed Apr. 17, 1959, Ser. No. 807,090
11 Claims. (Cl. 74-665)



1. A combined drive and lifting mechanism comprising a vertical shaft member rotatable about its axis, a rotary drive member operatively supported for imparting drive torque to said shaft while allowing for axial movement thereof, said drive member having thereon three upwardly directed vertical guide tracks substantially evenly spaced from one another about the vertical axis of the shaft, actuating means operable for axially raising and lowering said shaft, a driven member having three torque portions cooperative with respective tracks so as to render said driven member self-centering, connecting means for detachably yet rigidly fastening said driven member to said shaft so that there is transmitted a balanced drive torque from said tracks to said driven member simultaneously through said three torque portions thereof, said driven member being free to move vertically upon said tracks when raising and lowering the driven member together with said shaft member, and guide bearing means for said shaft member, carried by said drive member and spaced axially downwardly from said driven member in a direction opposite to said guide tracks.

3,002,401
DIFFERENTIAL LOCK FOR PROPULSION OF
LAWN MOWERS, ETC.
Hugh R. Weir, Minneapolis, Minn., assignor to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Feb. 5, 1959, Ser. No. 791,362
11 Claims. (Cl. 74-710.5)

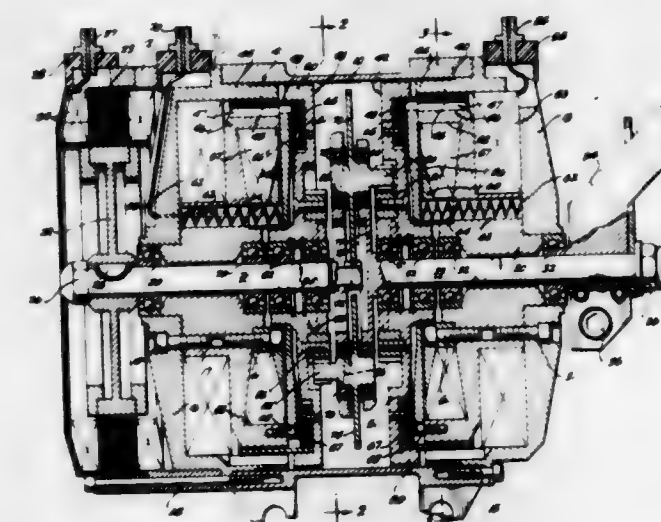


1. Mechanism for interlocking a pair of ground traversing wheels of a vehicle from a differential rotative

771 O.G.—6

movement to a common driving movement, having in combination an axle assembly including a first tubular axle member secured to a first wheel structure for revolution therewith, a second tubular axle member secured to the second wheel structure for revolution therewith, means interrelating said axle members to provide differential rotative movement between said wheels, said interrelating means having a face structure spaced from said first wheel structure, interlocking means interposed between said face and said first wheel structure, one of said structures being shiftable relative to said other structure in an axial direction, actuating means for axially shifting said shiftable structure, said actuating means including an annular cam mounted in co-axial relation on one of said axle members for rotation and axial shifting relative thereto, and thrust transmitting rod disposed axially within at least one of said axle members and interconnecting said actuating means and shiftable structure and imparting axial force to said shiftable structure for axially shifting said shiftable structure toward said non-shiftable structure to thereby interlock said axle members for common rotative movement.

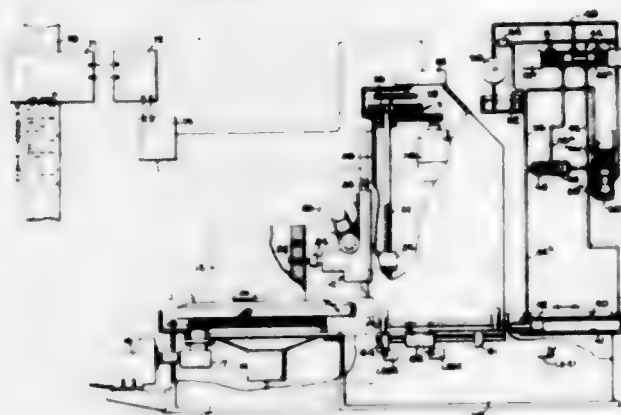
3,002,402
DIFFERENTIAL TORQUE APPLYING DEVICE
Spencer D. Howe, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 765,705
3 Claims. (Cl. 74-766)



2. A differential torque applying apparatus comprising, in combination: a housing; a power input shaft and a torque output shaft rotatably journaled in said housing; means for continuously driving said input shaft; a planetary gear system carried by and interconnecting adjacent ends of said input and output shafts, said planetary system including a pinion gear carried by said input shaft, a pair of interengaging planetary gears, a pair of planetary pinion gears and a pair of sun gears attached to and disposed concentrically with said shafts; a hysteresis clutch mechanism having a movable member carried by each of said sun gears, said clutch mechanisms being adapted for differential energization whereby to provide transmission of bidirectional torque to said output shaft, portions of said housing serving to complete a magnetic field about each of said clutch mechanisms; and a separate magnetically operable brake mechanism carried by and associated for operation with each of said hysteresis clutch mechanisms, said brake mechanisms being individually engageable with said sun gears and normally biased into braking contact with rotating elements of each of said clutch mechanisms.

3,002,403 CONTROLS FOR DRILLING MACHINES AND THE LIKE

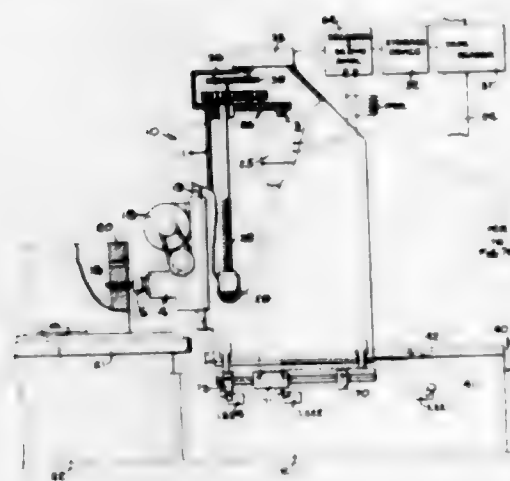
Mark R. Estabrook, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois
Filed May 13, 1958, Ser. No. 734,891
8 Claims. (Cl. 77—32.2)



1. In a control system for a machine tool having a positionable element and a reciprocable element, the combination comprising means for storing information, means for reading successive sets of information into said storing means and destroying the previously stored set of information, means responsive to information in said storing means for moving said positionable element to a corresponding position, means for advancing said reciprocable element from a home position through a working stroke and then retracting the same, and means for preventing the destruction of one set of information in said storing means until said reciprocable element has been advanced through a complete working stroke after that one set of information has been stored.

3,002,404 CONTROL SYSTEM FOR MACHINE TOOLS

Mark R. Estabrook, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois
Filed May 13, 1958, Ser. No. 734,947
9 Claims. (Cl. 77—32.8)

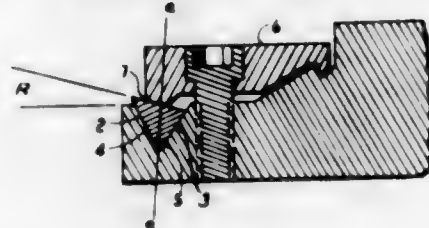


1. In a machine tool having a movable member and multi-speed power means for advancing said member along a predetermined path, a control system comprising, in combination, a first plurality of electrical devices, each associated with said power means and operative, when energized in different combinations, to cause such power means to move said member at different rates, a plurality of switching elements, means for actuating each of said elements when said member moves past respectively different points along its path, a reading device adapted to sense coded binary indicia on a record device which rep-

resents any one of a plurality of rate program codes, storage apparatus, means for setting said storage apparatus to a unique state in response to each rate program code sensed by said reading device, and means responsive to the state of said storage apparatus for causing the energized combination of said electrical devices to be controlled by respectively different ones of said switching elements.

3,002,405 CUTTING TOOLS

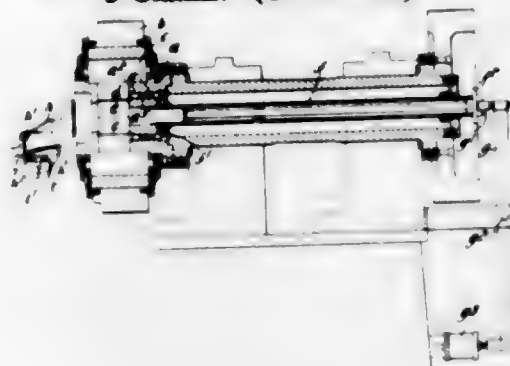
Maurice Ben Heftler, 1119 Harvard Road, Grosse Pointe Park, Mich.
Filed Apr. 17, 1958, Ser. No. 729,195
2 Claims. (Cl. 77—58)



2. A boring bar having an elongated transverse V-shaped groove therein, said groove having a forward wall and a rear wall, a bit having the cross section of a scalene triangle mounted within said V-shaped groove, two surfaces of said bit intersecting at the same angle as said forward and rear walls of said V-shaped groove, said bit being indexible from a first position to a second position by transposing said bit end for end to thereby change the rake angle of said bit, and clamping means mounted on said bar in engagement with a third surface of said bit.

3,002,406 ROTARY SWAGING OR FORGING MACHINES

Samuel Smith, Elmdon, England, assignor to Stevens & Bullivant Limited, Birmingham, England, a company of Great Britain
Filed Oct. 1, 1959, Ser. No. 843,752
5 Claims. (Cl. 78—21)



1. In a rotary swaging machine having a plurality of radially reciprocatory hammer blocks, a damping device for reducing noise created by such machine when running empty, said damping device comprising, in combination, a plurality of plungers, including springs to expand said plungers longitudinally, fluid pressure means acting to press said plungers longitudinally against the sides of said hammer blocks, a lever and push rod transmission mechanism interposed between said fluid pressure means and said plungers, a conduit for supplying fluid under pressure to said fluid pressure means, a valve in said conduit, yieldable means for normally holding said valve closed, and a trigger to be acted upon by work pieces placed in said machine whereby said trigger controls said valve to thereby relieve said hammer blocks from the retarding effect of said damping device while said swaging machine is operating upon work pieces.

3,002,407 WIRE STRIPPING TOOL

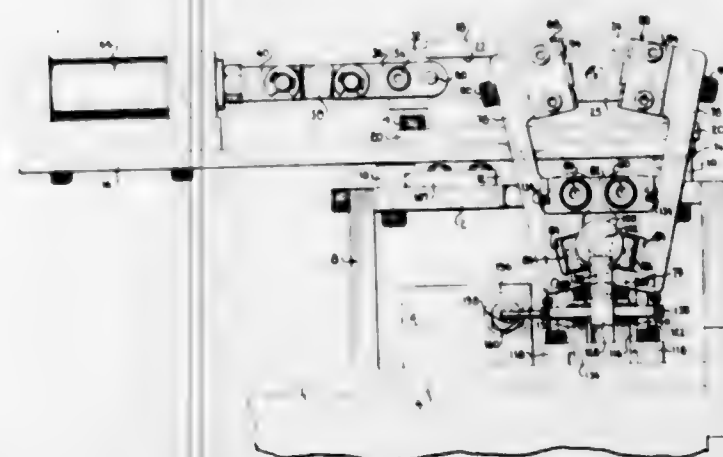
Clyde C. Johnson, 10213 7th Ave., Inglewood 4, Calif.
Filed May 2, 1960, Ser. No. 25,974
9 Claims. (Cl. 81—9.5)



1. A wire stripper tool for stripping the end portion of an insulating sheath from an insulated wire conductor enclosed and insulated by such a sheath, said wire stripper including: a first jaw member, a second jaw member, hinge means affixed to one end of each of the jaw members to join the jaw members in a hinged relationship, the intermediate portion of one of the jaw members forming a supporting means including a surface configuration for receiving and the other of said jaw members having a surface configuration for gripping the end portion of the insulating sheath of the insulated wire conductor, and blade means formed at the free end of at least one of the jaw members for causing the end portion of the insulated sheath to be stripped from the wire conductor gripped in the tool as the insulated wire conductor is withdrawn from the tool.

3,002,408 WIRE STRIPPING APPARATUS

Glendon H. Schwalm, Harrisburg, and Earl W. Wagner, Lebanon, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed Nov. 3, 1959, Ser. No. 850,579
6 Claims. (Cl. 81—9.51)

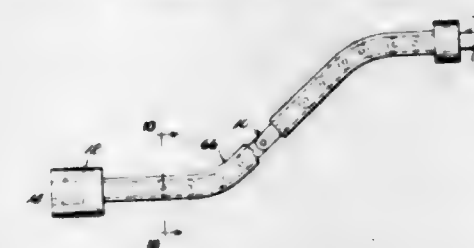


1. In an insulation stripping device of the type comprising a pair of normally open wire grippers and a pair of closable insulation cutting knives, said knives being movable away from said grippers thereby to strip insulation from a wire end, the improvement comprising, a carriage, said knives being mounted on, and movable with, said carriage, a movable camming rod having camming portions engageable with said grippers upon movement of said rod to close said grippers into engagement with a wire, spring means normally biasing said rod to maintain said camming portions out of engagement with said grippers, a shuttle reciprocable in the direction of movement of said carriage and said rod, said shuttle having rod engaging means pivotally mounted thereon and normally in engagement with said rod whereby upon initial movement of said shuttle, said rod is moved until said camming portions close said grippers, said shuttle having means thereon engageable with said carriage at the end of the stroke of said shuttle whereby said carriage is moved away from said knives, and fixed camming means engageable with said rod engaging means to

disengage said rod engaging means from said camming rod whereby said jaws are opened at the end of the stroke of said shuttle.

3,002,409 FLEXIBLE EXTENSION OR SHANK FOR TOOLS

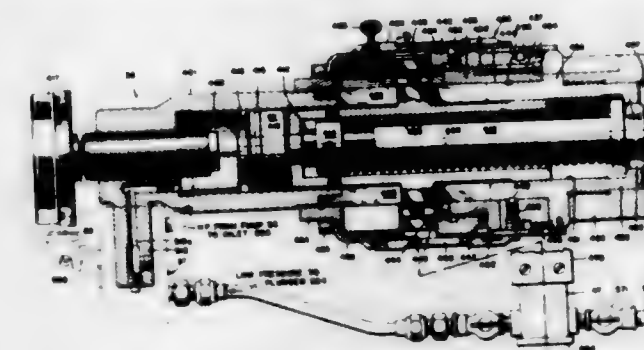
Robert B. Jones, 829 Kenmore Blvd., Akron, Ohio
Filed Apr. 29, 1959, Ser. No. 809,686
1 Claim. (Cl. 81—177)



The combination in a tool of a pivoted link chain having all of the pivots parallel to each other so that the chain can bend in one plane only, an oil resistant, resilient plastic cover molded over and to the chain when it is straight, said cover tending to always return the chain to a straight shape and resiliently opposing its bending movement in its bendable plane, a polygonal post secured to one end of the chain, a spring detent in the post, a socket, a flat wrench secured to the socket, said socket being adapted to fit the post and the spring detent so that the plane of the flat wrench is held parallel to the pivots in the chain, a socket secured to the other end of the chain, and a handle adapted to be removably received in the last-named socket.

3,002,410 POWER-OPERATED TOOL HOLDER

Luther E. Lee, 6625 Eastern Ave., Takoma Park, Md.
Original application Jan. 20, 1954, Ser. No. 405,267.
Divided and this application July 31, 1959, Ser. No. 830,967
4 Claims. (Cl. 82—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



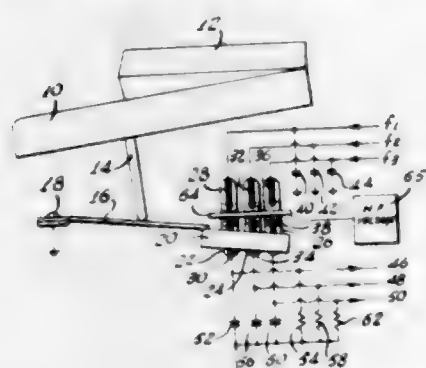
1. In a power operated turning and chasing head for a machine tool, the combination of a housing having a hydraulic chamber therein, means including a reciprocable cutter support mounted within said housing, a cutter carried by said cutter support and movable therewith, resilient means for urging said support rearwardly to retract the cutter from a workpiece, a fluid connection in communication with said chamber for supplying coolant fluid under pressure to the chamber to force the cutter support outwardly against the resilient means and the cutter into the workpiece, indexing means rotatably mounted within said housing and operatively connected to said cutter support to control axial advance of said support in selected increments, a threaded collar connected to said indexing means and engageable by said cutter support and advanceable axially in response to rotation of said indexing means for effecting pre-

selected displacement of the cutter support, means including a pin carried by said collar for rotating and positioning the collar in predetermined spaced relation with respect to the support to vary the axial advance of the support, and means in said cutter support in communication with chamber for supplying said pressurized coolant fluid to the cutter and workpiece as said fluid is supplied to the chamber.

3,002,411

CONTROL ELEMENTS FOR ELECTRONIC MUSICAL INSTRUMENTS

Günter Pötzl, Plauen, Germany, assignor to VEB Blechblas- und Signalinstrumentenfabrik Markneukirchen, Markneukirchen, Germany
Filed May 8, 1959, Ser. No. 811,866
Claims priority, application Germany May 14, 1958
7 Claims. (Cl. 84-1.01)



1. In an electronic musical instrument having an alternating voltage source of sonic frequency, a keying system associated with said source, a gas discharge tube connected with said voltage source for providing a current path for said voltage source, said tube including an ionizable medium within said gas discharge tube, and a pair of electrodes within said gas discharge tube, said voltage source having a voltage output insufficient to maintain discharge in said tube connected across said electrodes, means for producing a high frequency gas ionizing electric field in the gas discharge path in said tube, and means connected to said keying system and responsive thereto for selectively controlling the intensity of said high frequency field.

3,002,412

PEDAL STRUCTURE FOR ELECTRONIC PIANO

Clifford W. Andersen, De Kalb, Ill., assignor to The Rudolph Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 27, 1956, Ser. No. 624,583
16 Claims. (Cl. 84-1.13)



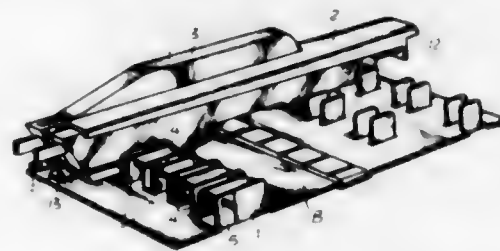
1. In an electronic piano comprising a case, a keyboard on said case, electronic tone generating means mounted within said case and selectively controlled by the keys of said keyboard, means for controlling the decay characteristics of said tone generating means, an amplifier for amplifying the oscillations of said tone generating means, a loud-speaker for converting the amplified electrical

oscillations into audible musical tones, the combination comprising a foot pedal disposed remotely and movably relative to said case, means including a flexible push-pull control of the type having a flexible sheath and a flexible inner control member and quick-release fastening means connecting the tone generation decay characteristic control means and said foot pedal, and means associated with said foot pedal for varying the connecting position of said foot pedal to said inner control member.

3,002,413

KEY MOUNTING FOR MUSICAL INSTRUMENTS

Karl Scherer, Sonnenweg 8, Trossingen, Baden-Württemberg, Germany
Filed July 8, 1959, Ser. No. 825,799
Claims priority, application Germany July 15, 1958
10 Claims. (Cl. 84-423)



1. In a musical instrument having a plurality of keys, means for pivotably mounting said keys adjacent to each other comprising a base, a shaft, means connected to said base and adapted to mount said shaft on said base in a spaced relation thereto, each of said keys having a slot in its lower side near one end thereof extending in its entire length transversely of said key and adapted to receive said shaft when said key is placed thereon, so that said shaft is then engaging with the arcuate inner end of said slot, each of said keys further having at least one elongated recess therein extending substantially in the longitudinal direction of said key from the rear end thereof and transversing said slot at a certain distance from said arcuate inner end of said slot, and a locking member adapted to be inserted into said recess from the open rear end thereof and then to traverse said slot so as to close the same in the downward direction and to maintain said key in a pivotable position on said shaft but in a locked position relative to said shaft.

3,002,414

FASTENER HAVING TOOL CENTERING, GEAR OPERATED, DRIVING CONTACT

Gorman R. Nelson, 2512 S. Summit, Sioux Falls, S. Dak.
Filed Mar. 27, 1958, Ser. No. 724,351
3 Claims. (Cl. 85-9)



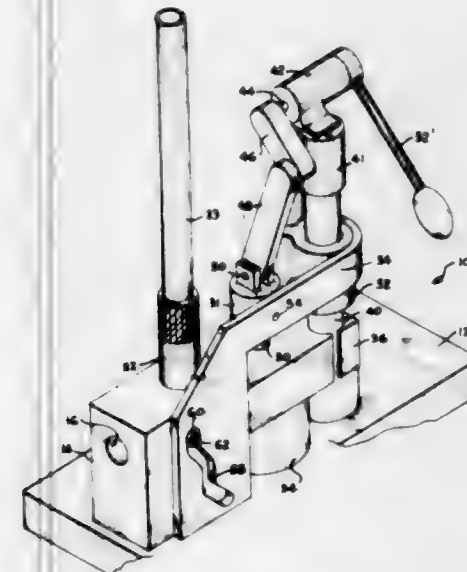
1. A rotatable securing device to be rapidly spun into and out of article-holding position, comprising a body having a longitudinal axis, said body having a threaded portion extending longitudinally of the body and in concentric relationship to the longitudinal axis, said body also including an external peripherally extending tool-engaging portion, said tool-engaging portion being formed outwardly of said threaded portion with respect to said longitudinal axis and extending longitudinally of said body, said tool-engaging portion including at least three contiguous annular portions extending completely around the tool-engaging portion, two of said annular portions being

of substantially identical construction, the other annular portion being of a different construction and being positioned immediately between said identical portions, one of said annular portions defining a smooth cylindrical outer surface for engaging a torquing tool associated with the device, another one of said annular portions defining peripherally extending gear teeth completely therearound, the edge portions of the intermediate annular portion being connected with the adjacent edge portions of the contiguous annular portions by peripherally extending surfaces extending completely around the body, said peripherally extending surfaces lying in substantially parallel planes disposed substantially normally to the longitudinal axis of the body, at least one side edge of each of said gear teeth being disposed in one of said planes, whereby a torquing tool may be seated in predetermined orientation with respect to the body, and said peripherally extending surfaces are adapted to limit the relative movement of the body means in the direction of the longitudinal axis thereof with respect to the associated tool.

3,002,415

AUTOMATIC LEAD BULLET FEEDER

Michael G. Hoyer, 65 Robertson Ave., White Plains, N.Y.
Filed July 27, 1959, Ser. No. 829,918
2 Claims. (Cl. 86-45)



1. A lead bullet feeder mechanism comprising a base, a main guide block supported on said base, a die block supported on said base beneath said guide block and having a vertically-extending die opening, and lead bullet supply means extending upwardly from said main guide block, said main guide block having a vertical bore in alignment with said opening in said die block, said guide block further having a longitudinal bore extending normal to said vertical bore therein, feed means for directing a lead bullet from said lead bullet supply means through said longitudinal bore into said vertical bore and into alignment with said die opening in the die block, said feed means including a plunger operable in said longitudinal bore to so transfer the lead bullet, ram means for forcing said bullet from said vertically-extending bore in the main guide block through the die opening in the die block, means mounted on said base for operating said ram means, said feed means further including a vertically-extending plate secured to said ram means to be operated thereby, said plate having a cam slot therein and said feed plunger having laterally-extending drive means extending into said cam slot to effect thereby the operation of said feed plunger, a pair of vertical guide posts extending upwardly from said base, said main guide block laterally abutting said vertical guide posts and a clamp yoke securing said guide block to said post, a twin sleeve slidable upon said vertical posts, said vertically-extending cam plate

having a bracket connection with said twin sleeve whereby said cam plate is held against lateral displacement from said laterally-extending drive means on the feed plunger.

3,002,416 COUPLER-DISCONNECTOR TOOL FOR CARTRIDGE BELT LINKS

Roger H. Casler, Washington, and Sargent N. Tower, North Woodbury, Conn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed June 21, 1960, Ser. No. 37,818
3 Claims. (Cl. 86-48)



1. A hand tool for coupling and separating sections of a cartridge belt composed of a plurality of links each including a front loop and a rear loop coaxially joined to a bridge, a center loop extending oppositely from the bridge from between the front and rear loops for insertion between the front and rear loops of another link to axially receive a cartridge for releasably joining the interengaged links, and a detent extending from the rear loop for engagement with an extractor groove in the cartridge engaged thereby, the hand tool including: a first arm and a second arm hingedly connected at similar ends for pivotal displacement outwardly apart to an open position and inwardly together to a closed position; means on said first and second arms for stopping outward displacement thereof at the open position; a spring interposed between said first and second arms for biasing said arms to the open position; a cradle extending integrally from the free end of said first arm so that the longitudinal axis of said cradle is disposed in the extended plane of movement of said first and second arms; said cradle being adapted to engage with the cartridge belt in a first position for pressing a cartridge into an interengaged pair of the links to couple sections of the belt together and in a second position for slidably displacing a cartridge in the belt for separation thereof; said cradle being provided with an arcuate channel longitudinally disposed along the underside thereof for receiving a linked cartridge when said cradle engages the belt in the first position, a pair of transversal recesses disposed for receiving the bridges on opposite sides of the linked cartridge received by said channel, and an inner end disposed for contact with the front loop of a pair of interengaged links when said cradle engages the belt in the second position; a pusher extending integrally from the free end of said second arm for approximate coaxial alignment with said channel when said first and second arms are in the closed position; engaging means disposed on said first and second arms for stopping the inner displacement thereof at the closed position; and a terminating end on said pusher disposed for contact with the base of a cartridge in the belt when said cradle engages the belt in the first and second positions, said terminating end being correlated to said recesses and to said engaging means so that when said cradle has engagement with the belt in the first position and said first and second arms are pivoted to the closed position the cartridge contacted by said terminating end is pressed thereby into

the engaging pair of links to engage the related detent thereon with the extractor groove of the cartridge, and said terminating end being correlated to said inner end of said cradle so that when said cradle is in engagement with the belt in the second position and said first and second arms are pivoted to the closed position a selected cartridge in the belt is pressed from the rear and center loops of the engaging pair of links.

3,002,417

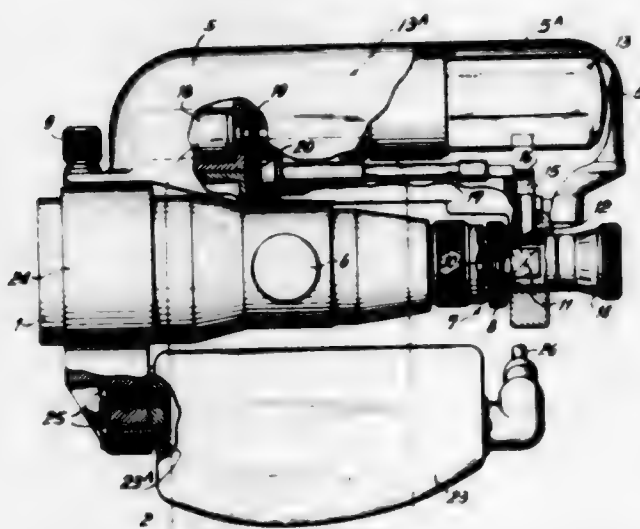
AUTOMATIC TARGET FINDER AND TRACKER FOR THEODOLITES AND THE LIKE

Carlo Harth, Berlin-Steglitz, Germany, assignor to Askania-Werke A.G., Berlin-Friedenau, Germany, a corporation of Germany

Filed Oct. 2, 1958, Ser. No. 764,934

Claims priority, application Germany Oct. 26, 1957

4 Claims. (Cl. 88-1)



1. In a target seeking instrument, a support structure and a telescope and phototube unit movably suspended thereon, said unit comprising a telescope including objective means for forming an image of a remote object, housing means lateral of and adjacent to the axis of said objective means, ocular means in axial alignment with said objective means, means between said ocular means and objective means for transferring an image formed by the objective means perpendicular to the axis of the telescope and into the housing means interposed between said ocular means and the objective means, photoelectric means in said housing for deriving electrical signals from the transferred image, and signal responsive tracking means in electrical connection with the photoelectric means.

3,002,418

DEVICE FOR USE IN THE NAVIGATION OF AIRCRAFT BY EMPLOYING TRANSPARENCIES OF TERRAIN FEATURES

Ray C. Mitchell, 212 S. Reynolds St., Alexandria, Va.

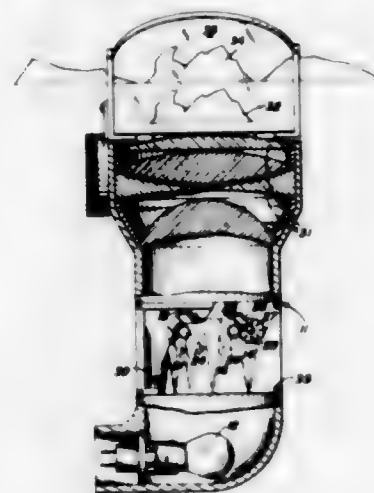
Filed Dec. 10, 1958, Ser. No. 779,506

3 Claims. (Cl. 88-1)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A device for use in the navigation of an aircraft comprising in combination, a frame mounted within the aircraft, a light source mounted within said frame, a collimating lens system mounted within the frame and disposed above said light source for forming optical images, a support secured to the frame and disposed between said light source and the lens system, a photographic film carried on said support for advancement selectively in either of two directions, said film being provided with a series of positive images having different perspective profile terrain characteristics corresponding to actual terrain characteristics encountered along the proposed flight path, spindle means rotatably mounted on said support and

supporting said film for lateral movement between said light source and the lens system, a first gear means rotatably mounted on said support for rotation in either of said two directions, lever means pivotally mounted on said support, actuating means pivotally mounted on said lever means engageable with said first gear means for selectively rotating the first gear means step by step in either of said two directions, a second gear means carried by said spindle means and controlled by said first gear means for rotating the spindle means step by step to advance



the film in accordance with the direction of rotation of the first gear means to expose said positive images at predetermined spaced intervals so that the light passes therethrough and through the lens system, and a transparent mirror carried by the frame and disposed above the lens system, film and the light source for superimposing the optical images of the positive images upon the mirror and normal to the forward line of vision of the pilot through the mirror so that the actual terrain characteristics visible therethrough and the optical images superimposed thereon coincide and are disposed in juxtaposition with respect to each other.

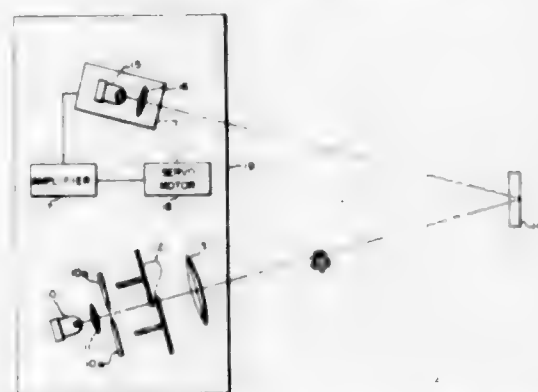
3,002,419

ALIGNMENT THEODOLITE

Joseph Richard Vyce, Ridgefield, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Nov. 13, 1957, Ser. No. 696,257

11 Claims. (Cl. 88-14)



1. An optical system for monitoring the position of a body, comprising a source of radiant energy, a reflective element affixed to said body, said element being adapted to reflect radiant energy at angles varying commensurately with its rotation about a first axis and being independent of its rotation about a second axis, means for directing said radiant energy from the source to said reflecting element, said means including a device for limiting the radiation divergence perpendicular to said first axis, means for coding said radiant energy adjacent said directing means to establish two distinguishable contiguous portions thereof having a boundary parallel to said first axis, radiation-

sensitive means positioned to receive said reflected energy, the response of said means being correlated to said coding, whereby the output signal of said means is a measure of the angular deviation of said body from a desired position.

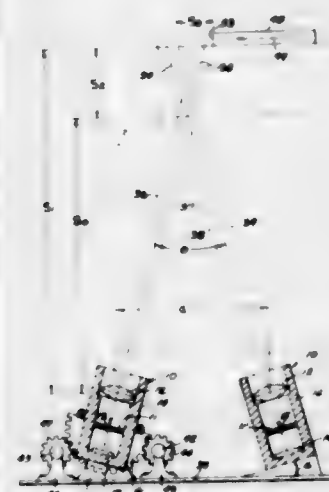
3,002,420

PARALLAX INTERVAL SENSING DEVICE

Samuel P. Willits, Mount Prospect, and William L. Mohan, Prospect Heights, Ill., assignors, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware

Filed Apr. 23, 1958, Ser. No. 730,480

19 Claims. (Cl. 88-14)



1. A system for making parallax interval measurements of cyclically moving objects comprising electro-optical sensing devices for receiving a plurality of radiant energy beams positioned in the path of said moving objects so as to be interrupted thereby in a sequential manner, said electro-optical sensing devices being responsive to the beam interruptions for producing electrical signals corresponding to said interruptions, a reference signal generator associated with the cyclically moving objects for producing reference signals having a frequency representative of the velocity of the cyclically moving objects, an electronic conversion circuit including computing means connected to said sensing devices and to said reference signal generator for computing information data in accordance with the relationship between said electrical signals and said reference signals, servo means connected to at least one of said sensing devices and responsive to said information data for varying the angular relationship of said sensing devices, and indicating means connected to said electronic conversion circuit and responsive to said information data for providing indications of said parallax interval measurements.

3,002,421

VISUAL AND PHOTOELECTRIC DEVICE FOR LOCATING THE POSITION OF A MOVABLE MEMBER

Miron Koulikovitch, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a corporation of Switzerland

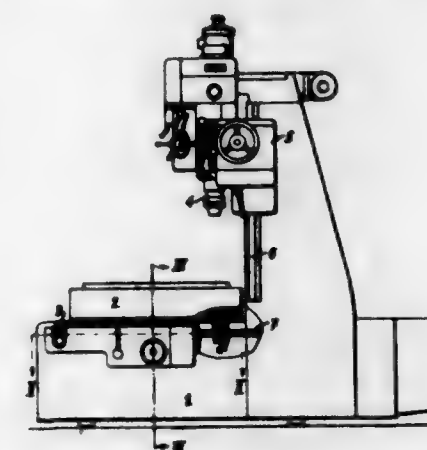
Filed Apr. 10, 1959, Ser. No. 805,625

Claims priority, application Switzerland Apr. 24, 1958

3 Claims. (Cl. 88-14)

1. In a machine tool or measuring machine having a frame and a movable member displaceable with respect to said frame, a visual and photoelectric device for locating the position of said movable member comprising a precision-graduated scale mounted on said movable member and a projection device for projecting the image of a line of said graduated scale, an observation screen onto which a part of said image of said line is projected, a

carriage, an adjustable mark displaceable in front of said observation screen, an opaque screen onto which the other part of said image is projected, said carriage carrying said mark and said opaque screen, a slit disposed in said opaque screen, a photoelectric cell located behind said slit, mirrors for reflecting the image of said line onto said observation screen and said slit in said opaque screen, one of said mirrors formed of two separate portions, one of said portions mechanically connected to the frame of said



machine and projecting onto the observation screen said part of the image of said line of said scale and the second portion of said mirror being movable and driven in a regular oscillatory movement and projecting onto said opaque screen the other part of said image of said line of said scale, whereby a sweeping movement is imparted to said other part of said image so that when said image part projected onto said observation screen registers with said mark, the sweeping movement of the other part of said image is centered onto said slit disposed in said opaque screen.

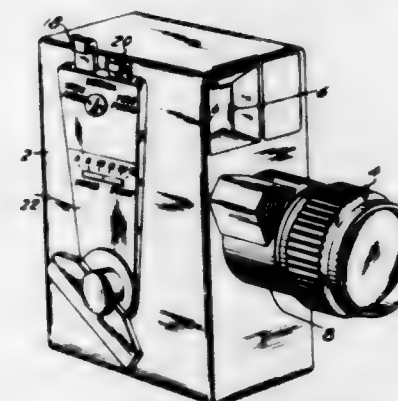
3,002,422

ACTUATING MECHANISM FOR CAMERA EQUIPPED WITH ZOOM LENS

Walter G. Lohmeyer, Northport, N.Y., assignor to DeJur-Amsco Corporation, Long Island City, N.Y., a corporation of New York

Filed Aug. 22, 1960, Ser. No. 50,949

21 Claims. (Cl. 88-16)



1. A camera comprising a casing having a top wall, a zoom lens mounted thereon, lens actuating means operatively connected to said zoom lens for actuating the latter to vary the effective focal length thereof, a pair of finger pieces mounted on said casing, located immediately adjacent one another so as to be manipulatable by the fingers of one hand, and exposed at the exterior of said top wall of said casing for manual manipulation, and means operatively connecting said finger pieces to one another and to said lens actuating means for simultaneous movement of said finger pieces in opposite substantially vertical directions and simultaneous progressive operation of said lens actuating means in accordance with said movement of said finger pieces as that movement pro-

gresses, and at a speed positively related to the speed of movement of said finger pieces.

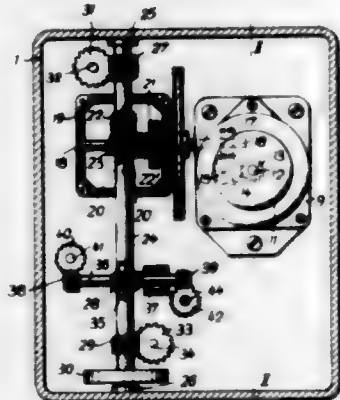
3,002,423

CINEMATOGRAPHIC PROJECTOR

Albert Straub, Stuttgart-Bad Cannstatt, Germany, assignor to Eugen Bauer G.m.b.H., Stuttgart-Unterturkheim, Germany

Filed Apr. 22, 1957, Ser. No. 654,279

Claims priority, application Germany Apr. 26, 1956
8 Claims. (Cl. 88-17)



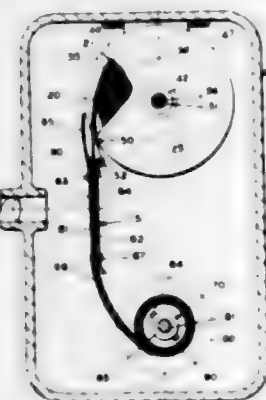
1. In a film projector, in combination, a shutter drive shaft; a single claw drive shaft; claw means; means driven exclusively by said single claw drive shaft and co-operating with said claw means for moving the latter first into engagement with the film, then in a film advancing direction, and then out of engagement with the film; adjustable transmission means interconnecting said shutter drive shaft and said claw drive shaft with each other for simultaneous continuous rotation and for maintaining the speeds of rotation of said shutter drive shaft and claw drive shaft at a predetermined ratio with respect to each other which may be adjusted; said transmission means including a plurality of shiftable change gears which may be selectively placed in engagement with each other for adjusting the transmission ratio; and driving motor means of substantially constant speed operatively connected to one of said shafts for driving said one so as to rotate said shutter drive shaft and said claw drive shaft at speeds having a ratio with respect to each other determined by the setting of said adjustable transmission means.

3,002,424

FILM FEEDING DEVICE

Carl David Miller, Columbus, Ohio
(4546 Rhode Island St., San Diego 16, Calif.)

Filed Nov. 13, 1957, Ser. No. 696,275
11 Claims. (Cl. 88-17)



1. For use in a camera an apparatus for moving an unexposed film past an aperture positioned at the op-

tical axis of the camera at constant velocity comprising a coil of film initially in coiled configuration; means for applying torque to said coil to accelerate said coil to a desired constant angular velocity; means comprising a pivoted finger at times positioned entirely out of the path of the coil, but movable to a position in which the outer end intercepts the outer end of said coil for deflecting a portion of said film from said coiled configuration during rotation of said film when said coil is rotating at said desired constant velocity to provide an uncoiled portion; means for guiding said uncoiled portion of said film past said aperture; means comprising a spool for receiving said uncoiled portion of said film to form a reel upon which said uncoiled portion is subsequently coiled; means for applying torque to said spool to accelerate said spool to at least the speed of said uncoiled portion of said film, to maintain said uncoiled portion of the film taut, and to compensate for friction to maintain uniform speed of said film; and means for disconnecting the first named means for applying torque from said first named coil when the first portion of the first named coil has been deflected from said coil to form an uncoiled portion and the first named coil is free running and when the first portion of said uncoiled portion of said film has been received on said spool.

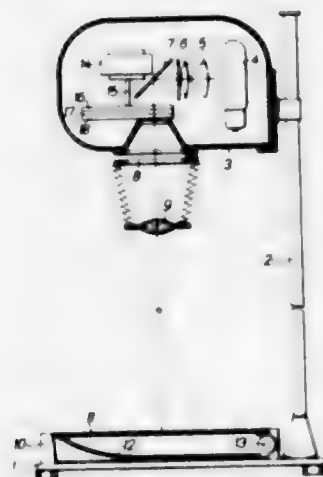
3,002,425

CHROMATIC PHOTOGRAPHIC REPRODUCTION APPARATUS

Friedrich Biedermann, Unterhaching, near Munich, and Richard Wick, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany

Filed Mar. 21, 1957, Ser. No. 647,512

Claims priority, application Germany Mar. 24, 1956
10 Claims. (Cl. 88-24)



10. Apparatus for making color copies of photographic color transparencies upon light-sensitive printing material comprising, in combination, illuminating means, a support for said photographic color transparency in the path of light from said illuminating means, a support for said light-sensitive printing material in the path of the light passing through said photographic color transparency, a chromatic light filter interposed between said illuminating means and said transparency and including three filter elements each of which corresponds to a primary additive color component of said illuminating means, changing means to selectively interpose each of said filter elements sequentially between said illuminating means and the transparency, photo-electric means arranged in the path of light from said illuminating means after the light has passed through said transparency, said photo-electric means being during the entire time of each of said consecutive exposures of said printing material exposed to and influenced by light of one of said three primary colors, exposure time regulating means associated

with said photo-electric means for automatically regulating the duration of each of said consecutive exposures corresponding to the amount of illumination of said photo-electric means during each exposure and for terminating each of said exposures after a pre-determined amount of light has impinged on said photo-electric means, three adjustable color-correction means adapted to be alternatively placed in circuit with said photo-electric means for varying the pre-determined amount of light which has to impinge upon said photo-electric means to terminate each exposure, and switching means for automatically actuating said changing means at the end of each exposure so as to change the color of the illuminating light from one to another of said primary colors by changing said filter elements, to automatically place with the change of said filter elements the corresponding color-correction means in circuit with said photo-electric means and to restart illumination of the printing material thereafter.

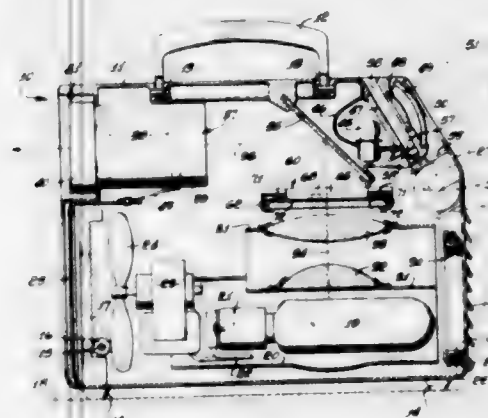
3,002,426

SLIDE PROJECTOR AND VIEWER

John R. McCabe, 1825 Oak St., South Pasadena, Calif.

Filed Feb. 16, 1959, Ser. No. 793,387

3 Claims. (Cl. 88-26)



1. An improved film slide projector, comprising an upright housing having lengthwise spaced front and rear walls, opposite side walls and opposite top and bottom walls, the housing having a generally rectangular cross-section in a plane extending lengthwise and widthwise of the housing and intersecting at least four of said walls including said front and rear walls, the housing interior including two widthwise spaced forward corner portions, the housing thickness between the remaining two walls being less than the housing width dimension, a primary light source in one rearward corner portion of the housing interior, a light reflector in the other rearward corner portion of the housing interior and arranged to receive incidence of light from said source and to reflect the light in a beam directed forwardly in the housing, a film slide pusher receivable in the rearward interior of the housing between said light source and reflector for pushing film slides into and out of the path of light passing from the source to the reflector, a forwardly and rearwardly movable projection lens in one forward corner portion of the housing interior forwardly of said reflector for projecting said beam forwardly, said housing forward wall containing an opening through which said beam may be projected, and a fan in the other forward corner portion of the housing interior and operable to displace air through the interior of the housing and over the light source in a cooling stream, said housing walls containing air inlet and outlet ports between which the air stream flows in a path having forward and rearward extent, said four walls including the top and bottom walls of the housing, said reflector being above said light source and said film

slide pusher being movable in a horizontal plane below said reflector and above said light source, one of the housing walls containing a first opening through which said pusher is reciprocable horizontally, interchangeable upper and lower receptacles for stacking film slides directly above and below the pusher and exterior of and adjacent to said one side wall, the upper receptacle for supplying film slides downwardly one at a time to the pusher for insertion into the housing and the lower receptacle for receiving film slides from the pusher upon withdrawal thereof from the housing, said receptacles having upwardly facing shoulders for supporting film slides during horizontal pusher movement acting to push the lowermost slide from the upper receptacle and into the housing through said first opening, and means independently and removably attaching each of said receptacles to the housing.

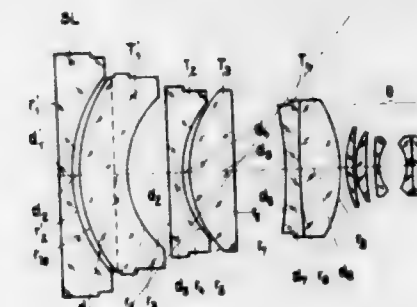
3,002,427

ANAMORPHOTIC ATTACHMENT

Paul Schäfer, Helmstedt, and Kurt Kirchhoff, Hamburg-Lurup, Germany, assignors to Ico Optische Werke G.m.b.H., Göttingen-Weende, Germany, a limited-liability company of Germany

Filed May 2, 1958, Ser. No. 732,590

Claims priority, application Germany June 13, 1957
3 Claims. (Cl. 88-57)



1. An anamorphic optical system comprising four air-spaced, cylindrically effective lens members having parallel axes of curvature, said lens members including a dispersive plano-concave first member on the object side of the system, a dispersive plano-concave second member following said first member, a collective plano-convex third member following said second member and a collective fourth member following said third member on the image side of the system; said first and second members constituting a first component of said system and said third and fourth members constituting a second component of said system; said first and second members having like median thicknesses, plane surfaces directed toward the object side of said system, and concave faces of like curvature directed toward the image side of said system; said third member having a convex face directed toward the object side of said system and a plane surface directed toward the image side of said system, the concave face of said second member and said convex face enclosing an air space in the shape of a positive meniscus, the median thickness of said air space being at most equal to substantially 10% of the focal length of said second component; and said fourth member comprising a first lens element and a second lens element cemented to said first lens element, the indices of refraction of said first and second lens elements differing by at least 0.05, said third and fourth members being separated by an air space ranging between substantially 8% and 25% of the focal length of said fourth member, said fourth member having a distinctly convex face turned toward the image side of the system and a non-convex face of larger radius of curvature averted from said image side.

3,002,428
MISSILE LAUNCHING SYSTEM
 Charles A. Johnstone, 3713 N. Linwood,
 Indianapolis, Ind.

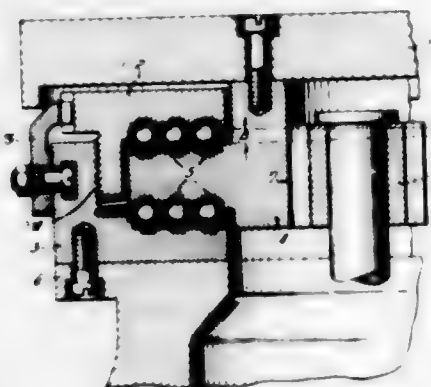
Original application Sept. 29, 1950, Ser. No. 187,652, now
 Patent No. 2,984,157, dated May 16, 1961. Divided
 and this application June 30, 1954, Ser. No. 440,570
 8 Claims. (Cl. 89—1.7)
 (Granted under Title 35, U.S. Code (1952), sec. 266)



1. A missile launching system carried by a vehicle and comprising a continuously moving, constant-speed feeding means of the endless conveyor type disposed in a substantially normal relation to assembled missiles presented to the feeding means at a loading position, means including a rotatable hoist having a pair of clamping devices releasably attached to the assembled missiles for moving and presenting the missiles to the feeding means in said loading position, means for releasably securing the missiles to said feeding means, a housing partially enclosing the system and defining a blast port and a launching port respectively underlying and overlying said feeding means in substantially vertical registration with one another and located laterally outboard of the vehicle at the launching position, whereby missiles are launched through the launching port successively upon arrival at the launching position.

3,002,429
BEARING ARRANGEMENT FOR SUPPORTING A ROTATABLE ELEMENT OF A MACHINE TOOL OR THE LIKE

Erich Franke, Aalen, Wilhelm Grolman, Dortmund-Kirchorde, Bernhard Braun, Dortmund, and Volker Weyrauch, Lippstadt, Germany, assignors to Eisenwerk Rothe Erde G.m.b.H., Dortmund, Germany
 Filed July 29, 1957, Ser. No. 674,907
 Claims priority, application Germany Aug. 11, 1956
 8 Claims. (Cl. 90—58)



1. In a machine tool, in combination, a rotary table having a central axis of rotation and an outer peripheral portion; a supporting frame located beneath and spaced

from said table and having an upper annular portion directed toward said peripheral portion of said table; and a single annular bearing means located between and connected to said table at said outer peripheral portion thereof and said frame at said upper annular portion thereof, said bearing means forming the only structure which supports the table for rotation about its axis and being located in its entirety in the region of said outer peripheral portion of said table coaxially therewith, said bearing means surrounding a free space beneath said table extending from a central portion of said table to said bearing means and available for purposes other than supporting the table for rotation.

3,002,430
APPARATUS FOR CONTINUOUS FLATTENING OF AN EXTRUDED TUBE
 Wilfried Voigt, Wiesbaden-Blebrich, and Hermann Holch, Lorrach, Baden, Germany, assignors to Lonza Electric and Chemical Works Ltd., Gampel, Wallis, Switzerland

Filed June 19, 1958, Ser. No. 743,137
 Claims priority, application Switzerland June 19, 1957
 4 Claims. (Cl. 93—1)

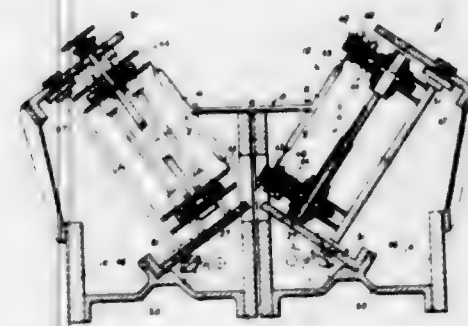


1. A device for continuous flattening of tubular foil, comprising, in combination, a pair of cooperating flattening rolls; and a pair of driven belt means for conveying said foil toward said rolls, said belt means having respective runs with confronting surfaces for engaging the tubular foil and being symmetrically arranged relative to the tangential plane of contact of said rolls so as to enclose an acute angle, and passing between said rolls so that superimposed layers are formed of the tubular foil between said confronting surfaces of said runs in the region of said rolls while all portions of said tubular foil including the superimposed layers are moved by said runs at the same speed whereby the formation of creases in said superimposed layers is prevented.

3,002,431
MACHINE FOR FORMING FOLDED TOP AND BOTTOM ENDS OF A BAG
 Martin Rawe, Tecklenburg, Westphalia, Germany
 Filed Dec. 12, 1957, Ser. No. 702,482
 Claims priority, application Germany Dec. 13, 1956
 6 Claims. (Cl. 93—28)

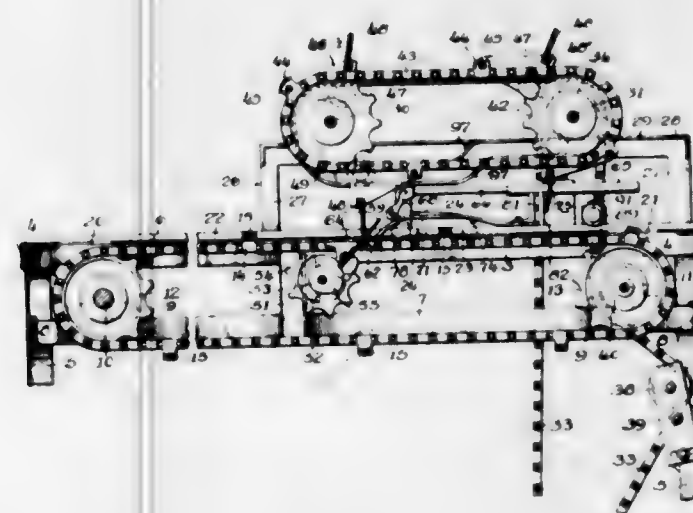
1. In a machine for forming folded top and bottom ends of a bag, in combination, support means; transporting means carried by said support means for transporting a flat tubular bag-forming blank along a predetermined path in a predetermined plane in which said blank is located, said blank having a pair of opposite end por-

tions; means for deflecting said end portions of said blank while it is transported in said predetermined plane by said transporting means through substantially less than 90° into a pair of oppositely inclined planes which make angles of substantially less than 90° with said predetermined plane, respectively; and a pair of means, each inclined with respect to said predetermined plane, for folding the deflected end portions of the blank into partially



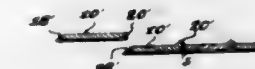
complete bag ends while said end portions are in said pair of oppositely inclined planes, the angle of said inclined planes being less than 90° with respect to said predetermined plane by an amount which renders it possible for said pair of folding means to be adjacent to each other in a plane transverse to said predetermined path and to act simultaneously on the partially complete bag ends even in the case where the length of the bag is so short that the completed bag ends touch each other.

3,002,432
PACKAGING MACHINE
 Herbert L. Wendshuh, Appleton, Wis., assignor to The Appleton Machine Company, a corporation of Wisconsin
 Filed June 26, 1957, Ser. No. 668,117
 22 Claims. (Cl. 93—49)



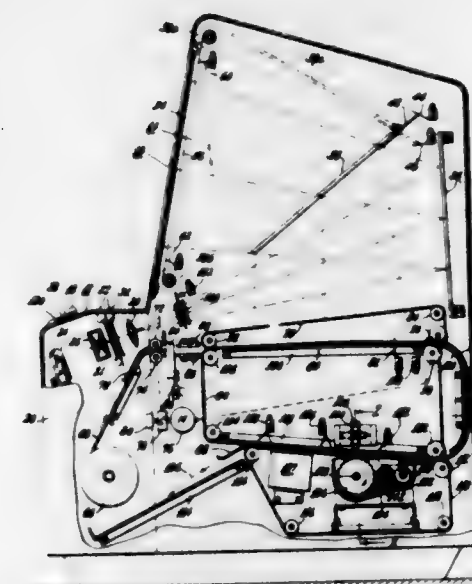
5. A method of automatically folding a flat card cut and scored to provide a front flap and two side flaps, said front flap having a diagonal slit adjacent each end and said side flaps each having an angularly extending tongue at the end adjacent said front flap, said method comprising the steps of automatically folding said front flap upwardly into vertical position, automatically bending the opposite corners of said front flap rearwardly along the lines of said slits, automatically folding said side flaps upwardly and inwardly to align said tongues with said slits, and automatically folding all three flaps downwardly and inwardly simultaneously to interlock said tongues and slits in a substantially flat plane.

3,002,433
SPIRALLY WOUND PAPER TUBE HAVING SEAMLESS OUTER SURFACE
 Charles K. Dunlap, Hartsville, S.C., assignor to Sonoco Products Company, a corporation of South Carolina
 Filed Jan. 10, 1958, Ser. No. 708,273
 1 Claim. (Cl. 93—94)



A method of producing a spirally wound tube having a substantially indiscernible outer surface seam comprising the steps of, beveling at least one edge of the outer surface of a paper strip to be wound and to constitute the outer surface of the tube to form an outwardly facing bevel, spirally winding said paper strip in overlapping relationship to form a spirally wound tube, winding said outer strip with its beveled edge overlapped by the edge of the adjacent convolution to thereby deflect said adjacent convolution edge radially outward producing a surface irregularity throughout the extent of the spiral seam, grinding the entire exterior surface of said tube only sufficient to remove the surface irregularity resulting from said deflection and to produce a uniform exterior surface on said tube having a substantially indiscernible outer surface spiral seam.

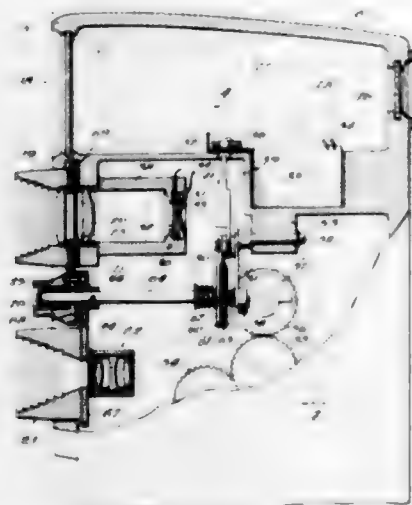
3,002,434
FILM VIEWER AND REPRODUCER
 Henry G. Reuter, Jr., Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
 Original application June 19, 1958, Ser. No. 743,145.
 Divided and this application July 28, 1960, Ser. No. 45,925
 9 Claims. (Cl. 95—1.7)



1. Apparatus for reproducing an image on a photo-sensitive sheet comprising means for advancing said sheet along a predetermined path, means for projecting a radiant image onto said sheet at a first station along said path, means adjacent said first station actuated by movement of said sheet to stop said sheet at said first station for a time to expose said sheet and produce thereon a latent image, and developing means adjacent a second station along said path, said developing means including means actuated by movement of said sheet to cause said developer means to produce a visible image from said latent image.

3,002,435 CAMERA HAVING AUTOMATICALLY CONTROLLED LENS STOP

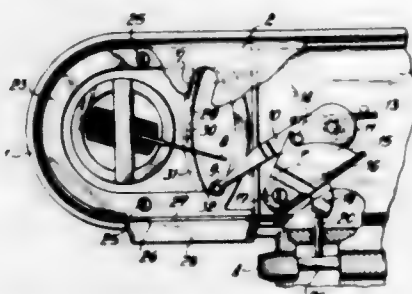
Theodore S. Briskin, Chicago, Robert L. Moore, La Grange Highlands, and Theodore Wickstrom, Skokie, Ill., assignors to Revere Camera Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 23, 1956, Ser. No. 605,874
10 Claims. (Cl. 95-10)



1. In a motion picture camera including a motor for operating the same, the combination of a camera lens system and adjustable lens stop means therefor, an electric circuit including a photoelectric component and a meter in series circuit therewith, and having a displaceable needle responsive to the electrical energy input to said meter, power driven means for mechanically sensing the direction of displacement of said needle, control means driven by said sensing means for regulating said electrical energy input, means connecting said adjustable lens stop means and said control means whereby the aperture of said camera lens system is automatically controlled in accordance with said electrical energy input, and drive means in said camera for driving said sensing means, said drive means comprising said motor.

3,002,436 PHOTOGRAPHIC CAMERA

Oskar Bihlmaier, Braunschweig-Gliesmarode, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Dec. 14, 1959, Ser. No. 859,459
Claims priority, application Germany Dec. 13, 1958
7 Claims. (Cl. 95-10)

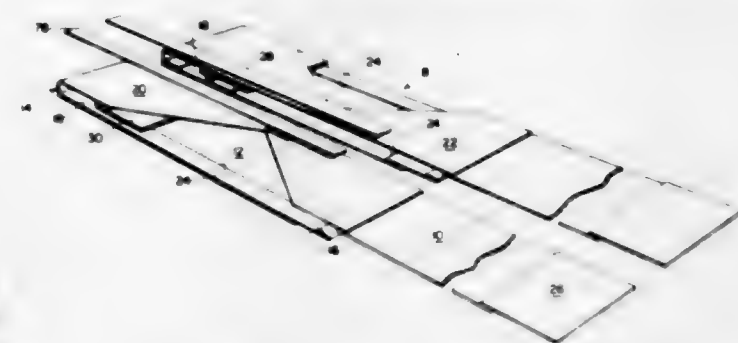


1. In a photographic camera including a built-in exposure meter having a movable pointer, an objective lens system, exposure condition adjusting means operatively associated with said lens system, a follow-up indicator movable into coincidence with said pointer, and means coupling said indicator and said adjustment means in such a manner that the adjusted exposure conditions correspond to the position of said indicator; improved means for setting the exposure conditions to compensate for the use of a filter with said lens system, comprising a scale along which said indicator is movable; said scale being

graduated in accordance with filter values, with a selected number of graduations thereof corresponding to a selected filter value; whereby, when said indicator has been moved into coincidence with said pointer, a further movement of said indicator over a number of graduations of said scale corresponding to the value of a filter used with the lens system will result in setting of the exposure conditions to compensate for the presence of such filter.

3,002,437 PHOTOGRAPHIC PRODUCTS

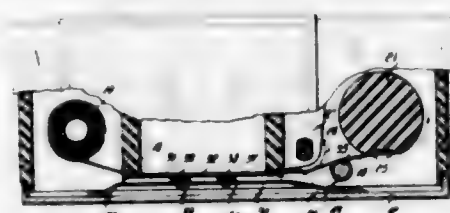
Valto K. Eloranta, Needham, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Original application July 16, 1958, Ser. No. 749,024. Divided and this application Aug. 25, 1960, Ser. No. 51,942
47 Claims. (Cl. 95-13)



1. A photographic product comprising a photosensitive sheet including a frame adapted to be exposed within photographic apparatus, a second sheet having an area approximately coextensive with said frame and adapted to be superposed therewith for aiding in the distribution of a fluid processing composition between said frame and area, a connecting element at least equal in length to said second sheet, said connecting element being joined at its ends to the leading ends of said photosensitive and second sheets, and a leader attached to said connecting element intermediate said leading ends of said sheets, said connecting element being folded adjacent said leading end of said second sheet into superposed relation with said second sheet, said photosensitive and second sheets being disposed with the leading end of each of said sheets located adjacent the trailing end of the other and with said connecting element located between said photosensitive and second sheets, said leader being attached to said connecting element between the latter and said photosensitive sheet and extending therebetween, from its point of attachment to said connecting element, toward said leading end of said photosensitive sheet and being folded upon itself so as to extend from between said photosensitive sheet and said connecting element and said second sheet at the leading end of said second sheet.

3,002,438 CAMERA

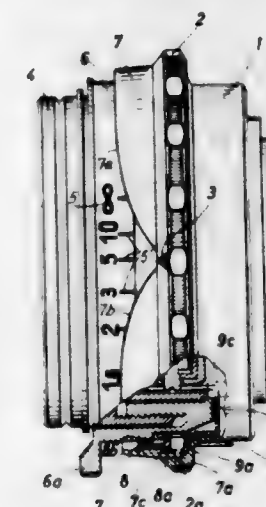
William H. Trow, Ann Arbor, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 797,948
10 Claims. (Cl. 95-31)



2. In a camera having a body provided with an exposure aperture having a rearwardly facing film guide

3,002,440 DEPTH OF FIELD INDICATOR FOR CAMERAS

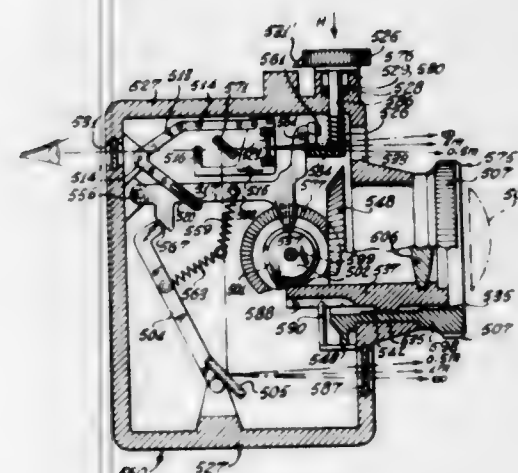
Carl Baur, Baldham, near Munich, and Erich Burger and Fridolin Hennig, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed Oct. 9, 1958, Ser. No. 766,280
Claims priority, application Germany Jan. 11, 1958
11 Claims. (Cl. 95-44)



2. In an objective assembly for a camera, in combination, a stationary tube adapted to be fixedly carried by the camera with its axis coinciding with the optical axis, said tube having front and rear annular edges and being formed with a cutout extending from said front toward said rear edge, being widest at said front edge and narrowest at its end distant from said front edge and defined by a pair of opposed indicating edges symmetrically arranged with respect to each other; a movable tube coaxial with said stationary tube and having a front annular edge part of which extends from one to the other of said indicating edges; an aperture adjusting ring coaxial with said tubes for adjusting the size of the aperture of the camera when said aperture adjusting ring is turned about the optical axis; means supporting said movable tube for axial movement, said means being formed by a tubular portion having a surface directed toward said movable tube and formed with at least one groove extending helically with respect to the optical axis and a projection integral with said movable tube and located in said groove; means connecting said movable tube to said adjusting ring to be axially moved when the latter is turned so that the axial position of said movable tube is indicative of the size of the aperture; and a focussing ring coaxial with said tubes and overlapping the same with a part of the indicia on the focussing ring extending from one to the other of said indicating edges, the distances indicated on the focussing ring at the intersections of said front edge of said movable ring with said indicating edges showing the depth of field.

3,002,439 CAMERA WITH COUPLED RANGE FINDER

Walter Hennig, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden
Filed Sept. 12, 1956, Ser. No. 609,407
3 Claims. (Cl. 95-44)



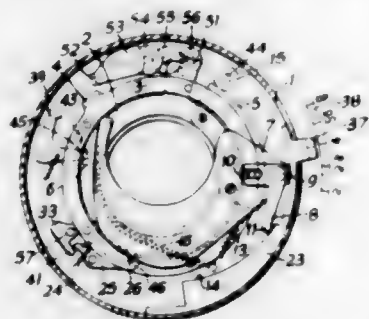
1. In a camera, the combination of a fixedly built-in objective having a predetermined focal length for taking pictures within a first distance range, said objective including an adjustable lens mount for focusing the camera and gear means rotated simultaneously with the adjustment of said lens mount, front lens means detachably mounted on said objective for changing the focal length thereof for taking pictures within a second distance range, a range finder including displaceable light deflecting means, first controlling means comprising a pair of coaxial, rotatable cams operatively connected with said gear means of the objective, each of said cams corresponding to one of said first and second distance ranges, second controlling means comprising a pair of interacting levers, one of said levers cooperating with one of said cams of the controlling means while the other of said levers is operatively connected with said light deflecting means of the range finder for displacing same in dependence on an actuation of said first controlling means by said gear means of the objective, said second controlling means being selectively settable for cooperation with either of said cams so as to adapt the position of said light deflecting means to either one of said two distance ranges, and setting means comprising a pin loosely journaled in a wall of the camera, a knob for manual actuation at one end of said pin, a lateral finger portion on the other end of said pin for operatively engaging said one lever of the second controlling means, whereby the latter may be selectively brought into contact with the cam corresponding to the first distance range of the objective alone or with the cam corresponding to the second distance range in which the front lens means is attached to said objective.

3,002,441 DIAPHRAGM FOR PHOTOGRAPHIC APPARATUS

Rolf Noack and Johannes Weise, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, a corporation of Germany
Filed Nov. 29, 1955, Ser. No. 549,823
7 Claims. (Cl. 95-64)

1. For a camera having a shutter housing and a shutter arrangement provided with a shutter cocking member which can be moved from a resting position into a cocked position against the action of a biasing means prior to running towards the position of rest by the action of the biasing means for the purpose of exposure, the provision of a diaphragm arrangement comprising in combination a plurality of diaphragm blades rotatably mounted within the housing, a diaphragm driving

ring also mounted within the housing in driving connection with said blades, a spring for biasing the driving ring for movement, a locking member pivotally mounted on the housing for locking said driving ring in a tensioned position against the action of said spring, means operatively associated with said cocking member to unlock said locking member, a diaphragm setting means, a cam provided on said setting means, a stop member connected with said driving ring so as to be moved by the latter into engagement with said cam for limiting the movement of said driving ring, whereby after actuation of said locking member the driving ring

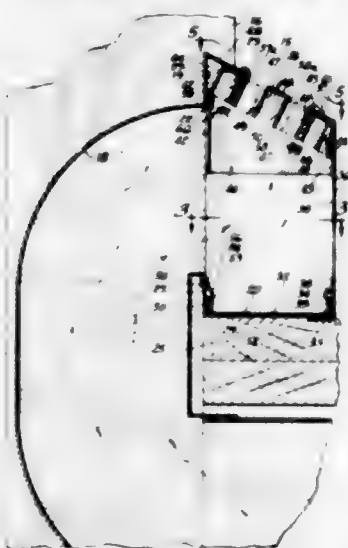


runs down and drives the diaphragm blades and said stop member, said stop member engaging the cam and limiting the movement of said driving ring in order to obtain a preselected aperture value, a first arm provided on said cocking member, a second arm provided on said driving ring lying in the running down path of said first arm, the first arm coming into engagement with the second arm during the end of the running down movement of the cocking member to turn the driving ring against the action of said spring into a position where said locking member falls behind said second arm and holds said driving ring against the action of said spring.

3,002,442

HEAT DISPERSING STRUCTURE

Ernest E. Brandes, 2046 Winnebago St., Madison, Wis.
Filed Feb. 23, 1960, Ser. No. 10,119
6 Claims. (Cl. 98—40)



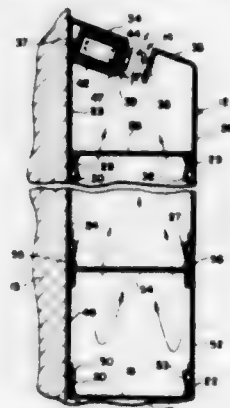
1. In a heat dispersing structure adapted to the dissemination of air and comprising a formed sheet metal back part of predetermined length and having a substantially flat wall engaging surface, a formed sheet metal front part having a front surface extending along the back part with said front surface in spaced, substantially parallel and opposed relationship to said flat wall engaging surface, a base part closing the space between the bottoms of the front and back parts, flange means integral with the tops of each of the front and back parts and extending toward one another to define a heat disseminating slot there-

between, strip means bridging said slot between the front and back parts at positions spaced longitudinally of the parts, means supported by said strip means and extending longitudinally of said slot to divide said slot into a plurality of narrower slots, movable means for determining the effective width of one of said narrower slots, strip elements spaced longitudinally of one of said parts and secured thereto at the bottom thereof for determining the spacing between the front and back parts, and said base part comprising a sheet metal strip covering the last mentioned strip elements and extending longitudinally of the structure and laterally between the front and back parts to effectively close the bottom of the structure between the front and back parts.

3,002,443

HEAT DISPERSING STRUCTURE

Ernest E. Brandes, 2046 Winnebago St., Madison, Wis.
Filed Jan. 12, 1959, Ser. No. 786,109
2 Claims. (Cl. 98—40)

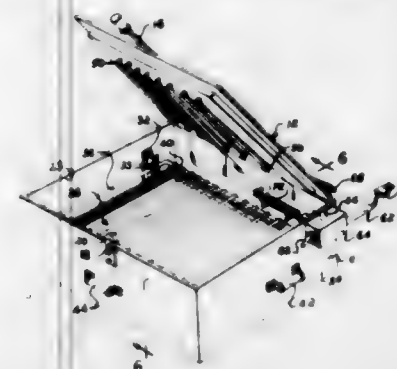


1. A heat dispersing structure suited to mounting along the base of a wall and adapted to the dissemination of air supplied thereto through ducts and comprising, in combination, a base part having substantially parallel flanges in predetermined spaced relationship to one another and extending longitudinally of opposite sides of the base part, sheet metal front and back parts each including upper and lower portions separated longitudinally of the mid-region of said parts at edges which fit together in abutting relationship, said lower portions of the parts being of substantially equal height and having means thereon for holding each of the lower portions in engaged relation with one of the flanges on the base part, separable retaining means for holding said edges of the upper and lower portions of the front and back parts in aligned and abutting relation to one another, said upper portions each having flange means thereon which extend generally toward one another when the upper and lower portions of the front and back parts are in position relative to one another and on the flanges of the base part, said flange means on the upper portions of the front and back parts being spaced from one another to define a slot for the dissemination of air from between the parts, spacer means connecting the front and back parts at positions above and below said edges and spaced longitudinally of the parts above the base part to hold the front and back parts in fixed relationship to one another, said separable retaining means including sheet metal strips secured to the inner surfaces of the lower portions of the front and back parts and projecting beyond said edges thereof in planes offset from the planes of the respective portions, and resilient clip means on said upper portions of each of said parts adjacent said edges thereof and spaced longitudinally of said edges for engaging the projecting portions of said strips on the lower portions to hold the upper and lower portions of each of said parts in abutting and substantially flush relationship to one another.

3,002,444

ELECTRICALLY HEATED, SMOKE PRODUCING BARBECUE GRILL

Cyril J. Hoebing, 1619 S. 8th St., Chickasha, Okla.
Filed Sept. 18, 1959, Ser. No. 840,960
1 Claim. (Cl. 99—260)

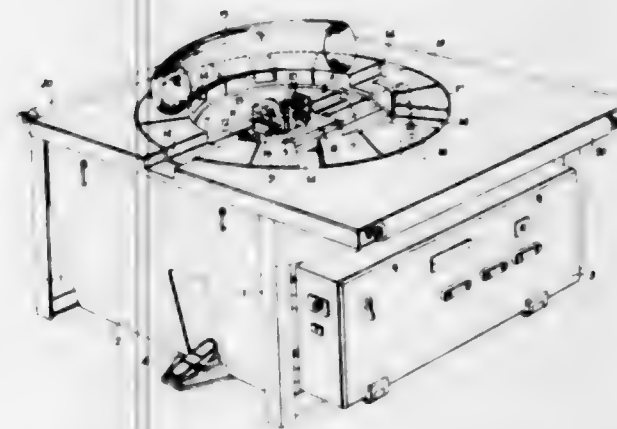


A barbecue grill comprising: a housing having a hinged lid, support members on the inner side of said housing, a transverse rack mounted on said support members within said housing a spaced distance above the bottom thereof, an electrical heating element mounted on the inner side of said hinged lid, a further electrical heating element for producing smoke mounted within said housing, an electric circuit connected to said heating elements, a support mounted on and secured to one of the walls of said housing a spaced distance below said lid, an elongated, V-shaped, removable, di-electric tray to receive granular wood substance mounted in said support with the apex of said V being lower-most, said further electric heating element being mounted in close proximity to the lower inner-most portion of said apex of said V, insulated, resilient means connected to each end of said further heating element to support said further heating element in spaced relation within said elongated, V-shaped, removable, di-electric tray for receiving granular wood substance, which resilient means maintains said further electric heating element in taut relation, and latch means for closing said cover on said housing in substantially smoke tight relation.

3,002,445

WIRE TYING MACHINES

Robert David Sansum, Hounslow, England, assignor to Gerrard Industries Limited, Brentford, England, and Rylands Brothers Limited, Warrington, England
Filed Dec. 9, 1959, Ser. No. 858,406
Claims priority, application Great Britain Oct. 23, 1959
3 Claims. (Cl. 100—4)



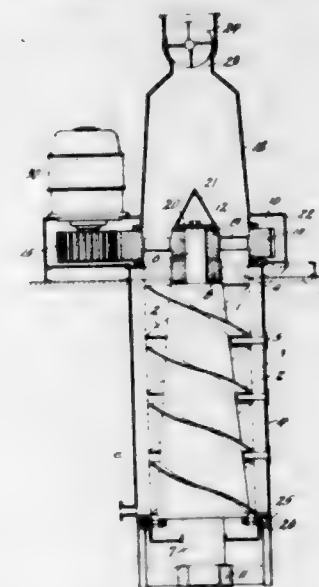
1. In a machine for tying wire about articles, a table for supporting an article, a workhead including a gripper to grip the wire, means carried in the workhead to feed out tying wire to be encircled about an article on the table to form a loop whereby the free end of wire may be gripped by said gripper, means to reverse said feed

out means for tightening the loop of wire about the article and for causing relative movement of the article toward said workhead, means for revolving the gripper to form a twisted tie, control means disposed forwardly of the gripper for stopping said reversing means and actuating said revolving means upon contact with the article when the reversing means is tightening the loop, the improvement comprising: a carriage supporting said workhead and mounted for sliding movement in the direction of wire movement, whereby when said feed out means are reversed, the carriage and thus the workhead moves toward the article.

3,002,446

SCREW PRESS

Erlend Viktor Jung, Landskrona, Sweden, assignor to Aktiebolaget Landsverk, Landskrona, Sweden
Filed May 26, 1959, Ser. No. 815,921
Claims priority, application Germany Jan. 7, 1959
6 Claims. (Cl. 100—145)

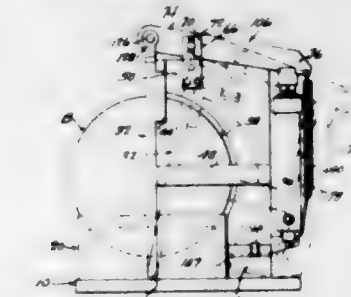


1. A vertical screw press comprising a spindle with outwardly extending screw blades, a surrounding stationary drainage jacket, a central hopper forming an upper extension of said jacket and extending above the top portion of said spindle, a bearing for an upper axle neck of the spindle provided at a level above said screw blades and supported by a plurality of outwardly extending arms connected to a ring-shaped frame around said spindle, and a driving gear ring secured to the spindle at a level below said hopper and above the lowest portion of the screw blades and forming within the gear ring a passage for the material passing downwardly from said hopper.

3,002,447

BOWLING BALL LETTERING MACHINE

James L. Haugh, 2521 Burnett Road, Topeka, Kans.
Filed Sept. 11, 1959, Ser. No. 839,482
9 Claims. (Cl. 101—4)



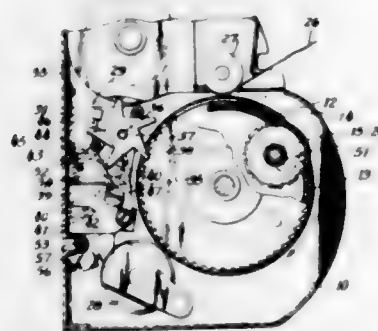
1. A ball stamping machine comprising a horizontal base plate, a circular ball seat fixed on the base plate, a

yoke pivotally mounted at its lower end on the base on an axis extending crosswise of said seat, said yoke having a bight portion spaced above the seat and legs disposed at opposite sides of said seat, to embrace a ball in the seat, a vertically movable die block slidably mounted on said bight portion, ball-stamping die means on the lower end of said block, a rock lever having a first end pivoted to said block, means rockably supporting said lever on the base plate at a point intermediate the ends of the lever, said lever having a second end, and vertically extensible and contractible jack means mounted at its lower end of the base plate and engaged at its upper end with the second end of the rock lever, said jack means being extensible to force the die block downwardly to apply the die means against a ball resting in said seat, said yoke normally occupying an erect position, and being tiltable out of erect position to free a ball for removal from the seat, and means for releasably locking the yoke in its erect position.

3,002,448

TICKET ISSUING MACHINES

Alfred Johnson Pearson, Swanley, England, assignor to British Transport Commission, London, England
Filed Jan. 11, 1960, Ser. No. 1,531
Claims priority, application Great Britain Jan. 19, 1959
5 Claims. (Cl. 101-66)



1. A ticket issuing machine comprising a rotatable printing drum, means for rotating said drum, a pressure roller in surface contact with the printing drum, means resiliently urging said pressure roller into contact with the drum, said drum having characters provided on its periphery and providing fixed information required on all tickets issued, a spool containing a paper ticket strip disposed adjacent the drum with the ticket strip passing between the nip of the drum and the pressure roller and being fed by the rotation of the drum so that the ticket strip moves with the drum during passage of the characters past the pressure roller, a plurality of discs mounted on the drum and being selectively rotatable and having characters on their peripheries, the characters radially projecting beyond the periphery of the drum and providing variable information, roller means disposed adjacent the drum, means containing a paper record strip disposed adjacent the drum with the record strip passing between the drum and the roller means and being urged by the roller means only against the characters on the discs so that these characters are reproduced on the record strip and the record strip passing between the characters on the discs and the roller means when the drum is rotated and being moved only when the discs are passing in contact with the roller means.

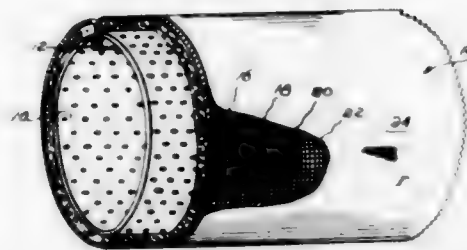
3,002,449

INKING PAD STRUCTURE FOR A MIMEOGRAPH DUPLICATING MACHINE

Herbert P. Sherman, 724 W. Washington St., Chicago, Ill.
Filed Dec. 24, 1958, Ser. No. 782,740
4 Claims. (Cl. 101-119)

3. An inking pad for a mimeograph apparatus having a perforated drum over which the pad is adapted to be

stretched, said pad comprising three or more superposed layers each of woven monofilament nylon fabric secured together in contiguous relationship, with the outermost

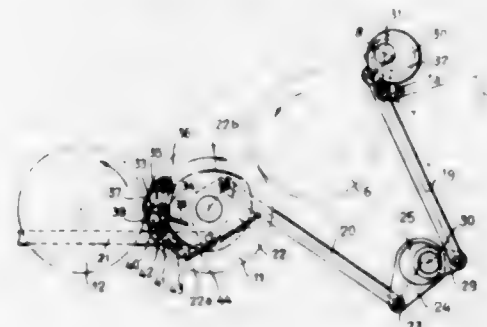


layers being characterized by a fine closely woven texture and the intermediate layer or layers being characterized by relatively open mesh texture.

3,002,450

ROTARY OFFSET MULTI-COLOR PRINTING MACHINES

Paolo Papa and Federico Capetti, Turin, Italy, assignors to Nebiolo Società per Azioni, Turin, Italy
Filed Mar. 2, 1960, Ser. No. 12,347
Claims priority, application Italy Oct. 3, 1959
4 Claims. (Cl. 101-137)



1. In a rotary offset multicolor printing machine comprising a number of successive printing units having impression cylinders rotating in the same direction and equipped with sheets gripping units comprising movable grippers and cooperating stops, a feed board arranged at the inlet end of the machine near the impression cylinder of the first of said printing units, an oscillating sheet gripping unit comprising grippers and cooperating stops lying between said feed board and said impression cylinder for taking up the sheets from said board and transferring them to the said cylinder, transfer cylinders between the impression cylinders of successive printing units and sheet gripping units comprising grippers and cooperating stops for said transfer cylinders, the said oscillating sheet gripping unit being mounted displaceable with respect to said feed board and said sheet gripping units of the transfer cylinders rotating in a direction opposite to the direction of rotation of the impression cylinders being mounted rockingly about axes parallel to the axes of said cylinders, means being further provided for displacing said oscillating sheet gripping unit and for simultaneously rocking the sheet gripping units for said transfer cylinders adjacent said impression cylinders thereby obtaining that the spacing of the stops provided in these sheet gripping units from the upper face of the feed board and respectively from the stops of the sheet gripping units provided on the other cylinders in the sheet transfer zones is suited to the thickness of the sheets being printed.

3,002,451

INK DISTRIBUTING MEANS FOR PRINTING PRESS

James G. Ghormley, Jr., and Clyde T. Kitchens, Fort Worth, Tex., assignors to Ghormley Engineering and Manufacturing Company, Fort Worth, Tex., a corporation of Texas
Filed Oct. 5, 1959, Ser. No. 844,249
4 Claims. (Cl. 101-350)

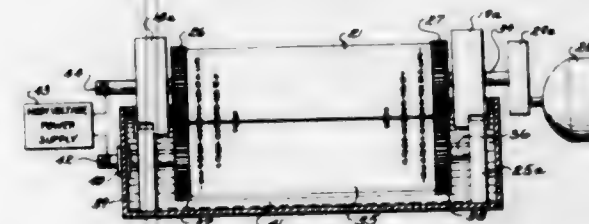


1. In a printing press including a mounting frame, a shaft rotatably and axially slidably mounted in said frame, a roller mounted to said shaft, a sprocket centrally receiving an end portion of said shaft, longitudinally slidable means rotatably coupling said sprocket to said shaft, a sprocket chain engaging said sprocket, a swivel mounted on an end of said shaft, an arm engaging said swivel, a second shaft rotatably mounted on said frame in a disposition substantially perpendicular to the first said shaft, means spaced from said swivel securing a portion of said arm on said second shaft, a second sprocket rotatably mounted on said frame and having its axis of rotation substantially perpendicular to said second shaft, a bar pivotally secured to said second shaft and extending therefrom to said second sprocket, a universal swivel joint eccentrically connecting said bar to said second sprocket, reducer means engaging said second sprocket and said sprocket chain, and means driving said sprocket chain.

3,002,452

METHOD OF MAKING TYPE DRUMS

Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed May 23, 1960, Ser. No. 31,116
8 Claims. (Cl. 101-401.2)



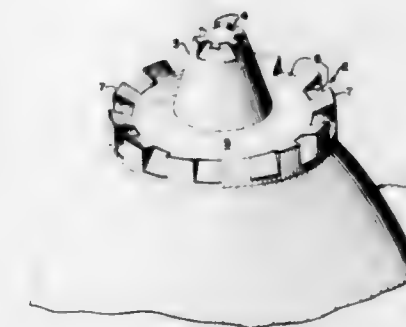
1. The method of forming type drums which comprises making a relatively hard metal master drum having raised characters thereon, rotating said master drum against a first relatively soft metal tool drum to form intaglio characters in said tool drum, rotating said tool drum and a type cylinder adjacent each other while effecting an electric discharge across said tool drum and said type cylinder in a direction to form raised type characters on said type cylinder, rotating said master drum against a second relatively soft metal tool drum to form intaglio characters in said second tool drum, hardening said second tool drum, and subsequently rotating said second tool drum against said type cylinder.

3,002,453

ANTI-RICOCHET DEVICE

Joseph V. Fedor, Takoma Park, and Harold E. Evans, Beltsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 30, 1958, Ser. No. 784,003
4 Claims. (Cl. 102-2)

(Granted under Title 35, U.S. Code (1952), sec. 266)

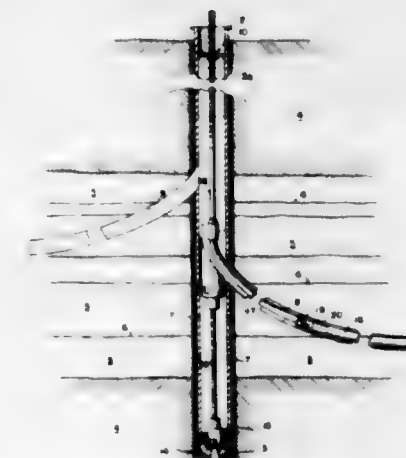


1. In combination with an air dropped missile, a nose member comprising a dish portion and secured to the forward end of the missile with the dish portion forwardly projecting therefrom, a spike formed integrally with said dish portion and extending forwardly thereof, said spike being of frusto-conical configuration and having a smooth outer surface throughout the length thereof and a flat surface on the forward end thereof, a plurality of uniformly spaced serrations each intersecting said outer and flat surfaces thereby to define a plurality of spike elements for producing waves of stress in a target as the target is struck thereby.

3,002,454

METHOD OF FRACTURING EARTH FORMATIONS

John D. Cheanut, Newport Beach, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Dec. 9, 1955, Ser. No. 552,150
8 Claims. (Cl. 102-21)



1. A method of fracturing earth formations in wells having a main bore hole provided with one or more drain holes extending laterally therefrom and containing a well fluid, comprising: filling said drain holes with coarse gravel or the like to prevent collapse of the walls of said drain holes, placing a body of sensitized nitromethane explosive in one or more of said drain holes to fill the interstices among the gravel, said sensitized nitromethane explosive body containing a detonator of the pressure-sensitive type, and applying pressure to said well fluid sufficient to actuate said pressure-sensitive detonator whereby said sensitized nitromethane explosive body is detonated within said one or more of said drain holes.

3,002,455

BALLISTIC MISSILE

Per Erik Jarnholt, Karlskoga, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

Filed Apr. 3, 1956, Ser. No. 575,834

Claims priority, application Sweden Apr. 12, 1955
10 Claims. (Cl. 102-56)



1. An explosive projectile comprising an elongated outer casing, and an inner body containing the explosive charge coaxially disposed in said casing rotatably and axially displaceable relative thereto, said casing and said body defining a space therebetween having an opening issuing in the bottom end of the projectile and an opening issuing in the outside wall of the casing, coating wall portions of the casing and the inner body forming abutment surfaces closing the lower end of said space in the rearward position of the casing relative to the inner body and the upper end in the forward position of the casing relative to the inner body whereby said space constitutes a gas passageway between said casing and said inner body.

3,002,456

SIMPLE EXPLOSIVE TRAIN ARMING METHOD

Jacob Savitt, Park Forest, Ill., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 26, 1956, Ser. No. 561,692

7 Claims. (Cl. 102-70)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An arming device comprising a casing having a bore therein, a donor explosive charge and an acceptor explosive charge disposed within said bore in mutual spaced relationship, means forming first and second chambers interposed within the bore and between said donor and

acceptor charges, said second chamber being normally air filled, a quantity of liquid within said first chamber, and means for admitting liquid into said second chamber whereby the device is armed.

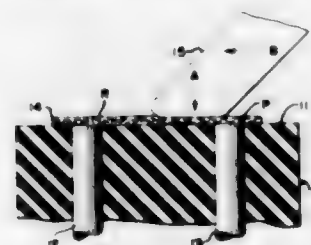
3,002,457

ELECTRIC INITIATOR AND METHOD OF MAKING SAME

John A. Doughty, Fayetteville, Ark., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Oct. 22, 1953, Ser. No. 387,820

7 Claims. (Cl. 102-70.2)



1. The method of preparing a conductive bridge on the substrate of an electric initiator comprising the steps of applying a quantity of crystalline graphite to the substrate, the graphite having normally a random orientation of the crystals, and applying to said graphite after application thereof a pressure against and across the substrate whereby the crystals are oriented in a preferred direction.

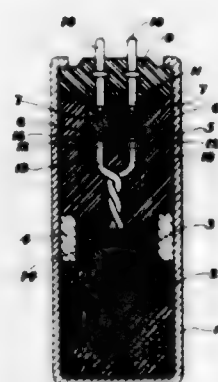
3,002,458

ELECTRIC EXPLOSIVE INITIATOR

John W. Haas, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1955, Ser. No. 556,371

1 Claim. (Cl. 102-70.2)



In an electric explosive initiator having a generally cylindrical casing open at its one end, explosive material and electrically controlled ignition means therefor carried within said casing, a plug of insulating material closely fitted within said casing between said explosive material and said open end, said plug being provided with a pair of laterally spaced, generally cylindrical recesses opening toward said open end and extending inwardly part way through said plug, a first pair of conductors extending outwardly through said plug from said ignition means into the inner closed ends of said recesses respectively, a cap member of insulating material fitted within and closing the open end of said casing and covering the open ends of said recesses, said cap member being provided with a second pair of conductors extending therethrough, the inner ends of said second conductors extending into said open ends of said recesses in substantial axial alignment with the ends of said first conductors but spaced axially therefrom, and a mass of readily fusible dielectric material heavily impregnated with finely divided metallic particles

which are dispersed throughout said dielectric material filling each of said recesses, the ends of the conductors in each recess being embedded in said mass whereby the latter electrically bridges the gap between said conductors.

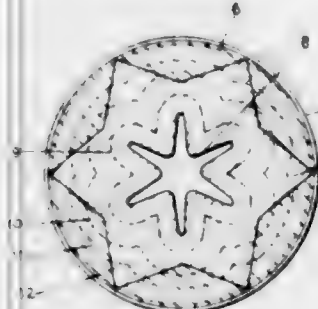
3,002,459

PROPELLANT CHARGES

Aubrey Edward Harper, Shawlands, Glasgow, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Oct. 4, 1956, Ser. No. 613,990

Claims priority, application Great Britain Nov. 9, 1955
5 Claims. (Cl. 102-98)



1. A cylindrical propellant charge for jet propulsion, the end surfaces and external surface of which are protected from burning, comprising at least two concentric portions of propellant composition of substantially the same physical and thermo-chemical properties in cohesive union with different burning rates, wherein the outermost concentric portion has a continuous cylindrical external surface, wherein each of said concentric portions has an axial star-shaped bore, the said axial star-shaped bore on any inner concentric portion being so positioned that any one of its external points lies substantially on the same radius as at least one internal point of the star-shaped bore of its adjacent external concentric portion, and wherein each bore with the exception of the bore in the innermost concentric portion has an adjacent inner concentric portion having an external configuration which permits it to be in said cohesive union with its adjacent outer concentric portion.

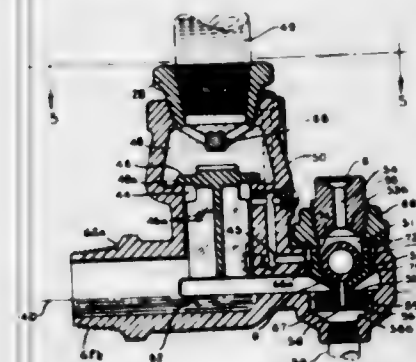
3,002,460

AIR INJECTOR DEVICE FOR PRESSURE WATER SYSTEM

Earl M. Ward, Rte. 1, Box 146, Calistoga, Calif.

Filed Aug. 8, 1956, Ser. No. 602,715

3 Claims. (Cl. 103-6)



1. In a water supply system comprising an air tight tank having a fluid inlet and a fluid outlet, which latter is adjacent the tank bottom, a pump for supplying water to the tank inlet from a well or other supply source, a fluid supply conduit connecting said pump with said tank inlet whereby water supplied to the tank will compress entrapped air in the upper part of the tank, there being tank air pressure controlled means for starting the pump when tank pressure drops to a predetermined degree and

for stopping the pump when it has been raised to a predetermined degree; the combination of an auxiliary air-supply unit incorporated as an element of said fluid supply conduit to supply a measured quantity of air to the tank during each period of operation of the pump, said unit comprising a casing providing a main horizontally disposed fluid-receiving chamber having a bottom, main chamber inlet and outlet portions provided by said casing and connected to said fluid supply conduit, said inlet portion located adjacent one main chamber end and its bottom and said outlet portion rising from an intermediate main chamber portion, said main chamber bottom providing a raised portion adjacent its second end and having a drainage outlet extending therethrough so that there will always be water in the main chamber when the pump is not running, a valve seat in said drainage outlet below the plane of said raised main chamber bottom portion, a normally open pump pressure closed drainage control valve in said drainage outlet and movable to engage said seat, at least the central and major portion of said drainage control valve comprising an elastically flexible disk member, the fluid outlet from said main chamber providing an air storage chamber and a superjacent valve chamber, a valve seat between said air storage and valve chambers, an outwardly opening fluid pressure-controlled valve in said valve chamber and movable inwardly by tank pressure to engage said seat, said casing providing a top opening communicating with said main chamber and aligned with the drainage outlet therefrom, a valve cage removably secured in said top opening and providing a secondary chamber for said unit located in a plane below the valve seat in said main chamber outlet portion, the lower portion of said valve cage-provided secondary chamber having communication with said main chamber and providing an air inlet in its upper portion, a valve seat in said secondary chamber and surrounding said air inlet, a fluid level controlled valve in said cage-provided secondary chamber and movable to close said air inlet when the pump is in operation, said casing providing a passage communicating between the upper portion of said secondary chamber and said air storage chamber for supplying air to the latter when the pump is not in operation and the air inlet control valve is unseated, a stem depending from said cage and operatively supporting said drainage outlet closing valve, the stem extending through said valve, and said stem having a bleed passage communicating with said drainage outlet from said cage-provided secondary chamber.

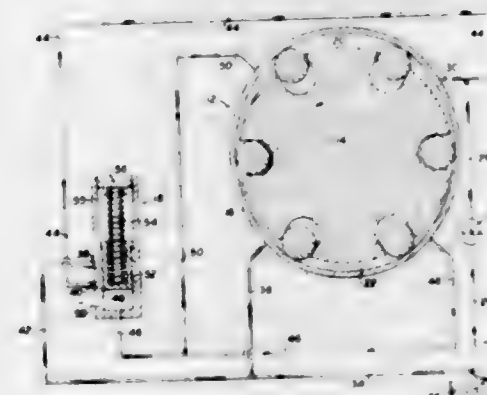
3,002,461

VARIABLE CAPACITY PUMP

Walter R. Eames, Jr., Royal Oak, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 13, 1956, Ser. No. 603,581

5 Claims. (Cl. 103-11)



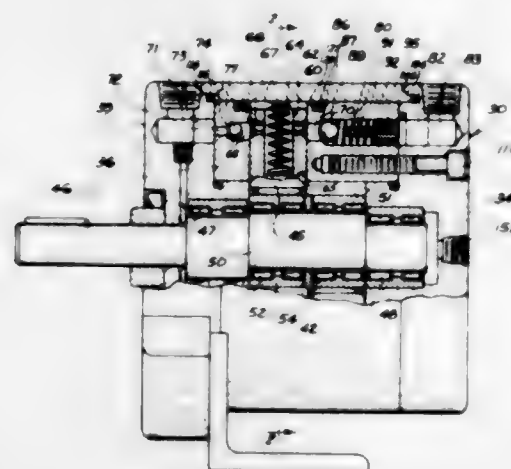
1. A fluid control system comprising means having a plurality of fluid pumping chambers, a single pressure re-

sponsive valve, a work communicating means, each of said pumping chambers being provided with an intake means and a discharge means, said intake means being in fluid communication with said valve and said discharge means being in fluid communication with said valve and said work communicating means, means in said valve being movable in response to the combined pressure of the fluid discharge of said pumping chambers and being movable to a position to allow fluid communication between said discharge means and one or more of said intake means, one-way valve means interposed between said one or more intake means and the remaining of said intake means preventing fluid flow from said one or more of said intake means to the remaining of said intake means, whereby at least a portion of said fluid discharge from said pumping chambers is bypassed to said one or more of said intake means.

3,002,462

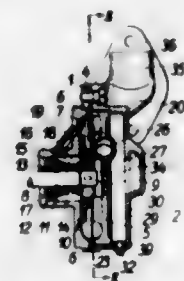
FLUID TRANSLATING APPARATUS

Thomas E. Raymond, Zanesville, Ohio, assignor, by mesne assignments, to Racine Hydraulics & Machinery, Inc., Racine, Wis., a corporation of Wisconsin
Filed Aug. 13, 1957, Ser. No. 677,912
35 Claims. (Cl. 103—38)



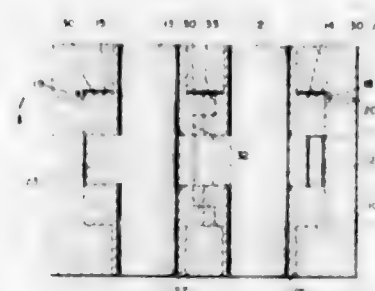
1. A fluid translating apparatus, comprising, a cylinder block having a plurality of radially arranged cylinders therein having inner ends opening into a central drive chamber and outer ends providing pump chambers, a plurality of pump pistons reciprocable respectively in the cylinders and having inner ends projectable into the central chamber, valve means for admitting and exhausting fluid to and from the pump chambers, means for pressing the pistons inwardly through intake strokes, a drive shaft in said central drive chamber having an eccentric thereon aligned with the pistons, a bearing ring rotatable on the eccentric and having a plurality of separate outer surfaces engageable respectively by the inner ends of said pistons for driving the latter outwardly through pumping strokes, each of said separate outer surfaces having a predetermined shape and the associated piston end having a complementary end surface engageable therewith, both surfaces extending in a direction transverse to the piston axis of reciprocation, means in fluid communication with the central drive chamber for conducting control fluid thereto, and means connected to the last recited means for varying the pressure in the drive chamber gradually relative to the intake pressure in the pump chambers to vary the piston intake strokes gradually between a maximum stroke permitted by said eccentric and ring and a lesser minimum stroke as determined by said relative pressures.

3,002,463
ROTARY PUMP OF THE LIQUID RING TYPE
WITH SIDE CHANNELS
Petter Lahti, Tikkurila, Finland
Filed May 21, 1959, Ser. No. 814,840
Claims priority, application Finland Apr. 10, 1959
11 Claims. (Cl. 103—96)



1. A pump comprising a casing having an internal chamber, a member fixed in said casing dividing said chamber into spaced sections, said member being provided with a peripheral inlet opening and with an arcuate groove opening into one of said sections and communicating with said peripheral opening, rotor means substantially coaxially aligned with said groove in said one section for circulating a medium received therein via said opening and groove, said member being provided with a second arcuate groove spaced radially inwards of the first said groove and with an opening communicating the second groove with the other of said sections, said casing being provided with a discharge opening substantially centrally positioned with respect to the second said groove.

3,002,464
ROTARY GEAR PUMP, BEARINGS AND SEALING MEANS THEREFOR
Clinton W. Lee, 15906 Glendale Ave., Cleveland, Ohio
Filed Mar. 17, 1958, Ser. No. 721,805
18 Claims. (Cl. 103—126)



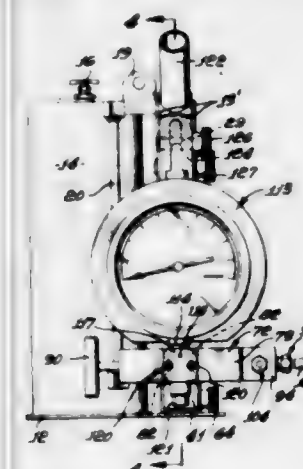
1. In a rotary gear pump having intermeshing gears, a body member, at least a pair of gears mounted in said body member, inlet and outlet means therefor, a pair of bearings at least on one end of said gears and supporting said gears against appreciable axial movements, cover means for the pump, each of said bearings being cylindrical in cross section on at least one axial portion of the bearing and each of said bearings having an arcuate segment shaped groove in radially overlapping and longitudinally interlocking relationship with the arcuate segment of the other bearing into which the mating cylindrical shape of the other bearing forms a sealing fit so that the side faces of said bearings are aligned with each other and provide a seal against the gear side faces.

3,002,465
HIGH PRESSURE PUMP
John S. Edison, 1434 Broadway, Burbank, Calif.
Filed Aug. 13, 1959, Ser. No. 833,492
7 Claims. (Cl. 103—153)

1. A device for producing high hydraulic pressure comprising in combination, a frame, a pump unit mounted on said frame and including a cylinder having an inlet

and an outlet, a piston means reciprocable in said cylinder and lever means for reciprocating said piston means, a fluid inlet check valve in said inlet, a high pressure fluid distributor component mounted on said unit, an outlet check valve unit having a fluid passage therethrough and a spring biased valve normally closing said passage; said check valve being interposed between said outlet and said distributor component and effective to afford fluid flow therethrough only to said distributor component, a pressure relief valve mounted in said distributor component, each of said valves having a metal valve seat and a relatively moving metal valve element, said distributor component having a plurality of passages therein connected at one end to a passage in said distributor component communicating with said fluid passage in said outlet check valve and terminating at their other ends in screw thread

in the lower end of the head and intermediate sections, said socket being semi-spherical in shape and being intersected by a circular passage of less diameter than the socket and a slot of less width than the diameter of the passage; said slot extending through the lower end of said sections; a male mating head on the end of each of the intermediate and base sections in the shape of a cylindrical section of a sphere, the said head having a cylindrical mid-portion of less diameter than the passage so that it will pass therethrough, and spherical end portions of greater diameter than the passage; the said head being joined to its respective section by a portion of less width than the slot, whereby the head may be passed through the passage in one position and rotated in the socket to another position so that it will not pass through said passage and said slot.



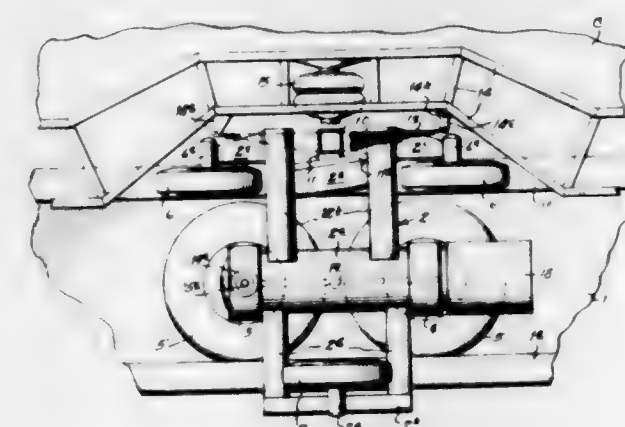
ed openings in the surface of said distributor component affording connection for conducting high pressure fluid to hydraulically operated apparatus, separate means for selectively closing such of said openings as are not required for a particular usage, each of said closing means effecting metal to metal sealing of said openings and each of said closing means comprising a non-rotative plug element and a screw threaded element engaging the threads of the opening and an end surface of said plug element to cause said plug element to engage and seal the opening engaged thereby, and other means effective to clamp said distributor component and said pump unit outlet to opposite ends of said outlet check valve unit to establish fluid flow therebetween through said passage in said outlet valve unit and simultaneously effect fluid sealing relation at the junctures thereof.

3,002,466
SWAB CUP SUPPORT
Norman W. Read, Dallas, Tex., assignor to The Guiberson Corporation, Dallas, Tex., a corporation of Texas
Filed Mar. 25, 1958, Ser. No. 723,804
11 Claims. (Cl. 103—225)



1. A swab cup support comprising: a head section; a base section; and an intermediate section; a socket formed

3,002,467
ASYMMETRIC TRUCK FOR OVER-RUNNING MONORAIL CAR
Sidney H. Bingham, 109 E. 35th St., New York, N.Y.
Filed May 8, 1959, Ser. No. 811,878
6 Claims. (Cl. 104—119)



1. An over-running wheeled truck for a monorail transportation system comprising a truck frame shaped to straddle a track beam and support a car above the beam, supporting and guiding wheels journaled on said frame in positions to engage respective faces of the beam, a bolster extending transversely across the top of the beam, and means for resiliently connecting said bolster to said truck frame to permit movement of said bolster, with respect to said truck frame, in a horizontal plane about its central vertical axis.

3,002,468
BASKET RACK AND CONVEYOR MECHANISM THEREFOR
Marion R. Williams, 6904 E. 96th St. Terrace, Kansas City, Mo.
Filed June 18, 1958, Ser. No. 742,936
2 Claims. (Cl. 104—121)



1. In a conveyor mechanism having upper and lower rails and a plurality of baskets each having compartments therein and a bottom, top, back side and open front for storing and dispensing articles therefrom, said lower

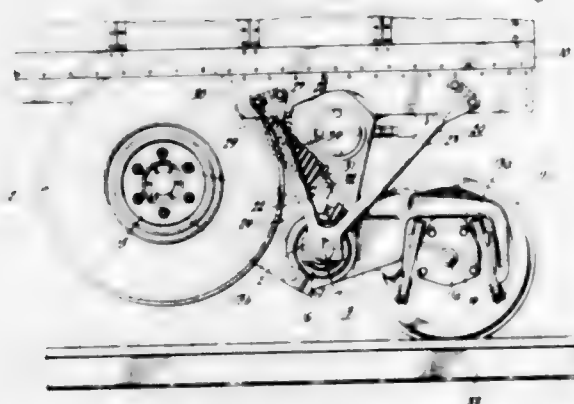
rail being of larger circumference than the upper rail and having a plane upper surface and plane vertical side walls, means mounting said baskets for movement on said rails, said means including spaced trolleys on an endless chain engaging the upper rail, means on said trolleys engaging the top of said basket near the back side thereof in adjusted spaced relation for suspending said baskets from said trolleys in spaced relation to each other, an elongated bracket secured underneath the bottom of said baskets and extending longitudinally of said bottom rail, said bracket having depending spaced arms at each end thereof and having their lower ends turned laterally outwardly, rollers mounted between said spaced arms for engaging the top plane surface of the lower rail to carry a part of the load of said baskets, and rollers secured to the laterally turned portions of said arms for engaging each side of said lower rail to maintain the first named roller on said rail whereby said baskets will move around said rails with the tops thereof inclined inwardly toward the conveyor to prevent the articles from falling from the open front.

3,002,469

SUSPENSION SYSTEM FOR VEHICLE HAVING ALTERNATE GROUND ENGAGING WHEEL SETS

Joseph W. Wanner, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 6, 1959, Ser. No. 825,137
5 Claims. (Cl. 105-215)



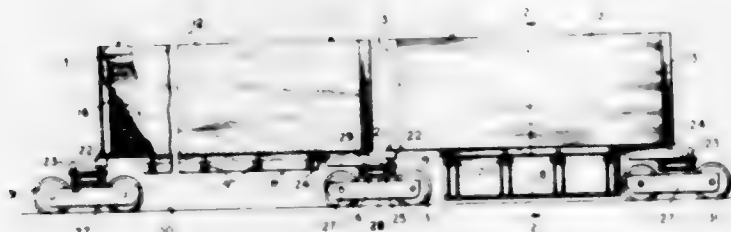
1. A suspension system for a vehicle comprising, a carrier pivotally attached to said vehicle, a first and a second wheel mounted on said carrier at opposite sides of the pivot point, drive means associated with said carrier to alternately position said first wheel and said second wheel between an elevated position and a ground engaging position, said drive means including a fluid operated motor, and means operatively associated with said fluid operated motor to automatically control the lowering of an elevated wheel to thereby retard free fall movement of the vehicle.

3,002,470

AXLELESS DUMP-CAR FOR ARTICULATED TRAINS

Henry Fort Flowers, 3023 Del Monte Drive, Houston 19, Tex.

Filed Feb. 21, 1957, Ser. No. 641,679
7 Claims. (Cl. 105-250)



1. A railway dump-truck having a body with its ends bowed at the corners, a universal bearing member be-

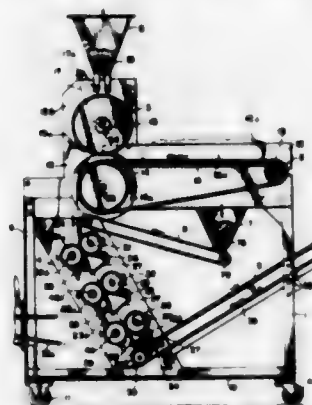
neath one end of the body on its longitudinal axis, a pair of side sills projecting from the opposite end with downwardly sloping ends, a transverse bolster plate supporting the ends of the sills, a second bearing member centrally on said bolster plate for fitting engagement with the universal bearing member on an adjacent car, laterally spaced king posts attached to the bolster plate, an axleless tandem truck pivotally supporting each king post and a tie-bar connecting the said trucks.

3,002,471

CONTINUOUS STRIP DOUGH SHEETER

Marion C. Jahn, Chicago, Ill., assignor to Colborne Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 13, 1959, Ser. No. 793,183
6 Claims. (Cl. 107-12)



1. A dough sheeting machine comprising a first endless-belt conveyor for moving a mass of dough horizontally in one direction between forward and rearward conveyor rollers defining the respective ends of the conveyor, means for compressing said dough mass on said first conveyor as the mass is moved thereby to form a dough sheet for delivery over the forward end of the said conveyor, a series of successive pairs of finishing rollers extending downwardly and rearwardly from the forward end of the first conveyor for receiving said dough sheet from the first conveyor and further reducing its thickness progressively, the rollers of each pair being horizontally spaced and adapted to receive the dough sheet between them, means directly beneath the first conveyor for applying a coating of flour onto the surface of said sheet next adjacent the first conveyor prior to the entry of the sheet into said series of finishing rollers, and a delivery conveyor means for receiving the dough sheet from the lowermost pair of rollers of said series and conveying the sheet upwardly and rearwardly of the first conveyor to substantially the height thereof.

3,002,472

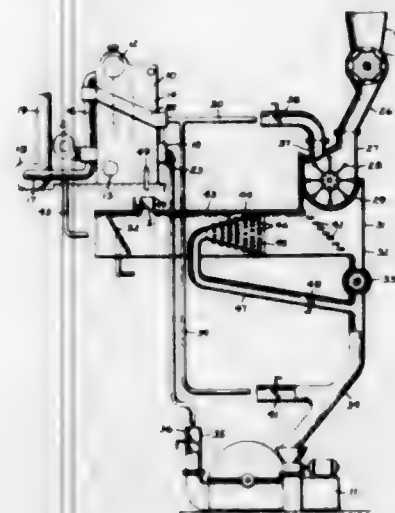
COMMUNITION SYSTEM FOR WET SOLID MATERIALS

Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts

Filed Apr. 21, 1958, Ser. No. 729,666
2 Claims. (Cl. 110-106)

1. A comminution system for wet solid fuel, comprising a furnace into which the fuel is to be fired, a fuel feeder, a crusher providing for a coarse comminution and agitation of the fuel, a first conduit for introducing dry, heated air into the said crusher, a pulverizer providing for a fine comminution of the fuel, means causing a flow of fuel between the crusher and the pulverizer, a primary separator interposed in the flow of fuel between the crusher and the pulverizer to remove the said air from the fuel, a second conduit connected at one end to the furnace and at the other end to the primary separator for permitting the said air to pass directly to the furnace

without passing through the pulverizer, a secondary separator in the said second conduit removing fine particles of fuel from the air, a third conduit connecting



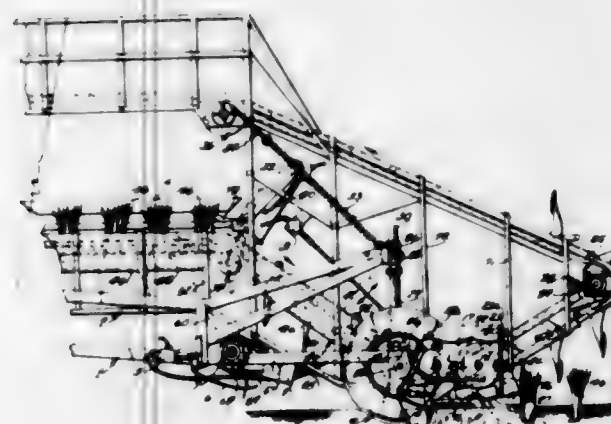
the secondary separator to the pulverizer for returning the fine particles of fuel so removed to the pulverizer, and a fourth conduit connected at one end to the pulverizer to introduce dry, heated air therein.

3,002,473

PINEAPPLE PLANTING MACHINE

Charles Victor Morine, 99-1225 Ala Heights Drive, Ala Oahu, Hawaii

Filed Sept. 18, 1957, Ser. No. 684,789
2 Claims. (Cl. 111-2)



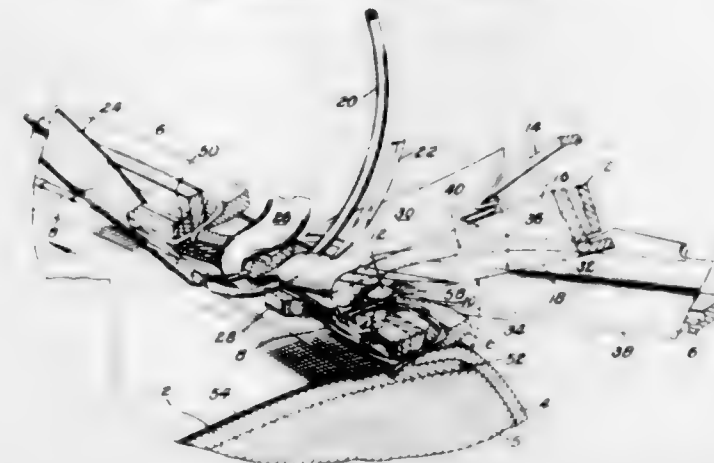
1. A planter comprising a main frame, chains movably supported on said main frame, blade assemblies connected to said chains for digging openings in the ground, said planter further including a trough provided with a bottom portion acting as a plant stop gauge, means on the main frame for tilting said blade assemblies to form the openings in the ground, means including rollers mounted at the lower rear portion of the main frame for grasping the plant and twisting the plant as it is being injected into the opening in the ground dug by the blade assembly, cam means on the rear portion of the main frame for vibrating the blade assemblies as they are being drawn from the soil, and means on the main frame including a hinged roller guide for regulating the size of the openings dug in the ground by the blade assemblies whereby the depths of planting can be controlled.

3,002,474

SHOE MACHINES WITH FEELERS FOR CONTROLLING WELT-SEVERING MECHANISMS

Lloyd G. Miller, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Jan. 23, 1959, Ser. No. 788,555
25 Claims. (Cl. 112-44)



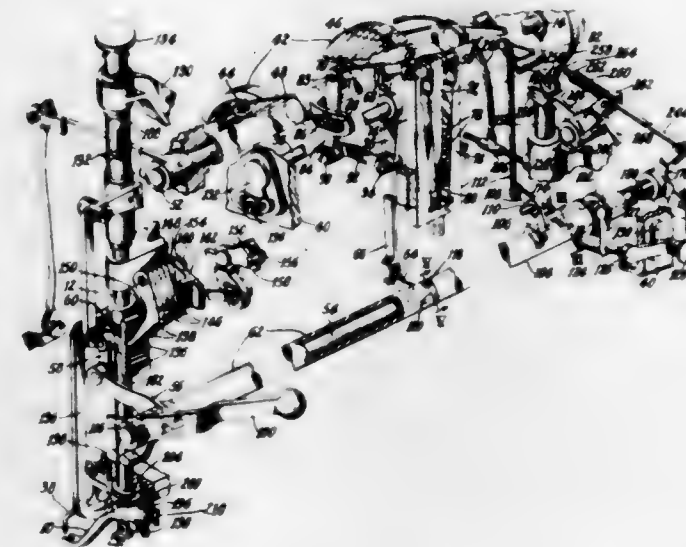
1. An in seam sewing machine for attaching a welt to the marginal portions of a last-supported Goodyear welt shoe upper and a sole member, said machine having stitch-forming, feeding and guiding devices capable of operating on the shoe parts entirely around a shoe, an operating tool acting during operation of said devices to perform an auxiliary operation other than stitch-forming, feeding or guiding the shoe parts, and mechanism for actuating the tool in advance of the point of operation of the stitch-forming devices comprising a feeler for engaging the leading end of the welt first attached to the shoe at a point backed by a bulging last supported portion of the upper as that end is approaching the point of operation of the stitch-forming devices a second time, in combination with a guard means extending beyond the end of the feeler at a position of engagement with the bulging upper of the shoe in line with the end of the welt first attached to the shoe for insuring proper engagement of the feeler with the end of the welt.

3,002,475

SHOE SEWING MACHINES

Fred Ashworth, Wenham, and Joseph R. Ioannilli, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Original application Oct. 28, 1955, Ser. No. 543,428, now Patent No. 2,928,361, dated Mar. 15, 1960. Divided and this application July 23, 1958, Ser. No. 750,410

11 Claims. (Cl. 112-60)



1. A McKay type shoe sewing machine having a frame, a sewing shaft in the frame, stitch forming de-

vices including a needle actuated by the sewing shaft, a shoe supporting horn rotatable on the frame, a presser foot for clamping the work on the horn, mechanism for actuating the presser foot toward and from the horn comprising a reciprocating bar to which the presser foot is attached, a rockshaft extending at right angles to the bar, operating connections between the rockshaft and the presser foot bar, a presser foot lock, a floating lever connected at one point along its length to the presser foot lock, an operating lever having an arm connected at another point on the floating lever and a link connected between the rockshaft and a point on the floating lever between the points of its connection with the lock and operating lever, and means for varying the effective length of the arm on the operating lever, in combination with an adjusting means including a segment on the frame for actuating the length varying means to increase or decrease the movement imparted to the presser foot.

3,002,476

SEWING MACHINES' NEEDLE EYES THREADER

Giuseppe Capelli, 59, Via Romolo Gessi, Milan, Italy

Filed Aug. 19, 1959, Ser. No. 834,698

Claims priority, application Italy Sept. 5, 1958

14 Claims. (Cl. 112-224)



1. In a sewing machine, in combination with a longitudinally reciprocable needle bar and needle: a threading means; a support supporting said threading means; means for mounting said support on a part of the sewing machine for movement between a retracted inoperative position, and a threading position in which said threading means is located in the eye of the needle, and also for movement in the direction of the longitudinal movement of the needle; coupling means for coupling said support in said threading position with the needle bar for movement with the same with said threading means located in the eye of the needle; and control means operatively connected to said support for shifting said support to said inoperative position during movement of said support with said needle bar so that the movement of said needle bar with said support and threading means effects disengagement of said threading means from the eye of the needle.

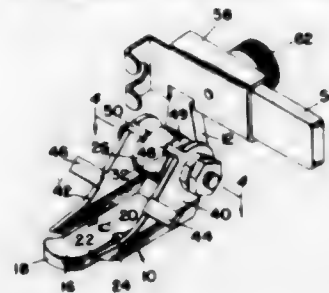
3,002,477

SEWING MACHINE PRESSER FOOT

David Silberman, New York, N.Y., assignor to Placket Closing Corporation of America, New York, N.Y., a corporation of New York

Filed Mar. 28, 1960, Ser. No. 17,931

3 Claims. (Cl. 112-235)



1. A sewing machine presser foot comprising a body portion, a foot connected to said body portion, a cylinder connected to said body portion above said foot, a bore in said cylinder, a pin extending through said bore, a pair of gauge bars, each gauge bar being spaced from the foot and pivotably secured to said pin, a flange on each gauge bar extending toward the foot, a shoulder on each end of the cylinder cooperating with each of the flanges for limiting the pivoting movement of said gauge bars, tabs on each gauge bar extending in a direction away from the foot, and a plurality of aligned holes in said foot.

3,002,478

PROCESS FOR SEWING CONCEALED SLIDE FASTENERS

Benjamin Duchan, Bronx, N.Y., assignor to Placket Closing Corporation of America, New York, N.Y., a corporation of New York

Filed Oct. 28, 1957, Ser. No. 692,772

2 Claims. (Cl. 112-262)



1. A process for sewing a concealed slide fastener to a pair of cloth members in a manner whereby the cloth members will closely simulate a sewn seam and conceal the slide fastener comprising the steps of folding each cloth member of the pair along a straight fold line to form two plies on each cloth member, arranging the folded cloth members side-by-side with their fold lines adjacent one another, stitching the cloth members along their fold lines at spaced points, placing a first slide fastener tape over a folded ply of one of the cloth members by juxtaposing said first tape to said folded ply on said one cloth member between said points with the fastener elements on said first tape being adjacent the fold line on said one cloth member, each fastener element having first and second arms gripping opposite sides of said first tape and a tooth extending from said second arm, aligning fastener elements on said first tape in an upright position with said first arms disposed along the outside edge of a presser foot, said presser foot having a needle hole in the form of a notch on said outside edge, stitching said first tape to said ply of said one cloth member by a first line of stitching which is closely adjacent to and parallel to the fastener elements carried by said first tape, placing a second slide fastener tape over a folded ply of the other cloth member between said points by juxtaposing said

second tape to said last mentioned folded ply, said second tape having fastener elements secured thereto identical with said first tape and its respective fastener elements, aligning the fastener elements on said second tape in an upright position along the outside edge of said presser foot, stitching said second tape to said last mentioned ply by a second line of stitching which is closely adjacent to and parallel to fastener elements carried by said second tape, superposing the remaining ply of each cloth member over said lines of stitching by bending said remaining plies along the fold lines, and engaging the fastener elements so that the fastener elements on each tape are concealed by the juxtaposed fold lines of said cloth members which simulate a sewn seam.

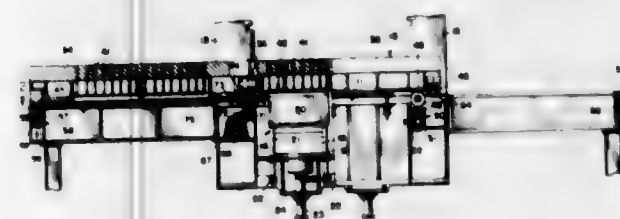
3,002,479

MOVABLE BOLSTER FOR METAL WORKING PRESS

Einar K. Johansen, Oak Park, and Gordon M. Sommer, Hinsdale, Ill., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed June 10, 1957, Ser. No. 664,621

6 Claims. (Cl. 113-49)



5. A metal working press adapted for quickly and easily replacing die sets in the press thereby reducing shut down time, said press comprising a bed, a crown, uprights between the bed and crown, a slide vertically movable between the uprights and adapted to have the upper die of a die set secured thereto, a die cushion mounted in the bed and below the top surface thereof, a bolster movable in and out of said press along a rectilinear path and adapted to receive a die set outside of the press and have the lower die of the die set secured thereto and to carry the die set into the press, means for securing the upper die of the die set to the slide when the bolster with the die set is positioned within the press, means within the press coacting with means on the bolster for locating the bolster at a predetermined position on the press bed, and means for lowering the bolster to the bed prior to the press operation thereby giving it a firm foundation, said bolster having a movable pressure pin carrier adapted to be engaged by said die cushion when the bolster is arranged within the press, holes formed in the bolster, and vertically extending pressure pins slidably received in said holes and having their lower ends resting on said pressure pin carrier.

3,002,480

SHIPBUILDING TOOL

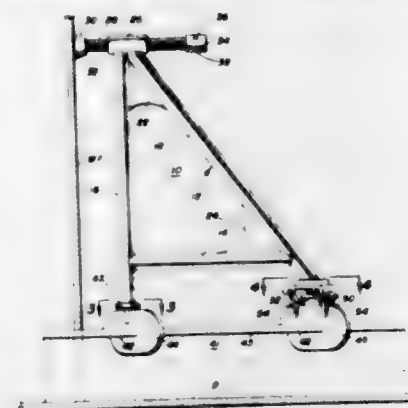
Hunter Lee Topping, 131 N. 2nd St., Buckroe Beach, Va.

Filed Mar. 17, 1959, Ser. No. 799,996

5 Claims. (Cl. 113-99)

1. A tool for plumbing structural components, said tool comprising a right triangular frame member adapted to be positioned with one leg portion upright and another leg extending longitudinally therefrom, a securing plate mounted for axial rotation on the lower end of the upright leg portion of said frame member, another securing plate mounted for axial rotation on the lower end of the hypotenuse leg portion of the right triangular frame member, said securing plates each having an open-ended slot longitudinally extending in co-planar relation with the other for receiving spaced portions of the same flange, and progressively advanceable pushing means mounted on the apex portion of the right triangular frame mem-

ber in a direction paralleling the slots of the pivotally mounted securing plates, axes means connected between the lower end of the hypotenuse leg portion and the slotted



securing plate pivoted thereon for accommodating movement of said last-mentioned plate about perpendicularly intersecting axes.

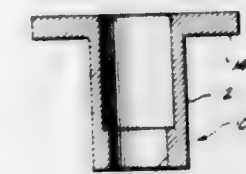
3,002,481

ELECTRICAL COMPONENT MOUNTING DEVICE

Eugene W. Hutter, Santa Monica, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed May 31, 1955, Ser. No. 511,864

1 Claim. (Cl. 113-110)



An eyelet member for printed circuit board assemblies comprising a unitary member consisting of approximately 22% tin and approximately 78% lead whereby to enable low temperature melting thereof, and having a cylindrical central portion with a central aperture therein, a flanged head portion at one end of said central portion and comprising a flange of predetermined thickness extending outwardly from and normal to said central portion, and an inner rim base portion at the other end of said central portion, said base portion having a radial thickness approximately equal to that of the thickness of said flange and an aperture therein coaxial with and of a diameter less than said central aperture.

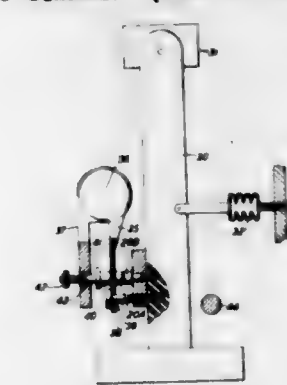
3,002,482

CONTROL UNIT

Harold C. Montgomery, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 28, 1947, Ser. No. 731,517

3 Claims. (Cl. 114-25)



1. A depth-pendulum control unit comprising a pendulum, depth control means coupled to said pendulum,

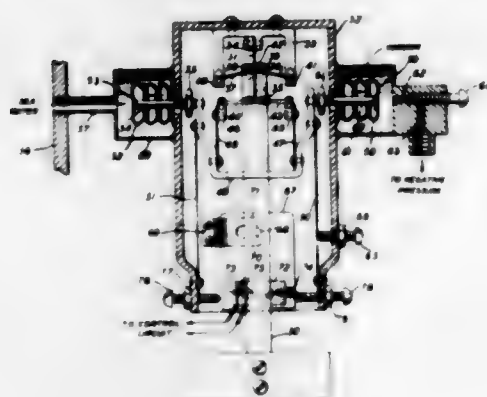
an electrical contact mounted by said pendulum, an arm having an aperture therein, means pivotally supporting said arm for motion in the directions of swing of said pendulum, said arm being pivotally supported separate from said pendulum, said supporting means being constructed to hold said arm frictionally in any position to which it is deflected, an electrical contact mounted by said arm in position to be engaged by said first contact when said pendulum swings in the direction toward said arm, and a coupler carried by said pendulum and extending through said aperture, said coupler having a portion for engaging said arm only when said pendulum swings in the direction away from said arm and said contacts have separated a preassigned distance.

3,002,483

DEPTH CONTROL DEVICE

John C. Steinberg, Short Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 24, 1947, Ser. No. 787,841
5 Claims. (Cl. 114-25)



1. In an elevator control system for a torpedo comprising an elevator, actuating means for said elevator and a control circuit for said actuating means for effecting deflection of the elevator in one or the opposite direction in accordance with whether the control circuit is open or closed, depth-tilt control means mounted in the torpedo including a first control means to control a pair of contacts for inclusion in said control circuit to open and close said control circuit in accordance with the direction of departure of the torpedo from level position, a second control means to alter the movement of said first control means by a limited amount in opening and closing of said contacts dependent upon the extent of departure of the torpedo from preassigned depth, a third control means to counterbalance the effect on said second control means of change in pressure in the torpedo, one of said contacts being coupled to said first control means and movable therewith, and compliant coupling means between said first and second control means.

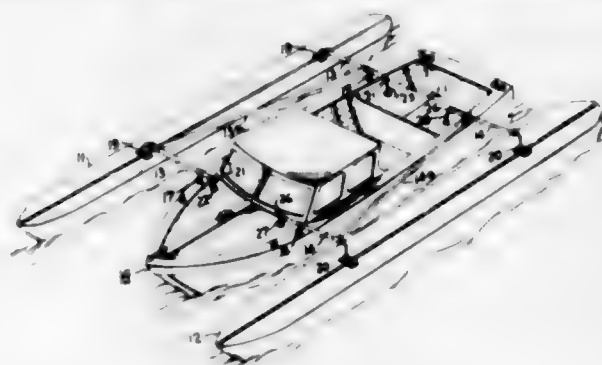
3,002,484

BOAT

Alfred T. Dube, Plank Road, R.F.D. 1, Waterbury, Conn.
Filed Apr. 24, 1958, Ser. No. 730,606
1 Claim. (Cl. 114-61)

A boat comprising a main boat unit, a pair of pontoons one of which is positioned at each side of the main boat unit, arms for joining said pontoons to the main boat unit, said arms being pivotally secured intermediate their ends to the main boat unit and pivotally connected at one end to the pontoons, and a hydraulic fluid system comprising a reservoir for holding a supply of hydraulic fluid, a hydraulic cylinder and piston for each arm, each of said pistons being connected to an arm, means for storing hydraulic fluid under pressure, valve and conduit means for conveying hydraulic fluid under pressure to

said cylinders to actuate the pistons and arms to position the main boat unit relative to said pontoons, and additional valve and conduit means for conveying fluid



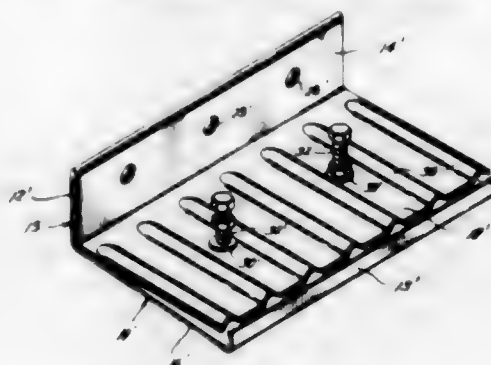
from said reservoir to the hydraulic cylinder and thence to said storing means under the pumping action of the piston and arm in response to wave action on said pontoons.

3,002,485

ADJUSTABLE STABILIZER FOR BOATS

Gerald J. Curtis, 8806 Glen Loch, Houston, Tex.

Filed July 22, 1960, Ser. No. 44,703
5 Claims. (Cl. 114-66.5)



2. In a stabilizer for boats a flexible plate-like member of angular shape, means for securing the member to the transom of a boat with one flange disposed parallel to and in contact with the external face of the transom and the other flange extending rearwardly in position for contact with the water to apply an upward force on the transom, and means for flexing said other flange vertically to vary the angular position thereof laterally and longitudinally relative to the bottom of the boat to adjust the upward force exerted by the water.

3,002,486

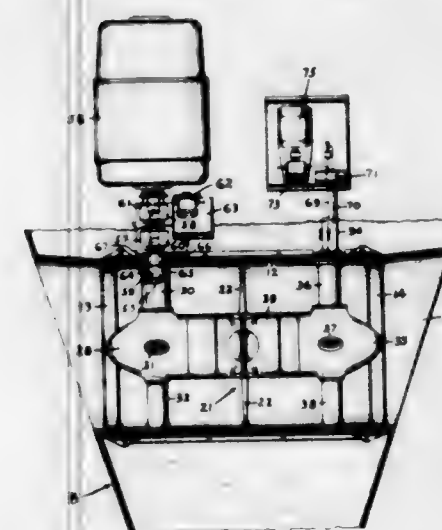
STEERING PROPELLER

Sven Åke Järnmo, Karlstad, Sweden, assignor to Aktiebolaget Karlstads Mekaniska Werkstad, Karlstad, Sweden, a company of Sweden

Filed Nov. 25, 1958, Ser. No. 776,294
Claims priority, application Sweden Nov. 30, 1957
3 Claims. (Cl. 114-148)

1. A steering mechanism for a ship comprising a tunnel member extending athwart the hull of the ship and having ends opening through opposite sides of said hull, a cylindrical drum fitting slidably in said tunnel member, means releasably engaging said drum for retaining it against sliding in and removal from said tunnel member, groups of struts located adjacent and fixed to opposite ends of said drum, a horizontal propeller shaft rotatably supported by and extending between said groups of struts, a variable and reversible pitch propeller mounted on said shaft between said groups of struts, a hydraulic motor carried by said propeller shaft and connected to said propeller for varying and reversing its pitch, a drive shaft

rotatably mounted in one of said struts, means connecting said drive shaft to said propeller, power means in said hull outside said tunnel member for driving said drive shaft, a releasable coupling between said power means and said drive shaft located approximately at the wall of said drum, conduits mounted in another strut and con-



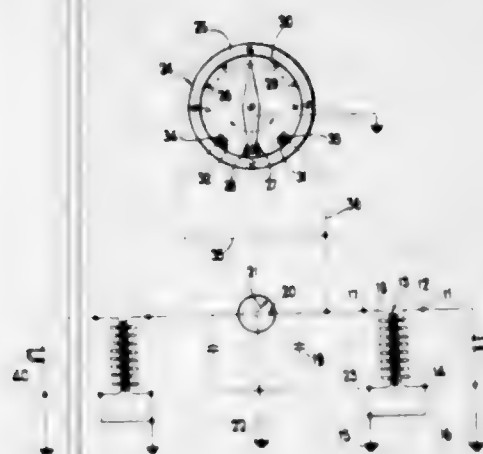
nected to said hydraulic motor, means in said hull outside said tunnel member to supply hydraulic fluid to said conduits and discharge hydraulic fluid from said conduits to actuate said motor, and coupling members releasably connecting said conduits to said supply means, said coupling and said coupling members being releasable to enable said drum to be removed from said tunnel member.

3,002,487

IGNITION CONTROL FOR MOTOR BOAT ENGINE

Wallace E. Didsbury, Sr., 66 Maloney Court, Winsted, Conn.

Filed July 20, 1960, Ser. No. 44,132
4 Claims. (Cl. 115-5)



1. An automatic ignition control system for a vehicle subjected to tilting, said system comprising: a multiple cylinder engine mounted on the vehicle, each cylinder having its own ignition circuit; normally open tilt-responsive switch means mounted on the vehicle, said switch means assuming a closed position whenever the vehicle assumes a tilted position which is further inclined than a predetermined angle; and means connecting said switch means to the ignition circuit of only some of the cylinders for rendering such ignition circuit inoperative by short-circuiting a component part of such ignition circuit whenever said switch means is in its closed position, whereby when the vehicle is tilted beyond said predetermined angle, only some and not all of the cylinders will become inoperative.

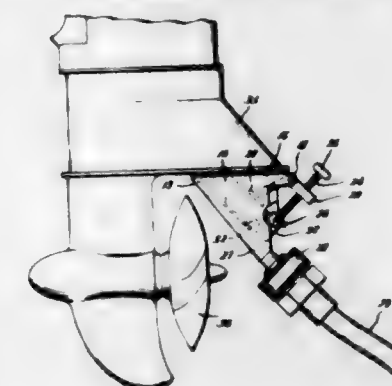
3,002,488

FLUSHING DEVICE FOR OUTBOARD MOTORS

Kjell G. Gublin, 1910 Houston Blvd., South Houston, Tex., assignor of one-half to Russell H. Snyder, Tomball, Tex.

Filed Oct. 12, 1959, Ser. No. 845,860

9 Claims. (Cl. 115-17)

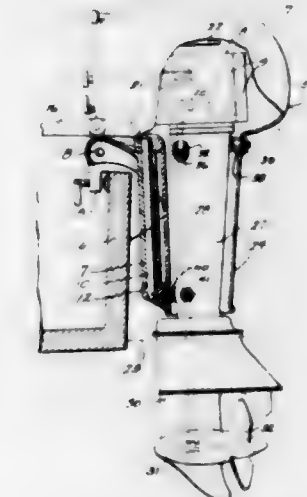


1. In combination with an outboard motor including a hollow fin vertically disposed in use having a downwardly and rearwardly sloping forward edge and having a water intake opening at said forward edge and being open along its rearward edge into a portion of its hollow interior, and a second fin horizontally disposed in use joined along the upper edge of and extending laterally beyond said hollow fin in every direction, a flushing device comprising a body fitted to and embracing and sealed to the forward edge of said hollow fin around said intake opening and having parts thereon extending rearwardly and upwardly along the sides of said hollow fin, said body having a conduit therein with one end of said conduit in communication with said intake opening and the other open to the exterior of the body and formed to receive a connection to a source of flushing fluid, and securing means extending from said parts beyond said hollow fin and tensioned against a portion of the motor surface facing opposite to the forward edge of the hollow fin to hold the body sealed against the forward edge of the hollow fin.

3,002,489

VIBRATION AND SOUND DAMPING OUTBOARD MOTOR STRUCTURE WITH EXTENDED SHROUD

Lacus D. Watkins, Hartland, Wis., assignor to Outboard Marine Corporation, a corporation of Delaware
Filed Jan. 16, 1956, Ser. No. 559,208
5 Claims. (Cl. 115-18)



1. In an outboard motor, having a transom bracket and a propulsion unit including in unitary connection an engine having a depending drive shaft, a lower unit having a propeller and propeller shaft with which the drive shaft is in operative connection, and a strut housing

the drive shaft and connecting the engine and lower unit, the improvement which consists in a shroud substantially completely surrounding and spaced from said engine and adjacent portions of said strut and providing a sound confining enclosure which is complete to a level materially closer to the lower unit than to said engine, means supporting the shroud for steering oscillation, a tiller connected with the shroud for directing the steering movement thereof, and vibration damping springs supporting the propulsion unit from the shroud to accommodate vibrations of said unit within the shroud while constraining said unit for steering movement with the shroud.

3,002,490

SURVIVAL KIT

Michael F. Murray, 381 Park Ave., Eugene, Oreg.
Filed Sept. 23, 1958, Ser. No. 762,751
2 Claims. (Cl. 116-124)



1. A survival kit comprising a container, a reel rotatably mounted in the container, said reel including means projecting exteriorly of the container for enabling rotation of the reel, a flexible line having one end connected to the reel, said container including an opening receiving said line, said line extending exteriorly of the container, an inflatable balloon having an entrance mouth, a longitudinally elongated hollow valve body disposed in said mouth, said valve body defining a longitudinal bore communicating the interior of said balloon with the atmosphere, a closure cap mounted on one end of said valve body, the other end of said valve body being disposed in said mouth, and means on said cap connected with said flexible line, a puncturing element mounted on said body within said bore, said puncturing element having a pointed end facing the cap and disposed adjacent thereto, check valve means disposed in said bore inwardly of said puncturing element for admitting gas into said balloon and preventing discharge of gas from said balloon, said body defining a counterbore at said one end for receiving the sealed end of a pressurized gas cartridge, said counterbore being defined by a cylindrical wall having means thereon for sealing and detachable connection with a pressurized gas cartridge, whereby the cap may be removed and the sealed end of a pressurized gas cartridge inserted into the counterbore and engaged with the puncturing element for puncturing the sealed end of the cartridge and inflating the balloon.

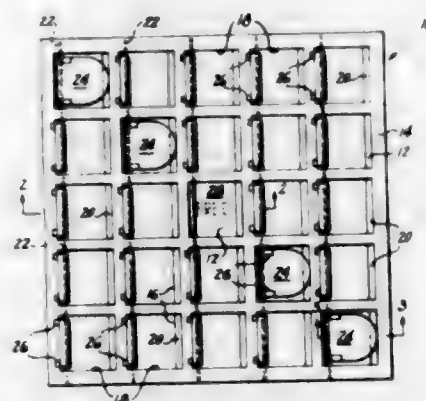
3,002,491

BINGO GAME DEVICE

Alfred E. Bachman, Lebanon, Pa., assignor to
Gustave Miller, Washington, D.C.
Filed Feb. 5, 1960, Ser. No. 6,894
1 Claim. (Cl. 116-134)

A bingo card score keeping auxiliary device comprising a board for disposition over a bingo card, depending

flanges on two opposite edges of said board adapted to embrace two opposite edges of the bingo card, said board comprising a thick base sheet and a thin top sheet secured thereto, said sheets having mating rectangular apertures corresponding in number and position to the blocks of the bingo card, the apertures of said base sheet being shorter along one corresponding edge, thereby providing ledges on said base sheet, a transparent flap for each rectangular aperture and pivot means for each said flap, said pivot means being located in said base

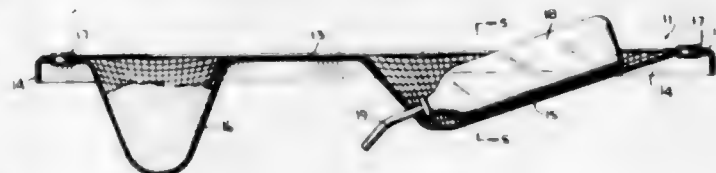


means and extending into each of said apertures and through the flap therefor on the side opposite from said ledge side whereby said flap may be supported on said pivot means and said ledge when in closed position, and an upwardly projecting weighted stop on each said flap on its upper side when in closed position and adjacent said pivot means but spaced from its pivot edge to overlie the adjacent edge of the rectangular apertures when in open position and support and releasably hold said flap in open position until the board is tilted toward the ledge edges to tilt all the flaps simultaneously to closed position.

3,002,492

ANIMAL CAGE LID

Victor S. Naturale, Hillsdale, N.J., assignor, by direct and mesne assignments, of one-half to Lincoln Mold and Die Corp., East Orange, N.J., a corporation of New Jersey, and one-half to Maryland Plastics Incorporated, Federalsburg, Md., a corporation of Maryland
Filed Jan. 4, 1960, Ser. No. 286
4 Claims. (Cl. 119-18)



1. An animal cage lid comprising an oblong cover portion made of a wire mesh material and a depressed feed basket depending therefrom at one end thereof, said feed basket being integral with said cover portion and extending substantially for the full width of said cover portion, and said basket being normal to the longitudinal axis of said cover portion.

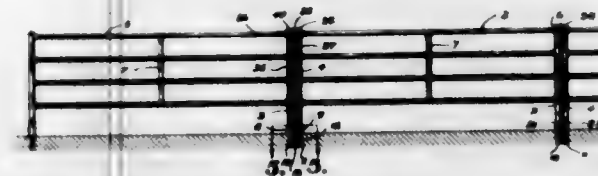
3,002,493

PORTABLE CORRAL

Donald J. Galamba, 1000 W. 66 Terrace,
Kansas City, Mo.
Filed Dec. 18, 1958, Ser. No. 781,276
1 Claim. (Cl. 119-20)

A corral structure of the character described comprising, a plurality of fence sections having vertically extending tubular end members and a plurality of elongated horizontally extending spaced rigid bars connecting pairs of said tubular end members, the bottom of said tubular

end members being open, posts adapted for being vertically embedded in the ground, said posts being arranged in spaced pairs, the bottom of said tubular end members being adapted for sleeving over said posts and being rotatable thereon, vertically spaced horizontally extending post bars rigidly connecting the posts together in said post pairs, said post bars being located on said posts a substantial distance below the upper ends of said posts whereby said post pairs may be embedded in the ground with the upper ends exposed for receiving the bottoms of said tubular end members, the lower ends of said

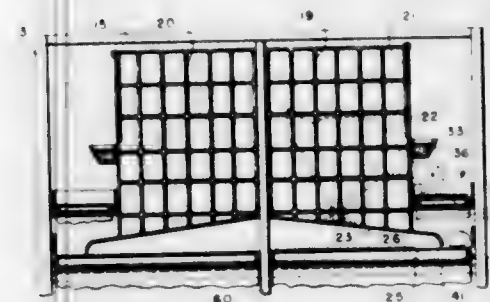


tubular end members having a plurality of aligned pairs of transverse openings therein spaced radially therearound the upper ends of said posts having transverse openings for aligning with the transverse openings in said tubular end members, pins engageable in certain of said openings in the tubular end members and the openings in said posts for holding selected sections in a desired adjustable angular position with respect to the next adjacent section, and members selectively engaging the end members on the upper ends thereof for holding the upper ends of the end members in spaced relation.

3,002,494

AUTOMATED HEN BATTERY

Loren C. Murray, Rte. 4, Box 388A, Elkhart, Ind.
Filed Dec. 14, 1959, Ser. No. 859,326
1 Claim. (Cl. 119-48)



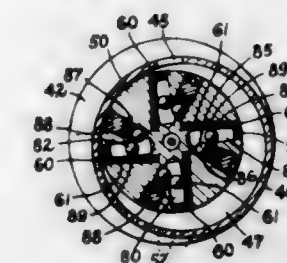
In a caged-hen egg producing battery, the combination of: a supporting frame; a plurality of hen-confining cages mounted on the frame and arranged in two registering stacks of rows of cages; each cage having a bottom member which is formed of wide-mesh grating to permit the passage of droppings, each said member being outwardly and downwardly extended and sloped to provide an incline for the discharge of eggs, the extensions of all of the members in each row terminating in a substantially continuous depending lip; conveying means including a first conveyor belt for the first stack and a second conveyor belt for the second stack; pulleys for supporting the belts so that each belt has a horizontal run adjacent each row of cages; each horizontal run extending beneath the cages in its associated row to pick up droppings, and also extending outboard of the row of cages and lip to pick up eggs, so that the continuous lip isolates the eggs from the droppings; and means including chutes adjacent the exit ends of the outboard portions of each run for conveying the eggs to a common point.

3,002,495

PNEUMATIC TOOLS

Charles L. Babb, Dayton, Robert H. Alexander, Miami, and Eugene Liniker, Dayton, Ohio, assignors to
Buckeye Tool Corporation, Dayton, Ohio, a corporation of Ohio

Filed Dec. 21, 1959, Ser. No. 861,083
9 Claims. (Cl. 121-34)

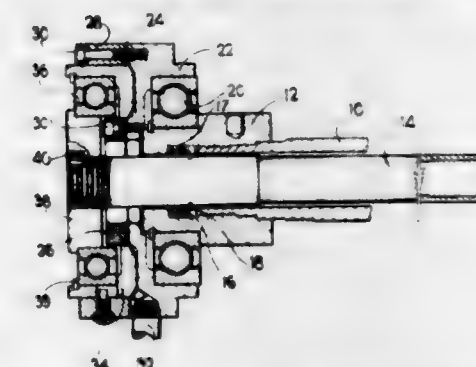


9. A vane type fluid motor comprising means defining a vane housing having a fluid inlet and outlet, a vane carrying rotor mounted for rotation in said housing defining a vane track between said housing and said rotor, a vane reciprocally received in said rotor and movable for sweeping said vane track upon the application of fluid pressure at said inlet for effecting the rotation of said rotor, means in said rotor defining a generally radially disposed passage in intersecting relation to said vane, a ball movable in said passage from a first position in inwardly disposed relation to said vane to a second position in cammed relation against said vane providing for inward movement only of said vane, and adjustable spring biased detent means positioned in interposed relation between said ball and said vane for retaining said ball in said first position and movable upon the occurrence of a predetermined angular velocity of said rotor to release said ball for movement into said second position.

3,002,496

PNEUMATIC ACTUATOR

William J. Manchester, Cider Mill Road, Rockfall, Conn.
Filed Mar. 15, 1960, Ser. No. 15,165
3 Claims. (Cl. 121-38)

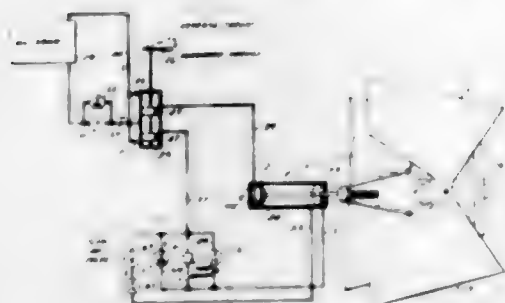


1. A pneumatic actuator for chucks and the like comprising, a rotatably mounted spindle, a draw tube within said spindle for operating a chuck thereon, a member mounted on and rotating with said spindle, a non-rotating member, an anti-friction bearing disposed between said members, an annular flexible diaphragm attached at its inner and outer edges to said non-rotating member, means to admit air under pressure to the space between said diaphragm and non-rotating member, a piston member bearing against said diaphragm and movable axially of said spindle when air under pressure is admitted against one side of said diaphragm, and a rotating member housed within said piston member axially adjustably connected to said draw tube, an anti-friction bearing between said piston member and adjustable member, whereby said draw tube will be actuated in one direction when air under pressure is admitted on one side of said diaphragm, and spring means normally forcing said draw tube in the opposite direction.

3,002,497

VELOCITY LIMITED FLUID ACTUATOR WITH PRESSURE RESET

William K. Gulick, Glendale, and Melvin E. Criffield, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Apr. 18, 1960, Ser. No. 22,956
1 Claim. (Cl. 121—38)



In a fluid actuator system for positioning a load subjected to high external force tending to drive the actuator and load in at least one direction of their travel and to retain them in position at one extreme of travel; a fluid pressure energized expansible chamber motor including first wall means defining a working fluid chamber, first and second fluid flow ports opening through said wall means into said chamber at opposite sides thereof for supply of pressure fluid thereto and drain therefrom, second wall means movable relative to said first wall means and disposed in said chamber for travel between said ports in response to fluid pressures applied therethrough, a third fluid flow port opening into said chamber through said first wall means at such point in the path of travel of said second wall means as to be blocked thereby through at least a portion of said wall means travel and to be open into said chamber when said second wall means is at either extreme of its travel; and pressure fluid supply and control means for energizing said motor and limiting its rate of travel at least in the direction aided by said external force comprising first, second and third flow lines connecting respectively into said first, second and third ports, pressure fluid drain and supply means, control valve means selectively operable to connect said first fluid flow line to said supply means and said second and third lines to drain or to connect said first line to drain and said second and third lines to said supply means, and first and second fluid flow restraining elements respectively interposed in said second and third fluid flow lines whereby the rate of travel of said second wall means in the direction of travel aided by said external force is controlled by the combined flow characteristics of both said flow restraining elements until said third port is blocked by said second wall means and then is controlled by said first flow restraining element alone, and when the actuator and load reach said one extreme of travel said third port again opens to said working fluid chamber and connects through that chamber to said first flow line for lowering pressure levels in the system.

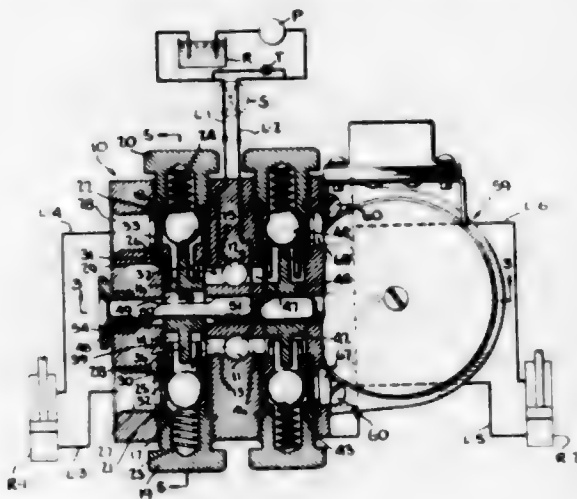
3,002,498

SELECTOR VALVE

George F. Quayle, Philadelphia, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Feb. 4, 1960, Ser. No. 6,739
9 Claims. (Cl. 121—40)

8. A fluid system comprising, a pair of rams, a source of fluid pressure, a passage from each end of each ram to said source of fluid pressure, a check valve for each passage, the application of fluid pressure to one passage to each ram unseating the check valve in said passage to allow fluid pressure to enter one side of the ram, a fluid actuated means for each ram moved by the fluid pressure applied to said one passage to unseat the check valve

in the other passage to the other side of the same ram for the return of fluid from the ram whereby to allow operation of the ram, and a movable control member selectively moved to control movement of said fluid actuated means of said rams to prevent unseating of a check



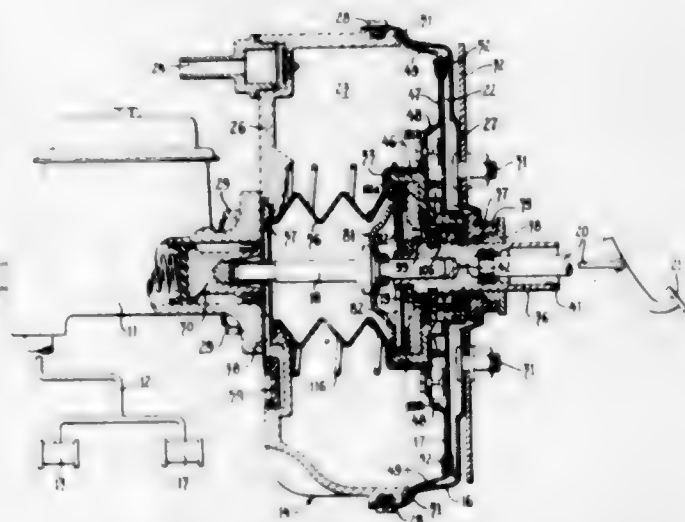
valve in a passage to one ram by one fluid actuated means while controlling the other fluid actuated means to allow unseating of a check valve in a passage to the other ram whereby to prevent operation of one ram and to allow operation of the other ram.

3,002,499

DIFFERENTIAL PRESSURE SERVO-MOTOR

Forrest O. E. Schultz, Owosso, Mich., assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Jan. 4, 1960, Ser. No. 285
6 Claims. (Cl. 121—41)



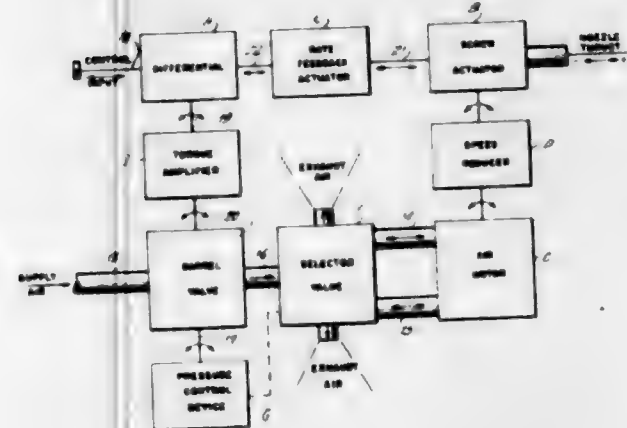
1. A differential pressure servo-motor comprising a housing having a movable wall therein forming a low pressure chamber in constant communication with a source of vacuum and a variable pressure chamber at opposite sides of said wall, a manually movable input member, a hydraulic master cylinder and piston means operatively connected to said wall and said input member for actuation thereby, a source of atmospheric pressure, valve means controlling communication between said chambers to inactivate said motor and between said atmospheric source and said variable pressure chamber to activate said motor, said valve means comprising a first seat element formed by said wall, a second seat member formed by said input member, a flexible, resilient valve element having a disk shape and having its outer circumference fixed to said wall, said element presenting a control passage therethrough, said valve element normally being engaged with said first seat member and disengaged from said

second seat member to maintain said chambers in communication with each other and isolated from said atmospheric source, said second seat member being manually movable in a first stage relative to said wall and at a predetermined rate into engagement with said valve element to isolate said chambers from each other, said second seat member being movable in a second stage to deflect a portion of said valve element adjacent said control passage out of engagement with said first seat at a relatively faster rate than said predetermined rate to rapidly admit atmospheric pressure to said variable pressure chamber for moving said wall.

3,002,500

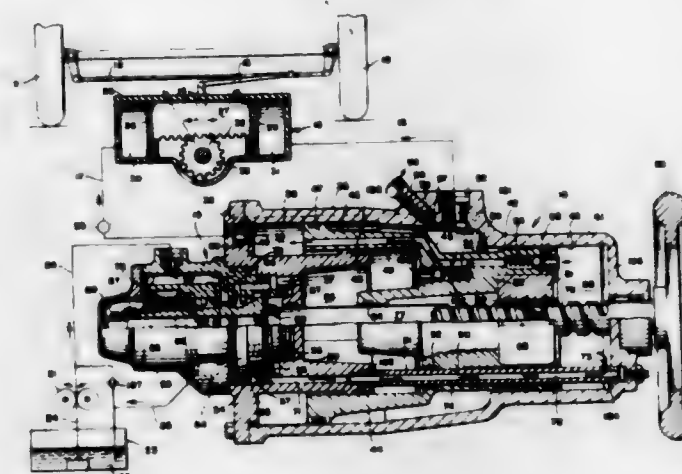
PRESSURE CONTROL SYSTEM FOR REGULATING THE POSITION OF A CONTROL SURFACE

Fred W. Disting, East Williston, and Torsten Lindbom, Blue Point, N.Y., assignors to Fairchild Stratos Corporation, a corporation of Maryland
Filed Jan. 27, 1958, Ser. No. 711,279
8 Claims. (Cl. 121—41)



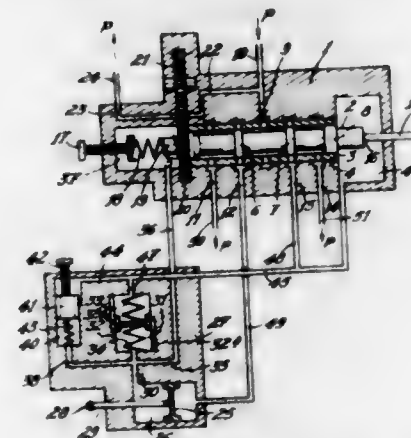
1. A control system comprising a movable element, a displaceable control member, means controlled by the adjustment of the control member for adjusting the position of said movable element, a linkage connected to said movable element, a linkage connected to said control member, and a feedback actuator interposed between said linkages, said feedback actuator including relatively movable piston and cylinder elements, one of said piston and cylinder elements being movable and connected to one of said linkages, the other of said piston and cylinder elements being stationary, mounting means for the stationary element, said cylinder defining a chamber on each side of said piston, a restricted passage connecting the chambers, resilient pressure-actuated means resiliently connecting the movable one of said piston and cylinder elements and the other of said linkages, and thereby also connecting the linkages, and means establishing communication between one of said chambers and said resilient pressure-actuated means so that said pressure-actuated means will be responsive to the pressure in said chamber in the event of an abrupt relative movement between said piston and cylinder, the movement from the linkage connected to the movable element to the other being transmitted through said resilient pressure-actuated means, whereby slow movement of said piston relative to said cylinder will permit the flow of fluid from one chamber to the other through said restricted passage and an abrupt movement of said piston with respect to said cylinder will cause the flow of fluid to act on the resilient pressure-actuated means to change the resiliency of the pressure-actuated means connecting said linkages.

3,002,501
REMOTE CONTROL HYDRAULIC SYSTEM WITH EMERGENCY MANUAL CONTROL
Oscar H. Banker, Evanston, Ill.
Filed Dec. 17, 1959, Ser. No. 860,164
10 Claims. (Cl. 121—41)



7. In combination, a housing having concentric, axially spaced cylindrical walls therein, a cover plate for one end of the housing having a cylindrical flange extending into the housing in radially spaced relation to one of said cylindrical walls and defining therewith an annular cylinder, a piston in the housing cooperating with the other of said cylindrical walls, said piston having a belled end extending into the annular cylinder and cooperating with the said other of said cylindrical walls and with the cylindrical flange and comprising an annular piston, a valve; a shaft extending through said housing, first-mentioned piston and end cover and connected to said valve; a threaded connection between said shaft and first-mentioned piston, means for preventing rotation of said first-mentioned piston and external means for rotating said shaft, said cover plate and housing having passages therein connecting the valve to opposite sides of said piston, and said shaft and valve having limited axial movement relative to the housing resulting from torque reaction produced by the threaded connection between the shaft and piston whereby to control the opening and closing of said passages by said valve.

3,002,502
REGULATING APPARATUS ASSOCIATED WITH HYDRAULIC SERVO-CONTROL AND FOLLOW-UP ACTING DEVICES
Joseph Szydlowski, Bordes, Basses-Pyrenees, France
Filed Feb. 12, 1958, Ser. No. 714,798
Claims priority, application France Feb. 19, 1957
2 Claims. (Cl. 121—42)

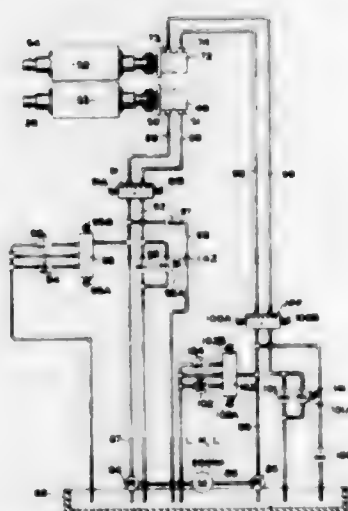


1. In an apparatus for regulating the fuel feed of an internal combustion engine and of the type comprising a distributing slide-valve adapted to feed with a liquid under

pressure, on the one hand, a servo-control piston mechanically connected to a regulation control device for said fuel feed and, on the other hand, a temporary follow-up acting piston hydraulically connected to said servo-control piston, according as the prevailing number of revolutions of the engine is lower or higher than the number of revolutions to be adjusted, the two faces of said temporary follow-up acting piston being interconnected through an adjustable restricted valve providing a laminar flow and being respectively connected to two chambers respectively housing the ends of said slide-valve; the improvement which comprises an assembly adapted to preset the value at which the fuel feed, and therewith the number of revolutions of the engine, is to be adjusted and bearing on the end of said slide-valve in the chamber receiving the pressure of the liquid interconnecting the servo-control and follow-up acting pistons, a member mounted in axial alignment with the slide-valve and rotatably driven by the engine, inertia masses pivoted on said member, acting upon the corresponding end of the slide-valve and housed in the other chamber, and means carried by said slide-valve and housed in said other chamber for rotatably driving said slide-valve at relatively slow speed under the action of the liquid which is stirred up by said inertia masses in said other chamber whereby the efficiencies of said inertia masses and slide-valve are increased.

3,002,503

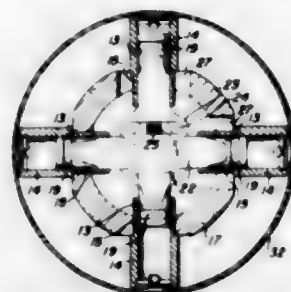
BRUSH UNIT AND DRIVE MEANS THEREFOR
John C. Bongiovanni, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed July 25, 1955, Ser. No. 524,115
4 Claims. (Cl. 121-45)



1. In control means for a reversible rotary fluid motor adapted to be connected in driving relationship to a rotary tool having a substantial angular momentum such as a rotary brush; a fluid pressure source for driving said motor, valve means adapted selectively to connect said pressure source to opposite sides of said motor to drive said motor in opposite directions, second valve means operable to divert fluid flow from said source away from said motor substantially to reduce the driving force applied to said motor, a flow control valve operable to constrict fluid flow from said motor to brake the latter, and automatic control means operative sequentially to actuate said second valve means to divert fluid flow from said motor, to actuate said flow control valve to constrict fluid flow from said motor to brake the latter, to shift said first valve means to connect said pressure source to the other side of said motor to reverse the direction of rotation of the latter, and to open said flow control valve and actuate said second valve again to direct full desired fluid flow from said source to said motor.

3,002,504
FLUID MOTOR

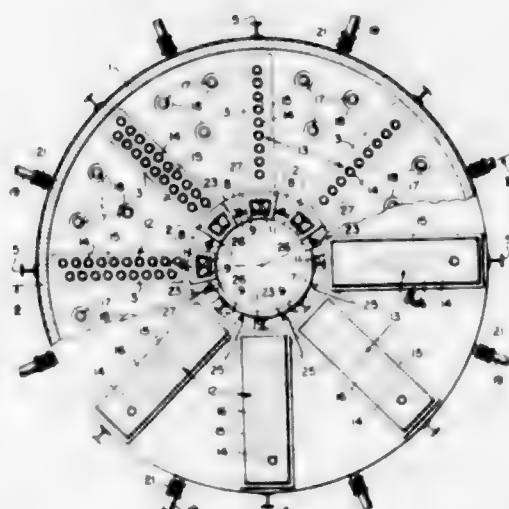
Clarence R. Taylor, 1632 Penfield Road, Rochester, N.Y.
Filed May 27, 1959, Ser. No. 816,303
25 Claims. (Cl. 121-59)



1. In a fluid motor, the combination comprising: a first member; a second member rotatably supported by said first member; oppositely disposed cylinders carried by one of said first and second members, said first and second members further having fluid passage means for successively introducing a fluid under pressure into said cylinders, and successively discharging the fluid therefrom; pistons reciprocally movable in said cylinders and connected to the other of said first and second members; and valve means fluidly connected to said fluid passage means for controlling the introduction of said fluid therein and selectively movable between a first position for controlling the rotation of said first member with second member fixed, and a second position for controlling the rotation of said second member with said first member fixed.

3,002,505
TUBE HEATER

Kurt William Fleischer, Philadelphia, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed July 28, 1958, Ser. No. 751,315
7 Claims. (Cl. 122-240)

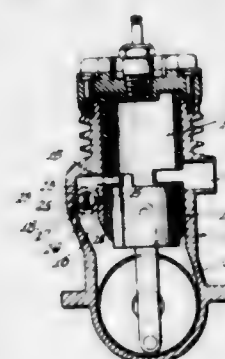


1. In a tube heater, the combination of a vertically extending stack, a plurality of vertically extending heating chambers shorter than said stack that are sector shaped in section surrounding said stack between the ends thereof, a burner in each chamber, means connecting said chambers to said stack at circumferentially spaced points around said stack with said chambers extending radially and with the apex of each chamber adjacent to the stack, said connecting means including means forming separate vertically elongated passages between said apexes and stack through which products of combustion can flow from a chamber to the stack, said passages extending for substantially the length of said chambers and equal distances above and below the vertical midpoint of said chambers,

a damper in each passage, each damper being so formed that the lower portion of a passage is open more than the upper portion, and means to adjust said dampers.

3,002,506
VALVE

Zenon R. Mocarski, 1329 Kosuth St., Bridgeport, Conn.
Filed Dec. 31, 1958, Ser. No. 784,375
13 Claims. (Cl. 123-73)

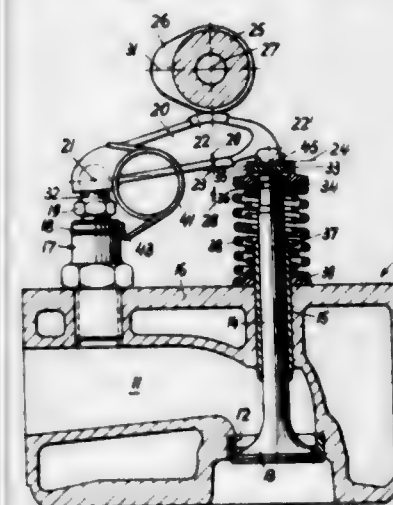


10. In combination with a reciprocating gasoline engine having a conduit communicating between a crankcase in which a combustible mixture is under pressure and a cylinder inlet, a valve adapted to be positioned in the conduit to control the passage of combustible mixture to the cylinder comprising a tubular member having a cylindrical bore, said member being formed with a slot on one side of the center line of the member and a second slot on the opposite side of the center line of the member; a plug closely fitting in the bore comprising a cylindrical rod having at least one groove formed in the periphery on one side of the center line of the plug and a second groove formed in the periphery on the other side of the center line of the plug; means for setting the plug to be either axially or rotatably moved to align the grooves and slots to open the valve or to be out of alignment to close the valve; and means forming a small passageway through the valve when it is closed to enable the engine to idle.

3,002,507
VALVE CONTROL MECHANISM FOR INTERNAL COMBUSTION ENGINES

Wolf-Dieter Benzinger, Stuttgart-Unterturkheim, and Hans-Otto Derndinger, Stuttgart, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Feb. 2, 1960, Ser. No. 6,162
Claims priority, application Germany Feb. 3, 1959
10 Claims. (Cl. 123-90)



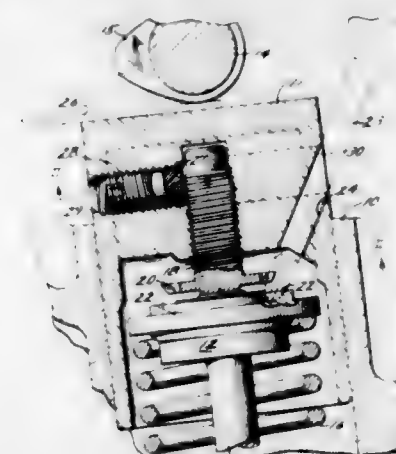
1. In an internal combustion engine, the combination comprising a cylinder head, a valve having a valve stem slidably mounted in said cylinder head and projecting

therefrom, a lever arm mounted above said cylinder head, pivot means adjacent one end of said lever arm for universal pivotal movement of said lever arm about a pivot axis and including a pair of complementary spherical faces, another end of said lever arm overlying said stem at a place of engagement for actuation thereof and having an arcuate convex face between its ends on its side remote from said cylinder head, the axis of curvature of said face being disposed approximately within a plane extending transversely to said stem through said pivot axis and said place of engagement, and a rotary cam mounted to engage said face and having its axis of rotation disposed within a plane substantially parallel to said stem and tangential to the path described by said axis of curvature, said cam and said convex face being profiled for essentially line contact.

3,002,508

ADJUSTABLE CAM FOLLOWER

Loren R. Barker, Peoria Heights, Dwight W. Parken, Washington, and Donald C. Kaiser, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Apr. 22, 1960, Ser. No. 24,071
5 Claims. (Cl. 123-90)



1. A cam follower of the kind described comprising a reciprocable cup-like member with an open end embracing a valve stem which has a spring seat adjacent its end, a closed end engageable by the lobe of a rotatable cam, a post threaded in the follower concentric and engageable with the valve stem, a flange on said post, and means to facilitate engagement of said flange for rotating said post to vary the effective length of the follower.

3,002,509

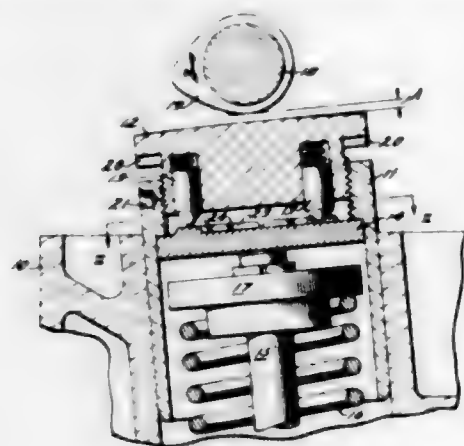
ADJUSTABLE CAM FOLLOWER WITH DETENT RETAINING MEANS

Robert T. Fitzgerald, East Peoria, and Jacob S. Saletski, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed May 2, 1960, Ser. No. 25,965
1 Claim. (Cl. 123-90)

A cam follower for use between the end of a valve stem and a rotatable cam for imparting opening movement to the valve which comprises, a cylindrical part surrounding the valve stem and having a disc-shaped removable thrust plate engageable with the end of the stem, and a member between the cam and the thrust plate threaded to said cylindrical part for adjustment to and away from the cam to provide operating clearance, detent means for holding said member in its adjusted position, said detent means comprising annularly arranged equally spaced notches formed in said thrust plate, and at least two spring biased plungers disposed in said member inwardly of its threaded connection with the cylindrical part in positions to enter

of said member, and means to facilitate engagement of said notches one at a time and alternately upon rotation

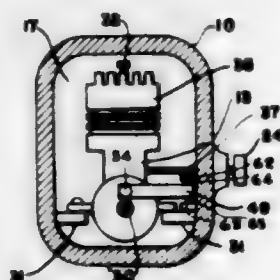


said cylindrical part and member with tools to effect relative rotation therebetween.

3,002,510 PORTABLE POWER DRIVEN TOOLS

Roman F. Wonneman, 9621 Harding Ave., Baltimore, Md., and Donovan S. Grove, Mount Vista Road, Bradshaw, Md.

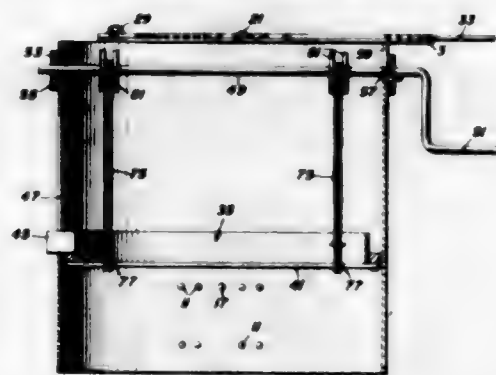
Filed Oct. 1, 1958, Ser. No. 764,609
3 Claims. (Cl. 123-195)



1. A hand operated portable tool comprising: a ventilated casing structure with a main hollow barrel housing portion adapted to be supported by the palm of one hand and having at one end thereof a driven rotatable shaft for driving an implement at the exterior of that end of the casing while attached to the shaft and reduction gearing on the inside of the casing alongside said end for driving said shaft, and a pendant hollow pistol grip handle housing portion at the opposite end of the main housing portion for holding the tool in operation solely by the grasp of the other hand, means for supporting a renewable supply of combustible fuel on the inside of the main housing above the pendant housing portion, a combustible fuel fired heat engine mounted on the interior of the main housing in spaced relation to the casing thereof at a region intermediate the fuel supply supporting means and the reduction gearing, said heat engine including a cylinder with a piston and a crank shaft connected with the reduction gearing, and ignition means for the fuel to the cylinder, an air line and a fuel supply line for the cylinder all located within the main housing and a fuel valve housing within the main housing between the fuel supply supporting means and the fuel supply line, with valves inside the main housing for control of the air to the air line and fuel from the fuel valve housing to the fuel line, with control extensions to the outside of said housing for manual control of the valves for air and fuel supply, and a receptacle for a starting battery and a starting switch located within the pendant housing portion with a control at the exterior of the pendant housing portion for starting connection with the ignition means for the cylinder.

3,002,511 PORTABLE GRILLS

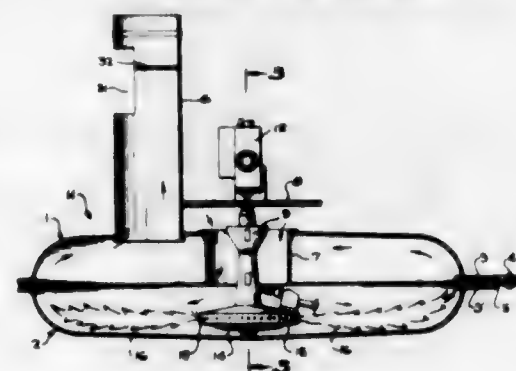
John Arcuri, 3112 16th St., Tampa, Fla.
Filed Dec. 1, 1958, Ser. No. 777,349
5 Claims. (Cl. 126-25)



5. In a portable grill, the combination of a casing having an open upper end and including a perimetric wall, a grate movable vertically in said casing and including a perimetric frame member slidably engaging the inner surface of said perimetric wall, a set of spaced grate bars extending transversely of and secured to the underside of said frame member, and a perimetric band secured to the inner surface of the frame member, said band being of a greater vertical dimension than the frame member and having its lower edge resting on said grate bars whereby the upper edge of the band is spaced above the upper edge of the frame member, said frame member constituting means for spacing said band inwardly from the perimetric wall of said casing, and means for supporting and moving said grate vertically in the casing.

3,002,512 GAS HEATERS OF THE OVERHEAD TYPE

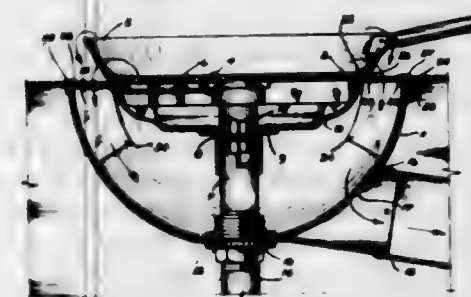
Edwin J. Cowan, 475 Gatewood Lane, Sierra Madre, Calif.
Filed Feb. 3, 1958, Ser. No. 712,845
5 Claims. (Cl. 126-91)



1. Heater comprising a bowl made of non-combustible material and having a generally flat bottom adapted to radiate heat, a burner head disposed adjacent said bottom and having burner ports directed in a substantially horizontal plane, thereby to emit burnable gas to form a flame superjacent a substantial area of said bottom, said area being substantially imperforate, thereby to preclude the introduction of excess air into the burner flame from beneath the flame, a cover substantially covering said bowl, and conduit means for admitting excess air into said bowl and terminating immediately above the level of said burner head, whereby substantially all of the excess air which mixes with the flame does so from above the flame said cover being spaced appreciably above the level of the termination of said excess air conduit means, there being a substantially unobstructed space above the level of said ports to a level substantially above the level of the termination of said excess air conduit means, whereby a layer of excess air is formed above the flame over substantially its entire extent to maintain the flame depressed toward said bottom.

3,002,513 BURNERS FOR COOKING RANGES AND VENTILATING MEANS THEREFOR

Merle R. Mornach, 2017 Quindaro, Kansas City, Kans.
Filed June 8, 1959, Ser. No. 818,936
3 Claims. (Cl. 126-299)



1. In combination with a cooking range having a top planar work surface extending substantially over the entire open cooking surface area and having at least one heating element positioned substantially in the plane of said work surface; means for withdrawing undesirable air borne components produced during the use of said element, said means including a cup-shaped first wall positioned beneath said element and having an upwardly extending edge portion terminating adjacent said element and substantially in the plane of said work surface, said first wall forming a chamber for receiving said element; a second wall spaced from said first wall and forming with said second wall a vent space therebetween, said second wall terminating in an upwardly extending edge portion; means retaining said second wall edge portion substantially in the plane of said top work surface and forming an entrance to said vent space located in the plane of said work surface and which at least partially surrounds said element, said second wall having an opening in one side thereof; a vent pipe communicating with said second wall opening, and suction means communicating with said vent pipe for causing undesirable air borne components to be drawn downwardly through said vent space and through said vent pipe to a place of disposal.

3,002,514 HIP SETTING PIN

William Minor Deyerle, 2222 Monument Ave., Richmond, Va.
Filed Jan. 24, 1958, Ser. No. 711,016
10 Claims. (Cl. 128-92)

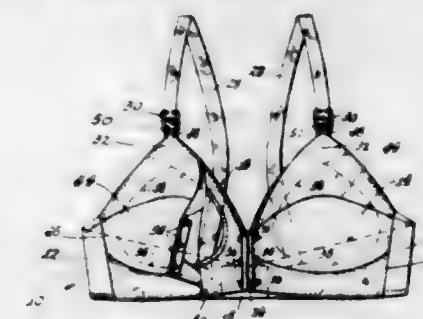


1. An instrument for use in the fixation of fractures in the upper region of the femur comprising an elongated fixation nail adapted to project through the distal surface of the femur and the neck of the femur approximately along the axis of the neck and into the head thereof to a selected distance from the proximal surface of the femur head spacing the end of the nail therefrom sufficiently to accommodate absorption at the fracture site, said nail having a base to project outwardly from the distal surface of the femur, a vertically elongated nail plate having a head portion at the upper end thereof adjacent said base of said nail and a depending leg portion

to be fixedly mounted on the distal surface of the femur shaft immediately below the trochanter, said nail being held by said nail plate against displacement from a pre-selected angular relation to the vertical axis of said nail plate to maintain a selected angle between the nail and the femur shaft, said head portion having a plurality of holes extending along axes parallel to and spaced symmetrically radially of the nail axis, and a plurality of fixation pins slidably extending through said holes to project inwardly of said nail plate through the neck of the femur and terminate in the proximal cortex of the femur head, said fixation pins being slidably held by the bounding surfaces of said holes to resist angular displacement of the fixation pins in the distal cortex from axes paralleling said nail axis, whereby said nail, nail plate and fixation pins coact to provide massive fixation of the fracture immobilizing the fracture against shearing and torsion forces while accommodating absorption at the fracture site and contact compression thereon.

3,002,515 NURSING BRASSIERE

Stanley Glogover, Brooklyn, N.Y., assignor to De Luxe Girdlecraft Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,334
2 Claims. (Cl. 128-460)



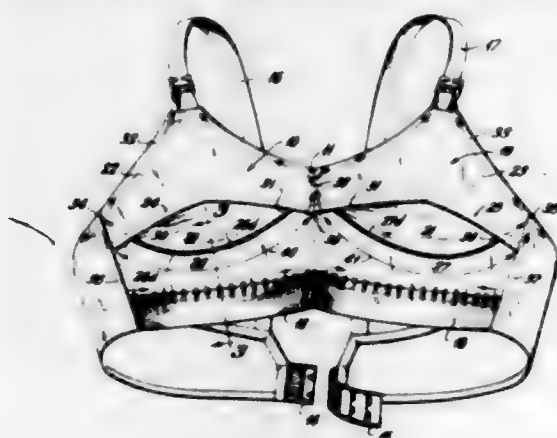
1. A nursing brassiere comprising a band adapted to encircle the body, said band including a pair of front, breast-supporting and encircling loops having distal and proximal sections, and including a front medial pillar joining the proximal sections of said loops fixedly to each other; shoulder straps attached to upper ends of the front loops and to rear portions of the band; a pair of breast cups permanently secured to the distal sections of said loops; cooperable separable fastening elements on the upper portions of the breast cups and front portions of the shoulder straps; and cooperable separable fastening elements on the front medial pillar and adjoining edges of the breast cups, said loops being characterized by lower and side inner edges together constituting a smooth and unbroken curved line and by a wide bust-supporting-lower section gradually merged with the said proximal and distal sections, said fastening elements enabling the cups to be detached and swung free of said loops except where secured to the distal sections of the loops, and the entire lower edges of the cups being at all times free and unattached whereby the cups when detached at the fastener elements may be swung completely about the said distal sections to fully expose the breasts of the wearer.

3,002,516 BRASSIERE

Raymond C. Cole, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed Mar. 13, 1959, Ser. No. 799,350
3 Claims. (Cl. 128-484)

1. A brassiere comprising a front section having a pair of breast receiving cups, each cup having an external panel of flexible substantially inelastic material covering

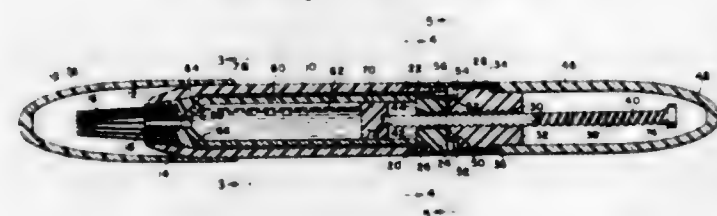
a portion only of the lower half of each breast cup, each said panel extending from the base of the breast cup to define upper edge portions joined to the breast cup approximately at the horizontal median line of the cup in the regions of the marginal sides and the center of said front section, and each panel having an intermediate con-



cave free upper edge portion extending arcuately downwardly below the horizontal median of said breast cup to provide an uplift at the lower portion of the lower half of the breast cup, each said panel also being attached to its respective breast cup along its marginal side and bottom edges, thereby forming an underbust-supporting sling anchored on the horizontal median of said cup and adapted to conform to varying bust shapes.

3,002,517 COSMETIC APPLICATOR WITH REPLACEABLE CARTRIDGE

Eva V. Pitton, 4165 Hill St., San Diego, Calif.
Filed Dec. 8, 1959, Ser. No. 858,271
2 Claims. (Cl. 132-85)



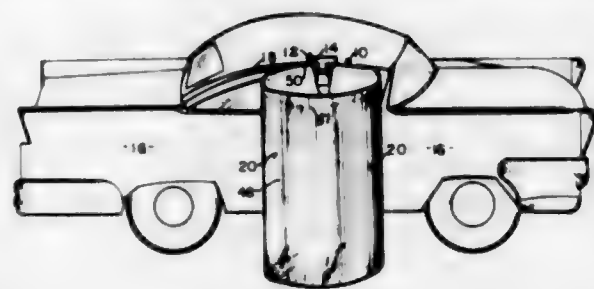
1. A cosmetic applicator, comprising: an elongated, cylindrical barrel having a brush fixed in one end thereof; a duct connecting the interior of said barrel with said brush; a tubular cartridge removably held in said barrel and having an aperture communicating with said duct; said cartridge being suitable for containing a substantially fluid cosmetic material; a piston axially slidably mounted in said cartridge; a connecting sleeve removably attached to the other end of said barrel; a nut element rotatably mounted in said connecting sleeve and held against axial movement thereby; an axially extending feed screw operatively engaged by said nut element; a guide block fixed in said connecting sleeve; said feed screw extending slidably through and being non-rotatably held in said guide block; said guide block bearing on and holding said cartridge in place; said feed screw engaging said piston to drive the piston into said cartridge and extrude said cosmetic material through said duct into said brush.

3,002,518 PORTABLE AND COLLAPSIBLE AUTO DRESSING SCREEN

Robert C. Maxwell, Lexington, Ga.
Filed June 24, 1957, Ser. No. 667,345
1 Claim. (Cl. 135-8)

A detachable support device for a portable and collapsible dressing arrangement which may be attached

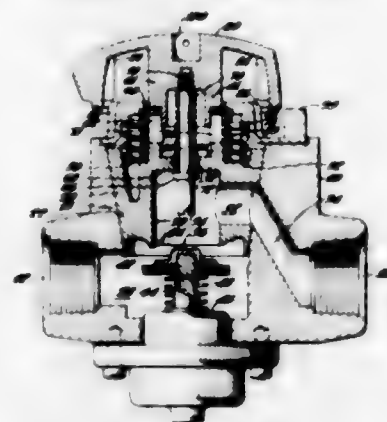
on the rain drip edge or other similar edge of a conventional automobile or other similar support, and wherein said collapsible dressing arrangement includes a flexible screen or curtain-like device such as a conventional, large beach towel having a hemmed edge along one side thereof, a substantially flat support plate member having an upper plate portion with a pair of retaining members thereon spaced from each other at the front thereof and each adapted to receive a support therein, said plate member having an attachment lip thereon protruding from the back thereof below said retainer members and being curved to fit over the drip edge, said lip thereby being adapted to be attached on and removed from the drip edge of an automobile or similar support, an elongated and detachable frame member of substantially arcuate formation adapted to form a continuous enclosure and



having two ends, each one being supported on said support plate, one end of said frame member being formed to detachably attach on said retainer member and the other end of said frame member similarly being formed for attachment on the other of said retainer members on said plate, both of the ends of said frame member being readily removable from said plate, said frame member when attached in place on said plate extending outwardly therefrom above the ground forming an arcuate support area protruding from said bracket and said frame being located above said lip on said plate thereby tending to pull said lip downwardly into the support edge when supporting a screen thereon, the bottom of said plate member extending below said attachment lip and being pushed against the automobile whenever there is the weight from a flexible screen or curtain member supported on said frame.

3,002,519 SAFETY CONTROL FOR GASEOUS FUEL BURNERS

John W. Wright, Long Beach, Wilbur F. Jackson, Compton, and Marvin M. Graham, Rolling Hills, Calif., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,899
6 Claims. (Cl. 137-66)

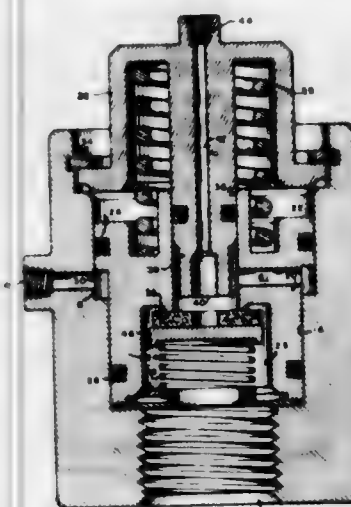


1. A fluid flow control valve comprising a casing having inlet and outlet passages intersected by a valve seat, a valve member rotatable on said seat and having a port cooperable with said passages for establishing an on and

an off position, said casing having an auxiliary passage cooperable with said port to establish a pilot position separate from said on and off positions, a stem projecting from said valve member and having a driving connection formed thereon, a cover member carried by said casing and apertured to receive said stem, a dial member for positioning said valve member having a driving connection cooperable with said stem driving connection for axial but relatively non-rotatable movement on said stem, an index member operatively engaging said dial and having a driving connection cooperable with said stem driving connection for axial but relatively non-rotatable movement on said stem, said index and cover members having interengaging surfaces operable to restrain rotation of said valve member from said pilot position to said off position, and biasing means for said interengaging surfaces and being yieldable upon axial movement of said index member for freeing said valve member for rotation from said pilot position.

3,002,520 SUPPLY AND EXHAUST VALVE WITH SNAP ACTION

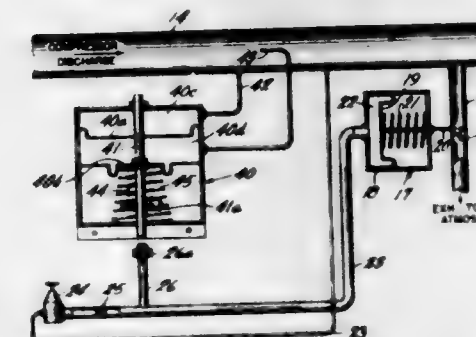
Robert J. Morse, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 860,302
11 Claims. (Cl. 137-102)



1. A fluid pressure governor comprising a body having inlet and control chambers and respective pressure ports, a movable member in said body having an axial bore therethrough and first and second motive areas respectively exposed to the pressures in said inlet and control chambers, said members having fluid port means affording a connection between said chambers and being movable between first and second positions, in response to the pressures received on said motive areas, a spring acting on said movable member in opposition to pressures acting on said motive areas, a member fixed in said body and having a free end axially received in said bore of said movable member and having an exhaust orifice therein, a single disc valve engageable with said fluid port means and said exhaust orifice, resilient means acting on said valve tending to move it in a direction closing said port means and orifice, said valve, port means and orifice being arranged so that when said movable member is in its first position said valve is engaged with said port means and disengaged from said orifice and vice versa when said member is in its second position, movement of said member between its positions enabling said valve to engage either said port means or said orifice to effect closing of one and opening of the other to admit or exhaust inlet pressure to or from said second motive area in said control chamber whereby upon such admission or exhaustion said movable member moves to its first or second position with a snap action.

3,002,521 SURGE CONTROLLER FOR COMPRESSORS AND PUMPS

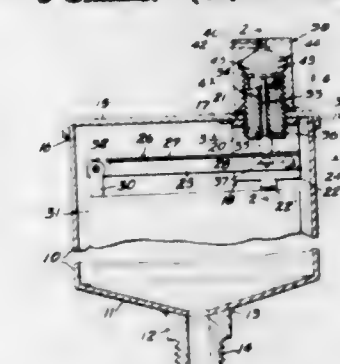
James C. Greenlee, Oakdale, and William C. Meyer, Central Islip, N.Y., assignors to Fairchild Stratos Corporation, a corporation of Maryland
Filed Oct. 9, 1956, Ser. No. 614,828
3 Claims. (Cl. 137-115)



1. A control device for relieving the pressure in a conduit comprising a biased closed relief valve in communication with the conduit, means controlling operation of the relief valve including a movable control member, means for displacing the movable control member to an operative position when the ratio of the velocity pressure head to the static pressure head falls below a safe value and away from the operative position when a sufficiently high ratio is maintained between the velocity pressure head and the static pressure head in the conduit, said means including a movable member connected to said control member and a movable member independent of said control member, means defining pressure chambers on both sides of said movable member connected to said control member, means for transmitting a pressure to one of said chambers which is a function of the static pressure head in the conduit, the pressure in said chamber exerting a force on said movable member which tends to displace the control member in a direction to effect opening of the relief valve, means for transmitting a pressure to the other of said chambers which varies with the velocity pressure head in the conduit, said other of said chambers being defined between said movable members, said pressure which varies with the velocity head exerting a force on the movable member connected to the control member which tends to displace the control member away from the operative position, and a spring which acts on the movable control member to displace it to a position which insures opening of the relief valve when the ratio of the velocity pressure head to the static pressure head falls below a safe value.

3,002,522 AIR VALVES

Glenn B. Klinefelter, Mountainside, N.J., assignor to Gorton Heating Corporation, Cranford, N.J., a corporation of New York
Filed Mar. 25, 1959, Ser. No. 801,909
5 Claims. (Cl. 137-202)



1. In an air valve of the class described, a discharge control means comprising a valve plug, said plug having

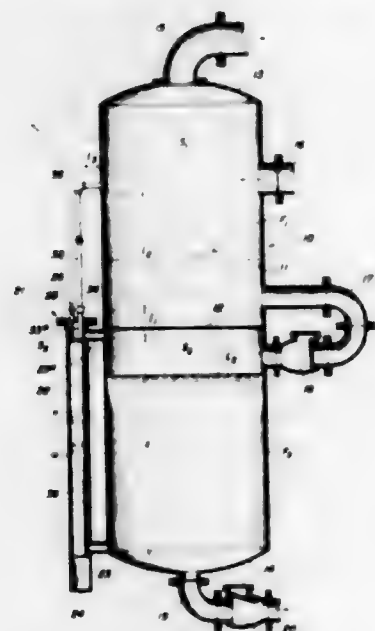
a bore opening through opposed ends thereof, an O-ring mounted in the lower portion of the bore, a valve stem arranged longitudinally of said bore, said stem being materially less in diameter than the diameter of said bore, a valve element fixed to the stem and operatively engaging said O-ring in checking discharge of air around the stem and through the bore of said plug, the upper end of the plug having a large diameter chamber, the bottom wall of said chamber being conical in form, a buoyant check valve normally seated on the bottom wall of said chamber and arranged below the upper end of said plug, a cap detachable with said plug and extending onto the plug to encircle the full depth of said chamber, said cap having a chamber larger in diameter than the diameter of the chamber in said plug and disposed above the upper surface of the plug, the outer end of the cap having a threaded vent aperture, an O-ring at the inner end of said vent aperture, and said buoyant valve operatively engaging said last named O-ring in checking discharge of air and/or water through the vent aperture of said cap.

3,002,513

CONTINUOUS VACUUM FILTRATION SYSTEM WITH FILTRATE INTERCEPTING APPARATUS

Leonard C. Rabbitts, Orillia, Ontario, Canada, assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed July 10, 1957, Ser. No. 671,034
6 Claims. (Cl. 137-205)



1. In a receiver apparatus operating in repetitive automatic fill and discharge cycles for discharging liquid from a vacuum system wherein liquid supplied under vacuum to an upper storage chamber gravitates through a transfer check valve into a lower storage chamber having pressure equalizing connection with the upper chamber so that the liquid will accumulate in the lower chamber to a point where float control means associated with the lower chamber become effective to interrupt the pressure equalizing connection while breaking the vacuum in the lower chamber thus causing said transfer check valve to close and allowing continued supply of liquid to accumulate in the upper chamber under the vacuum while the first mentioned accumulated liquid drains through a discharge check valve from the lower chamber into the atmosphere until the float control means restore the vacuum to both chambers whereby accumulation of liquid in the lower chamber repeats itself; improved float control means which comprise a float chamber arranged laterally of said lower chamber and communicating with the liquid as well as with the freeboard space in the lower

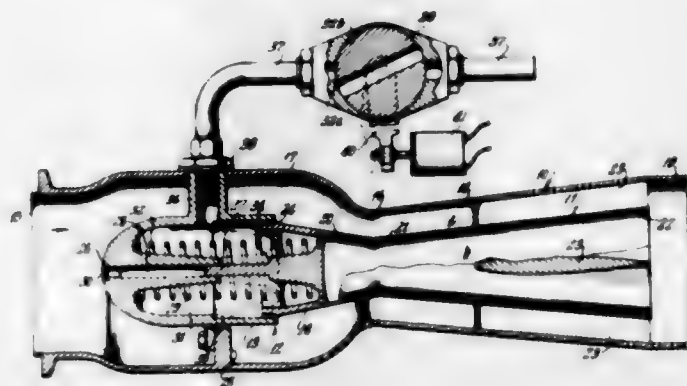
chamber; atmospheric relief valve means mounted in the top end of the float chamber comprising a relief valve member having a valve head and a stem depending therefrom and associated with a downwardly open end portion of said pressure equalizing connection extending through and mounted in said top end of the float chamber adjacent to said relief valve member and terminating in the freeboard space defined by the liquid level in the lower chamber; and a float body loosely guided vertically by said float chamber when rising and falling with the liquid in the lower chamber, and having a top end providing an upward closure face for sealingly engaging the mouth of said downwardly open end portion of the equalizing connection to close the same when the float body rises with said liquid, said top end of the float body also effective to actuate said relief valve member to break the vacuum in said lower chamber in timed relationship to the closing of said mouth, said float chamber having a removable top end plate end constituting with said relief valve member and with said downwardly open end portion of said pressure equalizing connection a removable sub-assembly unit, and wherein adjustment means are provided for varying the differential of length between said valve member and the associated end portion of the equalizing connection for varying said timed relationship between the breaking of the vacuum and the closing of the mouth.

3,002,524

FULL OR PARTIAL FLOW REGULATING DEVICE

Fred W. Dising, East Williston, and Torsten Lindbom, Blue Point, N.Y., assignors to Fairchild Stratos Corporation, a corporation of Maryland

Filed Apr. 29, 1957, Ser. No. 655,881
13 Claims. (Cl. 137-219)



1. A fluid flow regulating device comprising a source of fluid at a predetermined pressure, an outer venturi tube, an inner venturi tube, the upstream ends of said inner and outer venturi tubes communicating with said source of fluid, said inner and outer venturi tubes forming two passages, one through the inner venturi tube and the other between the inner and outer venturi tubes, a valve at the inlet end of the inner venturi tube, said valve in open position permitting the flow of fluid through both of said passages, and in closed position permitting the flow of the fluid through the passage defined between the inner and outer venturi tubes only, a variable pressure chamber for controlling the movement of said valve to open and closed positions, and means for varying the pressure within said chamber.

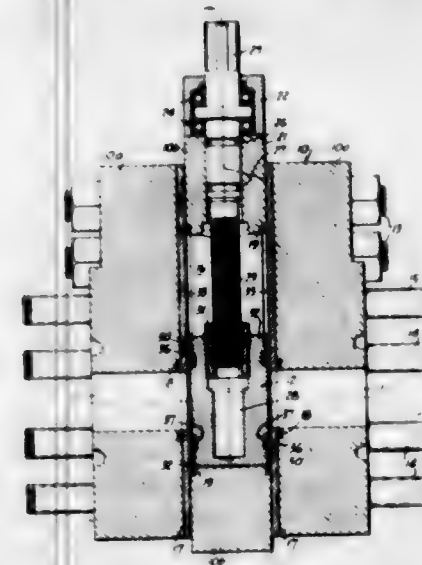
3,002,525

VALVE CONSTRUCTION

Marvin Henry Grove, 340 Hillside Ave., Piedmont, Calif.
Filed Oct. 9, 1959, Ser. No. 845,342
11 Claims. (Cl. 137-242)

9. In a valve construction, a body member having aligned flow passages, a gate disposed within the body and movable between open and closed positions relative to the

passages, annular sealing means interposed between the sides of the gate and the body for closed position of the gate and serving to form fluid tight seals between the gate

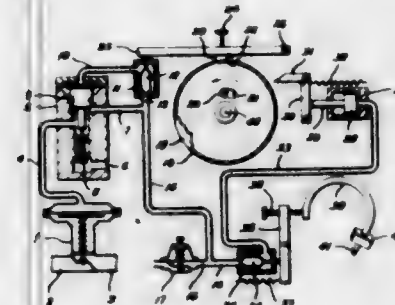


and the body, and annular wiping or scraper means interposed between the body and the gate, each wiping means being concentric with an associated sealing means.

3,002,526

WELL PRODUCTION CONTROLLER

Ben D. Terral, Houston, Tex., assignor to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed Aug. 10, 1959, Ser. No. 832,519
10 Claims. (Cl. 137-492.5)



1. In a controller for use with a gas lift well system having a production conduit and a lift gas conduit connected with the production conduit for the transfer of pressure lift gas thereto, the improvement which consists of intermittently operable means controlling admission of pressure gas to the lift gas conduit and comprising a motor valve, a timer therefor having a driven rotor connected with the motor valve and operated to open and close the same at spaced intervals, a driving rotor, a drive transmitting connection joining said rotors and incorporating lost motion means to free the driven rotor for forward rotation relative to the driving rotor and means effecting such forward rotation and responsive to a given pressure level within a selected part of the system.

3,002,527

HOT GAS RELIEF VALVE

Herbert F. Barilla, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 725,438
2 Claims. (Cl. 137-514)

1. In a hot gas relief valve having a valve body, inlet and outlet ports disposed normal to each other, a valve member, a valve seat in said inlet port and cooperable with said valve member, a guide for said valve member and a spring bias between said valve and said body, the combination with said valve of a hot gas deflection, shield-



expanded vibration damping portions formed in said wall of said shield and adapted for slidable engagement with an inner surface of said body.

3,002,528

CHECK VALVE GUIDE AND STOP

William R. Leisner, Milwaukee, Wis., assignor to Dynex, Inc., Pewaukee, Wis., a corporation of Wisconsin
Filed May 18, 1959, Ser. No. 813,799
1 Claim. (Cl. 137-539)



For a hydraulic pump, a valve unit comprising: a housing having an axial fluid passageway and also having a counterbore at one end thereof which defines a right angle shoulder between said passageway and said counterbore to form a valve seat at the juncture of said passageway and shoulder; a valve guide spacer assembly having an external diameter such that it fits snugly in said counterbore; said assembly comprising, a pair of relatively flat members arranged substantially at a right angle in respect to one another when viewed in cross section, said members having axially extending and circumferentially spaced legs arranged in parallelism to thereby define a central guide passageway therebetween, a central projection between the legs and forming a stop surface, a shiftable ball in said guide passageway, said legs abutting against said shoulder and located radially outwardly of said seat whereby said ball can be guided by said legs and bear directly against said seat when in the closed position and against said projection when in a fully open position; a spring in said guide passageway and mounted around said central projection for urging said ball against said seat, releasable snap ring means in said counterbore securing said assembly in said counterbore to prevent any axial shifting of said assembly, and an inlet cross port at the other end of said housing for admitting fluid to said axial passageway and through said assembly.

3,002,529

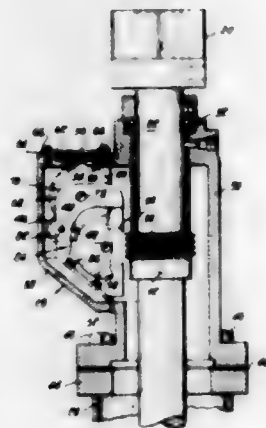
VALVE POSITION INDICATOR

Gilbert T. Bowman, Bethel Park, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 29, 1957, Ser. No. 655,643
7 Claims. (Cl. 137-553)

1. In combination with a manually actuated gear-driven operator equipped plug valve in which a predetermined large number of revolutions of the input shaft of the

operator are required to effect a quarter turn of the valve plug and having a sealed housing for the operator provided with an upwardly facing transparent window, a reversible indicating plural order revolution counter mounted on the valve operator beneath said window in a

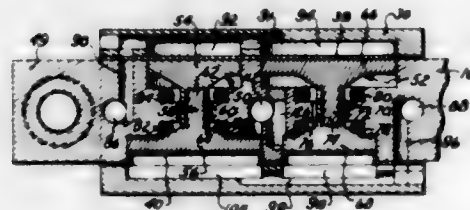


position visible through such window and geared to the input shaft thereof by a ten to one reduction gear train to count the revolutions of and thereby indicate the position of said shaft relative to one of its limit positions as determined by the open and closed positions of said valve.

3,002,530

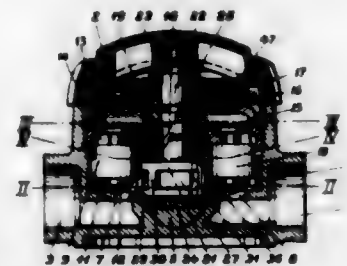
PNEUMATIC POPPET VALVE

Joseph P. Gibbs, Pasadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Jan. 27, 1958, Ser. No. 711,462
6 Claims. (Cl. 137-594)



1. An apparatus for selectively applying a plurality of pressures to a pressure responsive transducer including a block, a chamber within the block adapted to hold a transducer, three pressure inlets coupled to said block, a valve assembly disposed in said block between said pressure inlets and said chamber, said block having passageways interconnecting the pressure inlets and the valve assembly and passageway interconnecting the valve assembly and the chamber, said valve assembly including a pair of compound poppet valves, each compound poppet valve having a pair of heads of unequal surface area, the heads of the compound poppet valves having the largest surface area being disposed in opposing relationship, means to apply actuation pressure to one head of each compound poppet valve to set both valves in one position, means to apply actuation pressure to the other head of each compound poppet valve to set both valves in a second position, said valves being set to opposite positions by the application of actuation pressure to both heads of both valves whereby each different setting of said valves admits one or more of said three pressures to said chamber.

3,002,531
MIXING VALVES
Ilmari Katva, Hillerød, Denmark, assignor to Poul Robert Broen, Copenhagen, Denmark
Filed Jan. 2, 1959, Ser. No. 784,770
Claims priority, application Denmark Jan. 9, 1958
12 Claims. (Cl. 137-597)

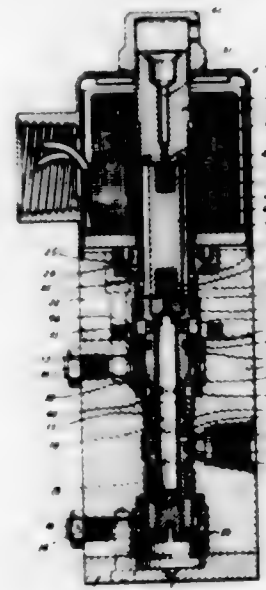


1. A mixing valve for hot and cold water or water and steam having two inlets and at least one outlet and having a valve body arranged in each inlet, said valve bodies being operable in unison by means of a common operating member, said mixing valve further comprising a rotatable cylindrical plug having a port in its circumferential surface, characterized in that each valve body is constructed as a slide having part of its surface engaged with the portion of the circumferential surface of said plug in which said port is provided.

3,002,532

SOLENOID ACTUATED VALVE

Carl M. Carlson, 344 12th St., Cresskill, N.J.
Filed Aug. 31, 1959, Ser. No. 837,168
23 Claims. (Cl. 137-623)



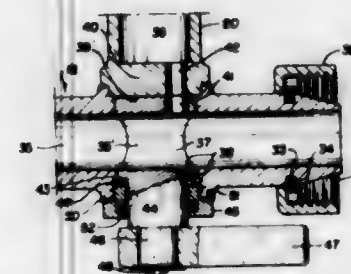
1. A valve structure for conducting a medium comprising a body, a cavity formed within said body, a second cavity formed in said body as a continuation of said first cavity, a spool disposed within said first cavity and movable therein toward and away from said second cavity, sealing means mounted upon said spool sealing said first and second cavities from each other, an inlet port formed in said body communicating with said first cavity, an outlet port formed in said body communicating with said first cavity, exhaust means enabling said first cavity to be exhausted by communication therewith, second exhaust means enabling said second cavity to be exhausted by communication therewith, a central bore formed in said spool, internal port means communicating said central bore with said first cavity, second internal port means communicating said central bore with said second cavity, a plunger disposed within said second cavity and movable therein for alternately blocking said second exhaust and said second internal port means, means for moving said

plunger within said second cavity, and cooperating seals formed on said spool and the walls of said first cavity whereby upon movement of said plunger to block said second exhaust means the medium is conducted into said second cavity through said first and second internal port means and said central bore and said spool is moved to allow the medium to be conducted simultaneously through said inlet port to said outlet port.

3,002,533

VALVED URN SHANK

Frederick F. Gunther, Cheyenne, Wyo., assignor to Wyott Manufacturing Company, Inc., Cheyenne, Wyo., a corporation of Wyoming
Filed Aug. 13, 1958, Ser. No. 754,868
4 Claims. (Cl. 137-625.47)



1. A valved T-shaped urn shank adapted to be mounted at the base of an urn to outstand therefrom and to hold a faucet and a glass gage, comprising in combination therewith, a T-shaped member having opposing aligned arms and a central leg outstanding therefrom with communicating passageways through the arms and the leg with one arm being connected to the urn, the other arm being connected to the faucet and the leg being connected with the glass gage, a valve socket traversing the arm passageway at said juncture having its axis aligned with the leg passageway, a cylindrical plug rotatably mounted in the socket having a transverse passageway therethrough in registration with the arm passageway when the plug is rotated to a first open position and to a second open position 180 degrees therefrom and to close off the arm passageways when the plug is rotated to a closed position 90 degrees from the open position, a longitudinal passageway through the end of the plug completely offset from the plug axis and extending from the transverse passageway to the leg passageway, a block in the leg passageway including an orifice therethrough and cut-off means associated with the plug adapted to provide communication through the longitudinal passageway and block orifice when the plug is at one open position and to close off such communication when the plug is rotated to another open position.

3,002,534

REINFORCED THERMOPLASTICS

Robert L. Noland, Norwalk, Calif., assignor, by mesne assignments, to Reinhold Engineering & Plastics Co., Inc., Marshallton, Del., a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,730
4 Claims. (Cl. 138-141)

1. A glass reinforced thermoplastic pipe which comprises: an inner cylinder of a thermoplastic material; a plurality of substantially parallel and axially disposed resin-impregnated glass filaments affixed directly to the outer wall of said thermoplastic cylinder by a cured bonding material forming an interface therewith, said bonding material comprising said thermoplastic material and said resin of said resin-impregnated glass filaments said thermoplastic material and said resin being uniformly admixed in said bonding material, said axially disposed glass filaments and said outer wall being juxtaposed, said glass filaments having a substantially lower coefficient of expansion than said thermoplastic material and

being so bonded to the inner cylinder as to exert a compressive force on the thermoplastic material as a thermal rise occurs to thereby place the inner cylinder in compression.

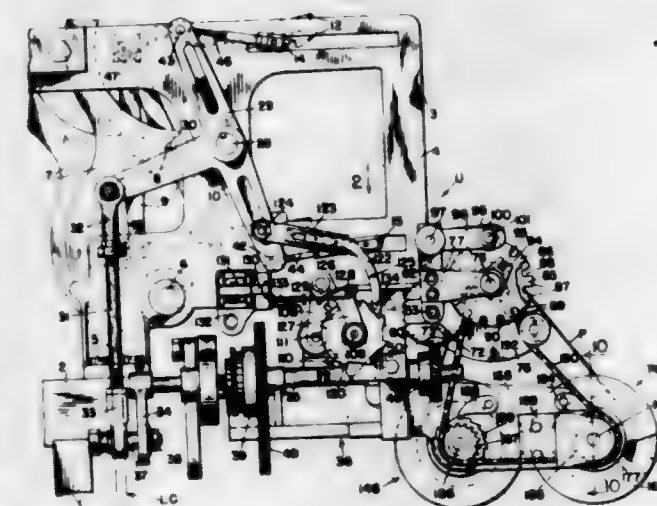


sion and the glass filaments in tension; and a peripheral winding of glass fibers around said longitudinal glass filaments to withstand hoop tensile stresses.

3,002,535

PATTERN REVERSING MECHANISMS FOR DOBBIES

Carl P. Bergstrom, Millbury, and Albert Cederlund, Worcester, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 28, 1960, Ser. No. 25,364
34 Claims. (Cl. 139-324)



1. In a loom dobby having a pattern cylinder for a paper pattern having perforations therein, reversibly rotatable indexing means slidably mounted on a shaft common to said cylinder to effect rotation thereof, oppositely turning force applying means for independent engagement with said indexing means to cause reverse rotation thereof, drive means for said force applying means, control means to effect sliding of said indexing means incident to said reverse rotation, movable shield means for said control means to prevent and permit operation thereof, pattern controlled indicating means cooperating with certain of said perforations to effect movement of said shield means, and actuating means for said control means to actuate the latter when said shield is moved due to indication by certain of said perforations to cause sliding of said indexing means from operable connection with one of said force applying means to operable connection with another of said force applying means whereby rotation of said indexing means is effected in a direction reverse to that when said indexing means was rotated by said one of said force applying means.

3,002,536

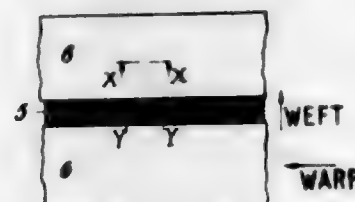
MECHANICAL BELTING

Witold Lord, Rochdale, and Ronald Steele, Saddle, Rochdale, England, assignors to Dunlop Rubber Company Limited, a company of Great Britain

Filed Jan. 28, 1960, Ser. No. 5,233

Claims priority, application Great Britain Jan. 30, 1959

6 Claims. (Cl. 139-419)



1. A divisible belting fabric comprising a plurality of longitudinal compound weave belting portions having weft threads in a plurality of planes, and a plurality of longitudinal dividing portions adapted for cutting longitudinally of the fabric to sever the weft threads and divide the fabric, at least two pairs of warp threads in each dividing portion, said pairs of warp threads being "leno" woven and twisted between adjacent weft threads to form loops and said weft threads passing through said loops in each of said pairs of warp threads.

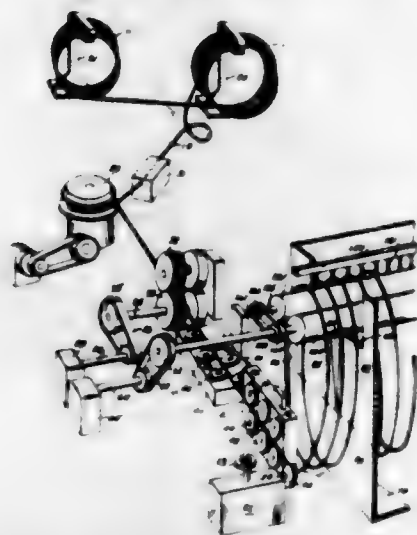
3,002,537

MACHINE FOR CONTINUOUSLY TREATING HEAVY WIRE AND SIMILAR STRIP MATERIAL

Herbert Kenmore and Walter J. Manson, New York, N.Y., assignors, by mesne assignments, to National Standard Company, Niles, Mich., a corporation of Delaware

Filed May 27, 1954, Ser. No. 432,774

2 Claims. (Cl. 140-1)



1. In an apparatus for treating heavy gauge wire having a cross sectional area at least equivalent to that of a round wire with a diameter of 0.075" comprising an elongated wire propelling and straightening device which comprises a plurality of generally aligned wire engaging elements including at least two opposed gripping rollers, means for driving at least one of said gripping rollers to propel the wire through the other generally aligned wire engaging elements, a wire curving device comprising a curving roller adjacent the delivery end of said wire propelling and straightening device, the periphery of said curving roller being somewhat out of alignment with the wire engaging elements of the wire propelling and straightening device in a vertical direction so as to impart a definite curvature to wire coming from the latter and being also out of alignment with said wire engaging elements in a horizontal direction so as to impart a definite pitch to the curved wire, the improved construction comprising a pair of rotatable elongated parallel

supporting rollers with their axes in the same horizontal plane each having one end thereof in the region of said curving roller and extending in parallel vertical planes which are at substantially right angles with respect to the path of the wire passing through the propelling and straightening device so as to cooperatively coact with said curving means to receive said wire curved by said curving device in the form of a helix and to support a number of the individual coils of said helix in a suspended position, means to rotate said elongated supporting and suspending rollers at the same peripheral speed in the same direction, said last named means being distinct from said means for rotating the gripping roller, and at least one bath surrounding a substantial part of the suspended portions of a number of the coils of the helix held on the parallel horizontal supporting rollers.

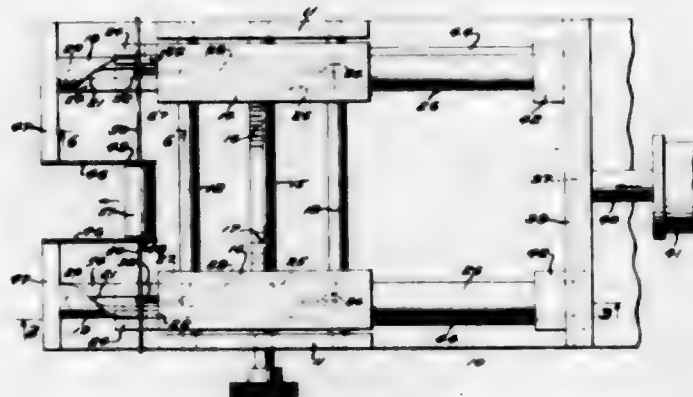
3,002,538

COMPONENT LEAD FORMING APPARATUS

Delbert E. Wilson, Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 21, 1957, Ser. No. 691,508

10 Claims. (Cl. 140-104)



3. An apparatus for forming eyelets in the terminal extremities of twin-lead electrical components comprising, a pair of forming tools for receiving respective leads of the electrical component, each forming tool defining a generally cylindrical passage therein, each forming tool also defining an open ended slot extending generally axially of and opening radially into the forming tool passage, one wall of each slot extending substantially axially of the associated passage and the other forming a helix of approximately 180° about the associated passage, rigid movable support means, said support means including a pair of cylindrical heads each axially aligned with a respective forming tool passage and each slidable freely and with small clearance within its passage, a bending pin mounted on one end of each head centrally thereof, each of said bending pins being of such a diameter as to be freely receivable with small clearance within its associated passage with a turn of a lead wrapped thereabout, said heads each being engageable with a respective lead when the lead is positioned in its associated forming tool slot to move the leads through the forming tool passages whereby said walls of said forming tools bend the leads about said pins.

3,002,539

DEVICE FOR STRAIGHTENING WIRE LEADS OF ELECTRICAL COMPONENTS

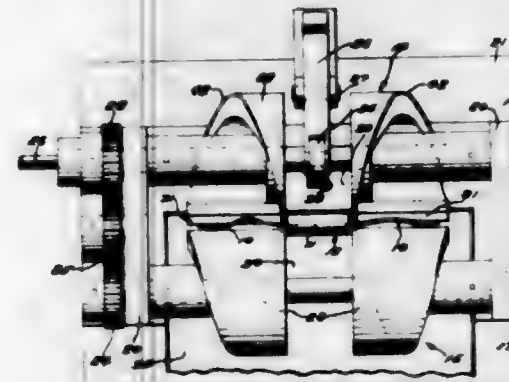
Albert F. Ras, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 13, 1957, Ser. No. 696,155

6 Claims. (Cl. 140-147)

1. In a device for straightening wire leads of electrical components, a pair of members having lead straightening surfaces engageable with a lead of an electrical compo-

nent, means for mounting said members for movement relative to each other along predetermined paths with said lead straightening surfaces in engagement with opposite sides of a lead placed therebetween, said lead straightening surfaces varying in length in a direction parallel to the lead and having predetermined relatively short portions for simultaneously engaging and straightening a



short portion of the lead adjacent the component and having successive portions increasing progressively in length to progressively engage and straighten successively longer portions of the leads, and means for effecting relative movement between said members to cause the lead to be rolled between said straightening surfaces and progressively straightened therebetween.

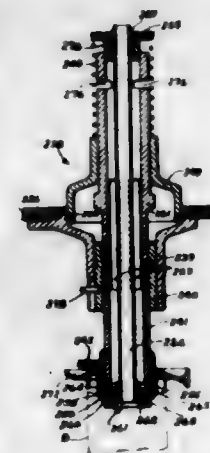
3,002,540

FILLER UNIT FOR A CONTAINER FILLING MACHINE

Charles Z. Monroe, Detroit, and Harry B. Egleston, Livonia, Mich., assignors, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan

Original application July 16, 1957, Ser. No. 672,200, now Patent No. 2,957,289, dated Oct. 25, 1960. Divided and this application Apr. 24, 1959, Ser. No. 808,854

6 Claims. (Cl. 141-308)



1. A filler unit for a container filling machine comprising, in combination, a supply tank, a fixed cylinder sealingly mounted in an aperture in the bottom of said supply tank, a displacement cylinder adapted to telescope within said fixed cylinder and to trap fluid within said cylinders, an operating sleeve having a lateral enlargement intermediate the ends thereof, said operating sleeve being slidably mounted within said cylinders for upward and downward movement therein, means for moving said operating sleeve upwardly and downwardly within said cylinders, upward movement of said operating sleeve lifting said displacement cylinder through engagement of the same by said lateral enlargement, means for effecting downward movement of said displacement cylinder upon downward movement of said operating sleeve, means defining at least one aperture in that portion of said operating sleeve within said cylinders establishing communica-

tion between the latter and the interior of said operating sleeve, means defining at least one metering vent in that portion of said operating sleeve outside said cylinders but within said supply tank and also establishing communication between the latter and the interior of said operating sleeve, a dispensing valve at the lower end of said operating sleeve, and an air exhaust tube running longitudinally of said operating sleeve.

3,002,541

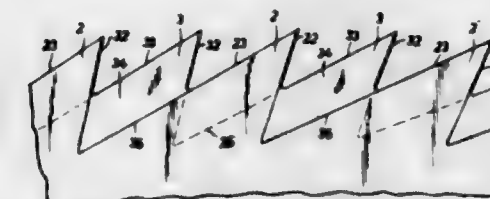
SAW BLADE

Oskar Wellmer, Zurich, Switzerland, assignor to Hintermeister & Co., Zurich, Switzerland

Filed May 19, 1958, Ser. No. 736,122

Claims priority, application Switzerland June 12, 1957

1 Claim. (Cl. 143-133)



A saw blade comprising spaced cutting teeth having a front surface, a back surface and a cutting edge formed by the intersection of said surfaces, the side faces of the teeth being ground-off alternately on opposite sides of successive teeth, the ground portion of each tooth being limited by the front face and the back face of said tooth, an extension of the front face of the next following tooth and by a line forming substantially the extension of the line of intersection of the back of the preceding tooth with the respective side face of the saw blade.

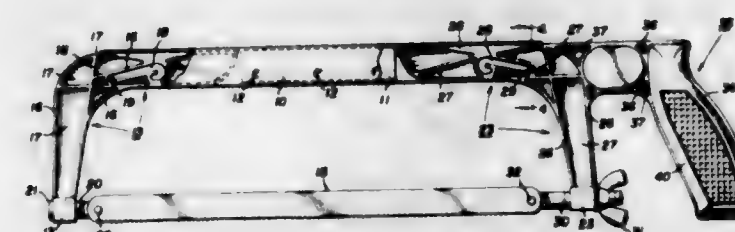
3,002,542

HACKSAW CONSTRUCTION

Raymond C. Dreier, 6930 South Shore Drive, Chicago, Ill.

Filed Oct. 29, 1959, Ser. No. 849,547

5 Claims. (Cl. 145-34)



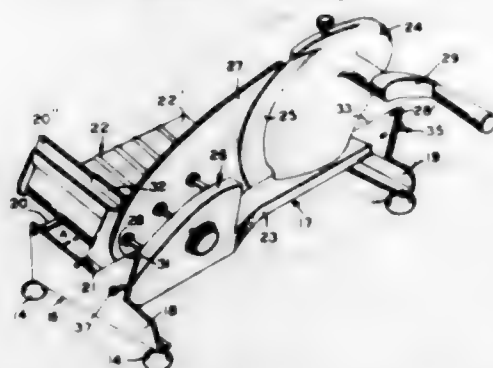
1. In a saw blade holder adapted to accommodate blades of various lengths, a pair of cooperating frame members movable longitudinally with respect to each other, one of said frame members being provided with a longitudinally extending slot closed at the opposite ends thereof and the other of said frame members being equipped with a pin extending transversely through said slot and being movable longitudinally therealong between a first position in substantial abutment with one end of said slot whereas said saw blade holder is adjusted to accommodate saw blades of one length and a second position in substantial abutment with the other end of said slot whereat said saw blade holder is adjusted to accommodate saw blades of another length, said slot having a main portion inclined with respect to a line through the ends of said slot and having an offset portion at one end of said main portion to provide communication between said ends of said slot, said frame members having portions thereof in substantial abutment when said pin is at either end of said slot so as to constrain said frame members against relative angular movement about the axis defined by said pin.

3,002,543

FOLDING SLICING MACHINES

Harry Weiner, Newburgh, N.Y., assignor to General Slicing Machine Co., Inc., Walden, N.Y., a corporation of New York

Filed Feb. 4, 1960, Ser. No. 6,812
3 Claims. (Cl. 146-102)



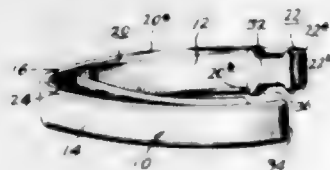
1. In a portable food slicing machine, a first unitary structure comprising an elongated, comparatively narrow auxiliary base member, a cutting blade supported for movement at a predetermined position atop said auxiliary base member and a gage plate mounted atop said auxiliary base member in advance of said blade, a main rigid unitary comparatively wide base frame structure presenting a track member along said auxiliary base member, for supporting a food carriage for slidable movement therealong, to and fro past the cutting edge of said blade; said first unitary structure being swingably mounted on said main base frame structure about an axis parallel to the line of said track member and directly above said auxiliary base member; the center of gravity of said swingable structure, being always within and over the confines of said main base structure; the planes of said blade and gage plate being upright and parallel to each other and to said track member, means releasably securing said swingable structure against swinging movement; said swingable structure when released, being capable of being swung to a position where said blade and gage plate lie substantially horizontally over at least the major part of said main base frame structure and means on said main base frame structure for supporting said swingable structure when it is so swung; such supporting means being at a region away from said auxiliary base member.

3,002,544

RIB LOCK WASHER

Rudolph Buechting, Glenside, Pa., assignor to Philadelphia Steel and Wire Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed June 20, 1958, Ser. No. 743,242
1 Claim. (Cl. 151-36)



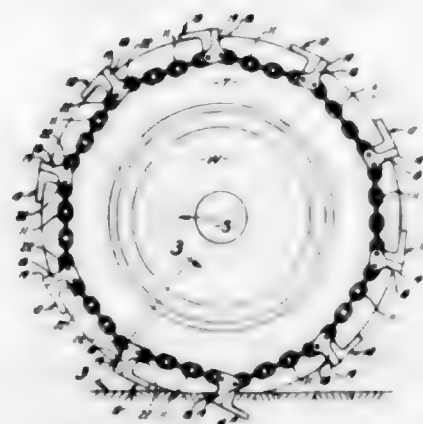
A split spring lock washer comprising a helical segment of substantially 360°, substantially flat axially directed faces of substantial width on said segment, said segment having inner and outer curvilinear peripheries substantially perpendicular to said axially directed faces, and substantially pointed ribs of tapered cross-section spacedly projecting from each said axially directed face at both inner and outer said peripheries at the extremities of said flat axially directed faces, the inner one of said ribs having a greater height than that of the outer one of said ribs, and said flat axially directed faces being serrated intermediate said inner and outer ribs.

3,002,545

TRACTION DEVICE

Ray B. Newcomb, Garrettsville, Ohio, assignor to Positive Traction, Inc., Parkman, Ohio, a corporation of Ohio

Filed Nov. 24, 1959, Ser. No. 855,191
11 Claims. (Cl. 152-225)



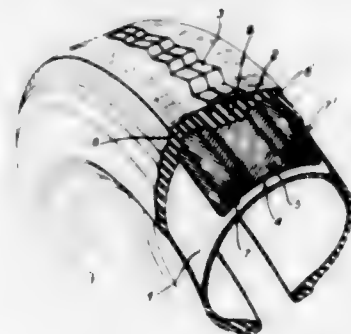
1. Traction apparatus for an automotive vehicle tire adapted to be held thereon by substantially oppositely acting tension means and comprising a tread portion having a substantially straight forward edge parallel to the axis of the wheel and a substantially flat face adapted for mounting in approximately tangential contact with the tread of said tire, a pair of laterally spaced control arms extending radially inwardly from and substantially normal to said flat face of said tread portion and adjacent said forward edge, and each having a pair of separate and circumferentially spaced pivotal connection means spaced radially inward from the forward portion of and in fixed relationship with said flat face for connecting the tension means to said traction apparatus.

3,002,546

REINFORCED TIRE CONSTRUCTION

Hans G. Lümmer, Waiblingen, Germany, assignor to Friedrich K. H. Nallinger, Stuttgart, Germany

Filed Dec. 2, 1958, Ser. No. 777,710
Claims priority, application Germany Dec. 10, 1957
5 Claims. (Cl. 152-361)



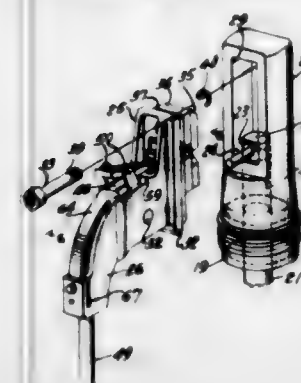
1. A pneumatic tire for vehicles of all types, especially motor vehicles, comprising a body portion, a tread portion having lateral tire shoulders, and reinforcing insert means arranged between said body portion and said tread portion, said insert means comprising a fabric strip having a radially innermost portion thereof of a width extending from shoulder to shoulder, said fabric strip further comprising an insert portion including a plurality of folded-over portions thereof within the region of each of said tire shoulders, the lengths of said folded-over portions extending in the circumferential direction of said tire, said folded-over portions being superposed with respect to said innermost portion and to each other in directions radially outward of said innermost portion, the widths of said folded-over portions progressively decreasing in said last-named directions.

3,002,547

TERMINAL APPLICATOR

Harold E. Cootes, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Filed Aug. 18, 1958, Ser. No. 755,512
8 Claims. (Cl. 153-1)



1. An applicator for serially applying connectors in strip form to wire conductors in response to the repetitive strokes of a power driven ram comprising a yoke attachable to the ram power unit so that the ram reciprocates in the slot thereof, a frame carrying a die set for detaching the lead connector from the strip and applying it to a wire and a feed mechanism for advancing the strip to said die set, means for releasably securing said frame to the yoke with the die set disposed in said slot, and means operatively connecting the die set and the feed mechanism to the ram for repetitive actuation thereby.

3,002,548

POWER ACTUATED TIRE REMOVING DEVICE

Don J. Marshall, 3816 Granada Ave., Baltimore, Md., assignor of fifty percent to Marshall H. Wentz, Baltimore, Md.

Filed Mar. 25, 1959, Ser. No. 801,913
1 Claim. (Cl. 157-1.26)



A power-operated tool arrangement of the portable type for breaking the bond between an annular member and tire having a pair of spaced beads mounted on said annular member and for removing said tire from said annular member, said annular member having an integral bead-engaging flange on one edge and a hook flange on the opposite edge thereof, comprising, a substantially triangular shaped clevis bracket having a tubular passage extending therethrough at one end of said bracket, an adjustable rod slidably received in said tubular passage of said bracket and extending therethrough, said rod having a hook on one end providing a mating abutment for engaging said hook flange on said opposite edge of said annular member, means for releasably locking said rod in an adjusted position in said tubular passage of said bracket, said bracket having a yoke spaced from said tubular passage, an actuator motor assembly pivotally

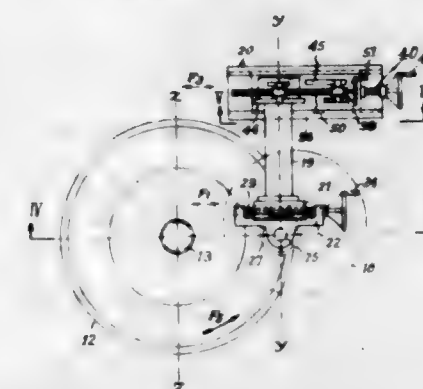
mounted in said yoke and having a thrust transmitting member connected thereto for extension and retraction thereby, and means including a cam wedge positioned at the opposite end of said thrust transmitting member for engagement with the bead-engaging flange of said annular member, said bracket and rod being arranged to form a substantially rigid right triangle structure, with the three vertices of the triangle structure being positioned at the pivotal axis of the actuator motor assembly; the center of said hook of said rod; and the point of intersection of two lines perpendicular to each other, one passing through said pivotal axis of said actuator motor assembly and the other through said center of said hook along the longitudinal axis of said rod, the line of thrust of said thrust transmitting member and cam wedge being positioned within said vertices of said triangular structure, with the line of resistance to thrust of said bracket extending through said pivotal axis of said actuator motor assembly and said center of said hook; the center of mass of said actuator motor assembly and the line of thrust of said thrust transmitting member being located on opposite sides of the pivotal center line of said pivot of said clevis bracket.

3,002,549

TIRE RETREADING SYSTEM

Gabriel Xavier Roger Boussu, Chamallieres, and Louis Henri Noël Saint-Frisson, Clermont-Ferrand, France, assignors to Michelin & Cie, Clermont-Ferrand, Puy-de-Dome, France

Filed Feb. 9, 1960, Ser. No. 7,654
2 Claims. (Cl. 157-13)



1. Apparatus for removing tread bands and tread reinforcements from tire casings comprising a turntable, means for supporting said turntable for rotation about its axis, means for rotating said turntable, means for supporting a tire casing in fixed relation to said turntable in substantially concentric relation to said axis, cutter means movably mounted adjacent to said turntable, and means for moving said cutter means toward and away from said turntable and transversely thereof to engage said tire casing in cutting relation thereto, said means for moving said cutter means including a platform, a supporting member extending from said platform and pivotally connected at one end to said platform, an arm secured to said cutter means and fixed to said supporting member and extending substantially parallel with the axis of pivotal movement of said supporting member, and means for adjusting said arm pivotally relative to said platform.

3,002,550

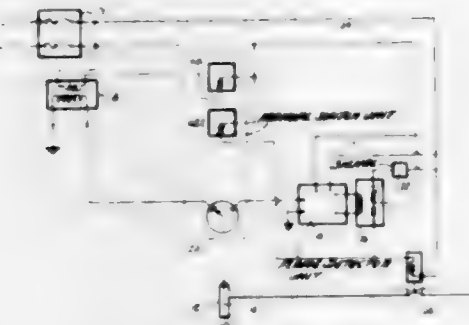
APPARATUS FOR BURNER IGNITION AND FLAME DETECTION

Robert E. Schreter, Forest Hills, N.Y., assignor to Hauck Manufacturing Co., Brooklyn, N.Y., a corporation of New York

Filed Oct. 17, 1958, Ser. No. 767,984
24 Claims. (Cl. 158-28)

1. Apparatus for burner ignition and flame detection, comprising a low voltage source and a fuel burner hav-

ing an electrode positioned to be in the burner flame and near another conductive part of the system, ignition means including a high voltage source adapted to adjust an ignition spark from said electrode, said high voltage source providing a potential of the order of 10,000 volts, a flame detection unit of the type responsive to an electrode immersed in flame, a circuit for energizing



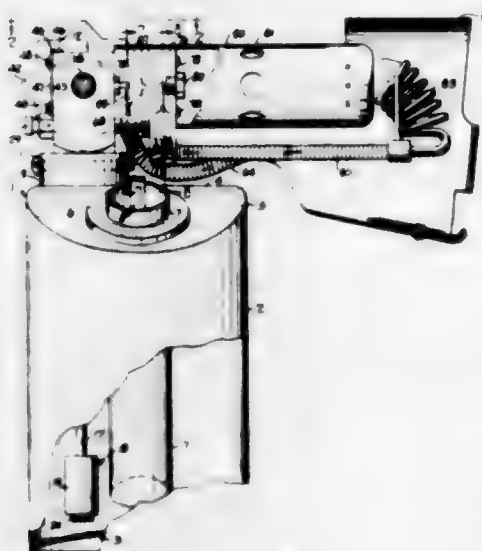
said flame detection unit from said low voltage source, a high voltage switching means, and circuit means adapted to so connect said electrode, said high voltage source, and said flame detection unit with said switching means that said switching means may be used to connect said electrode to either the high voltage source for starting the burner by spark ignition or to said detection unit during running of the burner.

3,002,551

MIXER FOR AIR AND LIQUID FUEL TORCH

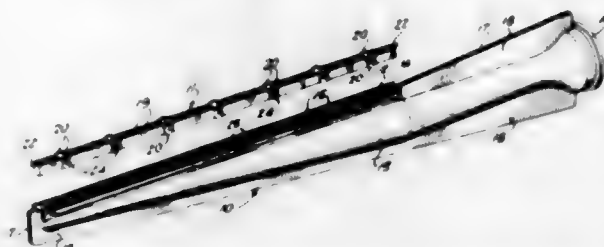
Robert H. Hunter, Epping Road and Old Mill Road, Gates Mills, Ohio, and Abe J. Hanje, Northfield, and Harris W. Smith, Bainbridge, Ohio; said Hanje and said Smith assignors to said Hunter

Filed July 9, 1958, Ser. No. 747,411
23 Claims. (Cl. 158—33)



1. In a liquid fuel torch, a tank for containing liquid fuel under pressure, a burner tube having an inner fuel receiving end and an outer flame discharging end, a mounting base at and within the inner end of the burner tube; a coupling face on one side of the mounting base; a nozzle base in the burner tube on the side of the mounting base opposite the coupling face, heat insulating means between the mounting and nozzle bases, a nozzle on the nozzle base; and means defining a passage system for conducting fuel under pressure from the tank to the nozzle, such passage system including communicating with one another, fluid flow passages in the mounting base, nozzle base and nozzle.

3,002,552
SHEET METAL GAS BURNER WITH REMOVABLE INSERT
James Richard Griffin, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 16, 1958, Ser. No. 728,979
2 Claims. (Cl. 158—116)

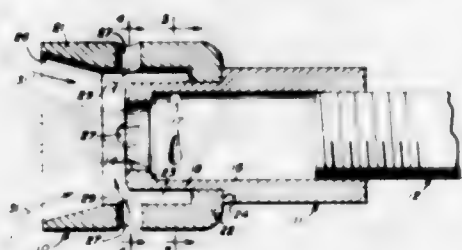


1. A gaseous burner comprising a hollow sheet metal body of generally tubular form having an opening in the side, the material adjacent the edges of said opening being turned outwardly to form end walls and a pair of spaced parallel resilient side walls; an insert having a U-shaped cross-section, end walls, and a second pair of parallel resilient side walls, said opening being of a size to accommodate said insert within the walls thereof, one of said pairs of parallel walls being formed with spaced crimps extending outwardly from said opening and engageable with adjacent portions of said other pair of parallel walls to form spaced separate gas passages between said insert and said body; projections on said crimps; said other pair of parallel walls being formed with grooves generally parallel to the body axis and adapted to accommodate said projections and removably lock said insert in position between said other walls, said insert being shorter than said opening to provide end clearance spaces for thermal expansion and tab means formed on at least one end wall of said insert and positioned to extend outwardly from said wall to overlap the adjacent end wall of said opening to close the clearance space and thereby prevent flash back through said opening, said tab extension being of such length as to provide a gripping means for removing the insert.

3,002,553

GASEOUS FUEL BURNER

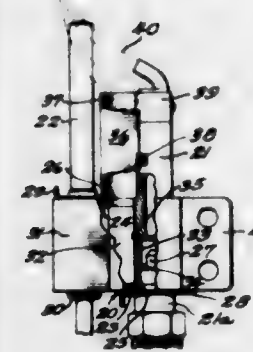
Robert D. Reed, Tulsa, Okla., assignor to John Zink Company, Tulsa, Okla., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 797,984
4 Claims. (Cl. 158—116)



2. A burner head assembly for gaseous fuel comprising, a nozzle having a discharge orifice, means for supplying gaseous fuel into said nozzle for escape through said discharge orifice, an annular member embracing the downstream end of said nozzle in spaced relation providing an annular space between the exterior of the nozzle and the interior of said annular member, said nozzle having a plurality of weep ports therein upstream of said orifice with the axis of each disposed substantially tangentially of the nozzle and in similar directions in proceeding around said nozzle for discharging minor portions of the fuel into said annular space and circumferentially therein, and said member having circumferentially spaced openings there-through in the vicinity of the downstream end of the nozzle member.

3,002,554
GAS-FUELED THERMO-ELECTRIC GENERATOR
Lawrence C. Biggle, Altadena, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California

Filed July 16, 1954, Ser. No. 443,755
2 Claims. (Cl. 158—130)

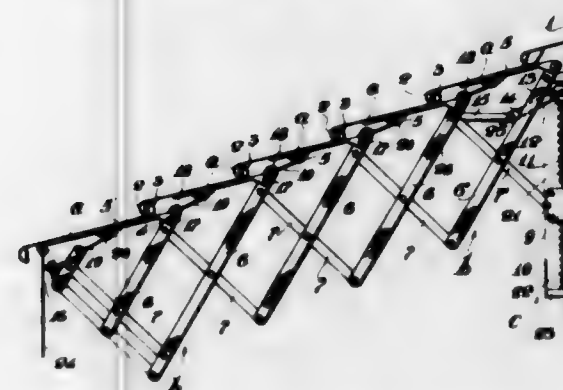


2. In a pilot burner and pilot generator structure, comprising a generally U-shaped bracket having spaced walls; a generator member and a burner member both extending transversely of the walls and supported thereby, the burner member having an air inlet port located intermediate the bracket walls, there being provisions for causing a flame to play on the generator member; the combination with said structure of housing means complementing the U-shaped bracket to form with the bracket a chamber surrounding said air inlet; and channel-shaped means having edges engaging one of the members to form a duct communicating with the chamber at one end, the duct-forming means providing an opening at the opposite end, the center line of which projects transversely to said flame provision means, the duct being so located that the flame projects from one side of the duct opening beyond the other side with slight clearance with respect to the opening.

3,002,555

RETRACTILE AWNING

Simon Goldfarb, Esmeralda 675, Buenos Aires, Argentina
Filed Oct. 1, 1957, Ser. No. 687,585
1 Claim. (Cl. 160—62)



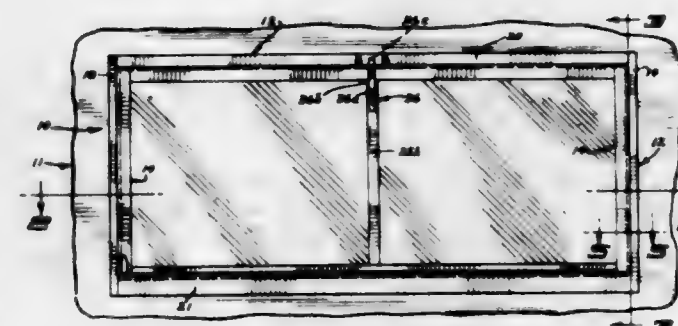
An awning comprising generally horizontal and parallel lazy tong arrangements each including sets of oppositely inclined ribs and means pivotally connecting said ribs to constitute said arrangements, the ribs of one set including portions extending upwardly beyond the ribs of the other set; first and second pivots on said portions; slats extending between said lazy tong arrangements and connected to respective of said first pivots; pivots on said slats; rods connecting the pivots on said slats to the second pivots on said portions, each slat and the rod associated therewith being connected to first and second pivots respectively on adjacent ribs of said one set; fixed vertical rails corresponding to said arrangements; means pivoting one of the sets of each of said lazy tong arrangements to respective of said rails; said

means being fixed relative to said rails; means slideable on said rails and connected to the other sets of said arrangements; and springs engaging the latter said means and balancing in part the weight of said slats and lazy tong arrangements.

3,002,556

UNITARY WINDOW STRUCTURE

Frank L. Tourville, St. Paul, Minn., assignor to Cole-Sewell Engineering Company, St. Paul, Minn., a corporation of Minnesota
Filed Mar. 30, 1959, Ser. No. 802,970
3 Claims. (Cl. 160—92)

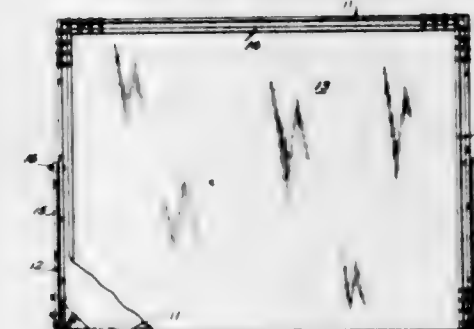


1. A unitary window structure having in combination, a window frame, an upstanding sill portion, a stop member recessed at each inner side of said frame adjacent the bottom thereof, said stop members comprising strap-like portions having right-angled outwardly and vertically depending portions having open notches at their free ends, a sash disposable in said frame, a right-angled flange formed across the bottom of said sash at one side thereof, said flange being adapted to be disposed on said sill portion to pivotally swing thereon, a portion extending outwardly endwise from the bottom of said sash at either end thereof adapted to engage said notched end portions of said stop members when said sash is pivoted to a partially opened position for holding said sash in said open position.

3,002,557

SCREEN AND FRAME ASSEMBLY

Bert W. Roth, New Rochelle, and Richard Frampton, Malverne, N.Y., assignors to Trans-Lux Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 2, 1958, Ser. No. 764,984
3 Claims. (Cl. 160—351)



1. A screen and frame assembly, said frame comprising horizontally and vertically extending members having a tendency to flex when subjected to stress, corner pieces comprising elements pivotally connected to each other and coupled to said members, plates secured one to each of said elements and extending toward each other to have a zone of overlapping, said plates being each formed with a plurality of openings within said zone of overlapping, means extensible through aligned openings of the different plates for retaining the latter and said elements against relative movements, a screen of substantially rectangular outline surrounded by said

members and corner pieces, means yieldingly connecting said members and the adjacent screen edges to place such screen under tension and accordingly place said members under stress such that they flex and bow toward each other through their central zones, the openings in the different plates successively aligning as said elements are swung from positions defining less than a right angle to positions defining an angle greater than a right angle; the portions of the members adjacent said elements in the latter position likewise extending with respect to each other to define an angle greater than a right angle and thus maintaining all edge zones of said screen under substantially equal tension despite the flexing of said members.

3,002,558

FLOW DISTRIBUTOR FOR FIBER MATERIAL FOR USE IN CONNECTION WITH PAPER MAKING MACHINES

Heribert Meyer, Chillicothe, Ohio, assignor to J. M. Voith G.m.b.H., Heidenheim (Brenz), Germany
Filed Dec. 18, 1958, Ser. No. 781,296
Claims priority, application Germany Dec. 21, 1957
14 Claims. (Cl. 162-338)



1. In a transverse flow distributor having only one deviation of the flow, especially for connection with a headbox of a paper machine: a deviating chamber provided with only one paper stock inlet and with only one paper stock outlet, said paper stock inlet being arranged unilaterally of said deviating chamber, said deviating chamber having a substantially constant cross section seen in the direction of said paper stock inlet, a device for steadying the flow of the paper stock and obtaining uniform velocity distribution, said device being designed as distributing screen means arranged in said stock outlet and including guiding vanes each having a length equaling at least a multiple of the thickness thereof and said vanes extending substantially perpendicular to the direction of the inflow of the stock and being slightly spaced from each other, the remaining free passage cross section between said spaced guiding vanes being considerably less than the cross section of said stock inlet of the deviating chamber.

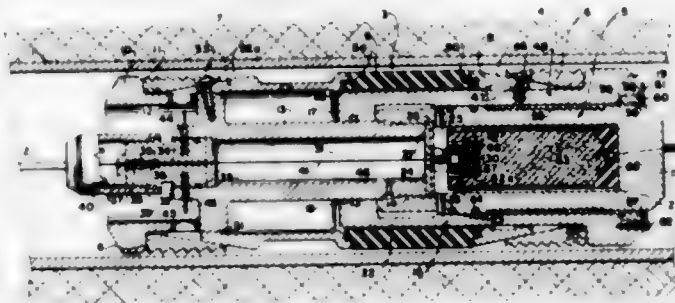
3,002,559

PROPELLANT SET BRIDGING PLUG

Vaughan Dean Hanes, West Covina, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of California
Filed July 22, 1957, Ser. No. 673,298
10 Claims. (Cl. 166-63)

1. A device adapted for use in a well casing comprising: a piston closed at one end and having a cavity therein, a cylinder receiving said piston in telescopic relation, a first combustible gas producing material having a slow burning rate arranged within said piston cavity, a second combustible gas producing material having a burning rate faster than said first gas producing material arranged contiguously within said piston cavity,

means for igniting said second gas producing material arranged in said piston cavity, said cylinder having a longitudinal axis and an enlarged portion extending radially outwardly arranged coaxially with said axis, a first and a second wedge slip, a means for supporting said first wedge slip attached to the piston and arranged coaxially with said cylinder enlarged portion, said slip supporting means having an expansion chamber therein that is in communication with said piston cavity, a means for regulating the flow rate of a fluid interposed between said retention means expansion chamber and said piston



cavity, said piston having a passageway arranged between the external surface into said piston cavity, said piston passageway arranged between said flow rate regulating means and said gas producing material, said first wedge slip encompassing and abutting said slip supporting means, said second wedge slip encompassing and abutting said cylinder enlarged portion, a radially expandable sleeve member arranged around said cylinder and between said first and said second slips, and a plurality of means for expanding said first and second said wedge slips positioned between said sleeve member and said slips.

3,002,560

MECHANIZED OIL FIELD DRILL RIG

Win W. Paget, Mountain Brook, Ala., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 13, 1955, Ser. No. 481,643
24 Claims. (Cl. 166-77.5)



23. In a drill rig, means for raising and lowering a sectional drill string in a hole being drilled, the drill string comprising sections detachably coupled together by threaded joints, means for coupling and uncoupling the threaded joints between the sections of the drill string, means for moving said coupling and uncoupling means at the same raising and lowering speed as said raising and lowering means to locate said coupling and uncoupling means in coupling and uncoupling positions as the

drill string hole, and means for coupling and uncoupling means threaded joints

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GENERAL AND MECHANICAL

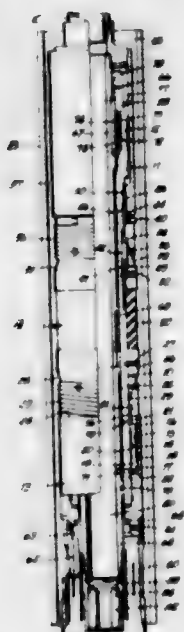
121

drill string travels in either of opposite directions in the hole, and means for operating said coupling and uncoupling means to effect coupling or uncoupling of the threaded joints.

3,002,561

SUBSURFACE WELL TOOL

John R. Baker, Pasadena, and Dan C. Preston, Jr., Whittier, Calif., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Dec. 23, 1957, Ser. No. 704,602
16 Claims. (Cl. 166—120)



1. In a well tool adapted to be set in a well conduit disposed in a well bore: a body having means thereon for connecting said body to a tubular running-in string extending to the top of the well bore; an upper expander on said body; normally retracted upper slips engaging said upper expander; a lower expander on said body; normally retracted lower slips engaging said lower expander; a cylinder on said body below said lower slips; said body having a port for feeding fluid under pressure from the running-in string and interior of said body to said cylinder; a piston in said cylinder movable upwardly along said cylinder by fluid pressure in said cylinder to shift said lower slips along said lower expander and outwardly against the well conduit; means on said body movable downwardly therewith to shift said upper slips along said upper expander and outwardly against the well conduit; and one-way ratchet means releasably connecting said means on said body and said body to prevent downward movement of said body relative to said means on said body and to permit upward movement of said body relative to said means on said body, whereby downward movement of said tubular running-in string shifts said body, ratchet means and means on said body downwardly to shift said upper slips along said upper expander.

3,002,562

RETRIEVABLE BRIDGE PLUG

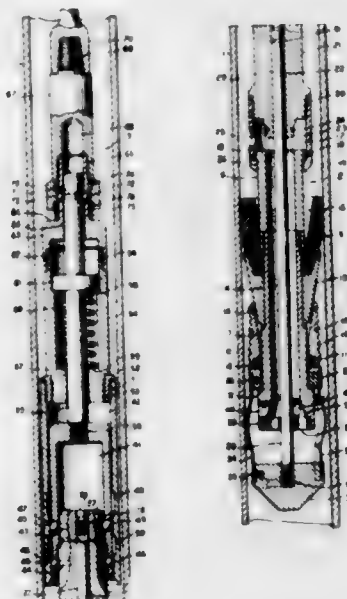
William Frank Carothers, Odessa, Tex., assignor to M & B Fishing Tool Co., Inc., Odessa, Tex., a corporation of Texas

Filed Jan. 14, 1958, Ser. No. 708,912

3 Claims. (Cl. 166—125)

1. A retrievable bridge plug, adapted to be set in a well pipe to seal off pressures from below, comprising a tubular mandrel, a tubular member connected by threads to the upper end of the mandrel, the lower end of the

tubular member forming a downwardly facing external shoulder and the outside diameter of the mandrel being reduced intermediate its ends to form a pair of longitudinally spaced, upwardly facing external shoulders, an annular member surrounding the mandrel and supported upon the lowermost external shoulder, a plurality of circumferentially spaced slip jaws supported for radial movement upon the annular member, a tubular expanding member surrounding the mandrel and supported upon the uppermost external shoulder, the expanding member having a tapered peripheral surface for engagement with corresponding surfaces of the slip jaws to expand them, upon movement of the expanding member downwardly relative to the slip jaws, a cup shaped annular packer member, formed of resilient material, surrounding the mandrel and clamped between the upper end of the expanding member and the lower end of the tubular member, the packer member extending upwardly and radially outwardly from the mandrel for engagement with the well pipe, a cylindrical valve housing surrounding the tubular member, the tubular member being externally flanged at its upper end and the lower end of the valve housing being internally flanged for sliding engagement with the tubular member below its flanged upper end, an elongated member, circular in transverse section and having a central bore formed therein, connected by threads to the upper end of the valve housing, an annular valve plug, of smaller



diameter than the elongated member and comprising a downward extension thereof, extending downwardly into the valve housing for telescoping engagement with the upper end of the tubular member, one or more side ports being formed in the valve housing intermediate its ends whereby fluid may flow through the valve housing, the tubular member and the mandrel when the valve housing is in its uppermost position relative to the tubular member, a circular member, of smaller diameter than the elongated member, positioned above the elongated member, the circular member and the upper end of the elongated member each having a peripheral groove formed therein for engagement by a setting tool, an elongated rod connected at its upper end to the circular member and reciprocable in the bore of the elongated member, the rod extending downwardly through the tubular member and below the mandrel, a circular shoe connected to the lower end of the rod, and a plurality of circumferentially spaced resilient metal strips each connected at their ends to the annular member and the shoe, the metal strips being bowed radially outwardly intermediate their ends for yieldable, frictional engagement with the well pipe.

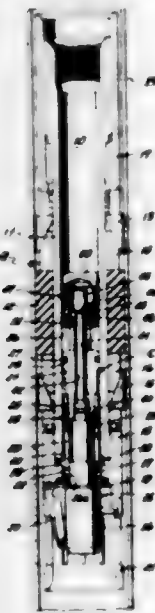
3,002,563

CONVERTIBLE WELL PACKER

Talmadge L. Crowe, Houston, Tex., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Mar. 16, 1959, Ser. No. 799,576

13 Claims. (Cl. 166—133)



1. In combination: a well packer adapted to be set in a well bore and including a packer body having a passage and means thereon for securing said body in the well bore, a plug in said passage to prevent flow of fluid therethrough and including a plug body in said passage having latch means at its lower portion engaging said packer body to hold said plug against downward movement in said passage with said latch means in compression when downwardly directed force is imposed thereon; and means for releasing said latch means from said packer body to enable said plug to be ejected from said passage.

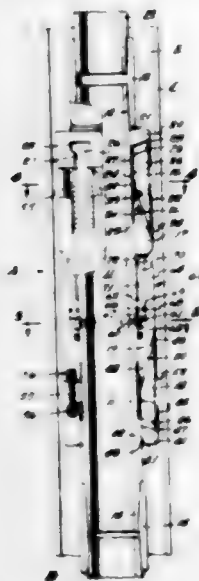
3,002,564

TUBING ANCHOR AND CATCHER

Reuben C. Baker, Coalinga, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed July 18, 1957, Ser. No. 672,768

17 Claims. (Cl. 166—212)



1. In apparatus of the character described to be disposed in a well conduit: a tubular body; first slip means disposed about said body; a first expander disposed about said body coacting with said first slip means and movable longitudinally relative thereto to expand said first slip means into anchoring engagement with the conduit against

upward movement therewithin; a second slip means disposed about said body; a second expander disposed about said body coacting with said second slip means and movable longitudinally relative thereto to expand said second slip means into anchoring engagement with said conduit against downward movement therewithin; and hydraulically operable means on said body between said expanders and responsive to the pressure fluid within said body for relatively shifting said first slip means and first expander with respect to each other and said second slip means and second expander with respect to each other to engage both slip means with the well conduit.

3,002,565

WELL TOOL HANGER

Howard H. Moore, Jr., Houston, Tex., assignor to Camco Incorporated, Houston, Tex., a corporation of Texas

Filed Aug. 13, 1958, Ser. No. 754,844

8 Claims. (Cl. 166—217)



1. In combination, a well string nipple having a well tool landing seat and a tool latch receiving recess, a retrievable well tool for detachable mounting in said nipple, said tool including an axially slidable latch expander having a dog receiving keeper groove, a barrel sleeved on the expander, an expander projectable latch element carried by the barrel for reception in said recess, means to transmit expander slide movement to said latch and project the same, a laterally shiftable dog carried by the barrel and shiftable from an inward position within said keeper groove to an outward position clear of said keeper groove, a dog position control member slidably carried by said barrel for movement between a lower position in retentive engagement with said dog in the inward position of the latter and an upper position providing outward clearance for dog movement to its said outward position, a motion limit seat on said barrel engageable by said member at the upper position thereof, an abutment seat on said member engageable with the nipple landing seat to limit descent of said member and a releasable connection joining said member in its lower position to said barrel and releasable in response to downward force transmitted through the barrel and resistance thereto offered by the member when its abutment seat is engaged with the nipple landing seat.

3,002,566

FLUID PRESSURE OPERATED SUBSURFACE SAFETY VALVE

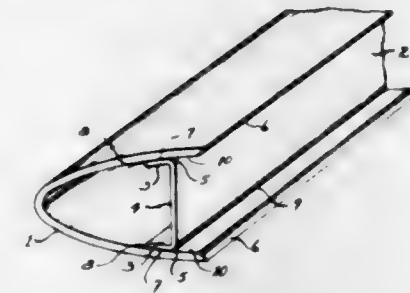
James H. Bostock, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Filed Oct. 4, 1957, Ser. No. 688,327

12 Claims. (Cl. 166—224)

1. A device of the character described comprising: a vertically disposed cylindrical housing member adapted

to be connected in a well tubing string, a valve seat member fixedly mounted within said housing member and having an elongated restricted bore therethrough coaxial with said housing member, a landing nipple member fixedly disposed within said housing member and having a bore coaxial therewith, said landing nipple member being vertically spaced from said valve seat member, said housing member and landing nipple member having surfaces thereon forming a flow path by-passing the bore of said landing nipple member, said housing member and landing nipple having a passage formed therethrough from the bore of said landing nipple member to the exterior of said housing member, and a tubing disposed along the exterior of said housing member and connected at one end to said passage; a removable valve assembly seated in said landing nipple member; means mounted on said removable valve assembly to releasably lock said removable valve assembly against vertical movement relative to said landing nipple member; said



brazed seams having integral fillets joining the margins of said flanges continuously to the inner surface of the trough plate.

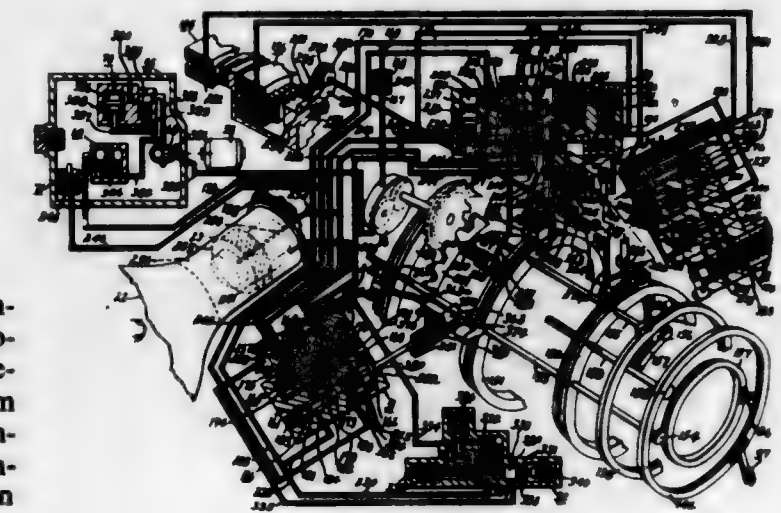
3,002,568

VARIABLE PITCH PROPELLER ASSEMBLY FOR MULTI-POWER PLANT AIRCRAFT

Roy C. Bodem and Roy H. Brandes, Dayton, and Richard A. Hirsch, West Milton, Edward H. McDonald, Tipp City, and Carl F. Wood, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Mar. 19, 1956, Ser. No. 572,348. Divided and this application Aug. 13, 1959, Ser. No. 840,484

11 Claims. (Cl. 170—160.21)



1. In a variable pitch propeller having blades rotatable about their longitudinal axes to different pitch positions, the combination including, power means operatively connected to the blades for adjusting the pitch position thereof, governor means operatively connected with the propeller and the power means for actuating said power means to maintain propeller speed substantially constant, override means operatively connected with said blades and with said governor means for preventing said governor means from actuating the power means in a decrease pitch direction when the blades are at a predetermined pitch position; and means operatively connected with said override means for adjusting said override means to vary said predetermined pitch position during constant speed propeller operation.

3,002,567

SPAR FOR SUSTAINING ROTORS

Frank L. Stulen and Robert H. Stamm, Traverse City, Mich., assignors to Parsons Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 21, 1953, Ser. No. 387,456

16 Claims. (Cl. 170—159)

16. A steel mass-balance and spar for sustaining rotor blades, comprising a steel trough plate continuous over substantially the entire span of the blade and constituting its principal structural member, a steel channel arranged spanwise within the trough plate and having flanges fitting closely against the inner surface thereof, and continuous spanwise brazed seams joining the entire contacting area

3,002,569

LOCKING DEVICE FOR FLOATING HUB HELICOPTER ROTORS

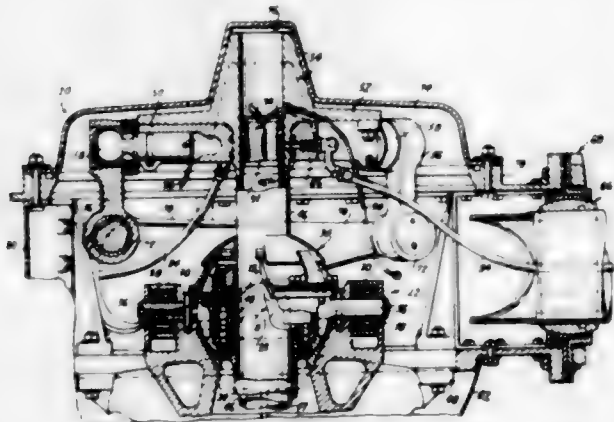
Friedrich L. Doblhoff, University City, Mo., assignor to McDonnell Aircraft Corporation, St. Louis, Mo., a corporation of Maryland

Filed May 28, 1959, Ser. No. 816,587

2 Claims. (Cl. 170—160.27)

1. In a helicopter rotor control system for a floating hub bladed sustaining rotor, the improvement of a rotor

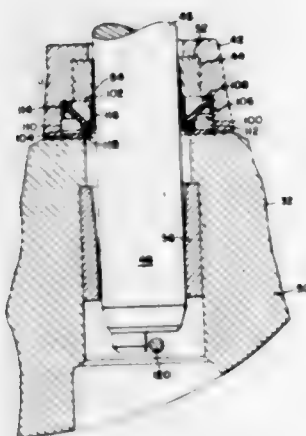
hub assembly, a rotor hub supporting structure including a gimbal assembly permitting rotation and universal tilting movement of the rotor hub, cover means on said rotor assembly spaced from said gimbal assembly, means in said hub assembly operatively connecting the rotor blades for coning and for collective pitch variations, said means including longitudinally movable collective pitch control means operatively disposed between said cover



means and gimbal assembly, and other means adapted to restrain universal tilting movement of said rotor hub at low collective pitch angles of the rotor blades, said restraining means comprising cooperating interengaging projection and socket means on said longitudinally movable control means and said cover means adapted to center said rotor hub in the axis of longitudinal movement of the control means.

3,002,570

TRACTOR HITCH AND SEAL MEANS THEREFOR
Harold K. Klezle, Waterloo, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Illinois
Filed Aug. 27, 1959, Ser. No. 836,495
3 Claims. (Cl. 172-7)



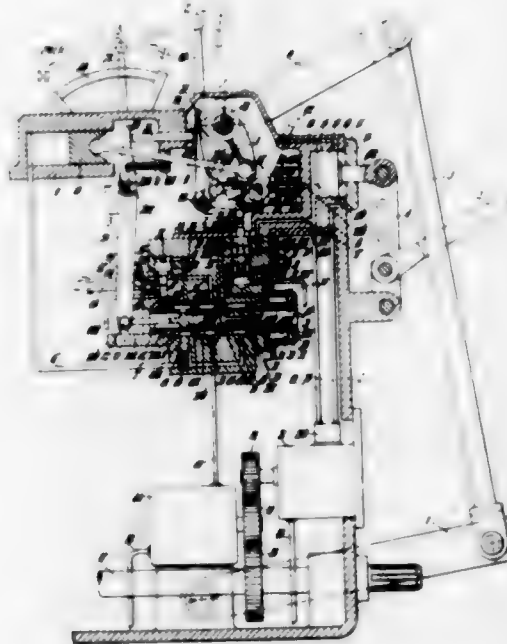
1. In a tractor having a fore-and-aft body and draft means connectible to an associated implement, the combination with the draft means of: a pair of supports spaced apart and aligned transversely of the body, each support having a transverse opening therethrough and said openings being coaxial on a transverse axis, and each support having an outwardly facing annular recess larger than and concentric with its opening; an elongated inherently resilient bar disposed transversely of the supports and through the openings and having opposite ends projecting outwardly beyond the respective supports and connected to the draft means to receive draft forces from said draft means; bar-engaging means on each support at the respective opening and providing a fulcrum inwardly of the respective recess and outwardly beyond which the

respective end of the bar projects so that draft forces applied to the draft means will stress the bar in bending so as to displace the ends of the bar radially of the respective recesses; and an annular seal received in each recess and including an inner ring encircling the bar and having an inside diameter slightly larger than the outside diameter of the respective part of the bar encircled thereby, an outer ring tightly received in the recess, a radially flexible annular diaphragm joined to and extending between said rings and capable of radial flexing upon displacement of the respective end of the bar, and said diaphragm having an inner marginal cylindrical portion extending axially within the inside diameter of the inner ring to form a tight fit with said respective part of the bar.

3,002,571

HYDRAULIC SYSTEM FOR TRACTORS

Albert Henry Kersey, Castle Bromwich, near Birmingham, and Frederick D. Cooper, Coventry, England, assignors to Ford Motor Company, Dearborn, Mich.
Filed Oct. 22, 1957, Ser. No. 691,697
Claims priority, application Great Britain June 21, 1957
5 Claims. (Cl. 172-9)



1. In a draft responsive mechanism for a tractor having a three-point hitch including two lower trailing draft links, a top link, lift means for lifting the draft links, and a lift mechanism including a source of hydraulic fluid under pressure, a hydraulic lift cylinder connected therewith and a sump: a control cylinder, a two-way piston within the control cylinder, means for mechanically transmitting draft sensing of both compression and tension from the top link to the piston to move it axially within the cylinder, fluid inlet passages extending to each end of the control cylinder, means for supplying fluid under pressure to the inlet passages, fluid outlet passages discharging to sump and extending from the control cylinder at each side of the piston when the piston is in a neutral position intermediate the ends of the control cylinder, and fluid-pressure-operated valve means interposed between the source of the hydraulic fluid under pressure and the lift cylinder, connected with said fluid inlet passages and operable by differential in pressure in the two inlet passages responsive to displacement of the piston in either direction from neutral position so as to close one of the outlet passages for either admitting fluid under pressure to the lift cylinder or permitting fluid to flow from said lift cylinder.

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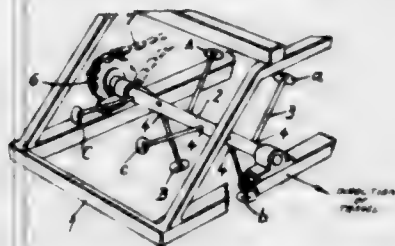
Arthur J. signm Delaw

A tra propelled prising a including marker front of carried and-aft end on a brace co tending wardly forward to the ce

3,002,572

ADJUSTABLE BLOCKING MACHINE

Ib Stampe Rasmussen, Industrivej 7, Glostrup, Denmark
 Filed May 25, 1956, Ser. No. 587,428
 Claims priority, application Denmark May 28, 1955
 2 Claims. (Cl. 172-109)



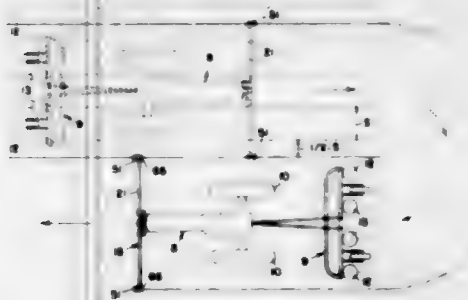
1. A row crop blocking machine of the type having at least one shaft horizontally disposed longitudinally of the direction of travel of the machine with radial arms having one end of each connected to said shaft and earth working members at their other ends and the shaft being rotatably driven, the improvement comprising, at least two sets of attaching means detachably connecting said arms to the shaft, each set of said attaching means being a plurality of individual attaching means helically arranged about said shaft, the sets of attaching means being oriented with respect to each other at equal angles around the shaft, the respective individual attaching means of the sets being equally spaced longitudinally of the shaft, and means to rotate the shaft one revolution each time the machine has traveled a distance equal to the sum of the longitudinal spacings of said individual attaching means in a helix of a set of attaching means, the construction and arrangement of the attaching means being such that the sets of attaching means form forwardly directed helically arranged attaching means and that progressive adjacent attaching means of alternate sets forms a reversely directed set of helically arranged attaching means whereby the effect of two rotating directions of the shaft are obtained from a uni-directionally rotating shaft.

3,002,573

EARTH MARKER

Arthur J. Immesoete, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed Mar. 19, 1958, Ser. No. 722,447
 1 Claim. (Cl. 172-126)



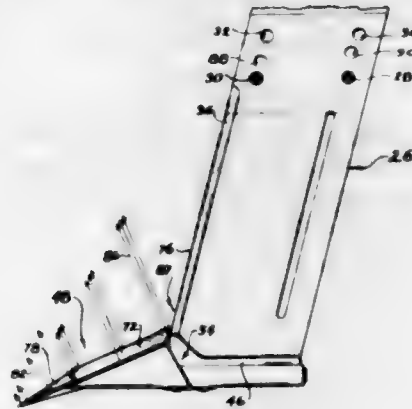
A tractor mounted row marker for use with tractor propelled multi-row implements, said row marker comprising a support attachable to the front of a tractor and including a generally vertically extending member, a rigid marker bar adapted to be disposed transversely across the front of the tractor, ground-engaging mark-forming means carried by the end portions of said marker bar, a fore-and-aft extending pivot member supported at its rear end on said vertically extending member, an angled pivot brace connected at its upper end to said vertically extending member and extending downwardly and forwardly therefrom and connected at its lower end to the forward end of said pivot member, a pivot clamp fixed to the central portion of said rigid marker bar and extend-

ing upwardly therefrom and swingably supported on said fore-and-aft extending pivot member, and bar-limiting means carried by said support for limiting the extent of oscillation of said rigid marker bar.

3,002,574

SYSTEM AND IMPLEMENT FOR DEEP TILLAGE OF THE SOIL

John R. Padrick, Anniston, Ala.
 (P.O. Box 1240, Columbus, Ga.)
 Filed Jan. 26, 1956, Ser. No. 561,702
 5 Claims. (Cl. 172-699)



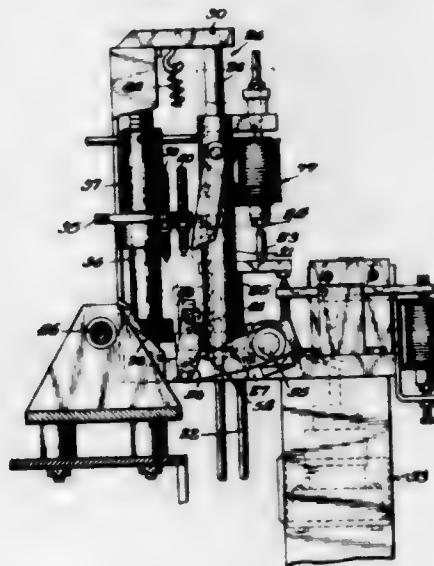
1. A subsoiler shoe characterized by upper and lower distinct portions, the upper portion having two upwardly, backwardly, outwardly inclined and intersecting upper substantially plane surfaces and the other portion being of upwardly curved configuration intersecting the first mentioned portion, the last mentioned portion having upward and backward inclination which is steeper than that of the first mentioned portion, and said last mentioned portion tapering to a point at its forward extremity.

3,002,575

MULTIPLE MATERIAL BATCHER CONTROL

Theodore B. Appel, Jr., Champaign, Ill., assignor, by mesne assignments, to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Mar. 5, 1956, Ser. No. 569,317
 10 Claims. (Cl. 177-70)



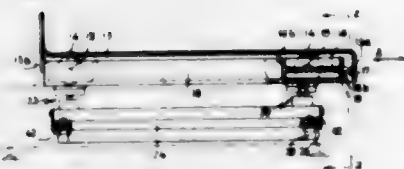
4. In a multiple material batcher having a weighing scale, a plurality of storage bins containing various materials to be batched, and a batcher control including a weight responsive control element, and a cut-off element adapted for engagement therewith, the combination comprising, power actuated means for establishing a series of selectable locations for said cut-off element each in accordance with a predetermined weight of material to

be deposited from a respective storage bin in relation to the accumulated weight of material on the weighing scale, and a control circuit including a selector switch advanced by said power actuated means through successive stages corresponding to the selectable locations for said cut-off element, means operative as an incident to said cut-off element reaching each location for energizing said selector switch, means responsive to said selector switch reaching a given stage for opening the fill gate of the said respective storage bin to initiate the flow of material contained therein, and means responsive to the engagement of said weight responsive element and said cut-off element for closing the fill gate and cutting off the flow of material from the said respective storage bin.

3,002,576

WEIGHING SCALE

Ernst Kuhle, Hermann-Rommel-Strasse 28,
Balingen, Württemberg, Germany
Filed Apr. 16, 1958, Ser. No. 728,852
5 Claims. (Cl. 177-255)



1. In a weighing scale of the platform type, the combination which comprises a horizontal carrier member; fulcrum means having parallel fulcrum edges; supporting means supporting said carrier member and supported by said fulcrum means in such a manner as to be effective to transmit the weight of the carrier member to said fulcrum means and to render said carrier member horizontally yieldable only in a direction transversely of the fulcrum edges from a position of rest relative to the fulcrum edges; said supporting means comprising two pairs of upright supporting members tiltable together about respective fulcrum edges with the tendency to return to the position of rest, said upright supporting members having operative connections with the carrier members whereby said supporting members may tilt incident to lateral displacement of the carrier member from the position of rest, wherein two of said operating connections comprise means providing for pivotal movement of the carrier member on the supporting member about a horizontal axis parallel to the fulcrum edges, and wherein the other two operating connections comprise abutment means having load transmitting horizontal abutment contact faces one of said faces being formed with a pair of horizontal tilting edges parallel to each other and to the fulcrum edges and spaced to straddle the center of the supporting member, one or the other of said parallel tilting edges being rendered effective as such incident to horizontal displacement of the carrier member in the one or in the other direction from its position of rest.

3,002,577

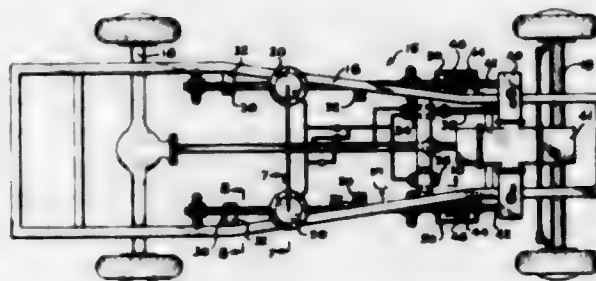
AUTOMATIC LIFT AND PARKING APPARATUS

Johnnie Williams, 365 W. 118th St., Apt. 18,
New York 26, N.Y.

Filed July 6, 1959, Ser. No. 825,142
3 Claims. (Cl. 180-1)

1. Power operated apparatus for parking vehicles having a transmission unit comprising, in combination, a pair

of auxiliary wheel and axle assemblies, one for side of the vehicle, each said wheel and axle assembly extending normal to the main wheel and axle assemblies of the vehicle, guide means supporting each wheel and axle assembly upon the underframe of the vehicle for reciprocating vertical movement between opposite extreme positions, actuating means for each assembly selectively extending each auxiliary wheel and axle assembly into engagement with the ground and for elevating the frame of the vehicle relative thereto, drive means for each assembly selectively rotating a corresponding one of said auxiliary wheel and axle assemblies to move the vehicle laterally with respect to the longitudinal axis of the vehicle along the ground, each said actuating means comprising a hydraulic cylinder supported upon the corresponding side of the vehicle

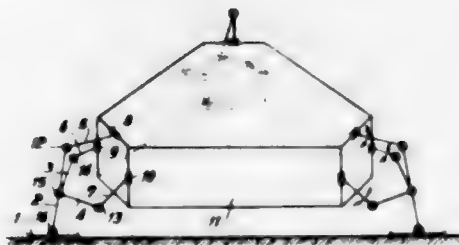


underframe, a piston slidably supported within each said hydraulic cylinder, a piston rod connected at opposite ends to said piston and to the corresponding auxiliary wheel and axle assembly, each of said guide means comprising a pair of bushings carried by the vehicle underframe, and guide rods secured to corresponding wheel and axle assemblies and slidably received within corresponding bushings for guiding said auxiliary wheel and axle assemblies for vertical movement relative to the vehicle underframe, each of said drive means comprising a gear box, each of said gear boxes being secured to a corresponding side of said transmission unit, and power transmission means associated with each said gear box transmitting power to each auxiliary wheel and axle assembly from the vehicle transmission unit.

3,002,578

CONTROL MEANS FOR A CONVEYANCE

Hans Wilhelm Kraus, Jaegerstrasse 10, Buckeburg,
Land Niedersachsen, Germany
Filed Dec. 5, 1958, Ser. No. 778,457
8 Claims. (Cl. 180-8)



1. A control device for a movable carrying unit comprising a housing, a miniature model having the geometrical configuration of said unit within said housing and supported on a plate-like surface, support means secured to said housing on which said plate-like surface is mounted for vertical and horizontal movement to reproduce the movements of said unit in said model, means for actuating said surface to produce the motion desired and means for coupling the movement of said model with said carrying unit.

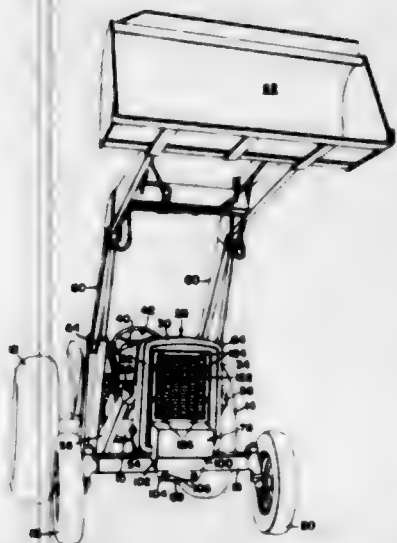
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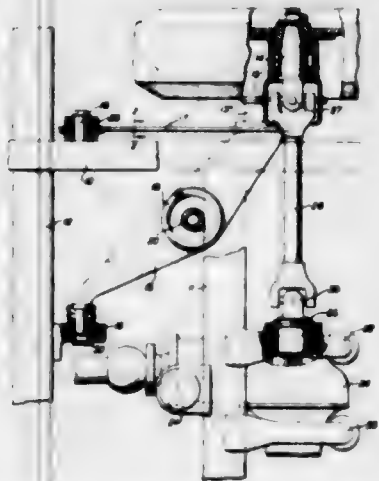
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3,002,579
VEHICLE CONSTRUCTION AND PUMP MOUNTING THEREFOR
 Gust J. Mihal, Dubuque, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
 Filed June 25, 1958, Ser. No. 744,545
 6 Claims. (Cl. 180-53)



6. In a tractor having a fore-and-aft body including a forward power plant equipped with a forwardly projecting power shaft, the improvement comprising: a generally rectangular upright transverse frame rising from the front of the body and having a transverse lower part, a pair of upright side parts and a top part defining a frontal opening affording rearward access to the front end of the tractor body; means mounting the frame on the body for limited shifting relative to the body; an auxiliary driven device mounted on the body front end independently of the frame and projecting ahead of the general plane of said frame and having a fore-and-aft shaft coaxially connected to the power shaft; a cover housing at least partly enclosing the device and having a front portion ahead of the device, a top part over the device and secured to the frame and a bottom part under the device and secured to the body, said cover housing being flexible to accommodate shifting of the frame.

3,002,580
INDEPENDENT WHEEL SUSPENSION FOR MOTOR VEHICLES
 Josef Mueller, Stuttgart-Riedenberg, and Friedrich H. Van Winsen, Kirchheim, Teck, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
 Filed Feb. 24, 1958, Ser. No. 717,158
 Claims priority, application Germany Feb. 28, 1957
 7 Claims. (Cl. 180-73)



1. An individual wheel suspension for a motor vehicle having a vehicle superstructure comprising a wheel car-

rier, swinging half axle means having inner and outer joint means at an essentially constant radial distance from each other and from the vehicle longitudinal center plane, means for positively guiding said wheel carrier in the vehicle transverse direction including said half-axle means and means connecting said outer joint means and said wheel carrier to essentially prevent movement therebetween in the vehicle transverse direction, and crank axle means connected with said wheel carrier and said superstructure guiding said wheel carrier during spring movements in the upward and downward direction thereof in exclusively essentially parallel planes to thereby assure that the wheel plane of the wheel adapted to be supported on said wheel carrier forms essentially the same angle with respect to the surface of the road during spring movements thereof.

3,002,581
DOOR OPERATOR
 Raymond A. Delbel, Cheektowaga, Hobart V. Roberts, Jr., Elma, and William C. Riester, Williamsville, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
 Filed May 8, 1958, Ser. No. 733,998
 7 Claims. (Cl. 180-82)

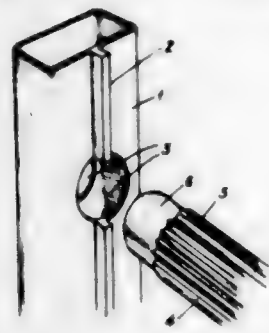


1. A fluid pressure door actuating arrangement comprising a cylinder, a first piston movable in either direction relative to said cylinder, conduit connections to said cylinder for causing the portion of the cylinder to either side of said first piston to communicate with a pneumatic pressure source, and a differential speed dampener in said cylinder comprising a hollow shaft carrying said first piston, hydraulic fluid in said hollow shaft, a second piston mounted within said hollow shaft for movement relative to said hollow shaft during a door opening and closing operation, throttling means for permitting hydraulic fluid to bypass said second piston at a relatively slow rate during the initial portion of the travel of said second piston, and means for permitting relatively free hydraulic fluid flow in relation to said second piston at the terminal portion of a door closing operation whereby said pneumatic pressure acting on said first piston and cylinder may impart an increased speed to said door to insure proper closing thereof.

3,002,582
LADDERS AND IMPROVED LADDER ELEMENTS
 Jules Julien Marcelle, Zwen-Brussels, Belgium, assignor to "A.V.R.", Achat, Vente, Representations, Societe Anonyme, Brussels, Belgium
 Filed Oct. 15, 1958, Ser. No. 767,448
 Claims priority, application Belgium Oct. 15, 1957
 3 Claims. (Cl. 182-194)

1. A ladder comprising a pair of spaced longitudinal members with each member having on its inner face a longitudinally extending rib, each of said members having a series of transversely extending circular bearing apertures intersecting said rib and interrupting the continuity of the same, with corresponding apertures of said members being in registration, a series of spoke members each having opposite end portions of circular cross-section, the intermediate portion of each spoke member having a pair of spaced longitudinally extending embossings, each end portion of a spoke member being re-

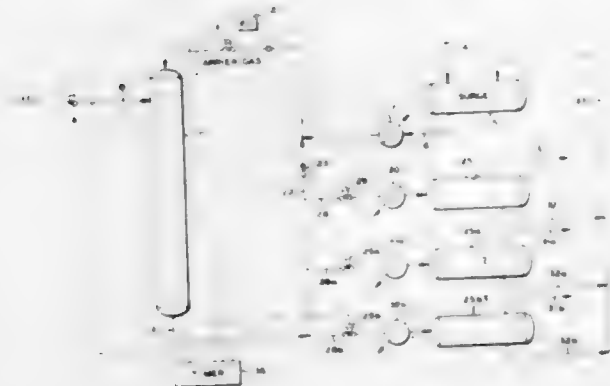
ceived in a respective bearing aperture with a portion of rib adjacent an aperture being received between the



spaced embossings thereby to lock said spoke member against rotation relative to the longitudinal members.

3,002,583 FLUID SEPARATION BY GAS CHROMATOGRAPHY

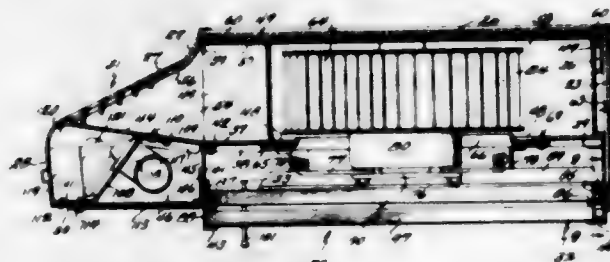
Robert A. Findlay, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,764
14 Claims. (Cl. 183-2)



12. The method of separating fluid mixtures which comprises passing a carrier gas through a zone which selectively retards passage of the constituents of the fluid mixture to be separated, introducing in sequence predetermined volumes of the mixture to be separated into said zone to be carried through by said carrier gas, directing the effluent from said zone to a plurality of separating zones in sequence to recover the constituents to be separated from the carrier gas, and returning the separated carrier gas to the first-mentioned zone.

3,002,584 DUCTLESS AIR FILTER

Charles A. Jerabek, Bay Shore, N.Y., Raymond Spilman, Darien, Conn., and Charles F. Stephenson, New York, N.Y., assignors to Major Industries, Inc., Chicago, Ill.
Filed Nov. 24, 1958, Ser. No. 775,988
3 Claims. (Cl. 183-4.3)

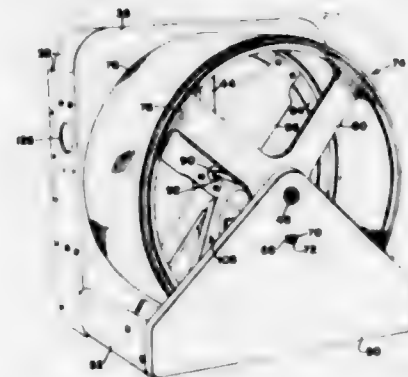


1. A ductless air filter comprising a hood including a rear wall, end walls and a top wall, said hood having an open bottom, means for securing said hood in operative position overlying a stove or the like, an extension on the front of said hood, said extension having a forwardly and downwardly inclined top portion having a grid opening

therein, a horizontal plate extending transversely across an intermediate portion of said hood, said plate having a relatively large central opening therein, a horizontally disposed blower, an electric motor secured concentrically to said blower and extending into said opening in said plate, means detachably securing said motor and said blower to said plate, a curved baffle extending vertically between said plate and said top wall and having an opening into said extension adjacent said grid opening, and filter means releasably secured in the open bottom of said hood beneath said blower completely closing said open bottom, upper and lower flanges at the lower end of said rear wall, resilient means in said rear wall adjacent each of said flanges, corresponding upper and lower flanges at the inner bottom of said extension in confronting relation with said first-mentioned upper and lower flanges, an activated charcoal filter positioned on said upper flanges, and a second-metal sponge filter unit positioned on said lower flanges, said units being held against displacement by said resilient means.

3,002,585 ROTARY AIR SCREEN

Stanley F. Pastureczak, East Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 22, 1960, Ser. No. 58,607
9 Claims. (Cl. 183-34)



1. For use with apparatus having upright means including marginal portions defining a frontal opening and means operative to create an air stream moving toward and rearwardly through said frontal opening: an air screening device comprising support means including an upright plate closely ahead of and overlying the upright means and affixed to said marginal portions but having therein a circular opening in register with a substantial portion of said frontal opening; a rotary screen in the form of a drum disposed coaxially ahead of and in substantial register with the circular opening so as to intercept foreign particles in the air stream, said drum having a foraminous front circular radial wall spaced ahead of the plate and a foraminous cylindrical wall joined to and extending rearwardly from said front wall to a rear marginal edge having a substantially airtight rotary seal with that portion of the plate that defines said circular opening; means journaling the drum on the support means for rotation about its axis; means operative to rotate the drum; fixed internal means within the drum for blanking out a portion of each of the front and cylindrical walls of the drum from the air stream, including an imperforate internal radial baffle closely rearwardly of the front wall and of materially smaller area than said front wall and an imperforate arcuate baffle secured to said radial baffle and disposed closely inwardly of and of materially smaller area than said cylindrical wall; and fixed external means including an imperforate external radial baffle disposed closely ahead of the radial wall and angularly offset from the internal radial baffle in a direction counter to the direction of rotation of the drum, and an external arcuate baffle closely

spaced from the cylindrical wall of the drum and angularly offset from the internal arcuate baffle in a direction counter to the direction of rotation of the drum.

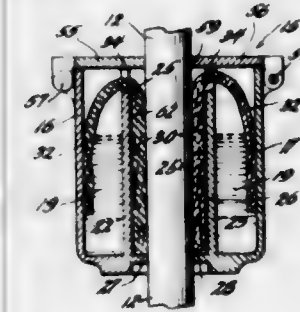
3,002,586 INHIBITING THERMAL DEGRADATION OF PHOSPHORYL TRI-DIMETHYL AMIDE

Warren J. Rabourn, Jr., Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 19, 1960, Ser. No. 9,710
9 Claims. (Cl. 183-115)

1. A method for substantially inhibiting the thermal degradation of phosphoryl tri-(dimethyl amide) comprising contacting said amide with an amount, sufficient to substantially inhibit said thermal degradation, of a member selected from the group consisting of basic oxides and hydroxides and basic salts of alkali and alkaline earth metals and aluminum and aqueous solutions thereof.

3,002,587 POLISH ROD LUBRICATOR

George L. Matson, 3200 W. Louisiana Ave., Midland, Tex.
Filed May 12, 1959, Ser. No. 812,644
4 Claims. (Cl. 184-25)

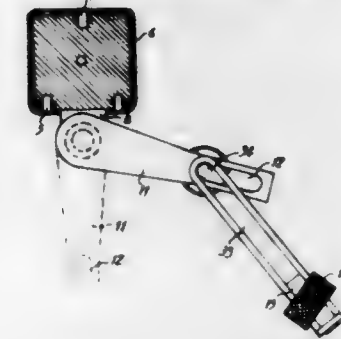


1. A lubricator for a substantially vertically disposed axially reciprocating rod, said lubricator comprising a stationary box-like container adapted to embrace said rod and to accommodate relative movement of the latter; said container comprising two complementary receptacles hinged together at one side of the rod and provided with manually operable latching means at the opposite side thereof, each receptacle having top walls, and mutually facing inner walls when closed to embrace the rod; said mutually facing inner walls of said receptacles being provided with semi-cylindrical recesses therein each of a radius greater than that of the contained rod, whereby when the container is closed about the rod there is provided an inner annular chamber surrounding said rod, the surface of the rod adapted to constitute at least in part the inner wall of said annular chamber; each of said receptacles comprising also an outer chamber adjoining the inner chamber and separated by the vertical recessed inner walls of the receptacle; each of said outer chambers adapted to contain a supply of liquid lubricant; a pair of inverted U-shaped wicks within said container, each having a wide first leg confined within said annular inner chamber and of a width equal to one-half of the circumference of the annular inner chamber and the wicks being curved to fit into said chamber to complement each other in providing complete peripheral surface contact with said rod, each wick having a second narrower strap-like leg surmounting the recessed portion of said inner walls and dipping down into the lubricant supply in the adjacent outer chamber, the said inner walls of the receptacles extending generally to the full height of said receptacles except that the semi-cylindrically recessed portions of said inner walls are notched at their upper ends to provide a space between said upper ends and said top wall only sufficient to accommodate the passage of said legs of the wicks therethrough.

771 O.G.-9

3,002,588 LIFT FOR AUTOMOBILES

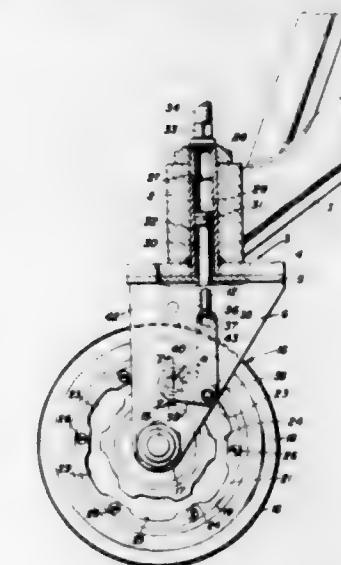
Marcel Charpigny, 40 Rue Erlanger, Paris 16, France
Filed June 16, 1959, Ser. No. 820,812
Claims priority, application France June 23, 1958
2 Claims. (Cl. 187-8.59)



1. A lift for automobiles and the like, comprising four vertical pillars, each of said pillars having a vertically movable block mounted thereon, means to actuate said blocks simultaneously, an arm pivotally mounted on each of said blocks and pivotable in a horizontal plane, an auxiliary arm slidably and pivotally mounted on each of said arms and movable in a horizontal plane, a support slidably and pivotally mounted on each of said auxiliary arms, and locking means to lock said arms into fixed positions.

3,002,589 CASTER WHEEL BRAKE MECHANISM

Harry G. Cook, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1960, Ser. No. 32,055
9 Claims. (Cl. 188-69)



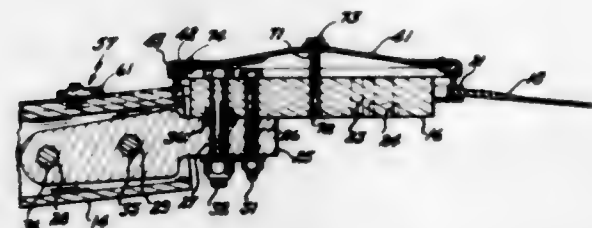
1. A caster wheel brake mechanism comprising a caster unit having a yoke, spaced legs on the yoke, a caster wheel, means rotatably mounting the caster wheel between the legs of the yoke, and brake means carried by the yoke and wheel, said brake means comprising a brake annulus on each side of the wheel and secured thereto, means securing a brake annulus on each side of the wheel, each said annulus having a circular groove consisting of a series of relatively wide elliptical groove portions connected by relatively narrow arcuate groove portions, brake shoes rockably carried by the yoke legs and normally disposed in the circular grooves, a movable linkage, said linkage including rockable means connected to the brake shoes and the linkage for imparting rocking movement to the shoes upon movement of said rockable means by said linkage so that said shoes either engage in said elliptical grooves for locking the wheel or clear said elliptical

and arcuate grooves for permitting free rotation of the wheel and means connected to said linkage for imparting said movement thereto.

3,002,590 TERMINAL FITTINGS AND INTERLOCKING DEVICES

Mitchell M. Hannooah, Wakefield, Lee P. Farnsworth, Lancaster, Thomas F. King, Burlington, and Fausto G. De Santis, Westwood, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

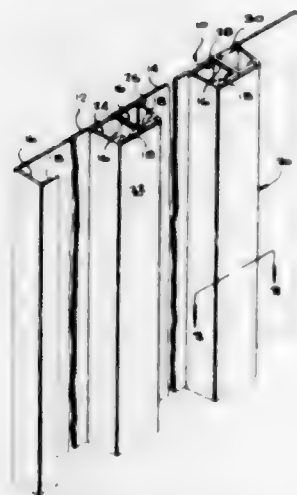
Filed Feb. 3, 1959, Ser. No. 790,992
3 Claims. (Cl. 189-1)



1. In a building structure, a plurality of frame-forming strut-like connectors having hollow, box-like end portions, a hub assembly including a circular core element having openings of graduated sizes in angularly spaced positions about the periphery of said core element, a series of tapering coupling elements disposed radially of the center of said core element, said coupling elements having openings therein of graduated sizes to match the openings in said core element, and being alignable therewith, said coupling elements having radial extensions fitting within the hollow box-like end portions of said strut-like connectors, and means for securing said coupling elements to said strut-like connectors, and also to said core element.

3,002,591 WALL STRUCTURE

Walter R. Hess, 3333 Park Ave., Union City, N.J.
Filed Aug. 14, 1959, Ser. No. 833,790
2 Claims. (Cl. 189-34)

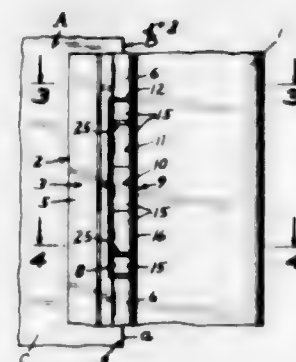


1. In a wall structure, at least a pair of upstanding panels arranged in longitudinal aligned relation, each panel having a first vertical leg projecting perpendicularly from each end thereof and a second leg projecting inwardly of and perpendicularly from the free end of the first leg, the panels being arranged so that the first vertical legs abut each other along their entire lengths with the second vertical legs facing away from each other, a connector embracing the abutting first legs and associated second legs of the adjacent panel ends, said connector

embodying a web, a pair of side flanges projecting in diverging directions from one side of said web, and an end flange projecting inwardly of and perpendicularly from the free end of each of said side flanges, the free ends of said end flanges being spaced from each other, the abutting first legs of said panels extending through the space between the free ends of said end flanges with the associated second legs abutting and bearing against the inner face of said web, and the end flanges bearing against the underfaces of the adjacent portions of said panels, and anchoring means at the juncture point of each of said side flanges with the web, the adjacent end portions of the associated second legs being received in said anchoring means.

3,002,592 HINGE AND METALLIC FRAME CONSTRUCTION

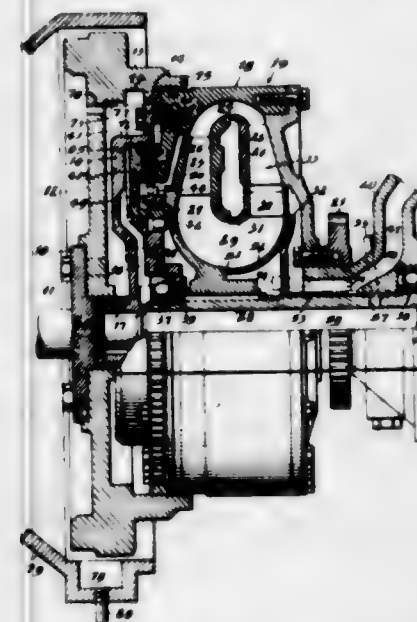
Bert A. Quinn, 250 E. 5th St., St. Paul, Minn.
Filed May 6, 1960, Ser. No. 27,333
1 Claim. (Cl. 189-46)



A hinge and metallic door frame construction for use in framing a doorway and for hanging a door thereto and comprising, a casing section having an elongated transverse flange adapted to be secured to a transverse marginal surface of said doorway, said casing section also having a longitudinally extending trim flange formed integrally with and generally normal to said transverse flange and adapted to overlie an adjacent wall surface of said doorway so that said section is super-imposed over the wall corner defined by said transverse surface and said wall surface, the junction of said transverse flange and said trim flange of said casing section defining a corner bead the axis of which extends longitudinally of said section, the corner bead defining a recess which opens inwardly toward the enclosed wall corner when said casing section is secured to said wall, said bead being interrupted at longitudinally spaced intervals so as to define hinge receiving apertures, and a pair of hinges for pivotally anchoring said door to said casing section, said hinges each being associated with and at least partially received within a different one of said apertures, said hinges each comprising a pair of leaves and a pintle, said pintle being of a greater axial length than its associated aperture and also its associated leaves, said pintle also defining upset and enlarged opposite end portions, said corner bead of said casing section being generally cross-sectionally U-shaped and having an inner diameter approximating the diameter of said enlarged end portions of said pintle and said enlarged end portions of said pintle being received from a generally laterally introduced direction within said recess and so positioned therein as to anchor said hinge within said corner bead of said casing section, and with respect to each of said hinges, one of the leaves thereof being rigidly secured intermediate said casing section and said transverse wall surface and the other of said leaves being adapted for rigid securement to said door.

3,002,593 POWER TRANSMISSION

James B. Black, Rockford, and Conrad R. Hilpert, Winnebago, Ill., assignors to Twin Disc Clutch Company, Racine, Wis., a corporation of Wisconsin
Filed Apr. 2, 1958, Ser. No. 725,952
8 Claims. (Cl. 192-3.2)



7. A power transmission comprising an hydraulic torque converter including an impeller forming part of a rotating housing and a turbine related to constitute a toroidal circuit to which working oil is constantly supplied, a driving member connectible to a source of power, an annular flange projecting laterally from the member in surrounding relation to the adjacent portion of the housing, meshing teeth respectively provided on the flange and housing portion as a driving connection, the flange and housing portion being cooperably shaped to define an annular chamber for centrifugally trapping oil and into which the respective teeth extend, an annular seal closing an end of the chamber on one side of the teeth between the housing and member, a lockup clutch including a driven plate having connection with the turbine and frictionally engageable with a part of the housing to effect a rotation together of the housing and turbine, means for bleeding oil at a controlled rate from the toroidal circuit and directing the same to the chamber including channels in a working face of the driven plate, and an exhaust passage in the driving member positioned to tap the oil in the chamber at a point close to and radially inwardly of the teeth roots on the housing.

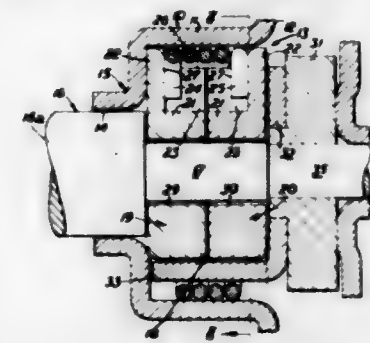
3,002,594 COIL SPRING MEANS FOR RELEASABLY COUPLING TWO RELATIVELY ROTATABLE MEMBERS

Arthur Cedric Haseler and Gilbert Whitridge Lacon, Birmingham, England, assignors to Wilmot-Breeden Limited, Birmingham, England

Filed Oct. 29, 1957, Ser. No. 693,054
Claims priority, application Great Britain Nov. 2, 1956
17 Claims. (Cl. 192-8)

1. Coil spring coupling means comprising two coaxial relatively rotatable members, a drum mounted coaxially with said members and formed as two axially separate parts, a helical spring carried coaxially by the drum with the ends of the spring engaged respectively by said two separate parts of the drum, a first of said members having a surface in frictional engagement with the convolutions of said spring when the latter is in a free condition, the other of said members being in driving engagement with said drum whereby a torque applied by said other member in one direction applies a torque to said spring whereby the grip of the latter on said first member is

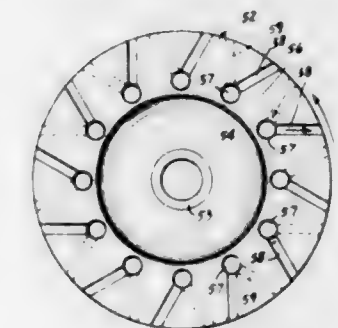
increased, and an actuating member rotatably mounted coaxially with said members and separate from but rotationally coupled to said drum with a degree of angular



lost motion therewith whereby a torque applied by said actuating member in the opposite sense to said one direction applies a torque to said spring tending to decrease the grip of the latter on said first member.

3,002,595 FLUID COUPLING DEVICE

Thomas J. Weir, Indianapolis, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation
Filed Sept. 16, 1957, Ser. No. 684,139
5 Claims. (Cl. 192-58)



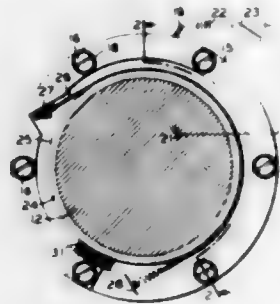
1. In a fluid coupling, the combination comprising a fluid retaining housing having spaced faces defining opposite sides of a chamber containing a supply of fluid, a rotor disposed for rotation in said chamber relative to said housing with its side surfaces extending in face-to-face relation with the faces of said housing, means for imparting relative rotation to said rotor and said housing whereby torque will be transmitted between said rotor and said housing through the shearing action of the fluid, said rotor having an annular area provided with a series of spaced apertures therethrough, a first series of grooves formed in one face of said area and extending between said apertures and the periphery of the rotor, a second series of grooves formed in the other face of said area and extending between said apertures and the periphery of the rotor, the axes of said first series of grooves leading the axes of said second series of grooves in the direction of rotation of the rotor whereby said fluid is circulated inwardly through said first series of grooves to said apertures and from said apertures outwardly through said second series of grooves.

3,002,596 ELECTROSTATIC CLUTCH

Clyde J. Fitch, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 19, 1957, Ser. No. 703,791
2 Claims. (Cl. 192-84)

1. An electro-adhesive clutch comprising, in combination, a conductive member comprising a band having perforations therethrough and having a first surface, a semi-conductive member comprised of conductive material

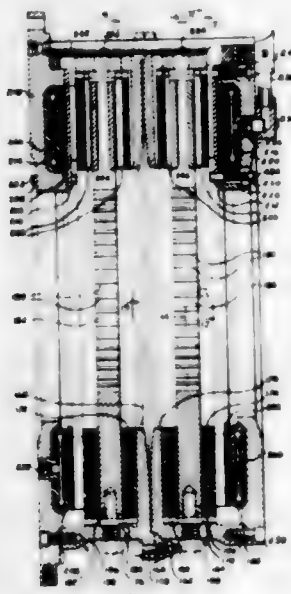
bound in an insulating binder and having a second surface disposed to face said first surface, means for moving said members relatively to each other along their facing surfaces, a dielectric lubricant having a high resistance



breakdown residue disposed between said surfaces, and means for applying an electrical potential difference between said surfaces to thereby clutch said members together.

3,002,597 DUAL AIR TUBE CLUTCH FOR REVERSIBLE DRIVES

Charles F. Warman, Jr., and Jack W. Mom, both of
P.O. Box 1150, Wichita Falls, Tex.
Filed Nov. 4, 1957, Ser. No. 694,294
1 Claim. (Cl. 192-87)

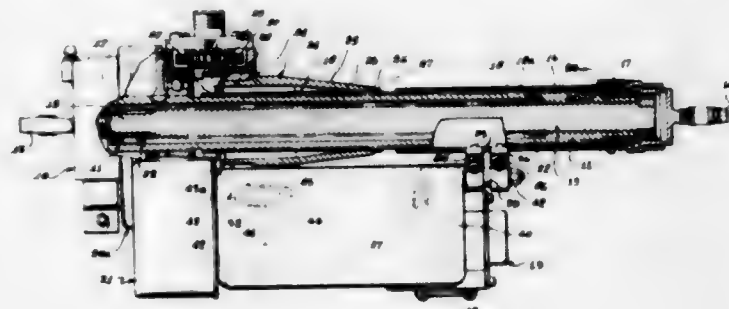


In a reversing clutch, a pair of independent housings attachably secured together in back to back relation and adapted to be connected to a rotatable element on a prime mover, said housings each having an air inlet formed in an end thereof, pairs of ribbed friction disc elements within each of said housings and engaged in non-rotatable relation with respect thereto, at least one of said friction disc elements of each pair being movable axially with respect to the respective housings, two shafts rotatably mounted axially of said housings, a clutch disc element on each of said shafts and being rotatable therewith, each of said clutch disc elements being positioned intermediate said respective pairs of friction disc elements, each of said housings having a ribbed abutment intermediate the innermost friction disc element of the pairs of friction disc elements, an end plate member on each outer end of each of said housings, an axially expandable air tube within each of said housings and being immediately adjacent the respective end plates, reaction members each having radial, spaced apart ribs, one of which reaction members is disposed intermediate each of said friction disc elements and the respective axially expandable tube adjacent thereto, conduit means connected

to each said axially expandable tube to convey air under pressure thereto while said housings are rotating, bars radially disposed within the grooves formed by the ribs of each said reaction member and abridging each said reaction member, a screw threaded bolt attached to each end of each of said bars, which bars are spaced circumferentially of said reaction member, said bolts extending through adjacent end plates, a spring telescoped over each of said bolts, an end of each of said springs being in abutting relation with one of said end plates, a nut positioned on each of said bolts and being in binding engagement with the other end of each said springs, said springs exerting resilient pressure on each said axially expandable tube to exhaust air therefrom when air pressure is released from said tubes so as to release frictional engagement between said friction elements and said clutch disc element.

3,002,598 MECHANICAL ACTUATOR WITH PROPORTIONAL TRAVEL LIMIT CAM HAVING ADJUSTABLE CONTOUR

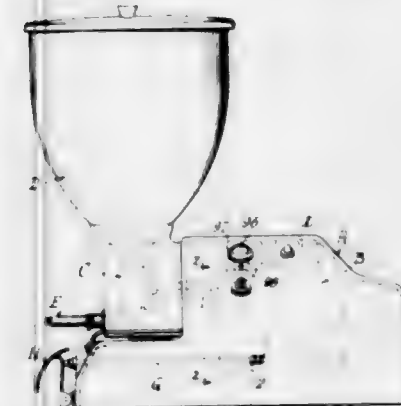
Valno A. Hoover, 2100 S. Stoner Ave., Los Angeles, Calif.
Filed Jan. 7, 1958, Ser. No. 707,627
3 Claims. (Cl. 192-141)



1. A mechanical actuator comprising: an elongated cylindrical nut member having internal and external threads; means to effect rotation of said nut member and to prevent longitudinal movement thereof; an elongated non-rotatably mounted cylindrical screw member extending through said nut member and threadedly engaged therewith, said screw member being longitudinally movable by said nut member between an extended position and a retracted position; a sleeve carried by said screw member which has an inner diameter greater than the outer diameter of said nut member; a tubular element threadedly engaging the external threads of said nut member, said tubular element being adapted for longitudinal movement upon rotation of said nut member, said tubular element having an outer diameter slightly less than the inner diameter of said sleeve member and being slidably but non-rotatably connected thereto, said tubular element being of a length to permit it to move longitudinally within said sleeve member, cam means including two actuating portions mounted at axially spaced locations on said tubular element for travel therewith; and means including a first element actuated by the axially inner one of said portions and a second element actuated by the axially outer one of said portions to limit the movement of said end member in either direction and hence limit the distance between the retracted and extended positions of said screw member, said axially inner portion being movable to a plurality of positions along said tubular element to variably control said retracted position of said screw member, said axially outer portion being fixed relative to said tubular element, said sleeve having an axially inwardly facing shoulder positioned near said axially outer portion when said screw member is fully retracted.

3,002,599 INFINITELY AND POSITIVELY ADJUSTABLE METERING DRIVING MECHANISM

Ira L. Lopata, Fair Lawn, N.J., assignor to Homogenette, Inc., North Arlington, N.J., a corporation of New Jersey
Filed Dec. 2, 1959, Ser. No. 856,689
12 Claims. (Cl. 192-148)



1. An adjustable driving and positive stop mechanism, including a frame, an input shaft and an output shaft journaled thereon, gearing including a clutch drivingly connecting said shafts, a clutch-stop device coactive with said clutch normally to stop the clutch and prevent rotation of said output shaft by the input shaft, a clutch-releasing element engageable with and disengageable from said clutch-stop device to release the clutch for operation of said output shaft and to stop said clutch and thereby stop said output shaft, respectively, a latch associated with said clutch-stop device to hold the latter in position to release the clutch, and a setting device to actuate said latch for release of said clutch-stop device to stop the clutch and said output shaft, said setting device including a wheel drivable by said output shaft and movable into and out of driven relation to said shaft upon movement of the clutch-stop device into clutch-releasing and clutch-stopping positions, respectively.

3,002,600 FLEXIBLE FEED TRACK

Milford A. Campbell, 17225 MacArthur, Detroit, Mich.
Filed Jan. 26, 1959, Ser. No. 789,002
4 Claims. (Cl. 193-25)

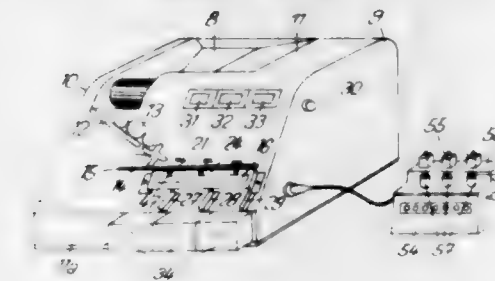


1. A flexible feed track for delivering articles by gravity along an irregular path comprising a plurality of hollow formed, segmental frame members disposed side by side along the length of said track and joined together by a bonded flexible coating, said frame members and said coating defining a way for articles to be delivered by said track, each of said frame members having spring-like characteristics so as to alter the cross section defined

thereby when a force is applied thereto and return to its original cross-sectional shape when the force is removed so as to cooperate with the inherent flexibility of said coating to permit said track to be formed torsionally and arcuately as required to conduct said articles along a desired path of travel, and said segmental frame members having aligned side openings collectively defining a slot extending along the length of said track through which articles in the way are visible and through which access can be had to the articles at various points along the length of the track.

3,002,601 COIN SORTING AND COUNTING MACHINE

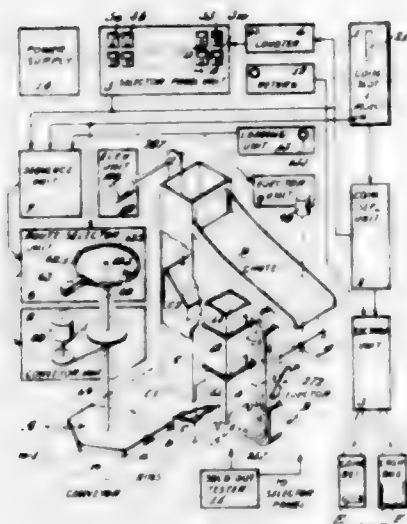
Eugen Reis, 19 Buchenauer Strasse, Bruchsal, Germany
Filed Apr. 19, 1960, Ser. No. 23,309
2 Claims. (Cl. 194-9)



1. Coin sorting and counting machine, comprising a housing with a funnel-shaped hopper for receiving the coins to be sorted and counted, a transporting device at the outlet of said funnel-shaped hopper moving the coins individually forward to be sorted and counted, a front wall of said housing sloping upwardly towards the rear of the machine and having a continuous horizontal slot, a downwardly sloping feed chute on the front of said front wall leading from the delivery end of said transporting device, a horizontal guide rail fixed on the front of said front wall parallel to said slot and extending from the delivery end of the feed chute at a lower level and below and in front of said slot, an endless belt mounted in the interior of said housing and having a run moving behind said front wall, entrainment pins fixed on said belt and progressively projecting through said longitudinal slot, said pins being spaced to take only one coin between two entrainment pins, an entrainment cross located between the delivery end of said feed chute and the receiving end of said guide rail, an axle carrying said entrainment cross, a disc with radial pins mounted on said axle and rotated by the pins fixed on the belt to regulate the transfer of the coins from the feed chute to the guide rail, contact pins projecting through elongated holes in the front wall above the guide rail and horizontal slot, the distance of these contact pins above the guide rail decreasing successively in the direction in which the coins travel and in each case being smaller than the diameter of one of the kinds of coins to be sorted, a counter mechanism coordinated to each of said contact pins actuated on impact with an oncoming coin to count each type of coin, an adding machine coordinated with said counter mechanisms to indicate the total value of coins and having a plurality of keys, lifting magnets one incorporated in each of said counter mechanisms rendered operative by the oncoming coins, push rods of said magnets actuating the keys of said adding machine, ejector pins mounted in holes in said front wall above said guide rail but below said horizontal slot and mechanically actuated by said contact pins under the influence of the coins, a catching device for the different kinds of coins arranged on said front wall at the height of said guide rails for receiving the coins ejected by said ejector pins, and a collecting receptacle under said catching device for receiving the sorted coins from said catching device.

3,002,602 VENDING APPARATUS

Hubert M. Glepen, 482 Jerusalem Road, Cohasset, Mass.
Filed Sept. 26, 1955, Ser. No. 536,520
2 Claims. (Cl. 194-10)



1. A device for automatically selling a variety of differently priced articles from a series of bins each of which can be conveyed to a station for discharge and delivery of an article upon insertion of at least the price of an article in any combination of coins and upon manual indication of a selected article selling not higher than the price inserted, comprising: motor means for conveying any bin to said station; motor means for discharging at said station an article from said bin; motor means for delivering the article from the station; means for separating the inserted coins and for initiating electric control impulses one for each multiple of the lowest coin value; means for counting said control impulses, including selector conduit means one for each value of a series of multiple values of said lowest coin value, and means for energizing each selector conduit means that corresponds to an inserted coin value at which an article is sold; a plurality of selector means one for each article sold, each connected to that one of said selector unit conduit means that corresponds to the price of its article, and each including motor conduit means, and manually actuated selector switch means for energizing its motor conduit means through its selector conduit means, said control impulse counting means also including means for clearing said selector means prior to energizing said selector conduit means; and means energized by said motor conduit means for consecutively activating, upon actuation of one of said selector switch means, said conveying, said discharging and said delivering motor means to bring the bin holding the selected article to the station and there to discharge and to deliver it.

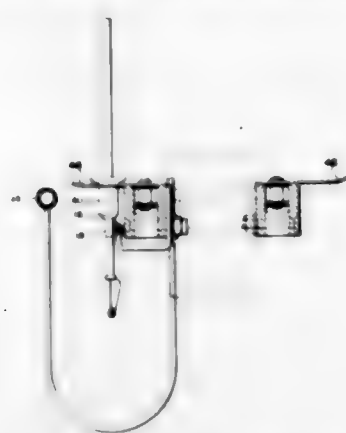
3,002,603

LAMP MOUNT TRANSFER

Roland M. Gardner, Swampscott, Ernest E. Yeo, Wenham, and David P. Drown, Beverly, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Original application June 15, 1955, Ser. No. 515,724, now Patent No. 2,960,205, dated Nov. 15, 1960. Divided and this application Apr. 29, 1960, Ser. No. 31,507
4 Claims. (Cl. 198-29)

1. Apparatus for conveying lamp mounts having narrow stems, widened or flared portions, and flat lower portions, comprising, an endless chain, U-shaped open holders on said chain for receiving and supporting said mounts,

a rail below said holders in position adjacent to the flat portions of said mounts in said holders, and air jets directed against said mounts for urging the said flat portions of said mounts against said rail.

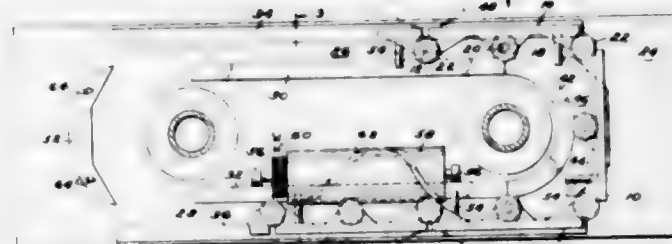


rected against said mounts for urging the said flat portions of said mounts against said rail.

3,002,604

ENDLESS CHAIN SYSTEM

John H. Brems, Detroit, Mich., assignor to Motomation, Inc., Detroit, Mich., a corporation of Michigan
Filed Oct. 28, 1957, Ser. No. 692,760
15 Claims. (Cl. 198-137)



1. A sprocket-less, endless, precision transfer system to move in a continuous, accurately defined circuit comprising a plurality of load-bearing platforms articulated at points adjacent their ends upon parallel pivot axes, a track follower on each platform rotatably secured thereto on an axis parallel to and co-planar with the first pivot axes and midway therebetween, a track for said track followers having linear runs along which the platforms are guided for movement in opposite directions, said linear runs being parallel and spaced apart the lateral distance between said pivot axes of each load-bearing platform, and a stationary, circular track section between adjacent ends of the linear track runs for guiding the track followers between said linear runs and serving as a pivot area to facilitate the transmittal of driving force on said platforms from one linear run to the other, the section being curved about an axis parallel to the pivot axes to effect transfer of each platform out of one run and into the other with equal instantaneous velocities without slack in the joints between the platforms, and a drive means to transmit a driving force on said platforms along one of said linear runs.

3,002,605

APPARATUS FOR TRANSPORTING AND GUIDING FISH TO THE TOOLS OF FISH DRESSING MACHINES

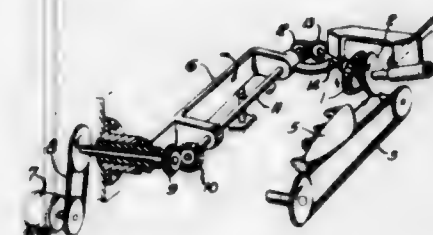
Karl Friedrich Schlichting, Lubeck, Germany, assignor to Nordischer Maschinenbau Rud. Baader, Lubeck, Germany, a firm

Filed July 9, 1957, Ser. No. 670,784

Claims priority, application Germany, July 17, 1956
1 Claim. (Cl. 198-167)

Apparatus for conveying and guiding fish to the processing tools of fish dressing machines, comprising a feeding

device having guiding means for the belly of the fish, two conical rollers above said feeding device, means supporting the axes of said rollers at such angle to each



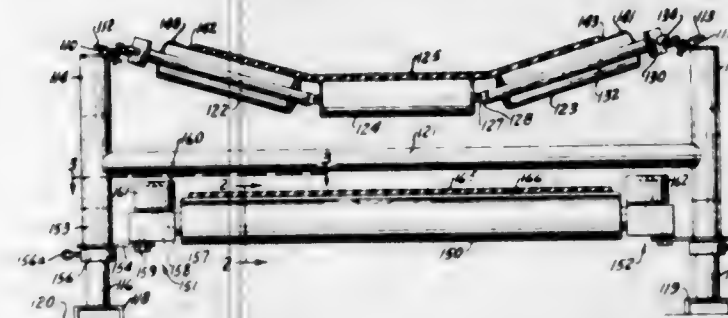
other than the conical surfaces of said rollers become closer together in the direction in which the fish is fed, and means pivotally supporting said supporting means.

3,002,606

MEANS FOR SWINGING FREELY SUSPENDED ROLLER ASSEMBLIES

Roy F. Lo Presti, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed June 4, 1959, Ser. No. 818,214
9 Claims. (Cl. 198-202)



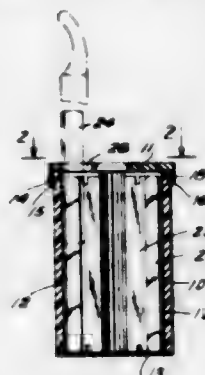
1. In a belt conveyor troughing roller assembly having at least a primary load carrying roller flanked by a pair of wing rollers, each wing roller having its outer end mounted for swinging movement to and fro about its inner end as a pivot whereby the wing rollers may be canted in the direction of belt travel, means for canting the roller in the direction of belt travel, said canting means including a peripherally discontinuous projection on the surface of a wing roller, said projections causing the belt to impart a jolt to the roller as it passes thereover.

3,002,607

RAZOR BLADE CONTAINER

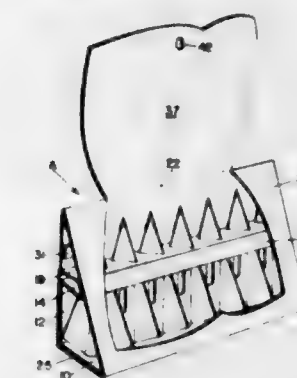
Howard J. Laverty, Brooklyn, N.Y., assignor to Sterling Precision Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,233
6 Claims. (Cl. 206-16)



1. A blade container comprising a body member having a series of slots each shaped to receive a blade therein, a cap and means movably securing it to said member having an opening adapted to register successively with said slots in its progressive movement, said opening being shaped upon full registry with a slot to enable slidable movement therethrough of a blade holder with blade therein or upon a small adjustment from full registry to cause the end of the blade to be engaged by an edge portion of the opening and restrained in the slot and the blade holder withdrawn from the slot.

3,002,608
PACKAGE FOR ARROW HEADS
Clifford J. Zwickey, 107 12th Ave. NE.,
North St. Paul, Minn.
Filed Aug. 17, 1960, Ser. No. 50,154
11 Claims. (Cl. 206-45.14)



1. A package of elongated tapered arrow heads including a bottom panel, a rear panel extending upwardly from one edge of said bottom panel, a front panel extending upwardly from the edge of said bottom panel opposite said one edge and connected to said rear panel to form a body substantially triangular in section, and a flap cut from said front panel intermediate the ends thereof and foldably connected to said rear panel along the upper edge thereof, and means on said back panel extending toward said front panel and supporting said arrow heads extending upwardly from said bottom panel in spaced parallel relation.

3,002,609

CONTAINER WITH INTERNAL INSERT

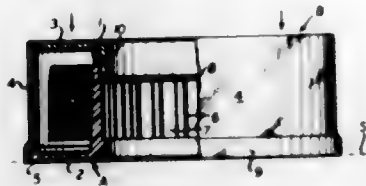
Stanley I. Batkin, New Rochelle, N.Y.
Filed Apr. 28, 1958, Ser. No. 731,488
13 Claims. (Cl. 206-45.14)



13. A container comprising a bottom wall having cuts producing spaced opposed flaps, an insert comprising an upstanding wall and laterally directed bottom flanges, said bottom flanges extending along said bottom wall and under said flaps, and a top wall having an opening, said insert comprising a pair of wall panels connected along one side by a foldline and flanges connected to the other sides of said wall panels by foldlines, said insert being formed exclusively from the material excised from said top wall to produce said opening, said bottom wall comprising tabs extending toward one another into said bottom wall flaps, said bottom flanges of said inserts being located beneath said flap and above said tabs.

3,002,610 SPOOLS

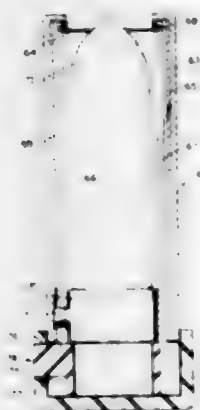
William T. Granger, Livingston, N.J., assignor to Decorated Metal Mfg. Co., Inc., Milltown, N.J., a corporation of New York
Filed Nov. 6, 1958, Ser. No. 772,347
4 Claims. (Cl. 206—52)



3. A spool packaging assembly comprising a spool member having a barrel and flange, a sleeve member having a sleeve adapted to fit over said flange and cover the barrel together with material wound thereon, the sleeve member comprising also a second flange having a hub adapted to be press fitted to the barrel, and frangible means peripherally joining the second said flange to the sleeve.

3,002,611 REFILLABLE LIPSTICKS

Jay Doblin, Chicago, Ill., assignor to Hazel Bishop Inc., New York, N.Y., a corporation of New York
Filed Feb. 11, 1959, Ser. No. 792,592
4 Claims. (Cl. 206—56)



1. A cartridge of the class described comprising a first tube having a rectilinear slot extending longitudinally from the upper end of said tube to a position near the lower end thereof, a resilient body in the lower end of said tube, said body including a stud disposed transversely of the tube and extending through the slot thereof, a second tube surrounding said first tube, said second tube having a helical groove, a base carried by said lower end of said first tube having an orifice extending radially through a side thereof, said stud being received within said orifice and locking said first tube in assembly with said base and against relative rotation therewith, a cup movable longitudinally with the first tube, said cup having means engaging said slot and groove, and a third tube surrounding said second tube.

3,002,612 CAN CARRIER

Ouglissa Jules Pouppich, Itasca, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Nov. 6, 1956, Ser. No. 620,695
22 Claims. (Cl. 206—65)

1. A one-piece sheet material clip for securely connecting at least three generally cylindrical cans or the like having annular end rims disposed in substantially abutting parallel relationship so that a space is enclosed between the cans, comprising polygonal body means having a generally flat central portion for substantially traversing the space between the cans and including at least three corner portions respectively for projecting at least

partially between immediately adjacent pairs of the cans, each of said corner portions comprising a pair of generally oppositely disposed upstanding sections for extending along outer surfaces of adjacent rims, a pair of generally oppositely projecting substantially rigid lugs integral with and struck from the upstanding sections of each of said corner portions adjacent outer terminal ends of the corner portions for engaging beneath rims of immediately adjacent cans, deformable elements integral with and extending from margins of said corner



portions for engaging inner surfaces of the can rims for cooperating with said lugs when the clip is fully applied to the cans for preventing removal of the cans until said deformable elements have been shifted away from the lugs, and rib means formed in said body means corner portions and respectively extending longitudinally between the pairs of lugs for resisting twisting or collapsing of the corner portions when the clip is fully assembled with the cans and the cans are subjected to rough treatment.

3,002,613 CARTON

Gordon Merkel, Atherton, Calif., and Costis John Papp, Evanston, Ill., assignors to Schmidt Lithograph Company, San Francisco, Calif., a corporation of California
Filed Oct. 5, 1959, Ser. No. 844,454
7 Claims. (Cl. 206—65)



1. A carton for packing two end-to-end rows of on-end cylindrical containers, said carton having the general shape of a rectangular parallelepiped, with four side walls and two end walls, a narrow tear strip midway between the end walls running around three of said side walls leaving most of said three walls in place when said tear strip is torn off, and a panel on the fourth side wall marked by scores as a continuation of said tear strip and provided with a pair of perforations adapted for carrying the carton and contents with two fingers.

3,002,614 VIBRATORY SQUEEZE-FORMING OF METALS IN THE SOLID STATE AND APPARATUS THEREFOR

James Byron Jones, West Chester, Pa., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 13, 1956, Ser. No. 628,126
6 Claims. (Cl. 207—2)

2. Extrusion apparatus including a housing having a cavity, a die having an orifice of smaller cross-sectional

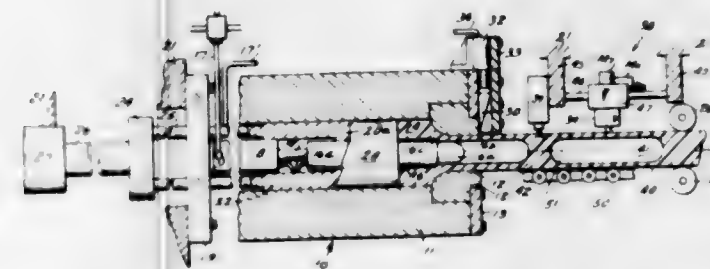
area than the cross-sectional area of the cavity of the housing in communication with the cavity of said housing, means for extruding a solid state metal from the cavity of said housing through said die, means for applying vibratory energy to at least a portion of said extrusion apparatus, and support means for supporting said means for applying vibratory energy including a member



having a length equal to a unit multiple of one-half wavelength in the material of which the support means is made at the applied vibratory frequency, said support means having one free end and including a flange positioned an odd unit multiple of one-quarter wavelength from the free end of the support means for securing said support means to the extrusion apparatus.

3,002,615 EXTRUSION APPARATUS

Jerome H. Lemelson, 43A Garfield Park Apts., Metuchen, N.J.
Filed Oct. 22, 1957, Ser. No. 691,622
16 Claims. (Cl. 207—2)



15. Extrusion apparatus comprising an extrusion machine having an extrusion chamber, a die having an opening therethrough communicating with said chamber, said opening having a minimal area portion defining an extrusion throat of said die, an automatically controlled servo operated means for varying the area of said throat, said throat defining an area in which material extruded through said opening is normally formed to shape with this shape normally being retained thereafter, prime moving means for moving an extrusion material through said apparatus, controls for said servo operated means, programming means connected to operate said controls, said programming means including means for generating a programmed sequence during a predetermined time in an extrusion cycle and adapted to control operation of said servo operated means to effect a predetermined variation in the area of the throat coordinated with speed of the prime moving means whereby the shape of the extrusion is varied along its length in a predetermined manner.

771 O.G.—10

3,002,616

POTASH ORE BENEFICIATION PROCESS

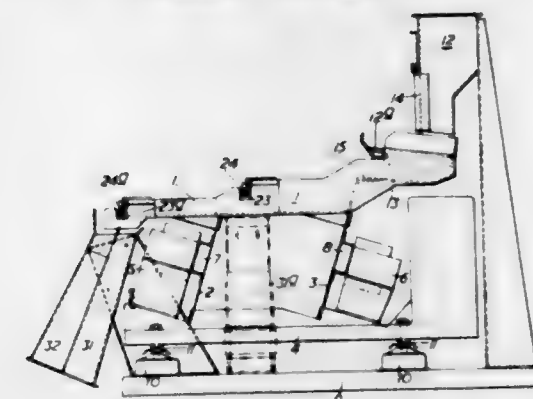
John H. Shollne, Lakeland, Fla., and Charles C. Cook, Alken, S.C., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 5, 1958, Ser. No. 719,203
8 Claims. (Cl. 209—2)

1. A process for beneficiating a potash ore containing sylvite, langbeinite and halite constituents which comprises comminuting the ore to the liberation of the various constituents, subjecting the comminuted ore to an air tabling operation and recovering a sylvite concentrate, and sizing said concentrate and recovering a large size fraction of increased sylvite concentration from the sizing operation.

3,002,617

GRADING MACHINES

Herbert Fraenkel, London, England, assignor to R. W. Gunson (Seeds) Limited, London, England
Filed May 10, 1957, Ser. No. 658,321
Claim priority, application Great Britain May 11, 1956
2 Claims. (Cl. 209—97)



2. A grading machine comprising a table mounted for vibration in the direction of its length and having a main portion formed with a plurality of longitudinally extending article orienting grooves, and an entry portion formed with a plurality of longitudinally extending preliminary article orienting grooves aligned respectively with the orienting grooves in said main portion, said entry portion having a small upward inclination relative to said main portion in the direction of longitudinal advance of the articles to be graded, means for feeding elongated articles to be graded onto said entry portion, means to vibrate the table in a longitudinal sense to advance articles fed to the entry portion progressively through said preliminary orienting grooves and into and through the aligned grooves of said main portion, a catch member disposed adjacent to and spaced from the main portion and defining therewith a grading gap to which the articles move in their advance, a vertically adjustable control component in said gap arranged adjacent the path of movement of the articles at the gap, and means for securing the control component in adjusted position.

3,002,618

ARTICLE SIZING MACHINE

Edward J. Derderian, 4514 N. Wilson Ave., and Carroll E. Cole, 4386 Wilson Ave., both of Fresno, Calif.
Filed Feb. 17, 1958, Ser. No. 715,569
2 Claims. (Cl. 209—102)



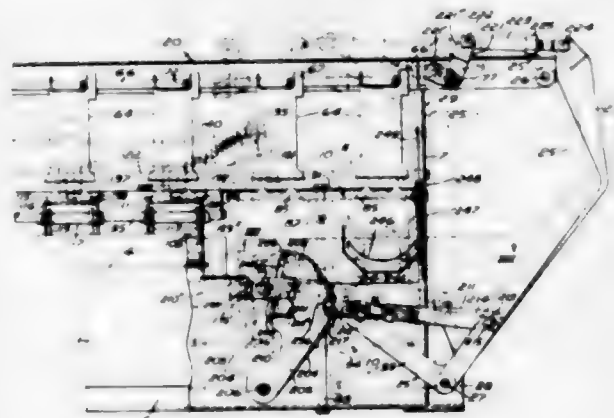
1. In a machine for sizing relatively soft and easily bruised articles having an acid and moisture content, such

as strawberries, an elongated frame having an article receiving end and an oppositely extended end; a drive sheave including an elongated substantially concentric shaft transversely journaled in the extended end of the frame and having a plurality of axially spaced circumscribing grooves; a driven sheave including an elongated substantially concentric shaft transversely journaled in the article receiving end of the frame in substantially the same horizontal plane as the drive sheave and having a plurality of axially spaced circumscribing grooves equal in number to the grooves on the drive sheave; a pair of lower idler drums transversely journaled in the frame in substantially horizontal coplanar relation below and inwardly adjacent to the sheaves, a plurality of elongated substantially cylindrical rollers eccentric to individual longitudinal axes therefor and axially transversely freely rotatably journaled in the frame in longitudinally spaced relation between and above the sheaves, the axes of the sheaves and the rollers lying in an upward arch having its highest point substantially equidistantly spaced from the sheaves, the rollers each having a plurality of axially spaced annular ribs individually circumscribed by annular grooves, said rollers having circumscribing annular recesses between the ribs, each of the rollers having the same number of grooves as the sheaves, adjacent grooves of the sheaves and the rollers being gradually spaced farther apart from the article receiving end to the extended end of the frame so that corresponding grooves are substantially aligned along lines longitudinally diverging from the receiving to the extended end of the frame; a substantially horizontal pulley mounted on the frame for adjustable movement longitudinally of the frame below and between the drums for rotatable movement around a substantially erect axis; a pair of substantially erect pulleys mounted on the frame for rotatable movement about substantially horizontal axes below the driven sheave and spaced longitudinally of the frame from said sheave; an elongated moisture and acid resistant, abrasion and corrosion proof, substantially cylindrical, smooth surfaced, endless cable of Mylar polyester film wound around the sheaves, the rollers, the drums, and the pulleys to provide upper and lower runs, the upper runs resting in said corresponding longitudinally aligned grooves and extending above the peripheries of their respective ribs so that adjacent runs define slots of progressively increased width from the article receiving end to the extended end of the frame; rotary drive means mounted on the frame and connected to the drive sheave for imparting rotation thereto; weighted means connected to the horizontal pulley to tension the cable against the sheaves, rollers, drums and pulleys whereby the upper runs of the cable are moved in the same direction from said receiving end to said extended end for urging articles from the receiving end toward said extended end and whereby the lower runs are moved from the extended end toward the receiving end, said articles gravitationally descending through the slots where their respective widths are less than the widths of the slots, the tension of the cable against the rollers effecting rotation thereof, the rollers being initially angularly adjusted under the pressure thereagainst of the cable so that their eccentricities extend in different directions from their respective axes and so as gently to oscillate the upper runs vertically whereby the articles are turned to facilitate their descent through the slots at precise positions, the radial depths of the annular recesses in the rollers being at least as great as the spacing of the upper runs rested in the grooves of their adjacent ribs whereby articles rested on the upper runs over the rollers do not contact the rollers but rest on the upper runs in spanning relation to the recesses; an elongated bar mounted in the frame transversely beneath the lower runs, and between the idler drums but relatively closely adjacent to the idler drum at the article receiving end; and spacers upwardly extended from

the bar in substantially the same spaced relation as the width of the grooves and individually extended between adjacent lower runs to maintain exact spacing therebetween prior to movement onto the driven sheave.

3,002,619 EGG GRADER

Norbert F. Marzolf, Strykersville, N.Y., assignor, by mesne assignments, to Marzolf Manufacturing Co., Inc., Strykersville, N.Y., a corporation of New York
Filed Dec. 20, 1955, Ser. No. 554,202
3 Claims. (Cl. 209-121)



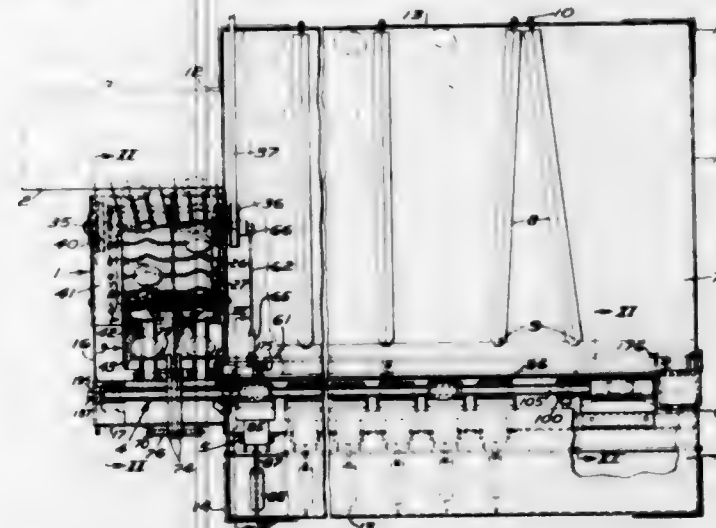
1. In a mechanism for grading articles by weight, a series of balances having article receiving platforms arranged in alignment with each other, article delivery means arranged adjacent one end of said series of platforms, and article transfer means for transferring articles from said delivery means to the adjacent and then to succeeding balance platforms including carriage means mounted on said mechanism for movement through an arcuate path with a predetermined stroke back and forth over said platforms and said delivery means, article engaging means carried by said carriage means for movement relative thereto into and out of article engaging position, means including drive means movable with said carriage means through said predetermined stroke in each direction and then relative thereto at the end of said predetermined stroke in each direction for moving said article engaging means alternately into and out of article engaging position, and spring means biasing said carriage means to its dead center position intermediate the opposite ends of said predetermined stroke.

3,002,620 EGG GRADER

Norbert F. Marzolf, Strykersville, N.Y., assignor, by mesne assignments, to Marzolf Manufacturing Co., Inc., Strykersville, N.Y., a corporation of New York
Filed Nov. 7, 1957, Ser. No. 695,041
14 Claims. (Cl. 209-121)

1. In a machine for grading articles according to weight, a series of weighing means having article receiving platforms aligned in a row, article conveying means for conveying articles to a first one of said platforms and then to succeeding ones thereof, said article conveying means comprising carriage means, support means mounting said carriage means for reciprocating movement through a delivery stroke and a return stroke in operative alignment with said platforms, said carriage means having a first part carried by said support means and a second part carried by said first part, said first and second parts being movable in unison and said second part being movable relative to said first part between raised and lowered positions relative thereto, and drive means connected to said carriage means for reciprocating the same through said delivery and return strokes, said drive means including means moving said first and second

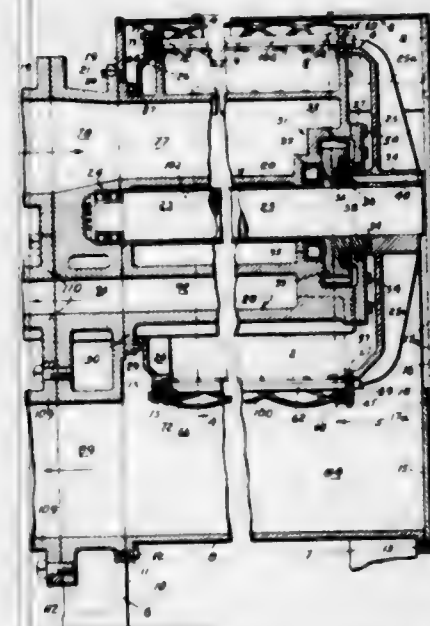
parts in unison throughout the entire delivery stroke and the major portion of the return stroke and moving said first and second parts relative to one another at the beginning and end of said return stroke, together with means translating such relative motion into shifting of said second part to its raised position at the end of the carriage return stroke and to its lowered position at the beginning of the carriage return stroke, said second part



having article supporting means arranged so that when said second part is in its raised position articles thereon are supported at an elevation above said platforms and when said second part is in its lowered position it clears articles on said platforms, said second part being moved to its lowered position to deposit articles on said platforms only after completion of the carriage delivery stroke.

3,002,621 PULP SCREEN

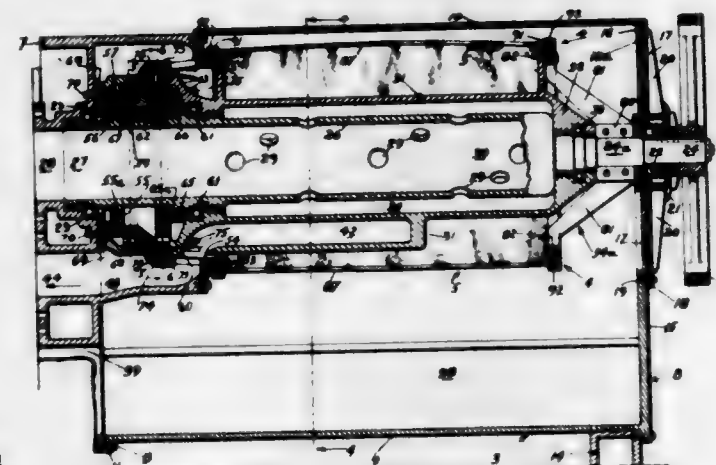
Wilfred F. Mathewson, 261 Franklin St., Weymouth 10, Mass.
Filed Jan. 28, 1957, Ser. No. 636,807
8 Claims. (Cl. 209-250)



5. A pulp screen comprising a casing having an end member at each end thereof, a cylindrical screen element within the casing, a horizontal shaft on which the screen element is mounted, a bearing in one end member for one end of said shaft, a stationary core member secured to said one end member and extending into the screen member, a bearing for the other end of the shaft carried by said core member, a driving gear axially aligned with the shaft, a bearing support for said gear carried by the core member and having a central

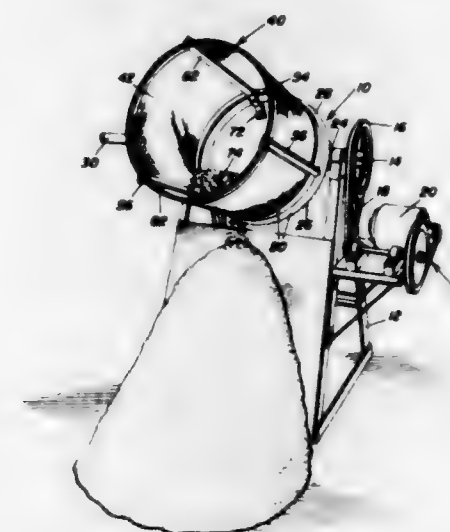
opening through which said shaft extends, means to rotate the driving gear and a jaw clutch connection between the driving gear and said screen element.

3,002,622
MACHINE FOR TREATING PAPER PULP STOCK TO VARY THE CONSISTENCY THEREOF
Wilfred F. Mathewson, 261 Franklin St., Weymouth 10, Mass.
Filed Feb. 4, 1958, Ser. No. 713,136
9 Claims. (Cl. 209-250)



1. A machine for treating pulp stock comprising a rotary cylindrical screen element having a cylindrical screening wall, a horizontal tubular shaft extending axially through the screen element, means to rotate said shaft, means mounting the screen element on the shaft to rotate therewith, means to deliver the pulp stock to be treated to the interior of said rotatable tubular shaft, the latter having openings through the wall thereof through which the pulp stock is delivered therefrom, and means including a stationary nozzle element situated within the screen element and provided with a delivery slot extending parallel to the axis of the shaft to deliver the pulp stock on to the inner face of the screening wall in the form of a sheet.

3,002,623
SCREEN ATTACHMENT FOR CEMENT MIXERS
Charles E. Fontaine, Nashua St., Leominster, Mass.
Filed Mar. 27, 1959, Ser. No. 802,496
11 Claims. (Cl. 209-288)



1. A rotary screen comprising an attachment for use with the base unit and power structure of a mixer of the type having a power operated rotary tumbling barrel con-

sisting of a rotary disk-like base with a cylindrical drum and fasteners removably securing said drum thereon, said attachment comprising; a cylindrical screen open at both ends and consisting of a reticulated material, a support framework secured to and stiffening and reinforcing said material, said support framework being mounted upon and secured to said disk-like base as a replacement for the tumbling barrel and by the fasteners that connected said barrel to said base.

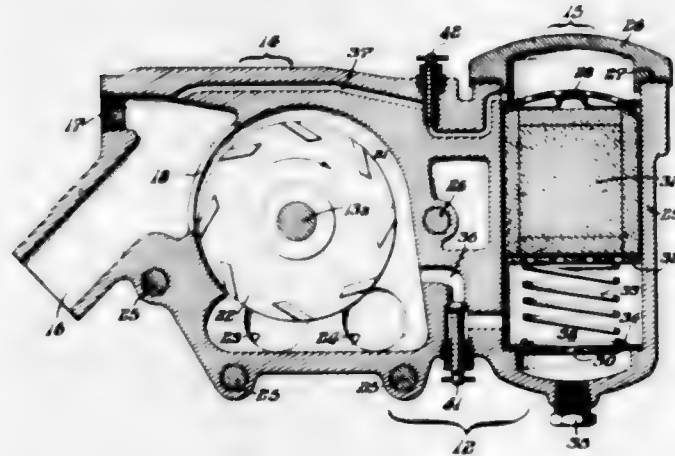
3,002,624

COMBINATION PUMP AND FILTER FOR RECIRCULATING LIQUID SYSTEMS

Joseph A. Vettel, Sr., Haddonfield, N.J., Arthur C. Saxton, Lakewood, Ohio, John H. Zabel, Jr., Bridgeport, Pa., and Ernest E. Cipolone, Brooklawn, N.J., assignors to R. M. Hollingshead Corporation, Camden, N.J., a corporation of New Jersey

Filed Jan. 2, 1958, Ser. No. 706,818

3 Claims. (Cl. 210-167)



3. As a new product of manufacture, a combination pump and filter-conditioner unit for use in a liquid circulating system of the internal combustion engine of a motor vehicle; said unit comprising an integral housing, a pump chamber formed in said housing and a separate filter chamber likewise formed in said housing, an outlet opening leading from the delivery side of the pump chamber, a duct formed in the housing and extending between the delivery side of the pump chamber and the lower portion of the filter chamber, a duct formed in the housing and extending between the top of the filter chamber and the suction side of the pump chamber, pump inlet passage in said suction side of pump chamber being adapted for connection to a radiator, an auxiliary inlet opening in said suction side of pump housing leading to the pump chamber for a hose connection to a heater in the vehicle; an impeller operative within the pump chamber; and a filter cartridge within the filter chamber whereby, during operation of the pump, the liquid is continuously circulated in the system with attendant by-passing of a portion thereof through the filter chamber and back to the pump chamber by way of the aforesaid ducts.

3,002,625

SCREENING AND COMMUNUTING DEVICE

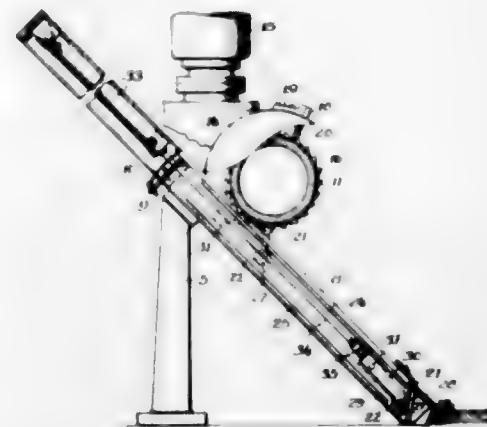
William H. Lannert, Skokie, Ill., assignor, by mesne assignments, to FMC Corporation, a corporation of Delaware

Filed May 19, 1954, Ser. No. 430,935

7 Claims. (Cl. 210-173)

1. In combination, a screen comprising a frame having downwardly extending flanges at its longitudinal edges and a plurality of longitudinally extending, spaced parallel screen elements, a pair of vertically spaced ribs extending inwardly from each of said flanges, each of said ribs being

inclined sharply downwardly adjacent the front end of said screen, a bar extending transversely of said screen, a plurality of posts projecting upwardly from said bar and extending between adjacent screen elements, a roller mounted at each end of said bar, each of said rollers



being positioned between one of said pairs of ribs, a block slidably mounted between each pair of ribs, each of said blocks being connected to a piston rod operable to reciprocate said blocks simultaneously longitudinally of said screen, and a link connecting each block to the adjacent end of said bar, whereby said posts may be moved between said screen elements longitudinally of said screen.

3,002,626

FILTER PRESS

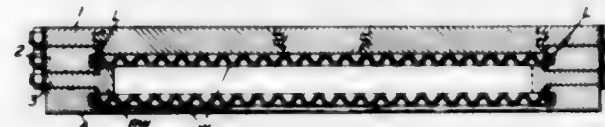
Josef Vogt, Allschwil, Switzerland, assignor to

J. R. Geigy A.-G., Basel, Switzerland

Filed July 15, 1959, Ser. No. 827,249

Claims priority, application Switzerland July 16, 1958

1 Claim. (Cl. 210-228)



A filter press comprising a plurality of filter plates, each filter plate having a frame and an imperforate center plate having an irregular surface on both sides thereof providing flow passages to the edges of said center plate, said center plate having a thickness less than the thickness of the frame and being mounted in the frame, and said filter plates each having a filter cloth over each face of the center plate and extending over the faces of the frame, and a plurality of distance pieces being disposed one between each pair of adjacent filter plates and clamping the filter cloths against the filter plate frames, the inner marginal edge of said filter plate frames being bevelled at both sides and around the entire internal periphery thereof, each of said distance pieces comprising a frame the inner marginal edge of which is thickened around the entire internal periphery thereof to form a shoulder at each side thereof, each of said shoulders having a bevelled edge adapted to cooperate with the bevelled edge of the filter plate frame adjacent thereto and clamping the filter cloth therebetween against the bevelled edge of the adjacent filter plate frame, the dimension of each shoulder in the direction of the thickness of said distance piece frames being equal to half the difference in thickness between a filter plate frame and the center plate therein, and the portion of the filter cloths within the filter plate frames being held flat against the center plates by the distance pieces.

3,002,627

AGITATOR FOR ROTARY DRUM FILTER

Charles R. Morehouse, Alameda, Calif., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed May 14, 1958, Ser. No. 735,280

3 Claims. (Cl. 210-383)



1. In a rotary drum filter apparatus an improved slurry agitating arrangement comprising in combination a filter drum adapted to have filter cake formed externally thereon; a vat for holding a slurry to be filtered by the drum mounted for rotation on the vat, said vat having end walls and a bottom substantially conforming to the curvature of the drum so as to provide a relatively narrow spacing between said bottom and said drum, whereby the total width of the vat is minimized while affording relatively deep immersion of the drum into the slurry in the vat; a correspondingly curved agitator construction comprising curved screen means located in the spacing between said bottom and said drum and extending from the low point of said drum a substantial distance in both directions along the periphery of the drum; bearing means for mounting said agitator construction for movement thereof in a straight line parallel to the drum axis; and actuating means for imparting reciprocations along said straight line to said agitator construction.

3,002,628

ROTATING POWER DRIVEN BASE

Charles A. Reddell, San Bernardino, Calif., assignor to Warren Christmas Trees, Inc., San Bernardino, Calif., a corporation of Nevada

Filed Feb. 4, 1960, Ser. No. 6,646

5 Claims. (Cl. 211-1.6)



2. A rotating power driven base comprising, an inverted dish-shaped molded plastic base member having an upwardly convex wall, formed with an integral upstanding centrally arranged circular collar, a stationary vertical shaft carried by and extending upwardly from said wall centrally of said collar, a thrust bearing member carried by said base member in surrounding relation to said shaft, a driven member formed of one-piece molded plastic with a central tubular portion journaled for rotation on said shaft and having a lower end portion supported for rotation on said thrust bearing, said driven member also having an integral cylindrical wall concentrically surrounding said tubular portion received within said collar and being formed with internal ring-gear teeth, an electric motor secured to said base member at the under side of said wall in a vertical mounting of the motor shaft and with the upper end of said motor shaft located between said stationary shaft and said cylindrical

wall of said driven member, and a pinion on said upper end of said motor shaft enmeshed with said ring gear teeth.

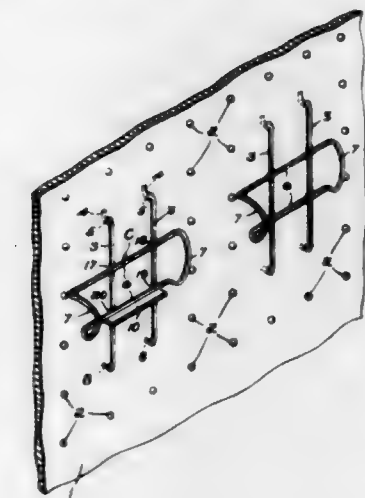
3,002,629

DISPLAY CLIP

Robert P. Gersin, 28 E. 55th St., New York 22, N.Y., and Eldridge W. Arnold, 15 Grossett Road, Riverside, Conn.

Filed Apr. 2, 1959, Ser. No. 803,688

4 Claims. (Cl. 211-35)



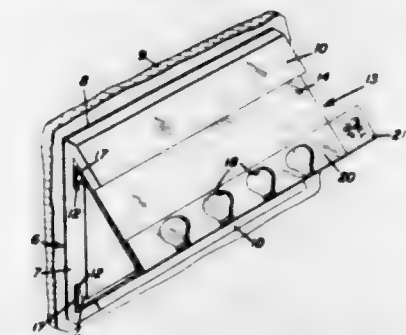
1. A support clip adapted to be mounted on an apertured board having vertically and horizontally spaced apertures, said clip having vertically disposed support elements, said elements being provided with rearwardly extending pins adapted to be received in said apertures for securing said clip flat against said board, a horizontally disposed support element in substantially the same plane as said vertically disposed support elements, said horizontally disposed support element being provided contiguous thereto with two forwardly extending elements one at each side edge of said horizontally disposed support element, said forwardly extending elements converging downwardly as gripping means for securing therebetween an article to be displayed in substantially upright position between said gripping means and against said board.

3,002,630

TOOTHBRUSH RACK

Robert E. Heisser, Celina, Ohio
(P.O. Box 23, Boyne City, Mich.)
Filed May 24, 1960, Ser. No. 31,386

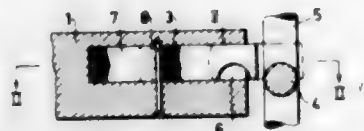
2 Claims. (Cl. 211-65)



1. A toothbrush rack comprising a bracket including a plate for mounting on a wall, a pair of spaced, opposed, forwardly convergent flanges on said plate, said plate having rabbets therein adjacent the flanges, said rabbets having oppositely opening grooves therein spaced from and opposed to the flanges, and a removable holder on the bracket, said holder including a generally V-shaped card engaged between the flanges, and intumed flaps on the card slidably engaged in the grooves, said card having slots therein traversing its apex portion for the

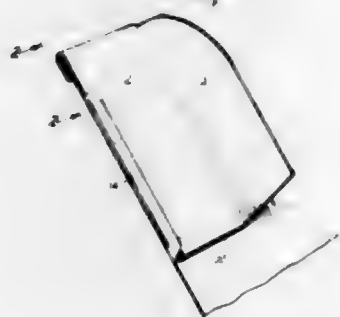
reception of toothbrushes, said slots including restricted intermediate portions for retaining the toothbrushes therein.

3,002,631
SUSPENSION FITTINGS
Nils Erik Strinning, La Couronne, Lutry,
Lausanne, Switzerland
Filed Nov. 4, 1959, Ser. No. 850,935
Claims priority, application Sweden Nov. 6, 1958
3 Claims. (Cl. 211-153)



1. A suspension fitting for shelf boards and the like comprising, a shelf board provided in one end with a cylindrical bore, a cylindrical pin snugly fitted in the bore and longitudinally slidable in the same, the pin being provided with an elongated slot extending through it, a nail driven through the shelf board at right angles to the longitudinal axis of the pin and mounted stationarily with respect to the shelf board and passing through the slot, the nail being so positioned in relation to the slot that it limits the extent of entry of the pin into the bore by contact of said nail with one end of the slot and permits a portion of the pin to extend out of the bore for finger engagement to permit of manual extension of the pin out of the bore, the slot having opposed curved side wall surfaces contacting against the nail permitting limited turning movement of the pin within the bore and on the nail.

3,002,632
CARD RACK DIVIDER WITH CLIP
Van George, 320 Orange Grove, South Pasadena, Calif.
Filed Nov. 12, 1959, Ser. No. 852,375
2 Claims. (Cl. 211-184)

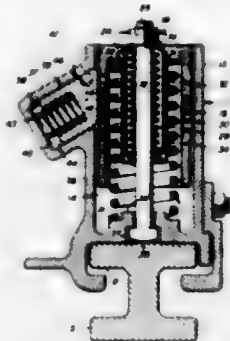


1. In combination, a support panel having upper front and lower back surfaces and an edge portion folded back upon said back surface; and a card rack divider including a relatively thin sheet of material having front and back surfaces, a single divider member projecting outwardly from said sheet front surface, and a clip member projecting outwardly from said sheet back surface, said clip member being resiliently connected to said sheet and having a catch lip turned inwardly toward said back surface; whereby said card rack divider is supported upon the upper front surface of said panel and is releasably held thereto by said edge portion and said clip member.

3,002,633
SNUBBED RESILIENT COUPLER CARRIER
Glenn F. Couch, Bergen, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Oct. 17, 1958, Ser. No. 767,854
19 Claims. (Cl. 213-61)

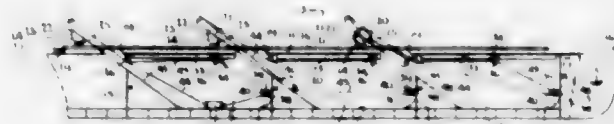
17. In a resilient coupler carrier, the combination with a supporting member, a carrier member, a housing up-

standing from said supporting member and opening toward said carrier member, an arm on said carrier member and extending into said housing, supporting spring means in said housing and acting on said arm for resiliently supporting said carrier member for relative vertical movement on said supporting member, a container on said arm and having an upwardly opening socket, auxiliary spring means in said socket, and a bolt anchored at its lower end to said housing and extending axially through said supporting and auxiliary spring means and said container for limiting upward relative movement of said



members, of an axially split annular wedge in said container between a bottom wall thereof and said auxiliary spring means and collaring and having a friction face engageable with said bolt, a downwardly facing frusto-conical wedging face and an annular flange, respectively, on lower and upper portions of said wedge outwardly of said friction face, and a wedging surface formed in a bottom wall of said container and engaged by said wedging face, said auxiliary spring means acting on said flange and through said wedging face and surface for urging said friction face into frictional engagement with said bolt and thereby snubbing said relative vertical movement between said members.

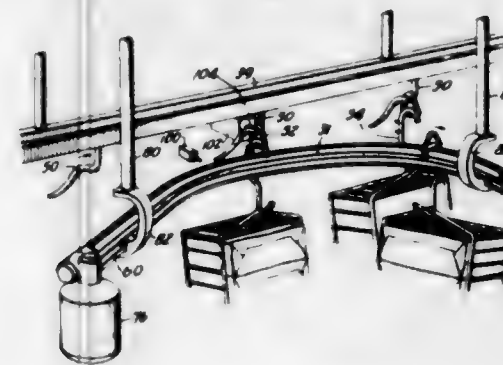
3,002,634
BULK-CARGO CARRYING SHIP
Gordon W. Culp, Glendora, Calif., John J. McMullen, Saddle River, N.J., and Thomas F. Bridges, Great Neck, N.Y., assignors to John J. McMullen Associates, Hoboken, N.J., a corporation of New Jersey
Filed Apr. 9, 1959, Ser. No. 805,197
4 Claims. (Cl. 214-15)



1. A ship for carrying bulk-cargo within a plurality of relatively flat-bottomed cargo holds thereof, said ship having bulk-cargo materials handling apparatus comprising drag scraper means within each of said holds for moving said bulk-cargo materials stored therein to discharge at one end of the hold, a ramp at the discharge end of each of said holds for elevating the drag scraper when the latter is moving said material to gravity discharge at the upper end of said ramp, said ramp of each hold extending from the bottom thereof to an elevation above an upper deck of said ship, a surge hopper mounted on said upper deck below the top of each of said ramps for receiving the materials discharge of said drag scrapers, a feeder conveyor mounted on said deck below each of said hoppers for receiving the materials discharge therefrom and carrying the same to gravity discharge at one end of said feeder conveyor, a centrally located longitudinal belt conveyor mounted on said deck for receiving and carrying the materials discharge from all of said feeder conveyors to gravity discharge at an end of said longitudinal con-

veyor, a boom conveyor mounted at one of its ends on said deck at a side thereof for pivotal movement out beyond said side for carrying and discharging bulk-cargo materials outboard of said ship, said mounted end of the boom conveyor being located in substantially the same plane of frame of said ship as said discharging end of the longitudinal conveyor, and a transverse belt shuttle conveyor on said deck arranged for receiving and carrying the materials discharge from said longitudinal conveyor to gravity discharge on said boom conveyor, whereby said ship is self-unloading of said bulk-cargo.

3,002,635
CONVEYOR AND SYSTEM
Edward T. Holland, Jr., Englewood, N.J., assignor to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed June 17, 1957, Ser. No. 666,023
2 Claims. (Cl. 214-16)



1. An automatic conveyor storage system comprising a continuously-operating, power-driven input conveyor adapted to carry in single-file a plurality of article carriers, a plurality of intermittently-operated independently-controlled power storage conveyors arranged in spaced-apart relationship transversely to said input conveyor, the article moving force of each storage conveyor being a rotatable helical screw engageable by the article carrier, means providing for automatic transfer of article carriers from said input conveyor to a selected storage conveyor, means to start operation of the selected storage conveyor upon transfer of an article carrier thereto, and means automatically to stop operation of said selected storage conveyor after a predetermined definite time has elapsed whereby article carriers received on the storage conveyors are substantially evenly spaced apart.

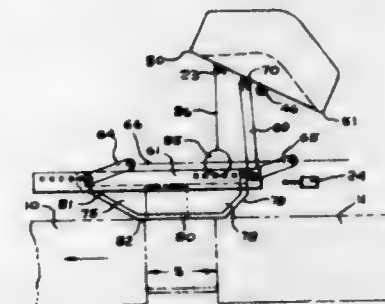
3,002,636
METHOD OF "PIGGIE-BACK" TRANSPORTATION
John Phil Felburn, 4160 W. Broad St., Columbus 4, Ohio
Continuation of application Ser. No. 733,127, May 5, 1958. This application Mar. 22, 1960, Ser. No. 16,720
15 Claims. (Cl. 214-38)



11. A method of making shipments through the utilization of rail and truck transportation and involving the use of a railway flat car and a semi-trailer having a load-carrying bed detachably connected at its front end to a tractor unit and having a stable multiple axle wheel unit provided with an upper portion detachably locked in position underneath the rear part of the bed whereby the latter is conjointly supported by said wheel and tractor units for movement along a roadway, said method including the steps of backing the semi-trailer by means

of the tractor in a direction generally normal to the longitudinal axis of the railway flat car to a position wherein the rear end of said bed adjoins and is generally level with the adjacent upper surface of said flat car and wherein the rear set of wheels of said wheel unit adjoins the side of said flat car, stopping the backing movement of said tractor unit and unlocking said wheel unit from said load-carrying bed to permit relative movement therebetween, then continuing the backing movement of said tractor unit while said wheel unit is held stationary to push against the forward end of said bed and thereby move said bed smoothly over the horizontally stable upper portion of said stationary wheel unit and onto said flat car to transfer support of the load from said wheel unit to said flat car, the wheel unit by reason of its stability remaining horizontal and untilted and permitting unobstructed movement of said load-carrying bed relative to said wheel unit without considerable separation therebetween, disconnecting said tractor unit from said bed, and swinging said bed horizontally and relative to said flat car to a position wherein its longitudinal axis is generally aligned with the longitudinal axis of the flat car.

3,002,637
AUTOMATIC CAR LOADING APPARATUS
Labron W. Miller, Paris, Ky.
Filed May 5, 1960, Ser. No. 26,992
6 Claims. (Cl. 214-42)

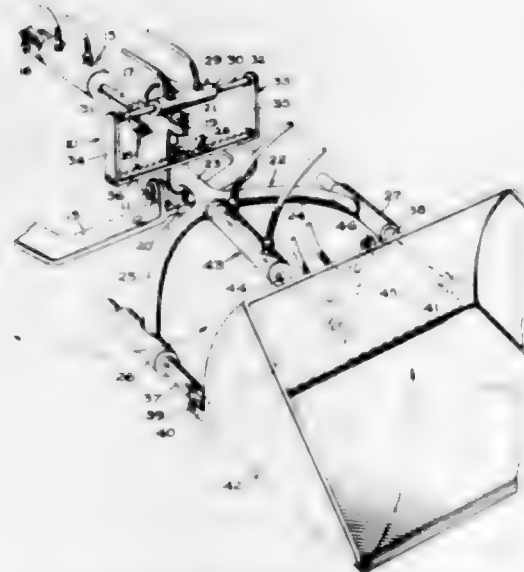


1. A car loading apparatus comprising in combination, a car loading conveyor and a trip of coupled cars having sides and end walls and adapted to be advanced in succession along rails into and from loading position, means for advancing said cars, a framework, a dispensing means pivotally mounted on an upper portion of said framework beneath said conveyor and receiving material from said conveyor, said dispensing means being tiltable between a normal first position discharging material into a forward car and a second position discharging material into the adjacent rearward car, car-engaging means connected to said dispensing means and pivotally mounted upon said framework for engagement successively by the end walls of said cars during a portion of the advancing movement thereof, and a first control means for actuating said car-advancing means, said first control means being actuated by movement of said car-engaging means, said car engaging means occupying a normal lowered position and being raised to an elevated position when in contact with the trailing end wall of a loaded car as said loaded car moves forward thereby jointly to cause said dispensing means to move to its second position and to actuate said first control means in order to move the end walls of said cars out of contact with said car-engaging means.

3,002,638
FULL SWING HYDRAULIC LEVEL SCOOP
Samuel Jacob Needy, Rifle Rte., Meeker, Colo.
Filed Aug. 15, 1958, Ser. No. 755,225
4 Claims. (Cl. 214-132)

1. A scoop attachment for tractors and the like, comprising a mounting block having pivotal means at its

lower end for attachment to the front end of an associated vehicle, said means allowing pivotal movement of the upper portion of said block in a vertical plane, a yoke assembly pivotally attached about a vertical axis to said mounting block and projecting forwardly therefrom, a scoop bucket carried by the forward end of said yoke assembly for movement therewith, and hydraulic means carried by said mounting block and engaged with said yoke assembly for swinging the same from side to side with respect to the mounting block; said means including a double acting piston within a stationary cylinder mounted rigid with the upper portion of said mounting block having a piston rod connected with said piston and projecting from the opposite ends thereof, a generally



U-shaped rack having upstanding legs connected at their upper ends to the extremities of said piston rod and having a toothed bight portion interconnecting said legs, said yoke assembly including a gear sector meshing with the toothed bight portion of said rack, said yoke assembly including a stem projecting forwardly from said mounting block and a pair of arms branching forwardly therefrom, a hydraulic cylinder forming an extension of said stem between said arms and having a forwardly extending piston rod projecting therefrom, said arms terminating in spaced, parallel guide sleeves, rods slidably disposed in said guide sleeves and pivotally connected at their forward ends to said scoop bucket, said piston rod being pivotally connected at its forward end to said scoop bucket for extending and retracting said bucket with respect to said yoke assembly, and means for pivotally moving said scoop bucket about its axis of connection to said rods.

3,002,639

STACKED BRICKS LIFTER

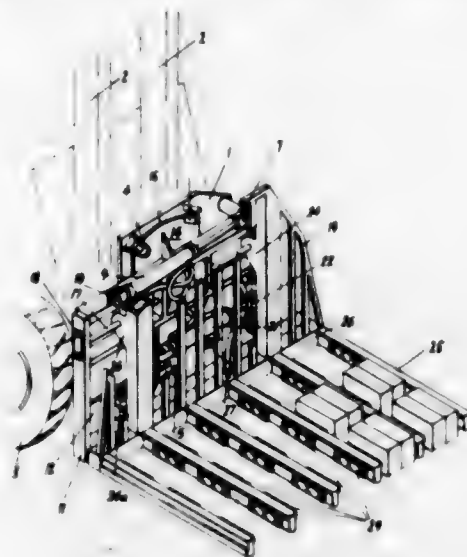
John Cavanagh, Croydon, near Sydney, New South Wales, Australia, assignor to Lawrence Toofill Pty. Limited, Auburn, near Sydney, New South Wales, Australia, a company of Australia

Filed Mar. 28, 1960, Ser. No. 18,110

Claims priority, application Australia Mar. 31, 1959
3 Claims. (Cl. 214-655)

1. In a stacked bricks lifter for mounting on and actuation by a fork lift truck having a source of fluid supply, the combination comprising a base frame secured to said truck, a main frame, means rotatably mounting said main frame on said base frame, said means including a fluid operated cylinder mounted on said main frame and connected with said base frame, a saddle, means slidably supporting said saddle on said main frame, means for moving said saddle laterally relative to said main frame, a plurality of stack supporting arms fixed to the lower end of said saddle and extending horizontally outwardly therefrom, a plurality of gripper shoes pivotally and

laterally slidably mounted on the opposed faces of said arms to provide full face contact with the bricks engaged therebetween, hydraulic fluid lines associated with each of said arms, means connecting said lines with the source of fluid supply of said truck, at least one cylinder in said



arms and connected to said hydraulic fluid lines, a plunger slidably in said cylinder and engaging a related gripper shoe to move said shoe laterally of said arm when fluid pressure is applied to said cylinder, and retracting means carried by said arms and connected to each of said gripper shoes to normally retract said shoe toward its related arm.

3,002,640

PROTECTORS

Samuel M. Kline, Monaca, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Feb. 4, 1959, Ser. No. 791,216
1 Claim. (Cl. 215-12)



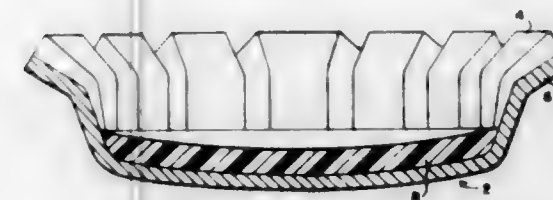
A method of protecting siliceous fragile articles from shock and vibration during the handling thereof, which comprises: extruding polystyrene particles having integrated therein from 4 percent to 9 percent of an aliphatic hydrocarbon boiling approximately in the range of 30° C. to 90° C. and having homogeneously admixed therewith a carbon dioxide liberating agent and an acid present in an amount sufficient to produce upon reaction a total of about 5 percent per weight of water and carbon dioxide based on the weight of polystyrene particles to produce a film of at least 0.02 inch in thickness of foamed polystyrene, forming said film into a sleeve, the inner-cross dimension of the sleeve being only slightly greater than the external cross dimension of the article to be protected, whereby said sleeve is readily removable from said article without deforming said article or destroying said sleeve, and surrounding said article with the removable sleeve.

3,002,641

CLOSURE

John W. Normandy, Washington, D.C., assignor to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York

Filed Apr. 25, 1957, Ser. No. 655,043
8 Claims. (Cl. 215-40)

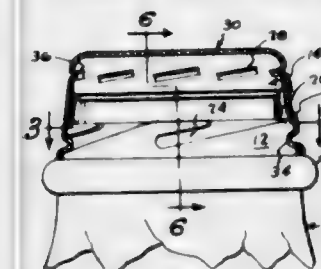


1. A closure shell containing a vinyl chloride resin plastisol liner having not over about 37% plasticizer based on the total of plasticizer and vinyl chloride resin.

3,002,642

BOTTLE CONSTRUCTION

John F. Watson, Linden Lane, Chatham, N.J.
Filed Sept. 11, 1959, Ser. No. 839,454
1 Claim. (Cl. 215-43)



The combination with a bottle having a neck portion, a pouring section provided with an opening extending about the top of said neck portion, an outwardly-projecting annular flange extending about said neck portion below and spaced from the pouring section, an inwardly-projecting annular recess formed in said neck portion between said pouring section and said flange, said recess being contiguous to said pouring section and being spaced above said flange, spaced inclined grooves forming female screw threads formed in the exterior surface of said neck portion and each having the upper end opening into said recess, and separated sealing grooves each inclined in the same direction and at the same angle as said screw threads formed in the exterior surface of said pouring section, of a pliable closure covering said opening and having a skirt extending over said pouring section, recess, screw threads and down to said flange and molded about said female threads and sealing grooves to form raised male threads conformably shaped to fit within said female threads and sealing grooves, said closure being removable by rotation with respect to said bottle without destroying the raised screw threads molded in said skirt.

3,002,643

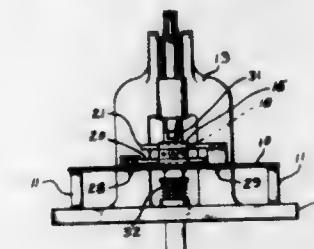
GAUGING DEVICE FOR A FASTENER SETTING MACHINE

Robert E. Miller, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Jan. 7, 1957, Ser. No. 632,844
2 Claims. (Cl. 218-17.2)

1. In a snap fastener setting machine, a punch and die, the center line of which defines a setting station, a gauging device for locating the edge of a garment with respect to said setting station of said machine for setting a third fastener element midway between two previously set fastener elements, said gauging device comprising an elongated support plate fixedly attached to said machine

rearwardly of said setting station, said plate having a pair of longitudinal slots extending lengthwise thereof one at each side of said setting station, a pair of guide blocks slidably along the top of said plate, elongated projections fixed to said guide blocks, said projections snugly and slidably fitting said slots to prevent twisting of said blocks relative to said plate, a pair of locating arms slidably along the underside of said plate, means fixedly and non-rotatably connecting said arms to said guide block projections, said arms extending forwardly of said plate, each of said arms having an element locating

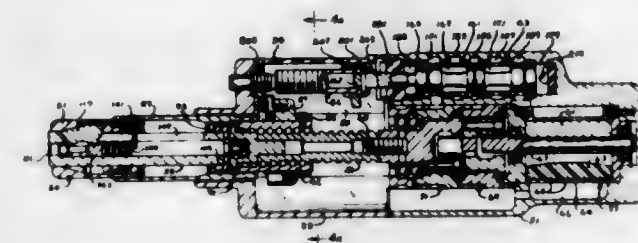


means at its forward end located in lateral alignment with the fastener setting station and serving to be engaged by previously set fastener elements upon the garments, a housing fixedly mounted on said plate, a single gear rotatably mounted in said housing directly in back of said setting station, and a pair of opposed laterally-extending racks engaging said gear and slidably in said housing, said racks having their outer ends joined to said guide blocks whereby movement of one of the arms laterally of the setting station will move the opposite arm an equal distance in the opposite direction so that said third fastener element may be set midway between said two previously set fasteners.

3,002,644

PULLING TOOL

John L. Meyer, Grand Haven, Mich., assignor to Gardner-Denver Company, a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,803
13 Claims. (Cl. 218-47)

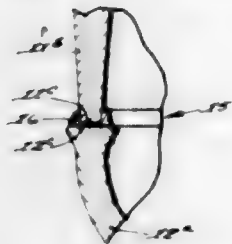


1. A pulling tool comprising a housing; a reversible air motor mounted in said housing; a lead screw rotatably driven by said motor; a follower nut driven by said screw; means in said housing for preventing rotation of said nut; a thrust bearing secured to the forward end of said lead screw; a head, extending from said housing, comprising an elongated anvil and a sleeve surrounding said anvil; said sleeve being removably secured to said nut and said anvil being removably secured to said thrust bearing; said anvil having an elongated bore and a plurality of longitudinal slots; a plurality of jaws carried by said head in said anvil slots; a tapered cam surface at the forward end of said sleeve; spring means in said sleeve for biasing said jaws forwardly into engagement with said tapered cam surface to move said jaws toward each other into gripping engagement with a member received in said anvil bore; cam surfaces at the forward ends of said anvil slots for urging said jaws away from each other; a reciprocable control valve in said housing for selectively directing air to said motor to drive it in either direction of rotation; said valve having a neutral position wherein air is sealed off from the motor; a manual valve for directing air to shift said control valve

from said neutral position; a reciprocable control member connected to said control valve through a lost motion coupling; and said control member disposed to be engaged by said nut to shift said control valve to said neutral position.

3,002,645
HERMETIC JOINT FOR GLASS CATHODE-RAY
TUBE ENVELOPE

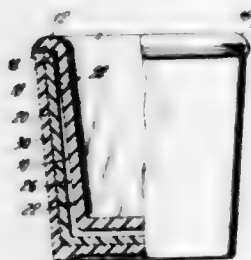
Robert R. Kegg, Toledo, Ohio, assignor to Kimble Glass Company, a corporation of Ohio
Filed Aug. 8, 1957, Ser. No. 676,977
3 Claims. (Cl. 220-2.1)



1. A sealed envelope for a cathode-ray picture tube adapted to color television reception comprising at least two hollow glass parts consisting of a funnel-shaped body portion and a concavo-convex face plate portion, said funnel and face plate portions having sidewalls terminating in complementary annular essentially planar unpolished sealing surfaces disposed in juxtaposed relation, and an annular layer of solidified low-melting glass sealing composition interposed between the said sealing surfaces, one of said sealing surfaces having a substantially greater width than the thickness of its adjacent side wall area as well as the juxtaposed other sealing surface to facilitate lateral adjustment of said sealing surfaces with respect to each other during sealing, said annular layer of sealing composition being in at least partially devitrified form and extending over the major portions of the opposing sealing surfaces and adjacent side wall areas of the narrower sealing surface, the sealed region being essentially devoid of re-entrant angles.

3,002,646
PLURAL WALLED CONTAINER AND PROCESS
OF MANUFACTURING THEREOF

Jerome Lewis, 230 5th Ave., New York, N.Y.
Filed Aug. 22, 1960, Ser. No. 51,087
1 Claim. (Cl. 220-9)



A plural walled container comprising an inner receptacle and an outer receptacle, said inner and outer receptacles being of a thermoplastic material, said inner receptacle having a flange portion overlying and extending beyond the outer surface of said outer receptacle and being disposed within said outer receptacle in spaced relationship for substantially the entire opposed surfaces thereof and with only the upper edge of said outer receptacle engaging the under face of said flange portion of said inner receptacle at a side location spaced from the top of said inner receptacle defining a closed insulation space between said inner and outer receptacles, and a layer of a thermoplastic material integrally fused with the outer surface of said outer receptacle and integrally

fused with the under face of said flange portion of said inner receptacle at said side location, said layer completely surrounding the outer surface of said outer receptacle, said layer having a lip portion cooperating with said flange portion defining an integral arcuate lip outwardly disposed of the rest of said container.

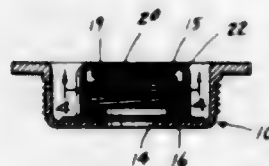
3,002,647
CLOSURE CAPS

Rubin Potoff, Waterbury, and Werner Vogt, Torrington, Conn., assignors to Metal Fabrications Incorporated, Waterbury, Conn., a corporation of Connecticut
Filed Feb. 2, 1960, Ser. No. 6,217
2 Claims. (Cl. 220-24)



2. In a closure cap construction, a crown component and a collar component, said crown component having a hollow body portion open at one end and having an inwardly extending post at the other end, said open end being defined by a peripheral edge, said post having a base of non-circular cross-section adjacent said body portion and a shank extending beyond the base; said collar component having an inner shell portion, an outer collar band portion joined thereto, and an inner end wall, the juncture of said inner shell and band portions forming an annular shoulder, said band portion extending outwardly beyond said crown component and having a smooth interior surface and being of smaller transverse proportions than the maximum transverse portion of said crown component, said peripheral edge of said crown component being in encircling engagement with said annular shoulder, the end of said collar component opposite said inner end wall being open, said inner end wall having an apertured portion of non-circular configuration and proportioned for enveloping engagement with said base; said inner shell portion being disposed within the crown component with said inner end wall in abutment with the body portion of the crown component, said post extending inwardly through said apertured portion, the latter being in enveloping engagement with said base, the innermost portion of said post having a flange in engagement with the adjacent portion of said inner end wall of the collar component, whereby the said crown and collar components are held in non-rotatable assembled relation only by said flange and the portion of the end wall immediately surrounding said apertured portion.

3,002,648
EXPLOSION PROOF CONTAINER PLUG
Glenn T. Rieke, Auburn, Ind., assignor to Rieke Metal Products Corporation, Auburn, Ind., a corporation
Filed Mar. 16, 1959, Ser. No. 799,812
3 Claims. (Cl. 220-44)



1. A pressure relief plug comprising a flanged and threaded plug having a centrally disposed pressure relief aperture, a cup-shaped spring retainer mounted on said plug with its open end facing said aperture and having an escape aperture in its bottom, said retainer having in-

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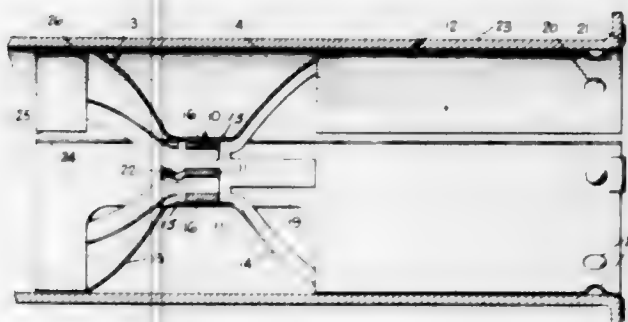
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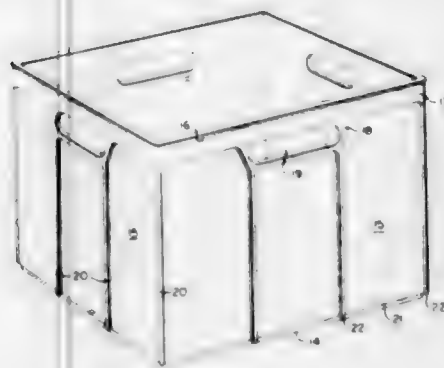
wardly opening peripheral channels, a cup-shaped valve of smaller diameter than that of said retainer and slidably mounted within said retainer in abutment with the surfaces of said plug surrounding said relief aperture to normally close said relief aperture, and a spring compressed between said retainer and said valve for holding said valve in closed position against predetermined maximum pressure.

3,002,649
FLUID PASSAGE GUARD MEANS
Hobart M. Turley, 582 Vine St., Oak View, Calif.
Filed Jan. 25, 1960, Ser. No. 4,469
9 Claims. (Cl. 220-86)



1. In a tubular passage having a changed diameter portion at a given point therein, guard means substantially preventing the insertion of elongated members through said passage past said given point, said guard means comprising; first generally cylindrical coil spring means disposed within said passage and circumferentially constrained thereby, said first spring means having at least one radially outwardly projecting member designed to be aligned with said changed diameter portion to stop axial movement of said first spring means in said passage in at least one direction; second spring means axially coupled within the length of said first spring means, said second spring means including a plurality of radially extending arms engaging and radially constrained by said passage.

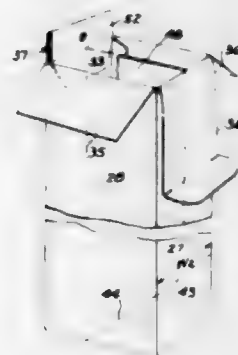
3,002,650
STACKING CASE AND TOTE BOX OF PLASTIC MATERIAL
Stanley P. Lovell, Newtonville, Mass., assignor to Baker Plastic Containers, Inc., Worcester, Mass., a corporation of Massachusetts
Filed May 27, 1959, Ser. No. 816,093
1 Claim. (Cl. 220-97)



A rectangular stacking case and tote box of polyethylene having surface lubricity for non adherent contact of the cases when stacked, and comprising a perforated bottom panel having external diagonal reinforcing ribs merging into a continuous marginal rib, and up-standing side walls integral with said bottom panel and offset outwardly with respect to the marginal rib thereof, said upright walls terminating at their upper edges in a flat outwardly extending flange and having a thickened peripheral band beneath the flange merging downwardly

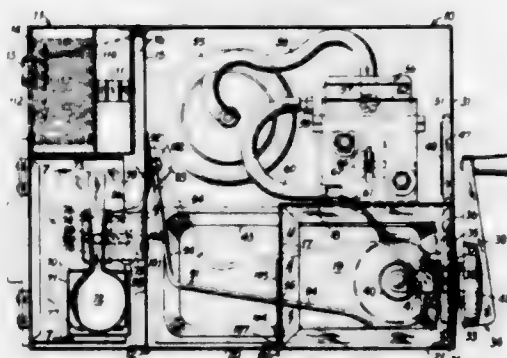
into an elongated thickened area containing hand holes, said thickened area merging downwardly in parallel external reinforcing ribs of the same thickness that terminate in crenelated formation outside the marginal rib of the bottom panel and so provide spaced points of support for the case.

3,002,651
DISPENSING PACKAGE FOR COMPRESSIBLE PADS
George M. Gauld, Caro, Mich., assignor to Alloy Metal Wool Products Corp., Caro, Mich., a corporation of Michigan
Filed Feb. 27, 1958, Ser. No. 718,053
15 Claims. (Cl. 221-34)



1. A package comprising a plurality of generally circular compressible pads, each pad having a diameter greater than its thickness, a generally rectangular container, the distance between one pair of side panels of said container being slightly greater than the diameter of one of said pads, said pads being positioned in said container in tangential side-by-side relationship, one above the other, to form a vertical row of pads, said container being made of frangible material and having weakened lines at the lower end thereof defining an opening, the size of said opening in a direction parallel to the plane of said pads being less than the diameter of one of said pads, whereby a portion of said container may be removed by severing the material of said container along said weakened lines to expose the opening and the lowermost pad.

3,002,652
CAN OPENING APPARATUS
Barry L. Smith, Overland, and William E. Gundelfinger, House Springs, Mo. (both % The Dazey Corp., 4301 Warne Ave., St. Louis, Mo.)
Filed Jan. 9, 1958, Ser. No. 707,921
8 Claims. (Cl. 221-96)



1. In can opening apparatus, a cabinet having contiguous access openings in the top and front of said cabinet, a closure for said openings including top and front panels, means rigidly connecting said panels together, means mounting said panels for vertical hinging movement on the cabinet, a can opening assembly

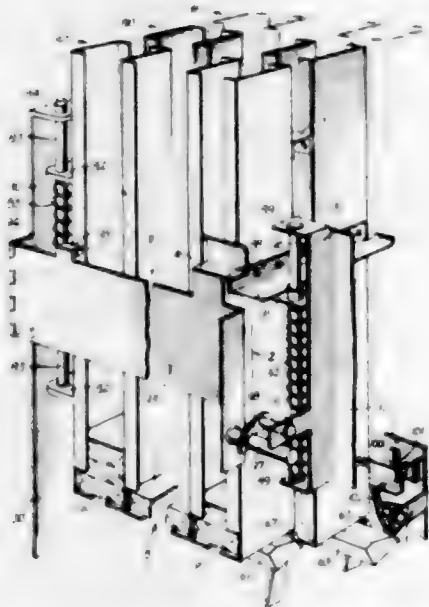
mounted on a side wall of the cabinet, said assembly including means for temporarily retaining a detached can top thereon, an arm attached to and projecting from said closure adapted to engage and remove a can top from the can opening assembly, and a receptacle in said cabinet adapted to receive the removed can top.

3,002,653

VENDING MACHINE

William Danziger, Malverne, N.Y., assignor to Continental Vending Machine Corp., Westbury, N.Y., a corporation of New York

Filed Oct. 13, 1958, Ser. No. 766,846
5 Claims. (Cl. 221-124)



5. In a known vending machine, having a cabinet and chassis, on which are mounted parts of said known machine, including three or more parallel rows of package storage hoppers, the front row thereof having its lower ends located above the lower ends of the second row of hoppers, with a package ejecting finger under the bottom of each front hopper, and an ejecting finger similarly under the bottom of each second row hopper, hence a row of ejecting fingers for said front and said second rows of hoppers, the front row of ejecting fingers being positioned above and thus higher than the second row of ejecting fingers and thereby disposed in the horizontal path of the second row of hopper bottoms, with power means for actuating the ejecting fingers through a vending cycle; that improvement in said known vending machine, which consists in joining said front and said second parallel rows of hoppers as a unit, thus providing a hopper rows unit, in combination with a structural arrangement, by which the unit may be elevated from its normal vending position, and moved outwardly of said cabinet, in order to have access to the back side of said second row of hoppers of the movable hopper rows unit for filling its said second row with packages, and then returning and fixedly holding the unit to and in exact operative relation with the respective rows of ejecting fingers; said improved structural arrangement comprising an upright slide-bearing, which mounts the hopper rows unit in the chassis, for a limited up and down movement in relation to the ejecting finger rows; a hinge at one end of the hopper rows unit, a means exerting an upward lift against the hopper rows unit, operative along the slide-bearing, so that the bottoms of the second row of hoppers may be first elevated to an up position, above the higher front ejecting finger row, and thereafter undergo an outward clearance movement over it; also a hold down means to secure the hopper rows unit in down position, against the exerted upward lift, adjacent the respective ejecting finger

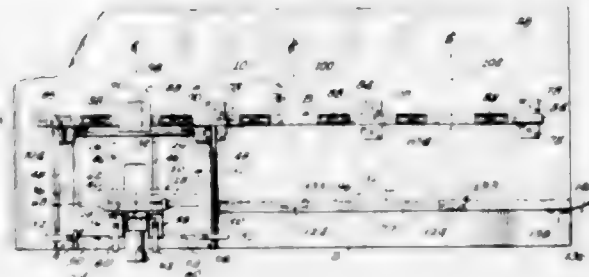
rows; and an aligning down stop means, acting to position and accurately center, by exact location, the down position of the bottoms of all the hoppers of the hopper rows unit, in exact operative relation to the respective ejecting finger rows, for normal vending operations.

3,002,654

DISPENSING AND TRANSFER MECHANISM FOR ELECTRICAL CIRCUIT BOARDS

Paul A. Maximoff, West Chicago, and Stanley J. Krol, Bensenville, Ill., assignors to Malco Manufacturing Company, Chicago, Ill., a partnership

Filed June 7, 1957, Ser. No. 664,404
10 Claims. (Cl. 221-225)



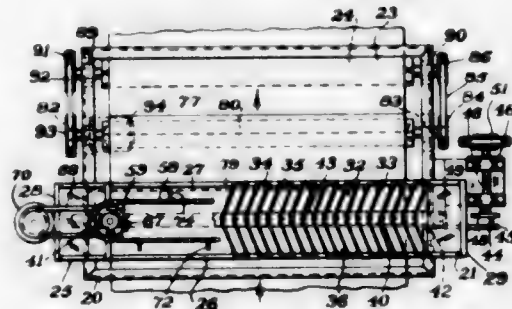
1. In a machine for dispensing and mounting a plurality of pins or the like in base members, mechanism for dispensing and successively transferring the base members one at a time between a plurality of operative positions on the machine, comprising generally vertical columns maintaining a plurality of base members in a stack, dispensing means for moving successive bottom base members out of line of the stack in one direction a distance less than the width of said base members in said direction, and reciprocable transfer means adapted for engaging one edge portion of the successive bottom base members when moved out of line of said stack and for successively shifting the base members in a direction at right angles to said one direction, said dispensing means supporting successive bottom base members which in turn support the stack until the bottom base members are shifted clear of the stack by said transfer means.

3,002,655

DEPOSITING APPARATUS AND METHOD

William G. Turner, Tewksbury, Mass., and Charles Klein, Mexico City, Mexico, assignors to Vertipile, Inc., Lowell, Mass., a corporation of New York

Filed Apr. 19, 1957, Ser. No. 653,782
13 Claims. (Cl. 222-1)



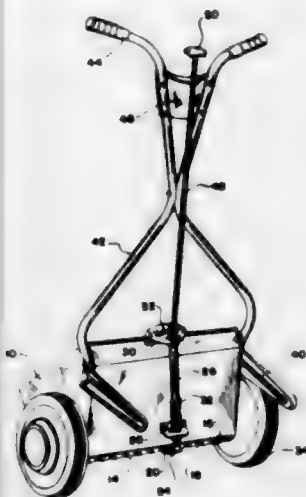
1. A hopper having a bottom formed of at least one row of spaced, parallel, resilient elements having downwardly directed passages therebetween, said elements forming a substantially closed bottom for supporting material in said hopper and power driven, mechanical, flexing means for alternately stretching and unstretching said resilient elements in the plane of said bottom to continually laterally displace the under support of material in said hopper while discharging material through said passages.

3,002,656

SPREADER WITH SLIDE MEMBER

Roy W. Garber, Elizabethtown, Pa., assignor to Moto-Mower, Inc., Oak Park, Mich., a corporation of Delaware

Filed Feb. 4, 1960, Ser. No. 6,718
2 Claims. (Cl. 222-43)



1. A spreader or the like comprising a hopper having front, rear and end walls, the front and rear walls diverging upwardly, a plurality of discharge openings in the bottom of the hopper, a slide member movably mounted adjacent said openings and operable to open or close the same, a tube mounted on the rear wall of the hopper, means interconnecting said tube and slide member whereby rotation of said tube causes movement of said slide member, a gauge plate mounted on said hopper, an indicator carried by said tube and operatively associated with said gauge plate for indicating the position of said slide member, said gauge plate being provided with a slot receiving said indicator and a plurality of integral, angularly disposed fingers, a stop on said indicator in engagement with said fingers and a combined torsion and compression spring carried by said tube for urging said indicator into engagement with said fingers and said tube to a slide-closing position.

3,002,657

CAN PUNCTURING AND POURING SPOUT

Frank H. Liljemark, Minneapolis, Minn., assignor to Plews Manufacturing Co., Minneapolis, Minn., a corporation of Minnesota

Filed Jan. 28, 1959, Ser. No. 789,655
1 Claim. (Cl. 222-89)



In a device of the class described, an arcuate handle shaped spout the concave wall of which is formed at its

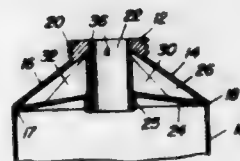
inner end to provide an integral relatively wide longitudinally extended guide tongue adapted to engage the outer peripheral surface of a can, said tongue and spout at the point of juncture thereof defining a transversely arcuate shoulder, the convex wall of said spout projecting longitudinally inwardly beyond the plane of said shoulder and defining a relatively flat transversely extended centering lip, the longitudinally inner end portion of said convex wall on opposite sides of said centering lip defining arcuate abutments which extend between said centering lip and opposite ends of said arcuate shoulder, a cross sectionally arcuate puncturing knife having a longitudinally extended wall in closely spaced relation to said guide tongue and having blade acting side flanges which are in engagement with and which taper from opposite sides of said centering lip toward said guide tongue and define a puncturing point adjacent the free end of said guide tongue, portions of said blade acting side flanges underlying said arcuate abutments, an elastic sealing element snugly encompassing said knife adjacent the inner end of said spout and having longitudinally projecting anchoring fingers at diametrically spaced points thereon extending into sealing relationship with opposite inner end portions of said spout, and having opposite portions thereof in anchored mating engagement with said arcuate abutments for compression thereof between said blade acting flanges and said transversely arcuate shoulders around the forward side of said spout, the opposite inner side portion of said sealing element merely snugly engaging over the surface of said spout adjacent said centering lip, whereby said anchored forward portion of said sealing element is held against longitudinal movement relative to said knife and said opposite inner side portion of said element is free for such movement as is required when said knife is forced through a can top to maintain full sealing engagement therewith and with the centering lip of said spout.

3,002,658

NOZZLE FOR APPLYING COLORS

Sigmund T. Sajda, 65 Grove St., Buffalo, N.Y.

Filed July 6, 1959, Ser. No. 825,335
4 Claims. (Cl. 222-94)

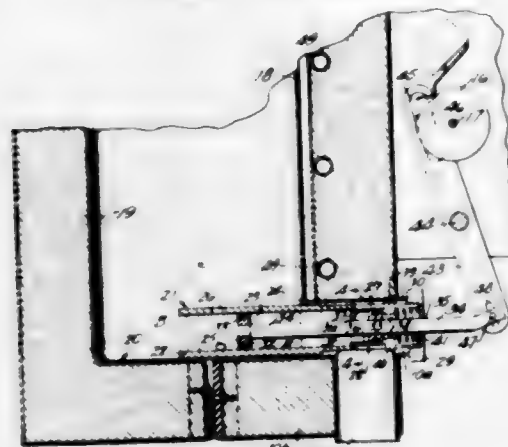


1. A nozzle structure for a container provided with a fluent substance, said nozzle structure comprising a wall adapted to be attached to the end of the container, a diaphragm baffle connected to said wall and isolating the wall into a cavity which is separated by said diaphragm from the interior of the container, a tube connected to said wall and in registry with the interior of the container, a plurality of partition walls provided in said cavity and separating the same into a plurality of compartments, said tube having a plurality of orifices in the side wall thereof in communication with the respective compartments so that upon application of force and pressure to the contents of the container, pressure is transmitted by means of said diaphragm to said compartments thereby issuing substances from said compartments through said orifices into said tube to be applied to the main stream of fluent substance passing therethrough, said baffle having a plurality of slots in which the lower edges of said partition walls are disposed so that said baffle may deflect into said cavity with portions of said baffle moving alongside of said partition walls.

3,002,659

CREAM DISPENSER

George E. Woods, Minneapolis, Minn., assignor to Northwest Automatic Products Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed June 13, 1957, Ser. No. 665,396
5 Claims. (Cl. 222-149)

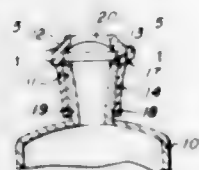


1. A dispenser for fluids such as cream and the like, comprising a housing having an open interior and having a fluid inlet in communication with a fluid supply, said housing also having an elongated outlet slot spaced from the inlet, a projection extending through one end of the slot and being movable along the slot to clear any obstruction which may have formed in the slot as by cream skinning over and the like, a valve element in the housing and being movable longitudinally over one end of the slot into fluid discharging position, said valve element being operatively associated with said projection for movement along the slot therewith, and means for moving the valve element and projection along the slot and for delaying movement of the valve element into discharging position until the projection has moved along the slot, whereby the slot is cleared immediately before fluid is discharged through the slot so as to permit fluid to freely through the slot.

3,002,660

DISPENSING DEVICE

Clarence R. Taylor, 1632 Penfield Road, Rochester 10, N.Y.
Filed June 10, 1959, Ser. No. 819,335
2 Claims. (Cl. 222-490)



1. In a dispensing device, the combination comprising: a container having a substantially rigid spout connected at one end to said container and its opposite end free, said spout having an elliptical cross-section at its opposite end which has a major axis and a minor axis and its outer dimension along its major axis is greater than its outer dimension along its minor axis, said spout further having an annular shoulder adjacent its one end; a substantially cup-shaped flexible cap having a substantially cylindrical flexible skirt tightly encircling said spout and rotatably mounted thereon, said skirt having an inner annular rib at one end engageable with said annular shoulder for holding said cap on said spout, and the opposite end of said skirt merges into a cover having a slit therethrough, said cover having an inner annular abutment adapted to engage said opposite end of said spout to prevent further depression of said cap on said

spout, said cover further defining a cavity in connection with said slit and disposed above a plane including said annular shoulder and said opposite end of said spout; and manually operable means formed by said cap to facilitate rotation of said cap on said spout between a first position in which said slit is closed and a second position in which said slit is opened.

3,002,661

GARMENT HANGER

Joseph E. Apostolico, 1205 Watson St., Scranton, Pa.
Filed Nov. 6, 1959, Ser. No. 851,438
1 Claim. (Cl. 223-88)



A garment hanger comprising a pair of connected downwardly-divergent arms having longitudinally-spaced lower ends, short horizontal extensions fixed on and extending longitudinally inwardly from said lower ends, each of said extensions having inner ends spaced longitudinally from each other, each of said extensions being provided with parallel bores opening to the free end thereof, and upstanding trouser cuff-engaging clips mounted on said extensions, said arms being rigid and being rigidly connected together and said extensions being rigid and rigidly connected to said lower ends, said clips being bendable toward and away from each other relative to the extensions, said clips having horizontal longitudinally-outwardly extending legs secured to the inner ends of the extensions in the parallel bores of the extensions.

3,002,662

CLOTHES HANGER

Richard Albright, 4318 S. Rockwell, Chicago, Ill.
Filed Feb. 12, 1959, Ser. No. 792,879
4 Claims. (Cl. 223-95)



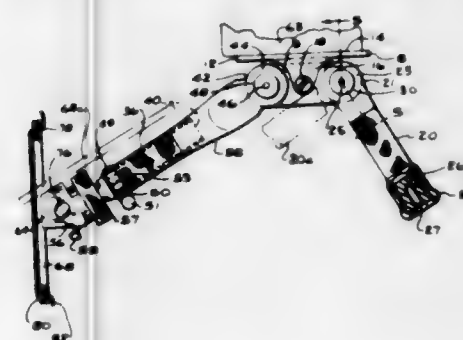
1. A hanger, comprising, a pair of tubular telescoping elements, each having gripper means thereon at the outer end for engaging the inner band of a piece of clothing, means for retaining the tubular elements in expanded positions with said gripper means engaging the inner band of a piece of clothing thereby to hang the clothing, a hanger hook having an upper hook-shaped portion and a lower shank portion with an enlarged head at the lower end thereof, an inner plug element slidable in the inner tubular element for carrying the hanger hook, each tubular element having a longitudinally extending slot through

the top thereof for passing the hanger hook and an aperture through the bottom thereof opposite the slot therein and of a size to pass said head, said inner plug element having an aperture therethrough of a size to pass the hook except the head and having a recess for housing said head, whereby the slots and apertures in the tubular elements are alignable with the aperture in the plug element to enable insertion of the hook, hook-shaped portion first, through the tubular element apertures, the plug element aperture and the tubular element slots to engage said head in said recess.

3,002,663

CAMERA SUPPORT

Arthur L. Fernellus, 14633 Richmond, Wyandotte, Mich.
Filed Apr. 28, 1958, Ser. No. 731,335
8 Claims. (Cl. 224-25)

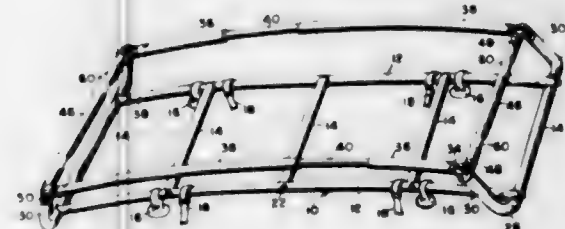


1. A sight instrument support structure comprising an instrument support platform having a vertical wall element; a tubular hand grip positioned adjacent the forward portion of said platform and having flattened end portions positioned against opposite surfaces of said vertical wall element; clamp means including a threaded element extended through said vertical wall element and flattened end portions for holding said hand grip in adjusted pivoted positions around the threaded element axis; an adjustable length arm pivotally connected with a rear portion of a support platform; a shoulder-engaging brace element; a connector carried on the free end portion of the adjustable length arm; and means securing the brace element on the connector for vertical adjustment therealong in accordance with the position of use most comfortable for the user.

3,002,664

BAGGAGE RACK FOR AUTOMOBILES

Nicholas Gaevara, 174 Center St., Brooklyn, N.Y.
Filed Oct. 30, 1959, Ser. No. 849,833
1 Claim. (Cl. 224-42.1)



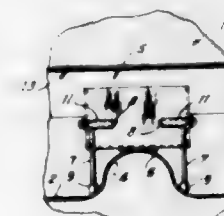
A baggage rack comprising, in combination, a generally rectangular base frame composed of parallel longitudinal rods and front and rear transverse tubular members fixedly connected to the longitudinal rods, attaching members carried by the longitudinal members and extending downward from them for mounting the rack on a vehicle top, cylindrical plugs secured in opposite ends of the transverse tubular members and having protruding end portions, front and rear pairs of outboard, tubular elbow members having horizontal arms and angularly extending free end portions, said horizontal arms disposed to extend

outward from opposite ends of the transverse tubular members in alignment with them, and secured upon the protruding plug ends with capacity for folding movement between a collapsed condition in which the free end portions extend along the outer sides of the longitudinal rods, and an erected condition, transverse front and rear baggage confining rails carried respectively by the free end portions of the front and rear pairs of elbow members, telescopic baggage confining side rails also carried by the free end portions of the elbow members at opposite sides of the rack, cooperative pairs of hinge fittings secured in the free ends of the elbow members and in the free ends of the telescopic side rails, the fittings of each pair having ears disposed in overlapped relation, pintles passed through the overlapped ears in alignment with the associated front and rear rails and secured in the adjacent ends of said rails, the hinge fittings of each cooperative pair including engageable stop surfaces constructed and arranged positively to limit erecting movement of the elbow members to definite positions.

3,002,665

ARTICLE RECEPTACLE FOR AUTOMOBILES

Lyndon B. Allen, 322 Johnson Blvd., Shreveport, La.
Filed Nov. 16, 1959, Ser. No. 853,057
1 Claim. (Cl. 224-42.42)



In a receptacle for miscellaneous articles, for installation in an automobile, the combination of a substantially rectangular receptacle, open at the top, having a pad secured to its bottom, adjacent one side thereof, engageable with a central longitudinal hump formed in the floor of an automobile, whereby the receptacle is adapted to be supported thereon, and having a pair of legs removably connected to the side of the receptacle opposite said one side thereof, in spaced apart relation to each other, adapted to straddle the hump whereby the receptacle is prevented from being displaced laterally relative thereto, the legs consisting of elongated rods which are bent right angularly adjacent their upper ends to form normally horizontally extending upper end portions, said end portions extending parallel to the last mentioned side of the receptacle and being received in tubular sockets therefor in integral lugs extending outwardly from said last mentioned side, the lugs having slots in their under sides communicating with the respective sockets adjacent their outer ends for engagement with the legs whereby the legs are prevented from being rotated in the sockets about said end portions, the legs having resilient feet engageable with the floor of the automobile on opposite sides of the hump.

3,002,666

AUTOMOBILE HANGER BRACKET

Hyman P. Silverman, 1280 Raleigh St., Denver, Colo.
Filed Sept. 8, 1958, Ser. No. 759,599
4 Claims. (Cl. 224-42.45)

1. A hanger bracket adapted for detachable mounted association with an upwardly-opening hook conventionally affixed interiorly of an automobile body enclosure, comprising an elongated, rigid member of inverted U-shape in transverse section symmetrically tapered in width from a greater end to a lesser end and formed with a transversely-convex top wall and with complementary

side walls integrally depending from the side margins of said top wall symmetrically and correspondingly tapered in width from a minimum at the lesser end of the member to a maximum at the greater end of the latter, a spaced succession of transverse notches exteriorly interrupting said top wall, an eye coactable with said hook

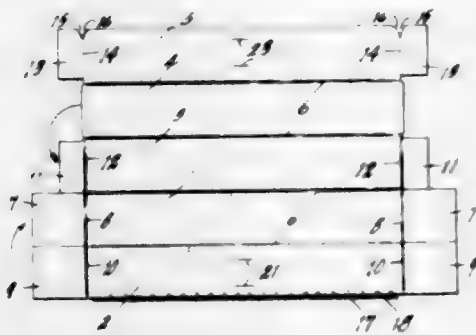


formed in said top wall inwardly adjacent the greater end of the member, and integral, triangular extensions from the wider ends of said side walls similarly tapered in width longitudinally and outwardly from said wider ends to present abutment-defining edges determining a plane transverse of the member in obtuse angular relation with the length of said top wall.

3,002,667

DISPENSING CARTONS

Kenneth T. Buttery, Kalamazoo, Mich., assignor, by mesne assignments, to KVP Sutherland Paper Company, a corporation of Delaware
Filed Oct. 2, 1957, Ser. No. 687,646
7 Claims. (Cl. 225-48)

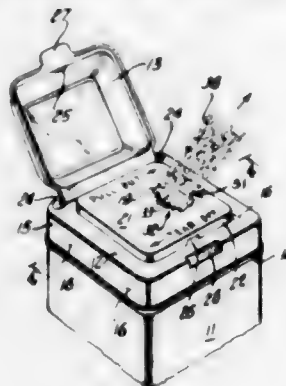


1. A dispensing carton comprising a bottom, front and rear walls connected to the front and rear edges of the bottom, a cover hingedly connected to the rear wall, a cover flap hingedly connected to the opposite edge of the cover, said cover flap having end members having weakened severing connections therewith, said cover being of a width at least equal to the width of the bottom and said cover flap being dimensioned to substantially correspond to the dimensions of the front wall, end wall members connected to the end edges of the bottom, front and rear walls, said cover flap end members being adhesively secured to the outer sides of the front wall end members, said rear wall end members being disposed on the outer sides of the front wall end members, said bottom end wall members being disposed on the outer sides of and adhesively secured to the said rear wall and cover flap end wall members, the front wall having longitudinal vertically spaced centrally disposed slits therein, said cover flap having adhesive connections of restricted area to the front wall below said slits to facilitate the disconnecting of the cover flap from the front wall, the cover flap when disconnected from its end members and the front wall constituting a tucking flap, and a cutter at the top edge of the front wall covered by the cover flap when the carton is closed.

3,002,668

DISPENSER FOR DISPENSING FLUFFY FIBROUS MATERIAL

Charles Castelli, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Oct. 15, 1957, Ser. No. 690,250
3 Claims. (Cl. 225-52)

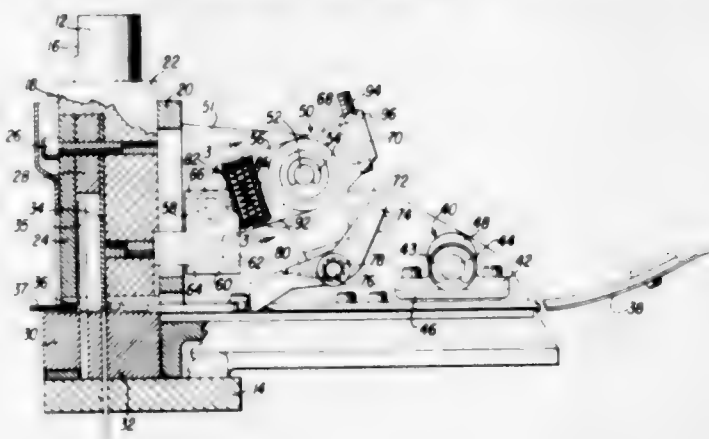


1. A dispenser for fluffy fibrous material in strip form which comprises a container for holding a supply of said material, a dispensing platform at the top of said container, said platform defining a dispensing opening of fixed dimensions, and a supply of said strip material in said container, said dispensing opening being located above said supply of strip material and having a relatively smooth ledge on one side and a plurality of teeth protruding from the opposite side into the opening, said strip being drawn through said opening in contact with said teeth on one side of the opening and said ledge on the other side of the opening, the leading edge of said ledge being horizontally spaced from the tips of said teeth by an amount slightly less than the thickness of the strip whereby the strip is prevented from being displaced from the teeth and falling back into the container after a length of the strip material has been torn away from the strip by pulling the strip against the teeth.

3,002,669

TERMINAL CRIMPING MACHINE

Stanley J. Krol, Bensenville, and John B. Sola, Chicago, Ill., assignors to Malco Manufacturing Company, Chicago, Ill., a partnership
Filed Sept. 12, 1958, Ser. No. 760,644
4 Claims. (Cl. 226-71)



1. A device adapted to be used for feeding a chain of terminal connectors into a ram type machine for crimping the connectors to wire leads comprising a first arm pivotally mounted and connected to the ram for oscillatory movement thereby, and a second arm pivotally mounted at one end concentric with said first arm and connected by resilient means to said first arm for oscillatory movement therewith, and said resilient means

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comprised of said first arm having a first cavity, said second arm having a second cavity, normally at least partially open to said first cavity and a coil spring confined in an axial direction by the co-operation of said first and second cavities so that movement of said first arm with respect to said second arm further confines said coil spring so as to resist relative movement between said first and second arms.

of the arm, said arm being movable between two positions in one of which the roller is clamped against the tape and in the second of which the roller is retracted from the tape, and electromagnetic means for rapidly moving the arm between said limiting positions, said means including a member of the permanent magnet type for magnetically holding the arm in said first limiting position.

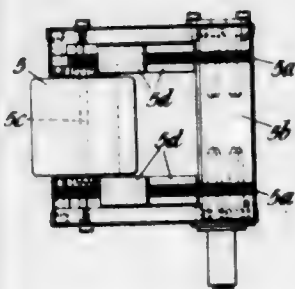
3,002,670

MAGNETIC RECORDER

Lazlo Namenyi-Katz, London, England, assignor to Epsilon Research & Development Company Limited, Bedford, England

Filed Dec. 9, 1957, Ser. No. 701,642

Claims priority, application Great Britain Dec. 14, 1956
3 Claims. (Cl. 226—176)



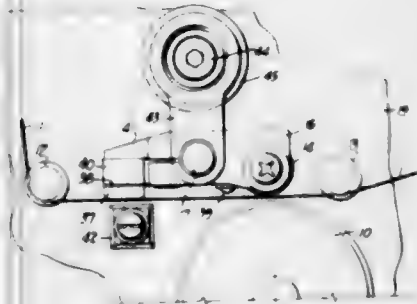
1. A capstan and pinch roller assembly for a magnetic tape recorder comprising a capstan, a pinch roller, a shaft carrying said pinch roller, a differential magnetic actuator having two spaced stacks of E-shaped laminations in which the center tongues of said laminations are connected to the outer limbs thereof by narrow necks capable of flexure in their own planes, electrical windings around each of said tongues and outer limbs of each said stack and a bearing for said shaft carried on said center tongues of each said stack, said shaft being carried in said bearings with said pinch roller between said stacks, said capstan and pinch roller being in such spaced relationship that said pinch roller may be moved into and out of tape driving engagement with said capstan by the application of appropriate electrical voltages to said windings.

3,002,671

MAGNETIC TAPE APPARATUS

Robert M. Brumbaugh, Menlo Park, and Walter J. Cheney, San Mateo, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Oct. 22, 1958, Ser. No. 769,019
9 Claims. (Cl. 226—176)

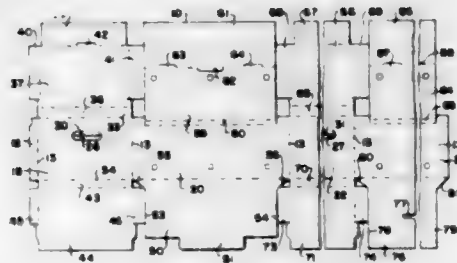


1. In a machine of the character described, a rotatable tape driving capstan, means for guiding a pliable record tape whereby the tape passes in proximity with the periphery of the capstan, a roller for engaging and clamping the tape into driving relation with the driving capstan, a movable arm, the roller being carried by one free end

3,002,672
STACKING CARTON
Joseph Lawrence Kotowick, Vancouver, British Columbia, Canada, assignor to Crown Zellerbach Canada Limited, Vancouver, British Columbia, Canada, a corporation of British Columbia

Filed Oct. 6, 1958, Ser. No. 765,505

3 Claims. (Cl. 229—16)



1. An open top stacking split bottom carton including opposed three ply end walls having horizontal top and bottom edges, opposed two ply side walls and a single ply engaged split flap closure bottom, the side and end walls being foldably connected along their respective vertical side edges and disposed in tubular relation, said end walls being higher than the side walls to provide stacking shoulders upon which successive cartons are supported, said shoulders supporting the containers only at the ends and the split bottom of the container being totally unsupported in such stacked relationship, each end wall comprising an outer panel hingedly connected to the adjacent ends of the side walls, an inner panel connected by a substantially horizontal spacer strip to the upper horizontal edge of the outer panel, said spacer strip serving as a support for successive cartons in stacked relationship, and an intermediate panel connected by a substantially horizontal spacer strip to the lower horizontal edge of the outer panel, said second spacer strip being narrower than the first spacer strip, the intermediate panel extending upwardly between the inner and outer panels, said panels extending substantially the height of the end wall and forming thereby a three ply vertical end construction terminating at the upper edge of said wall in a stacking shoulder of sufficient strength to support successive cartons without deformation of said end walls and a split bottom comprising only two outer bottom flaps each connected to and extending inwardly from the bottom horizontal edges of the side walls, the bottom flaps each having terminal edges and means locking said bottom flaps together, the terminal edges of said bottom flaps overlapping to the extent only of the length of said locking means, each side wall including an outer side panel connected at its ends to the outer end panels, an inner side panel connected at its upper edge only by a narrow spacer strip to the upper edge of the outer side panel, and inner reinforcing bottom flaps connected to the lower edge of the inner side panels and extending inwardly over the outer bottom flaps, the inner bottom flaps being substantially in free edgewise abutting relation along the container midwidth, and a bracing flap connected to the lower horizontal edge of each inner end panel and projecting inwardly between the upper and lower bottom flaps to brace said reinforcing bottom flaps adjacent each end of the carton.

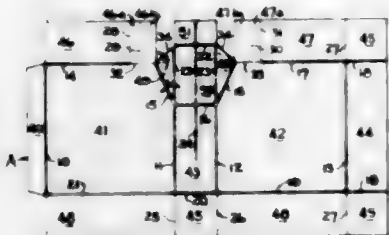
3,002,673

DISPENSING CARTON

Norman J. Asman, Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 1, 1960, Ser. No. 73,060

2 Claims. (Cl. 229-17)



1. A reclosable dispensing carton formed of a single blank suitably cut and scored to provide a pair of opposed main panels, each of said panels having one of a pair of opposed edge-defining biased score lines extending from a lateral to a top edge near one corner thereof; a pair of opposed side panels hingedly connected to the lateral edges of said main panels, one of said side panels terminating in a score line at the point where said biased score lines intersect said lateral edges; a pair of bottom closure flaps hingedly connected to adjacent ends of said main panels; a pair of top closure flaps hingedly connected to adjacent ends of said main panels and terminating at the intersection of said biased score lines with said top edges, a spout front panel hingedly connected to said one side panel along said terminating score line; a pair of opposed triangular spout side panels each being superposed against and between said main panels and each hingedly connected along one edge to the edge of one of said main panels along said biased score lines, and hingedly connected along another edge to said spout front panel, the third edge of each spout side panel being positioned along the top edge of one of said main panels; a spout tab hingedly connected to the upper edge of said spout front panel and lying in subposed relationship under and adhered to one of said top closure flaps and extending approximately to the upper termini of said biased score lines; said spout front panel forming an angle with an extension of said one side panel twice that of the angle formed by said biased score lines and said extension; and lines of weakness in said top closure flaps and along the score lines connecting said top closure flaps and said main panels to facilitate tearing to open the spout; said spout in opened position having said spout front panel and spout side panels lying coplanarly with said one side panel and said main panels respectively.

3,002,674

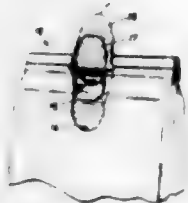
IMPROVEMENTS IN PAPER BAGS AND THE LIKE

Charles Edmund Wright, Toronto, Ontario, Canada

Filed Sept. 25, 1958, Ser. No. 763,270

Claims priority, application Canada, Dec. 10, 1957

1 Claim. (Cl. 229-51)



A multiply paper bag, comprising: an outer wall ply and at least one inner wall ply, each ply having a substantially U-shaped cut therein defining tear-out tabs, said tabs being substantially coaxial and having the apex of an inner tab spaced from the ends of the substantially U-shaped cut defining the tab in an immediately overlying

ply so as to define in said contiguous plies a two-ply strengthening bridge transverse to the axes of said tabs for lessening the danger of rupturing of said bag in the area of said tabs, said inner tab being adhered to said overlying ply by an adhesive bond stronger than the tear strength of its ply whereby tearing out of the overlying area of said overlying ply will cause a tearing out of the area beyond the base of said inner tab.

3,002,675

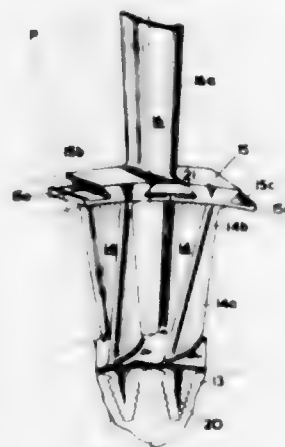
BLADE ELEMENTS FOR TURBO MACHINES

Alun Raymond Howell, Cove, Farnborough, and Arthur Norman Smith, Walton-on-Thames, England, assignors to Power Jets (Research and Development) Limited, London, England, a British company

Filed Nov. 3, 1958, Ser. No. 771,577

Claims priority, application Great Britain Nov. 7, 1957

5 Claims. (Cl. 230-116)



1. A gas turbine engine comprising inner, intermediate and outer wall means defining between them inner and outer coaxial annular flow paths; means for supplying air to one of said flow paths; means for supplying combustion gases to the other of said flow paths; a rotor coaxially mounted with respect to said flow paths; and two tier blading carried on said rotor, said blading including a tier of axial flow compressor rotor blades extending across said air flow path, a tier of axial flow turbine rotor blades extending across said combustion gas flow path, there being equal numbers of blades in said two tiers, a circumferentially extending shroud ring connecting the tips of the blades of the inner tier and forming part of said intermediate wall means dividing said flow paths, and means mounting the blades of the outer tier on said shroud ring at positions circumferentially alternating with the tips of the blades of the inner tier.

3,002,676

VENTILATING FAN CONSTRUCTION

Robert A. Papsdorf, Claremont, Calif., assignor to Emerson-Pryne Company, Pomona, Calif., a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,160

7 Claims. (Cl. 230-117)

1. In a ventilating fan construction including a housing with an air inlet and an air outlet, and an impeller and drive motor therefor within the housing, motor mounting means comprising: a central plate to support the motor; a plurality of arms integral with the plate and extending outwardly therefrom; a venturi ring conforming in diameter with the impeller and integral with the arms; an attachment flange joined to one edge of the venturi ring and engageable with a wall of the housing around the inlet therein to locate the motor-mounting means relative to the housing;

fastening means for attaching the motor mounting means to the housing, said fastening means being disen-

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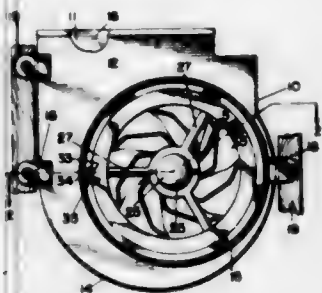
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gageable by rotation of the motor mounting means relative to the housing; and an electrical receptacle in the power supply to the motor mounted on the housing and adapted to receive a plug, the receptacle being accessible



through an opening in the attachment flange whereby the plug when inserted in the receptacle holds the motor mounting means against rotation in a direction to disengage the fastening means.

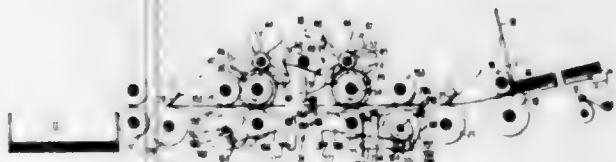
3,002,677

RECORD CARD PUNCHING MACHINE

Donald W. Haney, Vestal, and Charles S. Jackowski, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 18, 1959, Ser. No. 813,888

7 Claims. (Cl. 234-64)



1. Mechanism for feeding successive cards along a given pathway through a machine, said mechanism comprising two pairs of cooperating rolls spaced apart along the pathway a distance less than that between the leading and trailing edges of a card, means for rotating at least one of the rolls of one of said pairs intermittently to frictionally drive a card stepwise through said one pair of rolls, means for rotating at least one of the rolls of the other pair of rolls at a constant speed, and means operated in synchronously timed relation with a rotating roll of said other pair and operatively connected to at least one of the rolls of said one pair to spread said one pair of rolls relatively apart whenever a card is positioned to be effectively driven by said other pair of rolls.

3,002,678

HIGH SPEED PUNCH

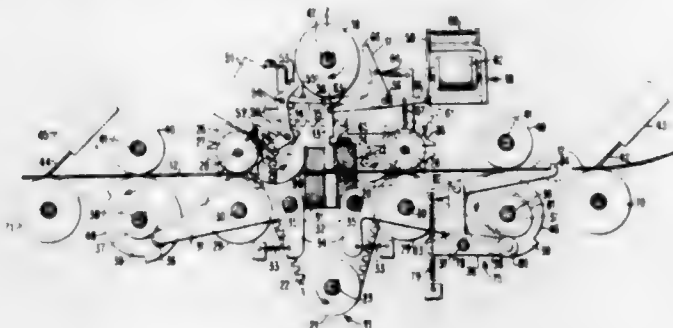
Charles S. Jackowski, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 22, 1960, Ser. No. 44,729

14 Claims. (Cl. 234-114)

1. In a machine for marking a record, the combination of a member movable to a marking position to mark the record, rotating cam means, actuating means comprising two parts positionable between the cam means and member to transmit motion from the cam means to the member to move the latter to marking position, means normally holding the actuating means effectively disengaged from the cam means, means operative to release the actuating means from the holding action of the holding means, and means operative upon operation of the

releasing means to cause said actuating means to effectively engage said cam means and then be actuated thereby



to selectively position said parts to cause said cam means to move the member to marking position.

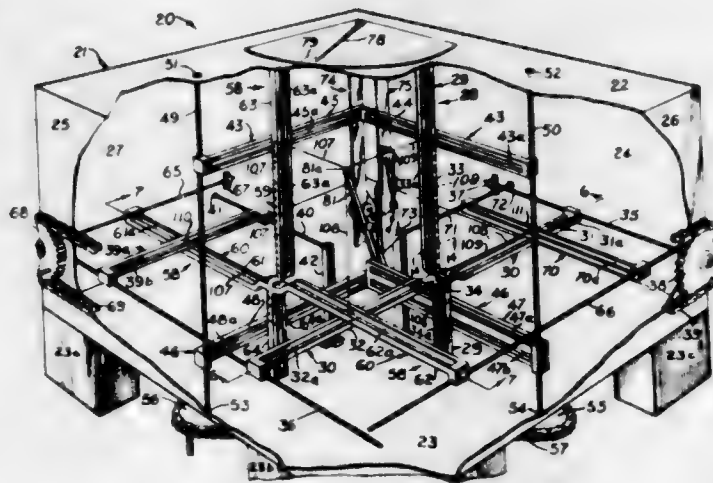
3,002,679

SPHERICAL COMPUTERS

Donald Abel, 43 Susan Ave., Midland Park, N.J.

Filed Aug. 12, 1960, Ser. No. 49,275

11 Claims. (Cl. 235-61)



1. A spherical computer comprising a casing, the casing comprising spaced parallel top and bottom members and end and side members, the members being secured together along corresponding edges, main and outer X and Z and upper and lower Y-carriages disposed in the casing, the main X and Z-carriages comprising a perpendicular and horizontal member intersecting intermediate the ends thereof, the portions of the horizontal member on each side of the perpendicular being substantially of equal length and the portion of the perpendicular above the line of intersection being substantially twice the length of the portion below the line of intersection, the outer X and Z-carriages comprising, a linear member substantially equal to one-half the length of the horizontal member of the corresponding main carriage, the upper Y-carriage comprising two linear members secured together at one end at right angles to each other, the lower Y-carriage comprising two linear members secured together at one end at right angles to each other with the width of one linear member substantially greater than the width of the other, each portion of the vertical and horizontal members of the main carriages and the upper and lower Y-carriages and the outer carriages having at least one longitudinal slot formed therein, means maintaining the main X-carriage upright and in spaced parallel arrangement with the outer X-carriage, means maintaining the main Z-carriage upright and in spaced parallel arrangement with the outer Z-carriage and perpendicular to the plane of the main X-carriage, means maintaining the upper and lower Y-

carriages in spaced parallel arrangement with each other and perpendicular to the planes of the main X and Z-carriages, the outer X carriage and the most proximate portion of the horizontal member of the main Z-carriage being slidable on each other with the slots communicating, the outer Z-carriage and the most proximate portion of the horizontal member of the main X-carriage being slidable on each other with the slots communicating, the upper Y-carriage and the upper portions of the vertical members of the main X and Z-carriages being slidable on each other with the slots communicating, the lower Y-carriage being slidable on the lower portions of the vertical members of the main X and Z-carriages with the slots communicating, and adjacent portions of the horizontal members of the main X and Z-carriages being slidable on each other with the slots communicating; the computer further comprising a yoke assembly, the assembly comprising an inverted U-member, a shaft fixed at one end in the top of the inverted U-member with the opposite end rotatable through the top member of the casing, a pointer fixed to the end of the shaft through the top member, and an azimuth angle dial for the pointer disposed on the top member; the yoke assembly further comprising an elevation shaft rotatable through the open end of the inverted U-member and passing through the theoretical intersection of the X and Y and Z-axes, the elevation shaft having a shoulder fixed thereon and the shoulder having flat surface portions on opposite sides, a resultant member slidable on the elevation shaft and rotating said shaft, outwardly directed spring tension means for the resultant member, and elevation angle and resultant length indicator means in operable engagement with the elevation shaft; the computer further comprising a slide disposed through the communicating slots of the outer X and main Z-carriages, a second slide disposed through the communicating slots of the outer Z and main X-carriages, X-tension means intermediate the first mentioned slide and the top of the resultant member and passing through communicating slots in the main Z and lower and upper Y-carriages, Z-tension means intermediate the second mentioned slide and the top of the resultant member and passing through communicating slots in the main X and the lower and upper Y-carriages, Y-tension means intermediate the second mentioned slide and the top of the resultant member and passing through communicating slots in the main X and lower Y and main Z-carriages, and anti-friction means for the tension members where passing through communicating slots; the computer further comprising means moving the two X-carriages simultaneously at the same rate in the same direction and the two Z-carriages simultaneously at the same rate in the same direction with one carriage moving at twice the rate of the other.

3,002,680

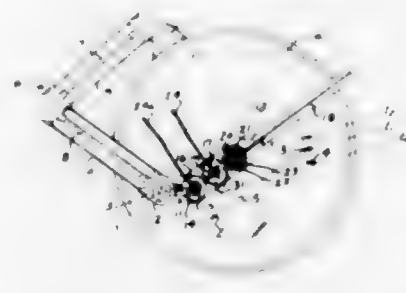
GRAPHICAL VECTORING COMPUTER

Stephen J. O'Neill, Lexington, and Leo D. Upham, Concord, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 27, 1956, Ser. No. 581,255
13 Claims. (Cl. 235—61)

(Granted under Title 35, U.S. Code (1952), sec. 266)

4. An interceptor collision course and target reference bearing angle indicator means comprising a stationary support located at a fixed geographical location, adapted for mounting in fixed relation adjacent the face of a Radar P.P.I. Scope on which the progressive positions of an interceptor and a target aircraft are displayed, a movable support, parallel motion transmitting means connected between the fixed support and said movable support for holding said movable support in its oriented

position during movement thereof, elongated transparent base reference means adjustably mounted on said movable support for angular adjustment over the face of the P.P.I. scope substantially parallel thereto, means for holding said base reference means in said angularly adjusted positions on said movable support, a base reference line extending longitudinally on said base reference means for alignment with the pair of interceptor and target spot image positions at a time instant on said P.P.I. Scope, a second line on said base reference means extending parallel to said base reference line and spaced therefrom a predetermined distance proportional to a predetermined image travel distance on said scope of the interceptor at a predetermined speed at right angles to the parallel lines during a predetermined interval of time, a transparent interceptor speed determining disk journaled on said base reference means with its center on said base reference line and its periphery crossing



said second line at two materially spaced points, an interceptor speed determining arc inscribed on said disk with its center coincident with the pivotal center of the disk and having a radius equal to a predetermined travel distance of the interceptor image on the P.P.I. scope when the interceptor is traveling at a predetermined speed during the predetermined time interval indicated by the space between the base reference and parallel lines, a pointer extending through the pivotal center of said speed disk to said arc intermediate its ends, bearing angle indicator means connected to said speed disk for adjustment thereby for indicating the relative bearing angle between the base reference line and said pointer, an interceptor collision course angle indicator connected between said speed disk and said movable support adjustable by relative rotative adjustment of said speed disk and angular adjustment of said base reference means whereby the pointer indicates the shortest collision course angle for an interceptor aircraft relative to the position of said movable support base reference line.

3,002,681

PERFORATED TAPE READER

James P. Norton and William F. Daley, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 27, 1956, Ser. No. 606,354
2 Claims. (Cl. 235—61.11)

2. Apparatus for reading and handling perforated tape, comprising; an incremental, reversible tape feed mechanism; perforated tape reading means having an electrical output; a tape supply reel disposed to supply tape to said feed mechanism; a tape take-up reel disposed to take up tape passing from said feed mechanism; respective motors connected to drive said respective reels; circuit means normally energizing said motors to drive said supply and take-up reels to supply tape to and take up tape passing from said feed mechanism, respectively; electrical means responsive to predetermined electrical outputs of said reading means for reversing said tape feed mechanism; electrical means controlled by said predetermined output and forming a part of said circuit means for de-energiz-

ing said motor connected to said supply reel; and electrical means controlled by said predetermined output and

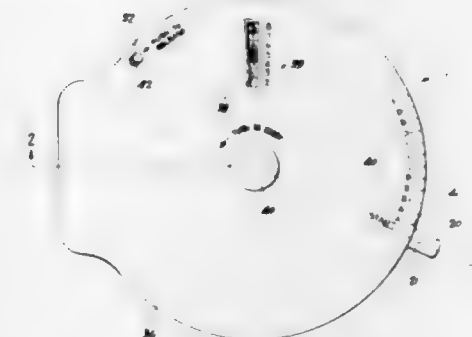
3,002,683

GRADE AVERAGING COMPUTER

Paul M. Rowland, 416 W. North St., Warrensburg, Mo.
Filed Nov. 15, 1957, Ser. No. 696,834
1 Claim. (Cl. 235—83)



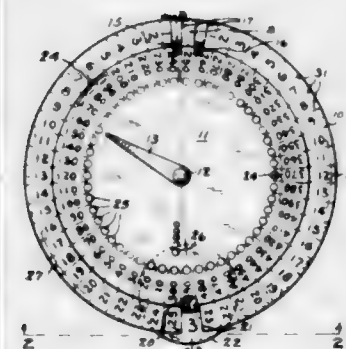
forming a part of said circuit means for reversing said motor connected to said take-up reel.



3,002,682

PINOCHLE SCORING DEVICE

Siebolt Scholtens, 17216 162nd St. SE., Monroe, Wash.
Filed Aug. 7, 1956, Ser. No. 602,606
2 Claims. (Cl. 235—78)



1. A scoring device for card games comprising a thin flat base; a thin flat circular dial of smaller size than said base; a pivot member positioned centrally of said dial and said base rotatively mounting said dial on said base with the base extending beyond the periphery of the dial; a disc of high friction resilient material and of substantially smaller diameter than said dial disposed coaxially between said dial and said base spacing said dial from said base; a hook shaped hold down clip integral with and struck from the marginal portion of said base and extending upwardly and inwardly over the marginal portion of said dial frictionally engaging said dial and forming a sight opening in said base; two spaced apart hook shaped hold down members integral with and struck from the marginal portion of said base and positioned substantially diametrically opposite to said hold down clip and extending upwardly and inwardly over the peripheral portion of said dial frictionally engaging said dial and forming spaced apart reference markers fixed relative to said dial, said disc of high friction resilient material holding said dial outwardly against said hold down clip and said hold down members; a number scale marked on the peripheral portion of said dial; other number scales marked on said base outwardly from the periphery of said dial; a pointer mounted on and frictionally held by said central pivot member and positioned above and movable over said dial; and a deal indicator dial positioned under said base and rotatively supported from said base and having a portion of its face movable across the sight opening formed in said base by the displacement therefrom of said hold down clip, the portion of said dial which is movable across said sight opening having markings thereon.

A device for obtaining the average of a number of grades comprising a base, a disc member pivoted centrally on said base and being inscribed with a plurality of concentric rows of grade marks, evenly spaced ratchet teeth on the periphery of said disc member, said base being formed with a generally V-shaped recess which includes the center of the base adjacent the vertex of the recess, a substantially flat arm disposed horizontally in said recess beneath the disc member and pivoted to the center of the base in said recess on the same axis as said disc member and projecting radially beyond an edge of said base, pawl means on the arm adjacent the periphery of the base engageable with said ratchet teeth to rotate the disc member in one direction responsive to rotation of said arm in said one direction, second pawl means on said base engaging said ratchet teeth and preventing rotation of the disc member in the opposite direction, a cover member secured to said base overlying said disc member, said cover member being formed with a radially extending window transversely overlying said concentric rows of average grade marks, said average grade marks being calibrated in accordance with a value determined by dividing the sum of the number of ratchet teeth moved by the arm during a series of rotations of the disc member by the number of such rotations, said cover member being provided adjacent said arm with a scale of radial markings corresponding to the different grades and angularly separated by the same angular spacing as the successive ratchet teeth, a reset knob centrally secured to said disc member and extending through said cover member, and manually releasable cooperating detent means on the base and on the disc member formed and arranged to at times prevent rotation of said disc member beyond a predetermined position, said detent means comprising an upstanding detent lug on the periphery of said disc member, a detent arm pivoted to said base and having a detent notch lockingly engageable with said lug, and means to manually rotate said detent arm sufficiently to disengage said detent notch from said detent lug.

3,002,684

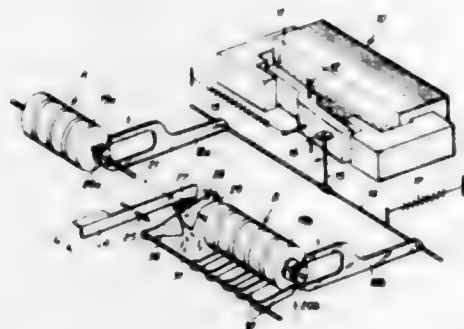
INDICATOR OF TELEPHONIC FEES

Paul Lüscher, La Chaux de Fonds, Switzerland, assignor to Sodeco Societe des Compteurs de Geneve, Geneva, Switzerland, a firm

Filed July 19, 1957, Ser. No. 672,946
Claims priority, application Switzerland July 21, 1956
2 Claims. (Cl. 235—92)

1. In a flat instrument adapted to carry a telephone set and to count the fee pulses and including a general totalizer and a partial totalizer arranged in coaxial relationship, the combination of an electromagnet including a winding fed with fee pulses and the axis of which is parallel with the common axis of the totalizers, an armature controlled by the electromagnet and pivoting round an axis substantially perpendicular to the totalizer axis, a

spindle extending in substantial parallelism with the totalizer axis, a short rod radially rigid with the spindle, a roller revolvably carried by the outer end of said rod and engaging the pivoting armature to be shifted angularly by the pivotal movement of said armature, upon energization of the electromagnet, a spring urging said spindle

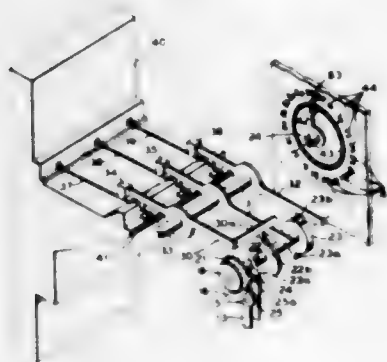


into a position for which the roller engages the armature, two arms rigid with the spindle and extending substantially in a plane passing through the totalizer axis and the electromagnet axis, means wherethrough said arms control the operation of the totalizers, and a flat casing enclosing the totalizers and the electromagnet and carrying the telephone set.

3,002,685

COUNTING AND READOUT APPARATUS

David Telleg, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 3, 1958, Ser. No. 739,557
7 Claims. (Cl. 235-92)



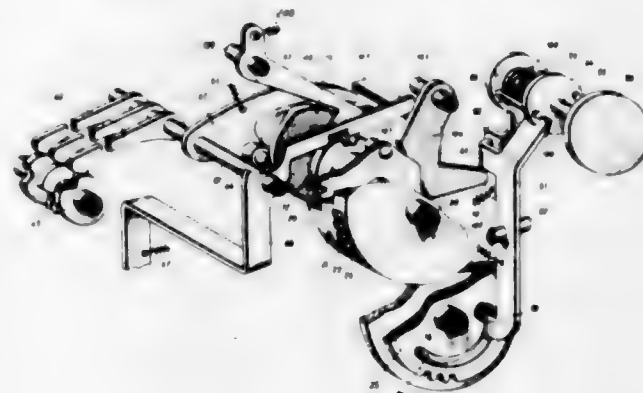
1. An accumulating system comprising three groups of serially connected denominational counter units adapted to receive discrete count representing pulses to effect step-by-step movement of the counter unit; carry contacts on each counter unit; a carry circuit controlled by each of said carry contacts connecting the counter unit with the unit of the next higher denomination with a group to effect the addition of carry pulses to the counter unit of the next higher denomination; readout means associated with each of said counter units for emitting digit representing signals; a count pulse source; count entry circuits coupled to said count pulse source; a means to selectively initiate readout and reset operations; a count entry and readout control means coupled to said means to selectively initiate readout and reset operations having alternative positions in response to readout signals; circuit means completed by said readout control means when in a first position connecting the lowest denomination counter unit of the first of said counter groups with said count entry circuits for advancing the lowest denomination counter unit in a step-by-step manner in response to pulses supplied by said count pulse source, and for connecting the carry contacts of the highest denomination counter unit of the first of said counter groups with the lowest denomination counter unit of the third counter group, and for

enabling the readout means of the second of said counter groups; circuit connections completed by said readout control means when in a second position connecting the lowest denomination counter unit of the second of said counter groups with said count entry circuit for advancing said lowest denomination counter unit in a step-by-step manner in response to pulses supplied by said count pulse source, and for connecting the carry contacts of the highest denomination counter unit of the second of said counter groups with the lowest denomination counter unit of the third counter group, and for enabling the readout means of the first of said counter groups; a source of reset pulses; reset contacts on each counter unit to interrupt the supply of reset pulses to the respective counter units when the counter unit reaches "zero" during a resetting operation; and selectively operable reset control means for alternatively connecting the denominational counter units of the first and third groups with said source of reset pulses to effect the resetting operation of said first and third groups of counter units.

3,002,686

POSTAGE METERS

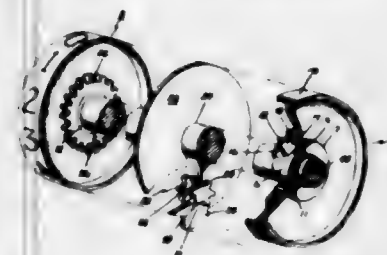
Friedrich Hell and Horst Springer, both of Frankfurt am Main, Germany, assignors to Telefonbau und Normalzeit G.m.b.H., Frankfurt am Main, Germany
Filed Dec. 26, 1956, Ser. No. 630,514
8 Claims. (Cl. 235-101)



1. In an apparatus for printing monetary amounts the combination of a printing cylinder adapted to perform repetitive printing cycles; a lock-out mechanism for said printing cylinder adapted to release said printing cylinder for the duration of one of said printing cycles at a time and to become effective at the end of each consecutive of said printing cycles; manually operable means for moving said lock-out mechanism to an ineffective position thereof after completion of one printing cycle to allow initiation of a consecutive printing cycle; control gears adjustable for predetermined monetary amounts; mechanical means operated by said control gears for controlling said lock-out mechanism, said mechanical means including an operating lever having a first limit position allowing said manually operable means to move said lock-out mechanism to said ineffective position thereof and a second limit position precluding said manually operable means from moving said lock-out mechanism to said ineffective position thereof; a subtracting totalizer adapted to be pre-set for a predetermined total of permissible imprints operated by said control gears; means under the control of said totalizer responsive to said total of permissible imprints for maintaining said operating lever in said second limit position thereof upon response of said totalizer-controlled means; an operating cam jointly movable with said control gears; and an abutment lever controlled by said cam to maintain said operating lever in said second limit position thereof up to a point of time shortly preceding termination of one of said printing cycles by said printing cylinder.

3,002,687
INTERNAL TRANSFER MECHANISM
FOR COUNTERS

Robert W. Herr, Fort Wayne, Ind., assignor to Bowmar Instrument Corporation, Fort Wayne, Ind.
Filed Jan. 5, 1959, Ser. No. 784,941
7 Claims. (Cl. 235-139)



1. In a counting device: rotatable shaft means; a first lower order number wheel coaxially disposed on said shaft means; a second higher order number wheel coaxially disposed on said shaft means and axially spaced from said first wheel; and intermittent motion transferring mechanism interposed between said first and second wheels for advancing said second wheel a predetermined angular amount responsive to a predetermined rotation of said first wheel comprising externally toothed intermittent drive means secured to said first wheel on the side thereof toward said second wheel, a plate member disposed between said wheels and having a central opening formed therein with said shaft means rotatably extending therethrough, said plate member having a slot extending radially outward from said central opening with its end terminating short of the outer periphery of said plate member, a transfer member having a hub portion rotatably seated in said slot end with first and second portions respectively on either side of said plate member, said first transfer member portion cooperatively engaging said intermittent drive means, an externally toothed spur gear secured to said second wheel on the side thereof toward said first wheel, the second portion of said transfer member including a pinion cooperatively engaging said gear to drive the same and thereby to advance said second wheel, and means for restraining said plate member against rotation, said hub portion of said transfer member having a smaller outside diameter than the outside diameters of said first and second portions whereby said transfer member is axially retained by said slot, engagement of said intermittent drive means and said gear with said first and second portions respectively of said transfer member radially retaining said hub portion thereof at said end of said slot, said central opening of said plate member having a larger diameter than the width of said slot and said outside diameters of said first and second portions of said transfer member whereby said hub portion thereof is initially positioned in said slot.

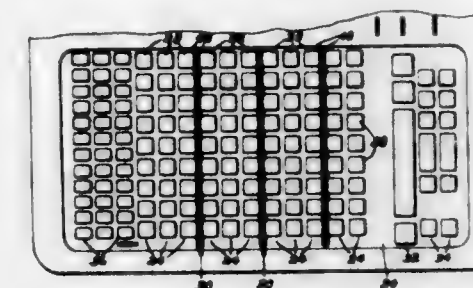
3,002,688

KEY ROW MARKER

Forrest E. Holladay, Ann Arbor, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 6, 1958, Ser. No. 707,192
4 Claims. (Cl. 235-145)

1. In a calculating machine having an inclined keyboard and parallel rows of key tops thereabove in stepped relationship from the front of the keyboard upwardly and rearwardly to the uppermost key tops, a key row marker to rest on the keyboard between an adjacent pair of rows of the stepped key tops comprising, an elongated strip the side edges of which constitute respectively the top and bottom of the marker, the thickness of the strip being substantially equal to but less than the distance between

opposed surfaces of laterally opposite key top for sliding engagement thereby, and outturned flanges on said



strip to hook behind a pair of the laterally positioned key tops for sliding relationship therewith.

3,002,689

MULTIPLIER ACCOUNTING MACHINE

Robert S. Bradshaw, Broomall, Walter Hanstein, Villanova, Harry R. Ott, Philadelphia, and Winston C. Sheppard, Jarrettsville, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 31, 1958, Ser. No. 724,985
26 Claims. (Cl. 235-160)



23. A multiplier unit for an accounting machine comprising: a shifter assembly, said assembly comprising a first rotatably mounted shaft, drive means for rotating said shaft, clutch means for connecting said drive means with said shaft to rotate said shaft intermittently, a right hand shifter disk secured to said shaft, circuit elements on the faces of said last mentioned disk, fixed contactors in wiping contact with the circuit elements on one face of said last mentioned disk, a left hand shifter disk rotatably mounted on said shaft, drive means for rotating said last mentioned disk, clutch means for engaging said last mentioned drive means with said last mentioned shaft to drive it intermittently, circuit elements on the faces of said last mentioned disk, fixed contactors in wiping contact with the circuit elements on one face of said last mentioned disk, a control disk secured to said shaft, circuit elements on the face of said last mentioned disk, fixed contactors in wiping contact with the circuit elements on one face of said last mentioned disk, contactors in wiping engagement with the circuit elements on the other face of said last mentioned disk, said last mentioned wiping contactors being rotatable with said left hand shifter disk; a function table assembly comprising, a second rotatably mounted shaft, drive means for rotating said shaft, clutch means for engaging said drive means with said shaft to drive the latter intermittently, a right hand function table disk secured to said shaft for rotation therewith, circuit elements on the faces of said last mentioned disk, fixed contactors in wiping engagement with the circuit elements on one face of said last mentioned disk, a left hand function table disk rotatably mounted on said shaft, drive means for rotating said last mentioned disk, clutch means for engaging said drive

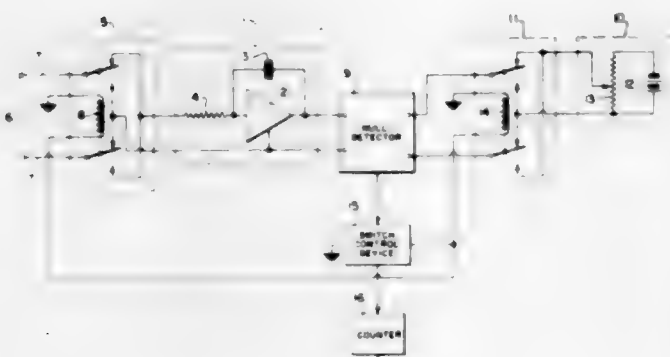
means with said last mentioned shaft to drive it intermittently, circuit elements on a face of said last mentioned disk, a function table control disk secured to said shaft for rotation therewith, circuit elements on the faces of said last mentioned disk, fixed contactors in wiping contact with the circuit elements on one face of said disk, and contactors in wiping contact with the circuit elements on the other face of said disk, said last mentioned contactors being rotatable with said left hand function table disk; and a platen having portions straddling said shafts between said right and left hand shifter disks and said right and left hand function table disks, contactors arranged on said platen portions normally out of contact with the circuit elements on the faces of said disks between which said portions extend; and means to shaft said platen toward the disks on either side thereof whereby said contactors are brought into contact relation with the circuit elements on said disks selectively.

3,002,690

CONTINUOUS INTEGRATOR

Saul Meyer, Havertown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed July 3, 1958, Ser. No. 746,528
11 Claims. (Cl. 235-183)



1. A continuous integrator comprising, in combination, an integrating circuit including an operational amplifier and a capacitive feedback circuit for said amplifier, means for applying to said integrator circuit a signal to be integrated, a reference level signal source, null-detecting means for comparing output signals from said integrator circuit with a reference level signal from said source, said null-detecting means being operative to produce a signal upon a substantial equality of the compared signals, means responsive to said signal from said null-detecting means for reversing the polarity of the signals applied to said integrator circuit and of the signals applied to said comparing means from said source, and output means responsive to said signal from said null-detecting means.

3,002,691

ANALOG CONVERTER

William H. Newell, Mount Vernon, N.Y., Henry F. McKenney, Weston, Mass., and Norman J. Zabb, Brooklyn, N.Y., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware

Filed Aug. 12, 1957, Ser. No. 678,264
3 Claims. (Cl. 235-187)

1. An analog computation device for converting phase hyperbolic coordinates to plane rectangular coordinates comprising means for continuously mechanizing and solving equations having the basic form:

$$X_p = \left(\frac{N_1 + N_2}{D_1 + D_2} \right) \sin B_p$$

and

$$Y_p = \left(\frac{N_1 + N_2}{D_1 + D_2} \right) \cos B_p$$

to obtain continuously the quantities X_p and Y_p which are related to: three reference points A, C and B having base lines L_a and L_b , L_a being measured from C to A and L_b being measured from C to B, a rectangular coordinate system having an X axis and a Y axis with their origin at the said point C, the bearing of the said base line L_a being B_a and the bearing of the said base line L_b being B_b as measured from the Y axis, and a point P having hyperbolic coordinates ΔL_a and ΔL_b relative to the said reference points A, C and B and rectangular coordinates X_p and Y_p relative to the said X and Y axes, the point P having a polar bearing B_p as measured from the Y axis, wherein N_1 is equal to the computation quantity $(L_a^2 - \Delta L_a^2)$, N_2 is equal to the computation quantity $(L_b^2 - \Delta L_b^2)$, D_1 is equal to the computation quantity $2[\Delta L_a + L_a \cos (B_p - B_a)]$ and D_2 is equal to the compu-



tation quantity $2[\Delta L_b + L_b \cos (B_p - B_b)]$ and the said means for mechanizing comprising means for continuously mechanizing and solving the said equations includes first means for generating quantities proportional to the observed quantities L_a , $(L_a - \Delta L_a)$, L_b and $(L_b - \Delta L_b)$, first means responsive to said generating means for computing the quantity $(N_1 + N_2)$, second means for generating quantities proportional to the observed quantities B_a and B_b , second means responsive to said first and second generating means for computing the quantity B_p , third means responsive to said first and second generating means and said second computing means for computing a quantity $(D_1 + D_2)$, resolving means connected to said $(N_1 + N_2)$ and B_p computing means for obtaining a first resolved output quantity $(N_1 + N_2) \sin B_p$ and a second resolved output quantity $(N_1 + N_2) \cos B_p$, means connected to said resolving means to receive the first resolved output quantity and to said $(D_1 + D_2)$ computing means for obtaining the coordinate quantity X_p and means connected to said resolving means to receive the second resolved output quantity and to said $(D_1 + D_2)$ computing means for obtaining the coordinate quantity Y_p .

3,002,692

THERMOSTATICALLY ACTUATED SIGNAL TRANSMITTING CONVERTERS

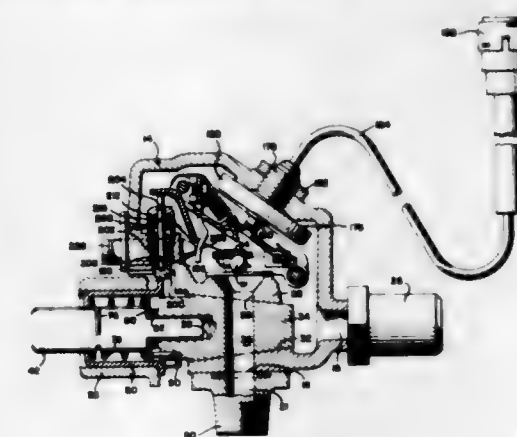
Ray S. Williams, Orrville, Ohio, assignor to Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 22, 1959, Ser. No. 808,250
5 Claims. (Cl. 236-82)

1. A thermostatically actuated pneumatic converter comprising, in combination, a diaphragm valve assembly including a valve body having a valve signal chamber, and a valve actuating pressure chamber, a common diaphragm assembly separating said chambers, said body having a pressure supply port, a valve port communicating said supply port with body chamber and a passage having an orifice therein communicating the supply

port with said valve actuating pressure chamber, and a signal sending passageway leading out of said valve body signal chamber, said diaphragm assembly having an exhaust valve port communicating said valve body chamber to the atmosphere, a housing having a feed-back chamber, said diaphragm valve assembly having a passage leading from said output signal passage to said feed-back chamber, a jet communicating said actuating pressure chamber with said feed-back chamber, a flap adjacent to the tip of said jet for controlling flow therethrough, a differential thermostat associated with said feed-back housing and forming a pressure-tight joint therewith, said thermostat having relatively thermally expansive and non-thermally expansive members providing relative

between said operating and said second valve means whereby said operating means is effective to adjust the

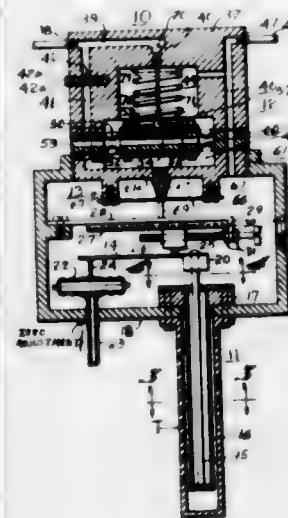


position of said first valve means independently of said second valve means.

3,002,694

SPRAY BARS FOR TAR AND THE LIKE SPRAYING MACHINES

Norman Cecil Scott Grant, "Bower Holme,"
Shrubbs Hill, Lyndhurst, England
Filed Apr. 27, 1959, Ser. No. 809,045
5 Claims. (Cl. 239-127)



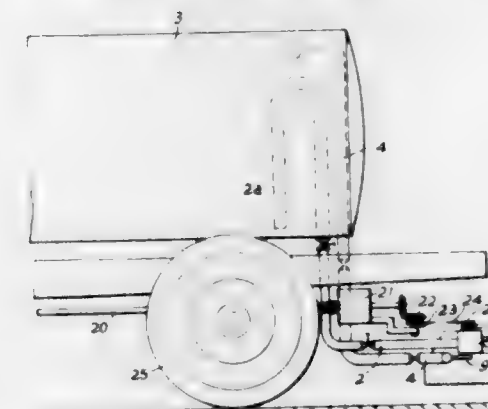
motion between them in response to temperature changes, one of said members being operatively connected to actuate said jet flap towards or away from said jet, and means responsive to the pressure in said feed-back chamber for actuating said jet flap in a direction opposite to that in which it was moved by said differential thermostat, the signal output pressure of the valve increasing as the flap moves towards the jet and decreasing as the flap moves away from the same which comprises a cantilever member supported at one end by one of the thermostatic members and at the other by a feed-back pressure responsive member comprising a hollow pressure deflectable member, a fulcrum and a cantilever supported at one end on said fulcrum and at the other end by a fulcrum member resting on said first-mentioned cantilever member, said second-mentioned cantilever being provided with means for actuating said jet flap.

3,002,693

THERMOSTATICALLY CONTROLLED FLUID VALVES

Charles D. Branson and William S. Kunzler, Greensburg, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 8, 1958, Ser. No. 766,063
20 Claims. (Cl. 236-99)

1. In a control device, the combination comprising a casing having an inlet and an outlet, first valve means disposed in said casing adjacent said inlet and being movable between positions for controlling a flow of fluid from said inlet, second valve means disposed in said casing and being movable between positions for regulating a flow of fluid to said outlet, operating means having a single plane of rotation operatively connected to said first and second valve means for selectively positioning the same, means defining a lost motion connection operatively disposed between said operating means and said first valve means whereby said operating means is effective to adjust the position of said second valve means independently of said first valve means, and means operatively disposed



1. Apparatus for spraying liquid, e.g., liquified tar, comprising a spray bar having along its length a plurality of jets and within the bar a plurality of metering pumps, one for each jet, each pump including an inlet and a pair of outlets, said inlet communicating with the bar interior, a liquid return pipe for connection to a liquid supply source, a two-way control valve controlling said outlets and associated with each pump through which the liquid can be discharged either to the jet or to the return pipe.

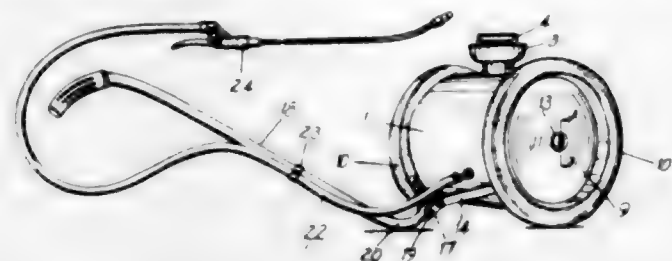
3,002,695

WHEEL TYPE SPRAYER

Edwin H. Matthewson, Saranac, Mich., assignor to Universal Metal Products Company, Saranac, Mich.
Filed Aug. 8, 1958, Ser. No. 753,924
11 Claims. (Cl. 239-146)

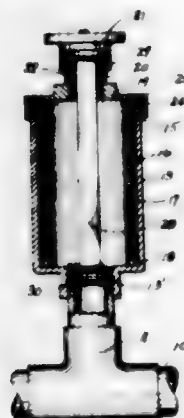
1. In a sprayer the combination of an elongated horizontally disposed tank of cylindrical section having flat and parallel end walls, horizontally disposed supporting bars fixedly secured to the ends of the tank, journals secured to said bars to project therefrom centrally relative to the tank, wheels of a diameter exceeding the diameter of the tank mounted on said journals, handle yoke arms mounted on said bars and converging at one side of the tank, a handle mounted on said arms and having a downward off-set therein adjacent the arms constituting a support engaging member, said tank being

provided with a filling opening, a pressure pump, an education conduit, and a hose connected to said education conduit



duit and supportedly connected to said handle in spaced relation to its connection to said education tube.

3,002,696
EXTENDABLE AND RETRACTABLE SPRINKLER
Frederick T. Jenkins, 836 W. Eturia St., Seattle, Wash.
Filed Oct. 3, 1960, Ser. No. 59,944
2 Claims. (Cl. 239—205)



1. A sprinkler unit comprising a vertically disposed cylindrical housing, open to its full diameter at its upper end and closed at its lower end and provided at that end with a tubular, axial inlet for reception of water under pressure, a hollow cylindrical piston reciprocally fitted within said housing with slight clearance for extension and retraction; said piston being open to its full diameter at its lower end and provided about that end with an annular sealing flange slidably engaging the side walls of the housing chamber and having a closing wall at its upper end with an upwardly directed tubular neck portion providing a discharge passage, a sprinkler head threaded onto said neck, an annular flange member threaded onto the open upper end of the cylindrical housing, about the upper end of said piston to serve as a guide for said piston in its travel and as a stop for the sealing flange as formed about the lower open end of the piston to limit the extending travel of the piston, a tubular anchoring coil threaded into the inlet of said housing, equipped with a diametrically directed end portion extending partially across said tubular anchor coil, a cross-pin removably seated in the discharge end of said tubular neck portion and a resilient strip of rubber secured under tension at its opposite ends to said diametrically directed end portion of the anchoring coil and to said cross-pin to retract the piston when water pressure thereagainst is discontinued.

3,002,697
MOVABLE FIELD SPRINKLER
William J. Jones, Palo Alto, Calif., assignor to Hiller Engineering Corporation, San Jose, Calif., a corporation of California
Filed Feb. 29, 1960, Ser. No. 11,607
3 Claims. (Cl. 239—212)

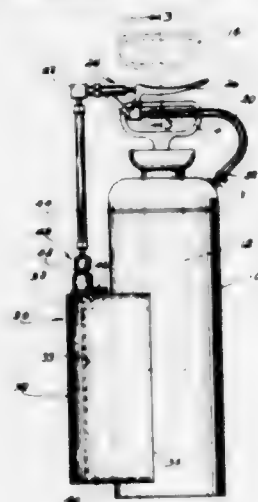
2. An irrigation apparatus comprising a pipe line section supported upon a wheel for movement across an area

to be irrigated; said wheel being fixed to said pipe line section for rotation therewith, a branch pipe projecting from said pipe section, a rotary sprinkler head rotatable



about an axis at right angles to the axis of said pipe line section, and means for supporting said sprinkler head from said branch pipe for rotation about an axis parallel to the axis of said pipe line section.

3,002,698
HAND PRESSURE SPRAYER
Michael S. Gallo, 1310 Forest St., Racine, Wis.
Filed Aug. 12, 1957, Ser. No. 677,475
2 Claims. (Cl. 239—308)

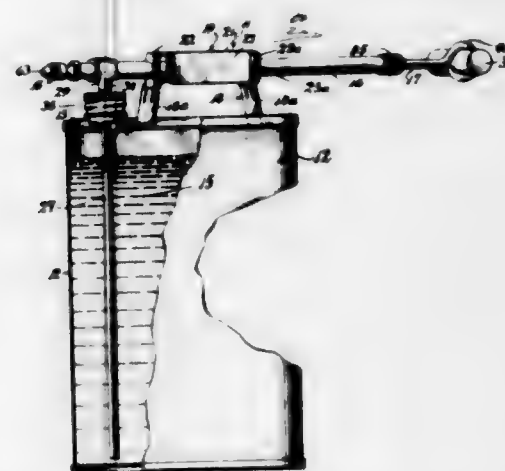


2. A hand sprayer having an air tank and an upright hand pump therein provided with a handle having a horizontally-extending longitudinal hand aperture, in combination a spray solution reservoir, a spray head operatively associated with the air tank and reservoir, said spray head being secured in said reservoir and having a siphon means connected thereto, a control valve for controlling air flowing from said tank to said spray head having a handle positioned adjacent said aperture and horizontally coextensive therewith so as to permit actuating said valve simultaneously with the same hand that carries the sprayer, a conduit between said spray head and said valve for supplying air to said spray head, and a conduit between said tank and said valve for supplying air to said spray head through said valve.

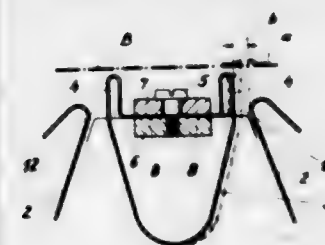
3,002,699
COMBINED SPRAYER PUMP AND CONTAINER ASSEMBLY
August H. Plake, Hastings, Minn., assignor to H. D. Hudson Manufacturing Company, Chicago, Ill., a corporation of Minnesota
Filed Feb. 19, 1960, Ser. No. 9,757
8 Claims. (Cl. 239—333)

1. In combination, a container for spray solution having a top provided with a fixed carrying handle and a neck defining a discharge port in spaced relation but aligned with said handle, a manually-operated hydraulic spray pump mounted and supported in operative position

upon and parallel to said handle, a delivery tube suspended from adjacent one end of said pump for insertion into said port, a cap loosely encompassing said delivery tube and providing a cover for said port when the delivery tube is inserted and depends into the spray solution of the



3,002,700
NOZZLE ON HEAT-TREATMENT MACHINES FOR TEXTILE FABRICS AND THE LIKE
Gustav Möhring, 3 Salzmannweg, Stuttgart, Germany
Filed July 27, 1959, Ser. No. 829,728
Claims priority, application Germany July 26, 1958
7 Claims. (Cl. 239—455)

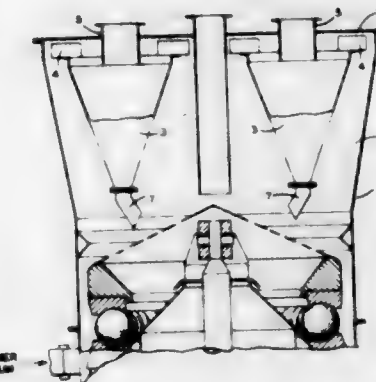


1. A nozzle for distributing a heat treating fluid to uniformly heat-treat a continuous web of textile material or the like comprising means forming an elongated discharge slot terminating in a predetermined plane for directing pressurized treating fluid which is discharged as a concentrated jet in the direction of the middle axis of the nozzle cross-section, perpendicularly to the web of fabric in spaced relation to a predetermined path of travel, and transverse adjusting means spaced longitudinally of said slot and providing a variable width along said discharge slot for attaining different velocity flow of fluid along said slot, said nozzle including spacer means extending longitudinally of said slot and beyond said predetermined plane for maintaining said continuous web a minimum distance from said slot discharge.

3,002,701
AIR-SWEPT PULVERIZING APPARATUS
Karl-Helm Kayatz, Hamburg-Osdorf, Germany, assignor to Babcock & Wilcox Limited, London, England, a corporation of Great Britain
Filed Mar. 6, 1958, Ser. No. 719,634
Claims priority, application Germany Mar. 9, 1957
2 Claims. (Cl. 241—52)

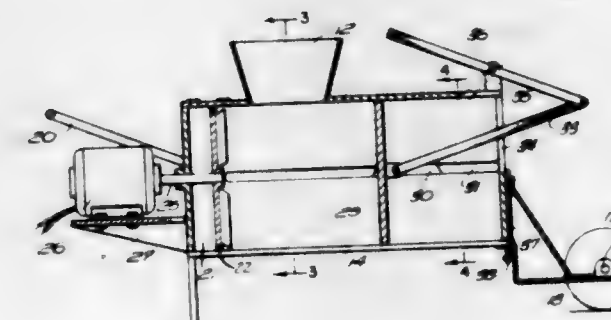
1. Apparatus for pulverizing solid materials comprising a housing, means for feeding raw material to be pulverized to said housing, means for grinding said raw

material in the lower portion of said housing, means defining more than two outlet openings in the upper portion of said housing, means for passing a stream of carrier fluid through said housing to entrain pulverized material from said grinding zone and to move said entrained material upwardly toward said outlet opening means, a plurality of stationary centrifugal classifying means in the upper portion of said housing, one of said



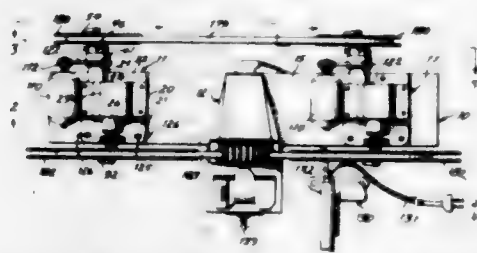
stationary classifying means interposed in the stream of carrier fluid entrained material passing to each of said outlet opening means, and means for regulating the quantity of carrier fluid passing through each of said classifying means including a plurality of circumferentially spaced pivotably adjustable vanes disposed in the wall of each of said separate classifiers, said means for regulating conjointly the fineness of pulverized material discharging from each of said classifying means.

3,002,702
LEAF PULVERIZER
Ronald S. Peltier, 30 Whitford Ave., Providence 8, R.I.
Filed June 15, 1960, Ser. No. 36,241
3 Claims. (Cl. 241—278)



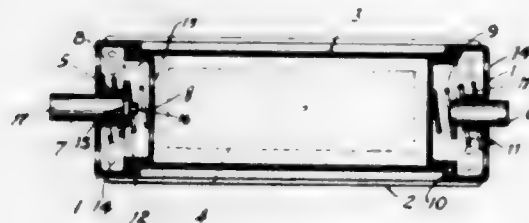
3. A leaf pulverizer comprising a rectangular housing having a top, bottom, side walls and end walls, said top having a hinged cover portion and a loading opening, an auxiliary wall portion adjacent one end wall defining a recess, said auxiliary wall portion having a large annular opening, a power driven shaft extending through said end wall adjacent said recess, a plate mounted on said shaft in said auxiliary wall opening, said plate having a plurality of radially positioned blades on the front face thereof, said blades being angularly disposed to the surface of said plate in the direction of rotation thereof, and means for pushing leaves in said housing against said rotating plate and blades, the bottom of said housing being hinged to permit dumping of the pulverized leaves, said pushing means comprising a rectangular plate slidably mounted in vertical position in said housing and a manually operable lever for moving said plate toward and away from said rotating plate, said lever having a vertically pivoted portion and a horizontally pivoted portion extending to the center of said plate.

3,002,703
MOTION PICTURE FILM WINDER AND EDITOR
 Alva K. Hinchman, 2 Rugby Road, Bryn Mawr, Pa.
 Filed Aug. 8, 1958, Ser. No. 753,906
 3 Claims. (Cl. 242—55.12)



1. In a motion-picture film winder and editor, a base, a pair of spaced reduction gear trains on said base each having a high speed shaft projecting on one side and a low speed shaft projecting on the other side, means for driving a selected one of said gear trains, means for mounting a film reel on each of said low speed and high speed shafts for rotation therewith, and selectively engageable and disengageable clutch means interposed between the projecting end of each of said shafts and its associated gear train, whereby a selected one of said high speed shafts and a selected one of said low speed shafts may each have its projecting end coupled to its respective gear train to be driven thereby and the other of said high and low speed shafts may have its projecting end disengaged from the associated gear train for free rotation relative to the latter, said low speed shafts each being of sectional construction having a pair of aligned relatively rotatable sections, and clutch means in said low speed shafts operatively connecting the sections of each low speed shaft for allowing variations in speed between said film-reel mounting means as required by changing relative sizes of film coils on said reels, said clutch means in said low speed shafts each comprising a brake element mounted on one section of the respective low speed shaft for movement radially inward and outward, respectively, into and out of frictional engagement with the other section of the respective low speed shaft, said other section of each low speed shaft being formed with an external circumferential groove removably comfortably receiving its respective brake element, and resilient means urging said brake elements radially inward into said frictional engagement, said resilient means being of sufficient force to retain said brake elements in said frictional engagement and to relieve said frictional engagement upon a predetermined tension in film being wound and upon a predetermined angular velocity under the centrifugal force of said brake elements.

3,002,704
TOILET ACCESSORY
 Aaron M. Grossfeld, New York, N.Y.
 (3001 Valentine Ave., Bronx, N.Y.)
 Filed Aug. 12, 1958, Ser. No. 754,600
 1 Claim. (Cl. 242—55.55)

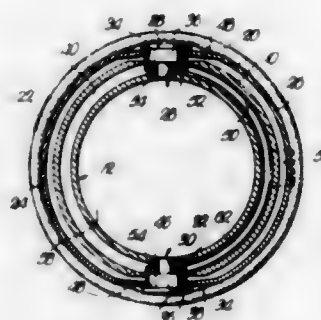


A mounting device for an imperforate tubular casing with open ends, said device comprising a hollow head with a rim encircling each end of the cylinder, one of said heads carrying a fixed central journal stud and the other a re-tractile central journal stud, a cap for the

adjacent end of the casing in each head, said heads and caps having apertures, a spring between each cap and the head carrying it, connector rods rigidly joining said heads, the length of said rods and the casing and size of said springs being such that when one end of the casing and cap thereat are fully inserted in one head, the opposite end of the casing will clear the rim of the other head and cap therein so that the casing can be removed, said caps having flanges abutting the ends of the casing, the rims of the heads encircling said flanges, each cap also having a cavity presented to the head carrying it, the heads each having a bearing for the stud carried thereby, said retractile stud having a flange abutting the inner end of its bearing, and a central boss projecting inward from said flange, the spring in the head carrying said retractile stud seating against the head at one end and the cap therein at the other end, said spring having a portion engaging said flange and boss.

3,002,705
TAPE REEL LOCK
 Willard D. Isbell, Tulsa, Okla., assignor to Midwestern Instruments, Inc., Tulsa, Okla., a corporation of Delaware

Filed Dec. 16, 1957, Ser. No. 703,163
 7 Claims. (Cl. 242—68.2)



1. For a revolvable device having a tubular hub, an expanding arbor for mounting said device on a spindle, said arbor comprising a body adapted to be received by said hub and having a bore adapted to fit onto said spindle; an extensible ring surrounding the body; radially expansible structure between the body and said ring for extending the latter against the hub, said structure comprising a pair of opposed resilient shoes, each partially surrounding the body and each having a pair of diametrically spaced ends; oscillatory apparatus for expanding the shoes and including a pair of diametrically opposed members rotatably carried by the body, each member having cam means engageable with said ends of the shoes therebetween; and a swingable lever coupled with said members for oscillating the same, said resilient shoes being spread apart by said cam means toward the hub to force said ring against the hub, said members being radially movable and each having a portion thereof disposed between the ring and the shoes whereby the members are moved outwardly against the ring as said ends of the shoes spread apart.

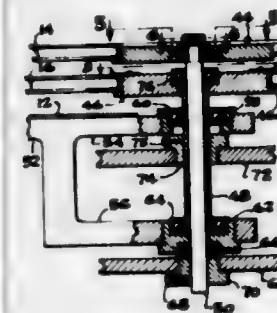
3,002,706
TAPE GUIDE AND REEL HUB CONSTRUCTION FOR COAXIAL REEL TYPE TAPE RECORDER OR REPRODUCER

Anthony Flan, Evanston, Ill. (2033 Glen Oak Drive, Glenview, Ill.), Harold N. Miller, Glencoe, and Fred Lindroos, Fox Lake, Ill.; said Miller and said Lindroos assignors to said Flan

Filed Mar. 28, 1956, Ser. No. 574,473
 3 Claims. (Cl. 242—68.3)

2. In a tape recorder having coaxial hubs to receive and carry reels having openings of like diameter, the hubs being mounted on coaxial shafts, the improvement com-

prising an upper hub having a central generally rectangular base portion carried by the inner shaft and of substantially less extent than the openings of the reels, pins in said base portion straddling said inner shaft and located in a common plane normal to said inner shaft, and extending outboard the base portion, and a pair of wings each having an inner portion fitting around at least a por-



tion of said base portion and pivotally received upon said projecting pins for folding rotations to up positions in planes straddling but parallel to said inner shaft and down positions in a plane normal to said shaft, each wing further having an outer edge forming in the down position a fragment of a cylinder adapted to receive the opening of a reel and a flange below said fragment of a cylinder adapted to sustain the reel, and in up position passing the opening of a reel.

3,002,707
REEL MOUNTING
 Stuart D. Noble, 3931 De Longpre, Los Angeles, Calif., assignor of 10 percent to Vernon D. Beehler, Los Angeles, Calif., and 90 percent to Stuart D. Noble
 Filed Sept. 26, 1957, Ser. No. 686,310
 10 Claims. (Cl. 242—68.3)

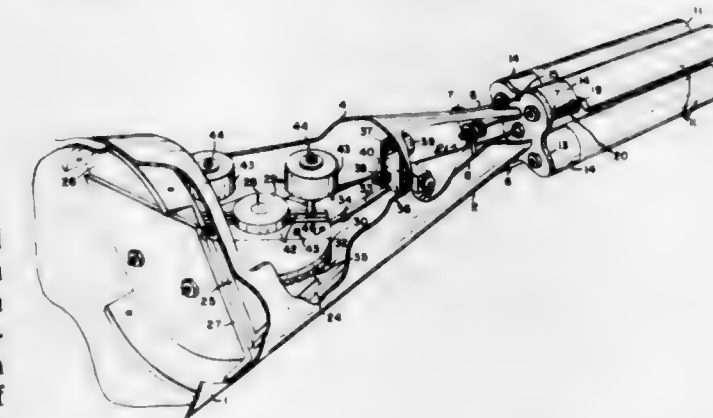


5. A rotating mounting for a reel comprising a frame, a shaft rotatably mounted on the frame, a substantially flat reel support non-rotatably mounted on the shaft including a central hub anchored to the shaft, a drive thimble having an axially slidable non-rotating connection to the hub, said thimble having an axially extending body, and a reel comprising parallel strand-confining sections on opposite sides and a strand-holding core therebetween, one of said sections being adapted to lie against the reel support and having an axially located hole therethrough providing a clearance around said body, the other section comprising circumferentially arranged resilient tabs having inner free ends lying in a circle of diameter smaller than said body whereby inner edges of the tabs are adapted to bear resiliently against said body and to hold the reel against the reel support.

3,002,708
AIRCRAFT TOW REEL SYSTEM
 James E. Wetzel, Hawthorne, Calif. (AFBMD—A.F. Unit P.O., Los Angeles 45, Calif.), and Carlos T. Gallegos, Star Rte., Box 146H, Fort Walton Beach, Fla.
 Filed Sept. 28, 1959, Ser. No. 843,023
 3 Claims. (Cl. 244—3)

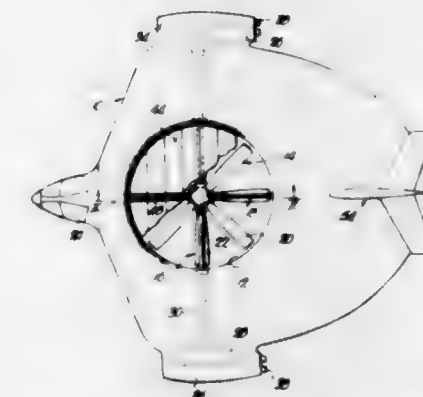
(Granted under Title 35, U.S. Code (1952), sec. 266)
 1. In a drone aircraft a wing tank formed with a tapered rear end portion, a horizontal support plate fixed

within said tapered portion, flare target supporting guide means fixed to said tapered rear end portion and extending rearwardly therefrom, a multiple flare unit supported against the rear end of said tapered portion on said target supporting guide means, a tow cable secured at one end to the forward end of said flare unit for towing thereof, a resilient towing connection between the tow cable and the flare unit, a cable reel rotatably mounted on said support plate with the tow cable wound thereon having its other end secured to said cable reel, centrifugal speed governor control means between said cable reel and said



support for controlling the rate of rotation of the cable reel and rate of pay-out of the tow cable, releasable locking means carried by said support plate in locking engagement with said cable reel to resist rotation thereof in a direction for paying out said tow cable, radio signal actuated control means carried by said tapered portion responsive to radio signals of a predetermined frequency for releasing said releasable locking means to free said cable reel for paying out said tow cable, including means operable thereby for igniting said flares of said flare unit substantially simultaneously with the release of said cable reel and the outward reeling of said tow cable.

3,002,709
AIRCRAFT ADAPTED FOR VERTICAL ASCENT AND DESCENT
 Charles L. Cochran, Overland Park, Kans., assignor to C. L. Cochran and Associates, Overland Park, Kans., a copartnership composed of Charles L. Cochran, Norman E. Schaeffer, Earl Lindaly, Vernon L. Hurst, and Donald A. Lueke
 Filed Dec. 19, 1955, Ser. No. 553,808
 2 Claims. (Cl. 244—12)



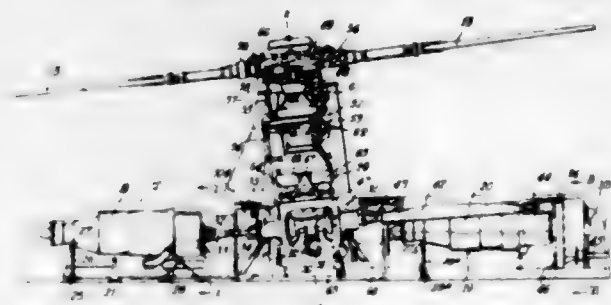
1. In an airplane, a pan-cake type fuselage of aerodynamic configuration in the direction of normal forward movement of the airplane and having length and width dimensions of the same approximate order of magnitude and a thickness of greatest order at a substantially central part of the fuselage and of substantially lesser magnitude than said length and width dimensions thereof, said fuselage being provided with a substantially vertical, general-

ly cylindrical air duct therethrough at the thickest portion of the same; air foil means mounted in the duct and including vertically spaced, variable pitch propeller means mounted for rotation about a fixed, normally vertical axis; separately controllable, turbo-propulsion means fixedly mounted on opposite side margins of the fuselage and each having generally rearwardly facing exhaust means disposed with the axes thereof in substantially parallel relationship with said normal direction of forward movement of the airplane; means operably coupling said turbo-propulsion means to said propeller means for rotating the same during operation of said turbo-propulsion means; separately controllable jet propulsion means mounted on opposite side margins of the fuselage adjacent respective turbo-propulsion means and each having generally rearwardly facing exhaust means disposed with the axes thereof in generally parallel relationship with the axes of the exhaust means of said turbo-propulsion means, said jet propulsion means providing a forward thrust component upon the fuselage during operation thereof; and shiftable control surface means including a deflector within each of said exhaust means of the turbo-propulsion means and said jet propulsion means, the deflectors in the exhaust means on one side margin of the fuselage being independently shiftable relative to the deflectors in the exhaust means on the other side margin of the fuselage, said deflectors being swingable about corresponding, normally horizontal axes and disposed to impart stability to motion of the fuselage by deflection in either vertical direction of exhaust gases from said turbo-propulsion means and said jet propulsion means to control pitch and roll of the fuselage regardless of whether said turbo-propulsion means or said jet propulsion means are operating separately or in conjunction.

3,002,710 HELICOPTERS

Charles Joseph Marchetti, Vanves, and Charles Henri Tresch, Boulogne-sur-Seine, France, assignors to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France

Filed May 3, 1957, Ser. No. 656,806
Claims priority, application France May 15, 1956
12 Claims. (Cl. 244-17.17)



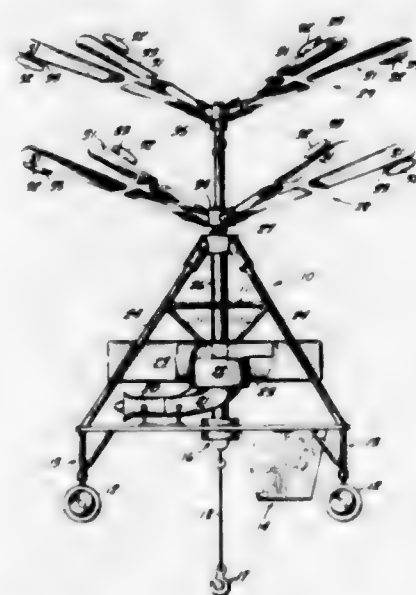
1. In a single-rotor, heavy-tonnage helicopter having a fuselage carrying a rear anti-torque rotor of conventional type and including a front pilot's cockpit, a cabin behind said cockpit, and a housing overlying said cabin and wherein are located, on the one hand, a transmission box coaxial with the rotor driving shaft and, on the other hand, at least three free turbine units having their axes parallel to the longitudinal plane of symmetry of the helicopter which passes through the axis of said shaft, said turbines being provided with securing means on the housing floor and connecting means with said transmission box and being disposed in two groups respectively located in front and behind the transmission box, one of said free turbine units being provided with the power take-off for the anti-torque rotor; the improvement which comprises a transmission box having two diametrically opposite front and rear input gears having a common axis at right angles to the axis of the rotor driving shaft and

disposed in the longitudinal plane of symmetry of the helicopter; for the front group, at least one turbine positioned on one side of the aircraft, a shaft provided with universal joints and directly interconnecting the power output of said turbine and the front input gear of the transmission box, and a free-wheel device interposed in said shaft, and at most one further turbine disposed symmetrically to the first turbine with respect to the longitudinal axis of the aircraft, a front coupling case enclosing said free-wheel device and a further free-wheel device connected to said further turbine and to said shaft; and, for the rear group, at least one turbine located on one side of the aircraft, a counter-gearing case having a free-wheel device connected to said turbine and a shaft provided with universal joints and interconnecting the output of the counter-gearing case and the rear input gear of the transmission box, and at most one further turbine disposed symmetrically to the first turbine with respect to the longitudinal axis of the aircraft, a rear coupling case enclosing said free-wheel device and a further free-wheel device connected to said further turbine and to said shaft, the power output of the turbines of the rear group being directed towards the rear of the helicopter.

3,002,711 HELICOPTER

Nicholas M. Stefano, Port Washington, N.Y., assignor to Fairchild Stratos Corporation, a corporation of Maryland

Filed Sept. 5, 1956, Ser. No. 608,099
8 Claims. (Cl. 244-17.23)

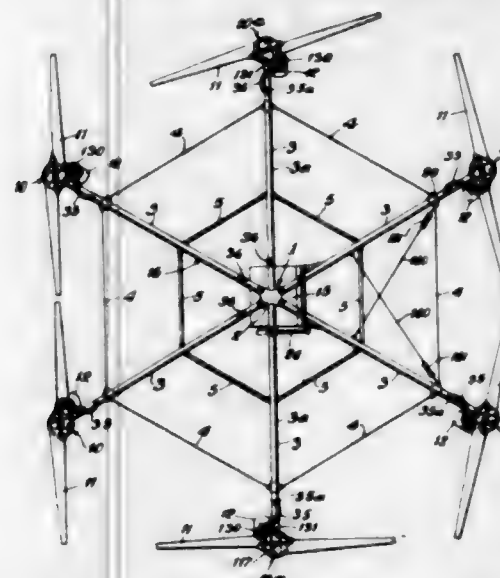


1. A helicopter comprising a fuselage formed of a horizontal support frame, substantially rigid members fixedly attached at spaced apart points on said frame and converging upwardly at an angle with said frame, a first bearing means fixed between the upper ends of said substantially rigid members, a second bearing means fixedly mounted on said support frame at a point in substantially vertical alignment with said first bearing means, a cabin depending from said support frame substantially rearwardly of said second bearing means; a turbine power plant mounted on said support frame, said turbine power plant comprising a pair counter-rotating turbine rotors supported to rotate about an axis common with the axis through said first and second bearing means, a plurality of gas generators connected to said power plant to rotate said turbine rotors; coaxial rotor blade shafts supported by said first and second bearing means, a plurality of rotor blades connected to each of said coaxial rotor blade shafts, means connecting one of said shafts to one of said pair of turbine rotors, means connecting the other of said shafts to the

other of said turbine rotors, and means associated with said rotor blade shafts for operably controlling the yaw of the helicopter.

3,002,712 POLYCOPTER

Sterling Beckwith, 500 King Muir Road, Lake Forest, Ill.
Filed Feb. 1, 1957, Ser. No. 637,705
6 Claims. (Cl. 244-17.23)

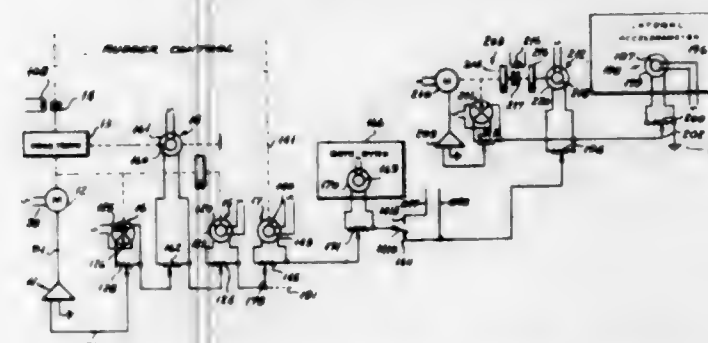


4. In an air transportation vehicle comprising a vehicle body with a generally upright axis, a plurality of thrust creating assemblies mounted on said body in diametrically opposed pairs disposed about the body axis, each of said assemblies including a rotor and a power plant in driving connection therewith, control means for said assemblies including simultaneously operable control elements connected to the power control of the power plant and to the pitch control of the rotor of each assembly whereby the power supplied by the power plant and the pitch of the rotor may be controlled together, the control elements of each assembly being connected to and operable in response to movement of a control arm mounted on the vehicle body whereby an increase in the power and pitch of one assembly in any pair simultaneously decreases the power and pitch of the opposed assembly.

3,002,713 AIRCRAFT CONTROL SYSTEM

Paul A. Noxon, Tenafly, and John E. Taylor, New Milford, N.J., and John Jarvis, Mount Clemens, Mich., assignors to The Bendix Corporation, a corporation of Delaware

Filed Dec. 19, 1955, Ser. No. 553,777
22 Claims. (Cl. 244-77)

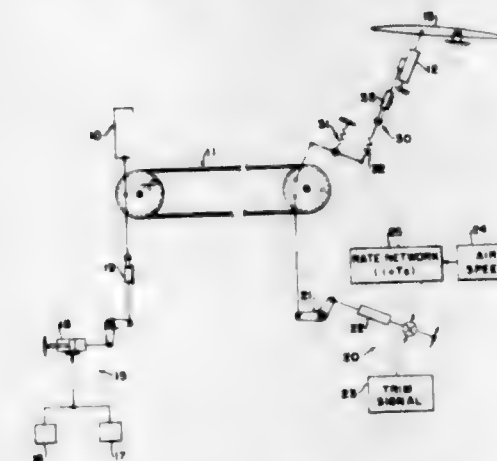


1. A control system for the movable yaw, roll and pitch control surfaces, comprising power means for each of said surfaces, means for connecting and disconnecting each of said power means with a respective surface for moving the surface, a controller displaceable manually from a reference position for moving one of said surfaces,

and means rendered operative by the controller displacement for operating said connecting and disconnecting means to disconnect said power means and said one control surface, and maintain said power means connected to the other control surfaces.

3,002,714 AIRCRAFT LONGITUDINAL CONTROL SYSTEM

James L. Decker, Towson, Md., assignor to The Martin Company, a corporation of Maryland
Filed Jan. 13, 1958, Ser. No. 708,600
12 Claims. (Cl. 244-83)

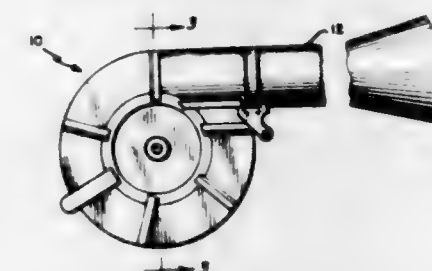


1. In an aircraft longitudinal control system providing a synthetic "feel" force indicative of aircraft behavior to the aircraft controls, the combination of a first mechanical network having accelerometer means for producing a first force cue proportional to the pitch angular acceleration of said aircraft, and a second force cue proportional to acceleration of said aircraft normal to the longitudinal axis of said aircraft, with a first linkage system mechanically connected to apply said first and second force cues directly to said aircraft longitudinal control system in a direction tending to maintain the said aircraft in level flight, a second mechanical network adapted to produce a third force cue proportional to the change in speed of said aircraft from a preselected trim speed, with a second linkage system connected to apply said third force cue to said aircraft controls in a direction tending to maintain the said aircraft at the said preselected trim speed, and a trim control element connected to said second mechanical network and adapted to vary the value of said preselected trim speed, whereby the resultant of said first, second, and third force cues as applied to said aircraft controls, produces said synthetic "feel" force effectively indicative of aircraft behavior.

3,002,715 DECELERATION PARACHUTE RETRACTION SYSTEM

Gordon R. Sinclair, Fallston, Md., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 4, 1958, Ser. No. 771,929
4 Claims. (Cl. 244-113)

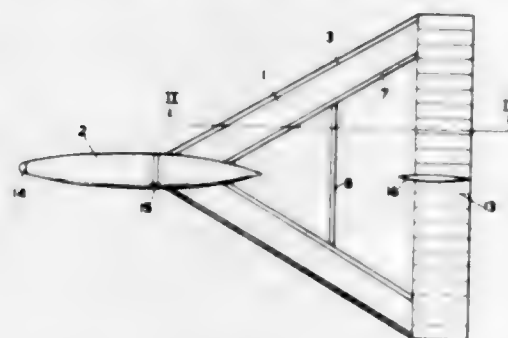


1. In a deceleration parachute retraction system the combination of a housing secured to the frame of an air-

plane, an opening in the fuselage of said airplane, a tube connecting said housing with said opening and having an enlarged portion adjacent said opening, a drum rotatably mounted in said housing, a constant torque motor mounted in said drum for driving said drum, a deceleration parachute having shroud lines, means for connecting said shroud lines to said drum, and a pilot chute secured to the canopy of said deceleration parachute, said drum and said housing being so proportioned to accommodate the deceleration parachute between said drum and said housing, and said tube being of a size to accommodate said pilot chute in a compressed condition.

3,002,716 AIRCRAFT

Ronald Andrew Shaw, Hemel Hempstead, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Feb. 27, 1957, Ser. No. 642,909
Claims priority, application Great Britain Mar. 1, 1956
15 Claims. (Cl. 244-117)



1. An aircraft for flight at high supersonic speeds having an outer surface over which, when the aircraft is in flight at said speeds, there is a relative airflow at a velocity such as to cause aerodynamic heating of said surface, the surface being formed with at least one aperture, the aircraft comprising at least one jet engine arranged to produce forward thrust on the aircraft, a source of supply of a liquid capable of being used in said engine to produce power, and a liquid supply connection between said source and said aperture, said aperture being arranged to emit said liquid onto said surface in such a direction and at such a velocity as to form a protective cooling layer which will flow rearwardly from said aperture over at least part of said surface, and said engine having a generally forwardly facing air intake spaced rearwardly from said aperture to which intake said surface extends and arranged to receive at least part of said layer.

3,002,717 AIRFOIL STRUCTURE

John Pavlecka, 8797 Capital, Oak Park 37, Mich.
Filed Jan. 12, 1960, Ser. No. 10,827
25 Claims. (Cl. 244-124)

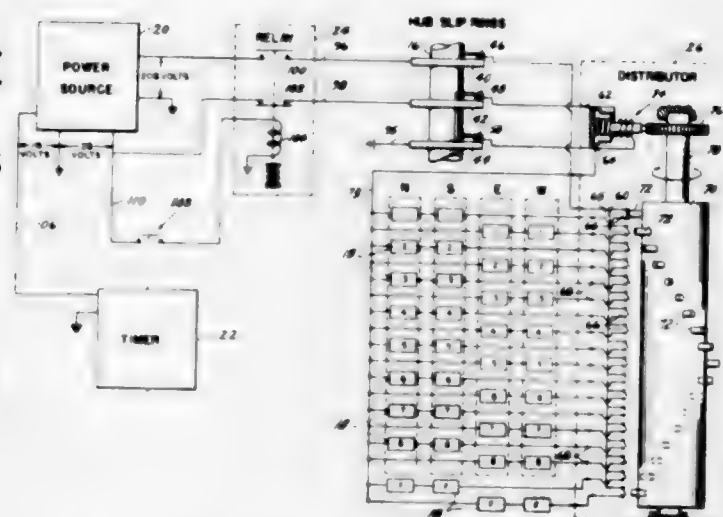


1. In a structure, a number of panel units forming a shell of an elongated profile with at least one closed profile extremity, a supporting member in said shell in a spaced relationship to said panel units, a stringer extending on each of said panel units in opposition to said supporting member, a linear key interposed between said supporting member and each stringer, said supporting member and each stringer having lengthwise portions in a slidable engagement with said key, and means on said supporting

member and on each stringer for rendering them relatively immobile by said engagement thereof with said key for coaction of the panel unit stringers with each other and with said supporting member as a unitary stress member.

3,002,718 ROTOR BLADE DEICING SYSTEM

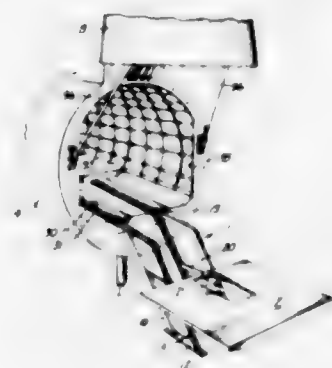
George L. Hackenberger, Jr., Suffield, Conn., assignor to The Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed July 8, 1960, Ser. No. 41,635
12 Claims. (Cl. 244-134)



1. In a rotor blade deicing system for a helicopter including a fuselage and including a rotor blade connected to a hub supported for rotation relative to the fuselage, the combination of a plurality of electrical heater elements located adjacent the surface of said blade and arranged so that each element is respectively associated with a different area of said blade surface, a source of electrical energy carried by said fuselage, a distributor mounted on said hub for rotation therewith and operable to distribute electrical energy in sequence to said heater elements, and means including contacts rotatable with said hub for conducting electrical energy from said source to said distributor for distribution to said heater elements.

3,002,719 CARGO HANDLING EQUIPMENT FOR CARGO AIRPLANES

Richard H. Welland, Seattle, and Ray W. Hamilton, Kirkland, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,701
3 Claims. (Cl. 244-137)



1. A cargo airplane comprising a fuselage the cargo compartment whereof terminates aft in an open end, a tail section hingedly mounted upon said fuselage for swinging between a flight position, wherein it constitutes a rearward continuation of the fuselage and closes the

latter's open end, and an open position clear of such open end, a track which in use while the airplane is ground-borne is secured to the fuselage and protrudes rearwardly and downwardly from the cargo compartment's open end, means to secure said track in an alternate stowed position within the airplane, a track extension carried by the fuselage and located to constitute a forward extension of the track when the latter is in its position of use, and an elevator guided for movement along the track and track extension for handling of cargo between the ground and the deck level of the cargo compartment.

3,002,720 HINGE JOINTS FOR DISPLAY MOUNT ELEMENTS

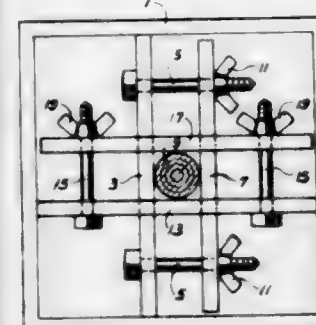
Carroll N. Cross, Rte. 2, Box 204, Maitland, Fla.
Filed Mar. 30, 1959, Ser. No. 802,914
4 Claims. (Cl. 248-35)



2. In a display mount constructed of paper stock, said mount having a facial panel for holding display material and a prop for maintaining said panel in a display position, a hinge line along an edge of said mount on which said prop is adapted to rotate into angular relation to said display panel, and a hinge element consisting of a flexible sheet of ductile material extending across said hinge line, said ductile material hinge element being the sole means for maintaining said panel and said prop in angular relation to each other.

3,002,721 SUPPORTING BASE FOR ORNAMENTAL OBJECTS

Charles F. Perkins, 8412 Greenmound, Dallas, Tex.
Filed June 13, 1960, Ser. No. 35,832
3 Claims. (Cl. 248-44)



1. An improved base for ornamental objects comprising an upstanding enclosure, a first cross member fixedly attached to the inside of said enclosure near the lower end thereof and spanning said enclosure near the center thereof, a first movable cross member movably supported on the first fixed cross member and parallel thereto, first adjusting bolts passing through said first fixed cross member and said first movable cross member and capable of moving said movable cross member toward said fixed cross member and clamping an object between said cross member, a second cross member fixedly attached to the inside of said enclosure near the upper end thereof perpendicular to said first fixed cross member and spanning said enclosure near the center thereof, a second movable cross member movably supported on the second fixed cross member and parallel thereto, and second adjusting

bolts passing through said second fixed cross member and said second movable cross member and capable of moving said movable cross member toward said fixed cross member and clamping an object between said cross members.

3,002,722 DISPLAY CARTON

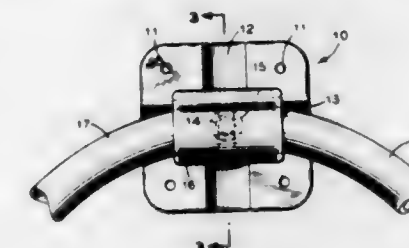
Raymond A. Cote, Monroe, La., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 184
1 Claim. (Cl. 248-174)



A display device formed from a single blank of foldable paperboard, for holding vertically spaced upper and lower portions of a displayed article, comprising: a vertically extending rear wall; a pair of upper and lower article engaging members carried by upper and lower portions, respectively, of said rear wall on one side thereof; said members having generally vertically aligned openings for engaging upper and lower portions of a displayed article; each of said members including a pair of forwardly converging inner and outer panels hingedly interconnected at their forward edges, the outer panel of each member having its rear edge hinged to said rear wall; a pair of attaching panels disposed between the members and hinged to rear edges of respective inner panels, said attaching panels extending toward each other and having overlapping portions disposed in generally parallel relation with said rear wall; one of said attaching panels being connected to said rear wall, and the other of said attaching panels being removably received between said one attaching panel and said rear wall.

3,002,723 WALL HANGERS OR THE LIKE

Charles Daum, 40 Central Park S., New York, N.Y.
Filed Apr. 30, 1959, Ser. No. 809,986
1 Claim. (Cl. 248-315)



A wall mounted bathroom fixture or the like comprising, in combination, a base plate having coplanar rear surface portions for firm securement bearing against a wall, and having a front surface formed with at least a pair of intersecting relatively elongated and rectilinearly extending recesses; a fixture having a relatively elongated tubular sleeve formed for substantially conforming seating along one of said recesses and extending across the intersection of the latter, and further compris-

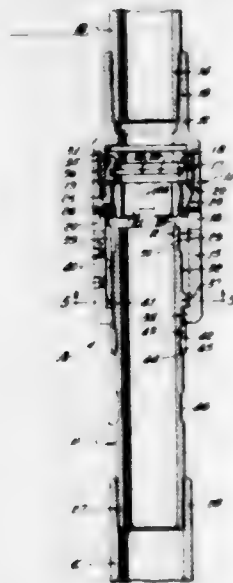
ing a towel holder spring ring having ends engaged in the ends of said sleeve; said base plate having an aperture therethrough at the intersection of said recesses; a headed fastener extending forwardly through said aperture and engaged in said fixture portion to hold the latter firmly seated in said one recess and thereby restrained against rotation relative to said plate in a plane parallel to the front surface of the latter.

3,002,724

SUBSURFACE VALVE APPARATUS

Martin B. Conrad, Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 21, 1958, Ser. No. 729,973
11 Claims. (Cl. 251-347)



1. In valve apparatus: an outer tubular member having a central passage; an inner tubular member telescopically arranged within the central passage of said outer member when said valve apparatus is open and also when said valve apparatus is closed and having a portion projecting longitudinally outwardly of said outer member, said inner member having a central passage coaxial of said other central passage whereby fluid can flow in a straight line path from one passage into the other passage; first connecting means on said outwardly projecting portion of said inner member for securing said inner member to an adjacent tubing section at one end of said apparatus; second connecting means on said outer member coaxial of said first connecting means for securing said outer member to an adjacent tubing section at the opposite end of said apparatus; coengageable valve elements operatively connected to said members for controlling flow of fluid in said members, said valve elements being shiftable with respect to each other upon relative telescopic movement between said members; and fluid pressure operated means on said members responsive to fluid pressure within at least one of said members for resisting relative longitudinal movement between said members.

3,002,725

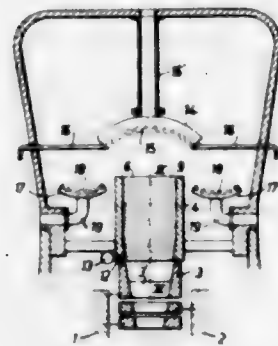
MOISTURE ABSORBING MEANS IN RADIAL FLOW TURBINES

Klas Wilhelm Ljungberg, Södermalmsvagen 16, and Anders A Skog, Grönvagen 25A, both of Finspang, Sweden

Filed Feb. 3, 1958, Ser. No. 712,890
Claims priority, application Sweden Feb. 7, 1957
1 Claim. (Cl. 253-16.5)

In an elastic fluid turbine in combination, a radial flow blade system, a stationary exhaust diffuser concentrically surrounding said blade system, said diffuser including two axially spaced annular walls provided at

right angles to the axis of the turbine, and moisture collecting means in said exhaust diffuser comprising partitions extending crosswise between said walls in circumferentially spaced relation, means on the foremost sur-

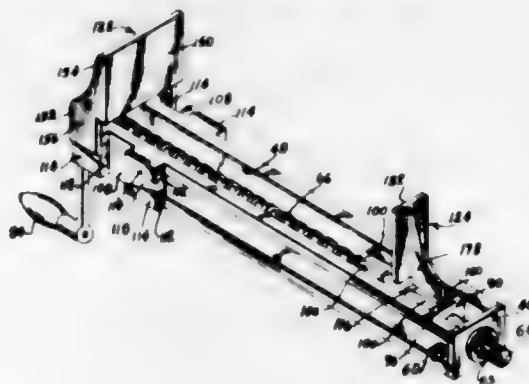


faces of said partition walls as seen in the direction of rotation of the blade system for deflecting moisture against said partitions, and means for gathering and draining moisture thus collected by the said surfaces of the partitions.

3,002,726

INTERCHANGEABLE STRETCHING DEVICE AND CLAMPS

David Ford, 110-39 Merrick Blvd., Jamaica, N.Y.
Filed Apr. 27, 1959, Ser. No. 809,010
1 Claim. (Cl. 254-67)



A wire fence stretching device comprising an elongated hollow rectangular-shaped casing engageable between a fence post and a stretcher bar in a wire fence to be stretched, said casing having side walls and end walls, one of said side walls being slotted, the end walls having central openings, a threaded shaft extending centrally through the casing and journaled in the openings in the end walls, means outwardly of the casing connected to one end of the shaft for rotating the shaft, an elongated follower block sleeved around the shaft inside the casing and threaded to the shaft for movement therealong upon rotation of the shaft, a pair of spaced guide flanges with dovetailed undercut recesses on the outer surface of said block at each end thereof, the space between the flanges of each pair being tapered with the wide ends of the spaces at the inner ends of the flanges, said inner ends of the flanges being spaced to provide an unobstructed intermediate portion on said surface, a plate having a base of dovetail configuration selectively and removably mounted in and interlocked with either pair of flanges on said block, said base being engageable with and disengageable from either pair of flanges by sliding movement along said intermediate portion on said surface, said plate being disposed at right angles to the axis of said base, another pair of spaced guide flanges adjacent the end of each of two opposed side walls of the

casing, a further pair of spaced guide flanges on each of said opposed side walls spaced inwardly from said other pair of spaced guide flanges to define therebetween an unobstructed area on each side wall, and a broad-faced rectangular-shaped other plate having integral flanges at both ends thereof extending beyond one long side thereof, with integral other dovetail bases along the extremities of integral flanges, said other and further pairs of flanges having undercut dovetailed recesses, said other dovetail bases being selectively and removably mounted in and interlocked with either of the other and further pairs of spaced guide flanges, said other dovetail bases being simultaneously engageable in and disengageable from either of the other and further pairs of spaced guide flanges by slidable movement through said unobstructed areas on the opposed side walls.

3,002,727

CABLE HOIST

James D. Renoud, Portland, Oreg., assignor to Roy F. Renoud, Portland, Oreg.
Filed Mar. 14, 1958, Ser. No. 721,515
1 Claim. (Cl. 254-150)

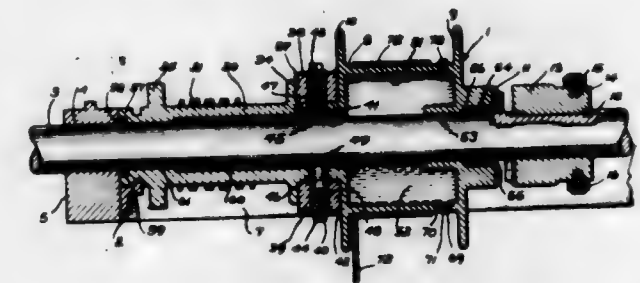


In a hoist including a frame, a rotatable drum mounted in said frame, at least one end of said drum being cone shaped, a cable having one end secured to an overhead support and having an intermediate portion wound in a plurality of turns about said drum with one turn adjacent the cone shaped end of said drum, a guide finger attached to said frame positioned rearwardly and substantially parallel to the lower portion interposed between and frictionally engaging the last of said turns and the adjacent plurality of turns on said drum and operable to restrain movement of said last turn toward the other end of said drum, a second drum journaled for rotation in said frame, spur gears operatively related to each of said drums with said spur gears arranged in meshing contact, a third drum positioned within a second frame for holding the free end of said cable taut, a snub shaft positioned within said first-mentioned frame having an arm on the outer end thereof, a biasing spring connected to said second frame and said arm for swinging said second frame toward said first-mentioned frame, and a spur gear related to said third drum and arranged for meshing contact with the spur gear on said second drum when said third drum is swung to a position adjacent said second drum, means fixedly secured to said snub shaft whereby movement thereof in one direction will cause the spur gear on said third drum to move toward and mesh with the spur gear on said second drum and movement of said means in the opposite direction will cause said third drum to move away from said second drum.

3,002,728

OILING APPARATUS FOR MECHANISM FOR UNLOADING CARS

Roy L. Brooks, 4429 Harrison, Kansas City, Mo.
Filed Aug. 13, 1958, Ser. No. 754,770
1 Claim. (Cl. 254-187)

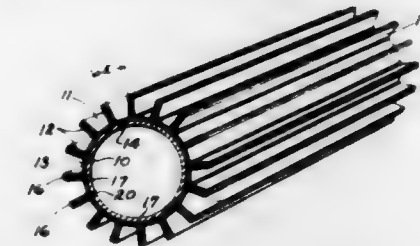


In an operator for a power shovel, a rotatably supported shaft adapted to be connected to a power source, a hollow drum containing liquid lubricant and having axially extending sleeve portions on each side thereof with bearing portions therein rotatably mounting said drum on said shaft, said sleeve portions having ends beyond said bearing portions, seal means adjacent the ends of said sleeve portions and engaging said shaft to retain said liquid lubricant in the drum and bearing portions, said drum being adapted to have a shovel cable trained thereover, clutching elements interposed between the drum and the shaft, one of the sleeve portions being elongate and having spaced annular flanges extending therefrom and defining a spool therebetween, said one sleeve having a bore larger than said shaft extending from the hollow drum to the bearing portion therein for movement of lubricant thereto from the hollow drum, diametrically opposed bores extending through said one sleeve adjacent said drum and into said bore, plug means adjustable in and closing outer end of said opposed bores, plungers slidably mounted in said opposed bores, and spring means interposed between said plungers and the respective plug means to urge said plungers into engagement with said shaft, said plungers having flat inner end surfaces in planes normal to plunger axes whereby said inner end surfaces frictionally engage said shaft with a line contact and are lubricated by liquid lubricant from the hollow drum, said plug means being adjustable to adjust pressure of said plungers on said shaft.

3,002,729

TUBE WITH EXTERNAL FINS

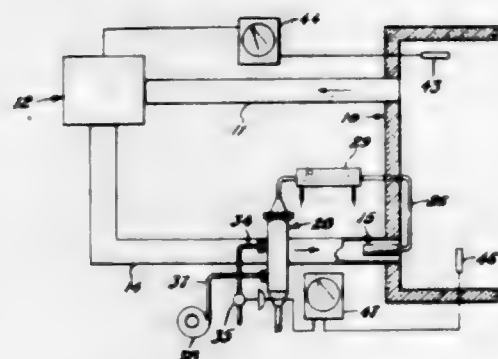
Oral S. Welsh, Elyria, Ohio, assignor to Brown Flintube Company, Elyria, Ohio, a corporation of Ohio
Filed June 20, 1955, Ser. No. 516,364
1 Claim. (Cl. 257-262.19)



A heat exchange tube comprising a tube having a plurality of separately formed longitudinally extending open channel section fin members brazed to the exterior thereof throughout the entire circumference thereof, each fin member having a base portion substantially conforming to the exterior surface of the tube and brazed thereto and a pair of separate fin portions extending outwardly from the edges of the base portion, the fin members being positioned on the exterior of the tube with the entire

outer surfaces of both the fin portions of each fin member in contact with and brazed to an entire outer surface of a fin portion of an adjacent fin member.

3,002,730
AIR CONDITIONING SYSTEM
Purdy Bradford, Palos Park, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 3, 1956, Ser. No. 613,699
4 Claims. (Cl. 257-280)

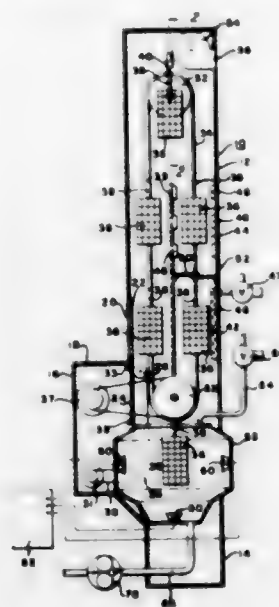


1. In an air conditioning system for a refrigerated chamber for foodstuffs, the combination comprising a cooling unit, a first duct for removing air from the chamber to the unit, a second duct for returning cooled air from the unit to the chamber, a conduit disposed to enter a portion of said second duct, means to force a stream of air through said conduit into said second duct, a source of steam adjacent to said conduit, means for injecting steam into the stream of air in said conduit whereby the moisture content of said stream may be regulated as a function of the relative humidity of the chamber, means for intimately mixing said stream of air with the cooled air, said means comprising a sleeve having smaller cross-section than said second duct disposed within a portion of said second duct adjacent to said chamber and a small air chamber one end of which is disposed within said sleeve, said air chamber being connected to said conduit and having an opening to permit the escape of said stream of air, and means for regulating the degree of cooling of the air within the cooling unit as a function of the temperature of the refrigerated chamber.

3,002,731
APPARATUS FOR ULTRASONIC CLEANING
Louis Gelfand, Detroit, and Robert Fred Smith, Grosse Pointe Woods, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 15, 1956, Ser. No. 622,305
3 Claims. (Cl. 259-1)

3. In an ultrasonic dishwasher including a tub having integral first, second, third, fourth, fifth and sixth wall portions and a top opening, said second and third wall portions extending from said first wall portion at predetermined obtuse angles thereto and forming therewith a first recess, said fifth and sixth wall portions, extending from said fourth wall portion at predetermined obtuse angles thereto and forming with said fourth wall portion a second recess, said recesses opening into said tub, a first ultrasonic transducer located within said first recess parallel to said first wall portion, said first transducer having a pair of wave generating faces located normal to said wall portion and facing respectively said second and third wall portions, a second ultrasonic transducer located within said second recess parallel to said fourth wall portion, said second transducer having a pair of wave generating faces located normal to said fourth wall portion and facing respectively said fifth and sixth wall portions, said angles being of such a value that ultrasonic energy impinging on said second, third, fifth and sixth wall por-

tions is reflected out of said first and second recesses toward the center of said tub, whereby the generated wave



energy is concentrated generally throughout the center of said tub.

3,002,732
AUTOMATIC CYCLING CONTROL FOR CONTINUOUS MINERS
Joseph R. Bouillé, Sydney, Nova Scotia, Canada, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 3, 1954, Ser. No. 427,327
3 Claims. (Cl. 262-29)

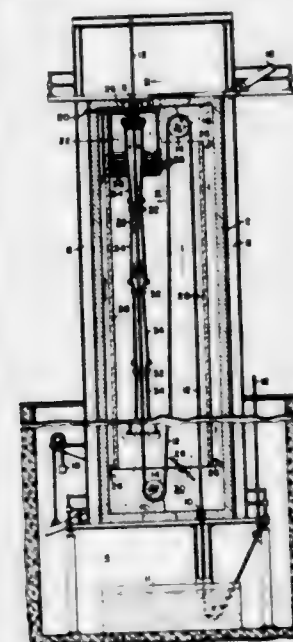


1. In combination, in a continuous miner, a vein-attacking and disintegrating head for dislodging and disintegrating the mineral of a solid mine vein, fluid operated means for moving said head forwardly to sump the same into the mine vein at the floor level and for retracting said head from the vein at the roof level, fluid operated means for swinging said head upwardly between its lowered sumped position and its raised retracting position, and controlling means for said fluid operated means for first sumping said head, then swinging said head upwardly, then retracting said head and finally causing movement of said head downwardly back to its initial position, all automatically in a definite cycle, said controlling means including a fluid actuated valve controlled by operation of said fluid operated sumping and retracting means and means for subjecting said valve to the action of pressure fluid, said controlling means including a shiftable fluid actuated valve responsive to the pressure in said fluid actuated swinging means for controlling the movements of said first mentioned fluid actuated valve.

2. In combination, a frame, a support movable back and forth relative to said frame, a vein-attacking and disintegrating head pivotally mounted on said support to swing in vertical planes, a fluid cylinder for moving said support forwardly relative to said frame for sumping said head into the mine vein at the floor level and for retracting said head from the vein at the roof level, a fluid cylinder for swinging said head upwardly about its pivot, and controlling mechanism for effecting sumping, swinging and retracting movements of said head automatically

in a definite cycle, said controlling mechanism including fluid actuated control means responsive to pressure conditions in said swing cylinder for automatically effecting operation of said cylinder for retracting said head from the mine vein whenever said head reaches its raised position, and means for subjecting said control means to the pressure in said swing cylinder, said controlling mechanism including a fluid actuated unloading valve for effecting a restricted venting of said swing cylinder to permit swinging of said head downwardly by gravity about its pivot, said control means being responsive to the pressure in said swing cylinder caused by the weight of said head acting on the fluid in said swing cylinder during such gravity down-swing of said head, the pressure acting on said control means to hold the latter open until said head reaches its limit of down travel.

3,002,733
HEAT TREATING FURNACE
Joseph D. Barnes, Meadville, Pa., assignor, by mesne assignments, to Sunbeam Equipment Corporation, a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,312
4 Claims. (Cl. 263-3)

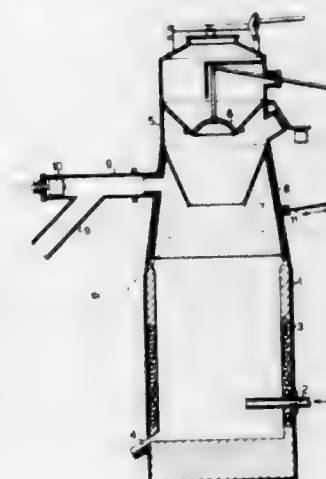


2. In a heat treating furnace, a tall insulated furnace housing, conduit means forming a thin heat exchange passage of substantial width extending vertically within said housing, means for directing a longitudinally moving strip vertically through said passage, a plenum chamber positioned on both sides of the upper end of said passage and extending across the width thereof, horizontally extending openings at the upper end of said passage providing fluid communication between said plenum chamber and said passage, inlet ducts for introducing heated gases into said plenum chamber, gas distribution means within said plenum chamber for producing a constant gas flow across the entire length of said horizontally extending openings.

3,002,734
SHAFT FURNACE
Sieds Koopal, Sittard, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Aug. 11, 1958, Ser. No. 754,304
Claims priority, application Netherlands Aug. 21, 1957
1 Claim. (Cl. 263-31)

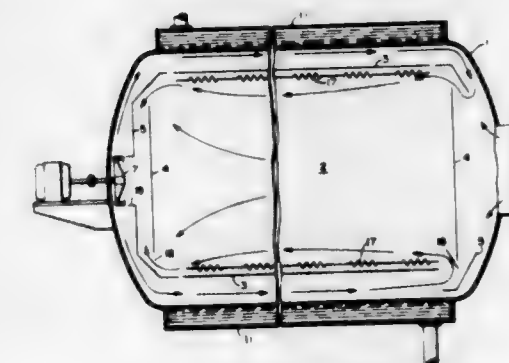
A shaft furnace comprising: a shaft having an inlet at its upper end for the admission of solid fuel thereto and a product outlet at the lower end thereof, a combustion zone within said shaft adjacent said outlet end, said zone receiving fuel from said inlet and discharging product through said outlet; means for supplying gas to

said combustion zone for combustion of the fuel therein to form said product; means comprising an annular wall member positioned within said shaft and extending longitudinally thereof between said combustion zone and said inlet, said member having a laterally extending gas discharge conduit, the wall of said conduit being spaced from the wall of said shaft and the wall of said member being spaced from the interior wall of said shaft, said member being supported for lateral shaking movement



with respect to said shaft; means for shaking the wall of said annular member during operation of said shaft; an inverted truncated member secured at its upper end to the interior wall of said shaft above said gas discharge conduit, said truncated member extending downwardly below said gas discharge conduit, and having a central opening therethrough, said truncated member and said annular wall member defining an annular chamber, whereby upwardly moving hot gases are trapped in the annular chamber and pass out of said shaft through said gas discharge conduit.

3,002,735
VACUUM FURNACE
Marvin T. Baker, Meadville, and Roger R. Glier, East Fairfield Township, Crawford County, Pa., assignors, by mesne assignments, to Sunbeam Equipment Corporation, a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,036
1 Claim. (Cl. 263-40)



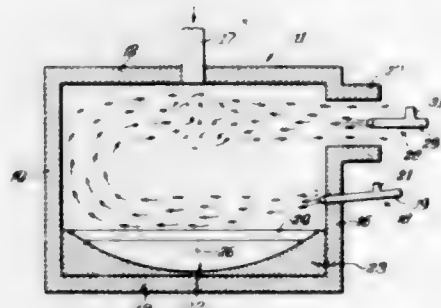
A vacuum furnace comprising an uninsulated generally cylindrical metallic housing sealed at vacuum pressure and enclosing a work chamber, radiant heating means in said chamber, said housing including externally mounted cooling heat exchange means, means for admitting a coolant gas into the furnace to cool the same, fan means within the furnace for propelling the coolant gas, and baffles between the heating means and the housing, said baffles defining said work chamber and including generally cylindrical metallic longitudinal members, substantially vertical metallic end members disposed at each end adjacent to but spaced from said cylindrical members, said end members conforming generally to the cross-sectional shape

of said cylindrical members but having portions of their peripheries shaped to provide openings for the flow of coolant gas therebetween, and generally cup-shaped metallic secondary baffle members having a cylindrical peripheral portion and a conical section with the apex portion of the cone removed, said secondary members being disposed opposite said openings at each end of said cylindrical members to back up the same but being spaced therefrom to permit the passage of coolant gas there-through, said baffles being disposed in spaced relationship to said housing and a metallic generally cone-shaped shroud extending from adjacent the secondary baffles at one end of said cylindrical members toward said fan means with an opening at said fan means to direct the coolant gas through the work chamber and fan means and over said heat exchange means in heat transfer relation therewith.

3,002,736

METHOD OF OPERATING A COMBINED MELTING HEARTH AND GAS REFORMER

Edward H. Travis, Chicago, Ill., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,726
7 Claims. (Cl. 263—52)



1. A combination melting and gas reforming method which comprises producing a relatively high temperature flame by burning a carbonaceous fuel with excess oxygen to produce combustion products rich in CO₂, directing said relatively high temperature flame and gaseous combustion products across the surface of a pool of molten material at the bottom portion of a combustion chamber feeding solid material to be melted into said chamber, guiding said combustion products upwardly and thence in a reversely flowing stream across the upper portion of said chamber, commingling with said reversely flowing stream a flame and combustion products containing excess carbonaceous fuel for converting CO₂ in said stream to CO at a relatively lower temperature, and withdrawing a reformed CO-rich gas from the upper portion of said chamber at a point above said high temperature flame.

3,002,737

SADDLE CUTTING MACHINE

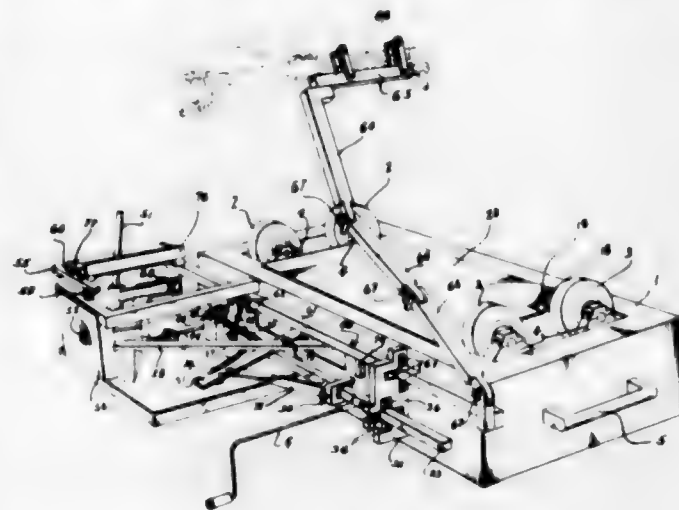
William P. Smith, 4015 Underwood, Houston, Tex., assignor of twenty-five percent to Joseph J. Hiller, Harris County, Tex.

Filed Aug. 10, 1959, Ser. No. 832,597

5 Claims. (Cl. 266—23)

1. In a saddle cutting machine, a housing, driven wheels mounted in said housing upon which a pipe in which a saddle is to be formed is mounted, a longitudinally movable rack in said housing having a fixed guide, a torch arm movably mounted on said housing, an oscillating bar on said housing having a gear train in mesh therewith and said gear train being rotated by the movement of said bar, a movable guide pivotally mounted on said bar and a connecting link joining one end of said rack with said movable guide, adjustable means connecting one end of said movable guide with said bar by means of which the angle between said bar and movable guide may be varied, means for rotating said driven

wheels and simultaneously moving said rack longitudinally, said rack moving said movable guide as the rack moves longitudinally in said housing and said movable guide moving said oscillating bar and rotating said gear

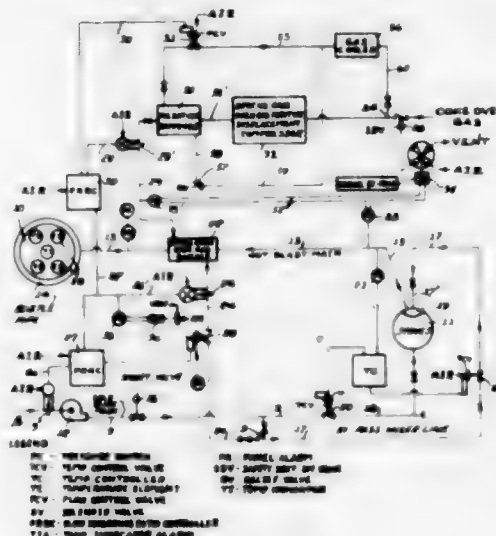


train to oscillate said torch arm as the pipe to be cut rotates, the ratio of rotation between said wheels and said gear train being determined by the adjustment of said guide on said oscillating bar.

3,002,738

DIRECT HEATING OF BLAST FURNACE AIR BLAST

Owen R. Rice, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,192
9 Claims. (Cl. 266—30)



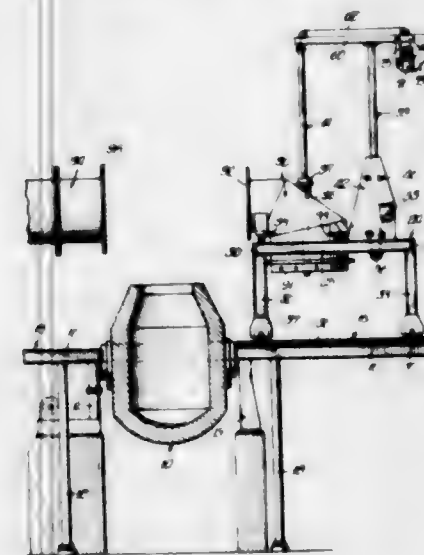
1. In a blast furnace system, the combination with a blast furnace having tuyeres, a blower for supply of the total air for the blast furnace, stoves for preheating the blast, a hot blast main line leading from the stoves to the tuyeres, a cold blast air line leading from the blower to the stoves with a snort valve in the line and a by-pass mixer line leading around the stoves from a point in the cold blast air line between the snort valve and the stoves to a point in the hot blast line after the stoves, throttle valves in the portion of the cold blast line after the snort valve which leads to the stoves and in the by-pass mixer line for regulating the volumes of air flow through said line portion and said by-pass line, and thermo-responsive means operable by the temperature differences in the hot blast line for adjusting the throttle valves as the stove temperatures drop, to maintain a constant temperature of the air in the hot blast line leading to the tuyeres, and a central control for operating said blower, snort valve,

and thermo-responsive means of a burner set for burning gas directly into the air in the hot blast line at a point therein after said thermo-responsive means, a temperature augmenting air line leading from a point in the cold blast line after the snort valve to said burner for supporting combustion of fuel therein to raise the temperature of the hot blast air to a level above the possible maximum preheat of the air in the stoves, means for supplying fuel to said burner for combustion therein with said air, and a volume proportioning valve in said temperature augmenting air line and actuating means therefor operable by and in accordance with changes in rate of flow of the total air entering the blower aforesaid and responsive to change in rate of flow in said augmenting air line for actuating said volume proportioning valve, to maintain constant the proportion of air fed to said burner by said augmenting air line in relation to the aforesaid total air entering the blower.

3,002,739

CARRIAGE FOR LANCE AND HOOD

Frank P. Lawler, Chicago, Ill., assignor to A. J. Boynton & Co., Chicago, Ill., a corporation of Illinois
Filed June 6, 1958, Ser. No. 740,273
7 Claims. (Cl. 266—35)



1. In a lance supporting structure, the combination with an oxygen converter for producing steel, of an operating platform for the converter, a carriage supported by the platform for movement from an inoperative position at one side of the converter to an operative position over the converter, a standard carried by the carriage, a supporting arm fixed to the standard, a lance suspended from one end of the arm by cable means, mechanism supported by the supporting arm and including a hoist drum for the cable means, whereby the lance can be raised and lowered with respect to the arm, a hood in supported relation on the carriage, said hood having an opening therein through which the lance extends, whereby said hood and lance are located over the converter when the carriage is operatively positioned, and said hood coacting with conduit means when located over the converter for conducting products of combustion from the converter and delivering the same to said conduit means.

3,002,740

SPRING ASSEMBLY

Jan van Hulst, Amersfoort, Netherlands, assignor to N.V. Ontwikkelingsmaatschappij Multinorm, Amersfoort, Netherlands, a Dutch limited liability company
Filed May 25, 1959, Ser. No. 815,549

Claims priority, application Netherlands May 23, 1958

4 Claims. (Cl. 267—1)

1. A spring assembly comprising a plurality of identical spring elements each in the form of an equilateral

parallelogram which is bent symmetrically out of a flat plane about only one of the diagonals thereof so as to be concave at one side and convex at the other side with said one diagonal remaining straight, said spring elements being arranged in pairs with the concave sides of the spring elements facing each other in each of said pairs so that the spring elements of each pair engage each other only at the corners thereof disposed at the ends of the

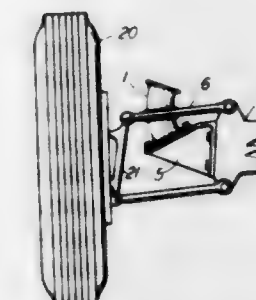


other diagonal of each spring element, and frame means for holding said spring elements in assembled relationship including means defining guideways slidably receiving only the corners of each of said spring elements disposed at the ends of said one diagonal which remains straight, each of said guideways having converging surfaces including an angle that is slightly larger than the angle included in the corner of each spring element slidably received therein.

3,002,741

HYDRAULIC DAMPER

Frank Akutowicz, 2007 Harvey Road, Wilmington 3, Del.
Filed Jan. 30, 1961, Ser. No. 85,589
4 Claims. (Cl. 267—8)



1. In a hydraulic damper interposed between a fixed machine part and a movable machine part the combination of an enveloping frame with closed ends, a bellows assembly supported between said closed ends, a quantity of fluid trapped within said bellows assembly, said bellows assembly comprising a sequence of annular diaphragms seam welded together, the inner peripheries of alternate diaphragms forming restrictive orifices, a reinforcing ring, means for attaching said reinforcing ring to the central portion of said bellows assembly, means for attaching said enveloping frame to said fixed machine part, means for attaching said reinforcing ring to said movable machine part.

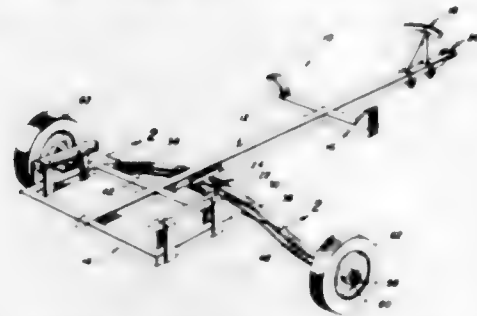
3,002,742

VEHICLE SUSPENSION SYSTEM

Leonard Troy, 5 Pen-Y-Bryn Drive, Scranton, Pa.
Filed Apr. 20, 1960, Ser. No. 23,563
3 Claims. (Cl. 267—38)

1. A vehicle spring-and-axle combination comprising a pair of transverse, elongated, single leaf springs having an intermediate, downwardly opening concavo-convex curvature and terminal reverse-bend curvatures, terminal and central spacer blocks secured between said single leaf springs and maintaining them in substantial parallel relation, and axles projecting laterally from said terminal blocks, beyond and in the longitudinal direction

of said leaf springs, said axles being disposed at a fixed acute angle with respect to a horizontal plane and pro-



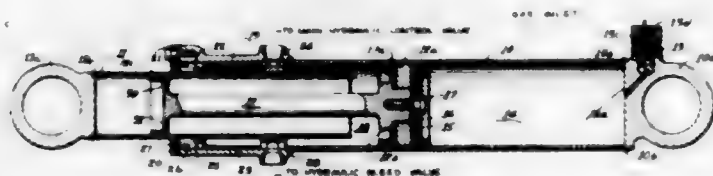
viding a constant wheel camber between maximum loaded and unloaded deflection conditions of said springs.

3,002,743

HYDRO-PNEUMATIC STRUT

Achilles C. Sampletro, Detroit, Mich., and James R. Jeromson, Jr., Willoughby Hills, Ohio, assignors to Thompson Ramo Wooldridge, Inc., a corporation of Ohio

Filed Sept. 2, 1958, Ser. No. 758,487
2 Claims. (Cl. 267-64)

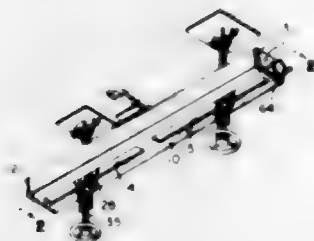


1. A hydro-pneumatic strut comprising a housing, a floating differential piston in said housing having a partition member at one end thereof and a damping member at the other end thereof, said partition member dividing the interior of said housing into a first chamber on one side of said partition member and a second chamber on the other side of said partition member, gas inlet means in said housing charging said first chamber with a predetermined mass of gas, whereby movement of said floating differential piston in said housing in one direction will compress the gas in said first chamber, a ram member received in the end of said housing movable into and out of said second chamber, said ram member having a cylinder formed therein opening into said second chamber and receiving said damping member, said damping member having restricted passage means, and hydraulic inlet means in said housing charging said second chamber and said ram cylinder completely full of liquid.

3,002,744

MOTOR JACK

Elmer S. Phillips and Daniel Berbel, both of
4328 Ave. S. Galveston, Tex.
Filed Dec. 19, 1958, Ser. No. 781,567
9 Claims. (Cl. 269-115)



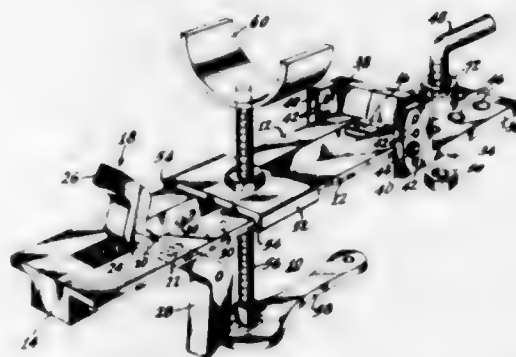
1. A device for supporting and adjusting a portion of an automobile with respect to the frame of the automobile comprising a beam, a cross member jack unit adjacent one end of the beam and slidable therealong, a

motor jack unit adjustable longitudinally of the beam adjacent the other end of the beam, a hook adjustable longitudinally of the beam intermediate the two jack units, and interconnected driving means between the beam and the motor jack unit to shift the motor jack unit along the beam.

3,002,745

AUTOMOBILE ENGINE LIFT

Llanwood E. Via, 1811 E. Main St., Waynesboro, Va.
Filed Aug. 5, 1959, Ser. No. 831,861
9 Claims. (Cl. 269-187)

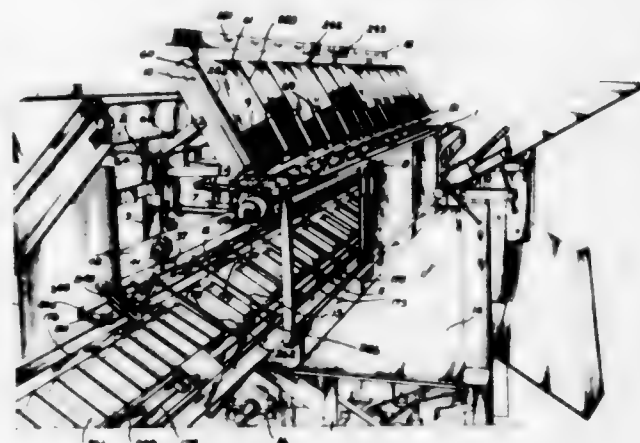


1. A lifting device comprising a support, a front lock pivotally fastened to one end of said support, said front lock having means operable to prevent pivoting and having a pivot portion and a clamping portion extending from said pivot portion and offset with respect thereto, a rear lock fastened to the other end of said support and including a clamping portion, and lifting means mounted on said support between said ends thereof.

3,002,746

COLLATOR

Allen H. Lloyd, Milford, Ohio, and Eric H. Bayer, Prairie Village, Kans., assignors to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Filed May 8, 1959, Ser. No. 811,987
9 Claims. (Cl. 270-58)



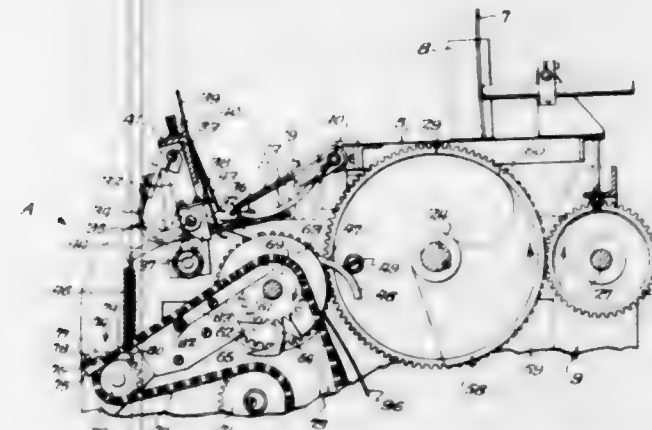
1. A collator of the character described for simultaneously picking up a card or the like from each of a plurality of stacks thereof and depositing them in respective containers comprising, a frame having spaced upright posts rearwardly thereof, a rocker frame mounted on said posts, said rocker frame including spaced rocker arms, a shaft on the forward ends of said rocker arms, a conveyor belt running longitudinally of said frame, spaced hoppers for retaining said stacks, said hoppers being secured to said frame spaced above said belt, said hoppers being located at an angle in transverse relation to said belt, spaced suction means mounted on said shaft on the forward ends of the rocker arms for picking up said cards, stop means on said frame for holding the containers in respective stop positions on the belt under

the hoppers while the cards are moved from the stacks to the containers, means for intermittently feeding the containers to said belt in timed relation with movement of the containers to the next succeeding stop positions, said last named means cooperating with the suction means for moving the containers during the time the suction means are moving to pickup cards from said stacks, means for creating a partial vacuum in said suction means for securing cards thereto, means for destroying said partial vacuum for depositing said cards in the containers, and motor means for operating said rocker frame mechanism for movement of the forward ends of the arms up and down and for operating said stop means for alternately stopping and releasing the containers on the belt.

3,002,747

BAG FEEDING, VALVING AND SEWING MACHINE

Clinton R. Hollis, Camden, Ark., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed July 5, 1955, Ser. No. 520,033
13 Claims. (Cl. 271-29)



2. In a machine for finishing paper bag tubes including bag tube finishing means and in combination bag tube feeding means including rotatable first, second and third elements, means for operating said finishing means, said first and second elements having curved portions which make contact with each other intermittently to form a first nip between them during rotation of said first and second elements, means for rotating said first and second elements in timed relation with each other and with said finishing means to form said first nip between them to engage a bag tube and to move it toward said finishing means, said third element having a curved portion which makes contact with the said curved portion of said second element intermittently to form a second nip between them during rotation of said second and third elements, and means for rotating said third element in timed relation with said second element and with said finishing means to form said second nip between them to engage said bag tube in said second nip after operation of said finishing means to move it away from said finishing means.

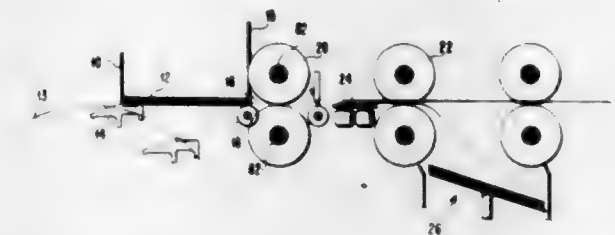
3,002,748

HIGH SPEED CARD FEEDING

Wendell J. Wheeler, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 26, 1958, Ser. No. 776,514
3 Claims. (Cl. 271-41)

1. A business card machine comprising a hopper for the cards, a variable speed picker knife system for partially removing the cards from the hopper, variable speed feed rolls for receiving the cards from the variable speed

picker knife system for moving the cards out of the hopper, the top speed of the picker knife system matching the low speed of the variable speed feed rolls during card

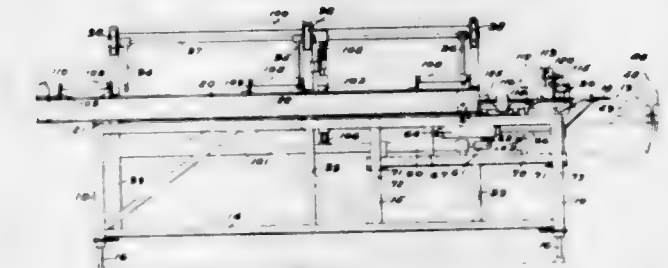


transfer and constant speed feed rolls for transporting the cards through the business machine matched to the top speed of the variable speed feed rolls.

3,002,749

FEEDER FOR DELIVERING STOCK TO A MACHINE

Francis J. Sehn, 3515 Brookside Drive, Bloomfield Hills, Mich., and Maurice M. Clemons, Birmingham, Mich., said Clemons assignor to said Sehn
Filed July 16, 1958, Ser. No. 748,952
12 Claims. (Cl. 271-54)



1. A feeder for delivering strip material to a machine of a type whose cycle of operation includes the severing of a workpiece from the strip, with the strip having a length which is approximately an even multiple of the length of the workpiece; comprising a frame, bed means carried by said frame for slidably supporting a strip, a carriage mounted on said frame for reciprocal movement lengthwise of said bed, actuating means for reciprocating said carriage from and to a normal position on a feed and a return stroke, means connecting said carriage to said actuating means, strip engaging means carried by said carriage and operable to engage a bed-supported strip intermediate the ends thereof on each feed stroke, said strip engaging means being inoperable on each return stroke, loading means for holding a second strip adjacent said bed in a loading position, gauge means defining said loading position so as to place the leading end of said second strip in advance of the location of said strip engaging means when said carriage is in said normal position, and means for actuating said loading means to deposit said second strip along said bed in response to movement of the trailing end of a preceding strip beyond said loading position.

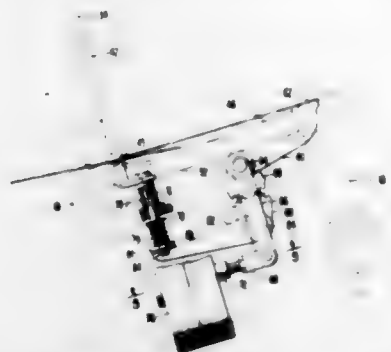
3,002,750

CARD FEED INTERRUPTION

Wendell J. Wheeler, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1958, Ser. No. 786,665
4 Claims. (Cl. 271-56)

1. In a card feed mechanism, a hopper containing a deck of cards and providing a throat, a picker knife movable back and forth for normally feeding successive cards singly along a defined path and through the throat, projection means normally retracted out of said path and operable into such path to shift the deck to a position

in which the picker knife is unable to contact a card and the cards of the deck are out of alignment with the throat thereby to interrupt card feeding, means including a double-acting fluid pressure motor controlling operation of said projection means, a vacuum source, said picker knife having suction ports, and valve means



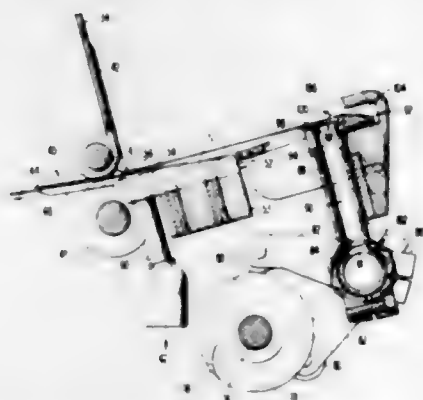
normally positioned to connect the source to the suction ports to attract the card being fed and also connect the source to one side of said motor to cause the latter to maintain said projection means in its retracted position, said valve means being operable to another position to disestablish such connections and connect said source to the opposite side of said motor to actuate said projection means to deck-shifting position.

3,002,751

CARD FEEDING MACHINE

Wendell J. Wheeler, Endwell, and Herman J. Klotz, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 30, 1958, Ser. No. 783,921
10 Claims. (Cl. 271-60)



1. A card feeding mechanism comprising a hopper for supporting cards, picker means for picking the cards from the hopper, and hopper posts for defining a rear portion of the hopper, and means for depositing the card against the hopper posts before engagement by the picker means whereby the card is initially positioned for accurate alignment at the same point of time for each card cycle.

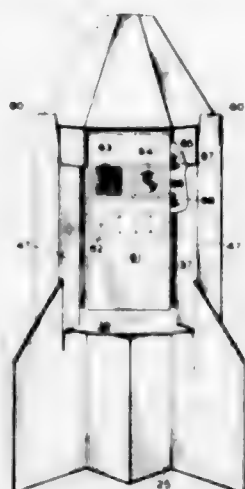
3,002,752

TOY ROCKET

Allen G. Roth, Indianapolis, Ind., assignor of one-half to Lester Matheson, Indianapolis, Ind., a corporation
Filed Feb. 8, 1960, Ser. No. 7,434
3 Claims. (Cl. 272-18)

1. A toy rocket comprising a pair of flat vertically extending members, said members being crossed and intersecting along a vertical axis, a flat deck resting on said members and retained thereby, side panels interlocked with said deck and extending vertically so as to partially enclose said deck, said members projecting past said side panels in such a manner that said mem-

bers' projecting end portions define fins, a flat ceiling interlocked with said side panels adjacent their upwardly



3,002,753

FOLDABLE AND PORTABLE FERRIS WHEEL

Vernon H. Garbrick, 375 Pennsylvania Ave., Centre Hall, Pa.

Filed Nov. 23, 1960, Ser. No. 71,193
18 Claims. (Cl. 272-29)

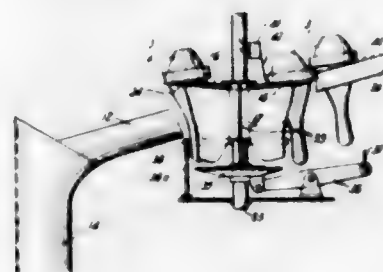


1. In a roundabout, a support, a shaft mounted on the support for rotation about its axis, a wheel hub assembly mounted on the shaft for rotation therewith, said assembly comprising a plurality of separate hub sections cooperating to surround the shaft, means supporting at least one of said sections on the shaft for pivotal movement about an axis parallel to and radially spaced from the axis of the shaft, and wheel spokes mounted at one end on the hub sections.

3,002,754

BOWLING PIN DISTRIBUTOR MECHANISM

Kurt Dombrowski, Scarborough, Ontario, Canada, assignor to Phillips Electronics Industries Ltd., Leaside, Ontario, Canada
Filed Aug. 15, 1960, Ser. No. 49,663
Claims priority, application Canada May 3, 1960
9 Claims. (Cl. 273-43)



2. In a bowling pin handling mechanism, a pin distributor mounted for indexed rotation in a substantially

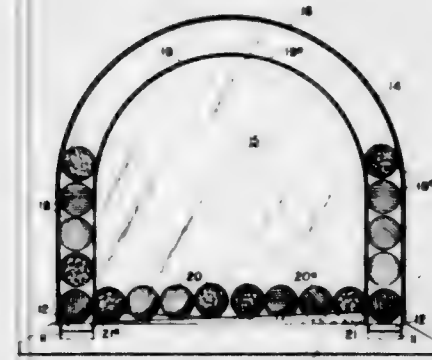
horizontal plane, a plurality of pin-receiving pockets located in the periphery of said distributor, each of said pockets being proportioned to support a pin therein in inverted position, a source operable to supply inverted pins sequentially to said pockets, and lifting means, incorporated with said distributor, upwardly movable to contact the heads of pins supported in said pockets to raise them free thereof and simultaneously tilt said lifted pins to fall base-first outwardly from said distributor.

3,002,755

AERIAL PROJECTILE BALL GAME

Peter A. Peterson, 8305 25th Ave., Jackson Heights, N.Y., assignor of one-half to Herman Peterson, Palm Beach, Fla.

Filed Dec. 18, 1959, Ser. No. 860,491
3 Claims. (Cl. 273-95)

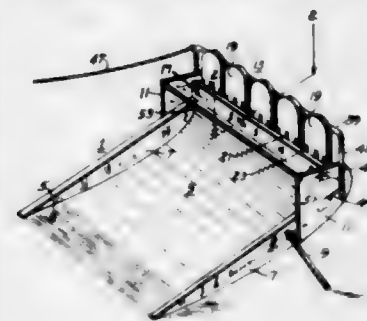


1. A toy game comprising a housing having a base, side walls and a curved top, a centrally disposed partition dividing said housing into two compartments, a curved member arranged in each compartment and extending an equal distance upward, each of said members forming an enclosure with the partition and an outer wall and being open at the top, the respective enclosures being adapted to receive a number of differently colored balls therein, said partition having an equal number of different colors arranged in equal succession upon each half side of said partition, paddles arranged at the base, said base being formed with cut-away portions, whereby to give leverage to said paddles, said paddles being adapted to project balls upward in the enclosures to cover colors equal to that of the balls.

3,002,756

GAME

Stephen A. Bakalyar, 135 Ashbury Ave., El Cerrito, Calif.
Filed Mar. 28, 1958, Ser. No. 724,565
3 Claims. (Cl. 273-118)



1. A game comprising a ball runway involving a floor having parallel side edges and a sectional contour terminating at one end in a relatively sharp curvature, and a wall bordering said floor along each of said side edges; means for supporting said runway at an inclined position, with the end of sharp curvature uppermost, said means including a strut pivotally secured at one end to each of said side walls, and a side panel affixed to each side wall beyond the associated strut to function as a stop for said strut in determining the inclined position of said

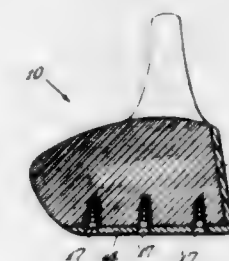
ball runway; means for registering a score in response to a ball rolled up said runway and in accordance with the path taken by such ball, said means involving a target mounting bar spanning said runway along the upper edge thereof and affixed at its ends to said side panels, said mounting bar having a rearwardly extending shelf, a plurality of targets, each having along its bottom edge, a central notch, and a notch in proximity to each side edge of the target, to form an anchoring leg, each of said anchoring legs having a transverse cut in the end thereof; means for anchoring each of said targets to said target mounting bar, said means including a staple passing through the transverse cut of each leg and entering said anchor bar at an angle of substantially 45 degrees to provide a pivot axis for said target, and a toggle spring having one end connected to a target at a point above its central notch and its other end affixed to said shelf below the pivot axis afforded by such staples to provide toggle action between a target and its spring and stop means for limiting swing of a target between a substantially horizontal position and a substantially vertical position, whereby each of said targets is capable of occupying a stable forward horizontal position in the path of a ball rolled up the runway, and a stable substantially vertical position to which it may jump when struck by such ball; means for restoring vertically positioned targets to their horizontal positions from a remote point; and means for preventing such ball when rolled up the runway, from passing beyond the point of impact with a target, and leaving the ball free to return down the runway.

3,002,757

GOLF CLUB HEAD

Emil J. Marcinak, East Hampton, Mass., assignor to A. G. Spalding & Bros. Inc., Chicopee Falls, Mass., a corporation of Delaware
Original application Dec. 17, 1957, Ser. No. 703,343.
Divided and this application Oct. 24, 1958, Ser. No. 769,331

4 Claims. (Cl. 273-174)



1. A golf club head comprising a wooden head impregnated with a self-sealing residue, after evaporation, of a deep penetrating solution comprising a vinyl resin, a solvent having a low evaporation rate and a solvent having a higher evaporation rate, said head being tough, having a high resistance to moisture transmission whereby swelling of the head thereby is resisted and being free of tackiness caused by resin exudation therefrom.

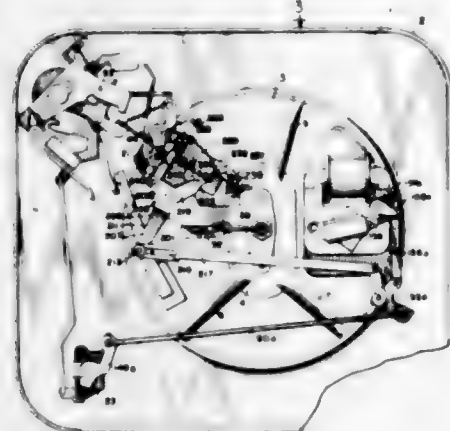
3,002,758

AUTOMATIC RECORD CHANGER
SPEED CONTROL

Edwin S. Bara, Chicago, Ill., assignor to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 7, 1956, Ser. No. 602,650
16 Claims. (Cl. 274-10)

1. In a record changer having automatic operating cycles for the sequential playing of a plurality of record tablets of different diameters and reproducing speeds respectively corresponding to the diameters thereof, a rotatable turntable having means for releasably supporting a stack of record tablets thereabove and means for dropping one of said tablets on said turntable during each oper-

ating cycle, a transducer-equipped tone arm adapted for vertical and horizontal swinging movement relative to said turntable, the combination of indexing means having a normal position and a position corresponding to each of a plurality of record diameters and comprising a flag engaged by record tablets dropped onto said turntable to effect a positioning of said indexing means corresponding to the diameter of each record tablet engaging said flag, means operable at the beginning of each cycle for operating said indexing means from said normal position to the position thereof corresponding to the smallest diameter



record tablet in said stack, means for varying the speed of said turntable including an element reciprocated each cycle and a crank movable to alternate positions and having two spaced cam surfaces engaged by said element, means actuated by said indexing means in response to the position thereof following the dropping of a record for urging said tone arm into an initial reproducing position corresponding to the diameter of the record tablet so dropped on the turntable during a cycle, and means operable in response to the position of said indexing means for removing said speed varying means from operation in one position of said indexing means.

3,002,759 PHONOGRAPH STYLUS AND MOUNTING THEREFOR

Clarence F. Jensen, Lombard, Ill., assignor to Jensen Industries, Inc., Forest Park, Ill., a corporation of Illinois

Filed July 24, 1959, Ser. No. 829,407
4 Claims. (Cl. 274-37)

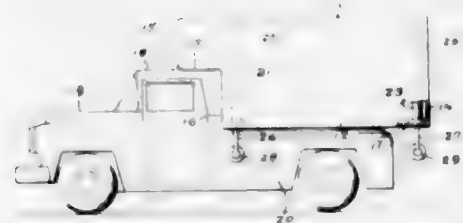


1. In a phonograph pickup, the combination of an elongated transducer element supported in a position of downward inclination of its longitudinal axis and adapted to be rotated about such axis, a generally rectangular mounting block secured to the lower end portion of said element and extending generally perpendicular to said axis thereof, means on said block on opposite sides of said end portion of said element defining apertures extending through the block and paralleling said axis, the ends of said block having V-shaped recesses opening outwardly away from said axis and defined by walls spaced substantially equal distances from said apertures, and a

pair of U-shaped stylus members carried by said block and each formed of a single integral piece of wire and having a first straight leg and another leg terminating in a sharpened point to fit into a record groove and extending from the bottom of the U first parallel to the first leg throughout the length of the first leg and then laterally away from the first leg at an angle less than the angle between said axis and the vertical whereby, when said block is turned into a vertical plane and the stylus member is mounted on the lower end of the block with the first leg inserted into the lower aperture and the parallel portion of said other leg lying against said walls of the lower one of said V-shaped recesses, said laterally bent portion of the member projects downwardly from the block at an inclination of the same direction as the inclination of said axis but at a smaller angle with respect to the vertical, said block being formed of a resilient material and the spacing between said parallel leg portions of each stylus member being equal approximately to the spacing between said walls of each of said recesses and the adjacent one of said apertures to facilitate insertion and removal of the stylus member.

3,002,760 TRAILER LIFT

Russell W. Lee, La Mirada, Calif.
(Rte. 1, Bald Knob, Ark.)
Filed June 1, 1959, Ser. No. 817,145
1 Claim. (Cl. 280-43.23)



In a fluid control system for use with an auxiliary truck body, the improvement comprising vertically disposed hydraulic cylinders mounted in corners of the body, pistons in the cylinders, piston rods extended from the pistons through lower ends of the cylinders, rollers in the lower ends of the piston rods, a starter motor, a pump connected to and driven by said starter motor, a reservoir connected to the suction inlet of said pump, a four way valve connected to the discharge outlet of said pump, and said reservoir, fluid conducting tubes connecting said four way valve to the upper and lower ends of the cylinders whereby fluid under pressure is supplied selectively to the upper and lower ends of the cylinders, a check valve in each of the fluid conducting tubes connected to the upper ends of said cylinders, a bypass having a speed valve therein connected to each of said last-mentioned fluid conducting tubes for bypassing said check valves, a first equalizing valve interpolated in the fluid conducting tubes connecting the four way valve to the lower ends of said cylinders, a pair of second equalizing valves connected to said first said equalizing valve and interpolated in the fluid conducting tubes connected to the lower ends of said cylinders, said second equalizing valves also connected to the fluid conducting tubes connecting said four way valve to said first said equalizing valve, check valves in the fluid conducting tubes connecting said second equalizing valves to the fluid conducting tubes connecting first said equalizing valve to said four way valve, said check valves and said equalizing valves equalizing the pressure of the fluid supplied to the cylinders by said pump for providing even upward and downward movement of the rods in said pistons, means for supplying electrical current to said starter motor and means for controlling the flow of the electrical current to said starter motor.

3,002,761 WALKER

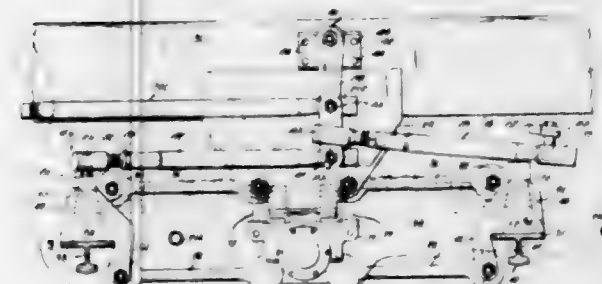
Olle M. Sundberg, 2730 Peck Ave., San Pedro, Calif.
Filed May 20, 1957, Ser. No. 660,296
6 Claims. (Cl. 280-43.24)



1. A walking device comprising a frame adapted to support a person and including a plurality of wheel supporting members pivoted with respect to each other and each having a wheel attached thereto for engagement with a floor surface, a downwardly depending brake member normally spaced from said floor surface rigidly attached to at least one of said wheel supporting members to move therewith and having a portion laterally spaced therefrom, spring means in engagement with at least one wheel supporting member normally maintaining said brake member in spaced relationship to said floor surface whereby downward force exerted against said frame will be transmitted to one of said wheel supporting members counteracting the tension of said spring and thereby causing said one of said supporting members to force said brake member into engagement with said floor surface, said brake member being released from said engagement upon removal of said force, said frame comprising two U-shaped members having downwardly depending legs each forming said wheel supporting members, said U-shaped members being joined together and pivoted at intermediate points.

3,002,762 AXLE ASSEMBLIES

Walther F. Scheel, Detroit, Mich., assignor to Rockwell-Standard Corporation, a corporation of Pennsylvania
Filed Sept. 6, 1957, Ser. No. 682,531
11 Claims. (Cl. 280-81.5)

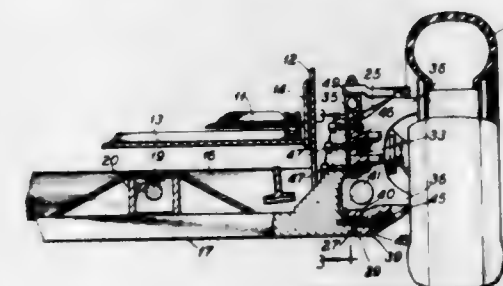


4. In a dirigible tandem axle assembly, a pair of closely spaced parallel dirigible axles having wheel hub mounting members pivoted at their outer ends, a centrally pivoted suspension mechanism interconnecting said axles and adapted to support a portion of the frame of a vehicle, and a steering linkage operative to impart simultaneous pivotal steering movements to the wheel mounting members at the outer ends of each of said axles, said linkage comprising a pitman arm pivoted intermediate said axles

about a laterally extending axis fixed relative to said frame, means comprising rearwardly and forwardly extending drag links pivoted respectively to said pitman arm and fixed steering arms on said wheel hub mounting members so as to provide lever systems of different effective length interconnecting said pitman arm and the wheel hub mounting members of said axles at one side of said vehicle, the lever system connected to the forward wheel hub mounting member being shorter than that connected to the rearward wheel hub mounting member, and means interconnecting the wheel hub mounting members of each axle for simultaneous movement, the forwardly extending drag link being connected to said pitman arm a point further distant from the pitman arm pivot than the connection between the pitman arm and the rear drag link, and a main link extending from the steering control for the assembly pivoted to the pitman arm between the pivot axis of the pitman arm and its connection to the rearward drag link.

3,002,763 WHEEL MOUNTING FOR SHUTTLE CARS AND THE LIKE

William R. Beck, Palos Heights, and William G. Bunchak, Chicago, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1959, Ser. No. 862,600
4 Claims. (Cl. 280-96.1)



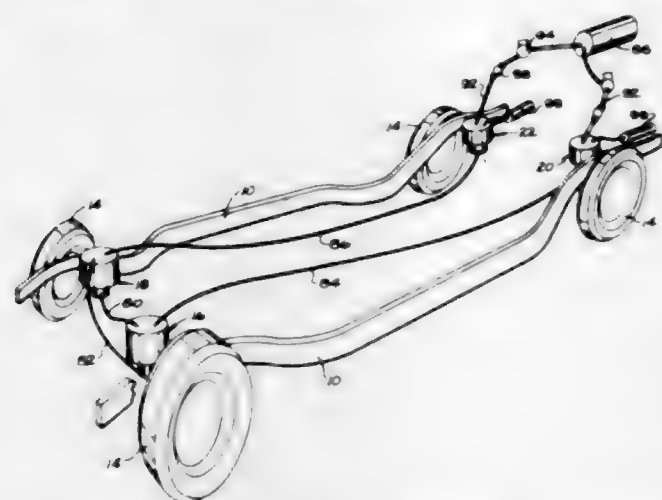
3. In a wheel support mounting for shuttle cars and the like, a support member, a wheel mounting bracket member, a tongue extending horizontally along one of said members adjacent the lower end thereof, said tongue having a horizontal upper face, a tapered lower face and an outer end face perpendicular to said horizontal face, a mating groove extending along the other of said members adjacent the lower end thereof and having opposite horizontal and tapered faces corresponding to the horizontal and tapered faces of said tongue, and an inner end face perpendicular to said horizontal face of said groove, fastening means extending through said tongue and groove perpendicular to the adjacent outer and inner end faces of said tongue and groove for drawing said members together along said tongue and groove and taking up clearance therebetween, said support member and said bracket member having facing bearing pads spaced above said tongue and groove, and through bolts extending through said bearing pads perpendicular to the adjacent faces thereof for drawing said bearing pads together and counteracting the tendency for said mounting bracket to tilt about said tongue and groove.

3,002,764 EQUALIZING SHOCK ABSORBER

Paul J. Clark, Sr., 300 Liberty St., Belleville, Mich.
Filed Apr. 13, 1959, Ser. No. 806,142
5 Claims. (Cl. 280-104)

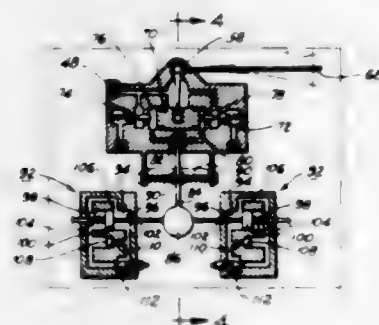
1. In a vehicle suspension system, the combination comprising two cooperating relatively movable members positioned between the vehicle frame and road-engaging elements; one of said members comprising a housing structure, and the other of said members comprising a plunger structure mounted for movement into and out

of said housing structure; a diaphragm extending within and across one end portion of the housing structure and supported on an enlarged portion of the plunger; said plunger having a hollow portion of substantially less diameter than the portion thereof engaged with the diaphragm; said housing structure having a wall portion thereof located within the hollow portion of the plunger



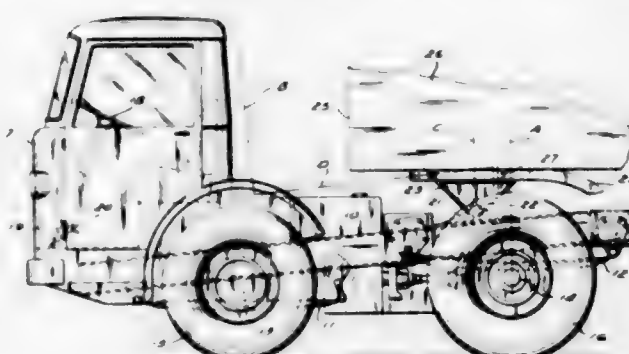
and having a flow aperture therethrough; a collapsible envelope carried by said wall portion and extending within the hollow portion of the plunger, whereby during the plunger stroke the chambers defined by the diaphragm and envelope are alternately enlarged and reduced, with the variation in volume of the diaphragm chamber being substantially greater than the variation in volume of the envelope chamber.

3,002,765
AUTOMATIC LEVELING HYDRO-PNEUMATIC SUSPENSION SYSTEM FOR VEHICLES
Stanley I. MacDuff, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 27, 1957, Ser. No. 642,723
2 Claims. (Cl. 280-124)



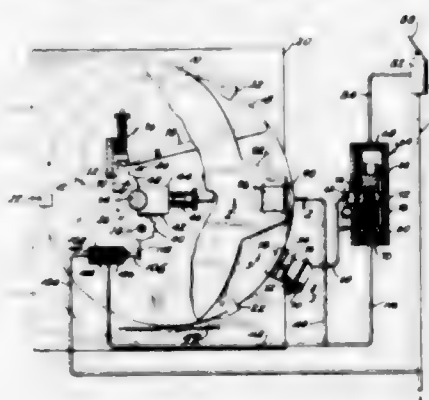
1. A suspension system for motor vehicles having a frame and wheels, said system comprising fluid suspension means connected between the frame and the wheels of the vehicle, a pressure source, valve means associated with said suspension means for regulating the pressure therein, actuating means responsive to relative movement between said frame and said wheels connected to said valve means for actuating said valve means, damping means associated with said actuating means for providing a time delay in the actuation of said valve means, and inertia controlled means associated with said damping means including a mass movable from a normally center position as a result of acceleration, deceleration, and centrifugal forces acting thereon, and dash pot means associated with said mass for permitting free movement of said mass away from center but impeding the return of said mass to center for a predetermined time interval after the cessation of forces acting thereon.

3,002,766
FIFTH WHEEL CONSTRUCTION
Bert C. Harris, Chagrin Falls, Ohio, assignor to The White Motor Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 20, 1959, Ser. No. 807,693
5 Claims. (Cl. 280-423)



1. In a tractor assembly for pulling a highway trailer the combination of, a frame, front axles connected to said frame, front road wheels mounted on said front axles, a single rear axle, rear road wheels mounted on said rear axle for rotation about a single axis disposed in a vertical plane of balance, a fifth wheel pivotally connected to said frame for pivotal movement relative to the frame about an axis disposed in a plane between said front wheels and said plane of balance, and said fifth wheel including means to connect a trailer king pin, said means being disposed between said planes.

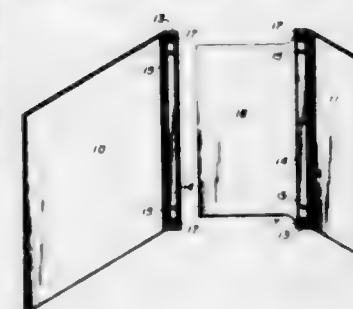
3,002,767
CONTROL SYSTEM FOR FIFTH WHEELS
Raymond S. Gresko, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Feb. 26, 1960, Ser. No. 11,260
5 Claims. (Cl. 280-434)



1. In combination with a fifth wheel assembly of the type having a fifth wheel rockingly mounted on a lower fifth wheel plate connected for swivelling relative to a tractor bed plate, and including latch means carried between said fifth wheel and said plate and movable to latching position behind a kingpin of a trailer when said pin is received in the slot of said fifth wheel, means for releasably locking said latch means in latching position, and means responsive to relative movement between said kingpin and said fifth wheel for automatically moving said latch means between latched and unlatched position upon release of said locking means, fluid pressure brake means including a brake chamber engageable with said assembly to prevent rotation thereof during coupling, second fluid pressure brake means including a second brake chamber carried by said assembly and engageable with the bolster plate of a trailer to lock said trailer to said assembly after coupling, a control system for said brake chambers for connecting and disconnecting said chambers with a source of fluid pressure during coupling and uncoupling operations, said system comprising conduit means affording a connection between said source and said second brake cham-

ber, normally closed valve means in said conduit means movable to open position in response to movement of said latch means to latching position so as to connect said brake chamber and said source to lock said bolster plate to said assembly, said valve means being movable in response to movement of said latch means to unlatching position to disconnect said source and said chamber while simultaneously connecting the latter to atmosphere, a fluid conduit connecting said other brake chamber to said source, a manually operable valve in said conduit movable between a position connecting said source and said chamber and a position disconnecting said source and said chamber while connecting the latter to atmosphere, a shuttle valve between said chamber and said last named valve, said shuttle valve including a double-acting pressure responsive member exposed on opposite sides to the pressure delivered to said first brake chamber and the pressure in the conduit between the manually operable valve and said second brake chamber, said pressure responsive member being resiliently urged in the same direction as the pressure acting thereon from said first brake chamber, said pressure responsive member when exposed only to the pressure delivered by said manually operable valve occupying a position connecting said manually operable valve and said brake chamber and when exposed to the pressure delivered to said first brake chamber upon movement of said latch means to latching position occupying a position connecting said second brake chamber with atmosphere while simultaneously disconnecting said chamber from said manually operable valve.

3,002,768
ADJUSTABLE BOOK COVER
Averill V. Ayers, Pine, and Walter B. Wilkinson, Evergreen, Colo., assignors to Tape Indexes, Inc., Denver, Colo., a corporation of Colorado
Filed Aug. 21, 1959, Ser. No. 835,204
9 Claims. (Cl. 281-34)

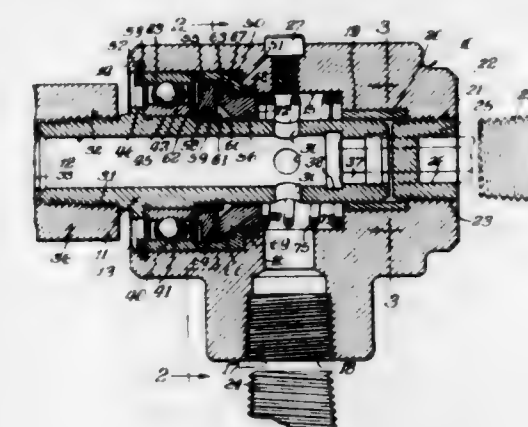


1. An adjustable book cover for interchangeable association with book units of varying thicknesses, comprising complementary, size-coextensive panels adapted to protectively overlie the opposite exterior faces of a book unit, relatively-narrow flaps hinged to and coextensively along the margins of said panels alignable with the spine of an associated book unit, means engaged with said flaps adjustably coactable to join the latter in substantially-coplanar, variably-spaced parallelism, and means supplemental to said first means fixedly instanding from the operatively-inward face of each said flap for independently and detachably connecting said flaps to and in exteriorly-overlying relation with the spine of an associated book unit.

3,002,769
ROTARY UNION HAVING PARTICULAR ASSEMBLY MEANS
Louis H. Deubler and Maurice Thomas, Northbrook, Ill., assignors to Deubler Company, Glenview, Ill., a corporation of Illinois
Filed Jan. 2, 1958, Ser. No. 706,795
4 Claims. (Cl. 285-39)

1. In a fluid transmitting rotary union of the class described adapted for mounting upon any form of self-

supported rotating fluid container having at one end thereof a coaxially aligned fluid inlet hub provided with a conventional internal mounting thread therein, said rotary union being in the form of a separate, independent accessory constituting no part of the bearing structure for supporting the rotating fluid container and comprising the combination of: a relatively stationary T-shaped housing having an axial bore therein extending horizontally therethrough from end to end, an in-line fluid inlet port opening axially into the outer end of said T-shaped housing in alignment with the outer end of said axial bore and communicating therewith, a right-angle fluid inlet port opening into the intermediate branch portion of said T-shaped housing and communicating with an intermediate portion of said axial bore, identical internal threads formed in both said in-line inlet port and in said right-angle inlet port, a fluid supply pipe having at one end thereof an external thread which matches with said identical internal threads for enabling said fluid supply pipe to be screwed alternatively either into said in-line port or into said right-angle inlet port, a closure plug having an external thread thereon identical with the external thread on said supply pipe for enabling said closure plug to be screwed into either said in-line inlet port or said right-angle inlet port, depending upon which of said inlet ports is not coupled up with said supply pipe, a tubular rotor rotatably supported in said



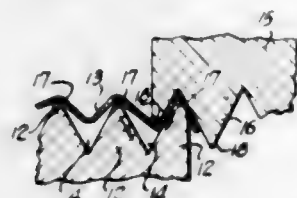
axial bore and having an axial fluid conducting passageway extending therethrough from end to end, the outer end of said tubular rotor terminating in the outer portion of said housing with its axial bore in alignment with said in-line inlet port for transmitting fluid supplied to said in-line inlet port when said supply pipe is connected therewith, transverse holes in said tubular rotor establishing communication between said right-angle inlet port and the axial fluid passageway through said tubular rotor for transmitting fluid supplied to said right-angle inlet port when the supply pipe is connected therewith instead of with said in-line inlet port, the inner end of said tubular rotor projecting slightly beyond the inner end of said T-shaped housing, an external mounting thread formed on such projecting inner end of the rotor and adapted to be screwed into the internal mounting thread provided in the fluid inlet hub of said rotating fluid container, said external mounting thread on the tubular rotor being located in immediate proximity to the inner end of said T-shaped housing to minimize the overhanging weight of said T-shaped housing and said supply pipe connected therewith, resulting from both extending outwardly in cantilever relation beyond the end of the fluid inlet hub of said rotating fluid container, said T-shaped housing affording no bearing support for said rotating fluid container irrespective of whether said supply pipe is connected with said in-line inlet port or with said right-angle inlet port, whereby in the mounted position of said rotary union on said rotating fluid container said T-shaped housing can be rotated about the

axis of said tubular rotor to face its right-angle inlet port at any desired vertical, horizontal or intermediate angle for accommodating different crowded installations by permitting said right-angle inlet port to be turned to accommodate any desired angle of approach of said supply pipe for direct threaded connection into said right-angle inlet port, a plain sleeve bearing interposed between the outer end of said tubular rotor and the outer portion of said T-shaped housing adjacent to said in-line inlet port, a counterbore in said T-shaped housing coaxial with said axial bore therein and extending from an inner closed end adjacent to said sleeve bearing to an outer open end at that end of said housing adjacent to said rotating fluid container, an antifriction ball bearing interposed between the inner wall of said counterbore and said tubular rotor substantially at said inner end of said housing, cooperating stationary and rotating sealing members in said counterbore in such position as to prevent fluids entering either through said in-line inlet port or through said right-angle inlet port from having access to said anti-friction ball bearing and thence escaping outwardly to atmosphere through said ball bearing and the open end of said counterbore, a helical compression spring encircling said tubular rotor within said counterbore for holding said sealing members pressed resiliently together, an internal hexagonal Allen wrench type of through-socket in the outer end of said tubular rotor for establishing fluid transmitting communication between said in-line inlet port and the axial passageway in said tubular rotor, and operative during installation of said rotary union to receive the end of a conventional Allen wrench inserted through said in-line inlet port for manually rotating said tubular rotor to screw the external mounting thread on the inner end of said rotor into mounting relation within the internal mounting thread in the inlet hub of said rotating fluid container, and an internal hexagonal Allen wrench type of socket opening in the outer face of said closure plug of the same size as the hexagonal through-socket in the outer end of said tubular rotor for receiving the same Allen wrench for screwing the closure plug into that inlet port with which the supply pipe is not connected.

3,002,770

THREADED JOINT WITH LUBRICATING AND SEALING RIBBON INTERPOSED BETWEEN THE THREADS

James A. Chesnut, Metuchen, and Joseph D. Singalewitch, Bloomfield, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed Oct. 29, 1959, Ser. No. 849,536
3 Claims. (Cl. 285-94)



1. A threaded joint comprising a male fitting having continuous male threads, a female fitting having continuous female threads adapted to mate with the threads on the male fitting, and a preformed transversely stretchable and compressible lubricating and sealing ribbon having a relatively low coefficient of friction and a high degree of lubricity wrapped circumferentially around the threads of the male fitting for at least one turn therearound with the ends of the ribbon overlapped one upon the other by an appreciable amount, said overlapping end portions of the ribbon adhering to one another when pressed into contact by hand, said ribbon prior to turning the male and female fittings together being in the form of a flat

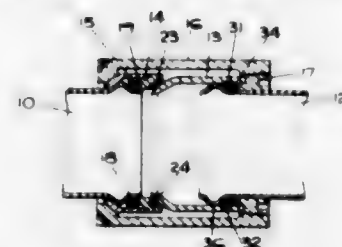
coherent unsintered polytetrafluoroethylene film having a specific gravity in the range of about 1.2-1.8 and being about 1 to 20 mils in thickness, the male and female fittings being turned together with the ribbon compressed and conforming substantially with the shape of the space between the male and female threads and defined by said threads when the threads are turned together with the ribbon between them, the ribbon remaining in substantially continuous film form on the faces of the threads between the tips of said threads and providing an anti-binding and sealing barrier between the threads and a lubricated surface for turning the fittings with respect to one another at any time during the life of the joint, whereby there is provided a joint possessing the following properties:

- (a) leakproof tightness at low torque,
- (b) retention of leakproof tightness for the life of the joint, and
- (c) ease of opening the joint during its life.

3,002,771

COUPLING DEVICES

Richard O. Chakroff, 298 Park Blvd., Worthington, Ohio
Filed July 31, 1959, Ser. No. 830,795
9 Claims. (Cl. 285-165)



4. A coupling for use in joining a pair of lengths of aircraft tubing together in fluid tight relationship, each such length having an enlargement adjacent one end thereof, said coupling comprising a female assembly consisting of a pair of annular members clamped together as a unit with the enlargement of one of said lengths of tubing clamped between them, said assembly having a first face formed as an annular segment of the internal surface of a cone and said assembly having a second face formed as an annular segment of a spherical surface; a male coupling member having a first surface formed as an annular segment of a spherical surface concentric with the spherical surface of the second face of the female assembly and cooperating to contact the said first conical face of said assembly along a line contact in fluid tight sealed relationship therewith, and formed with an oppositely extending sleeve into which the end of the other length of aircraft tubing having an enlargement adjacent thereto is slidably fitted; means comprising an O ring for sealing said second length of aircraft tubing in fluid tight relationship within said oppositely extending sleeve; and means comprising a flanged threaded metal sleeve and a nut therefor, for securing said first named length of aircraft tubing, said female assembly, said male member, and said sealing means together in clamped relationship.

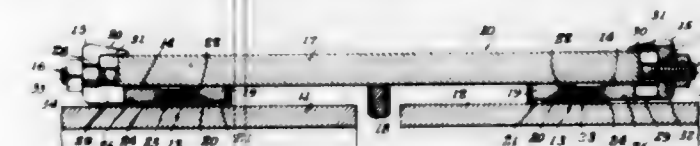
3,002,772

COUPLING WITH GASKET COMPRESSED BY MEANS EXERTING PRESSURE PARALLEL TO AXIS

Edward H. Schustack, 1816 N. Stanley, Los Angeles, Calif.
Continuation of application Ser. No. 394,915, Nov. 30, 1953. This application Jan. 29, 1959, Ser. No. 797,323
4 Claims. (Cl. 285-342)

1. In a pipe coupling having an outer sleeve having substantially parallel axially extending inner and outer surfaces surrounding and loosely engaged over the ad-

acent end of a pipe and provided adjacent to and inwardly spaced from its end on its inner surface with an outwardly flaring conical seat, there being a gasket around said pipe and engaging said seat and a substantially rigid and annular follower ring within said outer sleeve, the improvement that comprises a plurality of relatively narrow, circumferentially spaced lug elements arranged around the end sleeve, each element having a portion disposed in spaced relation beyond the respective end of the sleeve, an extension on the outward end of each said portion and directed over and into sliding engagement with the adjacent outer face of the sleeve, each lug element being provided with a pressure extension on the inward end



of each said portion, the latter extension extending partly into the annular space inward of the sleeve end and substantially engaging said inner surface and being in abutting engagement with said follower ring, and bolt means extending through each lug element to draw the elements axially of said sleeve, at least one of said extensions of each element engaging a said surface of said outer sleeve on opposite sides, circumferentially, of said bolt means to prevent turning about an axis parallel to the axis of said coupling, and produce pressure on the follower ring and gasket by the pressure extensions of the lug elements, each said bolt means extending through said element radially between said extensions to prevent turning about an axis perpendicular to the axis of said coupling.

3,002,773

ADJUSTABLE OFFSET KEY ASSEMBLY

Werner C. Hallgren, Lorain, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 9, 1958, Ser. No. 779,090
8 Claims. (Cl. 287-52.05)



8. A key assembly comprising, in combination with a pair of concentric driving and driven elements having axially extending keyways therein, a pair of longitudinally extending key parts respectively received in said keyways, said key parts being arranged in superimposed relation and having opposed facing surfaces in abutting engagement with each other, and means on said opposed facing surfaces for securing said key parts in different lateral positions of adjustment relative to each other to form a driving connection between said driving and driven elements and to provide for adjustment of the relative angular positions of said driving and driven elements.

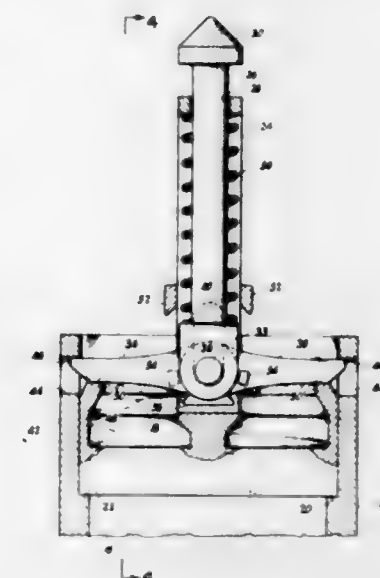
3,002,774

AUTOMATIC COUPLING

Robert A. Chapellier, Whitestone, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,479
7 Claims. (Cl. 287-103)

1. In an organization of the type described the combination of a support frame, a member insertable downwardly into said frame, means supporting said member in said frame at a predetermined location and means op-

erative to releasably retain the member within the frame against upward movement and including a housing secured to said member, a vertically disposed stem mounted in said housing and extending from the upper end thereof with the upper end of said stem adapted to have an actuator secured thereto, said stem being vertically movable within said housing between an upper and a lower position, said stem having an upwardly facing shoulder spaced below a downwardly facing surface on the housing spring means interposed between said shoulder and surface urging said stem to its lower position

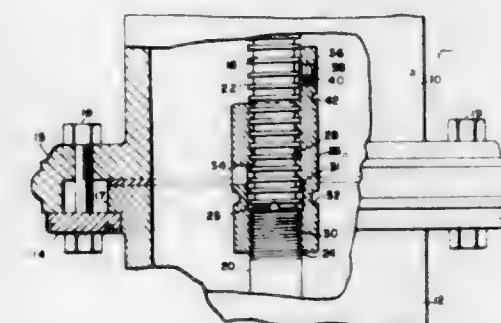


with a force that is less than the weight of said member and its attachments so that when the member is supported from the stem, the stem occupies its upper position, a locking lever secured to said stem for pivotal movement about a generally horizontal axis, means on said member and said frame for receipt of said lever therebetween to prevent withdrawal of the member from the frame, said lever being disposed intermediate these last-named means when the stem is in its lower position and withdrawn from intermediate said member and frame permitting withdrawal of the member from the frame when said stem is in its upper position.

3,002,775

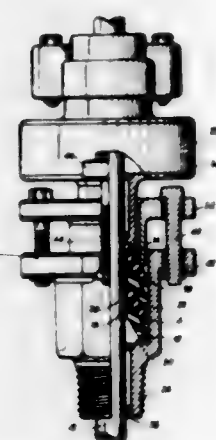
SAFETY COUPLING FOR HYDRANT VALVE STEM

Frank H. Mueller and John J. Smith, Decatur, Ill., assignors to Mueller Co., Decatur, Ill., a corporation of Illinois
Filed July 31, 1959, Ser. No. 830,878
5 Claims. (Cl. 287-117)



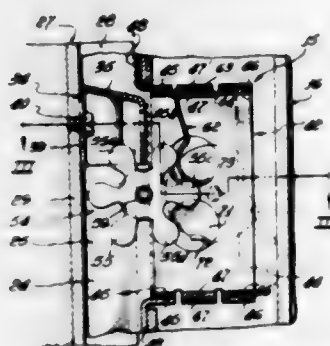
1. A frangible coupling for a two-section valve stem having opposed threaded ends engageable against relative rotation comprising: an internally threaded sleeve having a circumferential weakened portion; means including a set screw at one end of said sleeve to engage the valve stem to prevent relative rotation between said sleeve and the valve stem; and a frangible joint between said means and said sleeve.

3,002,776
MOLDED PACKING GLAND
 Sheridan P. Tschappat, 1201 W. 17th, Tulsa, Okla.
 Filed July 11, 1957, Ser. No. 671,280
 2 Claims. (Cl. 288-8)



1. A unitary molded packing gland adapted to be interposed between a polished rod and a fixed housing and constructed from a solid resilient rubber having additives of graphite, paraffin, and friction resistant material included therein for increasing the lubricating and wearing properties of the packing gland.

3,002,777
LATCH MECHANISM
 Ray N. Du Shane, Jr., Fullerton, Calif., assignor, by mesne assignments, to Acme Metal Molding Co., Los Angeles, Calif., a corporation of California
 Filed Sept. 16, 1957, Ser. No. 684,194
 6 Claims. (Cl. 292-78)

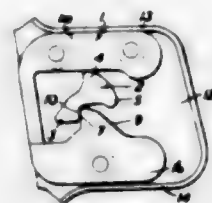


1. In a latch assembly for a sliding door including a stile provided with a door pull and a rotary latch member therewithin having spaced latch elements, the combination of: recess means provided by the stile and the door pull; and a pivotally mounted lock member within the recess means and provided with a laterally extending lock portion extending into said stile for cooperable engagement with the latch elements, external lock-actuating portions extending away from said stile and along a surface of said door pull, said lock-actuating portions being angularly arranged with respect to each other and said pull serving as positioning means for said actuating portions.

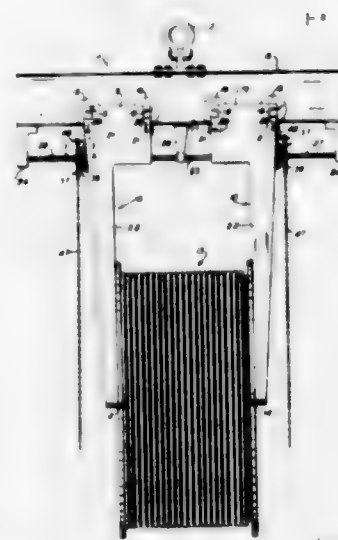
3,002,778
RELEASABLE FASTENING DEVICES
 Viktor Chanaryn, Solihull, and Kenneth Peter Pugh, Birmingham, England, assignors to Wilmot-Breeden Limited, Birmingham, England
 Filed Oct. 19, 1959, Ser. No. 847,307
 Claims priority, application Great Britain Oct. 22, 1958
 20 Claims. (Cl. 292-221)

2. A releasable fastening device for a motor vehicle door, comprising two parts which during a fastening operation undergo relative translatable movement as a result

of which relative angular movement of said parts to a relative coupling position occurs, said parts having co-acting surface portions which when in said coupling position engage substantially at the axis of said angular movement and so that the reaction force, as a result of any tendency for reverse translatable movement, is substantially aligned with the direction of said translatable movement and exerts substantially no moment tending to produce relative angular movement of said parts away from said coupling position.



3,002,779
GRAPPLES
 Domenico C. Frate, Baltimore, Md., and Daniel G. Stetka, Newark, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
 Filed Aug. 25, 1958, Ser. No. 756,845
 2 Claims. (Cl. 294-67)



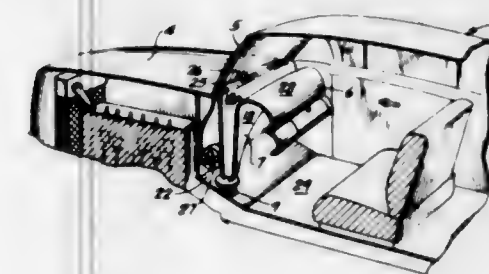
1. In combination with a grapple including a rotatable shaft having oppositely threaded portions on opposite sides of the center thereof and a pair of opposing jaws having lower portions designed for engaging opposite sides of an article to be carried by the grapple and having internally threaded apertures near the upper ends thereof received on the oppositely threaded portions of the shaft for longitudinal movement of the jaws toward and away from each other upon rotation of the shaft; the improvement which comprises a pair of rotatable pulleys mounted on the shaft, one adjacent to each of the jaws and toward the outer end of the shaft therefrom, said pulleys having splines formed around the inner periphery thereof, the threaded portions of the shaft being provided with longitudinal splines therealong which mesh with those of said pulleys so that either one of said pulleys may be rotated in order to move the jaws and so that said pulleys are also free to move longitudinally along the shaft, and a pair of bearing members secured to the upper portions of the jaws and having portions which interlock with portions of said pulleys so that both of said pulleys are constrained to travel along the shaft with the jaws during the rotation of either one of said pulleys, yet so that said pulleys are free to rotate with respect to the jaws.

3,002,780
TWO-HOLED HOOK AND SLING
 Robert G. Eggeman, 7544 Osceola St., Westminster, Colo.
 Filed Feb. 5, 1958, Ser. No. 713,453
 2 Claims. (Cl. 294-74)



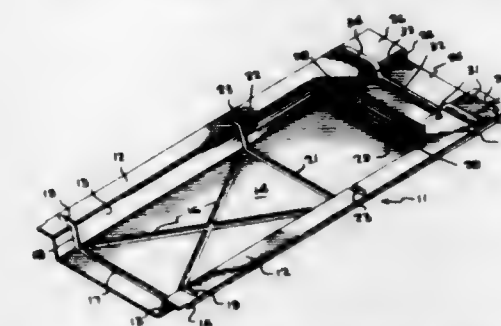
1. A combined hoist-choker, sling-hook for a wire-rope endless sling having a lower bight portion and parallel reach portions extending upwardly therefrom and comprising, in combination therewith, a body formed as a unitary member having a base, side and top and a pair of spaced, substantially-parallel passageways extending therethrough from the base to the top with each reach portion of the sling slideably extending through one of the passageways for free slideable movement of the reach portion through the passageway, a wire rope abutment at the base of the body between the passageways adapted to hold the body against the lower bight of the sling when the body is slid thereagainst and a hook outstanding from the side to serve as a hoist hook when the body is at the lower end of the sling and against the lower bight and to serve as a bight connector when the reach portions are slid through the passageway to form a choker loop below the body wherein the ends of said passageways are flared whereby to prevent wear and abrasion of the body at the ends of the passageways.

3,002,781
SOUND REPRODUCING AND TRANSMITTING DEVICES
 Frank B. Lenz, St. Charles, and William W. Haerther, Jr., Geneva, Ill., assignors to Hawley Products Company, St. Charles, Ill., a corporation of Delaware
 Filed Nov. 25, 1957, Ser. No. 698,469
 4 Claims. (Cl. 296-1)



1. In a passenger compartment, sound reproducing means, and an upwardly and outwardly flaring housing mounted in said compartment above said sound reproducing means, said housing having two chambers therein, one of said chambers being in the form of an upwardly opening air duct, and the other of said chambers being in the form of an exponential speaker horn for said sound reproducing means and having a throat portion and an upwardly opening bell portion, said throat portion being operatively connected to said sound reproducing means.

3,002,782
UNITARY FRAME AND BODY FOR A WHEELED VEHICLE
 Karl F. Jahn, 2710 Everts, Windsor, Ontario, Canada
 Filed Apr. 22, 1960, Ser. No. 24,073
 3 Claims. (Cl. 296-28)



1. A frame for a wheeled vehicle comprising a generally channel-shaped body of rigid sheet material integrally formed and including a pair of longitudinally-spaced downwardly and inwardly-inclined walls, a horizontal bottom panel between and integrally attached to the lower ends of said walls, and an outwardly-extending horizontal flange on the upper end of each of said walls, the portion of said bottom panel adjacent one end being upwardly offset to form a shallower channel than that of said body, said offset bottom panel portion being provided with a transversely-disposed upwardly-pressed channel extending from one side edge to the other side edge for embracingly receiving the rear axle of the vehicle.

3,002,783
SEALS AND SECURING ARRANGEMENT THEREFOR
 Wilhelm Hofmeister, Munich, Germany, assignor to Bayerische Motoren Werke Aktiengesellschaft, Munich, Germany
 Filed Oct. 10, 1958, Ser. No. 766,529
 Claims priority, application Germany Oct. 29, 1957
 8 Claims. (Cl. 296-44)



7. A sealing arrangement used with windows, doors, lids or hoods and similar pivotal or movable parts in motor vehicles having sheet-metal means, comprising elastic sealing means provided with a recess, clamping means made of an elastic material having a lesser elasticity than said sealing means for securing the latter to said sheet-metal means, said clamping means including two clamping lip portions and two spreading-jaw portions, one of said clamping lip portions engaging said recess in said sealing means and the other of said clamping lip portions pressing against said sheet-metal means with the inner surface thereof, and insert means placed between said spreading-jaw portions for spreading the latter apart and thereby forcing said other clamping lip portion against said sheet-metal means.

3,002,784
AUTOMOBILE HEAT SAVER PARTITION
 Robert D. Bagg, 81 Maple St., Oneonta, N.Y.
 Filed May 15, 1959, Ser. No. 813,474
 2 Claims. (Cl. 296-85)

1. A heat saver partition for automobiles comprising a lower section composed of vertical pipes supported on a

floor of the automobile and a transverse member having sockets fitted to the upper ends of the pipes, belt means for detachably securing the lower section to the rear of and about the front seat of the automobile, a transparent second section releasably connected to the lower section and adapted to be elevated or lowered therefrom to pro-



vide a closure for the upper portion of the interior of the automobile, said upper section conforming generally thereto, and said upper section comprising a U-shaped member having legs adapted to be tight fitted into the sockets of the transverse member, and the transparent member conforming to the shape of the U-shaped member and terminating at the transverse member.

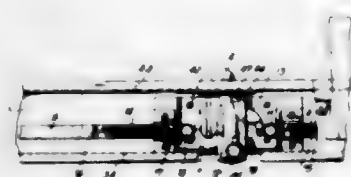
3,002,785

DEVICE FOR HOLDING A COVER OF A VEHICLE OPENING IN A DESIRED POSITION

Kurt Larché, Stockdorf, near Munich, Germany, assignor to Firma Wilhelm Baier K.G., Stockdorf, near Munich, Germany

Filed Nov. 10, 1958, Ser. No. 772,895

Claims priority, application Germany Nov. 13, 1957
2 Claims. (Cl. 296—120)



1. In a vehicle, in combination, a pair of spaced substantially parallel guides defining between themselves an opening of a vehicle; an elongated hollow housing extending between and guided by said guides for movement therealong, said housing being adapted to be connected to a cover which covers said opening to a degree determined by the position of said housing along said guides; an operating handle located at the exterior of said housing between the ends thereof and having a predetermined axis and a portion along said axis projecting into said hollow housing; a pair of elongated brake rods respectively located on opposite sides of said axis and extending therefrom respectively in opposite directions along the interior of said hollow housing toward said guides; a pair of brake means respectively carried by said rods at ends thereof respectively located distant from said axis and adapted to engage said guides, respectively, for holding said housing in a desired position when said rods are in an outer operating position distant from said axis, said rods being movable from said outer operating positions thereof to an inner idle position nearer to said axis where said pair of brake means are respectively spaced from said pair of guides; bearing means carried by said housing and supporting said handle for turning movement about said axis and said rods for longitudinal movement between the outer operating and inner idle positions; spring means cooperating with said rods for urging the latter inwardly toward their inner idle position; cam means including a cam member of substantially S-shaped configuration and carried by said handle portion in the interior of said housing for turning movement with said

handle and having outer arcuate edge faces cooperating with said rods for moving the latter in opposition to said spring means from their inner idle to their outer operating position when said handle and said cam means therewith are turned in one direction, turning of said handle in an opposite direction resulting in a release of said rods to the force of said spring means which returns said rods to their inner idle position freeing said housing for movement along said guides; a plate carried by said handle for turning movement therewith; and a latch member mounted on said plate turnably about an axis spaced from said turning axis of said handle, said latch member having a hook-shaped free end extending beyond said housing and moving between an active position in which said hook-shaped end is close to said housing and an inactive position in which said end is further spaced from said housing during turning of said handle in opposite directions, respectively, said hook-shaped end being in said active position slightly before said rods have been moved by said cam means to their outer operative position and said latch member being adapted in the active position of the hook-shaped end thereof to secure said cover in a position where it fully covers said opening.

3,002,786

COMBINED UTILITY TABLE AND SEAT

Raymond E. Light, 2783 Florida St., Longview, Wash.

Filed Oct. 20, 1959, Ser. No. 847,646

1 Claim. (Cl. 297—156)



A combination utility table and seat comprising a generally flat horizontal board, a seat supported on one end of said board, a pair of substantially L-shaped inverted tray supporting brackets mounted on the other end of said board and extending upwardly therefrom, a shelf fixedly secured to said tray supporting brackets and having a plurality of support openings formed therein, a partition closing the underside of certain of said openings, a vertical end wall extending upwardly from said board in supporting relation to said shelf, means securing the opposite ends of said vertical end wall to said brackets rigidly to secure said shelf and said brackets to said board, arms extending inwardly and comprising an integral part of said L-shaped brackets overlying and spaced from said board for supporting a removable tray adjacent said shelf, support legs at each corner of said board, and means detachably securing said support legs to said board, said last-mentioned means comprising double ended wood screws engaged in the corners of said boards and the upper ends of said brackets.

3,002,787

VARIABLE SEATING ENSEMBLE

Truman S. Ziegenfuss, 6940 Los Tilos Road, Hollywood, Calif.

Filed Dec. 24, 1959, Ser. No. 861,913

21 Claims. (Cl. 297—249)

1. A modular furniture ensemble of the class described comprising: a plurality of modular units arranged in generally side-by-side relationship and each having a hori-

zontal platform member supported on leg means formed therein in a medial fore-and-aft vertical plane; and attachment means extending between adjacent units engaging said units adjacent lateral edges thereof to support the same against lateral tilting and secure the same together in said relationship, said attachment means being pivotally secured to the respective units at pivot points on a vertical axis in said vertical plane to permit limited rotation of each of the latter with respect to the adjacent unit about said vertical axis.



3,002,788

HIGH CHAIR ATTACHMENT

Lorraine Sutton Rogers, Seattle, Wash.

Filed June 16, 1958, Ser. No. 742,429

2 Claims. (Cl. 297—255)



1. A high chair attachment for a conventional chair having a seat and a back comprising a flexible hood member adapted to slip over the back of said chair, a substantially integral flexible apron adapted to be supported on the seat of said chair extending forwardly from said hood member and having associated therewith extensions providing flexible side walls and an apertured flexible front wall, and means for supporting said side and front walls in substantially perpendicular relationship to the general plane of said apron, said means including a pair of horizontal rods respectively secured along the uppermost edges of said side walls and a second pair of horizontal rods respectively secured along the lowermost edges of said side walls, said means including a pair of vertical rods respectively secured along the forward edges of said side walls and a second pair of vertical rods respectively secured along the rearward edges of said side walls, said first pair of vertical rods respectively pivotally secured at their opposite ends to the forward ends of said first and second pairs of horizontal rods and said second pair of vertical rods respectively pivotally secured at their opposite ends to the rearward ends of said first and second pairs of horizontal rods to define frame structures for said side walls of parallelogram form pivotally connected together whereby said extensions may be selectively moved from said perpendicular relation to a folded position against said apron upon pivotal movement of said vertical rods and horizontal rods into general alignment.

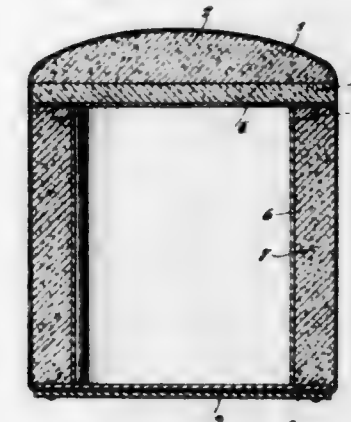
3,002,789

FURNITURE

Edmund Brown, Wellington St., Oldham, England

Filed July 29, 1958, Ser. No. 751,728

2 Claims. (Cl. 297—462)



1. An article of furniture comprising an elongate flexible casing having a circular and rounded top wall and a straight cylindrical side wall, said casing consisting of a single body of material, a rigid former within the casing and comprising a bottom disc, an upstanding hollow cylinder resting upon and centered on said bottom disc and a top disc resting upon the top of said cylinder and centered thereon, said top and bottom discs being of approximately the same diameter and concentrically positioned, said cylinder being spaced from the casing side wall and said top disc being spaced from the casing top wall and lying in a plane below the highest part of the casing side wall, the top disc projecting transversely beyond the outer side of the cylinder and being peripherally spaced from the casing side wall, the spacing of the top disc and cylinder from the casing side and top walls forming a stuffing receiving area entirely around the cylinder and around and over the top disc, stuffing material filling and tightly compacted in said area, a bottom cover disc underlying the first bottom disc, the casing side wall having a bottom edge portion turned in and lying between said bottom discs, and securing means passing through said bottom discs and said turned in portion of the casing and securing the casing tightly around the stuffing material

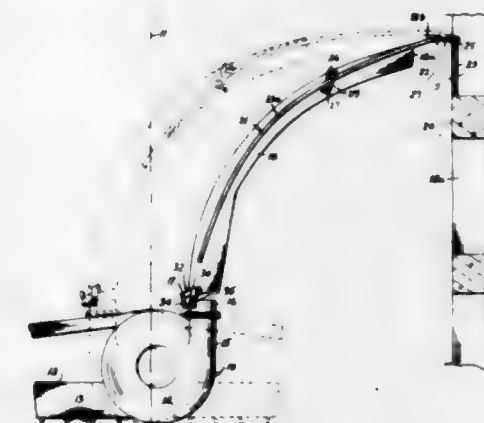
3,002,790

SILO UNLOADERS

George Roland Chapman, Stafford Road, Palmyra, N.Y.

Filed Oct. 16, 1959, Ser. No. 846,915

8 Claims. (Cl. 302—37)



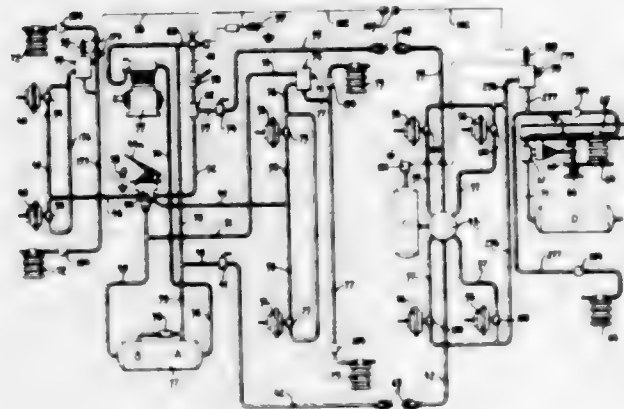
1. The combination of a silo having a lateral wall provided with an opening, a silage unloader positioned in said silo for revolving movement therein, said unloader being adapted to rest upon and operatively engage silage in the silo and including a silage blower having an outlet off-

set horizontally from the center of the silo whereby said outlet travels in a circular path horizontally toward and away from said opening during revolving of the unloader, an upwardly extending curved discharge duct movably connected at its lower end to the outlet of said blower for revolving movement of the unloader relative to the duct and for swinging movement of the duct in a vertical plane relative to the unloader, the upper end constituting the discharge end of the duct also moving toward and away from the silo opening during revolving of the unloader, and guide means connected to the silo wall and cooperating with said duct for respectively raising and lowering the discharge end thereof during its movement away from and toward said opening, whereby to maintain the trajectory of silage discharged from the duct constantly oriented through said opening.

3,002,791

EMERGENCY POWER BRAKE SYSTEM

John W. Pease, Hartsdale, N.Y., assignor to Midland-Ross Corporation, a corporation of Ohio
Filed Nov. 25, 1957, Ser. No. 698,551
6 Claims. (Cl. 303—2)



1. In a vehicle having a pneumatic suspension means for supporting a sprung portion of said vehicle, brake means for said vehicle comprising a source of fluid pressure and a fluid pressure responsive motor for operating brake mechanism on said vehicle, valve means connected to said pneumatic suspension means and to said fluid motor, said valve means being operable in one position to provide communication between said suspension means and said motor to apply said brake mechanism and operable in a second position to interrupt said communication and release fluid pressure from said fluid motor to release said brake mechanism, and means responsive to fluid pressure in said brake means above a predetermined minimum for operating said valve means from said first to said second position.

3,002,792

ROLLER CONVEYER STRUCTURE

Lee E. Sekulski, Ellwood City, Pa., assignor to Mathews Conveyor Company, Ellwood City, Pa., a corporation of Pennsylvania
Filed Nov. 20, 1958, Ser. No. 775,309
4 Claims. (Cl. 308—20)



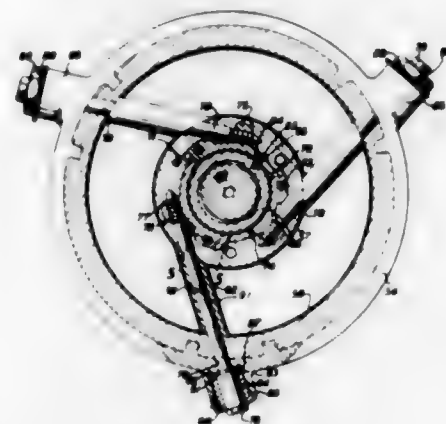
1. In a conveyer assembly including a channel-shaped side rail having a vertical web and a conveying roller

having an axle; a laterally offset section on said web having a lower end integral with said web and side and top edges laterally spaced from said web to define an opening therethrough, the upper portion of said section being located in parallel laterally offset relationship to said web, said upper portion of said section having a notch therethrough extending downwardly from said upper edge of said section for receiving and supporting said axle of said conveying roller, and a tab integral with said web and projecting downwardly from the upper edge of said opening in lateral alignment with said notch to prevent movement of said axle through said opening in said web.

3,002,793

BEARING SUPPORT STRUCTURE

Frank M. Barkana, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 7, 1958, Ser. No. 733,688
10 Claims. (Cl. 308—22)

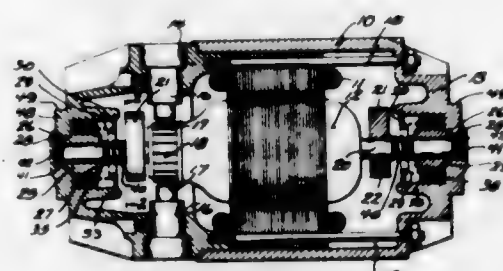


1. A bearing support structure comprising, a casing, a housing positioned within said casing for supporting a bearing, a ring positioned about said housing, a plurality of rods operatively engaging said ring and extending through said casing, a flange positioned on each of said rods engaging said casing on one side thereof, means engaging said casing and the other side of the flange of each rod so that said rods are rotatable with respect to said casing and so that axial movement of said rods with respect to said casing is substantially prevented, whereby said housing and said bearing may be adjusted to a desired position within said casing upon rotation of said rods.

3,002,794

MOTOR BEARING ORGANIZATION

Gary Groot Blumink, Racine, Wis., assignor to Howard Industries, Inc., Racine, Wis., a corporation of Wisconsin
Filed Oct. 14, 1957, Ser. No. 690,070
6 Claims. (Cl. 308—72)



1. In a motor the combination with a casing end wall, of a spring seat washer peripherally anchored in said cas-

ing end wall, said casing end wall having a recess partially closed by the spring seat washer, a shaft extending into the recess through the washer, a bearing member into which the shaft extends and which is provided with an annular spherically surfaced end face for which the casing end wall has a complementary face within the recess, the bearing member having a spherical surface at its opposite end, a floating spring seat washer having a spherical face complementary to the last mentioned spherical surface of the bearing member and engaged therewith, a compression spring disposed between and seated upon the first mentioned spring seat washer and said floating spring seat washer, and a lubricating ring encircling the bearing member and substantially filling the recess and with which a portion of the floating spring seat washer is engaged to confine the ring within the recess, the floating spring seat washer bearing on a major portion of the surface of the lubricating ring for limiting distortion thereof by movement of said bearing member, the casing end having a counterbore in line with the shaft and toward which the shaft projects beyond the bearing member, a thrust element within the counterbore in a position to engage the shaft in the event of axial shaft displacement into the counterbore, and opposed spring means biasing said shaft and adapted normally to maintain its center against axial displacement in the counterbore and in a position in which the shaft is spaced from said thrust element.

3,002,795

COUNTER DISPLAY CASES

William G. Michaelsen, Egan, Ill., assignor to Rockford Show Case & Fixture Co., Rockford, Ill., a corporation of Illinois
Filed Apr. 22, 1958, Ser. No. 730,132
9 Claims. (Cl. 312—118)



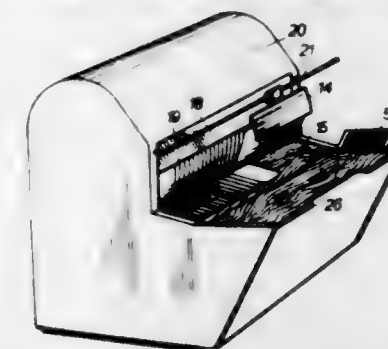
1. A display device adapted for displaying merchandise, comprising a boxlike receptacle adapted for housing merchandise for display and storage having rectangularly related upright front, side, and rear walls forming a mouth, and a swingable rectangular lidlike cover having a rectangular transparent face wall in closely spaced parallel relationship to an opaque rectangular back wall, said cover being unattached at either of its front and rear ends relative to said receptacle and adapted to close the mouth of the receptacle in one position with the transparent face wall of the cover on the upper side for display of merchandise in said cover and to stand upright edgewise on its front end on the upright rear wall of the receptacle in a second position with the transparent face wall of the cover on the forward side for display of merchandise in said cover, and a pair of rigid parallel links which are pivotally connected at one end to the opposite sides of the cover intermediate the front and rear ends thereof and at their other end to the opposite sides of the receptacle at the rear portion thereof and serve to connect the cover to the receptacle for movement from one of said two positions to the other.

3,002,796

INDEX OR LIKE FILING SYSTEMS

Jan Dahm, Bergen, Norway, assignor to C. Dahms Ingeniørforretning A/S, Bryggen, Bergen, Norway
Filed Sept. 30, 1959, Ser. No. 843,432
Claims priority, application Norway Oct. 1, 1958
13 Claims. (Cl. 312—184)

1. In a filing apparatus, a housing, an endless supporting member rotatably received within said housing, a number of card carrying rails, means supporting said rails on said member at right angles to the direction of rotation of said supporting member, and said rails being supported in parallelism with controlled spacings therebetween, each of said rails supporting a card stack consisting of a number of cards at a first card edge in partially overlapping relationship to expose a first marginal portion along an edge extending at an angle to the first mentioned edge,

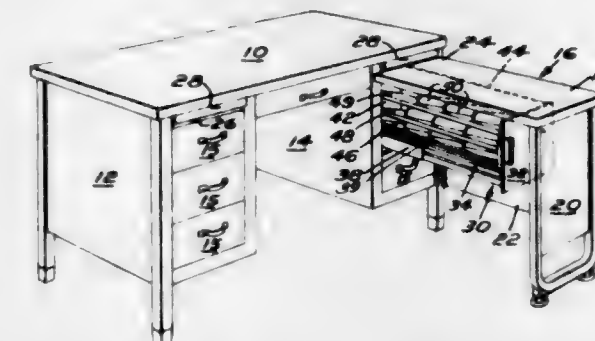


means supporting at least some of the card stacks on subsequent rails in partially overlapping relationship to expose a second marginal portion opposite to said first card edge, first selecting means for selecting a specific card by supporting the superimposed cards by said first marginal portion and leaving the desired card together with underlying cards in the stack unsupported, and second selecting means for selecting a specific stack by supporting subsequent stacks by said second marginal portion while leaving the desired stack together with preceding stacks unsupported.

3,002,797

OFFICE DESK EQUIPMENT

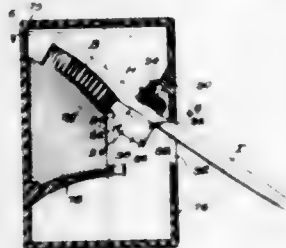
Forest G. Stark, Jamestown, N.Y., assignor to Art Metal Construction Company, Jamestown, N.Y.
Filed Mar. 25, 1958, Ser. No. 723,693
1 Claim. (Cl. 312—194)



In combination with a desk, a machine platform detachably connected to the desk for temporary association therewithin either one of two alternate positions relative thereto, and a removable rack cooperable with the desk structure for disposition in cooperation with the machine platform to retain the useful drawer space of the desk, said desk having a pedestal at either side thereof and there being drawers in each of said pedestals, at least one of said drawers being of modified construction having front and back walls, side walls and a bottom wall, at least one of said side walls being of reduced height so that such drawer is open throughout the major extent of its side, said machine platform being cooperable with the desk structure for fixed disposition relative thereto adjacent

one of said pedestals and in such position as to overlie the region into which the drawers of that pedestal are movable when in open position, said rack being positionable in said modified drawer in either one of said pedestals, dependent upon the position of said machine platform and being disposed in a drawer of that pedestal with which the machine platform is associated, said rack having a front and rear wall, a side wall of a height corresponding to the height of said front and rear walls, and having a wall at its opposite side of reduced height and corresponding to the open side wall of the modified drawer, said rack also having a bottom wall portion sloping downwardly from the open edge of the side wall thereof of reduced height toward and to the other side wall thereof, said rack also including a plurality of shelves extending between the front and rear walls thereof and disposed in vertically spaced relationship and generally in parallelism with said bottom wall portion of the rack, whereby the rack structure forms, in association with the modified drawer with which it is to be used, a means adapted to receive classified stenographic supplies such as stationery and the like, in such manner as to be readily accessible to the stenographer.

3,002,798
TOOTHBRUSH HOLDER AND PASTE DISPENSER
Clifton Corley, 232 Brazilian Ave., Palm Beach, Fla.
Filed Oct. 30, 1958, Ser. No. 770,747
2 Claims. (Cl. 312-207)

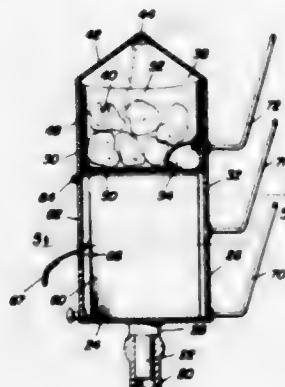


1. A toothbrush holder and dentifrice dispenser comprising a container, means in said container adjacent one wall thereof for supporting a dentifrice cake, the opposite container wall having an opening through which a toothbrush may be inserted, a resilient member, a swivel connection in said container and swivelly supporting said member in alignment with and between said opening and said cake supporting means, said member having a slit through which a toothbrush is passed to gain access to the dentifrice, the abutting walls of the member forming the slit being urged together by the resiliency of the member, whereby upon insertion of a toothbrush into the slit the opposing walls thereof engage the toothbrush head and bristles to support the toothbrush and the swivel connection permits movement of the toothbrush across the full width of a dentifrice cake in the supporting means and maintains substantially the same relative position to the dentifrice cake as it diminishes with use.

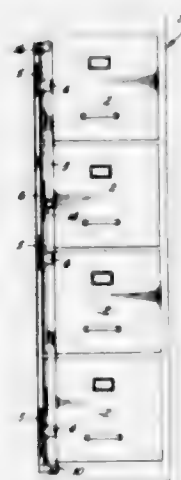
3,002,799
TISSUE DISPENSER
Harry David Kantor and Philip Kantor, both of
P.O. Box 578, Clarksdale, Miss.
Filed Aug. 22, 1958, Ser. No. 756,705
3 Claims. (Cl. 312-211)

1. In a patient's bedside utility device, a portable stand embodying a pedestal, a vertically elongated, open top casing rotatably mounted in upstanding position atop said pedestal and having front and rear walls, and opposite end walls, the latter having upper portions arising above the upper edges of the front and rear walls, a pair of opposite horizontal strips fixed in said casing to said end walls, an open top container for waste tissue removal

ably fitted in the upper portion of said casing and seated on said strips and defining a lower compartment in the casing for clean tissue to be dispensed from said compartment, a flexible liner removably fitted in said container for holding a mass of waste tissue for removal from said container by removal of said liner, and an inverted V-shaped closure having inclined walls cooperating with the front and rear walls at the top of the casing to close the top of the casing and the top of the container and having apical end portions hinged between the upper portions of said end walls for swinging in opposite directions to open the top of the casing and the top of the container at either the front or the rear of said casing.

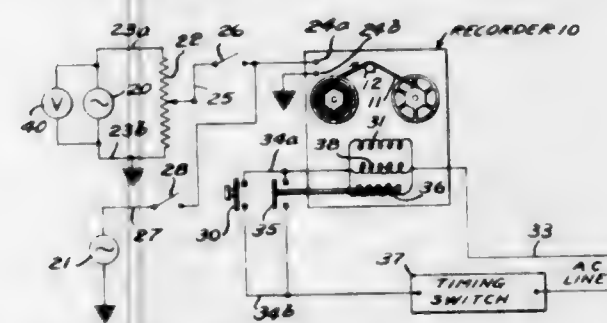


3,002,800
SECURITY LOCK BAR FOR FILING CABINETS
Walter C. McMahon, Escondido, Calif., assignor to McMahon Brothers Mfg. Co., Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 17, 1958, Ser. No. 774,461
5 Claims. (Cl. 312-216)



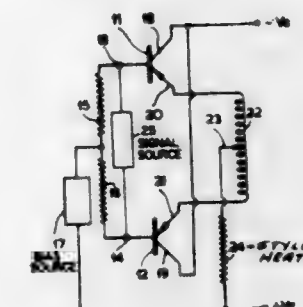
1. In a file cabinet lock structure for a group of adjacent drawers: a bar adapted to extend over the group and to be locked in that position; means providing an axis of angular motion for the bar, the axis being parallel to the length of the bar; a pair of ears, respectively carried by the bar and by the means that provides the axis of angular motion; said ears lying close together when the bar is in restraining position across the drawers; said ears being so arranged that they may be locked together; said means that provides the axis of angular motion being such as to permit the bar to move longitudinally to cause the ears to be moved out of alignment whereby the bar may be angularly moved to free the drawers; stationary socket means into which an end of the bar projects when the ears lie adjacent each other; said means providing the axis having longitudinally aligned pins; and spaced hinge elements carried by the bar and cooperating with the pins, the pins being elongated to permit the bar to be moved axially of the pins.

3,002,801
RADAR PREDICTOR STORAGE AND PLAYBACK SYSTEM
Herbert W. Bomzer, New Hyde Park, Edward Gold, Plainview, and William M. Wirfel, Glendale, N.Y., and Fleur B. Smith, Los Angeles, Calif., assignors to The Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Apr. 26, 1957, Ser. No. 655,437
2 Claims. (Cl. 346-74)



2. Apparatus for storing a series of prediction point data in radar trainers operable to visually reproduce said data on a cathode ray tube, comprising a magnetic tape recorder having a recording head, a signal source, a voltage source set at a substantially different frequency from said first-mentioned signal source, means for adjusting the voltage output of said second-mentioned source in accordance with the desired intensity of reproducing each point data in the cathode ray tube, means capable of being employed to selectively connect said first-mentioned signal source and said second-mentioned voltage source to the recording head of said recorder, an alternating current line connected to said recorder, a timing switch disposed in said line for opening said line after each point data is recorded, and a make and break switch in said line, and a holding relay also disposed in said line.

3,002,802
AMPLIFIER FOR ELECTRICALLY HEATED STYLUS
John Edsall Rich, West Wickham, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 21, 1959, Ser. No. 788,109
Claims priority, application Great Britain Jan. 22, 1958
3 Claims. (Cl. 346-76)



1. An electric circuit arrangement including a device dependent for its operation on electric heating, said device comprising a coil and an electrically heated stylus, an amplifier comprising two transistors each having base, emitter and collector electrodes, said transistors being connected in push-pull arrangement, means for applying an input signal to the transistor bases, supply voltage means connected to the collectors, a load circuit connected between the emitters, said load circuit comprising said coil and being provided with a center-tap, and a resistor connected between said center-tap and the ground point of said input, said resistor being constituted by said electrically heated stylus, whereby said stylus performs the dual function of providing a high equalizing resistance for the push-pull connected transistors and heat for the operation of the device.

CHEMICAL

3,002,803
METHOD OF SPINNING LOW ELONGATION VISCOSE RAYON
Berthold Daimler, Heinsberg, Hugo Elling, Oberbruch-Grebben, Richard Elssner, Randerath, and Kurt Heuer, Kassel-Bettenhausen, Germany, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Filed July 22, 1957, Ser. No. 673,154
Claims priority, application Germany July 24, 1956
1 Claim. (Cl. 18-54)

A process for the production of high strength viscose yarn having increased stretchability and low elongation comprising spinning a viscose into a spinbath maintained at a temperature of 38° C. to 39° C. and containing 4 to 6% sulfuric acid, 2 to 15% zinc sulfate and 5 to 20% sodium sulfate, the ratio of the percentage of sodium sulfate to the percentage of zinc sulfate being between 1.0 and 2.4, withdrawing the freshly spun yarn from said spinbath and stretching the yarn in a second hot weakly acidic bath.

3,002,804
PROCESS OF MELT SPINNING AND STRETCHING FILAMENTS BY PASSING THEM THROUGH LIQUID DRAG BATH
Joseph J. Killian, Covington, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 777,545
8 Claims. (Cl. 18-54)

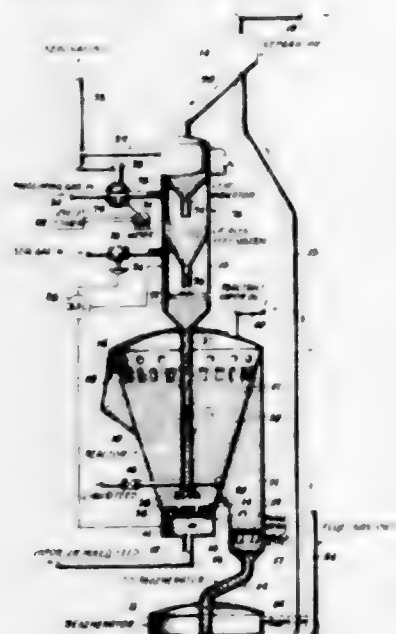
1. The process for preparing uniformly oriented textile yarn which comprises extruding a molten synthetic

linear polymer from a spinneret to form filaments, quenching said filaments to provide a solid structure by cooling them to a temperature at least 50° C. below their melting point, subjecting said filaments to a continuously increasing drawing tension by passing said filaments down-



wardly through a liquid drag bath, maintaining said bath at a temperature to preserve said solid structure, withdrawing said filaments from said bath at a speed of at least 750 yards per minute, said tension being at least about 1.0 gram per denier as said filaments leave said bath.

3,002,805
METHOD FOR CONTACTING FLUIDS WITH SOLID CONTACT MATERIALS
 Lewis M. Browning, Jr., Wenonah, and Raymond R. Hallik, Pitman, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
 Filed Mar. 7, 1957, Ser. No. 644,618
 15 Claims. (Cl. 23-1)



1. The method for contacting a fluid, at least part of which exists in the gaseous phase under the contacting conditions, and a solid contact material of palpable particulate form which comprises introducing said contact material into the lower section of an expanded contacting zone through at least one inlet opening with a force insufficient to move the contact material upwardly through said zone, separately introducing said fluid into the lower section of said zone so as to mix with said contact material, controlling the rate of fluid introduction to provide an upward flow of gaseous material through the contacting zone sufficient when added to the force of contact material introduction to push the contact material upwardly through said zone as a substantially compact bed, expanding said bed laterally at least along an upper portion thereof to effect reduction in the upward velocity of gaseous material flow by the time it reaches the surface of said bed below that which would cause substantial boiling of the bed at its surface, whereby the bed is maintained in compacted condition substantially throughout its length, withdrawing the contact material from said zone near the upper end of said bed and separately withdrawing the contacted gaseous material upwardly from said bed, said zone having a cross-sectional area at the region of mixing of the separately introduced fluid and said contact material substantially greater than the total cross-section of said opening for contact material introduction and having a cross-section for flow at least as great as that at said region of mixing at all locations intermediate the same and the location for upward withdrawal of contacted gaseous material from said bed.

3,002,806
PREPARATION OF ALKALI METAL BOROHYDRIDES

Luke J. Governale, Arthur F. Limper, Jesse Roger Mangham, and Frank L. Padgett, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
 No Drawing. Filed Oct. 30, 1956, Ser. No. 619,112
 4 Claims. (Cl. 23-14)

1. An improved process for the preparation of alkali metal borohydrides which comprises (1) reacting a dispersion of finely divided alkali metal in an essentially in-

ert liquid diluent with hydrogen to produce a suspension of alkali metal hydride, (2) reacting said suspended alkali metal hydride with an alkyl borate to form alkali metal borohydride and by-products, (3) dissolving said alkali metal borohydride in the dimethyl ether of diethylene glycol by adding said ether to the reaction mixture containing said alkali metal borohydride and by-products suspended in said inert liquid diluent whereby two separate liquid phases form, and (4) separating the dissolved alkali metal borohydride-ether phase and recovering the alkali metal borohydride from said phase.

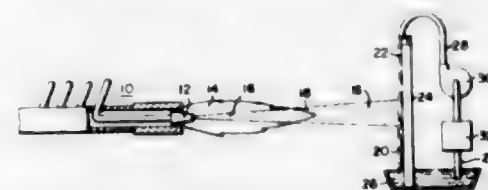
3,002,807
POLYMERIC COMPOUNDS
 Margot Becke, Heidelberg, Germany, assignor to Joh. A. Benckiser G.m.b.H. Chemische Fabrik, Ludwigshafen (Rhine), Germany
 No Drawing. Filed June 2, 1958, Ser. No. 738,942
 Claims priority, application Germany June 1, 1957
 14 Claims. (Cl. 23-14)

1. A water insoluble polymer consisting of a plurality of the following recurring monomer units:



wherein R is selected from the group consisting of H, C_6H_5 , CH_3 , CH_2-CH_3 , and $(\text{CH}_2)_2-\text{CH}_3$.

3,002,808
PREPARATION OF ULTRAFINE REFRACTORY OXIDE
 Bernard D. La Mont, Jeannette, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Aug. 7, 1957, Ser. No. 676,761
 3 Claims. (Cl. 23-14.5)



1. A method for producing an ultrafine metallic oxide from the group consisting of thorium oxide, uranium oxide, and cerium oxide, said method comprising the steps of dissolving in water a water soluble compound of the corresponding metal, injecting a fine spray of the solution thus obtained into the interior of a flame having a temperature sufficient to vaporize the aqueous portions of said solution and to convert said soluble compound to its corresponding oxide, directing said spray substantially axially through said flame, flowing a curtain of water transversely of said flame at a position adjacent the tip of the flame, said spray and said flame being directed generally toward said curtain, and said spray in addition being injected with sufficient velocity to carry particles thereof through said flame and to carry particles of said oxide to said curtain.

3,002,809
METHOD OF MANUFACTURE OF HIGH PURITY SODIUM ALUMINATE
 Alfred O. Walker, Westchester, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
 No Drawing. Filed June 22, 1959, Ser. No. 821,628
 3 Claims. (Cl. 23-52)

1. The process of producing sodium aluminate from bauxite which comprises the steps of heating a 45% to 70% by weight solution of sodium hydroxide to a temperature of at least 275° F., adding thereto with agi-

tation a bauxite which contains at least 57% by weight of alumina to produce a reaction mass having a Na_2O to Al_2O_3 ratio between 1.11:1 to 1.25:1, continuing the process whereby the alumina present in the bauxite is substantially converted to sodium aluminate and the insoluble impurities contained in the bauxite are uniformly suspended throughout the reaction mass, said aluminate liquor having a specific gravity of between 1.600 and 1.850, diluting to a specific gravity between 1.300 and 1.500, filtering the diluted liquor in the presence of not more than 1% by weight of carbon filter aid at a pressure of at least 25 pounds per square inch gauge, discarding not more than the first 5% of filtrate and adding to the filtered liquor between .1% and 1.5% by weight of an inorganic bleach from the group consisting of alkali metal hypochlorite, chlorine, and hydrogen peroxide and then drying the product.

3,002,810
METHOD FOR PRODUCING SODIUM BORATES OF LOWERED IRON CONTENT
 George W. Campbell, Jr., Santa Ana, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
 No Drawing. Filed May 13, 1960, Ser. No. 28,820
 4 Claims. (Cl. 23-59)

2. The method of producing sodium borates having lowered iron content which comprises adding to an aqueous solution of sodium borate containing carbonate ions in said solution and additionally containing iron as a contaminant from about 0.005% to about 0.5% of a water-soluble zinc salt, allowing the zinc salt to form zinc carbonate with said carbonate ions and to settle out whereby the iron in said solution is carried down with said zinc carbonate, separating the sodium borate solution from said zinc carbonate and iron and crystallizing sodium borate from said solution.

3,002,811
METHOD OF PURIFYING ALKALI METAL IODIDES
 Irwin E. Johnson, Parma, Ohio, assignor to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio
 No Drawing. Filed May 28, 1959, Ser. No. 816,368
 9 Claims. (Cl. 23-89)

1. A method for the purification of potassium contaminated alkali metal iodide selected from the group consisting of lithium iodide, sodium iodide, cesium iodide and rubidium iodide wherein the contaminated alkali metal iodide is first dissolved in a hot liquor consisting of water and hydriodic acid and then crystallized from said liquor by cooling to about 30° C., whereby purified alkali metal iodide crystals are formed while substantial proportions of said contaminants remain in the resulting mother liquor.

3,002,812
MANUFACTURE OF DEFLUORINATED PHOSPHATES
 William B. Williams, Birmingham, Ala., assignor to International Minerals & Chemical Corporation, a corporation of New York
 Filed Feb. 19, 1959, Ser. No. 794,383
 5 Claims. (Cl. 23-109)

1. A process for manufacturing a phosphate product of low fluorine content from phosphate rock containing fluorine and silica which comprises digesting said phosphate rock in sufficient hydrochloric acid solution to decompose substantially all of the phosphate in said rock to form phosphoric acid, separating remaining solids from the resultant digestion mass to produce a substantially

solids free liquid, subjecting said substantially solids free liquid to evaporation to produce a first solid of lower fluorine content than said phosphate rock, said solid containing a phosphate of calcium and calcium fluoride, digesting said first solid in an aqueous medium selected from the group consisting of water and hydrochloric acid solution to dissolve substantially all of said phosphate of

calcium, separating remaining solids containing calcium fluoride from the resultant digestion mass to produce a substantially solids free liquid, and subjecting said substantially solids free liquid to evaporation to produce a substantially dried solid phosphate product having a fluorine content substantially lower than the fluorine content of said first solid and suitable for use as an animal feed ingredient.

3,002,813
METHOD OF PREPARING MONOPERSULFATES
 Leonard R. Darbee, Grand Island, and James R. Kolczynski, Williamsville, N.Y., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
 No Drawing. Filed July 15, 1959, Ser. No. 827,144
 9 Claims. (Cl. 23-114)

1. Method of producing a monopersulfate comprising reacting together at a temperature of about 50° to 110° C. (a) a bisulfate from the group consisting of ammonium bisulfate, the alkali metal bisulfates, and the alkaline earth metal bisulfates, and (b) aqueous hydrogen peroxide, in the presence of sufficient amounts of an oxygenated inorganic acid to yield from 0.05 to two equivalents of hydrogen ion per kilogram of reaction mixture, said oxygenated acid being free of anions which catalytically decompose the active oxygen constituents, and wherein the molar ratio of hydrogen peroxide to water present in the final reaction mixture is at least 1:1.

3,002,814
PRODUCTION OF NICKEL SULFATE FROM HIGH-TEMPERATURE CALCINED GREEN NICKEL OXIDE
 Robert V. Horrigan, Lewiston, N.Y., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
 No Drawing. Filed Aug. 13, 1959, Ser. No. 833,391
 9 Claims. (Cl. 23-117)

1. A process for producing nickel sulfate from finely divided, high-temperature calcined, green nickel oxide having a specific gravity in excess of 6.30 which comprises initiating an energetic, exothermic reaction by bringing a mixture of said oxide with a sulfuric acid solution to a temperature of about 150° C. and following said reaction, leaching the reaction mass with water to remove nickel sulfate, the mixture being heated for at least one hour and the sulfuric acid solution being present in at least the theoretical amount required to convert the nickel oxide to nickel sulfate.

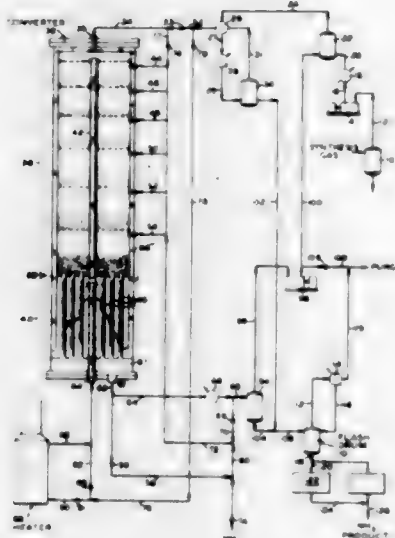
3,002,815 PROCESS FOR THE PRODUCTION OF CHROMIUM TRIOXIDE

Gerhard Heinze, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed July 1, 1959, Ser. No. 824,189
Claims priority, application Germany July 17, 1958
6 Claims. (Cl. 23-145)

1. In a process for the production of chromium trioxide by reacting sodium dichromate with sulphuric acid, the step which comprises reacting a mixture of dichromate and water containing about 1300 g. to about 1700 g. of dichromate (calculated as $\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$) per litre with from 2 to 2.6 mols of sulphuric acid per mol of dichromate, and recovering the chromium trioxide formed from the resulting reaction mixture.

3,002,816 METHOD OF EFFECTING EXOTHERMIC CATALYTIC REACTIONS

Leo Friend, New Rochelle, N.Y., and Manfred von Stein, East Orange, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed July 23, 1958, Ser. No. 750,402
21 Claims. (Cl. 23-199)



1. A process for converting reactant gases in an exothermic type of reaction, in the presence of a catalyst to the corresponding addition product which comprises introducing a feed of reactant gases into a converter containing a plurality of catalyst beds, passing the gases successively through each of the catalyst beds under reaction conditions, permitting the temperature in each catalyst bed to approach the equilibrium temperature of the reaction, withdrawing the gases from each of said catalyst beds within the reactor before the equilibrium temperature and the catalyst decomposition temperature is attained and cooling the gases between catalyst beds by direct heat exchange with a quench material containing at least 3.5 percent by volume of the addition product of the reaction and containing at least 1 percent addition product in excess of that present in the feed whereby the temperature of the reaction in the converter is maintained at all times below the equilibrium temperature of the reaction and below the temperature at which catalyst decomposition occurs.

3. A process for converting reactant gases containing hydrogen and nitrogen to ammonia in an exothermic type of reaction in the presence of an inorganic metal catalyst at a temperature of at least 300°C . and below the catalyst decomposition temperature and the equilibrium temperature of the reaction, which comprises introducing a feed of reactant gases into a converter containing catalyst arranged in a plurality of beds, passing the gases successively

through each of the catalyst beds, permitting the temperature of the gases in each catalyst bed to rise, withdrawing the effluent gases from each of said catalyst beds within the reactor before the catalyst decomposition temperature and the equilibrium temperature of the reaction is attained, and cooling the effluent gases between catalyst beds to a temperature of at least 50°C . below the temperature of the effluent gases to be quenched by direct heat exchange with a cooled quench material containing at least 1 percent ammonia in excess of that present in the feed and containing between about 3.5 percent by volume and an amount about equal to the concentration of ammonia in the effluent to be quenched whereby the temperature of the reaction in the converter is maintained at all times below the temperature at which catalyst decomposition occurs, and below the temperature at which the reaction attains a state of equilibrium.

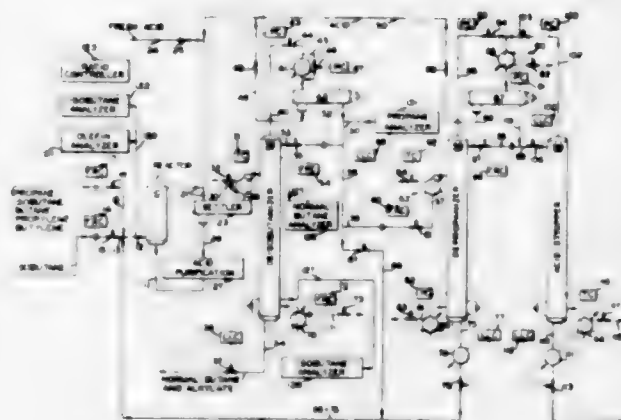
3,002,817 PROCESS FOR THE PREPARATION OF HYDROGEN PEROXIDE

Lucien Villemey, Lyon, France, assignor, by direct and mesne assignments, to Societe d'Electrochimie, d'Electrometallurgie et des Acieries Electriques d'Ugine and FAir Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procédes Georges Claude
No Drawing. Filed Oct. 7, 1954, Ser. No. 461,019
Claims priority, application France Oct. 15, 1953
3 Claims. (Cl. 23-207)

1. In the cyclic process of producing hydrogen peroxide comprising the steps of hydrogenating a compound selected from the group consisting of anthraquinone, alkylanthraquinones, tetrahydroanthraquinone and alkyl-tetrahydroanthraquinones to an anthrahydroquinone, and oxidation of the resultant anthrahydroquinone, the improvement in said process which consists in carrying out the successive hydrogenation and oxidation steps in a common organic solvent for both said anthraquinone and anthrahydroquinone, said solvent consisting of an aliphatic ketone selected from the group having the general formula $\text{R}-\text{CO}-\text{R}$, in which R is a lower alkyl radical containing at least two carbon atoms, said ketone having an oxidizing power with respect to that of diisopropylketone, taken as a reference and set equal to unity, at least equal to 0.6, and said solvent being non-reactive under the hydrogenating conditions prevailing in said cyclic process.

3,002,818 PROCESS CONTROL SYSTEM

Donald E. Berger, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 28, 1956, Ser. No. 624,843
12 Claims. (Cl. 23-253)

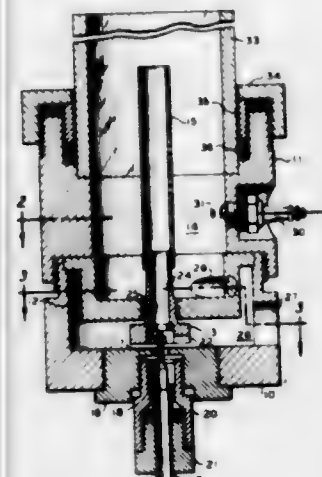


1. In an alkylation unit wherein a mixture of olefins and isoparaffins is contacted by a catalyst in a reactor;

a control system to maintain a predetermined ratio of olefins to isoparaffins in the hydrocarbon feed to the reactor comprising first conduit means communicating with said reactor to supply olefins, second conduit means communicating with said reactor to supply isoparaffins, first analyzing means to measure the flow of olefins by detecting the concentration of olefins supplied through said first conduit means, second analyzing means to measure the flow of isoparaffins by detecting the concentration of isoparaffins supplied through said second conduit means, and means responsive to said first and second analyzing means to adjust the flow through at least one of said conduit means to maintain a predetermined ratio of olefins to isoparaffins in the hydrocarbon feed to the reactor.

3,002,819 APPARATUS FOR TESTING FUELS

Robert L. Brack, Santa Clara, Calif., and Robert M. Schirmer, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 20, 1958, Ser. No. 716,427
15 Claims. (Cl. 23-253)



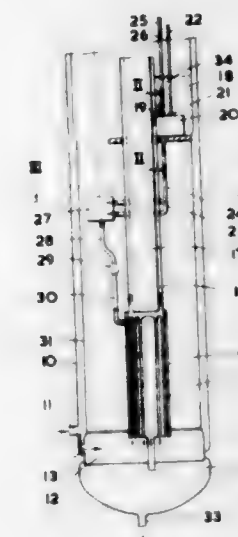
1. A burner for liquid fuels comprising a housing defining a cylindrical combustion chamber, a solid cylindrical tube extending into said chamber from one end of said chamber and along the axis of said chamber, said housing being provided with at least one first passage which extends from a region exterior of said housing to said combustion chamber adjacent said one end, said first passage entering said combustion chamber in a direction generally tangential to the side wall of said chamber, and spark ignition means positioned in said combustion chamber outside said tube and adjacent said one end, said housing being provided with a second passage which extends from a region exterior of said housing to a region within said combustion chamber adjacent said spark ignition means.

3,002,820 APPARATUS FOR DETERMINING THE METAL OXIDE CONTENT OF AN ALKALI LIQUID METAL

William Bateman Hall, Cumberland, England, and Alan Draycott, Tarrumurra, New South Wales, Australia, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Apr. 20, 1959, Ser. No. 807,602
Claims priority, application Great Britain Apr. 25, 1958
5 Claims. (Cl. 23-253)

1. Apparatus for determining the metal oxide content of an alkali liquid metal, said apparatus comprising two channels each containing a barrier having orifices to

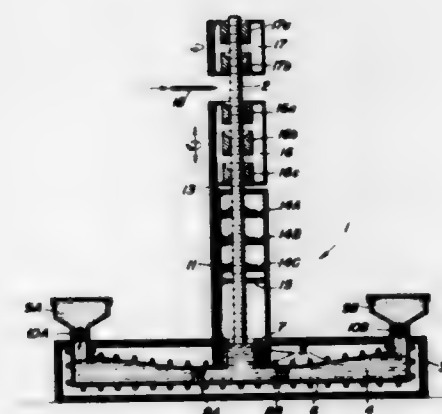
permit liquid metal flow through the barriers, one barrier being of a material resistant to corrosion by the liquid metal containing the metal oxide and the other barrier being of a material resistant to corrosion by the



liquid metal free of oxide but corrosible by the metal containing the metal oxide, means for connecting the channels in parallel between two points of pressure difference in a liquid metal circuit and means for comparing the flowrates through the barriers.

3,002,821 MEANS FOR CONTINUOUS FABRICATION OF GRADED JUNCTION TRANSISTORS

Carl I. Haron, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 22, 1956, Ser. No. 617,330
9 Claims. (Cl. 23-273)



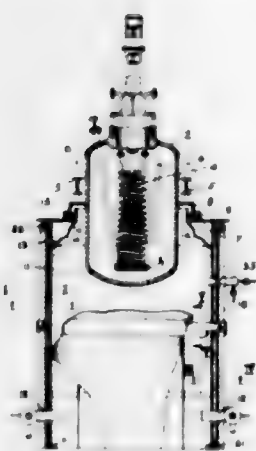
1. In combination, an enclosed means for containing a supply of molten semiconductor material, means for maintaining the supply of semiconductor material molten, means to introduce semiconductor material into the enclosed means, means to withdraw a solidifying mass from the surface of said molten semiconductor material and to remove the solidified mass already withdrawn from the surface of said molten material from the enclosed means while solidifying mass is being withdrawn from the surface of said molten material and sealing means cooperating with the solidified mass at its point of removal from the enclosed means to seal against gas leakage during removal of the solidified mass.

3,002,822

DIRECT-FIRED HEAT KETTLE

Eugene H. Leslie, Ann Arbor, Mich., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Continuation of application Ser. No. 328,308, Dec. 29, 1952. This application Aug. 9, 1956, Ser. No. 603,857
1 Claim. (Cl. 23—290.5)



A direct-fired liquid heating apparatus of the class described comprising a vertical generally cylindrical sheet metal shell defining the interior of a combustion chamber, the shell being of thin gauge sheet metal whereby it has a low heat-retention capacity, a jacket of low bulk density insulation surrounding and encasing the sheet metal shell and also having a low heat-retention capacity whereby the temperature of the shell may be rapidly raised or lowered, a bottom for the shell, a metal cover for the shell, a kettle having a bottom and vertical side walls, the kettle being of less diameter than the shell and being centrally positioned in the cover with its lower end portion projecting through the cover into the interior of the shell below the cover and with its upper portion extending above the cover, there being a concentric annular clearance space between the side walls of the lower portion of the kettle and the interior of the shell whereby the kettle and the shell are symmetrically positioned about the vertical axis of the kettle and in spaced relation to each other, cooperating sealing means on the cover and the kettle for preventing the escape of gas from the combustion chamber between the kettle and the cover, means spaced outwardly from the kettle adjacent the top of the shell for removing combustion gases from the interior of the shell, a luminous flame burner projecting horizontally into the lower part of the combustion chamber at a level between the bottom of the kettle and the bottom of the combustion chamber and wherein the distance from the level of the burner to the bottom of the kettle is such that a straight line may be projected from the vertical center line of the combustion chamber at the burner level upwardly and outwardly tangent to the outside edge of the kettle bottom to the upper part of the combustion chamber and two such lines projected in diametrically-opposite directions from said point will define between them an acute angle with the entire area of the combustion chamber wall above the burner level being exposed to direct radiation from flame in the central area of the combustion chamber at the burner level directly under the central area of the kettle, such level being below that at which the horizontally-projected flame from the burner may contact the kettle, the distance from the bottom of the kettle to the bottom of the combustion chamber being greater than the distance from the bottom of the kettle to the cover to thereby provide an extensive heat-absorbing and re-radiating area below

the kettle, the space between the burner and the kettle being open and unobstructed whereby radiant heat may be transmitted from the luminous flame generated by the burner directly to the bottom of the kettle and also to the inner surface of the metal shell from the top to the bottom thereof and to the bottom of the combustion chamber for reradiation to the shell and to the kettle.

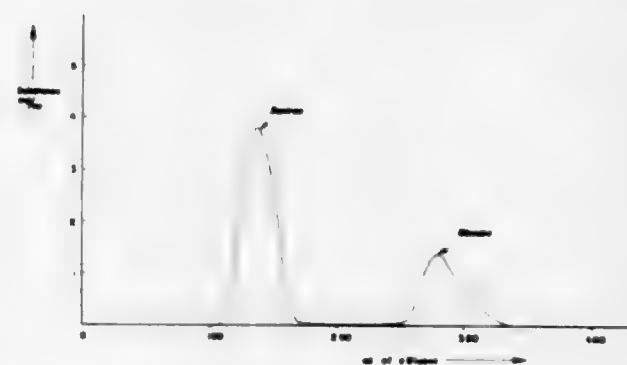
3,002,823

PROCESS OF SEPARATING MATERIALS HAVING DIFFERENT MOLECULAR WEIGHTS AND DIMENSIONS

Per Gustaf Magnus Flodin and Jerker Olof Porath, Uppsala, Sweden, assignors to Aktiebolaget Pharmacia, Uppsala, Sweden, a company of Sweden

Filed Apr. 13, 1959, Ser. No. 805,916

Claims priority, application Sweden Apr. 16, 1958
15 Claims. (Cl. 23—293)



1. A method for separating from one another substances of different molecular dimensions corresponding to a difference in molecular weight of at least 100, which comprises feeding, to a bed of gel grains having an average diameter in the dry state within the range 0.01 to 2.0 mm., immersed in an aqueous medium, an aqueous solution of said substances, the said gel consisting of an uncharged insoluble organic substance inert with regard to the substances to be separated and capable of swelling in aqueous medium, the water regain of the gel being 1–50 g./g. of dry gel material, said gel consisting of a three-dimensional macroscopic network of molecules bonded together by ether bridges of the general type —O—X—O— , wherein X represents an aliphatic radical containing from 3 to 10 carbon atoms, said gel having a content of hydroxyl groups corresponding to at least 12% of the weight of the dry gel, the said aqueous solution being supplied to the bed in a maximum volume corresponding to the volume of water absorbed in the swollen gel grains, the said gel being capable of selectively sorbing substances from the solution, whereby the substances with different molecular sizes are distributed differently between the gel grains and the surrounding solution owing to their different ability to penetrate into the gel grains, dependent on their molecular dimensions, displacing liquid from the bed by the said aqueous solution, thereafter feeding aqueous elution liquid to the bed to displace a further amount of liquid from the bed, regulating the flow through the bed to a maximum rate of 10 cm./min., and collecting successive fractions of the displaced effluent liquid, whereby there is obtained a fraction of the effluent which contains a major portion of substance of larger molecular size, and a subsequent fraction of the effluent which contains a major portion of substance of smaller molecular size which has penetrated into the gel grains and temporarily been physically taken up in the gel grains.

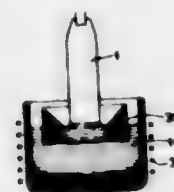
3,002,824

METHOD AND APPARATUS FOR THE MANUFACTURE OF CRYSTALLINE SEMICONDUCTORS

Marcel Pieter Alfons François, Brussels, Belgium, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 18, 1957, Ser. No. 697,046

Claims priority, application Netherlands Nov. 28, 1956
10 Claims. (Cl. 23—391)



10. A method for growing a single crystal in the form of a substantially cylindrical rod from a semiconductive melt, comprising providing in contact with the melt an apertured annular member whose inner diameter is only slightly greater than the rod diameter to be grown and whose outer diameter is at least twice the said rod diameter and having a high radiation coefficient, contacting the melt through the aperture in the annular member with a single crystal, drawing the single crystal upwards through the apertured annular member so that the grown rod just fills the aperture, and maintaining said annular member at a temperature at least equal to that of the melt thereby radiating heat to the just-grown rod portion contiguous with the molten zone, thereby to improve the quality of the resultant single crystal.

3,002,825

FUEL OIL ADDITIVE FOR PREVENTING WEAR IN DIESEL ENGINES AND GAS TURBINES

Robert S. Norris, 26 Valley Road, Larchmont, N.Y.

No Drawing. Filed Sept. 14, 1954, Ser. No. 456,051
2 Claims. (Cl. 44—51)

1. A fuel-oil additive consisting essentially of a water-in-oil emulsion, including a basic calcium sulfonate as an emulsifying agent, the water phase of the emulsion being about a 25% aqueous solution of a water-soluble salt of a metal selected from the class consisting of calcium, barium, and magnesium; the oil phase being a light naphthenic neutral oil present in the amount of about 60% by volume of the total emulsion and the water phase being present in the amount of about 40% of the total emulsion.

3,002,826

FUEL OIL ADDITIVE TO REDUCE CORROSION AND DEPOSITS

Robert S. Norris, 26 Valley Road, Larchmont, N.Y.

No Drawing. Filed Oct. 3, 1955, Ser. No. 538,290
8 Claims. (Cl. 44—51)

1. A viscous water-in-oil fuel oil additive emulsion stable against extreme conditions of temperature and adapted to render vanadium and sulfur compounds in fuel oil relatively innocuous during combustion thereof, the water phase of which consists essentially of a concentrated aqueous solution of a water-soluble salt containing an element selected from the group consisting of aluminum, boron, copper, silicon, and zinc, and as an emulsifying agent a sulfonate of an alkaline earth metal; the oil phase of the said emulsion consisting essentially of a mineral oil, and being present in the amount of about 1 part for each 6 parts of water phase by volume.

3,002,827

FUEL COMPOSITION FOR DIESEL ENGINES

Merrell R. Fenske, State College, Pa., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 29, 1957, Ser. No. 699,443

6 Claims. (Cl. 44—57)

1. A fuel composition for a compression ignition high speed engine comprising a mixture of from about 30 to about 55 weight percent of a low octane petroleum distillate produced as a raffinate from the extraction of a naphtha, said distillate boiling within the range of about 150° to 450° F., from about 25 to about 40 weight percent of polynuclear aromatic hydrocarbon produced as an extract from a petroleum fraction boiling within the range of about 400° to 750° F., and from about 15 to about 30 weight percent of a non-benzenoid hydrocarbon-soluble alcohol having at least 6 carbon atoms and boiling below about 750° F., said fuel having a viscosity of at least 1.2 centistokes at 100° F.

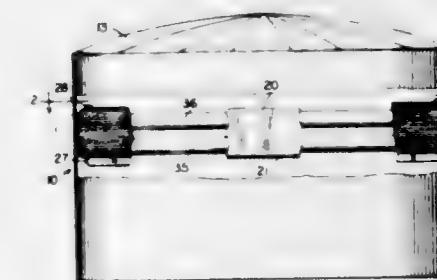
3,002,828

GASHOLDER SEAL

Alexander F. Fino and John M. Swick, Warren, Pa., assignors, by mesne assignments, to Pittsburgh-Des Moines Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 9, 1958, Ser. No. 740,748

7 Claims. (Cl. 48—174)



1. A gas holder having a cylindrical wall, roof, and a bottom wall, a floating cover disposed within said tank adapted to rise and fall in accordance with gas pressure within the tank, said cover being of smaller diameter than the inside of said cylindrical wall to provide an annular space between the periphery of the cover and the tank, a first liquid containing flexible hollow annular member supported by said cover adjacent the lower portion thereof and extending completely therearound, a second liquid containing flexible hollow annular member supported by said cover adjacent the upper portion thereof and spaced from said first hollow member and extending completely therearound, a first flexible annular band having the upper and lower edges thereof connected to said cover and engaging said second hollow member for at least partially supporting said second hollow member and extending completely around said cover, a second flexible annular band having the upper and lower edges thereof connected to said cover and extending completely therearound and engaging said first hollow member for at least partially supporting said first hollow member, said second annular band being spaced from said cover and spanning the space between said first and second hollow members for defining a closed gas chamber therebetween and contacting the inner surface of said cylindrical wall.

3,002,829

JET AND ROCKET FUELS AND PREPARATION THEREOF

John J. Koffenbach, North Plainfield, and Herbert K. Wiese, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 1, 1958, Ser. No. 725,564

10 Claims. (Cl. 52—5)

1. An improved jet fuel consisting essentially of the product obtained by heat soaking for from ½ to 6 hours

3,002,838

METHODS OF TREATING CITRUS FRUIT FOR THE PRODUCTION OF A HIGH PROTEIN STOCK FEED

Patrick L. Hughes, Lakeland, Fla., and Jonathan B. McKay, Bascom, Ohio, assignors to Gavin D. McKay, De Kalb, Ga.

Filed Feb. 27, 1958, Ser. No. 717,917

14 Claims. (Cl. 99-9)

1. The steps in the biochemical treatment of such products as citrus fruit, which consists in reducing and separating the product to a pulp constituent and pressed water constituent, subjecting the pressed water constituent to a fermentation treatment for increasing the protein value thereof, subsequently reducing the solution obtained from the fermentation steps to a molasses state, mixing suitable proportions of the pulp ingredient and molasses, drying the same and obtaining a resultant high protein stock feed.

3,002,839

OLIVE PROCESSING

Jerome H. Levinson, Tujunga, and Anthony V. Willmas, Sierra Madre, Calif., assignors to Lawry's Foods, Inc., Los Angeles, Calif., a corporation of California

No Drawing. Filed Apr. 24, 1959, Ser. No. 808,562

3 Claims. (Cl. 99-204)

1. Method of processing olives comprising steeping the olives in the form of discrete elements in acidified brine having a pH between 2.0 and 4.5 and a salinity of between 20° and 45° salometer for a period of at least eight hours, said brine being composed of a solution of sodium chloride and a food acid selected from the group consisting of citric, acetic, phosphoric and lactic; draining the brine; subjecting the olives to a pressure of from 2,000 to 5,000 pounds per square inch for a period from 2 minutes to 60 minutes, until the water content is reduced to 40-60%; removing the water and oil thus pressed from the olives, breaking up the olive pad formed by the pressing into the discrete elements which were extant before the pressing operation, dehydrating the olives for a period from 1.5 to 2 hours until the water content is reduced to from 2 to 12%, and spraying the olives with an edible, anti-oxidant liquid.

3,002,840

ANTI-TACK COMPOSITION

Rudolf Kern, Neustadt (Weinstrasse), Hans Scheurer, Heidelberg-Schlierbach, and George Ultsch, Munich, Germany, assignors to Rhein-Chemie G.m.b.H., Mannheim-Rheinau, Germany

Filed Feb. 26, 1959, Ser. No. 795,802

14 Claims. (Cl. 106-2)

1. A water-soluble anti-tack composition for preventing adhesion of contacting surfaces at least one of which is of adherent quality, said composition consisting essentially of a mixture of at least one water-soluble salt of a fatty acid having between 8 and 30 carbon atoms, and a mixture of at least two water-soluble salts of carboxymethyl cellulose, said latter mixture consisting of substantially equal proportions of at least one carboxymethyl cellulose salt having a viscosity of between about 15-50 centipoise and at least one carboxymethyl cellulose salt having a viscosity of between about 150-500 centipoise, said salts being mixed in such proportions that the ratio of said fatty acid salt expressed in parts by weight of fatty acid equivalents therein to said combined salts of carboxymethyl cellulose is substantially between 15:1 and 5:3.

3,002,841

DIELECTRIC MATERIALS

Gilbert Goodman, 1099 Mohawk Road, Schenectady, N.Y.

Filed Mar. 16, 1960, Ser. No. 15,500

11 Claims. (Cl. 106-39)

1. A ceramic dielectric composition having a dielectric constant varying only slightly up to about 500° C., said composition being composed essentially of a vitrified combination of ingredients composed essentially of (a) an alkaline earth selected from the group consisting of strontium oxide, barium oxide, calcium oxide, and mixtures thereof, (b) a metallic oxide selected from the class consisting of zirconium oxide, titanium oxide, tin oxide, and mixtures thereof, and (c) tantalum oxide, the metals of the oxides of (a) and (b) being present in such molar ratios that the total molar concentration of said metals ranges from 0.75 to 1.50 of the molar concentration of tantalum in said tantalum oxide.

3,002,842

INFRARED-TRANSMITTING ANTIMONY SULFIDE GLASS

George D. Kelly, Golden, Colo., assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed Sept. 4, 1959, Ser. No. 838,370

7 Claims. (Cl. 106-47)

1. The infrared transparent glass in the system $K_2O-Sb_2O_3-Sb_2S_3$ consisting essentially of a composition within the range limits by weight of from 1 to 10 parts K_2O ; from 2 to 20 parts Sb_2O_3 ; and from 75 to 97 parts Sb_2S_3 .

3,002,843

CONCRETE STRUCTURE

Rudolf Stöcker, Am Waldsaum 55, Essen-Ruhr, Germany

No Drawing. Filed Oct. 1, 1957, Ser. No. 687,347

6 Claims. (Cl. 106-97)

1. A structural element capable of resisting temperatures of at least 1200° C. without change in crystalline structure and being formed of a mixture consisting essentially of about 150 parts by weight of Portland cement, up to one part by weight of calcium chloride and about 615 parts by weight of at least one substance selected from the group consisting of foamed and unfoamed blast furnace slag, about 300 parts by weight of said substance having a particle size of between 0 and 4 mm., about 300 parts by weight of said substance having a particle size of between 3 and 12 mm. and about 15 parts by weight of said substance being finely ground.

3,002,844

PIGMENT PAPER COATING COMPOSITION

Thomas L. Relling, Dedham, Mass., assignor to Robert B. Seth, doing business as Boston Chemical Products Company, Boston, Mass.

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,383

5 Claims. (Cl. 106-129)

1. A paper coating composition which consists essentially of a suspension of a paper pigment and finely subdivided particles of protein in a liquid hydrocarbon-water emulsion, said protein and pigment forming a co-precipitate on the breaking of the emulsion with the particles of protein adhering to the pigment, said suspension consisting essentially of a dispersion of from 5 to 20 parts of an alkali soluble water insoluble protein selected from the group consisting of alpha protein, soya protein and casein and mixtures and equivalents thereof, between 80 and 95 parts of water, between 5 and 60 parts of a liquid hydrocarbon having a flash point between 100° F. and 250° F. and between 10 and 95 parts of a gum pigment mixture where said gum pigment mixture is made up of between

5 and 75 parts of a paper pigment, between 5 and 75 parts of a soluble gum selected from the group consisting of animal glue, methyl cellulose and polyvinyl alcohol and mixtures and equivalents thereof and between 40 and 95 parts of water.

3,002,845

PHthalocyanines PIGMENTS WHICH ARE RESISTANT TO FLOCCULATION AND PROCESS FOR THEIR MANUFACTURE

Kurt Hoelzle, Liestal, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed July 7, 1958, Ser. No. 746,619

Claims priority, application Switzerland July 19, 1957

5 Claims. (Cl. 106-288)

1. A pigment mixture consisting of (A) hydroxymethyl-copper phthalocyanine having 1 to 2 hydroxymethyl groups and (B) copper phthalocyanine in a ratio of 5 to 50% (A) to 95 to 50% (B).

3,002,846

PROCESS FOR THE MANUFACTURE OF INORGANIC PIGMENTS

Helmut Flasch, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed July 2, 1957, Ser. No. 669,631

Claims priority, application Germany July 2, 1956

5 Claims. (Cl. 106-309)

1. In a process for producing inorganic pigments of the group consisting of zinc oxide, zinc sulfide, lithopone, cadmium sulfide, titanium oxide, iron oxide, chromium oxide and cobalt pigments, which inorganic pigments require a grain-ripening treatment of the crude pigment by a heat treatment, the step which consists of suspending said crude pigment in a melt consisting of at least one inorganic compound selected from the group consisting of alkali metal halides, alkaline earth metal halides, caustic alkalis and mixtures thereof, for the required heat treatment at a temperature of between 300 and 800° C. for a period of from 3 minutes to 3 hours.

3,002,847

PROCESS FOR PRODUCING A FINE MESH PATTERN ON A SUBSTRATE

Robert A. Shaffer, Elmira, and Curtis C. Attridge, Horseheads, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force

Filed Sept. 11, 1958, Ser. No. 760,524

5 Claims. (Cl. 117-5.5)



1. The process of applying a positive image of a mesh mask containing an element selected from the magnetically attracted group of iron, nickel, cobalt, manganese, chromium and cerium having interstices to a substrate which is accomplished by contacting a first side of the substrate with the mesh mask which is attracted by a magnetic field, applying a magnetic field to the mesh mask as a means for maintaining the mesh mask against the first side of the substrate, applying a powder selected from the group of iron and nickel attracted by a magnetic field through the interstices in the mesh mask to the first side of the substrate selected from the group of glass, mica, plastic and paper, and in a pattern determined by the interstices in the magnetically attracted mesh mask, removing the mesh mask from the first side

of the substrate by lifting the mesh mask in a normal direction from the powder bearing side of the substrate along with a minimum of powder particles that are attracted thereby with a minimum of distortion of the powder aperture defined pattern retained on the surface of the substrate by the attraction of the magnetic field, causing a vaporized material to adhere to the first side of the substrate and to continuously overlie the powder pattern retained thereon by the attraction of the magnetic field, and reversing the polarity of the magnetic field in applying a repulsion force capable of removing the powder from the first side of the substrate leaving the adhered material bonded to the substrate in a pattern which is a positive image of the mesh mask.

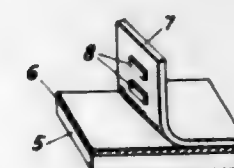
3,002,848

METHOD OF SELECTIVELY COATING SURFACES

Harold A. Clark, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Filed Feb. 4, 1960, Ser. No. 6,690

2 Claims. (Cl. 117-10)



1. A method of selectively coating a solid surface with an organopolysiloxane resin which comprises (1) applying a coating of uncured siloxane resin to said surface, (2) placing a coating having an acid number of at least 1 and consisting essentially of a non-volatile carboxylic acid, against that portion of the siloxane resin coating which it is desired to remove from said surface, (3) heating the coated surface at a temperature below the decomposition temperature of the carboxylic acid to cure that portion of the siloxane resin coating not in contact with the acid coating and (4) removing the uncured siloxane resin and any adhering carboxylic acid coating from said surface with an alcohol solvent whereby the cured silicone coating remains on the desired parts of said surface, said siloxane resin consisting essentially of a monovalent hydrocarbon substituted polysiloxane in which there is an average of from 1 to 1.7 monovalent hydrocarbon groups per silicon, said siloxane containing a curing catalyst selected from the group consisting of quaternary ammonium salt of carboxylic acids, quaternary ammonium hydroxides and quaternary ammonium alkoxides.

3,002,849

METHOD AND APPARATUS FOR FORMING NONWOVEN FABRIC

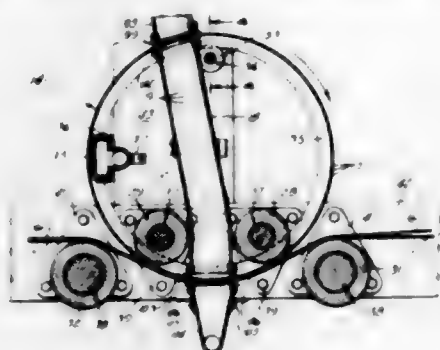
Carlyle Harmon, Longmeadow, Charles H. Plummer, Springfield, and Joseph H. Smith, Amherst, Mass., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts

Filed June 6, 1956, Ser. No. 589,697

13 Claims. (Cl. 117-21)

1. The method of forming a nonwoven fabric from a relatively loosely assembled layer of overlapping and intersecting fibers, which comprises positioning distributing means at one side of the layer, said distributing means having a multiplicity of apertures therethrough, dispersing in a gas macroscopic solid particles of bonding material in a substantially nonadhesive state, passing the gas carrying the particles into the layer in streams arranged in a pattern determined by said apertures, said particles

being filtered from the streams by said fibers in areas of the layer corresponding to said pattern, and activating



ing the particles to render them bond forming and forming bonds with the fibers in said areas.

3,002,850
GRAPHITE FLAKE COATED LOW FRICTION SHEET MATERIAL
William H. Fischer, % Process Engineering Corp., Crystal Lake, Ill.
Filed Aug. 26, 1959, Ser. No. 836,055
7 Claims. (Cl. 117-33)



1. A sheet material having a low friction surface, comprising: a flexible supporting sheet; a thin coating thereon of a flexible, adherent, non-tacky binder containing about 0.75-1.25 parts fine graphite having not more than about 10% retained on a 60 mesh screen and a major portion passing through a 200 mesh screen and about 1-1.5 parts of graphite grains substantially all of which pass through a 35 mesh screen but are substantially entirely retained on a 50 mesh screen; and a surface covering of graphite flakes partially embedded in said coating, all said parts and percentages being by weight.

5. The method of making a sheet material having a low friction surface, comprising: applying to one side of a flexible supporting sheet a mixture comprising a liquid coating of a binder containing about 0.75-1.25 parts fine graphite having not more than about 10% retained on a 60 mesh screen and a major portion passing through a 200 mesh screen, and about 1-1.5 parts of graphite grains substantially all of which pass through a 35 mesh screen and are retained on a 50 mesh screen; applying to said coating while wet a covering of graphite flakes in an amount that is substantially the maximum that will adhere thereto; and drying said coating.

3,002,851
PHOTOSENSITIZED TRANSPARENT ELEMENT
Jack L. Sorkin, Cleveland Heights, and Ronald C. Vickery, Novelty, Ohio, assignors to Horizons Incorporated, Princeton, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 28, 1957, Ser. No. 649,009
2 Claims. (Cl. 117-34)

1. A method of forming a transparent photosensitized element of rigid vinyl plastic material selected from the group consisting of polyvinyl acetate, polyvinyl chloride and polystyrene which comprises: applying a solution of a photosensitive diazo coating to a solid transparent base composed of said vinyl plastic and thereafter concurrently subjecting the coated base to a temperature between about 100° C. and 150° C., and a pressure of at least 500 p.s.i., for a time sufficient to permit the diazo coating material to migrate into the body of the base material but not sufficient to destroy the photosensitivity of said diazo coating material.

3,002,852
METHOD OF FORMING TANTALUM SILICIDES ON TANTALUM SURFACES

Melvin G. Bowman and Nerses H. Krikorian, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed July 18, 1960, Ser. No. 43,697
2 Claims. (Cl. 117-106)

1. The process of coating a tantalum surface with a coating of tantalum silicides consisting essentially of heating triphenyl silicide under vacuum in contact with said tantalum surface to a temperature sufficient to dissociate said triphenyl silicide into its elemental components, said temperature being less than the melting point of said triphenyl silicide.

3,002,853
COATING COMPOUNDS
Gustaf Bristol Heijmer, Vastra Lannagen 35, Enebyberg, Sweden
No Drawing. Filed Dec. 7, 1959, Ser. No. 857,560
7 Claims. (Cl. 117-111)

6. The process of producing on cement surfaces a coating resistant to attack by substances contained in the cement, which consists of applying to said surface a composition containing: (1) pulverulent water-insoluble inorganic material of sizes graded below about 0.3 millimeter, (2) from 5% to less than 50% of coarser particles of inorganic filler material, said particles being of sizes graded so that the smallest of said particles are at least 0.1 millimeter larger than the largest of the particles of said pulverulent material, and (3) a liquid vehicle of a film-forming material in an amount to form a spreadable mixture; said coating being applied by spreading the same on said surface by a flat-surfaced cork-faced instrument so that said coarser particles act to space said flat cork face from said surface and define the thickness of the spread film.

3,002,854
TREATMENT WITH TITANIUM ORGANIC COMPOSITIONS
Harold C. Brill, Cranford, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 12, 1957, Ser. No. 652,376
7 Claims. (Cl. 117-121)

1. A process of treating a solid surface which comprises applying to the surface a stable, dilute aqueous solution containing about 1/4% to 20% by weight of a reaction product obtained by reacting in the ratio of 1 to 4 mols of acetylacetone with 1 mol of an alkyl titanate having 2-4 carbon atoms in the alkyl group, and after applying said solution, evaporating the liquid therefrom.

3,002,855
METHOD AND COMPOSITION FOR COMBATING SLAG FORMATION ON REFRACTORY SURFACES
James H. Phillips, Western Springs, Donald R. Anderson, Downers Grove, and Franz P. Manlik, Chicago, Ill., assignors to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Feb. 1, 1957, Ser. No. 637,629
14 Claims. (Cl. 117-123)

1. The method for combating slag formation on refractory surfaces exposed to hot gases from which slag-forming materials deposit thereon, which comprises providing on said surfaces a coat of a composition containing 1 part by weight of a non-slugging salt of a metal of the group consisting of chromium and aluminum, and 3-10 parts by weight of aluminum oxide, and contacting the coated refractory surfaces with said hot gases from which slag-forming materials deposit.

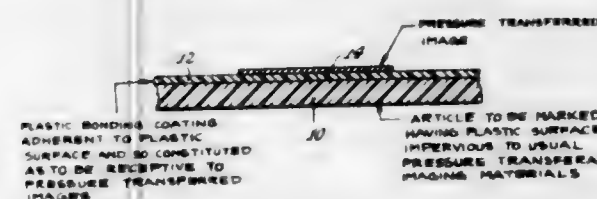
3,002,856
MIRROR
Konrad H. Marcus and John Fenlon Donnelly, Holland, Mich., assignors to Donnelly Mirrors, Inc., Holland, Mich., a corporation of Michigan
No Drawing. Filed Oct. 22, 1958, Ser. No. 768,833
5 Claims. (Cl. 117-124)

5. A process for treating a glass surface to render the same soil resistant, which comprises: cleaning said surface; air drying said surface to a substantially liquid-free condition; contacting said surface with an aqueous solution consisting essentially of about three thousand to about fifteen thousand parts by weight of water and one part by weight of a monomeric silane of the formula $RSi(OCH_2CH_2N(CH_3)_2HY)_3$ wherein R is selected from the group consisting of alkyl radicals and the hydrogen atom and Y is of the group consisting of chlorine atoms and acyloxy radicals of less than 4 carbon atoms; removing excess solution from said face; and thereafter drying said face.

3,002,857
HIGH TEMPERATURE INORGANIC BINDER AND PRODUCTS PRODUCED WITH SAME
Joseph P. Stalego, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware
No Drawing. Filed Nov. 14, 1955, Ser. No. 546,791
7 Claims. (Cl. 117-126)

1. Glass fibers and a binder on the glass fiber surfaces consisting essentially of the product of the thermal reaction on the glass fiber surfaces between elements which are present in the glass composition of which the fibers are formed, sodium silicate and a compound selected from the group consisting of boric acid, a borate and an acid salt of boric acid, in which the materials are present in the ratio of 1 part by weight of sodium silicate to 0.5 to 10 parts by weight of the compound.

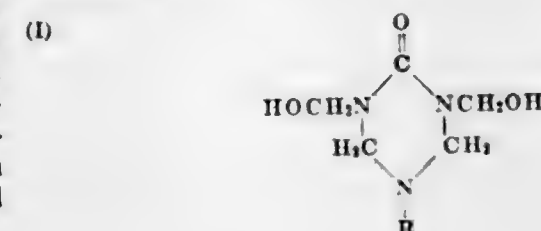
3,002,858
INK RECEPTIVE COATING COMPOSITION
Douglas A. Newman, Glen Cove, and Allan T. Schlottzhauser, Locust Valley, N.Y., assignors to Columbia Ribbon & Carbon Manufacturing Company, Inc., Glen Cove, N.Y., a corporation of New York
Filed May 10, 1955, Ser. No. 507,502
2 Claims. (Cl. 117-138.8)



1. A new article of manufacture for receiving and retaining thereon a pressure-inscribed ink composition, said article comprising a substantially impermeable plastic foundation sheet the surface of which has poor retentive properties for said ink composition, and a transparent, honeycombed, spongelike, porous coating on the surface of said sheet which is miscible with said ink composition and has an adherent affinity for said foundation sheet and said ink composition, said coating comprising the residue of a coating composition including a film-forming water-insoluble plastic and a liquid medium comprising two mutually dispersible volatile fractions, one of said fractions being a solvent for said plastic and having a rapid evaporating rate, and the other fraction being substantially a non-solvent for said plastic and having a substantially lower evaporating rate, said residue being formed by evaporating said liquid medium from said coating composition.

3,002,859
COMPOSITIONS, TEXTILES TREATED THEREWITH AND PROCESSES FOR THE TREATMENT THEREOF
Melvin D. Hurwitz, Southampton, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed July 9, 1959, Ser. No. 825,885
14 Claims. (Cl. 117-143)

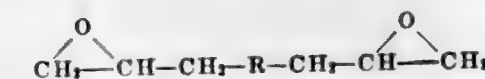
1. A composition comprising an aqueous solution of a mixture of 25 to 75 mole percent of a compound of Formula I:



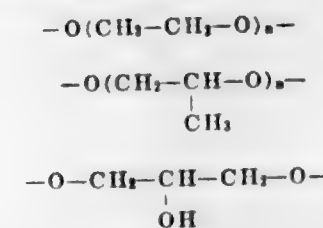
where R is selected from the group consisting of 2-hydroxyethyl, 2-methyl-2-hydroxyethyl, and alkyl groups having 1 to 4 carbon atoms, and 75 to 25 mole percent respectively of a water-soluble condensate of formaldehyde with N,N'-trimethyleneurea.

3,002,860
PAPER SIZED WITH NITREOUS SALT OF MALEIC ANHYDRIDE-STYRENE COPOLYMER AND EPOXY RESIN MIXTURE
Charles F. Bishop and Oscar P. Cohen, Longmeadow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Apr. 16, 1959, Ser. No. 806,783
4 Claims. (Cl. 117-155)

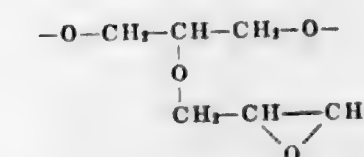
1. The method which comprises wetting paper with a dilute aqueous solution containing 75-95 parts by weight of a volatile nitrogenous base salt of a maleic copolymer and, correspondingly, 25-5 parts by weight of a water-soluble polyglycidyl ether of a polyhydric alcohol and subsequently drying said paper at a temperature of at least about 190° F.; said maleic copolymer being an essentially equimolar copolymer of a monovinylidene aromatic hydrocarbon monomer of the group consisting of styrene, ar-substituted alkylstyrenes and mixtures thereof and a maleic monomer of the group consisting of maleic anhydride, maleic acid, half alkyl esters of maleic acid in which the alkyl group contains 1-8 carbon atoms, and mixtures thereof; said water-soluble polyglycidyl ether of a polyhydric alcohol conforming to the formula:



where R is a radical of the group



and



and n in the above radicals has a value of 1-2.

3,002,861 METHOD OF PRODUCING A COATING OF BARIUM TITANATE

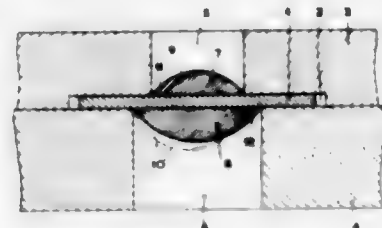
Lydia A. Suchoff, Shrewsbury, N.J., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed June 7, 1957, Ser. No. 664,443
1 Claim. (Cl. 117-169)

(Granted under Title 35, U.S. Code (1952), sec. 266)

A method of forming a strongly adherent, extremely thin and uniform film of barium titanate of high dielectric constant upon a surface consisting essentially of mixing a barium alcoholate selected from the group of barium methyle, barium ethyle, barium propyle and barium isopropyle with a titanium alcoholate selected from the group of titanium ethyle, titanium propyle and titanium isopropyle, in an organic solvent of a low boiling point to obtain a film-forming solution containing about 4% by weight of barium and titanium ions, applying a thin layer of said diluted solution upon the surface to be coated and drying off the organic solvent by heating at a temperature of about 120° C. whereby a strongly adherent film of barium titanate is formed in situ upon the surface to be coated.

element of one of the contact materials and the body and is heated at a temperature at which the contact material melts and alloys to the body forming a recrystallized region whose conductivity is determined by the contact material, the improvement comprising first heating the



semiconductive body before the contact material is contacted thereto in air to a temperature between 200° C. and 500° C. to oxidize the surface thereof, and thereafter contacting the oxidized surface with the contact material and carrying out the alloying process as above defined.

3,002,862 INORGANIC COMPOSITIONS AND METHOD OF MAKING THE SAME

Robert Smith-Johannsen, Niskayuna, N.Y., assignor to Chemelex, Inc., Niskayuna, N.Y., a corporation of New York

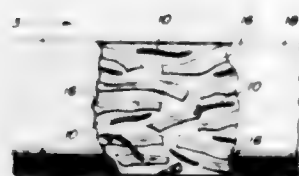
No Drawing. Filed Aug. 24, 1955, Ser. No. 530,419
12 Claims. (Cl. 117-226)

1. An electrically conductive composition consisting essentially of graphite dispersed throughout clay particles coated with a layer of collapsed dense silica, said graphite being present in said composition in a sufficient amount to render the composition electrically conductive.

3,002,863 SMOKING TOBACCO MIXTURE AND METHOD OF MAKING

Richard J. Shaw, 3241 N. El Tovar, Tucson, Ariz.
Filed June 20, 1960, Ser. No. 37,135

17 Claims. (Cl. 131-17)



1. A smoking mixture comprising a plurality of pieces of tobacco, and a plurality of adsorbing elements disposed in the spaces between said tobacco pieces, each said adsorbing element including a heat-resistant fiber core and a coating of activated carbon around said core.

3,002,864 METHOD OF MANUFACTURING SEMI- CONDUCTOR DEVICES

Johannes Jacobus Amerus Ploos van Amstel, Eindhoven, Netherlands, assignor to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,852
Claims priority, application Netherlands Sept. 5, 1958
2 Claims. (Cl. 148-1.5)

1. In the method of alloying a contact to a germanium semiconductive body wherein the contact material is placed in contact with the semiconductive body in the presence of a flux capable of forming the halide of an

3,002,865 METHOD OF STRENGTHENING THE SURFACE OF METALLIC SPRINGS BY WARM WORKING

William R. Johnson, Bristol, Conn., assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware

No Drawing. Filed Oct. 30, 1958, Ser. No. 770,575
10 Claims. (Cl. 148-12)

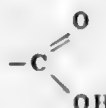
1. The method of surface strengthening a spring which comprises the steps of forming the spring to shape, treating the spring as by heat treatment or cold working to impart thereto the principal part of the desired physical properties of the metal from which the spring is formed, heating the spring to a temperature above room temperature and just below the softening temperature of the metal of which the spring is formed, and while maintaining the spring at such temperature subjecting it to surface mechanical working which does not produce any substantial change in its shape or size.

3,002,866 INKING ROLL

Robert D. Gartrell, Ridgewood, and Robert A. Gregg, Passaic, N.J., and Richard J. Farrell, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 15, 1956, Ser. No. 584,875
4 Claims. (Cl. 154-43)

3. An inking roll covered with a layer of non-porous polyurethane material comprised of the reaction product of an alkyd polyester having an average number of reactive alcoholic hydroxyl groups greater than 2.0 per molecule, said alkyd polyester being prepared from an esterification reaction mix containing predominantly a dihydric alcohol and a dicarboxylic acid in admixture with a lesser quantity of a polyfunctional compound selected from the group consisting of a polyhydric alcohol having more than two reactive —OH groups and a polycarboxylic acid having more than two



groups, with an organic diisocyanate having a melting point below 150° C., the ratio of isocyanate to hydroxyl groups not exceeding 1.0, said polyurethane material having a Shore "A" value of from 5 to 35 and being free from plasticizer for the polyurethane.

3,002,867 LAMINATES

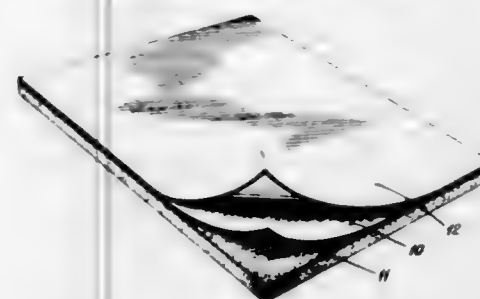
Jacques Schmidt and Pierre Schmidt, both of Strasbourg-Robertsau, France, assignors to Societe anonyme dite: Papeteries de la Robertsau, Strasbourg-Robertsau, Bas-Rhin, France, a French society

No Drawing. Filed July 19, 1957, Ser. No. 672,884
Claims priority, application France July 23, 1956
6 Claims. (Cl. 154-45.9)

1. A laminate article which comprises a base element, an ornamental sheet element bonded to the base, and an overlay element bonded over said ornamental sheet element, said overlay element comprising a thin element of craped sheet material having a settable resin impregnating the creases thereof.

3,002,868 SPONGE BACK FLOOR COVERING

Horace Boivin, Granby, Quebec, Canada
Filed Mar. 2, 1959, Ser. No. 796,338
2 Claims. (Cl. 154-49)



2. A floor covering comprising: a sheet of reinforcing tightly woven glass thread fabric united, on one face thereof, to a backing layer of sponge rubber and adhering, on the other face thereof to a facing layer of polyvinyl chloride.

3,002,869 GLASS FIBRE PREFORMS

Robert R. Hough and Roland Barone, Middlebury, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 12, 1957, Ser. No. 645,395
4 Claims. (Cl. 154-43)

3. The process which comprises forming a random glass fibre mat partially impregnated with a composition comprising an emulsion of the oil-in-water type containing from 20 to 50 parts of a diallyl phthalate prepolymer consisting of homopolymerized diallyl phthalate which is essentially a curable non-cross-linked linear polymer having allylic unsaturation, correspondingly from 70 to 40 parts of diallyl phthalate monomer, and from 5 to 10 parts of a nonionic emulsifying agent, in admixture with a catalyst and water, heating the resulting mat to cure the resinous binder and remove excess water, the amount of said composition being such that the resulting mat contains 5-15% binder and is open and receptive to impregnation, subsequently impregnating the resulting mat with a strength-imparting curable polyester-cross-linker resin of different character than the binder contained therein, the cross-linker in said polyester-cross-linker resin being selected from the group consisting of styrene, vinyltoluene, alpha-methylstyrene, diallyl phthalate, triallyl cyanurate, the diallyl ester of carbic anhydride, methyl methacrylate, and mixtures of these monomers, and curing said last-named resin.

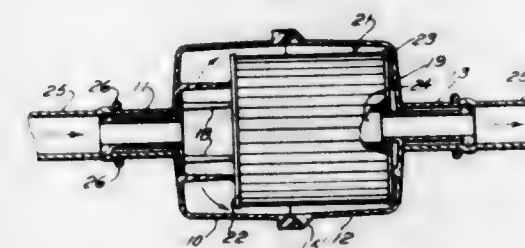
3,002,870 LIQUID FILTERS

Leo Belgarde, Pawtucket, Daniel Fairchild, Providence, and Martin Mahdesyan, Pawtucket, R.I., assignors to Fram Corporation, East Providence, R.I., a corporation of Rhode Island

Filed Sept. 27, 1960, Ser. No. 58,746
2 Claims. (Cl. 156-70)

1. The method of making a liquid filter, comprising a filter element housed in a transparent shell having an in-

let and outlet, wherein the shell is formed of two transparent molded nylon cups, one of which has flexible integral fingers projecting inwardly from its bottom and the meeting rim edges of the cups are bonded together, which comprises forming a filter element closed at one end by a cap having a hard, smooth outer surface and at the other

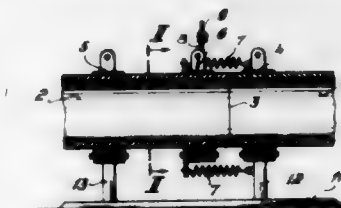


end by a cap that has a central opening, placing the cups together with their edges meeting and with the filter element held in place in the shell by the engagement of the fingers with said smooth surface, and rotating one cup relatively to the other under pressure while the fingers slide on said surface, to frictionally heat the cup edges sufficiently to soften the nylon and bond the cup together.

3,002,871 WELDING THERMOPLASTIC BODIES TOGETHER

Heinrich Tramm, Mulheim-Speldorf, and Franz Schaub and Heinz Rudolf Rüggeberg, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany

Filed Sept. 16, 1957, Ser. No. 684,156
Claims priority, application Germany Sept. 22, 1956
9 Claims. (Cl. 156-73)



1. In the process for welding together pipe sections of thermoplastic materials by means of frictional heat, produced at the surfaces to be joined together by oscillatory motion, the improvement which comprises maintaining the corresponding end portions of the pipe sections to be joined in axial alignment and frictional contact, stationarily securing the end portion of one of said pipe sections for oscillatory motion with respect to the remaining portion of the same pipe section while securing said remaining portion against movement, and producing at least that amount of frictional heat required to effect the welding together of the pipe sections by oscillating the pipe section end portion mounted for oscillatory motion with a rotary oscillatory motion in frictional contact with the stationarily secured pipe section end portion.

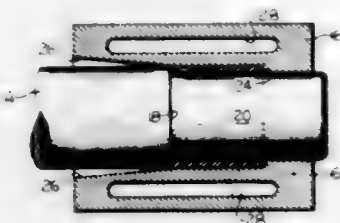
3,002,872 RADIALLY COMPRESSED TEXTILE YARN CARRIER AND METHOD OF FORMING SAME

Charles K. Dunlap, Sr., Charles K. Dunlap, Jr., and Baynard R. Whaley, Hartsville, S.C., assignors to Sonoco Products Company, a corporation of South Carolina

Filed Nov. 14, 1956, Ser. No. 622,130
1 Claim. (Cl. 156-194)

A method of forming a textile yarn carrier comprising the steps of, forming a tubular, thermosetting resin impregnated preform of wound fibrous sheet material, compressing said preform axially to reduce its length a selected

amount as much as one-third smaller than its original length before compression, simultaneously compressing said preform radially throughout its entire peripheral surface to reduce the wall thickness of the preform uniformly throughout and to a predetermined degree to there-



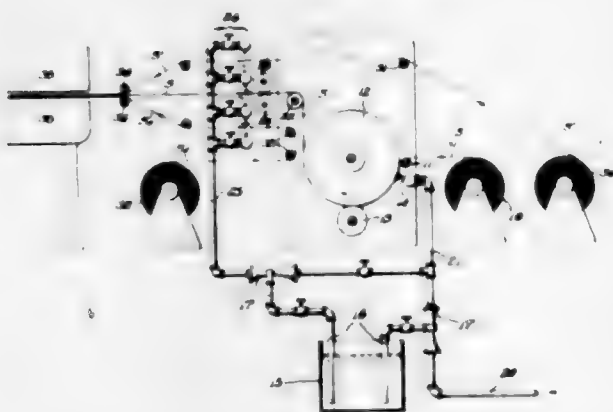
by produce a carrier of uniform density and wall thickness with an interrelated predetermined beam strength and flat crush strength, and simultaneously applying heat to said preform during said compression steps to activate said resin.

3,002,873

METHOD OF TREATING, CORRUGATING AND LAMINATING A FLEXIBLE ABSORBENT SHEET MATERIAL

James H. Pickren, P.O. Box 6466, Jacksonville, Fla., assignor of one-half to Samuel A. Hooker, Martinsville, Va.

Filed Sept. 24, 1957, Ser. No. 685,964
2 Claims. (Cl. 156-205)



1. In a method of treating an elongated piece of fiber-board from a plurality of flexible absorbent sheets of cellulosic material, the steps which comprise continuously moving one of said sheets over a generally cylindrical supporting surface having a corrugated formation, providing a liquid treating bath containing an aqueous unreacted mixture of (1) a substance of the group consisting of urea and gelatin and (2) formaldehyde, said composition being kept at a pH between 2.2 and 4.5 when said substance is gelatin and between about 4.0 and 6.8 when said substance is urea, whereby said substance and formaldehyde remain unreacted in the presence of water; flowing a stream of steam past said bath and constricting the flow of steam to create a venturi effect therein; withdrawing mixture from said bath and uniformly entraining same in said steam flow by means of said venturi effect, the amount of composition withdrawn from said bath and entrained in said steam being automatically regulated by the amount of steam passing through said constricted flow; directing a jet of steam containing said mixture against said sheet while said sheet is supported by said corrugated surface, said steam being under pressure and flowing at a high velocity against the surface of said sheet, whereby the sheet is impregnated with a substantially uniform essentially unreacted mixture of said substance and formaldehyde, continuously adhering substantially flat sheets to opposite sides of the sheet contacted by said steam, substance and formaldehyde, and then heating said sheet to dry same and continuing said heating in the dry condition to cause

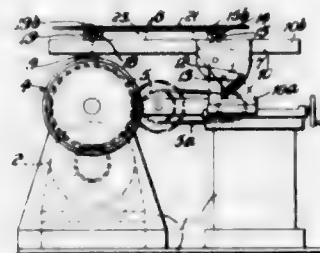
a condensation reaction of said substance and formaldehyde to form a resin in situ uniformly dispersed in said sheet.

3,002,874

APPARATUS FOR THE MANUFACTURE OF PNEUMATIC TYRES

Jack Milner Lowe, Sutton Coldfield, England, assignor, by mesne assignments, to Dunlop Tire and Rubber Corporation, Buffalo, N.Y., a corporation of New York

Filed Jan. 23, 1956, Ser. No. 560,648
Claims priority, application Great Britain Feb. 1, 1955
15 Claims. (Cl. 156-397)



1. Apparatus for winding pneumatic tyre reinforcing bands comprising a former having an outer peripheral winding surface, means for continuously rotating the former, a guide pulley for the material to be wound comprising means for guiding cord between the former and the periphery of said guide pulley, means for urging the guide pulley into contact with the winding surface, and reciprocable means connected to the guide pulley for moving it transversely from side to side repeatedly during each revolution of the drum over the winding surface at a rate relative to the rate of rotation of the former in order to form the said reinforcement band.

3,002,875

APPARATUS FOR BUILDING PNEUMATIC TIRES

Henry William Trevaskis, Point Pleasant, Blackdown, near Leamington Spa, England, assignor, by mesne assignments, to Dunlop Tire and Rubber Corporation, Buffalo, N.Y., a corporation of New York

Filed Feb. 17, 1958, Ser. No. 715,684
Claims priority, application Great Britain Feb. 20, 1957
6 Claims. (Cl. 156-417)



1. An expansible tire building drum comprising a wedge member, a resilient sleeve surrounding the wedge member having an inner surface shaped to conform with the outer surface of the wedge member, the wedge member being slidable axially into and out of the sleeve so as alternately to cause the sleeve uniformly to expand and to allow it to contract, and means for relatively moving the sleeve and wedge member to move the wedge member into and out of the sleeve.

3,002,876

APPARATUS FOR CORRUGATING PAPER IN A DIRECTION PARALLEL TO THE LENGTH OF THE SHEET

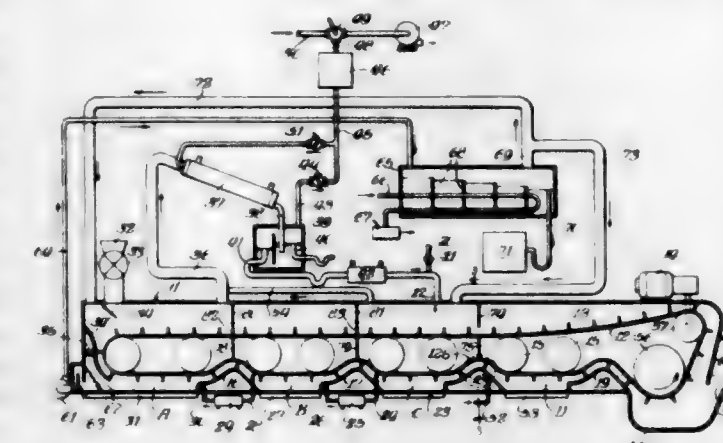
Gildo Rosati, Via Federico Cesi 30, Rome, Italy

Filed Oct. 18, 1956, Ser. No. 616,714
Claims priority, application Italy Oct. 22, 1955
3 Claims. (Cl. 156-594)

1. A device for corrugating paper, comprising two parallel upper side frames, two lower side frames parallel

to said upper side frames, a plurality of rollers mounted upon said upper side frames, a plurality of rollers mounted upon said lower side frames, the rollers mounted upon said upper side frames being located directly above the rollers mounted upon said lower side frames to form pairs of cooperating rollers extending in spaced relation and in parallel planes between an inlet end of said side frames and an outlet end thereof, each of the rollers belonging to the pair of rollers located closest to said inlet end having three centrally located adjacent circumferential grooves, the grooves of one roller being located directly above the grooves of the other roller, each of the rollers belonging to a pair of rollers located closer to said outlet end than a preceding pair of rollers having a number of grooves which is twice the number of grooves of said preceding pair of rollers, the grooves of all of said rollers being uniformly disposed and lo-

liquid in each chamber, and means for collecting solvent-water azeotrope vapor arising from said chambers and



condensing it and returning the condensed solvent to the solvent chambers.

3,002,878

COMPRESSED CELLULOSIC PRODUCT AND METHOD OF MAKING SAME

Harry K. Linzell, Forest Hills, N.Y. (425 Cherry St., Elizabeth, N.J.), and William R. Taylor, 41 Sandra Circle, Westfield, N.J.

No Drawing. Filed Dec. 9, 1957, Ser. No. 701,294
9 Claims. (Cl. 162-124)

4. The process of producing a homogeneous hardboard product in thicknesses greater than one-half of an inch, which comprises producing partially dried lignocellulosic sheets, bonding two or more of such sheets by the use of a bonding agent in forming a laminated mat, then pre-heating the mat in a dielectric heater to a temperature of 400° F. to 430° F., and then applying pressure and heat at sufficient temperature to the laminated mat to form a dense end product having smooth opposed surfaces.

3,002,879

SOUND DAMPENING FELT

Eugene E. Johnston, Lockport, N.Y., assignor to The Patent and Licensing Corporation, New York, N.Y., a corporation of Massachusetts

No Drawing. Filed Dec. 20, 1956, Ser. No. 629,441
4 Claims. (Cl. 162-135)

1. A process for producing an improved sound dampening felt adapted to be adhered to the surface of a vibratory object for dampening the vibrations thereof, comprising the step of adding finely divided non-fibrous inorganic filler in the form of a slip during the felt formation, said filler initially comprising from 50%-100% by weight of the dry fiber content of the stock in order that the dried felt may contain 20-33% by weight of the filler and saturating the felt after drying with a bituminous saturant.

3,002,880

MANUFACTURE OF PAPER

Endre Schönberg, Velp, and Leendert van Amendelft, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Nov. 12, 1958, Ser. No. 773,193
Claims priority, application Netherlands Nov. 20, 1957
1 Claim. (Cl. 162-157)

A process for producing short fibers of uniform length suitable for use in the manufacture of paper comprising the steps of combining a plurality of continuous filaments in parallel relationship into a cable measuring about 10 cm. in diameter, compressing said cable into an elongated stiff bundle by passing the combined filaments through an elastic funnel-shaped member, wrapping the bundle of filaments while compressed with a



cated in parallel planes, a power roller carried by said upper side frames at said outlet end, another power roller carried by said lower side frames at said outlet end and below the first-mentioned power roller, said power rollers having grooves aligned with the grooves of said rollers, and endless belts extending between said rollers and said power rollers, each of said belts extending circumferentially over a separate groove of one of said power rollers and a separate groove of one of said rollers, the belt extending circumferentially over a groove of one of said rollers being located opposite a free groove of the other roller belonging to the same pair of rollers, said free groove being devoid of engagement with a belt, belts extending over grooves of the same pair of rollers being located one next to each other to form a corrugating space for a paper sheet, whereby the corrugation of said sheet in said corrugating spaces proceeds gradually and uniformly from said inlet end toward said outlet end.

3,002,877

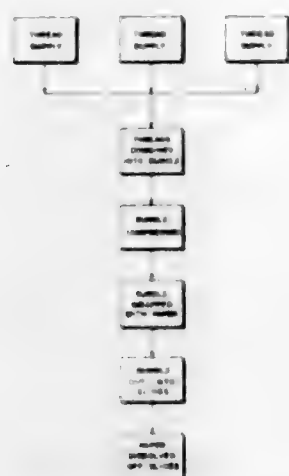
MANUFACTURE OF PAPER PULP

Dan McDonald, Oswego, Ill., assignor to Leona S. Jones, St. Louis, Mo.

Filed Feb. 27, 1959, Ser. No. 796,172
10 Claims. (Cl. 162-74)

1. In a wood pulp treatment apparatus, a series of solvent chambers and a digester liquor chamber, belt conveyor means arranged for continuously moving wood chips successively through the solvent chambers and into the liquor chamber and holding them submerged below the liquid level in each chamber, means cooperating with the conveyor means for draining liquid from the chips as they are advanced by the conveyor means from one chamber to the next, means for supplying heat to the

strip of paper having adhesive thereon to preserve the stiff bundle formation, repeatedly cutting the bundle of filaments in a direction perpendicular to the axis there-



of into uniform slices from 2 to 5 mm. in thickness, and collecting the slices in water to disintegrate the paper layer and liberate the fibers contained therein.

3,002,881

METHOD OF INCREASING THE WET STRENGTH OF CELLULOSIC MATERIAL AND ARTICLE FORMED THEREBY

Basil McDonnell and Harry Edward Jackson, both of Rosland, British Columbia, Canada, assignors to The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a company of Canada
No Drawing. Filed Nov. 9, 1956, Ser. No. 621,208
7 Claims. (Cl. 162-166)

1. In a process for increasing the wet strength properties of fibrous cellulosic material, the improvement which comprises the step of treating said fibrous cellulosic material with a combination composed of water soluble guanidine-formaldehyde resin and a hydrocolloid, the formaldehyde being present in said resin in the ratio of at least about 2 mols per mol of guanidine, said resin being provided in amount of at least about 0.1% by weight based on the dry weight of the fibrous cellulosic material, and said hydrocolloid being provided in amount of at least about 0.02% by weight based on the dry weight of the fibrous cellulosic material.

3,002,882

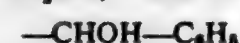
SYSTEMICALLY WORKING AGENT FOR COMBATING MICRO-ORGANISMS

Olga Marie van Andel, Wageningen, Netherlands, assignor to Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek, The Hague, Netherlands, a corporation of the Netherlands
No Drawing. Filed July 23, 1959, Ser. No. 828,947
Claims priority, application Netherlands July 28, 1958
17 Claims. (Cl. 167-22)

1. A method for protecting plants against internal infection which comprises contacting said plants with a composition comprised of between 0.01% and 1.0% by weight of an amino acid having the formula



wherein R is selected from the group consisting of hydrogen, $-CH_3$, $-CH_2OH$, $-CHOH-CH_3$, and



and between 10 and 500 parts per million of an organic fungicide selected from the group consisting of sodium dimethyl dithiocarbamate, tetramethyl thiuram monosulfide, tetramethyl thiuram disulfide, 2,3-dichloro-naphthoquinone, N-(trichloromethylthio)-tetrahydro-phthalimide

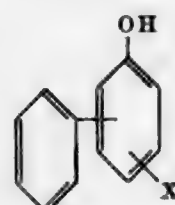
and S - (carboxymethyl)-N,N-dimethyl-dithiocarbamate and an inert carrier, whereby the composition is absorbed and protects the plant from internal infection.

3,002,883

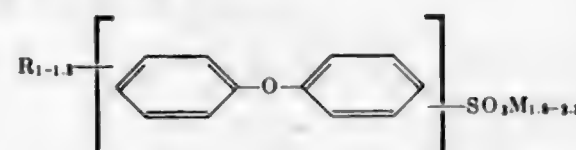
DISINFECTANT COMPOSITIONS

Frederick J. Butt, Midland, and Clarence L. Moyle, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 29, 1959, Ser. No. 830,184
3 Claims. (Cl. 167-31)

1. A liquid concentrate detergent-disinfectant composition comprising an aqueous solution of a phenylphenol having the formula



wherein X is selected from the group consisting of hydrogen and chloro and its water-soluble salts, said solution containing at least 1 percent by weight of said phenylphenol maintained in solution by an anionic dispersing agent of the general formula



wherein R is an alkyl radical containing from 9 to 15 carbon atoms, inclusive, and M is selected from a group consisting of alkali metal and ammonium.

3,002,884

HORTICULTURAL PROCESS WITH N-HALOMETHYL-1,2-BENZISOTHIAZOLIN-3-ONE-1,1-DIOXIDES FOR CONTROLLING FUNGUS DISEASES

Chien-Pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,433
2 Claims. (Cl. 167-33)

1. A process for controlling fungus diseases of growing plants which comprises applying to plants an N-halomethyl-1,3-benzisothiazolin-3-one-1,1-dioxide in which the halogen of the halomethyl group has an atomic weight of at least 35.

3,002,885

RED SQUILL TRACKING POWDERS

Morton Schwarcz, Berkeley Heights, N.J., assignor to Roberts Development Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,722
4 Claims. (Cl. 167-46)

1. The method of controlling a house mouse infestation comprising distributing over a surface traversed by said house mice a composition comprising a finely divided siliceous support impregnated with red squill extractives, the LD₅₀ against rats, of said composition being not greater than 750 mg./kg. body weight.

3,002,886

BETAINE SALICYLATES AND THE METHOD FOR THEIR PREPARATION

Alfred Halpern, Great Neck, N.Y., assignor to Synergistics, Inc., New York, N.Y., a corporation of New York
Filed Mar. 3, 1958, Ser. No. 718,543
9 Claims. (Cl. 167-65)

2. The method of elevating blood salicylate levels which consists of administering betaine salicylate.

3,002,887

METHOD OF PURIFYING A DIALYZABLE LIPID MOBILIZER CONTAINED IN BLOOD

Friedrich Wilhelm Zilliken, Springfield, Pa., assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 11, 1958, Ser. No. 741,229
7 Claims. (Cl. 167-74)

1. The method of purifying the lipid mobilizer contained in the dialyze of blood plasma obtained from the blood of non-specifically stressed mammals by dialysis against water in the absence of an organic solvent which comprises: adding to an aqueous solution of the dialyzed solute at a pH of 3.5-4.0 in successive portions a water-soluble lower-aliphatic alcohol, removing the precipitate formed on each addition of alcohol, biologically testing for enhanced lipid-mobilizing activity a sample of each precipitate, and recovering the precipitate showing such enhanced activity.

3,002,888

LIPID-MOBILIZING COMPOSITION

Joseph Seifter, Berwyn, and David H. Baeder, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 11, 1958, Ser. No. 741,230
10 Claims. (Cl. 167-74)

1. The method of preparing a lipid-mobilizing composition having the property when injected of mobilizing fat into the blood stream which comprises: subjecting a mammal to non-specific stress such as to cause hyperactivity of the posterior pituitary gland, thereafter removing blood from said stressed animal, separating the plasma from the whole blood, dialyzing the plasma through a semi-permeable membrane against water in the absence of an organic solvent, and freeze-drying the dialyze.

7. A composition suitable for parenteral injection when dissolved in water and having the property of mobilizing fat from the fat depots into the blood stream of injected animals, said composition being the dialyze obtained by dialysis against water, in the absence of an organic solvent, of the blood plasma of non-specifically stressed mammals, the stress being such as to cause hyperactivity of the posterior pituitary gland, said composition being free of proteins, ACTH and steroids and comprising inert salts and an active constituent designated as L.M.-α, said L.M.-α being isolatable from said composition by fractional adsorption, fractional precipitation from aqueous ethanol and fractional chromatography on cellulose, said L.M.-α being a white crystalline solid polypeptide giving a positive yellow ninhydrin reaction, soluble in water and dilute ethanol, insoluble in non-polar organic solvents, yielding on acid hydrolysis the following amino acids—alanine, glycine, leucine, glutamic acid and lysine—traveling as a single spot on electrophoresis, and having a high lipid-mobilizing potency.

3,002,889

METHOD OF PRODUCING L-GLUTAMIC ACID

Shukuo Kinoshita, Katsunobu Tanaka, and Sadao Akita, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Chiyoda-ku, Tokyo, Japan, a corporation of Japan
No Drawing. Filed June 20, 1960, Ser. No. 37,078
9 Claims. (Cl. 195-47)

1. In a method for producing a compound having an L-glutamate radical from carbohydrate material and nitrogen source by culturing at a pH from about 6 to about 9 *Micrococcus glutamicus* in a culture medium, the improvement wherein said culture medium contains from about 1.0 to about 5.0% of biotin per liter.

3,002,890

PROCESS FOR PREPARING PINEAPPLE STEM PHOSPHATASE ESSENTIALLY FREE OF PROTEASE ACTIVITY

Willis A. Gortner, Honolulu, Hawaii, assignor to Pineapple Research Institute of Hawaii, Honolulu, Hawaii, an association of Hawaii
No Drawing. Filed Nov. 25, 1957, Ser. No. 698,384
4 Claims. (Cl. 195-62)

1. A process for preparing phosphatase enzyme from pineapple stem bromelain solutions, comprising adjusting the enzyme solution to an acid pH, followed by heating at a temperature between 60° and 100° C. for a period just sufficient to destroy protease activity, and cooling the solution.

3,002,891

PROCESS FOR THE PREPARATION OF PINEAPPLE STEM BROMELAIN

Ralph M. Heinicke, Honolulu, Hawaii, assignor to Pineapple Research Institute of Hawaii, Honolulu, Hawaii, an association of Hawaii
No Drawing. Filed Dec. 12, 1958, Ser. No. 779,851
11 Claims. (Cl. 195-66)

1. In a process for the production of an enzyme preparation, the steps comprising applying to the stems of pineapple plants a shearing force and applying pressure to the stems to extract therefrom the juice, and separating the juice from the solid materials.

3,002,892

PROCESS FOR PREPARING BACTERIOPHAGE-IMPREGNATED PAPER DISCS FOR RAPID IDENTIFICATION OF BACTERIAL STRAINS

Elmo S. Dooley, 105 E. Adams St., Crossville, Tenn.
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,699
15 Claims. (Cl. 195-103.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of typing strains of micro-organisms, which comprises impregnating flat shapes of porous material with aqueous liquid materials, successive portions of which contain a bacteriophage material adapted to lyse strains of organisms to be typed, a growth-supporting medium for the bacteriophage material, and a redox indicator, and applying the resulting impregnated flat shapes to cultures of the organisms to be typed.

3,002,893

METHOD FOR THE DETERMINATION OF SERUM ACID PHOSPHATASE AND DIAGNOSTIC PREPARATION THEREFOR

Arthur L. Babson, Morris Plains, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
No Drawing. Filed Nov. 13, 1958, Ser. No. 773,571
13 Claims. (Cl. 195-103.5)

1. A substrate for use in the determination of prostatic acid phosphatase in serum which comprises a buffer adapted to maintain the serum pH within about 4.5 to about 5.5 and a salt of α-naphthyl phosphate.

7. A method for the determination of prostatic acid phosphatase in serum which comprises incubating a small volume of serum in a substrate comprising a buffer adapted to maintain the pH of said serum within about 4.5 to about 5.5 and a salt of α-naphthyl phosphate, adding to said incubated mixture an azonium salt of an aromatic amine and comparing the developed color to the color developed in serum in the presence of a known concentration of prostatic acid phosphatase.

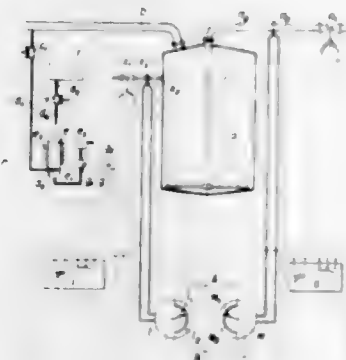
3,002,894 METHOD AND DEVICE FOR CONTROLLING THE GROWTH OF MICROBIAL CULTURES

Karl Rungaldier, Klagenfurt-Limmersach, Carinthia, and Ernst Braun, Vienna, Austria, assignors to Patent-anwertung Vogelbusch Gesellschaft m.b.H., Vienna, Austria, a company of Austria

Filed Nov. 9, 1959, Ser. No. 851,733

Claims priority, application Austria Nov. 14, 1958

9 Claims. (Cl. 195—117)



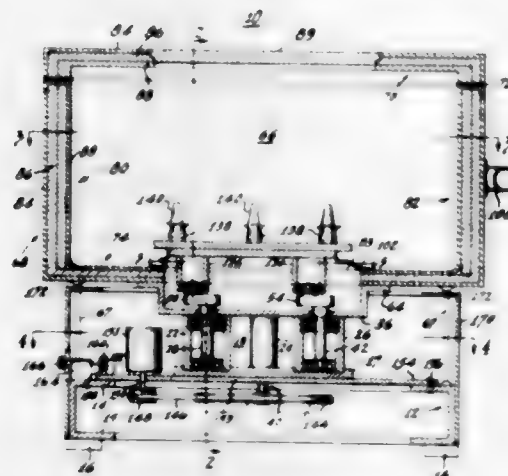
1. In a method of growing yeast in an aqueous culture in which alcohol is produced by fermentation of a nutrient material, the steps of passing air through said culture at a rate permitting saturation of said air with the moisture and the alcohol of said culture; sensing the concentration of said alcohol in said air after passage through said culture; generating a signal responsive to said sensed concentration; and controlling the supply of growth controlling material to said culture by said signal.

3,002,895 INCUBATOR-SHAKER APPARATUS

David Freedman, 348 S. 3rd Ave., Highland Park, N.J.

Filed Feb. 11, 1957, Ser. No. 639,362

7 Claims. (Cl. 195—143)



1. A combination incubator-shaker including a stationary air-tight, sealed incubation chamber, a bottom wall in said chamber having an aperture, a plate covering said aperture and sealed in air-tight engagement to said bottom wall, drive means extending through said plate into the interior of said chamber, a support table secured to said drive means inside said chamber and adapted to be moved thereby, air-tight yieldable insulating means between said table and said bottom wall sur-

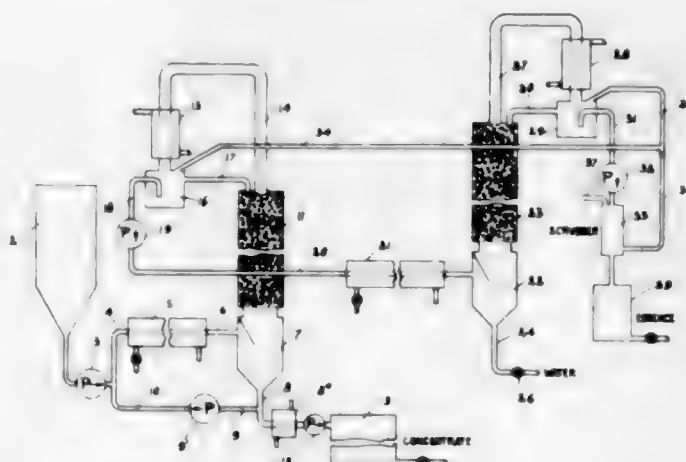
rounding said aperture therein, thermal insulating material in the walls of said incubation chamber, said incubation chamber thus being sealed off and insulated from the external atmosphere whereby its contents may be maintained sterile and at a controlled temperature, conduit means coupled to said chamber for circulating a controlled atmosphere therethrough, and means outside of said chamber for circulating the atmosphere surrounding said chamber and thereby preventing the accumulation of heat surrounding said chamber.

3,002,896 PROCESS FOR CONTINUOUS CONCENTRATION OF VINEGAR

Robert E. Buck, Coraopolis, Pa., assignor to H. J. Heinz Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 20, 1958, Ser. No. 722,772

4 Claims. (Cl. 202—67)



1. The art of processing vinegar to produce a concentrate which can be reconstituted by the addition of water which comprises continuously subjecting vinegar to fractional distillation to produce a residue of water in which the acetic acid of the original vinegar is principally concentrated and a distillate constituted principally of water with some of the original acetic acid of the vinegar retained therein and also containing aromatic constituents of the vinegar, redistilling and fractionating said distillate to produce a second distillate in which the aromatic constituents of the original vinegar are concentrated and a residue constituted of water removed from the original vinegar stripped of most of the acetic acid and aromatic constituents of the original vinegar, and thereafter restoring the distillate-containing aromatic constituents to the residue first produced.

3,002,897 DISTILLING HEAD

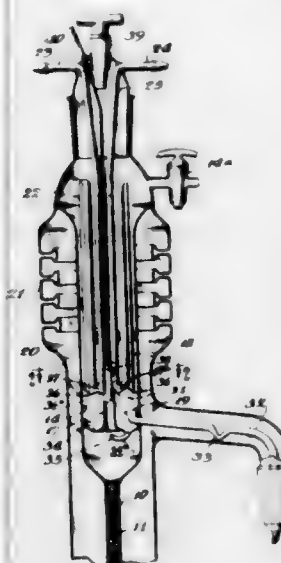
Earl V. Kirkland, La Marque, and Harry G. Brinkley, Jr., Texas City, Tex., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 10, 1957, Ser. No. 701,838

4 Claims. (Cl. 202—161)

1. A distilling head comprising an elongated chamber, condenser means arranged peripherally within said chamber, product condensate delivery means associated with said condenser means and adapted to be positioned selectively over a product take-off means for controllably varying the reflux ratio, said product take-off means being positioned within said chamber and below said delivery means, reflux collection means below said product take-off means and extending substantially across the flow area of said chamber and defining a sub-chamber therebelow,

drain conduit means discharging reflux below said collection means into said sub-chamber, vapor riser means car-



ried by and extending upwardly from said reflux collection means and discharging within said condenser means above said delivery means and said take-off means.

3,002,898 PROCESS OF AND APPARATUS FOR PRODUCING FINELY-DIVIDED METALS

Ralph Herbert Jarvis, 5246 E. Florence Ave., Bell, Calif.

Filed Dec. 24, 1957, Ser. No. 705,045

22 Claims. (Cl. 204—10)

1. A process for producing finely-divided metals which comprises dispersing mercury in an oleaginous vehicle, forming a film composed of said oleaginous vehicle containing said dispersed mercury on a moving cathodic surface, subjecting said moving cathodic surface to electrolytic action thereby forming an amalgam, removing the oleaginous vehicle and the other products from said moving cathodic surface and separating the various products removed from said moving cathodic surface.

3,002,899 ADHESION OF NICKEL TO CHROMIUM

Walter E. Reid, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed July 31, 1959, Ser. No. 830,959

3 Claims. (Cl. 204—32)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing a chromium surface to yield improved adhesion at elevated temperatures with a nickel coating to be deposited thereon which comprises the steps of anodically etching the chromium surface at a current density of about 3 to about 7 amp./dm.² in an electrolyte solution composed of glacial acetic acid containing about 10 to about 15 percent by volume of concentrated sulfuric acid until said surface becomes coated with a dark brown film, rinsing said surface with water and giving said surface a nickel strike in a Wood's nickel strike bath.

3,002,900 PREPARATION OF PLATES FOR DEFERRED ACTION TYPE BATTERIES

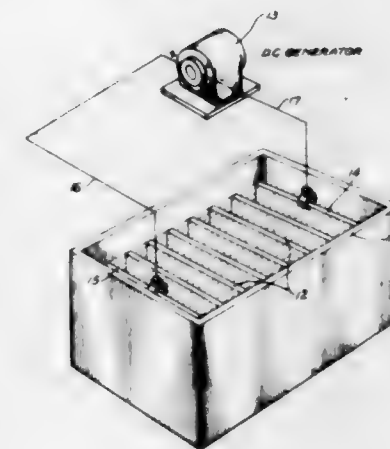
James W. Henry, Kingsport, Tenn., and Linwood P. Morrison, Rochester, N.Y., assignors, by mesne assignments, to the United States of America, as represented by the Secretary of the Navy

Filed Oct. 7, 1949, Ser. No. 120,053

2 Claims. (Cl. 204—42)

1. The process of preparing battery plates by depositing lead and lead dioxide electrolytically on opposite sides

of conducting plates from a lead perchlorate bath consisting of approximately 420 grams of lead monoxide and approximately 320 cubic centimeters of perchloric acid per liter of water, characterized by placing the bath in a nonconducting container, inserting a plurality of such plates approximately parallel in the bath and in series forming separate cells between successive plates but without completely sealing off the electrolyte between cells, and applying across the series a voltage of approximately three volts per cell sufficient to deposit



the lead and lead dioxide on opposite sides of each plate without simultaneously dissolving the lead peroxide from the anode in spite of the leakage between cells.

2. The process of preparing battery plates by depositing lead and lead dioxide electrolytically on opposite sides of conducting plates from a solution of lead perchlorate in a nonconducting container, characterized by plating between .00005 and .00005 inch of nickel on plates of an iron alloy which is substantially noncorrosive in lead perchlorate, placing a plurality of the nickel coated plates in the solution in series, and applying voltage across the series.

3,002,901

ELECTROPLATING PROCESS AND BATH

Edgar J. Seyb, Jr., Oak Park, Mich., assignor to Metal & Thermit Corporation, Woodbridge Township, Middlesex County, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 8, 1959, Ser. No. 838,429

23 Claims. (Cl. 204—43)

1. An improved acidic tin-nickel bath for electroplating in which the improvement comprises incorporating in said bath a small amount of a sulfonated perfluoro cyclohexyl hydrocarbon effective to eliminate pitting.

3,002,902

ELECTRODEPOSITION OF NICKEL

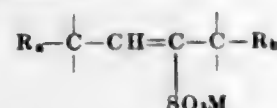
Donald Gardner Foulke, Watchung, Otto Kardos, Red Bank, and Herman Koretzky, Belleville, N.J., assignors to Hanson-Van Winkle-Munning Company, a corporation of New Jersey

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,454

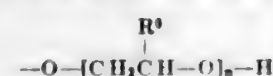
10 Claims. (Cl. 204—49)

1. The process for producing bright nickel deposits which comprises electrodeposition of nickel from an aqueous acidic solution of at least one nickel salt in which there is dissolved from about 0.1 to about 100 millimoles per liter of the bisulfite addition product of an α,α' -disubstituted acetylenic compound and N times an equivalent weight of a compound capable of forming a chain-carrying sulfite radical selected from the group consisting of sulfurous acid, sulfur dioxide, and the alkali metal and metal bisulfites, sulfites, and metabisulfites, where N is equal to the number of acetylenic bonds in the acetylenic

compound, said bisulfite addition product containing the structural configuration



in which each of R_a and R_b are substituents of the group consisting of hydroxy, alkoxy, formoxy, alkanoxy, halogen, and polyoxy groups having the structure



in which R^0 is a substituent selected from the group consisting of hydrogen, methyl, chloromethyl, hydroxymethyl, ethenyl, and glycidyl, n is an integer from 1 to 20 and M is a cation substituent selected from the group consisting of hydrogen, alkali metals, ammonium, magnesium, and nickel.

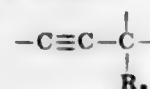
3,002,903

ELECTRODEPOSITION OF NICKEL

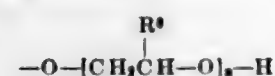
Donald Gardner Foulke, Watchung, Otto Kardos, Red Bank, and Herman Koretzky, Belleville, N.J., assignors to Hanson-Van Winkle-Munnings Company, a corporation of New Jersey

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,455
12 Claims. (Cl. 204-49)

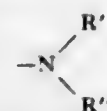
1. The process for producing bright nickel deposits which comprises electrodepositing nickel from an aqueous acidic solution in which there is dissolved from about 1/4 to about 80 grams per liter of a water-soluble sulfonate compound of the group consisting of unsaturated aliphatic sulfonic acids, mononuclear and binuclear aromatic sulfonic acids, heterocyclic sulfonic acids, mononuclear aromatic sulfonic acids, the alkali metal, ammonium, magnesium, and nickel salts of said acids, and mononuclear aromatic sulfonamides and sulfonimides, and from about 1 to about 25 millimoles per liter of a water-soluble bisulfite addition product of an α -substituted acetylenic compound and N times an equivalent weight of a compound capable of forming a chain-carrying sulfite radical, where N is equal to the number of acetylenic bonds per molecule of the acetylenic compound, said α -substituted acetylenic compound containing the structural configuration



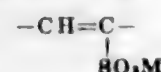
in which R_a is a substituent of the group consisting of hydroxy, alkoxy, formoxy, alkanoxy, halogen, polyoxy groups having the structure



in which R^0 is a substituent of the group consisting of hydrogen, methyl, chloromethyl, hydroxymethyl, ethenyl, and glycidyl, and n is an integer from 1 to 20, and amino groups having the structure



in which each of R' and R'' are substituents of the group consisting of hydrogen, alkyl, and hydroxyalkyl, said compound capable of forming a chain-carrying sulfite radical being selected from the group consisting of sulfurous acid, sulfur dioxide, and the alkali metal and metal bisulfites, sulfites, and metabisulfites, said bisulfite addition product containing the structural configuration



in which M is a cation substituent selected from the group consisting of hydrogen, alkali metals, ammonium, magnesium, and nickel, and the olefinic carbon atom to which the SO_3M radical is attached was originally one of the acetylenic carbon atoms.

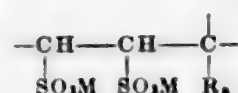
3,002,904

ELECTRODEPOSITION OF NICKEL

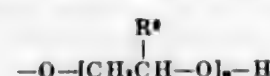
Donald Gardner Foulke, Watchung, Otto Kardos, Red Bank, and Herman Koretzky, Belleville, N.J., assignors to Hanson-Van Winkle-Munnings Company, a corporation of New Jersey

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,456
16 Claims. (Cl. 204-49)

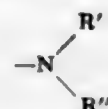
1. The process for producing bright nickel deposits which comprises electrodepositing nickel from an aqueous acidic solution in which there is dissolved from about 1 to about 250 millimoles per liter of the bisulfite addition product of an α -substituted acetylenic compound and $2N$ times an equivalent weight of a compound capable of forming a chain-carrying sulfite radical, where N is equal to the number of acetylenic bonds per molecule of the acetylenic compound, said bisulfite addition product containing the structural configuration



in which M is a cation substituent selected from the group consisting of hydrogen, alkali metals, ammonium, magnesium, and nickel, R_a is a substituent of the group consisting of hydroxy, alkoxy, formoxy, alkanoxy, halogen, polyoxy groups having the structure



in which R^0 is a substituent of the group consisting of hydrogen, methyl, chloromethyl, hydroxymethyl, ethenyl, and glycidyl, and n is an integer from 1 to 20, and amino groups having the structure



in which each of R' and R'' are substituents of the group consisting of hydrogen, alkyl, and hydroxyalkyl, said compound capable of forming a chain-carrying radical being selected from the group consisting of sulfurous acid, sulfur dioxide, and the alkali metal and metal bisulfites, sulfites, and metabisulfites.

3,002,905

PROCESS FOR ELECTROWINNING TITANIUM FROM LOWER VALENT TITANIUM ALKALI CHLORIDES

Abner Brenner, Chevy Chase, Md., and Joseph M. Sherfey, Arlington, Va., assignors to the United States of America as represented by the Secretary of the Army

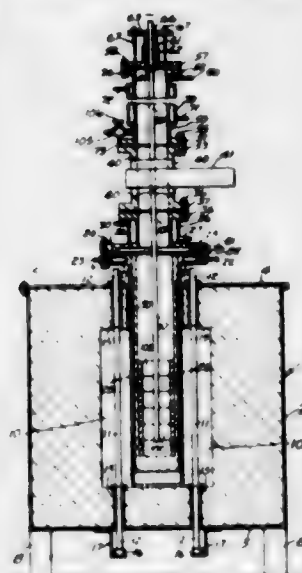
Filed May 27, 1955, Ser. No. 511,819
1 Claim. (Cl. 204-64)

(Granted under Title 35, U.S. Code (1952), sec. 266)
The process of electrowinning titanium from lower valent titanium alkali chlorides contained in the catholyte of an electrolytic cell in which the anolyte consists of a mixture of MoO_3 and Na_2MoO_4 , which process comprises maintaining a separation of said anolyte from said catholyte by means of a solid glass diaphragm impervious to the passage of the catholyte or anolyte, passing an electric current through said cell and said diaphragm and recovering titanium as a powder.

3,002,906

PROCESS FOR THE EXTRACTION OF RELATIVELY PURE THORIUM

Guy Ervin, Jr., Encino, Calif., and Herbert F. G. Ueltz, Shrewsbury, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Aug. 4, 1959, Ser. No. 831,606
8 Claims. (Cl. 204-64)



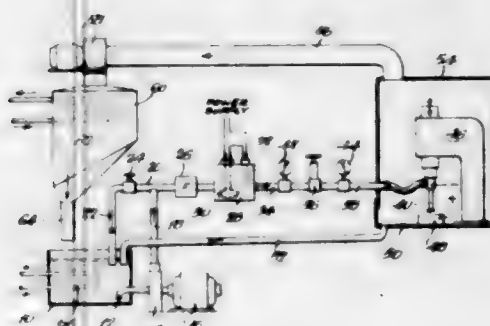
1. Process for the preparation of thorium which comprises passing a direct electric current through a cell having a solid anode and a solid cathode in a direct current electric circuit, the electrolyte in said cell consisting, apart from any thorium halide content, essentially of fused halide of metal selected from the group consisting of alkali metals and alkaline earth metals including magnesium and mixtures of such halides, said cell containing thorium carbide in said halide electrically connected to the positive side of the electric circuit and collecting the thorium metal electrolytically liberated at the cell cathode.

3,002,907

ELECTROLYTIC HOLE SINKING

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed May 26, 1959, Ser. No. 814,450
4 Claims. (Cl. 204-143)



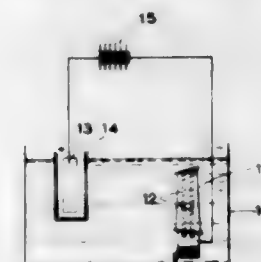
1. The improved method of removing work material by electrolytic action at the interface between a workpiece and the working face of a cathodic electrode in the presence of an electrolyte, which comprises supplying the electrolyte at a pressure of several atmospheres to the interface for flow therethrough, maintaining the electrolyte under substantial pressure while the electrolyte is within the interface, and heating the electrolyte after it has been pressurized but before it leaves the interface to a temperature above the electrolyte atmospheric boiling point but below the electrolyte boiling point at the interface pressure, whereby steaming of the electrolyte with-

in the interface is substantially eliminated but takes place immediately after the electrolyte escapes from the interface.

3,002,908

METHOD OF REMOVING FILLER MATERIALS

Douglas Wilson Hall, Billy Mill, Tyneemouth, Northumberland, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 8, 1958, Ser. No. 754,110
Claims priority, application Great Britain Aug. 27, 1957
3 Claims. (Cl. 204-146)



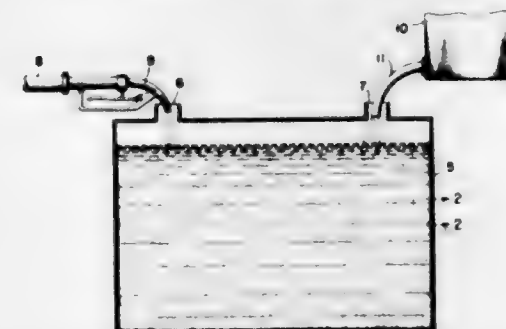
1. A process of removing ferrous metal filler from the interior of an object made of a nickel base material: comprising the steps of immersing the object in a nitric acid electrolyte; placing an insoluble anode in the electrolyte; and passing an electric current between the anode and the object, which is made cathode, through the electrolyte; the object and the filler being both exposed to the electrolyte, and being the cathode throughout the process.

3,002,909

METHOD OF INHIBITING CORROSION

Peter C. Heldt, Masonville, N.J., assignor to Keystone Shipping Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed July 10, 1959, Ser. No. 826,237
2 Claims. (Cl. 204-148)



1. The method of inhibiting ferrous metal corrosion in water storage systems containing ferrous metal parts which comprises adding to the body of water stored in said systems an inhibitive proportion of finely divided magnesium metal having an average particle size substantially such that it passes a No. 20 mesh screen, said metal remaining dispersed in said body of water.

3,002,910

CATALYTIC CONVERSION OF ORGANIC COMPOUNDS USING PENETRATING RADIATION

James M. Caffrey, Jr., Beacon, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Jan. 5, 1959, Ser. No. 785,097
6 Claims. (Cl. 204-154)

1. A method of hydrogenating an olefinic hydrocarbon produced from the radiolysis of an alkane which comprises irradiating with high energy, ionizing radiation, in an inert atmosphere, a catalytically active ferric oxide to a total dosage of about 1 megareöntgen, said ferric oxide having a surface area of at least one square meter

per gram and having incorporated therein about 0.005% of at least one oxide of a metal selected from the group consisting of aluminum, magnesium, nickel, zirconium and manganese, adsorbing an alkane on the surface of said catalyst and irradiating said catalyst containing said alkane adsorbed thereon to a total dosage of at least .1 megarentgen in an atmosphere of hydrogen, to convert any olefin produced from the radiolysis of said alkane to a hydrogenated product and thereafter recovering said hydrogenated product.

3,002,911

RADIOLYSIS OF ORGANIC COMPOUNDS IN THE ADSORBED STATE

James W. Sutherland, Upton, and Augustine O. Allen, Shoreham, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 6, 1959, Ser. No. 844,838

3 Claims. (Cl. 204-154)

1. A method of radiolysis of an alkane hydrocarbon in the adsorbed state whereby there is an increase in the yield of branched chain hydrocarbons by increasing the amount of alkane hydrocarbon in the adsorbed state, the steps of which comprise preparation of ion-exchange forms by combining a zeolite with cobalt ions, adsorbing said alkane hydrocarbon on the ion-exchange forms, irradiating said ion-exchange forms with high energy ionizing radiation sufficient to cause the production of branched chain hydrocarbons and thereafter recovering the products.

3,002,912

REACTORS

Lyman Spitzer, Jr., Princeton, N.J., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 24, 1957, Ser. No. 705,071

11 Claims. (Cl. 204-154.2)



1. The method of operation of apparatus for stably confining high temperature ionized gas having a closed endless reaction tube with a divertor therein including: the applying of a confining magnetic field inside and axially said tube, and simultaneously therewith applying a multipolar magnetic field transverse to the axis of said tube.

3,002,913

NUCLEAR RADIATION TO IMPROVE SHEAR STABILITY OF P-XYLYLENE COPOLYMER V.I. IMPROVING AGENTS

Manuel A. Pino, Richmond, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Mar. 30, 1959, Ser. No. 802,646

5 Claims. (Cl. 204-162)

1. A process of improving shear stability of p-xylylene copolymers as viscosity index improving agents in lubricating oil compositions comprising irradiating aromatic lubricating oils containing said p-xylylene copolymers by means of nuclear radiation, at a dosage of 10^7 to 10^8 rads, wherein said nuclear radiation is gamma radiation, wherein said p-xylylene copolymers are polymers selected

from the group consisting of poly(alkylbenzene-p-xylylenes), poly(diphenyl alkane-p-xylylenes), and poly(diphenyl ether-p-xylylenes).

3,002,914

PREPARATION OF ELECTRODES FOR ELECTROLYSIS OF AQUEOUS SOLUTIONS BY THE MERCURY PROCESS

Jean Clement, Boltsfort-Brussels, Belgium, assignor to Solvay & Cie, Brussels, Belgium, a Belgian company

No Drawing. Filed May 14, 1957, Ser. No. 658,965

Claims priority, application Belgium May 23, 1956

2 Claims. (Cl. 204-219)

1. In an electrolytic cell having a mobile mercury cathode, a support for said mercury comprising a metallic base plate having upon its mercury-contacting surface an electro-deposited coating of soft iron having a thickness up to 0.9 mm.

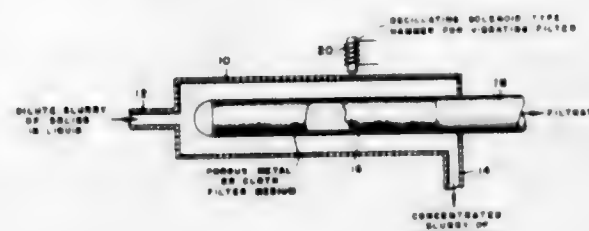
3,002,915

FILTRATION METHOD

Thomas H. Royder, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Aug. 18, 1958, Ser. No. 755,687

1 Claim. (Cl. 208-38)



In a continuous method for the turbulent isothermal filtration of a slurry of crystallized wax in a mother liquor consisting of a solution of dewaxed lubricating oil in a dewaxing solvent, the improved method of filtration which consists essentially of continually, turbulently, isothermally flowing said slurry past a filtering element in a filtration zone defined by a housing to thereby permit the filtering of a selected portion of said mother liquor through said filter element, continuously maintaining a slurry flow velocity sufficient to sweep wax crystals past said filter element to keep said filter element clean and during the time said slurry is maintained in continuous flow, periodically subjecting the said filtering element to compression-type shock waves at intervals of time within the range of 10 to 60 minutes by positive mechanical vibration while maintaining the slurry flow at undiminished velocity, each period of vibration being conducted for a period of time within the range of from about 10 to 60 seconds whereby fine wax particles which would normally tend to blind said filtering element are at least partially dislodged therefrom into said flowing stream of slurry.

3,002,916

TWO-STAGE REFORMING WITH INTERMEDIATE FRACTIONATION

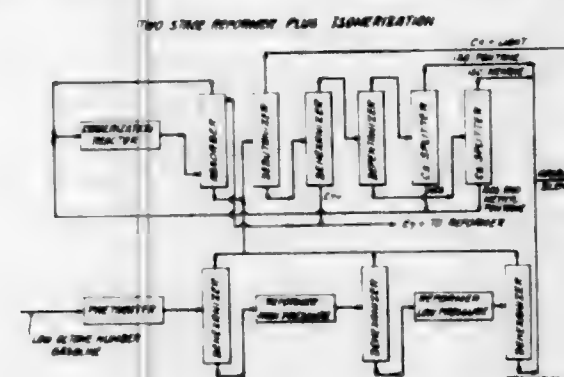
Winton W. Hamilton, Pitman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 6, 1956, Ser. No. 608,294

3 Claims. (Cl. 208-64)

1. A method of producing high octane gasoline which comprises reforming low octane gasoline containing principally C_7 and heavier hydrocarbons in the presence of hydrogen and a reforming catalyst at relatively high pressures of at least 300 p.s.i.g. but below 750 p.s.i.g. and at a temperature in the range 750° to 1050° F. and a space velocity in the range 0.1 to 6 v./hr./v. to crack C_{10} and heavier hydrocarbons whilst dehydrogenating naph-

thenes to obtain a high pressure reaction zone effluent comprising hydrogen and C_1 -hydrocarbons, separating hydrogen and C_1 -hydrocarbons from said high pressure zone effluent to obtain a low pressure zone charge stock comprising principally C_7 and heavier hydrocarbons, reforming said low pressure zone charge stock in the presence of a reforming catalyst and hydrogen at a reaction pressure lower than the aforesaid high pressure and not exceeding 300 p.s.i.g. and reforming conditions



of temperature in the range 750° to 1050° F. and space velocity in the range 0.1 to 6 v./hr./v. to dehydrogenate naphthenes and dehydrocyclicize C_7 and heavier paraffins without substantial cracking of said paraffins to obtain a low pressure zone effluent comprising hydrogen and C_1 and heavier hydrocarbons, separating hydrogen and C_1 -hydrocarbons from said low pressure zone effluent to obtain a product containing C_7 and heavier hydrocarbons, said product being highly aromatic and boiling in the gasoline range.

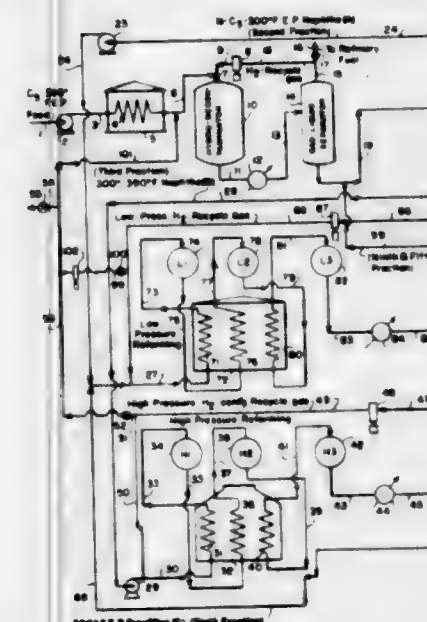
3,002,917

METHOD OF MAKING 104-106 R.O.N. LEADED GASOLINE

Winton W. Hamilton, Pitman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Oct. 1, 1959, Ser. No. 843,809

9 Claims. (Cl. 208-79)



1. A method of producing gasoline having a leaded octane number of at least 104 which comprises fractionating charge gasoline having an initial boiling point of about 80° F. and an end boiling point within the range of about 390° F. and about 420° F. to obtain (1) a first fraction comprising isopentanes, (2) a second fraction comprising normal pentane and heavier hydrocarbons and having an end point of about 300° F., and (3) a third fraction having an initial boiling point about the same as the end boiling point of the aforesaid second fraction and an end boil-

ing point of about 420° F., reforming the aforesaid third fraction at high reaction pressure in excess of about 350 p.s.i.g. in the presence of hydrogen and particle-form reforming catalyst under reforming conditions to produce a reformed the hydrocarbons of which boiling above about 300° F. have a leaded octane number of at least 104 to obtain a high pressure reaction zone effluent, separating said high pressure reaction zone effluent into high pressure recycle gas comprising C_2 and lighter hydrocarbons and hydrogen, and a liquid effluent, fractionating said liquid effluent into a fourth fraction comprising C_4 and lighter hydrocarbons, a fifth fraction comprising C_5 hydrocarbons, a sixth fraction comprising C_6 and heavier aliphatic hydrocarbons, and a seventh fraction comprising aromatic hydrocarbons boiling above about 320° F., reforming the aforesaid second fraction comprising normal pentane and heavier hydrocarbons at low reaction pressure of about 50 to about 250 p.s.i.g. in the presence of hydrogen and particle-form solid reforming catalyst under reforming conditions to aromatize the C_6 and heavier aliphatic hydrocarbons to aromatic hydrocarbons having a leaded octane number of at least 104 and to isomerize at least a part of the n-pentane to obtain a low pressure effluent, separating said low pressure effluent into a low pressure recycle gas comprising C_2 and lighter hydrocarbons and hydrogen, and a liquid effluent, separating said liquid effluent into an eighth fraction comprising C_4 and lighter hydrocarbons, a ninth fraction comprising C_5 hydrocarbons, and a tenth fraction comprising C_6 and heavier aromatic hydrocarbons having a leaded octane number of at least 104, and blending the aforesaid seventh fraction with the aforesaid tenth fraction and the isopentanes of the aforesaid fifth and ninth fractions to obtain a gasoline having a leaded octane number of at least 104.

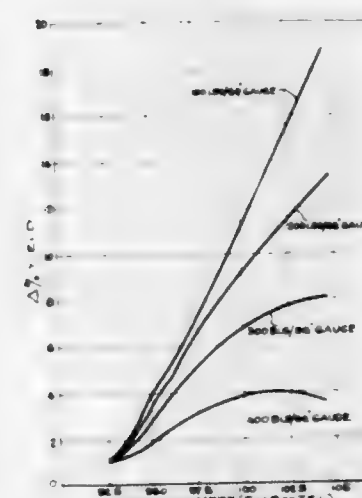
3,002,918

LOW PRESSURE REFORMING WITH ON-STREAM PERIODS OF GREATER DURATION

William H. Lang, Wenonah, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Feb. 4, 1959, Ser. No. 791,223

5 Claims. (Cl. 208-134)



1. In the method of reforming naphtha wherein a charge mixture comprising charge naphtha having an end boiling point of about 370° F. and hydrogen is passed in series flow through a plurality of reaction zones, each of said reaction zones containing a static bed of particle-form solid reforming catalyst under reforming conditions of temperature, superatmospheric pressure, and liquid hourly space velocity to produce 10 RVP leaded gasoline having an octane rating (F-1+3 cc. TEL) of at least 95, and wherein after a predetermined on-stream period the aforesaid catalyst is regenerated, the improvement which comprises employing a charge mixture comprising the aforesaid naphtha and hydrogen in a hydrogen-to-naphtha

mol ratio of at least 30, and a superatmospheric pressure not exceeding 400 p.s.i.g., and regenerating the aforesaid catalyst after an on-stream period of at least 90 days dependent upon the liquid hourly space velocity.

3,002,919

HYDROFORMING CATALYST AND PROCESS
Elroy Merle Gladrow and Charles Newton Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 10, 1958, Ser. No. 779,295
5 Claims. (Cl. 208-136)

5. The process of reforming hydrocarbons boiling in the naphtha boiling range which comprises contacting the naphtha vapors with a catalyst consisting essentially of from about 5 to 15 wt. percent of molybdenum oxide, up to 2.5 wt. percent of a group III metal oxide selected from the class consisting of indium oxide and gallium oxide the remainder being adsorptive alumina at temperatures of 800 to 1000° F., pressures of from 100 to 1000 p.s.i.g. in the presence of from 2000 to 10,000 c.f./b. of hydrogen for a period sufficient to substantially improve the octane number of the naphtha.

3,002,920

HYDROFORMING CATALYST AND PROCESS
Walter James Porter, Jr., Warren Maxwell Smith, and Robert Edward Schexnayder, Jr., all of Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 10, 1958, Ser. No. 779,278
3 Claims. (Cl. 208-138)

1. A method of reforming hydrocarbon fractions boiling in the naphtha boiling range which comprises contacting naphtha vapors in admixture with hydrogen at temperatures of from 800 to 1000° F. and pressures of from 100 to 1000 p.s.i.g. with a catalyst consisting essentially of from about 0.01 to 5.0 wt. percent of a platinum group metal in combination with from 0.05 to 5.0 wt. percent zirconia supported upon an adsorptive alumina carrier and periodically burning carbonaceous deposits from the catalyst by contact with an oxygen-containing gas at elevated temperatures.

3,002,921

HYDROFORMING CATALYST AND PROCESS
Elroy Merle Gladrow and Charles Newton Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 10, 1958, Ser. No. 779,294
6 Claims. (Cl. 208-138)

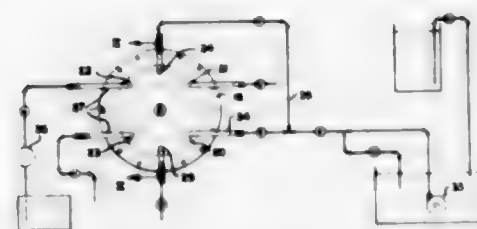
6. The process of reforming hydrocarbons boiling in the naphtha boiling range which comprises contacting the naphtha vapors with a catalyst consists essentially of from about 0.01 to 5.0 wt. percent of a platinum group metal in combination with from about 0.1 to 5.0 wt. percent of praseodymium oxide supported on an adsorptive alumina carrier at temperatures of 800 to 1000° F. pressures of 100 to 1000 p.s.i.g. in the presence of from 2000 to 10,000 c.f./b. of hydrogen for a period sufficient to substantially improve the octane number of the naphtha.

3,002,922

APPARATUS AND METHODS FOR CONTINUOUS ION EXCHANGE
Raymond F. Baddour, % Hagan Chemicals & Controls Inc., Belmont, Mass.
Filed Jan. 29, 1959, Ser. No. 789,946
9 Claims. (Cl. 210-33)

9. Method of continuous ion exchange comprising the steps of continuously moving a continuous bed of ion exchange material, introducing and removing fluid to be treated at spaced points along the path of travel of said

bed, introducing and removing regenerating fluid at spaced points along the path of travel of said bed spaced from the points of introducing and removing fluid to be treated

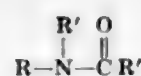


and introducing a fluid pressure into the bed at a point intermediate between the fluid to be treated and the regenerating fluid.

3,002,923

WATER-IN-OIL EMULSION DRILLING FLUID
George E. Barker, Norristown, Pa., and James Hurst, Wilmington, Del., assignors to Atlas Chemical Industries, Inc., a corporation of Delaware
No Drawing. Filed Mar. 29, 1957, Ser. No. 649,282
20 Claims. (Cl. 252-8.5)

1. A stable water-in-oil emulsion drilling fluid comprising a water phase, an oil phase and from about 3 to 11 lbs. per bbl. of an emulsifier component consisting essentially of an oil soluble, surface-active agent selected from the group consisting of compounds having the following formula:



and esters thereof wherein: R is a monovalent organic residue selected from the group consisting of hexane pentols and anhydro hexane pentols; R' is selected from the group consisting of hydrogen, alkyl hydrocarbon radicals which contain up to 6 carbon atoms and cyclo alkyl hydrocarbon radicals which contain up to 6 carbon atoms;



is the acyl radical of an aliphatic monocarboxylic acid which contains from 12 to 26 carbon atoms per molecule; provided however that the carbon atoms in R' plus those in the aforesaid acyl radical total at least 15.

3,002,924

LUBRICANT ADDITIVE AND COMPOSITION CONTAINING SAME
Albert R. Sabol, Munster, Eli W. Blaha, Highland, and Robert E. Karl, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed May 26, 1958, Ser. No. 737,479
17 Claims. (Cl. 252-32.7)

1. As a new composition of matter, the oil-soluble neutralized alkaline earth and boron-containing complex of the reaction product of a phosphorus sulfide and a normally non-gaseous hydrocarbon, said neutralized complex being obtained by the process comprising reacting from about 1% to about 50% of a phosphorus sulfide and a normally non-gaseous hydrocarbon at a temperature of from about 150° F. to about 500° F., hydrolyzing the resultant reaction product, neutralizing the resultant hydrolyzed reaction product with from about 1 mole to about 4 moles of an inorganic basic alkaline earth compound per mole of phosphorus in the presence of from about 0.1 mole to about 4 moles of a boron compound per mole of phosphorus selected from the group consist-

ing of boric acid, boric acid anhydride and a boric acid ester, from about 0.5 mole to about 2.0 moles water per mole of alkaline earth compound and from about 2 moles to about 10 moles per mole of an alkaline earth compound of an organic monohydroxy material selected from the group consisting of an alkanol having not more than three carbon atoms, and a mixture of said alkanol and a phenol, while heating the mixture at the reflux temperature of said alkanol for a period of from 1 hour to about 10 hours, raising the temperature of the mixture from about 250° F. to about 400° F. and recovering the resultant neutralized complex product.

3,002,925
LUBRICANT ADDITIVE AND COMPOSITION CONTAINING SAME

Albert R. Sabol, Munster, Eli W. Blaha, Highland, and Robert E. Karl, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed May 26, 1958, Ser. No. 737,480
15 Claims. (Cl. 252-32.7)

1. As a new composition of matter, the oil-soluble neutralized alkaline earth and boron-containing complex of the reaction product of a phosphorus sulfide and a normally non-gaseous hydrocarbon, said neutralized complex being obtained by the process comprising reacting from about 1% to about 50% of a phosphorus sulfide and a normally non-gaseous hydrocarbon at a temperature of from about 150° F. to about 500° F. under non-hydrolyzing conditions, adding from about 0.10 mol to about 3 mols of a boron compound selected from the group consisting of boric acid, boric acid anhydride and a boric acid ester per mol of phosphorus, neutralizing the resultant mixture with from about 1 mol to about 4 mols of an inorganic basic alkaline earth compound in the presence of from about 0.20 mol to about 2 mols water and from about 1 mol to about 10 mols of an alkanol having not more than three carbon atoms, per mol of said basic alkaline earth compound while heating the mixture at a temperature of from about 100° F. to about 180° F. under reflux conditions, for a period of from 1 hour to about 10 hours, raising the temperature of the mixture from about 300° F. to about 400° F. and filtering the resultant neutralized complex product.

3,002,926
HEAT-STABLE GREASES AND METHOD OF PREPARATION

Charles R. Bergen, Monroeville, Pa., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed July 3, 1958, Ser. No. 746,336
13 Claims. (Cl. 252-35)

1. The method of preparing a lubricating grease composition which comprises the steps of forming a gelling agent in situ by reacting about .4 to 1.8 parts of a metal salt with about 1 part of a polycarboxylic acid selected from the group consisting of itaconic acid, 2-methyl adipic acid, 3-tertiary butyl adipic acid, 3-tertiary amyl adipic acid, mercapto succinic acid, 2,3-dibromo succinic acid, 5-methyl-4-cyclohexene-1,2-dicarboxylic acid, benzylmalonic acid, terephthalic acid, thiodiglycolic acid, pyromellitic acid, isophthalic acid, diglycolic acid, and 3-methyl glutaric acid, said reactants being in solution in about 25 to 100 parts of a mutual solvent, in the presence of about 3.5 to 15 parts of an oleaginous liquid, wherein the cation of said metallic salt is selected from the group consisting of the metals of groups 2 and 3 of the periodic table and the anion is selected from the group consisting of halide, alcoholate, carbonate, and alcoholate-carbonate complex radicals, removing the solvents by heating to a temperature of not greater than about 150° C., and then homogenizing the reaction mixture.

3,002,927

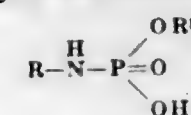
STABILIZED ORGANIC SILICON FLUIDS
Richard W. Awe and Harry M. Schlefer, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Jan. 2, 1959, Ser. No. 784,446
3 Claims. (Cl. 252-37.2)

1. A stable fluid which has been prepared by pre-oxygenating the fluid by heating a mixture of (1) a polysiloxane fluid in which the siloxane units are selected from the group consisting of units of the formula $\text{R}_2\text{SiO}_{1.5}$, R_2SiO , $\text{RSiO}_{1.5}$ and SiO_2 , in which each R is selected from the group consisting of methyl, phenyl, chlorophenyl, fluorophenyl and bromophenyl radicals, (2) a ferric salt of a carboxylic acid having from 4 to 18 inclusive carbon atoms, in amount such that there is from .006 to .03 percent by weight iron based on the weight of (1) and (3) oxygen mechanically dispersed in said fluid, at a temperature above 400° F. until the mixture changes to a reddish brown color and until the mixture will not form a precipitate when heated in the absence of oxygen at a temperature above that at which the pre-oxygenation step is carried out.

3,002,928

REACTION PRODUCT OF A DIISOCYANATE AND AN ALKYL AMINE SALT OF AN ALKYL AMIDE OF ALKYL ORTHO PHOSPHORIC ACID AND LUBRICATING OIL THICKENED WITH SAME
Stephen J. Zajac, Whiting, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Apr. 13, 1959, Ser. No. 805,735
15 Claims. (Cl. 252-49.9)

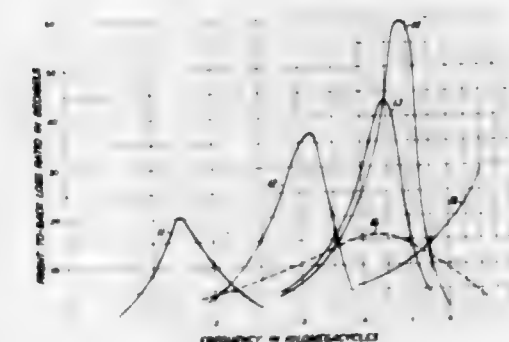
6. As a composition of matter, the lubricating grease product obtained by reacting an alkyl amine and a compound corresponding to the formula:



wherein R is an alkyl radical having from 8 to about 20 carbon atoms and R¹ is a water solubilizing radical selected from the class consisting of an alkyl radical having less than 5 carbon atoms, an alcohol and a glycerol with an organic diisocyanate at a temperature in the range of from about 150° F. to about 450° F. in the presence of a normally liquid oleaginous lubricant vehicle for a period of time sufficient to form a reaction product of said alkyl amine and said compound with said diisocyanate in said oil.

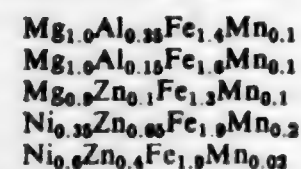
3,002,929

PROCESS FOR MAKING COMPOSITE FERRITES
Le Grand G. Van Urt, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 1, 1956, Ser. No. 581,859
1 Claim. (Cl. 252-62.5)



The method of preparing a composite ferrite body showing broad-band resonance absorption for microwaves

which comprises separately sintering five ferrite compositions which individually show resonance peaks at spaced intervals within the frequency spectrum for which broad-band resonance is desired, the metallic constituents of said compositions being present in the following amounts, the non-metallic constituent being oxygen:



powdering said sintered ferrite compositions, screening said powdered ferrite compositions to obtain ferrite aggregates between 0.01 centimeter and 0.5 centimeter in their longest dimension, loosely mixing in approximately equal parts by weight said different ferrite aggregates but retaining in said mixture aggregates 0.01 centimeter to 0.5 centimeter in their longest dimension, shaping a body from the mixture so prepared and firing said shaped body in an oxidizing atmosphere at a temperature between 1000° C. and 1400° C. for a time sufficient to sinter said mixture without extensive homogenization of said mixture by interdiffusion between said different ferrite regions, whereby a composite structure, homogeneous in gross but rendered inhomogeneous by the presence of a mixture of discrete regions composed essentially of the individual component ferrites is produced, said regions being between about 0.003 centimeter and 0.5 centimeter in their largest dimension.

3,002,930

PROCESS OF MAKING A FERROMAGNETIC BODY
Preston Robinson, Williamstown, Mass., and Alfred Sommer, Kingston, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 3, 1956, Ser. No. 625,872
11 Claims. (Cl. 252—62.5)



1. A method of making a ferromagnetic body comprising the steps, forming a body of intimately-mixed finely-divided oxides of at least one metal selected from the group consisting of copper, magnesium, manganese, cobalt, zinc and nickel, and ferric oxide in proportions forming upon heating a ferrite having the composition MFe_2O_4 in which M is at least one of said metals, applying around said body a layer of a finely-divided oxide of at a temperature of about 1100° to 1500° C. in a non-nickel, cobalt, zinc and copper, and heating the so-coated body to a temperature of about 1100° to 1500° C. in a non-reducing atmosphere to form said ferrite.

3,002,931 COMPOSITIONS CONTAINING TRICHLORO-CYANURIC ACID

William F. Symes, Winchester, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 19, 1956, Ser. No. 622,737
13 Claims. (Cl. 252—99)

1. A solid bleaching, disinfecting, sterilizing and detergent composition consisting essentially of (1) from about 0.5 to 40% by weight of trichlorocyanuric acid, (2) from about 0.1 to 3 mols, per mol of trichlorocyanuric acid, of an aryl sulfonamide, and (3) a water-soluble salt selected from the group consisting of inorganic, alkaline, water-soluble, alkali metal detergent builder salts and mixtures thereof with a water-soluble inert inorganic neutral alkali metal salt and (4) from 0.5 to about 5.0% by weight of water, said aryl sulfonamide being sufficient to retard loss of available chlorine from said composition in the presence of said water.

3,002,932

INORGANIC ANION-EXCHANGERS AND A PROCESS FOR THEIR PREPARATION

Ernest J. Duwell and Joseph W. Shepard, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Oct. 27, 1958, Ser. No. 769,544
10 Claims. (Cl. 252—179)

1. An anion-exchanger consisting essentially of a stable, substantially non-crystalline, solid, three-dimensional reticulate structure composed of mixed insoluble hydrated oxides of a pair of metals selected from the group consisting of aluminum, silicon, titanium, zinc and zirconium, one member of said pair being present in amount at least about three times the molar amount of the other member of said pair and having a positive valence number in the oxide state lower by unity than the other member of said pair, the higher valent member of said pair being present in an amount of at least 1 atom percent, together with an amount of bound anion sufficient to balance the charge of the higher valent member of said pair.

8. The process for the preparation of an anion-exchanger which comprises coprecipitating mixed hydrated oxides of a pair of elements chosen from the group consisting of aluminum, silicon, titanium, zinc and zirconium in an aqueous medium at a pH in the range of about pH 5 to 7, the lower-valent member of said pair being present in amount at least about three and not more than ninety-nine times the molar amount of the higher-valent member of said pair, drying the aqueous mixture by evaporation at a temperature below about 150° C., and washing the dried mixture with water to remove soluble impurities therefrom.

3,002,933

METHOD OF HALOPHOSPHATE PHOSPHOR MANUFACTURE

Horace H. Homer, Arlington, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Dec. 10, 1958, Ser. No. 779,399
4 Claims. (Cl. 252—301.4)

1. In the manufacture in a furnace of powdered halophosphate phosphors, antimony and manganese activated, from a mixture of powdered raw materials containing compounds of antimony, of manganese, and of chlorine, the steps of placing a charge of such raw materials in an uncovered boat to a level sufficiently below that of the top of the boat to allow room for the accumulation of an atmosphere of antimony chloride above the phosphor, flowing a substantially inert gas into the furnace and firing the materials at high temperature, while said uncovered boat is open to the gases of said furnace.

3,002,934 EXTENDED-LIFE FLUORINATION CATALYST

Ralph A. Davis, Midland, and Max R. Broadworth, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,462

1 Claim. (Cl. 252—442)

An extended-life fluorination catalyst consisting of 80 percent chromium oxyfluoride and 20 percent aluminum fluoride in intimate mixture.

3,002,935 PREPARATION AND USE OF TABLET CATALYSTS

Emory W. Pitzer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 11, 1958, Ser. No. 754,147

11 Claims. (Cl. 252—443)

1. A process for preparing for use at an elevated temperature, strong catalyst tablets from powdered catalytic material which absorbs moisture when exposed to atmospheric air, which comprises heating said material at an elevated temperature of at least 500° F. but below the deactivation temperature of said catalytic material so as to reduce the moisture content to below about 0.5 wt. percent; tabletting said material while at said moisture content; calcining the resulting tablets at an elevated temperature; and thereafter preventing sorption of moisture by the calcined tablets until same are contacted with a process stream of reactant gas catalyzed by said tablets at a temperature above 500° F., by maintaining said tablets in an ambient gas of less than 5 percent relative humidity as determined at 80° F., thereby maintaining the moisture content of said material below 0.5 weight percent at all times between the first and last heating steps whereby the original crushing strength of said tablets is maintained.

3,002,936

METHOD FOR MAKING REFRACTORY ARTICLES
Charles R. Allenbach, Tonawanda, and John C. Burbach, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Apr. 29, 1958, Ser. No. 731,628

6 Claims. (Cl. 252—518)

5. A refractory article having a composition resulting from the sintering of a mixture consisting essentially of between about 5 and 50 percent by weight of finely divided silicon nitride and between about 95 and 50 percent by weight of finely divided molybdenum disilicide, said sintering having been conducted at the dissociation temperature of silicon nitride and under oxidizing conditions whereby the silicon nitride dissociates to silicon and nitrogen and the silicon is oxidized to silicon dioxide.

3,002,937

POLYESTER-URETHANE FOAM CONTAINING SYNTHETIC DETERGENT AND METHOD OF PREPARING SAME

Earl E. Parker, Allison Park, and Keith H. Coultrap, Oakmont, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa.

Filed Jan. 25, 1955, Ser. No. 484,022
4 Claims. (Cl. 260—2.5)

3. As an article of manufacture, a soft, flexible synthetic sponge suitable for use in washing surfaces and comprising a soft, flexible foam of polyurethane resin, said resin being formed by reaction of (A) 100 parts by weight of a polyester of a hydroxyl value of about 60–80, said polyester being formed by the reaction of (1) a mixture of polyhydric alcohols, the major portion of which is an alcohol selected from the class consisting of ethylene glycol, diethylene glycol, propylene glycol, dipropylene glycol, 1,3-butylene glycol, 1,4-butylene glycol, a minor amount of the mixture of polyhydric

alcohols being selected from the class consisting of glycerol, triethylolmethane, trimethylolpropane, pentaerythritol and mannitol, and (2) a dicarboxylic acid selected from the class consisting of adipic acid, succinic acid, sebacic acid, azelaic acid, phthalic acid, terephthalic acid and isophthalic acid, (B) about 20 to about 35 parts by weight of toluene diisocyanate, (C) about 1 to about 4 parts by weight of water, and (D) a detergent dispersed in the plastic and being selected from a class consisting of alkyl-aryl sulfonic acids and sodium salts, potassium salts and ammonium salts of said acids, said detergent being present in an amount of about 1 to 12 percent by weight based upon the polyester and in an amount in excess of that which will dissolve in the polyester, the major portion of said foam comprising a mass of relatively large, intercommunicating, bubble-like cells of a diameter which is substantially greater than 0.05 inch, but not substantially greater than about 1/2 inch and being uniformly distributed in a foam of cells of a diameter not essentially greater than 0.05 inch, the latter cells providing walls separating the larger cells from each other, said cells being adapted to take up water when the soft sponge is squeezed and released in water.

3,002,938

METHOD OF MAKING NATURAL RUBBER RESISTANT TO OZONE BY THE ADDITION OF POLYTETRAFLUORETHYLENE AND PRODUCT THEREOF

Joseph L. Gagne, Somerset, Mass., assignor to Davol Rubber Company, Providence, R.I., a corporation of Rhode Island

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,119
4 Claims. (Cl. 260—4)

1. The method of making a natural rubber compound which will be resistant to ozone cracking, comprising the steps of milling the raw natural rubber, slowly adding and blending therewith fillers and softeners, adding zinc oxide and then accelerators, slowly and evenly dispersing into the blend 3/4 to 2 1/2 percent by weight of the formulation of polytetrafluoroethylene, when the polytetrafluoroethylene has been well dispersed adding sulfur, and then processing and curing.

3,002,939

COMPOSITIONS FOR PRINTING AND DYEING TEXTILES

Leslie L. Balassa, Madison, N.J., assignor to J. R. Geigy, S.A., Basel, Switzerland, a corporation of Switzerland
No Drawing. Filed Mar. 6, 1957, Ser. No. 644,195
11 Claims. (Cl. 260—6)

1. An oil-in-water textile printing and pad-dyeing emulsion composition consisting of an admixture of (a) a pigment in aqueous dispersion, (b) a water-immiscible and organic-solvent-soluble thermosetting emulsified amino-aldehyde resin selected from the group consisting of butylated melamine-formaldehyde and butylated urea-formaldehyde resins and mixtures thereof, in organic solvent solution, said aminoaldehyde resins being per se in the emulsified state, (c) a protective colloid selected from the group consisting of methyl cellulose, casein, egg albumin, blood albumin, gelatin, bone glue, zein, gluten, alkali metal salts of polyacrylic acids, ammonium salts of polyacrylic acids, carboxymethyl cellulose, pre-gelatinized starch, carboxymethyl starch, hydroxyethyl cellulose, alkali metal salts of alginic acids, sodium and ammonium salts of alginic acids, water-soluble salts of maleic adduct of styrene, gum tragacanth, carrageen moss, dextrin, starch, locust bean gum, hydroxypropyl starch, guar gum, polyvinyl pyrrolidone, polyvinyl alcohol, and mixtures thereof, (d) a surface active agent selected from the group consisting of ammonium, morpholine, ethanolamine, and alkali metal salts of fatty acids having 10 to 22 carbon atoms, of hydroxy fatty

acids having one or more hydroxyl groups attached to the carbon chain, of unsaturated fatty acids derived from naturally occurring oils, ammonium and alkali metal salts of mono-esters formed from sulfuric acid and fatty alcohols having a carbon chain length of from 8 to 22 carbon atoms, ammonium and alkali metal salts of benzene and naphthalene sulphonic acids having one or more aliphatic chains on the aromatic ring and condensation products thereof with formaldehyde, polyoxyethylene condensation products of fatty acids and of fatty alcohols and of substituted phenols, soya lecithin, and mixtures thereof, (e) a water-dispersion of an interpolymers of a monomer mixture comprising 30 to 80 parts of acrylonitrile and 2 to 15 parts of an alphaolefinic monocarboxylic acid selected from the group consisting of acrylic acid and methacrylic acid, ethacrylic acid, phenylacrylic acid and crotonic acid, and 15 to 65 parts of an ester of an alpha-olefinic monocarboxylic acid of the above group formed with a saturated aliphatic monohydric alcohol of 1 to 8 carbon atoms, said parts of said monomer mixture being based upon 100 parts by weight of total monomer mixture, (f) emulsified water-immiscible organic hydrocarbons having less than 3% solubility in water by weight, (g) and ammonia, the dry weight of said interpolymers being between 1 and 5 times the dry weight of said pigment, the proportion on a dry weight basis of the aminoaldehyde resin to 100 parts of said interpolymers being between 5 and 30.

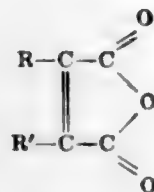
3,002,940

STYRENE-BUTADIENE LATEX PAINT CONTAINING SOLUBLE AND INSOLUBLE THICKENER RESINS AND SUSPENDING AGENTS

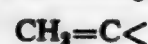
John A. Holloway, Lakewood, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed May 16, 1956, Ser. No. 585,137
7 Claims. (Cl. 260—17.4)

1. A latex paint comprising an aqueous dispersion of a synthetic copolymer of 60 to 67% styrene and 33 to 40% butadiene as a binder material thickened and suspension-stabilized with from 0.1 to about 2% by weight, based on the total weight of said paint, of a mixture comprising (1) an insoluble monovalent salt of a member of the class consisting of a partial ester and a partial amide of an anhydride interpolymers in which from about 5 to about 50% of the anhydride has been neutralized by reaction with a member of the class consisting of monohydric alcohols and monoamines containing from 1 to 8 carbon atoms, said interpolymers being prepared by the polymerization of a monomeric mixture containing (a) an alpha-beta unsaturated polycarboxylic acid anhydride of the formula



wherein R and R' are selected from the class consisting of hydrogen, halogen, cyanogen group, alkyl groups, aryl groups, alkaryl groups, aralkyl groups and cycloaliphatic groups, (b) a vinyl alkyl ether copolymerizable with said anhydride, and (c) 0.01 to 5% by weight based on the total of (a)+(b) of a cross-linking agent copolymerizable with (a), (b) and containing more than two



groups per molecule in non-conjugated relationship said cross-linking agent being a member of the class consisting of polybutadiene, polyisoprene, and polyalkenyl poly-

ethers of polyhydric alcohols, which contain at least 4 carbon atoms and at least 3 hydroxyl groups the molar proportions of (b)+(c) being approximately equal to that of (a), and (2) a water-soluble monovalent salt of a polymer containing at least 50 mol percent of polymerizable alpha-beta olefinically-unsaturated carboxylic acid, said (1) and said (2) being present in said paint in the ratio of between 10:1 and 1:5.

3,002,941

CURING EPOXY RESIN WITH AN AMINO-POLY-IMIDAZOLINE

Lowell Peterson, Anoka, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed May 17, 1957, Ser. No. 659,759
2 Claims. (Cl. 260—18)

1. A cured composition containing an epoxy resin being a glycidyl polyether of a polyhydric phenol and having an epoxy equivalent weight of at least 100 and an amino-poly-imidazoline-amide which is the reaction product at temperatures in the range of 285 to 315° C. of (a) polymeric fat acids and (b) an excess of an aliphatic polyamine of the general structural formula



where n is an integer of from 1 to 5 and R is selected from the group consisting of hydrogen and lower alkyl radicals containing less than 5 carbon atoms in which the ratio of reactants is at least 1.5 equivalents of amine for each equivalent of acid and said amino-poly-imidazoline-amide has an acid number less than 5, an amine number in the range of 270 to 500, a Brookfield viscosity of 100 to 1000 at 24° C., and contains at least 2 imidazoline groups for every amide group.

3,002,942

PIGMENTATION OF POLYESTERS

Gijsbertus Johannes Zoethbrood, Velp, Netherlands, assignor, by mesne assignments, to N.V. Onderzoekings-Instituut Research, Arnhem, Netherlands, a corporation of the Netherlands

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,324
Claims priority, application Netherlands Oct. 19, 1957
2 Claims. (Cl. 260—22)

1. In a method of preparing pigmented polyesters by reacting a glycol of the series $\text{HO}(\text{CH}_2)_n\text{OH}$ wherein n is an integer greater than 1 but not exceeding 10, and a compound of the group consisting of terephthalic acid and an alkyl terephthalate of 1-4 carbon atoms, the improvement comprising incorporating a pigment in the form of a dispersion in the reaction mass in the presence of a small amount of zinc stearate.

3,002,943

PREPARATION OF FATTY ACID SALTS

Leonard Martin Kebrich, Ridgewood, N.Y., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 729,402, Feb. 18, 1947. This application Oct. 23, 1958, Ser. No. 769,094

11 Claims. (Cl. 260—23)

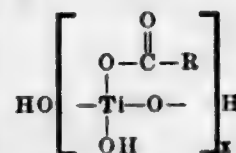
10. A mixture of at least two basic lead soaps suitable as a stabilizer in resin compositions containing vinyl chloride, the fatty acid radicals in said mixture being selected from the group consisting of the fatty acid radicals of stearic acid, palmitic acid and oleic acid, and said soaps containing in excess of one mole of lead calculated as PbO for each two mols of said fatty acid radicals calculated as the fatty acids.

3,002,944
HYDROXYTITANIUM ACYLATES IN CIS-CONJUGATED DIENE POLYMER COMPOSITIONS AND PROCESS OF PREPARATION

Gerard Kraus and Donald E. Carr, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 1, 1958, Ser. No. 732,116
19 Claims. (Cl. 260—23.7)

1. A rubber composition having improved tensile strength comprising a major amount of cis-conjugated diene polymer selected from the group consisting of natural rubber and synthetic polymers of conjugated dienes having from 4 to 8, inclusive, carbon atoms per molecule containing at least 80 percent cis-1,4 addition, a minor amount of carbon black and hydroxytitanium acylate represented by the formula



where x=5-100 and each R is selected from the group consisting of alkyl, hydroxyalkyl, alkenyl and hydroxy-alkenyl radicals and each acyl group contains 6-24 carbon atoms.

3,002,945

THERMOSETTING COMPOSITION OF UNSATURATED POLYESTER RESIN AND POLYTHIO MERCAPTAN

Edward Rolle, San Diego, William L. Mackie, Oxnard, and John Q. Tabor, Jr., Los Angeles, Calif., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed June 10, 1957, Ser. No. 664,866
1 Claim. (Cl. 260—28.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)

A plastic product characterized by high tensile strength, exceptional hardness and unusually good optical and electrical properties, such product being formed by molding without added pressure or temperature a mixture by weight of the following ingredients in substantially the proportions set forth:

Unsaturated polyester resin having styrene as a reactive monomer, the resin being derived from propylene glycol, maleic anhydride and phthalic anhydride, the ratio of maleic anhydride to phthalic anhydride being relatively high and containing a small amount of paraffin wax.....	88-93
A polythio polymercaptan derived from 98 mole percent of bis (2-chloroethyl) formal and 2 mole percent of trichloropropane.....	0.5-3
Benzyl alcohol.....	0.25-3
Benzyl ether.....	0.5-5
Benzaldehyde.....	0.5-3
Hydrogenated terphenyl.....	0.5-1.5
Diethyl phthalate.....	0.5-5
Solution of methyl ethyl ketone peroxide and hydroperoxide in dimethyl phthalate.....	0.5-4

3,002,946

COATING COMPOSITION OF POLYSILOXANE RESIN AND TWO POLYSILOXANE FLUIDS

Robert N. Thomas, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,336
2 Claims. (Cl. 260—29.1)

1. A cured coating composition consisting essentially of (1) from 80 to 98 percent by weight of a phenyl methyl siloxane resin with a total per silicon atom of

from 1 to 1.7 hydrocarbon radicals selected from the group consisting of phenyl, methyl and ethyl radicals, (2) from 1 to 10 percent by weight of a phenyl methyl siloxane fluid which has per silicon atom from 1.99 to 2.0 hydrocarbon radicals selected from the group consisting of phenyl, methyl and ethyl radicals and which contains at least one percent by weight of silicon-bonded hydroxyl groups and (3) from 1 to 10 percent by weight of a siloxane fluid in which the silicon valences not satisfied by the siloxane linkage are satisfied by monovalent hydrocarbon radicals, there being at least two monovalent hydrocarbon radicals per silicon atom and in which fluid at least 75 mol percent of the diorganosiloxane units are dimethylsiloxane units, said fluid (3) being incompatible with (1) and (2); having a viscosity at 25° C. of not more than 1,000,000 cs. and having a vapor pressure of less than 20 mm. Hg at 300° C.

3,002,947

DELUSTERED AND STABILIZED POLYAMIDE

Donald Elwood Maple, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 22, 1959, Ser. No. 814,947
9 Claims. (Cl. 260—37)

1. In the process of preparing polyhexamethylene adipamide, the improvement comprising concentrating an aqueous solution of hexamethylene diammonium adipate, adding from 0.01-5% by weight (dry TiO₂ based on dry adipate) of TiO₂ in a slurry when the concentration of the adipate solution is at least about 70% but before any appreciable polymerization has taken place, heating the solution under polymerization conditions, and adding trace amounts of a manganous salt having a reducing anion when the molecular weight of the polyhexamethylene adipamide is greater than about 1700 and after at least about 30 minutes from the completion of the addition of TiO₂.

3,002,948

SHELL MOLD

William D. Lawther, Hammond, and John A. Rassenfoss, Highland, Ind., assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

No Drawing. Filed Sept. 12, 1957, Ser. No. 683,472
9 Claims. (Cl. 260—38)

1. A shell mold for producing low carbon, low alloy steel castings, said mold comprising: molding-sand particles bonded together by a phenol formaldehyde resin and having a sufficient amount of the earthy residue resulting from the digestion of bauxite at the casting contacting mold surfaces to effectively eliminate characteristic shell molding defects of castings poured therein, said residue comprising in chemical combination the following constituents in approximately the percentages indicated: Al₂O₃, 26%; Fe₂O₃, 17%; SiO₂, 14%; TiO₂, 11%; CaO, 10%; Na₂O, 10%; the balance ignition loss.

3,002,949

COMPOSITION COMPRISING AN ORGANOPOLYSILOXANE AND THE REACTION PRODUCT OF A TITANIUM ESTER AND FORMALDEHYDE, AND METHOD OF RENDERING FIBROUS MATERIAL WATER-REPELLENT THEREWITH

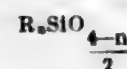
Siegfried Nitzsche and Ewald Pirson, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed Oct. 17, 1958, Ser. No. 767,765
Claims priority, application Germany Nov. 13, 1957

14 Claims. (Cl. 260—42)

1. A composition of matter particularly suited for rendering fibrous materials water repellent consisting es-

essentially of a mixture of (1) 50 to 98 percent by weight of an organopolysiloxane of the average unit formula



where each R is a monovalent hydrocarbon radical and n has an average value of from 1.0 to 2.9 inclusive and (2) 2 to 50 percent by weight of the reaction product of (a) a titanium ester of an alcohol having 3 to 10 inclusive carbon atoms and (b) formaldehyde.

3,002,950

EPOXIDIZED ADDUCT OF A DICARBOXYLIC ACID AND A TRIALKENE, PROCESS OF MAKING AND COMPOSITION CONTAINING SAME

Charles S. Shull, Louisville, Ky., assignor to Devco & Reynolds Company, Inc., a corporation of New York
No Drawing. Filed Jan. 8, 1958, Ser. No. 707,688
11 Claims. (Cl. 260—45.4)

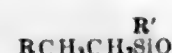
4. An epoxidized adduct of an aliphatic dicarboxylic acid dienophile selected from the group consisting of maleic, fumaric, mesaconic, citraconic, itaconic acids and anhydrides, and a trialkene having a non-terminal double bond separated by at least one methylene group from a conjugated olefinic double bond system.

3,002,951

METHOD OF POLYMERIZING CYCLIC DIORGANOSILOXANES

Oskar K. Johansson, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,952
4 Claims. (Cl. 260—46.5)

1. A method of preparing high polymeric siloxanes which comprises heating a cyclotrisiloxane of the unit formula



in which R is a perfluoroalkyl radical of from 1 to 10 carbon atoms and R' is an aliphatic hydrocarbon radical selected from the group consisting of methyl, ethyl and vinyl radicals, in the presence of an alkaline catalyst selected from the group consisting of alkali metal hydroxides, quaternary ammonium hydroxides, organosilanol salts of alkali metal hydroxides and organosilanol salts of quaternary ammonium hydroxides, at a temperature and for a time sufficient to cause polymerization of the cyclotrisiloxane to the desired polymer without causing appreciable degradation of the polymer so formed to cyclotrisiloxanes and thereafter deactivating the catalyst to prevent substantial degradation of said desired polymer, said alkaline catalyst being present in amount such that there is from 1 alkali ion per 100 silicon atoms to 1 alkali ion per 200,000 silicon atoms.

3,002,952

INITIATORS FOR THE POLYMERIZATION OF FORMALDEHYDE

Timothy Edmond O'Connor, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 22, 1959, Ser. No. 841,452
12 Claims. (Cl. 260—67)

1. A process for preparing high molecular weight polyoxymethylene which comprises contacting substantially anhydrous monomeric formaldehyde in an inert liquid reaction medium with 1–1000 milligrams per liter of said reaction medium of a polymerization initiator consisting essentially of a tertiary amine salt of a Friedel-Crafts metal halide at a temperature of -110° to 100° C. and recovering high molecular weight polyoxymethylene formed thereby.

3,002,953

PROCESS FOR PRODUCING POLYMERIZATES
Johann Sitt, Munich, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Germany, a corporation
No Drawing. Filed Jan. 28, 1957, Ser. No. 636,476
Claims priority, application Germany Feb. 1, 1956
6 Claims. (Cl. 260—78.5)

1. Process for producing a complex polymerize compound containing mercury in the absence of peroxides which comprises polymerizing a mixture of vinyl acetate and a member of the group consisting of maleic acid and maleic anhydride, at a temperature of from room temperature to 60° C., in the presence of at least 1.5 percent by weight, based on the vinyl acetate, of mercuric acetate and from about 0.08 percent to about 0.16 percent of concentrated sulfuric acid as catalyst, said vinyl acetate being employed in a molar excess of up to five times in relation to said member.

3,002,954

CROSS LINKED POLYMERS OF MALEIC ANHYDRIDE

John C. Sellers, North Tarrytown, N.Y., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,887
11 Claims. (Cl. 260—78.5)

1. An adhesive composition having a plasticity not greater than about 4.0 mm. and a cold flow not greater than about 2.5 inches, comprising a cross-linked ester of a copolymer comprising about equimolecular proportions of maleic anhydride and a vinyl compound selected from the group consisting of styrene and vinyl toluene, said copolymer having an intrinsic viscosity in the range from about 0.2 to 2.0, about 70 to 95 percent of the potential carboxy groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol containing 6 to 16 carbon atoms, said ester being cross-linked with a polyhydric alcohol of which only the hydroxy groups react with the carboxy groups of the copolymer, said cross-linking being sufficient to impart to said ester a gel content in the range from about 10 to 100 percent by weight of the ester.

3,002,955

CROSS-LINKED MALEIC ANHYDRIDE COPOLYMERS

John C. Sellers, North Tarrytown, N.Y., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,888
8 Claims. (Cl. 260—78.5)

1. An adhesive composition having a plasticity not greater than 4.0 mm. and a cold flow not greater than 2.5 inches, comprising a cross-linked ester of a copolymer comprising about equimolecular proportions of maleic anhydride and an alkyl vinyl ether the alkyl group of which contains from 1 to 8 carbon atoms, said copolymer having an intrinsic viscosity in the range from about 0.2 to 2.0, about 65 to 95 percent of the potential carboxy groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol containing 6 to 16 carbon atoms, said ester being cross-linked with an inorganic polyvalent metal oxide to impart to said ester a gel content in the range from about 10 to 100 percent by weight of the ester.

3,002,956

POLYMERIZATION PROCESS

Joseph M. Perri, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 1, 1958, Ser. No. 732,146
10 Claims. (Cl. 260—79.3)

1. The process which comprises copolymerizing a mixture of monomers containing at least 75% acrylo-

nitrile and up to about 25% of vinylidene chloride at a temperature from about 30° C. to about 55° C. in the presence of water, a water-soluble surface-active agent selected from the group consisting of alkali metal salts of fatty alkyl sulfuric acids, alkali metal salts of alkyl aryl sulfonic acids, and polyoxyethylene sorbitan monooleate in an amount from about 0.035% to about 0.080% based on the total weight of acrylonitrile and vinylidene chloride, and an initiator system containing a persulfate catalyst and a sulfoxide reducing agent, the amount of water being adjusted to provide a concentration of monomers of from about 13% to about 30% based on the total weight of the reaction mixture.

3,002,957

POLY-N-VINYLBUTANESULTAM

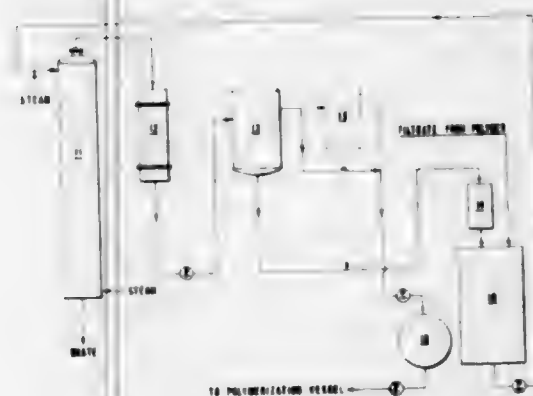
Carl John Berg, St. Paul, and Samuel Smith, Mendota Heights, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Sept. 15, 1958, Ser. No. 760,869
6 Claims. (Cl. 260—79.3)

1. Solid high-melting thermoplastic poly-N-vinyl-1,4-butanedisultam melting at about 300° C.

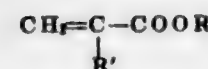
3,002,958

PROCESS FOR POLYMERIZING MONOMERIC MIXTURES

William K. Wilkinson, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 30, 1958, Ser. No. 752,108
7 Claims. (Cl. 260—85.5)



1. In a continuous process for polymerizing in an aqueous medium, a monomeric mixture of at least 85% acrylonitrile and up to about 15% of an acrylic ester having the general formula



wherein R is selected from the class consisting of alkyl and aryl groups, and R' is selected from the class consisting of hydrogen, alkyl, and aryl groups, and recovering unpolymerized monomers, the improvement which comprises removing a volatile, water-soluble emulsion stabilizing agent formed during the polymerization of said monomers by aqueous washing and filtering the polymerization product, distilling the filtrate, collecting and condensing the vapors to form two liquid layers, separating said layers, returning the top layer to polymerization vessel, first passing the bottom layer through a synthetic water-insoluble cationic exchange resin, and thereafter combining said bottom layer with said filtrate.

771 O.G.—15

3,002,959

HYDROXYL-CONTAINING COPOLYMERS AND THEIR PREPARATION

Darrell D. Hicks, Louisville, Ky., assignor to Devco & Reynolds Co., Inc., a corporation of New York
No Drawing. Filed June 25, 1956, Ser. No. 593,340
5 Claims. (Cl. 260—88.1)

1. A one-step process for preparing a polyhydroxy copolymer from (a) an unsaturated aliphatic acid having only one carboxyl group and selected from the group consisting of acrylic acid, methacrylic acid, crotonic acid and half acid-esters of maleic and fumaric acids formed with saturated alcohols of from 1 to 10 carbon atoms, (b) an ethylenically unsaturated monomer copolymerizable with the unsaturated acid and selected from the group consisting of monovinyl aromatic hydrocarbons, monovinyl halogenated aromatic hydrocarbons, vinyl alkyl ethers having not more than twenty carbon atoms in the alkyl group, alkenyl cyanides of not over four carbon atoms, monoethylenically unsaturated monocarboxylic acid esters of saturated monohydric alcohols, the acids having not more than four carbon atoms and the alcohols having not more than twenty carbon atoms, and monoethylenically unsaturated monohydric alcohol esters of saturated monocarboxylic acids, the alcohols having not more than four carbon atoms and the acids having not more than twenty carbon atoms, and (c) a monoepoxide selected from the group consisting of 1,2-alkylene oxides, aryl-1,2-alkylene oxides, monoglycidyl ethers and monoglycidyl esters each having not over ten carbon atoms; which one step process comprises in a non-reactive solvent in an amount sufficient to substantially completely dissolve the resulting polyhydroxy copolymer, and in the presence of both a free radical producing peroxide vinyl polymerization catalyst and an epoxycarboxy catalyst selected from the group consisting of amines and quaternary ammonium compounds reacting the unsaturated aliphatic acid with the monoepoxide while concomitantly copolymerizing the unsaturated aliphatic acid with the ethylenically unsaturated monomer, catalyzing the esterification reaction with 0.5 to 6 weight percent based on the reactants of the epoxycarboxy catalyst and catalyzing the concomitant copolymerization reaction with 1 to 4 weight percent based on the reactants of the peroxide catalyst, the catalyst amounts within said ranges being such that each reaction is initiated at the reaction temperature by the catalyst employed, and maintaining a reaction temperature of 60° C. to the reflux temperature of the system until an acid value in the range of 13 to 0 is obtained and the concomitant polymerization reaction is substantially complete, the unsaturated acid and ethylenically unsaturated monomer being employed in amounts such that the resulting copolymer contains 5 to 75 weight percent hydroxy ester and 25 to 95 percent ethylenically unsaturated monomer.

3,002,960

POLYACRYLAMIDE PREPARATION

Edwin R. Kolodny, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 18, 1958, Ser. No. 755,434
6 Claims. (Cl. 260—89.7)

1. A method of producing a polyacrylamide having an intrinsic viscosity of at least 12 deciliters per gram which comprises polymerizing acrylamide in aqueous solution free from carbon dioxide at a temperature within the range of from about 10° to 35° C. in the presence of a catalyst mixture of a water-soluble tertiary amine selected from the group consisting of 3,3'-nitrolo-trispropionamide, dimethylaminopropionitrile, dimethylaminoacetone, β -methylisopropylaminopropionitrile, β -methyl-n-butylaminopropionitrile, methyl- β -cyanoethylaminoacetone, dimethylaminopropanediol and trietha-

nomamine and a water-soluble inorganic persulfate oxidizing agent containing from about 2 to 6 mols of the amine for each mol of the oxidizing agent.

3,002,961

PROCESS FOR THE PREPARATION OF PROPYLENE OF HIGH MOLECULAR WEIGHT

Hans Günter Kirschner, Albert Gustav Martin Gumboldt, and Gerhard Bier, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Oct. 16, 1956, Ser. No. 616,128
Claims priority, application Germany Oct. 21, 1955

4 Claims. (Cl. 260—93.7)

1. An improved process of polymerizing propylene which comprises contacting liquid propylene with a catalytic amount of a catalyst formed by mixing an alkyl-aluminum compound selected from the group consisting of an aluminum trialkyl, a dialkylmonoaluminum halide, and a monoalkylaluminum dihalide, with a titanium halide in a ratio of 0.5–12 moles of alkylaluminum per 1 mole of a halogen compound of titanium, employing as the dispersing agent liquid propylene, and maintaining sufficient liquid propylene in the reaction mixture to function as a diluent for the resulting polymer by restricting the polymerization of the batch to a conversion of 30–60% of the total propylene introduced, so that the reaction mixture of propylene and polymer can be easily agitated.

3,002,962

POLYMERIZATION DILUENT TREATMENT

Earl Bone Claiborne, Baton Rouge, La., and Ralph H. Schatz, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Oct. 28, 1959, Ser. No. 849,265

7 Claims. (Cl. 260—187)

1. In a process for polymerizing a C_2 – C_4 alpha mono olefin in the presence of a catalyst containing a partially reduced, heavy, transition metal halide of a group IVB–VIB metal and a metal alkyl compound corresponding to the formula $RR'AIX$, wherein R and R' are alkyl groups having from 2 to 8 carbon atoms and X is selected from the group consisting of alkyl, hydrogen and halogen in a hydrocarbon diluent, wherein a C_1 to C_2 alkanol is added to the reaction system to precipitate solid polymer product, and acetylacetone is also added to remove catalyst residues from the polymer followed by separation of the resultant diluent-alkanol-acetylacetone mixture therefrom, the improved integrated operation which comprises the steps of removing soluble polymers from the alkanol-diluent-acetylacetone mixture; extracting the mixture with an aqueous caustic solution; separating the thus treated mixture into a diluent-rich organic phase and an aqueous alkanol-acetylacetone phase; distilling the diluent phase to take as a bottoms product an essentially alkanol-acetylacetone-water free hydrocarbon stream; distilling the aqueous phase to obtain a relatively hydrocarbon-acetylacetone free alkanol stream and leaving a caustic stream and utilizing the alkanol stream to wash the precipitated polymer product.

3,002,963

GAZ PHASE POLYMERIZATION UTILIZING A FREE-SETTLING, FLUIDIZED CATALYST AND REACTOR SYSTEM THEREFOR

Edward L. Czernusich and William L. Fawcett, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 22, 1957, Ser. No. 654,337

8 Claims. (Cl. 260—94.9)

1. A process for producing a solid polymer which comprises passing gaseous material containing polymerizable olefin into a feed zone; passing said gaseous ma-

terial from said feed zone in an annular gas stream; introducing said annular gas stream into a concentric, cylindrical communication zone; passing said gaseous material upwardly through said communication zone into the bottom of a vertical, uniformly expanding reaction zone; passing said gaseous material upwardly through said reaction zone; maintaining a dilute, free-settling suspension of finely divided solid catalyst within said reaction zone, said catalyst catalyzing the conversion of said olefin to solid polymer which builds up on the catalyst particles thereby forming particles of gradually increasing particle size as a function of the length of time the individual catalyst particles are in the reaction zone; maintaining the temperature within said reaction zone sufficient to effect said conversion in the presence of said catalyst but below the melting point of said polymer; continuously removing particles of polymer-coated catalyst in a maximum size range from the bottom of said reaction zone through said communication zone; continuously removing the unreacted portion of said gaseous material from the top of said reaction zone; introducing fresh catalyst to said reaction zone to replace that removed; and maintaining the feed rate of said gaseous material into said reaction zone substantially constant so that the velocity of said gaseous material steadily decreases as it passes through said expanding reaction zone, said feed rate being such that the maximum gas velocity at the bottom of said reaction zone and in said communication zone is just insufficient to suspend said particles of polymer-coated catalyst in a maximum size range and the minimum gas velocity at the top of said reaction zone is insufficient to suspend the smaller particles of fresh catalyst introduced.

3,002,964

COLOUR PHOTOGRAPHY

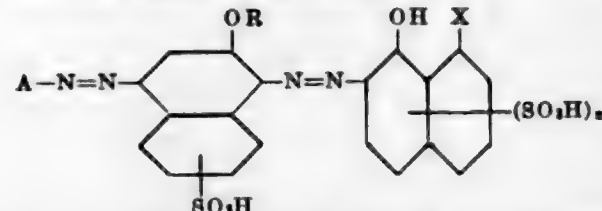
Ernst Keller, Peter Hindermann, and Jean-Pierre Jung, all of Basel, Switzerland, assignors, by mesne assignments, to Ilford Limited, Ilford, England, a British company

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,065

Claims priority, application Great Britain Apr. 29, 1957

6 Claims. (Cl. 260—187)

1. A cyan dyestuff of the formula:



where A is a radical selected from the class consisting of phenyl- and phenoxyphenyl-carboxylic alkyl esters of which the alkyl group contains at least 5 carbon atoms and to which the nitrogen atom shown is nuclearly attached, R is selected from the class consisting of alkyl groups containing up to 6 carbon atoms and carboxymethyl groups, X is selected from the class consisting of hydroxy, amino, lower alkyl carbonylamido, phenyl-alkyl carbonylamido, phenyl carbonylamido, chloro-phenyl-alkyl carbonylamido, and chlorophenoxyalkyl carbonylamido groups, and n is an integer of from one to two.

3,002,965

NUCLEOSIDES AND THEIR PREPARATION

Jack J. Fox, White Plains, N.Y., and Robert Duschinsky, Essex Fells, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 17, 1958, Ser. No. 729,860

13 Claims. (Cl. 260—211.5)

1. A compound selected from the group consisting of 5-fluorocytosine- N_1 -pentoside and medicinally acceptable acid addition salts thereof.

3,002,966

METHOD OF PRODUCING MANNOSE-6-PHOSPHATE

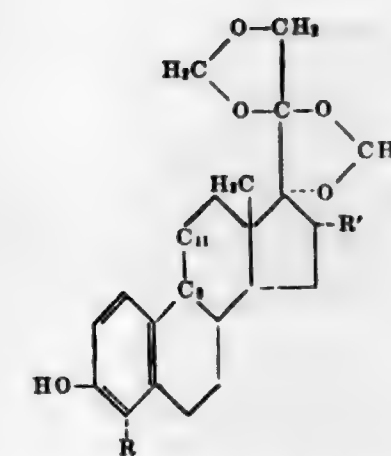
Morey E. Slodki, Peoria, Ill., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,614

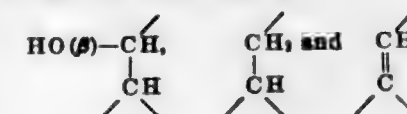
3 Claims. (Cl. 260—234)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process of preparing mannose-6-phosphate comprising heating the potassium salt of a phosphomannan polymer with hydrochloric acid to hydrolyze mannose-6-phosphate therefrom, said potassium salt of the phosphomannan polymer having been obtained from the aerobic whole culture fermentation of a yeast selected from the group consisting of *Hansenula holstii* NRRL Y-2448, *Hansenula holstii* NRRL Y-2154, *Hansenula holstii* NRRL Y-2155, *Hansenula capsulata* NRRL Y-1889, *Hansenula capsulata* NRRL Y-1842, *Hansenula minuta* NRRL Y-411, *Pachysolen tannophilus* NRRL Y-2461, *Torulopsis pinus* NRRL Y-2023, and *Saccharomyces pini* NRRL YB-2022, adjusting the pH of the hydrolysate to about 8.2 and mixing therewith barium acetate to form the barium salt of the mannose-6-phosphate, adding methanol to the resulting mixture to precipitate the barium salt of mannose-6-phosphate, separating the precipitated barium salt of mannose-6-phosphate from the methanol mixture, and slurrying the separated barium salt of mannose-6-phosphate with the free acid form of a sulfonic acid type cation exchange resin to remove the barium from said barium salt of mannose-6-phosphate and free the mannose-6-phosphate.



wherein R and R' are members of the group consisting of hydrogen and methyl radicals and $-C_{11}$ is a trivalent radical of the group consisting of



radicals.

3,002,969

3β-HYDROXY-6-METHYL-Δ⁵-STEROIDS AND METHOD OF PREPARATION

Vladimir Petrow and Isobel Ann Stuart-Webb, London, England, assignors to The British Drug Houses Limited, London, England, a British company

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,154

Claims priority, application Great Britain May 3, 1957

11 Claims. (Cl. 260—239.55)

1. A method for the preparation of a 3β-hydroxy-6-methyl-Δ⁵-steroid selected from the group consisting of the spirostane, androstane and pregnane series from a corresponding 6β-hydroxy-5:5-cyclo-steroid which process comprises oxidizing said 6β-hydroxy-3:5-cyclo-steroid with chromium trioxide to form a 6-oxo-3:5-cyclo-steroid, treating said 6-oxo-3:5-cyclo-steroid with a methyl magnesium halide to give a 6ξ-hydroxy-6ξ-methyl-3:5-cyclo-steroid and rearranging said 6ξ-hydroxy-6ξ-methyl-3:5-cyclo-steroid with a source of hydrogen ions to form said 3β-hydroxy-6-methyl-Δ⁵-steroid.

11. A compound selected from the group consisting of 3β-hydroxy-6-methyl-spirost-5-ene and the 3β-lower alkanoyloxy derivatives thereof.

3,002,970

18-OXYGENATED STEROIDS AND PROCESS FOR THEIR SYNTHESIS

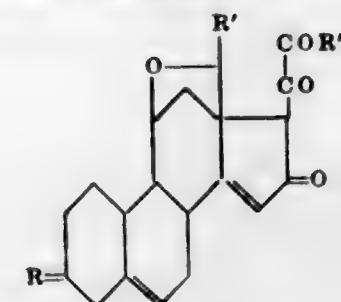
Albert Wettstein and Karl Heusler, Basel, Hellmut Ueberwasser, Riehen, and Peter Wieland, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,691

Claims priority, application Switzerland Dec. 5, 1957

14 Claims. (Cl. 260—239.55)

9. Compounds of the formula:



wherein R represents a ketalized oxo group, R' a tetrahydropyranloxy group, and R'' a member selected from the group consisting of a free hydroxyl group, a lower alkoxy group and a substituted amino group selected

3,002,968

BISMETHYLENEDIOXY STEROIDS

Seymour Bernstein, New City, and John J. Brown, Pearl River, N.Y., and Robert H. Lenhard, Ridgefield Park, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,143

14 Claims. (Cl. 260—239.55)

12. A compound having the formula:

from the group consisting of lower alkyl amino, di-lower alkylamino, phenyl lower alkylamino, cyclo-lower alkylamino and heterocyclic amino.

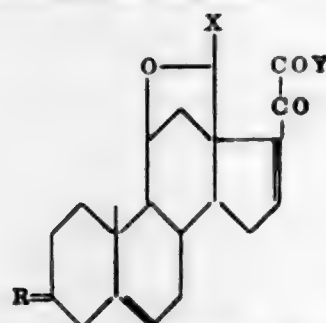
3,002,971

18-OXYGENATED STEROIDS AND PROCESS FOR THEIR MANUFACTURE

Albert Wettstein and Karl Heuser, Basel, Hellmut Ueberwasser, Riehen, and Peter Wieland, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,692
Claims priority, application Switzerland Dec. 5, 1957
18 Claims. (Cl. 260—239.55)

12. Compounds of the formula



wherein R represents a ketalized oxo group, X a tetrahydropyranyloxy group, and Y a member of the group consisting of a morpholino group, a hydroxyl group, and a lower alkoxy group.

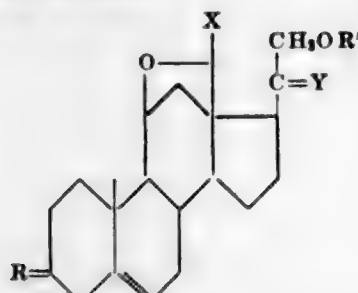
3,002,972

18-OXYGENATED STEROIDS AND PROCESS FOR THEIR SYNTHESIS

Albert Wettstein and Karl Heuser, Basel, Hellmut Ueberwasser, Riehen, and Peter Wieland, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,693
Claims priority, application Switzerland Dec. 5, 1957
14 Claims. (Cl. 260—239.55)

8. A member selected from the group consisting of compounds of the formula



wherein R represents a ketalized oxo group, R' a member selected from the group consisting of a hydrogen atom and an acyl group, X an etherified hydroxyl group and Y stands for a member selected from the group consisting of the



group and O, and said compounds containing a further double bond in 16,17-position.

3,002,973

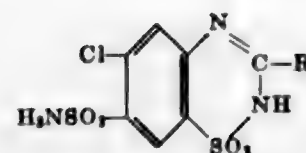
6-CHLORO-3-CYCLOALKYL-7-SULFAMYL-1,2,4-BENZOTHIADIAZINE-1,1-DIOXIDES

Harold E. Zaugg, Lake Forest, and Raymond J. Michaels, Jr., Mundelein, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Continuation of application Ser. No. 777,212, Dec. 1, 1958. This application Jan. 25, 1960, Ser. No. 4,208

4 Claims. (Cl. 260—243)

1. A compound selected from the class consisting of compounds corresponding to the formula



and their non-toxic alkali metal salts, wherein R is selected from the group consisting of cyclopropyl, cyclobutyl, methylcyclopropyl and methylcyclobutyl.

3,002,974

PREPARATION OF 8-CHLOROALLOXAZINE

Harold G. Petering, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 9, 1959, Ser. No. 825,898
8 Claims. (Cl. 260—251.5)

1. A process for the preparation of 8-chloroalloxazine substantially free from impurities, which comprises reacting 4-chloro-1,2-phenylenediamine with alloxan in an anhydrous medium containing acetic acid and not less than about 3 molar percent of boric acid based on the alloxan present in the reaction mixture.

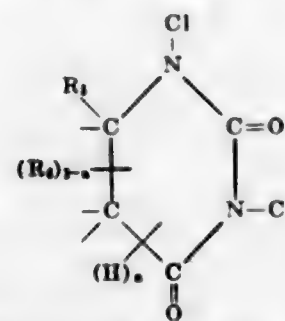
3,002,975

PROCESS FOR THE PREPARATION OF 1,3-DIHALO-URACILS

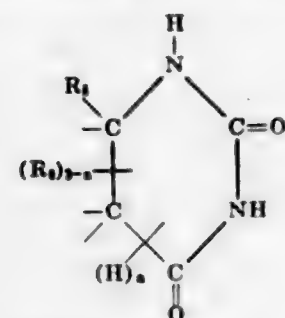
Frank B. Slezak, Palmerville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,102
3 Claims. (Cl. 260—260)

1. The method of preparing compounds of the structure:



which comprises mixing water and a compound of the structure:



wherein a is a number from 1 to 3 inclusive; R₁ and R₂ are lower alkyl radicals containing 1 to 10 carbon atoms and passing chlorine into the mixture at a temperature of about 0°–30° C. while maintaining a pH range of 1 to 3 by periodically adding caustic solution.

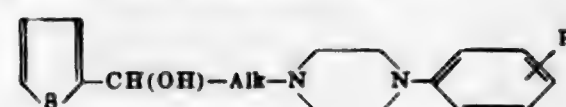
3,002,976

1-(2-THIENYL)-(4-ARYLPYPERAZINE)ALKANOLS

Paul A. J. Janssen, Antwerp Steenweg 16, Vosselaar, near Turnhout, Belgium

No Drawing. Filed Oct. 12, 1959, Ser. No. 845,629
7 Claims. (Cl. 260—268)

1. A compound of the formula



wherein R is a member of the class consisting of hydrogen, methyl, and halogen and Alk is a lower alkylene radical.

3,002,977

ETHYL 2-(2-CYCLOHEXYNYLTHIO)-4-THIAZOLECARBOXYLATE

John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,782
1 Claim. (Cl. 260—302)

Ethyl 2-(2-cyclohexenylthio)-4-thiazolecarboxylate.

3,002,978

GLYCERYL PYRROLIDONE CARBOXYLATES

Gustave Marie Joseph Bocher, 67 Blvd. Raspail, Paris, France

No Drawing. Filed May 5, 1959, Ser. No. 810,984
Claims priority, application France May 6, 1958
4 Claims. (Cl. 260—326.3)

1. A compound selected from the group consisting of glyceryl monopyrrolidone carboxylate, glyceryl dipyrrolidone carboxylate, and glyceryl tripyrrolidone carboxylate.

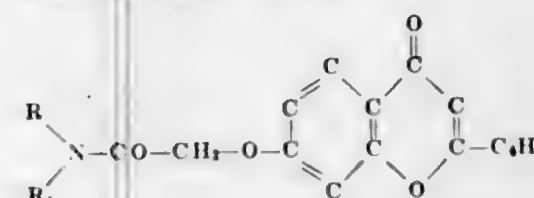
3,002,979

FLAVONE-7-OXY-ACETAMIDES

Josef Kloss, Berlin-Zehlendorf, Germany, assignor to Delmar Chemicals, Limited, Lachine, Quebec, Canada, a corporation of Canada

Filed Mar. 10, 1960, Ser. No. 14,079
7 Claims. (Cl. 260—345.2)

1. A compound of the formula



where R and R₁ are selected from the group consisting of H, alkyl, cyclohexyl, cyclohexylaminoalkyl, phenylalkyl, phenylalkoxy, phenylalkoxyalkyl, hydroxyalkyl, hydroxyphenyl, alkoxyalkyl, dialkylaminoalkyl and anti-pyrinyl, and when taken with the nitrogen atom, R and R₁ form groups selected from the group consisting of morpholine, pyrrolidine, piperidine, alkyl piperidine, and tetramethyl piperidine, and the acid addition and methyl quaternary salts of said compounds, wherein R₁ and R₂ include tertiary amine groups, "alkyl" and "alkoxy" groups in every case consisting of those selected from the groups having from one through four carbon atoms.

2. Flavone-7-oxy-acetic acid amide.

3,002,980

RECOVERY OF PHTHALIC ANHYDRIDE FROM PHTHALIC ANHYDRIDE COKE

George H. Michel, Dumont, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 30, 1957, Ser. No. 681,378
5 Claims. (Cl. 260—346.7)

1. A method of recovering phthalic anhydride from phthalic anhydride distillation coke which comprises coating particles of a solid inert carrier with said coke, contacting the particles so coated with a flow of hot inert gas and thereby vaporizing phthalic anhydride into said gas, drawing off the gas and recovering the phthalic anhydride therefrom, burning the carbonaceous residue from the carrier particles so treated by contacting them with an oxygen-containing gas at combustion temperatures and then returning the resulting carrier particles to the coating step for reuse in the process.

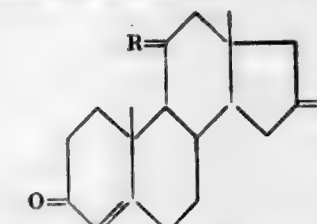
3,002,981

ANDROSTENE-16-ONES

Leon Velluz, Paris, and Georges Muller, Nogent-sur-Marne, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed May 11, 1960, Ser. No. 28,251
Claims priority, application France June 12, 1959
3 Claims. (Cl. 260—397.3)

1. A compound of the formula



wherein R is selected from the group consisting of =O and



3,002,982

METHOD OF PREPARING 2-HYDROXYETHYL P-SULFAMYL CARBANILATE

Theodore I. Fand, White Plains, and Bernard F. Duesel, Yonkers, N.Y., said Duesel assignor to Nepera Chemical Co. Inc., Harriman, N.Y., a corporation of New York

No Drawing. Filed Apr. 8, 1959, Ser. No. 804,859
2 Claims. (Cl. 260—397.7)

1. In a method of preparing 2-hydroxyethyl p-sulfamylcarbanilate, the steps which comprise refluxing a mixture of a lower alkyl ester of p-sulfamylcarbanilic acid with ethylene glycol at a temperature between about 150° C. and about 200° C. for about 2 to about 10 hours, the molar ratio of ethylene glycol to said lower alkyl ester of p-sulfamylcarbanilic acid in said mixture being between about 2 to 1 and about 8 to 1, continuously withdrawing and partially condensing the vapor phase of said reaction at a temperature above the boiling point of the lower alkyl alcohol formed as a product of the reaction whereby a partial condensate rich in ethylene glycol is formed and returned to said reaction mixture, digesting the reaction mixture with hot water so that only the 2-hydroxyethyl p-sulfamylcarbanilate formed is dissolved, filtering the resulting suspension at a temperature between about 70° C. and about 90° C. thereby to separate the undissolved lower alkyl ester of p-sulfamylcarbanilic acid and crystallizing 2-hydroxyethyl p-sulfamylcarbanilate from the aqueous filtrate by cooling.

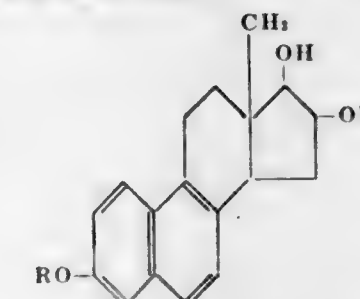
3,002,983

1,3,5(10),8-ESTRAPENTAEN-3,16,17 TRIOL COMPOUNDS AND PROCESS

Max N. Huffman, Colorado Springs, Colo., assignor to Lasdon Foundation, Inc., Yonkers, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 24, 1961, Ser. No. 104,827
7 Claims. (Cl. 260—397.45)

1. A steroid of the formula



where R is a member of the group consisting of hydrogen and lower alkyl and alkenyl radicals.

3,002,984

PROCESS FOR THE PREPARATION OF 11-HYDROXY-STERIODS

Stefan Antoni Szpilfogel, Oss, Netherlands, assignor to Organon Inc., West Orange, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,595
Claims priority, application Netherlands May 12, 1958
1 Claim. (Cl. 260—397.45)

Process for the preparation of a $\Delta^{1,4}$ -3,20-diketo-11-hydroxy-6-halo-steroid which comprises reacting a $\Delta^{1,4}$ -3,20-diketo-11-keto-steroid, which is substituted in the 6-position by a halogen atom selected from the group consisting of chlorine and fluorine with a hydrazine derivative selected from the group consisting of phenylhydrazine, dinitrophenylhydrazine, semicarbazide, and the acid salts thereof, in the presence of an organic solvent, reducing the 11-keto group to an 11-hydroxy group at a temperature below about 20° C., and then setting free the keto groups in the 3- and 20-positions.

3,002,985

FERROUS CHELATES OF AMINO ACIDS

Satsuo Imado, Sakai City, Japan, assignor to Tanabe Selyaku Co., Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Dec. 16, 1959, Ser. No. 859,860
Claims priority, application Japan Dec. 22, 1958
13 Claims. (Cl. 260—439)

1. A method of preparing a ferrous chelate of an amino acid taken from the class consisting of 2-amino-3-hydroxyalkanoic acid and 2-amino-3-mercaptopalkanoic acid there being not more than 6 carbon atoms in the chain of said alkanic acid which comprises forming the alkali metal salt of said acid, mixing said salt with a water soluble ferrous salt in aqueous solution, then adding a hydrocarbon aldehyde having up to 8 carbon atoms, whereby a reaction takes place forming said ferrous chelate.

8. A ferrous chelate selected from the class consisting of bis (2-alkylidenamino-3-hydroxyalkanoato) iron (II), bis (2-alkylidenamino-3-mercaptopalkanoato) iron (II), bis (2-vanillylidenamino-3-hydroxyalkanoato) iron (II), bis (2-vanillylidenamino-3-mercaptopalkanoato) iron (II), and hydrates thereof, the alkyliden group having up to 8 carbon atoms and there being not more than 6 carbon atoms in the chain of each of said alkanic acid compounds.

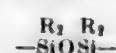
3,002,986

SILOXANE ALUMINUM COMPOUNDS

James F. Hyde, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,228
2 Claims. (Cl. 260—448)

1. A composition of matter of the unit formula $(YX)_z$, in which Y has a cyclic structure and is of the formula $-O(R_2SiO_2Al)_2O-$, X is of the formula



and z is an integer from 1 to 20 inclusive in which composition R is a monovalent hydrocarbon radical of from 1 to 30 inclusive carbon atoms, any valences of the silicon atoms not satisfied by R groups and oxygen atoms being satisfied by radicals selected from the group consisting of hydroxyl, alkoxy and OM where M is an alkali metal and in which composition any valences of the aluminum atoms not satisfied by oxygen atoms being satisfied by substituents selected from the group consisting of hydroxyl groups and chlorine atoms.

3,002,987

HOMOPOLYMERS OF BIS(TRIMETHYLSILOXY)-METHYLVINYLSILANE

Donald L. Bailey, Snyder, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 17, 1957, Ser. No. 703,242
3 Claims. (Cl. 260—448.2)

1. A homopolymer of bis(trimethylsiloxy)methylvinylsilane.

3,002,988

CHLOROSILANE PURIFICATION

Richard A. Falk, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 16, 1958, Ser. No. 767,513
2 Claims. (Cl. 260—448.2)

1. A method comprising contacting a mixture of silanes of the formula $R_nH_{4-n}SiCl_{4-m-n}$, in which each R is independently selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals and m and n and the sum of m and n have a value ranging from 0 to 3, said mixture containing primarily diorganodichlorosilanes and containing some polyfunctional silanes selected from the group consisting of monoorgano-substituted silanes and silanes free of organic substitution, with (1) at least one equivalent per equivalent of silicon-bonded hydrogen of an oxidizing agent selected from the group consisting of permanganyl chloride, chromyl chloride and mercuric chloride for a time and at a temperature sufficient to replace all of the detectable silicon-bonded hydrogen in the system with silicon-bonded chlorine and (2) glacial orthophosphoric acid in an amount equal to at least one mol of acid per mol of the aforesaid polyfunctional silanes for a time and at a temperature sufficient to esterify all of said polyfunctional silanes and distilling diorganodichlorosilanes and any triorganomonochlorosilanes from the esterification products.

3,002,989

METHOD OF STABILIZING ORGANOSILICON FLUIDS

Richard W. Awe and Harry M. Schiefer, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,849
1 Claim. (Cl. 260—448.2)

A method of preparing a siloxane fluid having increased stability to oxidation which comprises heating a mixture of (1) a trimethylsiloxy endblocked organosiloxane fluid in which the organic substituents along the chain are of the group consisting of phenyl, methyl and halo-phenyl radicals, (2) a compound of the group consisting of mono- and bis-trimethylsilylferrocene and (3) oxygen, at a temperature above 400° F. for at least 15 minutes.

3,002,990

REACTION OF CYANOGEN CHLORIDE WITH CARBOXYLIC ACIDS AND ANHYDRIDES THEREOF

James E. Longfield, Stamford, and James K. Dixon, Riverside, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 29, 1957, Ser. No. 649,324
9 Claims. (Cl. 260—465)

1. A vapor phase process for preparing nitriles which comprises the steps of: subjecting a mixture of cyanogen chloride and a carboxylic acid compound selected from the group consisting of a lower alkanic acid, a monocyclic aromatic hydrocarbon acid, a monoaryl lower alkanic acid and an acid anhydride thereof, to a temperature of at least 400° C. and for a contact time of at least 0.5 second but not more than 60 seconds and recovering the thus-formed nitrile.

3,002,991

SEMINITRILE ESTERS OF BETA-HYDROMUCONIC ACID

Francesco Minisci and Ugo Pallini, Milan, Italy, assignors to Montecatini Soc. Gen. per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed Feb. 3, 1959, Ser. No. 790,821
Claims priority, application Italy June 12, 1958
2 Claims. (Cl. 260—465.4)

1. Method of manufacturing an alkyl ester of beta-hydromuconic acid seminitrile comprising reacting 1,4-dicyano-2-butene with an alkyl alcohol containing at most five carbon atoms at a temperature ranging between 50° and 150° C. in an aqueous medium containing a member selected from the group consisting of sulphuric acid and hydrochloric acid, while employing a 0.2-0.45 acid/dinitrile molar ratio, a 0.2-0.5 water/dinitrile molar ratio and a 1.5-3 alcohol/dinitrile molar ratio, stopping the reaction at a positive conversion value not exceeding 50% based upon 1,4-dicyano-2-butene by cooling the reaction mixture below said temperature, thereby crystallizing unreacted dinitrile in the mixture, recovering the crystallized dinitrile, and recovering the alkyl ester from the crystallization mother-liquor by fractional distillation.

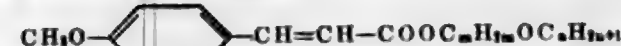
3,002,992

ALKOXYALKYL ESTERS OF p-METHOXY-CINNAMIC ACID

Thomas F. Wood, Wayne, N.J., assignor to The Glaxo Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 10, 1958, Ser. No. 766,405
5 Claims. (Cl. 260—473)

1. Liquid chemical compounds represented by the following structural formula:



where m and n integers whose sum is 4 to 6.

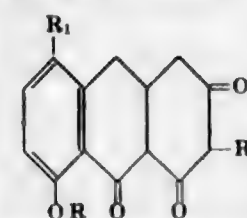
3,002,993

SUBSTITUTED TRIOXO-OCTAHYDROANTHRACENES AND OCTAHYDROANTHRACENES

Raymond G. Wilkinson, Montvale, N.J., and Thomas L. Fields, Pearl River, and Andrew S. Kende, Hartsdale, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

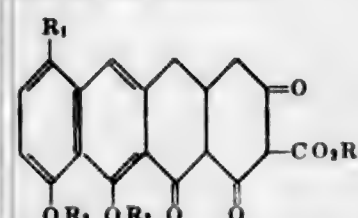
No Drawing. Filed Jan. 30, 1959, Ser. No. 790,051
11 Claims. (Cl. 260—473)

1. A compound of the formula:



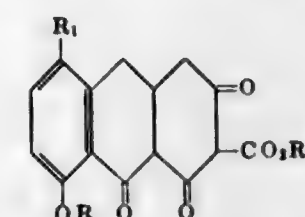
wherein R₁ is selected from the group consisting of chlorine and bromine, R is a member of the group consisting of hydrogen, lower alkyl, and phenyl lower alkyl radicals, and R₂ is a member of the group consisting of hydrogen, carboxamido, and lower carbalkoxy radicals.

2. A compound of the formula:



wherein R₁ is selected from the group consisting of chlorine and bromine, R₂ is lower alkyl, and R is a member of the group consisting of hydrogen, lower alkyl, and phenyl lower alkyl radicals.

3. The method of preparing a compound of the formula:



wherein R₁ is selected from the group consisting of chlorine and bromine, R₂ is lower alkyl, and R is a member of the group consisting of hydrogen, lower alkyl, and phenyl lower alkyl radicals which comprises treating a 4-oxo-1,2,3,4-tetrahydro-2-naphthaleneacetyl chloride with a di(lower)alkyl magnesiummalonate to form the corresponding acyl malonic ester and cyclizing said ester with sodium hydride to form the corresponding 1,3,9-trioxo-1,2,3,4,4a,9,9a,10-octahydroanthracene-2-carboxylate.

3,002,994

PURIFICATION OF SALTS OF DIALKYL ESTERS OF SULFOSUCCINIC ACID

Emil F. Williams, Old Greenwich, and Norman T. Woodberry, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,601
4 Claims. (Cl. 260—481)

1. A process for purifying members selected from the group consisting of alkali metal, ammonium and ethanolamine salts of dialkyl esters of sulfosuccinic acid of a technical grade, wherein the alkyl groups contain from 1 to 12 carbon atoms, and wherein said salts contain up to about 1% of impurities resulting from their manufacturing process, which comprises dissolving such salt in a substantially anhydrous solvent which is solvent for the salt but not for its hydrate, adding sufficient water to form an insoluble hydrate of said salt and cooling said mixture to a temperature between about 15 and -15° C. to precipitate said ester and thereafter recovering said purified ester and drying the same.

3,002,995

PURIFICATION OF SALTS OF DIALKYL ESTERS OF SULFOSUCCINIC ACID

Emil F. Williams, Old Greenwich, and Norman T. Woodberry, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,608
4 Claims. (Cl. 260—481)

1. A process for purifying members selected from the group consisting of alkali metal, ammonium, and ethanolamine salts of dialkyl esters of sulfosuccinic acid of technical grade, wherein the alkyl groups contain from 1 to 12 carbon atoms, and wherein said salts contain up to about 1% of impurities resulting from their manufacturing process, which comprises preparing a solution containing from between 2 and 15% of said salt in a solvent, mixing said solution with about 1 to 10% of activated carbon, based on the weight of the solution, filtering the solution and drying the filtrate to recover the product.

3,002,996

PROCESS FOR THE PREPARATION OF DRY OXIMES

Gerhard Meier and Arndt Striegler, Leuna, Germany, assignors to VEB Leuna-Werke "Walter Ulbricht," Leuna, Germany

No Drawing. Filed July 10, 1956, Ser. No. 596,831
9 Claims. (Cl. 260—566)

1. A process for the production of a dry, substantially pure ketoxime which comprises blowing a stream of inert

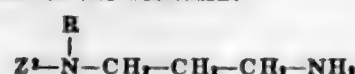
gas through a crude ketoxime melt containing as impurities water and the corresponding keto compound at temperatures not exceeding 120° C., whereby said water and said ketone are taken up in said inert gas, and passing the vapor-enriched gas stream so formed through an aqueous solution of hydroxylamine sulfate whereby water, said ketone and small amounts of said ketoxime are taken up by said aqueous solution, said inert gas being selected from the class consisting of air and nitrogen, and said ketoxime being difficultly soluble in water and being a ketoxime formed from a ketone selected from the class consisting of cyclohexanone, methyl-substituted cyclohexanone and pinacolone.

3,002,997

PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS

Milton Green, Newton Highlands, and Myron S. Simon, Newton Centre, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
No Drawing. Filed Jan. 29, 1958, Ser. No. 711,812
6 Claims. (Cl. 260-570.5)

1. A compound of the formula:



wherein Z² is selected from the group consisting of o-dihydroxyphenyl and p-dihydroxyphenyl groups; and R is selected from the group consisting of hydrogen and lower alkyl groups.

3,002,998

PREPARATION OF 1,3,5-TRIAMINO-2,4,6-TRINITROBENZENE

Lloyd A. Kaplan, Adelphi, and Francis Taylor, Jr., Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed May 13, 1959, Ser. No. 813,039
7 Claims. (Cl. 260-581)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of producing 1,3,5-triamino-2,4,6-trinitrobenzene from a starting material selected from the group consisting of 1,3,5-trichloro-2,4,6-trinitrobenzene and 1,3,5-tribromo-2,4,6-trinitrobenzene which comprises: dissolving the starting material in a solvent which is inert with respect to the starting materials and ammonia to form a solution, adding gaseous ammonia to the solution, removing 1,3,5-triamino-2,4,6-trinitrobenzene from the solution.

3,002,999

MANUFACTURE OF MESITYL OXIDE

Robert Lichtenberger, Oullins, and Lucien Villemey, Lyons, France, assignors to Societe Industrielle des Derives de l'Acetylene (S.I.D.A.), Paris, France, a corporation of France

Filed Dec. 21, 1954, Ser. No. 476,738
Claims priority, application France Dec. 24, 1953
11 Claims. (Cl. 260-593)

1. A method of manufacturing mesityl oxide including heating, for a period of about 15 to 60 minutes at a temperature between about 75 to 120° C., a single phase system comprising acetone and an alkali metal hydroxide in solution in an alcohol solvent, said alkali metal hydroxide being present in an amount of about 0.5 to 7 grams per liter of acetone.

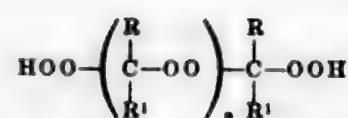
3,003,000

ORGANIC PEROXIDES

Nicholas A. Milas, Belmont, Mass., assignor to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed July 1, 1959, Ser. No. 824,219
8 Claims. (Cl. 260-610)

5. Organic peroxides of the formula



wherein R and R¹ are lower alkyl groups and n is a whole number from 2 to 5.

3,003,001

PROCESS FOR THE PRODUCTION OF 1-VINYL-6-ALKOXY-3,4-DIHYDRONAPHTHALENE

Richard Wightman Kierstead, Montclair, Walter Kiesel, Highland Park, and William Edwin Scott, North Caldwell, N.J., assignors to Hoffman-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,563
4 Claims. (Cl. 260-612)

1. A process which comprises condensing 6-lower alkoxy-1-tetralone with vinyl magnesium halide at a temperature from about 15° to about 50° C. and heating the condensation product at a temperature up to about reflux temperature in an inert aromatic solvent to produce 1-vinyl-6-lower alkoxy-3,4-dihydronaphthalene.

3,003,002

FURIFICATION OF ETHER

Robert N. Feinstein, Downers Grove, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Jan. 8, 1959, Ser. No. 785,763
5 Claims. (Cl. 260-616)

1. A process of removing peroxides from a peroxide-containing ether, comprising contacting said ether with a strong-base anion exchange resin in its hydroxyl form whereby the peroxides are preferentially adsorbed on said resin while the ether remains substantially unadsorbed, and separating said resin from said ether.

3,003,003

MANUFACTURE OF 1 CHLORO-2,2,2, TRIFLUORO-ETHANE

Robert Leslie McGinty, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Apr. 22, 1959, Ser. No. 807,981
Claims priority, application Great Britain May 7, 1958
8 Claims. (Cl. 260-653.6)

1. A process for the manufacture of 1-chloro-2:2:2-trifluoroethane which comprises heating trichloroethylene with hydrogen fluoride at superatmospheric pressure in the presence of at least one mole of an antimony fluorochloride catalyst per mole of trichloroethylene at a temperature of about 60° to about 130° C. and adding chlorine to the reaction mixture in an amount not greater than one mole of chlorine to each mole of trichloroethylene.

3,003,004

LONG CHAIN ALKENYL CHLORIDES

Thomas E. Leslie, St. Albans, W. Va., and Robert J. O'Neill, Stoneham, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 21, 1954, Ser. No. 438,342
6 Claims. (Cl. 260-654)

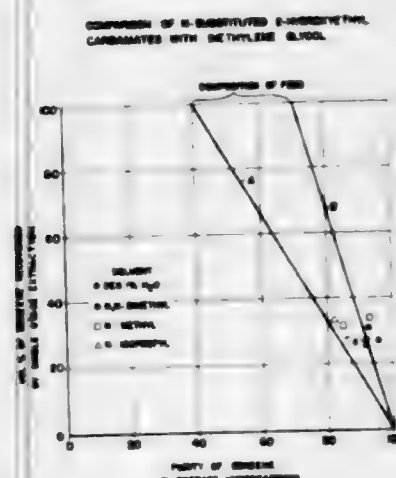
1. The process of producing a chloroolefin containing reactive chlorine which comprises reacting a higher olefin fraction from the acid catalyzed polymerization of propylene the average chain length of which falls within the range of 9-16 carbon atoms with hypochlorous acid in a ratio of approximately 1-2 moles of hypochlorous acid per mole of higher olefin and isolating a chloroolefin containing reactive chlorine.

3,003,005

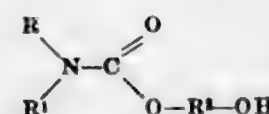
EXTRACTION PROCESS

Thomas W. Martinek and Le Roi E. Hutchings, Crystal Lake, Ill., and Nathaniel L. Remes, Miami, Fla., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Dec. 27, 1957, Ser. No. 705,699
12 Claims. (Cl. 260-674)



1. The process of separating aromatic hydrocarbons from a mixture of aromatic and non-aromatic hydrocarbons comprising contacting said mixture with a stable hydroxy-substituted ester of carbamic acid having the formula,

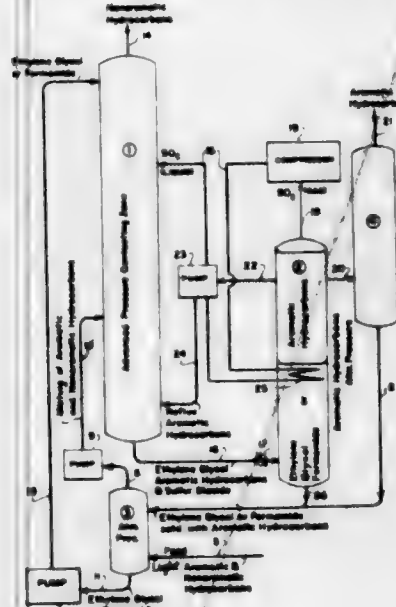


wherein R is an alkyl radical containing 1 to 5 carbon atoms, R¹ is a substituent of the group consisting of hydrogen and an alkyl radical containing 1 to 5 carbon atoms and R² is an alkylene radical containing 1 to 5 carbon atoms, separating the composite mixture into two components consisting of a raffinate and an extract and recovering said aromatic hydrocarbons from said extract.

3,003,006

CONCENTRATION OF AROMATIC HYDROCARBONS WITH DILUTED SULFUR DIOXIDE

Alfred W. Francis, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Sept. 14, 1959, Ser. No. 839,647
18 Claims. (Cl. 260-674)



olefins, ethylene and C_3-C_6 mono-olefins, physically separating said mixture into a first fraction containing ethylene and residual acetylene and into a second fraction free from acetylene containing conjugated diolefins and C_3-C_6 mono-olefins, hydrogenating said first fraction in a second hydrogenation step with palladium catalyst at 100-400° F. to reduce said unsaturated impurities to a level of less than 10 parts per million in said first fraction.

31603162

ODORLESS ISOPARAFFINIC SOLVENT MANUFACTURE

1. A process of manufacturing odorless isoparaffinic solvents which comprises polymerizing propylene containing minimum amounts of n-butylene and isobutylene and containing not more than 10 p.p.m. sulfur with a phosphoric acid catalyst, recovering from the polymer product by fractionation a polypropylene feed stock having a boiling range of between 300 and 460° F., a gravity of 50 to 55, a refractive index at 20° C. of 1.433 to 1.436, a bromine number of from 81 to 100 and an aniline point of 140° F. to 150° F. and reacting said polypropylene feed stock with hydrogen at about 300 to 600° F. and 200-800 p.s.i.g. in contact with a nickel catalyst thereby effecting at least 98% saturation of the polypropylenes in the feed stock with less than 10 to 15% loss by side reactions such as cracking and polymerization.

4. An odorless isoparaffinic solvent consisting essentially of hydrogenated trimers and tetramers of propylene boiling in the range of 300° to 460° F., said solvent being further characterized by an aniline point in the range of 178 to 182, a kauri-butanol value in the range of 27 to 28.5, and a refractive index at 20° C. in the range of 1.422 to 1.423 produced by the process of claim 1.

3.003.010

PROCESS FOR THE PREPARATION OF PRECIPITATED CALCIUM CARBONATES

Fernand Meuret, Heusden, and Victor Brouwers, Malines, Belgium, assignors to Solvay & Cie, Brussels, Belgium, a Belgian company
No Drawing. Filed Mar. 17, 1958, Ser. No. 721,671
Claims priority, application Belgium Mar. 26, 1957
5 Claims. (Cl. 260-762)

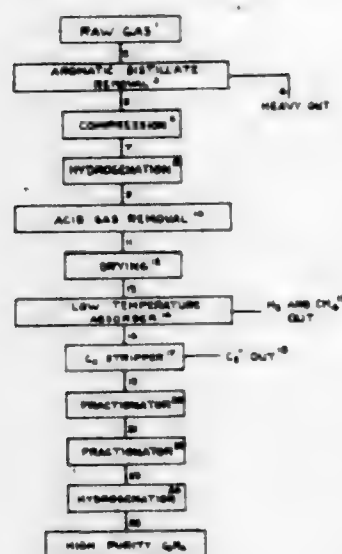
1. A process for the preparation of precipitated calcium carbonate particularly suitable as a filler for natural and synthetic rubber and as a pigment for paper coatings which comprises the steps of preparing a milk of lime solution, adding to said milk of lime solution a soluble salt selected from the group consisting of sodium aluminate ($\text{Na}_2\text{Al}_2\text{O}_4$), aluminum sulphate ($\text{Al}_2(\text{SO}_4)_3$), magnesium sulphate (MgSO_4), vanadyl sulphate

 $(\text{VOSO}_4 \cdot 2\text{H}_2\text{O})$

chromium nitrate ($\text{Cr}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$) and ferrous chloride ($\text{FeCl}_2 \cdot \text{H}_2\text{O}$), passing through said milk of lime a stream of carbon dioxide to effect carbonation thereof and to form calcium carbonate as a precipitate, whereby said calcium carbonate is in precipitated form in said aqueous milk of lime in the presence of said soluble salt, and filtering said solution to separate said calcium carbonate therefrom, said soluble salt being added in an amount such that the metal component of said salt represents 0.2 to 3% by weight of the precipitated calcium carbonate.

3.003.000

Filed Oct. 13, 1958, Ser. No. 766,761
4 Claims. (Cl. 260—677)

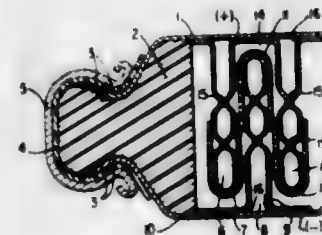


ELECTRICAL

3.003.011

SYSTEM FOR THE CONSTRUCTION OF ELECTRICAL SECONDARY CELLS, I.E. STORAGE BATTERIES

**José Ignacio Martin Artajo, 23 Alberto Aguilera,
Madrid, Spain**
Filed May 21, 1958, Ser. No. 736,809
6 Claims. (Cl. 136—6)

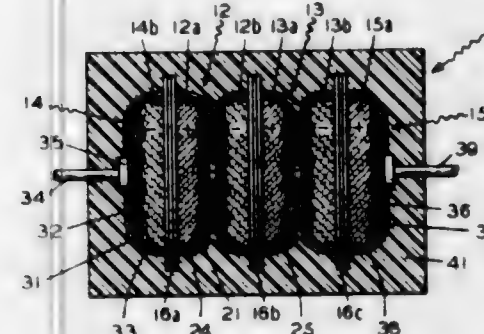


1. In a storage battery, a pair of spaced, substantially parallel pole plates, an insulating frame assembly maintaining said plates in spaced relationship and electrically insulated one from the other and forming, with such pole plates a space for containing a liquid electrolyte, a plate forming member carried by each of said pole plates, each such member being in the form of a perforate metallic sheet provided with a plurality of traverse folds presenting elongate hollow fingers extending right angularly from the respective pole plate and each such member being rigidly joined to its pole plate in those areas thereof intermediate such fingers, separator strips interposed between said fingers to retain the same in spaced interdigitated relationship to each other and each finger being of a length to extend from its associated pole plate but terminate short of the other pole plate, the hollowed portions within the fingers of one member being filled with an electrochemically active paste and the hollowed portions within the fingers of the other member being filled with an electrochemically active paste so that the pastes and electrolyte will be effective to produce an electrical potential between said pole plates.

3.003.012

ELECTRIC BATTERY

Joseph C. Duddy, Trevese, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed July 10, 1958, Ser. No. 747,621
4 Claims. (Cl. 136-9)



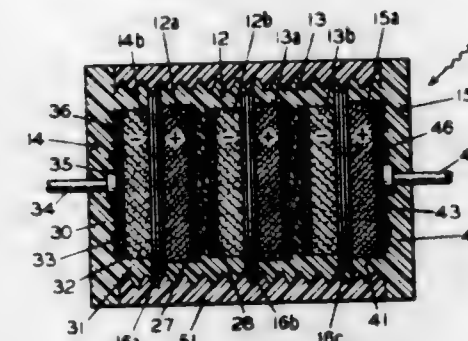
1. An electrode assembly for a pile type battery encapsulated in a resin polymerized in situ around said assembly comprising, in combination, a plurality of bipolar elements each of said elements comprising a positive electrode and a negative electrode each housed in a metallic cup, said cups being joined in a back to back relationship, a pair of end cells, one of said end cells comprising a positive electrode housed in a metallic cup and the other of said end cells comprising a negative electrode housed in a metallic cup and separator means saturated with an elec-

trolyte interposed between the peripheral edges of adjacent bipolar elements and end cells whereby a plurality of electrolytic cells consisting of a positive electrode of one bipolar element or end cell and the negative electrode of the next succeeding bipolar element or end cell are provided, said metallic cups surrounding their respective electrodes on three sides, the edges of said cups and the exposed face of each of said electrodes being in intimate contact with one of said separator means, an encapsulating resin completely surrounding said assembly, said separator means and said cups immobilizing the active material of said electrodes and maintaining said electrodes out of contact with said encapsulating resin.

3.003.013

ELECTRIC BATTERY

Joseph C. Duddy, Trevese, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed July 10, 1958, Ser. No. 747,622
4 Claims. (Cl. 136—9)



1. A pile type battery comprising in combination a plurality of bipolar elements, each of said elements comprising a positive electrode and a negative electrode separated by an electrolyte impermeable barrier having compartments on each side thereof for housing said electrodes said barrier being made of plastic having embedded therein a metallic conductive grid extending through said barrier to contact said positive and negative electrodes, a pair of end cells each comprising an electrolyte impermeable barrier having a compartment on one side thereof for an electrode, said end cell barriers being made of plastic having a metallic conductive grid embedded therein, one of the said end cells housing a positive electrode in contact with said grid and the other of said end cells housing a negative electrode in contact with said grid, separator means between adjacent bipolar elements and end cells whereby a plurality of electrolytic cells consisting of alternate positive and negative plates of said end cells and bipolar elements are formed, said end cells and said bipolar elements being threaded, and a threaded housing surrounding said end cells and said bipolar elements whereby said plurality of electrolytic cells are contained.

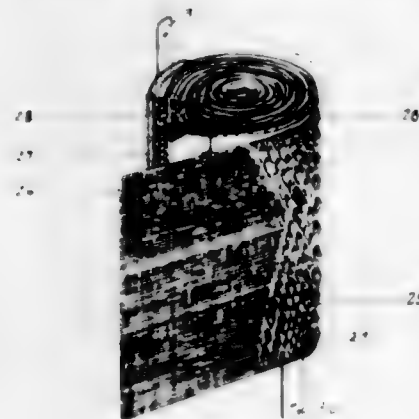
3.003.014

GAS-TIGHT SEALED ALKALINE ACCUMULATORS

Frikx Philipp, Haspe-Hagen, Westphalia, and Werner Tietze, Hagen, Westphalia, Germany, assignors to Accumulatoren-Fabrik Aktiengesellschaft, Hagen, Westphalia, Germany, a corporation of Germany
Filed Jan. 10, 1957, Ser. No. 633,425
Claims priority, application Germany Jan. 11, 1956
10 Claims. (Cl. 136-13)

1. In a fluid-tight sealed alkaline storage battery, in combination, a substantially cylindrical electrode assembly comprising at least one negative electrode unit

consisting essentially of a sheet-like negative electrode having two opposite faces and of a sheet-like electrically conductive electro-chemically inert foraminous insert formed with voids sufficiently large to prevent saturation thereof with electrolyte by capillary action and substantially free of active mass, said insert abutting at least one of said two opposite faces of said negative electrode; at least one positive electrode unit in alignment with and abutting said negative electrode unit and consisting essentially of a sheet-like positive electrode having two opposite faces at least one of which is located adjacent a

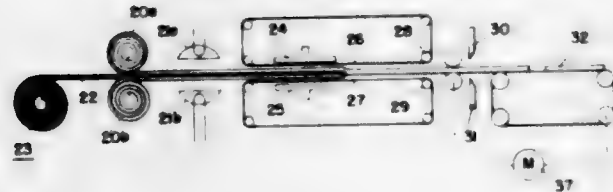


negative electrode unit, and a sheet-like porous separator being gas-impermeable when saturated with liquid alkaline electrolyte, said separator abutting each of said faces of said positive electrode, said electrode units and said separator being spirally wound about each other to form said substantially cylindrical electrode assembly, with a portion of said insert forming the outer surface thereof; and an alkaline electrolyte fixed in said electrodes and said separator and forming a thin film on said foraminous insert, whereby gas developed during operation of said battery will come in contact with said electrically conductive insert, and build-up of excessive pressure within said sealed battery will be prevented by interaction between said gas and said insert.

3,003,015

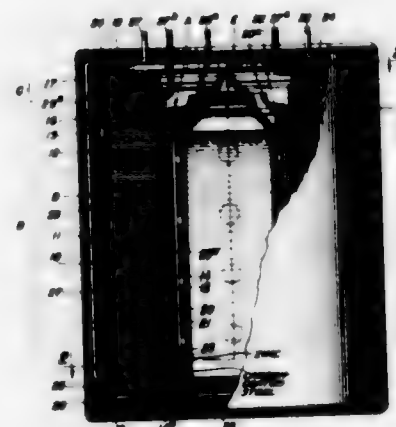
BATTERY ELECTRODE

Joseph C. Duddy, Trevoe, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed June 25, 1958, Ser. No. 744,544
9 Claims. (Cl. 136—30)



1. The method of making battery electrodes which comprises intimately and thoroughly mixing with an electrolytically reducible metallic compound selected from the hereinafter named group of metallic compounds a plasticized resin substantially insoluble in an electrolyte and soluble in a solution in which the metal of said selected metal compound is to major degree insoluble, said metallic compound being selected from the group consisting of zinc oxide, copper oxide, silver oxide, lead oxide, iron oxide and cadmium oxide, electrolytically reducing said compound in said electrolyte to produce throughout said mixture finely divided metal, said metal compound being present in ratio of at least 4 to 1 by weight with respect to said resin, and subjecting said mixture to a solvent for removal of at least the major portion of said resin to yield a porous structured mass.

3,003,016
GALVANIC BATTERY
Paul Marsal, Rocky River, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 2, 1943, Ser. No. 501,001
12 Claims. (Cl. 136—90)

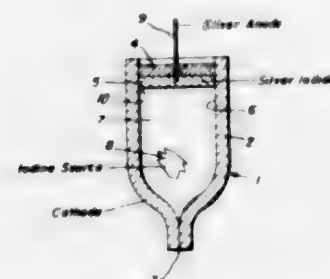


6. Galvanic battery of the deferred action type, suitable for use in a projectile, comprising a plurality of substantially flat annular soluble metal elements each provided with at least one small aperture and each coated on one flat surface with an electrically-conductive electrolyte-imperious carbonaceous layer to form an electrode unit, said units being assembled coaxially with the coated surfaces uppermost; insulating material disposed between and sealed to the outer peripheral margins of adjacent units to provide between each pair of units a cell for electrolyte; rigid insulating material disposed between and sealed to the inner peripheral margins of adjacent units to support said margins; at one end of the so assembled units an electrolyte distributor provided with apertures communicating with the apertures in said units and with the axial cavity defined by the assembled annular units; in said axial cavity a frangible ampule containing a reserved supply of electrolyte; and a rigid outer container.

3,003,017

SOLID ELECTROLYTE CELL

Joseph L. Weininger, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 27, 1959, Ser. No. 836,451
17 Claims. (Cl. 136—100)



1. A solid electrolyte cell comprising an inert metal container open only at one end, insulating means sealing said container at said open end, a layer of silver iodide containing from 0 to 5 mole percent of an iodide of a metal other than silver as a phase transformation modifier within said container adjacent said insulating means and in contact with the wall of said container, an iodine source positioned in said container, and a silver electrode extending in gas-tight relationship through said insulating means into said silver iodide layer.

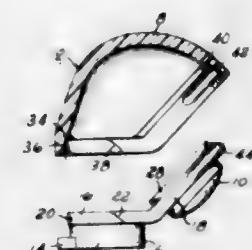
3,003,018
RETRACTILE CORDS
John Brown Cook, North Haven, Conn., assignor to The Whitney Blake Company, Hamden, Conn., a corporation of Connecticut
Filed Aug. 24, 1959, Ser. No. 835,769
3 Claims. (Cl. 174—69)



1. A retractile cord comprising a plurality of parallel conductors aligned side by side, a jacket surrounding same to provide a flat, jacketed cord, said cord being arranged in a helix the axis of which is perpendicular to the general plane of the cord, and the inner edges of the convolutions being crimped to provide indentations which register with the indentations of adjoining convolutions so that said convolutions will nest within each other.

3,003,019
SERVICE ENTRANCE HEAD FOR ELECTRICAL CONDUIT

Denis A. Dearth, New Britain, Conn., assignor to North & Judd Manufacturing Company, New Britain, Conn., a corporation of Connecticut
Filed Apr. 15, 1959, Ser. No. 806,572
3 Claims. (Cl. 174—81)



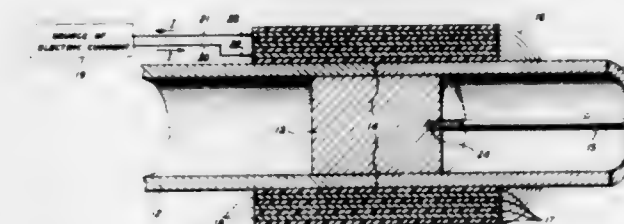
3. An entrance head for electrical conduit comprising a plastic yoke member having a threaded base for attachment to a conduit and an upwardly inclined bifurcated portion defining a cylindrical opening, said bifurcated portion being provided with a ledge about the inside of said opening, a cylindrical insulator with an outwardly disposed flange at its base seated in said opening and ledge and having at least one aperture in its face for passage of conductors therethrough, and a plastic cover having a peripheral edge cooperating with and enclosing said yoke member and dimensioned to distort said bifurcated portion in a closing direction, the yoke member having a pair of downwardly facing spaced shoulders on its base and beads about the bifurcated portion, the inner periphery of said cover having shoulders with oppositely inclined, cooperating with said shoulders of the yoke member, abutting faces for sliding engagement of the cover with said base and a groove cooperating with said beads for snap-locking engagement of the bifurcated portion in the cover.

3,003,020
JOINING ASSEMBLY FOR WAVE GUIDE SECTIONS OR THE LIKE

Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,604
3 Claims. (Cl. 174—84)

3. A sleeve for joining the abutted end portions of transmission line sections comprising a plurality of alter-

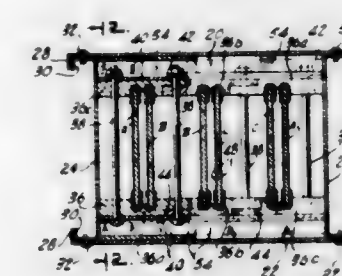
nate layers of conductive and dielectric media to be disposed over said end portions, said layers overlaying each other, said conductive media forming a continuously conductive spiral path for low frequency current between the innermost and the outermost ones of said conductive layers, said dielectric layers being impregnated with a



thermosetting resin, and means for passing said current through said spiral path for a time to elevate the internal temperature of said sleeve, said conductive layers being adapted to remain in place to provide mechanical strength to said sleeve after thermosetting is completed.

3,003,021
BUS DUCT

Paul M. Christensen, West Orange, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware
Original application Aug. 30, 1956, Ser. No. 607,028, now Patent No. 2,966,540, dated Dec. 27, 1960. Divided and this application Mar. 3, 1960, Ser. No. 15,022
7 Claims. (Cl. 174—99)



1. An electrical bus duct including multiple bus bars, an enclosing duct about said bars, and a number of orienting frame structures fixing the bus bars in relation to each other and to the duct, said structures including a pair of transverse members of metal having individual grooves for receiving the several bus bars, tie-bolts pulling said members into gripping relationship with said bus bars, and layers of flexible insulation interposed between said bars and said members, the respective surfaces of said transverse members which contain said grooves being relatively wide compared to the bus bar thickness so that the pressure against said layers of insulation is distributed along the respective edges of said bus bars and along said layers of insulation.

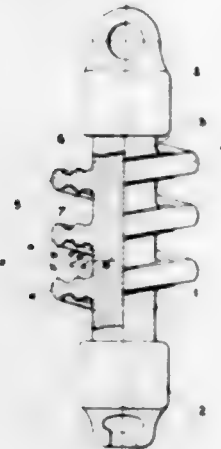
3,003,022

FINNED INSULATOR

Jean Henri Meier, Tarbes, France, assignor to Compagnie Generale d'Electro-Ceramique, Paris, Seine, France, a company of France
Filed Jan. 27, 1959, Ser. No. 789,356
Claims priority, application France Mar. 7, 1958
3 Claims. (Cl. 174—211)

1. A self-washing insulator comprising an elongated body of dielectric material having a helical rib integral thereon extending along the length of said body, the rib having an upper and a lower face and on at least one face thereof a protuberance projecting from said face, and said

protuberance extending longitudinally along the length of the rib intermediate said insulator body and the peripheral



edge of the rib and extending coaxially with said peripheral edge of the rib.

3,003,023

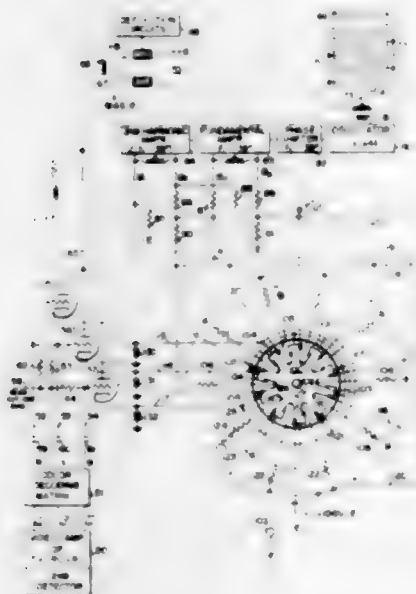
SYNCHRONOUS OPERATION OF BEAM SWITCHING TUBES FOR COLOR SIGNAL GATING

Laurence R. Brown, Berwyn, and Sin-pih Fan, Philadelphia, Pa.; said Brown assignor to Barroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Mar. 7, 1956, Ser. No. 574,355

4 Claims. (Cl. 178-5.4)

(Filed under Rule 47(a) and 35 U.S.C. 116)



4. A color television circuit comprising a color producing cathode ray picture tube including a multiple-element phosphor screen and a plurality of sets of focusing electrodes for focusing an electron beam adjacent to said screen; a plurality of electronic gates each adapted to receive and pass one of a plurality of color signals to be applied to said picture tube; an electron beam switching tube having a cathode and a plurality of groups of electrodes; each group of electrodes including a target electrode which receives an electron beam and produces an output signal therefrom, a spade electrode which holds an electron beam on its associated target electrode, and a switching electrode which serves to switch an electron beam from one group of electrodes to the next; each of said target electrodes being coupled to and adapted to open one of said gates; said targets being connected in sequence to a corresponding sequence of said gates; in series, a sine wave oscillator, a phase shifter, a funda-

mental frequency amplifier, and a second harmonic amplifier; said fundamental frequency amplifier and said second harmonic amplifier each having a pair of output terminals between which generally sine wave output waves appear; one of the output terminals of said second harmonic amplifier being coupled to each of the two terminals of said fundamental amplifier and through a resistive network to provide, with one of the terminals of said second harmonic amplifier, three terminals from each of which a beam switching signal of different phase is provided; said three terminals being coupled in order to successive switching electrodes in said beam switching tube; said sine wave oscillator also being coupled to said sets of focusing electrodes in said cathode ray tube; the operation of said oscillator and said beam switching tube being synchronized so that the color signals applied to said cathode ray tube coincide with the focusing of an electron beam on the proper corresponding element of the phosphor screen by said focusing electrodes.

3,003,024

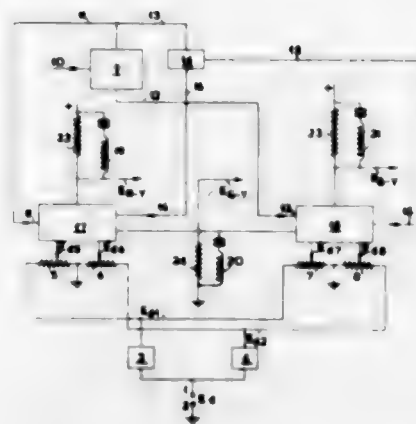
COLOR TELEVISION RECEIVER DEMODULATOR

Halvor Nygard, Gaule, Sweden, and Jan Jacob Verschuur, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 26, 1959, Ser. No. 815,907

Claims priority, application Netherlands June 20, 1958

8 Claims. (Cl. 178-5.4)



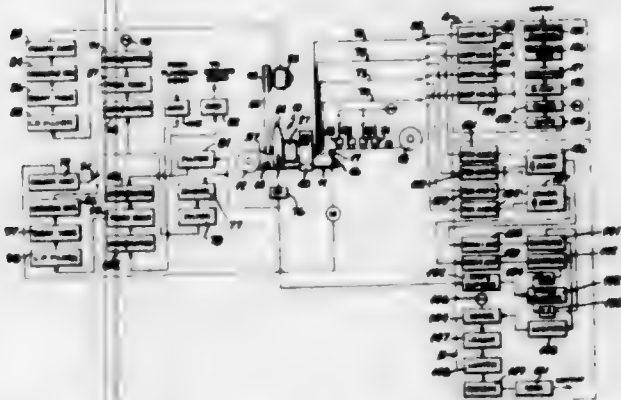
1. A receiver for color television signals of the type having a first component relating essentially to the brightness of a scene and a second component comprising a subcarrier wave modulated in quadrature with first and second signals relating to color content of the scene, said first and second signals having different bandwidths, said receiving comprising first filter means having a bandwidth substantially corresponding to the band of said first signal, second filter means having a bandwidth substantially corresponding to the bandwidth of said second signals, means apply said subcarrier wave to said first and second filter means, first and second demodulator means, a source of reference oscillations of the frequency of said subcarrier wave, phase shift means connected to said source for providing a plurality of reference oscillations of different phases, said demodulator means each comprising means for synchronously demodulating a pair of signals, means applying reference oscillations of two different phases to each of said demodulator means, means applying the output of said first filter means to said first and second demodulator means in different proportions for demodulation in each demodulator at the phase of one of the reference oscillations applied thereto, and means applying the output of said second filter means to said first and second demodulator means in different proportions for demodulation in each demodulator at the phase of the other reference oscillations applied thereto.

3,003,025

VIDEO RECORDER TAPE AND HEAD SPEED CONTROL SYSTEM

Charles P. Ginsburg, Los Altos, and Shelby F. Henderson, Jr., Portola Valley, Calif., Ray M. Dolby, Cambridge, England, and Charles E. Anderson, San Carlos, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California

Original application July 25, 1955, Ser. No. 524,004, now Patent No. 2,956,114, dated Oct. 11, 1960. Divided and this application July 21, 1958, Ser. No. 749,921
6 Claims. (Cl. 178-6.6)



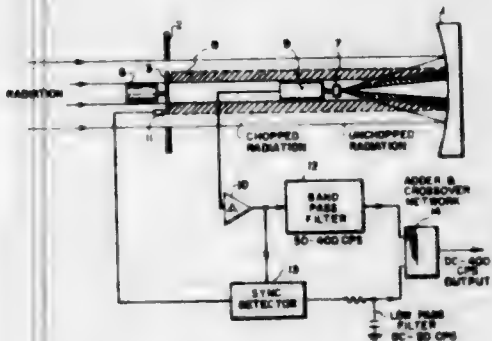
1. In a system of the character described, a rotatable magnetic head assembly including a plurality of transducer units, a tape transport means for moving a magnetic tape in cooperative relation with the head assembly whereby the units sweep successively across the tape, means including a first alternating current motor of the synchronous type for driving the head assembly, means including a second alternating current motor of the synchronous type for moving the tape, pulse generating means associated with the head assembly and serving to generate pulses of a frequency dependent upon the speed of rotation of the head assembly, means for supplying current of variable frequency to said first motor, means for controlling the frequency of current supplied to said first motor, said last means including a phase comparator, a source of reference frequency applied to the comparator, and means for applying a frequency to the comparator dependent upon the speed of rotation of the head, means for supplying alternating current to the second motor at a frequency directly dependent upon the frequency of said pulse generating means, and means for recording on the tape a speed control frequency dependent upon the frequency of the pulse generating means.

3,003,026

SCANNING DETECTOR AND ELECTRIC PROCESSING SYSTEM

Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed Mar. 7, 1960, Ser. No. 13,124
6 Claims. (Cl. 178-7.1)



1. Infrared scanning and electronic processing means comprising in combination, and optical alignment, an infrared detector, optical means for imaging a beam on the

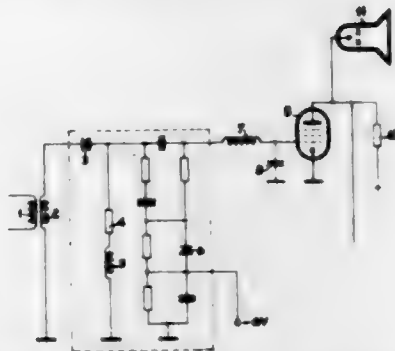
detector said means including an aperture, chopping means within said aperture dimensioned to chop only a portion of the beam passing through the aperture thus producing a chop frequency A.C. carrier signal, means for producing relative motion of detector and image so that the image is scanned in a raster, thereby modulating the chop frequency carrier, amplifying means for detector output, means for producing a reference signal at chop frequency, means connected to the output of the amplifying means constituting a high pass filter which does not pass D.C. and low frequency components of the detector signal, a sync detector receiving sync signal from a sync generator and an output from the amplifying means, a low pass filter, means connecting the output of the sync detector thereto whereby chopped frequency signals are eliminated and low frequency modulation of the chop frequency carrier are passed and means for combining the signals from the two filters to produce a composite video signal.

3,003,027

CIRCUIT ARRANGEMENT FOR DEMODULATING AND SUBSEQUENTLY AMPLIFYING TELEVISION SIGNALS MODULATED ONTO A CARRIER

Gerhard Förster, Hamburg-Stellingen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 15, 1957, Ser. No. 671,868
3 Claims. (Cl. 178-7.3)



1. A television receiver circuit comprising a source of television signals having a reference level and modulated on a carrier, a demodulator connected to demodulate said television signals and requiring a charging capacitance at its output for proper operation thereof, circuit means for setting the reference level of signals applied thereto at a fixed value, said circuit means having an inherent capacitance, means connecting said circuit means to the output of said demodulator thereby to set the reference level of said television signals at a fixed value and to serve as the sole charging capacitance of said demodulator, and a signal correcting network connected to said output of said demodulator and requiring an input capacitance, said inherent capacitance of the circuit means further serving as said input capacitance.

3,003,028

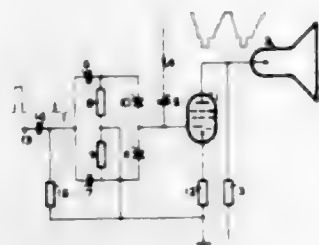
CIRCUIT ARRANGEMENT FOR RE-INTRODUCING THE DIRECT CURRENT COMPONENT OF A VIDEO SIGNAL

Robert Suhrmann, Hamburg-Rahlstedt, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 12, 1957, Ser. No. 695,890
Claims priority, application Germany Dec. 15, 1956
8 Claims. (Cl. 178-7.3)

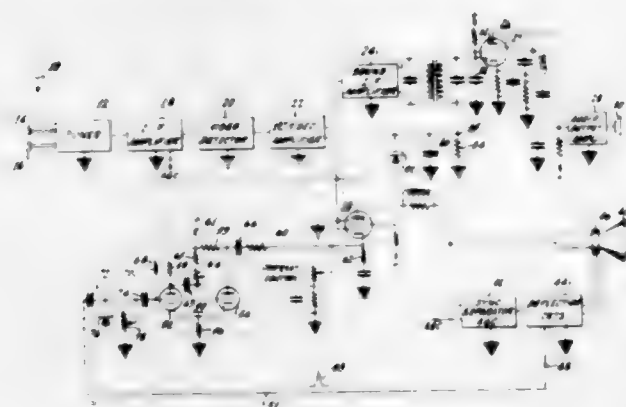
2. A circuit arrangement for reintroducing the direct current component of a video signal having recurrent portions of given reference signal value comprising, two unilaterally conductive elements connected in a series circuit in front-to-back relationship and two impedance elements forming with said two unilaterally conductive ele-

ments a bridge circuit arrangement having two pairs of diagonal connecting points, capacitor means for applying the said video signal to one point of one of said pair of points, means connecting the other point of said one pair of points to a reference potential, input means for



3,003,029 TELEVISION RECEIVER FINE TUNING INDICATION SYSTEM

Juri Tufts and Peter H. Werenfels, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,328
8 Claims. (Cl. 178-7.5)



1. A tuning indication circuit for television receivers of the type including a picture reproducing device and deflection means for producing scanning signals having a retrace interval associated with said picture reproducing device, comprising: means connected in said receiver for providing a control voltage whose magnitude varies as a function of the receiver tuning; pulse generator means for generating an indicating signal occurring during said retrace interval when said receiver is properly tuned, means connecting said control voltage producing means to said pulse generator means whereby said pulse generator means varies the timing of said indicating pulse as a function of the magnitude of said control voltage; and means for coupling said indicating signal to said picture reproducing device.

3,003,030 TRANSMISSION CHARACTERISTIC COMPEN- SATION SYSTEM

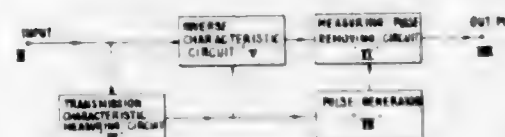
Shintaro Oshima, Musashino-shi, Tokyo-to, and Hajime Enomoto, Ichikawa-shi, Japan, assignors to Kokusai Denso Denwa Co., Ltd., Tokyo, Japan, a Japanese company
Filed Sept. 12, 1955, Ser. No. 533,571
Claims priority, application Japan Sept. 18, 1954
6 Claims. (Cl. 178-69)

1. A transmission frequency characteristic compensation system, having, at the transmission side of the trans-

mission path, means for generating measuring pulses, and at the receiving side of the transmission path, means for receiving said measuring pulses, said measuring pulses being sent out at every period T_p from said means for generating measuring pulses for measuring transmission frequency characteristics, being received at said receiving side as wave form thereof after being deformed by said transmission frequency characteristics, and then being measured as sampled values of impulse response of said transmission path by a sampling pulse generator synchronized at T_p and gate circuits, said sampling pulse generator and said gate circuits sampling said wave form at every sampling time

$$\frac{1}{2W}$$

defined by W which is larger than bandwidth of said transmission path, and obtaining as voltages components $a_0, a_1, a_2, \dots, a_L$ of the sampled value of said received wave form of measuring pulses, characterized in that the system is provided with a network which is connected in cascade to said transmission path and which comprises a plurality of series-connected circuits, each of said series-connected circuits being composed of controllable amplifiers having each an amplification factor equal to said voltage components $a_0, a_1, a_2, \dots, a_L$



a_L and delay circuits each having a delay time corresponding to an integer multiple of said sampling time

$$\frac{1}{2W}$$

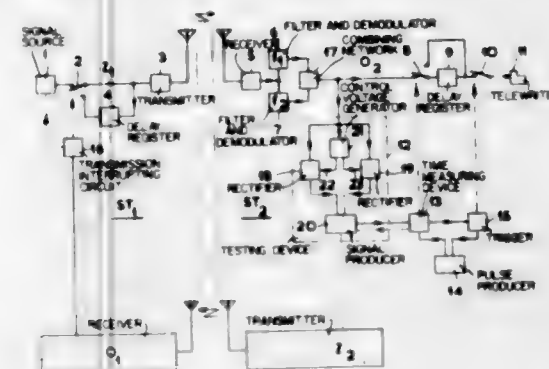
the first of said series-connected circuits, nearest to said transmission path, intensifying one of said voltage components having the maximum energy of said sampled value of impulse response produced in said transmission path and attenuating all remaining of said voltage components, by controlling said amplification factor of said controllable amplifiers, whereby the energy ratio of the voltage component having the maximum energy up to the output of said first series-connected circuit and said remaining voltage components is made larger than at the input of said first series-connected circuit, the succeeding series-connected circuits each intensifying said voltage component having the maximum energy up to the output of the immediately preceding series-connected circuit and attenuating said remaining voltage components, whereby the energy ratio of said voltage component having the maximum energy up to the output of the immediately preceding series-connected circuit and said remaining voltage components is made larger and larger, said operation being repeated, whereby impulse response produced in said transmission path and said network has a non-zero value at a delay time corresponding to an integer multiple of said sampling time and has a value substantially zero at other times than said delay time, and the frequency characteristics of said network are inverse to the transmission frequency characteristics of said transmission path.

3,003,031 TELEGRAPH SYSTEM

Klaas Posthumus, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 16, 1959, Ser. No. 793,448
Claims priority, application Netherlands Feb. 19, 1958
6 Claims. (Cl. 178-69)

1. Means for providing an output signal responsive to mutilation of telegraph signals having mark and space

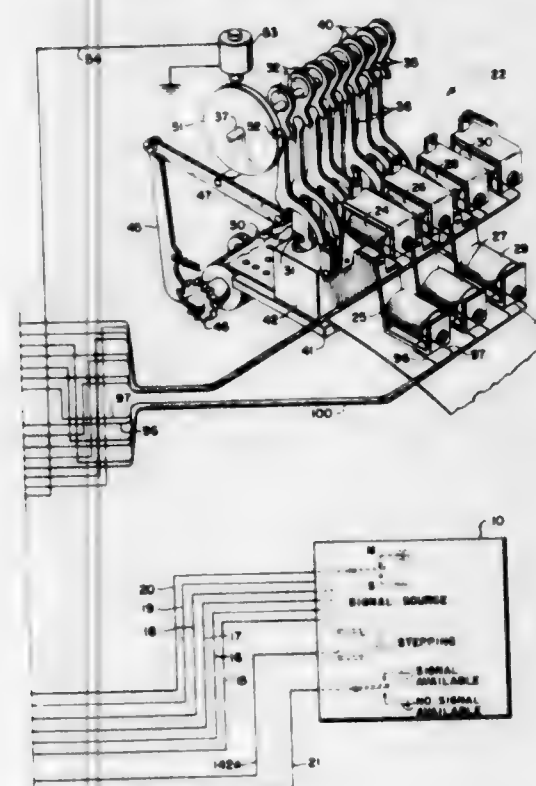
elements of opposite polarity, comprising a source of threshold voltages, means for comparing said signals with said threshold voltages to provide said output signal when said signals have amplitudes less than said threshold voltages, means for providing a control voltage hav-



ing an amplitude dependent upon the amplitude of said mark and space signals, and means for applying said control voltage to said threshold voltage source to vary the amplitude of said threshold voltages oppositely with respect to variations of the amplitude of said mark and space signals.

3,003,032 METHOD OF AND APPARATUS FOR CONTROL- LING HIGH SPEED TAPE REPERFORATORS

L. V. Haggadone, Indianatic, Fla., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed June 5, 1958, Ser. No. 740,092
15 Claims. (Cl. 178-92)

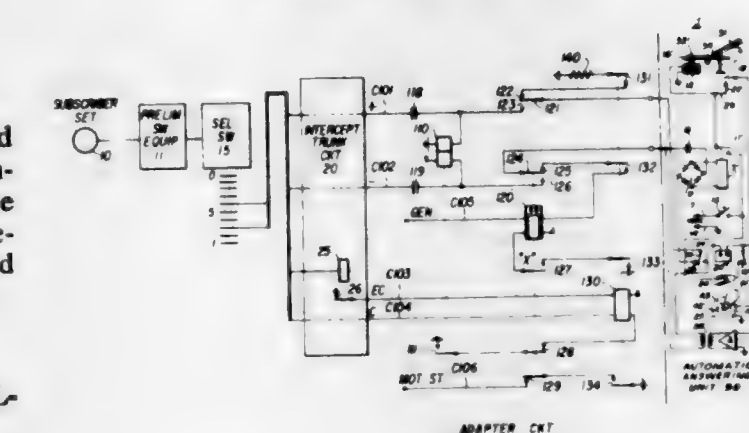


2. Apparatus for controlling tape reperforators, which comprises a plurality of punch magnets and a feed magnet associated with a tape reperforator, an energizing circuit for each of the magnets including a capacitor connected serially therewith, means for applying signals comprising marking and spacing conditions to the punch magnet energizing circuits whereby each marking condition thereof conditions one of such circuits for operation, means for operating each of the conditioned punch magnet energizing circuits and the feed magnet energizing circuit through the associated capacitor, and manually-operable means for applying a predetermined signal including at least one marking condition to the punch magnet energizing circuits and for initiating the

operation of the reperforator independently of the first-mentioned signal-applying means to produce a feed-out of tape distinguishable from any feed-out normally produced under the control of the first-mentioned signal-applying means.

3,003,033 ADAPTER CIRCUIT FOR ADDING AUTOMATIC ANSWERING TO CENTRAL STATION SWITCH- ING EQUIPMENT

John R. Kuska, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,490
2 Claims. (Cl. 179-6)



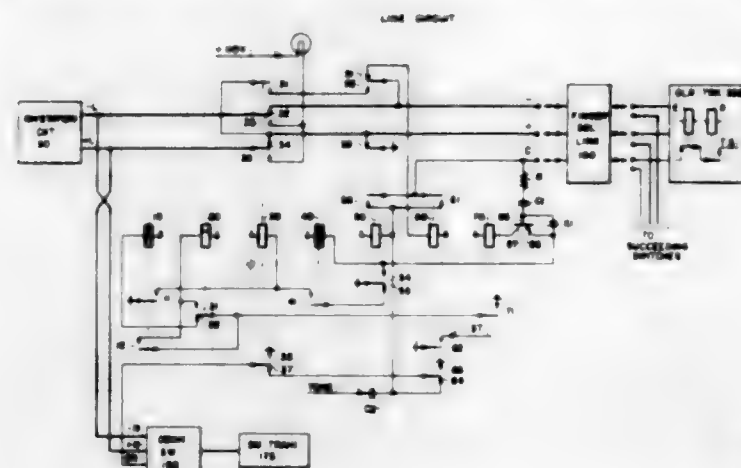
1. In an automatic telephone system, a selector having a plurality of selector levels, at least one of which is unassigned, intercept means connected to the unassigned ones of the selector levels comprising: an intercept trunk circuit operated in response to the extension of a connection from a calling line to one of said unassigned selector levels; an automatic answering unit including an input circuit, reproducing means for transmitting a prerecorded message, and start means operated only in response to ringing current impressed on said input circuit for initiating the operation of said reproducing means to transmit said prerecorded message; a ringing circuit including a ringing current generator having an output circuit and a slow-to-operate relay having its operate coil connected in series with said generator output circuit; relay means connected to said intercept trunk circuit operated in response to the operation thereof to connect said ringing circuit to said input circuit of said automatic answering unit; an extension circuit including a first and a second conductor connected to said intercept trunk circuit for extending the connection from said calling line beyond said intercept trunk circuit; contact means operated in response to the operation of said slow-to-operate relay over said ringing circuit to disconnect said ringing circuit from said input circuit of said automatic answering unit and to connect said conductors of said extension circuit thereto; and a supervisory relay operated over said input circuit of said automatic answering unit for controlling the subsequent operation of said intercept unit in response to supervisory signals returned by said automatic answering unit.

3,003,034 TONE CONTROLLED PAYSTATION

Alfred H. Faulkner, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Feb. 7, 1956, Ser. No. 563,925
5 Claims. (Cl. 179-6.3)

1. In a telephone system, a line having a paystation thereon, a line circuit individual to said line, a toll trunk circuit, switching means for extending a connection from said line circuit to said toll trunk circuit in response to the initiation of a call by said paystation, a special signal tone source in said toll trunk circuit, means in said toll trunk

circuit operated in response to the extension of said connection thereto for applying said special signal tone to said connection, a source of paystation control potential in said line circuit, tone responding means individual to

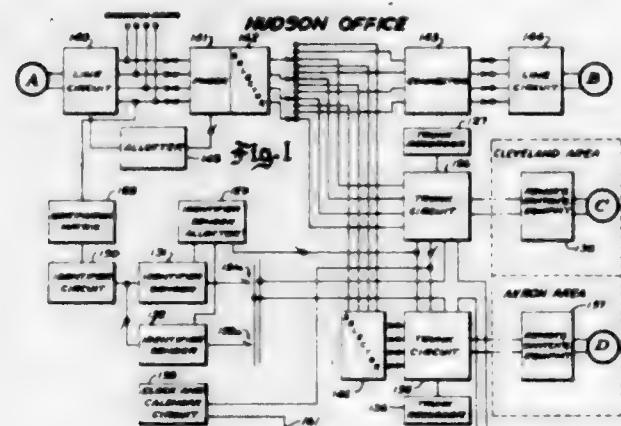


said line circuit operated in response to receipt of said special signal tone, and means in said line circuit operated in response to said operation of said tone responding means for applying said paystation control potential to said connection to initiate a coin control operation at said paystation.

3,003,035

AUTOMATIC TOLL TICKETING SYSTEM

Milton A. Clement and Ben A. Harris, Rochester, N.Y., assignors to General Dynamics Corporation, a corporation of Delaware
Filed Sept. 26, 1955, Ser. No. 536,579
58 Claims. (Cl. 179-7.1)



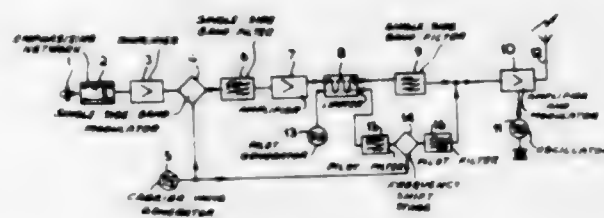
1. In a telephone system, means for storing called office code digits, translating means selectively operated in accordance with the stored called office code digits to establish signals representing alphabetical characters corresponding to the stored digits, a recorder operable to provide a permanent record in accordance with the signals representing alphabetical characters thereby to provide a permanent record of the called office code, and means for operating said recorder to record the stored called office code digits if the translating means fails to provide signals representing alphabetical characters corresponding to said stored digits.

3,003,036

SINGLE SIDEBAND COMMUNICATION SYSTEM
Johannes Anton Greeffkes, Eindhoven, Netherlands, assignor to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,352
Claims priority, application Netherlands Sept. 30, 1958
5 Claims. (Cl. 179-15.5)

1. A single-side band communication system comprising a source of input signals having a pre-determined

bandwidth, modulator means connected to said source for producing a single side band signal, limiter means connected to said modulator means to provide an amplitude limited single side-band signal, a source of pilot oscillations, means connected to apply said pilot signal oscillation to said limiter to provide a pilot signal voltage vary-

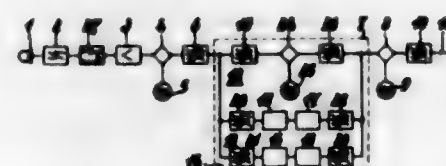


ing with the instantaneous amplitude of said input signals, the frequency of said pilot oscillations being displaced from said single side band signal a distance at least equal to said bandwidth, frequency shift means for reducing the frequency difference between said pilot signal voltage and limited single side band signal, and means connecting said frequency shift means to said limiter means.

3,003,037

TRANSMISSION SYSTEM

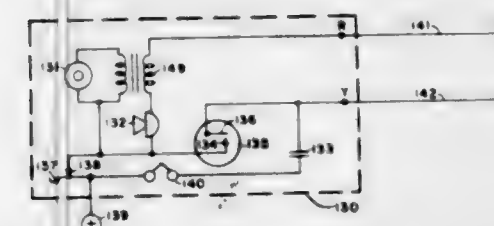
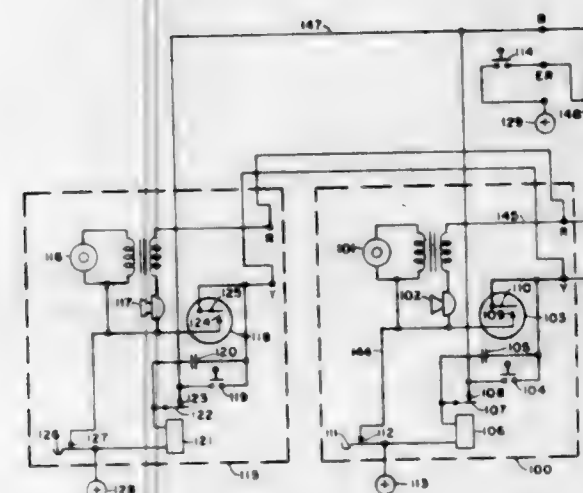
Frank de Jager and Johannes Wilhelmus Klute, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 24, 1955, Ser. No. 542,375
Claims priority, application Netherlands Oct. 25, 1954
12 Claims. (Cl. 179-15.55)



6. A single-sideband transmission system comprising a transmitter having a source of single-sideband modulated signals, a plurality of parallel-connected signal channels, means for splitting said signals into a plurality of different formant frequency ranges corresponding to said plurality of signal channels, means for feeding said formant frequency ranges respectively through said signal channels whereby the signal in each channel retains its single-sideband modulation characteristic, at least some but not all of said channels including compressor means for compressing the frequency range of the single-sideband modulated signals passed therethrough, and means for simultaneously transmitting the output signals of said signal channels, and a receiver having a plurality of signal channels corresponding to said transmitter signal channels, means for feeding the received signals of the formant frequency ranges respectively through said receiver channels, at least some but not all of said receiver channels including expander means for expanding the frequency range of the single-sideband modulated signals passed therethrough in a manner corresponding inversely to the said frequency compression of the signals in the respective formant ranges, means for combining the output signals of said receiver signal channels, said compressor means comprising an oscillator tuned substantially to a subharmonic of the respective signal, and means for synchronizing said oscillator with said respective signal.

3,003,038
MULTIPLE STATION INTERCOMMUNICATION SYSTEM

Adolph A. Baker and Angus W. Blow, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Oct. 3, 1957, Ser. No. 688,063
7 Claims. (Cl. 179-17)



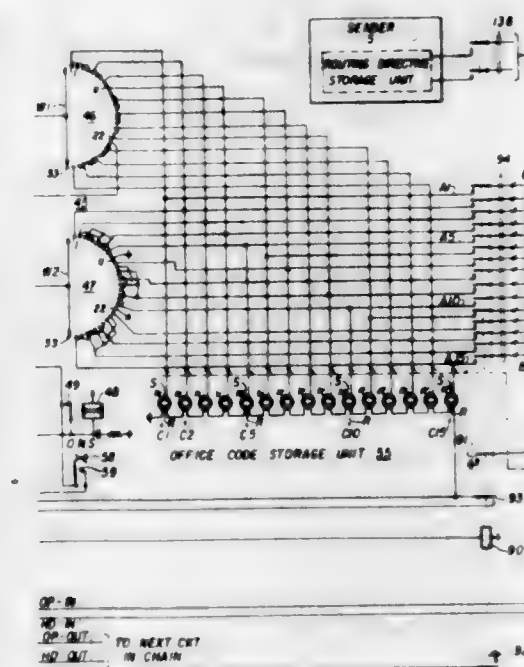
2. In an intercommunicating system, a plurality of lines including an executive line, a station connected to each of said lines including said executive line, an extension station connected to said executive line, means for signaling locally between stations on said executive line, a link for establishing a connection between a calling and a called ones of said lines, lockout means within said link for preventing said link from establishing more than one connection at any one time between calling and called ones of said lines and means responsive to the operation of said local signaling means for rendering said lockout means non-responsive to said executive line to enable said link to establish a connection between calling and called ones of said lines other than said executive line while the stations on said executive line are used for intercommunication purposes.

3,003,039
REGISTER-TRANSLATOR-SENDER ARRANGEMENTS

Alfred H. Faulkner, Redondo Beach, Calif., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Apr. 8, 1960, Ser. No. 21,038
15 Claims. (Cl. 179-18)

1. In a telephone system, a register-sender arrangement comprising a register, in which recorded information corresponding to the destination of one call only is stored at any one time, means for extracting and receiving said recorded information from said register for transmission by said sender of digits corresponding to said destination, the recording of said information being destroyed incident to said extraction, and means controlled by said re-

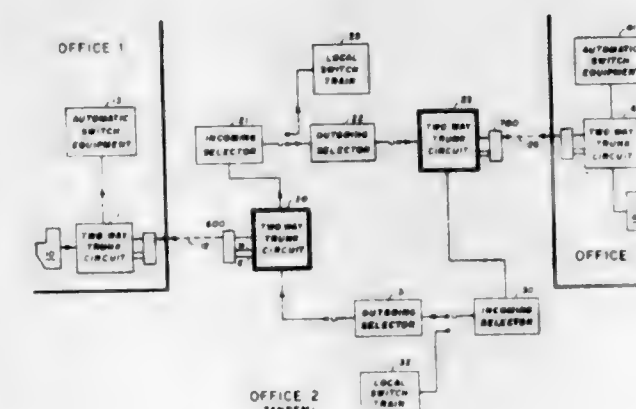
ceiving means for automatically re-recording information corresponding to said destination back in said register for



3,003,040

MODIFIED TRUNK CIRCUIT

Ferdinand J. Campa, Tampa, Fla., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Jan. 25, 1956, Ser. No. 561,268
5 Claims. (Cl. 179-18)



1. A telephone system comprising a tandem office, a first trunk circuit for receiving signals sent through said tandem office, a second trunk circuit for transmitting said signals sent through said tandem office, an automatic switch train comprising two talking conductors and two control conductors for interconnecting said trunk circuits, means for extending said signals over said talking conductors, said trunk circuits and said switching equipment comprising means which inherently delays said signals that are transmitted through said tandem office, and means in said first trunk circuit effective in response to receipt of said signals for preparing said second trunk circuit over one of said control conductors for transmission of said signal pulses, and circuit means whereby said last named means is made effective during said time delay.

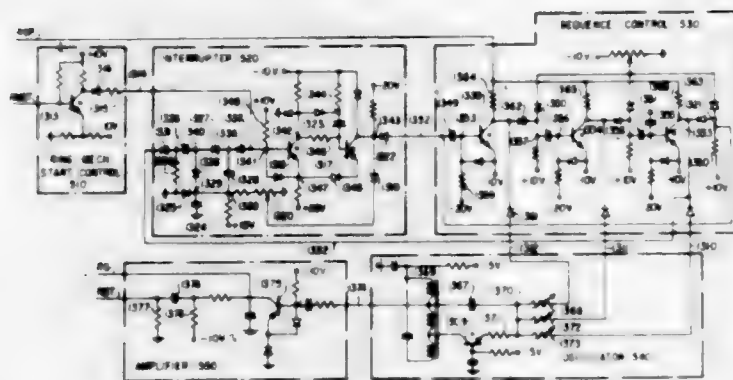
3,003,041

ELECTRONIC TELEPHONE SYSTEM AND RINGING-TONE GENERATOR THEREFOR

Alfred H. Faulkner, Redondo Beach, Calif., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Original application Jan. 6, 1958, Ser. No. 707,298, Divided and this application Feb. 20, 1959, Ser. No. 794,619

6 Claims. (Cl. 179-84)



1. In a ringing tone generator for supplying tone signals over a telephone line to an electro-acoustic transducer of a substation; generator means having an output circuit and a plurality of input circuits for transmitting a tone signal over the output circuit responsive to the actuation of any one of the input circuits, the frequency of the tone being dependent upon the input circuit being actuated; switching means for cyclically actuating said input circuits in succession, thereby causing a sequence of different tones to be repeatedly transmitted over said output circuit, each sequence corresponding to one cycle of the switching means; and interrupter means responsive to the completion of a predetermined number of complete cycles of the switching means for producing a spacing interval between groups of tone sequences transmitted over said output circuit; whereby a chime-like ringing signal comprising groups of tone sequences is produced in said transducer, each sequence being a plurality of different tones in succession, each group being a plurality of complete sequences, and the groups being separated by a silent interval.

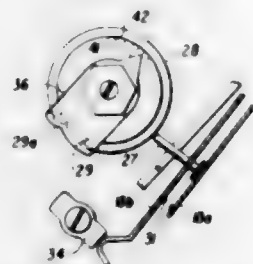
3,003,042

TWO CAM INTERPULSE STATION IDENTIFYING DIAL

Howard E. Koss, Elmwood Park, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,616

4 Claims. (Cl. 179-90)



1. In an automatic telephone system having a calling-party identification circuit and a setting device variably rotatable from and returnable to a home position in accordance with the digital directory number for controlling a called-party generating means including a cam shaft having a first cam rotated therewith in accordance with the return of said setting device to generate a pulse in a circuit in a predetermined time sequence indicative of the selected called party, an automatic calling-party identification circuit control means comprising: a sec-

ond cam rotatable with said setting means, said second cam being circular and having an indentation along a predetermined portion of the periphery thereof; switch means in said calling-party identification circuit, said means including contacts having a cam follower associated therewith riding on the periphery of said circular cam to condition said switch means for operation when said follower is in said indentation; masking means for preventing the entrance of said cam follower into the indentation in said circular cam during the rotation of said setting means away from its home position; and means operable by said cam shaft for operating said switch means during its conditioned period whereby a calling-party identification pulse is generated only at a predetermined point in said return cycle in a predetermined time relationship to said called-party identification pulse.

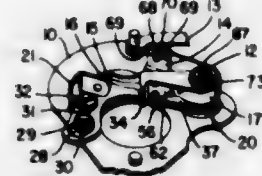
3,003,043

CONTACTS ASSEMBLY

Earl W. Meyer, Jr., Harry M. Seubert, and Robert J. Latorre, Toledo, Ohio, assignors to The Electric Auto-Lite Company, Toledo, Ohio, a corporation of Ohio

Filed June 13, 1958, Ser. No. 741,813

10 Claims. (Cl. 200-30)



1. An ignition breaker arm contact structure comprising an elongated body of insulating material, a bumper projection formed integrally therewith at one end thereof, a pivotal opening formed on said body having its axis parallel to and separated by an intermediate portion of said elongated body from said bumper projection, the outer dimensions of said elongated body decreasing from its pivotal opening toward said bumper projection, the intermediate portion of said elongated body having the form of an I-beam section providing oppositely directed channel-shaped faces, a thin metal member fixedly secured in one of the channel-shaped faces of said elongated body in engagement with the side walls thereof and extending beyond said bumper projection, a contact member carried by said metal member, a ribbon-like spring located in the other channel-shaped face of said elongated body in engagement with the side walls thereof, and means performing the dual function of securing said thin metal body and said ribbon-like spring to said body and establishing an electric connection therebetween.

3,003,044

DELAY ELECTRICAL SWITCH

Frank A. Davis, Box 115, Flat Rock, Ind., and Herold H. Losche, 541 Euclid Ave., Greenwood, Ind.

Filed Mar. 23, 1959, Ser. No. 801,348

6 Claims. (Cl. 200-33)



1. A time delay electrical switch comprising: a pivotable capsule having two compartments separated by a wall, said compartments having a conductive liquid therein; an unrestricted conductive liquid passage in the nor-

mally lower end of said wall and an adjustable air metering passage in the normally upper end of said wall whereby the flow of conductive liquid between compartments is controlled by said air metering passage in the passage of air between compartments; and electrodes in at least one compartment adaptable to be bridged by said conductive liquid, said electrodes being connected through said capsule.

sition to maintain said toggle in a predetermined position, said interengagement means being spaced from said pivot.

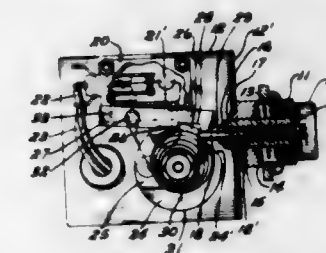
3,003,047

SWITCH ACTUATING DEVICES

Paul J. Daniels, 2534 S. 11th St., Niles, Mich.

Filed Jan. 16, 1959, Ser. No. 787,174

12 Claims. (Cl. 200-160)



1. An actuating device for an electric switch having a spring tensioned operating member comprising movable actuating means having a part positioned to depress said switch operating member when said actuating means is in one position of movement, force applying means including a manually operable member and including mechanism mounted for movement relative to said manually operable member and relative to said movable actuating means for temporarily projecting said movable actuating means beyond said force applying means to said switch operating member depressing position, and automatic means for returning said movable actuating means to a position where the spring-tensioned switch operating member is released, said operating member depressing part of the movable actuating means being so located that said release of the switch operating member on return movement of the movable actuating means takes place regardless of whether the manually operable member has been released and regardless of whether it is still in the position in which it initiated plunger depression.

3,003,045

ELECTRICAL SWITCHING DEVICE

Clyde L. Tichenor, Encino, Calif.

Filed Sept. 8, 1958, Ser. No. 759,580

2 Claims. (Cl. 200-61.08)



1. An electrical switching device comprising a tubular base having a major and minor outside diameter, said tubular base having a through hole transverse to the longitudinal axis of the tubular base in the portion of the tubular base having the minor outside diameter, said hole in the tubular base allowing passage of an external electrical circuit conductor through the tubular base, a cylindrical slide member within said tubular base having a combination hard flat surface transverse to its longitudinal axis and adjoining the tubular base suitable to force separation of the electrical circuit conductor, and an angular beveled surface adjacent to said flat surface and suitable to wedge immobile the severed circuit conductor end between said beveled surface and the inner wall of the tubular base.

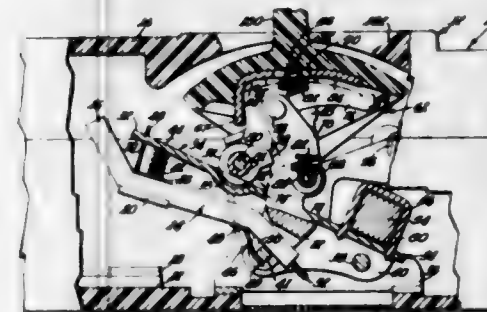
3,003,046

CIRCUIT BREAKER

John De Torre, Westfield, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Oct. 26, 1959, Ser. No. 848,572

12 Claims. (Cl. 200-153)



1. In a circuit breaker, contact means relatively movable between open and closed positions, a contact device movable to open and closed positions to open and close said contact means, operating mechanism for said device comprising an actuating member movable to said positions, a releasable cradle operable on release to effect movement of said contact device to open position, and a toggle operatively associated with said cradle and contact device, said toggle including a link connected by a pivot to said device, an overcenter spring operable by said actuating member to operate said toggle and thereby move said contact device to said positions, and means providing for the inter-engagement of said toggle and contact device on the release of said cradle to said open po-

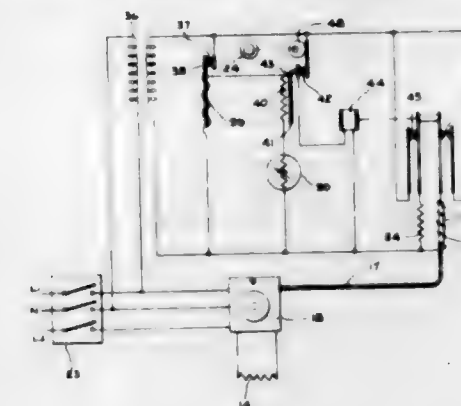
3,003,048

AUTOMATIC MEAT THERMOMETER AND HEATER

George A. Scott, Jeffersonton, Ky., assignor to General Electric Company, a corporation of New York

Filed Dec. 21, 1959, Ser. No. 860,884

8 Claims. (Cl. 219-20)

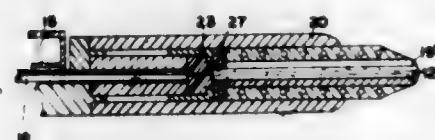


2. Apparatus for cooking a roast or the like comprising an oven adapted to receive the roast, means for supplying heat to the oven, and thermostatic means for manually selecting the oven temperature, a combined meat probe and heater that is insertable into the roast, the probe comprising a temperature sensitive element in the tip, and a heating element coiled within the probe so that controlled heat is introduced directly into the interior of the roast while the oven temperature is maintained sufficiently high to cook the exterior thereof, and a low voltage control circuit for the combined meat probe and heater comprising a

voltage regulator for ambient temperature and voltage changes, the voltage regulator delivering a root mean square voltage to a responder that is in series with the temperature sensitive element in the probe, the responder having a pair of normally open contacts, the temperature sensitive element having a negative coefficient of resistance so that as the temperature rises the resistance will decrease so that more current will flow through the responder to close its contacts, and a relay that is actuated by the closed contacts of the responder to open the circuit to the probe heater and simultaneously close a circuit to an anticipator heater that cooperates with the thermostatic oven control, the probe heater and anticipator heater being cycled alternately between the ON and OFF positions, thus biasing the thermostatic means and causing the temperature in the oven to drop until the oven temperature reaches a serving temperature which may be maintained for an extended time.

3,003,049 SOLDERING IRONS

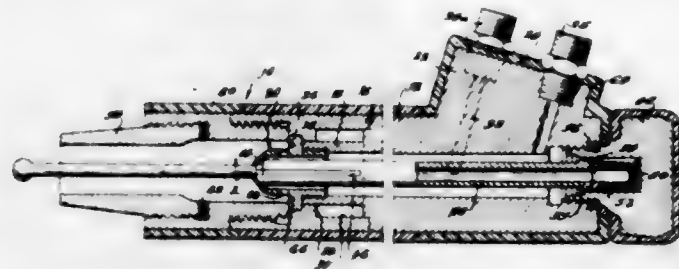
John F. Thomas, 804 Cedarcroft Road, Baltimore, Md.
Filed Jan. 14, 1960, Ser. No. 2,518
17 Claims. (Cl. 219—27)



3. A self-feeding soldering iron of the class described comprising: a body having an orifice through which solder is adapted to pass; a tip having an orifice therein aligned with the orifice in said body; actuatable feeder means for selectively feeding the solid solder through the orifice in the body into the orifice in the tip; means in said tip for heating the same to a working temperature at which solder contained in the tip orifice is maintained in a molten state; and thermal cut-off means interposed between the body and the tip, said thermal cut-off means having an open position for effecting interconnection between the orifice in the tip and the orifice in the body and a closed position for disconnecting the apertures, said thermal cut-off being movable to closed position upon melting of the solder in the tip whereby the molten solder in the tip is mechanically separated from the solid solder in the body, said thermal cut-off means when closed serving to thermally disconnect the molten solder from the solid solder.

3,003,050 WELDING TORCH

Thomas B. Correy, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 8, 1960, Ser. No. 34,851
1 Claim. (Cl. 219—75)



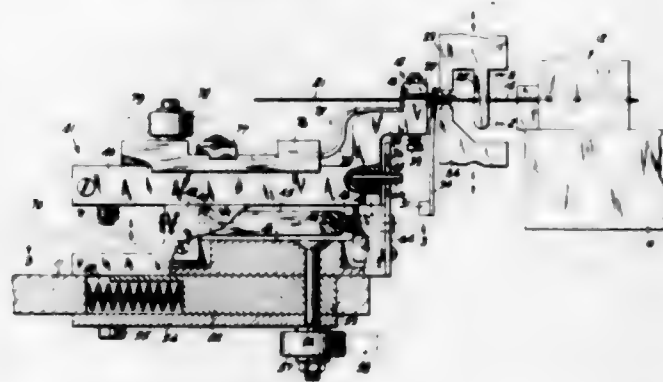
A welding torch comprising an electrically-conducting, substantially-circular body having an axially aligned circular passage therethrough, said body having a

reduced diameter portion at one end forming a shoulder, a retainer ring having an outer diameter equal to said body and an inner diameter greater than the diameter of said end portion, said retainer ring having one end in abutment with and sealed to said shoulder, an inwardly extending flange centrally located within said retainer ring in abutment with and sealed to said body at its reduced diameter portion to form a sealed annular space between said retainer ring and said body, an electrode longitudinally disposed within said passage and extending beyond said reduced diameter end portion of said body, a collet sleeve surrounding the portion of said electrode within said passage and extending to the other end of said body, said collet sleeve having longitudinal slots at one end, a collet head having a conical inner surface in contact with the slotted end of said collet sleeve and threadably engaging the inner diameter of said body at its reduced diameter end, said collet head having an outwardly extending flange in abutment with the end of said body and said inwardly extending flange of said retainer ring, a cap threadably engaging said body at its other end and having a recess therein to receive said other end of said collet sleeve, spring means disposed within said recess to constrain said collet sleeve towards said collet head thereby causing said slotted end of said collet sleeve in cooperation with the conical inner surface in said collet head, to clamp said electrode, an extension ring threadably engaging the inner diameter of the other end of said retainer ring and engaging the collet head so as to keep it in threaded engagement with the body, a ceramic nozzle threadably engaging the inner diameter of said extension ring at one end and terminating at its other end adjacent the end of said electrode, means for introducing an inert gas into said passage in the body, said collet head having three equispaced radial holes for providing communication for said inert gas from said passage to said nozzle, the body having a pair of coolant channels passing longitudinally through said body and connecting to said annulus between the retainer ring and body, means for connecting one of said coolant channels to a liquid coolant source and the other coolant channel to a coolant drain, said connecting means also adapted to connect to an electric power source, and an insulating coating surrounding said body retainer ring and extension ring.

3,003,051 WELDING APPARATUS

Frederick W. Kulicke, Jr., and Albert Soffa, Philadelphia, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed July 29, 1959, Ser. No. 830,296
9 Claims. (Cl. 219—78)



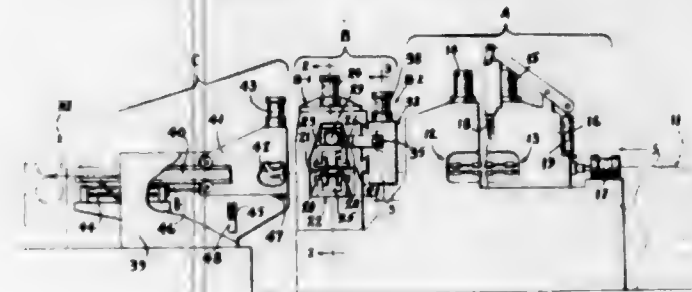
1. In an apparatus for joining parts moved successively to a joining station, to articles having projections moved successively in a given path toward the joining station, a holder for each part, a holder for each article, supports for the holders movable laterally relative to the joining

station respectively to locate the parts successively in the joining station and to locate the articles successively adjacent the joining station, a locating element mounted at a fixed position in the joining station transversely of the given path of the projections and having a recess in the upper end thereof to receive the projections singly and position them with respect to their parts, a carriage for each article holder mounted for movement on its support and having operatively connected relatively movable members adapting the carriage for vertical expansion and contraction to raise and lower their holders, and an actuator for each carriage movable relative to the support for the articles to cause expansion of the carriage in advance of the joining station to move the projection out of said path and above the locating element and to cause contraction of the carriage at the joining station to lower the projection until it comes to rest in the recess of the locating element.

3,003,052 STRIP JOINING APPARATUS

Arthur L. Williams and Francis A. Bodenheim, Warren, Ohio, assignors, by mesne assignments, to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio

Filed Sept. 21, 1959, Ser. No. 841,206
7 Claims. (Cl. 219—101)



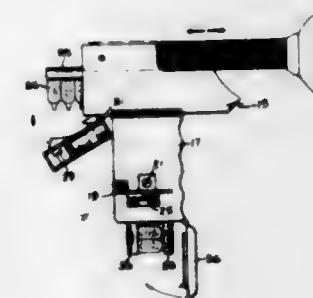
1. Apparatus for joining strip material in end-to-end relation, which strip material is movable longitudinally in a predetermined direction, comprising welding means for securing respective strip ends together by forming a transversely extending welded joint therebetween, strip gripping means spaced from said welding means in the direction of strip movement and movable longitudinally of the strip, first joint trimming means intermediate said welding means and said strip gripping means, second joint trimming means intermediate said welding means and said first trimming means, one of said joint trimming means removing weld surplus projecting flatwise of the strip and the other removing weld surplus projecting edge-wise of the strip, strip clamping means adjacent one of said trimming means for holding the strip immobilized, means for engaging said strip gripping means with said strip and for effecting movement of said strip gripping means and consequently the strip gripped thereby in the direction of strip movement and in an amount equal to the spacing between said second trimming means and said welding means, following operation of the latter, to align the welded strip joint with said second trimming means, means for actuating said clamping means to grip the strip following disposition of the welded strip joint at said second trimming means, means for disengaging said strip gripping means from the strip and for effecting movement thereof in the direction opposite to that of strip movement following gripping of the strip by said clamping means, means for re-engaging said strip gripping means with the strip following operation of said second trimming means and for effecting movement of said strip gripping means and consequently the strip gripped thereby in the direction of strip movement and in an amount equal to the spacing between respective

trimming means, following release of the strip by said clamping means, to align the welded strip joint with said first trimming means.

3,003,053 FLASHGUN

David N. Brooks, West Peabody, David R. Dayton, Beverly, and Albert H. Nimblett, Salem, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

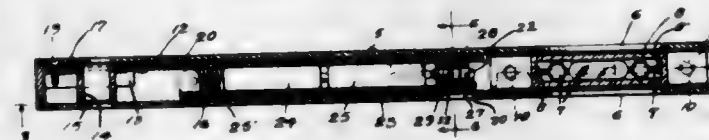
Filed Dec. 30, 1959, Ser. No. 862,903
5 Claims. (Cl. 240—1.3)



1. A repeating photoflash gun comprising: a horizontally disposed stationary chamber; a horizontally disposed slide reciprocally mounted on the top of said chamber for movement longitudinally with respect thereto; a reflector, having a central aperture, mounted on an end of said slide; a plurality of aligned bulbs disposed side-by-side in said chamber longitudinally thereof; a bulb holder; means for pivotally mounting said bulb holder in said chamber forward of said aligned bulbs, said bulb holder being swingable through about ninety degrees from a bulb-receiving position with respect to said aligned bulbs to a position in alignment with said aperture in said reflector; and means connecting said slide to said bulb holder whereby reciprocation of said slide actuates said pivotally mounted bulb holder to effect movement thereof to and from said positions.

3,003,054 ILLUMINATED SPIRIT LEVEL

Richard T. Hubbard, 13418 E. 15th, Spokane, Wash.
Filed Sept. 9, 1960, Ser. No. 55,005
3 Claims. (Cl. 240—6.44)



1. In an illuminated spirit level, a hollow body, vial units mounted within said body, said body having sight openings in the wall thereof through which said vial units are viewed, a battery unit slidably mounted within said body, said battery unit embodying a stationary supporting plate and a channel bar pivotally connected at one of its ends to said supporting plate, an electric light bulb mounted within the opposite end of said channel bar, a normally open circuit including batteries mounted within said channel bar, said batteries being in circuit with said light bulb, a pair of spaced rubber supporting rings mounted on the stem of said light bulb, securing said light bulb in position by frictional contact with said channel bar, said channel bar normally resting on said rubber supporting rings out of contact with said metallic washer, and said channel bar adapted to contact said metallic washer, completing the circuit to said light bulb upon pressure directed to said channel bar compressing said rubber rings, exposing said metallic washer for contact by said channel bar.

3,003,055

LIGHTING FIXTURE

Milton Liberman, 65 Sewane Road, East Rockaway, N.Y.
Filed Sept. 10, 1958, Ser. No. 760,104
4 Claims. (Cl. 240-9)

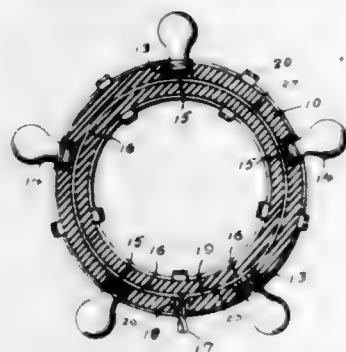


1. A lighting fixture comprising a grating having interlocked sets of lateral and longitudinal members forming a plurality of rectangular openings, a frame member surrounding said grating and having a wireway therein, a plurality of electric outlets in said frame member and connected to current carrying wires in said wireway, and flanges on said members to form an inwardly extending ledge about one edge of each of said openings to support individual lighting elements therein with the lighting elements resting on said flanges.

3,003,056

FLASHER STAR CHRISTMAS WREATH

Charles H. Resch, 2793 Bader Ave., Akron 19, Ohio
Filed July 14, 1959, Ser. No. 826,946
1 Claim. (Cl. 240-10)



An ornament in the form of a Christmas wreath resembling a flashing star, comprising a circular body of solid construction and said body being circular in cross section, five light bulb receiving sockets embedded in said solid body and said sockets being arranged inwardly from the outer periphery of the solid body, electric wires arranged in said body and connected to said sockets, there being a continuous generally annular slot extending inwardly of one side of the body for receiving said wires, said sockets being equally spaced apart to correspond to the points of a star, a pair of covers semi-circular in cross section positioned against the sides of the body, and said pair of covers having interengaging coacting clips and ridges thereon, and the outer surfaces of said covers being provided with decorations.

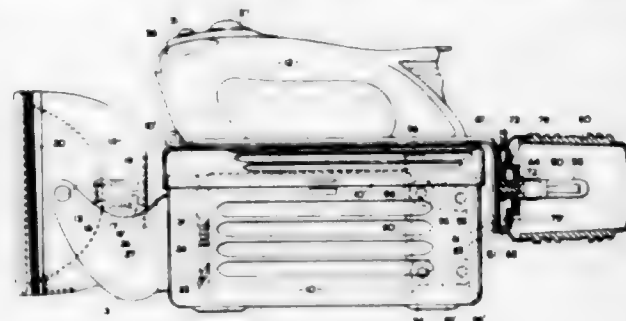
3,003,057

PORTABLE ELECTRIC LANTERNS OR TORCHES AND SWITCHING DEVICES THEREFOR

Wing G. Cheng, No. 1, Forfar Road, Kowloon, Hong Kong, China
Filed Dec. 31, 1958, Ser. No. 784,239
Claims priority, application Great Britain Jan. 2, 1958
5 Claims. (Cl. 240-10.63)

1. An electric lantern comprising a main casing to receive a supply battery, a main lamp bulb mounted on said main casing and arranged to be supplied from said battery, a carrying handle fixed to and extending along the top of said casing, switch means for controlling the

current supply from said battery to said main lamp bulb, said switch means being mounted on said handle, a support for an auxiliary lamp bulb, one end of said support being pivotally mounted on said main casing so as to extend along the top thereof and to swing about an axis transverse to the longitudinal axis of said main casing, an

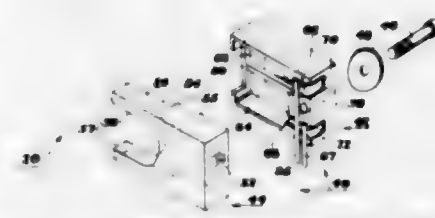


auxiliary lamp bulb mounted on the free end of said support and arranged to be supplied from said battery, and switch means for controlling the current supply to said auxiliary lamp bulb, said switch means for controlling the supply to said auxiliary lamp bulb being carried on said pivotally mounted support and operated independently of said switch means for controlling the current supply to said main lamp bulb.

3,003,058

COMBINED LAMP AND REFLECTOR WITH SOCKET

David L. Babcock, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 17, 1958, Ser. No. 761,568
2 Claims. (Cl. 240-41.35)

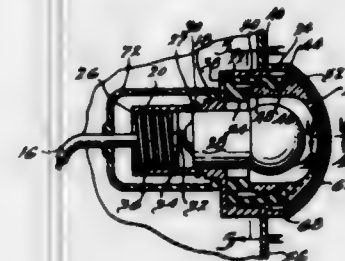


1. An inexpensive and readily serviced projection lighting arrangement comprising a socket having a pair of flexible electrical contact elements positioned in side-by-side insulated relation and in generally the same plane, said socket having means forming a first slot generally parallel to the plane of said contacts and extending longitudinally into the socket from one end thereof, said socket having means forming a second slot communicating with said first slot and extending in a direction generally perpendicular thereto, both slots extending into the same end of the socket, a flat, apertured lamp-mounting member removably positioned in said first slot, an incandescent lamp extending from one surface of said member through said second slot, said lamp having a filament and having a base extending through an aperture in said member, with electrical contacts on said base connected to the lamp filament and establishing an electrical connection from the filament to the contacts in the socket, flanges extending from the lateral edges of said member and lying closely along complementary edge surfaces of said socket adjacent said first slot to position said member laterally relative to the socket, a reflector support integral with said member and having a surface abutting an end surface of the socket to position said member longitudinally relative to the socket, and a concave reflector integral with said support with its concave surface facing said lamp.

3,003,059

LAMP ASSEMBLY

Norbert P. Worden, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a corporation of Michigan
Original application Aug. 27, 1954, Ser. No. 452,587, now Patent No. 2,903,570, dated Sept. 8, 1959. Divided and this application Mar. 18, 1959, Ser. No. 800,176
15 Claims. (Cl. 240-152)

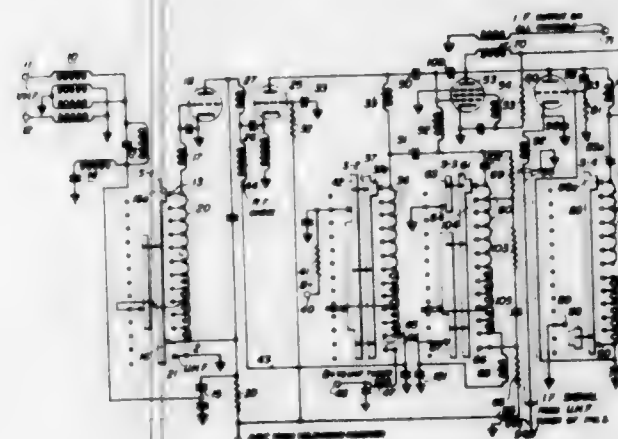


9. A lamp assembly comprising a lens, a rigid body including a generally cylindrical hollow portion having an aperture in the wall thereof, said aperture having two opposed side walls, said body further including an annular surface at one end of said hollow portion, a resilient flexible plastic grommet engaging and supporting the lens and having an inner generally tubular portion and an outer generally tubular portion coaxial with and overlying said inner tubular portion and having one end joined to the corresponding end of said inner tubular portion by an integral radial portion having a generally annular surface lying in a plane generally perpendicular to the axis of said tubular portions and parallel with and abutting said annular surface of said body, said outer portion having a generally cylindrical surface engaging said generally cylindrical hollow portion of said body over the major portion of the length of said hollow portion, and an integral resilient flexible projection on said generally cylindrical surface of said outer portion of said grommet extending through the aperture in the wall of said hollow portion and abutting and trapped between said side walls.

3,003,060

TELEVISION TUNER

Chalmer H. Lewis, Jr., Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed Oct. 22, 1956, Ser. No. 617,399
2 Claims. (Cl. 250-20)



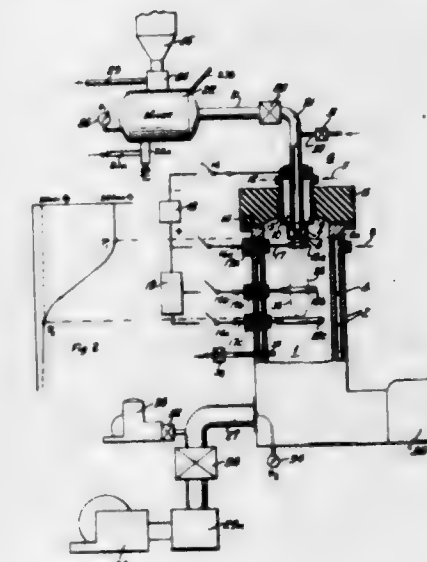
1. A V.H.F.-U.H.F. television tuning system comprising in combination a radio frequency amplifier for received V.H.F. signals, a signal mixer stage having a tunable signal input circuit, means coupling said signal input circuit with said radio frequency amplifier, a dual purpose stage connected with said mixer including a triode tube,

first circuit means including a tunable frequency determining tank circuit for connecting said dual purpose stage to operate as a V.H.F. local oscillator, second circuit means for connecting said dual purpose stage to operate as an intermediate frequency amplifier, means providing a signal input connection for said dual purpose stage for applying intermediate frequency signals to be derived from a preceding U.H.F. converter to said dual purpose stage, means providing an automatic gain control signal input connection for said mixer stage for applying an automatic gain control signal to said mixer stage, and switch means for selectively establishing said first or said second circuit means in said V.H.F.-U.H.F. tuning system and for supplying an automatic gain control signal to said mixer stage with said dual purpose stage connected to operate as an intermediate frequency amplifier, said automatic gain control signal being supplied to said mixer stage independently of said dual purpose stage so that said dual purpose stage is operated at full gain during U.H.F. reception.

3,003,061

ELECTRIC DISCHARGES IN GASES

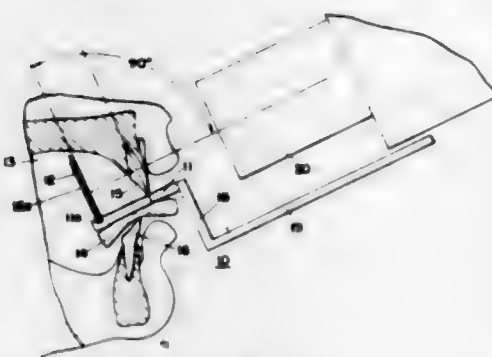
Bernhard Berghaus and Hans Bueck, Zurich, Switzerland, assignors to Elektrophysikalische Anstalt Bernhard Berghaus, Vaduz, Liechtenstein
Filed Apr. 1, 1957, Ser. No. 649,922
Claims priority, application Switzerland Apr. 2, 1956
13 Claims. (Cl. 250-49.5)



1. In a method of submitting gases, vapors, dispersed liquids and powdered solid materials to metallurgical, chemical, or other technical processes under the influence of electric gas discharges by introducing them through elements of the nature of nozzles into a reaction chamber which contains electrodes that are electrically insulated from one another, a starting-up procedure for establishing a glow discharge in the reaction chamber concentrated in the immediate vicinity of the nozzle orifice, said starting-up procedure comprising the steps, prior to the admission of the substances for processing, of first creating a low pressure atmosphere which will not impair the intended processes in the reaction chamber, said pressure being below the operating pressure, applying potential to the electrodes to produce a glow discharge on the electrode or electrodes which at least temporarily carry a negative potential, then raising the pressure to an operational pressure in the range of 20 mm. Hg to several thousand mm. Hg and varying the potential drop until the discharge becomes concentrated in the vicinity of the nozzle orifice, whereupon the said starting-up procedure is concluded and a final state of the discharge established, and then introducing the substances for processing into the reaction chamber through the nozzle at a pressure

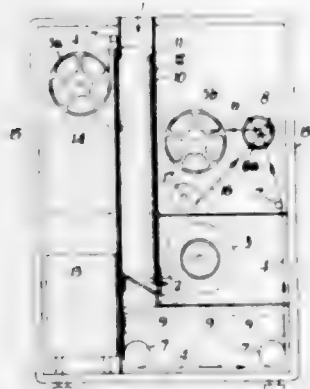
which will produce a zone exhibiting a pressure gradient in which the energy of discharge is substantially concentrated.

3,003,062
POSITIONING INSTRUMENTS FOR X-RAY FILM
William James Updegrave, 616 W. Hortter St., Philadelphia 19, Pa.
Filed Nov. 19, 1959, Ser. No. 854,120
10 Claims. (Cl. 250-70)



1. A positioning-angulator for producing dental X-ray films utilizing the paralleling technique, comprising a bite block having at least one slot disposed adjacent an end portion thereof and extending perpendicular to the long central axis of said bite block, said bite block having a surface on the same side thereof as said slot, which surface extends along a plane perpendicular to the plane of said slot, said surface having a plurality of grooves extending parallel to said slot to provide a corrugated-like surface engageable by the teeth to be X-rayed, the surface of said bite block opposite said corrugated-like surface being engageable by compressible material for transmittal of pressure from the opposing teeth for positioning the bite block with said slot in the region of maximum height of the mouth cavity thereby to position X-ray film disposed within said slot in a direction generally parallel to the long axes of the teeth, and a supporting arm secured to said bite block and having at the end opposite the point of securement to said bite block an offset portion laterally spaced from said slot and extending in a direction perpendicular to the plane of said slot and forming a guide for directing a source of X-rays perpendicular to said plane of said slot and X-ray film supported therein and in a direction perpendicular to said long axes of said teeth being X-rayed.

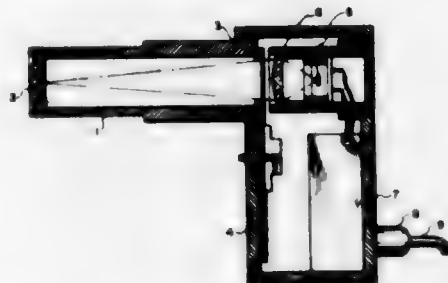
3,003,063
APPARATUS FOR MEASURING RADIOACTIVITY
Friedrich Mayer, Sarnen, Switzerland, assignor to G. A. Messen-Jachin, Sarnen, Switzerland, a Swiss body corporate
Filed Mar. 12, 1959, Ser. No. 798,934
7 Claims. (Cl. 250-83)



1. Apparatus for measuring the total amount of radioactivity of the air, comprising a separating chamber,

means for causing a stream of air to be tested to flow through the chamber together with solid and liquid particles contained in the air, a separating electrode in the form of a band disposed partly within the chamber, means for driving the band so that it is fed longitudinally through the chamber parallel to the direction of the air stream, means for generating ions in the air stream and for providing in the chamber an electrical field, the direction of which is transverse to the direction of movement of the band, whereby the ions will impinge upon and charge said particles and the latter will be deposited on the band, and at least one measuring instrument located adjacent the band, beyond the chamber having regard to the direction of movement of the band, and adapted to measure the radioactivity of the particles deposited on the band.

3,003,064
INFRARED DIMENSIONAL GAGE
Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,787
4 Claims. (Cl. 250-83.3)

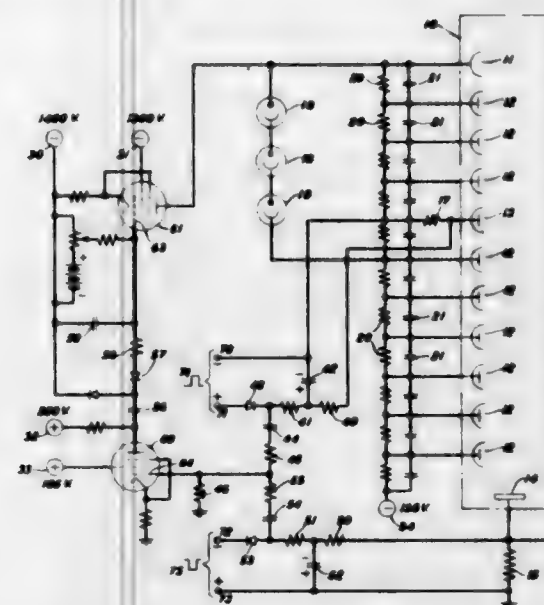


1. A radiation dimensional gage comprising in combination and in optical alignment a mask provided with a window, means for imaging radiations from a radiation emitting object to be gaged onto the plane of the mask, a single radiation detector, means for imaging onto the detector the entrance pupil of the optical system which images radiation from the object onto the window, a movable reticle adjacent the mask and window, said reticle being provided with radiation transparent openings registering with the window to cause a small transparent area to move lengthwise of the window as the reticle moves, said transparent openings having a spacing greater than the dimension of the image of the object to be gaged in the window plane, electronic means connecting to the output of the radiation detector to produce therefrom a series of rectangular pulses of fixed voltage and width proportional to the time of irradiation through the reticle opening and electronic means for producing an output signal from the rectangular pulses which is proportional to the dimension of the object to be gaged.

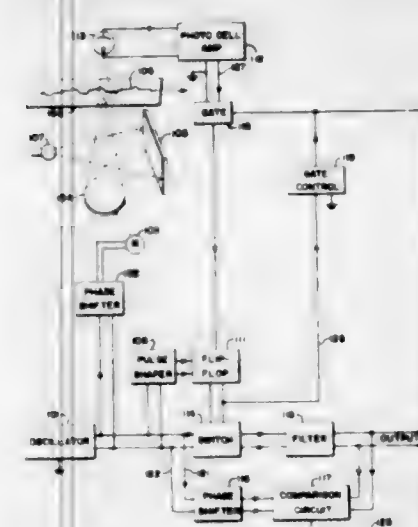
3,003,065
ELECTRON MULTIPLIER TUBE CIRCUITS
Raymond W. Ketchledge, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 15, 1957, Ser. No. 659,258
15 Claims. (Cl. 250-207)

15. An electrical circuit comprising an electron multiplier device having electrodes with secondary electron emitting characteristics and an anode, means for applying fixed potentials to said electrodes, output means connected to said anode, means for measuring electron beam current at at least one of said electrodes, means for measuring electron beam current at said anode, means for comparing said measured currents to ascertain any

change in electron multiplication intermediate the points of measurement, and means energized by said comparison means for controlling the potentials applied to said electrodes.

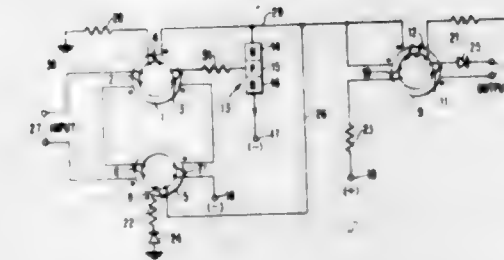


3,003,066
GATING CIRCUIT FOR SCANNING TRACE CONVERTER
Benjamin L. Snavely, State College, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 25, 1959, Ser. No. 795,566
11 Claims. (Cl. 250-219)
(Granted under Title 35, U.S. Code (1952), sec. 266)



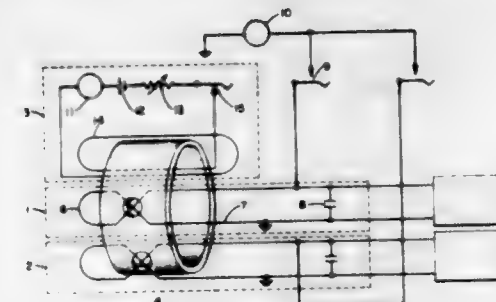
1. A scanning trace converter having a first means for producing a scanning beam of light for a trace on a moving strip of material, a second means responsive to the passage of said light beam across said trace to produce an output signal, an oscillator means connected to control the frequency of scanning of said beam, a third means controlled by said second means to produce the output of said trace converter, a fourth means gating the output of said second means to said third means, a fifth means connected to be responsive to the combined outputs of said trace converter and the output of said oscillator means to control the opening and closing of said fourth means, a bistable circuit connected to be shifted from one stable state to the other by said oscillator means and said fourth means, a seventh means controlled by one state of said bistable circuit to render the control of the opening and closing of said fourth means unoperative.

3,003,067
PULSE COUNTERS
Aurle S. Myers, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 18, 1959, Ser. No. 794,078
10 Claims. (Cl. 307-88)



4. A binary trigger comprising first, second and third magnetic elements, each having two distinct states of substantial remanence, input, output and additional windings for each of said magnetic elements, said input windings of said first and second magnetic elements being connected in series-aiding relationship, said output windings of said first and second magnetic elements being connected in series-bucking relationship, an amplifier having an input and an output, means coupling said output windings of said first and second magnetic elements to the input of said amplifier, means coupling the output of said amplifier to said input winding of said third magnetic element and to said additional windings of said first and second magnetic elements, a source of potential, and means coupling said source to said additional windings of said first and third magnetic elements.

3,003,068
PARAMETRICALLY-EXCITED RESONATORS
Otto A. Jorgensen, Pittsford, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,282
1 Claim. (Cl. 307-88)



In a signaling system, a plurality of substantially identical parametrically-excited resonators, each of said resonators comprising first and second windings and a capacitor, a multi-aperture core of magnetic material common to said resonators, said core having an aperture for each of said resonators, said first and second windings in each resonator being wound through the aperture for that resonator and around an individual portion of said core, means for connecting the first and second windings in each resonator in series opposition and in circuit with the capacitor in that resonator to form a resonant circuit having a resonant frequency f , a control winding disposed in inductive relationship with said core, means for applying an exciting signal having a frequency which is a harmonic of frequency f to said control winding, and means for selectively applying an input signal of frequency f to the resonant circuit in any one of said resonators.

3,003,069

SIGNAL TRANSLATING APPARATUS

Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 4, 1956, Ser. No. 607,666

5 Claims. (Cl. 307-88.5)



1. A multistable stage adapted for a ring trigger and comprising, a first transistor having emitter, base and collector electrodes and arranged as an inverted amplifier having a grounded base configuration, a second transistor having emitter, base and collector electrodes and arranged as an emitter follower, a common impedance connecting the emitters of said transistors to a source of potential whereby saturation of said inverter amplifier is prevented, a direct current connection for coupling the collector of said inverter amplifier to the base of said emitter follower, a first source of input signals, a capacitor connected to the base of said inverter amplifier and responsive to an input signal from said first signal source to change the conductive states of said transistors whereby said stage is turned on, a second source of input signals, and a diode connected to the base of said emitter follower and responsive to an input signal from said second signal source to change the conductive states of said transistors whereby said stage is turned off.

3,003,070

TRANSISTOR SWITCHING CIRCUITS INCLUDING AN INVERTER STAGE DRIVING AN EMITTER-FOLLOWER STAGE

Leonard Roy Harper, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1957, Ser. No. 706,486

5 Claims. (Cl. 307-88.5)



1. A transistor switching circuit comprising a first transistor having an emitter electrode, a base electrode, and a collector electrode, means connecting said emitter electrode to a common junction, means reversely biasing the base-emitter impedance of the transistor and tending to hold it in a relatively low conduction state, input means for supplying to the base electrode a square wave signal potential of polarity and magnitude sufficient to overcome said reversely biasing means and switch the transistor to a relatively high condition state, a first load resistor and a first source of unidirectional electrical energy connected in series between said collector electrode and

said common junction, said transistor being effective to produce at its collector electrode an output signal whose polarity is inverted with respect to its input signal, a second transistor having an emitter electrode, a base electrode, and a collector electrode, means directly connecting the base electrode of said second transistor to the collector electrode of the first transistor so that the output signal of the first transistor tends to switch the second transistor between relatively high and low conduction states when the first transistor switches between relatively low and high conduction states, a second load resistor and a second source of unidirectional electrical energy connected in series between the emitter electrode of the second transistor and said common junction, said first and second sources and said first and second load resistors being connected in a series loop with the emitter-base impedance of the second transistor, said first and second sources both being poled to bias forwardly the emitter-base impedance of said second transistor, said sources and load resistors being proportioned so that when said second transistor is in its high conduction state, there is transmitted through said last mentioned impedance a current greater than the minimum base saturation current of said second transistor and effective to store minority carriers in said second transistor, said current being effective to supply a substantial external load connected to the emitter electrode of the second transistor, said stored minority carriers being effective when said first transistor switches on to its relatively high conduction state to provide a low impedance path through the base-emitter impedance of said second transistor, whereby the second transistor is rapidly switched to its low conduction state and the emitter electrode thereof is rapidly switched to its off potential.

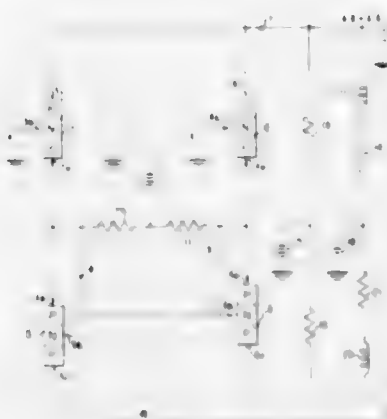
3,003,071

TRANSISTOR LOGICAL CIRCUIT

Robert A. Henle, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1957, Ser. No. 706,509

7 Claims. (Cl. 307-88.5)



5. A logical circuit for detecting correspondence between two signals, comprising two signal inputs respectively receiving the signals, first, second, third and fourth transistors, each having a base electrode, an emitter electrode and a collector electrode, means connecting the respective signal inputs to the base electrodes of the first and second transistors, a first junction connected directly to the emitter electrodes of the first and third transistors and to the base electrode of the fourth transistor, a second junction connected directly to the emitter electrodes of the second and fourth transistors and to the base electrode of the third transistor, a first constant current source connected to the first junction, a second constant current source connected to the second junction, a third junction connected directly to the collector electrodes of the first

and second transistors, a fourth junction connected directly to the collector electrodes of the third and fourth transistors, a first constant current drain connected between a fifth junction and said third junction, a second constant current drain connected between said fifth junction and said fourth junction, a variable current branch circuit connected between said third and fourth junctions, and an output terminal connected directly to one of said third and fourth junctions.

3,003,072

TRANSDUCERS

Robert Hill Robins, London, England, assignor to United Insulator Company Limited, Cheshington, Surrey, England, a British company

Filed July 8, 1958, Ser. No. 747,249

Claims priority, application Great Britain July 11, 1957
7 Claims. (Cl. 310-8.7)



1. An electric transducer element comprising a body of a material which can be so energized as to generate in the material ultrasonic acoustic energy which radiates from at least two surfaces of said body and, deposited directly onto at least the greater part of one of said surfaces so as to adhere thereto, a porous coating of inorganic material which prevents dissipation into the surrounding medium of a substantial proportion of the energy radiated from said surface.

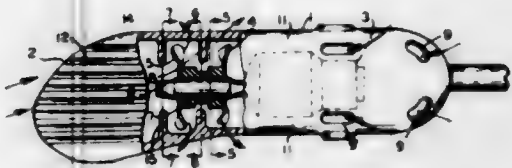
3,003,073

COOLING MEANS FOR PORTABLE ELECTRIC TOOL

John R. Bixler and Robert L. Howell, Baltimore, Md., assignors to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland

Filed Mar. 20, 1959, Ser. No. 800,733

2 Claims. (Cl. 310-59)



1. Cooling means for a portable electric tool comprising a cylindrical motor housing, a gear case forwardly of said motor housing, a motor in said motor housing, said motor having a spindle protruding forwardly therefrom towards said gear case, first and second opposed fans mounted on said spindle forwardly of said motor, said fans being axially spaced with respect to each other and said first fan being axially closer to said motor than said second fan, a first internal annular baffle intermediate said first and second fans and extending radially inwardly from said motor housing towards said spindle, said motor housing having a plurality of air intake openings rearwardly of said motor and further having a plurality of circumferentially-spaced air exhaust openings radially adjacent to said first fan, whereby an air cooling path is established for said motor, said gear case having a plurality of separate air intake openings forwardly of said second fan, said motor housing having a plurality of circumferentially-spaced separate air exhaust openings radially adjacent to said second fan and further having a second internal annular baffle extending radially inwardly

intermediate said second fan and said gear case air intake openings, whereby a separate and independent air cooling path is established for said gear case.

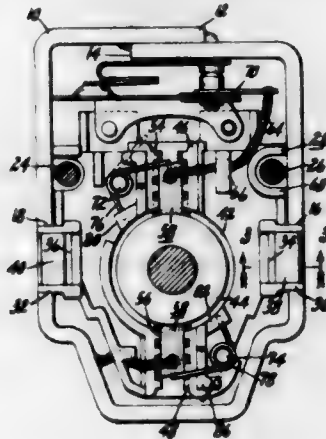
3,003,074

BRUSH HOLDER

Carl J. Finsterwalder, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 6, 1958, Ser. No. 772,337

9 Claims. (Cl. 310-239)



1. In a dynamo electric machine having a frame and a current collector member rotatably supported within said frame, an integral brush plate and brush box assembly of insulating material connected with said frame and having an opening therein to accommodate said current collector member, said assembly including an integral brush box with a substantially open front wall having laterally extending finger means, a brush mounted for reciprocable movement within said brush box having grooves formed in the corners on the front face thereof to receive said finger means, and means biasing said brush against said current collector member.

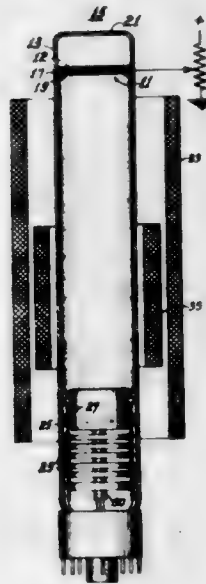
3,003,075

INFRA-RED SENSITIVE DEVICES

Gardner L. Krieger, Albuquerque, N. Mex., and Melvin L. Schultz and George A. Morton, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Dec. 24, 1952, Ser. No. 327,878

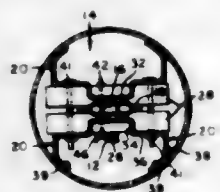
10 Claims. (Cl. 313-65)



3. A photosensitive device comprising a non-conductive base plate, a conductive coating deposited on said plate, and a composite layer on said conductive coating of complex reaction products of lead oxide, sulfur and oxygen.

3,003,076 ELECTRON TUBE

Herman W. Bonney, Hartsdale, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Nov. 16, 1956, Ser. No. 622,694
3 Claims. (Cl. 313-286)



1. In an electron tube, a stem, an envelope sealed to said stem, an electrode assembly mounted on said stem including pairs of upper and lower blocks supporting a grid between them, anodes secured to said blocks, each anode having a central section bent in toward the grid and lying between an upper and lower block, side portions offset from the central section and having their upper and lower portions fastened to the blocks, and wide wing portions extending toward said envelope of a length substantially equal to the length of the central section, the ends of the wing portions conforming to interior walls of the envelope and snugly engaging the same.

3,003,077 DISCHARGE LAMP CATHODE

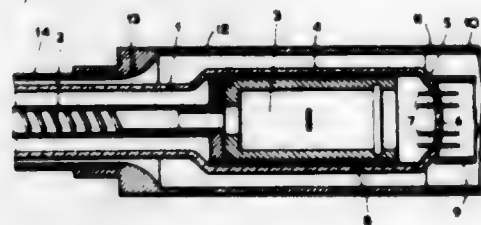
Ralph B. Thomas, Salem, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Continuation of application Ser. No. 367,205, July 10, 1953. This application Nov. 14, 1958, Ser. No. 773,857
5 Claims. (Cl. 313-343)



1. A cathode for an electric discharge device, said cathode comprising a doubly-coiled mandrel-free stranded cable, the stranded cable having a hollow core and the strands being wire in general spaced from and parallel to each other, the angle of the strands with respect to the axis of the cable being low so that the strands are nearly parallel to said axis.

3,003,078 TRAVELLING-WAVE TUBE

Hendrik Groendijk, Arle Vermeel, and Cornelis Teunis De Wit, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,024
Claims priority, application Netherlands Apr. 10, 1958
1 Claim. (Cl. 315-3.5)

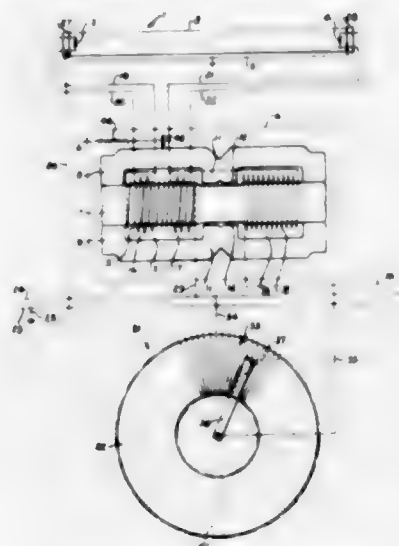


A travelling-wave tube comprising an envelope, an electron gun structure within said envelope, said gun includ-

ing a cathode, a delay line within said envelope and spaced from said electron gun, said envelope having a portion of given diameter surrounding the cathode and another portion having a diameter less than said given diameter surrounding the delay line, and an input coupling to said travelling-wave tube comprising a system of coaxial conductors, the inner conductor of said system comprising a first portion surrounding a portion of the envelope enclosing the cathode and a second portion comprising a metal layer on the inner wall of a portion of the envelope surrounding the electron gun, said first and second portions of said inner conductor being capacitatively coupled to one another, the diameter of said outer conductor decreasing gradually between the electron gun and the delay line until it has approximately the outer diameter of the envelope whereby at the area of the electron gun the ratio between the diameters of the metal layer and the outer conductor is smaller than the ratio between the diameters of the outer conductor and inner conductor.

3,003,079 FLUORESCENT LAMP DIMMING CIRCUIT

Delmar D. Kershaw, Highland Heights Village, Ohio, assignor to General Electric Company, a corporation of New York
Filed Nov. 8, 1954, Ser. No. 467,349
9 Claims. (Cl. 315-97)



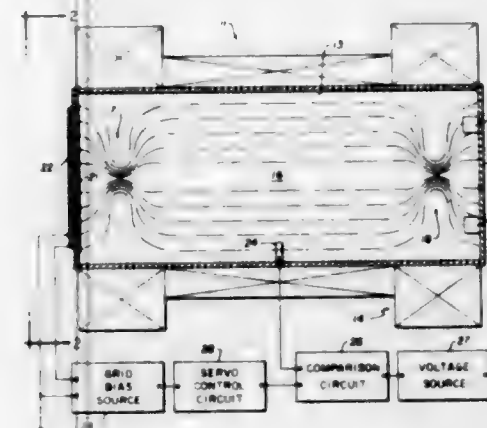
1. A dimming control system comprising an elongated electric discharge lamp of the low pressure positive column type having a pair of thermionic filamentary activated electrodes sealed into opposite ends thereof, an alternating current supply of constant voltage, a ballast transformer comprising a magnetic core, a primary winding connected across said supply, a pair of low voltage auxiliary windings connected across respective ones of said electrodes, and a secondary winding loosely coupled to said primary winding to provide a high leakage reactance therebetween, said primary winding and said secondary winding being serially connected in autotransformer relation across opposite electrodes of said lamp, and a variable inductive reactance serially inserted between the high voltage end of said primary winding and the low voltage end of said secondary winding.

3,003,080 APPARATUS FOR MINIMIZING ENERGY LOSSES FROM MAGNETICALLY CONFINED VOLUMES OF HOT PLASMA

Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 27, 1959, Ser. No. 816,351
6 Claims. (Cl. 315-117)

1. Apparatus for controlling the electron temperature in a magnetically confined volume of plasma which

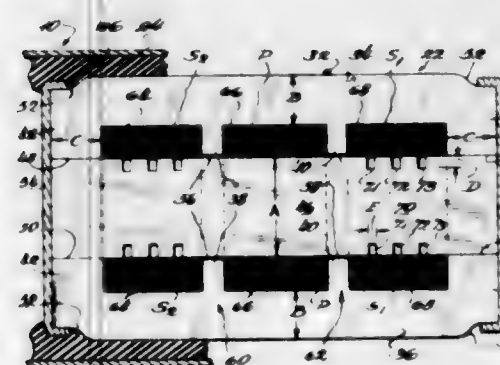
is supplied with sufficient energy to maintain said plasma at a temperature no less than a desired operating temperature comprising means for injecting relatively low energy electrons into the plasma in controllable quantities, and means for sensing departures in the plasma



equilibrium electron temperature above a predetermined value and coupled to said last named means to control the quantity of injected electrons in direct relation to said departures whereby the plasma equilibrium electron temperature at all times approaches said predetermined value.

3,003,081 APPARATUS FOR IGNITING AND OPERATING GASEOUS DISCHARGE DEVICES

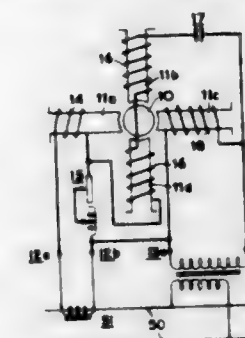
Elmer J. Huberty and Albert E. Feinberg, Chicago, Ill., assignors to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed May 6, 1959, Ser. No. 811,297
22 Claims. (Cl. 315-257)



1. Apparatus for igniting and operating gaseous discharge means from a source of A.C. voltage which comprises an iron core transformer including an elongate flux conductive element, a primary winding and a secondary winding each coaxially mounted on a different portion of said element and coupled relative one another to provide leakage reactance in the secondary winding during operation of said apparatus, said primary winding adapted to be connected to said source, a capacitive load circuit including gaseous discharge means connected with said secondary winding to have the current of said secondary winding flowing therein of leading character, the said element being of substantially uniform cross sectional configuration along the length thereof, and means for providing substantially constant current flow in said load circuit comprising a reduction of area of said portion of said element upon which said secondary winding is mounted of dimensions to provide a localized saturated portion of non-linear permeability confined between the ends of said secondary winding.

3,003,082 ELECTRICAL PROTECTIVE RELAY SYSTEMS

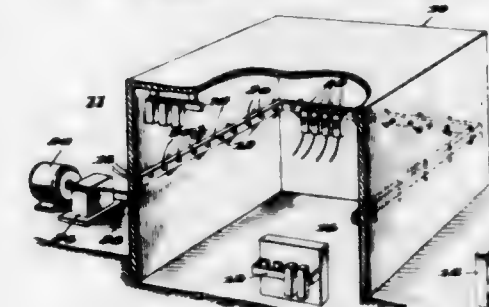
Albert Russell van Cortlandt Warrington, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Oct. 4, 1957, Ser. No. 688,244
9 Claims. (Cl. 317-32)



1. An electrical protective relay system comprising a protected circuit, a current transformer having a primary winding connected to be energized by said circuit, a voltage transformer having a primary winding connected to be energized by said circuit, and a relay comprising an electro-conductive armature, a magnetic core system adapted to apply a torque to said armature when windings on said core system are energized, an operating winding and a restraining winding and a polarizing winding mounted on said core system and operative to apply by electro-magnetic induction a torque to the armature proportional to the product of the energization of the polarizing winding and the differential energization of the operating winding and the restraining winding, means for producing a voltage proportional to the current in the operating winding, a pair of current terminals connected to the secondary winding of the current transformer and a pair of voltage terminals connected to the secondary winding of the voltage transformer, the operating winding being connected at least indirectly across said current terminals, the restraining winding being connected directly across said voltage terminals, and the polarizing winding being connected to said voltage terminals via the said voltage producing means so that (a) said operating winding is energized in proportion to a current supplied to the current terminals, (b) said restraining winding is energized in proportion to a voltage supplied to the voltage terminals only and (c) said polarizing winding is energized in proportion to a vectorial summation of the voltage supplied to the voltage terminals and the voltage produced by said voltage producing means.

3,003,083 ELECTRICAL DISTRIBUTION SYSTEM

Weldon C. Wilkinson, Baltimore, Md., assignor to Rowan Controller Company, Inc., Baltimore, Md., a corporation of Maryland
Filed July 1, 1957, Ser. No. 668,973
3 Claims. (Cl. 317-99)



1. An electrical distribution system comprising, an elongated bus duct, at least one bus located in said duct, said duct having a plurality of apertures spaced along

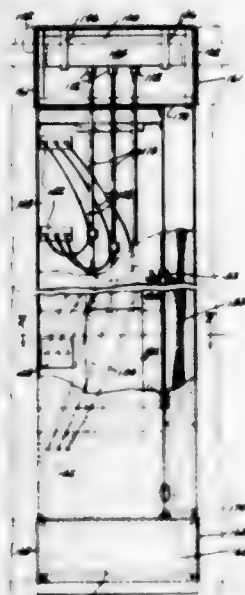
said duct, a terminal block of insulating material secured to said duct in each said aperture, at least one bus contact embedded in said block, said contact being connected to said bus and extending through said block, a load contact secured to said block on the side of said block remote from said duct, said load contact being located adjacent but spaced from said bus contact, an insulative cover for said block, an electrically conductive bridge mounted on said cover, means for securing said cover to said block to place said bridge in engagement with said contacts, a control unit housing, means accessible from within said housing for removably securing said housing to said duct in a position surrounding said block and cover, a control unit in said housing, at least one electrical connection from said control unit to said load contact, said control unit including a disconnecting switch, a door for said housing, and interlock means between said housing door and said switch to effect opening of said switch when said door is opened.

3,003,084

ELECTRICAL DISTRIBUTION SYSTEM

Weldon C. Wilkinson, Baltimore, Md., assignor to Rowan Controller Company, Baltimore, Md., a corporation of Maryland

Filed July 16, 1958, Ser. No. 749,580
5 Claims. (Cl. 317-99)

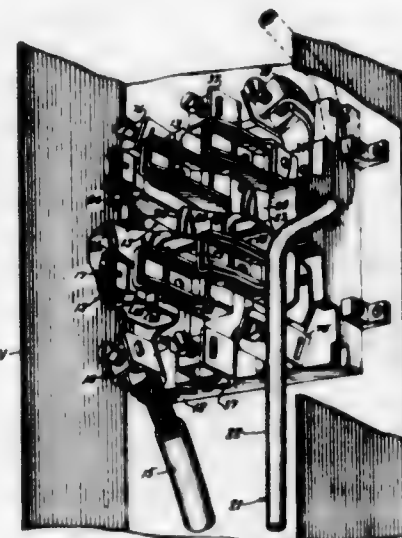


1. An electrical distribution system comprising a horizontally extending bus duct having an opening only in the bottom thereof, at least one primary bus located in said duct, a vertically extending bus duct having closed vertical walls and an opening at the top thereof, said vertical duct being joined to said horizontal duct with said openings aligned, at least one secondary bus dropping from said primary bus and disposed in said vertical duct, a plurality of closed control unit housings secured in vertical alignment to a wall of said vertical duct, control units in said housings, an electrical connector unit mounted in the adjoining walls of each said housing and said vertical duct to provide electrical communication between said secondary bus and said control units, a vertical cable duct having closed vertical walls and openings at the top and bottom thereof, one of the walls of said cable duct adjoining a wall of each said housing, the adjoining walls of said cable duct and housings having small aligned openings for the passage of cable between each said housing and cable duct, means for sealing said openings around said cable, and horizontal cable ducts at the top and bottom of said cable duct and having openings communicating with said cable duct, said horizontal ducts including walls forming barriers to isolate said horizontal ducts from said bus ducts and from said control unit housings.

3,003,085
BY-PASS AND DISCONNECT FACILITIES FOR
SOCKET TYPE METERS

Thomas C. Rand, Lafayette, Ind., assignor to Duncan Electric Company, Inc., Lafayette, Ind., a corporation of Indiana

Filed Mar. 11, 1958, Ser. No. 720,693
11 Claims. (Cl. 317-107)



1. A connection block assembly for socket type meters including a plurality of pairs of clamps for receiving the blades of the meter, each clamp including cooperating jaws of which one is spring urged toward the other and provided with an opening lever, a bypass pressure spring connected to each opening lever, a hand crank, a conductive camming means for each pair of clamps insulated from the crank, movable by the crank to engage the pressure springs and the clamps of each pair, and thereafter upon continued movement to actuate said opening lever to open said clamp.

3,003,086

THERMAL RELAY

Charles E. Strobel, Pittsburgh, and Guy F. Conner, Jeannette, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware

Filed June 19, 1958, Ser. No. 743,060
8 Claims. (Cl. 317-132)



1. In an electric relay, the combination comprising a pair of relay contacts for controlling a load circuit, a first heat responsive bimetallic strip supported at one end for deflection thereabout and having one of said contacts dielectrically mounted on the movable portion thereof, a second heat responsive bimetallic strip supported at one end for deflection thereabout and having the other of said contacts dielectrically mounted on the movable portion thereof in opposed relation to said one of said contacts, said first and second bimetallic strips having a normally open position in which said relay contacts are normally spaced apart, said first bimetallic strip being responsive to an increase in the heat applied thereto to

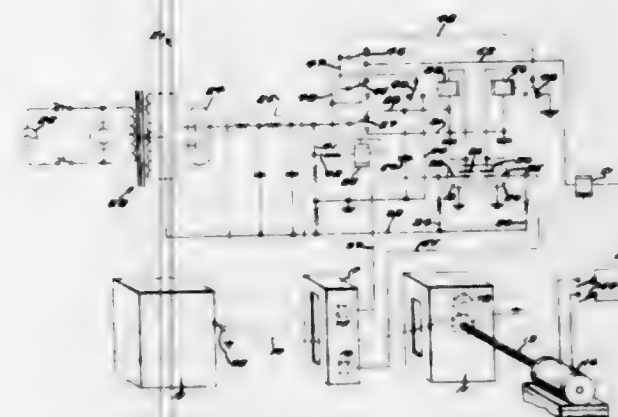
deflect toward said second bimetallic strip and responsive to a decrease in the heat applied thereto to deflect away from said second bimetallic strip, engagement of said first and second relay contacts deflecting said second bimetallic element an amount in proportion to the force of engagement, first circuit means for controlling the deflection of said first bimetallic strip toward said second bimetallic strip, said first circuit means including an electric heater, a first switch means operable between a first control position for connecting said heater to a source of electric energy and a second control position for disconnecting said electric heater to said source of electric energy, said electric heater being positioned in proximity with said first bimetallic strip for heating the same when said first switch means is in said first control position to cause movement of said first bimetallic strip toward said second bimetallic strip, and second circuit means for discontinuing the operation of said first circuit means to cause deflection of said first bimetallic strip toward said second bimetallic strip, said second circuit means including a short circuit connection electrically connected in parallel with said electric heater, a second switch means serially connected in said short circuit connection and operable between a circuit making position in which said short circuit connection discontinues the operation of said electric heater and a circuit breaking position in which said short circuit connection permits the operation of said electric heater, said second switch means including a first control contact mounted on the outer end of said first bimetallic strip for movement with said first bimetallic strip and a second control contact adjustably positioned in opposed relation to said first control contact for making and breaking contact therewith upon movement of said first bimetallic strip toward said second bimetallic strip, said second control contact being positioned so that the distance said first bimetallic strip must deflect from said normal position to close said control contacts is greater than the distance that said first bimetallic strip must deflect from said normal position to close said relay contacts, whereby the engagement pressure of said relay contacts is substantially constant so that deenergization of the first circuit means results in rapid disengagement of said relay contacts.

3,003,087

WIRE FEED CONTROL SYSTEM

Robert A. Kraay, Lincroft, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 24, 1957, Ser. No. 685,847
2 Claims. (Cl. 317-149)



2. In a control system, the combination which comprises a relay system having a non-electronic locking circuit, first and second relay means for operating said relay system, first and second electron tubes connected respectively to said first and second relay means causing, upon the conduction of either tube operation of the

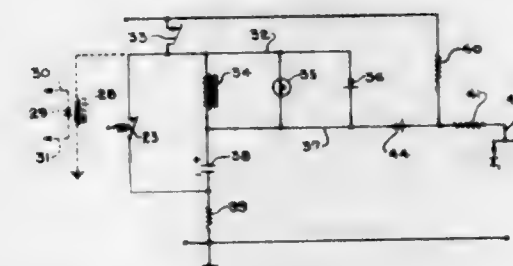
corresponding relay means, means controlled by said relay system for applying potential to an electrode of said first tube to condition the first relay means for operation and for preventing the application of a conditioning potential to an electrode of the second tube to prevent said second relay means from operating when said relay system is de-energized, means for applying a conditioning potential to an electrode of said second tube to condition the second relay means for operation and for preventing the application of a conditioning potential to an electrode of the first tube to prevent the first relay means from operating when said relay system is energized, means for operating said first tube to energize and lock the relay system thereby preventing the first relay means from further operation, and means for operating the second tube to de-energize and unlock the relay system thereby preventing the second relay means from further operation.

3,003,088

DETECTION CIRCUIT

Valentine Hechler IV, Evanston, Ill., assignor to Webcor, Inc., Chicago, Ill., a corporation of Illinois

Filed July 19, 1957, Ser. No. 672,997
1 Claim. (Cl. 317-151)



In a circuit for detecting a change of predetermined character in a situation external thereof including a normally closed switch sensitive to such changes and being operative to open when a change is sensed thereby, said circuit having a serially connected relay coil and capacitor in parallel with said switch, a rectifier connected in parallel with said coil and with the input side thereof connected commonly with the switch and coil, a charging resistor for said capacitor and connected thereto, the point of connection between said switch, coil and rectifier being adapted to be connected to the positive side of a direct current power supply which has the negative side thereof grounded, and circuit output means connected to the point of serial connection of said relay coil and capacitor, a pulse-forming network arranged within said circuit output means comprising a rectifier having the input thereof connected to the output means of said circuit, serially connected resistance and capacitance elements having the free end of the resistance element connected to the output side of said second mentioned rectifier, said free end being further coupled to the one side of the direct current power source, and having the free end of said capacitance element grounded.

3,003,089

NON-AQUEOUS ELECTROLYTE

Walter J. Bernard and Robert P. Auty, Williamstown, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Filed June 27, 1958, Ser. No. 745,221
5 Claims. (Cl. 317-230)

1. A non-aqueous electrolyte comprising a mixture of phenol and an amine selected from the group consisting of alkanol and alkyl amines having a formula



wherein a is an integer from 2 to 6, b is an integer from 0 to 1 and c is an integer from 1 to 3, said mixture dis-

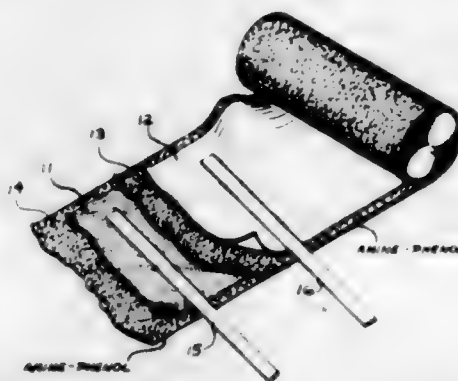
solved in a useable concentration in a solvent selected from the group consisting of alkanols having the formula



wherein n is an integer from 1 to 6; polyhydroxy alcohols having the formula



wherein n is an integer from 3 to 4 and m is an integer



from 2 to 3; ethylene glycol; and alkyl phosphates having the formula



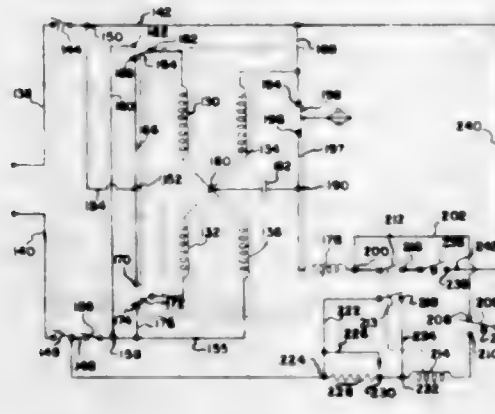
wherein n is an integer from 1 to 4, said amine comprising from 5 mol percent to 25 mol percent of said mixture and said solvent being present in said electrolyte in a percentage of from about 30% to about 60% by weight of the phenol amine solute.

3,003,090

POWER DRIVE APPARATUS

George A. Neyhouse and Jack W. Savage, Dayton, Ohio, and Ralph K. Shewmon, Centerville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,372
6 Claims. (Cl. 318—11)



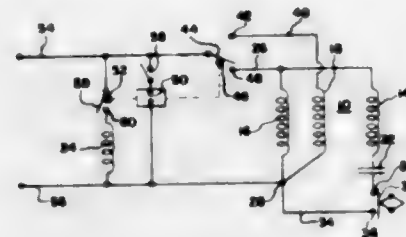
1. In combination, a driven load exhibiting a sharp decrease in torque requirement at a critical speed, an electric motor operable at a first speed of rotation and a second higher speed of rotation, transmission means connected between said motor and said load for driving said load at a first speed and at a second speed that is higher than said first speed, means for causing said motor to operate at its first low speed output while maintaining said transmission means in its first low speed mode of operation, means for causing said load to be driven in excess of its critical speed including means for causing said motor to accelerate to said second higher speed while maintaining said transmission means in said first low speed mode of operation, and means for causing said transmission means to shift to said second higher speed mode of operation after said motor has attained and is operating at said second higher speed.

3,003,091

POWER DRIVE APPARATUS

Ralph K. Shewmon, Centerville, and Jack W. Savage and George A. Neyhouse, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,373
5 Claims. (Cl. 318—11)



1. In combination, a load, an electric motor, variable output speed transmission means shiftable to provide first and second output speeds connected between said electric motor and said load for driving said load, means for causing said load to be driven at a first speed including means for operating said electric motor at a first speed while said transmission means is set for a first output speed, means for causing said load to be driven at a higher speed including means for increasing the speed of said electric motor while said transmission means is maintained in its first output speed setting, and means for causing said load to be driven at still a higher speed including means for shifting said transmission to provide a higher output speed only after said motor has accelerated the load with the transmission maintained in its low output speed setting to a point where the motor is operating at its increased speed.

3,003,092

ELECTRIC MOTOR CONTROL SYSTEM

Don A. Campbell, Gardena, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Nov. 30, 1959, Ser. No. 856,219
1 Claim. (Cl. 318—41)



An electric motor control system, comprising: a pair of synchronous motors; input circuits connected with both of said motors for simultaneously energizing said motors with alternating current voltage; phase synchronizing switch means including a pair of rotary switches, each having contacts closed in a single switch position, respectively connected to said motors and operated by said motors; a first electric switch having a coil and having contact means connected in series in one of said input circuits; a gas tube having a plate, grid and cathode; a second electric switch having a coil and having normally closed contact means; a direct current source; a circuit connecting said normally closed contact means of said second electric switch, said gas tube and said coil of said first electric switch in series across said direct

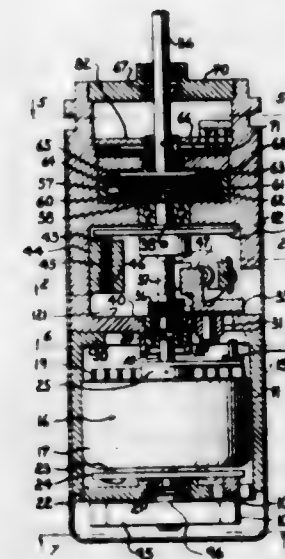
current source; a capacitor connected across said gas tube and said coil of said first electric switch; a bias voltage circuit connected to said grid of said gas tube and applying bias voltage thereto causing said tube to conduct when the voltage on said capacitor is sufficiently high; said tube firing and cutting off with charging and discharging of said capacitor, correspondingly energizing and deenergizing said first electric switch and opening and closing said contact means therefor to open and close said one input circuit; a second tube connected in series with said coil of said second electric switch across said direct current source and having a grid circuit including a grid circuit capacitor connected in series therein; a second source of direct current; a unidirectional current conducting device; and a circuit connecting said contacts of said rotary switches, said unidirectional current conducting device and said grid circuit capacitor in series across said second source of direct current to charge said grid circuit capacitor and cause said second tube to conduct when said contacts of both of said rotary switches are closed, whereby said second electric switch is energized, deenergizing said gas tube and said first electric switch, closing said one input circuit.

3,003,093

STEPPER MOTOR WITH HOMING DEVICE

Joseph P. Walters, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed May 19, 1958, Ser. No. 736,252
14 Claims. (Cl. 318—134)

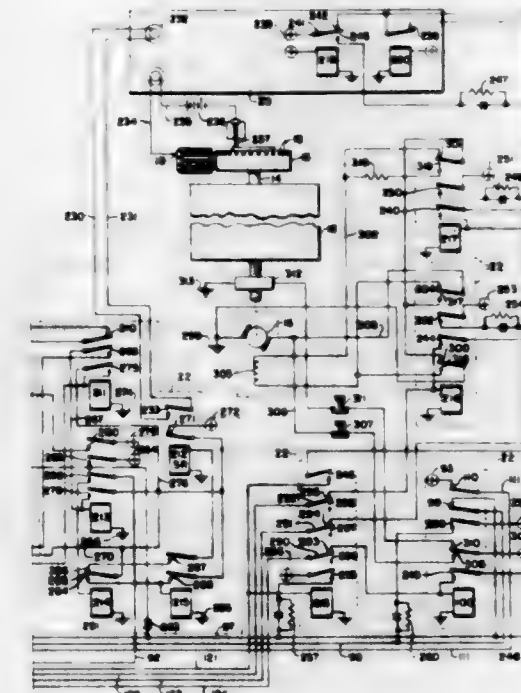


14. In a stepping motor comprising a rotatable driven element and an electrically controlled oscillatable drive unit for incrementally advancing said driven element to and from a home position, said drive unit being movable through one oscillation upon application of an electrical impulse thereto whereby to advance said driven element one increment; an electric homing circuit for said motor including interrupting contacts, a source of direct current, means controlled by said driven element for causing said drive unit to advance said driven element in the direction of shortest travel toward said home position, spring means for holding said contacts closed, detent means for holding said contacts open, and means including a lost motion connection between said drive unit and said contacts; said last mentioned means being effective adjacent one extreme of said oscillation of said drive unit to open said contacts and effective adjacent the opposite extreme of the said oscillation of said drive unit to close said contacts.

3,003,094

TAPE CONTROL SYSTEM

George L. Gough, Jr., Glenview, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 18, 1957, Ser. No. 684,718
1 Claim. (Cl. 318—162)



In a machine tool having movable elements and drive means for imparting movement to the movable elements, a control apparatus comprising means for measuring the amount of movement of said elements, a tape reader operable step by step for reading a permutation code perforated in a program tape at each step and having transfer contacts, one individual to each unit of the code, which contacts are permutatively set to either a marking or a spacing position under control of the tape at each step, a marking contact and a spacing contact individually associated with each of said transfer contacts for engagement by said transfer contacts upon movement of said transfer contacts to their marking or spacing positions, a reader controlled matrix having input leads connected to said marking and spacing contacts for translating the code as read by the reader, in terms of the position of said transfer contacts, into a single line command at each step of the reader, said reader controlled matrix having a plurality of output leads individually rendered effective to transmit said single line commands, a registering mechanism connected to certain of said output leads for receiving and registering selected ones of said commands, a counter controlled by said registering mechanism for registering information, controlling circuits for controlling the operation of said drive means and connected to others of said output leads for control by others of the single line commands, means controlled by the movable elements of the machine and electrically connected to the counter to read out from the counter the information registered therein, and means connecting the counter to the controlling circuits to control the time of operation of said movable elements of the machine.

3,003,095

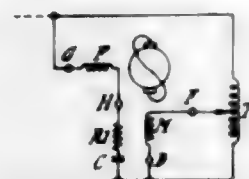
ELECTRICAL MACHINES

Geoffrey Walter Barnes, Johannesburg, Transvaal, Union of South Africa, assignor to Easom Electrical (Proprietary) Limited, Johannesburg, Transvaal, Union of South Africa

Filed May 12, 1958, Ser. No. 734,499
Claims priority, application Great Britain May 14, 1957
6 Claims. (Cl. 318—194)

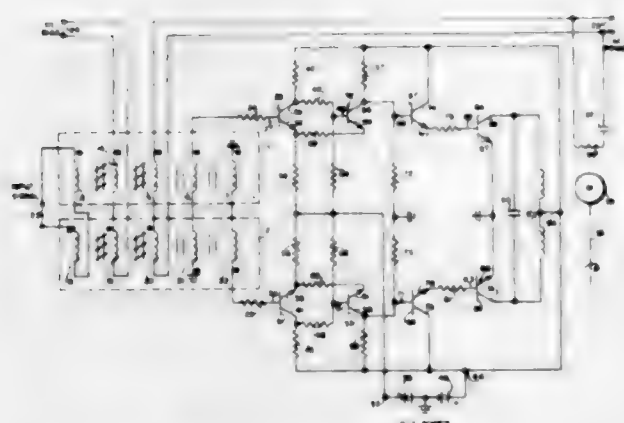
1. An alternating current commutator motor comprising a stator, a motive winding and a field winding located

upon said stator, at least one pair of commutator brushes short-circuited and connected only to each other, an impedance comprising a fixed resistor and a condenser connected in series with each other and with the field winding to constitute a series combination, which impedance



suitably relates and stabilizes in operation the phase of the current in the field winding to the potential across the motive winding, and a variable-ratio transformer having primary winding means connected in parallel with said series combination of field winding and impedance and secondary winding means connected across said motive winding.

3,003,096
PULSE WIDTH MOTOR CONTROL CIRCUIT
Norman L. Du Bois, Thornwood, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Feb. 6, 1959, Ser. No. 791,623
6 Claims. (Cl. 318-207)

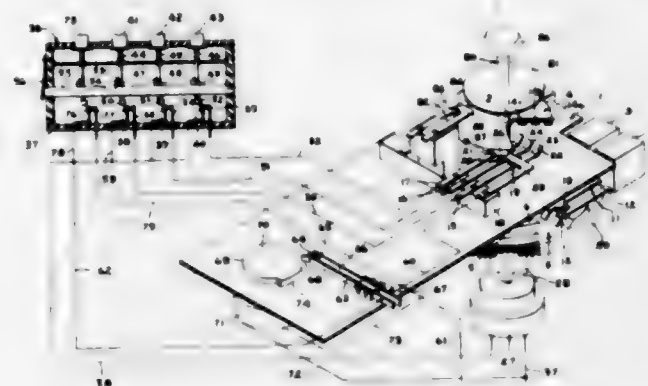


1. A pulse-width motor control comprising, a modulator having a pair of channels, means applying an input control signal having a controlling potential amplitude to said modulator, a transistor amplifier having a pair of channels, voltage limiting means in each of said amplifier channels producing pulse signals having widths representative of the amplitudes of signals applied thereto, means applying the modulated products of said pair of modulator channels respectively to said pair of amplifier channels, a polyphase motor, and means for applying the outputs of said pair of amplifier channels to one phase winding of said polyphase motor for push-pull energization thereof.

3,003,097
SEQUENCE CONTROL SYSTEM FOR TIMING MOTOR
Gresham N. Jennings, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 17, 1958, Ser. No. 749,095
10 Claims. (Cl. 318-443)

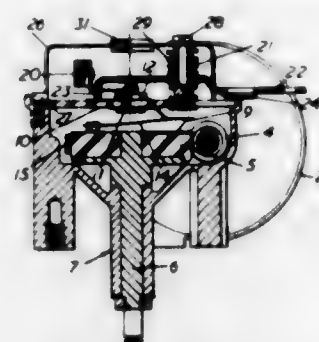
1. A control device comprising electrically actuated means, control means driven by said electrically actuated means for controlling the sequence of steps of an operation, said control means in a first position commencing said operation and in a second position terminating said operation, energization of said electrically actuated means causing movement of said control means towards said second position, a first energizing circuit for said electrically actuated means, switch means in said first energizing circuit, said control means including cam means having

a portion arranged to open said switch means at a predetermined position in said operation, a second energizing circuit for said electrically actuated means, and means intermittently completing said second circuit a predetermined



mined percentage of the time said switch means is open, whereby said electrically actuated means is intermittently energized through said second circuit until said cam means portion has been driven past its switch means opening position.

3,003,098
WINDSCREEN WIPER ACTUATOR MECHANISMS
William E. Simpson, Mill Hill, London, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 15, 1956, Ser. No. 622,306
Claims priority, application Great Britain Nov. 24, 1955
11 Claims. (Cl. 318-466)

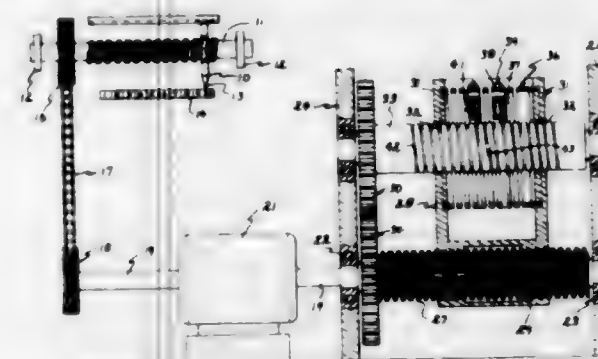


1. A windscreen wiper actuator mechanism comprising an electric motor having a drive shaft journaled for rotation in a housing for said motor, a driven wiper actuator shaft journaled for rotation in said housing, gears interconnecting said drive and driven shafts, a first switch connected in circuit with said motor to control the operation thereof when said motor is connected with an electrical supply, and a second switch interposed in said circuit and comprising a movable contact carried by one of said gears, and a fixed contact engageable with said movable contact, but electrically disconnected therefrom in a predetermined position of rotation of said wiper actuator shaft.

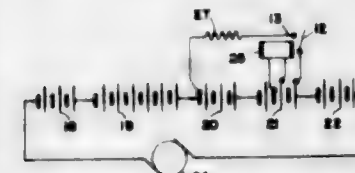
3,003,099
POSITIONING APPARATUS
Allan C. McColl, Chattanooga, Tenn., assignor to The Wheland Company, a corporation of Tennessee
Filed Sept. 12, 1960, Ser. No. 55,533
12 Claims. (Cl. 318-467)

1. In positioning apparatus, a shaft, means to rotate the shaft, a switch holder mounted for movement axially of the shaft, a plurality of switches supported by the holder and having elements disposed to contact the shaft, means to shift the holder axially of the shaft in direct relationship to the rotation of the shaft, means on the shaft effective upon arrival thereof of the element on one

of said switches in contact with the shaft to actuate the said one switch, and means responsive to the actuation

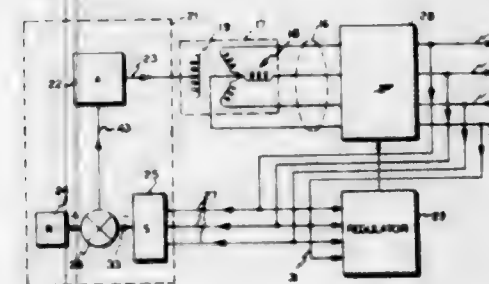


3,003,100
BATTERY EQUAL CHARGE CONTROL
Herman J. Eawema, Room 1568, 1440 Broadway, New York 18, N.Y.
Filed May 1, 1958, Ser. No. 733,788
6 Claims. (Cl. 320-17)



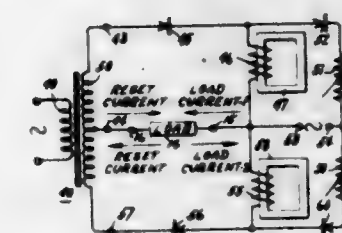
1. The charging circuit including, cells which are to be charged and which are connected together in series relationship, a charging source to which the two ends of said series of cells are connected, a power consuming device connected by a switch to part of said series of cells, and switch closing means responsive to a gassing condition within said part of said series of cells.

3,003,101
REGULATED ALTERNATOR
Fred Benjamin, La Mirada, and Arthur D. Schoenfeld, Covina, Calif., assignors to American Electronics, Inc., Los Angeles, Calif., a corporation of California
Filed May 2, 1958, Ser. No. 732,608
5 Claims. (Cl. 322-97)



5. Regulated multi-phase electric system comprising: a multi-phase alternator having a field winding, a multi-phase output bus connected to the output of said alternator, means for applying field current to said field winding, means responsive to energy flow in at least one phase of said output bus for regulating the field current applied to said field in accordance with said energy flow, adjustable reactor means connected across each phase of said output bus, and regulating means connected to at least one phase of said output bus for regulating the magnitude of said reactor means in accordance with energy flow in said last mentioned phase.

3,003,102
SINGLE WINDING SATURABLE CORE IMPEDANCE DEVICES
James B. McFerran, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 5, 1956, Ser. No. 595,961
11 Claims. (Cl. 323-89)



11. A saturable core impedance device comprising a core of saturable magnetic material having a winding thereon; a load circuit including a first unidirectional conducting device, said winding, a pair of output load terminals, and a first pair of input terminals; and a reset circuit including a second unidirectional conducting device, a reset impedance and a second pair of input terminals connected to said load circuit in parallel with said winding and said output terminals and in series with said first unidirectional conducting device and said first input terminals; said unidirectional conducting devices being polarized alternately to deliver current to said winding in opposite directions from alternating voltages supplied to said input terminals.

3,003,103
DEVICE FOR CONTINUOUSLY MEASURING THE CONCENTRATION OF SOLIDS, SUSPENDED IN A FLUID, SAID SOLIDS HAVING ELECTRIC PROPERTIES WHICH DIFFER FROM THOSE OF THE FLUID
Jacobus Laurens Smals and Johannes Jacobus Kamp, Amsterdam, Netherlands; said Smals assignor to N. V. Algemeen Technisch Ontwerpbureau Alto, Slidrecht, Netherlands, a Dutch limited liability company
Filed Oct. 10, 1956, Ser. No. 615,142
Claims priority, application Netherlands Oct. 14, 1955
3 Claims. (Cl. 324-30)

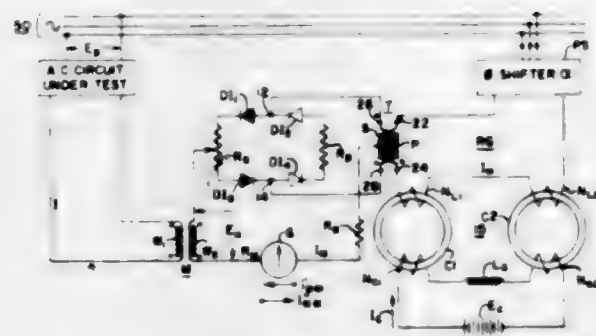


1. A circuit for measuring the concentration of insoluble insulating particles in a liquid, comprising a measuring cell having electrodes exposed to the particle bearing liquid, a reference cell having electrodes exposed to a reference liquid, said cells being connected in series across a source of voltage, said measuring cell with no particles having an impedance equal to twice the impedance of said reference cell, and means for measuring the voltage difference between the voltage across said measuring cell and a voltage equal to two thirds of the voltage of said source of voltage.

3,003,104
DYNAMIC ELECTRICAL CHARACTERISTIC TRACER
William A. Geyger, 8510 Flower Ave., Takoma Park, Md.
Filed Sept. 30, 1957, Ser. No. 687,312
44 Claims. (Cl. 324-34)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. Apparatus for determining the deviation in initiation of occurrences of a cyclically recurring first electrical function from the initiation of occurrences of a

cyclically recurring second electrical function produced by an energized electrical sample under test, the initiation of occurrences of said first function being controllably variable while the initiation of occurrences of said second function remain substantially constant, said apparatus comprising, in combination, terminal means for receiving said second function, generating means for producing said cyclically recurring first function, means operatively associated with said generating means for controlling the instant of initiation of each occurrence of said first function, and circuitry conductively combining

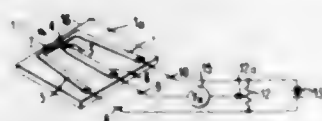


said first and second functions to produce a third electrical function representative of the instantaneous deviations between the initiations of occurrences of said first and second functions, wherein said second function includes an alternating current component representative of the magnetic-field intensity of a magnetic material serving as the sample under test and magnetizingly energized therewith; wherein said first function comprises alternating square-wave currents of which the instants of initiation are variable under control of said controlling means; and wherein said third function includes unidirectional currents of a magnitude which is a measure of the coercive force of the magnetic material under test.

3,003,105

THREE LEAD HALL PROBES

Bobdan Kostyshyn, Apalachin, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 29, 1959, Ser. No. 823,704
5 Claims. (Cl. 324-45)



1. A Hall probe comprising: a thin flat substrate of glass, or the like, having a flat surface and at least one straight edge; a thin layer of semiconductor in the form of a T adhering to a portion of said surface, the horizontal portion of the T lying parallel to said straight edge; a pair of current leads secured to said thin layer at opposite points lying on a horizontal axis passing through the horizontal portion of the T; and a Hall voltage lead secured to said thin layer at a point lying at the base of the vertical portion of the T.

3,003,106

MEASUREMENT OF B.S. AND W. IN OIL

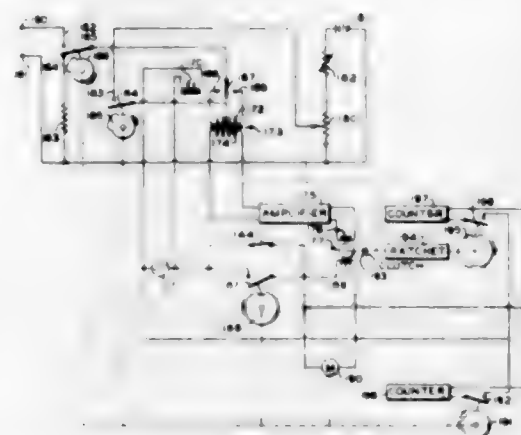
Daniel M. Vesper and Richard W. Michael, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 17, 1958, Ser. No. 721,726

9 Claims. (Cl. 324-61)

9. Apparatus for use in obtaining the average value of a plurality of electrical signals comprising a first electrically operated counter, a second electrically operated

counter, a timing motor, a second motor, means controlled by said timing motor to energize said second motor at predetermined intervals in response to said electrical signals, a source of electrical energy, first switching means to connect said source of electrical energy to said first counter, means responsive to said second motor to close



said first switching means a number of times representative of the magnitude of said signals, second switching means to connect said source of electrical energy to said second counter, and means responsive to said timing means to close said second switching means each time said second motor is energized.

3,003,107

APPARATUS FOR MEASURING THE FREQUENCY OF A CYCLIC PHENOMENON

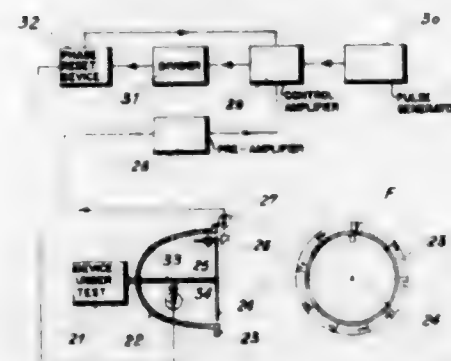
Roger Charbonnier, Montrouge, France, assignor to

Rocher Electronique, a corporation of France

Filed June 4, 1958, Ser. No. 739,777

Claims priority, application France June 8, 1957

5 Claims. (Cl. 324-70)



1. An apparatus for measuring the frequency of revolution of a rotative shaft, comprising: at least one opaque rotative disc adapted to be connected to said shaft and provided with an individual transparent slit and with N further regularly spaced transparent slits, N being an integer; a stationary graduated ring coaxial with said disc and having a zero angular division; means for producing an electric pulse at each passage of said individual slit past said zero angular division; means for delaying said electric pulse by a predetermined time interval; at least one opaque stationary disc provided with N+1 regularly spaced transparent slits adapted to register at least in part with said N further slits of said rotative disc and means controlled by said delaying means, for illuminating said slits during the duration of said delayed electric pulse.

3,003,108

REBALANCE BRIDGE

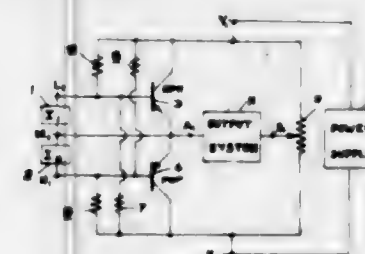
Alfred A. Tabele, 2502 Brighton Drive, Louisville 5, Ky.

Filed Sept. 16, 1957, Ser. No. 684,376

6 Claims. (Cl. 324-140)

1. A self balancing bridge circuit including first and second direct current source inputs having a common ter-

terminal therebetween, said first source providing a standard value of direct current and said second source providing a variable value of direct current in response to a predetermined condition; first and second bridge arms, said first bridge arm comprising a first transistor of a predetermined polarity having the emitter terminal thereof connected to the base terminal thereof through said common terminal and said first source, and said second bridge arm comprising a second transistor of an opposite polarity from said first transistor having the emitter terminal thereof connected to the base terminal thereof through said common terminal and said second source, said transistors each having a collector terminal, said first and second bridge arms extending from said common terminal to the respective collector terminals through said emitter terminals whereby an impedance is provided in each bridge arm by the respective transistor therein having a magnitude proportional to the value of the respective direct current source inputs; third and fourth bridge arms



comprising a single fixed resistor connected between said collector terminals of said first and second transistors and having a variable tap intermediate the ends thereof providing a variable common connection between said third and fourth bridge arms, whereby an impedance is provided in each of said third and fourth bridge arms having relative magnitudes dependent upon the position of said variable tap; a power source connected across said collector terminals whereby said first and second bridge arms and said third and fourth bridge arms, respectively, form first and second voltage dividers having said common terminal and said variable tap, respectively, as the intermediate terminals thereof whereby a voltage difference appears between said terminals as a function of the difference in the impedance ratio of said first and second voltage dividers; and unbalance detecting means connected between said common terminal and said variable tap responsive to said voltage difference to automatically reposition said variable tap to a position wherein the impedance ratios of said first and second voltage dividers are equal, including means for providing an indication of the value of said ratio.

3,003,109

BEAM TUBE HAVING SELECTIVE SWITCHING MEANS

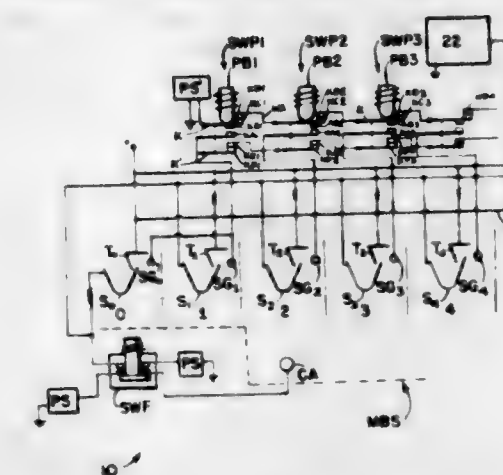
Jerome H. Lemelson, 72 Prescott Ave., Staten Island, N.Y.

Filed June 14, 1955, Ser. No. 515,417

7 Claims. (Cl. 328-64)

1. A selective pulse emitting device capable of emitting when actuated, a selected number of discreet electrical signals or pulses therefrom over a common output, said device comprising in combination a magnetron beam switching tube, having a cathode, multiple targets spaced substantially equidistant from said cathode, said multiple targets electrically connected to said common output a first beam forming target therein, means forming an electron beam from the cathode of said beam switching tube to said first target, means causing said beam to automatically switch one at a time to multiple target outputs in the direction of switching of said tube said multiple target outputs being connected to said common output over which a pulse is transmitted each time said

beam switches, and multiple selection means effecting the rotary switching of said beam to any one of said target



outputs emitting a pulse each time it steps from target to target in its travel to said selected target.

3,003,110

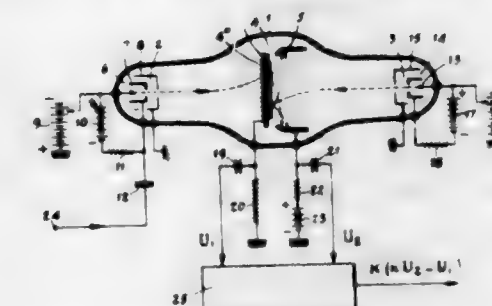
IMAGE TRANSFORMING APPARATUS WITH CROSS MODULATION SUPPRESSION MEANS

Jacques Toulemonde, Paris, France, assignor to Compagnie Generale de Telegraphie sans Fil, Paris, France

Filed Sept. 18, 1957, Ser. No. 664,782

Claims priority, application France Oct. 23, 1956

10 Claims. (Cl. 328-124)



1. An apparatus for eliminating cross-modulation in an image transformer provided with an electronic storage tube of the induced conductivity type including a target, a collector, writing electron gun means for producing on said target an image of electrical charges, reading electron gun means for scanning said target thereby to produce on said collector output signals whose magnitudes are proportional to said charges, comprising means for simultaneously taking off signals from both said target and said collector including an inscription signal from said target and a parasitic signal of the same polarity from said collector, and means for mixing said signals in such a polarity relationship that said inscription and parasitic signals having the same polarities on the collector and on the target are algebraically subtracted, said mixing means including means for changing the ratio of amplitudes of said inscription and parasitic signals so that in mixing they substantially cancel out while others of said mixed signals of opposite polarities are added together to provide a useful output signal with a minimum of cross-modulation.

3,003,111

PULSE GENERATOR HAVING MEANS FOR INDEPENDENTLY CONTROLLING, DURING SUCCESSIVE OUTPUT PERIODS, AMPLITUDE OR SLOPE AND DURATION

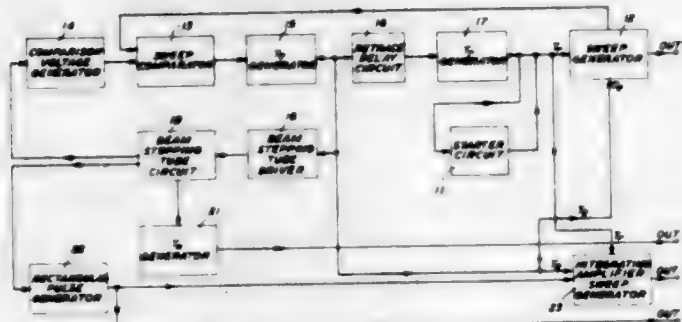
George W. Smith, Jr., Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 29, 1958, Ser. No. 738,894

11 Claims. (Cl. 328-185)

1. In combination, a sawtooth sweep generator operative in response to an input triggering pulse to initiate a

sweep, means including a beam stepping tube for generating a comparison voltage, voltage comparison means coupled to the output of said generator and the first-mentioned means and serving to generate a signal when the sweep output of said generator reaches a predetermined relative magnitude with respect to said comparison voltage, means for applying said signal to said generator



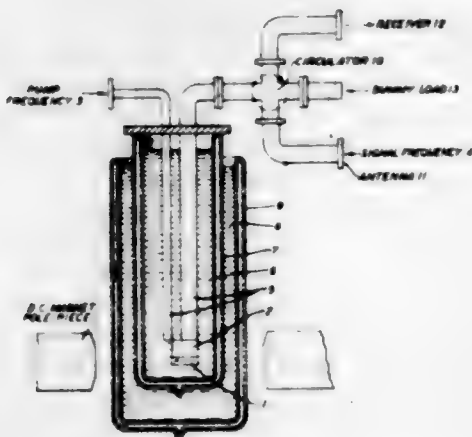
to terminate said sweep, a beam stepping tube driver operative in response to said signal to cause the beam of said beam stepping tube to advance to the next selected position, means for reinitiating a sweep output from said generator a predetermined time after the generation of said signal, and means coupled to said beam stepping tube for independently controlling the comparison voltage output of the first-mentioned means for each position of the beam of said beam stepping tube.

3,003,112

PROCESS FOR GROWING AND APPARATUS FOR UTILIZING PARAMAGNETIC CRYSTALS

Le Grand G. Van Uiter, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 25, 1959, Ser. No. 815,542
10 Claims. (Cl. 330-4)



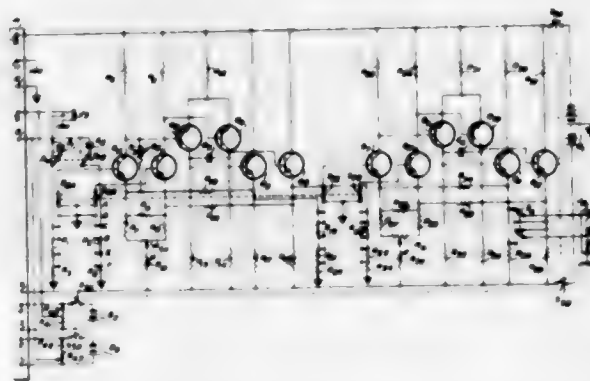
1. A process for growing single crystals of a divalent metal ion tungstate from initial ingredients equivalent to about 10 mol percent to about 75 mol percent MWO_4 where M is at least one divalent metal ion selected from the group consisting of magnesium, zinc, cadmium, calcium, strontium and barium, a flux comprising about 90 mol percent to 25 mol percent alkali metal ditungstate and at least one paramagnetic ion-containing substance containing from about 0.01 atom percent to 1.0 atom percent of at least one paramagnetic ion based on the total divalent metal ions present selected from the group consisting of paramagnetic ions having atomic numbers 22 through 29 and 58 through 70, comprising heating said initial ingredients to a temperature sufficient to form a molten solution, cooling said molten solution at a rate of from about 0.1° C. per hour to 25° C. per hour until said molten solution solidifies forming divalent metal

ion tungstate crystals and an alkali metal ditungstate, and removing said alkali metal ditungstate from said crystals.

3,003,113

LOW LEVEL DIFFERENTIAL AMPLIFIER

Edward F. MacNichol, Jr., Belfast Road, Sparks, Md.
Filed July 28, 1958, Ser. No. 751,560
4 Claims. (Cl. 330-69)



1. A differential electronic amplifier device for amplifying a direct or alternating current input signal having a common mode input signal component and a differential mode input signal component, comprising a differential electronic amplifier having two substantially identical sections of three transistors each, each section of transistors having an ungrounded input terminal and a common grounded input terminal, said transistors having elements including emitters, the transistors of each section being directly cascaded connected together for amplifying said direct or alternating current input signal fed between said ungrounded input terminals to said sections of transistors, said differential mode input signal component being applied between said ungrounded input terminals and said common mode input signal component being applied between said ungrounded and grounded input terminals, means for biasing said elements of each section of transistors, the second transistor of each section of three transistors being of complementary conductivity with respect to the first and third transistors of its respective section of transistors to permit the coupling together of the three transistors in its respective section, said third transistor of each section of transistors being arranged in a common collector configuration to provide a more favorable load for said second transistor of each section of transistors, the output signal from one section of transistors being an amplified differential mode input signal component to said differential amplifier and the output signal from the other section of transistors being of equal magnitude and opposite polarity from said amplified differential mode input signal component, each of said output signals from said sections of transistors being faithful reproductions of the differential mode input signal components to said sections of transistors, with the common mode input signal components to said sections of transistors being rejected by said differential amplifier, means including a resistive element for each section of transistors to provide an inverse feedback of a portion of the output signal from the emitter of said third transistor of each section of transistors to the emitter of the first transistor of each section of transistors so as to provide a stable value of gain substantially independently of small changes in the transistors employed in said sections of transistors and of changes in supply voltages as well as increase the band width of said differential electronic amplifier, and means coupled to the input of said amplifier to give a high impedance input thereto and a better signal-to-noise ratio.

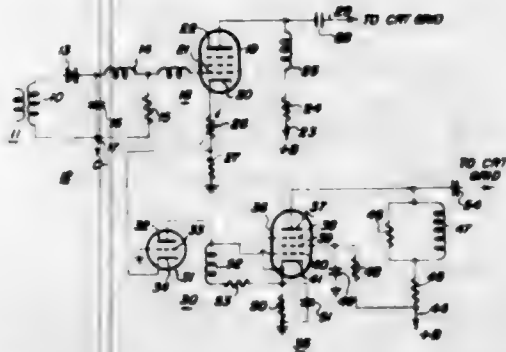
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3,003,114

VIDEO AMPLIFIER

Frank L. Wedig, Cincinnati, Ohio, and Donald S. Oliver, Scottsdale, Ariz., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,557
9 Claims. (Cl. 330-70)

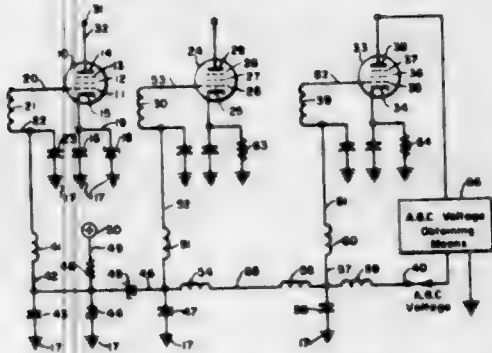


7. A video amplifier comprising a video signal source having low impedance, a first amplifying element having first, second and third electrodes, a point of common potential, lead means for connecting said source between said point and said first electrode, said second electrode being directly connected to said point, a high frequency amplifier stage including a second amplifying element having fourth, fifth and sixth electrodes, said first and fourth electrodes being capable of emitting charged carriers, a passive biasing network connected between said fourth electrode and said point, said third and fifth electrodes being directly connected together, terminal means for connecting said sixth electrode with a supply of direct current, a high frequency peaking network connected between said third and fourth electrodes, a path for direct current between said fourth electrode and said signal source including said peaking network, said lead means, and the internal impedance of said first amplifying element between said first and third electrodes.

3,003,115

AUTOMATIC GAIN CONTROL DELAY SYSTEM

Keefer S. Stull, Jr., Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 3, 1958, Ser. No. 771,381
6 Claims. (Cl. 330-133)



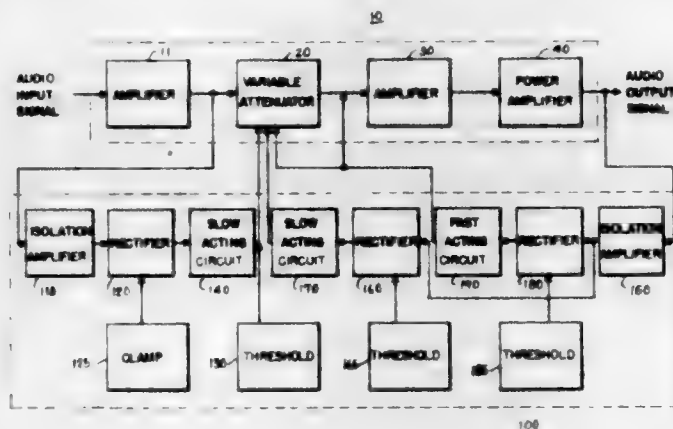
1. In automatic gain control voltage delay apparatus, in combination, input circuit means adapted to have an input signal applied thereto, said input circuit means including first tube means and first biasing means for normally biasing said first tube means at a predetermined voltage in the absence of an input signal, other circuit means including other tube means, said other circuit means being operatively connected to said input circuit means whereby said other tube means has applied thereto the signal output of said first tube means, said other circuit means including other biasing means for said other tube means, voltage obtaining means operatively connected to said other circuit means for obtaining an automatic gain control voltage of uniform polarity while

an input signal is applied to said input circuit means, further circuit means for applying said automatic gain control voltage to said other tube means to increase the bias thereof and decrease the gain thereof, and additional circuit means including a Zener diode connecting said further circuit means to said input circuit means whereby said automatic gain control voltage is applied to said first tube means to increase the bias thereon and decrease the gain thereof only while the amplitude of the automatic gain control voltage exceeds the Zener voltage rating of said Zener diode, no automatic gain control voltage being applied to the first tube means while the voltage output from the voltage obtaining means has an amplitude less than the Zener voltage rating of the Zener diode.

3,003,116

AUTOMATIC GAIN CONTROL AMPLIFIER

Ronald J. Rockwell, Cincinnati, Ohio, assignor to Crosley Broadcasting Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 9, 1960, Ser. No. 13,841
4 Claims. (Cl. 330-141)



1. In a signal translating circuit, the combination of: a variable bridge-type attenuator having an input circuit and an output circuit and a control circuit;

means coupled to said input circuit for supplying input signals to said attenuator;

amplifying means coupled to the output circuit of the attenuator, said amplifying means having an input circuit and an output circuit and said attenuator and amplifying means being arranged in series in a signal channel;

means comprising a first isolation amplifier and a rectifier and a first long time-constant rectifier load arranged in forward cascade between said attenuator input circuit and said control circuit for developing a first control signal in response to input signals below a predetermined level and applying said control signal to the attenuator, thereby slowly to decrease the attenuation;

and means comprising a second isolation amplifier and a second rectifier and a second long time-constant rectifier load arranged in reverse cascade between the output circuit of said amplifying means and said control circuit for developing a second control signal in response to input signals above a predetermined level and applying them to the attenuator slowly to increase the attenuation.

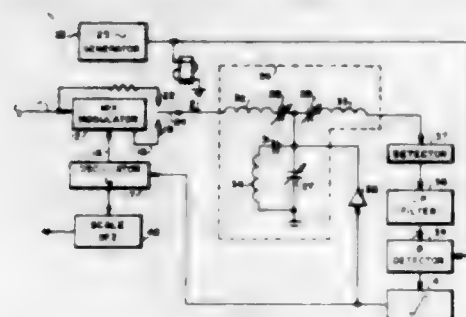
3,003,117

COINCIDENT FREQUENCY TRACKER

Gus Stavis, Briarcliff Manor, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Sept. 29, 1959, Ser. No. 843,237
9 Claims. (Cl. 331-14)

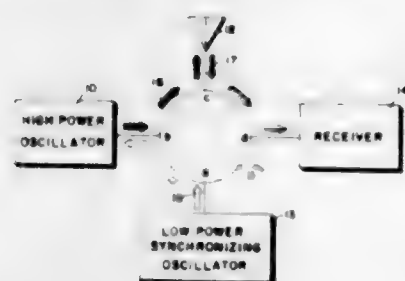
2. A coincident frequency tracker comprising, a mixer-modulator, means applying thereto an electrical signal having a frequency spectrum which is to be tracked, an oscillator connected to said mixer-modulator, an adjust-

able band-pass filter, means adjusting said adjustable band-pass filter to a transmission frequency substantially one-half of the frequency of said oscillator, means applying the output of said mixer-modulator and said electrical signal alternately to said adjustable band-pass filter, a detector and phase detector connected to said



adjustable band-pass filter to produce an error signal, means integrating said error signal to produce a control signal and means applying said control signal to control said oscillator frequency whereby the spectra transmitted by said adjustable band-pass filter in alternation are adjusted toward equal amplitude and said error signal is reduced in amplitude.

3,003,118
SYNCHRONIZED REGENERATIVE AMPLIFIER
Jack Kline, Concord, Mass., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,383
11 Claims. (Cl. 331-55)

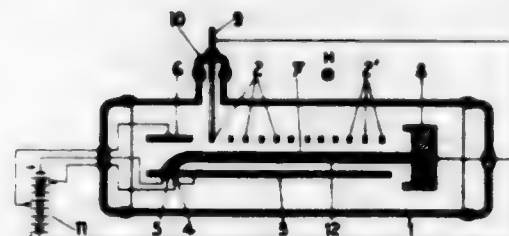


1. A synchronized, regenerative amplifier, comprising: an oscillator means for generating a relatively high-power, radio frequency signal; a loading means providing an output load for said oscillator means and so coupled to said oscillator means as to tend to maintain said oscillator means quiescent; a synchronizing generator means for providing a relatively low-power, synchronizing signal to enable said oscillator means to generate said high-power signal, frequency and phase locked to said synchronizing signal; and non-reciprocal, directional coupling means for coupling energy from said synchronizing means to said oscillator means and from said oscillator means to said loading means to translate substantially all of the energy from said synchronizing means only to said oscillator means and substantially all of the energy from said oscillator means only to said loading means, whereby, said oscillator means produces said high-power signal, frequency and phase locked to said synchronizing signal, at a substantially amplified power level to provide said synchronized, regenerative amplifier.

3,003,119
TRAVELING WAVE TUBE OSCILLATOR
Maurice Favre, Paris, France, assignor to Compagnie Generale de Telegraphie sans Fil, Paris, France
Filed Jan. 26, 1959, Ser. No. 788,857
Claims priority, application France Feb. 12, 1958
14 Claims. (Cl. 331-82)

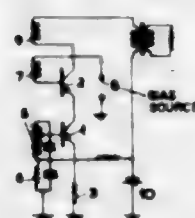
1. A microwave oscillator comprising an electron source and a collector electrode defining therebetween a path and interaction space for the electron flow, a wave

guiding structure positioned along said interaction space in which there is induced by the electron flow an electromagnetic wave which travels in the direction opposite to that of electron flow, means coupled to said wave guiding structure for abstracting the induced wave, and at-



tenuating means operatively connected with the portion of said wave guiding structure remote from said electron source including means rendering the portion of said interaction space adjacent thereto essentially free from any electric field.

3,003,120
TRANSISTOR OSCILLATOR
Johannes Anton Greefkes, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,366
Claims priority, application Netherlands Jan. 8, 1958
3 Claims. (Cl. 331-109)

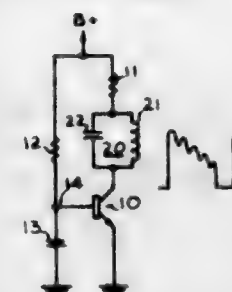


1. A transistor circuit arrangement with current distribution, comprising first and second transistors each having base, emitter and collector electrodes, the emitter-collector paths of both transistors being connected in series with a source of power supply, the collector of the first transistor being connected to the emitter of the second transistor, means coupled between the base of the first transistor and a point of reference potential for producing a substantially constant bias therefor, means coupled between the base of the second transistor and the point of reference potential for producing a bias therefor, the base bias for the second transistor substantially exceeding that for the first transistor, a load for the second transistor connected between the collector electrode and said source of power supply, the base bias of the second transistor and the source of supply having such polarities that the current flowing in the emitter of the second transistor flows substantially through the collector when the voltage at the collector exceeds in magnitude the voltage at the base, and said current flows substantially through the base when the voltage at the base exceeds in magnitude the voltage at the collector, means providing a positive feedback between the collector circuit of the second transistor and the base-emitter path of the first transistor, and means providing a negative feedback between the base circuit of the second transistor and the base-emitter path of the first transistor.

3,003,121
TRANSISTOR OSCILLATOR CONTROL CIRCUITS
Dale L. Hileman, United States Marine Corps, assignor to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 6, 1959, Ser. No. 851,370
5 Claims. (Cl. 331-111)

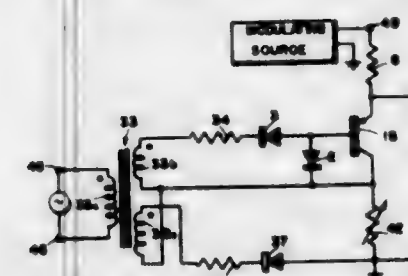
1. The combination comprising: a transistor having base, emitter, and collector electrodes; a capacitor con-

nected to the base electrode of said transistor; first circuit means connected to the base electrode for positively charging said capacitor in order to apply an increasing voltage thereto; second circuit means connected to the collector electrode of said transistor for applying a de-



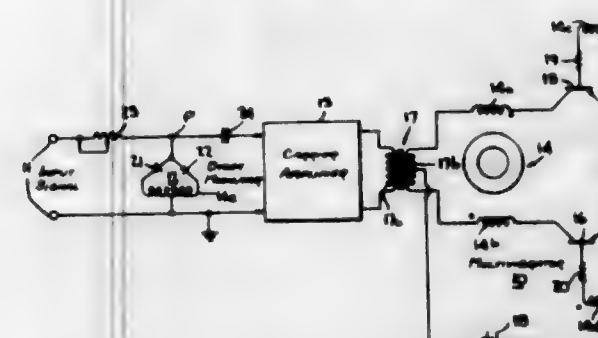
creasing voltage thereto; and a circuit loop including said transistor and capacitor, said capacitor discharging through said transistor to the emitter electrode thereof when the increasing voltage on the base electrode exceeds the decreasing voltage on the collector electrode.

3,003,122
LOW LEVEL TRANSISTOR SWITCHING CIRCUIT
Francis H. Gerhard, Lakewood, Calif., assignor to North American Aviation, Inc.
Filed Mar. 21, 1958, Ser. No. 723,035
14 Claims. (Cl. 332-9)



1. In a low level switching circuit, a transistor having emitter, collector, and base electrodes, an alternating-current switching voltage source, a low level signal source connected intermediate said emitter and collector electrodes, and means for making said transistor conductive in response to one predetermined half cycle of said switching voltage and cutting off all significant current flow in said transistor as compared with said low level signal source in response to the other half cycle of said switching voltage.

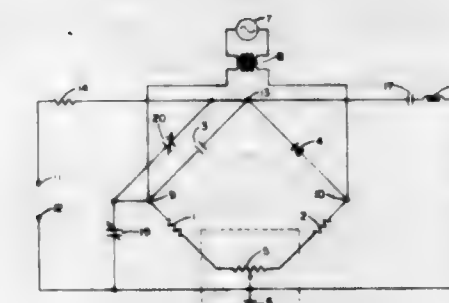
3,003,123
FREQUENCY MODULATED MULTIVIBRATORS
Raymond A. Runyan, Ridgefield, Conn., assignor to Data-Control Systems, Inc., Danbury, Conn., a corporation of Delaware
Filed Dec. 1, 1959, Ser. No. 856,549
10 Claims. (Cl. 332-22)



1. A frequency-modulation system comprising a multivibrator for generating square wave oscillations, a modu-

lator excited by said multivibrator, a carrier amplifier coupling said modulator to said multivibrator, means to derive a carrier wave from said multivibrator and to apply same to said modulator, and means to apply to said modulator an input signal to vary the amplitude and sense of said carrier wave whereby the frequency of said multivibrator is modulated accordingly.

3,003,124
BRIDGE MODULATOR
Warren R. Alexander, Pittsford, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,577
6 Claims. (Cl. 332-47)

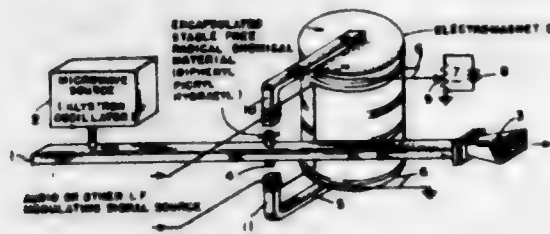


1. A converter of the modulator type for converting direct current signals to amplitude modulated alternating current signals comprising, a bridge circuit having respective impedance elements in each leg thereof arranged to provide an impedance balance with selected reference conditions and wherein solely one of said impedance elements is a variable impedance element of the type possessing impedance value characteristics which are a function of bias potential, means for connecting a source of direct current input signals across one diagonal of said bridge circuit in such a manner that the direct current input signals serve as a bias potential across said variable impedance element thereby producing varying degrees of impedance imbalance within said bridge circuit with changes in magnitude of the direct current input signals, a source of alternating current signals connected across the opposite diagonal of said bridge circuit whereby the impedance imbalance within said bridge circuit as produced by the direct current input signals results in the conduction therethrough of said alternating current signals, the magnitude of which is a function of the degree of impedance imbalance thereby effecting an amplitude modulation of said alternating current signals by the direct current input signals, and output circuit means connected to said bridge circuit from which the modulated alternating current signals may be taken.

3,003,125
MICROWAVE MODULATION SYSTEM
Hans A. Bomke, Sea Girt, George H. Minnerly, Spring Lake, and John W. Mount, Long Branch, N.J., assignors to the United States of America as represented by the Secretary of the Army
Original application Sept. 23, 1957, Ser. No. 685,760, now Patent No. 2,951,214, dated Aug. 30, 1960. Divided and this application Aug. 4, 1960, Ser. No. 54,556
1 Claim. (Cl. 332-51)

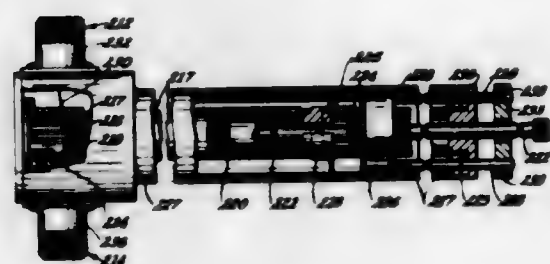
(Granted under Title 35, U.S. Code (1952), sec. 266)
A system for efficiently modulating a microwave carrier with varying amplitude, low frequency signals consisting of a wide band of audio frequency components, comprising: a non-resonant, hollow pipe waveguide over which said microwave carrier is propagated longitudinally; a modulating element including a small amount of the stable free radical paramagnetic chemical compound, di-

phenyl picryl hydrazyl, and a dielectric binding material encapsulated to form a unitary structure of a desired shape, the entire encapsulated structure being mounted so that it extends transversely across the interior of said waveguide in the path of the propagated microwave carrier, said stable compound having an atomic resonance spectrum including a strong, sharp resonance absorption line at a particular frequency; means to apply an initially constant, unidirectional magnetic field to said structure in a direction perpendicular to the propagation direction of the microwave carrier and of a strength such as to



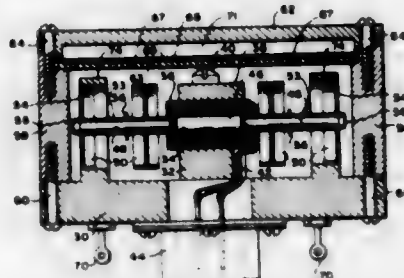
bring said compound to resonance at said particular frequency which is determined by the characteristics of that compound and the order of strength of the unidirectional magnetic field; and means to superimpose a sinusoidally alternating magnetic field varying in accordance with the amplitude of said low frequency signals on the unidirectional field to proportionately vary the latter field and thus to modulate the amplitude of said microwave carrier in accordance with the instantaneous amplitudes of said signals, due to the effects thereby produced on the spin velocity of the atomic nuclei in said diphenyl picryl hydrazyl free radical paramagnetic compound.

3,003,126
IMPEDANCE TRANSFORMER
Henry Jack, New York, N.Y.
(67-20A 193rd Lane, Fresh Meadows 65 N.Y.)
Filed Dec. 8, 1958, Ser. No. 778,729
9 Claims. (Cl. 333-33)



1. A variable impedance matching transformer comprising: first and second air-core coupled bifilar electrically conductive windings coaxially surrounding a central axis, a third electrically conductive winding axially displaced along said central axis and coaxial therewith, means connecting one end of said first and said second windings with one end of said third winding, first and second coaxial connectors having inner and outer conductive portions, each of said inner portions being connected to a respective one of the other end of each of said first and said second windings, a metal shield coaxially surrounding said first, second and third windings and connected to said outer conductor portions, first movable electrically conductive means for selectively interconnecting selected pairs of adjacent turns of said first and said second windings, means for moving said first movable means from a point external to said shield, and second movable electrically conductive means for connecting a selected portion of said third winding to said shield.

3,003,127
VELOCITY METER
Edward T. Habb, 8818 Glenville Road,
Silver Spring, Md.
Filed Feb. 28, 1958, Ser. No. 718,379
1 Claim. (Cl. 336-30)
(Granted under Title 35, U.S. Code (1952), sec. 266)

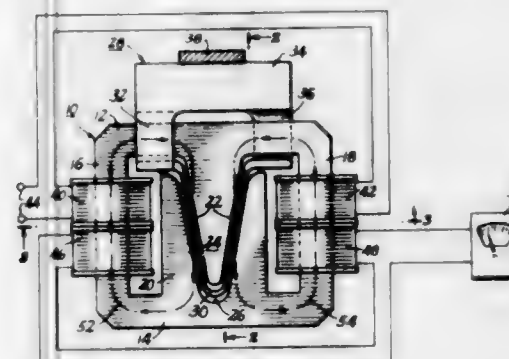


A viscosity controlled velocity meter comprising a base adapted to be fastened to a vibrating object; a linear voltage differential transformer comprising a primary winding and a pair of secondary windings connected in series opposition, said windings being wound coaxially around a central axis, and a cylindrical magnetic core slidably mounted within said windings along said central axis; a support mounted on said base having an opening whereby said differential transformer is mounted with its central axis parallel to said base; a pair of damping vane rods each attached by one end to the opposite ends of said magnetic core and having the other end extending away from said core along said central axis; a pair of leaf type restraining springs each attached by one end to the central section of one of said damping vane rods and by the other end to said base whereby a minimum spring force will be exerted on said rods; a plurality of damping vanes connected to said rods each comprising a circular sheet having a central hole for mounting said sheets on said rods transversely to the axis of said rods and a cylindrical tube having its inner circumference attached to the outer edge of said circular sheet with the central axis of said tube coincident with said rods; a pair of damping cylinders each mounted near the outer end of said rods to said base in sliding engagement with one of said damping vanes; a cover mounted on said base completely enclosing said transformer, rods, and vanes whereby an air-tight seal is provided; means for connecting said transformer to a power supply and recording means; a constant temperature device mounted on said base comprising a heating element and a thermostatically controlled switch adapted to be driven by a separate power source operable to keep the temperature of said meter relatively constant; and a high viscosity oil placed within said cover and in contact with said vanes and said heating element whereby a large damping factor between 5 and 50 may be obtained to render said meter linearly responsive to the velocity of vibration over a large range of frequencies of vibration.

3,003,128
POSITION MEASURING APPARATUS
Graydon Smith, Concord, Mass., assignor to Clevite Corporation, Cleveland, Ohio
Continuation of application Ser. No. 797,078, Mar. 4, 1959. This application Apr. 7, 1960, Ser. No. 20,786
6 Claims. (Cl. 336-75)

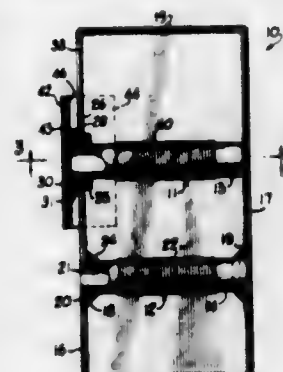
1. In a position-measuring device adapted to produce an electrical measurement signal for transmission to a remote electrical sensing or indicating means; apparatus comprising a core structure including magnetic material arranged to form two magnetic circuits having a common portion, primary winding means wound on said core structure to produce flux around said two magnetic circuits, said core structure being provided with air-gap

means in series with both of said magnetic circuits; the magnetic material of said core structure being shaped to define a configuration for said air-gap means wherein at least a part of said air-gap means extends in a direction that is non-perpendicular to the flux-axis of the magnetic material adjacent said air-gap means on at least one side thereof; electrically-conductive flux-barrier means mounted about said core structure and forming a closed conductive loop adapted to control the relative division



of said flux between said two magnetic circuits, said flux-barrier means including a control element positioned in said part of said air-gap means and extending essentially parallel to said direction thereof; support means mounting said flux-barrier means for movement effectively at right angles to said direction of said part of said air-gap means; and secondary winding means coupled to said core structure for producing a signal in accordance with the relative distribution of said flux between said two magnetic circuits.

3,003,129
R.F. TRANSFORMER DESIGN FOR MINIMUM COUPLING TO SHIELDING COVER
Henri T. Fichal, St. Petersburg, Fla., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 23, 1960, Ser. No. 30,917
12 Claims. (Cl. 336-87)



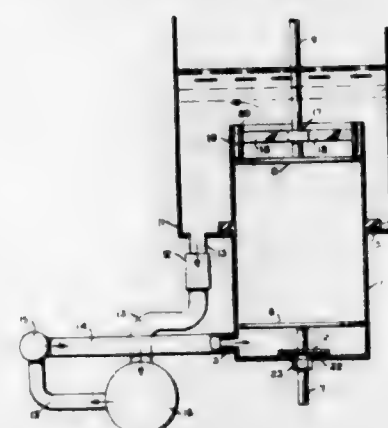
1. A coupling transformer comprising an elongated shielding can of substantially rectangular cross section, said shielding can having a width between two side walls considerably greater than the depth between the front and rear walls and having a height from top to bottom considerably greater than the width, a primary winding and a secondary winding extending parallel to each other within said can, each of said windings being wound upon a dielectric coil form of cylindrical shape supported within the can with the two coil forms having substantially the same diameter, each of said coil forms extending between said side walls and being substantially co-extensive with the width of the can, each winding being wound about its coil form for a distance less than the length of the form so that both ends of each winding are spaced from the side walls of the can, the depth of the shielding can being only slightly greater than the diam-

eter of the coil forms, and an elongated slot extending lengthwise along one of the side walls of said can to minimize the coupling between the windings and the can, thereby providing a high Q coupling transformer of very small size.

2. The apparatus defined by claim 1 wherein the elongated slot receives an end portion of one of said coil forms and wherein releasable means are provided for clamping said one coil form in position, said one coil form being movable within the elongated slot when the releasable means is released in order to permit adjustment of the coupling between the windings.

5. Apparatus according to claim 1 wherein a conducting clip is placed over said shielding can to cover at least a portion of said one side wall, said clip including arms respectively engaging the front and rear walls of the can and being electrically insulated from said one side wall.

3,003,130
LIQUID RHEOSTAT
Anderson F. Johnson, Jr., Salem, Va., assignor to General Electric Company, a corporation of New York
Filed July 27, 1960, Ser. No. 45,735
8 Claims. (Cl. 338-83)

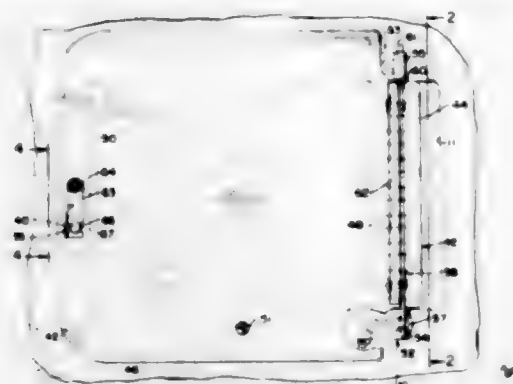


1. In a liquid rheostat a first container and a second container partially extending through an opening in the said first container and having an integral flange for supporting the second container at its juncture with the first container, electrolyte solution in both containers arranged in a manner so that the weight of said solution bears upon said juncture to effect a gravity seal, means for circulating externally said solution between said containers including a heat exchanger, and a pair of spaced electrodes in the second said container.

3,003,131
PRINTED CIRCUIT CONTACT AND MOUNTING ASSEMBLY
Marcus I. Nystuen, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware
Filed Jan. 13, 1960, Ser. No. 2,296
8 Claims. (Cl. 339-17)

1. A printed circuit board contacting and mounting assembly comprising a board of insulating material, a plurality of aligned circuit terminal areas along one edge thereof, a frame adapted to support said board, a plurality of aligned resilient contacts extending from said frame corresponding substantially in number and spacing to said areas, a supporting pivot post extending from said frame and spaced from said contacts to form a triangle therewith, said board being adapted near one edge to be pivotally supported solely on said post and resiliently supported solely on said contacts near the opposite edge thereof with said terminal areas in electrical engagement with said

contacts, latching means for detachably holding said board pivotally on said mounting post, and releasable clamping

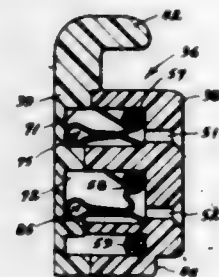


means over said contacts for pressing said board against and resiliently retaining it on said contacts.

3,003,132 MULTI-OUTLET DUPLEX RECEPTACLE SYSTEM FOR MASTER SWITCH CONTROL

Robert Johnson, Edgeworth, and Thomas E. Hoskins, Cornopolis, Pa., assignors, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed Jan. 6, 1959, Ser. No. 785,236
6 Claims. (Cl. 339-23)



1. A receptacle for a multi-outlet electrical system, said receptacle having separate and vertically spaced parallel passages therethrough and lengthwise thereof for different wires, a front face on the receptacle having two pairs of openings, each pair including an upper and a lower opening and the pairs being spaced from one another in the direction of the length of the receptacle, but having corresponding openings of each pair at the same vertical level, a first of the wire passages being of such a height that corresponding openings of both pairs communicate with said first passage, a second of said passages being of greater height behind one of the openings than the other and having an opening of only one pair communicating therewith, a third of said passages being of greater height behind one opening than the other and having an opening of only one pair communicating with it, and a different opening from that which communicates with the second passage, and contacts in all of the passages behind the openings with portions of each contact in position to connect with a wire extending through the passage but out of line with the openings, the contact in the greater-height portion of the second passage having its wire connecting portion above its associated opening and the contact in the greater-height portion in the third passage having its wire-connecting portion below its associated opening.

3,003,133 FEMALE CONNECTOR

William P. Herman, Providence, and Thomas Kenneth Hobson, Cumberland Hill, R.I., assignors, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 20, 1959, Ser. No. 787,964
5 Claims. (Cl. 339-59)

1. A female connector comprising an integral one-piece body of resilient material having an upper cord receiving

chamber and two spaced parallel slots extending downwardly from said chamber through said body, a contact blade seated in each slot against the inner wall thereof, an electrical cord connection to each contact blade extending from said cord receiving chamber, cooperating means between each blade and slot to lock said blade against axial movement in said slot, and cooperating means between each blade and slot to force each blade against the

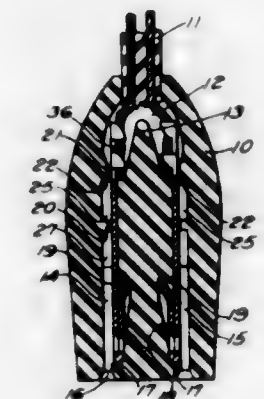


inner wall of its slot when a pulling strain is applied to the electrical cord connection, said last named means comprising an integral portion extending from the upper end of each blade beyond said electrical cord connection, said integral portion being bent at an outward angle and entering a recess in the outer wall of its slot, the cord-connection portion of each contact blade being offset laterally inwardly such that a pulling strain on said cord will tend to pivot the contact blade about said integral portion and against the inner wall of the body.

3,003,134 SERVICE BLOCK

William P. Herman, Providence, and Thomas Kenneth Hobson, Cumberland Hill, R.I., assignors, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 17, 1958, Ser. No. 749,238
1 Claim. (Cl. 339-61)

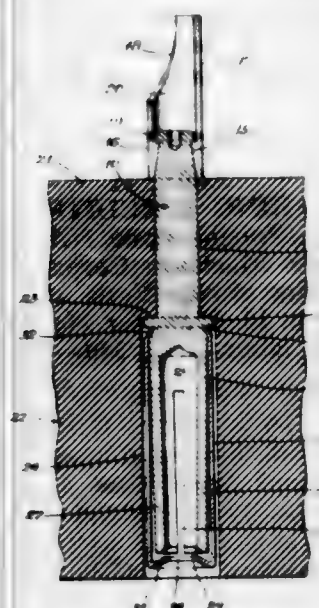


A service block comprising an elongated one piece body of resilient material having an upper cord receiving chamber and two spaced parallel vertical slots extending downwardly from said chamber through said body, said body portion having a pair of transverse slots intermediate the ends of said vertical slots and extending inwardly from opposite sides in vertically offset relation, said transverse slots communicating with said vertical slots, an elongated straight flat female contact blade in each vertical slot, and an electrical cord connection anchored to the top of each blade in said cord receiving chamber, said blades and body portion having cooperating means for anchoring said blades in said vertical slots, said body portion having a restricted slot portion in each vertical slot to retain each blade against the inner wall of each vertical slot.

3,003,135 ELECTRICAL CONTACTS

Richard M. Parinton, Lexington, Mass., assignor to Amphol-Borg Electronics Corporation, a corporation of Delaware

Filed Dec. 28, 1956, Ser. No. 631,212
2 Claims. (Cl. 339-262)



2. A female contact for electrical connectors comprising, in combination, an elongated body portion of generally tubular form including a central bore entering the body from one end and forming an open ended hollow sleeve; said sleeve being split into a plurality of separate individual spring jaws in opposed relationship with respect to each other; at least one of said jaws being inclined inwardly toward the central axis of the body; with a tubular hood surrounding and enclosing the end portion of said sleeve and closely spaced with respect to the outer surfaces of said jaws to permit outward flexing of the individual jaws yet limit said flexing and prevent permanent deformation of said jaws by flexing beyond their elastic limit; said hood having a forward end portion projecting beyond the end of said jaws and supporting an inwardly directed flange defining an aperture of fixed dimension beyond the ends of said jaws; said aperture being of size greater than the distance between the aforementioned jaws and less than the size of the aforesaid bore of the sleeve.

3,003,136 SUIT FOR DIVERS AND AN INTERCOMMUNICATION SYSTEM THEREFOR

Henry J. Burnett, 55 Glenbrook Road, West Hartford, Conn.

Filed Nov. 6, 1958, Ser. No. 772,343
12 Claims. (Cl. 340-5)



1. An electronic system for receiving and transmitting signals under water which includes electronic circuitry providing an amplifying circuit, a power output circuit connected to said amplifying circuit, a pair of electrodes, a transmitting microphone, a speaker, and a multi-pole switch adapted to selectively connect one of said elec-

trodes to said amplifying circuit and said speaker to said power output circuit for rendering said circuitry operable for the reception of signals through said speaker, or connect said microphone to said amplifying circuit and said electrode to said power output circuit to render said circuitry operable for the transmission of signals through said microphone.

3,003,137 BINARY SIGNAL STORAGE

Hrand L. Kurkjian, Hyde Park, N.Y., and Eric G. Wagner, United States Army, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 7, 1955, Ser. No. 545,431
6 Claims. (Cl. 340-172.5)

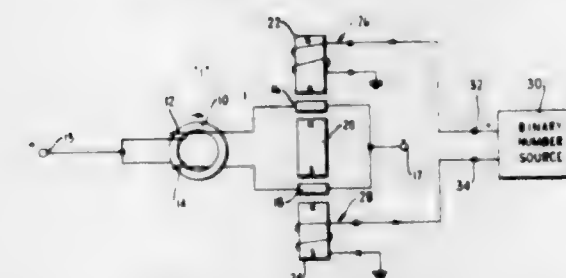


1. In a binary signal storage system comprising a plurality of binary signal storage registers, each register having a clear input and a complement input, the combination of selecting apparatus comprising: input means to apply signals to be stored to the complement input of each of said plurality of binary signal storage registers, clearing means to selectively apply a signal to the clear input of said plurality of binary signal storage registers and means to operate said input means, operate said clearing means, and re-operate said signal means in sequence.

3,003,138 MAGNETIC CORE MEMORY ELEMENT

Leo M. Piecha, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Jan. 4, 1960, Ser. No. 176
1 Claim. (Cl. 340-174)

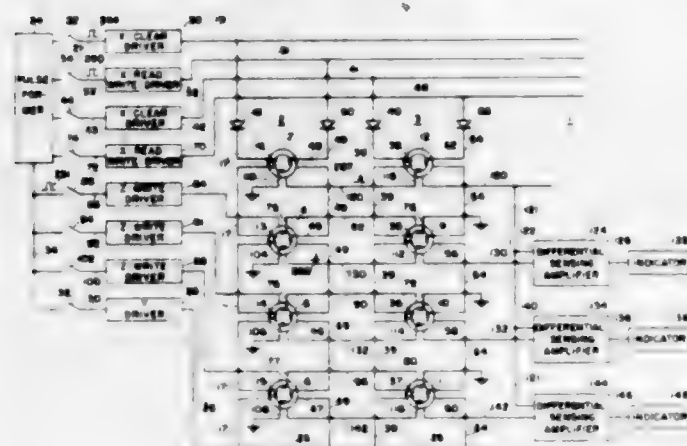


A magnetic element comprising a magnetic core adapted to be magnetized in either of two senses; a pair of input windings magnetically coupled to said core and adapted to receive electric current, each winding for magnetizing said core in an opposite sense in response to said current; a pair of crystals each connected in series with one of said windings and each responsive to a magnetic field applied therethrough for controlling the amount of current passing through said windings; mag-

netic field generating means responsive to control signals for providing a magnetic field in accordance therewith, said magnetic field generating means comprising a permanent magnet having each of its poles adjacent one face of each of said crystals and a pair of electro-magnets each having one pole adjacent the opposite face of said crystal; and control signal providing means for supplying said control signals to said magnetic field generating means.

3,003,139

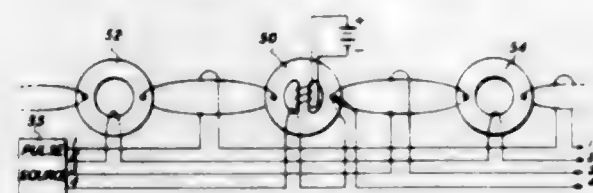
ELECTRICAL INFORMATION STORAGE SYSTEM
Kenneth C. Perkins, Lynnfield, Mass., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 29, 1955, Ser. No. 504,814
9 Claims. (Cl. 340-174)



1. In an electrical information storage system, a magnetic core, a substantially square hysteresis loop characteristic in said core, means inductively coupled to said core for creating in said core a maximum residual state of magnetism in one direction, means inductively coupled to said core for creating in said core a residual state of magnetism between zero and a maximum in said one direction, a second magnetic core having a square hysteresis loop characteristic and being in one of said last two mentioned residual states of magnetism, and electrical circuit means inductively coupled to said cores for comparing the residual state of magnetism in said first core to the residual state of magnetism in said second core.

3,003,140

MAGNETIC CORE NEGATION CIRCUIT
Hewitt D. Crane, Palo Alto, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 16, 1957, Ser. No. 703,003
9 Claims. (Cl. 340-174)



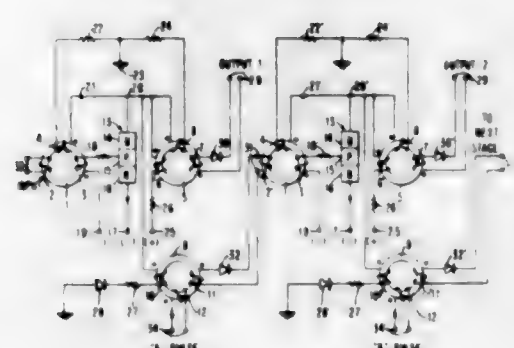
1. A negating magnetic core circuit comprising a core of magnetic material having a substantially rectangular hysteresis loop, the core having a substantially annular rim portion with a magnetic shunting portion extending between opposite regions of the annular rim portion, the core having first and second small apertures extending through the annular rim portion of the core and located respectively on opposite sides of the shunting portion, a holding winding wound on the shunting portion, means for producing a unidirectional current through the holding winding, a clearing winding wound on the annular

rim portion of the core and including turns linking the core through one of the small apertures, the aperture linked by the clearing winding being on the opposite side of the shunt from the part of the annular rim portion of the core on which the balance of the clearing winding is wound, means for pulsing the clearing winding with a unidirectional current, transfer windings linking the first and second apertures respectively, and means for separately pulsing the transfer windings with unidirectional current for transferring information into and out of the core.

3,003,141

RING CIRCUITS

Aurie S. Myers, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 18, 1959, Ser. No. 794,169
11 Claims. (Cl. 340-174)

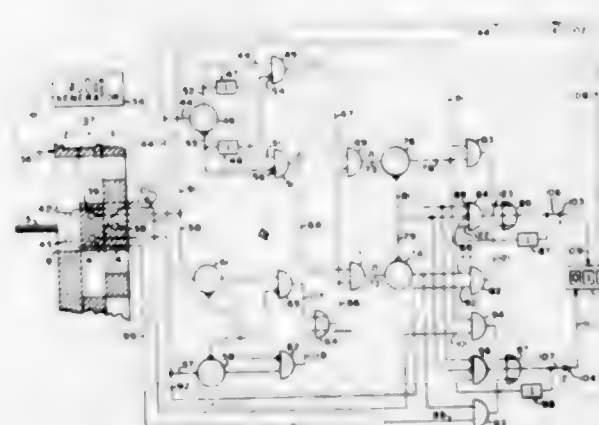


1. A pulse translating ring including a plurality of stages connected in cascade, each stage comprising, first, second and third magnetic cores, each having two stable states of substantial remanence, means including an amplifying device coupled to said cores and responsive to an input pulse applied to said first core to switch all three of said cores from a first of said stable states to a second state, a source of unidirectional potential coupled to said first and second cores to return said cores to said first stable state upon termination of the input pulse, means for applying a pulse to said third core to return said core to its first stable state, and output means for said second and third cores, the output of said third core being applied as the input to the first core of the succeeding stage.

3,003,142

ANALOG TO DIGITAL CONVERTER

Albert Wolinsky, New Rochelle, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed June 17, 1957, Ser. No. 666,153
10 Claims. (Cl. 340-347)



10. A device for sensing and indicating direction of motion comprising a device whose direction of motion

is to be sensed having incorporated thereon at least two zones each composed of consecutive sections, the sections of one of said zones being an even multiple in length in the direction of motion as respects the length of the sections of the other zone, a clock pulse generator, means for applying a train of clock pulses generated by said clock pulse generator to every alternate one of said consecutive sections in each of said zones, a first sensing element positioned to sense the clock pulses applied to the sections of said other zone, second and third sensing elements being positioned to sense different sections of said one zone when said first sensing element is adjacent a margin between consecutive sections of said other zone, a first inverter having the train of clock pulses sensed by said first sensing element impressed thereon and producing therefrom a first pulse train corresponding to said clock pulses and a second pulse train corresponding to the inversion of said clock pulses, a first "inhibit and" gate having a conduct input which produces a signal output and an inhibit signal input which prevents signal output thereof, said first train of pulses being impressed on said conduct input and said second train of pulses being impressed on said inhibit input through a delay line having a delay of one clock period, a second "inhibit and" gate having a conduct input which produces a signal output and an inhibit input which prevents signal output thereof, said first train of pulses being impressed on the conduct input of said second "inhibit and" gate through a delay line having a delay of one clock period and said second train of pulses being impressed on the inhibit input of said second "inhibit and" gate, a second inverter having the train of clock pulses sensed by said second sensing element impressed thereon and producing therefrom a third pulse train corresponding to said clock pulses and a fourth pulse train corresponding to the inversion of said clock pulses, a third inverter having the train of clock pulses sensed by said third sensing element impressed thereon and producing therefrom a fifth pulse train corresponding to said clock pulses and a sixth pulse train corresponding to the inversion of said clock pulses, a third "inhibit and" gate having a conduct input which produces a signal output and an inhibit input which prevents signal output thereof, said third "inhibit and" gate having said third pulse train impressed on its conduct input and said sixth signal train impressed on its inhibit input, a fourth "inhibit and" gate having a conduct input which produces a signal output and an inhibit input which prevents signal output thereof, said fourth "inhibit and" gate having said fifth signal train impressed on its conduct input and said fourth signal train impressed on its inhibit input, an "or" gate having the outputs of each of said third and fourth "inhibit and" gates impressed on the inputs thereof, a first "and" gate having the output of said first "inhibit and" gate and the output of said "or" gate impressed thereon, and a second "and" gate having the output of said second "inhibit and" gate and the output of said "or" gate impressed thereon.

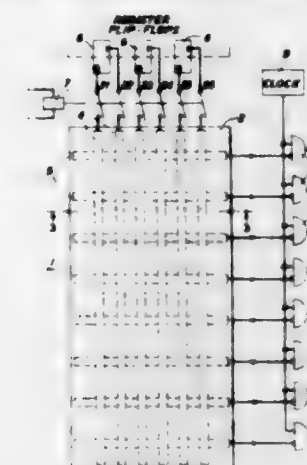
3,003,143

SELECTING CIRCUIT

Henry R. Beaurrier, Parsippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 28, 1959, Ser. No. 816,505
8 Claims. (Cl. 340-347)

7. A translator circuit for selecting a particular one of a plurality of output leads in accordance with a multiple digit binary address comprising a matrix of row and column conductors, means for applying input signals representing a plurality of binary digits and their complements simultaneously to corresponding column electrodes in said matrix, output means connected between each of said row conductors and corresponding output leads, and means for inhibiting selected ones of said output

means comprising capacitive means connected between selected row and column conductors of said matrix for

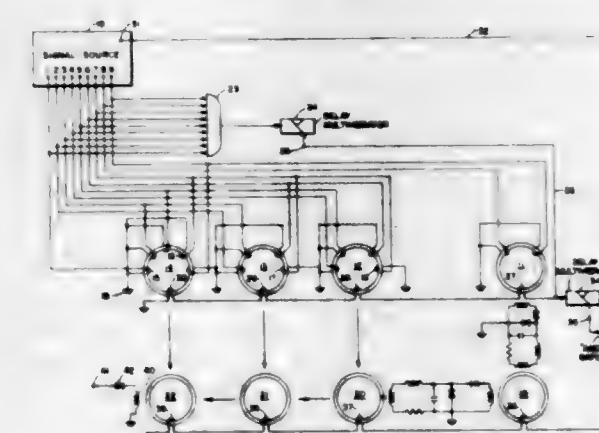


coupling said applied binary digit signals on certain of said column electrodes to the corresponding row electrodes.

3,003,144

CONVERTER DEVICE

William V. Tyrlick, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 4, 1959, Ser. No. 818,138
3 Claims. (Cl. 340-347)



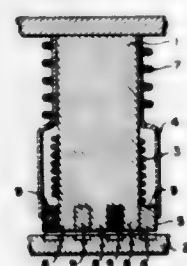
1. A converter device comprising a signal source having a predetermined number of separate output terminals for intermittently applying a potential marking to any single one of said output terminals, first and second groups of corresponding bistable elements, each of said bistable elements having first and second stable conditions, means for coupling each of said output terminals to a unique combination of bistable elements of said first group for switching those bistable elements to which any particular output terminal is coupled from said first to said second stable condition thereof in response to the presence of said potential marking on said particular output terminal, first delay means coupled to said output terminals for producing a first control pulse in response to the removal of said potential marking from any of said output terminals, a first transfer means intercoupling each bistable element of said first group with its corresponding bistable element of said second group, means for applying said first control pulse to each of said bistable elements of said first group to switch those bistable elements of said first group which have been switched to their second stable condition back to their first stable condition and through said first transfer means switch each bistable element of said second group which corresponds to a switched-back bistable element of said first group from its first to its second stable condition, second transfer means intercoupling adjacent bistable ele-

ments of said second group, a source of shift pulses, second delay means coupled to said first delay means for producing a second control pulse in response to the lagging edge of said first control pulse being applied thereto, output means coupled to a terminal one of said bistable elements of said second group for deriving a pulse in response to said terminal one of said bistable elements being switched back from its second to its first stable condition, means coupled to said second delay means and said source of shift pulses for applying shift pulses to each of said bistable elements of said second group only during the presence of said second control pulse to cause each bistable element of said second group which has been switched from its first to second stable condition to switch back to its first stable condition, said second transfer means being responsive to a bistable element of said second group being switched back to its first stable condition for immediately thereafter switching that adjacent bistable element of said second group which is closer to said terminal one of said bistable elements from its first to its second stable condition, whereby serial time position pulses corresponding to said unique combination are derived in said output means.

3,003,145

INDUCTIVE DIGITAL ENCODERS

Gunter Wolff, Westport, Conn., assignor to Machine Tool Automation, Inc., Southport, Conn.
Filed Sept. 3, 1959, Ser. No. 837,850
3 Claims. (Cl. 340-347)

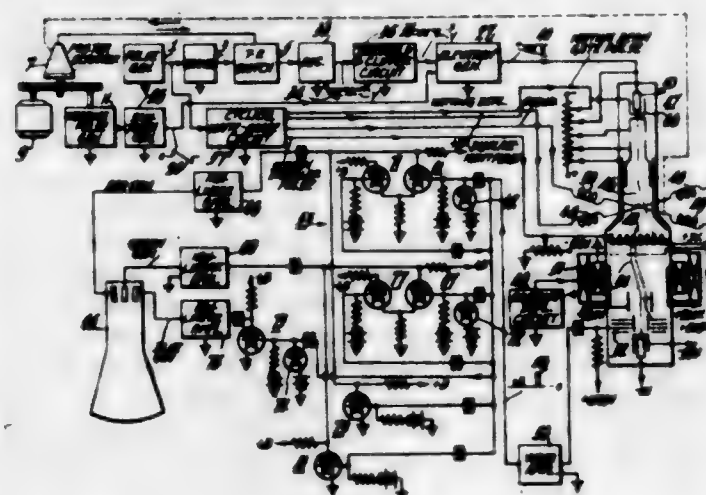


1. In an inductive digital encoder, signal sensing means comprising inductively related exciting and pick-off coils whose inductive relation is varied by a movable magnetic member; and a magnetic shield extending from inside said exciting coil to outside said pick-off coil.

3,003,146

METHODS AND MEANS FOR PROVIDING A THREE-DIMENSIONAL SIGNAL DISPLAY

Frank D. Covey, 3rd, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 29, 1952, Ser. No. 284,919
12 Claims. (Cl. 343-7.9)



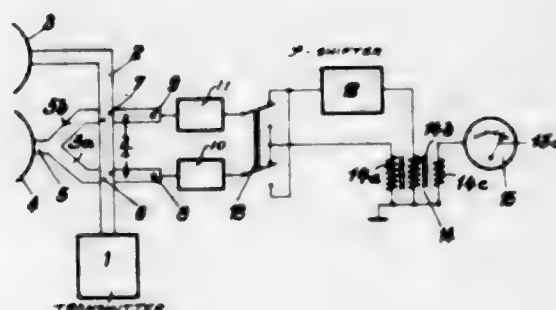
1. The method of recording three-dimensional radar information including bearing, range, and elevation angle

or altitude data from a plurality of radar targets on a two-dimensional medium comprising the steps of deflecting an electron beam across said medium along a path determined by said target bearing data, during said deflection deriving a wave signal train including radar target range data, limiting the amplitude of said wave train to a predetermined constant value, controlling the amplitude of said amplitude limited wave train as a function of the elevation angle or altitude of said targets, modulating said electron beam with said amplitude controlled wave signal train to write said three-dimensional information on said medium as an electrical charge pattern, deriving from said variable intensity charge pattern a further wave train having amplitude variations corresponding to variations in intensity of said electrical charge pattern, separating components of said further wave train according to their respective amplitude levels, and applying said separated wave train components to a color display device whereby the elevation angle or altitude of said targets are displayed in characteristic colors.

3,003,147

SPEED MEASURING SYSTEM

Heinz Lueg, Wolf Schallehn, and Hans-Hermann Toedter, Ulm (Danube), Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed Dec. 13, 1957, Ser. No. 702,728
Claims priority, application Germany Dec. 22, 1956
20 Claims. (Cl. 343-8)

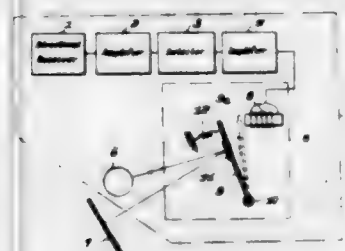


1. A Doppler velocity measuring system for selectively discriminating between signals representing approaching and receding reflection targets, comprising a transmitter radiating a continuously transmitted frequency; a receiver providing a received frequency including the transmitted frequency reflected from a target and modified by the Doppler effect; phase-shifting means fed by said transmitter and supplying two quadrature components of said transmitted frequency; mixing means separately mixing said quadrature components with a portion of the received frequency and delivering the mixed frequencies in two separate channels; filter means selecting in each channel only the Doppler frequency product; a 90° phase shifter; means for selectively placing said 90° phase shifter in either one of said two channels for imposing a further 90° phase shift on the Doppler frequency product of the respective channel; superimposing means for superimposing upon each other the 90° phase-shifted Doppler frequency product of the particular channel incorporating said 90° phase shifter and the Doppler frequency product of the channel which does not incorporate said 90° phase shifter; and indicating means for measuring and indicating the output of said superimposing means depending upon its frequency, whereby said indicating means will respond either to signals reflected from approaching targets only or to signals reflected from receding targets only, depending on which of said two channel incorporates said 90° phase shifter.

3,003,148

DIRECTION INDICATING DEVICE

Isokazu Tanaka, Toshiro Kawamoto, and Shigeru Izawa, Tokyo-to, Japan, assignors to Kabushiki-Kaisha Kodan Selsakusha, Tokyo-to, Japan
Filed Aug. 5, 1958, Ser. No. 753,334
Claims priority, application Japan Oct. 14, 1957
1 Claim. (Cl. 343-113)



A radio direction-indicating device comprising a directional radio receiver rotatable about a first axis and having means for providing an output voltage dependent on the strength of the incident radio energy, a light source and a reflector therefor mounted to rotate with said receiver about a second axis, means mounting the reflector for tilting movement about a third axis, a stationary screen mounted in fixed position relative to the light source and reflector for intercepting a reflected light beam, and linearly movable means rotatable with the mirror and responsive to the output voltage for tilting the mirror about the third axis an amount proportional to the output voltage, the linearly moving means comprising a piezo-electric device energized by the output voltage and mechanically linked to the mirror for tilting it an amount proportional to the output voltage.

3,003,149

REPLACEMENT ANTENNA

Joseph Grashow, Brooklyn, N.Y., assignor to Quickmount Manufacturing Co. Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 3, 1958, Ser. No. 726,257
2 Claims. (Cl. 343-715)



1. An improved replacement antenna comprising a plurality of tubular antenna shafts telescoped together and adapted to extend end-to-end upward, a slender metal mounting sleeve which has a central lower opening and which is permanently fastened to the lower end of the outer one of said shafts, the inner wall of said sleeve adjacent its lower end being threaded and above its lower end being tapered in diameter outward and downward, and a one-piece metal clutch nut threaded into the lower end of said sleeve, said nut having a cylindrical bore of a given internal diameter, the upper end of said nut being longitudinally slotted and tapered inwardly and upwardly and engaged by said tapered inner wall of said sleeve, the bottom end of said nut being substantially flat, the lower end of said sleeve and said nut having outer faces engageable by wrenches, said nut being fittable onto the stump of a broken antenna of said given diameter and engageable flush with the base thereof, whereby said replacement antenna can be easily though tightly fitted thereupon.

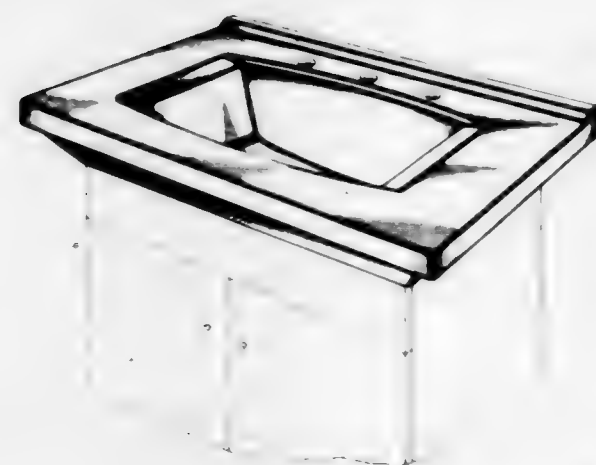
DESIGNS

OCTOBER 3, 1961

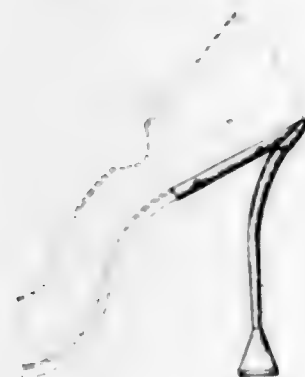
191,431
TELEVISION PROGRAM SCHEDULE HOLDER
William E. Kling, Detroit, Mich.
Filed May 22, 1959, Ser. No. 56,027
Term of patent 3½ years
(Cl. D1—9)



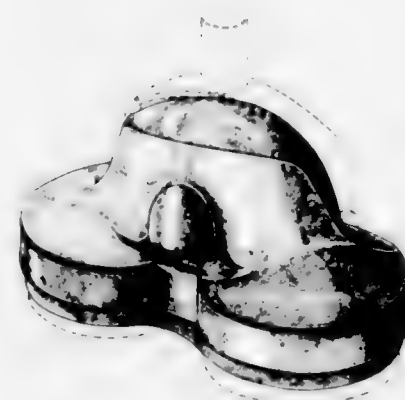
191,432
CABINET TOP LAVATORY
Frederick David Chapman, Chicago, Ill., assignor to The Murray Corporation of America, Pittsburgh, Pa., a corporation of Delaware
Filed Jan. 15, 1960, Ser. No. 59,059
Term of patent 14 years
(Cl. D4—2)



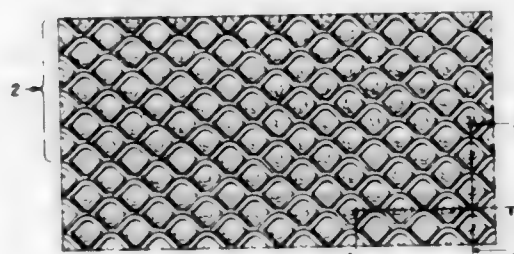
191,433
LADY'S SHOE HEEL
Eleanor A. Mehr, 317 E. 145th St., Harvey, Ill.
Filed Mar. 14, 1961, Ser. No. 64,287
Term of patent 14 years
(Cl. D7—5)



191,434
FLOOR POLISHER
Alexander B. Musichuk, Tallmadge, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed May 25, 1960, Ser. No. 60,720
Term of patent 14 years
(Cl. D9—2)



191,435
FLOOR MAT
Abraham I. Kantor, 122 Cleveland Terrace, Bloomfield, N.J.
Filed June 16, 1959, Ser. No. 56,376
Term of patent 14 years
(Cl. D9—6)



191,436
DOOR STOP
Edward F. Ulrich, 1100 SE. 12th Terrace, Deerfield Beach, Fla.
Filed Mar. 6, 1961, Ser. No. 64,150
Term of patent 14 years
(Cl. D10—7)



OCTOBER 3, 1961

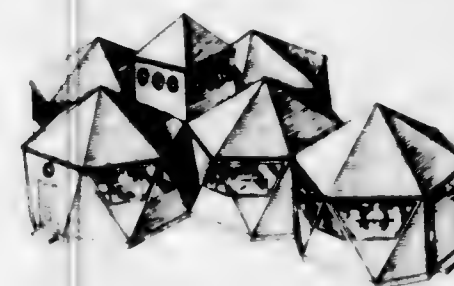
U. S. PATENT OFFICE

277

191,437
PORTABLE SERVICE STATION ISLAND UNIT
Charles E. Knox, Jr., 1007 Slocum St., Dallas, Tex.
Filed Dec. 12, 1958, Ser. No. 53,756
Term of patent 14 years
(Cl. D13—1)



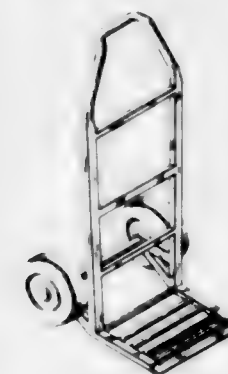
191,438
EDIFICE
Jehu D. Paulson, 2705 Everett Ave., Raleigh, N.C.
Filed Apr. 20, 1959, Ser. No. 55,575
Term of patent 14 years
(Cl. D13—1)



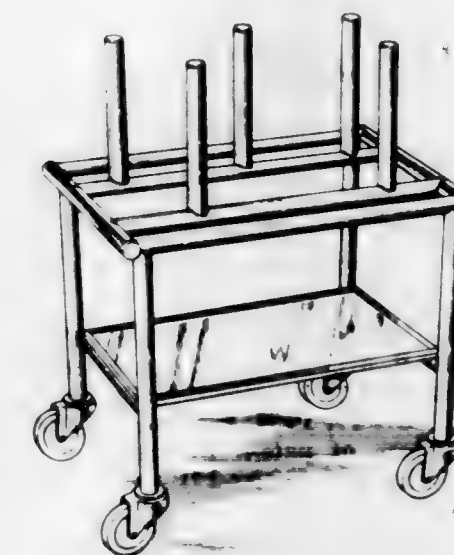
191,439
AUTOMOBILE
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works
Filed May 1, 1959, Ser. No. 55,737
Claims priority, application France Nov. 10, 1958
Term of patent 14 years
(Cl. D14—3)



191,440
HAND TRUCK
Charles L. Wienke, Box 52, Bristol, Wis., and Lester F. Tans, Rte. 3, Waukesha, Wis.
Filed May 11, 1960, Ser. No. 60,540
Term of patent 14 years
(Cl. D14—3)



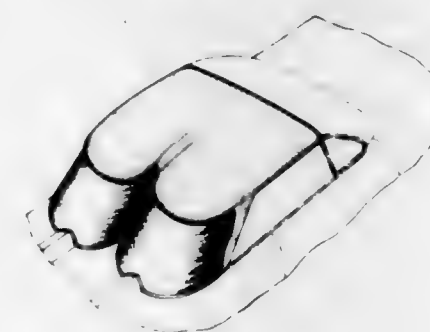
191,441
COMBINED WEIGHT HOLDER AND CARRIER
Joseph A. Preston, New York, N.Y., assignor to J. A. Preston Corporation, New York, N.Y., a corporation of New York
Filed June 24, 1960, Ser. No. 61,101
Term of patent 14 years
(Cl. D14—3)



191,442
PORTABLE STRAPPING STAND
Edward T. Wayne, 67 Clinton St., Binghamton, N.Y.
Filed July 12, 1960, Ser. No. 61,314
Term of patent 14 years
(Cl. D14—3)



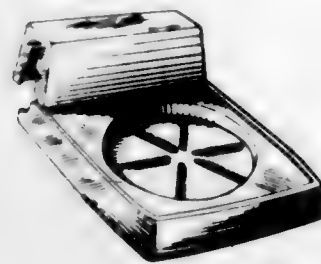
191,443
AUTOMOBILE
Charles M. Jordan, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 63,314
Term of patent 7 years
(Cl. D14—3)



191,444

CUP TRAY FOR AUTOMOBILES

John J. Schwartz and Arnold D. Verlo, Minneapolis, Minn., assignors to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
 Filed Sept. 22, 1960, Ser. No. 62,235
 Term of patent 7 years
 (Cl. D14-6)



191,445

COLLAPSIBLE CAMPING COMPARTMENT

Robert F. McFadden, St. Louis, Mo.
 (12014 Old St. Charles Road, Bridgeton, Mo.)
 Filed Nov. 17, 1959, Ser. No. 58,374
 Term of patent 14 years
 (Cl. D14-27)



191,446

WHEEL COVER

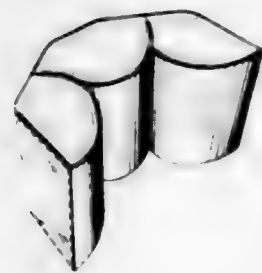
Robert A. Cadaret, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
 Filed July 21, 1960, Ser. No. 61,476
 Term of patent 7 years
 (Cl. D14-30)



191,447

HEAD REST FOR DENTAL CHAIRS

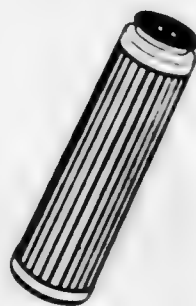
Kenneth C. Kerr, 1222 S. Riverside, Medford, Oreg.
 Filed Mar. 14, 1960, Ser. No. 59,711
 Term of patent 14 years
 (Cl. D15-8)



191,448

DRY SHAVES

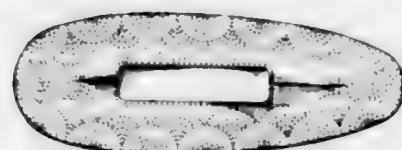
Reinhard Willem Jacob Veersema, Eindhoven, Netherlands, assignor to North American Philips Co., Inc.
 Filed Dec. 10, 1959, Ser. No. 58,624
 Claims priority, application Switzerland June 30, 1959
 Term of patent 14 years
 (Cl. D22-3)



191,449

RECOIL PAD FOR FIREARMS

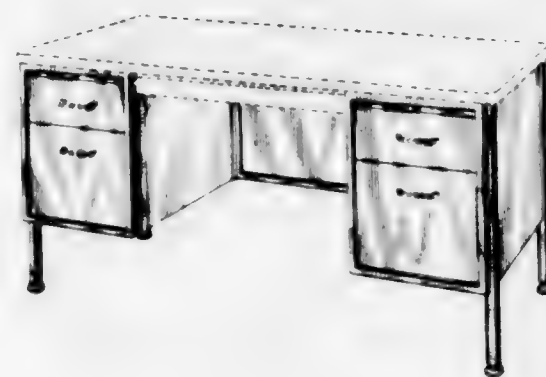
Frank A. Pachmayr, Los Angeles, Calif., assignor to Pachmayr Gun Works, Inc., Los Angeles, Calif., a corporation of California
 Filed Mar. 13, 1961, Ser. No. 64,238
 Term of patent 14 years
 (Cl. D30-1)



191,450

DOUBLE PEDESTAL DESK OR SIMILAR ARTICLE

Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,231
 Term of patent 14 years
 (Cl. D33-7)



191,451

SINGLE PEDESTAL DESK OR SIMILAR ARTICLE

Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,232
 Term of patent 14 years
 (Cl. D33-7)



191,452

TABLE DESK OR SIMILAR ARTICLE

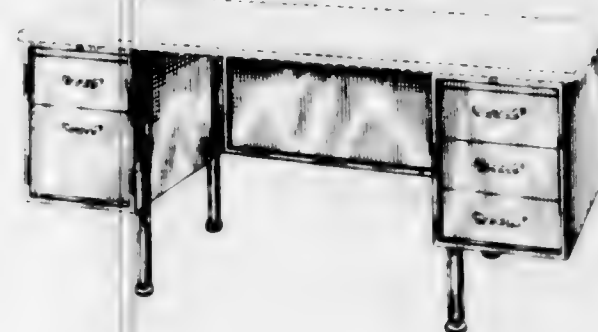
Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,234
 Term of patent 14 years
 (Cl. D33-7)



191,453

CREDENZA TABLE OR SIMILAR ARTICLE

Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,235
 Term of patent 14 years
 (Cl. D33-7)



191,454

L-SHAPED DESK UNIT OR SIMILAR ARTICLE

Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,236
 Term of patent 14 years
 (Cl. D33-7)



191,455

TABLE OR SIMILAR ARTICLE

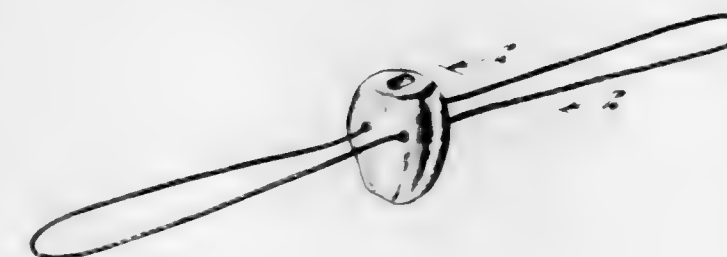
Charles M. Abrahamson, Aurora, and Pehr J. Anderson, St. Charles, Ill., assignors to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
 Filed July 5, 1960, Ser. No. 61,233
 Term of patent 14 years
 (Cl. D33-14)



191,456

WHIRLING TOY

Severino J. Cabanban, 10 W. 104th St., Apt. 3R, New York, N.Y.
 Filed June 19, 1959, Ser. No. 56,424
 Term of patent 14 years
 (Cl. D34-15)



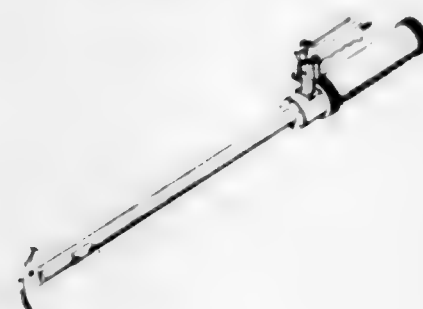
191,457
TOY BLENDER
Meyer Saffer, 89-11 153rd St., Jamaica, N.Y.
Filed Jan. 20, 1960, Ser. No. 59,120
Term of patent 14 years
(Cl. D34-15)



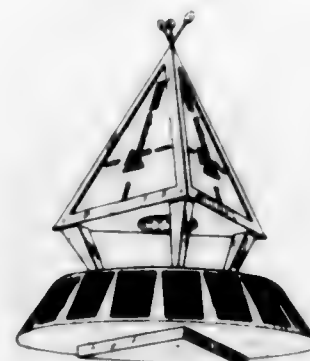
191,458
TOY LIVESTOCK TRAILER
Allan J. Alvane, Arlington Heights, Ill., assignor to
Sears, Roebuck and Co., Chicago, Ill., a corporation
of New York
Filed Sept. 16, 1960, Ser. No. 62,176
Term of patent 7 years
(Cl. D34-15)



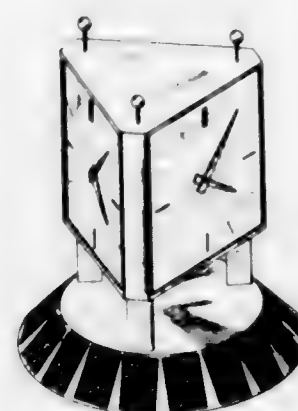
191,459
TREE PRUNING SAW
Ronald E. Hyskell, Seattle, Wash., assignor to Husky
Manufacturing, Inc., Seattle, Wash., a corporation of
Washington
Filed Apr. 18, 1960, Ser. No. 60,227
Term of patent 14 years
(Cl. D40-1)



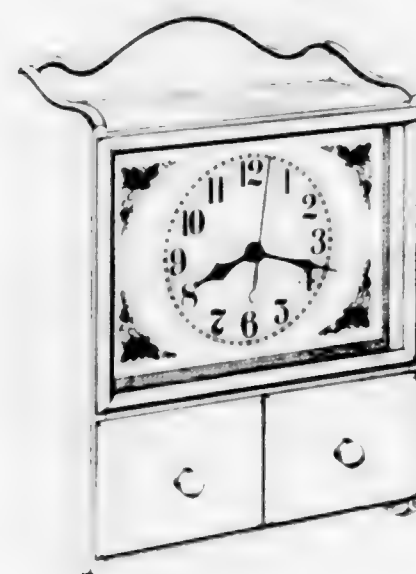
191,460
TABLE-CLOCK
Georges Ducommun, Grenchen, Switzerland, assignor to
Baumgartner Freres S.A., Grenchen, Switzerland
Filed Nov. 30, 1960, Ser. No. 63,030
Claims priority, application Switzerland June 30, 1960
Term of patent 14 years
(Cl. D42-7)



191,461
TABLE-CLOCK
Georges Ducommun, Grenchen, Switzerland, assignor to
Baumgartner Freres S.A., Grenchen, Switzerland
Filed Nov. 30, 1960, Ser. No. 63,031
Claims priority, application Switzerland June 30, 1960
Term of patent 14 years
(Cl. D42-7)



191,462
CLOCK OR SIMILAR ARTICLE
George H. Fitzsimonds, Trumbull, Conn., assignor to
General Electric Company, a corporation of New York
Filed May 1, 1961, Ser. No. 64,973
Term of patent 14 years
(Cl. D42-7)



191,463
CULINARY BEATER
James L. Hvale, Chicago, Ill., assignor to Ekco Products
Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 23, 1960, Ser. No. 61,862
Term of patent 14 years
(Cl. D44-1)



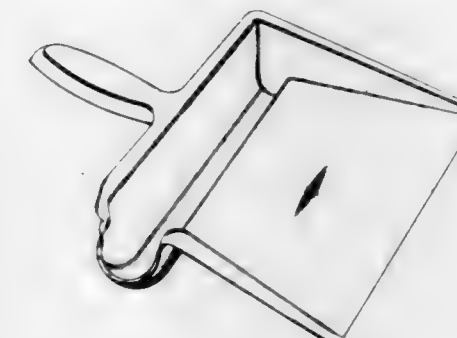
191,464
CUP
Frank Skupien, 5443 Wolcott St., Chicago, Ill.
Filed Mar. 27, 1961, Ser. No. 64,503
Term of patent 14 years
(Cl. D44-9)



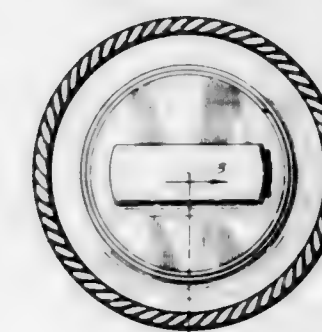
191,465
COMBINED BANK AND DRINKING CUP
Frank Skupien, 5443 Wolcott St., Chicago, Ill.
Filed Mar. 27, 1961, Ser. No. 64,504
Term of patent 14 years
(Cl. D44-9)



191,466
DUST PAN
John F. Reichlein, 8642 SE. Holgate Blvd.,
Portland, Oreg.
Filed Oct. 27, 1959, Ser. No. 58,085
Term of patent 14 years
(Cl. D44-18)



191,467
TABLE LIGHTER
William Joseph Reilly, Attleboro, Mass., assignor to
Zippo Manufacturing Company, Bradford, Pa., a cor-
poration of Pennsylvania
Filed Aug. 2, 1960, Ser. No. 61,609
Term of patent 14 years
(Cl. D48-27)



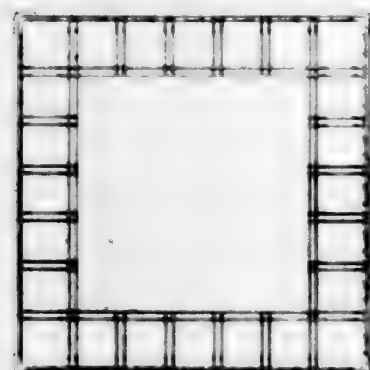
191,468
CIGAR LIGHTER OR THE LIKE
Marcel Quercia, Paris, France, assignor to Flaminaire
Marcel Quercia, Paris, France, a corporation of France
Filed Nov. 9, 1960, Ser. No. 62,790
Term of patent 14 years
(Cl. D48-27)



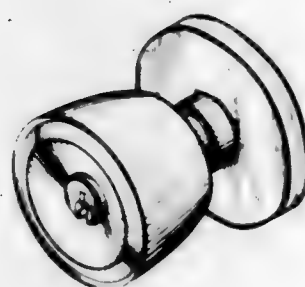
191,469
COMBINED WASHING AND DRYING MACHINE
 Jerry N. Lewis, 3129 Daniels, Dallas, Tex.
 Filed Nov. 18, 1959, Ser. No. 58,381
 Term of patent 7 years
 (Cl. D49—1)



191,470
DISH RACK SUPPORT
 Louis Maslow, Dallas, Pa.
 Filed Apr. 25, 1961, Ser. No. 64,897
 Term of patent 14 years
 (Cl. D49—1)



191,471
COMBINED KNOB AND ESCUTCHEON
 Fred J. Russell, 3800 Don Felipe Drive,
 Los Angeles, Calif.
 Filed Dec. 22, 1958, Ser. No. 53,845
 Term of patent 14 years
 (Cl. D50—3)



191,472
SECTIONAL REPAIR VULCANIZER FOR TIRES
 Elby French, P.O. Box 111, Littleton, Colo.
 Filed Apr. 11, 1960, Ser. No. 60,145
 Term of patent 14 years
 (Cl. D55—1)



191,473
SPECTACLE FRAME FRONT
 Pearl F. Ashton, Providence, R.I., assignor to Rolyn Tool
 & Finding Company, a corporation of Rhode Island
 Filed Jan. 23, 1961, Ser. No. 63,647
 Term of patent 3½ years
 (Cl. D57—1)



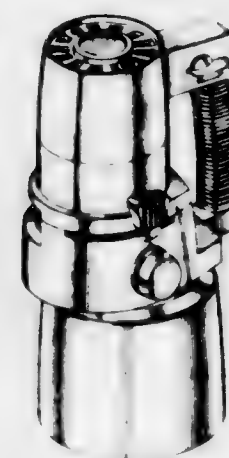
191,474
**DISPENSING CONTAINER FOR POWDERED
 HOUSEHOLD PRODUCTS**
 Alfred D. Sterges, Los Angeles, and Louis K. Warden,
 Balboa, Calif., assignors to Purex Corporation, Ltd.,
 South Gate, Calif., a corporation of California
 Filed May 2, 1960, Ser. No. 60,404
 Term of patent 14 years
 (Cl. D58—17)



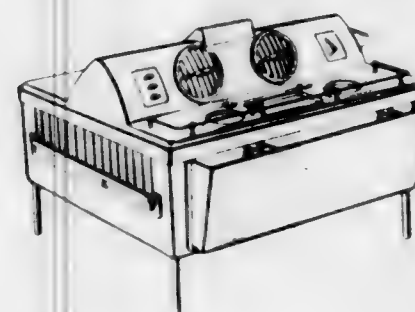
191,475
**MOTION PICTURE PROJECTOR OR
 SIMILAR ARTICLE**
 Robert L. Smith, Deerfield, Ill., assignor to Bell & Howell
 Company, Chicago, Ill., a corporation of Illinois
 Filed Oct. 21, 1960, Ser. No. 62,564
 Term of patent 14 years
 (Cl. D61—1)



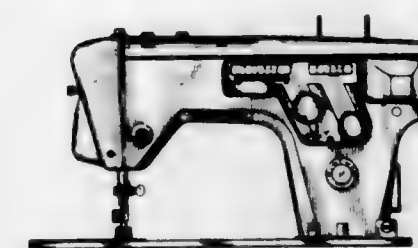
191,476
ROTARY SPRAY PAINT GUN
 Joseph Palma, Jr., Wheaton, Ill., assignor, by mesne as-
 signments, to Ziff-Davis Publishing Company, New
 York, N.Y., a corporation of Delaware
 Filed Feb. 23, 1960, Ser. No. 59,460
 Term of patent 14 years
 (Cl. D62—2)



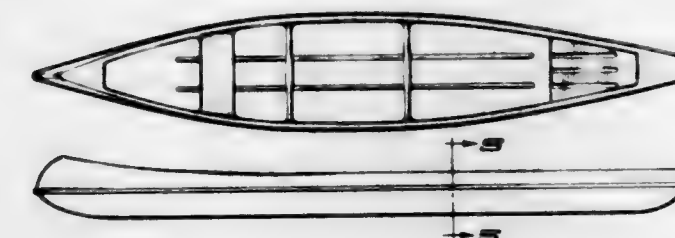
191,477
PORTABLE COOLER
 Lawrence W. Bonzer, Long Beach, Calif., assignor to
 G & B Manufacturing Co., Inc., Long Beach, Calif.,
 a corporation of California
 Filed Jan. 17, 1961, Ser. No. 63,585
 Term of patent 14 years
 (Cl. D62—4)



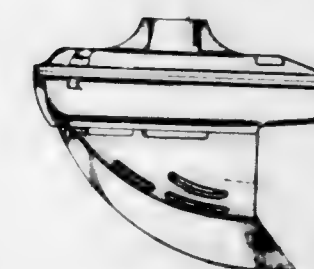
191,478
SEWING MACHINE
 Hideo Iida, Hamamatsu, Japan, assignor to Fuji Preci-
 sion Machinery Co., Ltd., Tokyo, Japan, a corporation
 of Japan
 Filed Apr. 13, 1959, Ser. No. 55,488
 Claims priority, application Japan Oct. 21, 1958
 Term of patent 7 years
 (Cl. D70—1)



191,479
SQUARE STERNED CANOE
 Robert M. Taft, 10344 Mississippi Drive, Coon Rapids,
 Minn., and John Sawicki, Minneapolis, Minn., assign-
 ors of one-half to said Robert M. Taft, Coon Rapids,
 Minn., and one-half to Warren R. Taft, South Haven,
 Minn.
 Filed Nov. 2, 1960, Ser. No. 62,708
 Term of patent 14 years
 (Cl. D71—1)



191,480
JET DRIVE FOR BOATS OR THE LIKE
 John P. Myers, 407 N. Maple Drive, Beverly Hills, Calif.
 Filed Jan. 30, 1961, Ser. No. 63,765
 Term of patent 7 years
 (Cl. D71—1)



191,481
PEN CARTRIDGE FILLING TOOL
 Howard W. Conley, West Shore Drive,
 Detroit Lakes, Minn.
 Filed Oct. 18, 1960, Ser. No. 62,528
 Term of patent 3½ years
 (Cl. D74—1)

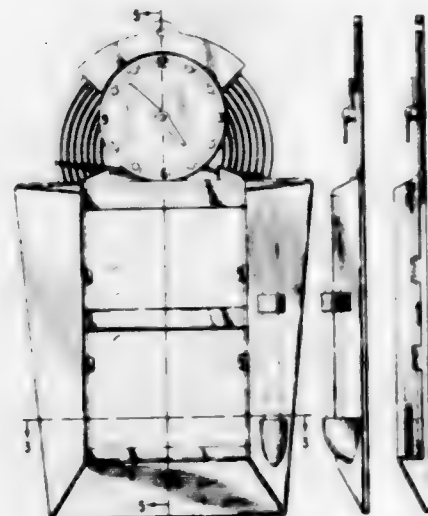


191,482

COMBINED APPOINTMENT CLOCK DIAL AND MEMO PAD HOLDER

Edward M. Rubin, Leominster, Mass., assignor to Commonwealth Plastics Corp., Leominster, Mass., a corporation of Massachusetts

Filed Mar. 6, 1961, Ser. No. 64,153
Term of patent 14 years
(Cl. D74-1)



191,483

ILLUMINABLE CLIP BOARD

George J. Cory, 11722 Archwood Ave., North Hollywood, Calif.

Filed Mar. 7, 1960, Ser. No. 59,631
Term of patent 14 years
(Cl. D74-2)

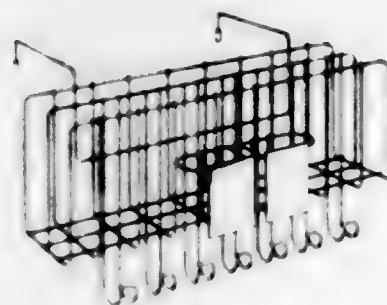


191,484

DISPLAY RACK

Joseph A. Bardo, 10130 Gerard Way, and John L. Ventimiglia, 1293 Farrington Drive, both of San Jose, Calif.

Filed July 28, 1960, Ser. No. 61,562
Term of patent 14 years
(Cl. D80-10)



191,485

AVIATOR'S BAIL-OUT OXYGEN TUBE CONNECTION UNIT

Howard A. Benzel, Lancaster, N.Y., assignor to Scott Aviation Corporation, Lancaster, N.Y., a corporation of New York

Filed June 20, 1958, Ser. No. 51,449
Term of patent 3½ years
(Cl. D83-1)

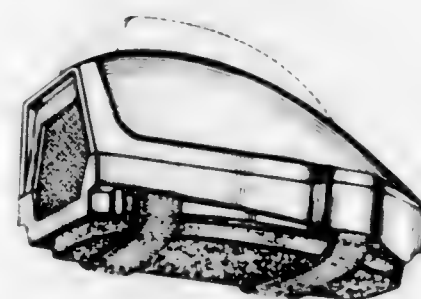


191,486

MASSAGE VIBRATOR

John F. Wahl and Warren P. Wahl, Sterling, Ill., assignors to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois

Filed Feb. 23, 1960, Ser. No. 59,477
Term of patent 14 years
(Cl. D83-1)



191,487

AEROSOL DISPENSER FOR PERFUME OR THE LIKE

Philip H. Sagarin, Bridgeport, and William R. O'Donnell, Trumbull, Conn., assignors to VCA Incorporated, Bridgeport, Conn., a corporation of Connecticut

Filed Sept. 14, 1960, Ser. No. 62,161
Term of patent 14 years
(Cl. D83-1)

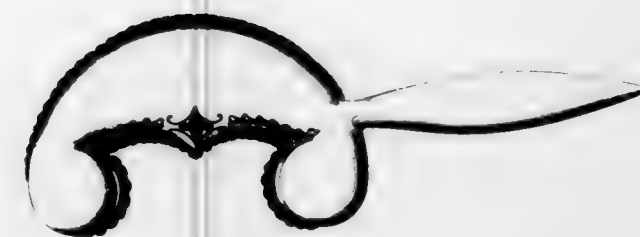


191,488

BRUSH

Samuel J. Golden, 2095 Grand Concourse, 180th St., Bronx, N.Y.

Filed Mar. 30, 1961, Ser. No. 64,558
Term of patent 14 years
(Cl. D86-10)



191,489

BACK PACK FRAME

Vincent C. Tyrrell, 3728 W. 170th St., Torrance, Calif.

Filed Oct. 31, 1960, Ser. No. 62,669
Term of patent 14 years
(Cl. D87-5)

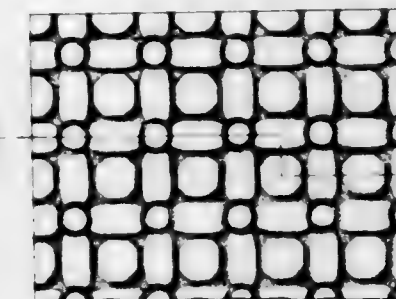


191,490

CARPET CUSHION

Nell S. McKay, Chicago, Ill., assignor to American Hair & Felt Company, Chicago, Ill., a corporation of Delaware

Filed June 27, 1961, Ser. No. 65,727
Term of patent 14 years
(Cl. D92-4)

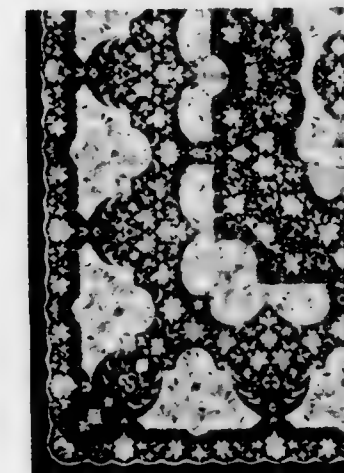


191,491

TABLECLOTH

Thomas William Binns, Huntingdon Valley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.

Filed June 7, 1961, Ser. No. 65,501
Term of patent 14 years
(Cl. D92-26)



LIST OF REISSUE PATENTEEES

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PATENTS WERE ISSUED ON THE 3RD DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Risley, Roger E. Re. 25,047.	Petersen, Thorvald K., and Smith. Re. 25,045.
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Dot, Pedro. 2,095.	Morey, Dennison H., Jr., to Jackson & Perkins Co. Rose plant. 2,097, 10-3-61, Cl. 47-61.
Dot, Pedro, to The Conrad-Pyle Co. Rose plant. 2,095, 10-3-61, Cl. 47-61.	Zombory, Sophia B.: See—
Jackson & Perkins Co.: See—	Zombory, William and S. B. 2,098.
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Cabanban, Severion J. Whirling toy. 191,456, 10-3-61, Cl. D34-15.	Maslow, Louis. Dish rack support. 191,470, 10-3-61, Cl. D49-1.
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 Sagarin, Philip H., and W. R. O'Donnell, to VCA Inc. Aerosol dispenser for perfume or the like. 191,487, 10-3-61, Cl. D83-1.
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 Wienke, Charles L., and L. F. Tans. Hand truck. 191,440, 10-3-61, Cl. D14-3.
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 Palma, Joseph, Jr. 191,476.
 Zippo Mfg. Co.: See—
 Reilly, William J. 191,467.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3RD DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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 Bowman, Melvin G., and N. H. Krikorian, to United States of America, Atomic Energy Commission. Method of forming tantalum silicides on tantalum surfaces. 3,002,852, 10-3-61, Cl. 117-106.
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LIST OF PATENTEEES

- Castelli, Charles, to Johnson & Johnson. Dispenser for dispensing fluffy fibrous material. 3,002,668, 10-3-61, Cl. 225-52.
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- Chanary, Victor, and K. P. Pugh, to Wilmot-Breeden Ltd. Releaseable fastening devices. 3,002,778, 10-3-61, Cl. 292-221.
- Chapelier, Robert A., to Combustion Engineering, Inc. Automatic coupling. 3,002,774, 10-3-61, Cl. 287-103.
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- Clapper, Genung L., to International Business Machines Corp. Signal translating apparatus. 3,003,069, 10-3-61, Cl. 307-85.
- Clark, Harold A., to Dow Corning Corp. Method of selectively coating surfaces. 3,002,848, 10-3-61, Cl. 117-10.
- Clark, Paul J., Sr. Equalizing shock absorber. 3,002,764, 10-3-61, Cl. 280-104.
- Clement, Jean, to Solvay & Cie. Preparation of electrodes for electrolysis of aqueous solutions by the mercury process. 3,002,914, 10-3-61, Cl. 204-219.
- Clement, Milton A., and B. A. Harris, to General Dynamics Corp. Automatic toll ticketing system. 3,003,035, 10-3-61, Cl. 179-71.
- Clemons, Maurice M.: See—
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- Cochran, Charles L., to C. L. Cochran and Associates. Aircraft adapted for vertical ascent and descent. 3,002,709, 10-3-61, Cl. 244-12.
- Cohen, Charles L., and R. A. Atchison, to ACF Industries, Inc. Stimulated nose wheel steering system. 3,002,292, 10-3-61, Cl. 35-12.
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- Cook, Charles C.: See—
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- Cook, Harry G., to United States of America, Navy. Caster wheel brake mechanism. 3,002,589, 10-3-61, Cl. 188-69.
- Cook, John B., to The Whitney Blake Co. Retractable cords. 3,003,018, 10-3-61, Cl. 174-60.
- Cookson, Harold, R. W. E. Mosse, and B. H. Osbornow, to The Metal Box Co. Ltd. Carton-closing machine. 3,002,329, 10-3-61, Cl. 53-375.
- Cooper, Frederick D.: See—
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- Corley, Clifton. Toothbrush holder and paste dispenser. 3,002,798, 10-3-61, Cl. 312-207.
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- Cote, Raymond A., to Container Corp. of America. Display carton. 3,002,722, 10-3-61, Cl. 248-174.
- Couch, Glenn F., to Symington Wayne Corp. Snubbed resilient coupler carrier. 3,002,633, 10-3-61, Cl. 213-61.
- Coultrap, Keith H.: See—
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- Cowan, Edwin J. Gas heaters of the overhead type. 3,002,512, 10-3-61, Cl. 126-91.
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- Cross, Carroll N. Hinge joints for display mount elements. 3,002,720, 10-3-61, Cl. 248-35.
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- Dahm, Jan, to C. Dahms, Ingeniorforretning A/S. Index or like filing systems. 3,002,796, 10-3-61, Cl. 312-184.
- Dahms, C., Ingeniorforretning A/S: See—
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- Daimler-Benz Aktiengesellschaft: See—
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- Daimler, Berthold, H. Elling, E. Elasser, and K. Heuer, to American Enka Corp. Method of spinning low elongation viscose rayon. 3,002,803, 10-3-61, Cl. 15-54.
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- Darbee, Leonard E., and J. E. Koicaynshi, to Food Machinery and Chemical Corp. Method of preparing monopersulfates. 3,002,813, 10-3-61, Cl. 23-114.
- Data-Control Systems, Inc.: See—
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- Daum, Charles. Wall hangers or the like. 3,002,723, 10-3-61, Cl. 248-315.
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- Davis, Ralph A., and M. R. Broadworth, to The Dow Chemical Co. Extended-life fluorination catalyst. 3,002,934, 10-3-61, Cl. 252-442.
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- De Boisblanc, Deslonde R., to Phillips Petroleum Co. Combustion control in aircraft engines. 3,002,339, 10-3-61, Cl. 60-35.8.
- Decamp, Andre E. Artificial plant. 3,002,308, 10-3-61, Cl. 41-13.
- Decker, James L., to The Martin Co. Aircraft longitudinal control system. 3,002,714, 10-3-61, Cl. 244-83.
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- Detting, James C., and E. J. Apparatus for forming concrete blocks. 3,002,247, 10-3-61, Cl. 25-41.
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- Diesing, Fred W., and T. Lindbom, to Fairchild Stratos Corp. Pressure control system for regulating the position of a control surface. 3,002,500, 10-3-61, Cl. 121-41.
- Diesing, Fred W., and T. Lindbom, to Fairchild Stratos Corp. Full or partial flow regulating device. 3,002,524, 10-3-61, Cl. 137-219.
- Di Pasquale, Renato, to Yardney International Corp. Process for producing electrode plates. 3,002,834, 10-3-61, Cl. 75-208.
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- Duddy, Joseph C., to The Electric Storage Battery Co. Electric battery. 3,003,012, 10-3-61, Cl. 136-9.
- Duddy, Joseph C., to The Electric Storage Battery Co. Electric battery. 3,003,013, 10-3-61, Cl. 136-9.
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Holloway, John A., to The B. F. Goodrich Co. Styrene-butadiene latex paint containing soluble and insoluble thickener resins and suspending agents. 3,002,940, 10-3-61, Cl. 260-17.4.

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Jahn, Marion C., to Colborne Mfg. Co. Continuous strip dough sheeter. 3,002,471, 10-3-61, Cl. 107-12.

Janssen, Paul A. J. 1-(2-thienyl)-ω-(4-aryl)perazine) alkaloids. 3,002,976, 10-3-61, Cl. 260-268.

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Johannson, Oskar K., to Dow Corning Corp. Method of polymerizing cyclic diorganosiloxanes. 3,002,951, 10-3-61, Cl. 240-46.5.
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- Kern, Rudolf, H. Scheurer, and G. Utsch, to Rhein-Chemie G.m.b.H. Anti-tack composition. 3,002,840, 10-3-61, Cl. 106-2.
Kersey, Albert H., and F. D. Cooper, to Ford Motor Co. Hydraulic system for tractors. 3,002,371, 10-3-61, Cl. 172-9.
Kershaw, Delmar D., to General Electric Co. Fluorescent lamp dimming circuit. 3,003,079, 10-3-61, Cl. 315-97.
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Klinefelter, Glenn B., to Gorton Heating Corp. Air valves. 3,002,522, 10-3-61, Cl. 137-202.
Kloss, Josef, to Delmar Chemicals, Ltd. Flavone-7-ox-acetamides. 3,002,979, 10-3-61, Cl. 260-345.2.
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LIST OF PATENTEES

- Kraus, Gerard, and D. E. Carr, to Phillips Petroleum Co. Hydroxytitanium acylates in cis-conjugated diene polymer compositions and process of preparation. 3,002,944, 10-3-61, Cl. 240-23.7.
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Van Uiter, Le Grand G., to Bell Telephone Laboratories, Inc. Process for growing and apparatus for utilizing paramagnetic crystals. 3,003,112, 10-3-61, Cl. 330-4.

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Waterbury, John W., to Praeger-Kavanagh-Waterbury. Convertible stadium. 3,002,234, 10-3-61, Cl. 20-1.126.

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 Wettstein, Albert, K. Heusler, H. Ueberwasser, and P. Wieland, to Ciba Pharmaceutical Products Inc. 18-oxygenated steroids and process for their synthesis. 3,002,972, 10-3-61, Cl. 260—239.55.
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 Williams, Emil F., and N. T. Woodberry, to American Cyanamid Co. Purification of salts of dialkyl esters of sulfosuccinic acid. 3,002,995, 10-3-61, Cl. 260—481.
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43: 3,002,956	137: 3,002,718	272- 18: 3,002,752	56: 3,002,750	174: 3,003,138
89: 3,002,957	144: 3,002,719	273- 43: 3,002,754	60: 3,002,751	3: 3,003,139
94: 3,002,958	249- 35: 3,002,720	274- 10: 3,002,755	118: 3,002,752	3,003,140
149: 3,002,959	174: 3,002,722	275- 95: 3,002,756	132: 3,003,086	347: 3,003,142
490: 3,002,960	315: 3,002,723	276- 118: 3,002,757	149: 3,003,087	3,003,143
88: 3,002,961	49.5: 3,003,061	277- 174: 3,002,758		3,003,144
95: 3,002,962				3,003,145
223- 25: 3,002,963				343- 7.9: 3,003,146
95: 3,002,962				8: 3,003,147
224- 42.1: 3,002,964				113: 3,003,148
42.42: 3,002,965				715: 3,003,149
42.45: 3,002,966				74: 3,002,801
48: 3,002,967				76: 3,002,802
52: 3,002,968				

CLASSIFICATION OF DESIGNS

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D 4- 2: 191,432	6: 191,443	1: 191,453	D44- 1: 191,463	D57- 1: 191,473	2: 191,483
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191,438	D30- 1: 191,449	191,459	D40- 1: 191,469	D71- 1: 191,479	5: 191,489
D14- 3: 191,439	D33- 7: 191,450	191,460	D50- 3: 191,471	191,480	4: 191,490
191,440	191,451	191,461		D74- 1: 191,481	26: 191,491
191,441					

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

October 3, 1961

Volume 771

Number 1

TRADEMARKS
NOTICES

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the
Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 29,145 (BERIO & CO. AND DESIGN). F. Romeo & Co., Olive oil; **Reg. No. 176,690 (PHILIP BERIO AND CO. AND DESIGN).** same, filed July 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1228, *Societa Anonima Lucchese Olii e Vini v. D'Andrea & Sons Italian Foods*. Consent judgment; injunction granted Aug. 15, 1961.

Reg. No. 69,516 (H. UPMANN AND DESIGN). H. Upmann & Co., Cigars, filed Aug. 31, 1961, D.C., S.D.N.Y., Doc. 61/3117, *Menendez Garcia y Compania, Ltd., etc. v. Gimbel Brothers, Inc.*

Reg. No. 124,116 (RINSO). Lever Brothers Company, Soap and soap powder; **Reg. No. 699,150,** same, Soap and detergent for general washing and cleaning, filed Apr. 4, 1961, D.C., S.D.N.Y., Doc. 61/1211, *Lever Brothers Company v. Economics Laboratory, Inc.* Stipulation and order of dismissal without prejudice Aug. 28, 1961.

Reg. No. 176,690. (See Reg. No. 29,145.)

Reg. No. 351,535 (PERM-O-SEAL ETC.). C. T. Spear, Radiator stop leak; **Reg. No. 675,794,** same, Chemical compound to stop leaks in automotive radiators, filed Aug. 8, 1961, D.C., E.D. Ark. (Little Rock), Doc. 61-C-124, *The Diamond Spear Company v. O. G. Kuykendall etc.*

Reg. No. 532,063 (CARCO). Pacific Car and Foundry Company, Heavy machinery and parts thereof, including tractor winches, tractor hoists, logging arches, tractor bulldozers, tractor canopies and earth moving scraper blades; **Reg. No. 541,790,** same, Log carts, motor coach bodies and van type delivery bodies; **Reg. No. 554,894,** same, Wire rope fittings—viz., hooks, sockets, eyes, clevises, hitches and ferrules; **Reg. No. 610,296,** same, Logging bunks employed in connection with railroad cars and trucks, said trucks being used off and on highways, filed Aug. 14, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/107, *Pacific Car & Foundry Company et al. v. Carco Industries, Inc.*

Reg. No. 541,790. (See Reg. No. 532,063.)

Reg. No. 554,832 (BELTONE). The Decca Record Company Limited, Gramophones, gramophone records, gramophone needles and similar gramophone accessories, filed Aug. 17, 1961, D.C., S.D.N.Y., Doc. 61/2951, *The Decca Record Company Limited v. Beltone Recording Corporation.*

Reg. No. 556,894. (See Reg. No. 532,063.)

Reg. No. 564,170 (COVERMARK). Lydia O'Leary, Inc., Cosmetic for obliterating birthmarks and other skin blemishes, filed July 24, 1961, D.C., S.D.N.Y., Doc. 61/2597, *Lydia O'Leary, Inc. v. Helena Rubinstein, Inc.*

CONDITION OF TRADEMARK APPLICATIONS AS OF AUGUST 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]..... 13,451
Date of oldest new application..... February 13, 1961
Date of oldest amended application..... February 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50.....		2-18-61	2-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52, Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107, Collective Membership Marks, Class 200; Certification Marks, Classes A and B.....		3-13-61	3-20-61
Renewals (All Classes).....		8-14-61	8-24-61
Sec. 12 (c) Publications (All Classes).....		7-17-61	7-17-61

Applications filed during the month of August 1961—1947

Registrations Issued..... 335—No. 722,095 to No. 722,429
Renewals Issued..... 71

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed: subscription price, \$10.00 per annum, foreign mailing \$3.75 additional; single copies, 50 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 672,829 (AUDIVOX), Audivox, Inc., Hearing aids and accessories therefor—namely, receivers, batteries, audiometers, battery adapter compartments and cases and other parts for hearing aids, filed Aug. 23, 1961, D.C. Mass. (Boston), Doc. 61/857-F, Audivox, Inc. v. Byrnes Audio-phone Company of New England, Inc.

Reg. No. 610,296. (See Reg. No. 532,063.)

Reg. No. 672,776 (HONCO AND DESIGN), Enzyme Process Company, Inc., doing business as Doctor's Specialties Laboratories, Food supplements containing vitamins, filed Aug. 22, 1961, D.C., W.D.N.C. (Charlotte), Doc. 1635, Enzyme Process Company, Inc. v. Floyd I. Harper & Associates et al.

Reg. No. 675,794. (See Reg. No. 351,535.)

Reg. No. 699,150. (See Reg. No. 124,114.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 111,619. Société de la Viscose Suisse, Emmenbrücke, Switzerland. Filed Jan. 10, 1961.

FLIMBA

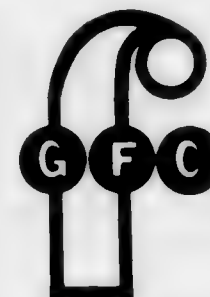
For Synthetic Fibres.
First use August 1957; in commerce in or about February 1958.

SN 111,623. Société de la Viscose Suisse, Emmenbrücke, Switzerland. Filed Jan. 10, 1961.

NYLCOLOR

For Synthetic Fibres and Filaments.
First use August 1957; in commerce in or about February 1958.

SN 112,142. General Foam Corporation, New York, N.Y. Filed Jan. 19, 1961.



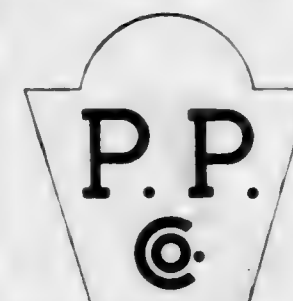
For Foam Rubber and Synthetic Foam Rubber.
First use on or about Oct. 20, 1960.

SN 112,844. Glen-Gery Shale Brick Corporation, Reading, Pa. Filed Jan. 31, 1961.



For Fluorspar Briquettes.
First use Jan. 16, 1961.

SN 115,375. Pennsylvania Glass Sand Corporation, Hancock, W. Va. Filed Mar. 10, 1961.



Owner of Reg. Nos. 190,925, 412,971, and 190,844.
For Silica.
First use in or about January 1906.

SN 116,988. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed Apr. 3, 1961.

SKUFTITE

For Leather.
First use Dec. 9, 1960.

SN 117,945. The Barash Company, Inc., New York, N.Y. Filed Apr. 17, 1961.

MERINGUE

For Vinyl Foam Sheetting Used Primarily in the Manufacture of Handbags and Belts.
First use in February 1961.

SN 118,299. Alfred E. Strickman, d.b.a. Blazers Co., San Diego, Calif. Filed Apr. 20, 1961.

BLAZERS

For Fireplace Logs and Artificial Fireplace Logs Formed of Combustible Material.
First use Jan. 3, 1961.

SN 118,872. The Dow Chemical Company, Midland, Mich. Filed Apr. 28, 1961.

THURANE

For Expanded Synthetic Resins.
First use Feb. 22, 1961.

SN 118,922. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Apr. 28, 1961.

VALGLAS

For Polyester Resins.
First use on or about Feb. 17, 1961.

SN 119,966. Courtaulds, Limited, London, England. Filed May 1, 1961.

ALARENE

Owner of British Reg. No. 795,107, dated Sept. 2, 1959.
For Raw Fibrous Textile Materials.

SN 119,084. Fred A. Velth, Cincinnati, Ohio. Filed May 1, 1961.

NATURE'S WAY

For Potting Soils.
First use on or about Nov. 1, 1957.

SN 119,702. Industrial Minerals of Canada Limited, Toronto, Ontario, Canada. Filed May 10, 1961.

LAKEFIELD

For Nepheline Syenite.
First use in 1938; in commerce in 1938.

Class 2 — Receptacles

SN 89,006. Milprint, Inc., Milwaukee, Wis. Filed Jan. 14, 1960.

Homefreez

For Polyethylene Bags and Ties Therefor, Rigid Polyethylene Containers, and Boxes.
First use Dec. 21, 1959.

SN 97,008. Jerome Dunlevy Co., East Grand Forks, Minn. Filed Apr. 14, 1960.

READYBILT

For Pre-Cast Concrete Septic Tanks, Cesspools, and Sewage Disposal Holding Chambers.
First use June 5, 1952.

SN 103,730. Wilbur V. Lundquist, d.b.a. Marvic Company, Winona, Minn. Filed Aug. 31, 1960.

LID-O-WATE

For Combined Attachable Weight and Deodorizer for Garbage Can Covers.
First use Aug. 22, 1960.

SN 103,891. Andrews-Nunnery Envelope and Paper Corp., Hicksville, N.Y. Filed Sept. 6, 1960.



For Merchandise Envelopes.
First use July 1, 1960.

SN 105,786. Aktiebolaget W. Dan Bergman, Sodertalje, Sweden. Filed Oct. 5, 1960.

RETEMBA

For Collapsible Boxes.
First use June 26, 1954; in commerce Sept. 20, 1960.

SN 110,490. Stetson China Company, Lincoln, Ill. Filed Dec. 19, 1960.



The drawing is lined for contrast only. Owner of Reg. Nos. 876,010 and 877,090.
For Plastic Dinnerware.
First use December 1954.

SN 119,223. Minton Metal Manufacturing, Inc., Chicago, Ill. Filed May 3, 1961.

FLAME-TAMER

For Waste Paper Receptacle.
First use Dec. 22, 1960.

SN 119,613. Dor Plastics Corp., Brooklyn, N.Y. Filed May 9, 1961.

FIL-N-FLO

For Plastic Bag Inserted Into a Corrugated Carton To Be Used as a Unit.
First use Mar. 1, 1961.

SN 119,741. Bemis Bro. Bag Company, St. Louis, Mo. Filed May 11, 1961.

THRIFTEE

For Mailing Bags.
First use Apr. 28, 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 102,122. Klick, Inc., New York, N.Y. Filed Aug. 5, 1960.

S-T-R-E-T-C-H-A-B-A-G!

For School Bags, Beach Bags, Utility Bags.
First use Jan. 10, 1960.

SN 117,060. Theodor Manufacturing Corp., Los Angeles, Calif. Filed Apr. 3, 1961.



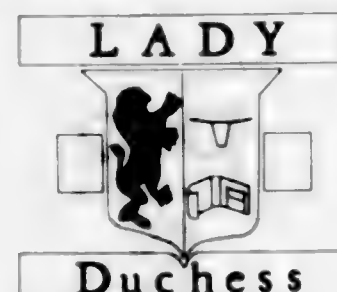
For Handbags.
First use Feb. 24, 1961.

SN 117,839. Emil Birnbaum, New York, N.Y. Filed Apr. 14, 1961.

POSTURE-BAG

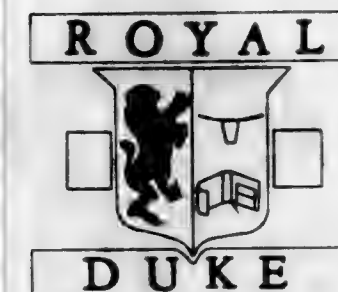
For School Bags and Knapsacks (Fitted on Back of Wearer).
First use Feb. 2, 1961.

SN 118,538. Adam-Steven Leather Goods Inc., New York, N.Y. Filed Apr. 25, 1961.



For Wallets.
First use Jan. 10, 1961.

SN 118,539. Adam-Steven Leather Goods Inc., New York, N.Y. Filed Apr. 25, 1961. **Class 5 — Adhesives**



For Wallets.
First use Jan. 16, 1961.

SN 118,720. Rexbilt Leather Goods, Inc., New York, N.Y. Filed Apr. 26, 1961.

SPACE KING

For Brief-Cases, Overnight Cases, Suit Cases, Handbags, Portfolios, Correspondence Cases, Commuter Cases and Attaché Cases.
First use Apr. 11, 1956.

SN 118,721. Rexbilt Leather Goods, Inc., New York, N.Y. Filed Apr. 26, 1961.

SPACE QUEEN

For Brief-Cases, Overnight Cases, Suit Cases, Handbags, Portfolios, Correspondence Cases, Commuter Cases and Attaché Cases.
First use Apr. 11, 1956.

Class 4 — Abrasives and Polishing Materials

SN 100,296. Salzenbrodt & Co. G.m.b.H., Berlin-Wittenau, Germany. Filed July 5, 1960.

COLLONIL

Owner of German Reg. No. 193,177, dated May 6, 1914.
For Shoe Polishes.

SN 117,492. Haus-Chemikalien G.m.b.H., Ingelheim (Rhine), Germany. Filed Apr. 10, 1961.

TOPAD

Owner of German Reg. No. 743,377, dated Dec. 7, 1960.
For Pads for Cleaning, Scouring and Polishing Pots and Pans.

SN 118,857. George R. Churchill Company, Inc., Hingham, Mass. Filed Apr. 26, 1961.

SPYRL-ROLL

For Buffing Wheels.
First use on or about Feb. 10, 1961.

SN 109,811. National Dynamics Corporation, New York, N.Y. Filed Dec. 7, 1960.



For Tire Sealant and Inflator Kit.
First use Oct. 25, 1960.
Subj. to Intf. with SN 116,706.

SN 112,425. White Stag Manufacturing Co., d.b.a. White Stag Mfg. Co., Portland, Ore. Filed Jan. 24, 1961.



The English translation of the German words "Hirsch Weis" is "white stag."
For Liquid Water Repellent Neoprene Adhesive.
First use Dec. 1, 1959.

SN 116,706. Consolidated Research and Manufacturing Corporation, New Haven, Conn. Filed Mar. 29, 1961.

REDI-SPARE

For Aerosol for Sealing a Puncture in a Pneumatic Tire and Inflating the Tire, and Including a Tire Sealant Compound.
First use Oct. 17, 1960.
Subj. to Intf. with SN 109,811.

Class 6 — Chemicals and Chemical Compositions

SN 111,100. E. K. Hardison Seed Company, Nashville, Tenn. Filed Dec. 30, 1960.



Owner of Reg. No. 425,382.
For Agricultural Chemicals Comprising Insecticides and Fungicides.
First use 1933.

SN 111,572. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Jan. 9, 1961.

HALANE

For Chlorine Liberating Organic Compound.
First use Mar. 25, 1953.

SN 111,708. Arthur J. Williams, d.b.a. Vapor Products Company, Orlando, Fla. Filed Jan. 11, 1961.

MILDEWCIDE

Owner of Reg. No. 601,187.
For Mildew-Proofing Compound and Household Deodorant.
First use June 23, 1948.

SN 112,104. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Jan. 19, 1961.

UNIPEROL

For Levelling and Dispersing Agents for Dyestuffs.
First use Oct. 1, 1948; in commerce Feb. 2, 1956.

SN 112,105. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Jan. 19, 1961.

BASOPHOR

Owner of U.S. Reg. Nos. 648,058 and 675,841.
For Emulsifying and Dispersing Agents for the Textile, Paper and Leather Industries.
First use Jan. 15, 1958; in commerce Jan. 15, 1958.

SN 112,107. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Jan. 19, 1961.

BASANYL

Owner of U.S. Reg. Nos. 648,058 and 675,841.
For Coloring Matters, Dyestuffs.
First use Apr. 2, 1957; in commerce Apr. 2, 1957.

SN 112,108. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Jan. 19, 1961.

BASOGAL

Owner of U.S. Reg. Nos. 648,058 and 675,841.
For Levelling Agents for the Textile Industry.
First use Apr. 18, 1958; in commerce Apr. 18, 1958.

SN 114,880. Safe-T-Water Co., Half Moon Bay, Calif. Filed Mar. 3, 1961.

PERLIA

For Aquarium Water Purifier.
First use Apr. 2, 1949.

SN 115,126. Diamond Alkali Company, Cleveland, Ohio. Filed Mar. 8, 1961.

VACATE

For Herbicide.
First use Feb. 7, 1961.

SN 116,225. General Dynamics Corporation, Chicago, Ill. Filed Mar. 22, 1961.

HI-DRY

For Welding Grade Carbon Dioxide.
First use Sept. 27, 1960.

SN 116,301. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 23, 1961.



For Pigments.
First use Mar. 16, 1961.

SN 116,355. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Mar. 23, 1961.

ENDOCIDE

Owner of French Reg. No. 463,396, dated Mar. 7, 1957 (Paris); Natl. Inst. No. 86,704.
For Insecticide Endotherapeutic.

SN 116,373. Ansul Chemical Company, Marinette, Wis. Filed Mar. 24, 1961.

SALVO

For Dry Chemical Fire Extinguishing Agents.
First use at least as early as Mar. 8, 1961.

SN 116,389. Diamond Alkali Company, Cleveland, Ohio. Filed Mar. 24, 1961.

A DIAMOND CHEMICAL

The terms "A" and "Chemical" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 551,610, 593,471, and others.

For Basic Alkali Products, Such as Soda Ash, Caustic Soda, and Modified Forms of Each of Varying Alkali Content; Bicarbonate of Soda; Chlorinated Products, Such as Chlorinated Solvents, Chlorinated Paraffins, and Chlorinated Aromatic Compounds and Derivatives Thereof; Chromium Chemicals; Silicate Products; Calcium Carbonates; Organic Wetting, Penetrating and Emulsifying Agents; Laundry Soaps; Metal Cleaning Preparations; and Agricultural Chemicals—Namely, Pesticides.

First use Aug. 16, 1957, on basic alkali products; at least as early as Apr. 1, 1922, as to the word "Diamond."

Class 7—Cordage

SN 111,622. Société de la Viscose Suisse, Emmenbrücke, Switzerland. Filed Jan. 10, 1961.

VISCOR

For Cordages Used for Industrial and Technical Purposes.
First use August 1957; in commerce in or about February 1958.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 114,908. Alcan Company, Incorporated, Alton, Ill. Filed Mar. 6, 1961.

PGS

For Shot Shell Powder Wads.
First use Feb. 28, 1961.

Class 10—Fertilizers

SN 111,099. E. K. Hardison Seed Company, Nashville, Tenn. Filed Dec. 30, 1960.



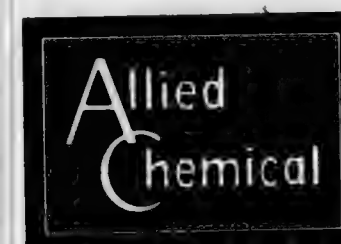
Owner of Reg. No. 425,382.
For Fertilizers.
First use 1933.

SN 114,838. Cotton Producers Association, Atlanta, Ga. Filed Mar. 3, 1961.

CPA

For Fertilizer and Plant Food.
First use at least as early as 1955.

SN 115,760. Allied Chemical Corporation, New York, N.Y. Filed Mar. 16, 1961.



Owner of Reg. No. 685,357.
For Fertilizers.
First use about May 1959.

Class 12—Construction Materials

SN 104,382. Fiberglass Supplies, Incorporated, Malibu, Calif. Filed Sept. 13, 1960.



No registration rights are claimed for the term "Fiberglass Skylight" such being merely descriptive wording, apart from the mark shown in the drawing, but the applicant waives none of its common law rights in the mark shown in the drawing or any feature thereof.

For Plastic Skylights.
First use July 7, 1960.

SN 110,907. United States Mineral Wool Company, Stanhope, N.J. Filed Dec. 27, 1960.

CELLOFOAM

For Rigid Plastic Blocks for Building Purposes.
First use Oct. 18, 1960.

SN 112,738. Knudsen Creamery Co. of California, d.b.a. The Calresin Company, Los Angeles, Calif. Filed Jan. 30, 1961.



For Artificial Stone Wall Facing.
First use Sept. 28, 1960.

SN 114,487. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 27, 1961.



For Roofing Mica, Patching and Ramming Refractories, and Refractory Compositions.
First use August 1960.

SN 116,860. American Olean Tile Company, Lansdale, Pa. Filed Mar. 31, 1961.



For Ceramic Tile.
First use December 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 106,110. Lewis Bolt & Nut Company, Minneapolis, Minn. Filed Oct. 10, 1960.



The drawing is lined for red and black but no claim is made to the colors as an integral part of the mark.
For Bolts, Nuts and Screws.
First use about Sept. 29, 1960.

SN 116,122. Glamorgan Pipe & Foundry Company, Lynchburg, Va. Filed Mar. 21, 1961.



For Plastic Pipe.
First use Jan. 16, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 56,757. Bridgeport Brass Company, Bridgeport, Conn. Filed Aug. 7, 1958.

Bridgeport
Ultraflex

For Metallic Strips Such as Phosphor Bronze Strips.
First use June 18, 1958.

SN 101,654. Acme Quality Paints, Inc., Detroit, Mich. Filed July 29, 1960.

84 SOLIDARE

For Metal Plastic Filler/Boner and Hardener for Repairing Dents and Holes in Metal.
First use on or about Mar. 22, 1957.

SN 105,936. United Industrial Corporation, Los Angeles, Calif. Filed Oct. 6, 1960.



For Castings and Forgings That Are Used in the Fabrication and Manufacture of Stokers and Parts Thereof.
First use about Mar. 1, 1932.

SN 110,067. Litho-Strip Corporation, Chicago, Ill. Filed Dec. 12, 1960.

LITHO-STRIP

Owner of Reg. No. 603,504.
For Enameled Metal.
First use Apr. 27, 1953.

SN 116,100. The Youngstown Sheet and Tube Company, Boardman, Ohio. Filed Mar. 20, 1961.

YO-NAMEL

For Metal Colls and Sheets.
First use June 2, 1960.

SN 116,650. Leggett & Platt, Inc., Carthage, Mo. Filed Mar. 28, 1961.

ACTION ARC

For Sinuous Wire.
First use Feb. 3, 1961.

SN 116,960. Armco Steel Corporation, Middletown, Ohio. Filed Apr. 3, 1961.

SSS 100

For High Strength Alloy Steel.
First use May 28, 1960.

Class 16—Protective and Decorative Coatings

SN 108,756. W. H. Sweeney and Company, St. Paul, Minn. Filed Oct. 19, 1960.

LION BRAND

The word "Brand" is disclaimed apart from the mark as shown.
For Paints, Putty, Solvents, and Varnishes.
First use in 1884.

SN 122,119. Reliance Varnish Company, Louisville, Ky. Filed June 19, 1961.

REL-VAR

For Synthetic Resin Coatings, Stains, Fillers, Lacquers, Varnishes, Enamels.
First use June 1, 1948.

SN 122,277. Cook Paint & Varnish Company, Kansas City, Mo. Filed June 19, 1961.

ARMORCOTE

Owner of Reg. No. 147,576.
For Acrylic Enamel.
First use June 9, 1961.

SN 123,226. Ohio Pacific Corporation, Canton, Ohio. Filed June 30, 1961.



For Protective Coatings—Namely, Ready-Mixed Oil Paints, Latex Base Paints, Creosote Base Paints, and Stains.
First use May 29, 1961.

Class 17—Tobacco Products

SN 75,503. Rose of Latakia Mfg. Co., Inc., New York, N.Y. Filed June 10, 1959.



For Liquid Tobacco Casing, Which Cures, Flavors and Imparts to Tobacco a Delicate and Lasting Aroma and Mellowness.
First use Jan. 1, 1872.

Class 18—Medicines and Pharmaceutical Preparations

SN 114,954. Graham Chemical Corp., Springfield Gardens, N.Y. Filed Mar. 6, 1961.

DYNACAINE

For Local Anesthetic.
First use Feb. 17, 1961.

SN 116,116. "FO-WE" Forschungs- und Verwertungs-Anstalt, Vaduz, Liechtenstein. Filed Mar. 21, 1961.

HEPAIODRINE

Priority claimed under Sec. 44(d) on Liechtenstein Reg. No. 1,115, dated Dec. 19, 1960.
For Medicinal and Pharmaceutical Preparation Containing a Composition of Iodine and Heparine.

SN 116,117. "FO-WE" Forschungs- und Verwertungs-Anstalt, Vaduz, Liechtenstein. Filed Mar. 21, 1961.

HEPARIODINE

Priority claimed under Sec. 44(d) on Liechtenstein Reg. No. 1,101, dated Nov. 18, 1960.
For Medicinal and Pharmaceutical Preparation Containing a Composition of Iodine and Heparine.

SN 116,617. Aktiebolaget Bofors, Bofors, Sweden. Filed Mar. 28, 1961.

CORTEPYROL

Owner of Swedish Reg. No. 89,020, dated Mar. 4, 1960.
For Pharmaceutical Preparations and Medicated Bandaging Material.

SN 117,621. Cutter Laboratories, Berkeley, Calif. Filed Apr. 11, 1961.

HORN-GO

For Veterinary Pharmaceutical Preparation for De-Horning Calves.
First use on or before Feb. 27, 1961.

SN 119,626. Eli Lilly and Company, Indianapolis, Ind. Filed May 9, 1961.

SOLGEN

For Extracted Pertussis Antigen Useful in Preparing a Pertussis Vaccine.
First use May 2, 1961.

SN 119,627. Eli Lilly and Company, Indianapolis, Ind. Filed May 9, 1961.

TRI-SOLGEN

For Immunizing Biological Preparation Containing Diphtheria and Tetanus Toxoids and Pertussis Vaccine.
First use May 2, 1961.

SN 120,526. Robert P. Howard, d.b.a. The Howard Company, Los Angeles, Calif. Filed May 22, 1961.

ETHIGEL

For Pharmaceutical Product Useful for the Relief of Gastric Hyperacidity and Ulcers.
First use on or about Apr. 11, 1961.

ORTHO-NOVUM

Owner of Reg. Nos. 589,221 and 601,555.
For Hormonal Preparation.
First use Aug. 31, 1960.

SN 111,225. A. Robinson, Inc. of Altoona, d.b.a. Aludon Products Co., Altoona, Pa. Filed Jan. 3, 1961.



For Castor Oil, Epsom Salts, Calamine Lotion, Tincture of Iodine, Aspirin Tablets, Vitamin Tablets and Capsules, Milk of Magnesia Tablets, Boric Acid, Saccharin Tablets, Rubbing Alcohol, Hydrogen Peroxide, Mild Antiseptic for Minor Cuts and Abrasions, Antiseptic Mouth Wash, Citrate of Magnesia, Astringent Mouth Wash, White Petroleum Jelly, Cough Syrups, Laxatives, and Preparation Used for the Treatment of Upset Stomach.
First use Oct. 13, 1960.

SN 111,607. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 10, 1961.

HIPPUTOPE

For Iodohippurate Radio-Iodinated Preparations.
First use May 18, 1960.

SN 112,761. Palos Verdes Bird Farm, Inc., Waleria, Calif. Filed Jan. 30, 1961.

SULFA-ZINE

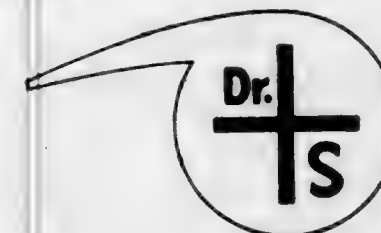
For Veterinary Preparation for the Treatment of Infections in Birds.
First use Oct. 18, 1960.

SN 114,464. Harry Fisher, d.b.a. Fisher Feeds, Portland, Oreg. Filed Feb. 27, 1961.

MOR-RUN

For Horse Feed Supplement.
First use during May 1958.

SN 114,583. Dr. Salisbury's Laboratories, Charles City, Iowa. Filed Feb. 7, 1961.



Owner of Reg. Nos. 516,874 and 520,225.
For Veterinary Preparations for the Treatment of Poultry, Domesticated Animals and Farm Livestock.
First use Apr. 21, 1960.

TM 771 O.G.—2

SN 120,609. Aktiebolaget Leo, Helsingborg, Sweden. Filed May 23, 1961.

REACTHIN

Owner of Swedish Reg. No. 71,949, dated May 9, 1952.
For Pharmaceutical Preparation Having Acth Activity.

SN 120,644. Lloyd Brothers, Inc., Cincinnati, Ohio. Filed May 23, 1961.

DUAD

For Medicines and Pharmaceutical Preparations—Namely, Analgesic-Antipyretic Decongestant.
First use on or about Apr. 30, 1958.

SN 120,714. E. Fougere & Co., Inc., Hicksville, N.Y. Filed May 24, 1961.

MYLOPAQUE

For Preparation for a Radiopaque Contrast Medium.
First use May 5, 1961.

SN 120,943. B. F. Ascher & Company, Inc., Kansas City, Mo. Filed May 29, 1961.

NIATRICON

For Medicinal Preparation for Use in the Old Age Syndrome.
First use May 5, 1961.

SN 121,002. Lambda Pharmacal Laboratories Inc., Ocean-side, N.Y. Filed May 29, 1961.

LAMBDA

For Pediatrics Products—Namely, Vitamin Drops, Vitamin Syrups, and Diaper Rash Therapy; Geriatrics Products in Injectable, Tablet and Capsule Form; Anti-Diarrhea Preparations, Obesity Compounds, Antibiotics, Anti-Spasmodics, Antacids, Ophthalmic and Ear Preparations, Vitamins and Hormones, Liver Products in Tablets, Capsules, Liquids and Ointments.

First use in October 1952.

SN 121,246. Geigy Chemical Corporation, Ardsley, N.Y. Filed June 2, 1961.

INDULITON

Owner of Reg. No. 685,473.
For Anticoagulants.
First use May 25, 1961.

SN 121,274. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed June 2, 1961.

BQNAZIN

For Sterile Ophthalmic Solution.
First use Sept. 19, 1955.

SN 121,560. Grove Laboratories Incorporated, St. Louis, Mo. Filed June 7, 1961.

BQ

For Cold Preparation.
First use Apr. 14, 1961.

SN 121,665. Provident Pharmaceuticals, Inc., Chattanooga, Tenn. Filed June 8, 1961.

PROVISUL

For Antibiotic, Antihistaminic, Ethical Pharmaceutical Preparation in Both Tablet and Liquid Form Used in the Treatment of Common Colds and Upper Respiratory Infections, and Certain Allergies.
First use Sept. 14, 1960.

SN 121,690. Alcon Laboratories, Inc., Fort Worth, Tex. Filed June 9, 1961.

LYOPHRIN

For Ophthalmic Preparations.
First use Apr. 27, 1961.

SN 121,777. White Laboratories, Inc., Kenilworth, N.J. Filed June 9, 1961.

ORPITIL

For Skeletal Muscle Relaxant.
First use on or about May 9, 1961.

SN 121,796. Barnes-Hind Ophthalmic Products, Inc., Sunnyvale, Calif. Filed June 12, 1961.

E P P Y

For Ophthalmic Solution for Intra-Ocular Pressure Depressant for Use in Therapy for Glaucoma.
First use Mar. 30, 1961.

SN 121,899. Bristol-Myers Company, New York, N.Y. Filed June 13, 1961.

DURALAST

For Preparation for Relief of Coughs.
First use Mar. 30, 1961.

SN 121,900. Bristol-Myers Company, New York, N.Y. Filed June 13, 1961.

DURALAST

For Analgesic.
First use Mar. 1, 1961.

SN 121,902. Bristol-Myers Company, New York, N.Y. Filed June 13, 1961.

DURASPAN

For Preparation for Relief of Coughs.
First use Mar. 30, 1961.

SN 122,053. American Cyanamid Company, New York, N.Y. Filed June 15, 1961.

FELAC

For Iron Complex for Veterinary Use.
First use Apr. 1, 1961.

SN 122,114. The Purdue Frederick Company, New York, N.Y. Filed June 15, 1961.

SENOVITE

For Preparation for the Treatment of Constipation.
First use May 31, 1961.

SN 122,257. B. F. Ascher & Company, Inc., Kansas City, Mo. Filed June 10, 1961.

LEMASCORB

For Ascorbic Acid Tablets.
First use during September 1949.

Class 19—Vehicles

SN 101,948. Inland Marine Corporation, Minneapolis, Minn. Filed Aug. 3, 1960.

Jet Stream

For Boats.
First use May 14, 1959.

SN 103,027. James M. Lacy, d.b.a. Aid Masters, Harrison, N.J. Filed Aug. 19, 1960.



For Automobile Controls for the Handicapped.
First use Jan. 8, 1960; May 1954 without the word designation.

SN 107,079. Jacob Van Geuns, The Hague, Netherlands. Filed Oct. 24, 1960.

AQUAVION

Priority claimed under Sec. 44(d) on Dutch application filed Apr. 26, 1960; Reg. No. 137,611, dated June 13, 1960.
For Ships, Boats and Other Water Vehicles Provided With Hydrofoils; Ships, Boats and Other Water Vehicles Supported by One or More Air-Cushions; Ships, Boats and Other Water Vehicles Supported and/or Propulsed by One or More Separate Moving Floating Elements.

SN 113,769. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 15, 1961.

DIPLOMAT II

For Golfers' Gasoline Powered Transport Carts.
First use on or about Apr. 7, 1959.

SN 117,970. John R. Kissock and William Haslett, d.b.a. H & K Distributors, Butte, Mont. Filed Apr. 17, 1961.

Pack-Kat

For Motor Driven, Two-Wheeled Scooters.
First use Nov. 15, 1960.

DUO-MATIC

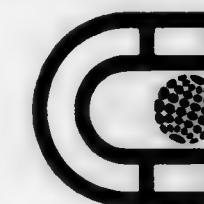
For Curb Feelers.
First use in February 1960.

SN 118,500. Schofield Mfg. Co., Cleveland, Ohio. Filed Apr. 24, 1961.

SCHOFIELD

Owner of Reg. No. 502,974.
For Automobile Body Replacement Panels and Patches Made of Metal—Namely, Door, Rocker and Body Panels and Cowl and Fender Patches.
First use Mar. 1, 1945.

SN 121,783. Allmänna Svenska Elektriska Aktiebolaget, Vanteras, Sweden. Filed June 12, 1961.



Owner of Swedish Reg. No. 89,138, dated Mar. 18, 1960.
For Motor Coaches, Trolley Buses, Cars, Trams and Trucks.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 79,671. Lighting Products, Inc., Highland Park, Ill. Filed Aug. 17, 1959.

LPI POWER-LUX

For Electric Lighting Fixtures.
First use on or about Mar. 9, 1959.

SN 84,896. Dondel Company, Phoenix, Ariz. Filed Nov. 2, 1959.

3-D LIGHTING

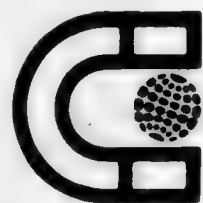
Applicant disclaims the word "Lighting" apart from the mark as shown.
For Lighting Fixture for Use in Combination With Medicine Cabinet Door Mirror and the Like To Illuminate an Individual Standing Before the Mirror.
First use Feb. 15, 1959.

SN 95,131. Victor Company of Japan, Limited, Kanagawa-ku, Yokohama City, Japan. Filed Apr. 14, 1960.

PHONTÉ

Priority claimed under Sec. 44(d) on Japanese application filed Oct. 27, 1959; Reg. No. 572,802, dated May 15, 1961.
For Magnetic Recorders and Reproducers; Magnetic Recording and Reproducing Business Machines and Accessories Thereof—Namely, Microphones, Magnetic Erasers, Magnetic Printers, Telephone-Pickup Devices and Microphone Mixers.

SN 98,191. Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden. Filed June 1, 1960.



Owner of Swedish Reg. No. 89,138, dated Mar. 18, 1960. For Electrical Apparatus, Machines and Supplies—Namely, Generators, Electrical Motors and Converters, Electric Rectifiers, Transformers, Tap-Changers, Circuit Breakers, Switches, Relays, Transducers and Regulators, Resistors, Reactors, Capacitors, Lightning Arresters, Fuses, Electric Conducting Material, Electric Cables, Switchgears, Electric Welders, Welding Electrodes, Magnetic Material, Magnetic Cores and Magnets, Electric Illuminating Apparatus, Electric Furnaces and Auxiliary Equipment—Namely, Rotating Machines and Control Panels, and Electric Stirrers, Electric Stoves, Electric Insulating Material—Namely, Glass Fibre: Yarn, Roving, Tape, Sleeving, Cord, Cloth, Mat and Chopped Strands, Electric Locomotives, Electric Power Plants, Electric Switch-Gear Plants and Transformer Plants, Electrical Signalling and Controlling Devices, Electrical Protective Devices, Electrical Control and Supervisory Equipment including Switchboards and Instrument Panels Therefor, and Apparatus for Industrial Processes for Drying.

SN 104,106. Polytran Industries, Inc., San Mateo, Calif. Filed Sept. 8, 1960.

HI-Q

For Small Portable Radio Receiver Set Sold and Distributed as a Toy. First use Mar. 4, 1960.

SN 104,107. Polytran Industries, Inc., San Mateo, Calif. Filed Sept. 8, 1960.

ROCKETEER

For Toy Pocket Type Radio Receiving Device. First use Mar. 4, 1960.

SN 104,108. Polytran Industries, Inc., San Mateo, Calif. Filed Sept. 8, 1960.

GALAXY

For Small Pocket Type All Transistor Portable Radio Receiving Sets. First use Mar. 4, 1960.

SN 104,227. Calbest Engineering & Electronics Co., Los Angeles, Calif. Filed Sept. 12, 1960.

REVERB-O-PLEX

For Electronic Amplifiers. First use May 17, 1960.

SN 107,970. Radiant Baseboard Panels, Incorporated, Newington, Conn. Filed Nov. 7, 1960.



Owner of Reg. No. 605,274. For Electric Radiators—Namely, Finned-Tube Heat Transfer Elements and Enclosures Therefor. First use Oct. 27, 1960.

SN 108,410. Superweld Corporation, North Hollywood, Calif. Filed Nov. 14, 1960.

OWL-ITE

For Electrically Energized Traffic Warning Lamp With Reflector. First use Oct. 24, 1960.

SN 108,779. Hampton Manufacturing Company, New Rochelle, N.Y. Filed Nov. 21, 1960.

INSULON

For Synthetic Resin Electrical Insulating Tape. First use Oct. 20, 1960.

SN 110,530. Dialtron Corporation, Brooklyn, N.Y. Filed Dec. 20, 1960.

DIALTRON

For Electronic and Electrical Relays. First use Nov. 9, 1956.

SN 112,551. Koyo Selko Co., Ltd., Ikunoku, Osaka, Japan. Filed Jan. 26, 1961.

KOYO

The English equivalent of the word "Koyo" is "light of the sea." For Radios. First use Dec. 25, 1956; in commerce Dec. 25, 1956. Subj. to Intf. with SN 108,900.

SN 113,246. Solitron Devices, Inc., Norwood, N.J. Filed Feb. 7, 1961.

SOUNVISTER

For Noise Diodes. First use Mar. 31, 1960.

SN 113,247. Solitron Devices, Inc., Norwood, N.J. Filed Feb. 7, 1961.

SOLIDPAKS

For Single and Multi-Phase Bridges, High Voltage Assemblies, and Network Assemblies. First use Feb. 1, 1960.

SN 113,570. Sprague Electric Company, North Adams, Mass. Filed Feb. 13, 1961.

LOGIPAK

For Electronic Digital Computer Circuits. First use Nov. 7, 1960.

SN 114,584. Ampco Corporation, Columbus, Ohio. Filed Feb. 28, 1961.

SPIN SECT

For Electrically-Operated Insect Trap. First use May 9, 1960.

SN 114,708. James R. Kearney Corporation, St. Louis, Mo. Filed Mar. 1, 1961.

UNIGAP

For Lightning Arresters. First use Jan. 26, 1961.

SN 114,905. Abbey Chemical Co., Inc., Providence, R.I. Filed Mar. 6, 1961.

THUNDERBOLT

For Electrically Operated Deodorizing Apparatus. First use in or about April 1960.

SN 114,937. Decibel Products, Inc., Dallas, Tex. Filed Mar. 6, 1961.

DECIBEL products

Applicant disclaims the word "Products" apart from the mark as shown.

For Radio Frequency Antennas; Radio Frequency Transmission Lines; Radio Frequency Transmission Line Components, Such as Connectors, Adaptors and Fittings; Radio Frequency Duplexers, Diplexers, Isolators and Matching Networks.

First use Feb. 14, 1961.

SN 118,678. Archibald T. Flower, d.b.a. Arch T. Flower Co., Philadelphia, Pa. Filed Apr. 26, 1961.

COV-A-TAP

For Insulating Covers for Electrical Splices. First use Mar. 6, 1961.

SN 118,850. Cannon Electric Company, Los Angeles, Calif. Filed Apr. 28, 1961.

MICROSOCKET

For Electrical Plugs and Electrical Connectors. First use Mar. 21, 1961.

SN 118,861. Cannon Electric Company, Los Angeles, Calif. Filed Apr. 28, 1961.

MICROPLUG

For Electrical Plugs and Electrical Connectors. First use Mar. 21, 1961.

SN 118,862. Cannon Electric Company, Los Angeles, Calif. Filed Apr. 28, 1961.

MICROPIN

For Electrical Plugs and Electrical Connectors. First use Mar. 21, 1961.

SN 119,050. Revere Corporation of America, Wallingford, Conn. Filed May 1, 1961.

TASKOTE

For Insulated Electrical Conductors. First use Dec. 9, 1960.

SN 119,178. Briscoe Electric Manufacturing Corporation, Auburn, Mass. Filed May 3, 1961.

BRISCON

For Electrical Supplies—Namely, Bill Plates, Cable Connectors, Cable Straps, Conduit Fittings, Conduit Straps, Drive Straps, Cable Staples, Lock-Over Clips, Fish Wire and Conduit Locknuts. First use Nov. 15, 1956.

SN 119,347. Bourns, Inc., Riverside, Calif. Filed May 5, 1961.

TRIMPOT

Owner of Reg. Nos. 602,968, 629,473, and 661,644. For Electrical Apparatus, Machines, and Supplies—Namely, Fixed-Value Resistors and Variable Resistors. First use Sept. 24, 1952.

SN 119,348. Bourns, Inc., Riverside, Calif. Filed May 5, 1961.

BOURNS

Owner of Reg. Nos. 603,933, 658,781, and others. For Electrical Apparatus, Machines, and Supplies—Namely, Potentiometers, Relays and Resistors. First use Feb. 25, 1947.

Class 22—Games, Toys, and Sporting Goods

SN 111,769. Oscar L. Stone, d.b.a. O and A Lure Mfg., Kansas City, Mo. Filed Jan. 12, 1961.

O AND A LURE

No claim of exclusive right is made to "Lure" as used on fishing lures. For Fishing Lures. First use Sept. 1, 1960.

SN 112,878. The American Thermos Products Company, Norwich, Conn. Filed Feb. 1, 1961.

THERMOS

Owner of Reg. Nos. 67,002 and 700,748.
For Swivel Seat Shell Boxes for Use by Hunters.
First use Dec. 15, 1960.

SN 113,315. Techni Electronics, Inc., Orange, N.J. Filed Feb. 8, 1961.

REST'N CYCLE

For Rotary Pedal Push-Type Exercising Machine.
First use July 28, 1960.

SN 113,736. Conrad G. Lambert, d.b.a. Lambert's Cycle & Toy Shop, Claremont, N.H. Filed Feb. 15, 1961.

TOY CASTLE

Owner of Reg. No. 613,841.
For Archery Sets; Blackboards; Log Sets, Building Sets; Dolls and Doll Carriages; Table Tennis Sets, Equipment for Playing Board, Card, or Similar Type Games; Mechanical Toys; Toy Accordions, Toy Pianos, Toy Musical Instruments, Toy Music Boxes; Pool Tables; Rocking Horses; Scooters; Sleds; Skis; Stuffed Toys; Children's Tricycles; and Toy Building Sets, Cars, Chests, Coloring Sets, Dishes, Guns, Holster Sets, Molding Sets, Pistols, Printing Sets, Soldiers, Stoves, Tools, Toolboxes, Planes, Tractors, Trains, Trucks and Wagons.
First use Jan. 6, 1954.

SN 114,260. Playland Toy Corp., New York, N.Y. Filed Feb. 23, 1961.

CAROLINE KAY

For Dolls.
First use Feb. 1, 1961.

SN 114,706. The Hubley Manufacturing Company, Lancaster, Pa. Filed Mar. 1, 1961.

DART-A-MATIC

For Blow-Gun Type Toy Pistol.
First use July 1, 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 88,341. Trans-World Industries, Inc., Long Island City, N.Y. Filed Dec. 31, 1959.



For Sewing Machines and Accessories.
First use Dec. 14, 1959.

SN 92,869. Compax Corp., Woodside, N.Y. Filed Mar. 15, 1960.

PACSET

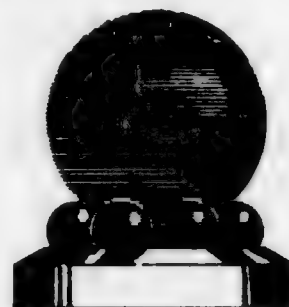
For Textile Finishing Machinery.
First use Feb. 11, 1960.

SN 97,839. Earl Larson, d.b.a. Glen Ellyn Mower and Marine, Glen Ellyn, Ill., assignee of Glen Ellyn Mower & Marine, Glen Ellyn, Ill. Filed May 25, 1960.

G. E. M.

For Motor Mounts, Exhaust Headers To Direct Exhaust Gases Away From Engines, and Chain Guards To Prevent Injury in Case of Power Transmission Chain Breakage.
First use Nov. 16, 1959.

SN 100,254. Hoover Ball and Bearing Company, Ann Arbor, Mich. Filed July 5, 1960.



For Balls and Bearings.
First use Mar. 3, 1958.

SN 104,592. Joseph D. Conway, d.b.a. Certified Chemical & Equipment Company, Cleveland, Ohio. Filed Sept. 16, 1960.

SPEEDMASTER

For Rug and Carpet Cleaning Machines Used Commercially on Location and in Rug Cleaning Plants.
First use Mar. 26, 1948.

SN 105,266. Concrete Pipe Machinery Company, Sioux City, Iowa. Filed Sept. 27, 1960.



The representation of the concrete pipe shown on the drawing is disclaimed apart from the entire mark.
For Concrete Pipe Machines and Parts Thereof.
First use Apr. 25, 1959.

SN 106,130. Cletrac Corporation, Chicago, Ill., by change of name from The Oliver Corporation, Chicago, Ill. Filed Oct. 10, 1960.

CLETRAC

Owner of Reg. No. 154,907.
For Tractors and Parts and Attachments Therefor.
First use on or about Dec. 31, 1918.

SN 109,153. Battenfeld Corporation of America, Chicago, Ill. Filed Nov. 28, 1960.

BATTENFELD

For Plastic Molding Machines.
First use 1946.

SN 113,946. W. Schlafhorst & Co., M. Gladbach, North Rhine-Westphalia, Germany. Filed Feb. 17, 1961.

AUTOCONER

Owner of German Reg. No. 611,009, dated Aug. 29, 1951; and U.S. Reg. No. 624,025.
For Textile Machines—Namely, Machines for Winding Thread and Yarn.

SN 114,606. Fry's Metal Foundries Limited, London, England. Filed Feb. 28, 1961.



Owner of U.S. Reg. No. 718,422.
For Soldering Machines and Apparatus.
First use March 1957; in commerce March 1957.

SN 116,003. Capitol Products Corporation, Mechanicsburg, Pa. Filed Mar. 20, 1961.

Smoothline

For Article Transporting Conveyors.
First use Feb. 13, 1961.

SN 116,019. Gomex Verktug Aktiebolag, Stuvsta, Sweden. Filed Mar. 20, 1961.

GOMEX

For Hard Metal Saw Blades and Hard Metal Cutters.
First use Oct. 16, 1960; in commerce Oct. 16, 1960.

SN 116,082. Claude B. Schneible Co., Detroit, Mich. Filed Mar. 20, 1961.

FLASKCONDITIONER

For Foundry Flask Straightening Mechanism.
First use Mar. 1, 1961.

SN 116,093. Vari-Typer Corporation, Newark, N.J. Filed Mar. 20, 1961.

VariTyper

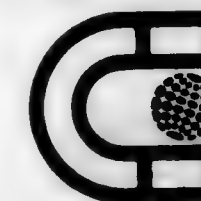
Owner of Reg. Nos. 251,465, 656,792, and others.
For Office Composing Machines Including Parts Therefor.
First use Nov. 10, 1960; Dec. 7, 1926, in a different style.

SN 116,208. Central Mine Equipment Company, St. Louis, Mo. Filed Mar. 22, 1961.

CME

For Bits, Augers, Drill Heads, Shanks, Sockets, Screw Conveyors, and Fishing Tools.
First use Nov. 20, 1951.

SN 121,782. Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden. Filed June 12, 1961.



Owner of Swedish Reg. No. 89,138, dated Mar. 18, 1960.
For Cranes, Lifts, Hoists, Escalators, Machine Tools, Rolling Mills, Paper Machines, Pumps, Textile Machines, Compressors, Dredgers, Gears and Geared Motors, Steam and Gas Turbines, Thermal Power Plants, Apparatus for Industrial Processes for Gas Cleaning, Electric and Hydraulic Apparatus Used on Ships—Namely, Slip-Couplings, Propeller Shaft Sets, Windlasses, Winches, Capstans, Deck Cranes, Steering Gear and Clear Sight Screens.

Class 25—Locks and Safes

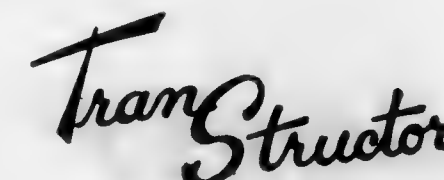
SN 116,231. Independent Lock Company, Fitchburg, Mass. Filed Mar. 22, 1961.

PLYLOK

For Padlocks.
First use Feb. 6, 1961.

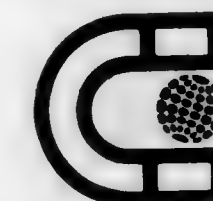
Class 26—Measuring and Scientific Appliances

SN 108,746. William M. Cannon, Jr., Northridge, Calif. Filed Nov. 21, 1960.



For Electronic Instructional Aid for Demonstrating Basic Transistor Biasing Circuits, Common Base, Common Emitter and Common Collector Transistor Circuit Configurations, Single Stage Amplifiers, Double and Multiple Stage Amplifiers Both AF and RF, Oscillators, Detectors, Multivibrators, Radio Receivers From Simple Diode Circuits Through Six Transistor Superheterodyne AM Receivers, Simple Transmitters, and Gating Circuits.
First use Sept. 11, 1960.

SN 121,892. Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden. Filed June 12, 1961.



Owner of Swedish Reg. No. 89,138, dated Mar. 18, 1960.
For Nuclear Reactors, Nuclear Fuel, Nuclear Moderators, Nuclear Coolants, Nuclear Plants and Parts, Fuel Loading Apparatus for Nuclear Reactors; Plants for Processing Nuclear Fuel, Nuclear Moderating Material, Reflectors and for Processing Coolants for Nuclear Energy Plants and Measuring Apparatus and Instruments.

Class 27—Horological Instruments

SN 108,073. Nicolet Watch S.A., Tramelan, Jura Bernois, Switzerland. Filed Nov. 8, 1960.



Owner of Swiss Reg. No. 148,772, dated Nov. 18, 1953. For Horological Products—Namely, Watches, Watch Movements, Watch Casings, Watch Dials, and Parts of Watches.

SN 118,216. M. Z. Berger & Co., New York, N.Y. Filed Apr. 20, 1961.

ELWOOD

For Watches.
First use May 1958.

SN 118,462. E. Mathey-Tissot & Co. S.A., Les Ponts-de-Martel, Switzerland. Filed Apr. 24, 1961.

BOREAL

Owner of Swiss Reg. No. 130,731, dated Oct. 14, 1949. For Watches and Parts Thereof.

Class 28—Jewelry and Precious-Metal Ware

SN 114,682. Carole Accessories, Inc., Los Angeles, Calif. Filed Mar. 1, 1961.



For Costume Jewelry.
First use Feb. 2, 1961.

Class 29—Brooms, Brushes, and Dusters

SN 106,779. Aktiebolaget Husqvarna Borstfabrik, Huskvarna, Sweden. Filed Oct. 20, 1960.

SIGNATUR

Owner of Swedish Reg. No. 83,569, dated Oct. 18, 1957. For Household Cleaning and Scrubbing Brushes, Toothbrushes, Bath Brushes and Car Brushes, Floor Mops, Sponge Mops, and Non-Electrical Floor Polishers.

SN 110,837. The Fuller Brush Company, East Hartford, Conn. Filed Dec. 27, 1960.

TRIM TEAM

For Set Consisting of a Clothes Brush and a Hair Brush. First use on or about Oct. 10, 1960.

Class 30—Crockery, Earthenware, and Porcelain

SN 105,346. The Easterling Company, Chicago, Ill. Filed Sept. 28, 1960.



For China Tableware.
First use Apr. 9, 1951.

Class 31—Filters and Refrigerators

SN 64,452. Berkefeld-Filter Gesellschaft und Celler Filterwerke G.m.b.H., Celle, Hannover, Germany. Filed Dec. 17, 1958.

BERKEFELD

Owner of German Reg. No. 98,306, dated June 4, 1907. For Filtering Apparatus and Filter-Cylinders. First use January 1892; in commerce January 1892.

SN 64,454. Berkefeld-Filter Gesellschaft und Celler Filterwerke G.m.b.H., Celle, Hannover, Germany. Filed Dec. 17, 1958.

**ORIGINAL
BERKEFELD-FILTER
CELLE**

Owner of German Reg. No. 617,305, dated Feb. 28, 1952. For Filters, Filtering Apparatus, Filter-Cylinders.

Class 32—Furniture and Upholstery

SN 105,863. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Oct. 6, 1960.

CLAYBOURNE

For Window Shades.
First use in June 1955.

SN 112,176. The United States Bedding Company, St. Paul, Minn. Filed Jan. 19, 1961.

MASTERFIRM

For Mattresses and Box Springs.
First use January 1954.

SN 115,690. Gusdorf and Sons, Inc., St. Louis, Mo. Filed Mar. 15, 1961.



For Wood, Metal and Combination Wood and Metal Furniture—Namely, Tables, Bases, Stands, and Accessory Supports for Television, Radio, Phonograph, and Related Articles, and Occasional Furniture Pieces.
First use Dec. 12, 1960.

Class 33—Glassware

SN 115,031. American-Wheaton Glass Corporation, Millville, N.J. Filed Mar. 7, 1961.



For Bottles and Jars.
First use Jan. 12, 1961.

SN 116,519. Hordis Bros., Inc., Philadelphia, Pa. Filed Mar. 27, 1961.



Applicant hereby disclaims the term "Tempered Glass" shown in the drawing. Owner of Reg. No. 690,237. For Safety Glass.
First use August 1956.

SN 123,109. Les Glaceries de la Sambre Societe Anonyme, Auvellais, Belgium. Filed June 29, 1961.



Priority claimed under Sec. 44(d) on Belgian Reg. No. 1,352 (Namur), dated May 27, 1961.
For Sheet Glass Absorbing Infrared Rays.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 106,505. Komo Corporation, Kokomo, Ind. Filed Oct. 17, 1960.

FASTEAMER

For Steam Bun Warmers Consisting of a Boiler and a Steam Head.
First use Aug. 1, 1960.

SN 112,874. The American Thermos Products Company, Norwich, Conn. Filed Feb. 1, 1961.

THERMOS

Owner of Reg. Nos. 67,002 and 700,748. For Gasoline Burning Stoves and Folding Stands Therefor, and Gasoline Operated Lanterns.
First use Nov. 18, 1960.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 115,021. Vogue Rubber Company, Chicago, Ill. Filed Mar. 6, 1961.

SLIMWITE

For Automobile Tires.
First use Feb. 25, 1961.

SN 118,244. Hastings Manufacturing Company, Hastings, Mich. Filed Apr. 20, 1961.



For Piston Rings.
First use July 29, 1957.

Class 36—Musical Instruments and Supplies

SN 116,697. Automatic Music, Inc., Grand Rapids, Mich. Filed Mar. 29, 1961.

AUTOMIX

For Record Changers.
First use Jan. 24, 1961.

SN 116,723. The Harmony Company, Chicago, Ill. Filed Mar. 29, 1961.

SOVEREIGN

For Portable Stringed Musical Instruments.
First use 1909.

Class 37—Paper and Stationery

SN 87,272. Carl M. Palmer, d.b.a. Automotive Sales Aids Company, St. Clair Shores, Mich. Filed Dec. 14, 1959.

REGISTERED OWNER

For Business Record Forms for Automotive Maintenance, Repair and Customer Records and Containers Therefor.
First use Jan. 5, 1954.

SN 114,802. Strathmore Paper Company, West Springfield, Mass. Filed Mar. 2, 1961.

GRANDEE

For All Kinds of Writing, Drawing and Printing Papers.
First use Nov. 27, 1925.

SN 115,277. S.E. & M. Vernon, Inc., New York, N.Y. Filed Mar. 9, 1961.



The lining on the drawing is part of the mark.
For Loose Leaf Fillers.
First use January 1960.

SN 116,772. Waldorf Paper Products Company, St. Paul, Minn. Filed Mar. 29, 1961.

BLEACH-WALD

For Paperboard.
First use Sept. 14, 1960.

SN 117,831. American Can Company, New York, N.Y. Filed Apr. 14, 1961.

STYLON

For Wrapping Paper.
First use Mar. 23, 1961.

Class 38—Prints and Publications

SN 112,023. The Billboard Publishing Company, Cincinnati, Ohio. Filed Jan. 18, 1961.

BILLBOARD MUSIC WEEK

Owner of Reg. Nos. 660,811 and 606,753.
For Trade Newspaper.
First use on or about Jan. 9, 1961.

SN 112,086. William L. Topp, d.b.a. Teis Medical Services Directories, Seattle, Wash. Filed Jan. 18, 1961.



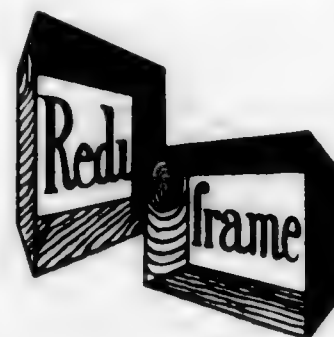
For Periodical Publications in the Nature of Medical Services Directories Containing Current Information and Advertisements Useful to Medical Practitioners and Those in Allied Fields.
First use Oct. 5, 1958.

SN 113,265. Coca-Cola Bottling Company of Minnesota, Incorporated, Minneapolis, Minn. Filed Feb. 8, 1961.

THE PAUSER

For Printed Monthly Publication for Company Employees.
First use Oct. 1, 1960.

SN 114,204. William R. Galter, Chicago, Ill. Filed Feb. 23, 1961.



For Postcards.
First use Jan. 18, 1961.

SN 115,127. Distributors' Promotions, Inc., Philadelphia, Pa. Filed Mar. 8, 1961.

WONDERLAND OF HOBBIES

For Catalogues Published Periodically.
First use June 15, 1960.

SN 115,306. Dell Publishing Co., Inc., New York, N.Y. Filed Mar. 10, 1961.

HOLLYWOOD ROMANCES

For Magazine Published Periodically.
First use June 1931.

SN 115,570. American Greetings Corporation, Cleveland, Ohio. Filed Mar. 14, 1961.

ROSEMARY

For Greeting Cards.
First use Mar. 6, 1961.

SN 116,268. Specialty Salesman Magazine, Inc., Chicago, Ill. Filed Mar. 22, 1961.

SPECIALTY SALESMAN

For Magazine Published at Regular Intervals.
First use January 1917.

SN 116,376. Walter J. Black, Inc., d.b.a. Detective Book Club, Roslyn, N.Y. Filed Mar. 24, 1961.

DETECTIVE BOOK CLUB

For Individual Books and Series of Books.
First use Feb. 9, 1942.

SN 116,432. Schieffelin & Co., New York, N.Y. Filed Mar. 24, 1961.

CURRENTS IN OPHTHALMOLOGY

For Newsletter.
First use October 1960.

SN 116,741. McCormick & Company, Incorporated, Baltimore, Md. Filed Mar. 29, 1961.

PEPPER-UPPER

For Periodical Publication in the Nature of a House Organ Published From Time to Time.
First use Jan. 18, 1961.

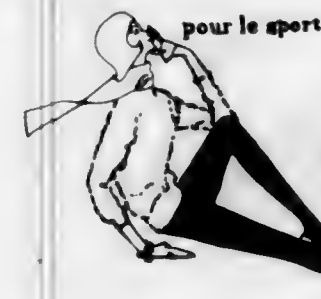
Class 39—Clothing

SN 75,454. Clifton Wood, d.b.a. Western Supply Company, Ardmore, Okla. Filed June 9, 1959.

CLIFTON'S PRINCESS

For Footwear for Women.
First use Apr. 1, 1959.

SN 80,417. Haymaker Sports, Inc., New York, N.Y. Filed Dec. 1, 1959.



"Pour le Sport" is disclaimed apart from the mark as shown. The girl appearing as part of the mark is a fictitious person.

For Leotards.
First use July 1956.

SN 91,289. Style Undies, Inc., Ozone Park, N.Y. Filed Feb. 19, 1960.



The word "Undies" is disclaimed, except as used in the composite mark shown. Owner of Reg. No. 417,510.
For Children's, Misses', and Women's Undergarments—Namely, Panties, Slips, Half Slips, Tights, Leotards, and Pajamas, Nightgowns, Robes, and Dressing Gowns.
First use 1947.

SN 93,899. Alamo Manufacturing Co., Inc., New York, N.Y. Filed Mar. 29, 1960.

"JIFFY WEAR"

The designation "Wear" is disclaimed apart from the mark as shown. Owner of Reg. No. 559,279.
For Ladies' Dresses.
First use Mar. 15, 1960.

SN 94,017. Ernst Patzak-Poor, Munich, Germany. Filed Mar. 30, 1960.

WEDEL

Owner of German Reg. No. 729,960, dated Oct. 14, 1959.
For Sports and Ski Clothing for Men, Women, and Children—Namely, Pants, Jackets, Pullovers, Sweater-Like Hooded Jackets; and Blouses.

SN 99,067. Maidenform, Inc., New York, N.Y., by change of name from Maiden Form Brassiere Company, Inc., New York, N.Y. Filed June 15, 1960.

LEGATO

For Foundation Garments—Namely, Brassieres.
First use June 6, 1960.

SN 99,589. Lujan, Inc., New York, N.Y. Filed June 23, 1960.



For Shoes for Men, Ladies, and Children.
First use May 1, 1960.

SN 101,591. Advance Glove Manufacturing Company, Detroit, Mich. Filed July 28, 1960.

PERMATEX

For Gloves Useful, for Example, as Work Gloves.
First use Mar. 9, 1959.

SN 102,749. Essex Products, Inc., Haverhill, Mass. Filed Aug. 16, 1960.

QUIET TOP

For Toplifts.
First use June 13, 1960.

SN 103,905. Chatham Garment Co., Inc., New York, N.Y. Filed Sept. 6, 1960.

HEIGHT O' FASHION

Owner of Reg. No. 644,293.
For Coats and Suits.
First use on or about Oct. 1, 1954.

SN 105,370. Newton Glove Manufacturing Company, Incorporated, Newton, N.C. Filed Sept. 28, 1960.



No claim is made to the word "Glove" or to the representation of the goods.
For Gloves for Men, Women, and Children.
First use July 15, 1960.

SN 105,481. Alix of Miami, Inc., Miami, Fla. Filed Sept. 30, 1960.

MR. ALIX

Owner of Reg. Nos. 632,740 and 677,008.
For Women's Outer Camisoles and Bras, Outer Shorts and Shirt Combinations, Swim Suits, Pedal Pushers, Slacks, Jackets, Blouses, Skirts, Beach Coats and Dresses; and Men's Shirts, Shorts, Slacks, Swim Suits, Sport Jackets and Beach Coats.
First use in or about July 1960.

SN 106,005. Societe Eminence, Nimes, Gard, France. Filed Oct. 7, 1960.



Owner of French Reg. No. 1,985, dated July 28, 1958 (Nimes); Natl. Inst. No. 112,067.
For Briefs, Waistcoats, Unlined Waistcoats, and T-Shirts for Men, Women, and Children, and Slips.

SN 106,865. Louis Walter & Co., Inc., Kansas City, Mo. Filed Oct. 20, 1960.

bellijean DIMENSIONAL COAT

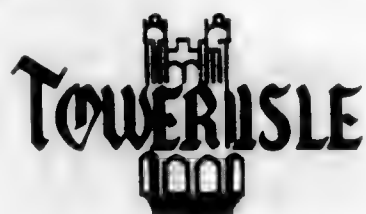
The words "Dimensional Coat" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 333,474 and 632,772. For Ladies' Coats.
First use Aug. 10, 1960.

SN 109,219. United States Rubber Company, New York, N.Y. Filed Nov. 28, 1960.

DRYFAST

Owner of Reg. No. 384,021.
For Sport Jackets and Trousers.
First use Feb. 14, 1939.

SN 110,496. United Shirt Shops, Inc., Jersey City, N.J. Filed Dec. 19, 1960.



The lining on the drawing is merely to reproduce the lines shown on the specimens.
For Men's and Boys' Shirts and Sport Shirts.
First use Apr. 19, 1960.

SN 110,514. Cora Zens, d.b.a. Cora Gels Convent Hosiery, Milwaukee, Wis. Filed Dec. 19, 1960.



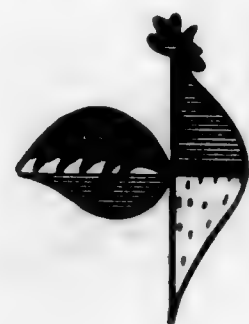
The name "Cora Gels" was the maiden name of the applicant. Applicant disclaims the word "Hosiery" apart from the mark.
For Hosiery.
First use Oct. 5, 1953.

SN 111,483. Claussner Hosiery Company, Paducah, Ky. Filed Jan. 9, 1961.

SATINSKINS

For Women's Hosiery.
First use in 1936.

SN 111,487. Eloesser-Heynemann Company, San Francisco, Calif. Filed Jan. 9, 1961.



The drawing is lined for the color blue but color is not claimed as an essential feature of the mark. Owner of Reg. Nos. 88,743, 124,832, and 182,949.
For Trousers and Slacks.
First use Feb. 9, 1959.

SN 111,574. Bernhard Altmann International Corporation, d.b.a. Bernhard Altmann, New York, N.Y. Filed Jan. 10, 1961.

LANABLAND

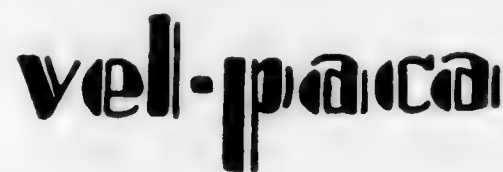
For Sweaters, Blouses, Skirts, Dresses, Jackets, and Hosiery for Men.
First use Dec. 15, 1960.

SN 111,584. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Jan. 10, 1961.

WIZARD WEAVE

The word "Weave" is disclaimed apart from the mark as shown. Owner of Reg. No. 438,872.
For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers and Vests.
First use Apr. 23, 1946.

SN 114,202. Fenway Coats, Inc., New York, N.Y. Filed Feb. 23, 1961.



Owner of Reg. No. 384,376.
For Misses' and Junior Misses' Coats, Suits, and Combinations Thereof.
First use Mar. 13, 1939.

Class 40—Fancy Goods, Furnishings, and Notions

SN 96,490. Gladys F. Hebert, Hilo, Hawaii. Filed May 5, 1960.



No claim is made to the words "Iron-on Applique" apart from the mark.
For Iron-on Transfer Patterns for Making Appliqueing Figures on Curtains, Clothing and the Like.
First use Mar. 3, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 84,838. Beacon Looms Inc., New York, N.Y. Filed Nov. 9, 1959.

EVERDUR

For Rugs, Window Curtains, and Draperies, All the Said Goods Being Made of Textile Fabrics.
First use Oct. 14, 1959.

SN 105,415. Bell Textile Co., Inc., New York, N.Y. Filed Sept. 29, 1960.

PILGRIM'S PRIDE

For Bedspreads.
First use Apr. 5, 1960.
Subj. to Intf. with SN 111,473.

SN 105,456. Newnan Mills, Inc., Newnan, Ga. Filed Sept. 29, 1960.

TOMAHAWK

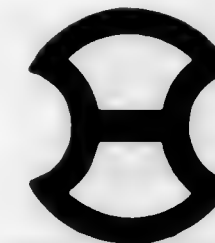
For Piece Goods for Women's Sportswear Such as Skirts, Blouses, and Jackets.
First use Aug. 22, 1960.

SN 105,499. Celanese Corporation of America, New York, N.Y. Filed Sept. 30, 1960.

ARNELURE

Owner of Reg. Nos. 609,202, 698,755, and others.
For Textile Fabric for Apparel and Home Furnishing Use.
First use at least as early as 1956.

SN 111,680. Nichimen Co., Ltd., Kita-ku, Osaka City, Japan. Filed Jan. 11, 1961.



The mark represents a weight or a balanced weight, as used in Japan. Owner of Japanese Reg. Nos. 160,641, 160,642, 160,643, all dated May 7, 1924; 160,189 dated Apr. 28, 1924; 415,645 dated Sept. 10, 1952.
For All Kinds of Mixed Textile Fabrics, Silk Textile Fabrics, Linen Textile Fabrics, Woolen Textile Fabrics, and Cotton Textile Fabrics.

SN 112,785. Wm. Simpson, Sons & Co., Inc., New York, N.Y. Filed Jan. 30, 1961.

PosTaire

Owner of Reg. No. 648,996.
For Trouser Fabric.
First use Nov. 18, 1960.

SN 116,401. William Hollins & Company Limited, Nottingham, England. Filed Mar. 24, 1961.



No claim is made to the word "Wear" except as shown. Owner of U.S. Reg. Nos. 155,717 and 183,709.
For Fabrics in the Piece Made of Wool With Other Fibers.
First use 1896; in commerce 1896.

SN 116,828. Minette Mills, Incorporated, Grover, N.C. Filed Mar. 30, 1961.

MINITUFT

For Bedspreads.
First use Mar. 15, 1961.

SN 116,945. John Wolf Textiles, Inc., New York, N.Y. Filed Mar. 31, 1961.

VALLEY PARK

For Cotton Fabrics in the Piece.
First use February 1961.

SN 116,947. John Wolf Textiles, Inc., New York, N.Y. Filed Mar. 31, 1961.

BALNARD

For Cotton Fabrics in the Piece.
First use February 1961.

SN 116,948. John Wolf Textiles, Inc., New York, N.Y. Filed Mar. 31, 1961.

RED RIVER

For Cotton Fabrics in the Piece.
First use February 1961.

Class 43—Thread and Yarn

SN 113,611. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Feb. 14, 1961.

LUXURIA NYLOMA

For Knitting Yarn of Natural and Synthetic Fibers for Use in Making Garments and the Like.
First use in November 1954.

SN 113,612. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Feb. 14, 1961.

LUXURIA POMPALAIN

For Yarns Made at Least in Substantial Part of Wool.
First use Dec. 18, 1953.

SN 113,927. Kurashiki Rayon Company Limited, Kurashiki, Japan. Filed Feb. 17, 1961.

KURASHIKI VINYLON

Owner of Japanese Reg. No. 417,568, dated Oct. 25, 1952.
For Thread and Yarn of Silk, Cotton, Wool, Hemp and Synthetic Fibers.

Class 44—Dental, Medical, and Surgical Appliances

SN 72,320. Johnson & Johnson, New Brunswick, N.J. Filed Apr. 27, 1959.

HELPING THE HANDS THAT HEAL

For Surgical Dressings, Including Bandages for Surgical Casts.
First use Sept. 17, 1958.

SN 85,968. Electro Medical Research Associates, Schenectady, N.Y. Filed Nov. 24, 1959.

Cardio-Axiograph

For Electronic Converter Devices for Use With a Cardio-graph.
First use Aug. 30, 1959.

SN 104,004. Etablissement Vivadent, Schaan, Liechtenstein. Filed Sept. 6, 1960.

KERATITE

Owner of Liechtenstein Reg. No. 969, dated Apr. 9, 1960.
For Filling Material for Molar Teeth.

SN 104,005. Etablissement Vivadent, Schaan, Liechtenstein. Filed Sept. 6, 1960.

TENET

Owner of Liechtenstein Reg. No. 940, dated Mar. 1, 1960.
For Oxyphosphate Cement for Dental Purposes, for the Preparation of Dental Fillings, Base Fillings, Fastening of Crowns, Bridges, Inlays and Other Orthodontic Work and Also Cementing Material for Non-Dental Purposes.

SN 111,981. Jean Leclabart, Paris, France. Filed Jan. 17, 1961.

PINSON

Owner of French Reg. No. 480,691, dated May 28, 1959 (Seine); Natl. Inst. No. 126,685.
For Hand Actuated Devices for Personal Massaging of the Scalp.

SN 115,899. Helene Curtis Industries, Inc., Chicago, Ill. Filed Mar. 17, 1961.

GOLD STAR

For Hair Dryer.
First use on or about Nov. 25, 1960.

Class 46—Foods and Ingredients of Foods

SN 111,319. Doubek Cookie Co., d.b.a. Broadview Baking Co., Broadview, Ill. Filed Jan. 5, 1961.

VARIETY VUE

For Cookies.
First use Dec. 9, 1960.

SN 111,548. The Procter & Gamble Company, Cincinnati, Ohio. Filed Jan. 9, 1961.

WINTON HILL

For Bulk Cake Mix.
First use Nov. 17, 1960.

SN 111,587. Continental Baking Company, Rye, N.Y. Filed Jan. 10, 1961.

HANDI-PIE

For Fruit Pies.
First use Sept. 17, 1959.

SN 111,649. Columbian Hog and Cattle Powder Company, Kansas City, Mo. Filed Jan. 11, 1961.

COMET

For Livestock and Poultry Feeds.
First use Nov. 15, 1960.

SN 112,584. Atlanta Trading Corp., New York, N.Y. Filed Jan. 27, 1961.

BLU-ROC

For Cheese.
First use Jan. 6, 1961.

SN 112,739. Leaf Brands, Inc., Chicago, Ill. Filed Jan. 30, 1961.

MR. FREEZE

Applicant disclaims exclusive right to the word "Freeze" apart from the mark as shown.
For Flavored Liquid Preparation for Making Frozen Pops.
First use Nov. 29, 1960.

SN 112,790. Talbott Foods, Inc., Tiburon, Calif. Filed Jan. 30, 1961.



For Imitation Milk Product—Namely, a Blend of Fat-Free Milk, Vegetable Fat, Salt, Vegetable Stabilizer, Artificial Flavor and Color, With Vitamins Added, for Human Consumption.
First use Jan. 20, 1961.

SN 113,033. Standard Fruit and Steamship Company, New Orleans, La. Filed Feb. 3, 1961.



Owner of Reg. No. 704,730.
For Bananas.
First use Jan. 20, 1961; Dec. 16, 1960, as to "Cabanita."

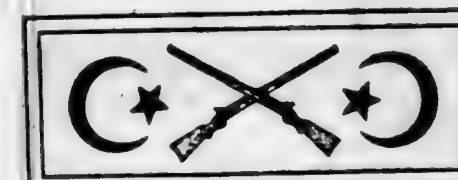
SN 114,564. The Wander Company, d.b.a. Ovaltine Food Products, Chicago, Ill. Filed Feb. 27, 1961.

MINVITINE 900

No registration rights are claimed for the numerals "900" apart from the mark shown.

For Food Preparation in Powder Form Consisting Principally of Skim and Whole Milk Solids, Vegetable Oil, With Vitamins, Minerals, Stabilizer and Flavoring Added, Primarily Made as a Food Concentrate for Mixing With Liquids or Skim Milk To Result in a Liquid Food Low in Caloric Content, Complete in Nutritive Value, for Use if Desired as a Reducing and Weight Control Diet.
First use Dec. 9, 1960.

SN 114,686. Comet Rice Mills, Houston, Tex. Filed Mar. 1, 1961.



For Rice.
First use Dec. 9, 1960.

SN 115,039. Bruce Church, Inc., Salinas, Calif. Filed Mar. 7, 1961.



Owner of Reg. No. 657,845.
For Fresh Vegetables and Melons.
First use Feb. 26, 1957, on fresh lettuce.

SN 115,162. Primrose Confectionery Company Limited, Slough, England. Filed Mar. 8, 1961.

MOUNTIES

Owner of British Reg. No. 696,636, dated Mar. 8, 1951.
For Candy, Chewing Gum, and Bubble Gum.

SN 115,644. Utah Packers, Inc., d.b.a. The Utah Canning Co., Salt Lake City, Utah. Filed Mar. 14, 1961.

PIONEER

For Canned Vegetables and Vegetable Juices.
First use May 8, 1898.

SN 116,653. Mutual Products Company, d.b.a. Highland Products Co., Minneapolis, Minn. Filed Mar. 28, 1961.

GOLDEN GRADE

For Milk Replacer in Powdered Form for Calves and Pigs.
First use Apr. 3, 1959.

SN 116,801. Cain's Coffee Co., Oklahoma City, Okla. Filed Mar. 30, 1961.



For Coffee.
First use Nov. 16, 1935.

SN 116,896. Mad River Orchard Co., Entiat, Wash. Filed Mar. 31, 1961.



Owner of Reg. No. 552,014.
For Fresh Deciduous Fruits.
First use Sept. 26, 1950.

SN 117,022. Kellogg Company, Battle Creek, Mich. Filed Apr. 3, 1961.

HANDI-PAK

Owner of Reg. No. 666,415.
For Cereal Breakfast Foods.
First use Mar. 2, 1948.

SN 117,055. Space, Inc., Washington, D.C. Filed Apr. 3, 1961.

SPACE

For Frankfurters.
First use Feb. 8, 1961.

SN 117,110. Kern Fruit Company, Bakersfield, Calif. Filed Apr. 4, 1961.

MAGICOLOR

For Fresh Deciduous Fruits.
First use May 17, 1960.

SN 118,269. Mead Johnson & Company, Evansville, Ind. Filed Apr. 20, 1961.

PROVIGEN

For Nutritious, High Protein Food Supplement Which Is Derived Principally From Calcium Caseinate, Nonfat Dry Milk and Sugar With Added Vitamins and Minerals.
First use Oct. 7, 1960.

SN 118,424. Dubuque Packing Company, Dubuque, Iowa. Filed Apr. 24, 1961.

ROYAL BUFFET

Owner of Reg. No. 652,168.
For Sliced Bacon.
First use Oct. 7, 1960.

SN 118,461. Marshall Durbin & Co., Inc., Birmingham, Ala. Filed Apr. 24, 1961.



"Marshall Durbin" is president of applicant corporation.
For Broiler Chickens, Frying Chickens, Roasting Chickens, Caponettes, Hens, Roasters, Turkeys, Cut-Up Chicken Parts, Both Fresh and Frozen.
First use on or about July 1, 1960, on cut-up chicken parts; 1931 as to "Marshall Durbin."

SN 118,559. A. L. Christensen and Son, Fremont, Calif. Filed Apr. 25, 1961.

KRIS KROSS

For Fresh Vegetables.
First use July 1, 1951.

SN 118,618. Sun Crown Food Corporation, San Francisco, Calif. Filed Apr. 25, 1961.

SUN CROWN

Owner of Reg. Nos. 404,460, 669,995, and 710,351.
For Canned Fruits, Canned Vegetables, Dried Fruits, Edible Nuts, and Honey.
First use June 20, 1943.

Class 47 — Wines

SN 113,596. Roger Louis Myers, d.b.a. Roger Louis & Co., Epernay, France. Filed Feb. 13, 1961.

ROGER LOUIS

For Wine and Champagne.
First use Nov. 15, 1938.

SN 113,853. Monarch Wine Company, Inc., d.b.a. B.J. Company, Brooklyn, N.Y. Filed Feb. 16, 1961.

BIG JIM

For Wine.
First use Feb. 1, 1961.

SN 114,067. Willen Brothers, Inc., Philadelphia, Pa. Filed Feb. 20, 1961.

Hoedown

For Hard Cider.
First use on or about Oct. 30, 1959.

SN 114,292. Willen Brothers, Inc., d.b.a. Indian Creek Wine Co., Philadelphia, Pa. Filed Feb. 23, 1961.

FLAME

For Wines—Namely, Muscatel, Port, and Sherry.
First use on or about Jan. 24, 1961.

SN 117,399. Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. Filed Apr. 7, 1961.

BULLETIN

For Wines.
First use Mar. 14, 1961.

Class 49 — Distilled Alcoholic Liquors

SN 114,052. Schenley Distillers, Inc., d.b.a. Blackstone Distilling Company, New York, N.Y. Filed Feb. 20, 1961.

BROOKDALE

For Whiskey.
First use Mar. 1, 1927.

SN 116,589. H. Stenham, Limited, London, England. Filed Mar. 27, 1961.

KING EDGAR

Owner of British Reg. No. 791,564, dated June 2, 1959.
For Scotch Whisky.

SN 116,591. H. Stenham, Limited, London, England. Filed Mar. 27, 1961.

QUEEN ELEANOR

Owner of British Reg. No. 791,565, dated June 2, 1959.
For Scotch Whisky.

Class 50 — Merchandise Not Otherwise Classified

SN 112,875. The American Thermos Products Company, Norwich, Conn. Filed Feb. 1, 1961.

THERMOS

Owner of Reg. Nos. 67,002 and 700,748.
For Tents.
First use Dec. 2, 1960.

SN 119,851. Creative Arts, Inc., Miami, Fla. Filed May 12, 1961.

SYMPHONY IN SCULPTURE

For Three-Dimensional Wall Plaques.
First use Sept. 1, 1955.

Class 51 — Cosmetics and Toilet Preparations

SN 112,488. Revlon, Inc., New York, N.Y. Filed Jan. 25, 1961.

'COLOR UP'

The descriptive word "color" is disclaimed.
For Coloring Preparations for the Hair.
First use Sept. 23, 1960.

SN 115,214. The Barbasol Company, Indianapolis, Ind. Filed Mar. 9, 1961.



The lining on the drawing is intended to indicate the colors blue and red. Owner of Reg. Nos. 135,022, 573,516, and others.

For Shaving Preparation Having Also Incidental Skin-Healing Properties.

First use July 20, 1960; in September 1919 in another display.

SN 115,434. Chesebrough-Pond's Inc., New York, N.Y. Filed Mar. 13, 1961.

AWARE

For Hair Tonic and Hair Dressing.
First use Feb. 21, 1961.

SN 115,436. Chesebrough-Pond's Inc., New York, N.Y. Filed Mar. 13, 1961.

CHARGE

For Hair Tonic and Hair Dressing.
First use Feb. 21, 1961.

SN 115,437. Chesebrough-Pond's Inc., New York, N.Y. Filed Mar. 13, 1961.

ANGUS

For Hair Tonic and Hair Dressing.
First use Feb. 21, 1961.

Class 52 — Detergents and Soaps

SN 112,407. Schuco Industries, Inc., New York, N.Y. Filed Jan. 24, 1961.

AD-HESE-AWAY

For Surgical Tape Remover in Liquid Form.
First use July 7, 1958.

SN 116,789. Autoclaved Products, Inc., Pawtucket, R.I. Filed Mar. 30, 1961.

DERMA-CLAVE

For Soap.
First use Feb. 21, 1961.

SN 118,132. Britex Corporation, Boston, Mass. Filed Apr. 19, 1961. SN 118,738. Toole Canning Industries, Inc., La Grange, Ga. Filed Apr. 26, 1961.

PHOS-O-BRITE

For Acid Cleaner.
First use Dec. 7, 1955.

SN 118,343. The Glasshouse Company, Wytheville, Va.
Filed Apr. 21, 1961.

VIEW

For Window and Glass Cleaner.
First use Mar. 31, 1961.

SN 118,625. United Development Laboratories, Austin, Tex.
Filed Apr. 25, 1961.



For Liquid Hand Soap.
First use Mar. 20, 1961.



For Cleaner and Spot Remover for Cleaning Leather, Leatherette, Nylon, Rayon, Cotton, Wool and Other Fabrics and Materials.
First use Feb. 10, 1961.

SN 119,205. International Chemical Co., Chicago, Ill. Filed May 3, 1961.

CADDY

For Compositions for Cleaning, Staining and Polishing Golf Club Woods and for Cleaning and Polishing Golf Club Irons.
First use Mar. 3, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 115,653. The Aerospace Corporation, El Segundo, Calif.
Filed Mar. 15, 1961.



For Engineering and Consulting Services—Namely, the Conducting of Surveys, Design Studies, Technical Direction and Research in the General Fields of Electronics, Physics and Space Vehicles.
First use July 22, 1960.

8, 1961
nge, Ga.

Leather,
Fabrics

l. Filed

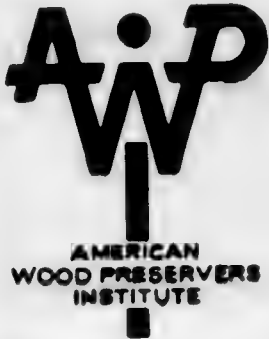
Polishing
olf Club

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 119,318. Society of Automotive Engineers, Inc. New York, N.Y. Filed May 4, 1961.

SN 114,828. American Wood Preservers Institute, Chicago, Ill. Filed Mar. 3, 1961.



For Indicating Membership in Applicant.
First use Jan. 20, 1961.



For Indicating Membership in Applicant.
First use June 12, 1909.

SN 117,640. Le Traveleer, Inc., Albuquerque, N. Mex. Filed Apr. 11, 1961.



The drawing is lined for red.
For Indicating Membership in Applicant.
First use Jan. 5, 1961.

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TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 722,095. HOMMEL AND DESIGN. The O. Hommel Company. SN 104,266. Pub. 7-18-61. Filed 9-12-60.
722,096. MAGNYL. Applied Magnetics Corporation. SN 107,726. Pub. 7-18-61. Filed 11-3-60.
722,097. SILICOR. Fritz Müller "Coroplast" K.G. SN 109,136. Pub. 7-18-61. Filed 11-14-60.
722,098. CUSH-N-FOAM. Hudson Foam Latex Products, Inc. SN 110,853. Pub. 7-18-61. Filed 12-27-60.
722,099. BAYTOWN. United Rubber & Chemical Company. SN 113,966. Pub. 7-18-61. Filed 2-17-61.
722,100. HERMITAGE. Armour and Company. SN 114,164. Pub. 7-18-61. Filed 2-23-61.
722,101. MARBON B-W CHEMICAL AND DESIGN. Borg-Warner Corporation. SN 114,675. Pub. 7-18-61. Filed 3-1-61.

Class 2—Receptacles

- 722,102. BARET WARE. I.D. Company, d.b.a. Bare Ware Co. and as B.W. Co. SN 101,000. Pub. 7-18-61. Filed 7-18-60.
722,103. X-L-O. Boyertown Burial Casket Company. SN 102,889. Pub. 7-18-61. Filed 8-18-60.
722,104. DURLAN. Durlan, Inc. SN 103,912. Pub. 7-18-61. Filed 9-6-60.
722,105. MEDALIST. Metal Coating Corporation, d.b.a. Medalist Tank Division. SN 105,184. Pub. 7-18-61. Filed 9-26-60.
722,106. LIFETIME. Eaton Brothers Corp. SN 109,857. Pub. 7-18-61. Filed 12-8-60.
722,107. PFSST. Airkem, Inc. SN 111,459. Pub. 7-18-61. Filed 1-9-61.
722,108. WONDERPAK. West Virginia Pulp and Paper Company. SN 113,041. Pub. 7-18-61. Filed 2-3-61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 722,109. PERLIMESH. Whiting & Davis Company. SN 111,832. Pub. 7-18-61. Filed 1-13-61.
722,110. DREAM STARS. A. J. Stris Products Corp. SN 112,492. Pub. 7-18-61. Filed 1-25-61.

Class 5—Adhesives

- 722,111. REPAIR 'N' AIR. National Dynamics Corporation. SN 111,988. Pub. 7-18-61. Filed 1-17-61.

Class 6—Chemicals and Chemical Compositions

- 722,112. AIDCO IN DESIGN FORM. Alloy Industries Development Co. SN 66,134. Pub. 7-18-61. Filed 1-20-59.
722,113. PROMETONE. Geigy Chemical Corporation. SN 74,737. Pub. 7-18-61. Filed 5-29-59.

- 722,114. HOMART. Sears, Roebuck and Co. SN 82,604. Pub. 7-18-61. Filed 10-2-59.
722,115. REGLONE. Plant Protection Limited. SN 104,547. Pub. 7-18-61. Filed 9-15-60.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 722,116. SAVILE ROW. Bullock's, Inc. SN 110,253. Pub. 7-18-61. Filed 12-15-60.

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 722,117. DIAMOND DESIGN. Weatherby's, Inc. SN 100,739. Pub. 7-18-61. Filed 7-12-60.

Class 10—Fertilizers

- 722,118. IMC AND DESIGN. International Minerals & Chemical Corporation. SN 111,889. Pub. 7-18-61. Filed 1-16-61.

Class 11—Inks and Inking Materials

- 722,119. RAYZ-GLO. Embossograph Process Company Incorporated. SN 107,120. Pub. 7-25-61. Filed 10-25-60.

Class 12—Construction Materials

- 722,120. JAL-A-SHADE. Reynolds Aluminum Supply Company, assignee of Convertible Clip Corporation. SN 57,602. Pub. 6-9-59. Filed 8-21-58.
722,121. GROTESQUE FIGURE. Ralph Goldberger. SN 107,401. Pub. 7-18-61. Filed 10-12-60.
722,122. ASTROCERAM. American Thermocatalytic Corporation. SN 108,593. Pub. 7-18-61. Filed 11-17-60.
722,123. EMBLEM DESIGN MARK WITHIN A CIRCLE. Battenfeld Grease & Oil Corporation, Inc. SN 108,596. Pub. 7-18-61. Filed 11-17-60.
722,124. SOUTHERN-AIRE. E. A. Nord Company, Incorporated. SN 115,753. Pub. 7-18-61. Filed 2-20-61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 722,125. TC. Telecomputing Corporation. SN 89,309. Pub. 7-18-61. Filed 1-19-60.
722,126. BIG JOHNY LIL JOHNY AND DESIGN. One-In-All Corporation. SN 99,229. Pub. 7-18-61. Filed 6-17-60.
722,127. MULTI JUST. Milwaukee Valve Company, Inc. SN 112,157. Pub. 7-18-61. Filed 1-19-61.
722,128. POTTY TUNE. Feldt-Swanson Ltd. SN 112,241. Pub. 7-18-61. Filed 1-23-61.

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- 722,129. ELEC-TESTED. George W. Moore, Inc. SN 112,294. Pub. 7-18-61. Filed 1-23-61.
722,130. DUTCH TULIP. Textile Machine Works. SN 112,336. Pub. 7-18-61. Filed 1-23-61.
722,131. KUGLOPRESS. Kugler, Fonderie et Robinetterie S.A. SN 112,887. Pub. 7-18-61. Filed 1-24-61.
722,132. GEOMETRICAL DESIGN. Melnor Industries, Inc. SN 112,393. Pub. 7-18-61. Filed 1-24-61.
722,133. PRENT-MOUNT. Prestole Corporation. SN 112,564. Pub. 7-18-61. Filed 1-26-61.
722,134. PRESTAKE. Prestole Corporation. SN 112,565. Pub. 7-18-61. Filed 1-26-61.
722,135. UNI-Q. Unique Window Balance Corporation. SN 112,797. Pub. 7-18-61. Filed 1-30-61.
722,136. UNI-Q TAKE OUT. Unique Window Balance Corporation. SN 112,798. Pub. 7-18-61. Filed 1-30-61.
722,137. PORTER-HAYDEN AND DESIGN. Porter-Hayden Conduit Company. SN 112,858. Pub. 7-18-61. Filed 1-31-61.

Class 14—Metals and Metal Castings and Forgings

- 722,138. ENTOLLOY. Entoleter, Inc., by merger and assignment from Safety Industries, Inc. SN 83,316. Pub. 7-18-61. Filed 10-15-59.
722,139. M40. Gorham Tool Company. SN 102,214. Pub. 7-18-61. Filed 8-23-60.

Class 15—Oils and Greases

- 722,140. STAR TANE AND DESIGN. Colorado Oil and Gas Corporation, d.b.a. Derby Refining Company. SN 92,962. Pub. 7-18-61. Filed 3-16-60.
722,141. POLY CHEM AND DESIGN. Herbert S. Fall. SN 96,844. Pub. 7-18-61. Filed 5-11-60.
722,142. TRANSTOP AND DESIGN. Phillip A. Schwartz, assignee of United Petroleum, Inc. SN 110,404. Pub. 6-13-61. Filed 12-10-60.

Class 16—Protective and Decorative Coatings

- 722,143. TUF-TOPI. The Norcote Company, assignee of Carlton L. Rydstrom, d.b.a. The Norcote Company. SN 62,418. Pub. 7-18-61. Filed 11-13-58.
722,144. EMBLEM DESIGN MARK WITHIN A CIRCLE. Battenfeld Grease & Oil Corporation, Inc. SN 108,597. Pub. 7-18-61. Filed 11-17-60.
722,145. BLISTER MASTER. Cowman-Campbell Paint Co., Inc. SN 111,866. Pub. 7-18-61. Filed 1-16-61.

Class 17—Tobacco Products

- 722,146. REYNO. R. J. Reynolds Tobacco Company. SN 112,773. Pub. 7-18-61. Filed 1-30-61.
722,147. B & W AND THREE LEAF DESIGN. Brown & Williamson Tobacco Corporation. SN 113,393. Pub. 7-18-61. Filed 2-10-61.
722,148. HORIZON. Phillip Morris Incorporated. SN 113,938. Pub. 7-18-61. Filed 2-17-61.

Class 18—Medicines and Pharmaceutical Preparations

- 722,149. F AND DESIGN. Charles E. Frost & Co. SN 48,553. Pub. 8-11-59. Filed 3-27-58.

- 722,150. DENTACEUTICAL. William Klein & Son. SN 80,328. Pub. 7-18-61. Filed 8-27-59.
722,151. ZOYLIN. C. H. Boehringer Sohn. SN 103,261. Pub. 1-31-61. Filed 8-23-60.
722,152. PROSERT. Fonville Products Company. SN 103,401. Pub. 7-18-61. Filed 8-25-60.
722,153. COUGHLETS. American Chicle Company. SN 103,755. Pub. 7-18-61. Filed 9-1-60.
722,154. MUSARIL. Etablissements Cila-Byla, Société Anonyme. SN 104,913. Pub. 7-18-61. Filed 9-21-60.
722,155. KIM'S. York Pharmacal Company, d.b.a. Kim's Laboratories. SN 105,244. Pub. 7-18-61. Filed 9-26-60.
722,156. THERATUSS. Olin Mathieson Chemical Corporation. SN 108,700. Pub. 7-18-61. Filed 11-18-60.
722,157. PEN-VETSTREP 667. Merck & Co., Inc. SN 109,088. Pub. 7-18-61. Filed 11-25-60.
722,158. ILOCALM. The Warren-Teed Products Company. SN 109,921. Pub. 7-18-61. Filed 12-8-60.
722,159. MICRAININ. Carter Products, Inc. SN 109,943. Pub. 7-18-61. Filed 12-9-60.
722,160. ADAZINE. The Upjohn Company. SN 110,498. Pub. 4-4-61. Filed 12-19-60.
722,161. ISUFANOL. Sterling Drug Inc. SN 113,035. Pub. 7-18-61. Filed 2-3-61.
722,162. ISOPROMID. Sterling Drug Inc. SN 113,036. Pub. 7-18-61. Filed 2-3-61.
722,163. WYETH-PASTEUR AND DESIGN. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 114,392. Pub. 7-18-61. Filed 2-27-61.
722,164. DERMATERGENT. Colgate-Palmolive Company. SN 114,438. Pub. 7-18-61. Filed 2-27-61.
722,165. STANKAP8. Standex Laboratories, Inc. SN 114,887. Pub. 7-18-61. Filed 3-3-61.
722,166. PHAZYME. Reed & Carnrick. SN 116,259. Pub. 6-27-61. Filed 3-22-61.
722,167. DISULPHINE. Imperial Chemical Industries Limited. SN 116,402. Pub. 7-18-61. Filed 3-24-61.
722,168. ALUPENT. C. H. Boehringer Sohn. SN 116,867. Pub. 7-18-61. Filed 3-31-61.
722,169. CONOVID. G. D. Searle & Co. SN 117,931. Pub. 7-18-61. Filed 12-1-60.

Class 19—Vehicles

- 722,170. W AND DESIGN. Wizard Boats, Inc. SN 87,757. Pub. 7-18-61. Filed 12-21-59.
722,171. FIBRIT. Deutsche Fibril Gesellschaft Ebers & Dr. Muller m.b.H. SN 89,340. Pub. 3-7-61. Filed 1-20-60.
722,172. CONVERTA-FLAT. Jack Cole Company. SN 101,750. Pub. 7-18-61. Filed 8-1-60.
722,173. SIMPLEX AND DESIGN. Lucien Juy. SN 105,523. Pub. 7-18-61. Filed 9-30-60.
722,174. PULLMAN CAMPER. Downey Sheet Metal Shop. SN 105,729. Pub. 7-18-61. Filed 10-4-60.
722,175. SAFEGUARD. Chrysler Corporation. SN 113,498. Pub. 7-18-61. Filed 2-13-61.
722,176. DPCD. Chrysler Corporation. SN 113,499. Pub. 7-18-61. Filed 2-13-61.
722,177. MERIDIAN. Glasspar Company. SN 113,516. Pub. 7-18-61. Filed 2-13-61.
722,178. LOAD KING. Goerlich's, Inc. SN 113,717. Pub. 7-18-61. Filed 2-15-61.
722,179. RIDE KING. Goerlich's, Inc. SN 113,719. Pub. 7-18-61. Filed 2-15-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 722,180. MARBLE. The Marble Company. SN 50,499. Pub. 5-9-61. Filed 4-28-58.

- 722,181. BLU-CAP. Fansteel Metallurgical Corporation. SN 80,240. Pub. 7-18-61. Filed 8-26-59.
 722,182. MODULINE. Sprague Electric Company. SN 83,406. Pub. 7-18-61. Filed 10-18-59.
 722,183. ALPHOLITE. General Electric Company. SN 93,792. Pub. 7-18-61. Filed 3-28-60.
 722,184. TELEVISION. Telectro Industries Corp. SN 96,440. Pub. 7-18-61. Filed 5-4-60.
 722,185. ESCORT. McGraw-Edison Company. SN 110,463. Pub. 7-18-61. Filed 12-19-60.
 722,186. STARLITE. Automatic Electric Company. SN 110,729. Pub. 7-18-61. Filed 12-23-60.
 722,187. PETCOSY. Kas Heating Products, Inc. SN 111,999. Pub. 7-18-61. Filed 1-17-61.

Class 22—Games, Toys, and Sporting Goods

- 722,188. NINES-OUT. Mina Locke. SN 103,346. Pub. 7-18-61. Filed 8-24-60.
 722,189. QUICK STRIKE. William J. Quinn. SN 104,312. Pub. 7-18-61. Filed 9-12-60.
 722,190. SIAMESE CRAWLER. Burke Flexo-Products Co. SN 108,154. Pub. 7-18-61. Filed 11-10-60.
 722,191. MAGIC WAND AND DESIGN. Magic Wand Corporation. SN 109,424. Pub. 7-18-61. Filed 12-1-60.
 722,192. REEL-A-LURE AND DESIGN. Leisure Products of America, Inc. SN 111,745. Pub. 7-18-61. Filed 1-12-61.
 722,193. JUMPTY DUMPTY. L. S. Brown Company. SN 111,958. Pub. 7-18-61. Filed 1-17-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 722,194. WIZZ. J. Wise & Sons Co. SN 80,143. Pub. 7-18-61. Filed 8-24-59.
 722,195. MIDAS MUFFLER AND DESIGN. Midas, Inc. SN 84,001. Pub. 7-18-61. Filed 10-26-59.
 722,196. RECARBER. Union Tank Car Company, assignee of Smith & Loveless, Inc. SN 86,350. Pub. 7-18-61. Filed 11-30-59.
 722,197. FRAME-GRIP. Curtis Manufacturing Company. SN 93,908. Pub. 7-18-61. Filed 3-29-60.
 722,198. MERIT. Continental Drill Corporation, Inc. SN 99,498. Pub. 7-18-61. Filed 6-22-60.
 722,199. ROCKET SYSTEMS AND DESIGN. Service Metal Fabricators, Inc. SN 100,304. Pub. 7-18-61. Filed 7-5-60.
 722,200. KEENCO. Keen Manufacturing Corporation. SN 100,612. Pub. 7-18-61. Filed 7-11-60.
 722,201. IPM. International Products & Mfg. Co. SN 107,015. Pub. 7-18-61. Filed 10-24-60.
 722,202. GYP C JACK. Clay E. Phillips, d.b.a. Gypsum Ceiling Jack Co. SN 108,815. Pub. 7-18-61. Filed 11-21-60.
 722,203. DRAG FAST. California Equipment Company. SN 109,034. Pub. 7-18-61. Filed 11-25-60.
 722,204. WHA-LITER COMBO AND DESIGN. Wha-Lite Products. SN 109,130. Pub. 7-18-61. Filed 11-25-60.
 722,205. CHUB PACKAGING MACHINE. The Kartridg Pak Co. SN 110,002. Pub. 7-18-61. Filed 12-12-60.
 722,206. IMPERIAL. Ida K. Meiser, d.b.a. Imperial Spark Plug Tire Pump Co. SN 111,002. Pub. 7-18-61. Filed 12-29-60.
 722,207. PMS. Popular Motor Specialties Inc. SN 112,768. Pub. 7-18-61. Filed 1-30-61.
 722,208. GLYD-O. Turner Uni-Drive Co. SN 112,871. Pub. 7-18-61. Filed 1-30-61.
 722,209. B-W BORG-WARNER, INGERSOLL PRODUCTS AND DESIGN. Borg-Warner Corporation. SN 112,943. Pub. 7-18-61. Filed 2-2-61.

- 722,210. PRINCESS. Morse Sewing Machine and Supply Corp. SN 112,973. Pub. 7-18-61. Filed 2-2-61.
 722,211. HYDRO-FRAM. L. R. Nelson Mfg. Co., Inc. SN 113,131. Pub. 7-18-61. Filed 2-6-61.
 722,212. PERMA-GROOVE. Zollner Corporation. SN 113,170. Pub. 7-18-61. Filed 2-6-61.
 722,213. CLEAR-O-MATIC. Zollner Corporation. SN 113,172. Pub. 7-18-61. Filed 2-6-61.
 722,214. LIFT SWING. Accurate Bushing Company. SN 113,466. Pub. 7-18-61. Filed 2-18-61.

Class 26—Measuring and Scientific Appliances

- 722,215. UNITRON. Peter Willems. SN 65,279. Pub. 12-6-60. Filed 1-2-59.
 722,216. PHOTOMASK. Simmonds Precision Products, Inc., by change of name from Simmonds Aerocessories, Inc. SN 73,621. Pub. 7-18-61. Filed 5-13-59.
 722,217. RAPIDATA. Photomechanisms, Inc. SN 107,371. Pub. 7-18-61. Filed 10-28-60.
 722,218. BANTAM-WARE. Kontes Glass Company. SN 108,793. Pub. 7-18-61. Filed 11-21-60.

Class 27—Horological Instruments

- 722,219. V-MAC. V. L. McCormack Company. SN 100,797. Pub. 7-18-61. Filed 7-13-60.
 722,220. DIAC. Novochoe S.A. SN 108,074. Pub. 7-18-61. Filed 11-8-60.

Class 28—Jewelry and Precious-Metal Ware

- 722,221. MR. DIAMOND AND DESIGN. Herman Diamond, d.b.a. H. Diamond Co. SN 93,168. Pub. 7-18-61. Filed 3-18-60.
 722,222. MAGI-CLASP. Coro, Inc. SN 110,410. Pub. 7-18-61. Filed 12-19-60.

Class 31—Filters and Refrigerators

- 722,223. FOAM-FAST. The Bastian-Blessing Company. SN 109,234. Pub. 7-18-61. Filed 11-29-60.

Class 32—Furniture and Upholstery

- 722,224. SP-A-C-E-MAKER BY ENGLANDER AND DESIGN. The Englander Company, Inc. SN 95,577. Pub. 7-18-61. Filed 4-22-60.
 722,225. CUSH-N-FOAM. Hudson Foam Latex Products, Inc. SN 110,854. Pub. 7-18-61. Filed 12-27-60.
 722,226. JENFRED-WARE. Levco Metal Finishers, Inc. SN 111,510. Pub. 7-18-61. Filed 1-9-61.
 722,227. COUNTRY VILLA. B. G. Mesberg Corp. SN 113,349. Pub. 7-18-61. Filed 2-9-61.

Class 33—Glassware

- 722,228. REGATTA. Libbey-Owens-Ford Glass Company. SN 116,321. Pub. 7-18-61. Filed 3-23-61.
 722,229. GALAXY. Libbey-Owens-Ford Glass Company. SN 116,322. Pub. 7-18-61. Filed 3-23-61.
 722,230. COLONNADE. Libbey-Owens-Ford Glass Company. SN 116,323. Pub. 7-18-61. Filed 3-23-61.

- 722,231. CROSSNET. Libbey-Owens-Ford Glass Company. SN 116,324. Pub. 7-18-61. Filed 3-23-61.
 722,232. SPOTNET. Libbey-Owens-Ford Glass Company. SN 116,325. Pub. 7-18-61. Filed 3-23-61.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 722,233. AIR-X-IT. Octagon Ventilator Co. SN 81,314. Pub. 7-18-61. Filed 9-14-59.
 722,234. HEAT-X-IT. Octagon Ventilator Co. SN 81,315. Pub. 7-18-61. Filed 9-14-59.
 722,235. VAPOR TURBOTUBE AND DESIGN. Vapor Heating Corporation. SN 106,447. Pub. 7-18-61. Filed 10-14-60.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 722,236. D-W ROD SEAL. Greene, Tweed & Co. SN 101,622. Pub. 7-18-61. Filed 7-28-60.

Class 36—Musical Instruments and Supplies

- 722,237. SAN. San Incorporated. SN 94,351. Pub. 7-18-61. Filed 4-4-60.
 722,238. STELLA. The Harmony Company. SN 116,724. Pub. 7-18-61. Filed 3-29-61.

Class 37—Paper and Stationery

- 722,239. CANNON LINE AND DESIGN. Garrison House, Inc. SN 92,751. Pub. 7-18-61. Filed 3-14-60.
 722,240. REM-STIK. Sperry Rand Corporation. SN 108,679. Pub. 7-18-61. Filed 11-17-60.
 722,241. CARLTON. The Northwest Paper Company. SN 109,727. Pub. 7-18-61. Filed 12-6-60.
 722,242. CONSOLIDATED COATED. Consolidated Water Power & Paper Company. SN 112,689. Pub. 7-18-61. Filed 1-30-61.
 722,243. MOPPETTS. American Can Company. SN 113,051. Pub. 7-18-61. Filed 2-6-61.
 722,244. SNO-LIN. American Can Company. SN 113,052. Pub. 7-18-61. Filed 2-6-61.
 722,245. FLAXEEN. American Can Company. SN 113,054. Pub. 7-18-61. Filed 2-6-61.
 722,246. PAV-LON. American Can Company. SN 113,055. Pub. 7-18-61. Filed 2-6-61.
 722,247. HUSKIES. American Can Company. SN 113,056. Pub. 7-18-61. Filed 2-6-61.
 722,248. SHAMRAY. American Can Company. SN 113,057. Pub. 7-18-61. Filed 2-6-61.

Class 38—Prints and Publications

- 722,249. BAZOOKA JOE ETC. AND DESIGN. Topp's Chewing Gum, Incorporated. SN 74,347. Pub. 7-18-61. Filed 5-22-59.
 722,250. DAKOTA. Rural Gravure Service, Inc. SN 105,675. Pub. 7-18-61. Filed 10-3-60.
 722,251. HARVEST YEARS. Harvest Years Publishing Co., Inc. SN 107,012. Pub. 7-18-61. Filed 10-24-60.
 722,252. KONTUR NEWS DIGEST. Kontur Kontakt Lens Company, Inc. SN 107,461. Pub. 7-18-61. Filed 10-31-60.

- 722,253. DRIVOTRAINER. The Aetna Casualty and Surety Company. SN 107,810. Pub. 7-18-61. Filed 11-4-60.
 722,254. WENDY THE GOOD LITTLE WITCH. Harvey Famous Cartoons. SN 107,944. Pub. 7-18-61. Filed 11-7-60.

- 722,255. CENTURY 21 EXPOSITION AND DESIGN. Century 21 Exposition, Inc. SN 108,024. Pub. 7-18-61. Filed 11-8-60.

- 722,256. THE BETTER HALF. The Register and Tribune Syndicate, Inc. SN 108,216. Pub. 7-18-61. Filed 11-10-60.

- 722,257. CHANNEL CHUCKLES. The Register and Tribune Syndicate, Inc. SN 108,217. Pub. 7-18-61. Filed 11-10-60.

- 722,258. THE FRIENDLY GHOST CASPER. Harvey Famous Cartoons. SN 108,321. Pub. 7-18-61. Filed 11-14-60.

- 722,259. BABY HUEY THE BABY GIANT. Harvey Famous Cartoons. SN 108,322. Pub. 7-18-61. Filed 11-14-60.

- 722,260. ORANGE S'PEEL. Nesbitt Fruit Products, Inc. SN 108,355. Pub. 7-18-61. Filed 11-14-60.

- 722,261. PLAYFUL LITTLE AUDREY. Harvey Famous Cartoons. SN 108,482. Pub. 7-18-61. Filed 11-15-60.

- 722,262. ANALOG SCIENCE FACT FICTION AND DESIGN. Street & Smith Publications, Inc. SN 108,518. Pub. 7-18-61. Filed 11-15-60.

- 722,263. THE TRAINER. Cramer Chemical Company. SN 110,039. Pub. 7-18-61. Filed 12-12-60.

- 722,264. H HARVEY COMICS AND DESIGN. Harvey Features Syndicate. SN 116,125. Pub. 7-18-61. Filed 3-21-61.

Class 39—Clothing

- 722,265. COOLTIMER. The Joseph & Feiss Company. SN 80,431. Pub. 7-18-61. Filed 8-28-59.
 722,266. THE PAINTED DESERT BRAND AND DESIGN. Thunderbird Mfg., Inc. SN 84,630. Pub. 7-18-61. Filed 11-4-59.
 722,267. BRAVO LINGERIE SILK-N-TOUCH AND DESIGN. Top Form Mills, Inc. SN 93,363. Pub. 7-18-61. Filed 3-21-60.
 722,268. POLAR PLUS. McGregor-Doniger Inc. SN 97,851. Pub. 7-18-61. Filed 5-25-60.
 722,269. TROPIC-TONE AND DESIGN. Merit Clothing Company. SN 98,380. Pub. 7-18-61. Filed 6-3-60.
 722,270. STARLOOM. Merit Clothing Company. SN 99,350. Pub. 7-18-61. Filed 6-20-60.
 722,271. SPIN-FLI. Legettes Inc. SN 99,396. Pub. 7-18-61. Filed 5-23-60.
 722,272. CONTI VKL. Banks Bros. Corp. SN 99,708. Pub. 7-18-61. Filed 6-27-60.
 722,273. DALKEITH. Dalkeith Agencies Limited. SN 105,058. Pub. 7-18-61. Filed 9-23-60.
 722,274. LASTO MESH. Danskin, Inc. SN 107,322. Pub. 7-18-61. Filed 10-28-60.
 722,275. THE INTER NATURAL BY ANDREW PALLACK. Andrew Pallack & Co. Inc. SN 107,783. Pub. 7-18-61. Filed 11-3-60.
 722,276. COBRINO. Naahua Footwear Corporation. SN 108,133. Pub. 7-18-61. Filed 11-9-60.
 722,277. JALS AND DESIGN. Jala Corporation. SN 108,488. Pub. 7-18-61. Filed 11-15-60.
 722,278. FOREMAN & CLARK. Howard Stores Corporation. SN 108,783. Pub. 7-18-61. Filed 11-21-60.
 722,279. PAK A WAY. United States Rubber Company. SN 108,926. Pub. 7-18-61. Filed 11-22-60.
 722,280. SABELVA. Elias Sayour Co., Inc. SN 109,271. Pub. 7-18-61. Filed 11-29-60.
 722,281. SILVER SPRINGS. Big-Dad Manufacturing Company, Inc. SN 109,939. Pub. 7-18-61. Filed 12-9-60.
 722,282. PRETTYFORE. Gay Sprites, Inc. SN 110,755. Pub. 7-18-61. Filed 12-23-60.

- 722,283. GROWEX. Gay Sprites, Inc. SN 110,756. Pub. 7-18-61. Filed 12-23-60.
- 722,284. VIOLETA AND DESIGN. Alfred Dziubek, d.b.a. U.S. & South American Trading Co. SN 111,084. Pub. 7-18-61. Filed 12-30-60.
- 722,285. BETTY BEST. Liberty Hosiery Mills, Inc. SN 111,417. Pub. 7-18-61. Filed 1-6-61.

Class 40—Fancy Goods, Furnishings, and Notions

- 722,286. WINGEES. Eden Kelley. SN 93,809. Pub. 7-18-61. Filed 3-28-60.
- 722,287. MAGNA-TOMIC. Michael C. Di Puppo, d.b.a. Emil Laboratories. SN 110,932. Pub. 7-18-61. Filed 12-28-60.

Class 43—Thread and Yarn

- 722,288. NYLOFT. The Firestone Tire & Rubber Company, assignee, by mesne assignments, of Industrial Rayon Corporation. SN 87,953. Pub. 5-24-60. Filed 12-24-59.

Class 44—Dental, Medical, and Surgical Appliances

- 722,289. OUCHPOUCH AND DESIGN. George F. Barth, d.b.a. Marketing Sales Plans Company. SN 105,257. Pub. 7-18-61. Filed 9-27-60.

Class 45—Soft Drinks and Carbonated Waters

- 722,290. B-1 ETC. AND DESIGN. B-1 Beverage Company. SN 82,191. Pub. 7-18-61. Filed 9-28-59.
- 722,291. BOTTLED SUNSHINE. Sun Spot Company of America, Inc. SN 105,030. Pub. 7-18-61. Filed 9-22-60.

Class 46—Foods and Ingredients of Foods

- 722,292. JFG MELLO-MADE. J.F.G. Coffee Company. SN 57,484. Pub. 7-18-61. Filed 8-19-58.
- 722,293. HI-LIFE AND DESIGN. Eugene Nalbandian. SN 70,504. Pub. 7-18-61. Filed 3-30-59.
- 722,294. DISK WITH DOUBLE F SYMBOL. Fortified Forage Corporation. SN 76,803. Pub. 7-18-61. Filed 6-30-59.
- 722,295. SUN GIRL AND DESIGN. Fine Foods, Inc. SN 81,552. Pub. 7-18-61. Filed 9-17-59.
- 722,296. NIFTY. Nifty Foods Corp., assignee of Lustig Foods Corp. SN 81,579. Pub. 7-18-61. Filed 9-17-59.
- 722,297. FAMOUS WONDER AND DESIGN. Continental Baking Company. SN 81,809. Pub. 7-18-61. Filed 9-22-59.
- 722,298. ROLL-RITE. The Glidden Company, d.b.a. Durkee Famous Foods. SN 82,658. Pub. 7-18-61. Filed 10-5-59.
- 722,299. HUBBARD'S EXPRESSO. Hubbard Milling Company. SN 86,152. Pub. 7-18-61. Filed 11-27-59.
- 722,300. PFANNI. Pfanni-Werk Otto Eckart, K.G. SN 87,763. Pub. 7-18-61. Filed 11-24-59.
- 722,301. "A SWALLOW WILL TELL YOU" AND DESIGN. Brownell & Field Co. SN 88,642. Pub. 7-18-61. Filed 1-8-60.
- 722,302. KING'S CLUB AND DESIGN. J. Howard Mecke, 3rd, d.b.a. G-M Food Brokers. SN 90,086. Pub. 7-18-61. Filed 2-1-60.

- 722,303. LETTER K KING KELLY AND DESIGN. King Kelly Marmalade Co., Inc. SN 94,993. Pub. 7-18-61. Filed 4-13-60.
- 722,304. WINONA AND DESIGN. S. Surabian & Sons. SN 96,283. Pub. 7-18-61. Filed 5-2-60.
- 722,305. FLAVORSMITHS. J. Hungerford Smith Co. SN 99,330. Pub. 7-18-61. Filed 6-20-60.
- 722,306. DIAMOND A AND DESIGN. Eugene Fruit Growers Association. SN 100,507. Pub. 7-18-61. Filed 7-8-60.
- 722,307. NERZONE. Gebruder Glulini G.m.b.H. SN 100,843. Pub. 7-18-61. Filed 7-14-60.
- 722,308. PROMOLIP. Central Soya Company, Inc. SN 101,541. Pub. 7-18-61. Filed 7-27-60.
- 722,309. SUGARIPE. Mayfair Packing Company. SN 101,795. Pub. 7-18-61. Filed 8-1-60.
- 722,310. LAMBRECHT. Beatrice Foods Co. SN 103,007. Pub. 7-18-61. Filed 8-19-60.
- 722,311. GO. The Pillsbury Company. SN 103,804. Pub. 7-18-61. Filed 9-1-60.
- 722,312. CHARCOL. Red Arrow Products Corporation. SN 105,307. Pub. 7-18-61. Filed 9-27-60.
- 722,313. TEMPE GOLD. Blue Goose Growers, Inc., by change of name from American National Growers Corporation. SN 106,031. Pub. 7-18-61. Filed 10-10-60.
- 722,314. TWO-TONE. C. J. Van Houten & Zoon, N.V. SN 106,288. Pub. 7-18-61. Filed 10-12-60.
- 722,315. TABOO. C. J. Van Houten & Zoon, N.V. SN 106,292. Pub. 7-18-61. Filed 10-12-60.
- 722,316. SUPREME AND DESIGN. United Biscuit Company of America. SN 106,550. Pub. 7-18-61. Filed 10-17-60.
- 722,317. WELCH'S. The Welch Grape Juice Company, Inc. SN 106,866. Pub. 7-18-61. Filed 10-20-60.
- 722,318. OH BOY PIZZA PETE AND DESIGN. Capitol Food Corporation. SN 106,983. Pub. 7-18-61. Filed 10-24-60.
- 722,319. GRANEX. Krim-Ko Corporation. SN 107,572. Pub. 7-18-61. Filed 11-1-60.
- 722,320. X-40. Wyandot Popcorn Company. SN 107,628. Pub. 7-18-61. Filed 11-1-60.
- 722,321. COUNTRY BEST. Eastern States Farmers' Exchange, Incorporated. SN 107,844. Pub. 7-18-61. Filed 11-4-60.
- 722,322. HI-ACRES. Hi-Acres Concentrate, Inc. SN 108,044. Pub. 7-18-61. Filed 11-8-60.
- 722,323. PARK-LAND. Hi-Acres Concentrate, Inc. SN 108,045. Pub. 7-18-61. Filed 11-8-60.
- 722,324. ORANGE PARK. Hi-Acres Concentrate, Inc. SN 108,046. Pub. 7-18-61. Filed 11-8-60.
- 722,325. RED-E. Chicago Almond Products Co., Inc. SN 108,871. Pub. 7-18-61. Filed 11-22-60.
- 722,326. 7 SEAS. 7 Seas Aquatics Inc. SN 110,478. Pub. 7-18-61. Filed 12-19-60.
- 722,327. BACKGAMMON. The Wander Company, d.b.a. Poppycock Candles. SN 110,505. Pub. 7-18-61. Filed 12-19-60.
- 722,328. CLARK'S "MR. RED" AND DESIGN. Allen Clark, Inc. SN 110,929. Pub. 7-18-61. Filed 12-28-60.
- 722,329. MR. HEALTH. The Miami Margarine Company. SN 111,118. Pub. 7-18-61. Filed 12-30-60.
- 722,330. TRIUMPH. Armour and Company. SN 111,146. Pub. 7-18-61. Filed 1-3-61.
- 722,331. NUTRIGARD. Dawe's Laboratories, Inc. SN 111,261. Pub. 5-9-61. Filed 12-8-60.
- 722,332. DUKE'S AND DESIGN. The C. F. Sauer Company. SN 112,406. Pub. 7-18-61. Filed 1-24-61.
- 722,333. ABBA-ZABA AND DESIGN. Colby & McDermott Candy Co., d.b.a. Colby & McDermott. SN 112,440. Pub. 7-18-61. Filed 1-25-61.
- 722,334. HIGH LINER. Lunenburg Sea Products, Ltd. SN 113,022. Pub. 7-18-61. Filed 2-3-61.
- 722,335. ALPHA MAC. V. La Rosa & Sons, Inc. SN 113,428. Pub. 7-18-61. Filed 2-10-61.

- 722,336. KAY'S. P. Mastripolito & Sons, Inc. SN 113,429. Pub. 7-18-61. Filed 2-10-61.
- 722,337. ITALIAN FESTIVAL. Louis Milani Foods, Inc. SN 113,544. Pub. 7-18-61. Filed 2-13-61.
- 722,338. KING KULLEN'S. King Kullen Grocery Co., Inc. SN 113,647. Pub. 7-18-61. Filed 2-14-61.
- 722,339. FAIRFIELD FARMS. Fruit Cake Bakers of America, Inc. SN 113,709. Pub. 7-18-61. Filed 2-16-61.
- 722,340. GLOUCESTER FARM. Fruit Cake Bakers of America, Inc. SN 113,710. Pub. 7-18-61. Filed 2-15-61.
- 722,341. OLD BEDFORD. Fruit Cake Bakers of America, Inc. SN 113,711. Pub. 7-18-61. Filed 2-15-61.
- 722,342. HAMPSHIRE HOUSE. Fruit Cake Bakers of America, Inc. SN 113,712. Pub. 7-18-61. Filed 2-15-61.
- 722,343. MOUNT VERNON. Fruit Cake Bakers of America, Inc. SN 113,713. Pub. 7-18-61. Filed 2-15-61.
- 722,344. CHEEP. T-N-T Food Products, Inc. SN 113,870. Pub. 7-18-61. Filed 2-16-61.
- 722,345. JUNIOR. Armour and Company. SN 113,887. Pub. 7-18-61. Filed 2-17-61.

Class 47—Wines

- 722,346. NASSAU DRY. E. & J. Gallo Winery. SN 108,696. Pub. 7-18-61. Filed 11-18-60.
- 722,347. SEGESTA. Diego Rallo & Figli. SN 108,822. Pub. 7-18-61. Filed 11-21-60.

Class 48—Malt Beverages and Liquors

- 722,348. EASTSIDE. Pabst Brewing Company. SN 89,600. Pub. 7-18-61. Filed 1-25-60.

Class 50—Merchandise Not Otherwise Classified

- 722,349. RAPIDKOTE. Polychrome Corporation. SN 100,389. Pub. 7-18-61. Filed 7-6-60.
- 722,350. PRINCESS LOUISE SOF-PET'L ROSES AND DESIGN. Titan National Corporation. SN 103,622. Pub. 7-18-61. Filed 8-29-60.
- 722,351. WA MONOGRAM SYMBOL. R. D. Werner Co., Inc. SN 110,917. Pub. 7-18-61. Filed 12-27-60.
- 722,352. SAFE-X-SCAPE. Win-Chek Industries, Inc. SN 113,167. Pub. 7-18-61. Filed 2-6-61.
- 722,353. INFORMA-BADGE. American Society for Metals. SN 115,877. Pub. 7-18-61. Filed 3-17-61.

Class 51—Cosmetics and Toilet Preparations

- 722,354. PERMA KOTE. Fay Fox, assignee of Joanel Cosmetic Company. SN 34,242. Pub. 7-18-61. Filed 7-23-57.
- 722,355. THE FRESHNESS OF A BREEZE ETC. Bookers Manufacturing Drug Co. Limited. SN 46,194. Pub. 7-18-61. Filed 2-20-58.
- 722,356. DARLING. Santen Pharmaceutical Manufacturing Company, Limited. SN 82,853. Pub. 7-18-61. Filed 10-7-59.
- 722,357. DAW-SONATA. Daw-Sonata, Ltd. SN 86,638. Pub. 7-18-61. Filed 12-4-59.
- 722,358. MISQUE. John H. Breck, Inc. SN 87,029. Pub. 7-18-61. Filed 12-10-59.
- 722,359. HAUTE MODE. L'Oreal, by change of name from Societe Monsavon-L'Oreal. SN 89,974. Pub. 7-18-61. Filed 12-18-59.
- 722,360. TOMBOY. William H. Lundin, d.b.a. Kathy Products. SN 98,997. Pub. 7-18-61. Filed 6-14-60.

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- 722,361. COLORGROOM. Brian-Lloyd Co., Inc. SN 100,220. Pub. 7-18-61. Filed 7-5-60.
- 722,362. YANG-YIN. Jean Jacques Martinat. SN 100,918. Pub. 7-18-61. Filed 7-15-60.

Class 52—Detergents and Soaps

- 722,363. SPRAYAWAY AND DESIGN. W. D. Moore Company. SN 50,822. Pub. 10-25-60. Filed 5-1-58.
- 722,364. DESIGN OF TRIANGLES AND CIRCLES. Onyx Chemical Corporation, by merger from Onyx Oil & Chemical Company. SN 56,789. Pub. 7-18-61. Filed 8-7-58.
- 722,365. "SO LOVELY." The Realistic Company. SN 74,060. Pub. 7-18-61. Filed 5-19-59.
- 722,366. SKACETROL ETC. AND DESIGN. Skasol Incorporated. SN 80,128. Pub. 7-18-61. Filed 8-24-59.
- 722,367. MATEY. J. Nelson Prewitt, Inc. SN 82,696. Pub. 7-18-61. Filed 10-5-59.
- 722,368. SOFT CURL. Helene Curtis Industries, Inc. SN 88,221. Pub. 7-18-61. Filed 12-30-59.
- 722,369. JEWELUSTER. E-Z-Est Products Co., Inc. SN 100,235. Pub. 7-18-61. Filed 7-5-60.
- 722,370. WHITE GLOVE. MMAR Corporation. SN 100,459. Pub. 7-18-61. Filed 7-7-60.
- 722,371. COLDET. Whirlpool Corporation. SN 101,292. Pub. 7-18-61. Filed 7-21-60.
- 722,372. UNDER 21. The Mennen Company. SN 108,565. Pub. 7-18-61. Filed 11-16-60.
- 722,373. DOW AND DIAMOND DESIGN. The Dow Chemical Company. SN 111,732. Pub. 7-18-61. Filed 1-12-61.

Service Marks

Class 100—Miscellaneous

- 722,374. REPRESENTATION OF GENIE. Aamed, Inc. SN 49,999. Pub. 7-18-61. Filed 4-21-58.
- 722,375. BURGER-KING. Burger King of Florida, Inc. SN 58,158. Pub. 7-18-61. Filed 9-2-58.
- 722,376. BERROLS. Roland Cornet. SN 69,051. Pub. 7-18-61. Filed 1-15-60.
- 722,377. BONEWITZ. Bonewitz Chemicals, Inc. SN 92,079. Pub. 7-18-61. Filed 3-3-60.
- 722,378. METTLER. Mettler Instrument Corporation. SN 102,934. Pub. 7-18-61. Filed 8-18-60.
- 722,379. REPRESENTATION OF JACK IN THE BOX. Foodmaker Company. SN 103,014. Pub. 7-18-61. Filed 8-19-60.
- 722,380. JACK IN THE BOX. Foodmaker Company. SN 103,015. Pub. 7-18-61. Filed 8-19-60.
- 722,381. MINUTEMAN RESEARCH. Farm Journal, Inc. SN 105,803. Pub. 7-18-61. Filed 10-5-60.
- 722,382. URIS. Uris Buildings Corporation. SN 107,802. Pub. 7-18-61. Filed 11-3-60.
- 722,383. MONTE'S. The Prophet Co. SN 109,348. Pub. 7-18-61. Filed 11-30-60.
- 722,384. SCHRAFFT'S. Frank G. Shattuck Company. SN 111,127. Pub. 7-18-61. Filed 12-30-60.

Class 101—Advertising and Business

- 722,385. STAT TAB. Statistical Tabulating Corporation. SN 66,110. Pub. 7-18-61. Filed 1-19-59.
- 722,386. AEROSPACE PANORAMA. Air Force Association. SN 67,270. Pub. 7-18-61. Filed 2-9-59.
- 722,387. AMERICAN R-EX CREDIT CLUB INC. AND DESIGN. American R-Ex Credit Club, Inc. SN 78,596. Pub. 7-18-61. Filed 7-29-59.

722,388. "LITAB" AND DESIGN. Long Island Tabulating Corporation. SN 80,102. Pub. 7-18-61. Filed 8-24-59.
 722,389. SILVER DOLLAR. Silver Dollar Trading Stamp Co. SN 87,732. Pub. 7-18-61. Filed 12-21-59.
 722,390. TEEN-O-RAMA. Charlotte Samuels Associates. SN 94,694. Pub. 7-18-61. Filed 4-6-60.
 722,391. GOTHIC HOUSE AND DESIGN. Gothic House, Inc. SN 102,022. Pub. 7-18-61. Filed 8-4-60.
 722,392. MAXAM. Max Dichter Inc. SN 105,965. Pub. 7-18-61. Filed 10-7-60.
 722,393. S WITHIN A CIRCLE. Safeway Stores, Incorporated. SN 109,356. Pub. 7-18-61. Filed 11-30-60.

Class 102 — Insurance and Financial

722,394. PR ETC. AND DESIGN. James P. Mayo, Inc. SN 56,783. Pub. 7-18-61. Filed 8-7-58.
 722,395. A & A AND DESIGN. Alexander & Alexander, Inc. SN 102,081. Pub. 7-18-61. Filed 8-5-60.
 722,396. CERTI-CHECK. Miami National Bank. SN 106,338. Pub. 7-18-61. Filed 10-13-60.

Class 103 — Construction and Repair

722,397. JADCO AND DESIGN. John A. Jadcak, d.b.a. Jadcak Precision Company. SN 85,134. Pub. 7-18-61. Filed 11-12-59.
 722,398. AMC AND DESIGN. Arduini Manufacturing Corp. SN 106,035. Pub. 7-18-61. Filed 10-10-60.

Class 104 — Communication

722,399. THE GOLDEN MUSIC STATION. KMAP, Inc. SN 107,773. Pub. 7-18-61. Filed 11-3-60.

Class 105 — Transportation and Storage

722,400. REPRESENTATION OF A QUAKER HEAD IN CIRCLE. Quaker Storage Company, Inc. SN 59,487. Pub. 7-18-61. Filed 9-24-58.
 722,401. EUROPABUS. Europabus (Overseas) Inc. SN 67,331. Pub. 7-18-61. Filed 2-9-59.
 722,402. THE MASON AND DIXON LINES INC. ETC. AND DESIGN. The Mason and Dixon Lines, Incorporated. SN 103,287. Pub. 7-18-61. Filed 8-23-60.

722,403. ANN ARBOR RAILROAD AND DESIGN. The Ann Arbor Railroad Company. SN 109,024. Pub. 7-18-61. Filed 11-25-60.
 722,404. REA. Railway Express Agency, Incorporated. SN 111,011. Pub. 7-18-61. Filed 12-29-60.

Class 106 — Material Treatment

722,405. ALCHRONIZING. Alchro Corp. SN 100,876. Pub. 7-18-61. Filed 7-18-60.
 722,406. RESISTANE. The Specialty Coatings Corporation. SN 102,950. Pub. 7-18-61. Filed 8-18-60.
 722,407. TUBE-KOTE. Tube-Kote, Inc. SN 106,959. Pub. 7-18-61. Filed 10-21-60.
 722,408. CECO WITHIN A TRIANGLE. The Youngstown Sheet and Tube Company. SN 107,398. Pub. 7-18-61. Filed 10-28-60.

Class 107 — Education and Entertainment

722,409. "TIRED JOE AND PAT." Joe F. Stout. SN 101,440. Pub. 7-18-61. Filed 7-25-60.
 722,410. DRIVOTRAINER. The Aetna Casualty and Surety Company. SN 107,811. Pub. 7-18-61. Filed 11-4-60.
 722,411. THE LAW ON TRIAL. The Bar Association of the District of Columbia, Inc. SN 109,026. Pub. 7-18-61. Filed 11-25-60.
 722,412. OUTSIDE IN. The Junior League of St. Louis, Inc. SN 110,061. Pub. 7-18-61. Filed 12-12-60.

Collective Membership Marks

Class 200

722,413. MOUNTAIN RESCUE AND DESIGN. Mountain Rescue Council. SN 111,987. Pub. 7-18-61. Filed 1-17-61.

Certification Marks

Class A — Goods

722,414. SABIN. Albert B. Sabin. SN 96,526. Pub. 7-18-61. Filed 5-5-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

722,415. Neely Manufacturing Co. Inc., Corydon, Iowa. SN 8,686. Filed P.R. 5-21-56; Am. S.R. 8-2-61.

Class 12 — Construction Materials

722,419. Lansdale Forest Products Corp., Lansdale, Pa. SN 111,340. Filed P.R. 1-5-61; Am. S.R. 7-19-61.

Reddy Fab **HOMES**

For Prefabricated Houses Made of Wood.
 First use July 3, 1960.

722,420. Adanlock Jamestown Corp., Jamestown, N.Y. SN 111,777. Filed P.R. 1-13-61; Am. S.R. 7-13-61.

THINWALL

For Portable Partition Structures and Work Station Fixtures.
 First use Mar. 27, 1959.

Class 14 — Metals and Metal Castings and Forgings

722,421. M. Swift & Sons, Inc., Hartford, Conn. SN 93,635. Filed P.R. 3-24-60; Am. S.R. 8-3-61.

GLITTER

For Gold Leaf, Metal Leaf and Metal Foil in Roll Form.
 First use on or about Feb. 1, 1939.

722,422. M. Swift & Sons, Inc., Hartford, Conn. SN 110,381. Filed P.R. 12-16-60; Am. S.R. 8-3-61.

GLOSSY

For Gold Leaf, Metal Leaf, and Metal Foil.
 First use on or about Feb. 1, 1939.

Class 17 — Tobacco Products

722,423. Wolf Bros. & Co., Red Lion, Pa. SN 84,825. Filed P.R. 11-6-59; Am. S.R. 7-21-61.

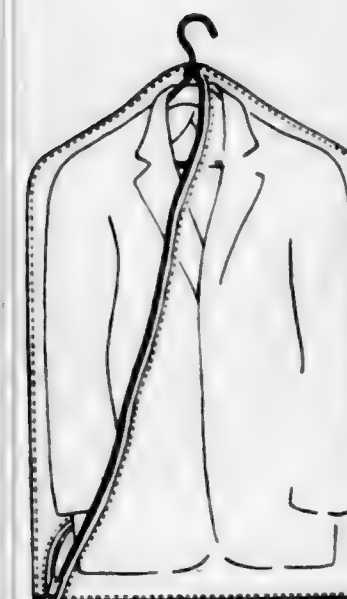
CROOKETTES

For Cigars.
 First use Aug. 6, 1959.

722,424. Albert L. Petri, Redwood City, Calif. SN 110,167. Filed P.R. 12-13-60; Am. S.R. 7-18-61.

FILTERFIRM

For Cigars.
 First use June 1, 1960.



For Plastic Garment Bags.
 First use Nov. 8, 1948.

722,416. Rheem Manufacturing Company, Richmond, Calif. SN 90,574. Filed P.R. 2-8-60; Am. S.R. 7-24-61.

STERILPAC

For Drums or Metal Containers.
 First use Nov. 17, 1959.

722,417. Standard Packaging Corporation, New York, N.Y. SN 100,067. Filed P.R. 6-30-60; Am. S.R. 7-20-61.

SUPER PAK

For Prepackaging Trays.
 First use at least as early as June 14, 1960.

722,418. Guild Plastics, Inc., Cambridge, Mass. SN 113,211. Filed 2-7-61.

TASTE THE COFFEE NOT THE CUP

For Plastic Disposable Cups.
 First use Mar. 3, 1959.

Class 21—Electrical Apparatus, Machines, Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

722,425. Morse Sewing Machine and Supply Corp., New York, N.Y. SN 101,883. Filed P.R. 8-2-60; Am. S.R. 8-1-61.

722,428. Mission Rubber Company, Inc., Whittier, Calif. SN 101,693. Filed P.R. 7-29-60; Am. S.R. 6-28-61.

SUPERTONE

For Radios.
First use July 26, 1960.

722,426. L. Frank Markel & Sons, Norristown, Pa. SN 112,553. Filed P.R. 1-26-61; Am. S.R. 7-10-61.

FLEXLEAD

For High Temperature Lead Wire Used on Electrical Apparatus and Equipment.
First use Jan. 6, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

722,427. Peterson Products of San Mateo, Inc., d.b.a. Peterson Products, Belmont, Calif. SN 102,864. Filed P.R. 8-17-60; Am. S.R. 6-26-61.

TWIN TIP

For Spray Guns for Spraying Liquid Resins and the Like.
First use on or about Oct. 1, 1958.

BAND-SEAL

For Rubber Sleeve Joint for Sewer Pipe.
First use Feb. 11, 1960.

Class 39—Clothing

722,429. Excelled Sheepskin & Leather Coat Co., New York, N.Y. SN 101,089. Filed P.R. 7-19-60; Am. S.R. 7-3-61.



For Men's, Women's, Boys', and Girls' Leather Coats and Jackets.
First use Feb. 2, 1940.

TRADEMARK REGISTRATIONS RENEWED

20,526. J & P COATS AND DESIGN. Cl. 43. 12-29-1891.	151,351. CREDO LIGHTS. Cl. 15. 1-31-22.
20,527. DESIGN OF SCALE OF INCHES. Cl. 43. 12-29-1891.	388,295. CELAVALA. Cl. 42. 6-17-41.
142,090. CHAS. PFIZER & CO. INC. ETC. Cl. 18. 5-3-21.	388,296. CELITE. Cl. 42. 6-17-41.
144,043. FURNITURE AGE. Cl. 38. 6-21-21.	388,578. FLEET RIB. Cl. 42. 7-1-41.
144,571. AUTOMATIC. Cl. 52. 7-12-21.	388,644. McHENRY AND DESIGN. Cl. 49. 7-1-41.
145,487. IMPERIAL. Cl. 4. 8-2-21.	388,701. MECCA. Cl. 42. 7-8-41.
145,611. REPRESENTATION OF A STAR ETC. Cl. 48. 8-16-21.	389,389. ZORBIT. Cl. 1. 8-5-41.
145,613. PARROT BRAND AND DESIGN. Cl. 18. 8-16-21.	389,428. INFRA RADIATOR. Cl. 21. 8-5-41.
145,666. FLEET PHOTO SERVICE AND DESIGN. Cl. 38. 8-16-21.	389,506. TRAVEL-AIR. Cl. 35. 8-5-41.
145,701. REPRESENTATION OF SCALES AND DESIGN. Cl. 6. 8-16-21.	389,577. LUSTA-WAX. Cl. 4. 8-12-41.
145,846. BLATZ AND DESIGN. Cl. 48. 8-16-21.	389,887. NU-TEX. Cl. 23. 8-26-41.
145,986. SLIKUM. Cl. 51. 8-23-21.	390,155. FLOR GLO. Cl. 4. 9-9-41.
146,254. COSMOLUBRIC AND DESIGN. Cl. 15. 9-6-21.	390,383. PROTECTANET. Cl. 39. 9-23-41.
146,255. HYDROLUBRIC AND DESIGN. Cl. 15. 9-6-21.	390,421. ALEX C. MACLEAN. Cl. 18. 9-23-41.
146,583. LIBERTY. Cl. 39. 9-13-21.	390,499. GYRO-SOLVER. Cl. 21. 9-23-41.
146,733. ESCOFFIER. Cl. 46. 9-20-21.	390,796. OXENE. Cl. 6. 10-7-41.
146,773. VITSOL. Cl. 15. 9-20-21.	390,817. BERNAT AND DESIGN. Cl. 43. 10-7-41.
146,774. FRAPOL. Cl. 15. 9-20-21.	390,836. SYLVANIA. Cl. 50. 10-7-41.
146,847. PEMCO. Cl. 12. 9-20-21.	391,297. CEDOME. Cl. 18. 10-28-41.
147,543. THE PRISM. Cl. 38. 10-25-21.	391,298. KADOME. Cl. 18. 10-28-41.
147,702. SWEET ORCHARD AND DESIGN. Cl. 45. 10-25-21.	391,304. RECORDVELOPE. Cl. 37. 10-28-41.
147,948. CANNON AND DESIGN. Cl. 42. 11-8-21.	391,602. SNAP CRACKLE POP AND DESIGN. Cl. 46. 11-18-41.
148,010. ENO. Cl. 18. 11-8-21.	391,938. OCTO-SOLVE. Cl. 4. 12-2-41.
148,500. QUAKER. Cl. 46. 11-15-21.	392,003. HEAT SEAL AND DESIGN. Cl. 37. 12-2-41.
149,825. ENRICO CARUSO ETC. AND DESIGN. Cl. 46. 12-27-21.	392,190. SNAP, CRACKLE AND POP. Cl. 38. 12-16-41.
150,270. C. W. BURGOON. Cl. 18. 1-3-22.	392,205. CORNELLIAN. Cl. 35. 12-16-41.
150,839. JEWEL AND DESIGN. Cl. 16. 1-3-22.	392,216. SCREW-VEYOR. Cl. 23. 12-16-41.
151,272. 808. Cl. 22. 1-24-22.	392,370. PEARL "B." Cl. 50. 12-23-41.
151,273. BACK DESIGN. Cl. 22. 1-24-22.	392,408. AZODRINE. Cl. 18. 12-23-41.
	392,468. DAN-DEE. Cl. 4. 12-30-41.
	392,481. SOUTHER-KNIT. Cl. 39. 12-30-41.
	392,504. KELLOGG'S. Cl. 33. 12-30-41.
	392,593. SANDOZOL. Cl. 6. 1-6-42.

392,626. PUNCH AND DESIGN. Cl. 46. 1-6-42.	393,049. AQUA-FED. Cl. 18. 1-27-42.
392,892. FOREST PRODUCTS ETC. AND DESIGN. Cl. 37. 1-20-42.	393,055. DAYAMIN. Cl. 18. 1-27-42.
392,940. LIFE SPAN AND DESIGN. Cl. 12. 1-20-42.	393,080. KOAGINOL. Cl. 18. 1-27-42.
392,987. PUNCH AND DESIGN. Cl. 46. 1-20-42.	393,162. SILOBRED. Cl. 1. 1-27-42.
	393,202. A-C. Cl. 18. 1-27-42.

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180,082. DOUBLE HB DIAMOND AND DESIGN. Cl. 44. 2-10-24.	610,700. BILTWEEL. Cl. 34.
261,900. ROKADA. Cl. 12. 9-24-29.	610,701. DETROIT JEWEL. Cl. 34.
269,287. GREEN HEAD AND DESIGN. Cl. 46. 4-1-30.	610,702. ROTO-SPIT. Cl. 34.
318,544. LITRO. Cl. 23. 10-30-34.	610,712. DUPLICOPLES. Cl. 37.
356,550. QUALATEX AND DESIGN. Cl. 22. 5-3-38.	610,719. SMS AND DESIGN. Cl. 38.
420,575. SOLVEPINE. Cl. 52. 4-23-46.	610,726. SEA-ESTA. Cl. 39.
424,363. SYNCRO-GREEN. Cl. 16. 10-1-46.	610,728. BUSY POCKETS. Cl. 39.
426,157. MD. Cl. 38. 12-17-46.	610,729. MINIMUM WEIGHT ETC. AND DESIGN. Cl. 39.

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610,515. STAK-TIER. Cl. 2.	610,733. LA MUNECA NEW YORK. Cl. 39.
610,516. FLICK AND DESIGN. Cl. 2.	610,743. MASCULON. Cl. 39.
610,517. FULTON FUL-KROP. Cl. 2.	610,744. PRINCE GEORGE. Cl. 39.
610,521. JEAN K. Cl. 3.	610,745. NEO-SUPREME. Cl. 39.
610,522. LYCEUM LUGGAGE. Cl. 3.	610,747. FESTIVAL. Cl. 39.
610,524. TWEET AND DESIGN. Cl. 3.	610,753. TRIP COAT. Cl. 39.
610,532. RIPPLE-CORE HOLLOW CORE PANELS AND DESIGN. Cl. 12.	610,760. CHEER LEADER. Cl. 39.
610,536. ROCK-A-CRIB. Cl. 13.	610,763. MONTRICO. Cl. 39.
610,539. SHELFMAKER. Cl. 18.	610,764. DIABRA. Cl. 39.
610,543. WHETHA-TUBE. Cl. 13.	610,767. BURNT GRASS. Cl. 39.
610,551. SUPERMATIC. Cl. 13.	610,769. J'ADORE. Cl. 39.
610,557. VERSATUBE. Cl. 13.	610,778. PAK'N GO. Cl. 39.
610,562. TURRETOP. Cl. 14.	610,775. CARACUL. Cl. 42.
610,563. VMC IN CIRCLE DESIGN. Cl. 14.	610,776. CYANOCOTTON. Cl. 42.
610,566. PNA. Cl. 14.	610,780. CYANOCEL. Cl. 42.
610,577. SORUNEX. Cl. 18.	610,784. TEXOBESTOS. Cl. 42.
610,590. BAKE-O-MATIC. Cl. 21.	610,786. MATS BY MOLLY. Cl. 42.
610,596. ELECTROVECTOR AND DESIGN. Cl. 21.	610,787. MOLLY MATS. Cl. 42.
610,601. CAPTAIN TV AND DESIGN. Cl. 21.	610,788. FIRMELUR. Cl. 42.
610,608. BCI. Cl. 23.	610,789. CYANOCOTTON. Cl. 43.
610,610. TATPAX. Cl. 23.	610,792. TRACTOLATOR. Cl. 44.
610,611. DISHMAID. Cl. 23.	610,796. JO. DANDY BRAND AND DESIGN. Cl. 46.
610,612. ROYAL MASTER. Cl. 23.	610,799. SLOTT'S SENAP ETC. AND DESIGN. Cl. 46.
610,617. VELVET LAWN. Cl. 23.	610,808. GOLDEN CITY. Cl. 46.
610,621. CHOPIE. Cl. 23.	610,810. REPRESENTATION OF CHEF. Cl. 46.
610,624. BUZZ'S 4 IN 1 HANDY YARD, TOOL AND DESIGN. Cl. 23.	610,813. RIPPLETAN. Cl. 50.
610,625. POK-A-HOL AND DESIGN. Cl. 23.	610,814. MAFLEX AND DESIGN. Cl. 50.
610,627. VEDETTE UNIC. Cl. 23.	610,815. RADIUM. Cl. 50.
610,628. ELECTRABRASIVE. Cl. 23.	610,816. TRU-TU-LIFE. Cl. 50.
610,635. EL RANCHO. Cl. 23.	610,824. NATURELESQUE. Cl. 51.
610,638. AUTO VORTEX AND DESIGN. Cl. 23.	610,829. NO-TIME AND DESIGN. Cl. 51.
610,640. KORNER KING. Cl. 23.	610,830. SPOTLIGHT. Cl. 52.
610,643. THOMSON. Cl. 23.	610,833. SUF-OUT. Cl. 52.
610,647. NYLOMAT. Cl. 23.	610,835. FASWASH. Cl. 52.
610,650. DUMP O MATIC AND DESIGN. Cl. 23.	610,838. DABBLE. Cl. 52.
610,653. PANORAMASCOPE. Cl. 26.	610,840. SHEPARD'S NOUVELLE SUEDE AND DESIGN. Cl. 1.
610,660. ARGUS AND DESIGN. Cl. 26.	610,846. SHUR-GIDE. Cl. 13.
610,664. TRALCO FILMS AND DESIGN. Cl. 26.	610,849. KEY RETRACT. Cl. 13.
610,667. SUPER SNIFFER. Cl. 26.	610,852. POWER SCOOP AND DESIGN. Cl. 23.
610,669. NIVARA. Cl. 27.	610,854. MANSFIELD. Cl. 31.
610,670. DUETTE. Cl. 27.	610,855. LYON AND DESIGN. Cl. 34.
610,672. SEITZ. Cl. 27.	610,856. MAGIC IN YOUR FINGERS. Cl. 37.
610,675. AM LEE. Cl. 28.	610,860. OLD ENGLAND. Cl. 40.
610,677. SNO BUG AND DESIGN. Cl. 29.	610,861. LAWNBRELLA. Cl. 41.
610,678. QUALITY. Cl. 29.	
610,683. NUKRAFT. Cl. 32.	
610,684. PRIDE KITCHENS. Cl. 32.	
610,686. TOY MART. Cl. 32.	
610,689. ART-FULL. Cl. 32.	
610,690. PEN-PAK. Cl. 32.	
610,693. YALACTA. Cl. 33.	
610,694. CHUCK RANGE. Cl. 34.	
610,697. J-JACKSON AND DESIGN. Cl. 34.	
610,698. DUALZONE. Cl. 34.	

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412,767. BARONET. Cl. 46. 3-27-45.
431,436. SPADS. Cl. 39. 7-22-47.
437,034. OCCASION. Cl. 46. 3-2-48.
707,897. SOLTERG. Cl. 52. 11-29-60.

Erratum

In the OFFICIAL GAZETTE, issue of Sept. 5, 1961, under "Trademark Registrations Canceled," page TM 37, column 1, "609,119" should read 609,118.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

388,620. July 1, 1941. Crown Products Corporation, Los Angeles, Calif. Pub. by Lady's Choice Foods, Los Angeles, Calif.

MIRACLE BLEACH

For Bleaching Water.

399,220. Dec. 22, 1942. Tempil Corporation, New York, N.Y. Pub. by registrant.

TEMPILAQ°

For Temperature Indicating Fluid Materials Made of Chemical Compounds, Chemical Elements, Eutectics, Pure Metals and Alloys Which Possess Sufficiently Sharp Melting Points or Melting Point Ranges To Indicate Specific Temperatures or Temperature Ranges in Subdivided Form Suspended or Dissolved in a Quickly Drying Vehicle or Solvent.

399,221. Dec. 22, 1942. Tempil Corporation, New York, N.Y. Pub. by registrant.

TEMPILSTIK°

For Temperature Indicating Pencils, or Crayons, Made of Chemical Compounds, Chemical Elements, Eutectics, Pure Metals and Alloys Which possess Sufficiently Sharp Melting Points or Melting Point Ranges To Indicate Specific Temperatures or Temperature Ranges by Their Melting.

405,293. Jan. 18, 1944. The Dispergent Company, New York, N.Y. Pub. by Walter A. Taylor, Guilford, Conn.

NEOCOL

For Emulsifiers Adapted To Form Emulsions of the Liquid or Cream Type and Dispersing Agents Adapted To Disperse Oils in Water or Low Concentrated Alcoholic Solutions.

Class 7—Cordage

391,259. Oct. 28, 1941. Piedmont Cotton Mills, East Point, Ga. Pub. by registrant.

TYNAC

For Cotton Twine.
TM 38

147,825. Nov. 1, 1921. United Fertilizer Company, Carrollville, Wis. Pub. by registrant.

HYNITE

For Fertilizers.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

383,352. Dec. 3, 1940. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ADEL

For Conduit Supporting Blocks and Conduit Supporting Clips, Formed in Part of Metal and in Part of a Cushioning Material Especially Designed for Use in the Construction of Aircraft.

383,606. Dec. 17, 1940. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ADEL

For Dual Control Valves, and Hydraulic and Pneumatic Valves, Especially Designed for Use on Aircraft.

383,607. Dec. 17, 1940. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Hydraulic and Pneumatic Valves Especially Designed for Use on Aircraft.

OCTOBER 3, 1961

U. S. PATENT OFFICE

TM 39

402,318. July 13, 1943. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Hydraulic Control Valves Especially Designed for Use on Aircraft.

408,710. Aug. 29, 1944. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Hydraulic Control Valves Especially Designed for Use on Aircraft.

411,874. Feb. 6, 1945. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

S*porty

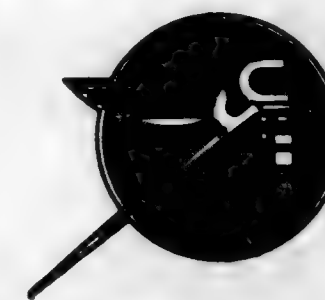
For Conduit Supporting Blocks and Conduit Supporting Clips, Especially Designed for Use in the Construction of Aircraft.

415,504. Aug. 7, 1945. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Conduit Supporting Blocks and Conduit Supporting Clips, Especially Designed for Use in the Construction of Aircraft.

416,473. Sept. 18, 1945. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Hydraulic Control Valves.

418,693. Jan. 8, 1946. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ADELOCK

For Self-Locking Nuts and Fasteners Made of Sheet Metal and Applicable to Screws, Bolts, and Threadless Studs.

Class 16—Protective and Decorative Coatings

388,934. July 15, 1941. Metals Disintegrating Company, Inc., Union, N.J. Pub. by American-Marietta Company, Chicago, Ill.

AMERICAN

For Flaked Disintegrated Metal Used as Paint Ingredient, Particularly as Paint Pigments.

388,935. July 15, 1941. Metals Disintegrating Company, Inc., Union, N.J. Pub. by American-Marietta Company, Chicago, Ill.



For Flaked Disintegrated Metal Used as Paint Ingredient, Particularly as Paint Pigments.

Class 18—Medicines and Pharmaceutical Preparations

367,648. May 23, 1939. Clinical Products Limited, London, England. Pub. by Nicholas International Limited, Toronto, Ontario, Canada.

MENOPAX

For Medicated Tablets for Human Use in the Treatment of Menopausal Ailments.

386,116. Mar. 25, 1941. Alice Parry Maeding, d.b.a. Parry-May Co., New York, N.Y. Pub. by Walter A. Taylor, Guilford, Conn.

HYPEX

For Ointment for the Treatment of Fungus Infections of the Skin.

434,499. Nov. 18, 1947. Clinical Products Limited, Richmond, England. Pub. by Nicholas International Limited, Toronto, Ontario, Canada.

MENOV

For Pharmaceutical Preparations for Use in the Treatment of Dysmenorrhoea.

Class 21—Electrical Apparatus, Machines, and Supplies

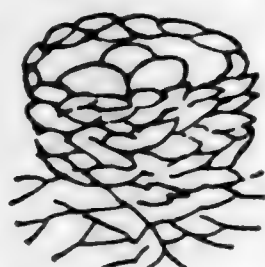
430,368. June 10, 1947. Automatic Electric Mfg. Co., Mankato, Minn. Pub. by Telex, Inc., St. Paul, Minn.



For Time Switches, Flashers, Interval Timers and Relays, the Time Switches, Interval Timers and Flashers Being Used To Close and Open or "Make" and "Break" Electrical Circuits at Prefixed or Definitely Established Times, the Flashers Including One Circuit and Two Circuit Flashers.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

142,144. May 3, 1921. Southern & Richardson Limited, Sheffield, England. Pub. by registrant.



For Ham Knives, Steak Knives, Carvers, Cocktail Knives, Salad Knives, Pen and Pocket Knives, Scout and Hunting Knives.

144,382. July 5, 1921. Easterbrook Allcard & Co., Limited, Sheffield, England. Pub. by registrant.

PRESTO

For Machine Twist Drills; Milling Cutters; Screwing Stocks, Taps and Dies; Reamers; Tube Expanders; Saws; Cold Chisels; Hammers; Tool Bits; Die Nuts; Bitstock Drills; Spanners; Spanner Wrenches; Pipe Wrenches; Twist Drills for Use in Ratchets; Ratchet Braces, and Bits, and Drills for Use in Ratchet Braces.

152,523. Feb. 28, 1922. The W. S. Tyler Company, Cleveland, Ohio. Pub. by registrant.

HUM-MER

For Vibrated-Screen Separating Machines.

384,577. Jan. 21, 1941. Adel Precision Products Corporation, Los Angeles, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ADEL

For Anti-Icing Pumps, Especially Designed for Use on Aircraft.

389,554. Aug. 12, 1941. American Machine and Foundry Company, New York, N.Y. Pub. by registrant.

GLEN

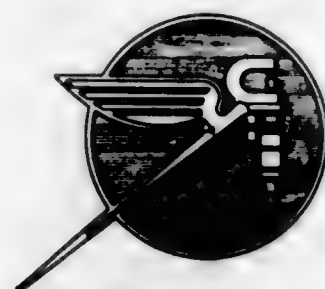
For Vertical and Other Mixers for Dough-Like and Other Materials With Accessories Therefor Such as Bowl Unloader Mechanism, and Parts of the Foregoing Machinery and Mechanism.

417,063. Oct. 16, 1945. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Hydraulic Unitary Control Apparatus Comprising Manually Operated Pressure Actuator Master Units, Equalizers, and Hydraulic Slave Units, for Use on Aircraft, Locomotives, Watercraft and Machinery as Operational Units.

425,939. Dec. 10, 1946. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Motor Operated Pumps, Hand Operated Pumps, Hydraulic Cylinder and Piston Assemblies and Hydraulic Motion-Transmitting Apparatus Including Cylinder and Piston, Actuating Units, Cylinder and Piston Actuated Units and Pressure Accumulators and Equalizers, All With or Without Built-In Valves and/or Thermal-Compensating Devices, for Hydraulic, Power-Transmitting Systems, Fluid Flow Control Systems and the Like.

Class 26—Measuring and Scientific Appliances Class 38—Prints and Publications

423,622. Sept. 3, 1946. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ALPHATRON

For Cameras, Parts Thereof, and Accessories Therefor.

425,288. Nov. 12, 1946. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

SURGISCOPE

For Medico-Surgical Cameras, Parts Thereof, and Accessories Therefor.

Class 27—Horological Instruments

147,600. Oct. 25, 1921. Fabrique d'Horlogerie Electa Gallet & Co. S.A., La Chaux-de-Fonds, Switzerland. Pub. by Gallet & Co. S.A., La Chaux-de-Fonds, Switzerland.



For Watches and Their Parts.

Class 31—Filters and Refrigerators

420,584. Apr. 23, 1946. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.



For Fluid Filters.
TM 771 O.G.—4

390,597. Sept. 30, 1941. Toy Manufacturers of the U.S.A., Inc., New York, N.Y. Pub. by registrant.



The applicant disclaims apart from the mark as shown, the wording appearing upon the drawing.
For Publications, Directories, Catalogues, Pamphlets, and Informative Periodicals Issued at Irregular Intervals.

Class 39—Clothing

324,110. May 14, 1935. New Era Hats, Inc., New York, N.Y. Pub. by Edward A. Matlen, New York, N.Y.

Beachurst

For Millinery—Namely, Ladies' Hats.

Class 40—Fancy Goods, Furnishings, and Notions

888,301. June 17, 1941. Rau Fastener Company, Providence, R.I. Pub. by registrant.

GRIPZIP

For Garment Buckles.

Class 43—Thread and Yarn

390,813. Oct. 7, 1941. Piedmont Cotton Mills, East Point, Ga. Pub. by registrant.

TYNAC

For Cotton Thread and Yarns.

Class 44—Dental, Medical, and Surgical Appliances

391,040. Oct. 21, 1941. The Columbus Dental Manufacturing Company, Columbus, Ohio. Pub. by registrant.



For Dental Ceramic Materials That Are Marketed as a Complete Kit for the Dentist To Use in Making Alterations and Additions to Porcelain Tooth Products.

Class 46—Foods and Ingredients of Foods

392,167. Dec. 16, 1941. The Kroger Grocery & Baking Company, Cincinnati, Ohio. Pub. by The Kroger Co., Cincinnati, Ohio.

VEIN-X

For Canned Shrimp.

Class 50—Merchandise Not Otherwise Classified

382,836. Nov. 12, 1940. Adel Precision Products Corp., Burbank, Calif. Pub. by General Metals Corporation, Oakland, Calif.

ADELITE

For Resilient Composition Formed in Sheets, Strips or Blocks for Forming Shock Absorbing or Cushioning Pads and the Like.

44,206. Feb. 21, 1905. National Toilet Co., Paris, Tenn. Pub. by The Chattanooga Medicine Company, Chattanooga, Tenn.

EGYPTIAN

QUEEN

For Cosmetic Cream.

392,655. Jan. 6, 1942. Cheatham Chemical Company, Atlanta, Ga. Pub. by registrant.

BEAUTY RAY

For Cold Cream, Vanishing Cream, Skin Lotion, Hair Dressing, Talcum Powder and Hair Tonic.

392,656. Jan. 6, 1942. Cheatham Chemical Company, Atlanta, Ga. Pub. by registrant.



For Cold Cream, Vanishing Cream, Skin Lotion, Hair Dressing, Talcum Powder and Hair Tonic.

INDEX OF REGISTRANTS

OCTOBER 3, 1961

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- Aamed, Inc., Oak Park, Ill. 722,374, pub. 7-18-61. Cl. 100.
 Abbott Laboratories, North Chicago, Ill. 393,053, ren. 10-3-61. Cl. 18.
 Abbott Laboratories, North Chicago, Ill. 393,202, ren. 10-3-61. Cl. 18.
 Abrasive Machine Tool Co., East Providence, R.I. 610,628, can. Cl. 23.
 Accurate Bushing Co., Garwood, N.J. 722,214, pub. 7-18-61. Cl. 23.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 382,836, 12(c) pub. 10-3-61. Cl. 50.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 383,352, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 383,606-7, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 384,577, 12(c) pub. 10-3-61. Cl. 23.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 402,318, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 408,710, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 411,874, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 415,504, 12(c) pub. 10-3-61. Cl. 13.
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 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 418,693, 12(c) pub. 10-3-61. Cl. 13.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 420,584, 12(c) pub. 10-3-61. Cl. 31.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 423,622, 12(c) pub. 10-3-61. Cl. 26.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 425,288, 12(c) pub. 10-3-61. Cl. 26.
 Adel Precision Products Corp., Burbank, by General Metals Corp., Oakland, Calif. 425,939, 12(c) pub. 10-3-61. Cl. 23.
 Advertising Displays, Inc., Covington, Ky. 610,816, can. Cl. 50.
 Adanlock Jamestown Corp., Jamestown, N.Y. 722,420, pub. 7-18-61. Cl. 12.
 Aetna Casualty and Surety Co., The, Hartford, Conn. 722,253, pub. 7-18-61. Cl. 38.
 Aetna Casualty and Surety Co., The, Hartford, Conn. 722,410, pub. 7-18-61. Cl. 107.
 Air Force Association, Washington, D.C. 722,386, pub. 7-18-61. Cl. 101.
 Alrkem, Inc., New York, N.Y. 722,107, pub. 7-18-61. Cl. 2.
 Aktiebolaget Upsala Attikfabrik, Uppsala, Sweden. 610,799, can. Cl. 46.
 Alchro Corp., Harrison, N.J. 722,405, pub. 7-18-61. Cl. 106.
 Alexander & Alexander, Inc., Baltimore, Md. 722,395, pub. 7-18-61. Cl. 102.
 Alloy Industries Development Co., Los Angeles, Calif. 722,112, pub. 7-18-61. Cl. 6.
 Am Lee Jewelry Co., Inc., Providence, R.I. 610,675, can. Cl. 28.
 American Can Co., New York, N.Y. 722,243-8, pub. 7-18-61. Cl. 37.
 American Chicle Co., Long Island City, N.Y. 722,153, pub. 7-18-61. Cl. 18.
 American Cyanamid Co., New York, N.Y. 610,776, can. Cl. 42.
 American Cyanamid Co., New York, N.Y. 610,780, can. Cl. 42.
 American Cyanamid Co., New York, N.Y. 610,789, can. Cl. 43.
 American Home Products Corp., d.b.a. Wyeth Laboratories, New York, N.Y. 722,163, pub. 7-18-61. Cl. 18.
 American Machine and Foundry Co., New York, N.Y. 389,554, 12(c) pub. 10-3-61. Cl. 23.
 American-Marietta Co., See—
 Metals Disintegrating Co., Inc.
 American National Growers Corp., See—
 Blue Goose Growers, Inc.
 American R.R. Credit Club, Inc., New York, N.Y. 722,387, pub. 7-18-61. Cl. 101.
 American Society for Metals, Novelty, Ohio. 722,353, pub. 7-18-61. Cl. 50.
 American Thermocatalytic Corp., Mineola, N.Y. 722,122, pub. 7-18-61. Cl. 12.
 American Viscose Corp., See—
 Sylvania Industrial Corp.
 Amex Merchandise Corp., New York, N.Y. 610,860, can. Cl. 40.
 Ann Arbor Railroad Co., The, St. Louis, Mo. 722,403, pub. 7-18-61. Cl. 105.
 Applied Magnetics Corp., Leeds, Mass. 722,006, pub. 7-18-61. Cl. 1.
 Arduini Mfg. Corp., Worcester, Mass. 722,398, pub. 7-18-61. Cl. 103.
 Argus Cameras, Inc., Ann Arbor, Mich. 610,660, can. Cl. 26.
 Armour and Co., Chicago, Ill. 722,100, pub. 7-18-61. Cl. 1.
 Armour and Co., Chicago, Ill. 722,330, pub. 7-18-61. Cl. 46.
 Armour and Co., Chicago, Ill. 722,343, pub. 7-18-61. Cl. 46.
 Associated Merchandising Corp., The, New York, N.Y. 610,854, can. Cl. 31.
 Atlanta Tool Co., Atlanta, Ga. 610,625, can. Cl. 23.
 Atlantic Macaroni Co., Inc., The, Long Island City, to Caruso Foods, Inc., Brooklyn, N.Y. 149,825, ren. 10-3-61. Cl. 46.
 Automatic Electric Co., Northlake, Ill. 722,186, pub. 7-18-61. Cl. 21.
 Automatic Electric Mfg. Co., Mankato, by Telex, Inc., St. Paul, Minn. 430,366, 12(c) pub. 10-3-61. Cl. 21.
 B.B. Chemical Co., Boston, Mass. 389,577, ren. 10-3-61. Cl. 4.
 B.W. Co., See—
 I.D. Co.
 Bailey Meter Co., Cleveland, Ohio. 390,796, ren. 10-3-61. Cl. 6.
 Banks Bros. Corp., New York, N.Y. 722,272, pub. 7-18-61. Cl. 39.
 Bar Association of The District of Columbia, Inc., The, Washington, D.C. 722,411, pub. 7-18-61. Cl. 107.
 Bar, Charles E., d.b.a. Latin American Trading Co., New York, N.Y. 610,733, can. Cl. 39.
 Baret Ware Co., See—
 I.D. Co.
 Barnes-Ross Co., Inc., The, See—
 Barnes-Ross Co., The, to The Barnes-Ross Co., Inc., Indianapolis, Ind. 147,543, ren. 10-3-61. Cl. 38.
 Barth, George F., d.b.a. Marketing Sales Plans Co., New York, N.Y. 722,289, pub. 7-18-61. Cl. 44.
 Batten-Blessing Co., The, Chicago, Ill. 722,223, pub. 7-18-61. Cl. 31.
 Battenfeld Grease & Oil Corp., Inc., Kansas City, Mo. 722,123, pub. 7-18-61. Cl. 12.
 Battenfeld Grease & Oil Corp., Inc., Kansas City, Mo. 722,144, pub. 7-18-61. Cl. 16.
 Beatrice Foods Co., Chicago, Ill. 722,310, pub. 7-18-61. Cl. 46.
 Beecham Products Inc., See—
 Eno, J. C., Ltd.
 Maclean, Ltd.
 Bernat, Emilie, & Sons Co., Jamaica Plain, Mass. 390,817, ren. 10-3-61. Cl. 13.
 Big-Dad Mfg. Co., Inc., Starke, Fla. 722,281, pub. 7-18-61. Cl. 39.
 Blue Goose Growers, Inc., by change of name from American National Growers Corp., Fullerton, Calif. 722,313, pub. 7-18-61. Cl. 46.
 Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 722,151, pub. 1-31-61. Cl. 18.
 Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 722,168, pub. 7-18-61. Cl. 18.
 B-1 Beverage Co., St. Louis, Mo. 722,290, pub. 7-18-61. Cl. 45.
 Bonewitz Chemicals, Inc., Burlington, Iowa. 722,377, pub. 7-18-61. Cl. 100.
 Bokers Mfg. Drug Co. Ltd., La Penitence, British Guiana. 722,355, pub. 7-18-61. Cl. 51.
 Borg-Warner Corp., Chicago, Ill. 722,101, pub. 7-18-61. Cl. 1.
 Borg-Warner Corp., Chicago, Ill. 722,209, pub. 7-18-61. Cl. 23.
 Bosketo, J., & Co. Proprietary Ltd., to D.H.A. (Laboratories) Pty. Ltd., Melbourne, Victoria, Australia. 145,613, ren. 10-3-61. Cl. 18.
 Bowers Printing Ink Co., Chicago, Ill. 610,835, can. Cl. 52.
 Boyertown Burial Casket Co., Boyertown, Pa. 722,103, pub. 7-18-61. Cl. 2.
 Bradford Motor Works, Bradford, Pa. 389,887, ren. 10-3-61. Cl. 23.
 Breck, John H., Inc., Springfield, Mass. 722,358, pub. 7-18-61. Cl. 51.
 Brian-Lloyd Co., Inc., New York, N.Y. 722,361, pub. 7-18-61. Cl. 51.
 Briddell, Chas. D., Inc., Crisfield, Md. 610,635, can. Cl. 23.
 Brooklyn Mills, Inc., Englewood, N.Y. 390,383, ren. 10-3-61. Cl. 39.
 Brown, Andrew, Co., Los Angeles, Calif. 424,363, can. Cl. 16.
 Brown, L. S., Atlanta, Ga. 722,193, pub. 7-18-61. Cl. 22.
 Brown & Williamson Tobacco Corp., Louisville, Ky. 722,147, pub. 7-18-61. Cl. 17.

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Brownell & Field Co., Providence, R.I. 722,301, pub. 7-18-61. Cl. 46.
 Bruhn & Co., Inc., Indianapolis, Ind. 391,938, ren. 10-3-61. Cl. 4.
 Bullock's, Inc., Los Angeles, Calif. 722,116, pub. 7-18-61. Cl. 8.
 Burger King of Florida, Inc., Jacksonville, Fla. 722,375, pub. 7-18-61. Cl. 100.
 Burgoon, Charles W., Bowling Green, to K. O. Hoffman, North Baltimore, Ohio. 150,270, ren. 10-3-61. Cl. 18.
 Burke Flexo-Products Co., Traverse City, Mich. 722,190, pub. 7-18-61. Cl. 22.
 California Equipment Co., Seattle, Wash. 722,203, pub. 7-18-61. Cl. 25.
 Calumet & Hecla, Inc., Calumet, Mich. 610,557, can. Cl. 13.
 Cannon Mfg. Co., to Cannon Mills Co., Kannapolis, N.C. 147,948, ren. 10-3-61. Cl. 42.
 Cannon Mills Co.: See—
 Cannon Mfg. Co.
 Capitol Food Corp., San Fernando, Calif. 722,318, pub. 7-18-61. Cl. 46.
 Carter Products, Inc., New York, N.Y. 722,159, pub. 7-18-61. Cl. 18.
 Caruso Foods, Inc.: See—
 Atlantic Macaroni Co., Inc., The.
 Celanese Corp. of America, New York, N.Y. 388,295-6, ren. 10-3-61. Cl. 42.
 Central Soya Co., Inc., Ft. Wayne, Ind. 722,308, pub. 7-18-61. Cl. 46.
 Century 21 Exposition, Inc., Seattle, Wash. 722,255, pub. 7-18-61. Cl. 38.
 Chatham Pharmaceuticals, Inc.: See—
 Steinberg, Arthur.
 Chattanooga Medicine Co., The: See—
 National Toilet Co.
 Cheatham Chemical Co., Atlanta, Ga. 392,655-6, 12(c) pub. 10-3-61. Cl. 31.
 Chicago Almond Products Co., Inc., Chicago, Ill. 722,325, pub. 7-18-61. Cl. 46.
 Chopie Tool and Die Co.: See—
 Chopieska, Frank S.
 Chopieska, Frank S., d.b.a. Chopie Tool and Die Co., La Crosse, Wis. 610,621, can. Cl. 23.
 Chrysler Corp., Highland Park, Mich. 722,175-6, pub. 7-18-61. Cl. 19.
 Clark, Allen, Inc., Paxinos, Pa. 722,328, pub. 7-18-61. Cl. 46.
 Clausen and Co., Charlotte, N.C. 431,436, can. Cl. 39.
 Clinical Products Ltd., by Nicholas International Ltd., Toronto, Ontario, Canada. 367,648, 12(c) pub. 10-3-61. Cl. 18.
 Clinical Products Ltd., Richmond, England, by Nicholas International Ltd., Toronto, Ontario, Canada. 434,499, 12(c) pub. 10-3-61. Cl. 18.
 Club Razor & Blade Mfg. Corp., Newark, N.J. 610,608, can. Cl. 23.
 Coats & Clark Inc.: See—
 J. & P. Coats, Ltd.
 Cohoes Carrybag Co., Inc.: See—
 Cohoes Envelope Co., Inc.
 Cohoes Envelope Co., Inc., Cohoes and New York, N.Y., to Cohoes Carrybag Co., Inc., Cohoes, N.Y. 391,304, ren. 10-3-61. Cl. 37.
 Colby & McDermott: See—
 Colby & McDermott Candy Co.
 Colby & McDermott Candy Co., d.b.a. Colby & McDermott, Los Angeles, Calif. 722,333, pub. 7-18-61. Cl. 46.
 Cole, Jack, Co., Birmingham, Ala. 722,172, pub. 7-18-61. Cl. 19.
 Colgate-Palmolive Co., New York, N.Y. 722,164, pub. 7-18-61. Cl. 18.
 Colorado Oil and Gas Corp., d.b.a. Derby Refining Co., Denver, Colo. 722,140, pub. 7-18-61. Cl. 15.
 Columbus Dental Mfg. Co., The, Columbus, Ohio. 391,040, 12(c) pub. 10-3-61. Cl. 44.
 Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis. 722,242, pub. 7-18-61. Cl. 37.
 Continental Baking Co., Rye, N.Y. 722,297, pub. 7-18-61. Cl. 46.
 Continental Drill Corp., Inc., Chicago, Ill. 722,198, pub. 7-18-61. Cl. 23.
 Convertible Clp Corp.: See—
 Reynolds Aluminum Supply Co.
 Cooperative G.L.F. Soil Building Service, Inc., to Cooperative Grange League Federation Exchange, Inc., Ithaca, N.Y. 389,389, ren. 10-3-61. Cl. 1.
 Cooperative Grange League Federation Exchange, Inc.: See—
 Cooperative G.L.F. Soil Building Service, Inc.
 Corbin, Ltd., New York, N.Y. 610,767, can. Cl. 39.
 Corner, Roland, Quebec, Canada. 722,376, pub. 7-18-61. Cl. 100.
 Coro, Inc., New York, N.Y. 722,222, pub. 7-18-61. Cl. 28.
 Corn-Ply Corp., North Augusta, Ga. 610,532, can. Cl. 12.
 Cowman Campbell Paint Co., Inc., Seattle, Wash. 722,145, pub. 7-18-61. Cl. 16.
 Cramer Chemical Co., Gardner, Kans. 722,263, pub. 7-18-61. Cl. 38.
 Crown Products Corp., by Lady's Choice Foods, Los Angeles, Calif. 388,620, 12(c) pub. 10-3-61. Cl. 6.
 Cudahy Packing Co., The, Chicago, Ill. 610,830, can. Cl. 52.
 Curtis Helene, Industries, Inc., Chicago, Ill. 722,368, pub. 7-18-61. Cl. 52.
 Curtis Mfg. Co., Cleveland, Ohio. 722,197, pub. 7-18-61. Cl. 23.
 D.H.A. (Laboratories) Pty. Ltd.: See—
 Bosisto, J. & Co. Proprietary Ltd.
 Dalkeith Agencies Ltd., Vancouver, British Columbia, Canada. 722,273, pub. 7-18-61. Cl. 39.
 Danaskin, Inc., New York, N.Y. 722,274, pub. 7-18-61. Cl. 39.
 Dawe's Laboratories, Inc., Chicago, Ill. 722,331, pub. 5-9-61. Cl. 46.
 Daw-Sonata, Ltd., New York, N.Y. 722,357, pub. 7-18-61. Cl. 51.
 Dennison Mfg. Co., Framingham, Mass. 392,003, ren. 10-3-61. Cl. 37.
 Dennison Mfg. Co., Framingham, Mass. 610,856, can. Cl. 37.
 Derby Refining Co.: See—
 Colorado Oil and Gas Corp.
 Detroit-Michigan Stove Co., now by merger, consolidation and change of name to Welbilt Corp., Detroit, Mich. 610,701, can. Cl. 34.
 Deutsche Flgirt Gesellschaft Ebers & Dr. Muller M.B.H., Krefeld, Germany. 722,171, pub. 3-7-61. Cl. 19.
 Diamond, H. Co.: See—
 Diamond, Herman.
 Diamond, Herman, d.b.a. H. Diamond Co., New York, N.Y. 722,221, pub. 7-18-61. Cl. 28.
 Dichter, Max, Inc., Rosindale, Mass. 722,392, pub. 7-18-61. Cl. 101.
 Die Engineering Co., New York, N.Y. 610,536, can. Cl. 13.
 Diego Rallo & Figli, Marsala, Italy. 722,347, pub. 7-18-61. Cl. 47.
 Dipuppo, Michael C., d.b.a. Emil Laboratories, Philadelphia, Pa. 722,287, pub. 7-18-61. Cl. 40.
 Dishmaid, Inc., Cleveland, Ohio. 610,611, can. Cl. 23.
 Dispergent Co., The, New York, N.Y., by W. A. Taylor, Guilford, Conn. 405,293, 12(c) pub. 10-3-61. Cl. 6.
 Donohue Directories, Inc., Chicago, Ill. 610,719, can. Cl. 38.
 Double Springs Distillers, Inc.: See—
 Mid-Valley Distilling Corp.
 Dow Chemical Co., The, Midland, Mich. 722,373, pub. 7-18-61. Cl. 52.
 Downey Sheet Metal Shop, Downey, Calif. 722,174, pub. 7-18-61. Cl. 19.
 Du Boff and Co.: See—
 Du Boff, Philip L.
 Du Boff, Philip L., d.b.a. Du Boff and Co., New York, N.Y. 610,539, can. Cl. 13.
 Durkee Famous Foods: See—
 Glidden Co., The.
 Durlan, Inc., Blooming Glen, Pa. 722,104, pub. 7-18-61. Cl. 2.
 Dziubek, Alfred, d.b.a. U.S. & South American Trading Co., New York, N.Y. 722,284, pub. 7-18-61. Cl. 39.
 Easterbrook Alford & Co., Ltd., Sheffield, England. 144,382, 12(c) pub. 10-3-61. Cl. 23.
 Eastern States Farmers' Exchange, Inc., West Springfield, Mass. 722,321, pub. 7-18-61. Cl. 46.
 Eaton Brothers Corp., Hamburg, N.Y. 722,106, pub. 7-18-61. Cl. 2.
 Electrovector Inc., Brooklyn, N.Y. 610,596, can. Cl. 21.
 Embossograph Process Co., Inc., Brooklyn, N.Y. 722,119, pub. 7-25-61. Cl. 11.
 Emil Laboratories: See—
 Dipuppo, Michael C.
 Emilian Bobkiewicz Reg'd, Montreal, Quebec, Canada. 610,647, can. Cl. 23.
 Englander Co., Inc., The, Chicago, Ill. 722,224, pub. 7-18-61. Cl. 32.
 Eno, J. C. Ltd., London, England to Beecham Products Inc., Clifton, N.J. 148,010, ren. 10-3-61. Cl. 18.
 Entoleter, Inc., New Haven, Conn., by merger and assignment from Safety Industries, Inc., Rutland, Vt. 722,138, pub. 7-18-61. Cl. 14.
 Escoffier Ltd., London, England. 146,733, ren. 10-3-61. Cl. 46.
 Etablissements Clin-hyla, Societe Anonyme, Paris, France. 722,154, pub. 7-18-61. Cl. 18.
 Eugene Fruit Growers Association, Eugene, Oreg. 722,306, pub. 7-18-61. Cl. 46.
 Europabus (Overseas) Inc., New York, N.Y. 722,401, pub. 7-18-61. Cl. 105.
 Excelled Sheepskin & Leather Coat Co., New York, N.Y. 722-429, Cl. 39.
 E-Z-Est Products Co., Inc., Oakland, Calif. 722,369, pub. 7-18-61. Cl. 52.
 Fabrique d'Horlogerie Electa Gallet & Co. S.A., by Gallet & Co. S.A., La Chaux-de-Fonds, Switzerland. 147,600, 12(c) pub. 10-3-61. Cl. 27.
 Fabrique l'Essor, Jura Bernois, Switzerland. 610,627, can. Cl. 23.
 Fall, Herbert S., Indianapolis, Ind. 722,141, pub. 7-18-61. Cl. 15.
 Fansteel Metallurgical Corp., North Chicago, Ill. 722,181, pub. 7-18-61. Cl. 21.
 Farm Journal, Inc., Philadelphia, Pa. 722,381, pub. 7-18-61. Cl. 100.
 Feldt Swanson Ltd., Gardena, Calif. 722,128, pub. 7-18-61. Cl. 13.
 Fenn Mfg. Co., The, Newington, Conn. 610,690, can. Cl. 32.
 Ferguson, W. R. Co.: See—
 Ferguson, W. R.
 Ferguson, W. R., d.b.a. W. R. Ferguson Co., Los Angeles, Calif. 437,034, can. Cl. 46.
 Fine Foods, Inc., Seattle, Wash. 722,295, pub. 7-18-61. Cl. 46.
 Firestone Tire & Rubber Co., The, Akron, Ohio, by assignments from Industrial Rayon Corp., Cleveland, Ohio. 722-288, pub. 5-24-60. Cl. 43.
 Fisher Scientific Co., Pittsburgh, Pa. 389,428, ren. 10-3-61. Cl. 21.
 Fisher Scientific Co., Pittsburgh, Pa. 390,499, ren. 10-3-61. Cl. 21.
 Fitzpatrick Bros., Inc., Chicago, Ill. 144,571, ren. 10-3-61. Cl. 52.
 Fleet Photo Service, to Fleet Photo Service, Inc., Washington, D.C. 145,666, ren. 10-3-61. Cl. 38.
 Fleet Photo Service, Inc.: See—
 Fleet Photo Service.

Fleet Photo Service, Inc.: See—
 Fleet Photo Service.
 Fleischman, Alvin T., Anderson, S.C. 610,686, can. Cl. 32.
 Fonville Products Co., Orlando, Fla. 722,152, pub. 7-18-61. Cl. 18.
 Foodmaker Co., San Diego, Calif. 722,379-80, pub. 7-18-61. Cl. 100.
 Fortified Forage Corp., Manhasset, N.Y. 722,294, pub. 7-18-61. Cl. 46.
 Fox, Fay, Massapequa Park, from Joannell Cosmetic Co., Bay-side, N.Y. 722,354, pub. 7-18-61. Cl. 51.
 Fraser & Johnston Co., San Francisco, Calif. 610,700, can. Cl. 34.
 Frost, Charles E., & Co., Westmount, Quebec, Canada. 722-149, pub. 8-11-59. Cl. 18.
 Fruit Cake Bakers of America, Inc., Chicago, Ill. 722,339-43, pub. 7-18-61. Cl. 46.
 Fuld Bros., Inc.: See—
 Fuld Bros.
 Fuld Bros., d.b.a. Lancaster Laboratories, to Fuld Bros., Inc., Baltimore, Md. 590,155, ren. 10-3-61. Cl. 4.
 Full Knit Hosiery Mills Inc., Burlington, N.C. 610,743-4, can. Cl. 39.
 Fulton Bag & Cotton Mills, Atlanta, Ga. 610,517, can. Cl. 2.
 G-M Food Brokers: See—
 Mecke, J. Howard, 3rd.
 Gallet & Co. S.A.: See—
 Fabrique d'Horlogerie Electa Gallet & Co. S.A.
 Gallo, E. & J., Winery, Modesto, Calif. 722,346, pub. 7-18-61. Cl. 47.
 Garrison House, Inc., New York, N.Y. 722,239, pub. 7-18-61. Cl. 37.
 Gay Sprites, Inc., New York, N.Y. 722,282-3, pub. 7-18-61. Cl. 39.
 Gebrüder Giulini G.m.b.H., Ludwigshafen (Rhine), Germany. 722,307, pub. 7-18-61. Cl. 46.
 Geigy Chemical Corp., Ardsley, N.Y. 722,113, pub. 7-18-61. Cl. 6.
 General Electric Co., Pittsfield, Mass. 722,183, pub. 7-18-61. Cl. 21.
 General Metals Corp.: See—
 Adel Precision Products Corp.
 Geoffrey, William, Santa Monica, Calif. 610,689, can. Cl. 32.
 Glasspar Co., Santa Ana, Calif. 722,177, pub. 7-18-61. Cl. 19.
 Glidden Co., The, d.b.a. Durkee Famous Foods, Cleveland, Ohio. 722,298, pub. 7-18-61. Cl. 46.
 Goerlich's, Inc., Toledo, Ohio. 722,178-9, pub. 7-18-61. Cl. 19.
 Goldberger, Ralph, Linden, N.J. 722,121, pub. 7-18-61. Cl. 23.
 Good Relish Co., Inc.: See—
 Sweet Orchard Co.
 Gordon, Clothes, Inc., Philadelphia, Pa. 610,729, can. Cl. 39.
 Gorham Tool Co., Detroit, Mich. 722,189, pub. 7-18-61. Cl. 14.
 Gothic House, Inc., Ashland, Mass. 722,391, pub. 7-18-61. Cl. 101.
 Grant, Midge, Inc.: See—
 Grant, Midge.
 Grant, Midge, Westport, Conn., to Midge Grant, Inc., New York, N.Y. 610,728, can. Cl. 39.
 Greene, Tweed & Co., North Wales, Pa. 722,236, pub. 7-18-61. Cl. 35.
 Gro-Cord Ribber Co., Lima, Ohio. 610,745, can. Cl. 39.
 Guild Plastics, Inc., Cambridge, Mass. 722,418, Cl. 2.
 Gypsum Ceiling Jack Co.: See—
 Phillips, Clay E.
 Hanson-Van Winkle-Munning Co., Matawan, N.J. 610,562, can. Cl. 14.
 Harmony Co., The, Chicago, Ill. 722,238, pub. 7-18-61. Cl. 86.
 Hart Metal Products Corp., Elkhart, Ind. 610,515, can. Cl. 2.
 Harvest Years Publishing Co., Inc., San Francisco, Calif. 722,251, pub. 7-18-61. Cl. 38.
 Harvey Famous Cartoons, New York, N.Y. 722,254, pub. 7-18-61. Cl. 38.
 Harvey Famous Cartoons, New York, N.Y. 722,258-9, pub. 7-18-61. Cl. 38.
 Harvey Famous Cartoons, New York, N.Y. 722,261, pub. 7-18-61. Cl. 38.
 Harvey Features Syndicate, New York, N.Y. 722,264, pub. 7-18-61. Cl. 38.
 Hat Corp. of America, Norwalk, Conn. 610,747, can. Cl. 39.
 Hematological Research Laboratory: See—
 Steinberg, Arthur.
 Hi-Acres Concentrate, Inc., Forest City, Fla. 722,322, pub. 7-18-61. Cl. 46.
 Hi-Acres Concentrate, Inc., Forest City, Fla. 722,324, pub. 7-18-61. Cl. 46.
 Hiersesell Brothers, Philadelphia, Pa. 180,082, can. Cl. 44.
 Hoffman, K. O.: See—
 Burgoon, Charles W.
 Hogan, Ralph H., Falls City, Neb. 610,624, can. Cl. 23.
 Holbrook Candies, Inc., Brooklyn, N.Y. 412,767, can. Cl. 46.
 Hommel, O. Co., The, Carnegie, N.Y. 722,095, pub. 7-18-61. Cl. 1.
 Houghton, E. F. & Co., Philadelphia, Pa. 146,254-5, ren. 10-3-61. Cl. 15.
 Houghton, E. F. & Co., Philadelphia, Pa. 146,773-4, ren. 10-3-61. Cl. 15.
 House of Huston, Inc., Coral Gables, Fla. 610,524, can. Cl. 3.
 Howard Stores Corp., Brooklyn, N.Y. 722,278, pub. 7-18-61. Cl. 39.
 Hubbard Milling Co., Mankato, Minn. 722,299, pub. 7-18-61. Cl. 46.
 Hudson Foam Latex Products, Inc., Edgewater, N.J. 722,098, pub. 7-18-61. Cl. 1.
 Hudson Foam Latex Products, Inc., Edgewater, N.J. 722,225, pub. 7-18-61. Cl. 32.
 I.D. Co., d.b.a. Baret Ware Co., and as B.W. Co., New York, N.Y. 722,102, pub. 7-18-61. Cl. 2.
 Imperial Chemical Industries Ltd., London, England. 722,167, pub. 7-18-61. Cl. 18.
 Imperial Spark Plug Tire Pump Co.: See—
 Meiser, Ida K.
 Industrial Rayon Corp.: See—
 Firestone Tire & Rubber Co., The.
 International Minerals & Chemical Corp., Skokie, Ill. 722,118, pub. 7-18-61. Cl. 10.
 International Products & Mfg. Co., Chicago, Ill. 722,201, pub. 7-18-61. Cl. 23.
 J.F.G. Coffee Co., Knoxville, Tenn. 722,292, pub. 7-18-61. Cl. 46.
 J. & P. Coats, Ltd., Paisley, Scotland, to Coats & Clark Inc., New York, N.Y. 20,526-7, ren. 10-3-61. Cl. 43.
 Jackson, W. L., Mfg. Co., Inc., Chattanooga, Tenn. 610,697, can. Cl. 34.
 Jadco Precision Co.: See—
 Jadcak, John A.
 Jadcak, John A., d.b.a. Jadco Precision Co., Philadelphia, Pa. 722,397, pub. 7-18-61. Cl. 103.
 Jale Corp., Philadelphia, Pa. 722,277, pub. 7-18-61. Cl. 39.
 Jennings, Gene, and Co., Stockton, Calif. 610,808, can. Cl. 46.
 Jewel Paint & Varnish Co.: See—
 Wadsworth-Howland Co.
 Joannell Cosmetic Co.: See—
 Fox, Fay.
 Johnson & Sons Mfg. Chemists Ltd., to Johnsons of Hendon Ltd., London, England. 145,701, ren. 10-3-61. Cl. 6.
 Johnsons of Hendon Ltd.: See—
 Johnson & Sons Mfg. Chemists Ltd.
 Johnston Lawn Mower Corp., Ottumwa, Iowa. 610,617, can. Cl. 23.
 Joseph & Feiss Co., The, Cleveland, Ohio. 722,265, pub. 7-18-61. Cl. 39.
 Junior League of St. Louis, Inc., The, St. Louis, Mo. 722,412, pub. 7-18-61. Cl. 107.
 Juy, Lucien, Cote-D'Or, France. 722,173, pub. 7-18-61. Cl. 19.
 K. & C. Metal Products Co., Inc., Brooklyn, N.Y. 610,684, can. Cl. 32.
 KMAP, Inc., Bakersfield, Calif. 722,399, pub. 7-18-61. Cl. 104.
 Kartridg Pak Co., The, Chicago, Ill. 722,205, pub. 7-18-61. Cl. 23.
 Kaz Heating Products, Inc., New York, N.Y. 722,187, pub. 7-18-61. Cl. 21.
 Kathy Products: See—
 Lundin, William H.
 Keep Mfg. Corp., Millville, N.J. 722,200, pub. 7-18-61. Cl. 23.
 Kelly, Eden, New York, N.Y. 722,286, pub. 7-18-61. Cl. 40.
 Kellogg Co., Battle Creek, Mich. 391,602, ren. 10-3-61. Cl. 46.
 Kellogg Co., Battle Creek, Mich. 392,190, ren. 10-3-61. Cl. 38.
 Kellogg Co., Battle Creek, Mich. 392,504, ren. 10-3-61. Cl. 33.
 Kennedy, Samuel F., d.b.a. Tri-County Mfg. Co., Taylorville, Ill. 610,852, can. Cl. 23.
 Key Corp. of America, Belleville, N.J. 610,849, can. Cl. 13.
 Kim's Laboratories: See—
 York Pharmaceutical Co.
 King Kelly Marmalade Co., Inc., Bellflower, Calif. 722,303, pub. 7-18-61. Cl. 48.
 King Kullen Grocery Co., Inc., Jamaica, N.Y. 722,338, pub. 7-18-61. Cl. 46.
 Kinney, E. C., Printing Co., Chicago, Ill. 610,712, can. Cl. 37.
 Klein, William, & Son, Arverne, N.Y. 722,150, pub. 7-18-61. Cl. 18.
 Kolker, Jean, St. Louis, Mo. 610,521, can. Cl. 3.
 Kontes Glass Co., Vineland, N.J. 722,218, pub. 7-18-61. Cl. 26.
 Kontur Kontakt Lens Co., Inc., Richmond, Calif. 722,252, pub. 7-18-61. Cl. 38.
 Krim-Ko Corp., Chicago, Ill. 722,319, pub. 7-18-61. Cl. 46.
 Kroger Co., The: See—
 Kroger Grocery & Baking Co., The.
 Kroger Grocery & Baking Co., The, by The Kroger Co., Cincinnati, Ohio. 392,167, 12(c) pub. 10-3-61. Cl. 46.
 Kuefer, Fonderle et Robinetterie S.A., Geneva, Switzerland. 622,131, pub. 7-18-61. Cl. 13.
 Lady's Choice Foods: See—
 Crown Products Corp.
 Lancaster Laboratories: See—
 Fuld Bros.
 Lansdale Forest Products Corp., Lansdale, Pa. 722,419, Cl. 12.
 La Rosa V. & Sons, Inc., Brooklyn, N.Y. 722,335, pub. 7-18-61. Cl. 46.
 Latin American Trading Co.: See—
 Bar, Charles E.
 Leavitt, L. J., d.b.a. L. J. Leavitt Produce Co., Burley, Idaho. 610,796, can. Cl. 46.
 Leavitt, L. J., Produce Co.: See—
 Leavitt, L. J.
 Legettes Inc., Boise, Idaho. 722,271, pub. 7-18-61. Cl. 39.
 Lefter Mfg. Corp., New York, N.Y. 610,732, can. Cl. 39.
 Leisure Products of America, Inc., Trenton, N.J. 722,192, pub. 7-18-61. Cl. 22.

- Leveo Metal Finishers, Inc., Long Island City, N.Y. 722,226, pub. 7-18-61. Cl. 32.
- Liberty & Co., Ltd., London, England. 146,583, ren. 10-3-61. Cl. 39.
- Liberty Hosiery Mills, Inc., Gibsonville, N.C. 722,285, pub. 7-18-61. Cl. 39.
- Libbey-Owens-Ford Glass Co., Toledo, Ohio. 722,228-32, pub. 7-18-61. Cl. 33.
- Lipton, Thomas J., Inc., Hoboken, N.J. 610,810, can. Cl. 46.
- Local Sales Agency, The, East Meadow, N.Y. 610,861, can. Cl. 41.
- Locke, Mina, Midland, Mich. 722,188, pub. 7-18-61. Cl. 22.
- Long Island Tabulating Corp., Hempstead, N.Y. 722,388, pub. 7-18-61. Cl. 101.
- L'Oreal, by change of name from Societe Monsavon-L'Oreal, Paris, France. 722,359, pub. 7-18-61. Cl. 51.
- Lubin-Wecker Co., Inc., to Weldon Pajamas, Inc., New York, N.Y. 392,481, ren. 10-3-61. Cl. 39.
- Lundin, William H., d.b.a. Kathy Products, Chicago, Ill. 722,360, pub. 7-18-61. Cl. 51.
- Lunenburg Sea Products, Ltd., Lunenburg, Nova Scotia, Canada. 722,334, pub. 7-18-61. Cl. 46.
- Lustig Foods Corp.: See—
Nifty Foods Corp.
- Lyons, Edward W., Youngstown, Ohio. 610,855, can. Cl. 34.
- Macleans, Ltd., Brentford, England, to Beecham Products Inc., Clifton, N.J. 390,421, ren. 10-3-61. Cl. 18.
- Maeding, Alice P., d.b.a. Parry-May Co., New York, N.Y., by Walter A. Taylor, Guilford, Conn. 386,116, 12(c) pub. 10-3-61. Cl. 18.
- Magic Wand Corp., Charlestown, Mass. 722,191, pub. 7-18-61. Cl. 22.
- Malloran Corp., The, Los Angeles, Calif. 610,814, can. Cl. 50.
- Marble Co., The, Nashville, Tenn. 722,180, pub. 5-9-61. Cl. 21.
- Markel, L. Frank, & Sons, Norristown, Pa. 722,426. Cl. 21.
- Marketing Sales Plans Co.: See—
Barth, George F.
- Martinat, Jean J., New York, N.Y. 722,362, pub. 7-18-61. Cl. 51.
- Marvel Plastic Products, Chicago, Ill. 610,677, can. Cl. 29.
- Mason and Dixon Lines, Inc., The, Kingsport, Tenn. 722,402, pub. 7-18-61. Cl. 105.
- Mastrippolito, P., & Sons, Inc., Embreeville, Pa. 722,336, pub. 7-18-61. Cl. 46.
- Mathieson Chemical Corp., now by merger and change of name from Mathieson Chemical Corp., New York, N.Y. 610,577, can. Cl. 18.
- Matlen, Edward A.: See—
New Era Hats, Inc.
- Mayers, L. & C., Co., Inc., New York, N.Y. 610,522, can. Cl. 3.
- Mayfair Packing Co., San Jose, Calif. 722,399, pub. 7-18-61. Cl. 46.
- Mayo, James P., Inc., Dublin, N.H. 722,394, pub. 7-18-61. Cl. 102.
- McGormack, V. L., Co., St. Louis, Mo. 722,219, pub. 7-18-61. Cl. 27.
- McGraw Edison Co., West Orange, N.J. 722,185, pub. 7-18-61. Cl. 21.
- McGregor-Donger Inc., New York, N.Y. 722,268, pub. 7-18-61. Cl. 39.
- Mission Rubber Co., Inc., Whittier, Calif. 722,428, Cl. 35.
- Mecke, J. Howard, 3rd, d.b.a. G.M. Food Brokers, Wayne, Pa. 722,302, pub. 7-18-61. Cl. 46.
- Medal Mfg. Co., Sharon, Pa. 610,601, can. Cl. 21.
- Medalist Tank Division: See—
Metal Coating Corp.
- Melzer, Ida K., d.b.a. Imperial Spark Plug Tire Pump Co., Blue Island, Ill. 722,206, pub. 7-18-61. Cl. 23.
- Melnor Industries, Inc., Moonachie, N.J. 722,132, pub. 7-18-61. Cl. 13.
- Mennen Co., The, Morristown, N.J. 722,372, pub. 7-18-61. Cl. 52.
- Merck & Co., Inc.: See—
Sharp & Dohme, Inc.
- Merck & Co., Inc., Rahway, N.J. 722,157, pub. 7-18-61. Cl. 18.
- Merit Clothing Co., Mayfield, Ky. 722,269-70, pub. 7-18-61. Cl. 39.
- Mesberg, B. G., Corp., New York, N.Y. 722,227, pub. 7-18-61. Cl. 32.
- Metakloth Co., Lodi, N.J., to Reeves Brothers, Inc., New York, N.Y. 392,370, ren. 10-3-61. Cl. 50.
- Metal Coating Corp., d.b.a. Medalist Tank Division, Chicago, Ill. 722,105, pub. 7-18-61. Cl. 2.
- Metals Disintegrating Co., Inc., Union, N.J., by American-Marietta Co., Chicago, Ill. 388,934-5, 12(c) pub. 10-3-61. Cl. 16.
- Mettler Instrument Corp., Hightstown, N.J. 722,378, pub. 7-18-61. Cl. 100.
- Miami Margarine Co., The, Cincinnati, Ohio. 722,329, pub. 7-18-61. Cl. 46.
- Miami National Bank, Miami, Fla. 722,396, pub. 7-18-61. Cl. 102.
- Micelche, Frank, Brooklyn, N.Y. 610,516, can. Cl. 2.
- Midas, Inc., Chicago, Ill. 722,195, pub. 7-18-61. Cl. 23.
- Mid-Valley Distilling Corp., Archbald, Pa., to Double Springs Distillers, Inc., Bardonia, Ky. 388,644, ren. 10-3-61. Cl. 49.
- Milani, Louis, Foods, Inc., Los Angeles, Calif. 722,337, pub. 7-18-61. Cl. 46.
- Mil-Hi Laboratories, Inc., d.b.a. Minit-Dri, New York, N.Y. 610,829, can. Cl. 51.
- Miller, John A., Co., Inc., of Newark, N.J.: See—
Steinberg, Arthur.
- Milwaukee Valve Co., Inc., Milwaukee, Wis. 722,127, pub. 7-18-61. Cl. 13.
- Minit-Dri: See—
Mil-Hi Laboratories, Inc.
- Minnesota and Ontario Paper Co., to The Minnesota and Ontario Paper Co., to Minnesota and Ontario Paper Co., Minneapolis, Minn. 392,892, ren. 10-3-61. Cl. 37.
- Mmar Corp., Chicago, Ill. 722,370, pub. 7-18-61. Cl. 52.
- Monterey Undergarment Co., Inc., New York, N.Y. 610,763, can. Cl. 39.
- Moore, George W., Inc., Waltham, Mass. 722,129, pub. 7-18-61. Cl. 13.
- Moore, W. D., Co., Tulsa, Okla. 722,363, pub. 10-25-60. Cl. 52.
- Morris, Philip, Inc., New York, N.Y. 722,148, pub. 7-18-61. Cl. 17.
- Morse Sewing Machine and Supply Corp., New York, N.Y. 722,210, pub. 7-18-61. Cl. 23.
- Morse Sewing Machine and Supply Corp., New York, N.Y. 722,425. Cl. 21.
- Mountain Rescue Council, Seattle, Wash. 722,413, pub. 7-18-61. Cl. 200.
- Muench-Kreuzer Candle Co., Inc.: See—
Norton Co., Inc., The.
- Muller, Fritz, "Coroplast" K.G., Nachstebreck, Germany. 722,097, pub. 7-18-61. Cl. 1.
- N.V. Bataafische Rubber Industries, Maastricht, Netherlands. 610,815, can. Cl. 50.
- Nalbandian, Eugene, Bakersfield, Calif. 722,293, pub. 7-18-61. Cl. 46.
- Nashua Footwear Corp., Lawrence, Mass. 722,276, pub. 7-18-61. Cl. 39.
- National Dynamics Corp., New York, N.Y. 722,111, pub. 7-18-61. Cl. 5.
- National Lift Co., Wayne, Mich. 610,650, can. Cl. 23.
- National Pneumatic Co., Inc., Boston, Mass. 610,551, can. Cl. 13.
- National Tire Stores Inc., to National Tires, Inc., Denver, Colo. 389,506, ren. 10-3-61. Cl. 35.
- National Tires, Inc.: See—
National Tire Stores Inc.
- National Toilet Co., Paris, by The Chattanooga Medicine Co., Chattanooga, Tenn. 44,206, 12(c) pub. 10-3-61. Cl. 51.
- Neely Mfg. Co., Inc., Corydon, Iowa. 722,415. Cl. 2.
- Neisner Brothers, Inc., Rochester, N.Y. 610,760, can. Cl. 39.
- Nelson, L. B., Mfg. Co., Inc., Peoria, Ill. 722,211, pub. 7-18-61. Cl. 23.
- Nesbitt Fruit Products, Inc., Los Angeles, Calif. 722,260, pub. 7-18-61. Cl. 38.
- Newbro Mfg. Co., Atlanta, Ga. 610,824, can. Cl. 51.
- New Era Hats, Inc., by E. A. Matlen, New York, N.Y. 324,110, 12(c) pub. 10-3-61. Cl. 39.
- Nicholas International Ltd.: See—
Clinical Products Ltd.
- Nifty Foods Corp., from Lustig Foods Corp., Brockport, N.Y. 722,296, pub. 7-18-61. Cl. 46.
- Nivada S.A., Grenchen, Switzerland. 610,669, can. Cl. 27.
- Noonan, T., Sons Co.: See—
Noonan, T., & Sons Co.
- Noonan, T., & Sons Co., to T. Noonan Sons Co., Boston, Mass. 145,986, ren. 10-3-61. Cl. 51.
- Norcote Co., The, from C. L. Rydstrom, d.b.a. The Norcote Co., St. Petersburg, Fla. 722,143, pub. 7-18-61. Cl. 16.
- Nord, E. A., Co., Inc., Everett, Wash. 722,124, pub. 7-18-61. Cl. 12.
- Norma-Hoffmann Bearings Corp., Stamford, Conn. 318,544, can. Cl. 23.
- Northern Supply, Anchorage, Alaska. 420,167, can. Cl. 21.
- Northrup, King & Co., Minneapolis, Minn. 393,162, ren. 10-3-61. Cl. 1.
- Northwest Paper Co., The, Cloquet, Minn. 722,241, pub. 7-18-61. Cl. 37.
- Norton Co., Inc., The, Jersey City, N.J., to Muench-Kreuzer Candle Co., Inc., Syracuse, N.Y. 151,351, ren. 10-3-61. Cl. 15.
- Novochoc S.A., La Chaux-de-Fonds, Neuchatel, Switzerland. 722,220, pub. 7-18-61. Cl. 27.
- Nuclear Instrument and Chemical Corp., Chicago, Ill. 610,667, can. Cl. 26.
- Nukraft Mfg. Co., Inc., Shelbyville, Ind. 610,683, can. Cl. 32.
- Octagon Ventilator Co., Chicago, Ill. 722,233-4, pub. 7-18-61. Cl. 34.
- Ohlin Mathieson Chemical Corp.: See—
Mathieson Chemical Corp.
- Ohlin Mathieson Chemical Corp., New York, N.Y. 722,156, pub. 7-18-61. Cl. 18.
- Olson, C. Le Roy, San Francisco, Calif. 261,900, can. Cl. 12.
- One-In-All Corp., Avondale Estates, Ga. 722,126, pub. 7-18-61. Cl. 13.
- Onyx Chemical Corp., by merger from Onyx Oil & Chemical Co., Jersey City, N.J. 722,364, pub. 7-18-61. Cl. 52.
- Onyx Oil & Chemical Co.: See—
Onyx Chemical Corp.
- Ottens, Henry H., Mfg. Co., Inc., to Henry H. Ottens Mfg. Co., Inc., Philadelphia, Pa. 148,500, ren. 10-3-61. Cl. 46.
- Pabst Brewing Co.: See—
Val Blatz Brewing Co.
- Pabst Brewing Co., Chicago, Ill. 722,348, pub. 7-18-61. Cl. 48.
- Page & Hill Co., to Page & Hill, Inc., Minneapolis, Minn. 392,940, ren. 10-3-61. Cl. 12.
- Page & Hill, Inc.: See—
Page & Hill Co.
- Pallack, Andrew, & Co., Inc., New York, N.Y. 722,275, pub. 7-18-61. Cl. 39.
- Peerless Corp., The: See—
Peerless Electric, Inc.
- Peerless Electric, Inc., now by change of name The Peerless Corp., New York, N.Y. 610,590, can. Cl. 21.

- Pemco Corp.: See—
Porcelain Enamel and Mfg. Co. of Baltimore.
- Pep Boys—Manny, Moe & Jack, Philadelphia, Pa. 392,205, ren. 10-3-61. Cl. 35.
- Perkins Theatre Supply Co. Inc., Buffalo, N.Y. 610,653, can. Cl. 26.
- Petri, Albert L., Redwood City, Calif. 722,424. Cl. 17.
- Peterson Products: See—
Peterson Products of San Mateo, Inc.
- Peterson Products of San Mateo, Inc., d.b.a. Peterson Products, Belmont, Calif. 722,427. Cl. 23.
- Pfanni-Werk Otto Eckart, K.G., Munich, Germany. 722,300, pub. 7-18-61. Cl. 46.
- Pfizer, Chas., & Co., Inc., to Chas. Pfizer & Co., Inc., New York, N.Y. 142,090, ren. 10-3-61. Cl. 18.
- Philadelphia Textile Finishers, Inc., Norristown, Pa. 610,813, can. Cl. 50.
- Phillips, Clay E., d.b.a. Gypsum Ceiling Jack Co., Cedar Rapids, Iowa. 722,202, pub. 7-18-61. Cl. 23.
- Photomechanisms, Inc., Huntington Station, N.Y. 722,217, pub. 7-18-61. Cl. 26.
- Piedmont Cotton Mills, East Point, Ga. 390,813, 12(c) pub. 10-3-61. Cl. 43.
- Piedmont Cotton Mills, East Point, Ga. 391,259, 12(c) pub. 10-3-61. Cl. 7.
- Pillsbury Co., The, Minneapolis, Minn. 722,311, pub. 7-18-61. Cl. 46.
- Pioneer Rubber Co., The, Willard, Ohio. 356,550, can. Cl. 22.
- Plant Protection Ltd., Yalding, England. 722,115, pub. 7-18-61. Cl. 6.
- Plume & Atwood Mfg. Co., The, Waterbury, Conn. 610,566, can. Cl. 14.
- Polychrome Corp., Yonkers, N.Y. 722,349, pub. 7-18-61. Cl. 50.
- Poppcock Candles: See—
Wander Co., The.
- Popular Motor Specialties Inc., Chicago, Ill. 722,207, pub. 7-18-61. Cl. 23.
- Porcelain Enamel and Mfg. Co. of Baltimore, to Pemco Corp., Baltimore, Md. 148,847, ren. 10-3-61. Cl. 12.
- Porter-Hayden Conduit Co., Baltimore, Md. 722,137, pub. 7-18-61. Cl. 13.
- Premo Pharmaceutical Laboratories, Inc., South Hackensack, N.J. 392,408, ren. 10-3-61. Cl. 18.
- Prestole Corp., Toledo, Ohio. 722,133-4, pub. 7-18-61. Cl. 13.
- Prewitt, J. Nelson, Inc., Rochester, N.Y. 722,367, pub. 7-18-61. Cl. 52.
- Production Publishing Co.: See—
Reno, H. O., Co., The.
- Prophet Co., The, Detroit, Mich. 722,383, pub. 7-18-61. Cl. 100.
- Quaker Storage Co., Inc., Philadelphia, Pa. 722,400, pub. 7-18-61. Cl. 105.
- Quinn, William J., Webster, N.Y. 722,189, pub. 7-18-61. Cl. 22.
- RCS Tool Sales Corp., Joliet, Ill. 610,640, can. Cl. 23.
- Railway Express Agency, Inc., New York, N.Y. 722,404, pub. 7-18-61. Cl. 105.
- Rau Fastener Co., Providence, R.I. 388,301, 12(c) pub. 10-3-61. Cl. 40.
- Realistic Co., The, Cincinnati, Ohio. 722,365, pub. 7-18-61. Cl. 52.
- Red Arrow Products Corp., Milwaukee, Wis. 722,312, pub. 7-18-61. Cl. 46.
- Reed & Carnick, Kenilworth, N.J. 722,166, pub. 6-27-61. Cl. 18.
- Reeves Brothers, Inc.: See—
Metakloth Co.
- Register and Tribune Syndicate, Inc., The, Des Moines, Iowa. 722,256-7, pub. 7-18-61. Cl. 38.
- Reno, H. O., Co., The, Chicago, Ill., to John H. Whaley, Jr., d.b.a. Production Publishing Co., Nashville, Tenn. 144,043, ren. 10-3-61. Cl. 38.
- Reynolds Aluminum Supply Co., Atlanta, Ga., from Convertible Clip Corp., Vienna, Va. 722,120, pub. 6-9-59. Cl. 12.
- Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 722,146, pub. 7-18-61. Cl. 17.
- Rheem Mfg. Co., Richmond, Calif. 722,416. Cl. 2.
- Rowley, A. Tool & Engineering Co.: See—
Rowley, Arthur.
- Rowley, Arthur, d.b.a. A. Rowley Tool & Engineering Co., Green Lake, Wis. 610,702, can. Cl. 34.
- Royal Master, Inc.: See—
Royal Master Metal Products Co.
- Royal Master Metal Products Co., to Royal Master, Inc., Riverdale, N.J. 610,612, can. Cl. 23.
- Rural Gravure Service, Inc., Chicago, Ill. 722,250, pub. 7-18-61. Cl. 38.
- Rydstrom, Carlton L.: See—
Norcote Co., The.
- Sabin, Albert B., Cincinnati, Ohio. 722,414, pub. 7-18-61. Cl. A.
- Safety Industries, Inc.: See—
Entoleter, Inc.
- Safeway Stores, Inc., Oakland, Calif. 722,393, pub. 7-18-61. Cl. 101.
- Samuels, Charlotte, Associates, New York, N.Y. 722,390, pub. 7-18-61. Cl. 101.
- San Inc., Chicago, Ill. 722,237, pub. 7-18-61. Cl. 36.
- Sandoz Chemical Works, Inc., to Sandoz, Inc., New York, N.Y. 392,593, ren. 10-3-61. Cl. 6.
- Sandoz, Inc.: See—
Sandoz Chemical Works, Inc.
- Santen Pharmaceutical Mfg. Co., Ltd., Higashi-Yodogawa-ku, Osaka, Japan. 722,356, pub. 7-18-61. Cl. 61.
- Sauer, C. F., Co., The, Richmond, Va. 722,332, pub. 7-18-61. Cl. 46.
- Savary, Rene P. M., Paris, France. 610,693, can. Cl. 33.
- Sayour, Ellas, Co., Inc., New York, N.Y. 722,280, pub. 7-18-61. Cl. 39.
- Schuckl & Co., Inc., Sunnyvale, Calif. 392,626, ren. 10-3-61. Cl. 46.
- Schuckl & Co., Inc., Sunnyvale, Calif. 392,987, ren. 10-3-61. Cl. 46.
- Schwartz, Philip A., Longmeadow, Mass., from United Petroleum, Inc., Springfield, Mass. 722,142, pub. 6-13-61. Cl. 15.
- Screw Conveyor Corp., Hammond, Ind. 392,216, ren. 10-3-61. Cl. 23.
- Searle, G. D., & Co., Skokie, Ill. 722,169, pub. 7-18-61. Cl. 18.
- Sears, Roebuck and Co., Chicago, Ill. 722,114, pub. 7-18-61. Cl. 8.
- Seitz, Pierre, Les Brenets, Switzerland. 610,672, can. Cl. 27.
- Service Metal Fabricators, Inc., Chicago, Ill. 722,199, pub. 7-18-61. Cl. 23.
- 7 Seas Aquatics Inc., Long Island City, N.Y. 722,326, pub. 7-18-61. Cl. 46.
- Sharp & Dohme, Inc., Philadelphia, Pa., to Merck & Co., Inc., Rahway, N.J. 391,297-8, ren. 10-3-61. Cl. 18.
- Shattuck, Frank G., Co., New York, N.Y. 722,384, pub. 7-18-61. Cl. 100.
- Sheehy & Cumming, Watsonville, Calif. 269,287, can. Cl. 46.
- Shepard, Geo. A., & Sons Co., The, Bethel, Conn. 610,840, can. Cl. 1.
- Sidalia, Inc., New York, N.Y. 610,764, can. Cl. 39.
- Silver Dollar Trading Stamp Co., Medford, Oreg. 722,389, pub. 7-18-61. Cl. 101.
- Simmonds Aerocessories, Inc.: See—
Simmonds Precision Products, Inc.
- Simmonds Precision Products, Inc., by change of name from Simmonds Aerocessories, Inc., Tarrytown, N.Y. 722,216, pub. 7-18-61. Cl. 28.
- Siris, A. J., Products Corp., New York, N.Y. 722,110, pub. 7-18-61. Cl. 3.
- Skasol Inc., San Francisco, Calif. 722,366, pub. 7-18-61. Cl. 52.
- Smith, Alexander, Inc., White Plains, N.Y. 610,775, can. Cl. 42.
- Smith, J. Hungerford, Co., Rochester, N.Y. 722,305, pub. 7-18-61. Cl. 46.
- Smith & Loveless, Inc.: See—
Union Tank Car Co.
- Societe Monsavon-L'Oreal: See—
L'Oreal.
- Sonneborn, L., Sons, Inc., New York, N.Y. 420,575, can. Cl. 52.
- Southern & Richardson Ltd., Sheffield, England. 142,144, 12(c) pub. 10-3-61. Cl. 28.
- Specialty Coatings Corp., The, Madeira, Ohio. 722,406, pub. 7-18-61. Cl. 106.
- Sperry Rand Corp., New York, N.Y. 722,240, pub. 7-18-61. Cl. 37.
- Sprague Electric Co., North Adams, Mass. 722,182, pub. 7-18-61. Cl. 21.
- Spurgeon Hosiery Corp., Philadelphia, Pa. 610,730, can. Cl. 39.
- Standard Packaging Corp., New York, N.Y. 722,417. Cl. 2.
- Standex Laboratories, Inc., Columbus, Ohio. 722,163, pub. 7-18-61. Cl. 18.
- Stanley Home Products, Inc., Westfield, Mass. 610,678, can. Cl. 29.
- Star-Maid Dresses, Inc., New York, N.Y. 610,773, can. Cl. 39.
- Statistical Tabulating Corp., Chicago, Ill. 722,385, pub. 7-18-61. Cl. 101.
- Steinberg, Arthur, d.b.a. Hematological Research Laboratory, to Chatham Pharmaceuticals, Inc., formerly John A. Miller Co., Inc., of Newark, N.J., Philadelphia, Pa., to Chatham Pharmaceuticals, Inc., Newark, N.J. 393,080, ren. 10-3-61. Cl. 18.
- Sterling Air Conditioning Corp., Gastonia, N.C. 610,698, can. Cl. 34.
- Sterling Drug Inc., New York, N.Y. 722,161-2, pub. 7-18-61. Cl. 18.
- Stern, Molly S., Rochester, N.Y. 610,786-7, can. Cl. 42.
- Stewart, Earl, Penwell, Tex. 610,846, can. Cl. 13.
- Stout, Joe F., Tampa, Fla. 722,409, pub. 7-18-61. Cl. 107.
- Street & Smith Publications, Inc., New York, N.Y. 722,262, pub. 7-18-61. Cl. 38.
- Students' Magazines Inc., Chicago, Ill. 426,157, can. Cl. 38.
- Suf-out Mfg. Co., Bridgeport, Conn. 610,833, can. Cl. 52.
- Sun Spot Co. of America, Inc., Baltimore, Md. 722,291, pub. 7-18-61. Cl. 45.
- Surabian, S., & Sons, Dinuba, Calif. 722,304, pub. 7-18-61. Cl. 46.
- Surprise Brassiere Co., Inc., New York, N.Y. 610,769, can. Cl. 39.
- Suter Watch Factory Inc., Bienne, Switzerland. 610,670, can. Cl. 27.
- Sweet Orchard Co., to Good Relish Co., Inc., Chicago, Ill. 147,702, ren. 10-3-61. Cl. 45.
- Swift, M., & Sons, Inc., Hartford, Conn. 722,421-2. Cl. 14.
- Sylvania Industrial Corp., Frederickburg, Va., and New York, N.Y., to American Viscose Corp., Philadelphia, Pa. 390,836, ren. 10-3-61. Cl. 50.
- T-N-T Food Products, Inc., Lawrence, Kans. 722,344, pub. 7-18-61. Cl. 46.
- Taylor, Earl L., Richmond, Va. 610,610, can. Cl. 23.
- Taylor, Walter A.: See—
Dismergent Co., The.
- Maeding, Alice P.

- Toy Manufacturers of The U.S.A., Inc., New York, N.Y. 390-597, 12(c) pub. 10-3-61. Cl. 38.
- Tyler, W. S., Co., The, Cleveland, Ohio. 152,523, 12(c) pub. 10-3-61. Cl. 23.
- Tect, Inc., Northvale, N.J. 707,897, canc. Cl. 52.
- Telecomputing Corp., Los Angeles, Calif. 722,125, pub. 7-18-61. Cl. 13.
- Telectro Industries Corp., Long Island City, N.Y. 722,184, pub. 7-18-61. Cl. 21.
- Telex, Inc.: See—
Automatic Electric Mfg. Co.
- Templi Corp., New York, N.Y. 399,220-1, 12(c) pub. 10-3-61. Cl. 6.
- Terry, Lucy M., Tulare, Calif. 610,838, canc. Cl. 52.
- Texarkana Casket Co., Texarkana, Tex. 610,694, canc. Cl. 34.
- Textile Machine Works, Wyomissing, Pa. 722,130, pub. 7-18-61. Cl. 13.
- Thomson Machine Co., now by merger Wallace & Tiernan Inc., Belleville, N.J. 610,643, canc. Cl. 23.
- Thunderbird Mfg., Inc., Prescott, Ariz. 722,266, pub. 7-18-61. Cl. 39.
- Titan National Corp., Pasadena, Calif. 722,350, pub. 7-18-61. Cl. 50.
- Top Form Mills, Inc., New York, N.Y. 722,267, pub. 7-18-61. Cl. 39.
- Topps Chewing Gum, Inc., Brooklyn, N.Y. 722,249, pub. 7-18-61. Cl. 38.
- Tractolator Corp., Philadelphia, Pa. 610,792, canc. Cl. 44.
- Tri-County Mfg. Co.: See—
Kennedy, Samuel F.
- Trilco Films: See—
Trillas, Margaret.
- Trillas, Margaret, d.b.a. Trilco Films, New York, N.Y. 610-664, canc. Cl. 26.
- Tube-Kote, Inc., Houston, Tex. 722,407, pub. 7-18-61. Cl. 106.
- Turner Uni-Drive Co., Kansas City, Mo. 722,208, pub. 7-18-61. Cl. 23.
- Twin City Shellac Co. Inc., Brooklyn, N.Y. 392,468, ren. 10-3-61. Cl. 4.
- Udell, Lester, Inc., New York, N.Y. 610,753, canc. Cl. 39.
- Union Tank Car Co., Chicago, Ill., from Smith & Loveless, Inc., Lenexa, Kans. 722,196, pub. 7-18-61. Cl. 23.
- Unique Window Balance Corp., South Norwalk, Conn. 722-135-6, pub. 7-18-61. Cl. 13.
- United Biscuit Co. of America, Melrose Park, Ill. 722,316, pub. 7-18-61. Cl. 46.
- United Cigar-Whelan Stores Corp., New York, to United Whelan Corp., Brooklyn, N.Y. 393,049, ren. 10-3-61. Cl. 18.
- United Fertilizer Co., Carrollville, Wis. 147,825, 12(c) pub. 10-3-61. Cl. 10.
- United Merchants and Manufacturers, Inc., New York, N.Y. 610,788, canc. Cl. 42.
- United Petroleum, Inc.: See—
Schwartz, Philip A.
- United Rubber & Chemical Co., Houston, Tex. 722,099, pub. 7-18-61. Cl. 1.
- United States Playing Card Co., The, Cincinnati, Ohio. 151-272-3, ren. 10-3-61. Cl. 22.
- United States Rubber Co., New York, N.Y. 610,784, canc. Cl. 42.
- United States Rubber Co., New York, N.Y. 722,279, pub. 7-18-61. Cl. 39.
- U.S. & South American Trading Co.: See—
Dziubek, Alfred.
- United Whelan Corp.: See—
United Cigar-Whelan Stores Corp.
- Uptohn Co., The, Kalamazoo, Mich. 722,160, pub. 4-4-61. Cl. 18.
- Upland, Ted, Associates of California: See—
Upland, Theodore R.
- Upland, Theodore R., d.b.a. Ted Upland Associates of California, San Francisco, Calif. 610,726, canc. Cl. 39.
- Uris Buildings Corp., New York, N.Y. 722,382, pub. 7-18-61. Cl. 100.
- Vacuum Metals Corp., Cambridge, Mass. 610,563, canc. Cl. 14.
- Val Blatz Brewing Co., to Pabst Brewing Co., Milwaukee, Wis. 145,611, ren. 10-3-61. Cl. 48.
- Val Blatz Brewing Co., to Pabst Brewing Co., Milwaukee, Wis. 145,846, ren. 10-3-61. Cl. 48.
- Van Houten, C. J., & Zoon, N.V., Weesp, Netherlands. 722-314-15, pub. 7-18-61. Cl. 46.
- Vapor Heating Corp., Chicago, Ill. 722,235, pub. 7-18-61. Cl. 34.
- Wadsworth-Howland Co., to Jewel Paint & Varnish Co., Chicago, Ill. 150,639, ren. 10-3-61. Cl. 16.
- Wallace & Tiernan Inc.: See—
Thomson Machine Co.
- Wander Co., The, d.b.a. Poppycock Candies, Chicago, Ill. 722-327, pub. 7-18-61. Cl. 40.
- Warren-Ted Products Co., The, Columbus, Ohio. 722,158, pub. 7-18-61. Cl. 18.
- Weatherby's, Inc., South Gate, Calif. 722,117, pub. 7-18-61. Cl. 9.
- Welbilt Corp.: See—
Detroit-Michigan Stove Co.
- Welch Grape Juice Co., Inc., The, Westfield, N.Y. 722,317, pub. 7-18-61. Cl. 46.
- Weldon Pajamas, Inc.: See—
Lubin-Weeker Co., Inc.
- Wellington Sears Co.: See—
Wellington Sears Co., Inc.
- Wellington Sears Co., Inc., to Wellington Sears Co., New York, N.Y. 388,578, ren. 10-3-61. Cl. 42.
- Wellington Sears Co., Inc., to Wellington Sears Co., New York, N.Y. 388,701, ren. 10-3-61. Cl. 42.
- Werner, R. D., Co., Inc., Greenville, Pa. 722,351, pub. 7-18-61. Cl. 50.
- West Virginia Pulp and Paper Co., New York, N.Y. 722,108, pub. 7-18-61. Cl. 2.
- Whaley, John H., Jr.: See—
Reno, H. O., Co., The.
- Wha-Lite Products, Chicago, Ill. 722,204, pub. 7-18-61. Cl. 23.
- Wheatland Tube Co., Philadelphia, Pa. 610,543, canc. Cl. 13.
- Whirlpool Corp., St. Joseph, Mich. 722,371, pub. 7-18-61. Cl. 52.
- Whiting & Davis Co., Plainville, Mass. 722,109, pub. 7-18-61. Cl. 3.
- Whittemore Brothers Corp., Cambridge, Mass., to Whittemore Bros., Baltimore, Md. 145,487, ren. 10-3-61. Cl. 4.
- Willems, Peter, Lucerne, Switzerland. 722,215, pub. 12-6-60. Cl. 26.
- Win-Chek Industries, Inc., Moonachie, N.J. 722,352, pub. 7-18-61. Cl. 50.
- Wiss, J., & Sons Co., Newark, N.J. 722,194, pub. 7-18-61. Cl. 23.
- Wizard Boats, Inc., Costa Mesa, Calif. 722,170, pub. 7-18-61. Cl. 19.
- Wolf Bros. & Co., Red Lion, Pa. 722,423. Cl. 17.
- Wood, Charles E., Co.: See—
Wood, Charles E.
- Wood, Charles E., d.b.a. Charles E. Wood Co., Milwaukee, Wis. 610,638, canc. Cl. 23.
- Wyandot Popcorn Co., Marion, Ohio. 722,320, pub. 7-18-61. Cl. 46.
- Wyeth Laboratories: See—
American Home Products Corp.
- York Pharmacal Co., d.b.a. Kim's Laboratories, St. Louis, Mo. 722,155, pub. 7-18-61. Cl. 18.
- Youngstown Sheet and Tube Co., The, Youngstown, Ohio. 722,408, pub. 7-18-61. Cl. 106.
- Zollner Corp., Fort Wayne, Ind. 722,212-13, pub. 7-18-61. Cl. 23.

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1961

Examiner affirmed.....	206
Examiner affirmed in part.....	42
Examiner reversed.....	61
Total.....	309

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the
Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

Sept. 18, 1961. EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

Excerpts From Public Law 87-206

[87TH CONGRESS, H.R. 8599]

September 8, 1961

[75 Stat. 475]

AN ACT

To amend various sections of the Atomic Energy Act of 1954, as amended, and the EURATOM Cooperation Act of 1958, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 7. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by deleting in the descriptive title the words "MILITARY UTILIZATION," and inserting in lieu thereof "INVENTIONS RELATING TO ATOMIC WEAPONS, AND FILING OF REPORTS."

SEC. 8. Subsection c. of section 151 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"c. Any person who has made or hereafter makes any invention or discovery useful in the production or utilization of special nuclear material or atomic energy, shall file with the Commission a report containing a complete description thereof unless such invention or discovery is described in an application for a patent filed with the Commissioner of Patents by such person within the time required for the filing of such report. The report covering any such invention or discovery shall be filed on or before the one hundred and eightieth day after such person first discovers or first has reason to believe that such invention or discovery is useful in such production or utilization."

SEC. 9. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"e. Reports filed pursuant to subsection c. of this section, and applications to which access is provided under subsection d. of this section, shall be kept in confidence by the Commission, and no information concerning the same given without authority of the inventor or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commission."

SEC. 10. Section 152 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"**SEC. 152. INVENTIONS MADE OR CONCEIVED DURING COMMISSION CONTRACTS.**—Any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission, shall be vested in, and be the property of, the Commission, except that the Commission may waive its claim to any such invention or discovery under such circumstances as the Commission may deem appropriate, consistent with the policy of this section. No patent for any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, shall be issued unless the applicant files with the application, or within thirty days after request therefor by the Commissioner of Patents (unless the Commission advises the Commissioner of Patents that its rights have been determined and that accordingly no statement is necessary) a statement under oath setting forth the full facts surrounding the making or conception of the invention or discovery described in the application and whether the invention or discovery was made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission. The Commissioner of Patents shall as soon as the application is otherwise in condition for allowances forward copies of the application and the statement to the Commission.

"The Commissioner of Patents may proceed with the application and issue the patent to the applicant (if the invention or discovery is otherwise patentable) unless the Commission, within 90 days after receipt of copies of the application and statement, directs the Commissioner of Patents to issue the patent to the Commission (if the invention or discovery is otherwise patentable) to be held by the Commission as the agent of and on behalf of the United States.

"If the Commission files such a direction with the Commissioner of Patents, and if the applicant's statement claims, and the applicant still believes, that the invention or discovery was not made or conceived in the course of or under any contract, subcontract or arrangement entered into with or for the benefit of the Commission entitling the Commission to the title to the application or the patent the applicant may, within 30 days after notification of the filing of such a direction, request a hearing before a Board of Patent Interferences. The Board shall have the power to hear and determine whether the Commission was entitled to the direction filed with the Commissioner of Patents. The Board

New Applications Received During August 1961

Patents.....	7,067
Designs.....	431
Plant Patents.....	10
Reissues.....	20
Total.....	7,528

Issue

Patents.....	1,110—No. 3,003,150 to No. 3,004,259, incl.
Designs.....	80—No. 191,492 to No. 191,571, incl.
Reissues.....	4—No. 25,049 to No. 25,052, incl.
Total.....	1,194

shall follow the rules and procedures established for interference cases and an appeal may be taken by either the applicant or the Commission from the final order of the Board to the Court of Customs and Patent Appeals in accordance with the procedures governing the appeals from the Board of Patent Interferences.

"If the statement filed by the applicant should thereafter be found to contain false material statements any notification by the Commission that it has no objections to the issuance of a patent to the applicant shall not be deemed in any respect to constitute a waiver of the provisions of this section or of any applicable civil or criminal statute, and the Commission may have the title to the patent transferred to the Commission on the records of the Commissioner of Patents in accordance with the provisions of this section. A determination of rights by the Commission pursuant to a contractual provision or other arrangement prior to the request of the Commissioner of Patents for the statement, shall be final in the absence of false material statements or nondisclosure of material facts by the applicant."

Sec. 11. Section 157 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"d. **Penalty on Limitations.**—Every application under this section shall be barred unless filed within six years after the date on which first accrues the right to such reasonable royalty fee, just compensation, or award for which such application is filed."

Sec. 12. The second sentence of section 158 of the Atomic Energy Act of 1954, as amended, is amended to read as follows: "If the court, at its discretion, deems that such licensee shall pay a reasonable royalty to the owner of the patent, the reasonable royalty shall be determined in accordance with section 157."

Approved September 6, 1961.

Patent Laws Pamphlet

Patent Laws Pamphlet, Revised Edition, of January 3, 1961, is available. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.—Price 30 cents.

Adjudicated Patents

(C.A. Calif.) Hayes Patent No. 2,381,589 (103—262), for distributing liquid solutions, *Held* valid and infringed. *Hayes Spray Gun Company et al. v. E. C. Brown Company*, 291 F.2d 319; 129 USPQ 383.

(C.A. Calif.) Stewart Patent No. 2,388,445 (239—318), for spraying proportioner, *Held* valid and infringed. *Id.*

(C.A. Calif.) Hayes Patent No. 2,571,870 (239—311), for educator nozzle, *Held* invalid. *Id.*

(C.A. Calif.) Hayes Patent No. 2,571,871 (239—434), for proportioner, *Held* valid and infringed. *Id.*

(C.A. Calif.) Hayes Patent No. 2,592,896 (103—262), for educator device. Claims 1 to 5 and 11 *Held* valid and infringed. *Id.*

(C.A.N.Y.) Bebery Patent No. 2,785,416 (5—36), for convertible hassock and bed combination. *Castro Convertible Corp. v. Bebery Bedding Corp. v. R. H. Macy & Co., Inc.*, 291 F.2d 306; 129 USPQ 332.

(C.A. Calif.) Gray Patent No. 2,486,560 (192—18), for transducer and method of making same. Claims 1 to 7, 11, 12, and 15 *Held* valid and infringed. *Erie Resistor Corp. et al. v. Solar Mfg. Corp.*, 194 F. Supp. 662; 129 USPQ 209.

(C.A.N.Y.) Pace Patent No. 2,826,307 (210—169), for fluid recirculation systems, *Held* valid and infringed. *London, Inc. v. Marine Swimming Pool Equipment Co.*, 195 F. Supp. 41; 129 USPQ 339.

(C.A.N.Y.) Cavenab and Steffen Patent No. 2,844,255 (210—170), for combination filter and surface skimmer, *Held* valid and infringed. *Id.*

(D.C. Ark.) Blankenship Patent No. 2,925,685 (46—189), for sound making device for toy guns. Claims 1 and 2 *Held* invalid and not infringed. *Blankenship v. Daisy Manufacturing Company*, 195 F. Supp. 12; 130 USPQ 7.

(C.A.N.Y.) Creveling and Pennell Reissue Patent No. 24,128 (5—36), for convertible hassock and bed combination. Claims 1 to 6, 9, and 11 to 14 *Held* valid and infringed. *Castro Convertible Corporation v. Bebery Bedding Corporation v. R. H. Macy & Co., Inc.*, 291 F.2d 306; 129 USPQ 332.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,453,502, G. L. Dimmick, Sound-to-image transducing system, decided May 15, 1961, Interference No. 83,852, claims 1, 2, 3 and 4.

Pat. 2,823,916, J. R. Wickland, Sheet feeding apparatus, decided Mar. 21, 1961, Interference No. 89,597, claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19 and 20.

Pat. 2,837,911, L. V. Haggadone, Wheel friction indicator, decided Aug. 23, 1961, Interference No. 90,720, claims 2 and 3.

Pat. 2,837,911, L. V. Haggadone, Wheel friction indicator, decided July 25, 1961, Interference No. 91,040, claims 1 and 4.

Pat. 2,868,655, K. Ladenburg, Salt tablets containing an ethylenediaminetetracetic acid compound and process of producing the same, decided Sept. 6, 1961, Interference No. 90,806, claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

Pat. 2,901,163, J. Waleffe, Pressure converter, decided Aug. 23, 1961, Interference No. 91,566, claims 1 and 6.

Pat. 2,903,276, D. S. Bates, Printing device, decided Aug. 31, 1961, Interference No. 90,996, claims 1 and 2.

Pat. 2,904,146, J. B. Codlin, Tractor controls, decided Aug. 31, 1961, Interference No. 91,720, claim 1.

Pat. 2,904,714, E. H. Wiley, Electric lamp, decided Aug. 16, 1961, Interference No. 91,292, claims 1, 2, 3, 4 and 10.

Pat. 2,922,224, J. W. Gray, Navigation system employing star heading reference, decided Aug. 15, 1961, Interference No. 91,346, claims 1 and 2.

Patents Available for Licensing or Sale

2,913,275. Handle Member (Detachable Handle). Salvatore La Rocca, 627 Cross St., Philadelphia 47, Pa.

2,994,896. Snow Clearing Device. Anthony Lopes, 377 Broad St., Cumberland, R.I.

General Electric Company is prepared to grant non-exclusive licenses under the following 9 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,936,296. Polyesters From Terephthalic Acid, Ethylene Glycol and a Higher Polyfunctional Alcohol.

Applications for license under the following 8 patents may be addressed to: Patent Counsel, Switchgear & Control Division, General Electric Company, 6901 Elmwood Ave., Philadelphia 42, Pa.

2,913,818. Apparatus for Installing an Electrical System.

2,931,097. Apparatus for Installing Electrical Systems.

2,953,342. Electrical Distribution System.

2,953,626. Electrical System.

2,960,674. Multiphase Power Distributing Apparatus.

2,970,746. Cooling Device for Alternating Current Equipment.

2,975,512. Method of Installing an Electrical System.

2,989,579. Electrical Distribution System.

CONDITION OF PATENT APPLICATIONS AS OF AUGUST 31, 1961

Total number of pending applications (excluding Designs)	197,748
Total number of pending Design applications	5,227
Total number of applications awaiting action (excluding Designs)	94,168
Total number of Design applications awaiting action	1,304
Date of oldest new application	May 16, 1960
Date of oldest amended application	May 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS	
	Oldest Application	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64, 16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68, 2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82, 7, 11, 17, 27, 34, 35, 39, 53, 62, 5, 8, 20, 29, 33, 36, 40, 52, 66, 1, 4, 9, 10, 18, 22, 23, 28, 45, 47, 3, 15, 19, 25, 30, 32, 49, 55, 67, 91, 92, 93, 94, 95.	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		
(IV) SPITMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.		
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS		
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		
(Roman numerals in parentheses indicate Examining Group)		
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working.	2-2-61	1-9-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles; Buttons and Clasps.	2-15-61	1-17-61
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors.	2-10-61	11-10-60
4. (VI) FALLER, E. A., Material or Article Handling.	2-6-61	2-1-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics.	9-26-60	9-12-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides.	10-17-60	10-14-60
7. (IV) ANDERSON, E. G., Optics.	12-20-60	12-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds.	3-6-61	3-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines.	1-16-61	1-5-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making.	12-21-60	11-14-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing; Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits.	10-10-60	10-3-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls.	9-20-60	10-3-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning.	10-10-60	10-31-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics.	10-24-60	9-2-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus.	3-10-61	3-2-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems.	9-9-60	9-8-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering.	9-13-60	9-26-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors.	3-1-61	3-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners.	1-10-61	11-15-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors.	3-1-61	2-27-61
21. (III) MADER, R. C., Textiles.	12-8-60	12-6-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows.	11-21-60	10-21-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education.	4-7-61	4-3-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders.	2-7-61	1-30-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making.	11-1-60	11-1-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers.	11-1-60	11-1-60
27. (IV) JAMES, E., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids.	1-6-61	12-5-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes.	10-21-60	12-2-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings.	11-14-60	11-10-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part).	2-27-61	2-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)		Oldest Application	
		New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	10-5-60	11-4-60	
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-2-60	12-1-60	
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-28-60	10-7-60	
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Truck, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	11-3-60	11-23-60	
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	1-17-61	1-10-61	
36. (V) EVANS, R. L., Measuring and Testing (part)	10-11-60	10-5-60	
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-3-60	10-10-60	
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	9-6-60	9-12-60	
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-5-60	11-22-60	
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	2-6-61	1-30-61	
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	12-2-60	11-30-60	
42. (II) SRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems	10-5-60	10-8-60	
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	8-8-60	8-29-60	
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	5-16-60	5-3-60	
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	3-1-61	3-1-61	
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	9-1-60	9-9-60	
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles	12-30-60	1-3-61	
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	8-8-60	8-1-60	
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	10-7-60	10-7-60	
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	11-9-60	12-1-60	
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	9-6-60	9-6-60	
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	2-27-61	3-1-61	
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	1-5-61	1-6-61	
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	6-29-60	7-19-60	
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members	10-20-60	10-24-60	
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	9-1-60	10-14-60	
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	9-2-60	9-6-60	
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	1-4-61	2-1-61	
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	10-19-60	10-21-60	
60. (I) MANGOAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-6-60	9-12-60	
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-61	2-2-61	
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	11-7-60	11-14-60	
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-24-60	10-11-60	
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	8-16-60	8-11-60	
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	9-1-60	9-9-60	
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	7-5-60	6-9-60	
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	12-15-60	12-9-60	
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers	9-6-60	9-2-60	
69. (III) MONCURE, J. A., Industrial Arts	5-12-61	5-12-61	
70. (III) HUNTER, E. H., Household, Personal and Fine Arts	5-12-61	5-9-61	
71. (III) BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass	10-4-60	10-28-60	
72. GAUSS, H., Radio Transmitters, Receivers and Tuners	3-6-61	3-6-61	
73. WAHL, R. A., Wire Working	1-30-61	2-2-61	
74. BERLOWITZ, W., Gas Separation	1-9-61	12-23-60	
75. REZNEK, J. (acting), Metallic Building Structures	12-9-60	12-6-60	
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	2-3-61	1-23-61	

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,359,277 to 2,361,905, inclusive
Plant Patents.....Numbers 643 to 646, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE WILLIE FONG ET AL.

No. 6606. Decided April 14, 1961

[48 CCPA —; 288 F.2d 932; 129 USPQ 264]

1. CLAIMS—CLAIMING INVENTIONS PREDICATED ON THE DISCOVERY OF A NEW USE.

"The title of the application is striking in that it truly and succinctly states what the invention is, the use of PVP [polyvinylpyrrolidone] as a soil-suspending agent. Applicants did not invent a new process, solution, or composition except insofar as these possessed novelty by reason of the presence of PVP. As the specification makes clear, neither were they the inventors of the use of soil-suspending agents in washing. Their discovery was simply a new soil-suspending agent, a new use for a known compound. But because the law does not permit the claiming of such an invention in terms of use, the claims are directed to a process, a washing solution, or a composition for making the latter, conventional and recognized ways of claiming inventions predicated on the discovery of a new use."

2. APPLICATION—DISCLOSURE—GENERIC AND SPECIFIC INVENTIONS.

"We do not agree with the Patent Office position that there are generic and specific inventions here. We feel that this assumption, upon which the Patent Office has built its entire case, is factitious. There was but a single invention or finding out or discovery and that was that PVP [polyvinylpyrrolidone] was useful as a soil-suspending agent in washing operations. Reading the specification from its title to its end makes this abundantly clear. There is no assertion or suggestion—and the Patent Office makes none either—of any chemical reaction, synergism, or even cooperation between the detergent and PVP, except in the practical sense that the soil loosened by the detergent is kept by the PVP from being redeposited. The detergents are described as 'any of the materials commonly used for washing purposes' and it is expressly stated that 'the particular detergent used is not critical except that one should be chosen which is generally useful in emulsifying and detergent applications.' That, in simple terms, means useful in washing. It seems clear that the detergent, being no part of the real invention, would not even appear in the claims, at least as a positive element, but for the fact that the law prevents the claiming of a 'use.' Its presence is merely a matter of form and cannot be taken as converting a single simple invention—the use of a single compound for a single purpose—into a genus and a number of 'species.'"

3. PATENTABILITY—AFFIDAVIT UNDER RULE 131—DIFFERENT SPECIES IN AFFIDAVIT AND REFERENCE.

"When the applicants proved by their Rule 131 affidavit that they had successfully and advantageously used PVP [polyvinylpyrrolidone] in a washing solution containing a detergent prior to the effective date of the German patent they effectively proved priority of their invention and overcame the reference. We deem it of no legal significance that the reference discloses two detergents which differ from the detergent referred to in the affidavit. Applicants did not invent a combination of PVP with this detergent or that detergent or of PVP with soap. They invented the use of PVP with any detergent and they established that they made the invention before the date of the German patent, the only reference on which their broad claims stand rejected."

4. SAME—PARTICULAR SUBJECT MATTER—USE OF POLYVINYL-PYRROLIDONE AS A SOIL-SUSPENDING AGENT.

The refusal of certain claims, in an application entitled "Use of Polyvinylpyrrolidone as a Soil-Suspending Agent," as unpatentable over the prior art is reversed.

APPEAL from the Patent Office. Serial No. 324,423.

REVERSED.

T. A. Seegrist (R. Hoffman, of counsel) for appellants.

Clarence W. Moore (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This appeal is from the rejection of claims 12-17 of appellants' application Ser. No. 324,423, filed December 5, 1952, for "Use of Polyvinylpyrrolidone as a Soil-Suspending Agent." That agent will hereinafter be called "PVP." Claim 18 alone has been allowed, as a result of the Board's reversal of its rejection.

The specification explains the invention and its background as follows:

This invention relates to washing procedures particularly to the washing of textile materials such as fabrics and fibers with aqueous media. In particular the invention concerns the use of polyvinylpyrrolidone in the aqueous washing medium whereby to minimize the redeposition of soil during the washing procedure. It is well known in the art that a successful washing operation involves two separate factors, i.e., (a) the removal of dirt from the textile material and (b) keeping the soil suspended in the medium so that it will not be re-deposited on the textile. In general aqueous washing media containing soap fulfill both of these criteria as soap not only is a good soil remover but also keeps the removed soil in suspension so that little re-deposition takes place. However, the present trend is toward the use of anionic synthetic detergents such as the alkyl benzene sulphonates since these agents can be used in hard water areas as their detergent power is not decreased by the presence of calcium and magnesium ions. However, these anionic detergents have the disadvantage that their suspending power is poor and so cotton fabrics washed with such agents will be grayer than when using soap. In order to overcome this disadvantage, various soil-suspending agents are commonly added to the anionic detergents. One of the most commonly used agents is sodium carboxymethyl cellulose.

It has now been found that polyvinylpyrrolidone has useful soil-suspending properties and when added to aqueous washing media the degree of soil re-deposition is greatly reduced.

[1] The title of the application is striking in that it truly and succinctly states what the invention is, the use of PVP as a soil-suspending agent. Applicants did not invent a new process, solution, or composition except insofar as these possessed novelty by reason of the presence of PVP. As the specification makes clear, neither were they the inventors of the use of soil-suspending agents in washing. Their discovery was simply a new soil-suspending agent, a new use for a known compound. But because the law does not permit the claiming of such an invention in terms of use, the claims are directed to a process, a washing solution, or a composition for making the latter, conventional and recognized ways of claiming inventions predicated on the discovery of a new use.

The appealed claims are illustrated by claims 12, 14, and 16:

12. A process for removing soil from a textile material and minimizing the re-deposition of removed soil which comprises washing the material with a solution comprising water, an organic surface-active detergent, and polyvinylpyrrolidone.

14. A washing solution which is effective not only to remove soil from textile materials but also to minimize re-deposition of removed soil comprising water, an organic surface-active detergent, and polyvinylpyrrolidone.

16. A composition soluble in water to form a washing solution which is effective not only to remove soil from textile materials but also to minimize re-deposition of removed soil, comprising an organic surface-active detergent and polyvinylpyrrolidone.

Claims 13, 15 and 17 are dependent on the next lower numbered claims, specifying that the average molecular weight of the PVP is from about 15,000 to about 40,000. Obviously these claims are but three ways of

claiming the identical invention, which is the use of PVP in washing with a detergent.

The claim definition of the detergent as "an organic surface active detergent" is so broad as to include practically any known detergent, including common soap as well as the "synthetic" detergents.¹ Applicants do not claim to have made any invention whatsoever with respect to the detergent to be used. In fact, their specification contains a list of possible known detergents about two and a half printed pages in length, says that any of them may be used and that their concentration is not critical. Hence the above appealed claims are broad enough to be infringed by the presence of PVP in practically any detergent or washing solution or composition for making the latter.

Claim 18, the only claim allowed, is dependent on claim 16 and specifies that the detergent therein is "a sodium alkyl benzene sulfonate wherein the alkyl group contains 12 to 18 carbon atoms." Issuance of a patent with this as the only claim would, therefore, teach the art the use of PVP as a soil-suspension agent with any detergent while limiting the protection to use of the invention in washing with the 12-18 carbon atom sodium alkyl benzene sulfonate as detergent. We turn now to the grounds on which the Patent Office deems this to be a necessary result.

The Examiner rejected all of the claims on five different grounds. The Board of Appeals refused to sustain four of them and therefore there is only one ground for us to consider. That ground is that claims 12-17 are unpatentable over a German patent, No. 850,328, with an effective date of September 22, 1952, two and a half months ahead of applicants' filing date. Since that patent discloses washing compositions comprising a detergent and PVP, on which the appealed claims read, applicants undertook to swear back of this reference by an affidavit under Rule 131. The Patent Office has refused to accept the affidavit as overcoming the reference and whether it does is the ultimate issue; for the appealed claims must be allowed if the German patent is overcome as a reference, no other reason for their rejection being asserted.

No question is raised as to the sufficiency of the affidavit to show an actual reduction to practice, prior to September 22, 1952, of a composition, solution, and process on which the claims read. The tests were laboratory tests dated between June 25 and 30, 1952, in which swatches of clean cotton cloth were "washed" in solutions containing PVP, detergent, builders, and carbon black (soil) in a "Launderometer," after which the cloth was removed, rinsed, dried and its reflectance measured to determine degree of cleanness, which is indicative of the effectiveness of the PVP.

The significant fact with respect to these tests, in view of the position taken by the Patent Office, is that they were conducted with solutions using only a single detergent, the same one named in the specific examples of the specification and the one named in the allowed claim 18, sodium alkyl ($C_{12}-C_{18}$) benzene sulfonate, also known and referred to in the affidavit as "Nac-

conol NRSF." It is "an organic surface-active detergent."

The disclosure of the German patent should be mentioned in view of certain misinterpretations which have been made of it. It makes no mention, incidentally, of soil suspension. It is entitled "Shaped Washing and Cleansing Agents" and opens with the statement that it has been discovered that PVP is "excellently adapted for use as an admixture in the shaping of soaps and other washing and cleansing agents." It says that PVP, in small amounts, produces better cohesion, especially in filled soaps, has a hardening effect and acts in the finished cake to promote the production, quantity, and stability of foam. There are two examples. Example 1 is stick shaving soap made from "shaving soap chips," "aromatic material" (which appellants say is perfume) and a 30% solution of PVP, the latter being said also to promote lathering and a pleasant after-shave feeling. Example 2 is a filled cake soap made from "10 kg. of a sodium salt of a mixture of higher molecular aliphatic sulfonic acids . . . 77 kg. of a mixture of equal parts of clay and kaolin accompanied by moistening with 14 kg. of water and an admixture of 6.6 kg. of a 30% polyvinylpyrrolidone solution." It is said that the PVP makes for "good toughness," instead of "only slight internal cohesion" in its absence, and more abundant foam than similar "pieces" made without PVP.

This is the totality of the disclosure and we find no support in it for the solicitor's statements that it discloses "sodium alkyl benzene sulfonate" or that the reference "has a generic disclosure." Careful study of the reference will show (and the Patent Office has never asserted the contrary) that it does not contain the slightest hint of the appellants' discovery, the soil-suspending properties of PVP. All we have in the German patent is disclosure of two detergent-PVP compositions² which meet the language of the appealed claims. This, to be sure, requires that the reference be somehow disposed of, but the fact it does not disclose the actual invention should not be lost sight of in dealing realistically with the situation.

After the Rule 131 affidavit was filed, the Examiner persisted in his rejection on the German patent, saying:

The affidavit shows the testing of wash solutions prepared from sodium alkyl ($C_{12}-C_{18}$) benzene sulfonate, sodium triphosphate and sodium carbonate and polyvinylpyrrolidone in specified amounts. An affidavit showing the reduction to practice of one species, not sufficient by itself to support a genus, does not overcome the reference for a generic claim, particularly where the species shown in the affidavit is different from that of the reference. *Ex parte Fryling* 1947 C.D. 5; 75 USPQ 9.

The Board of Appeals adopted the Examiner's contention, rejecting appellants' argument that there is no true genus-species relationship here. It held the *Fryling* decision binding on it and added reference to

¹ For some unexplained reason the Patent Office Examiner and Board relied only on the disclosure of "soap" and PVP in Example 1 of the reference. The solicitor's brief makes the mistaken assumption, which the Examiner and the Board do not appear to have made, that the reference discloses "sodium alkyl benzene sulfonate," the material of allowed claim 18, and that the Rule 131 affidavit showing use of that detergent overcame that portion of the reference. But, as shown in the quoted portion of Example 2 of the German patent, supra, the "synthetic" detergent of the reference is a sodium salt of a mixture of higher molecular aliphatic sulfonic acids, which detergent was not specifically referred to in the affidavit.

² Webster's New Collegiate Dictionary, 1956, says: "deterge . . . To cleanse; to purge away, as foul matter." "detergent . . . —n. A cleansing agent, as water, soap, or soluble or liquid preparation ('soapless soap'), usually synthetic, that resembles soap in the ability to emulsify oils and hold dirt in suspension." More technical definitions could be cited but they are in a constant state of change and would add nothing of value here.

our opinion in *In re Stempel*, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77, concluding on this issue as follows: . . . the reference shows soap and PVP. Since appellants' affidavit does not establish priority with respect to soap and PVP, the rejection of generic claims 12 through 17 as unpatentable over Sattler et al. [the German patent] must be sustained.

[2] We do not agree with the Patent Office position that there are generic and specific inventions here. We feel that this assumption, upon which the Patent Office has built its entire case, is factitious. There was but a single invention or finding out or discovery and that was that PVP was useful as a soil-suspending agent in washing operations. Reading the specification from its title to its end makes this abundantly clear. There is no assertion or suggestion—and the Patent Office makes none either—of any chemical reaction, synergism, or even cooperation between the detergent and PVP, except in the practical sense that the soil loosened by the detergent is kept by the PVP from being redeposited. The detergents are described as "any of the materials commonly used for washing purposes" and it is expressly stated that "the particular detergent used is not critical except that one should be chosen which is generally useful in emulsifying and detergent applications." That, in simple terms, means useful in washing. It seems clear that the detergent, being no part of the real invention, would not even appear in the claims, at least as a positive element, but for the fact that the law prevents the claiming of a "use." Its presence is merely a matter of form and cannot be taken as converting a single simple invention—the use of a single compound for a single purpose—into a genus and a number of "species."

Since we disagree with the theory that there are numerous species here and "specific" and "generic" claims, we see no applicability of the cases relating to genus and species situations, namely the *Fryling*, *Stempel* and similar cases. We have merely claims in which the detergent is set forth with greater or lesser specificity.

[3] When the applicants proved by their Rule 131 affidavit that they had successfully and advantageously used PVP in a washing solution containing a detergent prior to the effective date of the German patent they effectively proved priority of their invention and overcame the reference. We deem it of no legal significance that the reference discloses two detergents which differ from the detergent referred to in the affidavit. Applicants did not invent a combination of PVP with this detergent or that detergent or of PVP with soap. They invented the use of PVP with any detergent and they established that they made the invention before the date of the German patent, the only reference on which their broad claims stand rejected. We are of the opinion, therefore, that those claims are allowable.

We are confirmed in our interpretation of the situation by the manner in which the Patent Office has dealt with another rejection made by the Examiner but reversed by the Board. We refer to the rejection of the appealed claims for undue breadth in defining the detergent as "an organic surface-active detergent." The specification contains specific examples of the use of PVP only in connection with one detergent, the one

named in the affidavit and in claim 18 which is of the anionic type. The Examiner said:

The specification . . . does not disclose specific examples of soaps and non-ionic detergents. The statements in the specification are in general terms only. The disclosure in the specific examples of sodium alkyl ($C_{12}-C_{18}$) benzene sulfonate as the detergent employed does not warrant the broad language of the claims.

The Board reversed, saying:

. . . the specification discloses ordinary soaps and numerous anionic detergents and types of non-ionic detergents which are readily recognized by those skilled in the art. We will, therefore, not sustain the rejection of claims 12 through 17 as too broad. [Emphasis ours.]

If no more was necessary to support claims reciting the detergent in the broad language objected to than examples using one detergent and the naming of broad classes of detergents which would be readily recognized by those skilled in the art, then we are unable to see why the tests shown in the affidavit, which are in substance the examples of the specification, were not also sufficient to show those skilled in the art that the total inventive act had been completed.

We are satisfied that applicants complied with the Rule 131 requirement of "facts showing a completion of the invention in this country . . . before the date of the foreign patent." The affidavit really shows as much as the application except for the textbook recitation of known detergents.

[4] The decision of the Board rejecting the claims is reversed.

REVERSED.

Worley, Chief Judge, with whom Kirkpatrick, J., joins, dissenting:

I agree with the Board that the affidavit submitted by appellant is insufficient to show completion of the invention recited in the appealed claims prior to the effective date of the German patent.

The affidavit relates to tests of a washing solution containing 0.12% of Nacconal NRSF, 0.08% of sodium triphosphate, 0.04% of sodium carbonate, and 0.1% carbon black, to which polyvinylpyrrolidone (PVP) was added in amounts varying from 0.001% to 0.1%. The tests involved the washing of cloth samples and showed a progressive increase in washing efficiency from 0.001 to 0.05% of PVP and a slightly lower efficiency at 0.1 than at 0.05 percent of that material. No other materials were tested and the affidavit does not mention soil suspension.

I am unable to see how those limited tests establish completion of the invention of the appealed claims, which call for the use of PVP with any organic surface-active detergent to minimize re-deposition of removed soil. There is nothing whatever in the affidavit to show that appellants contemplated the use of PVP in combination with any detergent other than that actually used in the tests, or that they even recognized that PVP was acting as a soil suspension agent rather than as a detergent. So far as the affidavit shows it may have been thought that the improved results were due to some special coaction of PVP with the particular detergent used.

Appellants' application was not in existence when the tests described in the affidavit were made, and the disclosures contained in the application cannot be retroactively read into the tests. If, as seems to be suggested by the majority, appellants, when the tests were made, had the broad idea that PVP would be

effective as a soil suspension agent in conjunction with any organic surface-active detergent, it would have been a simple matter for them to have said so in their affidavit. They failed to do so, and the affidavit is silent as to the actual purpose of the tests and as to the conclusions, if any, which were drawn from them. Under such circumstances, I do not think we may properly fill in the gap by speculation favorable to appellants. The affidavit should be taken at its face value and, when so considered, it clearly fails to suggest the invention recited in the appealed claims.

It is to be noted that the German patent disclosing the invention claimed by appellant was published and available to the public six months before appellants' application was filed. Under such circumstances it seems evident that a very convincing showing by appellant should be necessary to justify granting a patent. Appellants' affidavit simply does not make such a showing.

The issue here is not whether the claimed invention might have been obvious to one skilled in the art on the basis of the experiments described in the affidavit. To antedate the reference it is necessary to show actual completion of the claimed invention, and not merely a concept which might have enabled one skilled in the art to complete it.

I would affirm the decision appealed from.

U.S. Court of Customs and Patent Appeals

IN RE PAUL W. GARBO

No. 6657. Decided February 21, 1961

[48 CCPA —; 267 F.2d 192; 129 USPQ 272]

1. DESIGNS—PATENTABILITY—UNOBVIOUS APPEARANCE—COMBINATION OF OLD ELEMENTS.

"It is true, * * *, that a patentable design may contain old elements, but in order to be patentable, the finished product must have an unobvious appearance and not be merely the result of an obvious combination of the old elements * * *."

2. SAME—SAME—SAME—SEATING ARRANGEMENT.

"Even though appearance as a whole is the criterion of a design patent, if the objective of the designer, * * *, motivates him to take old seating arrangements and adapt them to a specified area thereby bringing about an expected appearance, patentability is not present. If this were not so, every theatre having a seating arrangement and a screen size adapted to its particular dimensions would warrant a design patent."

3. SAME—SAME—SAME—FUNCTIONAL FEATURES.

"It is true, * * *, that a design may embody functional features and still be patentable, but in order to attain this legal status under these circumstances, the design must have an unobvious appearance distinct from that dictated solely by functional considerations."

4. SAME—SAME—PARTICULAR SUBJECT MATTER—DESIGN FOR A CINEMATIC MULTIPLE-PLACE TRAINER FOR AUTOMOTIVE DRIVERS.

The decision of the Board of Appeals refusing the single claim by appellant to a cinematic multiple-place trainer for automotive drivers as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. D-37,342. AFFIRMED.

Paul W. Garbo, pro se, Martin T. Fisher, for appellant.

Clarence W. Moore (S. Wm. Cochran, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H.

KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

MARTIN, J., delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office sustaining the Examiner's rejection of the single claim of appellant's application for a design patent.

The appealed claim is as follows:

The ornamental design for a cinematic multiple-place trainer for automotive drivers as shown and described.

The reference relied on is:

Your Car magazine, April 1954, page 43, "Behind the Wheel Training."

The Examiner described the claimed design as follows:

The claimed design is for a driver training arrangement in a narrow enclosure such as a trailer. This arrangement consists of two rows of small simulated cars in a bumper fashion and having an aisle between them. Each car in a row is at a slightly higher level than the one in front and all the cars are slightly angled away from the walls of the enclosure facing the front where a cinematic screen is located. In the rear is a film projector mounted on a stand.

It is also noted that the specification recites permanent attachment of the projector, screen, and individual trainer units to the trainer body. The screen is wide enough to extend substantially across the space in front of the two rows of cars. The bottom edge of the screen is high enough so that the heads of average seated trainees will not obstruct the projected picture. Each row contains four cars.

The Your Car magazine reference discloses a photograph of fourteen simulated car training units, of the same single seater type as those disclosed by appellant, arranged in a fan-shaped pattern in staggered relationship on the same level in a large room. Seated trainees face a screen on which is being projected a driving situation by a projector mounted on a stand behind the cars. Each car is spaced from other cars so that a person may move completely around a car.

The Board rejected the claim on the ground that appellant has merely adopted the well-known arrangement of seats in theaters and halls in arranging the training cars of the reference in a narrow enclosure. It was the Board's "firm conviction that the bumper-to-bumper arrangement is lacking in design invention because it has a functional and utilitarian aspect that is common and well known * * *." The other aspects of the design which differed from the arrangement shown in Your Car magazine were also found by the Board to be based on functional considerations known to the routine designer of theater and hall seating arrangements.

Appellant urges that the Board has broken down his "closely knit design" feature by feature and has analyzed each feature individually for novelty. This, it is suggested, should not have been done because the design as a whole must be compared with something in existence. Moreover, urges appellant, it is immaterial that the subject of a design may embody function if the design is attractive, novel, and inventive.

The Solicitor, on the other hand, urges that each of the changes made by appellant in the reference training room would have been obvious to a normally skilled designer, that the known useful functions of the various features of appellant's design are evidence that incorporation of these features into a design would be obvious, and that reliance may not be placed on the utilitarian aspects of the design for patentability.

Before discussing the patentability of appellant's design, it is well to point out that we have not been called upon to decide whether or not the appealed design is new and ornamental, or that it is or is not a design for an article of manufacture or a plurality of articles. The only question is whether this design is obvious and therefore unpatentable.

With reference to design patents, we stated in *In re Frick*, 47 CCPA 826, 275 F.2d 741, 125 USPQ 191, which involved a design for a mobile double ended carrier, that:

35 U.S.C. 171 authorizes the granting of patents for designs subject to the other conditions and requirements of Title 35, United States Code. A design to be patentable must be a "new, original and ornamental" design which would not have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. 35 U.S.C. 103.

It is our opinion that the design at bar does not fulfill the requirements of the statute as enunciated in the *Frick* case. This design is nothing more than the obvious result of confining the trainer cars into a limited enclosure in a manner to give the optimum view to each student. This result could have been produced by anyone skilled in the art who had the knowledge of the reference and the well known seating arrangement and wide screen concept of theatres.

[1] It is true, as appellant contends, that a patentable design may contain old elements, but in order to be patentable, the finished product must have an unobvious appearance and not be merely the result of an obvious combination of the old elements as we find in this case.

[2] Even though appearance as a whole is the criterion of a design patent, if the objective of the designer, as here, motivates him to take old seating arrangements and adapt them to a specified area thereby bringing about an expected appearance, patentability is not present. If this were not so, every theatre having a seating arrangement and a screen size adapted to its particular dimensions would warrant a design patent.

[3] It is true, as appellant argues, that a design may embody functional features and still be patentable, but in order to attain this legal status under these circumstances, the design must have an unobvious appearance distinct from that dictated solely by functional considerations. We do not find this situation here.

[4] For the above reasons we affirm the decision of the Board of Appeals.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE DOUGLAS H. MORETON

No. 6665. Decided March 15, 1961

[48 CCPA —; 288 F.2d 708; 129 USPQ 227]

1. PATENTABILITY—PATENTABLE SUBJECT MATTER—NEW USE CLAIMED AS A METHOD.

"* * * the invention, broadly described, is, as appellant himself indicates, a new use for two specific, closely related, triaryl phosphates, as hydraulic fluid in admittedly old hydraulic systems. But since one cannot claim a new use per se, because it is not among the categories of patentable inventions specified in 35 U.S.C. 101, it is claimed as a method, as permitted by 35 U.S.C. 100 (b). This mere matter of form should have no effect on patentability."

771 O.G.—20

2. APPLICATION—ASSERTION OF UNEXPECTED RESULTS—PATENTABILITY—EVIDENCE.

"The assertion of the specification is that 'unexpected' results are obtained by the use of the fluids of the claims but it is not stated what those results are other than to say that the fluids claimed are 'surprisingly satisfactory.' While the presence of such statements in a specification is neither surprising nor unexpected, they carry no weight in the absence of something concrete to support them."

3. PATENTABILITY—PRIOR ART—PRESUMPTION OF KNOWLEDGE.

Reference made to the "usual presumption" that the prior art cited was known to the person of ordinary skill in the art involved.

4. PATENTABILITY—REFERENCES—FOREIGN PATENT.

"Appellant attempts to disparage the value of the French patent as a reference on the ground that it is a 'foreign patent,' and is good 'for only what it clearly and definitely discloses.' That statement is true with respect to any reference, patent or otherwise, foreign or domestic. There is no basis in the statute (35 U.S.C. 102 or 35 U.S.C. 103) for discriminating either in favor of or against prior art references on the basis of nationality. We do know that some opinions have looked askance at foreign patents but that is for the reason that the patents of some countries have been notorious for containing inadequate and incomplete disclosures. A consideration of cases will show that this type of argument has not borne fruit in this court for the past 30 years."

5. SAME—PARTICULAR SUBJECT MATTER—METHOD OF HYDRAULIC POWER TRANSMISSION AND LUBRICATION.

The decision of the Board of Appeals holding certain claims in appellant's application, entitled "Method of Hydraulic Power Transmission and Lubrication," unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 333,605. AFFIRMED.

Francis C. Broune (William E. Schuyler, Jr., Andrew B. Beveridge, Joseph A. De Grandi and Gerald H. Peterson, of counsel) for appellant.

Clarence W. Moore (Joseph Schimmel, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This appeal is from the affirmation by the Patent Office Board of Appeals of the rejection of claims 2, 3, 8, 9, 13, and 14 of application Ser. No. 333,605, filed January 27, 1953, entitled "Method of Hydraulic Power Transmission and Lubrication." At the argument appellant's counsel withdrew claims 2, 3, and 13. The rejection is based on two references:

Caprio, 2,245,649, June 17, 1941.

French patent, 856,487, Mar. 23, 1940.

The first question before us is, what did the appellant invent? We next have to determine whether that invention is patentable in view of the prior art. We turn to the application for a description of the invention.

Appellant's specification first sets out the necessity of using, in many hydraulic systems, a hydraulic fluid which is suited both to the transmission of power and to the lubrication of various relatively moving parts of the system which are in frictional engagement, such parts occurring in such things as pumps, valves, pistons, cylinders, fluid motors, etc. The surfaces in frictional engagement may be of iron, steel, bronze, and natural or synthetic rubber, in any combination. The fluid must also have proper chemical and phys-

cal characteristics, such as viscosity, density, stability, non-flammability, non-toxicity, and lubricity. The requirements in many uses, for example in aircraft, may be "stringent." In short, the fluid should be well suited for power transmission in typical hydraulic systems and should also be a good lubricant for the moving parts it has to lubricate.

The statement of the invention is this:

In accordance with my invention a method has been discovered involving a new use of cresyl diphenyl phosphate which makes it possible to transmit power in and lubricate the frictional parts of such hydraulic systems, and particularly in such combination including the lubrication of a combination of particular frictional surfaces with the same fluid.

Although cresyl diphenyl phosphate is preferred as described above, phenyl dicresyl phosphate also may be used, or mixtures of these phosphates. Thus, my invention includes the triaryl phosphates containing both phenyl and cresyl radicals. [Emphasis ours.]

[1] Thus the invention, broadly described, is, as appellant himself indicates, a new use for two specific, closely related, triaryl phosphates, as hydraulic fluid in admittedly old hydraulic systems. But since one cannot claim a new use per se, because it is not among the categories of patentable inventions specified in 35 U.S.C. 101, it is claimed as a method, as permitted by 35 U.S.C. 100(b). This mere matter of form should have no effect on patentability. Casting the invention in terms of method, however, appellant puts great emphasis on certain elements or frictional surfaces present in the hydraulic system, as will be seen in the appealed claims, which we have broken up into elements, as follows:

Claim 14

In the method of operating the hydraulic system of an aircraft having
[A] an axial-piston pump therein for pumping hydraulic fluid through and supplying power for said system at a pressure of 3000 lbs. per square inch on said fluid of said system,
[B] said system including valves, operating pistons and cylinders, and elastomeric packings[,] including the frictional surfaces of

- [a] steel-on-steel,
- [b] steel-on-bronze and
- [c] steel-on-butyl rubber

lubricated by said hydraulic fluid,
[C] the improvement which comprises operating said system and simultaneously lubricating said frictional surfaces with a fluid comprising a triaryl phosphate in which the aryl radicals are both cresyl and phenyl.

Claim 8

The method as defined in claim 14 in which said phosphate is cresyl diphenyl phosphate.

Claim 9

The method as defined in claim 14 in which said phosphate is phenyl dicresyl phosphate.

Claims 8 and 9 are specific to the two triaryl phosphates which the specification discloses as appellant's hydraulic fluid and claim 14 is generic thereto. Except for this difference, the claims are identical and stand or fall together. No novelty is claimed for any method in the manipulative sense and it is transparently obvious that the only invention sought to be covered by the above claims is the use in an old hydraulic system, which is no part of the appellant's invention, of specific lubricating fluids.

[2] The assertion of the specification is that "unexpected" results are obtained by the use of the fluids of the claims but it is not stated what those results are other than to say that the fluids claimed are "surprisingly satisfactory." While the presence of such statements in a specification is neither surprising nor unexpected, they carry no weight in the

absence of something concrete to support them. The essence of the disclosure is that these fluids have all of the desired properties, nothing more.

The specification, the claim language, and the argument before us appear to be built up on the fact, developed in the specification, that airplane hydraulic systems commonly utilize as a source of hydraulic power a Vickers Axial-Piston Pump. Most helpful and instructive cutaway specimens of such pumps were used at the argument to demonstrate the fact that they themselves contain, without reference to the rest of the hydraulic system, all of the frictional surfaces [a, b, c] specified in the claims. Surface [a] is illustrated by ball-bearings, surface [b] by steel pistons in bronze cylinders and other bronze-to-steel bearing surfaces (which we may say is extremely common in machinery bearings generally), and [c] by a shaft seal on the pump drive shaft which is said to have a sealing element of butyl rubber. Great emphasis is placed on the contention that the use of the claimed fluids in contact with butyl rubber is not only unobvious but novel.

The asserted problem faced by appellant was to find a satisfactory hydraulic fluid to use, we shall assume, in systems employing Vickers Axial-Piston Pumps or the like which have to have their moving parts lubricated by the fluid as it flows through and is pumped by them, and as it attempts to leak past their shaft seals. If the prior art disclosed the use of the claimed triaryl phosphates in hydraulic systems of this type, the claimed "method" would be entirely lacking in novelty and be anticipated. [3] As such is not the case, however, we are concerned with the nearness of the approach of the art to such use and whether it is close enough to suggest such use to one of ordinary skill in the art involved on the basis of the usual presumption that the art cited was known to him.

The Caprio patent is directed to lubricants and their production. While emphasis is placed on phosphoric acid esters as additives for other common lubricants, the disclosure is by no means limited thereto and among other things it makes repeated reference to the use of tri-esters of phosphoric acid by themselves as the sole lubricant. It states specifically that triaryl phosphates may be used with oils "as an aid to film formation, film strength and/or penetrating power, covering power, and other qualities, from less than 1% to over 99%." Use in an amount over 99% is in accord with the statement made elsewhere in the patent that the ester "may replace all" of some other oily material normally employed. In Example V tricresyl phosphate is stated to be itself a lubricant which can be used alone as a crankcase lubricant, or in any desired proportion with a mineral oil of the desired viscosity. One would normally expect that a crankcase lubricant in use would lubricate all of the frictional surfaces named in the claims with the possible exception of the steel-on-butyl rubber surfaces. While tricresyl phosphate is the compound used in all of the specific examples except two, one of the latter specifically names one of appellant's claimed fluids, monocresyl diphenyl phosphate. Appellant points out that the ultimate compound of that example is a hard lubricant, but that is due to the combination with other ingredients, apparently not to the cresyl diphenyl phosphate alone which, according to appellant,

is fluid. The patent, after giving the general formulae of the various triesters of phosphoric acid, exemplifies them "by name" and there lists tricresyl phosphate, the material of most of the examples and the preferred material, as the equivalent in use of "monocresyldiphenyl phosphate," one of appellant's two claimed fluids. The patent specification concludes with the statement:

There are numerous formulae for lubricants for each purpose but for general purposes this invention relates to the replacing of a part or all the petroleum or other oily material with an ester of phosphoric acid. [Emphasis ours.]

We do not see how anyone interested in liquid lubricants could fail to find in this disclosure a clear teaching that monocresyl diphenyl phosphate is a good lubricant and can be used as such by itself. Appellant does not pretend to have discovered any of its other chemical or physical characteristics, such as viscosity and the like, which would presumably be known, and it is not seen why, as a known lubricating liquid it would not be in the category of logical materials to use in hydraulic systems of the type described in the claims.

The French patent disclosure brings the prior art even closer to appellant's use invention in teaching that tricresyl phosphate and other "compounds of the family of alcohol or phenol phosphoric esters" are better than petroleum oils as "hydraulic transmission fluid" (a species of power transmission) in hydraulic couplings. Appellant argues that this patent says nothing about lubricity. While this may be true, Caprio covers that matter thoroughly. The French patent also specifies a trixylyl phosphate, tri-(3,4-dimethylphenyl)phosphate.

[4] Appellant further attempts to disparage the value of the French patent as a reference on the ground that it is a "foreign patent," and is good "for only what it clearly and definitely discloses." That statement is true with respect to any reference, patent or otherwise, foreign or domestic. There is no basis in the statute (35 U.S.C. 102 or 35 U.S.C. 103) for discriminating either in favor of or against prior art references on the basis of nationality. We do know that some opinions have looked askance at foreign

patents but that is for the reason that the patents of some countries have been notorious for containing inadequate and incomplete disclosures. A consideration of cases will show that this type of argument has not borne fruit in this court for the past 30 years. See *In re Cross*, 20 CCPA 710, 62 F.2d 182, 16 USPQ 10; *In re Crowley*, 22 CCPA 881, 74 F.2d 753, 24 USPQ 221; and *In re Eitzen*, 24 CCPA 772, 86 F.2d 411, 31 USPQ 427.

Some of the points made in the French patent about tricresyl phosphate, which Caprio teaches to be useful for the same lubricating purposes as at least one of appellant's compounds, are that it is better for use in hydraulic couplings than the light mineral oils usually used because it is nonflammable, produces no explosive vapors, has low vapor tension at high temperatures, is stable and does not decompose at the highest temperatures of use, does not attack metals, is inert with respect to the oxygen in the air, and is odorless. These characteristics would be equally beneficial in appellant's type of system.

Granting, arguendo, that what appellant calls the "preamble" of his claim 14, which we take to be all but the part following "[C]," is a limitation, we think the references fairly suggest using the materials in clause [C] in hydraulic systems having the metallic friction surfaces [a] and [b]. If the steel-on-butyl rubber surfaces [c] presented any real problem in the sense of deterioration of the seal by the hydraulic fluid, we can see nothing patentable in testing the available fluids, which includes those claimed, in order to determine which one or ones would not adversely affect the particular synthetic rubber being used.

We also believe that the broad disclosures of Caprio would suggest to one skilled in this art the utility in the lubricant field of appellant's phenyl dicresyl phosphate, in view of the specific disclosure of monocresyl diphenyl phosphate. Appellant has not urged any patentable distinction as between these specific compounds.

[5] The decision of the Board is affirmed.
AFFIRMED.

REISSUES

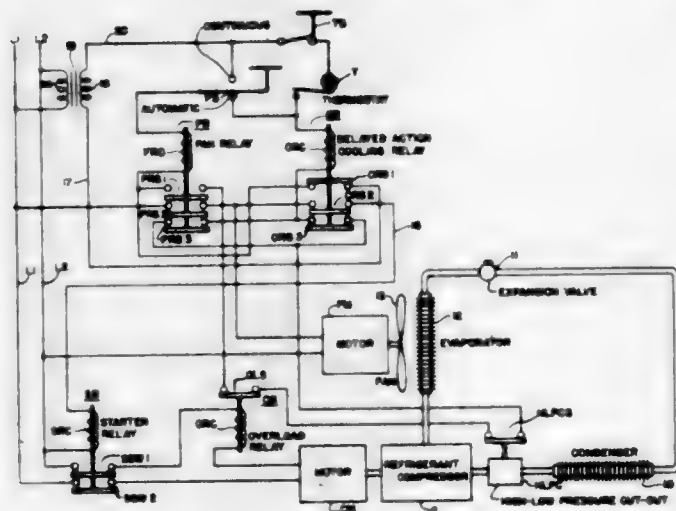
OCTOBER 10, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,049 SAFETY CIRCUITS FOR ELECTRIC MOTORS DRIVING REFRIGERANT COMPRESSORS

William R. Winter, Staunton, Va., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original No. 2,891,386, dated June 23, 1959, Ser. No. 675,374, July 31, 1957. Application for reissue Nov. 9, 1959, Ser. No. 851,928

6 Claims. (Cl. 62-163)



5. In a control circuit for a refrigeration system having air cooling means, a fan, an electric motor for driving said fan, a safety switch which opens in response to an abnormal condition in said system, an electric supply circuit, and a magnetic starter having switching means for operating said air cooling means from said supply circuit, the improvement comprising a first switch which is closed when said system is not operating, second, third and fourth switches which are open when said system is not operating, means for closing said third and fourth switches, a reset switch, means including said reset and first switches for operating said switch closing means from said supply circuit, means for closing said second switch and opening said first switch, means including said reset switch for operating said last mentioned means from said supply circuit after said third and fourth switch closing means has operated, means including said reset, third and safety switches for operating said third and fourth switch closing means from said supply circuit after said first switch has opened, means including said second and fourth switches for operating said starter from said supply circuit, and means including said fourth switch for operating said fan motor from said supply circuit.

25,050

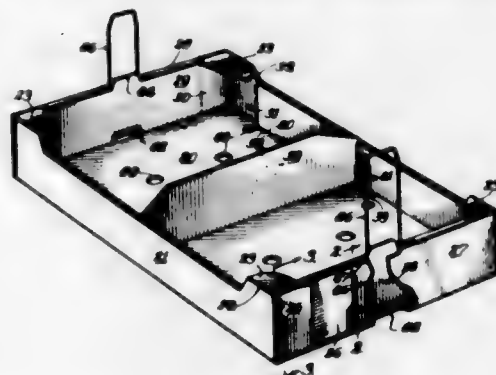
STACKING PAPERBOARD TRAY

Joseph Portola Hamilton, Alameda County, Calif., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Original No. 2,868,430, dated Jan. 13, 1959, Ser. No. 602,600, Aug. 7, 1956. Application for reissue Dec. 23, 1960, Ser. No. 78,198

9 Claims. (Cl. 229-34)

1. In a load supporting corner construction for a substantially rectangular open top stacking tray formed from a one piece blank of sheet material such as paper

board and having two opposite walls of less height for the major portion of their length than the other two opposite walls, a bottom wall panel, a first wall and a second wall extending upward from said bottom wall panel and disposed substantially perpendicular to each other, said walls respectively comprising an outer panel and an inner panel secured together at their upper edges by a fold strip, a substantially horizontal corner seat attached at one outer edge to the upper edge of the outer panel of said first wall, a first flap attached to the other outer edge of said seat extending therefrom toward said



bottom wall panel, a second flap attached to the end of the outer panel of the first wall extending between the panels of said second wall, and a third flap attached to the end of the inner panel of said second wall underlying said seat adjacent said other outer edge thereof and extending therefrom to said bottom wall panel, said second and third flaps providing two thicknesses of load supporting material at said other outer edge of said seat and said outer panel of said first wall providing one thickness of material supporting said seat at said one outer edge thereof.

25,051

METHOD OF FORMING A FROZEN CONFECTION

William G. Kolander, 354 E St., Chula Vista, Calif.
Original No. 2,927,544, dated Mar. 8, 1960, Ser. No. 679,659, Aug. 22, 1957. Application of reissue Mar. 14, 1961, Ser. No. 95,762

8 Claims. (Cl. 107-54)



5. The method of forming a plastically frozen confection comprising the steps of: placing a plastically frozen confection into a container having an outlet spout at the bottom thereof; placing a confection carrier under the spout of said container, said confection carrier consisting of a platform through which extends a stick, the confection carrier being so disposed relative to the spout

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that one end of said stick extends into said spout; and applying pressure to the confection within said container to extrude the confection from said spout onto said platform, said platform being moved relative to said spout during extrusion of the confection to thereby form a mound of confection on said platform without external support to the sides of the mound.

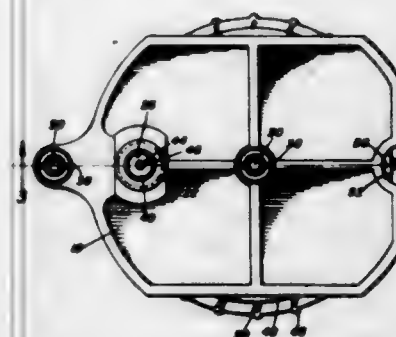
25,052

ADDITIVE CONTROL DEVICE

Richard L. Burkland, 734 E. Desert Park Lane, and John W. Graves, Jr., 415 E. Las Palmaritas, both of Phoenix, Ariz.

Original No. 2,891,579, dated June 23, 1959, Ser. No. 657,391, May 6, 1957. Application for reissue Oct. 3, 1960, Ser. No. 60,235

3 Claims. (Cl. 138-45)



1. A flow control device for disposal in a liquid flow line comprising a housing consisting of a pair of substantially identical rectangular plates having a constant thickness over a major portion of its area, said plates having smooth inner surface areas facing each other, a circular disk disposed between the plates, said disk having parallel flat surfaces for engagement with the smooth surface of the plates, the width of the plates being less than the diameter of the disk whereby the periphery of the disk will project beyond the side edges of the housing for enabling rotation of the disk, each plate having a liquid flow opening therein adjacent one end thereof with the openings being aligned with each other, tubular

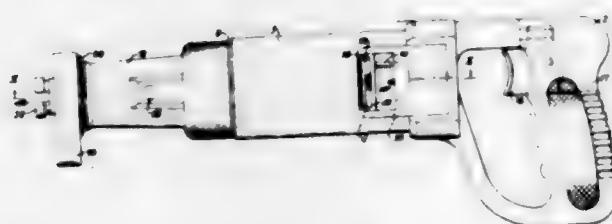
adapters connected with each of the plates in alignment with the openings for providing a liquid flow path, said adapters extending from the outer surfaces of the plates and being adapted to connect to a liquid flow line, said disk having a central opening, each of said plates having an opening therein in alignment with the central opening in the disk, means extending through the openings in the plate and the central opening in the disk for rotatably retaining the disk and urging the plates towards the disk, the end edge of each plate adjacent the tubular adapter having a laterally extending apertured ear disposed radially outwardly of the periphery of the disk, a clamp means extending through the ears for urging the plates towards each other adjacent the end edge having the tubular adapters thereon, each of said plates having an annular recess in the smooth inner surface area thereof with the recess being disposed in spaced concentric relation to the liquid flow opening, an O-ring seal in each recess, said seal being constructed of resilient material and projecting beyond the surface of the plate for frictional sealing engagement with the disk, said disk having a plurality of circumferentially spaced orifices extending therethrough, said orifices being disposed for alignment with the liquid flow openings and being of different sizes, the spacing between the orifices being greater than the diameter of the O-ring seal whereby only a single orifice can be encircled by the seal, numerical indicia on said disk radially outwardly of the orifices for indicating the size of the orifices, a plurality of knobs on the periphery of the disk for aiding in the rotation thereof, the end edge of each plate remote from the tubular adapters having a notch therein revealing the periphery of the disk and the numerical indicia thereon, a pointer in said notch for alignment with the indicia for indicating alignment of a diametrically opposed orifice with the liquid flow path and the size of that orifice, each of said orifices being countersunk on the downstream side thereof to facilitate escapement of liquid from the orifice, the smooth inner surface area of each plate disposed radially outwardly of the periphery of the disk extending longitudinally inwardly and terminating in flat surfaces disposed adjacent each other for maintaining the plates and disk in generally parallel relation whereby the entire periphery of the O-ring seals will engage the disk.

PATENTS

GRANTED OCTOBER 10, 1961

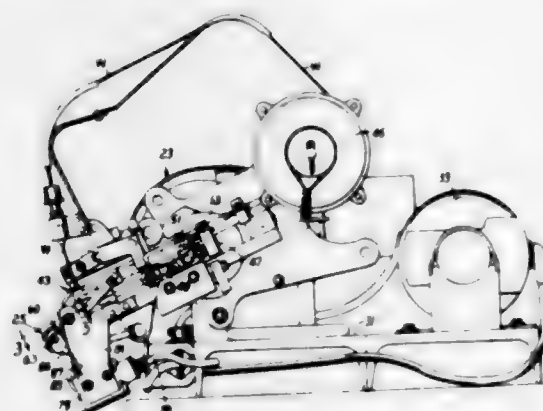
GENERAL AND MECHANICAL

3,003,150
EXPLOSIVELY ACTUATED STUD DRIVING TOOL
 Ernest E. Temple, Murrysville, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Dec. 18, 1958, Ser. No. 781,343
 1 Claim. (Cl. 1—44.5)



A barrel for a tool that will drive a stud under water by the firing of an explosive charge behind a piston at the rear end of the stud, the barrel being provided near its rear end with a piston and cartridge receiving area immediately behind a stud receiving area, and the side of the barrel being provided with a bypass having a rear inlet at the front end of said piston receiving area and having a front outlet that opens into the barrel between the piston receiving area and the front end of said stud receiving area, the bypass being slightly longer than the piston receiving area, whereby when a piston in said piston receiving area is driven forward by expanding gases from the explosion of a cartridge behind it, some of those gases will pass the piston as it travels between the ends of the bypass and will force the water out of the barrel ahead of the piston.

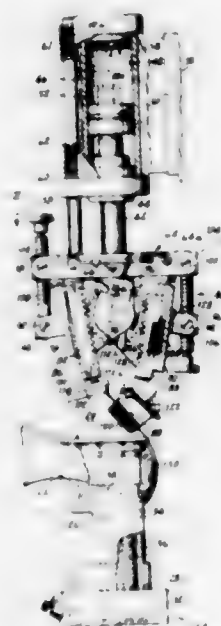
3,003,151
STAPLING APPARATUS
 Edwin A. Dickmann, Affton, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
 Filed Dec. 15, 1958, Ser. No. 780,442
 2 Claims. (Cl. 1—177)



1. In a stapler for clinching a staple around end portions of a drawstring of a drawstring bag; said drawstring being constituted by a drawcord, a clincher having a V-shape notch extending downward from the top thereof for receiving said drawstring end portions, the width of said notch corresponding closely to the width of each drawstring end portion so as to compel placement of the drawstring end portions in the notch one on top of the other, said clincher including an anvil at one side of the notch, a driver for

driving a staple against the anvil, said driver having a forward end portion engageable with a staple for driving it toward and against the anvil on movement of the driver from a retracted position wherein its forward end portion is on the other side of the notch, said driver being movable in a straight-line path transversely across the notch for driving a staple to straddle said drawstring end portions, the bottom of the notch being below the lower leg of a staple being driven by the driver, the anvil having a recess opposed to said forward end portion of the driver for turning in the legs of a staple being driven by the driver, and means for controlling the operation of the driver including a member offset from the path of the driver and having a portion thereof normally projecting above the bottom of the notch for engagement by the bottom one of the end portions of a drawstring as pressed down into the notch, said member comprising a rod slidable in a hole in the cylinder offset from the path of the driver in the plane of the notch, said member being movable to a depressed position by said drawstring end portions as they are pressed down into the notch for initiating the operation of the driver, said drawstring end portions then being positioned for being straddled by a staple being driven by the driver.

3,003,152
HEEL ATTACHING MACHINES
 Paul W. Senfleben, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
 Filed Oct. 19, 1960, Ser. No. 63,664
 5 Claims. (Cl. 1—335)



1. In a heel attaching machine, a support for a shoe, a carrier, a pair of guide members each of which has a guideway and is journaled on the carrier for initial adjustment about an axis, slides movable along said guideways, tread and rear clamps which are adjustably mounted respectively on said slides, means for operatively connecting the slides for simultaneous movement in opposite directions, means for effecting relative movement of translation between the carrier and the support to cause the tread and rear clamps and the tread and rear faces of a heel positioned on the shoe to be brought into forced engagement respectively whereby to force the heel

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and the heel seat of the shoe together, and means for initially moving on the carrier each of the guide members into different adjusted positions about its axis.

3,003,153
LEATHER NECKTIE
 George S. Laham, 208 S. Battin, Wichita, Kans.
 Filed July 13, 1959, Ser. No. 826,533
 14 Claims. (Cl. 2—144)



1. A necktie comprised of inner and outer end portions folded and arranged one upon the other when the tie is in use, the outer end portion of the tie having a V-shaped slit providing an opening extending through both surfaces of said outer end portion when the portion of the necktie within the confines of the slit is pushed rearwardly, and a major portion of the inner end portion of the tie being adapted to pass inwardly through said opening and leaving a V-shaped minor portion thereof exposed adjacent said opening at the outer surface of the outer end portion of the necktie.

3,003,154
SKI SOCKS
 Gisel H. Litman, Guggachstrasse 25, Zurich, Switzerland
 Filed Mar. 2, 1959, Ser. No. 796,490
 2 Claims. (Cl. 2—239)



1. A sock for use by skiers and the like comprising: a cloth body including an integral ankle-surrounding portion, said ankle-surrounding portion having an elastic band about the top thereof, said band being of sufficient resilience to hold the ankle-surrounding portion of the said sock in place when worn, said ankle-surrounding portion having four substantially rectangular pads positioned thereabout, said pads being substantially contiguous to one another, each of said pads extending from a point immediately beneath the said elastic band to a point below the area normally occupied by the wearer's ankle when the said sock is in use, two of the said pads constituting a first pair being positioned directly over the portion of the said sock normally occupied by the ankle bone of the said wearer when the said sock is in use, the other two pads being positioned opposite one another between the said

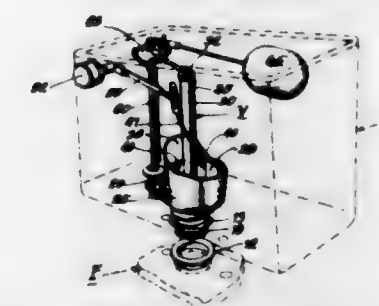
first pair of the said pads, the said pads being secured in place by four individual pieces of cloth, each of the said pieces of cloth overlying one of the said pads and being of a slightly larger size than the said pad covered thereby, each of the said pieces of cloth being stitched to the said integral ankle-surrounding portion.

3,003,155
HAIR DARTS FOR IMPLANTING IN LIVE OR ARTIFICIAL MEDIA
 Felix C. Mielzynski, 78 W. Ferry, Apt. 28, Detroit, Mich., and Ted Zbikowski, 12084 Lampkin St., Hamtramck, Mich.
 Filed July 6, 1956, Ser. No. 596,199
 1 Claim. (Cl. 3—1)



A hair dart for implantation in an embedding medium comprising a bulbous anchor portion and a hair secured to said anchor portion and extending therefrom, said anchor portion consisting essentially of a body tissue compatible metallic alloy and including axially spaced circumferential serrations to facilitate retention of said dart by said embedding medium.

3,003,156
TILTING FLUSH VALVE FOR TOILET
 Fred C. Alexander, New Castle, Pa., assignor to Universal Rundle Corporation, New Castle, Pa., a corporation of Delaware
 Filed June 18, 1959, Ser. No. 821,187
 14 Claims. (Cl. 4—60)

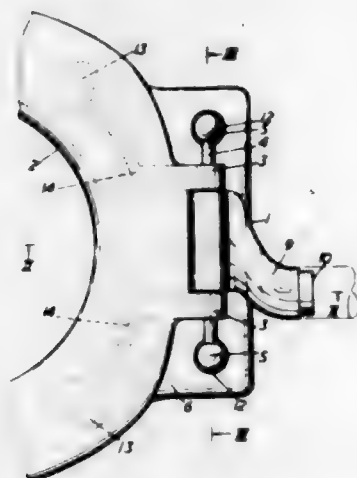


1. In combination, an assembly of the class described comprising an overflow tube having a discharge outlet and valve closing means at the bottom thereof, a first water reservoir and a second water reservoir disposed on opposite sides of said tube and adjacent the lower portion thereof, both of said reservoirs having a relatively large opening at the top and together encompassing said tube, said second reservoir also having an orifice adjacent its bottom, a tank discharge spud having a valve seat near the top thereof, means pivotally mounting said assembly to the upper portion of said tank discharge spud to provide for tilting of said assembly about a horizontal axis between a closed position towards said first reservoir wherein said valve closing means is seated on said valve seat and an open flushing position towards said second reservoir wherein said valve closing means is spaced from said valve seat, and counterweight means mounted on said tube adjacent the top thereof to retain the assembly in the open flushing position when moved thereto with both reservoirs filled with water, said counterweight means being counter-balanced by the water in the first reservoir as the water in the second reservoir escapes through said orifice to tilt the assembly to the closed position.

3,003,157

VENTILATED TOILET BOWL

Basil John Saunders Belcher, Petts Wood, Orpington, England, assignor to Silavent Limited, Petts Wood, Orpington, England, a British company
Filed Oct. 28, 1958, Ser. No. 768,292
Claims priority, application Great Britain Oct. 22, 1957
3 Claims. (Cl. 4-217)

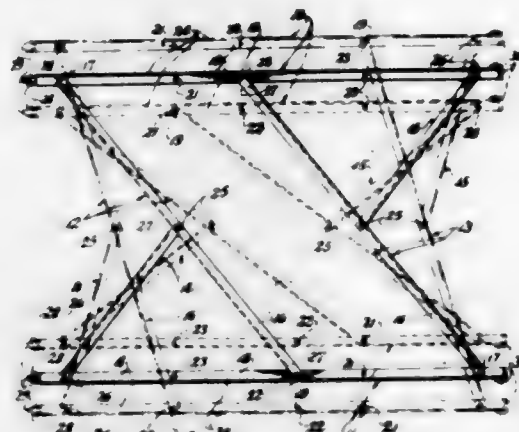


3. A collector for a ventilated toilet suitable for mounting on the top rear ledge of the bowl consisting of a hollow body having a substantially cylindrical front part having a downwardly-facing intake opening therein in the form of a slot having its longer sides parallel to the axis of the cylinder, the sides of said front part being recessed to accommodate pivot means, and a rear part having an outlet opening therein.

3,003,158

ADJUSTABLE BED FRAME

John G. Sevcik, Berwyn, Ill., assignor to Burton-Dixie Corporation, Chicago, Ill., a corporation of Delaware
Filed May 13, 1959, Ser. No. 812,914
2 Claims. (Cl. 5-181)



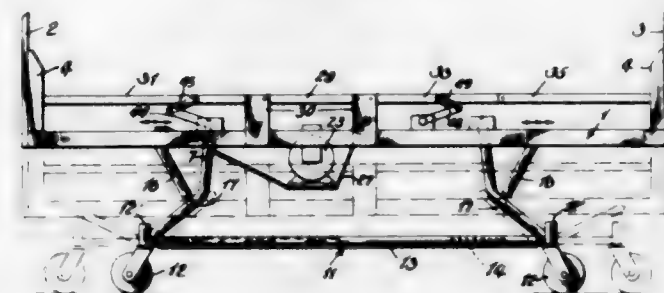
1. An adjustable bed frame, comprising a pair of angle members forming parallel side rails, each having a horizontal rail provided with spaced openings intermediate its length, a pair of angle members forming parallel cross rails extending obliquely across and joining said side rails in each position of adjustment, one end of one of said cross rails being affixed and pivotally connected to adjacent one end of a side rail and one end of the other cross rail being affixed and pivotally connected to and adjacent the opposite end of the other side rail, the other end of each cross rail having a depending stud received in one of the openings in the opposite side rail to provide a bed frame of a desired width, and a pair of parallel adjusting arms pivotally connected at one end to the end of each side rail opposite to the pivotal connection between said side rail and cross rail, the other end

of each adjusting arm pivotally connected to an intermediate portion of the adjacent cross rail thus providing a rigid three point suspension.

3,003,159

HOSPITAL BED

Julien Hebert and Irving Shulkin, Montreal, Quebec, Canada, assignors to Hyman Singer, Montreal, Quebec, Canada
Filed July 11, 1958, Ser. No. 747,859
1 Claim. (Cl. 5-63)

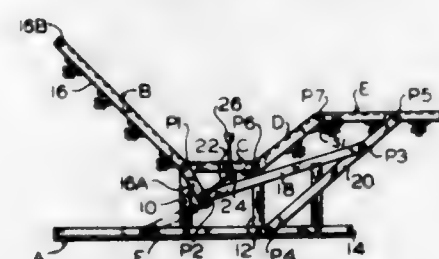


A bed comprising a main frame, levers pivotally connected to said main frame and adapted to support said main frame above the floor, bracing arms pivotally connected at one end to said levers intermediate the ends of the latter and joined at the other end to a block through pivotal connections and means to displace said block longitudinally of said main frame and to lock said pivotal connections in adjusted positions to thereby vary the inclination of said levers with respect to said main frame and vary the level of said main frame with respect to the floor while maintaining said inclination of said levers at an adjusted angular position; swinging wheels having swinging shafts, bearings for said swinging shafts, and a longitudinally extensible underframe rigidly interconnecting said bearings to keep said swinging shafts in a vertical position, said extensible underframe consisting of two T-shaped members having their main legs in axial alignment and in telescopic engagement, said bearings being rigidly mounted at the outer ends of the cross legs of said T-shaped members, said levers being pivotally connected to the outer ends of said cross legs.

3,003,160

FOLDABLE BED FRAME-BED TO CONTOUR CHAIR

Robert Goodman, 5319 Westminister Ave., Philadelphia, Pa.
Filed Dec. 1, 1958, Ser. No. 777,445
4 Claims. (Cl. 5-69)



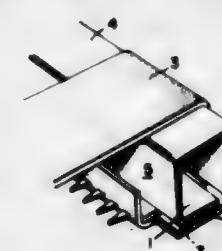
1. A contour bed comprising a base, a frame extending upwardly from said base, a seat section rigidly mounted in horizontal position on said frame, a head section pivotally connected to one end of said seat section, an intermediate section having one end thereof pivotally connected to the opposite end of said seat section and having the opposite end thereof pivotally connected to a foot section, said head section, intermediate section and foot section being positionable in horizontal alignment with said seat section and being pivotally movable relative thereto, linkage operatively connecting said head

section directly to said foot section for providing simultaneous movement of said head and foot sections, spring means urging said head and foot sections away from said horizontal alignment with said seat section, and pivotal locking means engageable with a straight slidable rod for releasably locking said sections in said horizontal alignment, said locking means being pivotally connected to said rigid seat section while said rod is pivotally connected to said linkage and is free from connection to any other part of said frame.

3,003,161

APPARATUS FOR FASTENING ELASTIC TAPES TO RIGID FRAMES

Pio Reggiani, Viale Argonne 38, Milan, Italy
Original application Oct. 10, 1955, Ser. No. 539,545, now Patent No. 2,922,170, dated Jan. 26, 1960. Divided and this application Apr. 7, 1958, Ser. No. 726,743
Claims priority, application Italy Oct. 15, 1954
6 Claims. (Cl. 5-194)

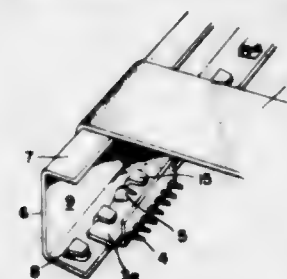


1. Means for detachably fastening a length of flat, elastic tape to a rigid frame across which said tape is tautly stretched and anchored at one end to a member of said frame and at its other end to an opposite member of said frame, each said member being of tubelike cross-section, having a pair of parallel, spaced flanges approximated to form a recessed slot of a depth substantially greater than the space between said flanges, and extending lengthwise throughout the length of said member; said means comprising a rigid flat anchorage plate having adjacent one edge thereof at least one integral projecting element which engages said tape, with said tape lying in contact with a portion of said frame member around which the adjacent end portion of said tape is partially wrapped; said plate having an integral tail portion which extends through said slot into said member and, under the pull of said tape, is held in firm engagement with said member.

3,003,162

APPARATUS FOR FASTENING ELASTIC TAPES TO RIGID FRAMES

Pio Reggiani, Viale Argonne 38, Milan, Italy
Original application Oct. 10, 1955, Ser. No. 539,545, now Patent No. 2,922,170, dated Jan. 26, 1960. Divided and this application Apr. 7, 1958, Ser. No. 726,744
Claims priority, application Italy Oct. 15, 1954
12 Claims. (Cl. 5-194)



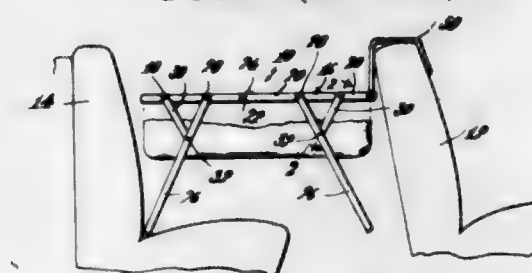
8. Means for fastening a length of elastic tape to a rigid frame having at least one pair of oppositely disposed side frame members, across which said tape is tautly stretched and anchored at one end to one member of said frame and at the other end to the opposite member, each member being of open channel cross-section with two substantially parallel flanges connected by an integral web; comprising: means for detachably anchoring at least one end of said tape to its supporting frame

member; including a rigid anchorage plate having adjacent one edge thereof at least one element which projects beyond the edge of said plate and engages the tape against its movement relatively to said plate; said plate having a tail portion, opposite said first element, which detachably engages a free-edge portion of one of said flanges, opposite the point at which said tape is tangential to the other of said flanges, so as to secure said plate to its supporting frame member against dislodgement when said plate is subject to the pull of the tape.

3,003,163

SNAP FASTENER BRACE FOR CHILD'S CAR BED AND THE LIKE

Samuel Linden, Swampscott, Mass., assignor to Bunny Bear Inc., Everett, Mass., a corporation of Massachusetts
Filed Mar. 4, 1959, Ser. No. 797,096
1 Claim. (Cl. 5-315)

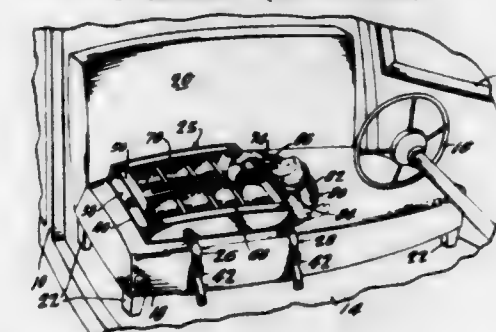


In a bassinet, a rigid, substantially rectangular frame, rigid, substantially U-shaped legs, means pivotally connecting the open ends of the U-shaped legs to the side members of the frame, rigid braces for holding the legs in fixed predetermined positions with respect to the frame to support the latter in a horizontal position for use, means pivotally connecting said braces to said sides of the frame and the legs at points spaced from the means pivotally connecting the legs to the frame, the means at one end, at least, of said several braces comprising snap fasteners having cooperable components fastened respectively to the braces and the parts of the bassinet associated with the braces at that end, said component parts being separable by displacement of the braces relative to the parts to which they are associated without modifying the angular disposition of the legs and/or braces, the means at the other ends of the braces being loosely engaged with the parts of the bassinet with which they are associated so as to permit displacement of the braces sufficiently to disengage and re-engage the cooperable components of the snap fasteners with ease.

3,003,164

SAFETY BED OR BERTH FOR INFANTS

Elizabeth M. Calvelage, R.R. 3, Columbus Grove, Ohio
Filed May 21, 1958, Ser. No. 736,729
3 Claims. (Cl. 5-343)



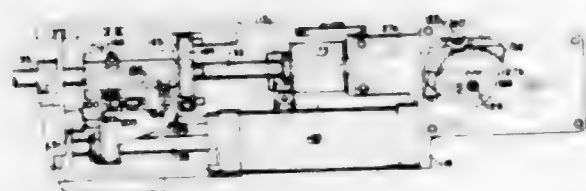
1. An infant's bed for use with a seat of an automotive vehicle comprising a bottom panel, side panels and a foot panel fashioned of flexible material and forming a rectangular-shaped structure, cover means including at least one panel of flexible material having one edge region fixedly joined with the rectangular-shaped structure, disconnectable fastening means adapted to removably secure

another edge region of the cover panel in closed position, said side panels and cover means defining an open end to accommodate an infant, an extension formed on the bottom panel for contact with the head of the infant, strap means secured to the rectangular-shaped structure for removably securing the structure to the vehicle seat, and a pair of shoulder straps fixedly secured to the bottom panel and adapted to be removably fastened to the cover panel for limiting endwise movement of the infant, said cover panel being provided with a reticulated section for ventilation purposes, and reinforcing members extending transversely across the reticulated section.

3,003,165

TOOL SPINDLE DRIVE MEANS FOR SEQUENTIALLY EFFECTING RAPID APPROACH, WORK FEED AND RAPID WITHDRAWAL
Arnold Samuel Charlat, Norwalk, Conn., assignor, by mesne assignments, to Brown & Sharpe Manufacturing Company, Providence, R.I., a corporation of Rhode Island

Filed Apr. 21, 1959, Ser. No. 807,935
13 Claims. (Cl. 10-128)



12. A machine for performing operations on workpieces, which comprises an axially movable quill, a rotary spindle mounted in the quill, axially thereof a carrier movably mounted on the quill, a plurality of tool holders mounted in the carrier and connectable separately to the spindle, the tool holders being presented selectively to the spindle for connection thereto by movement of the carrier, a table for supporting workpieces, a rack mounted on the quill axially thereof, a pinion engaging the rack and rotatable to move the rack and quill means for rotating the pinion to move the quill both toward and away from the table, a second means for rotating the pinion to move the quill but toward the table only, the second pinion rotating means being adjustable, means for limiting the movement of the quill toward the table, the limiting means being adjustable and including a plurality of abutments corresponding to respective tool holders in the carrier, adjustable means for driving the spindle, means for determining the length of the movement of the quill toward the table by the first pinion rotating means, the determining means being adjustable and including a plurality of abutments corresponding to respective tool holders in the carrier, and means connecting the tool holder carrier to the spindle driving means, the second pinion rotating means, the limiting means, and the determining means and acting, as the carrier is moved to present a tool to the spindle, to cause corresponding adjustments of the spindle driving means and second pinion rotating means and to move corresponding abutments of the limiting means and the determining means into effective position.

3,003,166

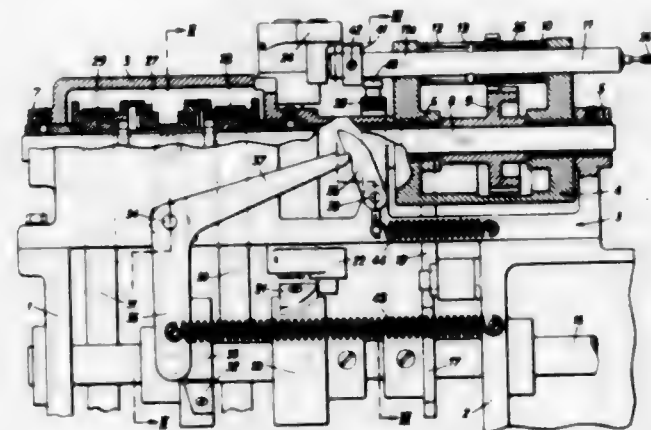
AUTOMATIC LATHE WITH PLURAL TOOL SPINDLES AND MEANS TO CHANGE TOOL SPINDLE SPEED TO EFFECTUATE REVERSAL FOR THREADING

André Bechler, 150 Nassau St., Montier 38, Switzerland
Filed Aug. 12, 1958, Ser. No. 754,622

Claims priority, application Switzerland Apr. 9, 1958
2 Claims. (Cl. 10-136)

1. An automatic lathe comprising a plurality of working spindles, a single swivel support carrying said plurality

of spindles at uniform distances from the rotational axis of said support, said spindles being longitudinally displaceable and at least one of said plurality of spindles being rotatable, a drive shaft, means including a cam disc secured on said drive shaft to swing said swivel support for selectively placing a working spindle in working position, means comprising a second cam resting on the drive shaft for feeding the working spindle placed in working position, a transmission shaft in driving connection with said working spindle, two spaced-apart drive members freely rotatable on said transmission shaft and adapted to have differential speeds, a coupling member rigidly connected with the transmission shaft and disposed between said drive members whereby upon longitudinal displacement it may be selectively placed in frictional engagement with said drive members, a clutch lever connected to displace the coupling member, a return spring acting on the clutch lever normally urging the coupling member against one of said two drive members, a cam resting on the drive shaft effective at the beginning of the feeding movement of the working spindle to swing the clutch lever against the



action of the return spring to connect the coupling member to the other of said drive members, locking means for temporarily locking the clutch lever after engagement of said coupling member with said other drive member, said locking means comprising a spring-loaded lever member, a pawl on said lever member positioned to engage said clutch lever when swung against the resistance of said return spring, and a shackle-like member carried by said lever member and extending in a transverse plane between the transmission shaft and the rear end portion of the working spindle, said shackle-like member having a projection disposed below the working spindle in its working position, and said working spindles each carrying a ring adjustable longitudinally thereon and positioned to engage with said projection when the working spindle in working position reaches a predetermined position, said engagement and continued movement of said working spindle being effective to release said clutch lever by movement of said lever member through said shackle member whereby said clutch lever is adapted to be released when the feed of the working spindle in working position has reached a predetermined extent.

3,003,167

BRIDGING STRUCTURES

Marion F. Smith, Philadelphia, Pa., assignor to Dodge Steel Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 30, 1958, Ser. No. 770,787
4 Claims. (Cl. 14-71)

1. A bridging structure spanning an interval between the confronting ends of two platforms, said structure comprising a substantially flat polygonal spanning element adapted to normally rest in retracted position upon one of the platforms; a swivel bolt pendently connected at its

upper end by a horizontal pivot pin to the underside of the spanning element at one rear corner thereof; a vertical axis socket bearing for said bolt secured to said one platform; means for restraining the swivel bolt against axial movement in the socket bearing; a cam bar affixed to the under face of the spanning element and curved on an arc centered in the axis of the swivel bolt, said cam bar having along the bottom thereof, a cam surface portion sloped downwardly and outwardly from the leading end of the bar and meeting with the horizontal intermediate portion, a portion sloping upwardly and outwardly from the horizontal portion to a depressed portion, and a downwardly and outwardly sloping portion beyond said depressed portion; and a roller for cooperation with the cam

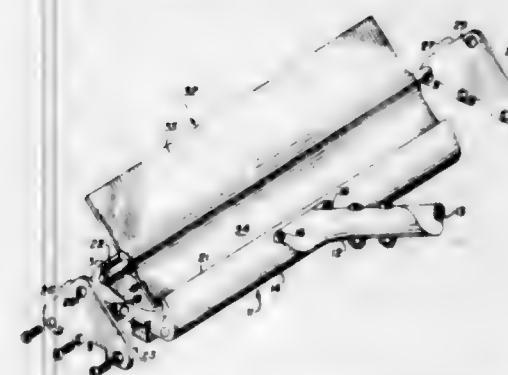


bar journaled in a bracket secured to the outer edge of said one platform at a distance substantially equal to the radius of said cam bar whereby, as the spanning element is swung outward from normally retracted position crosswise of said one platform about the swivel bolt and the upwardly inclined portion of the same surface of the track overrides said roller, the spanning element is first tilted upward slightly about the horizontal pin aforesaid to bring its distal end above the level of the other platform and then so held for a time as the intermediate level portion of the cam bar overrides said roller; and whereby upon approach of said element to bridging position, it is gradually let down until its distal end finally bears upon said other platform as the depressed portion of the cam bar overrides said roller, and vice versa.

3,003,168

UNDERWATER BRUSH

D'Arcy V. Shouldice, Alamo, Calif.
(3514 El Grande Drive, San Jose, Calif.)
Filed Aug. 24, 1959, Ser. No. 835,719
2 Claims. (Cl. 15-1.7)



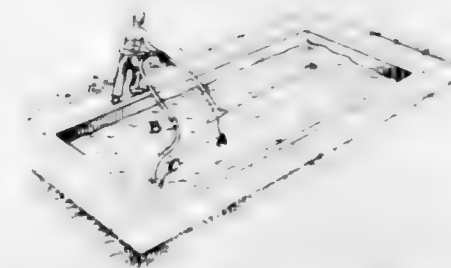
1. An underwater brush comprising a brush backing vane with a bottom portion and upper portion thereof, at least one brush mounted upon the bottom portion of said backing vane, first and second water foil supports affixed to opposite ends of said backing vane and extending upwardly therefrom, a water foil affixed to a shaft retained between said water foil supports and wherein said water foil is divided into an upper and lower portion by said shaft, said upper portion having an area substantially greater than the lower foil portion and wherein said lower foil portion extends downwardly towards and terminates adjacent the backing vane, a first foil stop element forming a portion of the backing vane and extending upwardly therefrom to restrain the water foil in a forward inclined position, and a second foil stop element forming a portion of the backing vane and extending upward therefrom to restrain the water foil in a backward inclined position.

ing a portion of the backing vane and extending upwardly therefrom to restrain the water foil in a forward inclined position, and a second foil stop element forming a portion of the backing vane and extending upward therefrom to restrain the water foil in a backward inclined position.

3,003,169

DEVICE FOR VACUUM CLEANING SWIMMING POOLS

Clive B. Forrester, 10301 S.W. 69th Ave., Miami, Fla.
Filed Dec. 8, 1959, Ser. No. 858,236
2 Claims. (Cl. 15-1.7)

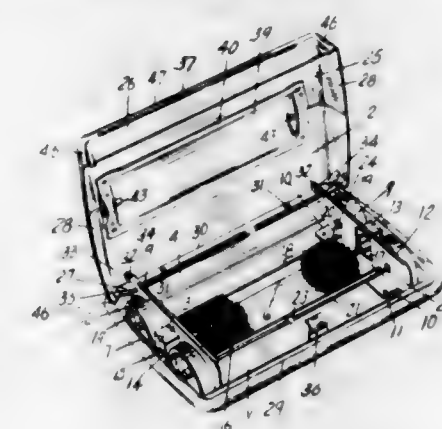


1. A device manually manipulatable from the earth edge portion of a swimming pool having a drain outlet in its bottom, said device comprising a flexible substantially flat frusto-conical sealing body adapted to fit over and form a seal with the drain outlet, said body having an opening, a strainer provided with a marginal flange embedded in the edges of said opening to anchor the strainer in place, a flexible hose connected to said sealing body and serving to guide the same in the water from above its surface to the drain outlet and starting the cleaning operation and also to pass scavenging water to the drain through the sealing body after it is held about the sides of the drain opening by hydrostatic pressure, and a suction pick-up head carried by the end of the hose opposite said sealing body.

3,003,170

CARPET SWEEPER

Henry T. Lathrop, Grand Rapids, Mich., assignor to Bissell Inc., a corporation of Michigan
Filed June 10, 1959, Ser. No. 819,381
4 Claims. (Cl. 15-41)



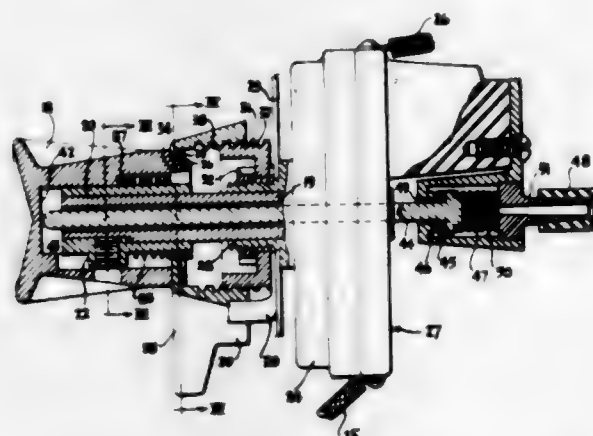
4. In a carpet sweeper, a bottom casing member having a central longitudinal brush receiving opening upwardly flanged at its edges to provide fore and aft fixed dust pans, an upstanding partition member near each end of said bottom member and extending fore and aft of the sweeper, fore and aft pairs of wheels arranged outwardly of and adjacent the corresponding partition members, axles for said wheels extending through openings in said partition members and between corresponding pairs of wheels, the central portion of each said partition member being offset outwardly toward the corresponding end of said bottom casing member, a brush having end trunnions

rotatably mounted in bearings in said offset portions of said partition members and end pulleys on said brush and engaged by said wheels to drive the brush, said wheel axles being bent downwardly at their central portions with said portions being secured to said bottom member to springingly bias the corresponding wheels into engagement with said pulleys.

3,003,171

WINDSHIELD CLEANING SYSTEM

John R. Olshe, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Aug. 11, 1959, Ser. No. 833,101
10 Claims. (Cl. 15-250.02)

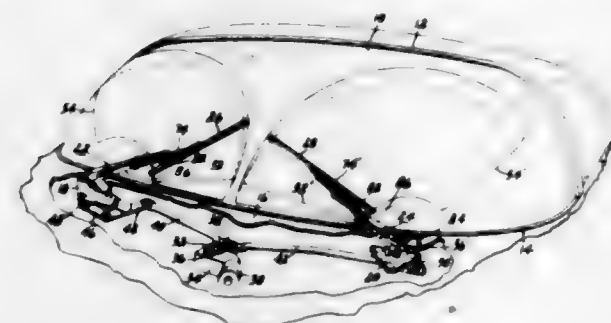


1. A combined windshield wiper-washer control comprising a first rotatable member for initiating sole wiper motor operation, a second member rotatable in the same direction as said first member, said second member including means for engaging said first member to thereby cause said first member to actuate said wiper motor when said second member is rotated, and means operable in response to the rotation of said second member for initiating operation of said washer whereby actuation of said second member results in joint wiper-washer operation.

3,003,172

WINDSHIELD WIPER MECHANISM

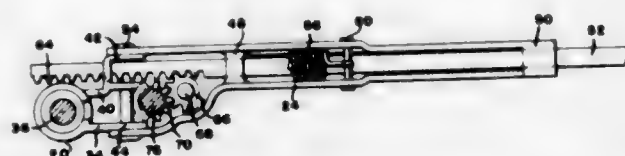
Jesse T. Harris, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,753
12 Claims. (Cl. 15-250.23)



1. Windshield wiper mechanism including, an oscillatable wiper shaft, a longitudinally adjustable wiper arm drivingly connected to said shaft and oscillatable between fixed stroke limits, resilient means operatively connected with said wiper arm for effecting longitudinal extension thereof, a wiper blade carried by said wiper arm for movement across the surface of a windshield, and cable means connected between said arm and a point eccentrically located with respect to said wiper shaft whereby said arm is extended adjacent one stroke limit and retracted adjacent the other stroke limit.

3,003,173
WINDSHIELD WIPER MECHANISM
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 12, 1959, Ser. No. 833,179
11 Claims. (Cl. 15-250.23)

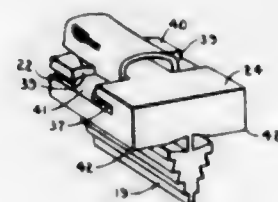


4. A wiper arm including, a socket section, an intermediate section spring hinged to said socket section, an outer section mounted for longitudinal movement relative to the intermediate section, and gear means carried by said intermediate section and operatively engaging said outer section for imparting longitudinal movement thereto.

3,003,174

WINDSHIELD WIPER BLADE AND METHOD OF PRODUCTION

John W. Anderson, 578 Broadway, Gary, Ind.
Filed Mar. 25, 1957, Ser. No. 648,148
6 Claims. (Cl. 15-250.42)

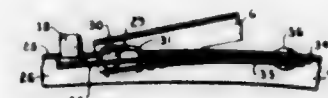


6. In a windshield wiper blade assembly, an elongate resilient wiper element having a wiper head portion and a back portion, said back portion having a pair of grooves formed longitudinally therein, a pair of separate spaced-apart elongate flexible supporting means nested in said grooves, means on said back portion formed integrally therewith at the ends of said grooves for limiting longitudinal movement of said supporting means, and a pressure device having means affording connections with said supporting means as spaced locations along the length of the wiper element, the length of said elongate supporting means not exceeding the length of a respective groove.

3,003,175

DETACHABLY CONNECTING A WINDSHIELD WIPER BLADE UNIT AND A PRESSURE UNIT

Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Sept. 15, 1958, Ser. No. 761,240
14 Claims. (Cl. 15-250.42)



10. A pressure-distributing unit for use with a windshield wiper unit comprising a first member having an upper portion formed to provide a raised concave seat and a pair of openings leading to the seat, a second member having a pair of intumed cylindrical projections insertable through the openings and journaled on the seat, and means for resiliently holding the projections on said seat.

3,003,176

APPARATUS FOR REMOVING LINT FROM ROLL DOCTOR

Francis H. Goyette, Worcester, Mass., assignor to Lodding Engineering Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Aug. 6, 1954, Ser. No. 448,192
1 Claim. (Cl. 15-256.5)

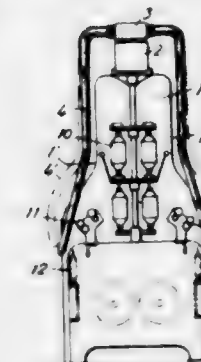


In combination with a revoluble roll, a doctor blade having a long edge bearing on the surface of said roll, and means including a blade holder for supporting said blade, apparatus for dislodging and removing from said edge fiber adherent thereto, said apparatus including a hood over said blade comprising a rigid strip and a flexible strip extending from one end of the roll to the other, said strips having mutually connected long edges secured together, the other long edge of the rigid strip being secured throughout its length to said blade holder, the other long edge of the flexible strip being in contact throughout its length with the surface of said roll, jet nozzles within the hood arranged to direct jets along the edge of the blade toward one end thereof, and means for supplying air under pressure to said nozzles.

3,003,177

NOZZLE CONSTRUCTION FOR TEXTILE MACHINERY CLEANING APPARATUS

Kenji Hijiyu, Amagasaki City, Hyogo, Japan, assignor to Nihon Spindle Seizo Kabushiki Kaisha, Amagasaki City, Japan
Filed July 15, 1958, Ser. No. 748,714
3 Claims. (Cl. 15-312)



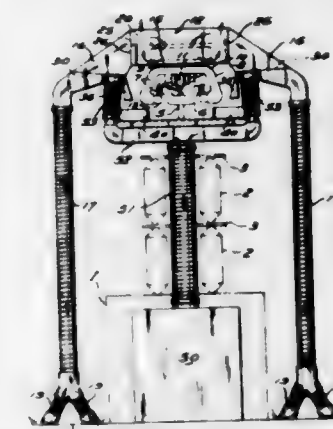
1. In cleaning apparatus, for textile machinery and the like, of the type including a carriage movable along the frame of the machinery and having a chamber formed with air inlet and outlet means, nozzle means connected to the air outlet means and extending downwardly along at least one side of the frame, the nozzle means having openings for directing cleaning air jets onto selected portions of the machinery, and means for continuously supplying air under pressure to the chamber air inlet means during movement of the carriage along the frame: the improvement comprising a nozzle means in the form of a relatively elongated, fully collapsible, bag of substantially air-tight flexible material formed with an inlet opening for attachment to such chamber outlet means and with plural relatively small discharge openings oriented to direct cleaning air jets onto selected portions of the machinery; said bag being imperforate except for said inlet opening and said discharge openings; the combined area of said discharge openings being less than that of said inlet opening; whereby said bag will be inflated during supply of air under pressure to said inlet

opening; said bag being contoured longitudinally thereof to the extent that, over at least the major portion of its length, the bag, when so inflated, conforms to the overall vertical contour of the side of the machinery frame along which it extends substantially vertically.

3,003,178

VACUUM APPARATUS FOR HANDLING LINT

Lloyd R. McEachern, Greenville, S.C., assignor to The American MonoRail Co., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 6, 1959, Ser. No. 832,113
7 Claims. (Cl. 15-312)



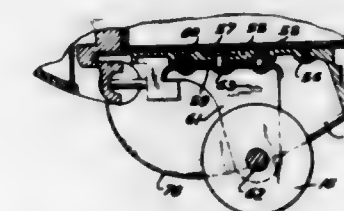
7. Lint collecting and storing apparatus comprising in combination a carriage adapted to travel on a trackway above a row of textile machines, a hollow casing supported by and extending transversely of said carriage, walls in said casing defining a collecting chamber, a vacuum chamber and an exhaust passage, a fan mounted for rotation in said vacuum chamber, a screen between said collecting and vacuum chambers, a conduit extending from said collecting chambers down close to the floor on one side of the row of textile machines, a door in a lower wall of the collecting chamber, cam means fixed in position below the path of travel of said carriage, a lever carried by said casing, connected to said door and engageable with said cam means for opening said door, a storage box fixed in position adjacent to the row of textile machines, conduit means extending from said box into the lower part of the casing and closely adjacent to said screen when the door is open and means to create a vacuum in said box and conduit means thereby to remove collected fibers from said screen and to conduct them into said box.

3,003,179

WHEELED SUPPORT STRUCTURE FOR VACUUM CLEANERS

Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Original application Apr. 1, 1958, Ser. No. 725,727. Divided and this application Apr. 22, 1959, Ser. No. 811,248

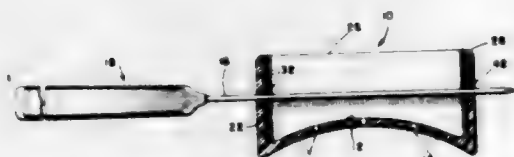
4 Claims. (Cl. 15-327)



2. In a tank-type suction cleaner having an inlet and an outlet at opposite ends and means for moving air there-through, a casing, means for normally supporting the

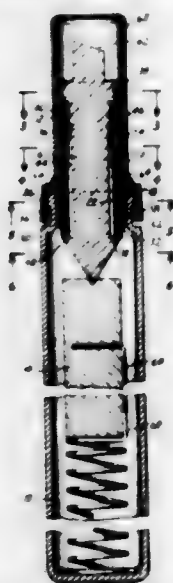
casing in a horizontally extending position including a single caster wheel at the front end of the casing and a pair of wheels at the rear end thereof, the front caster wheel being positioned between the opposing sides of the casing and the rear wheels being positioned with the outer parts thereof approaching vertical planes extending downward from the opposing sides of the casing, a stabilizing prop at the bottom of the casing having arms at the vicinity of the front wheel at each side thereof, each arm lengthwise of the casing extending forward and rearward of the vertical axis about which the front caster wheel moves, the wing spread of the arms at least exceeding the distance the inner parts of the rear wheels are separated from one another, the bottom surface of each arm being convex both lengthwise and crosswise of the casing, the bottom surface of each arm having a zone extending downward to a level at least as low as the horizontal axis about which the front caster wheel rolls, the bottom surface of each arm sloping upward from said zone to provide a region of spherical form, the bottom surface of each arm sloping upward at one rate in a direction to the rear of the zone and at a substantially sharper rate to the front and outside of the zone.

3,003,180
BUTTER APPLICATOR
George S. August, 9225 Coleridge Road,
Silver Spring, Md.
Filed Nov. 17, 1958, Ser. No. 774,291
12 Claims. (Cl. 15-514)



3. A butter applicator comprising a body having a perforated bottom and integral upstanding peripherally extending wall means, and aligned, opposed slots in said wall means intermediate the height thereof, said slots being triangular and having short back margins and converging long top and bottom margins.

3,003,181
MARKING DEVICE WITH SNAP-ON HEAD ASSEMBLY
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed July 29, 1959, Ser. No. 830,357
6 Claims. (Cl. 15-563)



1. In a marking device, a head assembly, an ink reservoir, snap-on means securing the head assembly and

ink reservoir together, said head assembly having a channel extending therethrough to establish communication between the ink reservoir and the atmosphere, a capillary flexible nib removably mounted in said channel and having shoulders adjacent its ends engaging said head assembly to oppose longitudinal movements of said nib longitudinally of said channel.

3,003,182
FOUNTAIN PENS
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Aug. 13, 1959, Ser. No. 833,649
1 Claim. (Cl. 15-563)

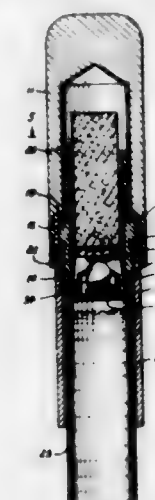


A fountain pen comprising a cylindrical barrel having an open end, a nib holder at one end of the barrel having a cylindrical bore for receiving interchangeable nibs, said barrel and holder being secured to each other by being mutually threaded; a nib of absorbent capillary material extending through the bore of the nib holder with one end projecting from the nib holder and an adapter surrounding the nib intermediate its ends and frictionally engaging the walls of the cylindrical bore of the holder to frictionally hold the nib in position in the nib holder; said adapter and nib being permanently secured to each other to form a sub-assembly adapter to be frictionally fitted as a sub-assembly into the holder; the holder being of considerably more rigid material than that of the adapter; the adapter being a thin longitudinally split resilient sleeve; the nib holder and adapter having mutually cooperating means for limiting the inward movement of the adapter and nib sub-assembly in the holder; the adapter being in the form of a collar enclosing the nib and having a slit extending longitudinally therethrough at one side to adapt the collar to yield radially as it is inserted into the cylindrical bore of the nib holder; the adapter being inwardly deformed to provide detents engaging the nib.

3,003,183
MARKING DEVICES
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Aug. 12, 1959, Ser. No. 833,260
1 Claim. (Cl. 15-566)

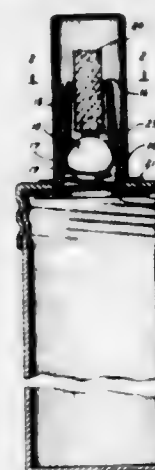
A pen comprising a barrel, a fluid ink containing cartridge therein having a nipple at one end containing a spring pressed ball valve, an annular resilient gasket surrounding said nipple, a nib holder threaded into said barrel and engaging said gasket, a nib slidably mounted in said holder, and a double spring arm means firmly secured to said nib and whose spring arms frictionally grip the holder to se-

cure the nib therein, and whose ends move to and are stopped by the gasket as the nib approaches the ball valve at the center of the strip for loosely receiving a small segment of the ball at all times and forming a bearing within which the ball may roll.



to open it an extent limited by the travel of the nib in the holder and of the arms to the gasket which resiliently stops the arms and the nib in such travel.

3,003,184
MARKING DEVICES
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed July 29, 1959, Ser. No. 830,372
1 Claim. (Cl. 15-581)



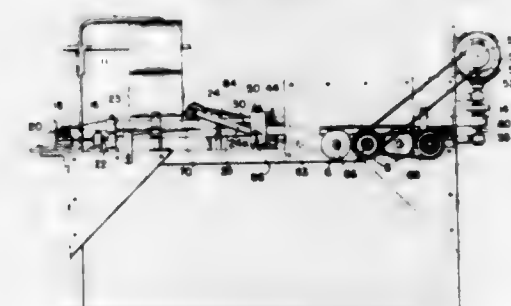
An ink container open at its upper end, a tubular nib holder above and operatively mounted at and in communication with said open upper end of the container, an absorbent felt nib slidably axially in said nib holder with its upper end normally extending beyond the upper end of said nib holder, a spring pressed valve ball arranged and adapted to control the flow of ink from the open end of the container directly to the lower end surface of said nib, said holder having an inner shoulder remote from its upper end to provide a valve seat for said valve ball, and a hard bearing member in the form of a foot plate secured to the lower end of the nib and fixed to it and operatively interposed between said lower end of said nib and said valve ball and arranged and adapted to transmit downward movement of the nib to the valve ball, said member being a thin, narrow metal strip which is narrower than the nib end and centered relative to the nib end, under the nib end and extending transversely across the lower end of the nib to expose a part of the lower end of the nib at both sides of the strip to thus permit passage of ink from the container to said lower end surface of the nib when the nib and said bearing member are pressed downwardly together to unseat said valve ball, and a ball receiving depression, formed

3,003,185
ANGULAR SET-IN INSERT BINDER BAR FOR FLOOR COVERINGS
Edward Grunwald, 134 W. 58th St., New York, N.Y.
Filed Apr. 14, 1960, Ser. No. 22,312
1 Claim. (Cl. 16-16)



A binder bar adapted to overlie a joint between adjacent strips of floor covering, said binder bar comprising a flat metal body of elongated rectangular shape, said body being bent at an angle to the plane of the body adjacent to and along one long side, an enlargement along the upper surface of the free end edge of said bent portion, said enlargement having a curved outer periphery, said enlargement having a central dovetail groove on its upper surface for its entire length, a rail having a curved top surface and a dovetail-shaped flange slidable in said groove, an enlargement along the upper surface of the free end edge of the other side of the body, said enlargement having a central dovetail groove on its upper surface for its entire length, a rail having a curved top surface and a dovetail-shaped flange slidable in said latter groove, the inner long edges of the rails serving to clamp a strip of floor covering onto the body of the bar.

3,003,186
FISH CLEANING MACHINE
Monrad E. Eriksen, Seattle, Wash., assignor to Northland Distributing Co., Inc., Seattle, Wash., a corporation of Washington
Filed Oct. 12, 1959, Ser. No. 845,684
6 Claims. (Cl. 17-3)

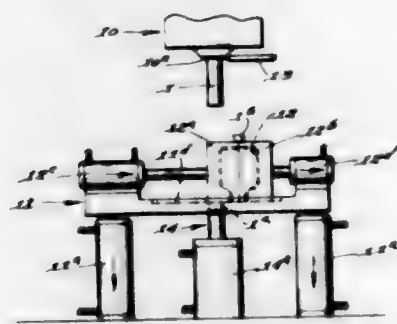


1. A fish cleaning machine, comprising: a pair of power driven horizontally disposed fish transporting belts positioned in transversely spaced relationship and with the plane of each belt substantially vertical throughout its fish handling range; said belts operatively disposed on pulleys revolving about horizontal axes at the fish receiving end of the belts, and driven by power driven pulleys revolving about vertical axes at the fish discharge end; adjustable rollers at the fish receiving end of said belts disposed to position the inner runs of said belts with their bottom margins juxtapositioned and the two tops outwardly flared to form a fish receiving seat; pressure means positioned between the tops of said belts to engage the fish and press it downwardly between said belts; resilient, transversely curved guide members engaging the outer surfaces of the inner runs of said belts and curving each belt partially around the respective sides of said fish and a bottom gauge plate disposed be-

low said belts, said guide members and said pressure means limiting the downward extent that said pressure means can press said fish; fish slitting means and fish cleaning, revolvable brushes disposed on the line of movement of fish as they are transported through said machine.

3,003,187

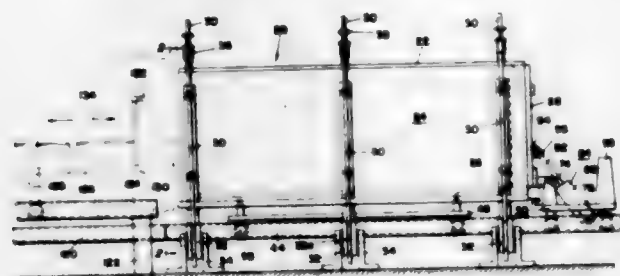
METHOD AND APPARATUS FOR FORMING AND TRIMMING HOLLOW PLASTIC ARTICLES
Wilbur A. Schaich, Maumee, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Oct. 16, 1958, Ser. No. 768,526
16 Claims. (Cl. 18-5)



1. Apparatus for forming hollow plastic articles comprising means for downwardly extruding a freely pendant open-end tubular formation of thermoplastic material at a temperature permitting expansion and setting in a mold, a horizontal mold bed mounted beneath said extruder means and having a vertical aperture to freely receive said open end of said tubular formation, a plurality of partible mold sections slidably mounted relative to said mold bed, means for closing said mold sections around said tubular formation after said open end enters said aperture, means for supplying fluid pressure through said open end of the tubular formation to expand said tubular formation within said closed partible mold, a cutting element disposed adjacent said aperture and lying in the plane of the bottom face of said partible mold, and means for relatively horizontally moving the closed partible mold and said cutting element to sever the plastic projecting below said partible mold.

3,003,188

APPARATUS AND METHOD FOR MAKING LARGE PLASTIC STRUCTURES
David Weiss, Philadelphia, Pa., assignor to Dalco Industries, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed July 13, 1959, Ser. No. 826,856
10 Claims. (Cl. 18-26)

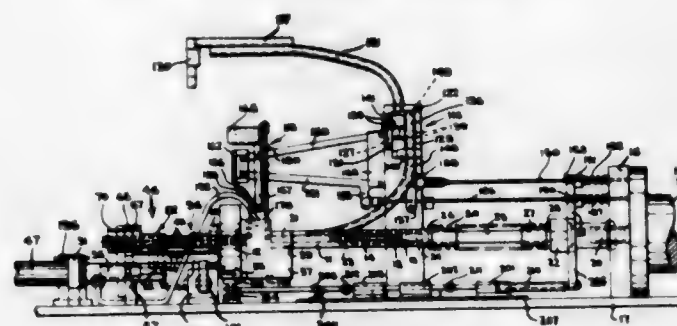


4. Apparatus for forming a one-piece plastic truck body comprising a plurality of spaced, parallel rings, means supporting each of said rings for rotation about a horizontal axis which is perpendicular to said rings and extends through the center of said rings, and a mold extending through and supported on said rings, said mold including a pair of opposed, substantially rectangular side walls, said side walls being substantially parallel to each other and to said axis, a substantially rectangular

top wall extending across the upper edges of said side walls, a floor extending between said side walls, said floor being substantially parallel to and spaced from said top wall, a pair of spaced, parallel tracks extending through and mounted on said rings beneath said floor, and a dolly riding on said tracks and supporting said floor.

3,003,189

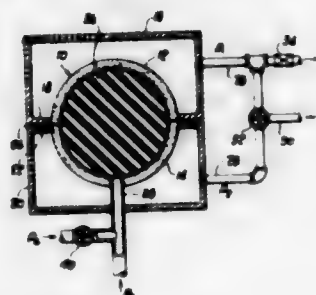
MOLDING MACHINE
Albert Slayton and George Holton, Grass Lake, Mich., assignors to Radio-Television Products Corporation, Grass Lake, Mich., a corporation of Michigan
Filed July 14, 1958, Ser. No. 748,438
15 Claims. (Cl. 18-30)



1. A molding machine comprising a mold having a mold cavity opening upon an outer surface of said mold, a ram having a charge-receiving chamber opening upon a face of said ram, means for moving said ram into and out of a position wherein said face is against said mold surface and the opening of said chamber is in registry with said mold cavity, said face being proportioned to overlap said mold cavity when in said position, a force rod reciprocally received in said chamber, said moving means also acting to move said force rod, when said ram is in said position, with relation to said ram and toward said mold cavity for forcing a charge from said chamber into said mold cavity to produce a molded product in said mold cavity, a first probe, a second probe, means carrying said first and second probes, said moving means being operable, when moving said ram out of said position, to actuate said carrying means to move said first probe into said cavity and said second probe toward said ram face, means, actuated by said first probe when said first probe encounters a molded product in said cavity, for preventing operation of said moving means, and means, actuated by engagement of said second probe with a molded product adhering to the face of said ram, for preventing operation of said moving means.

3,003,190

MOLD FOR AND A METHOD OF MOLDING UNDER FLUID SEPARATION CONDITIONS
Elmer Fred Macks, Cleveland, Ohio
(Willow Lane, Vermillion, Ohio)
Filed Sept. 3, 1954, Ser. No. 454,154
10 Claims. (Cl. 18-34)



3. A mold comprising, first and second mold cavity defining walls, each such wall having an inner cavity de-

fining surface and an outer chamber surface, said cavity defining surfaces together defining a confinement cavity having the complete contour of an object to be molded, a casing fixed to each said wall, each casing and the associated body chamber surface defining a fluid pressure chamber, said walls each being permeable over substantially the entire area of the cavity defining surfaces, means to introduce and maintain a quantity of fluid under pressure in each said chamber, and said molds defining outlet passages to permit such fluid to escape from said cavity, whereby to provide a device in which substantially constant fluid pressure is maintained in the pressure chambers and fluid flows through said permeable walls to maintain a constant moving film of fluid over all of the cavity defining surfaces when a quantity of material to be molded is in the cavity.

3,003,191

METHOD OF MAKING A TRANSDUCER DIAPHRAGM

Harold J. Luth, 397 W. 21st St., Holland, Mich.
No Drawing. Filed Sept. 2, 1958, Ser. No. 758,597
3 Claims. (Cl. 18-47.5)

1. The method of making a transducer diaphragm, comprising: providing a mold having a surface of the desired diaphragm shape and contour; applying to said surface a thin fibrous sheet material; wetting said sheet material with water to aid in obtaining intimate contact of said material with the mold; heating said sheet material to above the boiling point of water to drive off the water and loosen the fibers in the material; applying to said material a liquid thermosetting resin; and curing said resin while said material and resin are free and unconfined.

3,003,192

METHOD FOR THE PRODUCTION OF CLOSED CELL RUBBER

Hans Pfeumer, North Brunswick, N.J., assignor to Rubatex Products, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 717,041
10 Claims. (Cl. 18-53)



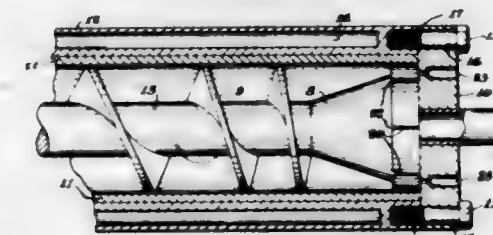
1. The method of producing elongated strips of closed cell, cellular, gas expanded rubber from a rubber compound having dispersed therein a substance which, on the application of heat, generates a gas, which comprises the steps of winding a strip of rubber compound onto an elongated cylindrical mandrel having at its opposite ends sleeves slidably concentrically thereon, said strip of rubber compound being wound on said mandrel so that its opposite ends are in contact with said sleeves thereby forming a sheet like layer on said mandrel covering said mandrel between said sleeves, positioning said mandrel with said rubber compound wound thereon in a cylindrical mold means to encompass said mandrel, said rubber compound and at least a portion of the sleeve at each end of the mandrel to thereby form an annular mold cavity closely confining said sheet like layer of rubber compound, heating said mandrel and said confined rubber compound to a temperature sufficient to generate said gas and cure said rubber compound, said heat thermally expanding said confined rubber compound to force said pair of sleeves to slide axially outward along said mandrel, means at the ends of said mandrel for stopping the axial movement of said sleeves to restrain said sleeves against

further outward axial movement after said rubber compound is thermally expanded, maintaining said temperature for a sufficient period to generate said gas and to cure said rubber compound while restraining further expansion of said confined sheet like layer due to the evolution of said gas in said strip of rubber compound, thereafter cooling the cured strip of rubber, and removing said cylindrical mold means encompassing said mandrel to permit the resultant strip of cured, closed cell, cellular rubber to expand under the pressure of gas trapped therein.

3,003,193

METHOD FOR MAKING BEADS OF THERMOPLASTIC POLYMERS

Douglas S. Chisholm and Harold R. Bylsma, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Jan. 15, 1959, Ser. No. 787,072
20 Claims. (Cl. 18-55)

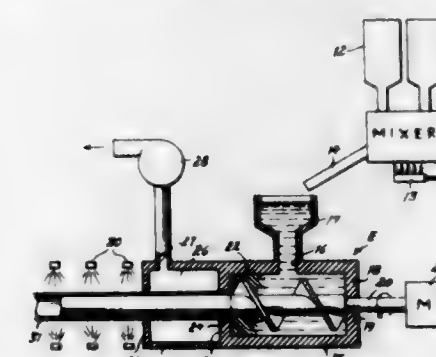


1. A method for making molding granules in the form of beads from a synthetic thermoplastic resin which comprises intermittently extruding a heat-plastified normally solid resinous composition comprising a synthetic thermoplastic polymer under a continuously applied pressure through a plurality of constricted passageways and a first valving means into a plurality of open outlets in a zone of lower pressure as discrete globules of said resinous composition and alternately flowing a non-reacting fluid which is immiscible with the plastic globules under a continuously applied pressure and at a temperature above its boiling point at atmospheric pressure into said outlets through channels opening in register with said outlets through a second valving means non-connecting with said constricted passageways, whereby the globules of the extruded plastic composition are ejected from said outlets and cooled to discrete solid beads.

3,003,194

METHOD OF PRODUCING BITUMINOUS GLASS-FIBER PIPE

Jules W. Hunkeler, Edmonton, Alberta, Canada, assignor to Perma Tubes Ltd., Edmonton, Alberta, Canada, a corporation of Canada
Filed June 16, 1959, Ser. No. 820,698
2 Claims. (Cl. 18-55)



1. In the production of bituminous glass-fiber pipe, the method comprising the steps of (a) mechanically intermixing molten asphalt at a temperature of 450-500° F., staple glass fibers of a length ranging from 1" to 1½", and a mineral filler comprising asbestos shorts and limestone, with the glass fibers constituting 10-20% of the

mixture and the mineral filler 10-20% of the total mixture, and (b) continuously extruding said mixture in a workable condition under pressure through a die and directly into a vacuum chamber on the opposite side of said die to form a pipe.

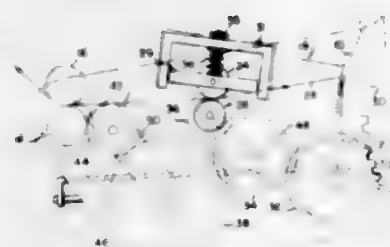
3,003,195

METHOD OF AND APPARATUS FOR THE TREATMENT OF COTTON FIBRES

André Varga, Toronto, Ontario, Canada, assignor to Carding Specialists (Canada) Limited, Toronto, Ontario, Canada

Filed Oct. 31, 1958, Ser. No. 771,050

Claims priority, application Great Britain Nov. 26, 1957
5 Claims. (Cl. 19-67)



2. A cotton carding machine having a doffer, a pair of calender rollers, a pair of impurity crushing rollers between said doffer and said calender rollers adapted to receive a carded web in substantially full width from the doffer, drive means rotating said crushing rollers at a speed sufficient to take up slack in the web between the doffer and the crushing rollers, and drive means rotating said calender rollers at a sufficiently greater surface speed than said crushing rollers to cause relative longitudinal fiber movement in said web between said crushing and calender rollers.

3,003,196

TOP ROLL ASSEMBLY

Kenneth P. Swanson, Abington, Mass., assignor to Progressive Engineering, Inc., Rockland, Mass., a corporation of Massachusetts

Filed Aug. 5, 1959, Ser. No. 831,840

11 Claims. (Cl. 19-131)



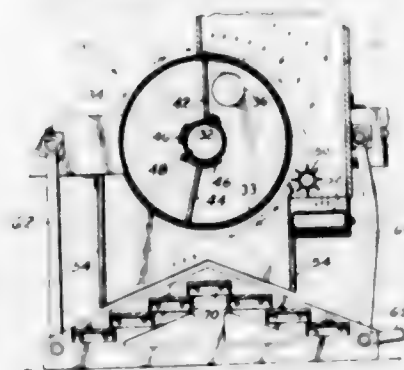
1. In a roll assembly for spinning and roving frames which include a frame, three spaced parallel bottom rolls and three spaced parallel top rolls, apparatus for supporting said top rolls in juxtaposition to said bottom rolls comprising a cradle having a first surface for engaging the upper portion of the middle one of said bottom rolls, a second surface for engaging the lower portion of another of said bottom rolls, and means for adjusting the engagement of one of the surfaces with one of said

bottom rolls to vary the rotational position of said cradle about the other of said bottom rolls and the position of said top rolls relative to said bottom rolls.

3,003,197

MAT FORMING APPARATUS

Harold E. Erickson, Auburn, Robert W. Riley, Milton, and Dale L. Schubert, Tacoma, Wash., assignors, by direct and mesne assignments, of one-half to said Dale L. Schubert, and one-half to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Continuation of application Ser. No. 584,677, May 14, 1956. This application Feb. 7, 1958, Ser. No. 713,979
11 Claims. (Cl. 19-156)



1. Mat forming apparatus comprising a rotary foraminous drum having openings smaller than the particles to be matted, means for evacuating a longitudinal segment of the drum, means for directing a flow of solid particles against the outer surface of the evacuated segment of the drum, thereby building up a deposit of the particles thereon, the particles being released from the drum at the leading end of the evacuated segment, dispersing means positioned adjacent said leading end of the evacuated segment for receiving the deposit and for separating it substantially into its component particles, and a support member positioned for receiving the particles from the dispersing means, thereby building up a mat thereon.

2. The mat forming apparatus of claim 1 wherein the means for directing a flow of solid particles against the outer surface of the evacuated segment of the drum comprises a chute positioned above said evacuated segment of the drum and communicating therewith.

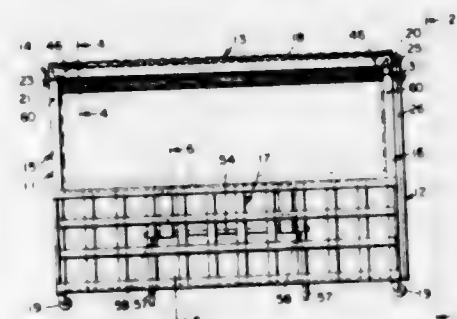
3,003,198

PORTABLE COLLAPSIBLE PATIO STRUCTURE

Dina Kronhaus, 4012 Shelburn Court, and Luba M. Lifschutz, 2351 Coral St., both of Los Angeles, Calif.

Filed Nov. 18, 1955, Ser. No. 547,655

1 Claim. (Cl. 20-2)



In a collapsible patio shelter, a pair of side frames each including a vertical post at each end, a first bridging lever pivotally mounted at one end at the upper end of the post of one frame for movement about a horizontal axis, a second bridging lever similarly mounted on a post at the opposite end of the other frame, vertical guideway means on each of the other posts at the other

ends of said side frames, said guideway means comprising a pair of rails in parallel spaced relation mounted on the post spaced outwardly of the surface thereof, each of said levers having its other end mounted in and for movement along the guideway means of a post on the other side frame whereby said structure may be collapsible to have said side frames lie adjacent each other or extended to have the same laterally spaced by the length of the said levers, said bridging levers each having its said other end received between said rails and the post and having a projection slideably received between the rails, and means at the upper ends of said guideway means for releasably anchoring said levers against pivotal movement.

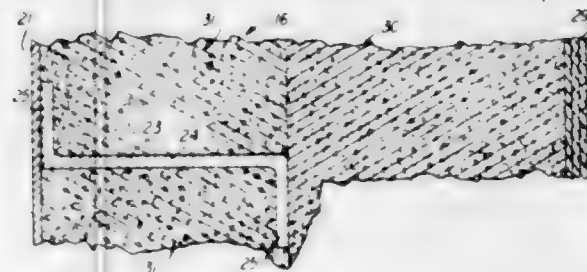
3,003,199

REFRIGERATOR CAR OR THE LIKE

Paul Talmey, Barrington, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed May 16, 1957, Ser. No. 659,620

3 Claims. (Cl. 20-4)



1. A refrigerator compartment wall of composite sandwich construction comprising a rigid outer metal sheet and a rigid inner plywood sheet arranged in spaced-apart relation, and self-supporting heat-insulating inner and outer layers arranged in the space between said sheets and substantially filling the same, said two layers being disposed in contact with each other and intimately bonded together, said outer layer being disposed in contact with said outer sheet and intimately bonded thereto, said inner layer being disposed in contact with said inner sheet and intimately bonded thereto, said outer layer being formed essentially of polyurethane and having a cellular structure and a high compressive strength and being separated from said inner sheet by the thickness of said inner layer, said inner layer being formed essentially of polystyrene and having a cellular structure and a high compressive strength and being separated from said outer sheet by the thickness of said outer layer.

3,003,200

SLIDING WINDOW CONSTRUCTION

Ernest Hansen, 3 Westcott Court, Riverside, Conn.

Filed Oct. 17, 1958, Ser. No. 767,929

2 Claims. (Cl. 20-52.1)



1. A window structure comprising a frame having a window opening, a window sash slidable in said window

opening, a hollow dummy blind on either side of said window opening, said window sash being provided at its lower end with an insert and with a pair of substantially parallel nylon guide rails, a re-entrant portion between said guide rails for swaging said guide rails in said insert, an inverted V-shaped track in said window structure, said guide rails being bevelled to correspond to the shape of said track, said rails riding on said track whereby said window may be selectively slid laterally in said window opening and in said hollow blind.

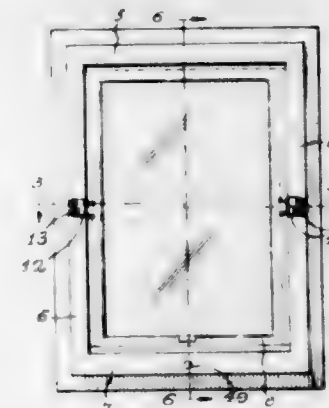
3,003,201

ROTARY TYPE WINDOWS

Angel Moreno, 5991 Victoria Ave., Montreal, Quebec, Canada

Filed Apr. 14, 1960, Ser. No. 22,296

12 Claims. (Cl. 20-53)



1. A window comprising a frame having an inward and an outward face, a sash mounted on two opposite sides of said frame for rotation about a central axis, shoulders on the other two opposite sides of said frame offset respectively inwardly and outwardly of a plane of said frame containing said central axis by a distance corresponding substantially to half the thickness of said sash at its margins abutting said shoulders, shoulders on the first mentioned two opposite sides of said frame pivotally mounted about axes adjacent the outer edges of said first mentioned shoulders and extending short of said central axis by distances totalling at least the thickness of said sash at the central axis.

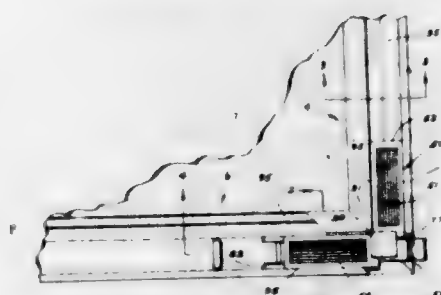
3,003,202

CONSTRUCTION FOR A WINDOW FRAME

Bernard E. Mendelsohn, Newton, Mass. (% Harvey Window Corporation, 5-7 Livingstone St., Dorchester, Mass.)

Filed Apr. 7, 1959, Ser. No. 804,611

3 Claims. (Cl. 20-56)

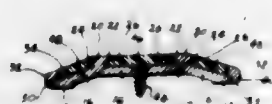


1. In a window sash construction having a side member and cross member interengaged by a lock means to form a corner of said sash, said side member having a cross sectional configuration comprising means forming a channel including a cross web and side wall forming opposite sides of said channel, means including an outer wall and members forming a second channel interconnect-

ing said sides, said cross member having a cross sectional configuration comprising means forming a third channel normal to said first two mentioned channels including a cross web and bottom wall forming opposite sides of said third channel and an outer wall interconnecting said sides, inwardly extending lips continuous with the free edges of said sides partially closing said first and third channels, said lock means comprising two legs forming an L-shaped member with each leg having in cross section opposite walls interconnected by a third wall, shoulders formed at the intersection of said opposite and third walls with said shoulders interengaging said lips, and said opposite walls of said legs in facing adjacent relation with the inner surfaces of said opposite sides of said first and third channels, and an insulating pile secured within said second channel.

3,003,203

SET-IN INSERT FOR DOOR SADDLES
Edward Grunwald, 134 W. 58th St., New York, N.Y.
Filed Dec. 4, 1959, Ser. No. 857,348
2 Claims. (Cl. 20-64)



1. A door saddle comprising an elongated metal body having flat base portions spaced from each other, flat slanting side portions extending from the inner ends of the base portions, a flat crown portion spanning the space between the top ends of the flat side portions, said crown portion disposed in a plane above the base portions, rails at the junctures of the crown portion and flat side portions, said rails having inwardly and outwardly extending flanges, said flanges having slanting inner faces, beads along the outer edges of the base portions, said beads having slanting inner faces, said crown portion, rails and inwardly extending flanges defining a channel opening upwardly, said beads slanting side portions and outwardly extending flanges defining channels at the sides of the body opening outwardly, and a nonmetallic removable facing strip in each of the channels, said strips having slanting long edges fitting the slanting inner faces of the flanges and beads, the outer surfaces of the strips being flush with the outer surfaces of the rails and beads.

3,003,204

CORRUGATED WOOD LAMINATE AND PROCESS
Benjamin S. Bryant, 8015 Sunnyside, Seattle 5, Wash.
Filed Jan. 27, 1956, Ser. No. 561,843
12 Claims. (Cl. 20-91)

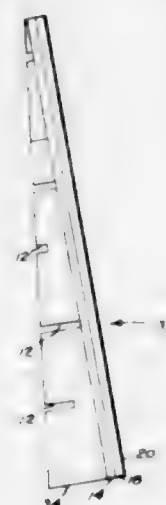


3. A corrugated wood laminate, comprising a core of rotary-cut dried wood veneer curved in a series of sinuous corrugations extending substantially parallel with the grain of the wood, all of the curves of the sinuous corrugations having been simultaneously formed, the core having been curved in the dry state while having a moisture content of lower than about 8%, curved beyond its ultimate strength of bending crosswise of the corrugations and thereby having a relatively stress-free condition and beyond any substantial tendency to return to its original mechanical integrity across the grain of the wood, and the faces of said core each covered by a stress-skin of sheet material simultaneously tensed crosswise of the corrugations and simultaneously secured to

such faces of said core by a hot press resin adhesive integrally press-bonding the same in intimate contact therewith, whereby the stress-skins have residual tension stresses operative to resist bending moment of said core crosswise of the wood grain by reason of having been stressed across the wood laminate while the core was being corrugated and while being bonded thereto.

3,003,205

COMPOSITE BEVEL SIDING AND METHOD FOR ITS FABRICATION
Ronald G. Frasbour and William H. Cooke, Roseburg, Oreg., assignors to State of Oregon, acting by and through the Oregon State Board of Forestry
Filed July 10, 1957, Ser. No. 670,893
6 Claims. (Cl. 20-91)



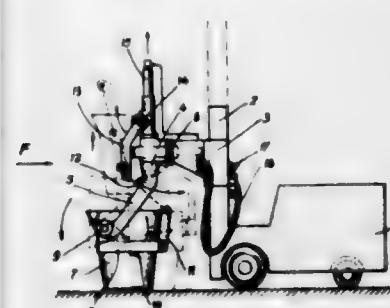
4. A method of manufacturing a composite bevel siding comprising cutting laterally spaced longitudinal slots in the opposite faces of wood boards to a depth of about one-half the thickness of the boards, arranging a plurality of the slotted boards in side by side parallel grain relationship to form a core, placing cross band wood veneers across both faces of the core, placing a sheet of wood face veneer over each cross band veneer, interposing adhesive between the abutting surfaces of the veneers and between the abutting surfaces of the veneers and the core, setting the adhesive to consolidate the assembly of the core and veneers, cutting the core of the consolidated assembly diagonally edgewise between the veneers to intersect some of the longitudinal slots and produce a pair of bevel siding panels each of which has a tapered core with laterally spaced longitudinal slots extending inwardly from the inner and outer faces of the core with at least one of the slots extending through the core member between the inner and outer faces.

3,003,206

APPARATUS FOR HANDLING AND TRANSPORTING MOLTEN METAL
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Oct. 26, 1959, Ser. No. 848,711
Claims priority, application France Nov. 27, 1958
3 Claims. (Cl. 22-82)

1. Apparatus mounted on a truck for transporting and distributing molten metal to any points and in any directions comprising a pouring ladle having a pouring spout, a metal ring in which the pouring ladle is supported, said ring having a forward part located under said pouring spout and a rear part opposite the pouring spout, a column supported by the truck, a bracket slidably mounted on the column for vertical adjustment, a fork mounted on the bracket for swiveling movement about a vertical axis, said fork having depending oblique arms directed away from said vertical axis, pivotal means between the for-

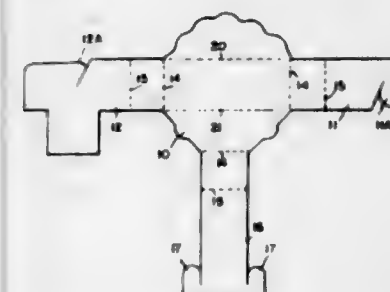
ward part of the metal ring and the lower ends of said arms, the pivot axis of said pivotal means passing adjacent the pouring spout for swiveling movement about an horizontal axis, link means pivotally attached to the rear part of the ring, arm means pivotally attached to the upper



end of the fork, connecting rod means extending between and connecting the arm means to tilt the ladle about a horizontal axis at the lower end of the fork arms and means for swiveling the fork to rotate the ladle about a vertical axis.

3,003,207

SANDWICH HOLDER
Clegg Powers, 19740 W. Seven Mile Road, Detroit 19, Mich.
Filed June 23, 1958, Ser. No. 743,847
4 Claims. (Cl. 24-17)



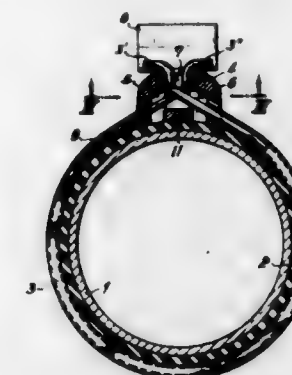
1. A blank for a sandwich container comprising a substantially circular pad portion having extending therefrom and diametrical oppositely located and aligned a pair of integral strips, each of a width substantially less than the diameter of said pad portion and notched adjacent their ends on opposite sides, and a third integral strip extending from the pad portion at right angles to the first strips and provided adjacent its end with notches between extensions, said third strip being creased crosswise for easy bending, said creases being parallel to the upper edges of said pair of strips away from the third strip.

3,003,208

CLAMP
Werner Hasenberger, Wuppertal, Germany, assignor to Firma Walther-Technik Carl Kurt Walther, Wuppertal-Vohwinkel, Germany
Filed Apr. 13, 1959, Ser. No. 806,023
Claims priority, application Germany Apr. 25, 1958
4 Claims. (Cl. 24-28)

1. A clamp comprising, in combination, an elongated wire formed into a loop through which an article to be clamped is adapted to pass, said wire having free end portions which cross over each other; a cap formed with cutouts through which portions of the wire respectively adjacent said free end portions respectively pass into the interior of said cap, the region where said free end portions cross over each other also being located in the interior of said cap, and said cap being formed with an additional cutout through which said free end portions of

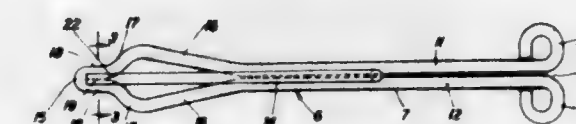
the wire pass to the exterior of the cap, the latter having a wall portion located between the wire and the center of the loop so that the wire will retain the cap on the clamped article; and a twisting member gripping the free end portions of the wire at the exterior of the cap so that said twisting member may be turned with respect to the cap while engaging an exterior surface portion thereof adjacent said additional cutout thereof to twist the free end portions of the wire to cause the latter to tightly



clamp an article passing through the loop formed by the wire until the twisting member breaks the wire portions gripped thereby from the rest of the wire at a point located within the cap, said twisting member having an edge portion extending into said cap through said additional cutout thereof and engaging the free end portions of the wire within the cap to shear said free end portions of the wire at a point within the cap.

3,003,209

DRAPERY HOOK
Daniel C. Ferguson, Freeport, Ill., assignor to Western Newell Mfg. Co., Freeport, Ill., a corporation of Illinois
Filed Jan. 2, 1959, Ser. No. 784,618
4 Claims. (Cl. 24-84)

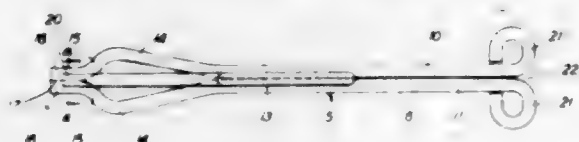


1. A drapery hook comprising a single length of stiff round wire bent upon itself at the middle to define an elongated vertical planar body having a straight elongated lower extremity of two-wire width where the wire of the two halves of the body are disposed in close line abutment, these abutting portions being welded together along the line of abutment and defining an elongated crotch therebetween, the upper substantially vertically end portions of said two halves being disposed in close parallel relationship to one another and constituting drapery supporting arms and defining therebetween another elongated crotch in longitudinal alignment with the first mentioned crotch, and an elongated vertical stiff round wire hook member for support of said body on a horizontal rod, said hook member being disposed in a substantially vertical plane substantially perpendicular to the plane of said body and including a hook portion on the upper end facing downwardly and forwardly with respect to the supporting arms of said body with the back of said hook portion disposed in the crotch between said arms, said hook member having a straight elongated attaching shank portion on the lower extremity thereof that is entered in the first mentioned crotch in said straight elongated lower extremity and rigidly secured by welding thereto along substantially the full length of said attaching shank portion.

3,003,210

DRAPERY HOOK CONSTRUCTION

Andrew F. Wintercorn, Rockford, Ill., assignor to Western Newell Mfg. Co., Freeport, Ill., a corporation of Illinois
Filed Jan. 2, 1959, Ser. No. 784,649
4 Claims. (Cl. 24-84)



1. A drapery hook comprising two equal lengths of stiff round wire which serve as the two halves of an elongated vertical planar body, the two lengths of wire having straight elongated lower extremities lying in close abutment and secured together by welding along the line of abutment and defining an elongated crotch therebetween, the upper end portions of said wires being substantially vertical and disposed in close parallel relationship to one another and constituting drapery supporting arms and defining therebetween another elongated crotch in longitudinal alignment with the first mentioned crotch, and an elongated vertical stiff round wire hook member for support of said body on a horizontal rod, said hook member being disposed in a substantially vertical plane substantially perpendicular to the plane of said body and including a hook portion on the upper end facing downwardly and forwardly with respect to the supporting arms of said body with the back of said hook portion disposed in the crotch between said arms, said hook member having a straight elongated attaching shank portion on the lower extremity thereof that is entered in the first mentioned crotch and rigidly secured by welding to the first mentioned straight elongated lower extremities along substantially the full length of said attaching shank portion.

3,003,211

DEVICE FOR SUPPORTING CABLES AND THE LIKE

Fred William Doering, Cicero, and James Currie Morison, La Grange, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 9, 1958, Ser. No. 707,917
1 Claim. (Cl. 24-126)



A cable clamping and supporting device comprising a pair of sheet metal gripping members having cylindrical portions engageable with opposite sides of a cable, each of said gripping members having a pair of reversely bent flanges disposed on opposite sides of the cylindrical portion in parallel relation to each other and to a plane midway therebetween and provided with parallel outer edges sloping in the same direction toward one end of the member, the flanges of each of the gripping members being disposed in coplanar alignment with and in laterally spaced relation to the flanges of the other gripping member and with the outer edges of the aligned flanges of the gripping members disposed in diverging relation to each other, a pair of wedge-shaped sheet metal clamping members having returned bent edge portions disposed in diverging relation to each other and forming grooves for receiving the outer edges of the flanges of the gripping

members therein to support the gripping members and to urge them into gripping engagement with the cable, each of said gripping members having a notch formed in one of the flanges and a lug formed from the cylindrical portion thereof and extending laterally from the other flange and in the plane thereof into the notch of the other gripping member to interlock the gripping members against longitudinal displacement relative to each other, and a U-shaped hanger having opposite ends thereof secured to the diverging end portions of the clamping members for supporting the device with the gripping members in clamping engagement with the cable.

3,003,212

CURVED CONTINUOUS FASTENER

Geraldine H. Emery, 519 Allenby Ave., Edgewood 18, Pa.
Filed Aug. 28, 1956, Ser. No. 606,760
8 Claims. (Cl. 24-205.16)



1. A support for a curved slide fastener comprising two lengths of tape of the herringbone weave providing a first and second tape, a twisted cord beading means the total length of which is shorter than the length of the first tape and stitched thereto along one of its edges to effect a curve for receiving a half set of slide fasteners, the ends of both the tape and the twisted cord beading means matching each other and the difference in their lengths being uniformly distributed between their ends, a second twisted cord beading means longer than and stitched thereto along the edge of said second tape to create a curve complementary to the curve of the corded edge of the first tape for receiving the other half set of fasteners, and a third cord means shorter than said second tape and stitched thereto along said second tape in uniform spaced relation from said second twisted cord beading means to anchor the curve created in said second tape.

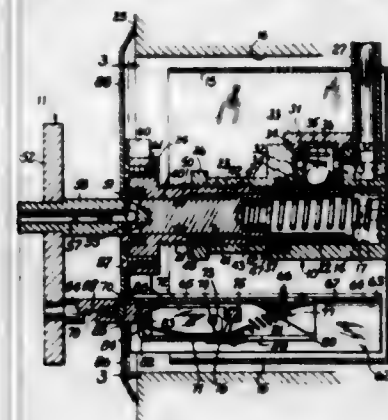
3,003,213

LATCHING DEVICE

Gerald L. Rogers, Olivette, Mo., assignor to Stille-Craft Manufacturers, Inc., St. Louis, Mo., a corporation of Missouri
Original application Feb. 17, 1955, Ser. No. 488,793, now Patent No. 2,908,511, dated Oct. 13, 1959. Divided and this application Mar. 5, 1959, Ser. No. 797,371
4 Claims. (Cl. 24-230)

1. In a latching device for a pair of relatively movable members, said device including a latch plug mounted on one member, and having a catch abutment, a latching unit including a housing mounted on the other said member, a latch arm, a plunger slidably mounted in said housing and engageable with said latch plug upon insertion of the plug, pivot means mounting said latch arm in said housing, spring means interconnecting the plunger and said latch arm, a movable latch element carried by said latch arm and adapted to engage said abutment, a stop element engaging said latch arm to prevent movement of said latch arm about said pivot means by said

spring means upon initial depression of the plunger by the latch plug, said pivot means including a slot permitting a translatory movement of said latch arm to disengage the stop element from said latch arm, whereby



to permit the spring means to move the latch arm and latch element to release the plug, and means for restoring operative engagement of the stop element and said latch arm.

3,003,214

SAFETY HOOK

Robert M. Geraghty, Novato, Calif., assignor to E. D. Bullard Company, San Jose, Calif., a corporation of California
Filed Mar. 27, 1959, Ser. No. 802,403
4 Claims. (Cl. 24-241)



1. A safety hook comprising a body having a shank at one end and a tip at the other end spaced from the shank to provide a throat therebetween, a safety gate pivotally mounted on the shank and rotatable thereon between open and closed positions over the throat, said gate having an integral free end engaging against one side of the tip when in closed position, a latch pivoted on the gate and normally engaged against the opposite side of the tip to lock the gate against opening movement when closed, spring means biasing the latch into an outward and upward swing to clear the throat and tip and unlock the gate, and a spring-pressed pawl pivoted on the gate and normally engaged with the latch to hold it normally locked against the tip.

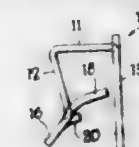
3,003,215

FASTENER

Eric Birger Fernberg, Northwood, England, assignor to F.T. Products Limited, London, England, a British company
Filed Sept. 16, 1957, Ser. No. 684,081
Claims priority, application Great Britain Sept. 17, 1956
1 Claim. (Cl. 24-259)

A fastener comprising a single strip of resilient material of U-shape having a substantially flat web and a first and a second limb depending therefrom, said first limb being disposed at a right angle to said web and said second limb being disposed at an acute angle to said web, two prongs in said second limb on each side thereof, both of which are directed inwardly and rearwardly with

respect to the U, one of said prongs being longer than the other, the free end of said longer prong being disposed nearer to both said web and said first limb than the free end of the other of said prongs, roots formed by said prongs and said second limb adjacent the juncture therebetween, said second limb being of reduced width between the juncture thereof with said web and said roots

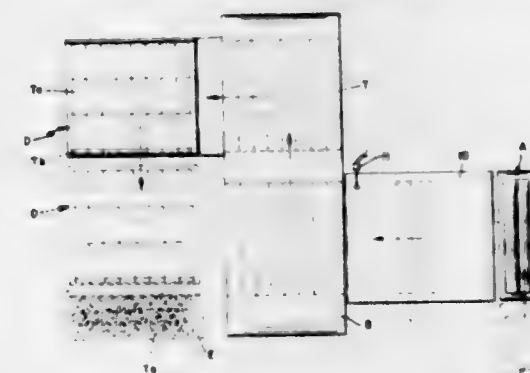


of said prongs, and at least one integral claw extending from the strip, said claw being of a length less than the maximum distance between said limbs and adjacent to and extending away from said web in a substantially normal direction thereto and as a continuation of said first leg.

3,003,216

APPARATUS FOR HANDLING AND SEVERING TILE

John D. Schmunk and Hall E. Gilliland, Findlay, Ohio, assignors to The Hancock Brick and Tile Company, Findlay, Ohio, a corporation of Ohio
Filed May 11, 1959, Ser. No. 812,393
2 Claims. (Cl. 25-2)

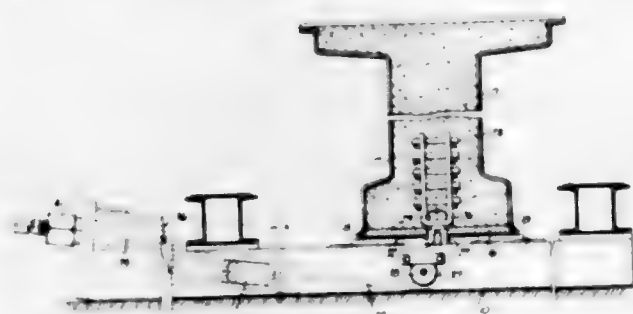


1. In a machine of the class described, a dump conveyor for receiving relatively long semi-plastic clay tile, means to incline the conveyor for allowing the tile to roll therefrom, an inclined table adjacent the conveyor and over which the tile roll, a second stage conveyor for receiving tile from the table, motivating means for said second stage conveyor, means operative after a predetermined number of long tile have been delivered to said second conveyor for energizing same, a cutter dolly beneath which tile are delivered by said second conveyor in endwise relation, a series of horizontal rollers on said dolly for engaging fore and aft portions of the tile respectively for separating the tile from each other and imparting rolling motion thereto, a series of knives carried by the dolly and disposed intermediate adjacent tile for severing the long tile into predetermined lengths, means for imparting horizontal advancing and retracting movements to said dolly for moving the tile sidewise, means for lowering the dolly initially into engagement with the tile at the start of advancing movement, means for raising the dolly away from the tile after the dolly has completed its advancing movement, means for causing the knives to penetrate the walls of the respective tile at the outset of the advancing movement of the dolly so that severance is effected as the tile roll, means to retract the knives when severance is effected, an upender tray arranged beneath the dolly and at the end of its advancing movement for receiving the severed tile from the dolly, means to clamp together the stacks of severed tile on the upender tray, means to advance and retract the tray for enabling the tile to be moved endwise, stop means for limiting the advancing movement of the upender tray and enable the advancing means by further movement thereof to rock the tray to

vertical position, means operable when the upender tray is in vertical position for abruptly retracting the clamping means for releasing the stacks of tile, means for disposing a kiln car in position to receive the stacks of tile from the upender tray, means to impart step by step motion to the kiln car for successively receiving stacks of tile, and separate means to advance a succeeding car when the first one is filled.

3,003,217
APPARATUS FOR MANUFACTURING PRESTRESSED CONCRETE MEMBERS
Ben C. Gerwick, Jr., Oakland, Calif., assignor to Ben C. Gerwick, Inc., San Francisco, Calif., a corporation of California

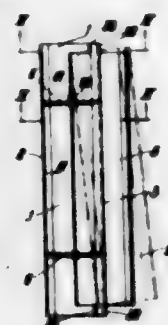
Filed Feb. 25, 1957, Ser. No. 642,124
4 Claims. (Cl. 25—118)



1. Apparatus for the manufacture of prestressed concrete beams, comprising a beam casting form, at least one elongate concrete reinforcement member supported within said form, at least one deflecting member located within said form and engaging each reinforcement member intermediate the ends thereof, a frame located adjacent said form, a cross head associated with each deflecting member slidably mounted within said frame, a screw shaft associated with each cross head, each screw shaft being mounted on said frame and being adapted to produce sliding movement of the corresponding cross head, cable means operatively connecting each cross head with the corresponding deflecting member, and roller means journaled within said frame adapted to guide movement of said cable means in a predetermined direction, whereby sliding movement of each cross head will produce bowing in the predetermined direction of each reinforcement member.

3,003,218
MOLD ELEMENT, PARTICULARLY FOR SLIDING, TRAVELLING OR CLIMBING MOLDS
Hans Dorn, Dusseldorf, Germany, assignor to Firma Acrow-Wolff Gesellschaft mit beschränkter Haftung, Dusseldorf, Germany

Filed Sept. 14, 1959, Ser. No. 839,980
Claims priority, application Germany Sept. 17, 1958
9 Claims. (Cl. 25—131)



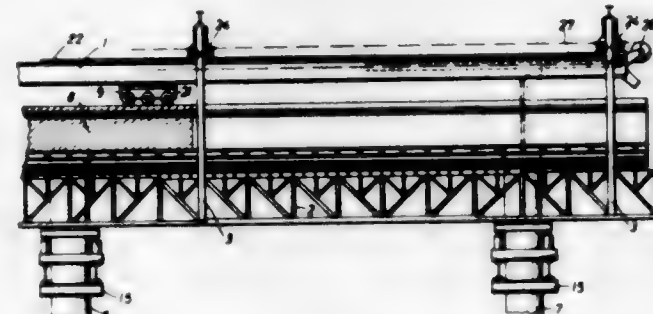
3. A mold element comprising, in combination, two mold panels at least one of which consists of an elastically deformable material; and connecting means secur-

ing said panels to each other for linear and angular displacement with respect to each other in a substantially common plane, said connecting means located entirely within the confines of the other of said panels whereby said one panel which consists of elastically deformable material may be freely deflected relative to said other panel beyond the confines of said other panel.

3,003,219
METHOD AND MEANS FOR ERECTING ELONGATED STRUCTURES OF CONCRETE

Bruno Suter, Karl Göttsche, and Hans Hermann Ehrhardt, Bensberg, near Köln, and Willy Jakobs, Wahn, near Köln, Heinz Moder, Köln-Hohenhaus, Emanuel Mroncz, Köln-Merheim, and Herbert Fröhlich, Köln-Müngersdorf, Germany, assignors to Strabag Bau A.G., and Klockner-Humboldt-Deutz, A.G., both of Köln-Deutz, Germany, both German corporations, jointly

Filed May 9, 1960, Ser. No. 27,793
Claims priority, application Germany May 23, 1959
30 Claims. (Cl. 25—131.6)



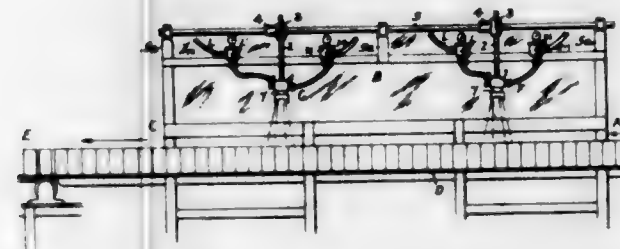
1. The method of erecting an elevated horizontally long structure of concrete by consecutively pouring in situ a plurality of elongated longitudinally consecutive concrete sections extending between elevated portions of a row of upright supports horizontally spaced from each other, which comprises the steps of suspending an assembly of forms between a first and a second one of the upright supports, pouring concrete for a first horizontally extending section into said assembly to connect said first and second supports, mounting a track member between said first section and a third one of said upright supports, releasing said form assembly from said first section and suspending said form assembly from said track member, moving said form assembly along said track member to a position between said first section and said third upright support, suspending said form assembly between said first section and said third upright support, and pouring the next section of concrete into said form assembly.

19. Apparatus for consecutively pouring in situ and into movable forms a plurality of elongated longitudinally consecutive concrete sections horizontally extending between elevated portions of upright supports horizontally spaced from each other, comprising a completed structural section having a horizontally extending elongated face portion, the face portion having a longitudinal end; a track member defining an elongated form-supporting track thereon; means for mounting said track member on said face portion adjacent said end with said track extending longitudinally in the direction of elongation of said face portion, said track member being longitudinally movable relative to said face portion into and out of a position in which a portion of said track member overhangs said end; and a form carrier member mounted on said track member for movement along said track to support said movable forms while concrete is poured into the latter to produce a respective section and for subsequently advancing said forms along said track member to said position to form a next section to be poured.

3,003,220
CERAMIC PRODUCT AND PROCESS FOR MAKING SAME

Robert B. Bassett and Leland H. Smith, Darlington, Pa., assignors to Central Commercial Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 9, 1959, Ser. No. 791,969
2 Claims. (Cl. 25—156)

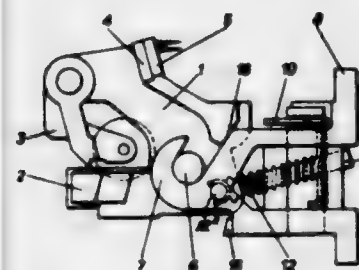


1. The continuous method of manufacturing glazed building bricks, comprising, conveying a column of successively and contiguously related building bricks at a predetermined unidirectional linear speed, directing against like surfaces of the bricks by superatmospheric pressure a steady mist of a colored viscous coating glaze to form on said surfaces a coating of desired thickness of said glaze, impinging against the surface of the applied coating by superatmospheric pressure and while the coating is wet, discrete droplets of different sizes of a steady stream of droplets of a viscous ceramic spotting glaze of substantially the same composition as, but differing in color from the coating glaze to flatten the droplets into spots of substantially circular shape and slightly embed same in the body of the applied coating with the upper surfaces of the spots substantially in the plane of the surface of the coating, predetermining the amount of the spotting glaze to produce said droplets, and heat treating the bricks to form the glazes into similar heterogeneous glassy matrices permanently bonded to said like surfaces of the bricks.

3,003,221
COMBINED TENSION CLIP FOR FABRIC TENSIONING DEVICES

Gerdard Treute and Paul Scheller, Wuppertal-Barmen, Germany, assignors to Firma Kolb & Co., Wuppertal-Barmen, Germany, a corporation of Germany

Filed June 10, 1957, Ser. No. 664,745
Claims priority application Germany June 12, 1956
6 Claims. (Cl. 26—62)



1. A combined tension clip for fabric tensioning devices including a needle carrier comprising a clip body, a clamping table and a clamping flap, said clamping table and said clamping flap being mounted on said clip body, and a guide member having a hook, and an axle disposed parallel to the fabric path and to its direction of movement, said clip body being swingable jointly with said clamping table and said clamping flap upon said axle on said guide member, so that selectively said needle carrier and said clamping table may be brought into operative position.

771 O.G.—21

3,003,222
CONTROLLED RELAXATION OF FRESHLY DRAWN NYLON

Gilbert Pitzl, Chattanooga, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

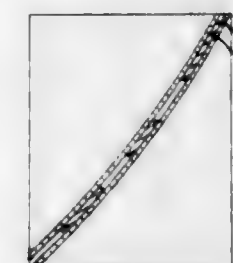
Filed Nov. 17, 1958, Ser. No. 774,803
6 Claims. (Cl. 28—72)



1. A process comprising elongating a substantially undrawn polyamide yarn to several times its initial length followed immediately by relaxing the yarn in an amount between about 7% and about 12%, based on the length of the elongated yarn prior to relaxation, and then winding the relaxed yarn into a stable package at a tension low enough to avoid substantial elongation of the yarn during winding on the package.

3,003,223
METAL CORE COMPOSITE FILAMENTS
Alvin L. Breen, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 25, 1957, Ser. No. 648,375
16 Claims. (Cl. 28—82)



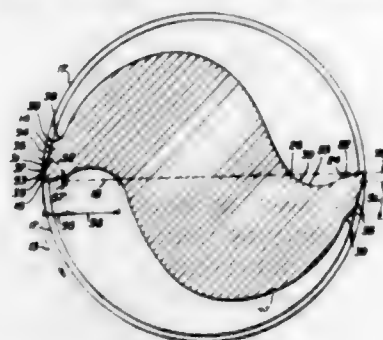
1. A shaped article comprising a metal core and an adherent oriented polymer sheath disposed about said core, said metal core having a melting point below the temperature at which the polymer for the sheath becomes unstable.

3,003,224
CUTTING TOOL
Thomas A. Ribick, Cleveland, Ohio, assignor to The Weldon Tool Company

Filed Feb. 6, 1958, Ser. No. 713,584
2 Claims. (Cl. 29—103)

1. An end mill comprising a fluted portion, said end mill adapted to rotate in a direction with said fluted portion rotating in a circumferential cutting path, said fluted portion having a plurality of helical cutting teeth each having a helical cutting edge, said helical cutting teeth each having a cutting face wall and a peripheral relief wall, said walls converging toward each other and defining an acute angle therebetween to form said helical cutting edge, said peripheral relief face wall comprising a first back-off surface and a second back-off surface,

said first back-off surface extending from said helical cutting edge and terminating at a first back-off portion and having substantially a constant clearance angle with respect to the circumferential cutting path at all places along said helical cutting tooth, said second back-off surface extending from said first back-off portion and terminating at a second back-off portion and having substantially a constant clearance angle with respect to the circumferential cutting path at all places along said helical cutting tooth, said second back-off surface having a greater clearance angle and a greater width than that of said first back-off surface, said cutting face wall defining a recess with respect to a diameter line passing through the cutting edge and residing on a side of said diameter line which is opposite to said direction of rotation, said cutting face wall comprising a secondary tooth surface and a polished primary tooth surface, said polished primary tooth surface constituting a surface extending from said cutting edge and terminating at a helical chip take-off portion defining a juncture with said



secondary tooth surface, said secondary tooth surface adjacent said juncture being recessed with respect to and lying out of the general plane in which said primary surface resides, said secondary tooth surface constituting an arcuate surface and extending from said chip take-off portion to an intersection with said diameter line, said arcuate surface of said secondary tooth surface including a continuing surface extending from said intersection with said diameter line to connect with said peripheral relief wall of another of said plurality of helical cutting teeth, said arcuate surface of said secondary tooth surface residing primarily on one side of a reference line drawn through said intersection of said arcuate surface and said diameter line and perpendicular to said diameter line and said continuing surface residing primarily on the other side of said reference line, said polished primary tooth surface having a width less than forty percent of the distance between said cutting edge and said intersection of said secondary tooth surface and said diameter line, and said polished primary tooth surface substantially defining an acute angle with the diameter line.

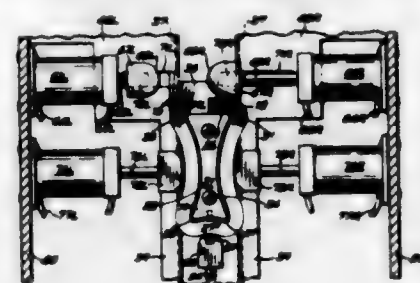
3,003,225

METHOD AND APPARATUS FOR CONSTRUCTING A MAGNETIC CORE

John J. Zimsky and William A. Mocker, Bridgeville, and George N. Boyd, Pittsburgh, Pa., assignors to McGraw-Edison Company, a corporation of Delaware
Filed Sept. 19, 1955, Ser. No. 535,202
19 Claims. (Cl. 29—155.61)

1. The method of constructing a rectangular magnetic core of whole turn laminations having overlapped ends comprising the steps of providing a plurality of magnetic strip laminations of progressively different lengths each of which is longer by approximately the amount of overlap of said lamination ends than the perimeter of the finished core at the layer containing said lamination, superimposing said laminations substantially symmetrically in a stack in order of their progressively different lengths, flatwise bending said stack of laminations through obtuse angles at points corresponding to the four corners of the finished core, whereby at least certain of said

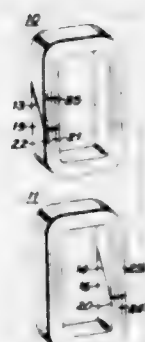
laminations assume a set with four bends therein, concentrically stacking said laminations into a closed hollow core of individual whole turns each comprising at least one lamination with the bends in said laminations in generally radial alignment and with the respective ends of each whole turn in overlapping relation to one another in one side of said core between adjacent bends defining said one side, shaping said core into rectangular configuration, and strain relief annealing said core while so shaped.



3,003,226

METHOD OF MAGNETIC CORE CONSTRUCTION

Oliver G. Attewell, South Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Filed Nov. 13, 1956, Ser. No. 621,629
7 Claims. (Cl. 29—155.61)



3. The method of constructing magnetic cores for stationary inductance apparatus, comprising the steps of winding magnetic strip material flatwise to form a first four-sided closed convoluted structure, winding magnetic strip material flatwise to form a second four-sided closed convoluted structure substantially identical in size to said first structure, cutting through one side of said first structure, cutting through one side of said second structure at a place differing from that at which said first structure is cut, disassembling the turns of both of said structures and concentrically stacking in order of progressively different peripheral length odd-numbered whole turns from said first structure and even-numbered whole turns from said second structure into a closed magnetic core with the respective ends of each of said turns meeting end to end opposite a substantially uncut portion of an adjacent turn, and concentrically stacking in order of progressively different peripheral length the even-numbered whole turns from said first structure and the odd-numbered whole turns of said second structure into a second closed magnetic core with the respective ends of each turn meeting end to end opposite a substantially uncut portion of an adjacent turn.

3,003,227

METHODS FOR FABRICATING GAS MANIFOLDS

William H. Haug, Shaker Heights, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Aug. 26, 1958, Ser. No. 757,242
2 Claims. (Cl. 29—156.4)

1. A method of fabricating a gas manifold assembly comprising the steps of providing an open-ended tubular manifold member and bracket members having a straight

attaching edge, flattening the ends of said manifold member to thereby substantially close the ends of said manifold member along substantially straight parallel joints and welding the bracket members to the respective ends

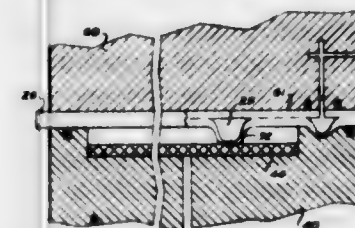


of said manifold along a single weld line covering said joint at each end of said manifold, said single weld thereby sealing said joints and simultaneously attaching said bracket members to said manifold members.

3,003,228

METHOD AND APPARATUS FOR EXPANSION OF UNBONDED AREAS IN COMPOSITE PLATES

Jesse B. Thomas, Louisville, Ky., assignor to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware
Filed May 26, 1955, Ser. No. 511,358
6 Claims. (Cl. 29—157.3)



6. A method of expanding a bonded passageway panel having front and back face areas containing bonded and unbonded portions including corresponding front and back bonded portions flanking the opposite edges of corresponding front and back unbonded unexpanded portions which cooperate to provide a potential internal passageway between them, comprising: inserting the unexpanded panel between two platens, one having a recess which is smaller in area than the panel, and positioning said panel to align one face area with said recess; moving the two platens relatively toward each other to clamp the panel between the platens and thereby close the recess; introducing a holding fluid under pressure into the closed chamber formed by the recess and the panel to force the panel against the other platen; and thereafter introducing a fluid under pressure into the unbonded portions of the panel at a pressure greater than the holding pressure to expand said unbonded portions into said recess against the pressure of the holding fluid while the bonded portions of the panel are held against said other platen by the holding fluid.

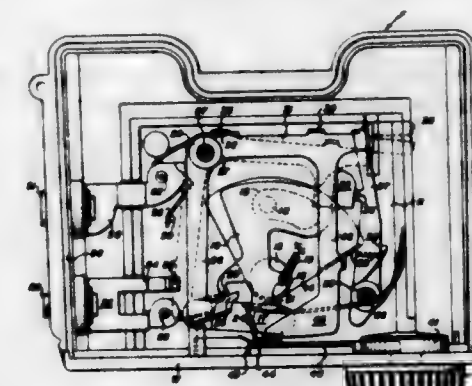
3,003,229

CAMERA TESTING AND ASSEMBLING MACHINE

Fred W. Powell, Wayne K. Wight, and William C. Flanagan, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 23, 1958, Ser. No. 737,447
14 Claims. (Cl. 29—208)

1. In an apparatus for assembling a camera front having a shutter equipped with a flash synchronizer circuit and a double exposure prevention mechanism to a camera back the combination of an endless conveyor; means for intermittently indexing said conveyor through a plurality of stations; a plurality of fixtures carried by said conveyor and spaced therealong so that each time said conveyor comes to rest one of said fixtures stops at a suc-

sive one of said stations; said fixtures adapted to receive and support a camera front in definite orientation, and each including a clamping jaw movably connected thereto to move between an open position, wherein a camera front may be loaded into and removed from said fixture, and a latched position, wherein the camera front is locked in the fixture and a camera back may be placed on the camera front while held by the fixture; a loading station at which each empty fixture stops during indexing of the conveyor; means for feeding camera fronts to said loading station; means for automatically picking up a camera front from said loading station and placing it on an open fixture in said definite orientation each time one of the fixtures on the conveyor stops at said loading station; means at a succeeding station for testing at least two operating characteristics of the shutter in the camera front in the fixture when it stops at said station; a memory unit indexed in synchronism with said conveyor and including means movable from a normally inoperative position to an operative position in accordance with any faulty operating characteristic of a shutter as detected at said testing station; means for moving said last-mentioned means of said memory unit to said operative position as



a result of any one of the tests failed and in accordance with the type of test failed, a reject chute at a succeeding reject station including means for sorting camera fronts in accordance with the type of test failed; means at said last-mentioned reject station for automatically opening the clamping jaw of a fixture and lifting a camera front from the fixture and depositing it in said reject chute when a reject signal is received; means operated by said memory unit for producing said reject signal when a reject shutter reaches said reject station and at the same time activating the sorting means in said chute in accordance with the type of test failed; means at a succeeding station for automatically placing a camera back on each camera front moved into said station; means at a succeeding station for positively fastening the combined camera front and camera back in assembled relation; means at a succeeding station for testing the assembled camera fronts and backs to determine if they are properly secured together and adapted to automatically stop the conveyor when an improperly assembled pair is encountered; and means at a succeeding station for opening the clamping jaw of any closed fixture and lifting any properly assembled camera front and back off its fixture.

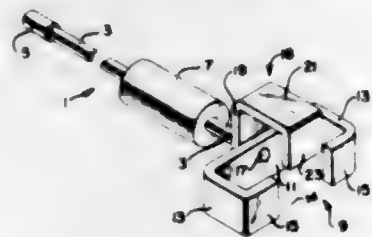
3,003,230

AXLE PULLING DEVICE

George E. Fornes, 513 S. Fayette St., Alexandria, Va.
Filed Dec. 31, 1959, Ser. No. 863,158
1 Claim. (Cl. 29—284)

A device for removing axles having discs fixed thereon from their housings, including an elongated handle having impact pressure applying and suspension means rigidly fixed to the forward end thereof and extending forwardly therefrom, and an anvil fixed on the other end thereof, a weighted impact generating member slidably mounted on said handle and operative between said

means and said anvil for imparting axle removing pressures to said means, said means comprising an element fixed to said forward end of the handle and extending upwardly and radially therefrom in one direction only, a member at the top of said element extending forwardly from the upper end of said element, said last named member terminating in a finger extending downwardly in a plane substantially normal to the axis of the handle, said finger adapted to engage a face of the disc for imparting impact pressure thereto when said impact generating member is operated, and a base fixed to said forward end of the handle and providing aligned sections extending in opposite directions from the handle and perpendicularly with respect to said element, and each section terminating in a forwardly directed arm and each arm terminating

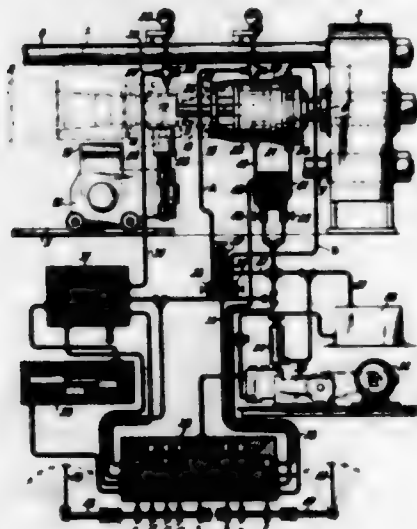


in a finger, the last named two fingers being directed toward each other and each being adapted to engage a face of the disc for imparting impact pressures thereto when said impact generating member is operated, the first named finger being substantially coplanar with and normal to the second named fingers, all of said fingers being of such lengths to provide a space therebetween, whereby said last named member may rest on the upper edge of the disc to provide the sole support for said forward end of the device, and said element and said base being spaced from all said fingers for providing an unobstructed area therebetween of greater depth than the thickness of the disc which is adapted to be received therein, and said unobstructed area below said member being open at its bottom for receiving the disc therethrough.

3,003,231

METHOD AND APPARATUS FOR DISASSEMBLING A CLUTCH FROM THE JOURNAL OF A ROLL
Gustav Ties, Düsseldorf, and Heinz Norres, Düsseldorf-Ratingen, Germany, and Emil Feltes, Niedercorn, Luxembourg, assignors to Schloemann Aktiengesellschaft, Düsseldorf, Germany

Filed Dec. 3, 1956, Ser. No. 625,949
Claims priority, application Germany Dec. 2, 1955
4 Claims. (Cl. 29-427)



1. A method of disengaging a clutch member having a hub from a conical portion of the journal of a rolling-mill roll, comprising the following steps: applying to the clutch member an axial pressure directed towards

the roll journal, and at the same time expanding the hub of the clutch member by forcing oil in between the contact surfaces of the hub of the clutch member and the roll journal, so that the oil flows in between these contact surfaces as far as each marginal zone of the hub, which bears in a fluidtight manner upon the roll journal owing to the axial pressure applied, and then, while maintaining the oil pressure between the contact surfaces of the hub of the clutch member and the roll journal, suddenly reversing the existing axial forcing-on pressure into an axial withdrawing pressure, so that the marginal zones of the hub become released from the roll journal, and the hub of the clutch member, floating upon the film of oil, slips off the roll journal.

3,003,232

CITRUS FRUIT PEELER

Michael J. McDonald, Ontario, Calif., assignor to Sunbelt Growers, Inc., Los Angeles, Calif., a corporation of California

Filed Oct. 22, 1959, Ser. No. 848,027
2 Claims. (Cl. 30-24)

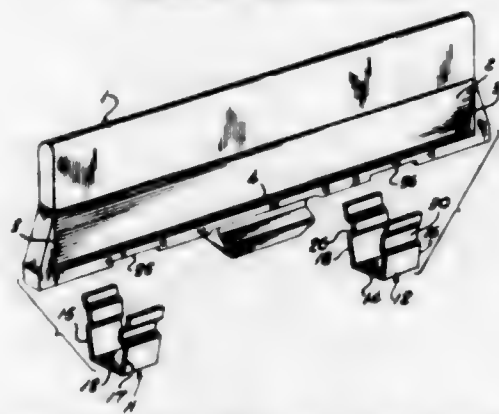


1. A citrus fruit peeling device comprising: a handle; a working element projecting generally longitudinally from said handle; said working element having a peel removing portion circular in section adjacent to the handle and a peel cutting section at its free extremity; said peel removing portion being disposed to extend upwardly at an obtuse angle with respect to said handle; and said cutting section being curved upwardly along an arcuate portion merging with said peel removing portion of the working element.

3,003,233

ELECTRIC SHAVER SHEARING HEAD ASSEMBLY
Armand R. Van Baelen, Quarryville, Pa., assignor to Schick Incorporated, Lancaster, Pa., a corporation of Delaware

Filed May 12, 1959, Ser. No. 812,702
6 Claims. (Cl. 30-43)

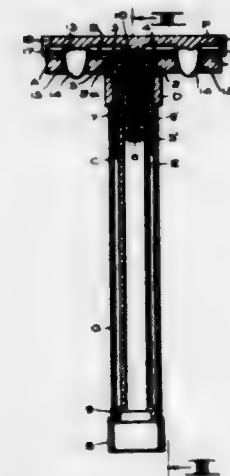


1. An electric shaver head unit of the kind including a pair of shearing heads having channel shaped base portions separated by and abutting the opposite side faces of a spacer bar, in which: walls of the said base portions which are adjacent the spacer bar are provided with openings, U-shaped spring clip means having the center part of the U engaged with the bottom of the spacer bar, the legs of the U embracing the said walls and intervening spacer bar and having angularly disposed detent portions adapted to enter said openings in engagement with the lower edges thereof, the bottom of the spacer bar being provided with recesses to receive and locate the center part of the U of the spring clip means.

3,003,234

SAFETY RAZOR

Leslie F. Burch, 1173 1/2 S. Norton, Los Angeles 19, Calif.
Filed May 12, 1960, Ser. No. 28,712
2 Claims. (Cl. 30-43)



1. A safety razor comprising a substantially rectangularly-shaped guard and blade-supporting member having a central slot that extends at right angles to the longer parallel sides of the guard; an anchor sleeve having one end slidably received in the central slot, said sleeve extending substantially perpendicularly to the plane of the guard; cooperating means on said guard member and anchor sleeve for connecting the two together while permitting sliding movement of the anchor sleeve in the slot; the portion of the anchor sleeve depending below the guard member being exteriorly threaded; a clamping nut received on said threaded portion of the anchor sleeve and being rotatable for clamping the anchor sleeve rigidly to the guard after said sleeve has been moved into the desired position along the central slot; a blade-centering and clamping head, substantially rectangular in shape and having a central threaded shank; an inner sleeve having one end internally threaded and rotatably mounted in the anchor sleeve and being held from longitudinal movement with respect to said anchor sleeve; the threaded portion of the inner sleeve removably receiving the central threaded shank of said head for clamping the head to the guard member for clamping a razor blade therebetween; a razor blade mounted between the head and guard member and having a cutting edge projecting beyond the adjacent edges of the head and guard; said head having another edge paralleling the one disposed near the blade cutting edge and being disposed on the opposite side of the central threaded shank and extending beyond the edge of the blade paralleling the cutting edge; and markings on the surface of the guard member disposed closest to the last-mentioned edge of the head; whereby the clamping nut may be loosened and the guard member adjusted with respect to the head for bringing the desired marking into registration with the adjacent edge of the head for projecting the blade cutting edge the desired distance beyond the adjacent guard member, whereupon the clamping nut may be tightened and the inner sleeve rotated for clamping the blade in the desired position between the guard member and the head.

3,003,235

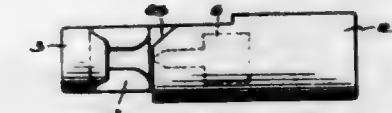
CABLE CUTTING TOOL

Robert Temple, Swinsvale, and Ernest E. Temple, Murrsville, Pa., assignors to Mine Safety Appliances Company, a corporation of Pennsylvania

Filed June 3, 1960, Ser. No. 33,710
5 Claims. (Cl. 30-180)

1. A cable cutting tool comprising a frame having a front end provided with a laterally opening cable-receiving recess, the rest of the frame including a barrel hav-

ing a front end that opens into said recess, a chisel slidably mounted in the barrel and having a front cutting end movable across the recess, a retaining member surrounding the frame and slidably mounted thereon, a coil spring surrounding the frame and normally holding said

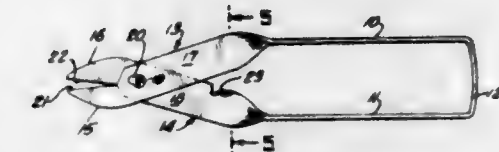


member across the open side of the recess to lock the tool on a cable, said spring being compressible to permit the retaining member to be retracted to open said side of the recess, and an explodable device disposed in the rear end of the frame behind the chisel for driving it forward.

3,003,236

CUTTER

Charles Castelli, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Mar. 31, 1961, Ser. No. 99,950
8 Claims. (Cl. 30-224)

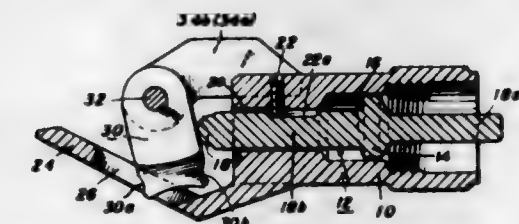


1. A pair of scissors formed of a single piece of resilient material shaped to form spaced finger grip sections integrally connected together, said finger grip sections terminating each in a blade member having a blade section and a shank section, and means including an integral part of said material pivotally securing said blade sections together whereby a squeezing force, exerted on the finger grip sections against the resiliency of said material, acts to close the blades to exert a shearing action and release of said squeezing force acts to open the blades under the influence of said resiliency.

3,003,237

POWER TOOLS

Clark Chandler, 3600 W. 15th St., Panama City, Fla.
Filed Jan. 5, 1960, Ser. No. 612
8 Claims. (Cl. 30-277)



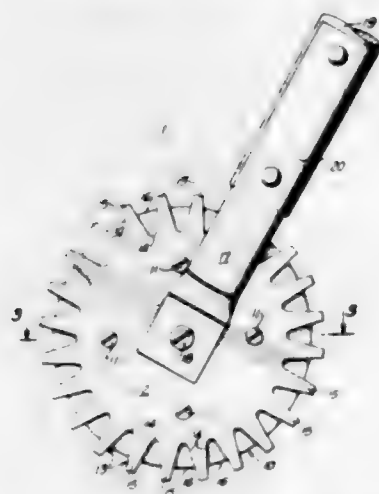
1. A sheet-metal cutting tool comprising a tubular body member adapted to be attached at its relatively rearward end to a power-operated impact hammer, a workpiece engaging foot plate affixed to and extending forwardly from said body member and having a longitudinal cutting-blade slot provided therein, a cutting blade pivotally connected to said body member forwardly thereof for limited forward and reverse swinging movement in its plane about an axis which extends transversely across said foot plate and at a level thereabove which is such that the lower portion of one side edge of said blade protrudes through the slot, at least said lower portion of said side edge being ground to form a cutting edge, and impact-transmitting means mounted in said body member for reciprocatory movement and extending forwardly therefrom to a posi-

tion in which it is adapted to impact the other side edge of said cutting blade, the construction and arrangement being such that said cutting blade is free to rebound from a workpiece following each impact applied thereto by said impact-transmitting means.

3,003,238

LAWN EDGER

Emil Olson, 4220 Arlington Ave., Los Angeles, Calif.
Filed Aug. 19, 1960, Ser. No. 50,780
3 Claims. (Cl. 30-319)

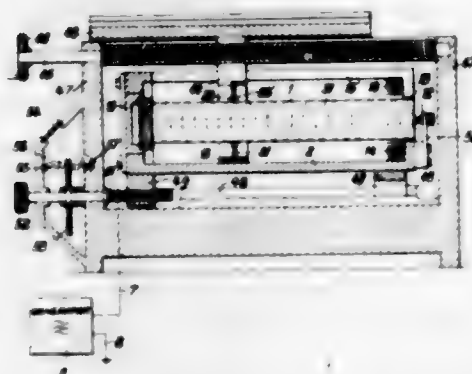


3. A lawn edger comprising a thin circular metal cutting blade, a pair of substantially rigid circular guard plates fixedly mounted on opposite sides of said blade, each of said guard plates having a series of teeth placed continuously around its periphery, the teeth of said guard plates being aligned with each other, said teeth having their outer ends disposed outwardly beyond the periphery of said blade and their inner ends disposed inwardly from the periphery of said blade to expose an arcuate portion of the circumference of said blade between each adjacent pair of teeth, and an elongated handle, said blade and guard plates being rotatably mounted on one end of said handle.

3,003,239

METHOD AND APPARATUS FOR MEASURING LENGTHS BY MEANS OF SOUND WAVES

Karl Benno Weidner and Heinz Jaenicke, Berlin, Germany, assignors to Erich Hoffmann, Werkstätten für Optik und Präzisionsmechanik, Berlin, Germany
Filed Feb. 21, 1956, Ser. No. 567,000
Claims priority, application Germany Feb. 26, 1955
14 Claims. (Cl. 33-1)



11. Apparatus for controlling the displacement of a body along a path, comprising a magnetized longitudinal member, oscillatory generating means connected with one end of said member for producing compressive longitudinal mechanical vibrations in said member so as to produce oscillating magnetic fields having a plurality of discrete locations of maximum and minimum magnetic

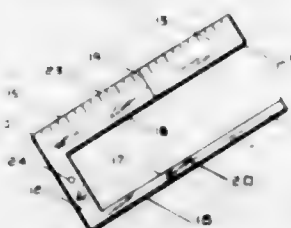
oscillations, and sensor means responsive to said oscillating fields cooperatively movable with said body along said path.

3,003,240

TROUSER CUFF TEMPLATE

William Mirin, 605 Northward Bldg., Fairbanks, Alaska
Substituted for abandoned application Ser. No. 647,592, Mar. 21, 1957. This application Oct. 4, 1960, Ser. No. 64,237

3 Claims. (Cl. 33-2)



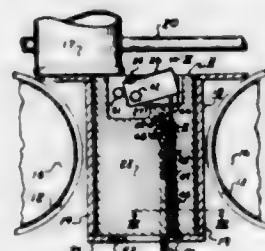
1. A template for locating cuff markings on trousers to enable cuffs to be formed with only two folding operations, comprising a flat, rectangular strip of relatively thin, substantially rigid material, longitudinally recessed from one end to define upper and lower, laterally spaced, parallel arms joined by a web at the opposite end, the vertical width of said upper arm being such as to define the cuff width, its top and bottom longitudinal edges forming the sole fold line marking guides respectively defining the trouser length and depth of cuff, the top and bottom longitudinal edges of said lower arm forming respectively, the cuff seam marking line and the trouser cut-off marking line.

3,003,241

CODE MARKER

Eldon L. Asher, Charles E. Folwell, and Jerome A. Meldgaard, Racine, Wis., assignors to S. C. Johnson & Son, Inc., Racine, Wis.

Filed Jan. 20, 1956, Ser. No. 560,464
4 Claims. (Cl. 33-32)



1. A code marking device for scoring an end of each of a plurality of upright articles with a series of substantially parallel marks of such number and spacing as to indicate the data to be recorded comprising support means for said articles, a scribing assembly, and means supporting said scribing assembly in operable engagement on said support means; said support means being a conveyor which is substantially straight immediately adjacent to said scribing assembly for moving said articles past said assembly in a substantially straight line, said scribing assembly comprising a plurality of contiguous scoring members disposed transversely to the direction in which said articles are moved by said conveyor, a pin for pivotally attaching said scoring members at one end thereof to said scribing assembly, and an adjustable biasing means associated with each of said scoring members for independently actuating the same by urging the free end thereof into a position to contact said articles as the same are moved past said scribing assembly, whereby actuation of selected scoring members causes the same to inscribe lightly said articles with the desired indicia in the form of parallel marks which do not cut through the surfaces of said articles.

3,003,242

GLASS CUTTING MACHINE

Thomas A. Insolio, Jeannette, Pa., assignor to American Window Glass, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 7, 1957, Ser. No. 638,836
27 Claims. (Cl. 33-32)



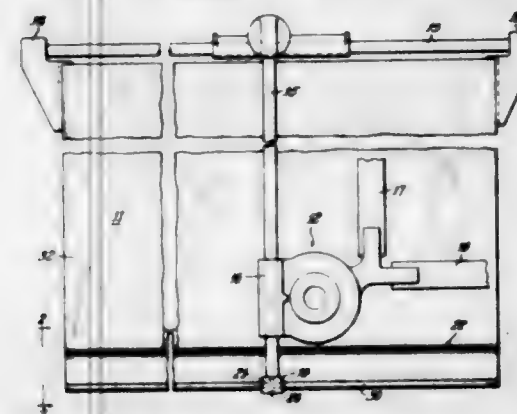
1. In sheet glass cutting apparatus, a frame, an assembly movable up and down in the frame comprising an upright measuring post for measuring the sheet to be cut and a horizontal carriage at the base of the post, cutter means on the carriage movable thereacross to cut the glass as measured, a capping head mounted to travel freely between points on the post and adapted to contact the advancing edge of the glass for moving at a like rate, means effective after substantial movement of said head which prevents further relative movement between the head and the measuring post so that said post undertakes guided movement at a like rate, and means operative after predetermined initial movement of said post which prevents further relative vertical movement between the post and the carriage whereby the carriage is lifted due to the force of the moving sheet of glass on the head.

3,003,243

COMBINED PENCIL TROUGH, INSTRUMENT GUARD AND DRAFTING MACHINE TRACK FOR DRAWING BOARD

Claude G. Kanzelberger, Two Rivers, Wis., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin

Filed Feb. 6, 1958, Ser. No. 713,729
3 Claims. (Cl. 33-76)



1. As an article of manufacture, in combination with a drafting board having a top, planar drafting face and a front edge intersecting said face, a drafting instrument trough and drafting machine track for attachment to said drafting board, said article comprising: a trough extending the length of said board and having a back wall abutting said edge, a bottom extending outwardly away from said back wall, away from said board and substan-

tially below said face, a front wall extending upwardly from said bottom, and a bead member extending along the top of said front wall, said bead member having a flat top face positioned approximately in the plane of said surface, whereby when said face is exposed it will serve as a bottom track for a drafting machine; and a continuous molding having a mounting member and a coaming, said molding being received on said bead member with said coaming extending upwardly substantially above the plane of said face to deflect drafting instruments into said trough; one of said members having a dovetail-like slot extending the length thereof and the other member defining a protuberance of corresponding shape extending the length thereof, said protuberance being received in said slot to hold said molding on said trough while permitting the molding to be removed to expose said face.

3,003,244

SELF-ADJUSTING ANGLE SQUARE OR RULE

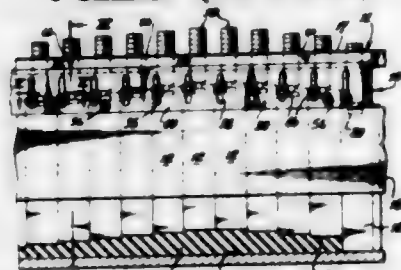
Jack Fogliano, 18020 North Blvd., Maple Heights, Ohio
Filed Mar. 25, 1957, Ser. No. 648,302
11 Claims. (Cl. 33-88)



1. An adjustable square comprising an elongated body formed with a longitudinally extending groove having spaced confronting walls, the body also having a flat working face adjacent the groove and through which the groove opens, a blade of substantially the same length as the body, said blade having a flat inside surface inscribed with measuring indices, means hinging one end of the blade to one end of the body adjacent the flat body face for swinging movement of the blade relative to the body between an open position in which the blade extends virtually in the same plane and as a continuation of the flat body face and a closed position in which said inside surface of the blade is disposed flatwise against the flat body face, a lead screw carried by the body and extending longitudinally through the groove, a block carried as a nut on the lead screw for to and fro longitudinal movement in the groove upon rotation of the lead screw, the block being confined by and having sliding engagement with the walls of the groove throughout the extent of the movement of the block longitudinally in the groove to restrain the block against rotation relative to the body and to restrain the block and the lead screw against lateral displacement in the groove, a link having its opposite ends connected, respectively, to the block and blade and arranged so that travel of the block along the lead screw swings the blade about its pivot axis into various positions of angularity relative to the body, said block having a pointer disposed for movement along the flat body face, and

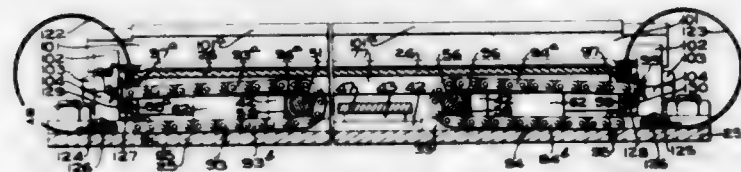
said flat body face carrying indices representing angular relationships corresponding to various positions of the block pointer and the blade.

3,003,245
GAUGE DEVICE FOR EXTRUSION GATE MEANS
Peter Nunez, Jr., Montebello, Calif.
Filed July 13, 1959, Ser. No. 826,656
6 Claims. (Cl. 33-180)



1. An adjustable template gauge device for use with an extrusion gate means for extruding plastic material such as rubber and the like, comprising: an elongated bar of polygonal section having a positioning edge face, a front face, a plurality of parallel through slots arranged transversely of the bar in spaced relation, and a guide recess in said front face at each slot; a plurality of gauge stop members opposite said slots, each stop member including a body portion slidable in said recess and a forwardly projecting portion having a gauge face; and a plurality of bolts extending through said slots and in threaded engagement with said body portions for adjustably securing said stop members with said gauge faces in predetermined relation.

3,003,246
ADJUSTABLE WHEEL SUPPORT FOR WHEEL ALIGNING EQUIPMENT
Tracy Carrigan, Lansing, and Wilbert G. Bush, Perry, Mich., assignors to FMC Corporation, a corporation of Delaware
Filed Apr. 10, 1957, Ser. No. 651,945
7 Claims. (Cl. 33-203.12)

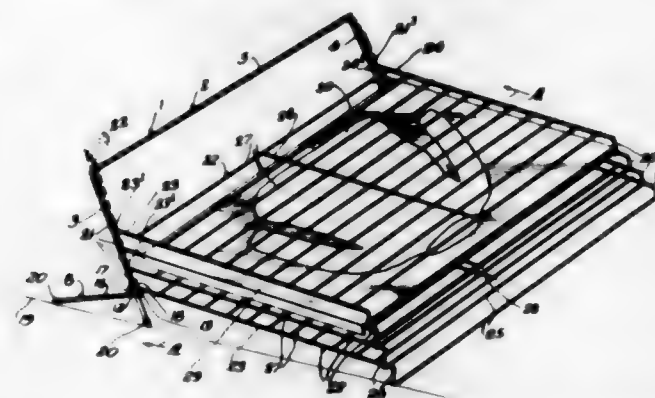


1. A device for supporting a wheel of a vehicle comprising a pair of relatively movable plates, one of said plates being adapted to receive thereon an automobile wheel, a roller assembly disposed between said plates, said roller assembly including a plurality of rollers engaging said plates to support said one plate for movement relative to the other of said plates, and a flexible member interconnecting said plates and trained around one of said rollers to cause movement of said roller assembly as said one plate is moved relative to said other plate to maintain said roller assembly in supporting position relative to said plates.

3,003,247
PROCESS FOR DRYING METAL ARTICLES
Francis Raymond Sherliker, Runcorn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed June 13, 1958, Ser. No. 741,735
Claims priority, application Great Britain July 31, 1957
8 Claims. (Cl. 34-9)

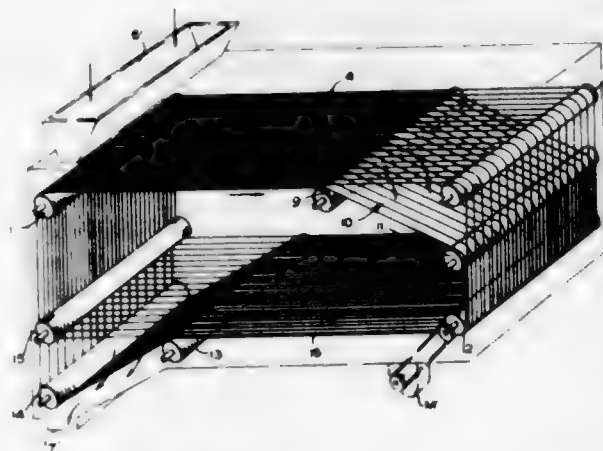
1. A process for drying water-contaminated surfaces of articles of metal or other non-absorbent material which comprises contacting the said surfaces with a chlorinated hydrocarbon solvent containing dissolved therein 0.001% to 1% by weight of a cationic surface active agent.

3,003,248
SWEATER DRYER AND BLOCKER
William W. Wittle, 7600 Oglesby Ave., Chicago, Ill.
Filed Oct. 30, 1959, Ser. No. 849,832
5 Claims. (Cl. 34-95)



1. A device of the character described comprising a stand of inverted U shaped formation having equally spaced parallel perforations in the legs thereof in alignment with the connecting portion thereof, a pair of supporting legs pivotally connected to the lower ends of said stand adapted to support said stand in an inclined position and a plurality of U shaped racks having inwardly projecting portions at the free ends of the legs thereof adapted to be pivotally mounted in certain of the aligned perforations of said stand, the cross member of said racks being bent downwardly in U shaped formation, the lower of said cross members being adapted to rest on a floor in parallel relation with said supporting legs and stand with the succeeding upper cross members resting on the leg of an adjacent rack therebelow, said racks and supporting legs adapted to be pivoted in substantially close parallel relation with said stand and each other when in closed position.

3,003,249
TREATMENT OF PRODUCTS AND MATERIALS
Robert Alexander Spencer Temoleton, Tatmore Place, Hertfordshire, Gossora, Hitchin, England
Filed May 1, 1958, Ser. No. 732,210
11 Claims. (Cl. 34-208)

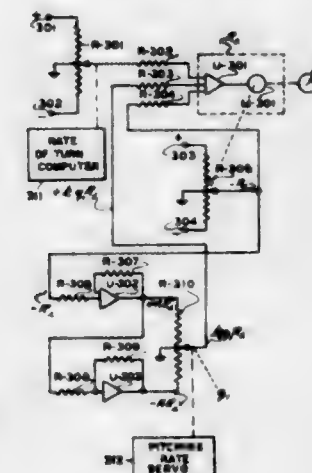


1. A conveyor comprising a plurality of horizontally-spaced rollers, means rotatively supporting said rollers, a mattress of endless strands trained about said rollers, means for causing said strands to move about said rollers in an endless path, said rollers being disposed to cause the endless strands passing about them to form an upper material-carrying pass in which all of the strands are moving in substantially the same plane, means adjacent the discharge end of the upper pass for deflecting certain of said strands relative to the other strands so that the width of the transverse spaces between the strands is increased, and means located lat-

erally beyond the line of deflection of said strands, in the direction of movement of the strands for regrouping all of the strands to form a lower material-carrying pass in which all of the strands are moving in substantially the same plane and in the opposite direction from the strands of the upper material pass, said lower material-carrying pass being positioned in part beneath said deflected strands, the space between the deflected strands and the underlying regrouped strands being sufficiently unobstructed to permit material falling through the transverse spaces of increased width of the upper pass, caused by the deflection of certain of the strands thereof, to fall upon the lower material-carrying pass and to be carried thereby in the opposite direction.

4. A conveyor as set forth in claim 1 in which said lower pass has a discharge end and includes means adjacent the discharge end of the lower pass and horizontally spaced from the means for regrouping the strands for deflecting certain of the strands relative to other of the strands so that the width of the transverse spaces between the strands is increased and material conveyed by said lower pass may fall through the spaces of increased width and be discharged from the conveyor.

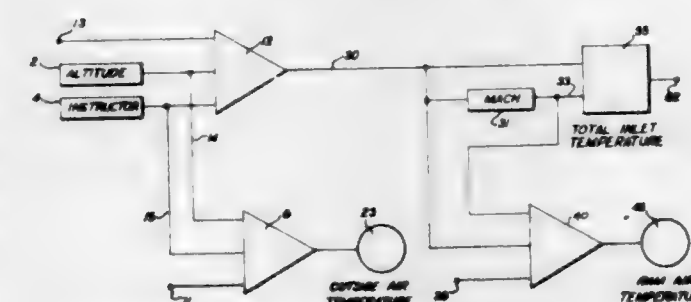
3,003,250
GROUNDING AIRCRAFT TRAINER
John M. Hunt, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Apr. 12, 1957, Ser. No. 652,544
3 Claims. (Cl. 35-12)



3. Grounded flight training apparatus for simulating the operation of a rate of turn indicator of a simulated aircraft, comprising in combination; a simulated rate of turn indicator; computer means for deriving a first potential commensurate with rate of turn of said simulated aircraft; a position servomechanism comprising means for comparing said first potential with the algebraic sum of first and second feedback potentials to derive an error signal and for amplifying said error signal, and motive means responsive to the amplified error signal for positioning said rate of turn indicator; a first potentiometer connected to be positioned by said motive means and operable to derive said first feedback potential, said first feedback potential varying in accordance with the output position of said motive means; computer means for deriving an input quantity commensurate with simulated pitching rate of said simulated aircraft, and means including a second potentiometer responsive to said pitching rate quantity and the output shaft position of said motive means for deriving said second feedback potential, said second

feedback potential being commensurate with the product of said pitching rate quantity and the simulated rate of turn indicated by said simulated rate of turn indicator.

3,003,251
JET ENGINE FLIGHT TEMPERATURE CHARACTERISTICS SIMULATOR
Hosna D. White, Jr., Greenbelt, and Henry J. McGinty, Hyattsville, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Feb. 14, 1958, Ser. No. 715,338
8 Claims. (Cl. 35-12)



1. In an apparatus for simulating high velocity jet powered flight, of the type having a computer for deriving a voltage proportional to simulated flight altitude and representing standard temperature and a computer for deriving a voltage proportional to a function of simulated flight Mach, a system for computing and indicating simulated flight temperature characteristics comprising a member under the control of an instructor for deriving a voltage proportional to variations from standard in simulated air temperature, an electrical circuit including first and second voltage combining means, said first combining means being connected to said member and said altitude computer for producing a voltage proportional to outside air temperature, means connected to said first combining means to indicate outside air temperature, said second combining means being connected to said member and said altitude computer, means connected to the said second combining means for combining the composite output thereof with the derived Mach function voltage to derive a voltage proportional to ram air temperature, means connected to said last recited means to indicate ram air temperature, second means connected to the said second combining means for combining the composite output thereof with the derived Mach function voltage, and a servo system connected to the last above recited means to derive a voltage proportional to the total inlet temperature.

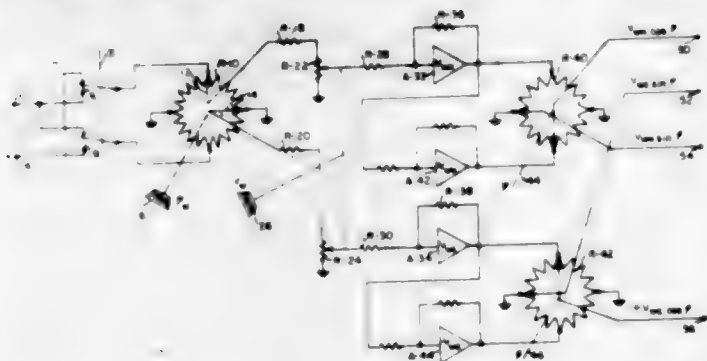
3,003,252
SYSTEM OF GROUND COORDINATE DETERMINATION IN A FLIGHT TRAINER
Edward G. Schwarm, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Aug. 5, 1958, Ser. No. 753,325
15 Claims. (Cl. 35-12)

12. Aircraft training computer apparatus for continuously simulating the operation of a simulated aircraft in the presence of a simulated wind during airborne and grounded travel and transitions therebetween, comprising in combination;

first means for deriving a first potential commensurate with the simulated horizontal component of velocity of said simulated aircraft along the longitudinal axis of said simulated aircraft;

second means for deriving a second potential commensurate with the simulated lateral horizontal component of velocity of said simulated aircraft;

third means for providing a simulated heading quantity commensurate with heading of said simulated aircraft with respect to simulated northerly and easterly reference geographical directions; first resolver means responsive to said heading quantity and including simulated wind velocity and wind direction controls for deriving third and fourth potentials commensurate respectively with the longitudinally-acting components of said wind velocity and for deriving fifth and sixth potentials whose vector sum is



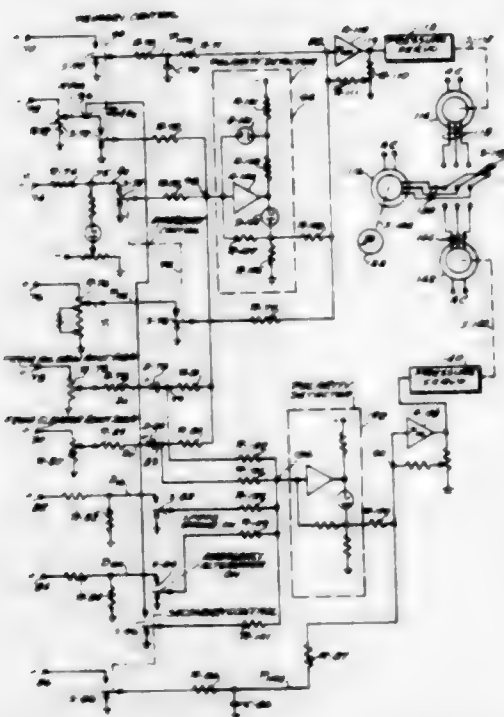
commensurate respectively with the laterally-acting component of said wind velocity;

first circuit means for summing said first, third and fourth potentials during simulated airborne conditions to provide a simulated longitudinal component of ground track potential; and second circuit means for summing said second, fifth and sixth potentials during simulated airborne conditions to provide a simulated lateral component of ground track potential.

3,003,253

SIMULATED HYDRAULIC PRESSURE SYSTEM

George A. Decker, Hillcrest, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Apr. 7, 1959, Ser. No. 804,631
5 Claims. (Cl. 35-12)



2. In an aircraft simulator, means for simulating a hydraulic pressure system comprising a first function generator for providing a potential proportional to hydraulic pressure in a primary hydraulic system as provided by a pump, a second function generator for providing a potential proportional to the change in hydraulic pressure in said system due to changes in demand, means for summing said first and second potentials to provide a third potential representing true hydraulic pressure in said

primary hydraulic system, a third function generator for providing a fourth potential proportional to hydraulic pressure in a secondary hydraulic system as provided by a pump, a fourth function generator for providing a fifth potential proportional to the change in hydraulic pressure due to changes in demand in said secondary hydraulic system, means for summing said fourth and said fifth potentials to provide another potential representing true hydraulic pressure in said secondary system, and means selectively responsive to said third potential and said sixth potential for indicating the magnitude of said true hydraulic pressure in said primary hydraulic system and in said secondary hydraulic system.

3,003,254

STABILITY DEMONSTRATOR

Jack E. Pattison, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 3, 1958, Ser. No. 778,019
9 Claims. (Cl. 35-19)



1. In a lift truck model having a base section, a tiltable upright mounted adjacent one end of the base section, a load engaging means movable along the upright and a counterweight portion located adjacent the opposite end of the base section for demonstrating the effect on stability of variable factors which are normally encountered in operation, the combination comprising a plurality of support means secured to and extending beneath the base section, a defined area on the upper surface of the base section connecting the support means, an element secured within said area at a pre-determined mass center of gravity, a load, a second element secured to the load at a pre-determined mass center of gravity, an elastic member adapted to deform uniformly for connecting said first and second elements when the load is located upon the load engaging means, and downwardly depending indicator means suspended from the elastic member at a distance from each of the two elements which is inversely proportional to respective weights which are assumed to be concentrated at the two centers of gravity, said indicator means thereby locating the combined center of gravity of the lift truck model and its load irrespective of changes in variable factors which affect stability.

3,003,255

APPARATUS FOR ANALYZING HUMAN PERFORMANCE

Walter Katz, Gertrudenstrasse 22, Hameln, Germany
Filed Oct. 9, 1959, Ser. No. 845,489
Claims priority, application Germany Oct. 11, 1958
2 Claims. (Cl. 35-22)

1. Apparatus for use in carrying out a tapping performance test and analyzing the results to ascertain human performance data, said apparatus comprising, in combination: a frame; a tapping surface on the frame divided into separate tapping areas; command means for indicating which area is to be tapped and the time and sequence

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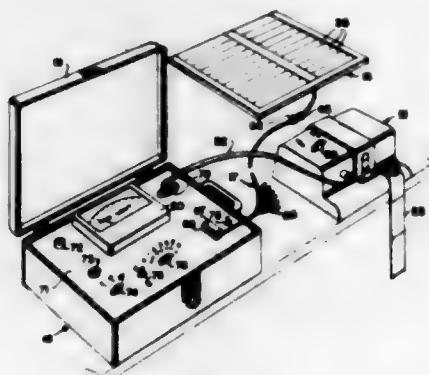
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wall extending diametrically and provided with a semi-circular mask depending from said other wall, said first and second base plates being positioned in face-to-face spaced relation with the openings in alignment and with said masks in alignment, a ring interposed between the peripheral portions of said first and second base plates and defining with said base plates a pocket, a large star disc disposed in said pocket and having its center aligned with the centers of said masks, a small world map disc overlying each of said first and second base plates concentric thereto, each of said base plates and said masks having a time ring area thereon extending about and from the periphery of the masks, said world map discs each being of a lesser diameter than the adjacent time ring area and lying concentrically thereto, the diametrically extending walls of the openings of said first and second base plates defining the momentary night areas of the map discs, said map discs having radial lines to facilitate their alignment with the adjacent time ring and the associated diametrically extending wall, and means extending through the centers of said star disc, map discs, first and second base plates and ring to rotatably support the map and star discs on said base plates.

3,003,259

ELECTRICAL EDUCATIONAL TESTING AND SCORING SYSTEM

Charles J. Sullivan, 40 Albemarle Place, Yonkers, N.Y.
Filed July 24, 1957, Ser. No. 673,905
2 Claims. (Cl. 35-48)



1. An electrical educational testing and scoring system device comprising a testing board having bus bars and a plurality of electric test elements adapted for the answer of questions of multiple choice and connected to the bus bars, an electrical circuit in the test board including the test elements and bus bars each of said test elements being adapted for supplying a resistance to the electrical circuit upon the element having been adjusted to either a right or wrong answer position and no resistance when left in a no answer position, and a metering circuit means connected to the test board electrical circuit and an external metering recorder member forming a part of the circuit means, a graph recording instrument connected to the external metering recorder terminal member and motor-operated selector switch means in the metering circuit to transmit the correct answer positions of the test element to the graph recording instrument, whereby a graph plotting score against time can be made.

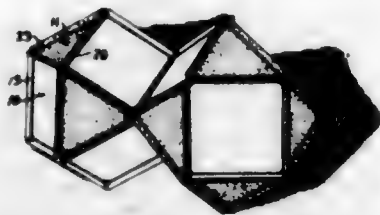
3,003,260

EDUCATIONAL CONSTRUCTION SET

Frederick F. Bassett, 14401 SE. 55th, Bellevue, Wash.
Filed May 1, 1959, Ser. No. 810,288
2 Claims. (Cl. 35-72)

1. For an educational set, a plurality of polygonal panels having along each of their marginal edges matching elongated marginal lips which are foldable at dihedral angles to the panels proper along fold lines, said fold

lines being of the same length and being separated at their ends by cutouts in the apexes of said panels, said cutouts forming noses at the ends of said lips, the noses on each lip being spaced apart a distance greater than



the length of said fold lines, and endless elastic means having a relaxed length shorter than the length of said fold lines and stretchable longitudinally over the noses of selected lips placed face to face for holding said selected lips together along their fold lines.

3,003,261

HUNTING BOOT PROTECTOR

Joe W. Graham, 622 E. Kelly, Pharr, Tex., and Harold R. Graham, 541 N. 4th St., Uvalde, Tex.; said Harold R. Graham assignor of ten percent to Andrew J. Lidwin, Zavala County, Tex., and forty percent to said Joe W. Graham

Filed Apr. 29, 1959, Ser. No. 809,743
2 Claims. (Cl. 36-2)



1. A protector comprising a shoe enclosing member and a leg enclosing tubular member, means articulately connecting the leg enclosing member to the shoe enclosing member for permitting movement about a transverse axis and resilient movement about a longitudinal axis for simulating the action of the ankle, said means being located adjacent the position of the ankle, said tubular member being provided with a rear vertically extending entrance slit, each edge of said slit having a generally hook-shaped projection defined thereon, said projections facing outwardly and forming outwardly facing recesses, and a resilient band encircling the projections and retaining the entrance slit in closed relation, said shoe enclosing member including a generally U-shaped member conforming to the curvature of the uppers of a shoe for covering substantially the entire shoe above the sole, said U-shaped member having leg portions interconnected by an adjustable elastic heel strap, an adjustable elastic shank strap extending under the shank region of a shoe and connected to the bottom edges of the legs of the shoe enclosing member, and an elastic instep strap connecting the rear ends of the legs of the shoe enclosing member and extending across the instep portion of the shoe and foot for retaining the shoe enclosing member in position.

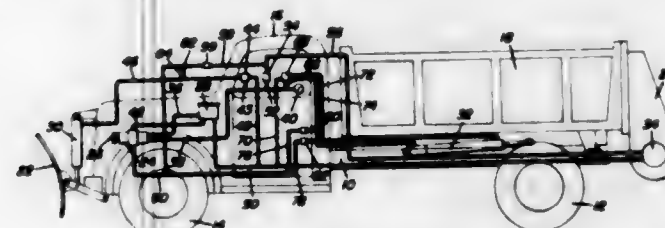
3,003,262

HYDRAULIC SYSTEM FOR DUMP TRUCKS

Charles P. de Blas, 74 Branson Road, Waterford, Conn.
Filed Jan. 13, 1960, Ser. No. 2,240
8 Claims. (Cl. 37-41)

1. A control system for dump body load carrying vehicles having a spreader mounted on the rear thereof and a snow plow mounted on the forward end thereof,

hydraulic means interconnecting the snow plow and vehicle for varying the position of the snow plow, hydraulic means interconnecting the dump body and the vehicle for raising and lowering the dump body, and a hydraulic motor for operating said spreader, said control system comprising a single hydraulic pump mounted under the hood of the vehicle and having a variable output, a reservoir communicated with the pump and being located under the hood for ease of access when refilling the hydraulic system, a control valve communicating the fluid pressure discharge of the pump with the hydraulic means interconnecting the vehicle and the snow plow, a

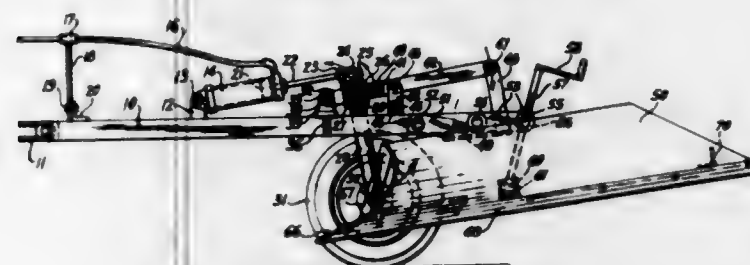


control valve communicating the pump discharge with the hydraulic means interconnecting the vehicle and dump body, and a control valve communicating the discharge of the pump with the hydraulic motor of the spreader, all of said control valves being located within the cab of the vehicle for access by the operator each of said control valves being provided with a pressure control line bypassing pressurized fluid back to the pump, said variable output means varying the output in response to the quantity of bypassed pressurized fluid back to the pump thereby providing for variation in the output of the pump in response to demand of the fluid motors operated thereby.

3,003,263

DITCHER

Alvin L. Meyer, Jr., and Roy Dee Meyer, Fairfield, Mont.
Filed Mar. 23, 1961, Ser. No. 97,791
6 Claims. (Cl. 37-98)



1. A ditcher comprising, in combination, a main frame bar, an axle support extending transversely across said bar, offset axles carried by said axle support, wheels carried by said offset axles, pivot means connecting said axle support to said frame bar, lift means for rotating said axle support about said pivot means, a link comprising a leveling bar pivotally connected to said axle support on the side opposite said pivot means, a lift arm pivoted to the other end of said link, a ditching plow secured to said lift arm, side plates pivoted to said frame member intermediately of said link, and means securing said ditch plow to said plates for raising and lowering said plow and said wheels relative to each other while maintaining the plow at a constant angle.

3,003,264

DITCH DIGGER

Charles M. Shore, Eldora, Iowa
Filed July 15, 1959, Ser. No. 827,265
4 Claims. (Cl. 37-103)

1. In a ditch digger, the combination with a bucket having opposite sides and a cutting edge, and an arm supporting the bucket for swinging movement to form a

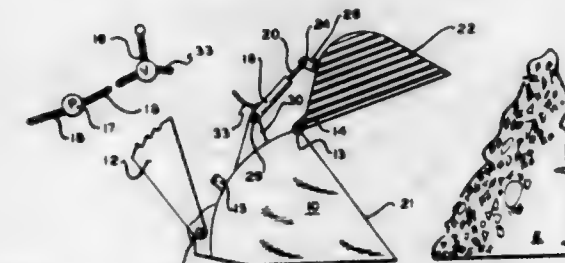
ditch, a pair of cutting blades extending upwardly from opposite sides of the bucket in diverging relation, brackets secured rigidly to the lower ends of the blades and engaged with opposite sides of the bucket, detachable fas-



3,003,265

BUCKET DEVICE

Herman Lutjens, 895 Westwood Ave., River Vale, N.J.
Filed Dec. 30, 1959, Ser. No. 862,914
1 Claim. (Cl. 37-118)



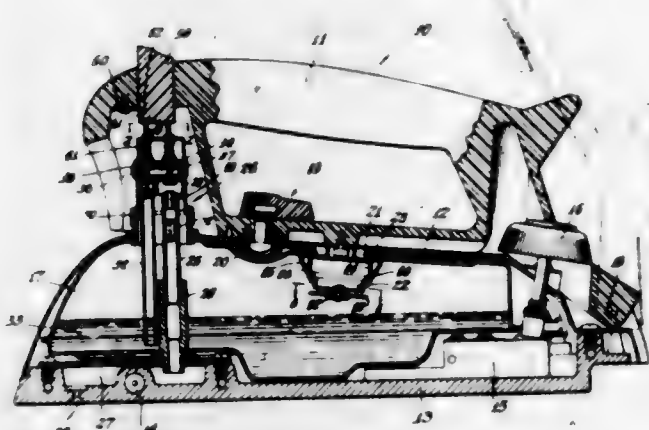
In combination with a bucket for an earth moving machine having an open face, wherein said bucket may be mounted on said machine and connected thereto so as to be selectively movable to an earth scooping or an earth dumping position, a screen device including a first frame generally U-shaped, coextensive with the entire open face of the bucket and formed as a plurality of bars held in spaced parallel relationship, a pair of first apertured ears disposed in spaced relation on an edge of the frame and extended therefrom, removable pin means engaging said first ears to pivotally connect the frame to the bucket and also to allow for separation, a rigidifying plate extending across said frame intermediate the edges thereof, a second pair of spaced apertured ears on said plate, motor means engaging said second pair of ears and the bucket for selectively rotating the frame relative to the entire open face of the bucket, said frame further having additional spaced bars extending between the extreme end elements of the frame to form end walls making with said frame a cup, a second frame comprising a plurality of bars of smaller diameter than those of the first frame, held in spaced parallel relation, lying outside of one side portion of said U-shaped frame and continued from one edge thereof to said rigidifying bar, the bars of the second frame being connected by flat plates slidably engaging the bars of the first frame, a plurality of bars on said first frame having studs outstanding therefrom, and said plates having slots receiving said studs to allow for sliding movement between said plates and said first frame bars, and means threaded on the parts of said studs extending beyond said bars for securing said

second frame to the first frame and tightening said plates in adjusted position against said first frame bars, the bars of said first and second frames respectively engaging opposite faces of said plates, so that the bars of the second frame may be disposed optionally in substantial registry with or intermediate the bars of the first frame, to thus adjust the openings therebetween, whereby when the frames are rotated against the bucket face to close it and the bucket is then moved to dumping position, material discharged therefrom will pass through the frames and the end walls, restraining objects of selected over-size, and when the bucket is moved to the scooping position, the frames may be rotated clear of said open face to facilitate a scooping operation.

3,003,266

STEAMING AND DAMPENING IRON

Laurence G. Horvitt, New Haven, and Julio F. Suarez, Milford, Conn., and Robert E. Hopp, Mount Vernon, N.Y., assignors to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 15, 1958, Ser. No. 728,725
13 Claims. (Cl. 38-77)



1. A spraying and steam iron comprising a soleplate, a heating element for the soleplate, a boiler adapted to contain water and be heated to convert the water to steam, a turret mounted on the boiler and forming a steam dome, a duct formed in the turret and communicating with an orifice formed therein, a first passageway communicating with the duct and the steam dome, a second passageway independent of the first communicating between the duct and the water containing portion of the boiler, and separate valve means located in its associated passageway for opening and closing each passageway individually whereby opening of both valve means enables the steam pressure in the boiler to force water through the second passageway into the duct and out the orifice in a stream of fine droplets of water.

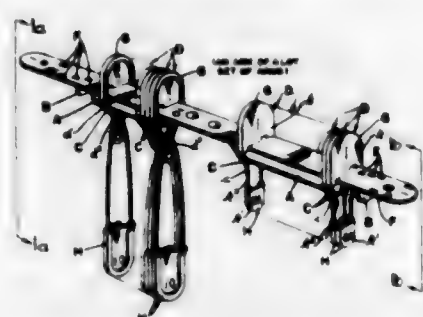
3,003,267

LAUNDRY IDENTIFICATION EQUIPMENT

Donald C. Summers, Allentown, Pa., assignor to The Key-Tag Checking System Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 1, 1958, Ser. No. 725,723
7 Claims. (Cl. 40-19.5)

1. Laundry checking equipment comprising a strip arm having a lock, a tag and pin assembly hanging from the arm and having a tag with a slot therein snugly fitting the arm and formed with a key cooperating with the arm lock, a spring strip secured adjacent its inner end to the arm and disposed substantially parallel therewith, the spring strip retaining the tags on the arm and having an intermediate portion spaced from the arm and an outer curved terminal portion normally abutting the arm, the tag including a hollow endless wire reinforcement

secured in the peripheral edge of the tag and continued around and beyond the spring strip, the assembly including a pin depending from the wire reinforcement, the side portions of the wire reinforcement beyond the

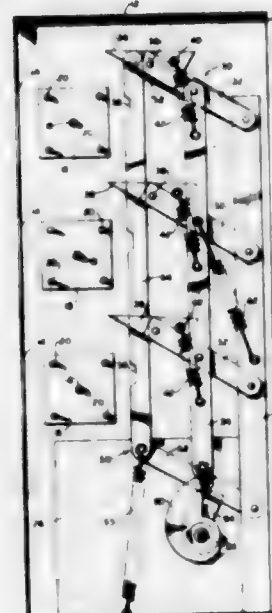


spring strip being contracted so as to bound a space less in width than the width of the terminal of the spring strip, whereby a guide is provided ensuring the registry of the arm and the tag slot when it is desired to place a pin and tag assembly on the arm.

3,003,268

SIGN CONSTRUCTION

Edmund Chan, 1917 Broderick St., San Francisco 15, Calif.
Filed June 18, 1959, Ser. No. 821,202
10 Claims. (Cl. 40-33)



1. In a fully automatic sign construction, movable means providing a wide variety of random word combinations for display, said means comprising a plurality of sign elements arranged in parallelism and mounted for rotation about their axes, said elements each having at least three sides bearing word-forming indicia, striking means adapted to impart free rotation to said sign elements, arrester means adapted to engage and stop the free rotation of said elements, and means synchronizing the operation of said striking and arrester means to successive portions of a continuous cycle, whereby different random combinations of word-forming indicia are continuously and cyclically produced by said sign construction.

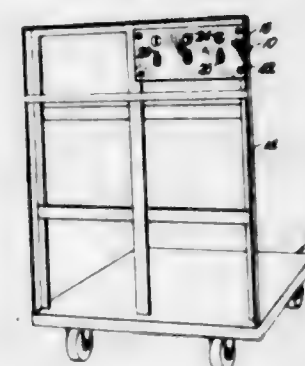
3,003,269

MECHANICAL CODING DEVICE

Russell A. Cobb, 1405 Russell Road, Kansas City, Mo.
Filed Dec. 14, 1959, Ser. No. 859,304
6 Claims. (Cl. 40-70)

1. A mechanical coding device comprising a front plate; flange means associated with said plate and extending laterally therefrom, said plate having an elongated slot therein disposed with the longitudinal length thereof nor-

mal to said flange means and an aperture in spaced relationship to said slot; a polygonal member having a plurality of identification indicia in radially spaced relationship on one face thereof; and rotative means mounting the member on said plate in a normally vertical plane and in a position with one of the indicia thereon in alignment with and discernible through the aperture when one segment of the peripheral edge of said member is in engagement with and supported by said flange means, said rotative means including a shaft secured to the member in substantially axial relationship thereto said shaft extend-

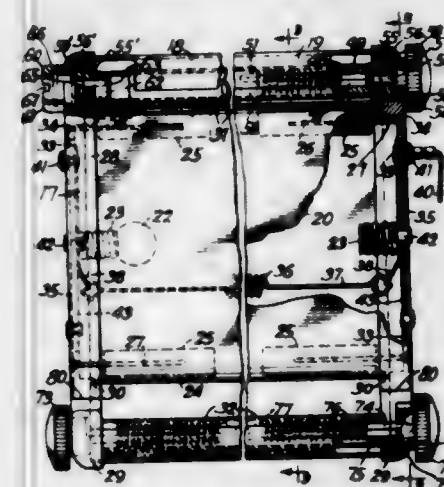


ing through and being freely slidable within said slot, the latter being of sufficient length to permit manual movement of the shaft and thereby the member in a direction away from the flange means a distance to cause the peripheral edge of the member to clear the flange means, whereby the member may be rotated within said plane about the axis thereof to bring another one of said indicia into a position aligned with said aperture when the corresponding segment of said edge of the member is moved into engagement with the flange means.

3,003,270

COMBINATION MAP HOLDER AND AUTOMOBILE VISOR

John R. Palm, 1718 East Gate Parkway, Rockford, Ill.
Filed May 3, 1957, Ser. No. 656,798
21 Claims. (Cl. 40-86)

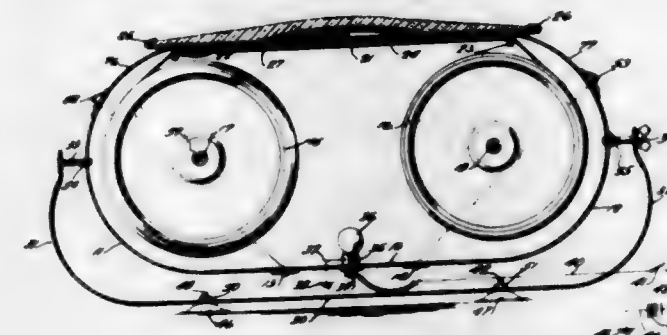


1. In a device of the character described comprising a casing, and a roller of elongated form mounted for rotation at its ends in said casing adapted to be turned manually, knob-operated means connected with one end of said roller for manually turning the same in either direction, said roller being hollow and open axially thereof at the other end, whereby it is adapted to receive supporting means for the casing inserted in the open end of the roller, an elongated rod insertable in the open end of said roller and closely engageable in said roller for pivotal support of said casing on said rod, a swivel mounting for the outer end of said rod whereby said casing when mounted on the rod is universally adjustable therewith, and means for detachably securing said casing against endwise displacement from said rod.

3,003,271

TOUR NAVIGATOR

Donald T. Purling, Hayward, Calif.
(% Clyde Ingram, Rte. 5, Box 52, Clay Center, Kans.)
Filed Dec. 16, 1959, Ser. No. 860,043
1 Claim. (Cl. 40-86)

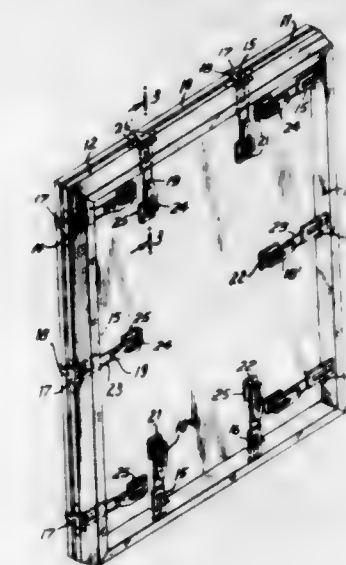


In a route map holder, the combination which comprises a relatively thin elongated casing, said casing having side and end walls, with a section of each end wall pivotally mounted for movement in relation to said side walls, means for retaining the sections in fixed relation to said side walls, a U-shaped cradle having upwardly extended arcuate shaped ends, a pin in one end of the cradle positioned to extend into an opening positioned in one section of the end walls of the casing, a thumb screw in the other section of the end walls of the opposite end of the cradle and threaded in said casing, and vacuum cups mounted on the cradle for retaining the casing on a surface in a motor vehicle.

3,003,272

MOUNTING

Robert M. Kulicke, New York, N.Y., assignor to Kulicke Frames, Inc., New York, N.Y., a corporation of New York
Filed Apr. 25, 1960, Ser. No. 24,374
7 Claims. (Cl. 40-155)



1. A mounting including in combination a sheet of material having rear and front faces, a frame defining an area substantially no greater than said sheet, said frame having a surface in contact with the rear face of said sheet and extending rearwardly thereof throughout the entire edge zone of the latter, said frame being formed with a series of transverse openings, clip members each including a shank lying adjacent the rear sheet face and extending through one of such openings, a base overlying the edge of the sheet at a point substantially in line with the edge of the frame, a projecting portion at the end of said base and means separate from said clip

member and connected therewith for exerting tension on the base portion of the clip member for maintaining it in position.

3,003,273

PRESCRIPTION LABEL PANELS

Samuel Tapper, 440 Baldwin Road, Maplewood, N.J.
Filed Nov. 6, 1958, Ser. No. 772,247
1 Claim. (Cl. 40-367)

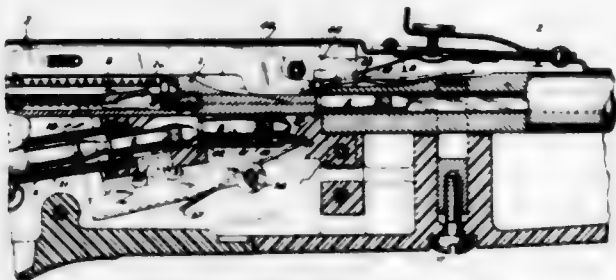


A prescription label panel consisting of a panel cover unit and a co-operating rectangular slide tray wherein the panel cover has a flat top and one side wall, there being a narrow rectangular slot in said panel cover at the junction of the said side wall and panel cover top, the side wall being cut away to the depth of the panel cover top in the area of the above mentioned slot, and wherein the co-operating rectangular slide tray has a portion of one lengthwise wall raised above the plane of the tray rim, said raised portion being shorter in overall length than the narrow rectangular slot in the panel cover, and having a small outward facing lateral projection on the afore-mentioned raised portion of the tray wall rim, said lateral projection having its lower surface approximately in the plane of the tray rim, said raised portion of the tray rim passing through the aforementioned slot permitting the rim of the tray to touch the under surface of the panel cover top, and the aforementioned side wall of the tray to rest against the inside surface of the panel cover side wall, the said lateral projection on the raised portion of the tray wall rim overlapping the side wall of the panel cover in the area of the panel cover slot to fasten the tray to the cover, the inward facing surface of the raised portion of the tray wall rim being parallel to the abutting surface of the rectangular slot in the panel cover, all the areas of contact between the panel cover and the tray co-operating to effectuate a close fitting slideable tray.

3,003,274

CARTRIDGE FEED SYSTEM

Charles H. Morse, Herkimer, and Homer W. Young, Ilion, N.Y., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Dec. 8, 1959, Ser. No. 858,099
3 Claims. (Cl. 42-17)



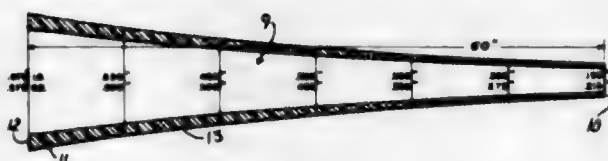
1. In a repeating firearm having a barrel, a receiver, a breech bolt longitudinally reciprocable in said receiver, a tubular magazine extending from a position beneath said breech bolt, a spring urged follower in said magazine urging cartridges therein to a position beneath said breech bolt, a cartridge feed insert defining forwardly and upwardly inclined elevator surfaces to elevate a cartridge as it passes therethrough, a forwardly and upwardly inclined bullet feed ramp, and cartridge stop means to con-

trol the release of cartridges from said magazine, the improvement comprising a bullet feed guide pivotally attached to the breech bolt and extending forwardly therefrom over the top surface of the barrel to form a reciprocating closure of the upper side of the space between the breech bolt and the barrel.

3,003,275

FISHING ROD

Robert H. Reid, Costa Mesa, Calif., assignor, by mesne assignments, to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 20, 1959, Ser. No. 794,604
9 Claims. (Cl. 43-18)

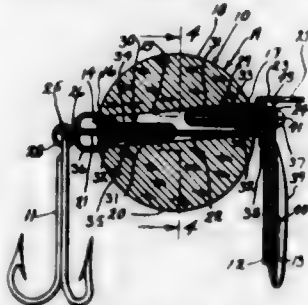


1. As an article of manufacture, a fishing rod having a tip end, said rod being so formed as to increase in diameter from its tip end at an increasing rate for a substantial portion of its length whereby said rod presents a concave profile.

3,003,276

FLUTTERING TYPE ARTIFICIAL LURE

Delbert Patterson, Wild Rose, Wis.
Filed Feb. 26, 1959, Ser. No. 795,748
3 Claims. (Cl. 43-42.15)



1. In an artificial lure of the surface bait type, a body of light floatable material having a forward portion and a rear portion and an elongated aperture through its axial center opening out on said forward and rear portions, fish hooks adjacent said rear portion of said body, a pair of pivoted blades adjacent said forward portion of said body, and attaching means associated with said body and aperture to firmly secure said hooks and to pivotally hold said blades to said body, said attaching means including a flat strip received in said elongated aperture and extending entirely therethrough and having a portion protruding beyond said forward and rear body portions, said forwardly projecting portion being adjacent and above the point where said blades are pivoted, whereby the upward movement of said blades is restricted, and headed pegs received in said elongated aperture of a size and configuration to wedge said strip to said body, said hooks and said blades being secured to the respective rear and forward portions of said strip.

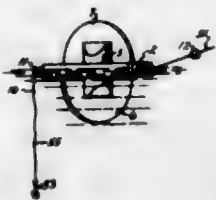
3,003,277

GUIDABLE FISHING FLOAT

William H. Vann, 7014 Abbott Court, Jacksonville 11, Fla.
Filed Sept. 29, 1958, Ser. No. 764,062
6 Claims. (Cl. 43-43.13)

1. A dirigible fishing float comprising a buoyant float body bounded by a peripheral edge, said body having generally parallel opposite faces spaced by a thickness

dimension less than the width dimension measured between opposite portions of said edge whereby said body tends to float indiscriminately with one and the other said face downward, means to connect a fishing line to a predetermined point of said edge of said body, a respective fin extending outwardly from each said face, pivot means interconnecting said fins in perpendicular

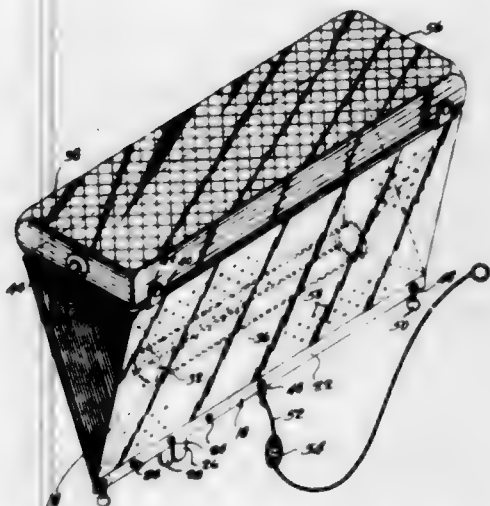


relation one to the other and perpendicular to said faces and rotatably connecting each said fin to said body, said pivot means establishing a common pivot axis for said fins generally normal to said faces whereby said fins are rotatable with rotation of said interconnecting pivot means into selected angular relations with respect to the direction of pull on said body of a fishing line attached thereto at said point.

3,003,278

MINNOW TRAP

Edward L. Armentrout, 321 S. 1st St., Hampton, Va., assignor of one-third to Henry L. Mead, Bartlett, N.H., and one-third to Louis A. Barre III, Shreveport, La.
Filed Dec. 31, 1959, Ser. No. 863,167
2 Claims. (Cl. 43-103)



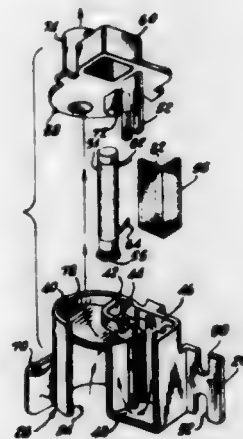
1. A minnow trap comprising a flexible back panel arranged in an upwardly sloping direction, a flexible front panel arranged in an upwardly oppositely sloping direction positioned in face to face relation with respect to said back panel and having the lower edge portion extending along and abutting the lower edge portion of said back panel and having the upper edge portion outwardly of and in substantial alignment with and spaced from the upper edge of said back panel, the lower edge portions of said front and back panels being fixedly secured together from one of the complementary ends of said front and back panels to a point adjacent to and spaced from the other of the complementary ends of said front and back panels, means detachably securing together the unsecured parts of said lower edge portions of said front and back panels, an upstanding flexible end panel disposed inwardly of and adjacent each of the complementary ends of said front and back panels and secured to said front and back panels, there being an ingress opening in each of said end panels, means for holding said end panels in position within the confines of said front and back panels, and inflatable means extending over the upper ends of said front, back, and end panels and attached to said panels.

3,003,279

SMOKE GENERATOR

Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York

Filed May 14, 1958, Ser. No. 735,251
4 Claims. (Cl. 46-9)

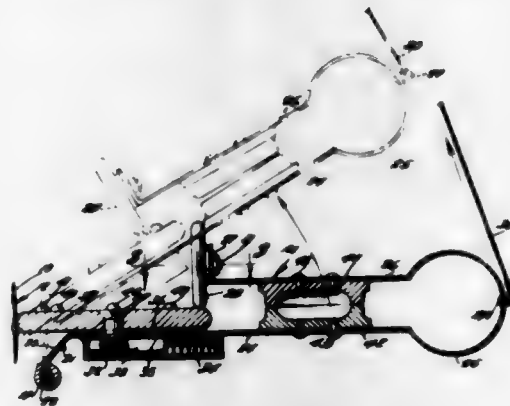


1. A combined toy smoke producing and puffing apparatus comprising a molded body portion and a cover portion fitted and secured to said body portion, said body portion including: an air compression chamber having a small opening at one end, said opening functioning both as the inlet and the outlet port to said compression chamber, a piston reciprocally displaceable within said air compression chamber, wall means external to the air compression chamber defining with an outside wall thereof an elongated air heating chamber, and vertically elongated smoke generating means mounted in a side portion of said air heating chamber; said cover portion including a depending partition wall dividing said air heating chamber into adjacent elongated first and second connecting passageways, said first passageway being in sealed direct communication with said air compression chamber small opening at one end and at the other end with the lower portion of said second passageway, and flue means in communication with said second passageway to discharge generated smoke, said flue means adapted to receive and direct smoke generating material to the bottom portion of said second passageway to replenish said smoke generating means.

3,003,280

NOISE MAKING TOY

Glenn A. Gordon, 927 Division St., Charleston, Ill.
Filed Dec. 29, 1959, Ser. No. 862,545
2 Claims. (Cl. 46-175)



1. A toy noise maker comprising a clamp, a rod affixed to said clamp, a support member having an end portion hingedly mounted on said rod, said support member embodying a main body portion which terminates in a curved spring portion, said spring portion terminating in a flat section which is arranged in spaced parallel relation with respect to said main body portion, a lip

arranged at right angles with respect to said flat section, coacting hollow cup-shaped members affixed to said main body portion and to said flat section, an actuating cable affixed to said spring portion, a wheel rotatably connected to said lip, a hollow casing secured to the lower surface of said main body portion, a plunger slidably arranged in said casing, a coil spring arranged within said casing and said coil spring abutting and engaging the adjacent end of the plunger, there being registering slots in said main body portion and casing, a pin extending through said slots and connected to said plunger, a disc mounted on said pin, and a plurality of spaced apart projections on a surface of said disc adapted to be selectively engaged by said wheel.

3,003,281
POP GUNS

Stanley Butler, 15272 Penn Ave., San Lorenzo, Calif.,
and De Los L. Marsh, 212 Revere Ave., Hayward,
Calif.

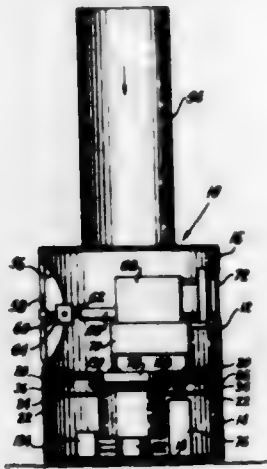
Filed Aug. 24, 1959, Ser. No. 835,712
6 Claims. (Cl. 46-178)



1. A device for creating a noise which includes: a member having a restricted opening formed therein; a deformable, imperforate diaphragm located within said member so as to cover said opening said diaphragm having a tab formed thereon, said tab being secured to said member, said diaphragm being capable of being moved through said opening; means for applying air pressure within said member against said diaphragm so as to cause said diaphragm to pop through said opening in said member, causing sound.

3,003,282
FROST-PROTECTIVE DEVICE FOR GROWING VEGETATION

Gwyn Davies, Scranton, Pa.
(Apt. 10, Hotel Simpson, Mount Dora, Fla.)
Filed Dec. 5, 1960, Ser. No. 73,630
8 Claims. (Cl. 47-2)



1. A plant growth protective device comprising a generally cylindrical housing which includes a lower stationary housing section and an upper rotatable housing section, said upper section having an open-ended stack extending from its upper end, said upper end being closed except for an opening mating with said stack, an inlet

opening and an air outlet opening provided in the wall area of said upper section, a blower unit in said upper section, said blower unit including a fan positioned for rotation in said outlet opening, a heater in said lower housing section, said heater being in communication with the interior of said upper section, and drive means in said lower section operatively connected to said upper section to rotate said upper section relative to said lower section.

3,003,283

MEANS FOR COLLECTING PITCH FROM A TREE
Harry W. Wilson, 2 Flower Road, Garden City, N.Y.
Filed Oct. 22, 1959, Ser. No. 847,977
2 Claims. (Cl. 47-11)



1. Means for cupping a tree to collect pitch, gum and other materials bled therefrom, comprising a flexible apron adapted to fit snugly against the tree, gutter elements provided on said apron, supporting means secured to said apron, a collecting cup carried by said supporting means, said gutter elements being adapted to direct the drippings from said tree into said collecting cup, said supporting means comprising a wire bracket pivotally hooked to the apron and adapted to pivot against the tree under the weight of the collecting cup and its contents, said bracket having a laterally supporting arm on which the collecting cup rests and said supporting arm being disposed in a substantially horizontal plane when the bracket abuts the tree under the weight of said collecting cup and its contents, a lip being provided on the apron for engagement with said collecting cup to hold it securely on said supporting arm of the bracket.

3,003,284

COMPOTE FOR FLORAL ARRANGEMENTS
Vernon L. Smithers, Akron, Ohio, assignor to The V. L. Smithers Manufacturing Company, Kent, Ohio, a corporation of Ohio
Filed Apr. 15, 1959, Ser. No. 806,618
3 Claims. (Cl. 47-41)



3. A compote for floral arrangements comprising a basin portion having a central hollow stem depending

therefrom and opening into said basin portion, a plurality of upstanding ribs within and spaced inwardly of the outer periphery of said basin arranged circumferentially of said hollow stem and extending substantially circumferentially thereof, said circumferential ribs being adapted for engaging the sides of a block of moisture-retentive crushable foam material to position the block over the hollow stem whereby a flower stem passed through the block into said hollow stem will aid in holding the block in place.

3,003,285

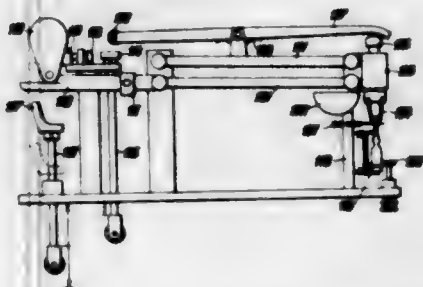
APPARATUS FOR THE MECHANICAL SEPARATION OF A PART FROM A ROD OR TUBE LIKE WORK PIECE

Helmut Sichel, Springeltwiete 9, Hamburg, Germany

Filed May 11, 1956, Ser. No. 584,346

Claims priority, application Germany May 14, 1955

19 Claims. (Cl. 49-7)



5. Apparatus for the mechanical separation of rod or tubelike work pieces made of heat softenable material, comprising means for holding the work piece, a grip means for gripping and holding the work piece at an end to be severed, a movable carrier supporting said grip means, controlled actuating means operatively connected to said grip carrier and capable of storing potential force and applying said force to said grip carrier when released, means for potentially loading said actuating means, heating means for softening the work piece at the line of breach, and control means normally holding said actuating means inactive when potentially loaded and for instantaneously releasing said potentially loaded actuating means after suitable softening of said line of breach for abruptly imparting a sudden forcible jerk to said grip carrier and said grip means endwise of said work piece, thereby causing violent instantaneous breaking-off of said work piece end at said softened line of breach.

3,003,286

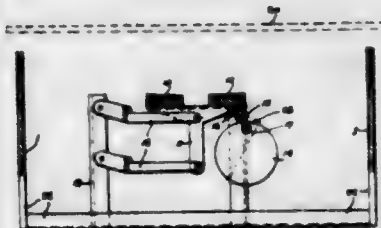
GLASS BENDING MOULD

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed Oct. 18, 1956, Ser. No. 616,853

Claims priority, application Canada June 28, 1956

9 Claims. (Cl. 49-67)



1. In the art of forming a bend in a glass sheet by positioning said sheet on a skeleton type glass bending mould having glass supporting side bars extending longitudinally of the mold and then subjecting said sheet to an elevated temperature sufficient to produce sagging of a portion of said sheet intermediate said side bars be-

low the neighbouring upper edges of said side bars, the step of checking bending of said portion of said sheet by moving into a position therebeneath and in physical contact therewith a body of metal of thermal capacity large in relation to adjacent mould parts.

3. In a skeleton type glass bending mould having a pair of side bars for supporting a sheet of glass generally horizontally; a body of metal of thermal capacity large in relation to adjacent mould parts, means mounting said body between said side bars spaced a substantial distance transversely from each of said bars, said means including means for moving said body between a raised and a lowered position, said raised position being a short distance below the level of a straight line joining the neighbouring upper edges of such bars, and said lowered position being a significantly greater distance below such level, and control means connected to said mounting means for moving said body to and from said raised and lowered positions.

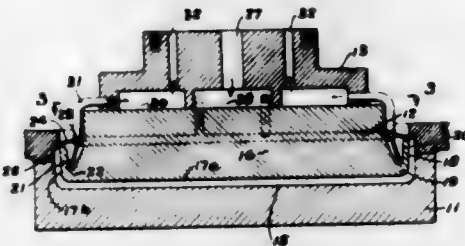
3,003,287

APPARATUS FOR FORMING GLASS ARTICLES

Julius J. Torok, Toledo, Ohio, assignor to Kimble Glass Company, a corporation of Ohio

Filed May 8, 1959, Ser. No. 811,935

24 Claims. (Cl. 49-76)



1. In an apparatus for forming a glass article by pressing a plunger downwardly into contact with a gob of glass placed in a mold having an internal molding surface corresponding to the external configuration of the article which is to be formed, said plunger having an external molding surface corresponding to the internal configuration of the article which is to be formed and comprising a pair of molding surfaces connected by a surface of relatively sharp radius, the improvement wherein said plunger includes a first plate of conductive material with one edge thereof having a thermal bond with the plunger on the side opposite the molding surface adjacent the area of juncture of said two surfaces, and means adjacent the other edge of said plate and adapted to cool said edge thereby removing heat by conduction through said plate, the coefficient of thermal conductivity of said plate being greater than the coefficient of thermal conductivity of said plunger.

3,003,288

SELF SEALING ASPHALT SHINGLES

Walton V. Leilbrook, Wyoming, and George Arthur Fasold, Mount Healthy, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio

Filed June 17, 1957, Ser. No. 665,957

4 Claims. (Cl. 50-103)



1. A high wind resistant roof covering comprising a plurality of similar flexible shingles laid in a double

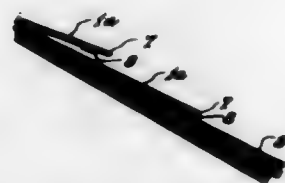
coverage arrangement, wherein the most underlying shingle has a head lap of not less than two inches, so that in the head lap area, portions of three shingles are superposed upon each other, and wherein the top edge of said head lap forms an upwardly bulging fulcrum in the surface of the intermediate shingle in said area, each of the similar shingles in said double coverage arrangement comprising a substantially rectangular body and having a substantially thick stripe of pressure sensitive adhesive of a tacky nature extending thereacross in alignment with the upwardly bulging fulcrum formed by the top edge of the head lap of the most underlying shingle, and in the unexposed area of said shingle, whereby said stripe of adhesive is disposed between the uppermost and intermediate shingle in said head lap area.

3,003,289

SELF SEALING ASPHALT SHINGLES

Walton V. Leilbrook, Wyoming, and George Arthur Fensold, Mount Healthy, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio

Filed June 17, 1957, Ser. No. 665,958
2 Claims. (Cl. 50-103)

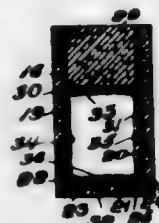


1. A high wind resistant roof covering comprising a plurality of similar flexible shingles laid in a double coverage arrangement, wherein the most underlying shingle has a head lap of not less than two inches, so that in the head lap area, portions of three shingles are superposed upon each other, at wherein the top edge of said head lap forms an upwardly bulging fulcrum in the surface of the intermediate shingle in said area, each of the similar shingles in said double coverage arrangement comprising a substantially rectangular body and having a substantially thick stripe of pressure sensitive adhesive of a tacky nature extending thereacross on its underside, in alignment with the upwardly bulging fulcrum formed by the top edge of the head lap of the most underlying shingle, whereby said stripe of adhesive is disposed between the uppermost and intermediate shingle in said head lap area.

3,003,290

REINFORCED CONCRETE STRUCTURE

Samuel Lerner, 14 Cooke St., Pawtucket, R.I.
Filed Oct. 8, 1957, Ser. No. 688,934
7 Claims. (Cl. 50-407)



1. A structural beam of extended length comprising a U-shaped foraminous metal lath having a bottom wall and side walls extending upwardly therefrom, a plurality of rods secured to the U-shaped lath in the area in which the bottom wall joins the upstanding side walls and which extend longitudinally along the length of said beam to support the beam in tension, a solid mass of material con-

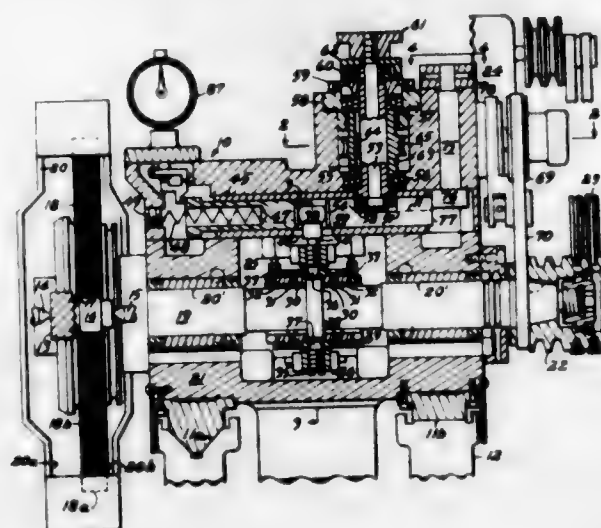
nected to and extending between said side walls and from substantially the upper extremities thereof downwardly to a level less than one half of the height of said side walls, the lower surface of the solid mass and the lower portion of the U-shaped lath defining a substantially unobstructed hollow void.

3,003,291

MECHANISM FOR SHOULDER GRINDING

Albert D. C. Stuckey, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Mar. 23, 1959, Ser. No. 801,243
1 Claim. (Cl. 51-34)



In a grinding machine having a grinding wheel and a follower operatively connected to the grinding wheel, said follower normally urged in one direction against an oscillating driver for reciprocation between normal limits, the combination of a cam adjacent the follower having a manually operated lever connected thereto, said cam spaced from the follower when the lever is in one extreme position, said cam engaging the follower to move the follower oppositely to said one direction to disengage the follower from the oscillating driver when the lever is moved to an intermediate position, said cam moving the follower further in said opposite direction to feed the grinding wheel beyond one of said normal limits as the lever is moved to an opposite extreme position, a stop member selectively swingable into the path of the lever to engage the lever at the intermediate position and prevent movement of the lever in one direction from said intermediate position, and a second stop member selectively swingable into the path of the lever to engage the lever at the intermediate position and prevent movement of the lever in the other direction from said intermediate position.

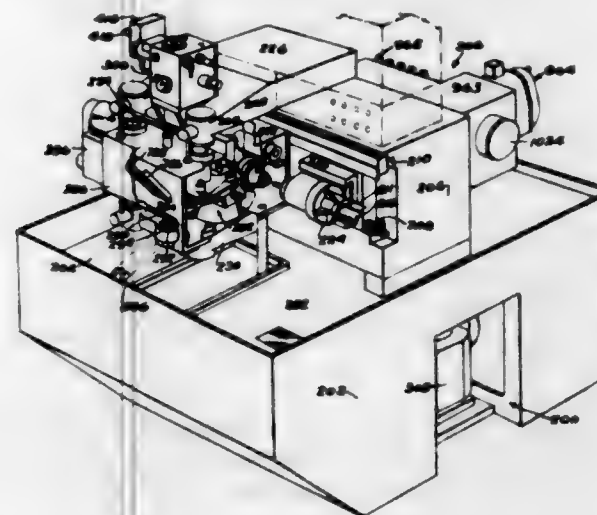
3,003,292

INTERNAL GRINDER

Earl A. Thompson, 1300 Hilton Road, Ferndale 20, Mich.
Filed Nov. 12, 1957, Ser. No. 695,611
41 Claims. (Cl. 51-50)

1. A machine tool for rotating both a work piece and a cutting tool comprising a main frame having one side provided with a pair of horizontal ways, a tool carriage slidable on the ways and carrying a power driven tool spindle with its axis horizontal, and projecting laterally to one side of the ways, means forming a pair of vertical ways secured to the frame at their upper and lower ends and spaced laterally from the frame beyond the tool spindle, a work carriage slidable on the vertical ways with its center of gravity adjacent the median plane of the ways, a power driven work spindle mounted on the

work carriage with its axis horizontal and spaced endwise from the tool spindle, means for reciprocating the tool carriage along its ways and means for feeding the work



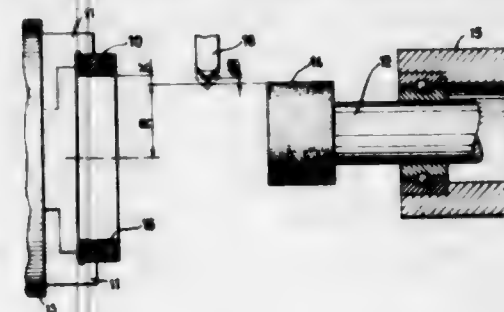
carriage along its ways whereby a work piece mounted on the work spindle may be machined by a tool mounted on the tool spindle.

3,003,293

MACHINE FOR GRINDING WORKPIECES TO NARROW TOLERANCES

Gerzon Glachowicz, Hagersten, Sweden, assignor to Ulvsunda Verkst der Aktiebolag, Bromma, Sweden, a corporation of Sweden

Filed July 11, 1955, Ser. No. 521,281
Claims priority, application Sweden July 12, 1954
5 Claims. (Cl. 51-165)



1. The combination in a grinding machine having a tool support, a work support, a rotary grinding wheel rotatably mounted on said tool support, a dressing tool for dressing the active surface of the grinding wheel, means mounting said dressing tool for adjustment relative to said grinding wheel to determine the position of the active surface of said wheel, and adjusting means for effecting said adjustment, of a measuring device for measuring a dimension of the workpiece after it has been ground on the machine, and means connecting said measuring device to said adjusting means to move said adjusting means a varying amount corresponding to the deviation of the dimension of the workpiece from a predetermined dimension as measured by said measuring device.

3,003,294

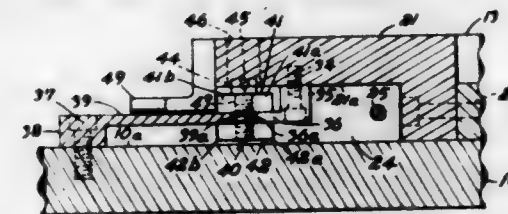
CLAMPING MECHANISM FOR MACHINE TOOL

Rolf Grzymek, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Jan. 13, 1959, Ser. No. 786,502
3 Claims. (Cl. 51-240)

1. In a machine tool having a support and a swivel table pivotally mounted thereon to rotate in a plane about a pivot axis, the combination comprising a bracket connected to said support spaced from said pivot axis and

having a flange above said support lying in a plane parallel to the plane of rotation of said swivel table, a flange connected to said swivel table and lying in the plane of the flange connected to said support, a clamping member



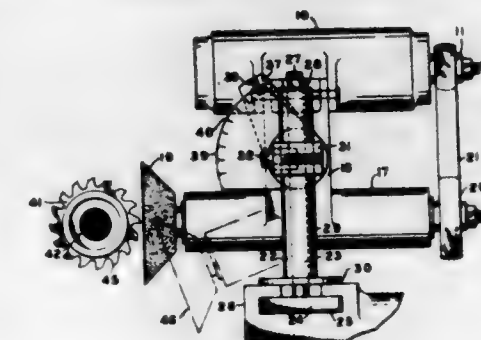
having jaws to receive loosely both flanges and permit relative rotation therebetween, and means to close said jaws to lock said flanges therein and prevent relative rotation between the swivel table and the support.

3,003,295

TOOL POST GRINDER SUPPORT WITH UNIVERSAL ANGULAR ADJUSTMENT

William Harvey Hunt, 2705 B Ave., National City, Calif.
Substituted for abandoned application Ser. No. 676,978, Aug. 8, 1957. This application Aug. 17, 1959, Ser. No. 834,908

3 Claims. (Cl. 51-259)



1. Means for rotatably supporting a grinding wheel on the supporting table of a machine tool comprising, in combination: a long vertical metal sleeve having a long top portion whose peripheral face is cylindrical; clamping means constructed to retain the bottom of said sleeve in position on top of said table with the axis of said sleeve vertical; a collar having an interior wall which is entirely circular and which fits over said cylindrical peripheral face and is slidable and freely rotatable thereon; clamping means carried by said collar and constructed to lock said collar and retain said collar at any desired height and angular position on the top portion of said sleeve; a cylindrical pivot shaft extending horizontally from the rear portion of said collar; a casing having a cylindrical bearing face in contact with said pivot shaft and rotatable thereon; screw threaded means constructed to lock said casing at any desired angular position on said pivot shaft; a power driven shaft rotatably supported in said casing; and a grinding wheel secured to one end of said power driven shaft.

3,003,296

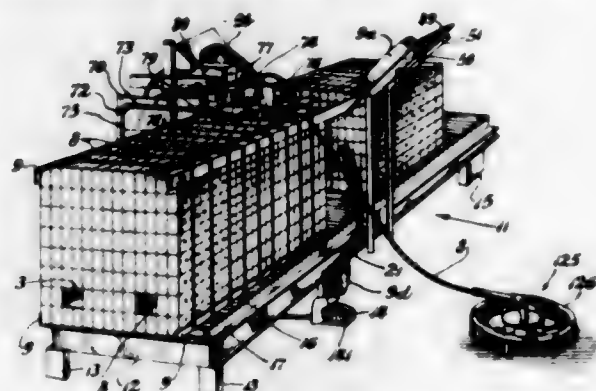
BRICK PACKAGING

John G. Feldkamp, Homewood, and George H. Bart and Robert E. Hager, Park Forest, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 20, 1959, Ser. No. 800,748

26 Claims. (Cl. 53-26)

1. The method of packaging objects comprising, stacking them in vertical stacks in a line one after the other with their longitudinally extending corners in alignment with each other, applying the leading end of a continuous corner protector strip extending from a continuous supply of corner protector strip along one of the longitudinally

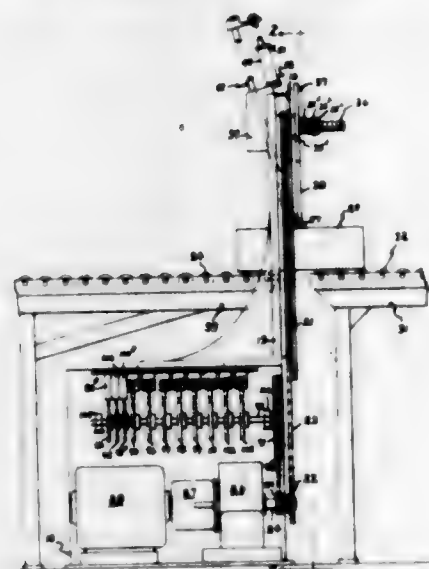
extending corners of a first stack, applying a strap around the first stack to secure the corner protector strip to the stack and to hold the stack together while the corner protector strip is still connected to said continuous supply, then transporting forward said first stack and the next



stack behind it, said first stack pulling the continuous strip along with it as it is transported forward to cause the strip to be drawn off from said continuous supply and applied continuously to a corner of the said next stack.

3,003,297 APPARATUS FOR WRAPPING ARTICLES WITH TAPE

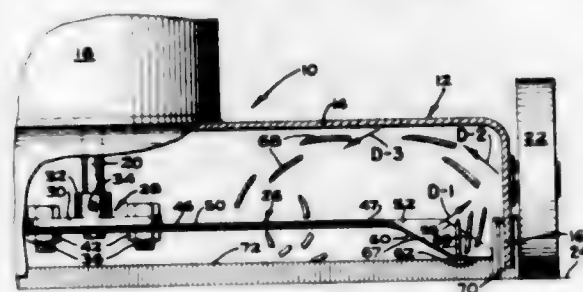
James H. Broadhead, Olin L. Johnson, Jr., and Lloyd B. Smith, Birmingham, Ala., assignors to J & B Manufacturing Company, a corporation of Alabama
Filed May 31, 1960, Ser. No. 32,720
19 Claims. (Cl. 53-198)



1. Apparatus for wrapping an article with tape comprising a rotatable member having an axial opening there-through for receiving the article being wrapped, tape supply means carried by said rotatable member with an end of said tape extending inwardly of said rotatable member, an actuating member adapted for movement at an angle to the plane of rotation of said rotatable member toward and away from the article being wrapped, means carried by said actuating member disposed to engage the inwardly extending end of said tape when said actuating member is moved toward said article at an angle to the plane of rotation of said rotatable member whereby upon rotation of said rotatable member the tape is wrapped about said article, and means to move said actuating member away from said article at an angle to the plane of rotation of said rotatable member after rotation of said rotatable member has commenced whereby said actuating member is moved out of contact and alignment with said inwardly extending end of the tape as the tape passes adjacent said actuating member to overlap the tape first applied to the article.

3,003,298 ROTARY MOWER BLADE

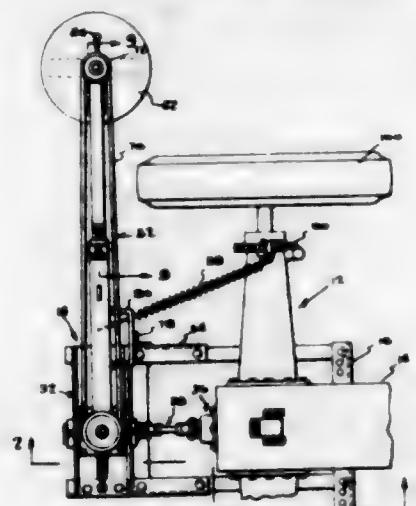
Lee W. Wisinger, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,949
3 Claims. (Cl. 56-25.4)



1. A rotary lawn mower comprising a housing having a roof provided with a depending peripheral skirt extending therearound and a rotatable drive shaft projecting downwardly from said roof, a cutter blade secured to said shaft within the housing for rotation in a horizontal plane and comprising a substantially straight main body portion extending radially from said shaft, said main body portion having a trailing edge and a leading edge chamfered to form a mulching cutter, said blade having an outer end portion bent downwardly from said main body portion along a line extending between said leading and trailing edges, the point of intersection of said line with said leading edge being closer to the axis of rotation of said blade than the point of intersection of said line with said trailing edge, said downwardly bent end portion having a leading edge forming a continuation of the leading edge of said mulching cutter, a sharpened cutting edge disposed at the lowermost extremity of said end portion adjacent the leading edge thereof and obliquely angled rearwardly therefrom, the upper face of said end portion defining an attack surface disposed at an acute angle to said housing skirt, whereby clippings severed by said sharpened edge initially glancingly engage said attack surface, thence are directed obliquely against said skirt, are thereafter deflected from said skirt to impinge obliquely against said roof and then deflected downwardly from the roof for re-severance by said mulching cutter.

3,003,299 MOWER ATTACHMENT FOR A TRACTOR

Charles R. Smith, Longview, and Raymond R. Comer, Broadlands, Ill.
Filed Oct. 23, 1959, Ser. No. 848,394
5 Claims. (Cl. 56-25.4)

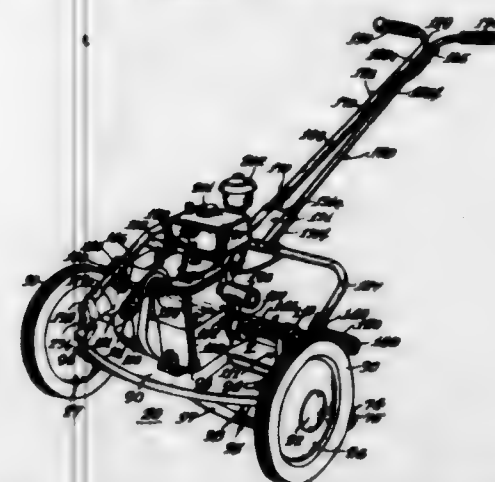


1. The combination with a mobile frame, of a mower attachment comprising a standard positioned adjacent one end of said frame and having the lower end thereof con-

nected to said frame for tilting movement of said standard in a vertical plane disposed transversely of said frame, a horizontally disposed boom positioned transversely of said frame adjacent the upper end of said standard and having one end connected to said standard for swinging movement of said boom from the transverse position to a position in which said other end is rearwardly of and spaced from the rearward end of said frame, a vertically disposed driven shaft carried by said other end of said boom, and a horizontally disposed mowing blade on the lower end of said driven shaft.

3,003,300 POWER LAWN MOWER

Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Original application Oct. 22, 1954, Ser. No. 464,020, now Patent No. 2,886,934, dated May 19, 1959. Divided and this application Aug. 25, 1958, Ser. No. 756,750
11 Claims. (Cl. 56-26)

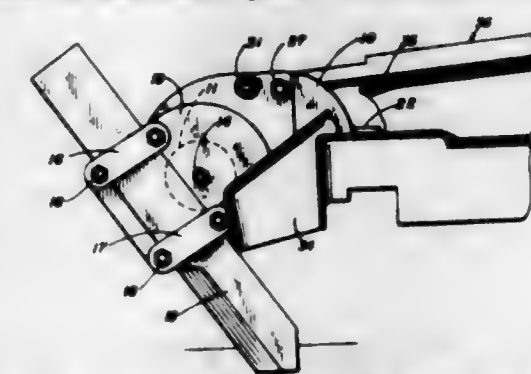


1. A lawn mower of the power type comprising a pair of ground wheels, support means carried by said ground wheels, a prime mover mounted on said support means, a cutting element rotatably mounted on said support means, said prime mover and the axis of rotation of said cutting element being fixed relative to each other and relative to said support means, driving mechanism for directly interconnecting said prime mover and said cutting element, handle means pivotally connected to said support means, stop members for limiting the pivotal movement of said handle means relative to said support means, a rotatable shaft supported for rotation by one of said means and disposed in spaced parallel relationship with the axes of said ground wheels, said shaft being so supported by one of said means that pivotal movement of said handle means causes said shaft to move toward and away from the axis of said ground wheels, means drivingly connecting said shaft to said prime mover, and friction drive members rotatable with said shaft and engageable with said ground wheels to drive the latter in one position of said handle means relative to said support means.

3,003,301 POWER MOWER EDGER ATTACHMENT

Verne R. Keon, 205 Sterling Point Drive, Portsmouth, Va.
Filed July 21, 1959, Ser. No. 828,558
1 Claim. (Cl. 56-25.6)

In an edger attachment, the combination which comprises a bracket having an L-shaped section with bolt holes therein, said bracket also having a vertically disposed flange on the edge opposite to that on which the L-shaped section is positioned, a side plate bolted to the flange of the bracket and extended therefrom, a swivel plate parallel to and positioned in spaced relation to the side plate, a bolt extended through the side plate and swivel plate for pivotally mounting the swivel plate on the side plate, a spacing washer on the bolt pivotally



said slot for clamping the swivel plate in radially adjusted positions on the side plate, a blade having a sharp cutting edge, links having bolts extended through ends thereof and threaded through the swivel plate for clamping said blade to said swivel plate, an arm pivotally mounted on the side plate and a shield carried by said arm and positioned to extend over the cutting edge of the blade in an upwardly disposed inoperative position.

3,003,302 ROTARY WHEEL SWATH TURNER

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company
Filed Sept. 30, 1957, Ser. No. 686,960
Claims priority, application Netherlands Sept. 29, 1956
6 Claims. (Cl. 56-370)



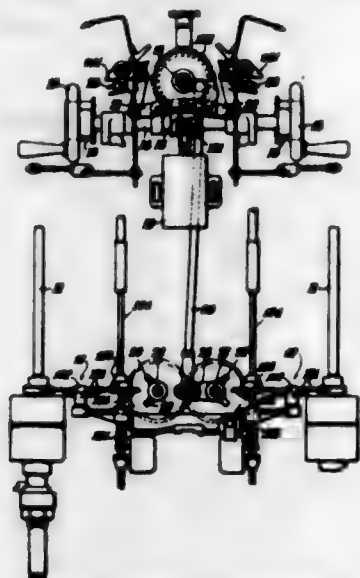
1. A device for displacing material lying on the ground, comprising a beam, at least two groups of rake wheels on said beam, the groups displacing said material independently of each other, the rake wheels in each group being disposed at an acute angle with respect to each other; the rake wheels in each group being operatively associated to displace said material in the same general direction.

3,003,303 TEXTILE TWISTING MACHINE CONTROL MECHANISM

Frank Wright, Haworth, Keighley, England, assignor to Prince-Smith & Stoll Limited, Keighley, England
Filed Aug. 29, 1958, Ser. No. 758,065
Claims priority, application Great Britain Sept. 2, 1957
7 Claims. (Cl. 57-78)

1. A textile twisting machine comprising spindles and separate drive and brake means for said spindles, a rotary control member, means for starting and stopping

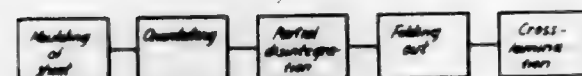
said separate drive means, stop motion detector means, means arranged on said control member for actuating said stopping and starting means, means arranged on said control member for neutralizing said stop motion



detectors when said machine is stopped, means operatively associated with said control member for actuating said brake means to apply a braking action on said spindle when said drive means are stopped and for removing said braking action when said drive means are started.

3,003,304 METHOD OF MANUFACTURING NON-WOVEN FABRICS AND YARNS

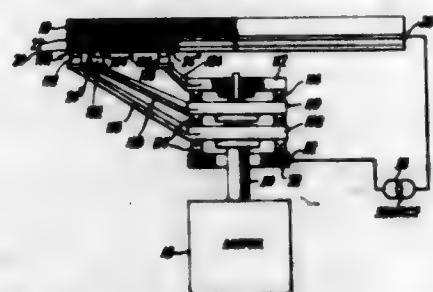
Ole-Bendt Rasmussen, Copenhagen, Denmark
(14 Gyvelbøkken, Birkeroed, Denmark)
Filed Oct. 31, 1955, Ser. No. 543,983
6 Claims. (Cl. 57-157)



4. Method of manufacturing a yarn comprising the steps of partially splitting up a highly unilaterally oriented, thin, continuous sheet material consisting of a synthetic organic linear polymer, so as to produce a network of fibers which are continuously interconnected in the entire dimension of the sheet, subsequently folding out said network, in case it is infiltrated or coiled, to a band of parallel fibers, which are mutually interconnected, in succession hereto laminating said band with at least one other similar band of fibers, and finally twisting said laminate to a yarn.

3,003,305 CLOCK

Irwin Goldman, Malverne, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed July 10, 1958, Ser. No. 747,668
3 Claims. (Cl. 58-50)

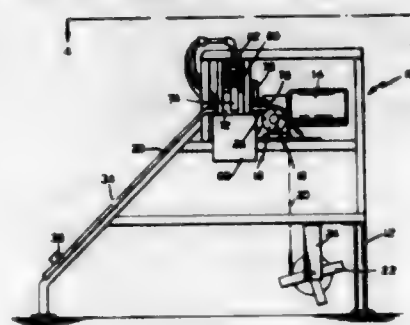


1. In a clock, a clock face having an annular section, said section comprising an annular transparent electrical conductive electrode, an annular electroluminescent

layer, one surface of which is in contact with said annular electrode, and a plurality of separate electrodes in contact with the opposite surface of said electroluminescent layer at equidistantly spaced positions, each of said separate electrodes having an offset inward extension.

3,003,306 SPROCKET CHAIN SEPARATOR WITH MEANS FOR MEASURING THE DESIRED LENGTH OF CHAIN

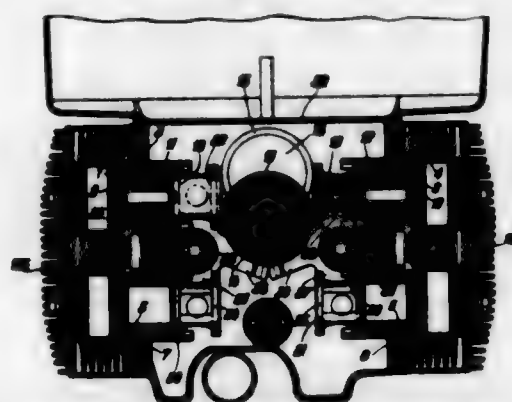
Carter E. Quisenberry, Kirkwood, N.Y., assignor to American Machine & Foundry Company, a corporation of New York
Filed Dec. 10, 1957, Ser. No. 701,761
21 Claims. (Cl. 59-7)



1. A chain separating apparatus comprising a source of supply of sprocket chain consisting of links formed by side plates and cross pins, a chain feeding sprocket, a drive for rotating said sprocket to feed the leading end of said chain along a predetermined and at least partially downwardly inclined measuring path, a detector actuated by the leading end of said chain, a link locator controlled by the actuation of said detector, and cross pin ejectors coacting with said locator and controlled by said detector to displace pins from the chain links to be separated each time said detector measures off the desired length of sprocket chain, and means for actuating said link locator and said cross pin ejectors.

3,003,307 COMPOSITE POWER PLANT

Hermann Klase, Überlingen (Bodensee), Germany
Filed Oct. 19, 1956, Ser. No. 617,058
Claims priority, application Germany May 12, 1956
3 Claims. (Cl. 60-13)

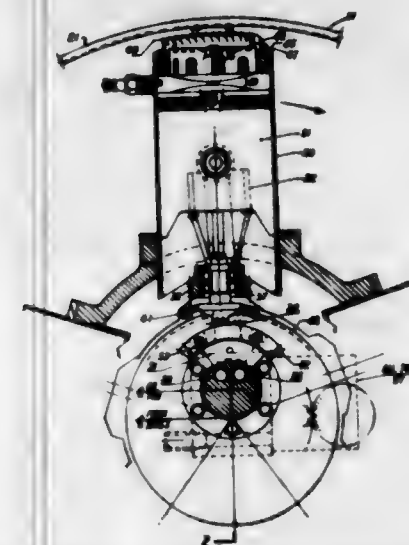


1. A composite power plant comprising an internal combustion engine having two pairs of cylinders and a first shaft, individual pistons disposed in each of said cylinders for reciprocation thereof and operable to drive said first shaft with a substantially constant rotational speed regardless of variations of load, a swinging lever coupled to each pair of pistons, a tiltable yoke adapted to be displaced, said yoke being positioned adjacent said swinging levers, a pair of swinging cranks disposed in said yoke and displaceable therewith and in driven connection with said swinging levers, a second shaft, coupling means for rotating said second shaft alternately and sequentially by means of said cranks, an exhaust gas tur-

bine, means establishing a conduit between said cylinders and said turbine, a pair of eccentric cams on said first shaft, yieldable means operable for driving said cams from said pistons thereby to rotate said first shaft, and gear means for connecting said first shaft to said turbine.

3,003,308 ROTARY RADIAL PISTON ENGINE

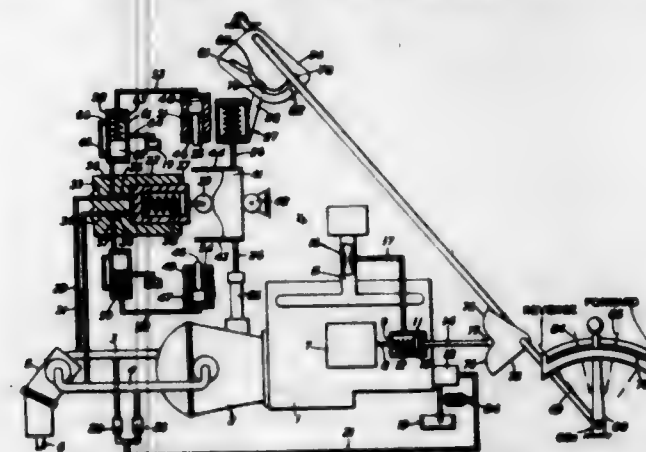
Leslie W. Beven, 44 E. Washington St., Palestine, Ill.
Filed Mar. 11, 1957, Ser. No. 645,224
3 Claims. (Cl. 60-13)



1. A rotary internal combustion engine of the expansion-reaction type, said engine embodying a stationary crankshaft, a crankcase journaled for rotation on said crankshaft, a radially disposed cylinder mounted on said crankcase, a firing chamber and a piston in said cylinder, a rotary exhaust valve in said cylinder, the rotor of said valve being driven by a shaft axial with said cylinder, said rotor being rigidly affixed to said shaft and piloted in the stator of said valve, said stator being fixed to said cylinder, the inner end of said valve driver shaft being provided with roller bearings of the radial-thrust type, said bearings being secured to and within said crankcase and mounted to hold said shaft on center and to withstand the axial thrust of the explosions and of the centrifugal action, falling upon said exhaust valve rotor.

3,003,309 SINGLE LEVER CONTROL APPARATUS FOR EN- GINE AND HYDRAULIC TRANSMISSION

Eric H. Bowers, Cheltenham, England, and Oswald Thoma, Grünwald, near Munich, Germany, assignors to Dowty Hydraulic Units Limited, Ashchurch, Tewkesbury, England, a company of Great Britain
Filed Jan. 29, 1960, Ser. No. 5,493
Claims priority, application Great Britain Jan. 30, 1959
6 Claims. (Cl. 60-19)



1. In combination with a variable speed prime mover, a power transmission driven thereby and arranged for

connection to a load, and control apparatus including speed-varying means for said prime mover, infinitely variable speed ratio control means for said transmission, a single manual control member movable from a neutral to a maximum position, a first operative connection between said control member and said speed-varying means arranged to increase the prime mover's speed substantially evenly with movement of said control member from neutral to maximum, a second operative connection between said control member and said speed ratio control means, said second operative connection including means to increase the speed ratio of the transmission to a maximum during the first part of control member movement from neutral, and to retain such speed ratio at maximum during the remainder of control member movement to maximum, and means sensitive to overload upon the prime mover and operatively connected to the speed ratio control to reduce such speed ratio automatically to the extent to remove such overload.

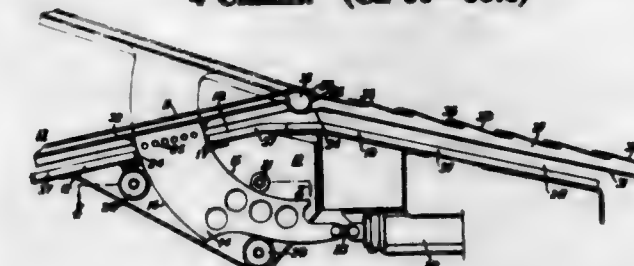
3,003,310 COMBUSTION PROCESS EMPLOYING IRRADI- ATED SOLID POLYMERIC FUELS CONTAINING OXIDIZING AGENTS

Gaetano F. D'Alella, South Bend, Ind., assignor to Bar Dal, Inc., a corporation of Delaware
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,485
20 Claims. (Cl. 60-35.4)

1. A process of combustion comprising the step of feeding in a continuous manner into an ignited zone, an elongated shape of an irradiated polymer mixture which consists essentially of an addition polymer of a compound having a polymerizable ethylenic group therein and selected from the class consisting of hydrocarbon and hydrocarbon derivatives having only derivative groups therein selected from the class consisting of ether and ester groups, and about 5-80 percent by weight of a combustion-supporting material selected from the class consisting of potassium perchlorate, ammonium perchlorate, ammonium nitrate, ammonium persulfate, potassium permanganate, manganese dioxide, potassium iodate, potassium nitrate, potassium dichromate, chloric acid, perchloric acid, and aryl perchloryl compounds, said polymer mixture having received an irradiation dosage of at least about two megareps of ionizing radiation derived from an energy source of at least 100,000 electron volts.

3,003,311 ADJUSTABLE PROPULSION NOZZLES

John Wallace Hall, Southend-on-Sea, England, assignor to The De Havilland Engine Company Limited, Leamington, England, a company of Great Britain
Filed July 11, 1958, Ser. No. 748,005
Claims priority, application Great Britain July 17, 1957
4 Claims. (Cl. 60-35.6)



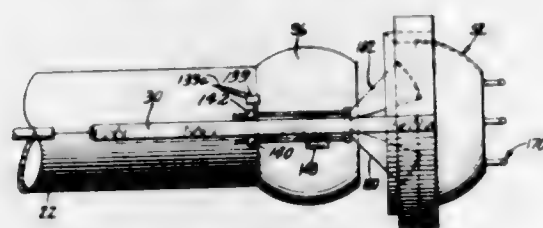
1. A propulsion nozzle construction for jet propulsion apparatus comprising a fixed tubular nozzle portion having a wall and a longitudinal axis, a series of adjustable petals encircling said axis within said fixed nozzle portion, each of said petals being mounted to swing its downstream end between an "open" position in which its downstream end is close to the wall of the fixed tubular nozzle portion, and a "closed" position in which said downstream end is swung away for the wall of

the tubular portion so as to vary the effective cross-sectional area of the nozzle and having an outer side which is remote from the said longitudinal axis, and operating means for swinging said petals, said operating means comprising a rigid web rigidly secured to at least each alternate petal and extending through a slot in the wall of the tubular nozzle portion outwardly from said petal and in a substantially radial direction with respect to the longitudinal axis of the tubular nozzle and having a downstream edge and an upstream edge, each said rigid web being provided with a first cam surface on its downstream edge and a second cam surface on its upstream edge, guiding means for each said rigid web positioned outside the gas stream passing through the nozzle and comprising at least one roller arranged to cooperate with one of said cam surfaces and at least two rollers spaced along the length of and cooperating with the other of said cam surfaces, said rollers being fixedly positioned relative to the said fixed tubular nozzle portion.

3,003,312

EXHAUST NOZZLE FOR JET ENGINES

Jack D. Jewell, Perry, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Aug. 19, 1957, Ser. No. 678,915
2 Claims. (Cl. 60—35.54)



2. A nozzle assembly for a jet propulsion engine comprising a nozzle member having a fluid conducting opening through which a propellant fluid may flow and be emitted through the opening, a nozzle end positioned over the opening, support means for the nozzle end operative to extend the nozzle end a distance spaced from the opening, adjustment means whereby the size of the nozzle end can be varied to increase or decrease the flow area for fluid therethrough, a pair of opposed target fluid deflectors movable laterally toward the gas stream at a location between the nozzle extension and extended nozzle, and control means operable to move the targets to partial reverse position out of the gas stream and to adjust the extended nozzle to maximum area whereby the unit will operate as a secondary air ejector to cool the jet exhaust and decrease the sound power.

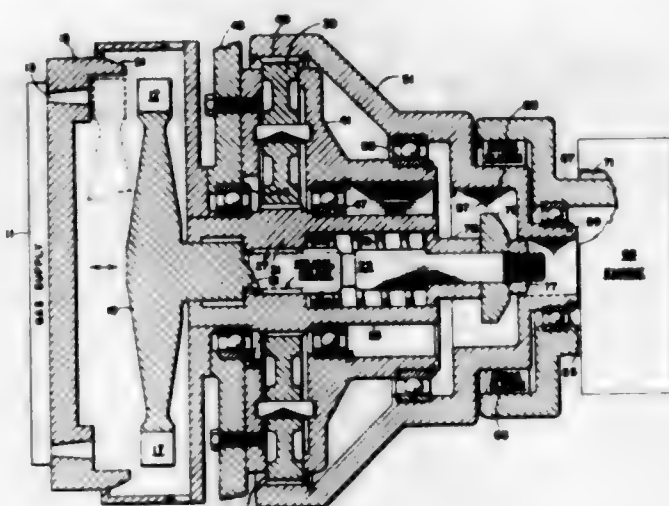
3,003,313

TURBINE WITH AXIALLY MOVING PLANE OF ROTATION

Dennen J. Bunker, Whitesboro, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,361
3 Claims. (Cl. 60—39.14)

1. A turbine-powered drive unit comprised of a turbine wheel having a shaft; gas means arranged to direct gases to said turbine wheel to cause rotation thereof, a speed-reducing gear train, connection means including an axially-fixed rotatably-mounted barrel member surrounding said shaft operably connecting said turbine shaft to said gear train, said barrel member having an external pinion gear connected to said gear train, spring means cooperating with said barrel member and spacing said turbine wheel in partially-effective speed-limiting position in relation to said gas means and providing a predetermined axial force, said shaft being helically splined in said barrel member so that said shaft and turbine wheel move axially toward said gas means against said axial

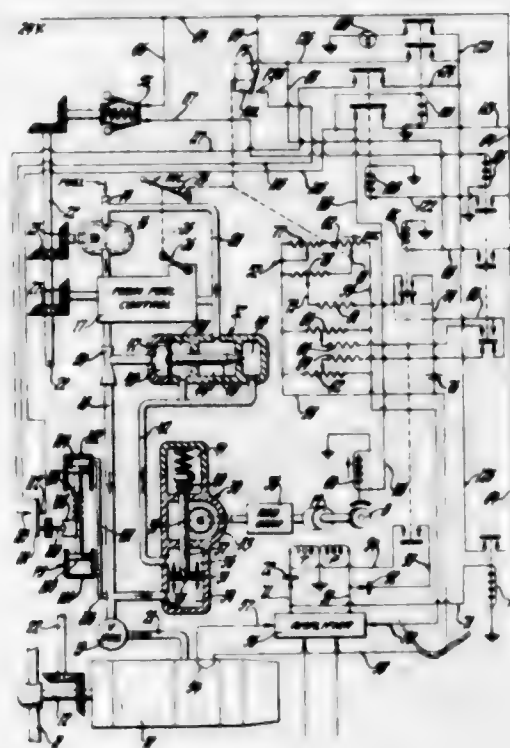
force when said turbine wheel is rotated and said gear train is connected to a predetermined load, stop means constructed and arranged to limit the axial movement of said turbine wheel toward said gas means so that said turbine wheel is positioned in fully-effective relation to



said gas means, said spring means being arranged to return said turbine wheel to said partially-effective speed-limiting position when said gear train is not so loaded; whereby the turbine gradually develops torque and the turbine wheel rotates at safe speeds when not loaded.

3,003,314

TEMPERATURE DATUM FUEL CONTROL
Edmund M. Irwin, Robert C. Keetch, and Lester W. Wright, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 10, 1958, Ser. No. 714,129
8 Claims. (Cl. 60—39.28)



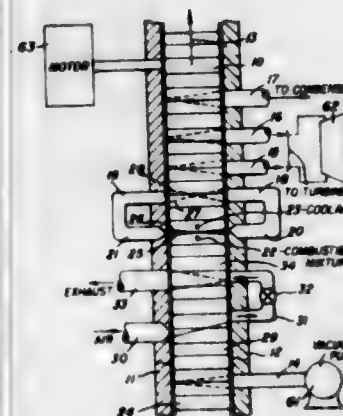
1. A fuel system for a gas turbine engine comprising, in combination, a fuel control adapted to meter fuel to the engine in accordance with power requirements and engine characteristics, a temperature datum control capable of modifying the output of the fuel control, means responsive to engine temperature, means establishing a scheduled temperature, power means actuated by the aforementioned means coupled to the datum control to vary the output thereof, means for locking the datum

control at any point in the range thereof, and means actuated as a function of the rate of change of a condition indicative of engine operating conditions coupled to the locking means for actuation thereof during transients in the said condition.

3,003,315

COMPRESSION IGNITION PRESSURE EXCHANGER

Dudley Brian Spalding, 2 Vineyard Hill Road, Wimbledon, London S.W. 19, England
Filed Oct. 24, 1956, Ser. No. 618,102
Claims priority, application Great Britain Oct. 26, 1955
12 Claims. (Cl. 60—39.45)

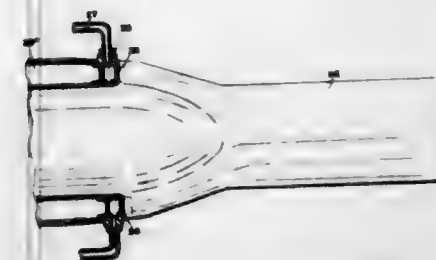


1. Pressure exchanger apparatus including a rotatable ring of open-ended substantially axially-extending cells for the compression and expansion of fluid, two stationary end-plates positioned one adjacent each end of the cells and at least one of the end-plates having ports therein to control fluid flow through the cells, driving means to rotate the ring of cells relatively to the end-plates, an inlet duct to admit an explosive combustible mixture to the cells, a compressed fluid-carrying duct communicating with the cells through one of the ports in the end-plates positioned, considered in the direction of relative rotation, after the port to introduce the combustible mixture, means to supply compressed fluid to the compressed fluid-carrying duct, an outlet duct communicating with one of the ports in one of the end-plates which, considered in the direction of relative rotation, follows the compressed fluid inlet port, and power production means communicating with the said outlet duct.

3,003,316

COOLING MEANS FOR FORKED EXHAUST DUCTS OF GAS TURBINE ENGINES

Thomas Henry Kerry, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Feb. 9, 1954, Ser. No. 409,187
Claims priority, application Great Britain Feb. 10, 1953
5 Claims. (Cl. 60—39.66)



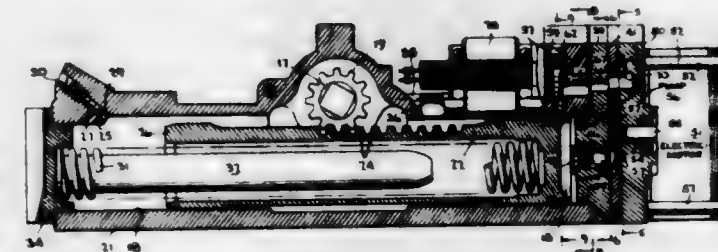
1. An exhaust system for a gas turbine engine having an air compressor, flame tubes and a turbine, said system comprising a single, thin-walled duct connected to receive at its up-stream end exhaust gases from said turbine, said

duct being forked at its downstream end to form a thin walled pair of ducts, and in which adjacent thin walls of said pair of ducts have a junction presenting a thin edge directly facing and in the main path of the hot gas stream issuing from the single duct for dividing it, means for protecting and cooling said junction comprising a heat shielding muff shaped in elevation to parallel said junction and so shaped in cross-section and positioned upstream of said junction as to encompass the edge thereof in spaced relation and having side walls overlapping and spaced from the forked duct walls downstream of said junction, means to supply cooling air from said compressor to the space between the muff and junction whereby said air is caused to flow over said junction and the adjacent walls of the pair of ducts and is discharged into the gas stream.

3,003,317

HYDRAULIC MECHANISM FOR A DOOR OPERATING SYSTEM

Charles S. Schroeder, Wynnewood, Mathias M. Check, Stratford, and Raymond Schmid, Havertown, Pa., assignors to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed July 31, 1958, Ser. No. 752,355
9 Claims. (Cl. 60—52)



1. In a door actuator assembly comprising a housing, a chamber in said housing, a piston movable in said chamber, a spring in said housing for urging said piston in one direction, a fluid pump operable to effect movement of said piston in an opposed direction and a motor for operating said pump, a passageway for exhausting fluid from said chamber as said piston is moved by said spring, and valve means in said passageway movable to close the same to prevent the flow of fluid therethrough and therefore to render said spring ineffective, a control circuit having a solenoid operable to move said valve means to closed position, a relay effective to energize said solenoid and motor, means responsive to a particular condition for controlling operation of said relay, and time delay means for maintaining said solenoid and motor energized for a predetermined period of time after the occurrence of said particular condition.

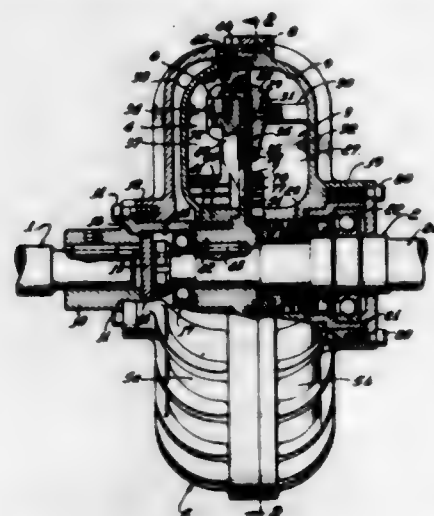
3,003,318

FLUID COUPLED TRANSMISSION MECHANISM

Don Heyer, 4169 Cogswell Road, El Monte, Calif.
Filed Mar. 18, 1957, Ser. No. 646,852
15 Claims. (Cl. 60—54)

1. In a fluid coupled transmission mechanism having a fluid containing chamber in which a driving rotor, a driven rotor and means providing a fluid work circuit are operable to effect a fluid driving couple between said rotors, a shaft in said chamber; means providing a driving connection between one of said rotors and said shaft operable to permit limited relative movement between said one rotor and said shaft; said means including a torque arm fixed on said shaft; a pair of bellows each connected at its opposite ends with said arm and said one rotor respectively; means providing a passage communicating said bellows one with the other; said bellows having ports for intaking fluid from said chamber; check

valves controlling said ports; spring means resisting compression of said bellows; and control means operatively



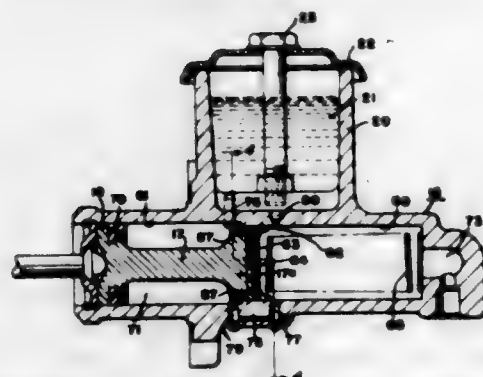
connected with said shaft and said one of said rotors and operable to vary the driving force of said fluid responsive to said relative movement.

3,003,319

HYDRAULIC ACTUATING SYSTEM

Jerry H. Gordley, Brookville, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 28, 1959, Ser. No. 849,300
6 Claims. (Cl. 60-54.6)



2. A hydraulic actuating system for a motor vehicle, including, a first hydraulic system for operating the brakes of the vehicle and a second hydraulic system for operating a second component of the vehicle, a storage container for hydraulic fluid having a main fluid supply chamber and separate first and second sump chambers in fluid connection with said main chamber, a master cylinder and piston assembly in said first hydraulic system in fluid connection with one of said sump chambers to receive fluid therefrom, a second hydraulic cylinder and piston assembly in said second hydraulic system in fluid connection with the other of the sump chambers to receive fluid therefrom, auxiliary cylinder and piston means forming liquid displacement means operable with said second assembly, means forming passage means connecting said auxiliary cylinder with said one sump chamber for displacement of fluid from the said auxiliary cylinder into the said one sump chamber with the discharge end of the said passage means disposed substantially above the bottom level of the said one sump chamber, and means forming fluid connecting passage means between said second cylinder and said auxiliary cylinder to supply fluid to said auxiliary cylinder from said second cylinder to effect depletion of fluid in said second cylinder and the sump chamber connected therewith and deliver the so supplied fluid to said master cylinder sump chamber through said first mentioned passage

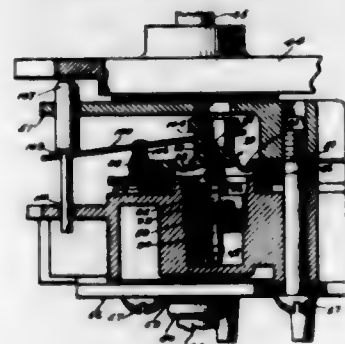
forming means to maintain thereby fluid supply to said first system at the expense of depletion of fluid from said second system to warn thereby the operator of the vehicle of hydraulic fluid loss from the hydraulic system.

3,003,320

VACUUM REGULATOR AND CONTROL SYSTEM

Frank Edward Obermayer, Oak Park, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Dec. 17, 1957, Ser. No. 783,408
8 Claims. (Cl. 60-60)



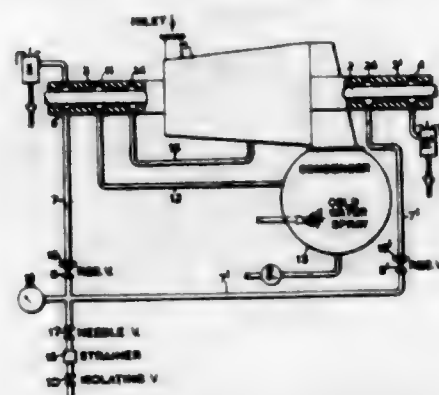
7. In a vacuum control device, a source of vacuum, a valve body having a plurality of valve chambers therein adapted to be connected to said source of vacuum and to a plurality of vacuum motors, each vacuum motor being adapted to operate a device to be operated, vacuum control means in said valve chambers connected with said source of vacuum and said valve means for controlling the degree of vacuum to be applied to said vacuum motors, adjustable means associated with said vacuum control means for singly and simultaneously selectively operating said vacuum motors and adjusting said control means to select the degree of vacuum applied to the operated vacuum motors and the degree of operation of the respective devices operated thereby.

3,003,321

STEAM TURBINES

Laurence Hugo Frederick Warth, Rugby, England, assignor to The English Electric Company Limited, London, England, a British company

Filed Feb. 12, 1957, Ser. No. 639,780
Claims priority, application Great Britain Jan. 31, 1955
1 Claim. (Cl. 60-64)



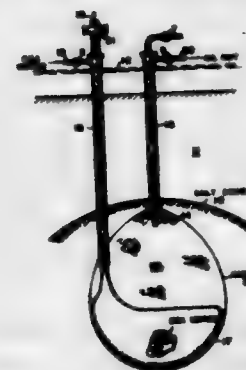
Sealing means for the shaft of a steam turbine having a housing having a high pressure end and a low pressure end, a rotor shaft journaled therein, and a main turbine condenser, comprising a combination: a source of sealing steam, a gland mounted on the high pressure end of said turbine housing and extending outwardly therefrom sealing the said rotor shaft with respect to the said housing, annular pockets being arranged in the said gland at different distances from the interior of the said housing, one of said pockets which is arranged furthest from the said housing being in direct fluid communication with

said source of sealing steam, an intermediate pocket being in fluid communication with said turbine condenser, and venting means in fluid communication with a pocket which is arranged further from the housing than said intermediate pocket.

3,003,322

OIL STORAGE

James K. Jordan, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,459
1 Claim. (Cl. 61-5)



A system for the storage of oil in a subterranean location underlying a body of sea water and for removal of oil stored in this location comprising an offshore subterranean salt dome provided with a cavity; at least a first conduit extending from above the surface of the water into the upper portion of said cavity; at least a second conduit extending from above the surface of the water into said cavity and provided with a shoulder adjacent the lower end thereof; an inflatable, deflatable bag arranged in said cavity, the neck portion of said bag being provided with a coupling having a shoulder engageable with said second conduit shoulder, said shoulders cooperating to prevent further downward movement through said second conduit of the neck portion of said bag; a cable connected to said coupling adapted to lower said bag deflated through said second conduit into said cavity; said first conduit being a conductor of oil from said cavity and said second conduit being a conductor of sea water into said bag when it is desired to displace oil stored in said cavity from said cavity by supplying said bag with sea water and said conduit being a conductor of sea water from said bag and said first conduit being a conductor of oil into said cavity when it is desired to store oil in said cavity.

3,003,323

COMPOSITE PILE CONNECTOR

Arthur Roland Holt, Jacksonville, Fla., assignor to Arisco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Jan. 29, 1958, Ser. No. 711,879
4 Claims. (Cl. 61-53)



1. A composite pile connector comprising a metallic cylindrical ring and two plates disposed as chords within said ring, said chordal plates meeting at one end of each plate to form the apex of a V with one leg on each side of the center of said ring, and being welded to said ring at said meeting end and said chordal plates also being

welded to said ring at their other ends, said plates being of a length greater than the radius of said ring, and serving to displace the wood of a wood pile so as to wedge it tightly within said ring.

3,003,324

CONTAINER FOR BEVERAGES OR THE LIKE

John R. Vance, R.R. 1, Box 516, Clayton, Ohio, and William R. Donnelly, 903 Washington Ave., Piquette, Ohio

Filed July 7, 1959, Ser. No. 825,541
3 Claims. (Cl. 62-4)



1. A container for beverages or the like, comprising: a main container, heat-conducting means dividing said main container into first and second compartments sealed from each other, said first compartment being completely closed and sealed and having a beverage or the like therein, said second compartment having an opening at the exterior of said container, a flexible exterior wall closing said opening, partition means displaceably mounted in said second compartment spaced from said flexible exterior wall and dividing said second compartment into a first chamber adjacent said flexible wall and a second chamber remote therefrom and being displaceable in response to hydraulic pressure thereon to establish communication between said chambers, chemical materials in said chambers, said chemical materials being such that when mixed, they react with a resultant change in temperature, the chemical in said first chamber including a liquid and completely filling said first chamber whereby inward pressure on said flexible wall is hydraulically transmitted to said partition means to establish communication between said chambers and to permit mixing of the chemicals therein, said flexible exterior wall being of light-transmitting material, said chemical materials being such that a mixture thereof is of a distinctively different color from the chemical material sealed in said first chamber, and means defining an annular channel encompassing said opening, said flexible exterior wall comprising a flexible diaphragm having its periphery sealingly engaged in said annular channel.

3,003,325

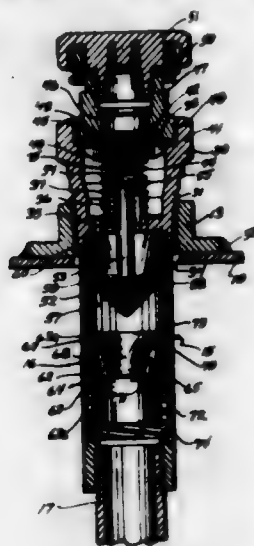
GAS DISPENSING SYSTEM

Robert E. Poethig, Glenview, and Theodore A. St. Clair, Deerfield, Ill., assignors to The Eastman-Blossing Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 31, 1957, Ser. No. 693,772
16 Claims. (Cl. 62-55)

6. In combination, a tank for storing liquefied gas under pressure, a filler and flow control valve assembly mounted at an opening in said tank comprising a housing carrying a dip tube extending to a point adjacent the bottom of the tank, a central passage formed in said housing, said housing being formed with a plurality of circumferentially spaced ports, means mounted within said passage for

closing said ports and having a venturi throat dividing said passage into two zones, said one of said zones being in communication with one end of said housing to receive replenishing fluid and the other of said zones being in communication at the other end of said housing with a point near the bottom of the tank through said dip tube to receive liquid educted from the tank, said ports opening into said one of said zones near the top of the vessel, a check valve in said passage opening in the direction of

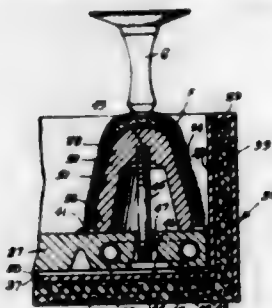


flow of replenishing fluid through said passage, said means including a slidable element disposed within said housing for relative movement in said housing to effect opening of said ports when the pressure in said one zone is greater than the pressure in said other zone, a spring normally moving said element to open said ports, and means actuated by said check valve, upon the opening of said valve for actuating the first mentioned means to close said ports when said valve is opened a predetermined distance.

3,003,326

INDIVIDUAL VESSEL REFRIGERATION METHOD AND MEANS

Frederick W. McDonald, Elmhurst, Ill., assignor, by mesne assignments, to A & W Root Beer Company, Santa Monica, Calif., a corporation of California
Filed Mar. 6, 1959, Ser. No. 798,317
16 Claims. (Cl. 62-62)

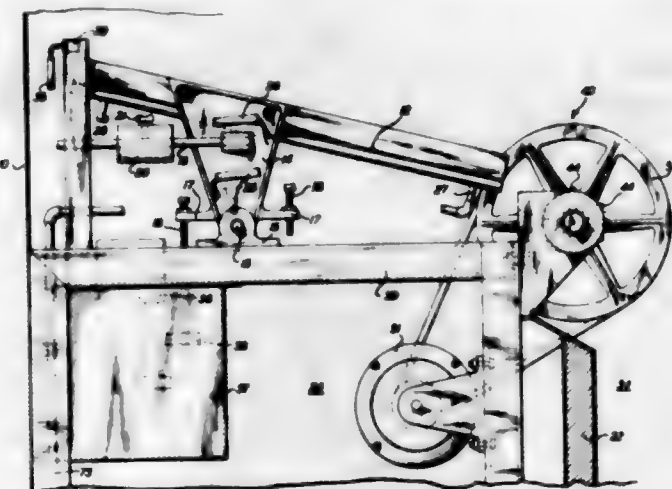


1. A method of conditioning individual open mouth vessels comprising the steps of: disposing a vessel in an inverted position onto an upwardly directed heat-conductive arbor partially receivable therein; refrigerating only a part of the arbor, which is axially remote and below the vessel to obtain generally axially directed heat flow in the arbor and to obtain a slight thermal gradient along the arbor within the vessel, to thereby effect heat transfer from the interior surface of the vessel to the exterior surface of the arbor, until the temperature of the exterior surface of the vessel is below 32 F.; and thereafter exposing the vessel, while on the arbor, to air having a dew point above the temperature of the external surface of the vessel to effect progressive cooling and downward flow of air along the vessel and hence also the deposit of a substantially uniform coating of frost on the vessel.

3,003,327

ICE MAKING MACHINE

Joseph Dennis Cox and Damsby Anderson Council, Fort Smith, Ark.; said Cox assignor to said Council
Filed Aug. 25, 1958, Ser. No. 757,648
8 Claims. (Cl. 62-132)



8. In automatic ice making apparatus, the combination comprising a hollow evaporator plate of substantially rectangular flat shape pivotally mounted on a horizontal axis transverse of the plate and at one side of its center of gravity so that the plate is normally disposed in a freezing position unbalanced in one degree of inclination for rocking movement to an ice harvesting inclined position of a different degree of inclination, means for directing against the upper portion of an outer surface of said plate a liquid which will flow by gravity down said surface, inlet and outlet conduits for refrigerant fluid on said plate, means holding said plate in said freezing position until the liquid flowing down said surface freezes to form thereon a predetermined quantity of ice, a valve for admitting a relatively hot gas to said plate, and means controlled by movement of said plate from said freezing to said harvesting position consequent upon formation of said predetermined quantity of ice thereon overbalancing said plate for opening said second valve to admit hot gas to the plate for freezing the ice formed thereon for gravitational sliding movement off the plate in said ice harvesting inclined position.

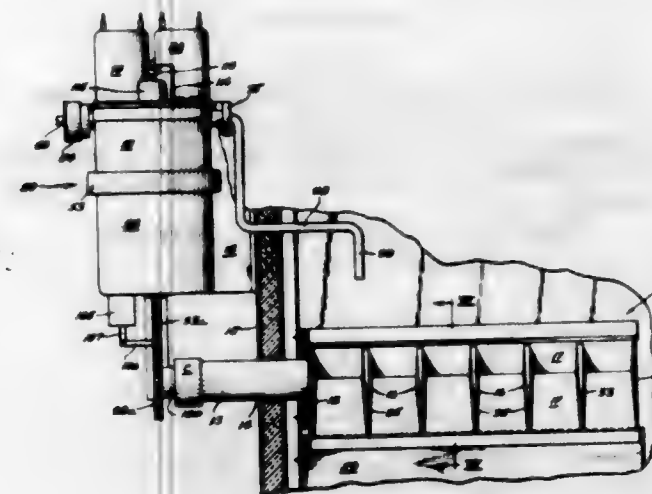
3,003,328

INTERNALLY HEATED SLUG VALVE

Carl C. Bauerlein, Lincolnwood, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed May 18, 1959, Ser. No. 814,047
3 Claims. (Cl. 62-135)

1. In a fluid control valve for delivering fluid to a receptacle as a function of the ambient temperature of the receptacle, said fluid control valve having a chamber and having an inlet and an outlet communicable with said chamber and having electrically energizable valve means at said inlet and said outlet for controlling fluid flow therethrough, the improvement for maintaining fluid disposed within said chamber at a predetermined temperature comprising thermostatic switch means disposed in heat transfer relation with the receptacle for controlling energization of at least one of said valve means, switch means for controlling operation of said electrically energizable valve means and operable in one position to effect opening of said inlet valve means and closure of said outlet valve means, a heater coil disposed within said chamber, an energizing circuit to said heater coil through said thermostatic switch means and said second mentioned switch means when said second mentioned switch means is in position to effect opening of said inlet valve means, means sensitive to the temperature of fluid within said

chamber for controlling energization of said heater coil and operable to deenergize said heater coil when the fluid within said chamber has reached a predetermined tem-

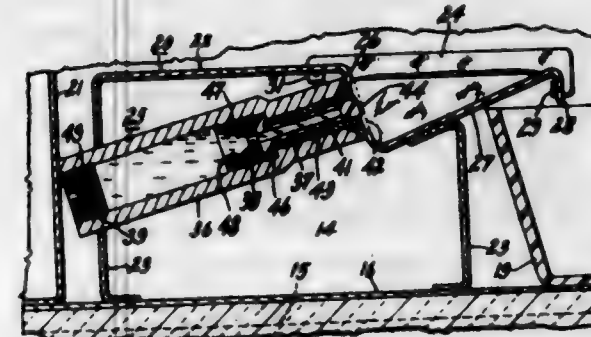


perature, and a heat conducting shell sealed to the walls of said chamber and covering said heater coil for protecting said coil from the fluid within said chamber.

3,003,329

REFRIGERATION

Arthur J. Frei and Walter G. Kniffin, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 860,770
2 Claims. (Cl. 62-135)

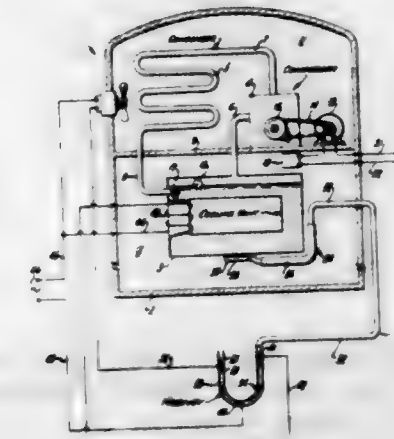


1. In combination, a chamber having a freezing device and a storage receptacle therein, said freezing device comprising a mold and a thermal responsive unit secured together against movement with respect to one another, said mold being composed of a plurality of inflexible walls forming a compartment adapted to contain water to be frozen, one of said walls being directed upwardly of the bottom of said compartment and provided with an aperture therein intermediate the top thereof and said compartment bottom, said thermal unit including a shiftable part separate from and independent of said compartment walls, said shiftable part of said unit communicating with the interior thereof and having a permanently closed end disposed in said aperture preventing passage of water therethrough and defining a continuing inner surface of said one compartment wall thereat, a refrigerating system including a refrigerant evaporator for chilling said mold within said chamber to freeze water in said compartment into a solid block of ice therein, said evaporator also cooling said thermal unit to a temperature below that at which the ice block freezes solid for activating the unit, and activation of said thermal unit shifting said shiftable part thereof relative to said inflexible mold walls through the aperture in said one wall a sufficient distance into the confine of said compartment whereby the unit serves as the sole means to eject the whole solid ice block out of the mold into said storage receptacle.

3,003,330

HEAT PUMP DEFROSTING UNIT

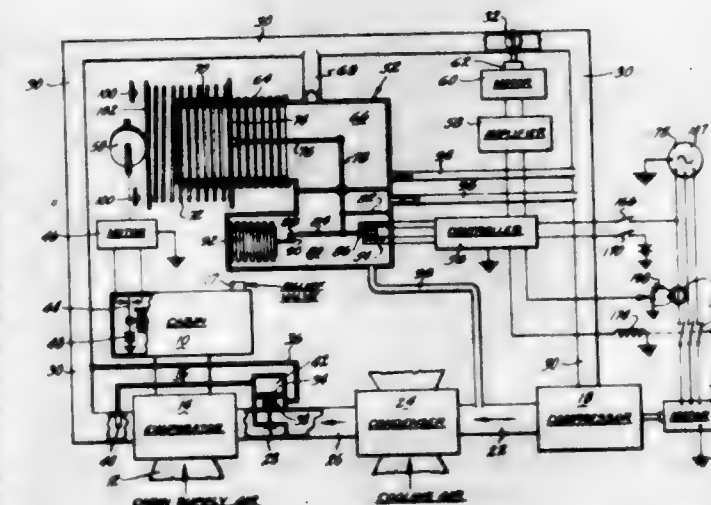
George L. Coad, 3354 Springhill Road, Lafayette, Calif.
Filed June 26, 1959, Ser. No. 823,188
2 Claims. (Cl. 62-140)



1. In combination, a heat pump including a cooling unit in closed fluid circuit with a condenser and a compressor; a control unit comprising: an air chamber mounted immediately adjacent said cooling unit and provided with a capillary opening facing said cooling unit and arranged to be closed upon the formation of ice or frost on said cooling unit; a conduit connected at one end to said chamber and having a thermal conducting portion spaced from but in heat exchange relationship with said cooling unit; first means connected to the other end of said conduit for sensing pressure variations within said conduit; and second means responsive to said first means for controlling the cycle of operation of said heat pump.

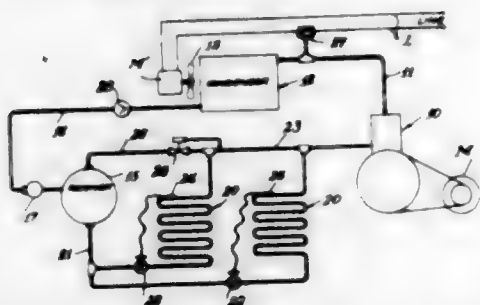
3,003,331

ELECTRONIC BACK PRESSURE CONTROL
Richard J. Coburn, Newington, and Kermit I. Harner, Windsor, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,489
19 Claims. (Cl. 62-161)



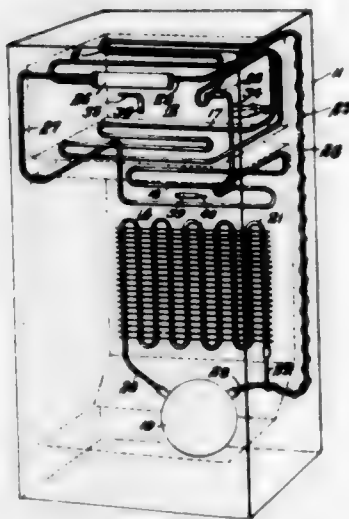
1. In a refrigeration system, a refrigerant evaporator, a compressor, a conduit connecting said evaporator outlet with said compressor inlet, a variable restriction in said conduit, a motor, means mechanically connected with said motor for varying said restriction, normally inactive means for urging said motor in a direction to close said restriction, a compressor motor, switch means for connecting said compressor motor with a source of power, means automatically activating said normally inactive means upon opening said switch means.

3,003,332
CONTROL MEANS FOR REFRIGERATING SYSTEM
 John E. Watkins, 307 Lake St., Maywood, Ill.
 Filed Oct. 7, 1957, Ser. No. 688,721
 6 Claims. (Cl. 62-197)



1. In a refrigeration system having an evaporator coil and associated feed valve, a condenser cooled by a circulating cooling medium, a receiver connected to receive liquid refrigerant from the condenser and to deliver fluid to the evaporator coil through the feed valve, and a compressor connected to draw spent refrigerant in gaseous form from the evaporator coil and discharge it to the condenser for condensation to liquid form, the combination of valve means permitting flow of refrigerant only from the condenser to the receiver, and other valve means connected between said receiver and the intake side of the compressor operative to maintain the receiver pressure substantially constant and at a lower level than the condenser pressure.

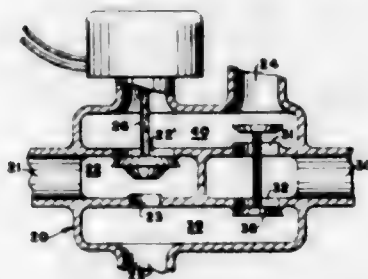
3,003,333
MULTI-TEMPERATURE REFRIGERATOR
 Rune Emanuel Lysén, Hasselby, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
 Filed June 30, 1958, Ser. No. 745,484
 Claims priority, application Sweden July 1, 1957
 8 Claims. (Cl. 62-199)



4. In a refrigerator having a thermally insulated cabinet divided into first and second compartments, a refrigeration system including a circuit for circulation of refrigerant including a refrigerant translating device, a condenser and first and second cooling elements which are connected in parallel, said first and second cooling elements being arranged to abstract heat from said first and second compartments, respectively, said circuit including means for maintaining a pressure differential between said condenser and said first and second cooling elements, liquid distributing means connected to receive all of the refrigerant from said pressure differential means, and supply lines for conducting refrigerant from said liquid distributing means to said first and second cooling elements, respectively, a conduit of capil-

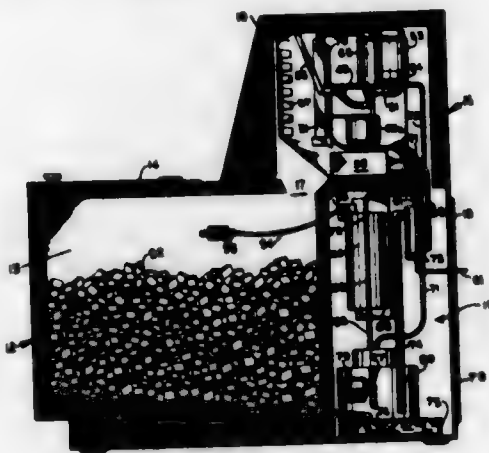
lary dimensions in said supply line to said second cooling element, heating means for heating said conduit, said liquid distributing means being at a higher level than said conduit of capillary dimensions.

3,003,334
REVERSE CYCLE REFRIGERANT FLOW CONTROL MEANS
 John Richard Mehalick, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
 Filed May 28, 1959, Ser. No. 816,445
 4 Claims. (Cl. 62-324)



1. In a refrigeration system operable under the reverse cycle principle, including a compressor, a first heat transfer member and a second heat transfer member, means for reversing the flow of refrigerant within a portion of the circuit, said means including a first chamber in communication with said first heat transfer member, a second chamber in communication with said second heat transfer member, means forming a first passageway for the flow of refrigerant from said compressor, means forming a second passageway for the flow of refrigerant to said compressor, said first and second passageways having openings communicating with said first and second chambers, valves controlling passage through said openings, one of the openings in said first passage being smaller than the other of said openings so as to vary the resistance to flow of refrigerant to one of said chambers from said first passageway.

3,003,335
ICE MAKING MACHINE
 Theodore Kattla, 1220 M St., Bedford, Ind.
 Filed July 22, 1960, Ser. No. 44,708
 17 Claims. (Cl. 62-348)



1. An ice making apparatus comprising a generally vertically disposed plate; means refrigerating said plate; a member having a plurality of cavities therein opening from opposite faces and generally disposed vertically along the member; means shiftably moving said member into contact with said plate closing off openings of said cavities in the member face toward the plate and moving the member away from said plate; means flowing water over the face of said member opposite said plate

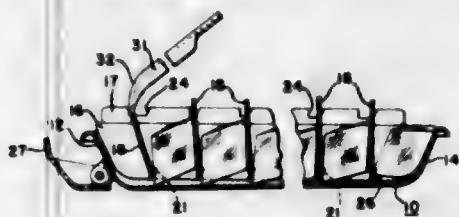
contacting face, the water flowing into and out of said cavities and freezing therein against said plate; means separating the ice from said plate; and means ejecting the ice from said cavities upon the movement of said member from said plate.

3,003,336

ICE TRAY GRID

Verlos G. Sharpe, Xenia, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 19, 1959, Ser. No. 814,212
2 Claims. (Cl. 62-367)



1. In a grid assembly for disposition in and removal as a unit from a tray adapted to contain water to be frozen into separated ice blocks, said grid assembly being of the type provided with a longitudinal partition, a plurality of spaced apart substantially inflexible walls directed transversely across said partition all pivotally interlocked thereto at the bottom thereof forming therewith and with walls of the tray rows of ice block compartments therein and an element movably connected by said transverse walls to the grid assembly constructed and arranged, upon operating a lever included in the assembly for tilting one of the transverse walls relative to said partition, to be shifted by the tilting movement of said one wall into engagement with other of said plurality of transverse walls for so tilting them, the improvement comprising; providing the lever as an integral inverted substantially U-shaped stamped extension of said one wall projecting upwardly therefrom over the top of said grid, the juncture of said U-shaped extension with said one wall being diverged laterally beyond the width of said lever into the top of the one wall for increasing its structural strength in the vicinity thereof, said element and the pivotal interlock of said transverse walls to said partition serving without the aid of additional means to hold said lever against detachment from said grid assembly so that the lever forms a handle thereon for removing same from a tray, and said handle being rotatable only in an arc about the axis of said interlock of said one wall whereby said juncture part therewith directly engages and shifts said movable element.

3,003,337

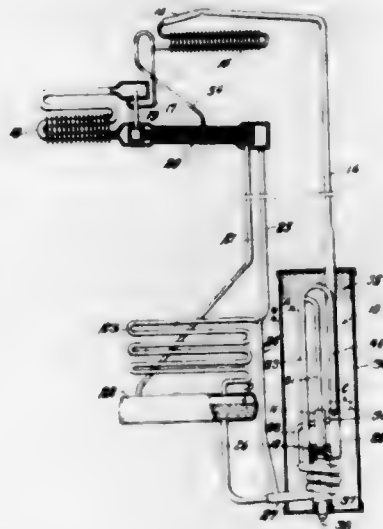
ABSORPTION REFRIGERATION

Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Filed Dec. 3, 1957, Ser. No. 700,340
Claims priority, application Sweden Jan. 5, 1957
8 Claims. (Cl. 62-496)

1. The method of refrigerating with a system employing an inert gas which comprises circulating the gas through and between a place of evaporation and a place of absorption, circulating absorption solution through and between the place of absorption and place of vapor expulsion, heating solution to expel refrigerant vapor therefrom at the place of vapor expulsion which has an upwardly extending path in which solution is raised by vapor-liquid lift action for effecting said circulation of absorption solution, flowing the expelled vapor in intimate physical contact with a column of absorption solution which is enriched in refrigerant and at a lower tem-

perature than the expelled vapor and is flowing from the place of absorption to the place of vapor expulsion, thereafter flowing the expelled vapor to a place of condensation for condensation therein and flowing the condensate to the place of evaporation for evaporation in the presence of the gas, said method further including applying heat at the place of vapor expulsion only to solution in the upwardly extending path to expel vapor therefrom for raising solution by vapor-liquid lift action, applying the heat at an elevated temperature to absorption solution in said path for the expelled vapor to reach a sufficiently high pressure to force its way through said column of absorption solution to analyze the vapor and



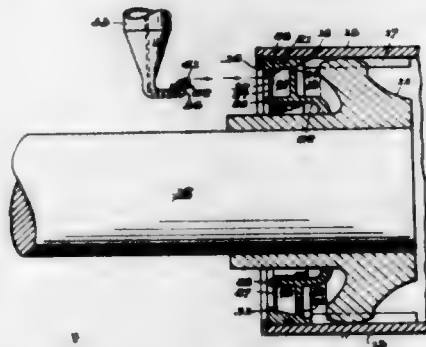
thereafter flow therefrom to the place of condensation, controlling the composition of the analyzed vapor flowing to the place of condensation by said column of absorption solution, and also controlling the rate at which absorption solution is raised in said path by vapor-liquid lift action and hence the rate at which absorption solution is circulated through and between the place of absorption and place of vapor expulsion responsive to the pressure developed in a zone of the system which is influenced by said column of absorption solution and to which absorption solution is raised in said path by vapor-liquid lift action.

3,003,338

LUBRICATION MEANS FOR SEALED COUPLINGS

Backman Wong, Baltimore, Md., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Aug. 25, 1960, Ser. No. 51,969
7 Claims. (Cl. 64-9)



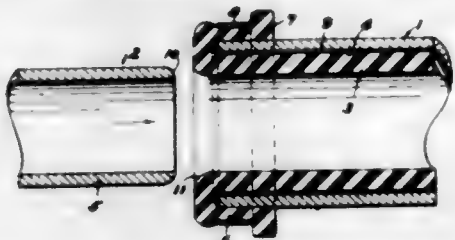
1. A sealed coupling comprising in combination coupling means interposed between a first member and a second member, annular sealing means interposed between one of said members and said coupling means, said sealing means and said coupling means defining a lubrication well, said sealing means having a cavity formed therein, said cavity communicating with said lubrication well and annular closure means forming part of the outer wall of said cavity, said closure means biased outwardly into

closed position and movable inwardly under superior force acting thereon from without said cavity whereby a lubricant injector may move said closure means inwardly to insert lubricant into said cavity during rotation of said sealing means.

3,003,339

RUBBER TORSIONAL UNIT

Fred L. Haushalter, 2185 Scott Lake Road, Pontiac, Mich.
Filed Nov. 9, 1959, Ser. No. 851,879
21 Claims. (Cl. 64-11)

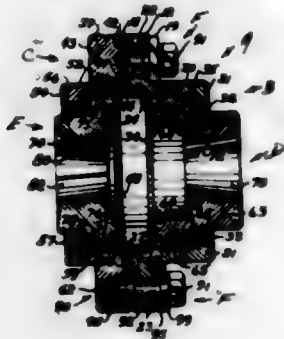


1. A torsional unit comprising a rigid outer tube, a rigid inner tube coaxially within said outer tube and cooperating therewith to provide an annular space, and a sleeve of rubber extending lengthwise of said annular space and under compression therein between said inner and outer tubes, said sleeve in its free state having an inside diameter less than the outside diameter of said inner tube, whereby the thickness of the side walls of said sleeve is reduced from the inside thereof when under compression as aforesaid, said sleeve in its free state having an outside diameter less than the inside diameter of said outer tube to obtain better stress distribution in said sleeve when under compression as aforesaid, the end of said sleeve being folded outwardly across the corresponding end of said outer tube and return-bent to provide a lip surrounding said end of said outer tube, and a band encircling said lip and clamping it tightly to said outer tube.

3,003,340

FLEXIBLE COUPLING

Robert A. Miller, Rutherford, N.J., assignor to Sier-Bath Gear and Pump Co., Inc., North Bergen, N.J., a corporation of New Jersey
Filed Oct. 26, 1960, Ser. No. 65,238
9 Claims. (Cl. 64-24)



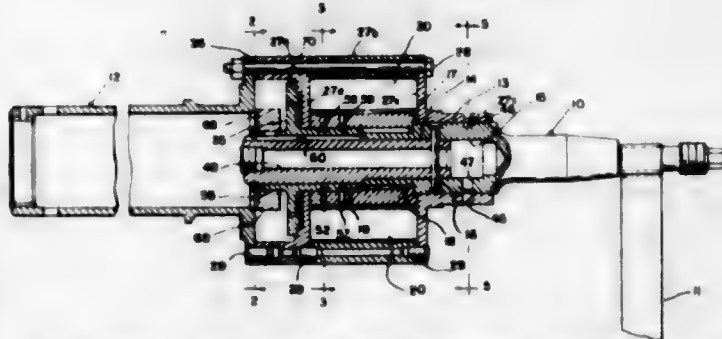
1. In a flexible coupling the combination of a first housing, means for attaching a shaft end to said first housing, a second housing, means for attaching a shaft end to said second housing, and fastening means for securing said first and second housings together in a predetermined rotative relationship to form a unitary coupling, said first and second housings including attaching means cooperatively engaging said fastening means for permitting relative rotation of said first housing with respect to said second housing when assembled in a unitary coupling relationship, said attaching means including the provision of a fixed point of attachment for said fastening means on one of said housings and the other of said housings including a slot slidably receiving said fastening means, said last mentioned housing being

relatively movable with respect to said fastening means and said first mentioned housing by movement of said fastening means through said slot, said fastening means including a cammed washer mounted in abutting relationship with respect to said housing having a slot therein for maintaining such housing in axial alignment with the other housing, the tightening of said fastening means serving to fixedly secure said housings in a predetermined rotative relationship with respect to each other.

3,003,341

HYDRAULIC TIMING DEVICE

Richard C. Aland, Highland Park, Mich., assignor to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Filed Dec. 14, 1959, Ser. No. 859,465
7 Claims. (Cl. 64-25)



1. A device for timing the angular relationship of connected rotating shafts, comprising a driving shaft, a driven shaft axially aligned with and angularly adjustable with respect to said driving shaft, said driving shaft having a center portion and a hub portion concentric with said center portion and in part radially spaced therefrom to provide an annular valve chamber between said center and hub portions, said hub portion being secured to and rotatable with said center portion, said hub portion having radially outwardly extending vanes, said driven shaft having a cylindrical housing radially spaced from said hub portion and provided with end walls to enclose said hub portion vanes, said housing having radially inwardly extending vanes intermediate and angularly spaced from said hub portion vanes to provide arcuate fluid chambers on each side thereof, said driving shaft being operable to drive said driven shaft through fluid in said arcuate chambers hydraulically connecting said vanes, said center portion having a fluid pressure passage adapted for connection with a source of fluid under pressure and port means connecting said pressure passage with said annular valve chamber, said hub having passages openly connecting said annular valve chamber with each of said arcuate fluid chambers, an annular valve structure in said annular chamber and angularly adjustable therein, said valve structure having passages selectively connecting said center portion port means with said hub passages and operable to direct fluid to one or the other side of said hub vanes on angular movement of said valve respectively in one or the other direction with respect to said driving shaft, and actuating means actuating said valve responsive to variations of shaft speed from a predetermined neutral value.

3,003,342

FABRIC TENSIONING DEVICES FOR KNITTING MACHINES

Alfred Woodward Kent and Percival Arthur Bentley, Leicester, England, assignors to The Bentley Engineering Company Limited, Leicester, England
Filed Aug. 24, 1956, Ser. No. 606,024
12 Claims. (Cl. 66-150)

1. A fabric tensioning device for use with a knitting machine having a needle cylinder with a plurality of needles arranged to form a needle circle and compris-

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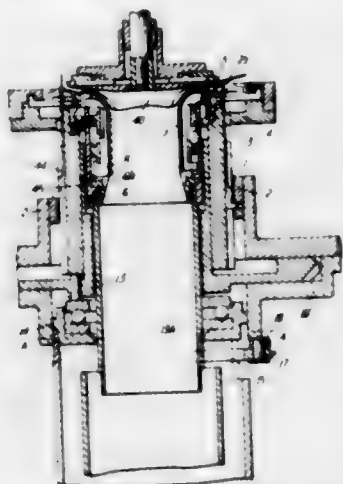
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ing a plurality of slender arcuate fabric engaging members having fabric contacting elements disposed in proximity to the needle circle in position to engage a short portion of fabric on its way from the needles to apply withdrawal tension thereto, the fabric engaging members being mounted for positioning immediately within the needle circle and spaced apart therearound, a tubular cage adapted to be mounted within the needle cylinder



and to be retained against rotation relative to said cylinder, said cage having guide slots to receive said fabric engaging members internally thereof and extending in the general direction of the axis of the cage, and cam means between which and the cage, relative rotation is arranged to occur during operation of the knitting machine, said cam means being disposed to act on the fabric engaging members to effect their oscillatory movements.

3,003,343

KNIT SIMULATED LACE

Ugo Alfano, Mount Airy, N.C., assignor to Renfro Hosiery Mills Company, Mount Airy, N.C., a corporation of North Carolina

Filed Feb. 17, 1958, Ser. No. 715,742
6 Claims. (Cl. 66—172)



6. A circular knit fabric top for a stocking comprising a plurality of successively knit courses forming walewise stitch loops, tuck stitches formed in spaced apart wales in a certain group of courses to draw up the fabric in said wales, draw stitches formed in other wales in a second group of courses successively following said certain group of courses to further draw up the fabric, and plain stitches formed in all other wales in each group of courses, the tuck and draw stitches deforming the fabric to form openings which simulate the openings in lace.

3,003,344

STOCKING

Joseph V. Clarke, New York, N.Y., assignor to Prestige, Inc., New York, N.Y., a corporation of Pennsylvania

Filed July 17, 1959, Ser. No. 827,812
7 Claims. (Cl. 66—172)

1. A stocking including a leg portion and a single thickness, upper marginal portion terminating in a sel-

vedge edge, the courses of said marginal portion being knit of a mono-filament yarn combined with a multi-filament yarn whereby, when released, said marginal por-

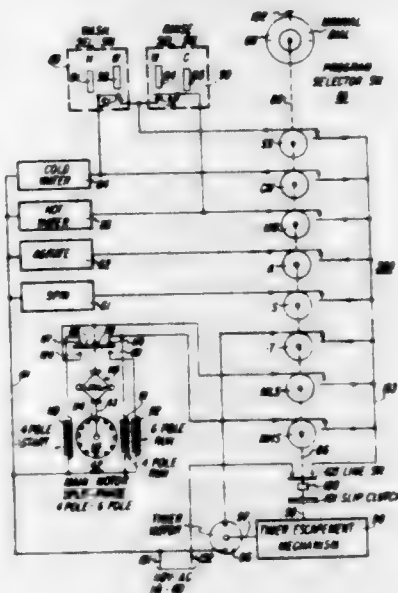


tion automatically rolls upon itself to form a tight bead with the selvedge edge at the center thereof.

3,003,345

CONTROL CIRCUIT IN AN AUTOMATIC CLOTHES WASHING MACHINE

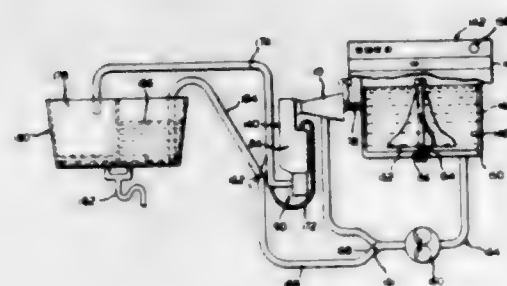
Floyd H. Green, Forest Park, Ill., assignor to General Electric Company, a corporation of New York
Filed Jan. 17, 1955, Ser. No. 482,129
11 Claims. (Cl. 68—12)



1. In a clothes washing machine including a tub adapted to receive clothes to be washed, and washing mechanism operative to subject the clothes in said tub to washing actions, said mechanism being operative at a relatively high speed to subject the clothes in said tub to a normal washing action suitable to normal fabrics and being operative at a relatively low speed to subject the clothes in said tub to a gentle washing action suitable to delicate fabrics; the combination comprising means including an electric drive motor for selectively operating said mechanism, said motor being of the two-speed split-phase induction type including a start winding and two run windings, said motor being operated at its relatively high speed when a first of its run windings is energized to effect said relatively high speed operation of said mechanism and being operated at its relatively low speed when a second of its run windings is energized to effect said relatively low speed operation of said mechanism, a manually operable selector switch having a first position selecting said first run winding and a second position selecting said second run winding, a device governed by the speed of said motor and having corresponding start and run positions, a control switch governed by said device and having corresponding start and run positions, a circuit network governed by said control switch in its start position for energizing both said start winding and

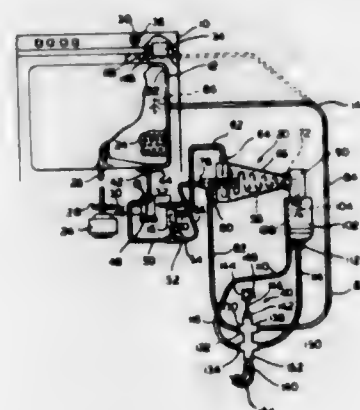
a predetermined one of said run windings and governed by said control switch in its run position for energizing only the one of said run windings selected by said selector switch, and means for selectively controlling said circuit network in a predetermined cycle, whereby operation of said selector switch into its first position establishes said normal washing action in said cycle and operation of said selector switch into its second position establishes said gentle washing action in said cycle.

3,003,346
LAUNDRY MACHINE WITH HYDRAULIC SEPARATOR
Harold H. Morris, St. Joseph, and Samuel E. Stone, Berrien Springs, Mich., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed May 9, 1957, Ser. No. 658,158
4 Claims. (Cl. 68-12)



1. A laundry machine comprising an automatic washer having presettable sequential control means for operating the machine through a cycle including a series of laundering periods,
said machine comprising a tub adapted to receive laundry liquid therein,
washing means in said tub for admixing immiscible solids washed from materials contained therein with the laundry liquid,
pumping means having an inlet connected with the tub for driving the laundry liquid and the admixed solids drawn from the tub in the form of a stream,
a separator for purifying the stream of laundry liquid during selected periods of the laundry machine cycle,
said separator comprising
a cyclone chamber having a tangential inlet orifice receiving the stream discharged by said pumping means and vortically whirling the stream to produce a fluid vortex in said cyclone chamber,
a vortex finding tube extending into said cyclone chamber at the large end of the fluid vortex for receiving clarified effluent,
effluent conduit means connected to said finding tube and to said tub for returning the clarified effluent to said tub, means connected to said cyclone chamber at the small end of the fluid vortex and having an outlet for receiving the separated solids,
said means including a collection vessel communicating with said outlet to provide a quiescent pool in which the separated solids gravitationally settle,
a drain conduit connected to the bottom of said collection vessel and leading to drain,
and vessel flushing means comprising a pressure responsive valve controlling the communication of said collection vessel with said drain conduit, and a valve in said effluent conduit means controlled by said presettable sequential control means for effecting pressure flushing of the collection vessel to drain upon closing of said valve in said effluent conduit means during selected periods of the laundry machine cycle.

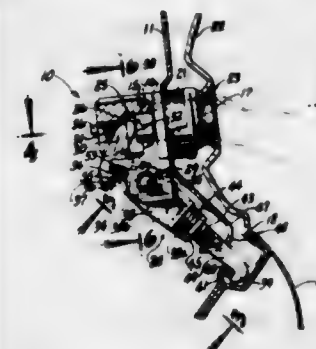
3,003,347
LAUNDRY MACHINE WITH HYDRAULIC SEPARATOR
Harold H. Morris, St. Joseph, James W. Moore, Benton Harbor, and Samuel E. Stone, Berrien Springs, Mich., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed Sept. 13, 1957, Ser. No. 683,882
5 Claims. (Cl. 68-12)



1. A laundry machine comprising,
an automatic washer having presettable sequential control means for operating the machine through a cycle including a series of laundering periods, said machine comprising a tub adapted to receive laundry liquid therein,
washing means in said tub for admixing immiscible solids including light phase particles and heavy phase particles washed from materials contained therein with the laundry liquid,
pumping means having an inlet connected with the tub for driving the laundry liquid and the admixed solids drawn from the tub in the form of a stream,
a separator for purifying the stream of laundry liquid during selected periods of the laundry machine cycle, comprising,
a cyclone chamber in said separator,
having a tangential inlet orifice receiving the stream discharged by said pumping means and vortically whirling the stream to produce a fluid vortex in said cyclone chamber,
inner and outer concentrically disposed vortex finding tubes extending into said cyclone chamber at the large end of the fluid vortex and forming an annulus between said inner and outer tubes for receiving clarified effluent, said inner finding tube receiving light phase particle-rich fluid for removal thereof from the separator, effluent conduit means connected to said annulus and to said tub for returning the clarified effluent to said tub,
means connected to said cyclone chamber at the small end of the fluid vortex having an outlet for receiving the heavy phase particles including a collection vessel communicating with said outlet to provide a quiescent pool in which the separated solids gravitationally settle, a drain conduit connected to the bottom of said collection vessel,
an overflow conduit arranged to receive overflow fluid from near the top of the collection vessel, and a dumping and flushing valve having inlet portions connected to said drain conduit and said overflow conduit and having an outlet portion leading to drain,
said dumping and flushing valve having a separate inlet and outlet portion in said effluent conduit means, said dumping and flushing valve having actuator means including a valve spool regulated by said presettable sequential control means and having a first position wherein clarified effluent is directed through said effluent conduit means to said tub and

a limited controlled flow of fluid from said overflow conduit is directed to said outlet portion, said valve having a second position wherein said drain conduit, said overflow conduit and said effluent conduit means are communicated with said outlet portion, thereby to flush the separator, while blocking flow through the effluent conduit means to said tub.

3,003,348
GLOVE BOX LOCK WITH ADJUSTABLE HOOK BOLT
Edward N. Jacobi, Milwaukee, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Nov. 14, 1957, Ser. No. 696,381
10 Claims. (Cl. 70-84)

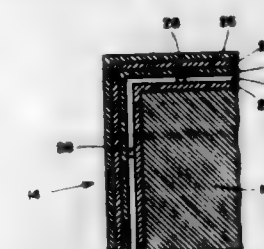


9. A compartment door latch of the type having a push-button actuator axially slidable back and forth in a bore in a latch body, and a latch lever swingable on a pivot which is located at one side of the push-button actuator and which extends transversely to the push-button axis, wherein depression of the push-button actuator into the bore swings the latch lever in a direction to carry a hook thereon from a keeper engaging position toward a keeper disengaging position, characterized by: the fact that the latch lever comprises a sheet metal stamping having spaced apart substantially parallel leg portions through both of which the pivot extends and which project radially from the pivot axis in a direction away from the push-button actuator, said leg portions being joined by a transverse connecting member which is integral with both of them and terminating at their end portions remote from the pivot in inturned flanges which extend substantially parallel to the pivot axis and are spaced apart in said direction, and said flanges having tapped holes; a bolt threaded in said holes and having the hook on its outer end so that the distance between the hook and the pivot axis of the latch lever may be adjusted by screwing the bolt in or out; and an arm integral with one of said leg portions and extending in a direction toward the push-button actuator, said arm having a surface thereon which provides an abutment cooperable with an abutment on the actuator whereby depression of the actuator is translated into swinging motion of the latch lever in the direction toward its keeper disengaging position.

3,003,349
WARNING SYSTEM
Frederick Sullivan, North Wilmington, and Samuel Edward Eaton, Hingham, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 9, 1959, Ser. No. 798,171
12 Claims. (Cl. 73-40.7)

1. A sealed radioactive element consisting of a radioactive material and a casing completely surrounding said material, and a warning medium associated with said element and positioned within said casing, said medium being adapted to move outwardly from within said casing

through any break therein and thereupon to provide a warning, directly detachable by the human senses, of the

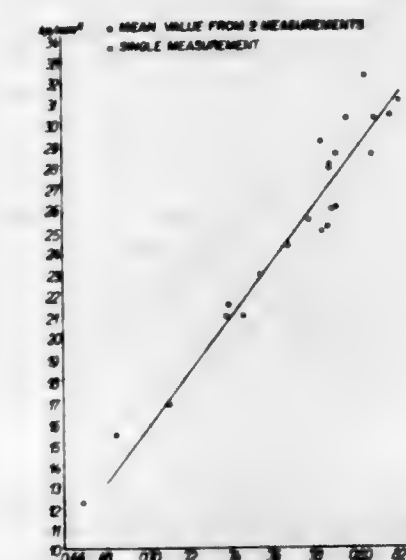


presence or potential leakage of radioactivity, said medium being confined within said casing in the absence of such break.

3,003,350
METHOD OF EXAMINING OIL SAMPLES
Clifford R. Stewart, deceased, late of Los Angeles, Calif., by Minnette Claire Stewart, executor, Pacific Grove, Calif., assignor to Ralph L. Faber, Los Angeles, Calif.
No Drawing. Filed Dec. 8, 1960, Ser. No. 75,053
6 Claims. (Cl. 73-64)

1. The method of examining engine oils from railroad, stationary, marine and similar diesel engines to detect engine deposition, comprising adding to an oil sample a thinner and a coagulant consisting essentially of N-butyl diethanolamine, centrifuging to precipitate solids, and then inverting the centrifuge tube and its contents, the failure of the precipitated solids to fall out of the tube indicating that engine deposition is occurring.

3,003,351
NON DESTRUCTIVE PROCESS FOR ASCERTAINING THE TENSILE STRENGTH OF GREY IRON CASTINGS
Rolf Ziegler and Richard Gerstner, both of Parkstrasse 21, Leoben, Styria, Austria
Filed Aug. 12, 1957, Ser. No. 677,421
3 Claims. (Cl. 73-67.5)



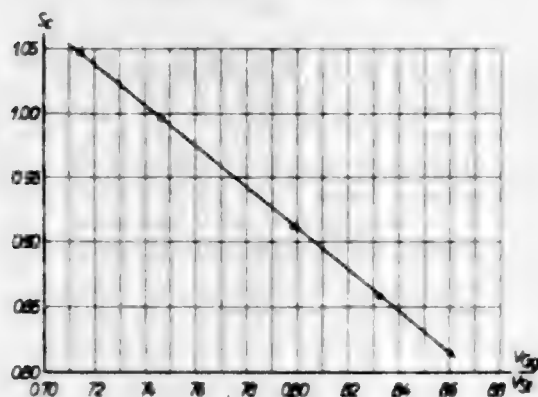
3. A non-destructive testing method for determining the tensile strength of a grey iron casting in any given area, which comprises the steps of subjecting a series of grey iron test castings of varying chemical composition to ultrasonic impulses induced by a machine calibrated to a constant to determine the apparent thickness of each of said castings, rupturing each of said grey iron test castings to determine the tensile strength of each, producing an empirical relationship between the tensile strength of said test castings and the quotient obtained by dividing the actual thickness of each of said test castings as determined by mechanical means by the apparent thickness of said castings, and subjecting a given area of a grey iron casting of unknown tensile strength to ultrasonic impulses

induced by a machine calibrated to a constant to determine the apparent thickness of said area of said casting, the actual thickness of said area then being divided by the apparent thickness and the resultant quotient employed in the previously determined empirical relationship to determine the tensile strength of the said area of the casting.

3,003,352

TESTING METHOD FOR ASCERTAINING THE SATURATION VALUE OF GREY CAST IRON
Rolf Ziegler and Richard Gerstner, both of Parkstrasse 21, Leoben, Styria, Austria

Filed Aug. 12, 1957, Ser. No. 677,467
3 Claims. (Cl. 73-67.5)



1. A method of determining the degree of saturation of grey iron, which comprises forming by casting a plurality of grey iron test specimens of different chemical composition at a constant pouring temperature, cooling said specimens at the same rate, chemically analyzing said grey iron test specimens to determine the degree of saturation of each specimen, subjecting each of said specimens to ultrasonic impulses to determine the apparent thickness of each of said specimens, producing a graph by plotting the quotients obtained by dividing the actual thickness of said grey iron test specimens as determined by mechanical means by the apparent thickness against the saturation value of said grey iron test specimens and drawing a substantially straight line through the plotted points, and subjecting a grey iron specimen having an unknown degree of saturation to ultrasonic impulses to determine the apparent thickness of said specimen, said unknown specimen being poured at the same temperature and cooled at the same rate as said grey iron test specimens, said apparent thickness then being divided into the actual thickness of said unknown grey iron specimen as determined by mechanical means and the resultant quotient located on said graph to establish the corresponding saturation value of said unknown grey iron specimen.

3,003,353

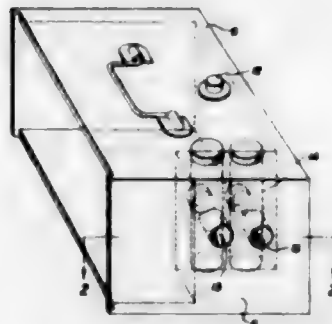
METHOD AND APPARATUS FOR TESTING OIL FOR MOISTURE CONTENT

Samuel Swadesh, Mill Valley, Calif., assignor to Yosemite Chemical Co., San Francisco, Calif., a corporation of California

Filed Sept. 29, 1958, Ser. No. 764,184
5 Claims. (Cl. 73-73)

1. Means enabling testing of oil samples to determine whether the respective samples contain water above a predetermined quantity, comprising a plurality of containers of light transmitting material, solvent for said oil in each container, the same quantity of solvent being in each container to a level below the top of each container thereby providing free head space above said level, a sulfonate detergent dissolved in said solvent in each container, the same quantities of dye being in the respective containers with the solvent, said dye being a quaternary amine dye having at least one sulfonate group

and being substantially insoluble in the solvent and oil but soluble in water and being capable of being solubilized in the presence of a relatively small quantity of water, and each container having a predetermined ref-



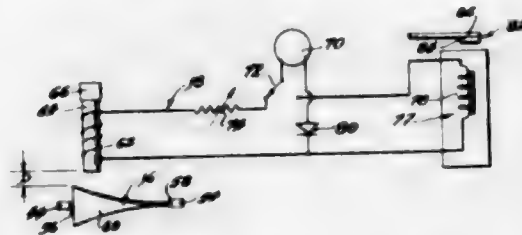
erence point above said solvent level whereby when oil samples are introduced into the respective containers to such reference points the respective containers will contain substantially the same quantity of oil samples.

3,003,354

FLUID FLOW MEASURING DEVICE

John F. Wood, Buchanan, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana

Filed June 26, 1959, Ser. No. 823,070
2 Claims. (Cl. 73-187)



1. A speedometer for a boat comprising a magnetic circuit including a source of magnetomotive force, a coil having a magnetically permeable core, and a magnetically permeable blade rotatably mounted adjacent to the core and spaced therefrom by a magnetic gap, rotation of the blade periodically varying the magnitude of the magnetic gap, means for immersing the blade in the water parallel to the direction of motion of the boat, and an electrical circuit for measuring the magnitude of the current generated in the coil, wherein the means for immersing the blade in water comprises a housing having an elongated stem, means for rotatably mounting the blade at one end of the stem, and a pair of ears adjacent the other end of the stem extending outwardly from opposite sides of the stem on an axis normal to the rotational axis of the blade, and a bracket adapted to be mounted to the stern of the boat having a pair of legs provided with confronting openings which engage the ears, the legs of the bracket conforming to the contour of the stem and being spring biased toward each other to grip the stem therebetween.

3,003,355

LIQUID LEVEL MEASUREMENT IN SALT STORAGE CAVERNS

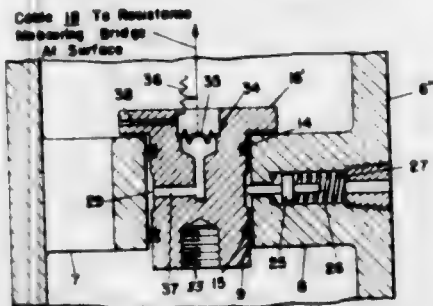
J Rondle Wright, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Nov. 25, 1958, Ser. No. 776,223
12 Claims. (Cl. 73-299)

1. In a subterranean salt storage cavern for storing a layer of liquid above a layer of brine, a brine pipe extending from the surface substantially to the bottom of said cavern, means defining a space surrounding said pipe through which the liquid to be stored may be pumped,

said pipe having therein, at a location adjacent the top of said cavern, a channel connecting the interior of said pipe to said space; actuatable means positioned in said channel and normally closing the same, and a member adapted to be lowered from the surface through said

being electrically coupled to the output of said second phase sensitive amplifier and detector for controlling said motor in its tilting of said envelope.



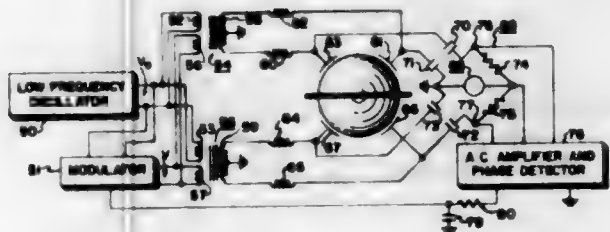
pipe, said member actuating said last-named means to the channel-opening position when said member reaches said location, said member cooperating with said pipe to form a chamber therebetween, into which said channel then opens.

3,003,356

FREE-GYRO SYSTEMS FOR NAVIGATION OR THE LIKE

Arnold T. Nordsieck, Urbana City, Ill., assignor, by direct and mesne assignments, of two-thirds to Instrument Development & Manufacturing Corporation, a corporation of California, and one-third to Bruce L. Birchard, Los Angeles, Calif.

Filed Nov. 1, 1954, Ser. No. 465,958
12 Claims. (Cl. 74-5)



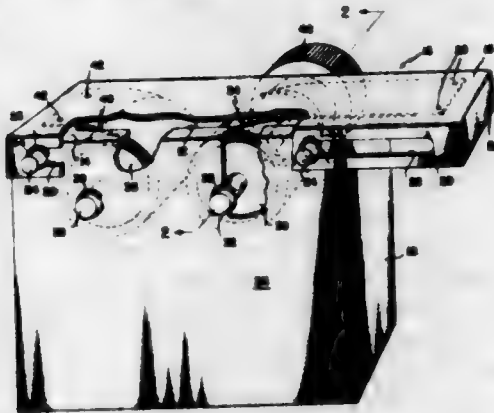
1. A free gyro system including: a gyroscopic element, said gyroscopic element including a conductive rotor and an envelope surrounding said rotor, said envelope carrying a plurality of rotor supporting electrodes spaced from said rotor and a plurality of tilt sensing electrodes, first conductor means for applying supporting and position sensing potentials to said supporting electrodes, and second conductor means for applying tilt sensing potentials to said tilt sensing electrodes; insulating means for preventing short circuiting of said supporting and sensing electrodes by said rotor; a source of variable supporting potential connected to said first conductor means; a position sensing bridge having a first arm connected to certain of said supporting electrodes and having a second arm thereof connected to certain other of said supporting electrodes; a source of position sensing potential connected across one diagonal of said bridge; a first phase sensitive amplifier and detector connected across the remaining diagonal of said bridge; a tilt sensing bridge having a first arm connected between certain of said tilt sensing electrodes and a second arm connected across certain of other of said tilt sensing electrodes; a source of tilt sensing potential connected across one diagonal of said bridge, and a second phase sensitive amplifier and detector connected across the remaining diagonal of said bridge; the output of said first phase sensitive amplifier and detector being coupled to said source of variable supporting potential to effect control thereof; a motor mechanically coupled to said envelope for effecting tilting thereof, said motor

3,003,357

MOTION TRANSMITTING DEVICE

Frank A. Votta, Jr., Ambler, Pa., assignor to American Machine and Metals, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 25, 1960, Ser. No. 4,511
11 Claims. (Cl. 74-95)



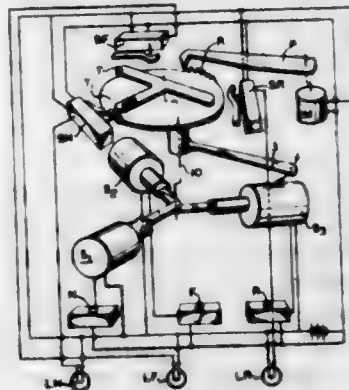
1. A motion transmitting device comprising a support means, a member, means mounting said member on said support means for linear movement, a tightly coiled ribbon spring mounted for coiling and uncoiling movement, means mounting said spring on said support means, an extended free end of said spring being connected to said member, and a spiral spring means connected to said member and to said support means to bias said member in a direction opposite to said ribbon spring, and rotatably mounted motion transmitting means operatively connected to said ribbon spring for rotation in accordance with the coiling and uncoiling of said ribbon spring, said motion transmitting means being rotatable to cause coiling of said ribbon spring and linear movement of said member or alternatively rotatable in accordance with coiling and uncoiling movement of said ribbon spring in response to linear movement of said member.

3,003,358

REMOTE CONTROL DEVICE

George H. Leonard, Darien, Conn., assignor, by direct and mesne assignments, of one-third to Arthur G. Cummings, and one-third to Sal D'Ariano, both of New York, N.Y., and one-third to George Shongut, North Miami, Fla.

Filed Aug. 21, 1958, Ser. No. 756,424
9 Claims. (Cl. 74-116)



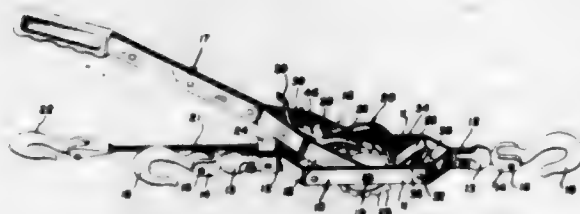
1. A construction for effecting movement of an ultimate driven member between selected positions; comprising a base; a shaft rotatable with respect to said base; a plurality of solenoids fixedly mounted on said base to be angularly spaced from each other and radially fac-

ing toward said shaft; switch means for separately actuating each of said solenoids; a radially extending arm on said shaft and means connecting said arm to said solenoids to thereby enable limited rotation of said shaft by actuation of a selected one of said solenoids; a pair of spaced apart superimposed overlying ratchets mounted to extend substantially radially from said shaft, the terminal end peripheries of said ratchets being formed to describe an arc, said terminal end periphery of one of said ratchets having teeth facing in one direction and the terminal end periphery of the other of said ratchets having teeth facing in the opposite direction, and said ratchets being mounted to be both rotatable about and movable radially between inward and outward positions with respect to said shaft as well as to be movable with respect to said base; an ultimate driven member movable with respect to said base and mounted to be driven by rotation of said ratchets about said shaft; a pawl and switch-controlled drive means therefor mounted on said base, said pawl being mounted to engage said peripheral teeth of a ratchet only when the latter are in a radially outward position; and means for presenting a desired ratchet for engagement by said pawl to effect movement of said driven member to a selected position, comprising motion converting means on said shaft cooperative with said ratchets to convert rotational movement of said shaft to radial movement of said ratchets to thereby effect simultaneous movement of one of said ratchets to a radially outward position and the other of said ratchets to a radially inward position upon rotation of said shaft in response to actuation of one of said solenoids and to reverse the radial positions of said ratchets in response to actuation of another of said solenoids.

3,003,359

POWER UNIT

Felber Maasdam, 1432 N. Ontario, Burbank, Calif.
Filed June 23, 1960, Ser. No. 38,311
5 Claims. (Cl. 74-142)



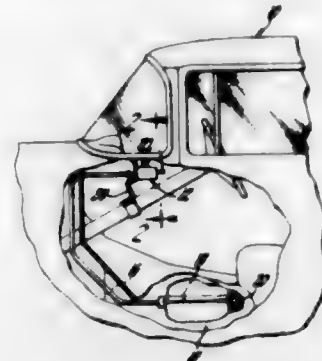
1. In a power unit of the character described, a frame for attachment to a fixed object, a cable winding drum journaled upon said frame for rotation, a swingable operating lever pivoted to said frame, ratchet teeth carried by said drum for driving the same, a holding pawl pivoted to said frame and resiliently biased toward active engagement with said ratchet teeth, a feeding pawl pivoted to said operating lever and engageable with said ratchet teeth to rotate said drum when the operating lever is swung in one direction, a coil spring connected with said feeding pawl and having an end longitudinal extension, a cup-like cam rotatably mounted upon said operating lever and including an operating part, said cam having a peripheral wall provided with an opening receiving said spring extension, said spring extension extending generally diametrically of said cam, said cam having a circumferential peripheral cam portion including a central high part and end low parts having sliding engagement with said spring extension, and stop elements on said cam adjacent said low parts engageable with said spring extension when the latter is adjacent said low parts, whereby turning of said cam upon said operating lever shifts said spring of the feeding pawl on opposite sides of dead center to render the feeding pawl active and inactive with respect to said ratchet teeth.

3,003,360

TRANSMISSION SELECTOR CONTROLS

James W. Fodrea, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 21, 1958, Ser. No. 756,440
20 Claims. (Cl. 74-335)

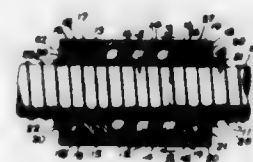


1. In a selector control, the combination of a plurality of control members, each being arranged for individual movement in a plane to a series of settings including a Neutral setting and also being arranged for removal from the Neutral settings of each so that both members may be in another setting other than Neutral at the same time, an output element, means for transferring movement of each of the control members to the output element, and cancellation means including a cancellation member arranged for movement in a plane different from the plane of movement for the control members, the cancellation member being operative to return the control members to the respective Neutral setting of each.

3,003,361

BALL BEARING SCREW AND NUT ASSEMBLY

Ernest D. Boutwell, 306 Webber St., Saginaw, Mich.
Filed Aug. 5, 1960, Ser. No. 47,854
8 Claims. (Cl. 74-424.8)



1. A ball-bearing screw and nut assembly comprising a screw shaft having a helical groove of arc contour in cross-section in its outer surface, a co-axial cylindrical ball cage having apertures through the wall thereof and arranged along a helical angle corresponding to that of said groove, an outer cylindrical thrust-sustaining nut element having said cage rotatably mounted therein and axially fixed relative thereto, balls in said cage apertures and engaging in said helical groove and the inner cylindrical surface of said nut element, said cage also having a recess internally thereof, and at least one ball of smaller size than that of said first mentioned balls held partially in said recess by engaging in said helical groove.

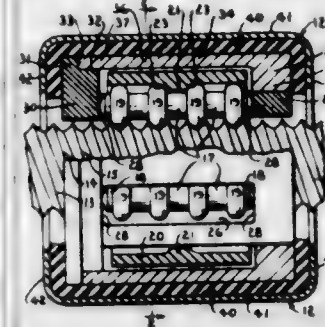
3,003,362

MOTION-TRANSMITTING DEVICE

Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Feb. 4, 1959, Ser. No. 791,113
9 Claims. (Cl. 74-424.8)

1. An antifriction-nut assembly comprising a cage, a threaded shaft extending through said cage, a plurality of bearing elements nested in apertures formed in said cage

and operatively engaging the threads of said shaft, freely rotatable ring means encircling said bearing elements for retaining said elements in contact with the shaft, and



means carried by said cage for movement therewith relative to the axis of the shaft.

3,003,363

APPARATUS FOR TURNING A STEERING WHEEL FROM A REMOTE POSITION

Edward S. De Hart, Collingswood, N.J., assignor to FMC Corporation, a corporation of Delaware
Filed Aug. 31, 1956, Ser. No. 607,309
13 Claims. (Cl. 74-494)



1. An apparatus for turning the steering wheel of a vehicle comprising a housing, a housing supported on said clamping member and arranged to journal a shaft journaled for rotation in said housing, clamping means secured to said shaft for rotation therewith and arranged to be locked in clamping engagement on a steering wheel, means secured to said housing and to an external portion of the vehicle remote from the steering wheel to prevent rotation of said housing, driving means connected to said shaft for rotating said shaft and the clamping means and the wheel relative to the stationary housing, and means including a flexible cable connected to said driving means for operatively controlling said driving means from a position removed from the immediate vicinity of the wheel.

3,003,364

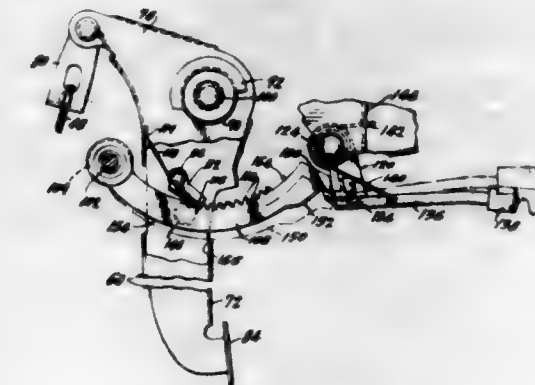
MECHANISM CONTROL

Robert S. Himes, Toledo, Ohio, assignor to The Bingham-Herbrand Corporation, Toledo, Ohio, a corporation of Ohio

Filed Jan. 23, 1959, Ser. No. 788,640
12 Claims. (Cl. 74-534)

1. Mechanism for controlling brakes of a vehicle including, in combination, a support, a foot-operated lever fulcrumed intermediate its ends on the support, one arm

of the lever being adapted to be connected with the vehicle brake mechanism, the other arm of the lever having a foot pad portion, means for retaining the lever in brake-setting positions including cooperating pawl and ratchet members, one of said members being articulately connected with the support and the other carried by the lever, the member carried by the lever being disposed between the fulcrum and the foot pad portion, a movable element mounted by the support having a ledge adapted to be engaged by the member connected with the support

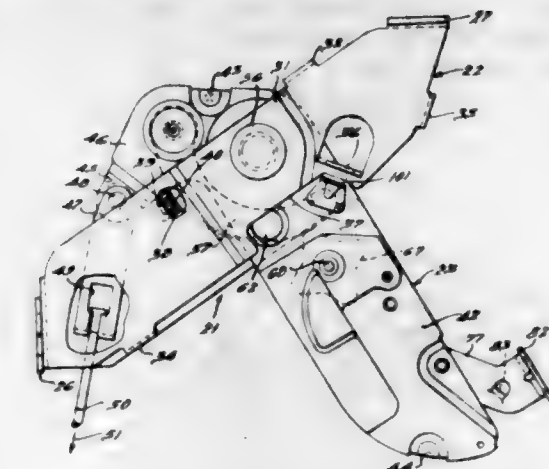


for normally retaining said member in cooperative relation with the member carried by the lever, said element being movable to a position to release said pawl and ratchet members from engaging relation, means formed on the lever for limiting the relative movement of the member connected with the support when the said element is moved to release position, and means formed on the member connected with the support arranged to be engaged by the lever upon return movement of the lever to brake releasing position to reengage the said member with the ledge on said element.

3,003,365

FOOT OPERATED MECHANISM

William G. McKenzie, Racine, Wis., assignor, by means assignments, to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed July 3, 1958, Ser. No. 746,455
14 Claims. (Cl. 74-542)



1. In a mechanism for actuating a parking brake or the like, a first member adapted to be secured in fixed position, a second member mounted on said first member and adapted to be moved between a released position and a braking position, means for securing a brake actuating cable or the like to said second member, holding means between said members actuatable between engaged and disengaged positions, said holding means when in its engaged position preventing movement of said second member from its braking position to its released position, an operator-controlled member movably mounted on said second member, said operator-controlled member being of sufficient size to transmit a brake setting force and being

movable between a retracted position and a transmitting position in which force applied thereto by an operator will be transmitted to said second member in a direction urging said second member toward its braking position, and means responsive to the completion of movement of said operator-controlled member to its transmitting position and its subsequent application of force to said second member sufficient to counter the cable force for moving said holding means to its disengaged position.

3,003,366

ADJUSTABLE CAM FOLLOWERS FOR ZIGZAG SEWING MACHINES

Edward J. Herbst, South Plainfield, and Griffen R. Muller, New Brunswick, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Nov. 17, 1958, Ser. No. 774,175
6 Claims. (Cl. 74-569)



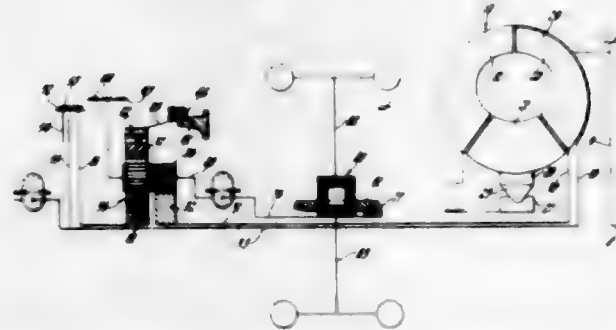
1. An adjustable cam follower device for sewing machines, said cam follower device comprising, a first part pivotally carried by said sewing machine, a second part also pivotally carried by said sewing machine, a follower means formed on one of said parts, a follower means formed on the other of said parts, an eccentric carried by one of said parts, means carried by the other of said parts for engaging said eccentric, means for adjusting said eccentric and thereby pivotally adjusting one of said parts with respect to the other of said parts, and means for securing one of said parts to the other of said parts.

3,003,367

SPLIT TORQUE TRANSMISSION

Frank J. Winchell, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 1, 1958, Ser. No. 732,213
23 Claims. (Cl. 74-688)



1. A transmission including a hydrodynamic power transmitting unit having an engine driven impeller and a turbine, a planetary gearing unit having a planet carrier supporting a plurality of sets of planet gears in mesh with each other, a power delivery shaft driven by said planet carrier, a first sun gear in mesh with one of said sets of planet gears, a drive connection between said turbine and said sun gear and extending through said power delivery shaft, a second sun gear in mesh with the other of said sets of planet gears, brake means selectively operable to brake said second sun gear against rotation to establish drive of said power delivery shaft by said turbine and through reduction drive of said planetary

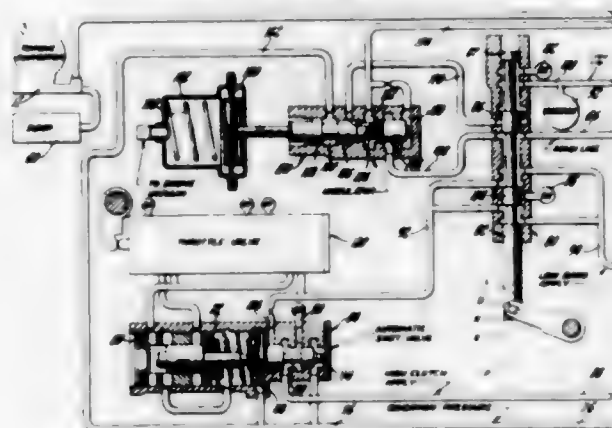
gearing unit, a shaft directly connected to and continuously driven by said engine and connected for rotation with said impeller by a connection external of said hydrodynamic power transmitting unit, said last mentioned shaft extending through said aforementioned drive connection, and an engageable and releasable clutch driven by said engine driven shaft and adapted to clutch said second sun gear to said engine when engaged to establish drive of said power delivery shaft partially by said turbine and partially by said engine independently of said turbine.

3,003,368

TRANSMISSION

Frank J. Winchell, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 18, 1957, Ser. No. 684,790
8 Claims. (Cl. 74-752)



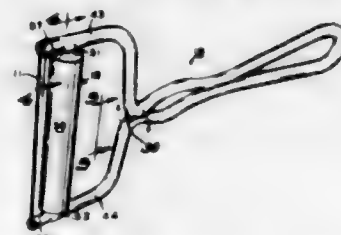
1. A transmission comprising in combination driving means, a rotatable input member connected to the driving means, an output member, a friction torque-establishing device for establishing a driving connection between the members, a source of pressure fluid, a fluid pressure actuator which can be connected to the source for operating the friction torque-establishing device, a pressure-responsive regulator for controlling the pressure of the source, supply means for supplying to the regulator fluid at a pressure which increases as torque demand on the driving means increases and thereby tends to increase the pressure of the source with increasing torque demand, and means continuously effective on said supply means for reducing, as a function of increase of speed of rotation of the output member, the pressure of the fluid so supplied to the regulator.

3,003,369

METHOD FOR MAKING CUTTER FOR SLICING CHEESE OR THE LIKE AND FRAME THEREFOR

Norman P. Uebel, 435 Clark St., Bellevue, Ky.

Filed Oct. 30, 1958, Ser. No. 770,676
5 Claims. (Cl. 76-101)



5. The method of assembling a slicer comprising a roller having integral frusto-conic stub-shaft portions, a cutter wire, and a resilient frame having a central loop-like handle portion coupled by a pair of knee bend portions to a pair of harp arms in which frusto-conic roller-journal-bearing-surfaces are provided, one of said knee bend portions having a rest form recess for cooperatively receiving a portion of the other knee bend portion, and

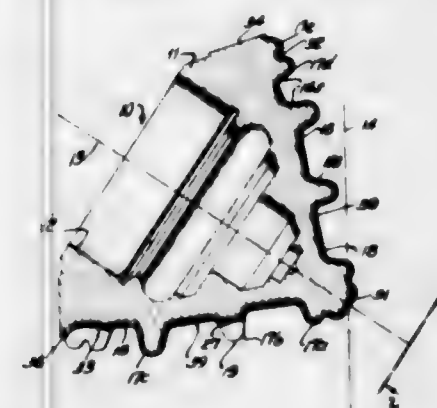
which frame is adapted to be stressed with opposed knee bend portions in fulcrum relation when said frame is assembled in a slicer and further stressed by squeezing of the handle portion thereof, said method of assembling a slicer comprising the steps of squeezing the arms toward each other until said opposed cooperating parts are in firm fulcrum engagement, and squeezing the arms further toward each other to resiliently flex them into the relative relation in which a roller is clamped between bearing surfaces of the frame engaging stub shaft portions of the roller, securing a cutter wire under predetermined tension to said frame at two spaced points and releasing the arms to move away from each other toward their unstressed condition to increase the wire tension which then remains in equilibrium with the stresses in the frame while the roller is released to remain more freely rotatable, when the wire tension is increased by drawing the wire through a sliceable material and the handle portion is not squeezed and when the wire tension is further increased by squeezing of the handle.

3,003,370

METHOD OF MAKING ROCK BIT CUTTER

John B. Coulter, Jr., Midland, Tex., assignor to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey

Original application July 5, 1956, Ser. No. 595,982, now Patent No. 2,927,778, dated Mar. 8, 1960. Divided and this application Jan. 19, 1960, Ser. No. 3,314
4 Claims. (Cl. 76-108)



1. The method of making a roller cutter for an earth boring drill which comprises turning a steel cone blank about its axis while feeding a plurality of forming tools toward the blank to cut circumferential grooves therein separated by ridges having straight sides, feeding a second set of forming tools at a different angle toward the grooved work piece while turning the latter to round off one side of each of a plurality of ridges, feeding a third set of forming tools at a still different angle toward the grooved work piece to round off the other side of each of a plurality of ridges until the upper portion of each ridge is shaped into a half torus, then cutting radial grooves transverse to the ridges to divide them into individual rows of teeth, then rounding the flanks of the teeth adjacent the radial grooves to form an undulating surface extending circumferentially of the row of teeth.

3,003,371

DRILLING AND/OR TAPPING APPARATUS

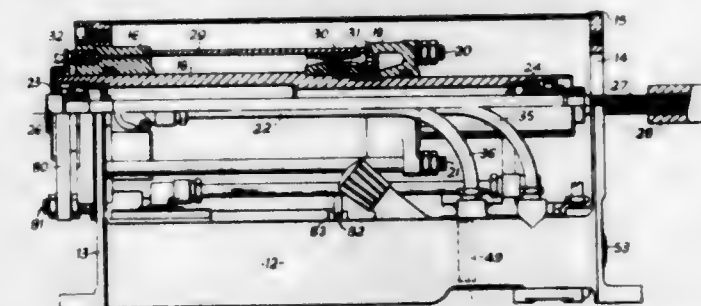
Bernard William Anderson, Dunstable, England, assignor to Engineering Research and Application Limited, Dunstable, Bedfordshire, England

Filed Mar. 4, 1959, Ser. No. 797,070

Claims priority, application Great Britain Mar. 5, 1958
12 Claims. (Cl. 77-32.3)

1. A tool feed apparatus comprising in combination, a housing, a tool-holder slidably mounted in the housing for reciprocable movement therein, driving means

for driving the tool-holder in its forward and backward strokes, a control device for said driving means to control the latter for reversal of movement of the tool-holder at the end of a stroke of the tool-holder, an electro-mechanical device connected to said control device for actuating the latter, switching means electrically connected to said electro-mechanical device, and movable means mounted on the housing which progressively advances step by step in accordance with the forward strokes of the tool-holder and which actuates the switching means thereby causing the tool-holder to stop and reverse direction at the end of a forward stroke which is longer than the immediately preceding forward stroke, a first



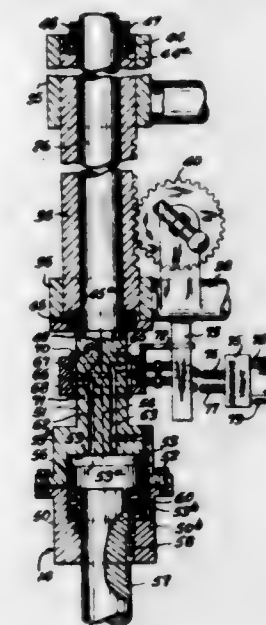
stop for limiting the movement of the movable means, a projection element, a detent element, one of said elements being carried by said tool holder while the other element is carried by said movable means, one of said elements being resiliently urged into the path of movement of the other such that it permits the resiliently urged element to be repressed by the other element when the movable means engages said stop, whereupon retraction of the tool holder effects retraction of the movable means, and a second stop for limiting the return movement of the movable means whereby final return movement of the tool holder disengages said elements from each other.

3,003,372

APPARATUS FOR CUTTING MATERIAL

Howard J. Findley, 995 Richmond Road, Lyndhurst, Ohio

Filed Sept. 29, 1959, Ser. No. 843,148
24 Claims. (Cl. 77-32.3)

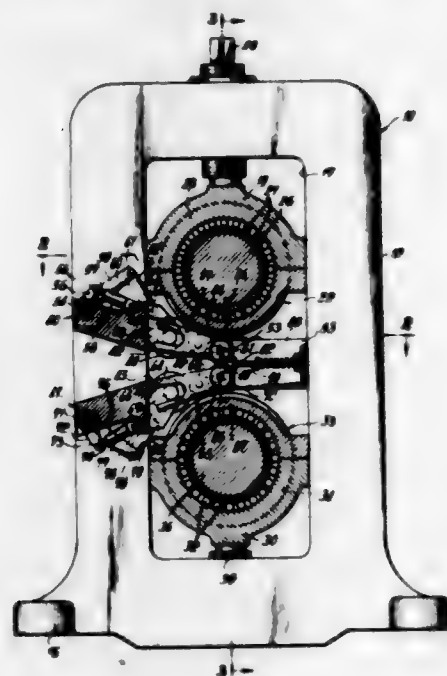


1. In apparatus for removing material from a workpiece, workholder means for supporting the workpiece, a rotatable cutting tool, drive means operable to rotate the tool, feed means operable to produce axial feeding movement of the tool for maintaining the latter in cutting relation to the workpiece, a vibrator device located between and connected with said drive means and tool for

transmitting rotative and axial feeding movements to the latter, said vibrator device comprising expandable-chamber pressure fluid responsive vibration producing means effective on the tool for producing a short-stroke rapid axial vibratory movement thereof during the cutting operation, and means for supplying pressure fluid to said responsive means.

3,003,373

MULTI-ROLL STAND FOR ROLLING MILLS
Clemens Volkhausen, Düsseldorf, Germany, assignor to Schloemann Aktiengesellschaft, Düsseldorf, Germany
Filed Aug. 11, 1959, Ser. No. 832,986
Claims priority, application Germany Jan. 21, 1953
2 Claims. (Cl. 80-38)



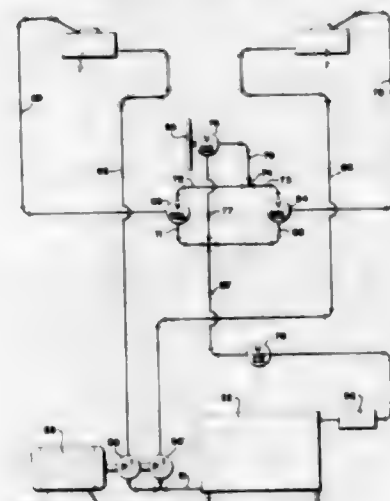
1. In a rolling mill a multi-roll stand comprising a frame including spaced substantially parallel upright members connected by cross members and providing a roll housing, upper and lower power driven backing rolls rotatably mounted in said upright members, upper and lower working rolls mounted in said housing in engagement with said upper and lower backing rolls respectively, said backing rolls frictionally driving said working rolls, the plane of the axes of said working rolls being offset from the plane of the axes of said backing rolls, upper and lower cross beams on said frame extending between said upright members on the same sides of the plane of the axes of said backing rolls as the plane of the axes of said working rolls, upper and lower carriages slidably mounted for vertical movement on said upper and lower cross beams respectively, upper and lower supporting rollers rotatably mounted on said upper and lower carriages respectively, an upper intermediate roll disposed between said upper working roll and said upper supporting roller, a lower intermediate roll disposed between said lower working roll and said lower supporting roller, upper and lower power operated means on said upper and lower cross beams connected with said upper and lower carriages respectively to move said upper and lower carriages vertically, said power operated means being operable to move said upper and lower supporting rollers into or out of frictional engagement with said upper and lower backing rolls respectively and means opposing displacement of said working rolls toward the plane of the axes of said backing rolls and for maintaining said upper and lower working rolls in engagement with said upper and lower backing rolls and said upper and lower intermediate rolls respectively, said last named means including a single common pressure applying means mounted on said frame at each end of said working rolls and each engaging the peripheries of both of said working rolls on

the sides away from said backing rolls and said intermediate rolls to provide a component of force toward said backing rolls and a second component of force toward said intermediate rolls.

3,003,374

HYDRAULIC ROLL PRESSURE CONTROL SYSTEM

Arthur Dean Smith, San Lorenzo, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed May 17, 1956, Ser. No. 585,523
2 Claims. (Cl. 80-56)



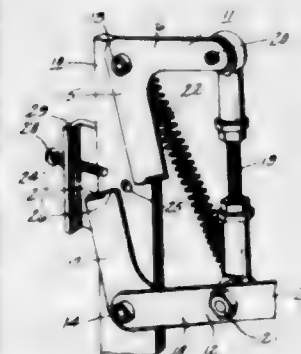
1. In a hydraulic control system for a rolling mill provided with a pair of cooperating rolls, one of which comprises a floating back up roll and the other of which comprises a work roll, said back up roll being movable with respect to said work roll so as to vary the pressure exerted between said rolls and separate hydraulically operated expandable piston and cylinder assemblies acting on the respective ends of said back up roll, means for actuating said piston and cylinder assemblies in such a fashion that equal and opposed pressures can be continuously applied to each piston and cylinder assembly, said actuating means including separate and oppositely acting pressure regulating valves for independently regulating the fluid pressure on each of said piston and cylinder assemblies, control means for each of said valves, means interconnecting the control means of said valves, the control means acting simultaneously on each of said valves such that pressure in one of the piston and cylinder assemblies can be increased while pressure in the other of said piston and cylinder assemblies is proportionately decreased and vice versa, a further pressure regulating valve connected to both of said first-mentioned pressure regulating valves, each of said first-mentioned pressure regulating valves comprising a housing, an inlet for said housing connected to a piston and cylinder assembly and an outlet for the housing for discharging fluid, a flanged piston in the housing movable toward and away from said outlet, the lower portion of said flanged piston being adapted to contact the seat of said outlet to close said outlet, spring means in the housing adapted to exert pressure on and tending to maintain said flanged piston in contact with said seat, said housing being further provided with a chamber disposed above the flange of the flanged piston, said flanged piston having an orifice passing through the flange of the piston and providing communication between said outlet and said chamber of the housing, said housing being further provided with a spring operated pilot valve disposed in an orifice connecting the chamber of the housing to the inward side of the pilot piston of the pilot valve, said latter orifice having a larger diameter than the orifice in the flange of the flanged piston, an adjustment spring in the housing adapted to exert the pressure on the pilot valve

and tending to maintain said pilot valve closed, means for regulating the pressure exerted by said adjustment spring, a vent means in the housing and disposed on the outlet side of said pilot valve, said vent means providing the only path for discharging fluid passing through said pilot valve and for opening said pilot valve when the fluid pressure at the inlet of the housing exceeds the pressure of the adjustment spring plus the pressure in said vent means, and said second-mentioned regulating valve being directly connected at all times to the vent means of both of said first-mentioned pressure regulating valves such that a change in the setting of the second-mentioned pressure regulating valve produces an equal change in vent pressure on both of said first-mentioned pressure regulating valves and the pressure in turn on each cylinder and piston assembly will be increased or decreased an equal amount while maintaining constant any pressure differential between the piston and cylinder assemblies established by operation of said first-mentioned regulating valves.

3,003,375

SIMPLIFIED INSULATION STRIPPING MECHANISM

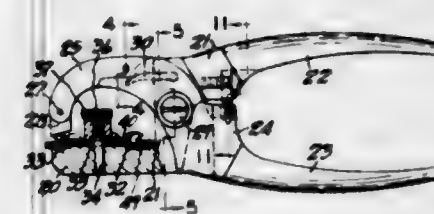
Earl E. Hopkins, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 24, 1959, Ser. No. 801,570
5 Claims. (Cl. 81-9.51)



1. An insulation stripping mechanism comprising a pair of knife blades which are joined together at their opposite ends, means for joining the knife blades together so that they will rotate in unison toward and away from each other, each knife blade having an edge for wedging an insulated cord therebetween, the edge of each knife blade having a flattened portion which first engages the cord whereby continued movement of the blades toward each other will compress the insulation of the cord, the edge of each knife blade having a cutting portion next to the flattened portion to sever the insulation down to the conductor.

3,003,376

DEVICE FOR APPLYING A WEIGHT TO A LINE
John M. Macy and Robert J. Shanahan, South Bend, Ind., assignors to South Bend Tackle Company, Inc., South Bend, Ind., a corporation of Indiana
Filed Feb. 11, 1957, Ser. No. 639,263
12 Claims. (Cl. 81-15)



1. In combination, a tool unit having a pair of relatively shiftable parts, a carrier unit mounting a plurality of slotted weight members in predetermined spaced relation, and means mounting said carrier unit on one tool part with a portion thereof located between said tool

parts in position for engagement of said portion of said carrier by and between said tool parts, said weight members being substantially equally spaced from said means.

3,003,377

TIRE PATCH APPLYING MACHINE
Jules Gross, 34 Glencedar Road, Toronto, Ontario, Canada
Filed Oct. 30, 1958, Ser. No. 770,645
3 Claims. (Cl. 81-15.2)



1. Apparatus for repairing tire casings comprising an elongated rigid mandrel conforming to and adapted to engage the interior of at least the whole of the crown and one sidewall of a segment of said tire casing, means supporting said mandrel in a fixed orientation in a position to be received within said tire segment and to support said tire casing in a perpendicularly dependent position, an elongated hood hingedly mounted on said supporting means at one side of said mandrel so as to be swingable between a first position away from said mandrel to permit a tire segment to be mounted on or removed therefrom and a second position in operative relation to said mandrel and in which it closely embraces the crown and sidewall of a said segment mounted on said mandrel, and means for locking said hood in said second position; said hood comprising a rigid shell hingedly mounted on said means supporting said mandrel for swinging over said tire segment on said mandrel, said shell being of generally concave shape for conforming approximately to the exterior of said crown and sidewall of said tire segment, and an inflatable bladder secured to and entirely contained within said shell and being expandable in response to fluid pressure to conformingly engage the exterior of at least the whole of said crown and sidewall of said tire segment and to transmit uniform pressure thereto compressing said crown and sidewall against said mandrel; said shell being shaped to co-operate with said tire segment in said second position to provide an enclosed space sufficient for containing and retaining said bladder therewithin and inflating means extending from said bladder through said rigid shell.

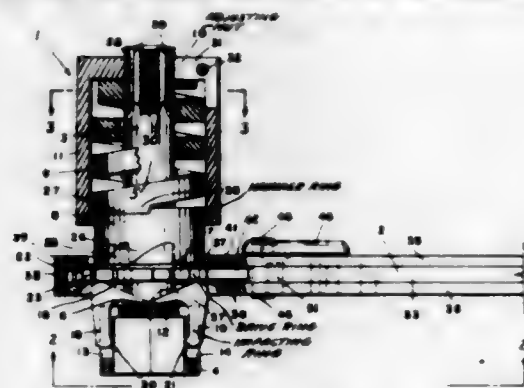
3,003,378

PREDETERMINED TORQUE RELEASE WRENCH PROVIDED WITH MEANS TO LOCK A BOLT AND NUT IN ASSEMBLED RELATION

Fred Hotchner, San Pedro, Calif.
(P.O. Box 738, Chicago 90, Ill.)
Filed Feb. 24, 1959, Ser. No. 794,981
8 Claims. (Cl. 81-52.4)

1. A predetermined torque release wrench including socket means adapted to engage a nut positioned on a bolt and apply turning moment thereto, impacting means associated with said socket means and adapted to deliver a distorting blow to the nut to lock it to the bolt on which

it is positioned, and drive means adapted to apply turning moment to the nut through said socket means to turn it up on the bolt until the value of the applied torque

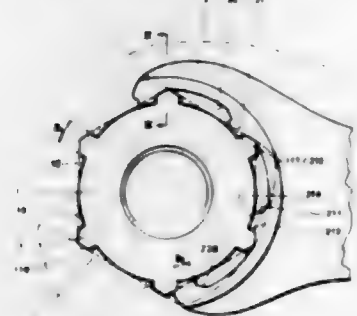


reaches a predetermined maximum and to thereafter impart energy to said impacting means to lock the nut to the bolt.

3,003,379

OPEN END SPANNER WRENCH

Hans Pribitzer, Koeschstr. 57, Zurich, Switzerland
Filed Apr. 23, 1959, Ser. No. 808,503
Claims priority, application Switzerland Apr. 24, 1958
3 Claims. (Cl. 81-90)



1. A wrench for use with screw elements in the form of a hexagon having six lugs spaced equally around the circumference thereof on a cylinder which is tangent to said hexagon at the mid point of its sides, said lugs having sideflanks oriented substantially parallel to a radial plane of symmetry of each lug, the space between two consecutive lugs being at least twice the length of one lug, said wrench comprising a wrench head with a concave cylindrical partial face having a radius of curvature which is equal to the radius of an imaginary cylinder which comprises the corners of said hexagon, four projections on said concave face extending a distance equal to the differences of the radii of said cylinders, said projections having sideflanks oriented substantially in radial direction of said concave face and being arranged so that at a time one side flank of all the projections will contact one sideflank of four consecutive lugs of the screw element, the space between two consecutive projections being at least twice the length of one projection, the wrench being applicable directly to said screw element by movement at right angles to its axis.

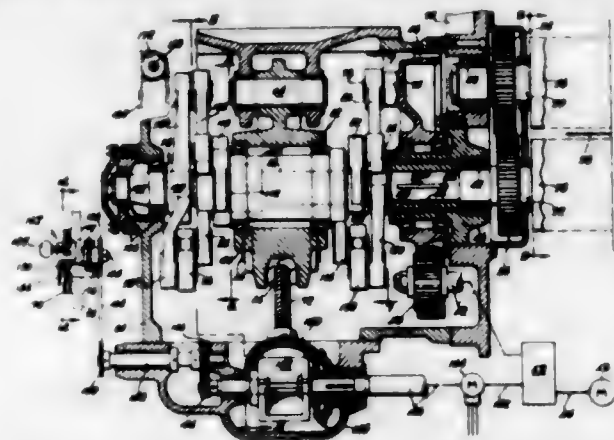
3,003,380

FLYING CUTTER CONTROL MEANS FOR VARYING FLYING FREQUENCY AND RETAINING FLYING SPEED OF CUTTERS

Henry W. Moser and Edwin Bolliger, Haddonfield, N.J., assignors to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
Filed Jan. 26, 1959, Ser. No. 788,834
10 Claims. (Cl. 83-299)

3. In a mechanism for cutting continuously advancing strip material into successive sections of predetermined

length, a cutting mechanism including coaxing rotary cutting cylinders, drive transmission means connected to said cutting cylinders operable to drive said cylinders at a predetermined rate of rotation and to vary the angular velocity thereof in each cycle of rotation, said drive transmission means comprising four rotatable drag link mechanisms interconnected in series and having their axes of rotation normally in alignment, the first and last of said mechanisms having stationary axes of rotation,



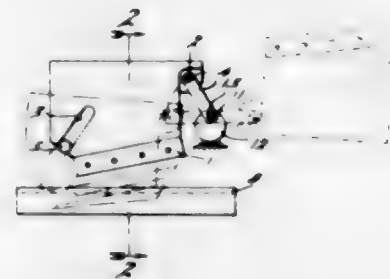
the first of said mechanisms being connected to a driving member, the velocity output of each said mechanism being superimposed on the input of the next succeeding mechanism, and means for simultaneously angularly displacing the axes of rotation of the two intermediate ones of said mechanism equally with respect to the stationary axes of rotation of the others of said mechanisms for cyclically varying the output velocity of the said mechanisms, the attained velocity of the last said mechanism being imparted to said cutting cylinders.

3,003,381

LEVER OPERATED PIN GUIDED DRAW CUT APPARATUS

Hans Biel and Ernst Pfäffle, both of Neuffen, Württemberg, Germany, assignors to Hans Sickinger, Providence, R.I.

Filed Sept. 25, 1956, Ser. No. 611,897
2 Claims. (Cl. 83-638)



1. In a cutting device for paper and the like, a straight stationary knife, a movable knife having a blade disposed at a predetermined acute angle with respect to said stationary knife, the movable knife being movable between open and closed positions with respect to said stationary knife, a holder for said movable knife having a slot in one end thereof, said slot being disposed at an acute angle lying between said predetermined angle and a 90° angle with respect to said stationary knife, a stationary guide pin circular in cross section disposed in said slot, an arm oscillatable on a stationary axis between the opened and closed positions of the movable knife, and a pivotal connection between the outer end of said movable arm and the end of said holder remote from said slot, the relative positions of said stationary axis and movable knife in the opened position of said

movable knife further being such that the path of movement of said pivotal connection will be more steeply inclined than said slot with respect to the stationary knife after said movable knife has passed its closed position, whereby the relative angle between said stationary and movable knives will be decreased after the work has been cut.

3,003,382

ELECTRIC VIOLIN, AND ELECTROMAGNETIC PICKUP THEREFOR

Clarence L. Fender, 2212 E. Revere, Fullerton, Calif.
Filed June 2, 1958, Ser. No. 739,393
13 Claims. (Cl. 84-1.16)

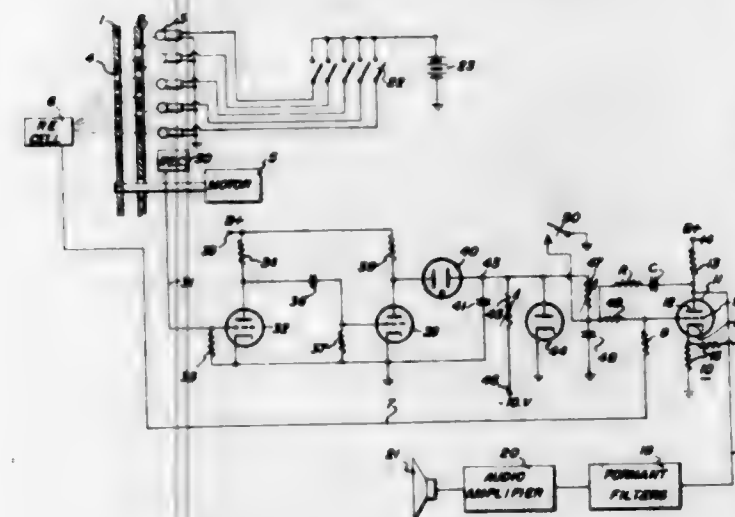


1. An electrical musical instrument of the violin type having a body, strings, and a bridge therebetween, an electrical pickup for said instrument comprising a support upon which said bridge is mounted, a resilient compressible pad disposed between said support and said instrument body, and adjustable compression means extending between said support and said body to adjust the degree of compression of said resilient compressible pad, said support comprising at least part of an armature of said pickup, whereby movement of said bridge by said strings will cause movement of said armature which may be electroacoustically translated into sound.

3,003,383

PERCUSSION SYSTEM

Richard E. Williams, P.O. Box 566, Fairfax, Va.
Filed Aug. 5, 1958, Ser. No. 753,859
7 Claims. (Cl. 84-1.26)



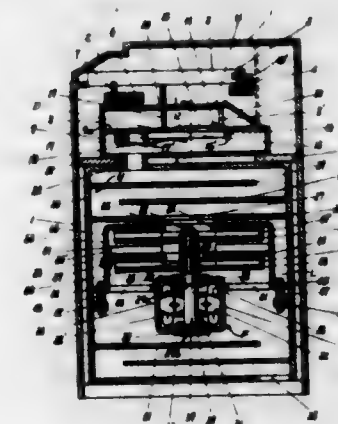
1. In combination, a gaseous conduction device and a condenser connected in a series circuit, means normally maintaining a voltage across said gaseous discharge device and said condenser in series which is lower than ignition voltage for said gaseous conduction device, a source of negative voltage, a high resistance, means con-

necting said source of negative voltage via said high resistance to the junction of said gaseous conduction device and said condenser, a diode connected from the said junction to a point of reference potential in conductive direction, and means for supplying pulses in series with said series circuit which are of magnitude sufficiently great to effect discharge of said gaseous discharge device.

3,003,384

ORGAN WITH MOTOR-DRIVEN BLOWER

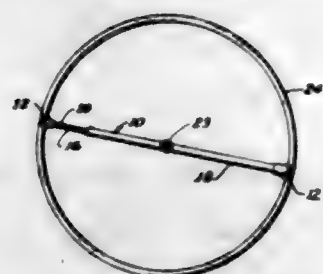
Ginzo Kikugawa, Tobashi, Mieken, Japan, assignor to Shinko Denki Kabushiki Kaisha, Tokyo, Japan
Filed Mar. 16, 1959, Ser. No. 799,652
2 Claims. (Cl. 84-355)



1. A reed organ, comprising: an outer casing; a keyboard comprising a plurality of keys disposed in said casing for playing the organ; a plurality of walls defining first and second chambers in the casing, one of the walls having a plurality of openings providing communication between the chambers; a plurality of vibratory reeds arranged in a row on said one wall and each extending across one of said openings to vibrate thereat; a plurality of spring loaded lids normally closing the respective openings; means connecting the keys to the lids for selective operation by the keys to clear said openings and permit passage of air between the chambers through the cleared openings; spaced shelves in the casing supporting said walls; an inner casing supported suspended from said shelves in the outer casing and spaced from the outer casing; pipe means connecting the inner casing and the second one of said chambers and providing an air passage therebetween; a horizontal wall dividing the inner casing into upper and lower chambers communicating with each other through an opening in the horizontal wall; a motor-blower assembly carried by arms mounted on resilient members supported at interior sides of the inner casing in the lower chamber; a dashed shell in the lower chamber covering said blower and spaced therefrom to direct air downwardly, said shell being supported on said arms; spaced vanes defining multiple stages of said blower rotatable in the shell; a stationary vane guide ring disposed between the rotatable vanes and secured to the interior of the shell, said shell having an upper central opening providing an air passage between the interior of the shell and said upper chamber through the opening in said horizontal wall; spaced baffle plates in the upper chamber defining a first tortuous air path and further spaced baffle plates in the lower chamber spaced from said motor and defining second tortuous air path, said inner casing opening to the atmosphere at the end of said second air path, whereby air drawn under suction through the outer casing is substantially free from noises produced by the motor-blower assembly when leaving the opening in the inner casing.

3,003,385 BATON

Don A. Taylor, 216 Mill St., Box 4, Wadsworth, Ohio
Filed Apr. 6, 1959, Ser. No. 804,246
9 Claims. (Cl. 84-477)



1. In combination, an annular hoop of which the outer periphery of the cross section is approximately circular, a manually twirlable baton extending diametrically of the hoop across the space within the hoop, detachable connecting means on the baton detachably connecting the baton to the hoop at diametrically opposite portions of the hoop and holding the hoop and baton in substantially coplanar relation sufficiently firmly so that said hoop and baton can be twirled as a unit by twirling the baton about an axis parallel to the hoop axis, the baton having its cross sectional dimension in the plane of the hoop small enough so that the baton with the hoop attached can be twirled by the fingers of one hand by manipulation of the baton by the fingers progressively between adjacent fingers in the conventional baton twirling manner, and said baton terminating at its ends close to the periphery of the hoop.

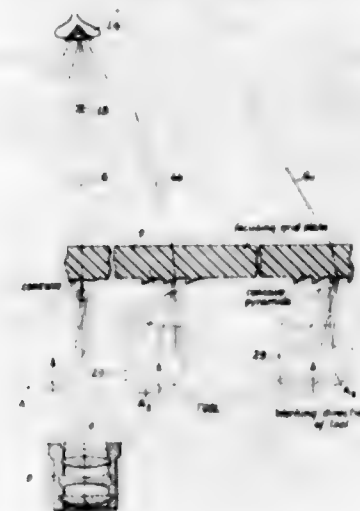
3,003,386

SHEET METAL NAIL WITH SPREADING LEGS
Richard A. Snyder, Detroit, Mich., assignor to Crescent Brass and Pin Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 30, 1958, Ser. No. 731,974
1 Claim. (Cl. 85-13)



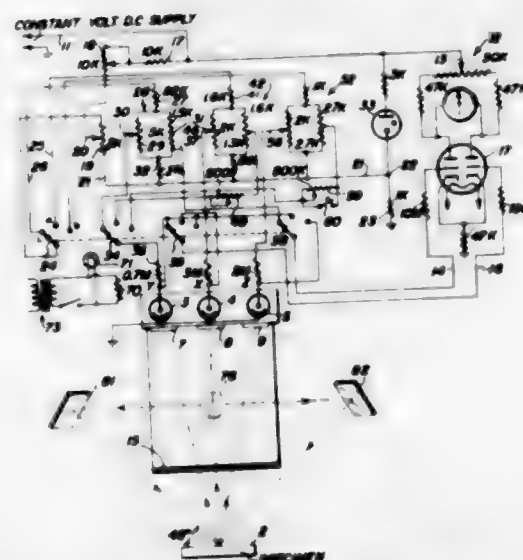
A nail formed from an elongated blank of sheet material and having a head formed by the mid-portion of such blank and having a pair of flexible elongated legs respectively formed by the respective end portions of the blank and extending similarly downward from the head in spaced substantially parallel relation, the length of said legs materially exceeding their width, each leg having a slot upwardly extending from its lower end and terminating in the upper portion of such leg, said slots being progressively reduced in width as they extend upwardly, said slots dividing each leg into a pair of relatively flexible elongated prongs, each prong progressively increasing in width from its lower end toward its upper end, and the lower end portion of each prong being bent to downwardly diverge from the longitudinal axis of the nail, whereby the legs will spread apart as the nail is driven, thereby resisting withdrawal of the nail, said head comprising a central panel to receive driving impact, and a pair of panels having upper ends integrally connected to opposite ends of the central panel and bent to converge downwardly toward said legs and to underlie said central panel, the width of said pair of panels exceeding the width of the legs, whereby shoulders are formed at the junctions of said panels and said legs.

**3,003,387
FOCUSING SCREEN FOR CAMERA FINDERS**
Karl Schiele, Braunschweig, Germany, assignor to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate, Braunschweig, Germany, a German firm
Filed July 8, 1958, Ser. No. 747,194
Claims priority, application Germany July 11, 1957
8 Claims. (Cl. 88-1)



1. A focusing screen comprising a sheet of transparent material having one face thereof provided with a large number of relatively small pyramid-like formations the geometrical axes of which formations are inclined progressively from a central area of the screen outwardly toward the lateral edges thereof, to converge light beams received from one side of the screen toward a common position on the other side of the screen, the apices of all of said pyramid-like formations lying substantially in a common plane and being spaced from the respective next adjacent apices by distances from 0.02 to 0.04 millimeter, the apex region of each of said formations being substantially identical with the apex region of the other pyramid-like formations in shape but being oriented differently in such fashion that a corresponding side of each of said formations is faced toward an optical axis passing through the center of said screen.

**3,003,388
COLOR DIFFERENCE MEASURING INSTRUMENT**
Richard S. Hunter and Clyde A. Loffland, Falls Church, Va., assignors to Hunter Associates Laboratory, Inc., Falls Church, Va., a corporation of Virginia
Filed May 9, 1958, Ser. No. 734,132
10 Claims. (Cl. 88-14)



1. A color meter comprising a light source, a plurality of light-responsive photoelectric cells, a load resistor connected in series with each cell respectively, means for

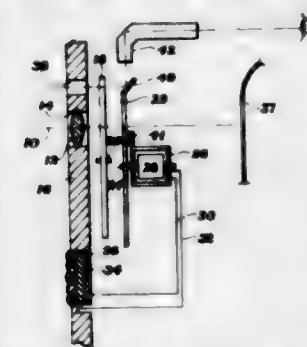
directing light from said source to a specimen to be measured and from said specimen toward said cells, light-diffusing means between said specimen and said cells, a plurality of separate filter means individual to said cells respectively and arranged to filter said diffused light reaching said cells in a plurality of spectral bands so selected as to produce electrical voltage responses across the load resistors of the respective cells corresponding to the spectral response functions of the human eye, electric circuit means for indicating and measuring the load resistor voltage response and the differences in voltage response of the respective cells arranged to produce an electrical output directly related respectively to the lightness L , the red-greenness a , and the yellow-blueness b , related to CIE illuminant C, X, Y, and Z by the following equations:

$$\begin{aligned} L &= Y\% \\ a &= 175Y - (1.02X - Y) \\ b &= 70Y - (Y - 0.847Z) \end{aligned}$$

separate scales for indicating the electrical values corresponding respectively to L , a and b , and two adjustable resistance means respectively in the a circuit and the b circuit for electrically standardizing the response of said photocells without mechanical adjustment.

3,003,389 VIEWFINDER SIGNALS FOR PHOTOGRAPHIC CAMERAS

Allen G. Thomson and Gerald F. Pichens, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 8, 1961, Ser. No. 87,930
9 Claims. (Cl. 88-16)



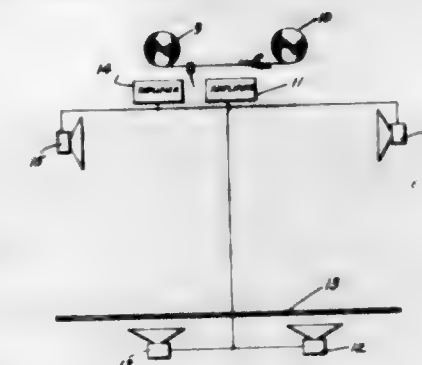
1. In a camera having a viewfinder and having an automatic exposure control system for regulating the exposure of photographic film in said camera automatically, said control system including a diaphragm vane moved as a function of scene brightness, means for indicating in said viewfinder a predetermined low level of scene brightness, said means comprising: means for transmitting a light beam from the exterior of said camera through a predetermined path rearwardly into said viewfinder, whereby said beam is visible in said viewfinder, said transmitting means including a reflecting member supported by said diaphragm vane for movement therewith and disposed in said path for reflecting said light beam only when the position of said diaphragm vane corresponds to said low level of scene brightness; and a rotatable shutter member having respective cut-out and opaque portions disposed for sequential cyclic movement across said path for interrupting said light beam cyclically to produce a visible flicker in said beam.

3,003,390 METHOD OF REPRODUCING BILINGUAL SOUND MOTION PICTURE FILM

Eugene A. De Lukawiecki, 2718 E. 2nd St., Long Beach, Calif.
Filed Oct. 31, 1958, Ser. No. 770,982
2 Claims. (Cl. 88-16.2)

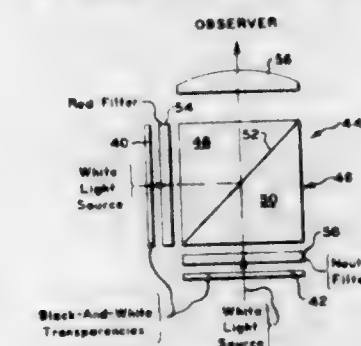
1. The method of bilingual film reproduction with sound allocation which consists in providing a positive motion picture film having picture frames and recorded

sound track carrying both original dialogue in one language and sound effects related to the picture frames, the picture frames adapted to be projected upon a viewing screen situated forwardly of the audience and the sound source of said original dialogue in one language being situated to the rear of said viewing screen; providing an unrecorded magnetic sound track and recording on said unrecorded magnetic track a translation of



the original dialogue in a language foreign to the language of the original dialogue by a single translator for all actors both male and female in the original dialogue, and the sound source for said language by the single translator being located at the rear of the audience, and commencing the translation by the translator after a time delay interval from the start of the original dialogue on the original recorded sound track of approximately twenty picture frames.

**3,003,391
COLOR IMAGE FORMATION IN WHICH ONLY ONE COLOR FILTER IS EMPLOYED IN PROJECTION**
Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 28, 1955, Ser. No. 504,545
2 Claims. (Cl. 88-16.4)

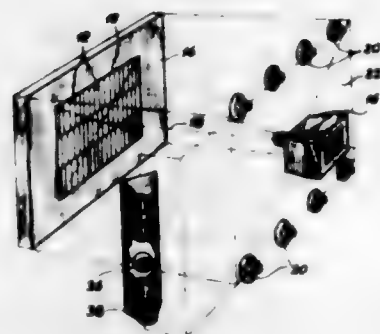


1. A unitary optical system for providing a multi-colored image of a photographic subject containing a plurality of colors, said system comprising prism means composed of a pair of adjoining, right prism elements having a partially light-reflecting and partially light-transmitting uncolored interface, substantially white light source means located adjacent said prism means providing the transmission of light rays along a pair of optical axes entering said respective prism elements, said axes being disposed substantially at 90° to one another and to entering faces of said prism elements and meeting at said interface, light rays of one of said axes being reflected from said interface and light rays of the other of said axes being transmitted by said interface so as to pass thence along a common optical axis which is an extension of said other of said axes, a black-and-white positive color-separation record of the long wavelength content of said subject positioned on one of said pair of optical axes, a black-and-white positive color-separation record of the short wavelength content of said subject positioned

on the other of said pair of axes, colored filter means of relatively long wavelength transmission characteristics positioned on that one of said pair of optical axes on which is positioned said color-separation record of the long wavelength content of said photographic subject, and a neutral filter positioned on the other of said pair of optical axes on which is positioned said color-separation record of the short wavelength content of said photographic subject, said black-and-white records being visible as a multicolored composite image.

3,003,392

METHOD OF AND MEANS FOR PHOTOGRAPHING A REPRODUCTION ORIGINAL CONSISTING OF CARDS IN A SCALE-LIKE ARRANGEMENT
Johan Henrik Lemche, Copenhagen, Denmark, assignor to Carl Allers Etablissement A/S, Copenhagen, Denmark, a Danish joint-stock company
Filed Mar. 31, 1958, Ser. No. 725,292
1 Claim. (Cl. 88—24)

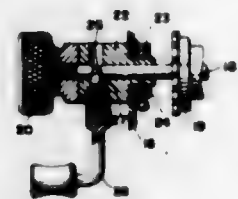


A method for photographing a plurality of cards carrying information thereon which are made of fluorescent material, comprising the steps of mounting said cards in rows on a support member in overlapping relationship such that a marginal portion of each card is exposed, directing light in a direct manner onto the exposed portions of said overlapping cards from a plurality of light sources disposed in a plane spaced from and parallel to said support member, projecting an ultraviolet light onto the free edges of said cards at an oblique angle thereto to fluoresce the free edges of said cards thereby avoiding casting of any shadows by the free edges of said cards onto cards overlapped by the exposed portions, and photographing the rows of overlapping cards illuminated by said directed and projected light.

3,003,393

FILMSTRIP ADVANCE AND ALIGNING MECHANISM

Paul J. Kilday, Niles, Ill., assignor to Standard Projector and Equipment Company, Inc., Niles, Ill., a corporation of Illinois
Filed May 31, 1960, Ser. No. 32,631
1 Claim. (Cl. 88—28)



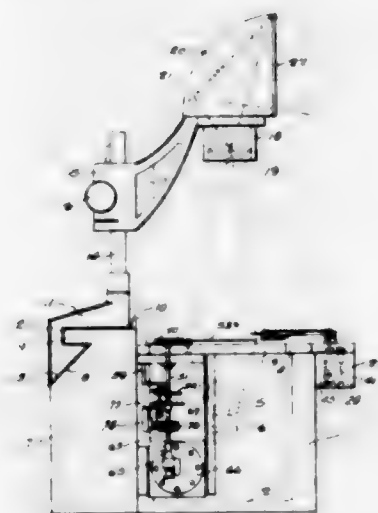
In a projector for filmstrips, a film advancing and aligning mechanism comprising a supporting bracket se-

cured to the projector and having a pair of spaced and downwardly projecting legs, each leg having an opening aligned with the corresponding opening in the other leg, a film aligning sleeve formed with a longitudinal bore and having an enlarged head at one end of greater diameter than the bracket openings and at the other end a threaded hub portion adapted to project through one of said bracket openings, a nut tightened on said threaded portion to hold said aligning sleeve snugly rotatable in said opening, a spring-pressed detent mounted in said sleeve whereby the detent is urged toward and partially into the longitudinal bore of said sleeve, a shaft extending through said sleeve bore and both of the aligned bracket openings and rotatable within said sleeve bore, said shaft being formed with equally spaced peripheral indentations, each indentation adapted to be engaged by said spring-pressed detent, a film engaging sprocket wheel rigidly mounted on said shaft between the two bracket openings, a film advancing knob secured to one end of said shaft for rotating said shaft and sprocket wheel independently of said sleeve, and a handle projecting outwardly from said sleeve for rotating said sleeve, shaft and sprocket as a unit for aligning the film in the projector.

3,003,394

APPARATUS FOR PROJECTING INDICIA IN SERIES AT TIMED INTERVALS

Jack Figaretti, 202 Cleveland Ave., Wheeling, W. Va.
Filed Nov. 17, 1959, Ser. No. 853,608
7 Claims. (Cl. 88—26)

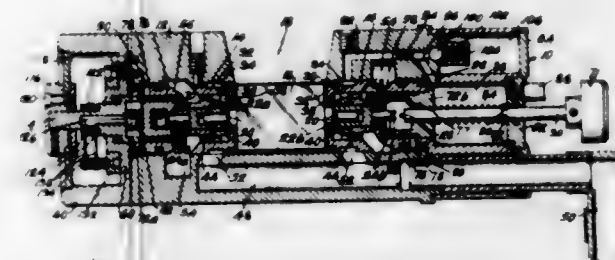


1. An order projecting apparatus comprising a housing having a transparent top portion, a lens adjustably mounted on said housing above said transparent top portion, a source of illumination mounted in said housing in line with said transparent portion and said lens, at least one transparent member capable of having order indicia transcribed thereon, an endless conveyor moveably mounted on said housing, means for detachably connecting said member to said conveyor, said conveyor being positioned for presenting said member between said source of illumination and said lens, an electric motor, a source of electrical current, a circuit connecting said motor and said current, a circuit make and break mechanism interposed in said circuit, a driven timer operatively connected to said mechanism for opening and closing said circuit at given intervals for operating said motor for predetermined periods, means operatively connecting said motor to said conveyor only during a portion of a turn of said motor for driving said conveyor intermittently and means operatively connected to said connecting means capable of connecting said motor to said current only during the driving of said conveyor.

3,003,395

HIGH-SPEED, GAS TURBINE DRIVEN MIRROR WITH ADJUSTABLE PULSE GENERATING MEANS

Willard E. Beck, Box 357, Boulder, Colo.
Filed May 20, 1957, Ser. No. 660,165
6 Claims. (Cl. 88—74)



1. In a rotating mirror camera, the combination of a housing, bearing means located in the housing, a mirror formed to have a polished planar face and having integral supporting shaft sections journaled for rotation within the bearing means, one of said shaft sections being of magnetic material forming a permanent magnet, means coupled with said mirror to effect rotation thereof, means for generating an electrical pulse comprising a core having pole pieces lapping the magnet of said shaft section and mounted in the housing for rotational movement into selected relative angular positions about said magnetic shaft section, a coil carried by said core for transmitting signals induced therein by the rotation of said magnet between the core pole pieces and means for effecting rotational movement of said core relative to said magnetic shaft section to selectively adjust the phase relationship between the generation of a pulse and the position of a polished planar face of the mirror.

3,003,396

AUTOMOBILE MIRROR

Hilger P. Jenkins, 5510 Woodlawn Ave., Chicago, Ill.
Filed Apr. 22, 1957, Ser. No. 654,210
2 Claims. (Cl. 88—87)



1. In an automobile mirror capable of presenting a panoramic reflection of the side and rear surroundings of an automobile, a unitary convexly curved reflecting surface of a generally rectangular outline thereby defining pairs of longer and shorter sides, the pair of longer sides being disposed generally horizontally, the said curved surface being defined by radii of curvature that decrease in proceeding from the central portion of said surface toward both pairs of side edges, the radius of curvature defining the curvature of the surface adjacent said shorter edges being one-fourth to one-eighth the radius of curvature defining said central portion, said central portion radius being about one meter.

3,003,397

WORK INSPECTING DEVICE

Louis Jacobus, Stamford, Conn., assignor to Ullman Devices Corp., Norwalk, Conn., a corporation of New York
Filed July 25, 1958, Ser. No. 751,023
3 Claims. (Cl. 88—164)

1. A work-inspecting device comprising a reflector, an elongated tubular handle, means pivotally supporting said reflector by an edge thereof on one end of said tubular handle, a rod of greater length than said tubular handle slidably disposed therewithin, means on one end

of said rod pivotally engaging said reflector for angular movement thereof relative to said tubular handle upon reciprocation of said rod relative to said handle, an expansion spring mounted over said rod intermediate its other end and the other end of said tubular handle, said expansion spring engaging said rod and said handle end to normally urge said rod end away from said handle end to thereby normally, resiliently maintain said reflector in extended position relative to said handle, and

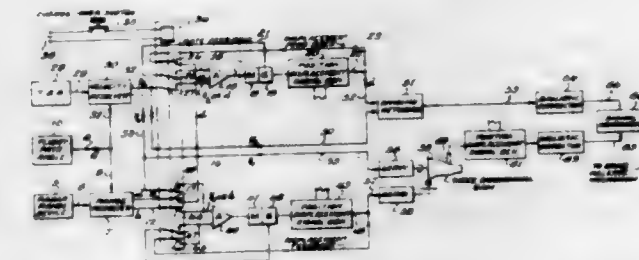


manually releasable spring tensioned means for regulating the relative movement of said rod and said handle to normal position comprising an opening formed in said tubular handle, a rack formed on the portion of said rod reciprocable past said opening, and a manually engageable pawl pivotally mounted on said handle in position to engage said rack and spring means mounted on said handle and engaging said pawl for normally urging said pawl into rack-engaging position.

3,003,398

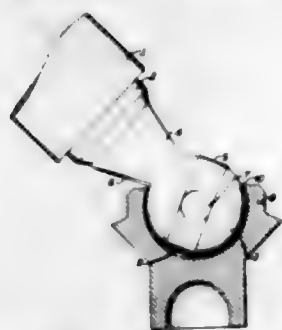
TOSS-BOMBING AID FOR AIRCRAFT

John O. Lalli, Los Angeles, Calif., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 30, 1955, Ser. No. 549,918
5 Claims. (Cl. 89—1.5)



3. In a toss-bombing system for aircraft, means providing signals in accordance with the vertical and horizontal components of the slant range from the craft to a target during the dive portion of the maneuver, means providing signals in accordance with the vertical and horizontal components of the velocity of the craft during the pull-out portion of the maneuver, a servomechanism operable in a signal repeating mode during the dive portion of the maneuver and a signal integrating mode during the pull-out portion of the maneuver to produce a continuous signal in accordance with the vertical component of the slant range from the craft to the target, a servomechanism operable in a signal repeating mode during the dive portion of the maneuver and a signal integrating mode during the pull-out portion of the maneuver to produce a continuous signal in accordance with the horizontal component of the slant range from the craft to the target, and change-over means operable to connect the vertical component signal of said slant range signal means to said vertical component servomechanism in the signal repeating mode; to connect the horizontal component signal of said slant range signal means to said horizontal component servomechanism in the signal repeating mode; to connect the vertical component signal of said velocity signal means to said vertical component servomechanism in the signal integrating mode; and to connect the horizontal component signal of said velocity signal means to said horizontal component servomechanism in the signal integrating mode.

3,003,399
LOCKAGE OF BREECH OF MORTAR BARREL TO COUNTERPLATE
 Hans O. Donner, Hammenkatu 14, Tampere, Finland
 Filed Mar. 27, 1959, Ser. No. 802,382
 4 Claims. (Cl. 89—37)



1. Apparatus to lock a mortar comprising a mortar barrel member, a counter plate member, a male element on one of said members and a female element on the other of said members, said elements being engageable to lock said members together; said female element comprising a single piece provided with a frusto spherical socket having a circular entry opening of determinable diameter and a maximum diameter greater than said determinable diameter; said male element including a generally spherical portion having a maximum diameter greater than that of the entry opening but less than the maximum diameter of said socket, said spherical portion having a flat annular surface with a diameter less than that of said entry opening whereby said male element can be selectively disengaged from said female element, and a neck connected to said spherical portion but spaced from said flat annular surface.

3,003,400
TAKE-DOWN ASSEMBLY FOR A FIREARM WITH A GAS PISTON
 James H. Johnson, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
 Filed Jan. 21, 1960, Ser. No. 3,776
 6 Claims. (Cl. 89—191)

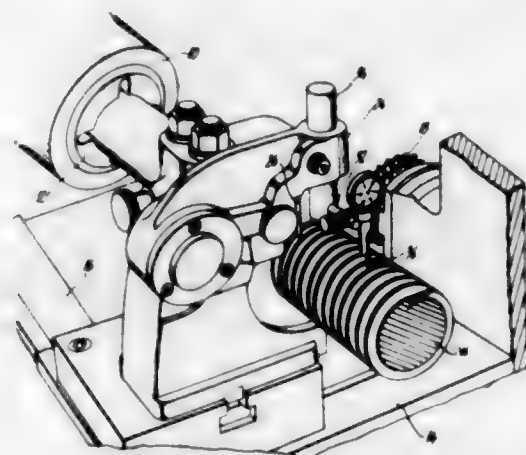


1. In combination in a firearm a barrel, a receiver, a guide rod movably supported by the barrel and the receiver, a bolt actuating piston carried by the rod, a trigger assembly carried by the receiver and the rod and a forearm cooperating with the barrel to enclose the piston and the rod, said forearm being carried by the barrel and the trigger assembly.

3,003,401
SCREW THREAD MATCHING DEVICE FOR MILLING MACHINES
 Frederic C. Whitehead, Newington, Conn., assignor to Pratt & Whitney Company, Incorporated, West Hartford, Conn., a corporation of Delaware
 Filed Feb. 5, 1958, Ser. No. 713,487
 6 Claims. (Cl. 90—11.66)

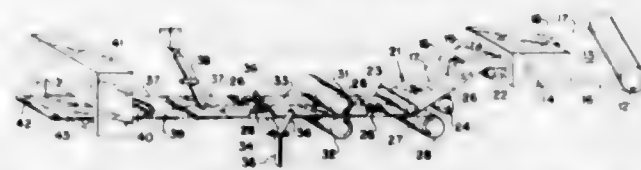
1. A tool locating means for thread milling machines comprising a base, a work supporting and rotating member thereon, means in said supporting and rotating member to permit advancement of a work piece therein to successive axial positions, a cutter carriage having limited sliding movement on said base, said carriage being movable in a direction parallel to the axis of rotation of said

work supporting and rotating member, a cutter thereon, a bracket pivotally mounted on said cutter carriage, an



indicator adjustably mounted on said bracket, a resiliently mounted work contacting member on said indicator, and means to axially adjust the position of said cutter carriage when in successive axially advanced operating positions of the screw threads being formed in accordance with the indication of said work contacting member.

3,003,402
METHOD OF MAKING DISPOSABLE LITTER BAGS
 Sam Stein, Wearimus Road, Hoboken, N.J.
 Original application July 5, 1957, Ser. No. 670,134, now Patent No. 2,894,675, dated July 14, 1959. Divided and this application Mar. 17, 1959, Ser. No. 799,963
 1 Claim. (Cl. 93—35)

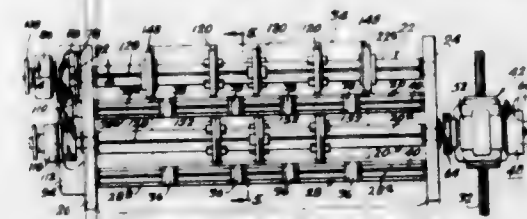


The method of making a self-attaching litter bag having a removable layer of treated paper extending along one side and over its closed folded end which can be removed readily without damaging said bag which comprises moving a continuous strip of bag paper in a single plane, applying a continuous strip of glue to one side edge of said strip of paper, sealing said side edges of said strip to form a tube, applying at least one patch of pressure-sensitive adhesive to one side of said tube at longitudinally spaced intervals, covering the side of said tube having said patch with a continuous strip of treated paper which becomes secured to said tube at spaced intervals throughout its length by said patches, cutting said tube and treated paper transversely at regular intervals spaced longitudinally from said patch into individual sections, applying a strip of glue transversely to the exposed surface of each piece of said tube adjacent its forward end, folding the forward end of each individual piece upon itself and over said transversely extending strip of glue to seal the same to form a bag whereby the free end of the treated paper is also folded over said folded end.

3,003,403
MECHANISM FOR REDUCING SET-UP TIME AND MAINTENANCE OF SLOTTING, SCORING, SLITTING AND LAP CUTTING APPARATUS
 Walter J. Goetsch, Kenilworth, Ill., assignor to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
 Filed Nov. 3, 1959, Ser. No. 850,726
 6 Claims. (Cl. 93—58.2)

1. In apparatus for working on corrugated cardboard container blanks, a plurality of pairs of upper and lower

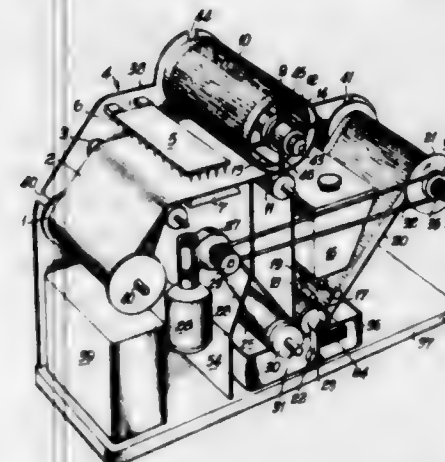
rotatably mounted shafts, a plurality of coaxing work members mounted on said shafts, drive means connected to one said pairs of shafts, a gear train interconnecting said pairs of shafts for rotation thereof from the driven shaft pair, first clutch means for said drive means and second clutch means for said gear means, said first clutch



means being separately and selectively operable for selectively engaging and disengaging said driven pairs of shafts from the drive means, said second clutch means being separately and selectively operable for selectively engaging and disengaging the gears interconnecting the pairs of shafts whereby one said pair of shafts is circumferentially adjustable with respect to another of said pairs.

3,003,404
MACHINE FOR EFFECTING ELECTROSTATIC PRINTING

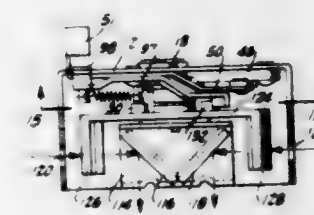
Kenneth Archibald Metcalfe, Graymore, South Australia, and Robert John Wright, South Payneham, South Australia, Australia, assignors to the Commonwealth of Australia, care of the Secretary of the Department of Supply, Melbourne, Victoria, Australia
 Filed Nov. 29, 1957, Ser. No. 699,645
 Claims priority, application Australia Dec. 21, 1956
 1 Claim. (Cl. 95—1.7)



A machine for effecting electrostatic printing on a paper web having a photo-conductive surface comprising a main supporting frame, a supply reel carrying said paper web rotatably supported on said frame, a take-up reel, means to drive said take-up reel, rollers on said frame to keep the paper web on a processing path between the said supply reel and take-up reel, an electrical charging device at a charging station on said frame along said processing path to charge said photo-conductive surface, a clear hollow rotary drum on said frame positioned to be contacted by said paper web after the paper web leaves the charging station to form an exposure station, means on said drum to secure a negative thereto, said negative being held in close proximity to the paper web, a shield disposed in said drum having a slot therein facing the photo-conductive surface on the said paper web, a light source in the said drum to project a continuous image through the negative onto the said photo-conductive surface, a roller to press the web to the said drum at said slot, a developer roller rotatably supported on said frame to contact said photo-conductive surface and forming a developing station after said exposure station, means to

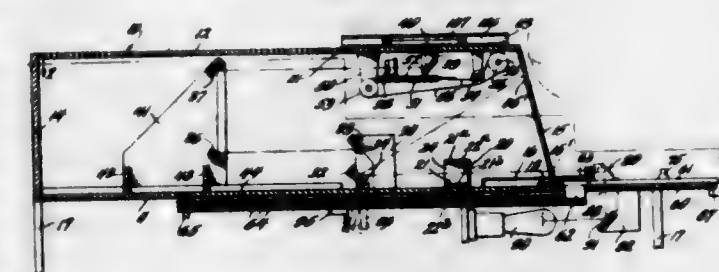
supply liquid developer to said developer roller, which is selectively deposited on said paper web according to the image charge, a drive roller sandwiching said web against said developer roller, means urging said drive and developer rollers together whereby an intimate contact between said web and developer roller is assured and said web driven along said path, and a drying station after said developer station including heating means also supported on said frame to dry said developed image before the web is taken up on the take-up roller.

3,003,405
CAMERA SHUTTER
 Joseph H. De Lacy, Los Angeles, Calif.
 (1785 Monrovia Ave., Costa Mesa, Calif.)
 Original application Nov. 12, 1954, Ser. No. 468,379, now Patent No. 2,870,697, dated Jan. 27, 1959. Divided and this application July 21, 1958, Ser. No. 750,038
 3 Claims. (Cl. 95—18)



2. A camera shutter comprising a rotatable shutter blade, spring means for urging rotation of said shutter blade, one-way drive means for applying a predetermined force upon said spring means, an escapement lever normally engaging said shutter blade holding same against rotation under the urging of said spring means, a pivotally mounted instantaneous exposure lever, a gear segment pivoted by depression of said instantaneous exposure lever, a pinion meshing with said gear segment and driving said one-way drive means upon rotation thereof, means carried by said gear segment to move said escapement lever to release said shutter upon pivoting of said gear segment, and a pair of openings directed oppositely with respect to each other, said shutter blade having a pair of right angular flanges, said flanges normally being disposed so as to be in the path of and prevent the passage of light through said openings, said flanges being moved temporarily out of said path during the rotation of said shutter blade to permit the passage of light through said openings.

3,003,406
VISUAL COMPOSING AND OPTICAL RECORDING MACHINE
 Samuel Sachs, 6701 N. 29th St., Arlington County, Va., and Frederick Kastel, St. Michaels, Talbot County, Md.
 Filed Feb. 7, 1958, Ser. No. 713,948
 12 Claims. (Cl. 95—4.5)

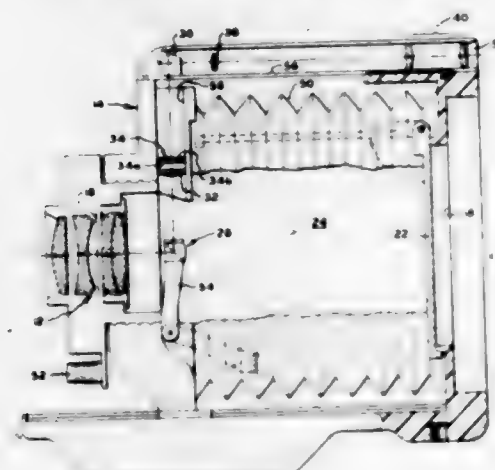


1. A composing and recording machine, comprising a housing, said housing including a support means, a plurality of optical projectors, means defining a common focal area in said housing for said projectors, means mounting said projectors on said support means with their optical axes converging on the opposite side of said

focal area from said projectors, said mounting means including means providing for individual adjustable movement of each of said projectors relative to the others to shift the point of intersection of the optical axis of such projector with said common focal area, each said projector including means for adjustably holding a character font in position therein for projecting an image of a selected character from such font to said common focal area, simultaneously projected images thereby being adjustable and composable by the relative positioning of said projectors, and means for effecting an optical recording of said images.

3,003,407

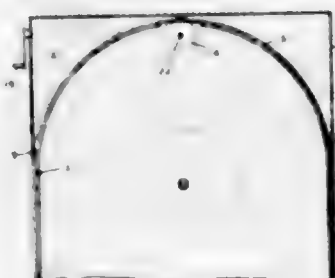
COMBINED RANGE FINDER AND VIEW FINDER
David S. Grey, Weston, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 8, 1956, Ser. No. 614,716
15 Claims. (Cl. 95-44)



1. In a photographic camera having an axially adjustable objective lens, a combined finder for viewing and ranging a field of view through said lens, said finder comprising composite light-deviating and imaging means located behind said objective lens, said light-deviating and imaging means being substantially coextensive with a predetermined area which extends transversely of the optical axis of and includes opposite marginal portions of said objective lens, said composite light-deviating and imaging means including a first reflecting means for deviating light from said objective lens to one side of the angular field of said lens along a second axis disposed at a predetermined angle with respect to said optical axis and also including first focusing means which, in combination with said objective lens, effectively constitutes lens means of short focal length for focusing an image of the field of view at a first image plane on said second axis, second focusing means located on said second axis adjacent said first image plane, second reflecting means for deviating light transmitted along said second axis to a third axis substantially parallel with said optical axis, third focusing means positioned on said third axis for relaying said image to a second image plane on said third axis, an eyepiece located on said third axis for viewing said second image plane, second light-deviating means comprising at least two adjacent elements disposed at one of said image planes for so splitting the field of said image into separate and adjacent fields which correspond respectively to light coming from each of said marginal portions of said objective lens that said adjacent fields are continuous when said image is coincident with said one of said image planes and are discontinuous when said image is out of coincidence with said one of said image planes, and means for moving at least said composite light-deviating and imaging means outside of the optical path extending between said objective lens and the focal plane of the camera.

3,003,408

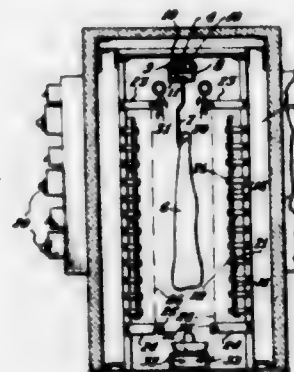
DAMPER OPERATING ARRANGEMENT
William J. McCarty, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 6, 1959, Ser. No. 825,064
1 Claim. (Cl. 98-33)



A damper operating arrangement for an air conditioner comprising a casing having air openings on opposite sides thereof, curved track members attached to said casing adjacent the opposite edges of said openings and curved around the inner portions of said casing, longitudinal grooves in said curved track members on opposite edges of said openings, a flexible air damper having opposite edges thereof inserted in said grooved track members and adapted to slide back and forth between openings on opposite sides of said casing, a plurality of aligned gear tooth perforations disposed in said air damper parallel to the edges of said damper inserted into the grooved track members, said gear tooth perforations being equally spaced, said air damper assuming the curve of said curved track members during movement between said openings on opposite sides of said casing, a drive sprocket in the upper portion of said casing disposed adjacent said semi-flexible damper on the concave side, said drive sprocket having gear teeth arranged to extend into said perforations in said flexible air valve to engage the edges of said perforations for driving said damper, said gear teeth having a pitch less than the linear distance between corresponding edges of two adjacent perforations so that engagement of one of said gear teeth with the edge of one perforation causes the preceding gear tooth to disengage from the edge of its respective perforation, and means for rotating said drive sprocket in either direction for selectively moving said air damper across said openings on either side of said casing.

3,003,409

ULTRA-LONG WAVELENGTH INFRARED RADIANT HEATING OVEN
Clarence A. Mills, Cincinnati, Ohio, assignor to Reflectotherm, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed May 1, 1959, Ser. No. 810,453
6 Claims. (Cl. 99-331)

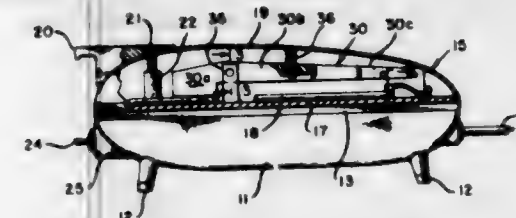


1. An ultra long wavelength infrared radiant heating system comprising an oven consisting of enclosing walls having an end closure, a track extending into the oven at the end having the closure, pulleys and a support for a hunk of meat mounted for movement along said track,

a pair of non-glossy amorphous carbon black coated radiant heating plates facing each other at the sides of and below said track, means for electrically heating the plates to from 200° to 500° F. so as to project ultra long wavelength infrared radiant heat waves each toward the surface of the other, and means for controlling the temperature of the plates at various elevations within the oven.

3,003,410

ELECTRIC GRILL
Burton E. Shaw, South Lynnfield, and Roger K. Lee, Jr., Watertown, Mass., assignors to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
Filed May 12, 1960, Ser. No. 28,784
6 Claims. (Cl. 99-380)



1. An electric grill comprising a base having a heating plate with a hinge hub projecting upwardly therefrom near one end thereof, said hub having a transverse elongated opening and an upper inclined surface spaced from the plate above said opening, a movable heater assembly comprising a heating plate adapted to be superimposed on the base heating plate, said movable assembly also having an elongated longitudinally extending hinge arm having a central transverse opening and a pair of extensions disposed on opposite sides of said hub, a hinge pin extending through said opening on the hub and secured to said hinge arm extensions, said movable heating plate having a pair of laterally spaced posts extending upwardly therefrom remote from said hub and on opposite sides of said hinge arm adjacent to said central opening, a forward pivot pin having a diameter less than the diameter of the central opening extending through said central opening and engaging said posts whereby the movable heating plate has limited movement relative to said hinge arm, and position pin means extending between said hinge extensions and releasably engageable with said inclined surface of the hub when the hinge arm is pivoted up from the base for locking the upper assembly in the open position.

3,003,411

GUIDEWAY CONSTRUCTIONS FOR BALING PRESSES
Sebastian F. Judd, 4473 N. 100th St., Milwaukee, Wis.
Filed Sept. 23, 1958, Ser. No. 762,851
3 Claims. (Cl. 100-98)

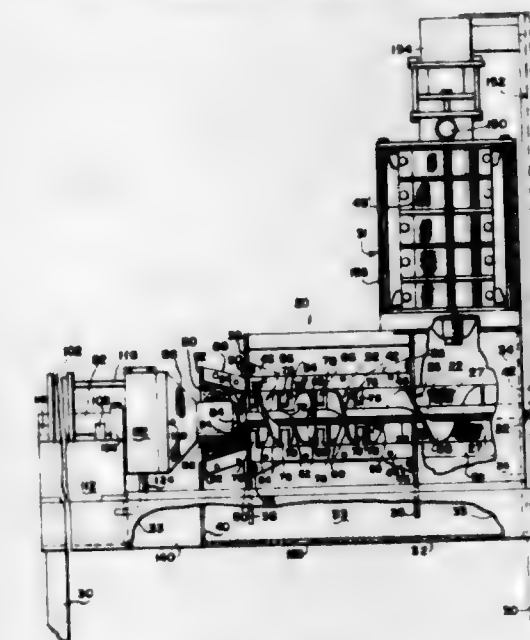


1. In a baling press having a charging box with a top, bottom and two opposite sides and with an outer end portion adjacent a top charging opening into which material is adapted to be fed from above into said box, a knife element mounted in said box at said outer end portion; a compressing ram with a top, bottom and two opposite sides and having a leading edge; said box having horizontal grooves in said opposite sides intermediate the height thereof; ribs in said grooves having a set of

inwardly facing guiding means; said ram having a set of guiding means at its sides for cooperation with said set of inwardly facing guiding means of said ribs; one set of said guiding means comprising V-shaped parts with projecting apices and with longitudinally extending upper and lower converging angled surfaces and with wear strips removably connected to said surfaces and extending therealong and projecting therefrom; the other set of said guiding means comprising V-grooves with longitudinally extending upper and lower converging angled surfaces and with wear strips detachably connected to said longitudinally extending angled surfaces of the V-grooves to extend therealong and project therefrom; said grooves receiving said V-shaped parts of the other set of guiding means with wear strips of the V-grooves engaging wear strips of the V-shaped parts to furnish the entire support for and guide said ram in horizontal movement toward and beneath said charging opening and beneath said knife element and support said ram spaced above the bottom of the box, a knife element on the leading edge of said ram positioned to pass beneath said first knife element in shearing relationship therewith during movement of the ram, and means for adjusting said ribs in said grooves so that wear strips of the V-shaped parts of one set of guiding means act on wear strips of the grooves comprising the other set of guiding means to raise and lower said ram to provide and maintain a desired shearing relationship between said knife elements.

3,003,412

FLUID EXTRACTING APPARATUS
Daniel B. Vincent, P.O. Box 1521, Tampa, Fla.
Filed Dec. 11, 1957, Ser. No. 702,085
5 Claims. (Cl. 100-117)

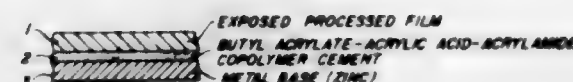


1. Fluid extracting apparatus of the character described comprising: an apertured drum having an inlet and an outlet; an apertured outwardly flaring and hollow member disposed at said outlet in substantially coaxial relation to said drum; a shaft having screw conveyor means thereon being journaled in said drum coaxially therewith and extending through said outlet and said member; an apertured frusto-conical element slidably and coaxially disposed on said shaft adjacent to and externally of said hollow member, said element flaring in the same direction as said member; means for draining fluid passing through said apertured element; means providing for axial movement of said element on said shaft toward or away from said member, and means for releasably drivingly connecting said element to said shaft for rotation therewith; said shaft including an enlarged section within said member disposed between said outlet and said frusto-conical element.

ment and tapering in the said direction as said element, and said screw conveyor means including a portion disposed on said enlarged shaft section.

3,003,413 FILM PRINTING PLATE AND METHOD OF MANUFACTURE

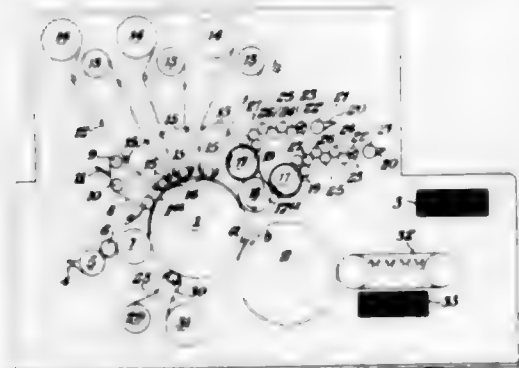
Erle W. Taylor and Henry C. Staehle, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 12, 1957, Ser. No. 645,565
9 Claims. (Cl. 101-149.2)



1. As an article of manufacture a lithographic type printing plate comprised of a metal base, an adhesive coating on said base, said coating comprising acrylamide monomer and an acrylic ester-acrylic acid copolymer, and an exposed, processed flexible film adhered to said adhesive coating.

3,003,414 PRINTING PRESS

Karol Chybinski, Putney, London, England, assignor, by mesne assignments, to Thomas De La Rue and Company Limited, London, England, a corporation of the United Kingdom
Filed Apr. 22, 1958, Ser. No. 730,167
Claims priority, application Great Britain May 15, 1957
2 Claims. (Cl. 101-178)

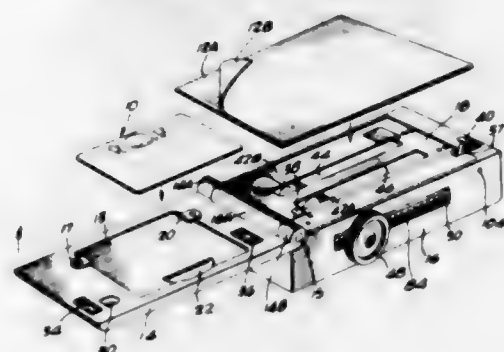


1. A rotary printing press comprising in combination a rotatable plate cylinder with an intaglio printing plate on its circumference; a rotatable impression cylinder of diameter equal to the overall diameter of the plate cylinder in pressure contact therewith; inking means to supply ink to said intaglio plate; wiping means engageable with the surface of said plate cylinder circumferentially between said inking means and said impression cylinder for removing ink from the outer surface of the intaglio plate after it has been inked by said inking means whilst leaving ink in the intagliated portions of said plate; second inking means comprising an off-set roller of a diameter which is an integral divisor of the diameter of said plate cylinder, said off-set roller being in pressure contact with said plate cylinder circumferentially between said wiping means and said impression cylinder to supply ink to the wiped surface of the intaglio plate in desired register in juxtaposition with the intagliated parts of the plate; and further inking means for inking said off-set roller in a predetermined pattern in more than one colour, said further inking means comprising a cylinder carrying a key letter press printing plate in pressure contact with said off-set roller, an off-set ink collecting roller in pressure contact with said cylinder carrying said key letter press printing plate, two cylinders carrying ink area letter

press printing plates respectively in pressure contact with said ink collecting roller, separate means for respectively applying inks of different colours to said two cylinders carrying said letter press printing plates, and wiping means acting on those portions of the surfaces of said ink area printing plate carrying cylinders between their respectively associated separate ink applying means and said ink collecting roller for wiping the inks of different colours from said ink area printing plates during travel of the latter from contact with said ink collector roller toward contact with said separate ink applying means.

3,003,415 IMPRINTER

John F. Herbert, Jr., Santa Clara, Calif., assignor to Bank of America National Trust and Savings Association, San Francisco, Calif., a national banking association
Filed Nov. 3, 1959, Ser. No. 850,668
5 Claims. (Cl. 101-269)



1. Apparatus for imprinting on a sheet of paper the raised lettering on a card comprising a box; a cover for said box, hinge means for attaching said cover to said box at one edge thereof, means on said cover for releasably holding said card, means for releasably holding said sheet of paper at the side of said box upon which said cover will close, latch means for holding said cover closed with said card next to said paper, roller means, means for supporting said roller means in said box for rolling motion over the surface of said paper and pressing same against said card including a box-shaped roller-assembly frame having a top and bottom side joined by four walls, said top side being open and slots being formed in each of two opposite walls of said roller-assembly frame, said slots extending along the length of said opposite walls parallel to each other and to said top side, a rack gear in each of said slots, a shaft means on which said roller means are mounted, two pinion gears, and means for attaching said two pinion gears to said shaft means at a distance from one another for engaging said rack gears for moving said roller, means extending external to said box for moving said roller means, and means actuated by said roller means for releasing said latch means when said roller means has been rolled over the entire area of said paper which is to be imprinted.

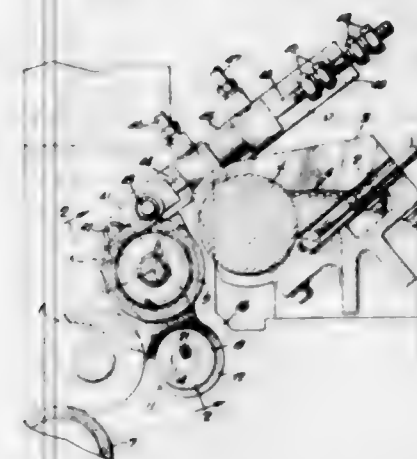
3,003,416 DUCTOR ROLL MECHANISM FOR INK FOUNTAINS

William Grobman, Philadelphia, Pa., assignor to Samuel M. Langston Co., Camden, N.J., a corporation of New Jersey

Filed July 15, 1957, Ser. No. 671,918
16 Claims. (Cl. 101-350)

1. In an ink fountain, a ductor roll and an oscillatory mount for said roll, said mount including a bearing for each end of the roll, separate independently movable arms providing supports for each bearing, coaxial journals for said arms providing an axis of oscillation for the roll, and resilient means interposed between at least one of the

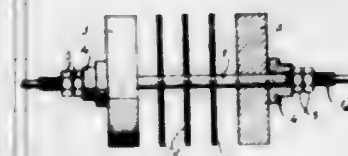
arms and its journal and forming a resilient support for the arm on the journal and adjustable limit stop means



for each said arm at each position of oscillation of said roll.

3,003,417 PRINTING ROLLERS

Louis Englander, Lyon (Rhone), France, assignor to Etablissements Victor Simon, Villeurbanne (Rhône), France, a French joint-stock company
Filed Apr. 24, 1959, Ser. No. 808,696
Claims priority, application France Apr. 26, 1958
7 Claims. (Cl. 101-375)



3,003,418 LIVESTOCK MARKING BULLET

Wendell M. Young, Bertha, N. Dak.
Filed Mar. 19, 1959, Ser. No. 800,496
2 Claims. (Cl. 102-38)

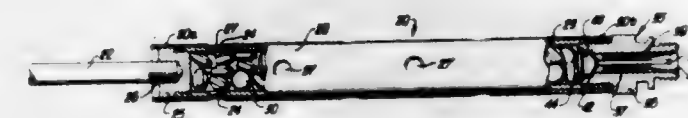


1. In a device of the class described, a cylindrical primary shell having a closed rear end and an open front end and formed from a material having a relatively high tensile strength, a primer cap in the closed rear end of said primary shell, gunpowder in the closed rear end portion of said primary shell adjacent said cap, wadding in the intermediate portion of said primary shell, and a cylindrical secondary shell formed from flexible plastic material and telescopically received within the open front end of said primary shell and frictionally retained therein with its rear end seated against said wadding and its front end projecting axially outwardly therefrom, said sec-

ondary shell being filled with liquid dye and having its projected front end formed to provide a forwardly opening V-shaped notch which extends diametrically thereacross, the bottom of said notch intersecting the axis of said primary and secondary shells and forwardly with respect to the front end of said primary shell.

3,003,419 ROD-TYPE PYROGENIC IGNITER

George Wallace Fite, Jr., North Hollywood, Calif., assignor to Mimx Corporation, Glendale, Calif., a corporation of California
Filed June 6, 1960, Ser. No. 34,115
3 Claims. (Cl. 102-86.5)



1. A rod-type pyrogenic igniter adapted to be used with a solid propellant rocket, comprising: a tubular sleeve having a plurality of transverse openings therethrough and being hermetically sealed at one end thereof, a continuous, shrunken cross-linked thermoplastic layer hermetically bonded to the outer surface of said sleeve by a thermosetting material to cover and hermetically seal said openings, that portion of the thermoplastic layer sealing each opening being under tension and forming a meniscus having a thinner annular section adjacent the edges of the opening and having sufficient tensile strength to resist being severed by a substantial increase in pressure, combustible pellet means for producing infrared rays within said sleeve, and a squib means hermetically connected to the other end of said sleeve for combusting the pellet means whereby the thin annular meniscus sections at the openings through the sleeve are adapted to fail and to be severed.

3,003,420 PARTITION BULLETS

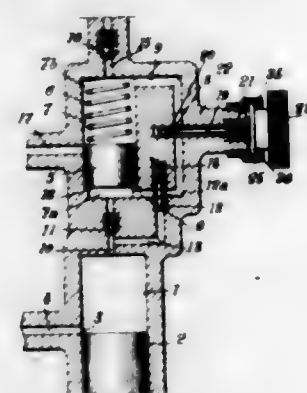
John A. Nosler, Ashland, Oreg., assignor to Nosler Partition Bullet Company, Ashland, Oreg.
Original application Oct. 1, 1956, Ser. No. 613,025. Divided and this application July 31, 1959, Ser. No. 830,941
5 Claims. (Cl. 102-91)



1. A bullet comprising a tubular jacket having a partition therein intermediate its ends dividing the jacket into front and rear pockets, the walls of the front pocket being radially tapered with increasing wall thickness from the front end rearwardly toward the partition, a lead slug in the front pocket having a nose portion protruding from the open end thereof, and a second lead slug in the rear pocket, the rear end of the jacket being crimped over the second lead slug, said jacket being

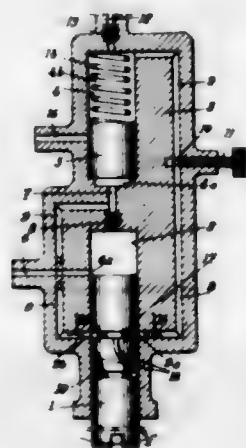
of greater hardness adjacent the partition than at its ends and having a circumferential recess included in the outer surface adjacent said partition.

3,003,421
RECIPROCATING LIQUID PUMPS, AND IN PARTICULAR IN FUEL INJECTION PUMPS
Pierre Etienne Bessiere, 55 Blvd. du Commandant Charcot, Neuilly-sur-Seine, Seine, France
Filed Feb. 23, 1961, Ser. No. 90,984
Claims priority, application France Aug. 14, 1956
22 Claims. (Cl. 103-41)



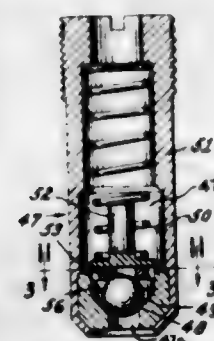
1. For use with an internal combustion engine, a reciprocating action fuel pump which comprises, in combination, a pump cylinder, a piston adapted to cooperate with said cylinder mounted for reciprocating movement therein, so as to limit therewith a variable volume working space, the movements of said piston in said cylinder in the direction for which the volume of said working space is reduced being called delivery strokes, and those in the opposed direction return strokes, a casing rigid with said cylinder provided with a discharge port opening to the outside, a shuttle member adapted to control said discharge port, said shuttle member fitting movably in said casing so as to limit with the inner wall thereof a variable volume chamber, the movements of said shuttle member in said casing in the direction for which the volume of said chamber is increased being called outward strokes and the movements of said shuttle member in the opposed direction being called return strokes, a fuel delivery means, conduit means in said casing including a connection from said working space to said fuel delivery means and a connection to said variable volume chamber and providing an outflow for liquid from the variable volume chamber, valve means in the connection to the variable volume chamber responsive to movements of said piston to close said connection during the return strokes of said piston, and said outflow having its smallest cross-section very substantially less than the cross-section of the shuttle member so as to slow down said liquid outflow and thus to exert on said shuttle member, during its return strokes, a braking action such that, for speeds of operation of the pump above a given value, said shuttle member return strokes are shorter as the speed of operation of the pump is higher, movement of said piston feeding liquid through said conduit means to said variable volume chamber during the delivery strokes thereof to produce outward strokes of said shuttle member; means, operative at least during the return strokes of said piston, for exerting a limited thrust on said shuttle member to urge it in the direction to produce the return strokes thereof, fuel being fed to said delivery means during the delivery strokes of said piston, the feed of fuel to said delivery means being stopped during every delivery stroke of said piston at least after the shuttle member has cleared said discharge port.

3,003,422
RECIPROCATING PUMPS INCLUDING AN AUXILIARY PISTON, IN PARTICULAR FOR THE INJECTION OF FUEL INTO INTERNAL COMBUSTION ENGINES
Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France
Filed Mar. 18, 1959, Ser. No. 800,198
Claims priority, application France Mar. 24, 1958
4 Claims. (Cl. 103-41)



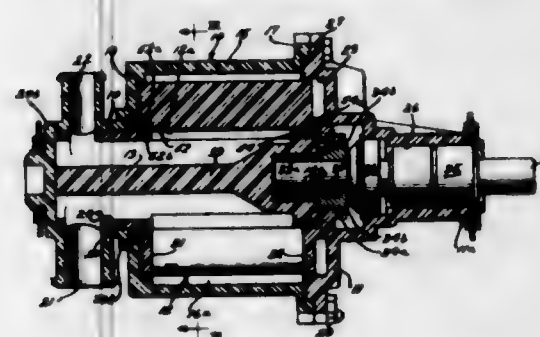
1. For use with an internal combustion engine, a reciprocating action fuel pump which comprises, in combination, a pump cylinder, a pump piston adapted to cooperate with said cylinder mounted for reciprocating displacement therein so as to limit therewith a variable working space, the movements of said piston in said cylinder in the direction for which the volume of said working space is reduced being called delivery strokes, fuel inlet means opening into said pump cylinder, a fuel delivery means adapted to be fed during the delivery strokes of said piston with fuel supplied from said pump cylinder, a casing rigid with said cylinder provided with a discharge port opening to the outside, a shuttle member adapted to control said discharge port, the feed of fuel to said delivery means being stopped during every delivery stroke of said piston when said shuttle member has cleared said discharge port, said shuttle member fitting movably in said casing so as to limit with the inner wall thereof a variable volume chamber, the movements of said shuttle member in said casing in the direction for which the volume of said chamber is increased being called outward strokes, return means interposed between said casing and said shuttle member for urging said member to move in said casing in the opposed direction, the movements of said shuttle member in said last mentioned direction being called return strokes, a passage in said casing extending from said cylinder working space to said casing variable volume chamber, valve means in said passage operative by liquid pressure variations in said cylinder working space for opening said passage during the delivery strokes of said piston and otherwise closing it, a conduit starting from said casing variable volume chamber for the outflow of liquid from said chamber during the return strokes of said shuttle member, said conduit including a throttled portion for braking said shuttle return strokes, and valve means in said conduit constituted by a portion of said pump piston for closing said conduit during the delivery strokes of said pump piston and opening said conduit temporarily during at least portions of the time intervals between said delivery strokes, said throttled portion being arranged to produce a braking action such that, for speeds of operation of the pump above a predetermined value, the return strokes of said shuttle member are the shorter as the speed of operation of the pump is higher.

3,003,423
PRESSURE CONTROL VALVE
Gilbert H. Drutchas, Detroit, Mich., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 11, 1957, Ser. No. 671,268
8 Claims. (Cl. 103-42)



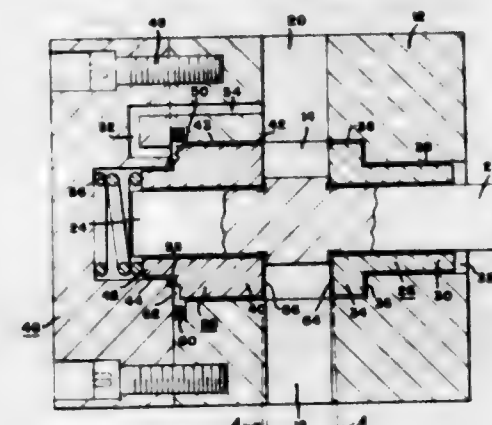
1. A ball type fluid pressure relief valve characterized by an inlet passage terminating in a ball seat, a ball normally engaging said seat, a cylindrical flow passage communicating with said inlet passage extending past said ball having substantially free flow dimensions relative thereto, a cylindrical spring loaded washer operatively engaging said ball normally fitting closely within said cylindrical passage when said ball is seated, an enlarged passage communicating with and extending beyond said cylindrical passage of substantially free flow dimensions relative to said washer, and constantly open restricted passage means extending across said washer between said cylindrical and enlarged passages operative to only partially restrict without blocking flow past said washer whenever said ball returns from an open position to its seat.

3,003,424
SINGLE LOBE WASHING MACHINE PUMP
Herbert F. Prasse, Gates Mills, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Sept. 10, 1957, Ser. No. 683,123
8 Claims. (Cl. 103-83)



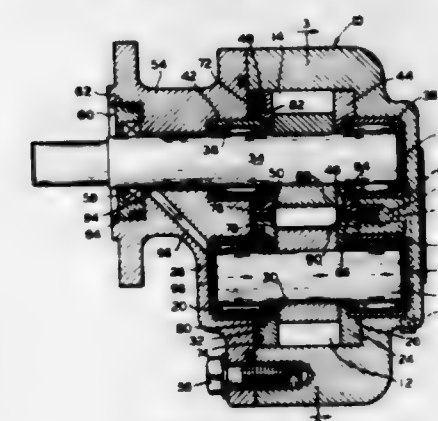
1. A pump including a housing having an inlet and an outlet, a drive shaft bearingly supported by said housing, an impeller in said housing drivingly connected to said shaft, said impeller being diametrically smaller than the inner housing wall and eccentrically mounted with respect to said housing, an axial bore through said impeller communicating through the periphery of the impeller with the interior of the housing and coaxial with the axis of rotation of the impeller, a porting plug fixed in said housing and extending axially into said bore made of a material subject to expansion due to moisture absorption at high temperature operation of the pump and having a portion extending across the bore dividing the impeller bore into an inlet zone and outlet zone, means connecting said zones respectively with said inlet and said outlet, and a pair of axially spaced bushings non-rotatably mounted on said porting plug made of a material of sufficient stability to prevent swelling of said porting plug and forming bearing surfaces journaling said impeller.

3,003,425
PUMP WITH PRESSURE LOADED BUSHINGS
Charles E. Flowers, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,384
4 Claims. (Cl. 103-126)



1. A pump comprising a housing having a pump chamber therein with a fluid inlet in its low pressure side and a fluid outlet in its high pressure side, a rotary fluid displacement member supported within said chamber on a shaft, an axially movable bushing in said housing around said shaft on one side of said rotary member and having a front surface which is in opposed relationship to one face of the rotary member, the fit of said bushing in said housing and around said shaft providing clearances to expedite assembly whereby said bushing is tiltable out of coaxial relationship with the shaft, and means for applying pressure relatively uniformly to the back surface of the bushing while the pump is in operation to thereby urge the front surface of the bushing against the rotary member, said bushing being formed such that the front surface thereof is at an angle to the face of said rotary member when the bushing is in a position coaxial with said shaft, the apex of the angle being on the high pressure side of the chamber and the size of the angle being such that when the pump is operated the tilting of the bushing on the shaft resulting from the pressure differential between the high pressure side and the low pressure side of the pump will effect fluid sealing engagement between the front surface of the bushing and the face of the rotary member.

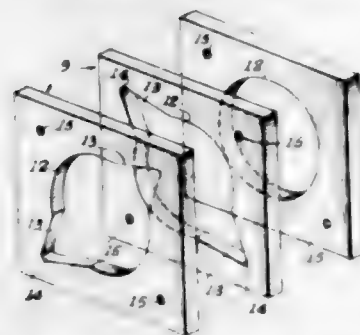
3,003,426
GEAR PUMP
John A. Lauck, Benton Harbor, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Mar. 23, 1959, Ser. No. 801,052
10 Claims. (Cl. 103-126)



1. In a pressure generating pump of the type including a housing containing intermeshing gears and having an inlet leading to and an outlet leading from said housing, axially movable thrust plate means responsive to pumping pressure to maintain sealing engagement with the

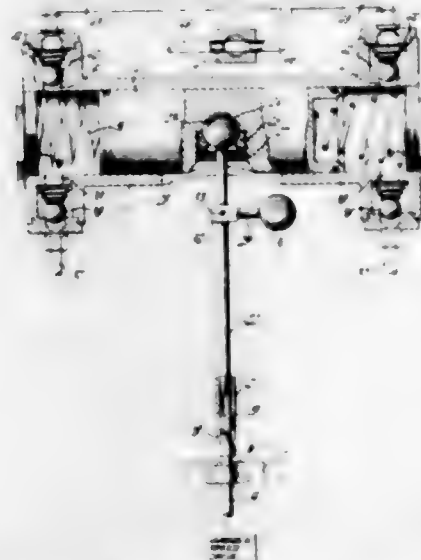
gear side faces during operation of the pump, a fixed thrust plate located adjacent each opposite side face of said gears and maintaining sealing engagement with said opposite side faces, and a passage through at least one of said fixed thrust plates at the inlet side of the pump, the opening of said passage at the sealing face of the fixed thrust plate being located such that the expanding gear pocket of intermeshing gear teeth during operation is placed directly in communication with the passage prior to breaking of intermeshing of such gear teeth, and conduit means conducting gear support bearing leakage fluid from the discharge side of said pump to said passage.

3,003,427
PUMP STATOR
James L. Grapen, San Gabriel, Calif.
(524 E. McKinley Ave., Sunnyvale, Calif.)
Filed Oct. 23, 1958, Ser. No. 769,248
4 Claims. (Cl. 103-136)



4. In a stator for a rotor having vanes, a plate comprising one of a stack of similar plates connected together, said plate having a central opening against the wall of which the rotor vanes are adapted to engage, a diagonally arranged and opposed pair of port recesses opening on said central opening, each recess being V-shaped with its end remote from the central opening forming the angle of the V and the recesses diverging toward and being largest where they open on the central opening, and a pair of port-connecting holes in the plate arranged on a diagonal intersecting the diagonal on which the recesses are arranged and in the same spaced relation from the central opening as said remote ends of the recesses.

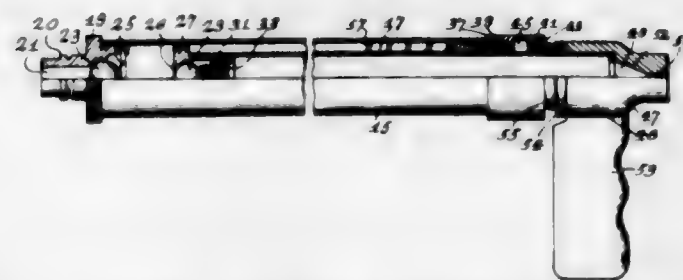
3,003,428
PUMP
Howard W. Christenson, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,791
13 Claims. (Cl. 103-175)



1. In a pump, a housing having an operating chamber, a movable wall within said chamber, inlet and outlet

means connected to said chamber including valve means controlling the entrance of fluid and discharge of fluid under pressure from said chamber, rotatable means mounted on said movable wall for rotation about an axis and fixed at a point on said movable wall to apply a controllable operating force having a controllable value in response to speed of rotation on said movable wall to operatively move said movable wall to supply a predetermined controllable pressure to said outlet means and incapable of moving said movable wall when the fluid in said outlet means is at said predetermined controllable pressure.

3,003,429
PORTABLE SPRAY PUMP
Stanislaw M. Petruszewicz and Darrell Turner, both of Montreal, Quebec, Canada, assignors to B. J. Coghlin Co., Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Oct. 29, 1959, Ser. No. 849,650
5 Claims. (Cl. 103-188)



1. A portable spray pump comprising a pair of telescopically interconnected inner and outer tubes, an inlet at one end of said outer tube and a check valve mounted in said inlet adapted to permit entry flow only to said outer tube, said inner tube fitting into said outer tube from the end remote from said inlet and having a check valve at the end adjacent said outer tube inlet adapted to permit entry flow to said inner tube during reciprocal movement towards said inlet, said inner tube being located in concentric spaced relationship within said outer tube and a sealing gland nut sleeve mounted in said outer tube end remote from said inlet end and including an inner cylindrical surface extending concentrically inwardly of said outer tube so as to surround the exterior surface of said inner tube and slidably maintain said inner tube in said concentric spaced relationship with said outer tube, said sealing gland nut sleeve inner surface being provided with three axially spaced annular grooves, a sealing ring mounted in one of said grooves, a wiping ring mounted in another of said grooves with the third groove located between said other two grooves being adapted to provide a lubricant containing chamber, a discharge outlet member mounted on the end of said inner tube remote from said check valve and protruding beyond said sealing sleeve, and a handle portion connected to said inner tube protruding end.

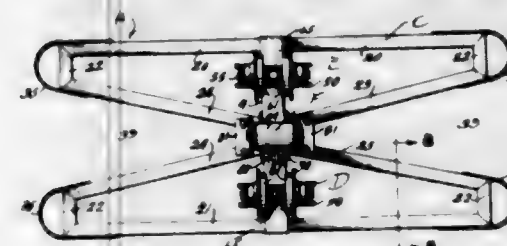
3,003,430
BOAT GUIDING APPARATUS
Jacob S. Hamel, Glendale, Calif., assignor, by mesne assignments, to Walt Disney Productions, a corporation of California
Filed July 16, 1956, Ser. No. 598,148
10 Claims. (Cl. 104-72)



1. Apparatus for guiding a self-powered boat along a predetermined course in a waterway, comprising: a hori-

zontally extending guide rail submerged in said waterway and defining said predetermined course; a plurality of rollers engaged with said guide rail; a housing supporting said rollers; a mounting member for said housing; means pivotally interconnecting said housing and said mounting member whereby they may undergo relative pivotal movement about an axis transverse to said guide rail; and reception means formed on said boat and telescopically and rotatably receiving said mounting member so as to permit relative vertical movement and relative rotation about a vertical axis between said housing and said boat.

3,003,431
TROLLEY ASSEMBLY FOR OVERHEAD RAIL SYSTEMS
James M. Markley, Miami, and Claude D. Parham, Hialeah, Fla., assignors to Eastern Air Lines, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,488
3 Claims. (Cl. 105-148)

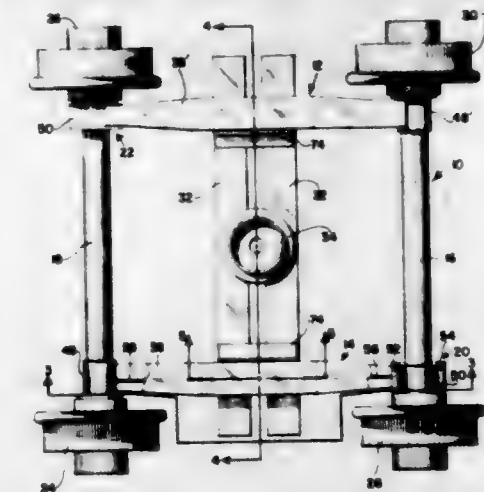


1. In a trolley assemblage for supporting and transporting of loads upon overhead rail systems, the combination with a monorail having laterally extending supporting flanges, a main frame, a load supporting standard connected to the main frame between the ends of said frame and depending therefrom, upstanding wheel assemblages swivelly mounted on the frame at the ends thereof and relatively disposed at opposite sides of the standard including carrier frames and wheels rotatably supported upon said flanges of the monorail, a stabilizing wheel rotatably carried by the frame beneath the monorail between the wheel assemblages and engaging the undersurface of the monorail to stabilize the trolley assemblage against lateral sway, and bumper extensions for each of the wheel assemblages connected to said frame and extending laterally at each side thereof for appreciable distances, the bumper extensions of each wheel assemblage at each side of the rail being relatively spaced with respect to each other and with the spaces unobstructed from the outer ends of the bumpers through said spaces to the wheel assemblages to permit the entry through said space of load handling equipment to said supporting standard.

3,003,432
RAILWAY CAR TRUCK
William N. Poundstone, Morgantown, W. Va., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1959, Ser. No. 837,087
4 Claims. (Cl. 105-182)

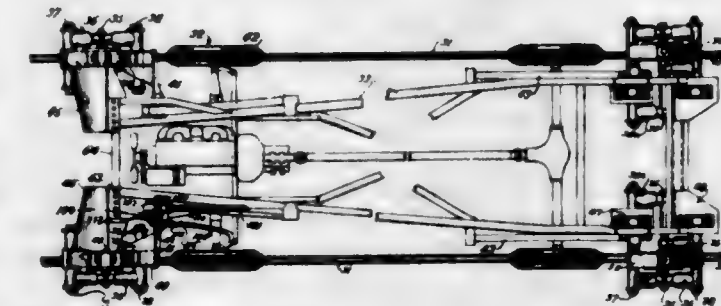
1. A rail car truck comprising first and second longitudinally extending side beams having forward and rear end portions, a first universal axle supporting means fixed to said first side beam forward end portion, a second universal axle supporting means fixed to said second side beam rear end portion, a first axle non-rotatably and rigidly fixed to said second side beam forward end portion and universally supported by said first universal axle supporting means, said first universal axle supporting means being axially aligned with the axis of said first axle, a second axle non-rotatably and rigidly

fixed to said first side beam rear end portion and universally supported by said second universal axle supporting means, said second universal axle supporting



means being axially aligned with the axis of said second axle, and four flanged wheels journaled for rotation upon the ends of said axles outboard of said side beams.

3,003,433
VEHICLE FOR HIGHWAY AND RAILWAY USE
Alfred G. Hoppe, 3320 Grandview Circle, Brookfield, Wis., and Elmer F. Reinke, 3002 S. 46th St., Milwaukee, Wis.
Original application Dec. 13, 1954, Ser. No. 474,794, now Patent No. 2,915,989, dated Dec. 8, 1959. Divided and this application Oct. 23, 1959, Ser. No. 848,337
3 Claims. (Cl. 105-215)



1. In a vehicle for use both on a highway and on track rails, said vehicle having a chassis frame supported on load-bearing wheels and having a steering wheel for turning certain of the load-bearing wheels to steer the vehicle when on a highway and having rail-contacting guide wheels and means for moving the guide wheels between an in-use position wherein the guide wheels also contact the rails on which the load-bearing wheels are supported and an out-of-the-way position wherein the guide wheels are elevated above the load-bearing wheels; apparatus connected between said steering wheel and the load-bearing wheels and including a steering lever arm rotatably mounted on the chassis frame of the vehicle and connected for turning the load bearing wheels to steer the vehicle, said arm having a slot opening therein, a support bracket mounted on the chassis frame of the vehicle, a locking pin movably mounted in the bracket, said bracket being located in a position to permit the locking pin upon being extended from the bracket, while the load bearing wheels are in a position of centered alignment to slide snugly into said opening in the steering lever arm to block rotation of said arm and control means selectively operable either for extending the locking pin to cause one end thereof to slide into said slot to lock said load bearing wheels in a position of centered alignment or for retracting the locking pin from said slot to free said steering lever arm for turning said load bearing wheels.

3,003,434
RAILWAY CARS FOR TRANSPORTING ROAD SEMI-TRAILERS
 Deodist Clejan, Chicago, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
 Filed July 29, 1960, Ser. No. 46,175
 9 Claims. (Cl. 105-368)

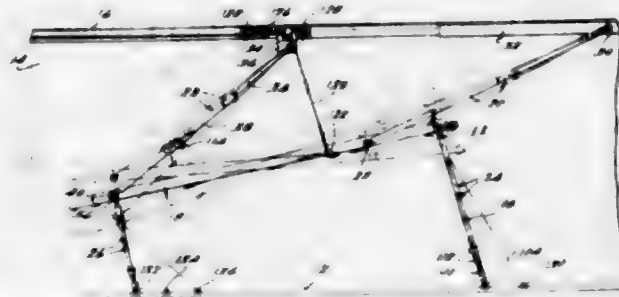


1. A railway car for transporting a road semi-trailer; said railway car comprising a longitudinally extending frame adapted to support and to accommodate longitudinal movements therealong of a road semi-trailer and of a road tractor, a hitch mounted upon said frame for movements between storage and erected positions with respect thereto, said hitch in its storage position being disposed closely adjacent to the top of said frame and in non-interfering relation with movements of a road semi-trailer and of a road tractor both carried on the top of said frame, said hitch in its erected position being disposed well above the top of said frame and being adapted to support the front end of a road semi-trailer carried on the top of said frame, said hitch including a fifth-wheel mechanism that is adapted selectively to latch and to release the king pin carried by the front end of a road semi-trailer supported by said hitch in its erected position, a tread-mill mechanism mounted upon said frame and oriented laterally thereon so that it is adapted removably to support the drive wheels of a road tractor carried on the top of said frame, said tread-mill mechanism including a roller adapted frictionally to engage the drive wheels of the supported road tractor, whereby selective forward and reverse rotations of the drive wheels of the supported road tractor impart respectively corresponding reverse and forward rotations to said roller, and actuating mechanism operatively connected between said roller and said hitch for selectively moving said hitch between its storage and erected positions, said actuating mechanism being responsive to rotation of said roller in one direction to move said hitch from its storage position into its erected position and responsive to rotation of said roller in the opposite direction to move said hitch from its erected position into its storage position.

3,003,435
AUTOMOBILE SHIPPING DEVICE
 Harvey W. Chapman, Detroit, Mich., assignor to Evans Products Company, Plymouth, Mich., a corporation of Delaware
 Filed Nov. 14, 1958, Ser. No. 773,950
 11 Claims. (Cl. 105-368)

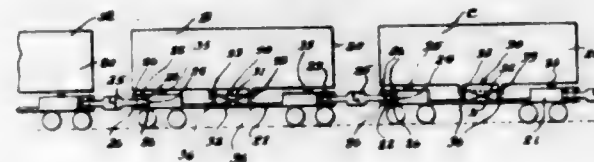
1. In combination, a freight car, an automobile loading frame, means for securing the frame in the car including a pair of arms pivoted at their upper ends to the car on longitudinally spaced axes and at their lower ends to the frame adjacent the opposite ends thereof, said arms being adapted to swing the frame from a position adjacent

the floor of the car to an elevated transport position, and means to vary the effective length to which one of said



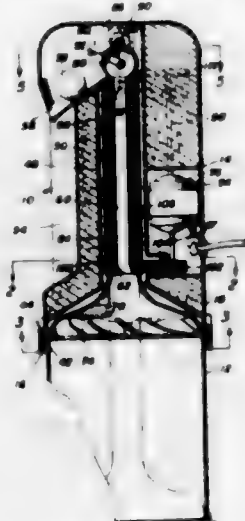
arms may be extended to vary the transport position of the frame.

3,003,436
METHOD AND APPARATUS FOR PROTECTING VEHICLE LOADS
 William H. Peterson, Homewood, Ill., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
 Filed Dec. 3, 1959, Ser. No. 856,963
 27 Claims. (Cl. 105-454)



1. In a railway freight car adapted to carry a shiftable load thereon, the combination of a car underframe, couplers at each end of the underframe, a load carrying body supported by the underframe and longitudinally movable relative to the couplers, and a cushioning device interposed between the couplers and said body, said cushioning device having energy transferring and dissipating characteristics equivalent to a 100% efficient cushioning mechanism having a cushion travel in one direction within the range from about 20 inches to about 40 inches, and in which, for an impact of 10 miles per hour delivered to one of said couplers by another car, the cushioning device will not close in less than about .23 second, said cushioning device having a cushion stroke length for closing in one direction of not more than about 40 inches.

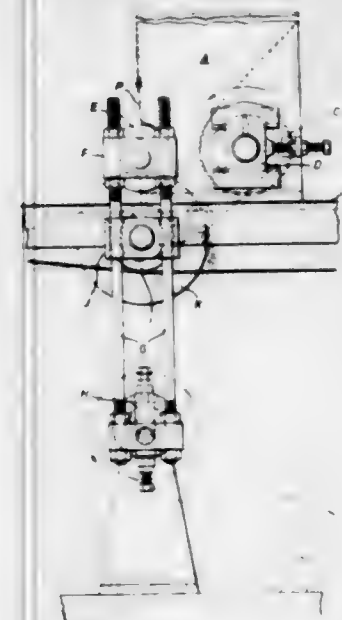
3,003,437
POWER DRIVEN ICE CREAM DISPENSER
 William W. Taylor, 21830 Pacific Coast Highway, Malibu, Calif., and Richard O. Spencer, 640 Resalano Drive, Pacific Palisades, Calif.
 Filed Aug. 12, 1959, Ser. No. 833,172
 5 Claims. (Cl. 107-8)



1. An ice cream dispenser adapted to be attached to an ice cream container, said dispenser comprising a hous-

ing, an ice cream delivery rotor rotatably mounted in said housing shaving veins mounted on said rotor for engaging the ice cream at one end of the housing, said rotor including a rotor tube communicating with said shaving veins, a delivery tube concentrically mounted within said rotor tube and through which the ice cream is propelled by the rotor, forming means operatively mounted on a discharge end of said delivery tube for forming the ice cream, and means operatively connected to said forming means and rotor for discharging the formed ice cream therefrom in response to delivery of a predetermined amount of ice cream to the forming means by the rotor.

3,003,438
DOUGH SHEETING MACHINE
 Joseph Francis Naylor, Newton-le-Willows, England, assignor to T. & T. Vicars Limited, Newton-le-Willows, England, a British company
 Filed Jan. 14, 1958, Ser. No. 708,819
 Claims priority, application Great Britain Jan. 18, 1957
 4 Claims. (Cl. 107-12)

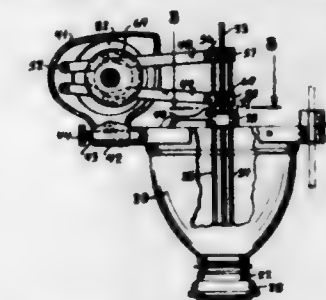


1. A dough sheeting machine for doughs having a wide range of consistencies comprising a dough hopper, a beating roller and a driven feed roller laterally arranged beneath said hopper and defining a hopper outlet for the dough between the longitudinally extending surfaces of said rollers, a traveling belt disposed beneath said rollers and said outlet to receive the extruded dough from said outlet, an anvil disposed directly below said belt and said beating roller, and means on said beating roller for continuously varying the lateral distance of said roller surface relative to the surface of said driven roller to effect a continuous variance in the size of said outlet during the operation of the machine, said means simultaneously varying the vertical distance of said beating roller relative to said anvil disposed beneath said beating roller.

3,003,439
DOUGH FORMING MACHINE
 Thomas E. Bolshaw, 1772 22nd Ave. S., Seattle, Wash.
 Filed Sept. 8, 1959, Ser. No. 838,552
 8 Claims. (Cl. 107-14)

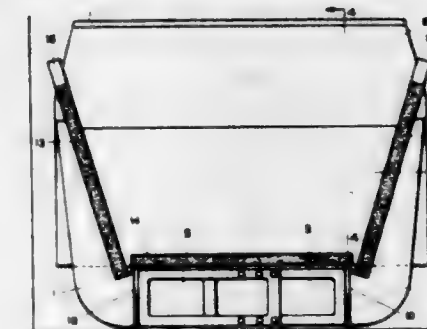
1. In a dough forming machine, a hopper with a cylindrical extension, a mounting ring on said hopper, a hub carried by said ring, said hub having a through bore centered over said extension and a longitudinal access slot into said bore, a bearing block removably interfitting with said hub, dough forming means including a rod slidably extending through said bearing block and bore and having a diameter less than the width of said access slot, and drive means removably carried by said mounting ring and opera-

tively associated with said rod by a detachable connection, whereby said rod and bearing block can be detached from said hopper assembly after removal of said drive means



by releasing said bearing block from its interfit with said hub and then moving said rod sideways out of said hub bore through said access slot.

3,003,440
METALLIC CARRIER SYSTEM FOR THE REFRACTORY LINING OF FIRE-BOXES IN BOILERS PROVIDED WITH BURNERS OF MINERAL OIL
 Filade Riello, Legnago, Italy, assignor to Riello F.I.I. Officine Fonderie, Legnago, Italy, a company of Italy
 Filed Mar. 21, 1958, Ser. No. 722,912
 Claims priority, application Italy Mar. 23, 1957
 1 Claim. (Cl. 110-1)



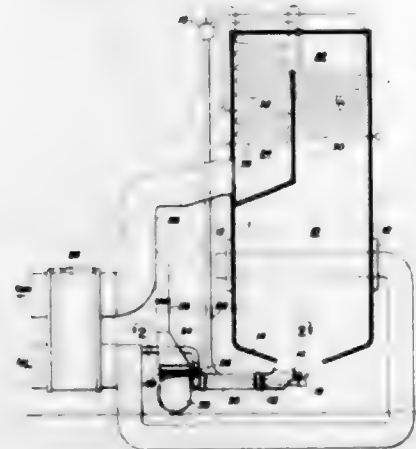
In a boiler fire box construction, a supporting structure for the refractory lining slabs arranged below the burners of the fire box; said supporting structure including a pair of elongated, longitudinal flat bars arranged in parallel, transversely spaced relation and lying in vertical planes, said bars having upper edge portions terminating in upper edges to support the horizontal slabs of the fire box lining, said bars being formed at their upper edge portions with vertical slots disposed in longitudinally spaced and transversely aligned relation, a plurality of transversely extending connecting means connecting the bars in spaced transverse relation, said connecting means including a pair of cooperative, cross-bars having overlapping inner ends, said inner ends having transversely aligned openings for receiving a fastening means with the openings being arranged so that the cross bars can be secured together in various lengthwise relations to space the longitudinal bars apart at various selected distances, said cross bars lying in substantially the same vertical plane and having upper and lower edge portions and outer ends, the lower edge portions adjacent the outer ends being formed with vertical slots to fit over the longitudinal bars and receive the portions of said longitudinal bars below the vertical slots in the longitudinal bars with the upper edge portions of the cross bars received by the vertical slots in the longitudinal bars whereby an interfitting locking arrangement is provided, and means on the outer ends of the cross bars for supporting the lateral slabs of the fire box lining, said cross-bars being formed with registrable centrally disposed air passage apertures or the flow of air under the horizontal slabs along the entire length of the fire box and the portions of the cross-bars above and below such apertures being formed with the openings which are arranged in spaced relation along the axes of the cross-bars.

3,003,441

FURNACE ORGANIZATION

Perry C. Eachner, Jr., Ridgewood, N.J., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Filed July 23, 1957, Ser. No. 673,677
7 Claims. (Cl. 110-49)



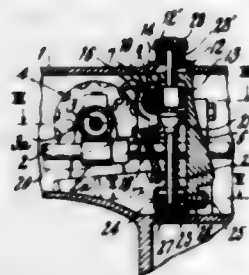
1. In combination a furnace into which fuel is fired and burned, a duct connected to the furnace for introducing hot combustion gases therein said duct having its inlet connected to receive combustion gases generated in the furnace so as to reintroduce them back into the furnace, damper means in said duct adjacent the end connected to the furnace, said end of the duct connected with the furnace being double walled from a location immediately upstream of said damper means with the walls being spaced to provide a narrow passage, said passage leading from the duct interior upstream of said damper means into the furnace, with the damper means operating on the inner passage of the double walled duct only, and means for introducing a cooling gas into said duct upstream of said damper means when said combustion gases are not passing there through.

3,003,442

STITCH SELECTOR MEANS FOR AUTOMATIC ZIGZAG MACHINES

Masayoshi Yasui, Nagoya, Japan, assignor to Nippon Sewing Machine Mfg. Co., Ltd., Nagoya, Japan, a corporation of Japan

Continuation of application Ser. No. 489,513, Feb. 21, 1955. This application July 11, 1958, Ser. No. 748,574
Claims priority, application Japan Dec. 16, 1954
7 Claims. (Cl. 112-158)



7. For use with a sewing machine having a member to be moved, a rotatable drive shaft for effecting movement of said member, a rotatably mounted cam shaft, means for coupling said drive and cam shafts for simultaneous rotation, a series of cams fixedly secured to said cam shaft to turn therewith, a follower shaft supported to extend parallel to said cam shaft, a follower to selectively engage the surfaces of the individual cams, said

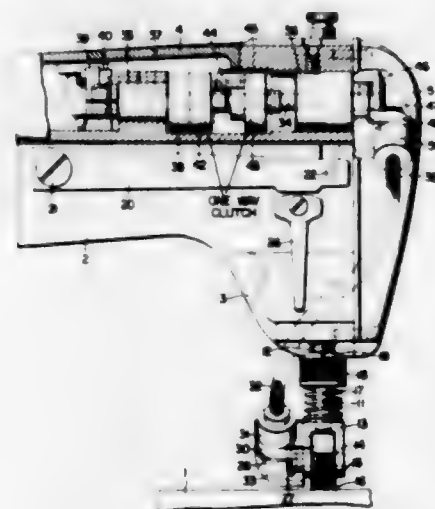
follower being mounted by said follower shaft, a rack connected to move axially with said follower shaft, a sleeve slidably enclosing said follower shaft, means for mounting said sleeve solely for rotation, said sleeve having an opening in line with said rack and a slot through which said follower extends, a selector shaft, means for movably mounting the same for rotation and axial shifting with respect to said follower, a pinion affixed to said selector shaft and extending through the sleeve opening into engagement with said rack to cause reciprocation of said follower-mounting shaft as said selector shaft turns, means for rocking said follower out of engagement with a cam, means carried by said selector shaft to engage and operate said rocking means as said selector shaft is axially shifted, and an element operatively connected to said follower to reciprocate as the latter rocks and thus impart lateral movement to said member.

3,003,443

FEEDING MECHANISM FOR SEWING MACHINES

James F. Condran, Roselle, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed June 27, 1958, Ser. No. 745,175
1 Claim. (Cl. 112-214)

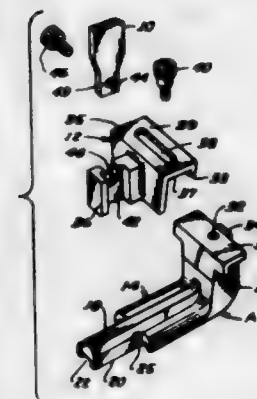


In an automatically lubricated sewing machine having a frame including a bed and a bracket arm terminating in a head overhanging said bed, a rotary needle bar actuating shaft journaled longitudinally within said bracket arm, and a puller feed mechanism comprising a feed bar mounted in said head for endwise movement on an axis perpendicular to said bed, a feed roller rotatably carried by said feed bar, means for biasing said feed bar toward said bed, a feed shaft journaled within the upper rear portion of said bracket arm at the head end thereof and on an axis parallel to the axis of said needle bar actuating shaft, said feed shaft extending through said head and terminating in a free end on the outside of said head beyond a plane normal to the axis of said needle bar actuating shaft and through the axis of said feed bar, a rotary actuating element on said needle bar actuating shaft, a sleeve journaled on said feed shaft, a one-way clutch coupling said sleeve to said feed shaft, a crank arm on said sleeve, a pitman operatively connecting said rotary actuating element and said crank arm for imparting intermittent one-way rotation to said feed shaft upon rotation of said needle bar actuating shaft, a flexible cable drive shaft, gears connecting one end of said flexible cable drive shaft to the free end of said feed shaft, and gears disposed on the opposite side of said plane from said first mentioned gears and connecting the other end of said flexible cable drive shaft to said feed roller for imparting rotation to said feed roller upon rotation of said feed shaft.

3,003,444

SEWING MACHINE ZIPPER GUIDE

Lonnie M. Gary, Cleveland, Ohio, assignor to Jack Fromm, Shaker Heights, Ohio, as trustee
Filed June 10, 1959, Ser. No. 819,481
3 Claims. (Cl. 112-235)



1. A slide fastener guide apparatus for guiding slide fasteners, which have interlocking rows of teeth with each row secured on flexible strips of material, respectively, so that the strips can be sewed in place with a sewing machine having a pressure foot post and an adjacent vertically reciprocating needle, and comprising, a mounting bracket, means for detachably securing the bracket to the pressure foot mounting post, a guide member, supporting means for adjustably supporting the guide member on the bracket for selective positioning thereof relative to the needle in a direction transversely of the sewing path, said guide member having a longitudinal downwardly open guide channel formed in its underside and disposed parallel to the sewing path, when the guide member is mounted on the bracket, for receiving with operating clearance the interlocked row of teeth and for guiding the interlocked row of teeth endwise of the row in the sewing path which extends forwardly and rearwardly relative to the needle, said channel extending a substantial distance forwardly and rearwardly of the needle when the mechanism is connected to the bracket, said channel being configured in transverse section for engaging with operating clearance those end surfaces of the interlocked teeth which face outwardly laterally of the interconnected rows at the lateral limits of the rows, respectively, thereby to constrain movement of the rows of teeth to the lineal sewing path from a point substantially in advance of the needle to a point substantially to the rear of the needle in the sewing direction, said guide member having undersurfaces for engaging the flexible strips of material adjacent the lateral limits of the rows of interlocked teeth both forwardly and rearwardly of the needle, said guide member having needle receiving passages at and adjacent opposite sides of said channel, said passages being spaced a substantial distance from both ends of the channel and being positioned for alignment with the needle, selectively, by movement of the supporting means to different adjusted positions, and means for securing the supporting means in the adjusted positions, selectively.

3,003,445

METHOD FOR MOUNTING A CONCEALED SLIDE FASTENER INTO A CLOTH ARTICLE

Philip E. Crystal, Scarsdale, N.Y., assignor to Irving Constant, New York, N.Y.
Filed July 30, 1958, Ser. No. 751,943
5 Claims. (Cl. 112-262)

1. In a method for mounting a slide fastener upon the adjacent flaps of a cloth article which slide fastener comprises a pair of mating fastener element carrying tapes, each of which tapes carries its elements on a welted inside edge, said slide fastener lacking a bottom stop adjacent the bottommost slide fastener element

on each of its tapes, said slide fastener including an element free gas on its tapes having a length appreciably greater than the length of the slide fastener's slider, with said gap being disposed between the bottommost slide fastener elements on each of the tapes and the bottom end portion of the slide fastener, and said slide fastener including means joining the bottom end portions of the tapes together, the steps which comprise applying a first line of stitching to join one fastener element carrying tape of the slide fastener to one flap of the cloth article while the slider of the slide fastener is disposed within the gap and spaced from the bottommost element of said one tape, extending said first line of stitching into the gap a spaced distance above the slider, applying a second line of stitching to join the other fastener element carrying tape of the slide fastener to the adjacent flap of the cloth article while the slider of the slide fastener is disposed within the gap and spaced from the



bottommost element of said other fastener element carrying tape, extending said second line of stitching into the gap a spaced distance above the slider, moving the slider a spaced distance from the gap onto the slide fastener elements of the slide fastener so that the slider is carried upon the stitched portions of the tapes a spaced distance from the gap, with mating elements of the tapes intermediate the gap and the slider joining the tapes together, cutting off the bottommost portion of the slide fastener along a line extending through the gap a sufficient distance below the bottommost slide fastener elements on each of the tapes to provide room for a bottom stop below the bottommost slide fastener elements on each of the tapes while the elements of the tapes intermediate the slider and the gap are matingly engaged, and applying a bottom stop to the inside welted edges of the tapes adjacent the bottommost slide fastener elements on each of the tapes.

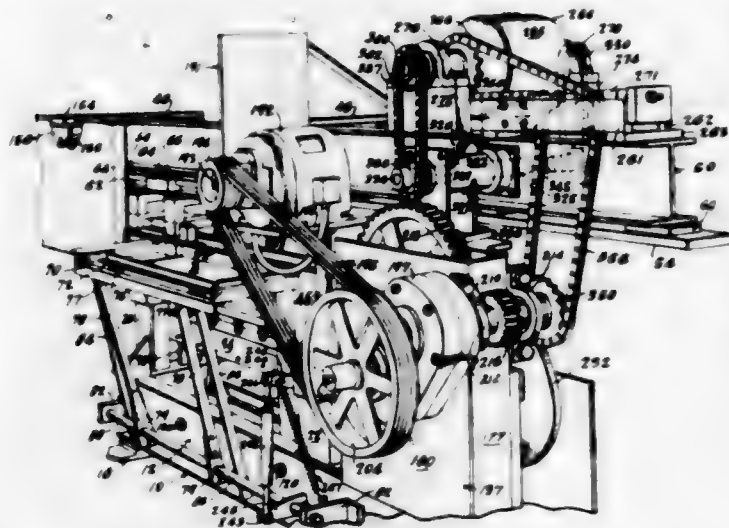
3,003,446

APPARATUS FOR FORMING TUBES

Walter J. Ely, Grand Haven, and Adolph A. Hale, Spring Lake, Mich., assignors to Oldberg Manufacturing Company, Grand Haven, Mich., a corporation of Michigan
Filed Sept. 25, 1957, Ser. No. 686,182
9 Claims. (Cl. 113-34)

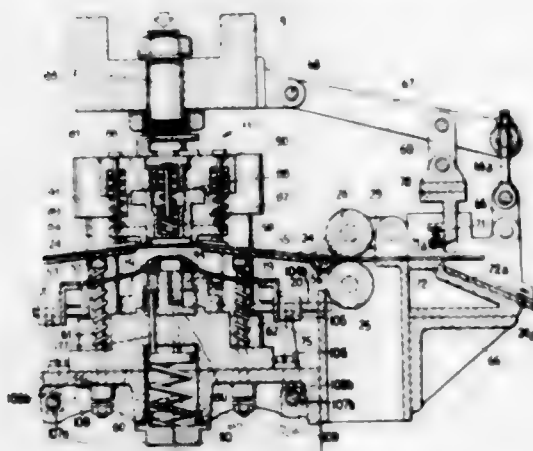
1. Apparatus for forming tubes from sheet metal blanks including, in combination, a frame, a mandrel supported thereby, a die for forming a metal blank on the mandrel to U-shape, a carriage mounted on the frame for reciprocatory movement, metal bending and forming rolls on said carriage engageable with the U-shaped blank on the mandrel for configuring the blank into a tube, a plurality of endless chains, means connecting the chains with the carriage whereby continuous

movement of the chains in one direction effects a reciprocation of the carriage, a motor, means for actual-



ing said die, and differential means connected with said chains and driven by the motor for transmitting substantially equal driving forces to each of said chains.

3,003,447
MATERIAL FEED APPARATUS FOR AUTOMATIC MULTIPLE PRESS
Manlio Gavazzi, Via Gabriele d'Annunzio 25,
Florence, Italy
Filed Dec. 9, 1954, Ser. No. 474,263
9 Claims. (Cl. 113-42)



1. In a multiple press for die-forming strip material in a plurality of stages, including a bed structure, a unit vertically displaceable relative to said bed structure, stationary die-means carried by such bed structure, a plurality of dies carried by said vertically displaceable unit, said plurality of dies movable jointly with said vertically displaceable unit toward respective die means to work upon a portion of said strip material, the combination of: movable initial shearing and embossing means supported by said vertically displaceable unit, stationary initial shearing and embossing means spaced from said movable shearing and embossing means and being supported by said bed structure, said stationary and movable shearing embossing means being adapted to matingly engage each other and being further adapted to sever a portion of said strip material being fed into said multiple press, means operatively connected to said bed structure for intermittently feeding said strip material between said initial stationary and movable embossing means, means operatively connected to said stationary initial shearing and embossing means adapted to eject upwardly said severed portion of strip material therefrom, biasing means movably connected to said bed structure adapted

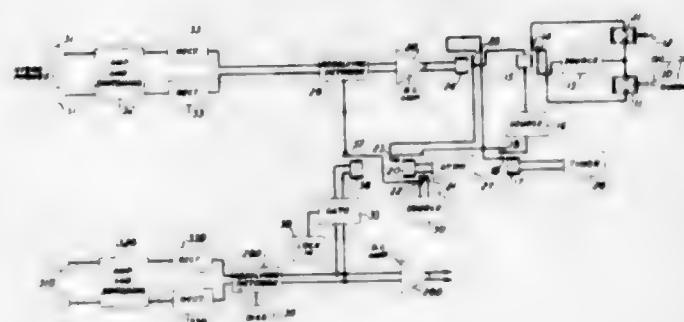
to yieldingly support said strip material and raise the same above the position of said ejected severed portion when said movable initial shearing and embossing means is raised with respect to said stationary shearing and embossing means, and means slidably connected to said bed structure and being adapted to move said ejected and severed portion of strip material transversely to the direction by which said strip material is fed into said multiple press on its way to the die-means.

3,003,448
EMERGENCY POWER SYSTEM FOR SUBMARINES
Shelton M. Gay, Jr., Vienna, Va., assignor, by mesne assignments, to PneumoDynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 842,043
4 Claims. (Cl. 114-16)



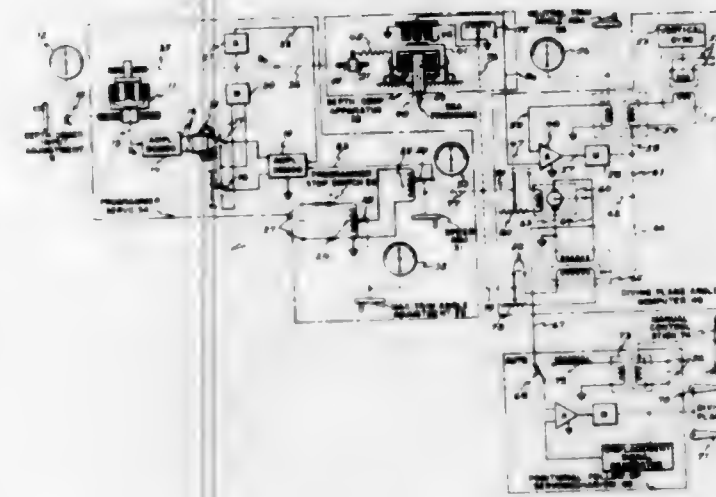
1. An emergency power system comprising a submarine having separate water-tight compartments, a hydraulic motor, an inlet connecting said motor to the exterior of said submarine, and valved exhaust means selectively connecting said motor to said compartments.

3,003,449
TORPEDO CONTROL CIRCUIT
Charles F. Wiebusch, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 22, 1945, Ser. No. 600,905
11 Claims. (Cl. 114-23)



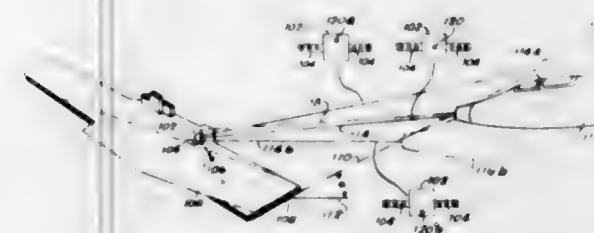
1. A control system for a moving body comprising a steering member, means for deflecting said member, means responsive to signals emanating from a target for producing a first control signal having an amplitude and polarity corresponding to the magnitude and direction, respectively, of the angle between the direction of movement of said body and the bearing of said signals with respect to said body, gyroscope controlled means responsive to a deviation between a preselected course and the direction of movement of said body for producing a second control signal having a polarity indicative of the direction of said deviation and a fixed amplitude equal to a preassigned magnitude within the amplitude range of said first control signal, means jointly responsive to said first and second control signals for producing an output signal of a polarity determined by the resultant of the polarities and relative magnitudes of said control signals, and means for applying said output signal to said deflecting member, whereby said steering member is deflected in one or the opposite direction in accordance with the polarity of said output signal.

3,003,450
ELEVATIONAL CONTROL SYSTEM FOR NAVIGABLE CRAFT
Frederick B. Brand, Sea Cliff, Joseph H. Chadwick, Jr., Amityville, and Jerome Bentkowsky, East Meadow, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Oct. 15, 1956, Ser. No. 616,069
14 Claims. (Cl. 114-25)



5. A depth control system for submarines with diving planes including servo means operatively connected to the diving planes for changing the depth of the submarine, means for programming a change in depth of the submarine having a rotational output, means settable in accordance with a desired change in the depth of the submarine for determining the extent of the travel of the program output means, means for determining the velocity of the rotational output of said program output means during operation including means settable in accordance with the speed of the submarine and means settable in accordance with a maximum trim angle adjustment of the diving planes, means for computing the depth of the submarine providing an output, means providing an output in accordance with the difference between the outputs of said program output means and said depth computing means, means for computing the diving plane angle of the submarine with respect to a horizontal reference plane containing the pitch axis of the submarine providing an output, and means for operating said servo means in accordance with the difference between the outputs of said diving plane angle computing means and said difference means.

3,003,451
MIRROR LANDING SYSTEM
John A. Lundin, Madison, George P. Maselli, Dumont, and Henry D. Zuerndorfer, Pompton Plains, N.J., assignors to General Precision Inc., a corporation of Delaware
Filed Sept. 10, 1959, Ser. No. 839,241
5 Claims. (Cl. 114-43.5)



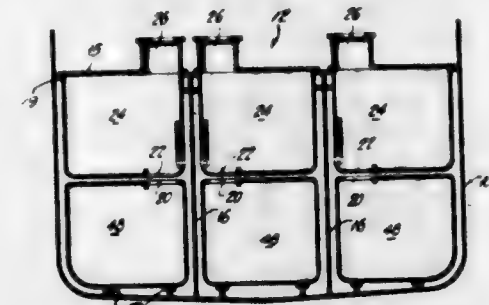
1. In a mirror landing system for landing an aircraft on the deck of a ship along a predetermined glide path, wherein said landing system includes a mirror and a source of light creating a virtual image in and reflected from said mirror, the center of said mirror and said source of light being fixed with respect to said deck; the

combination therewith of automatic means for tilting said mirror about its center through an angle μ equal to

$$\frac{\phi + \delta - \theta}{2}$$

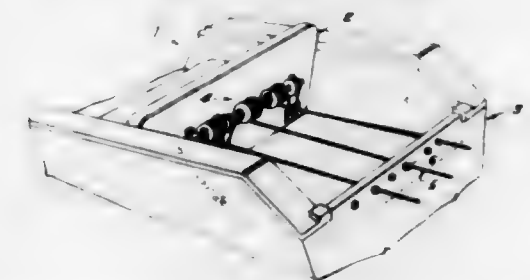
wherein ϕ is the angle between a first line determined by the center of said mirror and an aircraft located on the glide path and the projection of the first line on a horizontal plane passing through the center of said mirror, δ is the pitch angle of said ship, and θ is the angle between a second line connecting said source of light and the center of said mirror and the projection of said second line in a plane parallel to said deck passing through said source of light, said automatic means including tracking means having a sensing device the center of which is fixed relative to said deck for determining the actual angle α between a third line connecting the center of said sensing device and said aircraft and the projection of said third line in a plane parallel to said deck and passing through the center of said sensing device.

3,003,452
FISHING VESSEL
Wilhelm Sangerlaub, Rostock, Germany, assignor to VEB Volkswerft Stralsund, Stralsund, Germany
Filed Apr. 20, 1959, Ser. No. 807,494
1 Claim. (Cl. 114-72)



In a fishing vessel including a loading area defined by intersecting longitudinal and transverse bulkheads, the improvement comprising large-sized change tanks of a size for positioning directly in the areas defined by said bulkheads, said tanks being arranged in upper and lower relation to each other and including outwardly flanged upper portions adapted to rest on the upper edges of said bulkheads, said tanks having reinforced structural portions and top openings located adjacent one side thereof, the upper tanks having bottom openings aligned with said top openings to permit charging of the lower tanks, and hinged closure means for each of said upper tank bottom openings to close off charging of said lower tanks.

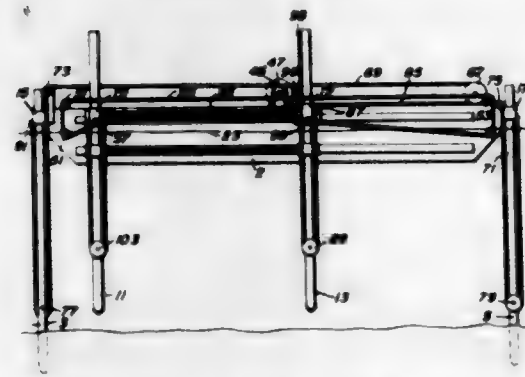
3,003,453
SKI ROPE REEL
John R. Jamieson, 1921 E. Abrams, Arlington, Tex.
Filed July 6, 1959, Ser. No. 825,246
3 Claims. (Cl. 114-235)



3. In an automatic ski rope retrieving device for boats, comprising a shaft rotatably supported in a boat and having a motor driving the same, a plurality of reels spaced along said shaft, each adapted to have a ski rope

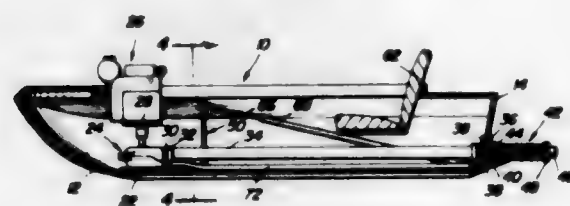
wound thereon, means on each of said reels and embracing said shaft for frictionally connecting said reels to said shaft when the latter is rotated clockwise and releasing said reels when said shaft is rotated counterclockwise, and a braking means on said shaft to restrain its rotation in a counterclockwise direction.

3,003,454
PROPELLING MEANS FOR DREDGE BARGES
Henry Shatoska and Troy W. Shatoska, both of
General Delivery, Gonzales, La.
Filed Dec. 10, 1958, Ser. No. 779,438
7 Claims. (Cl. 115-9)



1. In combination, a dredge barge having front and rear ends and a side, a pair of upright spuds vertically slidably mounted on said side at said ends respectively for dropping by gravity from a raised idle position into embedded position in the bottom of a body of water to hold said barge stationary, a longitudinal track on said side of the barge, a pair of upright spuds intermediate the first named pair spaced apart along said track, means vertically slidably mounting said intermediate spuds for dropping by gravity from a raised idle position into an embedded position in said bottom, means slidably mounting said first named means on said track for movement in unison to advance said intermediate pair of spuds toward said front end of the barge, power means on said barge operatively connected to said spuds to raise and lower one pair of spuds while simultaneously lowering and raising the other pair of spuds respectively, and power means on said barge operatively connected to said first named means and said barge for moving the same to advance said intermediate pair of spuds when raised and to advance said barge relative to said intermediate pair when embedded and said first named pair raised into idle position.

3,003,455
FOOT OPERATED DEVICE FOR SPEED AND STEERING CONTROL OF HYDRAULIC PROPELLED BOATS
John E. Alexander, Charles H. Comstock, Jr., Royce P. Burnett, and Lloyd B. McKinney, all of Box 1266, McCarney, Tex.
Filed Sept. 9, 1959, Ser. No. 838,877
6 Claims. (Cl. 115-12)



1. A steering control for a boat of the type having a hull and a water jet outlet conduit projecting rearwardly through a portion of said hull, said steering control comprising a flexible steering hose having one end adapted to be secured to the discharge end of said conduit, a

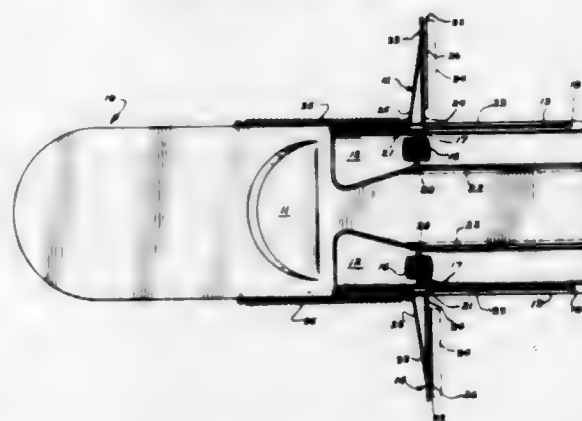
pair of control cables secured at one end to opposite sides of the outlet end of said hose and diverging outwardly toward the inlet end of said hose, a pair of control means adapted to be secured in said boat, and means securing the other end of each of said cables to one of said control means whereby the outlet end of said hose may be laterally deflected to either side upon operation of the corresponding control means, means adapted to be supported from said hull for guiding said cables forwardly and downwardly as well as outwardly.

3,003,456
FLUSHING PLATE FOR OUTBOARD MOTORS
Harold E. Crozier, 592 Birch, Hawthorne, Calif.
Filed Feb. 2, 1960, Ser. No. 6,227
4 Claims. (Cl. 115-17)



1. For use on a boat outboard motor the body of which has an internal cooling water circulation passage opening at a submerged surface of the body; a flushing device comprising an elongated relatively thin plate adapted to cover the passage surface opening, said plate including at its inside a tubular internally threaded projection adapted to enter the pass water into said passage during normal operation of the motor and to receive a threaded male fitting for introduction of flushing water to the passage, said plate containing at opposite sides of said projection openings for the reception of threaded fasteners to attach the plate to the motor body, the outside of the plate presenting a substantially smooth surface when disconnected from said fitting.

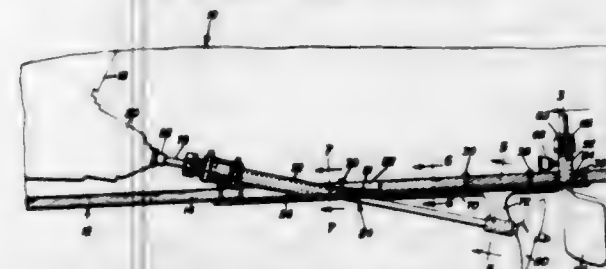
3,003,457
MANUALLY PROPELLED BOAT
George W. Patterson, Rte. 1, Remer, Minn.
Filed July 1, 1960, Ser. No. 40,219
4 Claims. (Cl. 115-25)



4. A boat including a longitudinally extending hull having a passenger seat, a longitudinally extending guide rod removably mounted on said hull adjacent opposite longitudinal edges of said hull, a guide slidably mounted over each of said guide rods, a pair of guide blocks longitudinally slidably mounted on said hull each spaced inwardly from one of said guide rods and being slidable substantially parallel to said guide rods, a pair of cross rods each fixedly attached at a first end thereof to one of said guide blocks and fixedly attached to one of said guides outwardly adjacent said guide blocks at a second end thereof, a foot pedal attached to each of said cross

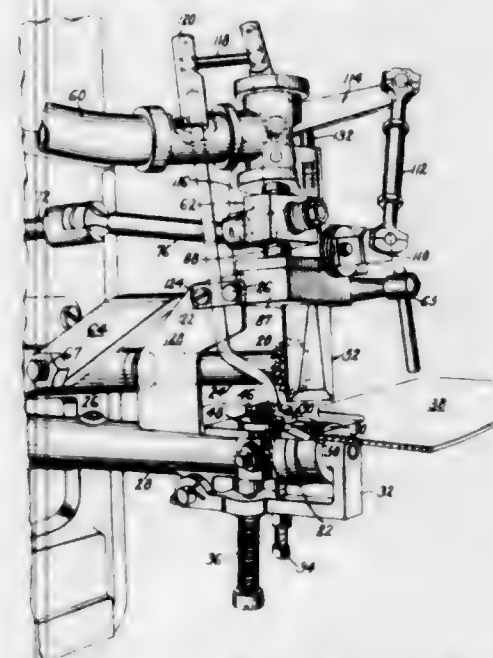
rods, said cross rod being movable between a first forward position and a second rearward position, a paddle support bar fixedly attached to each of said tubular guides and extending laterally outward therefrom, a downwardly extending paddle attached to each of said support rods, and resilient means urging each of said paddles to a forward position.

3,003,458
INBOARD BOAT PROPULSION AND STEERING ASSEMBLY
Richard M. Starns, Jr., P.O. Box 10943, Berkeley, Calif.
Filed Jan. 5, 1959, Ser. No. 785,052
10 Claims. (Cl. 115-34)



1. In combination with a boat having an engine fixedly mounted therein, an inboard motor boat propulsion and steering assembly comprising an elongated mounting plate including means fixedly mounting said plate on said boat independently of said engine, an upwardly and forwardly extending propeller shaft log formed integrally with the upper surface of said mounting plate adjacent the forward end of said mounting plate, an upstanding rudder post shaft log formed integrally with the upper surface of said mounting plate adjacent the rear end of said mounting plate, a rudder post packing gland carried by the upper end of said rudder post shaft log, and a depending propeller shaft strut formed integrally with the underside of said mounting plate forwardly of and adjacent to said rudder post shaft log, a propeller shaft packing gland disposed forward of said propeller shaft log, and a flexible connector securing said packing gland to said shaft log in sealed relation thereto.

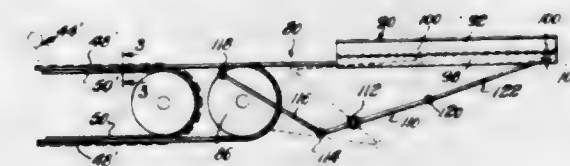
3,003,459
MACHINES FOR APPLYING A UNIFORM COATING
Gordon V. Sprague, Jr., Danvers, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Mar. 16, 1959, Ser. No. 799,668
11 Claims. (Cl. 118-8)



1. In a machine for coating the margin of a work piece having an irregularly curved contour, a nozzle for de-

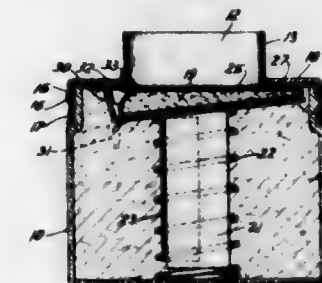
positing coating material on the work piece, means for guiding the edge of the work piece relative to the nozzle whereby a stripe of coating material is deposited along the margin of the work piece as it is fed, and means responsive to variations in curvature of the edge of the work piece for varying the rate of extrusion of material from the nozzle depending on the curvature of the edge of the work piece.

3,003,460
MAGNETIC CONVEYOR
Rufus W. Wilson, Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Dec. 9, 1957, Ser. No. 701,450
1 Claim. (Cl. 118-236)



Apparatus for applying a coating to the indicia of ferromagnetic license plates or the like of the type having reverse beads along the opposite edges thereof lying in a plane below the main body surface of the plate and embossed indicia lying in a plane above the main body surface of the plate, including a first endless conveyor member, a second endless conveyor member having a run extending substantially parallel to, inwardly of, and adjacent a run of said first conveyor member, said first conveyor member having a plurality of apertures therein, a plurality of rectangular magnet members attached to said second conveyor member and passing through said apertures of said first conveyor member to project beyond the surface of said first conveyor member, said magnet members each having a length transverse of the direction of conveyor travel slightly less than the spacing between the reverse beads along opposite edges of the license plate, means for feeding license plates to said conveyor member in synchronized relation to the movement of said conveyor member to cause the leading and trailing edges of the respective license plates to respectively lie between successive magnet members, roller coating means for applying a coating to the indicia of said plates, said roller coating means overlying said conveyor members and positioned to engage said plate indicia whereby said magnets lie between the oppositely disposed reverse beads and directly underlie the main body surface of the license plate to support the main body surface and maintain the indicia in contact with said roller coating means.

3,003,461
MARKING FLUID CONTAINER
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Aug. 3, 1959, Ser. No. 831,251
6 Claims. (Cl. 118-266)



1. A device for supplying marking fluid to an applicator comprising a container for the marking fluid having

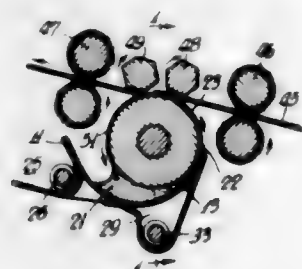
a top cover with an opening therein and providing a top wall between the opening and sides of the container, a packing of absorbent material in the container, a depressible perforated plate overlying the packing, a pad of absorbent material between the perforated plate and the cover and underlying the opening in the latter, means acting between said cover and said perforated plate for spacing only a minor peripheral portion of said pad at one edge thereof from said cover, and a compression spring acting between the bottom of the container and the perforated plate which yields under downward pressure exerted on said plate to compress the packing and cause marking fluid to flow through the perforated plate to wet the pad while maintaining the pad substantially flat.

3,003,462

APPARATUS FOR APPLYING DEVELOPER POWDER TO PHOTO-CONDUCTIVE INSULATING SHEETS

Paul B. Stetich, Sr., Fox Lake, Ill., assignor to Charles Bruning Company, Inc., Chicago, Ill., a corporation of Delaware

Filed Jan. 18, 1957, Ser. No. 634,873
1 Claim. (Cl. 118—637)



Apparatus for developing electrostatically charged latent images on photo-conductive insulating sheets comprising, in combination, means for moving said photo-conductive insulating sheets in a substantially horizontal plane, a container for a body of developer mixture consisting essentially of magnetic particles and developer powder, a cylindrical applicator mounted in said container with the periphery of said cylindrical applicator arranged to move through the upper portion of said body of developer mixture, the width of said cylindrical applicator being at least equal to the transverse extent of the entire image areas on said photo-conductive insulating sheets, said cylindrical applicator being positioned to have said photo-conductive insulating sheets pass in substantially tangential contact with the upper periphery thereof with the direction of movement of said photo-conductive insulating sheets in said horizontal plane being the same as the direction of rotation of said cylindrical applicator, means for creating a magnetic field in the periphery of said cylindrical applicator and to form thereon during its rotation a layer of magnetic particles and developer powder having a transverse extent at least equal to the complete width of the entire image areas on said photo-conductive insulating sheets which layer is continuous and unbroken throughout said transverse extent and is also continuous and unbroken in the direction of rotation of said cylindrical applicator from the upper surface of said body to the point of application of the developer powder to the photo-conductive insulating sheets, and means for rotating said cylindrical applicator to bring said layer into substantially tangential contact with said moving photo-conductive insulating sheets with both said layer and said insulating sheets in the area of substantially tangential contact moving in the same general direction to thus apply developer powder from said layer onto said photo-conductive insulating sheets across the entire transverse extent of the image areas thereon, said means for creating a magnetic field in the surface of said cylindrical applicator and for rotating said cylindrical applicator

effecting replenishing of the developer powder in said layer upon rotation of said cylindrical applicator through the upper portion of the body of developer powder to reform said layer for application of developer powder therein to successive photo-conductive insulating sheets.

3,003,463

HATCHING DRAWERS

Norbert Cyriel De Rijcke, Stationsstraat, 59,

Gavere (O.-VI), Belgium

Filed Sept. 18, 1958, Ser. No. 761,896

Claims priority, application Belgium Jan. 15, 1958
4 Claims. (Cl. 119—43)



1. A hatching drawer comprising an egg tray capable of being tilted from a vertical plane through substantially 180° comprising a perimetric frame, at least two vertically spaced parallel grids having substantially square meshes, each grid being formed of a first set of parallel rods having relatively small cross-sectional areas and supported on opposite sides of said frame, and a second set of similar parallel rods secured to and crossing the rods of said first set at right angles thereto, all of the rods of one set being coplanar, the spacings between the rods of any one grid being larger than the spacings of corresponding rods of a lower disposed grid whereby the dimensions of the meshes of any one grid are larger than the dimensions of the meshes of a lower disposed grid, the centers of corresponding meshes of said vertically spaced grids being in substantial vertical alignment and the uppermost grid being vertically spaced a substantial distance from the lowermost grid to dispose the centers of gravity of the eggs to be handled below said uppermost grid when the same are nested in the lowermost grid to retain the eggs within said tray during said tilting movement.

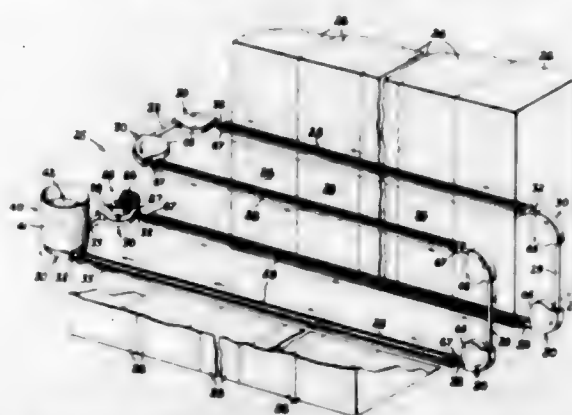
3,003,464

FEED CONVEYOR

Ralph K. Bailey, Springfield, Ohio, assignor, by mesne assignments, to The Buckeye Incubator Company, Springfield, Ohio, a corporation of Delaware

Filed Aug. 4, 1958, Ser. No. 752,689

6 Claims. (Cl. 119—52)



1. A feeder system for poultry comprising a feed hopper for receiving and dispensing feed, a plurality of interconnected closed conduits and open feed troughs constructed to provide a feeder course in the form of a closed loop meeting at the ends thereof in said feed hopper, a flexible coiled feed distributor constructed of a length of coiled spring having spacings between adjacent coils thereof for receiving and transporting feed, said feed distributor being threaded through said feeder course and

connected at the ends thereof to provide an endlessly movable closed loop, driving means for advancing said distributor through said course to receive feed from said hopper between the spaced coils which is thereafter advanced through said closed conduits to be discharged into said open troughs, said means for driving said flexible distributor having a plurality of rotatable opposed driver elements engageable with the coils of said distributor spring to impart translational movement thereto.

3,003,465

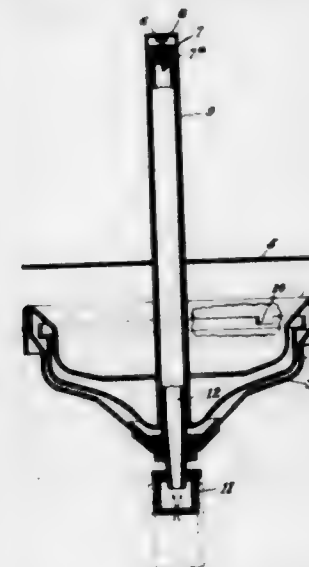
POULTRY WATERER

Eino A. Ahala, Pierce Road, Townsend Harbor,

Townsend, Mass.

Filed Oct. 12, 1959, Ser. No. 846,038

7 Claims. (Cl. 119—81)



1. A poultry watering device comprising a substantially vertically arranged conduit having a valve at the top thereof, a first bowl surrounding a lower portion of said conduit, a tubular imperforate member surrounding said conduit, a second bowl on the lower end of said tubular member and contained within said first bowl, the top of said tubular member being closed and normally resting on said valve to close the same, whereby when water is in said first bowl and said second bowl is empty the valve will be open, and water will then overflow into said second bowl until the same settles and causes said valve to close.

3,003,466

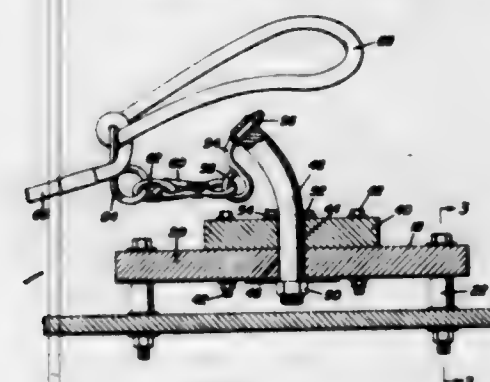
AUTOMOBILE PET HOLDING DEVICE

Dominick A. Matarazzo, 7810 5th Ave.,

North Bergen, N.J.

Filed Jan. 6, 1960, Ser. No. 724

4 Claims. (Cl. 119—96)



1. A pet restraining device comprising, in combination, a motor vehicle including a seat comprising a backrest and a package shelf in back of said backrest, a base, resilient vibration absorbing means securing said base on said shelf in vertically spaced relation thereto, and a leash having one end connected to said base.

3,003,467

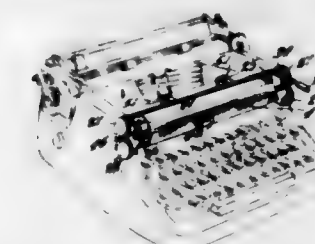
COPYHOLDING DEVICE

Laura Givens Berry, Tucson, Ariz. (Room 2219 Central

YMCA, 1421 Arch St., Philadelphia 2, Pa.)

Filed Dec. 19, 1958, Ser. No. 781,700

1 Claim. (Cl. 120—32)



In a copyholder, a U-shaped frame having arms and said arms having slots and apertures, a pair of adjacent parallel rolls extending between said arms and journaled in said apertures, each of said rolls having a longitudinal paper receiving slit, means for rotating said rolls, a paper support extending between and supported by the arms of said U-shaped frame, a transparent guide located in a plane parallel and adjacent the plane of the paper support and mounted between and in said slots of said arms of the U-shaped frame, said guide having means dividing the guide longitudinally into optically distinguishable portions so that when said guide is held in said slots a line of information which is to be copied from the copyholder is designated by the guide, and said paper support and guide being located outside a plane tangent to the rolls and on the far side of said plane of the rolls from the axes of the rolls to present a limited portion of the paper in position for copying.

3,003,468

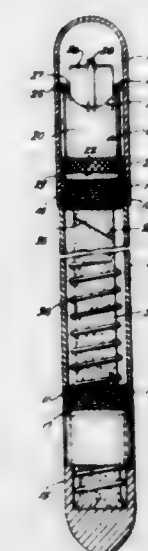
LINE MARKERS

Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to

Speedry Chemical Products, Inc., Richmond Hill, N.Y.

Filed July 29, 1959, Ser. No. 830,253

1 Claim. (Cl. 120—42.2)



A marking device comprising a casing open at one end, a head assembly including a sleeve releasably attached to said casing at such end, an inking roller mounted in said sleeve and extending outwardly through its outer end, a felt pack in said sleeve with its inner end extending inwardly through the inner end of said sleeve into said casing; a centrally apertured flat felt washer re-

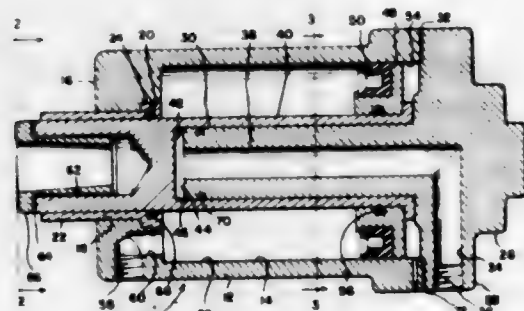
movably positioned between the felt pack and the roller and engaged by both the roller and the felt pack; the roller having a peripheral annular central rim narrower than the aperture of said washer whereby air may vent through the aperture to the felt pack and said rim rotatably wiping the edge of the aperture of the washer at two points in a path transversely across said aperture, whereby the flow of ink from the washer to the rim is controlled.

3,003,469

PORTABLE HYDRAULIC ACTUATOR FOR A WELDING GUN

Arthur F. Kelsey, Jr., Dearborn, Mich., assignor to Link Welder Corporation, Detroit, Mich., a corporation of Michigan

Filed July 18, 1960, Ser. No. 43,437
6 Claims. (Cl. 121-38)



1. A portable actuator comprising a housing having a bore therein open at one end and closed at the other, a member secured to said housing and closing the open end of said bore, said member having thereon an elongated stem of a predetermined length extending axially into said bore, a rod extending through the closed end of said bore and having an axially extending socket receiving said stem, opposed spaced portions of said socket and said stem forming an expansible pocket for fluid, a piston sleeved upon and fixed to said rod and movable therewith within said bore relative to said stem, said piston constituting a partition between the closed end of said bore and said member and dividing the space therebetween into a fluid chamber adjacent the closed end of said bore and an accumulator chamber adjacent said member, a supply passage for fluid extending through said member and through said stem, said passage opening into the expansible pocket aforesaid so that fluid discharged from said passage into said expansible pocket will cause said rod to move lengthwise in one direction relative to said stem, and a second supply passage for fluid extending through the closed end of said bore and opening into the fluid chamber aforesaid so that fluid discharged from said second passage into said fluid chamber will cause said rod to move lengthwise in the opposite direction relative to said stem and will cause fluid within said expansible pocket to be discharged into the first mentioned passage aforesaid.

3,003,470

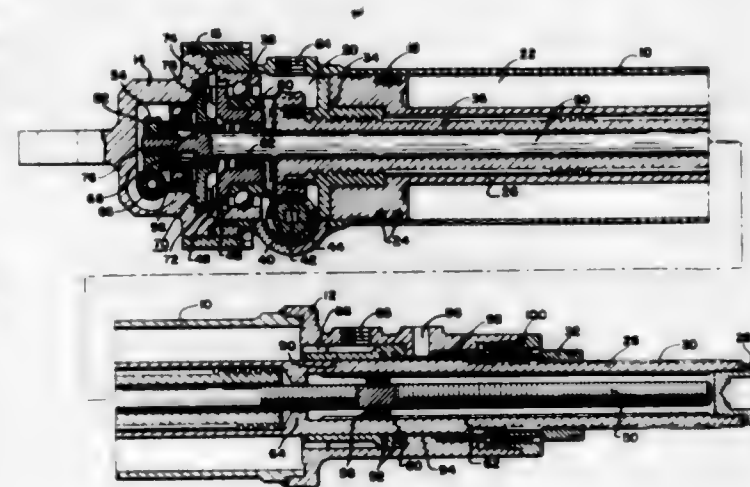
ACTUATOR WITH VARIABLE POSITION STROKE LIMITER

Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 16, 1960, Ser. No. 29,313
11 Claims. (Cl. 121-40)

1. An actuator assembly including in combination, a cylinder, a reciprocable piston disposed within the cylinder, a member rotatably supported in the cylinder, a non-rotatable element operatively engaging said member so as to move axially upon rotation of said member, said element being operatively engageable with said piston for

limiting movement thereof in one direction, and means operable to rotate said member and adjust the axial po-



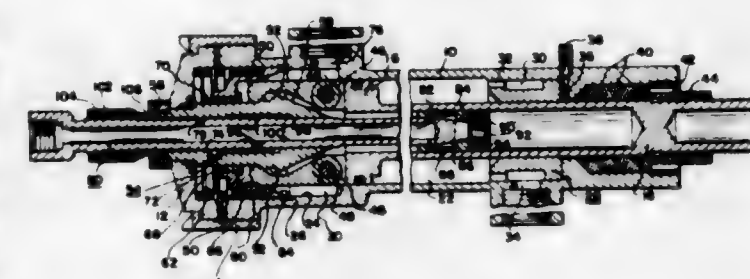
sition of said member to vary the stroke limit of said piston in said one direction.

3,003,471

ACTUATOR WITH STROKE END LOCKING MEANS AND STROKE ADJUSTING MEANS

Roy C. Bodem, Kettering, and Howard M. Geyer, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 23, 1958, Ser. No. 743,739
2 Claims. (Cl. 121-40)



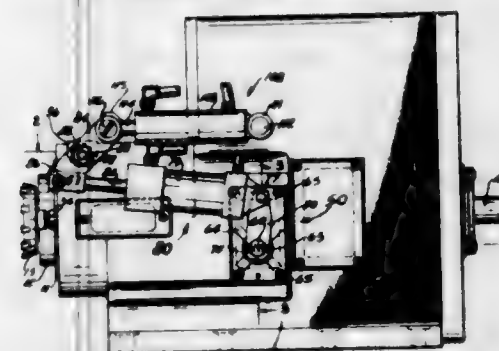
1. A fluid pressure operated actuator assembly including, a cylinder, a reciprocable piston disposed in said cylinder capable of fluid pressure actuation in both directions, said piston having a hollow rod with a closed outer end extending outside of said cylinder and dividing said cylinder into an extend chamber and a retract chamber, a pressure drop bushing disposed between the rod end wall of said cylinder and the outer periphery of said piston rod, the inner surface of said pressure drop bushing being radially spaced from the outer periphery of said rod so as to form an orifice through which a metered amount of fluid can flow due to a pressure differential across said bushing, a drain conduit connected with the low pressure side of said pressure drop bushing, a drain tube assembly coaxially disposed within said cylinder and having a closed inner end disposed within said piston rod, port means in said drain tube assembly adjacent the closed inner end thereof cooperating with said piston so as to be uncovered and thus connect the extend chamber to drain for determining the extend stroke end limit position of said piston, means for adjusting the position of said drain tube assembly relative to said cylinder to vary the extend stroke end limit position, and means constituting an orifice connecting the extend chamber to said drain tube assembly whereby a metered amount of fluid can flow from said extend chamber to drain due to a pressure differential across said last recited orifice.

3,003,472

QUILL ACTUATING AND CLAMPING MECHANISM

Robert M. Ferris, Hales Corners, and Denison C. Miller, Milwaukee, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin

Filed Sept. 14, 1959, Ser. No. 839,869
12 Claims. (Cl. 121-40)



1. In a retracting mechanism for a movable member of a machine tool; a frame; a source of hydraulic pressure; a cylinder supported on said frame for axial movement and connected to receive hydraulic pressure from said source; a piston slidably supported within said cylinder for axial movement; coupling means operably connecting said cylinder to the movable member so that axial movement of said cylinder in one direction will cause a movement of the movable member to an advanced position and axial movement of said cylinder in the opposite direction will cause a retraction of the movable member from its advanced position; clamping means operable when actuated to clamp the movable member in its advanced position, said clamping means being connected to be actuated by the axial movement of said piston; and restraining means operably connected to oppose the axial movement of said piston but arranged to yield upon the application of a predetermined force to allow said piston to be moved axially to actuate said clamping means; whereby the flow of hydraulic pressure into said cylinder will cause the cylinder to move axially relative to said piston to move the movable member to its advanced position and after the movable member has been located in its advanced position the continued flow of pressure into said cylinder will increase the force on said piston to overcome the opposition of said restraining means and cause axial movement of said piston to actuate said clamping means for clamping the movable member in its advanced position.

3,003,473

MECHANICAL LOCK FOR PISTONS OF FLUID PRESSURE RAMS

Raymond H. Ottoson, Garden Grove, Calif., assignor, by mesne assignments, to Clemco Aero Products, Inc., a corporation of Delaware

Filed Nov. 5, 1959, Ser. No. 851,078
9 Claims. (Cl. 121-40)



1. A cylinder having a piston reciprocable axially therein; means for admitting fluid pressure to an end of the cylinder to move said piston axially in said cylinder, said piston having an annular end portion projecting axially therefrom toward said end of the cylinder, said annular

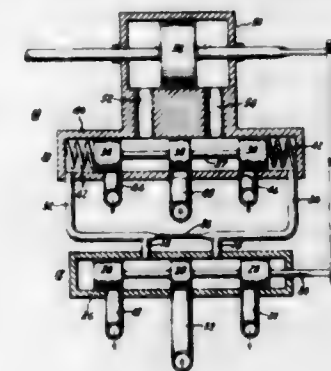
portion being formed adjacent the outer end thereof with an inwardly extending shoulder; latching fingers anchored with the cylinder and having outwardly projecting means thereon engageable with said shoulder when the said piston is positioned in said end of the cylinder, releasably to hold the piston against longitudinal movement relative to the cylinder when said means is locked in such engagement; an annular locking plate mounted coaxially adjacent an exterior coaxial end portion of the piston for longitudinal reciprocatory movement thereon and engageable in a first longitudinal position thereon internally with said fingers to lock said means outwardly in such locking engagement with said shoulder; resilient means in said piston urging said locking plate into such first longitudinal position; and means on said piston, responsive to the fluid pressure in the said end of said cylinder for moving said locking plate against the force of said resilient spring means into a second longitudinal position unlocking said means from said engagement with said shoulder, thus permitting said means to disengage said shoulder and the piston to be moved by said fluid pressure.

3,003,474

HYDRAULIC CONTROL SYSTEM WITH FLOW RESTRICTING MEANS

Walter B. Giles, Schenectady, and Robert A. Aiken, Scotia, N.Y., assignors to General Electric Company, a corporation of New York

Filed July 31, 1956, Ser. No. 601,322
7 Claims. (Cl. 121-41)



7. Hydraulic system, for controlling a servo actuator, comprising: a first stage valve including a pair of outlet ports; first pressurized-fluid supply means for operating the first stage valve; a second stage valve including a pair of inlet ports and a pair of outlet ports; second pressurized-fluid supply means for operating the second stage valve; a pair of conduits, each conduit defining a hydraulic path between one of the first stage valve's outlet ports and one of the second stage valve's inlet ports; flow restriction means defining a path between said pair of conduits in order to provide a pressure difference between the second stage valve's inlet ports; a servo actuator hydraulically coupled to the second stage valve's outlet ports; and, feedback linkage means coupling the servo actuator with the first stage valve; said second stage valve being so constructed as to substantially eliminate fluid leakage from said pair of conduits past the second stage valve.

3,003,475

PNEUMATIC POSITIONING CONTROLLER

George Rouvalis, Orrville, Ohio, assignor to Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 1, 1959, Ser. No. 817,316
11 Claims. (Cl. 121-41)

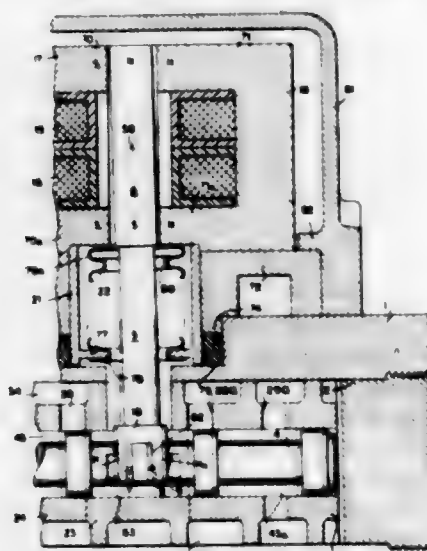
8. In combination, a power cylinder having a reciprocating piston therein and a piston rod extending therefrom through an end of the cylinder, a pilot valve for admitting motive fluid to either end of the cylinder while ex-

hausting from the other, a nozzle baffle control member having a pivot about which it rotates, tension springs connecting respectively, the piston rod to the baffle control member and the latter to the pilot valve, a pressure actuated diaphragm operator connected to the pilot valve, opposed compression springs, one of which engages the diaphragm of the operator to resist the force developed by pressure thereon and the other acting on the baffle control member, and a controller having a variable pressure responsive force producing means and a jet con-



trolled by the baffle control member for varying the pressure on the said means, valve means actuated by said variable pressure responsive means for generating operating pressure for the diaphragm operator, and means responsive to said operating pressure for balancing the force of said force producing means, said springs acting on said baffle control member to position the same in the same direction as the piston of the power cylinder travels in response to actuation of the pilot valve, thereby repositioning the baffle control member after each change in signal to said signal input means.

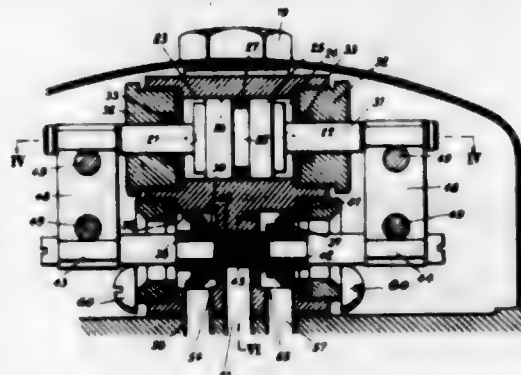
3,003,476
MOTOR FLAPPER CONTROLLED HYDRAULIC SERVO VALVE
Thomas J. Thomas, Verona, N.J., assignor to General Precision Inc., a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,292
7 Claims. (Cl. 121-46.5)



1. A valve actuating mechanism for a hydraulic servo valve, comprising a housing having a cylindrical cavity therein, defined by a cylindrical wall, a substantially cylindrical mating spool having a plurality of axially spaced integral cylindrical lands to define annular regions therebetween, the spool slidably fitting in the cavity, and the cavity wall having a plurality of ports therethrough corresponding in location and longitudinal length to the mating spool lands, the housing also having a plurality of passages therethrough in communication with the cavity wall ports, and the spool having a pair of metering openings therein; said metering openings being located between a pair of lands, the axes of said metering openings being located in a plane through the longitudinal

axis of the spool, and a plurality of longitudinal passages through the spool to connect each metering opening with the corresponding cylindrical region at the end of the spool; an angularly movable flapper mounted adjacent the portion of the spool through which the metering openings pass, the flapper being angularly movable in a plane substantially perpendicular to the plane through the axes of the metering openings, the flapper having an integral head operative to engage the area of the spool through which the metering openings pass to normally cover said metering openings, means operative to selectively angularly move the flapper to a position in which one of the metering openings is uncovered, fluid passageways operative to supply fluid under pressure to the cylindrical regions at both ends of the spool and the mating annular areas between pairs of spool lands, whereby the spool may be longitudinally moved along the cylindrical cavity when one of the metering openings is uncovered, the uncovering of the cavity wall ports by the spool lands permitting fluid under pressure to selectively flow through connecting passages through the housing, the flapper control means being an electrically operated actuating mechanism pivotally supporting the flapper, said flapper control means being operative to selectively angularly move the flapper into a position in which the head thereof uncovers one of the metering openings in the spool to create a pressure differential between the cylindrical regions at both ends of the spool, thereby causing the spool to move in a longitudinal direction relative to the cylindrical cavity, the direction of movement of the spool being co-ordinated with the position of the uncovered metering opening relative to the flapper axis, the longitudinal spool movement continuing until the metering openings through the spool are again covered by the flapper head, the fluid pressures in the cylindrical areas at both ends of the spool being equalized, a pair of fixed longitudinal metering passages located substantially parallel to the spool axis, each of said fixed passages being located near one of the cylindrical regions at the ends of the spool, and a plurality of passageways operatively connecting the fixed longitudinal passageways, to the respective cylindrical regions at the ends of the spool to substantially equalize the fluid pressures in the cylindrical regions at both ends of the spool when the metering openings in the spool are covered by the flapper head.

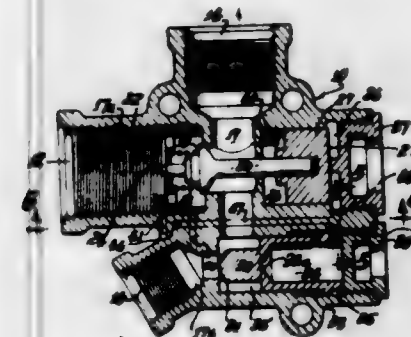
3,003,477
SLIDE-VALVE DEVICE FOR DISTRIBUTING FLUID UNDER PRESSURE
Jacques Camille Gendreau, 18 Rue Berthier, Versailles, France
Filed May 12, 1960, Ser. No. 28,692
Claims priority, application France Mar. 27, 1959
3 Claims. (Cl. 121-157)



1. A slide-valve device for distributing fluid under pressure for the control of a reciprocating engine, comprising a primary distributing slide-valve having small surface bearings and the outlet channels of which are

connected respectively to two small-capacity chambers of a cylinder containing the operating piston of a secondary valve system for distributing fluid to the engine, said valve system comprising two chambers, each chamber being in communication, through its middle part, with one chamber of the engine cylinder, whilst its two ends carry the seats of two coaxial valves communicating with the source of fluid under pressure and with the outflow, respectively.

3,003,478
PILOT-OPERATED SELECTOR VALVE
Bernard G. Bonaway, Granada Hills, Calif., assignor, by mesne assignments, to Sterer Engineering and Manufacturing Company, North Hollywood, Calif., a corporation of California
Filed May 24, 1960, Ser. No. 31,333
12 Claims. (Cl. 121-157)

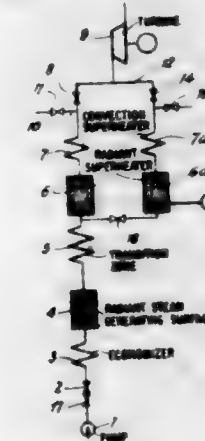


1. A pilot controlled selector valve mechanism, comprising:
a body having internal fluid passages interconnecting an inlet port, a cylinder port, and a return exhaust port;
a primary valve in said body controlling fluid flow into said body passages from the inlet port to said cylinder port, said primary valve being biased to a normally closed position shutting off fluid flow from the inlet port to said cylinder port;
a separate secondary valve in said body controlling fluid flow from the cylinder port through said body passages to said return port, said secondary valve being movable independently of said primary valve and biased to a normally open position placing said cylinder port in free communication with the exhaust port;
separate piston means associated with each of said valves adapted to move the associated valve to an alternate position in response to fluid pressure applied to the piston means; and
means controlling application of fluid pressure individually to said piston means, including a pilot valve, first and second passage means in the body communicating between the pilot valve and the inlet port and the cylinder port respectively, third passage means communicating between the pilot valve and said piston means, and means moving the pilot valve between selected positions to control the application of fluid pressure to said piston means from the inlet port.

3,003,479
STEAM AND AIR BOILER WITH HEATING SURFACE OF SMALLEST LOAD
Peter Bock, Hans Spies, and Karl Deitshamer, Ratingen, Rhineland, Germany, assignors to Durrwerke Aktiengesellschaft, Ratingen, Germany, a corporation of Germany
Filed Oct. 8, 1953, Ser. No. 384,978
Claims priority, application Germany Oct. 11, 1952
3 Claims. (Cl. 122-1)

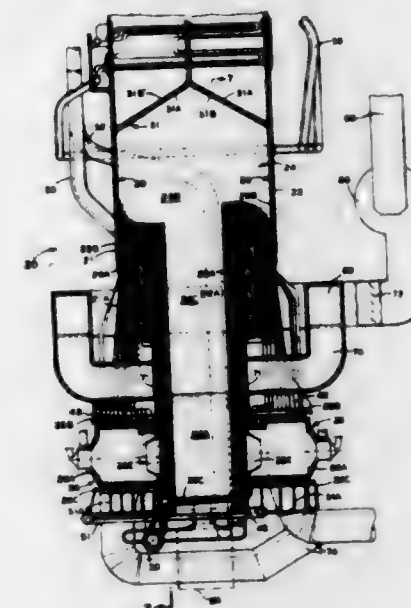
1. A vapor generating and superheating unit comprising wall means forming a gas flow chamber; economizer, vapor generating and vapor superheating sections dis-

posed in said chamber; a start-up minimum load portion including said economizer section and parts of the vapor generating section and of the vapor superheating section; said economizer section and said parts of the vapor generating section and of the vapor superheating section being connected for serial flow of fluid therethrough; means connecting said minimum load portion in parallel flow relation with the remaining parts of said vapor generating section and said vapor superheating section; first



combustion means supplying high temperature gases to said chamber to normally heat said sections; said minimum load portion being of a size to provide the minimum load vapor requirements for said unit; means for flowing all of the vaporizable fluid supplied for start-up through said minimum load portion to generate superheated vapor therein during the start-up of the unit; and second combustion means arranged to fire only said minimum load portion during start-up.

3,003,480
VAPOR GENERATOR
Leroy M. Fink, Union, N.J., Edwin G. Klappert, Wilton, Conn., Arthur E. Rayner, Rockville Centre, N.Y., and Will H. Rowand, Short Hills, N.J., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed June 19, 1957, Ser. No. 666,657
10 Claims. (Cl. 122-235)



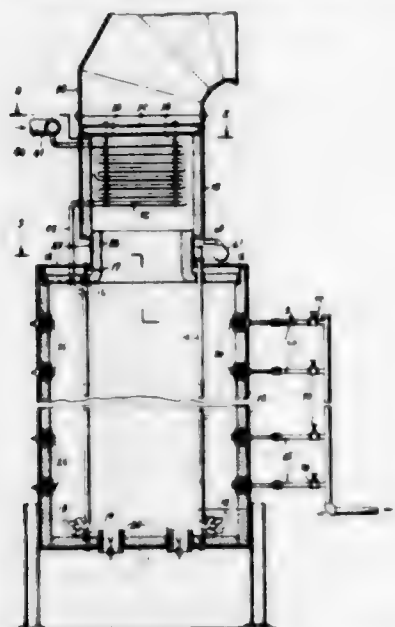
1. A vapor generating and superheating unit comprising vertical front, rear and side walls defining a setting including a radiation section and a convection heating section connected thereto for gas flow serially therethrough, a liquid and vapor separating drum, vertically extending vapor generating tubes connected for fluid flow therethrough with said drum lining said setting walls, a

cyclone furnace disposed for discharging hot combustion gases into said radiation section through a wall portion of said setting, said cyclone furnace being defined by a wall of fluid cooled tubes, cyclone furnace riser tubes in communication with and receiving fluid discharged from said cyclone furnace wall tubes, said riser tubes extending upwardly into aligned relationship with said generating tubes lining said setting walls and connected for fluid flow therethrough with said drum, and means including a first liquid header for supplying said setting wall tubes and a second separate and distinct liquid header for supplying said cyclone furnace wall tubes, and downcomers connecting each of said headers to said drum so that said riser tubes and setting wall tubes are connected into separate and distinct fluid downflow supply systems.

3,003,481

DOUBLE FIRED VERTICAL TUBE HEATER

John W. Throckmorton and John S. Wallis, New York, N.Y., assignors to Yuba Consolidated Industries, Inc., San Francisco, Calif., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,792
7 Claims. (Cl. 122-356)



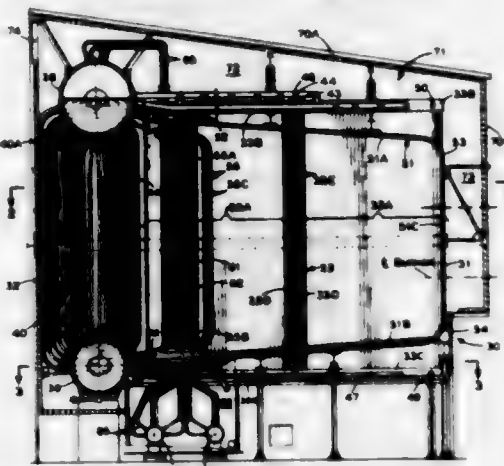
1. A furnace for heat transfer at high temperature comprising an upright cylindrical furnace shell having a refractory lining, a cylindrical bank of vertical tubes having a diameter substantially one-half of the diameter of the shell, a bottom plate, a plurality of high pressure burners arranged in a circle within the lower end of the cylindrical bank and discharging axially upward to form a central column of flame and hot gases, an auxiliary furnace chamber of diameter slightly less than the cylindrical tube bank and concentric therewith at the top of the furnace, an annular throat closing the main furnace chamber except at the center where it opens into the auxiliary furnace chamber, an economizer having a plurality of coils connected to a single header at the top and forming a nest of tubes closely filling the auxiliary furnace chamber but permitting the passage of hot gases from the furnace therethrough, and a plurality of low pressure burners distributed over the entire shell of the furnace and arranged to spread flame over substantially the whole interior refractory wall of the furnace without impinging upon the adjacent outer surfaces of the tubes in the cylindrical bank, the furnace structure being such that the central column of flame and hot gases is unobstructed prior to its impingement upon the economizer coils in the auxiliary furnace chamber, the tubes of said cylindrical bank being subdivided into a plurality of arcuate coils, all of the inlet tubes of said arcuate coils being arranged side by side at one side of the furnace and connected at the top to the respective coils of the econo-

mizer, all of the outlet tubes of said arcuate coils being arranged side by side at the opposite sides of the furnace and jumpers disposed near the bottom of the heater in the annular space between the tube bank and the cylindrical furnace wall and connecting the inlet tubes and the outlet tubes at the bottom of the furnace to the respective ends of the arcuate coils of the heater.

3,003,482

INTEGRAL FURNACE-VAPOR GENERATOR

Carl C. Hamilton, Cuyahoga Falls, Ohio, and Norman W. Young, Huntington Station, N.Y., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 29, 1958, Ser. No. 731,781
6 Claims. (Cl. 122-478)



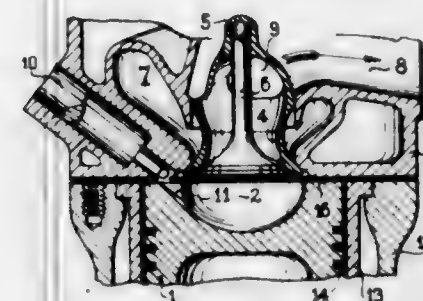
1. A pressure fired vapor generating and heating apparatus comprising rectangularly disposed front, rear and connecting side walls including spaced upright tubes to define a furnace cavity, a vapor heating cavity, and a vapor generating cavity, said cavities being disposed in side by side relationship and each extending co-extensively transversely the entire width of said apparatus, said vapor heating cavity being disposed between said furnace cavity and said vapor generating cavity, vapor generating means disposed in said vapor generating cavity, said vapor generating means including an upper liquid-vapor separating drum, a lower drum, and a bank of vapor generating tubes connecting said drums, a row of spaced continuous C-shaped tubes connecting said drums, said C-shaped tubes having relatively long upper and lower leg segments extending laterally from each of said drums to define the floor and roof of said vapor heating cavity and furnace cavity, and the integrally formed bight of said C-shaped tubes forming the front wall of said furnace cavity, metallic membranes sufficiently rigid to contain the pressure within the vapor heating and furnace cavities welded to and between the adjacent C-shaped tubes and the side wall tubes so as to seal the spaces between adjacent tubes gas tight, a second row of spaced C-shaped tubes connecting said drums, the tubes of said second row having relatively short upper and lower leg segments extending laterally from their respective drums and having the bight portion thereof forming a screen of relatively widely spaced tubes to separate the furnace cavity from said vapor heating cavity, a bank of predominantly radiant heated vapor heating means disposed in said vapor heating cavity immediately behind said screen, means connecting said vapor heating means in communication with the upper vapor-liquid separating drum, and burner means for directing heating gases through the front wall of said furnace cavity directly opposite and normal to the bank of vapor heating whereby said gases flow in a direction from said furnace cavity to said vapor heating cavity en masse over the entire exposed length of said vapor heating tubes in single horizontal gas pass in cross-heat trans-

fer relationship thereto, and thence horizontally through the vapor generating cavity in cross flow heat transfer relationship over the entire exposed length of the generating tubes disposed in said vapor generating cavity.

3,003,483

INTERNAL COMBUSTION PISTON ENGINE

Alfred Johann Büchi, Archstrasse 2, Winterthur, Switzerland
Filed July 5, 1960, Ser. No. 40,939
Claims priority, application Switzerland July 8, 1959
8 Claims. (Cl. 123-32)

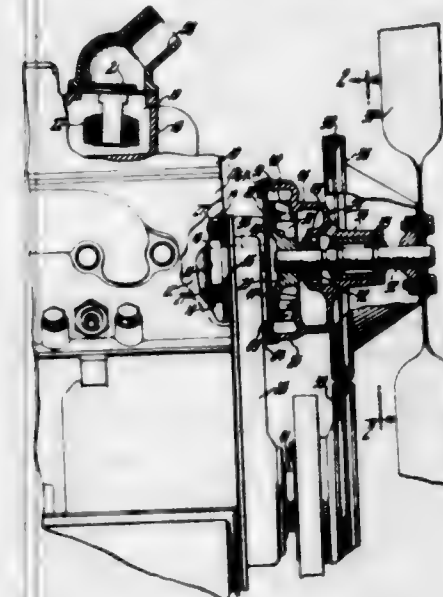


1. An internal combustion engine including a cylinder head, a cylinder, a piston in the cylinder, inlet and outlet valves supported in the cylinder head and guided coaxially one within the other, a crown for the piston facing the cylinder head provided with a cavity in the form of a body of revolution, the axis of which is in line with the axis of said valves, said piston crown having an annular surface surrounding the cavity, said cylinder head having an annular surface surrounding said valves and lying substantially parallel to the annular surface of the piston crown, said cavity defining approximately entirely a substantially semi-spherical combustion space when the piston is in the upper dead center position, the surface of said cavity differing by at most five percent from the surface of a hypothetical semi-spherical cavity of equal volume, and said cavity in the upper dead center position of the piston being capable of receiving the fully open inner valve and the at least partially open outer valve.

3,003,484

COOLING LIQUID PUMP FOR ENGINES

Earl W. Rohrbacher, Birmingham, and Adelbert E. Kolbe, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 29, 1954, Ser. No. 459,006
9 Claims. (Cl. 123-41.47)



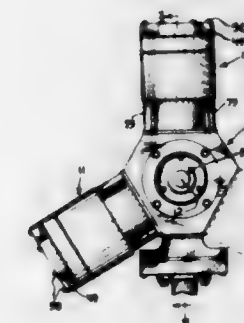
1. A cooling liquid pump for engines having parallel rows of liquid cooled cylinders and comprising an elongated pump casing adapted to extend between said rows of cylinders and to be secured at the opposite ends thereof to the liquid cooling cavity walls of said rows of cylinders, said casing being formed to provide a cylindrical impeller chamber extending transversely of said casing and between said ends and an inlet chamber at one end of said impeller chamber and a discharge chamber outwardly of said impeller chamber, said discharge chamber being an elongated chamber surrounding said impeller chamber and communicating with said impeller chamber throughout the peripheral extent of said impeller chamber and extending in opposite directions toward said ends and within oppositely disposed walls of said casing extending to and converging toward and about said ends of said casing, said casing ends being formed to provide outlet ports opening laterally of said casing through one of the side walls of said casing and being adapted to provide communication between said discharge chamber and the cooling liquid cavities within said cavity walls of said rows of cylinders, said one of the side walls of said casing being formed to provide a removable cover for said casing, said impeller chamber and said discharge chamber being open and accessible across the width thereof through an opening in said one side wall of said casing when said cover is removed from said casing.

gated pump casing adapted to extend between said rows of cylinders and to be secured at the opposite ends thereof to the liquid cooling cavity walls of said rows of cylinders, said casing being formed to provide a cylindrical impeller chamber extending transversely of said casing and between said ends and an inlet chamber at one end of said impeller chamber and a discharge chamber outwardly of said impeller chamber, said discharge chamber being an elongated chamber surrounding said impeller chamber and communicating with said impeller chamber throughout the peripheral extent of said impeller chamber and extending in opposite directions toward said ends and within oppositely disposed walls of said casing extending to and converging toward and about said ends of said casing, said casing ends being formed to provide outlet ports opening laterally of said casing through one of the side walls of said casing and being adapted to provide communication between said discharge chamber and the cooling liquid cavities within said cavity walls of said rows of cylinders, said one of the side walls of said casing being formed to provide a removable cover for said casing, said impeller chamber and said discharge chamber being open and accessible across the width thereof through an opening in said one side wall of said casing when said cover is removed from said casing.

3,003,485

RADIAL TYPE TWO-STROKE CYCLE INTERNAL COMBUSTION ENGINE WITH CRANKCASE COMPRESSION MEANS

Clifford R. Chard, 1307 Lincoln Ave., New Castle, Ind.
Filed Dec. 19, 1960, Ser. No. 76,789
1 Claim. (Cl. 123-55)

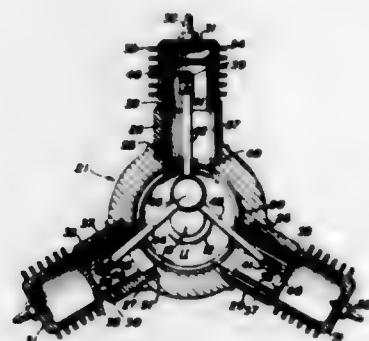


An internal combustion engine comprising a crankcase, a crankshaft rotatably mounted in said crankcase and including a plurality of cranks radially arranged and axially spaced along said crankshaft, a plurality of cylinders mounted on the crankcase spirally about the axis of said crankshaft, pistons in said cylinders, connecting rods joining respective pistons and cranks, said pistons and crankshaft being so arranged that the individual cylinders fire alternately and at equal time intervals, partitions separating said crankcase into a plurality of chambers each of which opens into the proximal end of a respective one of said cylinders, said partitions also acting as bearings for said crankshaft, said crankcase being formed with inwardly extending annular flanges forming supports for and fixedly mounting said partitions, a pair of intake conduits leading from each of said chambers and opening into its respective cylinder through the sidewall thereof, said crankcase having a plurality of passages each of which leads into a respective one of said chambers, means for supplying a gaseous explosive mixture to said passages, and a plurality of check valves each of which controls a respective one of said passages and permits flow through its passage into said crankcase but prevents flow therefrom.

3,003,486

REAR COMPRESSION TWO STROKE CYCLE INTERNAL COMBUSTION ENGINE WITH CONNECTING ROD ACTUATED ARCuate VALVE MEANS

Robert O. Werner, Arlington, Tex.
(3390 W. Union Ave., Littleton, Colo.)
Filed Dec. 24, 1959, Ser. No. 861,925
3 Claims. (Cl. 123-74)



1. An internal combustion engine comprising: a housing, a forward face plate attached in sealing engagement to one end of said housing, a shaft journaled to said forward face plate, a crank on said shaft interiorly of said housing, a crank pin carried by said crank within said housing and disposed with its axis parallel to the axis of said shaft, a cylinder exteriorly mounted on said housing and having its axis disposed perpendicularly to said axis of said shaft and having its bore in communication with the interior of said housing, a piston within said cylinder, a bypass within the wall of said cylinder and adapted to communicate upper and lower portions of said cylinder when said piston is at the lower limit of travel within said cylinder, an exhaust port in the wall of said cylinder at a position farther from said crank shaft than the outer termination of said bypass, a rearward face plate in sealing engagement with the other end of said housing, a cylindrical flange coaxially disposed with said housing and around said crankshaft, and spaced interiorly from said housing and extending between said forward and said rear face plates, an arcuate valve plate slidably positioned in the annulus between said flange and said housing and making sliding contact therewith, an opening in said flange aligned with said cylinder, a piston rod pivotally connected to and extending between said piston and said crank pin, an opening in said valve plate slidably receiving said piston rod, means sealing said opening in said valve plate about said piston rod, and carburation means communicating with said crankcase.

3,003,487

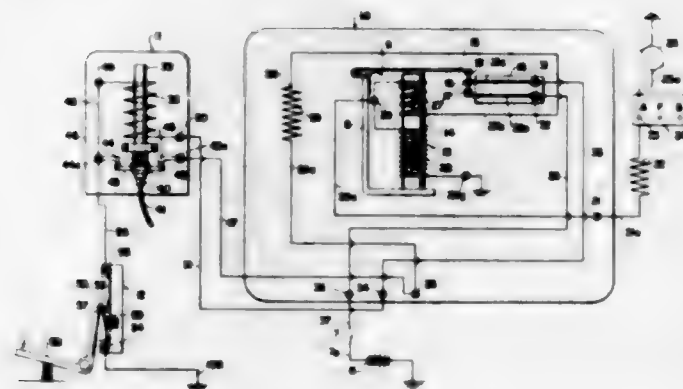
DEVICE FOR CONTROLLING THE ADMISSION OF FUEL INTO INTERNAL COMBUSTION ENGINES

Frank A. Kane, Jr., 18 Fairlea Ave., Stratford, Conn., and Frank A. Kane, 17 Fairview Terrace, Derby, Conn., assignors of one-quarter to Girard F. Oberrender and one-quarter to Emanuel R. Posnack, both of New York, N.Y.

Filed Feb. 18, 1959, Ser. No. 794,006
13 Claims. (Cl. 123-97)

10. In a fuel control device for an internal combustion engine having a fuel passageway operatively connected therewith, the combination of a valve member operatively connected with said passageway, an electrical generator connected to said engine, whereby the speed of the engine will control the operative speed of the generator, electro-mechanical means comprising a core and two opposing conducting coils operatively disposed thereabout, the first being a magnetizing coil and the second a demagnetizing coil, an armature arm in operative relation to said core

and movable between two respective limiting positions when said core is operatively magnetized and demagnetized, an electrical circuit connecting said generator to said first coil, another electrical circuit connecting said generator to said second coil, the electrical characteristics of said respective coils and their said respective electrical circuits being such that the operative core-magnetizing action of said first mentioned coil is greater than the operative demagnetizing action of said other coil, valve-actuating means operatively connected to said valve member and operatively responsive to said armature arm in



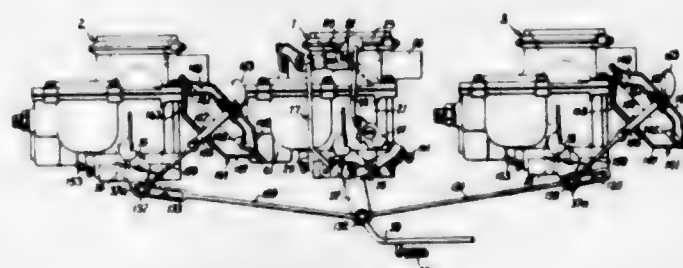
one of its said positions, whereby said valve-actuating means will actuate said valve member when said arm is operatively actuated by said electro-mechanical means, said first coil and said first-mentioned electrical circuit having such electrical characteristics as to induce sufficient magnetic energy in said core for operatively attracting said arm only in response to electrical energy above a predetermined critical magnitude, said generator being operable at a range of speeds for producing electrical energy of magnitudes ranging from below to above said critical magnitude.

3,003,488

TWO-STAGE CARBURETION

Harold A. Carlson, Brentwood, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Nov. 28, 1958, Ser. No. 776,975
19 Claims. (Cl. 123-127)



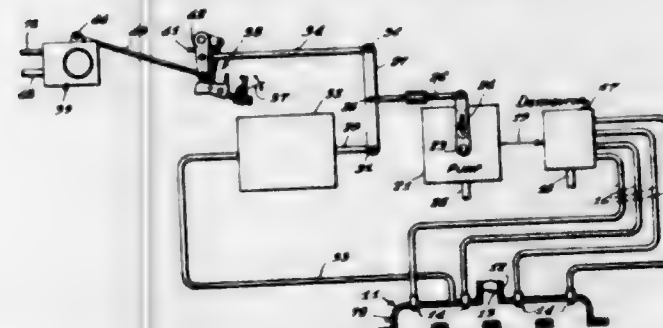
1. A multi-stage fuel mixture supply system for an internal combustion engine comprising means providing a primary mixture conduit and a secondary mixture conduit adapted to supply a mixture of fuel and air to the engine, a primary throttle valve in the primary mixture conduit, a secondary throttle valve in the secondary mixture conduit, lost-motion linkage means for manually opening the throttle valves in sequence so that the primary throttle valve opens first, and vacuum-operated means for holding the secondary throttle valve closed during initial opening movement of the primary valve with a force depending on the vacuum therein and responsive to opening of the primary throttle valve to reduce the vacuum thereby to reduce said force.

3,003,489

FUEL INJECTION PUMP CONTROL

Harold R. Schibe, Chardon, George V. B. Hall, Euclid, and James A. Hiltendorf, Cleveland, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Apr. 9, 1959, Ser. No. 805,242
14 Claims. (Cl. 123-140)



1. A fuel supply and control mechanism for a speed density control system for an engine comprising a fuel pump adapted for connection to deliver fuel to an engine and having a displacement output proportional to speed, means for driving the pump at a speed proportional to the speed of the engine, a control member connected to the pump to controllably vary its displacement, a distributor connected to receive fuel from the pump, fuel injection nozzles adapted for connection to an intake manifold of an engine and connected to the distributor, a pivotal link, an adjustable pivotal connection connecting the control member to the link and located at a point on the link intermediate the ends, a pressure responsive member responsive to atmospheric pressures and connected to said variable pivotal connection for varying the location of the connection of the control member to the link laterally and longitudinally of the link to reduce the fuel delivered by the pump with decrease in atmospheric pressure, a vacuum motor having an expandable chamber with a movable wall therein with said movable wall connected to one end of said link, means for connecting said vacuum motor to the intake manifold of the engine, a spring biasing means engaging said movable wall and having a first spring rate over a displacement range of the wall representative of a power range of throttle opening, a second spring rate over a displacement range of the wall representative of a cruising range of throttle opening, and a third spring rate over a range representative of idling throttle opening, means connected to the spring for adjusting the range of said third rate, a cold starting fuel enrichment member connected to the other end of said link, means responsive to engine temperatures connected to said enrichment member for moving the link to increase fuel supply during low engine temperatures, and means responsive to engine intake pressures connected to said enrichment member for moving the link to decrease fuel supply after cranking periods and when the engine is started.

3,003,490

AIR PROPELLED VEHICLE AND LAUNCHER

Leo G. Deterding and George H. Matter, Anaheim, Calif.; said Matter assignor, by mesne assignments, to said Deterding

Filed Mar. 26, 1958, Ser. No. 724,134
4 Claims. (Cl. 124-11)

4. A combined toy rocket and launcher comprising a base portion with a relatively flat bottom surface, a hollow launcher tube extending substantially upwardly from said base portion, means including exterior peripheral lip means forming a top exit aperture from said tube, a pressure releasable cap including interior peripheral lip means adapted to be connected to said first mentioned means sealing said exit aperture, a hollow rocket tube

having an open bottom end adapted to be telescoped in a close fit substantially over the entire length of said launcher tube, a shock absorbing nose cone slidably fitting on the top peripheral surface of said rocket tube and

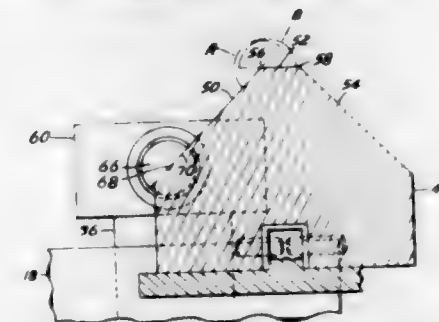


3,003,491

CAM FOLLOWER

Jacob Decker, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Mar. 23, 1960, Ser. No. 17,108
2 Claims. (Cl. 125-11)



1. In a machine tool having a grinding wheel and a diamond bar movable transversely across the wheel in translation, the combination comprising a cam lying in a plane extending transversely relative to the wheel, said cam having a plurality of cam surfaces normal to said plane and intersecting to form at least one exterior angle greater than 180 degrees, a cam follower having a flat surface and pivotally mounted on said diamond bar for rotation about an axis normal to the plane of the cam, said axis lying centrally in said flat surface, said flat surface urged against the cam to define a resultant force acting through said axis to swing the flat surface out of engagement with one cam surface and into engagement with the next cam surface as said axis passes the corner at the intersection of said cam surfaces during movement of the diamond bar across the wheel.

3,003,492

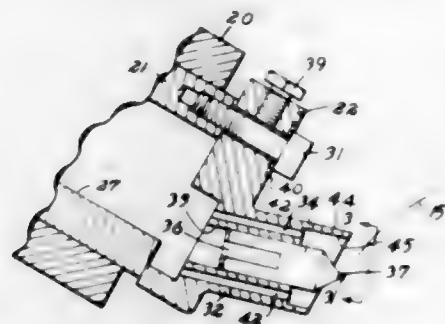
DIAMOND NIB HOLDER

George L. Grove, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Jan. 12, 1959, Ser. No. 786,290
1 Claim. (Cl. 125-11)

A holder for supporting a diamond truing nib on the end of a truing bar having a longitudinally extending

channel therein comprising a body portion, fastening means for attaching the body portion to the end of the truing bar, a neck portion on the holder projecting outwardly from said body portion in the general direction of the axis of the truing bar, a socket in said neck portion for receiving the shank of the diamond nib, a plurality of ducts extending longitudinally through said neck portion and communicating with the channel in the truing

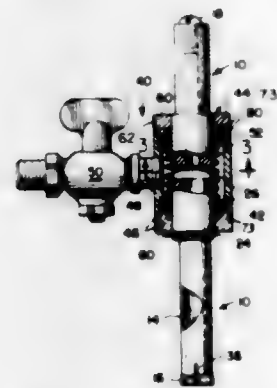


bar for delivering coolant from the channel out through the end of said neck portion in surrounding relation to the socket, and a peripheral shield portion, formed integrally with said holder and extending beyond the end of said neck portion in circumscribing relation to the ducts and to the socket to form a coolant containing pocket for submerging the diamond in coolant during truing operations.

3,003,493

CORE DRILL ADAPTER

Harold C. Miller, Chicago, Ill., assignor to Super-Cut, Inc., Chicago, Ill., a corporation of Illinois
Filed May 18, 1959, Ser. No. 813,765
1 Claim. (Cl. 125-20)



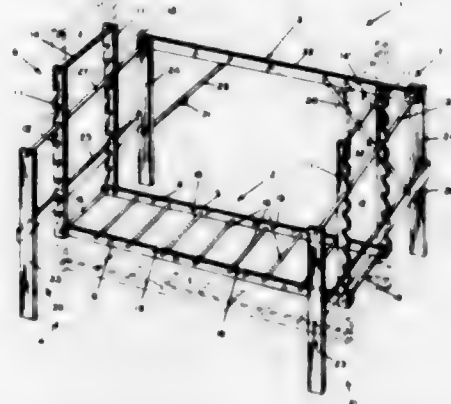
In an apparatus for drilling holes in, and producing cores from, glass, ceramic and similar articles, in combination, a one-piece tube type core drill having an opening in the side wall thereof through which a coolant fluid is adapted to pass radially inwardly of the drill for flow longitudinally along the tube to the cutting edge of the latter, an adapter for said drill comprising an open-ended tubular cylindrical casing of larger internal diameter than the over-all external diameter of the drill, said drill being adapted to be removably projected axially through said casing and, in combination therewith, defining an annular fluid reservoir surrounding the drill and in register with said opening, there being an opening in the wall of said casing defining an inlet port for fluid under pressure, means for supplying fluid under pressure to said port, a mechanical seal for substantially preventing the flow of fluid from the reservoir at each end of said casing, each seal comprising a sealing washer formed of resilient material surrounding said drill, said washer being formed with an axial bore therethrough through which the drill extends with the bore closely and yieldingly hugging the shaft in sealing relationship coextensively around the bore whereby the washer is constrained to rotate with the

shaft, the outer side of said sealing washer being formed with a peripheral recess defining a flat outwardly facing annular sealing surface and a forwardly projecting central reduced portion, a combined closure and seat member for said casing and sealing washer respectively, telescopically and sealingly received within the adjacent end of the casing and presenting an inwardly facing sealing surface designed for running sealing engagement with said outwardly facing sealing surface, the inner face of said closure and seat member being formed with a circular recess therein of a depth greater than the longitudinal extent of said forwardly projecting reduced portion and into which recess said reduced portion projects, the inside wall of said casing being formed with a continuous outwardly facing annular shoulder at each end region of the casing spaced inwardly and in opposition to and engageable with the inner face of the adjacent sealing washer for preventing inward shifting of said washer longitudinally within the casing, and a helical compression spring surrounding said core drill within the adapter casing and bearing at the opposite ends thereof against the inner faces of the sealing washers respectively, the radial width of the running seal afforded by said sealing surfaces being less than the radial width of the inner side of said sealing washer.

3,003,494

ADJUSTABLE OUTDOOR COOKING GRILL

Irene F. Ross and Gordon A. Lamb, both of 27 Lockheed Blvd., Toronto, Ontario, Canada
Filed Mar. 29, 1957, Ser. No. 649,537
4 Claims. (Cl. 126-9)



1. In a collapsible grill structure, an open-sided surface-engaging frame including substantially vertically extending side frames, each presenting a substantially horizontal support rail member vertically spaced from the surface-engaging extremities thereof with each support rail member arranged in substantially parallel relation to the other, and a generally horizontally disposed grill formation removably suspended within said open-sided frame, said grill formation having a pair of substantially vertically extending arm formations hinged thereto, one at each end, each of said arm formations presenting a series of vertically spaced horizontally aligned pairs of hook formations of a size and configuration arranged to snugly engage over its respective rail member for selectively suspending said grill formation therefrom over a range of vertical adjustment.

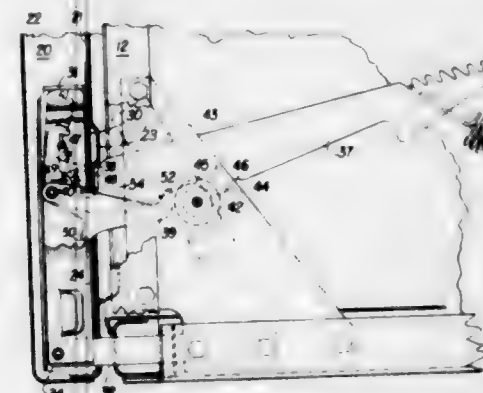
3,003,495

HINGE CONSTRUCTION

Raymond L. Coultrip, Oak Park, Ill., assignor to General Electric Company, a corporation of New York
Filed July 31, 1959, Ser. No. 830,861
10 Claims. (Cl. 126-194)

1. In combination with a frame structure defining an opening, a hinge bracket pivotally mounted on said structure, a door for closing said opening, slideway structure

on said door for slidable telescopic relation with said hinge bracket for removably mounting said door thereon, means providing first and second arms pivotally mounted on said bracket, said first arm being rotatable to an operative position engaging with said frame structure to maintain said bracket in an angular relation to said frame structure typical of an ajar position of said door, wall means on said door slideway structure engageable with said arm-providing means to move said first arm to an inoperative position relative to said frame structure upon placement of said door in a home position on said

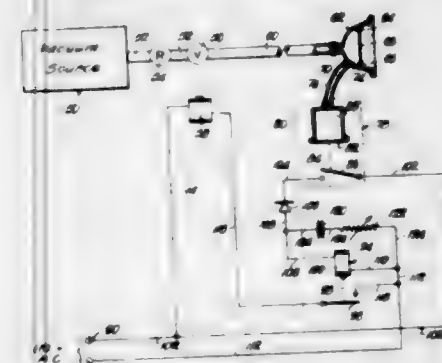


bracket, means effective upon withdrawal of said door from said hinge bracket subsequent to positioning said door in said typical ajar position to rotate said first arm to its said operative position whereby to maintain said bracket in a position receptive to the return of the door thereto, latch means on said slideway structure, and means responsive to movement of said door and hinge bracket from the ajar position toward a full open position to dispose said second arm and said latch means in cooperating relationship to secure the door against withdrawal from said hinge bracket.

3,003,496

METHOD AND APPARATUS FOR OBTAINING SPECIMENS OF VIABLE BRONCHIAL EPITHELIAL CELLS

Michael R. Klein, Overland Park, Kans., assignor to The University of Kansas Research Foundation, Lawrence, Kans., a corporation of Kansas
Filed July 21, 1958, Ser. No. 750,003
11 Claims. (Cl. 128-2)

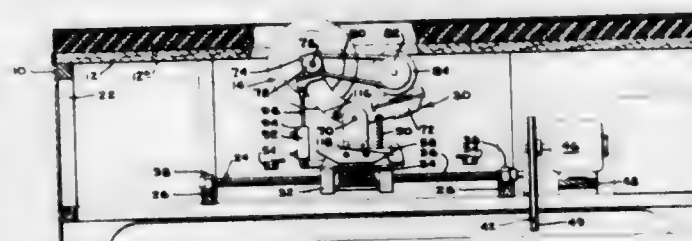


1. The method of removing physiological specimens from the bronchial system of a human being which comprises the steps of: subjecting a human bronchial system to an ambient external pressure level; causing said bronchial system to undertake a natural cough spasm cycle; sensing the pressure condition of said bronchial system while said cough spasm cycle proceeds; detecting the attainment by said bronchial system of a predetermined elevated level of positive pressure occurring substantially at the peak of said cough spasm cycle; responding to detection of attainment of said elevated level of positive pressure by thereupon applying an external negative pressure of predetermined level to said bronchial system while said bronchial system is in a state of substantially op-

timum expansion and inflation prevailing at the peak of said cough spasm cycle; discontinuing the application of said negative pressure to said bronchial system after a predetermined period of time; and receiving a specimen withdrawn from said bronchial system under the influence of said negative pressure during said period.

6. In apparatus for removing physiological specimens from the bronchial system of a human subject, the combination of: a vacuum source for providing negative pressure of predetermined level; structure for effecting a pneumatic coupling with the bronchial system of a subject; conduit means for coupling said source with said structure; a valve coupled with said conduit means, said valve having an operated condition for providing negative pressure of said source to said structure through said conduit means and a stand-by condition for preventing effective communication of said negative pressure of said source to said structure through said conduit means; pressure responsive means pneumatically coupled with said structure for sensing pressure conditions within the latter and operably coupled with said valve for actuating the latter from said stand-by to said operated condition thereof when a positive pressure within said structure in excess of a predetermined value is sensed.

3,003,497
MASSAGE TABLE WITH HYDRAULICALLY CONTROLLED ROLLER
John L. Nunes, 4972 Sandy Lane, San Jose, Calif.
Filed Feb. 25, 1959, Ser. No. 795,476
1 Claim. (Cl. 128-57)



A massage apparatus which comprises a table having a longitudinal slot in its top, a track under the top of said table parallel to the slot therein, a carriage mounted on said track for movement therealong, a rocker arm pivotally supported on said carriage for pivotal motion about a horizontal axis, a massage member supported at one end of said rocker arm arranged to project through the longitudinal slot in said table an amount dependent on the pivotal position of said rocker arm, spring means connected to said rocker arm whereby said massage member is urged upwardly through said table slot, and hydraulic means for adjustably limiting the spring-urged pivotal motion of said rocker arm.

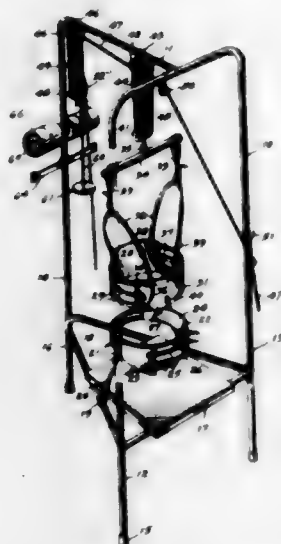
3,003,498

SPINAL TRACTION CHAIRS

Leo G. Hotas, 190 Osborne St., N., Winnipeg 1, Manitoba, Canada
Filed Dec. 2, 1958, Ser. No. 777,677
4 Claims. (Cl. 128-75)

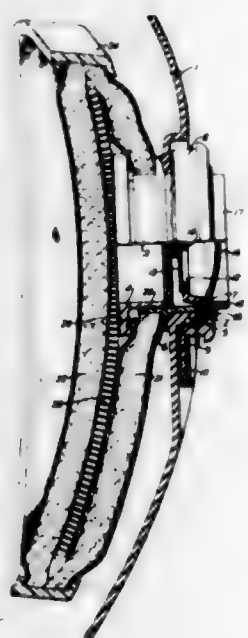
1. A spinal traction chair, comprising: a framework supporting a seat; means for securing the lower part of the body of a patient to said seat; a block and tackle, having an operating cable, carried by said framework and fastenable to the upper part of said patient for exerting traction on the spinal column thereof when said operating cable is pulled and said patient is so secured; a slip-grip mounted on said operating cable and normally gripping same for operation in one direction, and for manual release in either direction; a lifting mechanism carried by said framework; means for manually operating said lifting mechanism; a weight releasably connected to said

slip-grip for lowering of same to operate said block and tackle, and also connected to said lifting mechanism for releasable support of said weight; and said lifting mecha-



nism operable to progressively transfer the support of said weight between said slip-grip and itself to vary the amount of traction exerted on the spinal column of said patient.

3,003,499
INLET VALVE ASSEMBLY FOR MASK FACEPIECE
Walter Timm and John P. Lytle, Pittsburgh, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 4, 1959, Ser. No. 831,619
7 Claims. (Cl. 128-141)



1. The combination with a mask facepiece having an inlet opening encircled by an outwardly projecting flexible bead, of an inlet valve assembly comprising a tubular connector extending through said opening in engagement with the bead and provided with flanges straddling the bead, and an inlet valve seated on the outer flange of the connector and extending across the connector, the valve having an annular flange encircling the connector in radially spaced relation therewith and extending from the outer connector flange toward the other connector flange, said annular flange encircling said bead and compressing it radially against the connector, the central portion of the valve having an inlet port that opens into said connector, and the valve including a closure member for closing said inlet port during exhalation.

3,003,500
INTRAVENOUS ADMINISTRATION EQUIPMENT
Raymond W. Barton and Orville P. Nuffer, Evansville, Ind., assignors, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Dec. 14, 1955, Ser. No. 553,063
2 Claims. (Cl. 128-214)



1. A gravity intravenous liquid administration set, comprising: a combined drip tube and filter including an upper section of transparent rigid material having an inlet tube connectable with a source of liquid and extending into the upper section providing a drip, a lower section of transparent rigid material adapted for connection with a conduit, an annular intermediate section having the upper section secured to one side and the lower section secured to the other side thereof and having a central flow opening therethrough, and an upwardly opening cup-shaped filter suspended from said intermediate section and extending within said lower section; a conduit connected with the outlet of said lower section; a flexible pump chamber having an inlet connected with said conduit at a point spaced from said combined drip and filter chamber; and a floating check valve in said pump chamber for closing the inlet thereof when the pump chamber is operated to force liquid through the pump outlet.

3,003,501
SHOE SOLES
William H. Lynch, 50 Hillbright Terrace, Yonkers, N.Y.
Filed Sept. 14, 1959, Ser. No. 839,759
1 Claim. (Cl. 128-586)



A shoe structure having an upper, an insole having a pair of openings to accommodate the first and fifth metatarsal bones, a filler beneath the insole having openings in line with said first openings and an outsole attached to said insole having openings in line with said second openings and part way therethrough, whereby there are presented sockets for the first and fifth metatarsal bones, of such depth that they do not reach the bottoms of the openings of the outsole.

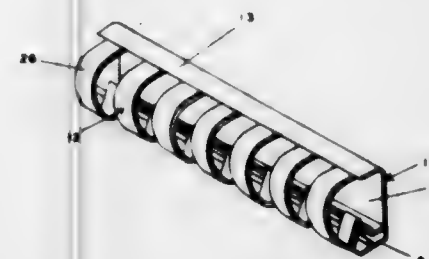
3,003,502
DEVICE FOR HOLDING PAPER SHEETS
Joseph Zalkind, 22 W. 22, New York, N.Y.
Filed Feb. 20, 1956, Ser. No. 566,456
15 Claims. (Cl. 129-23)

9. A device of the class described comprising a base element, a stripper element, and a clamp element, having

a common pintle and relatively rotative with respect to each other, said base element being provided with peg means and said stripper element being provided with perforations through which said peg means may protrude, said stripper element having finger means carried thereby



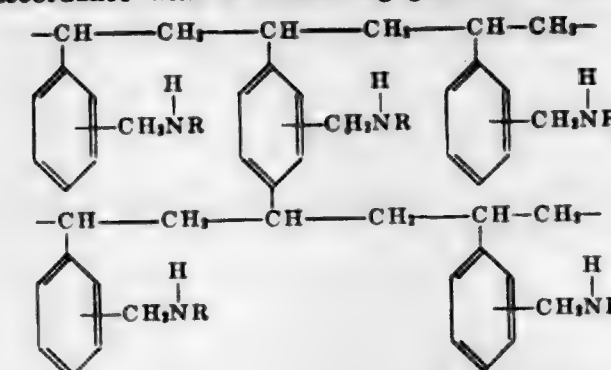
3,003,503
BINDER UNIT
Ralph E. Dennis, 2497 Fishinger Road, Columbus, Ohio
Filed Nov. 28, 1958, Ser. No. 776,958
13 Claims. (Cl. 129-24)



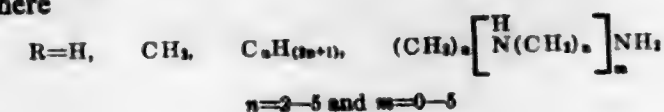
1. A binder unit comprising a backbone section and a ring section slidably connected together for relative movement between locked and unlocked positions, said ring section comprising a longitudinally extending connector rib and ring-like fingers extending therefrom at longitudinally spaced intervals so as to provide spaces therebetween with the root ends of the fingers connected to the rib and their other ends free, said backbone having a rib-receiving channel at one edge thereof in which said rib is slidably disposed, said rib being oscillatable in said channel to move the free ends of said ring-like fingers toward and from the backbone, and longitudinally spaced locking lugs on said backbone for cooperating with said fingers to lock the ring section with the free ends of the fingers in association with said backbone, said lugs being of substantially the same width as said fingers and being spaced to correspond with the spacing of said fingers with spaces therebetween corresponding to the width of said fingers, said locking lugs being disposed on the backbone adjacent said channel for cooperating with the adjacent root ends of the fingers, said root ends of the fingers being provided with locking portions for cooperating with said locking lugs, said locking portions comprising straight end portions connected to the rib and angular connecting portions between said last-named portions and the root ends of the fingers, said locking lugs on the backbone being angularly disposed for engaging the said locking portions of the fingers when located therewithin by the relative sliding movement of the backbone and ring sections.

3,003,504
SELECTIVE TOBACCO SMOKE FILTER
George P. Touey and John E. Kiefer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 5, 1959, Ser. No. 791,283
6 Claims. (Cl. 131-208)

1. A tobacco smoke filter adapted to remove undesirable aldehyde components from tobacco smoke comprising an elongated filter body portion which is made up of several thousand longitudinally oriented synthetic filaments, the filaments being encircled about their circumference by a wrapper, the filter being characterized in that the filaments carry on their surface a substantial content of a polymeric powder material that has amine groups in its molecule, said polymer composition being in accordance with the following general formula:



where



$n=2-5$ and $m=0-5$

3,003,505
HAIR CURLER FOR HOME PERMANENT WAVING
Carl L. Otto and La Nelle Barnham Otto, both of 745 5th Ave., New York 22, N.Y., assignors of eight percent to Charles C. Schwartz, New Rochelle, N.Y.
Filed July 11, 1956, Ser. No. 597,272
8 Claims. (Cl. 132-41)

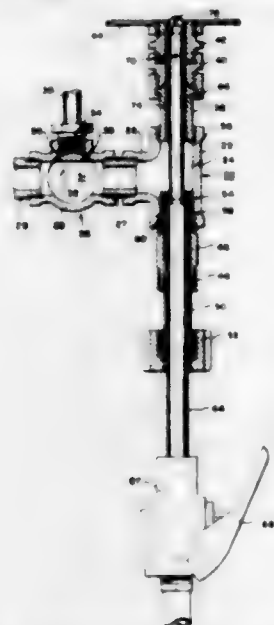


1. A hair curling device for home permanent waving comprising an imperforate tubular core member adapted to receive a portion of a retaining clip, a body member of sponge-like foamed material surrounding said core member in concentric relation and substantially coextensive therewith, and a water-soluble waving composition in concentrated form externally of said core member and adjacent thereto, said waving composition being in said body member and entirely surrounded thereby.

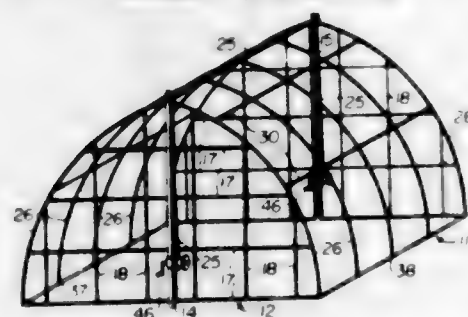
3,003,506
CRANK CASE FLUSHER
Walter F. Wosicki, 1002 Market, San Diego, Calif.
Filed Jan. 19, 1959, Ser. No. 787,714
5 Claims. (Cl. 134-99)

1. A device for supplying cleaning fluid and air under pressure to a crank case or the like comprising in combination, means forming a coupling adapted to be attached to a case; a tubular valve body connected with the coupling and having an inlet for cleaning fluid, and forming a valve seat intermediate the coupling and inlet, and having an opening at the end thereof opposite said coupling, and a second valve seat at said opposite end and confronting the first valve seat; a tube extending through the opening; valves within the valve body and carried by the tube, one of said valves cooperating to close upon the first mentioned seat when the tube is moved inwardly,

and the other of said valves cooperating to close upon the second mentioned seat when the tube is moved outwardly; and an air tube extending through said tube and into the valve body.



3,003,507
TEMPORARY ENCLOSURE
James A. Ferris, 58 Leyton Road, Bedford, Ohio
Filed Oct. 10, 1957, Ser. No. 689,433
6 Claims. (Cl. 135-1)



1. A temporary building comprising, a framework having first and second sections, the framework having a longitudinally extending central member, the first and second sections having a plurality of resilient risers pivotally attached to said central member, said sections also having a plurality of cross members fixed to said risers to hold said risers in appropriate spaced relationship, a plurality of flexible, water impervious, plastic strips having first and second side edges, a plurality of pins, each of said risers having a plurality of apertures therein, said pins being fixed in said apertures and fixed to said strips to fix the strips to said framework sections, first and second uprights, first and second cables reeved at the top of said uprights and connected to said central member, first and second winches, said first cable being connected to said first winch, said second cable being connected to said second winch, said winches being operable to pull on said cables and elevate and hold said framework, said risers being flexible inwardly at the ends opposite the central member to form a building of arch shaped cross section, and anchor means to hold said building in said arched position.

3,003,508
SELF-CLOSING UMBRELLAS
Fritz Bremshey, Solingen-Ohligs, Germany, assignor to Bremshey & Co., Solingen-Ohligs, Germany
Filed July 3, 1957, Ser. No. 669,870
Claims priority, application Germany July 11, 1956
4 Claims. (Cl. 135-23)

2. A frame for an umbrella of the self-closing type, comprising three substantially coextensive elongated mem-

bers telescopically intercalated with freedom of relative axial displacement between predetermined limits, said members including a tubular outer stick member, an inner stick member received in said outer stick member and a sleeve member surrounding said outer stick member; said outer stick member terminating at one end in a handle, said inner stick member being provided near its opposite end with a crown and being displaceable in the direction of said crown from a stick-foreshortening position in telescopic alignment with said outer stick member into a stick-extending position beyond said outer stick member; a plurality of ribs hinged to said crown for swinging motion in respective axial planes of said members between a closure position substantially parallel to said members and a spread position at an angle of inclination greater than 45° with respect to said members; a plurality of struts each articulated at one end to a re-



spective rib and at the other end to said sleeve member, said struts being so dimensioned and disposed as to maintain said ribs in said closure position upon said sleeve member telescopically registering with said outer stick member while said stick members are in said stick-extending position, said ribs assuming said spread position upon telescopic alignment of said sleeve member with said inner stick member; releasable catch means on at least one of said members for maintaining all of said members in a predetermined relative position in which said sleeve member is in telescopic alignment with at least said inner stick member whereby said ribs occupy said spread position; and spring means effective upon the release of said catch means to displace at least said sleeve member relatively to said inner stick member in a direction away from said crown from their position of telescopic alignment whereby said ribs are swung into their closure position.

3,003,509
SHORTENABLE UMBRELLA
Herbert Raymond Hibbard, London, England, assignor to Bremshey & Co., Solingen-Ohligs, Germany
Filed Feb. 24, 1959, Ser. No. 795,133
Claims priority, application Germany Mar. 7, 1958
8 Claims. (Cl. 135-25)

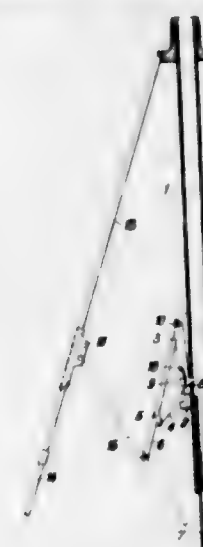
1. In an umbrella, in combination, an elongated stick member having a handle portion at one end thereof and a crown portion at the other end thereof; a plurality of ribs each pivoted at one extremity to said crown portion and provided with a connector slidable thereon between its extremities; a runner manually slidable on said stick member between said ends; a plurality of main struts each pivotally connected to said runner and to the connector on a respective one of said ribs; a slider member longitudinally displaceable on said stick member intermediate said runner and said crown portion; a plurality of auxiliary struts each pivotally connected to said slider member and to a respective one of said main struts intermediate the extremities of the latter; disengageable abutment means on one of said members for detaining the other of said members at a location intermediate said ends, thereby halting the advance of said slider member

toward said crown portion; and clearing means on said runner for disengaging said abutment means from said



other of said members, said runner being engageable with said abutment means for rendering said clearing means effective upon approaching said slider member.

3,003,510
COLLAPSIBLE UMBRELLAS
Herbert Fischinger, Ravensburg, Württemberg, Germany, assignor to Bremshey & Co., Solingen-Ohligs, Germany, a corporation of Germany
Filed Mar. 29, 1957, Ser. No. 649,401
Claims priority, application Germany Apr. 3, 1956
4 Claims. (Cl. 135-26)



1. A collapsible umbrella frame comprising a stick including two interfitting members adapted to be telescoped into each other, one of said members having a crown fixed to its end remote from the other of said members in an extended position thereof; releasable means adapted to lock said members in their extended position; a plurality of ribs each having one end pivotally connected to said crown, each rib including two rib members adapted to be telescoped into each other; a main slider slidable on said stick; a plurality of struts each pivotally connected to said main slider and hinged to its respective rib member; and auxiliary slider slidable on said stick between said crown and said main slider; a plurality of braces each pivotally connected to said auxiliary slider and to one of said struts by means of a hinge disposed on said strut intermediate the ends of said strut; stop means capable when in an effective position of positively stopping the motion of said auxiliary slider towards said crown, said stop means including a catch movably mounted on said auxiliary slider and a formation engageable by said catch and disposed on said stick between said

crown and said catch whenever said auxiliary slider is at maximum distance from said crown, coupling means coupling said catch to one of said braces and adapted to move said catch into an ineffective position while said braces turn outward about their pivots on said auxiliary slider, and means including one of said interfitting members for disengaging said catch from said formation upon an incipient telescoping movement of said interfitting members and for maintaining said catch ineffective in all but a fully extended position of said stick.

3,003,511
COLLAPSIBLE UMBRELLAS
Karl Müller, Solingen-Ohligs, Germany, assignor to Fritz Bremshey and Karl Heinz Eickhorn, trading as Bremshey & Co., Solingen-Ohligs, Germany, a firm
Filed Apr. 22, 1959, Ser. No. 808,176
Claims priority, application Germany May 2, 1958
3 Claims. (Cl. 135-26)



1. An umbrella frame comprising an elongated stick having a crown near one end; a main runner slidable on said stick; a plurality of ribs each pivoted at one extremity to said crown and provided with a telescopic extension at the other extremity; a plurality of main struts each articulated at its ends to said runner and to a respective one of said extensions; an auxiliary runner slidable on said stick between said main runner and said crown; a plurality of auxiliary struts each articulated to said auxiliary runner and to a respective one of the latter; and a lug resiliently mounted in a recess of said stick for normally projecting into the path of said auxiliary runner, the latter having a resilient peripheral portion formed with an axially extending slot aligned with said lug, said slot being wider than said lug over part of its length and terminating in a constricted passage open toward said main runner and narrower than said lug, said lug being so located along said stick as to be received in the wider part of said slot in a closure position in which said ribs are substantially parallel to said stick and in which both said runners are at their farthest points from said crown whereby a movement of said main runner toward said crown for spreading said ribs brings said resilient portion into frictional engagement with said lug at said restricted passage and expands said passage until said lug has cleared said passage upon continued rib-spreading displacement of said main runner, said resilient portion being outwardly flared at said constricted passage in the direction of said main runner, thereby forming a camming surface for urging said lug into said recess with avoidance of said passage upon a reverse movement of said main runner.

3,003,512

FLUID REGULATOR SYSTEM

Herbert Ziebolz, New York, N.Y., assignor to General Precision, Inc., Little Falls, N.J., a corporation of Delaware

Filed Jan. 28, 1960, Ser. No. 5,270
9 Claims. (Cl. 137-82)



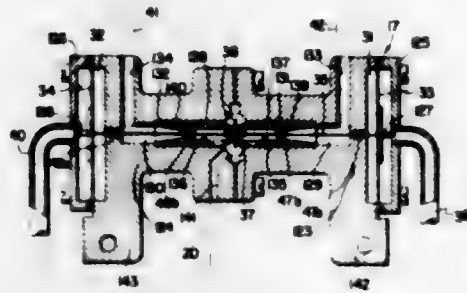
1. In a system for transmission of energy by means of a fluid supplied to said system under pressure and for regulating the percentage of fluid energy so delivered that is dissipated and recovered, which said system includes a first regulator having first regulator inlet and outlet flow means, recovery means for connection to a utilization device, and first control means adapted to dissipate a portion of the fluid energy supplied to said first regulator so as to deliver to said recovery means a portion of the supplied fluid energy, said first control means being movable to vary the percentage of energy so delivered and dissipated, said percentage depending upon the magnitude of the fluid energy at one of said first regulator flow means and the position of said first control means; an arrangement providing a preselected functional relationship between a control signal and the magnitude of the energy delivered to said recovery means, said arrangement comprising a second regulator having second regulator inlet and outlet flow means said second regulator inlet flow means being coupled to one of said first regulator flow means, said second regulator outlet flow means being coupled to one of said first regulator flow means, said second regulator outlet flow means being coupled to said recovery means, second control means associated with said second regulator adapted to vary the transmission of fluid energy through one of said second regulator flow means, and, common control means responsive to a control signal for moving said first and second control means through distances corresponding to a preselected relationship.

3,003,513

PNEUMATIC MODULATOR RESPONSIVE TO DIFFERENTIAL PRESSURE

William M. Harcum, Ambler, and Edward D. Watson, Norristown, Pa., assignors to Aircraft Products Co., Bridgeport, Pa., a corporation of Pennsylvania

Filed Apr. 14, 1958, Ser. No. 728,408
5 Claims. (Cl. 137-82)



1. In a pneumatic amplifier, a body portion, a pneumatic power chamber in the body portion, a pair of diaphragm chambers flanking the power chamber and each having a diaphragm therein, a pneumatic power input conduit connected to the power chamber between the ends thereof, a pair of pneumatic power output conduits connected to the power chamber on opposite sides of center, a tension member connecting the two diaphragms and

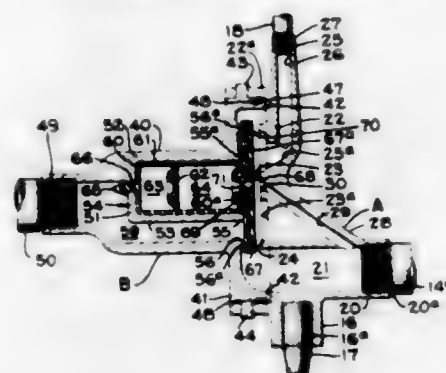
moveable therewith, valve element means on the tension member and moveable therewith to control the relative flow of pneumatic energy to the two output conduits, and a pair of pneumatic signal input conduits connected respectively to said diaphragm chambers, said power chamber communicating at opposite ends with the respective diaphragm chambers on the opposite sides of the diaphragms from the signal input conduit connections, and pneumatic constrictions between the pneumatic power chamber and the diaphragm chambers.

3,003,514

FLUID FLOW CONTROL APPARATUS

Donn B. Furlong, Port Washington, Wis., assignor to FMC Corporation, a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,700
4 Claims. (Cl. 137-119)



1. A valve construction comprising a housing having a liquid inlet port and a liquid outlet port, a valve element mounted within said valve housing for movement between two positions for respectively opening and closing the outlet port, means for directing liquid entering said housing through said inlet port into contact with said valve element to urge it to the position in which said outlet port is open, valve element control means mounted in said housing, said control means having a main chamber formed in a wall of said housing, a movable member in said main chamber dividing the chamber into a sealed-off compartment filled with gas and a liquid receiving enclosure, valve element operating means connected to said valve element, said valve element operating means providing a movable wall of said liquid receiving enclosure, and orifice means for establishing restricted communication between said inlet port and said liquid receiving enclosure, entrance of liquid from said inlet port into said liquid receiving enclosure shifting said movable member in one direction to compress the gas in said sealed-off compartment, interruption of the flow of liquid through said housing causing the pressure in said sealed-off compartment to shift said movable member in the other direction, said motion being transmitted by liquid trapped in said liquid receiving enclosure to cause motion of said valve element operating means and hence said valve element to the position closing said liquid outlet port.

3,003,515

APPARATUS FOR CONTROLLING PRESSURE AND LIQUID LEVEL IN A VESSEL

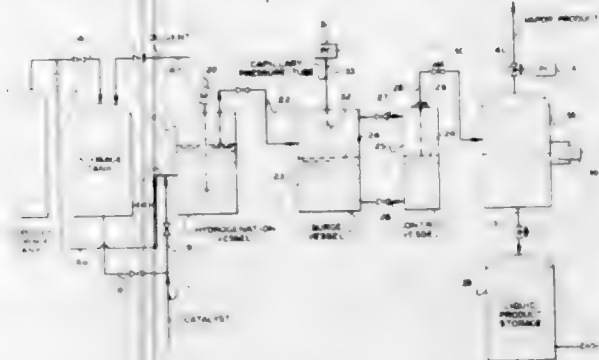
Charles W. Moberly, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Original application Nov. 22, 1954, Ser. No. 470,291. Divided and this application Oct. 30, 1958, Ser. No. 770,828

4 Claims. (Cl. 137-210)

1. Apparatus for simultaneously controlling pressure and liquid level in a vessel which comprises, in combination, a pressure control vessel, a conduit for introducing material into said vessel, an outlet conduit opening into said vessel at a predetermined intermediate level therein,

an automatic valve in said conduit, a pressure controller operatively connected to said automatic valve and having a pressure tap disposed within said vessel at a level higher than that of said outlet conduit, said controller



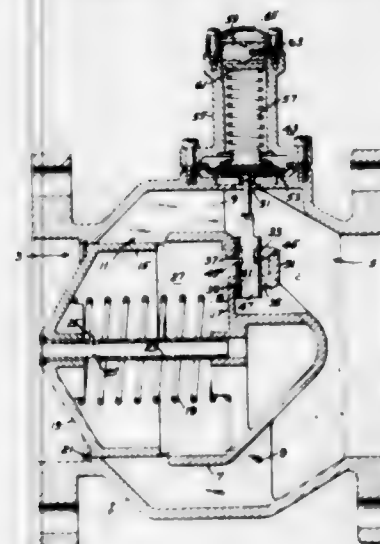
being arranged to open said valve when the pressure in said vessel rises above a predetermined value and to close said valve when said pressure falls below a predetermined value, and means for adjusting the vertical position of said outlet conduit within said vessel.

3,003,516

FLOW CONTROL VALVE ASSEMBLY

Albert J. Granberg, Oakland, and Erik Thuse, Berkeley, Calif.; said Thuse assignor to Granberg Corporation, Oakland, Calif., a corporation of California

Filed Apr. 8, 1957, Ser. No. 651,306
1 Claim. (Cl. 137-220)



A flow control valve assembly for use in a pipe line to maintain a substantially constant flow of liquid in such line to a liquid meter installed therein, in spite of variations in flow pressure above or below a desired value on the upstream side of said valve assembly, said flow control valve assembly comprising a casing having a flanged inlet and a flanged outlet for connection of said casing in a pipe line, said casing having an enlarged intermediate portion, a cylinder supported within the enlarged portion of said casing in spaced relationship to the inner wall thereof to provide a main flow passageway through said casing, said cylinder having an open end facing said casing inlet and of a diameter comparable thereto, and a wall at the opposite end thereof facing said casing outlet, a main valve in said casing including a transverse wall adapted to span said casing inlet and having a cylindrical skirt extending from said transverse wall into said casing and slidably receivable in said cylinder and of a length to substantially block said main passageway when said main valve transverse wall is spanning said casing inlet, a hollow valve stem extending at one end centrally through said main valve transverse wall and at its other end slidably supported in said cylinder end wall, said

hollow valve stem having an opening through the wall thereof, a supplemental pressure sensitive valve assembly including a supplemental continuously adjustable valve in said cylinder end wall, a diaphragm spanning an opening in the wall of said casing in alignment with said continuously adjustable valve, a valve stem connecting said supplemental continuously adjustable valve to said diaphragm, and means for adjusting the extent of opening of said supplemental continuously adjustable valve.

3,003,517

STACK ARRANGEMENT

Henry J. Blaskowski, New York, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 28, 1958, Ser. No. 731,522
6 Claims. (Cl. 137-253)

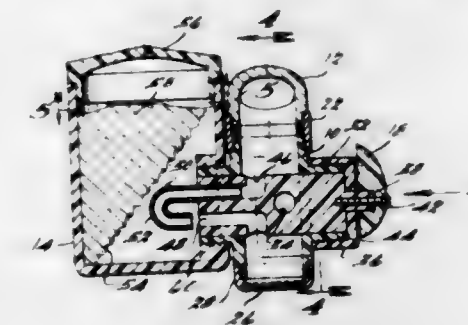


1. An upright stack in the form of a conduit for the discharge of a gaseous effluent relatively high into the atmosphere and supported at its base, a supply conduit, a first liquid seal valve within the region of a stack adjacent the bottom of the stack and having an inlet extending laterally through the wall of the stack communicating with said conduit and having an outlet leading from the stack with the walls of the stack forming the outer wall portions of the liquid seal valve, a second liquid seal valve within said stack above said first having an inlet in the wall of the stack also communicating with said supply conduit and an outlet communicating with the stack interior above this second seal valve with the walls of the stack forming wall portions of the second liquid seal valve, and means for supplying a sealing liquid to and removing the same from these valves.

3,003,518

FAUCET SUDS DISPENSER

Larry Tisdale, 507 Rivard Blvd., Grosse Pointe 30, Mich.
Filed Apr. 7, 1958, Ser. No. 727,002
5 Claims. (Cl. 137-268)



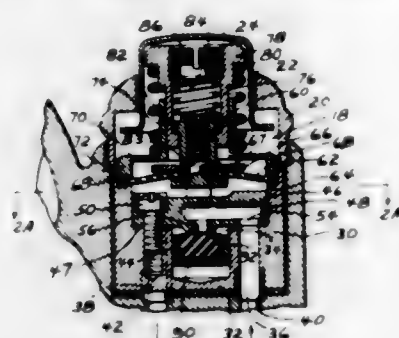
1. A suds dispenser for attachment to a faucet, said suds dispenser comprising a valve body having a water passage therethrough, a detergent reservoir having an opening in a wall thereof, said body having a hollow boss disposed in said opening and forming part of a means attaching said reservoir to said body, a two-position

rotary valve member extending across said passage intermediate the ends thereof and journaled in said boss, said valve member having a first position in which a bore permits the flow of water directly through said passage, said valve member having a duct extending from one side thereof into said reservoir and another duct extending from said reservoir to the other side of said valve member, said ducts being disposed so that when said valve member is in another position water may flow from said passage on one side of said valve member into said reservoir and hence from said reservoir to said passage on the opposite side of said valve member, said reservoir being adapted to hold a mass of detergent for mixture with the water which flows through said reservoir when said valve member is in its other position, and a handle connected to said valve member and disposed on the exterior of said body for shifting said valve member between its two positions.

3,003,519

FLUID CONTROL DEVICES

Arthur C. Homeyer, Fells Road, Essex Fells, N.J., and Frederick C. Kramer, Queens Village, N.Y.; said Kramer assignor to said Homeyer
Continuation of application Ser. No. 372,086, Aug. 3, 1953. This application May 21, 1959, Ser. No. 816,359
3 Claims. (Cl. 137-454.6)



2. A replaceable valve unit for fluid distribution systems comprising, in combination, a cup, a tubular element set on the bottom of said cup defining a well, an inlet duct and an outlet duct, a duct piece set within said cup, said duct piece having an internal duct communicating at one end with the aforesaid inlet duct and terminating at the other end in an annular valve seat, said valve seat being in spaced apart relationship and communicating with said outlet duct, a stirrup completely housed within said cup and freely encircling said duct piece, said stirrup having a base cap in facing relationship with said valve seat, said base cap being slidably disposed in said well for reciprocating movement in a direction normal thereto for controlling fluid flow through said valve seat, a diaphragm covering said cup, a cover piece surmounting said diaphragm, and spring means urging said stirrup base cap into closing engagement with said valve seat.

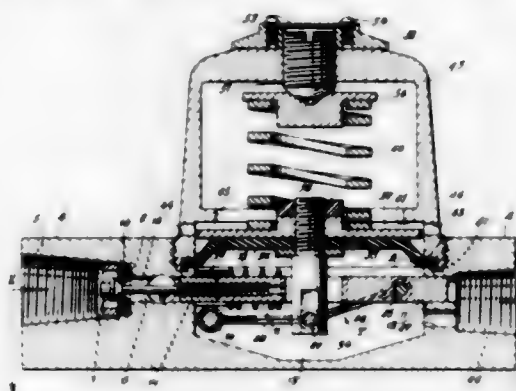
3,003,520

PRESSURE REDUCING REGULATOR

Joseph T. Corey, Tonawanda, N.Y., assignor to Scott Aviation Corporation, Lancaster, N.Y.
Filed Sept. 3, 1957, Ser. No. 681,579
4 Claims. (Cl. 137-505.43)

1. A pressure regulator comprising: a casing having an inlet and an outlet; a low-pressure chamber communicating with said outlet; a spring-loaded diaphragm arranged in said casing with its one face exposed to the pressure in said low-pressure chamber and its other face exposed to the pressure of the ambient atmosphere; a control valve arranged between said inlet and said outlet and adjustably secured to a yoke which spans said low-pressure compartment and is guided at its opposite ends in said casing;

a split resilient collar encircling said yoke and bearing against said casing at its outer end; a compression spring interposed between the inner end of said collar and an adjacent portion of said yoke; a push rod operatively connected with said diaphragm and passing through the open

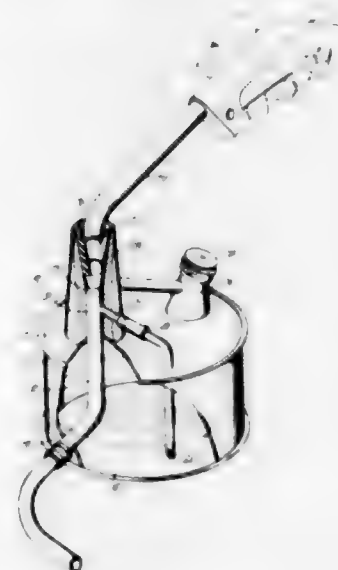


portion of said yoke; and a pair of toggle links centrally pivoted to each other and to said push rod, the outer end of one of said toggle links being movably connected with said casing, and the outer end of the other of said toggle links being movably connected with said yoke.

3,003,521

FUEL AND LUBRICANT MIXER

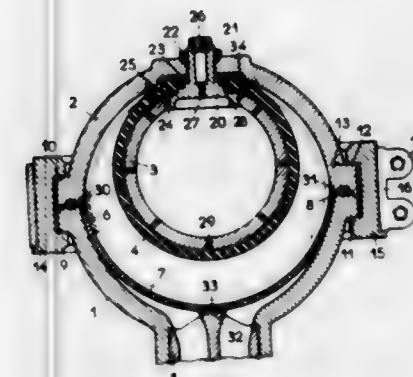
Joseph J. Colonna, Union, N.J., assignor, by mesne assignments, to James R. Parks
Filed Oct. 23, 1957, Ser. No. 691,893
1 Claim. (Cl. 137-604)



A portable fuel and lubricant mixer comprising a closed hollow vessel having a chamber therein and constituting a reservoir for a mixing liquid, said vessel having a spout, a fuel supply conduit having an imperforated section traversing and extending downwardly through said reservoir, said conduit having a constriction above said section, said conduit having a fuel receiving upper end disposed outside of said vessel and above said chamber for coupling to a fuel source and a fuel discharging lower end terminating beyond said reservoir and outside of said vessel for connection to a fuel receiving tank to permit a continuous flow of fuel through said supply conduit from said source to said tank, a rod member providing a handle spaced above said vessel and interconnected with said spout and the upper portion of said conduit disposed outside said vessel, and an aspiratory discharge conduit having an upper end communicating with said supply conduit through said constriction above said vessel and a lower end opening into and terminating in said chamber in proximity to the bottom of said chamber.

3,003,522
MEANS FOR DAMPING PULSATIONS IN FLUID PIPELINES

Etienne Rohac, Saint-Gratien, France
Filed Apr. 9, 1959, Ser. No. 805,298
Claims priority, application France Apr. 12, 1958
5 Claims. (Cl. 138-30)

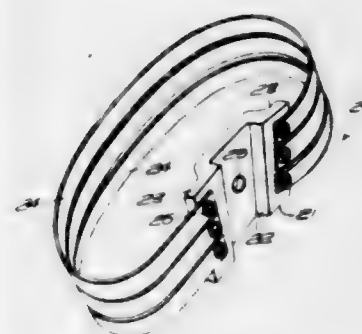


1. In a device for damping pulsations, a substantially spherical hollow body provided with an internal spherical surface, a substantially spherical core housed within said hollow body and having an external spherical surface spaced from said internal spherical surface of said hollow body to define a chamber, an expansible diaphragm enclosing said core and supported within said chamber for expansion therein, said diaphragm in one position being contiguous to said external spherical surface of said core, said diaphragm in said one position being expanded and in its unexpanded position having a radius less than said core to place said diaphragm under a stress.

3,003,523

PICKER STICK CHECK STRAP

Clyde O. Cronk, La Grange, Ga., assignor to Matthews Equipment Company, a corporation of Rhode Island
Filed July 7, 1959, Ser. No. 825,520
2 Claims. (Cl. 139-165)



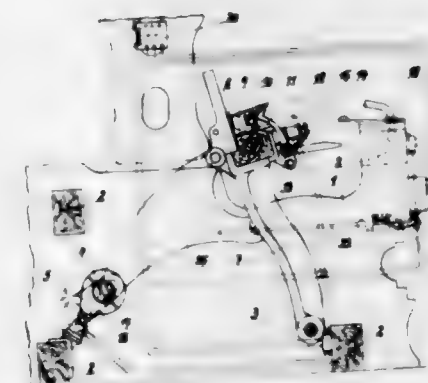
1. A check for a picker stick including a bracket adapted for mounting on the lay, said bracket having two flanges, each flange having a like number of a plurality of openings forming horizontal cooperating pairs of openings, the line of centers of openings in one flange and the line of centers of openings in the other flange converging from the top to the bottom on substantially the angle that the picker stick will assume between the opposite ends of its stroke to space the openings of said pairs of openings different horizontal distances, a plurality of straps of equal length one for each pair of openings, the ends of each strap secured by means of its pair of openings to the flanges to form a loop, said loops being of unequal length with the loop of greatest length at the top and the loop of smallest length at the

bottom whereby the picker stick will engage simultaneously each strap as it approaches either limit of its movement.

3,003,524

SHUTTLE-POSITION DETECTOR

Kurt Metzler, Duwockshamp 15, Hamburg-Bergedorf, Germany
Filed Dec. 28, 1956, Ser. No. 631,233
Claims priority, application Germany Nov. 19, 1956
2 Claims. (Cl. 139-341)



1. In a loom having a shed, oppositely disposed shuttle boxes, a lay operative in a cycle of forward and backward movement and having an electrically operated loom-stopping device for stopping the loom and operating with one shuttle passing through the shed during each loom operation cycle and boxed in said oppositely disposed shuttle boxes alternately, the improvement which comprises an automatic stop-motion protection arrangement comprising, in combination, means including an electrical power circuit arrangement having solely two control switches for automatically energizing the loom-stopping device in the event that the shuttle does not reach the shuttle box and does not complete successive boxings comprising, a first switch normally closed, means on the loom automatically operable for opening the first switch only in response to completion by the shuttle of a boxing in either of said shuttle boxes and for closing said first switch when the shuttle leaves either of said boxes subsequent to a boxing, a second normally open switch connected in series with the first switch, means operated in timed sequence with the lay for cyclically closing the second switch automatically substantially at a time the shuttle normally completes a boxing during the loom cycle and after the passing of the shuttle through the shed and said lay substantially begins to move forward in its cycle, whereby the loom-stopping device is energized at a precise moment of the loom cycle in the event the shuttle does not completely enter the opposite box.

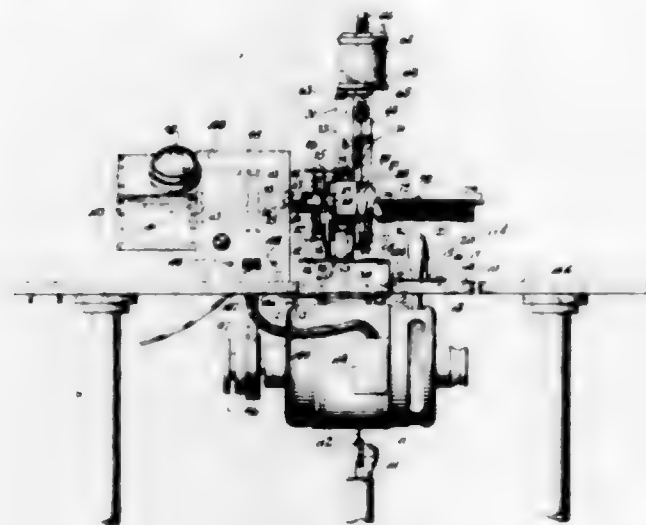
3,003,525

WIRE WINDING APPARATUS

Frederick J. Fuller, Chicago, Ill., assignor, by mesne assignments, to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Oct. 12, 1956, Ser. No. 615,695
7 Claims. (Cl. 140-71)

1. Apparatus for forming an elongated bendable metal connector into a plurality of elements having a predetermined pattern and free ends, comprising: a rotatable shaping mandrel of a predetermined configuration corresponding to said pattern, said mandrel being adapted to wind contiguous loops of said connector thereon during rotation; a wire feed mechanism surrounding said mandrel and including helical guide means positioned adjacent said mandrel and adapted to contact said loops to move the same axially relative to said mandrel during the formation of said loops into said elements; and severing means mounted on said mandrel and having a

cutting edge substantially normal to the path of movement of said connector loops, said mechanism being



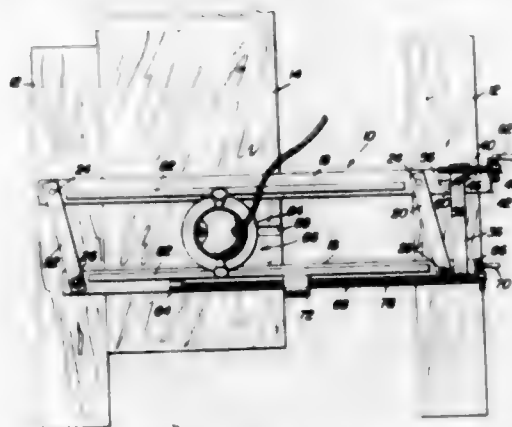
adapted to present said formed connector to said means for severing said loops from each other.

3,003,526
AUTOMATIC DISPENSING NOZZLE
Louie Austin Bell, Jr., 4614 Fountain Ave.,
Los Angeles, Calif.
Filed Mar. 2, 1959, Ser. No. 796,542
12 Claims. (Cl. 141-208)



1. A filler valve device with automatic shut-off comprising a valve body having a chamber therein, a transverse partition across an inlet end of said main chamber and a spout in communication with said chamber at an outlet end, a diaphragm at one side of the chamber forming a low pressure pocket, means forming a liquid supply passage through said transverse partition, a valve seat around said supply passage and a valve element in said body operatively associated with said valve seat and spring biased to closed position, a trip member reciprocably mounted in a position extending through said transverse partition having a movable fulcrum thereon at said inlet end and a trip element in said main chamber and forming part of said trip member, a link having a pivotal attachment to said fulcrum and having a separate pivotal attachment to said valve element, a shoulder on the body adjacent the link and a manually positionable catch on said link engageable with said shoulder when said valve element is in open position, a stop in said main chamber, a movable block in engagement with said diaphragm having a position between said stop and said trip element adapted to hold said valve element in open position when said catch is in engagement with said shoulders, a suction air passage between said low pressure pocket and said supply passage, an operating air passage between said low pressure pocket and an outer portion of said spout, said block being movable with said diaphragm to a position removed from said trip element upon the blocking of said operating air passage whereby to effect automatic closing of said valve element.

3,003,527
GUIDE FOR MAKING DADO CUTS
William J. Fortune, 946 S. 5th West, Missoula, Mont.
Filed Feb. 18, 1960, Ser. No. 9,458
6 Claims. (Cl. 144-136)



1. A guide for making dado cuts comprising a frame, said frame including a pair of spaced and parallel ways, means interconnecting said ways for movement toward and away from each other while maintaining their parallel relationship, means adapting one of said ways for securement to support members disposed on opposite sides of a workpiece, parallel guide means on said ways adapted to slidably guide opposite sides of a router housing, means for varying the distance between said ways, said interconnecting means comprising a pair of links pivotally secured at their opposite end portions between corresponding end portions of said ways forming a parallelogram linkage between said ways, a support bar fixedly secured at one end to said one way and projecting laterally therefrom with its other end overlying the other way, a pin and slot connecting between said other end of said bar and said other way with the slot of said pin and slot connection being arcuate to enable swinging movement of said other way relative to said one way, said distance varying means comprising a screw-threaded member having one end threadedly engaged with one of either of said support bar or said other way at one end and the other end journaled for rotation with the other of said support bar or said other way.

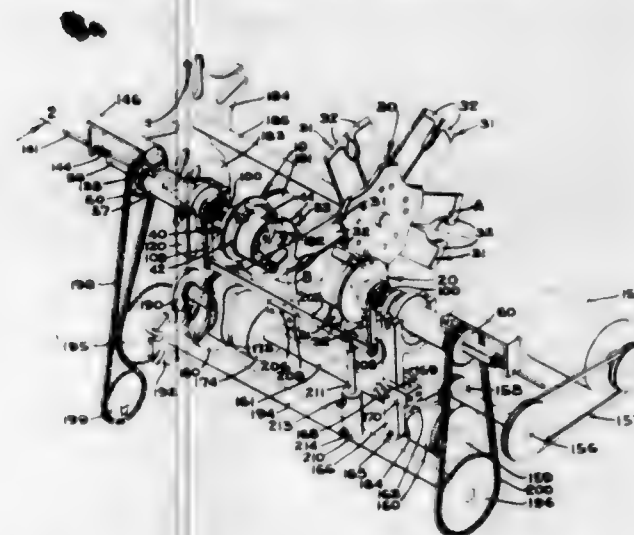
3,003,528
SCREW-HOLDING SCREW DRIVER
Warner E. Landeau, Racine, Wis.
(3500 Parsifal, N.E., Albuquerque, N. Mex.)
Filed June 22, 1959, Ser. No. 821,954
3 Claims. (Cl. 145-50)



1. A screw driver for positively holding a screw in the slot of the latter, comprising a shank, a screw-slot engaging bit on one end of said shank and being partitioned along the length of said shank into two half-portions consisting of a fixed bit half-portion on one side of said bit and a movable bit half-portion on the other side of said bit, a pin extending through said portions in a direction transverse to the center-line plane of partition and being disposed adjacent said one end and with said movable bit portion being movable transverse to the slot of the screw for clamping the screw at said slot with the free ends of both said bit portions, and a sleeve on said shank and fully disposed over the other end of said movable bit portion, said sleeve and said other end of said

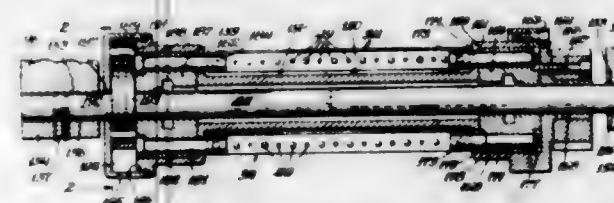
movable bit portion including camming surfaces in sliding contact for pivoting and securing said movable bit portion in a pivoted position of clamping on said screw, said camming surface on said movable bit portion being disposed to the side thereof located in the direction which said free end thereof moves for clamping and with said direction being counter-clockwise when viewed from said free end.

3,003,529
PEACH HALF TWISTING HEAD FOR PITTING MACHINES
Sherman H. Creed, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,043
9 Claims. (Cl. 146-28)



9. In combination in a twisting head, a support structure, a flexible band, means mounting said band on said structure for movement from an expanded position defining a loop adapted to receive a fruit segment therein to a contracted position in engagement with the fruit segment, first power driven means in frictional driving engagement with said mounting means for applying a predetermined driving force on said mounting means for moving said band into frictional gripping engagement with the fruit segment, and second power driven means for applying a progressively increasing pull on said band for overcoming the frictional engagement and imparting movement between said first power driven means and said mounting means while said first power driven means maintains said band in frictional engagement with the fruit segment.

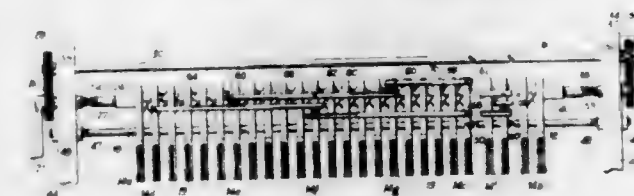
3,003,530
ORBITAL STRIP-CUTTING KNIFE ASSEMBLY
Joe R. Urschel and Gerald W. Urschel, both
% Urschel Laboratories, Inc., Valparaiso, Ind.
Original application Jan. 24, 1955, Ser. No. 483,616, now
Patent No. 2,934,117, dated Apr. 26, 1960. Divided
and this application Apr. 25, 1960, Ser. No. 24,400
3 Claims. (Cl. 146-78)



1. In an assembly for orbitally moving a plurality of knives about an axis, a knife carrier rotatable about such axis, a plurality of bearings in said carrier spaced equidistantly radially from said axis and in parallelism therewith, knife anchorage elements revolvable about said axis and respectively journaled in the carrier bearings, a hub-less orientation ring having an inner cylindrical periphery

constituting an inner bearing encircling said orbital axis of the knives, orientation bearing means contiguous with an end of the carrier to rotatively support said inner bearing of the ring and cooperable therewith for constraining the ring for rotation about its principal axis while maintaining such axis parallel with the first axis but eccentric with respect thereto, said ring having a plurality of crank-receiving bearings parallel with the eccentric axis and spaced therefrom equidistantly with the spacing of the carrier bearings from the carrier axis and having circumferential spacing about the eccentric axis corresponding to the circumferential spacing of the carrier bearings about the carrier axis, means for constraining said carrier and the ring for synchronous rotation about their respective axes while constraining the knife anchorage elements against rotation about their individual axes, comprising crank bearings respectively fixed to the knife anchorage elements independently of the knives and journaled in the crank-receiving bearings of said ring, a cap mounted on said end of the carrier, said cap embracing the orientation ring and being cooperable therewith and with said end of the carrier to form an annular lubricant-containing chamber communicating with the carrier bearings, and drive means for the assembly comprising a gear constrained for rotation coaxially with the carrier.

3,003,531
SPACING MEANS FOR CUTTER GUIDES IN BREAD SLICING MACHINES
Harry N. Niebuhr, deceased, late of Davenport, Iowa, by
Florence L. Niebuhr, administratrix, Davenport, Iowa,
assignor to American Machine & Foundry Company,
New York, N.Y., a corporation of New Jersey
Filed Aug. 17, 1959, Ser. No. 834,102
7 Claims. (Cl. 146-88)

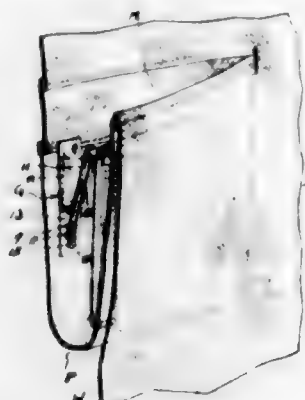


1. In a band slicing machine having a plurality of spaced blade guides, means for slidably mounting said guides for adjustment toward and away from each other, at least one of said guides having rotatably mounted thereon a pinion, a pair of gear racks engaging said pinion, one of said pair of racks being secured to a guide which is positioned to one side of said pinion mounting guide and the other of said pair of racks being secured to another guide on the opposite side of said pinion mounting guide, whereby equal spacing between said guides is maintained when one of said guides is moved relatively toward or away from another of said guides.

3,003,532
WALLET GUARDS
Raymond F. Nelson, 96 1/2 Swanwick Ave.,
Toronto 13, Ontario, Canada
Filed July 18, 1960, Ser. No. 43,638
4 Claims. (Cl. 150-47)

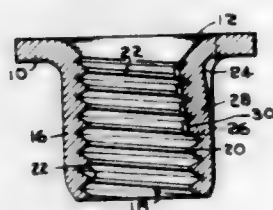
1. A wallet guard comprising an elongated plate forming a mount having front and rear sides, a fastening device secured to said plate at the rear side thereof for attaching it to a wall of a garment pocket in a generally upright direction, pivot means on said front side of said plate at an end thereof, a wallet-attachment member including a first bar and a second bar, said first bar having at one end an upstanding ear supplied with an abutment face and having at the other end a hook-shaped keeper, said pivot means supporting said first bar at its keeper end to swing crosswise of said plate, said second

bar having one of its ends pivoted to said ear and its other end free to swing for engaging said keeper with said bars slightly spaced apart and defining a closed elongated slot, said second bar being swingable between closed and open positions and engaged by said abutment



face in its closed position to maintain it in released engagement with said keeper, and a wallet-carried eye member having its eye part engaged freely in said slot whereby the wallet is made captive to said wallet attachment member.

3,003,533
NUT WITH LONGITUDINALLY EXTENDING SPRING TONGUE LOCKING MEMBER
Chester A. Hubbard, South Weymouth, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,184
1 Claim. (Cl. 151-21)

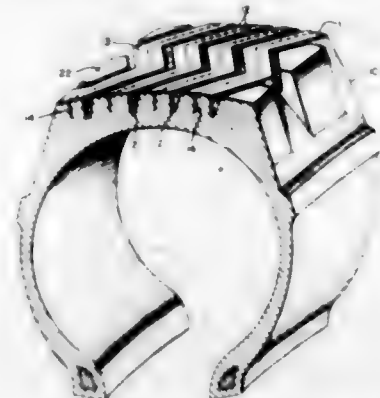


A device of the class described having a base, a hollow shank having a bore extending at a substantially right angle from said base, a thread formed internally of said shank for engagement with a threaded bolt or screw, said shank having a tongue formed in its wall to provide a locking member, said tongue having one end integral with said base, an opposite end integral with said shank, and divided from the shank by slots, said tongue having tongue threads on its inside face slightly out of phase with the threads of said bolt, the depth of said tongue threads being less than the depth of the bolt threads.

3,003,534
WIRE TRACTION INSERT FOR TIRES
Edward Cousins, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 5, 1959, Ser. No. 851,094
6 Claims. (Cl. 152-211)

1. In a tire, a rubber tread portion integral therewith having at least one anti-skid insert made of metal wire embedded in the rubber of said tread portion, said insert extending longitudinally and transversely of said tread portion, said insert having a width of substantially the same dimension as the thickness of the tread portion, said insert having a plurality of teeth projecting normal to and terminating at the tread surface, each tooth being formed of a loop of wire twisted upon itself for the length of each tooth, said teeth being inter-connected at the base of said insert by a base wire extending from the base of

each tooth to the base of the adjacent teeth, whereby said teeth are maintained in interconnected relationship



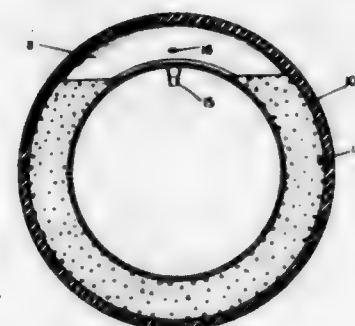
throughout the life thereof to prevent them from being thrown out of said tread.

3,003,535
TRACTION DEVICE FOR VEHICLE TIRE
Frank Doris, 3194 Perry Ave., Bronx, N.Y.
Filed Aug. 16, 1960, Ser. No. 50,030
9 Claims. (Cl. 152-223)



1. A traction device for a vehicle wheel comprising, a hook-shaped strap fitting over the tread of a tire, a cam lever pivoted at one end of the strap, a chain extended across the tread of the tire and having one end attached to the cam lever, a loop on the opposite end of the chain, a plate on one end of which a hook is provided, said plate being slidably attached to the strap and having a hook on its opposite end, the strap having a hook-shaped terminal into which the last-mentioned hook is adapted to fit, a pivoted element carried by the strap and urged against the side of the tire by the action of the cam lever, and means engaging the plate to secure the device to a vehicle wheel.

3,003,536
VEHICLE TIRE BALLAST
Fisher W. Culberson and William L. Hicks, Boulder, Colo., assignors to Led Ballast, Inc., Boulder, Colo., a corporation of Colorado
Filed June 13, 1960, Ser. No. 35,413
13 Claims. (Cl. 152-330)



1. A ballasted vehicle tire, comprising a resilient vehicle tire having an annular sealed chamber inflatable

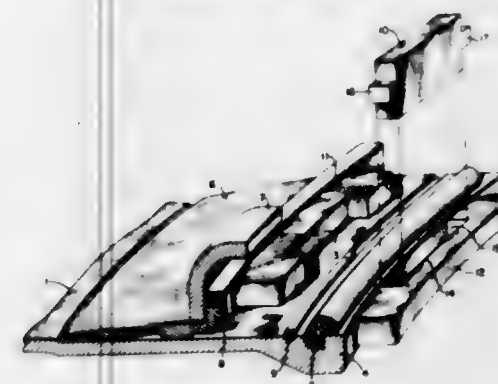
with gas under pressure, a particle ballast partially filling said chamber to not less than about 65% of its capacity when the tire is at rest, and leaving a void of not more than about 35% at the top of the tire, a gas maintained in said chamber under pressure to inflate said tire and to provide a pneumatic tire capable of flattening under heavy pulling loads, said ballast containing finely reduced powdered mineral material surface coated with a compound selected from the group comprised of long chain fatty acids of 10-31 carbon atom chain, the mineral salts of said acids, and mixtures thereof, the amount of finely reduced powder being sufficient that during rotation of the tire the ballast is entrained in the enclosed gas substantially filling the volume of the tire with a densified, compressible pneumatic medium for the tire.

3,003,537
PNEUMATIC TIRE AND METHOD OF MAKING SAME
Carl F. Engstrom, Detroit, and Arthur C. Danielson, Royal Oak, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 15, 1955, Ser. No. 534,497
6 Claims. (Cl. 152-362)



1. A pneumatic tire comprising an outer rubber tread and sidewall portions, an underlying carcass of rubberized fabric plies, the terminal ends of said plies being wrapped around inextensible bead members, and a toe strip overlying the outer surfaces of the bead areas, said toe strip being comprised of a loosely woven rubber-impregnated fabric of untwisted, flattened yarns, each of said yarns being made of a plurality of continuous filaments.

3,003,538
RIM
Gerhart Lothar Gerbeth, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed May 22, 1959, Ser. No. 815,080
6 Claims. (Cl. 152-405)



1. A multiple-piece rim for mounting a tire thereon including a generally cylindrical endless rim base, a re-

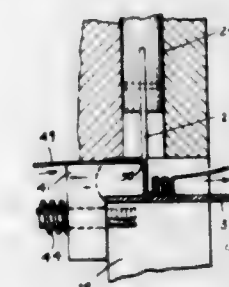
movable endless bead seat ring encircling said rim base, a transversely split locking ring engaging said base and said bead seat ring to maintain the base and bead seat ring in the assembled position when a tire is mounted on said rim and means to prevent relative circumferential movement between said base and said bead seat ring when said tire and rim are in use on a vehicle, said means comprising a first member extending from the axial outer edge of said base and having an opening therethrough with the edge of the rim base forming the axial inner side of the opening, a second member extending from the axial outer edge of said bead seat ring and having a notch along the axial outer edge thereof, the opening in said first member and the notch in said second member being superposed and aligned when the rim is in the assembled position to form a driver pocket therebetween, and an unattached driver member of a size to fit loosely in said pocket positioned therein to key said base and bead seat ring in fixed relation with respect to each other to prevent relative circumferential movement between said base and said bead seat ring when subjected to driving torque, the opening in said first member preventing axial displacement of the driver member.

3,003,539
CAR THEFT TIRE DEFLATOR
Robert M. Tone, 335 E. Maude, Sunnyvale, Calif.
Filed Apr. 18, 1960, Ser. No. 23,085
18 Claims. (Cl. 152-415)



1. A car theft tire deflator comprising a cap adapted to be secured to the valve stem of a tire having a conventional valve therein, a triggered mechanism including a spring urged plunger mounted in said cap for axial movement toward said valve stem for opening the valve therein, obstructing means in the path of said plunger and engaged thereby for obstructing movement thereof toward valve opening position, and momentum actuated means operatively connected to said obstructing means movable by centrifugal force to urge said obstructing means out of the path of said plunger when said tire rotates.

3,003,540
METAL FORMING APPARATUS
James J. Robinson, 324 N. Agnes St., Indianapolis, Ind.
Filed July 27, 1959, Ser. No. 829,637
2 Claims. (Cl. 153-76)



1. An apparatus for forming a series of parallel folds in a strip of metal stock, said apparatus including a forming blade positioned on one side of said stock and adapted to be reciprocated through extending and retracting portions of its stroke in a plane transverse to the plane

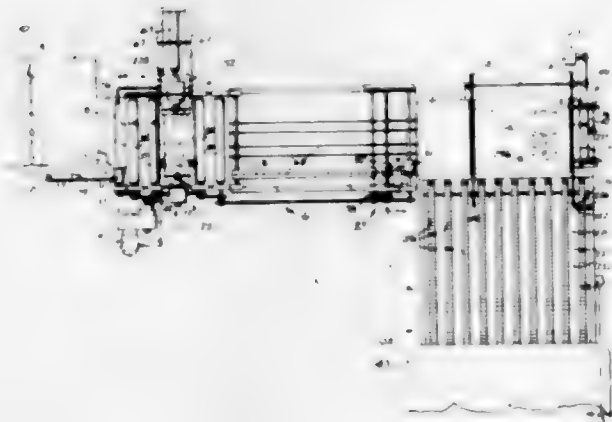
of said stock, a forming block positioned on the opposite side of said stock and adapted to be moved in a plane parallel to the plane of said stock, the leading margin of said block having a rounded configuration, a guide plate underlying said block and extending beyond said blade, spring means resiliently urging the leading margin of said block beneath said blade, said stock being positioned between said blade and said block whereby as said blade moves through the extending portion of its stroke the stock is jammed between said block and said blade, said block being moved against the force exerted by said spring means to permit formation of a fold by said blade as it approaches said guide plate, said block returning to its position beneath said blade as said blade completes the retracting portion of its stroke to thereby advance said stock into position for the next extending stroke of said blade.

3,003,541

APPARATUS AND METHOD FOR FORMING ELONGATED SHEET FROM VENEER

David V. Prentice and Edwin M. Heth, Portland, Oreg., assignors to Prentice Machine Works, Inc., Portland, Oreg., a corporation of Oregon

Filed Nov. 4, 1957, Ser. No. 694,210
5 Claims. (Cl. 156—263)



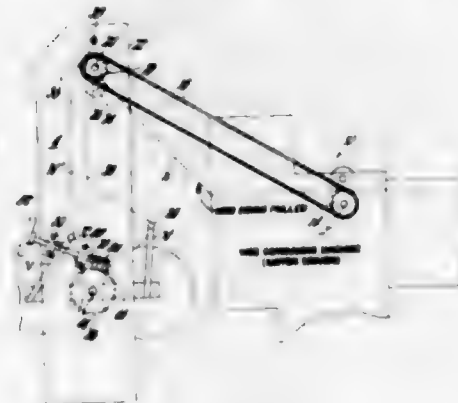
3. A continuous process of manufacturing elongated sheet from veneer pieces by transporting the pieces through a continuous treating path having work stations spaced therealong which comprises serially feeding single pieces of veneer into a veneer cutting station at one end of said treating path, cutting each piece, selectively, in the cutting station to form a piece bounded by a pair of parallel prepared edges, the prepared edges of each piece being selectively cut so that the edges bound a piece having a width determined by the initial dimension across the smaller of the two ends of the piece, transporting the pieces as a series of single piece through a gluing station and applying in the gluing station adhesive along a corresponding prepared edge of each piece in the series, conveying the pieces to a collecting station and assembling the pieces at the collecting station in edge-to-edge abutting relation with one of the parallel prepared edges of one piece abutting one of the parallel prepared edges of an adjacent piece, the feeding of pieces into the cutting station being determined by the accumulation of pieces in the collecting station, and feeding the pieces from the collecting station at a rate determined by the accumulation of pieces in the collecting station into a curing station and drying the adhesive between the assembled pieces to form an elongated sheet comprised of edge bonded parallel strips of veneer.

3,003,542

SPLICING MACHINE

Richard A. Butler, Jr., Palmer Road, Cambridge, Mass.

Filed Mar. 19, 1958, Ser. No. 722,403
3 Claims. (Cl. 156—350)



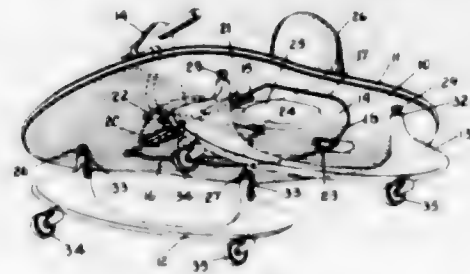
3. In combination with a machine employing a web printed with repeating indicia patterns; means for driving said machine; means related to the drive of said machine moving cyclically in direct phase relationship with the passage of said indicia patterns through said machine; means for splicing a new web to said web when it runs out; means for sensing the end of said web when it runs out; means for driving said splicing means; means actuated by said sensing means for placing said splicer driving means in potentially operative relationship with said cyclically moving means; and said splicer driving means constructed and arranged to drive said splicing means at a given point only in the cycle of said cyclically moving means and only when in said potentially operative relationship.

3,003,543

CHILD'S WALKER CONVERTIBLE TO A ROCKING CHAIR

William S. Duncan, Elora, Ontario, Canada

Filed Feb. 19, 1960, Ser. No. 9,780
4 Claims. (Cl. 297—130)



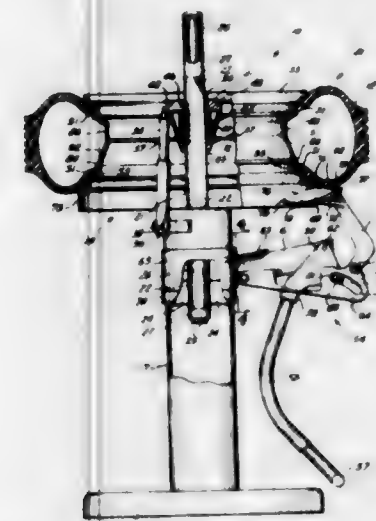
1. In a child's walker, a plate; a substantially large central opening in the plate; a seat filling said opening and having its forward edge hingedly connected to the forward edge of said central opening, said seat having a pair of openings in side-by-side relation therethrough, said pair of openings being of a size that the legs of a child are freely movable therein; a flat spring member secured to the underside of the plate and extending rearwardly under the seat to normally hold said seat in substantially the same plane as the plate; a pair of front legs and a pair of back legs fastened to and extending downwardly from the underside of said plate; a pair of rockers, each rocker having a front and rear socket for receiving its respective front and back leg; and means for retaining the legs in said socket, said means comprising a threaded extension on each leg, a rotatable connecting member carried on said extension adjustably joining said member to said rocker adjacent said socket whereby on rotating said member the relative length of each leg may be varied, and castors removably mounted on the underside of the rockers.

3,003,544

TIRE BEAD BREAKING APPARATUS

James R. Foster, Fort Dodge, Iowa, assignor to Coats

Company, Fort Dodge, Iowa, a partnership of Iowa
Filed Oct. 29, 1958, Ser. No. 770,557
2 Claims. (Cl. 157—1.26)



1. Tire dismantling apparatus comprising an upright standard, a table mounted on said standard for horizontally supporting a tire and wheel assembly, the tire of said assembly having a bead engageable with a complementary rim portion of said wheel, supporting means mounted on said standard and including a supporting arm carried on and extended radially outwardly therefrom, lift means including a pair of parallel arm members and pivotally mounted at their inner ends to said supporting means, arranged on opposite sides of said supporting arm for up and down movement, said arm members having outer portions extended beyond the outer end of said supporting arm and formed with transversely opposite slots, a shoe member having a curvature corresponding to that of said rim portion and adapted to engage the lower side wall of said tire, shank means depending from said shoe member and pivotally connected to the outer portion of said arm members, and handle means for raising and lowering said arm members, said handle means extending between said arm members and having one end pivotally connected to said supporting arm outer end, said handle means including further a roller device parallel to and spaced from the pivot by which the handle is connected to said support arm and having opposite ends thereof positioned in said slots for engagement with said arm members, whereby on pivotal movement of said handle means in one direction, said shoe member is moved into engagement with the lower side wall of said tire to provide for the movement of said tire bead out of engagement with the complementary rim portion of said wheel.

3,003,545

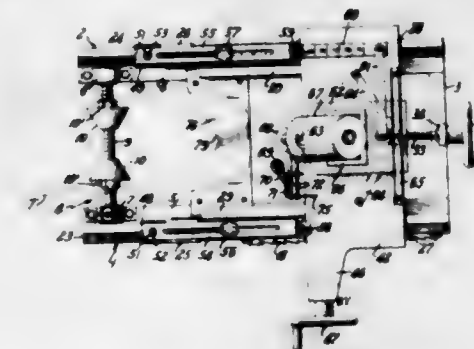
TIRE-TRUING MACHINE

Roy L. Peacock, Highway 280 E., Americus, Ga.

Filed Oct. 8, 1959, Ser. No. 845,258
7 Claims. (Cl. 157—13)

1. A tire-truing machine, comprising a supporting frame, means carried adjacent to one end of said frame for axially rotatably supporting a tire, means for rotating said tire on its axis, guide bar means supported by said frame and extending longitudinally thereof, first guide follower means mounted on said guide bar means adjacent to said tire supporting means, traveller means mounted on said frame in longitudinally spaced relation thereon with respect to said tire supporting means and rigidly connected with said first guide follower means, means for adjusting said traveller means and with it said first guide follower means longitudinally of said frame

and for maintaining such adjustment, second guide follower means mounted on said guide bar means and freely slidable thereon longitudinally of said frame, means defining a platform carried by said second guide follower means and extending transversely of said frame, a table carried by said platform and slidable relatively thereto transversely of said frame, means for imparting such



sliding movement to said table, a tire-truing tool carried by said table, and radius rod means having the opposite ends thereof pivotally connected to said first guide follower means and said table respectively and serving upon transverse movement of said table to cause said tool to traverse an arcuate path proximate to the tread of the tire.

3,003,546

DOMESTIC HEATING DEVICES

William A. Beach, Nixon, Robert L. Burke, Fanwood, and David R. Hogin, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

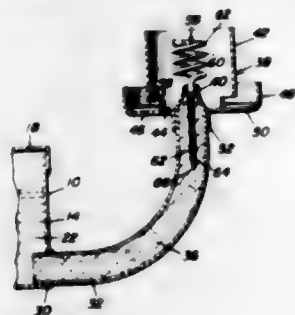
Filed June 27, 1956, Ser. No. 594,186
2 Claims. (Cl. 158—4)



1. A heating unit for house heating service including (1) an air blast tube having an inlet end and an outlet end, (2) an orifice member having a central opening of about 0.75 of an inch diameter located across the outlet end of said blast tube, (3) a nozzle apparatus located rearwardly of said member and within said blast tube essentially coaxially therewith wherefrom oil for combustion is discharged through said central opening of said orifice member, said nozzle apparatus being of the high-oil-pressure-atomizing type rated to discharge oil at below about 0.8 gallon per hour when supplied with oil at a pressure of about 100 pounds per square inch, (4) an air blower connected to said blast tube at said inlet end thereof to discharge air for the support of combustion through said tube to be thoroughly mixed with oil discharged from said nozzle apparatus adjacent said nozzle apparatus only, said blower being rated to supply substantially the theoretical amount of air needed for

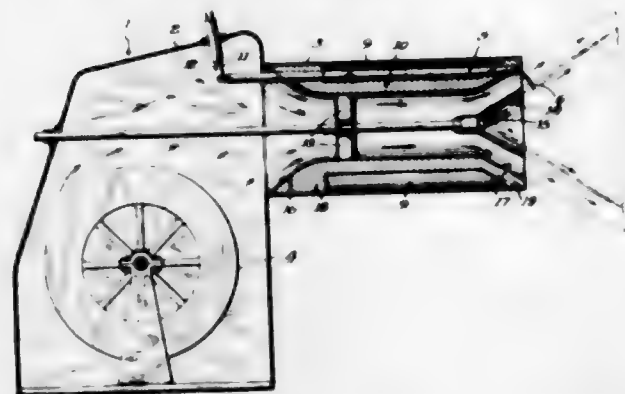
the support of combustion without producing smoke, (5) means within said blast tube for igniting said oil mixed with said air, (6) a combustion chamber extending from said outlet end of said blast tube to receive a mixture of oil and air issuing from said central opening of said orifice member, said combustion chamber having an imperforate wall, an outlet end, and a uniform cross sectional area (at right angles to the direction of flow of said mixture of oil and air issuing thereinto through said orifice member) of about 15 square inches to give a Reynolds number of said mixture in said combustion chamber greater than about 1400 for turbulent flow of said mixture in said chamber to obtain substantially complete combustion with substantially no excess air, and (7) a shell member wherein said outlet end of said combustion chamber is located.

3,003,547
RAILROAD SWITCH HEATER
Ernest E. Tiedt, 101 W. 11th, Evart, Mich.
Filed Nov. 16, 1959, Ser. No. 853,284
3 Claims. (Cl. 158—35)



2. A railroad switch heater comprising a portable fuel tank, a burner tube connected at one end to the tank in communication therewith and extending upwardly therefrom, a wick in said tube, and a burner assembly mounted on the tube, said burner assembly comprising a perforated vaporizer including a vertical, perforated tubular stem extending downwardly into the tube and the wick through the upper end portion of said tube, and a vertical tubular coil on the upper end of said stem.

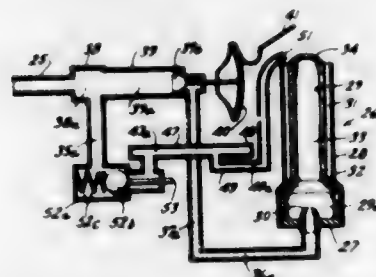
3,003,548
LIQUID FUEL BURNER
Guy J. Sanders, Hinsdale, Edward G. Grimsal, Chicago, and William E. Lawrie, Park Forest, Ill., assignors, by mesne assignments, to Crane Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 6, 1957, Ser. No. 682,448
4 Claims. (Cl. 158—76)



1. A liquid fuel burner comprising an elongated air blast tube having inner and outer peripheral end portions and with its outer end portion ported to receive inlet air flow, the other end portion thereof being adapted to discharge into a combustion chamber, a hollow sleeve-like insert member of substantially elongated cylindrical configuration cooperating with the inner peripheral surface

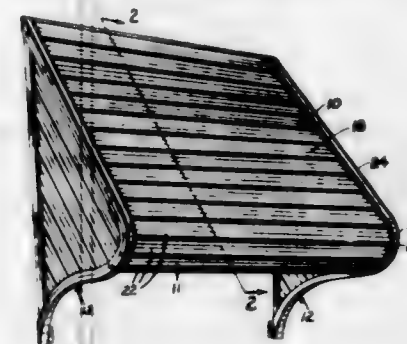
of said air blast tube to bear against the inner and the outer peripheral end portions of the tube, the said insert member having at least the inner end portion thereof with an annular surface of outwardly flaring form, the remaining portion of the insert member merging with the outwardly flaring inner end portion of the insert member, a fuel nozzle mounted in spaced apart longitudinally coaxial relation adjacent to the point of merger of the outwardly flaring inner end portion with the remaining portion of the said insert member, ported means mounted within the hollow insert member cooperating with said fuel nozzle to centrally position the latter member in spaced relation to the inner wall of the said insert member, a substantially frusto-conical hollow outwardly flaring cone member cooperating with said nozzle and being of a length approximating the said outwardly flaring inner end portion of the insert member, the included angle of said frusto-conical cone member being approximately equal to the included angle formed by the outwardly flaring annular surface of the inner end portion of the said insert member whereby to form a ring-like continuously outwardly flaring passage between said hollow cone member and the outwardly flaring annular surface of the inner end portion of the insert member.

3,003,549
MEANS FOR IGNITING A GASEOUS FUEL BURNER
Wolfgang Grunwald, Enebyberg, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Feb. 19, 1958, Ser. No. 716,076
Claims priority, application Sweden Feb. 21, 1957
3 Claims. (Cl. 158—143)



1. In combination, a burner having a discharge orifice from which the burner flame is adapted to project upwardly, means including a supply line for flowing gaseous fuel to the burner, a safety device for maintaining the supply line open responsive to the temperature of the flame which is produced and maintained at the burner discharge orifice and for shutting off flow of gaseous fuel through the supply line when the flame is extinguished, the safety device including a heat conducting part having its extreme end portion at the vicinity of the burner discharge orifice and a second portion adjacent thereto which is laterally removed from the burner discharge orifice, a burner lighter tube communicating with the supply line at a region thereof ahead of the safety device, means including a manually operable member for controlling flow of gaseous fuel to the burner lighter tube, the burner lighter tube having a plurality of sections, one of the burner lighter tube sections having a discharge orifice which is disposed at the immediate vicinity of the burner discharge orifice, and another of the burner lighter tube sections having a discharge orifice which is positioned with respect to the orifice of the one burner lighter tube section so that gaseous fuel discharged therefrom will be ignited by the flame produced at the discharge orifice of the one burner lighter tube section, the other lighter tube section being arranged to effect heating of the second portion of the heat conducting part of the safety device to maintain the supply line open.

3,003,550
FOLDING AWNING
Theodore J. Bottom, Kirkwood, Mo. (% Aluma Kraft Manufacturing Company, 1330 N. Rock Hill Road, St. Louis 24, Mo.)
Filed Feb. 15, 1960, Ser. No. 8,545
4 Claims. (Cl. 160—62)

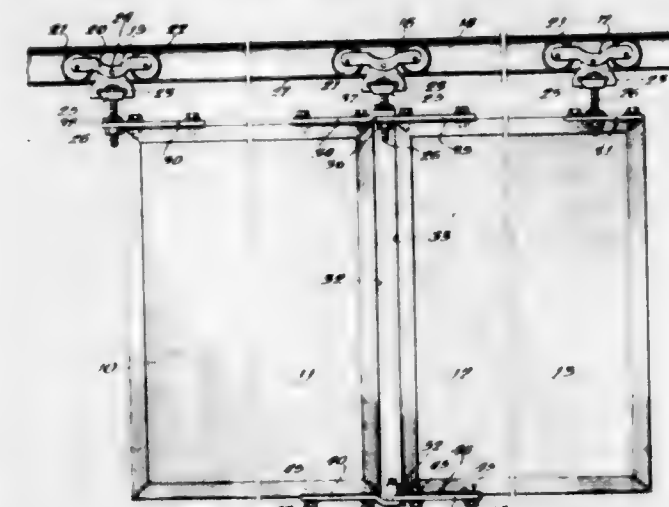


4. In an awning, a rigid roof panel having a transverse bottom margin and opposed side margins, a channel member embracing each side margin of said roof panel, said bottom margin being disposed below said channel members, a side member at each end of said roof panel, a plurality of hinges connecting each side member to said roof panel for selectively folding the side members toward each other in overlapping relation to the roof panel and for selectively extending the side members at a right angle to said roof panel, each hinge including one part attached to one of said channel members and extending downwardly below the roof panel and a coacting part secured to one of the side members, each side member including an angle frame extending along one of the channel members of said roof panel, said angle frames including one flange extending downwardly and another flange overlapping the said one channel member at the side margin of said roof panel, the angle frames extending beyond said bottom margin of the roof panel and being downwardly reversed, a plurality of slats extending transversely of the roof panel and disposed in adjacent edge-to-edge relation to provide a continuation of said roof panel, pivot means interconnecting one of said slats to the bottom margin of the roof panel, and pivot means interconnecting each slat with each adjacent slat, said slats being disposed internally of said angle frames and being selectively turned downwardly and reversed and secured to said angle frames of said side members when the side members are extended, said hinge parts interconnecting to provide pivot axes spaced below the roof panel a distance so that said slats can be folded back selectively onto the roof panel between the roof panel and pivot axes to enable folding of said side members.

3,003,551
TRACK SUSPENDED MULTIPLE PANEL DOOR
Robert G. Ferris, Harvard, Ill., assignor to Startline, Inc., a corporation of Illinois
Filed May 28, 1959, Ser. No. 816,633
1 Claim. (Cl. 160—196)

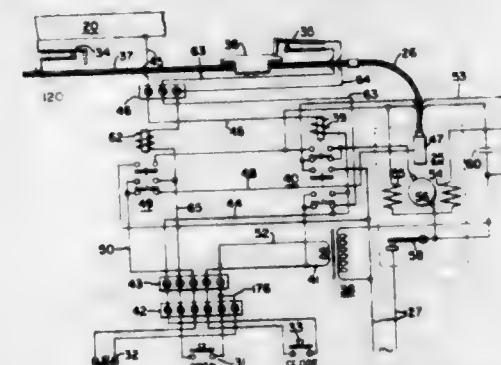
In a track suspended multiple panel door, in combination: a series of relatively tall and narrow door panels disposed in succession with the side edges of adjacent panels spaced apart a distance sufficient to define a space to permit swinging of one panel relative to the other; an upper hinge including a pair of hinge sections rigidly connected one to each of adjacent panels on the top thereof; a trolley disposed above said hinge with a connector extending from the trolley defining a hinge pivot for said upper hinge sections positioned centrally of said space between adjacent panel side edges; and a lower hinge including a pair of hinge sections connected one to each of said adjacent panels adjacent the bottom thereof, one of said lower hinge sections having an elongated slot length-

wise thereof and the other section carrying a hinge pin positioned in the slot and centrally of said space and movably mounted lengthwise of the slot whereby there is play



between the door panels to permit shift of adjacent panels toward and away from each other while maintaining the panels in precise alignment.

3,003,552
DRAPERY TRAVERSE
Stanley D. Eilenberger, Cranston, R.I., assignor to Electric Traverse Rod Company, Cranston, R.I., a corporation of Rhode Island
Filed Apr. 3, 1959, Ser. No. 803,897
6 Claims. (Cl. 160—331)

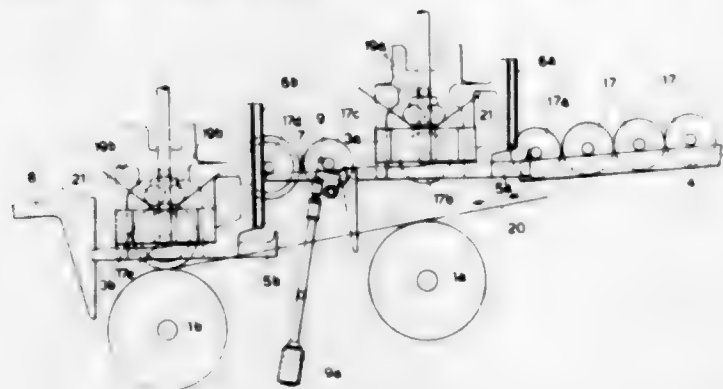


1. A motor-driven traverse assembly for draperies and the like comprising, an electrically conductive elongated threaded shaft rotatable about its longitudinal axis, an electrically conductive track mounted parallel to said shaft, a carrier slidably mounted on said track and having a threaded portion engaging a segment of said shaft, electrically insulating bearings each having a semi-circular recess for receiving and supporting said shaft in insulation from said track, driving means including an electric motor for rotating said shaft, and a control circuit for said motor including said shaft and said track and a limit switch positioned along said track engageable with said master carrier for connecting said shaft and track in electrical series as part of said circuit, whereby said circuit is responsive to the position of said master carrier for controlling the operation of said motor.

3,003,553
MACHINE FOR CONTINUOUSLY FORMING TUBES OF ASBESTOS CEMENT
Dante Colliva, Milan, Italy, assignor, by mesne assignments, to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Aug. 22, 1957, Ser. No. 679,583
Claims priority, application Italy Aug. 23, 1956
5 Claims. (Cl. 162—284)

1. A machine for continuously forming tubes of asbestos-cement comprising a plurality of alternately opera-

tive tube forming devices, means defining a guideway extending laterally past said tube forming devices to receive a plurality of empty mandrels at one side of the machine and to discharge the mandrels, with tubes of asbestos cement formed thereon, from the other side of the machine, said mandrels being normally urged toward said tube forming devices, each of said tube forming devices forming a tube of asbestos-cement on an empty mandrel, means adjacent said one side of the machine for retaining said plurality of mandrels in position to be selectively fed to said guideway for movement thereover, means for moving said tube forming devices into and

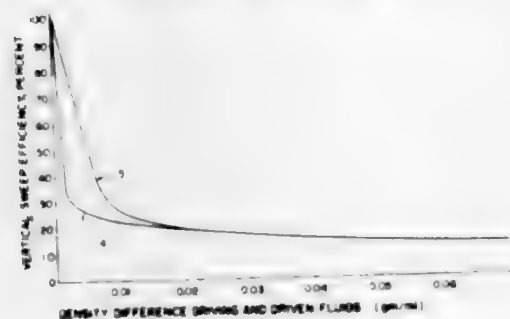


out of tube forming position, means forming a part of one of said tube forming devices and moving therewith to feed at least one of said plurality of mandrels to the remaining portion of said guideway for movement thereover, a plurality of stop means along said remaining portion of said guideway, said stop means being operable to arrest the movement of said mandrels along the remainder of said guideway, said stop means operating in response to the movement of said tube forming devices into and out of said tube forming position so that said mandrels are positioned in proper sequence at said tube forming devices, and so that tubes of asbestos-cement may be continuously formed by said machine.

3,003,554

SECONDARY RECOVERY PROCESS WITH CONTROLLED FLUID DRIVE

Forrest F. Craig, Jr., and Howard N. Hall, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 5, 1957, Ser. No. 700,879
8 Claims. (Cl. 166-9)



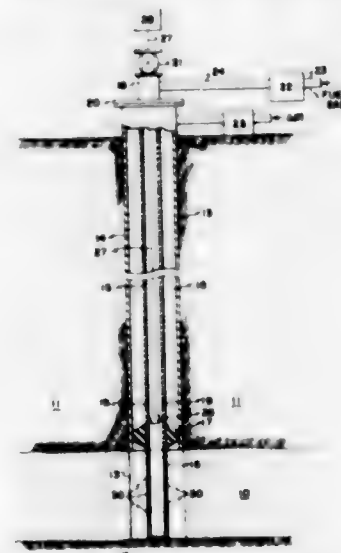
1. In a process for recovering oil from a subterranean oil reservoir in which gravity segregation is a problem when said reservoir is subjected to a solvent drive operation, the steps which comprise forming an intermediate driving fluid by mixing at least two fluids of different density and mutually soluble in one another and in said oil at least one of said fluids being lighter and at least one of said fluids being heavier than said oil, adjusting the amounts of said fluids in said intermediate driving fluid until the density difference between said driving fluid and said oil is not greater than about 0.01 gram per milliliter, thereafter injecting the resulting intermediate driving fluid of adjusted density into said reservoir through an

input well and subsequently displacing said oil and said intermediate driving fluid through said reservoir toward a producing well by injecting into said reservoir through said input well a scavenging fluid having a mobility in said reservoir substantially lower than the mobility of said intermediate driving fluid.

3,003,555

OIL PRODUCTION FROM UNCONSOLIDATED FORMATIONS

William A. Freeman and Victor G. Meadors, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Sept. 18, 1956, Ser. No. 610,578
10 Claims. (Cl. 166-21)



1. A method of completing and producing a well that penetrates an unconsolidated oil-bearing subterranean formation wherein the oil includes both volatile and residual hydrocarbons which comprises injecting an oil-displacing fluid into the formation from the well at a pressure in excess of formation pressure and in a quantity sufficient to displace a part of the oil from the portion of the formation that immediately surrounds the well bore and to move the displaced oil deeper into the formation, heating said portion of said formation to a temperature in the range from about 400° F. to about 1300° F. which is sufficient to vaporize volatile hydrocarbons and to bond residual hydrocarbons to the particles of said unconsolidated formation, thereafter terminating said heating, and reducing the pressure within the well to a value less than formation pressure so that oil may thereby flow from the formation into the well.

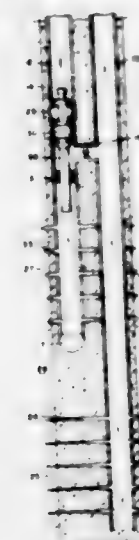
3,003,556

METHOD OF PERFORATING ONE OF A PLURALITY OF PARALLEL PIPE STRINGS

Farley M. McGehee, Genoa, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 769,143
6 Claims. (Cl. 166-35)

1. In a well penetrating a plurality of productive zones and having a plurality of parallel adjacent eccentric co-extending continuous metallic pipe strings, separated from each other by a cement sheath, the method of completing said well which comprises selectively perforating the metal wall of a selected of said pipe strings in any direction in a selected of said zones while maintaining the cement around said selected pipe string, and the metal wall of other of the pipe strings, free of any perforation in said selected zone, and then forming an opening in any direction through the cement in alignment with the perforation in said selected pipe string to fluidly communicate said selected zone through said ce-

ment with the perforation in the selected pipe string whereby fluid is flowable through said perforations in

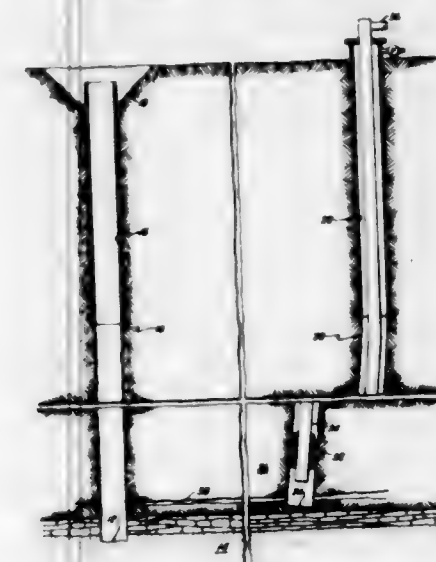


said selected zone and between the selected zone and the selected pipe string.

3,003,557

METHOD OF FRACTURING TO CONTROL WILD WELLS

Jimmie L. Huit, Glenshaw, Pa., and Abraham J. Teplitz, San Tome, Venezuela, assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Apr. 30, 1959, Ser. No. 810,095
5 Claims. (Cl. 166-42)



1. A method of killing a wild well comprising drilling an offset well adjacent to the wild well and to substantially the same total depth as the wild well, cutting a notch in the borehole wall of the offset well for the initiation of a substantially horizontal fracture, forming a substantially horizontal fracture extending from the offset well, displacing a low penetration liquid into the fracture to extend the fracture to intersect the wild well, and displacing a liquid down the offset well and through the fracture into the wild well to kill the wild well.

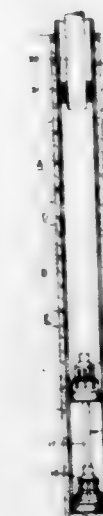
3,003,558

METHOD OF REMOVING DEBRIS FROM WELL BORES

Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Original application Aug. 1, 1955, Ser. No. 525,738, now Patent No. 2,902,095, dated Sept. 1, 1959. Divided and this application Oct. 9, 1957, Ser. No. 689,158
2 Claims. (Cl. 166-43)

1. A method for completing a well having a well casing arranged therein which consists of inserting a tele-

scopically collapsible debris remover into and forcing said debris remover to travel downwardly through said casing in contact with the inner surface thereof throughout its length to push ahead and simultaneously entrap debris with said debris remover whereby the inner surface of said well casing is scraped, said debris remover travel-



ing to and remaining on bottom of the well, placing sufficient force on said debris remover whereby the debris remover is caused to collapse and telescope and occupy less space than it occupied before being collapsed, and thereafter running and setting tubing in said casing spaced above said collapsed debris remover, thereby avoiding a round trip of said tubing.

3,003,559

SECTION MILL

Clarence H. Leathers, 3010 Johnston Ave., Redondo, Calif., and Virgil R. Douglas, 11206 Hulme Ave., Lynwood, Calif.
Filed Dec. 21, 1959, Ser. No. 861,106
3 Claims. (Cl. 166-55.8)



1. An oil well casing mill comprising, in combination: a vertically extending elongate cylindrical body of a predetermined diameter, said body having an axial passageway therethrough formed by upper, intermediate and lower successive cylindrical counterbores of successively larger predetermined diameters, the junctions between adja-

cent counterbores forming horizontally extending shoulder surfaces, said body defining a plurality of longitudinal identical slots extending radially therethrough, said slots being evenly spaced around the periphery of said body and proceeding downwardly from the horizontal shoulder surface formed at the junction between said intermediate and lower counterbores, the uppermost portion of said body being adapted for connection to a drill string, the lowermost portion of said body being adapted for connection to guide means; an elongate mandrel rigidly mounted to said body within said intermediate and lower counterbores, said mandrel having an axial cylindrical bore therethrough, said mandrel defining an upper section and an intermediate section and a lower section, said upper section of said mandrel being of cylindrical configuration with a diameter substantially equal to said intermediate counterbore of said body, said intermediate section of said mandrel being of downwardly linearly tapered configuration with a polygonal cross-section having a number of sides equal to twice the number of slots in said body, alternate sides of the polygon being of equal and constant width throughout the taper of said intermediate mandrel section to thereby define a plurality of rectangular inclined bearing contact surfaces, each of said bearing contact surfaces being aligned opposite a slot in said body, the uppermost part of said intermediate section of said mandrel being of greater cross-sectional area than the cross-sectional area of said cylindrical upper section of said mandrel, the junction between said upper and intermediate sections of said mandrel forming a horizontally outwardly extending shoulder surface abutted in bearing contact with the horizontal shoulder surface formed by the junction between said intermediate and lower counterbores of said body, the lower section of said mandrel being of cylindrical configuration with a diameter substantially less than the diameter of the lower counterbore of said body; a plurality of identical casing cutter members having a longitudinal bearing surface adapted for sliding contact with said contact bearing surfaces of said mandrel and a longitudinally extending cutting edge and a substantially transverse cutting surface at the lower end thereof, said cutting members being disposed within said body with one each of said cutting members in alignment with a slot in said body and with its bearing surface in contact with said bearing contact surface of said mandrel; an annular base plate mounted to the bottom of said mandrel, the outer diameter of said base plate being substantially equal to the diameter of said lower counterbore in said body, the inner diameter of said base plate being substantially equal to the diameter of the axial bore through said mandrel, said base plate being mounted transversely to said mandrel with the central opening in said base plate in substantial alignment with the axial bore through said mandrel, said base plate defining a plurality of small circumferentially spaced openings extending therethrough; annular piston means slideably mounted within said body surrounding said cylindrical lower section of said mandrel above said base plate and below said cutting members, said piston means having an inside diameter substantially equal to the diameter of said cylindrical lower section of said mandrel and an outside diameter substantially equal to that of said lower counterbore in said body, said piston means being adapted for fluid tight vertically sliding contact with said lower section of said mandrel and with said lower counterbore of said body; and, guide means coaxially detachably mounted to the bottom of said body, said guide means having an axial passageway therethrough communicating with the lower counterbore of said body and the axial bore through said mandrel to thereby provide a fluid passage through said casing mill, said guide means being adapted upon the flow of fluid through said casing mill to create a high fluid pressure area in said lower counterbore of said body below said piston means.

3,003,540
PUMP TOOL FOR REWORKING SUBMARINE WELLS
Charles B. Corley, Jr., Gilbert H. Tausch, and John W. Kennedy, Houston, Tex., assignors to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,349
15 Claims. (Cl. 166—70)



1. An elongated device for use in pumping members through tubing extending into a well comprising: a plurality of members connected together for angular movement with respect to one another to permit passage of the tool through any bends in the tubing; a cup packer mounted on each of two adjacent members, said packers being faced in such a direction as to be actuated by the pumping of the fluid to move the device into the well; an annular friction slide mounted for slidable movement about each of two adjacent members, the slide valves being substantially always in frictional contact with the tubing during movement through the tubing, the two adjacent members each having a fluid by-pass extending from a point spaced from the face-side of the cup packer on the particular member to the other side, and stops mounted on the two adjacent members so that the slide valves are movable by frictional contact with the tubing to a position to close the by-passes as the device is being pumped into the well and to a position to open the by-passes as the device is removed from the well.

3,003,561
FREE WHEELING WASH-OVER SPEAR MECHANISM
Franklin L. Le Bus, Sr., and Cecil Ware, Longview, Tex., assignors to Wash Overshot and Spear Engineers, Incorporated, Longview, Tex., a corporation of Texas
Filed Nov. 21, 1957, Ser. No. 697,861
9 Claims. (Cl. 166—99)

1. In a combined fishing and wash-over apparatus for retrieving a stuck fish in a well bore comprising a wash-over pipe having a retrieving unit adapted to be positioned therein, said unit comprising an elongated mandrel having a slidable sleeve thereon, a slip cage telescopically arranged with the sleeve, a plurality of circumferentially spaced slips carried by the slip cage and alternately operable to a gripping and non-gripping engagement with the wash-over pipe, means on the mandrel to provide for a make up connection with the stuck fish, means providing simultaneous movement of the sleeve on the mandrel with vertical movement of the wash-over pipe, means permitting release of the slips from a gripping engagement with the wash-over pipe upon a downward right hand rotational movement of the wash-over pipe relative to the

retrieving unit after a connection of the mandrel to the stuck fish, means to maintain the slips in released condition during vertical upward movement of the wash-over pipe, said means comprising a recess provided in the slidable sleeve, a slotted lock member disposed in the recess and rotatable with the sleeve, means provided on the mandrel to limit rotation of the lock member upon rotation

a plurality of longitudinally spaced annular valve members each surrounding the rod and rigidly connected thereto,

a plurality of annular valve seats, each loosely surrounding the rod and each positioned above one of the valve members, the valve seats slidably engaging the housing and the arrangement being such that the valve seats are seated on the respective valve members, to thereby form a series of pistons, upon movement of the plunger upwardly relative to the housing,

the outside diameter of the valve members being substantially less than the inside of the housing whereby annular spaces are provided between the valve members and the housing,

the inside diameter of the valve seats being substantially greater than the diameter of the rod whereby annular spaces are provided between the rod and the valve seats, and

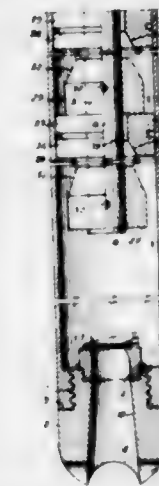
there being fluid passages between the bottom of the valve members and the top of the valve seats.

3,003,563
PERMANENT WELL COMPLETION APPARATUS
Gilbert H. Tausch and John W. Kennedy, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 4, 1956, Ser. No. 589,281
4 Claims. (Cl. 166—114)



of the sleeve in one direction, and a pin carried by the sleeve and extending through the slotted member and responsive to rotation of the sleeve in said direction to move the lock member radially inward into locking engagement with the mandrel and prevent simultaneous movement of the sleeve with the wash-over pipe as it is moved vertically upward and thereby preclude actuation of the slips.

3,003,562
SAND PUMP
Ray A. Yates, Midland, Tex., assignor, by mesne assignments, to Fred W. Cook, Odessa, Tex.
Filed Dec. 27, 1957, Ser. No. 705,531
3 Claims. (Cl. 166—108)



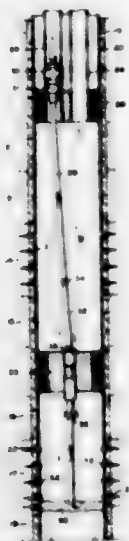
1. A sand pump comprising:
an elongated, normally vertically disposed tubular housing,
a tubular closure member removably connected to the upper end of the housing,
a set shoe removably connected to the lower end of the housing,
a check valve in the set shoe capable of admitting fluids to the interior of the housing while preventing the discharge of fluids therefrom,
a plunger reciprocable in the housing, the plunger consisting of
an elongated rod disposed vertically within the housing,
a rope socket rigidly connected to the upper end of the rod and adapted to be connected to one end of a wire rope,

1. Apparatus for producing a cased borehole penetrating a plurality of spaced-apart hydrocarbon productive intervals comprising two parallel, eccentric, co-extensive, spaced-apart tubing strings arranged in said borehole, the lower open ends of said tubing strings being positioned above the uppermost of said productive intervals, first packing means positioned on said tubing strings adjacent the lower ends thereof adapted to seal off the space between said tubing strings and said casing, second packing means provided with two spaced-apart bores therethrough positioned in said borehole between said uppermost productive interval and a lower productive interval adapted to seal off the space between the walls of said bores and said casing, a plug positioned in one of said bores adapted to prevent fluid flow through said bore and a tubing extension sealingly supported in one of said tubing strings and extending through said other bore, said tubing extension sealingly engaging with the wall of said other bore and being open ended whereby production fluids from said lower interval are isolated from production fluids from said upper interval, said fluids from said lower interval flowing upwardly through said tubing extension and through said one tubing string and fluids from said upper interval flowing upwardly through said other tubing string.

3,003,564

WELL COMPLETION

David E. Smink, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
 Filed Jan. 8, 1959, Ser. No. 785,745
 9 Claims. (Cl. 166—114)



1. A tubular member adapted to be retrievably suspended and sealed in the lower end of a tubing string in a well casing and to extend into the bore of a packer spaced vertically below the lower end of said tubing string in said casing which comprises a plug member slidably carried externally by said tubular member intermediate its ends, external first and second stop means on said tubular member spaced longitudinally from the ends of said plug member, first sealing means carried by said plug member for sealing with the exterior wall of said tubular member, second sealing means carried by said plug member for sealing with the bore of said packer, said plug member being provided with at least one normally closed passageway extending longitudinally through said plug member, and closure means in said passageway openable by imposition of fluid pressure thereon from above said packer when said plug member is in the bore of said packer.

3,003,565

APPARATUS FOR EQUALIZING THE PRESSURE DIFFERENTIAL BETWEEN THE INTERIOR AND EXTERIOR OF A PLUGGED TUBING STRING
 Horace L. Courtney, Victoria, Tex., assignor to Completion Tools, Inc., Victoria, Tex., a corporation of Texas
 Filed Mar. 28, 1958, Ser. No. 724,590
 18 Claims. (Cl. 166—152)



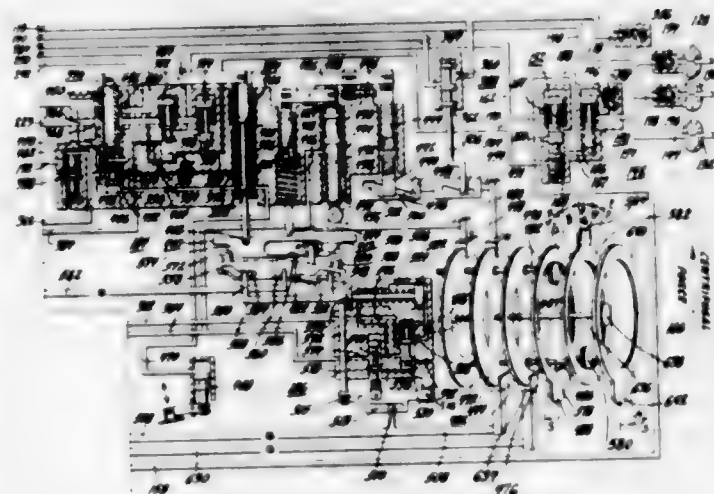
1. A well tool comprising, packer means including a tubular mandrel adapted to seal between said mandrel

and the casing of a well in which the tool is run, means closing the lower end of the mandrel, said mandrel having a duct exposed to well fluids below the packer means, valve means carried by the mandrel and controlling flow through the duct for permitting well fluids below the packer means to enter the mandrel, means carried by the mandrel and maintaining the valve means in closed position while running the packer means, and means carried by the packer means responsive to setting of the packer means for rendering the maintaining means ineffective and opening the valve means.

3,003,566

VARIABLE PITCH PROPELLER

Francis E. Conn, Piqua, and Calvin C. Covert, Elton K. Morice, and William A. Weis, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
 Filed Oct. 10, 1958, Ser. No. 766,611
 20 Claims. (Cl. 170—160.21)



1. A control system for a variable pitch propeller having a plurality of propeller blades rotatable about their longitudinal axes between a maximum negative pitch angle and a fully feathered pitch angle including, fluid pressure operated motor means operatively connected to said blades for adjusting the pitch position thereof, a source of fluid under pressure, a speed sensitive governor, a valve operated by said governor for controlling the flow of fluid under pressure from said source to said pitch adjusting motor means, a manually operable control for said governor having a forward thrust constant speed governing position wherein the pitch position of said propeller blades can be adjusted between minimum and maximum positive angles and a reverse thrust constant speed governing position wherein the pitch position of said propeller blades can be adjusted between maximum and minimum negative angles, and means actuated by said manual control for reversing the sense of said governor during movement of said manually operable control from the forward thrust governing position to the reverse thrust governing position.

3,003,567

COMBINED MECHANICAL PITCH LOCK AND PITCH STOP ASSEMBLY

Oren F. Flaugh, Dayton, Richard A. Hirsch, West Milton, and James R. Mansfield, Troy, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 20, 1958, Ser. No. 756,219
 16 Claims. (Cl. 170—160.33)

1. A variable pitch propeller including, a hub, a plurality of propeller blades journaled in said hub for rotation about their longitudinal axes to different pitch positions, means carried by said hub and operatively connected to said blades for adjusting the pitch position

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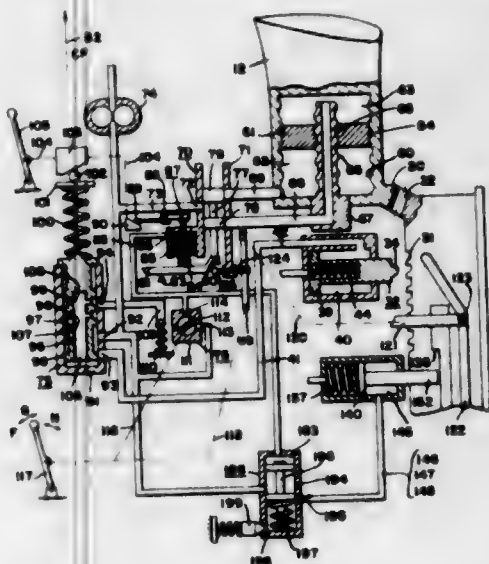
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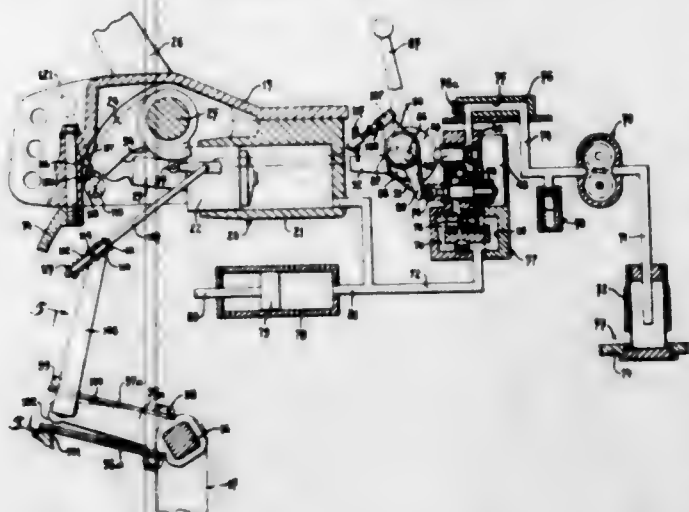
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thereof, a member operatively connected to said blades so as to be rotated thereby and supported in said hub for rotation about the horizontal propeller axis, lock means engageable with said member under certain conditions for preventing rotation of said member and said propeller blades in a decrease pitch direction, a source of fluid under pressure, a fluid pressure actuated servo for maintaining said lock means disengaged from said member, a drain conduit, means for controlling said fluid



pressure actuated servo comprising a speed sensitive valve having a first position for connecting said servo to said source of fluid under pressure and movable to a second position for connecting said servo to said drain conduit in response to a predetermined propeller overspeed, means for adjusting the speed setting of said speed sensitive valve, and a spring biased check valve in said drain conduit for maintaining a predetermined minimum pressure in said servo at all times.

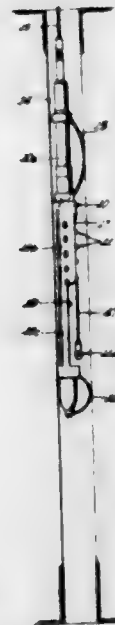
3,003,568
HYDRAULIC POWER UNIT AND CONTROL SYSTEM FOR TRACTORS
 Henry Edward Merritt, Claverdon, Warwick, England, and Pierre Francois Tiberghien, Marcq-en-Baroeul, and Alain Henri Eugene Gougelot, Flers Lez Lille Nord, France, assignors to Massey-Ferguson (Great Britain) Limited, Manchester, England, a British company
 Filed Aug. 28, 1958, Ser. No. 757,768
 Claims priority, application Great Britain Sept. 3, 1957
 11 Claims. (Cl. 172-7)



1. The combination in a tractor having a vertically swingable implement hitch linkage, a hydraulically operated power unit for raising and lowering the linkage and a continuously driven pump for supplying fluid under pressure to the unit, valve means controlling the delivery of pressure fluid to and exhaust of pressure fluid from

the unit, other valve means operative when actuated to by-pass the pressure fluid supplied by the pump, a hand lever pivoted on the tractor adjacent said valve means to swing in opposite directions from a neutral position, means operable by said hand lever when in neutral position for actuating said other valve means, alternatively available draft load and position responsive controls for said valve means, said draft load responsive control including a member shiftable by said hand lever when swung in one direction to actuate said valve means to maintain a uniform draft load on the linkage at a value determined by the extent of displacement of the hand lever from its neutral position, and said position responsive control including a member shiftable by the hand lever when swung in the other direction to actuate said valve means for raising or lowering the linkage in positional agreement with the setting of said hand lever.

3,003,569
SIDEWALL SAMPLER
 Forrest V. Porter, San Gabriel, and Ralph E. Hendrickson, Glendale, Calif., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
 Filed May 6, 1957, Ser. No. 657,149
 8 Claims. (Cl. 175-4)

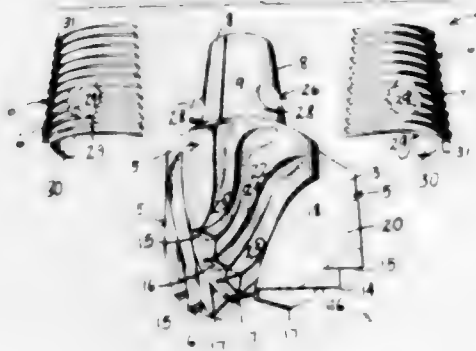


1. A sidewall sampler adapted to be lowered into an earth borehole so as to obtain a sample of a desired formation intersected by said borehole, comprising: a gun body; a gun bore in said body; a sampling projectile in said gun bore and having an axial formation sample-receiving bore extending therethrough; propulsion means operatively associated with the said gun bore and said projectile for propelling said projectile from said gun bore into said formation; piston means initially disposed forwardly in the said sample-receiving bore of said projectile for slideable movement longitudinally therein between each end thereof, said piston means being formed with fluid-transfer passage means; valve means mounted on the said piston means to control fluid flow through said passage means for permitting discharge of fluid rearwardly therethrough from the forward portion of the said sample-receiving bore of said projectile as it enters said formation to capture a sample and for preventing the entry of fluid into the said sample-receiving bore in the opposite direction through said piston means after a sample has been captured therein; stop means formed adjacent each end of said sample-receiving bore to limit the movement of said piston means therein; cable means initially disposed in the said sample-receiving bore rearwardly of the piston means; and attachment means connecting one end of said cable means to the said piston means and the other end thereof to the gun body.

3,003,570

DETACHABLE BLADE BIT

Joe A. Roland, 5117 Rocky Ridge Road, Dallas 32, Tex.
Filed Sept. 24, 1958, Ser. No. 763,039
3 Claims. (Cl. 175-391)

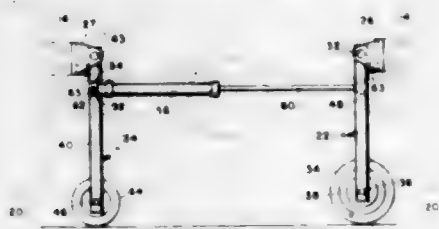


1. A detachable blade rotary drilling bit adapted to be positioned on a drilling sub comprising, a plurality of blades each having a shank with a tapering surface thereon, said shanks each being of a circumferential extent to define substantially a complete circle when said blades are positioned adjacent each other to form a bit, a circumferentially extending shoulder on each blade defining the termination of said shank portion of said bit, a flat surface extending from each of said blades, said surface extending longitudinally of each of said blades and being in a radial plane of the circle formed by said blades when assembled adjacent each other, said surface defining a support for receiving and supporting an adjacent blade thereagainst when the blades are assembled adjacent each other, a segmented ring with each segment having an inner surface conforming complementary to said surface on said blade shanks whereby said segmented ring may seat about said shanks, cooperating means engaging between each of said shanks and each of said ring segments to lock said segmented ring and shanks together against relative rotation and against relative longitudinal movement, and a threaded surface on the exterior of said ring whereby said ring and shanks held therein may be engaged with a drilling sub, said cooperating engaging means including a projection on each of said shanks and an opening in each of said segments for receiving each of said projections therein.

3,003,571

PARKING MEANS FOR AUTOMOBILES AND THE LIKE

Clark W. Ash, 2806 6th St., and Anne A. van Ginkel-Ondrus, 2740 6th St., both of San Diego, Calif.
Filed May 23, 1960, Ser. No. 31,023
3 Claims. (Cl. 180-1)



1. Parking apparatus for use with a wheeled vehicle having a frame, said apparatus comprising:

two pairs of leg units, each of said leg units having a substantially rectangular form comprising two substantially parallel side pieces, two substantially parallel end pieces, spacing means for maintaining the spacing between said side pieces, one of said end pieces being adapted for pivotal mounting, the other of said end pieces having a ground-contacting wheel mounted thereon, and an offset lug mounted on one of said side pieces;

leg unit mounting means positioned on said frame adjacent each wheel of said vehicle, said leg unit mounting means comprising a bracket that engages the pivotal end piece of said leg units and causes said leg units to pivot in a vertical direction, pairs of said leg unit mounting means being positioned on opposite sides of said frame to position a pair of said leg units at opposite ends of said frame, whereby said wheel of said leg units rotates in a direction transverse to the longitudinal axis of said frame;

a telescopic jack operatively associated with each pair of leg units positioned at the ends of said frame, said jack having a casing and a single extensible rod; means for pivotally connecting the ends of said casings to the lugs of one leg unit of a pair; means for pivotally connecting the free end of said jack rod to the lug of the other leg unit of a pair; a source of power connected to each said jack to operate each said jack;

first means, comprising said source of power, for extending said jacks and causing the pivotal connections at the ends thereof to force said lugs apart and pivot each said pair of leg units into a vertical position, whereby said wheels of said leg units support said vehicle;

second means, comprising said source of power for telescoping said jacks and causing the pivotal connections thereof to bring said lugs toward each other and pivot said leg units into horizontal positions, whereby the leg units and their wheels are foldably retracted under said frame;

a motor attached to one wheel of each pair of leg units;

means for connecting said source of power to said motors;

and means whereby when said leg units are in their vertical position with their wheels supporting said vehicle, said source of power may rotate said wheels and move said frame in a direction transverse to its longitudinal axis.

3,003,572

AIRCRAFT LAUNCHING VEHICLE

Eugen Snger, Gerlingen-Schillerhohe, near

Stuttgart, Germany

Filed Oct. 4, 1957, Ser. No. 688,158
3 Claims. (Cl. 180-1)

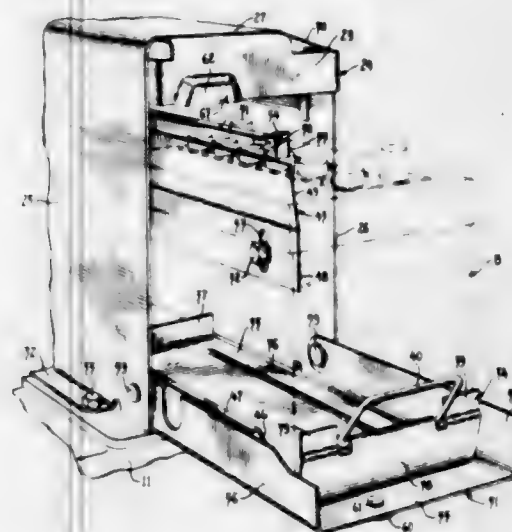


1. In combination with the frame of a vehicle for accelerating an aircraft to take-off speed, said frame being supported on freely rotatable wheels, vehicle propulsion means independent of the wheels on the frame comprising a tank mounted on the wheeled frame and holding a fluid, means defining ducts extending rearwardly and forwardly of the vehicle from the tank and each terminating in a pair of vapor ejection nozzles disposed in divergent relationship about the longitudinal axis of the vehicle, means in the tank for generating pressure vapor from the fluid, and valve means in the tank controlling flow through the ducts for selectively releasing the pressurized vapor through one of the pairs of nozzles to accelerate and decelerate the vehicle.

3,003,573

BATTERY MOUNTING FOR TRACTORS

Leo J. Lorenz, Farmington, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Oct. 1, 1959, Ser. No. 843,782
1 Claim. (Cl. 180-68.5)

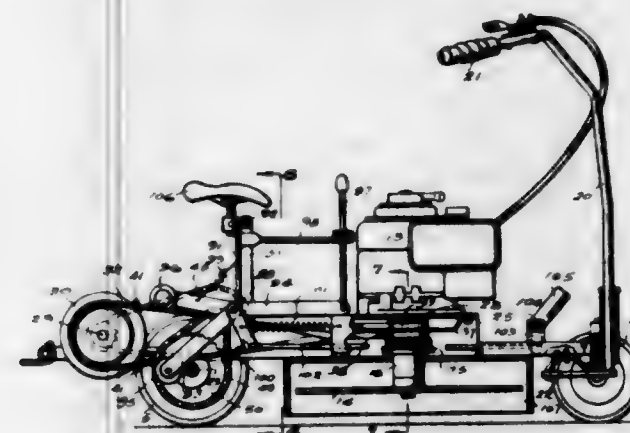


A battery mounting for tractors comprising, in combination, a sheet metal box structure having side walls, a top wall and one end wall defining a storage battery compartment, means securing said box to the body of a tractor with the top surface of a transmission housing forming the bottom of the box, a battery supporting tray adapted to rest on said box bottom within said compartment, a closure member including a flat metal plate having flanges at opposite side edges spaced apart to fit against the side walls of the box, pins extending through said flanges and the adjacent walls pivotally connecting the member to the structure to swing about a horizontal axis, said flanges extending beyond one end of said plate to accommodate said pins and locate the pivot axis of the member so that the lower edge of the plate engages the side of the tractor body to retain the plate in the same plane as the top surface of the transmission housing when the closure member is swung to open position and thereby define a slideway on which said tray may be withdrawn from the compartment.

3,003,574

POWERED IMPLEMENT WITH FORWARD AND REVERSE DRIVE

Leonard Milton Strunk, R.D. 4, Coatesville, Pa.
Filed Oct. 1, 1956, Ser. No. 613,142
6 Claims. (Cl. 180-70)



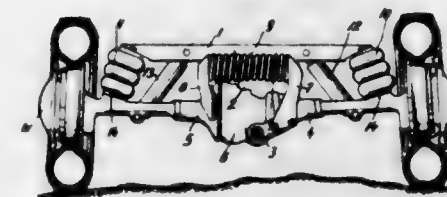
1. In a dirigible ground tending power vehicle, a rigid frame structure, ground engaging wheels respectively supporting the fore and aft ends of said frame structure, a power unit carried by said frame structure and having a depending drive shaft intermediate the front and rear

vehicle wheels, and power transmitting means operatively intervening said power unit and the rear vehicle wheels comprising pulley means mounted upon said drive shaft to be unidirectionally driven therewith by said power unit, additional pulley means revoluble about a horizontal axis extending across said vehicle, a pair of endless belts each trained over said unidirectional and additional pulley means but operatively disengaged from the pulley means aforesaid by reason of slack in the belts, one of said endless belts crossing itself between the unidirectionally driven and additional pulley means about which it is trained, belt tightening means mounted upon said frame structure and operable by the driver while seated upon the vehicle for optionally tightening either or both of said belts, whereupon said additional pulley means is rotated in one direction or the other depending upon which of said belts is tightened, and said additional pulley means is locked against rotation when both of said belts are tightened, and means operatively intervening said vehicle rear wheels and additional pulley means and operating to translate rotary motion of the latter in opposite directions respectively into forward and reverse motion of said vehicle, the vehicle being secured against movement in either direction when said additional pulley means is locked as aforesaid, and being free to coast in either direction when said additional pulley means is not locked as aforesaid and either belt is tight.

3,003,575

PNEUMATIC AND EQUALIZED MECHANICAL SPRING SUSPENSION FOR HALF AXLES

Friedrich K. H. Nallinger, Stuttgart-N, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 25, 1958, Ser. No. 723,827
Claims priority, application Germany Mar. 30, 1957
1 Claim. (Cl. 180-73)



In a motor vehicle, the combination comprising frame means, said frame means including a transverse beam member, a pair of half axles, means for pivotally supporting said half axles on said transverse beam member for oscillation individually about only one axis extending essentially fore and aft, resilient connecting means between said transverse beam member and said half axles comprising two pneumatic spring bellows, one each of said two bellows being respectively associated with a respective one of said half axles, said transverse beam member terminating in seating means for one end of each said bellows, said seating means being outwardly and downwardly inclined relative to said transverse beam member, each of said half axles comprising seating means for the other end of each of said bellows, said last-named seating means facing upwardly and being inclined angularly to the axis of a respective half axle, the bellows of one half axle being operative independently of the bellows of the other half axle and providing each a progressive spring characteristic in response to oscillation of the respective half axle, one spring abutment for each half axle, each spring abutment being secured to a respective half axle for oscillating movement therewith, and a mechanical spring responsive exclusively to the geometric sum of the movements of the half axles and operatively connected between said spring abutments to serve simultaneously as equalizing spring and as auxili-

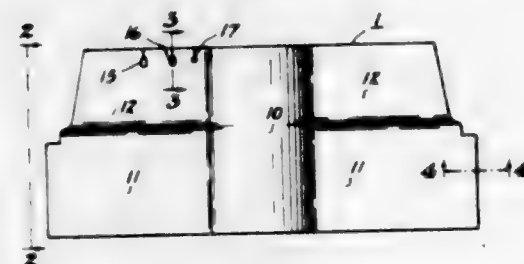
ary spring to aid said two pneumatic spring bellows in case of spring movements of said half axles producing a resultant geometric sum, shock absorbers having lower ends connected to said half axles intermediate said seating means on said half axles and having upper ends connected to said transverse beam member intermediate said seating means on said transverse beam member, said lower ends being spaced apart a greater distance than the distance between said upper ends, and a rear axle transmission housing between said half axles, said mechanical spring being a compression spring and disposed above said housing.

3,003,576

AUTOMOBILE FLOOR MAT

Howard M. Dodge, Marion, Ind., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed May 27, 1957, Ser. No. 661,915
3 Claims. (Cl. 180-90.6)



1. A flexible laminated automobile floor mat having a central hump portion with integral generally horizontal portions on opposite sides of said hump portion and integral portions on opposite sides of said hump portion inclined upwardly from said horizontal portions, one of the inclined portions having pedal openings therein, said mat comprising a flexible heterogeneous polymeric energy-absorbing base layer of plasticized polyvinyl chloride which at room temperature will not readily retract from the shape in which it is formed at elevated temperatures; an intermediate cellular elastic polyurethane layer bonded to the top surface of the base layer and having a thickness several times the average thickness of the base layer, said intermediate layer having a thickness throughout its margin and throughout the margins of the pedal openings which is only a fraction of its thickness inwardly of said margins, and a flexible polyvinyl chloride upper layer bonded to the top surface of the intermediate layer and having a thickness less than that of the base layer.

3,003,577

APPARATUS FOR SEISMIC EXPLORATION

Oswald A. Itria, Bellaire, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed June 5, 1957, Ser. No. 663,830
2 Claims. (Cl. 181-5)



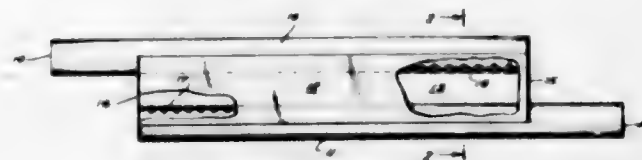
1. A seismic exploration device comprising a source of seismic disturbance, a plurality of detectors laterally spaced from said source, and a recorder connected to said detectors, each detector comprising at least three detector elements, each having an axis of maximum sensitivity and each of said axes being mutually perpendicular to the others, and said recorder having means recording in trace groups the seismic energy received by each group of like detectors.

3,003,578

MUFFLERS

Harry Ewaschuk, 12228 88th St., Edmonton, Alberta, Canada

Filed Apr. 14, 1959, Ser. No. 806,300
1 Claim. (Cl. 181-53)



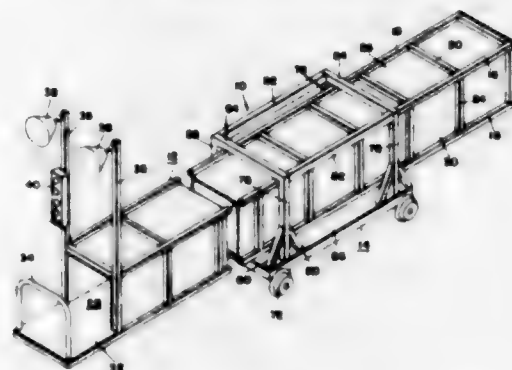
In a muffler structure, a pair of spaced, substantially parallel tubular members offset relative to each other so that one end, designated as outer end, of one member extends beyond the other end, designated the inner end, of the other member, a pair of substantially parallel connecting plates joining said members peripherally along spaced parallel diametrically opposite lines extending axially of said members, end plates closing the inner ends of the tubular members and being secured to the ends of said connecting plates, whereby a closed chamber is formed defined by the outer surfaces of said tubular members, the connecting plates and the end plates, said tubular members having perforations opening into the interior of the thus formed chamber, said perforations progressing in the direction from the closed ends of the tubular members toward their outer ends but terminating short of the end plates.

3,003,579

BOOM

David Weiss, Philadelphia, Pa., assignor to Dalco Industries, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed July 13, 1959, Ser. No. 826,855
2 Claims. (Cl. 182-13)



1. A boom comprising an elongated hollow duct, said duct being closed at one end, a platform means on the other end of said duct for carrying a person, a ventilating fan in said closed end and for forcing air through said duct toward said platform, motor means electrically connected to said fan, movable supporting means for moving said duct with respect to a supporting surface, illuminating means carried by said duct above said platform means, and a control means on said duct above said platform for selectively operating said illuminating means and said motor means.

3,003,580

SEPARATION OF REACTION PRODUCTS OF HYDROGENATION OF CRUDE OIL

William C. Lanning, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 13, 1958, Ser. No. 766,791
8 Claims. (Cl. 183-2.5)

1. A process for the separation of finely subdivided solids entrained in a flowing stream, comprising a mixture of liquid and gas, which comprises passing said solids-

containing stream upwardly into an elongated zone, passing said stream through a region of said elongated zone having a reduced cross section intermediate the ends of said elongated zone, further passing said upflowing stream into a conical zone positioned intermediately within said elongated zone and above said reduced cross section, disengaging and removing gas from said stream by permitting said gas to flow through the top of the said conical zone and from the upper portion of said elongated

suspended in the air stream from the retaining means with depression by the air stream of the air inlet face of the panel limited by its attachment with the retaining means, while the panel expands through its thickness with the unconfined outlet face thereof bulging outwardly in the direction of air flow, the density of the air panel and the resistance to the flow of air therethrough being reduced by the increase in thickness of the panel thus produced.

3,003,582

AIR FILTERING APPARATUS

Robert A. Palmore, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Nov. 27, 1959, Ser. No. 855,739
7 Claims. (Cl. 183-62)



zone, passing the upflowing solids and liquid through a region defined by the bottom of the said conical zone and the said region of reduced cross section into a quiescent zone, positioned outside said conical zone and within said elongated zone, maintaining the average linear velocity of the solids-liquid stream entering said quiescent zone not greater than the velocity at which solids settle from said solids-liquid stream, settling solids from the liquid in said quiescent zone and removing liquid of reduced solids content from said quiescent zone.

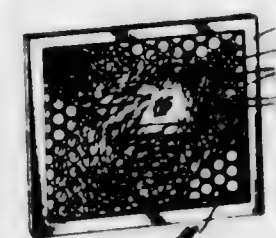
1. In air filter apparatus arranged to employ, as a filter medium, a web of expansible-compressible permeable material and in which the filter medium is advanced from a supply zone, through an air filtering zone in a planar curtain form and a resiliently expanded state, and into a discharge zone, filter medium guide and support structure comprising: a substantially planar group of rods disposed to engage and support a surface of said filter medium in said planar curtain form in said air filtering zone, said group including a plurality of rods having a length generally coextensive with the length of said air filtering zone and disposed, throughout said length, at an angle relative to the direction of filter medium advance for urging said filter medium engaged by said angularly disposed rods in a filter medium width increasing direction.

3,003,581

FIBROUS GLASS AIR FILTERS

David M. Gresson, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Filed Dec. 26, 1957, Ser. No. 705,319
13 Claims. (Cl. 183-49)



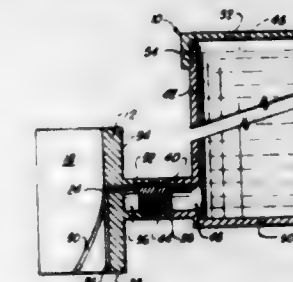
1. A fibrous air filtering unit for functioning in an air stream of high velocity including a frame, the frame having open air inlet and air outlet sides, a filtering panel of fibers, said fibers being interbonded to a sufficient degree to make the panel coherent and self-supporting through its thickness while resiliently expandable in its thickness dimension under the effect of an air stream of high velocity passing through the panel, and air permeable retaining means, supported by the frame, extending across the air inlet face of the panel in positive attachment with surface fibers of the panel and therethrough in supporting attachment with the whole filtering panel of interbonded fibers, the air outlet face of the panel being completely unconfined within its periphery and free to bulge outwardly in the direction of air flow, whereby when an air stream of high velocity is flowing through the panel, the panel is

3,003,583

POLISHED ROD LUBRICATOR

William B. Thomas, Rte. 2, Wellston, Okla., assignor of fifty percent to Herman Thomas, Shawnee, Okla.

Filed Sept. 21, 1959, Ser. No. 841,194
8 Claims. (Cl. 184-65)



1. A device for lubricating an oil well polished rod in accordance with the temperature of the polished rod, comprising a body formed of a heat conducting material, said body having an upper end and a lower end and having its inner face curved to mate with a portion of the periphery of the polished rod, said body also having an aperture extending transversely therethrough and a groove in the inner face thereof extending from said aperture to the lower end of the body, means for clamping the body to the polished rod, a container carried by the body having

an outlet in the lower portion thereof, a supply of lubricating oil in the container characterized by having its viscosity change in inverse relation with respect to its temperature, a horizontally extending conduit connected to the body and the container providing communication between said outlet and said aperture and being formed of a heat conducting material to retain the temperature thereof substantially equal to the temperature of the polished rod, and a restriction in said conduit formed of a heat conducting material and having an orifice therein of a size to control the flow of the lubricating oil therethrough in accordance with the temperature of the polished rod.

3,003,584 HYDRAULIC LIFT

John E. Wiegand, 6848 W. Madison St., Niles 31, Ill., and John K. Hoenig, 1747 Linneman St., Glenview, Ill.
Filed Mar. 20, 1959, Ser. No. 800,777
5 Claims. (Cl. 187-2)



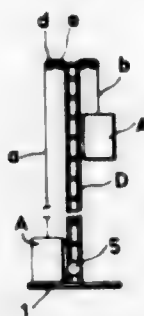
2. A portable hydraulic lift comprising a chassis, a collapsible mast mounted on said chassis, a load-supporting platform movable along said mast, said mast comprising a lower section perpendicularly secured to said chassis and an upper section pivotally connected to said lower section, hydraulic means for pivoting said upper section into and out of alignment with said lower section, for lowering said upper section and for moving said platform along said mast, means connecting said hydraulic means with said upper section to permit said upper section to be pivoted by said hydraulic means, said connecting means being disengageable from said hydraulic means when said upper section is aligned with said lower section to permit said platform to be moved along said mast by said hydraulic means, and control means extending along said mast for actuating said hydraulic means, said control means being operable by an operator supported on said platform at any position of said platform along said mast.

3,003,585 BUILDING HOISTS

Nils Einar Andersson, Bryggerigatan 12, Klippan, Sweden
Filed July 15, 1959, Ser. No. 827,327
Claims priority, application Sweden July 16, 1958
3 Claims. (Cl. 187-2)

1. A device for changing the effective hoisting height in building hoists having a drive shaft, a first rope drum fixed to said shaft, a second rope drum rotatably mounted on said shaft, two cages, and two ropes each suspending one of said cages from one of said rope drums, said ropes being wound in opposite directions around the respective drums, said device comprising in combination a dis-

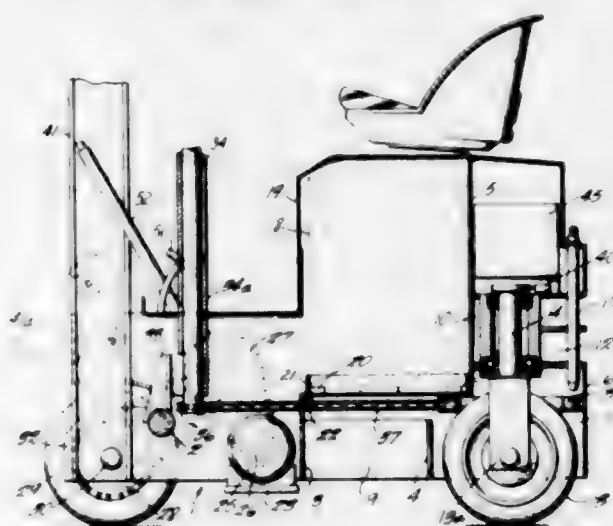
engageable clutch coupling said second rope drum with said shaft, locking means operable to lock said second rope drum against rotation, and a common control mechanism which upon actuation is adapted first to operate



said locking means to lock said second rope drum and then to disengage said clutch, and after that first to engage said clutch and then to make said locking means inoperative.

3,003,586 VEHICLE

Jakob Loef, Adolf Paul, and Kurt Steinert, Moosburg, Germany, assignors to Firma Steinbock G.m.b.H., Moosburg, Germany, a German company
Filed Aug. 28, 1959, Ser. No. 836,669
Claims priority, application Germany Aug. 28, 1958
7 Claims. (Cl. 187-9)



1. A forked lifting and conveying vehicle comprising, in combination, a chassis, a pair of fixed-axle forward wheels mounted in said chassis, a steerable rear wheel mounted in a fork on a vertical axis, a lifting column extending vertically between said forward wheels, a lift fork movable in the lifting column, a pair of electric motors each connected to drive one of the forward wheels, a battery for supplying power to said motors and disposed in said chassis between the steerable wheel and the forward wheels, a compartment filled with counter-weight means disposed in said chassis below said battery, steering means for said steerable wheel comprising a steering ring acting upon said fork, a steering column, and a chain connecting said steering column with said ring, said chain and said ring underlying said battery and overlying said compartment filled with counter-weight means.

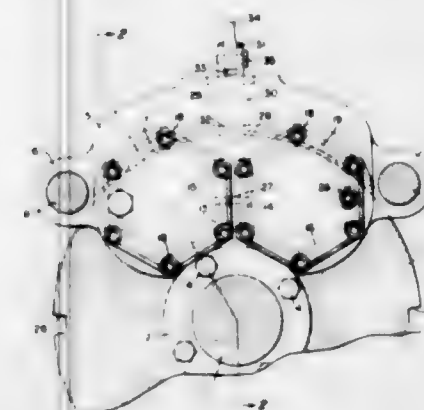
3,003,587 HYDRAULIC BRAKE WITH POSITIVE LOCK

James C. Garrett, Canton, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Nov. 4, 1958, Ser. No. 771,792
1 Claim. (Cl. 188-68)

A hydraulic brake comprising a single rotatable brake disc secured to a rotatable spindle to be braked, a non-

rotatable brake member slidably mounted for floating movement axial of said disc but restrained against rotation with said disc, said non-rotatable member comprising a member C-shaped in cross section having limbs flanking opposite sides of the disc, one of said limbs having cylinder means formed therein and extending therethrough in a direction axial of the disc, a piston removably mounted for axial sliding movement in said cylinder means, friction pads opposed to said disc, one of said pads being mounted on a limb of said C-shaped member and the other being mounted opposite thereto on said piston, fluid pressure means for advancing said piston to friction-

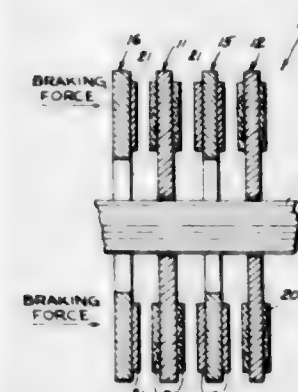


ally engage the friction pads with the disc, locking mechanism for positively locking the same disc against rotation, said locking mechanism including a number of widely spaced V-shaped notches in the outer periphery of the disc, said notches having flat axially extending sides converging at an angle greater than the radial angle defined by the radially outer ends of said notches, and bolt means having a wedge-shaped end with a pair of flat converging sides complementary in shape to said notches radially engageable in said notches and locking the disc and the non-rotatable member against relative rotation at any floating position of said member.

3,003,588 FRICTION COUPLES

Howard B. Huntress, Suffern, N.Y., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Filed Sept. 14, 1959, Ser. No. 839,897
2 Claims. (Cl. 188-71)

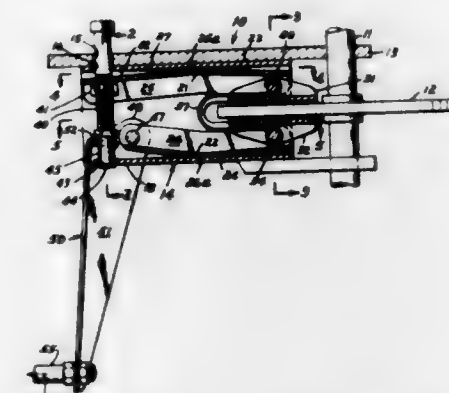


1. A friction couple comprising a rotary plate member and an opposing plate member engageable one with another, one of said members being separately faced with a powdered metal friction element essentially composed of a matrix of nickel aluminate intermetallic bonded by and sintered with nickel metal, and containing a hard ceramic in the matrix imparting enhanced wear and thermal resistance thereto, and the other of said members being separately faced with substantially pure molybdenum metal, said facings being disposed opposite one another in the friction couple.

3,003,589 VEHICULAR BRAKE

Roy M. Desbrow, Azusa, Calif., assignor to Azusa Engineering, Inc., Irwindale, Calif., a corporation of California

Filed Aug. 22, 1960, Ser. No. 50,990
9 Claims. (Cl. 188-73)



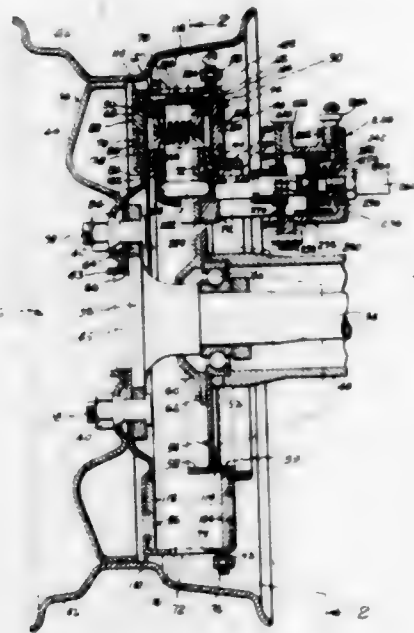
1. A brake comprising: a rotatable disc whose rotation in a circumferential direction is to be braked; a housing mountable to structure fixed relative to the disc, said housing including a pair of fulcrum points on opposite sides of the disc, and a pair of restraint means; a first and a second brake arm inside the housing, each having a fulcrum point coincident with one of the fulcrum points on the housing so that each arm is rockable at a respective fulcrum point; a pair of brake shoes; means mounting one of said brake shoes to each of said brake arms at a first side of the pivot points, the brake shoes being so disposed and arranged as to be brought to bear against opposite sides of the disc; a threaded bolt, the housing having an opening in the plane of rotation of the brake arms through which the bolt passes, the first brake arm being located immediately adjacent the said opening and having an aperture through which the bolt passes, the portion of the said first brake arm surrounding the aperture forming a nut seat; a nut threaded to said bolt on the opposite side of the said first brake arm from the opening and bearing against said nut seat; a lever pivotally jointed to the second brake arm on the opposite side of its pivot point from its respective brake shoe; a shoulder seat carried by said lever facing the nut seat; and a shoulder on the threaded bolt bearing against the shoulder seat, the shoulder seat and the fulcrum point of the second brake arm being on opposite sides of the location where the lever is pivotally jointed to the second brake arm, the restraint means being on opposite sides of the brake arms and adapted to restrain the brake arms and shoes from movement in the circumferential direction whereby drawing the lever in a direction away from the brake shoes moves the ends of the arms remote from the brake shoes apart to press the brake shoes against the disc.

3,003,590 DOUBLE-DISC VEHICLE BRAKE

Charles S. Ash, 2220 Wixom Road, Milford, Mich.
Filed Oct. 10, 1957, Ser. No. 689,314
7 Claims. (Cl. 188-73)

1. A double-disc brake for installation between a rotary vehicle wheel and a stationary vehicle wheel axle mount, said brake comprising a brake disc support adapted to be rotatably connected to the vehicle wheel, first and second brake discs mounted on said support in axially-spaced relationship and having axially-spaced parallel inner braking surfaces facing one another, first and second segment-shaped brake shoes mounted in axially-spaced relationship in the space between said brake discs for axial motion into and out of engagement with said braking surfaces, each brake shoe having a circum-

ferential length of less than a semi-circle and having a radially-directed side wall with a brake-disc-engaging surface thereon, means connected to said mount for restraining one of said brake shoes against circumferential motion while effecting axial braking motion thereof, said means including transversely-spaced generally rectilinear

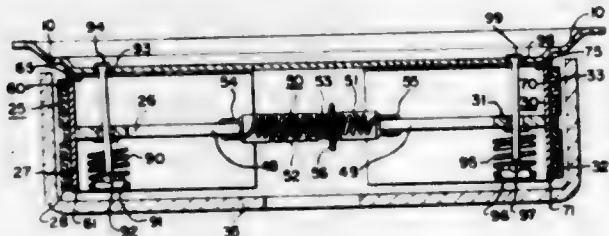


guideways disposed between said one brake shoe and said mount in a generally axial direction, and rollably anti-friction elements interposed between said guide-ways and mechanism engageable with said brake shoes for urging said brake shoes axially in opposite directions into braking engagement with said braking surfaces of said brake discs.

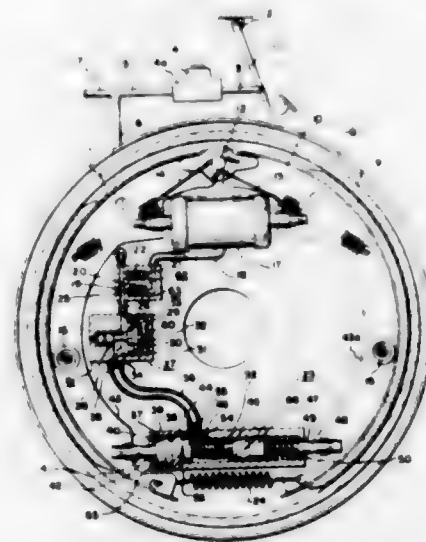
3,003,591 SELF-CENTERING ARRANGEMENT FOR BRAKE SHOES

Richard C. Rike, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 28, 1959, Ser. No. 849,299
6 Claims. (Cl. 188-78)



1. In a brake assembly for a friction type drum brake, the combination of, a backing plate, anchor means on said backing plate, brake shoe means having adjacent ends thereof engaging said anchor means pivotally supporting thereby the brake shoe means on said anchor means, and a plurality of brake shoe support pads on said backing plate each having a planar face engaged by an edge of said brake shoe means in support thereof on said pads, each of said planar faces being disposed angularly relative to the plane of the backing plate and inclined angularly downwardly toward the central area of the backing plate tending thereby always to urge said brake shoe means to a position concentric with the axis of the backing plate and thereby concentric with a brake drum in operable association with the backing plate.



1. An automatic brake adjuster for use in a hydraulically operated vehicle drum brake comprising in combination, a hydraulic fluid brake actuating system, means for pressurizing fluid within said fluid system, a vehicle drum brake having a brake drum, brake shoes for frictionally engaging said brake drum, and hydraulic means for engaging said brake shoes with said brake drum in communication with said hydraulic fluid brake actuating system, an automatic brake adjuster for use with said vehicle drum brake including a hydraulically extensible strut positioned between two cooperative adjacent ends of said brake shoes, a spring connected to the two cooperative adjacent ends of said brake shoes to maintain contact between said brake shoes and said hydraulically extensible strut, a clearance holding piston within said hydraulically extensible strut having a fluid chamber, a push rod connecting said clearance holding piston with the first of said two cooperative adjacent ends of said brake shoes, a wear compensating piston within said hydraulically extensible strut having an adjustable screw, said adjustable screw having means for extension relative to said wear compensating piston, a second push rod connecting said wear compensating piston with said second of said two cooperative adjacent ends of said brake shoes, conduit means from said hydraulically extensible strut to said hydraulic fluid brake actuating system, a pressure limiting valve in said conduit means to limit the pressure within said hydraulically extensible strut, a two-way check valve in the conduit means in said hydraulic brake fluid actuating system in communication with said fluid pressurizing means to retard the actuation of the vehicle brakes to a time subsequent to the operation of said adjustable strut.

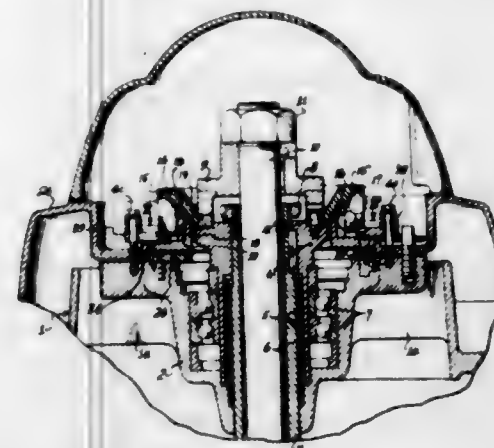
3,003,593 RATCHET MECHANISM FOR PREVENTING REVERSE ROTATION

Frederick O. Luenberger, Los Angeles, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California

Filed Jan. 20, 1958, Ser. No. 709,981
3 Claims. (Cl. 188-82.84)

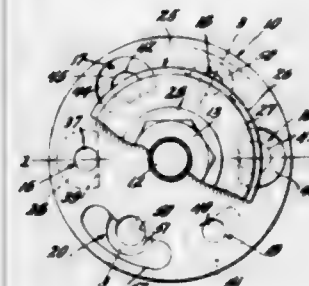
1. For use with a pump structure: a support; a shaft extending transverse to the support and adapted to drive the pump; means mounting the shaft so that the shaft is capable of continuous rotation relative to the support; said shaft having a desired direction of rotation; selectively operable means for rotating said shaft member in

said desired direction; a pair of ratchet members, one of the members being carried by the shaft; the second ratchet member being mounted by the support; means confining the second ratchet member for movement relative to the support about the axis of said shaft; an open ring having spaced ends; each end having a concave recess; a pin



carried by said support and engaging the concave recess at one end of the ring for anchoring the corresponding ring end; and a pin carried by the second ratchet member and engaging the concave recess at the other end of the ring, whereby said ring resiliently opposes movement of said second ratchet member about said axis upon engagement of said ratchet members.

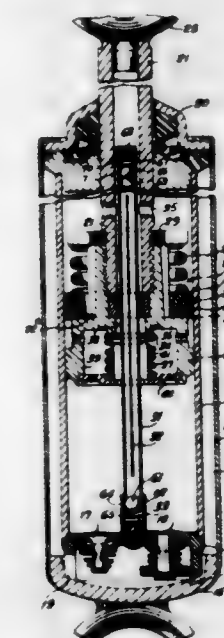
3,003,594
SHOCK ABSORBERS
Christian M. L. L. Bourcier de Carbon, 64 Blvd. Maurice-Barres, Neuilly-sur-Seine, France
Filed Dec. 9, 1957, Ser. No. 701,585
Claims priority, application France Nov. 4, 1957
15 Claims. (Cl. 188-88)



5. In a double-acting fluid damped telescoping shock absorber for operative connection between two members to cushion the relative movements of said members toward and away from each other, whereby the movement of the members toward each other results in a compression movement of the telescoping shock absorber parts and the movement of the members apart results in an expansion or rebound movement of the parts, the combination of: a cylindrical casing containing a damping fluid, a piston disposed in said casing for reciprocation within the body of damping fluid upon the occurrence of compression or rebound movements, and a piston rod having one end fixed to said piston and extending axially through the casing; passageways extending through said piston in a longitudinal direction through which the fluid may pass from one side of the piston to the other during reciprocation thereof, and at least one thin flexible valve disc fixedly secured centrally to each end of the piston for controlling and regulating the flow of damping fluid through the passageways in the respective directions; certain of said passageways serving primarily to transmit fluid from the rebound side of the piston to the compression side thereof upon the occurrence of rebound movement, one of said valve discs overlying

and controlling the outlet orifices of said rebound passageways at the compression face of the piston; and others of said passageways serving primarily to transmit fluid from the compression side of the piston to the rebound side thereof upon the occurrence of compression movement, the other one of said valve discs overlying and controlling the outlet orifices of said other passageways at the rebound face of the piston, the bore of each of the passageways, however, being of a generally funnel-like divergent configuration flaring from at least one smaller controlled outlet orifice adjacent the respective valve discs overlying and controlling the same to a larger inlet orifice at the opposite face of the piston where said larger inlet orifice is overlaid by the other valve disc only partially, the resulting segmental uncovered portion of the inlet orifice being of an area at least as large as the maximum opening of the outlet of the passageway permitted by its controlling valve disc, there being six passageways through the piston, namely, three compression and three rebound passageways, three passageways of each of said groups being disposed 120° apart as at the apices of an equilateral triangle centered on the axis of the piston, each valve disc being circular, and a circular clamping washer bearing directly upon each flexible valve disc, the diameter of each of said washers being such that three lines indicating the radially innermost limits of substantial flexure of the discs and extending the segments of the discs which respectively overlie the three equally spaced outlets on the same face of the piston will not intersect within the confines of the valve disc, and thus the disc will flex cylindrically along three marginal mutually exclusive areas thereby reducing the fatigue to which the discs are subjected during use and also equalizing and distributing the directional effect of any anisotropism of the material of which the discs are made.

3,003,595
SHOCK ABSORBERS
William G. Patriquin, Willoughby, Ohio, assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 6, 1959, Ser. No. 797,801
13 Claims. (Cl. 188-88)



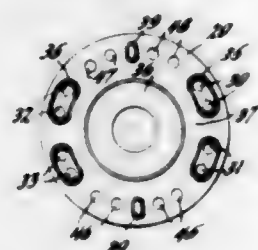
1. A direct double acting hydraulic shock absorber comprising a working cylinder, an outer cylinder providing a reservoir, first closure means for one end of said working cylinder and said outer cylinder, second closure means for the other end of said outer cylinder and said working cylinder, impact and replenishing valve controlled passage means between said working cylinder and said reservoir, a piston reciprocable in said working cyl-

inder and having a central passage therethrough and an annular valve seat intermediate the opposite ends of said piston and surrounding said passage, a recoil valve in said piston provided with a central opening, spring means in said piston acting on said recoil valve to maintain the same seated on said valve seat with a predetermined spring load, a tubular linearly movable piston rod connected centrally to one end of said piston and communicating with said central passage therein and provided with ports communicating with said working cylinder and spaced longitudinally of the cylinder from said valve seat and said recoil valve and said one end of said piston, said piston rod slidably projecting through said first closure means, said piston radially outwardly of said central passage having piston impact passage means extending therethrough, spring pressed piston impact valve means closing said piston impact passage means, and a fluid metering element centrally fixed in said working cylinder and extending longitudinally the full length thereof and coaxially with substantial clearance through said central passage in said piston and said central opening in said recoil valve and into said piston rod, said piston and said element being linearly relatively movable, said element cooperating with said central opening in said recoil valve and having fluid passage means stationary relative to said element providing independently of the seated or unseated condition of said recoil valve for passage through said central opening of a maximum volume of hydraulic fluid from the working cylinder at one side of said piston to the working cylinder at the opposite side thereof when said piston is in a predetermined position in said working cylinder and for such passage therethrough of a gradually diminishing volume when said piston moves in said working cylinder in either direction from said predetermined position, whereby the shock absorber's characteristics produced under the control of said recoil valve and said piston impact valve means are supplemented and altered regardless of the seated condition of said valve or said valve means and in accordance with the position and displacement of said piston in said working cylinder.

3,003,596 SHOCK ABSORBERS

Christian Marie Lucien Louis Bourcier de Carbon,
64 Blvd. Maurice-Barres, Neuilly-sur-Seine, France
Original application Feb. 21, 1955, Ser. No. 489,694.
Divided and this application Mar. 11, 1959, Ser. No. 798,707

6 Claims. (Cl. 188-88)



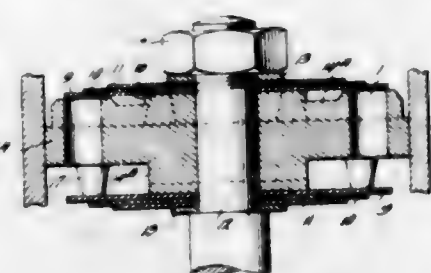
1. A double acting shock absorber of the class described, comprising a cylinder containing a working fluid, a single working piston contained therein and adapted to reciprocate within said cylinder and to have its movements damped by means of said fluid, and a solid piston rod fixed to said piston and extending through an opening in one end of the cylinder, said piston being the only piston device carried by said piston rod; said piston provided with two sets of passageways therethrough through which fluid may pass from one side of the piston to the other during working movement of the piston, one of said sets of passageways serving to transmit fluid in one direction through the piston and another different set of said

passageways serving to transmit fluid in the opposite direction therethrough, and valve means controlling the flow of fluid in said respective sets of passageways; said respective sets of passageways for transmitting fluid in the two opposite directions being the only means for bypassing working fluid from one side of the piston to the other, said sets each arranged in only two groups of at least one passageway each, the groups of each set being positioned exactly diametrically opposite each other on opposite sides of the axis of the piston, and the groups of the set for flow in one direction being spaced 90° from the adjacent groups of the set for flow in the opposite direction, the passageways of said sets having inlet and outlet orifices on the respective sides of the piston; said valve means comprising at least one completely circular flat resilient leaf element secured fixedly adjacent its center to the central portion of one face of the piston, and at least one completely circular flat resilient leaf element secured fixedly adjacent its center to the central portion of the opposite face of the piston; said circular leaf elements being imperforate except for its axial central securing point, the leaf elements on each side of the piston adapted to extend over and resiliently control the flow of working fluid from the outlet orifices of the sets of passageways debouching on its respective side of the piston, and the inlet orifices of the other set of passageways on that side of the piston being spaced away from said circular leaf element so as not to be controlled thereby; the said outlet orifices being substantially in the plane of the leaf element which controls them and opening individually through the surface of the piston whereby flow through the respective passageways is individually controlled, the outlet orifices of the respective passageways for transmitting fluid in the same direction being disposed beneath diametrically opposite portions of the respective leaf elements at points remote from the axis thereof so that the leaf elements are stressed and resiliently bent only in a simple substantially cylindrical configuration by fluid issuing under pressure from the openings which they cover.

3,003,597 SHOCK ABSORBERS

Christian Marie Lucien Louis Bourcier de Carbon,
64 Blvd. Maurice-Barres, Neuilly-sur-Seine, France
Original application Feb. 21, 1955, Ser. No. 489,694.
Divided and this application Mar. 11, 1959, Ser. No. 798,708

3 Claims. (Cl. 188-88)

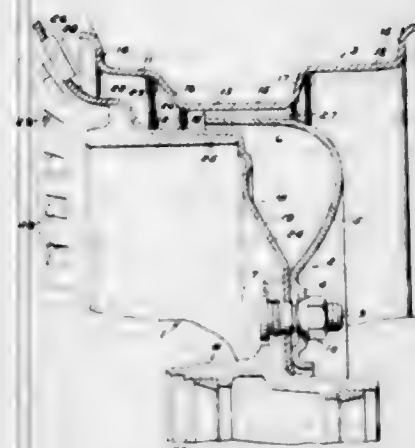


1. A double acting shock absorber of the class described, comprising a cylinder containing a working fluid, a piston contained therein and adapted to reciprocate within said cylinder and to have its movements damped by means of said fluid, said piston having oppositely facing axially spaced fluid contacting surfaces, and a piston rod fixed to said piston and extending through an opening in one end of the cylinder; said piston provided with two sets of passageways therethrough through which fluid may pass from one side of the piston to the other during working movement of the piston, one of said sets of passageways serving to transmit fluid in one direction through the piston and another different set of said passageways serving to transmit fluid in the opposite direction therethrough, the passageways of each set being

substantially equally spaced from the axis of the piston, the passageways of said sets having inlet and outlet orifices on the respective sides of the piston, the outlet orifices being substantially circular, and valve means controlling the flow of fluid in said respective sets of passageways; said valve means comprising at least one completely circular flat resilient leaf element secured fixedly adjacent its center to the central portion of one face of the piston and at least one completely circular flat resilient leaf element secured fixedly adjacent its center to the central portion of the opposite face of the piston; said leaf elements on the respective sides of the pistons each adapted to extend over and resiliently control the flow of working fluid from the circular outlet orifices of the set of passageways debouching on its respective side of the piston, and the inlet orifices of the other set of passageways on that side of the piston being spaced away from said circular leaf element so as not to be controlled thereby, the said outlet orifices at each surface of the piston being substantially in the plane of the leaf element which controls them and opening individually through that surface of the piston, whereby flow through each passageway is individually controlled; the diameter of each of the circular resilient leaf elements being less than the diameter of a circle embracing the outer arcuate edge portions of the outlet orifices of the passageways controlled by said element, whereby the peripheral margins of said elements are offset radially inwardly from the said arcuate outer edge portions so that there are provided permanently open crescent-shaped segmental openings in said outlet orifices, the size of said crescent-shaped openings being thus controllable to a fine degree by the substitution of valve disc elements of various selected diameters.

3,003,598 BRAKE DRUM

Charles H. Sumner, Detroit, and Rupert L. Atkin, Grosse Pointe Woods, Mich., assignors to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,750
6 Claims. (Cl. 188-218)



1. Wheel structure comprising a wheel body and a tire carrying rim mounted on and encircling said wheel body, a composite brake drum carried by said wheel structure, said brake drum comprising a one-piece metal shell having a web and a peripheral continuous annular flange radially inside said rim in spaced relation thereto, a brake liner within and secured to said flange, said flange having an integral annular extension extending axially inwardly of said rim and flaring radially outwardly to its periphery to dissipate heat and to provide an air scoop for flow of air into the annular space between said rim and flange while the wheel structure is

rotating, the flaring portion of said extension being located axially inwardly of said rim in axially opposed relation thereto and cooperating therewith to provide an annular air inlet to said space, the flaring portion of said extension having an annular series of circumferentially spaced holes spaced radially inwardly from the periphery of said flaring portion, louvers for said respective holes, said louvers being struck from the material of the flaring portion of said extension, each louver having the same dimensions as the hole associated therewith and being integrally joined to said flaring portion along an edge of the associated hole which edge lies in a radial plane, said louvers extending circumferentially from said edges across the associated holes and into said air inlet at an acute angle to said flaring portion to form openings to said holes, to increase the flow of air into said space and to produce turbulence.

3,003,599

CONSTRUCTION ELEMENTS

George Alexis Rubissow, New York, N.Y., assignor to Industrial Development Co. (Establishment), Vaduz, Liechtenstein, a body corporate of Liechtenstein
Filed Feb. 27, 1956, Ser. No. 567,869
Claims priority, application France Mar. 2, 1955
1 Claim. (Cl. 189-34)



A cellular construction element comprising at least two identical sheets having plain surfaces facing each other and rigidly connected in a common plane, the opposite sides of said sheets having a plurality of circular cupolas of equal radial and diametrical dimensions with their peripheral portions in touching relation and arranged in parallel rows longitudinally of the sheets, the cupolas of adjacent parallel rows having their vertical axes staggered with respect to the vertical axes of the cupolas of an adjacent row, and the rows of cupolas on one of said sheets being displaced laterally with respect to the cupolas of a companion row on the opposite sheet to provide intercommunication with each other on one sheet and with the interior of cupolas on the opposite sheet.

3,003,600

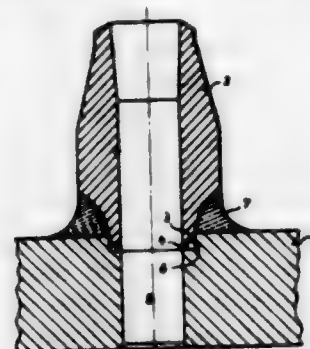
CONSTRUCTIONAL ELEMENT

James A. MacKenzie, 433 Echo Drive, Ottawa, Ontario, Canada
Filed Apr. 10, 1958, Ser. No. 727,562
4 Claims. (Cl. 189-34)

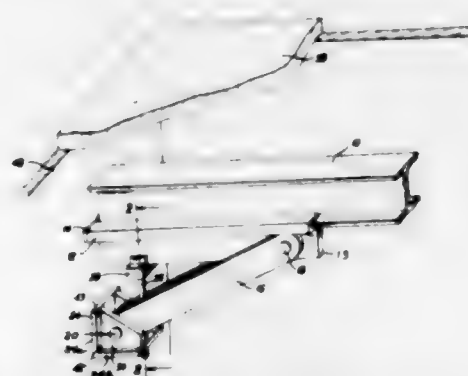
1. A constructional element of constant thickness and of L-shaped cross-section having a narrow flange and a wide flange, said flanges being integrally connected by a joint of small radius, a row of holes extending longitudinally of the narrow flange, and two rows of holes extending longitudinally of the wide flange, the minimum distance between the adjacent edges of adjacent holes in each row being the same throughout each row, said distance being the same in the case of each of the three rows, the row of holes in the narrow flange and the outer

of the two rows of holes in the wide flange being transversely aligned repetitions of one another and each consisting of a plurality of alternate round and elongated holes, the round holes all being of the same diameter, the elongated holes all being of the same size, said elongated holes being elongated substantially transversely of the element, said elongated holes being of a width equal to the diameter of one of the round holes and of a length equal to the diameter of one of the round holes plus twice the thickness of the element, the inner row of holes in the wide flange consisting of alternate substantially transversely elongated and longitudinally elongated holes, the substantially transversely elongated holes in said inner row being of the same size as the substantially transversely elongated holes in said outer row, one such substantially transversely elongated hole in the inner row being transversely aligned with every second round hole in said outer row, each of the longitudinally elongated

tively thick portion, an empty space being formed between said relatively thin end portion and the bottom of said



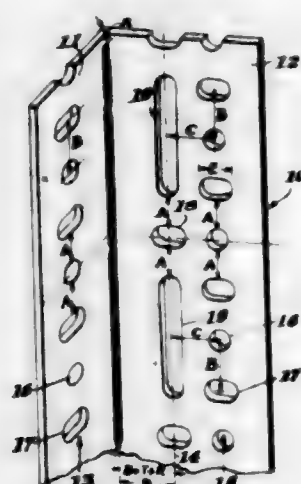
3,003,602
**SUPPORTING FRAME FOR FALSE CEILINGS,
FIXTURES AND THE LIKE**
Robert W. Lester, 225-20 141st Ave., Laurelton, N.Y.
Filed June 20, 1958, Ser. No. 742,391
1 Claim. (Cl. 189-36)



A supporting frame adapted to support a false ceiling or other horizontal structure on spaced vertical supports such as the side walls on opposite sides of a room, comprising at least one horizontally disposed beam, a pair of slip fittings mounted on said beam and having stop members abutting the ends of the beam, a pair of diagonally disposed struts situated adjacent said ends of said beam, and a pair of bearing plates disposed in vertical planes and adapted to be held flat against said vertical supports, said struts being pivotally connected at their upper ends to said slip fittings and at their lower ends to said bearing plates, pre-loading means being provided between each of said struts and said beam to cause pivotal movement of the struts toward the beam, thereby effecting a toggle action between the beam and the bearing plates, said pre-loading means applying vertical forces directed upwardly upon the struts and said toggle action transmitting said vertical forces in the form of horizontal forces directed by the bearing plates against said vertical supports and adapted to hold them securely against said vertical supports.

3,003,603
ELECTRON TUBE STRUCTURES
Richard F. Sparck, Wilton, Conn., assignor to Machlett Laboratories, Incorporated, Springfield, Conn., a corporation of Connecticut
Filed June 22, 1959, Ser. No. 822,101
6 Claims. (Cl. 189-36.5)

1. An electron tube having an envelope comprising a plurality of elements connected together to enclose an evacuated space, said elements including a cylindrical metal member and a cylindrical ceramic member, the first of said members having a circumferential shelf-like



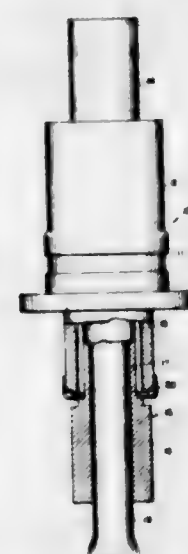
holes being, over most of its length, equal in width to the diameter of one of said round holes and at least as long as the centre-to-centre distance between two of said substantially transversely elongated holes in said outer row plus the diameter of one of said round holes, the centres of all the holes in each row lying in a straight line which is parallel to the longitudinal axis of the element, a line drawn through the centres of said row of holes in the narrow flange being at the same distance from the wide flange as a line drawn through the centres of the inner row of holes in the wide flange is from said narrow flange, said distance being substantially equal to the sum of (1) the centre-to-centre distance between adjacent holes in said outer row, (2) the thickness of the element, and (3) the radius of the joint between the flanges.

3,003,601
WELD CONNECTION
Walter Ott, Elgg/ZH, Switzerland, assignor to Sulzer Frères, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Mar. 28, 1958, Ser. No. 724,730
Claims priority, application Switzerland Apr. 4, 1957
3 Claims. (Cl. 189-36)

1. A weld connection for connecting two elements, wherein at least one of said elements has a tapered portion having a surface, the second element having a surface portion facing said surface of said tapered portion, and a weld placed between said surface of said tapered portion and said surface portion of the second element, the thin end of said tapered portion having a tongue-like extension including a relatively thick portion adjacent to said tapered portion and a relatively thin end portion extending from said relatively thick portion and forming a step therewith, said second element having a recess shaped to receive said tongue-like extension, the depth of said recess corresponding to the thickness of said rela-

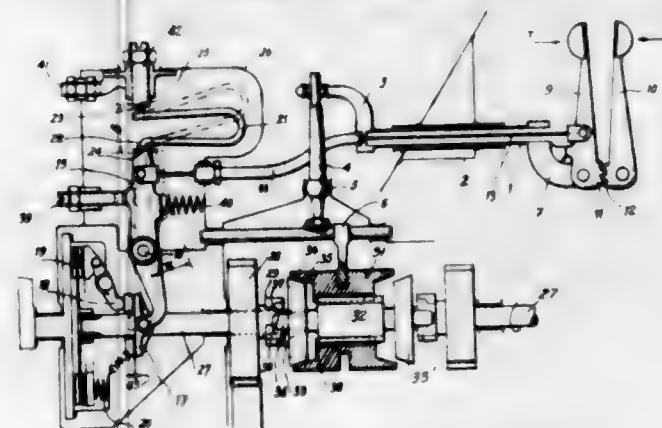
tively thin end portion is free to be deformed for absorbing stresses caused by the shrinking of the weld.

surface facing one end of the second member, which shelf-like surface is spaced inwardly from a projected continuation of the outer surface of the first member by a circumferential recess in said outer surface, and flexible vacuum-tight seal means for joining the members together in spaced relation comprising an annular sealing member having a first flange bonded to the second member and having a second flange bonded to said shelf-like surface, the second flange being spaced from the ad-



jacent end of the second member and having a portion overlying said circumferential recess in the outer surface of the first member, and the first flange having a portion overlying the space between the end of the second member and the adjacent surface of the second flange, said portions of the flanges being flexible whereby they may move freely into and out of said recess and space under the influence of expansion and contraction pressures caused by varying thermal conditions.

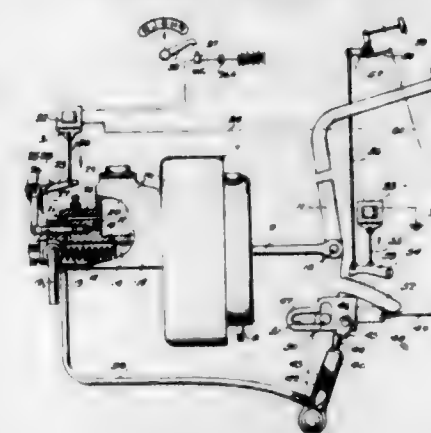
3,003,604
**COMBINED CLUTCH AND TRANSMISSION
CONTROL MECHANISM**
Antoine Bruecker, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Filed Dec. 1, 1955, Ser. No. 550,415
Claims priority, application France Dec. 6, 1954
12 Claims. (Cl. 192-3.5)



1. Apparatus comprising a clutch mechanism, a gear change lever, a change speed gear box operatively associated with said lever for control thereby, said change speed gear box having different speed engageable gears and including synchronizing pinions operatively coupled to said clutch mechanism, and means preventing engagement until synchronization is attained, a coupling member coupling said lever to said clutch mechanism for the transmission of forces from said lever to said clutch mechanism, and control means operatively connecting said gear box to said lever and to said coupling member, said control means including a support abut-

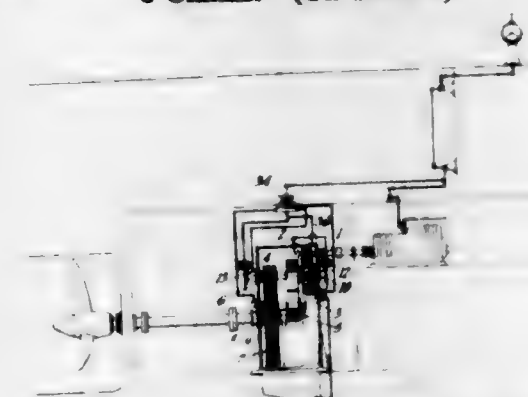
ment for said coupling member to permit displacement of said clutch mechanism by said lever, said control means being prevented from undergoing displacement for engagement of any of said gears so long as said preventing means are active and said support abutment permits displacement of said clutch mechanism by said lever.

3,003,605
**SINGLE LEVER, POWER ACTUATED, SERVICE
AND EMERGENCY BRAKE SYSTEM**
Edward M. Apple, Milan, Mich. (2607 David Stott Bldg., Detroit 26, Mich.), assignor to Joseph Martin, Detroit, Mich.
Filed Nov. 25, 1960, Ser. No. 71,607
12 Claims. (Cl. 192-4)



1. In a motor vehicle, having a power operated service brake mechanism, including a foot lever for actuating said service brake, an emergency brake mechanism, and an automatic transmission speed selector mechanism, the combination of power means associated with said power operated service brake mechanism foot lever, and said emergency brake mechanism, and responsive to the setting of said speed selector mechanism for independently effecting the application of power to said service brake mechanism and effecting the application of power to said emergency brake mechanism by said foot lever.

3,003,606
REVERSING TRANSMISSION ASSEMBLAGES
Thomas Hindmarch, Lindo Lodge, Stanley Ave., Chesham, Buckinghamshire, England
Filed Mar. 9, 1959, Ser. No. 798,021
Claims priority, application Great Britain Mar. 14, 1958
6 Claims. (Cl. 192-4)



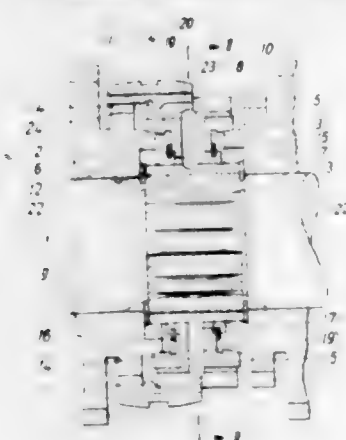
1. A power transmission including at least one prime mover, at least one output shaft, change direction reduction gearing means for operably connecting the prime mover to the output shaft, said change-direction reduction gearing means including gear means on the output shaft, forward and reverse drive pinions meshing with said gear means, pressure liquid operated clutch means capable of slip adapted for connection with each drive pinion and with the prime mover and operative to connect and disconnect the pinions with the prime mover, at least one pressure liquid operated brake means operably associated with the prime mover for imparting a

braking effect on the prime mover, at least one further pressure liquid operated brake means operably associated with the output shaft for imparting a braking effect on the output shaft, a source of pressure liquid, control valve means, conduit means between said source and said control valve means, conduit means interconnecting the control valve means with said one brake means, said further brake means and said clutch means, respectively whereby actuation of the control valve means to operate the clutch means to change the direction of rotation of the output shaft, the drive to the output shaft is disconnected thereby operating said one brake and further brake means.

3,003,607

SYNCHRONIZATION DEVICE, PARTICULARLY FOR MOTOR VEHICLE GEAR SHIFT TRANSMISSIONS

Alfred Magg, Friedrichshafen, Germany, assignor to Zahnradfabrik Friedrichshafen, Aktiengesellschaft, Friedrichshafen am Bodensee, Germany
Filed Jan. 28, 1959, Ser. No. 789,635
Claims priority, application Germany Feb. 11, 1958
4 Claims. (Cl. 192-53)



1. In a gear shift synchronizing mechanism having a drive shaft and a pair of spaced gears thereon, wherein said gears are provided with positive drive clutch teeth, means for coupling said shaft with said gears comprising a collar keyed to said shaft and rotative therewith, said collar carrying a pair of synchronizing rings having frictional surfaces alternately engageable with respective gears for frictional drive thereof, said synchronizing rings having relative rotation with respect to said collar, a shifting sleeve carried by said collar and slidably splined thereto and having teeth selectively engageable with either of the positive drive clutch teeth of said gears, locking pin means carried by said synchronizing rings, said pin means having cam means at both ends and being radially slidable with respect to said synchronizing rings, and cam surfaces provided on said shaft and engageable with cam means at one end of said pin and being oriented to force said pin means radially outward responsive to relative rotation between said shaft and said synchronizing rings, and the teeth of said shift sleeve having cam surfaces coacting with the cam means at the other end of said locking pin means operative to lock said shift sleeve against longitudinal motion, and to cam said locking pin means radially inward upon synchronization being effected between said shift sleeve and either of said gears.

3,003,608

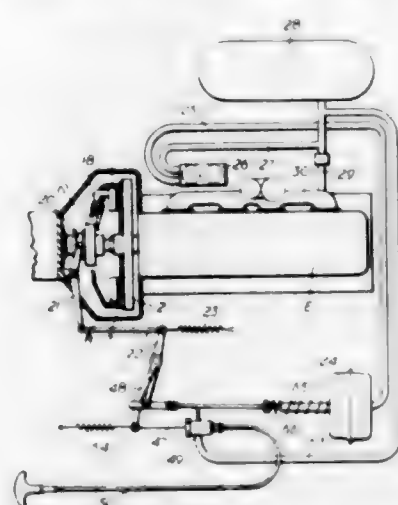
MANUALLY ENGAGEABLE AND FLUID RELEASE CENTRIFUGAL CLUTCH

Henri E. Biraben, Harpenden, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 26, 1958, Ser. No. 763,695
11 Claims. (Cl. 192-83)

1. A clutch control mechanism for a centrifugally actuated clutch adapted to be disengaged at rest comprising in combination centrifugal weights for engaging said clutch

when said weights are rotated above a predetermined speed, a clutch plate, a pressure plate, a spring ring, a spring disposed between said pressure plate and spring ring normally biasing said pressure plate towards its clutch engaging position, a stop member carried by said pressure plate and cooperating with said centrifugal weights to prevent engagement of said clutch plate by said spring when said pressure plate is at rest, a vacuum responsive servo motor, linkage connecting said servo motor to said pressure plate, a vacuum source, valve means for admitting vacuum to said servo motor, said servo motor being effective upon admission of vacuum thereto to move said linkage through a limited range of motion to release said



pressure plate from said clutch plate without releasing said stop member from said centrifugal weights, a normally closed relief valve effective when open to connect said servo motor to atmosphere, and an additional manually operable overcontrol connected to said linkage, said overcontrol being effective when actuated to open said relief valve and to move said pressure plate beyond the normal range of travel obtainable through operation of said servo motor to release said stop member from said centrifugal weights, said spring being effective upon release of said stop member to engage said pressure plate to said clutch plate when said clutch plate is at rest.

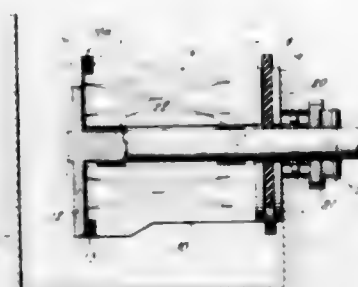
3,003,609

ARMATURE DISK FOR CLUTCH BRAKE UNIT

Albert P. Lang, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 10, 1959, Ser. No. 839,205
7 Claims. (Cl. 192-84)

1. A combination of the class described comprising a housing element, a rotatable shaft journaled in said housing element, an armature disk having substantial axial thickness fixed to said shaft so as to be rotatable therewith, a friction ring supported in a circumferential end groove on said housing for providing a frictional coupling between said housing and said armature disk, and radially directed slot means cut entirely through the axial thickness



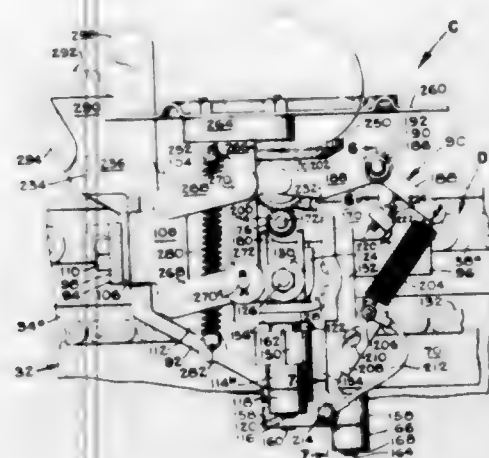
and extending over a portion only of the periphery of said armature disk whereby said friction ring may be removed from said combination while the other elements of said combination remain assembled.

3,003,610

FRUIT HANDLING MACHINE

John Boyce, San Jose, and Leslie Vadas, Los Gatos, Calif., assignors to FMC Corporation, a corporation of Delaware

Filed Jan. 7, 1959, Ser. No. 785,414
30 Claims. (Cl. 198-33)



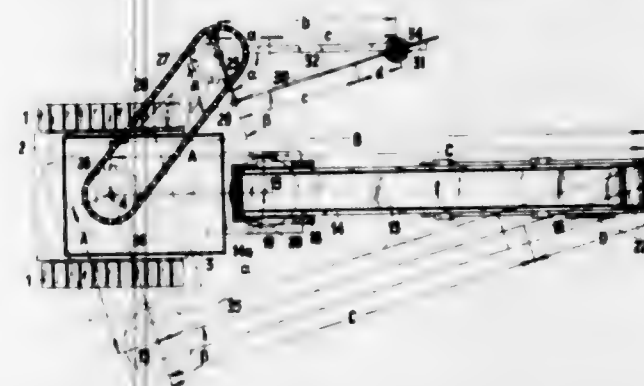
10. Apparatus for orienting fruit having a surface indent, comprising a rotatably mounted indent finder wheel arranged to support a fruit to be oriented by engagement with the surface thereof and for entry into the indent when the indent registers with the finder wheel, gear teeth on the finder wheel, a drive gear rotatably mounted adjacent said finder wheel and engageable with said gear teeth at a region thereof diametrically opposite a fruit engaged by the finder wheel, means for driving said gear to rotate the finder wheel and thereby cause the fruit to progressively present different regions of its surface to the finder, and means operative when the indent is registered with the finder wheel for moving the finder wheel into the indent and out of engagement with the drive gear.

3,003,611

CONVEYING DEVICE, ESPECIALLY FOR BULK MATERIAL

Hans K. Pelzer, Krefeld, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschränkter Haftung, Essen, Germany

Filed Mar. 11, 1960, Ser. No. 14,281
Claims priority, application Germany Mar. 19, 1959
4 Claims. (Cl. 198-88)



1. A conveying device which comprises: a lower structure, an upper structure adapted to turn relative to said lower structure about a vertical axis, an arm supported by said upper structure and adapted to turn relative to said lower structure about a vertical axis offset with regard to the axis of rotation of said upper structure, conveyor belt means supported by said arm and having a discharge station, crank drive means including a crank member operatively connected to said upper structure so as to turn together with the latter by the same angle as said upper structure, said crank drive means also including a con-

necting rod having one end pivotally connected to said crank member at a point spaced from the axis of rotation of said crank member, rotatable guiding means held at a certain distance from the axis of rotation of said crank member for rotatably and longitudinally displaceably guiding the free end portion of said connecting rod, the ratio of the crank section between the axis of rotation of said crank member and its pivotal connecting point with said connecting rod to the distance between the axis of rotation of said crank member and the axis of rotation of said guiding means substantially equalling the ratio of the distance between the axis of rotation of said upper structure and the axis of rotation of said arm to the distance between the axis of rotation of said upper structure and said discharge station, means maintaining the angle β defined by the longitudinal axis of said conveyor belt means and the extension of the connecting line between the axis of rotation of the upper structure and the axis of rotation of said arm substantially equalling the angle defined by the extension of the crank member with the connecting rod, and means operatively connected to said conveyor belt means for respectively extending and reducing the total conveying length of said conveyor belt means by a distance corresponding to the longitudinal displacement of said connecting rod in said guiding means in one and the opposite direction.

3,003,612

ARTICULATED SELF-TRACKING CONVEYING APPARATUS

William N. Poundstone, Morgantown, W. Va., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 17, 1956, Ser. No. 559,596
19 Claims. (Cl. 198-92)



19. A portable articulated self-tracking conveying apparatus comprising a series of interconnected sections, each of said sections having front and rear first coupling means to interconnect said sections, each of said sections having floor engaging supporting means disposed substantially equidistantly between said front and rear coupling means, each of said sections having independent endless conveyor means extending longitudinally thereon, actuating means on each of said sections to actuate said independent endless conveyor means positioned thereon, and drive means to drive said actuating means and thereby drive said conveyor means, said coupling means and said floor engaging means coacting to automatically guide said sections through a turn so that said sections are self-tracking and follow each other around curves.

3,003,613

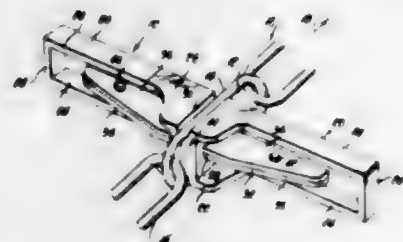
CONVEYOR FLIGHT

Marshall Meloy, Seattle, Wash., assignor to Bellingham Chain & Forge Company, Seattle, Wash., a corporation of Washington

Filed May 13, 1958, Ser. No. 735,022
5 Claims. (Cl. 198-176)

1. A chain conveyor flight assembly comprising a pair of substantially identical halves, each half comprising an arm having a material carrying surface on a side thereof, a chain engaging bracket integral with said arm extending across an end thereof in a direction away from said material carrying surface, said bracket having a flat face in full

surface engagement with the corresponding surface on the opposite flight half, a beam bracer bar having a section comprising substantially half its length rigid with said arm on a side thereof opposite from said material carrying surface with the remaining section thereof extending longitudinally from said arm and through said bracket, a pair of substantially parallel grooves extending along the lateral edges of said bracket, said grooves extending substantially normal to said material carrying surface and adapted to receive therein opposite sections of a chain link, an opening through said bracket adjacent a side of



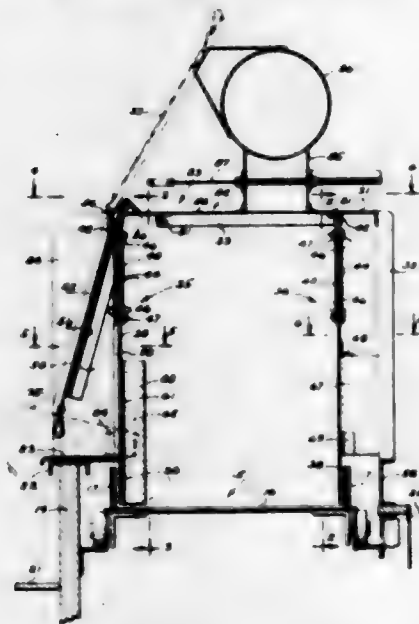
said beam bracer bar surrounding and supporting a section of the beam bracer bar of the other flight half in a manner such that the section of the beam bracer bar projecting through said bracket opening is positioned adjacent a side of the section of beam bracer bar rigid with said arm, the section of each beam bracer bar projecting through said bracket opening having surfaces respectively bearing against said arm and against the side of said opening facing said arm when a load is applied to said material carrying surfaces, and means for detachably locking the halves of said conveyor flight assembly together.

3,003,614

CONVEYOR MECHANISM

George H. Frank, Oak Park, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed July 28, 1959, Ser. No. 828,336
6 Claims. (Cl. 198-204)



1. In a device for conveying material, a conveyor having a substantially flat upper surface for carrying the material thereon, a frame for supporting said conveyor, a pair of laterally spaced elongated metal sheets for confining the material therebetween on said conveyor, and means for individually mounting said metal sheets substantially vertically on said frame in predetermined positions and in spaced and close proximity to said conveyor for upward movement and lateral inward movement and against lateral outward movement and against downward movement.

3,003,615
WALKING BEAM CONVEYOR
Peter P. Ruppe, Grosse Pointe, Mich. (% Prab Conveyors, Inc., 30121 Groesbeck Highway, Roseville, Mich.)

Filed Feb. 9, 1959, Ser. No. 792,034
12 Claims. (Cl. 198-219)



1. An article conveyor comprising, in combination: an article support having an article-supporting surface over which articles to be conveyed are moved; mechanism for shifting articles along said support including an article carrier reciprocable longitudinally of said support in the direction of article movement and having an article-lifting surface disposed beneath articles to be moved along the support; means providing an article carrier-supporting surface extending in the direction of carrier movement and upon which the carrier is supported for reciprocation; said carrier-supporting surface so disposed relative to the article-supporting surface of said support that the article-lifting surface of the carrier is disposed beneath the article-supporting surface of said support; cam means shiftable relative to the first-mentioned means between a position in the path of carrier movement to elevate the carrier and dispose its article-lifting surface above the article-supporting surface of said support, and a position retracted from the path of the carrier; and actuating means coupled with said cam means and with said mechanism and operative to synchronize functioning to shift said cam means to a position in the return path of the carrier at the end of one stroke thereof and retract the cam means from the path of the carrier at the end of such return stroke.

3,003,616

HANGER CARTON

Harry Field, 5942 N. St. Louis Ave., and Joe Field, 6336 N. Oakley Ave., both of Chicago, Ill.

Filed Feb. 16, 1955, Ser. No. 488,532
6 Claims. (Cl. 206-7)



3. A transportation packaging unit for hanger supported garments including, an interior liner folded from a single sheet into four contiguous sidewall panels of similar opposite pairs, each of said sidewall panels including a downwardly infolded flange portion forming with its adjacent panel an inverted V-shaped pocket fringe at the top edge of said liner, a frontal one of said sidewall panels being horizontally cut across its width from a corner of said liner at which the ends of said single sheet meet to its opposite side flanking corner at which said liner is folded whereby a portion of said frontal sidewall panel is formed into a side access door, a stabilizing beam including extreme plate elements defining upwardly extending notch recesses for receiving the double thickness fringe of the pair of opposite sidewall panels which

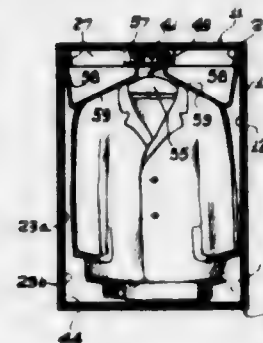
adjoin said frontal panel, said beam including a transverse strut element for bracing said adjoining panels thereat as well as for receiving thereover the suspension hooks of garment hangers, a stabilizing and filler element formed of a single sheet of paper-board and comprising extreme panels for reentrant insertion into the space beneath the downwardly infolded flanges of the other pair of said panels and intermediate panels for reposing upon aligned garment hangers suspended from said strut element, and an exterior case comprising telescoping fitted components covering said interior liner and meeting each other at an intermediate level of said liner.

3,003,617

CARTON FOR PACKAGING SUIT GARMENTS

Harry Field, 5942 N. St. Louis Ave., and Joe Field, 6336 N. Oakley Ave., both of Chicago, Ill.

Filed Nov. 3, 1955, Ser. No. 544,774
3 Claims. (Cl. 206-7)



1. A package case for a plurality of garments each on a shoulder hanger, said case including a closed bottom and four vertical walls together forming a vertical rectangular chute closed at the bottom and open at the top, the four walls constituting one continuous sheet of paper board folded to form front, rear and side walls, at least two opposite vertical walls having reinforcement means each comprising an inwardly extending inverted V-shaped fold of the paper board of said walls and each extending across the full widths thereof at the tops thereof and each fold being integral with the wall surface that it is reinforcing across substantially the full width of such wall surface, a stationary garment support and tie rod structure adapted to receive and hold a plurality of side by side garment sustaining hangers, said structure including a rod extending across the top of the case between said two opposite top reinforced vertical side walls and said structure resting on and being supported by the apices of said two folds and including portions each straddling one of the folds and holding the folded ends of the corresponding vertical walls in position, means forming a hinged openable and closable flap out of the top part of one of the vertical walls that is between the said two opposite vertical walls that sustain said garment-supporting rod to permit hinging of the flap to form an entrance door portion to the interior of the case, said door portion extending vertically from the top of the case for a major portion of the height of the case and terminating above the bottom of the case, the portion of said one wall below said door constituting a lower panel that is joined to opposite sides of the case at the bottom thereof, closure means for the open top and a member for holding garments on their hangers in the event of inversion of said packing case, said member comprising a sheet of corrugated board adapted for positioning overlying said rod and bent downwardly therefrom on opposite sides thereof to form sloping panels overlying the hangers, each sloping panel terminating in an upwardly bent wing adapted to be forced into position in the crotch of an inverted V-shaped fold at the top of an adjacent wall.

3,003,618
PARTS AND TOOL KIT, AS FOR PLUMBING PARTS, TOOLS, AND THE LIKE
Anthony D. Lebedzinski, 1104 Eberhard, Houston, Tex.
Filed Aug. 20, 1959, Ser. No. 835,087
5 Claims. (Cl. 206-16)



1. A kit, as a parts kit for plumbers and the like and comprising, a housing having a bottom, left and right and rear walls upstanding therefrom, a horizontal partition spaced above said bottom and dividing said housing into a lower drawer space and an upper parts space, a front plate extending across the front of said upper parts space and joined at either end to said left and right walls, respectively, an inverted channel upstanding from said partition and extending substantially centrally thereacross from left wall to right wall, two spaced apart, longitudinally extending rows of holes in the web of said inverted channel and a correspondingly longitudinally spaced apart row of holes in said front plate and in said rear wall with such correspondingly spaced rows of holes being transversely aligned with and spaced above the rows of holes in said inverted channel, parts support rods having heads at one end visible from the outside of said housing, said support rods being hooked angularly downwardly at such end and hooked downwardly at the other end, said rods being insertable through the holes of said higher spaced rows to receive parts thereon with the downwardly hooked other ends inserted downwardly through the holes in said channel web, a compartmented drawer insertable into said drawer space and providing compartment means having therein upstanding parts receiving rods, including rods with hooked upper ends, a pair of narrow, spaced apart hasps hingedly connected to the front part of said bottom to upstand therefrom in front of said drawer to constrain said drawer within said housing, each hasp having its upper end re-curved and being longitudinally spaced from the adjacent front corner of said housing, a top for said kit hingedly connected to the top of the rear side of said housing and having a channel extending downwardly from the under side of said top and longitudinally extending centrally thereacross to bear upon rods above said inverted channel as a hold-down and anchoring means, the front edge of said top having downwardly re-curved portions on opposite sides of said hasps, a latch rod on each side to extend through said re-curved portions and the hasp-re-curved upper end therebetween at each front corner of said kit to connect said housing and said drawer in closed, latched position, the front edge portion of said top between said handles being re-curved downwardly and providing slots extending longitudinally thereinto from either end of said portion, spring means in said portion with ends to urge against the inner ends of said said latch rods within said portions to position said latch rods in hasp latching position, each latch rod having a handle near the inner end

thereof whereby when said handles are drawn inwardly along said slots to compress said spring means said latch rods may be drawn inwardly from said hasps to unlatch said top from said housing to permit access to said drawer.

3,003,619

JEWELERS' RING CASE AND DISPLAY DEVICE
Albert S. Samuels, 856 Market St., San Francisco, Calif.
Filed Sept. 14, 1959, Ser. No. 839,630
3 Claims. (Cl. 206-45.13)



3. A ring case of the kind described comprising a rectangular box-like structure separated diagonally to provide two substantially triangular parts, a rectangular book-shaped cover, one of said parts being secured within said cover, the other of said parts having a ring support therein adapted to support a ring with a portion thereof exposed to view, and means connecting the said other part for pivotal movement relative to the cover and part secured therein to enable it to swing from a position within the cover with the exposed portion of the ring contained in the secured part to a position outside the cover and in a position to be supported by the cover as a pedestal.

3,003,620

MERCHANDISING DEVICE
Jesse Srofe, 3385 Ault View Ave., Cincinnati 8, Ohio
Filed July 8, 1960, Ser. No. 41,514
11 Claims. (Cl. 206-45.14)



5. An article supporting open-ended elongated display sleeve adapted to secure an item of merchandise in operative position having, an upwardly extending back panel, a forwardly extending bottom panel normal to said back panel and integral with the bottom edge thereof, a downwardly sloping top panel integral with the top edge of said back panel, a front panel integral with the front edges of said bottom panel and said top panel having top and bottom portions sloping inwardly toward said back panel and substantially contacting the same, said bottom portion of said front panel having openings therein extending from the front to the rear of said display sleeve and said upper rearwardly sloping portion of said front panel and said downwardly sloping top panel having openings substantially in alignment with said openings in said bottom portion of said front panel, and a locking dowel pin extending horizontally adjacent the back of said inte-

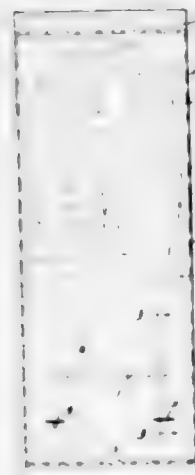
gral connection between said top panel and said front panel and engaging an item of merchandise in said openings.

ERRATUM

For Class 206-45.18 see:
Patent No. 3,003,997

3,003,621

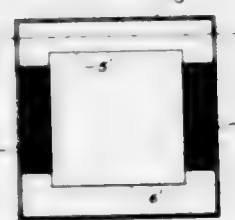
DISPLAY AND PACKAGING ARTICLE FOR GLOVES, OR THE LIKE
Robert R. King, Willard, Ohio, assignor to The Pioneer Rubber Co., Willard, Ohio, a corporation of Ohio
Filed Nov. 4, 1958, Ser. No. 771,791
2 Claims. (Cl. 206-45.33)



1. A display and packaging article comprising a card-board frame having integral front and back portions connected by a bottom fold section, said front portion being of less than about one-half the height of said back portion, the lower part of said back portion having a pair of parallel laterally directed slits therein extending less than the width of and spaced from the edges of said back portion to provide a strip in said back portion, said strip receiving and positioning a pair of flexible gloves between its back surface and adjacent upper and lower front parts of said back portion, means securing said back and front portions together below said strip, said gloves being folded back up over said strip on the front surface thereof and having their lowest portions above said securing means, and an enclosure in which said frame and gloves are snugly received to retain said gloves folded back over said strip to extend upwardly of the package.

3,003,622

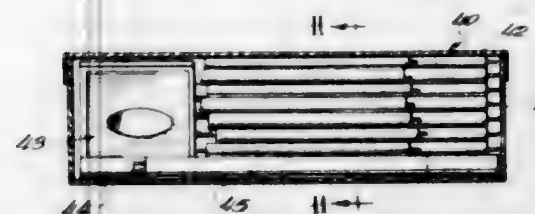
CUSHIONED SHIPPING CONTAINER UNIT
James S. Hardigg, Washington, D.C.
(58 Middle St., Hadley, Mass.)
Filed Aug. 26, 1953, Ser. No. 376,732
7 Claims. (Cl. 206-46)



1. A cushioned shipping container unit comprising an outer container, an inner article of smaller size disposed within said outer container and completely spaced therefrom, and a plurality of compressible cellular elastomeric pads interposed between facing surfaces of said container and said article, each of said pads being firmly attached to each of the adjoining facing surfaces whereby said pads provide elastic resistance to movement of said inner article relative to said outer container in every direction.

3,003,623

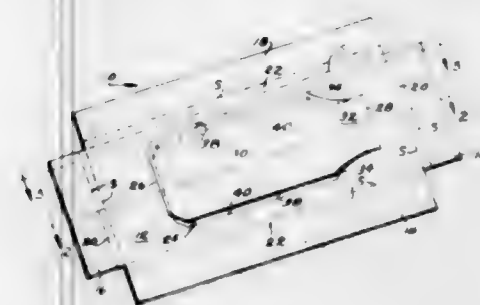
ARTIFICIAL TREE PACKAGE
Nathan Paul and Clarence D. Reese, Chicago, Ill., assignors, by mesne assignments, to Mard Continental, Inc., Chicago, Ill., a corporation of Illinois
Filed May 18, 1959, Ser. No. 813,826
4 Claims. (Cl. 206-46)



1. A package product comprising, in combination, a carton, a knocked-down artificial Christmas tree stored in said carton comprising, a trunk having socket means along the circumference thereof for attaching thereto a plurality of branch members to form said tree, a plurality of expansible and crushable branch members on the interior of the carton each slidably received in an open-ended cylindrical sleeve with the foliage of the branch compressed around the stem of the branch, said branches being substantially similar in length and said sleeves being the same length, each branch having an extremity thereof accessible through one of said open ends of the sleeve to permit said branch to be slid out of the sleeve through said open end with accompanying expansion of said foliage thereof to its normal condition, and a trunk pedestal in said carton, said sleeves being arranged flat in stacked arrangement on the interior of the carton so that the size of the carton required is substantially reduced as compared to the volume of space occupied by the branches in their normal condition and a trunk pedestal in said carton.

3,003,624

DISPLAY PACKAGE FOR HOSIERY AND METHOD
Julius M. Ramsay, Jr., Asheboro, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 847,947
1 Claim. (Cl. 206-46)

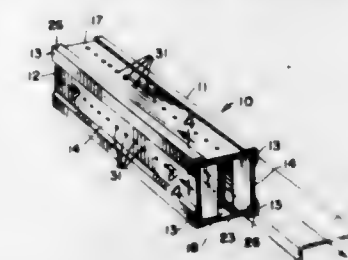


A display package comprising: an oblong, one-piece blank having a front wall and symmetrically opposed side and end walls, back wall portions joined to said respective side walls and end walls folded to form a closed generally rectangular container wherein said back walls are joined to one another to define the rear wall of the package, a longitudinally extending elongated cut-out portion in said front wall extending over a major portion thereof and having an oblong portion merging at one end to an end portion which is pivotally joined to said front wall, said end portion being of tapered construction, a pair of socks arranged within said container, said cut-out portion being positioned within the leg portion of at least one sock of said pair, the welt end of said one sock being received by said tapered end portion,

whereby the leg of said sock is visible from the outside of the package, the foot portion of said one sock being folded over said leg portion within said package.

3,003,625

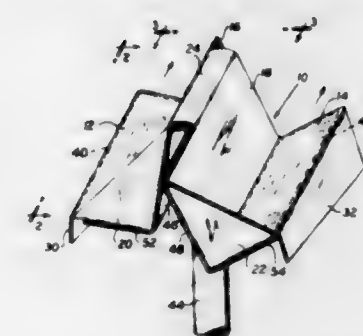
FIRST AID KIT
Wendell Anderson, 22 W. 378 Army Trail Road, Rte. 1, Addison, Ill.
Filed May 15, 1958, Ser. No. 735,447
10 Claims. (Cl. 206-63.2)



1. A supply container comprising: first and second elongated double-channel members both of predetermined internal and external widths and both having slide channels running along each longitudinal edge portion thereof of a predetermined depth; third and fourth elongated channel members both of selected internal and external widths and both having bottom portions of predetermined thickness less than said predetermined depth with one of said selected widths approximating one of said predetermined widths in engagement with said first and second double channel members; first and second U-shaped members both of a depth less than said predetermined internal width minus the total bottom thickness of said third and fourth channel members in engagement with said first and second and said third and fourth channel members; and means securing said first and second and said third and fourth channel members and U-shaped members together with said channels facing each other to form a hollow rectangular container.

3,003,626

MAIL SORTING TRAYS
Thomas C. Richards, 1544 Flatbush Ave., Brooklyn, N.Y., and Benjamin Schepetin, New York, N.Y. (2420 Glenwood Road, Brooklyn, N.Y.), assignors of twenty percent to George Bohrer, Bayonne, N.J.
Filed Aug. 20, 1959, Ser. No. 835,004
5 Claims. (Cl. 206-73)



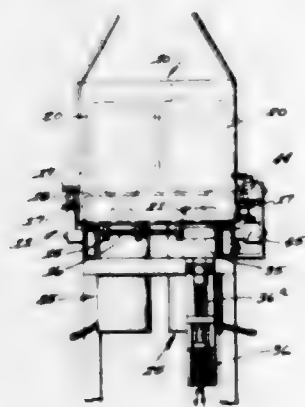
1. A mail sorting tray of the character described comprising a pair of generally rectangular mail supporting platforms disposed adjacent to each other, said platforms being tilted toward each other, their near side edges being disposed at a lower level than their far side edges, a pair of retaining walls connected to said platforms along their lower near side edges to support the mail disposed on said platform, a pair of additional retaining walls being connected to said platforms along their lower front ends to cooperate with the first-mentioned retaining walls in supporting the mail, the several retaining walls being dis-

posed in substantially perpendicular relation to the planes of the mail supporting platforms to which they are respectively connected.

3,003,627

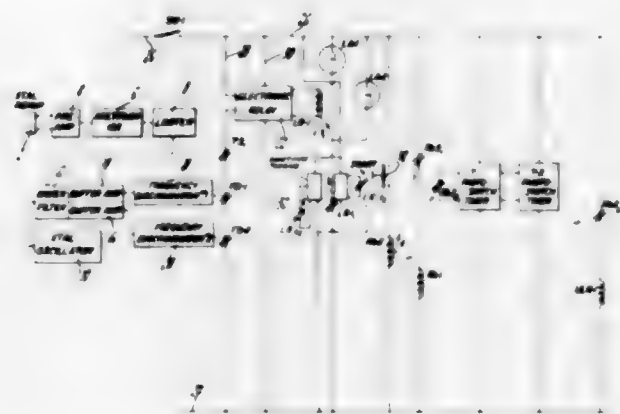
APPARATUS FOR DETECTING AND INSPECTING ARTICLES IN CONTAINERS

Thomas B. Sorbie, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 13, 1957, Ser. No. 677,876
12 Claims. (Cl. 209-71)



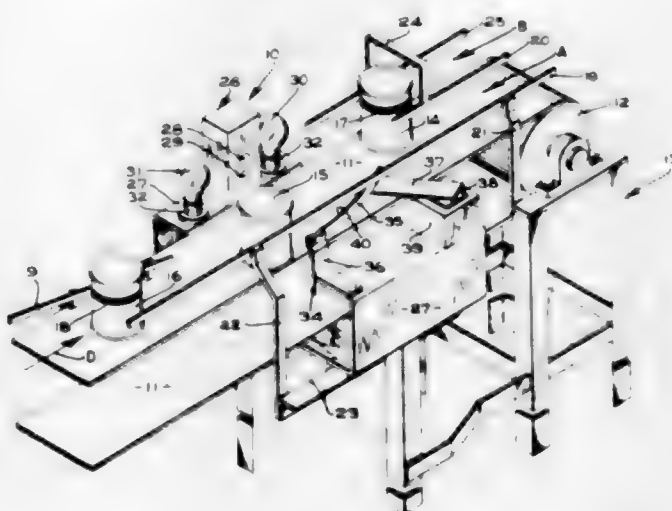
1. Apparatus for inspecting cartons with containers packaged therein, each carton adapted to hold a prescribed number of containers with the containers occupying prescribed positions within the carton, said containers normally having metal closure caps applied thereto, the apparatus including a conveyor by which the cartons are carried in succession to and through a testing station, detecting devices positioned at said station and arranged in order and positions corresponding to the said arrangement of the containers within the carton, each detecting device comprising a differential transformer including primary coils connected in opposing phases and a secondary coil, amplifiers and relays individual to the transformers, each relay comprising a solenoid, the relays each comprising a contact element movable to a circuit closing position when the relay is energized, the contact elements being connected in series in a relay circuit, the said closure caps being operable, when brought within the magnetic fields of the corresponding transformers as a carton enters the testing station, to produce voltage in the transformer secondary circuits by which the corresponding amplifiers and relay solenoids are energized, whereby the said relay circuit is established when the carton at the testing station contains the prescribed number of containers and closure caps in the prescribed order, a stop gate movable into and out of the path of the cartons, a gate solenoid operatively connected to said gate and operative while energized to hold the gate out of the path of the cartons, a power circuit in which the gate solenoid is connected, a normally closed switch, a normally open switch, said switches being connected in parallel in the gate solenoid circuit and in parallel with the said relay circuit, the normally closed switch being in the path of the cartons and in position to be opened by a carton after the carton reaches the position to effect the closing of said relay circuit, the normally open switch being positioned and arranged to be closed by the carton while the said relay circuit is closed, the normally open switch being held in closed position while the normally closed switch is released by the carton and again closed, whereby the carton is permitted to advance uninterruptedly through the testing zone when the prescribed number of containers with closure caps thereon are in position within the carton, and whereby the gate solenoid circuit is broken and the gate moved to stop position when a container or closure cap is missing.

3,003,628
SONIC INSPECTION APPARATUS
Milton J. Diamond, Saginaw, Phillip O. Fredrickson, Clawson, and Robert F. Spain, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 16, 1956, Ser. No. 616,267
6 Claims. (Cl. 209-72)



1. In testing apparatus for controlling means for classifying parts having a resonant frequency of vibration, a plurality of switches connected in series with said controlling means to commonly control the energization of the same, timing means for actuating one of the switches to close the same a predetermined time after the apparatus is energized and open it again at a predetermined later time, a plurality of frequency discriminators adjusted to different spaced center frequencies to define limits connected to and individually operating the remainder of the switches, transducer means for changing mechanical vibrations of a part into electrical oscillations for picking up the vibration of a part and amplifying means interconnecting said transducer means and the discriminators to apply the resonant frequency thereto for control purposes for a given time period.

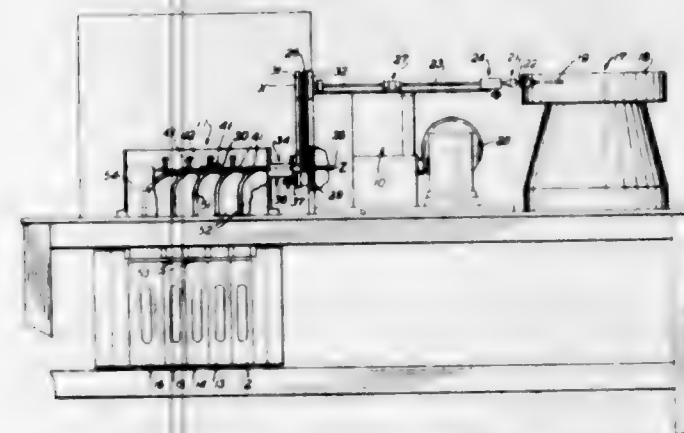
3,003,629
CONTAINER SEGREGATING APPARATUS
Albert Luther Henderson, San Diego, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Mar. 22, 1956, Ser. No. 573,294
8 Claims. (Cl. 209-74)



7. In an article segregating apparatus, a deflecting assembly comprising a resilient deflecting member mounted in a deflecting position in the path of advancing articles to be segregated and capable of bending from said path upon contact by advancing articles, a projection extending laterally from said deflecting member in

an outwardly direction opposite the deflecting surface, and electro-magnetic means disposed below said projection when said deflecting member is in a deflecting position, said electro-magnetic means being arranged to magnetically lock said projection and thereby hold said deflecting member in a deflecting position upon being energized.

3,003,630
APPARATUS FOR SORTING RESISTORS AND CONTROL CIRCUITRY
Raymond W. Brown, Evergreen Park, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 26, 1960, Ser. No. 24,832
24 Claims. (Cl. 209-81)

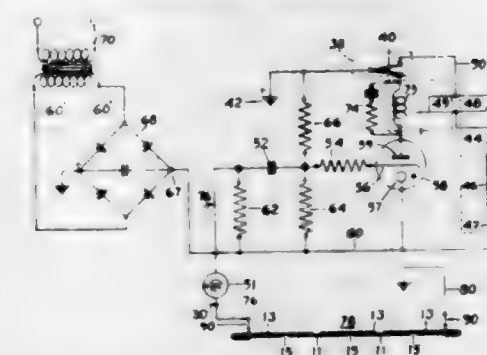


1. In combination with an apparatus of the type wherein a group of operating devices is provided that are to be energized in sequence until the occurrence of a particular event that may occur as a result of the energization of any one of the operating devices, wherein a device is provided for detecting the occurrence of the event, and wherein an ultimate device is provided that is to be operated in one of several different manners in accordance with a determination of which operating device was effective to produce the event; a control circuit, which comprises a group of control relays, each of which is designed when energized for energizing an associated one of the operating devices, said control relays being arranged in an open chain such that each one but the last in the chain will energize a subsequent control relay after a distinct time delay T; means responsive to the operation of the detecting device when the particular event has occurred for precluding the energization of any control relay that is not already energized, said control relays being so constructed that the time delay T required to energize a subsequent control relay after the preceding one has been energized is longer than the time required for the operating device associated with the preceding control relay to be energized, plus the time required for the event to take place, plus the time required for the detecting device to determine whether or not the event has taken place, plus the time required for the energization-precluding means to function and thus prevent the energization of the subsequent control relay; and means responsive to the concomitant operation of the detecting device and at least one of said control relays for selectively operating the ultimate device in accordance with the number of control relays that have been energized.

3,003,631
MEANS FOR DETECTING THE PRESENCE OF CONTENTS IN ENVELOPES
Bernard L. Stock, 3317 Normandy Road, Springfield, Ill.
Filed Oct. 8, 1956, Ser. No. 614,499
25 Claims. (Cl. 209-81)

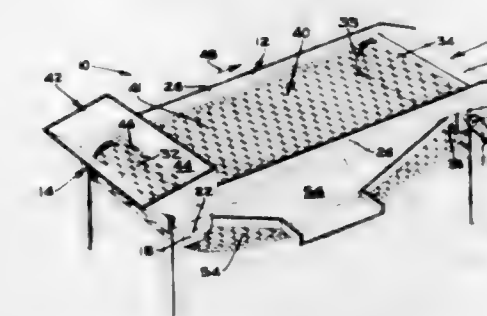
2. An apparatus for sorting envelopes in accordance with the presence or absence of material enclosed in an envelope comprising, a detector circuit including a pair

of laterally spaced electrically conductive sensing electrodes reciprocally operable for penetrating an envelope when disposed in the reciprocable path of said electrodes, said envelope having a discontinuous electrically conductive strip on its interior face and on the interior surface of it flaps, each strip being in a position to bridge the discontinuities of other strip to complete a detector circuit



between said electrodes when the envelope is empty, selector means actuated in discriminatory response to completion of said detector circuit for conditioning a control circuit, and an envelope gate means selectively controlled through the circuit conditioned by said selector means for segregating said envelopes according to the proper empty or non-empty category initially determined by said detector circuit.

3,003,632
ARTICLE SIZING APPARATUS
Hans W. Grotewold, Sebring, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed Dec. 6, 1957, Ser. No. 701,111
7 Claims. (Cl. 209-84)

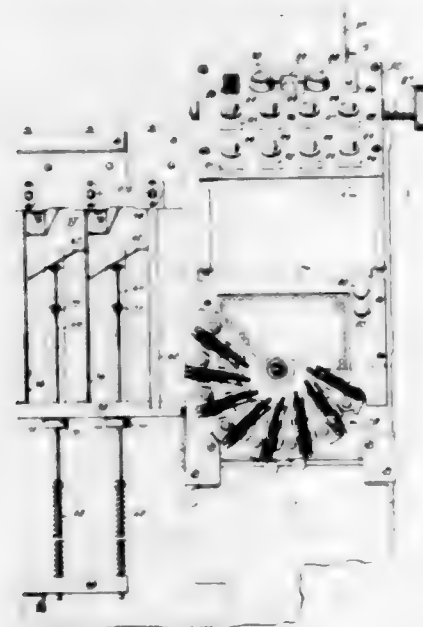


1. In a sizing screen having link members and connecting means therefor providing equally spaced elongated hexagonal openings between adjacent link members, said hexagonal openings each having the opposite sides thereof substantially equally spaced apart, gauging means on each of said connecting means projecting a predetermined distance lengthwise of said openings into two adjacent ones of said hexagonal openings, opposed ones of said gauging means in one of said hexagonal openings being effective to limit one dimension of said hexagonal opening to form an octagonal sizing opening having the opposite sides thereof substantially equally spaced apart.

3,003,633
RECORD CARD SORTING MACHINE
Guillermo Perez, Hartford, Philip S. Rand, Redding Ridge, and Jacob A. Randmer, South Norwalk, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 23, 1956, Ser. No. 599,385
32 Claims. (Cl. 209-111.5)

1. A machine for sorting cards bearing intelligence in accordance with a selected code in the form of perforations through discrete positions arranged in spaced columns thereon comprising means for feeding the cards into the machine at uniformly spaced intervals, a plu-

rality of card receptacles, each of the receptacles being adapted to receive cards having perforations in a given position therethrough, a light source, photoresponsive means disposed in opposing spaced relation with said source for generating a voltage in response to light therefrom, means for conveying said cards in continuous movement from said card feeding means to said receptacles in a path wherein a column on a card passes between said light source and said photoresponsive means whereby each of the positions in said column is successively placed in registration with said light source and said photoresponsive means and whereby said voltage is generated when a perforation through a given position is placed in registration with said light source and said photoresponsive means, a commutator adapted to rotate in synchronism with the card feeding means, an arcuately disposed array of a plurality of segments on the commutator, each of the segments corresponding to one of said positions in said cards, means for applying a voltage to the segments in response to the voltage generated by the



photoresponsive means, a plurality of position sensing relays, each of the relays being adapted to be energized in accordance with the presence of a perforation in a discrete position, means responsive to the voltage from the commutator segments for energizing the position sensing relays, a card sensing relay, means for energizing the card sensing relay in response to a card's passing between the light source and the photoresponsive means, a plurality of timing means, each individually associated with a receptacle and adapted to be actuated in response to the concurrent energization of a position sensing relay and the card sensing relay for determining the time of opening of the receptacle adapted to receive the card having a perforation through a given position, and a plurality of pocket actuating means, each associated with one of said receptacles and adapted to be energized under control of the associated timing means when actuated for opening said receptacles to receive said cards whereby a card having a perforation through a given position is received at a chosen time in a corresponding receptacle.

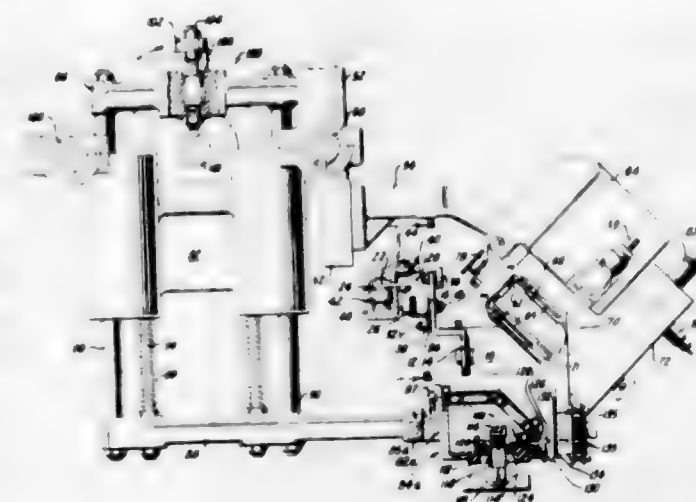
3,003,634

LAMP INSPECTION APPARATUS

Donald L. Snyder and Marius Gisleberg, Montoursville, and Robert A. Helwig, Williamsport, Pa., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Dec. 30, 1957, Ser. No. 705,930
4 Claims. (Cl. 209—111.5)

1. In apparatus for detecting contaminants in a sealed, light-transmitting, gas-filled lamp, by a comparative analysis of the spectral distribution of light from a gase-

ous discharge within said lamp, the combination of: a conveyor; lampholders, for supporting lamps, mounted on said conveyor; an inspection chamber disposed along the path traversed by said conveyor; a pair of electrodes mounted in said chamber; means for advancing said chamber into encompassing relationship with respect to a lamp held by one of said lampholders on said conveyor

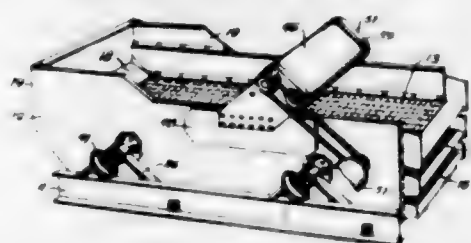


and advancing said electrodes into engagement with said lamp envelope; a phototube in light-receiving relationship with respect to a lamp in said chamber; means for energizing said electrodes whereby a glow discharge is produced in said lamp envelope; and means for alternately passing the total light and the visible light of said glow discharge to said phototube.

3,003,635

SHAKE SCREEN WITH PHASING LINKS AND AIR CUSHIONS

Everett N. Wood, Cedar Rapids, Iowa, assignor to Pettibone Mulliken Corporation, a corporation of Delaware
Filed Aug. 7, 1959, Ser. No. 832,360
13 Claims. (Cl. 209—415)

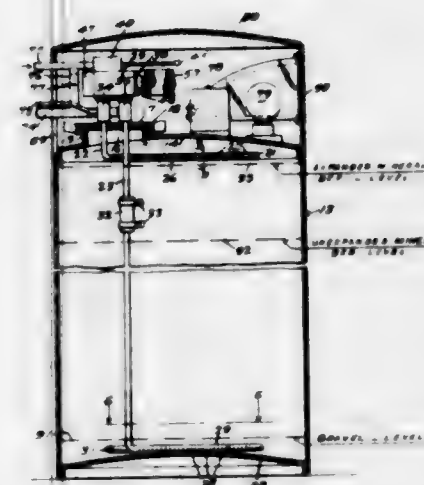


1. Shake-screen apparatus including a base, a screen unit having at least one screen therein, mass-reaction means tending to oscillate the screen unit approximately in a desired oblique direction, and means for confining the oscillation of the screen unit to the desired direction including at least four substantially parallel tie links each pivoted to the screen unit and to the base about parallel axes perpendicular to the direction and parallel to the plane of the screen, the tie links extending upwardly from their pivotal connections with the base, the pivotal connection in each instance including a rubber bushing, and at least one of the pivotal connections having a bearing spread in the direction of the pivotal axis sufficiently long to eliminate objectionable side sway and lateral movements of the screen unit, and a tie link on one side of the screen unit being rigidly connected with a tie link on the opposite side to maintain the two sides of the screen unit oscillating in phase with one another independently of structural rigidity of the screen unit, and resilient means acting other than by torque through the bushings, supporting the screen unit at a desired level at which the tie links are perpendicular to said direction of oscillation.

3,003,636

WATER SOFTENING APPARATUS

Martin Walter Schrader, Red Bud, Ill.
(3910 Crest Drive, Lake Oswego, Oreg.)
Filed May 21, 1958, Ser. No. 736,811
9 Claims. (Cl. 210—97)

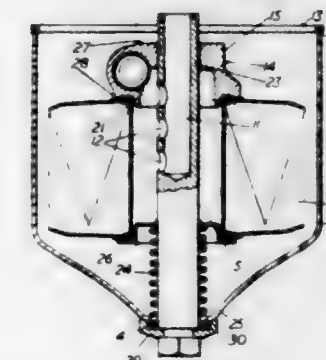


1. A control valve for a water softening apparatus comprising, in combination with a sealed tank, an inlet conduit and an outlet conduit each having an end opening into the sealed tank, a valve housing having an inlet passage, a conduit for supplying hard water under pressure connected to the valve housing and communicating with one end of said inlet passage, said valve housing having separate outlet passages each having an inlet end communicating with the inlet passage, valves mounted in said housing and controlling said outlet passages, a first conduit member interposed between the valve housing and said inlet conduit and forming a connection between a first one of said outlet passages and said inlet conduit, a second conduit member interposed between the valve housing and said outlet conduit and forming a connection between the second outlet passage and said outlet conduit, a drain conduit connected to and leading from said first conduit member, a soft water conduit connected to and leading from said second conduit member, the valve of said first outlet passage being normally disposed in an open position and the valve of said second outlet passage being normally disposed in a closed position, a first pressure responsive valve disposed in said first conduit member and movable by the pressure of the water flowing through said conduit member from said first outlet passage for closing the drain conduit and for permitting a flow of hard water to said inlet conduit, a second fluid pressure responsive valve disposed in the second conduit member and movable by the pressure of the soft water from said outlet conduit into the second conduit member for opening said soft water conduit and for shutting off communication between said outlet conduit and said second outlet passage, and electrically operated valve actuating means connected to said valves of the outlet passages and functioning, when energized, for moving said two valves simultaneously in the same direction for closing the valve of said first outlet passage and for opening the valve of the second outlet passage for reversing the flow of water through the inlet conduit and outlet conduit and through the first and second conduit members whereby the pressure of the reverse flowing water will reverse the positions of said fluid pressure responsive valves for shutting off the soft water conduit and for permitting the hard water under pressure to be supplied to said outlet conduit, and for opening the drain conduit and closing the connection between said first outlet passage and the inlet conduit whereby the reverse flowing water is discharged through the drain conduit.

3,003,637

FILTERS

Kenneth Ernest Buckman, Redbridge, Southampton, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 12, 1957, Ser. No. 665,157
Claims priority, application Great Britain June 12, 1956
3 Claims. (Cl. 210—130)

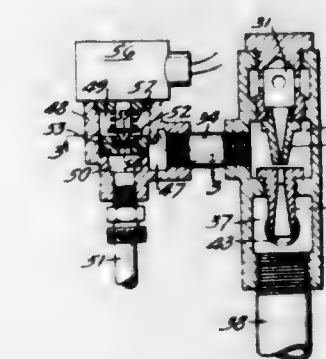


1. A filter unit comprising a casing with an open end, a bolt extending through said casing with a threaded end in said casing open end for attaching the unit to an engine block, an annular filter element and a relief valve assembly rotatably and slidably mounted within said casing on said bolt, said casing and filter element defining a first chamber between them for receiving contaminated fluid, said filter element and bolt defining an outlet chamber for clarified fluid, a spring encircling said bolt and positioned to urge said filter element and relief valve assembly toward said casing open end, said relief valve assembly having a pressure actuated one way valve and a bypass passage with an inlet at one side only of said bolt and an outlet leading to said outlet chamber, and the said inlet and the center of gravity of said relief valve assembly being on opposite sides of a plane in which lies the axis of said bolt.

3,003,638

BRINE SUPPLY SYSTEM FOR FLUID TREATMENT APPARATUS

Benjamin H. Kryzer, St. Paul, Thomas W. Techler, North St. Paul, and Richard G. Thompson, Stillwater, Minn., assignors, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 18, 1957, Ser. No. 646,881
7 Claims. (Cl. 210—139)



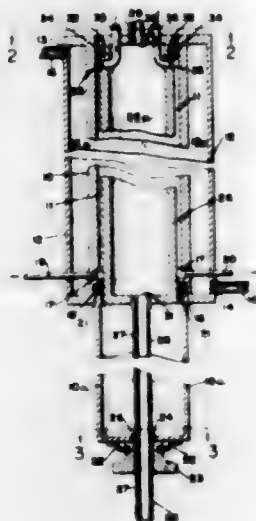
1. A brine supply system for water softeners of the type having a softener tank, a brine tank, a chambered aspirator having inlet and outlet chambers, a nozzle and a suction chamber interposed between said inlet and outlet chambers, said inlet chamber being connected to a supply of liquid under pressure and said outlet chamber being connected to said softener tank for supplying brine to said tank, the improvements which comprise, a conduit connecting said inlet chamber to said outlet chamber of the aspirator; a normally closed back flow valve controlling flow through said conduit, a brine

control valve having a casing formed with a first port connected to said suction chamber and a second port connected to said brine tank, said brine control valve having a pressure responsive closure member controlling flow from said brine tank to said casing, said closure member being movable under reduced pressure in said casing to open said second port for flow from the brine tank to said suction chamber; a flow control plug disposed in said casing and having a restricted passage for flow to said brine tank when said closure member is held in closed position by higher fluid pressure within said casing; a second closure member normally closing said restricted passage to cut off flow of refill liquid through said passage to the brine tank, and timing means operatively connected to said back flow valve and to said second closure member respectively whereby flow through said conduit and restricted passage may be initiated and terminated at preselected times.

3,003,639

CONTINUOUS-FLOW VARIABLE SLIT HEIGHT THERMAL DIFFUSION COLUMN

Melvin M. Fink, Cleveland, Ohio, assignor, by means assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Sept. 12, 1956, Ser. No. 609,464
3 Claims. (Cl. 210-176)

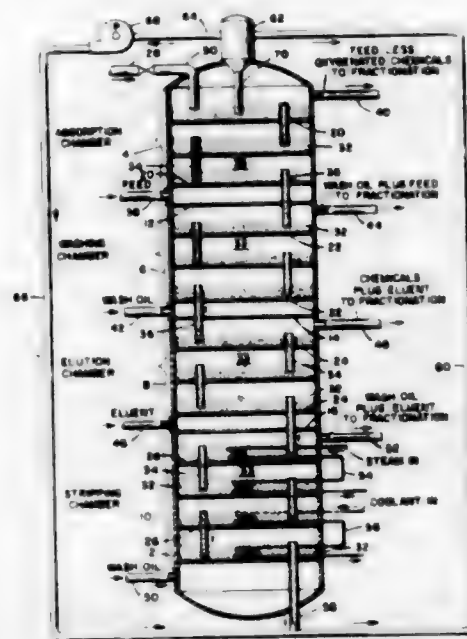


1. A thermal diffusion apparatus comprising a stationary outer tubular member and an inner tubular member having a smaller outside diameter than the inside diameter of said outer tubular member movably mounted in concentric relation to said outer member, said outer tubular member having a seal retaining means and a seal operatively associated therewith, said inner tubular member having a seal retaining means and a seal operatively associated therewith spaced apart from said retaining means and seal associated with said outer member so as to provide a thermal diffusion separation chamber in the annular space between said outer and inner tubular members, inlet conduit means for introducing a liquid to said separation chamber, two outlet conduit means for withdrawing two liquid products simultaneously from said separation chamber, first port means communicating with one of said outlet conduit means and said separation chamber located at the upper extremity of said inner tubular member, second port means communicating with the other of said outlet conduit means and said separation chamber located at the lower extremity of said outer tubular member, means for impressing a temperature gradient upon said separation chamber and means for moving said inner movable tubular member in an axial direction relative to said stationary outer member whereby the effective length of said separation chamber may be altered.

3,003,640 APPARATUS FOR SEPARATION OF MIXTURES

Frank G. Pearce, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed Mar. 28, 1957, Ser. No. 649,091
4 Claims. (Cl. 210-189)



1. Apparatus for separating components of a mixture by selective adsorption methods comprising an enclosed elongated shell having successively and vertically disposed therein individual adsorption, washing, elution and regenerating chambers, said chambers being defined by spaced plates conforming to the walls of said shell in fluid-tight relationship, feeding means for introducing adsorbent material into said adsorption chamber, individual means in each of said chambers for the introduction and withdrawal of a fluid from said shell, a single conduit in each of said plates placing adjacent chambers in communication with one another, said plates being otherwise imperforate, the upper end of each of said single conduits opening into the upper of said adjacent chambers thereby placing said upper end above the level of said individual withdrawal means in the lower of said adjacent chambers, means in said regenerating chamber for withdrawing regenerated adsorbent therefrom, and means for externally transferring regenerated adsorbent to said feeding means.

3,003,641

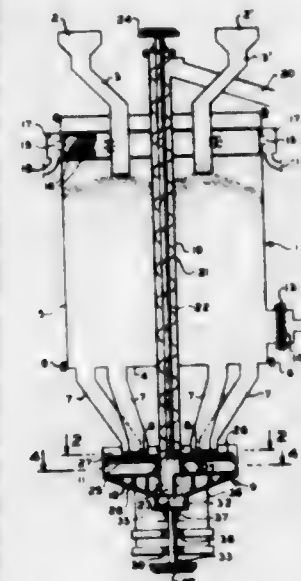
CONTINUOUS PERCOLATION APPARATUS

Carl D. Laughlin, North Brunswick, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

Filed July 25, 1958, Ser. No. 751,018
5 Claims. (Cl. 210-189)

1. In an apparatus adapted for continuous counter-current contact of a liquid with a particulate solid by percolation of the liquid through a columnar mass of the particulate solid, said apparatus comprising a vertically disposed columnar vessel adapted for continuous downward movement of said particulate solid therethrough in the form of a columnar mass, said columnar vessel including a base for supporting said columnar mass, first inlet means for introducing particulate solid into said columnar vessel, second inlet means located below said first inlet means for introducing liquid feed, liquid outlet means located above said second inlet means for continuously withdrawing contacted liquid from said columnar vessel; the combination therewith of a chamber located below said columnar vessel and of substantially smaller volumetric capacity than said columnar vessel,

a plurality of distributory outlets of restricted area provided in the base of said columnar vessel, each distributory outlet terminating in an open end within said chamber, thereby establishing communication between said columnar vessel and said chamber, a vertically positioned elevating screw mounted for rotatable movement within said columnar vessel and said chamber with the lower extremity of said screw terminating at a point above the base of said chamber, a casing enveloping said elevating screw and having its lower end open and spaced from the lower end of said chamber above the lower extremity of said elevating screw whereby particulate solid may be conveyed upward from said chamber through said casing, a discharge outlet adjacent the upper end of the casing for discharging particulate solid conveyed through said casing, stationary plate means disposed in said chamber below the open end of each of said distributory outlets and spaced therefrom in a manner to restrict flow of particulate solid through said distributory outlets so that normal flow of said particulate solid through said distributory outlets is prevented, means for periodically removing particulate solid from the area between the open end of each of said distributory outlets and said plate for controlling flow of particulate solid through said distributory outlets and into said chamber whereby particulate solid may be continuously removed uniformly over substantially the entire base of the columnar mass in said columnar vessel, thus preventing substantial turbulence of the remaining particulate solid during continuous movement thereof downwardly within the columnar vessel, and means in said chamber for urging particulate solid into contact with said elevating screw for removal through said casing.



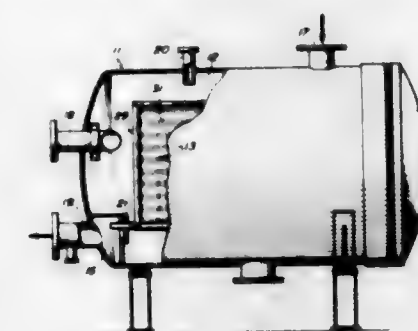
tributary outlets and spaced therefrom in a manner to restrict flow of particulate solid through said distributory outlets so that normal flow of said particulate solid through said distributory outlets is prevented, means for periodically removing particulate solid from the area between the open end of each of said distributory outlets and said plate for controlling flow of particulate solid through said distributory outlets and into said chamber whereby particulate solid may be continuously removed uniformly over substantially the entire base of the columnar mass in said columnar vessel, thus preventing substantial turbulence of the remaining particulate solid during continuous movement thereof downwardly within the columnar vessel, and means in said chamber for urging particulate solid into contact with said elevating screw for removal through said casing.

3,003,642

FILTER ASSEMBLY AND AUTOMATIC SHUT-OFF VALVE THEREFOR

Edward A. Ulrich, Kenmore, N.Y., assignor to Process Filters, Inc., Buffalo, N.Y., a corporation of New York
Filed June 5, 1957, Ser. No. 663,738
5 Claims. (Cl. 210-347)

5. In combination: a tank having a chamber and a manifold provided with an opening affording communication between the chamber and manifold, a tubular mounting disposed in the chamber and secured in the opening, a tubular fitting extending from the mounting and provided with a passage, a frame having a perforated grid, a filter element enclosing the frame with its interior communicating with the passage, said filter element adapted to support a filtering agent, the improvement comprising an elongated tubular support connected to the mounting and extending into the fitting, said support being provided with an aperture, filter media

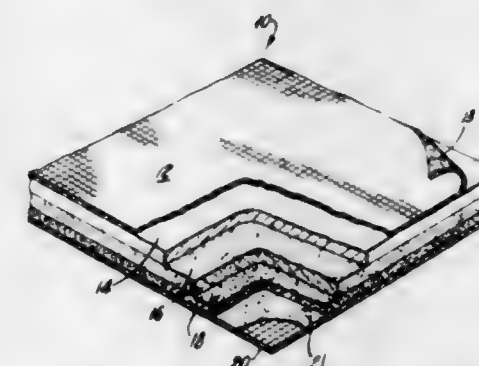


the media and aperture and when the condition of the element permits the unfiltered fluid to flow into the fitting through the passage foreign matter in the fluid will clog the media and thereby automatically prevent flow of the unfiltered fluid into the support.

3,003,643

FILTER MEDIA

William J. Thomas, Arlington, Va., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Oct. 28, 1957, Ser. No. 692,802
4 Claims. (Cl. 210-491)



1. Filter medium for use in the filtration of solutions of high polymeric materials preparatory to the conversion of said solutions into filaments, films and the like comprising an incoming fibrous layer having a maximum pore diameter of from about 175 to about 300 microns; a combination of at least a second, third and fourth filtering layer of fibers; the fibers in said second layer having an average fineness equivalent to a weight of from about 5.5 to about 7.5 micrograms per linear inch for a material having the density of cellulose, said second layer having a maximum pore diameter of from about 71 to about 160 microns and a layer weight of from about 875 to about 3500 grains per square yard; the fibers in said third layer having an average fineness in the range of from about 3 to about 5.4 micrograms per linear inch for a material having the density of cellulose, said third layer having a maximum pore diameter in the range of from about 48 to about 95 microns and a layer weight in the range of from about 875 to about 3500 grains per square yard; said second and third layers being through-bonded with from about 1 1/2% to about 20% by weight of a bonding agent; the fibers in said fourth layer forming a denser layer than the second and third layers, said fourth layer having a maximum pore diameter in the range of from about 45 to about 60 microns and a layer weight of from about 4000 to about 5300 grains per square yard; and an outgoing fibrous layer having maximum pore diameters greater than the pore diameters of said fourth layer.

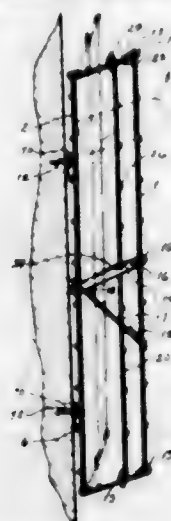
3,003,644

BOTTLE RACK

Oliver W. Hildebrand, Jennings, Mo., assignor to Wirecraft Manufacturing Company, St. Louis, Mo., a corporation of Missouri

Filed July 25, 1960, Ser. No. 45,107

3 Claims. (Cl. 211-74)



1. An article-retaining rack comprising a back section, a front section, and an intermediate section, said sections being flat and in planar-parallel, mutual, offset relationship, said front, intermediate and back sections each having openings for alignment along downwardly, front-to-back inclined axes for reception and maintenance therein of articles in inclined relationship to the horizontal, swingable means interconnecting said front, back and intermediate sections for mutual relative movement toward and away from each other between rack-extended or article-receiving condition and collapsed or inoperative condition, and a pair of restraining arms interconnecting said front and back sections for maintaining the aforesaid sections in mutually offset relationship.

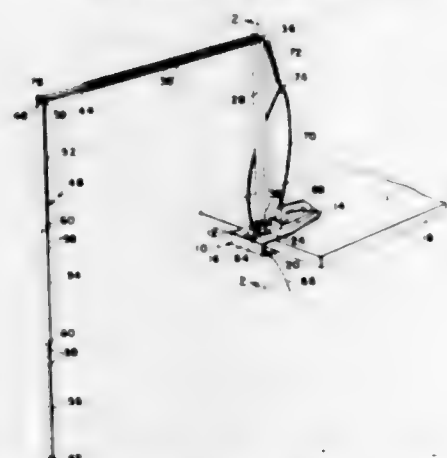
3,003,645

IRON HOLDER AND CLOTHES RACK ASSEMBLY FOR IRONING BOARD

Walter M. Sanders, 5925 Ranger Road, San Diego 14, Calif.

Filed Dec. 12, 1958, Ser. No. 779,911

2 Claims. (Cl. 211-86)



1. An iron holder and clothes rack assembly for an ironing board, comprising: a bracket having clamp means thereon for attachment to an ironing board; a support post pivotally attached at one end to said bracket said support post having a U-shaped cross section; means on said bracket to hold the post upright; a linearly adjustable garment supporting cross bar pivotally attached at one end to the other end of said support post said cross bar having a U-shaped cross section; a telescopically adjustable, floor-engaging post pivotally attached at one end to the other end of said cross bar; said floor-engaging post when collapsed being foldable into the hollow portion of said U-shaped cross section of said

cross bar, and said cross bar when linearly collapsed being foldable into the hollow portion of said U-shaped cross section of said support post.

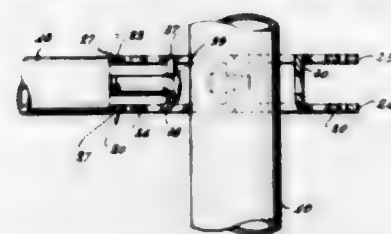
3,003,646

POLE DISPLAY APPARATUS

Morris A. Wolf, 1545 N. Laurel Ave., Los Angeles, Calif.

Filed Oct. 25, 1960, Ser. No. 64,894

9 Claims. (Cl. 211-107)



1. A display support collar for mounting on a display pole, comprising: a pair of members each of which has a pair of parallel flanges in spaced superposed relationship and each of which is matingly engageable with substantially one-half the periphery of a pole disposed normally to the planes of said flanges whereby said pole is substantially completely surrounded by said pair of members; fastener means to clamp said pair of members together and onto said pole; and means on each of said members for connection with a display support member.

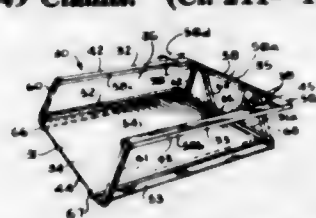
3,003,647

TIERABLE AND END-NESTABLE RECEPTACLES

Warren H. Lockwood, 1329 Granvia Altamira, Palos Verdes Estates, Calif.

Filed Aug. 3, 1960, Ser. No. 47,220

49 Claims. (Cl. 211-126)



1. A control system for a variable pitch propeller having a plurality of propeller blades rotatable about their longitudinal axes between a maximum negative pitch angle and a fully feathered pitch angle including, fluid pressure operated motor means operatively connected to said blades for adjusting the pitch position thereof, a source of fluid under pressure, a speed sensitive governor, a valve operated by said governor for controlling the flow of fluid under pressure from said source to said pitch adjusting motor means, a manually operable control for said governor having a forward thrust constant speed governing position wherein the pitch position of said propeller blades can be adjusted between minimum and maximum positive angles and a reverse thrust constant speed governing position wherein the pitch position of said propeller blades can be adjusted between maximum and minimum negative angles, and means actuated by said manual control for reversing the sense of said governor during movement of said manually operable control from the forward thrust governing position to the reverse thrust governing position.

3,003,648

CHART FILE

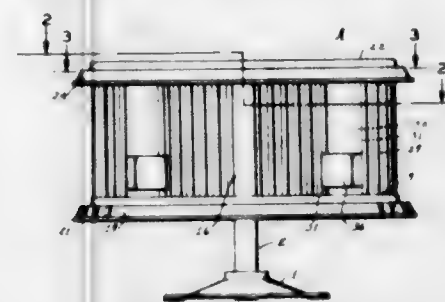
Eugene E. La Vigne, Creve Coeur, Mo., assignor, by mesne assignments, to Brunswick Corporation, a corporation of Delaware

Filed Apr. 30, 1959, Ser. No. 810,007

3 Claims. (Cl. 211-144)

1. A chart file comprising a pivot rod, a pair of vertically spaced apart, parallel, horizontally presented annular plates, axially normal to said rod and disposed

thereon, said plate having apertures provided therein, bearing means for rotating said plates about said rod, a plurality of horizontally spaced apart wall-forming members extending between said plates and being presented radially thereof, each wall-forming member comprising a web portion of substantially the same extent as the distance between the plates and tubular side elements integrally formed with said web and projecting at their ends beyond the adjacent end edges of said web and extending through the apertures of the said plate, means extending through selected tubular side elements for in-



tegrating said plates and wall-forming members into a unified structure, the inner edge portions of the wall-forming members being spaced from the central portion of the plates for defining a central storage chamber, said wall-forming members being more closely spaced at their inner ends than their outer ends for defining a plurality of generally wedge-shaped open-ended compartments whereby at their narrower inner end said compartments will communicate with the central storage area and at their outer, wider ends will communicate with the exterior.

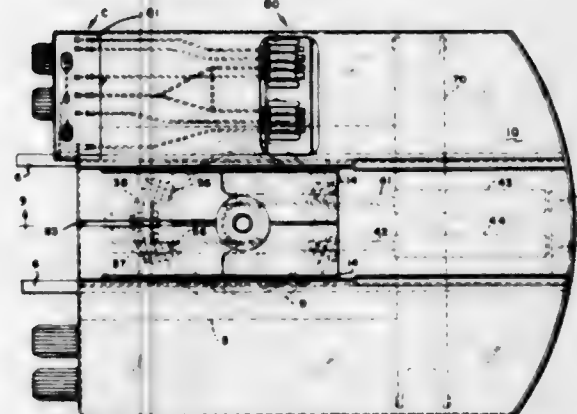
3,003,649

TURNTABLE STRUCTURE FOR HYDRAULIC DIGGING MACHINES

Daniel F. Przybylski, Winona, Minn., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 23, 1957, Ser. No. 691,910

5 Claims. (Cl. 212-69)



1. An excavating unit comprising, a bottom support plate to be fixed to a vehicle chassis, a turntable having a bottom part fixed to said support plate and having a rotatable upper part, a platform fixed to said upper part so as to be rotatable therewith, excavating means mounted on said platform, a stationary pinion on the axis of said turntable, racks meshing with opposite sides of said pinion, double acting reciprocating hydraulic motors connected between said racks and one edge of said platform for turning said platform, a stop abutment upstanding from said support plate, and a pair of stop pawls carried in adjacent relation by said platform and each adapted for engaging said abutment only in one direction of rotation of said platform, whereby substantially a full 360° of rotation of said platform can be had from its stop position.

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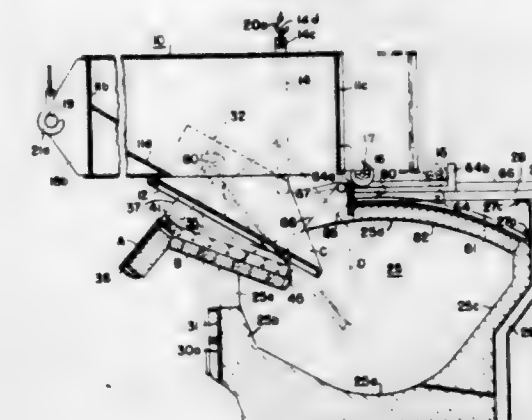
3,003,650

MATERIAL HANDLING

Levi S. Longenecker, 61 Mayfair Drive, Mount Lebanon, Pittsburgh 16, Pa.

Filed Nov. 5, 1958, Ser. No. 772,650

16 Claims. (Cl. 214-35)



1. A material-handling apparatus suitable for charging irregularly-shaped solid material such as metal scrap in a controlled manner through an open feed portion in a furnace roof wall which comprises, wall portions defining a box-like structure for containing the material, a chute door swingably carried by a back end portion of and extending forwardly along the box structure to provide a bottom closure wall therefor when in an upper cooperating position with respect thereto, a downwardly open yoke member straddling a front end portion of the box structure and pivotally connected to a front end portion of said chute to indirectly suspend the box structure at its front end portion from said chute, means to separately and directly suspend the back end portion of the box structure, support means above the furnace roof wall, and the box structure having a forwardly-extending portion to rest upon said support means and release the box structure from its indirect suspension by said yoke member when the box structure is carried by said yoke member and said separate suspending means to a position above the open feed portion, so that said yoke member may lower said chute relative to the box structure to an inclined material feeding position with respect to the furnace.

3,003,651

EXCAVATING APPARATUS

Valno J. Holopainen, Rutland, Mass., assignor to Wain-Roy Corporation, Hubbardston, Mass., a corporation of Massachusetts

Filed Apr. 8, 1957, Ser. No. 651,392

4 Claims. (Cl. 214-138)



4. Excavating apparatus including an adapter having two parallel, spaced vertical side members, a cross member joining the said side members in rigid relationship, a floor plate extending from one side member to the other, each side member having a downwardly-directed, semi-circular recess formed in the lower portion at one side thereof for engagement with a horizontal connecting beam of a tractor-attached loader, a seat attached to the floor plate, and a fastening aperture formed in the upper portion of each side member above the recess

for connection to the loader, each side member having two apertures arranged vertically one above the other at the other side thereof for the connection thereto of a digging attachment.

3,003,652

FRONT LOADING TRACTOR SHOVEL

Albert R. Henry, Salina, Kans., assignor to Henry Manufacturing Company, Inc., Topeka, Kans., a corporation of Kansas

Filed June 6, 1958, Ser. No. 740,255
1 Claim. (Cl. 214-140)

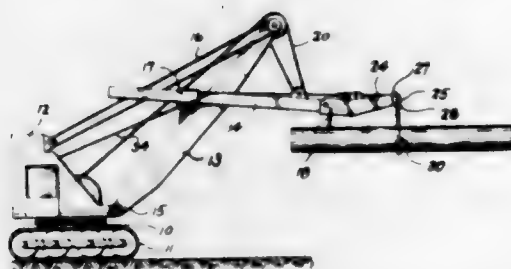


A power shovel comprising a frame, a forwardly extending boom pivoted to said frame for movement in a vertical plane, a bucket having a loading position in which it opens forwardly and a carrying position in which it opens upwardly, a link extending vertically behind said bucket when said bucket is in its loading position, said link being pivoted at its upper end to said bucket and at its lower end to said boom, a first hydraulic ram interconnecting said boom and said link for pivoting said link relative to said boom, and an independently operable second hydraulic ram interconnecting said link and said bucket for pivoting said bucket relative to said link.

3,003,653

LOG LOADER

Albert R. Wirkkala, Nacelle, Wash.
Filed Mar. 3, 1958, Ser. No. 718,816
1 Claim. (Cl. 214-147)



A log loading device comprising a boom, a swivel support means rigidly attached and immovably fixed to the outer end portion of said boom, a swivel having the upper end thereof connected to said swivel support means, a yoke at the lower end of said swivel, a pair of crossed tongs pivotally connected to one another adjacent the upper ends thereof, a clevis connected to the upper end of each of said tongs, each of said clevises being connected to said yoke for supporting the tongs from the swivel, one tong of said pair of tongs having a sheave wheel mounted thereon below the point of pivotal connection of the tongs, a cable guide at the outer end of said boom adjacent said swivel support means, and a tong control cable extending outwardly along the boom through said guide, downwardly and about said sheave wheel and connected to the upper end of the other tong whereby the tongs may be positively maneuvered into

operative position relative to a log or the like by moving the boom, and opening and closing of the tongs may be remotely controlled by means of said control cable.

3,003,654

HAND TRUCK

Frank Felto, Spencer, N.Y., assignor to Richard Greene, Spencer, N.Y.

Filed June 17, 1959, Ser. No. 821,030
1 Claim. (Cl. 214-370)



A hand truck comprising a frame, a load-supporting lift plate slidably mounted on said frame, means for lifting said lift plate, a first pair of casters secured to said frame with the caster axes parallel to the frame and a second pair of casters secured to said frame, said second pair of casters being positioned with the caster axes perpendicular to the caster axes of said first pair of casters whereby said first and said second casters may be pivoted into a position more remote from each other to support the entire weight of the load, said lift means being adapted to shift the load-supporting lift plate to a position such that the center of gravity of the load lies in a plane passing between said first and said second pair of casters.

3,003,655

BOAT TRAILER

David F. Bennett, 1100 Fleetwood St.,
Daytona Beach, Fla.
Filed July 17, 1959, Ser. No. 827,749
2 Claims. (Cl. 214-506)



1. A boat trailer comprising an elongated frame having a forward end, a running gear on which said frame is supported for rocking movement about an axis disposed crosswise of the frame, a draft tongue extending forwardly from the frame, means detachably latching an intermediate portion of the tongue to the underside of a forward portion of the frame, means pivotally connecting said tongue to the frame about an axis disposed crosswise of the frame and between the pivotal axis of the frame and said forward frame end for upward rocking movement of the forward part of the frame about the

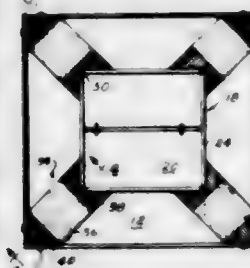
running gear and relative to the tongue, and a roller assembly mounted on and carried by a part of the draft tongue located behind and spaced from the tongue pivot for swinging movement with said part of the tongue upwardly above the plane of the frame into a load supporting position when said frame is tilted relative to the tongue.

3,003,656

CUSHIONED CONTAINER UNIT

James S. Hardigg, Hamilton, Mass.
(58 Middle St., Hadley, Mass.)

Filed Apr. 22, 1958, Ser. No. 730,187
7 Claims. (Cl. 217-53)



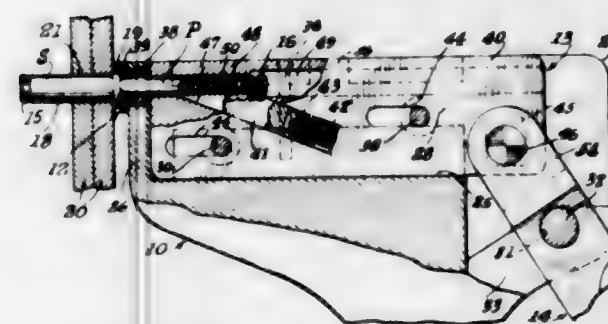
1. A cushioned shipping container unit comprising an outer container with four sides defining a rectangular cross-sectional form, an inner container of smaller size and corresponding form disposed within said outer container and completely spaced therefrom, and shock isolator elements interposed between corresponding side corner edges of said outer and inner containers, each of said shock isolator elements comprising a body of compressible cellular elastomeric material and blocks of laminated corrugated fiberboard firmly attached to opposite surfaces thereof, the fiberboard blocks of each shock isolator element being firmly attached to said outer container and to said inner container whereby said shock isolator elements provide elastic resistance to movement of said inner container relative to said outer container in every direction.

3,003,657

FASTENER-SETTING HAND TOOL

George Siebol and Dorian E. Rippey, Garden Grove, Calif., assignors to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California

Filed Oct. 17, 1960, Ser. No. 62,984
12 Claims. (Cl. 218-42)



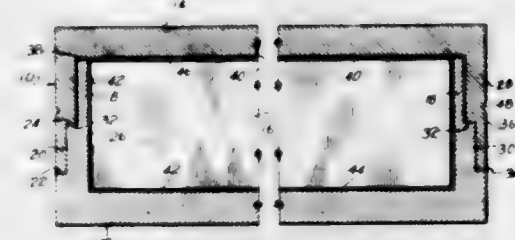
1. A fastener-setting hand tool comprising a head having an integral elongated handle, a slideway in said head, a wall defining an end of the slideway, a guide carried by said wall for receiving the grooved end of the pin of a blind fastener, a chuck assembly movable along said slideway and having a longitudinal through bore into which said fastener pin end is received, a chuck slidingly carried by said assembly, a pivoted handle carried by the head and movable relative to the integral handle and connected to the chuck assembly to move the same between a projected position nearer the mentioned wall of the head and a retracted position, means on the head en-

3,003,658

SEALED CONTAINER

Benjamin Beyton Lindsey, 1154 Wayne St., Topeka, Kans.

Filed Jan. 12, 1959, Ser. No. 786,191
2 Claims. (Cl. 220-42)



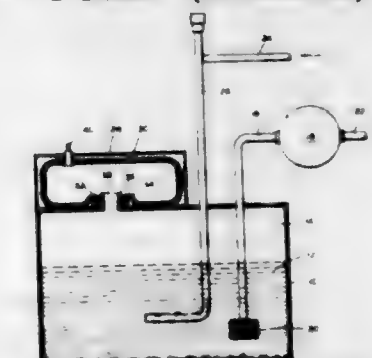
1. A container for enclosing an inner box, said container comprising a tray for receiving said box, said tray having a continuous, upstanding wall about the periphery thereof, the inner face of said wall and the inner surface of said tray being lined with an incombustible material, the outer face of said wall being stepped whereby to provide a first lowermost upwardly facing shoulder and a second upwardly facing shoulder in said wall between said first shoulder and the upper edge of said wall; and a cover for said tray, said cover having an inner and an outer surface and having a continuous marginal wall depending therefrom, the inner face of said wall being stepped to present a downwardly facing shoulder, the lowermost edge of said depending wall and said downwardly facing shoulder being in overlying abutting engagement with said first and second shoulders respectively of the outer face of the tray wall when the cover is placed on the tray, the inner surface of said cover being lined with an incombustible material, said lining extending over that portion of the inner face of said continuous marginal wall of the cover between the inner surface of the cover and the shoulder formed therein, the upper edge of said wall of the tray engaging the inner, lined surface of said cover when the cover is in place on the tray, said tray and said cover being formed of a material meltable upon the application of heat whereby the container may be sealed by fusing the unlined portion of the inner face of said depending wall of the cover to the adjacent portion of the outer face of said upstanding wall of the tray.

3,003,659

COLLAPSIBLE RESERVOIR

Prentice M. Miller, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Filed Sept. 11, 1958, Ser. No. 760,396
1 Claim. (Cl. 220-85)



A hydraulic supply system for vehicles operating in contaminated atmosphere comprising a closed rigid reservoir containing sealed from the surrounding atmosphere and containing hydraulic fluid, a gaseous fluid contained

in the space of the reservoir above the level of the hydraulic fluid, a flexible bladder-like reservoir containing such gaseous fluid and adapted to expand and contract its volume to minimize variations in pressure therein under certain conditions, a rigid passage connected to the rigid reservoir and extending into the flexible reservoir for continuously communicating the gaseous fluid in the flexible reservoir with the gaseous fluid in the rigid reservoir, said flexible reservoir having a flexible opening for receiving said rigid passage, said opening being formed of an annular loop, a sealing ring received in said annular loop for sealing said flexible opening with respect to said rigid passage, variations in the level of hydraulic fluid in the rigid reservoir during operation of the hydraulic supply system causing the flexible reservoir to expand or contract in a plurality of directions as said hydraulic fluid level rises and falls, respectively, normally closed valve means connected to one wall of the flexible reservoir permitting selective introduction of gaseous fluid at a selected pressure in the flexible reservoir, and rigid frame means secured to the rigid reservoir and surrounding the flexible reservoir for restricting the expansion of the flexible reservoir in any direction, whereby desired gaseous fluid pressure in the supply system is maintained while said system is sealed from contamination by the atmosphere.

3,003,660
STOCK LOADING DEVICE FOR A SCREW
MACHINE

Charles E. Hemmingsway, Wyandotte, Mich.
(30446 Prescottt, Romulus, Mich.)
Filed Apr. 23, 1958, Ser. No. 730,418
15 Claims. (Cl. 221-75)

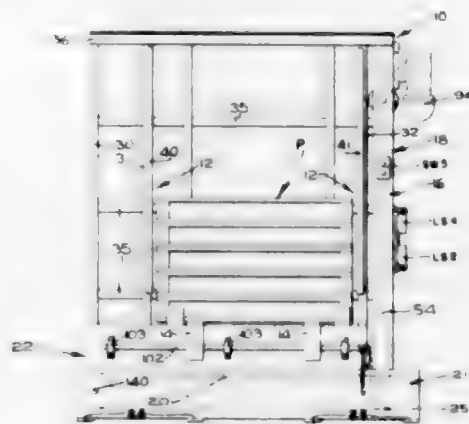


1. An automatic magazine stock-loader for a screw machine comprising a pair of longitudinally spaced pillar blocks extending angularly upward, there being a series of transversely spaced pairs of aligned slots formed across the top surfaces of said blocks, each pair of blocks adapted to receive spaced portions of a stock bar, corresponding transversely spaced pairs of aligned reciprocal stock risers slidably positioned within said pillar blocks with their upper ends registering with said slots, each pair of risers adapted to supportably engage spaced portions of a bar of stock, a laterally extending support below each pillar block parallel thereto and joined to and supporting the corresponding stock risers, power means for intermittently raising and successively lowering said supports relative to said pillar blocks, upward movement of said risers disengaging said bars of stock from said pillar blocks, whereby the bar of stock nearest the lower edges of said pillar blocks will drop therefrom, and the remaining bars of stock will roll downwardly onto said pillar blocks, retainingly engaged by forwardly adjacent elevated risers, and upon withdrawal movement of said risers drop into the forwardly adjacent slots in said pillar blocks.

3,803,661
ARTICLE HANDLING MACHINE
Earle J. McGrath, San Bernardino, Calif., assignor to
FMC Corporation, a corporation of Delaware
Filed Apr. 25, 1957, Ser. No. 655,047
5 Claims. (Cl. 221-290)

1. In an article dispensing machine, a support structure having an open central chamber, a plurality of dogs pivotally mounted on said structure and having end portions

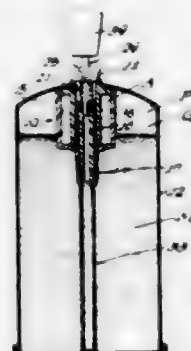
movable from a projected stack-supporting position within said chamber to a retracted position, a carriage mounted for vertical movement in said structure, a lifter plate extending across said chamber and carried by said carriage for movement upwardly in said chamber between said projected dogs to a predetermined elevation above said dogs to lift upwardly a stack of pallets disposed on said dogs, a reversible electric motor mounted on said support structure and having an output shaft, said motor including a raise coil arranged to drive the output shaft in a first direction upon being energized and a lowering coil arranged upon being energized to drive the output shaft in a second direction, elevating means operatively connecting said output shaft to said carriage in such a manner that rotation of said shaft in said first direction causes raising of said carriage and rotation of said shaft



in said second direction causes lowering of said carriage, said elevating means including a sprocket secured to said output shaft and a chain trained around said sprocket and having both end portions secured to said carriage, a discharge conveyor disposed in said support structure and arranged to carry individual pallets out of said chamber, means responsive to movement of a pallet out of said chamber by said discharge conveyor for energizing said raise coil to elevate said carriage, means operable by said carriage for deenergizing said raise coil and energizing said lowering coil when said lifter plate reaches said predetermined elevation, and cam means on said carriage movable into contact with said dogs and arranged to urge said dogs inwardly at a predetermined time during the lowering of said lifter plate to move the end portions of the dogs into position under a pallet of said stack.

3,003,662
DEVICE AND METHOD FOR DISPENSING MATERIAL UNDER PRESSURE OF AN IMMISCIBLE GAS

Philip Meshberg, 290 Euclid Ave., Fairfield, Conn.
Filed Sept. 14, 1959, Ser. No. 839,899
13 Claims. (Cl. 222-1)



1. A method for dispensing a predetermined measured quantity of material from a container under pressure of an immiscible gas comprising providing a measuring

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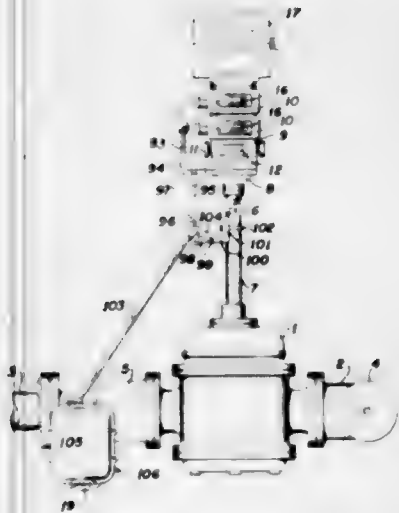
chamber of predetermined capacity having inlet and outlet means and means for forming an air pocket, said air pocket means including an auxiliary chamber adapted to supplement said measuring chamber and being openly communicated therewith at the opposite side of said chamber from said outlet means, trapping air at atmospheric pressure in the measuring chamber and auxiliary chamber, forcing material from the container by the pressure of the immiscible gas therein through said inlet means into the measuring chamber and auxiliary chamber to compress the air into the latter so that the pressure in the chambers and the container are substantially equal, closing the inlet means so that a predetermined quantity of material is trapped in the chambers and thereafter opening the outlet means for communicating the chambers with the atmosphere so that the trapped air is enabled to expand from the auxiliary chamber and drive the material therefrom and from the measuring chamber.

3,003,663

AUTOMATIC METERING SYSTEM

William E. Steen, South Pasadena, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed June 26, 1958, Ser. No. 744,808
19 Claims. (Cl. 222-2)



1. A key operated control mechanism for a fluid dispensing system having a fluid meter and electrical means for operating a pump and a manually operated valve to control fluid flow, which comprises circuit means for said electrical means, electrically controlled interlocking means for controlling manual operation of said valve, switch means adapted to simultaneously control said circuit means and said electrically controlled interlocking means, key operated means adapted to actuate said switch means, counting means to register fluid flow in said dispensing system, normally disengaged coupling means connecting said counting means to said fluid meter, and means operably connected to said key operated means and said coupling means to establish engagement of the coupling means incident to movement of said key operated means to a switch actuated position.

3,003,664

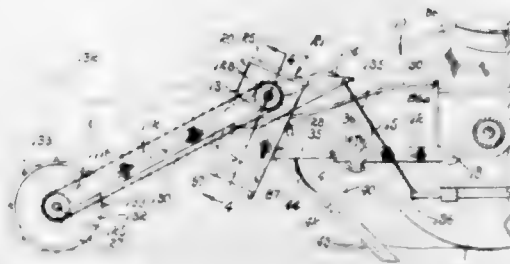
MATERIAL APPLYING IMPLEMENT

Eugene C. Cave, Rte. 4, Box 258, Bakersfield, Calif.
Filed June 1, 1959, Ser. No. 817,317

8 Claims. (Cl. 222-67)

3. In combination with a prime mover adapted for forward earth traversing movement along a predetermined path of travel and having a rearwardly extended implement support elevationally adjustable about a substantially horizontal forward axis disposed transversely of

said path of travel; an implement for applying fluid treating material to the soil over which the prime mover is traveled comprising an upright tank rigidly mounted on the support adapted to contain such treating material and having a lower treating material inlet and an upper treating material outlet, an elongated wheel mounting frame fulcrumed on the tank for elevational pivotal movement about a rear axis substantially parallel to said forward axis, the frame having end portions extended forwardly and rearwardly from said rear axis, means mounted in the tank for conveying treating material from adjacent to the inlet of the tank to the outlet thereof, a drive wheel mounted on the rearwardly extended end portion



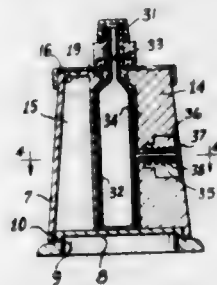
of the frame and engageable with the ground over which the prime mover is traveled, linkage means interconnecting the conveying means and the drive wheel for motivating the conveying means incident to rotation of the drive wheel, and means interconnecting the forwardly extended end portion of the frame and the prime mover for limiting upward movement of the forwardly extended end portion of the frame whereby the rearwardly extended end portion of the frame and the wheel are elevationally adjusted incident to elevational adjustment of the support.

3,003,665

CONDIMENT DISPENSERS

Sydney J. Peters, 12 4th Rue, Roxboro, Quebec, Canada,
Filed Aug. 14, 1959, Ser. No. 833,842

5 Claims. (Cl. 222-94)

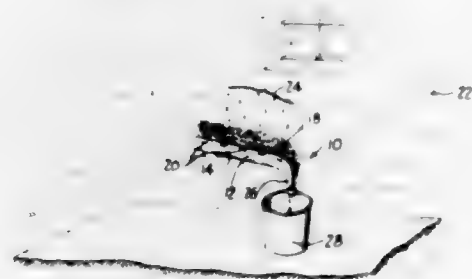


1. In a condiment dispenser, a compartmented body portion, having an outer wall and inner dividing wall defining separate outer compartments, the said inner dividing walls defining an inner compartment centrally located in said body portion, the said outer and inner compartments being open at one end and having dispensing apertures at the opposite end, a removable base plate sealing the open end of said body portion and the various compartments from each other, a selective dispensing plate overlying the apertured end of said body portion, the said dispensing plate being rotatably mounted to selectively expose the apertures of the said outer compartments, a nozzle forming the dispensing aperture of said inner compartment, the said nozzle extending through said dispensing plate and forming a journal member about which the said dispensing plate is rotated, a cap on said nozzle, a compression spring about said nozzle between said cap and said dispensing plate, a screw cap closing the outlet end of said nozzle, a squeeze plate in said central compartment, and a push-button

recessed in the wall of said body portion operably connected to said squeeze plate for displacement of said squeeze plate within the central compartment.

3,003,666 APPARATUS FOR CONTROLLING LEAKS IN WALLS

Barbara Stone, 208 Winchester Ave.,
Staten Island 12, N.Y.
Filed Oct. 30, 1959, Ser. No. 849,874
4 Claims. (Cl. 222-185)

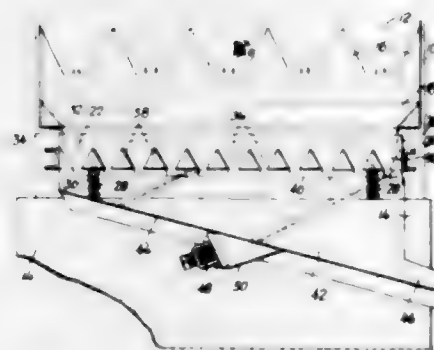


4. A liquid collector and conduit for diverting water running down a generally vertical wall, comprising in combination, a bat of absorbent fibers which has the property of clinging to a wet or damp wall, and to absorb water by capillary action, a water-impervious sheath embracing a part of said bat, said sheath being U-shaped in cross-section to define two spaced apart leg portions and a bight portion joining said leg portions, one end of said sheath defining a spout, and said bat having a part secured between said leg portions to conduct water from a wall to said bight portion when the extending portion of said bat is against a wet wall, said bight portion defining a channel for any water collected, said channel being flexible and the position of said spout being adjustable relative to said fibrous bat.

3,003,667 DEVICE FOR THE DISCHARGE OF GRAIN OR SIMILAR SMALL-SIZED MATERIAL

Anders Sigvard Jonsson, Johanneshov, Sweden; Fritz Belfrage, administrator of said Anders Sigvard Jonsson, deceased, assignor to Nils Fredrik Rudebeck, Stockholm, Sweden

Filed Oct. 18, 1957, Ser. No. 691,011
Claims priority, application Sweden Oct. 24, 1956
6 Claims. (Cl. 222-199)



1. In a device for the discharge of pulverized, grain-shaped, or other small size material from a container, fixed beams having sloping edges to form first downwardly converging passages for said material, a frame provided with bars set substantially at right angles to said beams in a vertically spaced relationship to form second downwardly converging passages for said material, substantially horizontal dispersion shelves fixed to said bars in a vertically spaced relationship below the second passages, vibrating means for said frame, and a downwardly tapered collecting device for said material.

3,003,668 CONTAINERS AND CLOSURES THEREFOR

John Gerrard Sherlock, Feltham, England, and Pieter Hemmes, Deventer, Netherlands, assignors to Plastic Packaging Limited, London, England, a company of Great Britain, and Thomassen & Drijver Blikemballage-fabrieken N.V., Deventer, Netherlands, a company of the Netherlands

Filed Jan. 31, 1961, Ser. No. 86,152
9 Claims. (Cl. 222-541)

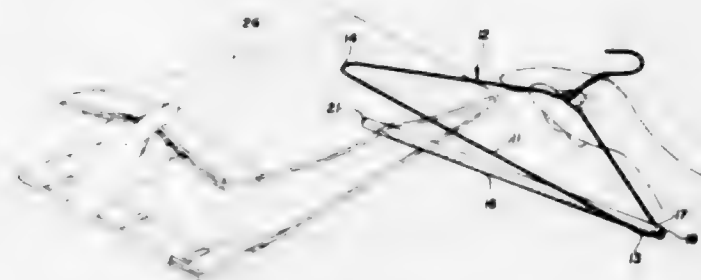


1. A thin walled container element for flowable substances wherein the wall of said element includes a part constituting a protrusion comprising a side wall and an end, the base profile of which protrusion includes at least two corners while the side wall of the protrusion comprises parts which meet at edges one end of each of which lies at one of said corners while its other end lies adjacent to said end of the protrusion, said edges forming parts through which, when a load is applied to the end of the protrusion in a direction towards the base of the protrusion, concentrated loads are applied simultaneously and substantially similarly to each of the localized areas or parts of the wall adjacent to said corners to rupture the wall at points adjacent to said corners and thereby provide apertures adjacent to the corners for discharge of the contents of the container.

3,003,669 GARMENT HANGER

Charles H. King, Oakland, and Marguerite V. West, Lafayette, Calif. (both of 166 Santa Clara Ave., Oakland 10, Calif.)

Filed Sept. 12, 1960, Ser. No. 55,604
5 Claims. (Cl. 223-91)



1. A garment hanger comprising, a length of wire formed with a normally horizontally disposed section and offset normally upright end portions, a rigid garment hanging and clamping rod formed at one end with an axially extending slot opening to said end and dimensioned to receive therein one of said end portions to provide a hinged connection permitting movement of said rod in a normally horizontal plane generally perpendicular to the other wire end portion, the opposite end of said rod being bevelled to provide a surface for engaging and wedging outwardly said last named wire end portion and being formed with a notch in said surface for detachable snap fitting with said last named wire end portion disposing said rod in latched parallel and superimposed relation to said wire, said rod providing between the bases of said slot and notch a fixed length greater than the normal spacing between said wire end portions thereby applying a spreading force thereto urging said horizontally disposed section toward said rod.

3,003,670 HOLSTER

Frank A. Stella, Lyndhurst, N.J., assignor to The Hubley Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Oct. 22, 1959, Ser. No. 848,099
2 Claims. (Cl. 224-2)

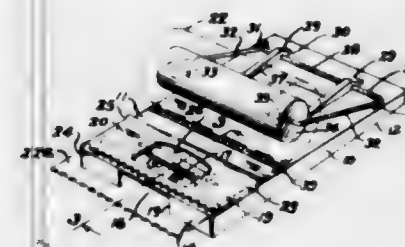


1. A universal holster for selectively supporting a revolver type firearm in a position so that the stock and trigger guard is poised for right or left-hand grip, comprising, a base, a tubular sheath having overlapping edge portions disposed medially of the back portion thereof, means concealed by the sheath for securing the said edge portions to the base to provide opposite side walls for engagement by the barrel of the firearm, said side walls including opposite recesses of substantially equal depth at the top portion thereof to receive said trigger guard of the firearm when the stock thereof is placed in a selected one of said recesses.

3,003,671 DISPENSER FOR SPIRALLY ROLLED PAPER

William S. Graham, 3032 College Ave., Berkeley 5, Calif.

Filed Nov. 1, 1957, Ser. No. 694,011
3 Claims. (Cl. 225-77)



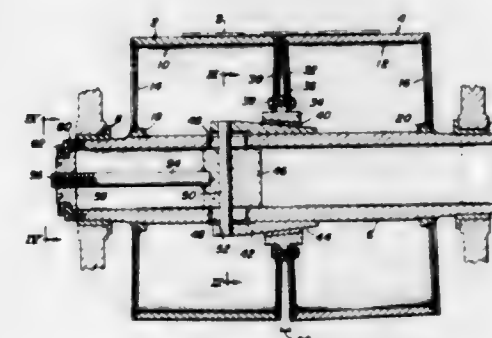
1. A dispensing device for spirally rolled paper, comprising a base member having a flat planar face plate, the forward portion of the face plate being spaced from the plane of a supporting back face of the base, said base having a space under said forward portion of the face plate, said forward portion of the face plate having an elongated lateral transverse roller slot therethrough in overlying communication with said space, a guide plate laterally transversely overlying said forward portion of the face plate and parallelly spaced from said forward portion of the face plate sufficiently to provide a guide slot therebetween for slidably receiving a strip of paper therethrough, an elongated single roller unit rotatably mounted laterally transversely of the base in said space and underlying said roller slot, a portion of the circumference of the roller extending through said roller slot and through the plane of the upper face of the face plate and spaced sufficiently below the plane of the opposed face of the guide plate to provide a lateral transverse space through the guide slot and over the roller for

slidably receiving a strip of paper therethrough in an aligned path parallel with the planar face plate, the circumference of the roller having close rotative slidable clearance with the forward edge of said roller slot, a terminal shearing edge at the forward edge of the guide plate, the said guide plate extending from the shearing edge rearwardly beyond said roller slot and roller and having a guide-plate-opening therethrough overlying the said roller slot and roller, the roller having a circumferential portion extending substantially the entire transverse width of the guide-plate-opening, said guide-plate-opening being freely open for finger pressure therethrough upon the roller and having a guide edge portion spaced rearwardly from the shearing edge and forwardly from said roller sufficiently to provide an underlying planar portion of the face plate between the roller slot and said guide edge exposed to finger pressure through the guide-plate-opening, whereby finger pressure may be exerted through the entire width of said guide-plate-opening upon a circumferential part of said roller and a strip of paper thereover for manual advancement of the paper strip through the guide slot toward the shearing edge, and pivotally mounted bracket means mounted at the opposite rearward planar portion of the face plate adapted for rotatably mounting a roll of spirally wound paper and maintaining the circumference of the paper roll in rotative frictional contact with an underlying surface of the planar face plate adjacent thereto whereby a strip of paper may slide in a plane from the circumference of the paper roll across said portion of the circumference of the roller and through the guide slot to the shearing edge, the said guide-plate-opening being centrally of the guide plate and spaced from the opposite lateral transverse edges of the guide plate, whereby finger pressure on a strip of paper and the roller may be confined to the transversely central portion of the paper strip in the guide slot.

3,003,672 ADJUSTABLE SELF-CENTERING ROLL

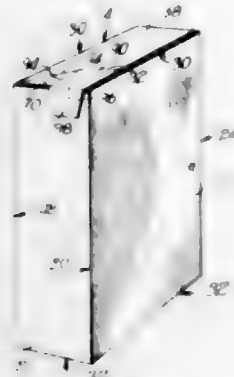
Alfred Teplitz, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 26, 1959, Ser. No. 802,130
4 Claims. (Cl. 226-192)



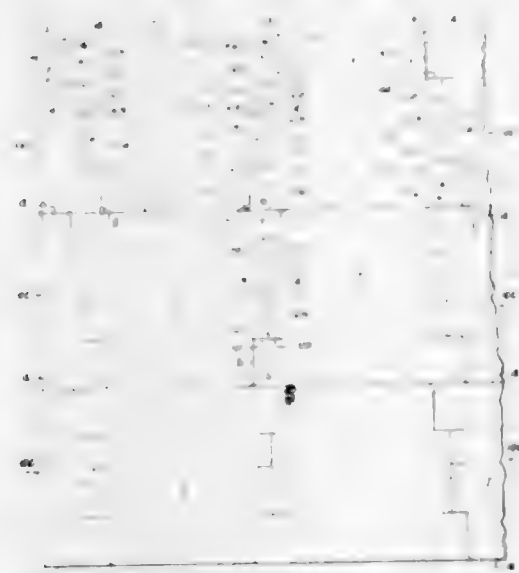
1. Apparatus for positioning a moving object comprising a pair of coaxially opposed rotatable hollow cylinders over which the object passes in a direction transverse to the axes of the cylinders, each of said cylinders having inner and outer ends with the inner ends adjacent each other, a shaft extending through said cylinders coaxial therewith, means supporting the outer end of each of said cylinders on said shaft, a radially extending web for each cylinder having inner and outer ends with the outer end fastened to its associated cylinder at the adjacent inner end of the cylinder and extending inwardly toward said shaft, means fastening the inner ends of said webs together, and a member supported between said shaft and said means and movable axially to vary the amount of deflection of the adjacent ends of said cylinders.

3,003,673
BOX HAVING POURING SPOUT
 David A. Clark and Ronald A. Clark, both of
 Atherton, Mo.
 Filed Sept. 23, 1959, Ser. No. 841,881
 3 Claims. (Cl. 229-17)



1. In a box, a hollow body having a pair of side panels, a pair of end panels, a bottom and a top; and a pull-out pouring spout for said top adjacent one of the end panels, said spout including a central main triangular segment having a line of fold forming one edge of the main segment and the upper edge of said one end panel, a pair of secondary triangular segments disposed one on each side of said main segment and each joined with said top by a line of fold, and a median triangular segment between each secondary segment respectively and the main segment and joined therewith by lines of fold, the median segments overlapping the main segment and each secondary segment overlapping its corresponding median segment when the spout is closed, said top having a pair of relatively overlapped flaps, one of the secondary segments being integral with one of the flaps, the other secondary segment being integral with the other flap, said one flap having means thereon and connected with said one end panel for initially holding the spout closed, said spout holding means including a tear-out tab connected with the secondary segment of said one flap and overlapping the secondary segment of said other flap, and a hold-down tab connected with the tear-out tab and glued to said one end panel.

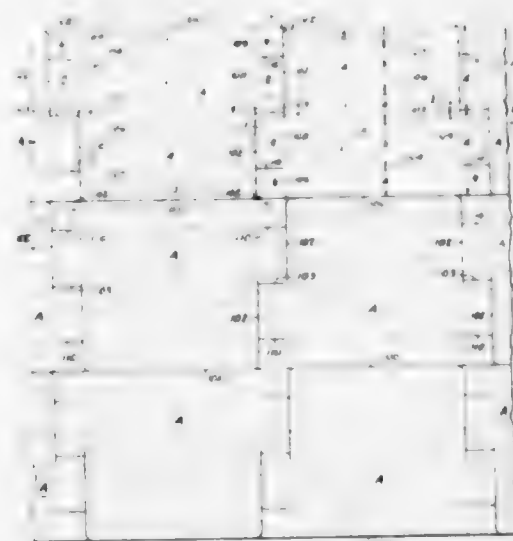
3,003,674
HINGED COVER BLANKS AND CARTONS
 William A. Ringler, Wayne, Pa., assignor, by mesne assignments, to Diamond National Corporation, a corporation of Delaware
 Filed Mar. 8, 1954, Ser. No. 414,569
 21 Claims. (Cl. 229-33)



1. A one-piece hinged cover carton forming blank whose opposite end edges are designed to completely

interfit, in snug cut-line contact throughout the transverse width of the blank, with the opposite end edges of two identical blanks when the three blanks are alternately arranged in columnar alignment, said blank presenting a front panel, a bottom panel, a rear panel, a top panel and a tuck-in flap foldably connected by substantially parallel longitudinally extending scores and serially arranged in the order named, said tuck-in flap presenting tapered end edges contoured to facilitate insertion of the tuck-in flap into the assembled carton, and an end flap foldably connected by a transverse score to each end of each of said front, bottom and rear panels, each of said front end flaps having an ear portion projecting from the end edge thereof whose free end edge is contoured in reverse conformity to the contour of the tapered end edges of said tuck-in flap, each of said front end flaps being separated from the adjacent bottom end flap by a slit cut extending substantially in alignment with the front and bottom panel connecting score, and each of said bottom end flaps being separated from the adjacent rear end flap by a slit cut extending substantially in alignment with the bottom and rear panel connecting score whereby each of said rear end flaps presents a square cut bottom edge, the free longitudinal edge of said front panel being substantially in alignment with the free longitudinal edges of said front end flaps and extending substantially in parallelism with the free longitudinal edge of said tuck-in flap, each of said front end flaps having a transverse width throughout the length thereof which is not greater than the transverse width of said front panel.

3,003,675
HINGED COVER BLANKS AND CARTONS
 William A. Ringler, Wayne, Pa., assignor, by mesne assignments, to Diamond National Corporation, a corporation of Delaware
 Filed Mar. 8, 1954, Ser. No. 414,629
 14 Claims. (Cl. 229-33)



1. A one piece hinged cover carton forming blank whose opposite end edges are designed to completely interfit, in snug cut-line contact throughout the transverse width of the blank, with the opposite end edges of two identical blanks when the three blanks are alternately arranged in columnar alignment, said blank presenting a front panel, a bottom panel, a rear panel, a top panel and a tuck-in flap foldably connected by substantial parallel longitudinally extending scores and serially arranged in the order named, said front panel having a transverse width not substantially less than the width of the bottom panel, said tuck-in flap presenting tapered end edges contoured to facilitate insertion of the tuck-in flap into the assembled carton, end wall forming flaps foldably con-

nected to the ends of each of said front and bottom panels, each of said front end flaps having a longitudinal length greater than the transverse width of said bottom panel, a rear panel flap foldably connected to the rear edge of each of said bottom end flaps by a longitudinal score which is substantially in alignment with the bottom and rear panel connecting score, and an ear portion projecting from the end edge thereof whose free end edge is contoured in reverse conformity to the contour of the tapered end edge of said tuck-in flap, a score extending transversely across each of said front end flaps defining an end panel section whose longitudinal length is substantially equal to the transverse width of the bottom panel and a securing flap section designed to be secured to the rear panel of the assembled carton, the adjacent front end section and bottom end flap when secured together in overlapped relation forming a composite carton end wall which presents a substantially smooth and unbroken outer surface and a continuous and straight top edge in substantial alignment with the adjacent top edges of the erected front and rear wall panels.

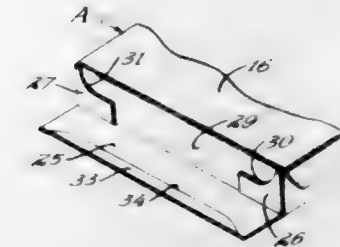
3,003,676
REINFORCED CARTON
 Leone A. De Nola, 367 Glendale Road,
 Hillsborough, Calif.
 Filed May 31, 1960, Ser. No. 33,036
 3 Claims. (Cl. 229-34)



1. A reinforced carton comprising: a corrugated paperboard carton formed from a single blank including a pair of end sections and a middle section, each end section including a first end wall panel, a second end wall panel, a pocket panel connecting the first and second end wall panels, each end wall panel having a pair of flap extensions on opposite sides thereof, one of the pairs of the flap extensions being slotted, said middle section including a bottom panel having side wall enclosure extensions on opposite sides thereof, the first end wall panels of each end section being connected to the other opposite sides of the bottom panel in the direction of its corrugations, the end sections being folded to form surrounding walls for the bottom panel, the pocket panel forming a pocket extension with the top portion of the first end wall panel, the slotted flap extensions on each side of the end sections being folded to form a side wall, and the side wall enclosure extensions being folded to secure the side walls; and a rigid supporting member in each pocket extension, each of the unslotted flap extensions being folded and positioned between its first end wall panel and the adjoining second end wall panel to form a double vertically corrugated platform having an outer portion, the outer portion adjoining the slotted flap extension on the same side of the end section, whereby each of the unslotted flap extensions form with the slotted flap extension a double vertically corrugated right angle corner reinforcement for the carton, and support said rigid supporting member inserted in the pocket extension.

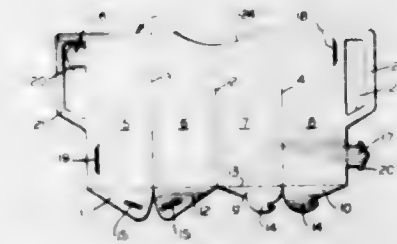
771 O.G.—30

3,003,677
TIGHTLY SEALED CARTONS
 Russell J. Hennessey, St. Paul, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
 Filed July 11, 1958, Ser. No. 748,048
 1 Claim. (Cl. 229-37)



A paper board carton including four side and end panels hingedly connected in tubular relation, a first end closure flap on one of said side panels having an area substantially equal to the area of the end of said carton and adapted to provide an inner closing flap, a pair of end closure flaps hinged to said end walls and adapted to fold outwardly of said first end closure flap in face contact therewith, said pair of end closure flaps being notched by cutting away portions of the edges thereof overlying the fold line connecting the first end closure flap to said one side panel to expose an area of this first end closure flap adjoining the last mentioned fold line, and an end closure flap on the remaining side wall having an area substantially equal to the end area of the carton, and an embossed area on the end edge thereof offset toward the first end closure flap when the flaps are in closing position, said embossed area being shaped to conform with the cut edges of said notches and to extend between said notches, and to lie in face contact with said first end closure flap in said area.

3,003,678
FOLDED CONTAINER
 Hal M. Chase, Los Altos, Calif., assignor to Vacu-Dry Company, Oakland, Calif., a corporation of California
 Filed July 20, 1959, Ser. No. 828,090
 2 Claims. (Cl. 229-39)



1. A foldable container blank for emergency use comprising a generally rectangular body having three parallel body fold lines dividing said body into four rectangular panels; a first pair of bottom flaps, one carried on the bottom edge of each of the outside two of said panels; a second pair of bottom flaps, one carried on the bottom edge of each of the inside two of said panels, each of said pairs of bottom flaps being foldable along a common fold line lying perpendicular to said body fold lines and each pair including one flap having a protruding hooked portion and the other flap having a corresponding slot for mating with said hooked portion; a pair of handle members, one disposed along the outside edge of each of the outside two of said panels and adjacent the top of said panels; a flap carried on one of said handle members for securing said members together; a pair of barbed tabs, one disposed along the outside edge of each of the outside two of said panels; and a pair of corresponding slots each carried in one of the outside two of said panels for mating with one of said barbed tabs.

3,003,679
CARTON

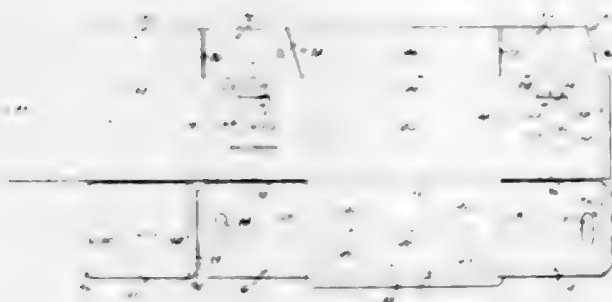
David B. Andrews, Neenah, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 30, 1959, Ser. No. 863,038
2 Claims. (Cl. 229—39)



1. Locking means for a carton, the carton including a pair of opposed panels to be locked together, each panel having a pair of side edges and an end edge, the locking means comprising a pair of male members formed on the end edge of one of said panels, said members having inner and outer side edges directed generally laterally outwardly from said one panel, said members being longitudinally spaced with respect to each other and each having a hooklike portion formed on its inner side by a cut line extending from the inner side of the said portion adjacent the conjunction of said member with said one panel and directed generally longitudinally of the panel and having a terminal portion of the cut line directed generally laterally outwardly of said member intermediate the side edges thereof, and female means in the other of said panels including a pair of longitudinally-directed slits longitudinally-spaced with respect to each other, the remote end of each of said slits having a terminal slit portion directed generally laterally inwardly thereof, the longitudinal spacing between said last-mentioned terminal slit portions being substantially equal to the longitudinal spacing between said outer side edges of the male members, said slits defining portions in said other panel adaptable for ready opening of said slits for entrance of the male members and consequent engagement of the locking means, the hook-like portions in locked position being engaged beneath said other panel, and said panels in locked position being restrained from substantial longitudinal shifting relative to each other by engagement of the respective laterally directed outer edges of said members with said terminal slit portions.

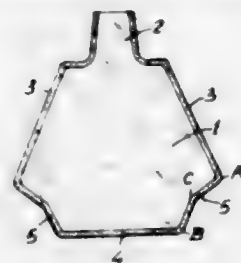
3,003,680
FOLDING AND COLLAPSIBLE CARTON
Thomas L. Wilcox, Jr., 700 W. Morris St.,
Indianapolis, Ind.
Filed May 22, 1959, Ser. No. 815,144
2 Claims. (Cl. 229—41)



1. A foldable one-piece blank for a carton comprising a rectangular bottom panel having first and second longitudinal edges and first and second end edges, a first rectangular end panel extending along the first end edge of said bottom panel and connected along the first end edge of said bottom panel by a first transverse fold line, a second rectangular end panel extending along said second end edge of said bottom panel and connected along

said second end edge of said bottom panel by a second transverse fold line, there being a longitudinal fold line extending centrally along said first end, bottom, and said second end panels, and bisecting said first and second fold lines, said bottom panel having converging fold lines extending from said central longitudinal line to each of said first and second transverse fold lines, a longitudinal flap extending along and foldably connected along said first longitudinal edge of said bottom panel, a first rectangular side wall panel having a pair of longitudinal edges and two end edges, said first side wall panel having one of its longitudinal edges extending along and foldably connected along said second longitudinal edge of said bottom panel, a rectangular end wall panel extending along each of the two end edges of said first side wall panel and foldably connected along the adjacent end edge of said side wall panel, said end panels and said end wall panels being substantially of the same size, a first closure side flap extending along and foldably connected along the other of the longitudinal edges of said first side wall panel, an attaching flap extending along one of said end wall panels and foldably connected thereto, a first end closure flap foldably connected to said one end wall panel, a second end closure flap foldably connected to the other of said end wall panels, a second rectangular side wall panel extending along said other end wall panel and foldably connected to the latter-named end wall panel, and a second side closure flap foldably connected to said second side wall panel, said two side wall panels and said two end wall panels and the attaching flap being serially connected, there being a transverse fold line extending centrally along and from said first end closure flap to and across said one end wall panel, and another transverse fold line extending centrally along and from said second end closure flap to and across said other end wall panel, said two last-mentioned transverse fold lines extending at right angles to said central longitudinal fold line.

3,003,681
CONTAINERS CONSTRUCTED OF DEFORMABLE MATERIAL
René Orsini, 32 Rue du 31 Decembre, Geneve, France
Filed Sept. 8, 1958, Ser. No. 759,752
Claims priority, application France Sept. 10, 1957
9 Claims. (Cl. 229—57)



1. A container comprising at least two flat panels of deformable material each having lateral edges and a transverse bottom edge, the length of said bottom edge being less than the width of said panels between the lower ends of said lateral edges, and margins of said panels extending from said lower ends of said lateral edges to the ends of said bottom edge, the said panels being sealed together at said edges and margins, and said margins being recessed to form an obtuse angle.

3,003,682
MATERIAL MIXING BAGS
Roger P. Mattson, 1004 S. Lincoln St., Casper, Wyo.
Filed May 1, 1959, Ser. No. 810,496
2 Claims. (Cl. 229—62.5)

1. A bag for intermixing a liquid with a material comprising: a front sheet; a pocket sheet; a back sheet, said sheets being of flexible material sealed together to form

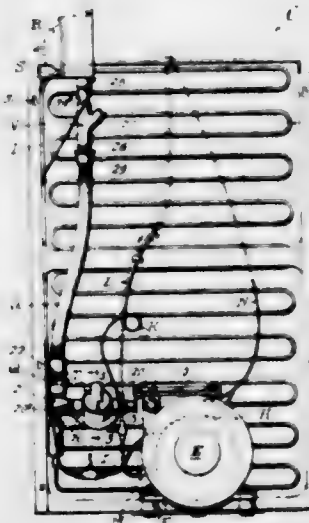
a material pocket between the front sheet and the back sheet; and a liquid pocket between the front sheet and the pocket sheet, therebeing a liquid entrance opening communicating through the pocket sheet with the upper portion of the liquid pocket and a valve port communicating between the liquid pocket and the material pocket, said

and an explosion proof conduit for said wires having explosion-proof connections with said housing and with said switch and including between said housing and said switch at least one sealing device that includes a hollow body through which said wires are threaded and in which is a plastic sealing compound that seals the wires in said body and closes the conduit thereby preventing passage of flame and fluid in the conduit from either side of said body to the other.



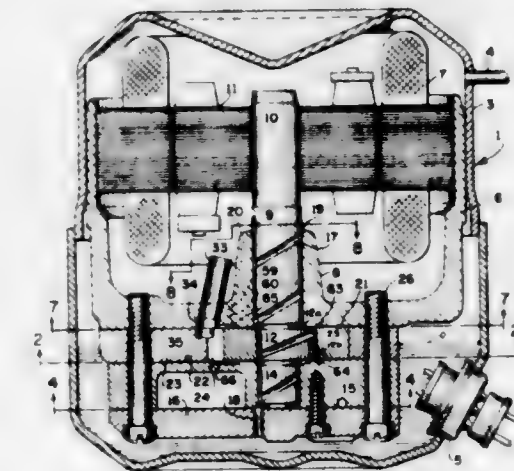
pocket sheet overlying said valve port to provide a closure for the latter until liquid is introduced into said liquid pocket, said three sheets extending upwardly in sealed contacting relation to form a hanging tab having a hanging opening formed therein so as to maintain said bag in a vertical position.

3,003,683
EXPLOSION-PROOF REFRIGERATOR
Albert E. Manning, Nutley, and Leonard I. Matless,
Cedar Grove, N.J., assignors to Kelmore, Inc., a corporation of New Jersey
Filed Aug. 1, 1958, Ser. No. 752,605
3 Claims. (Cl. 230—17)



1. In an explosion-proof refrigerator, the combination with a motor-compressor unit, including an electric motor and a refrigerant compressor driven thereby hermetically sealed in one casing, of a housing integral with said casing and having therein electrical control apparatus for said unit, said housing having a flange and a cover removably secured thereto with a flame-proof joint, an explosion-proof main switch, wires electrically connecting said control apparatus to said switch, gas.

3,003,684
REFRIGERATION APPARATUS
Frederic L. Tarterton, Oak Park, Ill., assignor to General Electric Company, a corporation of New York
Filed May 29, 1957, Ser. No. 662,441
7 Claims. (Cl. 230—207)

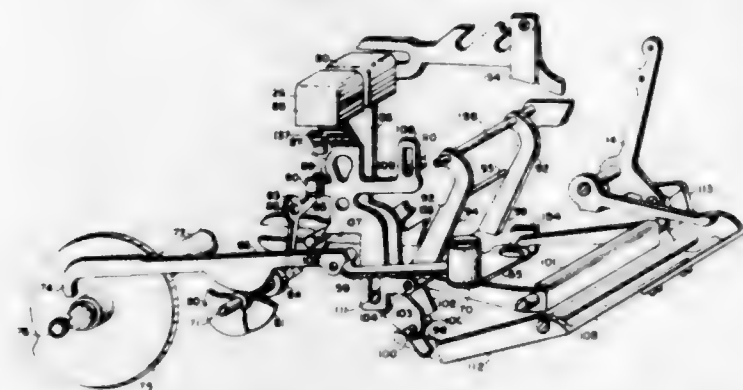


1. A motor-compressor mechanism comprising a casing having an inlet for gas to be compressed, a crankcase openly communicating with said casing and containing a quantity of lubricating oil, whereby said crankcase and oil are at substantially the pressure of the incoming gas, a motor and a compressor within said casing and including a cylinder and an annular rotor therein to provide a rotary piston, said cylinder having end plates overlying the top and bottom surfaces of the piston and a blade slidably mounted within said cylinder and engaging the peripheral wall of said piston to divide the cylinder into high and low pressure sides, a shaft driven by said motor, an eccentric on said shaft in continuous engagement with the inner wall of said piston for oscillating said piston about said cylinder in wall to wall tangential relationship, said eccentric shaft being continuously exposed to the pressure condition within said crankcase, means including a pump groove on the exterior wall of said eccentric shaft and said eccentric and openly communicating between said crankcase and the wall of said piston engaging said eccentric to lubricate said wall, means for introducing a predetermined quantity of oil into said cylinder at the low pressure side thereof during a short interval of each rotation of said piston, whereby the higher average cylinder pressure relative to the crankcase pressure will effect a flow of oil radially inwardly between the piston and the adjacent surfaces of the cylinder to lubricate and seal the same, means including a circular passage concentric with said eccentric shaft disposed between the piston and each of the end plates of the cylinder to intercept oil and high pressure gas during the passage thereof toward said eccentric shaft, passage means in said end plates communicating between the said circular passages and the low pressure side of the cylinder to conduct thereto the intercepted high pressure gas and oil, and a discharge conduit connected to said compressor and extending through said casing for the discharge of the compressed gas.

3,003,685

ESCAPEMENT CONTROL MECHANISM FOR TEN-KEY CALCULATING MACHINE
Harold J. Chell, Castro Valley, and Charles S. Balaz, Hayward, Calif., assignors to Friden, Inc., a corporation of California

Filed Aug. 15, 1955, Ser. No. 528,154
7 Claims. (Cl. 235-60)



1. In a calculating machine having a ten-key keyboard, a shiftable selection mechanism spring-urged to the left from its full-cycle position, key actuated escapement mechanism controlling the leftward shifting of said shiftable selection mechanism, and power operated means effective to restore said shiftable selection mechanism to its full-cycle position at the end of an operating cycle of the machine, a repeat addition key effective to disable said power operated restoring means and establish successive addition cycles of said machine, a repeat subtraction key effective to disable said power operated restore means and establish successive subtraction operations of said machine, escapement operating mechanism actuable by either said repeat addition or said repeat subtraction key to operate said escapement mechanism and step said shiftable selection mechanism one step to the left upon sequential depression and release of said repeat addition or said repeat subtraction key, and manually positionable means effective to render said escapement operating mechanism operative or inoperative.

3,003,686

CLEAR SIGN PRINTING MEANS FOR AN ACCOUNTING MACHINE HAVING TRUE NEGATIVE TOTALIZATION

Elmer L. Wise, Farmington, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 9, 1955, Ser. No. 533,309
7 Claims. (Cl. 235-60.17)



1. In an accounting machine, a credit balance register comprising a plurality of axially aligned wheels, means for entering amounts additively and subtractively into said register, means for sensing and printing a total ac-

cumulated in said register, a key for instituting operation of said last named means, means for turning the wheels of said register to a "zero" position when a positive total is printed and for turning said wheels to a "nine" position when a negative total is printed, a substantially circular disk forming an integral part of each register wheel, an irregularity in the periphery of each disk, a feeler member normally disengaged from said disks and adapted to sense said irregularities, means including said key for shifting said feeler member during a negative total-taking operation from a position wherein said member is aligned with said irregularities when the register wheels stand at "zero" to a position wherein said member is aligned with said irregularities when said register wheels stand at "nine," operating means for causing said feeler member to sense said irregularities, and printing means actuated by said operating means for printing a distinctive symbol when said feeler member senses all of said irregularities.

3,003,687

TIME INTEGRATING SYSTEM
Charles C. Bell, 180 Wampanoag Road, East Greenwich, R.I.

Filed Jan. 15, 1958, Ser. No. 709,076
4 Claims. (Cl. 235-61)



1. A time integrating system for monitoring machine activity comprising a first device, said first device producing a continuous output signal for a pre-selected percentage of a selected time unit, a second device, said second device producing a continuous output signal upon actuation from a monitored machine, and a time totalizing storage register coupled to said devices, said register comprising a central shaft having a time indicating device at one end thereof and electric motor means at the other end, said motor means electrically coupled to said devices and mechanically coupled to said shaft, whereby upon a signal from said first device the shaft will rotate in one direction and upon a signal from the second device the shaft will rotate in the other direction thereby accumulating the total algebraic time difference between the total integrated time of actuation of said first and second devices.

3,003,688

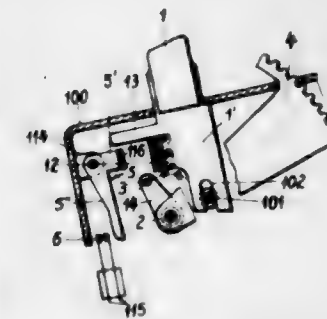
VALUE ENTRY MECHANISM
Eberhard Menge, Braunschweig, Germany, assignor to Braunsig Maschinenwerke AG., Braunschweig, Germany

Filed Dec. 22, 1954, Ser. No. 476,949
Claims priority, application Germany Dec. 24, 1953
1 Claim. (Cl. 235-63)

An operation selecting and initiating mechanism for calculating machines having a frame comprising, a plurality of numeral keys, each numeral key having a stem displaceably held in the frame, each key stem being formed with a stop face, each stop face being moved to an operative position in response to a predetermined depression of said associated key stem; a rocking mechanism

having an initial position, each of said stop faces when in its operative position being located in the path of said rocking mechanism, each of said stop faces defining a different one of a plurality of stopped positions of said rocking mechanism; an electromagnet having an armature, a normally open energizing circuit for said electromagnet, a switch to close said normally open energizing circuit in response to a final depression of any one of said keys exceeding said predetermined depression, a mechanical linkage extending between said armature and said rockable mechanism, a resilient member forming part

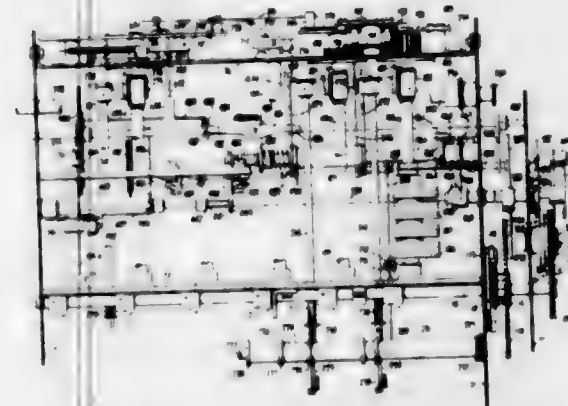
ordinal movement of said accumulator register and said selection mechanism in a direction to relatively increase a value set in the selection mechanism and then operate said actuating mechanism to make a single subtraction of the value set in the selection mechanism from the value in said accumulator register, means operated upon failure of operation of said overdraft responsive means during such single subtraction operation to operate said shifting means to effect relative movement of said product register and said selection mechanism in a direction to relatively increase the value set in the selection mechanism to an extreme ordinal position, and means operated by operation of said overdraft sensing means during such single subtraction operation for disabling said shifting means and enabling said division mechanism.



of said mechanical linkage, said armature performing an equal excursion each time said electromagnet is energized, said resilient member permitting partial transmission of the excursion of said armature to said rocking mechanism, the rocking motion of said rocking mechanism being stopped by a stop face in its operative position; a numeral setting element, said numeral setting element being rockable with said rocking mechanism; a step-by-step ordinal shifting device, and an actuator for said ordinal shifting device, said actuator being operated by said armature at the end of its stroke.

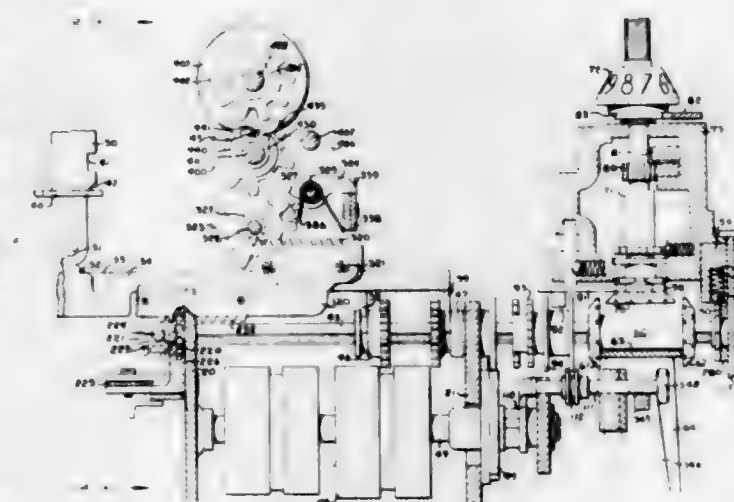
3,003,689

CALCULATING MACHINE
Grant C. Ellerbeck, San Leandro, Calif., assignor to Friden, Inc., a corporation of California
Filed Jan. 8, 1957, Ser. No. 632,997
7 Claims. (Cl. 235-63)



1. In a calculating machine having an ordinal arranged selection mechanism and an ordinal arranged accumulator register mechanism movable relative to each other, shifting means for shifting the relative ordinal positions of one of said mechanisms, an actuating mechanism, division mechanism for dividing a dividend in the accumulator register by a divisor in the selection mechanism by the method of repeated subtraction of the divisor from the dividend in successive ordinal series of operations, and a division programming mechanism including means for sensing an overdraft in the accumulator register and means operated thereby for controlling operation of said actuating means and said shifting means, a manually operated control member, a mechanism operated by said control member and driven by said actuating mechanism to operate said shifting means to effect a single relative

3,003,690
CALCULATING MACHINE
Grant C. Ellerbeck, San Leandro, Calif., assignor to Friden, Inc., a corporation of California
Filed Feb. 7, 1955, Ser. No. 486,323
17 Claims. (Cl. 235-73)



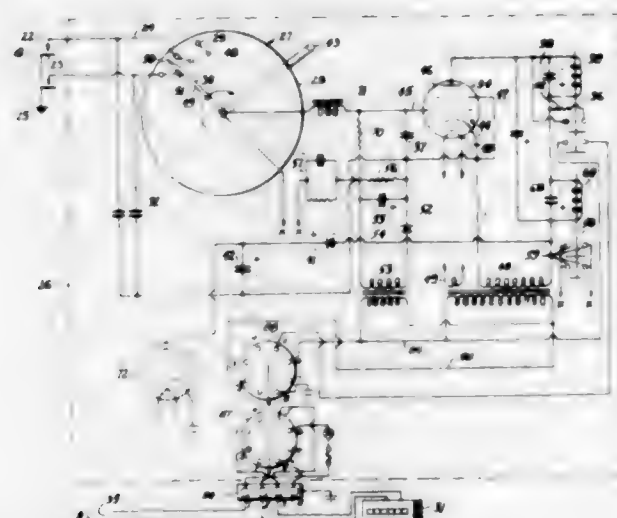
1. In a calculating machine having a plurality of ordinal arranged accumulator register members, stop means for stopping said register members at their "0" positions, ordinal arranged selection mechanism including ordinal arranged and differentially positionable selection bars and a keyboard operable to position said bars, and selectively operable means for operatively connecting said register members to the ordinal related selection members, the combination which comprises a power-driven operating means for resiliently moving said ordinal selection bars toward an extreme value position, and manual means operative to position said connecting means to connect said register members to said selection members, to operate said stop means, and for thereafter operating said resilient operating means, whereby the operation of the resilient selection members returns the register members to their respective "0" positions.

3,003,691
METHOD AND APPARATUS FOR COUNTING IMPULSES

Charles F. Strandberg, 416 W. Market St., Greensboro, N.C.
Filed Nov. 8, 1957, Ser. No. 695,358
10 Claims. (Cl. 235-92)

1. In data sampling apparatus, the combination of a plurality of independent data impulse storing circuits, a source of erase potential, a rotary sample switch including a plurality of contacts in circuit with the respective data impulse storing circuits, a sample rotor engageable individually and successively with said contacts, and an erase rotor engageable individually and successively with

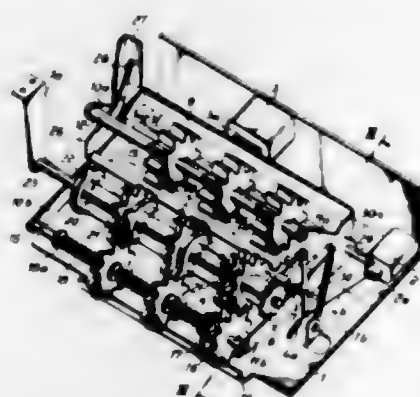
said contacts, said erase rotor being positioned with respect to said sample rotor so that the erase rotor engages a particular one of said contacts immediately after said sample rotor has left said particular contact, and so that said erase rotor disengages said particular contact



prior to the instant when said sample rotor engages the next succeeding contact, and switching means for intermittently making connection between said erase potential and the erase rotor each time an impulse is taken from said contacts by said sample rotor.

3,003,692 RESETTING APPARATUS FOR CALCULATING MACHINES

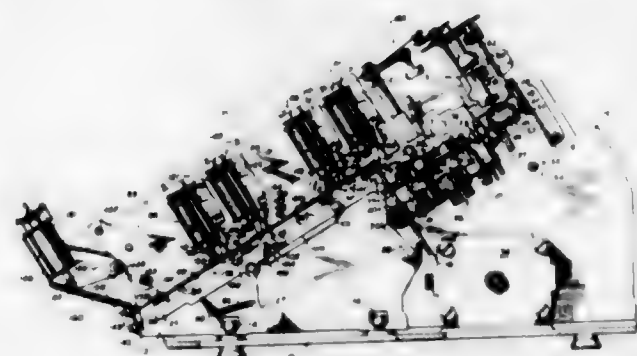
Hans Heuser, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Sept. 11, 1958, Ser. No. 760,424
Claims priority, application Germany Sept. 12, 1957
5 Claims. (Cl. 235-144)



1. In a computing machine, in combination: a frame; a first shaft supported by said frame; a plurality of numbers wheels loosely mounted on said shaft; a zero position determining lug connected with each wheel; a carriage swingably supported by said frame for movement between two alternative positions; an arresting member for said lugs operatively connected with said carriage for being movable together with the latter between positions of being engageable and unengageable, respectively, by said lugs; a second shaft supported by said carriage in parallelism with said first shaft; a plurality of resetting gears loosely mounted on said second shaft, one for each wheel; friction clutch means operatively connected with each of said gears and with said second shaft; first arresting means for said gears connected with said frame; means for transmitting rotation from said first shaft to said second shaft when said carriage is in one of said positions; a third shaft supported by said carriage in parallelism with said first shaft; a plurality of transfer gears on said third shaft, one for each wheel; second arresting means for

said transfer gears; means for swinging said carriage between a first position in which said transfer gears are distant from said wheels and engage with said second arresting means, in which said resetting gears mesh with said wheels and are distant from said first arresting means, and in which said arresting member is adjacent to said wheels, and a second position in which said transfer gears mesh with said wheels and are distant from said second arresting means, in which said resetting gears are out of mesh with said wheels and engage with said first arresting means, and in which said arresting member is distant from said wheels; and from said lugs; single drive means for rotating said first shaft, whereby, when said carriage is in said first position and said second shaft is rotated by transmission of rotation from said first shaft, the resetting gears drive said wheels until said lugs abut against said arresting member whereby the wheels are moved into zero-indicating position, while said clutch means permit rotation of said second shaft until each of said resetting gears has moved the respective wheels to zero-indicating position, and when said carriage is in said second position, said transfer gears cooperate with said wheels under the driving action of said first shaft.

3,003,693
SELECTION MECHANISM
Oral K. Lundell, Hayward, Calif., assignor to Friden, Inc., a corporation of California
Filed Mar. 9, 1959, Ser. No. 798,284
13 Claims. (Cl. 235-145)



3. An ordinal selection apparatus comprising in each order a pair of differentially adjustable selection bars, means for moving each of said selection bars to an extreme operative position, a means for latching each of the said selection bars in an inoperative position, a first electromagnetic means operable to unlatch one of the said selection bars, a second electromagnetic means operable to unlatch the other said selection bar, a third electromagnetic means operable to control a first intermediate differential movement of the said selection bars, a fourth electromagnetic means operable to control a second intermediate differential movement of the said selection bars, the said third and the said fourth electromagnetic means being operable simultaneously to jointly control a third intermediate differential movement of said selection bars.

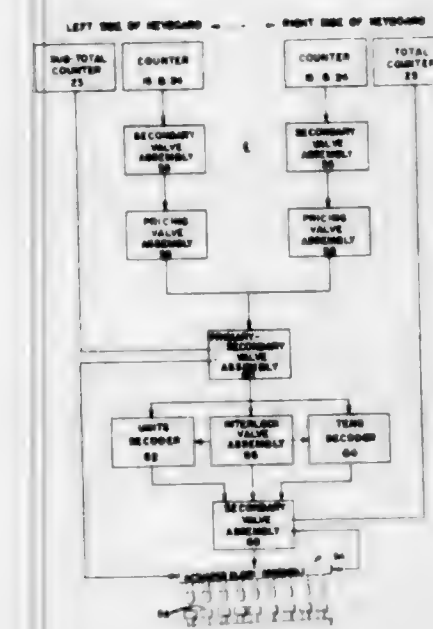
3,003,694
PNEUMATIC APPARATUS FOR OPERATING BUSINESS MACHINES
Le Roy V. Oxley, Clarence M. Blythe, Gerald T. Hammond, and Boyd N. Cagle, Hendersonville, N.C., assignors to Robotyp Corporation, Hendersonville, N.C., a corporation of Michigan
Filed Aug. 14, 1957, Ser. No. 678,148
25 Claims. (Cl. 235-146)

1. Pneumatic means for operating a business machine; comprising, a plurality of selectively operable item counters, a plurality of individual actuating means for re-

spectively operating said counters, a plurality of impulse valve units each respectively operated by one of said individual actuating means, means for pneumatically coding each of the impulses respectively initiated by said impulse valve units, a first valve means controlled by said coding means, a decoding valve means controlled by said first valve means, a second valve means controlled by said decoding means, and actuator means controlled by said second valve means for operating the control elements of said business machine.

20. Apparatus for operating a business machine having a plurality of selectively depressible amount keys and a motor bar; comprising a plurality of individually operable control keys, encoding means operated in response to the depression of said control keys for initiating dif-

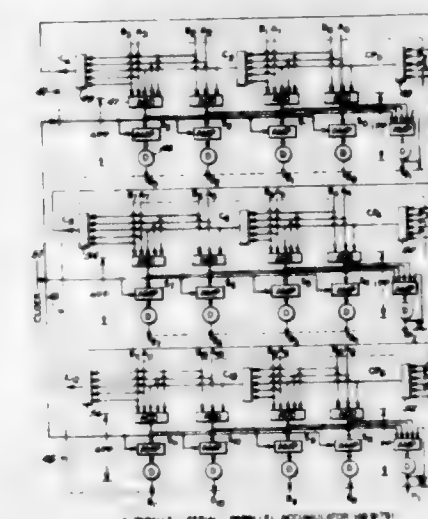
ferent groups of coded impulses corresponding to the respective control keys depressed, decoding means for decoding the various groups of said coded impulses, a plurality of individually operable actuators for respectively individually depressing said amount keys and motor bar, circuit means interconnecting said decoding means and said actuators so that each time said decoding means are operated predetermined ones of said amount keys and said motor bar are operated, and means for delaying the operation of the actuator for depressing said motor bar until after the depression of said predetermined ones of said amount keys.



ferent groups of coded impulses corresponding to the respective control keys depressed, decoding means for decoding the various groups of said coded impulses, a plurality of individually operable actuators for respectively individually depressing said amount keys and motor bar, circuit means interconnecting said decoding means and said actuators so that each time said decoding means are operated predetermined ones of said amount keys and said motor bar are operated, and means for delaying the operation of the actuator for depressing said motor bar until after the depression of said predetermined ones of said amount keys.

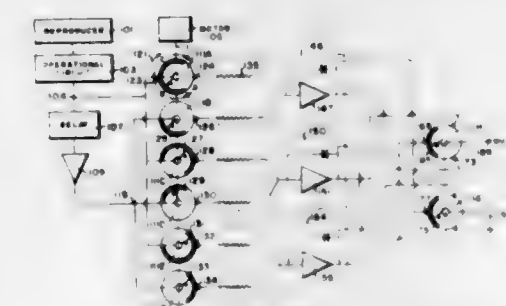
3,003,695
DATA PROCESSING APPARATUS
Roy W. Reach, Jr., Sudbury, and William N. Kahn, Brighton, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,719
19 Claims. (Cl. 235-175)

1. The improvement of data processing apparatus for machine words of the type having a plurality of data bits grouped into major characters, each formed of a plurality of minor characters, comprising a plurality of closed loop serial sub-registers, each including amplifying and delay means for enabling a plurality of bits to be stored therein; means connecting said serial sub-registers into groups corresponding to each major character and for writing, in a serial manner, into each serial sub-register in each group one bit from each of the minor characters forming the major character associated with the group, and means for



acter group, whereby a plurality of minor character bits are made available simultaneously from said serial sub-registers.

3,003,696
INTEGRATION OF AN ELECTRICAL SIGNAL OVER A TIME INTERVAL OF FIXED DURATION
Frank N. Tullios, Houston, and Allen B. Cunningham, Bellaire, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,724
5 Claims. (Cl. 235-181)



1. Apparatus for integrating an electrical signal over a time interval of fixed duration, comprising: input terminal means to which said electrical signal may be applied; a plurality of integrating means for integrating electrical signals coupled thereto, each of said integrating means having an input circuit and an output circuit; first and second coupling means each interconnecting said input terminal means and said integrating means input circuits, said first and second coupling means including means for differentially combining the signals coupled to each integrating means input circuit; said first coupling means being adapted to cyclically and sequentially couple the electrical signal appearing at said input terminal to said integrating means input circuits while delaying the electrical signal for a predetermined period; said second coupling means being adapted to cyclically couple the electrical signal appearing at said input terminal to each of said input circuits concomitantly with each coupling of the delayed signal to said each input circuit and for a period before said each coupling of the delayed signal equal to the period by which the electrical signal is delayed by said first coupling means; and means coupled to said integrating means for gating the output signal of each integrating means to an output circuit concomitantly with the gating of the delayed signal to said each integrating means by said first means.

3,003,697 SINE WAVE GENERATOR WITH PHASE ANGLE CONTROL

John W. Higginbotham, Essex, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland

Filed May 28, 1956, Ser. No. 587,689
3 Claims. (Cl. 235-186)



1. Apparatus for modulating a voltage according to the function $\sin(\omega t + \theta)$ which comprises first and second sine-cosine potentiometers each comprising a wound resistance element and four movable taps adapted to contact said element along a circular locus at intervals of

$\frac{\pi}{2}$

radians, a source of voltage connected to the resistance element of said first potentiometer, means for driving the taps of said first potentiometer along their locus at a rate proportional to ω , means for electrically coupling the sine and cosine taps of said first potentiometer respectively to the cosine and sine taps of said second potentiometer, means for displacing the taps of said second potentiometer by an amount proportional to θ from their positions corresponding to $\sin^{-1} 0$, and output terminals for connecting utilization means across the resistance element of said second potentiometer.

3,003,698 RATIO COMPUTING APPARATUS

Friedrich Kuhrt, Nurnberg, Germany, and Eberhard Braumersreuther, Geneva, Switzerland, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a German corporation

Filed Feb. 4, 1958, Ser. No. 713,266
Claims priority, application Germany Jan. 29, 1954
9 Claims. (Cl. 235-196)



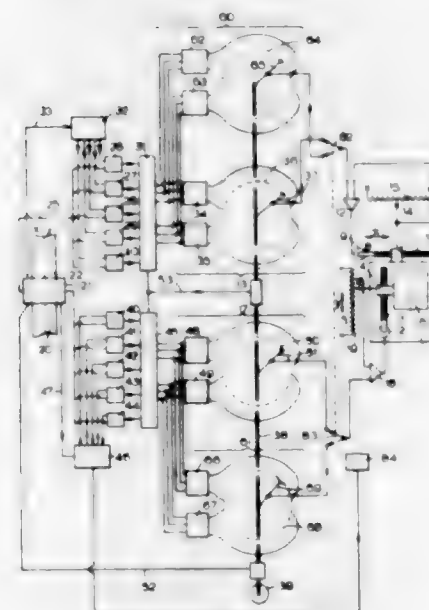
1. Computing apparatus for producing an output voltage proportional to the quotient of two input values of which at least one is a variable voltage, comprising a magnetic-field responsive resistance member having a current supply circuit for passing current through said member and having a pair of Hall electrodes, a magnetic device having a field circuit and having a magnetic field in which said member is located, first circuit means connecting said input voltage to one of said two circuits, second circuit means connected with said other circuit for deriving an output voltage therefrom, and regulating means having an input side connected across said

Hall electrodes and having an output side connected in said other circuit to regulate the current in said other circuit for constancy of the Hall voltage between said electrodes, whereby said output voltage is proportional to said quotient.

3,003,699 CONTROL OF AUTOMATIC MACHINES

Roland Allan Cail and Rolf Edmund Spencer, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed Aug. 7, 1956, Ser. No. 642,632
Claims priority, application Great Britain Aug. 10, 1955
13 Claims. (Cl. 235-197)



1. Control mechanism for producing signals suitable for controlling displacement of part of an automatic machine, comprising a source of input signals representing values of a function at relatively widely spaced values of a variable of the function, interpolating means having at least three input terminals for receiving signals from said source, a greater number of uniformly spaced output terminals, and couplings from said input terminals to said output terminals for producing non-linear interpolation of signals applied to said input terminals thereby to set up at said output terminals interpolated signals representing values of the function at a series of relatively close values of said variable, a selector movable successively from one output terminal to the next to derive the interpolated signals, and drive means for moving said selector at a predetermined rate, said couplings being predetermined to cause the interpolated signal set up at said terminals to correspond to a nonuniformly spaced series of values of said variable, whereby a linear rate of movement of said selector derives signals corresponding to a non-linear rate of change of said variable.

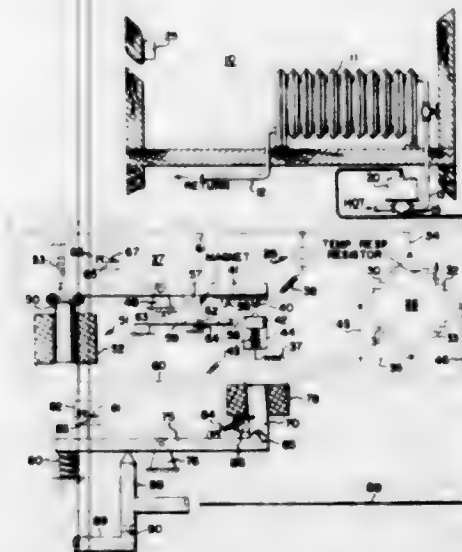
3,003,700 CONTROL APPARATUS

Frederick D. Joesting, Park Ridge, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 27, 1958, Ser. No. 757,530
7 Claims. (Cl. 236-36)

1. In control apparatus, an electrical sensing means responsive to a condition and providing a signal output when energized in proportion to variation of the condition from a predetermined value, an electrical source of power, circuit means including a switching means and means for periodically operating said switching means connected to said electrical source and energized thereby for periodically connecting and disconnecting said elec-

trical source to said sensing means to provide a periodic output therefrom in proportion to the variation of said



condition from said predetermined value, and means connected to said sensing means and controlled by the signal output therefrom to operate in proportion to said output.

3,003,701 RAIL JOINT BAR

James A. Greer, Kensington, Calif., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,841

1 Claim. (Cl. 238-243)



A joint bar for connecting ends of rails having arcuate head-web fillets, said bar including, a bar head, a web having bolt holes whose axes lie substantially in the horizontal neutral axis of the bar, and means for distributing bolting force from the area of the bolt holes to the head and foot of the bar, said means comprising, a load bearing surface on the bar head in the shape of a circular arc formed on a radius intersecting the mid-point of the arc and having its center concentric with the radius of the related head-web fillet, an initial bearing face on the bottom surface of the foot portion of the bar, a supplementary bearing face also on said bottom surface of the foot portion of the bar and disposed at an angle of lesser degree relative to the center line of the web than the degree of angular disposition of said initial face, said initial face disposed at right angles to a downwardly directed force transmitting line perpendicular with its midportion and also passing through the center line of the bolt holes at a point of intersection between said center line of the web and the outer face thereof, and an upwardly directed bolt force transmitting line passing through both said point of intersection and also the mid-point of the circular arc of the bar as defined by the radius, whereby, pressure at the line of the bolt holes

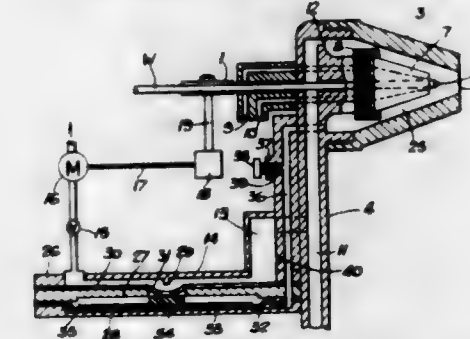
will cause the bar to pivot about its head in the fillet of the rail as the initial bearing face of the foot moves clockwise to bring the supplementary bearing face into play as wear occurs.

3,003,702 FEED CONTROL FOR METAL SPRAY GUNS AND THE LIKE

Henry S. Rondeau, 2865 Coventry Road, Cleveland, Ohio

Filed Sept. 19, 1960, Ser. No. 56,744

19 Claims. (Cl. 239-84)



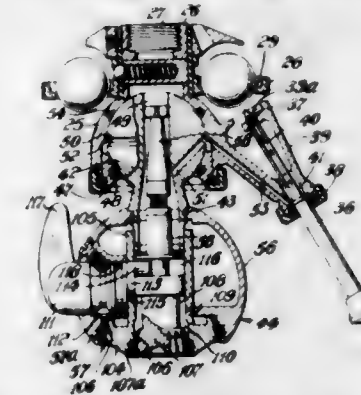
1. A metal spray gun comprising a combustion chamber having a discharge metal spray orifice, means to feed metal into said chamber to be fused therein and sprayed through such discharge orifice; and inverse feed-back means responsive to the pressure in said combustion chamber to control the rate of feed of said metal into said chamber.

3,003,703 DEVICE FOR DELIVERING LIQUID MIXTURES

Charles William Lambton, Mortimer, England

Filed Mar. 20, 1959, Ser. No. 800,711

Claims priority, application Great Britain Sept. 29, 1958
17 Claims. (Cl. 239-309)



1. A mixing device for delivering liquid mixtures comprising, in combination, mixing means having inlet and outlet openings for a liquid, passage means for the flow of liquid between said inlet and outlet openings, and a suction passage communicating with said passage means and adapted to deliver to said passage means a substance to be mixed with said liquid in the said passage means by the suction effect created by the flow of liquid through the said passage means; holding means on said mixing means for holding a capsule adjacent said suction passage so that upon piercing of said capsule the contents thereof will enter said suction passage; and piercing means carried by said mixing means for puncturing said capsule while the same is held by said holding means.

3,003,704 LOW PRESSURE SPRAY-GUN

Andre Roche, 45 Ave. St. Jerome, Aix en Provence, Bouches du Rhone, France

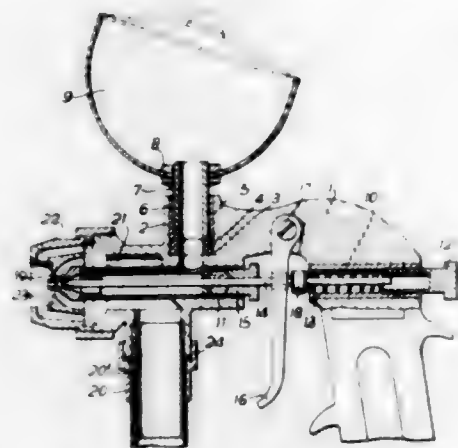
Filed May 4, 1959, Ser. No. 810,955

Claims priority, application France May 7, 1958

2 Claims. (Cl. 239-345)

1. In a spray gun having a body carrying a nozzle including an axial supply passage for a liquid material to be sprayed, a feed pipe communicating with said sup-

ply passage and extending upwardly through said body, the axis of said feed pipe being substantially perpendicular to said axial supply passage, a liquid tight seal rotatably securing said feed pipe in said body so that the pipe may be rotated about its own axis, a material container

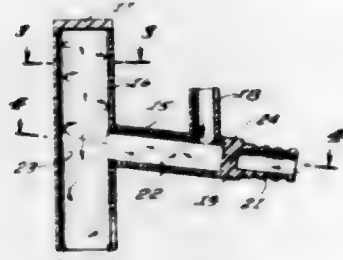


having a top opening, means for mounting said container about the upper end of said pipe with the axis of the container inclined with respect to the axis of said feed pipe whereby the plane of the opening of said container is varied with respect to the axis of the supply passage as said feed pipe is rotated.

3,003,705 AERATOR

Philip A. Johnson, 5811 Columbus, Van Nuys, Calif., assignor of fifteen percent to Richard L. Gassewitz, Santa Ana, Calif.

Filed Jan. 20, 1959, Ser. No. 787,984
3 Claims. (Cl. 239-399)



1. In an aerator device for feeding aerated liquid downwardly into a receptacle, wall means to define a generally cylindrical chamber adapted to be disposed in generally vertical relationship, said wall means being open at the lower end of said chamber, means to introduce liquid rapidly through an inlet into said chamber in upwardly inclined relationship from the horizontal when said chamber is disposed vertically, and in offset relationship from the axis of said chamber, the inclination and the amount of offset being sufficient that liquid introduced into said chamber spirals upwardly in a generally helical manner therein and then flows downwardly past said inlet thereto and out the lower end thereof into said receptacle, said last-named means comprising a liquid receptacle and liquid pump connected to said inlet, whereby the down-flowing liquid in said chamber is bombarded by entering liquid and is thereby aerated prior to discharge into said receptacle.

3,003,706 NOZZLE DEVICE

Niblack Thorne, 7450 Valley View Road, Scottsdale, Ariz.

Filed June 26, 1959, Ser. No. 823,225
9 Claims. (Cl. 239-511)

5. In a nozzle device the combination of: a nozzle body having a fluid delivery opening therein; side walls surrounding said opening being substantially parallel to

the normal flow axis through the nozzle, a valve member pivoted in said opening and bounded by said side walls; the cross-sectional shape of said opening comprising an arcuate wall section and an opposed straight wall section.

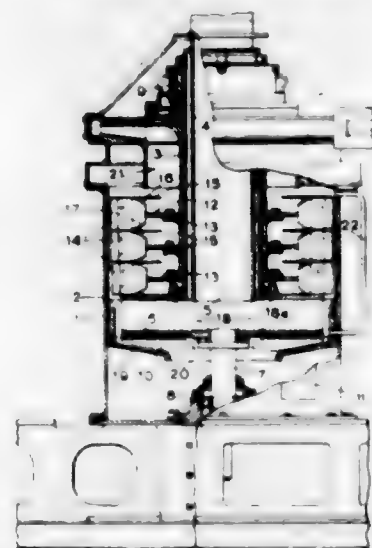


section adjacent to which said valve is pivotally mounted, the free end of said valve member having a straight edge portion disposed in spaced relation to said arcuate wall section.

3,003,707 METHOD AND APPARATUS FOR REDUCING THE SIZE OF PARTICLES

Joseph Lecher, Basel, Switzerland, assignor to Turbo-Jet Milling Co., Inc., New York, N.Y.

Filed Feb. 13, 1956, Ser. No. 565,270
Claims priority, application Great Britain Feb. 14, 1955
7 Claims. (Cl. 241-1)



1. An apparatus for reducing the particle size of solid material comprising a casing, a horizontally disposed rotatable plate, means for feeding the materials to be treated to the upper surface of said plate, a rotor inside said casing at least two axially spaced sets of annular carrier discs on said rotor, radially disposed blades carried by said discs and capable of vibrating circumferentially of said rotor, the inner part of the top of at least some of which blades is turned backwards with respect to the direction of rotation and the inner part of the bottom of at least some of which blades is turned forward with respect to the direction of rotation, a vibratory disc mounted in the space between adjacent sets of said blades, means for introducing past the periphery of said plate an upwardly flowing current of fluid which at a speed such that said blades are caused to vibrate sufficiently to establish an intense sonic energy in the fluid whereby the particles are caused to divide into a stream on the inner side of the blades and a stream on the outer side of the blades.

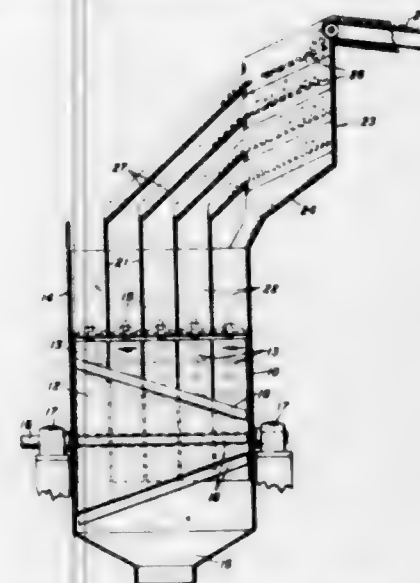
3,003,708 IMPACT CRUSHER

Joseph W. Leonard, Plum Borough, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Apr. 15, 1960, Ser. No. 22,609
4 Claims. (Cl. 241-81)

1. A crusher comprising a housing, a rotor journaled in said housing, at least one impact plate mounted in said housing opposite said rotor, throwing arms mounted on said rotor to travel at varying linear velocities along their

length on rotation of the rotor, and means for feeding to said rotor material separated into size fractions with coarser particles in the material going to the portions of



the arms which travel at greater linear velocities, said arms being adapted to throw particles against said plate at velocities which vary with the initial particle size.

3,003,709 PULP-PROCESSING SYSTEMS

Benson F. Bachus, Westchester, and John F. Kruzic, North Riverside, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

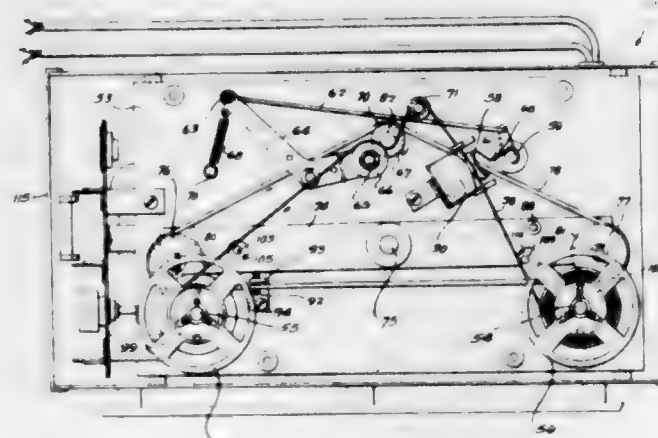
Filed Apr. 16, 1956, Ser. No. 578,271
3 Claims. (Cl. 241-135)



1. In a pulp-processing system for processing and delivering pulp of selected degrees of refinement, which includes a source of supply of pulp stock, a first pair of pulp refiners, a second pair of pulp refiners, and storage means for receiving pulp delivered from the refiners, the improvement which comprises first directing means operable for advancing selectively the stock from the source of supply of pulp stock to either one of the first pair of pulp refiners to refine the pulp stock at a predetermined rate to obtain pulp stock having a first desired degree of refinement, valves in the first directing means being selectively positionable for directing the pulp stock to the first pair of pulp refiners in series in order to obtain a higher degree of refinement of pulp stock as compared to the first desired degree of refinement obtained by using either one of the first pair of pulp refiners, the valves in the first directing means being also selectively positionable for directing the pulp stock to the first pair of pulp refiners in parallel to increase the rate of the pulp stock being processed in a certain period of time while maintaining the first desired degree of refinement; intermediate directing means operable for advancing the pulp stock from the first pair of the pulp

refiners selectively, to said storage means or to the second pair of pulp refiners; second directing means operable for advancing selectively the pulp stock from the intermediate directing means to either one of the second pair of pulp refiners in order to obtain a greater degree of refinement of the pulp stock as compared to that obtained from the first pair of pulp refiners, the degree of refinement varying in accordance with the degree of refinement obtained in the first pair of pulp refiners, valves in the second directing means being selectively positionable for directing the pulp stock from the intermediate directing means through the second pair of pulp refiners in series in order to obtain a yet higher degree of refinement as compared to the degree of refinement obtained by using either one of the second pair of pulp refiners, the valves in the second directing means being also selectively positionable for directing the pulp stock from the intermediate directing means through the second pair of pulp refiners in parallel, said second directing means also being for advancing the pulp stock from the second pair of the pulp refiners, connected in any preselected arrangement to the intermediate directing means, to said storage means; and electrical control means associated with the first, the intermediate and the second directing means, the control means being selectively actuatable for operating the first, the intermediate and the second directing means so that the pulp stock is advanced to a preselected arrangement of the first pair and the second pair of pulp refiners to obtain in a desired period of time a desired volume of pulp stock having a desired degree of refinement.

3,003,710
AUTOMATIC TAPE PLAYING MACHINE
Forrest L. Shiver, Sr., and Forrest L. Shiver, Jr., both of 709 W. Alden Ave., and Robert A. Lester, Jr., R.F.D. 2, all of Valdosta, Ga.
Filed Aug. 26, 1960, Ser. No. 52,170
7 Claims. (Cl. 242-55.12)



1. In a tape transport mechanism of the type including a support, a pair of reels journaled on said support and arranged to receive the opposite end portions of a magnetic tape wound thereon, and a magnetic transducer head, the improvement comprising an arm pivoted to said support and extending adjacent the reels, a drive capstan mounted on said support, guide means for supporting a magnetic tape wound on said reels adjacent said transducer head and adjacent said drive capstan, respective drive drums connected to the reels, respective pulley members journaled on the arm adjacent said drive drums, an endless flexible belt member engaged around the pulley members and drive capstan, an electric motor connected to the drive capstan, switch means extending adjacent one of the reels and engageable by the portion of the tape adjacent thereto when a predetermined amount of tape is on the reel, means biasing the arm towards a position wherein said flexible belt engages one

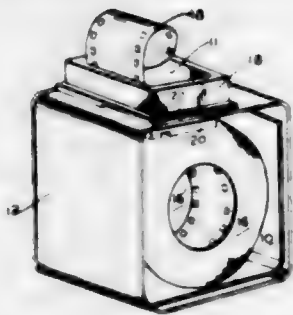
of the drive drums, whereby to rotate the associated reel and move the tape in one direction, and means to rotate said arm to a position wherein the flexible belt engages the other drive drum responsive to the engagement of said switch means by said tape portion, whereby to rotate the other reel and reverse the direction of movement of the tape.

3,003,711

MERCHANDISING AND DISPENSING PACKAGE
Carl Zick, Johnson City, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 23, 1958, Ser. No. 782,500

2 Claims. (Cl. 242—71.7)



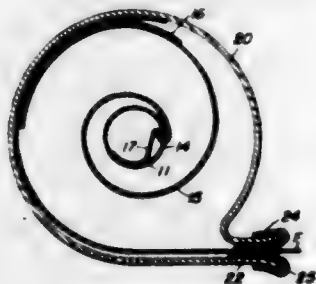
1. A merchandising and dispensing package for a roll of photographic film of which predetermined lengths are to be wound onto a spool in a cartridge, comprising a substantially rectangular box accommodating said roll, said box having an open side and a removable closure for closing said side, a cutout in a wall of said box, said cutout extending from the open side of the box toward the opposite side thereof, a loading chamber positioned over said cutout and slidably supported by said wall, said loading chamber comprising a base and a cover, said base being of greater width than said cutout, a connecting portion extending from said base into the cutout, a flange extending from said connecting portion in spaced substantially parallel relation to said base to form a groove of sufficient extent to accommodate the thickness of the wall surrounding the cutout and an edge of the closure thereby forming a light seal for the interior of the box, said groove also forming a slideway which enables the loading chamber to slide on the box when the closure is removed, said chamber being so dimensioned as to accommodate said film cartridge, a winding knob, an opening in one side of said cover rotatably accommodating the shaft of said knob, and a slit in said base portion facing the inside of said box permitting said film to enter said chamber to be wound onto said spool in said cartridge upon rotation of said knob in one direction.

3,003,712

TAKE-UP SPOOL FOR PHOTOGRAPHIC CAMERAS
Robert L. Dalton, Pittsford, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware

Filed Mar. 3, 1959, Ser. No. 796,958

1 Claim. (Cl. 242—74)



A cartridge for use in a photographic camera comprising in combination, a hollow, approximately cylindrical cassette, and a spool mounted in said cassette for

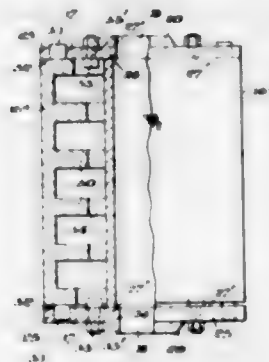
rotation on its axis, said cassette being stationary and having an opening through it which extends in the direction of the axis of said spool and which constitutes a mouth through which film may be introduced into the cassette, said spool comprising a rotatable shaft, and a resilient spring strap affixed at one end to said shaft and projecting from said shaft outwardly toward the inside surface of said cassette and windable about said shaft, said strap extending over a major portion of the axial extent of said cassette and having a flat web of friction material affixed to the side thereof that faces away from said shaft, said web extending a substantial distance inwardly from the free end of said strap, said strap having a length considerably greater than the internal diameter of said cassette so that even when said cassette is empty of film said strap will extend spirally in more than one convolution about said shaft to have contact with the inside surface of said cassette through an angle in the order of 75°, whereby upon rotation of said spool film introduced through said opening will be engaged by said web and wound upon said spool.

3,003,713

COILER REEL FOR REVERSING HOT STRIP MILLS
Claude W. King, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed June 6, 1960, Ser. No. 34,248

5 Claims. (Cl. 242—78.1)



1. A coiling reel for hot strip metal, comprising: a hub member adapted for mounting over a shaft for rotation about its longitudinal axis; axially spaced disc elements mounted on said hub member for rotation therewith, each of which comprises an outer ring and an inner ring with an annular expansion joint between their inner and outer peripheries, respectively, a pair of peripheral arcuate segments radially spaced from said hub member on opposite sides thereof, and extending between said disc members, said arcuate segments being suspended at their ends from the outer rings of said disc elements by expansion joints for initial thermal expansion of the arcuate segments independently relative to said disc elements; and strip-end supporting elements protruding radially from diametrically opposite portions of the hub member in spaced relation between the arcuate extremities of the arcuate segments.

3,003,714

SECURING MEANS FOR FILAMENTARY BODIES

Edward Thompson Lloyd, New Eltham, London, and Henry Kenneth Holderness, Gravesend, England, assignors to W. T. Henley's Telegraph Works Company Limited, London, England

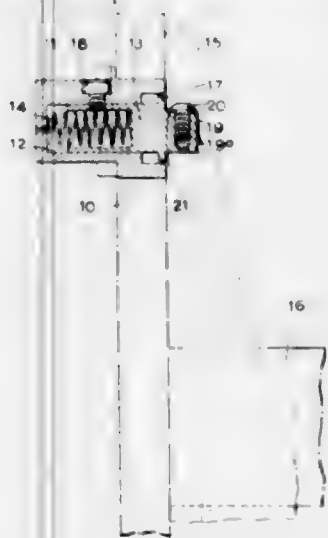
Filed Oct. 1, 1957, Ser. No. 687,390

Claims priority, application Great Britain Oct. 3, 1956

4 Claims. (Cl. 242—125.1)

1. In a continuous spooling machine for filamentary bodies, the combination of a spool having a flange with an aperture therein, an arbor formed with a flange and arranged to receive said spool flange in abutting engage-

ment therewith, a projection on the inside face of the arbor flange and passing through said aperture in said spool flange and formed with a projection face associated with the surface of said spool flange remote from said arbor flange, and a tongue provided on said projection face pointing inwardly towards the axis of rotation of said spool, said tongue having a first part thereof



lying against said projection face, while a second part of said tongue is spaced from said projection face sufficiently to allow a filamentary body to be introduced between said tongue and said projection face, whereby as the filamentary body moves between said tongue and said projection face towards said first part of said tongue, said filamentary body jams and is held.

3,003,715 SPOOL

Robert L. Seigle, 7812 Lexington Ave.,
Philadelphia 15, Pa.
Filed Feb. 12, 1959, Ser. No. 792,762
6 Claims. (Cl. 242-125.1)



3. A spool comprising a tubular, cylindrical barrel, an annular head secured around the top end of said barrel, said head having an annular flange extending radially outwardly therefrom adjacent the top of said head, a clip secured to the bottom surface of said flange, an annular groove in the outer periphery of said head next to the bottom surface of said flange, and at least one longitudinal groove in the outer periphery of said head extending from said annular groove to the bottom of said head, and a second annular head secured around the bottom end of said barrel, said second head being larger in diameter than the diameter of the flange of said first head.

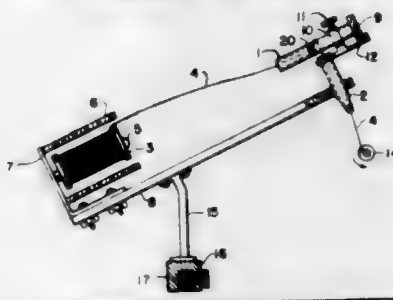
3,003,716

FILAMENT HANDLING APPARATUS

Dhualne J. Davis and Merwyn C. Davis, Wheaton, Ill.,
assignors, by mesne assignments, to William L. Grey,
Hartsdale, N.Y.

Filed Dec. 17, 1957, Ser. No. 703,375

2 Claims. (Cl. 242-154)



1. A tension and guide apparatus comprising a tubular member being open at one end and having an opening in the wall thereof, means mounting said member for rotational adjustment of the same, and a second tubular member disposed transversely to said first mentioned tubular member, the plane containing the axis of said second member and located at right angles to the axis of said first member intersecting the first member at a location spaced from said opening in the wall thereof, and having one end open and the other end converging to a reduced orifice to permit the passage of wire there-through.

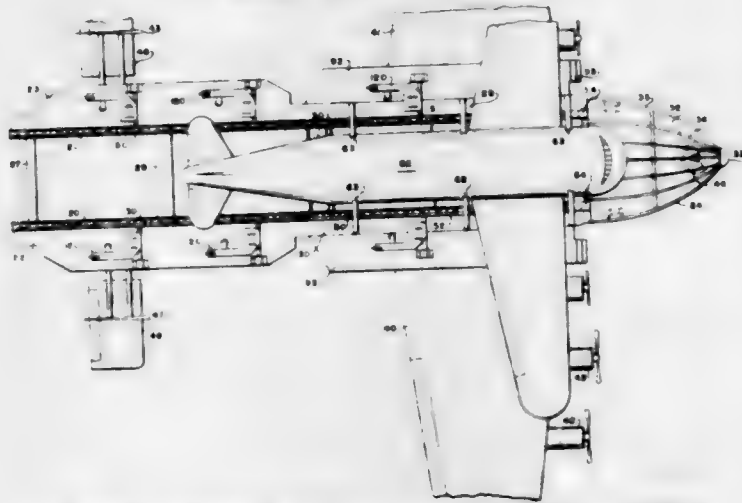
3,003,717

FLYING LANDING PLATFORM

Peachy Booker, 25 Quogue Road, Riverhead, N.Y.

Filed July 22, 1960, Ser. No. 44,772

9 Claims. (Cl. 244-2)



1. A flying landing platform comprising, in combination, two parallel girder type structures, cross members joining said girder type structures, two rear landing tracks disposed above said girder type structures and sloping upwards from the rearmost ends of said girder type structures, air foils enabling said flying landing platform to fly attached to said girder type structures, aircraft propulsion means moving said air foils, landing gear fixed to said girder type structures, two forward landing tracks pivotally fixed by their rearmost ends by the front of said rear landing tracks, and means to raise the front portions of said forward landing tracks from a position parallel to said girder type structures to a position in which said forward landing tracks extend upward in line with said rear landing tracks.

3,003,718

ENGINE MOUNT FOR AIRCRAFT

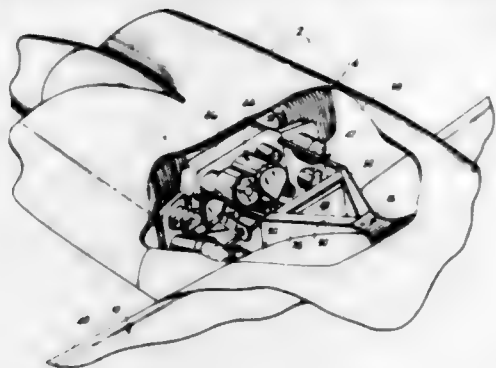
David G. Peterson, P.O. Box 2355, Oakland, Calif.

Filed Jan. 19, 1959, Ser. No. 787,658

5 Claims. (Cl. 244-54)

3. An engine mount adapted to be secured between the spar members of an aircraft wing, and comprising a cross beam rigidly secured between said spar members, a

torsion box rigidly secured to one of said spar members at the juncture of the cross beam and disposed within the wing structure, said torsion box having diverging leg



members to provide a triangular configuration therefor, and means for securing the engine to the forward portion of the torsion box.

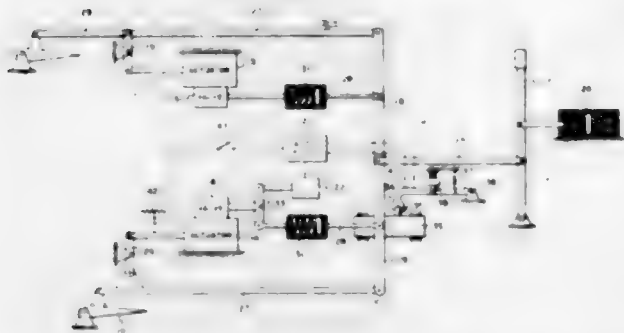
3,003,719

CONTROL APPARATUS FOR AIRCRAFT

Frederick Arthur Summerlin, Isleworth, and Ruben Hadel, London, England, assignors to The Sperry Gyroscope Company Limited, Brentford, England, a British company

Filed Sept. 15, 1958, Ser. No. 761,006

Claims priority, application Great Britain Sept. 27, 1957
9 Claims. (Cl. 244-76)



1. Control apparatus for an aircraft having a control surface with a number of independently movable control surface portions comprising a plurality of main actuators each having its own actuator control means, each main actuator being connected to move a different portion of said control surface in dependence upon an input signal applied to its associated control means, means for generating a control signal, an auxiliary actuator responsive to said control signal for controlling the control means of one of said main actuators in accordance therewith, and means responsive to the output of said one main actuator for providing an input signal corresponding to that applied to said main actuator to be applied to said control means of each of said other main actuators.

3,003,720

AUTOMATIC PILOT

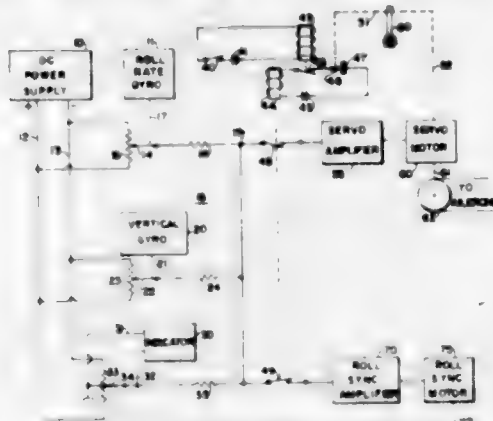
Thomas W. Chase, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed July 8, 1958, Ser. No. 747,139

6 Claims. (Cl. 244-77)

1. A control system for a movable object, comprising: control means, effective when operated to move said object from a normal position; means for operating said control means; means responsive to movement of said object for generating a first signal proportional to the displacement of said object from said normal position; means responsive to said movement for generating a second signal proportional to the rate of change of said

displacement; means responsive to said first and second signals for generating a third signal to null the algebraic sum of said first and second signals; and means responsive to the termination of operation of said operating



means for maintaining said third signal, said rate of change of said displacement being effective to carry said object through its position at the time of said termination and into a position where said third signal is nulled by said first signal.

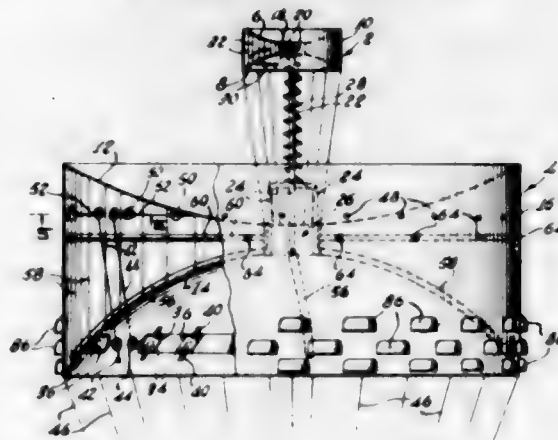
3,003,721

PARACHUTE

John B. Toomey, 330 W. 23rd St., New York, N.Y.

Filed Mar. 3, 1960, Ser. No. 12,625

6 Claims. (Cl. 244-142)



1. A parachute comprising upper and lower flexible wall members interconnected at their peripheries by a flexible cylindrical wall member, said lower wall member being provided with a plurality of openings for admission, during descent, of air into the space defined by the wall members, and means including non-extensible flexible threads of different lengths connected to said upper member for maintaining said upper wall member concave upward when the parachute is inflated during descent.

3,003,722

INFLATABLE KITE

Russell A. Pohl, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware

Filed June 1, 1956, Ser. No. 588,704

3 Claims. (Cl. 244-153)

1. A hollow inflatable kite having both dihedral and camber comprising a pair of similar flexible sheets of plastic material having angularly disposed edges, a gas-

tight seam extending peripherally about the matching edges of said sheets to seal said sheets together, a narrow central seam extending substantially from one end of the kite to the other at an angle with respect to said edges to divide said kite into inflatable portions on either side thereof, said central seam providing a line about which said portions may be bent to form said dihedral and to provide surface engagement of the plastic material adjacent either side of said central seam, a nar-

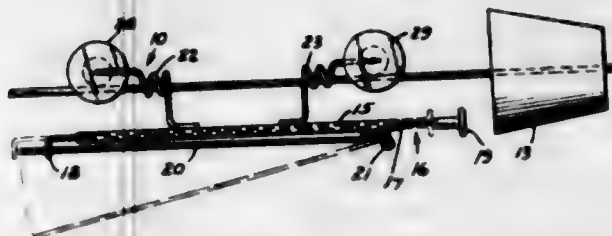


row transverse seam extending substantially from one side of the kite to the other and intersecting said central seam at right angles to divide each of said portions into two smaller sections, said transverse seam providing a second line about which the two sections of each of said portions may be bent to form said camber and to provide surface engagement of the plastic material adjacent either side of said transverse seam, and inflation means operatively associated with said kite.

3,003,723

KITE STRING TROLLEY

Walter D. Boone, 1327 Oakwood Drive, Arcadia, Calif.
Filed Jan. 11, 1961, Ser. No. 82,055
7 Claims. (Cl. 244-155)

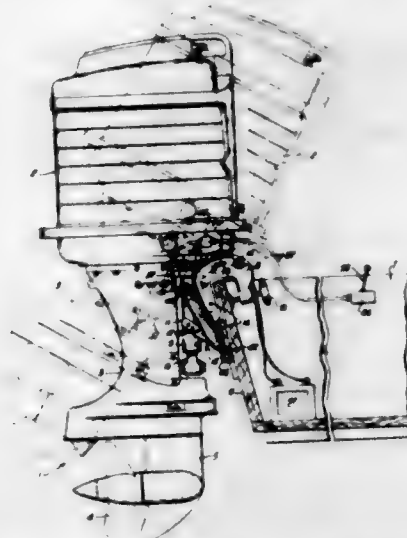


1. A kite string trolley adapted to run along a kite string to carry and drop a sail, comprising: a latch guide; a bar hingedly mounted to the latch guide; a latch carried by the latch guide and having a first position wherein it holds the bar adjacent to the latch guide, and a second position where it is disengaged from the bar to permit the bar to swing away from the latch guide; a pair of trolley wheels; a pair of loosely wound spiral string guides, one of each of the string guides being attached to the latch guide, and a trolley wheel journaled to the other end of each of the string guides, the string guides being axially aligned with each other, the trolley wheels being aligned with the string guides, whereby a kite string can be inserted through the string guides and support the trolley wheels with the latch guide hanging beneath, and whereby a sail can be inserted between the bar and the latch guide in said first position to run the trolley up the kite string, contact between the latch and an obstruction on the string moving the latch relative to the latch guide and bar to release the bar to assume its second position and release the sail, whereupon the trolley runs back down the string.

3,003,724

DAMPING AND LIFT DEVICE FOR OUTBOARD MOTORS

Elmer Carl Klekhaefer, Cedarburg, Wis.
(2408 Cypress Gardens Road, Winter Haven, Fla.)
Filed Aug. 5, 1960, Ser. No. 47,744
9 Claims. (Cl. 248-4)

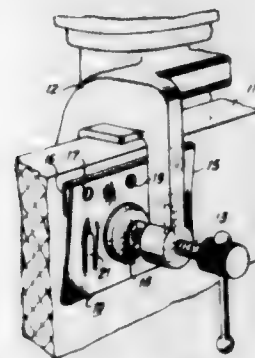


1. In an outboard propulsion unit for boats, the combination of: a mounting bracket adapted to be secured to the transom of a boat, a propulsion unit, a swivel bracket carrying said propulsion unit and pivotally connected to said mounting bracket on a horizontal transverse axis to provide for tilt of the propulsion unit in a vertical plane between an operative position and an inoperative position, fluid pressure damping means interposed and connected between the mounting bracket and swivel bracket and adapted to dissipate a substantial portion of the energy due to sudden pivotal movement of the propulsion unit upon said axis, a source of fluid pressure, and conduit means connecting the damping means and the pressure source, said pressure source being adapted to pressurize the damping means when desired to tilt the propulsion unit upon said axis from the operative position to an inoperative position.

3,003,725

MOUNTING PLATE FOR OUTBOARD MOTORS

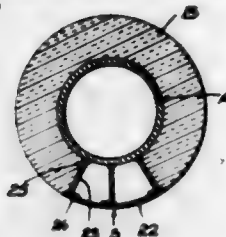
Henry E. Woolbright, Irving, Tex.
(1232 Dumont Drive, Richardson, Tex.)
Filed May 18, 1959, Ser. No. 813,993
1 Claim. (Cl. 248-4)



A plate for mounting an outboard motor on the transom of a boat and coacting with the clamp screws of the motor including a substantially flat relatively thin body, an offset flange at the upper portion of the body for fastening the plate to the transom with said body spaced therefrom, said body being inclined relative to the transom and having its lower portion in contact therewith when said body is engaged by one of the clamp screws of the motor whereby said body is deformed toward the transom upon tightening of the clamp screw and exerts a tension thereagainst to resist loosening thereof, a plurality

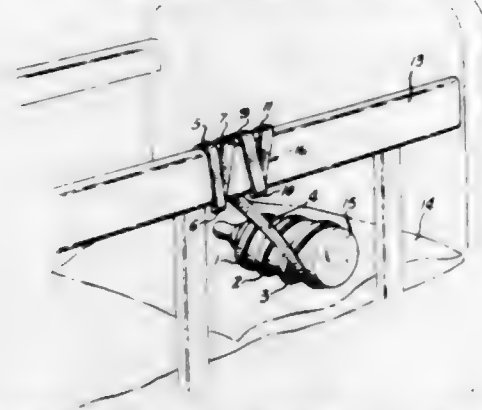
of upright spaced ribs on the rear surface of said body for bearing against the transom when said body is inclined relative to the transom and has its lower portion in contact therewith, the ribs increasing in projection upwardly so that substantially the entire length of said ribs bear against the transom, said ribs reinforcing said body and preventing flattening thereof by the clamp screw.

3,003,726
PIPE HANGER AND SADDLE
Gérard Duhamel, 20 Davis Ave., Cornwall,
Ontario, Canada
Filed June 8, 1960, Ser. No. 34,680
1 Claim. (Cl. 248—55)



In a pipe insulated with a thick insulating outside layer, a metal saddle for supporting said pipe on the roller of a pipe hanger, said saddle having an outside surface flush with the outside surface of said insulating layer, said saddle being constituted by a curved outer plate and webs radially extending from said pipe to said plate for supporting the latter, said webs each consisting of elongated sheet metal strips having longitudinal crenelated inner and outer edges forming alternating recesses and projections, the projections of at least the outer edge of said webs being bent back and applied against the inside face of said curved plate and secured thereto while the inner crenelated edge of said webs is secured to said pipe to thereby provide strong and rigid fixation of said curved plate to said pipe.

3,003,727
BABY BOTTLE HOLDER
Joseph Ralph Medor, 20 Germain St., Burlington, Vt.
Filed Feb. 11, 1960, Ser. No. 8,196
2 Claims. (Cl. 248—104)

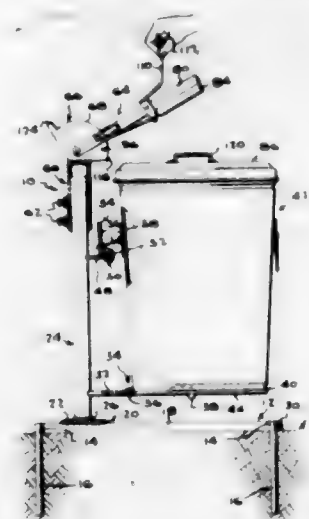


1. A suspended bottle holder for a baby bed, comprising a single elongated strip of rolled aluminum metal, bent at one end into the shape of a series of conical spirals, with said spirals bent so as to wrap themselves loosely around a nursing bottle, and bent at the other end into the shape of a triple-U-clamp that is readily attachable and detachable over the top of a side of a baby bed or other similar article.

3,003,728
GARBAGE CAN STAND
Arthur K. Shaw, 301 Nathan Drive, Wynne, Ark.
Filed June 23, 1959, Ser. No. 822,252
5 Claims. (Cl. 248—154)

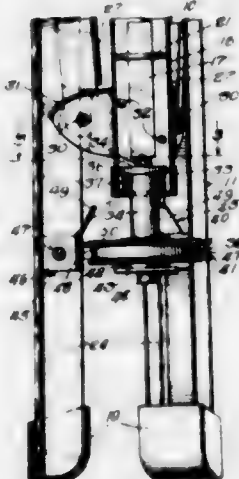
1. A stand for a garbage can, comprising a ground engaging base, a standard, a horizontal platform fixed on and extending laterally from the standard bracket

fixed on the standard and spaced above said platform, a lateral garbage can side handle engaging holder mounted on said standard, and a locking lever assembly mounted on said standard above said holder, comprising a fixed locking element upstanding on said standard, a main lever having a rear end horizontally pivoted on said element, said main lever having a forward end having a horizontal garbage can cover handle embracing element thereon, and a toggle link and lever assembly mounted on said main lever and engageable with said locking element for releasably locking said main lever in a depressed position with the embracing element bearing upon the cover on a garbage can seated on said platform, said locking



element comprising a sector plate having an arcuate upper edge facing said locking lever assembly, said main lever being engaged with a side of the locking plate and pivoted thereto at the center of said arcuate edge, said assembly comprising a detent slidably mounted on said main lever to move toward and away from the arcuate edge of the locking plate, said arcuate edge having an open locking slot therein, and said detent having an element to engage in the locking slot, and operating means mounted on the main lever for moving the detent into locking engagement with said slot only in the depressed can-engaging position of the main lever, said operating means comprising a link and lever assembly.

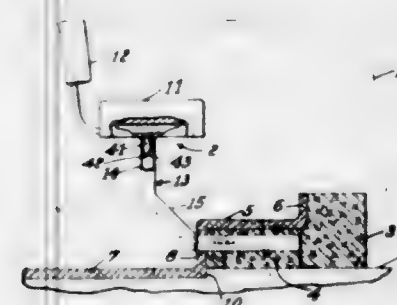
3,003,729
PORTABLE PROJECTION SCREEN APPARATUS
Edward J. Petrick, Park Ridge, Ill., assignor to Knox Manufacturing Company, a corporation of Illinois
Filed Aug. 17, 1959, Ser. No. 834,079
14 Claims. (Cl. 248—171)



1. A portable stand comprising: a standard; a plurality of leg members for supporting the standard in upright position, each of said leg members being hinged to said

standard for movement from a closed position adjacent the standard to an outwardly spread supporting position; and latching means acting between each of said leg members and the standard for retaining said leg members in closed position adjacent the standard, said latching means including a magnetic latching member on the standard comprising a ceramic magnet and a ferrous portion extending outwardly of its periphery, and latching elements of ferrous material on each of the leg members, said latching elements and said ferrous portion of the magnetic latching member being positioned so as to be brought into abutting latching engagement when the leg members are swung to closed position to retain the leg members in closed position.

3,003,730
CANTILEVER COUNTER STOOL
Paul L. Dodds, 1427 E. 6th St., Los Angeles 21, Calif.
Filed June 12, 1959, Ser. No. 819,930
7 Claims. (Cl. 248—220.5)



1. A support for counter seats including: a horizontal base tube adapted to be secured to a floor, a seat support tube bent intermediately to provide two straight end sections in substantially right angular relationship and lying in the same vertical plane, the lower end section of said tube adapted for reception within the base tube, the base tube and the seat support tube being formed to prevent relative rotation therebetween, a nut having a taper sided head and an elongated shank provided with internal screw threads, the head engaging both the seat support tube and the base tube, said seat support tube formed with an opening, a bolt held against axial movement with respect to the seat support tube and having a head and a threaded shank, the latter engaging the screw threads of the nut, the opening in the seat support tube furnishing access to said head for turning the same to adjust the position of the taper sided head of the nut relative to the base tube and the seat support tube and thereby lock the seat support to the base tube.

3,003,731
SELF-SERVICE SUPPORTS
Robert A. Balch and Leslie T. Hall, Spokane, Wash.; said Balch assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,947
6 Claims. (Cl. 248—221)

1. In combination, a support boom hingedly connected at one end to a vertically extending surface for movement in a vertical plane between an elevated and a lowered position, a lighting fixture detachably connected to the opposite end of said support boom, a substantially channel shaped member fixed to said vertically extending surface and disposed to receive a portion of said boom when said boom is in said elevated position to hold said boom against lateral motion, said point of engagement of said channel shaped member with said support boom being spaced above and offset laterally from said hinge connection so that said support boom is held in torsion,

and means connected to said boom and operative to control actuation thereof between said positions to selectively



raise and lower said lighting fixture respectively to an elevated normal operating position and a lowered servicing position.

3,003,732
RADIATOR HANGER
Robert H. Sand, Norfolk, Conn., assignor to The Vulcan Radiator Company, Hartford, Conn., a corporation of Connecticut
Filed Dec. 24, 1958, Ser. No. 782,970
1 Claim. (Cl. 248—223)

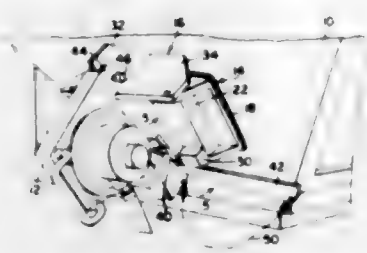


In a radiator unit, a back panel constructed of sheet metal and adapted to be secured against the surface of a wall, said back panel having an elongated bead extending horizontally thereof and projecting forwardly of its front surface, said bead having an upper side and a lower side slanted downwardly toward the front surface of said back panel, said bead having a T-shaped opening therein with its upper portion in said upper side and its lower portion in said lower side of said bead, said lower portion of the opening extending substantially to said front surface of the back panel, and an elongated hanger bar having a flat, T-shaped upper end portion insertable into said T-shaped opening and engageable with the marginal edges of the narrow portion of said T-shaped opening forwardly of said front surface of the back panel for supporting said hanger bar, and means on said hanger bar for supporting a radiator element.

3,003,733
MOUNTING MEANS ESPECIALLY FOR VIBRATORS
Edwin F. Peterson, % Martin Engineering Company, Neponset, Ill.
Filed Jan. 7, 1960, Ser. No. 1,129
14 Claims. (Cl. 248—224)

1. Means for mounting a vibrator on a structure to be vibrated, comprising: a female member having means thereon for rigid affixation thereof to such structure and

further including an elongated socket element of C-shaped section made up of a back wall, opposite side walls and a pair of front walls spaced closely apart to provide a slit lengthwise of said element, said walls defining a channel of T-shaped section lengthwise of said element and opening at first and second opposite ends as well as outwardly via said slit, certain of said walls being interiorly shaped to converge toward said second end of the channel, said element having thereon a pair of abutments rigid respectively on the front walls and projecting outwardly respectively at opposite sides of the slit; an elongated male member of T-shaped section in which the bar of the T provides a web receivable by the channel



via said first end and having tapered edges fitting the converging walls to tighten said male member in said female member, and the leg of the T providing a rib lengthwise of said male member and projecting outwardly through the slit and between and beyond the abutments, said rib having a slot lengthwise thereof and provided with opposite ends and one of said ends normally being spaced beyond the abutments; a wedge member insertable transversely through the slot and beneath the abutments to engage between the abutments and said end of the slot to create forces tending to draw the male member more tightly into the female member; and means on the male member outwardly of said rib for carrying a vibrator.

3,003,734

RECEPTACLE MOUNTING ASSEMBLY

William L. Davis and James V. Vevrit, Kenmore, N.Y., assignors to McDonald Products Corporation, Buffalo, N.Y.

Filed Aug. 11, 1960, Ser. No. 48,973
7 Claims. (Cl. 248-224)



1. A mounting assembly for releasably securing a receptacle to a generally vertical supporting surface comprising, a receptacle supporting bracket having a pair of downwardly diverging first mounting flange portions adjacent the opposite sides thereof projecting laterally inwardly toward each other and an interposed pair of downwardly converging second mounting flange portions projecting laterally outwardly away from each other, and a bracket mounting plate having a body portion adapted to lie against and be secured to a supporting sur-

face, said mounting plate having a pair of flange portions offset from said body portion adjacent the opposite sides thereof providing a pair of downwardly diverging first shoulders and an interposed flange portion offset from said body portion providing a pair of downwardly converging second shoulders, said bracket flange portions slip fitting behind said mounting plate flange portions and said first and second bracket flange portions wedging against said first and second mounting plate shoulders to releasably secure said bracket in position on a supporting surface.

3,003,735

SUSPENSION CLIP

Leslie N. Havener, Euclid, Ohio, assignor to Erco Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 21, 1960, Ser. No. 37,792
6 Claims. (Cl. 248-228)



5. A suspension clip comprising a body portion of flat resilient material, means on said clip for supporting a depending article therefrom, tabs on said body portion projecting inwardly from adjacent the opposite edges thereof and lying in a plane offset from and parallel to the plane of said body portion on the same side thereof, said tabs also being offset relative to each other longitudinally of said clip to enable them to embrace respective edge portions of a supporting beam or like member when said clip is rotated flatwise, the portions of said clip generally opposite said respective tabs being offset to the same side of said body portion as said tabs resiliently to snap over the corresponding edges of such beam when said clip is thus rotated and thereby prevent inadvertent dislocation of said clip.

3,003,736

HOLDERS FOR OILCANS

William Hofgesang, Avenel, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed June 10, 1959, Ser. No. 819,445
1 Claim. (Cl. 248-229)



A unitary oilcan gripping device adapted to be mounted on a leg of a sewing machine table, said oilcan gripping device comprising a base member; a rearwardly extending C-shaped prong formed on one end of said base member; a rearwardly extending S-shaped prong formed on the other end of said base member, said two prongs cooperating to hold said base member to a leg of the sewing machine table, and said S-shaped prong providing a handle means for easy removal of said base member from said leg; a pair of closely spaced outwardly extending gripping arms secured to a front lower portion of

said base member and each of said outwardly extending arms having a first outwardly extending section, a second curved section secured to the outer end of said first section and a third divergent section secured to the outer end of said second section; and a pair of widely spaced outwardly extending gripping arms secured to a front upper portion of said base member, each of said last named arms having a first outwardly extending section, a second curved section secured to said first section, and a third divergent section secured to the outer end of said second section said pair of closely spaced outwardly extending gripping arms being positioned entirely below the said pair of widely spaced outwardly extending gripping arms thereby making it possible for said closely spaced outwardly extending gripping arms to grip the neck of an oilcan of such size that the largest diameter thereof is larger than can be gripped by the widely spaced outwardly extending gripping arms.

3,003,737

TELESCOPIC ARM UNIT

Jacob A. Mehr, Kirkwood, Mo., assignor to Dazor Manufacturing Corp., St. Louis, Mo., a corporation of Missouri

Filed Oct. 31, 1960, Ser. No. 66,224
20 Claims. (Cl. 248-286)

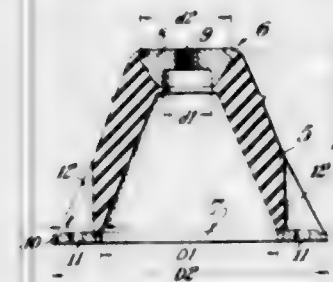


14. In a telescopic arm unit, a base, a telescopic arm pivoted to said base, counterbalance means operatively connected to said arm, and means operatively interconnecting the counterbalance means with said arm to shift the point of connection relative to the pivot axis of said arm in response to telescopic action of said arm so as to maintain a balanced condition.

3,003,738

RESILIENT MOUNTINGS

Marcus Horovitz, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed June 30, 1958, Ser. No. 745,445
5 Claims. (Cl. 248-358)



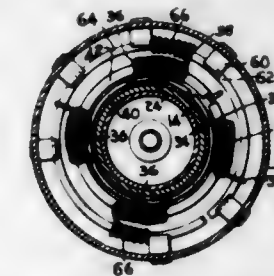
1. A resilient mounting comprising a hollow resilient flexible body, and attachment means on each end of the body for connecting the body between a support and an article to be mounted on the support so that the resulting load is taken solely by the body which then acts as a strut supporting the article from the support, said body comprising a frusto-conical wall of substantially uniform thickness and having inner and outer wall surfaces defined by internal and external diameters at the smaller and larger ends thereof, the internal and external di-

ameters of the smaller end of the body being between one quarter and one half the internal and external diameters respectively of the larger end of the body, the internal diameter at the larger end being at least as large as the external diameter at the smaller end and the height of the body being about equal to the inside diameter of the larger end of the body whereby the body when subjected to axial compressive loads less than a predetermined load retains its frusto-conical form and behaves as a relatively stiff strut, and when subjected to an axially compressive load in excess of said predetermined load buckles into flexure by collapse of its smaller end into the hollow interior of the body and becomes relatively soft.

3,003,739

VIBRATION ISOLATOR

William F. Wingard, Newtonville, and Raymond A. Goselin, Northeaston, Mass., assignors, by direct and mesne assignments, of one-half to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware, and one-half to A. Wells & Company Limited, London, England, a corporation of Great Britain
Filed Oct. 14, 1959, Ser. No. 846,340
5 Claims. (Cl. 248-358)

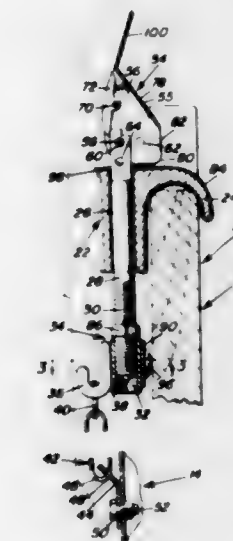


1. A vibration isolator comprising a base member, an anti-vibration assembly associated with said base member, barrel springs connecting said base member and said anti-vibration assembly, said springs each having a terminal end circumferentially movable relative to said base member and a return spring abutting one of said barrel springs.

3,003,740

BOAT TRAILER TIE-DOWN STRAP

Vertle A. Balko, 706 Lindoo Ave., E., Ladysmith, Wis.
Filed July 11, 1960, Ser. No. 41,852
9 Claims. (Cl. 248-361)



1. A boat trailer tie-down strap assembly comprising a clamp body including a downwardly opening and laterally offset hook member adapted to embrace the upper edges of a boat transom, an actuator, means mounting said actuator on said body for vertical sliding movement relative to said body, a tension member, attaching

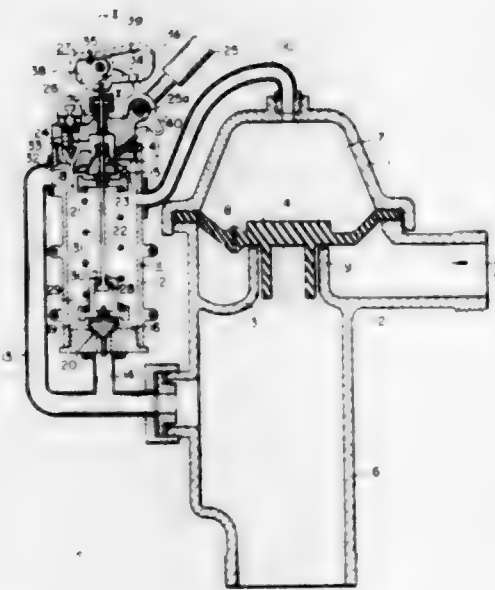
means on the lower end of said actuator engaging one end of said tension member, means on the other end of said tension member adapted for securement to a trailer frame, and cam means operatively connected between said actuator and clamp body for effecting upward movement of the former relative to the latter, said actuator including an elongated rod, said mounting means including a vertical opening formed through said body slidably and longitudinally receiving said rod therethrough whereby said cam means effects straightline axial movement of said rod, a threaded shank portion on the lower end of said rod, an internally threaded sleeve threadingly secured on said shank portion, said attaching means carried by said sleeve.

3,003,741

FLUSH VALVE ASSEMBLY

Robert J. McLanahan, Alliquippa, Pa., assignor to McLanahan Products, Inc., Alliquippa, Pa., a corporation of Pennsylvania

Filed Dec. 16, 1958, Ser. No. 780,776
4 Claims. (Cl. 251-26)



1. A flush valve assembly comprising a housing having a water inlet and a water outlet, said water inlet being adapted to be connected to a source of water under pressure, a resilient diaphragm separating the water inlet from the water outlet and being adapted to normally close the water inlet, a chamber in said housing formed by the housing and the diaphragm and adapted to hold a quantity of water, valve means connected to said chamber by a first conduit, a second conduit connecting said valve means to a pipe leading from said water outlet to a closet bowl, operating means connected to said valve means for regulating opening and closing of said valve means so that when said operating means opens said valve means water flows from said chamber through said valve means to said pipe and thereby permits water under pressure in said water inlet to move said diaphragm and enable water to flow from the water inlet to the water outlet, said diaphragm having a restricted passageway therethrough which interconnects said chamber and said water inlet for equalizing water pressure within the housing to return the diaphragm to its closed position, said operating means being movable and including a member and a track with said member disposed upon said track for movement in either of two directions along a path of travel thereover from a position thereon at which the operating means closes the valve means, movement of said member in either of said two directions from said position opening said valve means and being to one of two stations on said track, the distance between said position and one of said

two stations being greater than the distance between said position and the other station of said two stations so that movement of the member along said path of travel to one station and return to said position maintains said valve means open longer than movement of said member along said path of travel to the other station and return to said position.

3,003,742

LIFT GATE VALVE

Michael I. Kearns, 1858 Norfolk, Houston, Tex.
Filed Mar. 17, 1960, Ser. No. 15,673
13 Claims. (Cl. 251-167)



1. A valve comprising

chamber defining wall means having a plurality of openings therethrough providing an inlet and outlet for the chamber with an area around at least one of said openings providing a seat, closure means for engaging said seat and blocking flow through said one opening,

actuator means for moving said closure means in a direction having at least a component parallel to the flow path through said seat between a closed position of engagement with said seat and an unseated position out of engagement with said seat but at least partially in the direct path of flow between said inlet and outlet and for moving said closure means transverse to said path between said unseated position and an open position both out of engagement with said seat and out of said path, said actuator means comprising

wedge means for moving said closure means from said unseated position to said closed position, said wedge means having first and second bearing means acutely disposed relative to each other, third bearings means carried by said wall means for cooperating with said first bearing means, fourth bearing means carried by said closure means for cooperating with said second bearing means, means controlling the motion of said closure means from closed to unseated position including connecting means connecting said closure means to said wedge means with said second and fourth bearing means in engagement and providing a limited amount of lost motion between said closure and wedge means with respect to relative motion in the direction of relative sliding of said second and fourth bearing means, said connected closure means and wedge means forming a closure-wedge means, and constraining means including first guide means carried by said closure-wedge means cooperating with second guide means carried by said wall means con-

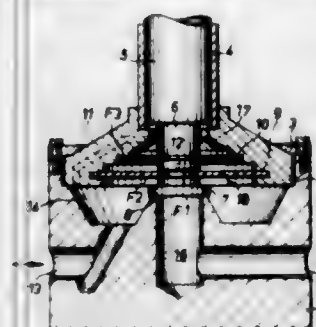
straining said wedge means to movement relative to said wall means in which said first and third bearing means remain in engagement while said closure means moves from said closed to unseated position.

3,003,743

VALVE WITH PRESSURE BALANCING DIAPHRAGMS

Klaus Sattler, Stuttgart, Germany, assignor to Concordia Maschinen- & Elektrizitäts-G.m.b.H., Stuttgart, Germany

Filed Dec. 21, 1959, Ser. No. 861,092
Claims priority, application Germany Dec. 22, 1958
3 Claims. (Cl. 251-282)

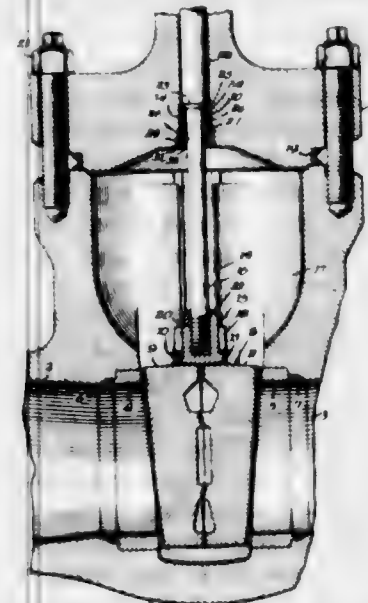


1. A pressure-balanced valve comprising a valve body having a valve chamber and a valve port therein, an inlet and an outlet channel connected to said chamber and valve port, respectively, a valve member adapted to move within said valve body to open and close said valve port, and a pair of diaphragms within said chamber and secured, on the one hand, to said valve member and, on the other hand, to said valve body, said diaphragms dividing said chamber into an inlet chamber at one side of said diaphragms, a compensating chamber between said two diaphragms, and a balancing chamber at the other side of said diaphragms, a channel connecting said inlet and balancing chambers, and a channel connecting said compensating chamber with said valve port and outlet channel, one of said diaphragms having an effective surface area greater than the effective surface area of the other diaphragm by the size of said valve port, the actual size of said diaphragms being, however, independent of the size of said valve port.

3,003,744

BACKSEATING CONSTRUCTION

Richard Fennema, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 21, 1958, Ser. No. 756,461
7 Claims. (Cl. 251-330)



1. In a backseating mechanism for a valve or the like, the combination of a reciprocally movable stem having

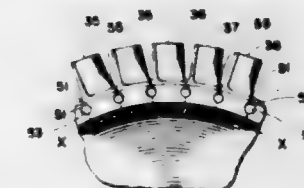
an annular shouldered portion thereon, bonnet means with an opening for receiving said stem, the said opening being enlarged adjacent the shoulder portion of said stem, an annular seating bushing within said bonnet opening, the said bushing comprising upper and lower axially aligned annular portions in spaced apart relation to occupy said enlarged opening of the bonnet, the lower annular portion being fixedly mounted in said opening in annular fluid sealing relation to the said bonnet means, resilient pressure retaining means snugly fitted within said bonnet opening positioned around said stem between said upper and lower portions of said bushing and connected thereto, the upper annular portion of the said bushing being mounted on said resilient pressure retaining means in fluid sealing relation against said stem shouldered portion, the said pressure retaining means providing for the said upper annular portion of the said bushing being normally held against inner limits of the bonnet means opening and being axially movable in response to predetermined axial movement of the said stem.

3,003,745

TURBINE WHEEL CONTAINMENT

John H. Ferguson, Jr., Saugquott, and Dennen J. Bunker, Whitesboro, N.Y., assignors to The Bendix Corporation, a corporation of Delaware

Filed Oct. 31, 1957, Ser. No. 693,728
1 Claim. (Cl. 253-77)



In a high-speed turbine, the safety improvement comprising a turbine housing having a heavy ring providing a braking surface, a turbine wheel having a hub section formed with an outer circular edge, buckets having base sections welded to said outer circular edge of said tub section, the outer ends of said buckets being adjacent said braking surface of said heavy ring of said housing, said bucket base sections having axially-extending radial faces, said radial faces being respectively in abutment with radial faces of adjacent bucket base sections, said turbine wheel being formed with a low strength, reduced cross section at the location where said buckets are welded to said hub section, each of said buckets having an integral tongue projecting from one of its axially-extending radial faces and having a groove formed in the other axially-extending radial face opposite said tongue, said tongues and grooves having a generally-square cross section and extending axially from one side to the other side of the respective bucket base sections, said tongues projecting respectively into the facing grooves, said tongues having a slightly smaller cross-section than said grooves and being arranged respectively so that said tongues are spaced a small distance from the sides of said grooves, the arrangement of said tongues in said grooves being such that when a bucket separates at said low strength section such bucket will move radially a limited distance to be restrained by adjacent buckets and to initiate separation of adjacent buckets, said heavy ring braking surface of said turbine housing being arranged and constructed such as to cause effective braking of said turbine wheel when one bucket separates and causes initial separation of buckets.

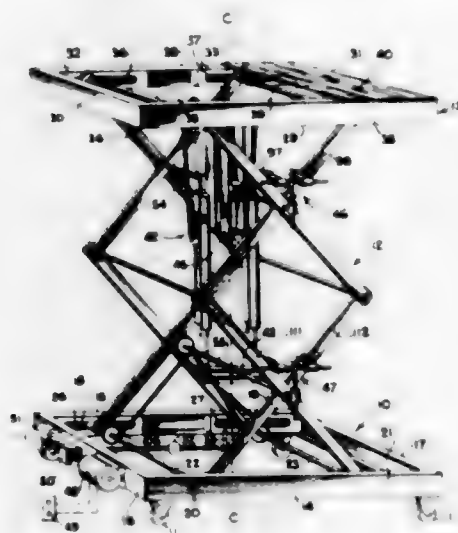
3,003,746

LOAD LIFTING APPARATUS

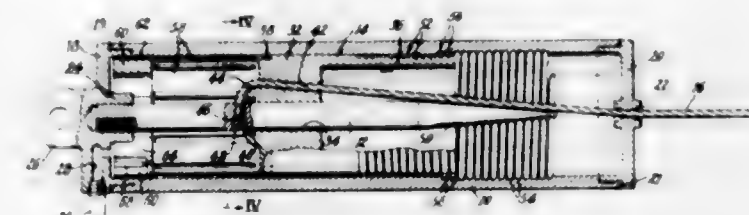
William W. Gridley, 341 E. Loop Drive, Camarillo, Calif.
Filed Jan. 23, 1957, Ser. No. 635,844
6 Claims. (Cl. 254-9)

1. A load lifting apparatus comprising: a first frame; a second frame; a crossed levers structure interposed and

coupled between said first frame and said second frame; said crossed levers structure having only two linearly movable spaced pivot axles on a given center line of said apparatus; ram means interposed and coupled to said pivot axles; fluid pressure means connected to said ram means, whereby said fluid pressure means may be



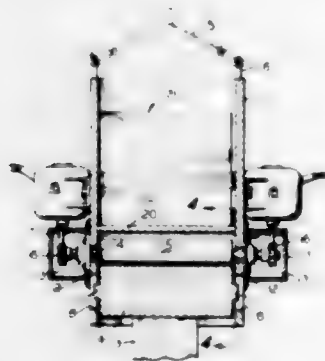
3,003,748
CABLE RETRACTOR
C. Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Nov. 17, 1959, Ser. No. 853,595
8 Claims. (Cl. 254-150)



1. A cable retracting device comprising a casing, a fixed arbor extending axially of the casing, a piston in the casing mounted upon the arbor for movements of rotation and translation relatively thereto, a cable extending into the casing and through an opening in the piston spaced from the axis of the arbor and secured to the arbor, and means for supplying fluid under pressure to the interior of the casing to effect movements of the piston to wind the cable upon the arbor.

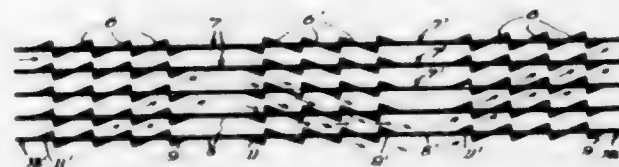
actuated to effect expansion or contraction of said ram means to cause proportionate movement of said crossed levers structure; and, ram balancing means secured to said crossed levers structure and said pivot axles, respectively, to prevent rotative movement of said pivot axles during expansion and contraction of said crossed levers structure, thereby assuring equal angular movement of said levers relative to said pivot axles.

3,003,747
PILE DRIVER
Enoch J. Thomas, 1009 Walnut St., San Carlos, Calif.
Filed June 8, 1959, Ser. No. 818,782
7 Claims. (Cl. 254-29)



1. Apparatus for driving piles comprising a housing open at the lower end thereof for accommodation of the top portion of a pile to be driven, a driving block within said housing at the lower end thereof, means mounting said block for relative up and down sliding movement with respect to said housing, the bottom surface of said block being engageable with the top of a pile received within said housing, a cam rotatably mounted in said housing about a substantially fixed axis transverse thereof and engageable with the upper surface of said block to deliver impulses thereto, force applying means of selected magnitude carried by said housing for applying weight urging said cam downwardly for continuous engagement against said block during rotation thereof, and means for rotating said cam.

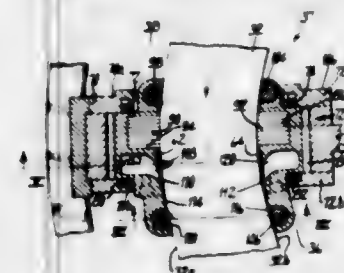
3,003,749
AUTOMOTIVE STRIP SERPENTINE FIN
James D. Morse, Racine, Wis., assignor to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Filed Sept. 9, 1957, Ser. No. 682,910
6 Claims. (Cl. 257-130)



3. A heat exchange structure comprising a plurality of laterally spaced, elongated fluid conducting tubes, fin structures positioned between said laterally spaced elongated fluid conducting tubes providing elongated fluid pass structures and operatively connected thereto in heat transfer relationship and for spacing said elongated fluid conducting tubes, each of said fin structures including a plurality of spaced and transversely extending fin strip elements operatively connected to the respective elongated fluid conducting tubes between which they are associated in heat exchange relationship, each of said fin strip elements including a plurality of relatively narrow and substantially planar fins having their ends operatively connected to the opposite sides of the elongated fluid pass structure formed by the respective elongated fluid conducting tubes operatively associated therewith in heat transfer relationship, the respective relatively narrow and substantially planar fins extending transversely of the axis of fluid flow through each respective elongated fluid pass structure, said relatively narrow and substantially planar fins of each fin strip element being arranged in a plurality of spaced groups, each of said spaced groups extending across the respective elongated fluid pass structure transversely to said axis of flow therethrough, each of said relatively narrow and substantially planar fins extending at an angle with respect to the direction of flow, all of the relatively narrow and substantially planar fins of each spaced group extending in the same general direction, the angle of relatively narrow and substantially planar fins of each spaced group being reversed with respect to the angle of the relatively narrow and substantially planar fins of the next adjacent spaced group, and a deflecting fin member positioned between said spaced

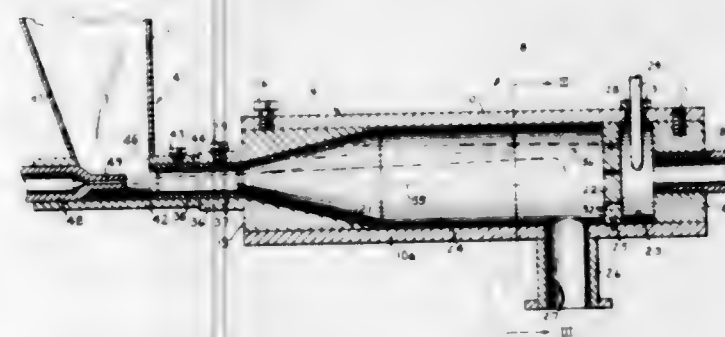
groups of reversely directed and relatively narrow and substantially planar fins, each deflecting fin member including portions respectively extending in the same angular direction as the relatively narrow and substantially planar fins of the spaced groups to provide undulating fluid flow paths through said elongated fluid pass structure.

3,003,750
SEAL FOR ROTARY REGENERATOR
Anton Hess, Parma, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Sept. 8, 1958, Ser. No. 759,708
2 Claims. (Cl. 257-269)



1. A seal for bearing against the moving surface of a drum of a regenerator having a high and a low pressure chamber, an annular support having an inwardly facing channel for extending around the surfaces of an annular drum in a radial direction, side retainers mounted in said channel for relative radial movement therein toward the surfaces of the annular drum, seals between the sides of the retainers and the sides of the channel accommodating movement of the retainers toward or away from the drum, a series of stacked adjacent radial strips provided for each of the surfaces of the drum and mounted on the retainers, biasing means between the support and the retainers urging the retainers inwardly to move the strips in edge-wise relationship against the drum surface, elongated nozzle means mounted in said side retainers and extending annularly around the drum in a radial direction and positioned to direct a flow of high pressure air along the surface of the drum, means for supplying a flow of high pressure air to said nozzles so that a curtain of air will flow along the drum away from the sealing strips, a first set of rollers mounted on the retainers outwardly of the air nozzles at one side of the retainers, and a second set of rollers spaced circumferentially of the first set at the other side of the retainers, said rollers having a fixed position relative to said retainers to positively fix the location of the retainers and be held against the drum by the biasing means and to engage the drum with a rolling friction.

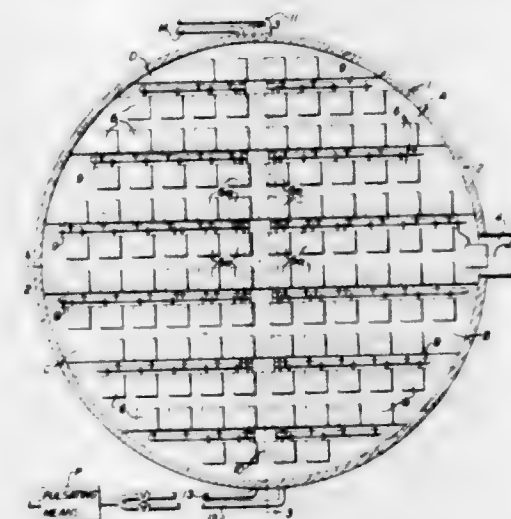
3,003,751
BLENDER
Conrad M. Trost, 334 Newbold Ave., Moorestown, N.J.
Filed Apr. 21, 1958, Ser. No. 729,787
3 Claims. (Cl. 259-4)



1. An apparatus for blending two or more materials, at least one of which is pulverulent, comprising: a substantially horizontally disposed housing defining an elongated

gated mixing chamber at least part of which is cylindrical; a feed passageway communicating with said mixing chamber coaxially through one end thereof; nozzle means arranged coaxially with said feed passageway for directing a stream of pressure fluid through said feed passageway into said mixing chamber substantially along the lengthwise axis thereof; a materials hopper communicating with said feed passageway adjacent to said nozzle means, the materials in the lower end of said hopper being entrained by said pressure fluid stream and entering therewith into said chamber; means defining a plurality of substantially parallel passageways communicating with said mixing chamber through the other end thereof, said passageways being arranged substantially in a circle substantially coaxial with said mixing chamber; means for directing pressure fluid through said parallel passageways; deflecting wall means extending at an angle to the lengthwise axis of said mixing chamber and sloping inwardly from a point on the wall of said chamber intermediate the ends thereof toward said feed passageway; and an outlet passageway through the side wall of said mixing chamber near the other end thereof, said chamber being closed except for said feed passageway, said outlet passageway and said pressure fluid passageways so that the entirety of the materials and fluid admitted thereto are removed through said outlet opening.

3,003,752
METHOD AND APPARATUS FOR CONDITIONING PULVERULENT OR GRANULAR MATERIAL
Robert B. Frost, Catasauqua, Pa., assignor to Fuller Company
Filed May 20, 1958, Ser. No. 736,491
17 Claims. (Cl. 259-4)

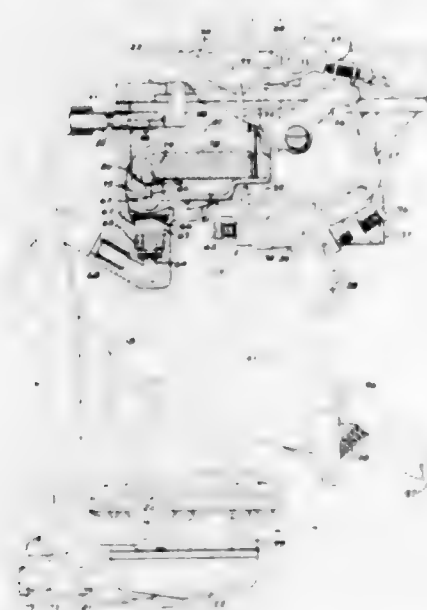


1. Apparatus for conditioning fluidizable pulverulent material comprising a vessel, a plurality of aerating units at the bottom of the vessel, the upper surfaces of said aerating units being arranged as a floor in the vessel, said vessel having a material outlet communicating with the space above said floor, said aerating units being arranged in sections, the outer edge of each section terminating adjacent the periphery of the vessel and the inner portion of each section being adjacent the center of the vessel, means for supplying a gas to the bottom of each of said aerating sections for passage upwardly there-through independently of the other sections, means for causing a flow of a gas upwardly through at least the outer portion of a selected one of said sections at a volume sufficient to fluidize pulverulent material overlying that section, means for providing a gas flow through at least the outer portion of each nonselected section at a volume sufficient only to aerate pulverulent material overlying each such nonselected section, and means for providing gas flow upwardly from the bottom of and

through the inner portion of the nonselected sections within a central zone at a volume, per unit area, greater than that provided through the outer portions of the non-selected sections.

3,003,753 FUEL SUPPLY SYSTEM FOR INTERNAL COMBUSTION ENGINES

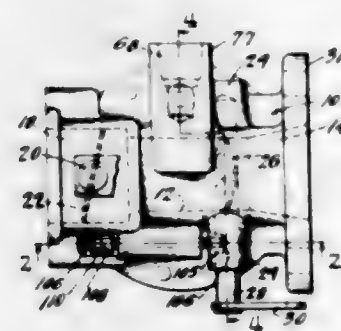
Eldon A. Johnson, St. Louis, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed June 2, 1958, Ser. No. 739,267
10 Claims. (Cl. 261—36)



2. In a fuel supply system for an internal combustion engine, a carburetor having a mixture conduit, a throttle in said mixture conduit movable between open and closed positions, a fuel bowl, a weir in said fuel bowl forming therewith an overflow chamber and a sump to receive the overflow from said chamber, a fuel passage leading from the bottom of said overflow chamber to said mixture conduit, a fuel inlet for said overflow chamber, a needle valve for variably restricting said inlet, an outlet from said sump, means including a pump to supply fuel through said fuel inlet into said overflow chamber, and means operable responsive to movement of said throttle for actuating said needle valve to control the flow of fuel through said fuel inlet into said overflow chamber.

3,003,754 CHARGE FORMING APPARATUS

Bernard C. Phillips, Toledo, Ohio, assignor to The Tillotson Manufacturing Company, Toledo, Ohio, a corporation of Ohio
Filed Dec. 16, 1958, Ser. No. 780,845
2 Claims. (Cl. 261—37)

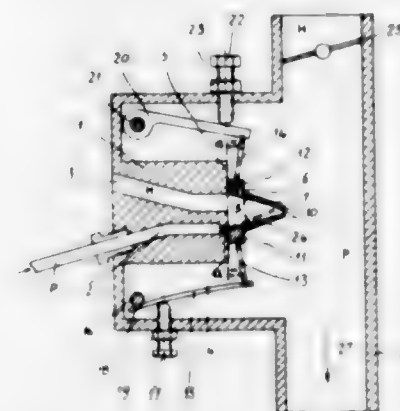


1. In combination, charge forming apparatus including a casing formed with a mixing passage, a throttle valve movably disposed in the mixing passage, a fuel chamber

formed in the casing, a flexible diaphragm forming a wall of the fuel chamber, the diaphragm being movable inwardly upon depletion of the fuel within the chamber, a fuel inlet for the fuel chamber, valve means for the fuel inlet, means actuated by movement of the diaphragm for controlling said fuel inlet valve means, a fuel discharge orifice opening into the mixing passage, a fuel duct between the orifice and the fuel chamber, the throttle valve mounted on a rotative shaft extending transverse of the mixing passage, said shaft having a portion with a cam surface thereon positioned outside of the mixing passage and in the casing, a fuel metering assembly comprising a reciprocating fuel metering member movable to vary fuel flow through the fuel duct, a reciprocable rod mounted in the casing in a direction generally normal to the throttle valve shaft and having one end which engages the cam surface, the reciprocable fuel metering member being mounted in the casing in a bore disposed parallel to the reciprocable rod and having a tapered forward portion which is positioned within the duct, a connecting member connected to the reciprocable rod at its other end and engaging the fuel metering member so that movement of the reciprocable rod will change the position of the metering member, a spring mounted in the casing which engages a rear portion of the metering member to hold the rod against the cam surface and assure position control of the metering member, and the connecting member threadably engaging the reciprocable rod whereby rotation of the reciprocable rod with respect to the connecting member will adjust the position of the reciprocable rod with respect to the metering member.

3,003,755 ADJUSTABLE DEVICES FOR METERING AND EMULSIFYING GASEOUS AND LIQUID SUBSTANCES

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Nov. 16, 1959, Ser. No. 853,202
Claims priority, application France Nov. 28, 1958
7 Claims. (Cl. 261—71)

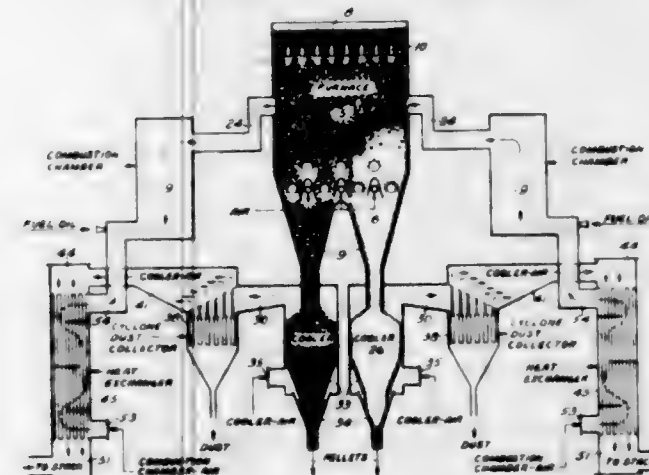


1. A device for metering and emulsifying gas and liquid substances and delivering the same into a chamber, said device comprising a distributor block having a slide face, a gas passage through said distributor block opening through said slide face, a liquid passage through said distributor block and opening through said slide face adjacent to said gas passage, means connected to said distributor block for delivering liquid to said liquid passages under pressure, a slide engaging said slide face, said slide having a chamber of generally frustoconical configuration with the large end of said chamber opposing said slide face, said chamber functioning as an emulsifying chamber and the small end thereof forming an emulsion outlet orifice, and support means connected to said slide holding said slide in engagement with said slide face and positioning said slide relative to said distributor block for controlling the quantity of liquid delivered to said cham-

ber, gas being projected into said chamber at least in part by the kinetic energy of the liquid passing into said chamber.

3,003,756 PELLET FURNACE

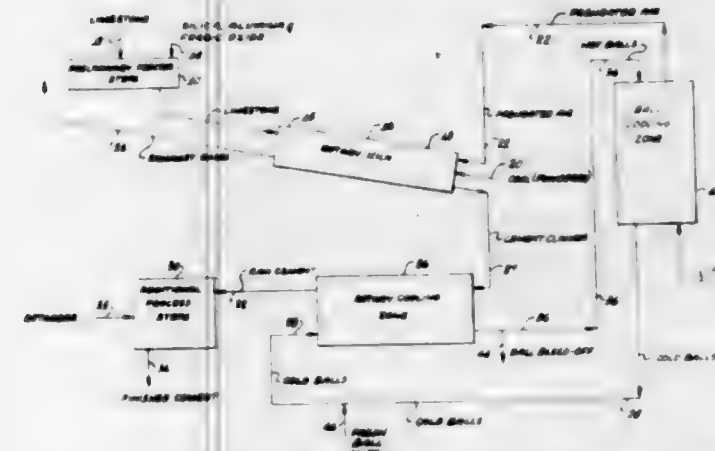
Percy Lea Steffensen, Cornwall, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Aug. 18, 1958, Ser. No. 755,481
3 Claims. (Cl. 263—29)



3. A method of treating pellets of iron ore or the like, comprising the steps of maintaining a continuous descent of pellets through a shaft furnace, heating said pellets to a high temperature in said shaft furnace, introducing air at the bottom of the shaft furnace and directing said air vertically upwardly in counterflow heat transferring relation through the descending pellets in said shaft furnace, cooling the pellets thereafter in a separate chamber by directing a body of other air in heat transfer therethrough, cleaning said body of air, and utilizing the heat retained in said body of cleaned air to preheat a completely separate body of clean outside air, and supplying only said preheated clean air to a combustion chamber which gives its heat to the furnace.

3,003,757 COOLING OF CEMENT CLINKER

David W. Mitchell, Shelby, N.C., assignor to The Oil Shale Corporation, Beverly Hills, Calif., a corporation of Nevada
Filed May 5, 1958, Ser. No. 733,156
4 Claims. (Cl. 263—53)

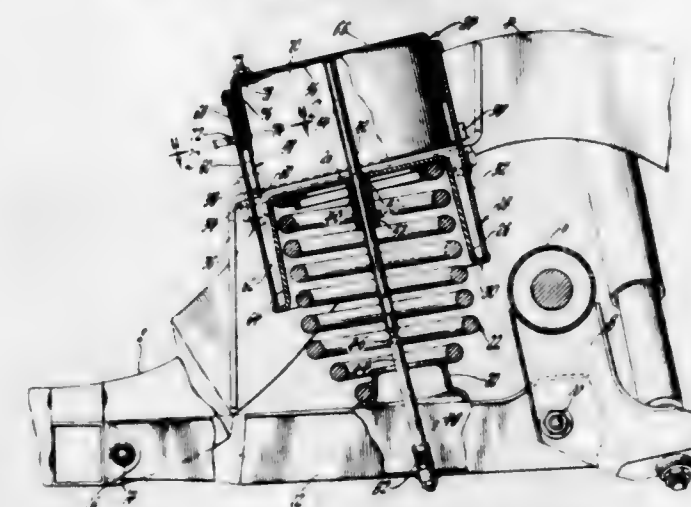


1. A process for the manufacture of cement which comprises: heating cementitious ingredients, by hot gases, to form hot cement clinker; admixing said hot cement clinker with solid cooling bodies having an initial temperature substantially lower than said hot cement clinker whereby to simultaneously grind and cool said cement clinker; separating said solid cooling bodies from said cement clinker after the cooling thereof; passing said solid bodies through cold air to thereby cool said bodies and preheat the air; recycling said solid cooling bodies for admixture with newly-formed hot cement clinker;

771 O.G.—31

3,003,758 VEHICLE SUSPENSION SELF-LEVELING COMPOSITE SPRING ASSEMBLY

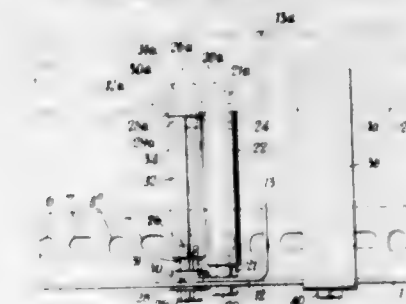
Philip L. Francis, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,537
13 Claims. (Cl. 267—34)



1. A composite coil and fluid spring assembly arranged in parallel, said assembly comprising an upper and a lower spring seat for said coil spring, a coil spring disposed between said seats, said upper spring seat including a depending annular portion surrounding the upper part of said coil spring, a cylinder surrounding and connected to said annular portion, said cylinder having an open upper end extending above said spring seat, the periphery of said cylinder and of said annular portion being spaced radially to form an annular interval therebetween, an inverted cup-shaped piston reciprocable in said annular interval, a flexible diaphragm connecting said cylinder and piston, and means formed in the periphery of said cylinder and said piston respectively cooperating with said flexible diaphragm effective to control fluid flow into and out of said spring responsive to variation in displacement relation of said cylinder and casing.

3,003,759 JIGS FOR FRAME STRUCTURES

Frederick William Reilly, Weston, Ontario, Canada, assignor to Dexion Limited, London, England
Filed Mar. 13, 1957, Ser. No. 645,741
Claims priority, application Great Britain Mar. 16, 1956
6 Claims. (Cl. 269—117)



1. For use in producing a frame from a plurality of perforated elements to be connected together by bolts, a jig comprising perforated elements, arranged in the form of the frame to be produced, bolts connecting said elements of said jig, and a plurality of upstanding locating members applied to the bolts of the jig, each locating member being a stud-like member provided, at one end, with a screw-threaded hole by which it is engaged with the shank of the bolt to which it is applied and, at the other end, with a recess of a shape and size complementary to the shape and size of the head of the bolt.

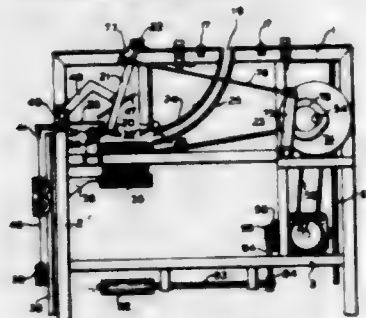
3,003,760

TOWEL FOLDING MACHINE

Louis O. Schen, Jr., Louisville, Ky. (Norwood Drive, Box 197, Rte. 1, Lyndon, Ky.), and John B. Wilson, 3702 W. Weyburn Road, Louisville, Ky.

Filed Dec. 23, 1957, Ser. No. 704,642

12 Claims. (Cl. 270-82)



1. A machine for folding flexible sheets such as towels, diapers and the like comprising: a frame having a work surface containing an elongated folding slot; work feeding means mounted on said frame for feeding and return movement between spaced flat-sheet receiving and releasing positions and operable to grasp a flat sheet fed thereto in its receiving position, to move said sheet to and release it at said releasing position wherein said flat sheet covers said folding slot and thereafter to return to said sheet-receiving position; work folding means mounted on said frame for sheet-delivering and return movement between inoperative and folded-sheet delivery positions respectively spaced above and below said folding slot and operable, upon moving from its inoperative position, to engage a flat sheet which is positioned over said slot and progressively fold and carry that sheet downwardly entirely through said slot to said folded-sheet delivery position and thereafter to disengage said sheet and return to said inoperative position; work removing means mounted on said frame adjacent said folded-sheet delivery position and operable to receive the folded edge of a folded sheet as it is carried by said work folding means into said delivery position, to grasp and hold said folded edge stationary in said delivery position until said work folding means is disengaged from said folded sheet and thereafter to release said folded edge; and drive means operative, when a flat sheet is fed to the work feeding means, to operate said work feeding, folding and removing means in a coordinated manner to move a flat sheet from the receiving position to the releasing position, and from the releasing position to the delivery position, progressively fold it during the latter movement, hold the folded sheet in the delivery position until the folding mechanism is disengaged therefrom and then release it.

3,003,761

CHILDREN'S PLAY HORSE

Engene Alfred Young, Vista, Calif., assignor to Dixco, a corporation of California

Filed Jan. 23, 1959, Ser. No. 788,658

12 Claims. (Cl. 272-1)



1. A device of the character described comprising: a flexible bar having a clip adaptable to be slipped over a belt on one end thereof and the profile of a horse's head bent on the other end thereof; a bridle fastened to the head end of said bar; and reins attached to the said bridle.

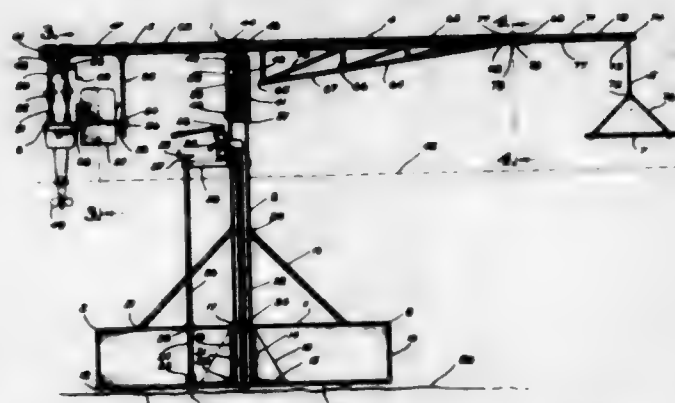
3,003,762

SKI INSTRUCTION APPARATUS

Charles T. Lewis, P.O. Box 4755, Oklahoma City, Okla.

Filed Nov. 28, 1959, Ser. No. 854,311

9 Claims. (Cl. 272-32)



1. An aquatic instruction device comprising, an upright standard, a head on said standard and adjustable on the upper portion thereof to change the height of the head, a boom extending horizontally adjacent said head, means rotatably mounting said boom on said head for rotation about a vertical axis at said head, means for supporting said standard in a body of water whereby said boom is spaced above the surface of the water and adjustment of the head on the standard raises and lowers said boom relative to said water surface, said boom having tubular arms extending radially opposite from the head with one of said arms being longer than the other, a motor member having a propeller, means supporting said motor means on the shorter of the boom arms in depending relation thereto whereby the propeller extends into the water and operation of the motor effects rotation of the boom, a winch supported on the shorter of the boom arms, a tow rope on said winch and extending therefrom through the tubular boom toward the end of the other arm, and a boom extension telescoped in said longer boom arm and adjustable relative thereto for lengthening the boom on the side opposite the motor, said boom extension being tubular and the tow rope extending through said tubular extension and laterally outwardly thereof adjacent the end of said boom extension, said tow rope having an end on the portion extending from the boom extension adapted to be grasped by a person to be towed thereby whereby operation of the winch will effect drawing in and paying out of said rope to change the extending length thereof and the operational range of the person grasping same.

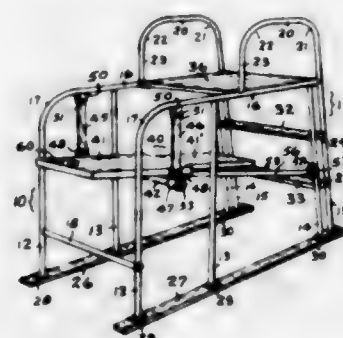
3,003,763

DIVING BOARD AND MOUNTING MEANS THEREFOR

John G. Griffith, 911 Dupont St., and Frank W. Coleman, Lake Samish, both of Bellingham, Wash.

Filed July 17, 1959, Ser. No. 827,855

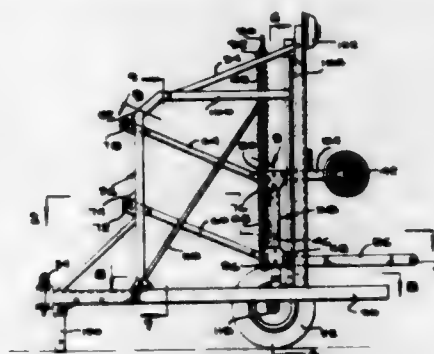
1 Claim. (Cl. 272-66)



Portable diving board means comprising two rigidly connected spaced apart upright side frames; an elevated

platform supported by said side frames adjacent the inner end of said side frames; a diving board positioned between said side frames with its inner end spaced a substantial distance below said platform and its outer end extending beyond the outer end of said side frames, said diving board including a board member having a support bar extending across its under side and beyond the edges of the board member and rigidly secured to the board member and having two divergent rods rigid with said support bar and extending divergently away from said support bar along the lower side of said board member and toward the inner ends of said side frames, said rods being rigidly connected by a cross bar and the inner end of said board member being rigidly attached to the cross bar; pivot means pivotally connecting the spaced apart inner ends of said rods with the respective side frame; and at least two resilient suspension members connected between the outwardly extending end portions of said support bar and the adjacent side frames resiliently supporting the outer end portion of said diving board.

frame to said supporting structure so that the frame may move upwardly and downwardly while maintaining its vertical plane, and spaced coil springs operatively con-



nected to said frame and said supporting structure for counterbalancing a portion of the weight of said bar bell.

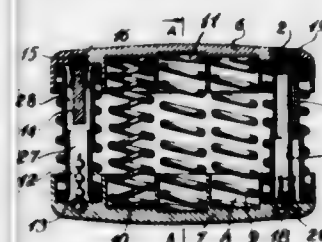
3,003,764

SPRING-LOADED GYMNASTIC HANDLE

Lazare Yovanovitch, 71 St. Elizabeth St., Longueuil, Quebec, Canada

Filed Oct. 9, 1958, Ser. No. 766,328

1 Claim. (Cl. 272-68)



A gymnastic handle of the spring-loaded type consisting of two identical elongated and spaced apart parallel end plates placed in mirror image positions and adapted to be moved towards one another, the outer faces of which are shaped so as to conform to the palm of the hand and the inner opposed faces of which are flat and bear a number of symmetrically disposed recesses adapted to receive the end portions of a number of helical springs; said recesses opening into the plane of the two flat faces and having their longitudinal axis at substantially right angles to the plane of the said flat faces; co-operating telescoping rod and sleeve guiding elements moulded into said plates as integral parts thereof and perpendicularly centrally depended from the bottoms of at least two of the recesses of each end plate for guiding said plates in their movements towards one another; said helical springs surrounding said co-operating elements and having an outer diameter slightly larger than the diameter of said recesses so as to be frictionally held therein; said springs thus serving as interconnecting members between said opposed plates.

3,003,765

EXERCISING APPARATUS

Blaine H. Dove, Rte. 2, Box 21-A, Bernville, Pa.

Filed May 13, 1960, Ser. No. 29,022

5 Claims. (Cl. 272-81)

1. In an exercising apparatus, an upright skeleton supporting structure, an upright frame mounted within said structure for upward and downward movement in a vertical plane, a horizontally disposed handle bar means on one side of said frame and fixedly supported from the lower end of said frame, a horizontally disposed bar bell on said one side of said frame and supported from the upper end of said frame, means connecting said

3,003,766

AMUSEMENT DEVICE OR GAME

Harmon G. Stanton, 638 S. Roosevelt Ave., Arlington Heights, Ill.

Filed Aug. 9, 1957, Ser. No. 677,341

1 Claim. (Cl. 273-108)



A game apparatus including a playing stick that comprises a rod that has a curved base on the lower end thereof, a hoop for engagement with said base, and a target comprising a cup that is adapted to be embedded in the ground and said cup embodying a bottom wall and a cylindrical side wall, the top of the cup being flush with ground level, the outer diameter of said cup being substantially less than the diameter of said hoop so that the hoop can selectively surround the cup, said bottom wall being shaped arcuately and the central portion of said bottom wall being bowed outwardly and downwardly, a body member including a vertically disposed pin projecting through said cup, the upper end of said pin projecting above the top of said cup, and wherein with the hoop surrounding the cup and pin, the top of the pin will be slightly higher than the upper surface of the hoop, the lower end of said pin being arranged just above the bottom wall of said cup, a disc mounted on said pin and said disc snugly engaging the side wall of said cup, said body member being selectively removable from the cup, said disc being circular and the diameter of said disc being approximately the same as the inner diameter of the cup so that the disc is snugly held within the cup, the bottom wall of said cup having a plurality of spaced apart apertures therein.

3,003,767

AMUSEMENT DEVICE WITH PROJECTIBLE OBJECT

Henry P. C. Keuls, Pittstown, N.J.

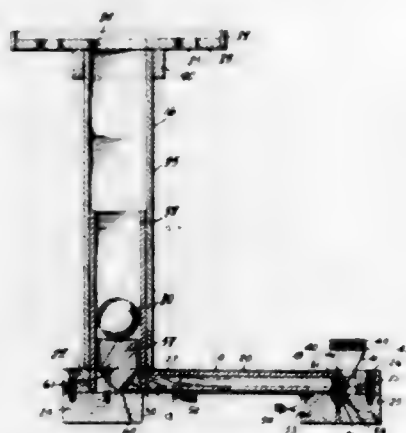
(205 E. 63rd St., New York 21, N.Y.)

Filed Mar. 4, 1957, Ser. No. 643,790

2 Claims. (Cl. 273-138)

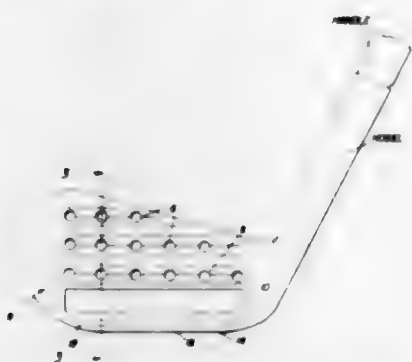
1. An amusement device comprising, in combination, means defining an elongated base, an upwardly-extending hollow casing supported adjacent one end of said base and defining a confined guide-way for a projectible object adapted to be disposed in said casing, a movable project-

ing member² in said casing adapted to engage said projectible object, a movable actuating member adjacent the other end of said base adapted to be struck and moved by a force directly applied to it by the user of the device, and a force transfer member movable in said base for transmitting the movement of the actuating member to the projecting member to cause the latter to project said projectible object upwardly in said casing solely in response to the actuating force applied by the user upon the actuating member, said actuating member and said force transfer member having cooperating cam surfaces and said projecting member and said force transfer member



having cooperating cam surfaces whereby downward movement of said actuating member causes upward movement of said projecting member, said casing having an opening at its upper end and said guide-way being walled to prevent egress of said projectible object from said guide-way except through said opening at said upper end, and a receptor carried by said casing and surrounding said opening for catching the projectible object after it has been projected from said casing by said force, said receptor comprising a tray extending substantially beyond at least a portion of said base and provided with a plurality of apertures dimensioned to receive and retain the projectible object.

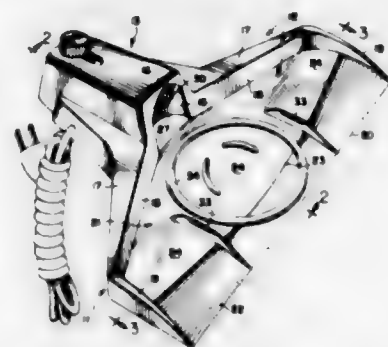
3,003,768
GOLF CLUB HEAD
Ben Clements, 227 Zeta St., Ravenna, Ohio
Filed Aug. 14, 1959, Ser. No. 833,796
4 Claims. (Cl. 273-175)



1. An improved golf club head for use in constructing a sand wedge comprising a horizontally elongated one-piece body which is generally ovate in both front and rear elevation, said body having longitudinal top and bottom edges, a heel at one transverse end provided with a hosel to accommodate a handle, and a rounded toe at the outer transverse end, said body also having a front face and a rear face, the major upper median and lower lengthwise portion of said front face slanting downwardly and forwardly and providing a loft corresponding to that commonly utilized in a sand wedge, the lengthwise bottom portion embodying a sloping declivity disposed at an obtuse angle relative to the slanting front face and being com-

mensurate in length with the length of the body, said declivity having a lower leading edge merging into and cooperating with the bottom edge, said declivity being planar and defining a sand pickup surface and said leading edge being knife-like and constituting a lip, the lower median portion of said body at the lengthwise top of said declivity being provided with a relatively wide horizontally elongated single slot opening through the front and rear faces of the body and constituting a sand discharging and relief slot, said slot being of a length substantially commensurate with the length of said body and also of a length greater than the diameter of a golf ball.

3,003,769
GAME DEVICE
John Ronald Brandell, Evanston, Ill.
(915 Appletree Court, Northbrook, Ill.)
Filed Oct. 24, 1958, Ser. No. 769,414
2 Claims. (Cl. 273-179)



1. A golf ball putting practice device comprising a unitary frame of molded plastic material forming a tray having a floor and mutually facing lateral abutments at the opposite sides of the tray and defining a ball receiving area on the floor between the abutments, said frame forming a ball trapping pocket at the rear of said area medially between the abutments, upstanding walls extending on opposite sides of said pocket along the rear edges of the floor and merging with said abutments, said floor providing an upwardly inclined plane portion extending between said abutments and rearwardly of the front edge of the tray to a ridge, and a downwardly inclined portion extending rearwardly from said ridge toward said ball trapping pocket, a pair of spaced apart, upstanding and floor rigidifying ribs formed on the frame in position defining a target zone of limited width, in centered alignment with said trapping pocket, and a pair of missed putt zones outwardly and on opposite sides of the target zone, said ribs including portions extending forwardly of said ridge toward and terminating at the front edge of the tray, and portions extending rearwardly of said ridge and terminating forwardly of said upstanding walls to permit balls, delivered into either of said missed putt zones, to roll upon the floor and along said walls freely past said ribs and into said trapping pocket, and a ball return kicker operable, in response to the presence of a ball in said pocket, to propel the ball thence medially through the target zone and outwardly of the device across its forward edge.

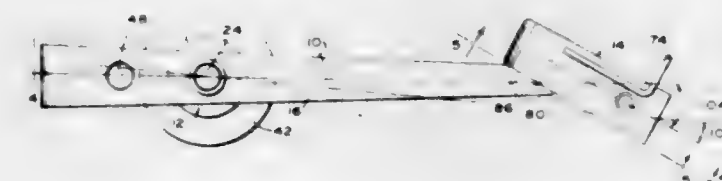
3,003,770
GOLF BALL TEEING MACHINE
Richard O. Jones, 152 Corbin Ave., Macon, Ga.
Filed Dec. 11, 1959, Ser. No. 858,931
3 Claims. (Cl. 273-201)

1. In a golf ball teeing device, a vertical golf ball supply chamber formed at its lower portion with a delivery aperture, a generally L-shaped delivery trough pivoted in said aperture and extending therethrough, means biasing said trough to a position wherein its outer portion is elevated, a guide channel in the chamber inclined down-

wardly toward and registrable with the inner portion of said trough when the outer portion of the trough is elevated, a tee lever pivotally mounted below the trough in the same vertical plane therewith, an upstanding tee on the outer end of the tee lever, ball-positioning means on the outer end of the trough registrable with said tee when the outer end of the trough is swung downwardly, a feeding roller rotatably mounted in the chamber and spaced above said guide channel by a distance substantially equal to the diameter of a golf ball, projections on the feeding roller spaced to receive therebetween a golf ball in the channel to prevent descent thereof, said trough being rotatable to lower its outer portion by grav-

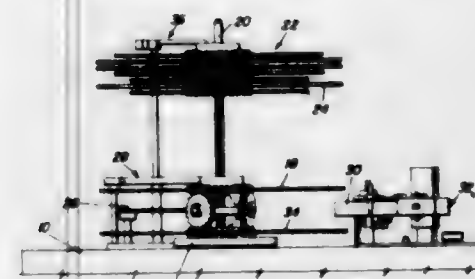
positioning the tone arm selectively above and below a record supported upon the supporting and driving assembly and for selectively positioning the tone arm between records supported on the turntable and on the supporting and driving assembly for selectively playing the adjacent sound tracks of said records, means for causing the tone arm to selectively set down upon the sound track of the adjacent side of a record supported upon the supporting and driving assembly and the adjacent sound tracks of records mounted on the turntable and on the supporting and driving assembly.

3,003,772
TRANSDUCER ASSEMBLY
Chester A. Snow, Jr., Middletown, and Arthur A. Klebba, Enfield, Conn., assignors to The Gray Manufacturing Company, a corporation of Connecticut
Filed Sept. 19, 1957, Ser. No. 685,017
19 Claims. (Cl. 274-23)



1. A transducer assembly comprising a support, an arm and a head, a first pivot joint connecting said support and an intermediate portion of said arm for relative movement about a vertical axis, a second pivot joint connecting a terminal portion of said arm directly to a terminal portion of said head for relative movement about a horizontal axis, said second pivot joint including members mutually supported by spaced bearings and providing concentric surfaces of revolution mutually spaced throughout to define an annular gap, and a viscous damping liquid occupying said gap and imparting a restoring force to said head relative to said arm.

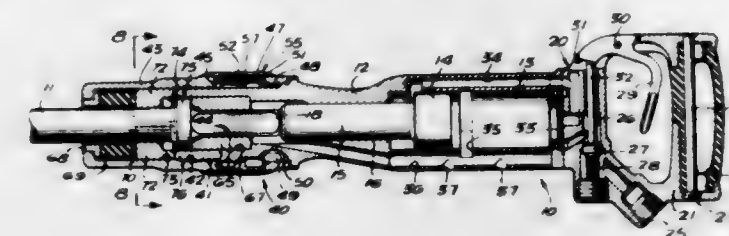
3,003,771
AUTOMATIC RECORD PLAYER
Herman H. Mueller, Ephrata, Pa.; Elizabeth M. Mentzer, executrix of said Herman H. Mueller, deceased
Original application July 10, 1953, Ser. No. 367,316, now Patent No. 2,841,400, dated July 1, 1958. Divided and this application Nov. 4, 1954, Ser. No. 476,731
1 Claim. (Cl. 274-10)



In an automatic phonograph record player, a turntable and means for driving the same, a supporting and driving assembly operatively supported and driven by the turntable for supporting and driving a record in vertically spaced relation to the turntable, said turntable and said supporting and driving assembly having a positive, interlocking, toothed driving connection therebetween, a tone arm and a horizontal movement for swinging the same towards and from the turntable, means for vertically

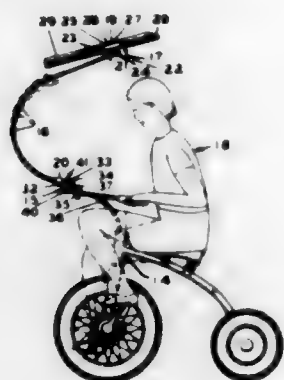
3,003,773
COUPLING ASSEMBLY WITH POSITIVE LOCK

George H. Fuehrer, Downey, Calif., assignor to Thor Power Tool Company, Aurora, Ill., a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,441
7 Claims. (Cl. 279-19.6)



1. In combination with a pneumatically actuated tool, a coupling for detachably securing a tool assembled thereto, said coupling including a retainer sleeve having a screw thread junction with a mounting member therefor, a retainer lock rotatably supported on said mounting member adjacent one end of said sleeve, a resilient locking member carried by said mounting member engageable with said sleeve to prevent rotation thereof relative to said mounting member, said retainer lock being movable between a first position wherein said locking member is operable to lock said sleeve against rotation and a second position wherein said locking member is held inoperative to lock said retainer sleeve against rotation.

3,003,774
SIMULATED HELICOPTER
 Ryland Russell, 5628 Pembroke Lane,
 Shawnee Mission, Kans.
 Filed Mar. 9, 1961, Ser. No. 94,630
 1 Claim. (Cl. 280-1.21)



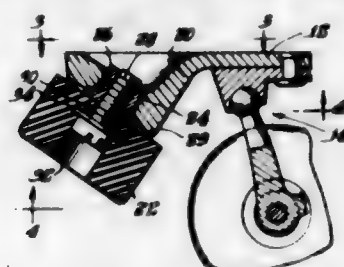
A velocipede having a steering column curved upwardly and forwardly and joined to the mid-length of handle bars, an anchor plate secured to the steering column and projected over the mid-length of the handle bars, a pair of parallel wedge shaped members spaced and being secured to the lower face of said anchor plate with the lower surfaces thereof being tapered downwardly in opposite directions to bear downwardly on the mid-length portions of the handle bars, lugs, said lugs being secured to and projected upwardly from the upper face of said anchor plate, a C curved rod, the lower end portion of said C curved rod being pivotally connected to said lugs, a propeller made of resilient material, a propeller shaft, and said propeller shaft being pivotally connected to the upper end portion of said C curved rod.

3,003,775
LIQUID FERTILIZER ATTACHMENT
 John W. Ackley, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
 Filed July 6, 1956, Ser. No. 596,332
 2 Claims. (Cl. 280-5)



1. A planting and liquid distributing implement comprising an elongated frame extending transversely of the normal line of travel and including front and rear frame bars, a forwardly extending hitch connected at its rear portion to said frame and adapted to be connected with and supported at its forward end on a propelling tractor, a pair of wheel frame means disposed in spaced apart relation and fixed at front and rear portions to said front and rear frame bars, a ground engaging wheel carried by each wheel frame means between said front and rear frame bars, pairs of upwardly extending tank-supporting brackets fixed to said front and rear frame bars, each pair being disposed in the vertical fore-and-aft extending plane of the associated ground wheel, and a liquid container carried by each pair of said brackets and disposed substantially in centered relationship, both laterally and fore-and-aft, with respect to the associated ground wheel.

3,003,776
TOE STOP ARRANGEMENT
 Gordon K. Ware, Chicago, Ill., assignor to The Chicago Roller Skate Company, Chicago, Ill., a corporation of Illinois
 Filed Feb. 24, 1959, Ser. No. 795,199
 4 Claims. (Cl. 280-11.2)



1. A roller skate toe stop assembly comprising a toe stop supporting structure on the forward end of a roller skate and having a threaded bore inclined downwardly and forwardly and of a predetermined diameter adapted to receive a threaded connector of a stop member of relatively large over-all dimension, an externally threaded bushing received in said threaded bore and having an internally threaded aperture of a reduced diameter relative to the predetermined diameter of said threaded bore, said bushing having a radial flange disposed in opposition to the adjacent outer face of said supporting structure, a toe stop of relatively small over-all dimension, and a bolt fixedly carried by said toe stop of relatively small over-all dimension and having an enlarged end disposed in the body of the toe stop and a threaded end projecting from the upper face of the toe stop and threadedly engaged in the internally threaded aperture of said bushing for mounting the toe stop on said supporting structure with the central upper portion of the toe stop clamped between the enlarged end of the bolt and the radial flange on said bushing.

3,003,777
SKI BINDING
 Anderson C. Hilding, 421 36th Ave. E, Duluth, Minn.
 Filed Apr. 25, 1960, Ser. No. 24,487
 11 Claims. (Cl. 280-11.35)



3. In a ski binding, a ski plate adapted to be secured to a ski, means for rotatably mounting a shaft on said ski plate, a boot plate adapted to be secured to the sole of a ski boot and having a pair of connector lugs formed thereon and extending forwardly thereof, and cooperating means formed on said lugs and said shaft for positioning and releasably securing said connector lugs on said shaft.

3,003,778
CONVERTIBLE-SKI-SLED
 Francis W. Taggart, 3503 Clinton St., Bellaire, Ohio
 Filed Jan. 9, 1959, Ser. No. 785,914
 3 Claims. (Cl. 280-12)

1. A convertible ski-sled comprising a runner means, a pedestal component fixed directly to and rising from an intermediate part of the runner means, and a seat component extending crosswise of the runner means and fixed on the pedestal means and spaced above the runner means,

first means connecting said pedestal component to the runner means, and second means connecting the seat component to the pedestal component, said runner means comprising a single ski-runner and said pedestal component comprising a single pedestal, said single pedestal comprising slidably engaged lower and upper sections, and third means engaged with the sections and securing the sections in vertically adjusted relation to each other, said lower section comprising a pair of laterally spaced vertical plates having upper ends and lower ends, lateral flanges on said lower ends bearing upon the ski-runner, said

laterally spaced pair of front wheels, caster means for independently caster mounting each of said spaced front wheels for rotations about a respective vertical axle in the plane of its wheel, means for attaching each of said caster means on a respective one of said vertical frame elements for axial movement of its respective vertical axle thereon and lever means laterally rockably supported on said high cross tie element with its ends respectively linked to said respective means for attaching said caster means on said vertical frame elements, whereby when said front wheels are moved forwardly with the said frame said front wheels will be steered horizontally by said vertical axles and said vertical axles will be moved vertically oppositely by said front wheels.



3,003,780
VERTICALLY ADJUSTABLE TANDEM TYPE RUNNING GEAR FOR VEHICLES
 Ezra C. Lundahl, Logan, Utah, assignor to Ezra C. Lundahl, Inc., Logan, Utah, a corporation of Utah
 Filed Jan. 6, 1958, Ser. No. 707,349
 1 Claim. (Cl. 280-43)



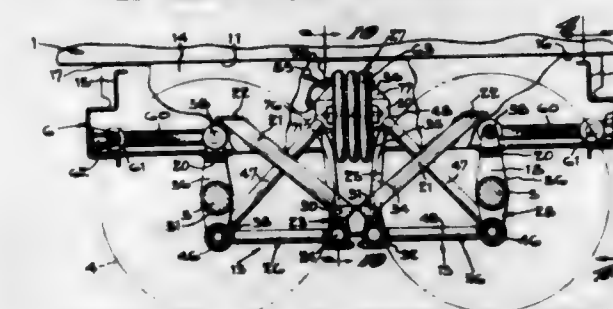
plates having forward and rear ends, laterally inwardly offset vertical channels on said forward and rear ends, said upper section comprising a pair of laterally spaced vertical plates having upper and lower and forward and rear ends, said upper section plates being disposed between and in sliding engagement with the lower section plates, laterally inwardly offset vertical tongues on the forward and rear ends of the upper section plates slidably confined in related channels of the lower section plates, and lateral flanges on the upper ends of the upper section plates upon which the seat component bears.

3,003,779
VEGETABLE HARVESTER TYPE VEHICLE
 Stanley T. Allison, 8800 S.E. Sunnyside Road,
 Portland, Oreg.
 Filed Nov. 16, 1959, Ser. No. 853,267
 2 Claims. (Cl. 280-32.5)



1. A work carriage for a gardener sitting thereon while manually harvesting asparagus from the ground between his legs along the center plane of said carriage, said carriage comprising a frame including a similar pair of side frame members symmetrically laterally spaced on either side of said centerplane, each of said side frame members including a lower rearwardly extending element and a forward vertically extending element together with a rear cross tie element laterally connecting said rearwardly extending elements towards the rear ends thereof and a high cross tie element laterally connecting said upwardly extending elements near the tops thereof and a forward facing seat for said gardener supported on said frame at said centerplane near said rear cross tie element of said frame whereby said gardener at his work on said seat has a clear level forward view between the ground, said high cross tie element and said two laterally spaced vertically extending side elements, said carriage including a pair of widely, laterally spaced parallel rear wheels and a widely

3,003,781
AIR SPRING VEHICLE SUSPENSION SYSTEM
 James J. Black, Cincinnati, Ohio, assignor to Trailmobile Inc., Cincinnati, Ohio, a corporation of Delaware
 Filed Jan. 9, 1958, Ser. No. 707,985
 13 Claims. (Cl. 280-104.5)



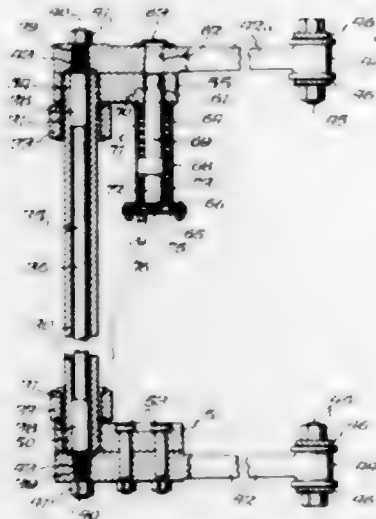
1. An air spring suspension system for a vehicle comprising, a load-supporting frame, a pair of tandem axles extending transversely relative to said frame, opposed pairs of suspension rockers disposed relative to the op-

posite sides of the frame, pivot means extending across the load-supporting frame from one side to the opposite side thereof and pivotally connecting said rockers to the frame, each pair of rockers having opposed spring-engaging portions residing adjacent one another within the confines of the load-supporting frame at opposite sides thereof, a respective air spring interposed directly in compression between said spring-engaging portions of the rockers, said air springs residing within the confines of the load-supporting frame, each pair of rockers having respective axle-engaging portions projecting longitudinally of said frame and in opposite directions from said spring-engaging portions toward said tandem axles and into motion transmitting connection therewith, a strut element forming a part of each rocker, said strut element being diagonally disposed relative to the spring-engaging and axle-engaging portions of the rockers and reinforcing the same, said motion transmitting connections residing at points displaced outwardly in transverse directions from said spring-engaging portions, the weight load of the vehicle being yieldingly biased by said air springs, said outwardly displaced connections providing a stabilizing action transversely relative to the vehicle and axles.

3,003,782

BODY ROLL STABILIZER FOR MOTOR TRUCKS

Albert F. Hickman, 17 Ames St., Chautauqua, N.Y.
Filed July 16, 1957, Ser. No. 672,191
14 Claims. (Cl. 280-112)



1. A body roll stabilizer for a truck having a frame member and an axle member, comprising a torque arm at each end of said axle member and each fulcrumed at one end on one of said members to swing vertically relative to said axle member, means pivotally connecting the other ends of said torque arms to the other of said members, spring means arranged to yieldingly transmit movement of the fulcrumed end of one torque arm to the fulcrumed end of the other torque arm, and means responsive to changes in the static load on the truck arranged to connect and disconnect said spring means and one torque arm thereby to render said torque arms and spring means operative and inoperative in so transmitting movement of one torque arm to the other torque arm.

3,003,783

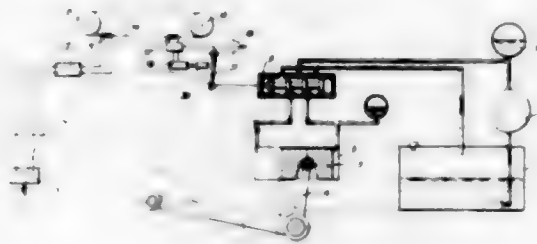
VEHICLE SUSPENSION CONTROL SYSTEMS

Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France

Filed Dec. 31, 1957, Ser. No. 706,532
Claims priority, application France Jan. 4, 1957
11 Claims. (Cl. 280-124)

1. Suspension apparatus for a vehicle, operable in dependence on irregularities of a surface over which the

vehicle is to pass, said apparatus comprising: means for supporting said vehicle on said surface; an arm associated with each said means; an energy accumulator device, members for applying this energy to said arms so as to vary their positions with respect to the chassis of said



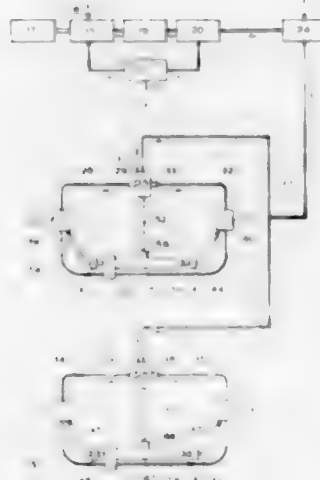
vehicle; a servo-motor for controlling said members; a detector device for measuring the height from the ground of the inequalities in front of said supports and for supplying these measurements to said servo-motor device in order to control this latter device.

3,003,784

PNEUMATIC LEVELLING SYSTEM FOR VEHICLES

David Hodkin, Liddington, England, assignor to Engineering Research and Application Limited, Dunstable, England

Filed Mar. 30, 1959, Ser. No. 802,998
Claims priority, application Great Britain Apr. 3, 1958
5 Claims. (Cl. 280-124)

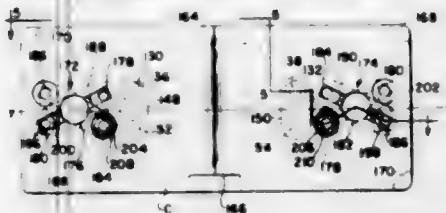


1. A vehicle levelling apparatus comprising an air reservoir, two air suspension devices associated with co-axial road wheels, a levelling valve having an air exhaust outlet, said valve connecting the air suspension devices selectively to said air reservoir and said exhaust outlet according to the height of a sprung part of the vehicle in relation to a predetermined height, said valve sealing said devices from exhaust and from the reservoir and from each other after levelling; by-pass means connected with the air suspension devices and including a pressure equalisation valve which by-passes the levelling valve and is normally open to bring said devices into communication with each other; and control means for closing the equalisation valve to close communication between said devices when required; said control means including a roll bar, a member connected at one end to the roll-bar, a projection on the other end of said member, said equalisation valve comprising two relatively movable parts connected respectively to the other end of the roll-bar, and to said projection to close the equalisation valve when the roll-bar twists beyond a predetermined degree.

3,003,785

**WEIGHTS AND WEIGHT-MOUNTING MEANS
FOR TRACTORS AND THE LIKE**

Robert D. Straszheim, Waterloo, and Kenneth J. Lowin,
Cedar Falls, Iowa, assignors to Deere & Company,
Moline, Ill., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,428
20 Claims. (Cl. 280-150)

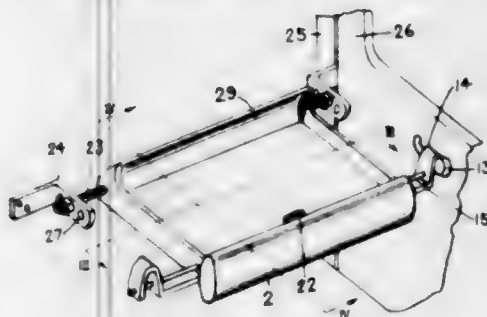


1. A multiple weight system of the class described, comprising: a first weight element having mounting means for the affixation thereof to a support or the like and further having an outer face and provided with a pair of slots opening at said face and oppositely inclined away from each other, each slot having a fastener-receiving portion and a fastener-retaining portion spaced along said slot from said receiving portion; a pair of fasteners inwardly received respectively in the slots via the receiving portions and shifted respectively to the retaining portions to project outwardly from said weight means; and a second weight element outwardly of the first weight element and having a pair of apertures spaced apart on the order of the fastener-retaining portions and respectively receiving the retained fasteners.

3,003,786

SAFETY TRAY FOR VEHICLES

James Frederick Liston, 20 Findlay Ave.,
Ottawa, Canada
Filed Sept. 30, 1959, Ser. No. 843,511
18 Claims. (Cl. 280-150)



1. A combined tray, crash bar, and safety door lock for vehicles comprising a rod, means at both ends of said rod for attachment to a vehicle, a tray of relatively rigid material pivoted about said rod along a first edge of said tray, a crash bar comprising an edge of said tray opposite to said first edge, and a pair of vehicle door engaging means attached to said tray at the corners of said tray adjacent to said crash bar.

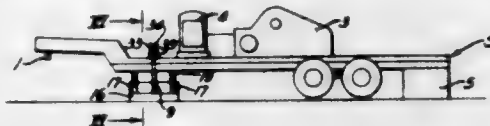
3,003,787

SEMI-TRAILER WITH SUPPORTING JACK

Homer J. Woolfslayer and Cecil Jenkins, Tulsa, Okla., and
Erwin A. Campbell, Wexford, Pa., assignors to Lee C.
Moore, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 13, 1961, Ser. No. 88,722
8 Claims. (Cl. 280-150.5)

1. A truck semi-trailer comprising a trailer bed provided near opposite sides with vertical openings, a post extending loosely through each opening, a sleeve slidably receiving each post, means pivotally connecting the sleeves with the bed on parallel axes to permit the lower ends of the posts to be swung toward and away from each other, bearing pads pivotally connected to the

lower ends of the posts beneath said bed on parallel axes, arms secured to the pads and extending inwardly toward each other, means beneath said bed pivotally supporting the inner end of each arm on an axis extending lengthwise of said bed, resilient means normally

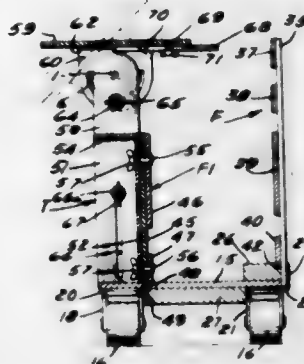


holding said pads above the ground with the posts in an elevated position relative to the bed, and means for moving said posts downward in the sleeves to swing said pads down against the ground and for then moving the bed up the posts to a higher level.

3,003,788

GLAZIER'S TRUCK

Aksel F. Grymer, 940 S. Figueroa St.,
Los Angeles 15, Calif.
Filed Jan. 13, 1959, Ser. No. 786,543
9 Claims. (Cl. 280-179)

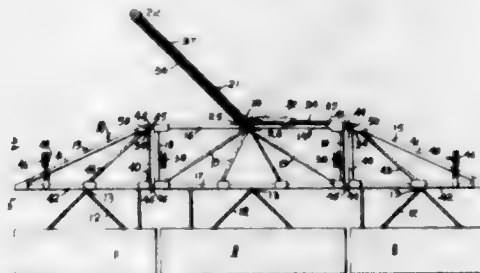


1. A glazier's truck, including: a mobile platform of elongated form; a side frame secured to and extending upwardly from one side of said platform; a second frame secured to and extending upwardly from the other side of said platform in parallel spaced relation to the first-mentioned side frame so that plates of glass can be positioned edgewise on said platform between said frames and inclined against said side frame; a table detachably secured to one side of said second frame; and a second table secured to the first-mentioned table and having a top adjustable about a horizontal axis to occupy various angular positions so that one edge of said top can be variously spaced from said side frame to coact with the latter in holding glass plates between said frames and against movement relative to the frames and on said platform.

3,003,789

UNIVERSAL HILLSIDE HYDRAULIC HITCH

Oscar C. Calkins, Spokane, Wash., assignor to Calkins
Manufacturing Company, Spokane, Wash.
Filed Mar. 11, 1960, Ser. No. 14,451
5 Claims. (Cl. 280-411)



1. In a hitch adapted to tow farm implement units behind a tractor unit, a horizontal frame, ground engaging

support means mounted upon said frame, a tongue extending forwardly from said frame and pivotally connected at one end to the frame about a vertical axis, the remaining end of said tongue being adapted for connection to a tractor unit, a wing extending from one side of said frame, said wing being pivotally joined to the frame for rotational movement about a horizontal axis, first support means fixed to said wing at a point offset from its pivotal axis and protruding vertically therefrom, second support means fixed to the tongue intermediate its ends, support means at a pivot vertically removed from the wing axis, to said means adapted to connect said first and second support means whereby movement of the tongue will result in pivotal movement of said wing about its connection to the frame.

3,003,790 IMPLEMENT HITCH

Harold W. Brown, Cedar Falls, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,316
5 Claims. (Cl. 280-415)



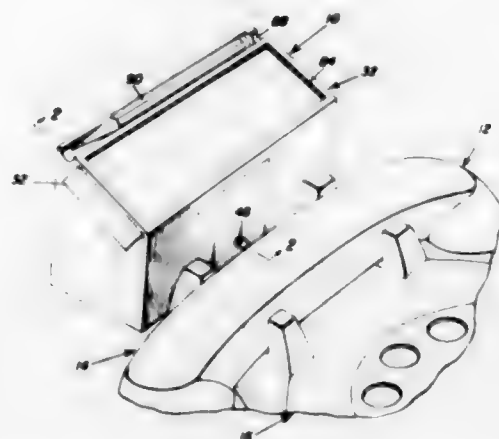
1. A hitch device particularly adapted for tractors having drop axles, said hitch device comprising a pair of draft link supports, each including a generally fore-and-aft extending bar apertured adjacent one end and a pivot member disposed in the aperture and extending outwardly from one side of said bar an appreciably greater extent than from the other side, thereby forming a relatively short pivot means at one side of the bar and a relatively long pivot means at the other side of the bar, said pivot member being generally normal to said bar, and means optionally fixing said bars to the lower portions of said drop housings, respectively, in either of two positions, one position being that in which the relatively long pivot means extend laterally outwardly generally underneath the drop housings and the other position being that in which the relative long pivot means extends laterally inwardly from said drop housings, each pivot member carrying draft link receiving means at its ends.

3,003,791 TELEPHONE PAD ATTACHMENT

Robert T. Madding, 1115 S. Jackson, Apt. 2, Amarillo, Tex.
Filed May 20, 1959, Ser. No. 814,593
4 Claims. (Cl. 281-12)

1. A telephone pad attachment for utilization with telephones having a recessed portion below the telephone cradle comprising a support member, said support member including a vertical leg and a horizontal leg, said horizontal leg received in said recessed portion, resilient means retaining said horizontal leg in said recessed portion, a frame member secured to said vertical leg, a rear wall dependently supported from said frame member spaced from said vertical leg, a spindle secured between said rear wall and said vertical leg, a roll of paper received on said spindle, a window in said frame member, aligned slits in said frame member at opposite ends of said window for receiving a portion of said paper roll therethrough, one of said slits defining a serrated

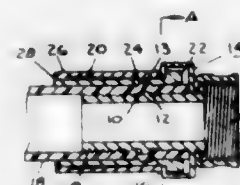
edge for facilitating the cutting of the paper passing therethrough, said resilient means including an arcuate end portion formed integral with said horizontal leg, said arcuate end portion including a first part spaced from and opposed to said horizontal leg for bearing against a portion of said telephone to retain said support member



fixed to said telephone, a housing receivable over said support member, said housing including a window alignable with said frame member window and a slit alignable with said slit defining said serrated edge, said housing including a front wall defining an opening therein, said vertical leg tightly received in said opening for securing said housing.

3,003,792 FLEXIBLE HOSE COUPLER WITH ROTATIONAL CAM

Robert A. Gilmour, Box 70, Somerset, Pa.
Filed Apr. 14, 1959, Ser. No. 806,258
1 Claim. (Cl. 285-81)

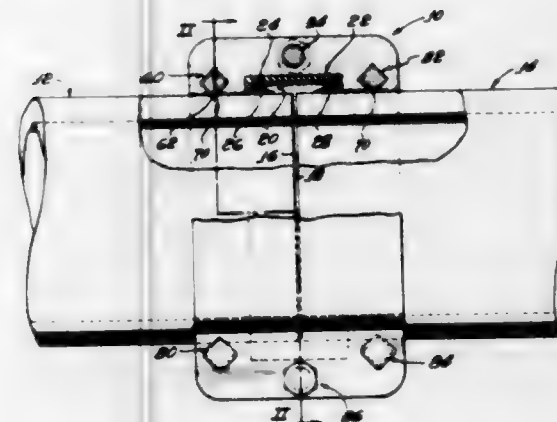


In combination: A hollow cylindrical piece of rigid material, said hollow cylindrical piece having two annular grooves therein on the outside thereof separated by an annular ridge extending above the level of the main body of said piece; a retaining ring mounted on and encircling said piece, said retaining ring comprising a washer shaped section attached at its circumference to the edge of a cylindrical ring, circumferentially spaced inward radial projections on the inside of said ring near the edge of said ring opposite the edge where said washer is attached; a length of hose inserted over a portion of said cylindrical piece and against the washer portion of said retaining ring and under the cylindrical ring portion of said retaining ring, a segmented compression ring each segment having an outward flange near an end thereof, said flange being of a size to pass between said projections and fitting under the said cylindrical ring behind a projection when said compression ring and retaining ring are relatively rotated, a sleeve around said compression ring holding said compression ring clamped on said hose, said sleeve having an axial projection extending into and blocking the space between said projections under a portion of said cylindrical ring.

3,003,793 LONGITUDINALLY DIVIDED SLEEVED PIPE COUPLING

Edmund W. Pitt, 91 N. Greenwood Ave., Pasadena, Calif.

Continuation of application Ser. No. 668,942, July 1, 1957. This application Apr. 14, 1960, Ser. No. 22,365
1 Claim. (Cl. 285-112)



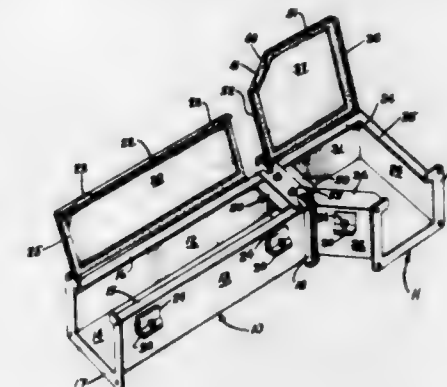
In a pipe coupling, in combination: a pair of mating body members having semi-cylindrical concave surfaces adapted to encircle end portions of pipes to be coupled along a plane of juncture and having enlarged bosses; registering pairs of openings formed in said body members on opposite sides of said plane and on opposite sides of said semi-cylindrical concave surfaces, said pairs of openings having substantially parallel axes which are transverse to the axis of one of said pipes and having inner edges constituting shallow chords in the outer walls of the pipes to be coupled; means clamping said body members together with said surfaces in pipe gripping relation including elongated members extending through registering pairs of holes formed in said body members, said holes being substantially parallel to said openings and located in said bosses between said openings with their inner edges outwardly of the outer edges of said openings, whereby said holes and openings are accessible from one side when said coupling is used in a deep, narrow trench or the like, and said coupling has great strength irrespective of the type of stress imparted to it; a rigid elongated locking element drivingly received in each registering pair of openings and provided with an inwardly directed pipe-engaging edge cutting a shallow chord in the outer wall of the pipe to be coupled, whereby said locking elements maintain said pipe end portions securely and rigidly in fixed relation without requiring prior preparation of said pipe end portions, and said locking elements cooperate with said elongated members in maintaining said body members in aligned, clamped together relation; and gasket means housed in said pair of mating body members surrounding said pipe end portions.

3,003,794 LAY-IN WIREWAY STRUCTURE OR THE LIKE

Ronald R. Barley, Anoka, Minn., assignor to Hoffman Engineering Corporation, Anoka, Minn., a corporation of Minnesota
Filed Mar. 2, 1959, Ser. No. 796,658
3 Claims. (Cl. 285-121)

1. A wireway trough structure or the like comprising a first trough portion having an open top and a terminal planar joining end, a second trough portion having an open top and cooperating adjacent terminal planar joining end, means forming a rigid and fluid tight joint between said ends of said adjacent trough portions, said means including sealing means positioned around said terminal ends, the open top of said trough portions being provided with inwardly turned flanges, said terminal planar joining ends and said inwardly turned flanges being so

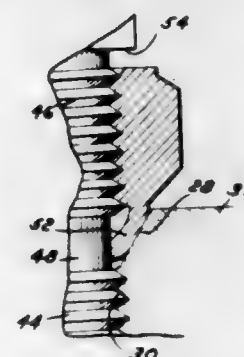
constructed and arranged that unobstructed access to the trough portions is provided through the open top thereof, a plate having downwardly off-set end portions provided with sealing gasket material for engaging the underside of said inwardly turned flanges continuously from a point on one side of the juncture of said adjacent trough portions, across the juncture to a point on the other side thereof, means secured to said plate and engaging said inwardly turned flanges for clamping the plate and flanges together releasably, said plate having exposed edge portions between said off-set ends extending transversely across said trough portions, a cover for each of said first



and second trough portions shorter than the trough portions and having end edges substantially parallel to adjacent end edges of adjacent covers, sealing gasket material secured to the edges of said covers, said exposed edge portions of said plate that extend between said off-set end portions lying substantially in the same plane as the inwardly turned flanges of said trough portions, and means secured to said trough portions for releasably urging said covers toward their respective inwardly turned flanges to bring said sealing gasket material into sealing engagement with said inwardly turned flanges and exposed portions of said plate.

3,003,795 TUBE COUPLING HAVING A RESILIENT METAL SEALING SLEEVE

Gilbert T. Lyon, Royal Oak, Mich., assignor to L & L Manufacturing Company, Warren, Mich., a corporation of Michigan
Filed Aug. 12, 1959, Ser. No. 833,239
12 Claims. (Cl. 285-212)



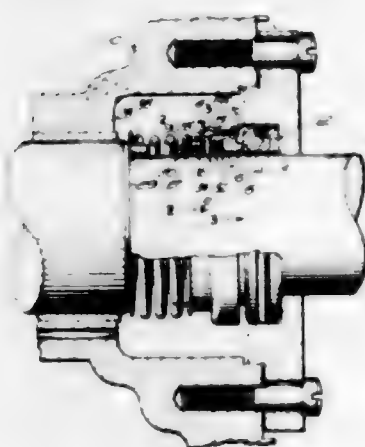
1. A fluid pressure coupling for attachment to a member having an internally threaded port provided with an outwardly beveled unthreaded entrance comprising, in combination, a tubular fitting having one end portion provided with two externally threaded lengths, one being an inner threaded length adjacent to the end of the fitting adapted to be threadedly received within the threaded port of the member, and the other being an outer threaded length spaced outwardly from said inner threaded length by an unthreaded length, said unthreaded length having an external diameter less than the external diameter of

the inner threaded length, annular sealing means encircling the fitting and comprising a nut portion threadedly coupled with the outer threaded length of the fitting and a resistingly deformable resilient continuous metal sleeve portion encircling the unthreaded length of the fitting between the nut portion and the beveled entrance to the port when the inner threaded length of the fitting is threadedly received within the port, said sleeve portion being in the form of an axially outwardly opening substantially convex lip forming in cross section substantially a quadrant of a circle, the inner end of the lip substantially engaging and fitting the said unthreaded length, and the outer end of the lip extending substantially parallel to the axis of the fitting, the inner end of said lip at the point of substantial engagement with the unthreaded length being of less internal diameter than the external diameter of the inner threaded length of the fitting, the external surface of said lip opposite said inner end being radially opposed to said beveled entrance to the port and adapted to bear continuously circumferentially against the said beveled entrance to be resiliently constricted urging the said inner end continuously circumferentially against the said unthreaded length of the fitting when the external surface of the lip is urged against and swaged inwardly by the beveled entrance to the port by pressure thereupon by the nut, the radially inner surface of the lip being radially spaced from the fitting from the point of substantial engagement of said inner end with said unthreaded length to said outer end and having an internal diameter at said outer end and immediately adjacent to the nut greater than the external diameter of the outer threaded length of the fitting, the external surface of the inner end portion of said lip being spaced from the beveled entrance to the port, whereby fluid pressure against the external surface of the inner end portion of said lip tends to wedge it more tightly between the fitting and the beveled entrance to the port.

3,003,796

SHAFT SEAL

Walter W. Meyer, Warwick, R.I., assignor to Sealol Corp., a corporation of Delaware
Filed Nov. 6, 1959, Ser. No. 851,322
1 Claim. (Cl. 286—11.15)



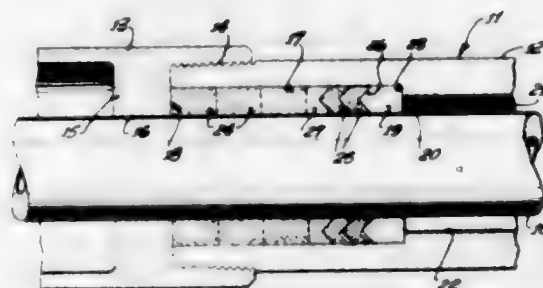
A rotary shaft seal for relative rotation in either direction clockwise or counterclockwise about the shaft axis comprising a relatively fixed member having an annular sealing face, and a relative rotary member having an annular sealing face to mate therewith at one end thereof and a recess opening radially inward from the other end thereof, a sleeve for encircling the rotating shaft and having bonded to its inner surface an elastomer of a size to grip the rotating shaft to provide a driving connection therewith, said sleeve having an enlarged portion joined thereto by a radially extending portion, said enlarged portion having a connection to the rotary member to permit axial movement and provide a driving

connection from said sleeve to said member, an elastic member located in said recess sealing the rotary member to the shaft, said sleeve having a radially extending portion with openings therein, a spring to exert axial pressure, a ring-like member having means passing freely through said openings for transmitting axial pressure from said spring to said rotary member, said ring-like member bearing against the rotary member adjacent the recess and maintaining the elastic member in said recess.

3,003,797

PACKING ASSEMBLY

Arthur Glover Gage, 7000 E. Gage Ave., Bell, Calif.
Filed Nov. 17, 1958, Ser. No. 774,301
2 Claims. (Cl. 286—30)



1. In combination with a pump plunger, tubular means including screwed together pin and box members, said box member having an internal flange forming a reduced bore closely receiving the plunger for axial reciprocation therethrough and said pin member having an enlarged bore receiving the plunger in outwardly spaced relation thereto, said box member having a flange shoulder at one end of said space and extending between said reduced and enlarged bores, compressible non-metallic packing material in said space in engagement with said shoulder, and a metallic pressure ring received in said enlarged bore and mounted on the plunger in closely interfitted relation therewith to move bodily endwise along said enlarged bore toward said shoulder for pressurizing said packing therebetween and into sealing relation with the plunger and enlarged bore in response to fluid pressure exertion against the ring, the control clearance between the plunger and said reduced bore being at least twice as great as each of the clearances between said plunger and ring and between said ring and said enlarged bore to induce slight fluid leakage between the packing and plunger for lubricating the plunger during reciprocation thereof, said packing extending directly adjacent the control clearance in blocking relation therewith and said control clearance being sufficiently small to prevent excessive pressurization of the packing causing binding of the plunger, the terminal end of said pin member and said box member flange shoulder being in tight interengagement about the terminal end of said packing and said pin and box members being separable by relative unscrewing thereof to expose said packing material permitting direct replacement thereof, a first portion of said packing engaging said shoulder having a rectangular cross-section in axial radial planes and a second portion of said packing engaging said pressure ring along an endwise tapering interface that is substantially V-shaped in axial radial planes, and a metallic spacer ring received in said enlarged bore and movable along the plunger between said first and second packing portions, said ring engaging said second packing portion along an endwise tapering interface that is substantially V-shaped in axial radial planes, the clearance between the spacer ring and the plunger being greater than the control clearance between the plunger and reduced bore and greater than the clearances between the pressure ring and plunger and between the pressure ring and enlarged bore.

3,003,798

ANCHORING REINFORCING CABLES OR BRAIDS IN WELL PACKERS

Herman L. Sandlin, Houston, Harris County, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed May 20, 1957, Ser. No. 660,210
4 Claims. (Cl. 287—20)



1. Apparatus for end-connecting rough-surfaced, metallic reinforcing means of a well packer, comprising: an annular end plate adapted to fit around a drill pipe; recess means in the end plate adapted to receive the reinforcing means; the ratio of the diameter of the recess means to the diameter of the reinforcing means being between 1.2 to 1 and 1.35 to 1; and potting means between the reinforcing means and the end plate comprising 100 parts by weight of an epoxy resin, 40 to 80 parts by weight of a granular filler for said resin selected from the group consisting of carborundum, corundum, and Al_2O_3 , and 20 to 45 parts by weight of a heat responsive hardening agent selected from the group consisting of chlorendic anhydride, pyromellitic dianhydride, and a compound formed by a mixture of 60% of m-phenylenediamine and 40% of 4,4'-methylene dianiline.

3,003,799

OIL RETAINER FOR ROTATING AND SLIDING AXLES

Gerardo A. Marchionda and Alberto Molina, both of 3045 Ramon L. Falcon St., Buenos Aires, Argentina
Filed Feb. 4, 1957, Ser. No. 637,965
3 Claims. (Cl. 288—2)



1. An oil retainer for rotating and sliding axles comprising a rigid fastening ring of generally trapezoidal cross section, said ring having a first lateral face, a second opposed lateral face, and a tapered inner surface extending between said lateral faces, said inner surface tapering outwardly from said second face to said first face, a

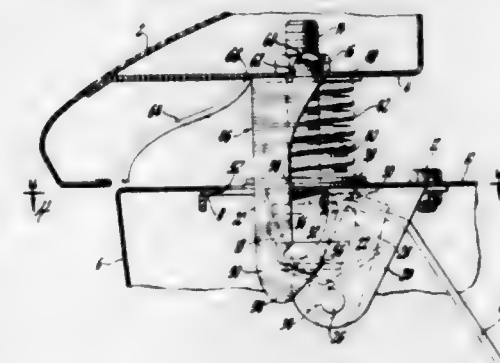
V-shaped flexible and elastic adjustment ring having an inner wing and an outer wing, the outer surface of said outer ring abutting said tapered inner surface with the free end of said outer wing having a lateral peripheral rim secured to said first face of said rigid fastening ring, the inner wing being inclined to the axis of said retainer, said inner wing having adjacent its free end an inwardly directed angled border, said border being adapted to contact the axle to provide a seal therewith, said angled border being the innermost portion of said inner wing between the extremity of said free end and the apex of said V, and a thickened rib opposite said angled border on the outer side of said inner wing, said thickened rib strengthening the free end of said inner wing.

3,003,800

AUTOMOTIVE HOOD SAFETY LATCH

Almerion J. Hammond, Gladwin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 13, 1960, Ser. No. 55,778
7 Claims. (Cl. 292—11)



1. A safety latch for use between the associated hood and body parts of an automotive vehicle comprising a base member having an operating handle thereon and a hook extending therefrom, a latch plate engageable by said hook adapted to be mounted on one of the parts and a pop-up spring engaging said base member and insertable between the hood and body parts tending to separate them and at the same time adapted to yieldably clamp said base member against the other of the parts so that it may be moved out of engagement with said latch plate by said handle against the action of said spring.

3,003,801

LATCHING MECHANISM FOR CASKETS

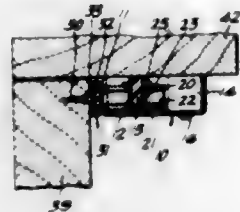
Jim P. Wilkerson, 3025 Trice Ave., Waco, Tex.
Filed Mar. 20, 1959, Ser. No. 800,846
2 Claims. (Cl. 292—96)



1. A locking mechanism for sheet metal caskets comprising, in combination, a casket body having front, rear and end walls; a lid or cap having a keeper pin fixed there-to near its lower edge; a hook-like latch engageable at its upper end with said keeper pin to pull down said lid or cap, said latch being pivoted on said casket body near the upper edge thereof and being adapted to swing in a vertical plane; a link pivotally connected with the lower end of said latch and adapted to be reciprocated to swing said latch to locking and unlocking positions; a lead screw supported for axial rotation on said casket body; a nut thread-

ed on and movable longitudinally of the lead screw; a pivotal connection directly coupling said nut and said link; an elongated hollow casing closed except at its ends; means to mount said casing rigidly in a horizontal position on an end wall of the casket body; said nut traveling longitudinally of and within said casing when the lead screw is rotated; the casing and the nut being of similar non-circular cross section so that the nut is prevented from turning in the casing; means associated with said casing to hold said lead screw against longitudinal travel while permitting free rotation thereof; the lead screw having a socketed head accessible from outside the end wall of the casket and adapted to receive a crank so that an operator may turn the lead screw to lock and unlock the lid or cap.

3,003,802
MAGNETIC DOOR LATCH
Harry Carl Wilson, 15126 Rayneta Drive,
Sherman Oaks, Calif.
Filed Jan. 13, 1958, Ser. No. 708,469
13 Claims. (Cl. 292-251.5)



1. A magnetic catch comprising a one-piece casing and stud, a permanent magnet sandwiched between a pair of magnetic plates and held loosely and detachably mounted on said stud by a keeper having a press fit over the end thereof, an adjacent pair of said plate ends being exposed along one edge of said casing, and a keeper of magnetic material adapted to bridge the exposed ends of said plates and to be attached to a member for releasable detention by said permanent magnet.

3,003,803
MANUAL SAFETY LOCK FOR REAR DOORS
Thomas E. Kirk, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 18, 1959, Ser. No. 853,942
3 Claims. (Cl. 292-347)



1. A latch device disposed within a vehicle door and adapted to retain the door in a closed position, said device including a lock means for rendering said device inoperative thereby precluding opening of said door, said

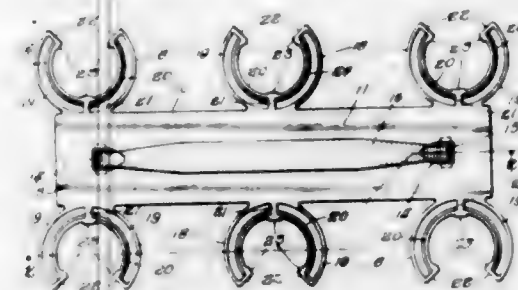
door including a sill, an opening formed in said sill and generally aligned with said lock means, a control rod extending through said opening and articulated at one end to said lock means, a button secured to said rod and extending through said sill opening, said button adapted to be movable with said rod relative to said sill to actuate said lock means, and means mounted on said sill for frictionally engaging said button to lock said button and control rod against movement, said means for locking the sill button and control rod against movement comprises a supporting sleeve mounted upon said sill, a longitudinal opening through said sleeve, said sleeve opening terminating in an inwardly tapered threaded portion, a locking collar disposed within said sleeve opening and including a longitudinal opening through which said button extends, said collar including an inwardly tapered shank portion adapted to coact with the tapered threaded portion of said sleeve, said collar being rotatable relative to said sleeve whereby said collar shank is adapted to frictionally engage with said button to lock the latter against movement.

3,003,804
DEVICE FOR LOCATING AND SALVAGING SUNKEN LOGS
Henry Noble, Box 117, Osage, Minn., assignor, by direct and mesne assignments, of four-twelfths to Jess J. Peffer, Park Rapids, four-twelfths to Louis Noeske, Osage, and one-twelfth to Theodore O. Colgrove, Osage, Minn.
Filed Oct. 6, 1959, Ser. No. 844,683
4 Claims. (Cl. 294-66)



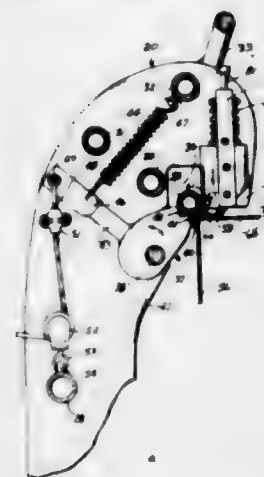
1. A device adapted to be towed beneath the surface of a body of water for locating and facilitating the salvaging of sunken logs on the bottom, said device comprising a pair of pivotally connected gripping jaw members, one of said jaw members being formed with a log snagging hook disposed in a generally upstanding plane when being towed, a buoyant member connected to the upper portion of said hook to hold the same in upstanding relation during the towing operation, the other jaw being formed by a log clamping member disposed generally forwardly of said hook during the towing operation and having log clamping means formed thereon, a single tow line forming both the sole means for towing the device through the water and for actuating said jaw, said tow line being connected to said clamping member in spaced relation to the pivotal connection between said jaws in a manner whereby the towing force exerted by the tow line urges the clamping jaw toward the snagging hook and said device including resilient spring means retracting said clamping member and yieldably retaining the same in retracted position when the device is being towed through an unobstructed path beneath the surface of the water, said spring means yielding however in response to the snagging of a log by said hook during the towing operation to permit the additional tension produced in said tow line by the resistance thus exerted on said hook to positively swing said log clamping member jaw towards said snagging hook and positively clamp the engaged log between said jaws to permit raising and salvaging the log.

3,003,805
BOTTLE CARRIER
Irving D. Glazer, Dallas, Tex., assignor to Dura Pak Corporation, Kansas City, Mo., a corporation of Delaware
Filed July 23, 1957, Ser. No. 673,698
7 Claims. (Cl. 294-87.2)



1. A substantially rigid molded carrier of resilient non-metallic material for bottles having reduced neck portions comprising a horizontal body portion and a plurality of bottle-neck receiving vertical sockets extending horizontally outwardly from the periphery of the body portion, said sockets comprising a vertical inner collar and a vertical outer enveloping collar radially spaced from a common axis, the outer collar having a greater diameter than the inner collar, said collars terminating in jaw like portions forming a mouth having a width less than the hole in the socket formed by the inner collar, and end portions connecting the outer and inner collars at the end of the jaws, the outer and inner collars being separated from each other except at their ends.

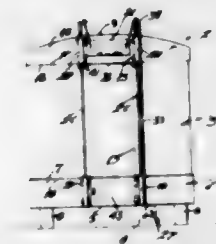
3,003,806
DRUM LIFTER
Ladd C. Szramek, 542 Monica Drive, Fairplain,
Benton Harbor, Mich.
Filed Oct. 20, 1958, Ser. No. 768,172
7 Claims. (Cl. 294-101)



7. A lifting mechanism for use with transporting trucks or the like comprising a support member having an open gripping slot for receiving a projection of an article to be gripped and lifted with said article having a surface beside said projection limiting the bite on said projection, a first gripping member at one side of the slot, means supporting the first gripping member for movement toward the slot to a gripping position and away from the slot to a release position, means for moving the first gripping member to gripping position, a second gripping member at the other side of the slot, means supporting the second gripping member at the other side of the slot for movement parallel to the slot including a pair of guide bars extending parallel to the slot at the sides of said gripping member, means defining slots at the sides of the gripping member slidably receiving the bars, spring means carried on the support member and urging the

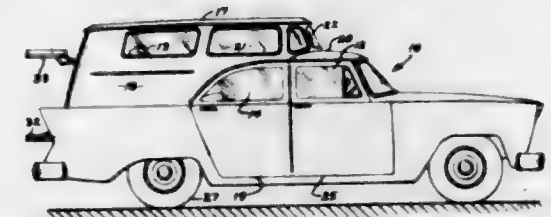
second gripping member parallel to the slot toward the slot opening, and a first article engaging surface on the second gripping member facing in the direction of advancement of the second gripping member toward a gripping position and a second article engaging surface facing the first gripping member, whereby the second surface will be held in engagement with an article to be gripped for maximum surface engagement by said first surface with the article.

3,003,807
COLLAPSIBLE TRAILER
Abraham D. Plett, Roseport, Manitoba, Canada
Filed Apr. 9, 1959, Ser. No. 805,277
2 Claims. (Cl. 296-23)



1. A collapsible trailer comprising in combination a wheel supported base portion, an upper cover portion, flexible, collapsible walls extending between said base portion and said upper portion and means to raise and lower said upper portion with relation to said lower portion, said lower portion including a floor panel, end walls and side walls forming an open topped box like structure, said upper portion including a cover panel, end walls and side walls forming an open faced box like structure and having a perimetrical configuration similar to said base portion, said means including winch means on said lower portion operatively connecting said upper portion to said lower portion for raising and lowering said upper portion, a pair of posts detachably secured on each end wall of said lower portion and extending upwardly therefrom in spaced and parallel relationship, a pair of tubes secured on each end wall of said lower portion, the lower ends of said tubes being closed, the lower ends of said posts registering within said tubes, and bearing means on said end walls of said upper portion adapted to mount said upper portion for vertical movement on said posts, said bearing means comprising a pair of open ended tubes secured to each of the end walls of said upper portion in vertical alignment with the said tubes on the end walls of said lower portion.

3,003,808
SPLIT LEVEL STATION WAGON
John H. Swanberg, 110 Orth SE.,
Minneapolis 14, Minn.
Filed June 27, 1960, Ser. No. 38,802
4 Claims. (Cl. 296-24)



1. A motor vehicle body including a first forwardly located compartment having a rearwardly extending floor, a first roof portion, first side walls joining said roof and a forward portion of said floor, a front door in each of said first side walls, and a first seat mounted on said floor; a substantially vertical transverse partition attached to

said floor behind said first seat; a deck spaced above a rearwardly extending portion of said first compartment floor and attached to said partition; a second roof portion spaced from said deck and situated on a plane above said first roof portion; a windshield connecting said first and said second roof portions; two second sidewalls connecting said floor, said deck and said second roof portion; a rear door on a level with said front doors located in each of said second side walls; a first storage compartment defined by said partition, said deck, and said rear portion of said floor, said storage compartment being accessible through doorways of each of said rear doors; at least one rear seat fixedly attached to said deck; said rear seat having a seat cushion and a generally upright back rest; said back rest being mounted with respect to said seat cushion and being pivotally positionable rearwardly to be substantially level with said seat cushion; and an auxiliary cushion mounted with respect to said first seat movable from a first substantially vertical position to a second position substantially level with said rear seat.

3,003,809

STREAMLINED MOTOR VEHICLE BODY

Béla Barényi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Jan. 23, 1957, Ser. No. 635,796

Claims priority, application Germany Apr. 7, 1951
4 Claims. (Cl. 296—28)

1. In a passenger motor vehicle, a streamlined body consisting of three separate main body parts including two hollow side members extending over the entire length of said vehicle, and further including a middle part comprising a floor and upper panel means having front and rear sections, said front and rear sections and said two side members defining a passenger compartment, each one of said side members comprising end portions connected by an intermediate part forming in cross-sectional view a portion of a closed geometrical body and comprising upper, lower, and side wall portions, each of said wall portions being curved as viewed in transverse cross section and being disposed symmetrically with respect to the longitudinal axis of said one of said side members, each of said end portions comprising a wall portion symmetrically tapered with respect to said axis as seen in side view, said hollow side members having an inclination upwardly and outwardly from said floor to define a space in said passenger compartment wider than said floor, said space being limited on each side of said vehicle by said side wall portions, said vehicle having front and rear cambered wheels, each said hollow side member covering the upper portions of the ones of said wheels on a respective side of said vehicle, the said inclination of said hollow side members being in accordance with the camber of said wheels.

3,003,810

PLASTIC TRUCK BODY CONSTRUCTION

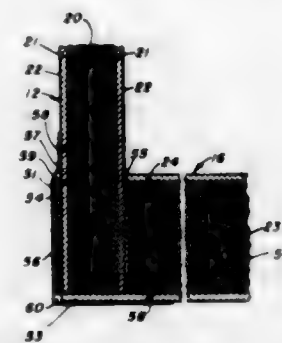
George E. Kloote, Grand Rapids, Joseph A. Potchen, Marne, and George D. Meier, Grand Rapids, Mich., assignors, by mesne assignments, to Evans Products Company, Plymouth Township, Mich., a corporation of Delaware

Filed Feb. 2, 1956, Ser. No. 562,972

5 Claims. (Cl. 296—31)

1. A vehicle body having walls, a floor and a roof, said body consisting of: a plurality of panels comprising a low density synthetic resin core and a pair of synthetic

resin facing skins joined to each face of said core, said panels being adhesively joined together for forming said walls, floor and roof of said body, said walls, floor and roof being adhesively joined together to provide a rigid, frameless, load carrying shell open at one end, a rigid



sheet adhesively bonded to said open end, said sheet being flanged to overlie a portion of both the inner and outer surfaces of the side walls of said shell, said sheet having an apron portion depending below said shell and said apron portion having stiffening means at its lower end.

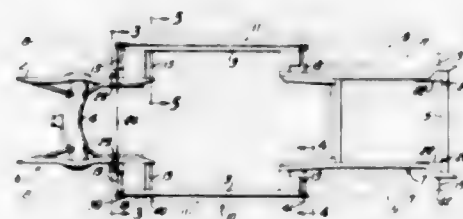
3,003,811

METHOD AND APPARATUS FOR MOUNTING A VEHICLE BODY TO ITS FRAME

Donald W. Sherman, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Sept. 25, 1958, Ser. No. 763,244

15 Claims. (Cl. 296—35)



1. In combination, a vehicle frame including transversely spaced inner and outer vertical frame portions provided with transversely aligned openings, a body for support on said frame and having a vertically extending portion spaced outwardly of said outer frame portion and positioned substantially opposite the opening therein, and a transversely extending connecting member extending through the frame openings and engaging the opposed body portion and being secured respectively to the frame and vertically disposed body portion, said openings providing for slidable transverse adjustment of the connecting member prior to securement to overcome the space tolerance differences between the body and frame.

3,003,812

ANTI-GLARE DEVICE

Glen D. Haugland, 1513 Indiana Ave. NE., Albuquerque, N. Mex.

Filed June 16, 1960, Ser. No. 36,623

4 Claims. (Cl. 296—97)

1. An anti-glare device comprising: a multi-pleated, collapsible panel; means removably securing a lowermost fold of said panel to the dashboard of a vehicle; a pair of spaced brackets secured to said lowermost fold of said panel; a pair of hinge members, each of said hinge members including an uppermost link, a lowermost link, and an intermediate link, said uppermost link being pivotally secured at its uppermost end to said uppermost fold of said panel and at its lower end to one end of said intermediate link, and said lowermost link being pivotally

secured at its lower end to one of said brackets and at its uppermost end to an opposite end of said intermediate link; said hinge members being selectively and independ-



ently foldable and unfoldable for respectively collapsing and extending said panel in parallel and non-parallel relationship of said folds.

3,003,813
SUN VISOR

Adolf Bolenbach, 12630 Gall Ave., Sunnyvale, Calif.

Filed Mar. 2, 1959, Ser. No. 798,314

3 Claims. (Cl. 296—97)



1. A sun visor assembly comprising a split horizontal ball socket mounting having two opposed substantially hemispherical ball sockets, each socket having a substantially horizontal flat shank portion extending outwardly therefrom adjacent the open face of the socket, fastening means securing the shank portion of one socket to the shank portion of the other socket, the lower shank portion having an upwardly extending bendable extension adapted to be fastened to the roof of a vehicle adjacent to its windshield; a substantially L-shaped short rod having a short leg and a long leg, the short leg terminating in a ball end, said ball end being received in the ball socket and frictionally retained therein; a split tubular bracket composed of opposed portions partially and frictionally embracing, the long leg of the L-shaped short rod and rotatable and slidable on said rod, fastening means securing the opposed portions of the split tubular bracket together and controlling the degree of frictional engagement of the split tubular bracket with the long leg of the L-shaped rod; a substantially horizontal rod secured at one end to the split tubular bracket; two pairs of tubular clamps rotatable about and slidable along said horizontal rod, said tubular clamps each including a tubular portion partially embracing the long rod and spaced parallel shank portions extending outwardly from said tubular portion; a small rectangular opaque panel secured at one longitudinal edge between the spaced shanks of one pair

of said tubular clamps; and a small translucent panel secured at one longitudinal edge between the spaced shanks of the other pair of said clamps, the shanks of said pairs of tubular clamps being offset with respect to the longitudinal center line of the rod with the clamps for one of said panels being mounted reversely with respect to the clamps for the other panel whereby said panels are adapted to be moved into overlapping positions.

3,003,814
LEG-REST ACTUATING LINKAGE FOR MULTIPLE-POSITION RECLINING CHAIRS
Fridthof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz
Filed Aug. 11, 1959, Ser. No. 832,974
6 Claims. (Cl. 297—88)



1. In a multiple position reclining chair having a support frame, a carrier member movably mounted on the support frame, a body-supporting unit including a rigidly-formed seat and back-rest, front and rear guide links pivotally mounted on the carrier member and pivotally connected to spaced points on the seat for rearward movement of the body-supporting unit relative to the carrier member during a first motion phase, the carrier member being then movable relative to the support frame during a second motion phase; a leg-rest structure swingably mounted on the forward end portion of the carrier member, and leg-rest actuating means for moving the leg-rest from a retracted position beneath the seat to an extended position forwardly of the seat in response to movement of the body-supporting unit during said first motion phase, said actuating means including an extension of one of said guide links projecting beyond the pivotal mount of said guide link on said carrier member, and a control link connecting said link extension with said leg-rest structure.

3,003,815

LOUNGING SUPPORT

Wilbur O. Zinn, Addison, Ill.

(42 N. Lincoln St., Lombard, Ill.)

Filed Sept. 28, 1959, Ser. No. 842,901

3 Claims. (Cl. 297—118)

1. A lounging pillow for supporting selected portions of the human body in various sitting and prone positions, comprising a resiliently compressible body portion having a generally flat first wall adapted to serve as a base, a substantially flat second, rear wall connected to the first wall at an acute angle thereto and extending over the rear portion thereof, an uninterrupted third wall connected to and overlying and sloping upwardly and rearwardly from the front edge of the first wall toward said second wall, and a fourth wall having a generally upwardly and forwardly sloping portion extending in substantially the same direction as said second wall and into overhanging relation to the third wall, said fourth wall further having a curved crown portion connecting it to said second wall and thereby defining an upstanding neck overhanging the rear portion of said third wall and being

resiliently yieldable theretoward upon pressure being applied downwardly on said neck, the relative width of the walls being substantially the same and said body portion



having a pair of upright walls at the opposite ends thereof connecting said first, second, third and fourth walls.

ERRATUM

For Class 297—130 see:
Patent No. 3,003,543

3,003,816 TIGHTENER APPARATUS FOR REMOVABLE COVER OF CHAIR BACK OR CHAIR SEAT AND THE LIKE

James Harrison Wilson, Sturgis, Mich., assignor to
Sturgis Posture Chair Co.
Filed Sept. 27, 1957, Ser. No. 686,762
3 Claims. (Cl. 297—219)



1. A removable cover assembly for a chair back or the like, comprising a fabric cover and a closed loop for fastening and unfastening said cover without breaking the continuity of said loop, said back having front and rear sides and a surrounding edge, said cover having a face portion adapted to cover said front side, a surrounding skirt portion adapted to extend over said edge and overlie a portion of said rear side adjacent said edge, and a draw-wire-receiving tubular portion along the periphery of said skirt portion, said skirt portion having a transverse opening in its periphery, said tubular portion having opposed open ends at said transverse opening, said closed loop comprising a length of freely flexible draw-wire disposed in said tubular portion with its respective end portions extending from said opposed open ends, and a rigid elongate narrow wire tightener with means proximate each of its respective ends frictionally gripping the respective end portions of said wire, each said means comprising a pair of spaced apertures lying approximately on the longitudinal axis of said tightener, said apertures each being of a size to secure said draw-wire frictionally when the respective end of the latter is passed upwardly through one and then downwardly through the other of said apertures and drawn tightly against said wire tightener between said pair of spaced apertures, whereby said cover may be placed on said back, said loop may be shortened to take up slack by slidably adjusting the ends of said wire in the respective ends of said tightener, said tightener may then be twisted end for end about its center to twist together portions of said wire between the ends of said tightener, and said tightener may then be tucked between

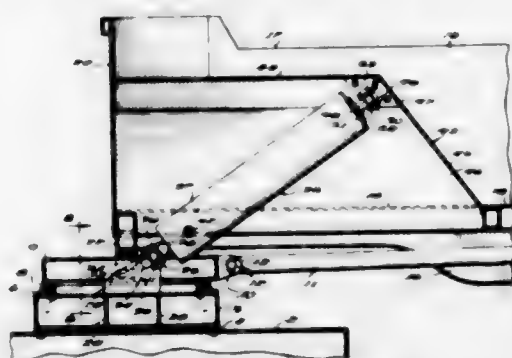
said skirt portion and said back to be frictionally held against untwisting, thereby fastening said cover on said back, and said steps may be reversed to remove said cover without breaking the continuity of said loop.

3,003,817 CHAIR CONSTRUCTION Raymond H. King, P.O. Box 386, Hampton Bays, N.Y. Filed July 15, 1959, Ser. No. 827,380 5 Claims. (Cl. 297—440)



1. A chair comprising, in combination, a backrest, a frame having portions slidably supporting said backrest, a seat, mounting means detachably supporting said seat upon said frame, and said seat carried upon said frame locking said backrest upon said frame against relative movement therewith, said frame comprising a pair of substantially identical frame members, each one of said frame members comprising a pair of legs, a cross bar extending between said legs, and an extension projecting upwardly from one of said legs, said backrest comprising a panel, and downwardly opening bores in one lower edge of said panel slidably receiving said upwardly projecting extension of said frame member, said bores converging upwardly toward each other to maintain said upwardly projecting extensions of said frame members in angularly related positions therewithin, and said seat comprising a rigid weight-supporting member, and said mounting means comprising a pair of rearwardly converging, downwardly opening channels extending along one lower side of said seat receiving said cross-bars of said frame members therewithin.

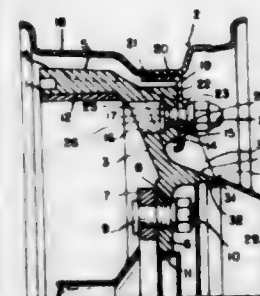
3,003,818 TRACTOR COUPLED DUMPING TRAILER Don R. Merchant, Glendale, Calif. (137 Dale Place, Concord, Calif.) Filed Jan. 22, 1960, Ser. No. 4,047 12 Claims. (Cl. 298—20)



1. In combination, a tractor including wheels, a frame, a cab on the forward portion of said frame, and a fifth wheel device on the rear portion of said frame; said fifth wheel device including a stationary component fixed to said rear portion of said frame and a movable component mounted on said stationary component for relative rotative movement about a vertical axial line, a trailer having

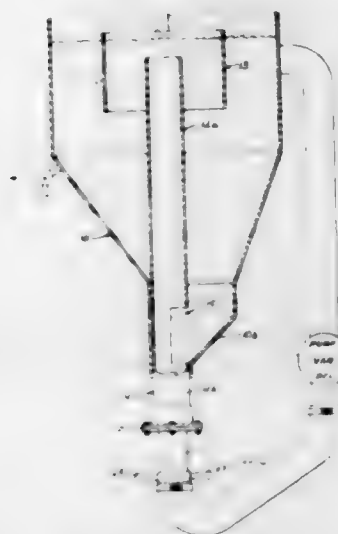
a frame, wheels supporting the rear end of said frame, means on the front end of said frame adapted to rest on said movable component of said fifth wheel device, and a body mounted on said trailer frame, means for transmitting tractive effort of said tractor to said trailer comprising reach means interconnecting said tractor and trailer and pivotally attached to said movable fifth wheel component for movement about a horizontal axial line extending transversely of the trailer and means pivotally attaching said reach means to said trailer frame at about the mid length of said trailer frame; for movement about a horizontal line also extending transversely of said trailer, a hydraulic ram means for lifting the front end of said trailer for dumping a load carried thereby, means attaching one end of said hydraulic ram means to the front end of said trailer with capacity for angular movement of said hydraulic ram means relative to the trailer, and other means disposed in the axial line of said fifth wheel for attaching the other end of said hydraulic ram means to said tractor independently of said movable fifth wheel component with capacity for angular movement of said ram relative to said tractor.

3,003,819 WHEEL AND BRAKE DRUM ASSEMBLY Thomas L. Hibbard, Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware Filed Jan. 12, 1959, Ser. No. 786,245 2 Claims. (Cl. 301—6)



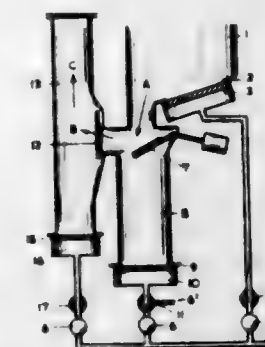
1. In a wheel and brake drum assembly, a brake drum comprising a shell formed of a relatively lightweight material having high heat transfer characteristics, said shell having a web and an annular flange at the radially outer extremity of said web projecting from said web in an axially inward direction, said web serving also as a wheel center and having an integral annular hubcap retaining formation spaced radially inwardly of said flange, said formation projecting from said web in an axially outward direction, a wheel structure comprising a rim and mounting tabs carried by said rim in circumferentially spaced relation, said tabs having axial flanges permanently secured to the underside of the rim base and radial flanges projecting radially inwardly from said axial flanges, said web having integral bosses between said drum flange and said formation projecting from said web in an axially outward direction in circumferentially spaced relation corresponding to the spacing of said tabs, said bosses terminating in radial mounting faces, fasteners for detachably mounting the radial flanges of said tabs on the radial faces of said bosses with the axial flanges of said tabs overlying said bosses, said web having an integral hub portion disposed radially inwardly of said hubcap retaining formation for mounting said drum on a spindle, said web also having integral reinforcing and heat dissipating ribs between said bosses and radially outwardly of said formation projecting from said web in an axially outward direction, the portion of said web radially outwardly of said hubcap retaining formation being exposed on the outboard side for maximum cooling and to present a wheel body appearance.

3,003,820 HOISTING SOLID AGGREGATES IN LIQUIDS Percy S. Gardner, Jr., 3651 Apollo Drive, Salt Lake City, Utah Filed May 25, 1959, Ser. No. 815,674 7 Claims. (Cl. 302—14)



1. Means for lifting and transporting solid particles from a liquid bath comprising a transport pipe having an inlet opening therein adapted to be positioned with the opening submerged in the liquid bath containing the particles, a re-entrant nozzle aligned with the transport pipe inlet opening and axially spaced therefrom, basin means containing the liquid bath and solid particles adapted to introduce the solid particles into the space between the nozzle and the inlet opening of the transport pipe, the restricted opening of said nozzle being offset radially from the center of the inlet opening of the transport pipe, means operatively connected to said nozzle adapted to rotate said nozzle about the axis of the inlet opening of the transport pipe, and means operatively connected to said nozzle adapted to supply liquid under pressure to said nozzle, whereby a high velocity stream of liquid is directed between the nozzle and the transport pipe inlet opening to thereby pick up the solid particles from the bath and carry them through the transport pipe.

3,003,821 PNEUMATIC CONVEYING MEANS Raymond Marchand, La Bedoule, Bouches-du-Rhone, France Filed May 27, 1960, Ser. No. 32,220 3 Claims. (Cl. 302—53)

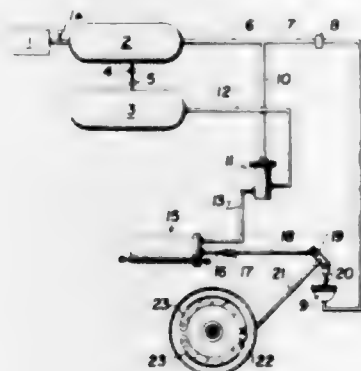


1. A statically operating pneumatic conveying device for powdered and granular materials comprising a storage receptacle having an opening at its lower part, a pump body disposed below the storage receptacle and communicating at its upper end with the receptacle said pump body having an outlet at its upper end, air pervious means at the lower part of the storage receptacle for the controlled introduction of compressed air to fluidise the contents

of the receptacle, other air-pervious means at the lower part of the pump body for controlled introduction of compressed air to fluidise the contents of the pump body, an expulsion column having an opening in its wall communicating with the outlet of the pump body, still further air-pervious means at the lower part of the expulsion column for the controlled introduction of compressed air into the expulsion column to fluidise the contents thereof and expel the contents upwardly out of the column, first valve means positioned to act between the storage receptacle and the pump body for inlet to the pump body, and second valve means positioned to act between the pump body and the expulsion column for outlet from the pump body.

3,003,822

AUTOMATIC EMERGENCY BRAKE SYSTEM
 Alfred P. McCarthy, 603 Mountain St., Pittsburgh 10, Pa.
 Filed Apr. 11, 1960, Ser. No. 21,562
 2 Claims. (Cl. 303-9)



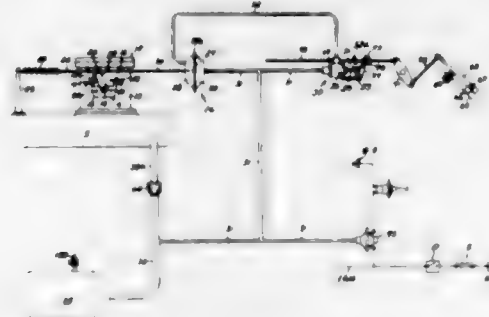
1. In an air braking system for vehicles comprising a main tank enclosing air under pressure, a main air supply line fed thereby, brake operating means including a diaphragm motor operated by air from said supply line, in combination, an auxiliary air containing tank, a pressure reducing valve connected between said tanks so as to provide reduced pressure in said auxiliary tank, a pilot operating valve including a piston, one side of said piston being in communication with said main tank and the other side, with said auxiliary tank, said pilot operating valve being normally closed by virtue of the greater pressure of said main tank, and an emergency brake cylinder including a piston which is also connected to said brake operating means, said last named cylinder being in communication with said pilot operating valve in a manner so that when air under said reduced pressure is passed through said pilot operating valve so as to flow into said emergency brake cylinder as a consequence of abnormal decrease of pressure in said main tank, it will operate the piston of the emergency brake cylinder and effect operation of said brake operating means.

3,003,823

DIESEL ENGINE VACUUM PUMP
 Norman C. Williams, Portland, Oreg., assignor to Power Brake Equipment Company, a corporation of Oregon
 Filed Aug. 15, 1960, Ser. No. 49,470
 6 Claims. (Cl. 303-12)

1. A vacuum air continuous energy supply means for operation of the wheel brakes of a vehicle powered by a diesel engine, comprising a diesel engine having an intake manifold, an atmospheric air conduit leading to said manifold through which air is induced when said engine is running, a damper in said conduit, a first stop means in said conduit against which said damper can be rotated in one direction to give the greatest permissible resistance to air flow through said conduit to create the greatest permissible vacuum in said manifold when said engine is being cranked at starting, a second stop means in said conduit

against which said damper can be rotated in the other direction to give the least possible resistance to air flow through said conduit, means resiliently biasing said damper toward said first stop means, a vacuum suspended diaphragm chamber separated by a flexible diaphragm into a first space and a second space, a diaphragm piston rod slidably sealed through an outer wall of said first space, said piston rod being connected within said first space to said diaphragm and without said chamber to said damper to oppose said resiliently biasing means, a vacuum air accumulator tank connected to said manifold by a first vacuum line having a check valve therein to permit air to flow only in the direction from said tank to said manifold, a second vacuum line connecting said tank with said second space of said chamber to overcome said resilient biasing means to open fully said air conduit to manifold when said vacuum in said tank exceeds a preset value, a pedal three way valve having an outlet, vacuum inlet and an atmospheric inlet, a third vacuum line connecting said second vacuum line with said vacuum inlet of said valve, a fourth line connecting said outlet of said valve with said first space of said chamber, said vehicle including a fuel throttle pedal for said engine, said pedal including a first



adjustable stop means setting a minimum fuel flow to said engine in one direction of throw of said pedal for idling said engine, a second adjustable stop means setting a maximum fuel flow to said engine in the other direction of throw of said pedal for full power from said engine, said pedal including means when in its idling position to set said valve to admit vacuum from said third line to said fourth line to balance the vacuum in said second space from said fourth line to suspend said diaphragm in said chamber to permit said resilient means to return said damper to its restricted air flow position in said air conduit to said manifold but when said throttle pedal is in its working fuel required position to hold said valve in its position of blocking said fourth line from said third line and connecting said fourth line to said atmospheric inlet to overcome said biasing means and open said damper to its full open position to stop the build up of vacuum in said tank, said tank including a vacuum signaling means sensible to the driver of the vehicle whereby when the signal indicates that the brake operating vacuum in the tank is too low the driver will take his foot from the fuel throttle pedal until the signal indicates the brake operating vacuum in the tank is again built up to a safe value.

3,003,824

ANTI-SKID DEVICE
 Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
 Filed Feb. 25, 1959, Ser. No. 795,539
 Claims priority, application France Feb. 26, 1958
 2 Claims. (Cl. 303-21)

1. A device for preventing the wheels of a vehicle equipped with a hydraulic brake system from locking, said hydraulic brake system comprising a brake circuit supplied by differential type master cylinder including two chambers in which work respectively a main piston

and a secondary piston of smaller diameter, non-return means allowing the chamber of the main piston to communicate with the chamber of the secondary piston and communicating itself with the brake circuit, said device including means responsive to the pressure developed in the master cylinder to establish a communication from the chamber of the main piston to the atmosphere starting at a predetermined pressure in the brake circuit, said device additionally comprising a passage interconnecting said two chambers, a valve means controlling

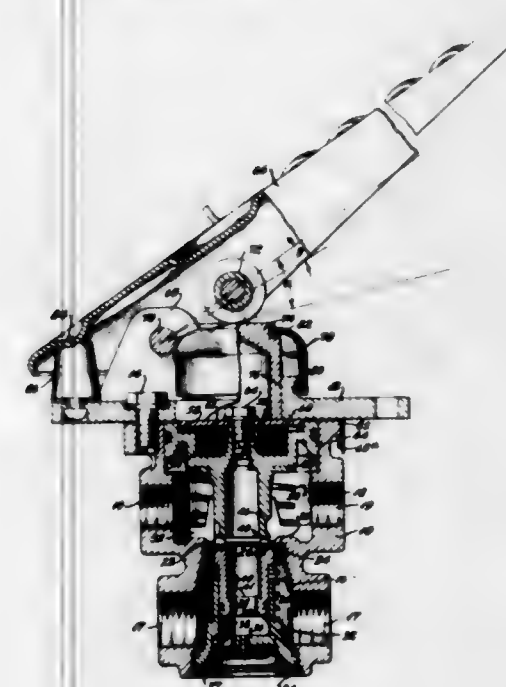


said passage, an electromagnet actuating the valve means, a source of electrical energy connected to the electromagnet, switches controlling the connection of the source of electrical energy and the electromagnet, friction members mounted separately on each wheel of the vehicle and coacting with a member rigid with the corresponding wheel and controlling the switches so as to cause said chambers to communicate with each other when one or more wheels become locked during a brake application in such a way that there is an automatic reduction of the fluid pressure as long as a wheel is locked.

3,003,825

FLUID PRESSURE CONTROL VALVE MECHANISM

Herbert A. Kamble, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
 Filed May 11, 1959, Ser. No. 812,181
 10 Claims. (Cl. 303-54)

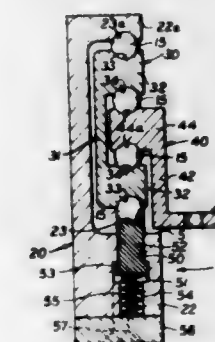


1. Graduating means for a self-lapping valve mechanism of the type comprising a casing having inlet and outlet chambers, a valve for controlling the flow of fluid

pressure between said chambers, a pressure responsive member in said outlet chamber movable in opposite directions to control said valve, and a manually operable device for moving said member in a valve opening direction in opposition to pressure in said outlet chamber tending to move said member in a valve closing direction, said graduating means comprising a substantially cylindrical rubber annulus marginally confined for a portion of its height on said pressure responsive means, said annulus having an inwardly and upwardly sloping upper surface and a planar bottom surface containing a frusto-conical recess therein, and a plate interposed between the upper surface of said member and said manually operable device whereby said rubber member is compressed between said plate and said pressure responsive member when subjected to the opposing forces of said manually operable device and the pressure in said outlet chamber acting on said pressure responsive member.

3,003,826

SLIDE WITH SPRING-SUPPORTED TRACK
 Louis R. Wichers, Nyack, N.Y., assignor to Grant Pulley and Hardware Corporation, West Nyack, N.Y., a corporation of New York
 Filed Aug. 22, 1960, Ser. No. 51,233
 2 Claims. (Cl. 308-3.8)



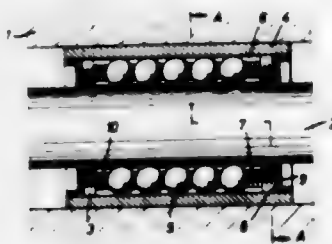
1. A slide comprising a longitudinally extending, laterally outer, fixed support element of channel shape having a vertical web and inwardly extending upper and lower fixed element flanges, said lower flange having a longitudinally and vertically extending slot extending to the upper surface thereof and having a lower portion of increased width, a longitudinally extending bar received vertically slidably within said slot, said bar having a lower portion of increased width but of less height than said slot lower portion and abutting the upper surface of said slot lower portion in the upper limit position of said bar, spring means in said slot engaging said bar and urging it upwardly and maintaining it in its upper limit position under normal load conditions of said bar, the upper surface of said bar and lower surface of said upper flange being formed with longitudinally extending track surfaces, at least one additional support element, said additional support element being arranged in lateral succession inwardly of said fixed element and being independently longitudinally slidable, the support element next in succession to said fixed element having track surfaces facing said first-mentioned track surfaces, balls seated in said track surfaces, and means mounting successive additional support elements longitudinally slidably relative to each other, said spring means being adapted to be flexed to permit downward movement of said bar under momentary abnormally increased load conditions to prevent said balls from scoring said track surfaces, said fixed element lower flange having a stop shoulder positioned and adapted to be engaged by the innermost additional element to stop the downward movement of said additional elements.

3,003,827

BALL GUIDE FOR AXIALLY MOVABLE MACHINE PARTS WITH SMALL AXIAL STROKE
 Alfons Hentschke, Frankfurt am Main, Germany, assignor to SKF Kugellagerfabriken G.m.b.H., Schweinfurt, Germany

Filed Apr. 27, 1960, Ser. No. 25,157

Claims priority, application Germany Apr. 28, 1959
 7 Claims. (Cl. 308-6)



5. A ball guide for small axial movements of a shaft relative to a machine part surrounding said shaft with a radial clearance, comprising a plurality of balls arranged in rows between said shaft and said machine part and contacting an outer bearing sleeve and an inner bearing surface on said shaft, and resilient elements mounted at both ends of each of said rows of balls for biasing said balls in a direction from said ends of said rows towards their middle portions, said resilient elements engaging the end balls of each of said rows eccentrically with respect to those diameters of said end balls which extend parallel to the axis of said shaft.

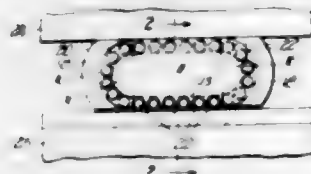
3,003,828

RECIRCULATING BEARING

James A. Stark, 4846 Central Ave., Western Springs, Ill.

Filed June 25, 1957, Ser. No. 667,787

3 Claims. (Cl. 308-6)



1. A recirculating antifriction device adapted to be disposed between two surfaces at least one of which is linearly movable with respect to the other comprising a raceway, a plurality of antifriction roller members disposed within said raceway for rolling movement therein, each of said roller members having an annular recess intermediate its ends, said raceway including a body member in cross section composed of a cross member and two side members for at least a portion of its length arranged in a substantially U-shaped configuration in which the side members project from the cross member a distance greater than the diameter of the roller members, the upper and lower surfaces of said cross member being in rolling engagement with said antifriction roller members and being substantially flat in the direction of travel, inner and outer semicircular race members at each end of said body member secured thereto to form enclosed raceways connecting said upper and lower surfaces, a shoulder on said lower surface extending lengthwise thereof, said shoulder being at least partially received in said annular recesses so as to maintain the axes of said antifriction roller members substantially normal to the direction of travel, said antifriction members when in engagement with said lower surface being adapted to be in rolling contact with one of the surfaces between which the antifriction device is mounted, the upper ends of said side members being in engagement with the other of the two surfaces, an elongate retainer member extending between said outer race members substantially parallel with said lower surface,

said elongate retainer member being spaced from said lower surface a distance greater than the combination of the maximum radius of said antifriction roller members and the radius at said recess, and less than the maximum diameter of said antifriction roller members, a second elongate retainer member extending between said outer race member in a substantially parallel spaced relationship with said upper surface and at least partially received in said annular recesses.

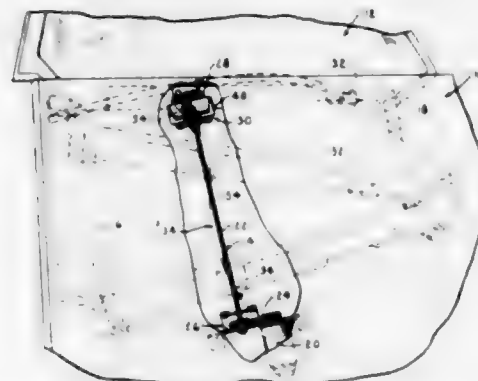
3,003,829

CROSS-HEAD BEARING

Ralph H. Wise, Davis Island, Tampa, Fla., assignor, by mesne assignments, to The Anderson Company, a corporation of Indiana

Filed Oct. 2, 1957, Ser. No. 687,659

4 Claims. (Cl. 308-6)



3. A cross-head type force-transmitting structure for interposition transverse to a reciprocative driving member and a reciprocative driven member comprising a channel-shaped structure having an opening extending along one side thereof, and also having mounting means for rigid connection with one of said members, an elongate bearing block in and movable along said channel means, pivot means carried by the central portion of said bearing block and extending through said opening in the channel means for operative connection with the other of said members, guide means formed in the elongate opposite edge portions of said bearing block, a plurality of bearing elements engaging with said guide means and operatively contacting the inner side portions of the channel means, and carrier means engaging with said bearing elements to longitudinally space said bearing elements relative to said bearing block whereby movement of the driving member is transmitted to the driven member.

3,003,830

TUBULAR-TYPE ANTIFRICTION BEARING ASSEMBLIES

William J. Blazek, New Lexington, and James J. Strnad, Bedford, Ohio, assignors to Lemco Products, Inc., Bedford, Ohio, a corporation of Ohio

Original application Nov. 8, 1955, Ser. No. 545,696, now Patent No. 2,897,582, dated Aug. 4, 1959. Divided

and this application May 15, 1959, Ser. No. 813,575

2 Claims. (Cl. 308-6)



1. A sleeve-like retainer for a multiplicity of antifriction bearing elements comprising an axially elongated, tubular body having relatively parallel, oppositely disposed inner and outer side wall surfaces and formed with a multiplicity of relatively spaced apart bearing-receiving pockets extending through the opposite side wall surfaces of said body, whereby to permit opposite seg-

ments of an antifriction bearing element positioned in each of said pockets to project outwardly beyond the inner and outer wall surfaces of said body, and said body being formed on at least one of its side wall surfaces with a multiplicity of closely spaced, longitudinally extending, straight, parallel grooves, each of said grooves being coextensive in length with said body and intersecting at least one of said pockets, said grooves, at the points of intersection thereof with said pockets, forming on said body integral, fin-like abutments extending partially across said pockets for retaining an antifriction bearing element therein.

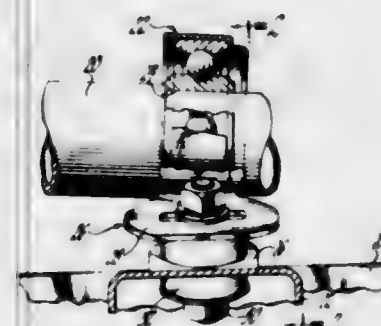
3,003,831

BEARING SUPPORT

Kenneth K. King, Saginaw, and Raymond J. Schultz, Bay City, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 3, 1956, Ser. No. 625,919

1 Claim. (Cl. 308-26)



In a motor vehicle having a drive shaft, a bearing member retained on said drive shaft intermediate the ends thereof and disposed in a plane normal to the axis of said drive shaft, a saddle brace secured to said bearing member and having mounting ears extending radially and obliquely from said bearing member in a downward direction, the plane of each of said mounting ears being angularly disposed with respect to the axis of said drive shaft, a support member underlying said bearing member and extending between frame side rails of said motor vehicle, a pair of tabs struck from the surface of said support member and extending obliquely upwardly and in spaced parallel relation to and below said mounting ears, resilient means disposed between said mounting ears and said tabs and secured thereto, said resilient means receiving the weight of said shaft and said bearing member in compression and shear and further receiving vibration forces of said shaft in alternating compression and tension and shear during dynamic conditions to balance vertical and horizontal disturbance forces in said shaft in a plane normal to said shaft, said resilient means receiving axial forces on said shaft in tension and compression to damp axial vibrations in said shaft.

3,003,832

SEALED JOURNAL BEARING FOR RAILWAY CAR AXLE

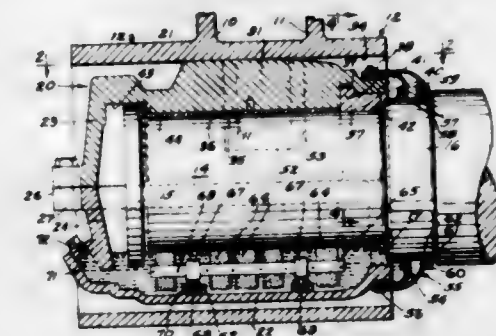
Franklin D. Barber, Bloomer, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a corporation of New Jersey

Filed Oct. 28, 1957, Ser. No. 692,828

2 Claims. (Cl. 308-91)

1. The combination of a railway car axle journal provided at its outer end with a thrust collar and at its inner end with a thrust shoulder the perimeter of which defines a circumferential dust guard surface, a combined journal bearing and lubricant reservoir assembly comprising an elongated rigid casing closed at one end and open at the other and enclosing said journal and its thrust collar, the

said rigid casing being provided with an integral bearing seat portion supported on the journal between said thrust collar and said thrust shoulder with its outboard end positioned in close abutting relation to said thrust collar and having its inboard end spaced axially from said thrust shoulder and formed with a radial recess of L-shaped configuration in axial cross-section and defined in part by said journal, means for extending the bearing surface area of said bearing seat portion comprising a semi-circular thrust ring seated upon said journal within said recess and conforming in shape to the recess with its outboard end abutting against a vertical face of said recess and with its inboard end positioned to abut against said thrust



shoulder, a housing for said combined journal and lubricant reservoir having its inboard end open and terminating in substantial vertical alignment with the inner end of said combined journal bearing and lubricant reservoir and overlying only a slight marginal portion of said dust guard surface, and resilient means including a pair of flexible tubular elements secured to the open end of said combined journal bearing and lubricant reservoir and projecting in an axial direction therefrom through the open end of said housing and into resilient sealing engagement with said dust guard surface at locations spaced from each other lengthwise of the axle.

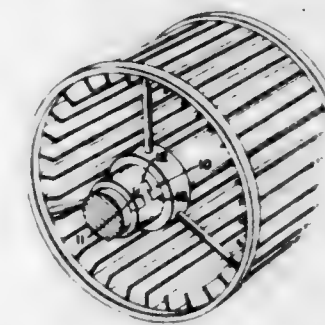
3,003,833

STAMPED THRUST COLLAR

Arthur E. Friedman, Shaker Heights, Ohio, assignor to Air Controls, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Oct. 22, 1959, Ser. No. 848,042

3 Claims. (Cl. 308-163)

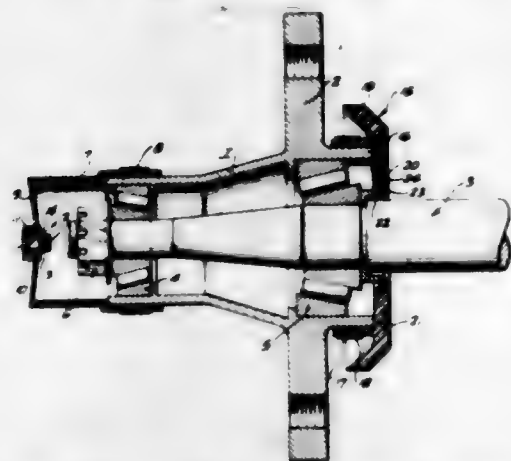


1. A split thrust collar formed from strip material having some axial length and a split circumferential collar engaging surface, said thrust collar having a radial aperture through the collar and a tapered opening for a radially engaging screw connection, said split collar formed from strip of substantially equal width throughout and at one end thereof having a portion substantially reduced in width forming a tongue having a first portion of lesser width forming a neck portion and a wider portion outwardly therefrom, the opposite end of said split collar having a groove with substantially mating conformation to that of the tongue, and each of said ends formed together.

3,003,834

SEAL FOR VEHICLE HUBS

Alfred H. Pendleton, 902 W. Hadley St., Whittier, Calif.
Filed May 12, 1960, Ser. No. 28,706
5 Claims. (Cl. 308—187.1)



1. A hub for wheels, comprising: a hollow tubular hub surrounding an axle spindle, bearings in said hub riding on said spindle, a sealing ring sealing the inner extremity of said hub to said spindle, a hub cap inclosing the outer extremity of said hub about said spindle, said hub cap being formed of a flexible nonmetallic material, a ring encircling the hub cap and the hub to detachably secure said hub cap to the hub, and an air valve means in said hub cap to admit air under pressure to said hub cap and hub.

3,003,835

SEAL FOR GREASE LUBRICATED BEARING

Arnold Schindel, Fair Lawn, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,376
4 Claims. (Cl. 308—187.2)



1. In a bearing assembly having an annular groove in the inner surface of an outer race facing the shoulder of a reduced land in the outer surface of the inner race, the seal improvement comprised of a deflected metallic Belleville washer having a rubber coating and extending from the groove to the shoulder, said coating extending over the bottom of said groove and contacting said shoulder, means anchored in said groove constructed and arranged so that said Belleville washer is held in deflected position and so that axial loading on the radially-outer part of said washer will be offset, said Belleville washer being constructed and arranged so that as deflected its inner edge is tensioned against said shoulder, said means also exerting a radially outward force on said coating in the bottom of said groove.

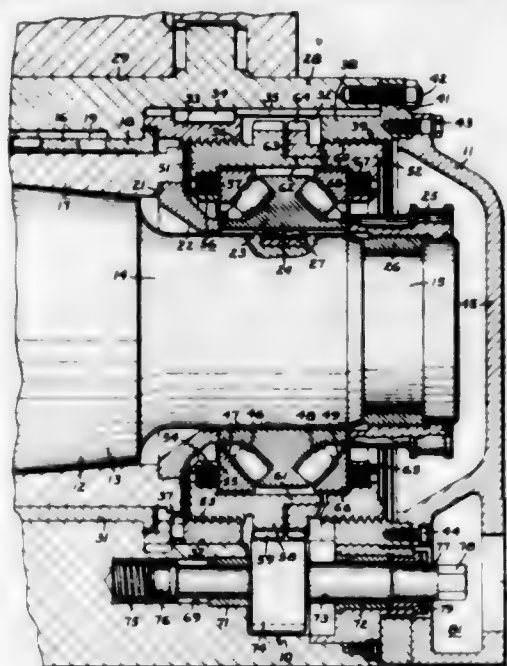
3,003,836

ROLL ADJUSTMENT

William J. Hill, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a corporation of Massachusetts
Filed Oct. 22, 1958, Ser. No. 768,983
7 Claims. (Cl. 308—234)

5. A bearing apparatus having a radial bearing and a thrust bearing, comprising a chock in which the bearings reside, a first adjusting member normally fixed in

the chock at one side of the thrust bearing, a second adjusting member normally fixed in the chock at the other side of the thrust bearing, a third adjusting member contacting the said one side of the thrust bearing and threadedly engaging the said first adjusting member, a fourth adjusting member contacting the said other side of the

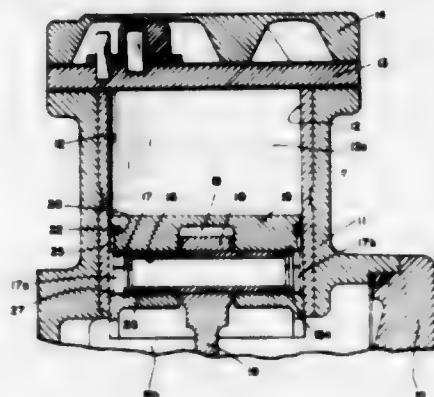


thrust bearing and threadedly engaging the said second adjusting member, the third and fourth adjusting members having gear teeth formed on adjacent parts thereof, and a gear meshing with the said teeth for simultaneously rotating the third and fourth adjusting members to produce axial movement of the thrust bearing.

3,003,837

FLUID COMPRESSOR

Frank E. La Flame and Frank L. Rifner, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 6, 1959, Ser. No. 832,053
2 Claims. (Cl. 309—6)



1. In a fluid compressor, the combination of, a cylinder member having a cylinder therein, a piston reciprocable in said cylinder, a closure member at one end of said cylinder and forming with said piston a fluid compression space therebetween, said piston having a single piston ring groove therein having a piston ring in the said groove engaging said cylinder to resist flow of compressed fluid from said compression chamber past said piston and flow of oil from within the compressor into said compression chamber, said piston also having a piston pin bore extending transversely thereof positioned below said piston ring groove and having a piston pin in the said bore, means forming an oil relief passage means from said ring groove to the end of said piston pin bore, and additional continuously open oil relief passage means in the periphery of said piston pin bore extending axially

thereof between the surface of the piston pin bore and the piston pin therein and terminating at the inner end of said piston pin bore for relief flow of oil from the radially outer end of said piston pin bore to the radially inner end thereof relative to said piston for discharge internally of said piston and into said cylinder in which the piston reciprocates whereby to prevent entrapment of oil below said piston ring and in said piston pin bore with resultant oil pressure build-up, at the piston ring.

3,003,838

ADJUSTABLE TYPEWRITER SUPPORT FOR DESKS OR THE LIKE

Marc E. Chaff, 3207 Benjamin Road, Oceanside, N.Y.
Filed Mar. 9, 1959, Ser. No. 798,233
12 Claims. (Cl. 312—28)

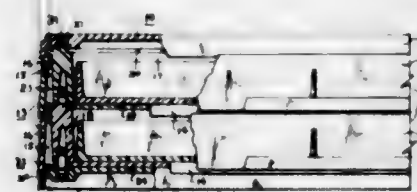


1. In an extensible typewriter support for a desk, or the like, including a frame, a typewriter supporting platform, and means mounting said platform on said frame for arcuate upward movement, adjustable means for limiting the upward movement of said platform comprising a plate having an arcuate slot formed therein opening into an edge thereof, means pivotally supporting said plate on said frame, a pin on said platform mounting means engageable against the inner end of said slot upon the upward movement of said platform, means for adjustably positioning said slotted plate comprising a plurality of arcuately disposed spaced holes formed in said plate and a resiliently mounted member on said frame to the other side of said plate from said platform releasably engageable in a selected one of said holes upon rotation of said plate on the pivot thereof, said member engageable from the platform side of said plate for disengagement from said selected one of said holes

3,003,839

DISPLAY TRAY ASSEMBLY

Eli Bloom, Philadelphia, Pa., and Robert S. Dorfman, Lido Beach, N.Y., assignors to Universal Dental Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1958, Ser. No. 759,503
20 Claims. (Cl. 312—111)



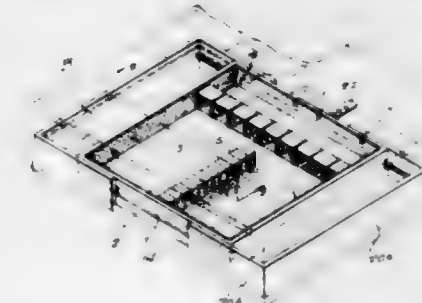
1. In an expandable capacity display assembly, an assembly element interlockable with similar elements and comprising, a plurality of substantially vertically extending side wall structures and a top wall, each of said plurality of side wall structures being recessed so that each side wall includes an inner and an outer side wall portion and said top wall bridges the inner and outer portions of each side wall, a plurality of headed

connectors extending from spaced areas of the surface of said top wall, each of said headed connectors including a neck portion and a surmounted integrally formed head portion of larger horizontal cross-section than that of said neck, and a plurality of connector-receiving apertures vertically underlying said connectors extending from said top wall and including regions shaped complementally to the neck and head portions of the headed connectors, whereby said assembly element is interlockable with other assembly elements of the same kind by positioning one assembly element over the other so that the connectors of the lower register with the apertures of the upper and interlock therewith upon application of suitable vertically directed force effective to temporarily horizontally radially compress the said head portion of each connector until the latter passes through the neck portion of the complementally formed connector-receiving apertures and into the head receiving portion thereof to thereby effect a snap-action interlock.

3,003,840

CHESTS FOR SILVERWARE AND THE LIKE

Nathan Katzin, 220 S. Main St., Rocky Mount, N.C.
Filed July 26, 1960, Ser. No. 45,330
10 Claims. (Cl. 312—298)



1. A chest for table silverware and the like comprising a body having side and end walls, the outer side of each side wall having a groove therein coextensive with its length, a cover for said chest slidable with respect thereto and having at least two sides, each inside wall of said cover sides having a strip secured thereto in a longitudinal direction, said groove being at least twice the thickness of said strip, said strip engaging in the upper portion of said groove when the cover is in place on said chest, said cover being reversible with respect to said chest whereby the cover is slidable over the bottom of said chest, the strips of the sides thereupon engaging in the lower portion of said groove, and cooperating means on the bottom of said chest and an inside wall of said cover to lock said cover and chest together in any extended relationship therebetween.

3,003,841

SLIDING DRAWER ASSEMBLY

Harvey W. La Branche, James Charles Preble, and Bruce K. Boundy, Tacoma, Wash., assignors, by mesne assignments, to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,106
3 Claims. (Cl. 312—348)



1. A drawer assembly comprising a drawer, a face panel, a pair of elongated slides affixed to the lateral sides of the drawer, a pair of elongated guides dimensioned to

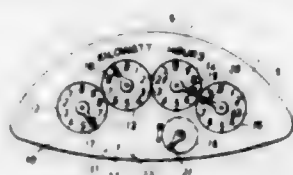
receive the slides, and means for affixing the guides in spaced apart relation to a stationary support on which the drawer assembly is to be mounted, at least one of the guides including integral ceiling, side wall and floor segments, the floor segment being formed with spaced central and rearward pockets, the rearward pocket terminating in a vertical abutment, the ceiling being formed with an integral abutment positioned above the central pocket, and the associated slide mounting a block dimensioned for reception in the central pocket and positioned for engagement with the abutment above the central pocket upon sliding movement of the drawer to its open position, said block being engageable with the rearward pocket vertical abutment in its closed position, the forward length of the guide to said vertical abutment being less than the length of the drawer for limiting inward travel of the drawer to prevent abutment of the face panel.

3,003,842

METER RECORD DEVICE AND METHOD
George B. Langford, 88 Queensbury Ave., Toronto, Ontario, and Patrick E. Cavanagh, 8th Line, Oakville, Ontario, Canada, assignors to one-third to Marie Phyllis Montague, Toronto, Ontario, Canada
Filed Jan. 13, 1958, Ser. No. 708,635
2 Claims. (Cl. 346-14)

1. In a cumulative metering system including a meter having a plurality of dial means thereon, the combination therewith of: a housing enclosing said dial means, said

housing being formed of a non-magnetic material; a movable dial indicator for each of said dial means, said indicators being formed of a non-magnetic material; a permanent magnet mounted at the outer extremity of each of said indicators and movable therewith in a recording position adjacent and within said housing, said magnets on adjacent dial means being movable to positions of predetermined minimum spacing, one from another; means supporting said housing in a position closely



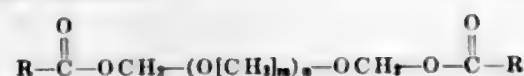
overlying said magnets, the distance between the outer surface of said housing and said magnets being less than said predetermined spacing; an information carrier member in the form of a rectangular sheet and carrying thereon a relatively uniformly dispersed suspension of a magnetizable substance; a carrier member supporting surface on said housing adapted for placement of said member thereon by an operator to provide local magnetization of said member by said magnets through said housing; and means supporting said magnets on said indicators in positions of mutually repelling magnetic field orientation when disposed in recording position.

CHEMICAL

3,003,843

METHOD OF DYEING NITROGENOUS FIBERS WITH PREMETALIZED AZO DYES AND COMPOSITIONS THEREFOR
Chester A. Amick, Bound Brook, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 19, 1956, Ser. No. 629,225
11 Claims. (Cl. 8-43)

1. A method of dyeing basic nitrogenous fibers with metalized acid azo dyes containing an amino group and a hydroxy group, both groups being ortho to an azo group which comprises effecting dyeing in the presence of an effective amount of a diester of an oxymethylene glycol having the formula



where R is selected from the group consisting of hydrogen, alkyl and an aryl radical and n is an integer selected from one, two and three and n is an integer selected from zero, one, two, three and four.

3,003,844

STABLE SOLUTION FOR PRODUCING ICE COLORS
Charles F. Jelinek, Frederick W. Possett, and Lester N. Stanley, Delmar, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 10, 1957, Ser. No. 664,513
15 Claims. (Cl. 8-45)

1. A substantially clear, stable aqueous alkaline solution comprising an ice color diazo compound solubilized and stabilized against azoic coupling on the alkaline side by reaction with an organic amine containing at least one solubilizing group and at least one replaceable hydrogen atom attached to an amino nitrogen atom, an ice color coupling component, and, as substantially the sole surface active agent, about 0.5 to 5% by weight of a nonionic surface active agent having the formula



wherein R is a hydrophobic radical selected from the

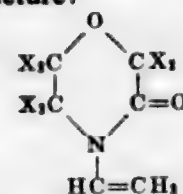
group consisting of (A) an aliphatic hydrocarbon radical of at least 12 carbon atoms, (B) an alkylated phenyl radical containing at least 1 alkyl radical and a total of at least 7 alkyl carbon atoms, and (C) a polyether radical having a molecular weight of about 300 to 3000 and 3 to 8 carbon atoms per recurring ether unit, n has a value of at least 4, and m is 1 when R is (A), 1 when R is (B) and 2 when R is (C), said diazo compound and coupling component being devoid of solubilizing carboxylic and sulfonic acid groups and being present in approximately equivalent proportions which, combined, amount to at least about 10% by weight in the solution.

3,003,845

DYE-RECEPTIVE POLYMER COMPOSITIONS OF FIBER-FORMING POLYMERS AND CROSS-LINKED N-VINYL-3-MORPHOLINONE COPOLYMERS, PREPARATION THEREOF AND ARTICLES RESULTING THEREFROM

Forrest A. Ehlers, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Apr. 16, 1958, Ser. No. 728,866
20 Claims. (Cl. 8-100)

1. Dye-receptive composition which comprises a synthetic, resinous linear, hydrophobic fiber-forming polymer in which there is incorporated between about 2 and 15 percent by weight, based on the total weight of polymeric material in the composition, of a cross-linked, water-insoluble copolymer of (1) a polyfunctional monomer that contains at least two functional, polymerizable, ethylenically unsaturated groups and which is copolymerizable with an N-vinyl-3-morpholinone monomer of the Formula I and (2) an N-vinyl-3-morpholinone monomer of the structure:



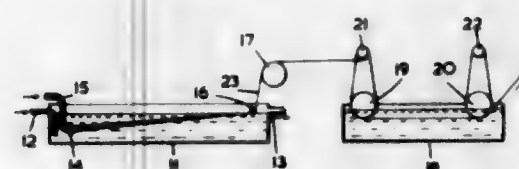
wherein each X is independently selected from the group

consisting of hydrogen, alkyl radicals containing from 1 to about 4 carbon atoms, and aryl radicals containing from 6 to about 10 carbon atoms.

3,003,846

MANUFACTURE OF ARTIFICIAL FILAMENTARY MATERIAL

Denis William Groombridge and Reginald Henry John Riley, Spondon, near Derby, England, and James Hague Pearson, Thurso, Scotland, assignors to British Celanese Limited, a corporation of Great Britain
Filed Aug. 21, 1957, Ser. No. 679,471
Claims priority, application Great Britain Aug. 23, 1956
9 Claims. (Cl. 18-54)



1. Process for the manufacture of artificial filamentary material, which comprises extruding an acetic acid solution of cellulose triacetate into a coagulating bath of aqueous acetic acid having an acetic acid concentration of about 5 to 25% by weight, withdrawing the resulting filaments from the coagulating bath before they have attained equilibrium with the bath, passing the filaments through air until the liquid from the coagulating bath carried on the surfaces of the filaments has been considerably enriched with acetic acid by diffusion of the latter from the interior of the filaments, and stretching the filaments in air while carrying the acid-enriched liquid, the overall acetic acid concentration of the total liquid associated with the cellulose triacetate in said filaments at the time of said stretching being 40 to 55% by weight.

3,003,847

PROCESS OF RECOVERING URANIUM VALUES
Howard M. Dess, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Apr. 19, 1956, Ser. No. 579,134
2 Claims. (Cl. 23-14.5)

1. A process for recovering uranium values from metal compositions thereof with at least one metal selected from the group consisting of thorium and zirconium comprising hydriding said metal composition whereby the metal values are converted to hydrides; admixing the hydrided metal composition with a substantial amount of at least one alkali metal bifluoride; subjecting the resulting mixture to hydrogen fluoride at a temperature in the range of from 60° C. to 250° C. whereby the metal values are substantially converted to fluorides; subjecting the fluorinated metal values to gaseous fluorine at an elevated temperature up to about 700° C. whereby the uranium values are substantially converted to uranium hexafluoride; and separating the uranium hexafluoride from the reaction mixture.

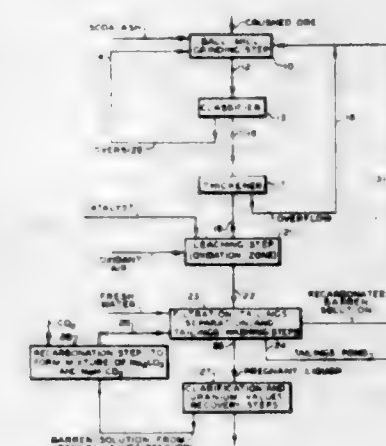
3,003,848

HEMOGLOBIN AS AN AID IN URANIUM LEACHING

John C. Hillyer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,885
17 Claims. (Cl. 23-14.5)

1. In a process for the oxidation of tetravalent uranium to hexavalent uranium which comprises oxidizing an aqueous slurry of comminuted uranium-containing ore in the presence of sodium carbonate and sodium bicarbonate, forming a pregnant liquor containing dissolved sodium uranyl tricarbonate complex, and recovering uranium

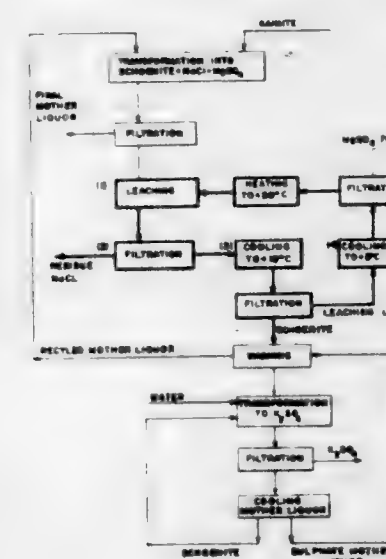
values from the pregnant liquor, the improvement which comprises the addition of a small but oxidation accelerating amount of a catalyst selected from the group consisting of hemoglobin, hemoglobin containing dried blood, and hemoglobin containing dried blood with the blood



3,003,849

PROCESS FOR THE SEPARATION OF SCHOENITE FROM MIXTURES OF SCHOENITE, SODIUM CHLORIDE AND MAGNESIUM SULPHATE
Giacinto Veronica, Novara, Italy, assignor to Montecatini Società Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Filed Oct. 17, 1958, Ser. No. 767,956
Claims priority, application Italy Oct. 18, 1957
2 Claims. (Cl. 23-38)



1. A process for separating hydrated double potassium-magnesium sulfate from a salt mixture thereof with sodium chloride and magnesium sulfate, comprising the steps of leaching said salt mixture at about 50° C. with a selective liquor saturated with K₂SO₄ and NaCl, said selective liquor containing 80-120 g./l. MgCl₂ and up to 140 g./l. MgSO₄, until the double potassium-magnesium sulfate contained in said salt mixture is dissolved in said selective liquor, the NaCl contained in the salt mixture remaining undissolved, cooling the solution to a temperature of approximately 15° to 18° C. to precipitate out the hydrated double potassium-magnesium sulfate, further cooling the solution to a temperature of approximately 0° to 5° C. to precipitate out MgSO₄·7H₂O, and recycling the selective leaching liquor.

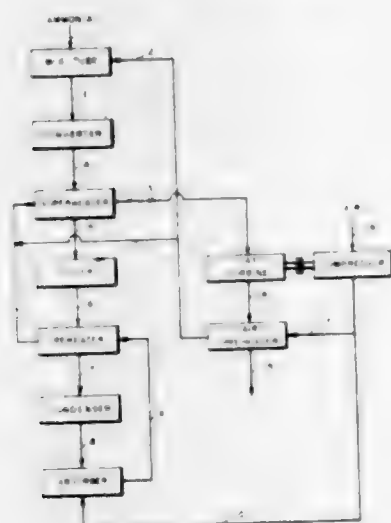
3,003,850 PREPARATION OF MONONITRATODIOXO-VANADIUM(V)

Edward A. Heintz, Williamsville, and Albert K. Fischer, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,638
3 Claims. (Cl. 23-140)

1. As a novel composition of matter, a novel compound of vanadium, mononitratodioxovanadium(V), having the formula VO_2NO_2 .

3,003,851 MANUFACTURE OF NITRIC ACID

Vernon C. Wynn, Princeton, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed July 9, 1959, Ser. No. 826,003
1 Claim. (Cl. 23-162)



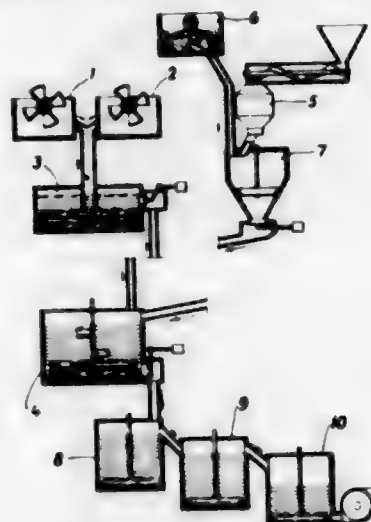
In the process of making nitric acid wherein ammonia is oxidized with air under pressure, the products of oxidation are cooled and absorbed in water to form nitric acid, and the heat developed in the oxidation is recovered as energy to compress the air required for oxidation, the improvement which comprises admixing with the spent gases from the absorber an amount of compressed air between about 20% and about 45% by weight of said spent gases, heating the resultant mixture of spent gases and compressed air by indirect heat exchange with the products of oxidation, and utilizing the energy in said mixture to compress the air required both for oxidation and for admixture with the spent gases.

3,003,852 PRODUCTION OF ORTHOPHOSPHORIC ACID

Rolf Gunnar Jonas Nordengren, Landskrona, Sweden, assignor to AB. Kemiska Patent, Landskrona, Sweden, a limited joint-stock company of Sweden
Filed Oct. 15, 1958, Ser. No. 767,316
Claims priority, application Sweden Feb. 16, 1955
4 Claims. (Cl. 23-165)

1. A method of producing a phosphoric acid containing 40 to 45% of P_2O_5 which comprises mixing and reacting phosphate rock with phosphoric acid in such relative amounts that a gel of monocalcium phosphate is formed, charging said gel of monocalcium phosphate into a mixture pre-heated to a temperature of at least 130°C . and consisting of phosphoric acid, sulfuric acid and water during a time period of at least 30 minutes to form a reaction mixture consisting essentially of phosphoric acid, calcium sulfate in the form of anhydrite crystals, non-reacted calcium monophosphate, sulfuric acid and water, allowing the temperature of said reaction mixture to decrease to a value not lower than about 110°C . during said charging, the combined amount of phosphoric acid

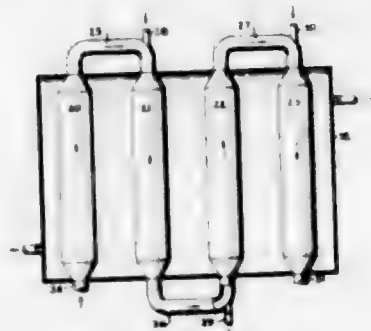
mixed with said phosphate rock and phosphoric acid in said pre-heated mixture, consisting of phosphoric acid, sulfuric acid and water, calculated as P_2O_5 , being at least twice as large as the amount required to react completely with raw phosphate and sulfuric acid to form phosphoric acid, water and calcium sulfate, discharging said partially



reacted mixture and allowing the non-reacted calcium monophosphate and remaining sulfuric acid of said reaction mixture to substantially react completely with each other to form phosphoric acid, water and calcium sulfate in the form of readily filterable anhydrite crystals, and separating said anhydrite crystals by filtration to recover said phosphoric acid, containing 40 to 45% of P_2O_5 .

3,003,853 PRODUCTION OF HYDROGEN PEROXIDE

John W. Mecorney, Lafayette, and George W. Gaertner, Modesto, Calif., and Aldo Spencer Lehmann, Riverside, Conn., assignors to Shell Oil Company, a corporation of Delaware
Continuation of application Ser. No. 400,074, Dec. 23, 1953. This application Sept. 24, 1959, Ser. No. 842,164
13 Claims. (Cl. 23-207)

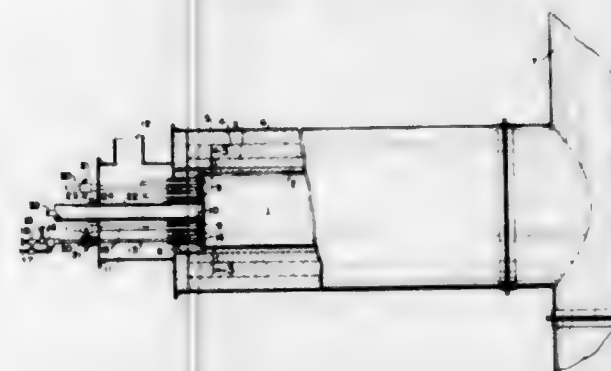


1. A process for the preparation of hydrogen peroxide which comprises passing a vaporous mixture comprising molecular oxygen and an alcohol of at least two carbon atoms per molecule and having both the hydroxyl group and a hydrogen atom attached to one and the same carbon atom in the vapor phase through a succession of reaction zones while maintaining the reaction mixture at a temperature within the range of from about 350°C . to about 500°C . under a pressure within the range of from about 45 pounds per square inch (absolute) to about 1000 pounds per square inch (absolute), between each pair of said successive reaction zones adding a stream of gas containing molecular oxygen to the vaporous mixture in an amount corresponding to from about 0.25 to about 0.01 mole of added molecular oxygen per mole of alcohol at the point of addition and in amounts further corresponding to a mole ratio of total alcohol supplied to total oxygen added between about 2:1 and about 20:1, withdrawing effluent from the terminal reaction zone at

a rate such that not over 90% of the total oxygen fed is consumed, and recovering hydrogen peroxide from the withdrawn effluent.

3,003,854 MANUFACTURE OF CARBON BLACK

George L. Heller, Monroe, La., assignor to Columbian Carbon Company, New York, N.Y., a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,710
11 Claims. (Cl. 23-209.4)



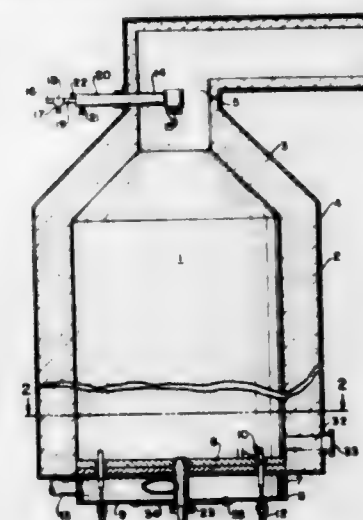
1. In the process for producing carbon black by the decomposition of a fluid hydrocarbon whereby the hydrocarbon to be decomposed is separately and forcefully injected into, and mixed with, a turbulent stream of hot blast flame gases passing longitudinally through an elongated, heat-insulated, unobstructed reaction chamber of substantially uniform transverse dimension and is decomposed by heat absorbed from the hot gases to form carbon black in suspension, the suspension being withdrawn from the downstream end of the chamber and the carbon black separated therefrom, the steps of generating, within the furnace chamber a uniform, turbulent stream of blast flame gases by forcefully injecting longitudinally into the upstream end of the chamber a multiplicity of substantially parallel gas-atomized streams of a liquid fuel symmetrically and uniformly positioned over substantially the entire transverse area of the chamber and each surrounded by an entering sheath of a free oxygen-containing gas, thereby forming a combustible mixture, and burning said mixture substantially completely as it enters the chamber, and separately and forcefully injecting a liquid hydrocarbon to be decomposed to carbon black, substantially longitudinally of the furnace chamber, into the resulting hot gas stream as at least one gas-atomized liquid spray substantially centrally positioned with respect to, and surrounded by, the entering streams of the liquid fuel and air and thereby rapidly mixing the hydrocarbon to be decomposed with the hot stream of blast flame gases.

3,003,855 CARBON BLACK MANUFACTURE

George L. Heller, Monroe, and Charles L. De Land, West Monroe, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,261
8 Claims. (Cl. 23-209.4)

1. Process for producing low structure carbon blacks from normally liquid hydrocarbons comprising injecting a gas-atomized liquid spray of the hydrocarbon substantially vertically and coaxially into a vertically elongated, heat-insulated furnace chamber heated to a temperature in excess of the decomposition temperature of the hydrocarbon by passing hot gaseous products of combustion upwardly through the chamber adjacent the periphery thereof and so removed from the spray stream as to avoid inspiration into the liquid spray of any unburned oxygen present therein, and thereby producing within the furnace chamber a dense blanket of smoke, and shrouding the

liquid spray with said blanket of smoke substantially immediately upon the entrance of the spray into the chamber, thereby decomposing the hydrocarbon into carbon black in gaseous suspension by heat absorbed from the hot smoke blanket while shielding the spray by said smoke



blanket from contact with any unburned oxygen present in the furnace gases and thereby preventing combustion of the hydrocarbons in the zone of carbon black formation, passing the suspension from the upper end of the furnace chamber and separating the carbon black therefrom.

3,003,856 METHOD FOR TRACING THE FLOW OF H_2O

John L. Boyd, Tulsa, Okla., assignor to Sinclair Oil & Gas Company, Tulsa, Okla., a corporation of Maine
No Drawing. Filed June 30, 1958, Ser. No. 745,284
7 Claims. (Cl. 23-230)

1. A method for tracing the flow of water in subterranean areas including adding a water-soluble thiocyanate ion yielding compound to the water at an origin point, recovering a portion of water at a recovery point, and analyzing the portion for thiocyanate ion content as an indication of water derivation from the origin point.

3,003,857 FUEL OIL ADDITIVE

William H. Carl, Jr., Chicago, Ill., assignor to The Peroli Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 4, 1957, Ser. No. 694,099
12 Claims. (Cl. 44-58)

1. A liquid additive composition for residual fuel oils for retarding ash deposition in the combustion of such oils, said composition being self-dispersing in residual fuel oil and being a homogeneous solution of an oil soluble organic silicate in an approximately equivalent amount by weight of an aromatic solvent consisting essentially of methylnaphthalene and which, apart from said solution, has as a characterizing physical property the capacity to actively disperse petroleum sludge.

3,003,858 STABILIZED DISTILLATE FUEL OIL

Harry J. Andress, Jr., Pitman, and Paul Y. C. Gee, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Jan. 7, 1958, Ser. No. 707,457
7 Claims. (Cl. 44-62)

1. A distillate fuel oil containing a minor amount, sufficient to inhibit sedimentation and screen clogging and to prevent rusting of ferrous metal surfaces in contact therewith, of a material selected from the group consisting of (1) an amic acid of a heteropolymer of maleic acid anhydride and a 1-olefin, having between about 2 and about

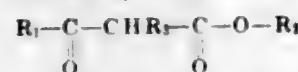
18 carbon atoms, with an unsubstituted aliphatic primary amine containing between about 4 and about 30 carbon atoms per molecule, and (2) amine salts of (1) with unsubstituted aliphatic primary amine containing between about 4 and about 30 carbon atoms per molecule; said heteropolymer being produced by reacting equimolar amounts of maleic acid anhydride and said 1-olefin at temperatures of between about 100° C. and about 175° C., for a period of time varying between about one hour and about 4 hours.

3,003,859

LIQUIFIED CHELATE GASOLINE ADDITIVES
Glenn E. Irish, Fullerton, Calif., and Lewis F. Gilbert, Fraser, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application May 31, 1956, Ser. No. 588,248, now Patent No. 2,926,184, dated Feb. 23, 1960. Divided and this application July 30, 1958, Ser. No. 751,903

9 Claims. (Cl. 44-68)

1. Gasoline containing from about 0.005 percent to about 5 percent by weight of liquid, metal-organic material obtained by heating a normally-solid, metallic chelate compound formed from a β -keto ester having the formula

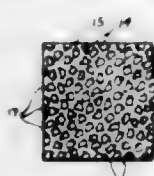


in which R_1 and R_2 are radicals containing up to about 10 carbon atoms each and are selected from the group consisting of alkyl, cycloalkyl, aralkyl, aryl and alkaryl radicals; and R_3 is selected from the group consisting of hydrogen and alkyl radicals containing up to about 10 carbon atoms; the heating being to a temperature above the melting point of said compound at which a permanent transformation occurs in said compound, said temperature being below the temperature at which thermal decomposition of said liquid, metal-organic material occurs.

3,003,860

ABRASIVE TOOLS AND METHODS OF MAKING AND USING SAME

George Thomas Sermon, Essexville, and Tolvo Joseph Leacetus, Saginaw, Mich., assignors, by mesne assignments, to Unimatic Manufacturing Inc., Bay City, Mich., a corporation of Michigan
Filed Aug. 5, 1957, Ser. No. 676,093
21 Claims. (Cl. 51-307)



1. An abrading tool consisting essentially of a uniformly wearing, strongly bonded, non-graphitic carbon matrix, about 10 to 90 weight percent of abrasive grains which are of greater hardness than the matrix and are uniformly dispersed in the matrix, and filler selected from the group consisting of graphite, petroleum coke, and silica which is chemically inert to the grains.

3,003,861

SOLID COMPOSITE PROPELLANTS CONTAINING INORGANIC OXIDIZING AND POLYMERIC QUATERNARY AMMONIUM COMPOUNDS

William B. Reynolds and James E. Pritchard, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 25, 1952, Ser. No. 284,447
26 Claims. (Cl. 52-5)

1. A solid propellant consisting essentially of an intimate admixture of a major amount by wt. of a solid

inorganic oxidizing salt and a minor amount by wt. of a solid 1,3-butadiene-N-aryl vinyl substituted pyridine halide polymer.

3,003,862

USE OF AMYLOPECTIN TO WATERPROOF DYNAMITE

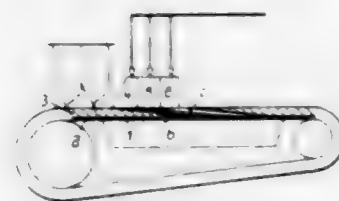
Lemuel E. Sentz, Jr., and Matthew A. Curtis, New Castle, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Apr. 7, 1960, Ser. No. 20,546
5 Claims. (Cl. 52-11)

1. A composition consisting essentially of 15-99.5% ammonium nitrate, 0-48.5% sodium nitrate, 0-48.5% potassium nitrate, there being at least as much ammonium nitrate as any of the other nitrates, 0-25% nitroglycerine, 0-15% dinitrotoluene, 0-3% of antiacid compound selected from the group consisting of chalk, zinc oxide and magnesium oxide, and at least 0.5% of isolated amylopectin.

3,003,863

SINTERING OF ENDOTHERMIC MATERIALS

Kurt Meyer, Frankfurt am Main, and Hans Rausch, Oberursel (Taunus), Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Oct. 23, 1958, Ser. No. 769,128
Claims priority, application Germany Nov. 5, 1957
1 Claim. (Cl. 75-5)



A process for the endothermic treatment of material moving horizontally on a sinter apparatus comprising forming a bed composed of a mixture of the material and solid fuel on said sinter apparatus, drawing hot gas through the bed to ignite the solid fuel and supply additional heat to said bed and thereby form a melting zone of the material in the bed, then drawing a gas cooler than said hot gas through said melting zone in said bed in quantities sufficient to limit an increase in the width of said melting zone and to maintain a thin gas permeable zone in advance of said melting zone and below melting temperature with said cooler gas being hot enough to supply sensible heat to said sinter bed, and then drawing another hot gas at a temperature higher than said cooler gas through said bed for forming a second zone at a temperature less than that of said melting zone but greater than that of thin gas permeable zone.

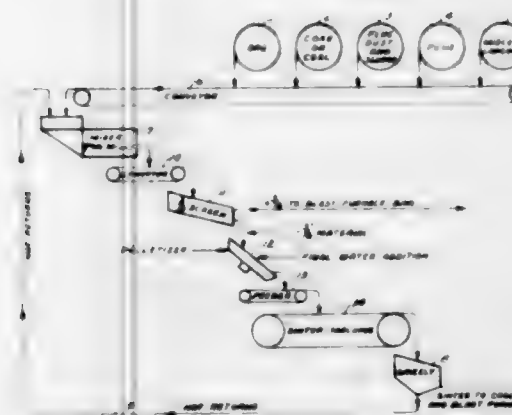
3,003,864

METHOD OF SINTERING

Hobart M. Kramer, Bethlehem, and Robert A. Limous, Hellertown, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Dec. 16, 1959, Ser. No. 859,874
3 Claims. (Cl. 75-5)

3. In a process for treating a sticky ore which is normally unscreenable by reason of high natural water content, the succession of steps consisting of mixing the wet ore with sufficient hot sinter returns to dry the ore substantially to a water content between 3 and 7.5%, said mixture having then a mealy consistency, screening the mixture while dry to remove the $+\frac{3}{16}$ " material, moisten-

ing the $-\frac{3}{16}$ " fines and concurrently pelletizing the moistened fines, sintering the pelletized material, passing the



sintered material over a grizzly, and recycling hot fine returns from the grizzly to the mixing step.

3,003,865

DECARBURIZING PROCESS FOR ALLOY STEELS CONTAINING CHROMIUM

John B. Bridges, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex.
No Drawing. Filed Sept. 10, 1959, Ser. No. 839,085
17 Claims. (Cl. 75-60)

1. A process for decarburizing steel which comprises preparing a melt of alloy steel containing chromium and not more than 0.75 percent carbon; blowing through the melt a dry material selected from the group consisting of air, mixtures of air and oxygen, and mixtures of oxygen and an inert gas, such material containing from 15 to 70 percent oxygen; maintaining the temperature of the melt in the range from 2800 degrees F. to 3150 degrees F. while blowing, whereby carbon is oxidized from the melt with little accompanying oxidation of chromium.

3,003,866

SELECTIVE ELUTION OF COPPER, NICKEL, AND COBALT FROM AMINOCARBOXYLIC ACID CHELATE EXCHANGE RESINS

Leonard A. Mattano and Francis D. Schwalm, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 18, 1958, Ser. No. 742,741
6 Claims. (Cl. 75-108)

1. In a method wherein a water-insoluble solid chelate exchange resin containing aminocarboxylic acid groups as the active chelate ligands is laden with a mixture of at least two of the metals copper, nickel, and cobalt in chelated form by contacting the resin with a starting ammoniacal aqueous liquid solution containing ammine complex ions of at least two of the metals copper, nickel, and cobalt selected from the group consisting of bivalent ammine complex ions of cupric copper having ammonia coordination of from two to four, bivalent ammine complex ions of nickelous nickel having ammonia coordination of from two to six, and trivalent ammine complex ions of cobaltic cobalt having ammonia coordination of from two to six until the chelate exchange resin is saturated with at least one of the metals in the starting solution, the improvement which comprises selectively eluting the metals from the chelate resin by removing the metal-laden resin from contact with the starting metal solution, contacting the metal-laden resin with a liquid aqueous solution containing ionized salts of only non-chelating cations and having a pH value of at least five until no more metals are extracted from the resin thereby, removing the resin from contact with such salt solution, and contacting the resin with an acidic aqueous liquid having a pH value of at most three.

3,003,867

PROCESS FOR RECOVERY OF NIOBIUM

Bernard J. Lerner, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed May 22, 1959, Ser. No. 814,949
16 Claims. (Cl. 75-121)

1. In a process of treating ores containing niobium in association with alkaline earth metals with sulfuric acid to decompose the ore and to render the niobium extractable from the ore with organic leaching agents, the improvement which comprises, utilizing sulfuric acid of a concentration from about 35 to about 75 percent by weight.

3,003,868

HIGH TEMPERATURE WELDABLE ALLOYS

Robert S. Zeno and Robert F. Gill, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 30, 1959, Ser. No. 843,345
4 Claims. (Cl. 75-126)

1. An alloy for high temperature service comprising by weight from about 0.10 to 0.20% carbon, 0.75 to 3.0% chromium, 0.75 to 1.75% molybdenum, 0.30 to 1.0% vanadium, 0.30 to 0.80% manganese and 0.28 to 0.50% silicon with the remainder essentially iron said alloy being normalized for about four hours at from about 1800° F. to 2050° F., air cooled and then tempered at a temperature of from about 1150° F. to 1400° F. for from 10 to 30 hours to strength, said alloy having a bainitic structure after heat treatment.

3,003,869

XEROGRAPHIC PLATE OF HIGH QUANTUM EFFICIENCY

Roland M. Schaffert, Vestal, N.Y., assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed Feb. 11, 1957, Ser. No. 639,296
3 Claims. (Cl. 96-1)



1. The method of producing an electrostatic latent image corresponding to an optical image comprising the following steps:

A. Applying a D.C. electric potential between two transparent conductive layers which have a layer of electroluminescent phosphor material therebetween which luminesces only under the combined stimulus of a D.C. electric field and activating radiation;

B. Placing a uniform electrostatic charge on the outer surface of a layer of photoconductive insulating material which is supported by one of said transparent conductive layers;

C. Subjecting said phosphor layer to an optical image by projecting said optical image onto said phosphor layer through the said transparent conductive layer which is free from said photoconductive insulating material whereby the resulting changes in electric field distribution produce an electrostatic latent image on the outer surface of said photoconductive insulating material; and

D. Removing said electric potential when said electrostatic latent image is formed.

3,003,870 ALTERATION OF CHARACTERISTIC CURVE OF ZINC OXIDE ELECTROPHOTOGRAPHIC MATERIALS

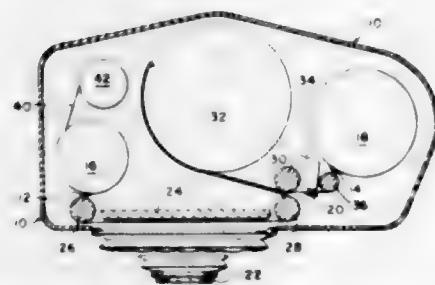
James G. Jarvis, Dale L. Smith, and Rayen W. Tyler, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 17, 1957, Ser. No. 653,316
10 Claims. (Cl. 96—1)



1. An electrophotographic element comprising a continuous coating on a conductive support of particulate photoconductive zinc oxide (I) having a given sensitivity, dispersed in an insulating binder-material, and coated over said continuous coating a discontinuous coating comprising small spots of substantially, uniformly-distributed insulating binder-material containing particulate photoconductive zinc oxide (II) having a different given sensitivity, said particulate photoconductive zinc oxide (I) and said particulate photoconductive zinc oxide (II) having sensitivity in the same spectral region, but one of said particulate photoconductive zinc oxides having a sensitivity of from $1/4$ to 8 times that of the other of said particulate photoconductive zinc oxides, from 2 to 98% of the surface of said continuous coating being coated with said small spots of substantially, uniformly-distributed insulating binder-material containing particulate photoconductive zinc oxide (II), the number of said small spots being between 10^2 and 300^2 per square inch, the said insulating binder-materials of said coatings being of such nature that said coatings have a low decay rate in the dark when said coatings have received an electrostatic charge.

3,003,871 PHOTOGRAPHIC APPARATUS AND PROCESS FOR TREATING LIGHT-SENSITIVE MATERIAL

Edwin H. Land, Cambridge, Murry N. Fairbank, Belmont, and William J. McCune, Jr., Lincoln, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 29, 1955, Ser. No. 537,464
11 Claims. (Cl. 96—29)



1. The method of producing a succession of finished photographic images on an elongated strip of photographic sheet material from a succession of exposed frames of elongated photosensitive strip by subjecting each of said exposed frames to a treatment requiring a predetermined processing period variable within certain maximum and minimum limits, the processing period and the maximum and minimum limits thereof being the same for each frame, said method comprising the steps

of: withdrawing said photosensitive strip and a second strip from, respectively, first and second storage means; as said strips are withdrawn from their respective storage means superposing said strips at a fluid distributing means and advancing said superposed strips in a first direction into a third storage means, the length of said strips advanced into said third storage means being at least approximately equal to the length of said photosensitive strip to be exposed and processed; withdrawing said superposed strips from said third storage means and during withdrawal separating said strips at said distributing means and advancing said strips in the opposite direction into their respective first and second storage means; during advancement of said photosensitive strip into said first storage means photoexposing successive frames of said photosensitive strip to produce developable latent images therein; thereafter advancing said strips in said first direction from said first and second storage means and, at said distributing means, superposing successive exposed frames of said photosensitive strip with areas of said second strip and distributing a fluid processing composition between said strips to form a sandwich at least equal in length to the length of said photosensitive strip exposed and to be processed, said fluid including an agent for reacting with said exposed photosensitive strip to produce visible images corresponding to said latent images therein; immediately as said sandwich is formed advancing said sandwich in one direction directly into said third storage means located closely adjacent said fluid distributing means, said third storage means having a maximum girth dimension which is substantially less than said length of said sandwich; advancing said sandwich into said third storage means until at least the last frame of said length of said photosensitive strip to be processed is superposed with an area of said second strip with said processing composition distributed therebetween; holding and supporting said strips comprising said sandwich in superposition and against relative movement of superposed portions of said strips in said third storage means during a time interval commencing with the superpositioning of said last frame of said photosensitive strip with an area of said second strip and at least equal to the minimum processing period; at the end of said interval withdrawing said sandwich comprising said strips in said opposite direction from said third storage means and at said distributing means separating said strips from one another commencing with the portion of said sandwich including said last frame; as said strips are separated from one another advancing said strips in said opposite direction into their respective first and second storage means; continuing withdrawal and separation of said strips at such a rate as to separate said first frame of said photosensitive strip from said second strip within a time interval commencing with the superpositioning of said first frame with said second strip and not exceeding the maximum limit of said processing period.

3,003,872 PHOTOGRAPHIC PRODUCTS AND PROCESSES

Elkan R. Blout, Belmont, Howard C. Haas, Arlington, and Howard G. Rogers, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

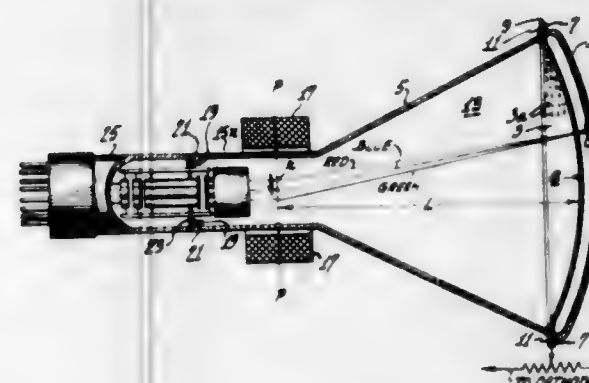
No Drawing. Filed Dec. 3, 1957, Ser. No. 700,281
7 Claims. (Cl. 96—29)

1. In a process of forming a photographic image in color, wherein a latent image contained in an exposed silver halide emulsion is developed with an aqueous alkaline solution containing a dye developer to provide in said emulsion a predetermined distribution of unoxidized dye developer, said dye developer being a compound which is both a dye and a silver halide developing agent, and wherein at least part of said distribution of said unoxid-

ized dye developer is transferred by imbibition from said emulsion to an image-receiving element in superposed relationship with said emulsion to impart to said image-receiving element a reversed positive dye image of the developed image; the improvement characterized by the feature that said image-receiving element comprises an image-receiving layer of a dyeable material selected from the class consisting of (a) copolymers of vinyl alcohol and N-vinylpyrrolidone and (b) mixtures of polyvinyl alcohol and poly-N-vinylpyrrolidone.

3,003,873 COLOR KINESCOPES AND METHODS OF MAKING THE SAME

Vladimir K. Zworykin, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 23, 1953, Ser. No. 400,040
4 Claims. (Cl. 96—34)



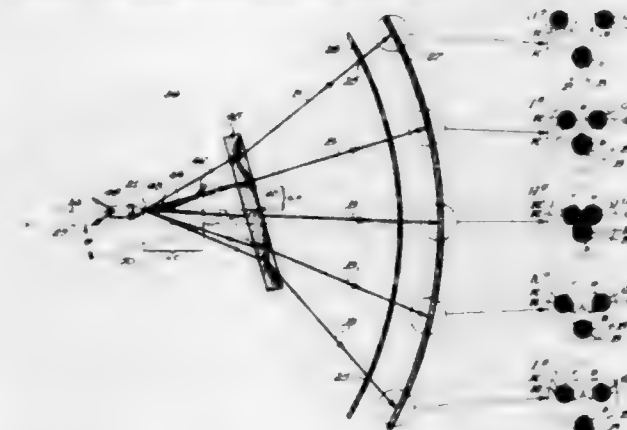
1. Method of making a color-kinescope of the kind that includes a target-assembly comprising a mask containing a systematic pattern of apertures and a transparent envelope portion having a color-phosphor mosaic on its inner surface and a mask-supporting rim portion surrounding said mosaic, said method comprising: permanently securing said mask to said rim portion and thereafter coating said inner surface with a photosensitized organic gel containing phosphor particles of one color, exposing said coating to light rays through the apertures in said mask whereby photographically to record the pattern of said mask apertures on said surface, washing said surface to develop the photograph thereon, repeating said coating, exposing and developing steps for each of the other colors of said mosaic and then heating said surface to volatilize and remove said organic gel therefrom.

3,003,874 OPTICAL CORRECTION IN MANUFACTURE OF COLOR IMAGE REPRODUCERS

Sam H. Kaplan, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Oct. 26, 1956, Ser. No. 618,590
6 Claims. (Cl. 96—35)

1. In the art of manufacturing a cathode-ray tube of the type which requires dynamic convergence correction and contains a color-selection electrode having a multiplicity of systematically arranged apertures through which a plurality of electron-beam components pass along different angularly related paths, in transit from respective color-centers located at respective predetermined points which are radially spaced from the longitudinal axis of said tube and disposed in a plane-of-deflection substantially perpendicular to said tube axis, to impinge upon respective sub-elemental areas of respectively different color-response characteristics on the mosaic surface of a nearby fluorescent screen, the process of producing a fluorescent screen comprising such sub-elemental areas arranged on a support in a selectively distorted pattern to compensate for an effective shift of position of said plane-of-deflection along said axis, said shift varying in amount with deflection of said electron-beam com-

ponents and being of a maximum amount ΔC , and additionally to compensate simultaneously for an effective change of position of said color centers in a direction radially of said axis, said change varying in amount with said dynamic convergence and being of a maximum amount ΔA , whereby said electron-beam components centrally impinge upon their respective sub-elemental areas over substantially the entire area of said fluorescent screen, said process comprising: providing said support with a coating of material sensitive to light energy; pro-



jecting light energy from a selected point corresponding to one of said predetermined points along a reference axis extending toward said color-selection electrode; and passing said projected light energy through a refractive lens at a location with its effective optical center on said reference axis and of a configuration compensating for said plane-of-deflection effective position shift and canted about said effective optical center in a positive direction with respect to said reference axis by an angle whose tangent is approximately

$$\frac{\Delta A}{\Delta C}$$

to compensate for said color center effective position change and re-direct said light energy along corrected paths through the apertures of said color-selection electrode to expose selective areas of said coating to said light energy.

3,003,875 PHOTOGRAPHIC PRODUCTS AND PROCESSES

William H. Ryan, Lincoln, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed May 12, 1958, Ser. No. 734,612
2 Claims. (Cl. 96—63)



2. In a photographic process, the step which comprises developing a latent image contained in an exposed photosensitive element, said element comprising a silver halide gelatin emulsion containing deacetylated chitin wherein the ratio, by weight, of deacetylated chitin to gelatin is from 1:1.7 to 1:6, inclusive, with an alkaline processing composition, for a time sufficient to develop said latent image to a silver image.

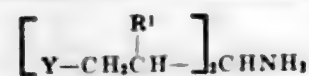
3,003,876 PHOTOGRAPHIC PROCESS

Elkan R. Blout, Belmont, Saul G. Cohen, Lexington, and Myron S. Simon, Newton Centre, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Aug. 27, 1957, Ser. No. 680,620
4 Claims. (Cl. 96—66)

1. A process for developing a photosensitive silver halide emulsion which comprises treating an exposed silver

halide emulsion with an aqueous alkaline solution of a compound represented by the formula:



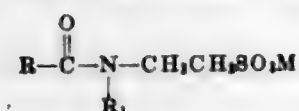
wherein each R^1 is selected from the group consisting of hydrogen, alkyl and phenyl groups; and each Y is selected from the group consisting of unsubstituted, alkyl-substituted, and halogen-substituted ortho and para dihydroxyphenyl groups, for a sufficient time to develop the latent image to silver.

3,003,877

SPOT PREVENTION IN PHOTOGRAPHIC EMULSIONS AND COLLOID LAYERS

Leonard T. McLaughlin, Avon, and Bill R. Burks, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed June 27, 1957, Ser. No. 668,316
16 Claims. (Cl. 96-94)

9. A photographic gelatino-silver-halide emulsion comprising (1) a synthetic spreading agent selected from those represented by the following general formula:



wherein R represents an aliphatic hydrocarbon radical containing at least eight carbon atoms, R_1 represents a member selected from the group consisting of an aliphatic radical containing one to four carbon atoms, a cycloalkyl group and an aryl group and M represents a member selected from the group consisting of an alkali metal atom, an ammonium group and an organic ammonium group, and (2) tannic acid.

3,003,878

PHOTOGRAPHIC EMULSIONS OF IMPROVED FLEXIBILITY AND INCREASED SILVER COVERING POWER

Bernard D. Illingsworth and Louis M. Minsk, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Dec. 4, 1957, Ser. No. 700,555
6 Claims. (Cl. 96-113)

1. A photographic emulsion comprising a suspension of silver halide in an aqueous solution of gelatin containing therein, based on the weight of the gelatin, 10-50% of hydroxyethyl cellulose compound selected from the group consisting of the hydroxyethyl celluloses having inherent viscosities within the range of approximately 0.3 to 1.0 and the hydroxyethyl cellulose having both hydroxyethyl and carboxyl containing substituents on the cellulose.

3,003,879

NONAQUEOUS PHOTOGRAPHIC EMULSIONS

William J. Priest and Ernest J. Perry, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Jan. 8, 1959, Ser. No. 785,567
5 Claims. (Cl. 96-114)

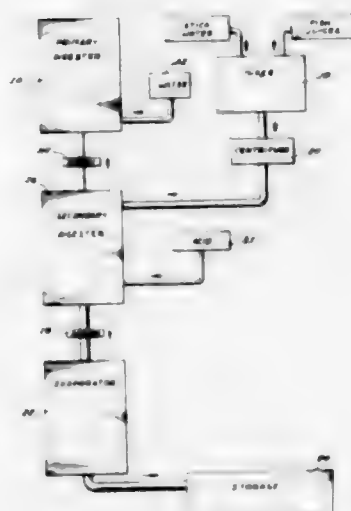
1. A method of making nonaqueous photographic emulsions which comprises reacting silver nitrate and water soluble halide in an aqueous solution of a peptizer selected from the group consisting of the water soluble salts of carboxylated polyvinyl acetals containing 60-87 mole percent polyvinyl acetal and at least 4 and not more than 40 mole percent of carboxyl, and the water soluble salts of carboxylated polyvinyl butyrals containing 50-75 mole percent polyvinyl butyral, the minimum carboxyl content being within the range of 4-17 mole percent and the maximum carboxyl content being 100 mole percent minus the mole percent of polyvinyl butyral contained

therein, coagulating the dispersion thus formed by adjusting the pH to a value within the range of 3-4.5, separating the silver halide coagulum and drying, followed by dispersing the coagulum in a solution of the free acid form of the polyvinyl compound in a solvent selected from the group consisting of dioxane, isopropanol, dimethoxyethane and acetone, whereby a silver halide photographic emulsion composition is obtained.

3,003,880

PROCESS FOR PREPARING A NUTRITIONAL CONCENTRATE

Reginald T. Erickson, San Juan Capistrano, Calif., assignor to Star-Kist Foods, Inc., Terminal Island, Calif., a corporation of California
Filed Mar. 14, 1958, Ser. No. 721,581
12 Claims. (Cl. 99-7)



1. A process for preparing a nutritional concentrate which includes effecting a primary digestion of fish viscera in water, removing free oil from uncoagulated fish stick water, mixing together such stick water and the product of said primary digestion, and effecting a secondary digestion of such mixture.

3,003,881

FOOD PROCESS

Edward E. Anderson, Lexington, Carol P. Nelson, Boston, and William F. Hampton, South Duxbury, Mass., assignors, by direct and mesne assignments, to Ocean Spray Cranberries, Inc., Hanson, Mass., a corporation of Delaware
Filed July 14, 1960, Ser. No. 42,852
2 Claims. (Cl. 99-105)

1. Process for treating cranberries to make them suitable for converting to juice, characterized by the step of alternating the temperature of cranberries between about 0° F. and about 40° F., thereby to subject them to temperature cycles the number of said cycles being at least two.

3,003,882

IMITATION ICE CREAM CONTAINING HIGHLY UNSATURATED VEGETABLE OIL

Robert M. Feat, San Valley, Calif., assignor, by mesne assignments, to Frozen Dessert Company, Hollywood, Calif., a corporation of California
No Drawing. Filed Aug. 25, 1959, Ser. No. 835,826
4 Claims. (Cl. 99-136)

1. A frozen stabilized dessert composition containing as its essential ingredients approximately:

(a) 2-22% by weight of a vegetable oil having a pour point lower than the freezing point of water and an unsaturated fatty acid content of more than about 70%,

- (b) 2-15% of a material selected from the class consisting of non-fat milk solids and non-milk protein solids,
- (c) 10-25% of sugar solids other than lactose of non-fat milk solids, and
- (d) 45-75% of water.

3,003,883

METHOD OF CURING FRESH MEAT PRODUCTS

Irwin F. Levy, Brooklyn, N.Y., assignor to First Spice Manufacturing Corp., New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 28, 1958, Ser. No. 731,112
5 Claims. (Cl. 99-159)

1. In the curing of flesh meat products the method of increasing the yield thereof which comprises curing the meat with a combination consisting essentially of conventional curing ingredients and a water-soluble edible magnesium compound whereof the magnesium compound imparts a magnesium content to the cured meat in the approximate range of 0.0075 to 0.5%.

3,003,884

FRESH MEAT PACKAGE AND METHOD

William Page Andrews, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 10, 1958, Ser. No. 720,060
2 Claims. (Cl. 99-174)

1. A method for preserving the color and condition of fresh meats which comprises wrapping fresh meat in a transparent flexible wrapper comprising a regenerated cellulose base film uniformly coated on one side only with a composition consisting essentially of polyethylene and cyclized natural rubber in the proportion of 99% to 90% by weight of polyethylene and from 1% to 10% of cyclized natural rubber, the weight of coating being within the range of from 2.5 to 25 grams per square meter of base film surface, said wrapper having a water vapor permeability within the range of 100-490 and an oxygen permeability value of at least 20, the uncoated surface of said base film being placed in contact with the fresh meat and constituting the inner surface of said wrapper.

3,003,885

TITANIUM DIBORIDE ARTICLE

Victor Mandorf, Jr., Fostoria, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed Feb. 1, 1960, Ser. No. 5,716
4 Claims. (Cl. 106-39)



1. A method of hot pressing finely divided titanium diboride comprising mixing titanium diboride having an

average particle size of around 7 microns with a fugitive binder and with from about 3 to about 10 percent by weight of a refractory nitride of an element selected from the group consisting of zirconium, boron, titanium, hafnium, vanadium, niobium, chromium, tantalum, molybdenum and tungsten, cold pressing into shape the resulting mixture under a pressure ranging from about 10 to about 20 tons per square inch, and then hot pressing the formed shape at a temperature of about 2000 to 2300° C. under a pressure of about one ton per square inch.

3,003,886

PRODUCTION OF COLORED GLASSES

Leslie F. Pither, Maumee, Ohio, assignor to Kimble Glass Company, a corporation of Ohio
No Drawing. Filed May 7, 1959, Ser. No. 811,529
5 Claims. (Cl. 106-52)

2. The method of producing colored opal glass ranging in coloration from opaque light ivory to opaque dark brown comprising the steps of providing an opal glass batch consisting essentially of the following constituents in calculated percentage by weight: 60-75% SiO_2 , 0-2% B_2O_3 , 4-9% Al_2O_3 , 10-18% Na_2O , 0-10% K_2O , 0-11% CaO , 0-2% MgO , 4-8% F_2 , 0-2% ZnO , 0-0.10% Fe_2O_3 , 0.0043-0.183% sulphur, and 0.0057-0.280% glass-forming elemental metal in powder form selected from the group consisting of silicon and aluminum, said sulfur being included in said batch in readily reducible form, melting the said batch constituents by heat-reaction in a melting chamber, effecting a reduction of at least a portion of said sulfur to metallic sulfides "in situ" within said melting chamber to effect uniform coloration of the molten glass, said elemental metal becoming oxidized and producing no coloration, and conveying the said molten glass to a point of use.

3,003,887

PROCESS FOR OBTAINING REFRACTORY ARTICLES HAVING A HIGH MULLITE CONTENT

Jean Pierre Klehl, Lyon, France, assignor, by mesne assignments, to Societe Generale de Produits Refractaires, Paris, France, a corporation of France
No Drawing. Filed Oct. 28, 1958, Ser. No. 770,023
Claims priority, application France Oct. 31, 1957
7 Claims. (Cl. 106-67)

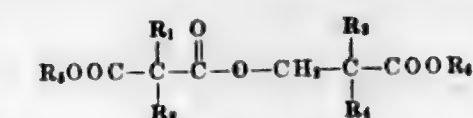
1. A process for obtaining refractory products having a high mullite content, which comprises reacting in the solid pulverulent state, at a temperature of about 1350° C. to 1450° C., from 45% to 55% by weight of kaolin clay containing from about 15 to 50% alumina and from 45% to 55% of boehmite containing, in the fired state, about 90% to 100% alumina, said kaolin clay having a specific surface as measured by the BET method (Brunauer, Emmett, Teller) greater than 25 m²/g., said boehmite having a specific surface of at least 3 m²/g.

3,003,888

PLASTIC COMPOSITIONS CONTAINING DICARBOXYLIC ACID PLASTICIZERS

John R. Caldwell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 22, 1957, Ser. No. 679,775
2 Claims. (Cl. 106-181)

1. A plastic composition consisting essentially of a plastic selected from the class consisting of cellulose esters, cellulose ethers, and polyvinyl chloride containing polymers and a compound having the following formula:



in which R_1 and R_2 are alkyl radicals containing from 6 to 8 carbon atoms and R_3 , R_4 , R_5 and R_6 are alkyl radicals containing 1 to 6 carbon atoms, as a plasticizer.

3,003,889

CELLULOSE ESTER PLASTIC COMPOSITIONS CONTAINING DI-ISOOCTYL DIPHENYL ETHER

John W. Tamblin and Gordon C. Newland, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed June 19, 1959, Ser. No. 821,363
5 Claims. (Cl. 106—188)

1. A cellulose organic acid ester plastic composition comprising a cellulose ester selected from the group consisting of cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate-propionate and cellulose acetate-butyrate, containing from 5 to 50 parts by weight, per 100 parts by weight of cellulose ester, of a mixture of ester plasticizer for the cellulose ester and di-isooctyl diphenyl ether, the ratio by weight of the amount of the ester plasticizer to the amount of di-isooctyl diphenyl ether being from 1:1 to 3:1.

3,003,890

PRODUCTION OF LUBRICATING COMPOSITIONS FROM ZIRCONIUM COMPOUNDS

Reginald S. Dean, Hyattsville, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
No Drawing. Original application Dec. 22, 1958, Ser. No. 781,946, now Patent No. 2,941,931, dated June 21, 1960. Divided and this application June 12, 1959, Ser. No. 820,841
4 Claims. (Cl. 106—286)

1. As a composition of matter chemically homogeneous flakes of graphitic texture having the chemical formula $ZrCl_2$ with a density of about 4.0 and a single phase structure in which the interplanar spacings of the atoms include those of alpha zirconium and an additional interplanar spacing of about 8-9 Å.

3,003,891

UNMOTTLED DYE TRANSFER

Howard W. Albrecht, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, Rochester, N.Y., a corporation of New York
No Drawing. Filed Nov. 19, 1958, Ser. No. 774,847
4 Claims. (Cl. 117—17.5)

1. A method of transferring a water soluble dye image pattern of powder particles from a water impermeable surface of a xerographic plate to a chemically hardened gelatin layer overlying a support base comprising rapidly absorbing the dye image into a first transfer member comprising a damp and highly absorbent smooth surfaced paper layer by placing said absorbent layer in a damp condition with the smooth surface thereof across the dye image, removing said first transfer member with the dye image imbedded therein away from the xerographic plate, and then slowly diffusing the dye image from the absorbent layer into a second transfer member comprising a chemically hardened gelatin layer overlying a support base by placing the chemically hardened gelatin layer in a damp condition against the dye carrying absorbent layer.

3,003,892

METHOD OF MARKING POLYETHYLENE AND RESULTANT ARTICLE

Albert A. Shannon, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 17, 1957, Ser. No. 690,614
2 Claims. (Cl. 117—47)

1. A method for marking polyethylene comprising marking the polyethylene by charging the polyethylene

with static electricity and applying an ink consisting of 5-15% by weight polybutylmethacrylate, 85-95% by weight Hi-Flash solvent naphtha, and a dye selected from the class consisting of Brilliant Oil Blue BMA, Oil Red O, and Yellow O 2311 to the surface of the static charged polyethylene.

3,003,893

RUBBERIZED BITUMINOUS SEALANT AND METHOD OF USE

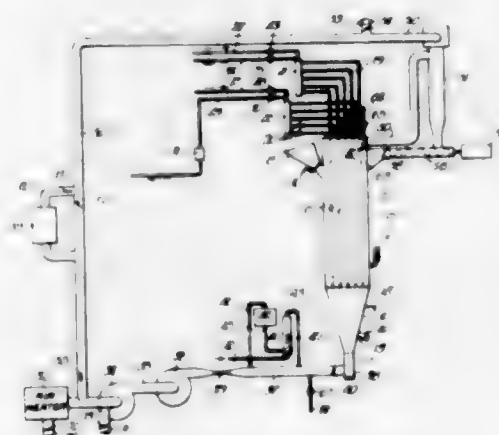
Clyde W. Mertz, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed June 3, 1957, Ser. No. 663,011
8 Claims. (Cl. 117—135)

6. A method of sealing metal-to-metal joints which comprises forming a blend composing 50 to 90 weight percent high-softening asphalt, 2 to 40 weight percent rubber-compounding reinforcing agent selected from the group consisting of carbon black and mineral filler and 1 to 30 percent by weight of a copolymer of butadiene and 2-methyl-5-vinylpyridine having incorporated therein a quaternizing amount of organic halide quaternizing agent, maintaining the temperature of said blend during mixing sufficiently low to prevent any appreciable curing reactions, applying said blend to a metal joint, and elevating the temperature of said joint sufficiently to cure said blend thereon to a tough, adherent, oil resistant seal.

3,003,894

RENDERING STARCH FLUIDIZABLE

Ralph E. C. Fredrickson, Decatur, Ill., assignor to A. E. Staley Manufacturing Co., Decatur, Ill., a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 839,274
2 Claims. (Cl. 127—71)



1. In fluidizing starch powder wherein the powdered starch is suspended by means of passing a gas there-through, the improvement which comprises adding to the starch powder a fraction of one percent by weight of $Ca_3(PO_4)_2$.

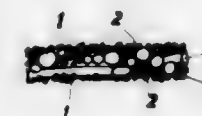
3,003,895

TOBACCO PRODUCT AND METHOD OF MAKING THE SAME

Georg F. Gruenwald, Hamburg-Wandsbek, Germany, assignor to Heier, Borgwaldt, Hamburg-Bahrenfeld, Germany
Filed Dec. 2, 1958, Ser. No. 777,618
Claims priority, application Germany Dec. 6, 1957
13 Claims. (Cl. 131—17)

1. A method of producing a tobacco-containing foil, comprising the steps of treating a relatively thin cellulose fleece in the absence of binding agents, with a mass consisting essentially of an intimate mixture of finely subdivided tobacco and of a liquid medium substantially incapable to react with either said tobacco or

said cellulosic fleece so as to form a layer of said mass walls with a composition comprising an aqueous solution with said fleece serving as reinforcing skeleton therefor; containing both citric acid and formic acid in a total and drying the thus-treated fleece so as to remove at



least the major portion of said liquid, whereby a foil consisting essentially of said finely subdivided tobacco particles and said fleece forming a reinforcing skeleton therefor is formed.

3,003,896

PROCESS AND COMPOSITION FOR TREATING ALUMINUM ALLOYS

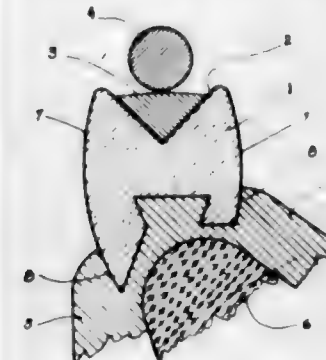
Earl W. Kendall, San Diego, Calif., assignor to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California
No Drawing. Filed Jan. 17, 1958, Ser. No. 709,442
8 Claims. (Cl. 134—3)

2. A process for cleaning an article composed of an aluminum-rich alloy which comprises the steps of subjecting the article to the action of an aqueous solution of nitric and chromic acids; rinsing the article with water; and subjecting the article to the action of an aqueous solution consisting essentially of water, citric acid and ammonium bifluoride.

3,003,897

METHOD FOR REMOVING WAX FROM ARTIFICIAL TEETH

Jacob D. Schwartz, 5710 Beacon St., Pittsburgh, Pa.
Filed Mar. 18, 1958, Ser. No. 722,162
4 Claims. (Cl. 134—4)



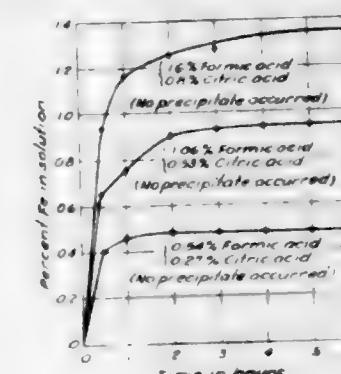
1. The method of removing wax from a sulcus on the occlusal surface of an artificial porcelain posterior tooth comprising the steps of melting by heat and mixing together a quantity of waxen material and said wax to be removed, said quantity of waxen material having a melting point of at least 185 degrees F., a shrinkage greater than 1.2 percent from 135 degrees F. to 68 degrees F. and being at least equal in volume to said wax to be removed, removing said heat to permit said molten wax to solidify, then lifting said solidified wax mixture from said sulcus.

3,003,898

SCALE REMOVAL

Cecil F. Reich, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 10, 1960, Ser. No. 48,630
7 Claims. (Cl. 134—22)

1. The method of removing scale from the interior walls of a vessel consisting essentially of contacting said



amount of between 0.2 and 20.0 percent by weight of the solution, the ratio of the amount of the citric acid to that of the formic acid being between 1:3 and 6:1.

3,003,899

REMOVAL OF SCALE DEPOSITS

John F. Eberhard and Robert B. Rosene, Tulsa, Okla., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 17, 1957, Ser. No. 659,744
2 Claims. (Cl. 134—22)

1. The method of removing iron oxide-containing scale from the interior of non-drainable tubes in superheaters and supercritical steam generators consisting essentially of dissolving between 0.5 and 7.5 percent by weight of an organic acid selected from the class consisting of citric acid and formic acid in water to make an aqueous descaling composition, forcing the solution thus made into contact with the scale in said non-drainable tubes, subjecting the solution thus in contact with the scale to a temperature of between 150° and 212° F. for a period of time of at least 1 hour, and thereafter subjecting residual acid remaining in said tubes to a temperature above 212° F. to decompose said acid and render it substantially noncorrosive.

3,003,900

METHOD FOR DIFFUSING ACTIVE IMPURITIES INTO SEMICONDUCTOR MATERIALS

Clifford A. Levi, North Hollywood, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,769
14 Claims. (Cl. 148—1.5)



1. In a semiconductor crystal body the method of reducing the concentration of a rapidly diffusing acceptor impurity which affects the electrical characteristics of said body including the steps of: placing a body of semiconductor material together with a source of halogen atoms into a first portion of a sealed container; placing a solid metallic sink into a second portion of said container; and heating said container to at least the diffusion temperature of said rapidly diffusing acceptor impurity, said temperature being greater than the melting point of said metallic sink, but below the melting point of said semiconductor material.

3,003,901 NON-CORROSIVE SOLDERING FLUX AND METHOD OF MAKING SAME

Sam Anthony Marcell, 8532 Troy Ave.,
Lemon Grove, Calif.

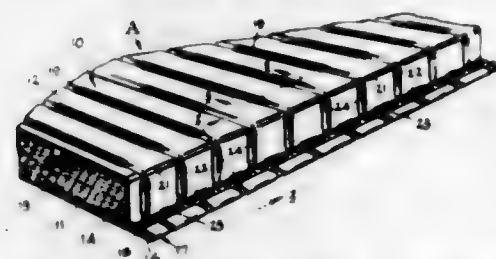
No Drawing. Filed Nov. 8, 1960, Ser. No. 67,920
2 Claims. (Cl. 148—23)

1. A non-corrosive soldering flux consisting essentially by weight, of: rosin, 32 parts; isopropyl alcohol, 32 parts; a stabilizer from the group consisting of glycerin and castor oil, 16 parts; and 1 part of a solution of camphor in alcohol in the proportion of 1 part camphor to 4 parts alcohol.

3,003,902 FLEXIBLE CONTAINED INSULATION BLANKET

Leon E. McDuff, Reseda, Calif., assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware

Filed May 11, 1956, Ser. No. 584,237
1 Claim. (Cl. 154—44)

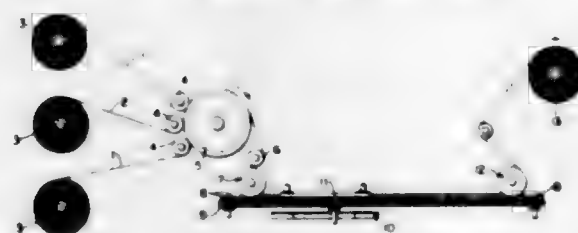


A flexible metal-clad insulation unit, comprising spaced metallic cover sheets, a layer of fibrous material filling the space between the cover sheets, one of said sheets having a base portion and laterally turned side walls terminating in outwardly directed marginal portions fixedly connected to the marginal portions of the second cover sheet, said first cover sheet having spaced substantially parallel grooves formed in said base portion and in the lateral side walls thereof, said grooves extending generally in a direction substantially perpendicular to said side walls, said second cover sheet also having spaced parallel grooves formed therein extending generally in the same direction as the grooves in said first cover sheet, said grooves in said cover sheets being directed inwardly in opposition to one another, said grooves in said cover sheets being substantially rectangular in transverse cross section whereby expanding and contracting forces will be distributed throughout different areas of the fibrous layer as the unit is flexed, and said first cover sheet having at least one groove formed therein extending in a direction substantially perpendicular to said other grooves, said perpendicularly extending groove being directed inwardly toward said second cover sheet, and portions of said first cover sheet forming the bottom of said groove being in contiguous relationship with portions of said second cover sheet.

3,003,903 STRETCHED LAMINATED FILM

Paul J. Vaughan, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Nov. 13, 1958, Ser. No. 773,708
2 Claims. (Cl. 154—50)



1. Three-ply film, the surface plies being essentially rubber hydrochloride and the intermediate ply being essentially polyvinylchloride, said film being oriented bi-

axially to substantially the same extent in both directions to at least four times its original area, the surface plies being the same thickness and composition.

3,003,904 ELECTROLUMINESCENT DEVICE MAKING

Theodore K. Riggen, Elmira, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Original application Oct. 23, 1959, Ser. No. 850,011, now Patent No. 2,970,239, dated Jan. 31, 1961. Divided and this application June 23, 1960, Ser. No. 42,739
7 Claims. (Cl. 156—3)

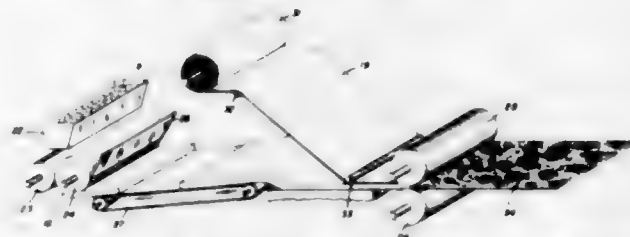


1. A method of producing an electroluminescent device which comprises depositing a layer of electroluminescent material over an electrode, forming a pattern of pillars extending from a sheet of dielectric material, sealing the sheet to the electroluminescent layer by a layer of sealing glass which is of greater thickness intermediate the pillars than under the pillars with the exposed pillar ends adhered to said sealing glass layer completing subdivision of the dielectric sheet into individual pillars, applying a variable resistance material to the pillar walls, and attaching a second electrode over the pillars.

3,003,905 DECORATIVE PLASTIC SHEETS

Anthony N. Piacente, North Arlington, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

Filed Jan. 13, 1958, Ser. No. 708,574
14 Claims. (Cl. 156—251)



1. A process for producing a smooth sheet of composition material having a variegated decoration which comprises feeding to the nip of two calender rolls a thin sheet of composition material on the surface of a substantially thicker composition sheet in a plastic state and substantially reducing the gauge of said thick sheet by passing between said calender rolls thereby pressing said thin sheet into said thick sheet while simultaneously breaking up portions of said thin sheet to expose portions of the thick sheet in the surface of the unitary calendered sheet produced.

ERRATUM

For Class 156—263 see:
Patent No. 3,003,541

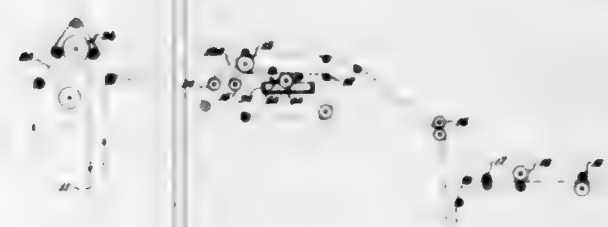
3,003,906 METHOD OF PREPARING SELF-SEALING SHINGLES

George Arthur Fasold, Mount Healthy, and Walton V. Leibbrook, Wyoming, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio

Filed Jan. 5, 1956, Ser. No. 557,563
3 Claims. (Cl. 156—269)

1. A method of preparing self-sealing granule surfaced asphalt roofing shingles, which includes the steps of moving a sheet of granule surfaced asphalt roofing

material along a path, applying an adhesive in a lengthwise stripe to said sheet as it moves along said path, and subsequently as said sheet continues along said path applying to said stripe a readily detachable tape, cutting said tape at a point slightly offset from the point at which said sheet material will be cut to define the shingle unit



edge, and then cutting said sheet material into shingle units, whereby to provide a pull tab for removing the tape from each of said shingle units during the application thereof to a roof, the edge of each shingle unit opposite said pull tab having an exposed adhesive stripe portion of a length substantially equal to the length of said pull tab.

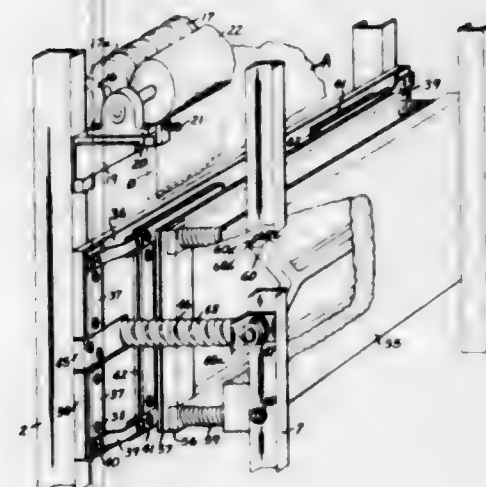
ERRATUM

For Class 156—350 see:
Patent No. 3,003,542

3,003,907 MACHINES FOR MAKING PLASTIC BAGS

Arthur E. La Fleur, Clawson, Mich.
(273 River St., Manistee, Mich.)

Filed Dec. 2, 1957, Ser. No. 700,208
5 Claims. (Cl. 156—537)



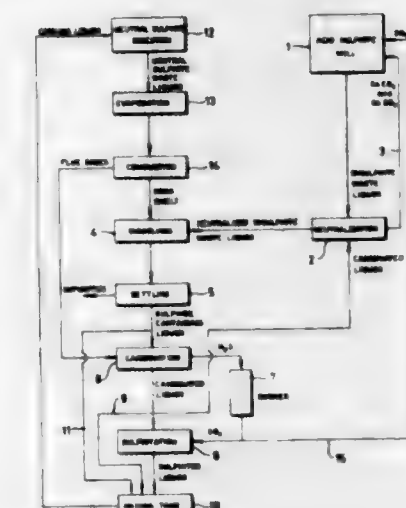
1. A machine for making bags of plastic film comprising a frame, rollers mounted thereon between which plastic film folded longitudinally upon itself to form a gusset between its opposite sides is adapted to be fed, means for intermittently rotating the rollers, a bed secured on the frame, a bolster mounted on the frame for movement towards and from the bed, means for reciprocating the bolster when the rollers are stationary, said plastic film being adapted to pass from the rollers between the bed and the bolster, a sealing iron secured to the bolster to engage the plastic film between the sealing iron and the bed, and a stationary slip sheet supported along on longitudinal margin between the bed and the bolster to project into the gusset, said sealing iron being adapted to simultaneously seal the outer sides of the plastic film on opposite sides of the slip sheet each to the side of the gusset adjacent thereto.

3,003,908 PROCESSES OF PREPARING COOKING LIQUOR FOR NEUTRAL SULPHITE DIGESTION OF CELLULOSIC MATERIAL

Nils Viktor Mannbro, Soderhamns, Sweden

(Apt. 15, 1115 2nd St. W., Cornwall, Ontario, Canada)

Filed Oct. 9, 1956, Ser. No. 614,911
4 Claims. (Cl. 162—33)



1. In a neutral sulfite digestion process for producing semi-chemical pulp from cellulosic material with a neutral sulfite cooking liquor consisting of a solution of neutral sulfite cooking solids, said solution containing sodium monosulfite as the active cooking agent and having a pH of about 6-10, which process normally results in a waste liquor having a content of dissolved combustible solids insufficient to permit an economical regeneration thereof, the improvement of increasing the content of combustible solids in said waste liquor to permit regeneration thereof by evaporation and combustion and simultaneously fortifying the cooking liquor with active cooking agent which comprises preparing the said cooking liquor from a solution in bisulfite waste liquor of said neutral cooking liquor solids, said bisulfite waste liquor supplying to said cooking liquor both combustible solids for combustion during regeneration and sulfite compounds which directly at said pH form sodium monosulfite, digesting said cellulosic material in the cooking liquor and regenerating the waste liquor from said digestion by evaporation and combustion, said bisulfite waste liquor being obtained from the independent bisulfite digestion of additional cellulosic material.

3,003,909 METHOD OF PULPING HARDWOOD BY A NEUTRAL SULFITE PROCESS

Kenneth E. Olson, Tomahawk, Wis., assignor, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Jan. 30, 1957, Ser. No. 637,147
2 Claims. (Cl. 162—36)

1. In a continuous semi-chemical pulping process of the neutral-sulfite type for producing paper pulp from hardwood chips, said process utilizing an aqueous cooking liquor comprising an alkali metal sulphite as the primary pulping agent and an alkali metal carbonate as the primary buffering agent for neutralizing organic acids released by said wood chips upon reaction with said liquor at elevated temperatures and pressures, and wherein the aqueous filtrate from a washing step of said process is separated from the pulp, concentrated, ignited to form a smelt, and the smelt dissolved in water and sulphited to form a reconstituted liquor for reuse; the improvement which comprises introducing additional amounts of alkali metal carbonate and alkali metal sulphite into said reconstituted liquor to obtain a mol ratio of buffering agent consisting of alkali metal carbonate and sulphides to alkali

metal sulphite ranging from about 1.0/0.5 to about 1.0/2.5, combining said reconstituted liquor with said hardwood chips in an enclosed digestion chamber, the alkali metal constituents of said liquor calculated as Na_2O ranging from about 4.5 to 15% by weight of wood chips calculated on an oven-dry basis, and impregnating



and reacting said hardwood chips with said cooking liquor over a period not substantially in excess of about 6 minutes while maintaining a steam pressure within said chamber of about 170 p.s.i. gauge and a temperature of about 375° F., the pH within said chamber being maintained between 8.5 and 10.0.

3,003,910

PEROXIDIC BLEACH CONTAINING SILICIC ACID ESTER

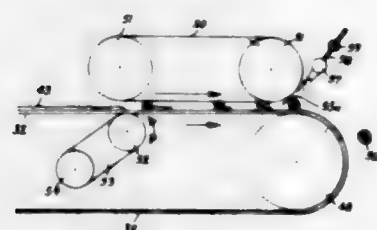
Karl Dithmar, Frankfurt am Main, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
No Drawing. Filed May 28, 1959, Ser. No. 816,369
Claims priority, application Germany May 29, 1958
13 Claims. (Cl. 162—76)

1. In a process for bleaching cellulose, wood pulp, natural and synthetic fibers in an aqueous medium containing a peroxidic bleaching compound, the step which comprises incorporating an at least partially water soluble, hydrolyzable, silicic acid ester in the aqueous medium employed for such bleaching to maintain a quantity of silicic acid ester of 1 to 30 g. per liter in said aqueous medium.

3,003,911

FIBROUS AGGREGATES AND PROCESS AND APPARATUS FOR MAKING THEM

Richard S. Lindstrom, Melrose, and Thomas Raphael, Winchester, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 7, 1958, Ser. No. 726,957
8 Claims. (Cl. 162—100)



1. Process of forming fibrous aggregates in the form of tightly wound, convoluted fibrous layers, comprising the steps of forming a water stock of fibers, laying said stock on a moving foraminous member to form a wet web,

forming said wet web into ribbons, and rolling up predetermined lengths of said ribbons before any appreciable amount of water remaining in said ribbons is removed thereby to form said aggregates.

3,003,912

MAKING PAPER FROM TETRAFLUORO-ETHYLENE POLYMERS

Edward F. Harford, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Original application Apr. 27, 1954, Ser. No. 426,041. Divided and this application Mar. 2, 1959, Ser. No. 796,219
2 Claims. (Cl. 162—157)

2. An air-pervious sheet comprising bonded polytetrafluoroethylene fibers which are randomly interlaced in multi-contact relationship wherein the binding consists essentially of sintered polytetrafluoroethylene.

3,003,913

COPPER COMPOSITIONS AND METHOD FOR MAKING THE SAME

Percy J. Rowe, 521 Pearson, Ferndale, Mich.
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,330
9 Claims. (Cl. 167—16)

1. A finely divided basic copper oxychloride sulfate material containing about 0.6% to about 1.1% ammonia, about 1.9% to about 12.6% chloride and about 1.0% to about 5.0% sulfur as sulfate, the balance being substantially a mixture of copper oxide and copper hydroxide.

3,003,914

FUMIGANT COMPOSITION CONTAINING 1,2-DIBROMO-3-CHLOROPROPANE AND 1,2,3-TRIBROMOPROPANE

Charles R. Youngston, Long Beach, and Cleve A. I. Goring, Garden Grove, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 30, 1959, Ser. No. 849,772
9 Claims. (Cl. 167—22)

8. In the practice of agricultural economy, the process which comprises treating soil with a parasiticide dosage of a composition comprising from about one to about eighteen parts by weight of 1,2-dibromo-3-chloropropane and from about two to about nineteen parts by weight of 1,2,3-tribromopropane.

3,003,915

METHOD OF DESTROYING LACTOBACILLI EMPLOYING MONO (TETRADECYLAMINE) MALONATE

Paul M. Borick, Cranford, N.J., and Martin Daniel Bratt, Edgewood, Md., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 11, 1959, Ser. No. 858,857
1 Claim. (Cl. 167—22)

A method for inhibiting the growth of lactobacilli which comprises applying to said lactobacilli a germicidally effective quantity of mono (tetradecylamine) malonate.

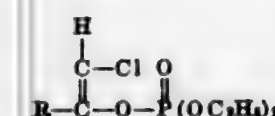
3,003,916

VINYL PHOSPHATE INSECTICIDES

Everett E. Gilbert, Morris Township, Morris County, Julian A. Otto, Lake Tamarack, and Edmund J. Rumanowski, Jersey City, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 10, 1958, Ser. No. 740,996
20 Claims. (Cl. 167—30)

9. A method of combatting insects which comprises

subjecting said insects to the action of a vinyl phosphate compound having the following general formula:



in which R is a member of the group consisting of di-chlorophenyl and 2-fluoro-5-bromophenyl radicals.

3,003,917

WOUND HEALING COMPOSITION

Jay Morton Beller and Gustav J. Martin, Philadelphia, Pa., assignors to The National Drug Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Jan. 14, 1959, Ser. No. 786,698
4 Claims. (Cl. 167—73)

1. A composition useful for increasing the rate of wound healing which comprises 1 to 25 parts by weight of relaxin, 0.2 to 5 parts by weight of a proteolytic enzyme selected from the group consisting of trypsin, chymotrypsin and ficin and 0.2 to 5 parts by weight of an amylase selected from the group consisting of alpha-amylase and beta-amylase.

3,003,918

PRODUCTION OF CERULOPLASMIN IN A PURIFIED STATE FROM BLOOD PLASMA FRACTIONS

Benjamin E. Sanders and Maurel N. Richard, North Wales, and Orin P. Miller, Broomall, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
Filed Oct. 17, 1958, Ser. No. 767,830
3 Claims. (Cl. 167—74)

1. In a method of producing ceruloplasmin from a protein fraction selected from the group consisting of Cohn alcohol fractions IV-1 and IV-1, 4, the steps which comprise stirring said fraction with an alkali metal chloride solution, centrifuging to separate the insoluble materials from the resulting ceruloplasmin containing suspension, adjusting the pH of the resulting ceruloplasmin suspension to about 4.6 to 5, adjusting the specific electrical resistance of the suspension to a value above about 250 ohms at about 0 to 4° C., suspending diethylaminoethylcellulose in a solution of alkali metal chloride and acetate, said solution having a pH of about 4.6 to 5 and having an alkali metal chloride molarity of at least about 0.025 M, mixing the solutions together causing adsorption of said ceruloplasmin on said diethylaminoethylcellulose, filtering the solution from the resulting solids, and eluting the resulting ceruloplasmin from the diethylaminoethylcellulose by increasing the molar concentration of said alkali metal chloride.

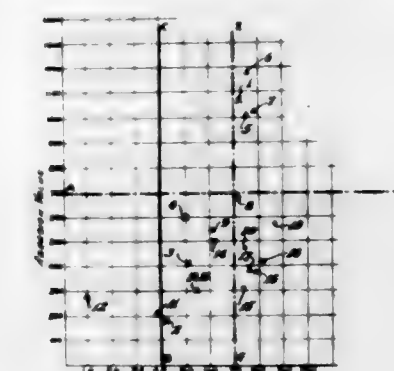
3,003,919

ALUMINA ABRASIVE MATERIALS

Robert W. Broge, Mount Healthy, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 22, 1956, Ser. No. 593,253
4 Claims. (Cl. 167—93)

3. A dentifrice comprising a sudsing agent and an abrasive, said abrasive comprising particles of alumina, from 20% to 90% of said alumina being kappa-type alumina, not more than 20% of said alumina being gamma-phase alumina, not more than 10% of said alumina being alpha-phase alumina, and the balance being sub-

771 O.G.—34



ing grade of at least 4, substantially none of said particles having diameters greater than 20 microns.

3,003,920

CHEWING GUM PREPARATION

William E. Dominick, 621 Judge Ave., Waukegan, Ill.
No Drawing. Filed Aug. 2, 1956, Ser. No. 601,657
8 Claims. (Cl. 167—93)

1. A palatable non-irritating composition for use in the oral cavity for combating odor-producing products comprising: about 5 to 40 percent by weight of a basic anion-exchange resin condensation product of a phenyl containing group, an aldehyde, and an alkylene polyamine uniformly dispersed in a chewing gum base which comprises between about 60 and 95 percent by weight of said composition, and said composition being stable and providing a mildly basic pH of at least pH 7; whereby said composition is capable of combating odor producing endogenous products of the oral cavity when brought into intimate contact therewith.

3,003,921

METHOD OF PRODUCING L-GLUTAMIC ACID FROM RACEMIC GLUTAMIC ACID

Shukuo Kinoshita, Masao Tanaka, and Yo Kato, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan
No Drawing. Filed Sept. 12, 1960, Ser. No. 55,198
Claims priority, application Japan Sept. 11, 1959
17 Claims. (Cl. 195—29)

1. A method of producing L-glutamic acid from racemic glutamic acid which comprises: (1) preparing a reaction mixture by combining with an aqueous solution of racemic glutamic acid (a) aldehyde having in a position ortho to the aldehyde group a radical coordinatable with metal, said aldehyde being a member selected from the group consisting of aromatic and heterocyclic aldehydes and (b) metallic ion coordinatable with the aldehyde; (2) subjecting said reaction mixture to the action of enzyme of *Pseudomonas cruciviae*, whereby the racemic glutamic acid is converted into L-2-pyrrolidone-5-carboxylic acid; and (3) hydrolyzing the L-2-pyrrolidone-5-carboxylic acid to L-glutamic acid.

3,003,922

METHOD FOR PRODUCING L-PYRROLIDONE-CARBOXYLIC ACID AND ITS SALT

Shukuo Kinoshita, Katsunobu Tanaka, and Sadao Akita, Tokyo, and Yoshiaki Maruta and Yoshihisa Yamamoto, Hofu-shi, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan
No Drawing. Filed Nov. 4, 1959, Ser. No. 850,754
Claims priority, application Japan Nov. 10, 1958
5 Claims. (Cl. 195—29)

1. A method for producing L-pyrrolidone carboxylic acid, which comprises acting at a pH of from 6 to 9

at least one member selected from the group consisting of *Pseudomonas cruciviae* Gray and Thornton and enzyme thereof, on an aqueous solution containing L-glutamic acid, the resulting starting reaction mixture containing from 10 to 100 mg./ml. of L-glutamic acid and recovering L-pyrrolidone carboxylic acid from the resulting mixture.

3,003,923

METHOD FOR PRODUCING L-GLUTAMIC ACID FROM RACEMIC GLUTAMIC ACID BY USE OF A MICROORGANISM

Shakuo Kinoshita, Masao Tanaka, Yuji Nagano, and Tetsuo Kishi, all of Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Chiyoda-ku, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Nov. 4, 1959, Ser. No. 850,755
Claims priority, application Japan Nov. 14, 1958
6 Claims. (Cl. 195—29)

1. A method for producing L-glutamic acid from racemic glutamic acid, which comprises converting L-glutamic acid involved in racemic glutamic acid into L-2-pyrrolidone-5-carboxylic acid by use of an enzyme material obtained by cultivation of a strain belonging to *Pseudomonas cruciviae*, separating the resulting L-2-pyrrolidone-5-carboxylic acid from D-glutamic acid, and hydrolyzing the separated L-2-pyrrolidone-5-carboxylic acid to yield L-glutamic acid.

3,003,924

METHOD OF MAKING GLYCERINE FROM LIGNIFIED CELLULOSE

Alfred M. Thomsen, 265 Buckingham Way, Apt. 402, San Francisco, Calif.
Filed May 4, 1959, Ser. No. 810,956
2 Claims. (Cl. 195—38)



1. The method of making glycerine from lignified cellulose which comprises; digesting said lignified cellulose with a solution of neutral sulphite of an alkali metal under the conventional limitations for such a digestion until the resident cellulose shall have been substantially freed from incrusting material; separating said cellulose from said spent cooking liquor; converting the separated cellulose into sugars by heating with an acid medium equivalent to approximately 1/2% of sulphuric acid in an incomplete reaction and separating the sugar solution from the residual cellulose; fermenting the sugar solution thus formed in the presence of at least as much magnesium sulphite as there is sugar in said solution with a yeast freshly made at a later step and with recycled yeast and sulphite drawn from the last vessel of a series of fermenters and returned to the first vessel, the whole constituting a continuous fermentation cycle; controlling the pH of the circulating fluid by the alternate addition of ammonia and of sulphur dioxide and

maintaining said pH between 4.5 and 6.5; continuing said fermentation until the fluid in the last vessel shall be substantially free from hexose sugars and then withdrawing substantially the same amount in volume as the entering sugar solution; separating yeast and suspended magnesium sulphite from the portion thus withdrawn and further purifying the residual solution by adding sufficient calcium hydroxide to precipitate calcium sulphite and magnesium hydroxide and separating said precipitate; removing the pentose sugars still resident in said purified solution by intense aeration in the presence of yeast and recycling the yeast thus produced to the fermentation step; dividing the resultant solution, containing glycerine, ethanol, and acetaldehyde, into two parts; recycling one part as the liquid medium in saccharification, thus increasing the glycerine content of the fermenting mass, and passing the other part to a glycerine still for recovery of the resident glycerine; evaporating the spent cooking liquor from which the cellulose was previously separated, using steam generated by the release of pressure in the saccharification step; commingling the condensate from said evaporation with the spent air used in aeration while removing pentose sugars to form a dilute acetic acid for subsequent use; fusing the concentrated spent liquor, after said evaporation, with additional caustic alkali at a finishing temperature of approximately 230° C. and leaching with the dilute acetic previously obtained to form a solution of caustic alkali and alkali metal acetate; crystallizing out the acetate and re-cycling the caustic to the fusion step; roasting the residue to form an ash consisting mainly of alkali metal sulphate and carbonate; dividing a solution of said ash in two parts; causticizing one part with lime and re-cycling the causticized solution to the fusion step; commingling the remainder with calcium carbonate from said causticizing step, with the mixture of calcium sulphite and magnesium hydroxide obtained in purifying the pentose sugar solution, and with sulphur dioxide; separating the calcium sulphate formed; purifying the resulting solution by adding alkali carbonate with attendant separation of magnesium carbonate, thus obtaining a regenerated cooking liquor.

3,003,925

METHOD OF PRODUCING L-GLUTAMIC ACID BY FERMENTATION

Shakuo Kinoshita, Shigeo Ueda, and Sadao Akita, all of Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan
No Drawing. Filed June 21, 1960, Ser. No. 37,593
Claims priority, application Japan May 17, 1956
15 Claims. (Cl. 195—47)

1. A method for producing L-glutamate selected from the group consisting of L-glutamic acid and a salt thereof which comprises aerobically culturing *Micrococcus glutamicus* in a culturing medium containing carbohydrate, nitrogen source and inorganic material, controlling the pH value of the culturing medium within the range of from about 6 to about 9 by the addition of neutralizing agent, whereby a substantial amount of L-glutamate is accumulated in the culturing medium, and recovering said L-glutamate.

3,003,926

SYNTHESIS OF ALKALOIDS

Frank Welsenborn, Middlebush, and Samuel C. Pan, Metuchen, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Original application Apr. 25, 1958, Ser. No. 730,796. Divided and this application Apr. 29, 1960, Ser. No. 30,705
4 Claims. (Cl. 195—51)

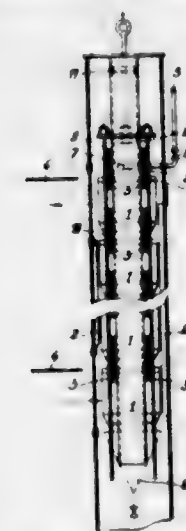
1. A process for preparing an 18-hydroxyyohimbine which comprises subjecting an 18-unsubstituted yohim-

bine to the action of enzymes of a microorganism selected from the group consisting of *Streptomyces aureofaciens*, *Streptomyces rimosus*, *Streptomyces antibioticus*, *Streptomyces fradiae*, *Streptomyces olivaceus* and *Streptomyces roseochromogenus* in the presence of oxygen.

3,003,927

METHOD AND APPARATUS FOR CONTINUOUSLY REFINING OR IMPROVING MINERAL OILS BY MEANS OF A SOLID ADSORBENT

Dieter Ernst August Jänchen, Neu-Altschwil, Switzerland, assignor to Camag Chemieerzeugnisse und Adsorptionstechnik A.G., Basel, Switzerland
Filed July 29, 1957, Ser. No. 674,826
Claims priority, application Germany Sept. 4, 1956
2 Claims. (Cl. 196—46)



1. An apparatus for the refining of a liquid petroleum product including: an elongated generally vertically disposed zone wherein refining of the petroleum is effected by adsorption; a plurality of individual open-top, foraminous-bottom container having solid side walls for confining a granular adsorbent material while it is conducted through the refining zone; a peripheral flange on each of said containers at its upper end; means for introducing said container means, one at a time, into the lowermost portion of the refining zone; means for elevating said containers comprising a supporting frame suspended in said refining zone and including a plurality of downwardly extending rods depending from said frame for substantially the length of the refining zone; pawls pivotally mounted on said rods for engaging said peripheral flange and for simultaneously advancing each of the container means stepwise upwardly through the refining zone; means for intermittently reciprocating said rods vertically; means for limiting the travel of said frame and said rods to slightly more than the height of one container; at each step; means for admitting a liquid to be refined into the uppermost of said open-top, foraminous bottom containers; means for withdrawing said uppermost container from the refining zone; means for withdrawing refined liquid product from the bottom of the refining zone; and vertically extending guide rails secured to an external support adjacent to said refining zone for maintaining the containers in vertical alignment.

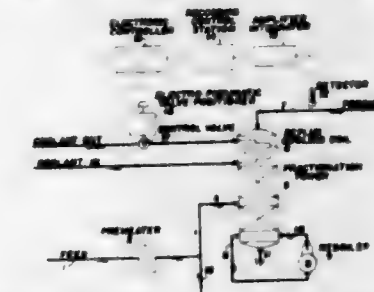
3,003,928

FRACTIONATING APPARATUS

Ronald R. Proctor, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 13, 1956, Ser. No. 621,808
6 Claims. (Cl. 202—40)

1. Apparatus for automatically and continuously effecting separation of a component of a fluid composition containing at least one other component comprising a separating chamber, a conduit for feeding fluid to said

chamber, a conduit for withdrawing a fluid component from said chamber, a radioactive detector adjacent said withdrawal conduit, conduit means operatively connected to said chamber through which is adapted to flow fluid



which affects the operation of said separation, a valve in said conduit means, said valve being operatively connected to said detector so as to be motivated to opening or closing position in accordance with the radioactivity of the fluid passing through the conduit to which said detector is adjacent.

3,003,929

AZEOTROPIC DISTILLATION WITH BY-PASSING OF REFLUX OR VAPOR

Albert G. Bright, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 30, 1959, Ser. No. 843,440
2 Claims. (Cl. 202—40)



1. The process of separating a solvent mixture comprised of ethylene dichloride, propylene dichloride, cyclohexane, acetone and n-butanol which comprises feeding a solvent mixture into an intermediate section of a distillation column having at least 50 plates, also feeding water into the column at an intermediate section below the point of introduction of the solvent mixture, supplying heat to the lower part of the column whereby a fraction comprised of cyclohexane, acetone and water is distilled off the top of the column, condensing this fraction and returning a portion of the condensate to the column as reflux, withdrawing a fraction from the side of the column, said fraction being comprised essentially of ethylene dichloride and propylene dichloride and in the vicinity of this side withdrawal by-passing a part of the column contents around the plate section where the side fraction is withdrawn whereby the amount of butanol contamination in the side fraction is reduced.

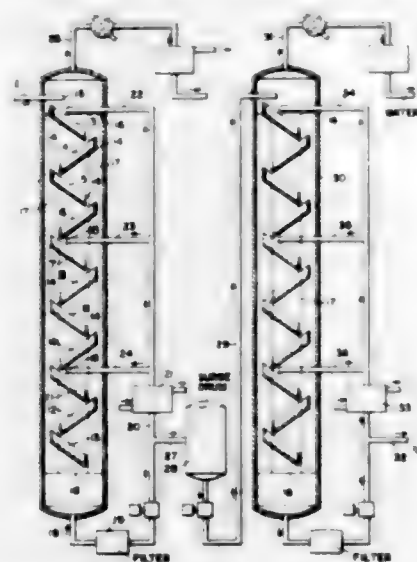
3,003,930

PROCESS OF STRIPPING A LATEX SOLUTION

Duane Wood Pugh, Baton Rouge, La., and Sydney Lip-ton, Bayonne, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 21, 1958, Ser. No. 749,994
2 Claims. (Cl. 202—46)

1. Process for stripping a liquid from a polymer latex which comprises passing said latex downwardly in alternately oblique directions through a stripping zone, with-

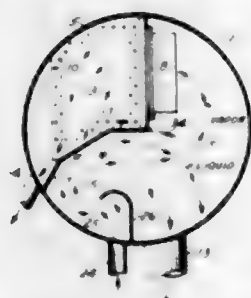
drawing stripped latex from the bottom of said stripping zone, heating a portion of said withdrawn latex to a tem-



perature between 150° and 200° F., and returning it to the stripping zone at spaced points therein to provide the sole means of introducing heat to said stripping zone.

3,003,931 FOG-SCRUBBING ARRANGEMENT FOR FLASH DISTILLING PLANT

Eugene Porter Worthen, Braintree, and Fenner Smith Barbour, Wollaston, Mass., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Jan. 19, 1959, Ser. No. 787,417
27 Claims. (Cl. 202-53)



15. A method of scrubbing fog from the vapor produced by the flash evaporation of superheated feed, comprising flashing superheated feed to produce a mixture of vapor and unflashed feed, propagating a first curtain-like spray of unflashed feed, passing said vapor thorough said first curtain-like spray of unflashed feed, passing unflashed feed from said first curtain-like spray along an arc-like path and propagating a second curtain-like spray of unflashed feed, and passing said vapor through said second curtain-like spray of unflashed feed.

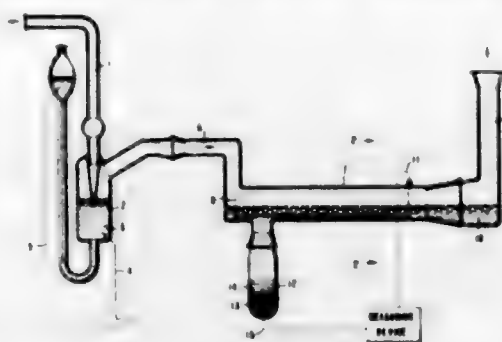
3,003,932 APPARATUS FOR THE GALVANIC ANALYSIS OF HYDROGEN

Harold Joseph Frey, Jr., and Roger Conant Voter, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 28, 1956, Ser. No. 574,412
3 Claims. (Cl. 204-1)

1. A method for measuring the hydrogen concentration in hydrocarbon gas streams containing from 1 to 1000 parts per million of hydrogen, and containing no hydrogen oxidizing agents, which comprises passing a gas stream containing from 1 to 1000 parts per million of hydrogen into a hollow receptacle containing a noble metal sheet anode having a surface coated with a colloidal deposit of a noble metal, an electrolyte solution, and a mercury-mercurous chloride cathode, said electrolyte being in contact with said anode and said cathode,

contacting said gas stream with the metal anode above the level of said electrolyte, and indicating by means of an external circuit and a current measuring device the



current produced as a result of said gas stream contacting said anode, whereby a measure of the concentration of the hydrogen in said gas stream is obtained.

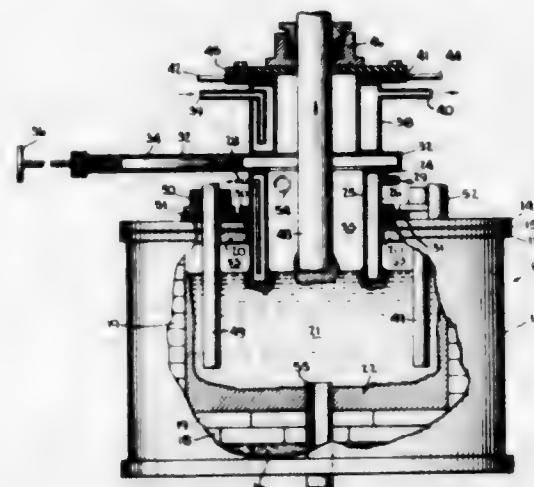
3,003,933 ELECTRO-PLATING OF METALS

James Thomas Nesbitt Atkinson, Dartmouth, Nova Scotia, Canada, assignor to Her Majesty the Queen in the right of Canada as represented by the Minister of National Defence
No Drawing. Filed Apr. 21, 1958, Ser. No. 731,073
3 Claims. (Cl. 204-49)

1. A method of electro-plating nickel directly onto the surface of a clean cathodic metal member selected from the group consisting of aluminum and aluminum base alloys which comprises: immersing an anode and said cathodic metal member into a plating bath solution having a pH not over about 4.0, said solution containing dissolved therein per litre about 100 to 400 grams of crystalline nickel sulphate, about 300 to 75 millilitres of nickel fluoborate solution (specific gravity 1.49), from about ¼ to 1 gram of crystalline nickel chloride, and from about 10 to 40 grams of boric acid, and passing an electric current through said solution between said cathodic metal member and said anode until a nickel plate of the desired thickness has been deposited on said cathodic metal member.

3,003,934 PROCESS FOR THE ELECTROLYTIC PRODUCTION OF METALS

Harvey L. Slatin, New York, N.Y., assignor to Timax Associates, New York, N.Y., a partnership of New York
Filed Jan. 8, 1959, Ser. No. 785,597
28 Claims. (Cl. 204-64)

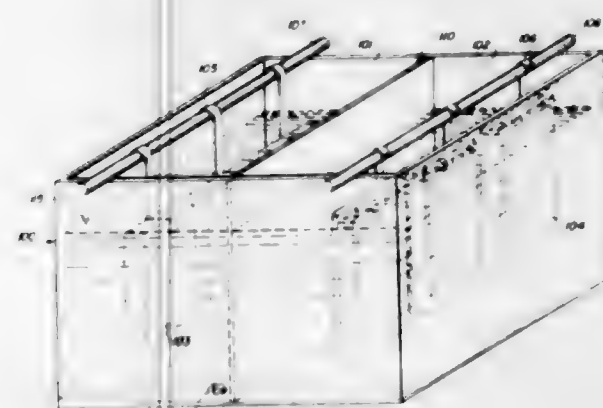


1. An electrolytic process for the production of a metal of the group IVB metals in excess of 99% purity and in the form of large, high purity crystals of metal comprising a fused electrolyte consisting essentially of a few percent of at least one alkaline earth oxide and at least one halide of the group of alkaline earth halides

forming a high proportion of the electrolyte maintaining separation of the catholyte from the anolyte, providing at least an effective amount of one oxide of the multi-oxides of the group IVB metals in the catholyte compartment to deposit the group IVB metal on the cathode, maintaining the temperature of the bath above the melting point to insure complete solution of the metal oxide and to impart desired fluidity to the solution, electrolyzing the electrolyte between a solid anode and a solid cathode with a high cathode current density to deposit the group IVB metal on the cathode as large crystals of metal at a purity in excess of 99%.

3,003,935 ARGENTOUS OXIDE, POWDER AND METHOD FOR MAKING SAME

Kenneth N. Brown, Teaneck, N.J., assignor, by mesne assignments, to Yardney International Corp., New York, N.Y., a corporation of New York
Filed Sept. 8, 1958, Ser. No. 759,554
6 Claims. (Cl. 204-96)



1. The process for electrochemically preparing substantially pure argentous oxide which comprises electrolyzing a silver anode against an inert cathode through an interposed electrolyte permeable separator in a liquid electrolyte comprising an alkaline solution of a salt having an anion which forms soluble salts with silver compounds, maintaining at said cathode a hydrostatic pressure greater than that at said anode, and collecting the silver oxides which precipitate near the anode.

3,003,936 LEACHING METHOD FOR USE IN THE PRODUCTION OF ELECTROLYTIC MANGANESE

Michael C. Carosella, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Sept. 11, 1957, Ser. No. 683,231
4 Claims. (Cl. 204-105)

1. In a process for the production of solutions suitable for employment as cell feed in the electrowinning of metallic manganese wherein a manganese-bearing slag containing substantial amounts of silica and alumina is leached with an aqueous acidic solution to provide a leach liquor high in manganese values, the leach liquor so produced is neutralized by the addition of a base, and the neutralized leach liquor is separated from the precipitates produced during the neutralization, the improvement which comprises effecting said leaching by adding said aqueous acidic solution to said manganese-bearing slag at a rate such that the pH of the resultant leach liquor is lowered to an acidic value above about 3.5 and maintained above said acidic value during such lowering, and thereafter maintaining the leach liquor at an acidic value above about 3.5 before neutralization whereby the precipitates produced during the neutralization are substantially free from gelatinous precipitated silica and alumina.

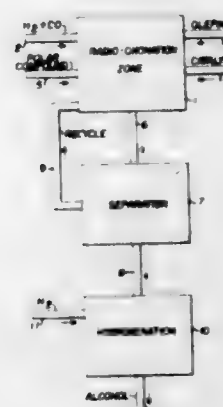
3,003,937 LUBRICANTS

Peter J. Lucchesi, Cranford, and Robert B. Long, Wana-massa, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 25, 1956, Ser. No. 599,908
6 Claims. (Cl. 204-154)

1. A lubricating oil composition comprising a major proportion of a lubricating oil base stock and in the range of about 0.1 to about 4 wt. percent of an additive prepared by irradiating a paraffin wax fraction containing at least 80 wt. percent of paraffin hydrocarbons having from 21 to 32 carbon atoms with high intensity ionizing radiation to an extent that said fraction receives a dosage above at least 10⁴ ergs/gm./sec. for a time sufficient to convert at least 75 weight percent of said fraction to an oil soluble rubbery additive material, said lubricating oil composition having a viscosity in the range of 40 to 300 S.S.U. at 210° F., a boiling point in the range of 700 to 1200° F., a viscosity index above 100, and a pour point below 10° F.

3,003,938 RADIO-OXONATION OF OLEFINS

John Rehner, Jr., Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 652,734
2 Claims. (Cl. 204-162)



1. A process which comprises reacting a terminally unsaturated monoolefin having in the range of 2 through 20 carbon atoms per molecule with 0.01 to 100 moles of carbon monoxide and hydrogen in the presence of 0.05 to 2 weight percent of a carbonylation catalyst comprising the salt of a metal selected from the group consisting of cobalt, rhodium and iron, and in the presence of high energy ionizing radiation at a dose rate above 10⁻³ kwh./hr./lb. of olefin feed, at a pressure in the range of 200 to 10,000 p.s.i.a., and at a temperature in the range of 60° to 250° C., until 10⁻³ to 10 kwh. of radiant energy per pound of olefin feed have been absorbed, the relative induction period being less than 60% and the relative reaction rate being greater than 150%, and separating an oxygenated product having one more carbon atom than said monoolefin.

3,003,939 METHOD AND APPARATUS FOR PRODUCING AND ENHANCING CHEMICAL REACTION IN FLOWABLE REACTANT MATERIAL

Auguste L. M. A. Rowy, Scarsdale, N.Y., and Charles H. Peterson and Green B. Glascock, Erie, Pa., assignors to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1955, Ser. No. 531,626
11 Claims. (Cl. 204-164)

1. The method of producing and enhancing chemical reaction in flowable reactant material, which comprises causing the reactant material to flow as a fluid current

along a defined flow path, establishing an electrical discharge having a field pattern axial to the direction of flow through the flowing material within the flow path, and passing the flowing reactant material as a whole in a unidirectional and continuous fluid current through a converging-diverging nozzle which converges from and is continuous with the walls of said flow path upstream of the nozzle and diverges to and is continuous with the walls of said flow path downstream from the nozzle, said converging-diverging nozzle being free throughout its entire converging-diverging length from obstruction and



from discontinuities in the walls thereof which would modify the characteristic flow pattern of the nozzle constituting a part of said flow path, at least a portion of the electrical discharge overlapping a segment of said nozzle, thereby establishing in said flowing material those interrelated, controlled conditions of pressure, temperature and velocity which are characteristic of said unobstructed converging-diverging nozzle, said conditions being produced at a specific desired position within the discharge region whereby a desired reaction is enhanced and undesired reactions are suppressed.

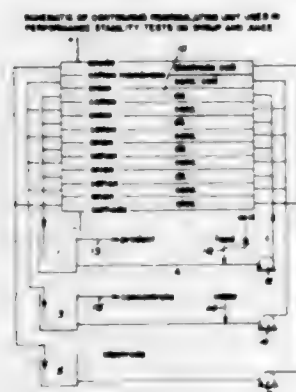
3,003,940

METHOD OF PREVENTING FOULING OF ANION SELECTIVE MEMBRANES

Edward A. Mason, Lexington, Mass., and Jacob A. Marinsky, Eggertville, N.Y., assignors to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Continuation of abandoned applications Ser. No. 558,283 and Ser. No. 558,284, Jan. 10, 1956. This application Jan. 5, 1961, Ser. No. 80,957

12 Claims. (Cl. 204-180)



1. The method of preventing fouling of anion selective membranes in the demineralization of aqueous solutions containing minor quantities of inorganic salts to be removed therefrom and constituents which are susceptible of fouling anion selective membranes comprising: passing said solution as a diluting stream through the diluting chambers of an electrochemical unit having a plurality of concentrating and diluting chambers defined between alternate anion selectively permeable and cation selectively permeable membranes, passing a second aqueous solution as a concentrating stream through the alternate concentrating chambers, adding acid to the influent concentrating stream sufficient to maintain the pH of said stream below 6.5 throughout its course through said concentra-

tion chambers and passing a direct current in series transversely through said membranes and aqueous streams to effect dilution and concentration of said alternate streams.

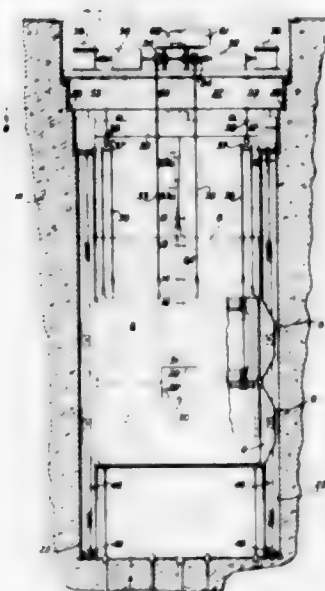
3,003,941

NUCLEAR REACTOR

Otto Drolshagen, Milan, Italy, and Roy E. Manoli, Silver Spring, Md., assignors, by mesne assignments, to Allis-Chalmers Manufacturing Company, a corporation of Delaware

Filed Nov. 12, 1958, Ser. No. 773,392

8 Claims. (Cl. 204-193.2)



1. In a nuclear reactor, a core of fissionable material, a graphite thermal column to provide a source of thermal neutrons, lead gates and boral curtains interposed between said core and thermal column and having recesses therein defining openings therethrough for the passage of neutrons from the core to the thermal column, shutters movable into and out of registry with their respective openings, and means to move said shutters.

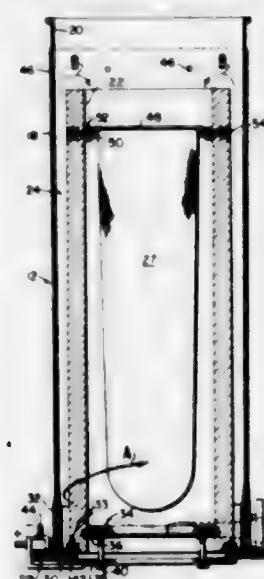
3,003,942

ELECTROLYTIC CELL FOR RECOVERY OF SILVER FROM SPENT PHOTOGRAPHIC FIXING BATHS

Nicholas J. Cedrone, Needham Heights, Mass., assignor to Hispeed Equipment Inc., New York, N.Y., a corporation of New York

Filed Dec. 16, 1954, Ser. No. 475,639

2 Claims. (Cl. 204-272)



1. An electrolytic cell for recovery of silver from a spent photographic fixing bath comprising a cylindrical

3,003,944

HYDROCARBONS OBTAINED BY DESTRUCTIVE DISTILLATION OF GILSONITE AND PRODUCTS MADE THEREFROM

Nathan W. Davis, 3474 S. 23rd St., Salt Lake City, Utah

No Drawing. Filed Aug. 15, 1956, Ser. No. 604,085

6 Claims. (Cl. 208-22)

5. A brownish black liquid having a specific gravity of 0.52 at 70° F., which is recovered from the destructive distillation of Gilsonite, having a melting point range of 320° F. to 350° F., said fraction being separated at 430° F. to 438° F.

3,003,945

SEPARATION OF ASPHALT-TYPE BITUMINOUS MATERIALS WITH ACETONE

Leo Garwin, Oklahoma City, Okla., assignor to Kerr-McGee Oil Industries, Inc., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 435,351, June 8, 1954. This application Nov. 5, 1958, Ser. No. 771,963

8 Claims. (Cl. 208-45)

1. A method of separating an asphalt-type bituminous material including asphaltenes into at least two fractions, which method comprises separating a heavy fraction containing essentially asphaltenes from a lighter solvent fraction containing dissolved residual asphalt-type bituminous material by treating in a single treating zone at elevated temperature and pressure each volume of the asphalt-type bituminous material with at least two volumes of a solvent consisting essentially of acetone, the temperature of treatment being between 200° F. and about 400° F. and the pressure being at least equal to the vapor pressure of the solvent at the highest temperature present in the treating zone, the separated heavy asphaltene fraction being in the liquid phase and having a viscosity whereby it is freely flowable from the treating zone, and withdrawing the liquid phase asphaltene fraction from the treating zone.

3,003,946

SEPARATION OF ASPHALT-TYPE BITUMINOUS MATERIALS UTILIZING ALIPHATIC ALCOHOLS OF 3 THROUGH 4 CARBON ATOMS

Leo Garwin, Oklahoma City, Okla., assignor to Kerr-McGee Oil Industries, Inc., a corporation of Delaware

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,593

17 Claims. (Cl. 208-45)

1. A method of separating an asphalt-type bituminous material including asphaltenes into at least two fractions which comprises treating each volume of the asphalt-type bituminous material with at least two volumes of a solvent consisting essentially of at least one aliphatic alcohol containing from 3 through 4 carbon atoms, inclusive, and admixtures thereof at elevated temperature and pressure to form a heavy fluid phase asphaltene fraction and a lighter solvent fraction containing dissolved residual asphalt-type bituminous material, the temperature of treatment being between about 50° F. below the critical temperature of the solvent and about 200° F. and the pressure being at least equal to the vapor pressure of the solvent at the temperature selected, and separating the resulting heavy fluid phase asphaltene fraction while in the fluid phase from the lighter solvent fraction containing dissolved residual asphalt-type bituminous material.

3,003,947

SEPARATION OF ASPHALT-TYPE BITUMINOUS MATERIALS UTILIZING ALIPHATIC CARBOXYLIC ACID ESTERS CONTAINING 2 THROUGH 3 CARBON ATOMS

Leo Garwin, Oklahoma City, Okla., assignor to Kerr-McGee Oil Industries, Inc., a corporation of Delaware

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,611

17 Claims. (Cl. 208-45)

1. A method of separating an asphalt-type bituminous material including asphaltenes into at least two fractions

anode, a cylindrical cathode surrounding the anode, an upstanding sleeve of small height relative to the anode and surrounding the bottom portion of the anode, a horizontal flange extending inwardly from the sleeve below the anode, means for supporting the anode on the flange and for insulating it therefrom, means for securing the anode and the flange in a rigid relationship, said securing means comprising two locking rings, means for mounting one locking ring internally of the anode and the other below the flange, and means for rigidly connecting the locking rings together, a tangential liquid inlet member secured to the sleeve to introduce fixing solution into the annular space between the sleeve and the anode, the cathode being of a material on which silver plates out but to which silver does not adhere, means for removably mounting the cathode in electrically conducting relation to the sleeve, and terminal means connected with the sleeve and with the anode.

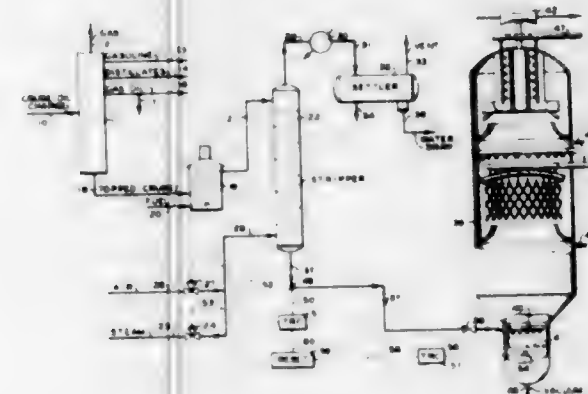
3,003,943

ASPHALT MANUFACTURE

Donald M. Little, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 28, 1958, Ser. No. 724,765

4 Claims. (Cl. 208-4)



1. A method of producing asphalt which comprises fractionating crude oil to form a topped crude, heating said topped crude at a temperature sufficient to produce asphalt but which is below the temperature which will produce an appreciable amount of coking, passing the thus heated topped crude to a stripping zone, counter-currently contacting said topped crude in said stripping zone with air and steam concomitantly, said air being in sufficient amount to maintain the temperature of the topped crude leaving said stripping zone at a first predetermined value in the range of about 700 to 770° F., sensing the exit temperature of said topped crude leaving said stripping zone, producing a first signal in response to said topped crude exit temperature, varying the amount of air in said contacting step in response to said first signal to maintain said first predetermined value by increasing the air flow to increase said exit temperature and decreasing the air flow to decrease said exit temperature, varying the amount of steam in said contacting step in response to said first signal to maintain the combined air and steam input at an approximately constant volume, passing the thus air blown and steam stripped topped crude to a vacuum distillation zone wherein a vacuum residuum of asphalt specification is produced, sensing the temperature of said vacuum residuum, producing a second signal in response to said residuum temperature, adjusting said first predetermined value to maintain the temperature of said vacuum residuum at a second predetermined value in the range of about 650 to 750° F., and withdrawing an asphalt product.

which comprises treating each volume of the asphalt-type bituminous material with at least two volumes of a solvent consisting essentially of at least one aliphatic carboxylic acid ester containing from 2 through 3 carbon atoms, inclusive, and admixtures thereof at elevated temperature and pressure to form a heavy fluid phase asphaltene fraction and a lighter solvent fraction containing dissolved residual asphalt-type bituminous material, the temperature of treatment being between about 50° F. below the critical temperature of the solvent and about 200° F. and the pressure being at least equal to the vapor pressure of the solvent at the temperature selected, and separating the resulting heavy fluid phase asphaltene fraction while in the fluid phase from the lighter solvent fraction containing dissolved residual asphalt-type bituminous material.

3,003,948

MULTICATALYST DEHYDROGENATION, SINGLE CATALYST DECONTAMINATION AND AROMATIZATION

Louis P. Evans, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,789
6 Claims. (Cl. 208—65)



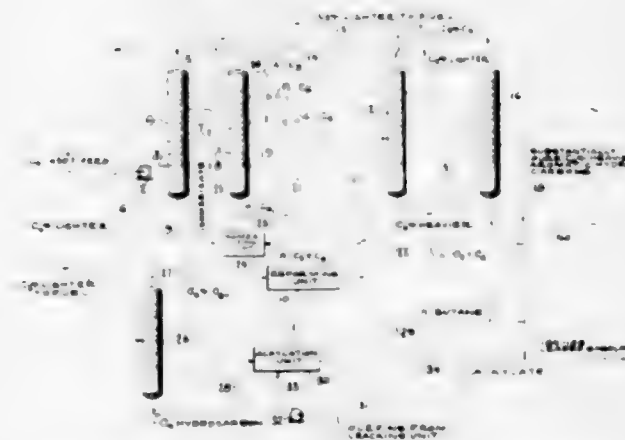
1. A method of pretreating and reforming naphtha which comprises flowing hot, active, nitrogen-insensitive, sulfur-insensitive particle-form first reforming catalyst successively through a first reaction zone and a third reaction zone, said particle-form first reforming catalyst having hydrodecontaminating capabilities, at least one component of said first reforming catalyst forming a sulfide stable under the conditions of temperature and hydrogen partial pressure in said first reaction zone and oxidizable to a gaseous sulfur compound during regeneration, in said first reaction zone contacting said flowing first reforming catalyst with feed naphtha containing more than 1 p.p.m. of nitrogen at a temperature of at least 800° F. to obtain a first reaction zone effluent comprising ammonia, hydrogen sulfide, hydrogen, and C₁ and heavier hydrocarbons, in a second reaction zone contacting at least the C₂ and heavier hydrocarbons of said first reaction zone effluent with particle-form nitrogen-sensitive platinum-group metal in the presence of hydrogen and not more than 1 p.p.m. of nitrogen based upon the naphtha feed to said first reaction zone under reforming conditions of temperature, pressure, and liquid hourly space velocity to dehydrogenate at least 85 percent of the naphthenes in the naphtha feed to said first reaction zone to aromatics to obtain a second reaction zone efflu-

ent comprising hydrogen, and C₂ and heavier aromatics and paraffins, in the aforesaid third reaction zone, without separation of any substantial portion of said reaction zone effluent, contacting substantially all of said second reaction zone effluent with said particle-form first reforming catalyst discharged from said first reaction zone at substantially paraffin dehydrocyclizing temperature under paraffin dehydrocyclizing conditions of temperature, pressure, and catalyst-to-oil ratio to dehydrocyclize paraffins in said second reaction zone effluent and to substantially complete dehydrogenation of naphthenes in said second reaction zone effluent to obtain a third reaction zone effluent, cooling said third reaction zone effluent to a temperature at which C₄ and heavier hydrocarbons condense, separating uncondensed third reaction zone effluent comprising hydrogen and C₁ to C₃ hydrocarbons from condensed C₄ and heavier hydrocarbons, and recycling said uncondensed third reaction zone effluent to at least said first reaction zone.

3,003,949

PROCESS FOR MANUFACTURING 104-106 R.O.N. LEADED GASOLINE

Winton W. Hamilton, Pittman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed June 10, 1959, Ser. No. 819,410
2 Claims. (Cl. 208—79)



1. A method of producing gasoline having a leaded octane number of at least 104-106 (research +3 cc. TEL) which comprises fractionating a C₄ and heavier fraction or naphtha having an end boiling point not greater than 450° F. to provide a first fraction comprising C₄ and lighter hydrocarbons, a second fraction comprising C₅ to C₆ hydrocarbons, and a third fraction comprising hydrocarbons heavier than C₆ hydrocarbons, reforming the aforesaid third fraction in the presence of hydrogen and an aromatizing reforming catalyst under reforming conditions of temperature, pressure, and space velocity to convert substantially all of the hydrocarbons in the aforesaid third fraction to aromatic hydrocarbons and C₈ and lighter paraffinic hydrocarbons to obtain a reformer effluent comprising hydrogen and C₁ and heavier hydrocarbons, separating the aforesaid reformer effluent into recycle gas comprising hydrogen and C₁ and C₂ hydrocarbons, a fourth fraction comprising C₃ and lighter hydrocarbons, a fifth fraction comprising C₄ and lighter hydrocarbons, a sixth fraction comprising C₅ and C₆ hydrocarbons, a seventh fraction comprising substantially pure aromatic hydrocarbons containing not more than 10 percent by volume of paraffins and having an end boiling point of about 380° to 430° F., and an eighth fraction comprising hydrocarbons boiling above about 380° to 430° F., isomerizing all of the aforesaid C₃ and C₄ fractions comprising the aforesaid second fraction and the aforesaid sixth fraction to produce an ultimate isomerized product (P) containing less than 8 percent by volume of normal paraffins, fractionating the aforesaid

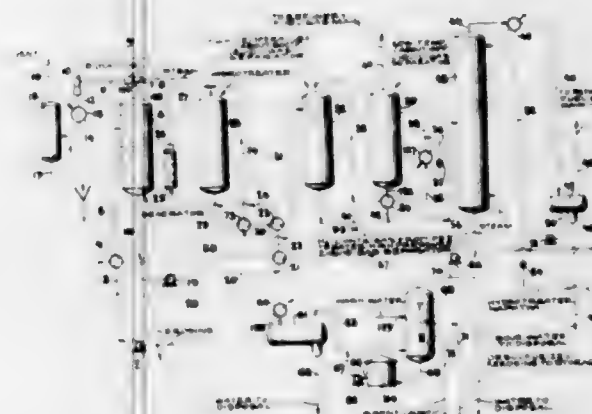
first fraction and the aforesaid fifth fraction to obtain a ninth fraction comprising n- and iso-C₄ hydrocarbons, alkylating the iso-C₄ hydrocarbons in the aforesaid ninth fraction with olefins to obtain an alkylate, mixing said alkylate, the aforesaid ultimate isomerized product containing less than 8 percent by volume of normal paraffins, the aforesaid seventh fraction comprising substantially pure aromatics containing not more than 10 percent by volume of paraffins, and normal C₄ hydrocarbons obtained from the aforesaid alkylation of iso-C₄ hydrocarbons in amount to provide the required volatility and vapor pressure to produce a gasoline blend having a leaded octane number of at least 104 (research +3 cc. TEL).

3,003,950

PRODUCING STABILIZED KEROSENE AND THE LIKE WITH REDUCED HYDROGEN CIRCULATION

Lawrence B. Van Ingen, Glenhead, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Oct. 9, 1958, Ser. No. 766,262
3 Claims. (Cl. 208—89)



1. A process for upgrading a plurality of hydrocarbon mixtures of substantially different composition which comprises admixing deaerated hydrocarbon mixture boiling above the 90 percent point of light naphtha and below the 10 percent point of heavy gas oil and containing not more than 20 p.p.m. of oxygen with hydrogen-containing pretreater gas in the proportion of about 200 to about 400 s.c.f. of hydrogen per barrel of the aforesaid hydrocarbon mixture at a hydrotreating pressure of about 350 to 430 p.s.i.g. to form hydrotreater feed mixture, contacting said hydrotreater feed mixture with hydrogenating catalyst having hydrodesulfurizing capabilities in a hydrotreater at a temperature in the range of about 675° to about 750° F. and at a liquid hourly space velocity of about 4 to 6 to obtain hydrotreater effluent, separating said hydrotreater effluent into (1) a gaseous fraction comprising C₂ and lighter hydrocarbons, hydrogen, and hydrogen sulfide, (2) hydrotreater naphtha comprising C₃ to C₁₂ hydrocarbons, and (3) heavy fraction comprising hydrocarbons boiling above about 410° F., caustic-treating and water-washing said heavy fraction to obtain a heavy fraction containing not more than about 3 percent of the mercaptans present in said deaerated hydrocarbon mixture, about 0.0001 to about 0.0003 percent by weight of mercaptan-sulfur, and about 0.001 to about 0.002 percent by weight of total sulfur, mixing the aforesaid hydrotreater naphtha (2) with straight run naphtha to provide pretreater charge naphtha containing not more than 10 p.p.m. of nitrogen, heating said pretreater charge naphtha to hydrodesulfurizing temperature, mixing said heated pretreater charge

naphtha at a pretreater pressure at least 40 p.s.i. greater than said hydrotreating pressure in the range of about 460 to about 490 p.s.i.g. with hydrogen-containing reformer gas in the proportion of about 150 to about 300 s.c.f. of hydrogen per barrel of pretreater charge naphtha to obtain a pretreater charge mixture, contacting said pretreater charge mixture with hydrogenating catalyst having hydrodesulfurizing and hydrodenitrogenizing capabilities at a temperature of about 675° to about 725° F. and at a liquid hourly space velocity of about 4 to 6 in a pretreater to obtain a pretreater effluent comprising hydrogen, hydrogen sulfide, ammonia, and C₁ and heavier hydrocarbons, at a first separation pressure of pretreater pressure less line drop in pressure, separating said pretreater effluent into pretreater gas comprising hydrogen, and light hydrocarbons, and first pretreater condensate, without recompression flowing said pretreater gas to said hydrotreater as the sole source of hydrogen in said hydrotreater feed mixture, at a second separation pressure at least 250 p.s.i. lower than the aforesaid first separation pressure separating second pretreater condensate comprising C₄ and heavier hydrocarbons from said first pretreater condensate, debutanizing said second pretreater condensate to obtain reformer feed containing not more than 20 p.p.m. of sulfur and not more than 1 p.p.m. of nitrogen, mixing said reformer feed with hydrogen-containing reformer gas to obtain reformer charge mixture comprising about 5 to about 12 mols of hydrogen per mol of reformer feed, contacting said reformer charge mixture with platinum-group metal reforming catalyst at reforming conditions of temperature in the range of about 800° to about 980° F., of pressure at least 100 p.s.i. greater than said pretreater pressure in the range of 450 to 600 p.s.i.g., and of liquid hourly space velocity of about 0.5 to about 2.5 to obtain reformer effluent, separating said reformer effluent at a reformer separation pressure of 450 to 600 p.s.i.g. less line drop in pressure into hydrogen-containing reformer gas and C₃ and heavier reformate, without recompression flowing a portion of said reformer gas to provide about 150 to 300 s.c.f. of hydrogen per barrel of pretreater charge naphtha to said pretreater as the sole source of hydrogen in said pretreater charge mixture, recompressing the balance of said reformer gas to a pressure in excess of said reformer pressure, and flowing said recompressed reformer gas to said reformer as the sole source of hydrogen in said reformer charge mixture.

3,003,951

PROCESS FOR PREPARING SILICA-ALUMINA CRACKING CATALYSTS AND A HYDROCARBON CONVERSION PROCESS USING SAID CATALYSTS

Milton E. Winyall, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,743
8 Claims. (Cl. 208—120)

8. A process for cracking hydrocarbon oils which comprises passing the oil under cracking conditions through a cracking zone containing a silica-alumina catalyst having about 7% alumina prepared by reacting an aqueous alkali metal silicate solution with carbon dioxide to form a slurry of silica hydrogel containing dissolved alkali metal carbonate, aging said slurry for about 30 to 60 minutes, commingling with the aged slurry an aqueous solution of an aluminum salt whereby alumina is precipitated from said salt solution in and on said hydrogel and thereby form a silica-alumina composite, aging said composite for about 24 to 72 hours, directly spray drying the aged composite, and purifying the dried composite.

3,003,952 MANUFACTURE OF PLATINUM-ALUMINA REFORMING CATALYST

Robert H. Cramer, Woodbury, and Edward J. Rosinski, Almonesson, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

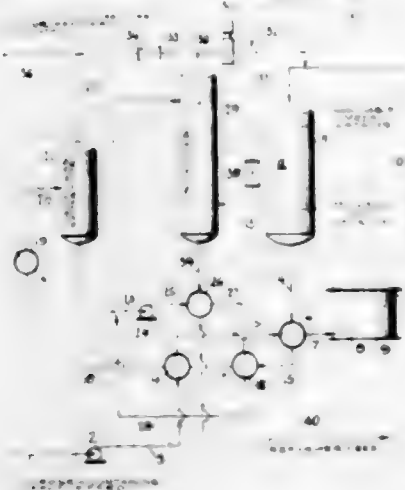
Filed Nov. 4, 1957, Ser. No. 694,219
17 Claims. (Cl. 208-138)



13. A process for reforming a hydrocarbon mixture which comprises contacting the same under reforming conditions with a catalyst consisting essentially of alumina impregnated with a minor proportion of a platinum metal prepared by reacting substantially pure aluminum with excess water, in the absence of acid, and in the presence of a material selected from the group consisting of mercury and a mercury compound in a catalytic amount corresponding to between about 0.1% and about 10% by weight of mercury relative to the amount of aluminum, controlling the temperature of the reaction mixture to within the range of 60° F. to 140° F. and maintaining the pH thereof within the range of 7 to 10 until at least a major proportion of the aluminum is converted into alumina in the form of an aqueous slurry, contacting the alumina slurry so obtained with a solution of a platinum metal compound which composites with the alumina an amount of between about 0.01 and about 5% by weight of platinum metal and thereafter drying and calcining the resulting product.

3,003,953 TWO-STAGE PROCESS FOR HYDRODENITRO- GENIZATION OF NAPHTHA

Louis P. Evans, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed May 28, 1959, Ser. No. 816,412
7 Claims. (Cl. 208-254)



1. A method of hydrodenitrogenizing naphtha which comprises charging a first reaction stage with particle-form solid non-noble metal hydrogenating catalyst having hydrodenitrogenizing capabilities, charging a second reaction stage with particle-form solid platinum-group metal hydrogenating catalyst having hydrodenitrogenizing capabilities, the total amount of said catalysts charged to said first and second reaction stages being in the proportion of about 10 to about 30 tons per 10,000 barrels of feed per day, the aforesaid non-noble metal catalyst being about

50 to about 90 percent by volume and the aforesaid platinum-group metal catalyst being the balance to make 100 percent by volume of the aforesaid about 10 to about 30 tons, passing feed containing at least 15 p.p.m. of nitrogen comprising naphtha containing more than 15 p.p.m. of nitrogen and a diluent successively through said first and second reaction stages to obtain an effluent of which the C₃ and heavier hydrocarbons boiling in the naphtha range contain not more than 1 p.p.m. of nitrogen whilst maintaining a pressure in the range of about 400 to about 800 p.s.i.g., a temperature in the range of about 500° to 800° F., and a hydrogen circulation of about 300 to about 3,000 standard cubic feet of hydrogen per barrel of said feed, in each of said first and second reaction stages maintaining in said first reaction stage a liquid hourly space velocity in the range of about 2 to about 11 and in said second reaction stage a liquid hourly space velocity of about 4 to about 55 dependent upon the liquid hourly space velocity in the said first reaction stage and the volume of catalyst in said second stage, and separating from the aforesaid effluent a C₃ and heavier hydrocarbon fraction boiling in the naphtha range containing not more than 1 p.p.m. of nitrogen.

3,003,954 METHODS AND COMPOSITIONS OF MATTER FOR SOFTENING TEXTILE FIBERS, YARNS, AND FABRICS

Herman Brown, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed July 19, 1957, Ser. No. 672,863
6 Claims. (Cl. 252-8.8)

1. A textile softening composition comprising an aqueous solution of at least one cationic surface active agent selected from the class consisting of quaternary ammonium compounds and amido amines and from about 5% to about 100%, based on the weight of said surface active agent of a substance represented by the formula ROACH₂COOM, wherein R denotes a hydrocarbon radical containing not less than 12 and not more than 16 carbon atoms, A denotes a chain of 1 to 5 ethenoxy groups, and M is a cation selected from the class consisting of hydrogen, sodium, potassium, and ammonium, said textile softening composition, due to its content of said latter substance, being characterized by its lack of forming an objectionable co-precipitate of anionic laundry compounds and component cationic surface active agent when mixed with laundry rinse waters containing anionic laundry compounds.

3,003,955 METHOD OF INHIBITING CORROSION

Lloyd W. Jones, Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware
No Drawing. Original application Oct. 30, 1953, Ser. No. 389,467. Divided and this application Aug. 2, 1956, Ser. No. 609,335
15 Claims. (Cl. 252-8.55)

1. A method of inhibiting corrosion by fluids containing water and a member of the group of corrosive materials consisting of oxygen, hydrogen sulfide, carbon dioxide, carboxylic acids containing from 2 to 4 carbon atoms per molecule, and combinations of the individual corrosive materials, comprising adding to said fluids at least about 5 parts per million (by weight) of a polyamine salt of a carboxylic acid residue, said polyamine having the formula RNHR'NH₂, wherein R is a hydrocarbon radical containing at least about 10 carbon atoms, N is a nitrogen atom, H is a hydrocarbon atom, and R' is a hydrocarbon radical containing from 2 to 4 carbon atoms, and said carboxylic acid residue containing highly oxidized polybasic acids having at least about 12 carbon atoms per acid radical.

3,003,956 METHOD OF CONVERTING AN AQUEOUS DRILL- ING FLUID TO A PACKER FLUID

Clarence O. Walker, Houston, and Walter J. Wells, Sugar Land, Tex., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Dec. 6, 1957, Ser. No. 700,970
2 Claims. (Cl. 252-8.55)

1. A method of converting an aqueous drilling fluid which contains an alkaline aqueous phase having a pH not greater than 12.6, said aqueous phase containing hydratable clayey material dispersed therein by a clay dispersing agent and having a calcium ion concentration in excess of 200 parts per million by weight based on said aqueous phase, said aqueous phase being saturated with calcium hydroxide, into a temperature stable packer fluid which comprises adding to said drilling fluid an amount of citric acid sufficient to neutralize substantially all of said calcium hydroxide in said drilling fluid and to sequester substantially all of the calcium dissolved in the aqueous phase of said drilling fluid.

3,003,957 FIRE-RESISTANT LUBRICATING EMULSION

Edward Barkis, Philadelphia, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 23, 1960, Ser. No. 38,129
8 Claims. (Cl. 252-32.5)

1. A fire-resistant water-in-oil lubricating emulsion in which the water phase constitutes from 5 weight percent to 95 weight percent of the emulsion and the oil phase constitutes from 95 weight percent to 5 weight percent of the emulsion, said oil phase consisting essentially of the following ingredients in volume percent based on the total volume of the oil phase:

Partial esters of wax acids.....	1.0-10.0
Ethanolamine.....	0.05-1.00
Sulfurized sperm oil.....	0.5-3.5
Solvent refined lubricating oil.....	98.45-85.50

wherein the partial esters are the reaction product obtained by partially esterifying a polyhydric aliphatic alcohol having a carbon chain length of from C₃ to C₆ with the high molecular weight aliphatic carboxylic acids content of an oxidate of a petroleum hydrocarbon mixture having a mean carbon chain length falling within the range C₂₈-C₅₀ subjected to controlled liquid-phase partial oxidation for a period of the order of 8 hours said oxidate having an acid number of from about 23 to about 26 and a saponification number of not in excess of about 75, wherein the solvent refined lubricating oil has a viscosity within the range from 80 to 2500 Saybolt Seconds Universal at 100° F., and wherein the oil phase contains from 0.0027 gram to 0.019 gram of lead diamylthiocarbamate per milliliter of oil phase.

3,003,958 LUBRICATING OIL ADDITIVES AND LUBRICAT- ING OIL COMPOSITIONS

Carleton B. Scott, Pomona, and William L. Wasley, Santa Ana, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Oct. 7, 1957, Ser. No. 688,782
17 Claims. (Cl. 252-32.7)

1. A lubricating oil additive composition adapted for addition to mineral lubricating oil to produce a lubricating oil composition having high viscosity index, detergent and anticorrosion characteristics, said additive composition consisting essentially of a mineral lubricating oil containing between about 15% and about 50% by weight of a product obtained by reacting 1.0 part of a hydrocarbon polymer selected from the class consisting of the homopolymers of monoolefins containing from 3 to 6 carbon atoms, and copolymers of said monoolefins with between about 0.005 and about 0.1 part by weight of a conjugated diolefin containing from 4 to 7 carbon atoms,

said polymer having an average molecular weight between 5,000 and 50,000, said hydrocarbon polymer being prepared at a temperature between -20° C. and -100° C. using a Friedel-Crafts catalyst, with between about 0.01 and about 0.15 part of a compound selected from the class consisting of methyl trithiometaphosphate and ethyl trithiometaphosphate, at a temperature between about 20° C. and about 190° C. for between about 2 and about 10 hours to produce an acidic phosphorus and sulfur-containing reaction product and neutralizing the last named reaction product with a metal base of the class consisting of the alkali and alkaline earth metal bases.

3,003,959 LUBRICATING OIL ADDITIVES AND LUBRICAT- ING OILS CONTAINING THE SAME

Chester E. Wilson, Anaheim, and William L. Wasley, Berkeley, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,677
14 Claims. (Cl. 252-32.7)

1. A lubricating oil additive composition adapted to be diluted with mineral lubricating oil to produce a lubricating oil composition having high viscosity index, detergent, dispersant and anticorrosion characteristics, said additive composition consisting essentially of mineral lubricating oil containing between about 15% and about 50% by weight of a product prepared by (1) reacting 100 parts of an isobutylene-isoprene copolymer having an average molecular weight between about 10,000 and about 150,000 and containing between about 0.5 and about 5 parts of isoprene per 100 parts of copolymer, with between about 1 part and about 10 parts of a phosphorus sulfide at a temperature between about 90° C. and about 260° C. to obtain an acidic phosphorus- and sulfur-containing product; (2) further reacting said acidic product with between about 1.5 and about 3.5 chemical equivalents of an alkaline earth metal base in the presence of between about 5 and about 100 parts of an alkyl phenol containing between about 4 and about 10 alkyl carbon atoms per 100 parts of said acidic product, the amount of said alkyl phenol being at least that amount represented by the equation:

$$\frac{\text{Minimum alkyl phenol}}{\text{mol. wt.} \times \text{isoprene} \times \text{phosphorus sulfide}} = \frac{10,000}{10,000}$$

where "alkyl phenol" is expressed in parts per 100 parts of said acidic product, "mol. wt." is the average molecular weight of the copolymer, "isoprene" represents the parts of isoprene per 100 parts of copolymer, and "phosphorus sulfide" represents parts of phosphorus sulfide per 100 parts of copolymer.

3,003,960 GLYCINE AMIC ACIDS IN TURBINE OIL

Harry J. Andress, Jr., Pittman, and Paul Y. C. Gee, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed June 10, 1959, Ser. No. 819,233
6 Claims. (Cl. 252-33.6)

1. A mineral lubricating oil containing a small amount, sufficient to prevent rusting of ferrous metal surfaces, of a material selected from the group consisting of (1) an amic acid of alkenyl succinic acid anhydride, having between about 8 and about 35 carbon atoms in the alkenyl radical, and an equimolar amount of glycine, (2) amine mono- and di-salts of (1) wherein the salt-forming amine is a tertiary-alkyl primary amine having a tertiary carbon atom attached to the nitrogen atom and containing between about 6 carbon atoms and about 30 carbon atoms per tertiary-alkyl radical, and (3) monoamides of (1) wherein the amide-forming amine is a tertiary-alkyl primary amine having a tertiary-carbon atom attached to the

nitrogen atom and containing between about 6 carbon atoms and about 30 carbon atoms per tertiary-alkyl radical.

3,003,961

GLYCINE IMIDES IN TURBINE OIL

Harry J. Andross, Jr., Pittman, and Paul Y. C. Gee, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed June 10, 1959, Ser. No. 819,234
4 Claims. (Cl. 252-33.6)

1. A mineral lubricating oil containing a small amount, sufficient to prevent rusting of ferrous metal surfaces, of at least one compound selected from the group consisting of (1) an N-carboxymethyl-alkenyl-succinimide containing between about 8 carbon atoms and about 35 carbon atoms in the alkenyl group and (2) amine salts of (1) with tertiary-alkyl primary amines having a tertiary carbon atom attached to the nitrogen atom and containing between about 6 carbon atoms and about 30 carbon atoms per tertiary-alkyl radical.

3,003,962

EXTREME PRESSURE STEEL MILL LITHIUM BASE GREASE CONTAINING SULFURIZED SPERM OIL AND LEAD NAPHTHENATE

Terence B. Jordan and John P. Dilworth, Fishkill, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Dec. 22, 1958, Ser. No. 781,901
9 Claims. (Cl. 252-36)

1. A grease adapted for steel mill lubrication and characterized by high dropping point and EP properties comprising a lubricating oil as the major component, 4.5 to 15.0 weight percent lithium 12-hydroxy stearate as a thickening agent, 5-15 weight percent sulfurized sperm oil and 1 to 5 weight percent of a lead salt of a naphthenic acid having an average molecular weight between 120 and 235.

3,003,963

LUBRICATING OIL COMPOSITION

Edward L. Kay, Wappingers Falls, N.Y., assignor to Texaco Inc., a corporation of Delaware
No Drawing. Filed Sept. 30, 1958, Ser. No. 764,244
2 Claims. (Cl. 252-42.7)

1. A mineral lubricating oil containing from about 0.5 to 2% by wt. of a magnesium alkyl phenolate wherein the alkyl group has from 15 to 30 carbon atoms, from about 0.25 to 1.5% by wt. of a zinc alkyl phenolate wherein the alkyl group has from 15 to 30 carbon atoms, and from 0.5 to 1.5% by wt. of a tetra alkyl titanate wherein the alkyl groups have from 2 to 4 carbon atoms.

3,003,964

RADIOCHEMICAL PRODUCTION OF PHOSPHOSULFURIZED HYDROCARBONS

Donald A. Guthrie and Carroll L. Knapp, Jr., Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Mar. 1, 1954, Ser. No. 413,478
16 Claims. (Cl. 252-46.6)

1. The method of producing phosphosulfurized hydrocarbonaceous materials which comprises exposing a hydrocarbonaceous material selected from the group consisting of hydrocarbons and esters containing hydrocarbon radicals in intimate contact with a phosphosulfurizing agent at a temperature in the range of 60° to 200° F. to a total dosage of high energy ionizing radiation in the range of 5×10^3 to 9.6×10^4 Roentgens.

2. A phosphosulfurized hydrocarbonaceous material produced by the method of claim 1.

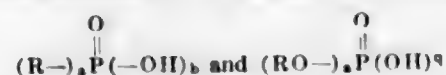
3. A lubricating oil composition comprising a major proportion of a lubricating oil and a minor proportion of the phosphosulfurized material of claim 2.

3,003,965

METHOD OF PREPARING A MAGNETIC SOUND CARRIER

Sjerp Anne Troelstra and Jan Anton Willem van Laar, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 25, 1954, Ser. No. 452,212
Claims priority, application Netherlands Sept. 29, 1953
6 Claims. (Cl. 252-62.5)

1. The method of preparing a magnetic sound carrier comprising the steps, coating an insoluble magnetic powder with a dispersing agent consisting of a derivative of phosphorus selected from the group consisting of



wherein a is a whole number from 1 to 2, b is a whole number from 1 to 2, $a+b=3$ and wherein R is selected from the group consisting of alkyl, aryl and aralkyl radicals, mixing said coated powder into a hardenable organic liquid to form a dispersion of said inorganic powder in said hardenable organic liquid and hardening said liquid.

3,003,966

POLYCRYSTALLINE GARNET MATERIALS

Le Grand G. Van Uiter, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Sept. 9, 1957, Ser. No. 682,573
5 Claims. (Cl. 252-62.5)

4. A ceramic body having a resistivity of at least 7×10^{10} ohm-centimeters selected from the group consisting of yttrium-iron and rare earth-iron oxides having a garnet structure and of the formula $A_3B_5O_{12}$ where O is oxygen, A is at least one element selected from the group consisting of yttrium and the rare earths having an atomic number between 62 and 71 inclusive, and B is iron containing at least one element selected from the group consisting of gallium, aluminum, scandium, indium and chromium, said gallium, aluminum, scandium, and indium being present in an amount from 0 to 20 atom percent and said chromium being present in an amount from 0 to 10 atom percent, which body contains between 0.4 percent and 10 percent by weight of all the metal ions present of a 2:1 molar mixture of divalent copper and pentavalent vanadium ions present in the body as the oxides of these metals, said body being formed by adding said molar mixture of divalent copper and pentavalent vanadium in the form of compounds convertible to the metal oxides on firing to the uncalcined components of said yttrium-iron and rare earth-iron oxides and firing the resultant composition in an oxidizing atmosphere at a temperature between about 1200° C. and 1350° C. for between about one hour and forty hours.

3,003,967

METHOD FOR INCREASING THE EFFECTIVE PERMEABILITY OF MANGANESE FERRITES

Lynn J. Brady, Butler, N.J., assignor to Kearfott Company, Inc., Little Falls, N.J., a corporation of New York
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,682
2 Claims. (Cl. 252-62.5)

2. A method for removing the oxide coating on a manganese ferrite composed of manganese oxide, zinc oxide and iron oxide to effect an increase in the permeability thereof, comprising the steps of inserting said ferrite in an acid solution composed of about two volumes of concentrated hydrochloric acid and about one volume of concentrated nitric acid, maintaining said ferrite in said solution for about one hour at room temperature, and then removing said ferrite from said solution.

3,003,968

METHOD OF HYDRAULIC TRANSMISSION OF POWER

John P. Bruce, Lake Jackson, Tex., and Joseph R. Boudreaux, Plaquemine, La., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 3, 1958, Ser. No. 718,403
4 Claims. (Cl. 252-79)

1. In a method of hydraulic transmission of power for activating pressure operated elements the improvement which comprises employing as the activating fluid a diester having the formula



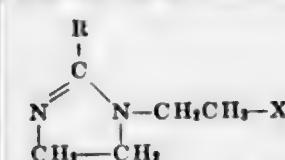
wherein R is an alkyl radical having from 1 to 4 carbon atoms, n is an integer from 1 to 6 and the total number of carbon atoms of the diester compound is at least 10.

3,003,969

DETERGENT COMPOSITIONS FOR THE HAIR

Otto Albrecht, Neuwelt, near Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland
No Drawing. Filed Nov. 8, 1954, Ser. No. 467,639
Claims priority, application Switzerland Nov. 17, 1953
5 Claims. (Cl. 252-142)

1. A cation-active detergent composition for the hair, which comprises as a cation-active detergent a water soluble acid addition salt of an imidazoline, of the formula



in which R represents an aliphatic hydrocarbon radical containing 11 to 13 carbon atoms and X represents a member selected from the group consisting of a primary amino group, an acylamino group derived from a saturated fatty acid containing at the most 8 carbon atoms, and a hydroxy-alkylated amino group containing at least one hydroxy-alkyl radical which contains at the most 3 carbon atoms, and a sufficient amount of a water soluble aliphatic hydroxy-carboxylic acid to produce an acid reaction in aqueous solution.

3,003,970

CLEANING COMPOSITION AND A METHOD OF ITS USE

Robert G. Call, Huntington, W. Va., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 23, 1960, Ser. No. 30,746
19 Claims. (Cl. 252-152)

1. A cleaning composition consisting essentially of from 2 to 25 weight percent of a hydroxylamine mineral acid salt, 3 to 35 weight percent of an amine having a general formula:



where n is a number of 1 to 4, and the remainder water.

6. A copper oxide solvent consisting essentially of from 3 to 25 weight percent of ethylenediamine, from 2 to 25 weight percent of hydroxylamine sulfate, and the balance water.

3,003,971

STABILIZED TERTIARY N-CHLOROUREA COMPOSITIONS

William W. Prichard, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 6, 1944, Ser. No. 529,826
8 Claims. (Cl. 252-187)

1. A chlorine-liberating mixture of (1) a chlorine-liberating tertiary N-chlorourea and (2) 1-200% by weight,

based on the weight of said N-chlorourea, of a stabilizer, substantially nonreactive with the N-chlorourea under the conditions of formulation, selected from the group consisting of oxides of elements having an atomic number between 24 and 30, inclusive, hydroxides of said elements, and salts of said elements with acids having a dissociation constant less than about 1.5×10^{-2} .

3,003,972

METHOD OF CATALYST MANUFACTURE

Vladimir Haensel, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed July 7, 1958, Ser. No. 746,657
6 Claims. (Cl. 252-441)

1. A method of preparing a catalyst which comprises impregnating alumina containing in excess of 1% by weight of combined fluorine with a homogeneous aqueous solution of a water-soluble platinum compound, a hydrogen halide and an acidic compound selected from the group consisting of nitric acid, sulfuric acid, phosphoric acid, aluminum nitrate, acetic acid, oxalic acid, formic acid, and propionic acid, said solution having a pH value below 2.5.

3,003,973

MANUFACTURE OF PLATINUM-CONTAINING ALUMINA CATALYST

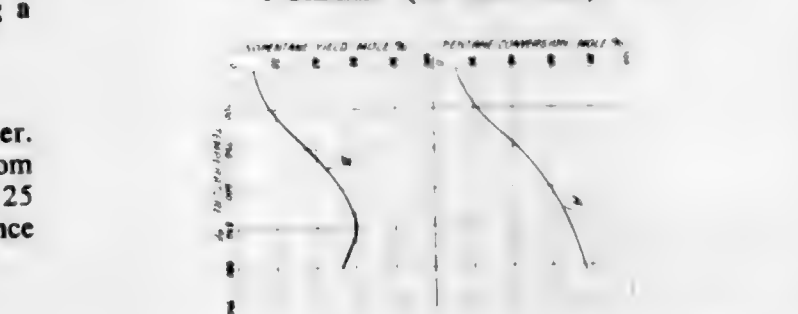
Robert M. Smith, Berwyn, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,326
8 Claims. (Cl. 252-441)

1. In a process for the manufacture of platinum-containing, alumina catalyst, wherein alumina is impregnated with a water-soluble platinum compound in the presence of ammonium hydroxide and an oxidizing agent selected from the group consisting of hydrogen peroxide and ammonium nitrate, resulting in the formation of an ammonium-platinum complex, the improvement which comprises commingling alumina, a water-soluble platinum compound and hydrogen peroxide with ammonium hydroxide at a temperature below 212° F., heating the resulting mixture to a temperature in excess of 212° F., adding ammonium nitrate thereto when said temperature attains 212° F., drying the resulting mixture and thereafter calcining said mixture.

3,003,974

ISOMERIZATION CATALYST

Richard W. Baker, Baltimore, Md., and George W. Munns, Jr., West Deptford, and Robert L. Smith, Pittman, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Feb. 5, 1957, Ser. No. 638,352
4 Claims. (Cl. 252-451)



1. A catalyst for the isomerization of pentane which comprises between about 0.01 percent and about 5 percent, by weight of the catalyst, of a metal selected from the group consisting of platinum and palladium supported upon a synthetic composite of silica and alumina that contains between about 10 percent and about 40 percent alumina by weight; said synthetic composite of silica and alumina being produced by first producing silica hydrogel

by treating water glass with strong inorganic acid at a pH between 0 and 7, aging said silica hydrosol at a pH between one and 6, for 0.5 to 24 hours, at temperatures varying between about 40° F. and about 100° F.; slurring the aged silica hydrogel in an aqueous solution of an aluminum salt and adjusting the pH to between about 4.5 and about 5.5, thereby precipitating alumina on the silica hydrogel; and drying and calcining the composite, thus produced, to the gel state.

3,003,975

CONDUCTIVE PLASTIC COMPOSITION AND METHOD OF MAKING THE SAME

Arnold S. Louis, Bronx, N.Y., assignor to Myron A. Coler, Scarsdale, N.Y.

No Drawing. Filed Nov. 26, 1958, Ser. No. 776,397
9 Claims. (Cl. 252-503)

2. A granular product adapted to be used in molding conductive plastic articles, said product consisting of granules of an electrically conductive material, said granules having their surfaces coated with a thin layer of an electrically conductive substance selected from the group consisting of carbon and conductive metals, said conductive material being essentially composed of a substantially uniform dispersion in a synthetic organic molding plastic of finely divided electrically conductive particles selected from the group consisting of carbon and metal powders, said dispersion containing from 20% to 50% by weight of said conductive particles.

3,003,976

CONDUCTING VISCOUS FLUID

Joseph S. Lord, Walpole, Mass., assignor to Instrument Development Laboratories, Inc., a corporation of Massachusetts

No Drawing. Filed Jan. 31, 1956, Ser. No. 562,605
5 Claims. (Cl. 252-518)

1. A stable conductive viscous liquid solution consisting essentially of elements mixed in substantially the following proportions, 100 cc. of an aqueous polyhydric alcohol containing anhydrides and polyhydric derivatives of sorbitol, 1.35 cc. of water, and .11 gram of cupric ammonium chloride.

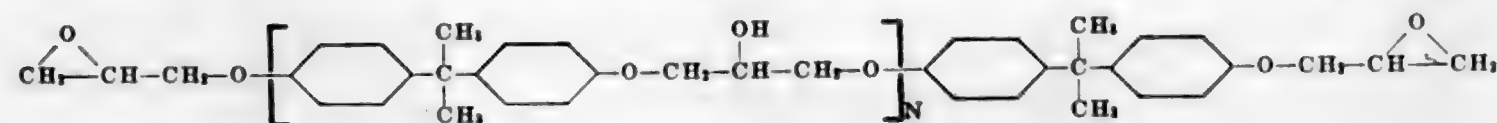
3,003,977

CELLULAR POLYURETHANES PREPARED FROM AMINO GLYCOL BASED POLYESTERS

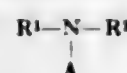
Marvin J. Hurwitz, Elkins Park, and Richard Zdanowski, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

Filed Nov. 5, 1958, Ser. No. 772,025
9 Claims. (Cl. 260-2.5)

1. A cellular plastic material comprising a water-reacted poly(ester-urethane) product of an organic polyisocyanate with a polyester resin having an hydroxyl and carboxyl functionality of 2.2 to 3.0 and said polyester resin comprising a condensation product of a mixture



comprising polycarboxylic acid and polyhydric alcohol components, the polyhydric alcohol component comprising polyhydric alcohol and glycols, the glycols comprising about 70 to 100 mole percent of an aminoglycol of the general formula I



where A is an aryl group containing 6 to 17 carbon atoms, and R¹ and R² are hydroxyalkyls each containing from 2 to 4 carbon atoms.

3,003,978 A COATING COMPOSITION COMPRISING A CELLULOSE DERIVATIVE, AN EPOXIDIZED OIL AND AN AMINE-ALDEHYDE RESIN

Kenneth R. Cooney, Pennsville, N.J., Richard B. Fyewell, Media, Pa., and William B. Webb, Jr., Pitman, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 6, 1958, Ser. No. 740,191
5 Claims. (Cl. 260-15)

1. A coating composition comprising an organic solvent solution of (a) a cellulose derivative film-former, (b) an epoxy composition from the group consisting of epoxidized triglyceride of soya bean oil and epoxidized acetylated triglyceride of castor oil, and (c) a resinous curing agent for the epoxy composition selected from the group consisting of the alkanol-modified urea-formaldehyde, melamine-formaldehyde and benzoguanamine-formaldehyde resins, the ratio of (b) to (a) being about 50-100/100, and the ratio of (c) to (a) being about 8-50/100.

3,003,979

DRY CEMENT COMPOSITION COMPRISING CELLULOSIC THICKENER GELLED STARCH, POLY-VINYL ALCOHOL AND POLYVINYL ACETATE

Mitchell P. Ptasinski, Elk Grove, and Joseph W. Gill, Des Plaines, Ill., assignors to United States Gypsum Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 5, 1958, Ser. No. 778,493
11 Claims. (Cl. 260-17)

1. A dry cement composition comprising from about 3 to 1% by weight of a cold-water soluble cellulosic thickener containing only ether and hydroxyl oxygen, about 4.5 to 12% by weight of a binder comprising a ternary mixture of acid-hydrolyzed pre-gelled starch, cold-water soluble polyvinyl alcohol which is not completely hydrolyzed but which is at least 75% hydrolyzed, and polyvinyl alcohol-stabilized polyvinyl acetate; and about 87 to 95% by weight fillers.

3,003,980

EPOXY BASE FRICTION MATERIAL AND METHOD OF MAKING SAME

William A. Hames, Dayton, and Burlin B. Brombaugh, Germantown, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 561,142, Jan. 24, 1956. This application July 25, 1958, Ser. No. 750,871

1 Claim. (Cl. 260-18)

A method of forming a friction material element which may be bonded to an associated machine element prone to damage at elevated bonding temperatures and external pressures comprising the steps of; creating a flowable mass by mixing 90 to 110 parts by weight of a low molecular weight epoxy resin having the formula

wherein N has a value between zero and 10, 3.5 to 9.5 parts by weight of a non-reactive filler, 3.5 to 9.5 parts by weight of polymerized cashew nut shell oil, and an accelerator taken from the group consisting of triethyl-enetetramine and metaphenylenediamine, said accelerator present in the ratio of the chemical equivalent of 4 parts by weight to each 100 parts of epoxy resin; applying and retaining said flowable mass at atmospheric pressure to the associated machine element in the desired shape at the place of application and allowing the mass to cure at room temperature to form the completed friction element and bond said friction element to the machine part.

3,003,981

EPOXIDIZED POLYENE POLYMERS

Robert L. Wear, West St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 9, 1956, Ser. No. 573,579
8 Claims. (Cl. 260-24)

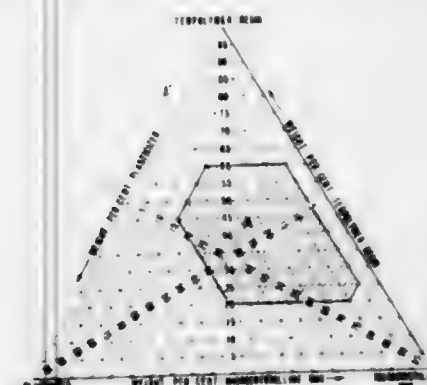
1. A composition of matter, capable of curing when heated to a tough, flexible, resinous article, comprising a mixture of (1) a soluble polymeric product which has an average molecular weight of about 1500 to 40,000, a polymeric open chain consisting substantially exclusively of carbon atoms, on the average more than one oxirane oxygen atom attached to said open chain, and an oxirane oxygen content of up to about 6% by weight, and (2) a hardening amount of alkenyl succinic anhydride.

3,003,982

VINYL RESIN COATING COMPOSITIONS AND PROCESS FOR COATING POLYMERIC FILMS

William Bryan Lindsey, Tonawanda, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 24, 1959, Ser. No. 808,772
18 Claims. (Cl. 260-28.5)



1. A coating composition comprising 20-60% by weight of a terpolymer of a vinyl halide, a vinyl ester of a lower saturated fatty acid, and an aliphatic alpha, beta-mono-olefinic carboxylic acid, said terpolymer containing 60-95% by weight of combined vinyl halide and 0.1-10% of said acid, 15-70% of a chlorinated hydrocarbon microcrystalline wax melting at a temperature between about 50° C. and about 100° C. and 5-40% of a plasticizer for said terpolymer.

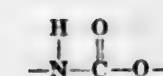
3,003,983

POLYAMIDES AND POLYURETHANES DISSOLVED IN A MIXTURE OF WATER AND PHYTIC ACID AND PROCESS OF MAKING SAME

Paul R. Cox, Jr., Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed Sept. 25, 1958, Ser. No. 763,212
20 Claims. (Cl. 260-29.2)

1. A new composition of matter comprising a polymer selected from the group consisting of synthetic linear polymeric carbonamides which have recurring carbon-amide groups as an integral part of the main polymer chain separated by at least two carbon atoms, and polyurethanes containing recurring structural groups of the formula:



dissolved in a solvent containing 5 to 50 percent by weight of water, based on the total weight of the solvent, and 95 to 50 percent of a compound selected from the group consisting of phytic acid, the water-soluble alkali

metal acid salts of phytic acid, alkaline earth metal acid salts of phytic acid, and mixed alkali and alkaline earth metal acid salts of phytic acid.

3,003,984

SOLUTION OF POLYPYRROLIDONE IN A MIXTURE OF 1,1,1-TRICHLORO-3-NITRO-2-PROPANOL AND WATER AND PROCESS OF MAKING SAME

William B. Black, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed May 27, 1959, Ser. No. 816,067
14 Claims. (Cl. 260-29.2)

1. A new composition of matter comprising polypyrrolidone and a solvent selected from the group consisting of 1,1,1-trichloro-3-nitro-2-propanol and mixtures of 1,1,1-trichloro-3-nitro-2-propanol with from 0.5 percent up to a saturating amount of water, based on the total weight of the solvent.

3,003,985

SOLUTION OF POLYPYRROLIDONE IN A MIXTURE OF CHLORAL HYDRATE AND WATER, AND PROCESS OF MAKING SAME

William B. Black, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed May 27, 1959, Ser. No. 816,086
14 Claims. (Cl. 260-29.2)

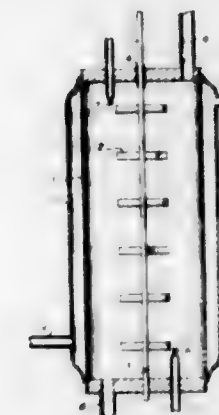
1. A new composition of matter comprising polypyrrolidone and a solvent selected from the group consisting of chloral hydrate and a mixed solvent containing chloral hydrate and up to 70 percent water, based on the total weight of said mixed solvent.

3,003,986

PROCESS OF EMULSION POLYMERIZATION OF ETHYLENICALLY UNSATURATED MONOMERS UTILIZING TAYLOR RING FLOW PATTERN

Francis John Long, Beaconsfield, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

Filed July 5, 1957, Ser. No. 670,315
Claims priority, application Great Britain July 6, 1956
3 Claims. (Cl. 260-29.6)



1. A process of continuous emulsion polymerization comprising the steps of feeding a stream consisting essentially of ethylenically unsaturated monomer and a stream of catalyst into a reaction zone in counter-current flow to each other, stirring the contents of said zone with a stirrer to produce a vertical flow pattern of Taylor rings in which the stirred liquid is segmented in planes perpendicular to the principal axis of the vessel and to the axis of rotation of the stirrer with much higher rates of mass transfer within than between said segments and well defined boundaries separating the segments, and withdrawing a polymer dispersion from the bottom of said zone.

3,003,987

COPOLYMER OF ACRYLIC ACID ESTER, METHOD OF MAKING, AND USE OF SAID POLYMER TO COAT TEXTILE FABRICS

Osnow B. Hager, Glenade, and Robert A. Martin, Levittown, Pa., assignors to Alco Oil & Chemical Corporation, Philadelphia, Pa., a corporation of Ohio
No Drawing. Filed Nov. 14, 1957, Ser. No. 696,339
18 Claims. (Cl. 260—29.6)

5. A textile finishing composition adapted for sizing textile yarns and finishing textile fabrics comprising a stable aqueous dispersion of a copolymer of from about 30 to about 80 parts, by weight, of a vinyl ester monomer of the formula:



in which R is selected from the group consisting of hydrogen and an alkyl radical containing from 1 to 4 carbon atoms, from about 2.5 to about 15 parts of a diester of a dibasic acid of the formula:



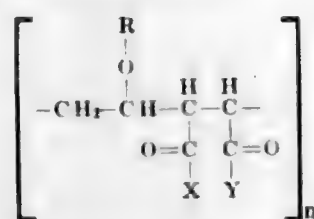
in which X is an alkyl radical containing from 1 to 8 carbon atoms, from about 1 to about 5 parts of an adhesive monomer selected from the group consisting of maleic, fumaric, itaconic, mesaconic, and citraconic acids, and maleic and citraconic anhydrides, and from about 10 to about 65 parts of modifier monomer which is an ester of acrylic acid and a monohydroxy alkyl alcohol containing from 1 to 3 carbon atoms, said copolymer having a molecular weight of from about 100,000 to 600,000

3,003,988

STABILIZER FOR DENTURES

Donald P. Germann, Binghamton, N.Y., Edward L. Kropa, Greensboro, N.C., and Robert W. King and Palmer B. Stickney, Columbus, Ohio; said Kropa, said King and said Stickney, assignors, by mesne assignments, to Clark-Cleveland Incorporated, Binghamton, N.Y., a corporation of New York
No Drawing. Filed Oct. 16, 1958, Ser. No. 767,512
4 Claims. (Cl. 260—33.6)

1. A denture-stabilizing composition having as a stabilizing component a material comprising more than 25 percent by weight of said denture-stabilizing composition and being a water-insoluble water-sensitized polymeric material; said material characterized by a particle size of minus 150-mesh U.S.B.S. sieve, by an apparent bulk density greater than 0.5 gram per cubic centimeter, and by a pH between 5 and 8.5, the pH being determined on a one percent by weight aqueous dispersion of said material in water; said material consisting essentially of a partial mixed salt of a copolymer selected from the group consisting of copolymers and partial lower alkyl esters of these copolymers, said copolymers consisting essentially of the repeated structural unit,



wherein X and Y separately each represent a hydroxyl radical and X and Y together represent a bivalent oxygen atom, R represents an alkyl radical of less than 5 carbon atoms, n is an integer greater than one representing the number of repeated occurrences of said structural unit in a molecule of said copolymer and n is large enough to characterize said copolymer as having a specific viscosity larger than 1.2, the specific viscosity being determined in methyl ethyl ketone at 25° C., said partial lower alkyl esters of said copolymers having less than one-third of the total initial carboxyl groups esterified,

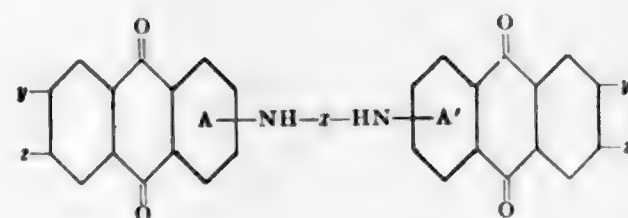
said partial mixed salts containing calcium cations and alkali cations, in a mole ratio between 1:1 and 5:1, the alkali cations selected from the group consisting of sodium, potassium, and quaternary ammonium cations, with not more than one third of the total initial carboxyl groups unreacted.

3,003,989

PIGMENTATION OF MOLDED GOODS AND CAST SHEETS WITH ANTHRAQUINONE DYESTUFFS

Klaus Ehrhardt and Fritz Kehr, Basel, and Wolfgang Schoenauer, Riehen, Switzerland, assignors to Sandoz A.G., Basel, Switzerland
No Drawing. Filed July 28, 1958, Ser. No. 751,119
Claims priority, application Switzerland Aug. 16, 1957
6 Claims. (Cl. 260—37)

1. A process for mass pigmenting filaments, molded goods and cast sheets made with a material selected from the group consisting of synthetic polymers, copolymers and polycondensates wherein an anthraquinone dyestuff of the formula



wherein x represents the divalent radical of a member selected from the group consisting of benzene-1,4-dicarboxylic acid, 1,1'-azobenzene-4,4'-dicarboxylic acid, 1,1'-azoxybenzene-4,4'-dicarboxylic acid, ethylene-1,2-dicarboxylic acid, 1-chloroethylene-1,2-dicarboxylic acid, 1-methylethylene-1,2-dicarboxylic acid and 1,2-dichloroethylene-1,2-dicarboxylic acid, each of y and y' represents a member selected from the group consisting of hydrogen and chlorine, and each of z and z' represents a member selected from the group consisting of hydrogen, fluorine, chlorine and bromine, when y and y' stand for hydrogen, and represents a member selected from the group consisting of hydrogen and chlorine, when y and y' stand for chlorine, the radical $-\text{NH}-x-\text{HN}-$ connecting the nuclei A and A' in α -positions, is added to the mass of the said material and the thus-colored material is converted into the final form.

3,003,990

RUBBER COMPOUNDED AND HEAT TREATED WITH COATED FILLER

Carl W. Umland II and Albert M. Gessler, Cranford, and Winthrop C. Smith, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Aug. 21, 1957, Ser. No. 679,522
4 Claims. (Cl. 260—38)

1. In a process for treating butyl rubber copolymer of 85–99.5% C₄ to C₇ isooctene and 0.5–5.0% C₄ to C₁₄ multioctene with kaolin clay having the general formula Al₂O₃·2SiO₂·2H₂O, wherein the Al₂O₃ content varies between 38 and 40 weight percent, the SiO₂ content varies between 44 and 47 weight percent, the specific gravity is about 2.60, and the particle size of 80% of the clay is about 2 microns; the improvement which comprises mixing an aqueous slurry of said clay with a water-dispersible condensation product of formaldehyde and a material selected from the group consisting of urea, alkylated urea, phenol, an alkyl-substituted phenol, and a

polyhydric phenol with subsequent drying to coat said clay with said condensation product adjacent hereto; compounding said rubber with said coated clay; and curing said compounded rubber at a temperature of at least 250° F. to provide an improved vulcanizate therefrom.

3,003,991

COMPOSITION COMPRISING AN UNSATURATED POLYESTER, A SUBSTANCE CONTAINING AT LEAST ONE CH₂=C< GROUP, A VANADIUM COMPOUND AND BENZENE PHOSPHINIC ACID, AND METHOD OF CURING SAME

Carl A. Marszewski and John O. Koontz, Toledo, Ohio, assignors to Allied Chemical Corporation, a corporation of New York
No Drawing. Filed Nov. 13, 1957, Ser. No. 696,037
9 Claims. (Cl. 260—40)

1. A method of effecting final cure of unsaturated polyester resins derived from polyhydric alcohol of which at least 95% thereof is dihydric alcohol, and alpha-beta ethylenically unsaturated dicarboxylic acid and having an acid number no higher than about 100, and containing a copolymerizable compound containing at least one CH₂=C< group, which comprises: incorporating therein, as catalyst-promoter system, (1) a promoting amount not above about 0.5% by weight of an organic compound that contains a vanadium atom therein in an oxidation state of less than 5, (2) an effective amount not above about 0.5% by weight of benzene phosphinic acid, and (3) a catalytic amount not above about 3.0% by weight of a tertiary hydroperoxide catalyst.

3,003,992

GLYCIDYL ESTER COPOLYMER-CARBOXY SUBSTITUTED SILICONE COMPOSITION AND METALLIC ARTICLE COATED WITH SAME

David W. Mabrey, Middletown, Ky., and Robert A. Raugh, Milwaukee, Wis., assignors to Devco & Raynolds Company, Inc., Louisville, Ky., a corporation of New York
No Drawing. Filed Dec. 6, 1957, Ser. No. 700,945
7 Claims. (Cl. 260—45.4)

1. A resinous reaction product formed by heat curing (a) an epoxy-containing copolymer of an unsaturated glycidyl ester and a vinylidene compound copolymerizable therewith, and (b) a carboxy-containing organosilicon compound formed by replacing, with a hydroxy-carboxy ester of a glycol and a dicarboxylic acid, from two to all of the functional groups of an organosilicon compound which is at least difunctional and is selected from the group consisting of silanols, halosilanes, alkoxy silanes, siloxanols, halosiloxanes, and alkoxy siloxanes, wherein (a) and (b) are present in an amount of 0.5 to 1.2 carboxy groups of (b) per epoxide group of (a).

3,003,993

PROCESS FOR COLOR STABILIZING ACRYLONITRILE POLYMERS BY WASHING WITH ETHYLENE DIAMINE TETRAACETIC ACID

Willis C. Wooten, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 19, 1959, Ser. No. 847,097
5 Claims. (Cl. 260—45.5)

1. A process for color stabilizing an acrylonitrile polymer selected from the class consisting of a homopolymer of acrylonitrile and a copolymer of at least 40% acrylonitrile and up to 60% of a monoethylenically unsaturated compound which comprises washing the recently polymerized finely-divided polymer sufficiently to color stabilize the polymer with wash water containing 1–1,000 parts per million of ethylene diamine tetraacetic acid so that .001–.000001 g. of acid is contacted with one gram of polymer.

3,003,994

POLYVINYL CHLORIDE STABILIZED WITH PRODUCTS OF ALLENE AND ACETYLENE

James Maurice Quinn, Tonawanda, N.Y., and Allan Kenneth Schneider, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,044
11 Claims. (Cl. 260—45.7)

1. A composition of matter comprising polyvinyl chloride and 1–15% of at least one stabilizing compound, said stabilizing compound being selected from the group consisting of the reaction product of the cyclopolymerization of allene and the reaction product of allene and acetylene.

3,003,995

STABILIZED POLYCAPROAMIDE COMPOSITIONS

Elmer C. Schule, Morris Plains, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 18, 1960, Ser. No. 43,683
13 Claims. (Cl. 260—45.8)

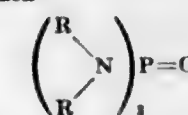
1. A polycaprolactam nylon composition in which is incorporated an aging inhibitor which contains a water-insoluble solid fusible diarylamine-ketone product of low temperature condensation.

3,003,996

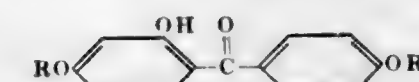
POLY- α -OLEFIN COMPOSITIONS CONTAINING SYNERGISTIC STABILIZER COMBINATION

Gordon C. Newland and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed May 20, 1959, Ser. No. 814,395
6 Claims. (Cl. 260—45.9)

1. A solid poly- α -olefin composition comprising a poly- α -olefin selected from the group consisting of polyethylene and polypropylene containing .001% to 10% by weight based on said poly- α -olefin of a stabilizer combination comprising a tris-(dialkylamino)phosphine oxide having the formula



and a 2-hydroxy-4,4'-dialkoxybenzophenone having the formula

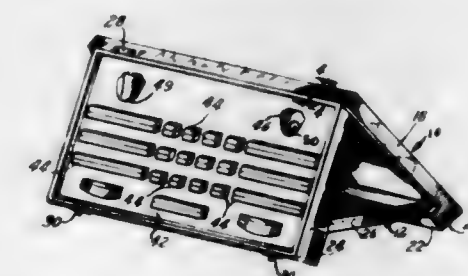


wherein the R substituents in the said formulas are lower alkyl radicals having 1 to 4 carbon atoms, the weight ratio of said tris-(dialkylamino)phosphine oxide to said 2-hydroxy-4,4'-dialkoxybenzophenone being in the range of 1/30 to 30/1.

3,003,997

DISPLAY CASE

Howard A. Intermill, Indianapolis, Ind., assignor to Herff-Jones Co., Indianapolis, Ind., a corporation of Indiana
Filed Mar. 28, 1960, Ser. No. 17,910
9 Claims. (Cl. 206—45.18)



1. A display case, comprising upper and lower shells forming the case walls and pivotally joined together along

the bottom wall of the lower shell forwardly of the rear edge of the case for opening and closing said case, said lower shell comprising a pair of pivotally interconnected sections movable with respect to each other about a transversely extending axis along the bottom wall of said lower shell, a display board mounted on one of said pair of sections and movable therewith, and locking means on said shells for releasably locking the case in closed position.

3,003,998

POLYVINYL CHLORIDE RESIN COMPOSITIONS FOR USE IN FOOD PACKAGING

Otto S. Kauder, Jamaica, and Norman L. Perry, Seaford, N.Y., assignors to Argus Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 15, 1960, Ser. No. 15,058
16 Claims. (Cl. 260-45.75)

1. A polyvinyl chloride resin stabilizer composition capable of improving the resistance of the resin to heat deterioration when heated at 375° F., consisting essentially of calcium benzoate, the zinc salts of mixed fatty acids derived from edible fats and oils, and glycerol, in the proportions of from about 15 to about 25 parts of calcium benzoate, from about 10 to about 25 parts of the zinc salts and from about 50 to about 75 parts of glycerol.

3,003,999

STABILIZED POLYVINYL CHLORIDE COMPOSITIONS FOR USE IN FOOD PACKAGING

Otto S. Kauder, Jamaica, and Norman L. Perry, Seaford, N.Y., assignors to Argus Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 15, 1960, Ser. No. 15,059
16 Claims. (Cl. 260-45.75)

1. A polyvinyl chloride resin stabilizer composition capable of improving the resistance of the resin to heat deterioration when heated at 375° F. consisting essentially of the calcium salts of mixed fatty acids derived from edible fats and oils, the zinc salts of mixed fatty acids derived from edible fats and oils, and sorbitol, in the proportions of from about 25 to about 40 parts of the calcium salts, from about 25 to about 40 parts of the zinc salts, and from about 20 to about 50 parts of sorbitol.

3,004,000

POLYVINYL CHLORIDE RESIN COMPOSITIONS STABILIZED FOR USE IN FOOD PACKAGING

Otto S. Kauder, Jamaica, and Norman L. Perry, Seaford, N.Y., assignors to Argus Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 15, 1960, Ser. No. 15,060
20 Claims. (Cl. 260-45.75)

1. A polyvinyl chloride resin stabilizer composition capable of improving the resistance of the resin to heat deterioration when heated at 375° F. consisting essentially of a mixture of calcium and zinc salts of which at least one is selected from the group consisting of zinc benzoate and calcium benzoate, and at least one of the other salts is selected from the group consisting of the calcium salts of mixed fatty acids derived from edible fats and oils, and the zinc salts of mixed fatty acids derived from edible fats and oils, and sorbitol, in the proportions of from about 15 to about 40 parts of the benzoate, from about 15 to about 50 parts of the fatty acid salts, and from 20 to about 60 parts of sorbitol.

3,004,001

ODOR INHIBITORS FOR POLYOLEFINS

Archle L. Robbins and Kenneth R. Mills, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Aug. 28, 1959, Ser. No. 836,589
10 Claims. (Cl. 260-45.95)

1. A polymer composition comprising a blend of (1) a polymer of an aliphatic 1-olefin having a maximum of

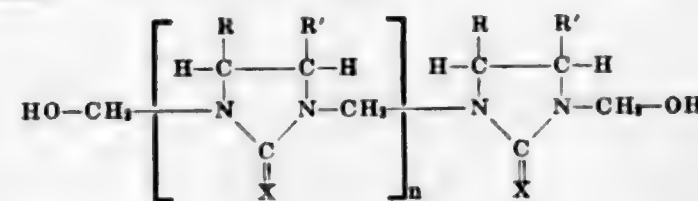
8 carbon atoms per molecule and no branching nearer the double bond than the 4-position, said polymer having been prepared in the presence of a chromium oxide-containing catalyst and containing an odor-producing antioxidant selected from the group consisting of phenols, bisphenols and aromatic amines and (2) in the range of 0.01 to 2.0 weight percent, based on the amount of said polymer, of an alpha-hydroxy ketone of the general formula $RCHOHCOR'$, wherein R and R' are selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkaryl radicals.

3,004,002

HOMOPOLYMERS OF 1,3 BIS-(HYDROXYMETHYL)-2-IMIDAZOLIDONES OR IMIDAZOLITHIONES

Earl Kaplan, North Plainfield, and Joseph C. Morath, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 26, 1958, Ser. No. 737,983
18 Claims. (Cl. 260-67.5)

1. A homopolymer represented by the structural formula:



wherein R and R' are selected from the group consisting of hydrogen and lower alkyl, X is selected from the group consisting of oxygen and sulfur and n is an integer at least 2.

3,004,003

PREPARATION OF POLYESTER CONTAINING Δ⁴-TETRAHYDROPHthalic ACID RADICALS

Hans Batzer, Stuttgart-Feuerbach, Germany, assignor to C. F. Roer G.m.b.H., Stuttgart-Feuerbach, Germany
No Drawing. Filed Jan. 27, 1956, Ser. No. 561,917
Claims priority, application Germany Jan. 29, 1955
1 Claim. (Cl. 260-75)

A method for the preparation of polyesters containing Δ⁴-tetrahydrophthalic acid radicals comprising subjecting a linear unsaturated polyester containing dienophilic groups and at least 10 ester groups formed by esterification of hydroxyl groups of a diol with a member of the group consisting of butenedioic acids and anhydrides thereof at temperatures of about 0 to 130° C. to the Diels-Alder synthesis with a conjugated diene in contact with a polymerization inhibitor.

3,004,004

HYDROPHILIC POLYPEPTIDES AND THEIR PREPARATION

Charles J. Fox, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 26, 1958, Ser. No. 723,980
2 Claims. (Cl. 260-78)

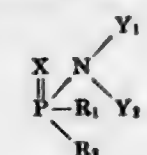
1. A process for preparing a hydrophilic polypeptide which comprises dissolving a high molecular weight poly-γ-benzyl-L-glutamic acid, having an intrinsic viscosity in dioxan of at least 0.42, in dichloroacetic acid and treating the solution thus obtained with anhydrous hydrogen bromide under cool conditions until the debenzylated polypeptide is soluble in dilute alkali.

3,004,005

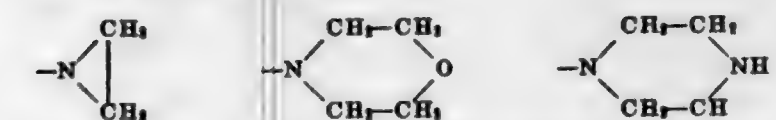
VULCANISATION ACCELERATORS FOR VULCANISABLE ELASTOMERS

Hugo Malz, Leverkusen, Theo Kempermann, Köln-Lindenthal, Helmut Esser, Köln-Salz, and Friedrich Lober, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Jan. 9, 1958, Ser. No. 707,868
Claims priority, application Germany Jan. 9, 1957
14 Claims. (Cl. 260-79)

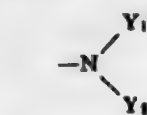
1. In the process of sulfur-vulcanizing an elastomer by curing it in the presence of 0.5-5% by weight of a vulcanization accelerator, said elastomer being selected from the group consisting of natural rubber, homopolymers of conjugated diolefins, and copolymers of conjugated diolefins and copolymerizable monovinyl compounds, the improvement comprising mixing with said elastomer, a vulcanization accelerator of the formula:



wherein X represents an atom selected from the group consisting of oxygen and sulfur, Y₁ and Y₂ are selected from a group consisting of hydrogen and a hydrocarbon radical containing up to 9 carbon atoms, and wherein Y and Y₁ taken together can form with the adjacent nitrogen atom a heterocyclic ring system selected from one of the following groups:



and wherein R₁ and R₂ are individually selected from the group consisting of (a)



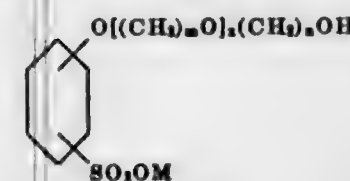
wherein Y₁ and Y₂ are as defined above, and (b) a hydrocarbon radical containing up to 6 carbon atoms, a hydrocarbon oxy radical containing up to 6 carbon atoms, and a hydrocarbon thia radical containing up to 6 carbon atoms; and vulcanizing said mixture.

3,004,006

OMEGA-HYDROXYPOLYOXYALKYLENEOXY-BENZENE SULFONATES

Henry L. King and William A. H. Huffman, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware
No Drawing. Filed Nov. 29, 1957, Ser. No. 699,473
2 Claims. (Cl. 260-79.3)

1. A method for preparing an omega-hydroxypolyoxy-alkyleneoxybenzene sulfonate of the general formula



wherein m and n are integers from 2 to 4, x is an integer from about 5 to about 125, and M is a metal selected from the group consisting of an alkali metal and alkaline earth metal comprising the steps of forming under standard room conditions as to temperature and pressure an aqueous mixture composed of enough water to dissolve the following constituents, a sulfonated monohydroxy-

benzene selected from the group consisting of monohydroxybenzene sulfonic acid, an alkali metal salt thereof, and an alkaline earth metal salt thereof and a base catalyst selected from the group consisting of an alkali metal hydroxide, an alkali metal oxide, an alkaline earth metal hydroxide, and an alkaline earth metal oxide, said base catalyst being present in an amount efficient to establish a pH in the resulting mixture of greater than about 8, introducing into said mixture an alkylene oxide having from 2 to 4 methylene groups per molecule in an amount such that x+1 mols of the alkylene oxide will add to the selected sulfonated monohydroxybenzene per mol thereof.

3,004,007

VULCANIZING BROMINATED COPOLYMERS

Robert E. Clayton, Roselle Park, John R. Briggs, Westfield, and Francis P. Baldwin, Colonia, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 14, 1957, Ser. No. 696,334
9 Claims. (Cl. 260-79.5)

1. A composition which comprises 100 parts by weight of the reaction product of a brominated copolymer of 85 to 99.5 wt. percent of a C₄ to C₆ isolefin and 15 to 0.5 wt. percent of a C₄ to C₁₄ multiolefin, said copolymer containing at least about 0.5 weight percent bromine but not more than about three combined atoms of bromine per double bond in the copolymer, and an admixture of about 0.5 to 30 parts by weight of zinc oxide, about 0.01 to 10.0 parts by weight of magnesium oxide, about 0.05 to 10.0 parts by weight of a thiazyl sulfide, and about 0.01 to 10.0 parts by weight of a member selected from the group consisting of thiuram sulfides, thiocarbamates, and mixtures thereof, said composition being free of added elemental sulfur.

3,004,008

MANUFACTURE OF COPOLYMERIC PRODUCTS

Albert S. Carpenter, Sutton Coldfield, Birmingham, England, assignor to Courtaulds Limited, London, England, a British company
No Drawing. Filed Jan. 21, 1959, Ser. No. 788,045
Claims priority, application Great Britain Feb. 18, 1958
7 Claims. (Cl. 260-85.5)

1. A process for the production of fibre-forming, acetone-soluble copolymers of acrylonitrile and vinylidene chloride which comprises polymerising a mixture containing from 30 to 65 percent by weight of acrylonitrile and from 70 to 35 percent by weight of vinylidene chloride in the presence of a polymerisation initiator, both monomers and the initiator being dissolved in a solvent mixture containing (a) water, (b) a water-miscible alcohol and (c) a third component chosen from the group consisting of acetone, acetic acid and mixtures of acetone and acetic acid, the solvent mixture containing at least 15 percent by volume of each of the components a, b and c.

3,004,009

SUSPENSION COPOLYMERIZATIONS OF VINYL CHLORIDE

Richard G. Dell, Ford, N.J., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,816
12 Claims. (Cl. 260-86.3)

1. In a suspension copolymerization wherein 10 to 95 parts vinyl chloride are copolymerized with 90 to 5 parts of other monoethylenically unsaturated CH₂=C< monomer from the group consisting of the vinyl esters of the lower fatty acids and the acrylate esters dispersed in water containing a surface active agent to produce filterable polymer suspensions, that improvement which comprises dispersing the monomers in water containing as

surface active agents a methyl cellulose having a solution viscosity of about 4000 and substantially 0.075% to 0.6% of a mononuclear alkyl aryl sulfonate emulsifier in which the aryl nucleus is a member of the group consisting of the benzene and toluene nuclei and each of said nuclei contains a single C_{10} to C_{30} alkyl substituent, the methyl cellulose being present in amount at least equal to the amount of the alkyl aryl sulfonate and no greater than about 5.0%, the amounts of said surface active agents being by weight of the monomers present.

3,004,010

HIGH-POLYMER METAL COMPOUNDS AND PROCESS FOR MAKING SAME

Meyer Mendelsohn, New York, N.Y., assignor, by mesne assignments, to Yardney International Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 30, 1953, Ser. No. 345,741
7 Claims. (Cl. 260-91.3)

1. A process of forming a polymeric metallate, comprising the step of reacting, in an aqueous alkaline solution, a water-swallowable high polymer, selected from the group which consists of cellulose and polyvinyl alcohol, with a water-soluble salt of a metal chosen from the group which consists of magnesium, zinc and cadmium.

3,004,011

CATALYTIC PROCESS FOR POLYMERIZING CHLOROPRENE TO A SOLID ELASTOMER

Harold Leonard Jackson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 5, 1958, Ser. No. 713,305
4 Claims. (Cl. 260-92.3)

1. A process for homopolymerizing chloroprene to a solid homopolymeric chloroprene elastomer wherein a liquid substantially anhydrous chloroprene is contacted, at a temperature within the range of 0° to 100° C. with a metallic alloy consisting of lithium and a metal taken from the group consisting of magnesium, calcium, strontium, barium, aluminum, gallium and indium, said alloy containing 4 to 12% by weight of lithium, the total alloy present being within the range of 0.5 to 10% by weight of said chloroprene, said reaction being carried out in a non-reactive non-aqueous system and under inert atmospheric conditions.

3,004,012

CATALYTIC PROCESS FOR POLYMERIZING CHLOROPRENE TO A SOLID ELASTOMER

Harold Leonard Jackson and Kurt Lothar Seligman, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 5, 1958, Ser. No. 713,315
5 Claims. (Cl. 260-92.3)

1. A process for homopolymerizing chloroprene to a solid homopolymeric chloroprene elastomer wherein metallic lithium as the sole catalyst is contacted in a non-reactive non-aqueous system and in an inert atmosphere with a liquid substantially anhydrous chloroprene at a temperature within the range of 0° to 100° C., said lithium being present in an amount within the range of 0.05 to 5% by weight of said chloroprene.

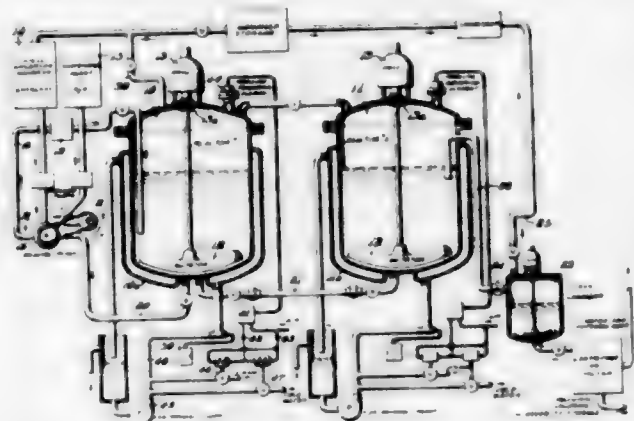
3,004,013

METHOD FOR PRODUCING FINELY DIVIDED POLYVINYL CHLORIDE

Charles E. Kircher, Jr., Robert J. Jones, and Robert F. Kirz, Detroit, Mich., assignors to Detrex Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 28, 1954, Ser. No. 426,135
6 Claims. (Cl. 260-92.8)

1. In a process for the manufacture of polyvinyl chloride by the suspension polymerization of vinyl chloride,

the steps which comprise mixing vinyl chloride monomer and lauroyl peroxide with polyvinyl alcohol, said polyvinyl alcohol being dissolved in water in which said monomer is insoluble, by subjecting the resultant mixture to mechanical forces so as to permanently disperse the vinyl chloride monomer and lauroyl peroxide in said aqueous polyvinyl alcohol in the form of a plurality of finely divided, physically distinct, uniform spheres, substantially 100% of said spheres having a particle size such that they



would pass a standard 100 mesh screen, and at least 50% by weight of said spheres having a particle size such that they would pass a standard 200 mesh screen, then effecting polymerization of the resultant dispersion while agitating the dispersion whereby the particle size of the dispersed spheres is substantially maintained, and recovering polyvinyl chloride in the form of uniform spheres having a particle size substantially that of the initial dispersed vinyl chloride and lauroyl peroxide.

3,004,014

STYRENE POLYMERIZATION

Ralph W. Myerholtz, Jr., Highland, Ind., and Edwin L. De Young, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,473
2 Claims. (Cl. 260-93.5)

1. In a process for preparing polystyrene by solution polymerization of styrene at a temperature between about 40° C. and about 80° C. in contact with from about 0.01 to about 0.5 weight percent of sodium and a promotional amount between 0.01 and 0.5 weight percent based on styrene of an ethylene glycol dimethylether in a solvent consisting essentially of C_6 - C_8 aromatic hydrocarbons containing a major proportion of xylene isomers and not more than about 10% by weight total concentration of benzene and ethylbenzene, the improvement which comprises adding a solvent selected from the group consisting of benzene and ethylbenzene in an amount sufficient to increase the total concentration of benzene and ethylbenzene in said solution to at least about 20% by weight while maintaining the styrene concentration in said solution above about 10%, and thereafter effecting said polymerization, whereby polystyrene of intrinsic viscosity above about 1.5 dl./gm., measured in benzene at 30° C. is produced.

3,004,015

THREE-COMPONENT OLEFIN POLYMERIZATION CATALYST CONTAINING AN ALUMINUM SESQUIHALIDE AND A TRANSITION METAL COMPOUND

Harry W. Coover, Jr., and Newton H. Shearer, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 29, 1960, Ser. No. 52,338
16 Claims. (Cl. 260-93.7)

1. In a polymerization of α -olefinic hydrocarbon material to form solid crystalline polymer, the improvement which comprises catalyzing the polymerization with a catalytic mixture of an aluminum sesquihalide having

the formula $Al_2R'_3X_3$, wherein R' is selected from the group consisting of alkyl radicals containing from 1 to 12 carbon atoms, phenyl and benzyl and X is a halogen selected from the group consisting of chlorine, bromine and iodine, a compound of a transition metal selected from the group consisting of titanium, zirconium, vanadium, chromium and molybdenum, and a stibine having the formula R_3Sb wherein each R is a radical selected from the group consisting of hydrogen and hydrocarbon radicals containing 1 to 12 carbon atoms and selected from the group consisting of alkyl, aryl and aralkyl.

3,004,016

POLYMERIZATION PROCESS

Harold M. Hawkins, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 28, 1957, Ser. No. 668,762
10 Claims. (Cl. 260-93.7)



1. In a process for the polymerization of a 1-olefin containing up to 8 carbon atoms per molecule and having no branching nearer the double bond than the 4 position, in the presence of a catalyst comprising a minor proportion of chromium as chromium oxide, and containing a substantial amount of hexavalent chromium, associated with at least one oxide selected from the group consisting of silica, alumina, zirconia and thoria, said catalyst being suspended in a liquid hydrocarbon solvent for the polymer in a polymerization zone at polymerization conditions wherein the 1-olefin is sparged into the suspension of catalyst in liquid hydrocarbon in said polymerization zone and the liquid hydrocarbon is introduced into said polymerization zone at a plurality of points and separately from said olefin, the improvement comprising admixing a portion of said liquid hydrocarbon solvent, in an amount of about 10 to about 100 weight percent of said olefin, with said olefin; and sparging the resulting admixture into said polymerization zone.

3,004,017

PROCESS OF OLEFIN POLYMERIZATION WITH CATALYSTS CONTAINING TETRAPHENYLBORATES

George O. Cash, Jr., and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 6, 1958, Ser. No. 772,160
9 Claims. (Cl. 260-93.7)

1. The process for polymerizing a normally gaseous α -monoolefin to solid polymer which comprises contacting said α -monoolefin with a catalyst consisting essentially of the tetraphenylborate of a transition element selected from the group consisting of titanium, zirconium, tungsten, vanadium, chromium and molybdenum at a temperature within the range of -20° C. to 250° C., the valences of said transition element being satisfied by only tetraphenylborate groups.

3,004,018

PROCESS AND CATALYST FOR THE PRODUCTION OF RUBBERY POLYMERS

Floyd E. Naylor, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Mar. 21, 1958, Ser. No. 722,842
10 Claims. (Cl. 260-94.3)

1. A method for polymerizing 1,3-butadiene which comprises contacting said 1,3-butadiene under polymerization conditions with a catalyst comprising (a) a compound corresponding to the formula R_nM , wherein R is an alkyl radical containing up to and including 12 carbon atoms, M is a metal selected from the group consisting of mercury and zinc, and n is an integer equal to the valence of said metal M , and (b) titanium tetraiodide.

3,004,019

SOLIDS RECOVERY PROCESS

James I. Stevens, Idaho Falls, Idaho, and John E. Cottle, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,598
16 Claims. (Cl. 260-94.9)

1. A process for recovering solids associated with insoluble polymer from a polymer solution which comprises reducing the temperature of the polymer solution whereby the solids agglomerate, decanting a portion of the supernatant liquid, heating the remaining material to redispense the agglomerated solids, flash drying the dispersion and recovering a dry solids product.

3,004,020

ETHYLENE POLYMERIZATION USING A MIXTURE OF METALS AND A HALOGEN AS CATALYST

Howard S. Young, Charles W. Hargis, and Wayne Reynolds, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,903
7 Claims. (Cl. 260-94.9)

1. In the polymerization of ethylene to form solid polymer, the improvement which comprises effecting the polymerization at a temperature within the range of 0 to 250° C. in the presence of a catalytic mixture initially consisting essentially of a transition metal in metallic form selected from the group consisting of titanium, vanadium, zirconium, chromium, and molybdenum, a second metal in metallic form selected from the group consisting of aluminum, zinc and magnesium and a halogen selected from the group consisting of chlorine, bromine and iodine, said catalytic mixture containing from 0.1 to 10 atoms of second metal per atom of transition metal and from 0.1 to 10 atoms of transition metal per mole of halogen.

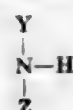
3,004,021

NOVEL AMPHOTERIC SURFACE-ACTIVE COMPOUNDS AND A PROCESS FOR THEIR MANUFACTURE

Hans-Dieter Selle and Angela Ruhnu, Berlin, Germany, assignors to VEB Chemische Fabrik Grünau, Berlin-Grünau, Germany
No Drawing. Filed Dec. 13, 1956, Ser. No. 628,005
10 Claims. (Cl. 260-123.7)

1. A process for the production of amphoteric surface-active peptide compounds comprising the steps of: reacting a compound which is obtained by the condensation of a sclero-protein hydrolysis product containing from 1 to 5 peptide groups with an acid chloride selected from the group consisting of aliphatic hydrocarbon carboxylic acid chlorides having a carbon chain of from 8 to 23 carbon atoms and aliphatic hydrocarbon sulfonic acid chlorides having from 8 to 23 carbon atoms, and

from which substantially all by-products have been removed with (1) an amine of the general formula



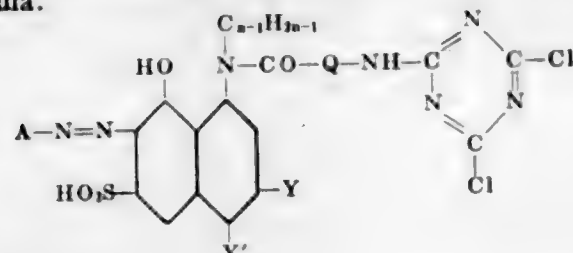
wherein Y is selected from the group consisting of alkyl containing not more than 4 carbon atoms, hydroxy-substituted alkyl containing not more than 4 carbon atoms, and hydrogen, and Z is selected from the group consisting of alkyl containing not more than 4 carbon atoms and the phenyl radical when Y is hydrogen, and with (2) formaldehyde at an elevated temperature ranging from 80–100° C. then neutralizing the reaction mixture and finally continuing heating at said elevated temperature until the reaction is substantially complete.

3,004,022

TRIAZINYL AZO DYESTUFFS

William Elliot Stephen, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Jan. 17, 1958, Ser. No. 709,453
Claims priority, application Great Britain Jan. 23, 1957
6 Claims. (Cl. 260—153)

1. Dyestuffs represented in their free acid form by the formula:



wherein:

A stands for a radical selected from the group consisting of unsubstituted naphthyl and sulfonated naphthyl radicals, phenyl radicals and phenyl radicals carrying up to three substituents selected from the group consisting of chlorine, methyl, trifluoromethyl, methoxy, phenoxy, nitro, sulfamyl, carbamyl, carboxy, and sulfonic acid groups;

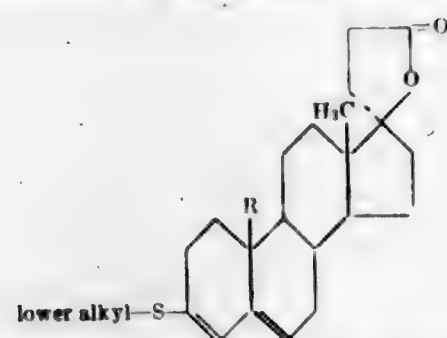
n is a small whole number having a value from 1 to 7; Q is a member selected from the group consisting of m- and p-phenylene radicals; and, one of the radicals represented by Y and Y' is selected from the group consisting of hydrogen and sulfonic acid, and the other is hydrogen.

3,004,023

3-ALKYLTHIO-17 α -CARBOXYETHYLANDROSTA-3,5-DIEN-17 β -OL LACTONES AND PROCESS

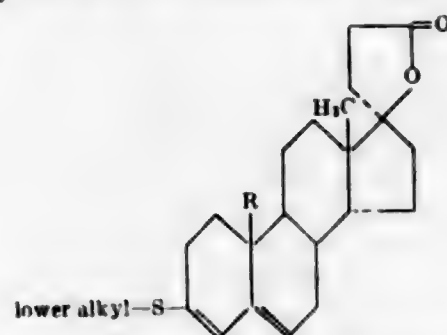
Robert C. Twitt, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 23, 1960, Ser. No. 16,919
4 Claims. (Cl. 260—239.57)

1. A compound of the formula

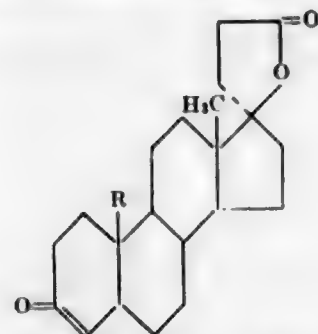


wherein R represents a member of the group consisting of hydrogen and a methyl radical.

4. In a process for the manufacture of compounds of the formula



wherein R represents a member of the group consisting of hydrogen and a methyl radical, the step which comprises contacting a 3-oxo steroid of the formula



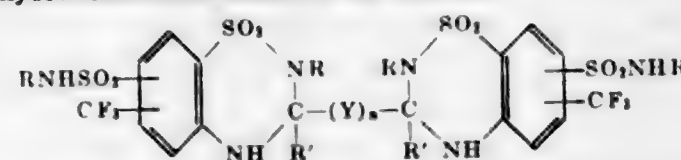
with a lower alkyl mercaptan in a liquid alcohol solution containing sulfuric acid, R in the formula of the 3-oxo steroid being defined as before.

3,004,024

BENZOTHIADIAZINE DERIVATIVES

Jack Bernstein and Harry Louis Yale, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Apr. 10, 1959, Ser. No. 805,374
10 Claims. (Cl. 260—243)

1. A compound selected from the group consisting of dihydrobenzothiadiazines of the formula



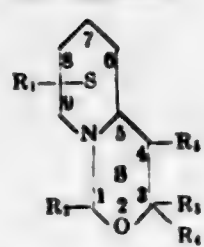
and alkali metal salts thereof, wherein each R is selected from the group consisting of hydrogen, lower alkyl, phenyl, lower alkyl phenyl, chlorophenyl, bromophenyl, nitrophenyl, lower alkoxy phenyl and sulfamylphenyl; each R' is selected from the group consisting of hydrogen, lower alkyl, phenyl and benzyl; Y is selected from the group consisting of lower alkylene and p-phenylene, and n is selected from the group consisting of zero and one.

3,004,025

OXAZINES

Marcus G. Van Campen, Jr., Berkeley, Calif., and Charles H. Tilford and Edwin R. Andrews, Cincinnati, Ohio, assignors to Richardson-Merrell Inc., a corporation of Delaware
No Drawing. Filed Jan. 21, 1958, Ser. No. 710,173
6 Claims. (Cl. 260—244)

1. Compounds of the formula:



in which R₁ is a radical selected from the group consisting

of hydrogen, methyl and ethyl radicals; R₂ is a radical selected from the group consisting of hydrogen, methyl and ethyl radicals; R₃ and R₄ are indifferently selected from the group consisting of alkyl groups having 2 to 11 carbon atoms, cycloalkyl groups of 5 to 9 carbon atoms, phenyl, halophenyl, lower alkoxyphenyl, lower alkylphenyl, and pyridyl, and radicals which taken together with the carbon atom to which they are attached form a cyclic group selected from the group consisting of indanylidene, fluorenylidene, acenaphthyldiene, cyclohexylcyclohexyldiene, camphenyldiene, fenchyldiene and anisylcyclohexyldiene groups; and R₅ is selected from the class consisting of hydrogen, alkyl groups having 1 to 6 carbon atoms and phenyl; with the proviso that R₃ and R₄ together have at least 5 carbon atoms.

3,004,026

HEXAMETHYLENETETRAMINE HIPPURATE

Alexander Galat, 126 Buckingham Road, Yonkers, N.Y.
No Drawing. Filed Aug. 28, 1959, Ser. No. 836,618
1 Claim. (Cl. 260—248.5)

Hexamethylenetetramine hippurate.

3,004,027

PROCESS FOR PURIFICATION OF 3,6-DICHLOROPYRIDAZINE

John Edson Gordon, Middlesex, Kenneth Goodemoot, Franklin Township, Somerset County, and Fred Bernard Dorf, Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 1, 1957, Ser. No. 656,186

7 Claims. (Cl. 260—250)

1. In recovering 3,6-dichloropyridazine from a reaction product obtained by the action of phosphorous oxychloride on maleic hydrazide, said reaction product containing a finite amount of residual unreacted phosphorous oxychloride, the improvement which permits recovery of said 3,6-dichloropyridazine containing not over 2% impurities, said improvement comprising the steps of drowning said reaction product in water, treating the resultant mass comprising drowned product in drowning liquor with at least 10 parts per hundred parts by weight of said reaction product of a water-soluble sulfite selected from the group consisting of the bisulfites, of sodium, potassium and ammonium, precipitating 3,6-dichloropyridazine from the so-treated mass and collecting resultant precipitate.

3,004,028

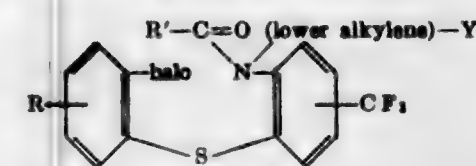
PREPARATION OF PHENOTHAZINES

Morris A. Dolliver, Edison, Wilbur B. McDowell, Milltown, and John J. Pfeiffer, Jr., New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 16, 1957, Ser. No. 659,476

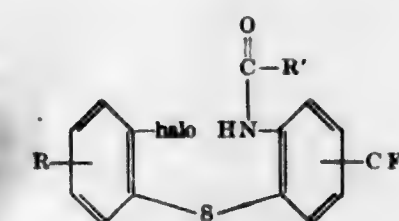
5 Claims. (Cl. 260—268)

3. A process for preparing a compound selected from the group consisting of free bases of the general formula



and non-toxic acid-addition salts thereof, wherein R is

selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halo and trifluoromethyl, R' is selected from the group consisting of hydrogen and a hydrocarbon radical of less than ten carbon atoms free from acetylenic linkages, and Y is selected from the group consisting of di(lower alkyl)amino and a monocyclic saturated 5 to 6 membered basic heterocyclic nitrogen-containing radical of less than twelve carbon atoms, selected from the group consisting of piperidyl, (lower alkyl) piperidyl, di(lower alkyl)piperidyl, (lower alkoxy) piperidyl, pyrrolidyl, (lower alkyl)pyrrolidyl, di(lower alkyl)pyrrolidyl, (lower alkoxy)pyrrolidyl, piperazyl, (lower alkyl)piperazino, (hydroxy lower alkyl)piperazino, di(lower alkyl)piperazino, (lower alkoxy)piperazino, (lower carbalkoxy)piperazino, (hydroxy alkoxyalkyl)piperazino and acyloxyalkyl-piperazino, which comprises reacting at about 100° C. a compound of the general formula



wherein R and R' are as above-defined with a compound of the general formula Y-(lower alkyl)halide, wherein Y is as above-defined in the presence of a basic catalyst.

5. 2-[piperazinyl-(lower alkyl)-4-formamido]-4-trifluoromethyl-2'-bromo-diphenylsulfide.

3,004,029

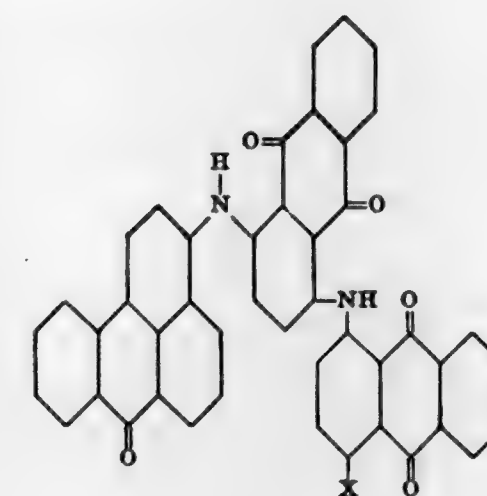
NEW BENZANTHRONE ANTHRAQUINONE ACRIDINE VAT DYES

William Baptist Hardy, Bound Brook, and Isalah Von, Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 19, 1957, Ser. No. 703,987

3 Claims. (Cl. 260—274)

1. The dyestuff obtained by the process which comprises condensing Bz-1-halogenbenzanthrone with 1-amino-4-haloanthraquinone to form a dianthrime having the following formula



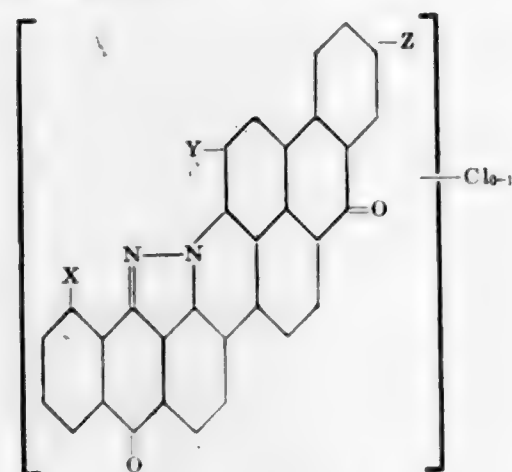
in which X is a halogen having an atomic number greater than 9 and not greater than 35, and subjecting the anth-

rimide to fusion with from 3-30 parts of caustic alkali per part of anthrimide at 125-185° C. until the combined halogen in the dyestuff has been reduced to not more than 0.1%.

3,004,030
LEUCO-SULFURIC ACID ESTERS OF DYESTUFFS OF THE BENZANTHRONE-PYRAZOLANTHRONE SERIES

Ernst Spietschka, Wiesbaden-Biebrich, and Hans Schlischenmaier, Lindau (Bodensee), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Aug. 5, 1958, Ser. No. 753,213
Claims priority, application Germany Aug. 9, 1957
6 Claims. (Cl. 260-275)

1. The leuco-sulfuric acid esters of dyestuffs having the following formula

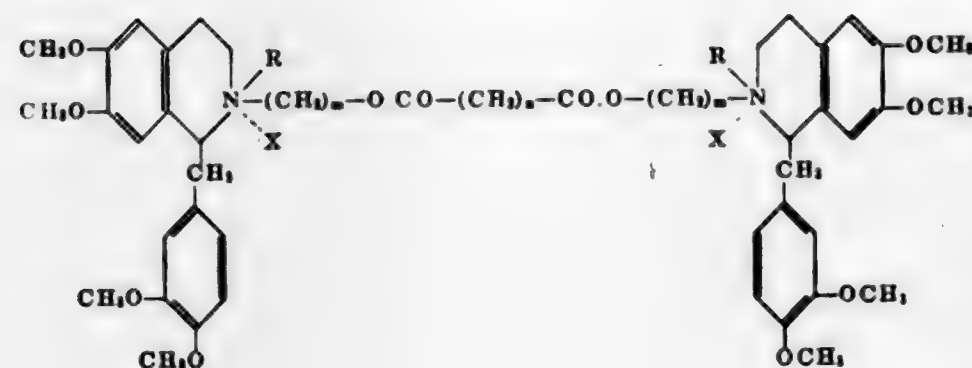


wherein X stands for a lower alkoxy group, Y represents a member selected from the group consisting of hydrogen, lower alkyl and phenyl, and Z represents a member selected from the group consisting of hydrogen and bromine.

3,004,031
DIQUATERNARY SALTS OF PAPAVERINO ESTERS

Edwin Percival Taylor, Henry Oswald Jackson Collier, and Jan Mieczyslaw Zygmunt Gladych, all of London, England, assignors to Allen & Hanburys Limited, London, England, a British company
No Drawing. Filed July 1, 1959, Ser. No. 824,182
Claims priority, application Great Britain July 3, 1958
5 Claims. (Cl. 260-286)

1. Salts of the formula:

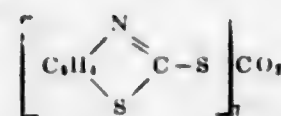


where R is a lower alkyl group of less than 7 carbon atoms, X is a non-toxic inorganic ion, m is one of the integers 2 and 3 and n is selected from the group consisting of zero, 1, 2, 3 and 4.

3,004,032
PROCESS FOR PRODUCING A COBALT MERCAPTOBENZOTHIADIAZOLE COMPOUND

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
No Drawing. Filed June 15, 1959, Ser. No. 820,099
Claims priority, application France July 7, 1958
1 Claim. (Cl. 260-299)

Process for obtaining a cobalt mercaptobenzothiazole having the formula



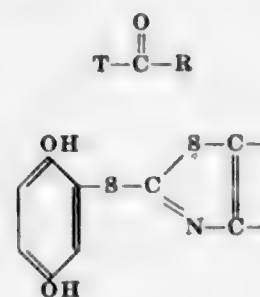
which comprises: producing a first solution by mixing without heating, about 76% by weight of denatured alcohol, about 14% by weight of mercaptobenzothiazole in powder form and about 10% by weight of an aqueous soda solution having a concentration of about 28.5%; agitating this mixture until the dissolution is complete; mixing a second composition constituted by about 83.6% of said first solution and about 16.4% of hydrated cobalt chloride $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$ in a finely pulverized state; agitating said second composition until reaction is complete and green cobalt mercaptobenzothiazolate precipitates, and separately recovering the cobalt mercaptobenzothiazolate.

3,004,033
2-(2,5-DIHYDROXYPHENYLTHIO)THIAZOLECARBOXYLATES

John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 23, 1959, Ser. No. 861,444
7 Claims. (Cl. 260-302)

1. Compounds having the formula where T is a radical

of the structure

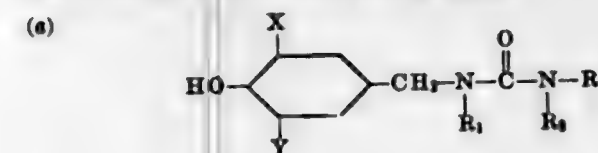


the remaining valence of which is satisfied by a member of the group consisting of hydrogen and lower alkyl and where R is a member of the group consisting of NH_2 , anilino, hydroxy and lower alkoxy.

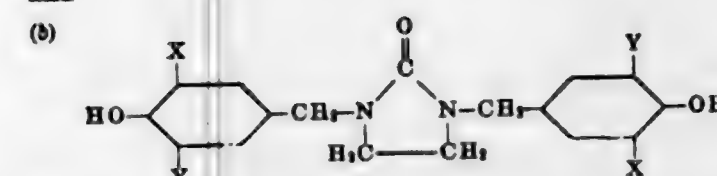
3,004,034
2-(2-CYCLOHEXENOXY)BENZOTHIADIAZOLE
John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 30, 1959, Ser. No. 862,792
1 Claim. (Cl. 260-304)
2-(2-cyclohexenoxy)benzothiadiazole.

3,004,035
DIALKYLPHENOL CONDENSATION PRODUCTS
Ernest Casades, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 31, 1959, Ser. No. 836,896
3 Claims. (Cl. 260-309.7)

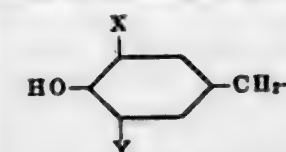
1. A compound taken from the group consisting of those compounds having the structure



and



in which compounds, R_1 , R_2 and R_3 of (a) is taken from the group consisting of hydrogen and

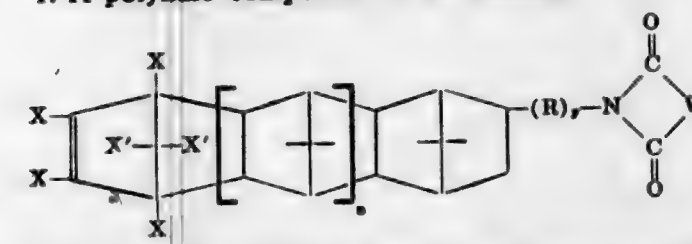


X is lower tertiary alkyl and Y is lower alkyl.

3. The compound 1,3-bis(3-tert-butyl-4-hydroxy-5-methylbenzyl)-2-imidazolidone.

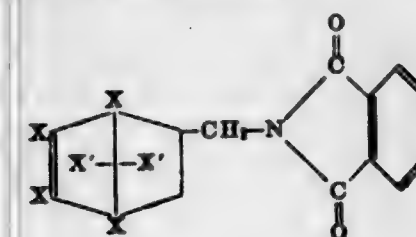
3,004,036
CARBOXIMIDE COMPOUNDS
Hsing Yun Fan and Harry G. Durham, Modesto, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,787
11 Claims. (Cl. 260-326)

1. A polyhalo compound of the formula



wherein X is a member of the group consisting of hydrogen and halogen, and at least one X is halogen, X' is a member of the group consisting of hydrogen, halogen and lower alkoxy, R is selected from the group consisting of alkylene, phenylalkylene, tolylalkylene, naphthalenylalkylene and anthracenylalkylene in which alkylene is in each case alkylene of 1 to 10 carbon atoms, and tolylene, phenylene, naphthylene and anthrylene, y is a whole number from 0 to 1, and W is a member selected from the group consisting of alkylene of 2 to 5 carbon atoms, halo-substituted alkylene of 2 to 5 carbon atoms, halo-substituted alkenylene of 2 to 5 carbon atoms and 1,2-phenylene, and n is a whole number from 0 to 1.

4. A compound of the formula

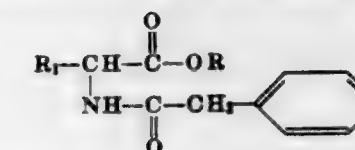


wherein X and X' are each halogen.

771 O.G.—85

3,004,037
HETEROCYCLIC AMINE COMPOUNDS AND PROCESS OF PRODUCING THE SAME
Charles A. Miller, Detroit, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,732
2 Claims. (Cl. 260-326.5)

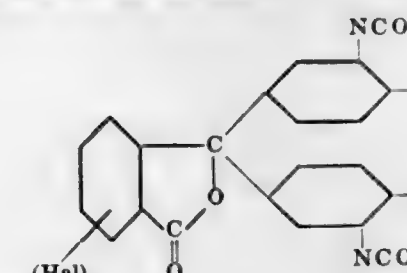
1. Process of producing alkylated 3-phenyl-2,4-pyrrolidinedione compounds which comprises reacting an N-phenylacetyl-2-aminoacid ester having the formula



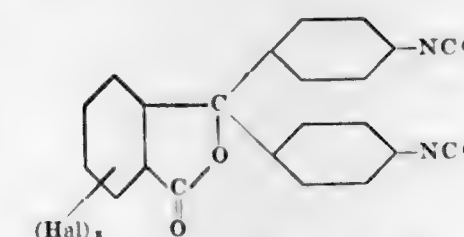
with substantially one equivalent of a member of the group consisting of alkali metal alkoxides, amides and hydrides, in the presence of an inert organic solvent, and reacting the resulting 3-phenyl-2,4-pyrrolidinedione with substantially one equivalent of an alkylating agent of the class consisting of lower alkyl halides, lower dialkyl sulfates, lower dialkyl sulfonates and lower monoalkyl sulfonates, where R represents an alkyl group containing from one to two carbon atoms and R_1 is selected from the group consisting of hydrogen and methyl.

3,004,038
SUBSTITUTED PHTHALIDE DIISOCYANATES
William B. Hardy and Frederic H. Adams, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 23, 1958, Ser. No. 744,020
6 Claims. (Cl. 260-343.4)

1. A compound selected from the group consisting of compounds of the formulae:



and



in which "Hal" is selected from the group consisting of bromine, chlorine and iodine, "x" is an integer of from 0 to 4, and R is selected from a group consisting of bromine, chlorine and the lower alkyl radicals.

3,004,039
PREPARATION OF POLYHYDROPYRANYLAMINO AROMATIC COMPOUNDS
James J. Louvar, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Oct. 29, 1958, Ser. No. 770,563
13 Claims. (Cl. 260-345.1)

1. A process which comprises condensing carbocyclic aromatic amine with 2,3-dihydropyran in the presence of a mercuric salt, and recovering the resultant condensation product.

9. A process which comprises condensing p-phenylenediamine with 2,3-dihydropyran in the presence of

mercuric acetate at a temperature in the range of from about 0° to about 20° C., and recovering the resultant N,N'-di-(2-tetrahydropyranyl)-p-phenylenediamine.

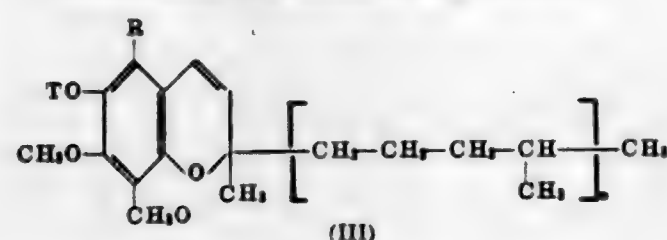
3,004,040

DIMETHOXY-1,2-CHROMENES

Hrishikesh Pendse, Basel, Rudolf Rüegg, Bottmingen, and Gottlieb Ryser, Basel, Switzerland, assigns to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,627
Claims priority, application Switzerland July 15, 1959
3 Claims. (Cl. 260—345.5)

1. A compound represented by the formula



wherein the symbol R represents a lower alkyl radical; the symbol T represents a member selected from the group consisting of hydrogen, lower alkanoyl and benzoyl; and the symbol n represents a natural number from 0 to 9 inclusive.

3,004,041

3-ALLYLOXY-2-METHYL-4H-PYRAN-4-ONE

Henry E. Hennis, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,551
4 Claims. (Cl. 260—345.9)

1. 3-allyloxy-2-methyl-4H-pyran-4-one.

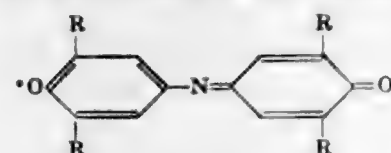
3,004,042

FREE RADICALS OF 4,4'-BIS(2,6-DI-TERT-ALKYL-HYDROXYPHENYL) AMINES

Galvin M. Coppinger, Oakland, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,834
7 Claims. (Cl. 260—396)

1. The stable free radical of the formula



wherein each R is tertiary alkyl.

3,004,043

WATER-SOLUBLE VEGETABLE OIL STEROL DERIVATIVES

Max H. Stern, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 9, 1959, Ser. No. 845,327
7 Claims. (Cl. 260—397.2)

1. A water-soluble polyethylene glycol ester of a phytosterol acid ester of a dicarboxylic acid having the formula



wherein (S) is a phytosterol moiety selected from the group consisting of sitosterol, stigmasterol and campesterol joined to said dicarboxylic acid at the 3-position of the steroid nucleus, R is an alkylene radical having 2 to 6 carbon atoms and (PEG) is a polyethylene glycol moiety having a molecular weight of 400 to 6000.

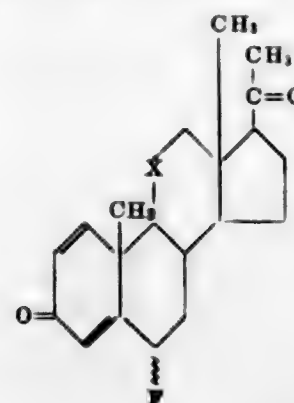
3,004,044

1-DEHYDRO-6-FLUORO-11-OXYGENATED PROGESTERONES

J Allan Campbell, Kalamazoo, John C. Babcock, Portage Township, Kalamazoo County, and John A. Hogg, Kalamazoo, Mich., assigns to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed June 9, 1958, Ser. No. 740,569
10 Claims. (Cl. 260—397.3)

1. A compound of the formula:



wherein X is selected from the group consisting of the carbonyl radical and the hydroxymethylene radical.

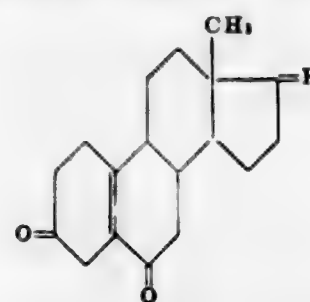
3,004,045

Δ⁵⁽¹⁰⁾-3,6-DIKETO ANDROSTENES

Filippus Johannes Zeelen, Oss, Netherlands, assignor to Organon Inc., West Orange, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 31, 1960, Ser. No. 65,917
Claims priority, application Netherlands Nov. 12, 1959
4 Claims. (Cl. 260—397.4)

1. New steroids of the general formula:



in which R is selected from the group consisting of O, H(βOH), H(βOAcyl), αX(βOH) and αX(βOAcyl), in which X is selected from the group consisting of a saturated and unsaturated hydrocarbon radical with 1-4 carbon atoms.

3,004,046

PROCESS OF PREPARING 4-PREGNENE-11-OL-3,20-DIONES FROM 4-HALO-PREGNANE-3,11,20-TRIONES

John T. Day, Danville, Pa., and Charles M. Smith, Fanwood, N.J., assigns to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 481,018, Jan. 10, 1955. This application Feb. 24, 1958, Ser. No. 716,894

5 Claims. (Cl. 260—397.45)

1. In the process of converting a 4-halo-3,11,20-triketo-17,21-dihydroxy-pregnane compound to both the corresponding Δ⁴-3,11,20-triketo-pregnene and the corresponding Δ⁴-3,20-diketo-11-hydroxy-pregnene compound in high overall yield, the steps which comprise reacting approximately one molecular equivalent of the corresponding 4-halo-3,11,20-triketo-pregnane with approximately two to four molecular equivalents of semicarbazide in the presence of a liquid medium comprising

both (1) a water-immiscible organic solvent selected from the group which consists of hydrocarbon solvents and halogenated hydrocarbon solvents and (2) a highly polar, water-miscible organic solvent, selected from the group which consists of alcohols, N,N-dialkylalkanoamides and lower alkanic acid nitriles, thereby forming a reaction product comprising mono- and 3,20-bis-semicarbazones of the corresponding Δ⁴-3,11,20-triketo-pregnene, precipitating and recovering said Δ⁴-3,11,20-triketo-pregnene 3,20-bis-semicarbazone from the mother liquor in crystalline form, converting said compound to said Δ⁴-3,20-diketo-11-hydroxy-pregnene, and subjecting said mother liquor containing mono-semicarbazones and residual 3,20-bis-semicarbazone of the Δ⁴-3,11,20-triketo-pregnene to the action of a hydrolyzing agent thereby hydrolyzing said mono-semicarbazones and residual 3,20-bis-semicarbazone to form the Δ⁴-3,11,20-triketo-pregnene, the total combined yield of said Δ⁴-3,11,20-triketo-pregnene and said Δ⁴-3,20-diketo-11-hydroxy-pregnene, based on the 4-halo-3,11,20-triketo-pregnane starting material, being substantially quantitative.

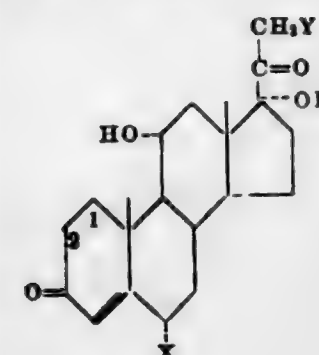
3,004,047

6α-HALO-11α-HYDROXY STEROIDS OF THE PREGNANE SERIES AND ESTERS THEREOF

Josef Fried, Princeton, and Pacifico A. Principe, New Brunswick, N.J., assigns to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 13, 1959, Ser. No. 799,093
9 Claims. (Cl. 260—397.45)

1. A steroid of the formula



wherein the nuclear carbon atoms in the 1 and 2 positions are connected by a linkage selected from the group consisting of a single bond and a double bond, X is a halogen selected from the group consisting of chloro and fluoro, and Y is selected from the group consisting of hydrogen, hydroxy and the acyloxy radical of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,004,048

METHOD FOR PREVENTING COLOR REVERSION OF FATTY MATERIAL

John W. Copenhaver, Short Hills, Jack Kwiatek, North Arlington, and Horace R. Davis, Jr., Nutley, N.J., assigns to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

No Drawing. Filed Apr. 4, 1951, Ser. No. 219,318
9 Claims. (Cl. 260—398.5)

1. In the manufacture of soap from decolorized fatty materials, a method of preventing color reversion of said fatty material prior to its conversion into soap, which includes the steps of: adding to said fatty material between 0.005% and .3% of at least one member of a group of mercaptans consisting of 2-mercaptoethanol, thiophenol, thiocresol, benzyl mercaptan, or their homologs and between .005% and .3% of orthophosphoric acid; and wash-

ing out residual mercaptans and acid with alkali solution in the soap making process.

7. A method for retarding the color reversion of fatty materials which comprises: subjecting said fatty materials to a decolorization treatment with a liquefied, normally gaseous hydrocarbon; and thereafter incorporating in said decolorized fatty materials a small amount of a compound containing as the only sulfur group of sulfhydryl group activated by an aromatic ring.

3,004,049

PRODUCTION OF ESTER TYPE ANIONIC SURFACE ACTIVE AGENTS

Leslie M. Schenck, Mountainside, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,366
16 Claims. (Cl. 260—400)

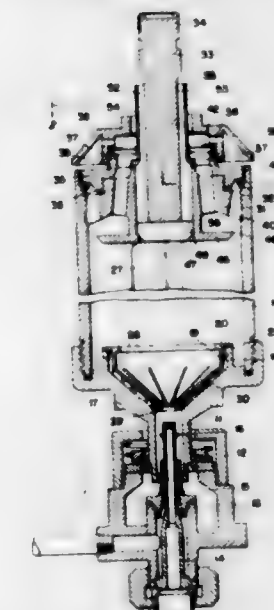
1. A process comprising heating at least 1 mole of an acylating agent selected from the group consisting of free aliphatic and alicyclic monocarboxylic acids of from 8 to 22 carbon atoms with 1 mole of an isethionate of the formula HO—CHR—CHR—SO₂M wherein R is selected from the group consisting of H and lower alkyl and M is a cation selected from the group consisting of alkali metals and alkaline earth metals, at an acidic pH and a temperature of about 140 to 320° C. in the presence of a catalytic amount of a compound selected from the group consisting of hypophosphorous acid and its metal, ammonium and amine salts, while removing the water formed during the reaction.

3,004,050

REFINING OF FATTY OILS

Arthur U. Ayres, Philadelphia, Pa., assignor to The Sharples Corporation, a corporation of Delaware

Filed Feb. 27, 1958, Ser. No. 718,034
14 Claims. (Cl. 260—425)



1. In the refining of fatty oil wherein aqueous alkaline reagent is admixed with the oil in concentration and quantity such that upon subjecting the reaction mass to centrifugation for the separation of reaction products and reagent from the refined oil three layers are formed, the lightest layer being of oil, the next heavier layer being of reaction products admixed with reagent, and the heaviest layer being of reagent, the steps which comprise maintaining in the zone of centrifugation a balanced relationship between the oil layer and the reaction product layer dependent upon their specific gravities, and separately discharging outwardly from the periphery of said zone of centrifugation the reagent layer as rapidly as it is formed.

3,004,051

EXTRACTION OF URANIUM VALUES FROM AQUEOUS SOLUTIONS

John C. Hillyer and Karl H. Hachmuth, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Aug. 28, 1958, Ser. No. 757,655
7 Claims. (Cl. 260-429.1)

1. A process for the recovery of uranium values from an aqueous alkaline carbonate solution, comprising adding a compound of the structure



to form the corresponding uranium 8-quinolate, and 0.1 to 10 volumes per volume of said aqueous solution of an inert organic solvent not completely miscible with said aqueous solution, said organic solvent containing 0.5 to 10 percent by weight of a compound of the structure



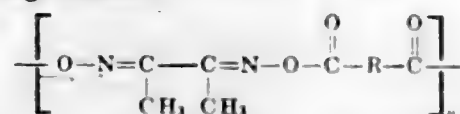
where X is an anion selected from the group consisting of chloride, iodide, bromide, sulfate, phosphate, acetate, and hydroxide, n is the valence of X, and each R is individually selected from the group consisting of hydrocarbon radicals containing 1 to 24 carbon atoms, the total number of carbon atoms in the sum of said R groups being in the range of 4 to 38, thoroughly mixing the resulting mixture, separating the aqueous and organic phases, said organic phase containing uranium values extracted from said aqueous phase.

3,004,052

PROCESS FOR THE RECOVERY OF URANIUM FROM SOLUTION BY MEANS OF CHELATION WITH A POLYOXIME ESTER RESIN

Robert B. Feild, Woodbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 2, 1959, Ser. No. 803,566
2 Claims. (Cl. 260-429.1)

1. A process for the beneficiation of uranium-containing ores and minerals which comprises contacting an ore leach with a polyoxime ester resin to absorb the uranium from the leach and thereafter treating the resin with dilute acid to strip the uranium from the resin, said polyoxime ester resin consisting essentially of repeat units having the following formula:



wherein "R" is a phenylene or a polymethylene radical and "n" is a whole number greater than one.

3,004,053

PREPARATION OF ORGANOSILANES EMPLOYING ALKYL ALUMINUM HALIDES

Isoo Shikara and Jun Iyoda, Osaka City, and Hiroshi Takahashi, Sakai City, Japan, assignors to the Director of the Agency of Industrial Science and Technology, The Ministry of International Trade and Industry, Japanese Government, Tokyo, Japan
No Drawing. Filed Mar. 24, 1959, Ser. No. 801,451
Claims priority, application Japan Mar. 28, 1958
5 Claims. (Cl. 260-448.2)

1. A process for producing alkyl hydrosilanes which comprises reacting hypopolysiloxane with an alkylaluminum halide of the general formula



wherein R is an alkyl group, X is a halogen atom and p is any number larger than 0 and smaller than 3.

3,004,054

PROCESS FOR THE MANUFACTURE OF MIXED PHOSPHOROTHIOATE ESTERS

William R. Smith, Jr., Richmond, Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia
No Drawing. Filed May 23, 1960, Ser. No. 30,740
8 Claims. (Cl. 260-461)

1. A process for the manufacture of mixed phosphorothioate esters which comprises reacting in the absence of a catalyst an alkali metal hydroxide with a mixture of a O,O-di(lower alkyl) phosphorothioate and a phenol, said alkali metal hydroxide being employed as an aqueous solution containing at least 45-50% by weight thereof.

3,004,055

PROCESS FOR PREPARING O,O-DIALKYL, S-N-ALKYL-CARBAMYL METHYL PHOSPHORODITHIOATES

Mario Perini and Giovanni Speroni, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy
No Drawing. Filed Jan. 15, 1957, Ser. No. 634,181
5 Claims. (Cl. 260-461)

1. In the production of a compound selected from the group consisting of N-monoisopropylamide of O,O-diethylthiophosphorylacetic acid, N-monoisopropylamide of O,O-dimethylthiophosphorylacetic acid, and N-monomethylamide of O,O-dimethylthiophosphorylacetic acid by reaction between an alkali salt of the correspondingly dialkylated dithiophosphoric acid and the correspondingly N-alkylated-alpha-haloacetamide, the improvement which comprises producing the compound directly in a pure, light-colored to substantially colorless state in which it exhibits pronounced parasitocidal activity coupled with low toxicity to warm-blooded animals without requiring purifying after-treatments, by carrying out said reaction, at a temperature between 10° C. and 15° C., in water.

3,004,056

SURFACE ACTIVE COMPOSITIONS

Leslie G. Nunn, Jr., Metuchen, N.J., and Stanley H. Hesse, Bethlehem, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 12, 1959, Ser. No. 852,188
12 Claims. (Cl. 260-461)

1. A process comprising reacting 1 mole of P₂O₅ with 2 to 4.5 moles of a nonionic surface active agent having the molecular configuration of a condensation product of at least one mole of ethylene oxide with one mole of a compound containing about 6 to 150 carbon atoms and a reactive hydrogen atom and selected from the group consisting of phenol, alkyl phenols, aliphatic alcohols, fatty acids, fatty amines, fatty amides, rosin amines, long chain sulfonamides, long chain-substituted aryl sulfonamides, and high molecular weight mercaptans under substantially anhydrous conditions and at a temperature below about 110° C. down to about room temperature.

3,004,057

SURFACE ACTIVE COMPOSITIONS

Leslie G. Nunn, Jr., Metuchen, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 1, 1959, Ser. No. 856,367
15 Claims. (Cl. 260-461)

1. In a process comprising reacting 1 mole of P₂O₅ with 2 to 4.5 moles of a nonionic surface active agent having the molecular configuration of a condensation product of at least one mole of ethylene oxide with one mole of a compound containing about 6 to 150 carbon atoms and a reactive hydrogen atom and selected from the group consisting of phenol, alkyl phenols, aliphatic

alcohols, fatty acids, fatty amines, fatty amides, rosin amines, long chain sulfonamides, long chain-substituted aryl sulfonamides, and high molecular weight mercaptans under substantially anhydrous conditions and at a temperature below about 110° C. down to about room temperature, the improvement comprising carrying out the reaction in the presence of a small amount of a phosphorus-containing compound selected from the group consisting of hypophosphorous acid, salts of hypophosphorous acid, phosphorous acid, and salts and esters of phosphorous acid.

3,004,058

SEPARATION OF TRIMETHYL BORATE FROM THE TRIMETHYL BORATE-METHANOL AZEOTROPE

George L. Cunningham, San Antonio, Tex., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 21, 1954, Ser. No. 457,790
17 Claims. (Cl. 260-462)

1. A method of separating trimethyl borate from its azeotrope with methanol which consists of contacting said azeotrope with an anhydrous metal salt as a solution in methanol, said metal salt being substantially insoluble in trimethyl borate, and recovering the liquid layer enriched in trimethyl borate which separates from the solution.

3,004,059

PROCESS FOR THE RECOVERY OF ω-AMINONITRILES

Karl Wüst, Hanau (Main), Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
Filed Feb. 10, 1959, Ser. No. 792,431
Claims priority, application Germany Feb. 11, 1958
1 Claim. (Cl. 260-465.5)

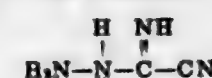
A process for separating a saturated straight chained ω-aminonitrile containing 3 to 18 carbon atoms from its admixture with ammonium chloride which comprises adding in the presence of free ammonia an organic solvent selected from the group consisting of benzene, toluene and methylene chloride to such mixture to dissolve the ω-aminonitrile the quantity of free ammonia present in the admixture to which the solvent is added substantially corresponding to the solubility of the ammonia in the admixture at room temperature, driving off the free ammonia and separating the ω-aminonitrile solution from the precipitated ammonium chloride.

3,004,060

1-CYANOFORMIMIDIC ACID HYDRAZIDE

Lucille T. Morn and Ken Matsuda, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,202
6 Claims. (Cl. 260-465.5)

1. A compound of the formula



3,004,061

POLYESTERS OF BENZENE POLYCARBOXYLIC ACIDS WITH FLUORINATED ALKANOLS

Donald R. Baer, Wilmington, and Charles D. Ver Nooy III, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 2, 1957, Ser. No. 699,930
12 Claims. (Cl. 260-475)

1. A polyester of a benzene polycarboxylic acid having the formula



wherein m represents an integer of from 3 to 4 and n represents an integer of from 1 to 5.

5. A mixture of polyesters each of which has the formula



wherein C₆H₄ represents a benzene ring, m represents an integer of from 3 to 4, and n represents an integer of from 1 to 5.

3,004,062

PURIFICATION OF PHTHALIC ACID ESTERS

Robert W. F. Kreps, Amsterdam, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed July 7, 1958, Ser. No. 746,668
Claims priority, application Netherlands July 30, 1957
7 Claims. (Cl. 260-475)

1. The process for removing components having any substantial adverse effect upon the color stability of a lower alkyl ester of a phthalic acid which comprises heating said ester at a temperature above its melting temperature in the presence of molecular oxygen and a salt of the group consisting of copper lower alkanoate and manganese lower alkanoate and thereafter distilling said esters.

3,004,063

METHOD FOR THE PRODUCTION OF 4,4'-DIHYDROXY-β-CAROTENE, 4,4'-DIHYDROXY-15,15'-DEHYDRO-β-CAROTENE AND ESTERS THEREOF

Roland Entschel and Paul Karrer, Zurich, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 13, 1959, Ser. No. 786,466
Claims priority, application Switzerland Jan. 20, 1958
7 Claims. (Cl. 260-488)

7. A process which comprises reacting a compound of the group consisting of β-carotene and 15,15'-dehydro-β-carotene in the presence of acetic acid at a temperature below about 0° C. successively with N-bromosuccinimide and N-ethylmorpholine to produce, respectively, a member of the group consisting of 4,4'-diacetoxy-β-carotene and 4,4'-diacetoxy-15,15'-dehydro-β-carotene, and reacting the latter with an alkali metal hydroxide to obtain, respectively, a member of the group consisting of 4,4'-dihydroxy-β-carotene and 4,4'-dihydroxy-15,15'-dehydro-β-carotene.

3,004,064

SEPARATION OF NITROGEN ISOTOPES

Karl Erik O. Holmberg, Stockholm, Sweden, assignor to Quartz & Silice S.A., Paris, France, a corporation of France
No Drawing. Original application June 15, 1953, Ser. No. 361,858. Divided and this application Oct. 2, 1957, Ser. No. 687,603
3 Claims. (Cl. 260-501)

1. A method of separating nitrogen isotopes by means of a chemical exchange process between two compounds containing the isotopes to be separated, comprising the steps of combining trimethylamine containing the isotopes to be separated with acetic acid to form a dissociable compound in a liquid phase, passing said liquid phase downwardly through a distillation column, heating said liquid phase in the bottom of said column to liberate vapors of trimethylamine, passing said vapors upwardly in said column in countercurrent contact with said liquid phase, and removing product containing said vapors enriched in one of the nitrogen isotopes from the top of the column, and removing product containing said dissociable compound enriched in a second nitrogen isotope from the bottom of the column.

3,004,065

PREPARATION OF ALKYL GUANIDINE SALTS
George N. Gagliardi, Springfield, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 29, 1957, Ser. No. 699,518
3 Claims. (Cl. 260-501)

1. In the preparation of a salt of an alkyl guanidine by the process which comprises forming a mixture comprising water, a primary alkyl amine containing 10 or more carbon atoms and an acid salt of said amine, adding thereto a mixture of the acid corresponding to said acid salt and an aqueous solution of cyanamide, keeping the resultant mixture at a pH of at least about nine by the addition of said acid corresponding to said acid salt and holding the temperature of the mixture between about 95° C. and 100° C. until reaction substantially ceases, the improvement in combination therewith in which an aqueous cyanamide solution having a dissolved iron content of less than 300 parts per million is employed and said resultant reaction mixture has, throughout the reaction, a dissolved iron content of less than about 100 parts per million.

3,004,066

OXIDATION OF DIALKYLBENZENES
Emanuel M. Amir, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,389
3 Claims. (Cl. 260-524)

1. In a process for the catalytic liquid phase oxidation of primary dialkyl benzene containing 1 to 4 carbon atoms per alkyl group at a temperature within the range of 120° to 275° C. and at a pressure sufficient to maintain said liquid phase for a time within the range of 0.5 to 25 hours with molecular oxygen in an amount in the range of about 0.1 to about 50 mols of oxygen per mol of dialkylbenzene per hour, the improvement which consists essentially of catalytically effecting said oxidation in the presence of a mixture of iron phthalocyanine with cobalt naphthenate as the catalyst, from about 0.2 to 5 mols of said cobalt naphthenate being employed per mol of iron phthalocyanine.

3,004,067

SEPARATION OF AROMATIC CARBOXYLIC ACIDS

Gordon Howard Whitfield and Edward Kemp, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Nov. 25, 1957, Ser. No. 698,397
Claims priority, application Great Britain June 21, 1957
2 Claims. (Cl. 260-525)

1. A continuous process for separating ortho-phthalic acid from a mixture containing ortho-phthalic acid and at least one other phthalic acid which comprises continuously feeding the mixed phthalic acids and a solvent, selected from the class consisting of benzene nitrobenzene, chlorobenzene, alkylbenzene, chloroalkylbenzene, benzoic acid, alkyl benzoic acids, alkanolic acids, and dioxane, and mixtures thereof, to a dehydration zone, held at a temperature from 100° C. to 300° C., continuously removing water vapor from said zone, continuously withdrawing magma comprising mixed acids, phthalic anhydride and solvent from said zone, centrifuging said magma, isolating mixed iso- and terephthalic acid after said centrifuging and washing the same with said solvent, continuously passing the mother liquor and washings to a second zone held at a temperature from 100° C. to 300° C. together with sufficient water to hydrolyze the ortho-phthalic anhydride content thereof, precipitating the ortho-phthalic acid and continuously withdrawing

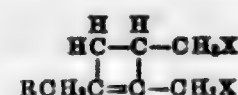
and centrifuging the magma from said second zone, continuously separating the ortho-phthalic acid and washing the same with said solvent, continuously removing water from the mother liquor solvent, distilling the same, and then continuously recycling it to said dehydration zone.

3,004,068

CYCLOBUTENES CONTAINING TWO SUBSTITUTED METHYL SUBSTITUENTS

John Lynde Anderson, Winnetka, Ill., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 19, 1956, Ser. No. 622,810
3 Claims. (Cl. 260-563)

1. A cyclobutene having the general formula



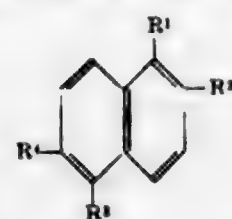
where R is selected from the group consisting of hydrogen, alkyl and cycloalkyl of up to six carbon atoms, and the phenyl radical and X is selected from the group consisting of the hydroxyl radical and the amino radical.

3,004,069

NAPHTHALENE DERIVATIVES

Walter Mark Duffin, London, England, assignor to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York
No Drawing. Filed June 19, 1956, Ser. No. 592,266
Claims priority, application Great Britain June 22, 1955
5 Claims. (Cl. 260-570.9)

1. A compound selected from the class consisting of a free base represented by the formula:



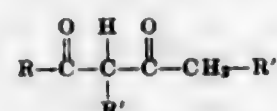
wherein one of the groups R¹ and R² is hydroxyl, R⁴ is hydroxyl and the other of the groups R¹ and R² and the group R³ are alkylaminomethyl groups of the structure R³NHCH₂—, wherein R³ is a radical selected from the class consisting of the alkyl radicals having from three to six carbon atoms and the cycloalkyl radicals having from five to seven carbon atoms and a therapeutically acceptable acid addition salt thereof.

3,004,070

BETA-DIKETONES

Robert J. Hartle, Gibsonia, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,730
3 Claims. (Cl. 260-590)

1. A beta-diketone having the general formula:

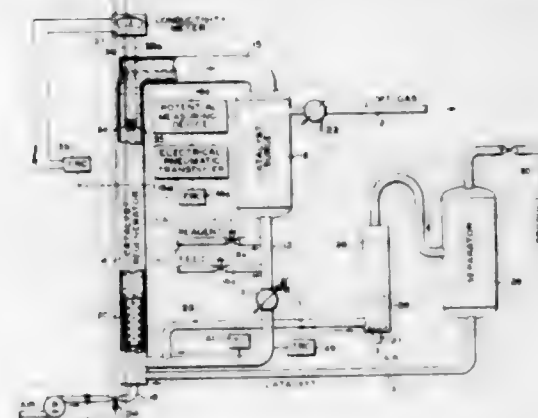


where R is a member selected from the group consisting of naphthyl and mononuclear aromatic hydrocarbon radicals having a nuclear carbon atom thereof connected directly to the adjacent carbonyl carbon atom and containing 6 to 22 carbon atoms, and R' and R'' are members selected from the group consisting of saturated and mono- and di-olefinic open-chain aliphatic hydrocarbon radicals that contain 8 to 22 carbon atoms.

3,004,071

PROCESS OF OXIDIZING MERCAPTANS TO DISULFIDES

Paul F. Warner and Archie D. Adams, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed July 8, 1957, Ser. No. 670,447
9 Claims. (Cl. 260-608)



1. In a process for oxidizing mercaptans, the steps which comprise establishing a body of interspersed mercaptan feed, cupric chloride reagent, disulfide product and a free oxygen-containing gas, adding feed to the body, withdrawing product therefrom, continuously producing a signal representative of a variable which is a function of the ratio of the interspersed disulfide reagent phases, and adjusting the disulfide reagent phase ratio in response to said output signal.

3,004,072

METHOD OF MAKING 4,4'-DI(HALOMETHYL) DIPHENYL OXIDES AND PRODUCT

James D. Doedens, Midland, and Earl H. Rosenbrock, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 26, 1959, Ser. No. 801,986
2 Claims. (Cl. 260-612)

1. A method for making a 4,4'-dihalomethyl diphenyl oxide wherein halo is a member of the group consisting of chloro and bromo, which method comprises heating a mixture of proportions of 1 mole diphenyl oxide, about 2 to about 4 moles of formaldehyde, about 2 to about 4 moles of a concentrated hydrogen halide of the group consisting of hydrochloric and hydrobromic acid, about 10 to about 40 weight percent of concentrated acetic acid, total reactants basis, and about 15 to about 30 weight percent of a concentrated mineral acid of the group consisting of sulfuric and phosphoric acid, total reactants basis, at a temperature ranging between about 70° and about 100° C. for a time ranging between about ¼ and about 3 hours, dependent upon temperature, and separating dihalomethyl diphenyl oxide product.

3,004,073

PROCESS TO PREPARE 1-PENTACHLOROPHENOXY-2,3-PROPANEDIOL

Marco Wismer, Gibsonia, and William R. Hydro, New Kensington, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
No Drawing. Filed May 5, 1959, Ser. No. 811,003
8 Claims. (Cl. 260-613)

1. A method of forming a 1-pentahalophenoxy-2,3-propanediol which comprises heating a mixture of a pentahalophenyl glycidyl ether, in which the halogen is of an atomic weight between about 35 and about 80, and water in the presence of a mutual solvent and a strong, mineral acid boiling above about 150° C.

3,004,074

CONDENSATION OF POLYHALOCYCLOALKADIENES WITH CYCLOOCTATETRAENE

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Aug. 3, 1954, Ser. No. 447,655
13 Claims. (Cl. 260-648)

1. A process for the preparation of a polyhalo substituted polycyclic compound which comprises reacting at least one molecular proportion of polyhalocyclopentadiene with cyclooctatetraene, and recovering the resultant polyhalopolyhydromethanocyclooctabenzene.

10. Polyhalopolyhydromethanocyclooctabenzene.

3,004,075

PURIFICATION OF FLUOROCARBONS

Katman Marcell, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 17, 1959, Ser. No. 840,535
15 Claims. (Cl. 260-648)

1. The process for purifying an impure saturated perfluorocarbon of 2 to 6 carbon atoms in which the impurities consist essentially of unsaturated highly fluorinated compounds of the group consisting of perfluoroolefins and unsaturated haloalkanes which contain at least one member of the group consisting of chlorine and hydrogen, and which impurities include at least one unsaturated highly fluorinated perhalocarbon, which process comprises intimately contacting the impure saturated perfluorocarbon with at least one member of the group consisting of piperidine, pyrrolidine and a mixture of from about 99 to about 10 parts by weight of pyridine and from about 1 to about 90 parts by weight of at least one member of the group consisting of piperidine and pyrrolidine at a temperature of from about 0° C. to about 80° C., and separating the purified saturated perfluorocarbon from the reaction mixture.

3,004,076

PREPARATION OF HALOGEN-CONTAINING STILBENES AND BIBENZYL

William M. Le Suer and Carl W. Steube, Cleveland, Ohio, assignors to The Labrizol Corporation, Willoughby, Ohio, a corporation of Ohio
No Drawing. Filed July 1, 1960, Ser. No. 40,136
7 Claims. (Cl. 260-649)

1. The process of preparing halogen-containing compounds which comprises heating at a temperature within the range of 125-300° C. a mixture of:

(a) a trihalomethyl-substituted aromatic compound having the structure



where Ar is a non-functional aromatic radical attached to the carbon atom through a benzenoid carbon atom, X is a halogen atom selected from the class consisting of chlorine and bromine atoms and y is an integer between 1 and 3;

(b) elemental phosphorus; and

(c) from about 0.001 to about 5.0% of the combined weight of (a) and (b) of hydrogen iodide.

3,004,077

MANUFACTURE OF FLUORINATED AROMATIC COMPOUNDS

Ronald Eric Banks, Barnage, Manchester, Anthony Kenneth Barbour, Coombe Dingle, Bristol, Colin Russell Patrick, Quinton, Birmingham, and John Colin Tatlow, Kings Norton, Birmingham, England, assignors to National Research Development Corporation, London, England, a British corporation
No Drawing. Filed Sept. 4, 1959, Ser. No. 838,055
Claims priority, application Great Britain Sept. 11, 1958
10 Claims. (Cl. 260-650)

1. A process for the manufacture of a nuclear fluorinated aromatic compound in which a fluorinated cyclo-

hexadiene is heated to a temperature of at least about 300° C. in contact with a metal surface reactive with fluorine.

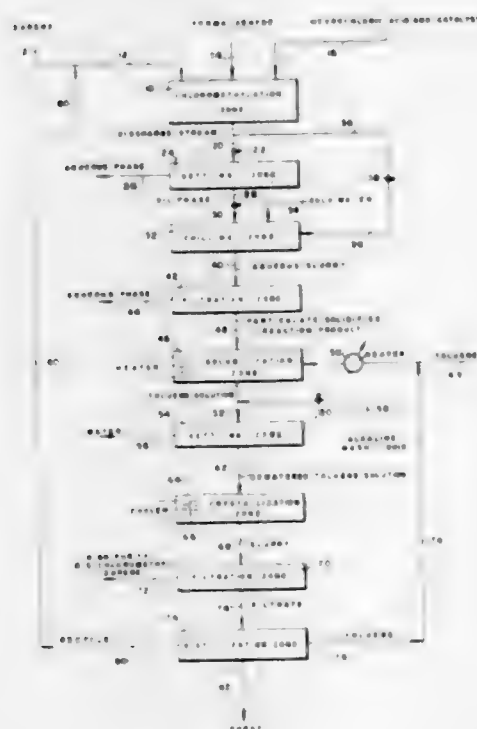
3,004,078

SELECTIVE PRECIPITATION OF BIS(CHLOROMETHYL) DURENE FROM TOLUENE

William G. De Pierri, Jr., and Harold W. Earhart, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed July 14, 1959, Ser. No. 827,088

4 Claims. (Cl. 260-451)



1. A method for recovering high purity bis(chloromethyl)durene from a crude solid durene chloromethylation reaction product containing the same which comprises dissolving said chloromethylation product in toluene at a temperature in excess of about 60° C., cooling said thus prepared toluene solution to a temperature within the range of about -10° to 35° C. to selectively precipitate said bis(chloromethyl)durene and recovering said precipitated bis(chloromethyl)durene.

3,004,079

ALKYL HALIDES FROM ETHERS OR ALCOHOLS AND AN ALUMINUM HALIDE ALKYLATION SLUDGE

Geoffrey John Sleddon, West Kilbride, and Robert Craig Anderson, Saltcoats, Scotland, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,552

Claims priority, application Great Britain Dec. 12, 1958

7 Claims. (Cl. 260-652)

1. A process for the recovery of halogen which comprises reacting at a temperature of from 120° to 400° C., a residue containing aluminum in combination with a halogen and obtained from the alkylation with an alkyl aluminum halide of an oxygen containing material selected from the group consisting of a silica, a silicate, a borate and boric oxide, with a compound of the formula ROR' where R is a radical selected from the group consisting of a methyl and ethyl group and R' is a radical selected from the group consisting of a methyl group, ethyl group and hydrogen, and distilling off the resulting alkyl halide.

CHEMICAL COMPOSITIONS FROM THE CLASS CONSISTING OF 1,4-DIETHYLTETRALIN AND 1,1,4-TRIETHYLTETRALIN

Rex D. Closson, Northville, Mich., Alfred J. Kolka, Pittsburgh, Pa., and Waldo B. Ligott, Pontiac, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 23, 1958, Ser. No. 730,271

3 Claims. (Cl. 260-666)

1. A compound selected from the class consisting of 1,4-diethyltetralin and 1,1,4-triethyltetralin.

3,004,081

CYCLOOLEFIN PRODUCTION

George Bosmajian, Birmingham, Ala., assignor, by mesne assignments, to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

Filed May 29, 1959, Ser. No. 816,856

12 Claims. (Cl. 260-666)



12. In a continuous process of dimerizing butadiene to cyclooctadiene, the improvement including the steps of introducing reaction ingredients consisting essentially of butadiene and a catalyst comprising bis(triphenylphosphite) nickel dicarbonyl into a continuous reactor, conducting the reaction at a pressure of between about 200 and 600 p.s.i.g., at a temperature of between about 150 and 170° C. at a feed rate corresponding to about 0.2 to 4 volumes of liquid feed per volume of reactor per hour, utilizing the catalyst at a concentration of between 0.5 and 4% by weight, and withdrawing reaction products from said reactor.

3,004,082

ALKYLATION OF SATURATED HYDROCARBONS

Erwin E. Meisinger, Elmhurst, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,148

20 Claims. (Cl. 260-666)

1. A process for the alkylation of an alkylatable saturated hydrocarbon which comprises reacting the latter with an olefin-acting compound at alkylation conditions in the presence of a Friedel-Crafts metal halide and a copper base alloy comprising copper and a metal selected from the group consisting of zinc and tin.

3,004,083

HYDROCARBON SEPARATION

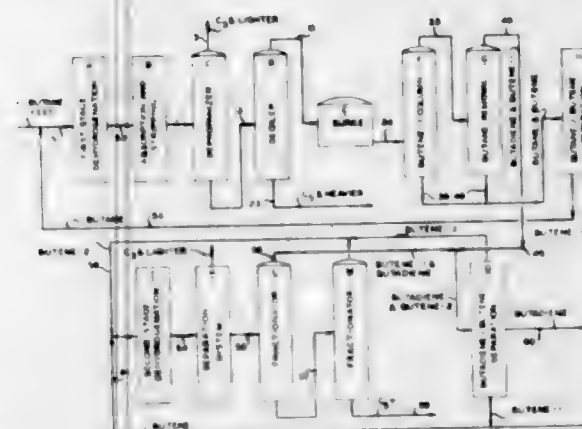
Fred A. Siedenstrang and Gene K. Reimuth, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 14, 1958, Ser. No. 715,359

3 Claims. (Cl. 260-680)

1. In the process wherein normal butane is dehydrogenated to form olefins and diolefins, C₃ and lighter materials are removed from the dehydrogenation effluent, the butadiene is recovered and the olefins and remaining

normal butane are separated and passed to respective dehydrogenation steps, the improvement comprising passing the butane dehydrogenation effluent, from which C₃ and lighter hydrocarbons have been removed, and without further treatment, to a fractional distillation de-oiling step so as to remove C₃ and heavier hydrocarbons as the kettle product; cooling and passing the overhead product from the de-oiling step to a surge storage zone; passing a stream of hydrocarbon, without further treatment, from



said surge storage to a fractional distillation butene splitter step so as to remove butene-1, isobutylene, butadiene and some butane overhead and butene-2 and normal butane as kettle product; removing butane and butene-2 from the butene splitter overhead; separating butane and butene-2; returning normal butane to the first stated dehydrogenation step; recovering butadiene from admixture with butenes and passing said butenes to a second dehydrogenation step.

3,004,084

PRODUCTION OF CONJUGATED DIOLEFINS

Wilfred John Oldham, Grangemouth, Scotland, assignor to British Hydrocarbon Chemicals Limited, London, England, a British company

No Drawing. Filed June 18, 1958, Ser. No. 742,710

Claims priority, application Great Britain July 10, 1957

3 Claims. (Cl. 260-681)

1. A process for the production of isoprene which comprises reacting isobutene with formaldehyde at an elevated temperature in the range of 150° to 400° C. in the vapor phase in the presence of a catalyst which consists essentially of silica/alumina synthetic petroleum cracking catalyst.

3,004,085

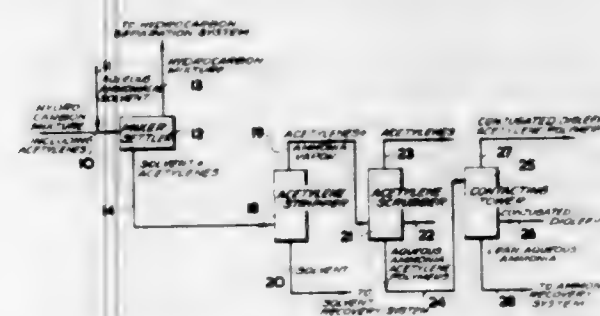
METHOD OF PREVENTING FOULING

Joseph E. Ewanchyna and Charles M. Finigan, Sarnia, Ontario, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a corporation

Filed June 3, 1959, Ser. No. 817,859

Claims priority, application Canada May 4, 1959

9 Claims. (Cl. 260-681.5)



1. In a process for the separation of butadiene from a mixture thereof with other hydrocarbons and hydrocarbon compounds comprising acetylenes and carbonyls with a cuprous ammoniacal acetate solvent wherein the

gases stripped from the solvent are water washed for the recovery of ammonia vapours as a dilute aqueous ammoniacal stream containing acetylenes and hydrocarbon compounds as contaminants and the ammonia is subsequently stripped from the wash water, the improvement which comprises contacting the aqueous ammoniacal stream with a liquified light hydrocarbon containing 3-5 carbon atoms and separating the liquified light hydrocarbon with contaminants dissolved therein from the aqueous ammoniacal stream before the ammonia is stripped therefrom.

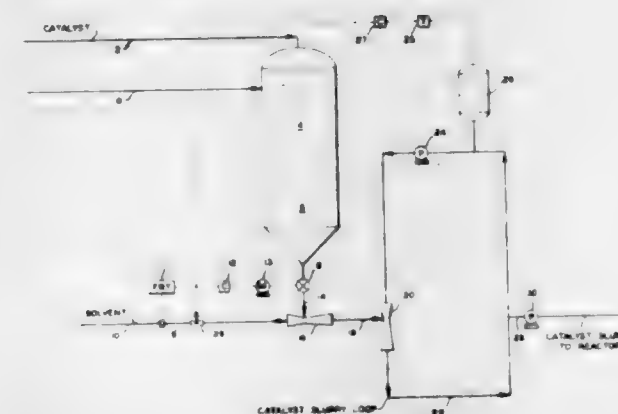
3,004,086

METHOD AND APPARATUS FOR PROVIDING A SOLIDS SLURRY

John J. Moon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 27, 1956, Ser. No. 606,274

15 Claims. (Cl. 260-683.15)



4. A process for feeding a subdivided solid catalyst to a reaction system wherein polymerization of olefins is effected in the presence of a solvent at an elevated temperature and pressure, which comprises withdrawing the catalyst from a source of supply, introducing the catalyst directly to a confined zone adapted to contain a bed of said catalyst, maintaining the confined zone free from moisture, withdrawing catalyst from the confined zone, slurrying the catalyst in a measured amount of flowing solvent, varying the rate of catalyst withdrawal responsive to changes in the quantity of flowing solvent, introducing the resulting catalyst-solvent slurry to a circulating system having a point of withdrawal by which slurry is continuously passed, withdrawing a portion of the circulating slurry, passing the withdrawn slurry to a reaction system and varying the quantity of flowing solvent responsive to changes in pressure on said circulating system.

3,004,087

DIMERISATION OF OLEFINS

Reginald Edwin Goddard and Peter Smith, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,257

Claims priority, application Great Britain Jan. 9, 1957

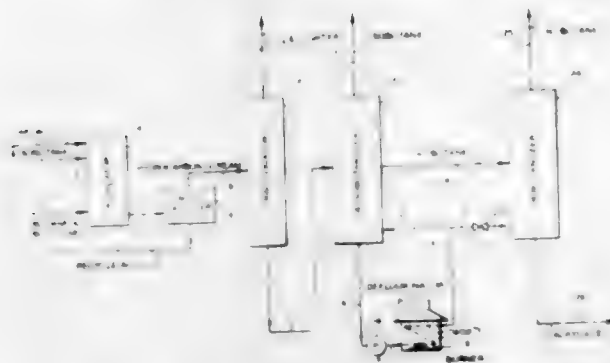
8 Claims. (Cl. 260-683.15)

1. A process for the dimerization of an olefine having from 4 to 7 carbon atoms and having the double bond in other than a terminal position which comprises contacting said olefine at a temperature above 100° C. and under elevated pressures with a reaction medium consisting essentially of aluminum trialkyl and a finely divided metal selected from the group consisting of copper and titanium.

3,004,088

ALKYLATION PROCESS

John F. Hutto, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 13, 1958, Ser. No. 766,824
4 Claims. (Cl. 260—683.42)

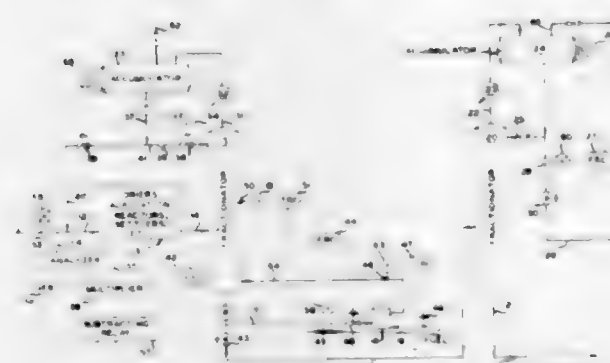


1. A method for the deisobutanization of an HF-alkylate and its substantially simultaneous defluorination which comprises the steps in combination as follows: feeding an HF-alkylate to a deisobutanizing zone, removing isobutane as overhead from said zone, removing normal butane as a side stream from said zone, removing bottoms from said zone, passing bottoms thus removed into a defluorinating zone heated to a defluorinating temperature, returning thus-heated bottoms to the bottom of said deisobutanizer zone, and withdrawing a portion of the thus-heated bottoms from the deisobutanizer zone as deisobutanized and defluorinated alkylate.

3,004,089

N-BUTANE REJECTION IN HF ALKYLATION

John F. Hutto, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,402
10 Claims. (Cl. 260—683.48)



1. Apparatus for eliminating an inert component in a cyclic conversion system as rapidly as it is added to the system in the charge stock thereto, comprising, in combination, a conversion assembly, a first feed inlet and an effluent outlet in said assembly, first and second fractionating columns having second and third separate feed inlets, separate overhead product outlets and separate bottoms product outlets, the effluent outlet of said assembly being in operative communication with said first feed inlet, the bottoms product outlet of the first fractionating column being in operative communication with said third inlet, a first flow rate sensing means communicating with

said first feed inlet, an analyzer in operative communication with said first feed inlet, a first conduit operatively connecting the overhead outlet of said first fractionating column with said first feed inlet intermediate said assembly and said first flow sensing means and analyzer, second means for adding reboiling heat to the kettle section of said first fractionating column, a third flow rate sensing means operatively in the overhead product outlet of said second fractionating column and communicating with a relay subsequently mentioned, said analyzer being adapted to emit a signal proportional to the concentration of said inert component in said first feed inlet, a multiplier in operative communication with said analyzer and with said first flow sensing means, the signal emitted by said multiplier being proportional to the product of the charge stock flow rate and the fraction of said inert material in said charge stock and thus to the flow rate of said inert material in said first feed inlet, said relay subsequently mentioned being a subtracting relay in operative communication with the outlet of said multiplier and with said third flow sensing means, said relay being adapted to emit a signal proportional to the difference of the flow rate sensed by said third flow sensing means and the flow rate of said inert component in said first feed inlet as sensed by said multiplier, said second means including a second conduit for adding reboiling heat to the kettle of said first fractionating column, a flow control means operatively in said second conduit and communicating with the outlet of said relay, and said flow control means being adapted to regulate the inlet of heat to the kettle section of said first fractionating column in response to a signal emitted by said subtracting relay.

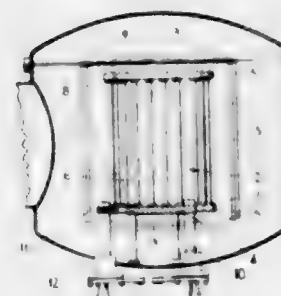
3. A method for reducing the build-up of n-butane in a cyclic isobutane-butylene catalytic alkylation operation comprising passing a charge stock comprising n-butane, i-butane and butylene into an alkylating zone maintained under i-butane-butylene alkylating conditions, withdrawing effluent from said zone and distilling same thereby producing an overhead stream comprising i-butane and n-butane, returning this overhead stream to the charge stock downstream from a point in the flow of charge stock from which a sample is taken and analyzed as subsequently stated, and a bottoms material comprising alkylate-containing n-butane, adding reboiling heat to the distilling operation, withdrawing this bottoms material from said distilling operation and distilling same under de-n-butanizing conditions thereby producing a n-butane-rich overhead stream and a crude alkylate, withdrawing n-butane-rich overhead material from this operation as product, determining the liquid rate of flow of the n-butane-rich overhead material withdrawn, determining the liquid rate of flow of said charge stock, analyzing said charge stock n-butane content, feeding an impulse corresponding to said liquid flow rate of said charge stock and an impulse corresponding to the n-butane liquid content of said charge stock into a multiplier, passing an impulse corresponding to the product of said n-butane content of said charge stock and the flow rate of said charge stock and an impulse corresponding to the flow rate of said n-butane-rich overhead material into a subtracting relay, said relay emitting a signal proportional to the difference of the signal of said n-butane material flow rate and of said product, resetting a set point of a flow controller thereby regulating the addition of reboiling heat to the first mentioned distilling operation.

ELECTRICAL

3,004,090

HEATING ELEMENT ASSEMBLIES FOR ELECTRIC FURNACES

Maurice Donovan, Northwood, and Michael John Severs, Ealing, London, England, assignors to The General Electric Company Limited, London, England
Filed Mar. 26, 1959, Ser. No. 802,098
Claims priority, application Great Britain Apr. 1, 1958
3 Claims. (Cl. 13—25)

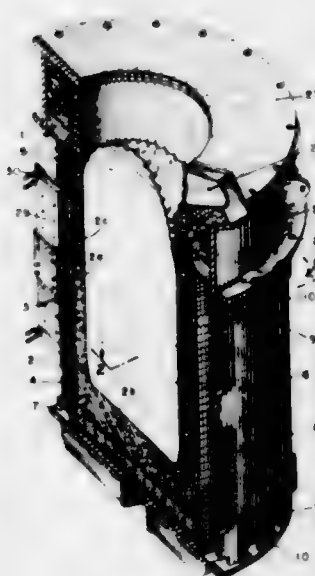


1. A heating element assembly for an electric furnace, comprising a plurality of graphite rods which are screw-threaded at their ends, a plurality of curved graphite busbar members arranged to form a pair of end rings between which each of said graphite rods extends to form a generally cylindrical cage, said rods being located in bores in said busbar members and secured to said busbar members by a screw-threaded connecting arrangement, and a plurality of graphite posts secured to one of said end rings each post being secured to a respective one of said busbar members through a screw-threaded connecting arrangement and serving as the sole support for said cage and as electrical terminal posts through which said assembly is connectable to an electric supply.

3,004,091

CORELESS INDUCTION FURNACE MELTING OF METALS

Mario Tama, Morrisville, Pa., and James L. Hoff, Pennington, N.J., assignors, by mesne assignments, to Ajax Magnethermic Corporation, a corporation of Ohio
Filed Sept. 15, 1958, Ser. No. 760,972
20 Claims. (Cl. 13—27)



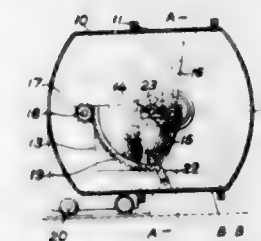
1. A coreless induction furnace for melting metals, comprising in combination, a refractory container having a side wall and a bottom wall, an electrically energizable coil surrounding the side wall of said container, a barrel having a wall surrounding said coil and having a bottom,

said barrel wall and said side wall of said container defining an annular chamber, said bottom wall of said container and said barrel bottom defining a space, laminated first yoke means movably disposed in said annular chamber, laminated second yoke means secured in said space, said first yoke means being magnetically continuous with and mechanically independent of said second yoke means and operable for releasably gripping the exterior of said coil thereby to reinforce said container, and propelling means operable for moving said first yoke means.

3,004,092

ELECTRICAL VACUUM FURNACE

Thor Thelemarck, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Nov. 9, 1959, Ser. No. 851,882
Claims priority, application Sweden Nov. 11, 1958
3 Claims. (Cl. 13—31)

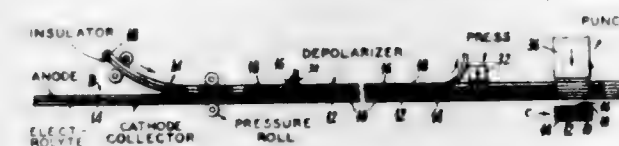


1. Electric vacuum melting furnace, particularly for high frequency, comprising a vacuum tank having a wall, an exchangeable furnace unit accommodated in said tank and having a coil, bare connection means mounted outside the vacuum tank, insulated connection leads for current and coolant leading from the coil of the furnace unit to said connection means, leading-through means of insulating material for said connection leads, the leading-through means for the connection leads being joined inseparably with said leads, the walls of the vacuum tank having openings therein, and means mounting the leading-through means in a vacuum tight manner in said openings for movement into the interior of the vacuum tank.

3,004,093

CONTINUOUS PROCESS FOR MAKING SOLID ELECTROLYTE BATTERIES

Elmer W. Richter, Lakewood, Daniel Shellek, Cleveland, and Herbert E. McMillan and George E. Evans, Rocky River, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed June 3, 1958, Ser. No. 739,547
11 Claims. (Cl. 136—175)



1. A method of making a primary galvanic cell comprising forming a duplex electrode composed of an anode and a cathode-collector, providing electrolyte on said anode, adhering an insulating film to a masking shield to form a laminate, punching said laminate to form an aperture therein, joining said insulating film to said electrolyte, fitting said aperture with cathode-depolarizer mix, removing said masking shield, and compressing said cathode-depolarizer mix.

3,004,094
METHOD OF MAKING UNIT WAFER CELLS
 William J. Haessly, Cleveland, Ohio, assignor to Union Carbide Corporation, a corporation of New York
 Filed June 3, 1958, Ser. No. 739,620
 8 Claims. (Cl. 136-175)



1. A method of manufacturing a unit primary galvanic wafer cell comprising adhering a laminate composed of an insulating film and a masking shield, having an aperture therein, to an anode, providing a separator between said anode and said insulating film in such position as to provide access thereto through said aperture, filling said aperture with cathode-depolarizer mix, removing said masking shield, covering said depolarizer mix with a cathode-collector, and compressing said cell thereby providing intimate contact of all elements thereof, said insulating film separating said anode and said cathode-collector.

3,004,095
GROUNDING CLIP
 Albert J. Buzak, Marblehead, Mass., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
 Filed July 2, 1959, Ser. No. 824,638
 2 Claims. (Cl. 174-51)

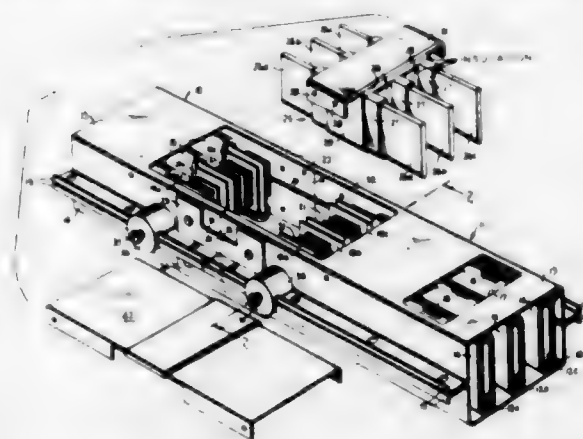


1. A grounding device for connecting the ground wire of a non-metallic sheathed cable to a metal outlet box having an adjustable clamp therein, comprising a resilient metal clip having a body portion of U-shape in cross section adapted to grip said cable, an extension integral with one end of one side of said body portion bent upon itself to frictionally receive an edge portion of an outlet box between said body portion and said extension upon inserting the opposite end portion of said body portion into said outlet box through a knock-out opening therein, and a cleat secured on the other side of said body portion lengthwise thereof for receiving turns of said ground wire thereon whereby said ground wire turns are clamped between said body portion and said cleat upon securing said adjustable clamp across said inserted body portion and on said cleat to secure said grounding device in said outlet box against relative movement.

3,004,096
BUSWAY CONNECTOR
 Raymond N. Rowe, Plainville, Conn., assignor to General Electric Company, a corporation of New York
 Filed June 15, 1960, Ser. No. 36,389
 6 Claims. (Cl. 174-88)

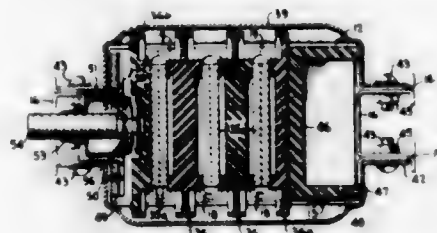
1. A busway system comprising: a plurality of sections of busway, each comprising an elongated housing and a plurality of bus conductors supported in parallel side-by-side relation lengthwise of said housing, the bus conductors in each of said sections terminating short of the ends of their associated housings, a portion of the housings adjacent the ends of the busway sections being cut away to expose the ends of the bus conductors therein; the housings of said busway sections being connected in end-to-end relationships with said cutaway portions form-

ing a composite opening, and with said conductors of one section being longitudinally spaced from the conductors of the other section such that the ends of the conductors are exposed through said composite opening, a unitary joint connector for establishing electrical continuity between respective bus bars in said end connected busway sections comprising an assembly of mutually insulated conducting links bound together as a unit, insulating members between said conducting links separating them on centers spaced apart by an amount approximately equal to the spacing between centers of the ends of said



bus conductors, said connector and said composite opening being dimensioned such that the connector can be inserted and withdrawn through the opening in directions extending substantially perpendicular to the direction of elongation of the conductors, the ends of said conducting links engaging the respective ends of said bus conductors to establish a friction fit connection therebetween, and clamping means for compressing the interengaged ends of said bus conductors and conducting links to establish firm electrical continuity between respective bus bars in adjoined busway sections.

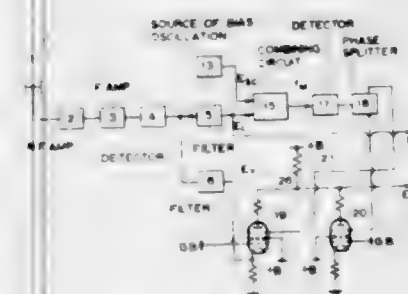
3,004,097
BUSWAY SYSTEM
 Frank C. Johnston, West Hartford, Conn., and Paul Krauss, Burlington, Vt., assignors to General Electric Company, a corporation of New York
 Filed May 26, 1958, Ser. No. 737,934
 3 Claims. (Cl. 174-88)



1. A busway comprising an elongated housing having at least two opposed side walls, at least two elongated generally parallel bus conductors in said housing having contact portions in overlapping electrically contacting engagement, means cooperating with said housing for clamping said overlapping bus conductors together including a tapped member engaging one of said walls, a bolt threadedly engaged in said tapped member, at least one circular dish-shaped spring washer carried by said bolt and disposed to exert a force against said bus conductors to resiliently compress all of said contact portions together and toward the side wall opposite said one side wall, said tapped member comprising a cup-shaped portion having a tapped aperture in the bottom wall thereof and having a flange portion extending from the open end thereof in engagement with the inside surface of said one side wall, said cup-shaped portion having an

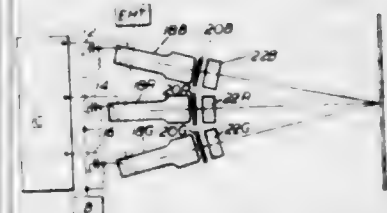
internal diameter slightly larger than the diameter of said circular dish-shaped spring washer, whereby said dish-shaped spring washer may be retracted into said cup-shaped portion when said bolt is in a retracted position.

3,004,098
COLOUR TELEVISION RECEIVERS
 Eric John Gargiel, West Drayton, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
 Filed Feb. 26, 1958, Ser. No. 717,728
 Claims priority, application Great Britain Feb. 27, 1957
 7 Claims. (Cl. 178-5.4)



1. Colour television apparatus comprising an initial circuit for supplying a brightness signal which varies in amplitude as a function of the brightness of successive points of an image and a colour signal which varies in phase as a function of the hue of said image points and which varies in amplitude as a function of the intensity of the respective hue, a source of an oscillation of reference phase, means for adding said colour signal to the oscillation from said source to derive a biasing oscillation which varies in amplitude as a different function of the intensity of the respective hue, and means for variably amplifying said brightness signal with a gain which is variable in response to said biasing oscillation to modify said brightness signal.

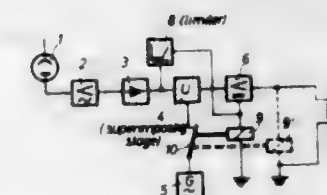
3,004,099
APPARATUS FOR LIGHT INTENSITY CONTROL IN COLOR TELEVISION PROJECTION APPARATUS
 John H. O. Harries, Warwick, Bermuda, assignor to Harries Television Research Limited
 Filed Aug. 27, 1958, Ser. No. 757,520
 Claims priority, application Great Britain Sept. 2, 1957
 15 Claims. (Cl. 178-5.4)



2. A colour television receiver including at least two electron discharge tubes each having a fluorescent screen and means for controlling an electron beam to form a raster thereon, said fluorescent screens fluorescing in different colours when struck by said electron beams, the receiver further including a common viewing screen, and an optical projection system for each tube so arranged that images of said rasters on said fluorescent screens are superimposed on said common viewing screen to produce thereon a composite colour or monochrome picture, at least one of said optical projection systems including an aperture plate having a large number of apertures formed therein, said apertures being distributed over the area of said plate covered by said projected optical image to produce substantially uniform illumination of said viewing

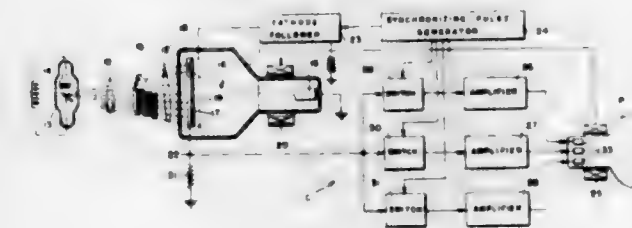
screen, the total area of the apertures in said plate being selected in accordance with the desired value of the numerical aperture of the corresponding projection system to produce a pre-determined colour balance.

3,004,100
METHOD AND APPARATUS FOR INSERTING EXTRANEEOUS MATTER IN SCREENED HALF-TONE PRINTING PLATES UPON PRODUCTION THEREOF
 Heinz Taudt, Kiel, Germany, assignor to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, Kiel-Dietrichsdorf, Germany, a company of Germany
 Filed Aug. 27, 1958, Ser. No. 757,627
 Claims priority, application Germany Sept. 7, 1957
 8 Claims. (Cl. 178-6.6)



1. In the art of producing in an electronically controlled machine screened half-tone printing plates by photoelectric scanning of corresponding half-tone picture copies and simultaneous engraving, by means of an engraving tool, of a blank which is to form the printing plate for the reproduction of a desired half-tone picture copy, a method of including in the corresponding half-tone printing plate by line engraving untuned matter of the class consisting of writing, lettering, line drawing and the like, which is normally extraneous to the picture copy to be reproduced, comprising the following steps, namely, disposing the extraneous matter in deep black and/or bright white representation thereof upon the half-tone picture copy to be reproduced for the photoelectric scanning thereof, lightening the dark parts of said picture copy and darkening the bright parts thereof, the extraneous black matter appearing blacker than the darkest lightened parts on said picture copy and the extraneous white appearing brighter than the darkened brightest parts on said picture copy, photoelectrically scanning said half-tone picture copy and the extraneous matter disposed thereon, changing the half-tone engraving to a line engraving upon ascertaining by said scanning the upper threshold value of the extraneous white matter, and resuming half-tone engraving again upon ascertaining by said scanning a value lying below said threshold value.

3,004,101
COLOR RADIOGRAPHY
 John E. Jacobs, Hales Corners, and Harold Berger, West Allis, Wis., assignors to General Electric Company, a corporation of New York
 Filed Apr. 9, 1956, Ser. No. 577,098
 8 Claims. (Cl. 178-6.8)



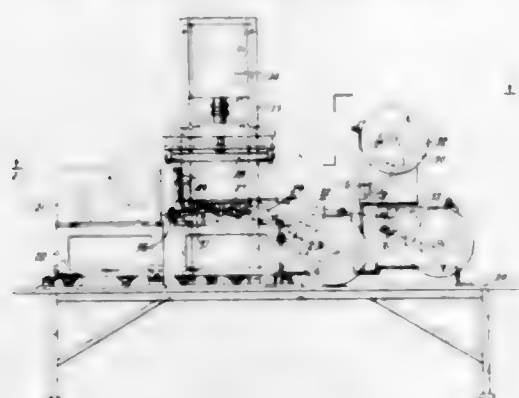
1. Apparatus for visually reproducing images latently carried by penetrating rays, comprising an image pickup device embodying a layer of ray sensitive semi-conductor

material supported on a backing plate of electrical conducting material and positioned to intercept an image carrying ray beam to thereby excite the same at various depths therein, in accordance with the picture image as carried by ray beams components of varying penetrating ability, means for scanning the layer successively with an electron beam, means for applying an electrical field of different selected intensity across said layer for any two of said successive scans, whereby to develop a signal on said backing plate corresponding with the excitation of said layer at a depth therein determined by the selected intensity level of said field, a picturing tube, and means for applying said signal for the control of said tube.

3,004,102

DATA-REPRODUCING APPARATUS
Nicholas Curtis, Denville, N.J., assignor to Trans-Lux Corporation, New York, N.Y., a corporation of Delaware

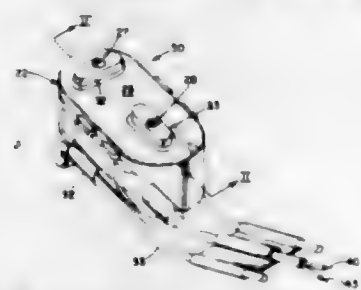
Filed Oct. 23, 1959, Ser. No. 848,254
6 Claims. (Cl. 178-7.1)



1. In an apparatus of the character described, a pair of tape-printing and feeding mechanisms each having a zone from which imprinted tape is discharged, tape-supporting means providing a display station therefor, means mounting said mechanisms to normally maintain them in positions at which the tapes discharged thereby move toward each other, a television camera, means for supporting such camera to encompass within its field tapes displayed at such station, means interposed between said tape-supporting means and the discharge zones of said mechanisms for guiding the tape in movements converging upon the display station and causing them to traverse the surface thereof in parallel relationship, means individual to each tape for drawing the same across such display station and said mechanisms being supported for movements to positions relatively remote from said display station whereby the mechanisms are individually rendered accessible for servicing.

3,004,103

NOISE-REDUCING MICROPHONE ASSEMBLY
Harold A. Hart, Dallas, Tex., assignor to Chance Vought Corporation, a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 781,988
19 Claims. (Cl. 179-1)



1. In a noise-reducing microphone assembly, the elements including, in combination: a pair of vibratile ele-

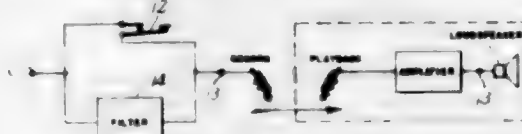
ments; means substantially impervious to sound completely enclosing said vibratile elements and lying in shielding relation between said vibratile elements and sound waves approaching said means substantially impervious to sound; means partitioning said vibratile elements one from the other within said means substantially impervious to sound, said means substantially impervious to sound having provided therein first and second openings lying substantially in one same plane; a first passage enclosed by said means substantially impervious to sound and terminating at said first opening, said passage leading from said first opening to one of said vibratile elements; a second passage similarly enclosed and terminating at said second opening, leading from said second opening to the other of said vibratile elements, and of substantially the same length as the first passage, said first and second openings permitting the passage of sound via said first and second passages to said vibratile elements through said means substantially impervious to sound, said means substantially impervious to sound having an exterior surface which is continuous except where the means substantially impervious to sound is provided with said openings; a first means producing an electrical output in response to movement of one of said vibratile elements and a second means producing an electrical output in response to movement of the other of said vibratile elements; and means for electrically connecting together said first and second means in such polarity that their outputs tend to nullify each other when substantially identical sounds are imposed on both said vibratile elements through both said openings, whereby a sound admitted more strongly into one than the other of said openings appears as an electrical signal on said output leads.

3,004,104

IDENTIFICATION OF SOUND AND LIKE SIGNALS

Emil Frank Hembrooke, Brooklyn, N.Y., assignor to Muzak Corporation, New York, N.Y., a corporation of New York

Filed Apr. 29, 1954, Ser. No. 426,465
6 Claims. (Cl. 179-2)



1. In combination, an input terminal, means for supplying to said terminal an electric signal corresponding to an original signal and having a plurality of frequency components each having a respective frequency and amplitude, an output terminal, encoding means for impressing a distinctive code on said electric signal for identifying the origin of said original signal, said encoding means including a narrow-band-reject filter adapted to attenuate said components of said electric signal within a very narrow frequency range, and also including a switch for connecting and for disconnecting said filter between said terminals in a predetermined time sequence to form said distinctive code.

3,004,105

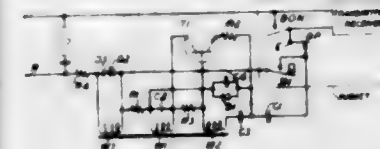
TRANSISTOR OSCILLATOR IDENTIFIER FOR COMMUNICATION SYSTEMS

Walter D. Goodale, Jr., Chatham, and William Pfurd, Watchung, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 21, 1957, Ser. No. 691,344
15 Claims. (Cl. 179-6.3)

1. In a telephone signaling system, a called telephone station identifier including a telephone line, contact means

connected to said line, a transistor oscillator connected to said line, a plural winding transformer connected to said oscillator and to said line, and means responsive to



the operation of said contact means for energizing said oscillator to transmit an output signal from said oscillator through said transformer to said telephone line.

3,004,106

PULSE TRANSMITTING AND RECEIVING CIRCUIT

Frank K. Low, Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 31, 1956, Ser. No. 631,612
17 Claims. (Cl. 179-16)



1. A signaling system including a transmitter, a conductive channel and a receiver, said transmitter including means for varying the impedance of said channel to a high impedance condition, an intermediate impedance condition, and a low impedance condition, said receiver including means responsive to the variation of said impedance to said intermediate and low impedance conditions for registering the number of occurrences thereof, and means responsive to the variation of said impedance to said high impedance condition for enabling and disabling said registration means, said signaling system and said registration means being operative substantially independent of the time duration of operation of said transmitter.

3,004,107

TELEPHONE PARTY LINE SWITCHING

Richard Grote, Eugen Jauch, Herbert Topfer, and Walter Voithenleitner, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany

Filed Mar. 27, 1956, Ser. No. 574,360
Claims priority, application Germany Mar. 31, 1955
19 Claims. (Cl. 179-18)

1. A telephone system comprising subscriber lines subdivided in a plurality of subscriber groups, each group having branch line conductors extending from the subscriber lines belonging thereto, a switching device, said branch line conductors connecting the respective subscriber lines to said switching device, switching means in said switching device for extending outgoing calls from said lines and incoming calls to said lines, respectively, and a plurality of start relays in said switching device,



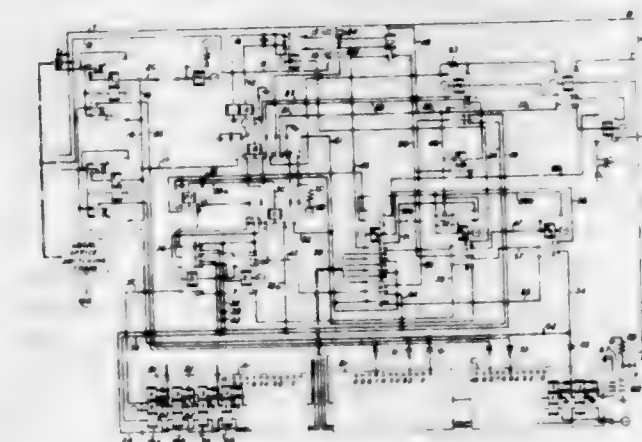
over contacts in said switching device and being effective to start operation of said switching means to initiate extension of calls.

3,004,108

HIGH SPEED SIGNALING SYSTEM USING MAGNETIC STORAGE

Amos E. Joel, Jr., South Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 17, 1956, Ser. No. 610,188
15 Claims. (Cl. 179-18)



1. In a telephone system, a calling line, outgoing trunks, means responsive to the transmission of coded information over said calling line for extending a connection from said line over one of said trunks, shift register storage means connectable to said trunk and to said line for storage and transmission of said coded information therebetween, signaling means connected to said trunk and under control of said shift register means over said trunk, and means for varying the rate of advance of said information through said shift register.

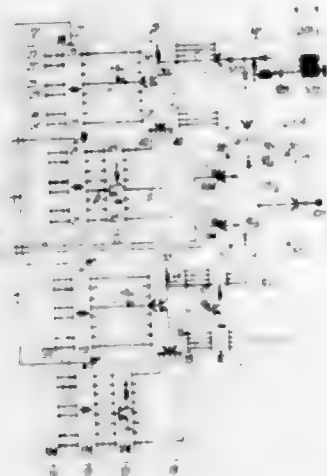
3,004,109

HIGH SPEED MEMORY TESTING DEVICE
Pierre Marie Lucas, 11 Rue Abbé Derry, Issy-les-Moulineaux, France, and Michel Marcel Rouzier, 22 Chemin des Postes, Clichy-sous-Bois, France

Filed Oct. 9, 1959, Ser. No. 845,555
Claims priority, application France Oct. 29, 1958
3 Claims. (Cl. 179-18)

1. A high speed memory testing device for testing the electrical condition of a plurality of channels comprising in combination a marking matrix having rows, columns and crosspoints operable to one of two alternate states in response to signals received over said channels and

characterizing the electrical condition thereof; address register means divided into a first lower order row address register, a second upper order row address register, a third lower order column address register and a fourth upper order column address register; first, second, third and fourth decoders respectively connected to said registers; controlling means adapted to apply test pulses to said decoders; a row access matrix having rows connected to said first decoder, columns connected to said second decoder, crosspoints connected to the rows of the marking matrix and adapted to apply said test pulses to the rows of the marking matrix the number of which is registered in said row address registers; a column access matrix having rows connected to said third decoder,



columns connected to said fourth decoder, crosspoints connected to the columns of the marking matrix; inhibiting gates inserted between said column access matrix and said marking matrix, said column access matrix being adapted to apply through said inhibiting gates said test pulses to the column of the marking matrix the number of which is registered in said column address registers, said inhibiting gates being connected in parallel to a single inhibiting input and a single general output and being responsive to said test pulses; whereby a given crosspoint of the marking matrix designated by the address register means and marked by its corresponding channel is operated to give an output signal, all the crosspoints of the same row of the marking matrix as the given crosspoint being inhibited.

3,004,110
SOUND SCANNING DEVICE FOR PERFORATED SOUND CARRIERS HAVING MAGNETIC SOUND TRACKS
Siegfried Schütze and Horst Stühmke, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden

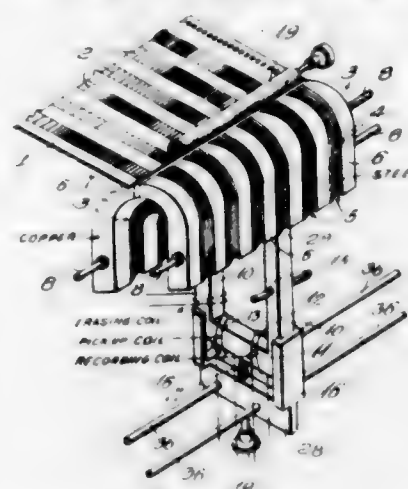
Filed Jan. 30, 1957, Ser. No. 637,192
3 Claims. (Cl. 179-100.2)



2. A scanning arrangement for a sound carrier having deformations across its plane, comprising a substantially rigid scanning head, means for longitudinally moving said sound carrier in a path past said scanning head, and a rotatable idler roller of soft resilient material, having a circumferential cover of flexible and substantially non-stretchable material, mounted adjacent said scanning head and positioned on the side of said sound carrier opposite and close enough to said scanning head to deform

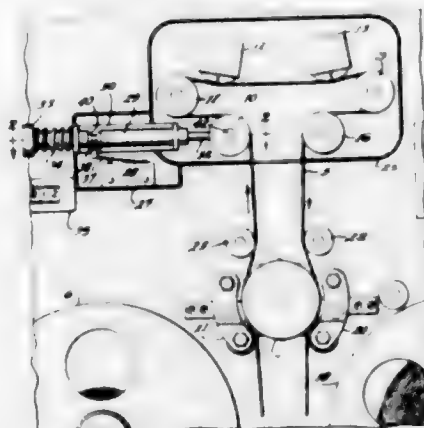
the shape of said roller and press said sound carrier against said scanning head with sufficient force to reform said deformations.

3,004,111
COMPLEMENTARY MAGNETIC CORES FOR SELECTIVE MAGNETIC RECORD READOUT
R. Lee Hollingsworth, 514 Hempstead Ave., West Hempstead, N.Y.
Filed May 24, 1957, Ser. No. 661,315
7 Claims. (Cl. 179-100.2)



1. In a magnetic tape transducer system, a magnetic tape, a substantially horseshoe-shaped magnetic unit having two substantially parallel legs and a transverse portion connecting one end of the first said leg to a corresponding end of the other said leg, said transverse portion being provided with a transverse recording slot, means for causing said tape to pass over said slot in said transverse portion, a complementary U-shaped magnetic unit having two substantially parallel legs and a transverse portion connecting one end of a first leg thereof to an adjacent end of the second leg thereof, the free ends of the legs of said horseshoe unit and the free ends of the legs of said U-shaped unit being provided with mutually engageable terminal means, retracting means for retracting the terminal means of said U-shaped unit into and out of engagement with the terminal means of said horseshoe unit, and windings carried on said U-shaped unit.

3,004,112
MAGNETIC FILM MARKING
Lloyd T. Goldsmith, North Hollywood, Calif., assignor to Warner Bros. Pictures, Inc., Burbank, Calif., a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,398
7 Claims. (Cl. 179-100.2)



1. A film marking system for a magnetic film adapted to be transported in a tight loop with resiliently mounted filter rollers comprising a sprocket adapted to advance film

thereon, means for moving said filter rollers a predetermined distance during standstill of said film on said sprocket, a recording head positioned to contact said film, said film being movable past said head upon movement of said rollers and while said recording head is in contact with said film, a source of audio signal, a switch actuated by the movement of said filter roller moving means, means for applying signals from said source to said recording head while said recording head is in contact with said film, and means including said switch for connecting said source of audio signal to said head during the movement of said film past said head, said film remaining at standstill on said sprocket.

3,004,113
HEARING AIDS
Raymond T. Christensen, Itasca, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Nov. 21, 1955, Ser. No. 548,133
4 Claims. (Cl. 179-107)



1. A hearing aid assembly comprising: a microphone unit having a median plane; an amplifier unit having a median plane; a first pair of male connector elements included in one of said units, having a predetermined size, shape and mutual spacing, and disposed substantially parallel but off set with respect to the median plane of said one unit; and a second pair of female connector elements included in the other of said units, disposed substantially parallel to one another, having the same size and spacing as and a shape complementary to that of said first connector elements for mating engagement with said first connector elements to effect both electrical and mechanical interconnection of said units in a plurality of different mutual space relations.

3,004,114
METHOD OF FASTENING THE COLLECTOR HEAD ON THE COLLECTOR BAR OF A TROLLEY CAR
Werner Früh, Zurich, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint stock company
Filed May 8, 1959, Ser. No. 811,843
Claims priority, application Switzerland May 17, 1958
1 Claim. (Cl. 191-59.1)



Attachment of a current collector head on a current collector bar of an electrically driven vehicle, said current collector bar having a protective part at its upper end, comprising a collector head support member to one end of which such head is fixed, pivotal means for securing an opposite end of said support member to said bar within said protective part of said bar, said pivotal securing means permitting rotation of said support member in a vertical plane, an upper stop means associated with said bar for limiting upward rotation of said support member in said plane to operating position of said head, a lower stop means associated with said bar for limiting downward rotation of said support member in said plane to an inclined position in which each part of said head is at a

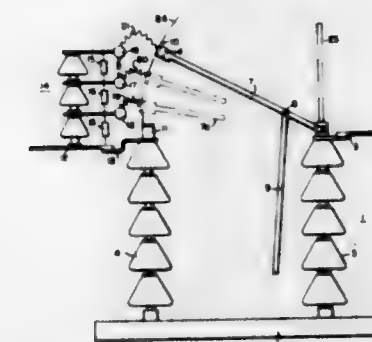
level below that of the top of said protective part of said bar, and an elastic biasing means centrally located within said support member, said elastic biasing means biasing said support member when in said operating position towards said upper stop means and when in said inclined position towards said lower stop means.

3,004,115
COMMUTATOR MAKE AND BREAK DEVICE
John de Rugeris, 527 Kenneth, Campbell, Calif.
Filed Oct. 24, 1958, Ser. No. 769,470
6 Claims. (Cl. 200-26)



1. In a commutator and brush make and break arrangement for the low voltage phase of the ignition system of an internal combustion engine in which a source of direct current is intermittently connectable to the primary winding of a coil via a brush riding upon the periphery of said commutator; a commutator body of conductive material driven in synchronism with said engine, said body having a plurality of narrow recesses formed therein from the periphery thereof toward the center of said body to present a plurality of conductive lands of greater lineal area on the periphery of said body than the width of the gaps provided by any one of said narrow recesses, a brush of slightly lesser thickness than the width of any one of said gaps normally urged against the periphery of said body, and non-conductive tracks on each end of said body having uninterrupted continuous peripheries aligned with the periphery of said body for supporting the ends of said brush as it passes over any one of said gaps in said body.

3,004,116
AIR-BREAK DISCONNECTING SWITCH
Samuel B. Griscom, Wilkensburg, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 24, 1958, Ser. No. 730,692
11 Claims. (Cl. 200-48)



1. The combination in an air-break disconnecting switch of insulating means for supporting a relatively stationary contact, said insulating means also supporting a swinging, movable, disconnecting switch blade, the swinging, movable disconnecting switch blade making contacting engagement with the relatively stationary contact in the closed circuit position of the switch, means for effecting opening swinging movement of the movable disconnecting switch blade in an arcuate path away from the relatively stationary contact to establish an arc there-with during the opening operation of the switch, an impedance assemblage including a plurality of impedance sections disposed adjacent to said relatively stationary contact and extending away therefrom in the gen-

eral direction of the opening path of movement of the free end of the movable switch blade, a plurality of spaced arcing contacts tapped to said impedance sections, said arc between the end of the movable switch blade and the relatively stationary contact transferring successively to the plurality of spaced arcing contacts to incrementally insert said impedance sections into series circuit during the opening operation of the switch, the lateral dimension of the free end of the movable switch blade being less than the longitudinal spacing between the spaced arcing contacts of the impedance assemblage, the capacitance between the arcing contacts assisting in grading the voltage lengthwise along the impedance assemblage during the opening operation, and means spacing said arcing contacts away from the path of opening movement of the free end of the movable switch blade so that ice formation will not impede opening switch movement.

3,004,117

AIR-BREAK DISCONNECTING SWITCHES

John W. Skooglund, North Huntingdon, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 30, 1958, Ser. No. 732,078
20 Claims. (Cl. 200-48)



1. An air-break disconnecting switch including means defining a relatively stationary contact, a swinging movable switch blade engageable with the relatively stationary contact to complete the electrical circuit through the switch, the swinging movable switch blade separating from the relatively stationary contact during the opening operation of the switch and traversing an arcuate path of travel, an impedance assemblage disposed adjacent the relatively stationary contact and extending generally therefrom in the direction of said path of travel, said impedance assemblage including one or more impedance sections, an arcing contact at one end of at least one impedance section to which the arc upon opening switch movement may terminate yet spaced from said arcuate path of travel, and said arcing contact including a substantially oval-shaped arcing ring disposed in a plane substantially normal to the axial length of the impedance assemblage.

3,004,118

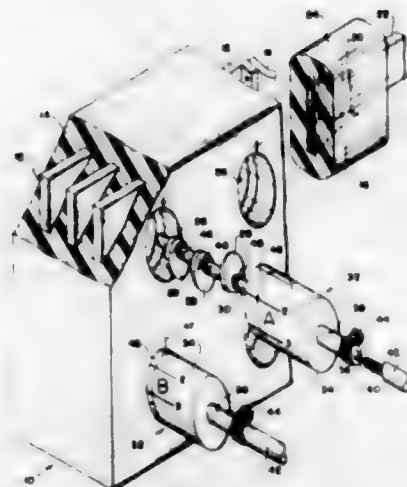
MULTIPLE CONNECTOR

John J. McGlew, 432 Terrace Ave.,
Hasbrouck Heights, N.J.

Filed Jan. 9, 1959, Ser. No. 785,870
11 Claims. (Cl. 200-51.05)

1. A conductor terminal for connection to a block of alternate layers of conductive and insulation materials comprising an elongated body portion, and a plurality of cam-contact portions extending laterally from said elongated body portion, said cam-contact portions being

spaced along the length of said body portion and being angularly offset to present contact portions in alignment

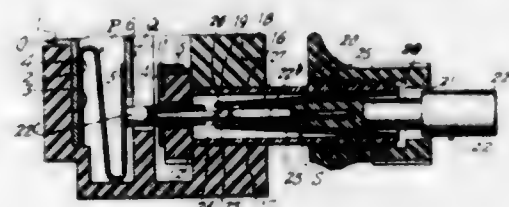


with the conductive layers of said block in dependence upon the angular disposition thereof when positioned in said block for connection thereto.

3,004,119

COMBINATION THREE LIGHT AND PUSH-BUTTON SWITCH

Paul H. Gerrie, Chatham, N.J.
(314 Cooper Road, Red Bank, N.J.)
Filed Aug. 18, 1958, Ser. No. 755,625
4 Claims. (Cl. 200-51.14)



1. A switch-socket for a multi-light electric lamp having a terminal for each filament and a common terminal for all filaments, said switch-socket including a body of insulation having a socket for said lamp that also provides a terminal element to contact said common terminal of the lamp, a plurality of other contact members one for each of said filaments, a switch in said body of insulation to control connection and disconnection of one of said contact members to and from one of said terminals, respectively, and a second switch including a contactor movably mounted in said body of insulation to control connection and disconnection of said one contact member, respectively, to and from the other contact members upon movement of said contactor in one direction providing for opening of said circuit through any of said contact members and said one terminal by the first-mentioned switch and so that the filaments can be energized successively individually and simultaneously by the first-mentioned switch and any one thereof can be de-energized by said first-mentioned switch independently of the second switch.

3,004,120

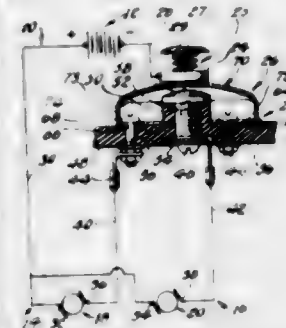
CIRCUIT-SEPARATING DEVICE

Gordon R. Forrer, 39710 Haggerty Court,
Northville, Mich.

Filed June 10, 1959, Ser. No. 819,468
10 Claims. (Cl. 200-61.08)

1. An electrical circuit-separating device for selectively energizing first and second load circuits, said device comprising a supporting structure having an electrical supply contact thereon, a detachable first load contact engageable with said supply contact and adapted to be elec-

trically connected to the first load circuit, and a second load contact disposed on the opposite side of the first load contact from the supply contact in insulated relationship with the first load contact and supply contact and adapted to be electrically connected to the second



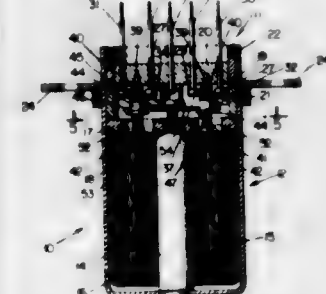
load circuit, said first load contact initially engaging said supply contact while shielding said second load contact from engagement by said supply contact, said supply contact being engageable with said second load contact in response to removal of said first load contact.

3,004,121

ELECTRICAL RELAY

Rolland M. Purdy, Bainbridge, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 10, 1958, Ser. No. 760,161
13 Claims. (Cl. 200-104)



1. An electrical switch having opposed contacts, a post mounted between said contacts, a contactor slidably mounted on said post and selectively movable in opposite directions between said contacts into terminal positions in engagement therewith, a first weaker coil compression spring disposed about said post urging the contactor in a first of said opposite directions, a second stronger coil compression spring disposed about said post urging the contactor in a second of said opposite directions, the second spring normally overcoming the first spring, reciprocable contactor operating means selectively operable at least partially to suppress the action of the second spring on the movable contactor so that the first spring may then move the contactor in the first direction to its respective terminal position, said last mentioned means comprising a bushing slidably mounted on the post and interposed between the inner end of the second, stronger spring and the respective contactor, said bushing having an abutment thereon forming part of a lost motion connection between it and said contactor operating means, said lost motion connection permitting the contactor operating means to move freely an appreciable distance in said first direction before it retracts the bushing in said first direction.

3,004,122

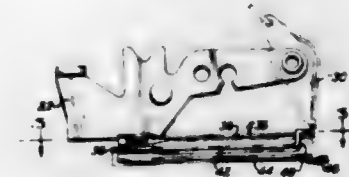
LOW-RATED CIRCUIT BREAKERS

Alexander R. Norden, New York, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Feb. 9, 1959, Ser. No. 792,068
8 Claims. (Cl. 200-116)

1. A circuit breaker including a pair of contacts, a movable contact member carrying one of said contacts,

trip-free manually operable mechanism for opening and closing said contacts and an overload release means for automatic opening of the contacts in response to over-current conditions, said overload release means including a latched member, a length of bimetal arranged for latching said latched member, and at least one additional length of bimetal integral with said first mentioned length of bimetal and supported only by said latching length of bimetal, said additional length of bimetal being closely adjacent thereto and electrically in series therewith, said



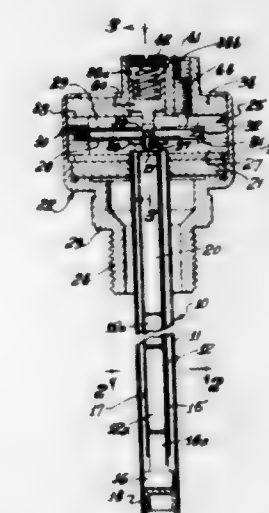
latching length of bimetal being united at one end thereof to said movable contact member and said lengths of bimetal being thereby mounted for bodily movement with said movable contact member, a connecting conductor of braid having a joint to said additional length of bimetal, said connecting conductor having a stationary portion spaced from said joint, said additional length of bimetal providing environmental heating to resist dissipation of heat developed in said first mentioned length of bimetal and said additional lengths of bimetal further providing mechanical isolation between said conductor and said latching length of bimetal.

3,004,123

THERMALLY RESPONSIVE ACTUATOR

Kenneth B. Cannon, 5240 Alhambra Ave.,
Arcadia, Calif.

Filed Apr. 28, 1960, Ser. No. 25,473
7 Claims. (Cl. 200-137)



7. In a thermally responsive switch operating mechanism of the differential expansion type having operating members with different coefficients of thermal expansion which move one blade of a pair of switch blades, the combination comprising:

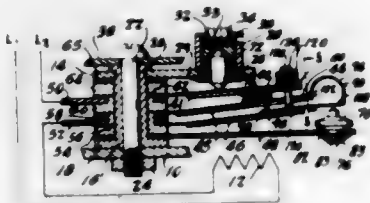
a first operating member comprising a plurality of separate, individual elements arranged in a row with successive elements in contact and a metallic member at one end of the row engageable with said one switch blade;
a tube surrounding the first operating member to maintain the elements in a row and fastened to the metallic member at one end of the row;
spring means maintaining successive elements in the row in contact;

a second operating member of tubular configuration surrounding the said tube and annularly spaced therefrom;
and guide means inside the second operating member and centering the tube therein, said guide means having a sliding contact with the tube at the end thereof remote from the switch blade to permit relative longitudinal movement between the two operating members, the guide means being electrically non-conductive to insulate the two operating members from each other.

3,004,124

SNAP SWITCH

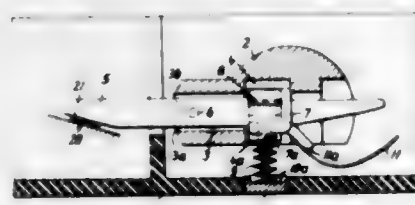
John W. Huffman, Mansfield, Ohio, assignor to Pace, Inc., Mansfield, Ohio, a corporation of Ohio
Filed Oct. 23, 1959, Ser. No. 848,279
11 Claims. (Cl. 200—138)



3. Switch mechanism, in combination, a relatively movable current conducting member provided with a contact, a second contact, means supporting the second contact, said current conducting member being movable to positions engaging and disengaging said contacts, a second member, a resilient element formed with an arcuate portion and a planar portion, the distal end region of the arcuate portion being in pivotal engagement with an end of one of said members, the planar portion of said element being fixedly secured to the other of said members, said resilient element being formed with a weakened section forming a hinge zone for said arcuate portion, the region of pivotal engagement of the element with one member and the hinge zone being disposed with respect to the movable current conducting member whereby flexure of the planar portion causes rocking movement of the arcuate portion about the hinge zone to effect snap action movements of the current conducting member to engage or disengage the contacts, and thermoresponsive means arranged to control the position of a region of the planar portion of the element for effecting movement of the arcuate portion under the influence of ambient temperature variations.

3,004,125
SWITCH

Hans Prien, Einfeld, and Hans-Jürgen Wulff, Hohenwestedt, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed July 11, 1960, Ser. No. 41,950
5 Claims. (Cl. 200—166)

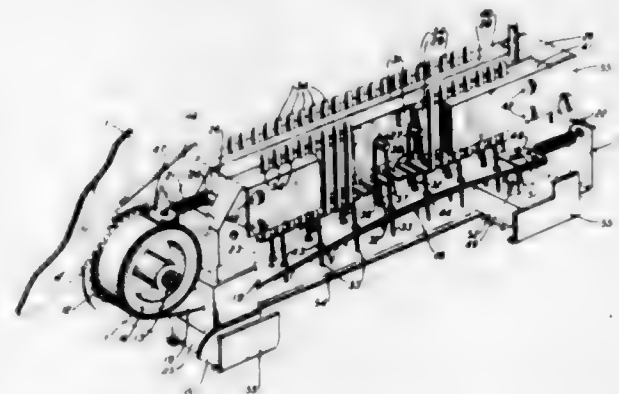


1. In an electric switch, the combination which comprises: a switch casing; a stationary contact mounted on said casing; a movable contact carrier pivotally mounted on said casing for movement between open and closed positions, said carrier being provided with two intersecting mutually perpendicular recesses, one of which has

an open end generally directed toward said stationary contact and the other of which has an open end generally directed toward a stationary part of said switch casing; an elongated contact piece loosely arranged in said one recess, having a portion extending through the intersection of said recesses and having a free end projecting out of said open end of said one recess, so that a contact carried at the end of said elongated contact piece may engage said stationary contact when said carrier is in said closed position; a lead-in element loosely arranged in said other recess and being in engagement with said portion of said contact piece; and spring means interposed between said lead-in element and said stationary part of said switch casing for resiliently urging said contact piece and said lead-in element into engagement with each other, whereby said contact piece may be withdrawn from said one recess of said carrier when the latter is in open position against the action of said spring means.

3,004,126
RELAY

Clyde J. Fitch and Harry L. Dunn, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1956, Ser. No. 631,744
1 Claim. (Cl. 200—166)



A relay, comprising: an elongated mounting bar with opposite sides, a row of pegs, each of said pegs extending thru and having an end outwardly of each of said bar sides whereby there is formed a row of peg ends along each of said bar sides; a straight spring wire having therein a single bend, said bend shaping said wire in the form of a hairpin spring having legs of unequal lengths, and such a hairpin being hung on each of said peg ends adjacent said bar so that the inside of said bend of each hairpin contacts such a peg end and so that there are two rows of said hairpins and their legs and so that all the legs of a said row of hairpins are coplanar in a plane parallel to a said bar side, a spacer strip contacting the bends of each row of hairpins to confine said hairpins to their pegs; a base block engaging each spacer strip, receiving therein a row of said peg ends, and limiting movement of said pins along said pegs; a clamp plate along each of said sides and in opposition to each of said blocks; a plurality of L-shaped conductors formed in two rows, each conductor having a shank and at right angles thereto a contact portion, the shanks of all the conductors of a row being parallel, coplanar, and held between and transverse one of said blocks and one of said plates, and each shank extending from its said block and plate, the contacts of said rows being in a plane intersecting all the legs of said hairpins and each row of contacts being between the rows of said shanks, and each leg of each hairpin being between two of said contacts whereby contacts and hairpin legs alternate in a row and the spring action of each such hairpin being such that the legs thereof are biased against two of said contacts; and an actuator movable band having its elongation parallel to the elongation of said mount-

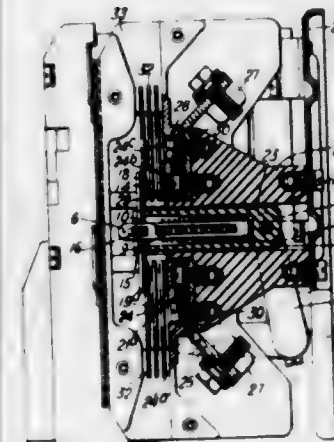
ing bar, contacting said longer legs, spaced from said shorter legs, and adapted upon actuation to move each said longer leg from one of said contacts to another.

3,004,127

CONTACTS FOR ELECTRIC SWITCHES

Joseph Thom Carding, Wolverhampton, and Gordon Albert Jelley, Walsall, England, assignors to J. A. Crabtree & Co. Limited, Walsall, England, a British company

Filed Sept. 9, 1958, Ser. No. 759,987
Claims priority, application Great Britain Sept. 16, 1957
13 Claims. (Cl. 200—166)



2. A moving contact device for use in an electric switch, said device comprising an actuating body member having a cylindrical bore therein, viscous material disposed within said bore, a spring, a piston slidably mounted against said spring within said bore, said piston cooperating with said material to form a fluid tight seal therein, an arm disposed on said piston extending from said body, means for actuating said body, a contact plate transversely mounted in said arm, said spring disposed within said body adapted to press said arm-carried plate toward fixed contacts in said switch when said body is actuated.

3,004,128

ATTACHMENT FOR ELECTRICAL WALL SWITCHES

Benny J. Mikolajski, Clarendon Hills, Ill.
(419 N. Quincy St., Hinsdale, Ill.)
Filed June 9, 1955, Ser. No. 514,283
5 Claims. (Cl. 200—172)



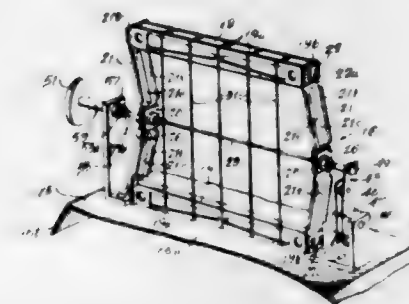
1. For the remote manual control of an electrical switch operated by a pivoted toggle, in cooperation with a cover plate enclosing said switch, said toggle extending thru said plate, a switch actuator which comprises a slide-guide longitudinally mounted on and in continuous, contiguous relationship with said plate, a manually operated slide reciprocally mounted in said slide-guide and retained in position by the relative position of said toggle, said slide comprising a toggle enclosure depending laterally from said slide and adapted to receive said toggle, a shank portion, and a handle means adapted to manu-

ally operate said slide depending downwardly therefrom; said toggle enclosure containing a recess comprising a pair of side walls and two opposed cam walls, said cam walls spaced apart from the side walls of said toggle and each of said cam walls alternately abutting against the adjacent terminal extremity of said toggle when the switch is in the normally open, or normally closed position, and an outer shell integral with said walls surrounding said recess.

3,004,129

THERMAL RESPONSIVE DEVICE

Ludvik J. Koci, Hinsdale, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed July 14, 1958, Ser. No. 748,225
4 Claims. (Cl. 219—19)

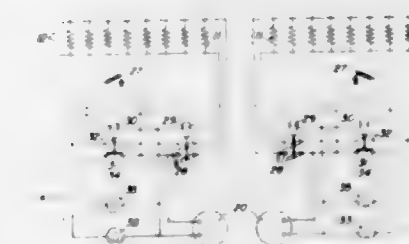


3. A thermal control device responsive to the temperature of a surface area comprising a pair of spaced parallel frame members mounted for limited movement toward and away from each other while maintaining their parallel relationship, a pair of resilient members interconnecting the spaced ends of said frame members and supporting said members relative to each other for said limited movement, a plurality of parallel thermal responsive wires extending between said frame members, said wires being connected at spaced points along the lengths of said frame members, and switch means connected to said resilient members and responsive to the spacing of said frame members.

3,004,130

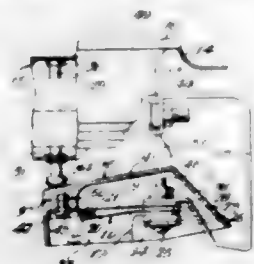
TANK HEATING SYSTEM

Eldon R. Miller, Iowa City, Iowa, assignor to Eldon Miller, Inc., a corporation of Iowa
Filed Nov. 12, 1959, Ser. No. 852,469
5 Claims. (Cl. 219—20)



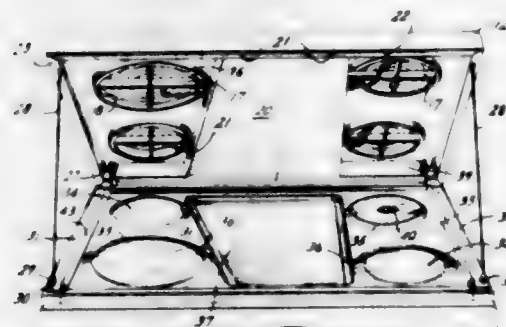
1. A heating system for a tank having a tank body formed of a plurality of bays with structural reinforcing members at the adjacent juncture edges of said bays, heating members comprising electrical resistance heating strip elements extending around a portion of each bay in close proximity to the outer surface of the tank body and spaced between said reinforcing members, a source of electric power, circuit breaker means responsive to the temperature in a section of said tank body for connecting said source of electric power to said heating members, means for indicating when said circuit breaker means is energized to closed-circuit position, and means for indicating when said circuit breaker means is deenergized to open-circuit position.

3,004,131
WARMER STOVE
 Aart J. Gillissen, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware
 Filed July 17, 1959, Ser. No. 827,763
 9 Claims. (Cl. 219—37)



9. A switch to control an electrical device, comprising in combination: a fixed switch element; a movable switch element; a mounting for said elements normally supporting the same in out of contact relationship; means to enclose the space above and around said switch, said means being secured to said movable element for movement therewith; a plunger engaging said means to tip the same and thereby move said switch elements into contacting relationship; and an electrical conductor which supports said switch.

3,004,132
COOKING RANGE
 Joseph Earl Harris, Jr., Huntingdon Valley, and Albert E. Cullen, Warminster, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
 Filed Dec. 15, 1959, Ser. No. 859,665
 2 Claims. (Cl. 219—37)

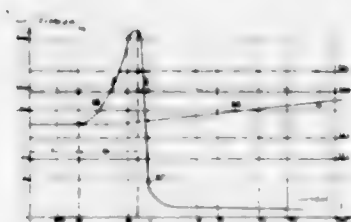


1. An electric cooking range having an apertured panel pivotally secured to the range body for movement into and out of engagement therewith and mounting a plurality of electrical, open-type surface heating elements, controls, and associated control circuitry; a unitary baffle in spaced, underlying relation to said surface heating elements having surface concavities formed therein the perimeters of which are rimmed to provide individual drip wells for each of said surface heating areas, and including an enlarged depression in fluid communication with each of said wells to provide a reserve reservoir for the receipt of excess spillage from any or all of said wells; and a wiring enclosure removably secured to said panel for isolating said circuitry from spillage contamination.

3,004,133
PROCESS FOR STARTING AND PERFORMING TECHNICAL PROCESSES USING ELECTRICAL GLOW DISCHARGES
 Bernhard Berghaus and Hans Bueck, Zurich, Switzerland, assignors to Elektrophysikalische Anstalt Bernhard Berghaus, Vaduz, Liechtenstein
 Original application Dec. 8, 1954, Ser. No. 473,895. Divided and this application Oct. 8, 1958, Ser. No. 766,116

8 Claims. (Cl. 219—50)
 1. Process for regulating the electrical supply circuit for the treatment of an object in a gas atmosphere in a

discharge chamber by an electric glow discharge initiated and maintained by said supply circuit, said circuit having a series impedance and the object to be treated being connected in said circuit so as to operate at least part of the time as a cathode during the discharge and being heated by impinging ions while conversion of the glow discharge into an arc discharge is prevented, said process comprising reducing the said impedance to a value



smaller than the impedance of the glow discharge path in the chamber and increasing the supplied electric energy to increase the ionic current impinging the cathode surfaces to such degree that at every point of the cathode surfaces such current is equal to or greater than the electronic current emitted at such point, regulating the voltage to a value over 100 volts, and maintaining the ionic current density greater than one-tenth milliamperere per square centimeter of surface.

3,004,134
IMPEDOR FOR USE ON A THERMATOOL WELDER
 Ernst W. Allardt, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
 Filed July 17, 1959, Ser. No. 827,755
 6 Claims. (Cl. 219—59)

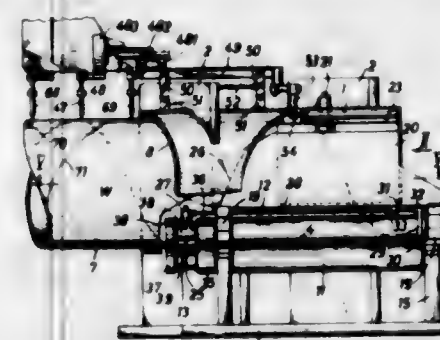


5. In apparatus for progressively forming tubing by high frequency electric resistance welding having an impedor assembly within and extending longitudinally of the tubing and including an elongated member of high magnetic permeability material extending throughout the welding zone and means for directing a cooling fluid over the outer surface of said elongated member to maintain said member at a temperature below its Curie point, the improvement which consists of having said elongated member of tubular form and arranged to surround a longitudinally extending non-magnetic support rod mounted in said impedor assembly, and a sleeve of heat insulating material surrounding said elongated tubular member and arranged to confine the flow of cooling fluid to the peripheral surface of said elongated tubular member.

3,004,135
MACHINES FOR THE MANUFACTURE OF TUBES
 Richard Diener, Berlin-Hermsdorf, and Werner Wenemann, Dortmund, Germany, assignors to Hoesch Rohrwerke Aktiengesellschaft, Hagen, Westphalia, Germany, a body corporate of Germany
 Filed Mar. 18, 1959, Ser. No. 860,306
 Claims priority, application Germany Mar. 24, 1958
 10 Claims. (Cl. 219—62)

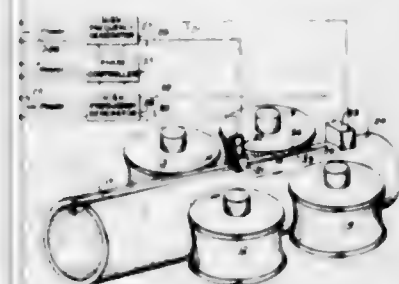
1. In an apparatus for the manufacture of helically welded tubing from a continuous strip of metal, in com-

bination, a support; a sleeve secured to said support and provided with a substantially cylindrical internal forming surface; feed means for continuously introducing successive portions of said strip into engagement with said forming surface in a direction generally tangential to said surface and inclined to the axis of said surface, thereby winding said strip helically within said sleeve; welding



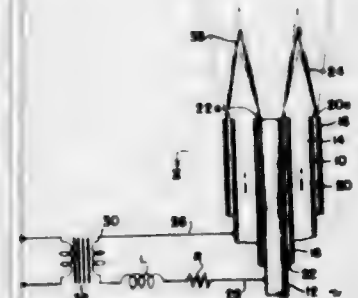
means for welding together adjacent edges of said strip to form a helical seam; and clamping means adjacent said welding means for maintaining said adjacent edges in a predetermined relative position during welding, said clamping means including internal and external roller means bearing upon opposite surfaces of said strip at each of said edges.

3,004,136
WELDING, PROXIMITY EFFECT BY PHASE CONTROL
 Gerald H. Peterson, 1001 3rd St., Santa Monica, Calif.
 Filed Oct. 30, 1959, Ser. No. 849,964
 22 Claims. (Cl. 219—67)



11. The process of welding together material edges placed in close opposition, comprising: causing high frequency currents to flow parallel and codirectional with respect to said edges and opposite in phase so as to heat such edges, and upon said heating butting said edges to effect a weld of the materials of such edges.

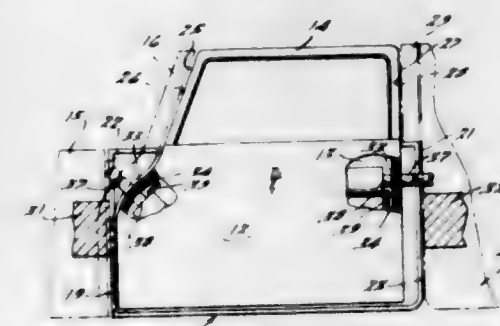
3,004,137
METHOD AND APPARATUS FOR THE PRODUCTION OF HIGH GAS TEMPERATURES
 Béla Karlovitz, Pittsburgh, Pa., assignor to Combustion and Explosives Research, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
 Filed June 7, 1960, Ser. No. 34,590
 14 Claims. (Cl. 219—75)



1. A method of producing a stream of high temperature gas which comprises creating a strongly turbulent

stream of a combustible mixture forming a flame by chemical combustion in the stream, establishing a substantial electrical discharge distributed across the flame, and passing substantially all of the stream of combustion gas through the discharge to increase the temperature of said stream.

3,004,138
WELDING METHOD AND CONSTRUCTION
 Harry E. Day, Birmingham, Mich., assignor to Delta Welder Corporation, Detroit, Mich., a corporation of Michigan
 Filed Sept. 29, 1958, Ser. No. 763,924
 15 Claims. (Cl. 219—93)



1. In a method for welding together two sheet metal parts so that a predetermined relationship will exist between the parts, the steps of forming an embossment on one of said parts having an outermost portion and a main portion, placing the outermost portion of said embossment against said second part, applying a pair of welding electrodes to the outsides of said parts adjacent said embossment, forcing said electrodes together so as to apply pressure to at least a portion of said one part outside the recess formed in it by said embossment, applying a welding current between said electrodes, causing the outermost portion of said embossment to be heated by said current to a weldable temperature range and the main portion of said embossment to a plastic temperature range, and compressing the main portion of said embossment until said electrodes reach a predetermined spacing.

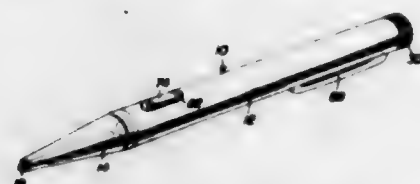
3,004,139
WELDING STUD AND FERRULE CONSTRUCTION FOR ELECTRICAL ARC WELDING
 Edward Dash, 2043 Gaylord St., Long Beach 13, Calif.
 Original application Apr. 30, 1956, Ser. No. 581,458. Divided and this application Jan. 29, 1959, Ser. No. 790,014
 16 Claims. (Cl. 219—99)



1. A ferrule for use with a welding stud having a shank with a welding end of selected cross sectional area comprising an open ended hollow body defining a weld chamber and having a plain uninterrupted end face to seat on the surface of a work member, the opposite end of said body having an axial opening greater in area than the cross sectional area of the shank to loosely receive the shank thereto in spaced relation, the cross sectional area of the weld chamber being not less than 1.96 and not greater than 3.24 times the cross sectional area of the shank, and the length of said weld chamber having an internal height sufficient to contain against expulsion molten metal from a stud in the chamber.

3,004,140 ILLUMINATED PEN OR PENCIL

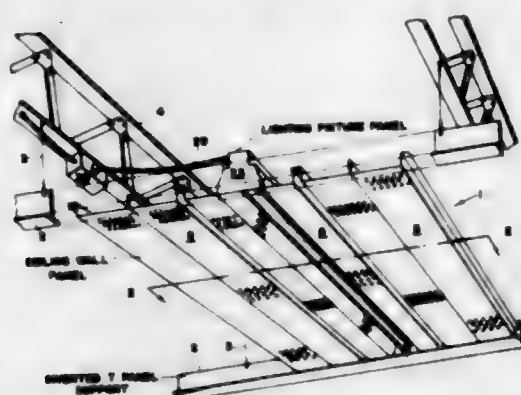
Cyril R. Gomes, 2336 Palolo Ave., Honolulu 16, Hawaii
Filed Oct. 30, 1957, Ser. No. 693,470
2 Claims. (Cl. 240-6.46)



1. An illuminated pen comprising a substantially cylindrical electrically conductive casing, a removable nib of a light conducting material threadedly mounted in one end portion of said casing and having a recess in its inner end portion, a writing cartridge in said nib, a sleeve of insulating material mounted in the casing in end-abutting engagement with said nib and having an opening therein, a generally cylindrical body of insulating material mounted in the sleeve and having a threaded socket in one end portion opening into the recess and further having a recess in its other end portion, a conductor strip mounted longitudinally in the body, a fixed contact on one end of the conductor strip engaged in the socket, a yieldable contact on the other end of the conductor strip operable in the second named recess, batteries in the casing electrically connected to the yieldable contact, an electric lamp mounted in the socket and projecting therefrom into the first named recess, said lamp being electrically connected to the fixed contact, a conductor element in the body electrically connected to the lamp in the socket and extending therefrom into the opening, means electrically connecting the batteries to the casing, and a normally open switch on the casing for electrically connecting said conductor element to said casing for establishing an electrical circuit through the lamp for energizing same.

3,004,141 SHEET METAL PANEL TYPE CEILING CONSTRUCTION

Allen C. Waller, New York, and Robert A. Goeller, Mamaroneck, N.Y., assignors to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 702,956
8 Claims. (Cl. 240-9)

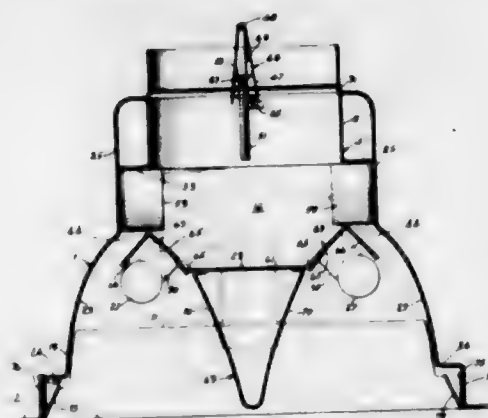


1. A ceiling construction of the panel type, comprising: a pair of elongate ceiling-panel supports; means supporting them in laterally spaced parallel relationship along the level of the proposed ceiling; a plurality of elongate acoustical sheet metal ceiling panels having front and back faces and being of equal widths and of relatively longer but equal lengths so as to be completely interchangeable one with another; said panels being arranged successively in side-by-side relationship to form a row extending along said supports with each panel extending lengthwise from one support to the other and having its

ends resting on said supports, the adjacent side edges of adjacent panels being in interlocking engagement with each other; at least one of said plurality of panels being an elongated trough-type lighting fixture panel with an upwardly-deep horizontally-elongate downwardly-open light-reflecting acoustical trough in its front face and with means to support a source of illumination within said trough; and the others of said plurality of panels being vertically shallow and having the major portion of their respective front face areas relatively flat and facing downwardly.

3,004,142 OVERHEAD AIR AND LIGHT DISTRIBUTOR UNIT

Lee A. Archer, Wheaton, Ill., assignor to The Pyle National Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 3, 1959, Ser. No. 831,245
8 Claims. (Cl. 240-9)

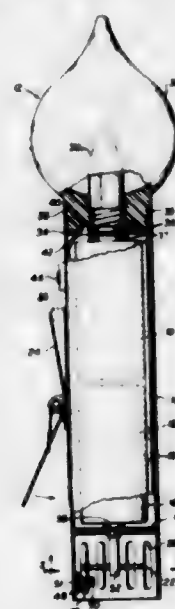


3. In an overhead air and light distributor unit, an elongated troffer light housing having upwardly and inwardly extending inner side walls, a reflector extending along said troffer light housing above the bottom thereof and having a parabolic reflector extending downwardly therefrom along the center thereof and defining lighting troughs beneath said reflectors and a plenum chamber thereabove, an air inlet into said plenum chamber intermediate the ends thereof admitting the air directly onto the upper surface of said reflector to create eddy currents therein and thereby convert the velocity head of air into a static head of air, said reflector having angular reflector portions extending for the length thereof, including upwardly inclined reflector portions extending along opposite sides of said parabolic reflector and downwardly inclined reflector portions inclined downwardly from the upper end portions of said upwardly inclined reflector portions and spaced from said inner side walls and extending generally parallel thereto to form air passageways between said inner side walls and said downwardly inclined reflector portions, fluorescent tubes extending along said angular reflector portions and shielded thereby, a series of aligned slots extending through said upwardly inclined reflector portions, at the inner margins thereof along said parabolic reflector, directing the flow of air along said parabolic reflector, the downwardly inclined reflector portions directing the flow of air along said inner side walls, and deflector vanes extending along opposite sides of said plenum chamber and inclined in opposite directions from the transverse center of said plenum chamber angularly upwardly from the bottom of said plenum chamber towards opposite ends of said plenum chamber, said deflector vanes being spaced from said air inlet and being inclined in the direction of the flow of air toward the ends of said plenum chamber and reducing the endwise velocity components of the air and directing the air straight downwardly along the upper faces of said angular reflectors in the spaces between said reflector portions and said inner side walls, and through

said slots and along said parabolic reflector, and damper valve means in said air inlet adjustable to vary the flow of air thereinto.

3,004,143 CHRISTMAS TREE LIGHTING MECHANISM

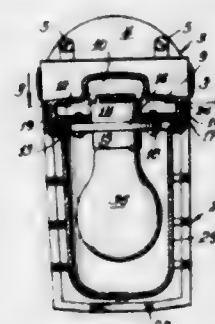
Robert Rebernick, 41-37 Frame Place, Flushing, N.Y.
Filed Jan. 6, 1960, Ser. No. 771
3 Claims. (Cl. 240-10.68)



1. A temperature responsive lighting device comprising a light, an elongated casing having an insulating partition therein to provide a battery housing for said light and a switch housing, respectively, a post having a metallic contact resting on said partition, a thermal switch comprising a bi-metallic coiled spring located in said housing, said post extending into said latter housing and engaging said coiled spring, and a resilient contact extending between a pair of spaced turns of said thermal switch, said resilient contact being adjustable to vary the gap between it and said spaced turns.

3,004,144 LIGHTING FIXTURE

William C. Agrell, Forest Park, Ill., assignor, by mesne assignments, to Thomas Industries, Inc., Louisville, Ky., a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,238
1 Claim. (Cl. 240-11.2)



In a vapor and weather tight lighting fixture, the combination of a bracket providing a downwardly facing flat annular base portion, a lamp socket having an exterior circumferential flange underlying and secured to said base portion, a sealing gasket confined under compression between said flange and said base portion and providing a vapor and weather tight seal about said socket, said gasket extending radially outward beyond said flange, said socket facing downwardly and being adapted to receive and support a lamp, a cup shaped light transmitting globe adapted to surround and enclose

the lamp and socket and to engage said base portion, said globe having at its upper end an outwardly extending annular shoulder seating on the portion of said gasket extending radially outward beyond said flange of said socket member, a cup-shaped foraminous guard loosely embracing said globe and having at its upper end a substantially continuous ring member extending upward about said base portion and provided at its lower end with an inwardly extending annular shoulder facing axially upward and underlying said shoulder of said globe, a cushion sealing ring disposed between said shoulder of said guard and said shoulder of said globe, said base portion and said ring member having annular coaxial connecting parts disposed in telescopic relation, one of said parts comprising a plurality of lugs and the other of said parts comprising a plurality of grooves, each of said grooves opening axially to admit the corresponding lug and extending angularly providing means for camming said base portion and guard together effective for compressing the radially outer portion of said gasket and said cushion sealing ring thereby providing a vapor and weather tight seal between said base portion and the upper end of said globe and a vapor and weather tight seal between said shoulder of said guard and the under face of said shoulder of said globe.

3,004,145 ANTI-BLINDING SCREEN WITH BUILT-IN LAMP MEANS FOR THE ILLUMINATION OF ROADS WITH SEPARATE TRACKS

Jacob Meesman Arnold Kroes, 128 Louise de Colignystraat, The Hague, Netherlands
Filed Jan. 13, 1959, Ser. No. 786,623
3 Claims. (Cl. 240-25)



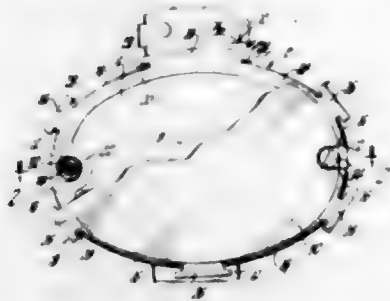
1. A screen placed between the separate tracks of a road to eliminate blinding effect of lights of oncoming traffic and provided with screened light sources for the illumination of said road, comprising a supporting structure consisting of tubular post members mounted along said road and tubular horizontal connecting members, coupling sleeves having apertures therein for connecting said tubular post members and tubular horizontal connecting members at the upper part of said tubular post members, a light source arranged in said coupling sleeves, said light source provided with a source of supply disposed within said tubular members, further apertures arranged in said coupling sleeves on each side of the axis thereof to transmit light from said light source in a direction to illuminate said road in the direction of traffic movement, and plate members mounted over the full length of said tubular horizontal connecting members and at least over the upper part of said tubular post members to eliminate blinding effect of lights of oncoming traffic.

3,004,146 LENS GASKET FOR LAMP ASSEMBLY

James J. Martin, Chesterfield, and James M. Dalton, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 8, 1958, Ser. No. 753,951
7 Claims. (Cl. 240-41.55)

1. In combination, a lamp body, a gasket mounting seat on said body including a mounting flange and a pair

of spaced locking flanges extending out of the plane of said mounting flange, a gasket mountable on said seat, a



lug on said gasket projecting through the space between said locking flanges, and shoulder means on said lug abutable with at least one of said locking flanges.

3,004,147

LIGHTING FIXTURE CLOSURE MEANS

Richard C. Leamer and Ernest P. Kochals, Jr., Des Plaines, Ill., assignors, by mesne assignments, to Thomas Industries, Inc., Louisville, Ky., a corporation of Delaware

Filed Aug. 11, 1960, Ser. No. 48,863

7 Claims. (Cl. 240—147)



1. In lighting fixture closure means, a downwardly opening reflector shell substantially rectangular in plan and having downwardly extending side walls each provided with an attached upwardly extending flange, a closure member for said shell, upper hinge leaves engaging over one of said flanges, lower hinge leaves secured to said closure member at one side thereof and pivoted to said upper hinge leaves, means carried by said lower hinge leaves and in cooperation with the adjacent side wall of said shell restraining said upper hinge leaves against upward movement when said closure member is in closed position while accommodating upward movement of said upper hinge leaves when said closure member is in open position, and means at the other side of said closure member for releasably securing it in closed position.

3,004,148

MEANS FOR MOUNTING A DIFFUSER IN A LIGHTING FIXTURE

Louis Rosoff, Brooklyn, and Peter De Mauro, Whitehouse, N.Y., assignors to Globe Lighting Products, Inc., Brooklyn, N.Y., a corporation of New York

Filed Mar. 23, 1959, Ser. No. 801,302

5 Claims. (Cl. 240—147)



2. In a lighting fixture having a housing member and a diffuser member, said diffuser having a normally closed position in which it is disposed entirely within the interior of said housing and approximately flush with the lower edges of said housing and with the sides of said diffuser being in juxtaposition with the sides of said housing; means for pivotally mounting said diffuser member to said housing member, comprising a pair of elongated rods

pivotally connected at one end thereof to one of said members, and being provided with means at the other end thereof for resiliently biasing said elongated rods toward each other and into engagement with said other member to releasably retain said diffuser member within said housing member, said mounting means having means directly responsive to the application of external force to either side of said diffuser member for pivoting said diffuser member with respect to said housing member to expose a gripping edge on the other side of said diffuser member for the subsequent displacement of said diffuser member from said housing member.

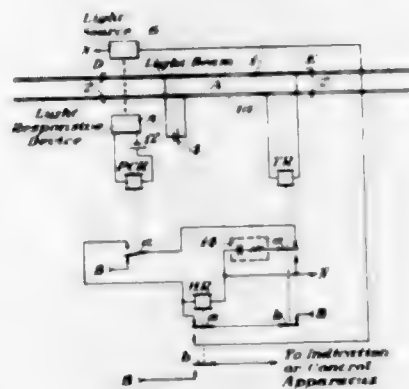
3,004,149

RAILWAY TRACK OCCUPANCY DETECTORS

Crawford E. Staples, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Oct. 28, 1959, Ser. No. 849,226

6 Claims. (Cl. 246—29)



1. In a track occupancy detection arrangement for a section of railway track capable of being spanned by the wheels and axles of a railway car, the combination comprising, a track circuit for said track section including a source of current and a track relay actuated from a first position to a second position when the track section is occupied, a light responsive device, a normally deenergized light source so disposed in relation to said light responsive device and said track section that a beam of light projected from the source to the device is interrupted when a portion of the track section is occupied, a second relay, a stick circuit for said second relay including one of its own front contacts and a first contact of said track relay closed in the first position of the track relay, an energizing circuit for said light source including said first contact of said track relay and a back contact of said second relay, a third relay, means controlled by said light responsive device for picking up said third relay when said device is receiving light from said source, an energy storing device, a circuit for storing a charge of energy in said energy storing device, said circuit including a back contact of said third relay and a second contact of said track relay closed in the first position of the track relay; and a pickup circuit for said second relay including said energy storing device, said second contact of said track relay, and a front contact of said third relay.

3,004,150

HIGHWAY CROSSING PROTECTION SYSTEMS

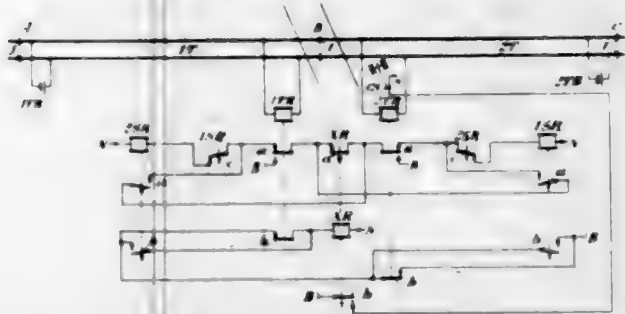
Merle K. De Vos, McDonald, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Aug. 4, 1959, Ser. No. 831,577

10 Claims. (Cl. 246—130)

1. In combination, a stretch of railway track intersected by a highway; two track circuits for said stretch, one on each side of said highway and each including a normally energized track relay; a normally deenergized

slow release stick relay associated with each track relay, a normally energized slow release relay; a pickup circuit for each stick relay including a back contact of the associated track relay, a front contact of the other track relay, a back contact of the other stick relay, and a front contact of the normally energized slow release relay; a first stick circuit for each stick relay including its own front contact, said back contact of the other stick relay, and said back contact of the associated track relay; a second stick circuit for each stick relay including its said own front



contact, said back contact of the other stick relay, said front contact of said normally energized slow release relay, and said back contact of the other track relay; a crossing warning device for said highway, means controlled by said track relays and said stick relays for deenergizing said normally energized slow release relay when one of said track relays and the stick relay associated with the other track relay are deenergized, and means controlled by said normally energized slow release relay when released for actuating said crossing warning device.

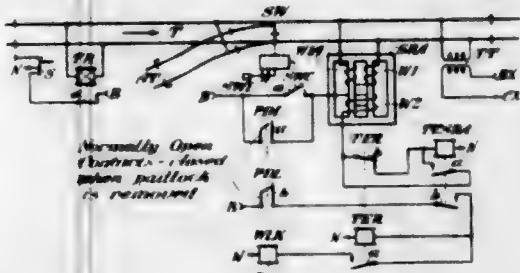
3,004,151

RAILWAY TRAFFIC CONTROLLING APPARATUS

Charles W. Faylor, Forest Hills, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Feb. 21, 1958, Ser. No. 716,586

12 Claims. (Cl. 246-146)



12. In a control arrangement for an electric switch lock applied to an outlying track switch located within a section of railway track provided with an alternating current track circuit including the rails of the section and a source of alternating current connected across the rails, the combination comprising, a first winding arrangement mounted on a core of a saturable material and connected in multiple with said track circuit, a second winding mounted on said core and proportioned to sufficiently lower the reactance of said first winding arrangement that the first winding shunts the track circuit when a unidirectional current of a predetermined value is supplied to the second winding, a third winding mounted on said core in an inductive relationship to said second winding, a relay connected in series with said third winding, a circuit controller, means controlled by said circuit controller for at times supplying a unidirectional current of said predetermined value to said second winding, and means controlled by said relay for energizing the control winding of said electric switch lock when the relay is picked up.

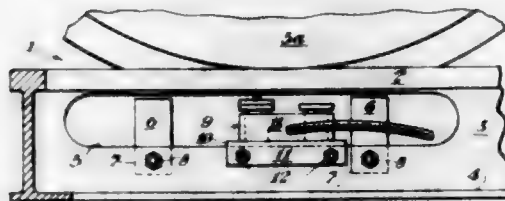
3,004,152

VEHICLE WEIGHT RESPONSIVE MEANS

Howard E. Dyche, Jr., Wilkinsburg, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Dec. 9, 1955, Ser. No. 552,152

4 Claims. (Cl. 246-251)



3. In combination with a rail having upper, intermediate and lower portions and having an opening formed within the intermediate portion which extends transversely from side to side through said intermediate portion and is sufficiently elongated lengthwise of the rail and located sufficiently close to the upper portion to permit upper portion deflection into said opening to cause a narrowing thereof upon the application of a load on the upper portion above said opening, first and second groups of electrically connected carbon pile resistance members arranged in the form of a Wheatstone bridge with the carbon piles in the first group forming opposite legs of said bridge and responsive to pressure changes by varying the electrical resistance therethrough, means for applying an initial pressure to all of said resistance members, the resistance members in said second group being temperature compensating members, a pressure member operated by said upper portion to increase the pressure on the resistance members of said first group and thereby change their resistance upon deflection of said upper portion, and electrical detector means for responding to changes in the resistance of the members of said first group.

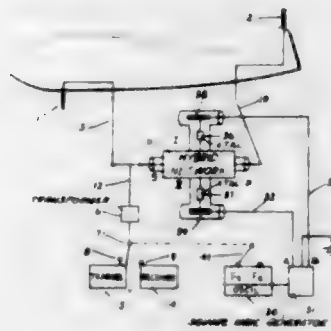
3,004,153

CIRCUIT FOR USE WITH A PLURALITY OF ANTENNAS

Andrew Alford, Winchester, Mass.
(299 Atlantic Ave., Boston, Mass.)

Filed Jan. 4, 1957, Ser. No. 632,484

16 Claims. (Cl. 250-13)



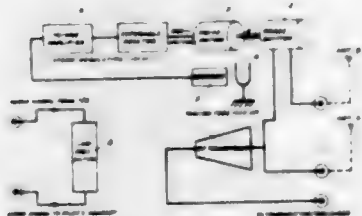
3. In combination with an aircraft, and a pair of antennas, means mounting said antennas on opposite portions of said aircraft, means for rapid and substantial interchange of signal nulls and lobes resultant from simultaneous usage of said pair of antennas for a radio communication device transmitting information upon a high frequency carrier signal comprising means connecting one antenna directly to a common input to said device, means connecting the other antenna between said common input through a four terminal pair network, said last mentioned means being connected to opposite terminal pairs of said network, said network including imped-

ance changing means for phase shifting the transmitted wave on said other antenna with respect to said one antenna at a frequency substantially in excess of the maximum frequency of said information signal in response to alternating pulse signals applied to the remaining two of said terminal pairs, and means for applying alternating pulse signals to said remaining two terminal pairs.

3,004,154

PHASE WOBBLER

Lindsay Russell, Needham, Mass., assignor to Andrew Alford, Boston, Mass.
Filed Oct. 18, 1957, Ser. No. 690,969
10 Claims. (Cl. 250-17)



1. In an RF transmitting system apparatus aboard a vehicle comprising, two spaced antennas on said vehicle, a source of high frequency energy modulated with an intelligence signal having its spectral components below a predetermined audio frequency, means coupling said source to said antennas, the latter coupling means including a phase shifter coupled to one of said antennas for varying the phase of its carrier signal relative to the signal in the other antenna at a frequency greater than said predetermined audio frequency and substantially less than the carrier frequency to radiate said energy in all directions.

3,004,155

PULSE MODULATION TRANSMITTER CIRCUITS

Leigh A. Brite, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,892
15 Claims. (Cl. 250-17)

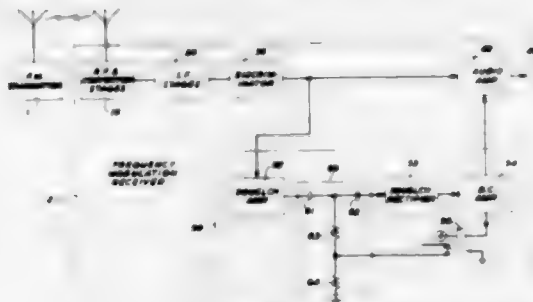


1. A circuit to be utilized in conjunction with a frequency-shift radioteletype transmitter developing a pulse-modulated carrier wave for modifying the carrier wave so as to reduce destructive interference at a receiver caused by cancellation between out-of-phase components of the carrier wave, the circuit comprising a pulse source for developing initiating pulses which start at the beginning of the modulation pulses but are shorter in duration, a delay line having input terminals coupled to the pulse source and also having taps coupled to output terminals, the number of taps, the delay between taps and the duration of the initiating pulses being selected to cause a series of quasi-randomly spaced control pulses to appear at the output terminals of the delay line in response to each initiating pulse and to cause the series of control pulses to end at the end of each modulation pulse, and a phase-varying circuit responsive to the carrier wave and coupled to the output terminals of the delay line for varying the phase of the carrier wave in response to the control pulses to introduce a plurality of quasi-random variations of the phase of the carrier wave during each modulation pulse.

3,004,156

SQUELCH CIRCUIT

Sidney B. Coleman, North Andover, and Don S. Williams, Andover, Mass., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 29, 1960, Ser. No. 39,657
5 Claims. (Cl. 250-20)

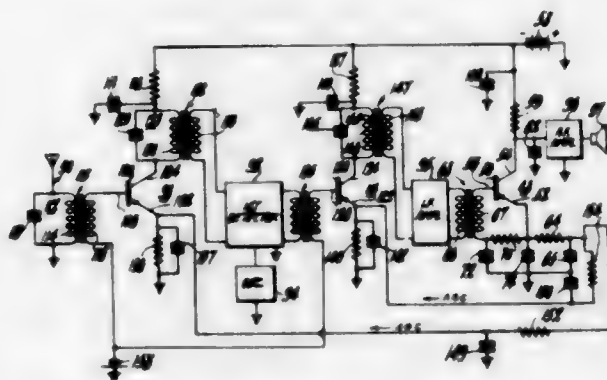


1. In a radio frequency receiver, the combination comprising means for detecting primarily the audio modulation frequency component of a received signal; a first channel responsive to the audio modulation frequency component at the output of said detecting means; a second channel selectively responsive to frequency components at the output of said detecting means for controlling the output of said first channel, said second channel including a variable pass-band filter, first means for amplifying all frequency components present in said second channel, means for changing the output of said first amplifying means to direct current, means for applying said direct current to said first channel to control the output of said receiver; and means responsive to the reception of a carrier signal for changing the pass-band of said filter.

3,004,157

AUTOMATIC GAIN CONTROL SYSTEM FOR SEMI-CONDUCTOR DEVICES

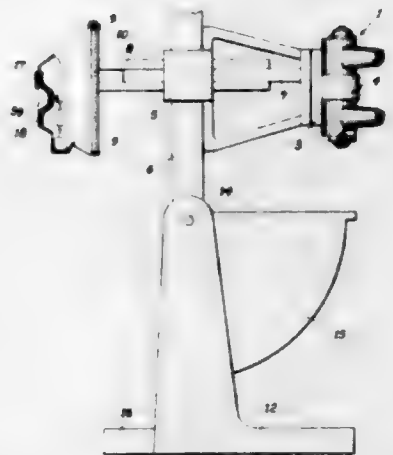
Larry A. Freedman, New Brunswick, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 24, 1953, Ser. No. 394,004
17 Claims. (Cl. 250-20)



1. In a radio receiver the combination comprising, a source of automatic gain control current including alternating current signal detection means, said means comprising a semiconductor device including a base, an emitter and a collector electrode, energization means connected with said electrodes, conductive circuit means coupled with said emitter electrode for deriving from said device an automatic gain control current which increases with increases in amplitude of an applied alternating current signal, a semi-conductor signal amplifying device including a base, an emitter and a collector electrode, and circuit means including a direct current connection between the emitter electrode of said signal detection means and the emitter electrode of said signal amplifying device.

amplifying device for directly applying said automatic gain control current to the emitter electrode of said signal amplifying device to reduce the emitter current thereof by an amount substantially equal to the increase in said gain control current as the amplitude of said alternating current signal increases.

said apertures uncovering one eyepiece at a time during the rotary motion of said flat ring, the proximity of the



3,804,158

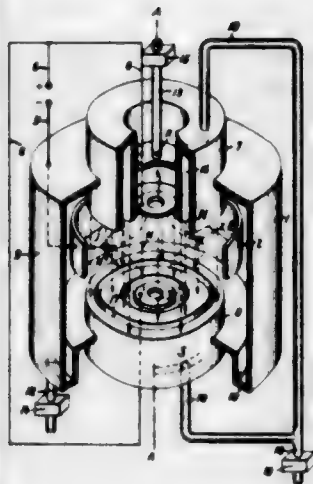
GAS CENTRIFUGE FOR ISOTOPE SEPARATION

Karl Steimel, Königstein, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany

Filed Oct. 29, 1958, Ser. No. 770,475

Claims priority, application Germany Oct. 30, 1957

18 Claims. (Cl. 250-41.9)



4. A gas centrifuge, comprising in combination: a drum; electrode means inside said drum for producing in said drum an electric current of a gas discharge; means for producing in said drum a magnetic field disposed with at least one non-vanishing component perpendicularly relative to said electric current; the combination of said means for producing said electric current of a gas discharge and of said means for producing said magnetic field being arranged axially symmetrically relative to the axis of said drum; gas feed means connected to said drum for supplying to said drum a gas mass at a pressure at which the mean number of collisions of the gas particles is greater than twice the frequency of the periodicity of the hypothetical motion of a gas ion moving singly in an electric field of the same direction as the electric field accompanied with said electric current in said drum and in a magnetic field of the same direction and of the same intensity as said magnetic field in said drum; gas outlet means; whereby said gas mass in said drum is given a rotary motion by the combined effects of the electric current and magnetic field.

3,804,159

THREE-DIMENSIONAL RADIOLOGY APPARATUS

Massimo Brancaccio, 4 Piazza Gesù e Maria, Naples, Italy

Filed Nov. 7, 1957, Ser. No. 695,024

Claims priority, application Italy Nov. 7, 1956

9 Claims. (Cl. 250-60)

1. In a three-dimensional radiology apparatus having two X-ray sources for projecting images of a subject on a surface by means of rays from said sources, a viewing means comprising a pair of eyepieces adapted to view said images, an eyepiece shutter including a flat ring having at least two apertures, said eyepiece shutter being operatively disposed adjacent said pair of eyepieces, means for rotating said eyepiece shutter about the geometrical axis of said flat ring, and means for accommodating an observer's nose within said flat ring such that the observer's eyes can be kept as near said flat ring as possible,

observer's eyes to said eyepiece shutter avoiding the sensation of flickering.

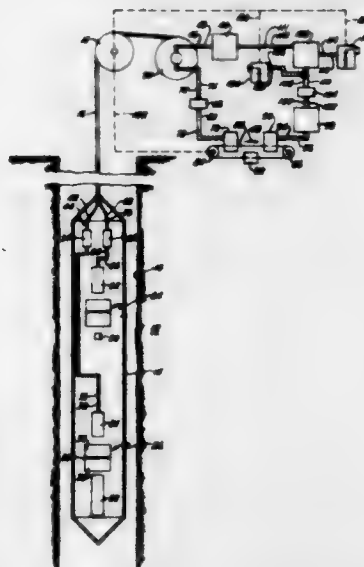
3,804,160

RADIATION BOREHOLE LOGGING

Charles W. Tittle, Newton, Mass., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed July 11, 1957, Ser. No. 671,251

5 Claims. (Cl. 250-83.1)



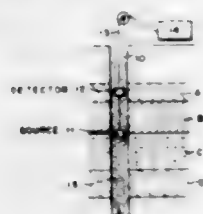
1. Apparatus for logging an earth formation traversed by a borehole comprising a pair of vertically spaced neutron sources, one of said sources producing neutrons having sufficient energy to cause disintegration of ^{16}O nuclei and the other of said sources producing no neutrons having sufficient energy to cause disintegration of ^{16}O nuclei, means for vertically moving the neutron sources along a borehole, means including a first detector for continuously producing a first electrical signal having a magnitude that is a function of the rate at which a selected class of penetrating radiation enters the borehole adjacent one neutron source, means including a second detector spaced from said first detector and having substantially the same characteristics as said first detector for continually producing a second electrical signal having a magnitude that is a function of the rate at which said selected class of penetrating radiation enters the borehole adjacent the other neutron source, means for producing a third electrical signal having a magnitude that is proportional to the magnitude of the first signal at a time displacement that substantially equals the time required for one neutron source to travel the vertical distance between the neutron sources, and means for producing an output elec-

trical signal having a magnitude that is a function of the magnitude of the second signal and the third signal, and means for recording the output signal versus the depth of said one neutron source in the borehole.

3,004,161

METHOD OF WELL LOGGING

James A. Rickard, Bellaire, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed May 22, 1957, Ser. No. 660,950
4 Claims. (Cl. 250-83.3)



1. A method for logging a borehole traversing subsurface formations for distinguishing subsurface formation characteristics of permeability and porosity in a continuous logging run utilizing a source of primary radiation and a detector for detecting the induced secondary radiation resulting from bombardment by said primary radiation comprising adding a material adapted to become radioactive upon bombardment by said primary radiation to said subsurface formations to be traversed by said source and detector, traversing the borehole in said continuous logging run with said source and detector to irradiate the subsurface formations with primary radiation and to detect the secondary radiation induced thereby, and recording the detected induced radiation counting rate versus depth of borehole traversed, the slope characteristics of the induced secondary radiation counting rates being indications of formation characteristics of permeability and porosity, the curve indicating a permeable porous formation having the greatest slope, the curve indicating an impermeable imporous formation having the least slope and the curves indicating impermeable porous and permeable imporous formations having slopes intermediate therebetween, the slopes of said curves indicating impermeable porous and permeable imporous formations being further distinguished by obtaining first derivatives of said curves, the first derivative of said curve indicating an impermeable porous formation having three zero crossings and the first derivative of said curve indicating a permeable imporous formation having one zero crossing.

3,004,162

INFRA-RED RAY DETECTING APPARATUS

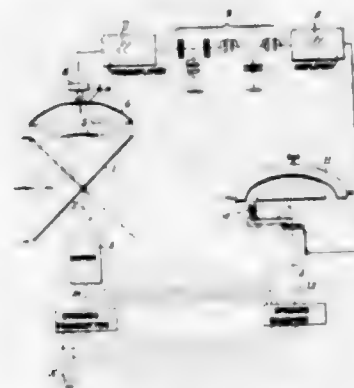
Josef Ferdinand Menke, Zurich, Switzerland, assignor to Brimro Limited, Mohamed V, Tangiers, a society of Tangiers

Filed Oct. 21, 1957, Ser. No. 691,456

Claims priority, application Luxembourg Oct. 25, 1956
6 Claims. (Cl. 250-83.3)

2. An infra-red ray detecting apparatus which comprises, in combination, a flat mirror rotatable about a vertical axis, said mirror being oblique to said axis, a concave mirror having its axis substantially in line with said first mentioned axis, the concavity of said concave mirror being turned toward said flat mirror, a convex mirror interposed between said flat mirror and said concave mirror, said convex mirror being of smaller diameter than said concave mirror and having its axis in line with said first mentioned axis, the convex reflecting face of said convex mirror being turned toward said concave mirror, said concave mirror being provided with a central opening, a photo-electric cell located opposite said opening on the other side of said concave mirror

from said convex mirror, the photo-sensitive layer of said photo-electric cell being located in the image plane of the optical system constituted by said convex and concave mirrors, rotatable indicator means responsive to electrical signals, means for constantly and continuously revolving said flat mirror and said indicator means in synchronism and in phase with each other at a given speed, and elec-

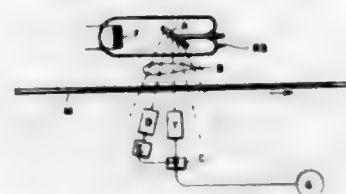


tric means for connecting the output of said photo-electric cell with said indicator means, said electric means including an amplifier and a high-pass filter the cut-off frequency of which has a predetermined value chosen as a function of said speed to prevent transmission to said indicator means of signals from infra-red ray sources of such dimensions that the amplitude of scanning thereof by said optical means exceeds a given angle.

3,004,163

RADIATION GAUGING SYSTEM

Rolf G. Edholm, Milwaukee, Wis., assignor to General Electric Company, a corporation of New York
Filed Dec. 17, 1957, Ser. No. 703,302
4 Claims. (Cl. 250-83.3)



1. The method of gauging the density of known material which consists in applying, through the material, a beam of penetrating X-ray radiation comprising a plurality of components of distinguishable energy wave lengths, including a component of wave length for which the absorption characteristic of material under examination is known and a component of different wave length heavily absorbable by a contaminant substance contained in the material, detecting the beam to produce a density gauging signal, isolating the component of different wave length and separately detecting the same to obtain a correctional signal corresponding with the component of wave length heavily absorbed by the contaminant substance, modulating said density gauging signal in accordance with the correctional signal to reduce the error therein caused by said contaminating substance, and applying the corrected signal as a density or thickness index of said first known material.

3,004,164

METHOD AND APPARATUS FOR MEASURING IONIZATION RADIATION

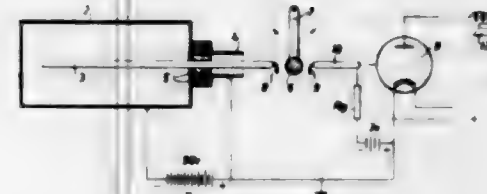
Rolf Maximilian Sievert, % Radiofysiska Inst., Stockholm 60, Sweden

Filed Nov. 19, 1957, Ser. No. 697,487

Claims priority, application Sweden Nov. 22, 1956
10 Claims. (Cl. 250-83.6)

1. Apparatus for measuring ionization radiation, comprising an ionization chamber provided with an insulated

electrode designed with a predetermined electrostatic capacity, an output circuit extending to a detecting device, a capacity means designed with an electrostatic capacity which is a fraction of the electrostatic capacity of said ionization chamber electrode, and moving means for positively connecting said capacity means at the end of a predetermined period of time repeatedly to said ionization

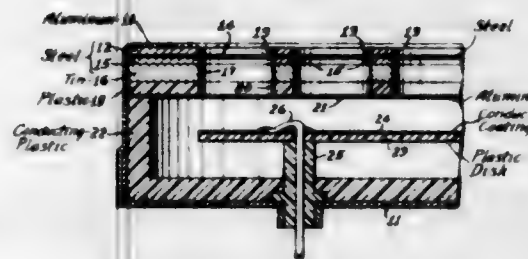


chamber electrode and said output circuit in an alternating succession for transferring any charge collected on said ionization chamber electrode during said extended period of time as a result of incident ionization step by step into said output circuit for actuating said detecting device as many times as corresponds to the number of steps required for transferring said charge.

3,004,165

IONIZATION CHAMBER

Wilbert Minowitz, New York, N.Y., and Fred E. Roth, Florham Park, N.J., assignors to Tung-Sol Electric Inc., a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 730,970
8 Claims. (Cl. 250-83.6)



1. An ionization chamber for the detection and measurement of beta and gamma radiation comprising: a sealed envelope containing an ionizable gas, one side of said envelope including a plurality of perforated metal sheets in combination with a perforated sheet of plastic and two impermeable sheets of metal for providing uniform gas ionization due to gamma radiation for all orientations of the chamber with respect to the radiation direction, said perforations arranged in alignment; the other sides of said envelope comprising a sheet of metal lined with a sheet of conducting plastic; an electrode mounted within said envelope and connected to a lead-in conductor for connection to an external circuit.

3,004,166

LINE TRACER APPARATUS AND METHOD

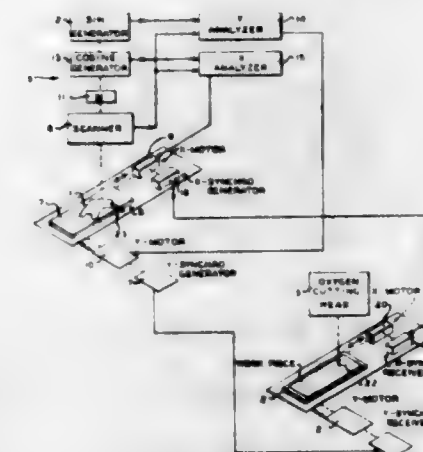
William J. Greene, Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 16, 1958, Ser. No. 761,389

19 Claims. (Cl. 250-202)

1. A line tracer comprising a table element for supporting a pattern defining a line, a tracer element for scanning cyclically a path intersecting said line, means for relatively moving said table and tracer elements, means including said tracer element for producing on each cycle a first signal varying directly with the apparent deviation between the tracer element position and the line and a second signal varying inversely with said apparent deviation, means responsive to said second signal

for controlling the velocity of said moving means, and means responsive to said first signal for modifying the



velocity of said moving means when said first signal is different from zero.

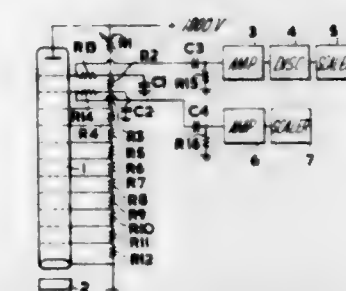
3,004,167

NUCLEAR PARTICLE DISCRIMINATORS

Richard Bruce Owen, Abingdon, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed Sept. 4, 1959, Ser. No. 838,222

Claims priority, application Great Britain Sept. 12, 1958
2 Claims. (Cl. 250-207)



1. A nuclear particle discriminator comprising a scintillation counter including a photomultiplier tube, means for deriving an output pulse from a dynode of said tube, means for applying operating potentials to the electrodes of said tube, said means being operable to provide a potential difference between said dynode and the next subsequent electrode sufficiently small for space-charge limitation of the current leaving said dynode to cause the polarity of the output pulse to depend on the shape of the scintillation pulse, and amplitude discriminating means for accepting positive output pulses above a given amplitude.

3,004,168

ENCAPSULATED PHOTOELECTRIC SEMICONDUCTOR DEVICE AND METHOD OF ITS MANUFACTURE

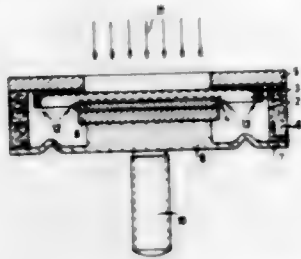
Reimer Emels, Ebermannstadt, Upper Franconia, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed Feb. 20, 1959, Ser. No. 794,735

Claims priority, application Germany Feb. 22, 1958
11 Claims. (Cl. 250-211)

1. A photoelectric semiconductor device, comprising a monocrystalline semiconductor body provided with a p-n junction that reaches a surface region of the crystal, a gas-tight housing comprising an annular metallic electrode plate disposed adjacent, and in sealed relation with respect to a second surface region of the crystal, the annular electrode exposing, within its inner periphery, a photo-sensing surface area of the crystal, said housing

further comprising a second electrode disposed on a third surface region of the crystal, and means connecting the two electrodes to complete said housing, said means



including a member that electro-insulates the said two electrodes from each other, the two electrodes being electro-conductively connected to each other through the said body.

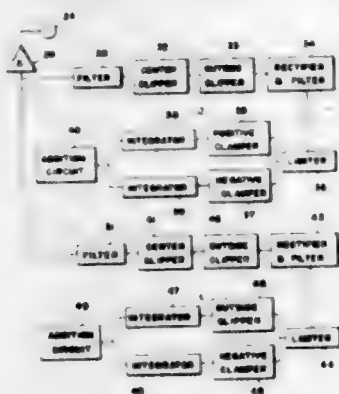
3,004,169

RADIATION DETECTING SYSTEM

Avard F. Fairbanks, South San Gabriel, and Charles M. Wolfe, Glendora, Calif., assignors to North American Aviation, Inc.

Filed Nov. 2, 1953, Ser. No. 389,562

8 Claims. (Cl. 250-233)



8. Means for locating a source of radiation in an optical field or a point of no radiation in the presence of substantially uniform radiation comprising first means for modulating at a first frequency the radiation of a portion of said field which extends across said field in a first direction, said first means including radiation chopping means and means for moving said chopping means across said field in said first direction, said first means including means for continuously varying the dimension of said radiation modulated field portion in a second direction which is angularly related to said first direction, second means for modulating at a second frequency the radiation of a second portion of said field which extends across said field in said second direction, said second means including second radiation chopping means and means for moving said second chopping means across said field in said second direction, said second means including means for continuously varying the dimension of said second radiation modulated field portion in said first direction, and means responsive to said modulated radiation for producing electrical signals proportional to displacement of said source along axes defined by said first and second directions respectively to thereby locate said source of radiation in said field.

3,004,170

AUTOMOBILE THEFT PROTECTION DEVICE

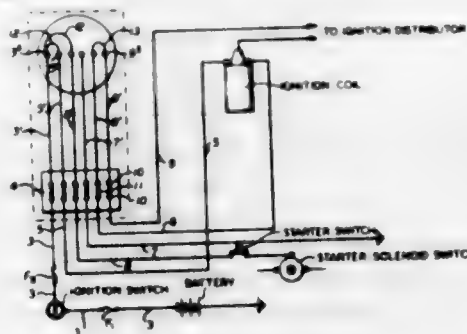
Arnold Greenspan, 352 Seymour Ave., Newark, N.J.

Filed Dec. 24, 1958, Ser. No. 782,964

7 Claims. (Cl. 307-10)

2. An automobile theft protection device comprising a socket element attached to the car and plug element removably insertable therein for forming connections in

automobile operating circuits when so inserted, the plug element comprising a casing, a holding plate, insulating plate and a pair of connector plates stacked within the casing in that order, and means fastening the said plates in position in the casing, the holding plate having a plurality of similar bores for receiving plugs, the insulating plate having apertures aligned with the said bores, one connector plate having apertures aligned with a number of the said bores and the other having apertures aligned with others of the said bores, externally identical live and dummy prongs carried in the bores of the holding plate, the live prongs extending through apertures in the



insulating plate into apertures of the connecting plates and forming electrical connections therewith, and the dummy prongs having heads engaging the insulating plate around the apertures therein for spacing the said dummy prongs from the connector plates, there being three such live prongs connected to one of the connector plates and two such live prongs connected to the other, the dummy prongs aligned with each connector plate being a multiple of the live prongs, the socket element having sockets for receiving the live and dummy prongs and connections to the car wiring system for the sockets which receive the said live prongs.

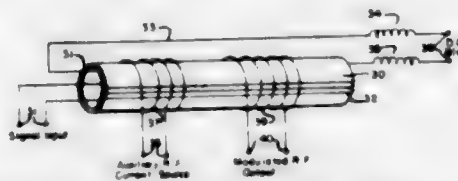
3,004,171

TRANSVERSE MAGNETIC DEVICES PROVIDING CONTROLLABLE VARIABLE INDUCTANCE AND MUTUAL INDUCTANCE

Daniel M. Lipkin, Philadelphia, Pa., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Mar. 17, 1955, Ser. No. 494,946

7 Claims. (Cl. 307-88)



1. A magnetic device comprising a saturable magnetic element, a plurality of winding means linked to said element and respectively associated with transverse directions of magnetization, means for energizing at least a part of each of said winding means simultaneously and at least one of said parts in a varying amount with the net magnetizing force produced by said winding means when energized being sufficient to maintain said element in substantial saturation, and means for deriving output signals from a part of one of said winding means.

3,004,172

SWITCH CORE MATRIX

Edgar Bader, Backnang, Germany, assignor to Telefunken

G.m.b.H., Berlin, Germany

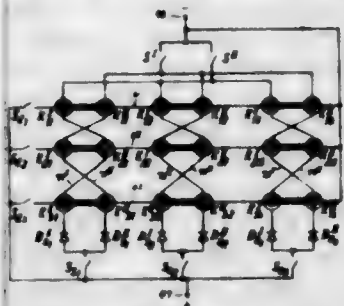
Filed July 2, 1959, Ser. No. 824,505

Claims priority, application Germany July 3, 1958

5 Claims. (Cl. 307-88)

1. In a switch core matrix having intersecting column and row conductors and having a core circuit at each

intersection of a column and a row, said core circuits each comprising a pair of permeable cores each having a substantially rectangular hysteresis loop, an output winding on each core of the pair and connected in series with means for producing first a positive and thereafter a negative pulse in a predominantly inductive load connected thereacross; first and second exciter windings on each



core of the pair, one of the windings on each core being excited by a column conductor and the other winding on each core being excited by a row conductor; bias winding means on each core normally biasing the cores of each pair to saturation in opposition to the exciter direction of both associated exciter windings, and switch means to selectively excite one row conductor and one column conductor in the matrix.

3,004,173

TRIGGERED PULSE GENERATOR WITH STEERING CIRCUIT TO CONTROL OPERATION OF TIMING LOOP

David A. Starr, Jr., Paoli, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 11, 1959, Ser. No. 798,789
20 Claims. (Cl. 307-88.5)



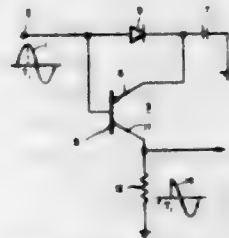
1. A pulse generating circuit comprising in combination, a timing section and a current steering section, said timing section comprising a plurality of current amplifying devices and a capacitive storage element arranged in a current feedback path, said capacitive element having first and second terminals, first current means coupled to said first terminal of said capacitive element for charging said element to a first predetermined potential, said steering section comprising a plurality of current amplifying devices and being coupled to said timing section, said steering section being adapted to be pulsed from a source of trigger pulses, said steering section amplifying devices determining whether or not current will flow in said feedback path of said timing section by opening said path in the absence of said trigger pulses and closing said path in response to the presence of a trigger pulse, the closing of said feedback path providing a path for discharge current to flow from said capacitive element, second current means coupled to said second terminal of said capacitive element, said second current means being responsive to the closing of said feedback path for causing a constant charging current to flow through said capacitive element, this latter current flow being in a direction opposite to

the current supplied by said first current means, said capacitive element discharging at a constant rate, the voltage on said second terminal of said capacitive element and the bias voltage on a first of said timing section amplifying devices remaining constant during the discharge of said latter element as a result of the action in said feedback path, any tendency for the potential on said second terminal of said capacitive element to vary from said constant value resulting in a change of the bias voltage on said timing section first amplifying device, whereby the degree of conduction of said latter device is varied, the change in current through said feedback path restoring the voltage on said second terminal of said capacitive element and said bias voltage to constant value, means including at least one of said timing section amplifying devices for preventing the discharge of said capacitive element below a second predetermined potential and simultaneously therewith to terminate said feedback action, the cessation of said discharge allowing said second current means to charge said capacitive element, the bias voltage on said timing section first amplifying device changing in value as a result of the cessation of said discharge, said steering section responding to the change in said bias voltage by opening said feedback path, thereby halting the further charge of said capacitive element by said second current means and allowing said first current means to recharge said element to said first predetermined potential, and circuit means for deriving an output pulse from said waveshape generating circuit, said output pulse commencing with the closing of said feedback path by said steering section, having a duration equal to the time required for said capacitive element to discharge from said first predetermined potential to said second predetermined potential, and terminating with the opening of said feedback path by said steering section.

3,004,174

FOUR PHASE CLOCK

Herbert Alvin Seidman, Bronx, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,511
20 Claims. (Cl. 307-88.5)



17. A peak detecting circuit comprising; a PNP transistor having a base, an emitter, and a collector, means for applying a source of varying voltage to the base; an asymmetric conductor connecting the base and the emitter, said conductor being connected to present a low impedance to positive voltages applied to said base; electric storage means connected to the emitter; and means connected between said storage means and said collector for providing a sharp voltage change which corresponds in time to the positive voltage peaks of said varying voltage.

3,004,175

PORTABLE POWER SYSTEM

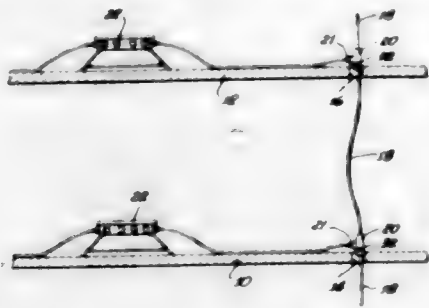
Hubert L. Weiss, % American Construction Equipment Co., Inc., 5055 W. Jefferson Blvd., Los Angeles 16, Calif.

Filed Aug. 4, 1958, Ser. No. 752,811

2 Claims. (Cl. 307-147)

1. In an electrical riser cable structure for providing temporary power to a multiple-floor building structure: a cable having a series of conductors; a series of takeoff connectors secured to the cable at spaced intervals, the

spacing between the connectors being at least as great as the spacing of the floors of said building structure;



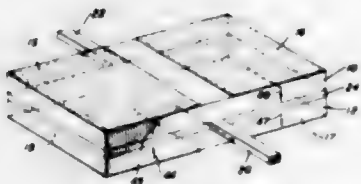
said connectors each having through apertures for passage of a rod or the like whereby each connector may be suspended at an aperture in the corresponding floor.

3,004,176

ELECTROMECHANICAL TRANSDUCERS

Warren P. Mason, West Orange, and Robert N. Thurston, Whippany, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 30, 1959, Ser. No. 803,007
13 Claims. (Cl. 310-9.1)



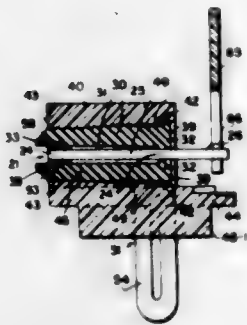
1. An electromechanical transducer comprising an elongated composite bar supported by supporting members solely at its transverse bisecting axis, each half of the bar as divided by the axis comprising an electromechanical structure, the structure comprising two subportions mechanically bound into a unitary structure, means for electrically coupling to the two subportions, one subportion expanding, the other contracting, and vice versa, for alternate half cycles of an applied alternating current potential, the structures on opposite sides of the transverse axis being in antisymmetrical relation to each other, whereby the transducer responds to an alternating current potential to produce antisymmetrical flexural vibrations of the halves of the bar and a purely torsional force is produced at the axial supports.

3,004,177

VIBRATORY PIEZOELECTRIC TRANSDUCERS

Ilyitch J. Sobel, 16-26 163rd St., Whitestone 57, Long Island, N.Y., and Edward Lessing, 7 Keller Lane, Dobbs Ferry, N.Y.

Filed Apr. 1, 1959, Ser. No. 803,475
4 Claims. (Cl. 310-9.2)



1. In a mechano-electric transducer device, an elongated piezoelectric transducer body with two opposite, relatively large, outer transducer surfaces and having an interme-

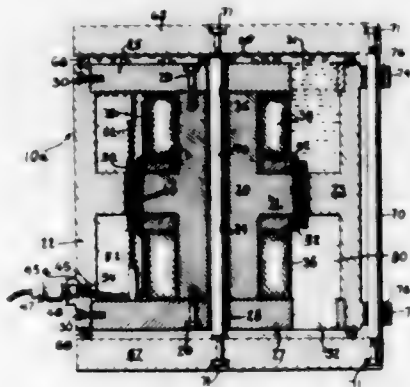
diate elongated vibratory transducer region extending between two clamped transducer regions thereof, an integral, hollow elongated elastomer body coextensive with and surrounding the over-all length of said clamped and intermediate transducer regions, said elastomer body having two spaced sets of two spaced, generally parallel restraining walls engaging with their inner elastomer surfaces the outer surfaces of said two clamped transducer regions, respectively, an integral, relatively rigid hollow mounting structure coextensive with said elastomer body and having two corresponding spaced sets of two spaced opposite clamping walls engaging and clamping with their inner clamping surfaces the outer surfaces of said two sets of restraining walls for suppressing vibratory motion of said two clamped transducer regions, said intermediate vibratory transducer region being relatively free for vibratory transducer motion in a direction transverse to said transducer surfaces.

3,004,178

VIBRATION GENERATOR

Philip C. Efromson, Winchester, and Robert C. Lewis, Boxford, Mass., assignors, by mesne assignments, to Ling-Temco Electronics, Inc., a corporation of Delaware

Filed June 20, 1958, Ser. No. 743,321
12 Claims. (Cl. 310-11)



1. A vibration generator comprising a magnetic structure having a cavity therein and a magnetic gap connecting with the cavity across which gap a unidirectional flux is established, a liquid filling the cavity, a load carrying table movable with respect to the magnetic structure and forming one wall of the cavity, compliant sealing means interposed between the magnetic structure and the table for hermetically sealing the liquid in the cavity, and electromagnetic means associated with the magnetic gap for cyclically varying the pressure of the liquid in the cavity whereby a corresponding vibratory motion is hydraulically imparted to the table.

3,004,179

ELECTRIC CLOCK

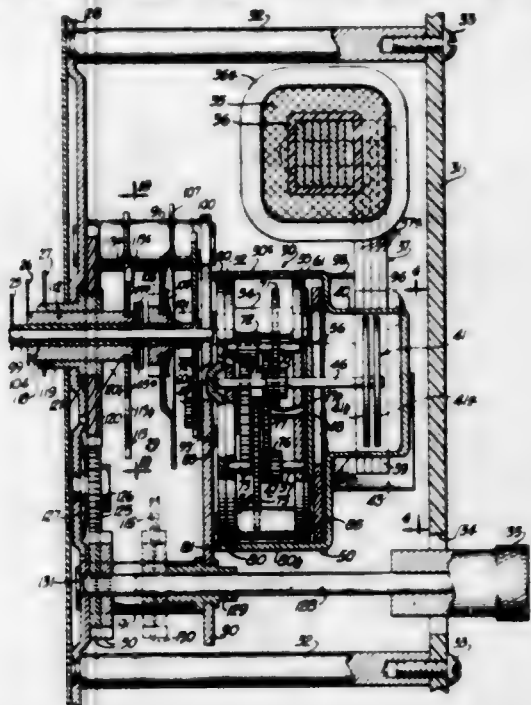
Edmund G. Chartier, Elmhurst, and Chester H. Wickenburg, Elgin, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed Oct. 7, 1957, Ser. No. 688,467
12 Claims. (Cl. 310-83)

1. A synchronous electric clock motor comprising an oil-tight housing having a bosslike projection at one end thereof, a pair of spaced parallel plates supported in said housing, one of said plates being positioned near the end of said housing from which said bosslike projection extends but spaced slightly therefrom to define a narrow capillary space between said one plate and said end of said housing, a gear mechanism included between said plates, an armature disposed within said projection and drivingly connected to said gear mechanism, a field structure associated with said armature, and a porous mem-

ber disposed in said capillary space to convey oil which may have moved into said bosslike projection back to

inner surface adjacent its side edges and opposed tapered portions on its inner surface each adjacent said undercut portions and extending to an undercut portion, said



the portion of said housing containing said gear mechanism.

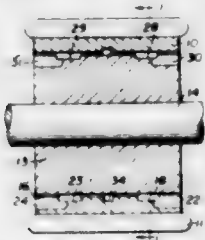
3,004,180

FLUID SUPPORTED ROTOR

Elmer Fred Macks, Vermillion, Ohio, assignor, by direct and mesne assignments, to Air-Glide, Inc., Cleveland, Ohio, a corporation

Filed Apr. 23, 1956, Ser. No. 580,133

17 Claims. (Cl. 310-90)



1. A dynamoelectric device having first and second elements relatively rotatable about a horizontal axis, said elements having confronting cylindrically contoured surfaces in spaced relationship with one another for generating a load carrying fluid dynamic film therebetween on relative rotation about the axis of the surfaces, one of said surfaces having a plurality of circumferentially spaced depressions therein to provide stepped convergences to improve the pressure characteristics of such generated load carrying fluid film, and said first element being a rotor element totally supported radially on said film when the elements are relatively rotating, the fluid in said film being totally supplied by the fluid ambient to the device.

3,004,181

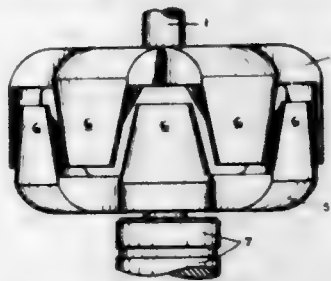
ALTERNATOR

Ray C. Noddin, Chicopee, Mass., assignor to American Bosch Arms Corporation, a corporation of New York

Filed July 14, 1958, Ser. No. 748,313

2 Claims. (Cl. 310-263)

1. In an alternator rotor, a pair of opposed pole pieces, said pole pieces each having a plurality of spaced pole shoes with the pole shoes of said pole pieces being in opposed, intermeshing relation, said pole shoes having arcuate outer surfaces of constant periphery and diameter, each of said pole shoes tapering in width from its respective pole piece to the free end of said pole shoe, each of said pole shoes having undercut portions on its



opposed tapered portions each tapering toward the free end of said pole shoe and toward said adjacent undercut portion, whereby the amount of leakage flux is reduced without impairing the magnetic circuit.

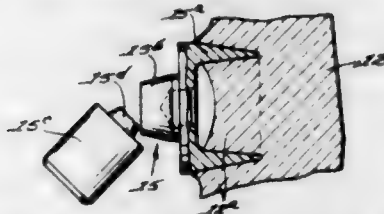
3,004,182

MOUNTING ELEMENT AND METHOD OF ATTACHMENT TO GLASS

Lawrence V. Pfaender, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Mar. 13, 1958, Ser. No. 721,305

9 Claims. (Cl. 313-64)



1. A load-supporting stud element for utilization with a preformed glass part or article comprising a cylindrical metallic member having a hollow disk-shaped mounting portion adapted to be sealed partially beneath a glass surface, a frusto-conical portion adapted to extend beyond the glass surface comprising a seating surface for an electronic element, and a frangible portion extending beyond said frusto-conical portion adapted to facilitate precision mounting of said member partially within the glass prior to its elimination and subsequent mounting of said electronic element.

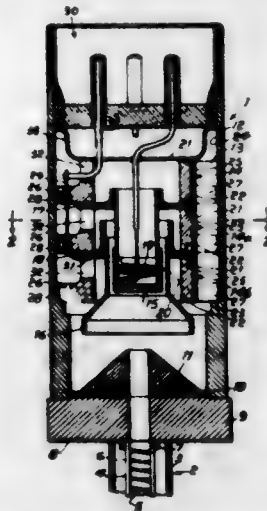
3,004,183

ELECTRON GUN

Herbert L. Levin, Paterson, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Dec. 3, 1957, Ser. No. 700,500

12 Claims. (Cl. 313-82)



1. In a vacuum tube having a plurality of electrodes, means for supporting the electrodes in fixed geometric relationship comprising a cylindrical vacuum envelope, the inner surface of said envelope providing the primary

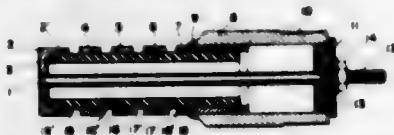
reference surface for said supporting means, a plurality of cylindrical rods of insulating material disposed lengthwise of and in spaced circumferential relation about said inner surface, said rods each including a first surface portion along the length thereof bearing against said primary reference surface in substantially a line contact and a second surface portion along the length thereof opposite said first surface portion cooperating to provide a secondary reference surface for said supporting means spaced radially from and concentric to said primary reference surface, a plurality of electrodes each including a portion disposed in transverse relation to said envelope, each of said transverse portions being a relatively thin, annular member having parallel transverse surfaces and inner and outer circumferences concentric with respect to each other and perpendicular to said transverse surfaces, the outer circumference of said annular member of each of said transverse portions bearing against said second surface portion of each of said rods to establish the radial alignment of said electrodes, a plurality of hollow dielectric spacers of generally cylindrical configuration having the end surfaces thereof parallel with respect to each other, each of said spacers being disposed to engage said second surface portion of each of said rods by at least a portion of the outer surface thereof and to have the end portions thereof in contact with the juxtaposed transverse surfaces of said annular members of adjacent ones of said electrodes to axially space said electrodes within said envelope and to dispose each of said annular members in a parallel relationship with respect to each other to render the inner circumference of each of said annular members concentric with respect to said primary and secondary reference surfaces, and means disposed in coaxial relation with the ends of said rods and the end surfaces of at least the first and last of said spacers to maintain said annular members bearing against said second surface portion of said rods and in contact with said spacers and to maintain said first surface portion of said rods bearing against said primary reference surface to retain said electrodes in the established fixed geometric relationship.

3,004,184

SURFACE DISCHARGE MULTIPLE GAP SPARKING PLUG

James N. M. Deans, Renfrew, Scotland, assignor to Babcock & Wilcox Limited, London, England, a company of Great Britain

Filed Dec. 5, 1958, Ser. No. 778,357
3 Claims. (Cl. 313-123)



1. A low voltage electrical igniting means for fluent fuel fired furnaces comprising a hollow cylindrical metal end housing, a hollow cylindrical dielectric tubular member co-axially connected to one end of said housing to form an extension thereof, said dielectric tubular member having a smooth and uninterrupted outer surface, a conductor rod extending co-axially along said housing and connected dielectric member in spaced relationship thereto, a dielectric bearing supporting one end of the rod on said housing, an electrode having an annular peripheral flange mechanically and electrically connected to the other end of said rod, said flange tightly engaging the outer periphery of said dielectric tubular member, a plurality of annular electrodes spatially disposed longitudinally of said tubular dielectric member, said annular electrodes defining therebetween a plurality of serially arranged annular sparking gaps, each of said gaps being formed between the facing lateral substantially parallel surfaces of adjacent electrodes extending laterally inward

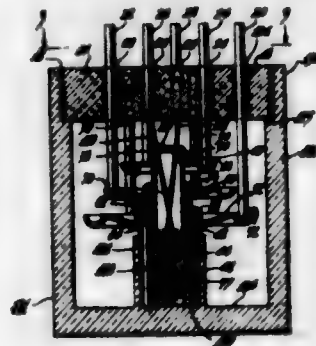
from the outer circumferential surfaces of the electrodes, and said annular electrode farthest removed from said flanged electrode being mechanically and electrically connected to said housing.

3,004,185

ELECTRON TUBE

George M. Rose, Jr., Mountain Lakes, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 26, 1958, Ser. No. 737,785
21 Claims. (Cl. 313-245)



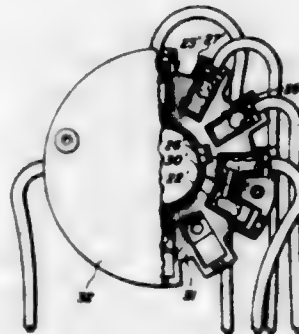
1. An electron tube having a structure comprising an insulating wafer having a plurality of openings there-through, a plurality of wires fixed to the walls of said openings and having ends defining a plane spaced from and parallel to said wafer, a support having a flange fixed adjacent its periphery to said ends of said wires and including a central tubular portion, and an elongated electrode fixedly mounted at one end thereof in said tubular portion.

3,004,186

CATHODE-RAY TUBE ARRANGEMENT

Richard O. Gray, Broadview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Sept. 17, 1958, Ser. No. 761,621
4 Claims. (Cl. 315-15)



1. A cathode-ray tube comprising: an electron gun structure including a cathode and a plurality of other electrodes disposed along an electron-beam path for developing and accelerating an electron beam along said path; means for energizing said gun structure including a filamentary heater disposed on the side of said cathode away from said other electrodes and having one portion thereof maintained at a reference potential, said electrodes in operation normally sustaining a high interelectrode potential gradient but subject to transient arc discharge current therebetween tending to seek a path culminating in a disruptive discharge from said cathode to said heater in the interelectrode space therebetween; and a conductive strap of minimal length and resistance extending between one of said electrodes and said one portion of said heater to constitute a low impedance path conductive of said arc discharge current around the heater-cathode interelectrode space.

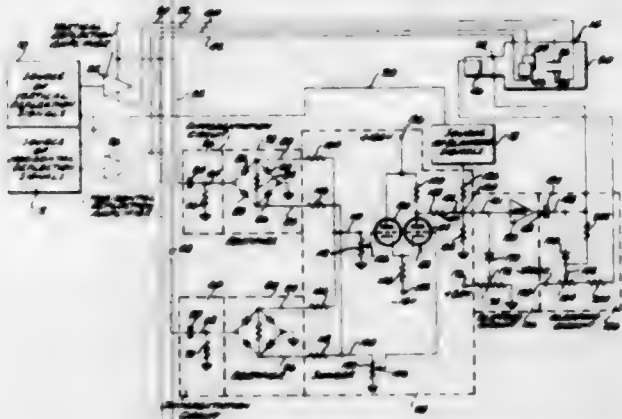
3,004,187

CATHODE RAY TUBE INTENSITY CONTROL SYSTEM

Roland D. Olson, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Feb. 11, 1960, Ser. No. 8,191

7 Claims. (Cl. 315-22)



1. An intensity control system for controlling the intensity grid of a cathode ray tube having horizontal and vertical deflection plates and an electron beam which is time shared during repetitive periods to develop a plurality of symbols each being formed repetitively on a screen during symbol portions of the repetitive periods comprising a source of horizontal and vertical deflection signals coupled respectively to the horizontal and vertical deflection plates, said source controlled so that the deflection signals during each period represent a respective symbol, first and second differentiating means coupled respectively to said source of horizontal and vertical deflection signals, first and second full wave rectifiers coupled respectively to said first and second differentiating means, first summing means coupled to said first and second rectifiers for developing a summed signal representing the summed absolute value of the differentials of the horizontal and vertical deflection signals, a source of gating signals synchronized with said source of horizontal and vertical deflection signals for defining a blanking period and a writing period during each symbol period, second summing means coupled to said first summing means aid to said source of blanking signals to develop a combined signal, slipping means coupled to said second summing means, an isolating capacitor coupled between said clipping means and the intensity grid, a source of biasing potential, and clamping means coupled between said source of biasing potential and said intensity grid, whereby the potential of said source of biasing potential is isolated from said second summing means and the plurality of symbols are formed on the screen with equal intensity.

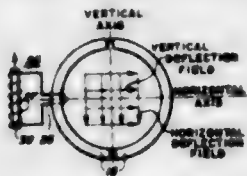
3,004,188

CATHODE-RAY TUBE DEFLECTION STRUCTURE

Jack van Hutten, Villa Park, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Aug. 7, 1958, Ser. No. 753,762

5 Claims. (Cl. 315-27)



1. In combination with a deflection yoke structure for a cathode-ray tube including a first set of deflection coils for producing a first deflection field, a second set of deflection coils for producing a second deflection field per-

pendicular to said first field, and a core member disposed concentrically with said deflection coils, the improvement which comprises a conductive loop encircling a section of said core and positioned asymmetrically of said first set of coils to intercept the lines of force of the first field to develop a third field for asymmetrically modifying said first field, and an impedance included in said conductive loop for regulating the intensity of said third field and its modifying effect.

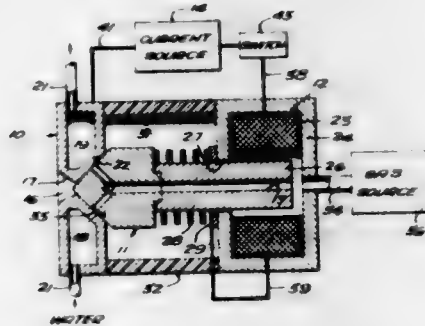
3,004,189

COMBINATION AUTOMATIC-STARTING ELECTRICAL PLASMA TORCH AND GAS SHUTOFF VALVE

Gabriel M. Giannini, Newport Beach, Calif., assignor to Plasmadyne Corporation, Santa Ana, Calif., a corporation of California

Filed Oct. 5, 1959, Ser. No. 844,243

12 Claims. (Cl. 315-111)



1. In an electrical plasma-jet torch, nozzle means through which gas may be discharged, electrode means to maintain an electric arc in the vicinity of said nozzle means to thereby heat the gas discharging through said nozzle means and result in formation of a high-temperature high-velocity plasma jet, and means to effect substantially simultaneous initiation of said electric arc and of gas flow through said nozzle means.

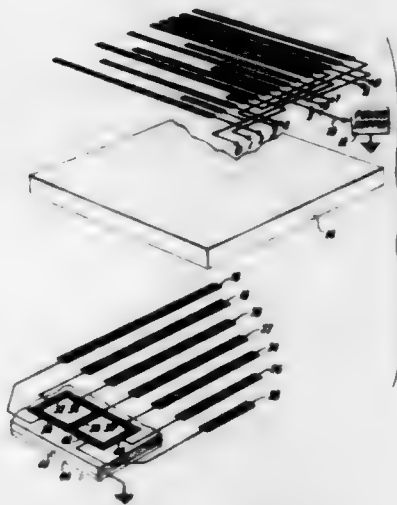
3,004,190

ENCODER

Edwin R. Bowerman, Jr., Whitestone, and Moe Wasserman, Massapequa Park, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Oct. 26, 1959, Ser. No. 848,862

11 Claims. (Cl. 315-201)

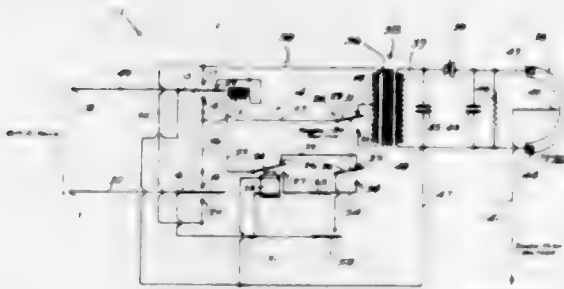


1. A signal encoder comprising an electrically non-linear layer consisting of cadmium sulfide powder embedded in glass, said layer, when a voltage is applied thereto, exhibiting an electrical impedance which de-

creases as said voltage increases; a first set of parallel electrodes secured to one surface of said layer and arranged in columns, certain of said first set electrodes having differing lengths; and a second set of parallel electrodes secured to the other surface of said layer and arranged in rows, certain of said second set electrodes having differing lengths.

3,004,191 TIMING LIGHT

James A. Umbarger, Cheboygan, Mich., assignor to Fox Valley Instrument Company, Inc., Cheboygan, Mich., a corporation of Michigan
Filed Dec. 18, 1959, Ser. No. 860,400
7 Claims. (Cl. 315-219)



1. Apparatus for producing a timed signal from a selected one of a plurality of different D.C. voltage sources, said apparatus comprising input terminals adapted for connection to a selected one of said sources; transformer means including a primary winding and a secondary winding, said primary winding having a number of taps for selectively increasing and decreasing the number of turns of said primary winding to be utilized according to the voltage value of a selected one of said sources; tap changing means for connection to selected taps of said primary winding; circuit means including vibratable contacts interconnecting said terminals and said primary winding via said tap changing means for periodically completing and breaking an electrical circuit between a selected voltage source and said primary winding upon operation of said vibratable contacts so as periodically to induce voltages in said secondary winding of said transformer means; an energizing circuit interconnecting said terminals and said vibratable contacts, said energizing circuit being electrically independent of said circuit means; and means connected to said secondary winding operable to produce a signal in timed relation to the induction of voltages therein.

3,004,192 GAS DISCHARGE DEVICES

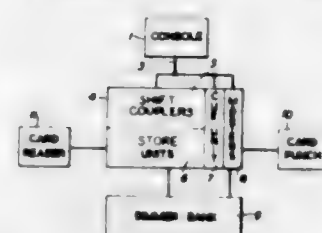
Paul W. Stutsman, Needham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed June 25, 1949, Ser. No. 101,279
11 Claims. (Cl. 315-238)



1. An electron discharge system comprising a gas-filled envelope containing an anode, a cold cathode, and a grid structure, means for biasing said grid structure positive with respect to said cathode, a circuit connecting a source of potential and an output load impedance in series with said anode potential and oscillation damping means connected to said grid structure.

3,004,193 CONTROL OF LIGHTING FOR VARIABLE EFFECT

Frederick Percy Bentham, London, and Leonard Wiggett Leggett, Maidstone, England, assignors to The Strand Electric and Engineering Company Limited, London, England, a company of Great Britain
Filed Aug. 19, 1959, Ser. No. 834,723
Claims priority, application Great Britain Aug. 22, 1958
7 Claims. (Cl. 315-295)



1. Control apparatus for the control of stage lighting comprising a plurality of lighting circuits, a dimmer device connected in each lighting circuit varying the intensity of illumination provided by the circuit, switching means associated with each dimmer device for effecting actuation thereof to give a required intensity of illumination, a group of switches presettable for selecting a required intensity of illumination in a lighting circuit, and means for selectively connecting said group of switches to any one of the said switching means to cause the switching means to actuate the associated dimmer device to give the illumination selected by the setting of the group of switches.

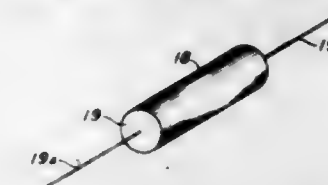
3,004,194
TEMPERATURE RESPONSIVE CONTROL
Jackson L. Bohnert, Cleveland, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Jan. 29, 1958, Ser. No. 712,044
7 Claims. (Cl. 317-149)



5. A thermal controller comprising: an error signal generator, comprising a Wheatstone bridge circuit having a thermal sensing element connected in one arm thereof and a variable impedance connected in an adjacent arm thereof, for generating an error signal having an amplitude representative of variations in magnitude of the temperature of said element from a given normal temperature determined by the setting of the variable impedance and further having a phase relation, with respect to a reference signal applied across said two arms of the bridge, representative of the direction of variation of the temperature of said element; a first control device, including a relay, actuatable between a first and a second operating condition in response to two applied signals; a second control device, including a relay, actuatable between a first and a second operating condition in response to two applied signals; means for applying the reference signal to said first and second control devices; and means for applying the error signal to the first and second control devices to actuate the first device from its first to its second operating condition whenever the error signal exceeds a first threshold amplitude and when said error signal is in a first phase relation relative to said reference signal, to actuate said first device from its first to its second operating condition in response to an increase in the error signal above a second threshold amplitude when said error signal is in a second phase relation relative to said reference signal, and to actuate the second control device from its first to its second operating condition whenever the error signal exceeds a predetermined amplitude and is in said first phase relationship with respect to the reference signal.

3,004,197 CERAMIC CAPACITOR AND METHOD OF MAKING IT

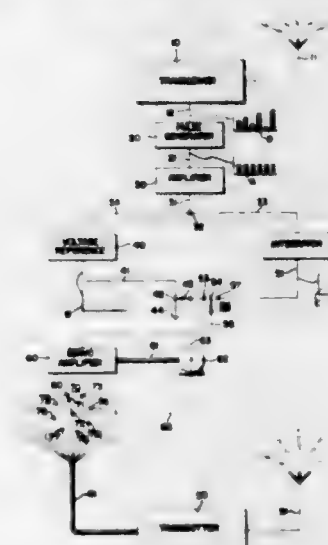
Antonio R. Rodriguez, Franklinville, and Arthur B. Wallace, Olean, N.Y., assignors to Aerovox Corporation, a corporation of Massachusetts
Filed Dec. 13, 1956, Ser. No. 628,023
10 Claims. (Cl. 317-258)



8. A ceramic capacitor comprising two matured ceramic strips metallized in a predetermined pattern on each surface thereof and convolutely wound together to form a cylinder the dielectric of which is substantially solely of ceramic, metal terminations plated upon each end of said cylinder and lead wires attached to each of said terminations.

3,004,198 PULSE FREQUENCY CONTROLLED SERVO SYSTEM

Merle R. Ludwig, Golden Valley, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,354
6 Claims. (Cl. 318-28)



4. Apparatus for positioning a rotatable shaft in accordance with the frequency of a source of variable frequency energy comprising: first means responsive to a source of signal of variable frequency for providing a unidirectional reference potential substantially equal to the magnitude of said signal; second means responsive to said signal for providing a unidirectional potential of a magnitude proportional to the frequency of said signal; and servo means connected to said first and second means and responsive to the outputs of said first and second means for rotatably positioning a shaft in accordance with the ratio between the outputs of said first and second means.

3,004,199 MULTIVIBRATOR CONTROLLED SERVO MECHANISM

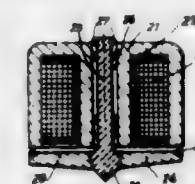
Paul J. Sakson, Yorktown Heights, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 758,954
5 Claims. (Cl. 318-28)

1. A position servo system comprising, a multivibrator including a first and second pair of output and control electrodes, first independently variable circuit means con-

ond operating condition whenever the error signal exceeds a first threshold amplitude and when said error signal is in a first phase relation relative to said reference signal, to actuate said first device from its first to its second operating condition in response to an increase in the error signal above a second threshold amplitude when said error signal is in a second phase relation relative to said reference signal, and to actuate the second control device from its first to its second operating condition whenever the error signal exceeds a predetermined amplitude and is in said first phase relationship with respect to the reference signal.

3,004,195 ELECTROMAGNETS

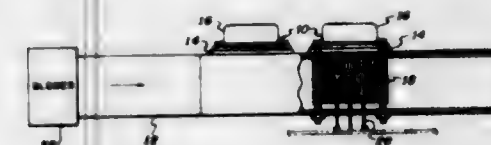
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Aug. 4, 1958, Ser. No. 752,929
Claims priority, application France Aug. 16, 1957
6 Claims. (Cl. 317-194)



1. In an electromagnet which comprises two relatively movable elements arranged in reciprocal relationship and constituted of a magnetic metal, with a coil mounted on one of the two elements, the two elements comprising cooperating surfaces that are attracted and stuck against each other when an electric current passes through said coil, the improvement comprising the provision of a lining of plastic material on one of said surfaces and formed with at least one elastic bead which acts as a spring to maintain a slight magnetic gap and prevent the elements from sticking to each other after the electromagnet has been de-energized.

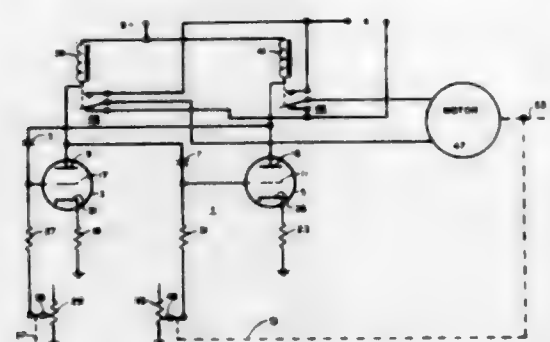
3,004,196 APPARATUS FOR COOLING SEMICONDUCTOR DEVICES

Werner H. Drexel, Jackson Heights, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,160
2 Claims. (Cl. 317-234)



1. Apparatus for cooling a plurality of transistors the bases of which must be insulated from each other comprising a nonconductive duct, a plurality of heat sinks each of which comprises a plate upon which a transistor is adapted to be mounted and a plurality of cylindrical pins in contiguous relationship with said plate, each of said pins being solid and having a diameter substantially smaller than one quarter of its length, said heat sink pins and plates being thermally conductive and said duct being adapted to have said heat sinks mounted thereon with their respective pins extending into the interior of said duct, and means for blowing air through said duct and past said pins at a rate that is below the critical flow rate for air, whereby heat is removed convectively from said pins.

ected to the control electrode of the first pair and adapted to be adjusted by an amount corresponding to an error signal for varying the duration of the output from the output electrode of the first pair, a servo motor, switching means connected to the output electrodes and adapted to connect the servo motor to a source of energizing voltage and to provide servo motor movement in one direction when the first output electrode is energized and movement in the opposite direction when the second



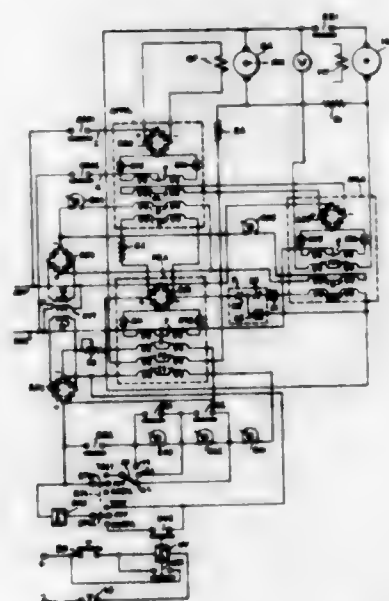
including connections from a plurality of said second series of contacts to said selector whereby the voltages at said plurality of contacts are determined by the respective connections and by the voltage derived by the selector from the respective one of said first series of contacts, an error signal lead for applying a signal to said servo motor, and command switch means for connecting said lead to one of said second series of contacts, said servo motor being responsive to the signal from said lead to displace said part and said feedback switch means being responsive to displacement of said part in the sense tending to reduce any signal induced in said lead by said command switch means.

3,004,201

MOTOR CONTROL SYSTEM

Douglas W. Fath, Brookfield, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Mar. 10, 1958, Ser. No. 720,397
7 Claims. (Cl. 318-148)



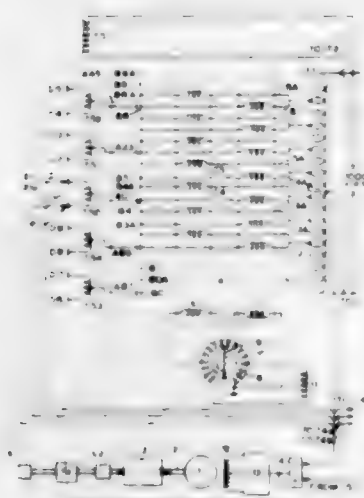
output electrode is energized, second independently variable circuit means connected to the control electrode of the second pair of electrodes, and feedback means connected between the motor and the second independently variable circuit means for adjusting said second independently variable circuit means to return the system to equilibrium after the correction commanded by the error signal has been made.

3,004,200

SERVOMOTOR CONTROL SYSTEM ESPECIALLY FOR MACHINE TOOLS

James Hugh Phillips, Cookham, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed Apr. 30, 1959, Ser. No. 810,121
Claims priority, application Great Britain May 3, 1958
7 Claims. (Cl. 318-28)



1. In a voltage regulator system, the combination with means responsive to predetermined incremental values of input reference voltage for providing respective predetermined values of amplified output voltage, and means normally automatically operable for altering said input reference voltage in predetermined steps, of means for testing the magnitude of the output voltage for each step of input voltage when said automatically operable means is inactive comprising manual means operable in steps for sequentially simulating input voltage conditions normally produced by said automatically operable means, means for measuring the output voltage, and means for adjusting the input reference voltage for each step of said manual means thereby to preset the system for automatically providing said predetermined values of output voltage.

3,004,202

CYCLIC MACHINE CONTROL SYSTEM

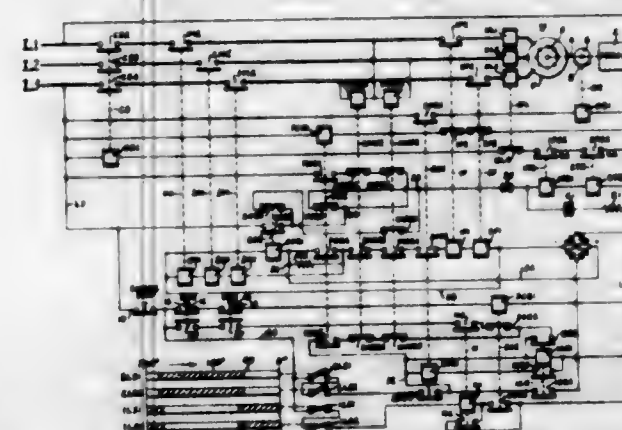
Verne H. Simson, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed July 2, 1957, Ser. No. 669,596
13 Claims. (Cl. 318-216)

1. An automatic control system comprising a part the displacement of which is to be controlled, a servo motor for producing displacement of said part, a voltage divider tapped at a series of reference points, a first series of contacts connected respectively to said reference points, feedback switch means including at least one selector movable in response to displacement of said part from one to another of said first series of contacts to derive voltage therefrom, a second series of contacts having circuit connections to said first switching means to maintain different voltages at the successive contacts of said second series determined by the circuit connections and by the switch means, said circuit connections

1. In a cyclic machine control system having first and second electroresponsive switches which must be closed to connect power therethrough to energize the machine and means responsive to initiation of operation of the machine for closing said first switch, in combination, means responsive to closure of said first switch for closing said second switch to effect one cycle of operation of the

machine, means responsive to termination of said one cycle for automatically opening said switches, and means



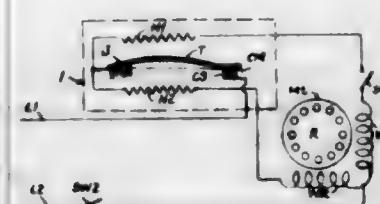
responsive to a failure of either the second or third mentioned means to operate properly for stopping the machine.

3,004,203

OVERLOAD PROTECTIVE APPARATUS

Henry David Epstein, Cambridge, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Mar. 16, 1959, Ser. No. 799,621
8 Claims. (Cl. 318-221)



1. In overload protective apparatus for an electrical motor having start and run windings; first and second electrical heaters of thermally conductive electrically resistant material meeting at a junction, an electrically conductive thermostatic element welded at one point to said junction to form an electrical junction of high thermal conductivity, said thermostatic element being cantilevered from said junction and positioned adjacent to and substantially parallel with but spaced from one surface of said first heater, said thermostatic element having a movable contact affixed thereto at a point spaced from said junction, a stationary contact connected to one side of a source of electrical power and normally engaged by said movable contact, said run winding being connected between said second heater and the other side of said power source, said start winding being connected between said other side of said power source and said first heater, said element having a predetermined operating temperature which when exceeded will actuate said element to move said movable contact away from said stationary contact and toward said first heater, whereby heat will continue to be conducted from both of said heaters through said junction to said thermostatic element while said contacts are separated and thereby decrease the cooling rate of said element, and whereby the spacing of the thermostatic element from the first heater is decreased during the period when said contacts are separated, thereby further decreasing the cooling rate of said element.

771 O.G.—38

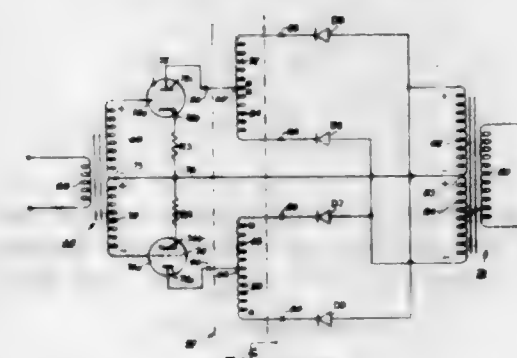
3,004,204

CARRIER TYPE AMPLIFIER

Raymond E. Claffin, Jr., Bedford, and Roderic J. Procaccio, West Acton, Mass., assignors to The Olgear Company, Waltham, Mass.

Original application Oct. 11, 1957, Ser. No. 689,648, now Patent No. 2,973,468, dated Feb. 28, 1961. Divided and this application May 17, 1960, Ser. No. 29,743

8 Claims. (Cl. 318-257)



1. In an electrical amplifier in which the input signal is in the form of an amplitude-modulated carrier, the combination of a pair of control elements, each of said control elements having a pair of control terminals and first and second output terminals, the signals applied to said control terminals determining the electrical resistances of said elements between their respective output terminals, input means for applying said input signal to said control terminals, the signal applied to one pair of control terminals being in phase opposition to that applied to the other pair of control terminals, two pairs of impedance elements, each of said impedance elements having two terminals, means connecting a first terminal of each impedance element in one pair thereof to said first output terminal of one of said control elements, means connecting a first terminal of each impedance element in the other pair to said first output terminal of the other control element, a reference signal source connected in series with the output terminals of each of said control elements and the impedance elements connected thereto, said source being adapted to apply electrical pulses across said output terminals through said impedance elements, one pulse occurring for each half cycle of the carrier, alternate pulses passing through one of the impedance elements in each pair thereof and the remaining pulses passing through the other impedance elements, all of said pulses having the same polarity with respect to said first output terminals of said control elements, and output means including means for adding the currents in each pair of impedance elements and means for subtracting the sum of the currents in one pair of impedance elements from the sum of the currents in the other pair thereof.

3,004,205

SIGNAL DEVICE

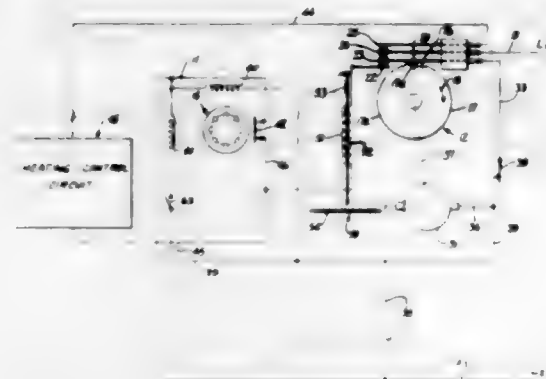
Max E. Barritt and Norman L. Fuqua, Marion, Ohio, assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware

Filed Dec. 23, 1957, Ser. No. 704,607

11 Claims. (Cl. 318-490)

1. A signalling device comprising means for producing a sensorily discernible signal including electrically operated means, electrical motor means including a rotor and a winding operative to produce an electromotive force constituting a momentary transient voltage induced in the winding by the residual decaying circulating rotor current existing in the rotor when the motor is deenergized and

is decelerating from operating speed, and means for connecting said electrically operated means to said winding

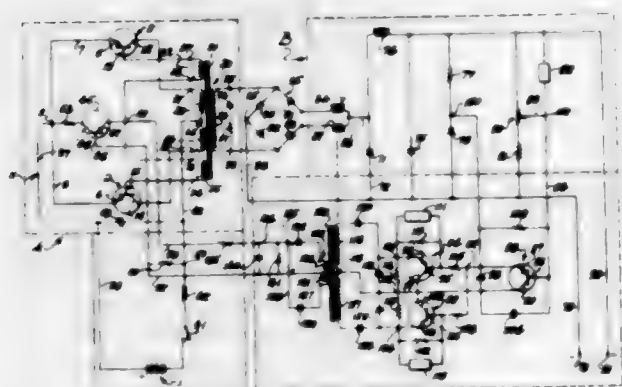


of said motor means during deceleration of said motor means for energization of said electrically operated means by said electromotive force to produce said signal.

3,004,206

REGULATED POWER SUPPLY

David Sheffet, Altadena, Calif., assignor to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 788,922
6 Claims. (Cl. 321-2)



4. A direct current power supply comprising: a transistor circuit for producing a square wave output signal in response to the direct current input signal; rectifier means coupled to the output of said transistor circuit; a voltage regulator circuit coupled to the output of said rectifier means; a pair of output terminals to receive the output from said voltage regulator circuit; means for determining a variation in the voltage of said output terminals from a predetermined value; means for amplifying said variation and means for feeding the amplified signal from said last named means to said transistor circuit to vary the output of said transistor circuit in the direction opposite to said variation, said means for feeding including a pair of transistors in push-pull arrangement whose resistance varies as a function of the output potential, said means for amplifying being powered by the output from said transistor circuit; and transistor means coupled intermediate said means for feeding and said transistor circuit for producing a square wave output signal, said transistor means being adapted to vary the magnitude of said square wave output signal.

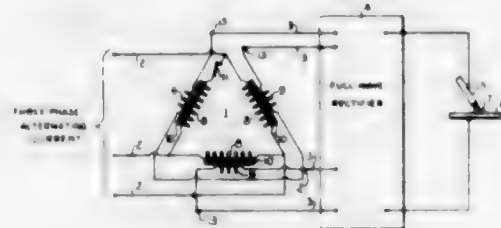
3,004,207

DIRECT CURRENT ARC WELDING APPARATUS

Arthur E. Johnson, Elkhorn, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Aug. 2, 1956, Ser. No. 601,785
3 Claims. (Cl. 321-24)

3. A direct current welding source, which comprises a magnetic core structure having at least three distinct

magnetic portions, a primary winding having three branches connected in a delta circuit with each branch disposed upon a distinct magnetic portion, a secondary winding having three interconnected branches with each branch disposed upon a distinct magnetic portion to

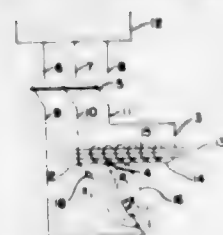


provide a drooping volt-ampere static characteristic, a full wave rectifier connected in circuit with the secondary winding to provide direct current welding power, and switch means connected in one branch of the primary winding to selectively connect and disconnect that branch from the circuit.

3,004,208

PHASE CONVERTER

James W. Williamson, Cleveland, Ohio, assignor to Ajax Magnethermic Corporation, Youngstown, Ohio, a corporation of Ohio
Filed Feb. 18, 1955, Ser. No. 489,200
12 Claims. (Cl. 321-57)



1. In phase conversion apparatus, impedance means connected between first and second conductors of three conductors of a three-phase power system, said impedance means consisting substantially solely of capacitive reactor means, an autotransformer having the terminals of its winding connected between the second and third of said conductors, and a single-phase load of lagging power factor having one of its terminals connected directly to said first conductor and having its opposite terminal connected to an intermediate tap on said autotransformer winding, said autotransformer being disconnected from said first conductor except through said capacitive reactor means and said load.

3,004,209

D.C. REGULATOR AND CONTROL CIRCUIT

Knud J. Knudsen, Middlebury, Conn., assignor to Lewis Engineering Company, Naugatuck, Conn., a corporation of Connecticut
Filed May 1, 1957, Ser. No. 656,422
9 Claims. (Cl. 323-22)



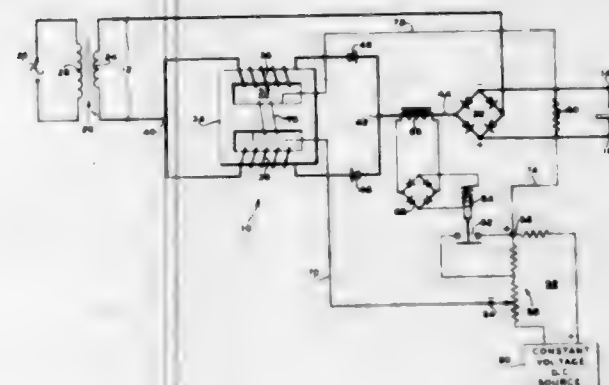
1. In a voltage control circuit, a transistor having a base, an emitter and a collector; a first voltage-dropping resistor connected between the base and emitter; a rectifier

and two resistors all series-connected in the order named, the rectifier being connected to said base and the end resistor of the series being connected to the collector, said end resistor, collector and emitter comprising an auxiliary load circuit; supply and main load circuit leads connected respectively to the ends of that one of the series-connected resistors which is joined to the rectifier so as to bridge the said resistor, the load circuit lead being more remote from the rectifier than the supply circuit lead by the value of the said bridged resistor; and additional supply and main load circuit leads connected with each other and to the auxiliary load circuit having the said emitter.

3,004,210

POWER TRANSMISSION

Clarence Bennett, Lemay, and Lester W. Buechler, Kirkwood, Mo., assignors to Vickers, Incorporated, Detroit, Mich., a corporation of Michigan
Filed June 1, 1956, Ser. No. 588,802
2 Claims. (Cl. 323-89)

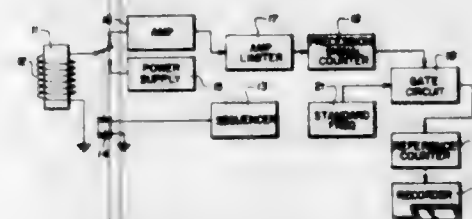


2. Welding power supply apparatus comprising input means for receiving alternating current, output means for connection to a load, a magnetic amplifier with a saturable core, a load winding and control winding means inductively related to said core, said load winding being interposed between said input and output means, control circuit means including said control winding means and a reference source for comparing the output voltage of the apparatus to said reference thereby to regulate said output voltage, switch means for selecting a particular reference value from the reference source at no load, said switch means being responsive to the application of load for selecting a lower reference value.

3,004,211

ATOMIC PRECESSION MAGNETOMETERS

Weston A. Anderson, Palo Alto, and John M. Mathias, Woodside, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Oct. 14, 1957, Ser. No. 689,937
15 Claims. (Cl. 324-5)



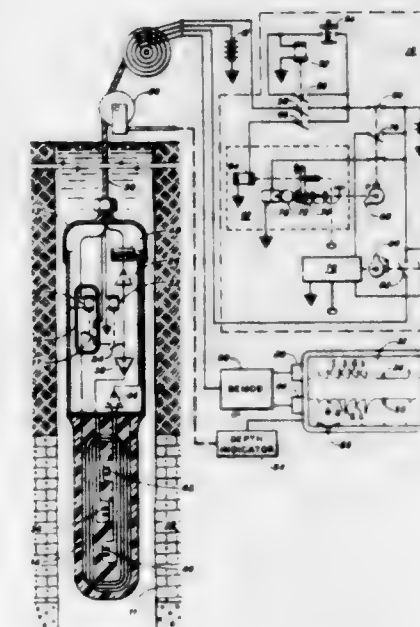
1. A magnetometer of the precessing atom portion type comprising a polarizing current source, an induced precession signal frequency counting circuit, an electrical coil means coupled to atom portions in a sample, and means for first coupling said coil means to said polarizing current source to polarize the atom portions at an angle to the direction of the magnetic field to be meas-

ured and for subsequently decoupling said coil means from said polarizing source and coupling said coil means to said frequency counting circuit for measuring the precession frequency, said electrical coil means including a plurality of coil sections with similar magnetic moments, said coil sections being electrically connected in series-bucking manner and having electrical terminals for connecting with the polarizing current source and the precession frequency counting circuitry, the coil sections having their axes extending in the same direction and positioned so the atom portions which are inductively coupled to the respective coil sections are polarized in opposite directions and the currents induced in the coil sections due to magnetic fields produced within the coil sections by the precessing magnetic moments of the atom portions in the sample within the coil sections are in the same direction and additive while currents induced in the coil sections due to magnetic fields outside the coil sections are in opposite directions in the coil sections and thus mutually cancel.

3,004,212

INDUCTION AND NUCLEAR MAGNETISM LOGGING

John E. Coolidge, Arlington Heights, Ill., and Robert J. S. Brown, Fullerton, Calif., assignors, by direct and mesne assignments, of one-half to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois, and one-half to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Apr. 16, 1959, Ser. No. 806,831
12 Claims. (Cl. 324-5)



9. The method of recording simultaneously the fluid content and an electromagnetic characteristic of an earth formation traversed by a well bore which comprises positioning a nuclear magnetism polarizing coil in said well bore adjacent an earth formation, initiating a direct current flow through said coil to polarize protons in formation fluids around said bore hole, continuing the application of said current flow to polarize said protons until electrically transient signals mutually induced in said formation and said coil by initiation of said current flow have decayed, abruptly interrupting said current flow to permit said polarized protons to precess in unison about earth's magnetic field to induce a nuclear magnetism signal in said coil, delaying the detection of said induced nuclear magnetism signal until the electrically transient signals mutually induced in said formation and said coil by said current interruption have decayed, then detecting an elec-

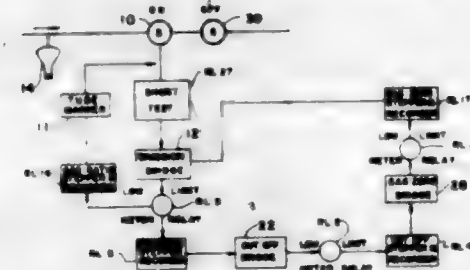
trical characteristic of the signal induced in said coil by in-phase precession of said protons as a measure of the fluid content, and during at least one of said electromagnetically induced transient conditions detecting an electrical value characteristic of the signal mutually induced between said coil and said formation as a measure of the electromagnetic properties of said formation.

3,004,213

TUBE TESTER

Robert A. Reid, Atlantic Highlands, N.J., assignor to Thomas Electronics Inc., Passaic, N.J., a corporation of New Jersey

Filed Sept. 5, 1958, Ser. No. 759,161
5 Claims. (Cl. 324-23)



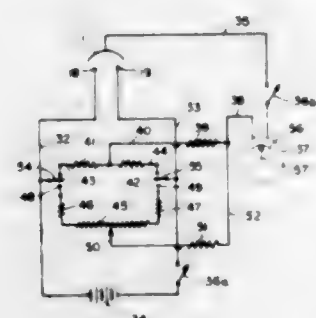
2. A tube tester comprising first and second bridge circuits, means for applying test voltages to a cathode ray tube to produce a first output signal indicative of the emission characteristics of said cathode ray tube, means for applying test voltages to said cathode ray tube to produce a second output signal indicative of the cutoff characteristics of said cathode ray tube, means for initiating a test of said emission characteristics by applying said first output signal to one side of said first bridge circuit, means for applying a step-wise increasing reference signal to the other side of said first bridge circuit, means for recording the discrete value of said reference signal when said bridge is balanced, and means responsive to balance of said first bridge circuit for initiating a test of the cut off characteristic of said tube.

3,004,214

APPARATUS FOR DETERMINING IDEALITY OF AQUEOUS SOLUTIONS AND MIXTURES

Arthur N. Wells, P.O. Box 696, Belmont, Calif.

Filed Oct. 21, 1958, Ser. No. 768,623
7 Claims. (Cl. 324-30)



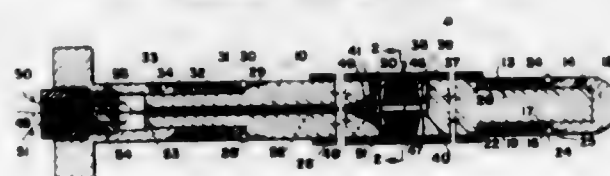
1. Apparatus for determining the ideality of aqueous solutions and mixtures comprising a probe assembly having a pair of fixed contacts disposed in spaced relation to each other and a third electrically conductive element spaced from said pair of contacts, said conductive element having a substantially greater surface than the surface of either of said contacts, a source of electrical energy, said contacts being connected to said source of electrical energy, a voltmeter, one side of said voltmeter being connected to said electrically conductive element and having its other side connected to a resistance bridge across said source of electrical energy.

3,004,215

MAGNETIC TESTING DEVICE

Paul L. Datt, Walnut Creek, and Joseph D. Shipley and William J. Warren, El Cerrito, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed Jan. 27, 1958, Ser. No. 711,356
9 Claims. (Cl. 324-34)



1. A probing device comprising: a probing device disposed to be inserted into a tubular member, two cores of magnetic material disposed along a transverse axis of the probing device and on opposite sides of the center of said transverse axis, and a single coil means wound on each of said cores, the axes of said coil means being disposed along an axis at right angle to and passing through the longitudinal axis of the probing device, said coil means being further adapted to constitute two sides of a measuring bridge circuit.

3,004,216

NULL-INDICATING IMPEDANCE BRIDGE

Joseph C. Hauf III, Towson, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 22, 1957, Ser. No. 698,092
6 Claims. (Cl. 324-52)



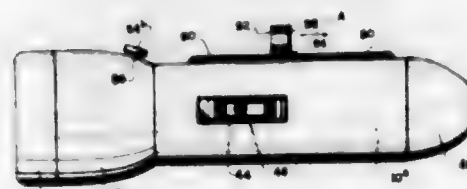
3. Electrical measuring and comparing apparatus, which comprises a bridge including two electrical elements of known values of impedance forming two ratio arms, an unknown reactance under test forming a third arm and a reactance of a known value forming a fourth arm, means for impressing an unfiltered, full-wave, direct-current potential across the bridge, and a null-indicating, direct-current detector connected to the bridge which indicates directly the existence and direction in which the value of the unknown reactance varies from the value of the known reactance.

3,004,217

FLASHLIGHT TESTER FOR ELECTRICAL DEVICES

Diane Ciardello, Bronx, N.Y.

(7 Porterfield Court, Huntington Station, N.Y.)
Filed Apr. 27, 1959, Ser. No. 809,254
1 Claim. (Cl. 324-53)



In a flashlight having a cylindrical insulated body, a pair of metal rings at opposite ends of the body, a lamp bulb and batteries in series circuit with said rings, a circuit element testing means comprising: a stud mounted at one end of the body in direct electrical circuit with one

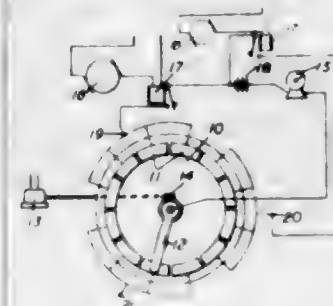
of the rings, and an elongated electrical conductor carried by the body and spaced longitudinally from the stud, said conductor being in direct electrical circuit with the other of said rings, whereby said lamp bulb lights when one terminal of said element is in contact with said stud and another terminal of said element is in contact with said conductor to indicate electrical continuity exists between the terminals of said element, said stud having a head and an undercut portion for engaging a terminal lead of said element around said undercut portion, said conductor being a wire member having a bent end contacting said other ring, said member having a notch formed therein adjacent the bent end for receiving a terminal lead of said element, said member being juxtaposed to the outside of said body, and a clip having spring fingers engaged on said wire member and movable therealong so that elements of different sizes can be tested between said stud and said clip, the other end of said member being formed with a doubly bent portion engaged in an aperture in said body near said stud but spaced therefrom to prevent displacement of the wire member.

3,004,218

TIME METER

George Geoffrey Stanley, % Marivale Consolidated Mines Limited, Marieshaft, Via Nigel, Transvaal Province, Union of South Africa

Filed Oct. 17, 1958, Ser. No. 767,827
Claims priority, application Union of South Africa
Oct. 18, 1957
8 Claims. (Cl. 324-68)

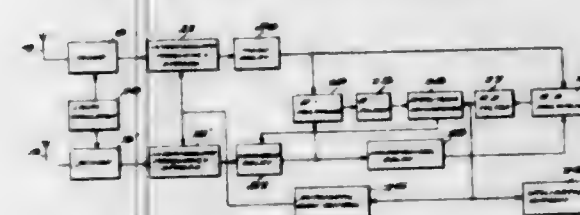


1. A combined average running time metering system for a group of machines comprising an electrically operated meter, an electrical supply and a multicontact switch, the latter comprising a series of contacts one corresponding to each machine, means connecting the electrical supply to the meter through one of the contacts at a time in a regular repeating sequence, and switching means responsive to the running of each machine for connecting the electrical supply through one of said switch contacts to the meter.

3,004,219

NONRADIATING VELOCITY DETECTION SYSTEM

Joseph J. Albert, Timonium, Md., assignor to The Martin Company, a corporation of Maryland
Filed Feb. 3, 1956, Ser. No. 563,253
25 Claims. (Cl. 324-70)



1. A system for obtaining an electrical signal dependent upon the velocity of a vehicle which comprises a first antenna for receiving a group of reflected cosmic noise signals in the radio frequency band, a second antenna for

simultaneously receiving a similar group of radio frequency signals arriving at said vehicle from a direction which is displaced substantially 180° in a horizontal plane with respect to the direction of arrival of said first group of signals, means for simultaneously reducing the frequencies of said groups of cosmic noise signals to produce respective groups of intermediate frequency signals, means for simultaneously acting on said groups of intermediate frequency signals to provide respective signals which have a phase angle therebetween that will permit autocorrelation detection thereof, means for multiplying said respective groups of signals to form an instantaneous product function, whereby said respective groups of signals are autocorrelated to provide the electrical signal as an index to velocity.

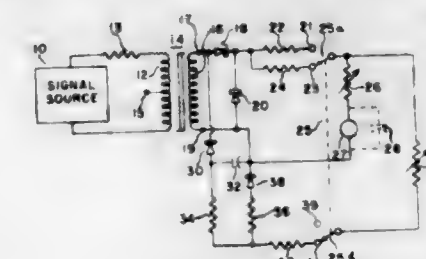
3,004,220

FREQUENCY RESPONSIVE NETWORK

Clifford N. Williamson, Broward County, Fla., assignor to Airpax Electronics Incorporated, a corporation of Maryland

Filed Aug. 20, 1957, Ser. No. 712,601
3 Claims. (Cl. 324-78)

(Filed under Rule 47(b) and 35 U.S.C. 118)



3. A frequency measuring circuit including an indicating device, said circuit comprising a first and second networks interconnected and connected to said indicating device, a core material having a substantially rectangular hysteresis characteristic, first and second mutually inductive windings wound thereon, a frequency source connected to said first winding, a first network means comprising first rectifying means to cause a unidirectional current to flow proportional to the frequency, said first rectifying means connected to said secondary winding, said second network comprising second rectifying means, a capacitor, and a Zener diode to rectify and regulate a current flow in said second network that is constant over the operating range of the frequency measuring circuit and independent of said frequency and of opposite polarity to the current flow in said first network, said second rectifying means interconnecting said capacitor and said secondary winding, a resistance connected in series with said Zener diode and said resistance and said Zener diode connected in shunt with said capacitor, and means to adjust the initial and final points of the operating range of frequency to coincide with the end points of the scale of said indicating device.

3,004,221

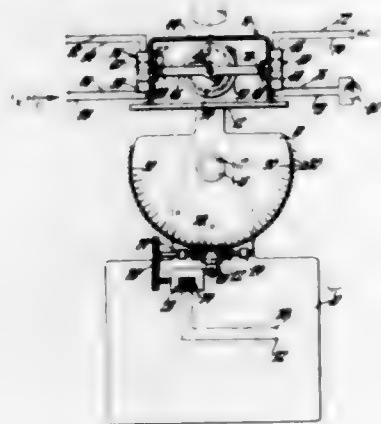
GYRO AMMETER

Edwin F. Katz, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 3, 1955, Ser. No. 479,345
3 Claims. (Cl. 324-98)

2. Electrical current measuring apparatus comprising the combination of a precision gyroscope sensitive to and developing an output torque proportional to the rotation of the earth, an electrical torque device coupled to the output of the gyroscope and having a winding energized by the current to be measured to produce an opposing torque on the output of the gyroscope proportional to the

current to be measured, and an adjustable table mount for the gyroscope and table adjusting mechanism for



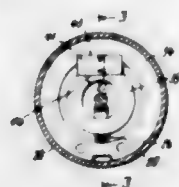
changing the declination of the gyroscope and the torque developed thereby.

3,004,222

COMPACT ELECTRICAL INSTRUMENT MOVEMENT WITH LARGE-SCALE DEFLECTION AND SELF-SHIELDING FIELD STRUCTURE

Knud J. Knudsen, Middlebury, Conn., assignor to Lewis Engineering Company, Naugatuck, Conn., a corporation of Connecticut

Filed July 16, 1958, Ser. No. 748,928
4 Claims. (Cl. 324—150)



1. In an electrical instrument, a self-shielding magnet and pole structure comprising a pair of spaced annular poles of magnetic material disposed concentrically one within the other, the inner annular pole constituting a core adapted to be linked by a movable coil, said inner pole having a diagonal cut extending entirely through it between its opposite ends and the outer pole having cylindrical inner and outer walls concentric with each other; and a permanent magnet disposed in the space between the poles at a point removed from the center of the said cut, said magnet having its north pole engaged with one annular pole and its south pole engaged with the other and the said diagonal cut in the inner pole making a complete turn around the axis of the pole and extending through an arc of substantially 360 degrees, said permanent magnet extending axially between and completely to the ends of the diagonal cut, and comprises a thin slab of magnetic material having appreciable width and having parallel longitudinal side edges and a length of the same order of magnitude as the axial length of the inner and outer poles, said magnet being devoid of one pair of diagonally opposite corners to prevent it from jutting into the said diagonal cut at the ends thereof.

3,004,223

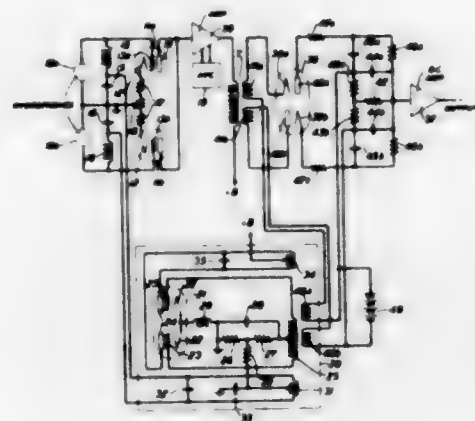
ELECTRON DISCHARGE DEVICE SWITCHING SYSTEM WITH AUTOMATIC VOLTAGE COMPENSATION

Alton C. Dickleson, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 22, 1943, Ser. No. 491,798
7 Claims. (Cl. 328—97)

1. A signal translating circuit comprising a pair of electron discharge devices each having a cathode, a control

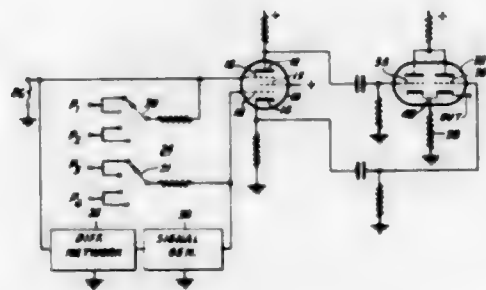
electrode and an output electrode, an output element to which the output electrodes of said devices are connected in common, separate input circuits for said devices each including the control electrode of the respective device, an electronic oscillation generator having a grid circuit, means



3,004,224

VARIABLE GAIN CIRCUIT WITH OUTPUTS EQUAL TO PRODUCT OF SELECTIVE INPUTS

Stephen Yando, Huntington, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 4, 1956, Ser. No. 614,012
3 Claims. (Cl. 328—160)



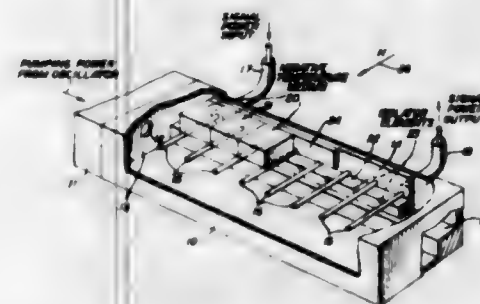
1. A signal modifier comprising an electron tube having first and second control elements; first and second input terminals, said first input terminal being coupled directly to said first control element and said second input terminal being coupled to a common reference point; differentiating means coupled to said first input terminal, generator means coupled to said differentiating means and to said second control element, said generator means applying a voltage to said second control element corresponding to the absolute value of the output of said differentiating means, first biasing means coupled to said first control element, said first biasing means being adapted for selectively coupling either a first or second bias voltage to said first control element, second biasing means coupled to said second control element, said second biasing means being adapted for selectively coupling either a third or fourth bias voltage to said second control element, and impedance means coupled between the cathode of said electron tube and said common reference point, the voltage across said impedance means being proportional to the voltage applied to said second control element.

3,004,225

TRAVELING WAVE SOLID STATE MASERS

Robert W. De Graess, Berkeley Heights, and Erich O. Schulz-Du Bois, Bedminster, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 25, 1958, Ser. No. 744,563
6 Claims. (Cl. 330—4)

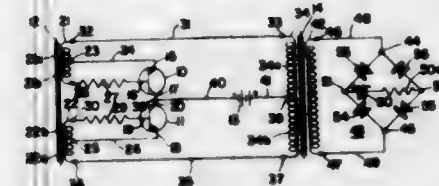


6. A traveling wave maser comprising a wave guide, means for propagating signal wave energy within said guide at a velocity slower than its velocity in the guide in the absence of such means, said means comprising a coplanar array of parallel elements, each of said elements having one end short circuited to a side wall of the guide and the other end open circuited to form a comb-like structure extending along the direction defined by the longitudinal axis of the wave guide, means for applying input signal wave energy to one end of said signal wave propagating means, means for abstracting output signal wave energy from the other end of the signal wave propagating means, means for applying pumping wave energy to the wave guide, means for amplifying the signal wave by the stimulated emission of wave energy of the signal frequency, said means being positioned adjacent the comb-like structure and comprising a paramagnetic crystalline medium which in the presence of a biasing magnetic field and the pumping wave assumes a negative spin temperature at the signal frequency, and means for providing non-reciprocal attenuation to opposite directions of travel of the signal wave energy, said means comprising gyromagnetic material.

3,004,226

SEMICONDUCTOR INVERTER WITH CAPACITIVE LOAD MEANS

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 1, 1958, Ser. No. 732,334
13 Claims. (Cl. 331—113)



10. Electrical inverter apparatus comprising: output means including load means and having a plurality of input terminals; inverter means comprising electronic current control means and having input and output terminals said inverter means also comprising feedback transformer means having primary and secondary winding means; direct current conductive means including said input terminals of said output means connecting a direct current potential source through said electronic current control means output terminals and through said primary winding means; and a current feedback loop conductively connected to said direct current conductive means and to the input terminals of said inverter means in a series loop whereby the output circuit is completed

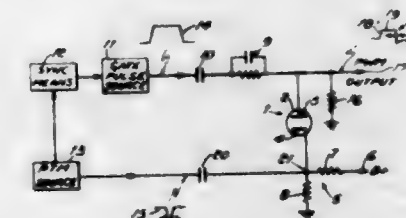
only by virtue of the series connection of said inverter means input terminals, said current feedback loop and said output means input terminals so that an output current path and a current feedback path is completed thereby enabling said feedback loop to control the input signal to said electrical transducer means as a function of the output current.

3,004,227

PULSE MODULATION CONVERTER

Robert L. Plouffe, Jr., Livingston, and Nelson Weintraub, Irvington, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Apr. 18, 1956, Ser. No. 578,963
11 Claims. (Cl. 332—1)



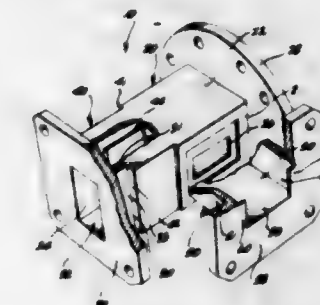
1. A pulse time modulation to pulse width modulation converter comprising a source of time modulated pulses, a source of gate pulses having a duration greater than the modulation of said time modulated pulses and synchronized with respect to the repetition frequency thereof, a diode, means coupling the output of said source of gate pulses to one electrode of said diode to apply said gate pulses to said one electrode, bias means coupled to the other electrode of said diode to maintain said diode normally non-conductive even in the presence of said gate pulses, means coupling the output of said source of time modulated pulses to said other electrode to couple said time modulated pulses to said other electrode to render said diode conductive during the occurrence of said modulated pulses in the duration of said gate pulses to vary the occurrence of the trailing edge of said gate pulses in accordance with the time position of said modulated pulses, and output means coupled to said one electrode to remove the resulting width modulated pulses therefrom.

3,004,228

ORTHOGONAL MODE TRANSDUCER

Robert L. Fogel, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed July 1, 1958, Ser. No. 745,933
3 Claims. (Cl. 333—21)



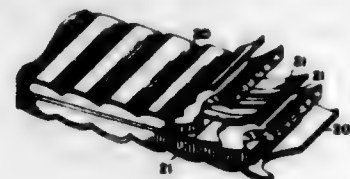
1. An orthogonal mode transducer comprising a square waveguide capable of supporting first and second modes of energy wherein the electric fields thereof are orthogonally disposed with respect to each other, a first rectangular waveguide disposed in substantial axial alignment with said square waveguide, a second rectangular waveguide coupled to said square waveguide substantially normally to the axis thereof by means of a rectangular aperture opening into said square waveguide, said aperture having the longest dimension thereof parallel to the axis

of said square waveguide whereby only energy in the first of said modes will be coupled into said second rectangular waveguide, the broad walls and the narrow walls of said second rectangular waveguide being disposed substantially normal to the broad walls and the narrow walls of said first rectangular waveguide, respectively, a transition section disposed between said first rectangular waveguide and said square waveguide for coupling said square waveguide to said first rectangular waveguide, said transition section including successively stepped portions effective to vary one of the transverse dimensions of said section between those of said square waveguide and of said first rectangular waveguide whereby energy in the second of said modes will be coupled between said square waveguide and said first rectangular waveguide, means disposed within said transition section to prevent energy in said first mode from entering said first waveguide.

3,004,229

HIGH FREQUENCY TRANSMISSION LINE
Thomas H. Stearns, South Merrimack, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Feb. 24, 1959, Ser. No. 795,146
7 Claims. (Cl. 333-84)



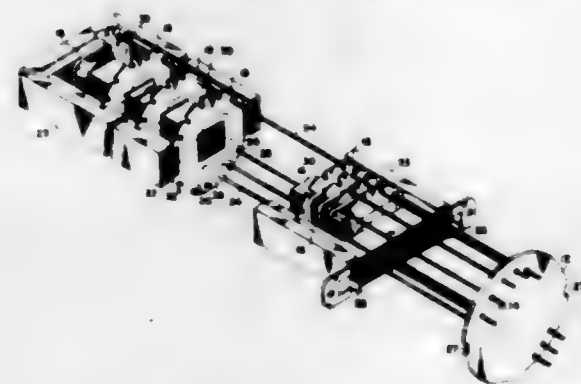
1. A flexible, planar high frequency transmission line, comprising: a pair of substantially parallel, flexible, elongated, planar, continuous, solid extensible outer members containing a plurality of conductors providing ground planes; an elongated, solid planar, flexible signal potential inner member containing a plurality of inner conductors disposed in insulated spaced aligned relation between said outer conductors to provide a plurality of transmission lines, the spacing between said outer members being periodically varied to provide increased flexibility of said cable, said periodic variations being so spaced as to minimize extraneous disturbances to the passage of high frequency electric energy therethrough; and flexible insulating material disposed between said members to provide means for securing said members in their relative positions.

3,004,230

ELECTRIC INDUCTOR DEVICES

Richard B. Levinsohn, Greenwich, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Oct. 12, 1956, Ser. No. 615,562
24 Claims. (Cl. 336-107)



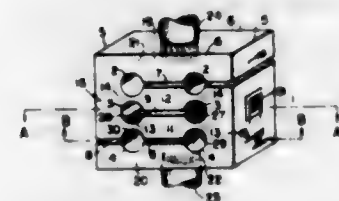
1. An inductor comprising a plurality of spirally wound coils of flat, insulated metal ribbon stacked along a com-

mon magnetic axis, each of said coils being tightly wound with the flat surface of each winding turn thereof abutting adjacent flat surfaces of successive turns, and a plurality of conductive sheets, each sheet having an intermediate portion interposed flat between adjacent coils, an inner portion of each of said sheets projecting axially and electrically connected face to face with the flat surface of the metal ribbon at an internal point on one of the coils, and an outer portion extending sufficiently beyond the coils to provide external connection to said internal point.

3,004,231

PARALLELOGRAM BEAM TYPE LOAD CELL
Eric Laimins, Cambridge, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania

Filed Feb. 15, 1960, Ser. No. 8,825
6 Claims. (Cl. 338-5)



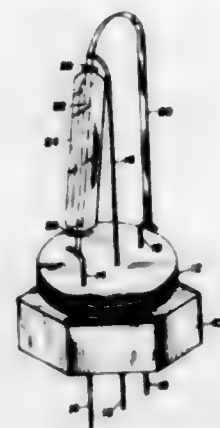
1. A force measuring device comprising, in combination, a pair of substantially parallel beams having flexure elements at each end thereof, rigid sections at both ends of said beams, the flexure elements at one of the corresponding ends of the beams being connected to one of said rigid sections and the flexure elements at the other corresponding ends of the beams being connected to the other rigid section, load transmitting cantilever members positioned above and below said beams and connected respectively to said rigid sections so that the beams and cantilever members are in substantially superimposed relation whereby a load force to be measured is applied to each of said cantilevers substantially normal to the direction of the superimposed relation, and strain responsive means for sensing strains induced in one of said beams upon application of load to the cantilevers.

3,004,232

CORROSION TEST PROBE

Edward Schaschl and Glenn A. Marsh, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed June 6, 1960, Ser. No. 34,046
7 Claims. (Cl. 338-13)



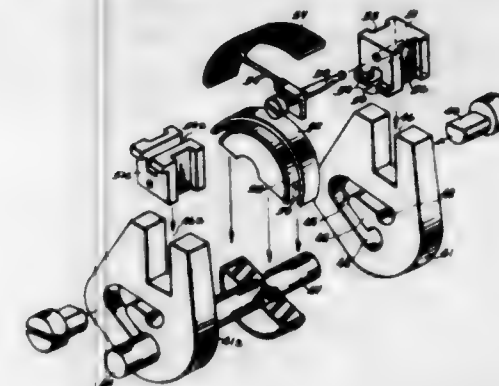
1. A corrosion-test probe comprising first and second elongated, electrically-conductive, corrodible test specimens fabricated of the same material of construction, first and second electrical conductors connected respectively to one end of each of said first and second test specimens, a third conductor connected to each of the

remaining ends of said specimens, and a sleeve encompassing a major portion of the length of said first specimen to produce a quiescent zone adjacent to said first specimen without electrolytically isolating said first specimen from said second specimen, said second specimen being disposed without said sleeve.

3,004,233

POTENTIOMETER

Samuel Arthur Douglas, Eadicott, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 792,150
12 Claims. (Cl. 338-162)



1. A potentiometer comprising a resistance element and a rotatably mounted arm operatively engaging said resistance element, said arm comprising a body portion of resilient material having an opening therethrough for the passage of a drive shaft, and rotatable cam means mounted on said arm for releasably securing said arm to said drive shaft, said rotatable cam means having an axis of rotation parallel to said drive shaft.

3,004,234

DEVICES TO BE USED IN ELECTRICAL LINKED NETWORKS

Louis Emile Pomy, Montmorency, France, assignor to Societe dite: Precision Mecanique Labinal, Saint-Ouen, France, a society of France

Filed May 2, 1960, Ser. No. 26,099
Claims priority, application France Dec. 2, 1959
2 Claims. (Cl. 338-221)



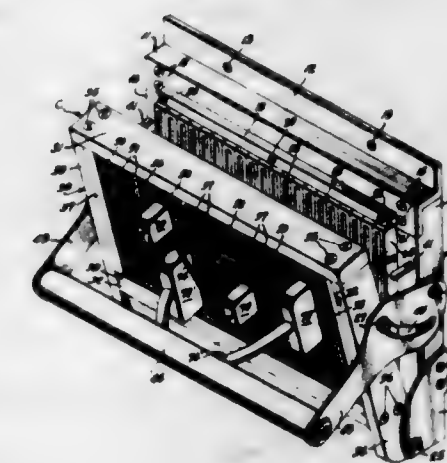
1. An adjustable electrical network system which comprises, in combination, a panel of an insulating material, a plurality of jacks mounted in said panel, said jacks forming a plurality of groups, means mounted in said panel for electrically connecting together the jacks of each of said groups, and a multiplicity of plug units having each two pins and two sockets, the two pins of a plug unit being at a distance from each other equal to the distance between two of said jacks belonging respectively to two adjacent groups and the two sockets of a plug being also at this distance from each other, each of said units having one of its pins electrically connected with one of its sockets and the other pin electrically connected with the other socket, said units being of two kinds, the units of the first kind having at least one resistor inserted between one of their pins and the socket with which said last mentioned pin is connected, each of said units of the first kind having its two pins insulated from each other and its two sockets insulated from each other, the units of the second kind having their two pins electrically connected together, the resistors incorporated in these units being of different values, whereby an elec-

trical loop, having the desired electrical characteristics, can be formed between two jacks belonging to two adjacent groups and located at said distance from each other by a stack comprising a series of units of the first kind plugged into one another and a unit of the second kind plugged into the top unit of said series, the bottom unit of said stack having its pins plugged into said last two mentioned jacks, respectively.

3,004,235

PLUGBOARDS FOR USE IN PATCHCORD PROGRAMMING SYSTEMS

Albert Cohen, 1813 N. Madison St., Arlington, Va.
Filed June 10, 1958, Ser. No. 741,155
6 Claims. (Cl. 339-18)



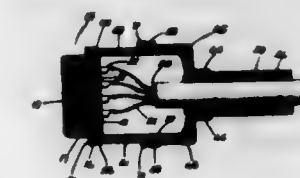
5. A plugboard of modular construction comprising a rectangular perimetric frame bounded by opposed side and end members for retaining a plurality of discrete and independent columnar connectors each formed of an elongated body of insulating material terminating in integral end lugs for seating in opposite end members of said frame, the opposite sides of said connectors having cooperating faces to enable compact juxtaposition and clamping thereof between the opposite side members of said frame, a plurality of aligned contacts in said connectors extending towards the opposite faces of said connectors with said alignment extending in transverse directions parallel to the side and end members of said perimetric frame, each of said aligned contacts on the front face of each connector extending into a recess extending longitudinally of the front face of said connector and terminating below the plane of said last-mentioned face, and alternate projections and depressions on the side of each recess in alignment with and in correspondence to each contact.

3,004,236

CONNECTOR PLUG ASSEMBLY

George K. Dickenson and Eldon H. Page, Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation

Filed Dec. 23, 1959, Ser. No. 861,483
4 Claims. (Cl. 339-103)



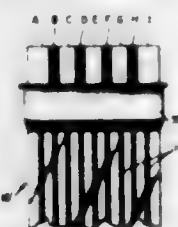
1. A connector plug assembly comprising: a base member having an insulating contact supporting member inserted therein with a plurality of contact elements extend-

ing therethrough with portions projecting on its inner side, said base member having a pair of spaced side plate members extending upwardly therefrom on opposite sides of said contact supporting member; a section of electrical cable having a plurality of conductors extending from one end thereof and respectively attached to said contact element projecting portions; a dust cover member having a hollow body portion open at one end and having a sleeve portion formed on and extending from its other end, said cable extending through said sleeve portion, said body portion being positioned between said side plate members with its bottom edge engaging said base member and peripherally surrounding said contact supporting member thereby enclosing said projecting portions of said contact elements and said conductors attached thereto; a pair of cooperating outer cover members respectively extending between said side plate members and engaging the same thereby substantially enclosing said dust cover member body portion, said cover members having mating cut-out portions formed therein with said dust cover sleeve portion extending through the opening defined thereby; and means having a first portion clamping said dust cover sleeve portion and second portions respectively engaging said cover members thereby maintaining said connector in assembled relationship and providing strain relief for said cable.

3,004,237

ELECTRICAL CONNECTOR FOR MULTI-CONDUCTOR CABLES

Judson C. Cole and James R. Hall, Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Aug. 6, 1959, Ser. No. 831,996
15 Claims. (Cl. 339-176)



13. A multi-contact separable electrical connector comprising a pair of cooperating plates adapted to be positioned in general coplanar alignment with their forward edges confronting each other, the first one of said plates having a plurality of fingers projecting longitudinally from the forward edge thereof, the second of said plates having a series of parallel finger-receiving ramps inclining forwardly each to emerge adjacent the central plane of the second plate at its forward edge, alternate ramps on the second plate lying on opposite sides of the plate, the two plates being positionable in juxtaposition with alternate fingers in contact with the bottoms of the ramps on opposite sides of the second plate, the surfaces of the fingers and of the ramps which contact each other having electrically conducting means thereon each electrically insulated from the others.

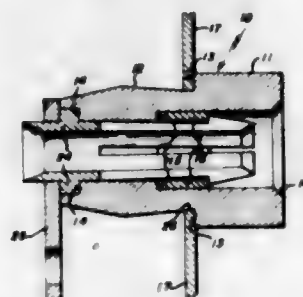
3,004,238

DETACHABLE ELECTRICAL CONNECTORS AND ATTACHING MEANS THEREFOR

Neil F. Damon, Cumberland, R.I., assignor to Raytheon Company, a corporation of Delaware
Continuation of application Ser. No. 566,292, Feb. 17, 1956. This application Jan. 27, 1961, Ser. No. 85,436
3 Claims. (Cl. 339-217)

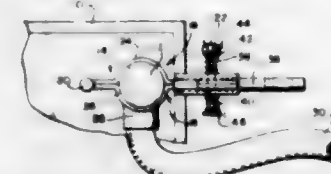
1. A detachable electrical connector adapted to be mounted in an aperture in a mounting panel, comprising a resilient tubular insulating support member having a transverse internal shoulder separating said support member into two portions of different internal cross-sectional areas and a transverse external shoulder separating said

support member into two portions of different external cross-sectional areas, said external shoulder being adapted to abut the periphery of a mounting-panel aperture, said internal and external shoulders being relatively displaced longitudinally of said tubular support member with the surfaces thereof being disposed in opposed facing relationship to define therebetween a longitudinal mounting portion of said support member wherein the portion of smaller external cross-sectional area overlaps the portion of larger internal cross-sectional area, a substantially rigid tubular member of a length at least equal to the length of said longitudinal mounting portion and of an external cross-sectional area greater than the internal cross-sectional area of said mounting portion of said support member, said rigid tubular member being adapted to be positioned within said mounting portion with one end thereof abutting said internal shoulder to provide a rigid second internal



shoulder within said support member and to urge said mounting portion outwardly into firm gripping relationship with the periphery of such mounting-panel aperture, and a conductive tubular member adapted to be inserted within said support member in contact with said rigid tubular member at said second shoulder, said conductive tubular member having a plurality of resilient fingers at one end thereof extending through said rigid tubular member, at least one of said fingers having a latch comprising an enlarged end of said finger tapering to the end of the finger and forming a shoulder located by and latched with said second shoulder, and a flange near the remaining end of said conductive tubular member adapted to bear against a portion of said support member to retain said conductive tubular member therein in cooperation with such latch finger.

3,004,239

BATTERY SAFETY CLAMP
Charles W. Devino, 707 Highland Ave.,
Waterbury, Conn.
Filed Sept. 9, 1960, Ser. No. 54,911
1 Claim. (Cl. 339-226)

A battery clamp comprising a pair of clamp sections arranged in face-to-face confronting relation and having their one ends hingedly connected together by a pivot pin, each of said clamp sections having a semi-circular jaw portion, the jaw portions being in face-to-face confronting relation and adapted to secure therebetween a terminal of a storage battery, the portions of the clamp sections remote from said pivot pin being provided with longitudinally extending recesses, a lever having a portion adjacent one end normally seated in said recesses and pivotally connected to said clamp sections portions for movement from the seated position to a position spreading the clamp sections apart, and spring means urging said clamp sections together about the lever portion when the lever portion is seated in said recesses.

3,004,240

VEHICLE AUTOMATIC STOP LIGHT
Frank R. Berg, 140 Franklin St., Vallejo, Calif.
Filed July 19, 1960, Ser. No. 43,854
3 Claims. (Cl. 340-74)

1. In a vehicle, a generator, a battery, a pair of spaced apart stop lights, a foot brake switch, an ignition switch, and a light switch; an electrical circuit comprising first, second and third control switches; said first control switch comprising a relay electrically connected to said generator, a stationary contact and a movable contact; said second control switch comprising a relay, first and second stationary contacts, and a movable contact; said third control switch comprising a relay, a stationary contact and a movable contact; a first conductor electrically connecting said battery to a stationary contact of said second control switch, a second conductor electrically connecting the movable arm of said second control switch to the stationary contact of said first control switch, a third conductor electrically connecting the movable contact of said first control switch to said foot brake switch, a fourth conductor connecting said pair of stop lights together, a fifth conductor connecting said fourth conductor to said third conductor, a sixth conductor connecting said foot brake switch to said ignition switch, a seventh conductor electrically connected to said light switch and said seventh conductor serving to connect said sixth conductor to said first conductor, an eighth conductor electrically connecting said light switch to the relay of said third control switch, a ninth conductor connecting said ignition switch to the relay of the second control switch, a tenth conductor for connecting said light switch to head lights of a vehicle, an eleventh conductor connecting the stationary contact of said third control switch to a first stationary contact of said second control switch, and a twelfth conductor electrically connecting the second stationary contact of the second control switch to the movable contact of the third control switch.

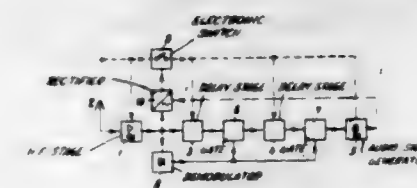
3,004,241

SELECTIVE CALL-RECEIVING DEVICE IN COMMUNICATION SYSTEMS

Heinrich Konig, Zurich, Switzerland, assignor to Albiwerk Zurich A.G., Zurich, Switzerland, a corporation of Switzerland
Filed June 5, 1959, Ser. No. 818,290
Claims priority, application Switzerland June 6, 1958
6 Claims. (Cl. 340-164)

1. A receiving device selectively callable by a coded call signal composed of a starting pulse, followed by a given number of successive code pulses, with the time spacing between each pulse and the next pulse being determined according to the code of the called receiving device and constituting the selection criteria, which comprises a signal receiving stage, pulse delay stages equal in number to

that of the selection criteria of the call signal, said delay stages having respective timing periods which, in totality, are distinctive of the particular call signal to which the receiving device will respond, a local-signal generating stage for producing a local signal under control by a call signal received, a first one of said pulse delay stages being connected to said signal receiving stage for response to the starting pulse, coincidence gates, said pulse delay stages being connected in cascade with each other through respective ones of said coincidence gates, the last pulse delay

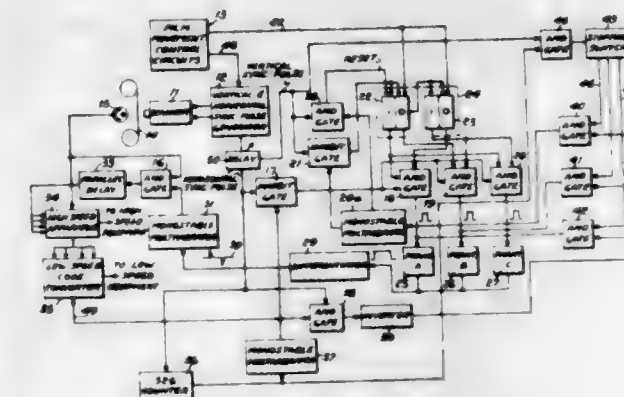


stage being connected to said signal generator stage through another one of said coincidence gates, whereby a call signal being received by said receiving stage controls the first pulse delay stage, and means connecting the output of the signal receiving stage to said coincidence gates for passing the output pulse from one pulse delay stage through a coincidence gate to each next pulse delay stage and to said signal generating stage only when the output pulse of each preceding pulse delay stage coincides with one of said selection criteria.

3,004,242

DATA READ-OUT SYSTEM

Vladimir P. Honelser, Paramus, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Sept. 3, 1958, Ser. No. 758,707
11 Claims. (Cl. 340-172.5)



1. A data processing system comprising a record containing bits of encoded information arranged in parallel columns and rows, means for scanning said record and producing a succession of pulses corresponding to said information bits, each complete scanning of the record constituting a frame, a horizontal and vertical synchronizing pulse generator for said scanning means, a circuit for reading-out certain of said pulses in each of said columns at two different speeds, comprising a high-speed column selector and a low-speed column selector, a delay device for each of said columns coupled to each of said selectors respectively, means under control of said high-speed selector for applying horizontal synchronizing pulses to one of said delay devices depending on the column being read-out at the line scan rate, and means under control of said low speed column selector for applying vertical synchronizing pulses to one of said delay devices, depending on the column being read-out at the frame scan rate,

each of said delay devices producing a pulse in response to an applied pulse having a time duration corresponding approximately to the time position of said certain pulses in the selected column.

3,004,243 MAGNETIC SWITCHING

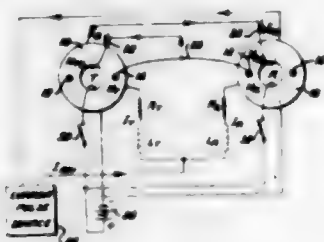
Thomas D. Reising, St. Paul, Minn., and Arndt B. Bergh, Palo Alto, Calif., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 12, 1957, Ser. No. 677,507
27 Claims. (Cl. 340-174)



1. A bi-stable device comprising magnetic material having a substantially rectangular hysteresis loop characteristic so as to exhibit only two stable states with the remanent magnetization of the material at any given time being in one of two possible opposing directions corresponding to said states, means for introducing a flux in said magnetic material in one of said directions to oppose the then existing remanent magnetization, and means for introducing a shaking magnetic field in said device during introduction of said flux to aid in switching magnetic material from its existing stable state to its other stable state.

3,004,244 DIGITAL CIRCUIT USING MAGNETIC CORE ELEMENTS

Hewitt D. Crane, Palo Alto, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 23, 1957, Ser. No. 704,511
10 Claims. (Cl. 340-174)



1. Apparatus comprising at least two storage elements, each element including an annular core of magnetic material having a substantially rectangular hysteresis loop the core having at least two apertures therethrough which are of substantially smaller size than the central opening formed by the annular shape of the core, a clearing winding linking the core through the central opening thereof for saturating the core in response to a unidirectional current passed through the clearing winding, an input winding linking the core through one of said apertures, and an output winding linking the core through the other of said apertures, the output winding of one core being directly connected across the input winding of the other core whereby the two windings are connected in parallel to form a closed conductive loop, means for applying a transfer pulse across the two windings in parallel, the transfer pulse being of predetermined magnitude to bring the cores when saturated by the clearing winding to sub-

stantially the threshold level at which flux starts to reverse in the cores, whereby the pulse does not materially alter the flux condition of the cores when they are both saturated by the respective clearing windings, a bias winding on at least one of the cores and linking the core through the central opening, and means for passing current through the bias winding in a direction to induce magnetic flux in the same direction in the core as the clearing winding.

3,004,245 MAGNETIC CORE DIGITAL CIRCUIT

Hewitt D. Crane, Palo Alto, David R. Bennion, Loma Mar, and Fred C. Helzmann, Palo Alto, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 30, 1957, Ser. No. 706,052
6 Claims. (Cl. 340-174)



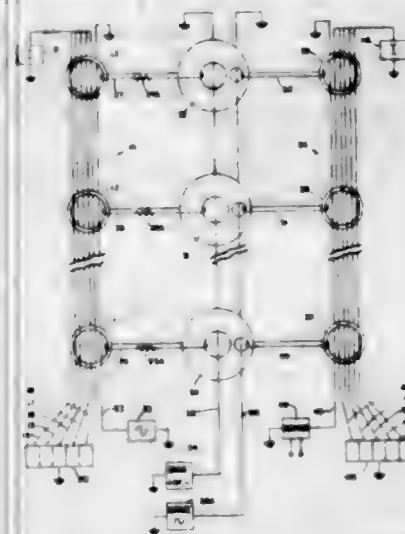
1. Apparatus comprising at least two storage elements, each element including an annular core of magnetic material having a substantially rectangular hysteresis loop, the core having at least two apertures therethrough which are of substantially smaller size than the central opening formed by the annular shape of the core, a clearing winding linking the core through the central opening thereof for saturating the core in response to a unidirectional current passed through the clearing winding, an input winding linking the core through one of said apertures, and an output winding linking the core through the other of said apertures, the output winding of one core being directly connected across the input winding of the other core whereby the two windings are connected in parallel to form a closed conductive loop, means for applying a transfer pulse across the two windings in parallel, the transfer pulse being of predetermined magnitude to bring the cores when saturated by the clearing winding to substantially the threshold level at which flux starts to reverse in the cores, whereby the pulse does not materially alter the flux condition of the cores when they are both saturated by the respective clearing windings, first bias windings wound on the cores and connected in series with each other and in series with the transfer loop, the first bias windings being connected so as to oppose the switching of flux in the cores by the transfer pulse, second bias windings wound on the cores, and means for passing a continuous direct current through each of the second bias windings in a direction to assist the switching of flux in the cores by the transfer pulse.

3,004,246 ELECTRICAL APPARATUS FOR STORING AND MANIPULATING DIGITAL DATA

Samuel D. Harper, Newton Highlands, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,555
7 Claims. (Cl. 340-174)

4. A digital memory circuit comprising a transfluxor core having a control aperture and an output aperture, a saturable core, winding means coupling said saturable core to said control aperture, output winding means coupled to said output aperture, winding means connected to said core to selectively saturate said saturable core, a first alternating current source coupled by electrical circuit means

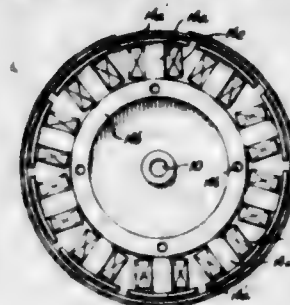
to said saturable core, a direct current bias source coupled by electrical circuit means to said control aperture, and



a second alternating current source coupled by electrical circuit means to said output aperture.

3,004,247 ROTARY ELECTROMECHANICAL DATA TRANSLATOR

Hugh A. White, 3981 Chilton Lane, San Bruno, Calif.
Filed May 3, 1960, Ser. No. 26,506
12 Claims. (Cl. 340-174.1)



12. Rotary electromechanical data translation means comprising a driving member adapted to be rotated continuously, and a plurality of controllable units each including a rotary driven member rotationally yieldably interconnected with the driving member to permit relative rotation therebetween when the driven member is restrained, said driven member being normally rotated by the driving member through said interconnection, said driven member having thereon an annular, electrically conductive, nonmagnetic vane portion extending therearound, and stationary electromagnet means operable to stop the rotary driven member in any of different selected positions comprising a plurality of separately energizable electromagnets positioned at intervals around the axis of said driving member and having pole faces disposed closely adjacent a first side of said vane portion, and ferromagnetic strip means substantially surrounding said vane portion in immediate proximity thereto at the side thereof opposite said first side, said ferromagnetic strip means having a discontinuity therein carried by said vane portion, whereby magnetic flux emanating through one of said pole faces is attracted outwardly through said vane portion by said ferromagnetic strip, inducing eddy-currents in the vane to retard the driven member, and whereby the driven member is then stopped with said discontinuity magnetically held by such flux emanation.

3,004,248 BURGLAR AND FIRE ALARM

Andrew L. Appel, 4928 Beckingham Court, St. Louis 8, Mo.
Filed July 10, 1959, Ser. No. 826,302
9 Claims. (Cl. 340-227)

4. In an alarm of the character disclosed, the combination of: a normally open signal producing circuit;

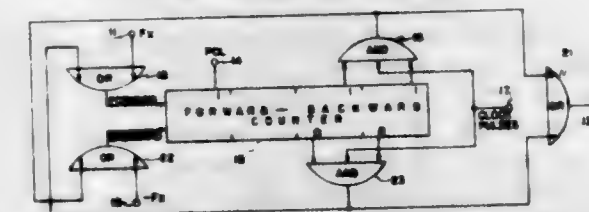
means for supporting the elements included in said circuit from an elongated casing closed at the top and open at the bottom; a strap member rigid with said casing and extending a short distance above the top of said casing, and having a circular opening formed in the thus extending upper end portion thereof; hanger means for suspending said casing in a selected position relatively to a substantially perpendicular flat surface of a non-stationary object, said hanger means including a base plate secured to said surface and an arm integral with said base plate, said arm having a plurality of notches or serrations contiguously formed in the upper marginal edge thereof for engagement therein of the upper edge of the strap member circular opening aforesaid; means included in said



circuit for intermittently closing same responsive to movements of said object whereby to diffuse a succession of signals in staccato fashion; and means included in said circuit for closing same responsive to fire conditions that may arise in the vicinity of said alarm whereby to diffuse a continuous signal so long as the fire conditions exist, said last named means including a highly resilient compound spring assembly that consists of an elongated relatively narrow main spring having its upper end anchored to said casing, a crossbar and an angularly contoured bimetallic contact rigidly secured to the depending free lower end of said main spring, and a pair of light compression springs each having its lowermost convolution rigidly secured to said crossbar adjacent one end thereof.

3,004,249 SIGNAL RESPONSIVE APPARATUS

Edward D. Ostroff, South Sudbury, Mass., assignor to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Jan. 7, 1959, Ser. No. 785,484
5 Claims. (Cl. 340-248)



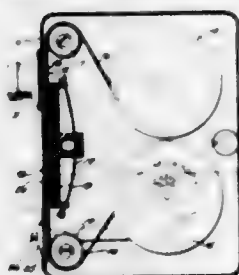
1. Apparatus for providing an output signal having a rate corresponding to the rate of first and second input signals applied to first and second input lines respectively during mutually exclusive time intervals together with a polarity signal indicative of which of said lines is then energized comprising, a reversible counter arranged with forward and backward inputs coupled to said first and second lines respectively, the count in said counter being advanced in response to said first input signal and retarded in response to said second input signal, first and second gating means enabled during mutually exclusive time intervals corresponding to said first and second input lines being energized respectively and in response to different

counts in said counter, a source of clock pulses having a rate greater than the rate of said first and second input signals, means for coupling said clock pulses to said output terminal through the enabled one of said gating means, and means for providing an indication of the most significant digit of said count to indicate which of said input lines is then energized.

3,004,250

FILM EXPOSURE SIGNAL

Julius Rendsburg, 3706 Towanda Ave., Baltimore, Md.
Filed Feb. 17, 1960, Ser. No. 9,318
5 Claims. (Cl. 340-260)

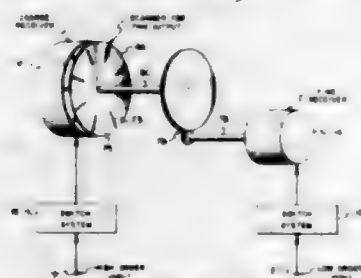


4. In a motion picture camera including a housing, a movable pressure member of considerable size having a plate thereon, said plate being of substantially the same size as said pressure member, film adapted to pass between the plate and the adjacent portion of the housing, a release knob connected to the housing, and signal means electrically connected to the plate and release knob for providing the signal when the available film has been used, said signal means including a pilot light.

3,004,251

DIGITAL-TO-ANALOGUE CONVERTER

Raymond Rapacz, Sea Cliff, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Oct. 10, 1957, Ser. No. 689,411
8 Claims. (Cl. 340-347)

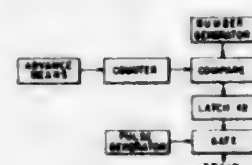


1. Converting apparatus comprising an input for receiving an array of digital information bits including a group of most significant digits and a group of least significant digits, first receiver means having an output with a plurality of response sections, means for selectively lighting said sections each in response to a different combination of the digits of said first group, second receiver means having an output with a plurality of response positions, means for selectively obtaining said positions each in response to a different combination of the digits of said second group, and a plurality of indicators simultaneously responsive to the output of said second receiver means for scanning said sections, each indicator being operable to scan a different one of said sections at any given time, said apparatus being adapted to provide greater contrast between a lighted section and said indicators than between an unlighted section and said indicators whereby a distinctive indication is given only by the indicator that is scanning whichever section is lighted at any given time.

3,004,252
BINARY-TO-DIGITAL PULSE TRAIN
CONVERTER

Edward J. Zola, Jr., Vestal, Kenneth W. Van Mechelen, Endicott, Gene J. Cour, Owego, and William L. McDermid, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1958, Ser. No. 745,612
3 Claims. (Cl. 340-347)

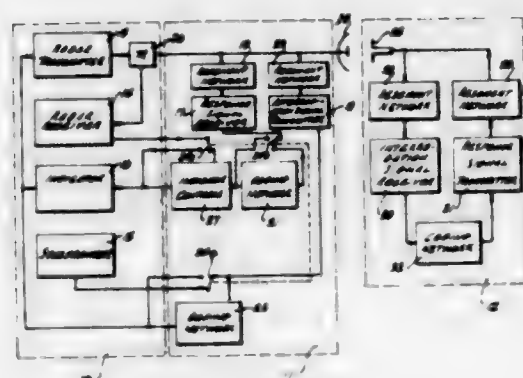


1. A converter for converting a number represented by the presence or absence of a pulse in each significant bit position thereof into a train of pulses equal in number to an analogue of said number that comprises: means to generate said number in digital form, a multistage counter, having at least one stage for each significant bit position of said number, means periodically to advance the count of said counter, means to compare sequentially the value of each significant bit position of said number to the value of each corresponding stage of said counter once each period, a pulse generator for generating pulses once each period, a gating circuit, means to feed said generated pulses to said gating circuit, gate conditioning means determined by said sequential compare means for conditioning said gating circuit to provide said pulse train and for deconditioning said gating circuit to terminate said pulse train.

3,004,253

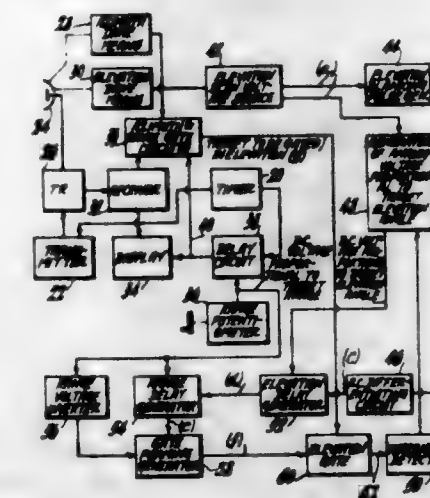
IFF SYSTEM

Teck A. Wilson, Playa Del Rey, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 20, 1954, Ser. No. 476,283
1 Claim. (Cl. 343-6.5)



An identification device for determining whether a target is friend or foe, said identification device being adapted to be used in conjunction with a radar search system which includes a radar transmitter and a radar receiver coupled through a transmit-receive switch to an antenna for transmitting exploratory pulses and receiving echo signals in response thereto, an indicator coupled to said radar receiver for producing a visual presentation of said echo signals, and a master synchronizer coupled to said radar transmitter and said indicator for initiating

the transmission of said exploratory pulses and the sweep circuits of said indicator, respectively, said identification device comprising: an interrogating transmitter coupled to said antenna for transmitting interrogating signal pulses towards a target; means for connecting said interrogating transmitter to said master synchronizer thereby to initiate the transmission of said interrogating signal pulses; a first coding network interconnected between said master synchronizer and said radar transmitter and indicator whereby said exploratory pulses are delayed by a first delay interval after the transmission of each interrogating signal pulse; apparatus disposed on board said interrogated target including an interrogating signal receiver for receiving said interrogating signal pulse, and means coupled to said interrogating signal receiver for transmitting a response signal pulse after a second delay interval subsequent to the reception of each of said interrogating signal pulses; a response signal receiver coupled to the antenna of said radar search system for receiving said response signal pulses; means responsive to said response signal pulses for producing a control voltage of short duration after a third delay interval subsequent to the reception of each response signal pulse by the interrogating signal receiver, said first delay interval being substantially equal to the sum of said second and third delay intervals whereby said control voltage is produced during an interval of time that includes the concomitant target echo signal received by the radar receiver; and means coupled between said last-named means and said indicator of said radar system for affecting the presentation of said target echo signal in response to said control voltage thereby to determine that said target is a friend.

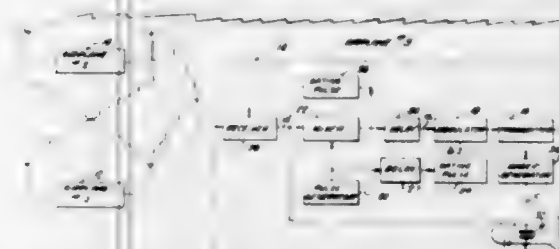


greater than said intervals; means for producing a voltage having a parameter which is a function of said given intervals of time; and means responsive to said voltage and to said groups of pulses for producing a gate signal having the same period as said groups of pulses and formed with portions bracketing said groups of pulses of a duration inversely proportional to the magnitude of said parameter.

3,004,254

AIRCRAFT COLLISION WARNING SYSTEM

Richard Steinsberg, Mar Vista, and Victor F. Cartwright, Pasadena, Calif., assignors to Ralph M. Parsons Company, Los Angeles, Calif., a corporation of California
Filed May 13, 1957, Ser. No. 658,658
22 Claims. (Cl. 343-6.8)



4. In an aircraft presence warning system, a transponder for each aircraft comprising means for generating a continuous train of pulses, transmitter means coupled to the output of the pulse generating means to transmit interrogation pulses to other transponders, receiving means for deriving pulses from other transponders, means for retransmitting selected pulses derived from the receiving means, and indicating means responsive to the pulses from the pulse generating means and to pulses derived from the receiver output for providing an indication of the time interval between the transmission of the pulses and reception of the selected pulses derived from the receiver.

3,004,255

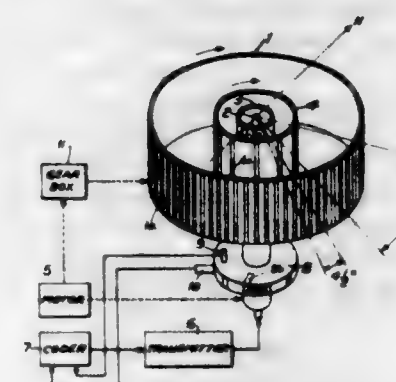
GATE CIRCUITS

Edward R. Walschilbaum, Rockland, Mass., assignor to Radio Corporation of America, a corporation of Delaware

Filed Oct. 21, 1955, Ser. No. 541,915
9 Claims. (Cl. 343-7.3)

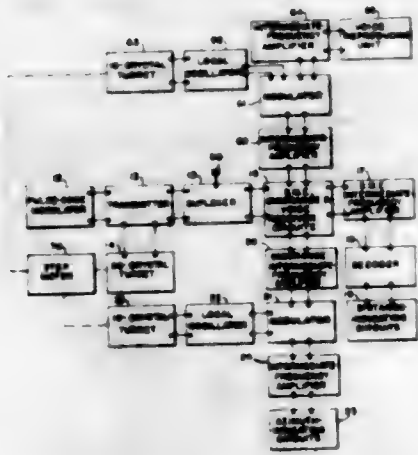
1. A gate circuit comprising, in combination, means for generating and transmitting to a target a series of

1. An aerial navigation system comprising beacon means at one location for radiating signals in a first rotating directional pattern rotating at a given rate, means for superimposing on said first rotating directional pattern a second rotating directional pattern rotating at another rate, means to transmit reference signals when said first pattern and said second pattern are directed in at least one given direction, signal detecting and receiving means at another location having means to detect the modulations of said beacon signals due to said rotations and means to detect said reference signals and means coupled to said modulation and reference signal detecting means for comparing said modulations with said reference signals to yield signals indicative of bearing.



3,004,257
NAVIGATION SYSTEM FOR AIRCRAFT
 Richard C. Curtis, Old Westbury, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

Filed May 31, 1955, Ser. No. 511,852
 8 Claims. (Cl. 343-112)

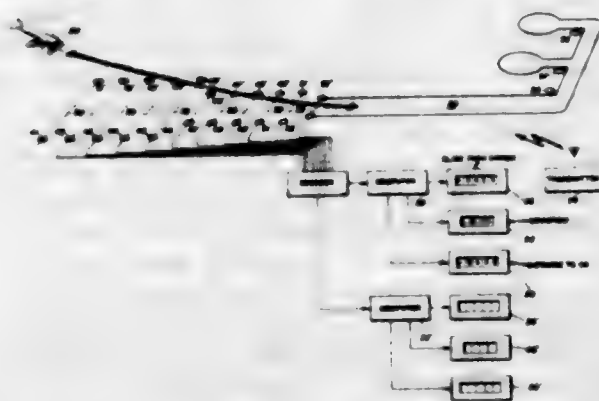


1. A multichannel radio-navigation system for aircraft comprising: a group of m or less geographically spaced ground stations each having its characteristic combination of challenging pulse code and challenging frequency and responsive to a received challenging signal at that frequency and pulse code to transmit a reply signal having a combination of one of m reply pulse codes and one of n reply frequencies also characteristic of the station; equipment at each station for transmitting one or more continuous wave signals affording additional information with respect to the station at one of n frequencies also characteristic of the station, all of those stations which have an identical reply frequency having a characteristic continuous wave frequency spaced from that reply frequency by a small primary value p plus a multiple from 0 to m of a predetermined secondary increment s approximately p/m , the primary value p of the spacing between reply and continuous wave frequencies being the same for all stations; and a group of airborne apparatus each including a transmitter for transmitting one of said challenging signals and an airborne receiver including selector means selectively responsive to a reply signal of any of said ground stations for deriving a signal representative of the distance between it and a challenged ground station, additional selector means selectively responsive to the continuous wave signals of any of said ground stations for deriving a signal representative of said additional information from the ground station, and uni-control means for adjusting said selector means in unison to respond only to the reply signal and the continuous wave signal from the same ground station where the foregoing parameters have the significance given in the specification.

3,004,258
CONTROL AND GUIDANCE OF VEHICLES
 Martha J. Cohen, West Palm Beach, and Henry C. Gibson, Jr., Palm Beach, Fla., assignors to Franklin Systems, Inc., Bridgeport, Pa., a corporation of Florida
 Filed Aug. 20, 1956, Serial No. 604,970
 8 Claims. (Cl. 343-112)

1. A vehicle locator, comprising a source of radioactivity, a housing for containing said source, said housing

being provided with an aperture therein to permit the escape of radioactive particles and being adapted for mounting upon the vehicle to be located, means for modulating the radioactive particles emitted by said source to identify radiation from said source, a plurality of detectors of radioactivity, each providing outputs upon the reception thereby of radioactive particles, the location of



said detectors having been predetermined, means for conveying said detector output to a common location, means for decoding said detector outputs at said common location to identify the radiating source according to the modulation impressed upon said outputs, and means for receiving the output of said decoder for presenting a visual indication of the identity and location of the radiating source.

3,004,259
ELECTRICALLY VARIABLE WAVEGUIDE SLOT WITH LONGITUDINAL POLARIZATION
 Howard E. Shanks, South Pasadena, Calif., and Bernard J. Maxum, Seattle, Wash., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed July 21, 1958, Ser. No. 749,732
 5 Claims. (Cl. 343-746)



1. A variable coupler for microwave energy comprising a rectangular waveguide for propagating microwave energy in a dominant mode and having a resonant slot extended transversely across a narrow wall, at least one ferrite stub mounted in said waveguide parallel and adjacent to said slot, and means for providing a static magnetic field through said stub parallel to said slot for converting said dominant mode to higher order modes with components of current transverse to the narrow dimension of said slot and making said slot radiate energy polarized parallel to the longitudinal axis of said waveguide.

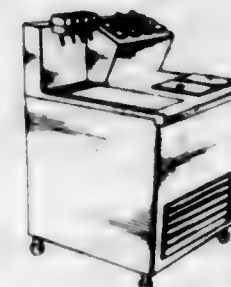
DESIGNS

OCTOBER 10, 1961

191,492
ORNAMENTAL RELIGIOUS SIGN
 Stephen C. Caffero, 8 Craig Place, Bloomfield, N.J.
 Filed July 19, 1960, Ser. No. 61,536
 Term of patent 14 years
 (Cl. D1-12)



191,493
SODA FOUNTAIN OR SIMILAR ARTICLE
 Herbert L. Smith, Van Nuys, Calif., assignor to S. Jerome Tamkin, doing business as Phillips Manufacturing Co., Los Angeles, Calif.
 Filed Apr. 10, 1961, Ser. No. 64,693
 Term of patent 14 years
 (Cl. D2-3)



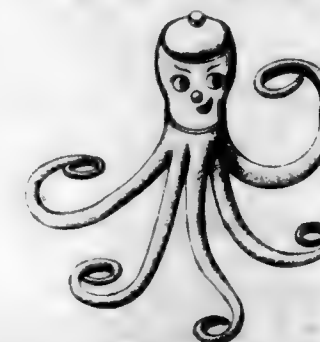
191,494
GLOVE
 Stanley M. Hoffstein, 1613 Stoney Run Drive, Wilmington, Del.
 Filed Dec. 29, 1959, Ser. No. 58,844
 Term of patent 14 years
 (Cl. D3-11)



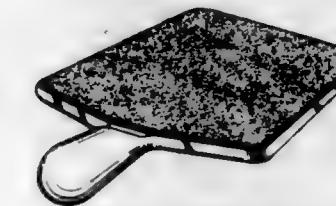
191,495
PROTECTIVE HEADGEAR FOR BOXERS
 John Tarangelo 1204 N. Curran Ave., Los Angeles, Calif.
 Filed Apr. 14, 1961, Ser. No. 64,745
 Term of patent 14 years
 (Cl. D3-13)



191,496
WALL MOUNTED HOLDER FOR A TUMBLER, TOOTHBRUSHES, AND TOOTHPASTE
 Eleanor M. Damiani, 525 Busti Ave., Buffalo, N.Y.
 Filed July 8, 1960, Ser. No. 61,278
 Term of patent 3 1/2 years
 (Cl. D4-3)



191,497
LIFTING HANDLE FOR TOILET SEAT
 Dwight E. Hottle, 2866 Lakeland Parkway, Cuyahoga Falls, Ohio
 Filed Apr. 14, 1961, Ser. No. 64,731
 Term of patent 14 years
 (Cl. D4-5)

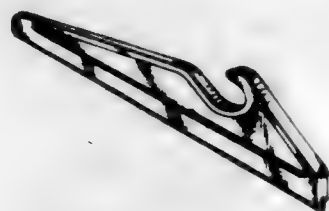


191,498
COMBINED SCRAPER AND BRUSH FOR GOLF ACCESSORIES
 Lawrence J. Chamberlain, 3243 W. Lawrence Ave., Chicago, Ill.
 Filed June 15, 1960, Ser. No. 60,980
 Term of patent 7 years
 (Cl. D9-2)



**191,499
SQUEEGEE**

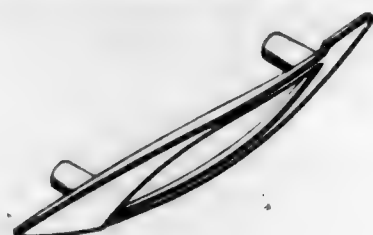
Steven Donay, 2940 S. 38th St., Milwaukee, Wis.
Filed Apr. 13, 1959, Ser. No. 55,467
Term of patent 7 years
(Cl. D9-6)

**191,500
DRAWER PULL**

Bernard Caminker and Newton Leichter, Los Angeles, Calif., assignors to Ajax Hardware Manufacturing Corp., City of Industry, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 65,161
Term of patent 14 years
(Cl. D10-8)

**191,501
DRAWER PULL**

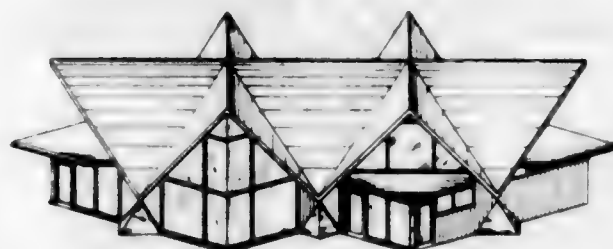
Bernard Caminker and Newton Leichter, Los Angeles, Calif., assignors to Ajax Hardware Manufacturing Corp., City of Industry, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 65,162
Term of patent 14 years
(Cl. D10-8)

**191,502
PARTITION**

Seymour Rutkin, 445 E. 65th St., New York, N.Y.
Filed May 26, 1958, Ser. No. 51,077
Term of patent 3½ years
(Cl. D13-1)

**191,503
BUILDING**

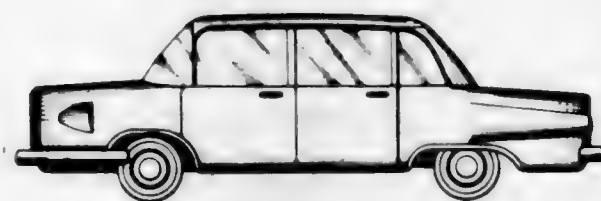
Edward J. Grey, Wichita, Kans., assignor to King's-X, Inc., Wichita, Kans., a corporation of Kansas
Filed Mar. 29, 1961, Ser. No. 64,534
Term of patent 14 years
(Cl. D13-1)

**191,504
COLLAPSIBLE DOLLY CART**

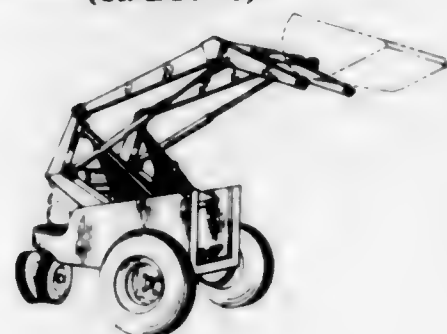
John M. Zupancic, Box 317, Cecil, Pa.
Filed June 2, 1959, Ser. No. 56,179
Term of patent 14 years
(Cl. D14-3)

**191,505
AUTOMOBILE**

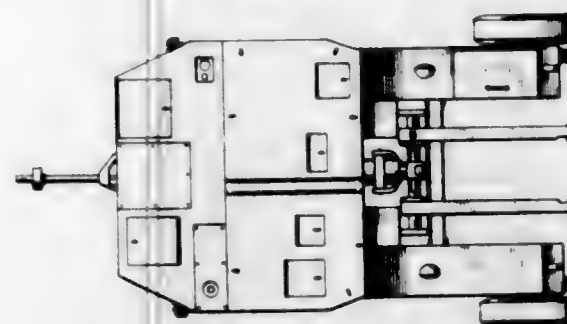
Ernest E. Dison, R.R. 18, Box 536-A, Indianapolis, Ind.
Filed Nov. 2, 1959, Ser. No. 58,185
Term of patent 14 years
(Cl. D14-3)

**191,506
SELF-PROPELLED LOADER**

Louis J. Keller, Millnor, N. Dak.
Filed Apr. 6, 1960, Ser. No. 60,072
Term of patent 14 years
(Cl. D14-3)

**191,507
TRACTOR FOR HANDLING AIRCRAFT
OR THE LIKE**

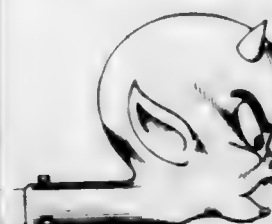
Raymond J. Enyeart, Westport, Conn., assignor to Consolidated Diesel Electric Corporation, Stamford, Conn., a corporation of New York
Filed Sept. 7, 1960, Ser. No. 62,053
Term of patent 14 years
(Cl. D14-3)

**191,508
FRAME FOR A GO-CART**

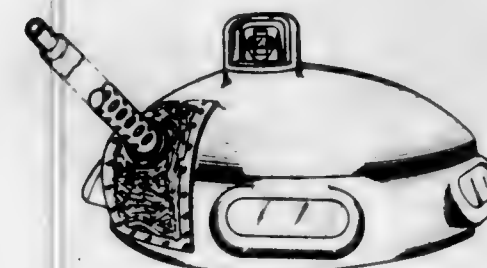
Jack A. McCaw, 2900 Hacienda, San Mateo, Calif., and Socrates F. Marquez, 1726 40th Ave., San Francisco, Calif.
Filed Sept. 6, 1960, Ser. No. 62,160
Term of patent 3½ years
(Cl. D14-3)

**191,509
TAIL PIPE ORNAMENT**

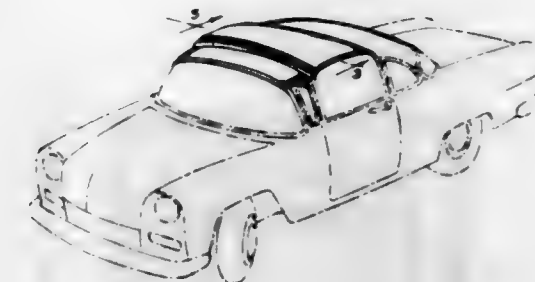
Sheldon F. Feinberg, 322 Monte Vista Ave., Oakland, Calif.
Filed Apr. 24, 1961, Ser. No. 64,883
Term of patent 14 years
(Cl. D14-6)

**191,510
GUNNER'S CUPOLA FOR AN ARMORED
VEHICLE**

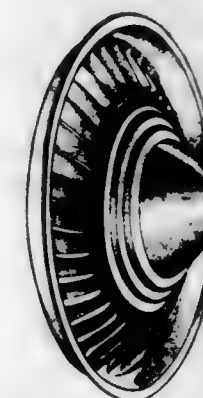
William A. Webb, Perry Hall, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Jan. 21, 1960, Ser. No. 59,132
Term of patent 3½ years
(Cl. D14-6)

**191,511
AUTOMOBILE**

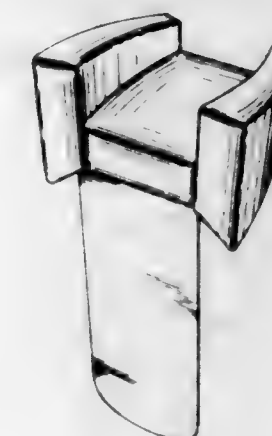
Edward L. Weed, 42 Carter St., Providence, R.I.
Filed Oct. 15, 1959, Ser. No. 57,939
Term of patent 3½ years
(Cl. D14-27)

**191,512
WHEEL COVER**

George Albert Lyon, 13881 W. Chicago Blvd., Detroit, Mich.
Filed May 9, 1960, Ser. No. 60,498
Term of patent 14 years
(Cl. D14-30)

**191,513
CHILD'S CONVERSION SEAT FOR A
DENTAL CHAIR**

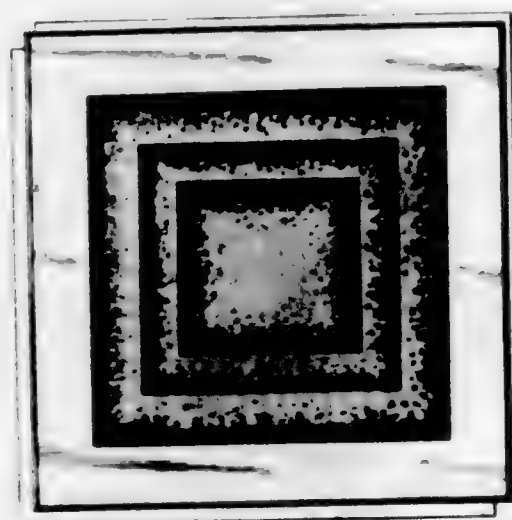
Kenneth C. Kerr, 1222 S. Riverside, Medford, Oreg.
Filed Mar. 14, 1960, Ser. No. 59,724
Term of patent 14 years
(Cl. D15-3)



191,514

TILE OR SIMILAR ARTICLE

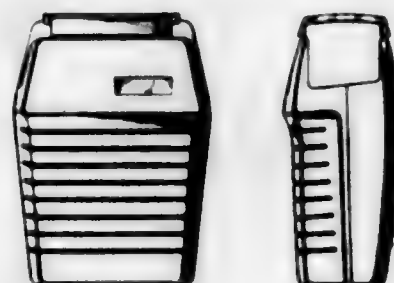
Philip M. Brady, Scarsdale, and Frederic H. Rahr, New York, N.Y., assignors to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware
 Filed June 9, 1961, Ser. No. 65,529
 Term of patent 14 years
 (Cl. D18-2)



191,517

ELECTRIC SHAVER

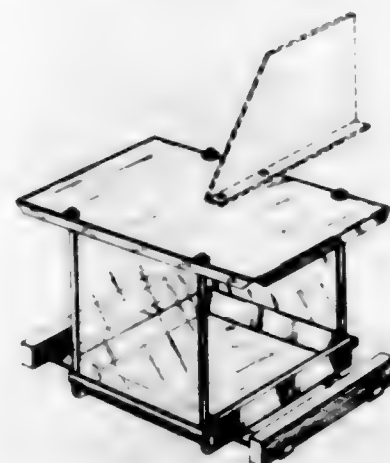
Luigi Segre, Turin, Italy, and William C. Badnaruk, Elverson, Pa., assignors to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
 Filed Mar. 27, 1961, Ser. No. 64,482
 Term of patent 14 years
 (Cl. D22-3)



191,518

BIRD FEEDER

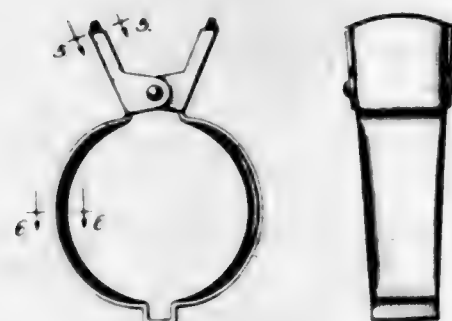
John B. Olson, 814 Riverside Drive, Fort Atkinson, Wis.
 Filed Sept. 15, 1960, Ser. No. 62,148
 Term of patent 7 years
 (Cl. D31-2)



191,515

CURTAIN CLIP RING

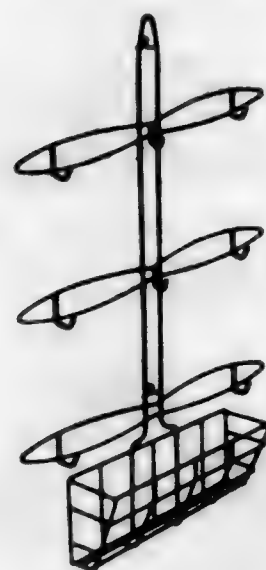
Nolan K. Rhoades, Beloit, Wis., assignor to Western Newell Mfg. Co., Freeport, Ill., a corporation of Illinois
 Filed Mar. 7, 1960, Ser. No. 59,641
 Term of patent 14 years
 (Cl. D21-1)



191,519

PURSE RACK

Clarence L. Meade and Mary E. Meade, both of 3419 Danbrook Ave., Anaheim, Calif.
 Filed Feb. 7, 1961, Ser. No. 63,855
 Term of patent 3 1/2 years
 (Cl. D33-3)



191,516

ELECTRIC CAN OPENER

James F. G. Bowiby, Butler, N.J., assignor to Lasko Metal Products, Inc., West Chester, Pa., a corporation of Pennsylvania
 Filed Dec. 19, 1960, Ser. No. 63,265
 Term of patent 14 years
 (Cl. D22-2)



191,520

PAPER BAG HOLDER OR SIMILAR ARTICLE

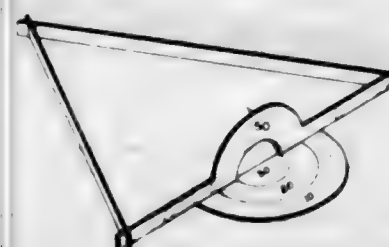
Albert Spielman, Brooklyn, N.Y., assignor to Sanjo Utility Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
 Filed Feb. 16, 1961, Ser. No. 63,959
 Term of patent 3 1/2 years
 (Cl. D33-3)



191,521

PRACTICE PUTTING DEVICE

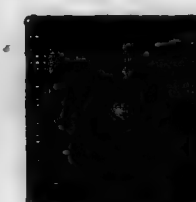
William Anderson Baker, P.O. Box 812, Hattiesburg, Miss.
 Filed Dec. 8, 1959, Ser. No. 58,596
 Term of patent 3 1/2 years
 (Cl. D34-5)



191,522

PLANTER

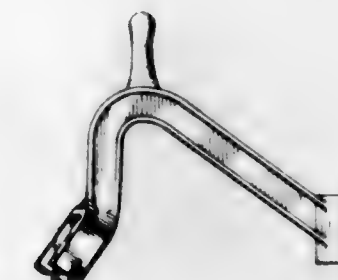
Raymond E. McGreevy, 1101 Jackson St., River Forest, Ill., and Frank M. Vondrasek, Rte. 66, Glen Road, Downers Grove, Ill.
 Filed June 23, 1961, Ser. No. 65,702
 Term of patent 14 years
 (Cl. D35-3)



191,523

GRINDER WHEEL DRESSER

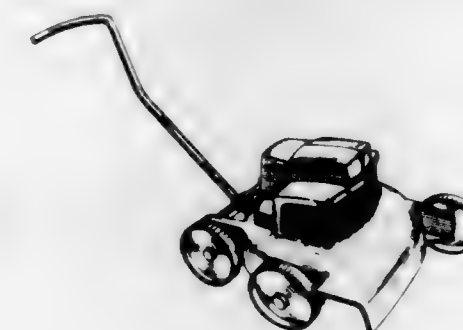
Jerome H. Newman, 13971 Skyline Blvd., Oakland, Calif.
 Filed Nov. 2, 1959, Ser. No. 58,168
 Term of patent 14 years
 (Cl. D37-1)



191,524

ROTARY POWER LAWN MOWER

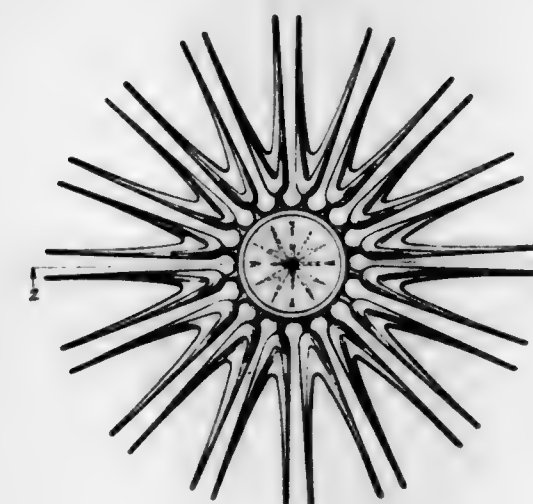
Finn T. Irgens, Wauwatosa, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
 Filed July 22, 1957, Ser. No. 47,047
 Term of patent 14 years
 (Cl. D40-1)



191,525

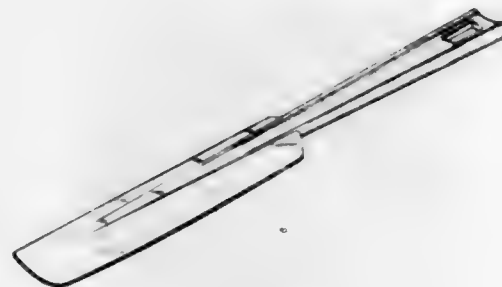
WALL CLOCK

David A. Patience, Melrose Park, Ill., assignor to Rubber Products, Inc., Chicago, Ill., a corporation of Illinois
 Filed Feb. 8, 1961, Ser. No. 63,864
 Term of patent 3 1/2 years
 (Cl. D42-7)

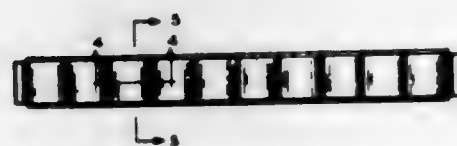


**191,526
SPATULA**

William Marcus, Cleveland, Ohio, assignor to Merrymaid Plastics Corp., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 1, 1960, Ser. No. 61,575
Term of patent 14 years
(Cl. D44-29)

**191,527****EXPANSION BRACELET FOR WATCHES**

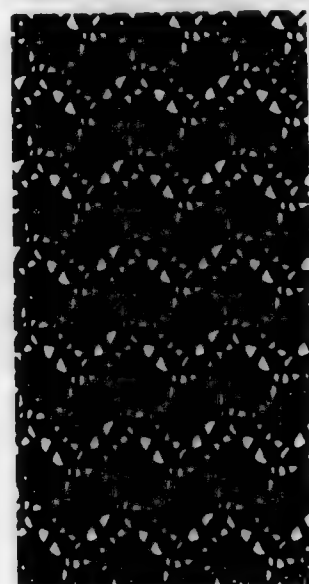
Charles J. Obst, Barrington, R.I., assignor to Flex-Let Corporation, East Providence, R.I., a corporation of Rhode Island
Filed Feb. 23, 1960, Ser. No. 59,544
Term of patent 14 years
(Cl. D45-4)

**191,528****EARRING OR SIMILAR ARTICLE**

Samuel Dauber, 2634 Burns Place, Union, N.J.
Filed Aug. 30, 1960, Ser. No. 61,950
Term of patent 14 years
(Cl. D45-9)

**191,529****LACE FABRIC OR SIMILAR ARTICLE**

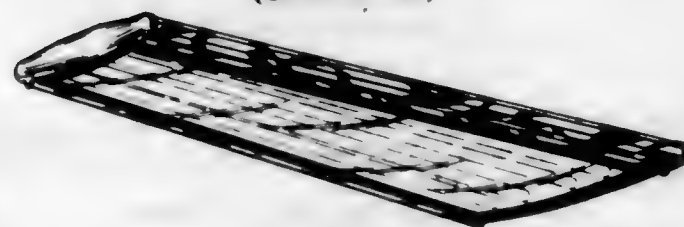
Anton J. Wider, 14 Dianne Court, Clifton, N.J.
Filed Feb. 17, 1961, Ser. No. 63,983
Term of patent 3 1/2 years
(Cl. D47-6)

**191,530****FLUORESCENT LIGHT FIXTURE**

Edward F. Zurawski, Chicago, Ill., assignor to Garden City Plating & Manufacturing Co., a corporation of Illinois
Filed Dec. 3, 1959, Ser. No. 58,538
Term of patent 14 years
(Cl. D48-23)

**191,531****LIGHTING FIXTURE OR SIMILAR ARTICLE**

Joseph H. Spaulding, 4814 S. Raeburn Drive, Cincinnati, Ohio
Filed Oct. 26, 1960, Ser. No. 62,689
Term of patent 14 years
(Cl. D48-23)

**191,532****FLASHLIGHT FOR MINERS' CAPS OR THE LIKE**

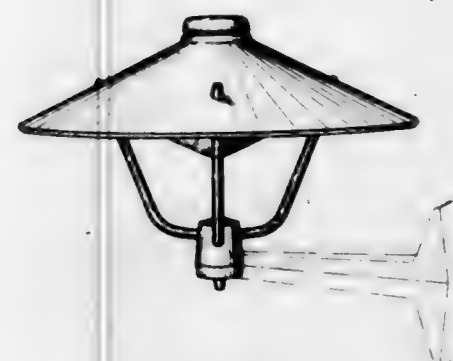
Warren B. Beers, 624 40th St. N.E., Cedar Rapids, Iowa
Filed Apr. 25, 1960, Ser. No. 60,299
Term of patent 14 years
(Cl. D48-24)

**191,533
LIGHTER**

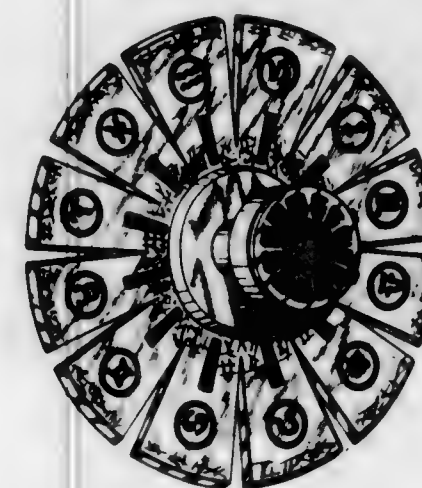
Emile Gilbertson, Paris, France, assignor to Etablissements Genoud et Cie, Societe Anonyme
Filed Feb. 2, 1961, Ser. No. 63,801
Term of patent 7 years
Claims priority, application France Nov. 25, 1960
(Cl. D48-27)

**191,534****LIGHT FIXTURE**

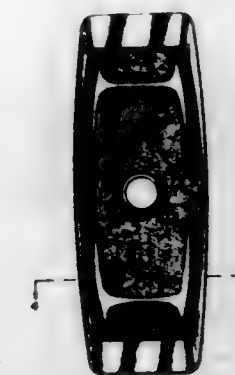
Paul J. Curtin, South Milwaukee, Wis., and Edward B. Smith, Jr., Arlington Heights, and Raoul E. Rodriguez, Chicago, Ill., assignors to McGraw-Edition Company, Milwaukee, Wis., a corporation of Delaware
* Filed Sept. 8, 1960, Ser. No. 62,063
Term of patent 14 years
(Cl. D48-31)

**191,535****COMBINED DOORKNOB AND ESCUTCHEON**

Roy Stuart Denker, Redondo Beach, Calif., assignor to Schlage Lock Company, a corporation
Filed May 23, 1961, Ser. No. 65,283
Term of patent 14 years
(Cl. D50-3)

**191,536****ESCUTCHEON PLATE**

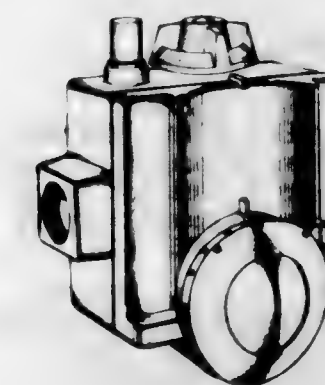
Roy Stuart Denker, Redondo Beach, Calif., assignor to Schlage Lock Company, a corporation
Filed May 23, 1961, Ser. No. 65,297
Term of patent 14 years
(Cl. D50-6)

**191,537****COMBINED VIAL STORAGE AND DISPENSING BIN**

Bernard Gavria, 57-32 263rd St., Little Neck, N.Y.
Filed Mar. 28, 1961, Ser. No. 64,519
Term of patent 14 years
(Cl. D52-2)

**191,538****WATER HEATER CONTROL**

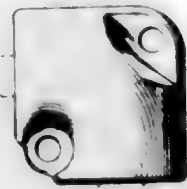
Henry C. Keck, Pasadena, and Theodore J. Dykzeul, Rolling Hills, Calif., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 59,411
Term of patent 14 years
(Cl. D52-6)



191,539

ANGLED ATTACHMENT FOR AN ELECTRIC
DRILL OR THE LIKE
Thomas B. Keesling, 17480 Shelburne Way, Los Gatos,
Calif., assignor of one-half to C. H. Keesling, San Jose,
Calif.

Filed Jan. 2, 1959, Ser. No. 54,027
Term of patent 14 years
(Cl. D54-14)



191,540

COMBINED CLOCK AND RADIO
Robert L. Sampson, 2244 S. Western Ave., Chicago, Ill.
Filed May 5, 1961, Ser. No. 65,036
Term of patent 14 years
(Cl. D56-4)



191,541

SPECTACLE FRAME OR THE LIKE
Walter C. Carmichael, Lexington, Mass., assignor to
American Optical Company, Southbridge, Mass., a vol-
untary association of Massachusetts
Filed July 19, 1960, Ser. No. 61,427
Term of patent 14 years
(Cl. D57-1)



191,542

SPECTACLE FRAME
Geneva L. Reese, 5319 61st St., Sacramento, Calif.
Filed Nov. 25, 1960, Ser. No. 62,978
Term of patent 14 years
(Cl. D57-1)

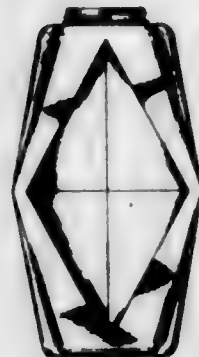


191,543

SPECTACLE FRAME
Harold Lambert, Shepard St., Plainville, Mass.
Filed May 4, 1961, Ser. No. 65,029
Term of patent 14 years
(Cl. D57-1)

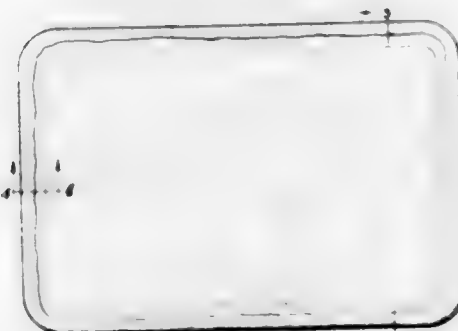
191,544
BOTTLE

Jack Bloch, Fort Worth, Tex., assignor to Loma In-
dustries, Fort Worth, Tex., a corporation of Texas
Filed Feb. 10, 1961, Ser. No. 63,891
Term of patent 14 years
(Cl. D58-5)



191,545

DISPLAY TRAY
Richard L. Emery, Fairfield, Maine, assignor to Keyes
Fibre Company, Portland, Maine, a corporation of
Maine
Filed Sept. 18, 1959, Ser. No. 57,601
Term of patent 14 years
(Cl. D58-13)



191,546

COMBINED REFUSE CAN AND PAIL
Abel E. Garner, 480 Park Ave., New York, N.Y.
Filed July 13, 1960, Ser. No. 61,348
Term of patent 3 1/2 years
(Cl. D58-17)



191,547

WALLPAPER PANEL
Fred R. Kazenwadel, Saddle River, N.J., and George K.
Birge, Buffalo, N.Y., assignors to George K. Birge
Co., Inc., Buffalo, N.Y.
Filed Aug. 12, 1960, Ser. No. 61,731
Term of patent 3 1/2 years
(Cl. D59-10)



191,549

WALLPAPER PANEL
Fred R. Kazenwadel, Saddle River, N.J., and George K.
Birge, Buffalo, N.Y., assignors to George K. Birge Co.,
Inc., Buffalo, N.Y.
Filed Aug. 12, 1960, Ser. No. 61,737
Term of patent 3 1/2 years
(Cl. D59-10)



191,550

PORTABLE TYPEWRITER
Anton Demmel, Wilhelmshaven, Germany, assignor to
Olympia Werke AG, Wilhelmshaven, Germany, a cor-
poration of Germany
Filed Nov. 23, 1959, Ser. No. 58,436
Claims priority, application Germany May 23, 1959
Term of patent 14 years
(Cl. D64-11)



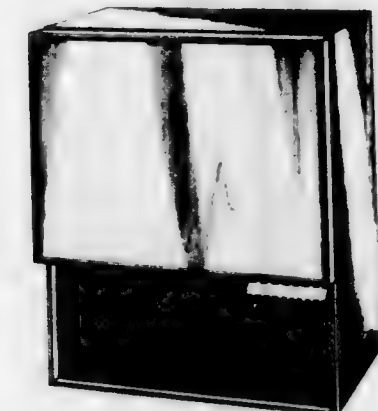
191,548

WALLPAPER PANEL
Fred R. Kazenwadel, Saddle River, N.J., and George K.
Birge, Buffalo, N.Y., assignors to George K. Birge Co.,
Inc., Buffalo, N.Y.
Filed Aug. 12, 1960, Ser. No. 61,736
Term of patent 3 1/2 years
(Cl. D59-10)



191,551

ICE MACHINE CABINET
Kenneth W. Duesenberg, St. Joseph, and Anthony M.
Kulusic, Benton Harbor, Mich., assignors to Whirlpool
Corporation, St. Joseph, Mich.
Filed Jan. 29, 1960, Ser. No. 59,202
Term of patent 14 years
(Cl. D67-3)



191,552
ICE TRAY

Robert E. Davis, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

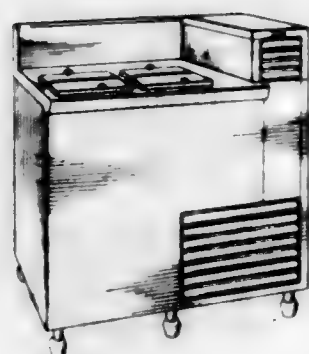
Filed Aug. 16, 1960, Ser. No. 61,785
Term of patent 14 years
(Cl. D67-3)



191,553
COMBINATION ICE MAKING MACHINE AND STORAGE CABINET OR THE LIKE

Herbert L. Smith, Van Nuys, Calif., assignor to S. Jerome Tunkin, doing business as Phillips Manufacturing Co., Los Angeles, Calif.

Filed May 8, 1961, Ser. No. 65,072
Term of patent 14 years
(Cl. D67-3)



191,554
COMBINED BALL POINT PEN AND MULTIPLIER

Louis Bodor, 1220 Fillmore St., Hollywood, Fla.

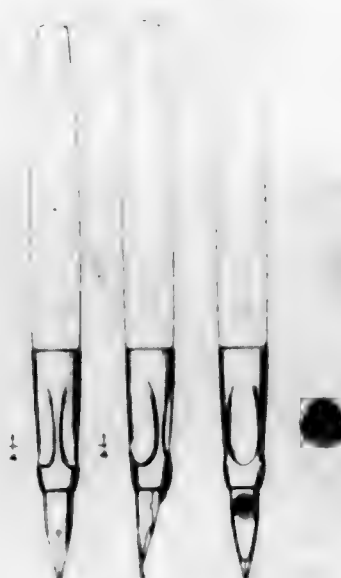
Filed Feb. 29, 1960, Ser. No. 59,546
Term of patent 3½ years
(Cl. D74-17)



191,555
FOUNTAIN PEN

Kenneth Parker, Janesville, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin

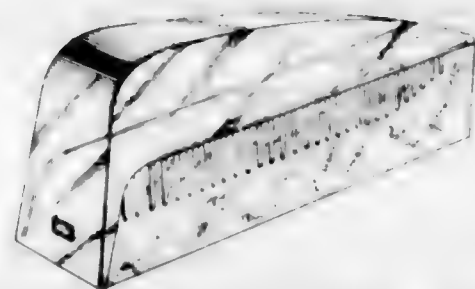
Filed Aug. 29, 1958, Ser. No. 52,446
Term of patent 14 years
(Cl. D74-17)



191,556
PENCIL SHARPENER

Jack Fairchild Fleming, Summit, and Otto Lehre, Springfield, N.J., assignors to Sterling Plastics Co., Union, N.J., a corporation of New Jersey

Filed Sept. 28, 1960, Ser. No. 62,449
Term of patent 14 years
(Cl. D74-21)



191,557
EARRING AND BEAD HANGER

Frank A. Oliver, Sandpoint, Idaho (P.O. Box 135, Gorst, Wash.)

Filed Mar. 27, 1961, Ser. No. 64,502
Term of patent 14 years
(Cl. D80-8)



191,558
JEWELRY DISPLAY EASEL

John Sands, 4757 Aldrich Ave. S., Minneapolis, Minn.

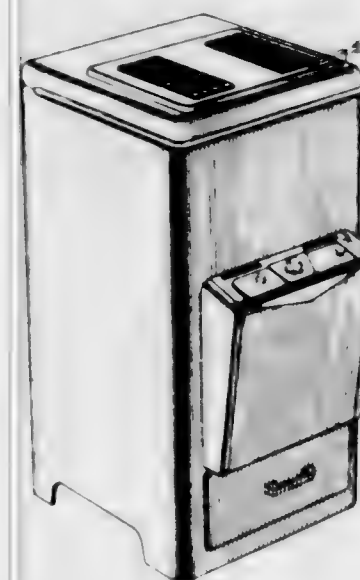
Filed Oct. 4, 1960, Ser. No. 62,372
Term of patent 3½ years
(Cl. D80-9)



191,559
INCINERATOR

Bernard E. Mustee, Westlake, Ohio, assignor to E. L. Mustee & Sons, Inc., Cleveland, Ohio, a corporation of Ohio

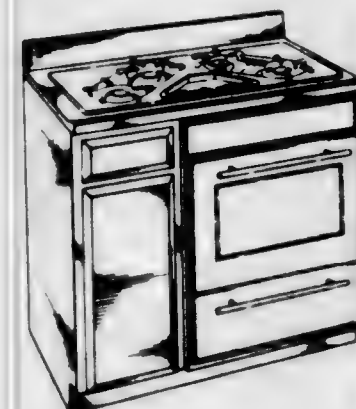
Filed Aug. 1, 1960, Ser. No. 61,574
Term of patent 14 years
(Cl. D81-1)



191,560
RANGE OR SIMILAR ARTICLE

Pierre L. Chabre, Los Angeles, and Clifford D. Mohr, Downey, Calif., assignors to Utility Appliance Corp., Los Angeles, Calif., a corporation of California

Filed Mar. 3, 1961, Ser. No. 64,134
Term of patent 14 years
(Cl. D81-4)



191,561
FIREPLACE STOVE

Randolph T. Hanger, Seattle, and Joseph L. Phillips, Bellevue, Wash., assignors to International Dynamics, Inc., Seattle, Wash., a corporation of Washington

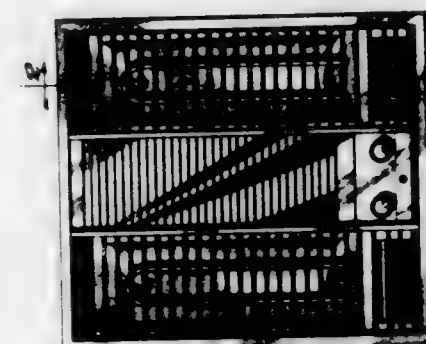
Filed Mar. 1, 1961, Ser. No. 64,112
Term of patent 14 years
(Cl. D81-7)



191,562
WALL HEATER

George D. Hart, Cincinnati, Ohio, assignor to Nutone, Inc., Cincinnati, Ohio, a corporation of New York

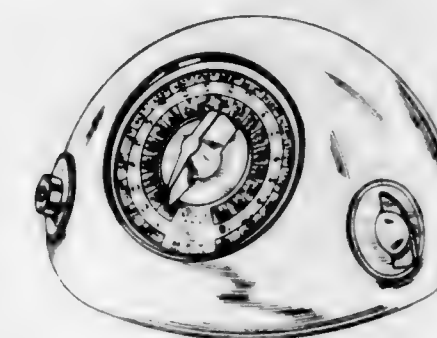
Filed Feb. 23, 1961, Ser. No. 64,026
Term of patent 14 years
(Cl. D81-10)



191,563
CARDIO-AXIOGRAPH INSTRUMENT

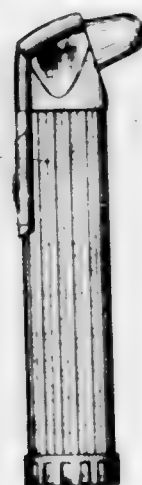
William Candib, Schenectady, N.Y., assignor to Electro Medical Research Associates, Schenectady, N.Y., a corporation of New York

Filed Nov. 24, 1959, Ser. No. 58,454
Term of patent 3½ years
(Cl. D83-1)



191,564

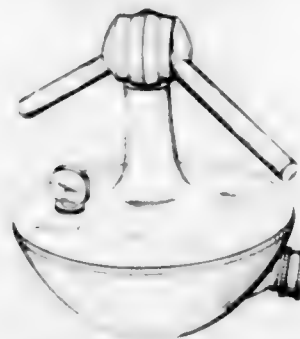
SOUND GENERATING AUDIOMETER
 Clayton D. Mallin, St. Paul, and Harold W. Darr, Minneapolis, Minn., assignors to Malco Electronics, Inc., Minneapolis, Minn., a corporation of Minnesota
 Filed May 9, 1960, Ser. No. 60,490
 Term of patent 14 years
 (Cl. D83—12)



191,567

SPRINKLER

Howard Menche, R.R. 1, Fort Branch, Ind.
 Filed June 19, 1961, Ser. No. 65,643
 Term of patent 7 years
 (Cl. D91—1)



191,568

FLOCKED TEXTILE FABRIC

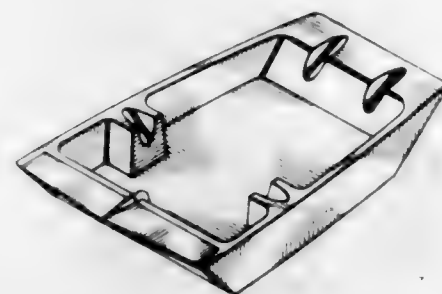
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
 Filed Dec. 28, 1960, Ser. No. 63,377
 Term of patent 14 years
 (Cl. D92—1)



191,565

ASH TRAY

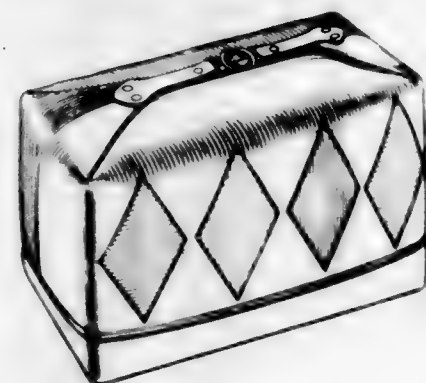
Bern E. Wolf and James H. Lee, Los Angeles, Calif., assignors to Prestige Hardware Corporation, Industry, Calif., a corporation of California
 Filed May 11, 1961, Ser. No. 65,117
 Term of patent 14 years
 (Cl. D85—2)



191,566

PICNIC BAG

Siegmund Werner, South Orange, N.J., assignor to Siegmund Werner, Inc., Bloomfield, N.J., a corporation of New Jersey
 Filed Sept. 19, 1960, Ser. No. 62,189
 Term of patent 3½ years
 (Cl. D87—5)



191,569

TABLECLOTH

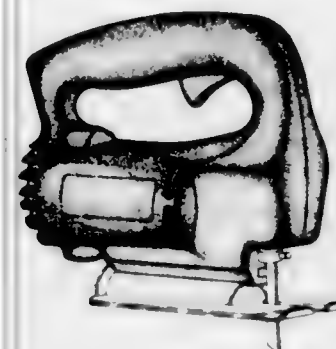
Thomas William Binas, Huntingdon Valley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
 Filed Mar. 7, 1961, Ser. No. 64,167
 Term of patent 7 years
 (Cl. D92—26)



191,570

PORTABLE ELECTRIC JIG SAW

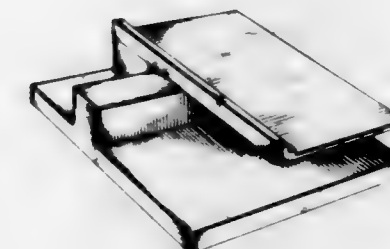
Walter M. Downs, Towson, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
 Filed May 26, 1960, Ser. No. 60,746
 Term of patent 14 years
 (Cl. D93—3)



191,571

POWER SAW MITRE BOX

Stuart R. Ferguson, 2155 Coldwater Canyon Drive, Beverly Hills, Calif.
 Filed Jan. 3, 1961, Ser. No. 63,426
 Term of patent 7 years
 (Cl. D93—4)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Burkland, Richard L., and J. W. Graves, Jr. Additive control device. Re. 25,052, 10-10-61, Cl. 138-45.
 Container Corp. of America: See—
 Hamilton, Joseph P. Re. 25,050.
 Hamilton, Joseph P., to Container Corp. of America. Stacking paperboard tray. Re. 25,050, 10-10-61, Cl. 229-34.
 Kolander, William G. Method of forming a frozen confection. Re. 25,051, 10-10-61, Cl. 107-54.
 Westinghouse Electric Corp.: See—
 Winter, William R. Re. 25,049.
 Winter, William R., to Westinghouse Electric Corp. Safety circuits for electric motors driving refrigerant compressors. Re. 25,049, 10-10-61, Cl. 62-163.

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- Aircraft Armaments, Inc.: See—
 Webb, William A. 191,510.
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 Caminker, Bernard, and Leichter. 191,501.
 American Optical Co.: See—
 Carmichael, Walter C. 191,541.
 Badnaruk, William C.: See—
 Segre, Luigi, and Badnaruk. 191,517.
 Baker, William A. Practice putting device. 191,521, 10-10-61, Cl. D34-5.
 Beers, Warren B. Flashlight for miner's caps or the like. 191,532, 10-10-61, Cl. D48-24.
 Binns, Thomas W., to Quaker Lace Co. Tablecloth. 191,569, 10-10-61, Cl. D92-28.
 Birge, George K.: See—
 Kasenwadel, Fred R., and Birge. 191,547.
 Kasenwadel, Fred R., and Birge. 191,548.
 Kasenwadel, Fred R., and Birge. 191,549.
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 Kasenwadel, Fred R., and Birge. 191,548.
 Kasenwadel, Fred R., and Birge. 191,549.
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 Downs, Walter M. 191,570.
 Bloch, Jack, to Loma Industries. Bottle. 191,544, 10-10-61, Cl. D58-5.
 Bodor, Louis. Combined ball point pen and multiplier. 191,554, 10-10-61, Cl. D74-17.
 Bowby, James F. G., to Lasko Metal Products, Inc. Electric can opener. 191,518, 10-10-61, Cl. D22-2.
 Brody, Philip M., and F. H. Bahr, to Wood Conversion Co. Tile or similar article. 191,514, 10-10-61, Cl. D18-2.
 Cañero, Stephen C. Ornamental religious sign. 191,492, 10-10-61, Cl. D1-12.
 Caminker, Bernard, and N. Leichter, to Ajax Hardware Mfg. Corp. Drawer pull. 191,500, 10-10-61, Cl. D10-8.
 Caminker, Bernard, and N. Leichter, to Ajax Hardware Mfg. Corp. Drawer pull. 191,501, 10-10-61, Cl. D10-8.
 Candib, William, to Electro Medical Research Associates. Cardio-axiograph instrument. 191,563, 10-10-61, Cl. D83-1.
 Carmichael, Walter C., to American Optical Co. Spectacle frame or the like. 191,541, 10-10-61, Cl. D57-1.
 Chabre, Pierre L., and G. D. Mohr, to Utility Appliance Corp. Range, or similar article. 191,560, 10-10-61, Cl. D81-4.
 Chamberlain, Lawrence J. Combined scraper and brush for golf accessories. 191,498, 10-10-61, Cl. D9-2.
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 Eneyart, Raymond J. 191,507.
 Curtin, Paul J., E. B. Smith, Jr., and R. E. Rodriguez, to McGraw-Edison Co. Light fixture. 191,534, 10-10-61, Cl. D48-31.
 Damiani, Eleanor M. Wall mounted holder for a tumbler, toothbrushes, and toothpaste. 191,496, 10-10-61, Cl. D4-3.
 Darr, Harold W.: See—
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 Dauber, Samuel. Earring or similar article. 191,528, 10-10-61, Cl. D45-9.
 Davis, Robert E., to General Motors Corp. Ice tray. 191,552, 10-10-61, Cl. D87-8.
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 Leavy, Natalie. 191,568.
 Demmel, Anton, to Olympia Werke A.G. Portable typewriter. 191,550, 10-10-61, Cl. D64-11.
 Denker, Roy S., to Schlage Lock Co. Combined doorknob and escutcheon. 191,535, 10-10-61, Cl. D50-3.
 Denker, Roy S., to Schlage Lock Co. Escutcheon plate. 191,536, 10-10-61, Cl. D50-6.
 Dison, Ernest E. Automobile. 191,505, 10-10-61, Cl. D14-3.
 Donay, Steven. Squeezee. 191,499, 10-10-61, Cl. D9-6.
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 Eneyart, Raymond J., to Consolidated Diesel Electric Corp. Tractor for handling aircraft or the like. 191,507, 10-10-61, Cl. D14-3.
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 Ferguson, Stuart R. Power saw mitre box. 191,571, 10-10-61, Cl. D93-4.
 Fleming, Jack F., and O. Lehre, to Sterling Plastics Co. Pencil sharpener. 191,556, 10-10-61, Cl. D74-21.
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 Garden City Plating & Mfg. Co.: See—
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 Gavrin, Bernard. Combined vial storage and dispensing bin. 191,537, 10-10-61, Cl. D52-2.
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 Hanger, Randolph T., and J. L. Phillips, to International Dynamics, Inc. Fireplace stove. 191,561, 10-10-61, Cl. D81-7.
 Hart, George D., to Nutone, Inc. Wall heater. 191,562, 10-10-61, Cl. D81-10.
 Hoffstein, Stanley M. Glove. 191,494, 10-10-61, Cl. D3-11.
 Hottle, Dwight E. Lifting handle for toilet seat. 191,497, 10-10-61, Cl. D4-5.
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 Kasenwadel, Fred R., and G. K. Birge, to George K. Birge Co., Inc. Wallpaper panel. 191,548, 10-10-61, Cl. D59-10.
 Kasenwadel, Fred R., and G. K. Birge, to George K. Birge Co., Inc. Wallpaper panel. 191,549, 10-10-61, Cl. D59-10.
 Keck, Henry C., and T. J. Dykzeul, to Robertshaw-Fulton Controls Co. Water heater control. 191,538, 10-10-61, Cl. D52-6.
 Keesling, C. H.: See—
 Keesling, Thomas B. 191,539.
 Keesling, Thomas B., 1/2 to C. H. Keesling. Angled attachment for an electric drill or the like. 191,539, 10-10-61, Cl. D34-14.
 Keller, Louis J. Self-propelled loader. 191,506, 10-10-61, Cl. D14-3.
 Kerr, Kenneth C. Child's conversion seat for a dental chair. 191,513, 10-10-61, Cl. D15-8.
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 Caminker, Bernard, and Leichter. 191,501.
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 Marquez, Socrates F.: See—
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 Oliver, Frank A. Earring and bead hanger. 191,557, 10-10-61, Cl. D80-8.
 Olson, John B. Bird feeder. 191,518, 10-10-61, Cl. D31-2.
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 Demmel, Anton. 191,550.
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 Rubber Products, Inc.: See—
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 Schlage Lock Co.: See—
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 Denker, Roy S. 191,536.
 Segre, Luigi, and W. C. Badnaruk, to Schick Inc. Electric shaver. 191,517, 10-10-61, Cl. D22-3.
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 Smith, Herbert L., to S. J. Tamkin d.b.a. Phillips Mfg. Co. Soda fountain, or similar article. 191,493, 10-10-61, Cl. D72-3.
 Smith, Herbert L., to S. J. Tamkin d.b.a. Phillips Mfg. Co. Combination ice making machine and storage cabinet or the like. 191,553, 10-10-61, Cl. D87-3.
 Spaulding, Joseph H. Lighting fixture or similar article. 191,531, 10-10-61, Cl. D48-23.
 Spielman, Albert, to Sanjo Utility Mfg. Co., Inc. Paper bag holder or similar article. 191,520, 10-10-61, Cl. D83-3.
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 Smith, Herbert L. 191,493.
 Smith, Herbert L. 191,553.
 Tarangelo, John. Protective headgear for boxers. 191,495, 10-10-61, Cl. D3-13.
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 Weed, Edward L. Automobile. 191,511, 10-10-61, Cl. D14-27.
 Werner, Siegmund, to Siegmund Werner, Inc. Picnic bag. 191,566, 10-10-61, Cl. D87-5.
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LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB. Kemishka Patenter: See—
 Nordengren, Rolf G. J. 3,003,662.
 ACF Industries, Inc.: See—
 Carlson, Harold A. 3,003,488.
 Johnson, Eldon A. 3,003,753.
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 Gilles, Walter B., and Aiken. 3,003,474.
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 Friedman, Arthur E. 3,003,833.
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 Alco Oil & Chemical Corp.: See—
 Hager, Onslow B., and Martin. 3,003,987.
 Alexander, Fred C., to Universal Rundle Corp. Tilting flush valve for toilet. 3,003,156, 10-10-61, Cl. 4-60.
 Alexander, John E., C. H. Comstock, Jr., R. P. Burnett, and L. B. McKinney. Foot operated device for speed and steering control of hydraulic propelled boats. 3,003,455, 10-10-61, Cl. 115-12.
 Alfano, Ugo, to Renfro Hosiery Mills Co. Knit simulated lace. 3,003,343, 10-10-61, Cl. 66-172.
 Alford, Andrew: See—
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 American Air Filter Co., Inc.: See—
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 American Brake Shoe Co.: See—
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 American Can Co.: See—
 Andrews, David B. 3,003,679.
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 Andreas, Harry J., Jr., and P. Y. C. Gee, to Socony Mobil Oil Co., Inc. Glycidic acids in turbine oil. 3,003,960, 10-10-61, Cl. 252-33.6.
 Andreas, Harry J., Jr., and P. Y. C. Gee, to Socony Mobil Oil Co., Inc. Glycidic imides in turbine oil. 3,003,961, 10-10-61, Cl. 252-33.6.
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Bechler, Andre. Automatic lathe with plural tool spindles and means to change tool spindle speed to effectuate reversal for threading. 3,003,166, 10-10-61, Cl. 10-136.

Beller, Jay M., and G. J. Martin, to The National Drug Co. Wound healing composition. 3,003,917, 10-10-61, Cl. 167-78.

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Beasler, Pierre E. Reciprocating pumps including an auxiliary piston, in particular for the injection of fuel into internal combustion engines. 3,003,422, 10-10-61, Cl. 103-41.

Beteiligungs- und Patentverwaltungsgesellschaft mit beschränkter Haftung: See—
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Black, William B., to The Chemstrand Corp. Solution of poly-pyrrolidone in a mixture of chloral hydrate and water, and process of making same. 3,003,985, 10-10-61, Cl. 260-29.2.

Blaskowski, Henry J., to Combustion Engineering, Inc. Stack arrangement. 3,003,517, 10-10-61, Cl. 131-253.

Blazek, William J., and J. J. Strnad, to Lemppo Products, Inc. Tubular-type antifriction bearing assemblies. 3,003,830, 10-10-61, Cl. 308-8.

Bloom, Eli, and R. S. Dorfman, to Universal Dental Co. Display tray assembly. 3,003,839, 10-10-61, Cl. 312-111.

Blout, Elkan R., H. C. Haas, and H. G. Rogers, to Polaroid Corp. Photographic products and processes. 3,003,872, 10-10-61, Cl. 96-29.

Blout, Elkan R., S. G. Cohen, and M. S. Simon, to Polaroid Corp. Photographic process. 3,003,876, 10-10-61, Cl. 96-66.

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Bock, Peter, H. Spies, and K. Deithausser, to Durrwerke Aktiengesellschaft. Steam and air boiler with heating surface of smallest load. 3,003,479, 10-10-61, Cl. 122-1.

Bodem, Roy C., and H. M. Geyer, to General Motors Corp. Actuator with stroke end locking means and stroke adjusting means. 3,003,471, 10-10-61, Cl. 121-40.

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Bottom, Theodore J. Folding awning. 3,003,550, 10-10-61, Cl. 160-62.

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Bourcier de Carbon, Christian M. L. L. Shock absorbers. 3,003,596, 10-10-61, Cl. 188-88.

Bourcier de Carbon, Christian M. L. L. Shock absorbers. 3,003,597, 10-10-61, Cl. 188-88.

Boutwell, Ernest D. Ball bearing screw and nut assembly. 3,003,361, 10-10-61, Cl. 74-424.8.

Bowerman, Edwin H., Jr., and M. Wasserman, to Sylvania Electric Products Inc. Encoder. 3,004,190, 10-10-61, Cl. 315-201.

Bowers, Eric H., and O. Thoma, to Dowty Hydraulic Units Ltd. Single lever control apparatus for engine and hydraulic transmission. 3,003,309, 10-10-61, Cl. 60-19.

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Brady, Lynn J., to Kearsfoot Co., Inc. Method for increasing the effective permeability of manganese ferrites. 3,003,967, 10-10-61, Cl. 252-62.5.

Brancaccio, Massimo. Three-dimensional radiology apparatus. 3,004,159, 10-10-61, Cl. 250-60.

Brand, Frederick B., J. H. Chadwick, Jr., and J. Bentkowsky, to Sperry Rand Corp. Elevational control system for navigable craft. 3,003,450, 10-10-61, Cl. 114-25.

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Brown, Raymond W., to Western Electric Co., Inc. Apparatus for sorting resistors and control circuitry. 3,003,630, 10-10-61, Cl. 209-81.

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Buzak, Albert J., to The Thomas & Betts Co. Grounding clip. 3,004,095, 10-10-61, Cl. 174-51.

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Gardner, Percy S., Jr. Hoisting solid aggregates in liquids. 3,003,820, 10-10-61, Cl. 302-14.

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Garwin, Leo, to Kerr-McGee Oil Industries, Inc. Separation of asphalt-type bituminous materials utilizing aliphatic alcohols of 3 through 4 carbon atoms. 3,003,946, 10-10-61, Cl. 208-45.

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Landau, Warner E. Screw-holder screw driver. 3,003,528, 10-10-61, Cl. 145-50.
Lang, Albert P., to Sperry Rand Corp. Armature disk for clutch brake unit. 3,003,609, 10-10-61, Cl. 192-84.
Langford, George B., and P. E. Cavanagh, to Mrs. Marie Phillips Montague. Meter record device and method. 3,003,842, 10-10-61, Cl. 348-14.
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Grobman, William. 3,003,416.
Moser, Henry W., and Bolliger. 3,003,380.
Lanning, William C., to Phillips Petroleum Co. Separation of reaction products of hydrogenation of crude oil. 3,003,580, 10-10-61, Cl. 183-2.5.
Lathrop, Henry T., to Bissell Inc. Carpet sweeper. 3,003,170, 10-10-61, Cl. 15-41.
Lauch, John A., to Clark Equipment Co. Gear pump. 3,003,426, 10-10-61, Cl. 103-126.
Laughlin, Carl D., to Minerals & Chemicals Philipp Corp. Continuous percolation apparatus. 3,003,641, 10-10-61, Cl. 210-189.
La Vigne, Eugene E., to Brunswick Corp. Chart file. 3,003,648, 10-10-61, Cl. 211-144.
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Lebedinski, Anthony D. Parts and tool kit, as for plumbing parts, tools, and the like. 3,003,618, 10-10-61, Cl. 206-16.
Lelius, Franklin L., Sr., and C. Ware, to Wash Overshot and Spear Engineers, Inc. Free wheeling wash-over spear mechanism. 3,003,501, 10-10-61, Cl. 166-99.
Lecher, Joseph, to Turbo-Jet Milling Co., Inc. Method and apparatus for reducing the size of particles. 3,003,707, 10-10-61, Cl. 241-1.
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Lehmann, Aldo S.: See—
McCormey, John W., Gaertner, and Lehmann. 3,003,853.
Leibrock, Walton V.: See—
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Leibrock, Walton V., and G. A. Fasold, to The Philip Carey Mfg. Co. Self sealing asphalt shingles. 3,003,288, 10-10-61, Cl. 50-103.
Leibrock, Walton V., and G. A. Fasold, to The Philip Carey Mfg. Co. Self sealing asphalt shingles. 3,003,289, 10-10-61, Cl. 50-103.
Lemche, Johan H., to Carl Allers Etablissement A/S. Method of and means for photographing a reproduction original consisting of cards in a scale-like arrangement. 3,003,392, 10-10-61, Cl. 88-24.
Lempeo Products, Inc.: See—
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Leonard, George H., to A. D. Cunningham, to S. D'Arano, and to G. Shongut. Remote control device. 3,003,358, 10-10-61, Cl. 74-116.
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Lerner, Bernard J., to Gulf Research & Development Co. Process for recovery of niobium. 3,003,867, 10-10-61, Cl. 75-121.
Lerner, Samuel. Reinforced concrete structure. 3,003,290, 10-10-61, Cl. 50-407.
Lescellus, Toivo J.: See—
Sermon, George T., and Lescellus. 3,003,860.
Lessing, Edward: See—
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Lester, Robert W. Supporting frame for false ceilings, fixtures and the like. 3,003,802, 10-10-61, Cl. 189-36.
Le Sueur, William M., and C. W. Stuebe, to The Lubrizol Corp. Preparation of halogen-containing stilbenes and bibenzyls. 3,004,076, 10-10-61, Cl. 260-649.
Levi, Clifford A., to Pacific Semiconductors, Inc. Method for diffusing active impurities into semiconductor materials. 3,003,900, 10-10-61, Cl. 148-1.5.
Levin, Herbert L., to International Telephone and Telegraph Corp. Electron gun. 3,004,183, 10-10-61, Cl. 313-82.
Levinsohn, Richard B., to American Machine & Foundry Co. Electric inductor devices. 3,004,230, 10-10-61, Cl. 336-107.
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Lindstrom, Richard S., and T. Raphael, to Arthur D. Little, Inc. Fibrous aggregates and process and apparatus for making them. 3,003,911, 10-10-61, Cl. 162-100.
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Lober, Friedrich: See—
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Loef, Jakob, A. Paul, and K. Steinert, to Firma Steinbock G.m.b.H. Vehicle. 3,003,586, 10-10-61, Cl. 187-9.
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Louis, Arnold S., to M. A. Coler. Conductive plastic composition and method of making the same. 3,003,975, 10-10-61, Cl. 252-503.
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Luenberger, Frederick O., to U.S. Electrical Motors, Inc. Ratchet mechanism for preventing reverse rotation. 3,003,593, 10-10-61, Cl. 188-82.84.
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- Lytle, John P.: See—
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Macy, John M., and R. J. Shanahan, to South Bend Tackle Co., Inc. Device for applying a weight to a line. 3,003,376, 10-10-61, Cl. 81-15.
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- Morin, Lucille T., and K. Matsuda, to American Cyanamid Co. 1-cyanoformamide acid hydrazide. 3,004,060, 10-10-61, Cl. 260-465.5.
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Morris, Harold H., J. W. Moore, and S. E. Stone, to Whirlpool Corp. Laundry machine with hydraulic separator. 3,003,347, 10-10-61, Cl. 68-12.
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Nunn, Leslie G., Jr., to General Aniline & Film Corp. Surface active compositions. 3,004,087, 10-10-61, Cl. 260-461.

Obermaier, Frank E., to The Dole Valve Co. Vacuum regulator and control system. 3,003,320, 10-10-61, Cl. 60-80.

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Otto, Carl L. and L. N. B., 8% to Charles C. Schwartz. Hair curler for home permanent waving. 3,003,508, 10-10-61, Cl. 132-41.

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Ottoson, Raymond H., to Clemco Aero Products, Inc. Mechanical lock for pistons of fluid pressure rams. 3,003,473, 10-10-61, Cl. 121-40.

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Palm, John E., II. Combination map holder and automobile visor. 3,003,270, 10-10-61, Cl. 40-86.

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Pan, Samuel C.: See—

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Peiser, Hans K., to Betriebs- und Patentverwaltungsgesellschaft mit beschränkter Haftung. Conveying device, especially for bulk material. 3,003,611, 10-10-61, Cl. 160-55.

Pendleton, Alfred H. Seal for vehicle hubs. 3,003,634, 10-10-61, Cl. 300-187.1.

Pendse, Hrishikesh, R. Ruegg, and G. Ryser, to Hoffmann-La Roche Inc. Dimethoxy-1,2-chromenes. 3,004,040, 10-10-61, Cl. 260-345.5.

Péras, Lucien, to Regie Nationale des Usines Renault. Apparatus for handling and transporting molten metal. 3,003,206, 10-10-61, Cl. 22-82.

Péras, Lucien, to Regie Nationale des Usines Renault. Adjustable devices for metering and emulsifying gaseous and liquid substances. 3,003,708, 10-10-61, Cl. 261-71.

Péras, Lucien, to Regie Nationale des Usines Renault. Anti-shid device. 3,003,824, 10-10-61, Cl. 308-21.

Péras, Lucien, to Regie Nationale des Usines Renault. Process for producing a cobalt mercaptobenzoethiasole compound. 3,004,032, 10-10-61, Cl. 260-299.

Péras, Lucien, to Regie Nationale des Usines Renault. Electromagnets. 3,004,198, 10-10-61, Cl. 317-194.

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Perini, Mario, and G. Speroni, to Montecatini Società Generale per l'Industria Mineraria e Chimica. Process for preparing O,O-dialkyl, S-N-alkylcarbamylmethyl phosphorothioates. 3,004,066, 10-10-61, Cl. 246-461.

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Kauder, Otto S., and Perry. 3,003,999.

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Peterson, Edwin F. Mounting means especially for vibrators. 3,003,733, 10-10-61, Cl. 248-224.

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Hutto, John F. 3,004,089.

Lanning, William C. 3,003,580.

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Poethig, Robert E., and T. A. St. Clair, to The Bastian-Blessing Co. Gas dispensing system. 3,003,325, 10-10-61, Cl. 62-55.

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Blout, Elkan R., Haas, and Rogers. 3,003,872.

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Prien, Hans, and E. J. Wolff, to Licentia Patent-Verwaltungs-G.m.b.H. Switch. 3,004,125, 10-10-61, Cl. 200-166.

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Pugh, Deane W., and S. Lipton, to Esso Research and Engineering Co. Process of stripping a latex solution. 3,003,930, 10-10-61, Cl. 202-48.

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Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 5, 1962.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 87,766. Azienda Lavorazione Colori Resine e Adm. S.p.A., Milan, Italy. Filed Dec. 2, 1959.

ALCREA

Priority claimed under Sec. 44(d) on Italian application filed June 8, 1959; Reg. No. 147,004, dated Jan. 29, 1960. For Salified Colophony and Colophony Esters, Phenol Resins, Maleic Resins, Glycerophthalic or Alkyl Resins, Epoxidic Resins and Epoxidic Derivatives, Amino Resins, Resins From Nature Products, Polyesters, Resins and Synthetic Products for Foundry Use, Copolymer Oils, Water Soluble Resins, Emulsion Resins, Resins of the Vinyl Series in Solution, Resins of the Vinyl Series Under the Form of Solid Polymers, Polymeric Plasticizers.

SN 89,599. Anthony Nysen & Sons Inc., Babylon, N.Y. Filed Jan. 25, 1960.



For Plant and Flower Bulbs.
First use Dec. 15, 1959.

SN 99,581. The Firestix Company, Vernon, Tex. Filed June 23, 1960.

FIRESTIX

For Fire Starter Also Used as Flares and Candles.
First use Oct. 9, 1959.

SN 112,131. John R. Consolini and Mary S. Consolini, d.b.a. Watta-Crete Company, Canaan, Conn. Filed Jan. 19, 1961.

WATTA CRETE

For All Purpose Sand.
First use Nov. 10, 1960.

SN 113,024. Milwhite Mud Sales Company, Houston, Tex. Filed Feb. 3, 1961.

MIL-CEDAR PLUG

For Ground Cedar (Oil Extracted) Fiber for Use as a Loss Circulation Material in Drilling Fluids.
First use Dec. 28, 1960.

SN 113,471. Armour and Company, Chicago, Ill. Filed Feb. 13, 1961.

KORDOSKIN

Owner of Reg. Nos. 662,399, 670,060, and 708,572.
For Upper Leather.
First use Jan. 27, 1961.

TM 44

SN 113,525. Harvest Queen Mill & Elevator Company, Dallas, Tex. Filed Feb. 13, 1961.

HQM

For Oil Well Drilling Mud.
First use May 4, 1959.

SN 114,484. Hulkonen Brothers, d.b.a. Winter Wonderland Forests, Kaleva, Mich. Filed Feb. 27, 1961.

WINTER WONDERLAND

For Christmas Trees, Evergreen Wreaths, and Evergreen Roping.
First use Nov. 30, 1958.

SN 115,263. Shell Oil Company, New York, N.Y. Filed Mar. 9, 1961.

ALDOCRYL

For Synthetic Resins.
First use prior to Mar. 1, 1961.

SN 117,713. Charles O. Howe, d.b.a. Port City Mineral Company, Chicago, Ill. Filed Apr. 12, 1961.



For Bentonite.
First use Dec. 8, 1960.

Class 2—Receptacles

SN 95,290. Kay-eL Mfg. Co., Chicago, Ill. Filed Apr. 18, 1960.



The phrase "The Vault Without a Fault" is disclaimed apart from the mark as shown.
For Burial Vault.
First use on or before Aug. 25, 1925.

SN 115,192. Standard Plastics, Inc., Fogelsville, Pa. Filed Mar. 8, 1961.

TRAPEZE

For Paperboard Shock Absorbent Containers and Packages.
First use Feb. 26, 1961.

OCTOBER 10, 1961

U. S. PATENT OFFICE

TM 45

SN 115,335. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Mar. 10, 1961.

SN 117,681. The Barcolene Co., Boston, Mass. Filed Apr. 12, 1961.

VAN-TANK

For Rubberized Fabric Containers for Storing or Transporting Liquids.
First use Feb. 22, 1961.

SN 116,465. Bemis Bro. Bag Company, St. Louis, Mo. Filed Mar. 27, 1961.

BEMI-STRIP

Owner of Reg. Nos. 219,995, 685,158, and others.
For Closures Incorporated Into Paper Bags.
First use Mar. 10, 1961.

SN 119,540. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed May 8, 1961.

POWR-KRAFT

For Tool Chests and Tool Boxes.
First use Jan. 1, 1958.

SN 119,895. Scott-Greene Inc., Rye Beach, N.H. Filed May 12, 1961.

LITTLE GEM

For Soap Holder.
First use Dec. 12, 1960.

SN 120,182. Container Corporation of America, Chicago, Ill. Filed May 17, 1961.

GLASS BAND

For Paperboard Bottle Carriers.
First use June 15, 1959.

Class 4—Abrasives and Polishing Materials

SN 102,308. Eastern Research Corporation, Philadelphia, Pa. Filed Aug. 9, 1960.

FOAM-FINISH

For Wax for Cleaning and Polishing Floors.
First use Aug. 1, 1960.

SN 102,943. Myers, Ellis & Poulakidas, Chicago, Ill. Filed Aug. 18, 1960.

MYERS MIRACLE

For Polishing Composition for Use in Connection With Abrasive Surfaces in the Industrial Polishing of Metals.
First use on or about July 15, 1960.

SN 106,441. John C. Stalford & Sons, Inc., Baltimore, Md. Filed Oct. 14, 1960.

MRS. EARLY BIRD

For Self-Shining Wax for Floors and a Combined Metal Polish and Porcelain Cleaner.
First use Oct. 10, 1960.

BARCOLENE'S



Owner of Reg. Nos. 619,725, 712,360, and others.
For Furniture Polish.
First use Nov. 1, 1960.

SN 117,683. Blasto-Lite Corporation, Tampa, Fla. Filed Apr. 12, 1961.

BLASTO-LITE

For Abrasive Blasting Material Used in Pneumatic Hoses.
First use Nov. 2, 1960.

SN 117,711. Harri Hoffmann Co., Inc., Milwaukee, Wis. Filed Apr. 12, 1961.



Owner of Reg. No. 556,727.
For Shoe Polishes, Waxes, and Dressings.
First use Nov. 15, 1960; on or about Mar. 24, 1951, as to "Hoffco."

SN 118,766. Chicago Wheel & Manufacturing Co., Chicago, Ill. Filed Apr. 27, 1961.

CHICAGO

For Abrading Wheels.
First use at least as early as May 27, 1937.

Class 5—Adhesives

SN 104,252. General Tape Corporation, St. Paul, Minn. Filed Sept. 12, 1960.



The drawing is lined for blue.
For Pressure Sensitive Adhesive Tapes.
First use July 2, 1960.

Class 6—Chemicals and Chemical Compositions

SN 56,684. Colebert L. Andrus, d.b.a. Androc Chemical Company, Minneapolis, Minn. Filed Aug. 6, 1958.



Owner of Reg. No. 671,659.
For Wood Preservatives.
First use June 25, 1957.

SN 79,456. Charles N. Barnett, d.b.a. Barnett Chemical Products Co., Philadelphia, Pa., assignee of Elizabeth D. Barnett, d.b.a. Barnett Chemical Products Co., Philadelphia, Pa. Filed Aug. 13, 1959.

BARNETT BRAND

For Insecticides and Chlordane Concentrates for Manufacturing Purposes Only.
First use in 1935.

SN 55,902. Pilar River Plate Corp., Newark, N.J. Filed Nov. 23, 1959.

OAK 'S'

Applicant disclaims the word "Oak" apart from the mark as shown, without relinquishing common law rights.
For Blend Consisting of a Preparation of Chemically Treated Four Different Vegetable Materials Suitable for Tanning Purposes.
First use May 1, 1957.

SN 87,223. Genuine Parts Company, Atlanta, Ga. Filed Dec. 14, 1959.

MINUS -34

For Permanent Type Chemical Anti-Freeze for Use in Automotive Vehicles.
First use Aug. 28, 1959.

SN 96,635. Chemical Coating Materials Company, Belleville, N.J. Filed June 8, 1960.

TOPPING

For Vegetable Wax Products Used for Dressing Leather.
First use September 1945.

SN 103,037. National Chemsearch Corporation of Texas, Dallas, Tex. Filed Aug. 19, 1960.



Owner of Reg. No. 685,666.
For Liquid Dust Mop Treatment That Fireproofs Mops; Disinfectants, Wetting Agents, Coolants, Anti-Corrosion Agents, Fumigants, and Industrial and Institutional Deodorants.
First use Jan. 19, 1960; 1919 as to "National."

SN 107,229. Dakota Engineering, Inc., Culver City, Calif. Filed Oct. 24, 1960.

CEL-O-TYTE

For Chemical Foaming Agents for Cellulating Cements.
First use on or about July 1, 1960.

SN 111,880. The Garden Protector Corporation, Revere, Mass. Filed Jan. 16, 1961.

DICKORY DOCK

For Rodenticides.
First use Sept. 9, 1960.

SN 111,881. The Garden Protector Corporation, Revere, Mass. Filed Jan. 16, 1961.

JIGS-UP

For Insecticide.
First use Sept. 9, 1960.

SN 113,338. The Harshaw Chemical Company, Cleveland, Ohio. Filed Feb. 9, 1961.

NICHLOR

For Nickel Chloride.
First use Dec. 5, 1960.

SN 117,012. J. M. Huber Corporation, Borger, Tex. Filed Apr. 3, 1961.

HX-U

For Carbon Black.
First use Jan. 19, 1961.

SN 117,008. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Apr. 4, 1961.

RESISTERM

Owner of German Reg. No. 740,276, dated Sept. 15, 1960.
For Preserving Agents for Wood, Synthetic Materials, Rubber, Bitumen, Lacquers, Leather, Paper, Textiles, Cement and Building Panels.

SN 117,165. Bonded Oil Company, Springfield, Ohio. Filed Apr. 5, 1961.

GOLDEN GLO

For Charcoal Lighter Fluid.
First use Mar. 15, 1961.

SN 117,255. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Apr. 6, 1961.

BASINEX

Owner of German Reg. No. 719,427, dated Nov. 11, 1958.
For Insecticides, Herbicides, and Fungicides.

Class 12—Construction Materials

SN 101,768. Flat Metal Manufacturing Company, Franklin Park, Ill. Filed Aug. 1, 1960.



For Toilet Enclosures.
First use July 11, 1960.

SN 102,407. Morton Pottery Company, d.b.a. Morton Ceramic Tile Co., Morton, Ill. Filed Aug. 10, 1960.



For Ceramic Tile.
First use June 1, 1960.

SN 103,693. W. F. Webster Cement Company, Cambridge, Mass. Filed Aug. 30, 1960.

THIO-SEAL

For Synthetic Sealants and Waterproofing Compounds for Building Construction.
First use Feb. 10, 1960.
Subj. to Intf. with SN 109,347.

SN 106,318. Elgood Concrete Services Corp., Brooklyn, N.Y. Filed Oct. 13, 1960.

VOIDCRETE

For Inflatable Forms for Concrete Molds.
First use Mar. 2, 1960.

THIOSEAL

For Elastic Caulking and Expansion Joint Compound.
First use June 6, 1958.
Subj. to Intf. with SN 103,693.

SN 110,615. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 21, 1960.

DRIP-CHEK

For Rubber Base, Flexible Sealer.
First use Aug. 3, 1960.

SN 116,029. The O. Hommel Company, Carnegie, Pa. Filed Mar. 20, 1961.



For Ceramic Glasses.
First use June 1, 1960.

SN 116,996. General Portland Cement Company, Chicago, Ill. Filed Apr. 3, 1961.



For Portland Cement.
First use Aug. 1, 1960.

SN 117,099. Federal Steel Products Corporation, Waukegan, Wis. Filed Apr. 4, 1961.

FEDERALITE

For Windows.
First use Mar. 20, 1961.

SN 117,145. Timber Engineering Company, Washington, D.C. Filed Apr. 4, 1961.

TECO

Owner of Reg. Nos. 307,738, 701,547, and others.
For Split Ring Connectors, Shear Plates, Joist and Beam Hangers, Framing Anchors, Metal Bridging for Joists, Toothed Rings, Spike Grids, Clamping Plates, Plywood Supporting Clips, Truss Plates, L-Shaped Clips for Wood Framing and Post Caps, All Made of Metal and Intended for Use in Making or Reinforcing Joists or Connections in Wood Construction.
First use on or about Mar. 20, 1933, on toothed rings.

SN 121,126. Safway Steel Products, Inc., Milwaukee, Wis. Filed May 31, 1961.



Owner of Reg. Nos. 333,604, 346,866, and 584,268. For Shores, Portable and Permanent Grandstands and Bleachers, and Ramp-Type and Step-Type Chair Risers. First use July 1, 1959; June 1, 1935, as to "Safway."

Class 14—Metals and Metal Castings and Forgings

SN 75,738. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed June 15, 1959.

K SLAB

The word "Slab" is disclaimed apart from the mark as shown. For Continuously Cast Aluminum Bars. First use in or about October 1958.

SN 108,256. Ball Brothers Company, Incorporated, Muncie, Ind. Filed Nov. 14, 1960.

LITH-RITE

For Metal in Liquid Form for Coating Metal Articles. First use Nov. 4, 1960.

SN 111,281. National Steel Corporation, Pittsburgh, Pa. Filed Jan. 4, 1961.

N-A-XTRA

Owner of Reg. No. 383,993. For Plates, Sheets, Bars, and Shapes of Ferrous Metal. First use May 21, 1959.

SN 111,282. National Steel Corporation, Pittsburgh, Pa. Filed Jan. 4, 1961.



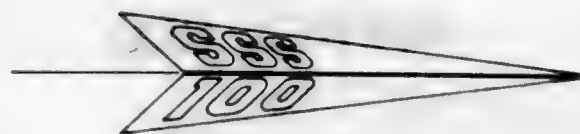
Owner of Reg. No. 383,993. For Plates, Sheets, Bars, and Shapes of Ferrous Metal. First use May 21, 1959.

SN 111,338. Kasle Steel Corporation, Dearborn, Mich. Filed Jan. 5, 1961.

GUARDMASTER

For Railway Crossing Guards. First use on or about Jan. 1, 1956.

SN 116,959. Armco Steel Corporation, Middletown, Ohio. Filed Apr. 3, 1961.



For High Strength Alloy Steel. First use May 28, 1960.

SN 117,213. National Steel Corporation, Pittsburgh, Pa. Filed Apr. 5, 1961.

X-A-R

For Low Alloy Steels. First use June 14, 1960.

Class 16—Protective and Decorative Coatings

SN 123,842. The Sherwin-Williams Company, Cleveland, Ohio. Filed July 12, 1961.

LOK-CEL

For Protective Paper Coatings in the Nature of a Transparent Liquid. First use Feb. 14, 1961.

SN 123,848. Thompson and Company, Oakmont, Pa. Filed July 12, 1961.

VINSYNITE

For Chemical Coatings for the Pretreatment of Metal Surfaces. First use June 30, 1948.

Class 18—Medicines and Pharmaceutical Preparations

SN 20,295. M. Lorenzo Perdiz, d.b.a. Vitalex Laboratories, Buffalo, N.Y. Filed Dec. 3, 1956.

MITCHELA



The three faces are purely fanciful. Owner of Reg. Nos. 103,954 and 371,109. For Medicament Administered Orally To Alleviate Menstrual Pain. First use 1948; 1876 as to the word "Mitchela."

SN 69,022. Puritan Laboratories, Inc., Des Moines, Iowa. Filed S.R. Mar. 5, 1959; Am. P.R. Dec. 18, 1959.

MIN-A-LAK

Owner of Reg. No. 653,576. For Feed Supplement Consisting Essentially of Vitamins and Minerals for Livestock and Poultry. First use Oct. 9, 1937.

SN 93,134. Beecham Research Laboratories Limited, Brentford, England. Filed Mar. 18, 1960.

DECEMYCIN

Owner of British Reg. No. 792,940, dated July 6, 1959. For Antibiotic Preparations and Substances.

SN 93,151. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

CILOPRIN

Owner of Swiss Reg. No. 116,637, dated July 30, 1946. For Pharmaceuticals for Human Use.

SN 108,562. The Mennen Company, Morristown, N.J. Filed Nov. 16, 1960.

MAGICOOL

For Preparation for Application to the Gums To Relieve Distress Due to Teething. First use July 20, 1960.

SN 108,564. The Mennen Company, Morristown, N.J. Filed Nov. 16, 1960.

MAGICAIDE

For Ointment for Treatment of Skin Rash. First use July 20, 1960.

SN 108,663. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Nov. 17, 1960.

GAMMAVAC

For Immunizing Vaccine To Be Administered by Injection. First use Oct. 27, 1960.

SN 109,193. Menlo Park Laboratories, Inc., Edison, N.J. Filed Nov. 28, 1960.

CETRIL

For Aerosol Skin Antiseptic and Cleanser. First use Sept. 28, 1960.

SN 110,450. Eli Lilly and Company, Indianapolis, Ind. Filed Dec. 19, 1960.

TYLAN

For Growth Promoting Swine Feed Supplement or Additive. First use Dec. 14, 1960.

SN 110,702. J. Carl Pfleger, d.b.a. MED Fabrik Chemisch-Pharmazeutischer Präparate J. Carl Pfleger, Berlin-Halen-see, Germany. Filed Dec. 22, 1960.

OMNIFLORA

Owner of German Reg. No. 739,652, dated Aug. 8, 1960. For Pharmaceutical Preparations Prohibiting Disturbances of the Normal Physiological Intestinal Bacterial Flora.

SN 112,519. Joseph V. Carda, Montreal, Quebec, Canada. Filed Jan. 20, 1961.

DH 112

Priority claimed under Sec. 44(d) on Canadian application filed Oct. 8, 1960; Reg. No. 132,414, dated June 2, 1961. For Pharmaceutical Preparations for Use as a General Geriatric Agent.

SN 115,718. Pharmaceutical Specialties, Inc., d.b.a. Dermatological Prescription Laboratories, Monterey, Calif. Filed Mar. 15, 1961.

VER-ACID

For Pharmaceutical Preparations Used in the Treatment of Diseases of the Skin. First use July 1, 1956.

SN 116,424. Polk Miller Products Corporation, Richmond, Va. Filed Mar. 24, 1961.

DERMA-FOAM

For Eczema Treatment for Dogs. First use Feb. 23, 1961.

SN 116,533. Irwin, Neisler & Co., Decatur, Ill. Filed Mar. 27, 1961.

ANALEXSAL

Owner of Reg. Nos. 696,324 and 696,325. For Analgesic. First use Mar. 7, 1961.

SN 117,389. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Apr. 7, 1961.

DELADROXONE

Owner of Reg. No. 623,940. For Hormone-Containing Preparations. First use Mar. 22, 1961.

SN 118,746. The Warren-Teed Products Company, Columbus, Ohio. Filed Apr. 26, 1961.



Owner of Reg. No. 712,401. For Pharmaceutical Products—Namely, Barbiturate for Sleeping; Analgesic for Relieving Painful Joints, Aching Muscles, Etc.; Ointment for Diaper Rash; and Ointment for Relief of Eczema, Hives, Etc. First use July 16, 1958.

SN 122,334. The S. E. Massengill Company, Bristol, Tenn. Filed June 19, 1961.

DARONIC

For Pharmaceutical—Namely, an Anti-Cholinergic Tablet. First use June 12, 1961.

SN 122,335. The S. E. Massengill Company, Bristol, Tenn. Filed June 19, 1961.

TUNASE

For Pharmaceutical—Namely, a Digestive Enzyme Capsule.
First use June 12, 1961.

SN 122,442. Hoffmann-La Roche Inc., Nutley, N.J. Filed June 20, 1961.

VALIUM

For Psychotherapeutic Agent.
First use June 12, 1961.

SN 122,527. Grove Laboratories Incorporated, St. Louis, Mo. Filed June 21, 1961.

NONOD

Owner of Reg. No. 384,404.
For Stay Awake Tablets.
First use at least as early as October 1935.

SN 122,788. Ethicon Standard Co., Inc., Long Island City, N.Y. Filed June 26, 1961.

DA-SINH-TO

For Nutritional Vitamin Preparation.
First use June 23, 1961.

SN 122,794. E. Fougere & Co., Inc., Hicksville, N.Y. Filed June 26, 1961.

ORABILEX

Owner of Reg. No. 629,415.
For Preparation for Oral Radiopaque Contrast Medium.
First use May 29, 1957.

SN 122,868. The Upjohn Company, Kalamazoo, Mich. Filed June 26, 1961.

MEDADENT

Owner of Reg. Nos. 699,724 and 694,143.
For Anti-Inflammatory Analgesic Preparation.
First use Feb. 16, 1961.

SN 122,909. The Upjohn Company, Kalamazoo, Mich. Filed June 26, 1961.

NORGLYCIN

For Antidiabetic Agent.
First use Mar. 29, 1961.

SN 122,921. Dome Chemicals, Inc., New York, N.Y. Filed June 27, 1961.

PREDNE-DOME

Owner of Reg. No. 664,324.
For Preparation for Inflammatory Pruritic and Allergic Disorders.
First use at least Aug. 12, 1957.

SN 122,961. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed June 27, 1961.

SURMONTIL

Priority claimed under Sec. 44(d) on French Reg. No. 495,422, dated Apr. 7, 1961 (Paris); Natl. Inst. No. 162,230.
For Medicinal Product for Antialgic and Anti-Depressive Action.

SN 123,090. W. V. Fitzsimmons, d.b.a. Muco-Lyte Drug & Chemical Co., Oak Park, Ill. Filed June 29, 1961.

MUCOLYSIN

For Preparation for Use in Steam Vaporizers for Relief of Respiratory Congestion.
First use Nov. 8, 1958.

SN 123,180. The Chloraseptic Co., Washington, D.C. Filed June 30, 1961.

Chloraseptic

Owner of Reg. No. 596,284.
For Mouthwash and Gargle.
First use July 15, 1952.

SN 123,223. Norgine Laboratories, Inc., New York, N.Y. Filed June 30, 1961.

MOVICOL

For Medicinal Preparation Used in the Treatment of Constipation.
First use Apr. 3, 1961.

SN 123,271. Breon Laboratories Inc., New York, N.Y. Filed July 3, 1961.

BRONKOSPAN

Owner of Reg. Nos. 604,751, 699,726, and others.
For Anti-Asthmatic Preparation.
First use June 16, 1961.

SN 123,285. Dartell Laboratories, Inc., d.b.a. Dartell Laboratories, Los Angeles, Calif. Filed July 3, 1961.

HOLOGEN

For Geriatric Nutritional Supplement Containing Digestants, Vitamins, Protein Enhancement Factors, Lipotropes, and Minerals.
First use June 5, 1961.

SN 123,328. Eli Lilly and Company, Indianapolis, Ind. Filed July 3, 1961.

DIPATE

For Equine Anthelmintic.
First use June 28, 1961.

SN 123,432. Merck & Co., Inc., Rahway, N.J. Filed July 5, 1961.

PERIDECA

For Steroid Preparation for use in Hormonal Therapy.
First use June 2, 1961.

SN 123,433. Merck & Co., Inc., Rahway, N.J. Filed July 5, 1961.

POLIFORT

For Vitamin Preparation.
First use June 2, 1961.

SN 123,456. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed July 6, 1961.

ARTESIC

For Preparation for the Treatment of Musculoskeletal Disorders.
First use June 27, 1961.

SN 123,605. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

BERMIL

For Pharmaceutical Preparation for use as an Aid to Relieve Pain and to Achieve Sleep.
First use May 26, 1961.

SN 123,607. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

MIL

For Pharmaceutical Preparation for use as an Aid to Relieve Pain and to Achieve Sleep.
First use May 26, 1961.

SN 123,608. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

NEUROMIL

For Pharmaceutical Preparation for use as an Aid to Relieve Pain and to Achieve Sleep.
First use May 26, 1961.

SN 123,609. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

OPTIMIL

For Pharmaceutical Preparation for use as an Aid to Relieve Pain and to Achieve Sleep.
First use May 26, 1961.

SN 124,152. The Upjohn Company, Kalamazoo, Mich. Filed July 17, 1961.

PROXOL

Owner of Reg. No. 709,244.
For Muscle Relaxant-Tranquillizer Compound.
First use Apr. 14, 1961.

Class 19—Vehicles

SN 113,213. E. D. Hall Mfg., Inc., North Hollywood, Calif. Filed Feb. 7, 1961.

ALASKAN

For Telescoping Cabins for Trucks and Similar Vehicles.
First use Jan. 27, 1961.

TM 771 O.G.—C

SN 116,161. Povanska Strojarna, Narodny Podnik, Povanska Bystrica, Czechoslovakia. Filed Mar. 8, 1961.



No claim is made to the inscription "Made in Czechoslovakia." "Manet" is a Latin word meaning "It (or he or she) remains." Owner of Czechoslovakian Reg. No. 119,926, dated Apr. 15, 1948.

For Bicycles, Motor Bicycles, Motorcycles, Motorised Three Wheelers, Scooters, Minicars, Mopeds, Motor Cars, and Parts Thereof.

SN 118,508. Sutone Corporation, Los Angeles, Calif. Filed Apr. 24, 1961.

HI-LO TWIN

For Curb Feelers.
First use September 1958.

SN 118,511. Sutone Corporation, Los Angeles, Calif. Filed Apr. 24, 1961.

CURB-A-LINE

For Curb Feelers.
First use February 1948.

Class 20—Linoleum and Oiled Cloth

SN 92,921. Polyplastex United, Inc., Union, N.J. Filed Mar. 15, 1960.



For Flexible Paper-Backed Vinyl Laminate Wall Covering.
First use July 10, 1959.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 100,831. Benco Television Associates Limited, Rexdale, Ontario, Canada. Filed July 14, 1960.

BENCO

For Amplifiers, Impedance Matching Transformers, Solenoid Connections, Tap-Offs, Antenna Couplers, UHF Converters and Interference Traps.
First use on or about July 23, 1956, on amplifiers and antenna couplers; in commerce on or about July 23, 1956.

SN 101,082. Daystrom, Incorporated, Murray Hill, N.J. Filed July 19, 1960.

D-PAK

For Constant Current Supply Unit for Use in Measuring Instruments.
First use Jan. 8, 1960.

SN 101,900. Societe Anonyme pour l'Equiptement Electrique des Vehicules, Issy-les-Moulineaux, Seine, France. Filed Aug. 2, 1960.

S.E.V.

Priority claimed under Sec. 44(d) on French Reg. No. 496,170, dated Feb. 19, 1960 (Seine); Natl. Inst. No. 139,445. For Electrical Apparatus and Accessories—Namely, Apparatus of All Kinds Relating to Electrical Equipment of Automotive Vehicles, Airplanes, Railroad Trains, in Particular, Magnetos, Spark Plugs, Ignition Coils for Motors, Battery Ignition Devices, Distributors, Ignition Accessories for Regulators, Contactors and Points, Instrument Panels, Headlights, Parking Lights, Electric Horns, Electric Switches, Electric Windshield Wipers; Electric Suction Dust Cleaners, Vacuum Cleaners, Electric Pulverizers, Electric Hair Dryers, Electric Carpet Sweepers, Electric Floor Polishers, Electric Irons, Electric Floor Rubbing and Waxing Machines, Electric Refrigerators, Freezers and Ice Makers.

SN 105,162. Harvill Corporation, Los Angeles, Calif. Filed Sept. 26, 1960.

dispoZmaster

For Electric Garbage Disposers.
First use on or about Aug. 3, 1960.

SN 105,250. Minimodels Limited, Havant, England. Filed Sept. 16, 1960.

SCALEXTRIC

For Electrical Apparatus for Controlling the Speed of Toy Automobiles.
First use January 1957; in commerce Sept. 4, 1957.

SN 105,739. General Electric Company, Schenectady, N.Y. Filed Oct. 4, 1960.

CUSTOM 8000

For Dynamoelectric Machines—Namely, Electric Motors.
First use June 30, 1959.

SN 111,943. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Jan. 16, 1961.

IMMERSE-A-MATIC

For Electrical Appliances—Namely, Fry Pans, Griddles, Dutch Ovens and Sauce Pans, and Automatic Controls Used in the Operation of the Aforesaid Electrical Appliances.
First use on or about July 24, 1958.

SN 115,053. Graphic Electronics, Inc., La Salle, Ill. Filed Mar. 7, 1961.

PHOTO-LATHE

For Electronic Engraving Machines.
First use Jan. 27, 1961.

SN 115,134. El-Tronics, Inc., Warren, Pa. Filed Mar. 8, 1961.

WHISPER-LITE

For Negative Glow Lamps.
First use Jan. 24, 1961.

SN 115,197. Sorrette Storage Battery Co., Inc., Salem, Mass. Filed Mar. 8, 1961.

REZISTOX

Owner of Reg. Nos. 422,626 and 610,999.
For Plate and Plate Grids for Electrical Storage Batteries.
First use 1955; July 1, 1944 in another display.

SN 116,302. General Motors Corporation, Detroit, Mich. Filed Mar. 23, 1961.

ACHIEVERFONE

For Radios and Parts Thereof.
First use Feb. 17, 1960.

SN 119,514. Harvic Manufacturing Corp., New York, N.Y. Filed May 8, 1961.

PIZZAZZIP

For Electric Ovens.
First use Mar. 10, 1961.

SN 119,615. Faradyne Electronics Corp., Belleville, N.J. Filed May 9, 1961.

FARATAN

For Capacitors (Tantalum).
First use Apr. 27, 1961.

SN 119,726. U.S. Engineering Co., d.b.a. Litton Industries, Van Nuys, Calif. Filed May 10, 1961.

LOC-FIT

For Electrical Terminals.
First use on or about Dec. 16, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 101,519. Henry Tichauer, Buffalo, N.Y. Filed July 26, 1960.

EAGLE CHESS

The word "Chess" is disclaimed apart from the mark as shown.
For Equipment Sold as a Unit for Playing a Chess-Type Board Game and Including Playing Pieces and a Board.
First use on or about May 18, 1960.

SN 102,845. Higbie Manufacturing Company, Rochester, Mich. Filed Aug. 17, 1960.



The drawing is lined for red, but color is not claimed as a feature of the mark.
For Fishing Tackle—Vis., Fishing Reels.
First use June 10, 1960.

SN 104,618. Magnum Sports Products Corporation, Pekin, Ill. Filed Sept. 16, 1960.

SN 107,962. Smith-Wire Company, Felton, Calif. Filed Nov. 7, 1960.



For Duck Calls, Goose Calls, Crow Calls, Predator Calls, and Deer Calls.
First use Aug. 3, 1960.

SN 104,619. Magnum Sports Products Corporation, Pekin, Ill. Filed Sept. 16, 1960.

magnum

For Duck Calls, Goose Calls, Crow Calls, Predator Calls, and Deer Calls.
First use Aug. 3, 1960.

SN 104,620. Magnum Sports Products Corporation, Pekin, Ill. Filed Sept. 16, 1960.

magnumtone

For Duck Calls, Goose Calls, Crow Calls, Predator Calls, and Deer Calls.
First use Aug. 3, 1960.

SN 104,631. Minimodels Limited, Havant, England. Filed Sept. 16, 1960.

SCALEXTRIC

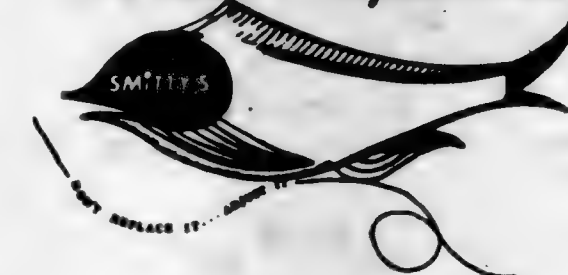
For Electrically Operated Toy Automobiles, Tracks for Use in Connection Therewith, and Scale Models of Buildings, Bridges and Like Structures, All Being Toys.
First use January 1957; in commerce Sept. 4, 1957 on electrically operated toy automobiles and trucks.

SN 105,120. Donald F. Boone, d.b.a. Don's Balts, Goldenrod, Fla. Filed Sept. 23, 1960.

**POT-GUT**

The drawing is lined for red, but color is not claimed as a feature of the mark.
For Artificial Fishing Lures.
First use Dec. 1, 1957.

IT'S NEW... *adjust-a-lure*



The words "It's New... Adjust-A-Lure" and "Don't Replace It... Adjust It" are disclaimed apart from the mark shown.
For Fishing Lures.
First use June 15, 1959.

SN 110,281. The Ohio Art Company, Bryan, Ohio. Filed Dec. 15, 1960.

ETCH A SKETCH

For Toy Self-Contained Opaque Screen Sketching Devices.
First use Apr. 1, 1960.

SN 112,056. Link Research & Development Corp., Beverly Hills, Calif. Filed Jan. 18, 1961.

SUMMIT

For Equipment Sold as a Unit for Playing a Type of Board Game.
First use Dec. 28, 1960.

SN 113,279. J. A. Hagen & Co., Inc., Mattapoisett, Mass. Filed Feb. 8, 1961.

BIG SQUIRT

For Toys—Namely, Imitation Clams Made of Plastic.
First use Jan. 5, 1961.

SN 113,280. J. A. Hagen & Co., Inc., Mattapoisett, Mass. Filed Feb. 8, 1961.

LITTLE SQUIRT

For Toys—Namely, Imitation Clams Made of Plastic.
First use Jan. 5, 1961.

SN 113,696. T. H. Davis-J. W. Pearson, Elyria, Ohio. Filed Feb. 15, 1961.

THIRSTEE'S

For Golf Tees.
First use Feb. 2, 1961.

SN 114,350. The Seamless Rubber Company, New Haven, Conn. Filed Feb. 24, 1961.

SUPER "A"

Applicant disclaims any right to the word "Super." Owner of Reg. No. 681,437.
For Underwater Sports Equipment—Namely, Rubber Fins and Face Masks.
First use Mar. 7, 1960.

SN 114,422. Vernon Brown Co., Chicago, Ill. Filed Feb. 27, 1961.

LAKE GUIDE

For Fishing Spot Markers, or Devices for Marking Locations on a Body of Water.
First use on or about May 6, 1960.

SN 114,423. Vernon Brown Co., Chicago, Ill. Filed Feb. 27, 1961.



For Fishing Spot Markers, or Devices for Marking Locations on a Body of Water.
First use on or about May 6, 1960.

SN 115,312. David A. De Long, d.b.a. De Long Lures, Cleveland, Ohio. Filed Mar. 10, 1961.

AXALIVE

For Fish Lures.
First use on or about Feb. 3, 1961.

SN 115,352. M. T. & D. Company, Cleveland, Ohio. Filed Mar. 10, 1961.

WHEEL KING

For Coaster Wagons for Juveniles.
First use Feb. 20, 1961.

SN 115,357. MacGregor Sports Products, Inc., Cincinnati, Ohio. Filed Mar. 10, 1961.

DX

For Golf Balls.
First use May 1939.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 109,100. Rees, Pitchford & Company, Limited, London, England. Filed Nov. 25, 1960.



Owner of British Reg. No. 645,854, dated March 14, 1946.
For Stapling Machines, Pencil Sharpeners, Numbering Machines, Punches, Perforators, and Daters.

SN 112,803. VanDale, Inc., Long Lake, Minn. Filed Jan. 30, 1961.

ROTOMATIC

For Silo Unloader Assemblies and Parts Thereof.
First use October 1950.

Class 24—Laundry Appliances and Machines

SN 110,653. Automatic Steam Products Corp., New York, N.Y. Filed Dec. 22, 1960.

CYCLO-MATIC

For Steam Cabinets for Treatment of Clothing.
First use Oct. 8, 1958.

SN 110,883. General Manufacturing, Inc., El Dorado, Kans. Filed Mar. 31, 1961.

Zephyr-Dry

For Cabinet Type Electric Laundry Dryer.
First use Mar. 20, 1961.

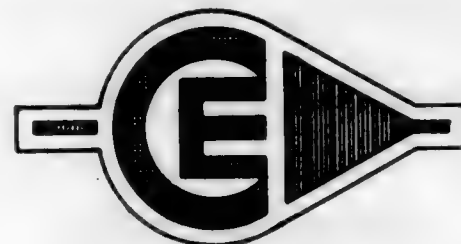
Class 26—Measuring and Scientific Appliances

SN 85,596. Internationale Fernseh Agentur G.m.b.H., Wiesbaden, Germany. Filed Nov. 18, 1959.



Priority claimed under Sec. 44(d) on German application filed May 21, 1959; Reg. No. 730,633 dated Nov. 3, 1959.
For Films.

SN 98,441. Computer Engineering Associates, Inc., Pasadena, Calif. Filed June 6, 1960.



The drawing is lined for red and black.
For Analogue Computers, and Amplifiers and Power Supplies Therefor.
First use Aug. 8, 1958.

SN 105,961. Cormac Chemical Corporation, New York, N.Y. Filed Oct. 7, 1960.

UNIKIT

For Photographic Processing Kits.
First use Mar. 17, 1960.

SN 115,973. Vapor Heating Corporation, Chicago, Ill. Filed Mar. 17, 1961.

"TELATEMP"

For Motor Temperature Control.
First use Aug. 6, 1960.

SN 119,397. Management Assistance, Incorporated, New York, N.Y. Filed May 5, 1961.

WROC

For Computing Machines.
First use Oct. 23, 1958.

SN 119,661. Affiliated Manufacturers, Inc., Oldwick, N.J. Filed May 10, 1961.

VACUARM

For Automatic Vacuum Pick-Up Arm for Sorting and Feeding of Small Parts.
First use Apr. 11, 1961.

SN 119,865. Epaco, Incorporated, Cambridge, Mass. Filed May 12, 1961.

VIDEOVERTER

For Data Processing Apparatus, and More Particularly, Electronic Analog-To-Digital Signal Converters.
First use Aug. 19, 1960.

SN 119,918. Atlantic Industrial Corporation, Newark, N.J. Filed May 15, 1961.

TUF-COAT

For Tape Rules.
First use May 4, 1961.

Class 29—Brooms, Brushes, and Dusters

SN 106,780. Aktiebolaget Husqvarna Borstfabrik, Huskvarna, Sweden. Filed Oct. 20, 1960.

SILUETT

Owner of Swedish Reg. No. 84,334, dated Feb. 21, 1958.
For Household Cleaning and Scrubbing Brushes, Tooth Brushes, Bath Brushes, and Car Brushes, Floor Mops, and Sponge Mops.

SN 116,749. Polychrome Corporation, Yonkers, N.Y. Filed Mar. 20, 1961.

WIPONS

For Pads for Applying Liquid Chemicals to Lithographic Plates.
First use December 1960.

Class 32—Furniture and Upholstery

SN 104,486. Royal Metal Manufacturing Company, Inc., New York, N.Y. Filed Sept. 14, 1960.

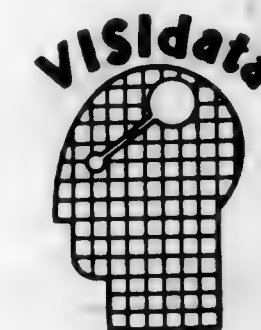
TORSION TILT

For Chairs.
First use Feb. 22, 1960.

SN 111,157. Beby Bedding Corporation, Bayonne, N.J. Filed Jan. 3, 1961.

CURLATEX

For Mattresses.
First use March 1940.



Owner of Reg. No. 685,612.
For Visible Filing Equipment Adapted to Achieve a Two-Dimensional Compartmentation for Rapid One-Motion Location and Refiling of Data-Processing Cards Whether Singly or in Multiple Sets.
First use Mar. 3, 1961.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 103,882. United States Rubber Company, New York, N.Y. Filed Sept. 2, 1960.

STAR STREAK

For Pneumatic Tires.
First use Aug. 2, 1960.

Class 36—Musical Instruments and Supplies

SN 116,060. Charles S. Ogabury, d.b.a. ODE Company, Boulder, Colo. Filed Mar. 20, 1961.

ODE

For Banjos.
First use Dec. 10, 1960.

SN 116,113. Morris Feldenkreis, d.b.a. Mark Field, Philadelphia, Pa. Filed Mar. 21, 1961.

MARFEL

For Phonograph Records.
First use Mar. 16, 1961.

SN 116,337. Pacific Electro Magnetica Co., Inc., Palo Alto, Calif. Filed Mar. 23, 1961.



For Magnetic Tape Recorders Used to Measure and Collect Scientific Data.
First use Sept. 30, 1960.

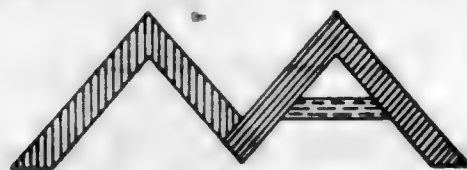
SN 116,386. Robert J. Cores, d.b.a. Aurora Record Co., Northlake, Ill. Filed Mar. 24, 1961.



For Phonograph Records and Albums.
First use June 4, 1958.

Class 37—Paper and Stationery

SN 74,237. Morgan Adhesives Company, Stow, Ohio. Filed May 21, 1959.



The accompanying drawing of the trademark is lined to show the left half of the letter "M" in bright red and the right half of said letter in a darker red with the crossbar underneath, forming the letter "A," in gray.

For Adhesive Papers of the Plain and Coated Variety, Including Fluorescent Paper, Foils (Laminated and Solid), and Colored Paper of All Kinds.

First use May 13, 1959.

SN 110,935. Walter Emmermann, Hamburg, Germany. Filed Dec. 28, 1960.

Raja

For Fountain Pens, Points for Fountain Pens and Propelling Pencils.
First use 1923; in commerce Sept. 9, 1959.

SN 115,154. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 8, 1961.

TISHEEZ

Owner of Reg. No. 299,676.
For Absorbent Paper—Namely, Facial Tissue.
First use Feb. 27, 1961.

SN 115,384. W. A. Sheaffer Pen Company, Fort Madison, Iowa. Filed Mar. 10, 1961.

REMINDER

For Clip Which is Incorporated in Ball Point Pens.
First use Feb. 3, 1961.

SN 115,901. Diebold, Incorporated, Canton, Ohio. Filed Mar. 17, 1961.

A#BC

For Card Guides.
First use Nov. 8, 1960.

SN 117,247. American Can Company, New York, N.Y. Filed Apr. 6, 1961.

CONTESSA

For Facial Tissue, Paper Towels, Toilet Tissue and Napkins.

First use Dec. 28, 1960.

SN 117,266. A. W. Faber-Castell Pencil Co. Inc., Newark, N.J. Filed Apr. 6, 1961.

METALLO

For Pencils and Pencils With Erasers Attached.
First use Aug. 16, 1949.

SN 117,505. Kimberly-Clark Corporation, Neenah, Wis. Filed Apr. 10, 1961.

COUSIN CASUAL



For Paper Table Napkins.
First use Mar. 31, 1961.

SN 118,706. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Apr. 26, 1961.

WAYLITE

For Fine Paper.
First use on or about Nov. 28, 1958.

Class 38—Prints and Publications

SN 83,925. Thorne Films, Inc., Boulder, Colo. Filed Oct. 23, 1959.



The word "Films" is disclaimed apart from the mark.
For Motion Picture Films.
First use Mar. 31, 1955.

SN 86,298. Magazines For Industry, Inc., New York, N.Y. Filed Nov. 30, 1959.

FOOD & DRUG PACKAGING

For Bi-Monthly Food and Drug Packaging Trade Magazine.
First use Nov. 5, 1959.

SN 89,701. Progressive Publications, Inc., Kenilworth, Ill. Filed Jan. 28, 1960.

**TIME
FOR
TOYS**

For Merchandise Catalogs, Issued Several Times a Year.
First use on or about Sept. 15, 1959.

SN 97,800. Gladen Enterprises, Inc., Bay City, Mich. Filed May 28, 1960.

ZIP CLIP

Applicant disclaims exclusive use of the word "Clip" apart from the mark as shown.
For Paper Clips Which Have Printed Matter Thereon.
First use Apr. 11, 1960.

SN 99,744. Industrial Electronic Publications, Inc., New York, N.Y. Filed June 27, 1960.

**INDUSTRIAL ELECTRONIC
ENGINEERING &
MAINTENANCE**

For Trade Magazine.
First use May 2, 1960.

SN 102,655. Thelma Greig, d.b.a. Larkline Publishing Company, Porterville, Calif. Filed Aug. 15, 1960.



For Booklets.
First use July 1, 1960.

SN 102,656. Thelma Greig, d.b.a. Larkline Publishing Company, Porterville, Calif. Filed Aug. 15, 1960.

IT'S A LARK

For Booklets.
First use July 1, 1960.

SN 104,417. The Art Foundation Press, Inc., New York, N.Y. Filed Sept. 14, 1960.

PORTFOLIO

For Semi-Annually Published Illustrated Journal of the Humanities, Particularly of the Fine Arts.
First use in May 1959.

SN 106,964. Wm. F. Zummach, Inc., Milwaukee, Wis. Filed Oct. 21, 1960.

COLOR MOBILITY

For Books and Charts Designed to Permit Colors to be Associated for the Purpose of Demonstrating the Effect of Different Combinations.
First use Oct. 22, 1959.

SN 109,376. Barry Process Co., Inc., Brooklyn, N.Y. Filed Dec. 1, 1960.

BARRY HI-DEPOSIT

For Color Cards.
First use Sept. 7, 1960.

SN 109,684. Ethicon, Inc., Bridgewater Township, N.J. Filed Dec. 6, 1960.

COLLAGEN CURRENTS

For Scientific Publication Published at Irregular Intervals.
First use July 1, 1960.

SN 111,320. Brown-Hawkins, Geneva, Ill. Filed Jan. 5, 1961.

HOMESTEAD AVOCATIONIST

For Fact Sheets—Namely, Detail Drawings for Home Maintenance, Remodeling and Home Workshop Projects.
First use Dec. 10, 1960.

SN 112,507. U.S. Health Club Inc., Bergenfield, N.J. Filed Jan. 25, 1961.

VITALITY

For Periodical Publication Devoted to News of Health Foods and Vitamins.
First use Nov. 1, 1960.

SN 112,579. William L. Zevely, d.b.a. Zevely Publishing Company, Lynn, Mo. Filed Jan. 26, 1961.

UNTERRIFIED DEMOCRAT

For Newspaper Published Weekly.
First use in July 1866.

SN 112,723. The Hearst Corporation, New York, N.Y. Filed Jan. 30, 1961.

Now See Here!

For Newspaper Column.
First use Jan. 9, 1961.

SN 112,863. Science & Industry Publishing Corporation, Evanston, Ill. Filed Jan. 31, 1961.

MIDWEST BOAT DEALER

For Periodical Publication.
First use on or about Jan. 11, 1961.

SN 113,106. Executive Publications, Inc., Greensboro, N.C. Filed Feb. 6, 1961.

PLAY/SOUTH

For Magazine.
First use Nov. 17, 1960.

SN 113,564. Science Information Bureau, Inc., New York, N.Y. Filed Feb. 13, 1961.

CONFERENCE

For Professional Periodical in the Fields of Medicine and Public Health.
First use Aug. 10, 1960.

SN 116,917. The Radio Bible Class, Inc., Grand Rapids, Mich. Filed Mar. 31, 1961.

OUR DAILY BREAD

For Periodical Relating to Religious Texts.
First use April 1956.

SN 116,932. Summy-Birchard Publishing Company, Evanston, Ill. Filed Mar. 31, 1961.



For Sheet Music, Music Instruction Books, Musical Compilations, Music Catalogs and Source Books, Song and Choral Books.

First use during 1956 on sheet music.

SN 117,005. Harvard Yearbook Publications, Incorporated, Cambridge, Mass. Filed Apr. 3, 1961.

CAMBRIDGE 38

For Magazine.
First use June 1958.

SN 117,235. United Feature Syndicate, Inc., New York, N.Y. Filed Apr. 5, 1961.

HEALTH CAPSULES

For Cartoon Panel.
First use Feb. 20, 1961.

SN 118,271. Merchandiser Publishing Company, Inc., New York, N.Y. Filed Apr. 20, 1961.



For Trade Publication Produced Annually.
First use Mar. 29, 1961.

SN 118,652. Cart Publishing Co. Inc., Chicago, Ill. Filed Apr. 26, 1961.

The *Cart*

For Magazine.
First use Apr. 5, 1961.

Class 39—Clothing

SN 98,224. The Joseph & Feins Company, Cleveland, Ohio. Filed June 1, 1960.

SCOTSWEIGH TWEED

The word "Tweed" is disclaimed apart from the mark as shown.

For Fabric Sold Only in the Form of Completed Men's Apparel—Namely, Suits, Overcoats, Topcoats, Sport Coats, and Slacks.

First use on or about May 1, 1958.

SN 98,751. United States Rubber Company, New York, N.Y. Filed June 9, 1960.

AQUA FOAM

For Bathing Caps and Bathing Shoes.
First use in 1956 on bathing caps.

SN 103,368. Santa's Village, Arcadia, Calif. Filed Aug. 24, 1960.

SANTA'S VILLAGE

For Clothing, More Especially T-Shirts, Hats, Ties and Slippers.

First use June 1, 1955.

SN 111,763. The Russell Manufacturing Company, Alexander City, Ala. Filed Jan. 12, 1961.

PAMKIN

For Children's Knitted Sleeping Garments.
First use Feb. 10, 1960.

SN 112,221. Cluett, Peabody & Co., Inc., New York, N.Y. Filed Jan. 23, 1961.



Owner of Reg. Nos. 420,755, 664,408 and others.
For Handkerchiefs, Women's Dresses, Men's Hats, Pajamas, Undershirts, Underdrawers, Neckties, Outer Belts, Garters, Suspenders, Men's Jackets, Men's Gloves, Men's Abdominal Supporters, Men's Athletic Supporters, Men's Shoes, Men's Slippers, Men's Bathing Slippers and Men's Loafers.
First use December 1946.

SN 114,381. The Lovable Brassiere Co., Atlanta, Ga. Filed Feb. 24, 1961.

SUDDEN COMFORT

For Brassieres.
First use Feb. 9, 1961.

SN 114,527. Penn State Mills, Inc., Allentown, Pa. Filed Feb. 27, 1961.

BARCOURT

For Underwear and Outerwear for Men, Women, and Children—Namely, Shirts, Shorts, Coats, Trousers, and Sweaters.
First use Oct. 18, 1960.

SN 117,151. Marty Walker Inc., New York, N.Y. Filed Mar. 6, 1961. SN 114,239. Masland Duralather Company, Philadelphia, Pa. Filed Feb. 23, 1961.



For Men's Trousers, Sport Jackets, and Suits.
First use Nov. 9, 1954.

SN 119,756. Dial Shoe Company, Inc., Philadelphia, Pa. Filed May 11, 1961.

PAPALLINI

For Women's Shoes.
First use Jan. 27, 1959.
Subj. to Int'l. with Reg. No. 718,284.

SN 124,900. Bay State Mfg. Co., Inc., Boston, Mass. Filed July 31, 1961.



For Women's and Misses' Dresses.
First use Dec. 3, 1956; July 25, 1940 as to "Demi-Tasse."

Class 40—Fancy Goods, Furnishings, and Notions

SN 114,736. Mitchell Products, New York, N.Y. Filed Mar. 1, 1961.



For Combs, Barrettes and Head Bands.
First use December 1942.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 102,250. New Castle Products, Inc., New Castle, Ind. Filed Aug. 8, 1960.

NUCA-TEX

For Fabric Backed Plastic Film Material for Use in Covering Accordion Type Doors, Folding Partitions, Upholstery, and the Like.
First use July 6, 1960.



No claim is made to the words "Strength and Shape" apart from the mark as shown. Owner of Reg. Nos. 612,665, 598,012 and 523,708.

For Vinyl Upholstery Material.
First use January 1961.

SN 115,826. Morgan-Jones, Inc., New York, N.Y. Filed Mar. 16, 1961.

INSULAIRE

For Blankets.
First use Jan. 26, 1961.

SN 116,256. H. M. Prince Textiles Inc., New York, N.Y. Filed Mar. 22, 1961.

CARAMEL

For Textile Fabrics in the Piece of Wool, Worsted, Synthetic Fibres, and Mixtures Thereof.
First use Sept. 1, 1960.

SN 117,003. Harburt, Inc., Boston, Mass. Filed Apr. 3, 1961.

MULTIGARD

For Treated Fabric Used as a Component of Women's and Misses' Outer Garments.
First use Aug. 23, 1960.

Class 44—Dental, Medical, and Surgical Appliances

SN 104,112. The Pyramid Rubber Company, Ravenna, Ohio. Filed Sept. 8, 1960.

SURE-GRIP

For Caps and Discs for Nursing Bottles.
First use Dec. 27, 1949.

SN 117,793. Walter Lyons and Company, Inc., East Boston, Mass. Filed Apr. 13, 1961.

LYONS ALL-DAY

For Adhesive Denture Cushions and Adhesive Suction Cushions for Dental Plates.
First use Feb. 10, 1950.

Class 46—Foods and Ingredients of Foods

SN 68,701. Chauncey D. Johnson, d.b.a. Neychau Company, Santa Ana, Calif. Filed Mar. 2, 1959.



For Oil Base Seasoned Sauce, Canned Shrimp Cooked in a Seasoned Sauce, and Canned Shrimp Salad.
First use July 4, 1957.

SN 89,405. E. J. Brach & Sons, Chicago, Ill. Filed Jan. 21, 1960.

TALKING HEARTS

No claim is made to the exclusive use of "Hearts" apart from the mark as shown.
For Candy.
First use Dec. 30, 1959.

SN 93,604. Green Bay Food Company, Green Bay, Wis. Filed Mar. 24, 1960.

HEIFETZ

For Pickles, and Pickled Products—Namely, Relishes, Onions, Peppers, Sauerkraut, and Tomatoes.
First use about 1940; prior to Apr. 8, 1938 as to "Heifetz Products."

SN 101,086. Dorann Foods, Inc., Rye, N.Y. Filed July 19, 1960.

ALPINE

For Salad Dressing.
First use June 20, 1960.

SN 108,027. Continental Baking Company, Rye, N.Y. Filed Nov. 8, 1960.

CONTINENTAL

For Bread Products.
First use Sept. 29, 1925.

SN 108,485. Hygrade Food Products Corporation, Detroit, Mich. Filed Nov. 15, 1960.



Owner of Reg. No. 384,040.
For Fresh, Canned, and Smoked Ham.
First use Apr. 24, 1937.

SN 110,051. General Mills, Inc., Minneapolis, Minn. Filed Dec. 12, 1960.

ROUTE 900

The number "900" has been disclaimed apart from the mark.
For Dietary Food Concentrate for Weight Control.
First use Nov. 8, 1960.

SN 110,983. Patrick J. De Pasquale, d.b.a. De Pasquale Spumoni Company, Hartford, Conn. Filed Dec. 29, 1960.



No claim of exclusive right is made to the wording "Genuine Spumoni De Luxe Italian Ice Cream" as the name of the goods herein or to the representation per se of the goods.
Owner of Reg. No. 601,983.
For Spumoni Ice Cream.
First use Oct. 19, 1951.

SN 111,094. General Preserve Company, Inc., Brooklyn, N.Y. Filed Dec. 30, 1960.

QUINCERVE

For Quince Preserves.
First use Mar. 6, 1958.

SN 111,717. Robert C. Aaron, d.b.a. C. R. Aaron Co., Tupelo, Miss. Filed Jan. 12, 1961.

"FRENCHBURGER"

For Sandwiches.
First use July 21, 1959.

SN 112,024. Campbell Soup Company, Camden, N.J. Filed Jan. 18, 1961.

FRANCO-AMERICAN

Owner of Reg. Nos. 84,312, 616,813 and others.
For Canned Sauces, Both Meatless and Containing Meat, and Canned Gravies, Both Meatless and Containing Meat.
First use Sept. 7, 1951 on sauce.

SN 112,819. Adams Corporation, Korn Kuris Division, Beloit, Wis. Filed Jan. 31, 1961.

GOLD'N KORN

For Food Snacks in the Nature of Corn Strips.
First use Jan. 7, 1961.

SN 113,528. Hygrade Food Products Corporation, Detroit, Mich. Filed Feb. 13, 1961.

FIESTA

Owner of Reg. No. 695,779.
For Meat Products—Namely, Wieners, Sliced Bacon, and Smoked Ham.
First use Dec. 31, 1956 on smoked ham.

SN 115,914. Hackmeister, Inc., McKees Rocks, Pa. Filed Mar. 17, 1961.

MOL-O-MON

For Food Emulsifier Comprised Principally of Concentrated Monoglyceride.
First use on or about Nov. 28, 1960.

SN 116,892. John Dulcich, d.b.a. John Dulcich & Sons, Earlham, Calif. Filed Mar. 24, 1961.



For Fresh Grapes.
First use Aug. 8, 1959.

SN 116,704. Columbia River Packers Association, Inc., Astoria, Oreg. Filed Mar. 29, 1961.

DELMONICO

Owner of Reg. No. 117,112.
For Canned Fish and Fish Roe.
First use 1891 on canned salmon.

SN 116,796. Beasley's House of Fine Foods, Inc., Atlanta, Ga. Filed Mar. 30, 1961.

THE COACH HOUSE

For Frozen Pies.
First use July 22, 1960.

SN 116,797. Beasley's House of Fine Foods, Inc., Atlanta, Ga. Filed Mar. 30, 1961.

FRENCH SILK

For Frozen Pies.
First use Mar. 17, 1961.

SN 119,114. Day & Young, Inc., Santa Clara, Calif. Filed May 2, 1961.



No claim is made to the word "Fruit" as the name of the goods disclosed by this application. Owner of Reg. No. 708,797.

For Fresh Deciduous Fruits; Fresh Citrus Fruits; Dried Fruits, Including Apricots, Figs, Prunes, and Pears; Dates.
First use Mar. 28, 1961.

SN 110,154. Salla Società per Azioni Industriali Liquirizia Abruzzese, Sili Marina, Abruzzi, Italy. Filed May 2, 1961.



Owner of Italian Reg. No. 97,590, dated Aug. 18, 1960.
For Liquorice, Liquorice Products, and Confectionery Generally.

SN 119,372. Robert J. Heintz, d.b.a. Chip-Ette Co., Detroit, Mich. Filed May 5, 1961.

CHIP-ETTES

For Potato Chips.
First use Apr. 17, 1961.

SN 119,373. Robert J. Heintz, d.b.a. Chip-Ette Co., Detroit, Mich. Filed May 5, 1961.

STRING-ETTES

For Shoestring Type Potatoes.
First use Apr. 17, 1961.

SN 119,398. E. C. Mazzie, d.b.a. Mazzie Farms, Arvin, Calif. Filed May 5, 1961.



For Fresh Vegetables; Fresh Potatoes; Fresh Melons.
First use at least as early as 1955 on fresh potatoes.

Class 47—Wines

SN 112,800. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. Filed Jan. 30, 1961.

TALIANO

For Wines.
First use Jan. 13, 1961.
Subj. to intf. with SN 118,447 and SN 120,848.

SN 113,447. Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. Filed Feb. 10, 1961.

TALIANA

For Wine.
First use Jan. 12, 1961.
Subj. to intf. with SN 112,800.

SN 117,385. James Moroney, Inc., Philadelphia, Pa. Filed Apr. 7, 1961.

MORONEY

For Wine.
First use 1845.

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Class 48 — Malt Beverages and Liquors

SN 98,225. Kingsbury Sioux City Brewing Co., Sioux City, Iowa. Filed June 1, 1960.

For Beer.
First use May 8, 1911.**Class 49 — Distilled Alcoholic Liquors**

SN 91,385. Heublein, Inc., d.b.a. The Popov Distilling Co., Hartford, Conn. Filed Feb. 23, 1960.

POPOVFor Vodka.
First use Feb. 11, 1960.

SN 96,419. Martini & Rossi Corporation, New York, N.Y. Filed May 4, 1960.

MARTINIOwner of Reg. Nos. 185,413, 577,251, and others.
For Vodka.
First use Sept. 23, 1959.

SN 104,473. J. & G. Oldfield, Ltd., Worcester, England. Filed Sept. 14, 1960.

"BLUE LABEL"For Blended Scotch Whisky.
First use Sept. 1, 1957; in commerce Sept. 1, 1957.

SN 113,023. McKesson & Robbins, Incorporated, New York, N.Y. Filed Feb. 3, 1961.

NEWPORTOwner of Reg. No. 311,971.
For Gin and Vodka.
First use 1939, on gin.

SN 114,140. Schenley Distillers, Inc., d.b.a. Many Blanc & Co., New York, N.Y. Filed Feb. 21, 1961.

WINTER MINT

Applicant disclaims the exclusive right to use the word "Mint," but this disclaimer reserves all rights under the act of 1946.

For Creme de Menthe and Other Mint Flavored Cordials.
First use Jan. 31, 1961.

SN 120,343. Schenley Industries, Inc., New York, N.Y. Filed May 18, 1961.

TALLIANAFor Whiskey.
First use Jan. 30, 1961.
Subj. to Intf. with SN 112,800.**Class 50 — Merchandise Not Otherwise Classified**

SN 72,785. Best Stamp & Manufacturing Company, d.b.a. Best Manufacturing Company, Kansas City, Mo. Filed May 4, 1959.

BESTFor Display Signs, Non-Electrical and Made of Plastic, Metal, Wood or Combinations Thereof—Namely, Building and Hospital Patient Directories, Memorial Plaques, Name Plates, Directional Signs, Desk Name Plate Signs, Name and Number Signs, Instrument Control Panel and Name Plates, Traffic and Street Signs, Floor and Counter Signs.
First use October 1944.

SN 120,309. Hedwin Corporation, Baltimore, Md. Filed May 18, 1961.

TRAIL-MATSFor Plastic Products—Namely, Table Place Mats and Coasters.
First use Apr. 5, 1961.**Class 51 — Cosmetics and Toilet Preparations**

SN 107,597. Shulton, Inc., d.b.a. Shulton, Clifton, N.J. Filed Nov. 1, 1960.

The lining on the drawing constitutes lining forming part of the mark, and does not represent color. Owner of Reg. No. 705,051.

For After Shave Lotion and Sets Containing After Shave Lotion, Men's Talcum and Men's Cologne.
First use May 25, 1960.

SN 112,814. Yardley of London, Inc., d.b.a. Yardley, Union City, N.J. Filed Jan. 30, 1961.

FAIR AND CLEAROwner of Reg. No. 705,157.
For Cosmetic Face Creams.
First use Jan. 18, 1961.

SN 116,348. Sales Affiliates, Inc., New York, N.Y. Filed Mar. 28, 1961.

Owner of Reg. Nos. 295,481, 635,328, and others.
For Oxidizing Agent for Use With Hair Colorings and as Hair Bleach.
First use Feb. 17, 1961.

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Class 52 — Detergents and Soaps

SN 106,442. John C. Stalfort & Sons, Inc., Baltimore, Md. Filed Oct. 14, 1960.

MRS. EARLY BIRDFor All Purpose Cleaner for Rugs, Furniture, Auto Upholstery, Woolens and Other Fabrics, Refrigerators, Walls, Woodwork, Tile, Etc.
First use Oct. 10, 1960.

SN 86,048. Mattox and Moore, Inc., Indianapolis, Ind. Filed Nov. 25, 1959.

STA-GOODOwner of Reg. No. 708,540.
For Egg Cleaner-Sanitiser Compounds.
First use Nov. 2, 1959.

SN 103,038. National Chemsearch Corporation of Texas, Dallas, Tex. Filed Aug. 19, 1960.

Owner of Reg. No. 685,066.
For Industrial and Institutional Detergents, Solvent Degreaser, Glass Cleaner, Soap Antiseptic Lotion Cleaner, Sewer and Drain Pipe Cleaners, Sewerage System Cleaners, and Paint Remover.
First use Jan. 19, 1960; 1919 as to "National"; Oct. 9, 1958, as to "Chemsearch."

SN 106,694. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 19, 1960.

BOUQUET FLORALFor Soap.
First use May 15, 1959.

SN 117,121. Multi-Clean Products, Incorporated, St. Paul, Minn. Filed Apr. 4, 1961.

DIANTROLEFor Antiseptic Cleaner for Floors, Walls, Furniture, Hospital Equipment and the Like.
First use Feb. 17, 1961.**SERVICE MARKS****Class 100 — Miscellaneous**

SN 117,497. Hazleton-Nuclear Science Corporation, Palo Alto, Calif. Filed Apr. 10, 1961.

SN 92,091. Dutch Pantry, Inc., Selinsgrove, Pa. Filed Mar. 3, 1960.

For Restaurant Services.
First use January 1956.

SN 94,571. Dresser Industries, Inc., d.b.a. Lane-Weiss Company, Dallas, Tex. Filed Apr. 7, 1960.

MINILOGFor Electrical Logging of Earth Boreholes and in the Supplying of Logs so Produced.
First use on or about Aug. 15, 1959.

SN 116,137. Mary Kritsildimas, d.b.a. Athens Restaurant, Washington, D.C. Filed Mar. 21, 1961.

ATHENS RESTAURANTThe word "Restaurant" is hereby disclaimed.
For Restaurant Services.
First use Oct. 5, 1944.The mark is a design consisting of the letters "HNS." For Research and Development Relative to Nuclear and Life Sciences.
First use Mar. 14, 1961.

SN 118,107. Selamograph Service Corporation, Tulsa, Okla. Filed Apr. 18, 1961.

FLO-PAKFor Well Logging Services.
First use May 9, 1960.**Class 101 — Advertising and Business**

SN 109,981. Metal Edge Industries, Barrington, N.J. Filed Dec. 9, 1960.

PACKA-GRAPHICSFor Designing Services in the Field of Industrial Packaging.
First use Aug. 15, 1960.

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SN 114,898. Stan Stanton, d.b.a. Stan Stanton's Search Service, Washington, D.C. Filed Mar. 3, 1961.



For Search Services—Namely, Searching, Surveying, and Reporting in the Fields of Trademarks and Patents.
First use June 1, 1960.

SN 117,678. Associated Business Bureau, Los Angeles, Calif. Filed Apr. 12, 1961.

THE IRON HAND IN THE VELVET GLOVE



For Debt Collection, Skip Tracing and Credit Investigation Services.
First use on or about Oct. 14, 1956.

Class 102—Insurance and Financial

SN 111,372. Americana Credit Card Corporation, Spartanburg, S.C. Filed Jan. 6, 1961.

AMERICANA

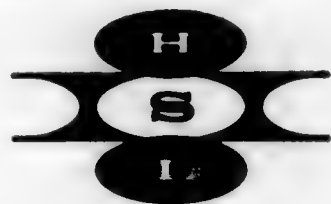
For Credit Card Services—Namely, Extending Credit to Customers of Retailers Participating in a Central Charge Plan and Providing a Central Billing to Said Customers.
First use Aug. 8, 1960.

SN 111,373. Americana Credit Card Corporation, Spartanburg, S.C. Filed Jan. 6, 1961.



The drawing is lined for the colors red and blue.
For Credit Card Services—Namely, Extending Credit to Customers of Retailers Participating in a Central Charge Plan and Providing a Central Billing to Said Customers.
First use Aug. 8, 1960.

SN 111,497. Home Security Life Insurance Company, Durham, N.C. Filed Jan. 9, 1961.



For Underwriting and Writing of Life Insurance.
First use Sept. 1, 1960.

SN 118,555. Capital Credit Corporation, Washington, D.C. Filed Apr. 25, 1961.



For Collection of Bad Debts.
First use Mar. 1, 1960.

SN 118,556. Capital Credit Corporation, Washington, D.C. Filed Apr. 25, 1961.

CAPPY

For Collection of Bad Debts.
First use Mar. 1, 1960.

Class 103—Construction and Repair

SN 93,861. Rochester Precision Parts Corporation, Rochester, Mich. Filed Mar. 28, 1960.



The black rectangular background is not an integral portion of the mark and is for the purpose of furnishing contrast only.
For Machine Shop Services—Namely, Machining and Finishing of Metal Stock and Parts Furnished by Others.
First use Jan. 15, 1960.

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SN 110,604. The Siegler Corporation, Anaheim, Calif. Filed Dec. 27, 1960.

Class 105—Transportation and Storage

SN 110,078. Pan American World Airways, Inc., New York, N.Y. Filed Dec. 12, 1960.

HALLAPLAST

For Providing Protective and Decorative Coatings for Telephones and the Like.
First use June 1, 1960.

SN 112,298. North American Brake Centers, Inc., Pennsauken, N.J. Filed Jan. 23, 1961.



The mark is a symbol of a policeman with body of a brake shoe.
For Services to Repair and Maintenance of Automobile Brakes and Front Ends.
First use in September 1960.

PAN AM

Owner of Reg. No. 668,792.
For Transportation of Passengers and Freight by Aircraft and Vehicular Transportation of Passengers and Freight To and From Airports.
First use during April 1931.

Class 106—Material Treatment

SN 100,540. Plastic Applicators, Inc., Houston, Tex. Filed July 8, 1960.



For Performing the Service of Inspecting of Tubular Goods and/or Coating of Tubular Goods With Cement or Plastic, Coating Various Oil Field and General Industrial Equipment With Plastic or Rubber, and Manufacturing Rubber Products to Specification.
First use Jan. 30, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 103,169. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.



For Indicating Membership in Applicant.
First use Mar. 22, 1913, on membership badges by members of applicant.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

- 722,430. POWER FOR PROGRESS AND DESIGN. Peabody Coal Company. SN 79,998. Pub. 7-25-61. Filed 8-17-59.
- 722,431. OIL PATCH. Hammons Products Company. SN 101,096. Pub. 7-25-61. Filed 7-19-60.
- 722,432. TERYLENE ICI ETC. AND DESIGN. Imperial Chemical Industries Limited. SN 102,661. Pub. 7-25-61. Filed 8-15-60.
- 722,433. JOHNSTON'S "GOOD-AS-GOLD." W. B. Johnston Grain Company. SN 103,667. Pub. 7-25-61. Filed 8-30-60.
- 722,434. FLO-FIL. Florida Fibre Company, Inc. SN 105,637. Pub. 7-25-61. Filed 10-3-60.
- 722,435. AMCOLITE. Aetna Manufacturing Company, Inc. SN 110,925. Pub. 7-25-61. Filed 12-28-60.
- 722,436. TYRILFOAM. The Dow Chemical Company. SN 114,194. Pub. 7-25-61. Filed 2-23-61.
- 722,437. EPOLAST. H. V. Hardman Company, Inc. SN 115,055. Pub. 7-25-61. Filed 3-7-61.
- 722,438. FLEXOFIL. Livingston & Doughty Limited. SN 115,240. Pub. 7-25-61. Filed 3-9-61.
- 722,439. MIDDLESEX. Johnson & Johnson. SN 115,925. Pub. 7-25-61. Filed 3-17-61.
- 722,440. DYNAPILM. National Distillers and Chemical Corporation. SN 116,551. Pub. 7-25-61. Filed 3-27-61.
- 722,441. EKRAKIN. Armour and Company, d.b.a. Winslow Bros. & Smith. SN 116,786. Pub. 7-25-61. Filed 3-30-61.

Class 2—Receptacles

- 722,442. ANGLE BAR. Union Tank Car Company. SN 76,131. Pub. 7-25-61. Filed 6-19-59.
- 722,443. "MINI-SERV" ETC. AND DESIGN. George J. Perkins. SN 105,915. Pub. 7-25-61. Filed 10-6-60.
- 722,444. "MINI-SERV." George J. Perkins. SN 105,916. Pub. 7-25-61. Filed 10-6-60.
- 722,445. PROTECT-O-GLASS. Plastic Fabricating and Engineering Company. SN 106,632. Pub. 7-25-61. Filed 10-18-60.
- 722,446. CRYSTAGLAZE. Brookpark, Inc. SN 106,788. Pub. 7-25-61. Filed 10-20-60.
- 722,447. IL E-Z-TARE. Ivers-Lee Company. SN 109,965. Pub. 7-25-61. Filed 12-9-60.
- 722,448. TOTE-CART. Tote-Cart Company. SN 110,117. Pub. 7-25-61. Filed 12-12-60.
- 722,449. IL 3-DEE. Ivers-Lee Company. SN 110,763. Pub. 7-25-61. Filed 12-23-60.
- 722,450. IL SEE-V. Ivers-Lee Company. SN 110,764. Pub. 7-25-61. Filed 12-23-60.
- 722,451. IL SUPPOSIFORM. Ivers-Lee Company. SN 110,765. Pub. 7-25-61. Filed 12-23-60.
- 722,452. IL SCRIP-PAK. Ivers-Lee Company. SN 110,766. Pub. 7-25-61. Filed 12-23-60.
- 722,453. PLASTI-LOK. Charles E. Palmer, d.b.a. Charles E. Palmer & Associates. SN 111,008. Pub. 7-25-61. Filed 12-29-60.
- 722,454. CONVERTAINER. Golay & Co., Inc. SN 113,335. Pub. 7-25-61. Filed 2-9-61.
- 722,455. MEDLEY. KVP Sutherland Paper Company. SN 113,732. Pub. 7-25-61. Filed 2-15-61.
- 722,456. TISSUE MASTER. Botteco Products Incorporated. SN 113,794. Pub. 7-25-61. Filed 2-16-61.

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Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

- 722,457. PILLOW-SOFT. The Dury Company, Inc. SN 110,533. Pub. 7-25-61. Filed 12-20-60.
- 722,458. REPRESENTATION OF A DIVING GIRL. Jantzen Inc. SN 110,856. Pub. 7-25-61. Filed 12-27-60.
- 722,459. PHOTORAMA. A. J. Siris Products Corp. SN 111,128. Pub. 7-25-61. Filed 12-30-60.

Class 4—Abrasives and Polishing Materials

- 722,460. LEA PLASTI-BRADE. The Lea Manufacturing Company. SN 111,897. Pub. 7-25-61. Filed 1-16-61.
- 722,461. PF. Super-Cut, Inc. SN 113,867. Pub. 7-25-61. Filed 2-16-61.

Class 6—Chemicals and Chemical Compositions

- 722,462. DESIGN OF TRIANGLES AND CIRCLES. Onyx Chemical Corporation, by merger from Onyx Oil & Chemical Company. SN 56,787. Pub. 7-25-61. Filed 8-7-58.
- 722,463. HOSPITAL LAUNDRAMINE. West Chemical Products, Inc. SN 100,740. Pub. 7-25-61. Filed 7-12-60.
- 722,464. E-DAY. Winston Sales Co., Inc. SN 106,941. Pub. 7-25-61. Filed 10-6-60.
- 722,465. SAND BANUM AND DESIGN. American Sand-Banum Co., Inc. SN 106,782. Pub. 7-25-61. Filed 10-20-60.
- 722,466. OUTLINE OF RETORT AND FACE OF METER. Hagan Chemicals & Controls, Inc. SN 109,321. Pub. 7-25-61. Filed 11-30-60.
- 722,467. GREENFIELD. Eli Lilly and Company. SN 110,043. Pub. 7-25-61. Filed 12-12-60.
- 722,468. FLOWER KING. Thermwell Products Co., Inc. SN 111,560. Pub. 7-25-61. Filed 1-9-61.
- 722,469. NOVOCIDE. The Upjohn Company. SN 111,563. Pub. 7-25-61. Filed 1-9-61.
- 722,470. HC-64-BD. Sid Richardson Carbon Co. SN 111,750. Pub. 7-25-61. Filed 1-12-61.
- 722,471. HC-64-UN. Sid Richardson Carbon Co. SN 111,760. Pub. 7-25-61. Filed 1-12-61.
- 722,472. HC-64-VP. Sid Richardson Carbon Co. SN 111,765. Pub. 7-25-61. Filed 1-12-61.
- 722,473. EPOCURE. H. V. Hardman Company, Inc. SN 115,054. Pub. 7-25-61. Filed 3-7-61.

Class 8—Smokers' Articles, Not Including Tobacco Products

- 722,474. EXECUTIVE. Alfred Robbins Organization, Inc. SN 78,373. Pub. 7-25-61. Filed 7-24-59.

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Class 9—Explosives, Firearms, Equipments, and Projectiles

- 722,475. RUBY. Gablondo and Company. SN 99,929. Pub. 7-25-61. Filed 6-29-60.
- 722,476. LLAMA. Gablondo and Company. SN 99,930. Pub. 7-25-61. Filed 6-29-60.
- 722,477. LIFETIME. Paul C. Knepp, d.b.a. Carbide Die & Mfg. Co. SN 102,123. Pub. 7-25-61. Filed 8-5-60.

Class 10—Fertilizers

- 722,478. SOILLUCK. Shin-Etsu Kagaku Kogyo Kabushiki Kaisha, d.b.a. Shin-Etsu Chemical Industrial Company Ltd. SN 110,792. Pub. 7-25-61. Filed 12-23-60.
- 722,479. SHRUB-TONE. The Espoma Company. SN 111,173. Pub. 7-25-61. Filed 1-3-61.
- 722,480. TERRA-GREEN. Oil-Dri Corporation of America. SN 111,537. Pub. 7-25-61. Filed 1-9-61.
- 722,481. GIANT AQUA. Daniel N. Pompilio, d.b.a. Soil Clinite Agronomical Laboratory. SN 112,857. Pub. 7-25-61. Filed 1-31-61.

Class 11—Inks and Inking Materials

- 722,482. K-HEET. Claremont Pigment Dispersion Corporation. SN 107,553. Pub. 7-25-61. Filed 11-1-60.
- 722,483. SHMERTEX. The Buckeye Ribbon & Carbon Co. SN 108,610. Pub. 7-25-61. Filed 11-17-60.

Class 12—Construction Materials

- 722,484. JAL-MASTER. Rogers Industries, Inc., by change of name from Winter Seal Corporation. SN 27,159. Pub. 5-13-58. Filed 3-28-57.
- 722,485. TENNISQUICK. Georges Augustin Marie Eugene Ewbank, assignee of Andre Ewbank. SN 86,273. Pub. 7-25-61. Filed 11-30-59.
- 722,486. STOP-FLO. The Gibson-Homans Company. SN 103,273. Pub. 7-25-61. Filed 8-23-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 722,487. M AND DESIGN. Madco Mfg. Co. SN 106,510. Pub. 7-25-61. Filed 10-17-60.
- 722,488. REZITRON. Josam Manufacturing Co. SN 110,771. Pub. 7-25-61. Filed 12-23-60.
- 722,489. STYL-GRIP. M & H Industries, d.b.a. Hyer Hardware Mfg. Co. SN 113,122. Pub. 7-25-61. Filed 2-6-61.
- 722,490. SNOW-SHOOT. Pennco Engineering Company. SN 113,298. Pub. 7-25-61. Filed 2-8-61.
- 722,491. CASTELAIN. Beacon Plastic & Metal Products, Inc. SN 113,324. Pub. 7-25-61. Filed 2-9-61.
- 722,492. EASTERNER. Eastern Products Corporation. SN 113,332. Pub. 7-25-61. Filed 2-9-61.
- 722,493. TALON ZEPHYR. Talon, Inc. SN 113,781. Pub. 7-25-61. Filed 2-9-61.

Class 14—Metals and Metal Castings and Forgings

- 722,494. VANADIUM TYPE G. Vanadium-Alloys Steel Company. SN 97,348. Pub. 7-25-61. Filed 5-17-60.

- 722,495. ELGILOY. Elgin National Watch Company. SN 99,503. Pub. 7-25-61. Filed 6-22-60.
- 722,496. BR 3. Latrobe Steel Company. SN 100,266. Pub. 7-25-61. Filed 7-5-60.
- 722,497. BR-2. Latrobe Steel Company. SN 100,267. Pub. 7-25-61. Filed 7-5-60.
- 722,498. BR-4. Latrobe Steel Company. SN 100,268. Pub. 7-25-61. Filed 7-5-60.
- 722,499. PITT-TEN. Pittsburgh Steel Company. SN 108,210. Pub. 7-25-61. Filed 11-10-60.

Class 15—Oils and Greases

- 722,500. CMD WITHIN A CIRCLE. American Seal-Kap Corporation of Delaware, assignee of Chicago Manufacturing and Distributing Company. CONSOLIDATED CERTIFICATE. SN 112,686, pub. 7-18-61, filed 1-30-61, Cl. 15; SN 112,685, pub. 7-11-61, filed 1-30-61, Cl. 23.
- 722,501. CHEMROLL. Naico Chemical Company. SN 112,975. Pub. 7-25-61. Filed 2-2-61.

Class 16—Protective and Decorative Coatings

- 722,502. CORSITE. N.V. PlasticHing. SN 110,074. Pub. 7-25-61. Filed 12-12-60.
- 722,503. SPECTAKOLOR. United Lacquer Mfg. Corp. SN 112,091. Pub. 7-25-61. Filed 1-18-61.
- 722,504. LUMICHRON. Luminous Products Corp. SN 112,278. Pub. 7-25-61. Filed 1-23-61.
- 722,505. VITRA-TEANE. Elliott Paint & Varnish Company. SN 112,530. Pub. 7-25-61. Filed 1-26-61.
- 722,506. COLOR CREST. Ampruf Paint Co., Inc. SN 112,582. Pub. 7-25-61. Filed 1-27-61.

Class 18—Medicines and Pharmaceutical Preparations

- 722,507. SMOG-EZE. Arthrin Company. SN 94,039. Pub. 7-25-61. Filed 3-31-60.
- 722,508. BIODISC. The British Drug Houses (Canada) Ltd. SN 113,080. Pub. 7-25-61. Filed 2-6-61.
- 722,509. OREMOR. E. Romero and Son. SN 114,345. Pub. 7-25-61. Filed 2-24-61.
- 722,510. DETHYRONA. Baxter Laboratories, Inc. SN 115,656. Pub. 7-25-61. Filed 3-15-61.

Class 19—Vehicles

- 722,511. HI-BUOY. Magna-Matic Mooring Co., Inc. SN 95,742. Pub. 7-25-61. Filed 4-26-60.
- 722,512. GATOR. Peterson Bros., Inc. SN 96,808. Pub. 7-25-61. Filed 5-10-60.
- 722,513. STAR LINE AND DESIGN. The Goodyear Tire & Rubber Company. SN 110,326. Pub. 7-25-61. Filed 12-16-60.
- 722,514. SUPER K AND DESIGN. Rupp Manufacturing, Inc. SN 110,367. Pub. 7-25-61. Filed 12-16-60.
- 722,515. K JUNIOR AND DESIGN. Rupp Manufacturing, Inc. SN 110,368. Pub. 7-25-61. Filed 12-16-60.
- 722,516. SPORTYAK. Woodall Industries, Incorporated. SN 112,989. Pub. 7-25-61. Filed 2-2-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 722,517. U LAB AND DESIGN. Microlab. SN 96,240. Pub. 7-25-61. Filed 5-2-60.

- 722,518. NWL AND DESIGN. Nothelfer Winding Laboratories, Inc. SN 102,786. Pub. 7-25-61. Filed 8-16-60.
- 722,519. PRINTACT. Executone Inc. SN 105,070. Pub. 7-25-61. Filed 9-23-60.
- 722,520. ELCOPAN AND DESIGN. General Precision, Inc. SN 105,159. Pub. 7-25-61. Filed 9-26-60.
- 722,521. JET-LINE. Sterling Industries, Inc. SN 105,223. Pub. 7-25-61. Filed 9-26-60.
- 722,522. AQUANAUT. Calpac, Inc. SN 105,723. Pub. 7-25-61. Filed 10-4-60.
- 722,523. WET GUARD. Health Guardian Corporation. SN 112,146. Pub. 7-25-61. Filed 1-19-61.
- 722,524. VARILINE. Columbia Technical Corporation. SN 112,688. Pub. 7-25-61. Filed 1-30-61.
- 722,525. GUARDISTOR. Westinghouse Electric Corporation. SN 112,869. Pub. 7-25-61. Filed 1-31-61.
- 722,526. COILIFE. Westinghouse Electric Corporation. SN 112,870. Pub. 7-25-61. Filed 1-31-61.
- 722,527. ASSISTENT. Aktiebolaget Electrolux. SN 112,996. Pub. 7-25-61. Filed 2-3-61.
- 722,528. ELDORADO. A. Cohen & Sons Corp. SN 113,001. Pub. 7-25-61. Filed 2-3-61.
- 722,529. MINI-SUB. Central Transformer Corporation. SN 113,086. Pub. 7-25-61. Filed 2-6-61.
- 722,530. GENERAL STONEWALL JACKSON. Sunbeam Corporation. SN 114,272. Pub. 6-13-61. Filed 2-23-61.

Class 22—Games, Toys, and Sporting Goods

- 722,531. PIN POINT. Edward A. Larson, d.b.a. Ed Larson Enterprises. SN 88,053. Pub. 7-25-61. Filed 12-28-59.
- 722,532. K LINE WITHIN A CIRCLE. Kestral Corporation. SN 89,857. Pub. 7-25-61. Filed 1-28-60.
- 722,533. SPACE CHECKERS AND DESIGN. William O. Williams, Jr. SN 99,550. Pub. 7-25-61. Filed 6-22-60.
- 722,534. BAYLEY SUIT AND DESIGN. Betty A. Rector, d.b.a. Bayleysuit. SN 107,630. Pub. 7-25-61. Filed 10-31-60.
- 722,535. RIDE-A-CYCLE. Ideal Toy Corporation. SN 108,176. Pub. 7-25-61. Filed 11-10-60.
- 722,536. MIRACLE SHRIMP. John W. Stanton, d.b.a. West Indies Oceanographic Products. SN 110,244. Pub. 7-25-61. Filed 12-14-60.
- 722,537. ROGUE. Rogue Reels, Inc. SN 110,706. Pub. 7-25-61. Filed 12-22-60.
- 722,538. BASEBALL EDUCATION AND DESIGN. L. W. Ramsey Advertising Agency, d.b.a. L. W. Ramsey Company. SN 111,215. Pub. 7-25-61. Filed 1-3-61.
- 722,539. ZIPWAY. Alice M. Freeman. SN 112,840. Pub. 7-25-61. Filed 1-31-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 722,500. CONSOLIDATED CERTIFICATE. See Class 15.
- 722,540. REPRESENTATION OF TREE. Outboard Marine Corporation. SN 58,875. Pub. 12-30-58. Filed 9-12-58.
- 722,541. HYDROID PUMPS AND DESIGN. Hupp Corporation. SN 59,040. Pub. 7-14-59. Filed 9-17-58.
- 722,542. COFFEE SHOPPE. Apeo Products Corp. SN 64,806. Pub. 3-15-60. Filed 12-23-58.
- 722,543. CAFE SHOPPE. Apeo, Inc. SN 65,811. Pub. 3-15-60. Filed 1-14-59.
- 722,544. SERVOMASTER. Servo Corporation of America, assignee of Underwood Corporation. SN 72,392. Pub. 8-25-59. Filed 4-27-59.
- 722,545. WEHRBEST. Wehr Steel Company. SN 78,667. Pub. 7-25-61. Filed 7-29-59.
- 722,546. WEHRBEST AND DESIGN. Wehr Steel Company. SN 78,669. Pub. 7-25-61. Filed 7-29-59.

- 722,547. ACE. American Saw & Mfg. Company. SN 98,614. Pub. 7-25-61. Filed 6-8-60.
- 722,548. SUPERWRAPPER. Wrapping Machinery Company, Inc. SN 105,778. Pub. 7-25-61. Filed 10-4-60.
- 722,549. FARQUHAR. Ferracut Machine Company. SN 108,765. Pub. 7-25-61. Filed 11-21-60.
- 722,550. GRAY. The G. A. Gray Company. SN 113,012. Pub. 7-25-61. Filed 2-3-61.
- 722,551. WES-CRAFT. Imperial Knife Associated Companies, Inc. SN 113,282. Pub. 7-25-61. Filed 2-8-61.
- 722,552. MECCANOFILM. Reggiani S.p.A. Divisione Macchine. SN 113,366. Pub. 7-25-61. Filed 2-9-61.
- 722,553. SUPERTech. The Capewell Manufacturing Company. SN 113,908. Pub. 7-25-61. Filed 2-17-61.
- 722,554. ELECTROMATIC. The Huffman Manufacturing Company. SN 114,000. Pub. 7-25-61. Filed 2-20-61.
- 722,555. CLEAN LINE. International Harvester Company. SN 114,003. Pub. 7-25-61. Filed 2-20-61.
- 722,556. GATHER-ALL. Diddle-Glaser, Inc. SN 114,099. Pub. 7-25-61. Filed 2-21-61.
- 722,557. IMPERIAL. Schick Incorporated. SN 114,539. Pub. 7-25-61. Filed 2-27-61.
- 722,558. KEM. Kem Manufacturing Company, Inc. SN 115,238. Pub. 7-25-61. Filed 3-9-61.

Class 26—Measuring and Scientific Appliances

- 722,559. C DESIGN. Giannini Controls Corporation, assignee of Cramer Controls Corporation. SN 88,142. Pub. 6-20-61. Filed 12-29-59.

Class 31—Filters and Refrigerators

- 722,560. MILLI-DYNE. American Machine and Metals, Inc. SN 101,461. Pub. 7-25-61. Filed 7-26-60.
- 722,561. VENTURI-FLO. Alco Valve Company. SN 102,000. Pub. 7-25-61. Filed 8-4-60.

Class 32—Furniture and Upholstery

- 722,562. BORO. Boro Wood Products Co., Inc. SN 98,266. Pub. 7-25-61. Filed 6-2-60.
- 722,563. AD-MON AND DESIGN. Charles D. Burnes Co., d.b.a. Frame Lines. SN 98,337. Pub. 7-25-61. Filed 6-3-60.
- 722,564. PRIDE OF KENTUCKY. The Englander Company, Inc. SN 98,461. Pub. 7-25-61. Filed 6-6-60.
- 722,565. PRIDE OF LOUISVILLE. The Englander Company, Inc. SN 98,462. Pub. 7-25-61. Filed 6-6-60.
- 722,566. TADSTOOLS. Pinnacle Products Co., Inc. SN 99,360. Pub. 7-25-61. Filed 6-20-60.
- 722,567. GENUINE MARSHALL. Nachman Corporation. SN 99,768. Pub. 7-25-61. Filed 6-27-60.
- 722,568. TWIN FOAM. Schnadig Corporation. SN 100,936. Pub. 7-25-61. Filed 7-15-60.
- 722,569. COSCO. Hamilton Cosco, Inc. SN 101,780. Pub. 7-25-61. Filed 8-1-60.
- 722,570. PLAZA. Breneman-Hartshorn, Inc. SN 105,860. Pub. 7-25-61. Filed 10-4-60.
- 722,571. SUNSET. Breneman-Hartshorn Inc. SN 105,861. Pub. 7-25-61. Filed 10-6-60.
- 722,572. BLUE BELL. Blue Bell Mattress Co., Inc. SN 108,262. Pub. 7-25-61. Filed 11-14-60.
- 722,573. BALASTORE. Balatum N.V. SN 114,309. Pub. 7-25-61. Filed 2-24-61.
- 722,574. PEDESTABLE. David Wood Studios. SN 114,384. Pub. 7-25-61. Filed 2-24-61.
- 722,575. VERT-A-LIGNER. Continental Silver-Line Products. SN 114,444. Pub. 7-25-61. Filed 2-27-61.

Class 33—Glassware

- 722,576. TRANQUILITE. Safetee Glass Company. SN 117,650. Pub. 7-25-61. Filed 4-11-61.
- 722,577. SABLE-LITE. Safetee Glass Company. SN 117,651. Pub. 7-25-61. Filed 4-11-61.

Class 34—Heating, Lighting, and Ventilating Apparatus

- 722,578. LO-X-IT TRI-VENT. Octagon Ventilator Co. SN 81,310. Pub. 7-25-61. Filed 9-14-59.
- 722,579. MEMMERT. Wilm Memmert. SN 100,800. Pub. 7-25-61. Filed 7-13-60.
- 722,580. E-Z-ON. M. A. Gerett, Inc. SN 111,329. Pub. 7-25-61. Filed 1-5-61.
- 722,581. HONEYCOMBE. Cargocaire Engineering Corporation. SN 112,025. Pub. 7-25-61. Filed 1-18-61.
- 722,582. JET-HEET. Jet-Heat, Inc. SN 112,270. Pub. 7-25-61. Filed 1-23-61.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

- 722,583. PORTOBLOCKS. H. K. Porter Company, Inc. SN 113,554. Pub. 7-15-61. Filed 2-13-61.
- 722,584. NYTEM. Seiberling Rubber Company. SN 113,772. Pub. 7-25-61. Filed 2-15-61.
- 722,585. TRIMFLEX HOSE AND DESIGN. Timely Technical Products, Inc. SN 113,873. Pub. 7-25-61. Filed 2-16-61.
- 722,586. CORVIC. Victor Manufacturing & Gasket Company. SN 113,877. Pub. 7-25-61. Filed 2-16-61.

Class 36—Musical Instruments and Supplies

- 722,587. WING DESIGN. Success Motivation Institute, Inc. SN 107,158. Pub. 7-25-61. Filed 10-25-60.
- 722,588. BREAKING THE SUCCESS BARRIER AND DESIGN. Success Motivation Institute, Inc. SN 107,159. Pub. 7-25-61. Filed 10-25-60.

Class 37—Paper and Stationery

- 722,589. POINTING HANDS DESIGN. Nekoosa-Edwards Paper Company. SN 102,498. Pub. 7-25-61. Filed 8-11-60.
- 722,590. 601 PLEZALL WIPERS AND DESIGN. Plezall Wipers, Inc. SN 107,507. Pub. 7-25-61. Filed 10-31-60.
- 722,591. INSUROGRAM. American Ezercraft Inc. SN 109,463. Pub. 7-25-61. Filed 12-2-60.
- 722,592. NORTEX. The Northwest Paper Company. SN 111,047. Pub. 7-25-61. Filed 12-29-60.
- 722,593. STA PAT. Hyman D. Abbey. SN 112,580. Pub. 7-25-61. Filed 1-27-61.
- 722,594. COMBINE-VELOPE. The Sawdon Company, Inc. SN 113,767. Pub. 7-25-61. Filed 2-15-61.
- 722,595. CHALLENGE. Searns, Roebuck and Co. SN 113,768. Pub. 7-25-61. Filed 2-15-61.
- 722,596. PINEHURST. The Champion Paper and Fibre Company. SN 113,797. Pub. 7-25-61. Filed 2-16-61.
- 722,597. KIMSET. Kimberly-Clark Corporation. SN 113,837. Pub. 7-25-61. Filed 2-16-61.
- 722,598. TARGET. W. A. Sheaffer Pen Company. SN 113,865. Pub. 7-25-61. Filed 2-16-61.
- 722,599. CRAY-O-BALL. A. J. Siris Products Corp. SN 114,141. Pub. 7-25-61. Filed 2-21-61.

- 722,600. CRAY-Z-BALL. A. J. Siris Products Corp. SN 114,142. Pub. 7-25-61. Filed 2-21-61.
- 722,601. MEMO-STOR. Varifab Incorporated. SN 114,377. Pub. 7-25-61. Filed 2-24-61.

Class 38—Prints and Publications

- 722,602. SHOLOM AND DESIGN. Arthur Gruskin, d.b.a. Sholom Greeting Card Co. SN 93,684. Pub. 7-25-61. Filed 3-25-60.
- 722,603. THE SOYBEAN BLUEBOOK. The American Soybean Association. SN 98,417. Pub. 7-25-61. Filed 6-6-60.
- 722,604. SCIENCE OF MIND. Church of Religious Science. SN 105,622. Pub. 7-25-61. Filed 10-3-60.
- 722,605. MINIPLAN. Claud Bonnar. SN 105,718. Pub. 7-25-61. Filed 10-4-60.
- 722,606. BY GEORGE. United Feature Syndicate, Inc. SN 106,232. Pub. 7-25-61. Filed 10-11-60.
- 722,607. HEAD LINES. Ampex Corporation. SN 106,460. Pub. 7-25-61. Filed 10-17-60.
- 722,608. OKT AND DESIGN. Osborne-Kemper-Thomas, Inc. SN 110,779. Pub. 7-25-61. Filed 12-23-60.
- 722,609. CHRISTOPHER NOTES. The Christophers, Inc. SN 110,981. Pub. 7-25-61. Filed 12-29-60.
- 722,610. THE LIVELY ARTS. New York Herald Tribune Inc. SN 111,006. Pub. 7-25-61. Filed 12-29-60.
- 722,611. CEDARBURG NEWS. News-Graphic, Inc. SN 111,045. Pub. 7-25-61. Filed 12-29-60.
- 722,612. FAMILY SLANTS. Barnes Publishing Company, Inc. SN 111,156. Pub. 7-25-61. Filed 1-3-61.
- 722,613. GRAYMOOR. Friars of the Atonement, Inc. SN 111,178. Pub. 7-25-61. Filed 1-3-61.
- 722,614. SUBURBANNEWS. Suburban Motor Freight, Inc. SN 111,442. Pub. 7-25-61. Filed 1-6-61.
- 722,615. DESIGN OF FLAME IN CUPPED HAND. Odlin Press Inc. SN 111,752. Pub. 7-25-61. Filed 1-12-61.

Class 39—Clothing

- 722,616. TORCH. Torch Rubber Company Inc. SN 77,973. Pub. 7-25-61. Filed 7-17-59.
- 722,617. GEM LON. Sakal Knitting Co., Ltd. SN 86,682. Pub. 7-25-61. Filed 12-4-59.
- 722,618. FREE-FOR-ALL. The Warner Brothers Company. SN 90,798. Pub. 7-25-61. Filed 2-11-60.
- 722,619. BELLICIANO. Dave Bellae Company, Inc. SN 95,243. Pub. 7-25-61. Filed 4-18-60.
- 722,620. JENNY LYNNE. Alamo Manufacturing Co., Inc. SN 96,170. Pub. 7-25-61. Filed 5-2-60.
- 722,621. CUMMERBELT. Pioneer Industries, Inc. SN 98,395. Pub. 7-25-61. Filed 6-3-60.
- 722,622. BOOTIQUE. Torch Rubber Company Inc. SN 99,105. Pub. 7-25-61. Filed 6-15-60.
- 722,623. THUNDERBIRD FASHIONS AND DESIGN. Thunderbird Mfg., Inc. SN 100,073. Pub. 7-25-61. Filed 6-30-60.
- 722,624. PENALJO LIVING SHOES. Hamilton Shoe Company. SN 101,626. Pub. 7-25-61. Filed 7-28-60.
- 722,625. ARMANDINE. Armand Fried. SN 102,019. Pub. 7-25-61. Filed 8-4-60.
- 722,626. PEPPY PETS. P. N. Hirsch and Company. SN 102,240. Pub. 7-25-61. Filed 8-8-60.
- 722,627. ADASOL. Victor G. Hoepf. SN 102,317. Pub. 7-25-61. Filed 8-9-60.
- 722,628. ENVOYS OF ENGLAND. Leon S. Posen & Company, Inc. SN 106,741. Pub. 7-25-61. Filed 10-19-60.
- 722,629. THE RUSTLER ROLL-UR-OWN AND DESIGN. Texas Harvest Hat Company. SN 106,771. Pub. 7-25-61. Filed 10-19-60.
- 722,630. "OVERS-AND-UNDERS." Capexio, Inc. SN 108,940. Pub. 7-25-61. Filed 11-23-60.

- 722,631. JOHNNY REB. Illinois Glove Company. SN 109,497. Pub. 7-25-61. Filed 12-2-60.
722,632. BALCRON. Balcort Shirt Co., Inc. SN 113,889. Pub. 7-25-61. Filed 2-17-61.

Class 40—Fancy Goods, Furnishings, and Notions

- 722,633. LOLITAS. The Governor Fastener Company. SN 107,334. Pub. 7-25-61. Filed 10-28-60.

Class 44—Dental, Medical, and Surgical Appliances

- 722,634. SWEDISH MASSEUR. Remington Research, Inc. SN 64,903. Pub. 5-19-59. Filed 12-24-58.
722,635. DEFENDER. Defender Supporter Company. SN 104,991. Pub. 7-25-61. Filed 9-22-60.
722,636. TRIO. Trio Dental Studios, Inc. SN 108,097. Pub. 7-25-61. Filed 11-8-60.
722,637. VAN'S. Louis R. Van Lanigan. SN 109,127. Pub. 7-25-61. Filed 11-25-60.
722,638. KEENTORR. The Torrington Company. SN 110,803. Pub. 7-25-61. Filed 12-23-60.
722,639. ACCESS-O-MATIC. American Seating Company. SN 113,178. Pub. 7-25-61. Filed 2-6-61.

Class 45—Soft Drinks and Carbonated Waters

- 722,640. SPRIG AND DESIGN. Sprig Sales Company, Inc. SN 100,065. Pub. 7-25-61. Filed 6-30-60.
722,641. SALLY SPRIG AND DESIGN. Sprig Sales Company, Inc. SN 100,066. Pub. 7-25-61. Filed 6-30-60.

Class 46—Foods and Ingredients of Foods

- 722,642. SHRIMP AHoy AND DESIGN. Seapak Corporation. SN 55,338. Pub. 7-25-61. Filed 7-15-58.
722,643. ROLL-IN-DO. The Glidden Company, d.b.a. Durkee Famous Foods. SN 82,660. Pub. 7-25-61. Filed 10-5-59.
722,644. PRINCESS. Bremner Biscuit Company. SN 90,310. Pub. 7-25-61. Filed 2-4-60.
722,645. THE "AIRES." Pangburn Company, Inc., d.b.a. Pangburn's. SN 93,626. Pub. 7-25-61. Filed 3-24-60.
722,646. ALLAN JACKSON ORCHARDS "THAT CHAMPAIN FLAVOR" AND DESIGN. Allan Jackson. SN 94,401. Pub. 7-25-61. Filed 4-5-60.
722,647. STONE CELLAR. Griswold's. SN 95,274. Pub. 7-25-61. Filed 4-18-60.
722,648. 5 STAR BRAND AND DESIGN. House of Good Celery, Inc. SN 99,216. Pub. 7-25-61. Filed 6-17-60.
722,649. THE GOLDEN POINT. The Golden Hamburger Drive-In Corporation, d.b.a. The Golden Point Drive-In System. SN 99,623. Pub. 7-25-61. Filed 6-24-60.
722,650. HUDSON'S FEEDS AND DESIGN. Hudson Products, Inc. SN 100,027. Pub. 7-25-61. Filed 6-30-60.
722,651. D WITHIN A CIRCLE. Delaware Milling Company, Inc. SN 101,083. Pub. 7-25-61. Filed 7-19-60.
722,652. SEAWAY. Arnold F. Ludwig, d.b.a. Seaway Fund Raising Company. SN 101,333. Pub. 7-25-61. Filed 7-22-60.
722,653. PEAK. Salada-Shirt-Horsey Inc. SN 104,759. Pub. 7-25-61. Filed 9-19-60.

- 722,654. CARICATURE OF MAN'S HEAD AND STAR DESIGN. Kellogg Company. SN 105,444. Pub. 7-25-61. Filed 9-29-60.
722,655. OLD RELIABLE. S. S. Kresge Company. SN 105,524. Pub. 7-25-61. Filed 9-30-60.
722,656. PURESUN. Realemon-Puritan Co. SN 106,139. Pub. 7-25-61. Filed 10-10-60.
722,657. COA AND MONOGRAM DESIGN. California Olive Association. SN 107,826. COLLECTIVE MARK. Pub. 7-25-61. Filed 11-4-60.
722,658. PARKS. H. G. Parks, Inc. SN 109,265. Pub. 7-25-61. Filed 11-29-60.
722,659. RED CHEEK. Berks-Lehigh Cooperative Fruit Growers, Inc. SN 109,466. Pub. 7-25-61. Filed 12-2-60.
722,660. 20TH CENTURY. Tri Foods Company, d.b.a. Twentieth Century Foods, Feed Division. SN 109,648. Pub. 7-25-61. Filed 12-5-60.
722,661. WHITFIELD. Alabama-Georgia Syrup Company, d.b.a. Alaga Syrup Company. SN 110,191. Pub. 7-25-61. Filed 12-14-60.
722,662. KNOTT'S BERRY FARM AND DESIGN. Knott's Berry Farm. SN 110,444. Pub. 7-25-61. Filed 12-19-60.
722,663. KNOTT'S BERRY FARM AND SIGN DESIGN. Knott's Berry Farm. SN 110,445. Pub. 7-25-61. Filed 12-19-60.
722,664. EAGER EATER. Ralston Purina Company. SN 111,214. Pub. 7-25-61. Filed 1-3-61.
722,665. GOLD KING. Neptunalia Seafood Company. SN 114,037. Pub. 7-25-61. Filed 2-20-61.

Class 49—Distilled Alcoholic Liquors

- 722,666. LITTLE MILL. Barton Distilling Company. SN 72,274. Pub. 7-25-61. Filed 4-27-59.
722,667. SLAINTHEVA AND DESIGN. Ainsley Dunn & Company Limited. SN 82,316. Pub. 7-25-61. Filed 9-29-59.
722,668. MOKATIA. Angostura Bitters (Dr. J. G. B. Siegert & Sons) Limited. SN 108,933. Pub. 7-25-61. Filed 11-23-60.
722,669. CORN HILL. Mr. Boston Distiller Inc. SN 111,905. Pub. 7-25-61. Filed 1-16-61.
722,670. KEEPSAKE. Schenley Distillers, Inc. SN 112,320. Pub. 7-25-61. Filed 1-23-61.

Class 50—Merchandise Not Otherwise Classified

- 722,671. SALITE. Salem Plastics, Inc. SN 90,580. Pub. 7-25-61. Filed 2-8-60.
722,672. LEE-PAK. Leewood Corporation. SN 101,112. Pub. 7-25-61. Filed 7-19-60.
722,673. DOTT TONE AND DESIGN. Valdes Associates Inc. SN 110,575. Pub. 7-25-61. Filed 12-16-60.
722,674. MCA. The Massillon-Cleveland-Akron Sign Company. SN 115,503. Pub. 7-25-61. Filed 3-13-61.
722,675. HANDI-BORD. Morton Rand Corporation. SN 116,052. Pub. 7-25-61. Filed 3-20-61.

Class 51—Cosmetics and Toilet Preparations

- 722,676. FEATHER FINISH. Yardley & Company Limited. SN 104,907. Pub. 7-25-61. Filed 9-21-60.
722,677. SULFRIN. Georg Dralle. SN 106,994. Pub. 7-25-61. Filed 10-24-60.
722,678. MONSIEUR X. Christian Dior Perfumes Corporation. SN 109,172. Pub. 7-25-61. Filed 11-28-60.
722,679. CLAIRE-FIL. Clair Incorporated. SN 109,386. Pub. 7-25-61. Filed 12-1-60.

- 722,680. MISS HATTIE. Hattie Carnegie, Inc., d.b.a. Hattie Carnegie. SN 110,596. Pub. 7-25-61. Filed 12-21-60.

Class 52—Detergents and Soaps

- 722,681. OILNOCK. Aktiebolaget Formosa. SN 100,748. Pub. 7-25-61. Filed 7-18-60.
722,682. PRETTY BABY. Chemical & Electronic Research Corporation. SN 109,167. Pub. 7-25-61. Filed 11-28-60.
722,683. OUTLINE OF RETORT AND FACE OF METER. Hagan Chemicals & Controls, Inc. SN 109,320. Pub. 7-25-61. Filed 11-30-60.
722,684. WESTASEPT. West Chemical Products, Inc. SN 109,536. Pub. 7-25-61. Filed 12-2-60.
722,685. CALMAL. American Calmal Corp. SN 109,835. Pub. 7-25-61. Filed 12-8-60.
722,686. WESTONE. West Chemical Products, Inc. SN 111,023. Pub. 7-25-61. Filed 12-29-60.
722,687. F HOUSE OF FULLER AND DESIGN. The Fuller Brush Company. SN 112,535. Pub. 7-25-61. Filed 1-26-61.
722,688. ALKADET. The Keever Starch Company. SN 113,534. Pub. 7-25-61. Filed 2-13-61.

Service Marks

Class 101—Advertising and Business

- 722,689. E.G. & A. DIAL-TALK. Edward Gottlieb & Associates Ltd. SN 94,483. Pub. 7-25-61. Filed 4-6-60.
722,690. FEATURED PRODUCTS PHARMONY AND DESIGN. Johnson & Lanman, Inc. SN 97,941. Pub. 7-25-61. Filed 5-26-60.
722,691. PHARMONY. Johnson & Lanman, Inc. SN 97,942. Pub. 7-25-61. Filed 5-26-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials Class 18—Medicines and Pharmaceutical Preparations

- 722,700. Raymond T. Johnson, d.b.a. Johnson's Flower Center, Washington, D.C. SN 62,761. Filed P.R. 11-19-58; Am. S.R. 8-11-61.

OUR BUSINESS IS BLOOMING

For Cut Flowers, Floral Pieces, Plants, Nursery Stock, Dried Foliage Decorating Materials, Top Soil, Bulbs, Seeds. First use Apr. 30, 1957.

- 722,701. Dominion Poly Products, Toronto, Ontario, Canada. SN 78,616. Filed P.R. 7-29-59; Am. S.R. 8-11-61.

POLYTARP

Owner of Canadian Reg. No. 110,407, dated May 30, 1958. For Plastic Sheeting.

- 722,702. The Hubbard-Hall Chemical Company, Waterbury, Conn. SN 101,685. Filed P.R. 7-29-60; Am. S.R. 7-21-61.

FIRE-LITE

For Liquid Charcoal Lighter. First use Dec. 3, 1958.

Class 105—Transportation and Storage

- 722,692. ROYAL ALOHA. Northwest Airlines, Inc. SN 75,770. Pub. 7-25-61. Filed 6-15-59.
722,693. WITH PILOT SERVICE IS A FRAME OF MIND AND DESIGN. Pilot Freight Carriers, Incorporated. SN 84,091. Pub. 7-25-61. Filed 10-27-59.
722,694. COMBINATION OF THE LETTERS E AND L AND DESIGN. Erie-Lackawanna Railroad Company. SN 111,396. Pub. 7-25-61. Filed 1-6-61.
722,695. THE FRIENDLY SERVICE ROUTE. Erie-Lackawanna Railroad Company. SN 111,397. Pub. 7-25-61. Filed 1-6-61.

Class 106—Material Treatment

- 722,696. PIC-PARADE. Mall Enterprises, Incorporated. SN 108,647. Pub. 7-25-61. Filed 11-17-60.

Class 107—Education and Entertainment

- 722,697. TITANS OF NEW YORK AND DESIGN. Titans of New York, Inc. SN 102,150. Pub. 7-25-61. Filed 8-5-60.
722,698. COMMON-CORE. Van Valkenburgh, Nooger & Neville, Inc. SN 108,776. Pub. 7-25-61. Filed 10-19-60.

Collective Membership Marks

Class 200

- 722,699. SERTOMA INTERNATIONAL AND DESIGN. Sertoma International. SN 92,816. Pub. 7-25-61. Filed 3-14-60.



For Vitamin Preparations, Antispasmodic Preparations, and Preparations for Liver Ailments. First use Aug. 14, 1956.

- 722,704. Astron Chemicals and Pharmaceuticals, Inc., New York, N.Y. SN 85,079. Filed P.R. 11-12-59; Am. S.R. 7-27-61.

INSTANTLY

For Inhalant for Nasal Congestion. First use October 1958.

- 722,705. Michael Malecki, d.b.a. Michael Malecki Co., Brooklyn, N.Y. SN 88,060. Filed P.R. 12-28-59; Am. S.R. 3-7-61.
- 722,710. Marcal Paper Mills, Inc., East Paterson, N.J. SN 97,405. Filed P.R. 5-18-60; Am. S.R. 7-10-61.



For Skin Lotion for Minor Burns and Sunburn.
First use Dec. 12, 1957.

Class 22 — Games, Toys, and Sporting Goods

- 722,706. Louis Marx & Company, Inc., New York, N.Y. SN 86,670. Filed P.R. 12-4-59; Am. S.R. 7-10-61.

TRAIN WITH THE BRAIN

For Toy Train System Which Operates Automatically.
First use May 14, 1959.

- 722,707. G. D. Baker, d.b.a. G. D. Baker Sales Co., Morristown, Tenn. SN 95,674. Filed P.R. 4-25-60; Am. S.R. 7-27-61.

BAKER'S

For Printed Cards Used in Playing the Game of "Bingo."
First use January 1960.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

- 722,708. Wilco Machine Works, Inc., Memphis, Tenn. SN 115,867. Filed P.R. 3-16-61; Am. S.R. 8-9-61.

Steinemann

Black is used for background and/or contrast purposes only, and its use is not limited to any particular shape or design.

For Machine for Coating Articles.
First use May 7, 1958.

Class 37 — Paper and Stationery

- 722,709. Erving Paper Mills, Erving, Mass. SN 95,064. Filed P.R. 4-14-60; Am. S.R. 7-25-61.

all-weather

For Windshield Wipes.
First use Feb. 13, 1954.



No claim is made to the representation of the package, per se.
For Facial Tissues.
First use Dec. 30, 1959.

Class 38 — Prints and Publications

- 722,711. Hallmark Cards, Incorporated, Kansas City, Mo. SN 87,945. Filed P.R. 12-24-59; Am. S.R. 7-17-61.

Collectors Cards

The lining on the drawing does not indicate coloring.
For Greeting Cards.
First use Nov. 24, 1959.

- 722,712. Simmons-Boardman Publishing Corporation, New York, N.Y. SN 104,121. Filed P.R. 9-8-60; Am. S.R. 7-25-61.

MARINE CATALOG

For Trade Publication Produced Quarterly.
First use July 16, 1956.

Class 46 — Foods and Ingredients of Foods

- 722,713. Kimbell Candy Company, Chicago, Ill. SN 81,287. Filed P.R. 9-14-59; Am. S.R. 5-26-61.

FREEZE-N-SQUEEZE

For Liquid-Frozen Sucker.
First use Aug. 3, 1959.

- 722,714. Lever Brothers Company, New York, N.Y. SN 100,852. Filed P.R. 7-14-60; Am. S.R. 7-10-61.

MRS. BUTTERWORTH'S

For Table Syrup.
First use June 27, 1960.

- 722,715. Showell Poultry, Inc., Showell, Md. SN 111,232. Filed P.R. 1-3-61; Am. S.R. 7-17-61.



For Fresh Dressed Poultry.
First use January 1952.

- 722,716. Abraham Schnall, d.b.a. Schnall Products Co., Brooklyn, N.Y. SN 111,630. Filed 12-23-60.

TAAM-TOV

The mark shown in the drawing means "Good Taste" or "Tasteful" in English.
For Cheese.
First use Mar. 1, 1953.

Class 51 — Cosmetics and Toilet Preparations

- 722,717. Richard Hudnut, Morris Plains, N.J. SN 73,093. Filed P.R. 5-7-59; Am. S.R. 7-13-61.

LAZY PINK

For Lipstick.
First use Apr. 27, 1959.

Class 52 — Detergents and Soaps

- 722,718. Allied Block Chemical Company, Pittsburgh, Pa. SN 94,547. Filed P.R. 4-7-60; Am. S.R. 8-2-61.



For Laundry Detergent.
First use Feb. 13, 1959.

TRADEMARK REGISTRATIONS RENEWED

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|---------------------------------------------------------------|-----------------------------------------------------------|
| 142,631. FIRST SETTLERS. Cl. 16. 5-17-21. | 389,609. WINTITE. Cl. 25. 8-12-41. |
| 144,614. NASH NORFOLK. Cl. 16. 7-12-21. | 389,616. HOBO KING CHICKEN AND DESIGN. Cl. 40. 8-12-41. |
| 145,095. MON CHERI. Cl. 52. 7-26-21. | 389,684. ABSORBTEX. Cl. 42. 8-10-41. |
| 145,216. REPRESENTATION OF A MALE. Cl. 37. 7-26-21. | 389,873. LEAFLEX. Cl. 16. 8-26-41. |
| 145,702. ACTIVOL. Cl. 6. 8-16-21. | 389,920. FELCOPAK. Cl. 12. 8-26-41. |
| 145,713. BLACK DIAMOND. Cl. 1. 8-16-21. | 390,000. BIDU. Cl. 45. 9-2-41. |
| 146,064. DOTS. Cl. 46. 8-30-21. | 390,020. EC-TRI-FLEX. Cl. 34. 9-2-41. |
| 146,072. FAMOUS CORNELL FLUXES. Cl. 6. 8-30-21. | 390,038. SLIM. Cl. 27. 9-2-41. |
| 146,681. AUNT JEMIMA AND DESIGN. Cl. 46. 9-20-21. | 390,041. HUGUENOT. Cl. 49. 9-2-41. |
| 147,577. VITALOSE. Cl. 46. 10-25-21. | 390,134. KEP. Cl. 46. 9-9-41. |
| 147,613. ROYAL WORCESTER AND DESIGN. Cl. 1. and 35. 10-25-21. | 390,356. LONOL. Cl. 51. 9-23-41. |
| 148,532. SEA LION AND DESIGN. Cl. 46. 11-15-21. | 390,469. SAN-SO. Cl. 52. 9-23-41. |
| 149,683. CASEC. Cl. 46. 12-20-21. | 390,784. BABY-DOO. Cl. 13. 10-7-41. |
| 150,778. CONDAX AND DESIGN. Cl. 17. 1-10-22. | 390,947. TREESWEET AND DESIGN. Cl. 46. 10-14-41. |
| 150,880. IRBY'S BLACK LEAF AND DESIGN. Cl. 17. 1-10-22. | 391,175. COLOR-AIDER. Cl. 34. 10-28-41. |
| 150,881. CLIPPER. Cl. 17. 1-10-22. | 391,398. QUAKER. Cl. 46. 11-4-41. |
| 150,882. OASIS AND DESIGN. Cl. 17. 1-10-22. | 391,414. ORANGE. Cl. 23. 11-4-41. |
| 150,883. ALADDIN AND DESIGN. Cl. 17. 1-10-22. | 391,517. FLYING HORSE DESIGN. Cl. 16. 11-11-41. |
| 150,884. OLD MILL. Cl. 17. 1-10-22. | 391,668. EL DORADO. Cl. 40. 11-18-41. |
| 150,995. ODD MOMENTS. Cl. 17. 1-10-22. | 392,220. SEA-COAST LINER COTE. Cl. 16. 12-16-41. |
| 151,121. DUNLAP. Cl. 39. 1-24-22. | 392,262. TABLELAND. Cl. 46. 12-16-41. |
| 385,923. ORMIG. Cl. 6. 3-25-41. | 392,400. SUGAR PLUM. Cl. 51. 12-23-41. |
| 386,925. ORMIG. Cl. 11. 4-29-41. | 392,582. KOLD KIST. Cl. 46. 1-6-42. |
| 387,311. WEBCO AND DESIGN. Cl. 46. 5-13-41. | 392,592. SEE THINGS IN A DIFFERENT LIGHT. Cl. 21. 1-6-42. |
| 387,330. PILGRIM WEDDING AND DESIGN. Cl. 37. 5-13-41. | 392,729. SLINDERELLA. Cl. 39. 1-13-42. |
| 387,621. SANSINENA. Cl. 46. 5-27-41. | 392,784. JIM KOTE. Cl. 16. 1-13-42. |
| 387,956. GREEK LETTERS. Cl. 28. 6-10-41. | 392,822. BLENDIX. Cl. 39. 1-13-42. |
| 388,271. PER-FIT. Cl. 39. 6-17-41. | 392,824. EXTENDORS. Cl. 39. 1-13-42. |
| 388,733. LADY GRACE. Cl. 40. 7-8-41. | 392,952. LE ROI. Cl. 23. 1-20-42. |
| 388,734. PER-FIT. Cl. 40. 7-8-41. | 392,991. FIRST CALL AND DESIGN. Cl. 46. 1-20-42. |
| 389,242. EMLITE. Cl. 29. 7-29-41. | 393,023. KLEINERT PIN-IN. Cl. 40. 1-27-42. |
| 389,264. PER-FIT. Cl. 44. 7-29-41. | 393,052. FILTERWELD. Cl. 26. 1-27-42. |
| | 393,168. RAYNEBEATER. Cl. 39. 1-27-42. |
| | 393,178. LANAFELT. Cl. 39. 1-27-42. |

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| 213,258. CRESCENT AND DESIGN. Cl. 34. 5-25-26. | 434,317. DAVY CROCKETT FRONTIERSMAN. Cl. 39. 11-18-47. |
| 691,748. FOGIES. Cl. 39. 1-19-60. | 443,192. AERO-MATIC. Cl. 13. 8-9-49. |
| | 443,692. BLENTONE AND DESIGN. Cl. 38. 1-17-50. |
| | 609,783. CHIN-GUARD. Cl. 3. 8-2-55. |
| | The following registrations issued Aug. 23, 1955 |
| 318,143. UNITUBULAR. Cl. 23. 10-16-34. | 610,864. SAMPSON'S CROWN CHINCHILLAS AND DESIGN. Cl. 1. |
| 321,865. PAR-A-RAP AND DESIGN. Cl. 37. 2-19-35. | |
| 322,424. SEELL. Cl. 42. 3-5-35. | |

610,874. SURFCO. Cls. 6 and 16.
 610,884. SUPER QUICK. Cl. 6.
 610,886. COLD DOG. Cl. 6.
 610,888. AMDYCO. Cl. 6.
 610,894. RAPIDTAN. Cl. 6.
 610,895. 10-40. Cl. 6.
 610,900. WIN-DOR APPROVED AND DESIGN. Cl. 12.
 610,901. SHADOW-LITE. Cl. 12.
 610,902. TRU-LINK FENCE ETC. Cl. 12.
 610,905. TEMP'N TIME. Cl. 13.
 610,906. VALPIPE. Cl. 13.
 610,910. RES-Q ETC. AND DESIGN. Cl. 13.
 610,912. AUTOMOIST. Cl. 13.
 610,916. SHAVEX CRADLE. Cl. 13.
 610,917. SHAVEX. Cl. 13.
 610,920. DARDELET. Cl. 13.
 610,925. PLASTI-ROKUT. Cl. 13.
 610,928. EDGEMASTER. Cl. 13.
 610,929. MAURIER AND DESIGN. Cl. 17.
 610,934. SUPER-VIM AND DESIGN. Cl. 18.
 610,935. RU-BAC. Cl. 18.
 610,936. IORP. Cl. 18.
 610,941. MUGOLIO AND DESIGN. Cl. 18.
 610,947. TEWINE. Cl. 18.
 610,955. CULVA-PLEX. Cl. 18.
 610,963. CHROMOTIVE. Cl. 19.
 610,964. BURNER-CADDY AND DESIGN. Cl. 19.
 610,971. PRESIDENT. Cl. 19.
 610,975. DUAL-REVENUER. Cl. 21.
 610,976. "FREEVIEWER." Cl. 21.
 610,977. ROTO-KLEEN AND DESIGN. Cl. 21.
 610,978. GAGETTE. Cl. 21.
 610,979. CIRCLE-VANE. Cl. 21.
 610,980. THE COMMANDER AND DESIGN. Cl. 21.
 610,984. BELOCK AND DESIGN. Cl. 21.
 610,987. DU VAR. Cl. 21.
 610,995. CAN ARM. Cl. 21.
 610,999. SURRETTE REZISTOX. Cl. 21.
 611,000. GEN RUB. Cl. 21.
 611,003. CRE-ME. Cl. 23.
 611,006. ZYMOZON. Cl. 23.
 611,007. TERRALOAD'R. Cl. 23.
 611,014. EASY WAY. Cl. 23.
 611,019. TRAC TOW BAR. Cl. 23.
 611,021. HYDROMIX. Cl. 23.
 611,023. ROLCUT. Cl. 23.
 611,026. NATIONAL. Cl. 23.
 611,031. PIT-BULL. Cl. 23.
 611,032. PIT-BULL AND DESIGN. Cl. 23.
 611,037. TEMP'N TIME. Cl. 26.
 611,038. HEATELL. Cl. 26.
 611,041. DESIGN OF A CAT. Cl. 26.
 611,042. COSMOPOLITAN. Cl. 27.
 611,043. MOTHER GOOSE. Cl. 27.
 611,046. BUCKERINA. Cl. 27.
 611,047. LADURA. Cl. 27.
 611,052. SILCOA WITH CROWN AND KEY DESIGN. Cl. 28.
 611,054. AIRFLEX. Cl. 28.

611,058. EXECUTIVE. Cl. 28.
 611,059. BAKEY'S 3 4 1 AND DESIGN. Cl. 29.
 611,067. HOLLYWOOD PARTYPLATE AND DESIGN. Cl. 30.
 611,071. DORFAN DUST AND FUME CONTROL SYSTEMS AND DESIGN. Cl. 31.
 611,072. SUPER-WALL. Cl. 31.
 611,075. AIR-FOLD LOUNGE. Cl. 32.
 611,078. DEGRADEKES. Cl. 32.
 611,079. BALORA. Cl. 32.
 611,080. BALORA ORIGINAL. Cl. 32.
 611,082. BOX-A-BYE. Cl. 32.
 611,083. PEASANT PROVINCIAL. Cl. 32.
 611,084. POLY-NET. Cl. 32.
 611,087. BELLAIR. Cl. 34.
 611,089. FIRE VALVE. Cl. 34.
 611,094. PARA-LIFT. Cl. 35.
 611,099. SCHENLEY. Cl. 38.
 611,100. FABULOUS IMMIGRANTS. Cl. 38.
 611,102. MUNSON MERRY-GO-ROUND. Cl. 38.
 611,104. 7TH AVENUE. Cl. 38.
 611,106. PHOTORAMA. Cl. 38.
 611,114. MERITEX. Cl. 39.
 611,117. STARLITE AND REPRESENTATION OF A STAR. Cl. 41.
 611,118. OVERLAND FABRICS AND DESIGN. Cl. 42.
 611,120. SCRAMBLE. Cl. 42.
 611,121. SCRABBLE. Cl. 42.
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 611,124. LAMALOFT. Cl. 42.
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 611,133. BORDILLA. Cl. 42.
 611,134. VELUJO. Cl. 42.
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 611,142. DAIRY DREAM. Cl. 46.
 611,144. BOSS. Cl. 46.
 611,147. BAG-O-SWEET. Cl. 46.
 611,149. REDCHAIN VITA-GREEN. Cl. 46.
 611,150. TEETHING BISCUITS AND DESIGN. Cl. 46.
 611,151. REPRESENTATION OF A TRUMPETER AND DESIGN. Cl. 46.
 611,154. VITA PEL. Cl. 46.
 611,156. OLE WILLIAMSBURG. Cl. 46.
 611,159. KING CAVY AND DESIGN. Cl. 46.
 611,163. OH HENRY COCONUT ROLL. Cl. 46.
 611,205. HELEN WARD. Cl. 51.
 611,214. SUN'N SAND. Cl. 51.
 611,217. SCORCHER. Cl. 51.
 611,222. ADSURANCE AND DESIGN. Cl. 101.
 611,223. DESIGN OF ROOSTER. Cl. 102.
 611,228. SECOND HONEYMOON AND DESIGN. Cl. 107.
 611,231. WE WILL BE HERE TOMORROW ETC. Cl. 19.
 611,232. RIEFLER WITHIN DESIGN. Cl. 26.
 611,233. WELDON. Cl. 27.
 611,235. EXECUTIVE FURNITURE GUILD OF AMERICA ETC. AND DESIGN. Cl. 32.

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65,400. GOLDEN SEAL AND DESIGN. Cl. 46. 9-24-07. 320,405. STEELOX. Cl. 12. 12-25-34. Steelox Company. Kansas Milling Company. The Kansas Milling Company, Wichita, Kans. Amended to appear:
 Amco Steel Corporation, Middletown, Ohio. Amended to appear:



STEELOX

504,844. EVERFAST. Cl. 42. 12-14-48. Everfast Fabrics, Inc., New York, N.Y. Amended to appear:

EVERFAST

507,409. EVERFAST. Cl. 40. 3-8-49. Everfast Fabrics, Inc., New York, N.Y. Amended to appear:

EVERFAST

507,410. EVERFAST. Cl. 43. 3-8-49. Everfast Fabrics, Inc., New York, N.Y. Amended to appear:
 661,682. HIGH FIDELITY. Cl. 38. 5-13-58. Audiocom, Inc. The Billboard Publishing Company, Cincinnati, Ohio. Amended to appear:

EVERFAST

523,324. REPRESENTATION OF PIRATE AND TREASURE CHEST. Cl. 46. 4-4-50. Treasure Cave. Treasure Cave, Inc., Faribault, Minn. Amended to appear:



549,067. SP AND DESIGN. Cl. 106. 10-2-51. Standard Pipeprotection Inc., St. Louis, Mo. Amended: In the statement, column 1, lines 7 through 13, the description of goods is deleted and *Treating metal pipe for protecting against rust and corrosion, such treatment comprising applying protective coatings and protective insulating wrappings, the mark being applied directly to the pipe or to the outer wrapping, as by decalcomania stickers, stencil or printing* is inserted.

625,735. VALSPAR VALASTIC. Cl. 18. 4-24-56. The Valspar Corporation, Ardmore, Pa. Amended to appear:

Valspar
VALASTIC

636,523. PRIME FROZEN. Cl. 46. 10-30-56. California Consumers Corporation, Los Angeles, Calif. Corrected: In the statement, column 2, line 4, after "juice" concentrate should be inserted.

TM 771 O.G.—7

high fidelity

706,210. SCRIPTSTARTER. Cl. 18. 10-25-60. Ames Company, Inc., Elkhart, Ind. Amended: In the statement, column 2, lines 1 through 4, the description of goods is deleted and *Sample of ethical pharmaceuticals for physicians which may be used to fill a doctor's prescription* is inserted.

716,935. GERBER AND DESIGN. Cl. 46. 6-13-61. Gerber Products Company, Fremont, Mich. Corrected: In the statement, column 2, after line 7, *The representation of the infant's head is an artistic drawing of a picture of Ann Turner Cook, whose consent is of record.* should be inserted.

717,229. IMPERVION. Cl. 39. 6-20-61. Chas. Macintosh & Co. Limited, Edmonton, London, England. Corrected: In the statement, column 1, line 1, "Macintosh" should be deleted and *Macintosh* should be inserted.

717,463. INDUSTRIONICS. Cl. 21. 6-27-61. Industri- onics Controls, Inc., by change of name from Wintriss, Inc., New York, N.Y. Corrected: In the heading, "975,534" should be deleted and 97,534 should be inserted.

717,735. CC AND DESIGN. Cls. 13, 21, 26, 31, and 34. 7-4-61. Controls Company of America, Schiller Park, Ill. Corrected: In the statement, column 1, line 5, "thermal" should be deleted and *thermo* should be inserted.

719,351. ENZEL OF PARIS. Cl. 39. 8-1-61. Educator Shoe Corporation, New York, N.Y. Corrected: In the statement, column 1, line 1, "Educators" should be deleted and *Educator* should be inserted.

720,026. THE FINE PRINT. Cl. 38. 8-15-61. Wolf and Cohen, Inc., Washington, D.C. Corrected: In the statement, column 1, line 1, "District of Columbia" should be deleted and *Virginia* should be inserted.

720,143. BOYSCUB ETC. AND DESIGN. Cl. 200. 8-15-61. Boys' Clubs of America, New York, N.Y. Corrected: In the statement, column 2, line 4, "through" should be deleted and *throughout* should be inserted.

INDEX OF REGISTRANTS

OCTOBER 10, 1961

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- Aero Mfg. Co., Rockford, Ill. 610,964, can. Cl. 19.
 Abbey, Hyman D., Larchmont, N.Y. 722,593, pub. 7-25-61. Cl. 37.
 Acme Chemical Co.: See—
 Dobkin, Israel.
 Adsurance, Inc., Denver, Colo. 611,222, can. Cl. 101.
 Aetna Mfg. Co., Inc., Burlingame, Calif. 722,435, pub. 7-25-61. Cl. 1.
 Alrkem, Inc., New York, N.Y. 610,895, can. Cl. 6.
 Aktiebolaget Electrolux, Stockholm, Sweden. 722,527, pub. 7-25-61. Cl. 21.
 Aktiebolaget Formosa, Stockholm, Sweden. 722,681, pub. 7-25-61. Cl. 32.
 Alabama-Georgia Syrup Co., d.b.a. Alaga Syrup Co., Montgomery, Ala. 722,661, pub. 7-25-61. Cl. 46.
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 Alabama-Georgia Syrup Co.
 Alamo Mfg. Co., Inc., New York, N.Y. 722,620, pub. 7-25-61. Cl. 39.
 Alco Valve Co., St. Louis, Mo. 722,561, pub. 7-25-61. Cl. 31.
 Allen, Don, Buffalo, N.Y. 611,231, can. Cl. 19.
 Allied Block Chemical Co., Pittsburgh, Pa. 722,716, Cl. 52.
 American Cabinet Hardware Corp., to Amerock Corp., Rockford, Ill. 389,609, ren. 10-10-61. Cl. 25.
 American Calmal Corp., Hialeah, Fla. 722,685, pub. 7-25-61. Cl. 52.
 American Dyewood Co., Belleville, N.J. 610,888, can. Cl. 6.
 American Ezercraft Inc., Rockville Centre, N.Y. 722,591, pub. 7-25-61. Cl. 37.
 American Machine and Metals, Inc., East Moline, Ill. 722,560, pub. 7-25-61. Cl. 31.
 American Medicinal Corp., Forest Hills, N.Y. 722,703. Cl. 18.
 American Optical Co., Southbridge, Mass. 393,052, ren. 10-10-61. Cl. 26.
 American Sand-Banum Co., Inc., Merrick, N.Y. 722,465, pub. 7-25-61. Cl. 6.
 American Saw & Mfg. Co., Springfield, Mass. 722,547, pub. 7-25-61. Cl. 23.
 American Seal-Kap Corp. of Delaware, New York, N.Y., from Chicago Mfg. and Distributing Co., Chicago, Ill. 722,500. Pub. 7-18-61, Cl. 15; pub. 7-11-61, Cl. 23. (Consolidated certificate, Classes 15 and 23.)
 American Seating Co., Grand Rapids, Mich. 722,639, pub. 7-25-61. Cl. 44.
 American Soybean Association, The, Hudson, Iowa. 722,603, pub. 7-25-61. Cl. 38.
 American Sugar Refining Co., The, New York, N.Y. 146,064, ren. 10-10-61. Cl. 46.
 American Tractor Corp., Churubusco, Ind. 611,007, can. Cl. 23.
 American Woolen Co., now by merger and change of name Texton American, Inc., New York, N.Y. 611,138, can. Cl. 42.
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 Ames Co., Inc., Elkhart, Ind. 706,210. Am. 7(d). Cl. 18.
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 Ampurf Paint Co., Inc., El Monte, Calif. 722,506, pub. 7-25-61. Cl. 16.
 Anderson School Equipment Co., Los Angeles, Calif. 611,078, can. Cl. 32.
 Angostura Bitters (Dr. J. G. B. Siegert & Sons) Ltd., Port of Spain, Trinidad. 722,668, pub. 7-25-61. Cl. 49.
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 Boys' Clubs of America, New York, N.Y. 720,143, cor. Cl. 200.
 Brannan, Lee, Detroit, Mich. 610,977, can. Cl. 21.
 Brenner Biscuit Co., Louisville, Ky. 722,644, pub. 7-25-61. Cl. 46.
 Breneman-Hartshorn Inc., Cincinnati, Ohio. 722,570-1, pub. 7-25-61. Cl. 32.
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 Boston Leather Specialties Inc.
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 Chatham Mfg. Co., Elkin, N.C. 611,124, can. Cl. 42.
 Chemical & Electronic Research Corp., Baltimore, Md. 722,682, pub. 7-25-61. Cl. 52.
 Chemical and Fibre Associates, Inc., Azusa, Calif. 610,886, can. Cl. 6.
 Chesbrough-Pond's Inc.: See—
 Northam Warren Corp.
 Chicago Mfg. and Distributing Co.: See—
 American Seal-Kap Corp. of Delaware.
 Christophers, Inc., The, New York, N.Y. 722,609, pub. 7-25-61. Cl. 38.

Church of Religious Science, Los Angeles, Calif. 722,604, pub. 7-25-61. Cl. 38.
 Clatrol Inc., New York, N.Y. 722,679, pub. 7-25-61. Cl. 51.
 Claremont Pigment Dispersion Corp., Roslyn Heights, N.Y. 722,482, pub. 7-25-61. Cl. 11.
 Cleveland Flux Co., The, Cleveland, Ohio. 146,072, ren. 10-10-61. Cl. 6.
 Cochran, Jacqueline, Inc., Newark, N.J. 611,214, can. Cl. 51.
 Cohen, A., & Sons Corp., New York, N.Y. 722,528, pub. 7-25-61. Cl. 21.
 Columbia Technical Corp., Woodside, N.Y. 722,524, pub. 7-25-61. Cl. 21.
 Compania Sansinena, Sociedad Anonima (Carne Y Derivados), Buenos Aires, Argentina, to Cap Sales Corp., New York, N.Y. 387,621, ren. 10-10-61. Cl. 46.
 Conday, E. A., & Co., Inc., to Liggett & Myers Tobacco Co., New York, N.Y. 150,778, ren. 10-10-61. Cl. 17.
 Continental Silver-Line Products, Houston, Tex. 722,575, pub. 7-25-61. Cl. 32.
 Controls Co. of America, Schiller Park, Ill. 717,735, cor. Classes 13, 21, 26, 31, and 34.
 Copley Fabrics, Inc., New York, N.Y., to Production and Marketing Co., Newton, Conn. 611,120, can. Cl. 42.
 Corn Products Co.: See—
 Corn Products Refining Co., to Corn Products Co., New York, N.Y. 147,577, ren. 10-10-61. Cl. 46.
 Cramer Controls Corp.: See—
 Giannini Controls Corp.
 Crush International Inc.: See—
 Orange-Crush Co.
 Culver Nutritional Products, Jersey City, N.J. 610,955, can. Cl. 18.
 Cundiff, Roy E., Houston, Tex. 610,901, can. Cl. 12.
 Davey Metals, Inc., Red Lion, Pa. 611,079-80, can. Cl. 32.
 Defender Supporter Co., Philadelphia, Pa. 722,635, pub. 7-25-61. Cl. 44.
 Delaware Milling Co., Inc., Deposit, N.Y. 722,651, pub. 7-25-61. Cl. 46.
 Deringer, Simon, d.b.a. Easy Way Stamper Machine Co., Philadelphia, Pa. 611,014, can. Cl. 23.
 Idde-Glaser, Inc., Emporia, Kans. 722,556, pub. 7-25-61. Cl. 23.
 Di Giorgio Fruit Corp.: See—
 Titcomb, H. H.
 Dior, Christian, Perfumes Corp., New York, N.Y. 722,678, pub. 7-25-61. Cl. 51.
 Dobkin, Israel, d.b.a. Acme Chemical Co., Pittsburgh, Pa. 443,192, can. Cl. 13.
 Dominion Poly Products, Toronto, Ontario, Canada. 722,701. Cl. 1.
 Dow Chemical Co., The, Midland, Mich. 722,436, pub. 7-25-61. Cl. 1.
 Dralle, Georg, Hamburg-Altona, Germany. 722,677, pub. 7-25-61. Cl. 51.
 Drexel Furniture Co., Drexel, N.C. 611,083, can. Cl. 32.
 Dunlap & Co., New York, N.Y., to Hat Corp. of America, Norwalk, Conn. 151,121, ren. 10-10-61. Cl. 39.
 Dunn, Ainslev, & Co. Ltd., London, England. 722,667, pub. 7-25-61. Cl. 49.
 Duplex Printing Press Co., Battle Creek, Mich. 318,143, can. Cl. 23.
 Duray Co., Inc., The, Brooklyn, N.Y. 722,457, pub. 7-25-61. Cl. 3.
 Durkee Famous Foods: See—
 Glidden Co., The.
 Eagle Electric Mfg. Co., Inc., Long Island City, N.Y. 392,592, ren. 10-10-61. Cl. 21.
 Earl Fruit Co.: See—
 Titcomb, H. H.
 Eastern Corp., Bangor, Maine, to Standard Packaging Corp., New York, N.Y. 387,330, ren. 10-10-61. Cl. 37.
 Eastern Products Corp., Baltimore, Md. 722,492, pub. 7-25-61. Cl. 13.
 Easy Way Stamper Machine Co.: See—
 Deringer, Simon.
 Edgemaster Corp., Philadelphia, Pa. 610,928, can. Cl. 13.
 Educator Shoe Corp., New York, N.Y. 719,351, cor. Cl. 39.
 Electronid Corp., Chazy, N.Y. 610,995, can. Cl. 21.
 Electronic Specialty Co., Los Angeles, Calif. 610,916-17, can. Cl. 13.
 Elgin National Watch Co., Elgin, Ill. 722,495, pub. 7-25-61. Cl. 14.
 Elliott Paint & Varnish Co., Chicago, Ill. 722,505, pub. 7-25-61. Cl. 16.
 Englander Co., Inc., The, Chicago, Ill. 722,564-5, pub. 7-25-61. Cl. 32.
 Erie-Lackawanna Railroad Co., Cleveland, Ohio. 722,694-5, pub. 7-25-61. Cl. 105.
 Erving Paper Mills, Erving, Mass. 722,709, Cl. 37.
 Espoma Co., The, Millville, N.J. 722,479, pub. 7-25-61. Cl. 10.
 Everfast Fabrics, Inc., New York, N.Y. 504,844, Am. 7(d). Cl. 42.
 Everfast Fabrics, Inc., New York, N.Y. 507,409, Am. 7(d). Cl. 40.
 Everfast Fabrics, Inc., New York, N.Y. 507,410, Am. 7(d). Cl. 43.
 Ewbank, Andre: See—
 Ewbank, Georges A.M.E.
 Ewbank, Georges A.M.E., from Andre Ewbank, Brussels, Belgium. 722,485, pub. 7-25-61. Cl. 12.
 Executive Furniture Guild of America, Grand Rapids, Mich. 611,235, can. Cl. 32.
 Executive Inc., New York, N.Y. 722,519, pub. 7-25-61. Cl. 21.
 Felters Co., The, Boston, Mass. 389,920, ren. 10-10-61. Cl. 12.

Ferracute Machine Co., Bridgeton, N.J. 725,649, pub. 7-25-61. Cl. 23.
 Firma "Ormig" Organisationsmittel G.m.b.H., to "Ormig" Organisationsmittel G.m.b.H., Berlin-Tempelhof, Germany. 385,923, ren. 10-10-61. Cl. 6.
 Firma "Ormig" Organisationsmittel G.m.b.H., to "Ormig" Organisationsmittel G.m.b.H., Berlin-Tempelhof, Germany. 386,925, ren. 10-10-61. Cl. 11.
 Florida Fibre Co., Inc., Hialeah, Fla. 722,434, pub. 7-25-61. Cl. 1.
 Fogleman, Howard, Inc., Burlington, N.C. 691,748, can. Cl. 39.
 Forster Mfg. Co.: See—
 Forster, Thomas E., Jr.
 Forster, Thomas E., Jr., d.b.a. Forster Mfg. Co., Wichita, Kans. 611,035, can. Cl. 26.
 Foster and Kleiser Co., San Francisco, Calif. 443,692, can. Cl. 38.
 Frame Lines: See—
 Burnes, Charles D., Co.
 Freeman, Alice M., Gladwyne, Pa. 722,539, pub. 7-25-61. Cl. 22.
 French Jewelry Co., Philadelphia, Pa. 611,054, can. Cl. 28.
 Friars of the Atonement, Inc., Garrison, N.Y. 722,613, pub. 7-25-61. Cl. 38.
 Fried, Armand, Brooklyn, N.Y. 722,625, pub. 7-25-61. Cl. 39.
 Friedman & Sons, New York, N.Y. 611,117, can. Cl. 41.
 Frisco, Ross, Boston, Mass. 611,100, can. Cl. 39.
 Fuller Brush Co., The, East Hartford, Conn. 722,687, pub. 7-25-61. Cl. 32.
 Gabilla, Henriette, to Les Parfumeries De Gabilla, Societe Anonyme, Paris, France. 145,095, ren. 10-10-61. Cl. 52.
 Gablondo and Co., Elgoibar, Guipuzcoa, Spain. 722,475-6, pub. 7-25-61. Cl. 9.
 Gabriel Co., The, Cleveland, Ohio. 610,979, can. Cl. 21.
 General Precision, Inc., Little Falls, N.J. 722,520, pub. 7-25-61. Cl. 21.
 General Tire & Rubber Co., The, Akron, Ohio. 611,000, can. Cl. 21.
 Gerber Products Co., Fremont, Mich. 611,150, can. Cl. 46.
 Gerber Products Co., Fremont, Mich. 716,935, Am. 7(d). Cl. 46.
 Gerett, M. A., Inc., Milwaukee, Wis. 722,580, pub. 7-25-61. Cl. 34.
 Gevaert Photo-Producten N.V., Mortsel, Belgium. 611,105, can. Cl. 38.
 Giannini Controls Corp., Duarte, Calif., from Cramer Controls Corp., Centerbrook, Conn. 722,559, pub. 6-20-61. Cl. 26.
 Gibson-Romans Co., The, Cleveland, Ohio. 722,486, pub. 7-25-61. Cl. 12.
 Glidden Co., The, d.b.a. Durkee Famous Foods, Cleveland, Ohio. 722,643, pub. 7-25-61. Cl. 46.
 Golay & Co., Inc., Cambridge City, Ind. 722,454, pub. 7-25-61. Cl. 2.
 Golden Hamburger Drive-In Corp., The, d.b.a. The Golden Point Drive-In System, Chicago, Ill. 722,649, pub. 7-25-61. Cl. 46.
 Golden Point Drive-In System, The: See—
 Golden Hamburger Drive-In Corp., The.
 Goldfeder, Sol, New York, N.Y. 611,052, can. Cl. 28.
 Goodyear Tire & Rubber Co., The, Akron, Ohio. 722,513, pub. 7-25-61. Cl. 19.
 Gottlieb, Edward, & Associates Ltd., New York, N.Y. 722,689, pub. 7-25-61. Cl. 101.
 Governor Fastener Co., The, New York, N.Y. 722,633, pub. 7-25-61. Cl. 40.
 Gramery Import Co., Inc., New York, N.Y. 611,232, can. Cl. 26.
 Graton & Knight Mfg. Co., The, Worcester, Mass., to L. H. Shingle Co., Camden, N.J. 147,613, ren. 10-10-61. Cl. 1.
 ren. 10-10-61. Cl. 35. (Consolidated certificate, Classes 1 and 35).
 Graton & Knight Co., Worcester, Mass., to L. H. Shingle Co., Camden, N.J. 391,414, ren. 10-10-61. Cl. 23.
 Gray, G. A., Co., The, Cincinnati, Ohio. 722,550, pub. 7-25-61. Cl. 23.
 Great Western Sugar Co., The, Denver, Colo. 611,147, can. Cl. 46.
 Griswold's, Claremont, Calif. 722,647, pub. 7-25-61. Cl. 46.
 Gruskin, Arthur, d.b.a. Shalom Green Card Co., New York, N.Y. 722,602, pub. 7-25-61. Cl. 38.
 Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 722,466, pub. 7-25-61. Cl. 6.
 Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 722,683, pub. 7-25-61. Cl. 52.
 Hallmark Cards, Inc., Kansas City, Mo. 722,711, Cl. 38.
 Hamilton Cosco, Inc., Columbus, Ind. 722,569, pub. 7-25-61. Cl. 32.
 Hamilton Shoe Co., St. Louis, Mo. 722,624, pub. 7-25-61. Cl. 39.
 Hammons Products Co., Stockton, Mo. 722,431, pub. 7-25-61. Cl. 1.
 Hardman, H. V., Co., Inc., Belleville, N.J. 722,473, pub. 7-25-61. Cl. 6.
 Hardman, H. V., Co., Inc., Belleville, N.J. 822,437, pub. 7-25-61. Cl. 1.
 Hat Corp. of America: See—
 Dunlap & Co.
 Hat Corp. of America, Norwalk, Conn. 392,822, ren. 10-10-61. Cl. 39.
 Hat Corp. of America, Norwalk, Conn. 393,178, ren. 10-10-61. Cl. 39.
 Health Guardian Corp., Monroe, Wis. 722,523, pub. 7-25-61. Cl. 21.
 Helwig, Carl, d.b.a. Helwig Products, Los Angeles, Calif. 611,058, can. Cl. 28.
 Helwig Products: See—
 Helwig, Carl.

Heublein, G. F., & Bro., to Heublein, Inc., Hartford, Conn. 390,041, ren. 10-10-61. Cl. 49.
 Heublein, Inc.: See—
 Heublein, G. F., & Bro.
 Hewitt Soap Co., Inc., The, Dayton, Ohio. 390,469, ren. 10-10-61. Cl. 52.
 High, L. W., d.b.a. Ole Williamsburg Packing Plant, Leary, Ga. 611,156, can. Cl. 46.
 Hirsch, P. N., and Co., St. Louis, Mo. 722,626, pub. 7-25-61. Cl. 39.
 Hobo King Tavern: See—
 Pro, Bertha M.
 Hoepf, Victor G., Philadelphia, Pa. 722,627, pub. 7-25-61. Cl. 39.
 Holtman Carpet Shops, Inc., Brooklyn, N.Y. 611,127, can. Cl. 42.
 House of Good Celery, Inc., Syracuse, N.Y. 722,648, pub. 7-25-61. Cl. 46.
 Hubbard-Hall Chemical Co., The, Waterbury, Conn. 722,702. Cl. 1.
 Hubinger Co., The, Keokuk, Iowa. 610,884, can. Cl. 6.
 Hudnut, Richard: See—
 Moore, John Hudson, Inc.
 Hudnut, Richard, Morris Plains, N.J. 722,717, Cl. 51.
 Hudson Products, Inc., Defiance, Ohio. 722,650, pub. 7-25-61. Cl. 46.
 Huffman Mfg. Co., The, Dayton, Ohio. 722,554, pub. 7-25-61. Cl. 23.
 Hummel, Ludwig, d.b.a. Lacher & Co., Pforzheim, Germany. 611,047, can. Cl. 27.
 Hupp, Corp., Cleveland, Ohio. 722,541, pub. 7-14-59. Cl. 23.
 Hyer Hardware Mfg. Co.: See—
 M & H Industries.
 Ideal Toy Corp., Hollis, N.Y. 722,535, pub. 7-25-61. Cl. 22.
 Illinois Glove Co., Skokie, Ill. 722,631, pub. 7-25-61. Cl. 39.
 Illinois Tool Works, Chicago, Ill. 610,925, can. Cl. 13.
 Imperial Chemical Industries Ltd., London, England. 722-432, pub. 7-25-61. Cl. 1.
 Imperial Knife Associated Companies, Inc., Providence, R.I. 722,551, pub. 7-25-61. Cl. 23.
 Industrial Research & Des. Inc., Cincinnati, Ohio. 611,021, can. Cl. 23.
 Industronics Controls, Inc., by change of name from Wintriss, Inc., New York, N.Y. 717,463, cor. Cl. 21.
 Inecto, Inc., to Sales Affiliates, Inc., New York, N.Y. 390,356, ren. 10-10-61. Cl. 51.
 Instituto Oportepico del Rio de la Plata, Sociedad de Responsabilidad Limitada, Buenos Aires, Argentina. 610,936, can. Cl. 18.
 Interchemical Corp.: See—
 Roxall Flexible Lacquer Co., Inc.
 International Harvester Co., Chicago, Ill. 722,555, pub. 7-25-61. Cl. 23.
 Ivers-Lee Co., Newark, N.J. 722,447, pub. 7-25-61. Cl. 2.
 Ivers-Lee Co., Newark, N.J. 722,449-52, pub. 7-25-61. Cl. 2.
 Jackson, Allan, Pound Ridge, N.Y. 722,646, pub. 7-25-61. Cl. 46.
 Jackson, Peter, (Overseas) Ltd., London, England. 610,929, can. Cl. 17.
 Jacob, W. & R., & Co. (Liverpool) Ltd., Aintree, Liverpool, England. 611,151, can. Cl. 46.
 Jantzen Inc., Portland, Oreg. 722,458, pub. 7-25-61. Cl. 8.
 Jet-Heat, Inc., Englewood, N.J. 722,582, pub. 7-25-61. Cl. 34.
 Johnson & Johnson, New Brunswick, N.J. 722,439, pub. 7-25-61. Cl. 1.
 Johnson & Lauman, Inc., New York, N.Y. 722,690-1, pub. 7-25-61. Cl. 101.
 Johnson, Raymond T., d.b.a. Johnson's Flower Center, Washington, D.C. 722,700, Cl. 1.
 Johnson & Sons, Mfg. Chemists Ltd., to Johnsons of Hendon Ltd., London, England. 145,702, ren. 10-10-61. Cl. 6.
 Johnson's Flower Center: See—
 Johnson, Raymond T.
 Johnsons of Hendon Ltd.: See—
 Johnson & Sons, Mfg. Chemists Ltd.
 Johnston, W. B., Grain Co., Enid, Okla. 722,433, pub. 7-25-61. Cl. 1.
 Josam Mfg. Co., Michigan City, Ind. 722,488, pub. 7-25-61. Cl. 13.
 KVP Sutherland Paper Co., Kalamazoo, Mich. 722,455, pub. 7-25-61. Cl. 2.
 Kansas Milling Co., The: See—
 Kansas Milling Co.
 Kansas Milling Co., The, Kansas Milling Co., Wichita, Kans. 65,400, Am. 7(d). Cl. 46.
 Keever Starch Co., The, Columbus, Ohio. 722,688, pub. 7-25-61. Cl. 52.
 Kellogg Co., Battle Creek, Mich. 722,654, pub. 7-25-61. Cl. 46.
 Kem Mfg. Co., Inc., Fair Lawn, N.J. 722,568, pub. 7-25-61. Cl. 23.
 Kestral Corp., Springfield, Mass. 722,532, pub. 7-25-61. Cl. 22.
 Kimbell Candy Co., Chicago, Ill. 722,713, Cl. 46.
 Kimberly-Clark Corp., Neenah, Wis. 722,597, pub. 7-25-61. Cl. 37.
 Kleinert, I. B., Rubber Co., New York, N.Y. 392,720, ren. 10-10-61. Cl. 39.
 Kleinert, I. B., Rubber Co., New York, N.Y. 393,023, ren. 10-10-61. Cl. 40.
 Knapp, Norman E., d.b.a. Knapp Plow Co., San Jose, Calif. 611,019, can. Cl. 23.
 Knapp Plow Co.: See—
 Knapp, Norman E.
 Knepp, Paul C., d.b.a. Carbide Die & Mfg. Co., Azusa, Calif. 722,477, pub. 7-25-61. Cl. 9.
 Knott's Berry Farm Buena Park, Calif. 722,662-3, pub. 7-25-61. Cl. 46.

Kold Kist, Inc., Los Angeles, Calif. 392,582, ren. 10-10-61. Cl. 46.
 Kounting-Kat Co.: See—
 Bertsik, Andrew G.
 Kresge, S. S., Co., Detroit, Mich. 722,655, pub. 7-25-61. Cl. 46.
 Lacher & Co.: See—
 Hummel, Ludwig.
 Larson, Ed, Enterprises: See—
 Larson, Edward A.
 Larson, Edward A., d.b.a. Ed Larson Enterprises, Sun Valley, Calif. 722,531, pub. 7-25-61. Cl. 22.
 Latrobe Steel Co., Latrobe, Pa. 722,496-8, pub. 7-25-61. Cl. 14.
 Lawrence, A. C., Leather Co., Boston, Mass., to Swift & Co., d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. 145,713, ren. 10-10-61. Cl. 1.
 Lea Mfg. Co., The, Waterbury, Conn. 722,460, pub. 7-25-61. Cl. 4.
 Ledbetter, Berl D., Long Beach, Calif. 609,783, can. Cl. 3.
 Lee, Nelle, d.b.a. McCary Associates, Kansas City, Mo. 611-223, can. Cl. 102.
 Leewood Corp., Lowell, Mass. 722,672, pub. 7-25-61. Cl. 50.
 Lenthric, Inc.: See—
 Olin Mathieson Corp.
 Le Roi Co., West Allis, Wis., to Westinghouse Air Brake Co., Pittsburgh, Pa. 392,952, ren. 10-10-61. Cl. 23.
 Les Parfumeries De Gabilla, Societe Anonyme: See—
 Gabilla, Henriette.
 Lever Brothers Co., New York, N.Y. 722,714, Cl. 46.
 Liggett & Myers Tobacco Co.: See—
 Conday, E. A., & Co., Inc.
 Liggett & Myers Tobacco Co., New York, N.Y. 150,880-4, ren. 10-10-61. Cl. 17.
 Lilly, Eli, and Co., Indianapolis, Ind. 722,467, pub. 7-25-61. Cl. 6.
 Livingston & Doughty Ltd., Leicester, England. 722,438, pub. 7-25-61. Cl. 1.
 Lock Thread Corp., Detroit, Mich. 610,920, can. Cl. 13.
 Ludwig, Arnold F., d.b.a. Seaway Fund Raising Co., Chicago, Ill. 722,652, pub. 7-25-61. Cl. 46.
 Luminous Products Corp., Boston, Mass. 722,504, pub. 7-25-61. Cl. 16.
 M & H Industries, d.b.a. Hyer Hardware Mfg. Co., Anaheim, Calif. 722,489, pub. 7-25-61. Cl. 13.
 MacBeth-Evans Glass Co., Pittsburgh, Pa. 213,258, can. Cl. 34.
 Macintosh, Chas., & Co., Ltd., Edmonton, London, England. 717,229, cor. Cl. 39.
 Maconochie Brothers, Ltd., to Maconochie Brothers, Ltd., London, England. 390,134, ren. 10-10-61. Cl. 46.
 Madco Mfg. Co., Aurora, Ill. 722,487, pub. 7-25-61. Cl. 13.
 Magna-matic Mooring Co., Inc., Bayside, N.Y. 722,511, pub. 7-25-61. Cl. 19.
 Mail Enterprises, Inc., Richmond, Va. 722,696, pub. 7-25-61. Cl. 10.
 Malecki, Michael, Co.: See—
 Malecki, Michael.
 Malecki, Michael, d.b.a. Michael Malecki Co., Brooklyn, N.Y. 722,705, Cl. 18.
 Malone, Carl E., and Hugh M. Sutton, Fort Lauderdale, Fla. 611,023, can. Cl. 23.
 Marcal Paper Mills, Inc., East Paterson, N.J. 722,710, Cl. 37.
 Marx, Louis, & Co., Inc., New York, N.Y. 722,708, Cl. 22.
 Massillon-Cleveland-Akron Sign Co., The, Massillon, Ohio. 722,674, pub. 7-25-61. Cl. 50.
 McCary Associates: See—
 Lee, Nelle.
 Mead Johnson & Co., Evansville, Ind. 149,683, ren. 10-10-61. Cl. 46.
 Measure Master Co., St. Paul, Minn. 611,003, can. Cl. 23.
 Mechanical Industries, Inc., Pittsburgh, Pa. 611,071, can. Cl. 31.
 Memmert, Willi, Schwabach, Middle Franconia, Germany. 722,579, pub. 7-25-61. Cl. 34.
 Microlab, Livingston, N.J. 722,517, pub. 7-25-61. Cl. 21.
 Midwestern Industries, Inc., Wichita, Kans. 611,031-3, can. Cl. 22.
 Mil-Hi Laboratories, Inc., New York, N.Y. 611,205, can. Cl. 51.
 Mishawaka Rubber and Woolen Mfg. Co., Mishawaka, Ind. 611,114, can. Cl. 39.
 Mr. Boston Distiller Inc., Boston, Mass. 722,669, pub. 7-25-61. Cl. 49.
 Moore, John Hudson, Inc., New York, N.Y., to Richard Hudnut, Morris Plains, N.J. 389,242, ren. 10-10-61. Cl. 29.
 Morton Rand Corp., Zanesville, Ohio. 722,675, pub. 7-25-61. Cl. 50.
 Munson, Inc., Babylon, N.Y. 611,102, can. Cl. 38.
 N. V. Plasticizing, Odoorn, Netherlands. 722,502, pub. 7-25-61. Cl. 16.
 Nachman Corp., Chicago, Ill. 722,567, pub. 7-25-61. Cl. 32.
 Nalco Chemical Co., Chicago, Ill. 722,501, pub. 7-25-61. Cl. 15.
 Nash, C. A., & Son, Inc., Norfolk, Va. 142,631, ren. 10-10-61. Cl. 16.
 Nash, C. A., & Son, Inc., Norfolk, Va. 144,614, ren. 10-10-61. Cl. 16.
 Nash, C. A., & Son, Inc., Norfolk, Va. 392,220, ren. 10-10-61. Cl. 16.
 National Distillers and Chemical Corp., New York, N.Y. 722,440, pub. 7-25-61. Cl. 1.
 National Lift Co., Wayne, Mich. 611,028, can. Cl. 23.
 National Service Sales Corp., to Guest Products Corp., New York, N.Y. 610,980, can. Cl. 21.
 National Silver Co., New York, N.Y. 611,067, can. Cl. 30.
 Nekoma-Edwards Paper Co., Port Edwards, Wis. 722,589, pub. 7-25-61. Cl. 37.

Neptunalia Seafood Co., Thunderbolt, Ga. 722,665, pub. 7-25-61. Cl. 46.
 New York Herald Tribune Inc., New York, N.Y. 722,610, pub. 7-25-61. Cl. 38.
 News-Graphic, Inc., Cedarburg, Wis. 722,611, pub. 7-25-61. Cl. 38.
 Northam Warren Corp., Stamford, Conn., to Chesebrough-Pond's Inc., New York, N.Y. 392,400, ren. 10-10-61. Cl. 51.
 Northwest Airlines, Inc., St. Paul, Minn. 722,692, pub. 7-25-61. Cl. 105.
 Northwest Paper Co., The, Cloquet, Minn. 722,592, pub. 7-25-61. Cl. 37.
 Notbelfer Winding Laboratories, Inc., Trenton, N.J. 722,518, pub. 7-25-61. Cl. 21.
 Octagon Ventilator Co., Chicago, Ill. 722,578, pub. 7-25-61. Cl. 34.
 Odia Press Inc., New York, N.Y. 722,615, pub. 7-25-61. Cl. 38.
 Oil-Dri Corp. of America, Chicago, Ill. 722,480, pub. 7-25-61. Cl. 10.
 Ole Williamsburg Packing Plant: See—
 High, L. W.
 Olin Mathieson Corp., to Lenthert, Inc., New York, N.Y. 611,217, can. Cl. 51.
 Onyx Chemical Corp., by merger from Onyx Oil & Chemical Co., Jersey City, N.J. 722,462, pub. 7-25-61. Cl. 6.
 Onyx Oil & Chemical Co.: See—
 Onyx Chemical Corp.
 Orange-Crush Co., Chicago, Ill., to Crush International Inc., Evanston, Ill. 390,000, ren. 10-10-61. Cl. 45.
 "Orming" Organisationsmittel G.m.b.H.: See—
 Firma "Orming" Organisationsmittel G.m.b.H.
 Osborne-Kemper-Thomas, Inc., Cincinnati, Ohio. 722,608, pub. 7-25-61. Cl. 38.
 Outboard Marine Corp., Waukegan, Ill. 722,540, pub. 12-30-58. Cl. 23.
 Overland Fabrics, New York, N.Y. 611,118, can. Cl. 42.
 Packard-Bell Co., Los Angeles, Calif. 611,087, can. Cl. 34.
 Palmer, Charles E., & Associates: See—
 Palmer, Charles E.
 Palmer, Charles E., d.b.a. Charles E. Palmer & Associates, Somers, Conn. 722,453, pub. 7-25-61. Cl. 2.
 Pangburn Co., Inc., d.b.a. Pangburn's, Fort Worth, Tex. 722,645, pub. 7-25-61. Cl. 46.
 Pangburn's: See—
 Pangburn Co., Inc.
 Parks, H. G., Inc., Baltimore, Md. 722,658, pub. 7-25-61. Cl. 46.
 Peabody Coal Co., St. Louis, Mo. 722,430, pub. 7-25-61. Cl. 1.
 Pennco Engineering Co., Philadelphia, Pa. 722,490, pub. 7-25-61. Cl. 13.
 Perkins, George J., Barrington, Ill. 722,443-4, pub. 7-25-61. Cl. 2.
 Petersen Oven Co., The, Chicago, Ill., to Baker Perkins, Inc., Saginaw, Mich. 390,020, ren. 10-10-61. Cl. 34.
 Petersen Oven Co., The, Chicago, Ill., to Baker Perkins, Inc., Saginaw, Mich. 391,178, ren. 10-10-61. Cl. 34.
 Peterson Bros., Inc., Jacksonville, Fla. 722,512, pub. 7-25-61. Cl. 19.
 Phillips-Jones Corp., to Phillips-Van Heusen Corp., New York, N.Y. 393,168, ren. 10-10-61. Cl. 39.
 Phillips-Van Heusen Corp.: See—
 Phillips-Jones Corp.
 Pilot Freight Carriers, Inc., Winston-Salem, N.C. 722,693, pub. 7-25-61. Cl. 105.
 Pinnacle Products Co., Inc., Newark, Ohio. 722,566, pub. 7-25-61. Cl. 32.
 Pioneer Industries, Inc., Darby, Pa. 722,621, pub. 7-25-61. Cl. 39.
 Pittsburgh Steel Co., Pittsburgh, Pa. 722,499, pub. 7-25-61. Cl. 14.
 Plastic Fabricating and Engineering Co., Waco, Tex. 722-445, pub. 7-25-61. Cl. 2.
 Plezall Wipers, Inc., Miami, Fla. 722,590, pub. 7-25-61. Cl. 37.
 Podbielniak, Inc., Chicago, Ill. 611,006, can. Cl. 23.
 Pompilio, Daniel N., d.b.a. Soil Clinic Agronomical Laboratory, Mount Vernon, N.Y. 722,481, pub. 7-25-61. Cl. 10.
 Porter, H. K., Co., Inc., Pittsburgh, Pa. 722,583, pub. 7-25-61. Cl. 35.
 Posen, Leon S., & Co., Inc., New York, N.Y. 722,628, pub. 7-25-61. Cl. 39.
 Pro, Bertha M., d.b.a. Hobo King Tavern, Northfield, Ohio. 389,616, ren. 10-10-61. Cl. 46.
 Production and Marketing Co.: See—
 Copley Fabrics, Inc.
 Production and Marketing Co., Newtown, Conn. 611,121, can. Cl. 42.
 Products Sales, Inc., Cleveland, Ohio. 611,075, can. Cl. 32.
 Quaker Oats Co., The: See—
 Aunt Jemima Mills Co.
 Quaker Oats Co., The, Chicago, Ill. 391,398, ren. 10-10-61. Cl. 46.
 R-W Gadget Co., Akron, Ohio. 610,978, can. Cl. 21.
 Ralston Purina Co., St. Louis, Mo. 722,664, pub. 7-25-61. Cl. 46.
 Ramsey, L. W., Advertising Agency, Davenport, Iowa. 722-538, pub. 7-25-61. Cl. 22.
 Realemon-Puritan Co., Chicago, Ill. 722,656, pub. 7-25-61. Cl. 46.
 Reactor, Betty A., d.b.a. Bayleysuit, Eureka, Calif. 722,534, pub. 7-25-61. Cl. 22.
 Reggiani S.p.A. Divisione Macchine, Bergamo, Italy. 722-552, pub. 7-25-61. Cl. 23.
 Remington Research, Inc., New York, N.Y. 722,634, pub. 5-19-59. Cl. 44.
 Res-Q Products, Van Nuys, Calif. 610,910, can. Cl. 13.
 Richardson, Sid, Carbon Co., Fort Worth, Tex. 722,470-2, pub. 7-25-61. Cl. 6.
 River Plate Corp., The, New York, N.Y. 610,894, can. Cl. 6.
 Robbins, Alfred, Organization, Inc., New York, N.Y. 722,474, pub. 7-25-61. Cl. 8.
 Robertshaw-Fulton Controls Co., Greensburg, Pa. 610,906, can. Cl. 13.
 Robertshaw-Fulton Controls Co., Greensburg, Pa. 611,037, can. Cl. 26.
 Rockwell Spring and Axle Co., Coraopolis, Pa. 611,084, can. Cl. 32.
 Rogers Industries, Inc., by change of name from Winter Seal Corp., Detroit, Mich. 722,484, pub. 5-13-58. Cl. 12.
 Rogue Keels, Inc., Berkeley, Calif. 722,537, pub. 7-25-61. Cl. 22.
 Romero, E., and Son, Port Acres, Tex. 722,509, pub. 7-25-61. Cl. 18.
 Roxallin Flexible Lacquer Co., Inc., Elizabeth, N.J., to Interchemical Corp., New York, N.Y. 389,873, ren. 10-10-61. Cl. 16.
 Rupp Mfg., Inc., Mansfield, Ohio. 722,514-15, pub. 7-25-61. Cl. 19.
 Russell, E. J., d.b.a. Russell Packing Co., Salinas, Calif. 611,144, can. Cl. 46.
 Russell Packing Co.: See—
 Russell, E. J.
 Safetec Glass Co., Philadelphia, Pa. 722,576-7, pub. 7-25-61. Cl. 33.
 Sakai Knitting Co., Ltd., Sumida-ku, Tokyo, Japan. 722,617, pub. 7-25-61. Cl. 39.
 Salada-Shirrif-Horsey Inc., Woburn, Mass. 722,653, pub. 7-25-61. Cl. 46.
 Salem Plastics, Inc., Salem, Ohio. 722,671, pub. 7-25-61. Cl. 50.
 Sales Affiliates, Inc.: See—
 Inecto, Inc.
 Sampson, Arthur, Minneapolis, Minn. 610,864, can. Cl. 1.
 Sawdon Co., Inc., The, New York, N.Y. 722,594, pub. 7-25-61. Cl. 37.
 Schenley Distillers, Inc., New York, N.Y. 722,670, pub. 7-25-61. Cl. 49.
 Schenley Industries, Inc., New York, N.Y. 611,090, can. Cl. 38.
 Schick Inc., Lancaster, Pa. 722,557, pub. 7-25-61. Cl. 23.
 Schnadig Corp., Chicago, Ill. 722,568, pub. 7-25-61. Cl. 32.
 Schnall Products Co.: See—
 Schnall, Abraham.
 Scholl Mfg. Co., Inc., The, Chicago, Ill. 392,824, ren. 10-10-61. Cl. 39.
 Schwartz Mfg. Co., The, Baltimore, Md. 434,317, can. Cl. 39.
 Science Associates, Los Angeles, Calif. 610,934, can. Cl. 18.
 Scott Paper Co., Philadelphia, Pa. 145,216, ren. 10-10-61. Cl. 37.
 Scovill Mfg. Co., Waterbury, Conn. 391,668, ren. 10-10-61. Cl. 40.
 Seaboard Packing Co.: See—
 Seacoast Canning Co.
 Seacoast Canning Co., Eastport, to Seaboard Packing Co., Bath, Maine. 148,532, ren. 10-10-61. Cl. 46.
 Seapak Corp., St. Simons Island, Ga. 722,642, pub. 7-25-61. Cl. 46.
 Sears, Roebuck and Co., Chicago, Ill. 611,072, can. Cl. 31.
 Sears, Roebuck and Co., Chicago, Ill. 722,595, pub. 7-25-61. Cl. 37.
 Seaway Fund Raising Co.: See—
 Ludwig, Arnold F.
 Selberling Rubber Co., Barberton, Ohio. 722,584, pub. 7-25-61. Cl. 35.
 Selig Co., Inc., The, Atlanta, Ga. 392,784, ren. 10-10-61. Cl. 16.
 Sertoma International, Kansas City, Mo. 722,699, pub. 7-25-61. Cl. 200.
 Servo Corp. of America, Hicksville, N.Y., from Underwood Corp., New York, N.Y. 722,544, pub. 8-25-59. Cl. 23.
 7th Avenue Publications, Inc., New York, N.Y. 611,104, can. Cl. 38.
 Sheaffer, W. A., Pen Co., Fort Madison, Iowa. 722,598, pub. 7-25-61. Cl. 37.
 Shin-etsu Chemical Industrial Co., Ltd.: See—
 Shin-etsu Kagaku Kogyo Kabushiki Kaisha.
 Shin-etsu Kagaku Kogyo Kabushiki Kaisha, d.b.a. Shin-etsu Chemical Industrial Co., Ltd., Chiyoda-ku, Tokyo-to, Japan. 722,478, Cl. 10.
 Shingle, L. H., Co.: See—
 Graton & Knight Co.
 Graton & Knight Mfg. Co., The.
 Sholom Greeting Card Co.: See—
 Gruskin, Arthur.
 Showell Poultry, Inc., Showell, Md. 722,715-16, Cl. 46.
 Sigma Phi Epsilon Fraternity, Richmond, Va. 387,956, ren. 10-10-61. Cl. 28.
 Simmons-Boardman Publishing Corp., New York, N.Y. 722-712, Cl. 38.
 Siris, A. J., Products Corp., New York, N.Y. 722,459, pub. 7-25-61. Cl. 3.
 Siris, A. J., Products Corp., New York, N.Y. 722,599-600, pub. 7-25-61. Cl. 37.
 Slepian, Arthur, & Co., Bridgeport, Conn. 610,987, can. Cl. 21.
 Soc. Accom Mugolio di Piccolo & C.: See—
 Soc. Accom. Mugolio di Seaf & C.
 Soc. Accom. Mugolio di Seaf & C., now by change of name Soc. Accom. Mugolio di Piccolo & C., Milan, Italy. 610,941, can. Cl. 18.
 Socony Paint Products Co., to Socony Paint Products Co., Metuchen, N.J. 391,517, ren. 10-10-61. Cl. 16.

Soil Clinic Agronomical Laboratory: See—
 Pompilio, Daniel N.
 Somerset Canning Corp., The, Somerset, Pa. 392,263, ren. 10-10-61. Cl. 46.
 Spar Engineering & Development, Inc., Wyncote, Pa. 610-912, can. Cl. 13.
 Sprig Sales Co., Inc., Los Angeles, Calif. 722,640-1, pub. 7-25-61. Cl. 45.
 Standard Packaging Corp.: See—
 Eastern Corp.
 Standard Pipe-protection Inc., St. Louis, Mo. 549,067, Am. 7(d). Cl. 106.
 Stanton, John W., d.b.a. West Indies Oceanographic Products, Fort Lauderdale, Fla. 722,536, pub. 7-25-61. Cl. 22.
 Stealox Co., Armco Steel Corp., Middletown, Ohio. 320,405, Am. 7(d). Cl. 12.
 Stein, A., & Co., to A. Stein & Co., Inc., Chicago, Ill. 388,271, ren. 10-10-61. Cl. 39.
 Stein, A., & Co., to A. Stein & Co., Inc., Chicago, Ill. 388-735-4, ren. 10-10-61. Cl. 40.
 Stein, A., & Co., to A. Stein & Co., Inc., Chicago, Ill. 389,264, ren. 10-10-61. Cl. 44.
 Stein, A., & Co., Inc.: See—
 Stein, A., & Co.
 Sterling Industries, Inc., Philadelphia, Pa. 722,521, pub. 7-25-61. Cl. 21.
 Stevens, John, Hackensack, N.J. 611,139, can. Cl. 44.
 Studebaker-Packard Corp., Detroit, Mich. 610,971, can. Cl. 19.
 Suburban Motor Freight, Inc., Columbus, Ohio. 722,614, pub. 7-25-61. Cl. 58.
 Success Motivation Institute, Inc., Waco, Tex. 722,587-8, pub. 7-25-61. Cl. 36.
 Sunbeam Corp., Chicago, Ill. 722,530, pub. 7-18-61. Cl. 21.
 Super-Cut, Inc., Chicago, Ill. 722,461, pub. 7-25-61. Cl. 4.
 Surface Protection Co., Inc., The, Cleveland, Ohio. 610,874, can. Cl. 6; can. Cl. 16. (Consolidated certificate, Classes 6 and 16.)
 Surrutte Storage Battery Co., Inc., Salem, Mass. 610,999, can. Cl. 21.
 Suter Watch Factory Inc., Bienne, Switzerland. 611,042, can. Cl. 27.
 Swartwout Co., The, Cleveland, Ohio. 611,089, can. Cl. 34.
 Swift & Co.: See—
 Lawrence, A. C. Leather Co.
 Talon, Inc., Meadowville, Pa. 722,493, pub. 7-25-61. Cl. 13.
 Telerad Corp. of America, Washington, D.C. 611,228, can. Cl. 107.
 Texas Harvest Hat Co., Laredo, Tex. 722,629, pub. 7-25-61. Cl. 39.
 Thermwell Products Co., Inc., New York, N.Y. 722,466, pub. 7-25-61. Cl. 6.
 Thunderbird Mfg., Inc., Prescott, Ariz. 722,623, pub. 7-25-61. Cl. 39.
 Timely Technical Products, Inc., Verona, N.J. 722,585, pub. 7-25-61. Cl. 35.
 Titans of New York, Inc., New York, N.Y. 722,697, pub. 7-25-61. Cl. 177.
 Titcomb, H. H., Concord, Calif., to Di Giorgio Fruit Corp., d.b.a. Earl Fruit Co., San Francisco, Calif. 392,991, ren. 10-10-61. Cl. 46.
 Torch Rubber Co., Inc., New York, N.Y. 722,616, pub. 7-25-61. Cl. 39.
 Torch Rubber Co., Inc., New York, N.Y. 722,622, pub. 7-25-61. Cl. 39.
 Torrington Co., The, Torrington, Conn. 722,638, pub. 7-25-61. Cl. 44.
 Tote-Cart Co., Chicago, Ill. 722,448, pub. 7-25-61. Cl. 2.
 Transvision, Inc., New Rochelle, N.Y. 610,975-6, can. Cl. 21.
 Treasure Cave, Inc.: See—
 Treasure Cave.
 Treasure Cave, Inc., Fairbault, Minn. 523-324, Am. 7(d). Cl. 46.
 Treasweet Products Co., Santa Ana, Calif. 390,947, ren. 10-10-61. Cl. 46.
 Tri Foods Co., d.b.a. Twentieth Century Foods, Feed Division, Concordia, Mo. 722,860, pub. 7-25-61. Cl. 46.
 Trio Dental Studios, Inc., New York, N.Y. 722,636, pub. 7-25-61. Cl. 44.
 Tru-Link Fence Co., Chicago, Ill. 610,902, can. Cl. 12.

Twentieth Century Foods, Feed Division: See—
 Tri Foods Co.

Underwood Corp.: See—
 Servo Corp. of America.

Union Tank Car Co., Chicago, Ill. 722,442, pub. 7-25-61. Cl. 2.

United Feature Syndicate, Inc., New York, N.Y. 722,606, pub. 7-25-61. Cl. 38.

United Lacquer Mfg. Corp., Linden, N.J. 722,508, pub. 7-25-61. Cl. 16.

United Merchants and Manufacturers, Inc., New York, N.Y. 611,182-4, can. Cl. 42.

United States Rubber Co., New York, N.Y. 611,094, can. Cl. 35.

Universal Mills, Fort Worth, Tex. 611,149, can. Cl. 46.

Upjohn Co., The, Kalamazoo, Mich. 722,469, pub. 7-25-61. Cl. 6.

Utility Plastic Products Corp., Chicago, Ill. 611,043, can. Cl. 27.

Valdes Associates Inc., Westbury, N.Y. 722,673, pub. 7-25-61. Cl. 50.

Valspar Corp., The, Ardmore, Pa. 625,735, Am. 7(d). Cl. 16.

Vandium-Alloys Steel Co., Latrobe, Pa. 722,494, pub. 7-25-61. Cl. 14.

Van Lanigan, Louis R., Moline, Ill. 722,637, pub. 7-25-61. Cl. 44.

Van Slyke, G. W., & Horton, Albany, N.Y., to G. W. Van Slyke & Horton, Inc., Red Lion, Pa. 150,995, ren. 10-10-61. Cl. 17.

Van Slyke, G. W., & Horton, Inc.: See—
 Van Slyke, G. W., & Horton.

Van Valkenburgh, Nooger & Neville, Inc., New York, N.Y. 722,698, pub. 7-25-61. Cl. 107.

Varifab Inc., High Falls, N.Y. 722,601, pub. 7-25-61. Cl. 37.

Vet Products Co., Kansas City, Mo. 610,935, can. Cl. 18.

Victor Mfg. & Gasket Co., Chicago, Ill. 722,586, pub. 7-25-61. Cl. 35.

Waljohn Plastics, Inc., Brooklyn, N.Y. 610,906, can. Cl. 13.

Warner Brothers Co., The, Bridgeport, Conn. 722,618, pub. 7-25-61. Cl. 39.

Wart-Off Co., Chattanooga, Tenn. 610,947, can. Cl. 18.

Webb Packing Co., The, Salisbury, Md. 387,311, ren. 10-10-61. Cl. 46.

Wehr Steel Co., Milwaukee, Wis. 722,545-6, pub. 7-25-61. Cl. 23.

Weldon Watch Co., Inc., The, New York, N.Y. 611,233, can. Cl. 27.

West Chemical Products, Inc., Long Island City, N.Y. 722-463, pub. 7-25-61. Cl. 6.

West Chemical Products, Inc., Long Island City, N.Y. 722-684, pub. 7-25-61. Cl. 52.

West Chemical Products, Inc., Long Island City, N.Y. 722-686, pub. 7-25-61. Cl. 52.

West Indies Oceanographic Products: See—
 Stanton, John W.

Westinghouse Air Brake Co.: See—
 Le Roi Co.

Westinghouse Electric Corp., Pittsburgh, Pa. 722,525-6, pub. 7-25-61. Cl. 21.

Wilco Machine Works, Inc., Memphis, Tenn. 722,708, Cl. 23.

Williams, William O., Jr., Gastonia, N.C. 722,533, pub. 7-25-61. Cl. 22.

Williamson Candy Co., Chicago, Ill. 611,163, can. Cl. 46.

Winslow Bros.: See—
 Armour and Co.

Winston Sales Co., Inc., Chicago, Ill. 722,464, pub. 7-25-61. Cl. 6.

Winter Seal Corp.: See—
 Rogers Industries, Inc.

Wintriss, Inc.: See—
 Industrious Controls, Inc.

Wolf and Cohen, Inc., Washington, D.C. 720,026, cor. Cl. 38.

Wood, David, Studios, Nashotah, Wis. 722,574, pub. 7-25-61. Cl. 32.

Woodall Industries, Inc., Detroit, Mich. 722,516, pub. 7-25-61. Cl. 19.

Wrapping Machinery Co., Inc., Franksville, Wis. 722,548, pub. 7-25-61. Cl. 23.

Yardley & Co. Ltd., London, England. 722,676, pub. 7-25-61. Cl. 51.



PATENTS

NOTICES

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Sept. 18, 1961. Chairman, Committee on Enrollment.

Board of Appeals Decisions Rendered in the Month of September 1961

Examiner affirmed	321
Examiner affirmed in part	30
Examiner reversed	58
Total	409

Disclaimers

2,835,741.—Henry E. Vaughan, Chatham, N.J. MAGNETIC CORE SIGNAL GENERATOR. Patent dated May 20, 1958. Disclaimer filed Sept. 11, 1961, by the assignee, Bell Telephone Laboratories, Incorporated.

Hereby enters this disclaimer to claims 1, 2, 9, 10, 12, 13, and 14 of said patent.

2,904,714.—Emmett H. Wiley, Willowick, Ohio. ELECTRIC LAMP. Patent dated Sept. 15, 1959. Disclaimer filed Sept. 5, 1961, by the assignee, General Electric Company.

Hereby enters this disclaimer to claims 1, 2, 3, 4 and 10 of said patent.

Final Fee Transmittal Form

The Office has noted that many practitioners are not making use of the Final Fee Transmittal Form (POL-85A) which accompanies each Notice of Allowance (POL-85B). This form was designed and intended as a convenience in remitting the final fee. It is suggested that it will be a convenience to all concerned if this form is used.

Excerpts From Public Law 87-206

[87TH CONGRESS, H.R. 8599]

September 8, 1961

[75 Stat. 475]

AN ACT

To amend various sections of the Atomic Energy Act of 1954, as amended, and the EURATOM Cooperation Act of 1958, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 7. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by deleting in the descriptive title the words "MILITARY UTILIZATION," and inserting in lieu thereof "INVENTIONS RELATING TO ATOMIC WEAPONS, AND FILING OF REPORTS."

SEC. 8. Subsection c. of section 151 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"c. Any person who has made or hereafter makes any invention or discovery useful in the production or utilization of special nuclear material or atomic energy, shall file with the Commission a report containing a complete description thereof unless such invention or discovery is described in an application for a patent filed with the Commissioner of Patents by such person within the time required for the filing of such report. The report covering any such invention or discovery shall be filed on or before the one hundred and eightieth day after such person first discovers or first has reason to believe that such invention or discovery is useful in such production or utilization."

SEC. 9. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"e. Reports filed pursuant to subsection c. of this section, and applications to which access is provided under subsection d. of this section, shall be kept in confidence by the Commission, and no information concerning the same given without authority of the inventor or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commission."

SEC. 10. Section 152 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"SEC. 152. INVENTIONS MADE OR CONCEIVED DURING COMMISSION CONTRACTS.—Any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission, shall be vested in, and be the property of, the Commission, except that the Commission may waive its claim to any such invention or discovery under such circumstances as the Commission may deem appropriate, consistent with the policy of this section. No patent for any invention or discovery, useful in the production or utilization of special nuclear material or atomic

New Applications Received During August 1961

Patents	7,067
Designs	431
Plant Patents	10
Reissues	20
Total	7,528

Issues

Patents	942—No. 3,004,260 to No. 3,005,201, incl.
Designs	33—No. 191,572 to No. 191,604, incl.
Reissues	7—No. 25,053 to No. 25,059, incl.
Total	982

energy, shall be issued unless the applicant files with the application, or within thirty days after request therefor by the Commissioner of Patents (unless the Commissioner advises the Commissioner of Patents that its rights have been determined and that accordingly no statement is necessary) a statement under oath setting forth the full facts surrounding the making or conception of the invention or discovery described in the application and whether the invention or discovery was made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commissioner, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commissioner. The Commissioner of Patents shall as soon as the application is otherwise in condition for allowances forward copies of the application and the statement to the Commissioner.

"The Commissioner of Patents may proceed with the application and issue the patent to the applicant (if the invention or discovery is otherwise patentable) unless the Commissioner, within 90 days after receipt of copies of the application and statement, directs the Commissioner of Patents to issue the patent to the Commissioner (if the invention or discovery is otherwise patentable) to be held by the Commissioner as the agent of and on behalf of the United States.

"If the Commissioner files such a direction with the Commissioner of Patents, and if the applicant's statement claims, and the applicant still believes, that the invention or discovery was not made or conceived in the course of or under any contract, subcontract or arrangement entered into with or for the benefit of the Commissioner entitling the Commissioner to the title to the application or the patent the applicant may, within 30 days after notification of the filing of such a direction, request a hearing before a Board of Patent Interferences. The Board shall have the power to hear and determine whether the Commissioner was entitled to the direction filed with the Commissioner of Patents. The Board shall follow the rules and procedures established for interference cases and an appeal may be taken by either the applicant or the Commissioner from the final order of the Board to the Court of Customs and Patent Appeals in accordance with the procedures governing the appeals from the Board of Patent Interferences.

"If the statement filed by the applicant should thereafter be found to contain false material statements any notification by the Commissioner that it has no objections to the issuance of a patent to the applicant shall not be deemed in any respect to constitute a waiver of the provisions of this section or of any applicable civil or criminal statute, and the Commissioner may have the title to the patent transferred to the Commissioner on the records of the Commissioner of Patents in accordance with the provisions of this section. A determination of rights by the Commissioner pursuant to a contractual provision or other arrangement prior to the request of the Commissioner of Patents for the statement, shall be final in the absence of false material statements or nondisclosure of material facts by the applicant."

Sec. 11. Section 157 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"d. **PERIOD OF LIMITATIONS.**—Every application under this section shall be barred unless filed within six years after the date on which first accrues the right to such reasonable royalty fee, just compensation, or award for which such application is filed."

Sec. 12. The second sentence of section 158 of the Atomic Energy Act of 1954, as amended, is amended to read as follows: "If the court, at its discretion, deems that such licensee shall pay a reasonable royalty to the owner of the patent, the reasonable royalty shall be determined in accordance with section 157."

Approved September 8, 1961.

Patent Laws Pamphlet

Patent Laws Pamphlet, Revised Edition, of January 3, 1961, is available. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.—Price 30 cents.

Patents Available for Licensing or Sale

2,984,836. Firing Tool With Ammunition, More Particularly for Use as a Pin Driving Tool. Novotek Anstalt, Schaan, Liechtenstein. Correspondence to: Michael S. Striker, 380 Lexington Ave., New York 17, N.Y.

2,991,620. Desuperheater Arrangements for Steam Turbines. Jaroslav Nekolay, Prague, Czechoslovakia. Correspondence to: Richard Low, 1080 Broad St., Newark 2, N.J.

2,991,388. Electromagnetic Pressure Gage. Vyskumny a Zkusební letový ústav, Letňany, near Prague, Czechoslovakia. Correspondence to: Richard Low, 1080 Broad St., Newark 2, N.J.

The following 2 patents are offered by: Frank A. Brown, Apt. 3, 310 W. 95th St., New York 25, N.Y.

2,995,394. Lock.

2,995,395. Lock.

General Electric Company is prepared to grant non-exclusive licenses under the following 7 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Specialty Control Department, Waynesboro, Va.

2,993,103. Electromagnetic Relay.

Applications for license under the following 6 patents may be addressed to: General Electric Company, Housewares and Commercial Equipment Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,975,723. Percolator Pump Construction.

2,565,478. Temperature Responsive Control Circuit.

2,728,061. Combined Plug and Strain Relief Structure.

2,914,645. Blanket Overhead Protector.

2,959,662. Thermosensitive Protective System for Electrically Heated Fabrica.

2,991,677. Thermoelectric Blanket.

Classification Order No. 322

Classification Order No. 322, dated September 20, 1961, incorporates changes in the following classes:

15
29
41
53
93
117
118
144
154
156 ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE (New Class—Bulletin No. 443)
206
216 Abolished (Bulletin No. 310)
252

The above changes will be incorporated in the Manual of Classification replacement pages dated October 1961.

M. C. ROSA,
Director, Patent Examining Operation.

CONDITION OF PATENT APPLICATIONS AS OF AUGUST 31, 1961

Total number of pending applications (excluding Designs).....	197,748
Total number of pending Design applications.....	5,227
Total number of applications awaiting action (excluding Designs).....	94,168
Total number of Design applications awaiting action.....	1,304
Date of oldest new application.....	May 16, 1960
Date of oldest amended application.....	May 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS.....		6, 31, 36, 43, 46, 50, 56, 59, 60, 63, 64,	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS.....		16, 26, 37, 41, 42, 44, 48, 51, 54, 55, 68,	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS.....		2, 12, 13, 14, 21, 24, 57, 58, 61, 61, 82,	
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.....		7, 11, 17, 27, 34, 35, 39, 58, 62,	
(V) HULL, J. A., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION.....		5, 8, 20, 29, 33, 36, 40, 52, 66,	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.....		1, 4, 9, 10, 18, 22, 23, 28, 45, 47,	
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.....		3, 15, 19, 25, 30, 32, 49, 55, 67,	
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.....		91, 92, 98, 94, 95,	
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working.....		2-2-61	1-9-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps.....		2-15-61	1-17-61
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors.....		2-10-61	11-10-60
4. (VI) FALLER, E. A., Material or Article Handling.....		2-6-61	2-1-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics.....		9-26-60	9-12-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides.....		10-17-60	10-14-60
7. (IV) ANDERSON, E. G., Optics.....		12-20-60	12-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds.....		3-6-61	3-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines.....		1-16-61	1-5-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making.....		12-21-60	11-14-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits.....		10-10-60	10-3-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls.....		9-20-60	10-3-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g., Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning.....		10-10-60	10-31-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics.....		10-24-60	9-2-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus.....		3-10-61	3-2-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems.....		9-9-60	9-8-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering.....		9-13-60	9-26-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors.....		3-1-61	3-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners.....		1-10-61	11-15-60
20. (V) SEER, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors.....		3-1-61	2-27-61
21. (III) MADER, R. C., Textiles.....		12-6-60	12-6-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows.....		11-21-60	10-21-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education.....		4-7-61	4-3-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders.....		2-7-61	1-30-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making.....		11-1-60	11-1-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g., Miscellaneous Electric Control Mechanisms; Inductors; Transformers.....		11-1-60	11-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids.....		1-6-61	12-5-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes.....		10-21-60	12-2-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings.....		11-14-60	11-10-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part).....		2-27-61	2-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....	10-5-60	11-4-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....	12-2-60	12-1-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....	10-28-60	10-7-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....	11-3-60	11-23-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....	1-17-61	1-10-61
36. (V) EVANS, R. L., Measuring and Testing (part).....	10-11-60	10-5-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....	10-3-60	10-10-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....	9-6-60	9-12-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....	12-5-60	11-22-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....	2-6-61	1-30-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....	12-2-60	11-30-60
42. (II) SRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....	10-5-60	10-6-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....	8-8-60	8-29-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....	5-16-60	5-8-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....	3-1-61	3-1-61
46. (I) WILES, W. O. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....	9-1-60	9-9-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles.....	12-30-60	1-3-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....	8-8-60	8-1-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....	10-7-60	10-7-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....	11-9-60	12-1-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....	9-6-60	9-6-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....	2-27-61	3-1-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....	1-5-61	1-6-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....	6-29-60	7-19-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....	10-20-60	10-24-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....	9-1-60	10-14-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....	9-2-60	9-6-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Splttoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....	1-4-61	3-1-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....	10-19-60	10-21-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.....	9-6-60	9-12-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.....	1-4-61	2-2-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.....	11-7-60	11-14-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....	10-24-60	10-11-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....	9-16-60	8-11-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....	9-1-60	9-9-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales.....	7-5-60	6-9-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....	12-15-60	12-9-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....	9-6-60	9-2-60
69. (III) MONCURE, J. A., Industrial Arts.....	5-12-61	5-12-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts.....	5-12-61	5-9-61
71. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.....	10-1-60	10-28-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners.....	3-6-61	3-6-61
73. WAHL, R. A., Wire Working.....	1-30-61	2-2-61
74. BERLOWITZ, W., Gas Separation.....	1-9-61	12-23-60
75. REZNEK, J. (acting), Metallic Building Structures.....	12-9-60	12-6-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....	2-3-61	1-23-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960*.

Patents.....Numbers 2,359,277 to 2,361,905, inclusive
Plant Patents.....Numbers 643 to 646, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

THE MASTIC TILE CORPORATION OF AMERICA (THE RUBEROID CO., MASTIC TILE DIVISION, ASSIGNEE, SUBSTITUTED) v. CONGOLEUM-NAIRN, INC.

No. 6663. Decided April 14, 1961

[48 CCPA —; 288 F.2d 954; 129 USPQ 287]

1. TRADEMARKS—CONFUSING SIMILARITY — “WEAREVER” AND “FLOR-EVER” FOR VINYL FLOOR TILE.

Upon review of the decision below denying registration of the appellant-applicant's mark “WEAREVER” in view of the appellee-opposer's registered mark “FLOR-EVER,” both marks being for vinyl floor tile, *Held* that “Although the instant suffixes are identical, we are of the opinion the prefixes “WEAR” and “FLOR” are so distinctly different in sound, appearance, spelling and meaning that the marks as a whole, as viewed in the market place, would not be likely to cause confusion.”

APPEAL from the Patent Office. Opposition No. 37,486.

REVERSED.

Ostrolenk, Faber, Gerb & Soffen, Sidney G. Faver (Marvin C. Soffen, of counsel) for appellant.
Richard T. Laughlin for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

WORLEY, Chief Judge, delivered the opinion of the court.

The parties stipulate that the sole issue here is whether “applicant's mark ‘WEAREVER’ when used on vinyl floor tile so resembles opposer's registered mark ‘FLOR-EVER’ for vinyl floor tile as to be likely to cause confusion or mistake among purchasers.”

The Trademark Trial and Appeal Board was of the opinion that the respective marks “have substantially identical connotations,” and, when coupled with other features of similarity, concluded that “confusion, mistake or deception of purchasers would be reasonably likely to occur.”

Applicant alleges error in that holding, urging primarily that the word “ever,” the only common feature of the marks, is widely used to denote long wearing or lasting qualities, is therefore highly suggestive of such qualities, and can have little trademark significance. In addition, appellant urges that the Board gave undue weight to the relative advertising efforts of the parties, appeared to be unduly influenced by the apparent good will appellee had established in its mark, and thus failed to properly evaluate the fundamental issue of likelihood of confusion.

The record, running something over three hundred pages, contains numerous exhibits, thirty-eight third party registrations, and testimony of opposing witnesses. We find nothing therein which would require an affirmance of the Board's decision, nor anything requiring separate discussion here.

Section 2(d) of the Lanham Act allows registration of a mark otherwise qualified unless it “so resembles a mark registered in the Patent Office * * * as to be likely when applied to the goods of applicant to cause confusion or mistake or to deceive purchasers.” That is the test.

Here, with all due respect to the views of the Board, we are unable to agree with its holding. [1] Although the instant suffixes are identical, we are of the opinion the prefixes “WEAR” and “FLOR” are so distinctly different in sound, appearance, spelling and meaning that the marks as a whole, as viewed in the market place, would not be likely to cause confusion.

Under such circumstances it is necessary to reverse the decision appealed from.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE PAUL HOLLIS TAYLOR

No. 6618. Decided April 14, 1961

[48 CCPA —; 288 F.2d 950; 129 USPQ 269]

1. PATENTABILITY—INVENTION—OBVIOUS CONCEPT.

“The bare concept of using energy to do work by any and all means is, in the nature of things, necessarily in the realm of the obvious, like using fire to heat, the wind to propel a ship, or ice to cool.”

2. SAME—PARTICULAR SUBJECT MATTER—METHOD OF STORING AND UTILIZING ENERGY.

Certain claims to a method of storing and utilizing energy in a work performing system through the medium of a non-gaseous material capable of polymorphic transition, *Held* properly rejected as unpatentable over the prior art.

APPEAL from the Patent Office. Serial No. 409,341. AFFIRMED.

William Marshall Lee, Byron, Hume, Groen & Clement, for appellant.

Paul Hollis Taylor, pro se.
Clarence W. Moore (S. Wm. Cochran and George C. Roeming, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the Examiner's rejection of method claims 22 and 23 in application Ser. No. 409,341, filed February 10, 1954, entitled “Accumulator.” Nine claims, each drawn to an “accumulator system,” have been allowed by the Examiner.

The invention of the appealed claims is predicated on recognition of the fact that energy can be stored upon compression of certain liquids and solids by reason of their polymorphic transition and that the stored energy can be released to perform work. When subjected to sufficiently high pressures, certain materials undergo changes in form resulting in sudden change in volume, the change in volume occurring gradually as pressure is increased until a critical pressure is reached, at which point a relatively large volumetric change may take place in response to a relatively small pressure change. This larger change in volume at a substantially constant pressure is known as a polymorphic transition. Additionally, the polymorphic transition phenomenon must be reversible so that a previously compressed material will return to its initial higher-volume state in response to pressure

reduction. This expansion of the material attendant upon the pressure decrease is the source of energy that appellant uses to perform work.

To illustrate, one of the materials disclosed by appellant is silver iodide which he says abruptly compresses, at a constant pressure of 42,600 pounds per square inch, from the 1.1% reduction in volume it has then undergone as pressure rose from zero to a reduction in volume of 17.4%. This, appellant says, is a volume reduction of 16.3% under substantially constant pressure conditions. Upon slight reduction from the transition pressure the volume returns to what it was. Appellant, however, makes no claim to the discovery of this phenomenon, but attributes it to Professor P. W. Bridgman of Harvard University, author of the references.

Claims 22 and 23 are substantial duplicates, each reciting three basic steps. We have broken claim 23 into its three basic steps for purposes of discussion. It reads:

A method of storing and utilizing energy in a work performing system through the medium of a non-gaseous material capable of polymorphic transition at a substantially constant pressure, comprising the steps of
[A] reducing the volume of the non-gaseous material at substantially said constant pressure to cause polymorphic transition to thereby store energy,
[B] subsequently reducing the pressure on said non-gaseous material below said constant pressure to cause reverse polymorphic transition to thereby expand the material, and
[C] concomitantly applying the energy of expansion of the material to work performing means in said system.

The application discloses specific accumulator devices so constructed as to utilize the energy released by expanding, previously-compressed, polymorphic transition materials. Accumulators, in general, are devices which store mechanical energy to supply peak demands and provide pressure leveling in hydraulic systems, and commonly use compressed gases as the energy storage medium. Each of appellant's accumulators has a heavy-walled compression chamber, containing a polymorphic transition material, connected to a hydraulic system. Pressure changes in the hydraulic fluid are transmitted from the hydraulic fluid to the compressible material. The accumulator is charged, i.e., the material is compressed to its lower-volume state, by the static pressure in the accompanying hydraulic system, or by pressure from an external source. It can be charged readily by such means as a conventional hand pump, and it may be stored in a charged condition indefinitely, so appellant says. In each instance, when the charging pressure drops below the critical transition value, the expanding material either pushes a piston, or a flexible diaphragm, or acts directly on the hydraulic fluid, in the case where it is in direct contact therewith, exerting sufficient force to do substantial work.

Various advantages are said to flow from the utilization of accumulators having polymorphic transition material as the energy storage medium, such as an increased amount of available energy for a given volumetric change; weight, size and cost reductions; and the release of energy at a substantially constant pressure.

The Examiner, in his final rejection, and the Board in affirming that rejection, relied on three references which were made of record by appellant. They are:

Bridgman: Proceedings of American Academy of Arts and Sciences, volume 76, No. 1, pages 2-7, February 1945.

Bridgman: Proceedings of the American Academy of Arts and Sciences, volume 76, No. 3, pages 71-87, March 1948.

Bridgman: Proceedings of the American Academy of Arts and Sciences, volume 77, No. 4, pages 127-128, 131-134, February 1949.

The references disclose an extensive series of compressibility tests on a wide variety of liquids and solids, including test results in tabular and graphic form and a general discussion of the test results. The articles amply testify to Professor Bridgman's recognition of the compressibility of certain solids and liquids and of the fact that this compression may include a polymeric transition. Professor Bridgman's experiments included testing silver iodide, one of applicant's preferred materials, and in volume 76, February 1945, at page 5, a graph of volume decrements for certain iodides shows an easily recognizable large polymorphic transition for that material.

Generally speaking, Professor Bridgman's test results were obtained by applying incremental pressure increases and taking corresponding volume readings for each pressure increase after allowing sufficient time for any heat of compression to dissipate. Decreasing pressure runs were also made. While the exact procedure for each of the tests is not disclosed, Professor Bridgman, at one point, indicates that 43 readings for both increasing and decreasing pressures were taken and throughout the articles it is noted that the difference, at corresponding pressures, between volume readings for increasing and decreasing pressures, was consistently small.

While the test equipment used for the earlier experiments is not thoroughly described in the articles, the February 1949 article illustrates and describes a later used testing device. That device has a heavy steel cylinder in which is placed the material whose compressibility is to be measured. Pressure is applied to the material by a piston and the article says that change in volume is "given directly by the motion of the piston measured by a dial gauge graduated to 0.001 inch and reading by estimation to 0.0001 inch." The piston which is in direct contact with the material is driven by a larger force-multiplying piston which in turn is driven by a conventional hand pump connected to the larger piston through a dead weight piston gauge. Accurate pressure readings are obtained by adjusting the dead weight gauge and operating the pump until the weight floats.

In his answer, the Examiner urged that the claimed steps of compressing the material and of releasing the pressure (steps [A] and [B]) were admittedly old and disclosed by Bridgman. The third step [C], that of applying the released energy to means to perform work in the system, was said to "constitute applicant's basis for patentability" and was, in the opinion of the Examiner, only a matter of mechanical skill, and not an "inventive" step. The Examiner commented:

In practically all kinds of motors, such as electric, internal combustion, [and] steam engines [.] energy is produced and released, the released energy being applied to means for performing work.
In response to applicant's argument it is admitted that the work of Bridgman was purely research, however it is submitted that the broad step of utilizing the produced energy merely constitutes an obvious expedient which is not patentable.

The Board did not pass on the Examiner's contention that the claimed third step would be obvious,

choosing instead to hold in effect that the claims fail to distinguish patentably from the operation of Bridgman's test equipment. The Board said:

It is clear that Bridgman not only compressed and released the various substances tested but also that he observed the behavior thereof during increasing and decreasing pressure sequences. It appears to us that it is an inherent and unavoidable incident of the operation of the Bridgman test equipment that the material be compressed through transition, released to reverse transition, and that energy be recovered therefrom in the form of forces acting on the equipment. The broad recitations of claims 22 and 23 as to "work performing system" and the application of expansion to the work performing means in said system, are so generally stated as to fail to define over such a test procedure. The work recovery need be nothing more than the retraction of the compressing piston to satisfy the terms of these claims. [Emphasis ours.]

As to claim steps [A] and [B], appellant does not assert that he discovered the compressibility of non-gaseous materials or that he discovered polymorphic transition. After carefully considering his arguments, it is not apparent to us that he is seriously contending that he alone recognized that polymorphic transitions involve energy transfers. His brief says:

In essence, what appellant has done is to recognize the tremendous advantages of, and to devise a novel method for utilizing the large amounts of energy available at a constant pressure from reverse polymorphic transition. [Emphasis ours.]

This alleged recognition and utilization seem to be the bases on which we are asked to find that the third step of the claims renders the claimed method patentable.

We agree with the Board that the language of the third step is broad and that the claimed method is inherent in the operation of Bridgman's test apparatus. Bridgman's experiments, involving, as they did, observations for both decreasing as well as increasing pressures, carried out the claimed method. As a necessary part of obtaining the test results, the pressure decrements were produced deliberately to determine the volume change as the compressed material expanded. The resulting piston movement was, in our opinion, the application of "the energy of expansion of the material to work performing means . . ." Appellant argues that Bridgman never used the energy, or, as a practical matter, never realized that energy was available during the reverse polymorphic transition and that it would be "erroneous speculation" to affirm the Board's conclusion that dissipation of energy to obtain test results is equivalent to practical utilization of this energy. The claims do not require that the work performed be either practical or useful.

We have been referred by appellant to *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, but find that case not in point. The process there involved was not, in fact, carried out by the allegedly anticipatory prior art. To the contrary, the prior art apparatus would have required alterations before it was capable of carrying out the claimed process and such alterations were suggested only by the concept disclosed in the patent in suit.

We also find merit in the Examiner's rejection for obviousness, which the Board did not reverse. Appellant says, in essence, that this rejection was made with hindsight and with knowledge of applicant's work. He asks that we be not influenced by the extreme simplicity of the process as simplicity does not negative patentability. While these are proper arguments, they are without persuasion where all that can be relied on in support of patentability is the broad

concept of "applying" available energy "to work performing means," as claim 23 says, or of "applying the released energy to means for performing work," which is the alternative language of claim 22. [1] The bare concept of using energy to do work by any and all means is, in the nature of things, necessarily in the realm of the obvious, like using fire to heat, the wind to propel a ship, or ice to cool. That the energy was there is obvious and is, moreover, tacitly admitted by appellant in his argument that "the Bridgman tests" resulted in "the complete dissipation of the stored energy without any utilization of this energy whatsoever." [Emphasis ours.]

[2] As we find ample ground to sustain the decision of the Board of Appeals, it is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE SHAKESPEARE COMPANY

No. 6629. Decided February 21, 1961. Petition for rehearing denied June 2, 1961

[48 CCPA —; 289 F.2d 506; 129 USPQ 323]

TRADEMARKS—REGISTRABILITY—MARK RESULTING FROM A PROCESS OF MANUFACTURE.

"We hold that the spiral marking on glass fishing rods which results from the . . . process of manufacture cannot be monopolized by treating it as a trademark, for which reason it is not registrable as a trademark. Whether or not the process is covered by the claims of the Howard et al. patent, we must treat the process, and the resulting product, as one which will eventually be in the public domain, even if it is not now. Were the spiral marking to be treated as a trademark the holder of the trademark rights would have a potentially perpetual monopoly which would enable it either to prevent others from using the process which results in the mark or force them to go to the trouble and expense of removing it. It is immaterial that other processes may be available by which glass rods without the mark can be made. Absent patent protection on the Howard et al. process, a condition which will exist after October 16, 1968, when the patent expires, freedom to utilize that process and whatever advantages it may have is a public right which cannot be interfered with by alleged trademark rights. . . . It is also immaterial how many fishermen or purchasers think the marking is a 'trademark.'"

APPEAL from the Patent Office. Serial No. 16,977. AFFIRMED.

Kenyon & Kenyon, Robert U. Geib, Jr. (Ralph L. Chappell, of counsel) for appellant.

Clarence W. Moore (George C. Roeming, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This case has to do with marks on fishing rods which appellant claims to be and desires to register as a trademark. The appeal is from the refusal of the Patent Office to do so.

The application, Ser. No. 16,977, filed October 4, 1956, says:

The mark consists of a continuous spiral marking formed in relief on the surface of and extending for substantially the full length of the rod.

The mark is used by applying it to the goods.

A drawing was filed which is supposed to show the mark, and does so as well as a drawing can, but its

true nature must be gathered from the specimens, actual fishing rods of resin-bonded glass filaments. The mark will best be understood from a consideration of how it is made, as described in United States Patent No. 2,571,717 to Howald and Meyer. Appellant's rod has been advertised as the "patented Howald-Process Wonderod."¹

The Howald et al. patent discloses a rod and a method of making it wherein the rod is constructed by covering a core with a layer of longitudinally extending glass filaments which have been precoated with a hardenable synthetic resin adhesive such as a polymerizable unsaturated polyester or a diallyl ester. The core is some light wood or resin material strong in compression and may be tapered. It is fed into a machine wherein the resin-coated glass filaments are applied to it from bobbins and bound around it by a temporary spiral wrapping of binding tape. While still bound by the tape the assembly passes through an oven wherein the resin is set and after leaving the oven the tape is unwound. According to the patent specification, the tape may be a steel ribbon, a cellophane strip, or other tough smooth material. According to the record, cellophane is used in practice.

This manufacturing process leaves its mark on the rod. It is this mark which appellant wants to register. Until the mark has had attention called to it, it is not very apparent. Inspection of samples shows that a tape about 4 mm. wide has been wrapped spirally on the rod with an overlap of about 0.5 mm. The setting of the resin within this smooth wrapping leaves a glassy surface with a slight spiral rib of no greater height than the thickness of the cellophane wrapping, produced by the overlap of its adjacent turns. In other words, one can see where the edges of the tape were located during the curing of the resin. It might be considered more of a tactile mark than a visual mark because this surface roughness is easier to feel than to see. It is apparent that it got there as a necessary result of the process of manufacture, as an incident of the process used, and was not applied arbitrarily for the purpose of indicating origin or identifying the goods. In fact, such use was admittedly an afterthought. Goods made by this process necessarily bear this mark and if it is not to remain, it must be removed by a further processing step, such as grinding, which, it can be presumed, would involve further manufacturing cost.

Appellant tells us, by way of argument, that it recognized in the beginning that these markings might be a definite handicap to sales and considered the desirability of grinding them off to make a smooth rod. It then says:

Appellant, however, decided against this step and adopted the spiral markings as a trademark and then started a campaign aimed at teaching the public that the spiral mark was a Shakespeare trademark.

On the basis of the assumed success of the advertising campaign, which we accept, arguendo, appellant says the mark has become distinctive of its goods in commerce, has acquired a "secondary meaning," and that registrability follows as a matter of course, citing

¹ The presence of the trademark "WONDEROD" on the goods has in no way influenced our decision and has no bearing on the issue.

section 2(f) of the Trademark Act of 1946 (15 U.S.C. 1062(f)).

We have just had occasion to review the law relevant to the instant appeal in the case of *In re Deister Concentrator Company, Inc.*, Appeal No. 6608, which we are deciding concurrently herewith, — CCPA —; — F.2d —; — USPQ —. That case involved an alleged trademark which we held unregistrable because it was "functional." While the appellant here argues that the spiral ridge marking is not "functional" in the sense that it performs no useful function in the rod, nor any decorative function, the principle of law which underlies the refusal to register "functional" marks applies equally to the instant case. In the *Deister* case we said:

The true basis of such holdings is not that they [the marks] cannot or do not indicate source to the purchasing public but that there is an overriding public policy of preventing their monopolization, of preserving the public right to copy.

For a discussion of the law which leads us to that conclusion we refer to our opinion, which also points out the irrelevancy of attempts by advertising to create exclusive trademark rights in that which cannot be monopolized under the law.

[1] We hold that the spiral marking on glass fishing rods which results from the above described process of manufacture cannot be monopolized by treating it as a trademark, for which reason it is not registrable as a trademark. Whether or not the process is covered by the claims of the Howald et al. patent, we must treat the process, and the resulting product, as one which will eventually be in the public domain, even if it is not now. Were the spiral marking to be treated as a trademark the holder of the trademark rights would have a potentially perpetual monopoly which would enable it either to prevent others from using the process which results in the mark or force them to go to the trouble and expense of removing it. It is immaterial that other processes may be available by which glass rods without the mark can be made. Absent patent protection on the Howald et al. process, a condition which will exist after October 16, 1968, when the patent expires, freedom to utilize that process and whatever advantages it may have is a public right which cannot be interfered with by alleged trademark rights. This is true notwithstanding any present ability of purchasers to recognize a Shakespeare "Wonderod" by reason of the spiral marking for reasons fully explained in the *Deister* opinion. It is also immaterial how many fishermen or purchasers think the marking is a "trademark."

The Patent Office Solicitor would have us hold the spiral marking to be "functional," "because it results from the specific process described in the Howald et al. patent." While this might be convenient from the standpoint of making certain precedents literally applicable and facilitate the classification of legal literature, the controlling principle goes deeper and we prefer to rest our decision on the principle rather than on a mere label. It seems to us appellant is quite accurate in saying the spiral mark performs no function whatever, but that is not the determining factor.

The decision below is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE DOUGLAS H. MORETON

No. 6667. Decided April 14, 1961

[48 CCPA —; 288 F.2d 940; 129 USPQ 288]

1. PATENTABILITY—INVENTION—35 U.S.C. 103—OBVIOUSNESS.

With respect to appellant's claim 12, "generic to tetra (octyl) orthosilicates and poly decyl methacrylate in the 2,000–14,000 molecular weight range," and appellant's claim 5, "specific to tetra (2-ethylhexyl) orthosilicate and the same methacrylate with the added limitation that its average molecular weight is 8,500," Held that "The question is whether this claimed combination of components 'would have been obvious at the time the invention was made to a person having ordinary skill in the art' and assumed to be familiar with the teachings of the references relied on, 35 U.S.C. 103"; and Held that "In answering this question we should and do take into account, insofar as the record and our ability enable us to do so, the knowledge one of ordinary skill in the art would have had of the problems and uncertainties in the art so as to avoid the pitfall of hindsight wisdom in passing on the issue of obviousness."

2. SAME—SAME—SAME—SAME.

With respect to allegations by appellants amounting to "an argument that if one slavishly following the prior art, albeit with a little educated imagination, will sometimes succeed and sometimes fail, then he is always entitled to a patent in case of success," Held that "This is not the intention behind 35 U.S.C. 103"; that "Obviousness does not require absolute predictability"; and that "Where, as here, the knowledge of the art clearly suggests a certain class of compounds, materials actually known by the term 'viscosity improving agents,' as useful to improve the viscosity index of a certain group of hydraulic fluid lubricants, the mere possibility of failure does not render their successful use 'unobvious.'"

3. APPLICATION—ASSERTION OF SURPRISING DISCOVERY—PATENTABILITY—EVIDENCE.

"Appellant has not shown the production of anything unexpected here. Though he lauds his own invention as a 'surprising discovery,' all that his examples purport to show is a satisfactory hydraulic fluid with improved viscosity curve characteristics. No curves are shown and no data are given. Nothing surprising is demonstrated. To this much of an invention the prior art clearly pointed."

4. PATENTABILITY—PARTICULAR SUBJECT MATTER—TETRA (OCTYL) ORTHOSILICATE HYDRAULIC FLUID.

The decision of the Board of Appeals refusing certain claims in appellant's application, entitled "Tetra (Octyl) Orthosilicate Hydraulic Fluid," as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 341,348. AFFIRMED.

Francis C. Browne (William E. Schuyler, Jr., Andrew B. Beveridge, Joseph A. De Grandi and Gerald H. Peterson, of counsel) for appellant.

Clarence W. Moore (Joseph Schimmel and Jack E. Armore, of counsel) for the Commissioner of Patents. Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of all claims in the application of Douglas H. Moreton, Ser. No. 341,348, filed March 9, 1953, entitled "Tetra (Octyl) Orthosilicate Hydraulic Fluid." The only claims before us are 5 and 12. The sole issue is patentability in view of the following references:

Watson, 2,549,270, April 17, 1951.

Morgan, 2,643,263, June 23, 1953, filed September 22, 1950.

771 O.G.—41

Da Fano, 2,726,213, December 6, 1955, filed February 18, 1950.

The invention is a fluid lubricant and/or hydraulic fluid suitable for use, for example, in aircraft hydraulic systems over the wide temperature range of —80° F. to 400° F., or even higher. The specification states that fluid for such use

in addition to having the usual combination of properties making it a good lubricant or hydraulic fluid should also have a relatively low viscosity at extremely low temperatures and an adequately high viscosity at relatively high temperatures and, in addition, must have adequate stability at the high operating temperatures of use. Still further, it is important that such a composition have low volatility and especially have a balanced volatility, that is, an important component should not volatilize away from the composition.

Appellant claims to have produced such a fluid by combining with a tetra (octyl) orthosilicate, which is a lubricant fluid, "a suitable polyalkyl methacrylate in which the alkyl groups have a number of carbon atoms within the range of 8 to 14" as a viscosity index improving agent. The only polyalkyl methacrylate exemplified and claimed, however, is, specifically, poly decyl methacrylate (10 carbon atoms) having a molecular weight within the range of 2,000 to 14,000. In the examples and in claim 5 it is stated to have an average molecular weight of 8,500.

Appellant's brief, paraphrasing the specification, states, as being a part of his discovery, that "tetra (octyl) orthosilicates such as * * * tetra 2-ethylhexyl, have a combination of most of the properties suitable for use as a hydraulic fluid * * * except that these orthosilicates are unsatisfactory since the slope of the viscosity-temperature curve over the wide temperature range of —80° F. to 400° F. is too great¹ and the viscosity above 210° F. is unsatisfactorily low." [Emphasis ours.] The remainder of the inventive act is said to reside in the further discovery that addition of the aforesaid poly decyl methacrylate remedies these shortcomings when used in admixture with the orthosilicate in an amount of from 0.2 to 10 percent of the orthosilicate, the resulting fluid being "ideal."

[1] The appealed claims are directed to fluids composed of the two components, claim 12 being generic to tetra (octyl) orthosilicates and poly decyl methacrylate in the 2,000–14,000 molecular weight range while claim 5 is specific to tetra (2-ethylhexyl) orthosilicate and the same methacrylate with the added limitation that its average molecular weight is 8,500. The question is whether this claimed combination of components "would have been obvious at the time the invention was made to a person having ordinary skill in the art" and assumed to be familiar with the teachings of the references relied on, 35 U.S.C. 103. We might add, in view of appellant's arguments, that in

¹ An explanation in the Da Fano reference will make this jargon intelligible:

Most liquids have the property of becoming viscous or thick when their temperature is lowered, and of becoming thin or less viscous as their temperature is raised. If the temperature-viscosity relationship is plotted on an A.S.T.M. viscosity-temperature chart (D 341–43), with the temperature in degrees F. on the abscissa and the viscosity (expressed in centistokes) on the ordinate, a substantially straight line usually results. The slope of this curve is an indication of the temperature-viscosity relationship. It is apparent that if the viscosity were not changed at all with a change in temperature, the plotted curve would be horizontal or flat. The less the slope of the plotted curve deviates from a flat position, the better is the temperature-viscosity relationship.

This also serves to indicate that the problem on which appellant was working was one with which the art was quite familiar. The use of the word "better" shows that others were in quest of means to reduce the slope of temperature-viscosity curves, as Da Fano was.

answering this question we should and do take into account, insofar as the record and our ability enable us to do so, the knowledge one of ordinary skill in the art would have had of the problems and uncertainties in the art so as to avoid the pitfall of hindsight wisdom in passing on the issue of obviousness.

As a starting point, the Morgan patent disclosed—and appellant admits it—the utility of tetra (octyl) orthosilicates, including the specific tetra (2-ethylhexyl) orthosilicate of claim 5, as hydraulic fluid for aircraft and other uses. Appellant, therefore, cannot claim this as a part of his discovery, though his specification appears to do so. If he did discover such utility, so much of the discovery admittedly lacked novelty.

It is argued that Morgan does not recognize that the slope of the viscosity-temperature curve over the range -80° F. to 400-500° F. and the viscosity above 210° F. are unsatisfactory, or suggest any agent to improve the matter. The Morgan patent states:

The liquids of the present invention are particularly suited for these uses (hydraulic fluids in aircraft, torque transfer devices, fluid transmissions, shock absorbers and as lubricants) because of their fluidity over wide temperature ranges; their resistance to hydrolysis and oxidation; and their lubricity.

As to the specific compound tetra (2-ethylhexyl) orthosilicate, the following disclosure is made by Morgan:

Tetra 2-ethylhexyl orthosilicate has a boiling point in the range of 191-192° C. at 9 mm. mercury pressure which is approximately 690° F. at 760 mm. of mercury pressure. Its viscosity at 210° F. approaches 2.36 centistokes, at 100° F. approaches 6.83 centistokes, and at -40° F. approaches 260 centistokes. Its pour point is below -100° F. and no crystallization was noted at the lowest temperatures available using Dry Ice.

Whether or not Morgan states the shortcomings of the viscosity characteristics of this specific material claimed by appellant as one of his components, he made no secret of what those characteristics are and set them forth for all the world to see and to decide whether or not they are satisfactory for any given purpose.

We feel constrained to hold that the prior art possessed quite full knowledge of the use of appellant's orthosilicate component as hydraulic fluid and of its viscosity-temperature behavior. This brings the question of patentability of the claimed invention down to the obviousness of adding to the orthosilicate component the claimed methacrylate component as a viscosity index improving agent, i.e., to decrease the slope of the viscosity-temperature curve over the stated temperature range and to increase the viscosity above 210° F., these being the alleged shortcomings to be remedied in order to achieve a more perfect hydraulic fluid.

Viscosity improving agents likewise were not unknown to the art when this invention was made. Da Fano was in search of a hydraulic fluid with a flatter temperature-viscosity curve and discloses that he achieved an increase in flatness by using a mixture of (1) a viscous polymeric material with (2) a non-viscous monomeric material. His monomeric material is an orthosilicate or hydroxysilicate, i.e., a monomeric silicic acid ester. One polymeric material he discloses is "polymerized methyl acrylic acid ester, available as 'Acryloid HF855,'" a 55% solution of "polymerized methyl ester of acrylic acid (also sometimes termed 'polymethyl acrylate' or 'polymerized methyl acrylic acid ester') in 200° F. minimum flash

oil." Da Fano acknowledges the use of silicoorthesters as hydraulic fluids as in the prior art but regards them as unsatisfactory because their temperature-viscosity curves are "not low enough." His advance was the combining with them of polymethyl acrylate, in order, among other things, to flatten out the curves. His figures show that he met with some success. Admittedly he does not disclose appellant's specific orthosilicates but rather cresyl tri-isopropyl orthosilicate with a statement that

The silicates may be aryl, alkyl or aralkyl orthosilicates in which the radicals may be phenyl, naphthyl, anthracyl, diamylphenyl, xylenyl, cresyl, or methyl, ethyl, propyl, isopropyl, tertiary butyl and mixed aryl and/or alkyl radicals

The Watson patent is also concerned with hydraulic fluids with an improved viscosity index or flat temperature-viscosity curves and, like Da Fano, with hydraulic fluids in admixture with viscosity improving agents. The first thing Watson says is that various phosphate liquids have been suggested as hydraulic fluids, including tricresyl phosphates, which however, "show a low response to viscosity index improves such as the polymerized methacrylic acid esters." Next he proposes the use of a particular mixture of "tricresyl phosphates with alkyl phosphates wherein the alkyl groups each have four to eight carbon atoms, the above mixture being improved by the addition of viscosity index improvers, especially polymerized esters of methacrylic acid, as more particularly described hereinafter." [Emphasis ours.] After describing in detail his tricresyl and trialkyl phosphates, the specification then includes the following:

VISCOSITY INDEX IMPROVING AGENTS

The agents to be used in the present compositions include polymerized esters of the acrylic acid series, such as acrylic acid esters and, more preferably, methacrylic acid esters. The latter are readily available as commercial products and are sold under the trade-name "Acryloid." The esters to be used should have molecular weights from about 5,000 to about 25,000, preferably 5,000 to 15,000. It will be understood that this is an average figure for the mixture of polymers, which is always present. [Emphasis ours.]

The acids should be esterified with aliphatic alcohols having two to fifteen carbon atoms, and the polymers may be homopolymers of a single ester or may be copolymers of a mixture of such esters. The term "polymerized esters" will be understood to include both of these types.

There are two specific examples of hydraulic fluids in each of which "Acryloid HF855," the same material mentioned by Da Fano, is included, 4% by weight in one example and 5% by weight in the other. (From the total disclosure we judge we should consider about half of that amount to be kerosene carrier for the polymer.)

It is not clear what "Acryloid HF855" is. Watson's disclosure would indicate it is a methacrylic acid ester polymer while Da Fano specifies that it is a polymethyl acrylate. Whatever it is, Watson and Da Fano both suggest its use and Watson specifically suggests in addition that methacrylic acid esters of appellant's type are viscosity index improving agents.

It is our view that the Board was entirely justified in concluding that "While Watson does not specifically disclose poly decyl methacrylate he does clearly indicate that the esterifying alcohol may have two to fifteen carbon atoms so that the decyl methacrylate would be within the scope of Watson's disclosure." Indeed, we would go further and say that the Watson patent would clearly suggest that the specific poly decyl methacrylate of claim 5 would have utility as a viscosity improving agent, taking into account the fact

that that claim names an average molecular weight of 8,500, right in the middle of Watson's disclosed range.

With this much knowledge in the art we are unable to see anything unobvious in using this material to improve the viscosity index or temperature-viscosity curve of the old orthosilicate hydraulic fluids as disclosed by Morgan, by anyone aware of the fact that they needed improving or desirous of improving them.

Appellant bases considerable argument on a reference no longer relied on by the Patent Office, an article by Glavis, 42 Ind. & Eng. Chem. 2441, December 1950. It is said to show that the addition of viscosity improving agents to lubricants does not give predictable results and that with Watson's tri-aryl phosphates specifically there is a marked difference between the results obtained with the polyacrylic esters of Da Fano and the methacrylic esters of Watson, the differences being operability versus inoperability.

[2] What this amounts to is an argument that if one slavishly following the prior art, albeit with a

little educated imagination, will sometimes succeed and sometimes fail, then he is always entitled to a patent in case of success. This is not the intention behind 35 U.S.C. 103. Obviousness does not require absolute predictability. Where, as here, the knowledge of the art clearly suggests a certain class of compounds, materials actually known by the term "viscosity improving agents," as useful to improve the viscosity index of a certain group of hydraulic fluid lubricants, the mere possibility of failure does not render their successful use "unobvious."

[3] Appellant has not shown the production of anything unexpected here. Though he lauds his own invention as a "surprising discovery," all that his examples purport to show is a satisfactory hydraulic fluid with improved viscosity curve characteristics. No curves are shown and no data are given. Nothing surprising is demonstrated. To this much of an invention the prior art clearly pointed.

[4] The decision of the Board is affirmed. AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,411,366, Glover and Childers, Apparatus for supporting and cementing liners or casings in well bores; 2,845,190, B. L. Austin, Apparatus for bridging and cementing well casing; 2,854,061, B. Kriegel, Well cementing apparatus, filed Oct. 17, 1960, D.C., N.D. Okla. (Tulsa), Doc. 5039, Baker Oil Tools, Inc. v. A. K. Kline doing business as Arrow Oil Tools Company. Consent decree; patents held valid and infringed; injunction granted July 19, 1961.

2,534,549, J. Frazer, Adjustable spray showerhead; Reg. No. 633,550 (SPEAKMAN), Speakman Company, Showerheads, valves and accessories, shower and bath fittings, hospital fittings, etc., filed May 1, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7582, Speakman Company v. Southeastern Plumbing Supply Co., Inc. Judgment for plaintiff Aug. 17, 1961.

2,532,901, Zimmerman and Hoge, Continuous mixing and delivering process; 2,625,381, same, Process of continuously preparing a typsum slurry, filed C.C.A., 6th Cir., Docs. 14,213-4, Hoge Warren Zimmerman Co. v. Nourse & Co. et al. and Nourse & Co. et al. v. Hoge Warren Zimmerman Co., Cross-Appeal. Decree of the District Court holding that Patent No. 2,625,381 has not been infringed and the dismissal of the counter-claim by the District Court affirmed Aug. 22, 1961.

2,657,618, W. Eisbain, Developing apparatus, filed Aug. 30, 1960, D.C., W.D. Wash. (Seattle), Doc. 5118, Copease Manufacturing Co., Inc. et al. v. Wm. Diericks Company et al. Cause dismissed without prejudice Aug. 30, 1961.

2,668,912, E. R. Goldfield et al., X-Ray apparatus; 2,673,627, Stava and Reininger, Electromagnetic lock for X-ray apparatus; 2,823,315, same, X-ray apparatus and control; 2,887,606, W. G. Reininger, X-ray focusing apparatus, filed Aug. 17, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1370, Picker X-Ray Corporation, Walte Manufacturing Division v. Prof-ray, Inc.

2,673,627. (See 2,668,913.)

2,793,063, W. J. Gross, Adhesive bandage, filed Aug. 18, 1961, D.C., S.D.N.Y., Doc. 61/2968, Johnson & Johnson v. The American White Cross Laboratories, Inc.

2,781,148, R. R. Reading, Spray device for retreading tires and like uses, filed May 17, 1957, D.C., S.D. Calif. (Los Angeles), Doc. 636/37-WB, Reading Tire Machinery Company, Inc. et al. v. California Tire and Supply Company. All claims of patent held valid and infringed (notice Aug. 22, 1961).

2,729,067, R. Patterson, Method for forming piles, filed Aug. 24, 1961, D.C., S.D. Ohio (Cincinnati), Doc. 4969, Intrusion-Prepakt, Inc. v. Raymond International, Inc.

2,753,004, Trow and Nelson, Ice disintegrating and chip delivering spiral ice chip producing machine, filed Aug. 21, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1394, King-Seely Thermos Company v. Freez-King Corporation.

2,816,583, Larchar and Pease, Product and process of polymerizing ethylene, filed June 20, 1958, D.C. Del. (Wilmington), Doc. 2006, E. I. Du Pont de Nemours & Company v. Phillips Petroleum Company et al. Stipulation and order of dismissal Aug. 28, 1961.

2,823,315. (See 2,668,913.)

2,826,540, G. F. Keeler, Method and apparatus for electrolytic cutting, shaping and grinding, filed Apr. 8, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 320/59-T, Anocut Engineering Company v. Sargent Engineering Corporation. Stipulation and order of dismissal (notice Aug. 21, 1961).

2,844,826, S. D. Chetten, Pressure device, filed Aug. 30, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1458, Samuel B. Chetten et al. v. Chicago Specialty Manufacturing Company.

2,845,190. (See 2,411,360.)

2,854,061. (See 2,411,360.)

2,873,702, F. H. Tennis, Control valve for fluid pressure operated mechanisms, filed May 26, 1960, D.C., E.D. Wis. (Milwaukee), Doc. 60-C-83, Parker-Hannifin Corporation v. Hydraulic Unit Specialties Company. Dismissed by stipulation with prejudice Aug. 29, 1961.

2,881,006, W. H. St. Germain, Aerosol valve, filed Sept. 1, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1477, Aerosol Research Company v. Scovill Manufacturing Company (A. Schrader's Son Division).

2,896,323, T. R. Duncan, Phonograph repeat Mechanism; 2,942,888, same, Phonograph and tone arm; 2,942,889, same, Phonograph device, filed Aug. 18, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1082/61-TC, Theodore R. Duncan et al. v. The Talking Book-Inc. et al.

2,887,606. (See 2,668,913.)

2,942,888. (See 2,896,323.)

2,942,889. (See 2,896,323.)

2,958,593, H. L. Hoover, Low density open non-woven fibrous abrasive article, filed Aug. 28, 1961, D.C., N.D. Ohio (Cleveland), Doc. 3714, Minnesota Mining and Manufacturing Company v. Norton Company et al.

2,996,361, J. P. Lopez, Feeding equipment, filed Aug. 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1410, Universal Corrugated Box Machinery Corporation v. Lanzit Corrugated Box Co., Inc.
 Dec. 196,410, D. J. Scholz, House, filed July 20, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/456, Scholz Homes, Inc. v. Ravet Development Company, Inc. Stipulation and consent judgment Aug. 23, 1961.

REISSUES

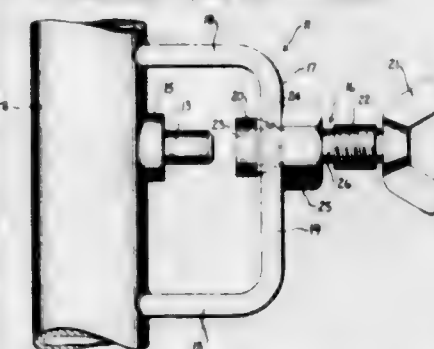
OCTOBER 17, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,053 RELEASABLE METAL SCAFFOLDING CONNECTOR

Theodore C. Juculano, Oshkosh, Wis., assignor to Marvel Equipment Corporation, Oshkosh, Wis., a corporation of Wisconsin
 Original No. 2,962,310, dated Nov. 29, 1960, Ser. No. 860,986, Dec. 21, 1959. Application for reissue Apr. 3, 1961, Ser. No. 100,768

6 Claims. (Cl. 287—53.5)



1. A connector for readily detachably securing a removable member having an aperture therethrough to a relatively fixed member, said connector comprising a [substantially U-shaped] bracket [having its legs] secured to said relatively fixed member and projecting outwardly from a surface thereon with a part [to hold the bight portions] of the bracket spaced from and substantially parallel to said surface; a stud fixed to said relatively fixed member adjacent to [intermediate the legs of] the bracket and projecting outwardly from said surface toward and partway to said part [the bight portion] of the bracket so that a removable member can be inserted between said part [the bight portion] of the bracket and the outer end of the stud and then moved axially inwardly relative to the stud to engage the latter in an aperture in the removable member; an elongated locking member having an inner end portion which is substantially larger in diameter than the outer end portion of the stud and having a coaxial well opening to its inner end in which the stud is axially receivable, said locking member being mounted in said part [the bight portion] of the bracket for endwise movement coaxially with respect to the stud between a locked position in which the inner end portion of the locking member is telescoped over the stud to confine a removable member engaged with the stud against outward movement axially off of the stud, and an unlocked position in which the inner end of the locking member is axially spaced from the outer end of the stud; and cooperating means on the locking member and on a fixed part of the connector for releasably securing the locking member in its locked position.

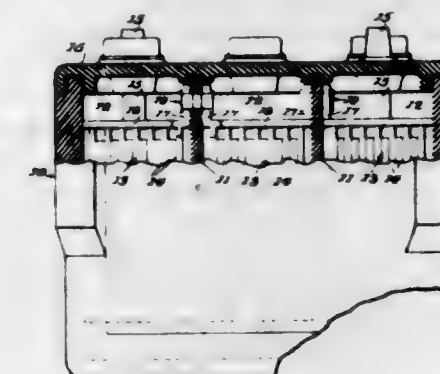
25,054 STORAGE BATTERY TERMINAL LUG CONNECTOR

Canby A. Rigby, Sr., R.R. 2, Elwood, Ind.
 Original No. 2,906,804, dated Sept. 29, 1959, Ser. No. 684,913, Sept. 19, 1957. Application for reissue May 23, 1960, Ser. No. 31,245

10 Claims. (Cl. 136—134)

10. In a storage battery, an insulating casing having an insulating partition dividing it into cells, groups of plates in said cells and having terminal lugs contacting with

opposite sides of said partition respectively, said lugs and partition having communicating openings jointly forming a bore therethrough, and a soft metal conducting pin separate from said lugs and extending through said bore, said pin being compressed into intimate and full sealing



contact with the wall of said bore and with said lugs, said pin having enlarged cross-sectional areas intermediate its ends adjacent each side of the partition and at both of its ends whereby each terminal lug is in electrical contact with a plurality of enlarged areas of the pin.

25,055 METHODS OF MAKING CLAY PRODUCTS AND IMPROVED CLAY PRODUCTS

Ludwig F. Audrieth, Urbana, Ill., assignor, by mesne assignments, to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
 No Drawing. Original No. 2,880,099, dated Mar. 31, 1959, Ser. No. 386,111, Oct. 14, 1953. Application for reissue Aug. 29, 1960, Ser. No. 52,754

11 Claims. (Cl. 106—73)

1. In the manufacture of shaped clay products from a clay mass, the method which comprises admixing non-refractory clay with about 0.5% to about 5% by weight, based on the weight of the clay, of a member of the class consisting of sodium metaphosphates, sodium pyrophosphates, and sodium polyphosphates, and sufficient water to form a clay mass, shaping said mass, and heating said mass at a firing temperature.

25,056 ADHESIVE APPLICATORS George H. Fritzinger, 18 Oakridge Road, West Orange, N.J.

Original No. 2,909,301, dated Oct. 20, 1959, Ser. No. 587,366, May 25, 1956. Application for reissue June 3, 1960, Ser. No. 33,872

21 Claims. (Cl. 156—523)

22. [A] In a mechanism for dispensing an adhesive film having two pressure-sensitive [means] adhesive surfaces carried releasably by a non-adhesive backing film and wound in roll form [comprising]: the combination of a journaled member for carrying a supply roll of said backing film with said pressure-sensitive [means] adhesive film thereon, means on said journaled member for holding said supply roll in fixed rotational relation thereto, a journaled take-up member separate from said carrying member for reeling up the backing film after

removal of said pressure-sensitive [means] adhesive film, a roller around which the backing film is led from said supply roll to said take-up member and at which the pressure-sensitive [means] adhesive film is peeled from the backing film, and means for driving said take-up member by said carrying member with a force tending to turn said take-up member at a greater rotational speed of said carrying member during the unreeling of said supply roll comprising an over-drive coupling in-



cluding a friction clutch and a drive coupling transmission between the carrying member and the take-up member having a drive transmission ratio greater than the ratio of the diameter of said supply roll to the diameter of said take-up member for providing an over-driving influence on said take-up member with slippage of said clutch to exert a tensioning force on the backing film during the entire unreeling of the supply roll.

25,057

PREPARATION OF PERACETIC ACID

Harold B. Stevens, Shawinigan, Quebec, Canada, assignor to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada
No Drawing. Original No. 2,830,080, dated Apr. 8, 1958, Ser. No. 581,383, Apr. 30, 1956. Application for release Feb. 18, 1959, Ser. No. 794,216
11 Claims. (Cl. 260-502)

1. A process for the preparation of peracetic acid comprising oxidizing liquid acetaldehyde with oxygen-containing gas in the presence of at least one halide salt catalyst of the group consisting of the chloride and bromide salts of copper, the chloride and bromide salts of cobalt, and cupric ammonium chloride, to form peracetic acid.

25,058

MOTOR CONTROL SYSTEM

Charles K. Taft, Warrensville Heights, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Original No. 2,977,522, dated Mar. 28, 1961, Ser. No. 780,377, Dec. 15, 1958. Application for release May 8, 1961, Ser. No. 108,684
9 Claims. (Cl. 318-260)

1. A control system for a direct current motor comprising a source of A.C. current, a pair of grid controlled rectifying tubes connecting said source to energize the armature of said motor with a unidirectional current which determines the speed of said motor, means providing a first signal component indicative of a desired rate of movement, means for deriving second and third signal components dependent on the velocity and rate of change

of velocity of said motor, means responsive to armature current to provide a fourth signal component dependent on the magnitude of the armature current, circuit means combining said first and fourth components in an additive relationship to each other and said second and third

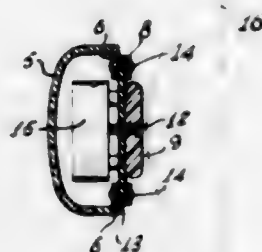


components in a bucking relationship to the first and fourth components when said motor is accelerating and applying the resultant signal to the grids of said tubes to control the conduction thereof as a function of said signal.

25,059

BONE CONDUCTION RECEIVER MOUNTING FOR COMBINED HEARING AID AND SPECTACLE

George Lewis, Manchester, England, assignor, by mesne assignments, to Otariion Listener Corporation, Scarborough Park, N.Y., a corporation of New York
Original No. 2,858,376, dated Oct. 28, 1958, Ser. No. 611,590, Sept. 24, 1956. Application for release Oct. 7, 1959, Ser. No. 853,668
Claims priority, application France Mar. 14, 1956
17 Claims. (Cl. 179-107)



1. Combined spectacles and bone conduction hearing aid apparatus, comprising a spectacle frame having two hollow side bows, a microphone housed in one of said side bows, an amplifier, and a bone conduction receiver fed from amplified microphone currents, an aperture on the inner face of the other of said side bows, a rubber sheet covering and stretched on said aperture, a thin metal flange securing said rubber sheet to the edges of said aperture, and means for securing said receiver to said rubber sheet.

PATENTS

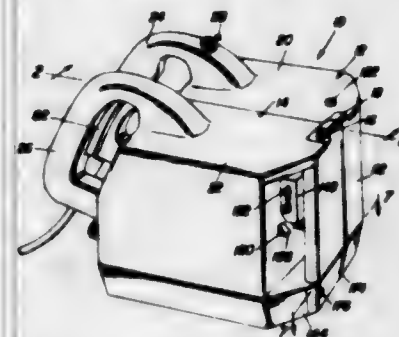
GRANTED OCTOBER 17, 1961

GENERAL AND MECHANICAL

3,004,260

ELECTRIC NAIL DRIVER

John Van Den Elzen, 303 S. Washington, De Pere, Wis.
Filed Aug. 25, 1959, Ser. No. 836,017
4 Claims. (Cl. 1-46)

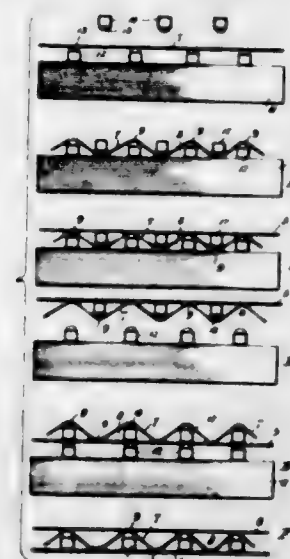


1. A nail driving machine comprising a generally hollow housing having an electric motor mounted therein, a reciprocable hammer mounted on the housing for driving a nail, a rack gear carried by the hammer, a pinion gear in meshed engagement with the rack gear for movement of the rack gear and hammer in a reciprocatory manner upon oscillation of the pinion gear, and drive shaft means interconnecting the motor and the pinion gear for driving the hammer, said drive shaft means including a separable pair of clutch elements which are manually engaged for causing the hammer to move in one direction, and means responsive to movement of the hammer in said one direction for releasing the clutch elements thereby enabling the hammer to move independently of said drive shaft means, said hammer being provided with spring means connected thereto for resiliently urging the hammer to a retracted position whereby the hammer will automatically return to a retracted position when the clutch elements are disengaged in response to movement of the hammer to an extended position.

3,004,261

METHOD FOR FORMING WALL BOARD PANELS

Leon E. Medel, P.O. Box 13,284, New Orleans, La., and Henry Frank Forbes, Rte. 1, Box P6, Slidell, La.
Filed Aug. 22, 1957, Ser. No. 679,587
1 Claim. (Cl. 1-60)



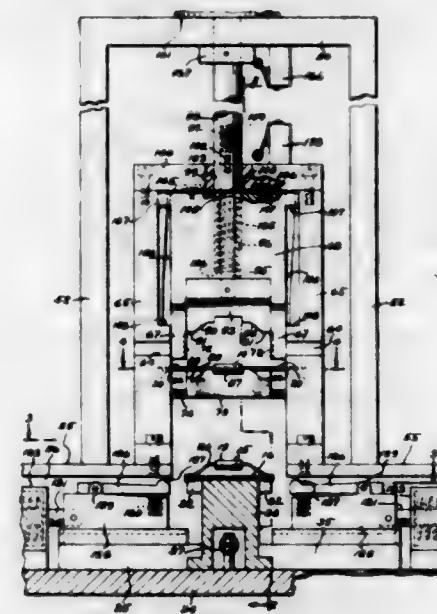
The method of forming a panel comprising arranging a plurality of fixed anvils in spaced parallelism, applying

a flat core sheet to the upper surfaces of said anvils and in resting engagement thereon, lowering a second set of spaced parallel anvils upon said core member between said primary anvils to depress said core between the latter and to provide spaced parallel oppositely directed crowns in said core, applying a flat skin to one side of said core and securing the same to the underlying crowns, removing said core, skin and second set of anvils from said fixed anvils, reversing the same and resting the skin upon said fixed anvils with the second set of anvils aligned therewith, applying a second flat skin to the upper surface of said core in engagement with the spaced crowns thereon, securing said second skin to said crowns, and removing said second set of anvils from between said skins.

3,004,262

APPARATUS FOR ATTACHING ELECTRICAL COMPONENTS TO WIRING BOARDS

James F. Cubbage, Naperville, and Willard D. Drucker, Downers Grove, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 14, 1959, Ser. No. 827,077
7 Claims. (Cl. 1-323)



1. In an apparatus for attaching electrical components to wiring boards wherein the electrical components have bodies with leads extending from opposite ends thereof, means for holding the wiring board, means for forming the leads to provide intermediate portions displaced laterally to one side of the body for engaging one side of the board and to provide laterally directed parallel end portions for receiving the board therebetween, means for moving and holding the thus-formed component onto the board with said intermediate portions of the leads thereof in engagement with marginal portions of one side of the board and the end portions straddling and projecting beyond the board and with the body in spaced relation to the board, means movable relative to said board holding means and the board thereon in directions substantially parallel to said one side of the board for bending the end portions of the leads around and against the edges of the board and against the other side thereof to attach the component to the board with the body thereof spaced from the board, and mounting

means for supporting the several means in predetermined relation to one another and for relative movement therebetween.

3,004,263

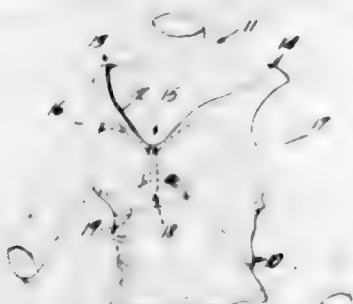
DRESS ANCHOR

Carmen Form, Young Road, Katonah, N.Y.

Filed Mar. 27, 1959, Ser. No. 802,429

4 Claims. (Cl. 2-74)

1. An anchor arranged to hold the edge of a garment close to the body of a wearer comprising a relatively stiff retaining member adapted to be tucked beneath an edge of an undergarment, and a short flexible joint associated with the retaining member and the garment so as to attach one end of the retaining member to the inside of the garment to hold it in closely adjacent relation to the garment at a location adjacent to the edge of the undergarment when worn and arranged to permit the retaining member to be



moved to any orientation with respect to the garment, the flexible joint being attached to the garment at a point spaced from the edge of the garment by a distance at least as great as the length of the joint from the end of the retaining member to the point of attachment.

3,004,264

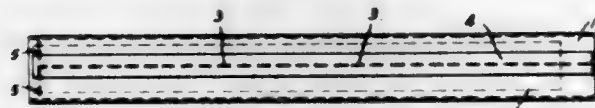
HAND FASHIONED BOW TIE

Mary B. Thaler and Joseph M. Thaler, both of

89-20 55th Ave., Elmhurst, N.Y.

Filed Dec. 29, 1958, Ser. No. 783,475

3 Claims. (Cl. 2-151)



1. A pre-formed bow tie comprising a single longitudinal strip of cloth folded upon itself along a longitudinal line and having its longitudinal edges secured to each other by stitches forming a tubular casing, a ribbon secured to the longitudinal joined edges of said casing, a longitudinal resilient lining being in the dimension of its width a certain fraction of the unfolded width of said single longitudinal strip of cloth and having one of its ends secured to one end of said tubular casing by stitches sealing said end of casing, said lining being fixed anterior to and being otherwise longitudinally unattached to the rear facing center seam of stitches within said casing forming the front wings of the said bow tie, said casing having two sealed square ends and being folded forming the front wings and the rear wings of said bow tie, a string tying up the distal portion of said wings of said bow tie, and a cross-piece secured at the central portion of the said bow tie.

3,004,265

BED FRAME

Jerome M. Silverman and Allan Brill, Chicago, Ill.;

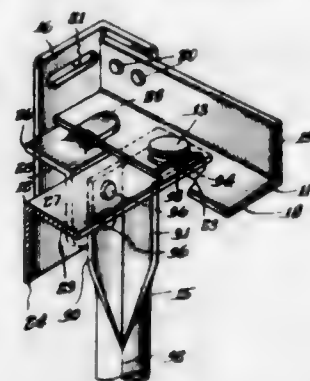
said Brill assignor to said Silverman

Filed Jan. 2, 1959, Ser. No. 784,766

1 Claim. (Cl. 5-176)

In a bed frame or the like, an angle side rail having a horizontal flange and an upwardly extending vertical

flange, an angle cross rail having a horizontal flange and a downwardly extending vertical flange, a vertically extending angle support leg having normally arranged vertically extending flanges with the bottom portions thereof formed together to provide a caster receiving socket, one of said flanges of the angle support leg being longer than the other flange and being bent over to form a horizontal ear, an angle stop member having a horizontal flange and a downwardly extending vertical flange, a plurality of rivets extending through the vertical flange of the stop member, the vertical flange of the cross rail and said other flange of the support leg for mounting the stop member on one side of the cross rail and the support leg on the other side of the cross rail with the horizontal ear of the support leg engaging the horizontal flange of the cross rail, a washer arranged between the horizontal flanges of the side rail and cross rail, and a pivot rivet extending through the horizontal flange of the side rail, the washer, the horizontal flange of the cross rail and the horizontal ear of the support leg for pivotally securing the cross rail to the side rail and for rein-



forcing the mounting of the support leg on the cross rail, the horizontal flange of the stop member swinging under the horizontal flange of the side rail and being provided with an upwardly spaced stop tongue for receiving the horizontal flange of the side rail when the cross rail is pivotally moved to a position normal to the side rail to stop movement of the cross rail beyond that position and to reinforce the pivotal connection of the cross rail to the side rail.

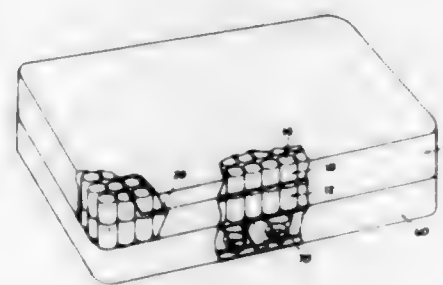
3,004,266

MATTRESS CONSTRUCTION AND SPRING

Raymond H. Blecker, Kenosha, Wis., assignor to Simmons Company, New York, N.Y., a corporation of Delaware

Filed Jan. 2, 1959, Ser. No. 784,655

4 Claims. (Cl. 5-252)



1. The combination of an innerspring mattress and a generally coextensive resilient base therefor, said resilient base having greater resistance to deflection along its side marginal areas than in the area between said marginal areas, said innerspring mattress having a pair of superposed inner spring constructions and a substantially rigid sheet secured therebetween for transferring to a large area of the lower one of said constructions concentrated loads applied to the upper constructions, said sheet

having its long dimension extending in the direction of the sides of said mattress and having its side margins overlying the stiffer side marginal areas of said resilient base whereby the usual loads received by said mattress tend to flex said sheet transversely of the mattress.

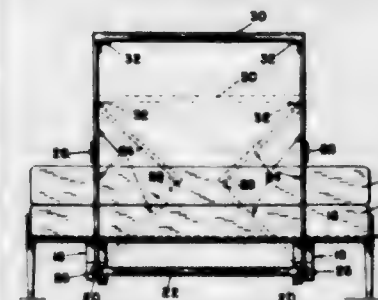
3,004,267

FOLDING RACK FOR BEDS

Jeannette E. Pesola, Bolton Road, South Lancaster, Mass.

Filed Dec. 29, 1959, Ser. No. 862,679

1 Claim. (Cl. 5-318)



A folding rack for attachment to a bed frame comprising a pair of brackets, means attaching the brackets to the bed under the frame depending therefrom, a rod slidable horizontally in each bracket, said rods being parallel, means connecting said rods, the means connecting said rods comprising an extensible rack means, said extensible rack means including a pair of folding members hingedly associated with said rods at the corresponding ends thereof, a cross-top member securing said folding members together at the ends thereof opposite said rods, said cross-top member being hingedly associated with said folding extensible rack members, and means yieldably maintaining the latter in extended condition thereof, the motion of the rack being vertical and at right angles to the rods, and said brackets spacing the sliding rods from the underneath side of the bed a distance greater than the folded height of the rack so that the rack when folded down is slidable underneath the bed and does not interfere with the same when retracted to its folded position under the bed.

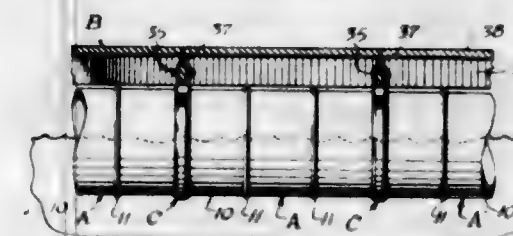
3,004,268

DRUM CONNECTORS

William F. Haas, 52 Prospect Blvd., St. Paul, Minn.

Filed Apr. 22, 1957, Ser. No. 654,354

5 Claims. (Cl. 9-11)



1. A drum connecting and supporting means including an upper arcuate section having an arcuate extent substantially less than one hundred eighty degrees and a lower arcuate section having an arcuate extent substantially more than one hundred eighty degrees, a pair of ears projecting outwardly and upwardly in a radial direction from the ends of said lower arcuate section, a pair of straps having vertical upper portions and inwardly angled lower portions connected to the ends of said upper arcuate section and to the ears in a contacting relation with said ears, and a channel member including channel sides in planes parallel to the side edges of said arcuate sections and an integral base extending horizontally between the lower edges of said channel sides, the ends of

said channel being secured to the upper ends of said straps and tangentially engaging an intermediate portion of said upper arcuate section.

3,004,269

LIFESAVING DEVICES

Johann Anton Dillier, Horw, Switzerland, assignor to A. Bernauer & Co., Nidwalden, Switzerland, a corporation of Switzerland

Filed Jan. 23, 1958, Ser. No. 710,646

Claims priority, application Switzerland Feb. 19, 1957

2 Claims. (Cl. 9-321)



1. A self-inflating lifesaving device, which comprises an item of wearing apparel with at least one pocket therein, at least a portion of said pocket being constructed of normally water and air-permeable material, a composition in the form of a self-contained readily removable cartridge in said pocket comprising an intimate mixture of a gas-generating substance and a sizing agent, said composition upon contact with water entering said pocket through said water and air-permeable portion generating gas sufficient to inflate said pocket and producing a moist foamy mass of sizing agent which coats the interior of said water and air-permeable portion limiting further inflow of water and escape of gas, and means forming an inlet aperture in said pocket for the introduction of said composition.

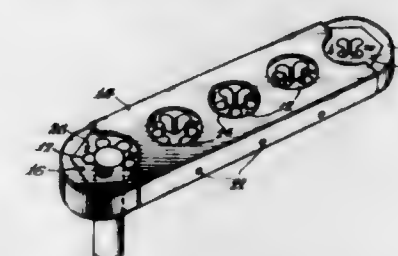
3,004,270

MULTIPLE DIE RECEPTACLE FOR HOLDING DIES AND FOR USE AS A DIE WRENCH

William E. Cowley, Louisville, Ky., assignor to Vermont American Corporation, a corporation of Kentucky

Filed Dec. 8, 1958, Ser. No. 778,756

5 Claims. (Cl. 10-114)



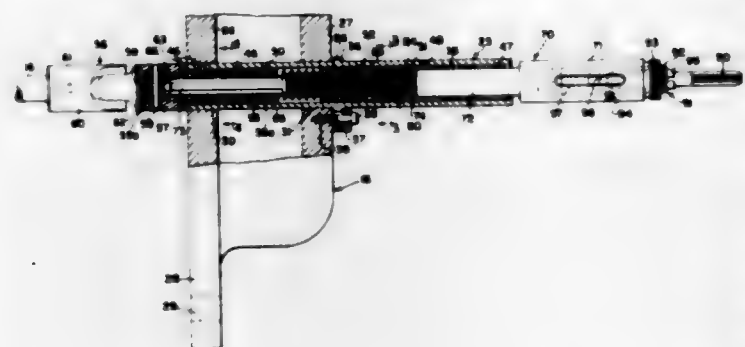
1. A tool consisting of an elongate body member having a plurality of identical transverse sockets therein throughout the length thereof, said sockets being spaced from and independent of one another and each including a portion of non-circular cross-section opening to one side of said body and a portion of reduced size opening to the opposite side, a die removably positioned in said portion of each of said sockets, said dies all having identical external dimensions and being of an external configuration complementary to said non-circular portion of said sockets, whereby said dies may be positioned indiscriminately in said sockets and shifted from socket

to socket and each die is held against relative rotation in the socket in which it is positioned, and a cover of a length no greater than said body frictionally engaged with said body and overlying said one side thereof for normally retaining said dies in said sockets, said cover being movable relative to said body to facilitate access to said dies and sockets and shifting of said dies from socket to socket, whereby said body may be employed as a single arm wrench of variable length and as a double arm wrench in applying any selected one of said dies to a work piece, said cover having openings aligned respectively with said sockets in the normal position of said cover relative to the body.

3,004,271

TAPPING TOOL SPINDLE ADAPTED FOR SUPPORT IN SPACED JOURNALS

August R. Hayes, Rock Island, Ill., assignor to Moline Tool Company, Moline, Ill., a corporation of Illinois
Continuation of application Ser. No. 808,991, Apr. 27, 1959. This application Feb. 14, 1961, Ser. No. 90,159
5 Claims. (Cl. 10-129)

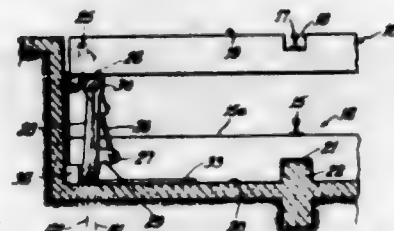


1. A tapping tool assembly adapted for mounting in two rigidly joined and spaced-apart walls disposed between a drive mechanism and material to be tapped, said walls being characterized by having a pair of aligned openings, said tapping tool assembly comprising: an elongated rigid casing extending through the openings and supported by the walls and having means thereon for preventing rotational and axial movement, said casing having an inner end adjacent the drive mechanism and an outer end adjacent the material; a first journal in the casing adjacent the inner end; a drive member projecting into and journaled in said first journal so as to normally extend through at least one of the walls when the assembly is mounted thereon, said member having an end outside of the casing adapted for an articulate connection to the drive mechanism to effect rotation thereof and an end within the casing; means fixing the drive member against axial movement relative to the casing; a second journal adjacent the outer end of the casing, an elongated spindle journaled in said second journal and having an end portion within the casing in telescoping and driving relation with the end of the drive member for effecting rotation of the member and spindle in unison, said casing and spindle having radially spaced adjacent portions; a radial element having axial surfaces disposed in the space between said adjacent portions, the radial element being threaded on one of said axial surfaces and having axial guide means on the other of said axial surfaces, one of said adjacent portions being threaded to accommodate the threaded surface of the radial element, the other of said adjacent portions having means accommodating said axial guide means whereby said radial element may move axially relative to that adjacent portion; means biasing the radial element axially toward the outer end of the casing; and tool adapting means on the outer end portion of the spindle for attaching a tap thereto.

3,004,272

LIFT MECHANISM OR THE LIKE

Jesse E. Clarke, Hinsdale, Ill., assignor to Autoquip Corporation, Chicago, Ill., a corporation of Illinois
Filed June 10, 1959, Ser. No. 819,288
3 Claims. (Cl. 14-42)

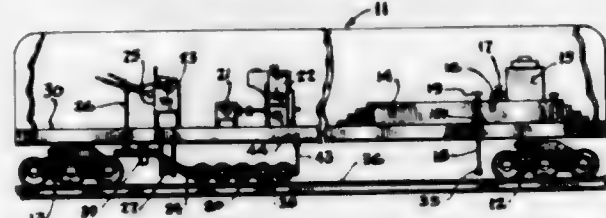


1. A lift bridge apparatus comprising: a vertically reciprocable bridge; means to guide said bridge for substantially vertical movement between an upper and a lower position; and lift mechanisms positioned at opposite ends of said bridge, each of said mechanisms including a leg pivotally attached at one end thereof to a bottom part of said bridge adjacent the end of the bridge for movement between a substantially vertical position when said bridge is in the upper position and a substantially horizontal position extending inwardly from said end of the bridge when the bridge is in the lower position, said leg having a roller rotatably attached to the other end thereof and a lug attached adjacent said other end and positioned to project upwardly from the leg when the leg is in the substantially horizontal position, a fixed track below said leg and aligned with the path of said roller during the movement of said leg between said two positions, and fluid operating means having a fluid cylinder body member and a piston rod member extending from said body member, one of said members being pivotally attached to said lug at a point which is above said leg when said leg is in the substantially horizontal position, the other of said members being pivotally attached to said bridge at a point that is approximately directly above the point at which the leg is pivotally attached to said bottom part and is at a higher elevation than is said point when said leg is in the substantially horizontal position.

3,004,273

APPARATUS FOR CLEANING RAILS

John R. Rushmer, 3809 S. Tyler, Amarillo, Tex.
Filed June 10, 1959, Ser. No. 819,361
3 Claims. (Cl. 15-55)



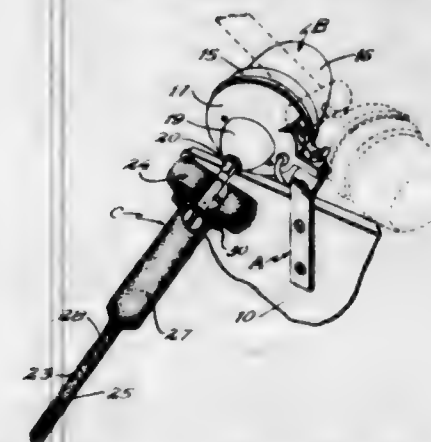
1. A rail cleaning car adapted to be connected into a train for operation at normal train operating speeds and equipped with a chemical cleaner and apparatus for applying the chemical cleaner to the running surface of both rails of a track and for removing such cleaner together with foreign deposits from the rails' running surface during the normal operation of said train, said car including conventional multiple axle front and rear freight car trucks and having means for storing said chemical cleaner, one or more rotatable cleaning brushes for each rail, mounting means for supporting said brushes in wiping contact with the rail surfaces at a point adjacent and forward of the rear truck with said brushes oriented to wipe the rails in a direction extending generally forwardly but angled somewhat to one side with respect to a vertical plane lengthwise of said rail, means for applying said

cleaner to the running surface of each rail at a point in advance of said brushes, and motor means for driving said brushes at high angular velocity while in wiping contact with said running surface of the rail to remove applied cleaner, together with any foreign deposits, from the rail surface and throw the same generally in the direction of travel of the car but to said one side of the rail.

3,004,274

MILKING MACHINE INFLATION BRUSHES

Oscar C. Lee, River Falls, Wis.
Filed May 7, 1956, Ser. No. 583,054
2 Claims. (Cl. 15-56)

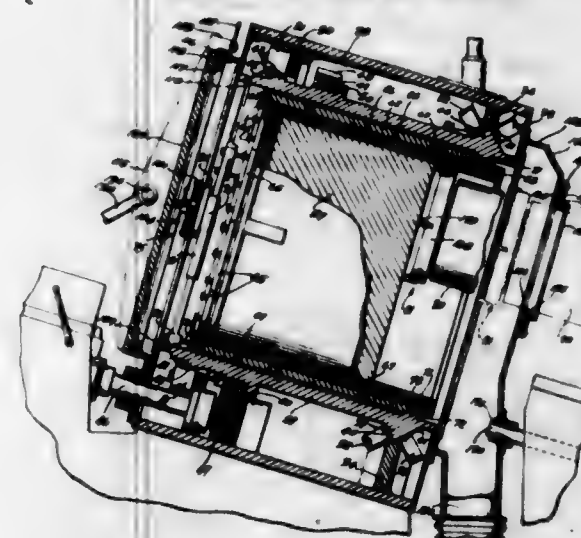


1. An apparatus for cleaning milking machine inflations including an elongated brush including a central core of spirally wound wires and bristles projecting in a generally radial direction therefrom, said elongated brush being shaped to fit into the milking machine inflations, and a transverse brush extending transversely of the elongated brush and at substantially right angles thereto, said last named brush having bristles on the side thereof toward said first named elongated brush, a motor, connecting means having an axial socket for accommodating an end of the core of the elongated brush and having a notch designed to accommodate the center portion of the transverse brush, means for holding said transverse brush clamped in said notch, and means for connecting said connecting means to said motor.

3,004,275

MACHINE TOOL FOR REMOVING MATERIAL FROM A CONTAINER

Kenneth A. Schaefer, Milwaukee, and Robert K. Sedgwick, Waterford, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Sept. 9, 1954, Ser. No. 455,043
16 Claims. (Cl. 15-104.1)



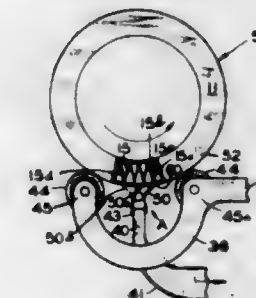
2. In a machine tool for machining a mass of material out of a cylindrical container having an axial open-

ing, a base, a drum rotatably mounted on said base and adapted to receive the container, power means operably connected to rotate said drum, locking means operable to lock the container in said drum so that the container will rotate with the drum, a cutter carrying spindle rotatably mounted on the base to revolve the cutter and supported by said base for axial movement with its axis parallel to the axis of the drum but offset therefrom, power means operably connected to rotate said spindle, and feeding means operable to effect the axial movement of said spindle to move the cutter into the container for operating upon the material contained therein while the container is being rotated to feed the material to the revolving cutter in a circular feeding movement, and an ejector mounted on said base and operably connected to eject the container from the drum when actuated, whereby after the material has been removed from the container, the ejector may be actuated to eject the container from the drum.

3,004,276

APPARATUS FOR QUICKLY CLEANING FOLDED FILTER ELEMENTS OF DRY TYPE AIR FILTERS

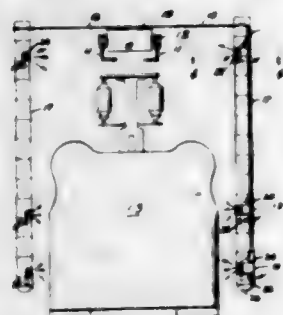
Carl C. Hoffman, 5808 N. 2nd Ave., Phoenix, Ariz.
Filed Nov. 3, 1958, Ser. No. 771,313
3 Claims. (Cl. 15-306)



1. Apparatus of the character described for quickly cleaning an air filter in the form of a cylindrical housing including concentric inner and outer perforate shell casings and a perforate filter element contained between said casings and having open folds, the elongated creases of which extend substantially parallel to the housing axis, said apparatus comprising means to support the filter housing in position for rotation about the housing axis, suction means for drawing air reversely through the filter housing and said element in a direction opposite the direction of air and dust entrance into said housing during service use of the filter, said suction means including a nozzle having a pair of elongated lips forming an elongated air and removed dust inlet parallel to said axis and adjacent the path of housing rotation for direct proximate exposure to narrow and elongated surface portions of one of said casings brought successively opposite said inlet as the housing is rotated, one of said elongated lips comprising a flexible seal projecting into the path of rotation of said one casing at the side of said inlet away from which the casing rotates, said seal being adapted to be flexed by said one casing in the direction of rotation thereof and to remain in surface sealing engagement therewith and said lips at all times being spaced apart in the direction of casing rotation by an amount at least as great as the maximum opening of successive folds whereby air drawn into the nozzle is caused to move the filter element folds rapidly and relatively away from and toward one another to loosen dust packed between the folds and near the fold creases as said folds are rotated with the housing opposite said nozzle inlet, all without damage to said filter element.

3,004,277 TRAVELING CLEANER

Geroge W. Alfred, P.O. Box 324, Mayodan, N.C.
Filed Nov. 9, 1956, Ser. No. 621,459
10 Claims. (Cl. 15-312)

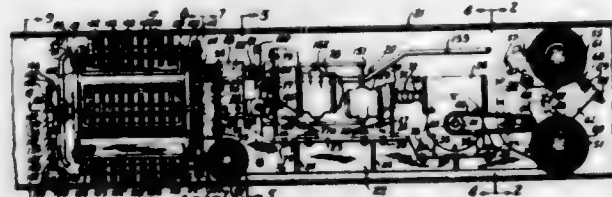


3. Apparatus for generating and discharging a current of air at machinery comprising in combination a trackway supported above the machinery, a traveling carriage mounted on the trackway, a flexible tubular casing supported at one end for free vertical suspension, said casing having an air discharge opening therein, and an impeller mounted in the flexible tubular casing for rotation to discharge a stream of air from the discharge opening, said impeller being supported intermediate the length of the casing for free movement with the casing, and a motor for rotating said impeller.

3,004,278 PIPE CLEANING APPARATUS

Richard C. Stanley, Gadsden, Ala., assignor to Stanley-Bledsoe Corporation, Tulsa, Okla., a corporation of Delaware

Filed Dec. 2, 1959, Ser. No. 856,704
8 Claims. (Cl. 15-319)



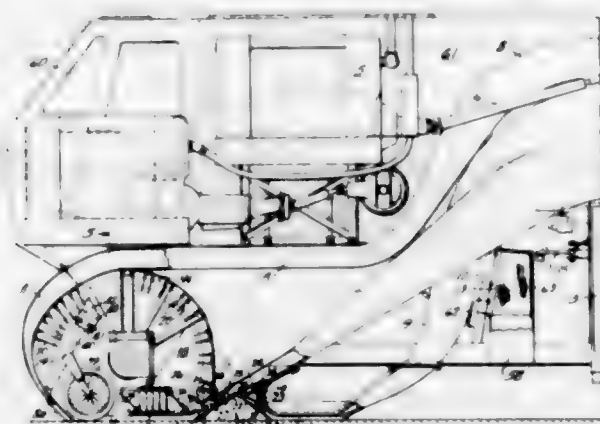
4. An apparatus for cleaning the interior of pipes comprising, in combination, a frame, power means for driving said frame through a pipe, a brush head assembly mounted on said frame, means for rotating said brush head assembly, a plurality of cylindrical brushes rotatably mounted in said brush head assembly in contact with the interior of said pipe, means for rotating said rotary brushes at a higher rate of speed than the speed of rotation of said brush head assembly, means for directing air over said brush head assembly and axially of said pipe in either direction, and automatic means actuated upon engagement with the end of the pipe for reversing said power means and thereby the direction of travel of said frame and concomitantly reversing the direction of said air flow.

3,004,279 MOBILE VACUUM CLEANING MACHINE FOR STREETS, AIRPORT RUNWAYS AND THE LIKE

Karl Ringer, 6736 Glenwood Ave., Minneapolis, Minn.
Filed Feb. 26, 1958, Ser. No. 717,650
16 Claims. (Cl. 15-340)

1. In a mobile vacuum pick-up machine, a wide front nozzle structure having a rearwardly directed, very narrow air discharge, a front nozzle approach communicating with said air discharge and defined at least partially between ground and a medium disposed transversely of the machine in very close relation to ground and extend-

ing generally horizontally parallel with ground, said medium being locally bodily yieldable upwardly throughout substantially the length thereof to over-ride relatively large, fixed and movable obstructions and a suc-

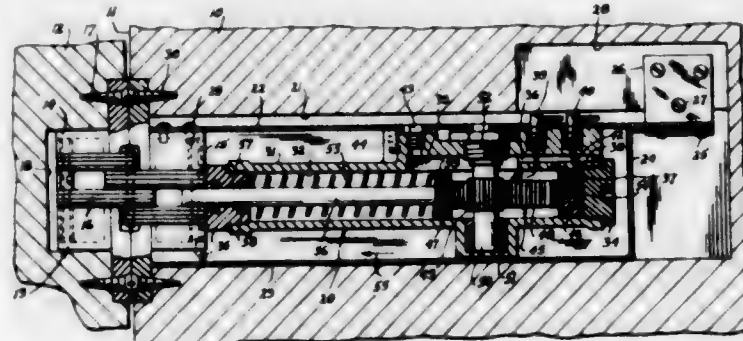


tion duct disposed rearwardly of said approach and also extending transversely of the machine, and declined at an acute angle to ground and to said front nozzle approach.

3,004,280 SELF-CLOSING CONCEALED HINGE

Joseph P. Stein, 2034 1/2 E. Chevy Chase Drive, Glendale, Calif.

Filed June 14, 1960, Ser. No. 35,991
3 Claims. (Cl. 16-54)



1. For use with a concealed door hinge, a concealed door closing and checking device comprising an elongated housing formed with a cylinder therein and with a fluid chamber intermediate the ends of said cylinder, a plunger reciprocable in one end portion of said cylinder and including first and second coaxial pistons secured together in axially spaced relation, the first piston and said housing at said one end portion of the cylinder being provided with fluid passage means communicating with said fluid chamber, a compression spring provided in the other end portion of said cylinder in abutment with the second piston of said plunger, a stem extending through said spring and connected at one end thereof to said second piston, the other end portion of said stem projecting outwardly from said housing and being operatively connected to said door hinge, said second piston having a fluid passage, and a check valve provided in said fluid passage.

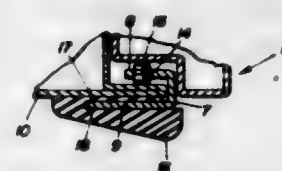
3,004,281 VEHICLE DOOR BUMPER

James D. Gautier, Jr., El Paso, Tex.
(P.O. Box 633, Kreole, Miss.)

Filed Sept. 10, 1958, Ser. No. 760,141
3 Claims. (Cl. 16-86)

1. A bumper for a hinged vehicle door of the type including a flange on the free end thereof, said bumper comprising a generally U-shaped, rigid metallic clamp adapted to straddle the flange, said clamp comprising a straight inner leg having a threaded opening therein

and a relatively long, straight outer leg, an elongated, resilient, longitudinally beveled pad having a rabbet in one end portion and further having a straight socket extending longitudinally thereto from said rabbet receiving said long leg for removably mounting said pad



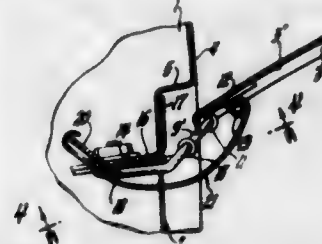
on the clamp, said rabbet providing a resilient pull tab to facilitate mounting the pad on the clamp, and a set-screw threadably mounted in the opening and engageable with the flange for removably securing the clamp in position thereon and for frictionally securing the removable pad on said clamp.

3,004,282 SPRING COUNTERBALANCE HINGE

Edward MacCallum, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 10, 1960, Ser. No. 48,683

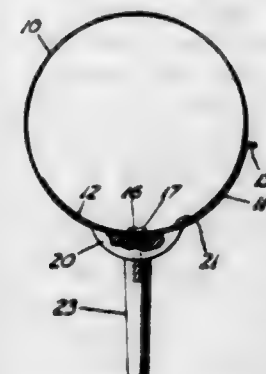
7 Claims. (Cl. 16-163)



1. In a hinge construction, two relatively movable members, a rocker having a pivotal connection adjacent one of its ends to one of the members and a pivotal connection intermediate its ends to the other of the members, and means interconnecting the members and operative upon the rocker in response to relative movement of the members in one direction about said first named connection to effect pivotal movement of the rocker relative to said other member and consequent relative movement of the members about said second named connection.

3,004,283 MOLD FOR FOOD PATTIES

Harold J. Vanstrom, P.O. Box 111, Bemus Point, N.Y.
Filed Mar. 31, 1959, Ser. No. 803,192
4 Claims. (Cl. 17-32)



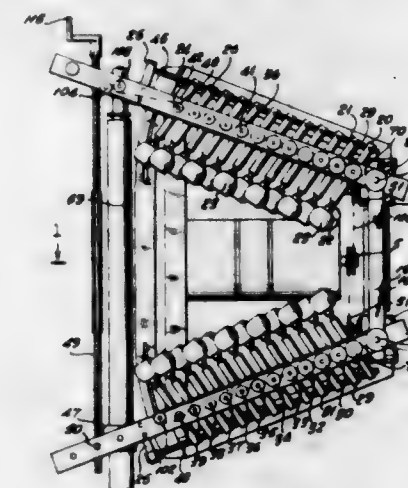
1. A device for forming food patties comprising a ring member and a handle member, said ring member comprising a relatively thin flat strip of resilient material in generally arcuate form with its ends overlapping to form a ring, one of said overlapping ends having an aperture and the other of said ends having a longitudinal slot, a screw disposed with its head within said ring and its

shank projecting radially outwardly through said aperture and said slot, said handle member having internal threads for engagement with said screw shank to clamp the overlapping ends of said strip selectively in various relative overlapping positions to adjust the effective diameter of said ring.

3,004,284 APPARATUS FOR STRETCHING PLASTIC MATERIAL

Anthony P. Limbach, New Brunswick, N.J., assignor to Union Carbide Corporation, a corporation of New York

Filed Oct. 23, 1958, Ser. No. 769,198
10 Claims. (Cl. 18-1)



1. In an apparatus for stretching flat plastic material, edge-engaging means for progressing and stretching said material comprising two series of angularly-adjustable, counter rotating, convex, curvilinear surfaces, each of said surfaces in each of said series positioned to feed an edge of the plastic material behind the center of each succeeding surface, said surfaces being in non-contacting relationship with the center of successive surfaces in each of said series lying alternatively above and below the horizontal plane defined by said plastic material.

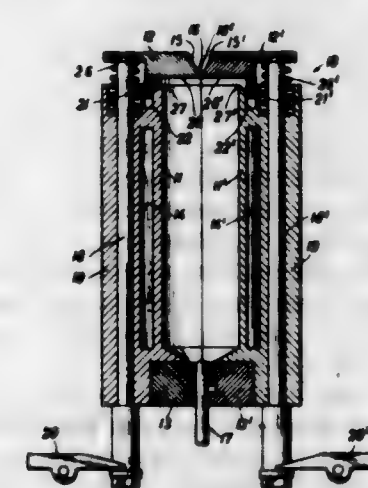
3,004,285 HOLLOW PLASTIC ARTICLES AND THEIR MANUFACTURE

Norbert Hagen, Siegburg, Rhineland, Germany, assignor to Reinhold Hagen, Hangelar über Siegburg, Rhineland, Germany

Filed May 18, 1959, Ser. No. 814,088

Claims priority, application Germany July 26, 1958

26 Claims. (Cl. 18-5)



6. Apparatus for the manufacture of hollow plastic articles by blowing, comprising a sectional mold having, when closed, at least a single composite cavity conform-

ing in shape to an intermediate product, the cavity having at least a single dilated portion and thus yielding an intermediate product having also a dilated portion, the cavity being closed except for a single opening, the mold including at least a single pair of sections and at least a single part, said sections being mounted to be moved horizontally toward and from each other, said sections and part being mounted to be relatively movable toward and from each other at least in vertical directions and being adapted to form from the initial plastic material used, on closing the mold, at least a single embryo or inflatable product within the mold, a blow pipe passing, with the mold in closed condition, through said opening to admit an inflating medium to expand the inflatable product to said intermediate product, means to impart said relative vertical reciprocation of the mold sections and mold part, the mold sections and mold part being shaped to cut, on moving toward each other, portions out of the intermediate product in the region of the dilated portion thereof, and thereby to form the final article.

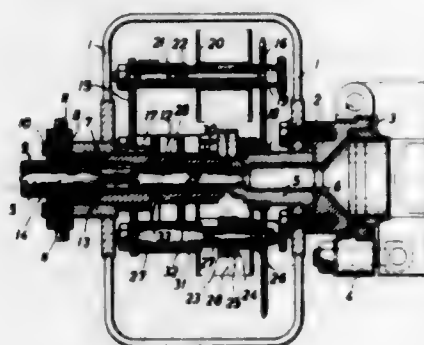
3,004,286

PROCESS AND APPARATUS FOR MANUFACTURING REINFORCED PLASTIC TUBES

Heinrich Klein, Bonn, Germany, assignor to Firma Eschweiler Bergwerks-Verein, Kreis Aachen, Germany, a firm

Filed Oct. 15, 1958, Ser. No. 768,524

Claims priority, application Germany Oct. 16, 1957
18 Claims. (Cl. 18-13)

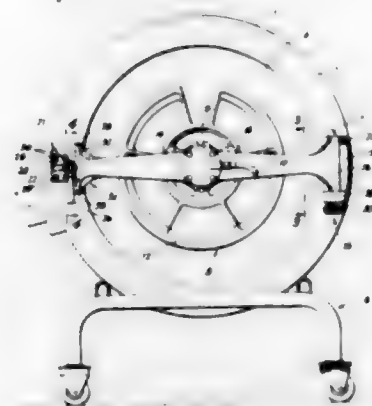


6. In an apparatus for manufacturing reinforced plastic tubes, in combination, an extruder outlet through which plastic material flows from an extruder; an elongated hollow tube fixed fluid-tightly to and extending from said outlet to receive plastic material therefrom so that plastic material flows from the extruder outlet along the interior of said tube, the latter having an end distant from said outlet; an elongated solid bar fixed to said end of said tube and forming a continuation thereof, said tube being formed in a wall portion thereof adjacent to said bar with cutouts through which the plastic material flows from the interior of said tube; a sleeve surrounding and spaced from said bar to define with the latter an elongated annular passage, said sleeve extending rearwardly from said bar along at least said wall portion of said tube and surrounding said wall portion while being spaced therefrom to form with said wall portion a continuation of said annular passage; and combined closure and feeding means cooperating with said tube and sleeve for at least partially closing said annular passage adjacent the rear end of said wall portion of said tube and for feeding a reinforcing material into said passage, whereby the plastic material in said tube will flow through the cutouts of said wall portion thereof into said annular passage and forwardly along the same while having the reinforcing material embedded therein, said annular passage being open at its front end so that a reinforced plastic tube issues from said front end.

3,004,287 TREAD CENTERING MECHANISM FOR TIRE RETREADING MOLDS

Ernst Roesch, Lodi, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California

Filed Apr. 1, 1958, Ser. No. 725,540
3 Claims. (Cl. 18-18)

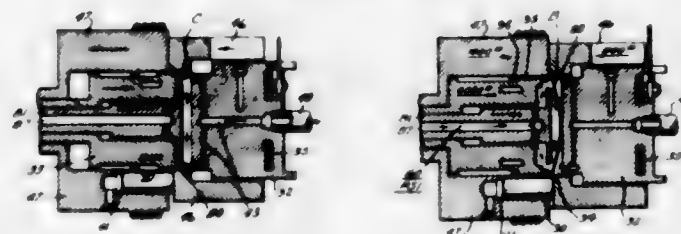


1. In the pressure unit of a horizontal-axis tire mold, there being a single centrally disposed vertical-axis hinge on one side of the unit connecting the same to the adjacent side skirt of the mold, the unit including an arm projecting in opposition to the hinge and overlapping the skirt on the corresponding side of the mold, a device releasably latching the outer end of the arm to the skirt, and means rigid with said arm bearing, when said arm is latched, in arm-stabilizing relation against the skirt at points below and above said latching device.

3,004,288 METHOD AND APPARATUS FOR SHAPING PLASTIC SHEET MATERIAL

Edward Boyd Gardner, Bloomfield, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Filed Oct. 19, 1955, Ser. No. 541,355
11 Claims. (Cl. 18-19)



5. In molding apparatus for shaping articles from thermoplastic sheet material, a first press platten member having a mold portion thereon, a second press platten member having means for heating a surface thereof to soften thermoplastic material engaged therewith, said second press platten member being disposed opposite said mold portion of said first platten member, a first clamping ring member mounted on said first platten member for movement independent of said first platten member, a second clamping ring member operably mounted on said second platten member for movement independent of said second platten member and said first clamping ring member, actuating means for said ring members to move said ring members independent of said platten member into gripping engagement with the perimeter of sheet material to be molded to retain the material intermediate said press platten members, passage forming means in one of said first members for introduction of fluid pressure to form the sheet material in domed shaped extending toward the heated surface of said second platten member, said actuating means being further operable to

move said ring members independent of said platten members and while gripping the sheet material to carry the domed shape sheet material into progressive engagement with the heated surface of said second platten member to soften the material, and passage forming means in one of said second members for introduction of fluid pressure to blow mold the softened sheet material into conformity with said mold portion on said first platten member.

3,004,289

APPARATUS FOR THE CONTINUOUS MOULDING OF THERMOPLASTIC MATERIALS

Günther Mimbach, Munich, Germany, assignor to Firma Alkett Maschinenbau G.m.b.H., Berlin-Borsigwalde, Germany

Filed Oct. 2, 1959, Ser. No. 843,998
12 Claims. (Cl. 18-19)



1. Apparatus for the continuous molding of thermoplastic materials, comprising a rotating cylinder having a plurality of apertures therein and connected to a vacuum plant and to support a pattern against which a plastic sheet to be moulded is urged by the vacuum induced suction applied to a part of the periphery of said cylinder, means to heat the plastic sheet within the neighborhood of the pattern to the moulding temperature, means to cool the material and pattern after moulding has been completed, said cylinder being hollow, a drum in the hollow of the cylinder and which is of smaller diameter than the cylinder, means to cause rotation of the drum by frictional engagement with the outer cylinder, and an elastic medium partially filling the clearance between the cylinder and the drum to keep the suction apertures in the outer cylinder closed which are not enveloped by the plastic sheet.

3,004,290

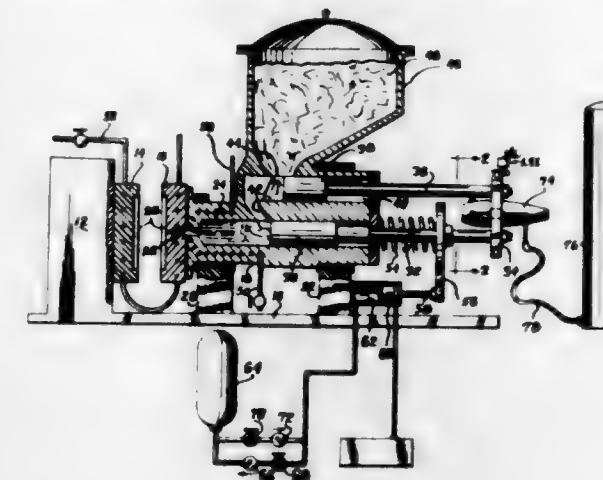
APPARATUS FOR MOLDING PLASTIC MATERIALS

Harry A. Tomlin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Filed Apr. 30, 1956, Ser. No. 581,720
5 Claims. (Cl. 18-30)

1. In a molding press: a press frame, a stationary mold half mounted in said frame, an injection cylinder slidable in said frame, a movable mold half mounted on the discharge end of said cylinder adapted for engaging such stationary mold half and defining a mold cavity, a plunger reciprocable in said cylinder to displace molding material therefrom into said mold cavity; means for heating the cylinder to soften the material therein, a hopper mounted on the cylinder and feed means operable in response to reciprocation of the said plunger in the cylinder for feeding molding material from said hopper to said cylinder, spring means acting between said plunger and cylinder to resist advancing movement of the plunger in the cylinder, fluid operable means for urging said plunger in its retracting direction, combustion-operated thrust generating

means connected with said plunger energizable for driving the plunger in its advancing direction and also for charging said fluid operable means, said fluid operable means



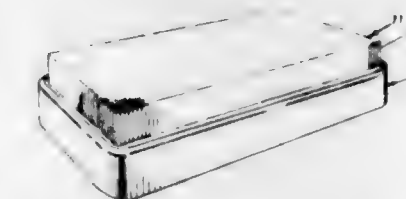
and said spring means being operable for returning said plunger and said cylinder to retracted position upon de-energization of said thrust generating means.

3,004,291

APPARATUS FOR FORMING BRUSHES

Robert Dietrich Schad, Toronto, Ontario, Canada, assignor to Eric Dent and Joseph Vallis, both of Toronto, Ontario, Canada

Filed Jan. 14, 1958, Ser. No. 708,952
3 Claims. (Cl. 18-42)



1. In a brush molding apparatus, in combination, a series of grooved plates located in a row parallel to each other with portions spaced from each other, and said spaced portions each being formed in opposed side faces with parallel grooves extending from a side edge of each grooved plate; a series of flat plates respectively alternating with said grooved plates and located against said portions thereof extending across said grooves, said flat plates having flat faces extending across said grooves to form with the latter bristle bores in which bristles are molded; a backing mold member spaced from the edges of said grooved plates from which said grooves thereof extend but located adjacent said edges; a pair of spaced carrier plates respectively carrying said flat plates and said backing mold; and an intermediate plate carrying said grooved plates, said pair of spaced plates and said intermediate plate all being movable toward and away from each other for opening and closing a mold of which they form a part, the movement of said flat plates from said grooved plates uncovering part of the bristles located in said grooves to facilitate the removal of the molded article from the mold.

3,004,292

EXTRUSION OF SILICA-ALUMINA HYDROGEL

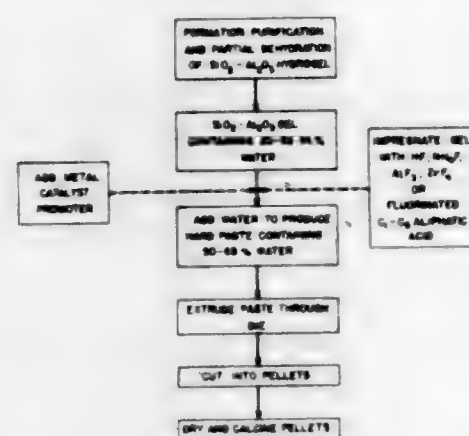
Hills O. Folkins and Kenneth E. Lucas, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Nov. 19, 1958, Ser. No. 774,916

6 Claims. (Cl. 18-47.5)

1. A method of preparing an extruded catalyst support having high isomerization activity from a silica-alumina

hydrogel, containing 50-95% wt. silica on a dry-weight basis, and which has been dried to a water content of 20-50% wt., but never below 20% wt., which consists of adding sufficient water, not less than about 5%, containing in solution a metal promoter for the catalyst, to

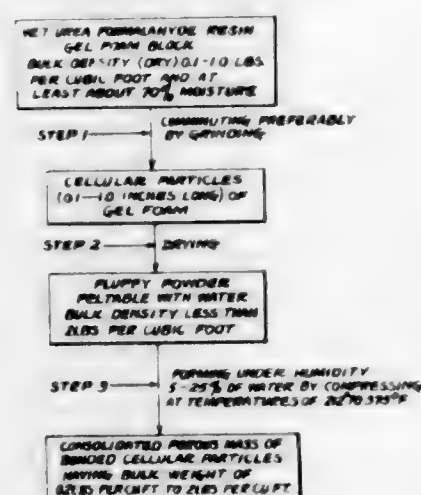


said dried hydrogel to produce a smooth paste containing 50-65% wt. water, the water content of said paste varying substantially in direct proportion to the silica content of the hydrogel, extruding said paste through a die, cutting the extrudate into pellets, and drying and calcining the pellets.

3,004,293

METHOD OF TREATING A FOAMY MATERIAL HAVING A HIGH WATER CONTENT AND PRODUCT OBTAINED THEREBY

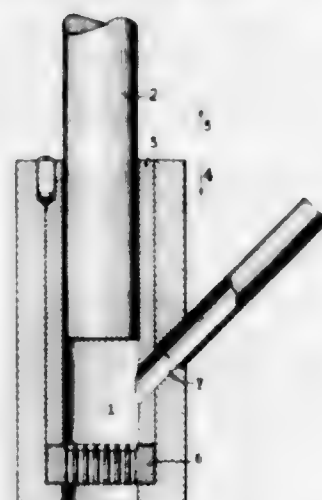
Werner H. Kreidl, 956 5th Ave., New York 21, N.Y.
Filed Sept. 15, 1959, Ser. No. 840,051
12 Claims. (Cl. 18-47.5)



1. The method of forming a pliable coherent compressed mass of cellular urea formaldehyde foam particles from the wet material in the form of a gel of density in dry form between 0.1 pound per cubic foot and 1 pound per cubic foot and containing at least 70 percent of moisture, comprising the steps of comminuting said wet material to form small particles less than 1 inch linear dimension and dry bulk weight less than 2 pounds per cubic foot, drying said particles to provide a dry fluffy granular material adapted to form a felted pliable porous mass under compression in the presence of moisture without substantially impairing the cellular structure of said particles in the cohered mass, and heating while compressing the particles to form a coherent porous article of bulk weight between 0.2 pound per cubic foot and 2 pounds per cubic foot.

3,004,294 PROCESS FOR THE MANUFACTURE OF GRANULAR PRODUCTS

Kurt Richard, Bad Soden am Taunus, and Hans-Eberhard Hildebrandt, Hattersheim am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
Filed Mar. 4, 1959, Ser. No. 797,257
Claims priority, application Germany Mar. 12, 1958
8 Claims. (Cl. 18-55)

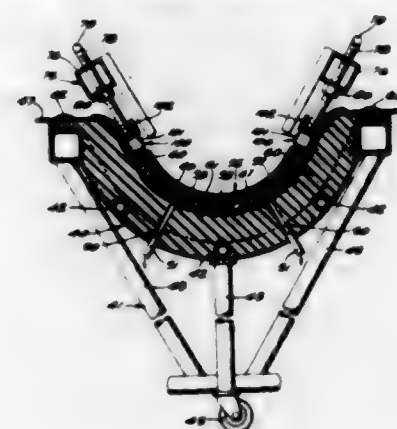


1. A process for granulating a powder-like non-metallic material which is capable of being molded by pressure to compact granular products in which the powder particles are welded together without the application of additional heat being necessary to soften the material which comprises pressing said material under a pressure of between 100 and 4000 kg./cm.² by a piston from a hollow space through a plate having a plurality of gaps, the ratio of the piston surface to the total area occupied by said gaps being between 1.2 and 2.2, the powder-like material being admitted to said hollow space by the action of said piston, the process being carried out at a temperature in the range between room temperature and a temperature below the softening point of the material.

3,004,295

METHOD FOR FORMING SHEET MATERIAL

Paul H. Bottoms, Hollywood, John G. Stansbury, La Canada, and Robert J. Clapp, Downey, Calif., assignors to Swedlow Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 26, 1955, Ser. No. 536,350
9 Claims. (Cl. 18-56)



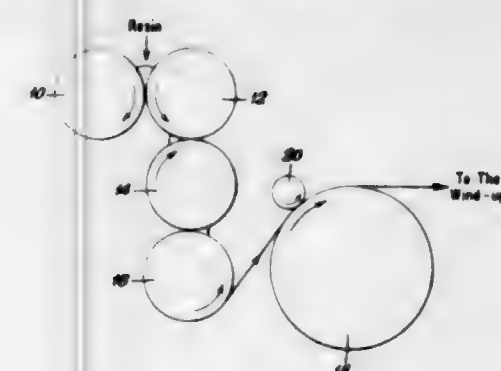
1. A method of forming a sheet of transparent cross-linked plastic into a curved article, which comprises heating the sheet to the forming temperature, applying said sheet over a female die having a forming surface contoured to the shape of the curved article, enclosing said sheet and said die surface in a thin flexible film,

evacuating a portion of the air from the space between said film and said die surface whereby said sheet is partially formed, applying pressure to at least two opposed edges of said sheet to force the sheet into contact with said die surface, and maintaining said evacuated condition and said edge pressure until said sheet has cooled to the set condition.

3,004,296

PROCESS FOR PREPARING POLY (ETHYLENE OXIDE) FILM BY CALENDERING

Robert H. Saedeker, New Brunswick, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 30, 1959, Ser. No. 849,903
4 Claims. (Cl. 18-57)

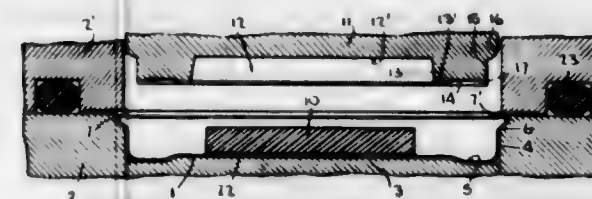


1. The method for producing poly(ethylene oxide) film which comprises fluxing an ethylene oxide homopolymer resin having a solution viscosity in the range of from about 1,000 to about 40,000 centipoises, calendering said fluxed resin by passing it successively through the nips between each adjacent pair of a series of at least three counter-rotating surfacing rolls while maintaining the last roll and the penultimate roll at a temperature in the range of from about 70° C. to 95° C. with the proviso that said last roll has a temperature higher than said penultimate roll, and while maintaining the antepenultimate roll at a temperature from about 20° C. to about 50° C. higher than the said penultimate roll, to form a film continuum and immediately thereafter rapidly chilling said film continuum to a temperature below about 30° C.

3,004,297

METHOD FOR FORMING A GASKET

Harry E. Stover, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Aug. 12, 1958, Ser. No. 754,658
4 Claims. (Cl. 18-59)

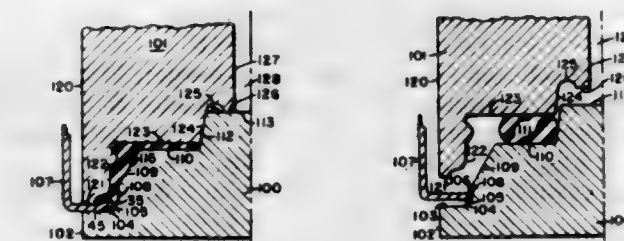


1. The method of molding a sealing gasket in a closure cap, which comprises coating the inside cover of said closure with a silicone compound, placing a gasket blank on the inside of said closure, applying pressure to compress the gasket blank and to force a portion of said gasket material along the skirt portion of the closure to form a spaced peripheral body, applying pressure to said peripheral body so that the peripheral body is attached to the gasket blank by a thin strip of gasket material and simultaneously pressing said peripheral body into a pre-

3,004,298

METHOD FOR MAKING FLUID SEALS

Robert N. Haynie, Mountain View, Calif., assignor to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Original application Feb. 11, 1957, Ser. No. 639,276.
Divided and this application Mar. 6, 1959, Ser. No. 799,834
5 Claims. (Cl. 18-59)

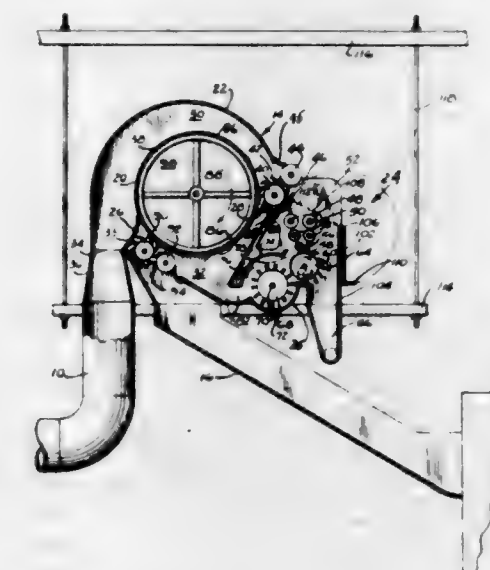


1. A method for flashless molding and simultaneous bonding of an elastomeric sealing lip for a shaft seal, to an annular metal case element having a radial portion with opposite radial faces and an axially extending peripheral edge extending between the faces, which comprises supporting said element only about the peripheral marginal portion of one radial face thereof, applying axial pressure to the opposite face of the element in a circular line radially spaced from the peripheral marginal portion to move the body of the case element relative to the marginal portion against a seat member to thereby provide a marginal flange portion bent at an obtuse angle to the other radial face, simultaneously applying elastomeric material against the exposed surface of the case element extending between the line at which the pressure is being applied and the support for the marginal portion on the other face of the case element, and bonding the elastomeric material to the case element without flash by the applied axial pressure.

3,004,299

LINT COTTON CLEANER

Joe E. Salmon, Birmingham, Ala., assignor to Continental Gin Company, Birmingham, Ala., a corporation of Delaware
Filed Sept. 11, 1956, Ser. No. 609,126
2 Claims. (Cl. 19-67)



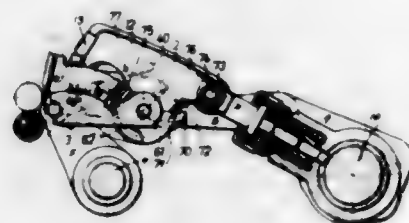
2. In combination, a rotatable drum condensing means adapted to separate lint from conveying air streams,

cleaning means, means for directing lint on to a first portion of said drum, means for removing lint from said first portion of said drum and transferring said lint to said cleaning means, means for removing lint from said cleaning means and transferring said lint to a second portion of said drum, means for removing said lint from said second portion of said drum and transferring said lint to a lint slide, and means for transferring lint from said first portion of said drum directly to said lint slide including a movably mounted lint slide movable into association with the first mentioned means for removing lint from said drum.

3,004,300

FEED ROLLER ARRANGEMENT IN A COMBING MACHINE

Werner Naegeli and Hansrich Eichenberger, Winterthur, Switzerland, assignors to Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, a corporation of Switzerland
Filed May 28, 1958, Ser. No. 738,539
Claims priority, application Switzerland June 1, 1957
9 Claims. (Cl. 19-116)

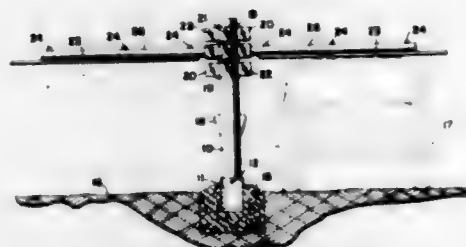


1. In a combing machine, a pair of movable nippers, actuating means connected to one of said nippers for imparting an oscillating movement thereto, said nippers being operatively interconnected for relative movement of the nippers upon movement of one of said nippers by said actuating means, a feed roller rotatably supported by one of said nippers, and drive means operatively connected to both nippers for actuation by said nippers upon a relative movement of said nippers, said drive means being operatively connected to said feed roller for rotating the latter upon relative movement of said nippers.

3,004,301

WEATHER PROTECTOR FOR AUTOMOBILE WINDSHIELD

John P. Francis, 20 Boston St., Haverhill, Mass.
Filed Dec. 1, 1958, Ser. No. 777,512
1 Claim. (Cl. 20-1.12)



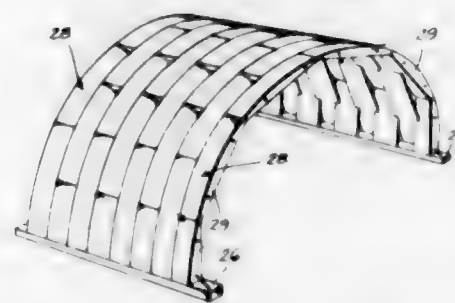
An automobile windshield weather protector adapted for erection and use in a drive-in parking area such as a drive-in theatre comprising, a central vertical supporting post, said supporting post being provided with vertically spaced cross bores, axially adjustable vertically spaced horizontal hollow supports extending through and outwardly from said vertically spaced cross bores, a pair of independently adjustable horizontally mounted supporting arms, each arm extending outwardly from only one side of the opposite side walls of said central vertical supporting post within and outwardly of the opposite ends of said axially adjustable horizontal hollow supports,

each of said horizontal supporting arms of said pair being adjustably supported freely of each other for axial and vertical height adjustment at the same or at separate levels of support, an awning adjustably supported from said horizontal supporting arm, and laterally spaced apart threaded bolt means adjustably supporting said awning to said supporting arm for vertically and laterally adjustable alignment therefrom, said awning adapted to adjustably engage the lateral contour of the roof top of an automobile in lateral rain sealing engagement or in spaced apart relationship relative thereto upon the adjustable alignment of said adjustable supporting arm and the said adjustable awning.

3,004,302

BUILDING CONSTRUCTION

Wesley W. Nightingale, Rte. 2, Box 157, Creswell, Oreg.
Filed Dec. 31, 1957, Ser. No. 706,328
6 Claims. (Cl. 20-2)



4. A building wall construction comprising a plurality of equisized and interchangeable, unitary building components arranged in parallel rows with a plural number of said building components arranged end to end in each row and the components of one row staggered with respect to the components of an adjacent row; said components supporting themselves by mutually forming in the wall construction triangular bracing structures; each of said components comprising an arching strip structure, and a connecting strip structure spanning the ends of the arching strip structure and having ends secured to the ends of the arching strip structure; said building components being positioned in the wall construction with the arching strip structures of the components on one side and the connecting strip structures of the components on the other side of the wall construction; the strip structures of laterally adjacent components on one side of said wall construction meeting smoothly with each other; the strip structures of laterally adjacent components on the other side of the wall construction extending across each other; the triangular bracing structures being formed through the crossing of the strip structures on said other side of the wall construction; and means securing together the strip structures of laterally adjacent components on said other side of the wall construction at approximately the location where they cross each other whereby they mutually support the building components.

3,004,303

DOORS FOR THE FUSELAGES OF PRESSURIZED AIRCRAFT

Maurice O. Wilmer, Woking, England, assignor to Vickers-Armstrongs (Aircraft) Limited, London, England

Filed June 29, 1959, Ser. No. 823,601
Claims priority, application Great Britain July 4, 1958
6 Claims. (Cl. 20-16)

1. In the fuselage or body of a pressurized aircraft, the combination of a door and a door frame each of which is provided about its periphery with a set of spaced laterally extending lugs, the arrangement being such that when the door is closed and the fuselage is pressurized the lugs

on the door abut by their outward faces against the inward faces of the lugs on the door frame, said frame lugs being disposed relatively to said door lugs when the door is closed to positively resist outward pressure on the door, and comprising means operable from within the fuselage whereby, after decompression thereof, the door can be raised with respect to the frame to disengage the abutting faces of the opposed lugs, the door lugs being moved to



positions intermediate the frame lugs, permitting the door to be opened, said door-raising means comprising feet slidably mounted in the base of the door and a handle connected to said feet for projecting the same downwardly to bear against the sill of the frame, and, by downward pressure thereagainst by continued movement of the handle, to raise the door into the position in which the sets of lugs are disengaged.

3,004,304

ROTATABLE AND TILTABLE WINDOW STRUCTURES

Wilhelm Frank, Oberachsen, Kreis Boblingen, Württemberg, Germany
Filed May 20, 1959, Ser. No. 814,637
15 Claims. (Cl. 20-53)



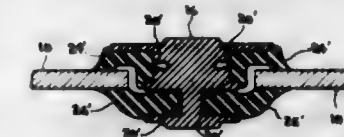
1. In a window assembly having a window frame in fixed disposition and a window member mounted on said frame for movement selectively about vertical and horizontal axes, respectively, an actuating lever mounted at one side of said assembly, a locking lever mounted at the other side of said assembly, means for locking said window member in closed condition on said frame including a locking bar operable by said locking lever to open and close said locking means, reciprocable means operatively interconnecting said locking bar and said actuating lever to transmit the motion of said actuating lever to said locking bar for operating the latter, said locking lever and said locking bar being operable independently of said reciprocable means to superpose the motions resulting from operation of said levers, a first releasable pivot means constituting said vertical axis at said one side of said assembly, and a second releasable pivot means constituting said horizontal axis at the bottom of said assembly, said pivot means being operable in opposite senses, respectively, under the control of said reciprocable means.

3,004,305

RESILIENT SASH MOUNTING FOR VEHICLES

George H. Goodemote, Syracuse, and Daniel E. Axe, Fayetteville, N.Y., assignors to The O. M. Edwards Company, Inc., Syracuse, N.Y., a corporation of New York

Filed Feb. 20, 1959, Ser. No. 794,566
2 Claims. (Cl. 20-56.4)

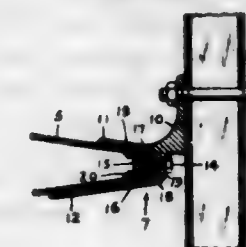


1. A sash assembly for a vehicle window opening bordered by vehicle body panels comprising a continuous, rigid frame having inside and outside edges and an interior and exterior side, said frame being formed with a pair of inwardly facing and a pair of outwardly facing channels at the inside and outside edges respectively of the frame, sheet glass, a first pair of resilient compressible retaining strips respectively mounted in the pair of channels at the inside edge of said frame to support said glass therein and provide a weather seal between the glass and frame, said pair of retaining strips holding said glass in spaced relation to said frame whereby the glass is resiliently supported therein, and a second pair of resilient compressible retaining strips respectively mounted in the pair of channels at the outside edge of said frame and engaging the marginal edges of the body panels bordering said window opening to support the frame therein and provide a weather seal between the frame and panels, said second pair of retaining strips holding said frame in spaced relation to said panels whereby the frame is substantially resiliently supported in the window opening, said frame including a portion on its exterior side which overlaps the marginal edges of the body panels on the exterior of the vehicle when the frame is mounted in said window opening, one of said second pair of retaining strips being positioned between said overlapping frame portion and the body panels and normally holding the portion in spaced relation to the panels whereby external pressure on said sash assembly forces the overlapping portion into closer, tighter relation with the panels by compressing said retaining strip, said frame also including a portion on its interior side which overlaps the marginal edges of said sheet glass on the interior of said vehicle, one of said first pair of retaining strips being positioned between said glass and overlapping frame portion and normally holding the glass in spaced relation to the portion whereby external pressure on said sash assembly forces the glass into tighter, closer relation with the overlapping portion by compressing said retaining strip.

3,004,306

BRACKET ASSEMBLY FOR AIRFOIL TYPE LOUVER BLADE

Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Aug. 11, 1959, Ser. No. 833,063
5 Claims. (Cl. 20-63)



1. A mounting assembly for a hollow airfoil shaped louver blade having opposite side surfaces joined by longi-

itudinally-extending leading and trailing edges, comprising a bracket having diverging lips adapted to receive one of said edges of said louver blade and engage portions of said side surfaces, and a foot on and extending from said bracket for mounting said bracket on a surface, a bar insertable within the louver blade adjacent to the edge received by said lips and means extending through said bracket and said edge and into said bar for securing said blade to said bracket.

3,004,307 COOLING TOWER SCREEN AND BRACKETS THEREFOR

Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Aug. 11, 1959, Ser. No. 833,064
3 Claims. (Cl. 20-63)



1. A cooling tower screen comprising a frame, a bracket mounted on said frame, said bracket having a base, and a pair of springy legs extending outwardly from said base, laterally and outwardly extending flanges at the free ends of said legs, an elongated blade having substantially parallel longitudinally extending rib portions on one side thereof parallel to and spaced inwardly from the longitudinal edges of the blade, said parallel ribs containing grooves facing toward each other, said bracket flanges being releasably engaged in the grooves to secure said blade to said frame, a detachable wedge for each leg, means on said blade adjacent to said ribs for receiving said detachable wedges and supporting them for engagement with said legs to hold said flanges in said grooves.

3,004,308 THRESHOLD STRUCTURE

Conrad T. Young, 522 S. Main St., Beaver Dam, Ky.
Filed Dec. 10, 1957, Ser. No. 701,799
5 Claims. (Cl. 20-64)



2. A threshold and sealing strip combination of the character described, comprising a one-piece threshold member of solid block construction having spaced generally parallel grooves provided with straight sides and a substantially flat bottom therebetween, and a sealing strip having a generally semi-circular portion extending upwardly from the upper surface of the threshold member, and leg portions depending downwardly from the semi-circular portion and substantially entirely received within the grooves with the lower ends of the leg portions normally in contact with the flat bottom in said grooves, said leg portions having barbs extending upwardly from the inner and outer side walls thereof in contact with the sides of the grooves to resist upward movement of the sealing strip from said grooves, said sealing strip further

including wing portions integral with the semi-circular portion and extending outwardly from the point of juncture of the semi-circular portion with the leg portions in generally perpendicular relation to said leg portions and lying against the upper surface of the threshold member to prevent the entrance of moisture into the grooves, the depth of the grooves closely approximating the height of the semi-circular portion from the threshold.

3,004,309 MAGNETIC CLOSURE SEAL

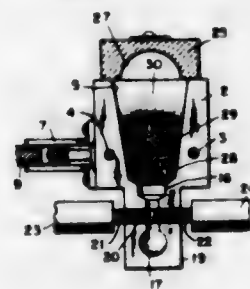
Paul C. Korodi, Columbus, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1959, Ser. No. 810,008
2 Claims. (Cl. 20-69)



1. Means for effecting a seal between the inner edge surfaces of a pair of relatively movable doors adapted to close an unobstructed access opening in a wall of a cabinet, said means including gaskets respectively mounted on said inner edge surfaces and each including an elongated magnetic portion, at least one of said magnetic portions being movable relative its door into contact with the magnetic portion of the other of said gaskets as the doors are closed, the plane of contact being generally parallel to the direction of relative movement of said edge surfaces, each magnetic portion including an elongated pair of opposite magnetic poles arranged one after the other in the direction in which the door carrying them is movable, said poles of one magnetic portion being positioned in close, mutually facing relationship with respective opposite poles of the other of said magnetic portions in the closed position of the doors, whereby said magnetic portions are attracted to each other in the closed position of the doors and repelled from each other to reduce sliding friction therebetween as like poles approach each other during the opening or closing movement of one door relative to the other.

3,004,310 WELDING APPARATUS

Donald L. Burke, East Cleveland, Ohio, assignor to Erico Products, Inc., Cleveland, Ohio, a corporation of Ohio
Original application Jan. 16, 1953, Ser. No. 331,634.
Divided and this application Apr. 9, 1954, Ser. No. 422,032
4 Claims. (Cl. 22-116)

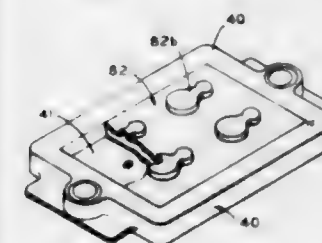


1. Apparatus for cast welding together the opposed ends of stranded conductor cables and the like comprising two graphite blocks adapted to have flat lateral surfaces closely juxtaposed, supporting frame members secured to said

respective blocks and pivotally connected for swinging movement of said blocks toward and away from each other, handles connected to said frame members for thus pivotally swinging said frame members, toggle means interconnecting said handles operative to lock the same with said blocks in close engagement, cooperative guide means on said blocks adapted precisely to position the latter during opening and closing movement, said blocks having their opposed faces hollowed out to form a downwardly tapering vertically split crucible opening to the top of said blocks, a sprue passage of less diameter than the bottom of said crucible extending vertically downwardly from such bottom and terminating in a spherical cavity, and a horizontal transverse passage of generally uniform cross-section extending through the block assembly and intersecting said vertical sprue passage, the line of division between said blocks extending centrally through each such passage and cavity, and a graphite cover for said crucible hinged to one of said blocks and hollowed out to open to the exterior laterally of the block assembly.

3,004,311 METHOD OF MAKING AND MOUNTING FOUNDRY PATTERNS

Gordon E. Swoeyenbos, Decatur, Ill., and Gordon W. Johnson, Granville, Ohio, assignors to Malleable Research and Development Foundation, Granville, Ohio, a corporation of Ohio
Filed Jan. 21, 1959, Ser. No. 788,166
5 Claims. (Cl. 22-191)



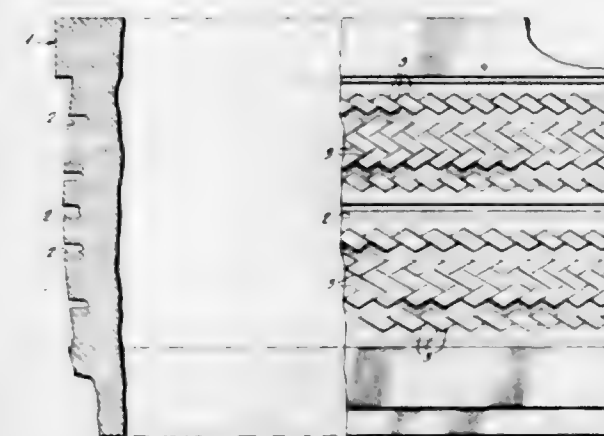
1. A process for making a production pattern from a master pattern which comprises forming cope and drag negative sections with mating faces from the master pattern, enclosing one of said negative sections within a removable frame of predetermined size and outline in engagement with a locating surface with the mating surface of the negative section in contact with the inner wall of a material-receiving cavity formed by said frame in cooperation with said surface, casting back-up material in the frame cavity around said section to form a first negative unit with a mating face at said inner wall of the cavity and corresponding with the mating face of the first section and with a frame-locating edge formed by said frame, positioning the other of said negative sections within a removable frame contacting said locating edge of said first negative unit and forming a cavity outwardly of the first unit with the mating face of the second negative section in registration with that of the first section at said mating face of the first negative unit, casting back-up material in said last-named cavity around the second negative section to form a second negative unit registering with the first negative unit and having a mating face in contact with the mating face of the first unit and a frame-locating edge formed by said frame which is in alignment with the frame locating edge on said first negative unit, enclosing each of said negative units separately within a similar removable frame contacting the frame-locating edge thereof with the mating face of the negative unit exposed and with the frame forming a cavity outwardly thereof, and casting pattern-forming material in said last-named frame cavity in contact with the said mating face of said negative unit to form the positive

pattern with a mating face formed by said negative unit and a locating edge formed by said frame, and removing the frame to expose the locating edge of said positive pattern.

3,004,312
PROCESS OF SHELL MOLDING
Charles F. Froberger, Oak Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed June 25, 1953, Ser. No. 364,202
4 Claims. (Cl. 22-193)

1. A process for forming a smooth-surfaced shell mold without building up a residue layer on a pattern, said process comprising thoroughly mixing a heated comminuted refractory filler with a mold binder comprising novolak and a thermoplastic resinous material obtained by extracting a resinous wood with a coal tar hydrocarbon, removing said hydrocarbon by evaporation, leaving a residue comprising wood rosin and thermoplastic resinous material, and extracting the rosin from said residue with a petroleum hydrocarbon, permitting said sand to cool to thereby cause a coating of the novolak and thermoplastic resinous material to be formed on a substantial portion of the particles of refractory filler, thereafter mixing a small but effective amount of a binder curing agent with the coated sand particles, placing said coated sand particles into contact with a metallic pattern heated to a temperature between 250° F. and 800° F. for at least ten seconds, and thereafter curing the resultant shell mold while in contact with said pattern.

3,004,313
METHOD AND MEANS FOR MOLDING
CORE MEMBERS
Clement O. Dennis and William C. Shaver, Macon, Ga., assignors, by mesne assignments, to Poplar Foundries, Inc., Macon, Ga., a corporation of Georgia
Filed Dec. 24, 1958, Ser. No. 784,415
3 Claims. (Cl. 22-194)

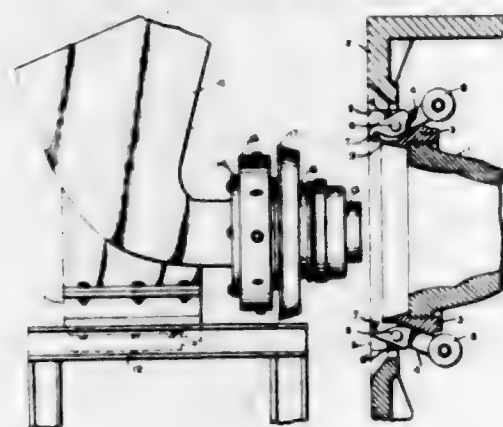


1. A method of making plaster cores for casting circular retreading matrices comprising, making a hard plaster full circle master pattern of the desired tread design with sipe blades imbedded in the design the depth of slits to appear in the final tire design and projecting above the surface of the master, placing the master in a mold box and pouring a rubber negative, slitting the negative transversely of the tread design and stripping the negative from the master, inserting sipe blades in slits formed in the negative by the sipe blades of the master, placing the negative around the inside of the outer wall of an annular core box, clamping the negative against longitudinal and transverse movement relative to the outer wall of the core box, putting a thin coating of plaster on the negative, rotating the core box, and pouring plaster in the core box to fill the core box while the core box is being rotated.

3,004,314

CENTRIFUGAL CASTING PROCESS

John H. Beyer, Beverly, N.J., assignor to United States Pipe and Foundry Company, Birmingham, Ala., a corporation of New Jersey
Filed Sept. 17, 1959, Ser. No. 840,638
4 Claims. (Cl. 22-200.5)

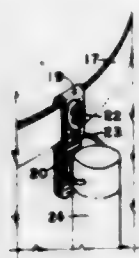


1. A process for casting pipe centrifugally in horizontal molds comprising: rotatably mounting a core about the spout of a horngate; seating said core in the mold by introducing simultaneously into the end of the mold the spout and the rotatably mounted core; rotating the mold; engaging means for securing the core in place in the end of the spinning mold; pouring molten metal into the rotating mold through the horngate; retracting the horngate spout from the spinning mold without extracting the core from the mold; continuing rotation of the mold until the metal is solidified; stopping mold rotation; disengaging said means for securing the core; and extracting the solidified pipe.

3,004,315

SNAP-ON APRONS

Joel Masare, 1525 Lowell Blvd., Denver, Colo.
Filed Dec. 8, 1958, Ser. No. 778,967
1 Claim. (Cl. 24-3)



A quick detachable fastening means for securing an apron to a trouser belt comprising: a strip of flexible material, being folded back upon itself to form a bight with a front portion and a rear portion depending from said bight; cooperating snap fastener elements mounted on the portions and acting to detachably secure the extremities of the two portions together to form a closed loop to encircle said belt; and detachable fastening means mounted on the front portion between the bight and the snap fastener elements for securing said apron thereto.

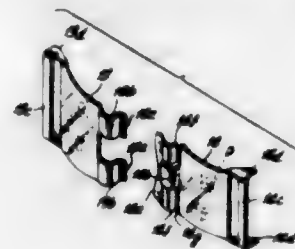
3,004,316

BUCKLE CONSTRUCTION

Christian J. Schumann, Palmdale, N.J., assignor to Essex Metal Products Company, West New York, N.J., a corporation of New Jersey
Filed Mar. 24, 1960, Ser. No. 17,392
7 Claims. (Cl. 24-75)

1. A buckle of the character described comprising a pair of members each having a centrally disposed body portion between an integral loop attachment bar and an

element of a separable male and female fastener component forming a sectionalized post extending transversely between said body portions when said members are interconnected, said male fastener component extending from the male body portion as an arcuate section of said post terminating in an end flange, said female fastener component extending from the female body portion as an

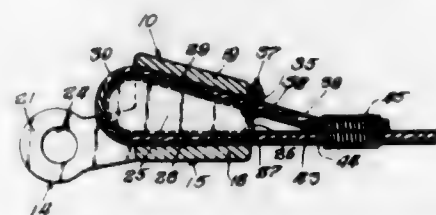


arcuate section of said post in offset alternate relation to said male arcuate section, said female arcuate section terminating in an end flange having a lateral extension carrying a wing extending toward said female body portion and terminating short thereof to form a slot located and sized for receiving said male end flange when the members are interconnected.

3,004,317

ROPE WEDGE SOCKET CONNECTOR

John W. Page, Chicago, Ill., assignor to Page Engineering Company, a corporation of Illinois
Filed June 4, 1959, Ser. No. 818,043
3 Claims. (Cl. 24-126)



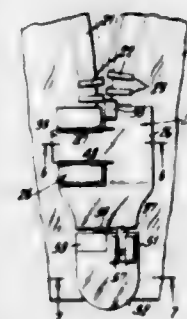
3. A wire rope wedge socket for positive fastening to a wire rope in a predetermined position, comprising: a hollow housing having an attaching eye portion at one end and a socket portion at the opposite end, said socket portion being open at its opposite ends and having a pair of opposite walls tapering toward each other and towards the end of the housing away from said eye portion; a wedge shaped to enter the socket portion and having opposite walls generally parallel to said tapered socket walls for wedging wire rope portions against said socket walls and said wedge walls when the wire rope enters the smaller socket opening and extends around the wedge to lay along the tapered socket walls and returns out through the opening from which it entered to extend a free end thereof beyond the socket portion a predetermined length, said tapered walls of said socket and wedge being arranged to direct the free end of the rope to meet the entering portion of the rope at a point spaced from the socket to permit lashing said free end and an entering rope line together at said meeting point thereby forming a triangular rope truss to prevent localized bending of the wire rope at the socket entrance during loading and unloading of the main wire rope; a U-bolt clamp integrally connected to the socket portion adjacent the outgoing end of said wire rope and having a bail portion extending inwardly of the socket portion for passing about the outgoing end of the said wire rope to clamp the socket to the wire rope at a position as determined by the length of the outgoing wire rope extending beyond the socket, said clamp holding the position of the said socket on the wire rope during wedging of the rope and wedge into the said socket as caused by

loading the wire rope; said eye portion of said socket being in longitudinal alignment with the longitudinal center line of said main rope line to avoid interference by the truss with the main line loading of the rope.

3,004,318

SLIDE FASTENER ASSEMBLY

Morris Weiser, 7 Regina Road, Farmingdale, N.Y.
Filed May 8, 1959, Ser. No. 811,917
11 Claims. (Cl. 24-205.15)



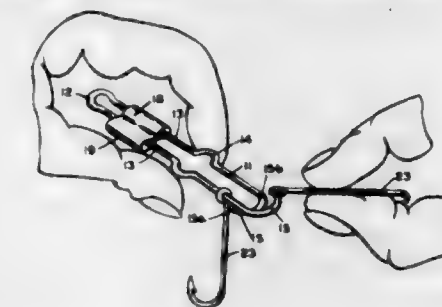
1. In a slide fastener comprising a pair of stringers each having a row of spaced fastener elements secured thereto along an edge thereof and adapted to be interfitted and interengaged with the fastener elements of the other of said stringer, said elements each including a forked end portion whereby it is clamped to said stringer in straddling position thereon, a slider for interfitting and separating said elements to close and open said slide fastener, said slider comprising a pair of separably interengageable sections, each of said sections comprising a channel-shaped portion slidably engageable over the row of fastener elements on one of said stringers, such channel-shaped portion including a pair of parallel walls, said walls connected to one another along one of their longitudinal edges by a spacing wall, and each having along its other longitudinal edge a flange facing the flange of the companion wall thereof and terminating short of the flange of said companion wall, one of said parallel walls of said channel-shaped portion having an extension at one free end thereof extending outwardly and laterally to the side of said spacing wall, said extension having a width at its point of connection to said wall not less than the combined length of a pair of said fastener elements and tapering to a width substantially equal to the combined length of a pair of interfitted fastener elements, said extension having a flange on each of its longitudinal edges facing in the direction of the flange of the wall from which it extends, each of said sections having cooperating fastening means at their channel portions adapted to separably interengage said sections when said sections are each slidably mounted on one of said stringers, with their connecting walls in juxtaposed relation and their extensions in overlying relation to one another.

3,004,319

CLIP FOR FISH HOOKS AND THE LIKE

Charles Earl Heanon, 309 W. Hillcrest Ave., New Castle, Pa.
Filed June 8, 1959, Ser. No. 818,612
2 Claims. (Cl. 24-241)

1. An improved clip for removably retaining fish hooks and the like comprising, a one-piece flexible body member having an eye-shaped back end portion and a pair of forwardly-diverging side portions formed integral with said eye-shaped back end portion, said side portions being resiliently tensioned apart by said back end portion, said side portions terminating forwardly in a pair of overlapping latching portions, said overlapping latching portions having juxtapositioned flattened surfaces, catch means slidably positioned on said side portions for lock-

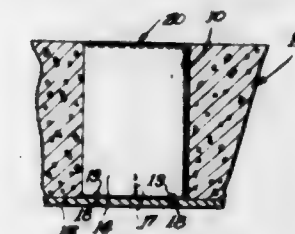


ing said latching portions in a closed position; and a pair of opposed inwardly-compressible and outwardly-offset locking means, forming a part of said diverging side portions, for engaging and retaining said catch means in a position which locks said latching portions in a closed position, and for releasing said catch means and opening said latching portions upon being compressed inwardly.

3,004,320

APPARATUS FOR FORMING HOLES

Edward L. Beckman, Chicago, Ill.
(515 Summit, Parkridge, Ill.)
Filed June 8, 1959, Ser. No. 818,942
2 Claims. (Cl. 25-128)

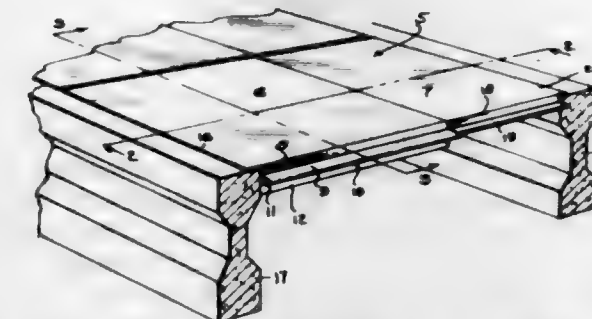


2. In apparatus for use in forming a slab of concrete with a cylindrical hole, the combination of, a form enclosing at least a part of a space to be filled with said concrete, a hollow cylindrical member having an end open and its other end closed but formed with a small aperture centered on the axis of the member, a locating pin secured in said form and projecting rigidly therefrom through said aperture so as to locate the member accurately with respect to the form, and a cover fitting into said one end of said cylindrical member to reinforce the member from collapse transaxially and to close the end to avoid entry into the member of flowable concrete poured into the form.

3,004,321

ADJUSTABLE METAL FORM

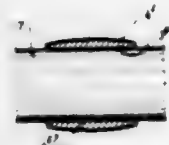
Robert A. Pulliam, 5859 S.W. 27th Ave., Miami, Fla.
Continuation of application Ser. No. 738,056, May 27, 1958. This application Apr. 22, 1960, Ser. No. 24,175
3 Claims. (Cl. 25-131.5)



1. A form to make a concrete floor or the like and to be mounted upon spaced beams, said form comprising

a substantially horizontal first plate, a depending substantially vertical web formed upon one edge of the first plate, a first U-shaped channel element formed upon the lower edge of the substantially vertical depending web, said first U-shaped channel element including upper and lower sides and a closed end, the closed end being arranged outermost, the first U-shaped channel element being arranged at an elevation beneath the first plate and substantially parallel therewith for forming a first upper recess, a substantially vertical stiffening flange carried by the lower side of the first channel element and depending below such lower side, a second U-shaped channel element formed upon the opposite edge of the first plate and including upper and lower sides and an outer closed end, the upper side of the second channel element being substantially flush with the upper face of the first plate, a substantially vertical stiffening flange formed upon the inner end of the lower side of the second channel element and depending below such lower side, the channel elements carried by said opposite edges of the first plate being spaced inwardly from the edge of the first plate which edge is arranged transversely of said opposite edges of the first plate, a second substantially horizontal plate, a depending substantially vertical web carried by one edge of the second plate, a substantially horizontal flange carried by the lower edge of the last-named web and adapted for insertion within the first-named channel element, the second plate continuing in the same plane to its opposite end, the opposite end of the second plate being mounted within the second U-shaped channel element, the web and flange of the second plate being spaced from the adjacent edge of the second plate which adjacent edge is arranged transversely of the web and flange of the second plate, the web and flange of the second plate forming an upper second recess, the arrangement being such that the first recess is adapted to receive the second channel element of a companion first plate and the second recess to receive the edge portion of the second companion plate.

3,004,322
PROCESSES FOR MANUFACTURING NEEDLE AND LIKE BEARING RACES
Alfred Pitner, Paris, France, assignor of one-half to Societe Anonyme des Roulements à Aiguilles, Rueil-Malmaison (Seine-et-Oise), France, a corporation of France
Original application Dec. 23, 1957, Ser. No. 704,784.
Divided and this application Mar. 25, 1959, Ser. No. 501,849
Claims priority, application France Dec. 28, 1956
5 Claims. (Cl. 29—148.4)



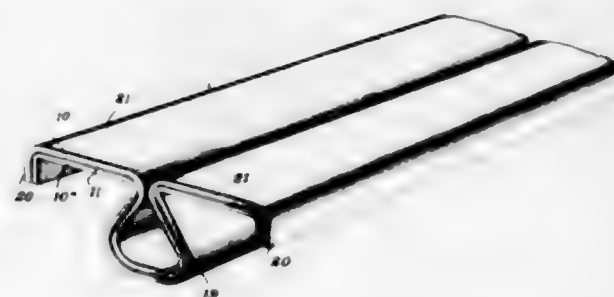
1. In a process of manufacturing an unsplit bearing race having a continuous cylindrical mounting surface and a continuous convex raceway adapted to cooperate with elongated rolling elements, the steps comprising starting from an unsplit tubular blank ring having concentric cylindrical surfaces, deforming said blank ring into a solid of revolution having substantially parallel inner and outer faces with curved generatrices and machining the concave face of said deformed blank to transform the latter into a cylindrical surface.

3,004,323
PROCESS OF MANUFACTURING BEARINGS AND BEARINGS RESULTING THEREFROM
Alfred Pitner, Paris, France, assignor, by mesne assignments, of one-half to Societe dite: Societe Anonyme des Roulements à Aiguilles, Rueil-Malmaison, France, a French company
Filed Dec. 23, 1957, Ser. No. 704,784
Claims priority, application France Dec. 28, 1956
5 Claims. (Cl. 29—149.5)



1. In a process of manufacturing an unsplit bearing race having a continuous mounting surface of revolution whose generatrix is rectilinear and a continuous convex raceway adapted to cooperate with elongated rolling elements, the steps comprising forming an unsplit blank ring having a first initial surface of revolution whose generatrix is rectilinear and a second initial surface of revolution whose generatrix is convex and permanently deforming said blank by force-fitting said second initial surface onto a support having a surface of revolution with rectilinear generatrices to transform said second initial surface into said mounting surface, whereby said first initial surface is transformed into said convex raceway.

3,004,324
METHOD OF MAKING LAMINATED TUBULAR SECTION STRUCTURAL MEMBERS
Stanley Macomber, Canton, Ohio, assignor to Macomber, Incorporated, Canton, Ohio, a corporation of Ohio
Filed Nov. 25, 1958, Ser. No. 776,377
5 Claims. (Cl. 29—155)



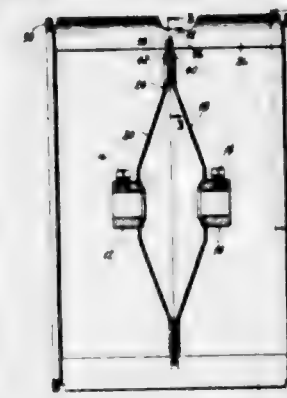
1. The method of making a laminated tubular section structural member which comprises applying pressure sensitive plastic adhesive to at least one opposed surface of two strips of hot-rolled sheet steel, superposing the hot-rolled strips with the plastic therebetween, the edges of the lower strip being spaced inwardly from the edges of the upper strip, moving the composite strip longitudinally, roll-forming the longitudinal central portion intermediate the longitudinal edges of the moving composite strip downwardly into U-shape, then roll-forming the U-shape portion of the moving composite strip into substantially tubular shape with a groove in the top side thereof, and roll-forming flat flanges on opposite sides of the groove with downturned terminal portions the longitudinal edges of which are flush, the roll-forming pressing the hot-rolled strips toward each other and setting the pressure sensitive plastic adhesive to securely join the hot-rolled strips together to form a laminated tubular section structural member, and deposit welding at spaced points in the entrance to the groove for rigidly holding the walls thereof to a predetermined spacing.

3,004,325
METHOD OF MAKING A MAGNETIC HEAD FOR RECORDING REPRODUCING
Otto Kornel, Cleveland Heights, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Original application Oct. 21, 1952, Ser. No. 315,994, now Patent No. 2,754,569, dated July 17, 1956. Divided and this application Dec. 2, 1955, Ser. No. 550,545
3 Claims. (Cl. 29—155.57)



1. In the method of making a magnetic transducer head, the steps of: providing a ring core of magnetizable material; cutting said core open along a line substantially parallel to the axis of said core to form two planar end faces; placing in said cut a non-magnetic shim whose thickness is less than the width of said cut; deforming said core by compressing substantially along a diameter substantially perpendicular to the planes of said end faces to force said two end faces together with said non-magnetic shim between the two end faces until the said two planar end faces are parallel and are in engagement with said shim; affixing said two end faces and said shim together in the aforesaid position; and winding a coil about said core.

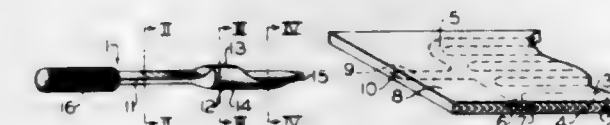
3,004,326
SUPPORT STRUCTURE AND METHOD FOR MAKING A BLOWER WHEEL
Kenneth A. Merz, Cornwall, Conn., assignor to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed Nov. 21, 1955, Ser. No. 548,166
17 Claims. (Cl. 29—156.8)



1. The herein disclosed method for making a centrifugal blower wheel, which method comprises providing two sheet metal supporting members connected with each other and having adjacent continuous peripheral portions with approximately equal diameters which members are rotatable about a common central longitudinal axis, at least one of the said members being formed with an annular bead adjacent and spaced inwardly from its peripheral portion and projecting away from the other member, providing a plurality of similar air moving blades formed with notches extending outwardly from the inner edges of the blades which notches have outwardly diverging lateral edges, longitudinally positioning said blades in an annular series with their notches forming an annular series and with the peripheral portions of the two supporting members extending into the notches, connecting said blades with each other at the ends thereof, and longitudinally pressing the two supporting members at said annular bead and thus at least partly flattening said bead and resultantly causing the corresponding peripheral por-

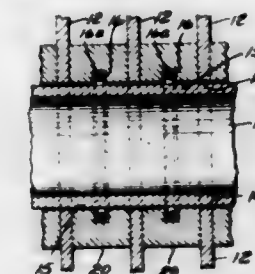
tion to swing away from the other peripheral portion so that the two peripheral portions outwardly diverge and have pressure engagement with the outwardly diverging edges of the blade notches so as to firmly hold the blades in fixed relationship to the supporting members.

3,004,327
METAL FORMING
Norval A. Keith, East Alton, and Glenn E. Koertge, Alton, Ill., and Lester J. Tranel, St. Louis, Mo., and Theron F. Pauls, Alton, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Mar. 17, 1960, Ser. No. 15,572
18 Claims. (Cl. 29—157)



1. The method of mechanically distending a tubular passageway of a metal tube sheet formed by selective welding, in a pattern defining a system of passageways which comprises at least said passageway, areas of adjacent surfaces of superimposed sheets of metals having different elastic limits wherein said welding defines said passageway between opposed unjoined portions of said sheets and laterally between welded portions of said sheets, said method comprising inserting between said unjoined portions a mandrel having a cross-sectional configuration corresponding to the desired distended cross-sectional configuration of said passageway said mandrel having and said insertion being made so as to apply a first bearing surface opposite and adjacent one of said unjoined portions having the lower elastic limit, and an oppositely disposed second bearing surface opposite and adjacent the other of said unjoined portions having the higher elastic limit wherein the ratio of the area of the bearing surface opposite and adjacent said one unjoined portion to the area of the bearing surface opposite and adjacent said other unjoined portion is equal to the ratio of said higher elastic limit to the said lower elastic limit times the ratio of the amount of distention desired in said one unjoined portion times ratio of the thickness of said one unjoined portion to the thickness of the other said unjoined portion.

3,004,328
FIN AND TUBE ASSEMBLY AND METHOD OF BONDING SAME
Donald John Pepper, Kingswood, and Albert John Miles, Ashford, England, assignors to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Feb. 29, 1956, Ser. No. 568,624
2 Claims. (Cl. 29—157.3)



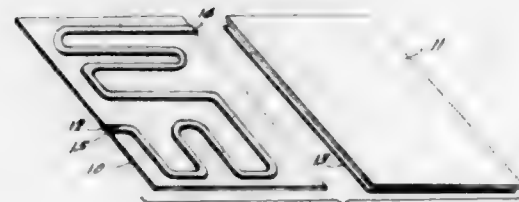
1. A method of metallic bonding fins to a tube wherein said fins are spaced from each other by a spacer member, said method comprising the steps of providing holes in each of the fins of a diameter slightly larger than the outside diameter of the tube so that a space is defined

between the periphery of the hole in the fin and the outer surface of the tube when the fin is disposed on the latter, providing a bore through each spacer member of a diameter slightly larger than the outer diameter of the tube so that a space is defined between the surface of said bore and the outer surface of the tube when the spacer member is placed on the latter, providing an annular recess in the surface of the bore of each of said spacer members inwardly of the ends of said spacer member, inserting brazing material in each of said annular recesses of said spacer members, placing the fins and spacer members in alternate relationship with each other on said tube, pressing the fins and spacer members together, heating the entire assembly to the melting point of the brazing material whereby some of the brazing material flows from the recesses into the spaces defined by the surfaces of the bores of said spacer members and the outer surface of the tube and the surfaces of the holes of the fins and the outer surfaces of the tube, and allowing the assembly to cool to solidify the brazing material and bond the fins, spacer member and tube together.

3,004,329

HEAT EXCHANGER AND METHOD OF CONSTRUCTION

Ramon F. Peterson and Francis J. O'Brien, Dowagiac, Mich., assignors to Rudy Manufacturing Company, Dowagiac, Mich., a corporation of Michigan
Filed Aug. 23, 1956, Ser. No. 605,735
4 Claims. (Cl. 29-157.3)



1. The method of forming a heat exchanger without the use of dies which includes the steps of: thoroughly cleansing a pair of metal sheets and bonding material which secures the sheets together, placing a "stop" material upon the face of at least one of the sheets conforming to the shape of a desired passageway the ends of which terminate at the edge of the sheet, securing the two sheets with the bonding and "stop" material therebetween together in unit relationship, heating said assembled sheets to melt the bonding material and secure the sheets together, forming an aperture between the sheets at least at one of the terminal ends of the passageway to be formed, and applying a fluid under pressure through said end to expand the metal defining the unbonded area to a degree determined by the pressure and amount of fluid employed to form the passageway.

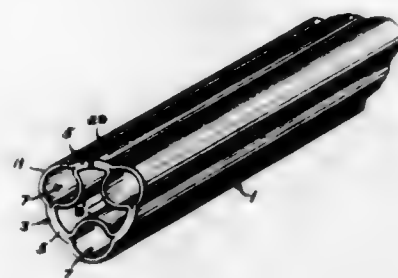
3,004,330

TUBES FOR STRUCTURAL AND FLUID CONDUCTING PURPOSES, AND METHODS OF MAKING THE SAME

Richard A. Wilkins, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Filed May 23, 1957, Ser. No. 661,104
3 Claims. (Cl. 29-157.3)

1. The method of making a tubular member for structural and for fluid conduction uses as in heat exchangers and having a circumferential wall with outer and inner sides and with one or more longitudinally coextensive tubular conduits within said wall between said outer and inner sides thereof, which comprises providing an elongated homogeneous monolaminar strip of cold workable

metal rolled from a billet singly cast from one and the same melt, said strip having opposite major faces, opposite side edges and transverse end edges, said strip having between the opposite side edges and the opposite faces thereof one or more slits extending lengthwise of the strip and individually opening on the respective end edges of the strip, said slits each having sides which are parallel to said major faces of the strip and said slits each having edges which are parallel to said side edges of the strip; operating on the strip to bend it transversely to bring said opposite side edges thereof substantially into contact; welding together said contacted side edges to form a tube the walls



of which are constituted by said strip with the slit or slits thereof extending longitudinally of such tube; and subsequently inflating said slit or slits of said tube to form a like number of tubular conduits by temporarily closing one of the ends and introducing into them from the opposite ends and whereby such conduits have walls which at their outer sides project laterally outwardly from the outer side of the resulting tubular member having said conduit or conduits and which at their inner sides project inwardly from the inner side of such resulting tubular member.

3,004,331

ALUMINUM BASE ALLOY POWDER PRODUCT
Raymond J. Townner and John P. Lyle, Jr., New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 8, 1960, Ser. No. 67,930
3 Claims. (Cl. 29-182)

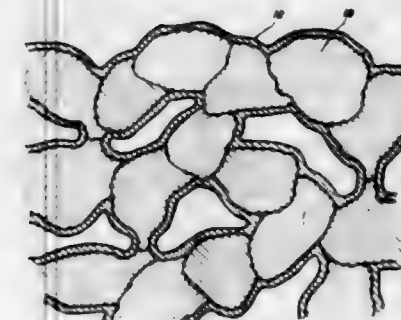
1. A hot worked aluminum base alloy powder article free from aluminum oxide except as an incidental impurity and having a maximum iron content of 1%, said hot worked alloy powder article being formed from atomized powder of an aluminum base alloy containing at least 70% by weight of aluminum, 2.5 to 12.5% by weight of manganese and from 2.5 to 7.5% by weight of copper as the essential components, the amount of manganese always being in excess of the copper content, and the total amount of manganese and copper exceeding the total quantity of any hardening elements present in the alloy, said alloy being substantially free from elements which form a solid solution with aluminum other than copper, except as they occur as impurities, said hot worked article being characterized in the as-worked condition by a tensile strength at 600° F. after a 100 hour exposure of not less than 10,000 p.s.i. and a yield strength of not less than 9,000 p.s.i.

3,004,332

POWDER METALLURGY PROCESS
John K. Werner, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 2, 1958, Ser. No. 758,429
9 Claims. (Cl. 29-182.5)

1. The process of fabricating a porous structure from oxide-coated metal particles by powder metallurgy techniques comprising the steps pretreating particles of a metal selected from the group consisting of aluminum, magnesium, zirconium and titanium in an aqueous solution se-

lected from the group consisting of hydrazine sulfate, hydrofluoric acid, solutions of chromic and phosphoric acids, hydrochloric acid, sulfuric acid, to effect a substitution of



a soft hydrated oxide film for the oxide coating originally present on the particles, and pressing the particles to form a compact.

3,004,333

BEARING AND METHOD OF MAKING SAME
Ralph A. Schaefer, Cleveland, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed June 18, 1957, Ser. No. 666,391
6 Claims. (Cl. 29-191.2)



1. A strip of bearing material comprising a strong metal backing member, a sintered layer comprised of copper-tin bearing metal adhered to one face of said backing member and having cavities predominantly on the order of about .001 to .002 inch in size, and lead-base babbitt bearing metal softer than said sintered layer filling substantially all of said cavities, said sintered layer after filling by said softer bearing metal having a tin content between one percent and five percent, the balance being predominantly copper.

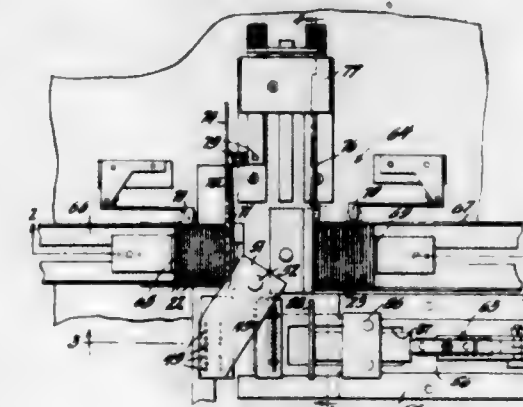
3,004,334

DEVICE FOR HOLDING AND SEPARATING A PLURALITY OF APERTURED PLATES HAVING WIRE TERMINALS IN THE APERTURES THEREOF

Estyle D. Hanson, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 7, 1958, Ser. No. 753,795
6 Claims. (Cl. 29-203)

1. A device for holding a plurality of apertured end plates to facilitate longitudinal insertion of a plurality of elongated, pretwisted, noncircular terminals into complementary apertures of the end plates and for positioning the end plates relative to the terminals to form a cage-like terminal strip subassembly, which device comprises a pair of end-plate holders, at least one of which is mounted for movement with respect to the other between a terminal-loading position wherein the end-plate holders are in close proximity and a terminal-locking position wherein the end-plate holders are separated widely, each of said end-plate holders having an end-plate receiving channel extending therethrough for holding an apertured end plate with the apertures thereof in an aligned relationship with the apertures in another end plate held in the other of said end-plate holders to facilitate the longi-

tudinal insertion of terminals into the aligned apertures while the end-plate holders are in the terminal-loading position, means for successively feeding the end plates into one end of each of the channels of said end-plate holders and for ejecting the end plates with the terminals therein from the opposite ends of the channels of said end-plate holders, means for moving at least one of said end-plate holders relative to the other from the terminal-loading position to the terminal-locking position so that the end plates are separated longitudinally of the inserted

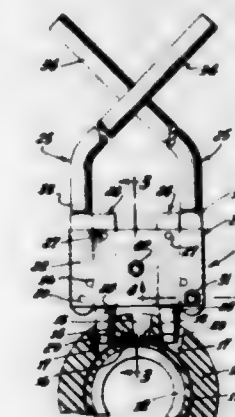


terminals to a predetermined spacing to form a terminal strip subassembly, and means for maintaining the terminals at predetermined longitudinal positions relative to one another during the separation of the end plates, said end-plate holders also having open-ended passages to permit the terminals to be inserted longitudinally into the aligned apertures of the end plates and to permit lateral movement of the terminals through the end-plate holders when the completed terminal strip subassembly is subsequently ejected from the device.

3,004,335

TOOL FOR INSTALLING WELL PIPE PROTECTOR

Charles H. Collett, 4116 Riverside Drive, Burbank, Calif.
Filed Dec. 1, 1958, Ser. No. 777,471
8 Claims. (Cl. 29-267)



1. A tool for tensioning about well drill pipe a flexible split protector collar, comprising a supporting member, a pair of jaws having terminals projecting from one side of said member for engagement with the protector collar at opposite sides of its split, a pair of elongated jaw actuating handles pivoted to said member and swingable apart from positions beyond the side of said member opposite its first mentioned side to spread positions in which the inner end extents of the handles come substantially into longitudinal alignment, means pivotally mounting the jaws to said member for relative lateral movement together of their collar-engagable terminals to predetermined inner-most collar tensioning positions, and said jaws and

handles having interengageable portions actuatable by swinging movements of the handles to move the jaw terminals relatively together to said innermost collar tensioning positions when the handles are swung to said spread positions at which their inner extents are substantially aligned.

3,004,336

METHOD OF RECONDITIONING WORN-OUT SURFACES OF ALUMINUM ALLOY PISTONS

Harjo B. Timmska, 71 Pintail Crescent, Don Mills, Ontario, Canada

Filed Oct. 12, 1959, Ser. No. 845,742
4 Claims. (Cl. 29-401)

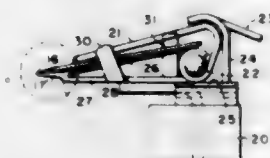


1. A method of reconditioning the surface of an aluminum body including the steps of thoroughly cleaning the surface of the said aluminum body, removing a layer of the cleaned surface by machining, cutting spaced annular grooves into said machined surface, knurling the uncut portions of said machined surface, spraying a thin coating of steel upon the said knurled and grooved surface, spraying a coating of aluminum alloy having a silicon content of about 8% and a copper content of about 4% upon the sprayed coating of steel, said aluminum alloy coating filling said grooves and building up said aluminum body to dimensions larger than the original dimensions of said body, and reducing said larger dimensions by machining the surfaces of the sprayed coating of aluminum alloy to reproduce the original shape of said aluminum body.

3,004,337

RAZOR HAVING A BIFURCATED BLADE-SUPPORTING MEANS

Walter O. Schweizer, 308 W. 4th St., Cincinnati, Ohio
Filed June 15, 1959, Ser. No. 820,327
3 Claims. (Cl. 30-58)



1. In a safety razor the combination of a flat-bodied blade having a beveled cutting edge, a plurality of rigid spaced end and intermediate obstructions in positive abutment with and extending transverse to the bevel of said edge, the apex of said edge presenting sharp cutting sectors in the spaces between said obstructions, said obstructions and edge supplementing each other to present dull sectors between said cutting sectors, and means for securing said obstructions and the bevel of said edge in contact with each other so that adjacent surfaces of the bevel and the obstructions firmly contact each other from base to apex of said edge, each of said obstructions having a width of from 0.002 to 0.006 inch, and each of the spaces between the obstructions having a width of from 0.008 to 0.03 inch to permit entry of hair between the obstructions but to prevent entry of skin between them.

3,004,338 GAS AND OIL WELL TUBING AND CUTTER ASSEMBLY

Clyde T. Turner, 5615 S. Lewis Ave., Tulsa, Okla.
Filed Aug. 10, 1960, Ser. No. 48,691
4 Claims. (Cl. 30-101)

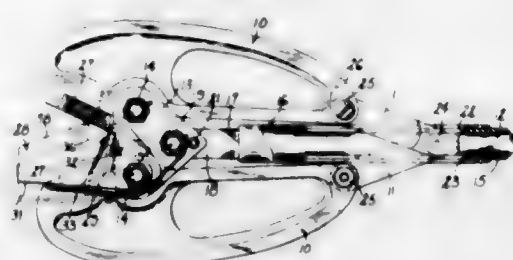


1. A tubing cutter comprising a sleeve, a plurality of cutting elements mounted internally of the sleeve for rotation about vertical axes parallel to each other and to the axis of the sleeve, and a plurality of rollers mounted on the sleeve below and radially outwardly of the cutting elements for rotation about axes which extend radially of the axis of the sleeve and which are disposed in a common horizontal plane.

3,004,339

CABLE CUTTER

Henry H. Townshend, Jr., New Haven, Conn., assignor to J. T. Henry Manufacturing Co., Inc., Hamden, Conn., a corporation of Connecticut
Filed Oct. 14, 1958, Ser. No. 767,105
4 Claims. (Cl. 30-124)



1. In a cable holder for use with a cable cutter having a pair of swinging blades, a yoke mounted for swinging movement relatively to the blades, the yoke embracing one of the blades and being spring urged toward the other, the arms of the yoke having generally arcuate aligned recesses therein to receive and hold a cable at both sides of the point at which it is to be cut, the yoke being swingable away from said other blade for entry of the cable in said recesses, and the entire swinging movement of the yoke being independent of movement of the blades.

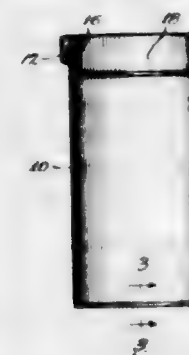
3,004,340

KITCHEN UTENSIL

Bernice L. Collins, 211 17th St., Wilmette, Ill.
Filed Sept. 24, 1959, Ser. No. 842,046
2 Claims. (Cl. 30-316)

1. A hand manipulated kitchen utensil consisting exclusively of an open-ended rigid tubular cylinder having imperforate smooth interior and exterior surfaces, the

ends of said cylinder being planar and perpendicular to the axis of said cylinder, one end of said cylinder being beveled internally and externally and defining a sharp circular planar cutting edge at said one end thereof, and a cushion member of short length fitted onto the other end of said cylinder, said cushion member comprising a resilient annulus having an annular axially extending recess therein of radial dimensions equal substantially to those of said cylinder and of a depth significantly less than the height of the annulus, said other end of said cylinder having a firm intimate frictional fit within said recess, said cushion member having a relatively long thin cylindrical wall portion interiorly of said recess fitted



intimately into the interior of said cylinder, a relatively thick short wall portion exteriorly of said recess intimately engaging the exterior surface of said cylinder and having a serrated peripheral edge, and a planar annular end surface of relatively large area the plane of which is perpendicular to the axis of the cylinder, said serrated exterior wall portion facilitating grasping of the utensil by the user's fingers with the palm of the user's hand overlying the opening through the utensil and said annular end surface of said cushion member whereby the user may exert by the palm of his hand a uniform force over the entirety of said circular cutting edge.

3,004,341

KITCHEN UTENSIL

Lawrence K. Carroll, Joseph H. Messinger, and Charles D. Whitcomb, Fremont, Ohio, assignors to Quikcut, Inc., Fremont, Ohio, a corporation of Ohio
Filed Dec. 11, 1959, Ser. No. 858,978
2 Claims. (Cl. 30-325)



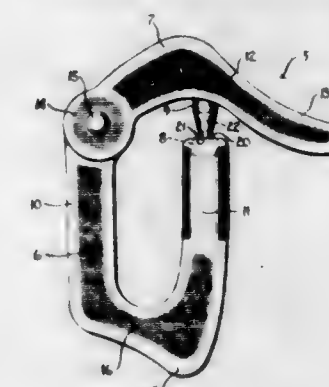
2. A combination kitchen utensil, comprising: a handle, a longitudinally asymmetrical cylindrical blade having the axis of the cylinder transverse of said handle, sharply bent flanges raised from said blade around the semiperiphery of said blade adjacent said handle, to form a spoon portion, said blade having a single integral reinforcing rib raised therefrom along the longitudinal axis

of said utensil, said blade also having two longitudinally oriented elliptical apertures disposed one on each side of said rib with the combined width of said apertures equalling approximately one-third the width of said blade to form a blending and draining portion, and said blade having a spatula portion with a cutting edge located at the end opposite from said handle with the cutting edge being bevelled toward the upper concave surface of said blade.

3,004,342

PUNCH FOR PERFORATING NURSING NIPPLES

Kenneth Beler, 410 Kedzie St., Madison 4, Wis.
Filed June 29, 1959, Ser. No. 823,440
3 Claims. (Cl. 30-363)



1. A punch of the type having a pair of cooperating perforating members, one of which is adapted to afford localized support to material to be perforated while the other is adapted to be pushed through the material to form an aperture therein, said punch comprising: a substantially U-shaped body having a pair of elongated substantially parallel legs, substantially equal in length, said legs being long enough and spaced apart far enough so that one of them can project into a nipple with the closed end of the nipple resting on the free end of said leg, the bight portion of said body being adapted to rest against the fingers of an operator's hand and having a protuberance substantially in line with said one leg and which projects in the opposite direction from the leg, said one leg of the body having one of the perforating members secured to its free end with its axis substantially aligned with said leg; and an operating lever having a length substantially greater than the distance between the legs of the body, said operating lever being pivotally secured at one end to the other leg of the body for swinging movement in the plane of the body toward and from a position in which the operating lever extends across the free end of the first designated leg, said operating lever having the other perforating member secured to its medial portion for engagement with the first designated perforating member when the operating lever is in its said position, and said operating lever having its free end portion extending at an oblique angle to its pivoted end portion, so as to be disposed at an acute angle to said first designated leg of the body when the operating lever is in its said position, thereby allowing an operator to conveniently apply pressure to the free end portion of the operating lever with his thumb while supporting the bight portion of the body with his fingers.

3,004,343

ARTIFICIAL TOOTH MAKING

Anders Folke Rydin, Gotgatan 31, Stockholm, Sweden
Filed May 2, 1958, Ser. No. 732,649
Claims priority, application Sweden May 10, 1957
3 Claims. (Cl. 32-13)

1. A method of making an artificial tooth comprising the steps of providing a separate element of thermoplastic, translucent synthetic resin material in the form of a shovel-like, hollow shell blank with a concave back and

having substantially the same thickness and extension as the enamel layer of the buccally visible portions, including the tip, of the natural tooth to be reproduced, trimming said shell blank and heating and deforming it to a desired shape so as to match the contours of the tooth

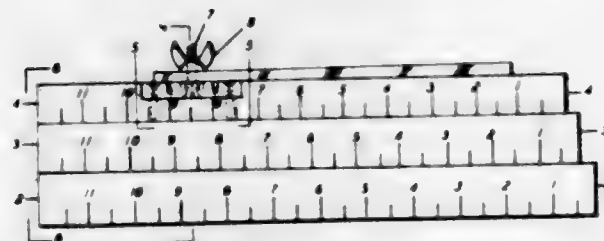


to be replaced, subsequently applying a coating of paint having a base which is chemically related to the material of the blank to the concave back of said translucent blank to let the color of said paint appear through the material of the shell blank, and finally combining said prepared shell blank with a body forming mass filling out said hollow shell and uniting it to a backing.

3,004,344

CARPENTER MULTIPLE USE MEASURING TOOL

James Wallace Douglas, R.F.D. 1, Siluria, Ala., assignor of fifty percent to E. G. Hall, Siluria, Ala.
Filed Oct. 21, 1957, Ser. No. 691,337
2 Claims. (Cl. 33-88)



2. A carpenter multiple use measuring tool of the character described comprising, an oblong metal base having straight sides and a flat bottom face said base being formed by three different portions of different heights positioned parallel with each other, one end of the base having a vertical face at an angle of 90 degrees compared to the sides of the base, said portions being formed in three different lengths, identifying numerals indented in the end of each portion, each of said parallel portions having a measuring scale thereon consisting of numerals and lines dividing each portion into 24 equal spaces; a flat metal bar, said bar having a measuring scale on part of one of its faces, one end of the bar being rounded, a semi-circular portion mounted on the highest portion of the base, said semi-circular portion having a hole through its center, said bar having a hole through its rounded end, a bolt and wing nut, said bolt and wing nut being mounted with said bolt in said holes and the nut on the bolt providing means for holding the bar in various positions with respect to said base; a spirit level mounted in one of the sides of the said base.

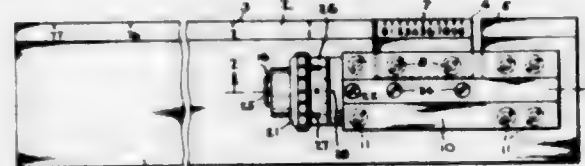
3,004,345

REGISTER RULE

Arthur H. Gaebel, 21 Cherry Ave., Larchmont, N.Y.
Filed Sept. 13, 1960, Ser. No. 55,622
4 Claims. (Cl. 33-107)

1. A measuring rule comprising, a base member having a graduated edge, the edge being provided with an aperture, a slidable measuring scale located in said aperture and movable therein, a housing mounted on the top of the base member, said housing containing a sleeve axially adjustable in the housing, said sleeve being attached to the measuring scale, the sleeve being internally threaded, a spring in the housing tending to bias the

sleeve in one direction, a threaded shaft rotative within the housing and extending through the sleeve and having threads in engagement with the internal threads in the sleeve, the shaft having an end extending beyond the housing and a calibrated knob provided a said end of



shaft, said knob provided with a radially-extending stop in, and a pivoted finger on the bottom of the housing, and stop means for limiting the pivotal movements of the finger and cause it to halt rotative movements of the knob at the same point after the rotative movement of the knob in either direction.

3,004,346

STEEL TAPE FOR MEASURING INTERNAL DIMENSIONS

Michel Charles André Quenot, Besancon, France, assignor to Société à Responsabilité Limitée dite: Etablissements Quenot & Cie, Besancon, France
Filed Dec. 4, 1957, Ser. No. 700,624
Claims priority, application France Dec. 20, 1956
2 Claims. (Cl. 33-138)



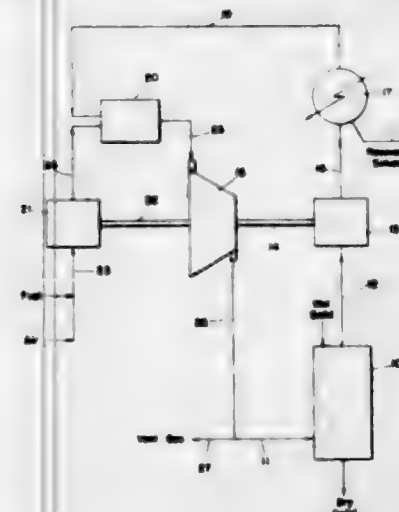
1. An instrument for measuring lengths, comprising in combination a substantially rectangular case formed with a plane rear face and a front face spaced from said rear face and formed with a slot, the outer edge of said slot being spaced from said plane rear face by a predetermined fixed distance, and a metal tape coiled in said case, said tape being provided on its upper face with a first scale having its point of origin coincident with the outer free end of the tape, said tape being adapted to be moved longitudinally into and out of said case through said slot, a second scale carried by the lower face of said tape, the point of origin of said second scale being spaced inwardly from said free end of said tape, a transparent window in the top of said case, the length of said window being greater than the distance existing between two successive reference numbers of said scales, a reference mark on said window, guide means within said case, said guide means consisting of a pair of confronting narrow grooves extending along a curvilinear path, said grooves being formed in the inner side walls of said case, the edges of said tape being slidably engaged effectively without clearance in said grooves, said guide means engaging said tape and being adapted to keep said second scale in a reading position with respect to said reference mark, said guide means having the complementary function of maintaining a constant tape length between said slot and said reference mark, said constant tape length being greater than said predetermined distance, the spacing of the point of origin of said second scale from said free end being equal to the difference between said constant tape length and said predetermined distance, each scale being upside down relative to the other scale so that, if the numbers of one scale could be read by transparency through the other scale they would

be seen upside down whereby the distance from said plane rear face to said free end of said tape may be read on said second scale in conjunction with said reference mark and the distance from said free end to any point on said tape may be read on said first scale, said distances being read in both cases in the usual manner on scales graduated from left to right.

3,004,347

DRYING OF SOLID MATERIALS

Ernest W. Dobson, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Dec. 8, 1958, Ser. No. 778,656
3 Claims. (Cl. 34-39)



1. Method of removing a volatile combustible liquid from the drying gas used in drying solid material containing said liquid which comprises contacting said material with a hot gas at relatively low pressure in a drying zone, compressing the gaseous effluent in a compression zone to a relatively high pressure, passing the compressed gas to a cooling zone and condensing a major part of the combustible liquid therefrom, compressing air and fuel in another compression zone to a relatively high pressure, burning the compressed mixture in a burning zone, passing effluent gas from said cooling zone into the burning zone at relatively high pressure and therein burning residual combustible liquid contained in said effluent, expanding the hot combustion product mixture in an expansion zone to said relatively low pressure, utilizing the expanded product as the hot drying gas, and utilizing the power developed in expansion of the mixture in at least one of the compression zones.

3,004,348

DEVICE FOR REGULATING THE DISTRIBUTION AND DIRECTION OF A GASEOUS MEDIUM

Rune Gustafsson, Stockholm, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Mar. 16, 1959, Ser. No. 799,768
Claims priority, application Sweden Mar. 17, 1958
2 Claims. (Cl. 34-114)



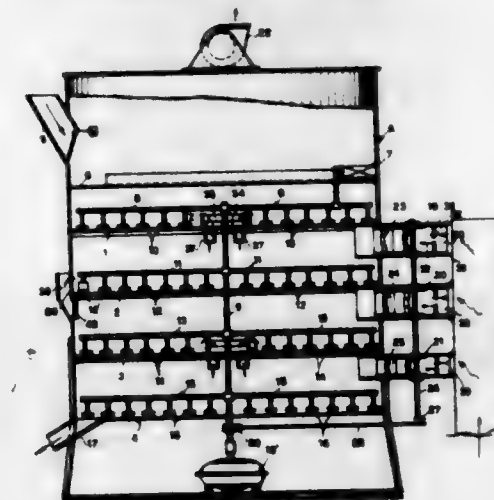
1. A device for regulating the distribution and direction of a gaseous medium being blown against a web, said

device consisting of a supply chamber for the gaseous medium, a distributing tube arranged across said web and being formed with outlet openings along its length for said medium, said tube having an inlet opening at one end connected to said supply chamber and a closure at the opposite end, an imperforate inner tube of smaller cross section than said distributing tube and having a softly-rounded conical inlet structure open to said supply chamber adjacent the inlet of said distributing tube and an outlet within said distributing tube adjacent the opposite end thereof, the outer marginal portion of said inlet forming radially-disposed flange means having an outside dimension at least as great as the cross section of said inlet opening, and means mounting said inner tube coaxially within said distributing tube for selective axial displacement of said flange into and out of registry with said inlet opening of the distributing tube, said conical inlet structure when in registry with said inlet opening, entirely closing said inlet whereby said gaseous medium is supplied to said distributing tube entirely through the opposite outlet end of said inner tube.

3,004,349

DRIER WITH CIRCULAR STAGES AND OSCILLATING FLOW AIR INLET NOZZLES

Achille Bianchi, Via Turati 28, Milan, Italy
Filed Aug. 27, 1957, Ser. No. 680,561
Claims priority, application Italy Sept. 3, 1956
2 Claims. (Cl. 34-173)



1. A drier comprising, in combination, a housing having a circular peripheral wall; at least one drying floor extending transversely through said housing and dividing said housing into at least two chambers, said drying floor being formed with at least one discharge opening; a distributor means for distributing material to be dried in a substantially even layer over said floor and for moving the material through said discharge opening of said floor to the chamber located beneath said floor; conduit means communicating with at least one of said chambers for feeding a stream of hot gas in a direction substantially parallel to said floor over said layer, said conduit means having an inlet end; a nozzle located at and communicating with said inlet end and being movable in a plane substantially parallel to said floor from an intermediate position in which said movable nozzle is directed toward the center of said housing to a first end position at one side of said intermediate position in which said movable nozzle extends substantially tangential to said peripheral wall of said housing and back over said intermediate position to a second end position in which said movable nozzle extends on the other side of said intermediate position also substantially tangential to said peripheral wall; moving means for continuously moving said movable nozzle between said positions thereof; and exhaust means for exhausting the hot gas from said housing, whereby the hot

gas will sweep over said layer in a turbulent stream continuously changing its direction so that an intimate contact between the hot gas and the material to be dried is obtained without overheating the material.

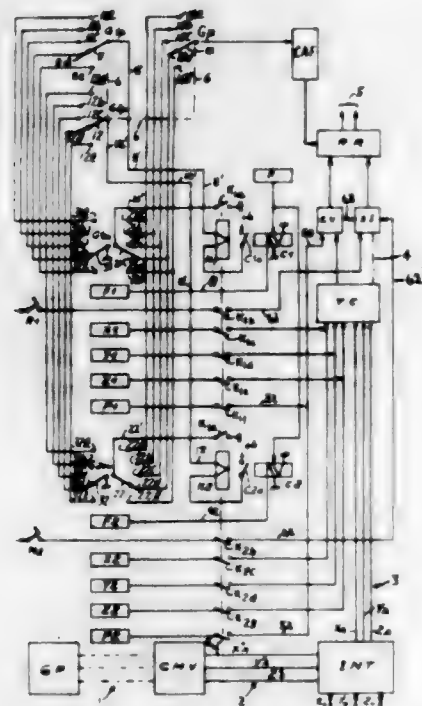
3,004,350

RADIO AIDS SIMULATOR FOR SIMULATED FLIGHT TRAINING

Claude Marret and Jean Armanville, Paris, France, assignors, by mesne assignments, to Curtiss-Wright Corporation, a corporation of Delaware

Filed May 28, 1958, Ser. No. 738,400

Claims priority, application France May 29, 1957
3 Claims. (Cl. 35-10.2)



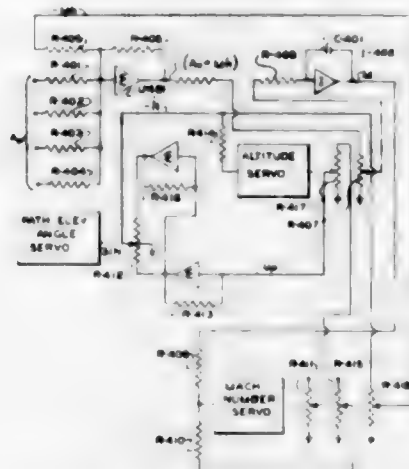
1. Apparatus for the training of flight crews in radio navigational aids comprising means for computing the instant location of the simulated flight, instructor controlled means providing signals representing the geographical location and the transmitting frequency and further providing navigational aid signals of each of a plurality of simulated radio aid transmitting stations, a simulated radio receiver tunable by a student on said stations, a single computer common to all said stations and adapted to compute the instant location of said simulated flight relative to any one of said stations and coincidence circuit means responsive to tuning in by said student of said receiver on any desired one of said stations for operatively connecting the means for representing the geographical location and navigational aid signals of such desired station to said signal computer and receiver respectively to effect control of said receiver by said signal computer and cause said receiver to deliver the navigational aid signals of said desired station in accordance with the computed distance of the simulated flight relative to said desired station, the receiver being provided with a student operated band selector switch, with the inclusion of a corresponding instructor operated band selector switch for selection of bands wherein the radio stations lie, and means responsive to matching of instructor and student band selections for enabling the receiver to operate and otherwise for inhibiting said operation, the receiver being tunable on a continuous basis as distinguished from selector switch tuning and the coincidence circuit means being responsive to double coincidence of matching of instructor and student band selections and of tuning in the desired station in the matched selected band to effect the aforesaid operative connections of the geographical location and navigational aid signals representative means.

3,004,351 HIGH SPEED FLIGHT SIMULATOR APPARATUS

John M. Hunt, Binghamton, and Merle W. Crabb, Vestal, N.Y., assignors to General Precision, Inc., a corporation of Delaware

Filed Sept. 21, 1956, Ser. No. 611,182

4 Claims. (Cl. 35-12)



1. Mach number computer means for grounded trainer apparatus comprising means for deriving a first potential commensurate with the acceleration of the simulated aircraft along its flight path, means for providing a second potential commensurate with a function of altitude, means for summing said first and second potentials, electro-mechanical integrating means responsive to the sum of said first and second potentials for deriving a quantity commensurate with Mach number including means for deriving a third potential commensurate with the rate of change of Mach number, means for deriving a quantity commensurate with altitude, and means responsive to both said third potential and said quantity commensurate with altitude for deriving said second potential.

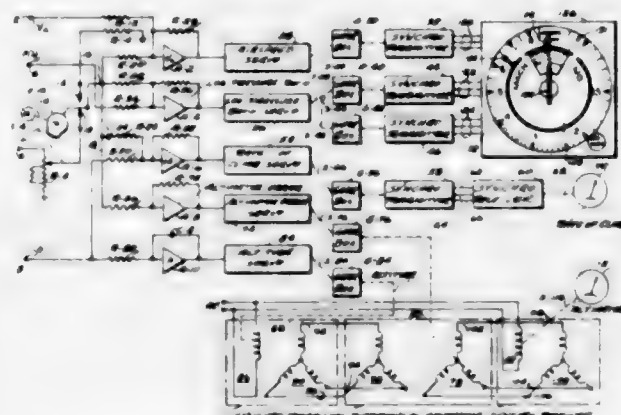
3,004,352

SIMULATION OF ERRORS OCCURRING AT TRANSONIC SPEEDS IN PITOT-STATIC INSTRUMENTS

Merle W. Crabb, Endicott, N.Y., assignor to General Precision, Inc., a corporation of Delaware

Filed Apr. 9, 1959, Ser. No. 805,272

1 Claim. (Cl. 35-12)



In an aircraft simulator means for simulating the effect of the error in a Pitot-static instrument that results from motion at transonic speeds comprising, a function generator for providing an error potential proportional to the amount of said error as a function of Mach number, a differential generator including a rotor and a stator, means for positioning the rotor of the differential generator in accordance with said error potential, means for providing a potential proportional to rate of change of altitude as determined in the stimulator, means for integrating said potential proportional to rate of change of altitude to provide a new potential proportional to

altitude, a synchro transmitter including a rotor and a stator, means for positioning the rotor of the synchro transmitter in response to said potential proportional to altitude, means coupling the stator of said synchro transmitter to the stator of said differential generator, a synchro receiver including a stator and a rotor, means coupling the rotor of said differential generator to the stator of said synchro receiver to generate a potential across the windings of said stator proportional to the sum of said error and said altitude, a shaft coupled to the rotor of said synchro receiver, said potential across said stator providing a magnetic field to rotate the rotor of said synchro receiver and to position said shaft in accordance with the sum of the altitude and the error being simulated and indicator means coupled to said shaft to show the indicated altitude with the transonic error superimposed.

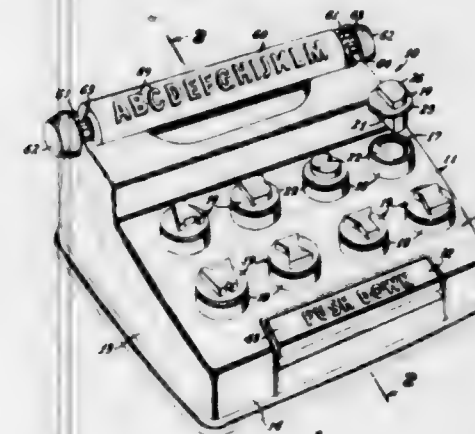
3,004,353

EDUCATIONAL POP-UP TOY

Reuben B. Klammer, Pacific Palisades, and Donald W. Herrick, Lawndale, Calif., assignors to Link Research Corporation, Beverly Hills, Calif., a corporation of California

Filed Mar. 1, 1960, Ser. No. 12,074

2 Claims. (Cl. 35-22)



1. A pop-up toy comprising: a housing having an outer configuration resembling a typewriter and having a top wall and side walls, said top wall having a plurality of openings extending therethrough; a plurality of plugs detachably fitting said openings; an ejector means pivotally secured in said housing and having a plurality of upstanding posts, each aligned with one of said openings; manually operable actuator means pivotally mounted in said housing and having a handle portion extending outwardly of said housing for manipulation thereof, said ejector means being engageable by said actuator means and responsive to pivotal movement of said actuator means in one direction, so as to pivot upwardly and adjacent said top wall, and engage each of said posts with its respective plug so as to eject said plugs outwardly from said openings, each of said plugs being hollow and including a transverse web having a cam surface and said posts being so aligned as to engage said cam surface of said webs during upward pivotal movement of said ejector means and said cam surface being angular so as to direct said plugs outwardly of their respective openings in predetermined direction.

3,004,354

SLIPPER

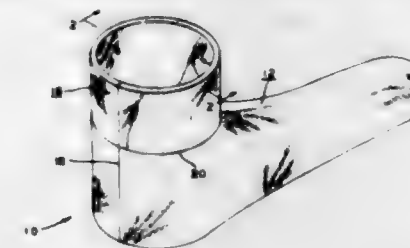
Lewis Kramer, 6723 N. 17th St., Philadelphia 26, Pa.

Filed Aug. 23, 1960, Ser. No. 51,376

4 Claims. (Cl. 36-9)

1. A slipper comprising an open ended single piece knitted body portion, a flexible sole portion stitched to the bottom edge of said knitted body portion, an open ended

single piece knitted cuff portion stitched to the top edge of the knitted body portion, and a single continuous seam line of stitching joining together the open ends of said



cuff portion and said body portion, said continuous seam line of stitching extending from the juncture of the body portion with the sole portion to the top of the cuff portion at the back of the slipper.

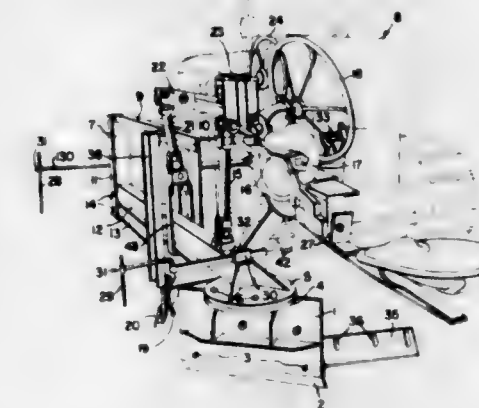
3,004,355

DEVICE FOR GRADING IN SETTING FORMS

James Julian, 405 S. Du Pont Road, Elsmere, Del.

Filed June 28, 1956, Ser. No. 594,621

10 Claims. (Cl. 37-145)



1. A device for grading areas to receive forms for the making of concrete surfaces which device is adapted to be attached to the side of a mobile unit and which device comprises an upright; pivotally mounted on said upright an arm extending in the normal non-operative position at right angles away from said upright; pivotally mounted at the far end from said upright on said arm a cutter; above said cutter and mounted to said arm at said far end, a pivotally connected upright activated by a raising and lowering mechanism; beneath said arm, a second arm similarly pivotally mounted to and extending from said first mentioned upright, said second arm terminating in front of said cutter; mounted at said terminating end a router; above said router a second pivotally connected upright activated by a raising and lowering mechanism; and means for mounting the said device at the side of a mobile unit.

3,004,356

COLLAPSIBLE IRONING BOARD

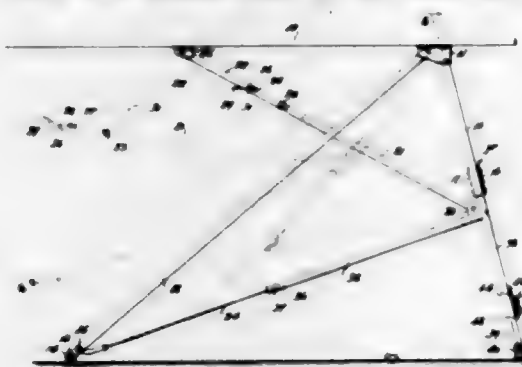
William Picken, 24-15 41st St., Long Island City, N.Y.

Filed Aug. 11, 1960, Ser. No. 48,929

4 Claims. (Cl. 38-117)

1. An ironing board having a collapsible leg structure comprising a transverse frame member and a forwardly extending front leg means swingably connected to the rear end portion of the board, laterally spreadable rear legs extending from the free end of said frame member, a manipulatable slide piece intermediate said rear legs, laterally extending stay links pivotally interconnected to and between said slide piece and said rear legs, a telescopic tie link means pivotally interconnected to and between said front leg means and said frame member, said tie link means including a tubular barrel section extend-

ing from the frame member, said slide piece being adapted to slidably overlie said barrel section when the leg structure is collapsed, said barrel section having a longitudinal slotway terminating at its forward end in an enlarged egress-ingress opening, said slide piece having a headed stud to enter through said egress-ingress opening into the barrel section when the frame member is down folded over said barrel section under collapsed condition of the leg structure, whereby, after movement of the slide piece to carry the headed stud to the rearward end of

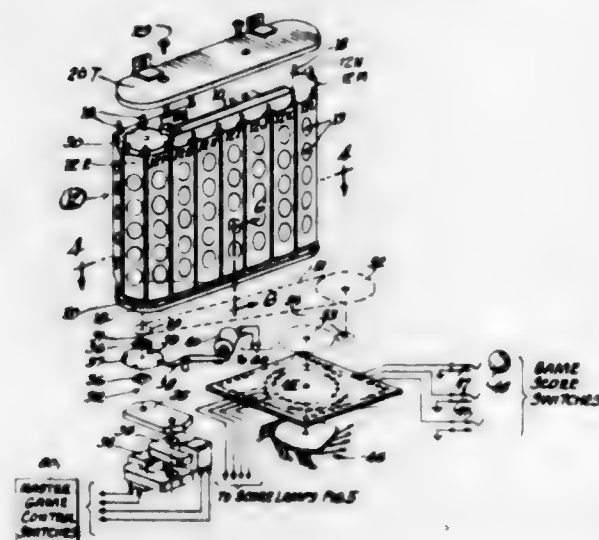


said slotway, not only to cause the stay links to draw the spreadable rear legs to inswing collapsed position but also to interlock the downfolded frame member with said barrel section against outswinging movement until said rear legs are first outspread to operative positions by reverse movement of the slide piece, a foldable brace bar means interconnected between the forward portion of the ironing board and the frame member, and manipulatable means to releasably lock said brace bar means in operative extension between said board and frame member.

3,004,357

SELECTIVE SCORE DISPLAY

Roman A. Tojza, Chicago, and Donald Edward Hooker, Wilmette, Ill., assignors to Lion Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 18, 1959, Ser. No. 800,299
6 Claims. (Cl. 40-28)



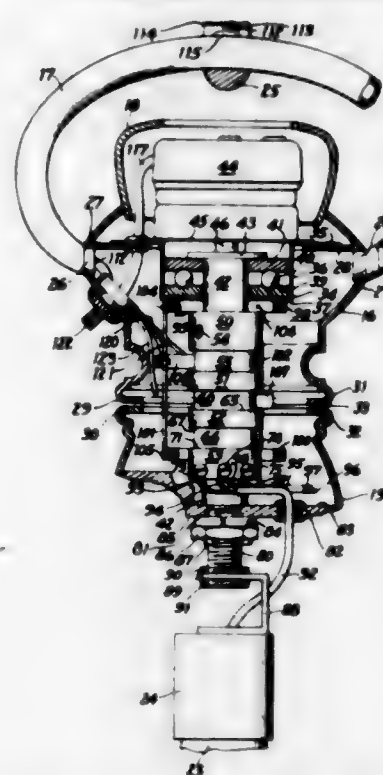
1. A mechanized Bingo Card including a shiftable train of card sections comprising a plurality of articulated vertical screen plates, and means mounting same to travel circumambiently about a fixed indicia panel having score indicia arranged in a predetermined square array of columns for Bingo-type scoring; electrically actuated means for activating any individual indicium; selector switch means operable to connect and disconnect score circuits selectively to said activating means; said plates having vertically spaced sight openings for alignment with any

vertical column indicia in said array depending on the position into which said plates are disposed as a result of shifting movement of the train; motor drive means for shifting said train; index means cooperable with said drive means for stopping the train in selected positions; and means for driving said selector switch means in synchrony with said train whereby to connect certain score circuits for operation in correspondence with the selected positions of said sub-panels.

3,004,358

ROTATING DISPLAY MECHANISM

Eugene W. Clark, Colerain Township, Hamilton County, Ohio, assignor to Advertising Products, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 9, 1957, Ser. No. 689,077
4 Claims. (Cl. 40-33)



1. A device for suspending, rotating, and supplying electricity to an animated display, said device comprising a hollow housing, a rigid shaft supported by said housing for rotation about an upright axis and adapted to support a display, a motor in said housing adapted to rotate said shaft, a plurality of dielectric collars on said shaft, each collar having at least one radial face in which a circular groove spaced from and coaxial with said shaft is provided, a plurality of cylindrical contact bands of electricity conducting material having marginal edge portions received in opposed grooves in adjacent collars, said bands being supported in coaxial spaced relationship to said shaft and each other by and between said collars, a plurality of spaced electricity conducting means, each conducting means connected to one of said contact bands and adapted to be connected to a display and a portion of which extends parallel to said shaft between and spaced from said shaft and contact bands, a pair of wiper member supporting dielectric rings, one of said rings being supported in fixed relationship to said housing coaxial with said shaft, a plurality of substantially T-shaped wiper members supported by said fixed ring and supporting the second of said rings in coaxial relationship to said shaft, each of the stem portions of said T-shaped wiper members being in tangential resilient continuous wiping contact with a respective one of said contact bands, whereby electrical energy-carrying means is provided between each of said T-shaped wiper members in fixed, relative relation to said housing and a corresponding conducting means in fixed relative relation to said shaft, means adapted to conduct electrical energy

to said motor, and means adapted to secure a display in fixed relationship to said shaft for rotation therewith, said display having a plurality of electrically operated devices therein, means connecting said electrical devices through said conducting means to respective devices bands whereby the display means may be rotated and the electrical devices therein operated when electrical energy is supplied.

3,004,359

ILLUMINATED WINDOW SIGN FOR AUTOMOBILES

Saverio S. Placiotto, 5223 Georgia Ave. NW., Washington, D.C.
Filed Nov. 28, 1958, Ser. No. 776,893
2 Claims. (Cl. 40-129)

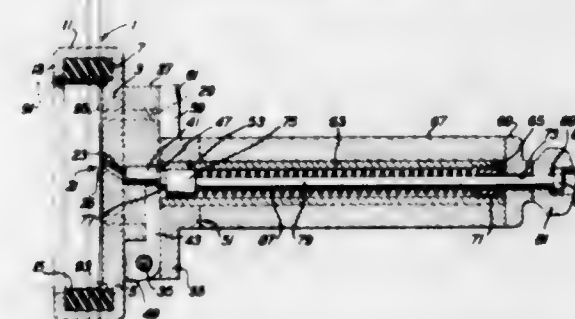


1. In combination, a window frame having spaced upper and lower horizontal moldings and spaced vertical side members, a transparent panel secured in said frame, a pair of horizontal reflector members secured upon and spaced along said lower molding at the inward side of and engaging said transparent panel, said members having upstanding end walls having free laterally inward ends spaced inwardly from the transparent panel, light bulbs mounted on said end walls, upstanding stop flanges fixed on the lower molding and spaced inwardly from the transparent panel, a sign plate coextensive with said transparent panel, said sign plate having upper and lower side edges, the lower edge of the sign plate being supportably engaged upon said lower molding and engaged between the inward ends of said end walls, the upper edge of the sign plate bearing against the laterally inward surface of the transparent panel in the region of said upper molding, and bracket means mounted on the upper molding and releasably engaged with the laterally inward side of the sign plate at the upper edge thereof.

3,004,360

TARGET PROJECTING DEVICE UTILIZING A CAN AND A BLANK CARTRIDGE

Arthur M. Johnson, 1600 Grace Church Road, Silver Spring, Md.
Filed Mar. 11, 1960, Ser. No. 14,448
6 Claims. (Cl. 42-1)



3. A projecting device for projecting a can into the air, said device including a head providing an area, a base plate forming an end of said area, said area adapted to releasably receive and mount a can therein, means fixed on said head for releasably maintaining the can mounted within the area, and said head including a chamber containing a blank cartridge providing a gas generating means, and said base plate having a gas conducting duct extending therethrough having an inlet end in communication with

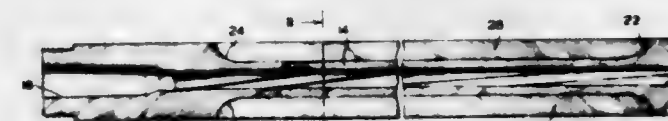
said chamber for receiving gas therefrom and an outlet end in communication with said area for directing the gas against the can for its projection from the head and into the air, and said duct being of substantially reduced diameter throughout its length relative to the diameter of said chamber, and means to fire said blank cartridge.

3,004,361

COMPOSITE LIGHTWEIGHT BARREL WITH PRE-DETERMINED THERMAL CHARACTERISTICS

Alexander Hammer, Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 8, 1959, Ser. No. 845,293
3 Claims. (Cl. 42-76)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A barrel including a steel core provided with a cartridge chamber and a bore extending coaxially therefrom, a plurality of longitudinal grooves formed in the periphery of said core to reduce the cross-sectional thickness thereof to that only sufficient to withstand the pressure produced in the bore and chamber by the discharge of a cartridge therein, a plurality of longitudinal ribs formed in the periphery of said core by said grooves, and a plurality of layers of a metal having a desired coefficient of heat transmission and a weight less than that of steel integrally formed in each of said grooves, said layers being integrally bonded to the walls of said grooves and to each other to produce laminated-type inlays which fill said grooves and are integral with said core.

3,004,362

HANDLE WITH ADAPTER FOR FISHING IMPLEMENTS

Robert C. Day, 1606 Main St., Baker, La.
Filed July 2, 1958, Ser. No. 746,198
1 Claim. (Cl. 43-6)



A harpooning implement comprising an elongated shaft having a rearward end with a portion reduced in cross-section and defining an endless shoulder and an axially projecting first terminal shank, a ferrule fitted over said shank abutting the shoulder, secured to said shank and having an axial screw-threaded coupling element of reduced cross-section, a protective cap having an axial screw-threaded socket, said coupling element being screwed into said axial socket, said cap being of predetermined weight and having the additional function of a shaft balancing and throwing element, the forward end of said shaft being reduced in cross-section and providing a second reduced terminal shank and an abutment shoulder, said terminal shank being cylindrical in cross-section and smooth-surfaced, an attachable and detachable adapter having a sleeve portion fitted over said second shank and abutting the shoulder, said sleeve portion being readily applicable and removable

and turnable on said second shank, the forward end portion of the adapter having an axial socket therein of a prescribed cross-section and depth, a harpoon shank having an attaching head corresponding in dimension with the dimension of said adapter socket and telescoping into said adapter socket, the wall of said adapter socket on one side being provided with latch means including a casing, said casing being secured in a recess provided therefor in said wall and being provided with a spring-loaded latch pin projecting into the adapter socket, the open mouth portion of the wall of said adapter socket being provided with a keying groove and said groove being in alignment with said latch, said head being provided on one side in a predetermined place with a lateral keeper socket and said latch fitting into said keeper socket, said head being provided on the same side and spaced from the keeper socket with a projecting keying stud fitting removably into a keeper slot provided therefor at the entrance of said adapter socket.

3,004,363

ATTACHMENT FOR AN ARTIST'S PAINT BOX
Eleanor C. Johnson, 1318 Beacon St., Brookline, Mass.
Filed June 9, 1958, Ser. No. 740,849
1 Claim. (Cl. 45—129)



In combination with an artist's paint box, an attachment therefor for supporting a canvas on the outside of said box when closed, and on the inside thereof when opened comprising a carrier frame attached to the outside of said box comprising an elongated tube secured by clamps to the outside of said box, a transverse bar welded to one end of said tube and extending equidistantly therefrom and terminating in supporting hooks at the bottom thereof, an adjustable rod slidably and rotatably mounted within said tube and having an arm terminating in a hook at the top thereof, a sliding clamp mounted on said arm, and a second pair of bottom supports mounted on the inside of said box cooperating with said adjustable rod and hook to support a canvas on the inside of the box while being painted.

3,004,364

EDUCATIONAL TOY FRAME
Glen F. Benkelman, 1105 Homewood Drive,
Lakewood, Ohio
Filed May 25, 1959, Ser. No. 815,539
1 Claim. (Cl. 46—25)



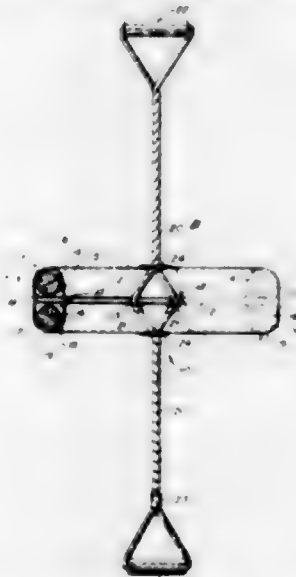
A toy building block, comprising, a body of square cross section longer than wide, said body having at least one projection from each end which projection is one-third as thick as the block width and is as wide as the block, one slot through the body between two sides and another slot intersecting the one slot and extending between the remaining two faces, said slots dimensioned one-third as thick as the block and as wide as the block to receive an end projection of another block having end projections of like form, a pin aperture axially of each slot and centered with respect to the slot, each end pro-

jection having a transverse lock-pin opening, whereby a projection may be inserted into a slot of a like block and a pin placed to lock the projection into the block slot.

3,004,365

TOY

Anthony Bertucci, 1530 Conti St. Park, New Orleans, La.
Filed Nov. 18, 1959, Ser. No. 853,849
1 Claim. (Cl. 46—63)



In a toy, a disc including a main flat central portion of circular formation provided with a pair of spaced apart apertures, enlarged circular hollow transparent shoulders arranged contiguous to the outer periphery of said disc, there being one of said shoulders on each side of the disc, whereby said disc forms a partition between said shoulders, said shoulders being hollow and defining therein circular passageways, a plurality of balls movably mounted in said passageways, the outer surface of said balls being equally divided into contrasting colors, there being a plurality of spaced apart openings in said shoulders, a cord having portions thereof extending through the apertures in said disc, clips engaging said cord and positioned contiguous to the disc, a pair of spaced apart hand grips connected to said cord, and bushings engaging said cord and spaced from said hand grips.

3,004,366

PLANT SUPPORTS

William B. Jaspert, Jr., 5050 Frick St., Pittsburgh, Pa.
Filed June 5, 1959, Ser. No. 818,286
2 Claims. (Cl. 47—47)



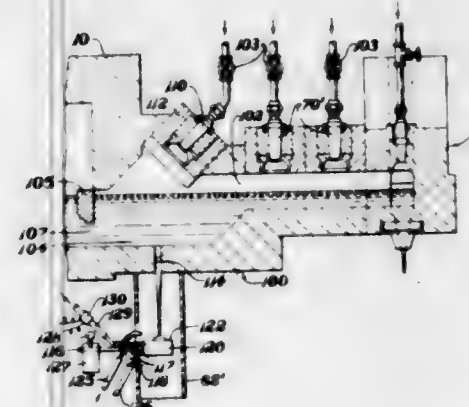
1. A plant support in the shape of an inverted cross with the short upright adapted for seating in the ground,

said support consisting of a one-piece metal rod double at the end of the short upright by folding upon itself into contacting relation and bent at right angles in opposite directions to form horizontal cross pieces, said rod ends being folded upon themselves in superposed contacting relation at the end of the cross pieces to double the cross pieces and said rod ends being again bent at right angles to form long parallel uprights extending in vertical alignment with said short upright and having a space therebetween, said parallel uprights having loose ends and having deformities at spaced intervals for receiving gripping members to fix the uprights against separation and gripping members in the shape of links adapted to straddle the long uprights and seat on said deformities.

3,004,367

APPARATUS FOR PROCESSING HEAT-SOFTENABLE MATERIALS

John J. Webber, Newark, Ohio, and John M. Hummel, Mission, Kans., assignors to Owens-Corning Fiberglass Corporation, Toledo, Ohio, a corporation of Delaware
Filed Aug. 3, 1953, Ser. No. 371,956
2 Claims. (Cl. 49—54)



1. Apparatus of the character disclosed in combination with a furnace containing a supply of heat-softenable material adapted to be heated therein to molten condition, a forehearth construction including a section extending transversely of the furnace and an intermediate section connecting the transversely extending section with the furnace, communicating channels formed in said transverse and connecting sections of the forehearth, the channel in said connecting section being in communication with the furnace forming a sole path for conveying molten material from the furnace into the transversely extending forehearth section, a plurality of radiant heating units disposed lengthwise of and above the channel in the transversely extending section and disposed lengthwise of and above the channel in the connecting section, means individual to each of the heating units for controlling said units to regulate the temperatures in various zones in the channels in said transversely extending and connecting sections, a skimmer block disposed between the furnace and the connecting section providing a restricted entrance for the material flowing from the furnace into the channel of the connecting section, a drain opening formed in a bottom wall of the channel in the connecting section through which is continuously discharged a stream of waste material, and means including a pivotally supported member disposed in the path of the stream of waste material for accumulating the waste material in relatively small, solidified bodies, said pivotally supported member being arranged to be tilted to discharge a body when the mass of the body of accumulated material overbalances the member.

3,004,368
MANUFACTURE OF FIBER OPTICAL DEVICES
John W. Hicks, Jr., Fiskdale, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 10, 1958, Ser. No. 741,183
9 Claims. (Cl. 49—79)



1. The method of forming a flexible fiber optical device from a multiplicity of flexible light-conducting fibers formed of core glass having a relatively high index of refraction with a thin layer of relatively low index glass therearound, comprising, forming bundles of said fibers, enveloping each of said bundles of fibers with a tubular casing of at least partially soluble metallic material, assembling said encased bundles of fibers together in intimate side-by-side relation with each other, heating and drawing said assembly of encased bundles of fibers to heat join the same and to form an elongated integral part therefrom of a predetermined cross-sectional size and length in accordance with the dimensions desired of said device, subjecting the mid-section of said part to a solvent for dissolving at least a substantial portion of said metallic material from between said encased bundles of fibers while protecting the opposite ends of said part from exposure to said solvent to cause said fibers to become detached from each other throughout said mid-section only.

3,004,369

CONSTRUCTION OF BUILDINGS

George Kendrick Findlay, 5/15 Cromer St.,
London, England
Filed May 31, 1957, Ser. No. 662,675
Claims priority, application Great Britain June 13, 1956
4 Claims. (Cl. 50—347)



1. A wall structure for buildings including horizontal supporting members, a cladding comprising a number of panels each having a lower section and an upper section offset from the lower section, and a flange extending rearwardly from the upper edge of said upper section for suspending the panel from one of the supporting members, metal clips, each adapted to engage in a supporting member, pass over the upper edges of two adjacent panels and to rest upon their front surfaces for securing the panels in positions depending from the supporting members with the lower sections in one row overlapping the offset upper sections of the row beneath and a sheet waterproofing

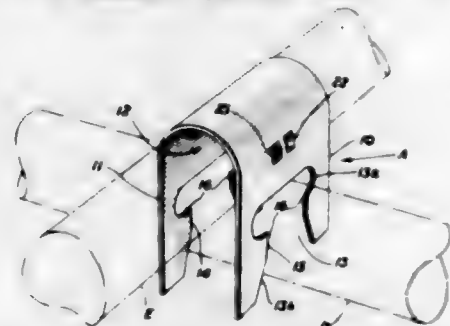
means disposed at the rear of each row of panels with its lower end engaging in parts of the clips interposed between the overlapping surfaces of adjacent panels.

3,004,370

RETAINING CLIPS

George A. Timmerman, 17864 Beach Road, Lakewood, Ohio

Original application Nov. 7, 1956, Ser. No. 620,936, now Patent No. 2,923,385, dated Feb. 2, 1960. Divided and this application Feb. 16, 1959, Ser. No. 793,539 2 Claims. (Cl. 50-520)



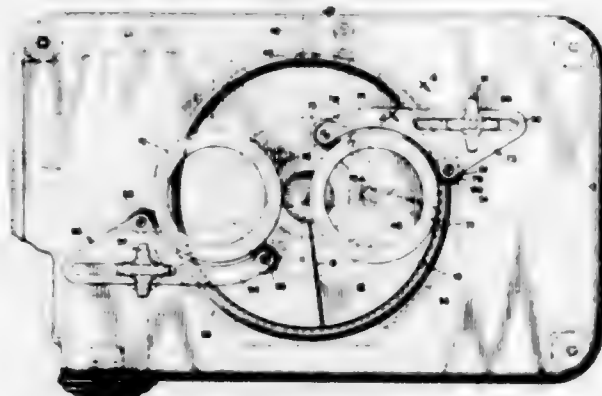
1. A retainer for securing a bar and element in angularly disposed relation to one another comprising a hardened, resilient sheet metal body bent upon itself to form spaced apart opposed walls having free end extremities opposite to its bent portion and defining a channel therebetween open at said free extremities, said walls each being recessed inwardly from said free extremities in registry with one another to form pairs of spaced apart jaws, said channel forming receiving means for said bar and said walls having means projecting inwardly of said channel engageable with said bar to grip the latter and biased against axial movement of said bar in said channel, said recesses forming receiving means for said element, said bent portion of said body forming a striking head, for driving said body into engaged position with said bar and said element, by percussive contact, said inwardly projecting means and said jaws being capable of simultaneously gripping said bar and said element respectively in biting pressure engagement when the former is received in said channel, the latter is straddled by said jaws and said body is driven into engaged position, said jaws having teeth outwardly flared from the plane of their respective walls as to bite into the element at an incline to its longitudinal axis as said body is driven to engaged position whereby to cause said jaws to engage said element in firm biting engagement.

3,004,371

BENCH-TYPE LAPPING MACHINE

Forrest E. Layton, Northbrook, and Harry I. Sole, Evanston, Ill., assignors to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois

Filed Apr. 8, 1958, Ser. No. 727,196 2 Claims. (Cl. 51-129)



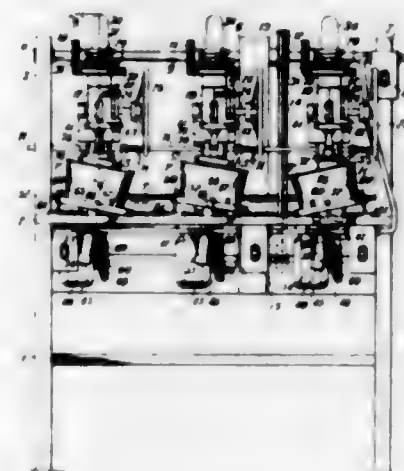
1. A lapping machine comprising a rotatable lap, a pivoted support for articles to be lapped on said lap, said

support comprising a fixed frame having a threaded opening, a post having a threaded region engaging said threaded opening and extending above the frame in proximity to the lap, said post having a flat-sided region adjacent the threaded region thereon, a plate extending in part over the lap end having a slot therein, said flat-sided end region extending into and engaging the side of the slot and locked against rotation relatively thereto by such engagement with the side of the slot but free to slide transversely of the post to vary the amount by which the plate extends over the lap, means on the plate for engaging an article to be lapped on the lap, means for locking the plate to the post against such transverse sliding thereon, and means for locking the post to the frame against relative rotation therewith, said plate functioning as a wrench to turn the post when said post is not locked to the frame.

3,004,372

APPARATUS FOR PRODUCING OPHTHALMIC LENSES

William Phillips, deceased, late of Middlesex, N.J., by Edward H. Phillips, Warrenville, Edwin Donald Phillips, North Plainfield, and Josephine Bernice Phillips, Fanwood, N.J., executors, assignors of one-fourth to Bozena Marie Phillips, one-fourth to Edward H. Phillips, one-fourth to Edwin D. Phillips, and one-fourth to Josephine Bernice Phillips, all of Middlesex, N.J. Original application Feb. 15, 1956, Ser. No. 365,644, now Patent No. 2,919,523, dated Jan. 5, 1960. Divided and this application Mar. 6, 1959, Ser. No. 797,796 14 Claims. (Cl. 51-131)



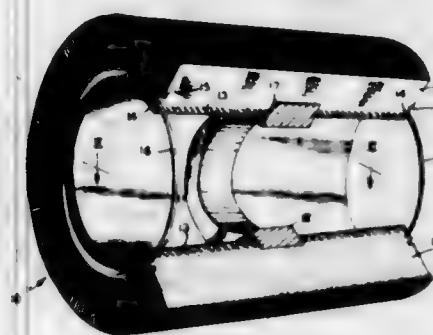
1. Apparatus for producing a plurality of solid, one-piece, homogeneous, multi-focal, monocentric lens blanks including a plurality of rotatably mounted lens blank supports, means embodied therewith for supporting a plurality of blanks in a circle and in spaced relation to one another in a manner whereby at least a portion of the faces of the blanks so supported will lie in an arcuate plane corresponding to the radius of curvature of a one field of a lens, means for adjustably disposing the support for rotation about an inclined axis passing through the center of said circle, a first grinding head having an annular inclined blank contacting grinding face of one diameter for said one field, means for rotating and vertically feeding said head toward said blank supporting means for grinding engagement with blanks thereon while the latter are rotating, additional rotatable lens blank holding supports each mounted for rotation about inclined axes, and including means for supporting the blanks in a circle and in an arcuate plane corresponding to the radius of curvature of another field to be generated thereon, additional rotatable and vertically movable grinding heads each respectively comprising annular inclined blank contacting faces having diameters for generating the said other and an intermediate field, said heads all being positioned in working relationship with their respective blank support-

ing means with the grinding faces of the heads encircling said axes of rotation of the blank supporting means while the grinding faces of the heads are in grinding contact with blanks on the supporting means and polishing means including individual rotatable supports for respectively receiving and rotating the blanks about vertical axes, and polishing heads adjustably supported superjacent said supports and each having annular blank contacting faces having diameters correlated with the size and disposition of the individual fields generated on the blanks for polishing the respective fields.

3,004,373

ABRASIVE DEVICES

Raymond A. Brooks, Latham, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts Filed Mar. 14, 1960, Ser. No. 14,657 3 Claims. (Cl. 51-193.5)

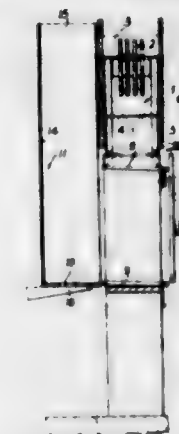


1. An annular abrasive wheel comprising a plurality of flexible abrasively coated sheets formed in an annular row defining an inner cylindrical periphery and an outer cylindrical periphery, said sheets being secured together adjacent said inner periphery by a cured adhesive penetrating between adjacent sheet members, at least one annular groove in said internal periphery and a rigid fibrous annular core member bonded in said groove.

3,004,374

APPARATUS FOR COLLECTING CIGARETTES IN RECEPTACLES

George Frederick Pembroke, Deptford, London, England, assignor to Molins Machine Company Limited, London, England, a British company Filed July 10, 1958, Ser. No. 747,738 Claims priority, application Great Britain July 16, 1957 6 Claims. (Cl. 53-148)



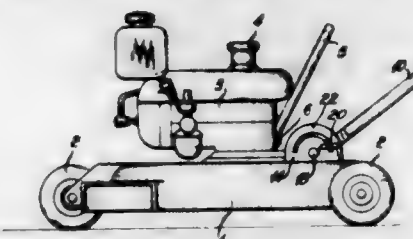
1. Collecting apparatus for cigarettes, comprising in combination a stationary open-sided and open-topped receptacle having opposed end walls, means to feed cigarettes into the receptacle from above so that they move downwardly through the receptacle and accumulate on one another to form a stack confined within the receptacle by said end walls, a pusher adjacent one open side of the receptacle, movable support means adjacent the other

open side of the receptacle, said support means being arranged to support a container in a plurality of different positions, means to move the said support means from one said position, through a distance at least equal to the height of a stack consisting of a substantial number of layers of cigarettes, to the next position, the said one position and the said next position being such that a lower part and an upper part respectively of the container are successively positioned in register with a stack in the receptacle, pusher actuating means to cause the pusher to move through the receptacle after a stack has been formed therein to transfer the stack into the container, and means operative, after a stack has been pushed into a lower part of the container, to move the support means downwardly and thereby bring an upper part of the container into register with the next stack to be formed in the receptacle.

3,004,375

LAWN MOWER WITH AN AUXILIARY HANDLE

Max Seyffer, Munich, Germany, assignor to Rockwell G.m.b.H., Pinneberg, near Hamburg, Germany, a corporation of Germany Filed Sept. 18, 1959, Ser. No. 840,869 Claims priority, application Germany Sept. 23, 1958 3 Claims. (Cl. 56-25.4)

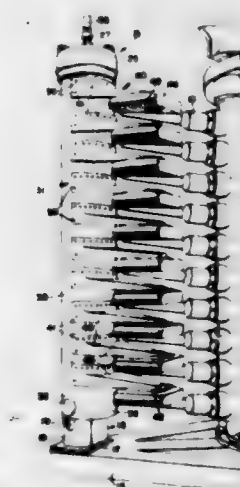


1. In a power driven lawn mower of the rotary type having a housing supported by ground engaging wheels, an internal combustion engine mounted on said housing, a cable pull starter roll mounted on said engine, and a U-shaped auxiliary handle rigidly fixed to said engine adjacent said starter roll whereby the operator may grip said U-shaped handle to stabilize the mower while actuating said starter roll.

3,004,376

MOISTENING ASSEMBLY FOR COTTON PICKING SPINDLES

Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware Filed Sept. 4, 1959, Ser. No. 838,141 10 Claims. (Cl. 56-41)



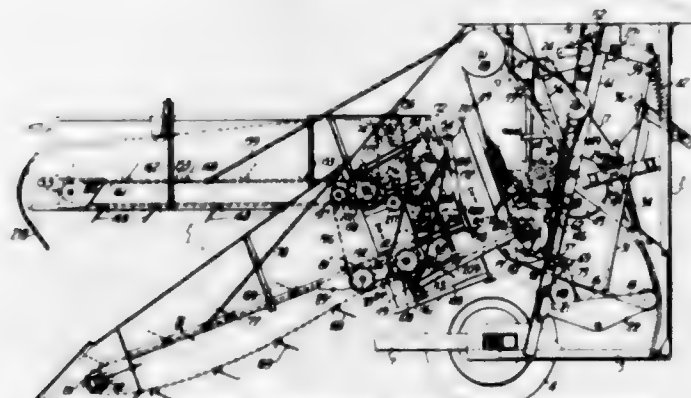
1. A moistener assembly for a cotton harvesting unit having a main frame and vertically spaced picker spindles comprising: a base member mounted on the frame; an

upright U-shaped columnar member fixedly attached to the base member having the bight portion thereof facing the spindles and opposite leg portions extending away from the spindles, said columnar member having therein a series of vertically spaced openings spaced on the order of the vertical spacing of the spindles; a fluid-distributing header fixed adjacent the upper end of the columnar member and having a series of fluid outlets therein; a plurality of tubes, each extending from a respective outlet through one of the spaced openings and having a terminal end spaced outwardly of the respective opening; said tubes being disposed behind the bight portion and between the leg portions of the columnar member; a plurality of vertically spaced laterally disposed arms, each of said arms having a vertical supporting flange at one end conforming to the shape of and embracing the outer surface of the column member proximate an opening, a laterally disposed flange at the opposite end, and an arm section between said ends opening downwardly and embracing from opposite sides and from above the end of the tube extending through the respective opening; means fixing the vertical supporting flanges to the U-shaped columnar member; and moistener pad means carried by the laterally disposed flanges of the arms.

3,004,377

BALING MACHINE

Paul H. Herrer, La Porte, Ind., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 25, 1958, Ser. No. 717,503
16 Claims. (Cl. 56-341)



1. A baling machine comprising, in combination, a continuously operable feed mechanism having a material inlet and a material outlet end; a bale forming mechanism having a predetermined operating cycle including a material admitting and a material shut off phase; conveying means adjustable selectively to either a first operating condition for delivering material from said outlet end of said feed mechanism to said bale forming mechanism, or to a second operating condition for delivering material from said outlet to said inlet end of said feed mechanism; control means operable to adjust said conveying means to either said first or to said second operating condition; and means operatively connecting said control means with said bale forming mechanism for actuation thereby so that said conveying means will be in said first operating condition during said material admitting phase and in said second operating condition during said material shut off phase of said operating cycle.

3,004,378

SIDE DELIVERY RAKING DEVICE

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company of the Netherlands

Filed Sept. 30, 1957, Ser. No. 687,027

Claims priority, application Netherlands Nov. 30, 1956
5 Claims. (Cl. 56-377)

1. A side delivery rake for the lateral displacement of crop lying on the ground, comprising a frame, a row of

rake wheels, means supporting the rake wheels on said frame in operative association for side delivery operation, said means including support members pivotally connected to said frame, said support members supporting the rake wheels in a row for said side delivery operation, a first ground wheel connected to said frame at



one end of said row of rake wheels, a second ground wheel connected to said frame at the other end of said row of rake wheels, a third ground wheel pivoted on said frame behind said row of rake wheels intermediate said first and second ground wheels, and means to fix said third wheel against pivotal movement.

3,004,379

DEVICE FOR THE LATERAL DISPLACEMENT OF MATERIAL LYING ON THE GROUND

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited liability company

Filed Jan. 24, 1958, Ser. No. 711,053

Claims priority, application Netherlands Oct. 16, 1957
11 Claims. (Cl. 56-400.02)



1. A hand-operated lawn rake for laterally displacing material lying on the ground comprising a mobile frame, consisting of one beam, one running wheel on and supporting the beam, said beam being pivotal on said running wheel through an angle of 180 degrees at the most, handles on the beam for manually propelling the device, a frame beam, at least one rake wheel on said frame beam for engagement with the ground, a second frame beam pivotal at one end on the mobile frame adjacent said running wheel and connecting the first said frame beam with said mobile frame, and supporting means on said mobile frame and engaging said second frame beam and adapted for limiting relative movement between said mobile frame and second frame beam.

3,004,380

ALARM CONTROL FOR TIME ALARM

Philip A. Sidell, West Hartford, George N. Kaniwec, Southington, and Oscar B. Burgeson, Bristol, Conn., assignors to The Ingraham Company, Bristol, Conn., a corporation of Connecticut

Filed June 19, 1959, Ser. No. 821,590

18 Claims. (Cl. 58-21.12)

1. An alarm control for a time alarm with a timing mechanism, comprising an alarm actuator movable into

and from an alarm-on position and normally urged into said position; a device for arresting said actuator in an alarm-off position away from said alarm-on position; presetable alarm-time means adapted to be operated by said timing mechanism to release said actuator from arrest by said device at the preset alarm time and to con-



dition said device a predetermined time period thereafter for arresting said actuator in said alarm-off position only; means operable to return said actuator to said alarm-off position; and means other than said return means manually operable to return said actuator into, and lock and unlock the same in, said alarm-off position.

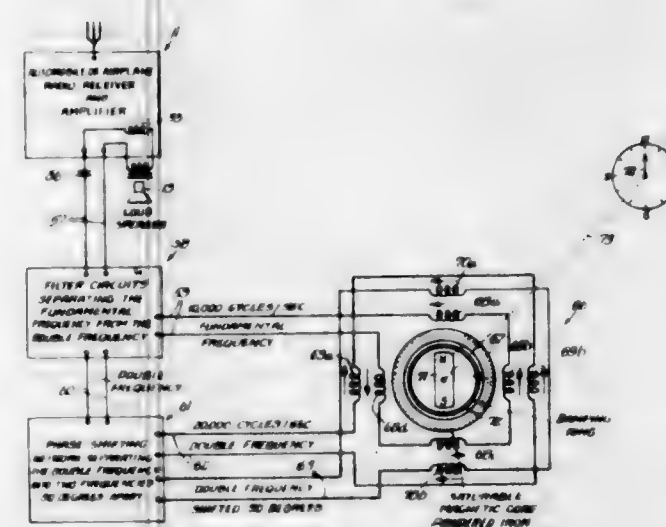
3,004,381

ELECTRICAL SYSTEM

Edmund O. Schweitzer, Jr., 1002 Dundee Road, Northbrook, Ill.

Filed Apr. 6, 1956, Ser. No. 576,564

24 Claims. (Cl. 58-24)



11. A remote indicating system comprising, in combination, radio transmitting and receiving means, means for modulating said transmitting means with a first alternating current and with a second alternating current having double the frequency of said first alternating current, means for shifting the phase relationship between said first and second alternating currents through 360 degrees in 24 hours, filter circuit means at said receiving means for separating said alternating currents, phase shifting means for splitting the double frequency alternating current into two alternating currents in quadrature with respect to each other, an annular magnetic core structure, a first winding means on said core structure connected to be energized by the first alternating current from said filter means to induce an alternating magnetic flux in said core structure, a second winding means on said core structure connected to be energized by said two alternating currents in quadrature to induce a shifting alternating magnetic

flux in said core structure having a frequency double that of the first mentioned alternating flux, the resultant of said fluxes being a unidirectional field the position of which shifts in accordance with the degree of shift between said first and second alternating currents, rotatable magnetic means responsive to said field and rotated twice through 360 degrees in 24 hours, and time indicating means driven by said rotatable magnetic means.

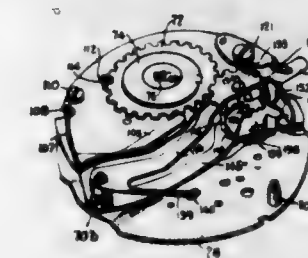
3,004,382

STEM WINDING AND SETTING WATCH MOVEMENT

Oscar R. Petters, Columbia, Pa., assignor to Precision Time Corporation, New York, N.Y., a corporation of New York

Filed June 3, 1959, Ser. No. 817,750

7 Claims. (Cl. 58-68)



1. A time piece comprising, in combination, a dial plate, a train plate, spacer posts securing said dial and train plates in spaced apart parallel relationship, a gear train mounted between said plates, a spring mounted between said dial and train plates having a set of spring winding gears drivingly engaged with said gear train, a set of hands mounted outwardly upon said dial plate having a set of hand setting gears drivingly connected to said gear train, a manually operable stem carried by said plates selectively engageable with said gear train to actuate one of said set of spring winding gears and said hand setting gears, selector means disconnecting said manually operable stem from one of said set of gears in response to connection of said manually operable stem with the other of said set of gears, said selector means comprising a winding lever and a setting lever pivotally supported at one end between said plates, a drive pinion secured upon said stem, a winding wheel rotatably carried upon the opposite end of said winding lever in meshing engagement with said drive pinion, spring means urging said winding wheel into meshing engagement with said spring winding gears, a setting wheel rotatably carried upon the opposite end of said setting lever in meshing engagement with said drive pinion, and spring means normally urging said setting wheel out of meshing engagement with said hand setting gears.

3,004,383

AUTOMATIC LINKING MACHINE

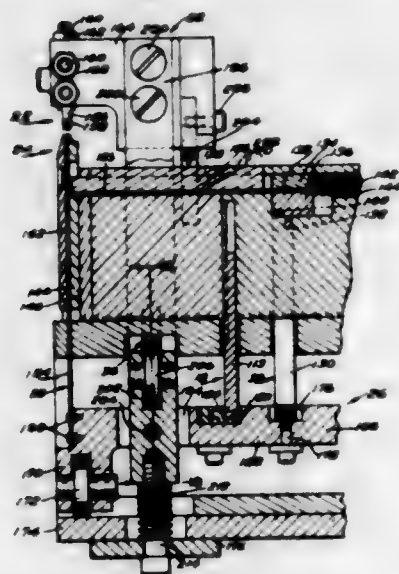
Thomas J. Crafford, Riverside, R.I., assignor to Crafford Tool & Die Co., a corporation of Rhode Island

Filed Dec. 13, 1957, Ser. No. 702,655

9 Claims. (Cl. 59-25)

1. A chain making machine comprising a cutting and forming station, wire stock feed means for feeding a pre-selected length of wire into said cutting and forming station, means cutting and partially forming a section of wire at said station, magazine means extending from said station having an inlet end for receiving said partially formed wire sections and a discharge end from which the wire sections are fed one at a time, upper and lower die heads in juxtaposition with the discharge end of said magazine means, pusher means transferring said formed wire section from said station into said magazine means and si-

multaneously ejecting one of said partially formed wire sections from said magazine discharge end into one of said die heads, said one die head including finger means

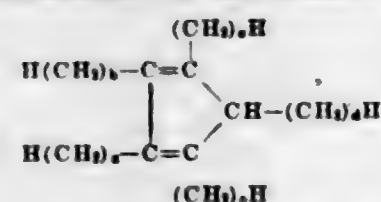


slidable therein for moving said one wire section relative thereto and toward the other die head, first operating means operatively coupled with and effecting operation of said cutting and forming means, pusher means and finger means, and second operating means operatively coupled with and effecting movement of said other die head toward said one die head, and third operating means cooperative with said first and second operating means and said feed means actuating the same in predetermined time sequence, said third operating means including first cam means for effecting actuation of said first operating means and second cam means for effecting actuation of said second operating means, and independently actuable means engaging said second cam means operable to effect movement thereof, and means responsive to movement of said second cam means engaging said first cam means and effecting actuating movement thereof.

3,004,384 METHOD OF OPERATING A TURBOJET ENGINE WITH HIGH ENERGY FUELS

James H. Saunders, New Martinsville, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 7, 1956, Ser. No. 589,855
11 Claims. (Cl. 60-35.4)

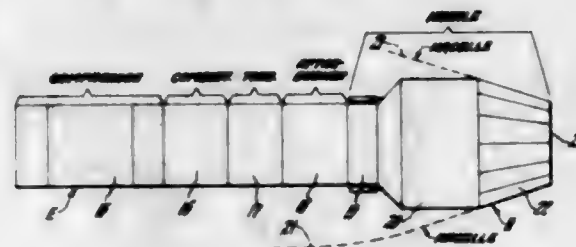
1. A method of operating a turbojet engine which comprises feeding a mixture of air and a hydrogenated poly-allycyclic hydrocarbon mixture having a specific gravity of from about 0.85 at 30° C. to about 1.5 at 30° C. a pour point not substantially above 5° C., and a heat of combustion of at least 125,000 B.t.u.'s per gallon into the combustion chamber of said engine, subjecting the said mixture to combustion, passing the resulting hot gases through a turbine to expand the same and then passing the hot gases into the atmosphere by way of a nozzle, whereby thrust is produced, the said hydrogenated poly-allycyclic hydrocarbon mixture being that obtained upon hydrogenation of an unsaturated poly-allycyclic hydrocarbon obtained by the polymerization of allycyclic diene monomer of the structure



wherein a , b , c , d and e are integers from 0 to 4, inclusive.

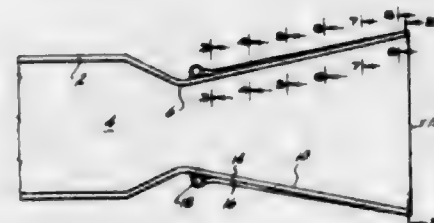
3,004,385 VARIABLE CONVERGENT-DIVERGENT JET NOZZLE

Esten W. Spears, Jr., and William T. Given III, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 25, 1958, Ser. No. 745,797
6 Claims. (Cl. 60-35.6)



1. A variable nozzle mechanism comprising, in combination, a gas duct having an outlet, a ring of overlapping flaps connected to the duct adjacent the outlet for concurrent radial swinging movement of the flaps, an actuating ring extending around the duct adjacent the outlet and movable axially of the duct, each alternate flap having a track thereon extending longitudinally of the flap, a carriage reciprocable on each track, two arms on each carriage each pivoted thereto for swinging movement about an axis parallel to the corresponding track, each remaining flap having two cams thereon each pivoted thereto for swinging movement about an axis extending longitudinally of the flap, the arms including cam followers engaging the cams of the adjacent flaps, and means coupling each carriage to the actuating ring for reciprocation therewith.

3,004,386
ROCKET NOZZLE TUBE CONSTRUCTION
Walter A. Ledwith, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,375
10 Claims. (Cl. 60-35.6)

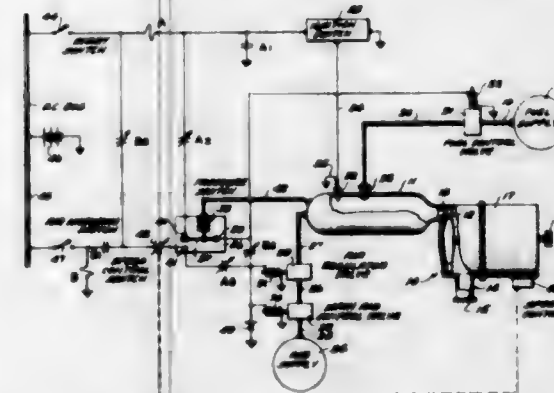


1. A substantially annular wall construction for a rocket, in which the wall varies in diameter from end-to-end, said wall construction including a plurality of axially extending tubes arranged in a ring to form the annular wall, said tubes being arranged in pairs and each pair of tubes being in contact with adjacent pairs of tubes, the tubes of each pair being in radial alignment with each other at smaller diameters of the wall and in circumferential alignment with each other at larger diameters of the wall, each tube of the pair being flattened substantially to semicircular shape between the smaller and larger diameters.

3,004,387
GAS TURBINE STARTER CONTROL SYSTEM
Morton Powell Woodward, Jr., Manchester, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 27, 1959, Ser. No. 808,983
4 Claims. (Cl. 60-39.14)

1. In a fuel-air gas turbine starter having fuel and air supplies connected through control means to a combustion

chamber arranged to deliver products of combustion of fuel and air to a turbine rotor and having ignition means for initiating combustion in said combustion chamber, a control system for controlling the cycle of said starter comprising relay means including an actuating coil and at least three sets of contacts operable upon energization of said coil, means for connecting a source of electrical energy to said coil, pressure responsive switch means connected to respond to the pressure in said combustion chamber, said pressure responsive switch means establishing a closed circuit path when in the inactivated position and being responsive to an increase in the pressure in said combustion chamber beyond a preselected level corresponding to combustion in said combustion chamber to interrupt said closed circuit path, speed responsive switch means connected to respond to the speed of the starter and establishing a closed circuit path when said speed is below a preselected level and an open circuit path when said speed is above said preselected level, first electrical connecting means interconnecting said speed responsive switch means, said pressure responsive switch means, and first and second sets of said relay contacts in a shunt path around said relay coil to



shunt out said coil and thereby prevent energization thereof, second electrical connecting means electrically connecting a third set of said relay contacts to said relay coil so as to lock said relay in when said coil is energized upon the opening of said shunt path, said first and second sets of contacts being in the normally closed position and said third set of contacts being in the normally open position when said relay coil is de-energized, third electrical connecting means for connecting said electrical energy source to said ignition means through said first electrical connecting means through a parallel path formed in one leg thereof by said relay coil and in the other leg thereof by said speed responsive switch means, said pressure responsive switch means and said first and second sets of relay contacts, and fourth electrical connecting means for connecting said electrical energy source to said fuel and air controls through said first electrical connecting means through a second parallel path formed in one leg thereof by said relay coil, said first set of contacts and said pressure responsive switch means, and in the other leg thereof by said speed responsive switch means and said second set of contacts.

3,004,388 MOUNTING AND ADJUSTING DEVICE FOR THE INNER RING OF A COMBINED TURBO-JET- RAM-JET ENGINE

Yvon Foulon, Versailles, France, assignor to Nord-Aviation, Société Nationale de Constructions Aéronautiques, Paris, France, a joint-stock company of France
Filed July 14, 1959, Ser. No. 827,068
Claims priority, application France Mar. 28, 1959
5 Claims. (Cl. 60-39.32)

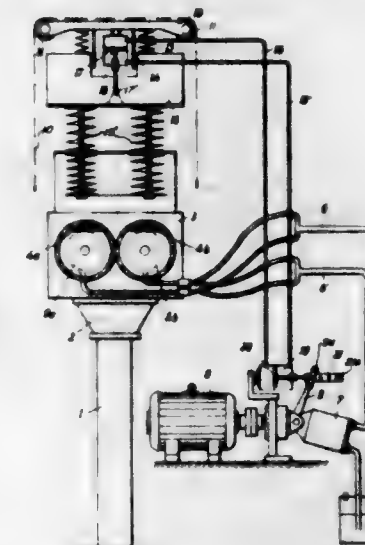
1. A mounting and adjusting device for the inner protective ring of a combined turbo-jet-ram-jet engine, each jet having a nozzle and a nacelle, said ring surrounding

a downstream portion of the turbo-jet nozzle, the downstream end of said ring having a resilient guiding means for said nozzle, said device comprising a plurality of triangular assemblies uniting the nacelle of the combined jet-engine with said inner protective ring, each of said assemblies including an upstream strut and a downstream strut articulated to each other at one of their ends on a communal gusset-piece and said gusset-piece being itself articulated to the nacelle, the two other ends of said struts being articulated to the ring at points which are in parallel alignment with the axis of said inner ring, means on the struts for adjusting their lengths, and means for the articulation to the nacelle of said communal



gusset-piece, said articulation means for the two struts in the triangular assemblies comprising merely a fixing means for two of said assemblies, two assemblies forming rigid body assemblies which are symmetrical in relation to the central vertical longitudinal plane of the ring and wherein the two corresponding struts converge towards each other in the peripheral zone of the inner ring and, for the other assemblies, said articulation means comprising both a fixing means and a limited sliding means, said other assemblies forming sliding head assemblies, the lengths of the struts being adjust when cold, whereby the turbo-jet and the inner ring are coaxial in normal operation of the turbo-jet.

3,004,389
DEVICE FOR VARYING THE FREQUENCY
OF A VIBRATION EXCITER
Ludwig Müller, Heinrich-Helme Strasse 41,
Marburg an der Lahn, Germany
Filed Apr. 14, 1960, Ser. No. 22,230
Claims priority, application Germany Apr. 25, 1959
6 Claims. (Cl. 60-53)



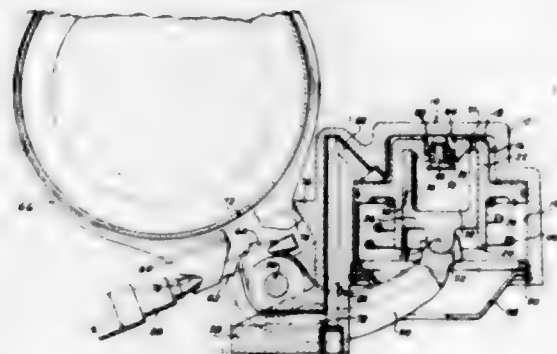
1. A device for varying the frequency of a vibration exciter for use with a vibration actuated pile driving device and for tuning said frequency to the natural frequency of a pile member to be driven or lifted, said device comprising a vibratory exciter including a rotary mass and a rotary hydraulic motor for driving said mass, a rotary, constant speed pump, conduit means connecting the pump with said motor for feeding pressure fluid to the motor, the feed of pressure fluid controlling the rotational speed of the motor, and control means for gradually regulating the feed of the pressure fluid to the motor.

3,004,390

FAST ACTING SERVO MECHANISM

James J. Duffy, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Continuation of abandoned application Ser. No. 637,436, Jan. 31, 1957. This application Aug. 11, 1959, Ser. No. 833,108

6 Claims. (Cl. 60-97)



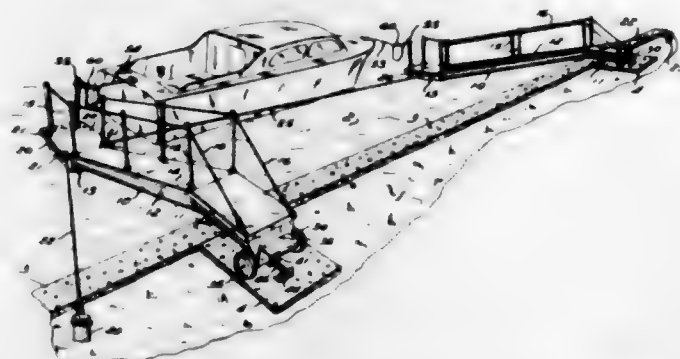
1. A fluid pressure operated servo mechanism for actuating a movable member comprising a cylinder, a compound piston movably disposed within said cylinder, said piston comprising a main piston portion defining in part a main fluid working chamber within said cylinder and a pilot piston portion slidably disposed within said main piston portion in telescopic relationship therewith, said pilot piston portion and said main piston portion defining another fluid working chamber of lesser volume than the main fluid working chamber, a check valve formed in said main piston portion providing a one-way transfer of fluid from said main working chamber to said other working chamber, said pilot piston portion being adapted to actuate said movable member, and a precalibrated orifice in said main piston portion positioned to provide continuous, restricted fluid flow between said working chambers during relative telescopic movement of said piston portions whereby a cushioned actuating force is applied to said movable member during an initial operating interval and wherein an intermediate actuating force build-up occurs during a subsequent operating interval upon relative movement of said piston portions, said force build-up being followed by a final sustained operating force upon positive engagement of said piston portions.

3,004,391

FLOATING DOCK

Leslie C. Miller, Macedonia, Ohio
(679 Norsota Way, Sarasota, Fla.)
Filed July 16, 1958, Ser. No. 748,984

7 Claims. (Cl. 61-48)



1. A dock comprising an elongated body having a front end to float on the water and a shore end, means to prevent tilting of the dock, said means including shore-engaging supports attached to the shore end of the body adjacent to its vertical sides, and means connecting the shore end of the body to the shore for limited vertical, longitudinal and lateral movement of the dock, said means including a universal motion device attached to said shore

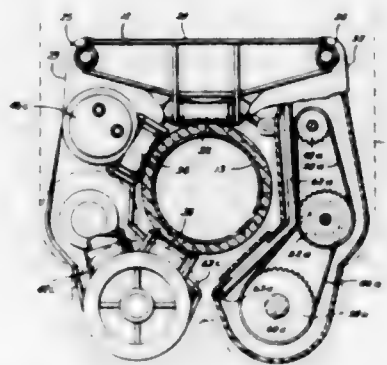
end, guide means attached to the shore and guiding the device for longitudinal movement of the dock, and resilient means engaging the device and guide for resiliently restraining movement of the device on said guide.

3,004,392

SUBMARINE PIPE LINE TRENCHER AND METHOD

William D. Symmank, Houston, Tex., assignor to Tellepsen Construction Co., Houston, Tex., a corporation of Texas

Filed Apr. 8, 1959, Ser. No. 805,063
16 Claims. (Cl. 61-72.4)



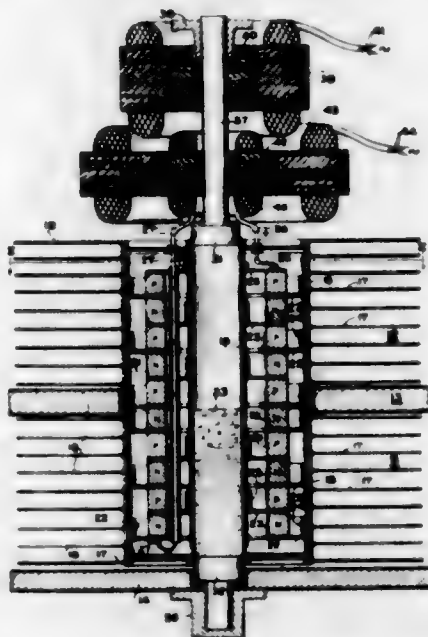
1. A pipe line trencher for excavating a trench to hold pipe comprising a cross-member, two pincer arms, each of said pincer arms pivotally connected to the cross-member, means connected between the cross-member and each pincer arm for moving said arms toward and away from each other thereby securing said trencher to the pipe when the trencher is placed about the pipe and the pincer arms closed on the pipe, roller means connected to each of said pincer arms, at least one rotary cutter connected to each pincer arm, motor means operatively connected to said cutters for rotating said cutters, and means for moving said trencher along the pipe.

3,004,393

THERMOELECTRIC HEAT PUMP

Carl F. Alsing, Wilbraham, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 15, 1960, Ser. No. 22,444
9 Claims. (Cl. 62-3)



1. In a thermoelectric heat pump, heat absorbing means, heat dissipating means, each of said means being movable with respect to the medium from which it absorbs heat or to which it dissipates heat for the purpose

of improving the heat transfer rate, a plurality of thermoelectric elements providing hot junctions and cold junctions upon the passage of direct electric current there-through, said elements being supported for movement with said means and having their hot junctions in heat transfer relationship with one of said means and their cold junctions in heat transfer relationship with the other of said means, a synchronous converter energized by alternating electric current, said converter having a rotor structure for moving said means and for supplying direct electric current to said thermoelectric elements, and a pair of electrical conductors carried by said rotor structure and attached to said rotor structure and to said thermoelectric elements.

3,004,394

HELIUM HEAT RECTIFIER

Charles Darby Fulton, Jr., Nashville, Tenn. (440 Beechtree Drive, Cincinnati 24, Ohio), and William M. Fairbank, Durham, N.C. (141 E. Floresta, Menlo Park, Calif.)

Filed Apr. 22, 1957, Ser. No. 654,405
18 Claims. (Cl. 62-3)



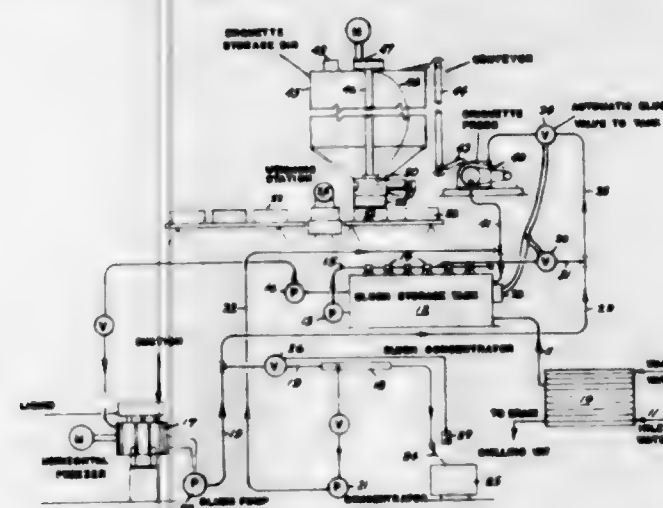
1. A thermal valve of the character described comprising a sealed chamber and a liquid mixture of helium isotopes 3 and 4 comprising between less than one percent and one-tenth of one percent of helium 3 in said chamber.

3,004,395

METHOD OF HANDLING REFRIGERANT

William F. Morris, Jr., Raleigh, N.C., assignor to Morris and Gorrell, Inc., Raleigh, N.C., a corporation of North Carolina

Filed July 25, 1956, Ser. No. 599,986
3 Claims. (Cl. 62-66)



1. The process of continuously producing and handling refrigerant in various states comprising the steps of continuously flowing water over a refrigerated surface, congealing a portion of the water on the refrigerated surface to form a film of ice thereon, removing

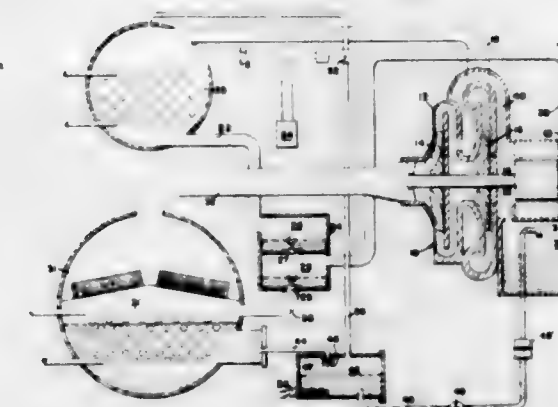
the frozen film of ice from the refrigerated surface to form discrete ice crystals continuously, mixing the ice crystals removed from the refrigerated surface with water to form a slush ice mixture suitable for flowing in a closed passageway, pumping a portion of said slush ice mixture to a remote location for storage and for refrigerating water for said refrigerated surface, compressing another portion of said slush ice mixture after removing excess water therefrom to form a solid refrigerant, and conveying said solid refrigerant to a storage bin for periodic removal from the storage bin for refrigerating articles.

3,004,396

APPARATUS FOR AND METHOD OF FLUID RECOVERY IN A REFRIGERATION SYSTEM

James W. Endress and Charlie D. Miller, Syracuse, and Ivor S. Pelsue, North Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Jan. 4, 1960, Ser. No. 288
17 Claims. (Cl. 62-84)



4. The method of recovering lubricant from a mixture of lubricant and refrigerant circulating in a refrigeration machine which consists in the steps of withdrawing a portion of the mixture from the evaporator, subjecting the mixture to a source of heat sufficient to vaporize the refrigerant and periodically subjecting the mixture to pressure within the machine in excess of the pressure within the portion of the machine to which it is desired to transmit the mixture for the purpose of creating a pressure difference sufficient to provide flow of the mixture to the desired locale in the machine.

3,004,397

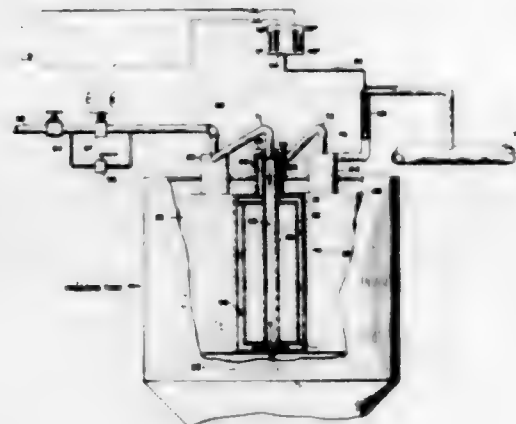
METHOD AND APPARATUS FOR DEHYDRATION

Elwood P. Wenzelberger, Newburgh, N.Y., assignor, by mesne assignments, to Union Carbide Corporation, a corporation of New York

Filed Apr. 17, 1958, Ser. No. 730,746
5 Claims. (Cl. 62-123)

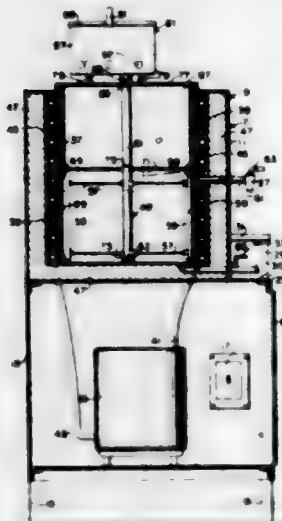
1. An apparatus for dehydrating a heat sensitive liquid composition of relatively low solids content comprising a plurality of interconnected refrigerating tanks for receiving said liquid composition, said tanks including elongated stationary freezing cylinders spacedly arranged therein, said cylinders comprising a hollow outer shell for the passage of refrigerant, a central passageway for refrigerant communicating with said hollow outer shell, a pipe line for connecting said central passageway of one of said freezing cylinders with a source of refrigerant, conduit means for connecting said freezing cylinders of each tank in series for the passage of refrigerant through said cylinders and to a discharge line connected to the last freezing cylinder of said series, electrically operated valve means disposed in said pipe line for alternately admitting and restricting the passage of refrigerant

to said freezing cylinders and through said hollow shell walls, means operable in response to temperature changes of the refrigerant in the freezing cylinders for actuating said valve, said last-mentioned means including a thermometer bulb disposed in said discharge line of the last freezing cylinder, means for introducing the liquid composition to be dehydrated into said refrigerating tanks,



electrically operated valve means operatively connected to each tank for discharging the refrigerated mixture to a centrifuge, and means comprising a common header arranged above and discharging into said centrifuge for collecting said refrigerated mixture discharged from said plurality of tanks.

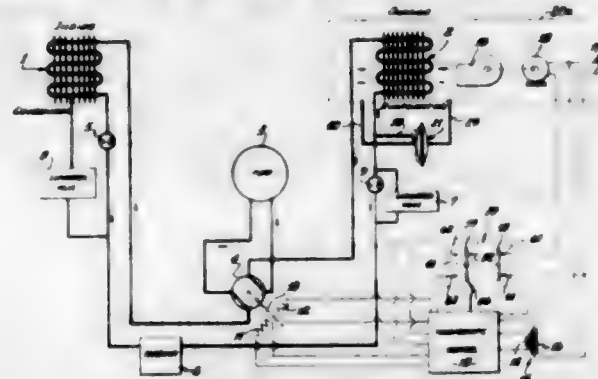
3,004,398
DISPENSER AND CONTROLS THEREFOR
James N. Mullins, Jr., % Polar Chips Mfg. Co.,
P.O. Box 4398, Fort Worth 14, Tex.
Filed Apr. 8, 1959, Ser. No. 804,981
6 Claims. (Cl. 62—136)



5. Apparatus for making a partially frozen water containing food composition comprising, in combination, tank means with separate portion for feed material and freezing, refrigeration means mounted and operable relative to said freezing portion of said tank means to remove heat therefrom, paddle means mountable in said freezing portion of said tank means, slush outlet means in said freezing portion of said tank means, power means operatively connected to said paddle means to turn same in operation, and switch means operatively connected to said refrigeration means to start and stop same, said switch means being connected to be responsive to a change of torque on said paddle means to, in operation, stop and start said refrigeration means when the torque has reached a predetermined value.

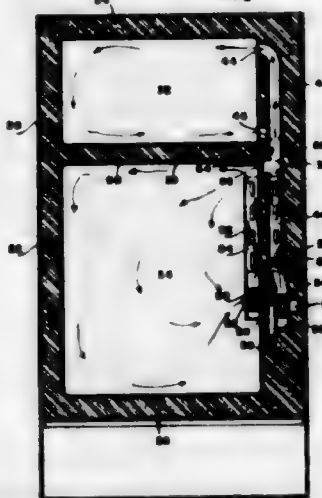
3,004,399
AUTOMATIC DEFROST CONTROL FOR REFRIGERATORS OR HEAT PUMP SYSTEMS
William F. Keller, Covina, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California

Filed Dec. 1, 1958, Ser. No. 777,446
11 Claims. (Cl. 62—140)



1. In an automatic defrost control of a heat exchange system including a vaporizable refrigerant, a compressor, two coils each capable of operating either as an evaporator or a condenser, a duct surrounding the first of the coils and an electric motor operated blower for passing air through the duct and over the first of the coils, said duct having an entrance and an exit for the air; the combination therewith of: a circuit controller; a first circuit for energizing the motor, and controlled by said circuit controller; a second circuit for reversing the functions of the two coils, also controlled by said circuit controller, the circuit controller having two stable positions, the first in which the motor is energized and the first coil absorbs heat and the second coil acts as a condenser, and the second position in which the motor is de-energized, the first coil acts as a condenser and the second coil absorbs heat; a control device for operating said circuit controller; means for transmitting the air pressure in the duct, on the blower side, to the control device; said control device being responsive to the air pressure transmitted from the duct, such that a pre-selected air pressure causes the control device, through the elements cooperable with the circuit controller, to move the circuit controller to the second stable position.

3,004,400
TWO COMPARTMENT FROST-FREE REFRIGERATOR
Leonard J. Mann and John J. O'Connell, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,638
4 Claims. (Cl. 62—156)

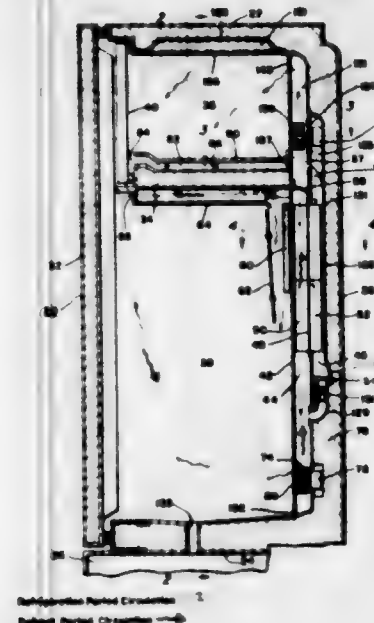


1. Refrigerating apparatus including insulated walls enclosing an above freezing compartment and a below freez-

ing compartment, said insulated walls being provided with a below freezing evaporator compartment, a cold evaporator located in said evaporator compartment, means forming in said insulated walls an air circuit connecting said below freezing compartment and said evaporator compartment, an above freezing evaporator located in heat transfer relation with said above freezing compartment, means providing communication between said evaporator compartment and said above freezing compartment, damper means for shutting off communication from said evaporator compartment alternately with said above freezing and below freezing compartments, fan means for forcibly circulating air alternately from said below and above freezing compartments through said evaporator compartment in heat transfer relation with said below freezing evaporator and return to said below and above freezing compartments alternately, and means for stopping refrigeration in said below freezing evaporator during the time communication is shut off between said below freezing and evaporator compartments.

3,004,401
FORCED AIR COOLED REFRIGERATOR
Leonard J. Mann, John J. O'Connell, and Clifford H. Wurtz, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

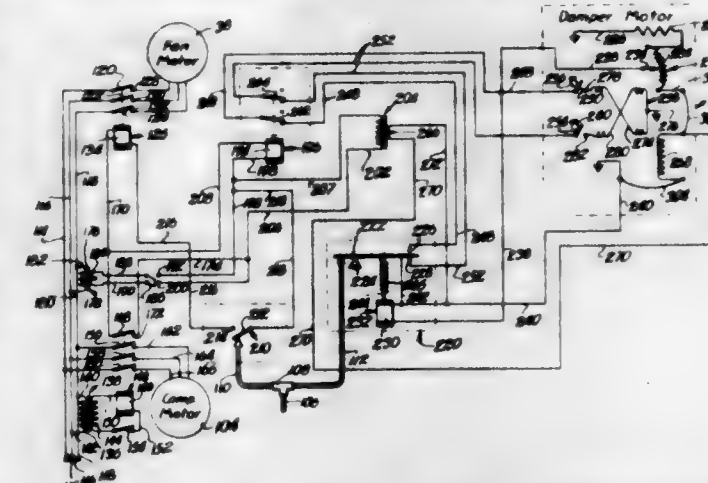
Filed July 8, 1960, Ser. No. 41,684
6 Claims. (Cl. 62—156)



1. A refrigerator including insulated walls enclosing a below freezing compartment and an above freezing compartment, one of the insulated walls enclosing the above freezing compartment being provided with an evaporator compartment, said insulated walls providing means for thermally isolating said evaporator compartment from said below freezing compartment, a wall of good heat conducting material dividing said evaporator compartment from said above freezing compartment, a substantially impervious plate-type evaporator dividing said evaporator compartment into a first compartment located between said evaporator and said wall of good heat conducting material and into a second compartment located on the opposite side of said evaporator, a refrigerant liquefying means operatively connected to said evaporator, first fan means for circulating air from said above freezing compartment through said first compartment into heat transfer with the adjacent side of said evaporator, and second fan means for circulating air from said below freezing compartment through said second compartment into heat transfer with the opposite face of said evaporator.

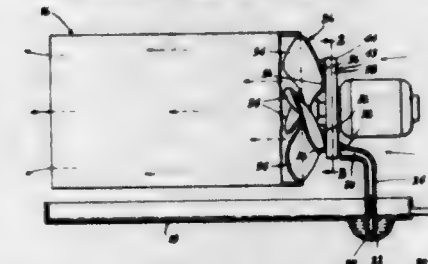
3,004,402
PRESSURE RESPONSIVE CONTROL APPARATUS FOR REGULATING REFRIGERATION EQUIPMENT

David M. Dart, Prairie Village, Kans., and Richard J. Stone, Tulsa, Okla., assignors to The Marley Company, Kansas City, Mo., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,051
14 Claims. (Cl. 62—183)



1. In refrigeration equipment having condenser means, refrigerant supply and return means connected to said condenser means, power driven fan means disposed to direct air through the condenser means, and movable damper structure for controlling the amount of air permitted to pass through said condenser means by natural convection and during operation of said fan means, the improvement of which comprises apparatus for actuating said fan means and the damper structure, said apparatus including mechanism for moving the damper structure to and from the open and closed positions thereof to regulate the amount of air permitted to pass over the condenser means; control means operably connected to said mechanism for actuating the latter to move said damper structure a distance in either of the directions of movement thereof, sufficient only to control flow of air over said condenser means by natural convection or during operation of said fan means and attempt to maintain the air flow, air temperature and predetermined condensing temperature in balance; and means controlling operation of said fan means for activating and deactivating the latter only after the head pressure of said refrigerant has reached preselected high and low levels respectively, and regardless of the positions of said dampers.

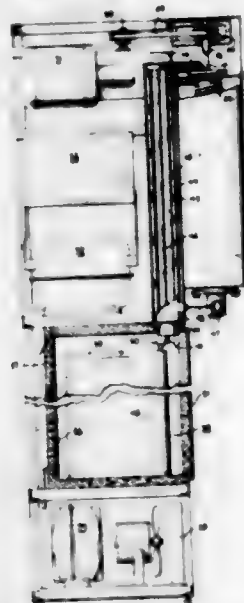
3,004,403
REFRIGERATED SPACE HUMIDIFICATION
Francis L. Laporte, 428 N. Claremont St.,
San Mateo, Calif.
Filed July 21, 1960, Ser. No. 44,446
5 Claims. (Cl. 62—311)



1. In a refrigeration system of the character described, said system including an evaporator and a therebelow disposed drain pan; means for trapping and collecting the condensate dripping from the evaporator into said drain pan, in combination with means for continuously withdrawing some of said condensate from the collected body thereof and diffusing it in atomized form about said evaporator and circulating it throughout the space refrigerated thereby, said last recited means including a suction tube,

a motor driven fan having a plurality of fan blades, a pair of spaced concentric ring members each rigidly secured to portions of the leading edges of said fan blades, and a circular series of spaced vanes disposed between and secured to said ring members.

3,004,404
APPARATUS FOR PRODUCING FROZEN CONFECTION
Richard F. Newby, 2417 W. 12th St., Anderson, Ind.
Filed May 15, 1959, Ser. No. 813,437
1 Claim. (Cl. 62-342)

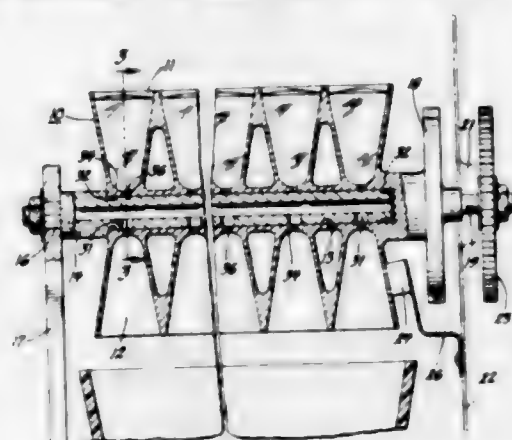


An apparatus of the class described, a cylindrical freezing chamber having a length:diameter ratio on the order of at least 20:1, said chamber having an inlet adjacent one end thereof and an outlet adjacent the other end thereof, manually-manipulable valve means for controlling flow through said outlet, refrigerant conduit means externally coiled about said chamber, a rotor having a portion concentrically and rotatably mounted within said chamber, a plurality of scraper blades carried by said rotor portion, each blade being elongated substantially in a plane including the axis of said rotor and bearing upon the internal wall of said chamber and said blades being axially and angularly spaced from each other relative to the axis of said rotor, a phase-change type refrigerating system connected to circulate refrigerant fluid through said refrigerant conduit and including an electric driving motor, thermo-sensitive means responsive to variations of temperature at said chamber and connected to control operation of said motor, a second electric motor connected to drive said rotor and automatically energized whenever said first-named motor is energized, means actuated by outlet-opening manipulation of said valve means to energize said second motor independently of said first-named motor, an "aerosol" type container charged with a liquid frozen confection mix gasified to a substantial superatmospheric pressure with an inert gas, and conduit means establishing open communication between the interior of said container, at a level below the surface of its charge, and the interior of said chamber.

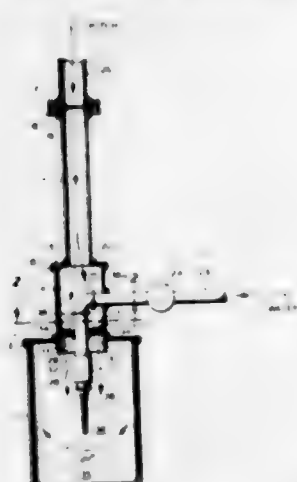
3,004,405
ICE MAKING DEVICE
Paul E. Upchurch, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,354
9 Claims. (Cl. 62-353)

1. An ice making device comprising, a rotatably mounted mold having oppositely facing compartments, means for rotating the mold about its mounting to successively bring said compartments into position to receive liquid and to have the liquid received in one of said compartments frozen into an ice block, said one compartment being inverted by said rotating means to ready the ice block releasable therefrom by liquid received in the other of said oppositely facing compartments, and means rendered effective by the inversion of said one compartment for venting the interior thereof through one of its walls at a point therealong contacted by the ice block therein to air ambient the mold for aiding release of said ice block from said one compartment.

ments, and means rendered effective by the inversion of said one compartment for venting the interior thereof through one of its walls at a point therealong contacted by the ice block therein to air ambient the mold for aiding release of said ice block from said one compartment.



3,004,406
QUENCHING HOT LIQUIDS
Jerry J. Foote, Sweeny, and Jack L. Mustard and Eugene E. Rankin, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 2, 1958, Ser. No. 732,604
10 Claims. (Cl. 62-373)



8. A liquid material quench apparatus comprising, in combination, a tubular shell having one end closed and being open at the other end, an opening in the closed end of said shell, a tubular member, said tubular member being exterior of said shell and fixed fluid-tight to said closed end around said opening, a first conduit exterior of said shell communicating with said tubular member, a spray nozzle mounted in said tubular shell, said spray nozzle being supported by said shell, and being disposed to direct spray toward the open end of said shell and a second conduit attached to said spray nozzle for passage of liquid to be sprayed.

3,004,407
CONTINUOUS POULTRY CHILLER APPARATUS AND METHOD
William F. Morris, Jr., Raleigh, N.C., assignor to Morris and Associates, Inc., Raleigh, N.C., a corporation of North Carolina
Filed Apr. 19, 1960, Ser. No. 23,170
6 Claims. (Cl. 62-374)

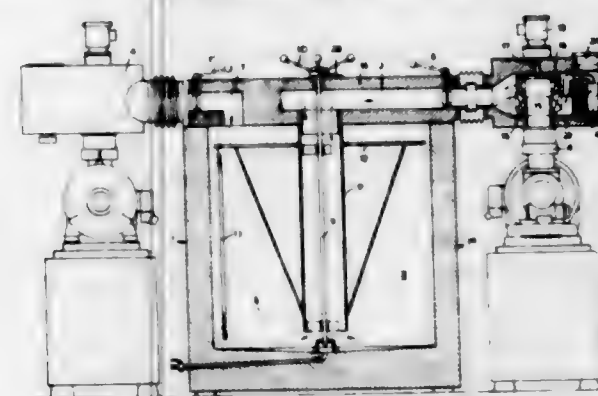
5. An apparatus for chilling poultry comprising a tank for retaining a liquid chilling medium therein, axial-

ly spaced apart means at the bottom of the tank for agitating and circulating the chilling medium in a direction transverse to the longitudinal direction of the tank, conveyor means supported above said tank having a plurality of depending spaced poultry advancing panel



members suspended therefrom, means for advancing said panel members in a directed path of travel longitudinally through the tank forming poultry advancing compartments between panel members for entrapping the transverse fluid flow of the chilling medium during movement of the poultry through the tank.

3,004,408
COLD INSTALLATION DESIGNED MORE PARTICULARLY FOR STORAGE OF AMPULLAE
Albert August Dros, Klaas Roozendaal, Cornelis Jacobus Marie van der Laan, Bertold Richard van Wulfften Palthe, and Evert Hellingman, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 9, 1958, Ser. No. 759,976
Claims priority, application Netherlands Sept. 25, 1957
3 Claims. (Cl. 62-419)

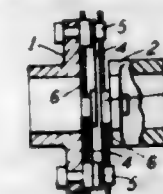


1. A cold storage system for containers of sperm, vaccine and serum or other substances comprising: a cold gas refrigerator having a cold head and operating on a reversed Sterling cycle, a compartment surrounding said cold head and having a closable inlet for atmospheric air and an outlet for cooled air, an enclosure to be cooled, a conduit connecting said enclosure to said compartment, a blower located adjacent to said cold head and in said compartment for blowing said cooled air into said enclosure through said outlet and conduit, and a discharge system adjacent to said cold head for drawing off air condensed on the cold head when said blower is inoperative.

3,004,409
FLEXIBLE COUPLING
John Constantine Grey, Osterley, England, assignor to Turbomachines Limited, Staines, England
Filed July 17, 1959, Ser. No. 827,743
Claims priority, application Great Britain, July 31, 1958
1 Claim. (Cl. 64-12)

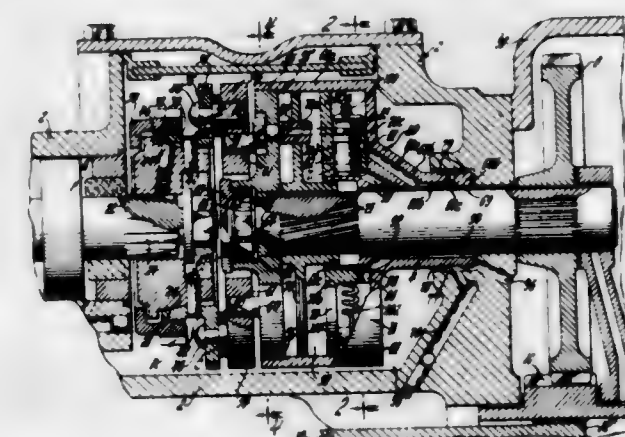
A flexible torque transmitting coupling comprising a first component adapted to be connected to a rotatable driving part; a second component adapted to be connected to a driven part rotatable normally about an

axis substantially coincident with the driving part axis of rotation; spaced pivot pins on said first component deployed on a pitch circle around the common axis of said rotatable parts; other spaced pivot pins on said second component deployed on said pitch circle and inter-



vening between the spaced pivot pins on said first component; and a plurality of substantially flat links having their opposite ends pivotally mounted respectively on pairs of pivot pins which are adjacent each other around said pitch circle and which are respectively on said first and second components.

3,004,410
ADJUSTABLE TIMING DEVICE
Earl R. Pierce, Bow, Wash., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 21, 1957, Ser. No. 647,578
12 Claims. (Cl. 64-25)



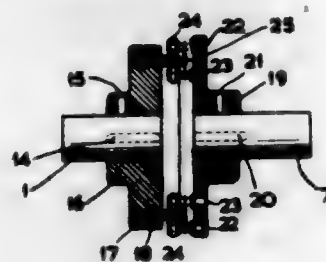
1. In a device of the character described, a drive shaft, a shaft adapted to be driven by said drive shaft, and means for drivingly interconnecting said shafts and for adjusting the angular phase relationship therebetween, said means including a housing embracing one of said shafts and mounted for limited rotation with respect thereto, said housing defining a cylinder, a piston reciprocally mounted in said cylinder, said piston being non-rotatably dowelled with respect to said housing and helically splined to said one shaft for limited axial movement and rotation with respect thereto, fluid pressure supply means including a valve member operable between two positions to alternatively control the admission and discharge of pressurized fluid to and from the opposite ends of said cylinder as separated by said piston, centrifugal means including a weight member pivotally mounted to swing radially outwardly with respect to said housing and adapted to control the operative position of said control valve in accordance with the rotative speed of said one shaft, means biasing said weight member radially inwardly and tending to maintain said valve member in one of its operative positions, said centrifugal means and said biasing means being cooperatively associated to maintain said valve member in its said one position when the rotative speed of said shafts is below a predetermined speed and to permit said valve member to be rapidly actuated to its second position when the rotative speed of said shafts is above said predetermined

speed, and flexible coupling means drivingly connecting said housing to the other of said shafts and accommodating limited variations in the axial spacing and alignment between said housing and said other shaft thereby isolating axial misalignments and deflections between said shafts from said housing and piston.

3,004,411

ROTARY SLIP CLUTCH

Roelof Dirk Bugel, Zwolle, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 17, 1957, Ser. No. 666,082
Claims priority, application Netherlands June 27, 1956
3 Claims. (Cl. 64-29)

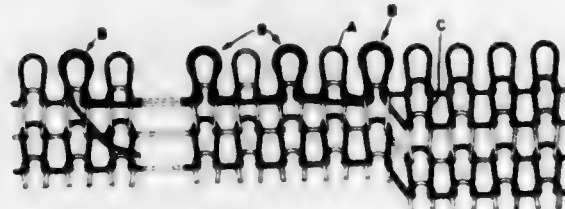


3. An adjustable rotary slip clutch comprising a driving portion, a driven portion, an elastic element having a high internal friction, means rigidly securing said elastic element to one of said portions, a pair of rollers each being positioned on opposite sides of said elastic element, the outer periphery of each of said rollers engaging said elastic element, means mounting one of said rollers on said driven portion, and means mounting said other roller on said driven portion adapted for radial movement relative to said driven portion including a spring urging said other element into engagement with the elastic element.

3,004,412

KNITTING MACHINE

Alexander Belford, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed Mar. 2, 1956, Ser. No. 569,041
16 Claims. (Cl. 66-42)



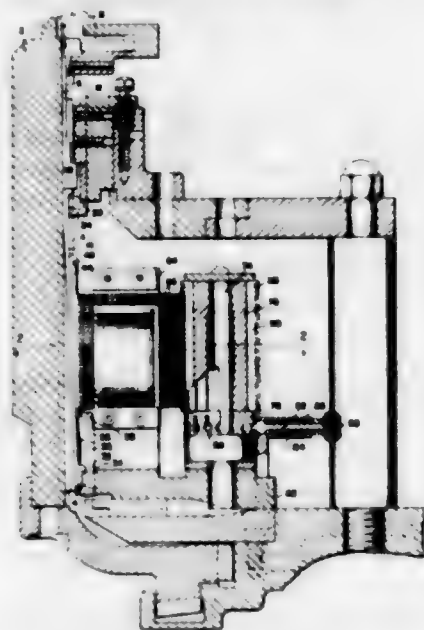
1. In a knitting machine, independent latch needles and means cooperating therewith for the formation of stitches including means for feeding yarns to the needles at at least two feeds, and means for effecting withdrawal of the yarn at one of said feeds following multiple feed knitting at both of said feeds with avoidance of eyelet formation in the fabric, the last means comprising means controlling one group of needles to take yarn and draw stitches thereof at one of said feeds with casting off of previously formed stitches carried thereby, means differentiating the needles of a group immediately following the first mentioned group, means causing certain needles of said group to take yarn at said feed and moving them in stitch drawing direction to a tuck level but insufficiently to cast off previously formed stitches carried thereby, means concurrently moving other needles of said following group flanking at least one of said needles to a tuck level, so that the yarn at said feed is held in the hooks of said certain needles by the wedging action re-

sulting from its location about the backs of said other flanking needles, and means for thereafter knitting the portions of yarn held in the hooks of said certain needles at the other of said feeds.

3,004,413

KNITTING MACHINE

Maurice H. Felker, Lakeport, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed May 4, 1960, Ser. No. 26,791
11 Claims. (Cl. 66-50)



1. In a multifeed circular knitting machine, a carrier mounting independently movable needles, elements cooperating with the needles for the production of stitches, and pattern controlling means for varying relationships of said needles and elements to produce knitted patterns, the last mentioned means comprising, associated with each of a plurality of feeds, a member selectively movable to a plurality of adjusted positions, means latching said member in any one of such adjusted positions, pattern elements carried by said member to be moved selectively to active positions by movements of said member to different latched positions, and elements individually associated with the needles to be variably controlled by said active pattern elements.

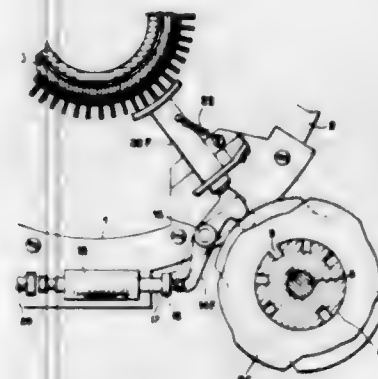
3,004,414

DOUBLE FEED APPARATUS FOR CIRCULAR HOSIERY MACHINE TO PRODUCE PLAIN AND TUCK STITCHES

Giorgio Billi, Firenze, Italy, assignor, by mesne assignments, to Singer-Fidelity, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Apr. 23, 1957, Ser. No. 654,505
Claims priority, application Italy Apr. 27, 1956
8 Claims. (Cl. 66-50)

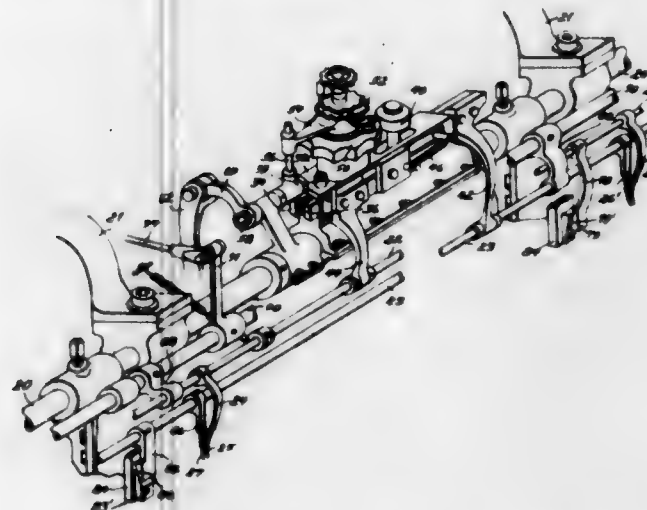
1. In a circular hosiery machine in combination: a rotary needle cylinder; needles and jacks slidably mounted on said cylinder, each jack being formed with two end butts one at each end and an intermediate butt; a support circumferentially surrounding said needle cylinder; first guide means for a first thread feed in a first position on said support; cams on said cylinder registering with said first position for controlling the needles thereat; a second guide means for a supplemental thread feed in a second position on said support angularly spaced from the first position; additional cams slidably carried by said support near said cylinder for selectively controlling the needles and jacks to form tuck stitches and to clear the stitches from the needles; said second guide means being disposed

between said first position and said additional cams, continuously rotating auxiliary cams carried on said support and driven in coordination with said needle cylinder to control said additional cams; and another cam disposed



CABLE STITCH ATTACHMENT FOR KNITTING MACHINE

Walter M. Golaski, 3339 Lancaster Ave., Philadelphia 4, Pa.
Substituted for abandoned application Ser. No. 738,593, May 23, 1958. This application Apr. 1, 1960, Ser. No. 19,980
2 Claims. (Cl. 66-96)



1. For use in a knitting machine of the type which includes a flat needle bed, a first lace rod, a second lace rod, means mounting said rods for movement in opposite directions above, and transversely of, said needle bed, for movement towards and away from said needle bed, and for rotation about their respective axes, and means for raising and lowering said lace rods relative to said needle bed, a first finger, at least one transfer point carried by said first finger, means mounting said first finger for movement with said first rod, a second finger, means mounting said second finger for movement with said second rod, and actuating means for rotating said rods, and the fingers carried thereby, in opposite directions when said lace rods are moved toward said needle bed to allow said transfer points to pass each other upon opposite movement of said rods transversely of said needle bed, and for oppositely rotating said rods, and the fingers carried thereby, when said lace rods are moved away from the needle bed to allow said transfer points again to pass each other during the reverse movement of said rods.

3,004,416

ADJUSTABLE CAM FOR CIRCULAR KNITTING MACHINE AND THE LIKE

Salomao J. Haddad, Charlotte, N.C., assignor to Southern Mill Equipment Corporation, Charlotte, N.C., a corporation of North Carolina
Filed Aug. 20, 1959, Ser. No. 835,053
23 Claims. (Cl. 66-156)



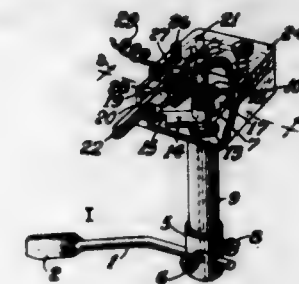
between said first and second positions; said other cam determining the selection of needles for forming plain stitches while said additional cams determine the selection of needles for forming tuck stitches.

1. A composite cam adapted to be mounted on a support for actuating machine elements, said cam comprising an elongate body adapted to be secured to said support, at least one cam extension adapted to seat against said support, said body including an outer wall extending longitudinally from at least one end of said body and overlying said cam extension, said cam extension having an abutment adjacent its end remote from said body and being adjustable longitudinally of said body between said overlying wall and said support whereby an instrument may be placed against said abutment and stuck lightly to adjust said cam extension, and means frictionally restraining said cam extension from unintentional movement relative to said body.

3,004,417

STOP-MOTION DEVICE FOR KNITTING MACHINES WITH LATCH NEEDLES

Hynek Lufák, Trebic, Czechoslovakia, assignor to Zapadomoravské strojírný, národní podnik, Trebic, Czechoslovakia
Filed Mar. 19, 1958, Ser. No. 722,405
Claims priority, application Czechoslovakia Mar. 25, 1957
15 Claims. (Cl. 66-157)



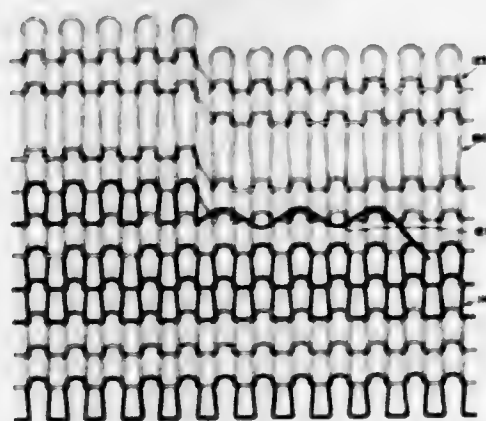
1. In a stop-motion arrangement for a knitting machine, in combination, a support; a first contact member fixedly mounted on said support; a second contact member mounted on said support, said second member being movable into and out of engagement with said first member for closing and opening a stop-action circuit; pivot means on said support having an axis; a feeler member mounted on said pivot means for turning movement about said axis between a first and a second angular position; a trigger member mounted on said pivot means and permanently connected to said feeler member for joint movement therewith about said axis; abutment means on said trigger member for abutment against said movable second contact member when said feeler member is in said first position thereof so as to selectively prevent movement of said second contact member into engagement with said first contact member; resilient means for urging said second contact member to move into engagement

with said first contact member, and for urging said feeler member to move from said second towards said first position thereof and a plurality of latch needles each having a latch movable toward and away from an open position, each needle being mounted for movement in an arcuate path relative to said support and for abutment of said latch thereof against said feeler member when said latch is in the open position thereof during said movement of said needle, and said feeler member is in said first position thereof.

3,004,418

KNITTED STOCKING

John J. McDonough, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Original application Jan. 14, 1957, Ser. No. 633,931, now Patent No. 2,971,358, dated Feb. 14, 1961. Divided and this application Feb. 24, 1958, Ser. No. 717,166
5 Claims. (Cl. 66-187)

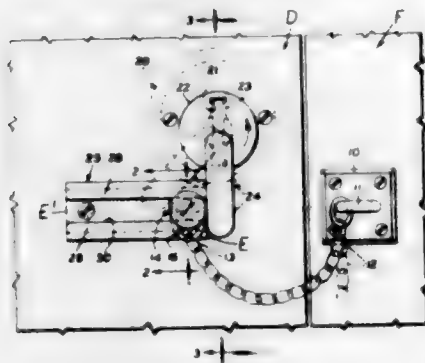


1. A circular knit stocking comprising a multifeed reciprocatorily knit toe followed by rotary knit single feed courses, with the trailing end of a yarn removed at the completion of the toe incorporated into the knit fabric to eliminate eyelet formation.

3,004,419

CHAIN LOCKING CONSTRUCTION

Morris Falk, Jr., Highland Park, Ill., assignor to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Sept. 3, 1959, Ser. No. 837,982
4 Claims. (Cl. 70-93)



1. A chain fastener device comprising a bracket adapted to be anchored to the frame of a door, a channel member adapted to be anchored to a door and including side walls, top walls spaced to define a slot, and an open end portion, a chain anchored at one end to said bracket and having at its other end a clevis pin slidable within said slot of said channel member, said pin including a flange portion adapted, in the channel inserted position of said pin, to engage said top walls to prevent lateral removal of said pin from said channel member and an extending portion projecting transversely from said channel, key

operable locking means mountable on said door, and an arm controlled by said locking means and adapted, in the locked position of said key operable member to lie adjacent said end portion in blocking position of said extending portion of said pin.

3,004,420

DOOR LATCH AND LOCK

John Pipe, Grand Rapids, Mich., assignor to Steelcase Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Feb. 9, 1959, Ser. No. 791,881
4 Claims. (Cl. 70-118)

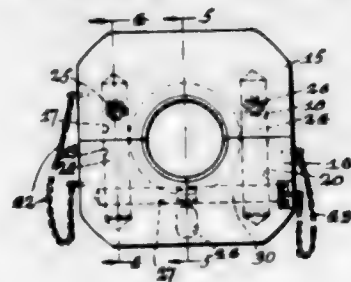


1. A door latch assembly for a door hingedly mounted in a door frame, which comprises: an upper and a lower, generally linear, rigid rod means vertically disposed adjacent the unhinged side of said door on the back side thereof, said upper rod means having a top terminal lateral bend portion at the top end thereof and a bottom transverse bend portion at the bottom end thereof, said lower rod means having a bottom terminal lateral bend portion at the bottom end thereof and a top transverse bend portion at the top end thereof; an open top catch assembly means secured to an upper portion of said door frame for receiving said top terminal lateral bend portion; an open top catch assembly means secured to a lower portion of said door frame for receiving said bottom terminal lateral bend portion; a vertically movable, lifter plate means vertically disposed in a plane adjacent generally to said rod means and vertically arranged relative to said door, said plate means comprising a pair of vertically elongated apertures therethrough with said bottom offset portion seated in one of said apertures and having a lost motion connection therewith and said top offset portion seated in the other of said apertures and having a lost motion connection therewith, whereby upward movement of said lifter plate means causes each of said rod means to move upwardly and thus said lateral bend portions to move above said catch assembly means upon opening said door; said rod means moving independently of said lifter plate upon closing said door to latch said door, and vertically movable door handle means secured to said lifter means.

3,004,421

ANTI-THEFT DEVICE FOR TRAILERS

William Bowler, St. Laurent, Quebec, Canada, assignor to Canadian National Railway Company, Montreal, Quebec, Canada
Filed Mar. 28, 1960, Ser. No. 18,137
Claims priority, application Canada Mar. 24, 1960
2 Claims. (Cl. 70-232)



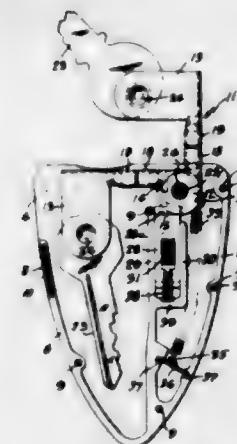
1. An anti-theft device for trailers of the type provided with a king-pin having an annular groove intermedi-

ate its ends and adapted to be coupled to a prime mover; said device comprising a two-part collar, each part being provided with a semi-circular recess adapted to be fitted about said king-pin and in said groove with opposing faces of each collar part in abutting relation, a pair of dowels projecting from the face of one of said parts of said collar, the other of said parts being provided in its face with a pair of sockets adapted to slidably receive said dowels when said collar parts are fitted together, a hole in said other collar part intersecting said pair of sockets, a locking pin adapted to fit in said last mentioned hole, said dowels also being provided with holes adapted to receive said locking pin when said collar parts are fitted together, and means for locking said locking pin on said other collar part.

3,004,422

KEY HOLDER

Rupert M. Starrett, 94 Housatonic Ave., Stratford, Conn.
Filed Dec. 4, 1959, Ser. No. 857,409
5 Claims. (Cl. 70-456)



3. A key holder comprising a casing including spaced side walls and an open end, a key support pivotally mounted in the casing and swingable about its pivot from a retracted position in the casing through the open end to a position outside the casing, said support including a swivel member pivotally mounted in the casing and an arm connected thereto by a swivel connection, said swivel connection comprising a tubular extension on each of the swivel member and arm with a pin provided with tapered end portions in said extensions and portions of the tubular extensions crimped about the tapered end portions of the pin providing the swivel connection between the arm and the swivel member, said arm including spaced side walls to receive a key between them and means to pivotally mount the key, a spring biased to swing the support from its retracted position in the casing through the open end to an operative position outside the casing, and a manually operable latch for releasably retaining the support in its retracted position in the casing.

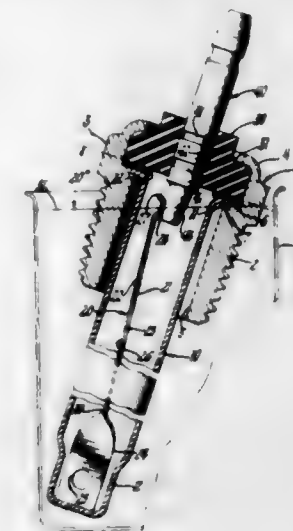
3,004,423

THERMOSTATIC SWITCH

Bertil H. Clason, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 26, 1955, Ser. No. 511,274
2 Claims. (Cl. 73-1)

1. The method of making a thermostatic switch comprising the steps of twisting a bimetal strip about its longitudinal axis at a point intermediate its ends so that the plane of one end is perpendicular to the plane of the other end, forming an electrical contact on one end and opening at the other end of the bimetal strip, forming a metal tube with an open end and with a flattened closed end which will receive said other end of said strip with sufficient clearance to permit pivotal motion of the strip in the plane of said other end, inserting said strip inside the

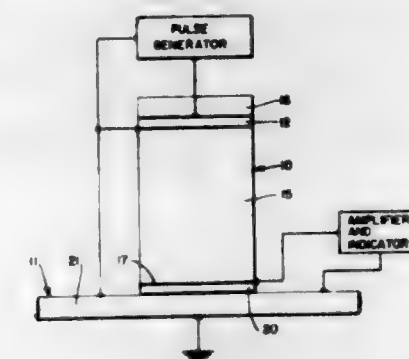
tube with said other end extending into the flattened end of the tube, securing a fixed electrical contact in fixed relation to, and electrically insulated from, the tube near the open end thereof at a point opposite the electrical contact on the bimetal strip, disposing the aforesaid assembly in a temperature controlled medium, tilting the assembly



away from the vertical position in the plane of said other end of the bimetal strip so that the strip falls toward the fixed electrical contact causing engagement of said contacts, and deforming said flattened end of the tube against the said one end of the bimetal strip in a direction perpendicular to said plane and in the region of said opening to secure it in fixed position relative to the tube.

3,004,424

TANDEM PIEZOELECTRIC TRANSDUCERS
Elliott A. Henry, Newtown, Conn., assignor to Sperry Products, Inc., Danbury, Conn., a corporation of New York
Filed Oct. 11, 1957, Ser. No. 689,718
3 Claims. (Cl. 73-67.8)

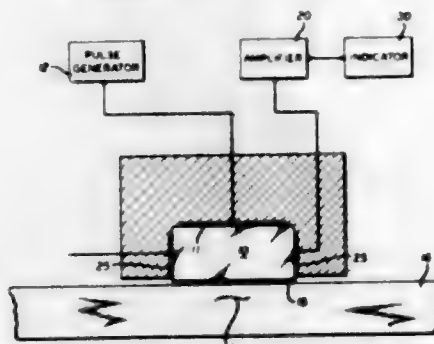


3. A transducer assembly comprising: a first transducer adapted to be energized by an electrical signal to generate mechanical wave energy; a wave-energy-conductive element in coupling engagement with said first transducer whereby wave energy from said first transducer is propagated therethrough; and a second transducer in coupling engagement with the opposite end of said wave-energy-conductive element and adapted to be coupled to an object under test so as to introduce wave energy to the object and to receive wave energy reflections from the object, the dimension of said wave-energy-conductive element being such that the round-trip time of propagated wave energy therein is greater than the round-trip time of a wave energy propagated in the object, the natural frequency of said second transducer being such that the one-way acoustic propagation time through it is equal to the period of an odd multiple of quarter waves at the operating frequency of said first transducer.

3,004,425 SIGNAL-TRANSMITTING AND RECEIVING SYSTEM

Elliott A. Henry, Newtown, Conn., assignor to Sperry Products, Inc., Danbury, Conn., a corporation of New York

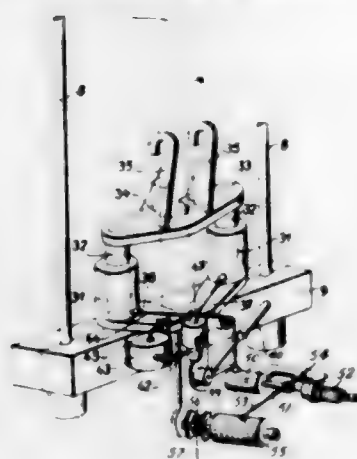
Filed July 14, 1958, Ser. No. 748,476
5 Claims. (Cl. 73-67.8)



1. A signal transmitting and receiving system for use in operative relation with a workpiece to be tested ultrasonically comprising: a single piezoelectric element having a surface adapted to be mechanically coupled with the workpiece and having a pair of intersecting axes; generator means for generating an electrical signal; means electrically coupled to opposed portions of said piezoelectric element intersected by one of said axes for applying said electrical signal to said piezoelectric element thereby to generate a mechanical signal emanating from said surface thereof for entering the workpiece; signal amplifier means electrically coupled to opposed portions of said piezoelectric element intersected by the other of said axes for deriving an electrical signal in response to a mechanical signal at said surface of said piezoelectric element representing a mechanical signal travelling through the workpiece, said signal amplifier means being electrically isolated from said generator means; and indicating means electrically coupled to said signal amplifier means.

3,004,426 DYNAMOMETERS FOR DEEP WELL PUMP INSTALLATIONS

Emil Lodynski, 21 Badstrasse, Modling,
Lower Austria, Austria
Filed Jan. 29, 1958, Ser. No. 711,999
6 Claims. (Cl. 73-141)



1. In a deep well pumping installation, particularly for the pumping of oil from deep wells, the combination of a vertically reciprocating pump rod, a vertically reciprocating carrying member assuming the load from said pump rod and having a top face, means for transferring the load of said pump rod onto said carrying member during normal pumping operation and having a lower end face, said lower end face of said load transferring means abutting the top face of said carrying member, said load transferring means having at least one lateral

projection, with at least one hydraulic pressure unit comprising a pressure cylinder and a piston reciprocating therein, said hydraulic pressure unit supported by said carrying member and said bottom face of said lateral projection resting on said hydraulic pressure unit in the operative position of the latter, a pump operatively connected with said pressure cylinder and feeding the latter, in order to lift said pressure cylinder and said piston, respectively, and said hydraulic pressure unit assuming the load of said pump rod, thereby lifting said lower end face of said load transferring means from said top face of said carrying member, and a pressure responsive recording member operatively connected with said hydraulic pressure unit.

3,004,427 FREE POINT INDICATOR FOR DETERMINING THE POINT AT WHICH STUCK PIPE IS FREE IN A WELL

Theodore L. Berry, Santa Fe Springs, Calif., assignor to The Dia-Log Tubular Survey Company, Whittier, Calif., a partnership

Filed Apr. 29, 1957, Ser. No. 656,481
15 Claims. (Cl. 73-151)



1. A device of the class described comprising, in combination, a variable inductance having two separable magnetizable members adapted to be lowered into a tubular member in a well, means connecting said members for limited movement relative to each other, means by which each member may be temporarily seated on the tubular member at points which are spaced from each other so that strains or changes of strain imposed on the tubular member may produce relative movement between the members of the inductance, means enabling but resisting relative movement between one of the members and its seating means, means for supplying direct current to the inductance means to cause the members thereof to be mutually attracted to an initial position relative to each other by overcoming the resistance of the last mentioned means, and means for supplying alternating current to the inductance means in lieu of the direct current and measuring thereby the change in inductance, if any, that occurs due to a change of relative position between the members of the inductance when the tubular member is subjected to strain or change of strain.

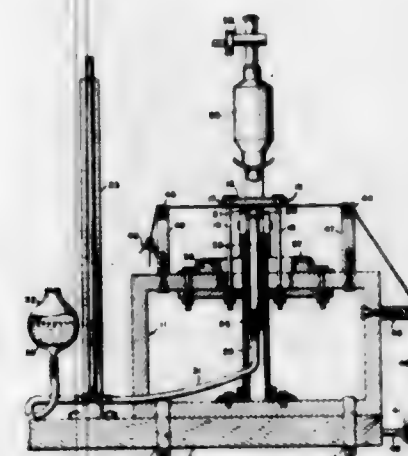
3,004,428 APPARATUS FOR MEASURING THE ABSOLUTE SOFTNESS OF YARNS

Evald L. Skan, New Orleans, La., assignor to the United States of America as represented by the Secretary of Agriculture

Filed Jan. 22, 1959, Ser. No. 788,471
2 Claims. (Cl. 73-160)

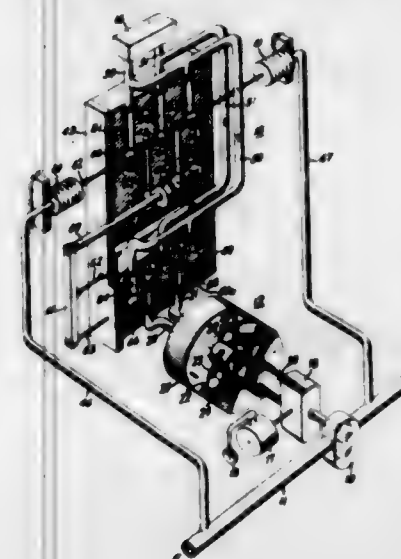
(Granted under Title 35, U.S. Code (1952), sec. 266)
1. An apparatus for measuring the softness of yarn comprising a transparent plate, an anvil having a surface

adjacent to a surface of the transparent plate and parallel thereto, means for moving the yarn between the parallel surfaces of said transparent plate and anvil and parallel thereto while holding the yarn straight to provide for the taking of measurements along the yarn at desired intervals of length, means for compressing the yarn at each such



3,004,429 DYNAMIC FLOWMETER

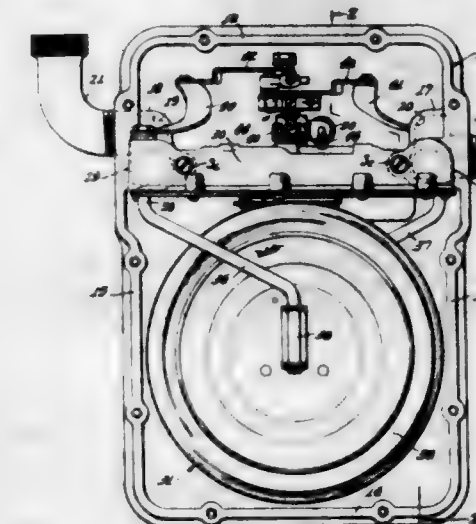
John R. Granan and Ernest E. Lewis, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Feb. 29, 1956, Ser. No. 568,586
6 Claims. (Cl. 73-232)



1. A fluid flow indicator comprising a fixed displacement device adapted to pass fluid in a conduit, a driving mechanism for said device including a hydraulic motor, hydraulic control means responsive to a differential pressure across said device for causing the driving mechanism to continuously tend to reduce the pressure differential to substantially zero, said control means including a two stage hydraulic servo mechanism, the second stage continuing to operate said driving mechanism when said pressure differential is substantially zero, and flow indicating means associated with the driving mechanism, the power for said driving mechanism and said control means being derived from a source independent of the fluid in said conduit.

3,004,430 THREE-CHAMBER GAS METERS

Fairchild Whitworth, Fairfield, Conn., assignor, by mesne assignments, to Texton, Inc., Providence, R.I., a corporation of Rhode Island
Filed Aug. 23, 1957, Ser. No. 679,916
2 Claims. (Cl. 73-263)



1. A three-chamber gas meter comprising a meter casing forming an outer gas measuring chamber vertically split to provide an open-ended middle casing section formed with lateral gas inlet and gas outlet passage means at each respective side of the casing section, said inlet and outlet passage means having passages opening in coplanar vertical surfaces lying in a plane parallel to the end of the middle section and a pair of removable cover sections closing the respective ends of the middle section, a self-contained gas measuring unit connected to and carried by the main casing section having a pair of inner gas measuring chambers the outer wall portions of which constitute flexible diaphragms, a valve housing operatively connected to said inner chambers as well as to said outer chamber and having a gas inlet and a gas outlet opening, control mechanism carried by said valve housing and operatively interconnecting the diaphragms to measure the gas passing through said chambers, said inlet and outlet openings of the housing presenting vertical meeting faces substantially in an identical plane for engaging said vertical coplanar meeting faces presented by said lateral inlet and outlet passage means of said middle casing section, and horizontally extending fastening means extending perpendicular to said plane and passing through said housing and into said middle casing section for fixing said measuring unit in cooperative relation to said main casing section with said vertical meeting faces thus engaged and said fastening means facing and readily accessible to the end of said middle casing.

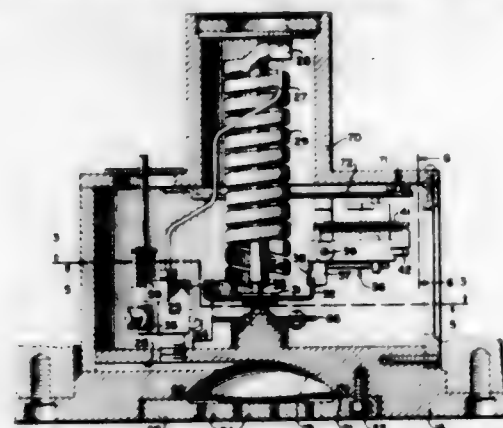
3,004,431 MAXIMUM DEPTH RECORDER

David K. Studenick, Beltsville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 17, 1961, Ser. No. 83,350
6 Claims. (Cl. 73-301)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A device for measuring water depth at a predetermined time comprising a casing capable of withstanding water pressure at various depths, depth sensing means located in said casing for sensing the water pressure as the device is submerged below the water surface, a time delay switching circuit means for connecting circuit components together in a predetermined time sequence, a source of power connected to said time delay switching means for energizing the various circuit components; means energized by said switching means for clamping

said depth sensing means in an existing position at a pre-determined time, solenoid motor means for rotating a contact means from a present position to a final position

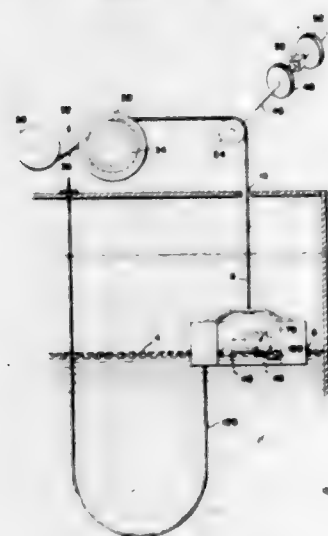


in contact with said depth sensing means whereupon the circuit to the solenoid motor means is opened, and means for recording the rotation of said solenoid motor means, whereby the depth below the water surface is indicated.

3,004,432 TANK GAUGE

Fred M. Mayes, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 11, 1955, Ser. No. 521,899
4 Claims. (Cl. 73-313)



1. Apparatus for gauging liquid level comprising a member movable to follow changes of the liquid level, means movable in response to movements of said member providing an electrical signal indicating the level of said member, a second means mounted on said member and providing an electrical signal indicating the position of said member relative to the liquid level and means for adding said signals.

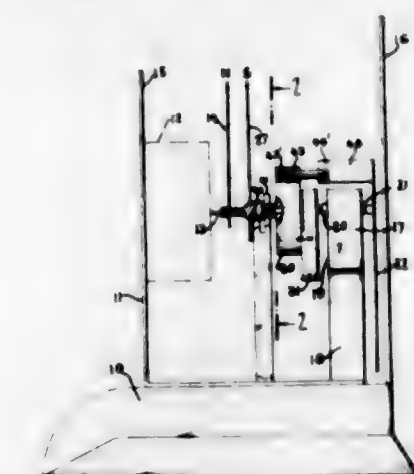
3,004,433 AUTOMATIC SETTING BAROMETER

John A. Galt, Larchmont, N.Y., assignor, by direct and mesne assignments, of one-half to Fann Clock Co., Inc., New Rochelle, N.Y., a corporation of New York, and one-half to John A. Galt, Wheaton, Ill.

Filed Oct. 24, 1957, Ser. No. 692,229
10 Claims. (Cl. 73-387)

1. In a combined barometer and horological apparatus, an indicator hand connected to, and angularly actuated about an axis by the barometer; a reference hand mounted for free angular turning on an axis coextensive with the axis of said indicator hand; magnetic means for

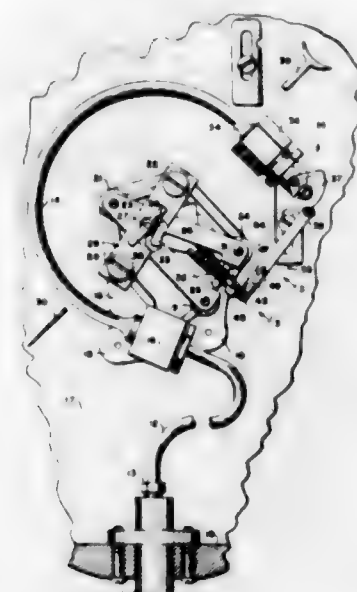
moving said hands into alignment; means normally restraining the turning of said reference hand; and means



operable by said horological apparatus for periodically overcoming said restraining means.

3,004,434 TEMPERATURE COMPENSATED GAUGE

Otto W. Heise, Brook Road, Newtown, Conn.
Filed Nov. 12, 1957, Ser. No. 695,696
8 Claims. (Cl. 73-411)

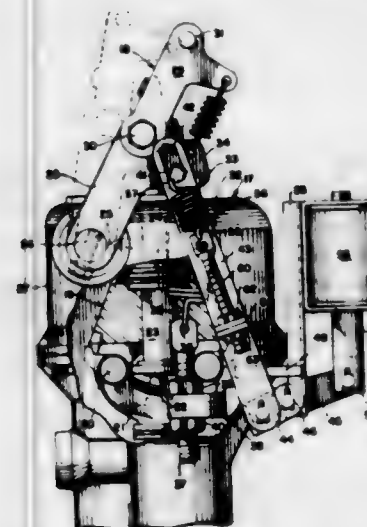


1. In a Bourdon tube gauge, a Bourdon tube; means for rigidly mounting one end of said tube with the other end free; indicating mechanism including a multiplying mechanism having a pivotally mounted segment slide; a segment rack connected to the one end of said slide and adapted to mesh with an indicating needle pinion; a link extending between the free end of said tube and the end of said slide opposite that connected to said rack; a bracket connected to the end of said slide opposite that connected to said rack and extending toward the free end of said tube; a bimetallic strip fixed to the free end of said bracket and extending to, and including a pivotal axis in line with the axis of the connection between said bracket and slide; and means for pivotally connecting the end of said link opposite that connected to said tube to said bimetallic strip along said pivotal axis, whereby said bimetallic strip automatically compensates throughout the entire scale of said gauge for variations in volume and linear size of said mechanism due to variations in ambient temperature.

3,004,435 OVER CONTROL LINKAGE FOR GOVERNOR

Oscar H. Banker, Evanston, Ill., assignor, by mesne assignments, to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan

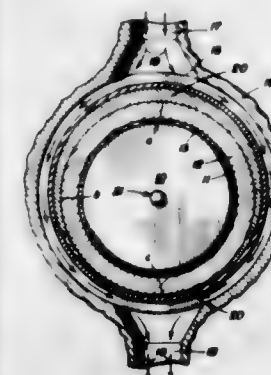
Filed Oct. 22, 1959, Ser. No. 848,070
2 Claims. (Cl. 73-543)



1. A governor mechanism comprising a housing, a rotatable shaft within the housing, pivoted weights driven in timed relation with the shaft, a lever pivoted on the housing and oscillatable about its pivot by the weights, a spring having one end secured to the housing and its other end secured to the lever to restrain movement of the lever and weights, a second lever pivoted externally on the housing at a point removed from the pivot for the first mentioned lever, a link having one end pivoted on the second lever, a laterally extending pin on the first mentioned lever, a slot on the link through which the pin extends, a lateral extension on the link, spring means connected in tension between the pin and extension, and means for releasably holding the second lever against movement about its pivot, whereby to establish a fixed abutment, through said link, to restrain the movement of the first mentioned lever.

3,004,436 COOLING MEANS FOR GYROSCOPIC DEVICE

Leonhard Katz, Woburn, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 16, 1960, Ser. No. 69,776
12 Claims. (Cl. 74-5)



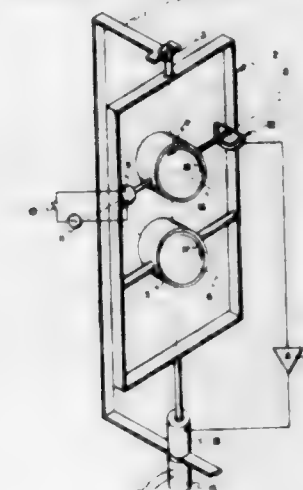
1. A gyroscopic device comprising a cylindrical housing, a cylindrical rotor rotatably and concentrically mounted in said housing with a clearance space between said rotor and said housing, said space being filled with a dense viscous fluid, an eccentric sleeve having a varying thickness and constructed of a poor heat conducting material surrounding the sides of said cylindrical housing

771 O.G.—44

and in intimate contact therewith whereby the heat flowing through said sleeve to or from said housing varies with thickness of said sleeve.

3,004,437 ALL ATTITUDE SINGLE AXIS GYROSCOPIC REFERENCE

Roland Pittman, East Grand Rapids, Mich., assignor to Lear, Incorporated
Filed Mar. 13, 1958, Ser. No. 721,302
5 Claims. (Cl. 74-534)

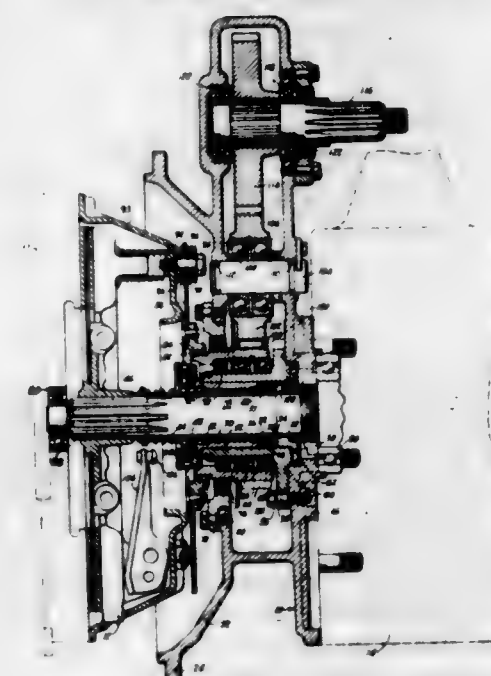


1. Stabilized apparatus comprising a gimbal rotatably supported about a first axis in space, a first gyroscope attached to said gimbal with its spin axis normal to said first axis, a second gyroscope rotatably supported on said gimbal about an axis normal to said first axis, pickoff means producing an electrical signal in response to rotational deviation of said second gyroscope from an orientation in which the spin axes of said gyroscopes are parallel, and torquer means for rotating said gimbal about said first axis in response to said electrical signal in the sense required to maintain said spin axes parallel.

3,004,438 POWER TAKE-OFF ASSEMBLY

Joseph C. Funk and Howard C. Funk, Coffeyville, Kans., assignors to Funk Mfg. Company, Coffeyville, Kans., a corporation of Oklahoma

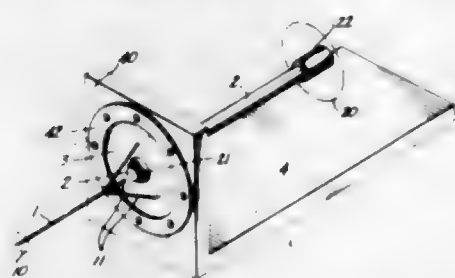
Filed Oct. 6, 1958, Ser. No. 765,359
4 Claims. (Cl. 74-15.63)



1. In combination with a transmission drive shaft and a clutch driven by a prime mover, a power take-off as-

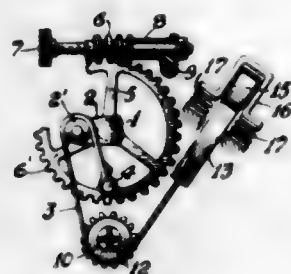
sembly comprising a housing secured between the transmission and the clutch, an inner mandrel disposed within the housing and around the drive shaft, said inner mandrel stationary with respect to the drive shaft, a hydraulic piston movably disposed around the inner mandrel, bearing means carried by the piston for intermittent disengagement of the clutch without interruption of operation of the power take-off assembly, a support mandrel disposed around the piston, a gear train carried by the support mandrel and the housing, means provided on the outer body of the clutch for continuous actuation of the gear train when the clutch is either engaged, or disengaged, and a power take-off shaft driven by the gear train.

3,004,439
MICROMANIPULATOR
Thomas N. Ross, 715 15th Ave. N., Seattle, Wash.
Filed Nov. 23, 1959, Ser. No. 854,867
6 Claims. (Cl. 74-18.1)



1. A motion-transmitting device comprising a deformable elastic element, supporting means fixedly engaged with said element in a given region, the element's deformation under strain in such region being zero, but its deformation in a distant region being a maximum, a handle secured to said element in the region of maximum deformation, and a needle secured to said element in a region intermediate the regions of maximum and zero deformation, and movable by said element correspondingly to movement of the element by said handle, but at reduced amplitude.

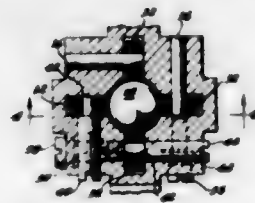
3,004,440
CONTINUOUSLY VARIABLE SPEED TRANSMISSION
Antonin Pernik, Prague, Czechoslovakia, assignor to Ustav pro vyzkum motorovych vozidel, Prague, Czechoslovakia
Filed Oct. 21, 1958, Ser. No. 768,627
Claims priority, application Czechoslovakia Nov. 16, 1957
16 Claims. (Cl. 74-117)



1. In a transmission arrangement with continuously variable transmission ratio, in combination, a support; a driven shaft and a driving shaft rotatably mounted on said support; eccentric entraining means mounted on said driven shaft for rotation about the axis thereof, said entraining means defining an operating circle about said axis; overruning clutch means on said driving shaft for actuating rotation thereof in one direction only, said clutch means including driven wheel means; a control member mounted on said support for movement along a predetermined path; fastening means on said control member; an elongated flexible motion transmitting mem-

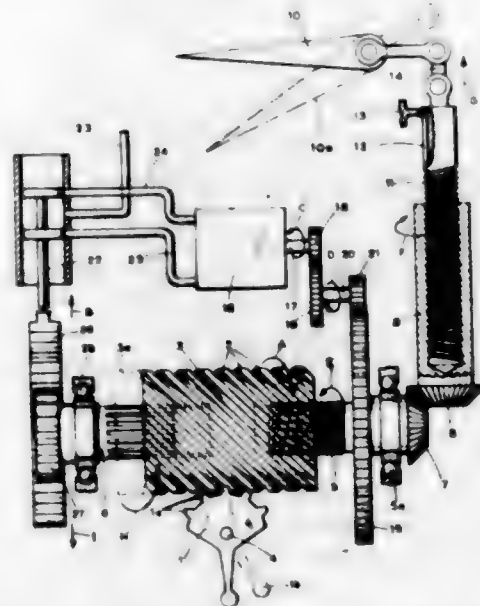
ber having two longitudinally spaced end portions, one of said end portions being secured to said fastening means, a driving portion intermediate said end portions and trained over said wheel means for transmitting motion in said one direction to said driving shaft, and a contact portion intermediate said one end portion and said driving portion, said contact portion moving in a radial direction in said operating circle when said control member moves along said predetermined path for contact with said eccentric entraining means; and means for tensioning said motion transmitting member.

3,004,441
INTEGRATOR BALL CARRIAGE ADJUSTMENT
Willard J. Opocensky and George W. SeEVERS, Glendale, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Jan. 15, 1959, Ser. No. 786,931
7 Claims. (Cl. 74-198)



1. A computing integrator comprising a rotatable input disk and an output member, a ball carriage disposed between said disk and said output member and radially adjustable of said disk, said carriage having two slots therein, each of said slots forming a pair of jaws, a pair of balls within said carriage respectively in driving engagement with said disk, said output member and each other, a pair of pins extending through each of said slots and embraced by said jaws, a cam on the end of each of said pins, a plurality of rolling supports mounted in said carriage radially disposed around each of said balls, two of said rolling supports surrounding each ball being mounted on two of said cams, and locking means extending through each pair of jaws adapted to lock the pins embraced by said jaws against rotation.

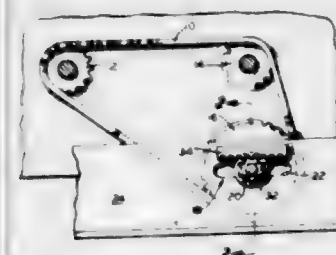
3,004,442
REMOTE CONTROL APPARATUS
Rowan Herbert Colley, Sunny Hill, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed May 13, 1958, Ser. No. 735,009
Claims priority, application Great Britain May 17, 1957
4 Claims. (Cl. 74-388)



1. A remote power actuator including in combination, a normally stationary member to be moved to and re-

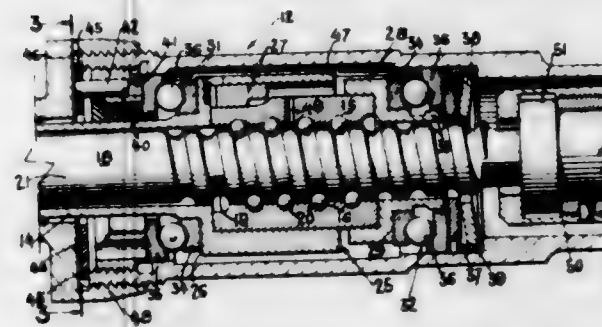
tained at a desired selected position, power driving means of the reversible type, a source of power for said means, a power train positively connecting said driving means to said member for solely actuating the latter, a control device having a neutral position and arranged for applying said power source to said driving means selectively to determine the direction of drive, a cylindrical member having helical teeth, means responsive solely to rotation of said cylindrical member to actuate said control device, means responsive to relative rotational motion between said power train and said cylindrical member to move the latter axially, a control member movable independently of the power train having tooth means engaging the helical teeth of the cylindrical member to rotate the latter selectively in a direction dependent on the direction of movement of the control member, and, means mounting said control member so that axial movement of the cylindrical member in respect to its tooth means causes rotation of the cylindrical member to restore the control device to its neutral position.

3,004,443
ADJUSTABLE TAKE-UP MECHANISM
Alfred W. Gerrans, 861 Curtner, San Jose, Calif.
Filed Jan. 11, 1960, Ser. No. 1,510
5 Claims. (Cl. 74-422)



1. An adjustable take-up mechanism which comprises a rack, a pinion nut arranged for meshing engagement with said rack and for releasable clamped connection relative to said rack, and a bolt threaded to enter said pinion nut and arranged to effect clamping connection to releasably fix said pinion nut and rack in adjusted relative position, said pinion nut including an integral washer portion.

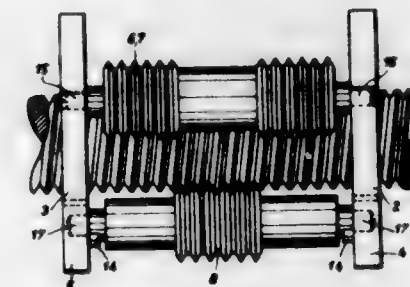
3,004,444
BALLSCREW AND NUT TRANSMISSION ASSEMBLY
Albertus E. Schmidlin, Caldwell, and William T. Fleming, Boonton, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Mar. 3, 1960, Ser. No. 12,605
3 Claims. (Cl. 74-424.8)



1. In a ballscrew and nut transmission assembly, the combination of a tubular housing having end sections and an intermediate section, a tubular shaft mounted for rotation in one of said end sections, a nut having a screw groove in said intermediate section secured to said tubular shaft for rotation therewith, a second shaft mounted for linear movement in said other end section, a spindle

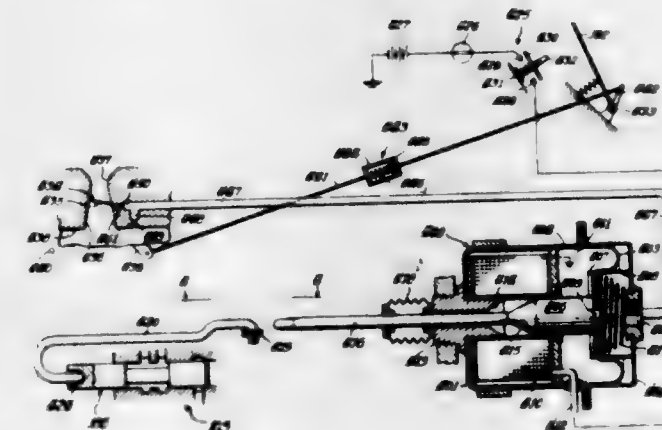
secured to the inner end of said second shaft for movement therewith having a screw groove at one end cooperating with the screw groove of said nut to provide a path for confining ball bearings and having a section at its other end extending into said tubular shaft, thrust bearings at each end of said nut for rotatably mounting said nut in said intermediate housing section, said thrust bearings each including a stationary outer ball bearing race ring mounted at opposite ends of said intermediate housing section and an inner ball bearing race ring secured to said nut for rotation therewith, said outer rings being slidably mounted in said intermediate housing section, a spring positioned in said intermediate housing section at one end thereof to bias said outer rings towards each other, and means in said intermediate housing section at the other end thereof for adjusting the degree of bias of said spring.

3,004,445
SCREW DRIVE FOR MEASURING INSTRUMENTS
Herbert Mondon, Oberkochen, Germany, assignor to Carl Zeiss, Oberkochen (Wuerttemberg), Germany
Filed Oct. 14, 1960, Ser. No. 62,566
Claims priority, application Germany Oct. 14, 1959
4 Claims. (Cl. 74-459)



1. In a screw drive, a screw spindle, three rollers arranged parallel to said screw spindle and provided each with a series of circular ridges entering the helical groove formed by the thread on said screw spindle, means for rotatably supporting said rollers in the position in which said circular ridges engage the thread of said spindle whereby upon rotation of said screw spindle a relative axial displacement takes place between said screw spindle and said rollers, and means for urging at least one of said rollers in radial direction yieldably in engagement with said screw spindle.

3,004,446
TRANSMISSION CONTROLS
George E. Flinn, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 25, 1956, Ser. No. 587,427
25 Claims. (Cl. 74-472)



1. In transmission mechanism, the combination of a drive shaft, a driven shaft, means for providing two dif-

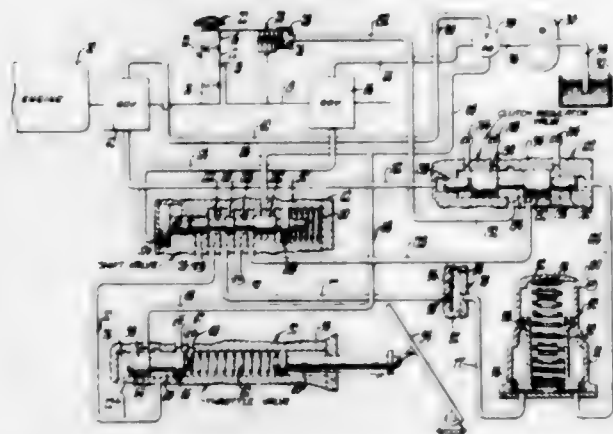
ferent power trains between said shafts and including two friction engaging devices one for completing each of said power trains, a fluid pressure responsive piston acting in a chamber effective to engage one of said friction devices when fluid pressure is released from one side of the piston, a fluid pressure responsive piston acting in a chamber for engaging the other of said friction devices when fluid pressure is applied thereto, a conduit, said chambers being connected in parallel to said conduit, valve means in said conduit for applying and releasing fluid pressure on the pistons, means providing a restriction in said conduit, and valve means connected in parallel with said restriction means normally operable for providing a direct fluid pressure applying path to said first-named fluid pressure responsive piston and operable for providing an indirect fluid pressure path through said restriction to said fluid applying and releasing valve means when fluid pressure is released from the conduit to cause disengagement of one of said devices and engagement of the other device, the said first-named piston causes fluid to flow to said second-named piston for lengthening the period of engagement of the friction device controlled by said second-named piston for thereby smoothing the change of drive between said power trains.

3,004,447

TRANSMISSION CONTROL DEVICE

Darrel R. Sand, Plymouth, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 16, 1956, Ser. No. 616,304
16 Claims. (Cl. 74-472)



1. In a transmission, the combination comprising, engageable and disengageable torque transmitting means for transferring drive between driving and driven members, means for engaging said torque transmitting means, regulating means for regulating said engaging means, and hydraulic control means for supplying a governor pressure proportional to the speed of the driving member and a continuously decreasing pressure, both pressures being operative to control said pressure regulating means to provide a controlled rate of engagement of said torque transmitting means in accordance with the speed of the driving member established by the continuously decreasing pressure.

3,004,448

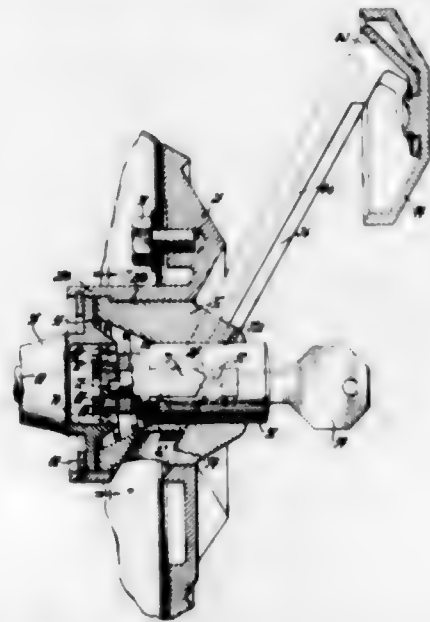
WINDOW REGULATOR OPERATING APPARATUS

Bert Ray Wanless, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 18, 1958, Ser. No. 755,583
14 Claims. (Cl. 74-548)

1. Window regulator operating apparatus of the character described, including: a rotatably mounted hub member, a crank arm slidably mounted on said hub member for slidable movement into and out of the hub be-

tween retracted and extended positions; a window regulator drive spindle, and coupling means engaged by said crank arm and operable thereby for coupling said hub



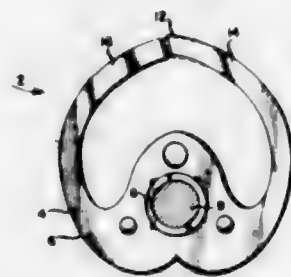
to said drive spindle when the crank arm is in extended position and for uncoupling said hub from said drive spindle when the crank arm is in retracted position.

3,004,449

CAM

Dominick Feroletto, Springfield, Mass., assignor to Standard Electric Time Company, Springfield, Mass., a corporation

Filed Oct. 28, 1960, Ser. No. 65,763
1 Claim. (Cl. 74-567)



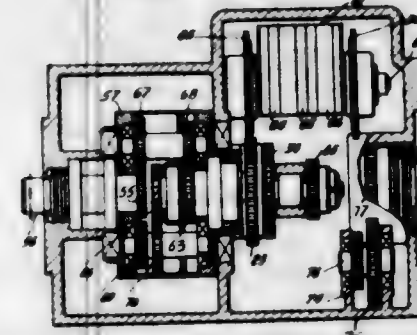
In a timer device incorporating an operating shaft, a re-setting cam mechanism coaxing with a driver for rotating the operating shaft of the timer device to a predetermined position preparatory to subsequent rotation comprising, a cam mounted on the operating shaft and having an outer circumferential periphery provided with high and low points located respectively at a maximum and minimum radial distance from the rotation axis of the operating shaft, the outer periphery of said cam also having a pair of curved surfaces interconnecting the high and low points and each extending at a progressively increasing radius from the axis of the operating shaft as the surface curves from the low point to the high point, said cam having a radial split transversely of and inwardly of one of the curved surfaces of the pair thereof immediately adjacent the high point and providing a pair of oppositely-facing free-ended lobes, the free end of one of the lobes of the pair thereof having an outer curved surface offset radially outwardly from the outer curved surface of the free end of the other of the lobes of the pair thereof and being biasable inwardly as the pressure of the driver is exerted thereagainst whereby said cam and the operating shaft are returnably-rotatable in reset manner to the predetermined position from any position of the operating shaft.

3,004,450

HYDRAULIC TRANSMISSION

Georges Garlier, Asnières, France, assignor to Air-Equipement, Asnières, Seine, France, a French company

Filed July 9, 1957, Ser. No. 670,793
Claims priority, application France July 25, 1956
1 Claim. (Cl. 74-687)



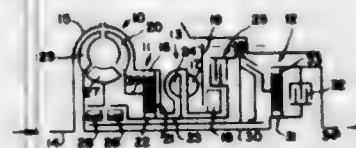
An hydraulic transmission of the type comprising two hydraulic devices each having a rotatably mounted non-adjustable cylindrical block, pistons movable in said block and a pistons control member to move said pistons when said block and said control member are given a rotation movement one relatively to the other, said control member being fixed in rotation and adjustable in inclination to control the output of said hydraulic device, distributing means fixed in rotation for hydraulically connecting said hydraulic devices, an input shaft, an output shaft, a planetary differential gear having an input sun gear drivingly connected to said input shaft, a planet gear carrier drivingly connected to one of said cylindrical blocks, a first output sun gear drivingly connected to said output shaft, a second output sun gear drivingly connected to the other of said cylindrical blocks, a first group of double planet gears carried by said planet gear carrier and comprising each two drivingly connected gears respectively meshing with said input sun gear and said second output sun gear, a second group of double planet gears carried by said planet gear carrier and comprising each two drivingly connected gears respectively meshing with said first output sun gear and with said gears of said first group of double planet gears meshing with said input sun gear, and means for simultaneously adjusting the inclination of both said pistons control member.

3,004,451

CHANGE-SPEED TRANSMISSION, PARTICULARLY FOR MOTOR VEHICLES

Werner R. E. Hensel, Fellbach, near Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Aug. 6, 1958, Ser. No. 753,517
Claims priority, application Germany Aug. 7, 1957
28 Claims. (Cl. 74-688)



1. A change-speed transmission having a transmission input shaft and a transmission output shaft and provided with a relatively stationary part, particularly for motor vehicles, comprising torque converter means provided with input means and output means, mechanical change-speed gear means drivingly connecting said input shaft only with said input means, means including further change-speed gear means operatively connecting said output shaft with said output means of said torque-converter means, and hydrodynamic coupling means having two rotatable elements for selectively shifting said first-mentioned change speed gear means including means for selectively varying the filling of said hydrodynamic cou-

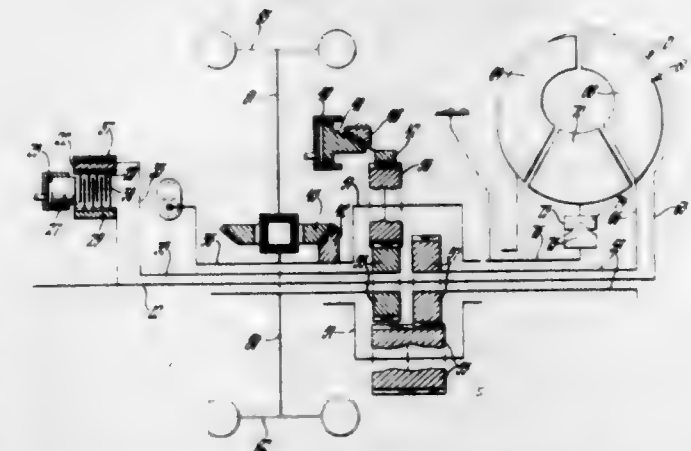
pling means and means for selectively connecting one of said rotatable elements with said relatively stationary housing to use said hydrodynamic coupling means as a continuously variable vehicle brake.

3,004,452

SPLIT TORQUE TRANSMISSION

Frank J. Winchell, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 1, 1958, Ser. No. 732,288
11 Claims. (Cl. 74-688)



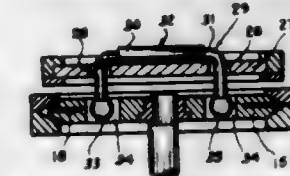
1. A transmission assembly including a hydrodynamic torque converter unit and a planetary gearing unit, said torque converter unit including impeller, turbine and reaction members, respectively, said gearing unit including a planet carrier supporting a set of relatively long planet gears in mesh with a set of relatively short planet gears, a first sun gear in mesh with said long planet gears, a second sun gear in mesh with said short planet gears, an engine driven shaft extending through said assembly for continuously driving said impeller, a turbine driven sleeve concentric with and external of said engine driven shaft for driving said first sun gear, a ground sleeve concentric with and external of said turbine driven sleeve and fixed against rotation, said ground sleeve rotatably supporting said turbine driven sleeve and said engine driven shaft therein, one-way brake means between said torque converter reaction member and said ground sleeve for preventing rotation of said reaction member in one direction, an additional sleeve fixed to said second sun gear concentric with and external of said engine driven shaft and coaxial with said turbine driven sleeve and adapted to be alternately braked against rotation and clutched to said engine driven shaft, a clutch and brake unit selectively operable to alternately brake said additional sleeve against rotation and to clutch said additional sleeve to said engine driven shaft, and a power delivery sleeve concentric with and external of said additional sleeve driven by said planet carrier, said power delivery sleeve providing a rotatable support for said additional sleeve and said engine driven shaft.

3,004,453

GEARLESS SPEED REDUCTION MECHANISM

Gregor L. Lang, East St., Suffield, Conn.

Filed June 24, 1957, Ser. No. 667,513
11 Claims. (Cl. 74-798)



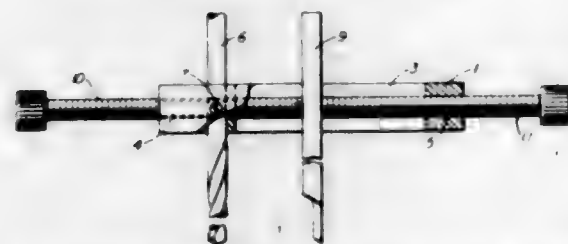
5. In a speed reduction mechanism comprising a circular track member, a friction disc member in said track

member, said disc member and track member having co-operating shaped adjacent faces, the combination of a driven plate and a U-shaped hinged member carried by said driven plate having its sides extending therethrough and its ends positioned in recesses in said disc, said U-shaped member coupling said driven plate with said disc member and having rocking and sliding freedom.

3,004,454

FLY CUTTER

Leon Sudakin, 84-30 126th St., Kew Gardens, N.Y., and John D. Loy, 1820 Avenue V, Brooklyn, N.Y.
Filed July 18, 1957, Ser. No. 672,745
5 Claims. (Cl. 77-69)

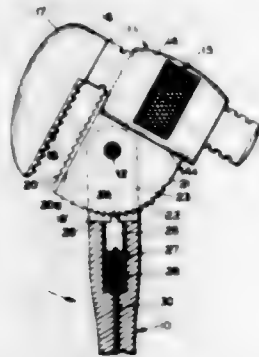


1. A fly cutter for cutting a circular hole in sheet material, said cutter comprising a rigid bar, a pivot and drive shaft fixedly mounted in said bar near one end thereof and transversely protruding from the bar for rotation of the bar jointly with the shaft about the shaft axis as rotational axis, said bar having a longitudinal slot terminating short of both ends of the bar and situated in a plane parallel to the axis of the pivot shaft, a cutting tool fitted in said slot slideable transverse of the slot and along the length thereof and transversely extending from the bar parallel to said pivot shaft, and a pair of setting means mounted on the bar at opposite ends of the slot, each setting means protruding through the bar into the respective end of the slot and being longitudinally adjustable in the slot independent of the other setting means for clamping the cutting tool within the slot between the setting means in a selected transverse lengthwise position within the slot.

3,004,455

CLOSE QUARTER RATCHET PIPE WRENCH

Max C. Bashore, 91 Sharon St., Shelby, Ohio, and James S. Ferguson, 401 S. Seffner Ave., Marion, Ohio
Filed Nov. 8, 1960, Ser. No. 67,947
2 Claims. (Cl. 81-61)



1. A close-quarter ratchet pipe wrench comprising a handle and a head pivoted together for relative movement, a ratchet between the head and the handle for controlling relative pivotal movement, said head comprising a movable jaw and a guide member carrying the movable jaw for relative movement to a fixed jaw carried by the guide member, said guide member comprising a guide for adjustably receiving the stem of the movable jaw and a fixed jaw at an angle to the axis of the guide so that the movable jaw will move toward and away from said fixed jaw upon movement of the stem in the guide, a jaw-adjusting nut supported in said guide member for receiving and adjusting said stem of the movable jaw when

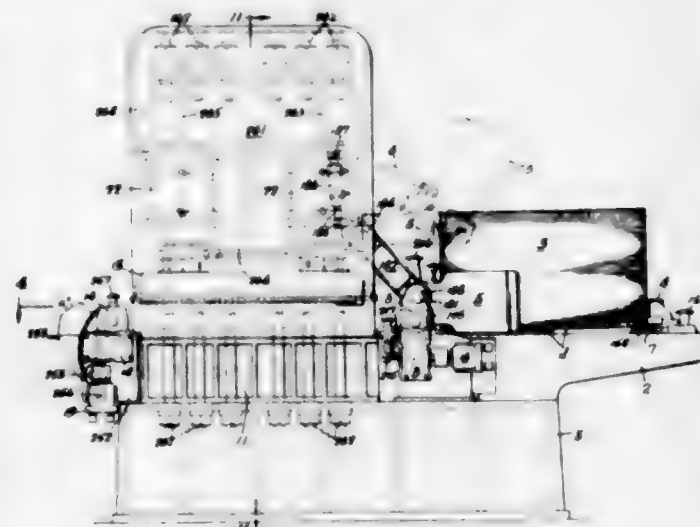
it is positioned in said guide, a segmental toothed ratchet portion disposed within the included angle between said guide and said fixed jaw on said guide member and formed integral therewith and having ratchet teeth on its outer edge which is arcuately curved, a handle having its inner end overlapping the segmental ratchet portion and being pivoted thereto by a pivot located within the outer curved toothed edge of said ratchet portion and toward the vertex of the angle between said fixed jaw and the axis of said guide, a movable pawl on said handle for engaging the ratchet teeth and yieldingly engaging said teeth, and means connected to said pawl for moving it out of engagement with said teeth.

3,004,456

MACHINES FOR PERFORMING OPERATIONS ON SHEET MATERIALS

Henry W. Moser, Haddonfield, N.J., assignor to Samuel M. Langston Co., Camden, N.J., a corporation of New Jersey

Filed Mar. 8, 1955, Ser. No. 492,897
2 Claims. (Cl. 83-80)



1. In a machine for performing operations on sheets of work material, a platen press comprising sheet-working elements and movable platen means for pressing the said sheets and elements together, mechanisms for feeding the work sheets successively to the press and for discharging said sheets after the pressing operation; means for registering the sheets with the said working elements in the press; hydraulic motor means for actuating the press, the feeding and discharging mechanisms, and the registering means; an electrical control system including control elements actuated by said sheets and said platen for actuating the motor means in predetermined repetitive sequence affording automatic cyclic operation of the machine, said registering means comprising a gate constituting a limit stop for the sheets in the press and mounted for movement by the hydraulic motor means to and from an operating position with respect to the sheets, and wherein further the electrical control system comprises a switch responsive to the individual sheets as they approach the gate station for actuating the motor means to move the gate into the operative position, and a second switch responsive to retraction of the movable platen means from pressing position for actuating the motor means to move the gate from the operative position.

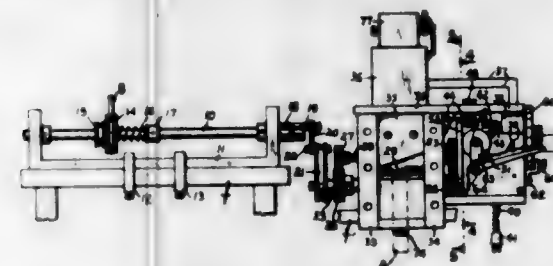
3,004,457

TAPE CUTTER HAVING MEANS TO ADJUST THE LENGTH OF THE TAPE FED BETWEEN CUTS

Anthony Abbene, Ozome Park, N.Y.
Filed Mar. 1, 1954, Ser. No. 413,130
2 Claims. (Cl. 83-245)

1. A tape feeding and cutting device comprising in combination, a drive mechanism operatively connected

to a feed roller, said mechanism including a reciprocable link and one way clutch, to drive the roller in one direction, said roller being disposed to pass tape through the device, a friction disc operatively connected to the roller, a friction wheel driven by said disc and means operative to adjust said friction wheel to selective predetermined positions with respect to the axis of the disc to control a drive connection between the friction wheel and said cam means for manually adjusting the position of said cam with respect to said cam follower, a switch disposed

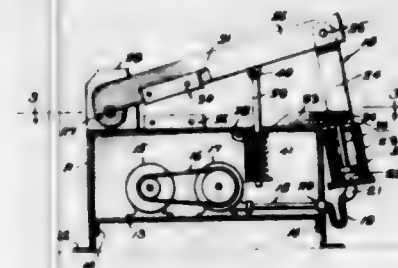


for periodic actuation by the cam follower, and a knife operatively connected to and controllable by an electrical circuit including said switch, to cut lengths of tape determined by the position of said wheel relative to the axis of said disc, a calibrated dial being provided for the setting of the said wheel in a position to fix the length of tape cut by the knife, said cam including a stepped portion which is engageable by the cam follower, said switch being actuated when the cam follower reaches said stepped portion of the cam.

3,004,458

HYDRAULIC POWERED OSCILLATING SHEAR

Joe R. Dvorak, Cosmos, Minn.
Filed June 3, 1955, Ser. No. 512,950
2 Claims. (Cl. 83-601)



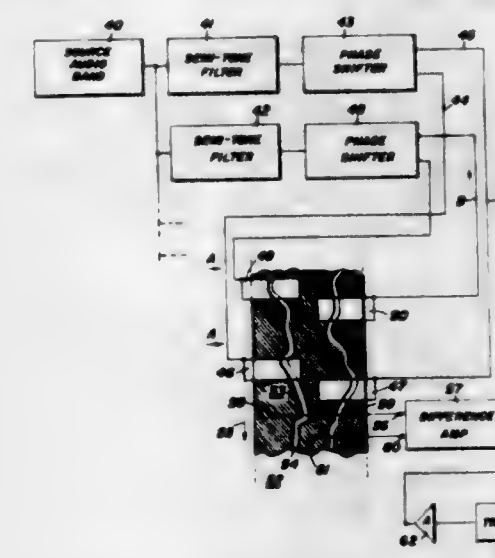
1. A shearing apparatus comprising a support, a fixed shearing blade on said support, a pivoted arm having one end pivotally supported on said support for movement substantially in a plane through an edge of said fixed blade from a position angularly related to said fixed blade to side by side relation thereto, a movable blade on said arm intermediate its ends and cooperable with said fixed blade, a piston rod pivotally connected to said support substantially in said plane and at a point adjacent to said pivotal arm when said movable blade is in side by side relation to said fixed blade, said piston rod extending from its pivot in a direction away from the other end of said pivotal arm, a piston on said rod, a cylinder encircling said piston with said rod extending through one end of said cylinder, said cylinder having a closed other end, a fluid pressure supply connected to said closed other end, and means on said cylinder pivotally connected to the other end of said pivoted arm, said last named means including a pair of spaced arms forming a yoke fixedly secured to diametrically opposed sides of said cylinder and extending longitudinally therefrom parallel to, and on opposite sides of said piston rod and extending beyond the pivotal connection between said piston rod and said support, and a pivot connecting said spaced arm on an axis intersecting said cylinder axis, said last named pivot extending through said plane.

3,004,459

MODULATION SYSTEM

Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio

Filed Dec. 31, 1956, Ser. No. 631,649
34 Claims. (Cl. 84-1.01)



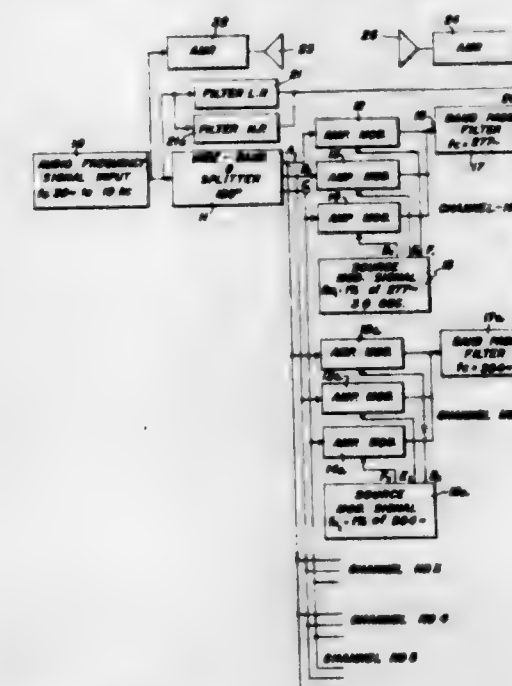
4. A modulation system comprising a source of signal, means operatively associated with said source for deriving from said signal a further signal of random amplitude and of randomly alternatively 0° and 180° phase, means operatively associated with said source for deriving from said signal another signal of random amplitude and of randomly alternatively approximately 90° and 270° phase and means connected to both means for deriving from combining said further signal and said another signal to provide a resultant signal having random amplitude and phase values at random over 360°.

3,004,460

AUDIO MODULATION SYSTEM

William C. Wayne, Jr., South Fort Mitchell, Ky., assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio

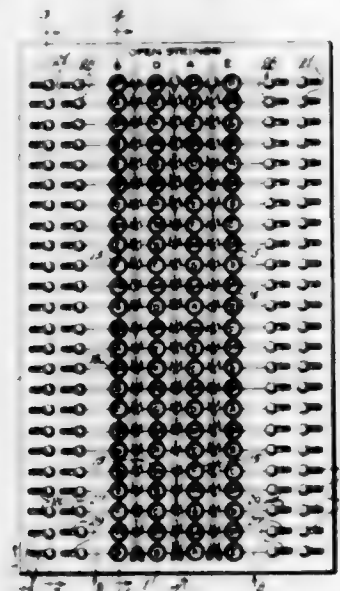
Filed Dec. 31, 1956, Ser. No. 631,650
46 Claims. (Cl. 84-1.01)



1. A system for frequency shifting a band of audio frequencies representative of music, comprising means for deriving from said band of audio frequencies further bands of audio frequency signals the frequencies of which

duplicate the frequencies of the first-mentioned band of audio frequencies but are relatively displaced in n equal phases, where n is greater than 2, a source of n -phase sub-audio frequency and means operatively associated with said first means and with said source and responsive to each phase of said n -phase sub-audio frequency for modulating the amplitude of one of said n further bands of audio frequency signals.

3,004,461
DEVICE FOR AIDING STUDENTS OF STRINGED INSTRUMENTS
Joyce Semonek, 357 Portia St., South Amboy, N.J.
Filed Jan. 19, 1960, Ser. No. 3,431
1 Claim. (Cl. 84-470)

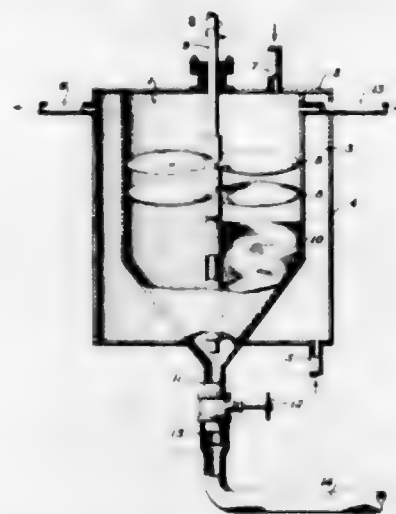


A device for aiding instruction in music, comprising front, shield, grid and back sheets in the order stated, said front and grid sheets having horizontal end-closed slots, slides laterally movable in said slots, said front sheet having aligned transparent areas arranged in a plurality of parallel columns in the middle portion of the sheet, said slides having colored inner end portions movable into and out of registration with said transparent areas, said slides comprising a column of short slides and a column of longer slides on each side of the columns of transparent areas, said short slides movable so that their colored end portions are movable into registration with the outer columns of said transparent areas and said longer slides movable into registration with the inner columns of said transparent areas, said short slides held in place by the front and shield sheets and said longer slides held in place by the grid and back sheets, said slots being longer than said slides, means whereby said slides may be conveniently moved manually, said shield having areas opposite the transparent areas of the front sheet so that the colored end portions of the longer slides may be visible, indicia of musical notes on said transparent areas of the front sheet, indicating the relative positions on the strings of a musical instrument which, when fingered, produce the indicated note, and each column of the transparent areas representing different strings of a musical instrument.

3,004,462
METHOD OF PRODUCING AN ELONGATED FLEXIBLE HOSE-LIKE EXPLOSIVE COLUMN
Melvin A. Cook, Woodbury, Robert S. Done, Clarksboro, and Roy C. Woehrmann, Wenonah, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 6, 1943, Ser. No. 509,202
5 Claims. (Cl. 86-1)

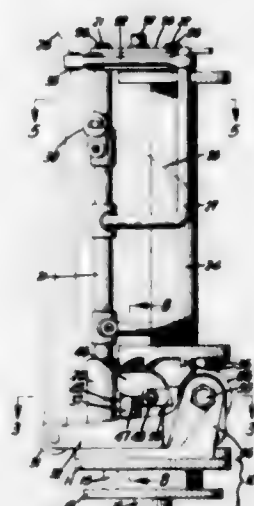
1. A method of producing an elongated flexible hose-like explosive column which comprises preparing an ex-

plosive composition by blending water-soluble, inorganic, oxygen-supplying salt, water in an amount between 9 and 15% of the entire composition sufficient to dissolve a substantial proportion of said salt at elevated temperatures, and at least one normally solid explosive nitrated organic compound; maintaining said composition at an elevated temperature below the melting point of said



nitrated explosive compound, thereby dissolving the inorganic salt while the solid explosive nitrated organic compound becomes suspended in the aqueous solution of said salt; flowing the mixture at said elevated temperature into a flexible elongated tubular container of internal diameter of at least $\frac{1}{2}$ inch; cooling the mixture to produce a column of explosive, rendered flexible by the presence of residual water content.

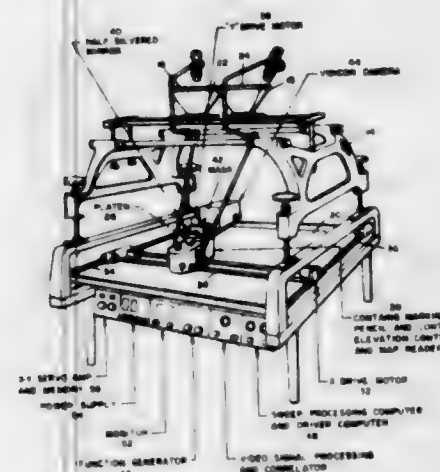
3,004,463
CARRIER FOR BRAIDING MACHINES
Earl S. E. Griesemer, Temple, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Apr. 12, 1960, Ser. No. 21,813
13 Claims. (Cl. 87-56)



1. A braiding carrier having a vertical standard, a spindle, a bobbin rotatably mounted on said spindle, said bobbin having a strand coiled thereon, and means for guiding said strand along a path from said bobbin to a point at which said strand is to be braided into a fabric, including a first guide post adjacent said bobbin at one side of a center line passing through said standard and spindle, a second guide post adjacent said bobbin at the other side of the center line through said standard and spindle, a grooved guide roller mounted on said standard at said other side of said center line, said second guide post and guide roller being positioned rela-

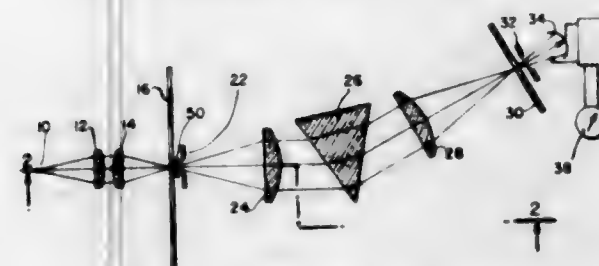
tive to each other so as to guide said strand along a straight path coincident with the center of the groove in said guide roller, a second guide roller, a movably mounted tension lever on which said second guide roller is mounted, and a fixed guide eyelet through which said strand is guided from said second guide roller to a braiding point.

3,004,464
STEREOPLOTTER
Thomas C. Leighton, Pasadena, and August Nuut, Glendale, Calif., assignors to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed June 21, 1955, Ser. No. 516,846
9 Claims. (Cl. 88-14)



1. A stereoplotter, comprising: means for forming a stereo model over a plane surface from a pair of stereo pictures; an electronic pickup tube having a photosensitive target; means for forming an image of a portion of each stereo picture on different sections of said photosensitive target; plotting means for drawing curves on said plane surface coupled to said image forming means; means for scanning said images to produce two electrical signals which are functions of time; means for correlating said electrical signals; means for regulating said scanning means to produce a maximum correlation condition; and means for moving said image forming means over said stereo model in a path maintaining a maximum correlation condition.

3,004,465
APPARATUS FOR REDUCING EFFECT OF SCATTERED LIGHT IN MONOCHROMATORS
John U. White, Darien, Conn., assignor to The White Development Corporation, Stamford, Conn., a corporation of Connecticut
Filed Sept. 19, 1956, Ser. No. 610,761
21 Claims. (Cl. 88-14)



1. In a photoelectric monochromator, in combination, a radiation-responsive device for producing an electrical signal, means forming an entrance slit and an exit slit, means, including dispersing means, for directing selected radiation from a source along a path including said entrance slit and onto said device, a radiation chopper in the path of said radiation, dispersing means including radiation scattering components in said path subsequent

to said chopper, said chopper comprising a signal portion and a compensating portion for transmitting controlled amounts of radiation toward said device, said portions being spaced on said chopper relative to said path of radiation so that said signal portion chops light passing through a portion of the length of said entrance slit and said compensating portion chops light passing through a substantially different portion of the length of said entrance slit, said signal and compensating portions of said chopper being dimensioned and positioned in relation to the other components of said monochromator so that radiation passing through said entrance slit and said signal portion is transmitted through said exit slit to said device both directly and by scattering, but so that substantially all the radiation transmitted to said device through said compensating portion reaches said device through said exit slit only by scattering, said scattering occurring after said entrance slit and after said chopper, said portions of said chopper being adapted to cause said device to produce an electrical response comprising a first component directly related to radiation comprising said desired, directly-transmitted radiation and a second component directly related to said scattered radiation, and means responsive to said device and to said components for producing an indication related to said directly-transmitted radiation but substantially free from the effects of scattered radiation.

3,004,466
OPTICAL APPARATUS WITH PHASE PLATE FOR THE PRODUCTION OF THE FIRST DERIVATIVES OF REFRACTIVE INDEX GRADIENTS AND A ZERO LINE
Erwin Wiedemann, Riehen, near Basel, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland
Filed June 30, 1958, Ser. No. 745,340
Claims priority, application Switzerland July 5, 1957
11 Claims. (Cl. 88-14)



8. An apparatus for the production of the first derivative of refractive index gradients and a zero line, i.e. the

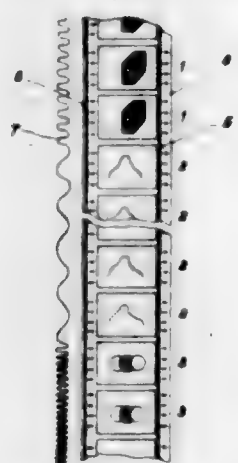
$$\frac{dn}{dx} \text{ values}$$

of refractive index gradients relative to a constant zero value, which arise on the frontiers between liquids of different refractive indices, comprising a source of light, optical means for directing said light through the liquids, a surface on which the representation of the derivative of the refractive index gradients and the zero line can be produced, and means for producing the image, comprising a phase plate between the liquids and the surface, said phase plate consisting of an optically flat transparent plate, a coating on said plate partially covering said plate and being of a material which will change the phase of light passing therethrough by $\gamma/2$ relative to the light passing through the uncovered part of said plate, a light impervious line on said plate having a width of from 10 to 50 μ , the longitudinal center of said line coinciding with the edge of said coating and said line being in the same plane as said coating.

3,004,467
FILM FOR USE IN TELEVISION PICTURES
Horst Zachau, Darmstadt, Germany, assignor to Firma Fernsch G.m.b.H., Darmstadt, Germany
Filed June 8, 1954, Ser. No. 435,235
Claims priority, application Germany June 9, 1953
2 Claims. (Cl. 88-16.2)

1. A motion picture film strip adapted to be televised and having a central portion containing a longitudinally

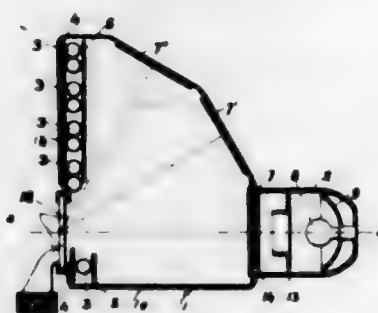
extending series of picture frames, and first and second edge portions extending along said central portion on either side thereof, respectively; a record strip means formed by a first magnetizable layer of material applied to the film strip alongside said series of picture frames within said first edge portion and carrying a magnetic sound record; and spacer strip means applied to the film alongside said series of picture frames within said second edge portion as a second layer having substantially the



same thickness as said first magnetizable layer for insuring even winding of the film in view of the presence of said record strip means, said spacer strip means additionally comprising magnetizable material and carrying magnetically recorded substantially continuous signals of varying significance respectively corresponding in various portions of said spacer strip means to varying density values of the pictures in picture frames located on said film strip in a predetermined relation to the respective portions of said spacer strip means.

3,004,468

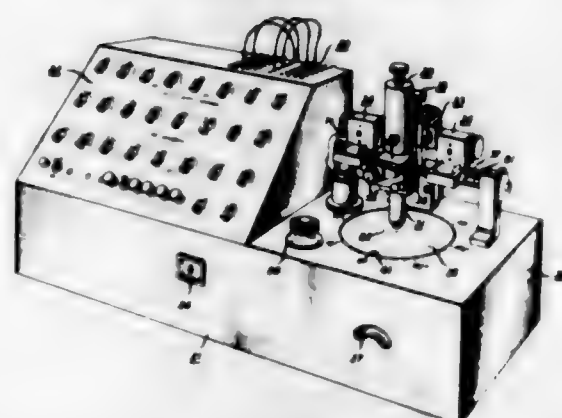
APPARATUS FOR INVESTIGATION OF THE OCCURRENCE OF SECONDARY AFTER IMAGES
Jan Stocky, 15 U divčich brada, Prague, Czechoslovakia
Filed Nov. 16, 1956, Ser. No. 622,709
Claims priority, application Czechoslovakia Nov. 17, 1955
5 Claims. (Cl. 88—20)



1. An apparatus for investigation of the occurrence of secondary after images comprising a light tight housing, means for generally illuminating the inside of said housing with diffused light, a plurality of observation screens inside said housing, an eye piece in a wall of said housing disposed with its optical axis intersecting the center of one of said screens for concentrating the sight of the investigated person on said one screen, the distances from all of said screens to said eyepiece being equal, said housing being rotatable with respect to said eye piece around the axis of said eye piece, means for projecting upon a selected one of said screens lighted images of predetermined color and light intensity for a predetermined time, and means for recording the duration of the illumination of the screen upon which said image is projected, of the latent interval thereafter, and of the time of the subsequent appearance and waning of the secondary image.

EQUIPMENT FOR AUTOMATICALLY PRODUCING PRINTED INDUCTOR PHOTOGRAPHIC MASTERS

Alfred Paul Broyer, Lake Hiawatha, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 28, 1959, Ser. No. 836,824
11 Claims. (Cl. 88—24)



1. Apparatus for producing photographic inductor masters comprising a turntable upon which unexposed photographic film is adapted to be mounted, light projecting means mounted above said turntable for projecting a narrow beam of light on said film, means for rotating said turntable, means for moving said light projecting means a predetermined lateral distance for each revolution of said turntable, a shutter disposed between said light projecting means and said turntable, control means for automatically actuating said shutter to alternately pass and intercept the light during predetermined portions of the rotation of said turntable, masking means also disposed between said light projecting means and said turntable for defining the image projected on the latter, and control means for actuating said masking means to effect predetermined variations in said image during selected portions of the rotation of said turntable.

3,004,470

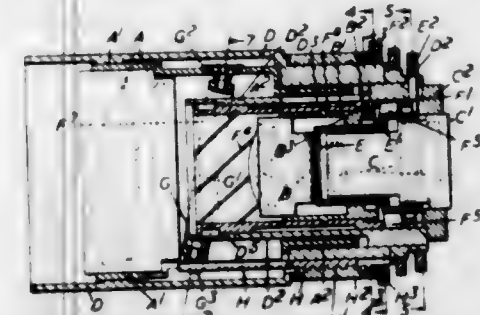
MULTIPLE FOCAL LENGTH LENS
Hans Röhle, Stuttgart, Germany, assignor to Zeiss Ikon A.G. Stuttgart, Stuttgart, Germany
Filed July 24, 1957, Ser. No. 673,800
Claims priority, application Germany July 28, 1956
7 Claims. (Cl. 88—57)



1. In a multiple focal length field lens for use in finders in single lens reflex cameras with interchangeable lens systems, a lens body, a first series of concentrically arranged and radially spaced annular surface sections of radially inwardly progressively greater inclination relative to the optical axis on one side of said lens body, said surface sections having a common focus, and a second series of concentrically arranged and radially spaced annular surface sections of radially inwardly progressively greater inclination relative to the optical axis on the other side of said lens body and arranged between said first series of concentrically arranged and radially spaced annular surface sections, said second series of annular surface sections having a common focus which is different from the focus of said first series of annular surface sections.

CONTROL DEVICES FOR OPTICAL OBJECTIVES OF VARIABLE FOCAL LENGTH

Gordon Henry Cook, Leicester, England, assignor to Taylor, Taylor & Hobson Limited, Leicester, England, a British company
Filed Oct. 20, 1958, Ser. No. 768,286
Claims priority, application Great Britain June 6, 1958
12 Claims. (Cl. 88—57)

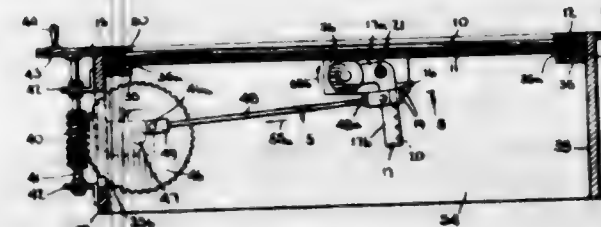


1. A control device for an optical objective of variable equivalent focal length having a stationary rear member and two relatively movable members of opposite powers, comprising a control element, a cam cooperating with such control element, means for simultaneously applying two drives to one of the two movable members to impart two superimposed axial movements thereto, such driving means incorporating means whereby one of such two drives is derived from the control element to impart an axial movement varying in linear relationship to the movement of the control element and whereby the other of such two drives is derived from the control element through the cam, means for applying a drive derived from the control element through the cam to the other movable member to impart an axial movement thereto, and means inter-relating the two drives derived through the cam whereby, in accordance with the shape of the cam, the movements of the two movable members cause the equivalent focal length of the objective to vary in accordance with an approximately logarithmic law relatively to the movement of the control element while maintaining the image plane stationary throughout the range of variation, such means incorporating a transmission mechanism having a 2:1 ratio and means interposing such transmission mechanism in the drive from the cam to one of the movable members.

3,004,472

MIRROR WITH MEANS FOR ADJUSTABLY FLEXING SAME

Dolores E. Burton, New York, N.Y., assignor to The Glesby Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 9, 1958, Ser. No. 747,521
2 Claims. (Cl. 88—76)

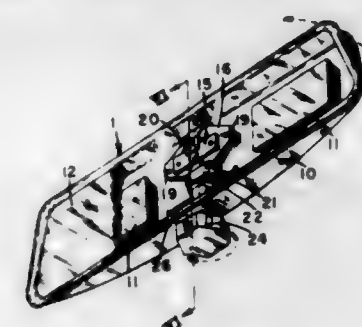


1. In a mirror assembly, a frame adapted to be placed in generally upstanding position, said frame having opposed side channels, a normally flat plate glass mirror mounted in said frame with the side marginal portions of said mirror positioned within said channels, resilient spacer strips co-extensive in height with the mirror between the opposite faces of said mirror and the respective opposing faces of said channels, said mirror being adapted

to be outwardly flexed along the central vertical axis thereof and being resilient, a roller of length substantially equal to the height of the mirror, means adjustably mounting said roller to extend generally vertically and against the rear face of said mirror along said central vertical axis and so as to be forwardly and rearwardly movable, and variable means for moving said roller under tension against said mirror so as to flex said mirror outwardly, and dial indicating means operatively connected with said variable means for indicating the degree of distortion of an image due to flexing of the mirror.

3,004,473

REAR VIEW MIRROR FOR MOTOR VEHICLES
Richard N. Arthur and Konrad H. Marcus, Holland, Mich., assignors to Donnelly Mirrors, Inc., a corporation of Michigan
Filed May 15, 1958, Ser. No. 735,546
1 Claim. (Cl. 88—77)



A multiple position rear view mirror unit for motor vehicles for producing three images of progressively distinguishable high, medium, and low intensities, said images being successively brought into view of the driver in the above order by tilting the mirror of the unit from a first, to a second, to a third position, said mirror comprising: a rigid support means for mounting said unit on said motor vehicle; a mirror frame; adjustable support means for selectively supporting said mirror frame on said rigid support means in said first, second, and third positions; actuating means for moving said mirror to each of said selective positions; a mirror mounted on said frame and having a front surface of 3-10% reflectivity and a rear surface of 60% to near 100% reflectivity; said surfaces being arranged at an angle to each other and spaced one from the other a proper distance to cause the reflections from a given direction from said rear surface to cross each other at points located between the driver and the mirror unit to bring into view of the driver a bright primary reflection produced by an image reflected directly to the driver from the rear surface while said frame is in said first position, a medium intense secondary reflection produced by an image reflected from the rear surface to the front surface, reflected back to the rear surface from the inside front surface, and then again reflected from said rear surface through the front surface to the driver while said frame is in said second position, and a dim tertiary reflection produced by an image reflected from the rear surface to the front surface, reflected back to the rear surface from the inside front surface, reflected back to the inside front surface and then back to the rear surface, and then again reflected from said rear surface through the front surface to the driver while said frame is in said third position.

3,004,474

ROUND INSPECTION MIRROR

Frank C. Humd, 1227 Saturna Drive, Nashville, Tenn.
Filed Nov. 12, 1958, Ser. No. 774,799
4 Claims. (Cl. 88—97)

1. An inspection mirror comprising a tube, a mirror pivotally mounted on one end of said tube and with the

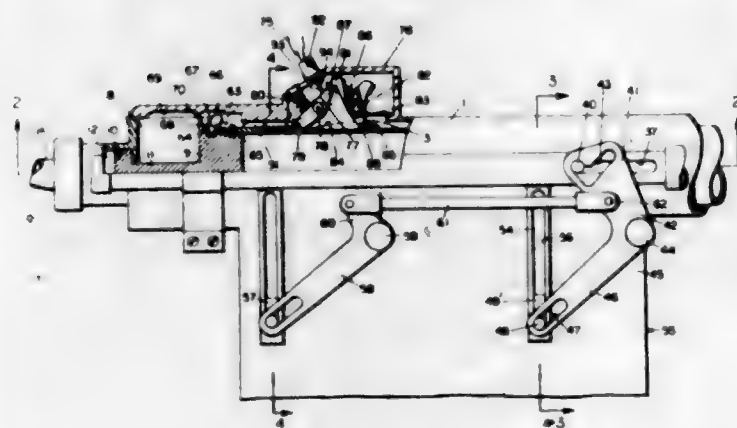
other end of said tube forming a gripping portion, a rod slidable within the tube connected with the mirror to move the mirror about the pivot on shifting of the rod, said tube and rod being composed of multiple segments



including threaded coupling means between the segments of the rod and also between the segments of the tube, each segment of the rod having a stud extending through a longitudinal slot in the associated tube segment, and a finger piece fastened to each stud exterior of the tube.

3,004,475 ROCKET GUN

Irwin R. Barr, Kingsville, Joseph N. Bond, Baltimore, Bertram W. Gore, Jr., Owings Mills, and Nicholas J. La Costa, Kingsville, Md., assignors to Aircraft Armaments, Inc., Baltimore, Md., a corporation of Ohio
Filed Apr. 28, 1953, Ser. No. 351,667
8 Claims. (Cl. 89—1.7)



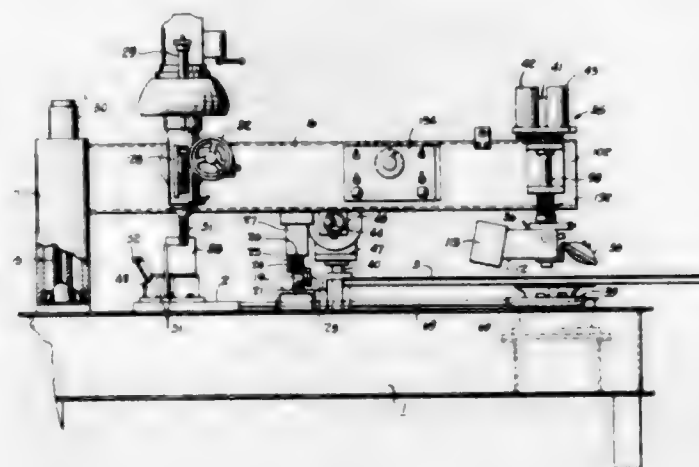
1. A closed breech automatic rocket gun comprising, a housing having a generally cylindrical bore formed therein, a piston slidably carried within said cylindrical bore adjacent one end thereof, a firing tube telescopically received within said bore, said tube being adapted for axial movement relative to said housing between a recoil position abutting said piston to a loading position spaced from said piston, double acting spring means urging said tube into an intermediate axial position, electrical means responsive to axial movement of said tube for firing said gun, hydraulic shock absorbing means communicating with said piston and allowing limited axial recoil movement thereof in response to firing said gun, and latch means releasably connecting said firing tube to said piston means carried by said housing and being responsive to axial movement of said tube independent of said piston for loading said gun.

3,004,476 PROFILE MILLING MACHINE

Stuart McCullough, 18098 Karen Drive, Encino, Calif.
Filed Apr. 24, 1959, Ser. No. 808,759
10 Claims. (Cl. 90—13.4)

1. An automatic machine tool comprising work and templet supporting means constrained to equiangular displacement, a cutting head and a tracer head constrained

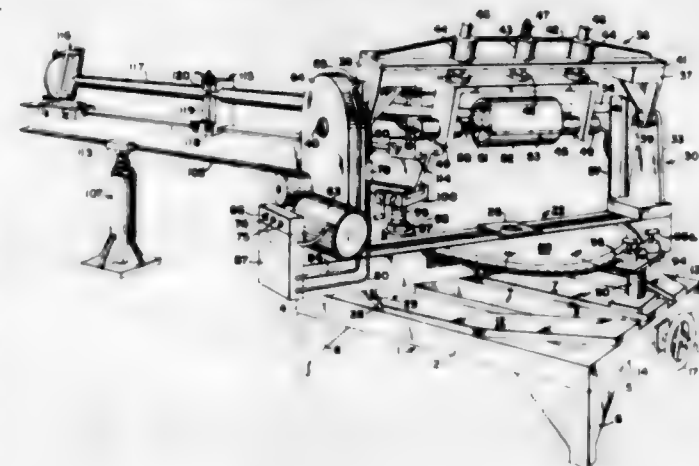
to proportional displacement along paths substantially radial to the circular displacement paths of work and templet respectively, said tracer head comprising detecting means responsive to relative displacement between templet edge and tracer head along an error axis thereof and to departure of said error axis from normality to templet edge, means controlled by said detecting means for rotating said tracer head to maintain its error axis normal to templet edge, a feed rate controller, resolving



means responsive to said detecting means and to said controller to provide trigonometric components of error and feed along axes substantially tangential and radial to the circular motion of said templet supporting means at said tracer head, means responsive to the tangential components of error and feed controlling the displacement of said supporting means, and means responsive to the radial components of error and feed controlling the displacement of the cutting and tracer heads.

3,004,477 TUBE ROUTING MACHINE

James S. Nielsen, Wadsworth, and Albert M. Rankin, Akron, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Jan. 8, 1959, Ser. No. 789,225
11 Claims. (Cl. 90—15)

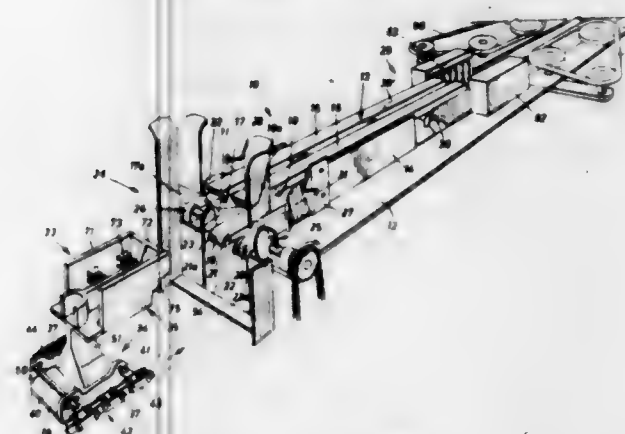


1. Apparatus for cutting the end of a structural member to fit the periphery of another structural member at an angle and including a double shank rotary cutting tool, driving means for rotating the cutting tool attached to each end of the cutting tool, yoke means supporting the driving means, a trunnion frame for adjustably supporting the yoke means for movement toward and from the axes of the trunnion frame, a U-frame pivotally mounting at opposed ends thereof respectively opposed ends of the trunnion frame so as to support said trunnion frame, tool feeding means rigidly attached to the U-frame and adapted to swing the trunnion frame in the U-frame, means attached to the U-frame for angularly ad-

justing the U-frame in a plane parallel to the tool axis, and means for adjustably supporting a structural member in a cutting relation to the tool.

3,004,478 APPARATUS FOR FORMING CARTONS FROM CARTON BLANKS

Sydney R. Phin, 26 Lipton Ave., Toronto,
Ontario, Canada
Filed Aug. 17, 1959, Ser. No. 838,816
21 Claims. (Cl. 93—44)



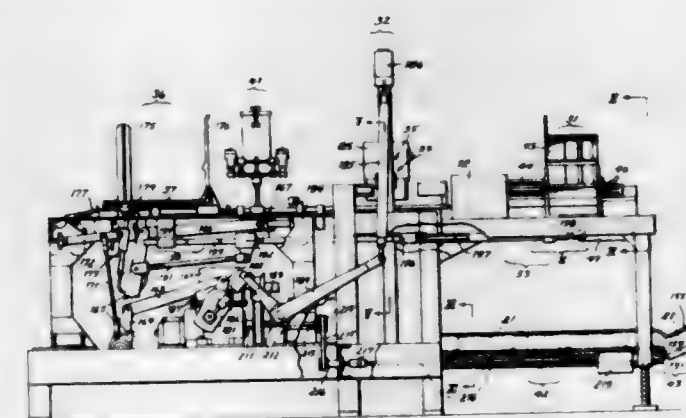
19. In carton forming apparatus, a series of mandrels mounted to travel on an endless carrier, each of said mandrel formations comprising a base which is adapted to be connected to said endless carrier, an upstanding shank portion mounted on said base adjacent to one end and presenting a forwardly extending cantilever support formation, a wall member mounted at the outer end of said support formation and presenting a planar surface at right angles to the support formation, a pair of side wall members pivotally connected to said central support formation to swing from a rearward position of maximum displacement from said central support formation to a forward position of minimum displacement from said central support formation, said side wall members presenting outer surfaces at substantially right angles to said front wall surface and the upper and lower edges, respectively, of said front and side wall members being substantially coplanar, a tunnel formation arranged along the path of travel of said endless carrier and having an internal cross sectional configuration for registering with said mandrels, means for folding a carton blank in carton forming relation about said mandrels, and means arranged beyond the tunnel formation for urging the side walls of said mandrel formation forwardly whereby a carton formed thereon is released therefrom.

3,004,479 APPARATUS AND METHOD OF MAKING A LUG BOX

John E. Ullman, Drexel Hill, Pa., assignor to Huntingdon Industries Incorporated, Bethayres, Pa., a corporation of Pennsylvania
Filed Mar. 29, 1960, Ser. No. 18,373
16 Claims. (Cl. 93—55)

1. A machine for forming a lug box having bottom, side, front, and rear walls made of paper and side support walls made of wooden boards adhesively attached to the interior of said side walls, comprising board hopper means for holding a quantity of wooden boards, a forming station, board feed means for feeding a pair of the boards from said board hopper means to said forming station, board receiving means at said forming station for receiving and detachably holding said pair of boards, a paper hopper for holding a quantity of paper blanks in flat condition, paper feed means for feeding the paper from said paper hopper to said forming station and into

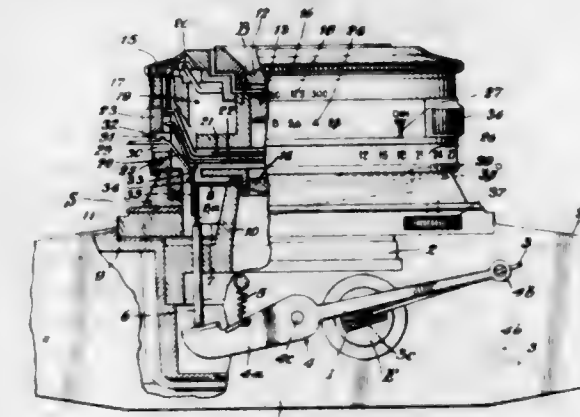
position beneath said pair of boards, adhesive applying means positioned intermediate said paper hopper and said forming means for applying an adhesive to selected areas of said paper, forming means positioned at said forming station for placing said boards into set-up position in said box, for camming the sides of said box into set-up position, and for compressing the adhesive surfaces of the box together to aid in setting, conveyor means positioned beneath said forming station for receiving the formed lug boxes, said conveyor means comprising a conveyor



passageway through which the boxes are transported, a conveyor pusher bar which contacts the rear wall of the lug box to move it along in the path of conveyor travel, spring-backed side conveyor guides for pressing the outside of the side walls of the lug box during its conveyor travel, and board conveyor guides mounted above the path of lug box travel and pressing downwardly on the top of the boards against the upward pressure exerted by said conveyor pusher bar, and pressing outwardly against the boards in opposition to the inward pressure exerted thereon by the side conveyor guides.

3,004,480 PHOTOGRAPHIC CAMERA WITH A COUPLED PHOTOELECTRIC EXPOSURE METER

Edgar Sauer and Johann Hahn, Stuttgart, and Horst Wutzler, Stuttgart-Degerloch, Germany, assignors to Zeiss Ikon A.G. Stuttgart, Stuttgart, Germany
Filed Nov. 26, 1957, Ser. No. 699,118
Claims priority, application Germany Nov. 30, 1956
3 Claims. (Cl. 95—10)



1. In combination with a photographic camera, of a photo-electric exposure meter, comprising a camera casing having front and top walls with a photographic objective attached to the front wall and having a central shutter provided with a shutter speed adjusting member and a diaphragm aperture adjusting member, means coupling the shutter speed adjusting member to the diaphragm aperture adjusting member, said photo-electric exposure meter being mounted in the upper portion of said casing and including an electrical measuring instrument provided with a rotary pointer movable in a plane

parallel to the top wall, a manually operated follow-up pointer adapted to be moved in a plane parallel to that of the instrument pointer so that a portion of said follow-up pointer may be moved into registry with a portion of said instrument pointer, and means including a coupling and a cam drive operatively connecting said diaphragm aperture adjusting member with said follow-up pointer, said cam drive including a cup-shaped annular member rotatably mounted on the camera and concentric with the axis of said objective and being provided with a peripheral flange the edge portion of which is shaped to form a cam surface, a pin slidably mounted in the camera having one end engaging said cam surface and the opposite end abutting said follow-up pointer whereby rotary movement of the cup-shaped member will move said follow-up pointer about its axis, said coupling including a yieldable spring-like member affixed to a control ring therefor and having a projection for drivingly engaging said cup-shaped member and another projection for normally engaging said diaphragm adjusting ring, said flexible member being adapted to be manually operated to disengage the second projection from one of a series of notches in said diaphragm adjusting member.

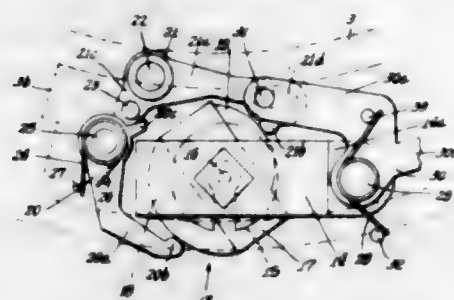
3,004,481

PHOTOGRAPHIC CAMERA WITH ELECTRIC EXPOSURE REGULATOR

Josef Bernader, Nurnberg, Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany

Filed June 27, 1958, Ser. No. 745,159

Claims priority, application Germany July 2, 1957
7 Claims. (Cl. 95-10)



1. In a photographic camera, in combination, an electrical measuring device having a movable part adapted to be actuated by the current of a photo cell, said part having a cam surface and a separate brake surface; a pair of levers engageable respectively with said cam and brake surfaces and separable therefrom to permit free movement of said movable part, said cam surface and associated lever constituting a cam and cam follower device and said other lever and brake surface comprising a brake to hold the said movable part in any of its adjusted positions; means coupling said levers to each other for concurrent movement, said means causing the lever associated with the brake surface to engage the latter prior to engagement of the cam follower lever with the cam surface as the levers are concurrently moved in a direction to effect engagement; and a control member engageable with an exposure adjustment of the camera, connected to one of said levers for movement therewith so as to control the camera adjustment as determined by the measuring device.

3,004,482

FILM AND SHUTTER WINDING MECHANISM FOR PHOTOGRAPHIC CAMERAS

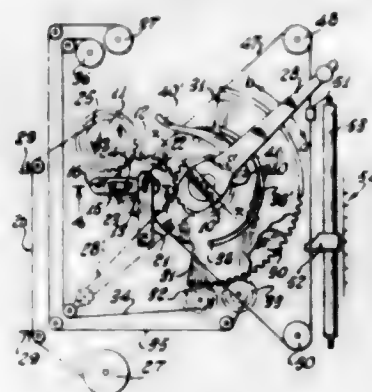
Alex C. Muller, 421 7th Ave., New York, N.Y., assignor of fifty percent to Albert W. Moser, New York, N.Y.

Filed Oct. 28, 1959, Ser. No. 849,399

11 Claims. (Cl. 95-31)

1. In a photographic roll film camera having film supply and take-up spools, film winding mechanism

comprising a winding crank handle, a driving gear connected to said handle, a driven gear connected to said take-up spool, the rotational axes of said gears being fixed relative to one another, a lever having a fixed pivot relative to said gears, an intermediate gear rotatably mounted upon said lever at a predetermined distance from said pivot, to maintain said intermediate gear in continuous meshing engagement with said driving gear and to cause rotation of said driving gear by said handle



in one direction to deflect said intermediate gear towards and into meshing engagement with said driven gear, for advancing consecutive film sections from said supply spool to picture taking position, and to cause rotation of said driving gear by said handle in the opposite direction to deflect said intermediate gear away and into disengagement from said driven gear, to thereby enable said handle to be returned to a predetermined starting position upon completion of each film winding operation.

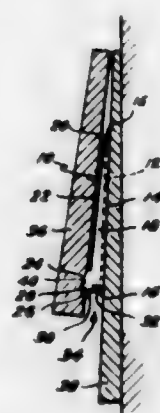
3,004,483

CLAPBOARD OR SHINGLE VENT

Maurice Prager, North Providence, and Franklin S. Rice, Cranston, R.I., assignors to Maurice Franklin Manufacturing Co., Inc., a corporation of Rhode Island

Filed Feb. 23, 1960, Ser. No. 10,383

6 Claims. (Cl. 98-37)

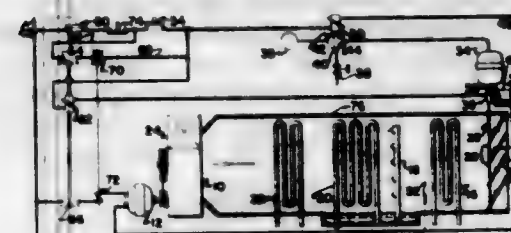


1. A vent for insertion between overlapping edges of clapboards, shingles or the like, comprising a substantially flat, rectangular body portion, a pair of spaced parallel walls extending upwardly from opposite edges of said body portion, each of said walls extending substantially for the length of the edge from which it extends and having an upper edge which inclines gradually upwardly from the surface of said body portion, the uppermost end of each wall being cut back to provide a sharp locking tooth, each of said walls having a projection extending in the plane thereof and located below said tooth, said projection being spaced from the adjacent end of said body portion whereby to define therewith a notch for receiving a bladed tool.

3,004,484

FAN CONTROL

John W. Lorenz, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Sept. 22, 1958, Ser. No. 762,324
5 Claims. (Cl. 98-116)



1. A ventilation system comprising: a fan, a fan motor connected to said fan, a duct system connected to said fan, means forming an air inlet opening in said duct system on the inlet side of said fan, a damper member operably associated with said air inlet opening, a damper motor connected to said damper member to open and close said damper member upon energization and de-energization of said damper motor, control means connecting said damper motor and said fan motor to energize said fan motor when said damper member has opened a predetermined distance, and a solenoid operated three-way air valve with a normally open port, a normally closed port, and a common port connected to said damper motor, and a restrictor connected to said open port whereby air will bleed from said common port through said restrictor to slowly close said damper when said solenoid operated air valve is de-energized.

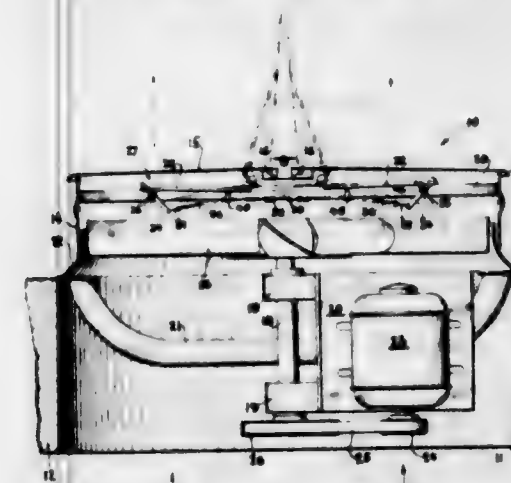
3,004,485

VENTILATOR

Billy L. Bristol, Shive, Ill., assignor to American Machine and Metals, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,474

4 Claims. (Cl. 98-116)



1. A temperature responsive ventilating device comprising housing means having open ends, damper means pivotally attached to said housing means and normally covering one of said open ends, supporting means mounted within said housing means proximate to said one end, a plurality of arm members for actuating said damper means, hinge members for attaching said arm members at one end to said supporting means, said arm members in their armed position extending in substantially opposite directions with the free ends of said arm means being adjacent to and underlying said damper means in its covering position, spring means urging said arm members from said armed position, lever means pivotally mounted on said supporting means and having ends engaging said arm members substantially adjacent their free ends in said

armed position, link means of material fusible at a predetermined temperature, and resilient means connecting the other ends of said lever means to said link means to lock said lever means into engagement with said arm members adjacent their free ends, so that in response to said predetermined temperature said link means will release said lever means and said arm members will be urged away from said armed position by said spring means into contact with said damper means to open said damper means.

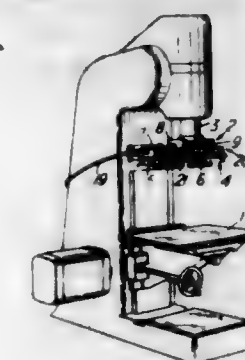
3,004,486

MARKING PRESSES

Wladyslaw Typrowicz, Croydon, England, assignor to Masson Sealey and Company Limited, London, England, a British company

Filed Mar. 28, 1960, Ser. No. 18,138

Claims priority, application Great Britain Apr. 1, 1959
6 Claims. (Cl. 101-193)



1. A marking press including a die-mounting assembly, at least two relatively fixed dies mounted on said assembly, said assembly being movably mounted in the press between at least two predetermined positions such that two dies mounted thereon can be positioned in turn in a single working zone of the press within which the work support is to be fixedly located, marking foil supporting and feeding means comprising means for supporting at least two spools of marking foil for use with two dies mounted on said assembly and independent foil guiding and feeding means for each such foil, said foil supporting and feeding means being mounted on said assembly for movement therewith to enable the marking foil appropriate to the die which is positioned in the working zone to be positioned between that die and the work, and drive means operable automatically for intermittently driving said feeding means for said foils to advance each foil stepwise between each marking operation therewith.

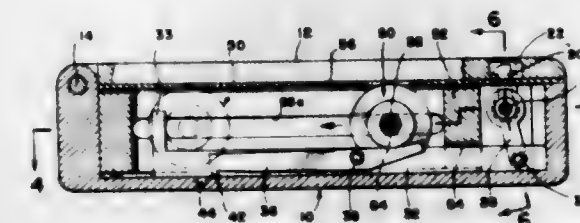
3,004,487

IMPRINTERS

John F. Herbert, Jr., Santa Clara, Calif., assignor to Bank of America National Trust and Savings Association, San Francisco, Calif., a national banking association

Filed Dec. 7, 1959, Ser. No. 857,907

7 Claims. (Cl. 101-269)



1. The improvement in an imprinter of the type employed for transferring data from a credit card to a document, said imprinter having a cover hingeably attached to a box, said card being held by said cover against

said document when said cover is closed upon said box, said box having four walls and a bottom, said box including roller means for applying pressure to said document and card for effectuating a data transfer while being rolled from one end to the other of said box, said improvement comprising movable latch means for engaging said cover for holding it closed, means actuated by said roller means when at one end of said box for moving said latch means to a position at which it will not engage said cover for holding it closed, and means actuated by said roller means when at the other end of said box for restoring said latch means to said position at which it will engage said cover for holding it closed.

3,004,488

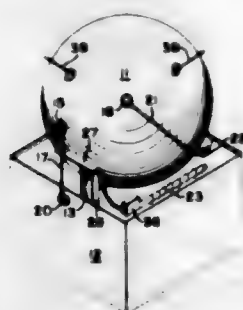
MOORED MINE

Daniel T. Wieland, Jr., 1216 Jarrett Road, Norfolk 2, Va.

Filed Dec. 4, 1958, Ser. No. 778,265

2 Claims. (Cl. 102-13)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A moored contact mine adapted to be sown in a friendly harbor comprising; a mine casing having an explosive charge therein, a mine anchor, frangible means securing said mine casing to said anchor whereby said mine casing sinks to the floor of said harbor with said anchor when the mine is launched, a slack cable connected between said anchor and said casing, a coarse search coil disposed on the mine anchor adapted to generate an electrical pulse only when it is subject to a strong electromagnetic field of an enemy magnetic mine sweeper, and means operatively connected to said search coil and disposed adjacent to said frangible means to fracture said frangible means upon receipt of an electrical pulse from said coarse coil to release said mine casing and permit it to float upward a predetermined distance and lie in the path of travel of ships in the harbor.

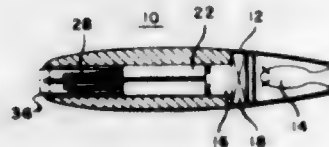
3,004,489

AERODYNAMIC STRUCTURAL SEPARATION DEVICE AND METHOD

David E. Griffith, Philadelphia, Pa., and Richard H. Hefelfinger, Camden, N.J., assignors to General Electric Company, a corporation of New York

Filed Jan. 9, 1958, Ser. No. 707,991

3 Claims. (Cl. 102-49)



1. An aerodynamic structural separation device for a high-speed vehicle comprising an auxiliary vehicle ejectable mounted within the high-speed vehicle and having drag-producing means mounted thereon, a nose cone supported and held by the forward end of said auxiliary vehicle and unrestrained as to forward movement relative to said auxiliary vehicle, means on said high-speed vehicle for maintaining said drag-producing means in inoperative position while said auxiliary vehicle is carried by said

high-speed vehicle, means for ejecting said auxiliary vehicle from said high-speed vehicle, and means for actuating said drag-producing means to an operative position away from the outer surface of said auxiliary vehicle to decelerate said auxiliary vehicle with respect to its normal free flight, said nose cone being slideably mounted in the front end of said auxiliary vehicle for free flight out of said auxiliary vehicle upon actuation of said drag-producing means thereby eliminating the transfer of the effect of the deceleration of said auxiliary vehicle by said drag-producing means to said nose cone to decelerate or otherwise interrupt the free flight of said nose cone.

3,004,490

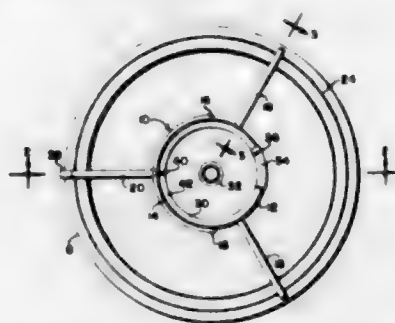
BOMB FUZE LINER CENTERING CLAMP

Cary F. Millner, Jr., Onley, Va., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 10, 1958, Ser. No. 766,626

3 Claims. (Cl. 102-70)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination, a bomb, a central bomb fuze liner for said bomb and a clamp for centering a bomb fuze liner within said bomb during an explosive loading operation thereof, said clamp comprising a pair of half-rings hinged together to form a ring when in fuze liner supporting position, an outer rim formed on said bomb, means attached to said half-rings and engaging said rim to support and center said fuze liner supporting ring with relation to the bomb, and means carried by one of said half-rings supporting the fuze liner within the ring.

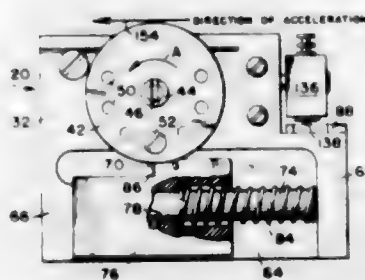
3,004,491

ARMING DEVICE

Eugene W. Place, Salinas, and Jack H. Davidson and James D. De Santo, China Lake, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed July 26, 1960, Ser. No. 45,514

14 Claims. (Cl. 102-83)



1. An arming device for use in a missile comprising, in combination, first and second shafts adapted for rotation about a common axis, said shafts being positionable in angular position about said axis relative to each other, means for effecting desired adjustment of the angular relationship between said first and second shafts whereby said shafts may be selectively secured together for joint rotation in a plurality of predetermined relative angular positions, a clockmotor mechanism operatively connected to one of said shafts, said clockmotor mechanism being adapted to bias said shafts to rotate in one direction of

rotation at a predetermined rate of rotation, acceleration responsive means cooperating with said first shaft adapted to lock said shafts in an initial position whereat said first shaft is in a predetermined angular position about said common axis against said bias of the clockmotor mechanism and adapted to release said shafts in response to acceleration of said housing, arming means actuable in response to rotation of said shafts from said initial position to a position whereat said second shaft is in a predetermined position about said common axis.

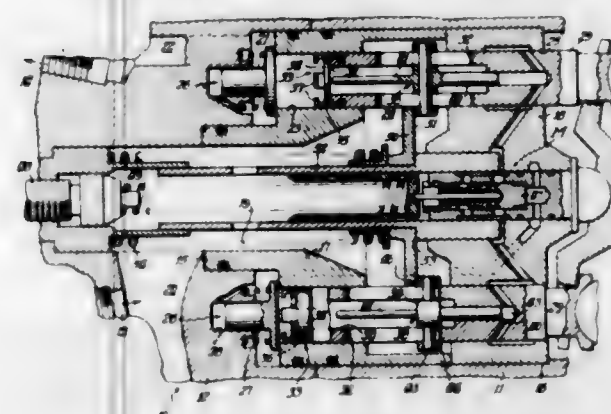
3,004,492

PISTON PUMPS

Francis E. Norlin, Chesterland, Ohio, assignor to Borg-Warner Corporation, a corporation of Illinois

Filed Sept. 2, 1959, Ser. No. 837,661

3 Claims. (Cl. 103-37)



1. In a positive displacement pump of the type having a casing, an inlet, an outlet a plurality of circularly arranged parallel pistons in said casing, swash plate means for reciprocating said pistons so as to provide each piston with a suction stroke and a discharge stroke, an open ended cavity in the body of each piston, said cavity being in communication with said pump inlet; means defining a flapper valve consisting of a substantially circular disc retained at the open end of each piston in such a manner as to allow fluid from said cavity to bypass said valve means during the suction stroke of said piston, and to seat on said piston during the discharge stroke of said piston so as to prevent fluid from returning to the piston cavity; hydraulically actuated stroke varying means comprising a central portion slidably and rotatably mounted within said cavity, a first axially extending member attached to said central portion in contact with said pump, and a second, opposite, axially extending member being adapted to contact said flapper valve during at least a portion of said pump discharge stroke when the pressure at said outlet is sufficient to position said stroke varying means against said flapper valve, holding it open; a sleeve slidably and coaxially mounted about said piston and attached to said central portion of said stroke varying means; fluid motor means including an axially movable spring loaded, substantially circular plate, connected with a source of pump discharge pressure and responsive thereto; said motor means being operable to effect the position of said plate which is so constructed and arranged as to contact said sleeve and thereby regulate the effectiveness of said stroke varying means in order that a constant discharge flow is maintained as desired.

3,004,493

CONTROL MECHANISM

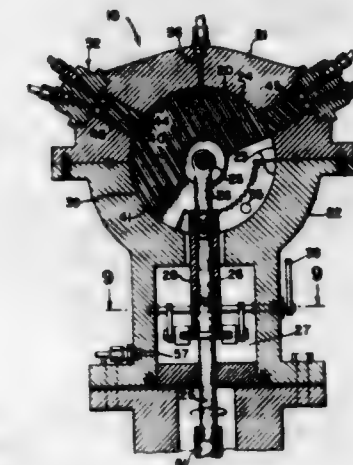
Lloyd G. Porkert, 4819 Barrymore Drive, Washington 21, D.C., assignor of twenty percent to Thomas K. Hampton, Washington, D.C.

Filed July 24, 1959, Ser. No. 829,412

9 Claims. (Cl. 103-38)

1. A control mechanism comprising a housing, said housing having a cavity with an axis of rotation extend-

ing therethrough, a control member mounted in said cavity, said cavity having a concave spherical support surface, said member having a convex spherical bearing surface in sliding contact with said support surface, said surfaces being concentric around a point on said axis and having sufficient contacting areas to provide a bearing to hold said member against displacement in said housing



while leaving it free to rotate about said point, a control surface on said member, said member having a control axis through said point perpendicular to said axis of rotation, means for adjusting the rotational position of said member about said control axis, means for rotating said member about said axis of rotation, and a contact member mounted in said housing and engaging said control surface.

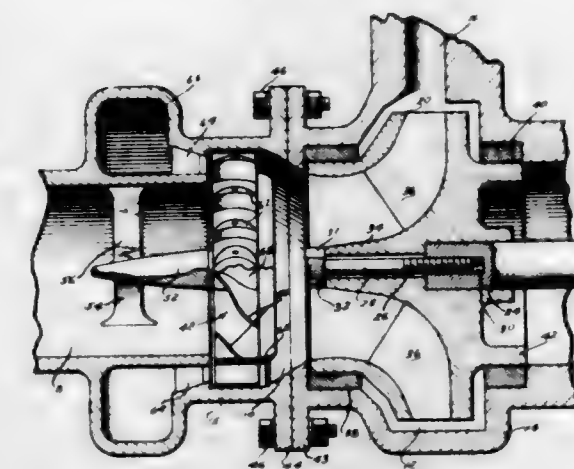
3,004,494

TURBINE DRIVEN PUMP INDUCER

Marshall J. Corbett, Willoughby, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Filed Nov. 14, 1957, Ser. No. 696,418

6 Claims. (Cl. 103-88)



1. A pumping unit adapted to operate under high speed and high lift or high temperature conditions with an absence of cavitation comprising in combination a rotary power-driven pump centrifugal impeller unit, a housing surrounding the impeller unit and having a pump discharge passageway and a pump intake chamber, a rotary inducer impeller mounted in said intake chamber in close proximity to the impeller unit, a supporting shaft carrying said inducer impeller, an annular band surrounding said inducer impeller, a series of fluid-driven turbine blades mounted outside of said band, a turbine housing surrounding said blades outside of said pump intake chamber and operative to deliver pressurized fluid to said turbine blades to drive the blades and the in-

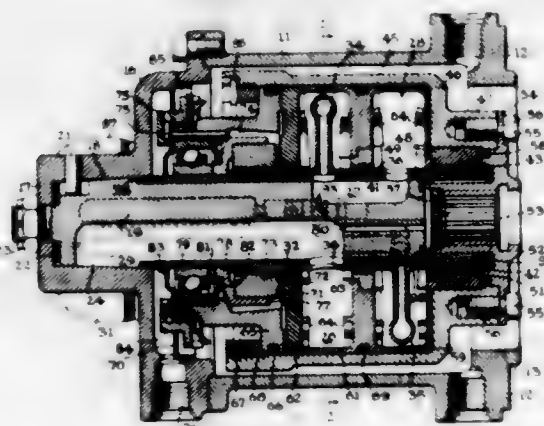
ducer impeller whereby fluid delivered to the intake chamber to the centrifugal pump is pressurized fluid to prevent cavitation, a by-pass fluid flow passageway connected between the turbine housing and the pump discharge passageway whereby pressurized fluid delivered by the centrifugal pump impeller will flow to the turbine impeller and drive the turbine and inducer impeller at a speed to deliver pressurized fluid to the centrifugal pump impeller and prevent the occurrence of cavitation, and a fluid flow control by-pass valve in said by-pass line to determine the amount of fluid which will be by-passed and the power used for driving the turbine, said valve being pressure responsive and connected to the discharge passageway and operative to reduce the flow path for fluid through the by-pass line to decrease the speed of operation of the turbine and the speed of the inducer impeller at high pressures and low flow outputs of the centrifugal pump impeller.

3,004,495

HIGH SPEED HYDRODYNAMIC PUMP

Stanley L. Macklis, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey

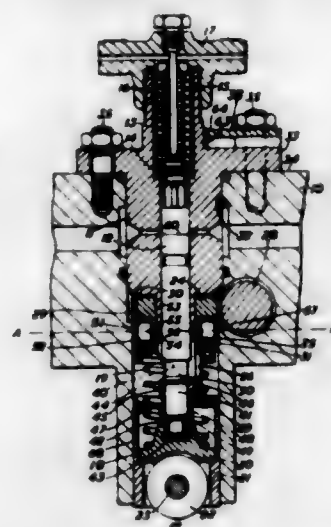
Filed Feb. 11, 1957, Ser. No. 639,297
6 Claims. (Cl. 103-101)



3. In a multistage "scoop" pump, the combination of a fixed shaft provided with a plurality of flow ports, different ones of which serve as a supply port, an interstage port, a high pressure discharge port, and a low pressure drain connection; a rotor enclosing a plurality of generally cylindrical coaxial pumping chambers which encircle said shaft and turn about their common axis as the rotor turns; liquid impelling vanes in said chambers; a plurality of scoop units, one enclosed by each of said chambers, each scoop unit comprising a ported strut and a Pitot orifice carried by said strut and communicating with the port in its strut, said scoop units being individually mounted in successive corresponding pumping chambers and angularly spaced uniformly about the shaft axis, the supply port, the interstage port, and the discharge port in said shaft serving to complete a continuous path from supply to the interior of the first chamber, and thence by way of its enclosed scoop unit and an interstage port to the next pumping chamber, and so on, the last scoop unit delivering to the discharge port in said fixed shaft; an ejector comprising a combining tube and a jet nozzle, said combining tube opening into and connected to draw gaseous medium from the first pumping chamber at a point adjacent the surface of said shaft; conduit means in said shaft to receive liquid under pressure from a point in said continuous path between the first scoop unit and the end of the discharge port and deliver said liquid to said nozzle, said ejector delivering mixed fluid and gas to said low pressure drain connection; and a mechanical connection for rotating said rotor.

3,004,496
FUEL INJECTION PUMPS FOR INTERNAL COMBUSTION ENGINES

Herbert Hargrave Basil Minnett, Chalfont, St. Peter, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Aug. 5, 1958, Ser. No. 753,333
Claims priority, application Great Britain Feb. 28, 1956
2 Claims. (Cl. 103-154)



1. A fuel injection pump for an internal combustion engine comprising a pump body, a housing providing an integral barrel portion and a delivery valve portion, a plunger which can be reciprocated in said barrel portion, a delivery valve, a seating for said delivery valve, a delivery valve spring biasing said delivery valve towards said seating, said delivery valve portion enclosing said delivery valve and said seating and said delivery valve spring, a return spring which urges said plunger in a direction away from said delivery valve, a tappet connected to said plunger, a cam follower roller, cam follower roller support means, a packing shim spacing said tappet from said cam follower roller support means, retaining means retaining said tappet in connection with said cam follower roller support means, said housing, said plunger, said delivery valve, said delivery valve seating, said delivery valve spring, said return spring, said tappet, said cam follower roller, said cam follower roller support means, said packing shim and said retaining means constituting an assembly removable as a whole from said pump body, a locating member which engages said housing to prevent relative angular movement, and means securing said locating member in a fixed position on said body.

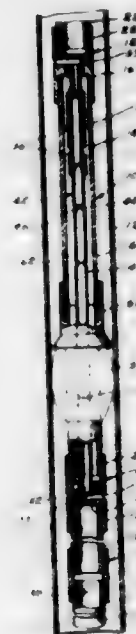
3,004,497

WELL PUMPING EQUIPMENT

Benjamin H. Lybyer, 526 W. 10th St., Casper, Wyo.
Filed Jan. 4, 1960, Ser. No. 441
1 Claim. (Cl. 103-203)

A device for separating gas and sediment from oil in a well having a casing and pump barrel disposed therein comprising: an outer tubular member; an inner tubular member concentric within said outer tubular member; said members being of substantially equal length, the inner wall of said outer tubular member and the outer wall of said inner tubular member comprising a fluid passage, said inner tubular member having a plurality of inwardly projecting corrugations defining axially spaced restrictions on the inner surface thereof whereby small entrained gas bubbles are caused to coalesce into larger gas bubbles for subsequent separation from the well fluid; a first tubular coupling having a radial web therein, one end of said coupling secured to said pump barrel, the other end of said coupling secured to said outer tubular member, said web including a first bore therein in communication with the exterior of said coupling and

an axial bore in communication with said first bore and the interior of said inner tubular member; a second tubular coupling having a radial web and secured at one end to said outer tubular member, said web including a first bore in communication with the exterior of said coupling and an axial bore in communication with said first bore and the interior of said inner tubular member, said first bore providing an inlet for the well fluid; plug

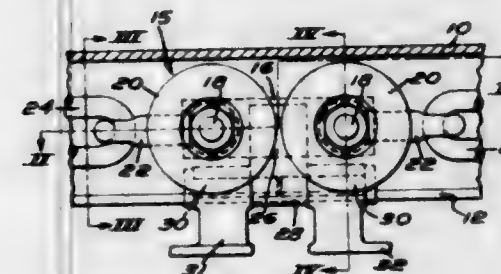


means secured to the other end of said second coupling; a packer surrounding said outer tubular member and adapted to seal with the well casing to form a sediment trap, and apertures in said outer tubular member spaced above said packer to provide communication between the interior of said outer tubular member and the interior of said casing so that gas free well fluid is allowed to pass to said pump.

3,004,498

CONVEYOR POWER CHAIN LOAD PICK-UP UNIT

Humphrey F. Parker, Buffalo, and Erford E. Robbins, North Tonawanda, N.Y., assignors to Columbus McKinnon Corporation, Tonawanda, N.Y.
Filed Nov. 20, 1958, Ser. No. 775,259
1 Claim. (Cl. 104-94)



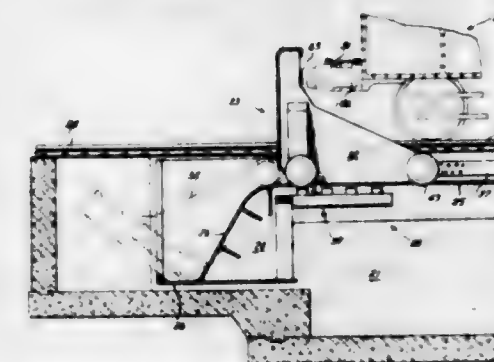
A conveyor power chain load pick-up unit comprising a vertically disposed keel member including an elongate plate provided with apertures at its opposite ends, an axle received in each of said apertures, a clevis straddling each end of said plate and pivoted upon a respective axle, a pair of wheels carried by each axle at the outer ends thereof, each wheel including a stationary hub engaged against a respective leg of its associated clevis whereby the hubs are relatively widely spaced and each axle having means at its opposite ends drawing said hubs against the clevis legs whereby the axles serve to hold the entire assembly together, each wheel also including a rim rotatably mounted on its hub concentrically of the associated axle, said keel member also including a U-shaped support

bracket fixedly depending from the central region of said plate, pin means carried by the lower end of said bracket and projecting fore and aft therefrom toward the opposite ends of said plate and between the associated pairs of wheels, a pair of laterally swingable dogs pivoted on and depending from said pin means one between each pair of wheels substantially in register below each of said axles so as to leave a space therebetween directly below said bracket and intermediate said axles for receiving and capturing a contact portion of an associated load carrying means.

3,004,499

RAILWAY CAR COUPLER CLAMPING APPARATUS

Lee H. Straight, Adel, and Lyle A. Hansen, Des Moines, Iowa, assignors to Straight Engineering Company, Adel, Iowa, a corporation of Iowa
Filed May 15, 1959, Ser. No. 813,390
8 Claims. (Cl. 104-249)



1. A coupler clamping assembly for a railway box car unloader mounted to tilt transversely of itself and adapted to support a box car having a conventional box car coupler at each end thereof, said assembly including a frame mounted on said unloader for movement toward and away from a coupler, a coupler engaging head member mounted on said frame, and means yieldably mounted on said frame and including a plurality of pivotally mounted plates arranged in a horizontally disposed, vertically stacked manner whereby one or more of said plates are engageable by said coupler when engaging said head member and are pivotally moved thereby, with one or more remaining plates extended above said coupler.

3,004,500

RAILWAY FLAT CAR BRIDGING PLATE
John A. Johnson, 9 Sheridan Drive, Short Hills, N.J.
Filed Aug. 20, 1958, Ser. No. 756,265
6 Claims. (Cl. 105-458)
(Granted under Title 35, U.S. Code (1952), sec. 266)



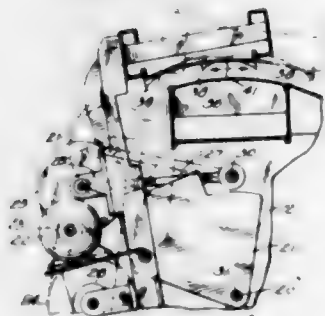
1. In combination with a flat bed vehicle capable of being coupled in spaced apart end to end relation to a similar vehicle, a bridging structure for spanning the space between adjacent ends of coupled flat bed vehicles to facilitate the passage of road vehicles along the beds of the coupled vehicles, said bridging structure comprising a hinge assembly secured to one end of a flat bed vehicle and a plate member connected to said hinge as-

sembly for rotation about the axis of said hinge assembly from a position of rest on one edge of said plate on the horizontal surface of the flat bed vehicle to a substantially horizontal position of the plate to permit spanning the space between adjacent coupled flat bed vehicles, said hinge assembly having an upper portion thereof projecting above the horizontal surface of the flat bed of the vehicle the axis of said upper projecting portion forming an acute angle with the horizontal surface of said flat bed vehicle, and a lower portion projecting below the horizontal surface of the flat bed vehicle, said upper and lower portions having a common axis oriented in a skewed position relative to the meeting edge formed by the horizontal surface of the flat bed vehicle and the depending end thereof and to the plane of said plate in both said position of rest and said substantially horizontal position whereby said plate member may be rotated from a stored position of rest on one edge of said plate member on the horizontal surface of the flat bed vehicle to a substantially horizontal use position wherein said plate member spans a space between adjacent ends of coupled flat bed vehicles.

3,004,501

SHAPING EQUIPMENT

Lionel Aubrey Wadley, 147 William Road, Norwood, Johannesburg, Union of South Africa
Filed July 21, 1959, Ser. No. 828,523
Claims priority, application Union of South Africa July 23, 1958
7 Claims. (Cl. 107-9)



1. Apparatus for forming a mass of dough into a spherical shape comprising two spaced conveyor belts, the first belt being arranged to move in a fixed path, the second belt being concave towards the first belt about a line of curvature beyond the first belt, and the first belt being curved substantially concentrically with the second belt, means to move the belts in opposite directions, and means to oscillate the second belt substantially about its line of curvature.

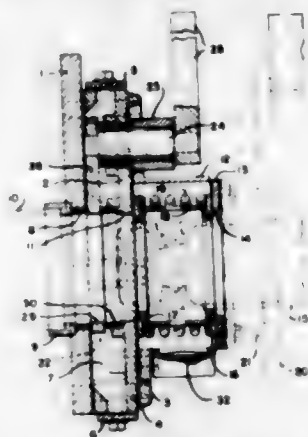
3,004,502

FURNACE SEAL MEANS

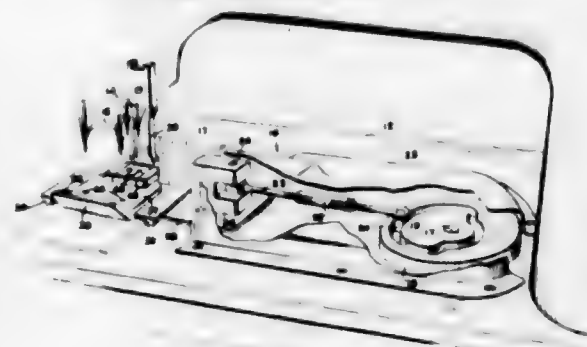
De Los E. Hibner, Jr., Du Bois, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed June 26, 1957, Ser. No. 668,182
1 Claim. (Cl. 110-179)

Means to provide access for a furnace accessory to a furnace at selected times through an opening in a wall of the furnace and to prevent leakage through said opening at other times comprising a member adapted to abut the exterior of the furnace wall surrounding said opening and adapted to form a chamber between said member and the furnace wall, a gate member movably positioned in the chamber operable to a position to mask the opening and to a position to unmask the opening, an opening in said member aligned with the furnace wall opening for access by the furnace accessory, furnace accessory guide means mounted on said member, and means sealing said guide means and adapted to seal a furnace accessory, a sealing member abutting the interior wall

of said chamber forming member adjacent the opening therein, said sealing member being in close proximity to one face of the gate member when it is in masking position.

3,004,503
SECONDARY INDEPENDENT FEED ACTUATOR
FOR SEWING MACHINES

Henry Erlichman, 126 Blake Ave., Brooklyn, N.Y.
Filed Aug. 4, 1958, Ser. No. 752,809
4 Claims. (Cl. 112-160)



1. A secondary feed actuator for sewing machines comprising, in combination, a substantially rigid leg for attachment to the needle head of a sewing machine, a presser foot pivotally supported upon said leg, a plate slidably supported beneath said presser foot for reciprocating longitudinal movement in a direction normal to the feed direction of the machine, and transmission means for reciprocating said plate during each operating cycle of the sewing machine, said presser foot including a plurality of needle receiving openings extending transversely therethrough in a direction normal to the plane of movement of said plate, said plate having a plurality of longitudinal slots formed therewithin, said slots communicating with said openings throughout the length of travel of said plate, said transmission means comprising a cam wheel adapted to be supported upon the bed of the sewing machine for rotation within a plane parallel to the plane of movement of said plate, a shank pivotally connected at one end of said plate, and a follower carried by the opposite end of said shank in guided engagement with said cam wheel, and a turn buckle integral with said shank for selectively adjusting the position of said plate to thereby displace the field of reciprocation of said plate.

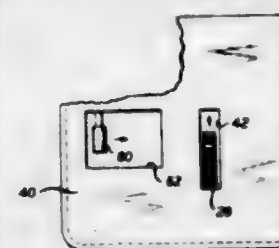
3,004,504

MACHINE FOR TURNING AND SPREADING
OVER-LOCK STITCHED GARMENTS

Anthony Abbenante, 134-46 97th St., Ozone Park, N.Y.
Filed July 3, 1958, Ser. No. 746,423
4 Claims. (Cl. 112-203)

1. A machine for spreading over-locked parts of a garment or the like, comprising a head, a horizontal

work-supporting plate mounted on said head, a first vertically movable support mounted on said head above said plate, a first presser foot mounted on said first support for engagement with said plate, a first opening formed in said plate below said first presser foot, a first eccentric mounted on said head below said first opening for movement in a vertical plane, a first pusher element mounted on said first eccentric and engaging in intermittent work-feeding movement through said first opening, the work-feeding path being in a horizontal plane on said work-supporting plate and along the plane of movement of the first eccentric, a second vertically movable support mounted on said head above said plate, a second presser foot mounted on said second support for engagement with said plate in laterally offset position relative to the first presser foot, a second opening formed in said plate below said second presser foot, a second eccentric mounted on said head below said second opening, said second eccentric operating in a vertical plane transverse of the plane of operation of the first eccentric, and a second pusher element mounted on said second eccentric and engaging in intermittent work-spreading movement through said second opening in a plane coinciding with the plane of operation of said second eccentric, the two eccentrics being synchronized so that when either rises to move its pusher element through the opening above it,



the other eccentric descends to withdraw its pusher element from the plate opening above it, said presser foot and said work-supporting plate being adapted to receive between them a garment having over-lock stitch joined parts, one such part between the first presser foot and the plate, the second such part between the second presser foot and the plate, the overlock stitch joined edges of the respective parts being disposed between the two presser feet and aligned with the plane of movement of the first eccentric, the first pusher element being adapted to engage said first part of the garment against the said presser foot to feed the garment intermittently in a path coinciding with said plane of operation of the first eccentric, the second pusher element being adapted to engage the second part of the garment against the second presser foot in the intervals between said feeding operations in order to move said second part of the garment in the direction away from the first part of the garment and in a path coinciding with the plane of movement of the second eccentric, the first presser foot being adapted to hold the first part of the garment stationary on the work-supporting plate against the pull of the second pusher element exerted upon the second part of the garment, whereby the two parts of the garment are spread substantially as far apart as the stitching will permit and thereby positioning the two parts in a substantially common plane.

3,004,505

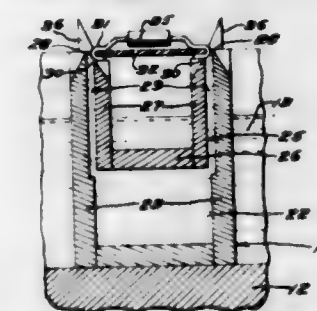
SOLDERING DEVICE

Howard A. Dvorak, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 30, 1957, Ser. No. 687,024
4 Claims. (Cl. 113-126)

1. The method of soldering an edge-clinched lead wire to metallic circuit patterns on opposite faces of a flat printed circuit board, said lead wire being clinched about

an edge of the printed circuit board in a generally U-shaped configuration and in contact with metallic circuit patterns lying on opposite faces of the board and extending to said edge, which method comprises the steps of forcing a stream of molten solder under pressure through an opening to create a substantially vertical solder fountain of a predetermined height, and placing said edge with the lead wire clinched thereabout partially across the opening in a manner such that only a part of the solder stream impinges upon portions of the circuit pattern and the lead wire on the lower face of the board and the opening is restricted by the edge of the board to an extent such that the remaining part of the stream is forced to rise vertically adjacent to said edge to an elevation substantially equal to that of the circuit pattern on the lower face of the board so as to wet portions of the circuit pattern and the lead wire on the top face of the board.

3. A device for soldering lead wires of electrical components to metallic circuit patterns on opposite faces of a flat, rectangular, printed circuit board, the lead wires being clinched about opposite side edges of the board, each lead wire being clinched in generally a U-shaped configuration and in contact with portions of the circuit patterns extending to said edges on opposite faces of the board, which device comprises an outer, generally rectangular vat having a pair of vertical side walls of a predetermined height spaced apart a distance slightly greater than the width of the printed circuit board, an inner, generally rectangular vat positioned within the outer vat and having a pair of vertical side walls of a height less than said predetermined height such that the top



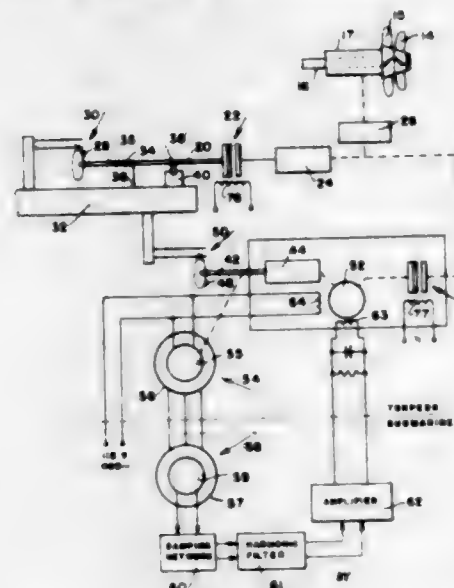
edges of said last-mentioned side walls lie in a horizontal plane spaced below a horizontal plane containing the top edges of the outer vat side walls by an amount substantially equal to the thickness of the printed circuit board, said inner vat side walls being spaced apart a distance slightly less than the width of the printed circuit board and spaced from the corresponding side walls of the outer vat so as to form a pair of vertical restricted passageways communicating with the interior of the outer vat, a reservoir of molten solder communicating with the interior of the outer vat, supporting and locating means for positioning the printed circuit board in a horizontal attitude between the side walls of the outer vat with the bottom face of the board spaced a distance of the order of the thickness of the lead wires above the plane containing the top edges of the inner vat side walls and with the side edges of the board projecting partly across corresponding ones of passageways between the walls and means for forcing molten solder from the reservoir into the interior of the outer vat and upwardly through said passageways to establish a predetermined flow rate through the passageways such that before the board is positioned on the supporting and locating means all of the solder stream flowing through each passageway flows over the top edge of the side wall of the inner vat and returns to the reservoir whereas after the board is so positioned only a part of the solder stream in each passageway flows over the top edge of the side wall of the inner vat to wet edge portions of the circuit pattern on the lower face of the printed circuit board and the remaining part of the solder stream from each passageway is forced to rise adjacent to the corresponding side edge of the board and to flow

over the top edge of the corresponding side wall of the outer vat so that portions of the metallic circuit pattern on the top face of the board and immediately adjacent to the side edges thereof are wet by the solder streams.

3,004,506 VARIABLE ENABLER

David A. Cooke and Robert H. Kittleman, Sharon, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Nov. 4, 1953, Ser. No. 390,268
6 Claims. (Cl. 114-20)



1. In a torpedo of the type having acoustic guidance means, and having a propeller adapted to be rotated by a propeller shaft to drive said torpedo a substantially constant distance per revolution of said propeller and shaft, the improvements comprising; a first shaft connected by a first clutch and first reduction gears to said propeller shaft, said first shaft adapted to turn through one revolution while said torpedo travels a minimum enabling distance, means for orienting said first shaft to a preselected angular position, a first cam on said first shaft, first cam contact mounted on said torpedo, said first cam contacts adapted to be closed by said first cam after said torpedo has substantially traveled said minimum enabling distance after said first clutch connects said first shaft to said propeller shaft, a second shaft connected by second reduction gears and a second clutch to said propeller shaft, said second shaft adapted to turn through one revolution while said torpedo travels a predetermined distance, means for orienting said second shaft to any selected position, a second cam on said second shaft, second cam contacts on said torpedo, said second cam contacts adapted to be closed by said second cam after said torpedo has traveled a preselected distance corresponding to the selected position of the second shaft after the second clutch connects said second shaft to said propeller shaft, means for engaging said first and second clutches after said torpedo is launched, and circuit means interconnecting said first cam contacts, said second cam contacts and said acoustic guidance means and adapted to energize said acoustic guidance means when said second cam contacts are closed after said first cam contacts have closed.

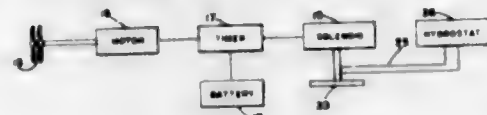
3,004,507 EXERCISE TORPEDO

Bernard W. Abrams, South Euclid, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed May 1, 1958, Ser. No. 734,071
5 Claims. (Cl. 114-20)

1. In an exercise torpedo having a hull, motor means for driving said torpedo through the water, electrical

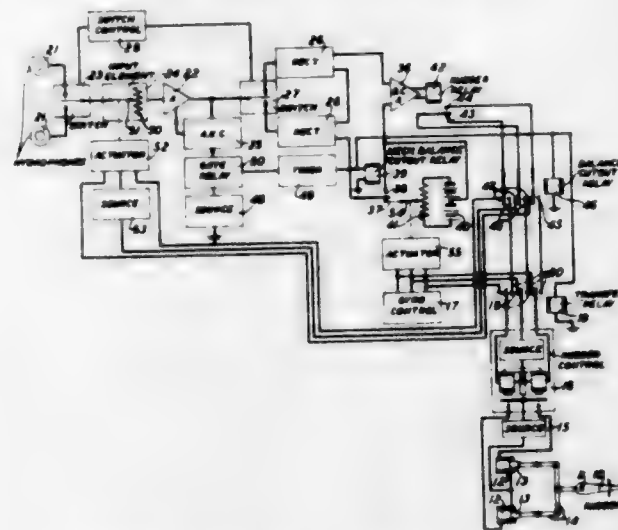
means for energizing said motor means, a compartment in the hull of said torpedo having an opening therein and adapted to communicate with sea water upon launching of the torpedo, a trap door in the said compartment, heavy shot in said compartment, solenoid means in circuit with said electrical means and connected to said trap door for maintaining said trap door closed while said



motor means is energized, a hydrostat mechanically coupled to said trap door maintaining said trap door closed until said torpedo sinks in water to a given depth at which the water pressure actuates said hydrostat to decouple said hydrostat from said trap door, said electrical means deenergizing said solenoid at the end of said torpedo's run thereby causing said trap door to open to allow said shot to spill out and lighten said torpedo.

3,004,508 CONTROL CIRCUIT

Alton C. Dickenson, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 20, 1944, Ser. No. 545,835
30 Claims. (Cl. 114-23)



1. A steering system for a torpedo, comprising a rudder, a control element for deflecting said rudder in one direction or the other, gyroscope means normally associated with said element for controlling it to maintain the torpedo on course, signal control means normally dissociated from said element and actuable in accordance with signals emanating from a target to control said element to guide the torpedo to the target, transfer means for associating said signal control means with said element and dissociating said gyroscope means therefrom, means for operating said transfer means at a time after the torpedo is launched, and means operable for at least a portion of the period between the launching of the torpedo and operation of said transfer means for adjusting said signal control means to compensate for unbalance in the steering system.

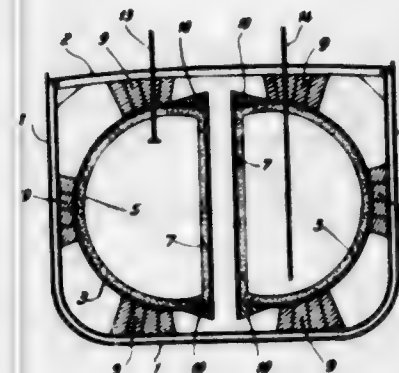
3,004,509 SHIPS DESIGNED FOR THE TRANSPORT OF LIQUEFIED GASES

René Leroux, 23 Route de Paris, Nantes-
Chantenay, France

Filed Mar. 3, 1958, Ser. No. 718,802
Claims priority, application France Jan. 31, 1958
2 Claims. (Cl. 114-74)

1. A cargo vessel for transporting liquefied gases, comprising in combination a hull, an elongated pressure-

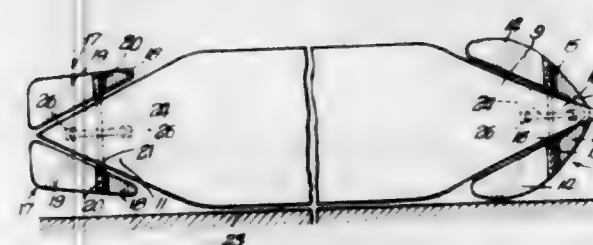
resistant tank disposed longitudinally within said hull and mounted in spaced relation thereto, said tank being formed by at least two horizontally disposed cylinders of circular cross section having their axes generally parallel to the axis of the vessel, said cylinders intersecting and joining with one another to form a single integrated tank,



and at least one elongated hollow stanchion mounted along the common chord of said cylinders with the ends thereof passing through and being connected to said cylinders at their points of intersection, the interior of said stanchion being in free communication with the space between said tank and said hull.

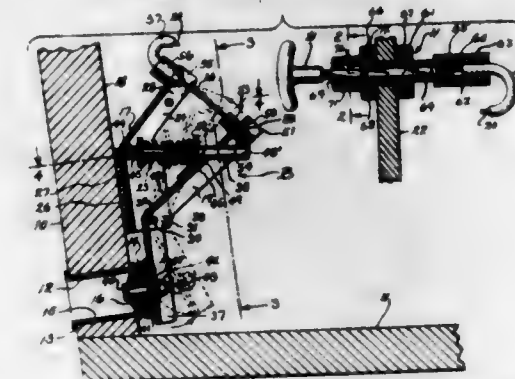
3,004,510 SHIP STABILIZERS

Josef Nawara, % Ravenswood Hospital Laboratory,
1931 Wilson Ave., Chicago 49, Ill.
Filed Aug. 13, 1958, Ser. No. 754,876
3 Claims. (Cl. 114-126)



1. In a ship having a bow, including a prow, and a stern, a stabilizer comprising a substantially V-shaped planar member in embracing, spaced relation with the bow, a shaft extended through the prow in a transverse relation, the side portions of said planar member being rigidly affixed to the ends of said shaft, the rearward end portion of said planar member past said shaft having greater area than the forward end portion of said planar member, a second planar member having portions extending in spaced relation with the sides of the stern, a shaft extended through the stern in a transverse relation, the side portions of said second planar member being rigidly affixed to the ends of said last named shaft, the rearward end portion of said second planar member past said last named shaft having greater area than the forward end portion thereof, both said planar members being disposed upon a common horizontal plane in a longitudinal relation with the ship and below the water level, said planar members being capable of angular shifting movement in a vertical direction due to the water pressures thereon resulting from the wave induced motions of the ship, the two shafts being capable of rocking motion imparted thereto by the angular shifting movement of the respective planar members, and means supported within the ship for limiting the rocking motion of said shafts for thereby limiting the angular shifting movement of said planar members in either direction.

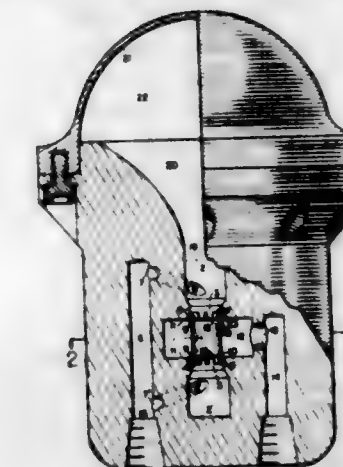
3,004,511
REMOTE CONTROL BOAT BAILER
Axel Moeller, St. Petersburg Beach, Fla., assignor to
Moeller Mfg. Co., Inc., Racine, Wis.
Filed Apr. 22, 1960, Ser. No. 23,947
5 Claims. (Cl. 114-185)



1. A remote controlled boat bailer characterized by the fact that the majority of operating parts are located above the bilge water and drain opening located in the stern of the boat comprising, a bracket secured to said stern board above said stern drain opening, said bracket being U-shaped in cross-section and including a depending leg terminating adjacent and above said drain opening, an upwardly and inwardly extending leg above and at an angle to said first mentioned leg, a valve seat for said drain opening, a valve lever pivotally secured to said first mentioned bracket leg adjacent the lower end termination thereof, said valve lever having a downwardly extending leg terminating in alignment with said valve seat and a drain opening and an angularly extending upper leg, a valve plug secured to said downwardly extending valve lever leg and adapted to open and close said drain opening and to fit said valve seat, a tubular member pivoted at one end to said upwardly extending bracket leg and projecting through an enlarged aperture in said upper valve lever leg, a spring received over said tubular member and carried between the said respective legs constantly urging said valve plug to its closed seated position, an operating handle secured to said boat dash remote from said valve means, and means connected to said valve lever extending to said dash and connected to said operating handle, whereby, said valve plug may be moved from its open to its closed position by movement of said operating handle.

3,004,512 ACOUSTIC-VIBRATION GENERATOR AND VALVE

John V. Bouyoucos, Cambridge, Mass. (1400 N. Goodman St., Rochester, N.Y.), and Frederick V. Hunt,
44 Beatrice Circle, Belmont, Mass.
Filed July 8, 1958, Ser. No. 747,159
38 Claims. (Cl. 116-137)

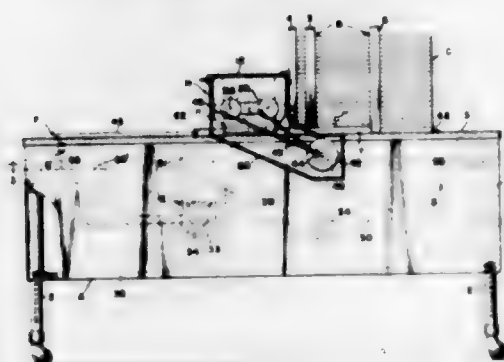


1. In an acoustic-vibration generator, a housing, means for producing a flow of a fluid medium through the hous-

ing for generating acoustic vibrations, a stator port region of the housing in the path of the fluid flow therethrough, and a fluid-pressure actuated valving mechanism disposed within the stator port region and provided with means for free-floating the valving mechanism in the said region with a fluid layer interposed between the valving mechanism and the stator port walls.

3,004,513 MACHINE FOR DUSTING AND HANDLING BAKER'S PEELS

John K. Matthews, Scranton, Pa., assignor to
Alfred Norris, Wyoming, Pa.
Filed Mar. 4, 1960, Ser. No. 12,814
7 Claims. (Cl. 118-2)



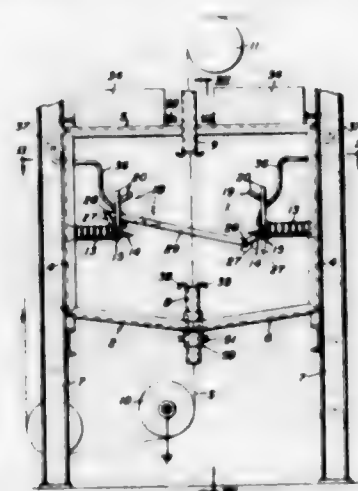
1. In a machine for successively dusting and positioning baker's peels at a loading station, a support structure having a top horizontal surface, stack holding means comprising a plurality of uprights for maintaining a stack of peels on said support structure and a loading station spaced from said stack holding means, conveyor mechanism for moving said peels successively from said stack to said loading station, dusting mechanism positioned above the path of movement of said peels to discharge material on to said peels on passage beneath said mechanism to said station, a pair of rails on said supporting structure extending alongside said stack of peels and along the path of said peels toward said loading station to guide said peels in said path, each of said rails being secured to at least one of said uprights to form a laterally confining structure for said peels, said top surface having a transverse slot adjacent each edge, guide means comprising transverse guide members mounted on said support structure beneath said slots, each said confining structure having a portion extending through one of said slots and slidably engaging said guide means to provide lateral adjustment for each of said rails and upright secured thereto, and means to secure said confining structure in position on said guide means, a power source to operate said conveyor mechanism and said dusting mechanism and actuated by a peel at said loading station to discontinue said operation of said conveyor mechanism and said dusting mechanism by said power source, so that removal of a peel at said loading station automatically causes operation of the dusting mechanism and delivery of the next peel to the loading station.

3,004,514 ELECTROSTATIC OILING APPARATUS

Erik Loes, Pittsburg, Calif., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 24, 1959, Ser. No. 808,754
2 Claims. (Cl. 118-8)

1. In apparatus for electrostatically depositing a film of oil on a moving metallic strip including opposed knife-edge discharge electrodes, means for moving strip there-

between, means for delivering oil to said electrodes, means for imposing an electrical potential across said electrodes and the strip adapted to atomize the oil and carry it to the strip, the combination therewith of opposed interceptor plates disposed below said discharge electrodes, opposed adjustable control grids disposed above the dis-



charge electrodes adapted to vary the path of atomized oil flow downwardly towards said interceptor plates to thereby control the amount of oil deposited on the strip, and control means adapted to adjust the position of the control grids automatically in response to changes in speed of travel of the strip.

3,004,515 MOISTENING DEVICE

August C. Hummel, % The A. C. Hummel Co., Box 25,
Pleasant Ridge Station, Cincinnati, Ohio
Filed June 16, 1958, Ser. No. 742,093
2 Claims. (Cl. 118-270)



1. A moistening device having a bottom part and a separate cover part, said bottom part consisting of a receptacle having a bottom and integrally formed upstanding walls, said walls terminating upwardly in an enlarged outwardly projecting annular lip, said cover part comprising a cover wall terminating outwardly in a downturned peripheral flange having an inwardly directed shoulder engageable with the enlarged lip on said receptacle to form a seal therewith, one at least of said parts being formed from a distortable material such that a water-tight seal may be effected between said parts upon engagement of said inwardly directed shoulder with said annular lip, an opening in said cover part, said opening having relatively thin inwardly directed peripheral edges, and a sponge-like moistening member snugly fitted in said opening, said moistening member being of a size to completely fill said opening and of a depth such that its lower surface seats on the bottom of said receptacle with its upper surface projecting upwardly beyond the opening in said cover part, said sponge-like member being adapted to swell upon saturation with moistening liquid, whereby the relatively thin peripheral edges of said opening will make pinching contact with the sides of said sponge-like moistening member, and a breather opening in said cover member through which air may enter the otherwise closed receptacle to enhance the capillary action of the moistening member.

3,004,516 FORM FOR GLOVE DIPPING

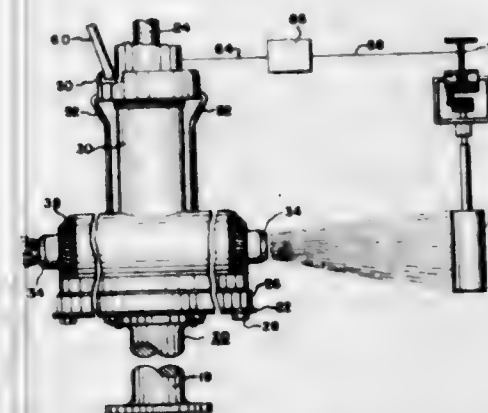
John Edwin Maraden and George Gee, Hyde, and Bristowe Backland Saxton, Gee Cross, Hyde, England, assignors to James North & Sons Limited, Hyde, England, a British company
Filed Jan. 10, 1958, Ser. No. 708,101
Claims priority, application Great Britain Jan. 10, 1957
6 Claims. (Cl. 118-500)



1. A support for a fabric glove to be coated with synthetic plastic material and then baked which comprises a thin-walled arcuate elongated member of a shape approximating that of the back of the hand and wrist of said support, a complementary thin-walled arcuate elongated member of a shape approximating that of the palm and wrist permanently united to said first member at the lateral edges of said members to form a hollow hand open at the wrist end and also at the finger end, and having a cut-out space on one side of said hand for the insertion of a thumbpiece, a thin-walled thumbpiece open at the rear thereof and of the contour of the thumb and united to said hand members at said space, a plurality of thin-walled fingers open at the rear thereof and having the shape of relaxed fingers and united to the finger end of said hand to close the opening, the contacting edges of said elements being welded, said elements being of approximately the same thickness.

3,004,517 ELECTROSTATIC PAINT SPRAY

Harold J. Reland, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 4, 1958, Ser. No. 726,449
9 Claims. (Cl. 118-627)

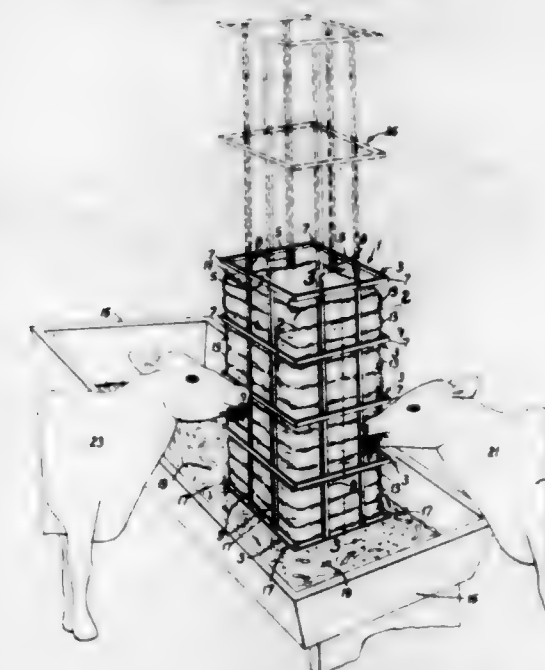


5. An electrostatic paint spray apparatus, comprising in combination; an electrostatic power pack having one pole thereof attached to an article to be painted, an electrostatic paint distributor connected to the other pole of the power pack and spaced a predetermined distance from said article to be painted, said distributor including a tubular emitter element having a restricted throat,

feeding means for supplying paint to the internal surface of the tubular element and mechanical driving means for rotating the tubular element in an orbit about a center and for simultaneously causing rotation thereof about its own axis whereby paint is centrifugally distributed within the element and is centrifugally thrown therefrom and is simultaneously electrostatically dispersed as it passes from said element whereby the paint is subsequently deposited on the article through conjoint action of centrifugal and electrostatic forces.

3,004,518 STOCK FEEDER

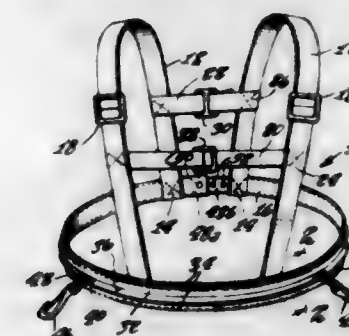
Henry V. Struckhoff, R.R. 1, Box 46, Augusta, Mo.
Filed Jan. 13, 1960, Ser. No. 2,235
1 Claim. (Cl. 119-58)



A stock feeder for rectangular hay bales to be vertically positioned, comprising uprights, corner-forming horizontal rectangular frames supported by said uprights in vertical spaced relationship, the resulting assembly having one pair of uprights on each side, the pairs of uprights on adjacent sides with the frames forming rectangular access openings spaced substantially away from the corners of said frames, said corners forming cornices, the vertical spacing between frames being such as only conveniently to admit the jaws of a feeding animal between cornices and in the rectangular access openings.

3,004,519 SAFETY HARNESS

Norman Weissman, 304 Bay 17th St., Brooklyn 14, N.Y.
Filed Feb. 24, 1959, Ser. No. 795,213
3 Claims. (Cl. 119-96)



1. A safety harness for infants comprising, in combination, a waist belt, a pair of shoulder straps permanently secured at each end to diametrically opposite sides of said waist belt, means for adjusting the diameter of said waist belt, and a pair of releasable securement means

for attachment to a stationary object slidably carried by said waist belt at diametrically opposite sides and adjustably limiting movement of said waist belt relative to said stationary object, said means for adjusting the diameter of said waist belt comprising a channel formed at one end of said belt, and a tongue formed at the opposite end of said belt, said channel slidably receiving said tongue longitudinally therewithin, releasable fasteners detachably securing the opposite ends of said belt in assembled relationship, and slides carried by each one of said shoulder straps selectively adjusting the length thereof, said securement means comprising a plurality of individual spring clips, a pair of longitudinally extending and laterally spaced apart webs integral with said waist belt defining a longitudinal channel, and bearings carried by said spring clips slidably received within said longitudinal channel for reciprocating longitudinal movement along the length thereof.

3,004,520

WRITING INSTRUMENT

William H. Kersten, Janesville, and Roger Polan, Milton, Wis., assignors to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed July 5, 1955, Ser. No. 519,743
3 Claims. (Cl. 120-42.03)



1. A retractable writing instrument comprising a barrel, a writing unit mounted in the barrel for movement between a retracted position and a projected position, spring means biasing the unit toward retracted position for retracting and retaining retracted the unit, the unit including, a push button extending from the rear end of the barrel for depression by the user for projecting the unit to projected position, and means for releasably retaining the unit in projected position consisting solely of an interengageable pair of forwardly converging tapered elements on the barrel and unit respectively capable of retaining the unit in projected position against normal writing pressures but releasable in response to excessive pressure applied to the unit in rearward direction, said spring means and said unit being the only moving parts of the instrument.

3,004,521

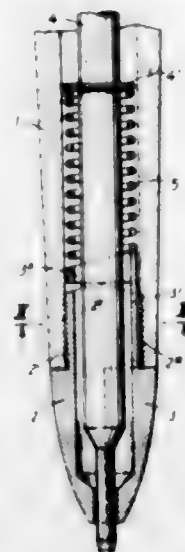
BALL-POINT PEN

Josef Schwarzl, Stein, near Nurnberg, Germany, assignor to A. W. Faber-Castell, Stein, near Nurnberg, Germany

Filed Apr. 7, 1959, Ser. No. 804,708
Claims priority, application Germany May 22, 1958
4 Claims. (Cl. 120-42.4)

1. A ball-point pen having a tubular casing with a tip portion thereon and an axial bore within said tip portion, and a ball-point insert removably mounted within said casing and having a tip portion extending through and held within said bore, said tip portion of said casing comprising two complementary parts, one of said parts being re-

siliently mounted in said casing so as to be resiliently displaceable in a direction transverse to the axis of said insert whereby to permit the tip portion of said insert to yield resiliently in a direction transverse to the axis of said insert, the other part having a portion fixedly engaged with said casing to rigidly secure said tip portion to said casing whereby to rigidly support the tip portion of said insert in a position directly opposite to said direction and transverse to the axis of said insert, each of said two parts forming substantially one-half of said tip portion.

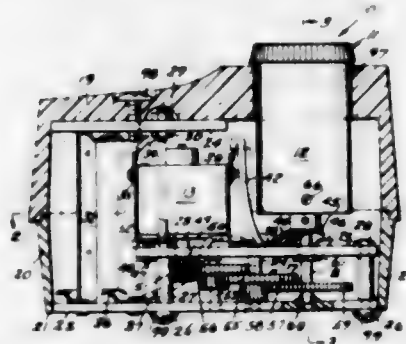


tion of said casing, the one part being provided with an extension, an annular part secured to the free end of said extension and surrounding said insert within said casing, spring means within said casing surrounding said insert and acting upon said annular part so as to press said one part resiliently against said other part, and the rear end of said fixedly engaged portion of said other part having a rocker edge, said annular part being pivotably mounted on said rocker edge, and said fixedly engaged portion having an aperture therein for receiving said extension.

3,004,522

BATTERY OPERATED PENCIL SHARPENER

Allen H. Kent, New York, N.Y., assignor to Minitone, Inc., New York, N.Y., a corporation of New York
Filed Aug. 11, 1959, Ser. No. 833,065
3 Claims. (Cl. 120-96)



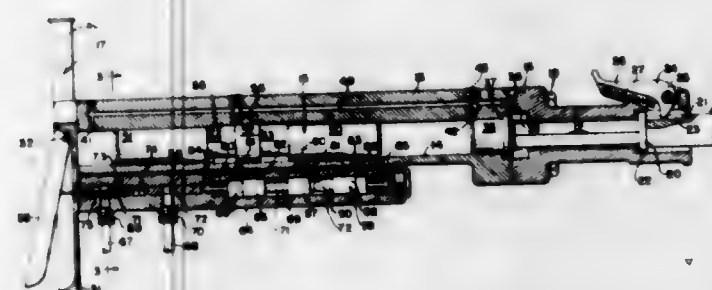
1. A sharpener device comprising a supporting structure including a base plate and a first plate parallel to said base plate and positioned thereabove, a chip receiving and retaining receptacle positioned above said first plate, a shaft extending through said first plate and defining an axis of rotation for said receptacle, said shaft being fixedly secured to said receptacle at a first closed end thereof, a cover removably mounted to a second open end of said receptacle, a sharpener means fixedly mounted to said cover and disposed within said receptacle, a driving means comprising the series connection of a battery means, a normally open switch, and a D.C. motor, speed reducing gear means disposed between said plates and connecting said shaft to said motor for rotation of said

receptacle by said motor when said switch means is closed, a case removably secured to said supporting structure, said receptacle being disposed substantially wholly within said case with said cover extending externally of said case through an opening thereof, said shaft and said driving means being disposed within said case, biasing means within said case urging said shaft along its axis to a first position wherein said switch is open, said receptacle being movable along said axis to a second position by the application of force upon a pencil inserted into a guide aperture of said sharpener means, said receptacle when in said second position operatively engaging said switch for closing thereof thereby energizing said motor from said battery means, thread means carried by said receptacle cooperating with thread means carried by said cover for securement of said cover to said receptacle, said thread means constructed so that rotation of said cover relative to said receptacle, in a direction opposite to the direction of rotation of said receptacle by said gear means, is effective to tighten the connection between said cover and said receptacle.

3,004,523

HYDRAULIC IMPACT TOOL

Sheldon L. Christensen, 1963 E. 9th, Fremont, Nebr.
Filed Nov. 4, 1959, Ser. No. 850,849
6 Claims. (Cl. 121-28)



1. A hydraulic impact tool comprising a main body having a shank support, a tool having a shank carried by said shank support, said body having a cylinder, an anvil aligned with said support to strike the shank, a hammer in said cylinder for striking said anvil, a piston movable with said hammer, a spool valve casing having hydraulic pressure inlet and return ports, pressure and return passageways extending between the casing and cylinder adapted to be connected to said inlet and return ports respectively during the actuation of said piston; spool-control fluid passageways communicating between opposite ends of the cylinder and opposite ends of the casing, a spool valve carried in said casing for directing liquid under pressure into one of said pressure passageways when said piston is in a raised position so that liquid under pressure may enter said cylinder and drive said piston in a power stroke during which the return port is open to a return passageway to exhaust and return most of the liquid in advance of said hammer, said piston closing said return passageway near the end of the power stroke of said hammer to form a pressure build-up in advance of said piston and opening a spool control passageway in advance of the piston to effect shifting of the spool valve to effect opening of the return port to the other of the return passageways and the pressure port to the other of the pressure passageways while closing the pressure passageway and the return passageway effecting the power stroke of the piston, the shifting of the spool valve thereby effecting reversal of movement of the piston to its non-power stroke, said piston advancing in its non-power stroke to close said other of the return passageways to effect a pressure build-up in advance of the piston while opening the other of the spool-control fluid passageways to reverse shift the spool valve to the position effecting the power stroke of

the piston, and a fluid duct communicating between opposite ends of the cylinder and containing check valves therein for relieving pressure within the cylinder and in advance of the hammer during the latter's power stroke and retaining pressure within the cylinder in advance of the piston during the latter's non-power stroke.

3,004,524

HYDRAULIC CYLINDER AND PISTON

ARRANGEMENT

Frank V. McCay, Salt Lake City, Utah, and John R. Austin, 1635 Kearney St., Denver, Colo.; said McCay assignor to said Austin
Filed July 20, 1960, Ser. No. 44,144
22 Claims. (121-36)



1. In a hydraulic cylinder and piston arrangement, including a cylinder having port means for the opposite ends thereof, a piston movable within said cylinder by pressure of hydraulic fluid on the respective opposite sides thereof, a piston rod connected to said piston and extending through at least one end of said cylinder, and means for supplying hydraulic fluid to and receiving hydraulic fluid from said port means, the improvement comprising a main port spaced from a first end of said cylinder, said piston covering said main port as said piston approaches said first end; an auxiliary port communicating with the space between said piston and cylinder at said first end; means for restricting the discharge of fluid through said auxiliary port, whereby fluid trapped between said piston and said first end of said cylinder will provide a cushion during movement of said piston between said main port and said first end of said cylinder; and means carried by said piston for relieving fluid pressure on the opposite side of said piston, through said piston and said main port, as said piston reaches said first end of said cylinder.

3,004,525

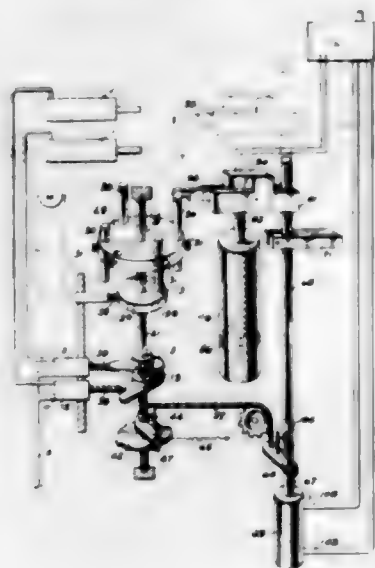
AUTOMATIC CONTROL SYSTEM

Jean Emalin, 44 Rue du College, Saint Claude, Jura, France

Filed Mar. 2, 1959, Ser. No. 796,648
Claims priority, application France Mar. 27, 1958
12 Claims. (Cl. 121-38)

1. A system for controlling multi-function apparatus in accordance with a pre-selected program comprising; a rotatable shaft; a plurality of axially spaced angularly settable first means on the shaft; a plurality of angularly spaced axially settable second means on the shaft; stepping means operable to rotate the shaft to selectively present said first means in a predetermined sequence to a first sensing station and to simultaneously selectively present each of said second means to a second sensing station; means at said first station connected with said apparatus and each responsive to presentation of a cor-

responding one of said first means at said first sensing station to initiate a respective one of said functions; a feeler and means for controlling the displacement of the feeler relatively to said shaft at a controlled rate from an initial position into cooperative relationship with a second means presented at said second station; control means for said shaft stepping means operative in response to attainment by the feeler of said coopera-

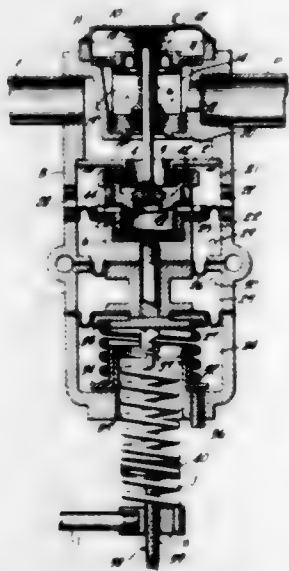


tive relationship to return said feeler to said initial position and then to impart a step of rotation to the shaft while simultaneously freeing said feeler for displacement from said initial position; whereby the selective setting of said first means will determine the order of performance of said functions while the selective setting of said second means will determine the relative times at which said functions are performed.

3,004,526

PRESSURE CONTROLLED POSITIONER

James C. Greenlees, Jr., Oakdale, N.Y., assignor to Fairchild Stratos Corporation, a corporation of Maryland
Filed Nov. 20, 1958, Ser. No. 775,184
5 Claims. (Cl. 121-41)



1. A pressure controlled positioner comprising a housing, a plurality of movable walls within the housing defining a plurality of chambers, including a control pressure chamber and a vented chamber, the control pressure chamber having a port for introducing therein a control fluid and the vented chamber having a port through which fluid is discharged, a movable pressure controlled positioner, a passage communicating with the interior of the housing and through which variations in pressure are

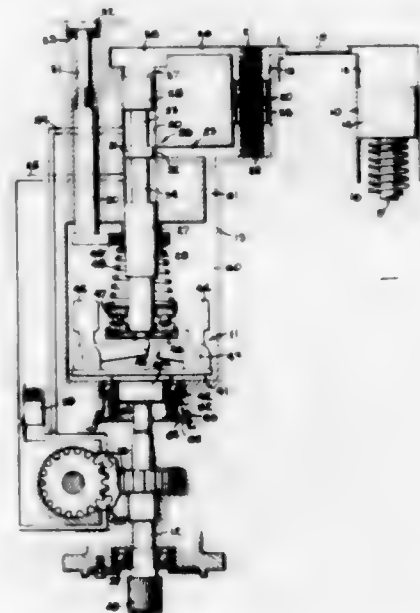
translated to the pressure controlled positioner for the regulation thereof, means connecting the interior of the housing with a source of fluid under relatively constant pressure, relatively movable valve and valve seat elements within the housing, the relative positions thereof regulating the flow of said supply fluid to the vented chamber which, in turn, regulates the pressure transmitted through said passage to the pressure controlled positioner, a pressure controlled actuator in communication with the supply pressure and connected to one of said elements for regulating the position thereof to compensate for variations in the supply pressure, and a movable control member connected to said movable walls and to the other of said elements for regulating the position thereof, whereby a variation in the pressure within the control pressure chamber produces displacement of the movable control member to vary the relative positions of the valve and valve seat elements which, in turn, regulates the pressure transmitted to the pressure controlled positioner.

3,004,527

CONDITION REGULATING APPARATUS

George Forrest Drake, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois

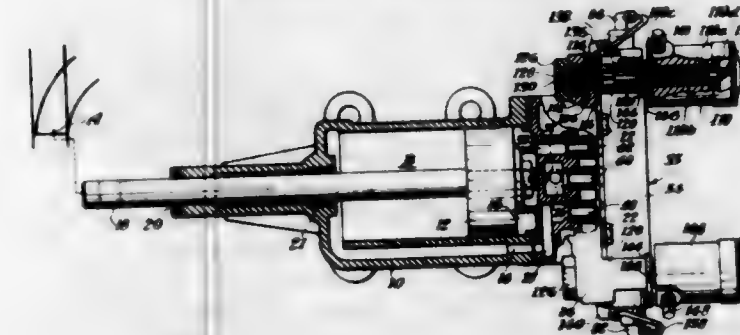
Filed July 9, 1959, Ser. No. 826,010
7 Claims. (Cl. 121-42)



1. In a condition regulator, the combination of, a casing providing first and second closed fluid filled chambers connected by a cylindrical bore, a valve plunger having three lands of equal diameters axially spaced along its length and slidable axially in said bore, said plunger having axially facing pressure areas of equal size and no larger than said lands disposed at opposite ends and exposed to the fluid in the respective chambers, means sealed in a wall of one of said chambers and transmitting therethrough a signal which varies with changes in a condition to be regulated, a condition sensor enclosed in said one chamber and exerting on said plunger a force which varies with deviations in said signal, a port in the wall of said bore communicating with said first chamber and cooperating with the intermediate one of the lands to form a valve for admitting pressure fluid to or releasing the same from said first chamber, a fluid servo including a cylinder communicating with said second chamber, a wall between said chambers yieldably urged in opposite directions and movable back and forth to transmit the pressure changes produced by opening of said valve, and a restricted passage permitting the slow leakage of fluid therebetween to equalize the pressures therein.

3,004,528
RAILWAY TRAFFIC CONTROLLING APPARATUS
John W. Logan, Jr., Forest Hills, and Rankin J. Bush, Jeannette, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed June 26, 1959, Ser. No. 823,136
4 Claims. (Cl. 121-157)



1. In combination, a fluid pressure-actuated motor comprising a cylinder having a piston reciprocable between a first and a second position, fluid pressure-actuated spool valve means reciprocable between a first and a second position for controlling the admission of fluid under pressure to said cylinder, and means for controlling the admission of fluid under pressure to said spool valve means and comprising first and second enclosure members each having an elongated opening therethrough screw-threaded at both ends, a first bushing slidably mounted in the opening in said first enclosure member, a second bushing slidably mounted in the opening in said second enclosure member, cap means in threaded engagement with said first and second enclosure members at one end of said openings for closing said one end of said openings, a first valve means slidably mounted in said first bushing for axial movement between a biased initial position and a second position for controlling the admission of fluid under pressure to one end of said spool valve means, a second valve means slidably mounted in said second bushing for axial movement between a biased initial position and a second position for controlling the admission of fluid pressure to the other end of said spool valve means, and valve actuating means secured to said first and second enclosure members at the other end of said opening and being operatively connected with said first and second valve means for moving said first and second valve means to their respective second positions.

3,004,529

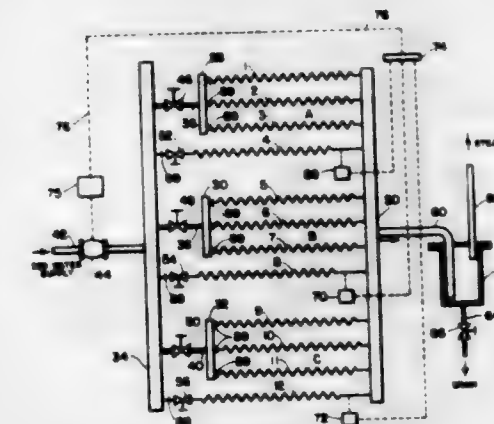
METHOD AND APPARATUS FOR CONTROLLING FUEL AND/OR FEEDWATER FLOW IN A ONCE-THROUGH STEAM GENERATOR

John I. Argeringer, Scarsdale, and Herbert M. Lowenstein, New York, N.Y., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 6, 1956, Ser. No. 569,920
22 Claims. (Cl. 122-448)

1. In a forced flow vapor generator in which heat is exchanged between a liquid working medium and a gaseous working medium and having the heating surface thereof divided into tubes carrying said liquid medium and being exposed to said gaseous medium, said tubes being connected in parallel at least in the zones of vaporization and the beginning of superheating, said tubes being divided into groups; the combination of means for regulating the rate of flow of at least one of said mediums in a manner to change the outlet temperature of said liquid medium, a plurality of temperature sensitive impulse transmitters each associated with one tube of each group to the exclusion of the other tubes in each group, in the region of the transition from the vaporizing zone

into the superheating zone; means connecting said transmitters to a mechanism which permits only the impulse transmitter which at the moment is subjected to the highest temperature to influence said regulating means; a variable flow restricting device associated with, and individual to the said one tube of each group and having a flow restricting value to cause superheated vapor to issue from

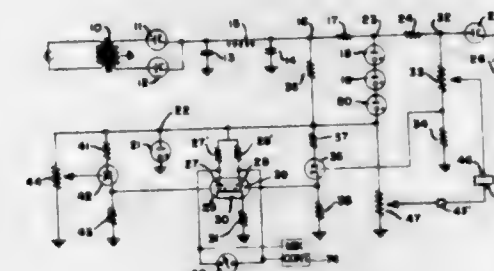


said one tube; a second variable flow restricting device common to and associated with said other tubes of each group and having a flow restricting value to cause saturated vapor to issue from said other tubes; and a plurality of other fixed value flow restricting devices each individual to said other tubes of each group for fixing the quality of the saturated steam issuing from said other tubes.

3,004,530

INSTRUMENT

Paul F. Adair, Commack, N.Y., assignor to Jet Ignition Co., Inc., Mineola, N.Y., a corporation of New York
Filed Aug. 10, 1959, Ser. No. 832,840
20 Claims. (Cl. 123-119)



1. The method of instantaneously and continuously measuring temperature above a predetermined value which comprises providing a gap at the location where the temperature is to be measured; impressing a voltage across said gap of a value such that a predetermined current flows across said gap at the low end of said range of temperatures to be measured; presetting a differential amplifying means so that its output is zero when the temperature at said gap is such that said predetermined current is flowing across said gap; and measuring the output of said amplifying means as the temperature at said gap varies within the range of temperatures to be measured.

3,004,531

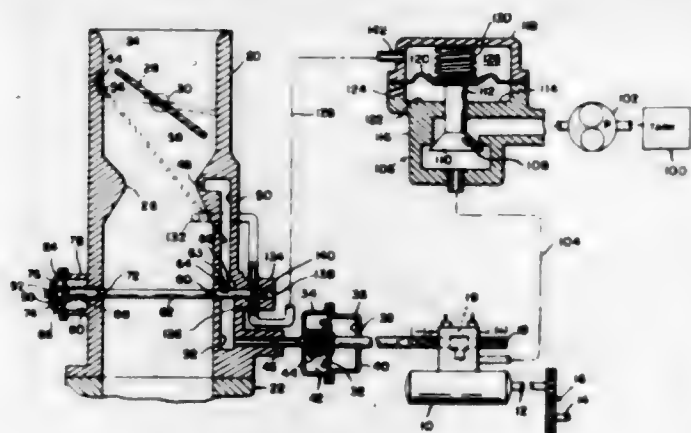
FUEL SUPPLY SYSTEM

Stanley M. Udale, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Filed Mar. 16, 1959, Ser. No. 799,747
13 Claims. (Cl. 123-140)

1. A fuel injection system for an internal combustion engine having a manifold, an air intake passage connected to said manifold and a throttle valve in said intake pas-

sage, a venturi downstream of said throttle valve, said system comprising a fuel delivery pump connected to supply fuel directly to said engine at a rate dependent on pump delivery, means responsive to manifold vacuum



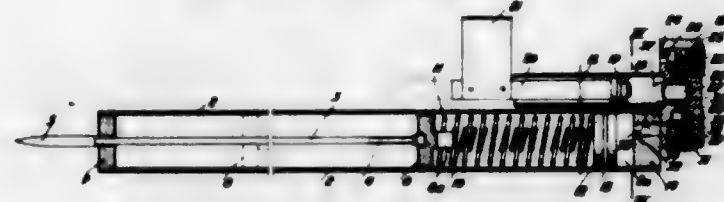
modified by the vacuum at said venturi connected to said pump to regulate its delivery rate, a shut-off valve controlling delivery of fuel by said pump, and means responsive to engine deceleration with said throttle valve closed connected to said shut-off valve.

3,004,532
WRIST ATTACHMENT FOR USE IN DRAWING AND RELEASING A BOW STRING
Walter Vance, Box 303, Northfield, Ohio
Filed Dec. 12, 1958, Ser. No. 780,015
6 Claims. (Cl. 124-23)



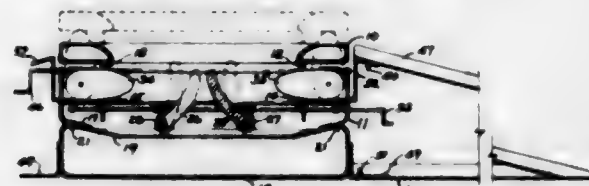
4. In combination with a bow having a bow string, an archer's wrist attachment for drawing and releasing the bow string by transmitting the pull of the bow string directly to the wrist and arm muscles of an archer's arm while maintaining the release control of the arrow shaft at the finger tips of the archer's hand; said attachment comprising a flexible body portion overlying the palm and palmar portions of the fingers of the archer's hand and having wrist engaging means on one end for attachment to the inside of the wrist of an archer's arm, said other end having at least two axially projecting tongues which are spaced laterally apart to define a space therebetween that is of a size to permit the passage between the tongues of the nock of an arrow shaft, said tongues being of a flexible nature and being connected by preformed hinge lines to the body portion and partially extended about the bow string of a bow and held against the bow string by the finger tips of an archer when the nock of the arrow shaft is disposed through the space and receives the bow string, said tongues having arresting means hingedly attached to their distal ends for encompassing the bow string so that when the tongues are released by the finger tips in releasing the bow string, the bow string laterally travels off the tongues and is captured by the means so as to arrest the bow string at the end of the lateral travel-off and restore the bow string to a straight line travel along the desired flight line of the arrow.

3,004,533
GUN FOR UNDERWATER USE
Maurice Jean Ritz, 4 Avenue René Sammel, Clamart, France
Filed June 6, 1960, Ser. No. 34,266
Claims priority, application France June 8, 1959
3 Claims. (Cl. 124-27)



1. A gun comprising a barrel having front and rear portions, a slider displaceable in a front portion of the barrel, a piston slidable in a rear portion of the barrel, a pair of springs in said barrel between said slider and said piston, said springs being coaxial and of unequal diameter and unequal length, said slider being displaceable to a rearward position by a missile engageable therewith to compress the longer spring, trigger-actuated mechanism for releasably retaining the slider in such rearward position, a chamber defined in the rear end of said barrel, and a hand pump manually operable to force fluid into said chamber to force the piston forwardly and thereby compress both of said springs, whereupon operation of the trigger to release the slider will cause the slider to be propelled forwardly of the barrel under the total compression of both springs to fire the missile.

3,004,534
MASSAGING APPARATUS FOR TOILETS
Milton H. Gottberg, 904 S. 2nd St., Fairfield, Iowa
Filed Jan. 14, 1959, Ser. No. 786,739
5 Claims. (Cl. 128-24)



1. An article of manufacture comprising a substantially rectangular intermediate frame, a toilet seat movably supported on said frame, manual operating means for varying the spacing of said seat with said frame, a substantially rectangular receptacle having closed bottom and sides and a top portion with a centrally located aperture therein, positioning means for securing said frame to said receptacle, a pair of transverse shafts extending across the central portion of said frame, an arcuate shaped member secured to each shaft centrally thereof, means for effecting movement of said arcuate members toward each other and away from each other, said last named means including a manual operated crank assembly, a base flange secured to one side of said receptacle, an upper flange secured to the corresponding side of said intermediate frame, and a V-shaped ramp arranged for attachment to said flanges including a plurality of positioning pins carried by the open end of said ramp arranged for cooperation with spaced apertures on said base flange and upper flange.

3,004,535
OPTICAL INSERT FOR GAS MASKS
Carl A. Nelson, Takoma Park, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 1, 1960, Ser. No. 12,238
2 Claims. (Cl. 128-141)
(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A gas mask for protectively enclosing the face of a wearer and composed of flexible material enabling the

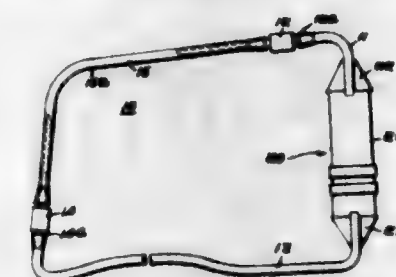
mask to be folded tightly for packaging and storing and to be extended therefrom for hermetically sealing the face of the wearer during service, the mask having spaced window openings sealed with transparent window material enabling viewing therethrough, a nosepiece intermediate the windows and having a recess behind the nosepiece and means enabling respiration through the mask, the said mask being spaced before and away from the face of the wearer when in service, and an optical insert mounted entirely within the confines of the mask and within the space between the mask and face of the wearer, the optical insert having a flexibility substantially equal to that of the mask and comprising an integral assembly including spaced spectacle frames, prescription lenses mounted in the spectacle frames, a resilient cushioning nosepiece having a bridging portion fitting over the bridge portion of the nose of the wearer and extensions projecting laterally therefrom on both sides of the nose, the said extensions integrally carrying the spectacle frames and corrective lenses therein closely adjacent to the eyes of the wearer for visual correction thereof, flexible suspension means for the frames and lenses connected to the resilient cushioning nosepiece of the insert, fastening means securing the suspension means to the nosepiece



of the mask interiorly thereof, and means enabling vertical adjustment of the suspension means relative to the mask for adjusting the optical insert with respect to the eyes of the wearer for correctively positioning the prescription lenses relative to the eyes of the wearer, the said fastening means being the only connection between the optical insert and the mask, the suspension means comprising a flexible strap having an end portion integrally united with the cushioning nosepiece of the insert, the said fastening means securing the strap to the mask including a buckle through which the strap is looped, a snap fastener having a first element integrally embedded in the mask, and a socket element receiving the first element, the buckle being a portion of the socket element, the strap having overlapping end portions with a stud fastener uniting the overlapping end portions, the stud fastener having a head portion seated on one of the overlapping end portions of the strap and a shank portion extending through a slot in an adjacent end portion of the strap enabling relative adjustment between the overlapping end portions, and a nut threadably mounted on the shank portion of the stud fastener for locking and releasing the fastener with respect to the end portions of the strap for enabling longitudinal adjustment of the strap.

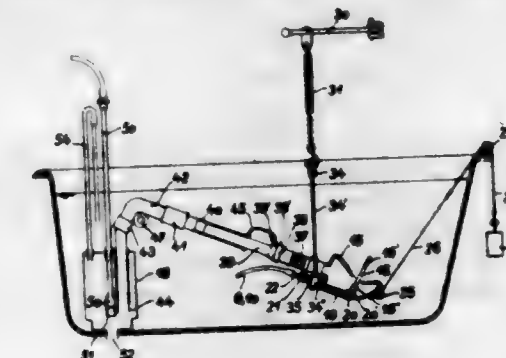
3,004,536
BLOOD ADMINISTERING APPARATUS
Carl W. Walter, 91 Highland St., Holliston, Mass.
Filed Mar. 29, 1954, Ser. No. 419,497
9 Claims. (Cl. 128-214)
1. Therapeutic fluid conducting and infusing apparatus comprising a flexible impermeable hemorepellent tube,

coupler and needle means at the opposite tube ends, a flexible impermeable hemorepellent sheath sealing said



means, and normally sealed apparatus-venting means on said sheath.

3,004,537
SUBAQUAL APPARATUS FOR INTESTINAL LAVAGE
Romulus Turlinc, 17 Delahardtelegraph, Vienna, Austria
Filed Dec. 9, 1958, Ser. No. 779,152
8 Claims. (Cl. 128-227)



1. A subaqual apparatus for intestinal lavage, which comprises, in combination, a wash head adapted to be submerged in a bath tub, means for supplying water to said wash head, an intestine tube for connecting said wash head to the intestine of a person in said tub, a pivoted arm adapted to be supported to extend above said tub, a front carrying member attached to said wash head and suspended from said arm, a strap connected to said wash head and adapted to be movably supported by the rear rim of said tub and carrying weights for tensioning said strap, which weights are disposed outside said tub when said strap is thus supported, and a discharge line including a telescopic tube assembly, a glass elbow connected to one end of said tube assembly, and a coupling detachably connecting the other end of said tube assembly to said wash head, said tube assembly comprising two relatively rotatable tubes, whereby said wash head is adapted to be suspended with freedom of rotation and of movement in the longitudinal direction of said tub and said discharge line is adapted to follow such rotation and movement of said wash head.

3,004,538
FOUNDATION GARMENT
Mario Laguzzi, New York, N.Y., assignor to Polartec Corsets, Inc., New York, N.Y.
Filed Nov. 4, 1959, Ser. No. 850,817
5 Claims. (Cl. 128-546)

1. In a foundation garment the combination of front and rear panels, and elastic side panels secured between said front and rear panels, said side panels comprising upper and lower portions having confronting edges, said upper and lower portions having wales normally extending in a vertical position to provide one-way stretch laterally, the confronting edges of said upper and lower portions being reverted angularly to form substantially triangular reinforcing portions at the position of greatest strain on the garment with the wales of the reverted portions extending angularly relative to the wales of the main body

portions to provide restraint in a direction at an angle to the restraint provided by the transverse stretch of the



wales of the upper and lower portions, and means securing said upper and lower reverted portions together along their edges.

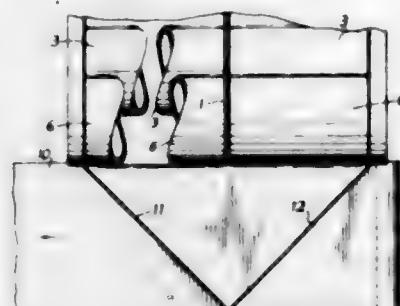
3,004,539

CIGARETTE MAKING MACHINERY

Desmond Walter Molins, Deptford, London, England, assignor to Molins Machine Company Limited, a company of Great Britain

Filed Sept. 9, 1959, Ser. No. 838,870

Claims priority, application Great Britain Sept. 26, 1958
2 Claims. (Cl. 131-109)



1. A tobacco-manipulating machine, such as a continuous rod cigarette making machine, comprising a plurality of tobacco feeding devices arranged side by side and each arranged to feed tobacco continuously, and a conveyor arranged to move past the said devices so as to receive tobacco from different ones of said devices in succession, whereby tobacco from the said different devices can be mixed while being fed through the machine, each of said tobacco-feeding devices comprising means to impel tobacco in a direction transverse to the direction in which the said conveyor moves, said machine including walls disposed obliquely across the conveyor, each of said walls being located opposite one of said tobacco-feeding devices, to intercept the tobacco so impelled and to direct it downwardly toward the conveyor, whereby the tobacco so intercepted is distributed across the width of the conveyor.

3,004,540

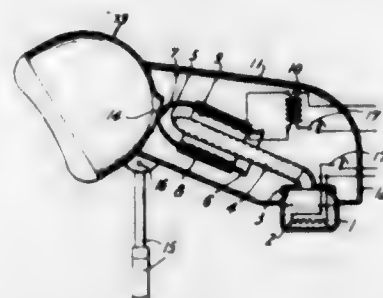
HAIR TREATING APPARATUS

Carl Ronzi, Kronshausen 5, Zurich, Switzerland
Filed Apr. 8, 1958, Ser. No. 727,172

6 Claims. (Cl. 132-9)

1. Apparatus for accelerating the bleaching and dyeing of hair by coloring substance applied to the latter, comprising a hood adapted to be placed over the head of a person whose hair has had coloring substance applied thereto, a duct opening at one end into said hood and adapted to have a flow of air produced therethrough,

ozonizing means in said duct for ozonizing the flow of air through the duct, and water vapor producing means opening into said duct at a location along the latter be-



tween said ozonizing means and said one end of the duct for introducing a flow of water vapor into the ozonized flow of air in the duct.

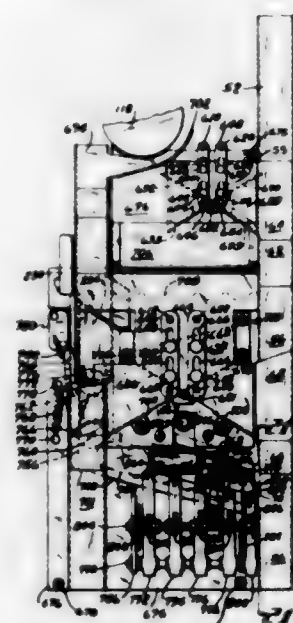
3,004,541

CHANGE COIN DELIVERY MECHANISM

Gustav F. Erickson, Kirkwood, and Fred J. Melvin, Bellefontaine Neighbors, Mo., assignors, by mesne assignments, to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri

Filed Aug. 20, 1954, Ser. No. 451,266

16 Claims. (Cl. 133-4)



1. A coin-operated device that can respond to the insertion of coinage having a predetermined value to actuate a secondary device and that can respond to the insertion of coinage having a value in excess of said predetermined value to actuate said secondary device and to pay out change and that has a passage for coins that can be paid out as change, a plurality of openings in said passage, a plurality of stops that are in register with said openings in said passage and are selectively movable through said openings into said passage to block the movement of coins through said passage, said openings and said stops being spaced along the length of said passage at equal intervals, a rotatable camshaft that is adjacent said passage and has a plurality of cams thereon, said cams being in register with said stops and responding to rotation of said camshaft to cause movement of said stops relative to said openings in said passage, a plurality of said cams having short dwells and one of said cams having a long dwell, the short dwell cams being disposed adjacent the outlet of said passage and said long dwell cam being disposed intermediate said short dwell cams and the inlet of said passage.

3,004,542

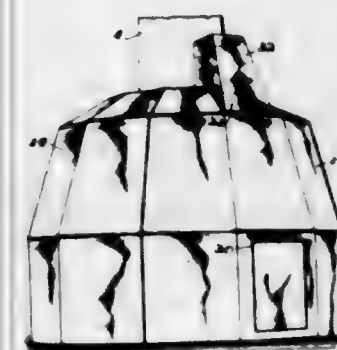
FRAME TYPE QUADRANTED SHELTER

Allen M. Moody, Framingham, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed Oct. 1, 1959, Ser. No. 843,896

7 Claims. (Cl. 135-1)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A generally circular lightweight shelter for a vertically disposed missile comprising four quadrant-shaped frame sections, each including an upper and a lower generally arc-shaped horizontal frame member adapted to conjointly combine to form upper and lower rings, arched vertical frame members connecting the respective upper and lower arc-shaped members, a canvas covering for each of said sections, and means for releasably securing said sections together about the base of said missile with said upper arc-shaped frame members closely encompassing said missile.

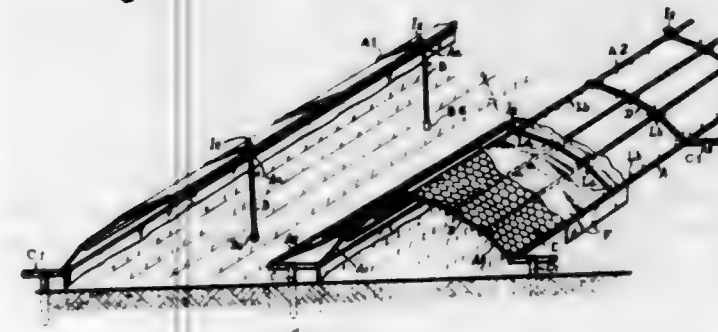
3,004,543

GREENHOUSE FRAME AND CULTURE APPARATUS INCORPORATING SAID FRAME

Louis Pinet, Pre Comtal-183, Route de Malinrat, Montferrand, France

Filed Sept. 15, 1959, Ser. No. 840,181

Claims priority, application France Sept. 19, 1958
7 Claims. (Cl. 135-5)



1. Greenhouse frame comprising supports adapted to be embedded in the ground in two parallel lines, and two panels; each panel comprising a light metal tube framework having parallel longitudinal members assembled at their ends and at least at an intermediate point by cross-members cranked in such manner as to constitute a prismatic surface having a polygonal externally slightly convex cross-sectional shape, and at least two faces, two sheets of netting held taut on the framework and held in position by hooks fixed to the framework, a sheet of transparent plastic material held between said two sheets of netting; the lowest of the longitudinal members of each panel being pivoted on one of said lines of supports respectively, and the panels being inclined relative to one another and resting against one another in the manner of the two sloping sides of a roof.

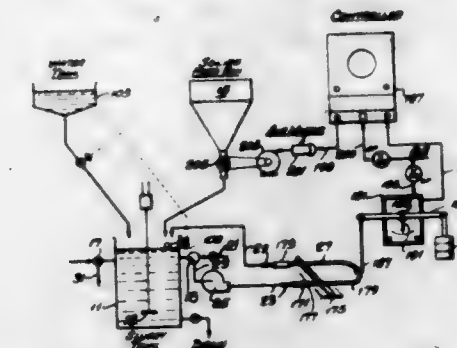
771 O.G.-46

3,004,544

CONTINUOUSLY MEASURING SLURRY DENSITY

Frank E. Gupill, Jr., Whittier, Calif., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 29, 1955, Ser. No. 556,251

12 Claims. (Cl. 137-1)



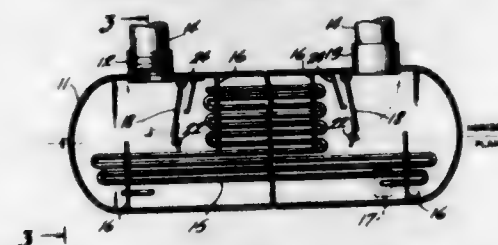
1. A method for maintaining automatically a substantially constant ratio of first comminuted solid and second liquid ingredients in a flowable mixture thereof, said mixture being made up by feeding said ingredients into a vessel, said method comprising automatically regulating the flow of liquid into said vessel in accordance with changes in the level of the flowable mixture therein thereby maintaining a substantially constant level, and automatically regulating the rate of feeding said solid ingredients by passing a stream of said mixture through a conduit having a section that is movable in opposite directions in response to variations in the weight of mixture therein, and automatically changing the rate of feeding of said comminuted solid ingredients to said mixture in response to changes in the position of said movable section.

3,004,545

TILTABLE HEAT EXCHANGER

Carleton A. Slemmer, Babylon, N.Y., assignor to Fairchild Stratos Corporation, a corporation of Maryland
Filed Mar. 2, 1959, Ser. No. 796,485

2 Claims. (Cl. 137-38)



1. A tiltable heat exchanger comprising a housing having a chamber for a liquid therein, at least two ports spaced apart in the upper region of the chamber, a gravity-actuated flap valve for each of the ports, means hingedly mounting the flap valves for the ports to said shell adjacent opposite sides of their respective ports in such fashion that the hinge for each flap valve is on the side of the port opposite the nearest end of the shell, whereby when the shell is tilted endwise the force of gravity will pivot the flap valve for the port at the lower level to closed position, maintaining the flap valve for the port at the upper level open, and a weight carried by each of the flap valves, each weight being adjustable with respect to the hinged mounting for the flap valve.

3,004,546

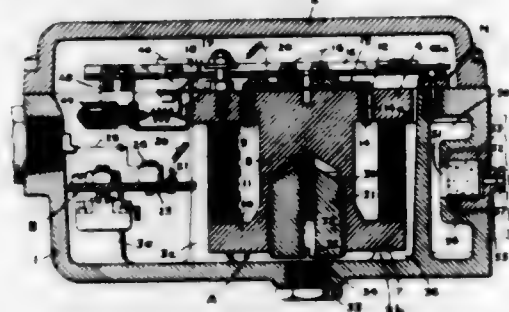
ELECTRO-PNEUMATIC TRANSDUCER

John W. Robins, Westwood, and Oscar J. Hardegen, Weymouth, Mass., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed June 2, 1959, Ser. No. 817,608

5 Claims. (Cl. 137-82)

1. In an electro-pneumatic transducer comprising, a casing, a chamber for pressure fluid in said casing, means

for delivering pressure fluid to said chamber, an adjustable orifice for bleeding pressure fluid from said chamber including, a nozzle, an orifice in said nozzle, a ball in said orifice, and a beam pivotably mounted to coact with said ball, the combination with said beam of a magnetic means including, an upper pole piece having an opening, a lower pole piece, and a magnet disposed between said upper pole piece and said lower pole piece, said lower pole piece having an upwardly extending cylinder dis-

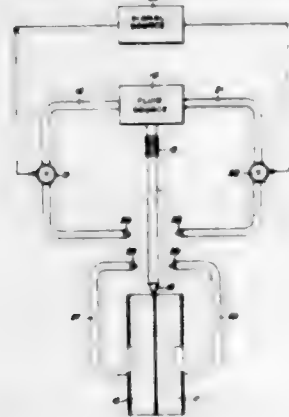


posed to fit into the opening in said upper pole piece and to form an annular gap therewith, a coil bobbin having a coil mounted thereon disposed to fit in said annular gap, means for delivering an electrical signal to said coil from any suitable source for actuating said coil to move relative said magnetic means, and means connecting said beam to said coil bobbin whereby said beam will move on movement of the coil bobbin, and means on said magnetic means for calibrating the transducer to provide for full input signal range.

3,004,547

BOUNDED JET FLUID AMPLIFIERS

Hyman Hurvitz, 1313 Juniper St. NW., Washington, D.C.
Filed July 22, 1960, Ser. No. 44,754
5 Claims. (Cl. 137-83)



1. A fluid amplifier, comprising a power jet, a deflectable elongated enclosure for said power jet, said elongated enclosure being arranged to confine said power jet within predetermined boundaries, said elongated enclosure having an egress aperture for said power jet, at least one fluid control jet, said at least one fluid control jet being arranged to project fluid against said elongated enclosure in a direction having a component perpendicular to the direction of flow of fluid in said elongated enclosure, and means for controlling flow of said fluid from said at least one fluid control jet.

3,004,548

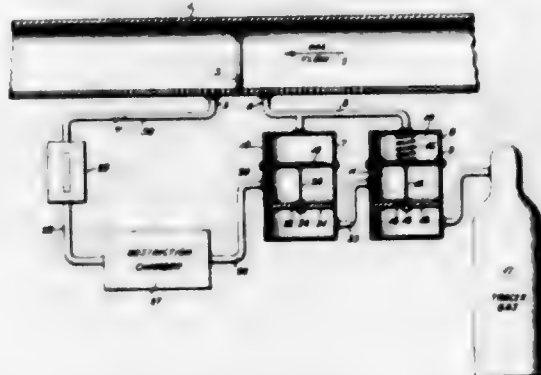
GAS INJECTION SYSTEM

Richard D. James, Nyack, N.Y., assignor to Isotopes Incorporated, Paterson, N.J., a corporation of New Jersey

Filed June 11, 1958, Ser. No. 741,335
5 Claims. (Cl. 137-100)

1. A system for injecting small quantities of an extraneous gas into a flowing gas stream which comprises a

conduit defining a flow path for said gaseous stream, a restriction in said conduit for providing a pressure drop thereacross, a supply of said extraneous gas under high pressure, a first regulator valve, a first diaphragm in said first valve dividing the same into first and second separate non-communicating chambers, means connecting said first chamber to a first pressure tap at the upstream side of said restriction, means connecting said second chamber to said supply of extraneous gas, an outlet connected to said second chamber and responsive to the movement of said first diaphragm to interrupt the fluid circuit between said supply of extraneous gas and said outlet from said second chamber when the pressure in said second chamber exceeds the pressure in said first chamber by a predetermined value, means biasing said first diaphragm so as to urge said fluid closure means towards its open position and to provide said predetermined value of pressure by which the pressure in said second chamber must exceed the pressure in said first



chamber in order to urge said closure means towards its closed position, a second regulator valve, a second diaphragm in said second valve dividing the same into third and fourth non-communicating chambers, means connecting said third chamber to said first pressure tap at the upstream side of said restriction, means connecting said fourth chamber to the outlet from said second chamber of said first regulator valve, an outlet connected to said fourth chamber, a second fluid closure means located within said fourth chamber and responsive to the movement of said second diaphragm to interrupt the fluid circuit between said second and said fourth chambers when the pressure in said fourth chamber reaches the pressure of said third chamber, and a second restriction connected between the outlet of said fourth chamber and a second pressure tap at the downstream side of said first-mentioned restriction, the difference in pressure between said first pressure tap and said second pressure tap constituting the pressure drop provided by said first-mentioned restriction.

3,004,549

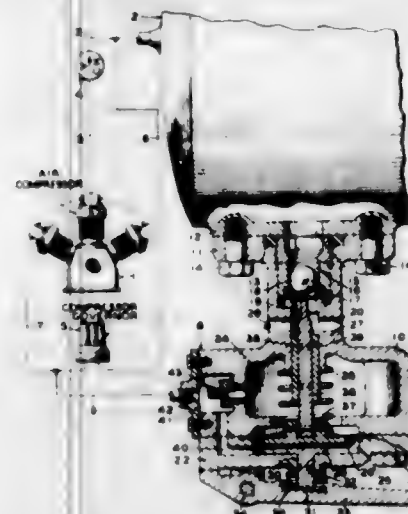
COMBINED AUTOMATIC AND MANUAL DRAIN VALVE

Fred Temple, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Oct. 29, 1959, Ser. No. 849,642
1 Claim. (Cl. 137-204)

A drain valve device for draining moisture condensation from a pressurized fluid container, said drain valve device comprising, in combination, a casing having therein an accumulation chamber having an opening thereto through which moisture condensation from the container may flow into the chamber, an inlet chamber having an inlet through which fluid under pressure may be supplied to and released from said inlet chamber, a pressure chamber constantly open to said inlet chamber, and an equalizing chamber, choke means carried in said casing and interposed between said inlet chamber and said equalizing

chamber for providing restricted communication therebetween, a valve disposed in said accumulation chamber and cooperative with, when seated thereon, a valve seat carried in said casing in surrounding relation to an opening leading to atmosphere, for closing said accumulation chamber to atmosphere, said valve being operable to an unseated position from said valve seat for opening said accumulation chamber to atmosphere via said opening to atmosphere, a piston in said casing having one side subjectable to pressure of fluid in said equalizing chamber and the opposite side subjectable to pressure of fluid in said pressure chamber, a stem associated with said piston and engageable with said valve upon movement of said piston to a release position in response to supply of pressurized fluid to said inlet chamber and said pressure chamber, for moving said valve to its unseated position, biasing means effective upon equalization of fluid pressure between said equalizing and pressure chambers



through said choke means or upon release of fluid pressure from said pressure chamber, for restoring said piston to a normal position in which said stem is disengaged from said valve for causing return thereof to its seated position, a plunger member engageable with said opposite side of said piston and having associated therewith a stem extending exteriorly of said casing, said plunger member normally occupying one position in which movement of said piston between its normal and release positions, as effected by supply and release of said pressurized fluid in the said several chambers, is unaffected thereby, a manually operable handle pivotally mounted on the exterior of said casing, and biasing means for biasing said handle toward a first position out of engagement with said plunger member, said handle being operable to a second position into engagement with said plunger member for causing movement thereof and thereby operation of said piston to its release position.

3,004,550
GAS STOP

John D. Polsker, Souderton, Pa., assignor to The Welbach Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Nov. 5, 1959, Ser. No. 851,171
1 Claim. (Cl. 137-246.15)

In a plug valve including a valve body with a tapered opening therein, a through passage at right angles to the opening and a tapered valve key mounted for engagement with the surface of and for rotation in the opening, the valve key having a through passage for registration with the passage in the valve body, a circumferential groove in the key above the passage therein, lubrication conduits in the key communicating with said groove, a second circumferential groove in the key below the passage therein, lubrication grooves in the surface of the key between and opening into the circumferential

grooves and an O ring mounted in each of the circumferential grooves in engagement with the key and with the adjacent surface of the tapered opening in the valve body, the improvement in which the first circumferential groove has a lower surface meeting the adjacent surface of the tapered opening in the valve body at approxi-

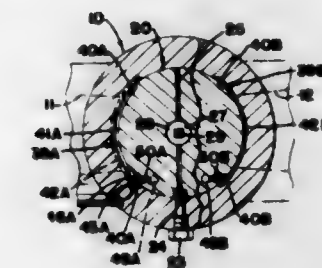


mately 90°; has a curved upper surface meeting the adjacent surface of the tapered opening in the valve body at approximately 60°; and has relative dimensions based upon the diameter of the O ring of a top curvature of $\frac{3}{32}$ of an inch radius and .171 inch height of the groove for a $\frac{1}{8}$ inch diameter O ring.

3,004,551

SEALING CONSTRUCTION FOR PISTON VALVE

Homer J. Shafer, P.O. Box 83, Mansfield, Ohio
Filed Nov. 28, 1958, Ser. No. 776,860
3 Claims. (Cl. 137-246.16)



2. In a piston valve having a body provided with aligned inlet and outlet ports and a piston having a through port registrable with said inlet and outlet ports when the piston is moved from closed to open position, said piston having resilient sealing rings around its ends and longitudinal lubricant grooves straddling said outlet port in closed position, and said piston being split only intermediate of and terminating short of its ends in a direction transversely of its through port to form two halves integral with the unsplit ends, to compensate for distortion of said body due to expansion and contraction.

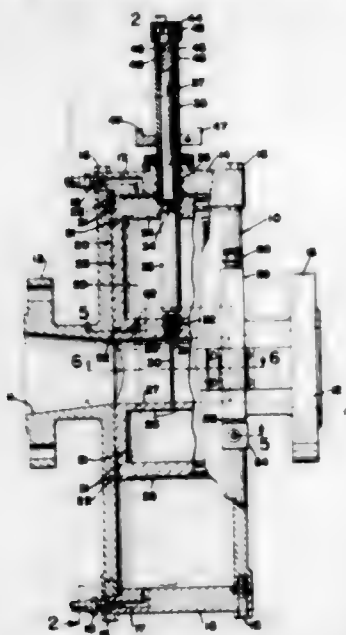
3,004,552

PISTON VALVE CONSTRUCTION

Homer J. Shafer, P.O. Box 83, Mansfield, Ohio
Filed Aug. 10, 1959, Ser. No. 832,595
8 Claims. (Cl. 137-246.22)

5. In a piston valve having a body provided with aligned inlet and outlet ports, a hollow piston slidable in said body and having closed end walls connected by an outer peripheral wall to form an internal cavity, an annular wall extending transversely of said piston between the end walls forming a through port registrable with said inlet and outlet ports in valve-open position, said annular wall being split longitudinally of said piston into two parts to allow pressure fluid to flow from said through port into said cavity, said piston having an external lubricant groove defining a closed path of such extent longitu-

dinally as to surround said body outlet port in both the open and closed positions of said piston, an external cross lubricant groove in said piston adjacent is through port



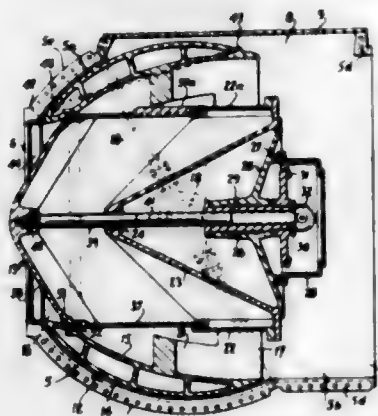
and having its ends spaced from said closed lubricant groove, and lubricant ports in said body for connecting said cross groove ends to said closed lubricant groove in both the open and closed positions of said piston.

3,004,553

COMBINED SHUT-OFF VENTILATED JET DISCHARGE VALVE

Victor G. M. Chatfield, Verdun, Quebec, and Feodor Kanger, Cote St. Luc, Quebec, Canada, assignors to Dominion Engineering Works Limited, Montreal, Quebec, Canada

Filed Sept. 14, 1959, Ser. No. 839,928
Claims priority, application Canada Sept. 5, 1959
13 Claims. (Cl. 137—315)



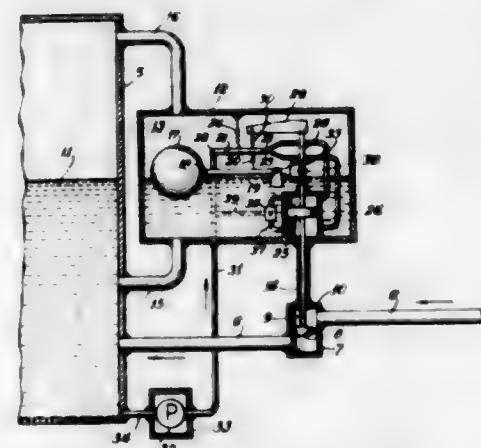
1. A valve assembly comprising a hollow valve casing having axially aligned inlet and outlet openings and an access opening located intermediate said inlet and outlet openings, an oscillating shut-off valve mounted in said casing and having inlet and outlet openings at opposite ends of a flow passage extending through said valve, said shut-off valve being mounted for oscillation from a position in which the inlet and outlet openings of the valve are aligned with the inlet and outlet openings of the valve casing to a position in which the valve inlet and outlet openings and flow passage are aligned with said access openings and in which the inlet opening of the valve casing is closed or blocked off by a portion of the shut-off valve, a flow control valve removably mounted in the shut-off valve for controlling the flow through the shut-off valve, means for moving the flow control valve to and from a valve seat carried by said shut-off valve said flow control valve being insertable in and removable from

the shut-off valve when the latter is positioned with its inlet and outlet openings and flow passage aligned with the access opening of the valve casing, and a removable cover normally closing said access opening.

3,004,554

LEAK-PROOF FLUID SYSTEM REGULATOR

Herbert W. Ziebold, New York, N.Y., assignor to Gpe Controls, Inc., a corporation of Illinois
Filed Aug. 18, 1958, Ser. No. 755,717
3 Claims. (Cl. 137—415)

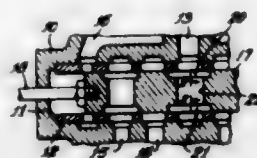


1. A liquid level control system for controlling the level of fluid supplied through a supply line to a tank, comprising in combination: a valve interposed in said supply line to control flow of fluid through said supply line to said tank; said supply line, tank and valve all being hermetically integral; a float operative to sense the instantaneous level of said fluid and to apply a first force to position a jet pipe, said jet pipe being pivotally supported to selectively distribute fluid under pressure to a pair of received ports connected to opposite sides of a piston in a cylinder, said piston being mechanically connected to position said valve and to apply a feedback force to position said jet pipe relative to said ports; and a mechanical lost-motion connection between said float and said valve, whereby said float is connected to operate said valve upon extreme changes in said liquid level.

3,004,555
VALVES

Frederick C. Haberland, Cleveland, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Feb. 19, 1957, Ser. No. 641,139
4 Claims. (Cl. 137—620)



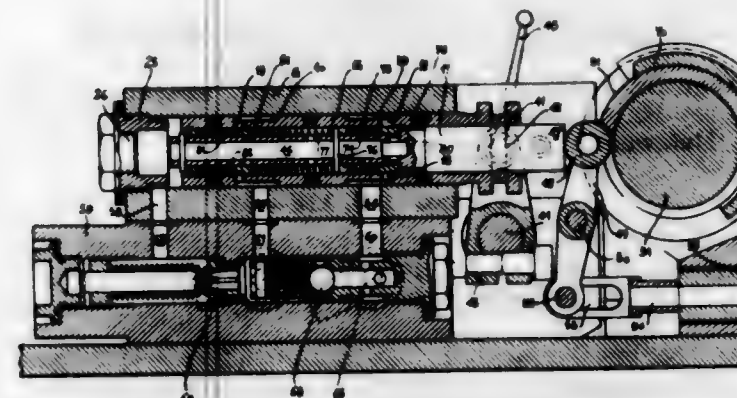
1. A spool type valve assembly comprising; a housing with inlet, outlet, return and pressure ports and a valve cavity formed therein; a spool disposed in said valve cavity for sliding relationship therein having a plurality of means so constructed and arranged for selectively connecting one or more of said ports for the communication of fluid pressure therebetween; said means comprising openings formed in the sealing periphery of said spool of a width less than the diameter of said sealing periphery of said spool and transverse passages interconnecting pairs of said openings to equalize the pressure on opposite sides of said spool when each of said pairs is in communication with only one of said ports.

3,004,556

HYDRAULIC DISTRIBUTION DEVICE

Fernand Humery, Dreux, France, assignor to Etablissements Grosdemouge, Paris, France, a corporation of France

Filed Jan. 26, 1959, Ser. No. 789,021
Claims priority, application France Feb. 2, 1958
2 Claims. (Cl. 137—620)

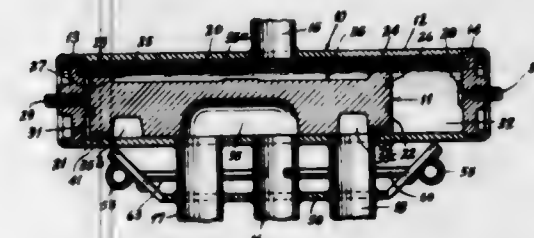


1. In a hydraulic distributor for controlling a jack, comprising a circular slide valve with admission of fluid under external pressure to said slide valve, a conduit axially disposed in said slide valve for evacuation of said fluid therethrough, the improvement which consists in disposing on said slide valve, oppositely facing an admission orifice, a cylindrical valve freely sliding on the outer surface of said slide valve, two stops provided on said slide valve between which said cylindrical valve is freely movable, an annular chamber formed in one of said stops for admission of fluid from said admission orifice to abruptly move said cylindrical valve away from one of said stops, and biasing means to barely maintain said cylindrical valve against one of said stops while said cylindrical valve is in an inoperative position.

3,004,557

FOUR-WAY CHANGE-OVER VALVE

Irvin E. Wiegman, St. Louis, Mo., assignor to Alco Valve Company, St. Louis, Mo., a corporation of Missouri
Filed May 29, 1957, Ser. No. 662,467
4 Claims. (Cl. 137—625.29)



1. A valve comprising a housing having spaced ends joined together by a thin walled tube, the tube having a cylindrically shaped internal surface, a slide positioned within the tube, the slide having cylindrically shaped ends of substantially the same diameter as the internal diameter of the tube, the slide being shorter than the tube and being longitudinally slidable between extreme positions within the tube, the slide including a pair of rods extending from the cylindrical ends, the diameter of the rods being smaller than the diameter of the slide ends, the slide further including a partial cylinder supported between the rods, the partial cylinder being more than half a cylinder and having substantially the same diameter as the diameter of the cylindrical ends of the slide, the ends of the partial cylinder being spaced by the rods from the ends of the slide with the spaces thus defined comprising fluid conduits, the non-cylindrical portion of the partial cylinder defining a pressure surface, the area between the pressure surface and the part of the

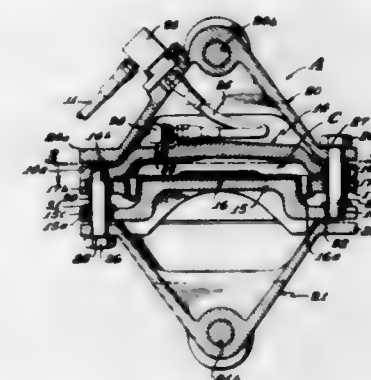
internal surface of the tube opposite the land comprising a high pressure chamber, a high pressure inlet port through the tube and communicating with the high pressure chamber, a low pressure outlet port through the side of the tube opposite the high pressure inlet port, a recess in the side of the partial cylinder opposite the pressure surface, the recess having ends spaced from the longitudinal ends of the partial cylinder and spaced from one another by more than the slidable distance of the slide, the recess being in continual communication with the low pressure outlet during sliding movement of the slide, a pair of auxiliary inlet-outlet ports through the tube in longitudinal alignment with the low pressure outlet port, the low pressure outlet port being positioned between the auxiliary ports, the distance between each auxiliary port and the low pressure outlet port and the length of the recess between the ends of the recess being such that one of the auxiliary ports is in communication with the recess in one extreme position of the slide and the other auxiliary port is in communication with the recess in the opposite extreme position of the slide, and the position of the fluid conduits being such that in each extreme position of the slide the auxiliary port out of communication with the recess is in communication with one of the fluid conduits, and means for causing the slide to shift between its extreme positions.

3,004,558

HYDRAULIC SENSING DEVICE FOR LOAD INDICATING APPARATUS

Franklin S. Crane, Long Beach, Calif., assignor to Martin-Decker Corporation, Long Beach, Calif., a corporation of Delaware

Filed Jan. 29, 1954, Ser. No. 407,140
16 Claims. (Cl. 137—778)



15. A hydraulic sensing device including: means providing a hydraulic pressure chamber adapted to contain a liquid; said means including a pair of relatively movable members for subjecting the liquid in said chamber to pressure; one of said members having a port for the passage of liquid from and into said chamber; a pair of opposed relatively movable force-applying elements; said members being interposed between said elements; said members and said elements having opposed marginal portions; and a series of tie members connecting the marginal portion of the respective elements with the member farthest therefrom.

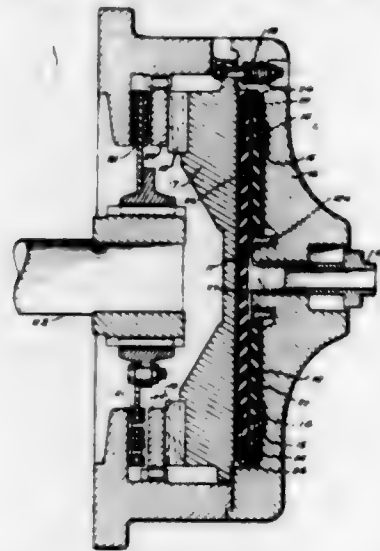
3,004,559

PANCAKE AIR TUBE AND METHOD OF MAKING SAME

Charles P. Warman, Jr., Box 1150, Wichita Falls, Tex.
Filed Mar. 17, 1958, Ser. No. 721,940
4 Claims. (Cl. 137—784)

3. A resilient fluid actuator comprising a pancake-shaped tube having two parallel disc portions joined together by a circular resilient flexing section of reduced thickness, thereby leaving within the tube a substantially toroidal cavity adjacent said flexing section; an annular

ring substantially filling said cavity when the tube is deflated so that said disc portions come into mutual contact;

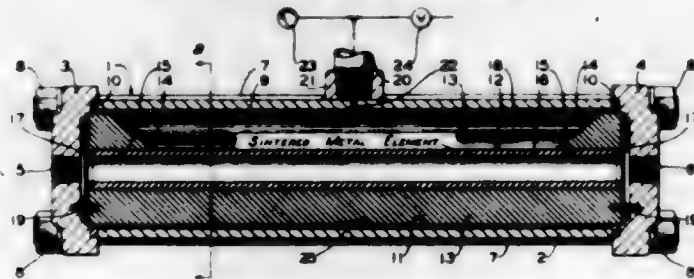


tact; and spud means passing through and fixed in at least one of said disc portions.

3,004,560

PULSATION DAMPENER DEVICE AND MANDREL FOR USE THEREIN

Ralph R. Leffler, Trafford, and Homer A. Knight, Pittsburgh, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Jan. 8, 1959, Ser. No. 785,628
1 Claim. (Cl. 138—30)



In a fluid pulsation device for absorbing pressure surges in a conduit conveying fluid at fluctuating pressures including a cylindrical casing having an inlet and outlet connectable in the conduit, a resilient sleeve in said casing adjacent the inner wall thereof and defining between the inner wall and said sleeve a gas chamber into which gas may be introduced at a predetermined pressure relative to the average pressure of the fluid in the conduit; the improvement comprising a spider member having a pair of spaced end portions of substantially circular cross section and a plurality of spaced radial ribs formed integral with and extending longitudinally between the opposed faces of said end portions, said end portions sealingly engaging the sleeve against said inner wall of said casing, an open-end bore axially extending through said spider member, and a rigid hollow tubular element in said bore for providing communication between the inlet and outlet and being supported in said end portions and contacting the inner ends of said radial ribs along spaced longitudinal extending circumferential areas to provide circumferential surfaces exposed to the interior of said sleeve, said spaced ribs and said exposed surfaces of said tubular element and said sleeve defining a pressure absorbing chamber, said tubular element being of sintered metal having pores of a perviousness serving as throttling orifices for the fluid flow between said tubular element and said pressure absorbing chamber and through said exposed surfaces, and said pores further being of such minute character to prevent extrusion of the resilient

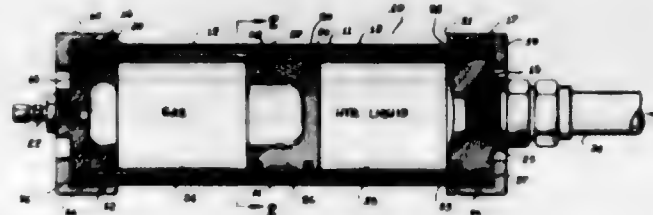
sleeve into said pores when the resilient sleeve is pressed against said exposed surfaces of said tubular element when the pressure of fluid in the gas charged chamber greatly exceeds the pressure of fluid in the pressure absorbing chamber upon a sudden reduction of the pressure of fluid in the conduit.

3,004,561

DOUBLE-WALLED ACCUMULATOR WITH TIME DELAY ORIFICE

Augustus P. Henry, Los Angeles, Calif., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Aug. 30, 1957, Ser. No. 681,357
2 Claims. (Cl. 138—31)



1. An elongated accumulator comprising an inner cylinder having a reciprocable piston therein dividing said cylinder into variable volume gas and hydraulic fluid chambers respectively at opposite ends of said piston, an endless annular sealing member carried by and encircling said piston and engaging said cylinder to seal said chambers from each other, an outer cylinder concentric with and surrounding said inner cylinder in radially spaced relation thereto and extending beyond said inner cylinder at each end thereof, an end cap received in each end of said outer cylinder and a second endless annular sealing member compressed between and making sealing contact with each end cap and the corresponding end of said outer cylinder, each end cap having a reduced extension received in the corresponding end of said inner cylinder and a third endless annular sealing member compressed between and making sealing contact with the reduced extension of each end cap and the corresponding end of said inner cylinder, said cylinders, end caps and second and third sealing members cooperating to define a closed annular space, the end cap adjacent said gas chamber having means defining an air inlet port opening into said gas chamber for permitting charging said gas chamber with air under pressure, the other end cap having means defining a hydraulic fluid port opening into said hydraulic fluid chamber for communication with a hydraulic system, said inner cylinder having means defining an orifice providing communication between one of said chambers and said annular space, and retainer means at each end of said outer cylinder for retaining the adjacent end cap in assembled relation with said cylinders.

3,004,562

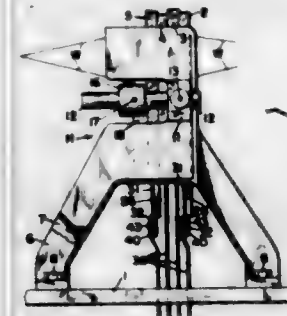
WARP CONTROL IN A HIGH SPEED LOOM

Clarence R. Kronoff, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Filed June 23, 1960, Ser. No. 38,329
15 Claims. (Cl. 139—91)

1. In a loom harness frame to support warp heddles, two vertically extending spaced substantially parallel side members, a bottom cross bar secured to the lower ends of the side members, a lower heddle rail extending across the lower part of the harness frame secured to the latter above the cross bar, a combined top heddle rail and frame forming member extending across the top of the harness frame connected to the upper ends of the side members to complete the harness frame and provide support for the upper ends of heddles when the lower

ends of the latter are engaged with the lower heddle rail, and a driver operatively connected to the bottom cross bar, said combined top rail and member being detach-



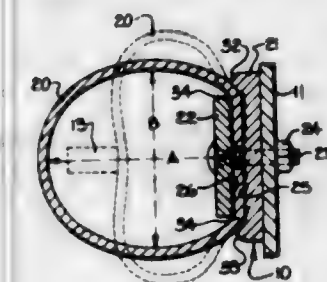
ably connected to the side members and when detached is liftable upwardly from the remainder of the frame and the driver.

3,004,563

PICKER STICK BUFFER FOR LOOMS

John G. Williamson, Jr., Charlotte, N.C., assignor to Perfecting Service Company, Charlotte, N.C., a corporation of North Carolina

Filed Aug. 15, 1960, Ser. No. 49,556
7 Claims. (Cl. 139—166)



1. A buffer for stopping inward movement of a picker stick of a loom, comprising a rigid support having a substantially planar surface facing the picker stick, a buffer strap in loop form having a portion attached to and extending throughout substantially the length of said planar surface and laterally of the path of the picker stick, abutment means projecting outwardly from laterally opposed ends of said surface and toward the picker stick, and said abutment means engaging outer surfaces of opposed side portions of said loop and serving to upset respective portions of the strap engaged thereby to maintain laterally opposed side portions of the loop at a predetermined curvature.

3,004,564

PILE FABRIC AND METHOD

Henry F. Nowicki, Norristown, Pa., and Harry J. Smiley, Glasgow, Va., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware

Filed June 2, 1960, Ser. No. 33,559
6 Claims. (Cl. 139—406)



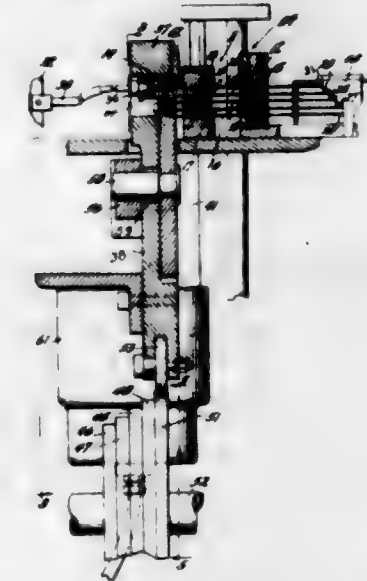
1. The method of weaving a three-frame Wilton fabric having filling wefts, binder warps, and ground warps which comprises the steps of controlling all the yarns in one of the frames to weave pile projections over alternate rows of filling wefts, and controlling the other two frames of pile yarns to selectively weave higher pile projections over intermediate filling wefts.

3,004,565

DEVICE FOR INDEXING, GUIDING AND SEVERING A PLURALITY OF WIRES

Estyle D. Hanson, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 7, 1958, Ser. No. 753,683
2 Claims. (Cl. 140—71)



1. A device for indexing a row of elongated, pre-twisted noncircular wires adjacent to successive rows of complementary shaped apertures in stationary end plates, feeding and guiding the row of wires into successive rows of the apertures of the end plates while preventing untwisting of the wires, and severing the row of wires to form each of successive rows of terminals of a cage-like terminal strip subassembly, which comprises means for simultaneously feeding a row of supply wires of an indefinite length intermittently longitudinally, the supply wires having noncircular cross sections, a carriage mounted for reciprocable indexing movement transversely of the axes of the supply wires, wire-guiding means mounted slidably on the carriage for rectilinear movement relative to the carriage and transversely of the axes of the wires, a plurality of telescoping guide tubes secured pivotably at one end to the wire feeding means and secured at the other end to the wire-guiding means, said guiding means having a row of noncircular wire-guiding apertures for guiding the noncircular supply wires into successive rows of the apertures in the end plates and for aligning and angularly orienting the ends of the twisted supply wires with the apertures of the end plates, a shear plate secured fixedly to the carriage and designed for cooperation with the guiding means for severing all wires of the row of supply wires simultaneously, fluid-actuated means secured to the carriage for movement therewith and connected operably to the guiding means for moving the guiding means transversely of the longitudinal axes of the supply wires to move the supply wires against the shear plate for severing all of the supply wires simultaneously, and cam means for periodically indexing the carriage to move the guiding means with the free ends of the supply wires therein to successive positions wherein the row of apertures in the guiding means and the free ends of the row of supply wires are aligned with successive rows of apertures in the end plates.

3,004,566

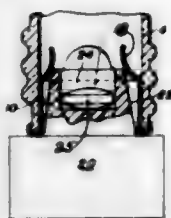
PILL DISPENSER

Anthony S. Raimo, 89 Mary Ann Lane, Wyckoff, N.J.

Filed Jan. 9, 1958, Ser. No. 707,984
1 Claim. (Cl. 141—18)

In combination with a receptacle for pills, having a delivery opening for the pills, a barrier member positioned in said delivery opening and attached to the inner wall

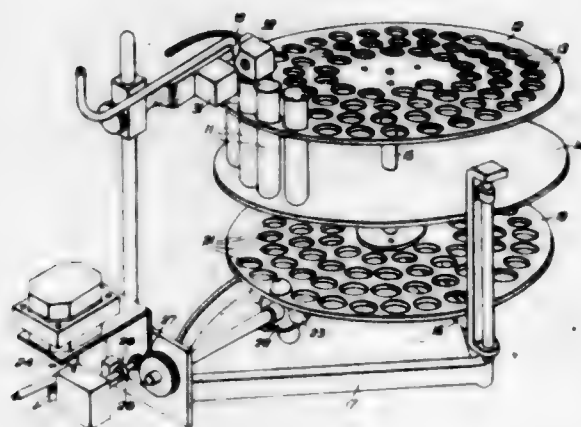
of said delivery opening, said barrier member comprising a plurality of flexible, radially extending members, extending inwardly and transversely across said delivery opening in a plane substantially perpendicular to said delivery opening, said receptacle being provided with an exteriorly threaded neck; and a cap member having interior threads cooperating with the exteriorly threaded neck



of the receptacle, said cap member having a projection with a pill receiving recess therein, said projection extending in a direction opposite to the threaded portion of said cap member, said projection, when the cap is removed and reversed, being adapted to be forced through said barrier member into the receptacle, and, when the receptacle is reversed, to receive one pill into the pill receiving recess thereof.

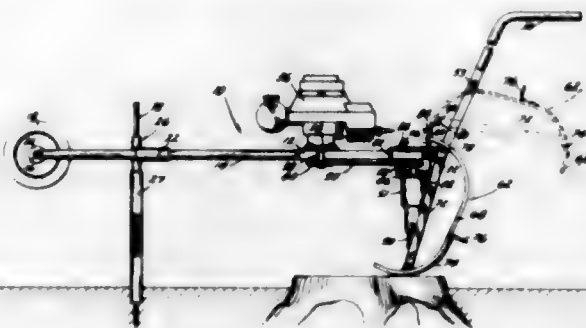
3,004,567 COLLECTING MEASURED QUANTITIES OF LIQUID

Arthur Snow, Fritz Arthur Ernest Porter, and Arnold Watson Tomalin, all % The Low Temperature Research Station, Downing St., Cambridge, England
Filed Apr. 14, 1958, Ser. No. 728,206
Claims priority, application Great Britain Apr. 17, 1957
12 Claims. (Cl. 141-130)



8. Apparatus for collecting measured quantities of liquid in collecting vessels from a common point of discharge comprising a supporting frame, a horizontal driving shaft journaled in said frame having a gear wheel with rounded teeth, a movable support carried in said frame, a turn-table and a disc fastened together on a common vertical axis journaled in said movable support to the driving shaft, the movement of said support being free and in a direction such that the axis of the turn-table and disc can move axially in relation to the driving shaft, a series of collecting vessels carried by said turn-table disposed in a spiral formation around its axis at a constant centre to centre distance, a matching spiral series of holes in said disc, said gear wheel meshing with said holes thereby constraining the disc both circumferentially and radially so that rotation of said gear wheel causes the collecting vessels to come into succession to a pre-determined position, liquid discharge means located at the pre-determined position, means for rotating said driving shaft, and means for interrupting the drive when a vessel is brought to the pre-determined position and for re-starting it when a measured quantity of liquid has been discharged into the vessel.

3,004,568 STAND FOR STUMP REMOVER Clarence L. Wachtel, 611 Maywood Ave., Milwaukee, Wis. Filed Oct. 28, 1959, Ser. No. 849,330 5 Claims. (Cl. 144-2)



1. The combination with a tree stump removing machine comprising a frame, ground support means at one end of the frame, a depending cutting tool and a tool control handle at the other end of the frame, of a stand, pivot means connecting said stand to the frame adjacent said tool and on which said stand is pivotable between a first position in which the cutting tool is supported by the stand above the level of the underlying surface and a second position exposing the tool for manipulation by said handle against a tree stump.

3,004,569 POWER OPERATED SCREWDRIVER Otto E. Dietrich, 617 W. Jackson St., Morton, Ill. Filed Aug. 4, 1959, Ser. No. 831,530 5 Claims. (Cl. 144-32)

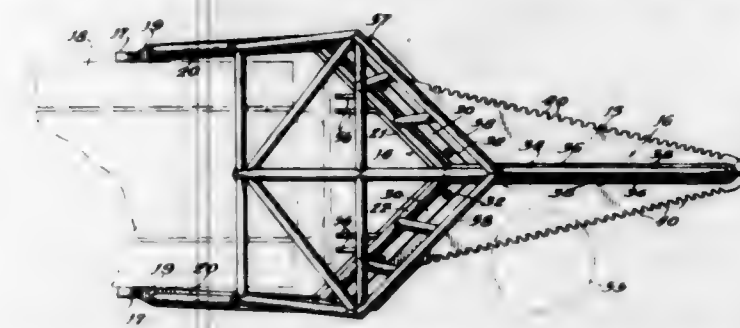


1. A tool attachment comprising a hollow adaptor body having a longitudinal axis, a toothed drive means fixed against movement along said longitudinal axis but mounted for rotation on said axis within said body, a worm gear arranged transversely of said axis and in engagement with said toothed drive means for rotating the latter, a rod within said body extending through said toothed drive means and rotatable on said longitudinal axis independently of said drive means, a chuck adapted for supporting a rotary tool, said chuck being rotatable in said body and displaceable along said longitudinal axis, said rod being connected to said chuck for displacing the latter axially against said drive means whereby the chuck is driven by said drive means, resilient means engaging said rod and normally displacing the same axially such that said chuck is maintained out of engagement with said drive means, a lever on said body and operatively coupled with said rod to displace the same against the action of said resilient means whereby said chuck is moved into engagement with said drive means, said lever extending externally of said body for being manually engaged.

3,004,570
TREE-CUTTING ATTACHMENT FOR TRACTORS
AND THE LIKE
William R. Clayton, P.O. Box 114, Angleton, Tex.; Howard F. Clayton, Jr., 1102 E. Miller, Angleton, Tex.; and Ernest L. Oliver, Jr., Rocharon, Tex.
Filed Mar. 27, 1958, Ser. No. 724,449
6 Claims. (Cl. 144-34)

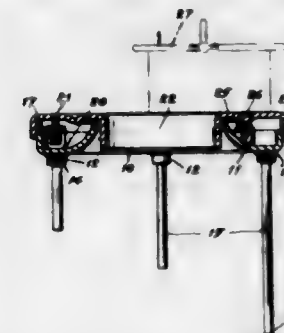
4. A blade for a tree-cutting device comprising a unitary triangularly shaped steel plate having forwardly tapering, oppositely disposed side edges, longitudinally

spaced teeth formed in each side edge in order to provide two cutting edges for said blade, the flanks of said teeth having a relief angle which is negative with respect to the longitudinal axis of the blade so that when the flanks engage the bottom of the kerf cut in a tree, the blade will be caused to "ride out," the negative relief angle



being related to the longitudinal spacing of the teeth in such a manner that the heel of one tooth is closer to the longitudinal axis of the blade than the front edge of the next succeeding tooth so that the lateral distance between said heel and said front edge will determine the depth of cut of each tooth, whereby the depth of cut of each tooth is regulated by said negative relief angle.

3,004,571 ROTATABLE TOOL SUPPORTING TABLE George Gerbrandt, 132 Buchanan St., St. Charles, Manitoba, Canada Filed July 22, 1959, Ser. No. 828,799 2 Claims. (Cl. 144-288)

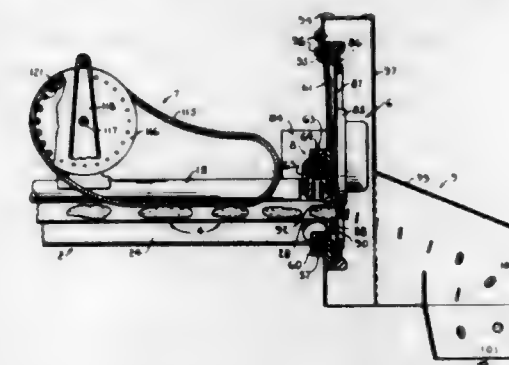


1. A work table and support for tools, comprising: an upstanding frame having a central opening vertically therethrough; an annular table cover overlying said frame for support of said tools; the central opening of said cover being aligned with said frame opening for drop passage of tool cuttings therethrough; a plurality of rollers mounted between said frame and said cover for rotatable support of the latter on said frame; and frictional retarding means for guiding the rotation of said cover.

3,004,572 MACHINE FOR SLICING A FOOD PRODUCT Joe R. Urschel, 202 Michigan Ave., and Gerald W. Urschel, 1614 Napoleon, both of Valparaiso, Ind. Filed July 22, 1957, Ser. No. 673,477 22 Claims. (Cl. 146-109)

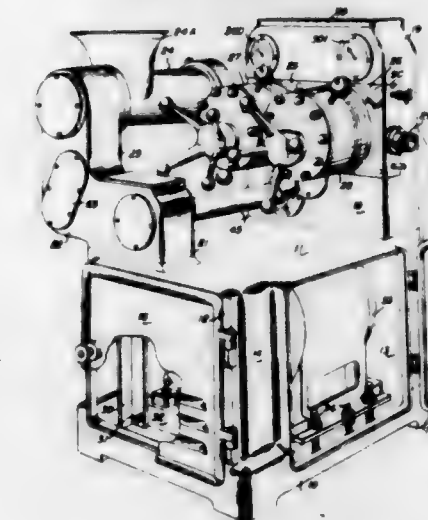
3. A conveyor assembly for conducting a product to a cutter assembly, said conveyor assembly comprising a frame, two pairs of pulleys mounted on the frame, a resilient conveyor belt carried by each pair of pulleys, means for driving at least one pulley of each pair to rotate the belts, the axes of said pulleys being angularly disposed so that the upper portions of the belts define a trough for resiliently supporting and carrying the product, an idling drum mounted on the frame above the belts, and an endless belt mounted on the drum and having a trailing portion overlying the conveyor belts for loose

engagement and rotation by the product for holding and stabilizing its position while carried by the conveyor



belts and for engagement and rotation by the latter when free of the product.

3,004,573 METHOD OF PRODUCING THE CREAM CONSTITUENT OF CREAMED CORN Ralph Cover, Westminster, Md., assignor to The United Products Co., Westminster, Md., a corporation of Maryland Original application Feb. 18, 1955, Ser. No. 489,236, now Patent No. 2,878,847, dated Mar. 24, 1959. Divided and this application Feb. 13, 1959, Ser. No. 793,081 4 Claims. (Cl. 146-239)

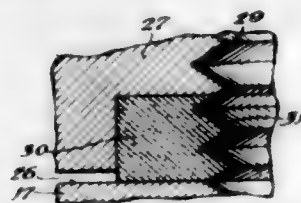


1. The method of reducing green corn kernels to a cream constituent comprising the steps of sequentially compacting the kernels to expel the accompanying air, pumping the compacted kernels and then grinding the compacted and pumped kernels to reduce the same to a cream.

3,004,574 SEALING NUT WITH PLASTIC PORTIONS HAVING SMALLER DIAMETER THREADS Francis S. Flick, Oak Park, and Walter J. Kudlaty, Elmhurst, Ill., assignors to Flick-Reedy Corporation, a corporation of Illinois Filed Jan. 16, 1956, Ser. No. 559,414 6 Claims. (Cl. 151-7)

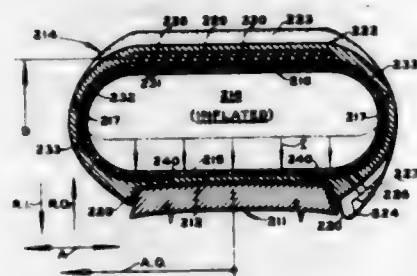
1. A thread sealing structure, comprising: an annular ring of resilient tetrafluoroethylene plastic material deformable under influence of pressure exerted thereon and adapted for placement about threads to be sealed, said ring being internally threaded; an annular ring of metal about the plastic ring in intimate contact therewith for holding the ring against radial outward distortion, said plastic ring having one face portion extending axially beyond the metal retaining ring for contact against a surface, said plastic ring being engageable on its opposite face portion by a nut portion threaded on said

threads, said nut portion and ring portion having an internal thread with walls that are continuous and with the thread in the nut portion being fully formed and the thread in the plastic ring portion being formed to extend inwardly to a greater extent than the threads in the nut



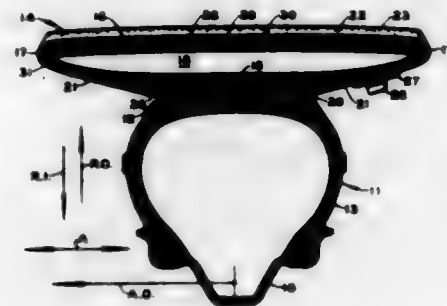
portion so as to fill and yieldingly press inwardly about the threads to be sealed, said nut portion being adapted for applying pressure to the plastic ring between said faces to urge the ring radially inwardly to maintain the threads to be sealed filled with said ring material and sealed against fluid leakage.

3,004,575
SUPPLEMENTAL PNEUMATIC TIRE
Charles L. Morse, P.O. Box 156, South Dartmouth, Mass.
Filed Sept. 6, 1960, Ser. No. 54,301
14 Claims. (Cl. 152-175)



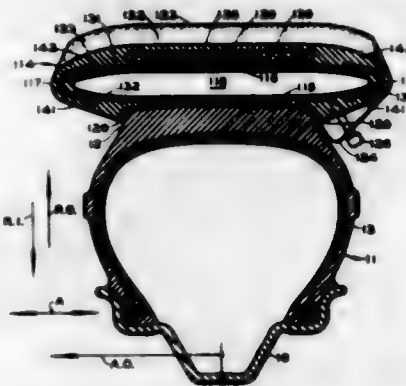
1. In combination with an inflatable hoop-shaped member, a supplemental overtire adapted to be pneumatically mounted on said hoop-shaped member comprising an annular resilient casing having an annular chamber therein, said casing comprising a fabric reinforced rubber lining, said casing in cross section having a substantially straight radially-outer wall and a substantially straight radially-inner wall, said walls joined at their axially-outer extremities by fabric-reinforced arcuate side wall portions, all of said wall portions integrally formed of continuous rubberized fabric, said radially-outer wall having circumferentially extending wire reinforcements spaced across the width thereof and on the radially-inner surface thereof, said wire reinforcements being centrally located and being of a substantially narrower width axially than the overtire width, the arcuate side wall portions being more resilient than said wire reinforced center portion, said radially-inner wall being resilient throughout its width, said radially-inner wall being adapted to engage the periphery of said hoop-shaped member upon overtire inflation, means for axially engaging said hoop shaped member to prevent axial shift between said overtire and said member when said overtire is inflated, said radially-inner wall when said overtire is uninflated having a diameter slightly larger than the diameter of said member, whereby said overtire may be slipped onto said member without deflating the latter, and means for introducing air under pressure into said chamber to inflate said overtire, said air pressure forcing radially inwardly the said radially-inner wall to firmly engage the periphery of said member, and said radially-inner wall retracting radially outwardly upon the release of said air pressure to permit easy removal of said overtire.

3,004,577
SUPPLEMENTAL PNEUMATIC TIRE
Charles L. Morse, P.O. Box 156, South Dartmouth, Mass.
Filed Oct. 14, 1959, Ser. No. 846,394
21 Claims. (Cl. 152-175)



1. In combination with an inflatable hoop-shaped member, a wide tread supplemental overtire adapted to be

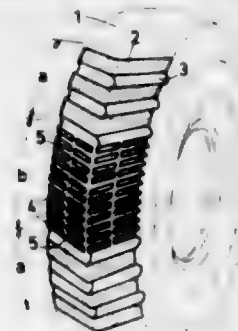
3,004,576
SUPPLEMENTAL PNEUMATIC TIRE
Charles L. Morse, P.O. Box 156, South Dartmouth, Mass.
Filed Oct. 14, 1959, Ser. No. 846,381
8 Claims. (Cl. 152-175)



1. In combination with an inflatable hoop-shaped member, a supplemental overtire adapted to be pneumatically mounted on said hoop-shaped member comprising an annular resilient casing having an annular chamber therein, said casing comprising a fabric reinforced rubber lining, said casing in cross section having a substantially straight radially-outer wall and a substantially straight radially-inner wall, said walls joined at their axially-outer extremities by fabric-reinforced axially-outer side portions, said wall portions integrally formed of continuous reinforced rubberized fabric, said radially-outer wall having circumferentially extending reinforcements spaced partially across the width thereof and traction means on the radially-outer surface thereof, said circumferentially extending reinforcements being centrally located and being of a substantially narrower width axially than said radially-outer wall, the axially outer portions of said radially-outer wall being more resilient than said wire reinforced center portion, said radially-inner wall being resilient throughout its width, a central portion of said radially-inner wall being adapted to engage the periphery of said hoop-shaped member upon overtire inflation, means for axially engaging the said member to prevent axial shift between said overtire and said member when said overtire is inflated, said radially-inner wall when said overtire is uninflated having a diameter slightly larger than the diameter of said member, whereby said overtire may be slipped on to said member without deflating the latter, and means for introducing air under pressure into said chamber to inflate said overtire, said air pressure forcing radially inwardly the said radially-inner wall to firmly engage the periphery of said member, and said radially-inner wall retracting radially outwardly upon the release of said air pressure to permit easy removal of said overtire.

pneumatically mounted on said hoop-shaped member comprising an annular resilient casing having an annular chamber therein, said casing comprising a fabric reinforced lining, said casing in cross section having a substantially straight radially-outer wall and a substantially straight radially-inner wall, said walls joined at their axially-outer extremities, said radially-outer wall having circumferentially extending reinforcements spaced across the entire width and on the radially-inner surface thereof and traction means on the radially-outer surface thereof, a central portion of said radially-inner wall being adapted to engage upon overtire inflation the periphery of said hoop-shaped member, circumferentially extending ridge means extending radially inwardly from said radially-inner wall, said ridge means having faces thereof for engaging the said member to prevent axial shift between said overtire and said member when said overtire is inflated, said radially-inner wall when said overtire is uninflated having a diameter slightly larger than the diameter of said member, whereby said overtire may be slipped on to said member without deflating the latter, said radially-inner wall having substantially greater resiliency than the said radially-outer wall, and means for introducing air under pressure into said chamber to inflate said overtire, said air pressure pressing radially inwardly said radially-inner wall to firmly engage the periphery of said member, the axial-outer portions of the radially-inner wall rotating radially inwardly about a point at the axially-outer extremity of the overtire upon said overtire inflation, and said radially-inner wall retracting radially outwardly upon release of said air pressure to permit easy removal of said overtire.

3,004,578
TIRE TREADS
Karl H. Braudorn, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed June 3, 1960, Ser. No. 33,685
5 Claims. (Cl. 152-209)



1. A pneumatic tire comprising a casing, two different treads around the outer periphery of said casing, each of said treads extending over substantially the width of the outer periphery of said casing and being positioned circumferentially on said casing, one tread having narrow ribs and narrow grooves extending intermediate said narrow ribs, and the other tread having wide blocks and wide grooves extending intermediate said wide blocks, thereby making said tire suitable to attain ideal traction both on hard and soft surfaces.

3,004,579
PROCESS OF MAKING A DUAL CHAMBER PNEUMATIC TIRE AND THE TIRE SO MADE
Harry L. Hatch, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 22, 1959, Ser. No. 822,060
11 Claims. (Cl. 152-342)

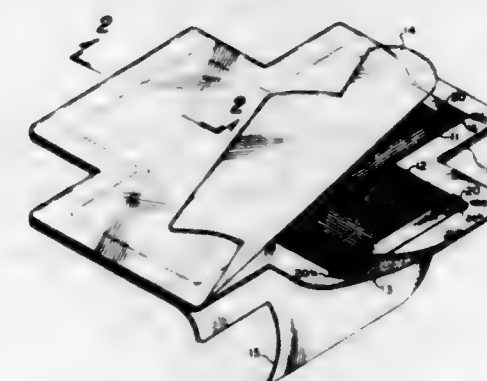
1. The herein described process of making a dual chamber pneumatic tire which comprises applying to a

tire building form layers of uncured rubber and of a reinforcing cord fabric, the cords of which are pre-stretched nylon cords, to form an inner band, covering the exterior of said inner band, except along opposite side edges thereof, with a separating layer of adhesion preventing material, applying to the exterior of said inner band layers of rubber and of reinforcing cord fabric to form a tire body, adhering edge portions of said body to the uncovered edge portions of said inner band, securing a bead ring to the adhered portions of said body and band at each edge of said body, applying heat to said



casing body and said inner band while applying fluid pressure to the interior of said band to press said inner band against the interior of said tire body to vulcanize the rubber and to create tension in said prestretched nylon cords, and delivering fluid under pressure into the space between the unadhered portions of said inner band and tire body while said nylon cords are hot to equalize the pressure on the interior and exterior of the unadhered portion of said inner band and cause the heated nylon cords to shrink and draw the unadhered portion of said band inwardly away from said tire body.

3,004,580
MULTI-PLY TIRE REPAIR UNIT
Frank H. Chambers and Gail B. Mount, Johnstown, Ohio, assignors to Technical Rubber Company, Inc., Johnstown, Ohio, a corporation of Ohio
Filed July 19, 1960, Ser. No. 43,890
3 Claims. (Cl. 152-367)



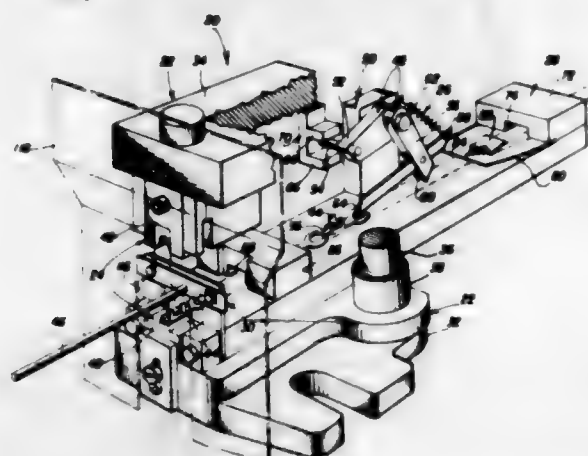
1. A tire repair unit comprising a plurality of rubberized cord plies in the form of strips with the cords thereof extending longitudinally only from one end extremity to the other of the strips, said strips being disposed in crossed superimposed relationship with their cords arranged substantially at right angles to each other to provide a superimposed crossed area and projecting tab ends, an underlying layer of unreinforced vulcanizable rubber which extends outwardly beyond said crossed strips in all directions, and reinforcing and connecting members positioned on said tab ends and extending over the

extremities thereof onto the adjacent extending portion of the vulcanizable rubber, said members being in the form of rubber impregnated strips of woven cloth fabric which extend transversely of said tab ends and the cords in said strips, said fabric having cords extending in two directions substantially at right angles so that the cords thereof extend both in the same direction as the cords in said strips and transversely thereof.

3,004,581

TERMINAL CRIMPING MACHINE WITH IMPROVED SWITCH

Stanley J. Krol, Bensenville, and John B. Sola, Chicago, Ill., assignors to Malco Manufacturing Company, Chicago, Ill., a partnership
Filed May 7, 1958, Ser. No. 733,712
10 Claims. (Cl. 153—1)

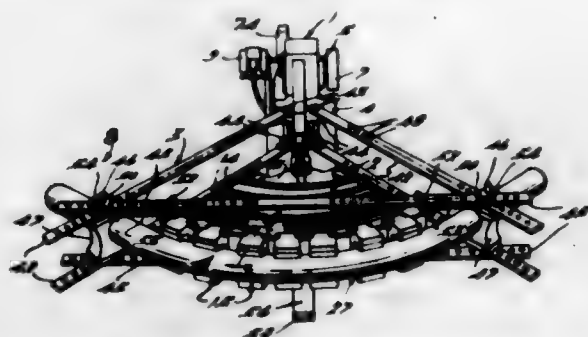


1. In a machine for crimping terminal connectors on wiring leads and including crimping means for acting on a crimping stroke to crimp the terminal connectors on respective leads and feeding means for acting on a feeding stroke to alternately feed the terminal connectors in connected chain form to the crimping means and also including actuating means for successively actuating the crimping means and the feeding means, the improvement comprising a sensitive electric switch for energizing the actuating means including a metallic plate member, a thin resilient electrical-conducting contact member, and means securing said members in closely spaced relation normally out of electrical contact to allow limited longitudinal deflection of a portion of said contact member when the contact member is transversely deflected to engage said plate member, said longitudinal deflection occurring prior to engagement of said contact member with said plate member.

3,004,582

MULTIPLE RADIUS PIPE BENDING MACHINE

Edward D. Key, 5871 Howard St., Detroit, Mich., assignor of one-half to William R. Farrington, Detroit, Mich.
Filed Mar. 18, 1959, Ser. No. 800,256
4 Claims. (Cl. 153—38)



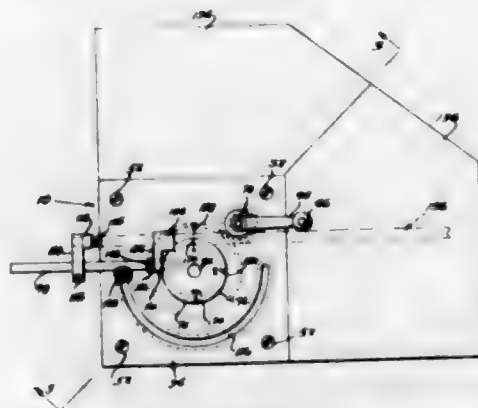
1. In a pipe bending machine, the combination comprising a frame, a double acting fluid actuated cylinder

on said frame having a longitudinally reciprocable piston rod, a variable radius bending ram mounted on said rod and reciprocable thereby, said bending ram comprising a base ram having an arcuate forward surface and a series of arcuate fillers of progressively increasing radii detachably secured to said arcuate forward surface for varying the radius of said bending ram, and a plurality of pipe bending shoes arcuately disposed along the forward surface of the outermost of said arcuate fillers, each of said bending shoes comprising a casing having an aligning pin in the rearward surface thereof for slidably engaging a corresponding aligning bore in the forward surface of the outermost of said arcuate fillers, a plurality of resiliently biased pivotally mounted latching levers on said casing for detachably engaging mounting grooves in the upper and lower surfaces of the outermost of said arcuate fillers, the forward surface of said casing formed to define a plurality of cavities of semi-circular cross-section for receiving and engaging piping of a corresponding diameter, said frame also having a pair of radial-link bars pivotally connected thereto and extending outwardly to each side of said bending ram, a pair of cross-link bars extending transversely between said link bars and detachably secured thereto by a pivot pin slidably and rotatably disposed in aligned apertures through said radial and said cross-link bars, a pair of holding shoes disposed between said pairs of cross-link and radial-link bars and mounted on said pivot pins, each of said holding shoes including a holding face formed to define cavities of semi-circular cross-section corresponding to said cavities in said bending shoes, a lever detachably affixed to each of said pivot pins including stop means thereon to limit the rotational travel of each of said holding shoes in one direction to a start position in which said holding face is perpendicular to the reciprocable path of travel of said ram, resilient means connected to each of said levers and to one of said link bars biasing said holding shoes toward said start position, guide means coaxing with said bending ram disposed parallel to the reciprocable path of travel thereof, and presettable control means for controlling the forward and rearward travel of said bending ram.

3,004,583

CONDUIT BENDING TOOL

William S. Zuccala and Harvey M. Mossman, El Paso, Tex., assignors, by mesne assignments, to Crawford Fitting Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 4, 1958, Ser. No. 726,376
1 Claim. (Cl. 153—40)



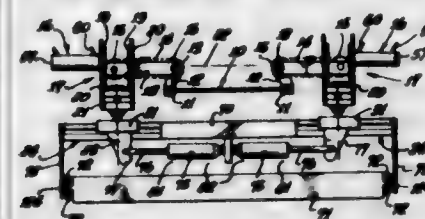
A manually operable conduit or tube bending tool comprising a substantially hollow base member having a clamping block fixedly secured to and depending from said base member, a substantially hollow rectangular cover plate for said base member, means releasably securing said cover plate to said base member and forming a hollow compartment therebetween, a pair of shafts rotatably supported on said base member and said cover plate and having a portion thereof extending across said compartment, said shafts having a portion of a pair of

adjacent ends thereof projecting exteriorly of said cover plate, a gear mounted for rotation on each of said shafts, said gears being meshed and disposed within said compartment, a substantially cylindrical mandrel having a continuous concavity formed in the side thereof, said mandrel being fixedly secured to the projecting end of one of said shafts for rotation therewith, a substantially cylindrical shoe having a continuous concavity formed in the side thereof, said shoe being loosely mounted for rotation on the projecting end of the other of said shafts, said mandrel and shoe being radially spaced with respect to each other with the concave sides thereof disposed in confronting relation, a crank arm having an end thereof releasably connected to said projecting end of said other of said shafts to provide leverage to effect rotation of said last named shaft, an elongated bar having an end thereof fixedly secured to said mandrel for rotation therewith, a hook member slidably mounted on said bar, means on said bar for limiting the movement of said hook member axially in one direction on said bar, said hook member being adapted to releasably receive therein the leading end of a conduit, a conduit abutment member for engagement with the leading end of said conduit, said conduit abutment member having a tip insertable within said leading end of said conduit, said abutment member being slidably mounted on said bar, means releasably securing said abutment member on said bar, and said cover plate having adjustable stop means mounted thereon to limit the degree of rotational movement of said bar.

3,004,584

PANEL FORMING EQUIPMENT

Henry O. Fuchs, Altadena, and James C. Berger, Burbank, Calif., assignors to Metal Improvement Equipment Company, Los Angeles, Calif., a corporation of California
Filed May 26, 1958, Ser. No. 737,651
15 Claims. (Cl. 153—44)



1. A machine having lateral and longitudinal extent for forming a panel having laterally spaced opposite edge portions, said machine comprising laterally extending rigid way means, and clamp assemblies mounted on said way means for relative movement therealong, said clamp assemblies including rotary clamps rigidly attachable to said panel opposite edge portions, said clamps having substantially longitudinally extending axes of rotation and said assemblies including actuators for rotating said clamps about said longitudinally extending axes, said clamp assemblies including pivot means having axes of rotation extending directionally in substantially perpendicular relation to both the lateral directional extent of said way means and longitudinal directional extent of said clamp axes of rotation, said clamps and actuators being freely bodily pivotable about said pivot axes during clamp rotation by said actuators.

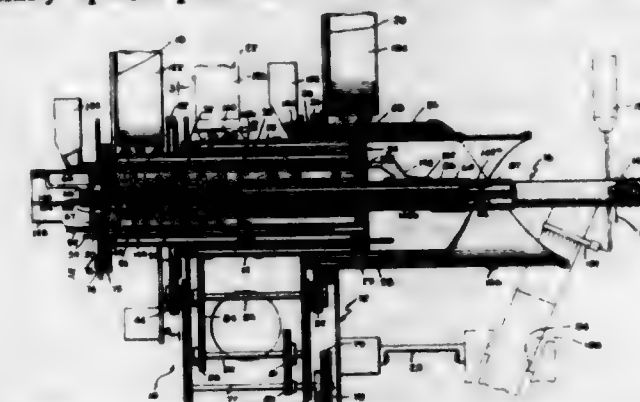
3,004,585

APPARATUS FOR MAKING TAPE REINFORCED PLASTIC PIPE

Thomas F. Lewis, North Apollo, and Dov Heals, Pittsburgh, Pa., assignors to Myron Cohen, New York, N.Y.
Filed Oct. 8, 1956, Ser. No. 614,729
8 Claims. (Cl. 156—429)

1. In apparatus for making tape reinforced plastic pipe, a mandrel comprising a longitudinally extending

tubular member, a plurality of circumferentially spaced rollers disposed adjacent one end of said tubular member, another plurality of circumferentially spaced rollers disposed adjacent the other end of said tubular member, a plurality of continuous ribbons having circumferentially spaced portions overlying the outer surface of



said tubular member and having other circumferentially spaced portions extending through said tubular member, each of said ribbons operatively engaging a roller at each end of said tubular member, and means for rotating the plurality of rollers at one end of said tubular member for imparting linear movement to said ribbons.

3,004,586

AUTOMOBILE ARM REST

Harry F. Bushong, South Bend, Ind., assignor to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,141
5 Claims. (Cl. 297—412)



1. An arm rest adapted to be attached to a vertical wall member such as a door panel, said arm rest comprising an elongated plate member having a horizontal portion, a cushion member positioned on and attached to said horizontal portion of said plate member, bracket means attached to and extending downwardly from said horizontal portion of said plate member at each end thereof each of said bracket means having a depending portion spaced from said vertical wall and having a screw receiving aperture for receiving a screw inclined upwardly towards said door panel, a casing enclosing said bracket means and being operably attached to said horizontal portion of said plate member, said casing having a lower edge portion at each end thereof beneath said bracket means which is adapted for abutting engagement with said wall member, and holes in said casing aligned respectively with the apertures in said bracket means to permit the insertion of screws for attaching the arm rest to said door panel.

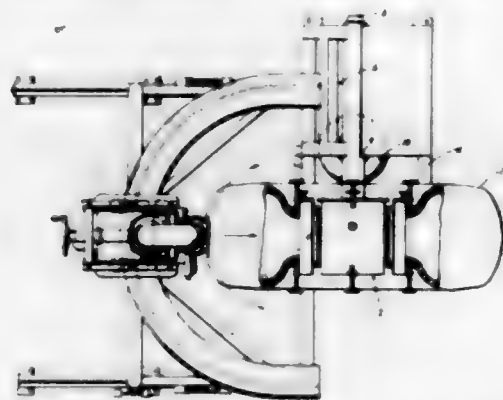
3,004,587

TIRE DRIVE UNIT FOR A TIRE DETREADING MACHINE

Edwin A. Glynn, Lodi, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California
Original application Apr. 1, 1957, Ser. No. 650,050, now Patent No. 2,941,584, dated June 21, 1960. Divided and this application Mar. 7, 1960, Ser. No. 13,300
7 Claims. (Cl. 157—13)

1. In a tire detreading machine, a rotary horizontal axis tire mounting rim assembly, a tire-tread working

tool positioned for engagement with the tread of a mounted tire as the latter rotates, a friction wheel engaging the tire on one side thereof, a relatively long driven shaft disposed radially on the axis of the rim assembly and on which shaft the wheel is slidably but non-turnably mounted, means to hold the wheel in any posi-



tion of adjustment along the shaft, and manually actuated brake means disposed to engage and hold the wheel against rotation in any adjusted position of said wheel; said brake means including a wheel brake plate extending parallel to the shaft for the length of adjusting movement of the wheel along the shaft.

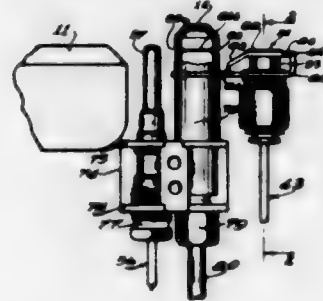
3,004,585
CUTTING AND WELDING TORCH
Nils Harry Christenson, 183 Fleming Road,
Cincinnati, Ohio
Filed Aug. 13, 1959, Ser. No. 833,589
6 Claims. (Cl. 158-27.4)



1. A torch construction comprising a handle with two arms terminating in first and second disc-like members having opposing first and second faces respectively to which is pivotally attached an adjustable head member having first and second faces adapted to abut said first and second faces of said disc-like members respectively, one of said arms comprising a pair of first and second tubes having passages therein, spaced inner and outer annular grooves provided in the face of said first disc-like member, a first port communicating between said first tube and said inner groove and a second port communicating between said second tube and the outer groove, spaced inner and outer grooves provided on said first face of said head member adapted to register with said inner and outer grooves of said first disc-like member when in abutting relationship therewith and in all angular positions of said adjustable head, a passage through said head having ports communicating with both said inner and outer grooves in said first face of said head, said other arm comprising a tube having a passage therein, said second disc-like member having a groove provided in the face thereof communicating with said tube of said

second arm, a groove provided in the second face of said head adapted to register with said groove in said second disc-like member when said faces are in abutting relationship and in all angular positions of said adjustable head, and a passage through said head communicating with said groove in said second face thereof.

3,004,589
ELECTRIC IGNITER
Charles E. Hajny, Milwaukee, Wis., assignor to Baso Inc.,
Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 20, 1956, Ser. No. 566,703
3 Claims. (Cl. 158-115)

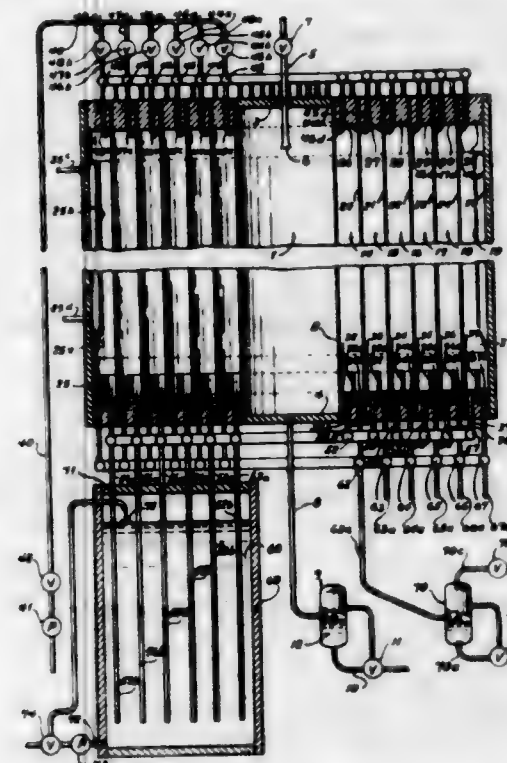


1. In combination, a gaseous fuel burner formed with an outlet port for discharging gaseous fuel in a predetermined generally horizontal direction therefrom, a bracket having a surface portion formed with an opening facing in a direction substantially normal to the direction of said fuel discharge, a sleeve fixed to said bracket substantially coaxial with said opening, an igniter plug coaxially positioned within said sleeve and having recessed opposite end portions, one of which is disposed at said opening to form therewith a depression, an insulated terminal tip fixed within the other recessed end portion of said plug, an helical igniter coil carried by said plug within said depression and disposed with its axis extending substantially diametrically across the end of said plug adjacent said opening, one end of said coil being connected in circuit with said plug, and the other end of said coil being connected in circuit with said insulated terminal tip, said other end of said plug being formed with shoulder means for removable connection with complementary shoulder means of a coaxial lead connector, and means for removably securing said igniter plug in operative position within said sleeve independent of said removable connection of said plug and lead.

3,004,590
MULTIPLE EFFECT EVAPORATORS
Curt F. Rosenblad, Princeton, N.J. (% Rosenblad Corp.,
1270 6th Ave., New York 20, N.Y.)
Filed Apr. 15, 1957, Ser. No. 652,779
4 Claims. (Cl. 159-13)

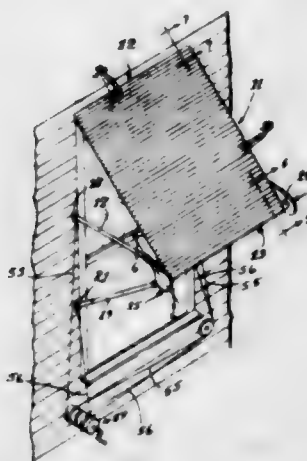
1. In evaporator construction, a pair of concentric horizontally spaced vertically extending cylinders providing opposed cylindrical walls, one of said cylinders being formed of heat transmissive material, means for closing the space between said cylindrical walls at the top end thereof, means for closing the space between said cylindrical walls at the bottom end thereof, means for introducing feed through said top end closing means, means for removing condensate and means for removing concentrate through said bottom end closing means, and baffle means within said space concentric with respect to said walls, in spaced relation with respect thereto, the lowermost portion of said baffle means being imperforate, positioned between said condensate removing means and said concentrate removing means and being sealed to said means for closing said space at the bottom end of said cylindrical walls, said baffle means extending throughout the vertical extent of said space, and said baffle means,

above said lowermost portion thereof, being formed with passage means therethrough so that vapor can pass



through the baffle means from one side to be condensed on the other side.

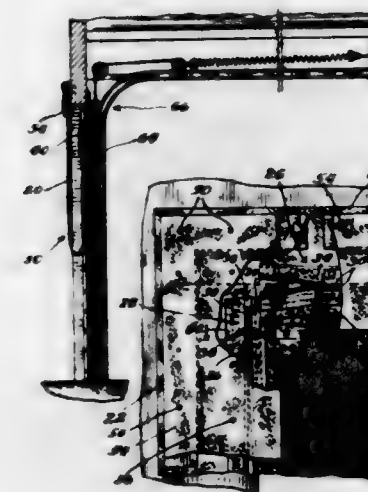
3,004,591
ADJUSTABLE AWNING
Jonathan W. King, Jr., 417 Warren Ave., Niles, Ohio
Filed Feb. 18, 1958, Ser. No. 715,881
14 Claims. (Cl. 160-62)



5. A roll-up awning comprising a plurality of awning slats in side-by-side relation pivotally secured together along adjoining margins to provide a flexible awning panel whose ends are defined by side margins of respective end slats and whose one end is secured to a suitable support such as a wall and the like, arm means having one end pivotally mounted with respect to the support and in spaced relation with said one awning panel end, spindle means connected to the other end of said awning panel and rotatably carried by the other end of said arm means for arcuate movement therewith toward and away from said one awning panel end, windlass means rotatable in one direction to wind a cable thereon and rotatable in the opposite direction to unwind such cable therefrom, first cable means extending between said windlass means and said spindle means and rotating the latter, during winding of said cable means upon said windlass means, in a direction to wind said awning panel thereon and such spindle means rotation exerting a force which swings said spindle means bodily about said arm means

pivotal mounting in a direction toward said one awning panel end, and second cable means extending between said windlass means and said spindle means to effect movement of the latter in a direction away from said one awning panel end during winding of said second cable means upon said windlass means, said windlass means having a pair of drum portions upon which respective cable means are wound and normally providing for simultaneous rotation of said drum portions to wind said first cable means thereon and to unwind said second cable means therefrom thus permitting unimpeded movement of said spindle means toward said one awning panel end to thereby retract said awning, one of said drum portions selectively being rotatable while the other is held against rotation to wind up one of said cable means while preventing unwinding of the other to thereby place that awning panel portion extending between said spindle means and said one awning panel end under tension to provide a rigid awning structure.

3,004,592
FOLDABLE SCREENING FOR GARAGE DOORS AND THE LIKE
Frank M. Norton, 14912 80th Ave., Orland Park, Ill.
Filed June 4, 1958, Ser. No. 739,878
2 Claims. (Cl. 160-114)



1. A closure device for garage doorways comprising guide rail members mounted on each side of the doorway and each including generally vertical portions merging into generally horizontal portions above the doorway that extend inwardly of the doorway, a sectionalized door mounted for shifting movement by said guide rail members between a lower generally vertical doorway closing position in parallel relation with said vertical portions and an upper generally horizontal position in parallel relation with said horizontal portions to open the doorway, a generally quadrilateral sheet of fiberglass screening proportioned to substantially close off the doorway, a row of zipper lug fastening elements secured along two opposed edges of said sheet, one of the other of the remaining pair of edges of the sheet serving as the top of said sheet, a flange member for each of said opposed edges of said sheet, said flange members being substantially coextensive with said opposed edges, respectively, and each carrying along one edge thereof a row of zipper lug fastening elements adapted to interlock with the respective lug fastening elements of said opposed edges, respectively, zipper lug fasteners operably associated with said elements of each of said opposed screening edges and their said flanges, respectively, said elements and said fasteners along said opposed edges of said screening comprising zipper fastening means, with the zipper fastening means of each of said opposed screening edges employing zipper starting lugs and sockets at the top of said sheet, whereby said zipper fasteners of said opposed screening

edges are moved downwardly to interlock said elements of said opposed edges with said elements of their respective flanges, means for securing said flanges and said top of said sheet along the sides and top of the doorway, respectively, the fourth of said edges of said sheet engaging the bottom of the doorway, and including means for releasably securing the fourth edge of said sheet to said door adjacent the top portion thereof, whereby, the screening sheet fourth edge, after said zipper means are sufficiently unzipped, may be secured to said portion of said door when said door is in its said vertical position, and after the screening zipper means are fully unzipped, the door may be moved to its said horizontal position to remove said screening from said doorway without detaching said screening therefrom.

3,004,593
FLEXIBLE CLOSURE DEVICE
Morton Jeskin, 16 Cold Spring Hill Road,
Huntington, N.Y.
Filed Mar. 9, 1959, Ser. No. 797,946
1 Claim. (Cl. 166-201)

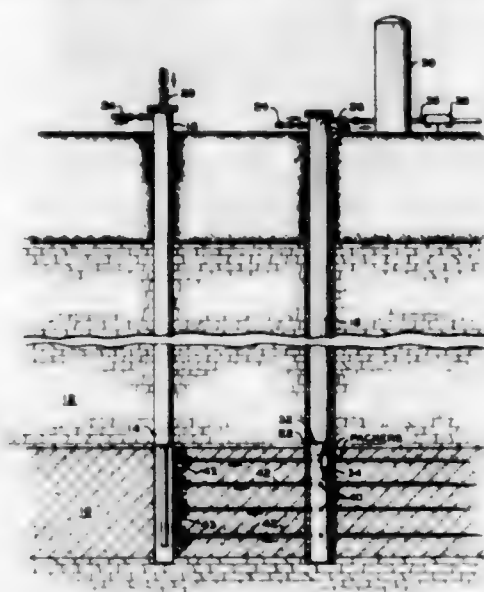


A device of the character described comprising a support having a pair of parallel passageways including at least one straight portion and one curved portion in respect to the plane of said straight portion, and a flexible closure structure slidable within said passageways being constituted by a plurality of mutually interengageable slats each having a flat rectangular cross-section and formed with claw-shaped end portions at the opposite longer edges thereof, said end portions having a height less than the thickness of the slats and being formed by a pair of substantially straight-walled grooves having a width equal to about one third of the thickness of said slats and a depth of about 60 to 65% of said thickness and being parallel to and spaced from said edges and extending from opposite faces of the slats, the inner lateral wall of one of said grooves and the outer lateral wall of the other groove being substantially normal to said faces and the width and depth of said grooves being equal, respectively, to the width and height of said end portions, whereby, with the end portions of one slat being interlocked with the grooves of the adjacent slats, the slats being positioned with their short edges engaging the straight portion of said passageways form a closely fitting structure being aligned at right angles to said passageways and presenting a substantially continuous plane surface, the inner surface of the groove adjacent to one of said longer edges and the outer surface of the end portion at the opposite short edge of the slats slanting inwardly in respect to a central symmetry line transverse to the slats, whereby to enable a relative pivoting movement of adjacent slats in one direction, to conform with the curved portion of said passageways during passage therethrough of said structure.

3,004,594
PROCESS FOR PRODUCING OIL
Francis W. Crawford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 19, 1956, Ser. No. 622,992
10 Claims. (Cl. 166-11)

6. A process for fracturing a carbonaceous formation which comprises penetrating said formation with first and

second boreholes within fracturing distance thru said formation; producing a fracture in said formation from the first to the second of said boreholes by direct application of fracturing pressure thereon thru one of said boreholes from a sufficiently large volume of readily compressible fluid comprising gas to provide surges of fluid into said fracture to immediately occupy and extend same deeper into the formation from said one borehole and maintain supporting pressure to hold said fracture open; after fracturing has occurred, alternately decreasing the fluid pressure so as to close the fracture and increasing said fluid pressure so as to open the fracture and cause said fluid to rush out of and into said fracture thereby creating debris therein which serves as a propping agent.



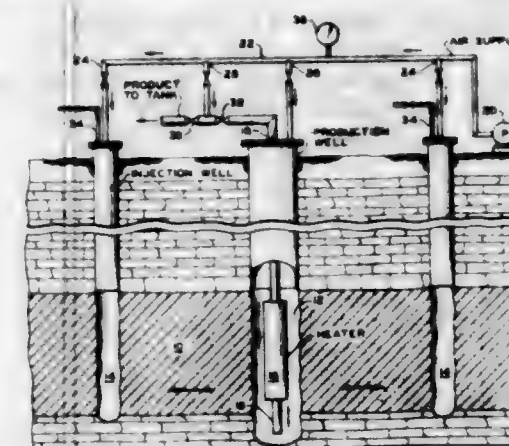
9. A process for fracturing a carbonaceous formation which comprises penetrating said formation with first and second boreholes within fracturing distance thru said formation; producing a fracture in said formation from the first to the second of said boreholes by direct application of fracturing pressure thereon thru said first borehole from a sufficiently large volume of combustion supporting gas to provide surges of fluid into said fracture to immediately occupy and extend same deeper into the formation and maintain supporting pressure to hold said fracture open; before said fracture is made, heating said formation adjacent said second borehole to at least combustion temperature so that same is ignited as said gas reaches the hot area thru said fracture; continuing the feeding of said gas thru said fracture to the resulting combustion front to cause same to move thru said formation toward said first borehole; and recovering produced hydrocarbons thru said second borehole.

3,004,595
IN SITU COMBUSTION OF CARBONACEOUS STRATA
Francis W. Crawford and Harry W. Parker, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 21, 1958, Ser. No. 722,885
12 Claims. (Cl. 166-11)

1. A process for initiating combustion in a stratum containing combustible carbonaceous material comprising heating to ignition temperature a section of said stratum around an ignition borehole therein from a heat source in said borehole; while heating said section, cyclically passing O₂-containing gas from an injection borehole spaced from said ignition borehole thru said section of stratum into said ignition borehole and from said ignition borehole into said section; and continuing the cyclic passing of said gas until ignition is effected.

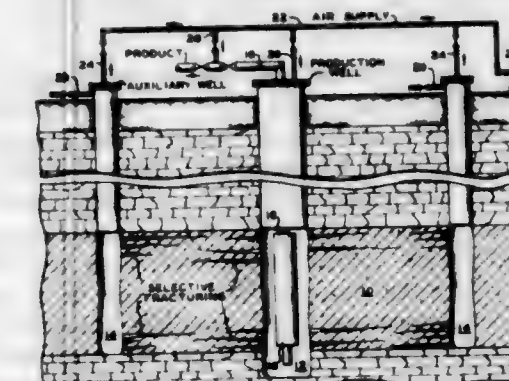
2. The process of claim 1 wherein said O₂-containing gas is injected into said stratum thru a series of injection

boreholes surrounding said ignition borehole during one phase of the cycle and gas is withdrawn from said ignition borehole; and during another phase of the cycle O₂-



containing gas is injected thru said ignition borehole and gas is withdrawn from said stratum thru said injection boreholes.

3,004,596
PROCESS FOR RECOVERY OF HYDROCARBONS BY IN SITU COMBUSTION
Harry W. Parker and Allen S. Rogers, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,586
11 Claims. (Cl. 166-11)

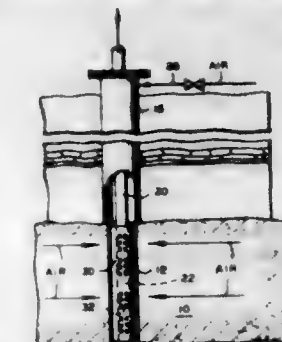


11. A process for producing hydrocarbons from a permeable carbonaceous stratum located between an overburden and an underburden, and penetrated by a pair of boreholes, which comprises packing off an upper section of said stratum in at least one of said boreholes; fracturing the packed off sections by applying fluid pressure thru the packed off sections so as to increase the effective permeability thereof while retaining the original permeability of the intervening section of stratum; igniting said stratum along one of said boreholes to establish a combustion zone extending from said overburden to said underburden; advancing said combustion zone thru said stratum toward the other borehole by pressurizing one of said boreholes with an O₂-containing, combustion supporting gas whereby said gas is fed at a faster rate thru said upper and lower sections than thru said intervening section to compensate for greater heat losses in said sections than occur in said intervening section; and recovering produced hydrocarbons from one of said boreholes.

3,004,597
INITIATING IN SITU COMBUSTION IN A CARBONACEOUS STRATUM
John W. Marx, Joseph C. Trantham, and Harry W. Parker, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,340
11 Claims. (Cl. 166-11)

1. A process for igniting a combustible gas-permeable carbonaceous stratum comprising suspending a bonded

unitary mass of solid fuel comprising charcoal in an ignition borehole adjacent said stratum; heating and igniting a lower end section of said mass of fuel; passing O₂-containing combustion-supporting gas into an offset borehole and thru said stratum into said ignition borehole to burn

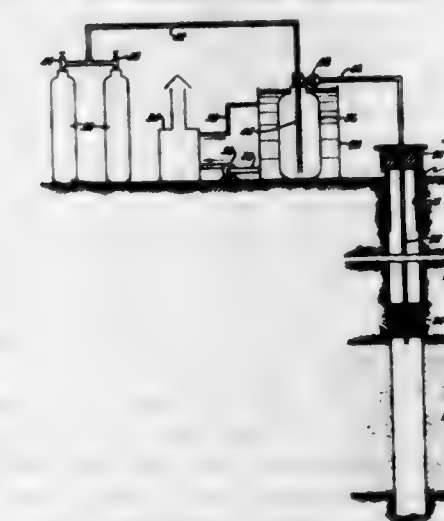


the ignited mass of fuel, so as to heat and ignite a section of said stratum adjacent the burning fuel; thereafter moving the burning mass of fuel along said ignition borehole while passing said gas thru said stratum so as to ignite an adjacent section of said stratum; and venting gases from said ignition borehole.

3,004,598
METHOD OF REDUCING THE PERMEABILITY OF UNDERGROUND FORMATIONS
Joe Ramos and Wayne F. Hower, Duncan, Okla., assignors, by mesne assignments, to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed May 14, 1958, Ser. No. 735,118
7 Claims. (Cl. 166-29)

1. A process for plugging a permeable formation penetrated by a borehole of a well for the production of hydrocarbon fluids comprising displacing down the borehole and injecting into the formation an aqueous solution of a metal salt, and then displacing down the borehole and injecting into the formation a mixture of an inert gas and a reactant gas that will react with the metal salt to form an insoluble precipitate containing the metal ion of the salt, the proportion of inert gas being such that the mixture of gases remains in the gaseous state at the conditions existing in the permeable formation.

3,004,599
METHOD AND APPARATUS FOR PLUGGING PERMEABLE FORMATIONS
Robert J. Goodwin, Oakmont, and Abraham J. Teplitz, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 12, 1958, Ser. No. 734,472
4 Claims. (Cl. 166-30)



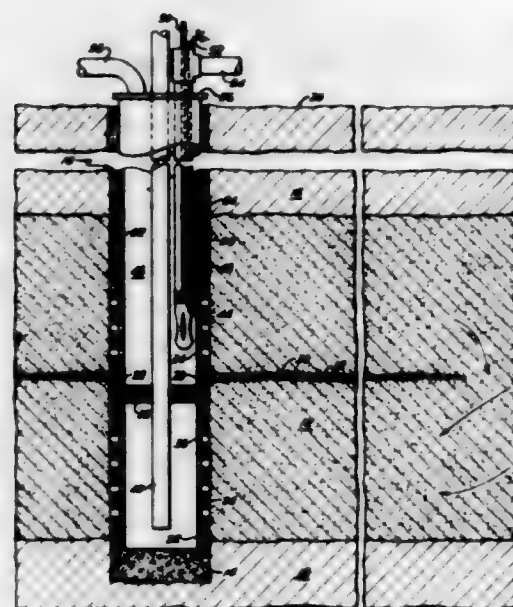
1. A method of plugging a permeable formation penetrated by a well comprising displacing an aqueous solu-

tion of a metal salt capable of reacting with a reactant gas to form a precipitate into the formation, maintaining the reactant gas in the liquid state at the well head at a temperature in the range from slightly below up to the temperature in the formation and a pressure higher than the pressure in the formation, then bubbling a permanent gas through the liquefied reactant gas to form a gaseous mixture of the permanent gas and the reactant gas, and displacing the mixture of the reactant gas and permanent gas into the formation whereby the reactant gas reacts with the metal salt to form a precipitate in the portion of the formation.

3,004,600

SINGLE WELL IN-SITU COMBUSTION PROCESS FOR PRODUCTION OF OIL

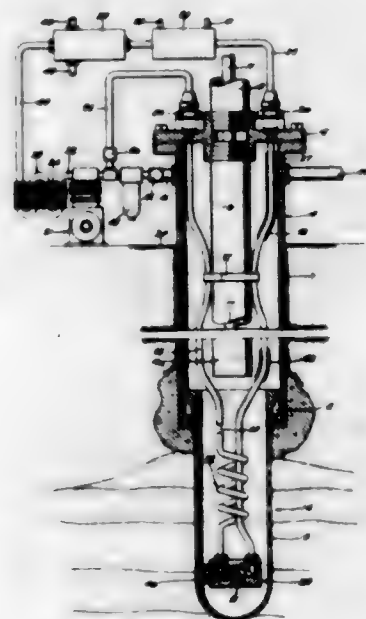
James H. Henderson, Gibsonia, Alfred Schild, Pittsburgh, and Malcolm R. J. Wyllie, Allison Park, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed June 17, 1957, Ser. No. 665,990
6 Claims. (Cl. 166—39)



1. An in-situ combustion process utilizing a single well for the production of oil from a pay zone comprising forming a fracture in the pay zone, pumping a liquid into the fracture to extend the fracture substantially radially from the well at least about 50 feet into the pay zone, said fracture being positioned in the central portion of the pay zone, squeezing cement into the fracture and allowing it to set to form a thin impermeable barrier extending from the well and dividing the pay zone into an upper and lower section, setting a packer in the well adjacent the barrier to divide the well into an upper zone above the packer and a lower zone below the packer, running tubing into the well and through the packer to provide a conduit from the well head to the lower zone, injecting an oxygen-containing gas down the well and into one of the sections of the pay zone, igniting and burning oil in that section into which the oxygen-containing gas is injected to increase the temperature therein and displace oil toward the other section of the pay zone, withdrawing oil from the other section of the pay zone into the well and lifting it to the well head, stopping the injection of oxygen-containing gas into said one section, injecting oxygen-containing gas into said other section, igniting oil in said other section, and withdrawing oil from the section of the pay zone in which the burning initially occurred to cause alternate burning and withdrawal of oil in the sections.

3,004,601 METHOD AND APPARATUS FOR AUGMENTING OIL RECOVERY FROM WELLS BY REFRIGERATION

Albert G. Bodine, 13120 Moorpark St., Sherman Oaks, Calif.
Continuation of application Ser. No. 368,796, July 17, 1953. This application May 9, 1958, Ser. No. 734,294
1 Claim. (Cl. 166—39)



The secondary recovery process of increasing the recovery of hydrocarbon liquid from a petroleum-bearing formation having a well bore therein, which formation contains a mixture of hydrocarbon gases locked in the formation and a hydrocarbon liquid whose flow to the well bore is impeded by said locked gases, that comprises: providing a coolant means in the well bore adjacent the formation; operating said coolant means in a manner to cool the well bore and the formation adjacent to and for a substantial distance back from the well bore to a temperature which is below the equilibrium temperature which would be required to condense the mixture of hydrocarbon gases normally available in the formation for flow into the well bore, so that said mixture of hydrocarbon gases in the formation is cooled to a value at which condensation thereof takes place within the formation, and said condensed gases are absorbed by the hydrocarbon liquid in the formation; and producing from the formation hydrocarbon liquid containing the condensate from said hydrocarbon gas mixture.

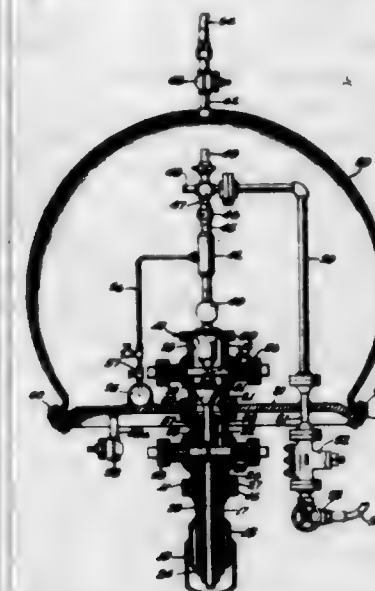
3,004,602

UNDERWATER OIL WELL COMPLETION

David C. Kofahl, Bakersfield, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,495
6 Claims. (Cl. 166—47)

1. The method of completion of an underwater well having a submerged well head structure provided with a blowout preventer, including the steps of: lowering a casing string through the well head structure and blowout preventer to bring a shoulder on the casing string to rest on the well head structure, separating an upper portion of the casing string from a remaining lower portion at a location above said shoulder and below the blowout preventer, removing the upper portion of the casing string, lowering a tubing string through the well head structure and blowout preventer into said remaining portion of the casing string to bring a shoulder on the tubing string to rest on the tubing head, removing the blowout preventer by raising it axially along the tubing string, removing an

upper portion of the tubing string from a remaining portion projecting above the well head structure, and in-



stalling an enclosure on the well head structure to encompass said projecting portion of the tubing string.

3,004,603
HEATER

Allen S. Rogers, James R. Hurley, and Harry W. Parker, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 7, 1958, Ser. No. 719,890
8 Claims. (Cl. 166—59)



1. Apparatus for downhole heating in an oil well comprising in combination an elongated burner including a shell enclosing a combustion chamber, an inlet for fuel and O₂ at one end of said shell, an outlet for exhaust gases at the opposite end thereof, and an igniter in said combustion chamber; a fluid feed line connected with said inlet; a conduit concentric with said feed line forming an annular passageway around said feed line for a cooling fluid; an exhaust conduit connected with said outlet, making a U-turn and passing back along said concentric conduit beyond said inlet; and a connecting conduit between said concentric conduit and said exhaust conduit just above said burner for flow of coolant into said exhaust conduit from said concentric conduit, said fluid feed line, said shell, and said exhaust conduit forming a closed circuit for gases within said well.

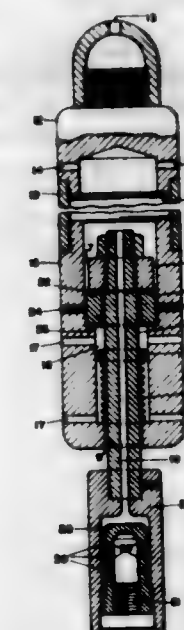
3,004,604

DUMP BAILER

Ray R. Limbocker, Jr., Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Dec. 22, 1958, Ser. No. 781,958
1 Claim. (Cl. 166—169)

A dump bailer for use in oil wells, comprising a housing providing a fluid retaining chamber; a plug at the

bottom of the housing having a longitudinal passage extending therethrough and also having therein an elongated transverse channel which communicates at one end with said passage and at its other end with the exterior of said plug, one end of said passage communicating with said chamber; an annular valve seat formed at said one end of said passage, a slidable member extending through said passage, in spaced relation to said plug, to a point below the bottom of said plug, an annular valve plug

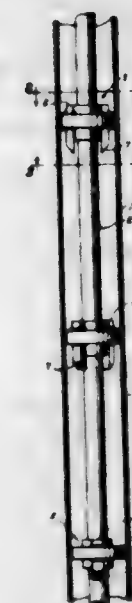


carried by said member and forming with said seat a valve means for closing the bottom of said chamber, said valve means including also an O-ring seal carried by said seat, said seat and said valve plug comprising magnets of opposite polarities, which operate by mutual attraction to normally maintain said valve means closed; and a compression spring one end of which engages said member and the other end of which engages said first-mentioned plug, to bias said valve plug away from said seat.

3,004,605

PARAFFIN SCRAPER AND ROD GUIDE

Paul Folsom, P.O. Box 1761, Pampa, Tex.
Filed Dec. 12, 1958, Ser. No. 779,922
1 Claim. (Cl. 166—176)



The combination of a well tubing, a pump rod arranged concentrically therein and movable reciprocally thereof, and a combined paraffin scraper and rod guide unit secured to the rod and slidably engaging the inner wall of said tubing, the scraper and guide unit comprising a band press fitted on said rod, a pair of diametri-

cally opposed spacer bars arranged parallel to each other and to the rod and secured to the peripheral surface of said band on opposite sides of said rod, the lower ends of said bars depending below said band, and having oppositely bevelled lower ends, and an annular scraper, narrower than said band, embracing said bars and said band, and rigidly secured to said bars opposite said band whereby the said spacer bars extend below said scraper for guiding said unit into a well tubing.

3,004,606

PACKER DEVICE FOR WELLS

Kenneth A. Wright and James R. Selam, Los Angeles, Calif., assignors, by mesne assignments, to B and W, Incorporated, Torrance, Calif., a corporation of California

Filed Aug. 20, 1957, Ser. No. 679,204
9 Claims. (Cl. 166—182)



1. In a well packer device, the combination of: a tubular shell having a shoulder, an annular expansible packer mounted on and encircling a portion of the shell and having upper and lower ends, said lower end engaging said shoulder, a sleeve slidably mounted upon the shell and having a shoulder engaging the upper end of said packer, internal threads on said shell, internal threads on said sleeve, a rotary member having external threads engaging said internal threads on the shell and having external threads engaging said internal threads on the sleeve, means including a mandrel extending within and engaging said rotary member for turning the said rotary member to release its external threads from engagement with the internal threads on said sleeve and said shell, expansible lugs carried on the mandrel, and means for moving said lugs to a position to overlie a portion of said sleeve upon upward movement of the mandrel following disengagement of said threads, whereby a downward force may be transmitted from the mandrel through said lugs to said sleeve for expanding the packer.

3,004,607

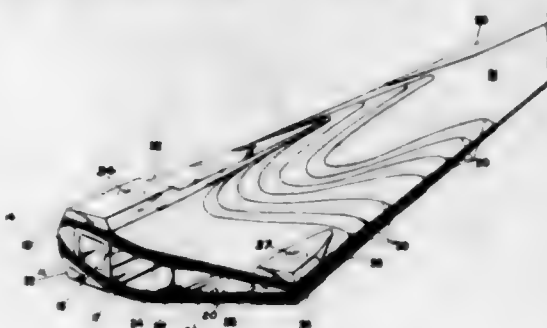
HELICOPTER METAL MAIN ROTOR BLADE

George H. Linnabery, Hurst, and John D. Bending, Dallas, Tex., assignors, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware

Filed May 15, 1956, Ser. No. 584,918
1 Claim. (Cl. 170—159)

A hollow rotor blade comprising a multi-cell structure shaped externally to airfoil contour form, said structure comprising a series of spanwise extending stiffening elements disposed in spaced relation to each other throughout their lengths and joined together solely by external skin means so as to provide a blade of multi-cellular structural form adapted to withstand flexing of the blade in the chordwise direction with the center of pressure, cen-

ter of gravity and the elastic axis of said blade substantially coinciding, said stiffening members consisting of a leading edge member in the form of a generally rectangularly sectioned hollow metal extrusion having upper and lower surface portions forming the shapes for corresponding portions of the blade and rearwardly terminating in a transverse web portion, an intermediate member in the form of an I-sectioned metal member, and a trailing edge member, said skin means including upper and lower metal sheet members adhesively bonded to said leading edge, intermediate and trailing edge members to join the same together, a pair of angle members having one leg of each adhesively bonded to said upper and lower skin sheets and their other legs adhesively bonded



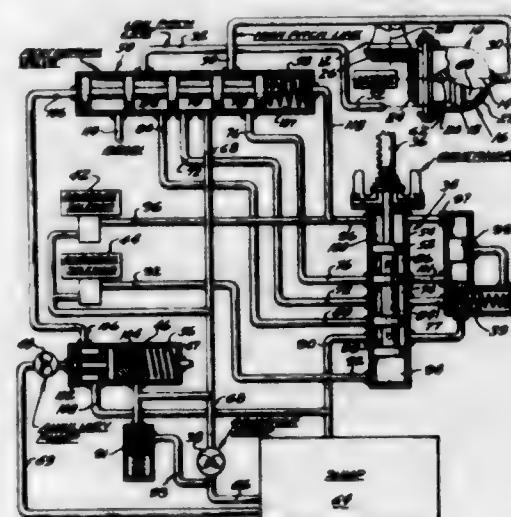
to said web portion of the leading edge member, the legs of said angle members which are joined to the skin sheets being substantially more flexible than said leading edge member to avoid stress concentrations in the skin means at its juncture with said web portion of the leading edge member due to flexure of the blade, a pair of cover plates interposed between the top and bottom flanges of said intermediate member and said cover plates being of a width to extend beyond said flanges at either side thereof to avoid stress concentrations in the skin means at its junctures with said flanges due to flexure of the blade, said skin-engaging legs of said angle members and the corresponding edges of said cover plates being spaced apart.

3,004,608

INDEPENDENT FEATHERING SYSTEM

Anthony V. Pond, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 16, 1957, Ser. No. 684,314
3 Claims. (Cl. 170—160.16)



1. A propeller comprising a plurality of blades each pivotable through an intermediate pitch range and a feather range and a reverse pitch range, propeller pitch control mechanism comprising a pitch changing hydraulic motor having pitch increase and pitch decrease sides, a first source of fluid pressure, a propeller speed control

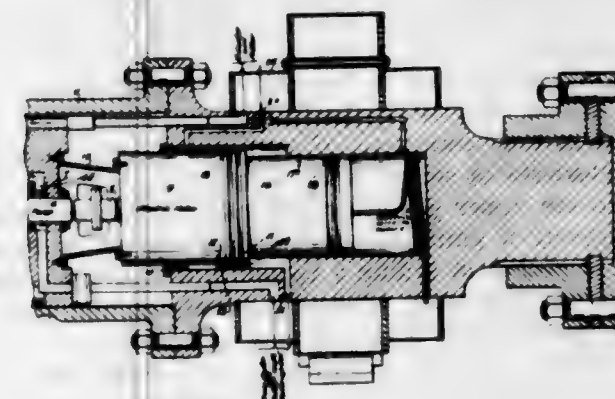
governor, governor controlled valve means movable in one direction or the other for directing fluid from said first source to said propeller pitch decrease side or said propeller pitch increase side of said motor for decreasing or increasing the propeller pitch throughout said intermediate range, a second source of fluid pressure, means responsive to said second source fluid pressure to cause the fluid from said sources to join hydraulically, a feathering valve hydraulically connected to said motor, valve means and sources and spring biased to a first position to connect said valve means to at least one of said sources and shiftable to a second position to connect said pitch increase side of said pitch change motor directly to said sources to bring said blades into the feather range, reverse pitch means directing fluid from both of said sources to said valve means for forcing said valve means in one direction to conduct fluid from said sources through said feathering valve to said pitch decrease side of said pitch change motor to decrease the propeller pitch to the reverse pitch range, feather pitch means directing fluid from said sources to said valve means for forcing said valve means in the opposite direction to conduct fluid from said sources through said feathering valve in its first position to said pitch increase side of said pitch change motor to increase propeller pitch to said feather range so that said propeller blades may be brought into said feathering range by said feathering valve when said valve means is inoperative and by said valve means when said feathering valve is inoperative.

3,004,609

CONTROLLABLE PITCH PROPELLER

Albert M. Naulty, Springfield, Pa., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania

Filed July 21, 1959, Ser. No. 828,651
7 Claims. (Cl. 170—160.32)



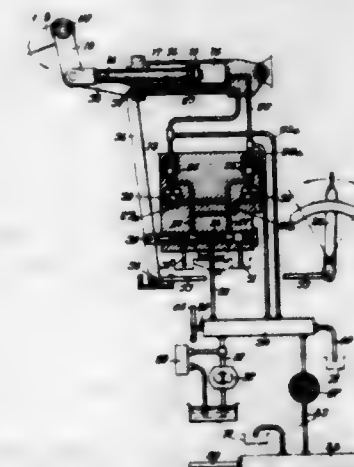
1. A propeller having a hub mounted on a shaft for rotation therewith about the shaft axis, blades journaled in the hub, a hydraulically actuated servo-motor mechanism for angularly adjusting the pitch of the blades, means for supplying operating fluid in either of opposite directions to the servo-motor to reversely operate it and correspondingly adjust the blade pitch, said supply means including a unidirectional operating pressure fluid pump supported by the shaft for rotation therewith, a valve supported by said shaft for rotation therewith and being movable in either of opposite directions to control the direction of fluid supply to the servo-motor, and servo-motor means also supported by and rotatable with the shaft for controlling the operation of the valve to determine the blade adjustment.

3,004,610

HYDRAULIC CONTROL SYSTEMS FOR AGRICULTURAL TRACTORS

Victor Pomper, Paris, and Louis Fignolet, Lyon, France, assignors to Société Industrielle Générale de Mécanique Appliquée S.I.G.M.A., Paris, France, a corporation of France

Filed Apr. 10, 1959, Ser. No. 805,555
Claims priority, application France Apr. 14, 1958
5 Claims. (Cl. 172—7)



1. For use in connection with an agricultural machine including a tractor, an agricultural implement movably connected with said tractor, a hydraulic motor carried by said tractor, said hydraulic motor including a cylinder and a piston movable in said cylinder to limit therewith at least one active chamber, linkage means operatively connecting said piston with said implement so that a rise of pressure in said chamber urges said implement upwardly, a hydraulic pump connected with said cylinder for feeding liquid to said active chamber, discharge means and conduit means for placing said discharge means in communication both with said active chamber and with said pump, said discharge means including a section for the common outflow of liquid from both said active chamber and said pump, the combination of distributing means in said conduit means for placing said active chamber and said pump both in communication with said common discharge section and load transfer means in said common discharge section for reducing the cross-section area of flow of liquid through said common discharge section, said load transfer means comprising two normally open valve devices located in series at different points of said common discharge section respectively and both for throttling the liquid stream flowing through said common discharge section at said two points thereof, respectively, means responsive to variations of the traction effort of said implement for operating one of said valve devices in accordance with the value of said effort arranged to close said last mentioned valve device more and more as the value of said traction effort increases, and manual means for operating the other of said valve devices arranged to close it gradually.

3,004,611

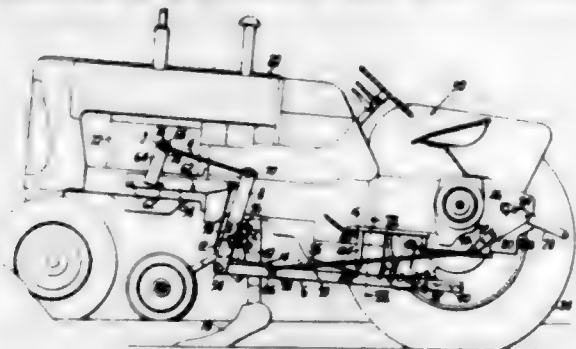
FRONT MOUNTED BEDDER

Willard H. Tanke, La Crosse, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Sept. 23, 1959, Ser. No. 841,864
7 Claims. (Cl. 172—308)

1. In a tool bar support structure for a tractor having a movable lift arm, the combination comprising: a vertically swingable draw bar pivotally connected at one end to said tractor and extending toward the front of said tractor; a main brace pivotally connected to the other end of said draw bar; a base plate fixed to the side of said tractor forwardly of said draw bar, said plate being positioned vertically above said draw bar; a link;

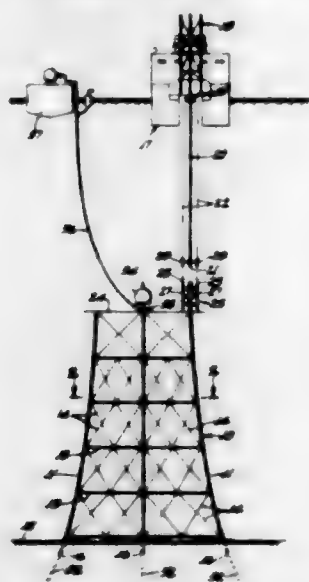
means pivotally interconnecting said link with said base plate that is forwardly of said draw bar; means pivotally interconnecting said link with said main brace, said link and draw bar being positioned to cooperate and constrain



said main brace to parallel movement; and, means interconnecting said lift arm of said tractor to said draw bar to raise said draw bar in response to raising of said lift arm.

3,004,612 SUBMERGED ELEVATED WELL HEAD STRUCTURE

David C. Kofahl, Bakersfield, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,327
1 Claim. (Cl. 175-7)



A submerged well head structure for a well in an off-shore marine location comprising in combination: a wholly submerged support structure having a plurality of tubular elements extending from the lower end to the upper end thereof, the lower ends of certain of the tubular elements extending into the ocean floor, a post fixed within each of the latter said tubular elements further projecting into the ocean floor, whereby the structure is rigidly fixed against movement, a submerged well head device fixed to the upper end of one of the other tubular elements laterally flexible guide means connected with the well head device and extending upwardly for guiding drilling tools into the well head device from a floating vessel at the ocean surface, and means on the floating vessel for rotating the drill tools.

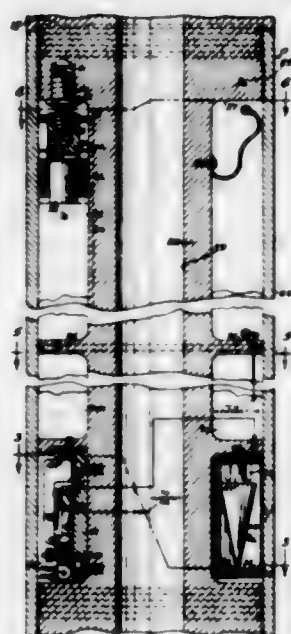
3,004,613 ELECTRONIC DEEP HOLE CONDITION ANALYSER

James Scivally Murphy, 205 S. Mill St., Ardmore, Okla., assignor of one-third to Millard R. Simmons and one-third to William E. Kolb, both of Ardmore, Okla.

Filed May 17, 1956, Ser. No. 585,450
3 Claims. (Cl. 175-45)

1. In a device of the character described, a drill stem, a transmitting section on the lower end of said drill stem,

a drill bit on the lower end of said transmitting section, a pick-up unit connected to the upper end of said drill stem, an amplifier filter electrically connected to said pick-up unit, a pendulum type plumb arranged in said transmitting section, and an indicator operatively connected to said plumb and actuated by said plumb for recording deviations from the vertical of said plumb, said transmitting section comprising a cylindrical housing provided with an upper inner threaded portion, a reduced diameter exteriorly threaded portion depending from said drill stem and engaging the threaded portion of said housing, a body member positioned in said transmitting section, a securing element adjustably engaging the lower end of said reduced diameter portion and provided with an enlarged lower head, the outer portion of said body member being shaped to include a plurality of spaced apart compartments, a permanent magnet positioned in one of said compartments and having a core extending



upwardly therefrom, a movable coil surrounding said core, an anvil connected to said coil and mounted for movement into and out of engagement with the head on said securing element, a vertically disposed sleeve arranged in one of said compartments, an insulated plate mounted in the lower end of said sleeve and provided with a plurality of spaced apart contacts, a bracket connected to the upper portion of said sleeve and including a web having a pointed lug extending upwardly therefrom, said plumb including a conical body having a support member extending upwardly therefrom and engaging said pointed lug, there being a central bore in said conical body, a rod movably mounted in said bore and having a ball on its lower end for engagement with said contacts, a coil spring engaging said rod, a governor mechanism connected to said rod, and amplifying means arranged in other of said compartments and connecting said contacts to said coil.

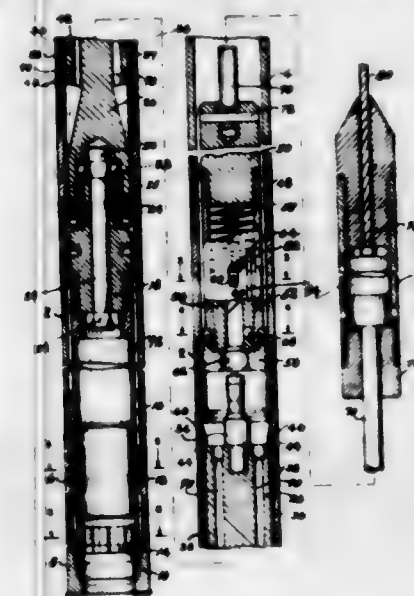
3,004,614 CORE-TAKING APPARATUS

Leroy W. Janson, Clark's Summit, and Harry G. De Witt, Factoryville, Pa., assignors to Sprague & Henwood, Incorporated, Scranton, Pa., a corporation of Pennsylvania

Filed Oct. 20, 1958, Ser. No. 768,257
5 Claims. (Cl. 175-246)

1. Core-taking apparatus comprising, in combination, an elongated outer core barrel divided transversely into sections, said barrel being rotatable on its major axis; a core bit secured to the inner end of said barrel and rotatable with the barrel; an elongated, non-rotatable inner core barrel insertable into and withdrawable from said

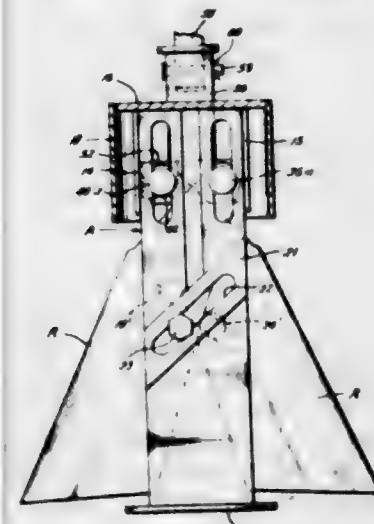
outer barrel; stop means on the wall of the outer barrel and engageable by the inner barrel positively to limit the extent of inward movement of the inner barrel; and spring-metal latch fingers within the outer barrel and clamped between adjacent sections thereof, said fingers extending along the inside of the outer barrel and so positioned as to be engaged by the inner barrel and de-



flected outwardly away from each other throughout inward movement of the inner barrel, and so positioned with respect to the said stop means that when the inner barrel has engaged the stop means the outer end of the barrel will have passed the outer ends of said fingers, and the fingers will spring inwardly to their initial position to overlap and engage the outer end of the inner barrel to retain it against withdrawal.

3,004,615 UNDERREAMER

Myles H. Schutte, 4655 Telephone Road, Houston 17, Tex.
Filed Feb. 21, 1958, Ser. No. 716,789
6 Claims. (Cl. 175-286)



2. An underreamer, comprising an underreamer body having two spaced vertical side plates, a bottom member secured to the lower ends of said vertical side plates to space said plates and serve as a base, each of said plates having a substantially vertical slot and an inclined slot therebelow, the inclined slots in said plates being at substantially equal and opposite angles of inclination with respect to each other, the vertical slot in each plate being substantially vertically above the upper end of the inclined slot in such plate, said vertical slots being laterally displaced with respect to each other, a pair of reamer blades,

said side plates extending below said reamer blades, an upper rod connected to both of said blades and extending through the vertical slot in each side plate, the ends of said upper rod being laterally displaced with respect to each other, said upper rod being at substantially the upper end of its travel in the slots through which it extends when said blades are in a retracted position, a first lower rod connected to one of said blades and extending through the inclined slot in one of said plates and being positioned at the upper end of such inclined slot substantially vertically below the vertical slot in said one of said plates when said one of said blades is in the retracted position, a second lower rod connected to the other of said blades and extending through the inclined slot in the other of said plates and being positioned at the upper end of such inclined slot substantially vertically below the vertical slot in said other of said plates when said other of said blades is in the retracted position, and means for applying a downward force to said blades simultaneously to move same outwardly in opposite directions away from said body.

3,004,616 JAR

Benjamin P. Nutter and Hugh E. Metcalf, Houston, Tex., assignors to Johnston Testers, Inc., Sugar Land, Tex., a corporation of Texas
Filed Sept. 27, 1956, Ser. No. 612,489
7 Claims. (Cl. 175-297)



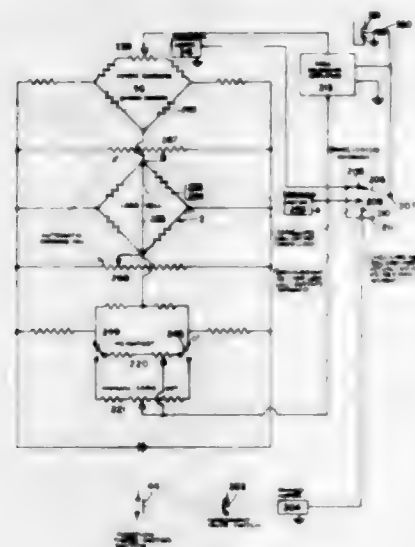
1. A well jar comprising an annular housing member and a cylindrical mandrel concentrically carried therein, said housing member and said mandrel being interfitted for limited longitudinal movement relative to each other between a contracted position and an extended position, said housing member and said mandrel providing opposite ends for said jar adapted for connection in a pipe string above an object which may become stuck in a well bore, annular seal means of like diameter spaced longitudinally apart for effecting a sliding seal between said housing member and mandrel to define an annular closed fluid-filled chamber therebetween with said mandrel extending completely through said closed chamber, said housing member having grooved and ungrooved portions of equal internal diameter forming the outer wall of said chamber, an enlarged portion of said mandrel intermediate the ends of said chamber having a valve seat thereon, a valve member carried by said mandrel and movable between a closed and an open position with respect to said seat by fluid pressure as said mandrel is extended and contracted, respectively, said valve member cooperating with the ungrooved portion of said outer chamber wall to restrict fluid flow past said enlarged por-

tion in its closed position and to enhance fluid flow therepast in its open position, and an annular anvil carried by said mandrel slidably within said grooved portion of said outer chamber wall and closed to fluid flow there-through, said grooved portion of said outer chamber wall providing unrestricted fluid flow around said anvil and around said enlarged portion when said jar is proximate to its extended position, said anvil and said housing member having confronting impact faces adapted to contact when said mandrel and housing member move to said extended position, said anvil having at least one spline engaged in said grooved portion of said outer chamber wall to prevent rotation between said mandrel and said housing member.

3,004,617

ELECTRICALLY CONTROLLED BATCHING SYSTEM

George E. Burdick, Hudson, and Roland O. Fiset, Attleboro, Mass., assignors to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed June 30, 1958, Ser. No. 745,357
6 Claims. (Cl. 177-12)



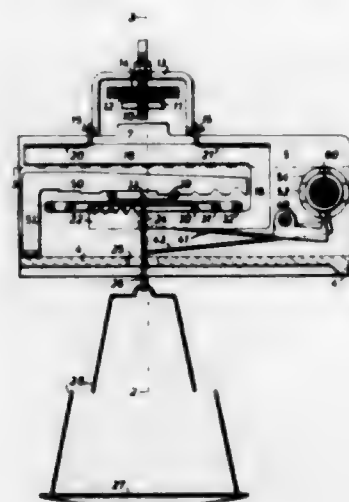
4. A batching system for ingredients comprising, in combination, a load cell having a network whose electrical output is responsive to ingredient weight, a group of operating elements which perform certain functions in connection with an ingredient including valve means for supplying the ingredient; a function switch movable sequentially to zero, batch, and check positions; a measuring system including a recorder having an initial center position, means for balancing out any electrical signal from the load cell in response to the function switch being in its zero position thereby to nullify the effect of any weight that might be on the load cell, a weight-set network for establishing a predetermined value of weight desired for the ingredient, means for opposing the output signals of the load cell and weight-set networks when the function switch is in its batching position; means, also responsive to the function switch being moved to its batching position, for operating the valve means so as to supply the ingredient until the opposed signals have substantially cancelled each other as a result of the predetermined ingredient weight having been substantially reached; means responsive to the substantial cancellation of the opposed signals so as to discontinue supply of the ingredient and to move the function switch to its check position, means rendered operative in response to the function switch being moved to its check position to subject the recorder to any signal unbalance between the load cell signal representing the actual weight of the ingredient and the signal from the weight-set network representing the desired ingredient weight, whereby only the amount of error in the desired weight is recorded,

and means for sequentially adding other ingredients, each such ingredient having its own group of operating elements which perform certain functions in connection with that ingredient including valve means for supplying a selected ingredient to the batching operation, programming means for sequentially selecting the group of operating elements for each ingredient as its turn comes to be added, means for rendering the group of operating elements for the second ingredient effective in response to the completion of the check operation of the first ingredient, and means for recycling the measuring system for the second ingredient as the zero, check, and batch operations occur for the second ingredient, whereby the effect of the weight of the first ingredient in the measuring system is eliminated so that the recorder then responds only to any error that may be present in the weight of the second ingredient.

3,004,618

BALANCE

Johann Meier, Stafa, Switzerland, assignor to Erhard Mettler, Zollikon, Zurich, Switzerland
Filed Feb. 13, 1958, Ser. No. 715,010
Claims priority, application Switzerland Apr. 13, 1957
7 Claims. (Cl. 177-248)



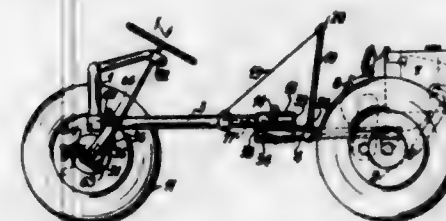
1. In a balance apparatus having a base, a balance beam pivotally connected to said base by main knife edge means, a carrier suspended from one arm of said balance beam by knife edge suspension means and including horizontal supporting means, and a plurality of concentrically-arranged spaced annular weight members removably supported on said horizontal supporting means; the improvement which comprises a horizontal stop member secured to said base and extending horizontally above and spaced from said supporting means and said weight members thereon, said stop member extending diametrically across said annular weight members and having longitudinally-spaced deformations in the lower surface thereof above diametrically opposed portions of each of said weight members, and means sequentially lifting said weight members upwardly from said supporting means into engagement respectively with the deformations in the lower surface of said stop member comprising a plurality of pairs of lifting members each arranged respectively below one of said annular weights, each pair of said lifting members being arranged to contact the associated weight member at diametrically opposed portions thereof, said stop member cooperating with said lifting members to hold secure against lateral displacement each of said ring-shaped weights, when in its raised position, in a crosswise arrangement between said lifting members and said stop member, and operating means sequentially raising said pairs of lifting members comprising a plurality of levers pivotally connected to said base and connected at their ends, respectively, to said

lifting members, and means pivoting said levers in a predetermined order to sequentially move said annular weights vertically.

3,004,619

COLLAPSIBLE MOTOR VEHICLE

Nicholas Peter Sorrell Strassler, 5 Clarges St., London, England
Filed Nov. 17, 1958, Ser. No. 774,206
8 Claims. (Cl. 180-27)

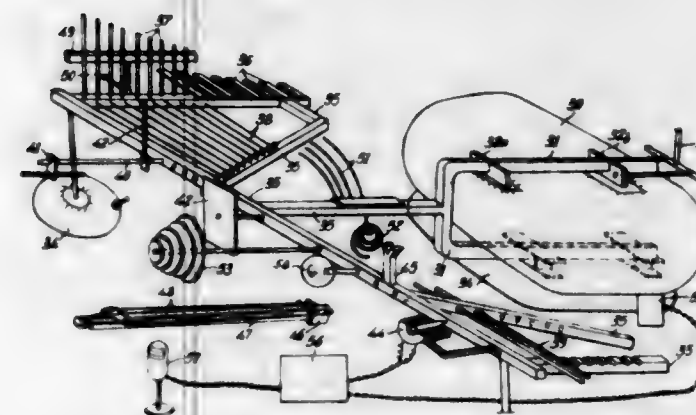


1. A collapsible motor vehicle comprising a chassis having cross members and side members, one of said cross members carrying drive wheels and the other cross member carrying a steering wheel, a steering column and coupling connection from said steering column to said steering wheel, a seat arranged on said side members, a motor in said chassis connected to said drive wheels, each said side member having movable sections connecting said cross members, guide means mounted on the side members to enable said movable sections to slide one with respect to the other, coupling means mounted on one of said movable sections to enable one of the cross members and one of the movable sections of each of said side members to slide one with respect to the other, and locking means rigidly fixing the movable sections of each side member in a running position of said vehicle, whereupon disengaging said locking means enables said vehicle to be arranged in a collapsed condition with the steering wheel touching the cross member of the drive wheels.

3,004,620

ACOUSTIC AMPLIFIER AND MUSICAL INSTRUMENT INCORPORATING SAME

François Pierre Maurice Bachelot, 38 Rue Boileau, Paris (16e), France
Filed July 26, 1956, Ser. No. 600,264
Claims priority, application France July 28, 1955
5 Claims. (Cl. 181-31)



5. A musical instrument comprising an inflated bag of yielding material, a fork-like member having a carrier bar and at least two arms, said arms embracing said bag and having shoe means on terminal portions thereof engaging opposite sides of said bag, and a vibrator operatively connected to said carrier bar, whereby when said vibrator is set into vibration the resulting vibrations are transmitted through said arms to said bag.

3,004,621

SCAFFOLDING

Frank A. Yench, Sr., Two Rivers, Wis.
Filed Dec. 8, 1959, Ser. No. 858,093
2 Claims. (Cl. 182-118)

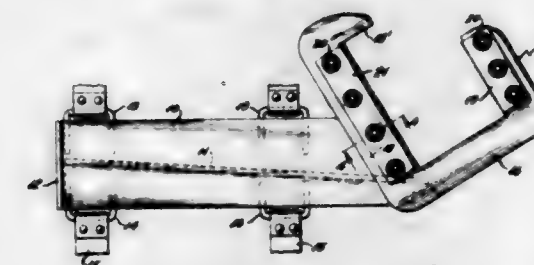


1. A knock-down scaffold comprising, a plurality of laterally spaced frames, each of said frames including a first elongated upright tubular member and a second elongated tubular member spaced and diverging upwardly from said first tubular member and terminating short of the upper end thereof, said first and second tubular members being rigidly interconnected by a plurality of vertically spaced horizontal rungs, bracing means extending between adjacent pairs of said frames and secured to the first tubular members thereof for maintaining said frames in rigid laterally spaced relation, a safety rail extending between adjacent pairs of said frames and secured to the upper ends of the first tubular members thereof above the upper ends of the second tubular members, means telescopically received for longitudinal adjustment in the lower ends of the first tubular members of adjacent pairs of said frames and providing ground engaging legs supporting and spacing said frames from the ground, a strut secured to each of said legs and interconnecting the leg and the second tubular member of each of said frames for bracing each of said legs when in extended condition, and means forming horizontal rungs on said struts cooperating with the horizontal rungs of said frames to provide a ladder.

3,004,622

CLIMBER FOR CONCRETE POLES

Dennis Lee Ringer, General Delivery, Sanford, Fla.
Filed May 4, 1959, Ser. No. 810,944
2 Claims. (Cl. 182-134)

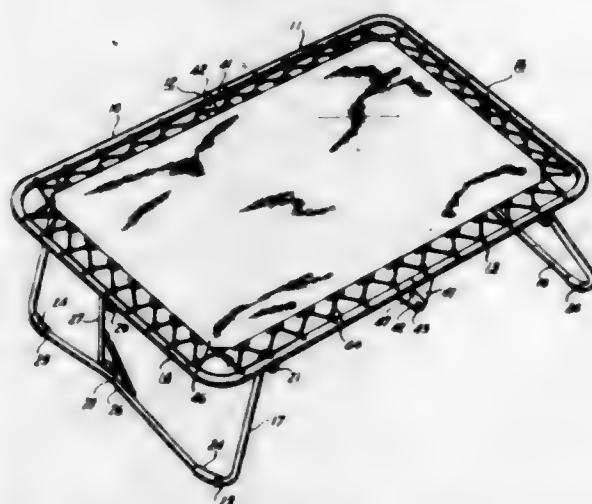


1. A device for climbing generally rectangular poles, comprising an elongated foot receiving member having lateral support means for a foot and fastening means for attaching a foot to said member, a generally C-shaped clamping member fixed to the end of said foot receiving member and extending laterally as an extension of said foot receiving member but inclined upwardly therefrom, said clamping member having a long leg connected to the foot receiving member and inclined toward the longitudinal axis of the foot receiving member, a short leg substantially parallel to and spaced from the long leg, and a connecting portion between the legs, a hook on the free end of the short leg.

end of the long leg and substantially spaced from the free end of the short leg so that the clamping member may be engaged with a substantially rectangular pole when the clamping member is in substantially level position and said elongated foot receiving member may be depressed until it is in a substantially level position to cause said clamping member to clamp in fixed position on said pole.

3,004,623 BOUNDING BED

George P. Nissen, 711 27th St. NE., Cedar Rapids, Iowa
Filed June 9, 1958, Ser. No. 740,821
1 Claim. (Cl. 182-139)



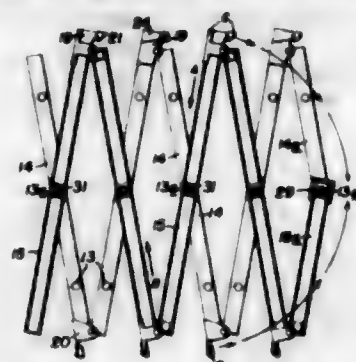
In a collapsible bounding bed, a pair of U-shaped rail members in opposed relation to form a generally rectangular frame, hinge members comprising a pair of downwardly extending plates on the open end of each one of said U-shaped members, a single plate on the opposite U-shaped member adapted to interleave between the first two plate members, the lowermost portion of said plates on the adjacent opposed ends being pivotally joined by a pin member, a second pin member extending between the first two plate members and adapted to limit the movement of the second plate relative thereto, U-shaped leg portions at the outer extremities of each U-shaped rail member, said leg portions being pivotally attached thereto, upwardly extending link members, the lower portion thereof being movably attached centrally to said U-shaped leg members and the upper portion being adapted to connect to the outer end of said U-shaped rail members, biasing means adapted to hold said linking members in connected position, a fabric sheet positioned within the perimeter of said rectangular frame, said sheet being interconnected thereto by a resilient shock means stretched between said rectangular frame and said sheet around said frame perimeter, said assembly being such that the leg members may be folded upwardly parallel to the U-shaped rail members, the linkage members folded parallel to the leg members, and the U-shaped rail members folded inwardly towards each other to cause the bounding bed to be collapsible into a relatively narrow rectangular assemblage, said hinges being pivoted at a distance from said rail members to cause said shock means and sheet to exert an over-center action to hold said assemblage in either opened or closed position.

3,004,624 EXTENSIBLE LADDER

John C. Green, 2404 Hanley Drive, Fort Worth, Tex.
Filed May 9, 1960, Ser. No. 27,686
3 Claims. (Cl. 182-157)

1. An extensible ladder wherein the runners thereof are comprised of inner and outer stringers and wherein each stringer is comprised of links oppositely hinged at

the end corners thereof, the links of said inner and outer stringers being arranged in side by side relation and pivotally connected intermediate their ends, the hinged links of one said stringer being oppositely arranged with reference to the other said stringer so as to provide a lazy tong construction, and latch assemblies connecting said

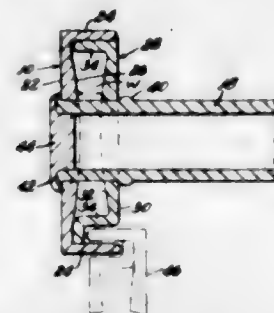


stringers opposite their respective hinges, said latch assemblies including stirrups extending from one said link so as to engage an adjacent said link of the same stringer and an adjacent stringer when the ladder is in its fully extended position, and rungs connected between the inner said stringers.

3,004,625 LADDER

Harold G. Arnold, Wooster, Ohio, assignor to The Bower Manufacturing Company, Wooster, Ohio, a corporation of Ohio

Filed Sept. 1, 1959, Ser. No. 837,405
2 Claims. (Cl. 182-228)



1. The combination in a ladder of a pair of channel-shaped side rails, rungs joining the side rails, a plurality of channel-shaped pad means, each pad means assisting in joining a rung end to the side rail, each pad means having the flanges of its channel fitting between the flanges of the channel of the side rail but oppositely facing so that the bases of the channels of each side rail and pad are apertured to receive the end of the rung engage with spaced portions of the rung, the pad means having at least one of the side flanges offset from the adjacent side flange of the side rail to allow sliding fit with a similarly formed portion of another ladder section and also having the end of said offset side flange of each pad formed with an additional flange to engage with the base of the side rail channel and the adjacent side flange of the side rail channel, and means for holding the side rail and pad together and the rung affixed thereto.

3,004,626

DEAERATING RADIATOR

Howard F. Brinen, Racine, Wis., assignor to Young Radiator Company, Racine, Wis., a corporation of Wisconsin

Filed May 14, 1958, Ser. No. 735,169
10 Claims. (Cl. 183-2.5)

1. A deaerating radiator comprising, a core having a battery of parallel tubes spanning and supported on top and bottom header plates, a tank secured to each of the header plates, a longitudinally-disposed apertured parti-

tion internally bonded to the top tank to divide the interior thereof into upper and lower chambers whereby the upper chamber has communication at one end of the tank confined to a limited number of tubes and the lower chamber has communication confined to all the remainder



of the tubes, the chambers having limited communication confined to a predetermined series of apertures in the partition, a perforate snubber baffle superimposed on the apertured portion of the partition, an inlet port in the top tank communicating with the lower chamber, and an outlet port in the bottom tank.

3,004,627

ARRANGEMENT FOR SEPARATING OUT FINE SOLID PARTICLES DISPERSED IN GASES

Julius Wehn, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Jan. 20, 1959, Ser. No. 787,908
Claims priority, application Germany Jan. 21, 1958
3 Claims. (Cl. 183-83)



1. An arrangement for separating out fine solid particles dispersed in gases comprising a conically shaped cyclone container, a conically shaped cyclone-like element which is pervious to gas and said solid particles and which is arranged in said container at a distance from the inside wall and coextensive with respect to said inside wall, said cyclone-like element being capable of deforming under the flow of said gas, at least one inner screening member being arranged concentrically with respect to and spaced from said conically shaped cyclone-like element, said inner screening member having the same configuration as the main cyclone-like element along at least the upper portion thereof and a common discharge chamber for the cyclone container and the cyclone-like element.

3,004,628

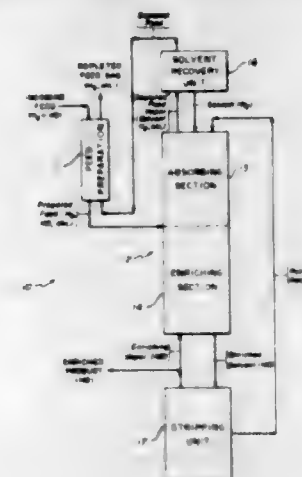
RECTIFIED ABSORPTION METHOD FOR THE SEPARATION OF HYDROGEN ISOTOPES

Charles d'Ancona Hunt, Orinda, and Donald N. Hanson, San Francisco, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed July 17, 1957, Ser. No. 672,530
11 Claims. (Cl. 183-115)

1. In a process for separating hydrogen isotopes from a plant process hydrogen feed stream mixture containing light and heavy gaseous elemental hydrogen isotopes

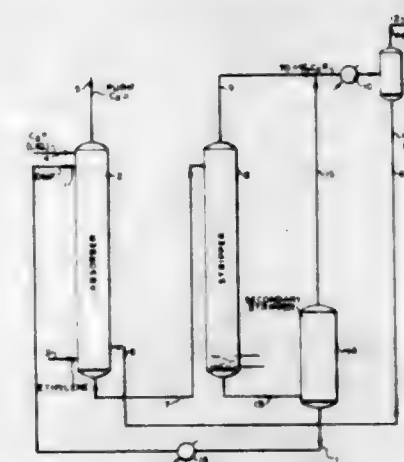
and gaseous nitrogen, the steps comprising passing said mixture through a feed preparation unit to be discharged as a feed stream consisting essentially of gaseous H_2 , HD and nitrogen at an initial temperature below the critical temperature of said mixture and an initial pressure above the critical pressure so that a portion of said nitrogen exists as a liquid nonpolar solvent in the discharged feed stream, passing the feed stream through a multistage absorption column to discharge from an upper portion thereof and recycle through said feed preparation unit as a coolant, countercurrently passing liquid nitrogen solvent through said column to contact and selectively absorb HD



with reduced proportions of H_2 from the feed stream and discharge as absorbate from the bottom of the column, passing the absorbate downward through a multistage rectification column to fractionate H_2 therefrom and to discharge as fluid phase enriched with HD from the bottom of the column, said H_2 being discharged at the top of said column, combining the H_2 fraction with the prepared feed in the absorption column, recovering hydrogen gas enriched with HD from the discharged nitrogen solvent phase, and recycling the nitrogen solvent into said absorption column.

3,004,629 METHOD FOR REMOVING ACETYLENE FROM ETHYLENE

John E. Cottle, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,418
4 Claims. (Cl. 183-115)



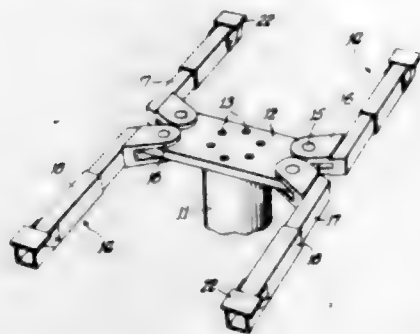
1. A method for the purification of an ethylene stream also containing acetylene which comprises contacting said stream with a stream of dry dimethylformamide, flowing the streams countercurrently to each other, introducing water to the thus contacted streams after substantial contact of them has been obtained so as to release ethylene from the solvent phase, thus removing from the contacting operation a solvent en-

riched with acetylene and an essentially dry ethylene gas substantially free from acetylene, the quantity of water introduced being sufficient to reduce the solubility of ethylene in the dimethylformamide solvent but insufficient to cause water vapor to be present in the purified ethylene stream.

3,004,630

AUTOMOTIVE FRAME LIFT MEANS

Jesse E. Clarke, Hinsdale, Ill., assignor to Autoquip Corporation, Chicago, Ill., a corporation of Illinois
Filed June 8, 1959, Ser. No. 818,915
2 Claims. (Cl. 187—8.75)



1. In a vehicle underbody lift apparatus, the combination with a vertically reciprocable ram plunger for mounting in the floor and a generally rectangular, flat, cross bolster extending to each side of said plunger and attached thereto, of four wing members, each one of which is secured to a corner of said bolster respectively, each of said wing members comprising a solid inner arm of approximately square cross-section, a hinge portion attached to one side of said arm at one end thereof and extending angularly away from said side in a horizontal direction, the depth of said portion being approximately equal to the depth of said arm, the extending end of the portion being bifurcated and extending above and below said bolster at a corner thereof, pivot pin means positioned vertically between the bifurcated end of the portion and said bolster, a box section outer arm snugly telescoped onto said inner arm to provide an extension of adjustable length, and a support block positioned on the top of said outer arm adjacent the outer end thereof, pivotally connected thereto and moveable between a first position at which it is flat against the top of said outer arm and a second position at which it stands erect on said outer arm with an end against the top of the outer arm, whereby a girder support is provided between said bolster and said support block which will have sufficient stiffness to support its share of the weight of the vehicle with a clearance height above the floor not substantially greater than the depth of the outer arm while providing room under the bolster, and without undue width obscuring the under portion of a vehicle supported on said apparatus.

3,004,631

AUTOMOBILE LIFT SUPERSTRUCTURE

Jesse E. Clarke, Hinsdale, Ill., assignor to Autoquip Corporation, Chicago, Ill., a corporation of Illinois
Filed June 8, 1959, Ser. No. 818,916
6 Claims. (Cl. 187—8.77)



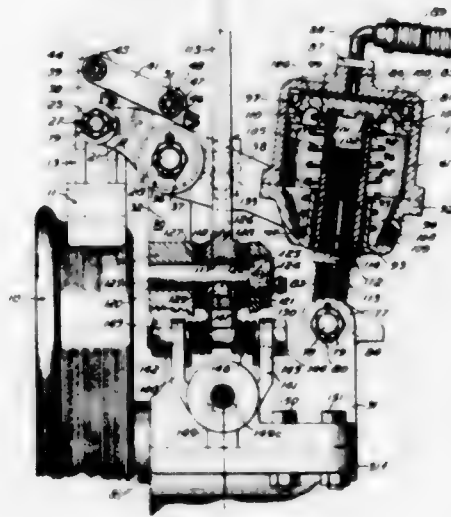
1. In automobile lift superstructure having a longitudinal support runway for receiving the front and rear wheels

thereon and having a proximal end for supporting a rear wheel and a distal end for supporting a front wheel, that improvement therein wherein said proximal end has a surface downwardly inclined toward the proximal extremity of the beam member and the distal end has a surface downwardly inclined toward the distal extremity of the runway at a steeper angle than the inclination of the proximal surface, an intermediate substantially horizontal surface joining said downwardly inclined surfaces, a limited upstanding transverse roll-over detent rib element at the juncture between said horizontal surface and said downwardly inclined distal surface, said rib element extending upwardly from said surfaces, and an upstanding permanently fixed stop element at the distal extremity, said stop element upstanding substantially higher than said roll-over rib element, said detent rib element and said stop element being spaced from each other a distance such that the wheel of a car on the runway will only contact one of the two at a time and the car may be rolled on its wheels back and forth between the two.

3,004,632

TREAD BRAKE APPARATUS FOR RAILWAY CARS

Emil G. Mueller, Wilkesburg, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed June 28, 1956, Ser. No. 594,548
17 Claims. (Cl. 188—57)

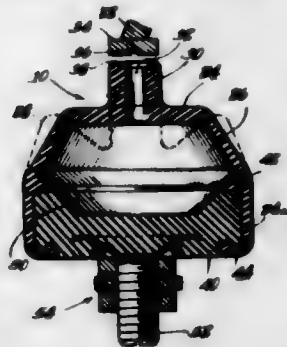


1. Tread brake apparatus for use on a vehicle having an axle, a journal for the axle, and a wheel to be braked mounted on the axle, said apparatus comprising, in combination, saddle means mounted on the journal, piston rod means having one end thereof pivotally connected to said saddle means and having a piston operatively connected to the other end thereof, a brake cylinder in which said piston operates, said brake cylinder being chargeable with fluid under pressure for moving the brake cylinder with respect to the piston, resilient biasing means for said brake cylinder, lever means operatively connected at one end thereof to said brake cylinder, fulcrum means rockably mounting said lever means on said saddle means, and brake shoe means operatively connected to the other end of said lever means, movement of said brake cylinder against the tension of said resilient biasing means when fluid under at least a predetermined pressure is introduced into said brake cylinder moving said lever means and causing said brake shoe means to move into braking engagement with the tread of said wheel.

3,004,633 DASHPOT

Carroll D. Hobson, Goshen, Ind., assignor to Goshen Rubber Co., Inc., Goshen, Ind., a corporation of Indiana

Filed Jan. 12, 1959, Ser. No. 786,145
5 Claims. (Cl. 188-94)

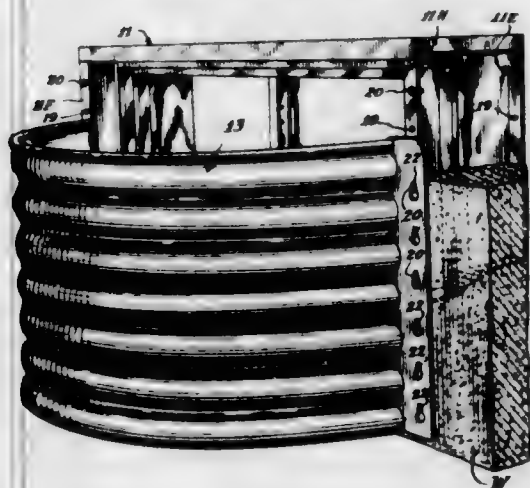


1. A dashpot comprising a substantially rigid base for attachment to a mounting structure, a flexible cup-like element of elastomeric material having an open end portion defined by a discrete peripheral wall flexibly fitting over and enclosing and engaging the peripheral surface of said base to be rigidified and closed thereby while permitting ready removal of the cup-like element and forming therewith a chamber with the remaining portion of the cup-like element forming a wall section collapsible independently of said peripheral wall and base, an operating post upstanding from said cup-like element remote from said base and adapted to receive a force applicator for collapsing the collapsible wall section of the chamber, the spring constant of said elastomeric material being such as to return the collapsible wall section to its expanded condition upon removal of the force applicator, and a breather port communicating with said chamber and adapted to be partially restricted when the force applicator is applied to the operating post and adapted to be substantially unrestricted upon removal of the force applicator from engagement of the post.

3,004,634 WINDOW STRUCTURES

Rupert L. Evans and John P. Malmrose, Kewanee, Ill., assignors to Kewanee Manufacturing Company, a corporation of Illinois

Filed Dec. 6, 1957, Ser. No. 701,213
3 Claims. (Cl. 189-1)



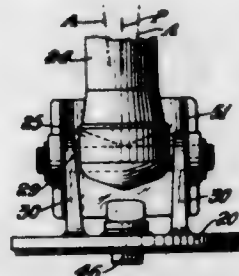
1. A basement window adapted to be cast in place in a concrete wall of a predetermined thickness and which may serve as a form for the window opening as the wall is cast, said window comprising a sheet metal frame having a thickness from its inner side to its outer side equal to said predetermined thickness of the wall in which the frame is to be cast, said frame having a pair of sub-

stantially vertical flanges extending away from each other along the outer vertical sides of the frame, said flanges each having a plurality of inward recesses with central openings therein formed in said vertical flanges at vertically spaced points, locking screws threaded through said openings and having heads disposed within the respective recesses flush with the outer surfaces of said vertical flanges so that said flanges may receive a form in flush engagement therewith, said screws being retractable from the flush positions thereof for use in locking a well member to the window frame.

3,004,635 PORTABLE MAST

Carl J. Langmack, Plainfield, N.J., assignor to Pfaff and Kendall, Newark, N.J., a corporation of New Jersey

Filed June 8, 1954, Ser. No. 435,135
1 Claim. (Cl. 189-26)



A portable unit for elevating a mast to a position perpendicular and plumb to a horizontal supporting surface, comprising a bearing plate adapted to be secured to the supporting surface, bearings on said plate upstanding therefrom in parallel spaced relation, a pin secured to the bearings in parallel spaced relation to the bearing plate, a yoke having a pair of spaced parallel ends proportioned to be positioned over and to straddle the bearings, a boom secured to said yoke, said pin removably and pivotally connecting said ends of the yoke to the bearings, for radial rotation of the yoke in a plane at right angles to the longitudinal axis of the pin, a mast, the lower end of the mast being transversely slotted to receive the pin secured to the bearings, so that, on connecting the mast to the boom and so radially rotating the yoke and thereby the boom secured thereto, the mast will be radially rotated on the pin to thus elevate the mast to a position perpendicular to the supporting surface, the upper wall of the so-slotted lower end of the mast being upwardly and outwardly extended from the center thereof, so that the mast may be rocked on the pin in the axial plane of the pin, into accurate plumb position on the supporting surface.

3,004,636 CEILING SUPPORT MEMBER WITH ADJUSTABLE HANGER BOLTS

Morris Shane, Westbury, N.Y., assignor to Flash-Metal Partition Corp., Long Island City, N.Y.

Filed Mar. 18, 1959, Ser. No. 800,202
6 Claims. (Cl. 189-34)

1. A supporting unit to be located wholly within a ceiling structure comprising an elongated member formed of sheet metal comprising vertical abutting wall portions, attachment flange means formed integrally with the vertical wall portions at the upper end thereof, a housing having vertical side walls formed integrally with the vertical wall portions at the lower end thereof, means securing the vertical wall portions together, inwardly directed spaced apart opposed shoulders at the lower ends of said housing side walls, a vertical guide wall depending from the free end of each shoulder to define therebetween a guide slot, a plurality of head elements within said housing, each of a width less than

the width of said guide slot for insertion therethrough and seated at their ends on said housing shoulders for movement therealong to an adjusted position, each head element having fixed thereto a depending load carrying shank extending through said guide slot, each of said housing shoulders being formed to provide a transversely



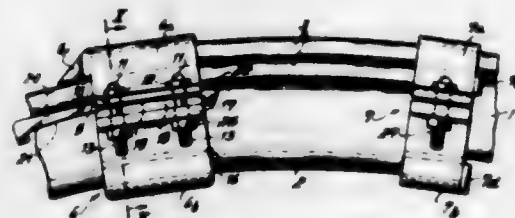
inclined track, and a depending wedge-shaped lug formed at the end of each head element complementary to said track to interlock therewith by a wedging action to prevent turning of the head element as well as to prevent spreading of the housing side walls and guide slot walls.

3,004,637

YIELDING CONNECTION FOR IDENTICAL FLANGED CHANNEL-LIKE PROFILE MEMBERS IN OVERLAPPING ENGAGEMENT

Hans Friedrich Heintzmann, Bochum, Germany, assignor to Bochumer Eisenhütte Heintzmann & Co., Bochum, Germany

Filed Feb. 27, 1957, Ser. No. 642,692
Claims priority, application Austria Feb. 29, 1956
7 Claims. (Cl. 189-36)



1. A coupling for the overlapping ends of frame members particularly for supporting mine passages and composed of interfitting inner and outer U-shaped frame members with out-turned flanges disposed along the free edges of the U, comprising a U-shaped upper part, a U-shaped lower part, said parts each having laterally extending flanges with at least one hole in the flange of the upper part being partly in the flange and partly in a side section thereof thereby forming a hole which is substantially right-angled, said lower part having at least one hole therein in correspondence with and in registry with the hole in the upper part, a ridge provided adjacent the flange of the lower part projecting against one of the frame members, and a bolt provided in the registered holes of the laterally extending flanges of the upper and lower parts and having a widened head with side walls to contact against the outer side surface of the upper part and a lug which extends partly into the hole which is in the upper part and through the hole in the flange of the upper part, the abutting of the bolt head against the upper part preventing the turning of the bolt.

3,004,638 FLOATING NUT WITHIN TUBULAR STRUCTURE

Richard H. Eaton, New Hartford, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 27, 1957, Ser. No. 686,703
1 Claim. (Cl. 189-36)



In combination, a circumferentially-continuous rectangular tubular frame member having a clearance hole in one wall thereof, a nut enclosed within and capable of limited lateral movement with respect to said member, said nut having a longitudinal axis parallel to the longitudinal axis of said frame member, said nut having a threaded bore perpendicular to said longitudinal axis and aligned with said clearance hole, said nut having a recess transverse to said longitudinal axis and surrounding said bore in the face of said nut adjacent said clearance hole, said recess being wider than the diameter of said threaded bore and providing transversely extending shoulders, said nut being dimensioned so that a diagonal, taken perpendicular to the axis of said threaded bore, is greater than the transverse dimension of said tubular member taken perpendicular to said threaded bore, and means to limit translational movement of said nut in said bolt receiving position comprising a portion of said wall immediately surrounding clearance hole upset interiorly of said member within said recess and spaced from said shoulders to permit said limited lateral movement.

3,004,639

FABRICATED CEILING CONSTRUCTION

John T. Choppa, 34 Shelter St., New Haven, Conn.
Filed Dec. 10, 1959, Ser. No. 858,815
5 Claims. (Cl. 189-36)



1. A joint for structural elements including a first structural element having a web, wall portions of said web defining adjacent slots and an integral deformable tongue member between said slots, a second structural element disposed at right angles to said first element and having a longitudinally extending web, said web extending through one of said slots in the first element, portions of the web of said second element defining a notch adapted to receive a portion of said deformable tongue.

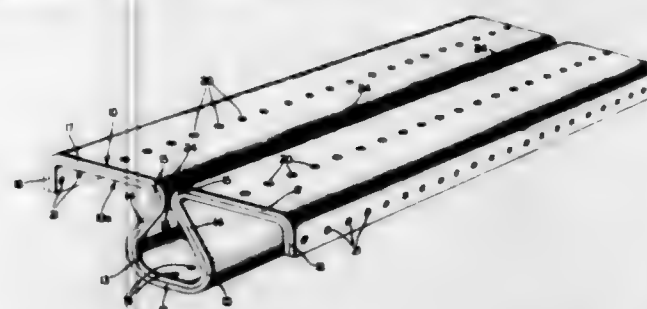
3,004,640

LAMINATED TUBULAR SECTION STRUCTURAL MEMBERS

Stanley Macomber, Canton, Ohio, assignor to Macomber, Incorporated, Canton, Ohio, a corporation of Ohio
Filed Feb. 7, 1958, Ser. No. 713,810
7 Claims. (Cl. 189-37)

1. A laminated tubular section structural member of indefinite length and uniform cross-section for use as a chord in a large, heavy fabricated structural member,

said laminated tubular section structural member comprising two superposed hot-rolled steel sheets, the opposed surfaces of which are in contact throughout their entire areas, the longitudinal central portion of said superposed steel sheets being of tubular form with a longitudinal groove in one side thereof, the sides of the tubular form converging toward said groove the edge portions of the superposed sheets being oppositely dis-

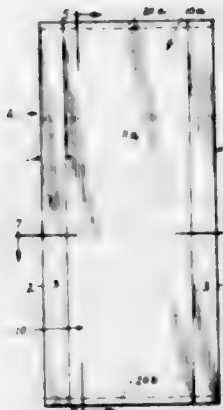


posed on each side of the groove forming flat flanges the terminal edge portions of said flat flanges being downturned perpendicular to said flat flanges, whereby the two formed sheets are interlocked, deposit welds at spaced points in the entrance to said longitudinal groove for rigidly holding the two formed sheets interlocked, and means connecting said superposed formed steel sheets together throughout the length of said structural member.

3,004,641

HOLLOW METAL DOORS

Robert C. Johnson, Colfax St., Jamestown, N.Y.
Filed Jan. 29, 1959, Ser. No. 789,893
6 Claims. (Cl. 189-46)



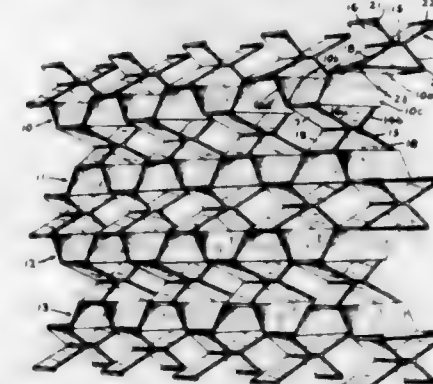
1. A hollow metal door structure comprising a pair of spaced stile members of channel shaped cross-section extending the full height of the door, an intermediate panel unit of unitary construction positioned between and interfitting with the spaced stile members, and a channel shaped framing member extending transversely of and rigidly secured to one end of the intermediate panel unit and the adjacent ends of the stile members; said intermediate panel unit including a pair of spaced panel facing sheets each presenting a wall facing portion extending between said spaced stile members and depressed edge portions along the opposite vertical edges thereof, said paired panel facing sheets also presenting adjacently spaced transverse ends substantially in alignment with the adjacent ends of said stile members, and a pair of vertically extending reinforcing channels presenting out-turned legs positioned between and rigidly secured to the adjacent depressed edge portions of the panel facing sheets with the adjacent terminal ends of said vertical reinforcing channels extending short of said transverse ends of the panel facing sheets for a sufficient distance to permit the adjacent transversely extending channel framing member to be positioned between said panel facing sheets and to project laterally therebeyond and

into the adjacent end portions of said channel shaped stile members; each of said stile members presenting a web section forming an edge face of the door and paired flange sections extending inwardly from the web section and forming side facing portions which are substantially flush with the adjacent wall facing portions of the panel facing sheets of the intermediate panel unit, each of said stile flange sections presenting an inwardly rebent portion snugly overlapping the inside face of its associated stile flange section for the full height thereof and designed to snugly overlap the adjacent depressed edge portion of the intermediate panel unit, and an outwardly rebent portion extending from each of said inwardly rebent portions in substantially parallel relation thereto and providing a groove therebetween which snugly receives the adjacent depressed vertical edge portion of the panel facing sheet and the adjacent outturned leg of the vertical reinforcing channels as rigidly secured thereto, each of said outwardly rebent portions terminating short of the adjacent end of the stile member with which it is associated to permit the end portion of the adjacent transversely extending channel framing member to extend between the flange sections of the adjacent stile member; said transversely extending channel framing member presenting paired outturned legs substantially in abutting relation to and bonded to the inside faces of the wall facing portions and depressed edge portions of the paired facing sheets of the intermediate panel unit and the inside faces of the flange sections of said stile members.

3,004,642

GRILLES, SCREENS AND THE LIKE

Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Aug. 8, 1960, Ser. No. 48,321
7 Claims. (Cl. 189-82)



1. A grille comprising a plurality of corrugated strips of thin sheet material having portions thereof disposed in offset, substantially parallel relation, and clips engaging and connecting at least some of said parallel portions of adjacent strips to hold them in spaced substantially fixed relation, each of said clips including a first pair of arms having means at their outer ends extending around and engaging at least part of the opposite edges of a parallel portion of one of said strips and another pair of arms having means at their outer ends extending around and engaging at least part of the opposite edges of a parallel portion of another of said strips, at least one arm of each pair of arms being resilient to enable said arms to spring apart to engage said means at the outer ends of the said arms with said opposite edges of said strips.

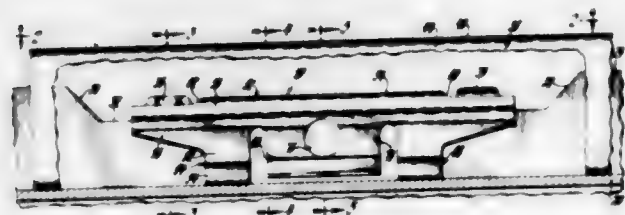
3,004,643

CLIP

Edward MacCallum, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,586
5 Claims. (Cl. 189-88)

1. A clip for securing a flanged molding to a pinch-weld, said clip comprising a clip body having a center

section and two side sections integrally formed therewith and extending downwardly therefrom to provide an inverted channel-like cross section throughout the length of said clip, said body center section being undercut adjacent either end of said clip to form apertures defined by said center section and side sections extending through said body center section for receiving clip holding tabs formed on the pinchweld, a first pair of flanges integrally formed with and positioned centrally of said body and extending first downwardly and inwardly toward the vertically disposed longitudinal center plane of said body and then extending downwardly and outwardly therefrom



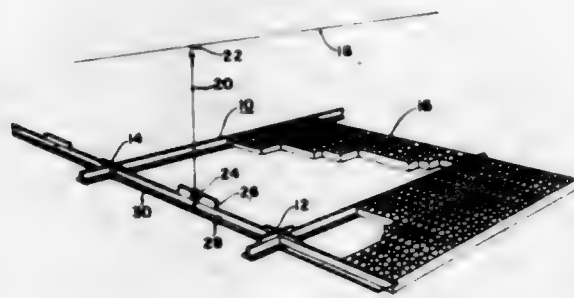
and having substantially aligned apertures formed there-through for receiving clip anchor means and at least one inwardly extending pinchweld-engageable barb on a flange thereof, and second and third pairs of flanges integrally formed with and longitudinally spaced along said body respectively intermediate said first pair of flanges and one of the ends of said clip, each flange of said second and third pair of flanges extending first outwardly and downwardly and then inwardly and downwardly relative to said body and bent to assume a hook conformation in cross section for springingly engaging and holding the flanged molding to the pinchweld.

3,004,644

ADJUSTABLE HANGER

Raouel B. Hall, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 30, 1959, Ser. No. 790,247
7 Claims. (Cl. 189-38)

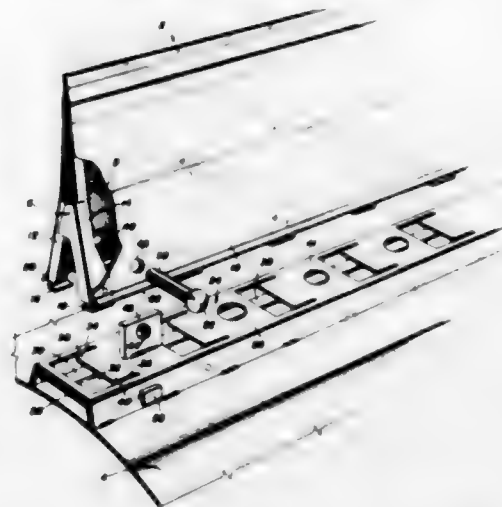


1. In a support for ceiling material, the combination comprising; a frame adapted to support a quantity of ceiling material, a fixed support, a plate member forming a portion of said frame, a stud rotatably carried by said plate member having a head portion and a shank portion of reduced diameter, a washer fitted on said shank portion and spaced from said head portion, a cable having one end thereof secured to said fixed support and having an opposite end thereof secured to said stud with a portion of said cable being fitted between said washer and the head portion of said stud and adapted to be wound on said stud when said stud is rotated, the distance between said washer and head portion being such that said cable is wedged therebetween, and means for restraining axial movement of said head portion away from said washer to maintain the cable wedged.

3,004,645
AERODYNAMIC SURFACE ATTACHING STRUCTURE

George E. Moul, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 27, 1959, Ser. No. 836,563
5 Claims. (Cl. 189-38)



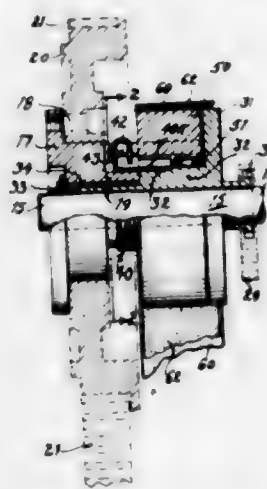
1. In an aerial vehicle, structure for attaching an aerodynamic surface to said vehicle, comprising an anchor strip secured to said vehicle and having at least one opening and at least one pair of spaced slots, said pair of slots being in communication with said opening, at least one rib secured to and projecting from said surface and having a pair of opposed, spaced, horizontally projecting feet at the lower end thereof, said opening and said slots being of a size to receive said lower end of said rib whereby said end may be moved through said opening and into said slots thereby to attach said surface to said body.

3,004,646

CLUTCH-BRAKE MECHANISM

Herman L. Seiden, Chicago, Ill., assignor to Lectromatic Devices, Inc., Chicago, Ill., a corporation of Illinois

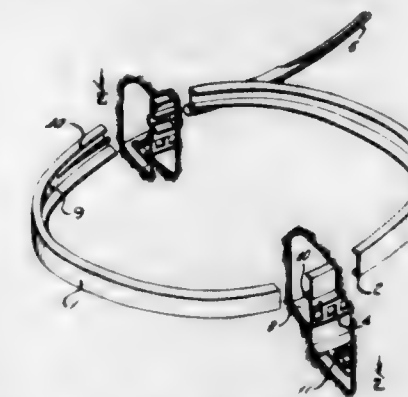
Filed Dec. 29, 1958, Ser. No. 783,431
2 Claims. (Cl. 192-17)



1. In a clutch, driving and driven members and means mounting the same for coaxial rotation with contiguous hub portions of matching diameter, a helical clutch spring closely embracing said hub portions and adapted to grab the same in coupling action responsive to rotation of the driving member in a given direction depending on the direction of spiral advance of the spring helix, and a control member freely rotatable concentrically with said driving and driven members and having a braking periphery contiguous to a complementary braking periphery on the driven one of said members, means

coupling said control member with an endwise portion of said spring helix which is located on the driving member, said control member when free to rotate acting as a torque load on the spring in a direction to cause the latter to grab and rotate with the driving member and thereupon to grab with the driven member and couple the latter with the driving member, said control member when held against rotation applying a torque preventing the spring from grabbing with the driving member as aforesaid; and brake means operable to engage said braking peripheries simultaneously.

substantially vertical wood arresting wall extending in a substantially circular horizontal path, and delivery chute means connected to said run to direct said pit wood



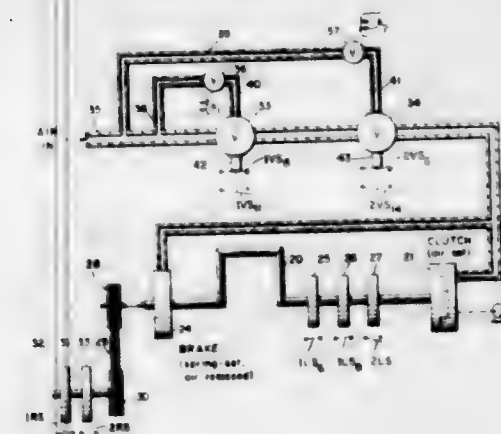
tangentially into said run against said arresting wall whereby the speed of the wood is checked as it is directed around the curved wall.

3,004,647

SINGLE STROKE CONTROL SYSTEM AND FLUID CONTROL UNIT THEREFOR

Everett H. Andrus, Berea, and George M. Coon, South Euclid, Ohio, assignors to Textrol, Inc., Cleveland, Ohio

Filed Mar. 20, 1959, Ser. No. 800,894
28 Claims. (Cl. 192-142)



1. A single cycle control system for a machine in which fluid pressure controls the starting and stopping of the machine, said system comprising: a pair of valves connected to control said fluid pressure such that the machine is stopped if either valve is closed, a pair of valve relays operable independent of one another to control the respective valves individually, a pair of anti-repeat relays operable to energize the valve relays initially to cause the respective valves to open, a pair of separate holding circuits connected individually to the respective valve relays to maintain the latter energized independent of each other following their initial energization, a first pair of limit switches connected respectively in said holding circuits and operable separately and independent of one another by the machine toward the end of the latter's cycle of operation to open the respective holding circuits individually independent of one another to de-energize the respective valve relays individually independent of one another, and a second pair of switches connected respectively in said holding circuits and operable individually independent of one another to close in response to the opening of the respective valves.

1. A tube testing apparatus comprising an intermittently movable conveyor having a plurality of sockets fixed thereto, a tube orienting and inserting device adjacent to said conveyor, and means connected to said conveyor and device for synchronizing the movements thereof, said tube orienting device comprising motor means for orienting said tube, locating means movable into a locating position with respect to said tube and means responsive to the movement of said locating means into locating position with respect to said tube for stopping said motor and for applying dynamic braking thereto, and means for inserting said oriented tube in one of said sockets during a momentary stoppage of said conveyor.

3,004,650

ARTICLE ORIENTING APPARATUS

Herbert M. Pettet, Holden, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin

Filed May 18, 1959, Ser. No. 813,896
2 Claims. (Cl. 198-33)

1. In a machine for labeling articles which are substantially elliptical in transverse section, and wherein the articles to be labeled are moved along a predetermined path past label-applying devices by a conveyor, and wherein articles are delivered into said path in contacting relation, means for spacing the articles and for orienting them, thereby accurately to align their major axes with the center line of said path before they enter the field of action of the label-applying devices, the article orienting means comprising like, rigid, helical elements located at opposite sides, respectively, of the article path, said helical

3,004,648

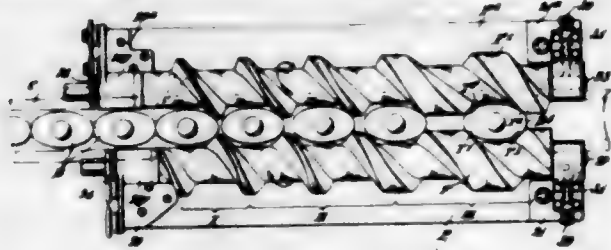
DEVICE FOR TRANSPORTING CONSTRUCTION TIMBER

Manfred Walther, Ernst-Thalman-Strasse 8, Burkhardsdorf, Germany, and Hans Pretzsch, Mozartstrasse 16, Aue, Germany

Filed July 17, 1959, Ser. No. 827,825
7 Claims. (Cl. 193-40)

1. An installation for tumbling pit wood into the lower floors of a mine comprising a substantially channel-shaped run disposed in a lower level and having a

elements being of the same pitch and turning in the same direction so as to advance the articles along said path, the article orienting helical elements being so shaped that, in co-operatively acting to turn an article, they make a four-point contact with the peripheral surface of the article, two of such points of contact being located at each side, respectively, of the vertical plane of the center line of the article path, and at equidistances from said plane,

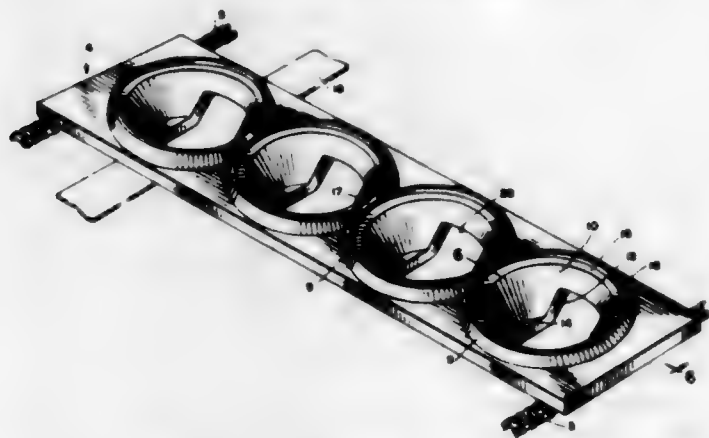


one pair of diagonally opposite points of contact being below the horizontal plane of the axes of the helices, while the other pair of diagonally opposite points of contact is above said plane, thereby neutralizing any tendency of the article to tip either forwardly or rearwardly, and guide means operative to prevent an article from tipping sidewise while moving toward the field of action of the label-applying devices.

3,004,651

CONVEYOR APPARATUS FOR FOODSTUFFS
Robert O. Mamppeker, 1128 McNeil St., and Maurice F. Kestley, Sr., 2271 Young Ave., both of Memphis, Tenn.

Filed June 4, 1956, Ser. No. 589,302
7 Claims. (Cl. 198-185)



1. A conveyor assembly for transporting foodstuffs comprising in combination, a conveyor, recessed unitary food receptacle holders movable therewith and having openings in the bottoms and sides of the recessed portions of the holders, said openings being so formed in the bottom and opposite sides of each of said holders as to permit a traveling conveyor to pass through said sides of each of said holders and contact the bottom of a receptacle held in each of said holders, a second conveyor arranged to contact receptacles by passing through said openings and thereby unseat said receptacles from said holders, and a third conveyor arranged to remove unseated articles from above said holders.

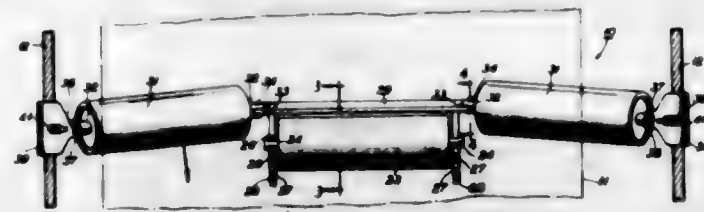
3,004,652

BELT TRAINING TROUGHING IDLER ASSEMBLY FOR ENDLESS BELT CONVEYORS
Roy F. Le Prestre, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Nov. 6, 1958, Ser. No. 772,384
8 Claims. (Cl. 198-202)

7. A troughing idler assembly for a flexible strand conveyor, said troughing idler assembly including, in combination, connector means adjacent each end portion

thereof for connecting the troughing idler assembly between a pair of flexible strands, said connector means enabling the troughing idler assembly to rock about a generally horizontally disposed axis located generally parallel to the troughing idler assembly in response to load thereon, first roller means including a pair of wing rollers each extending generally toward each other from a respective one of the connector means, second roller means including a center roller operatively interconnected with the

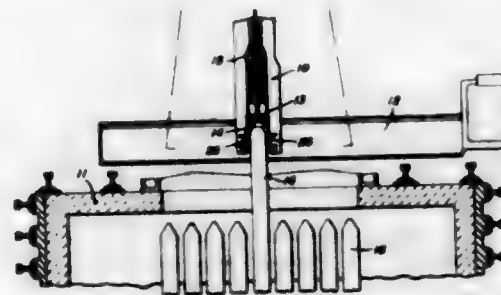


wing rollers, and offset means disposing at least one of the roller means in offset relationship to the rocking axis to thereby cause the troughing idler assembly, upon imposition of a load thereon, to rock about the generally horizontally disposed axis in a direction to orient the outer ends of the wing rollers further downstream than the inner ends relative to travel of a conveyor belt that may be supported by the troughing idler assembly for movement thereacross.

3,004,653

APPARATUS FOR BUTT-WELDING TUBE
Daniel W. McAfee, Jr., Lorain, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 20, 1958, Ser. No. 722,751
3 Claims. (Cl. 205-9)



1. In apparatus for making butt-weld tube including a welding bell, a bell stop and means for drawing skelp through the bell, the combination therewith of spaced opposed blocks mounted on the entry side of the bell substantially at the level of the path of the edges of the skelp as it is drawn through the bell, each block having a cavity therein opening thereto from the side of the block adjacent the skelp path, a pipe connection from each block to a source of oxidizing gas and a removable orifice plate overlying said cavity, said plate having a slot therein extending generally along said path, in register with said cavity, the slot being longitudinally inclined downwardly in the direction of skelp travel.

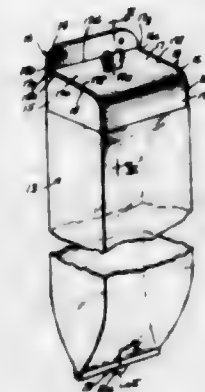
3,004,654

ENCLOSED BELT HOLDER
Alexander F. Fleming, P.O. Box 364, Maywood, Ill.

Filed Dec. 22, 1958, Ser. No. 782,250
6 Claims. (Cl. 206-7)

1. A belt holder comprising a rigid buckle housing structure and a flexible belt housing structure, the rigid buckle housing structure including rigid front, rear and side walls, a series of transversely extending rods supported on and between the rigid walls and spaced with respect to one another for superimposing and supporting the belt buckles of belts thereon, the belt housing structure comprising a flexible bag depending below the buckle

housing structure and having one end secured in assembly with the walls of the buckle housing structure for receipt of the portion of the belt extending below the buckle, and a swingable housing cover overlying and spaced above the transversely extending rods enabling belt buckles to be supported therebetween, the cover



3,004,655
DETACHABLE RECEPTACLE FOR A MOTOR VEHICLE

Walter A. Whitnack, Murray Hill, N.J., assignor to Thomas H. Whaley, Mount Vernon, N.Y.

Filed June 6, 1957, Ser. No. 664,016
3 Claims. (Cl. 206-19.5)

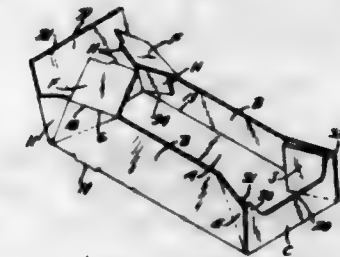


1. A receptacle adapted for mounting on the forwardly extending flange of an automobile instrument panel comprising in combination a container having two side walls, top and bottom walls and a back wall forming a walled enclosure open at its front, each of said top and bottom walls being of greater area than said side walls, a pocket on the outside of said top wall adjacent the open end of said container closed at both sides and at its bottom and opening toward the closed end of said container, means for releasably attaching said container to said automobile instrument panel comprising a U-shaped clamp releasably engaging said flange, a U-shaped hook attached at one end to one end of said clamp such that the free side of said hook is below said attached end and forms an acute angle with said side of said clamp with the free end of said hook higher than its bend and pointing in the direction of the open end of said container, said pocket portion of said container being adapted to substantially completely cover said free side of said hook removably holding said container in position below said instrument panel at an angle extending downward from said open front end toward said back wall.

3,004,656

DISPLAY CARTON CONSTRUCTION
William B. Dubey, Roosevelt, N.Y., assignor to Gerald Carton Co., Brooklyn, N.Y.

Filed July 23, 1959, Ser. No. 829,049
1 Claim. (Cl. 206-44)

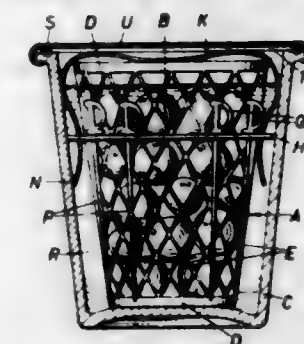


A rectangular fore and aft elongated tray-like display carton having a flat collapsed pre-assembled structure expandible into an expanded display tray, said carton having a movable rearwardly swinging rear wall to support articles in the carton so that they will extend upwardly obliquely rearwardly and said carton also having fixed position side and front walls and a rectangular base, said pre-assembled structure being folded from a single piece of die cut and scored cardboard, said cardboard having a central rectangular base section with separate short rear wall, long side wall and short front wall sections connected thereto along fold lines along the four side edges on the base, laterally outwardly extending rectangular flaps on the side edges of rear and front wall sections connected along fold lines to the side edges of the rear and front walls, said flaps on the rear wall sections having obliquely cut off upper edges and small laterally extending rectangular side flaps connected to the rear edges of the side walls, 45° oblique fold lines extending across the side walls adjacent the ends thereof from the end of the side walls at the front and rear ends of the fold line adjacent the front and rear walls, said oblique fold lines extending outwardly to the top edges of the side walls, and forming triangular end portions, the small side flaps having top edge projections and the fold lines at the sides of the base adjacent the rear wall having slit portions to receive said top edge projections.

3,004,657

PACKING OF EDIBLE COMMODITIES
Julian Hyman, 2 Percival St., Hightown, Manchester 8, England

Filed Nov. 28, 1958, Ser. No. 777,997
4 Claims. (Cl. 206-45.34)



1. A pack for small edible commodities, such as fruits and vegetables, normally preserved in a liquid medium, comprising a transparent impervious outer container having an airtight closure, and a snugly-fitting inner container in the form of a basket, whose contents are readily visible through said outer container, a horizontal planar handle of flexible plastic material extending from side to side and over the top of said basket on the outside thereof, depending legs on said handle having lateral extensions near the lower ends thereof, said extensions lying flat against the wall of the basket, a horizontal member on said basket side walls having opposed verti-

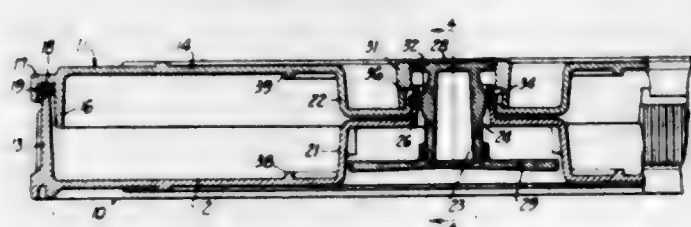
cally extending inwardly opening grooves in which the lower portions of said legs are disposed with said extensions bridging said grooves beneath the horizontal member to prevent removal of said handle, the depending legs of said handle being slidable in said grooves, said handle being in contact with the inner face of said closure when said closure is in place, whereby said basket is held against the bottom of said outer container.

3,004,658

CONTAINER CONSTRUCTION

George D. Rehman, Menlo Park, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Apr. 20, 1959, Ser. No. 807,552
5 Claims. (Cl. 206-52)



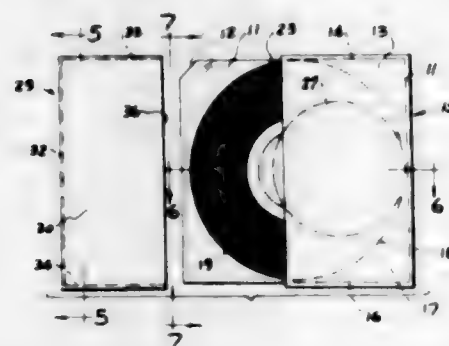
1. In a construction of the character described, body and cover parts fitting together and forming an enclosing container, said parts including substantially parallel walls forming spaced bottom and top walls for the container together with cooperating side walls, axially aligned first and second inwardly dished wall portions carried by said bottom and top walls, manually operable means located with said dished portions and mounted on said first dished portion for movement in an axial plane of said first dished portion and between container locking and release positions to selectively lock and release said second dished portion, and means on said second dished portion engaging said manually operable means and cooperating therewith to hold said dished portions together only in the locking position of said manually operable means.

3,004,659

RECORD HOLDER

Dave Usher, 22155 Hessel, Detroit 19, Mich.; Raymond H. Glassman, 21900 Kipling, Oak Park, Mich.; and William P. Hopkins, 227 Merrill, Birmingham, Mich.

Filed July 7, 1958, Ser. No. 746,786
10 Claims. (Cl. 206-62)



5. The record package of claim 1, parallel spaced intermediate portions on one side of said first cover being joined to said partition defining therewith a reduced height for one of said envelopes compared with the other envelope, and an elastic strip extending substantially over one outer side surface of both covers and secured thereto, said removable cover being disengaged from said partition on outward stretching of said strip relative to said stationary cover, said strip providing a flexible yielding connection between said covers and adapted to maintain said covers together in record enclosing position.

3,004,660

NEEDLE STORAGE DEVICE

Ulrich Hofmann, Ebingen, Wurttemberg, Germany, assignor to Theodor Grox & Sohne & Ernst Beckert, Ebingen, Wurttemberg, Germany

Filed Mar. 21, 1956, Ser. No. 572,974
Claims priority, application Germany Mar. 24, 1955
12 Claims. (Cl. 206-66)



1. A needle storage device for storing needles of equal lengths, each needle having one end portion bent at an angle to the length of the needle, and an opposite pointed end portion bent over substantially parallel to the length of the needle, said storage device comprising, in combination, a first elongated resilient strip of soft pliable material; a second elongated resilient strip parallel to said first elongated resilient strip and displaced therefrom a distance substantially equal to the length of said needles; a first row of needles arranged in a plane, said needles in said first row being substantially parallel to one another, said one end portion of each of said needles in said first row being removably embedded in said first resilient strip, and the opposite pointed end portion of each of said needles in said first row being removably embedded in said second resilient strip; and a second row of needles arranged in a plane substantially parallel to the plane of said first row of needles, said needles in said second row being substantially parallel to one another, said one end portion of each of said needles in said second row being removably embedded in said second resilient strip, and said opposite pointed end portion of each of said needles in said second row being embedded in said first resilient strip.

3,004,661

DISPLAY AND STORAGE PACKAGE FOR BRUSHES

Lawrence R. Schumann, Boston, Mass., assignor to Star Brush Manufacturing Co., Inc., Boston, Mass., a corporation of New York

Filed Dec. 1, 1959, Ser. No. 856,488
1 Claim. (Cl. 206-78)



A combination display and storage package for a paint brush, comprising a flat display card having a cover member of transparent sheet material attached to its front face and forming therewith an elongated outwardly projecting chamber shaped to receive the bristle and ferrule portions of a brush, said cover member being formed with a restricted opening in its lower end for passage of the brush handle to an exposed position upon the front face of the card, thereby presenting the entire brush to view, the walls

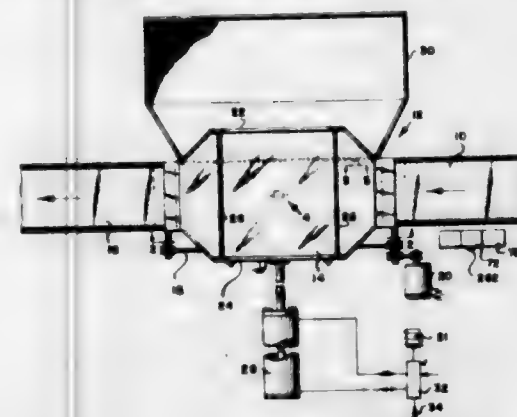
of the restricted opening supporting the brush in said chamber without contact with the bristles thereof, a hinged door outlined in the card behind said chamber by a line of perforations whereby the door may be bent out of the card by manipulating the exposed handle of the brush thus producing an opening in the back of said chamber through which a brush may be withdrawn with its bristles foremost.

3,004,662

FOREIGN BODY DETECTOR

George W. Armstrong, 114 Schneider Drive, Fairborn, Ohio, and Robert J. Neff, Fairborn, Ohio (R.R. 1, Medway, Ohio)

Filed Feb. 25, 1957, Ser. No. 642,021
24 Claims. (Cl. 209-72)



17. In an arrangement for detecting the presence of foreign objects in flowable bulk material; incoming and outgoing conveyor means, a shaker type conveyor interconnecting the incoming and outgoing conveyor means and comprising a hard plate, said conveyor means and conveyor being adapted for handling flowable bulk material, said shaker type conveyor moving material delivered thereto from the incoming conveyor to the outgoing conveyor with simultaneous agitation of the material whereby the material and foreign bodies therein of a hardness different from the hardness of the material will engage the plate and set up vibrations of different frequencies therein side walls along the side edges of the plate, a transducer pick up attached to the plate for actuation by vibrations set up in the plate to produce an output, an amplifying circuit connected to the transducer to receive the output therefrom as a signal, means for filtering out from the signal the vibrations normal to the material being passed across the plate whereby foreign bodies of different density than the material which may be entrained in the material will create the actual input to the amplifier, said amplifier developing an output proportional to the input thereto, and control means responsive to the output of said amplifier circuit for interrupting operation of said conveyor means and conveyor, said control means also being operable for causing movement of the said side walls laterally of the plate whereby to discharge from the plate the material thereon and which material will contain the foreign object that developed the signal to halt the operation of the conveyor means and conveyor, and means operable automatically for returning the side wall to their initial position following the discharge of material from the plate and for again setting the conveyor means and conveyor into operation.

3,004,663

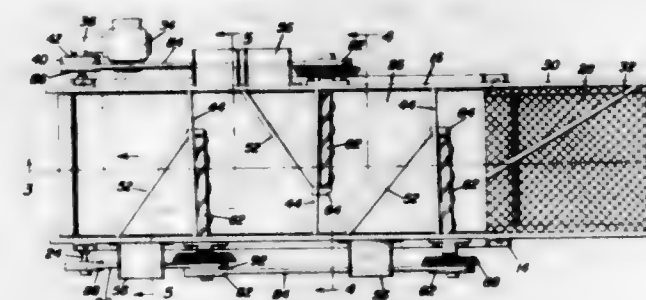
FRUIT AND POTATO SORTING MACHINE

Leopoldo Creoglio, 1322 N. Citrus Ave., La Habra, Calif.

Filed Mar. 9, 1960, Ser. No. 13,741
4 Claims. (Cl. 209-91)

1. In a sorting machine for fruit, potatoes and the like, the combination of a horizontally elongated frame including a pair of transversely spaced side walls, an

endless conveyor belt supported by said frame and having its upper run disposed between said side walls, means at one end of the frame for depositing on the upper run of the conveyor articles to be sorted according to size, a plurality of transverse partitions extending between said side walls above said conveyor belt and spaced longitudinally of the latter, said partitions being provided alternately adjacent one of the side walls with open-bottomed slots of progressively increasing height in the di-



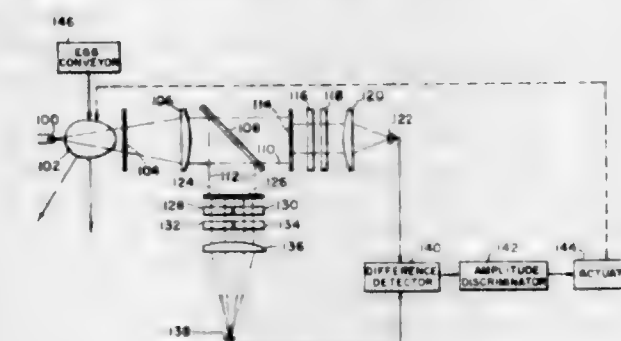
rection of travel of the upper run of said belt and also being provided alternately adjacent the other side wall with open-bottomed clearance passages for articles passing from one partition to the next, said side walls being provided with discharge openings spaced rearwardly from the slots in the respective partitions, and deflector rails extending from the respective partitions to said discharge openings in the respective side walls obliquely behind the respective slots.

3,004,664

METHOD AND APPARATUS FOR OPTICAL ANALYSIS OF A MIXTURE OF SUBSTANCES

Marc G. Dreyfus, Van Nuys, Calif., assignor to General Precision, Inc., a corporation of Delaware

Filed July 9, 1957, Ser. No. 670,694
4 Claims. (Cl. 209-111.5)



1. An egg bloodspot detector having means for conveying sample eggs into position for blood concentration determinations comprising a source of energy, means for selecting a portion of said energy and for transmitting said selected portion, a beam-splitter responsive to said selected portion for dividing said selected portion into two separate beams, a filter interposed into the path of the first of said two beams for selecting from said beam a first wavelength band having a particular spectral location and bandwidth, a pair of filters interposed into the path of the second of said beams for selecting from said second beam second and third wavelength bands, each of said second and third bands having a particular spectral location and bandwidth, a plurality of apertured members each associated with a different one of said bands for providing a predetermined weighting in each of the different wavelength bands, sensor means responsive to the weighted energy passing through the apertured members for converting such weighted energy into electrical signals having characteristics related to such weighted energy, comparator means coupled to said sensor means and responsive to the electrical signals for comparing said elec-

tical signals and providing an output signal dependent on the comparison, means coupled to said comparator means for selecting the output signal therefrom having particular characteristics, and means coupled to said selecting means and responsive to said selected output signal for obtaining a removal of the sample egg from the conveying system.

3,804,665

SYSTEM FOR BENEFICIATING GRAVEL AND THE LIKE

Eugene H. Leslie, 1831 Traver Road, Ann Arbor, Mich.
Filed Aug. 24, 1955, Ser. No. 530,354
4 Claims. (Cl. 209-119)



1. A method of recovering a hard stone enriched component from natural aggregate containing hard stones and soft stones, comprising the steps of adding moisture to the aggregate in an amount sufficient to cause absorption by porous stones in the aggregate, maintaining the stones in contact with the moisture until a substantial amount of moisture is absorbed in the porous stones, feeding the aggregate as a substantially mono-layer into space, accelerating the aggregates by free fall in unrestrained parabolas, impinging the aggregates on a hard elastic surface inclined to the horizontal, intercepting in flight a portion of the aggregate rebounding from said inclined surface intermediate the extremes of the rebound range, collecting as the enriched product all aggregates rebounding beyond said intercepted portion, subjecting at least a part of the portion intercepted to further free fall and rebound, intercepting the thus rebounded aggregate in flight at an adjusted distance such that a portion rebounding beyond the point of interception has substantially the composition of the enriched product and continuing in this fashion until the major portion of hard stones has been separated from the soft stones as an enriched product.

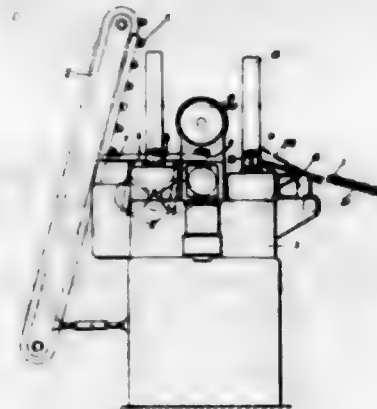
3,804,666

STATIC TESTING AND MASS-BALANCING APPARATUS FOR CONNECTING RODS AND THE LIKE

Heinrich Hack, Gross Zimmers, near Darmstadt, Germany, assignor to Carl Schenk Maschinenfabrik, Darmstadt, Germany, a corporation of Germany
Filed July 11, 1955, Ser. No. 521,155
8 Claims. (Cl. 209-121)

1. An automatically operating mass-balancing machine for testing and compensating the distribution of mass in individual articles, comprising a first and a second and a third station, means for supplying one of said articles to said first station while simultaneously removing an article from said first station and moving it to said second station and coincidentally removing an article from said second station and moving it to said third station, load sensing means at said first station for determining the relative load distribution at predetermined spaced portions of the article supplied thereto, means at said

second station for correcting the load distribution of the article received from said first station in response to occurrence of an undesired load distribution at said first

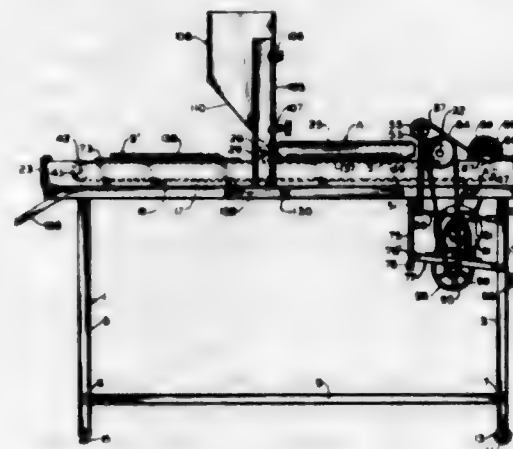


station, means at said third station for checking said relative load distribution in the article received from said second station, and means cooperating with said third station for discharging articles checked at said third station.

3,804,667

TABLET INSPECTION MACHINES

Victor M. Hermelin, University City, Mo.
(2503 S. Hanley Road, St. Louis 17, Mo.)
Filed June 9, 1958, Ser. No. 740,658
8 Claims. (Cl. 209-125)



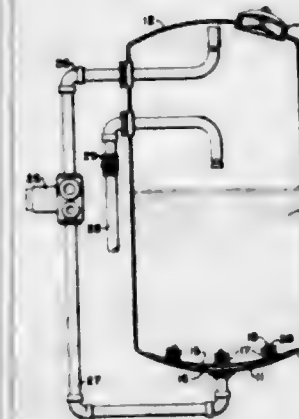
7. A device of the character described comprising a pair of spaced rollers, a first endless belt trained around said rollers and having an upper run and a lower run, a second pair of spaced rollers, a second endless belt trained around said pair of rollers and also trained around one of said first pair of rollers in overlying relation to said first belt, the upper run of said second belt being substantially longer than the lower run of said first belt and being in slightly spaced underlying relation thereto, means for driving said belts at the same speed, belt-tensioning means for urging said second belt against said first belt at said one of the first pair of rollers, means for delivering a plurality of objects to the upper run of the first belt so that said objects will be carried thereby with their upper surfaces exposed, said first and second belts being adapted to grip said objects and invert them as said belts pass around said one of the first pair of rollers, said second belt also being adapted to move said objects past the other of said first pair of rollers with the lower surfaces of said objects upwardly presented and exposed, and at least one tray rotatably mounted adjacent said belts and extending lengthwise therealong in laterally outwardly projecting relation to one side margin of said belts so that when objects are lifted from the belts and placed on the tray they may be discharged from the tray and away from the belts by tilting the tray.

3,804,668

UNDERDRAINS

Ralph C. Adams, Midland Park, N.J., assignor to Pfandliff Permutit, Inc., New York, N.Y., a corporation of New York

Filed Jan. 29, 1960, Ser. No. 6,339
1 Claim. (Cl. 210-293)



An underdrain for a cylindrical tank having a spherically curved dished tank bottom, which comprises a dished false bottom having a spherical radius of curvature at least forty percent greater than the spherical radius of curvature of said tank bottom and an outside diameter equal to 0.80 to 0.96 times the outside diameter of said tank bottom, means spaced toward the inside from the periphery of said tank bottom for fastening said false bottom to the dished top side of said tank bottom along the periphery of said false bottom, an underdrain space located between said tank bottom and said false bottom, a plurality of openings in said false bottom communicating with said underdrain space, a plurality of strainers mounted on the top side of said false bottom and communicating with said openings, and a pipe connected with said tank and communicating with the central portion of said underdrain space.

3,804,669

FILTER AND AUTOMATIC LEAF SHUT-OFF THEREFOR

Edward A. Ulrich, Kenmore, N.Y., assignor to Process Filters, Inc., Buffalo, N.Y., a corporation of New York
Filed June 5, 1957, Ser. No. 663,750
9 Claims. (Cl. 210-347)



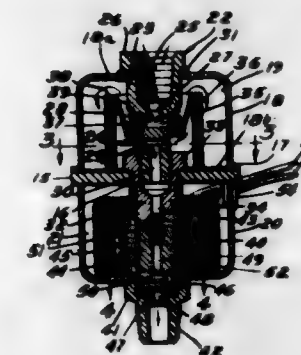
1. A filter assembly of the kind described comprising a frame and a pair of spaced screen members carried by the frame to constitute a unit, means carried by the frame for attaching it to a mounting, a filter element adapted to support a filtering agent enclosing the unit and provided with an opening through which the unit may be inserted into the element, said element also being provided with

an aperture within which the attaching means extends, means cooperating with the attaching means providing a sealed connection between the element and mounting, said element being of a greater length than the unit and having portions extending laterally from the unit which are overturned to close the opening, and means carried by the element for holding the overturned portions in a locked condition.

3,804,670

COMBINED FUEL FILTER AND LOCK-OFF VALVE AND FUEL FILTER

Lawrence C. Zouker, Los Angeles, Calif., assignor to Beam Products Mfg. Co., Los Angeles, Calif., a corporation of California
Filed Feb. 3, 1958, Ser. No. 712,728
2 Claims. (Cl. 210-429)

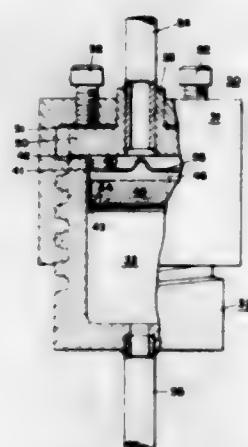


1. A combination fuel filter and lock-off valve including a plate having an opening therein; a first housing at one side of said plate coacting therewith to form a first compartment; a filter element of tubular form mounted on said plate within said first compartment; an elongated fuel inlet member having one extremity thereof disposed externally of said first housing and having a first axial bore in said one extremity and a first radial passage communicating with said first axial bore to permit fluid to flow through said first radial passage into said first compartment, said fuel inlet member having a second axial bore and a second radial passage communicating therewith, said second radial passage being disposed internally of said tubular filter element; retention means interposed between said filter element and said fuel inlet member for retaining said filter element in fixed position about said member whereby fuel flowing through one extremity of said member will pass through said first axial bore and said first radial passage outwardly of said filter element and through said filter element into said second radial passage and said second axial bore; a second housing on the other side of said plate coacting therewith to form a second compartment; a tubular coupling member having one extremity secured to the other extremity of said fuel inlet member and its other extremity projecting through said plate opening; a tubular fuel outlet member having one extremity secured to the other extremity of said coupling member and its other extremity incorporating an outlet port and projecting exteriorly of said second housing; a solenoid winding located in said second compartment in encompassing relationship with said fuel outlet member; a solenoid plunger valve mounted in said tubular fuel outlet member; and spring means in said fuel outlet member interposed between the confronting extremities of said fuel outlet member and said coupling member for urging said plunger valve axially to close said outlet port, said plunger valve having an axial bore and a radial passage communicating with said axial bore providing fluid communication between said tubular coupling member and said tubular fuel outlet member at a point above said outlet so that, when said solenoid is energized to move said plunger valve against the bias of said spring means, fuel can flow through said coupling member and said axial bore and radial passage of said plunger valve to said outlet port.

3,884,671

HIGH TEMPERATURE ANALYTICAL FILTER
 Alfred A. Sugalski, Scotia, Sherman L. Williams, Elmora, and Wilfred F. Mathewson, Jr., Ithaca, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
 Original application Feb. 11, 1959, Ser. No. 792,680.
 Divided and this application Feb. 12, 1960, Ser. No. 12,591

1 Claim. (Cl. 210-445)



Apparatus for effecting filtering operations which comprises complementary tubular sections each having one open end and a centrally-apertured end wall, said sections having their sidewalls removably secured together in nested relation forming a housing defined by the sidewalls and the centrally-apertured end walls, one section having its open end disposed within the housing and providing a space with the apertured end wall of the other section, said open end of said one section providing a rim of substantial surface extending inwardly from the sidewall of the other section, a cup-shaped container for precoat material having an outwardly extending annular flange at its open end and its other end formed of a porous filter, said container being disposed within said one section and having its outwardly extending annular flange received by the rim of said section, a transverse sealing gland in said space and disposed on said outwardly extending flange of the container, said gland having a conduit extending centrally thereof with one end extending through the centrally-apertured end wall of said other section in sealed relation therewith and its other end communicating with the open end of said container and means carried by said last mentioned end wall for clamping the outwardly extending flange of the cup and the sealing gland in fixed position.

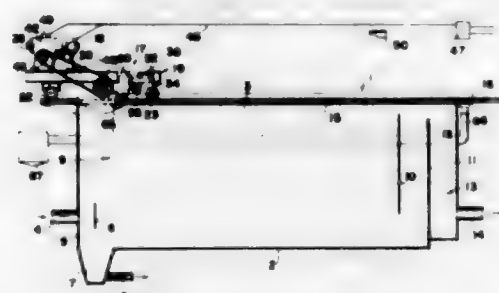
3,884,672

APPARATUS FOR SEPARATION OF SOLIDS OR OF LIQUIDS FROM A LIQUID BY FLOTATION
 Weld E. Conley, Wauwatosa, William J. Katz, Fox Point, and Gilbert W. Quast, Milwaukee, Wis., assignors to Chalmers Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 30, 1959, Ser. No. 824,045
 5 Claims. (Cl. 210-525)

1. In combination with a tank having a quiescent zone for the gravity separation of a lighter material from a raw liquid, an overflow means connected to said tank for withdrawing the clarified liquid from the tank at a rate maintaining a given liquid level in said quiescent zone, parallel rails alongside the tank, a carriage having wheels engaging the track for supporting the carriage on said track and for movement over the tank, a drum rotatably supported by said carriage with the lower-most part of the drum at said given level within the tank, means for adjusting said wheels with respect to the carriage for raising and lowering the drum with respect to the liquid level in the tank, separate means for rotating said drum

in one direction and moving said carriage in either direction, a scraper supported by said carriage with its upper edge in engagement with said drum, a trough fixed to said carriage beneath the lower edge of said scraper and having an outlet end projecting over the side of the tank for



discharge of the scum or supernatant, a second trough extending alongside the tank and beneath the outlet end of said first trough and having outlets at each end thereof and means carried by the carriage to move therewith and disposed in said second trough to push the material therein to one of said outlets with movement of the carriage.

3,884,673

DISPLAY STANDS

Merton D. Emery, Grand Haven, Mich., assignor to Grand Haven Harbor Industries, Inc., Grand Haven, Mich., a corporation of Michigan
 Filed Aug. 25, 1958, Ser. No. 756,804
 1 Claim. (Cl. 211-60)



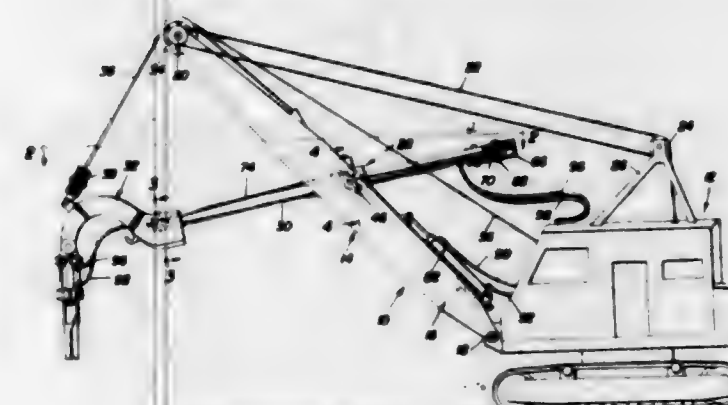
A display stand for fishing rods, and the like, comprising an elongated upright supporting member, two elongated base panels mounted on opposite sides of the lower end portion of said member and sloping downwardly and outwardly therefrom, an elongated flat supporting panel mounted in a horizontal plane on the upper end portion of said member and having two parallel longitudinal edges disposed on opposite sides of said supporting member in parallel relation to the longitudinal center lines of said base panels, said supporting panel having a plurality of spaced recesses in said edges, and two retaining bars mounted on respective ones of said base panels in outwardly and upwardly spaced parallel relation to said longitudinal center lines thereof, each of said bars comprising a plurality of circumferentially grooved elongated rollers mounted in axially aligned relation to each other with said grooves radially aligned with respective ones of said recesses, said bars being disposed further away from the longitudinal center line of said supporting member than the respective ones of said edges on the same side of said supporting member and closer to said last mentioned center line than the lower

edge of said respective ones of said base panels in such position that such a fishing rod, disposed between one of said bars and said respective base panel with the lower end of said rod disposed in abutting engagement with the upper face of said base panel and with said rod engaged in respective ones of said grooves and recesses, is releasably clamped against said base panel and is disposed at a downwardly and outwardly opening acute angle to the vertical plane in which said respective longitudinal edge of said supporting panel is disposed.

3,884,674

SWIVEL SUPPORT FOR SHOVEL BOOM

Robert M. Griffith, Primeville, Oreg.
 (P.O. Box 621, McCloud, Calif.)
 Filed June 5, 1958, Ser. No. 740,151
 15 Claims. (Cl. 212-42.5)

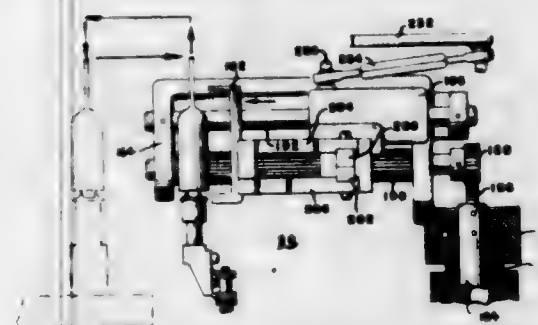


1. A log handling boom assembly for shovels, said boom assembly comprising a boom, a support fitting mounted on said boom intermediate the ends thereof, a boom stick supported by said support fitting including means for universally pivotally mounting and slidably receiving said boom stick while permitting free lateral displacement thereof, and crowd means carried by said support fitting and said boom stick for advancing and retracting said boom stick through said support fitting.

3,884,675

BULB ASSEMBLY TRANSFER DEVICE

Henry W. Roeber, Emporium, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
 Original application Dec. 16, 1955, Ser. No. 553,569, now Patent No. 2,940,220, dated June 14, 1960. Divided and this application Apr. 4, 1960, Ser. No. 19,673
 7 Claims. (Cl. 214-1)



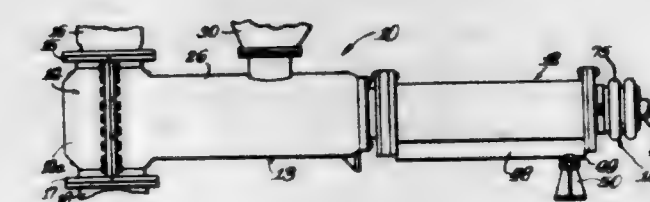
1. In combination, a conveyor means having superposed vertically spaced conveyors running in horizontal orbits, the conveyors having support means to support articles vertically therebetween, means for jointly indexing the conveyors, indexable means adjacent the conveyors having supports for receiving articles removed from the conveyors, and transfer means having jaws movable in between the spaced conveyors and movable from a

position behind the conveyors and an article supported by the conveyors to a position over a support on the indexable means, means for so moving the jaws, means for additionally moving the jaws together when in vertical alignment with the conveyors, means for moving the jaws upwardly when in said aligned position, means for additionally moving the jaws downwardly when over the support, means for opening the jaws after said downward movement and means for moving the jaws back to a position behind the conveyors.

3,884,676

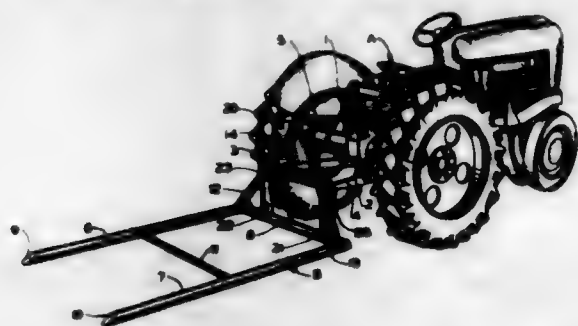
CHARGING APPARATUS

Melvin J. Greaves and John C. Fagley, Cleveland, Ohio, assignors, by mesne assignments, to Inland Steel Company, Chicago, Ill., a corporation of Delaware
 Filed Nov. 16, 1959, Ser. No. 853,367
 8 Claims. (Cl. 214-18)



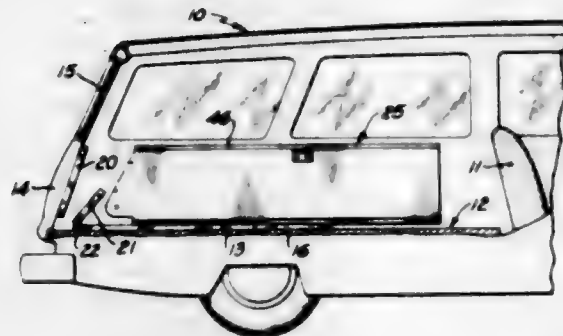
1. In a charging apparatus including a charge conveying plunger assembly reciprocally and sealably disposed in a housing section having spaced inlet and outlet openings therein, said plunger assembly reciprocally movable between said inlet opening and said outlet opening and adapted to receive a charge of material at said inlet opening and to convey said material to said outlet opening which communicates with a noxious fluid-containing passage associated with said housing section, the improvement comprising: a charge conveying plunger assembly having a plunger body section forming a sealing engagement with the said housing section throughout substantially the entire length thereof to prevent fluid passing therebetween, said plunger body section being operatively connected at one end with fluid means for effecting reciprocable longitudinal movement of the other end thereof from a point rearwardly of said inlet opening to a point forwardly of said outlet opening and extending into said fluid containing passage when said body section is in its most forwardly position, a plunger member reciprocally mounted in said other end of said plunger body section and forming a sealable sliding engagement with said housing section between said inlet and outlet openings, said plunger member being operatively connected with means reciprocally moving said plunger member alternately into spaced and abutting relationship with said other end of said plunger body section independently of movement of said plunger body section, said plunger member in the most rearwardly position of said plunger body section being sealably disposed in said housing section adjacent said inlet opening and in spaced relationship with said other end of said plunger body section forming together with said plunger body section a collapsible material receiving chamber disposed below said inlet opening for receiving a charge of material and movable as a unit from said inlet opening into said fluid passage, and said plunger member in the most forwardly position of said plunger body section when disposed in said fluid passage being movable from said spaced relationship to an abutting relationship with said other end of said body section to collapse said chamber before said plunger body section is moved from said fluid passage into said housing section; whereby, said reciprocally disposed plunger assembly periodically conveys material from said inlet opening to said outlet opening without permitting escape of a noxious fluid into the surrounding atmosphere through said inlet opening.

3,004,677
GENERAL-UTILITY ACCESSORY DEVICES FOR
AGRICULTURAL TRACTORS AND THE LIKE
 Joseph F. Reynolds, Ets. J. Carrollton, Ill.
 Filed Apr. 6, 1959, Ser. No. 804,460
 3 Claims. (Cl. 214-140)



1. An accessory attachment for converting tractors and similar vehicles having hydraulic lifting mechanisms into fork-lift trucks; said accessory attachment comprising a pair of spaced parallel bars rigidly connected at one end by a transverse bar, a pair of upwardly converging bars rigidly connected together at their upper ends and respectively connected at their lower ends to the parallel bars entirely forwardly of the forwardmost portion of said transverse bar so that the portions of said parallel bar to which the ends of the transverse bar are attached will overhang to the rear of the upwardly converging bar, a pair of upright brace-members attached at their lower ends to the transverse bar inwardly from the parallel bars and extending upwardly to the converging bars and being respectively attached at their upper ends to said converging bars whereby to form a cantilever bracing structure between the converging bars and the transverse bar, an auxiliary brace-bar rigidly mounted at its ends to the converging bars and extending transversely therebetween in upwardly spaced relation to the transverse bar, said auxiliary brace-bar being also connected rigidly to the upright brace-members, and connector-means rigidly mounted upon the converging bars in upwardly spaced relation to the parallel bars for mounting the accessory attachment on the lifting mechanism of the vehicle.

3,004,678
MULTI-PURPOSE CARGO CARRIER
 Theodore S. Golinski, 8675 Palmetto Ave., Fontana, Calif.
 Filed June 25, 1959, Ser. No. 822,956
 6 Claims. (Cl. 214-450)



1. A multi-purpose cargo carrier for use with a station wagon automobile having a flat bed in the rear end portion thereof, said cargo carrier including a pair of laterally spaced, fore and aft extending tracks mounted on said flat bed, a pair of relatively shallow open top boxes of generally rectangular configuration, each of said boxes having a pair of laterally spaced, longitudinally extending runners on the bottom sides thereof which are located so as to run on said tracks, one of said boxes being smaller than the other so that said one box may be nested within the larger box for compactness, and means for joining said boxes together end to end so as to provide an ex-

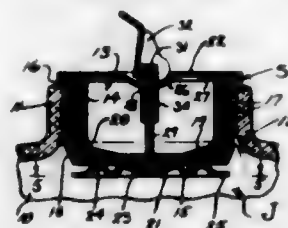
tended carrier of maximum cargo carrying capacity, said runners on said smaller box being aligned with said runners on the larger box, whereby both of said boxes are supported on said tracks.

3,004,679
CONTAINER FOR RADIATION STERILIZED
PRODUCTS
 Bernard L. Stelerman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
 Filed Dec. 15, 1958, Ser. No. 780,417
 3 Claims. (Cl. 215-1)



3. A glass container for radiation sterilized products comprising a hollow body envelope formed of a transparent glass containing a minor amount of cerium oxide whereby it is stabilized against coloration when subjected to high energy radiation, and a layer of a colorless glass bonded to a localized area of said hollow body envelope where controlled breakage of the envelope wall is desired, said colorless glass being susceptible to change in coloration by high energy radiation and having a coefficient of contraction greater than that of said hollow body envelope glass.

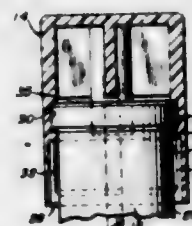
3,004,680
VACUUM WARE STOPPER
 Axel Moeller, St. Petersburg Beach, Fla., assignor to Moeller Mfg. Co., Inc., Racine, Wis., a corporation of Wisconsin
 Filed Mar. 27, 1959, Ser. No. 802,514
 1 Claim. (Cl. 215-53)



The combination with a vacuum vessel including a body and a neck, of a closure plug for the neck including a hollow compressible body having an annular side wall and a bottom wall, the outer end of said side wall having an outwardly projecting annular flange engaging the lip of the neck, said stopper body of a greater length than the width of the neck whereby upon insertion of the stopper body into the vessel with the flange in engagement with the lip, the stopper body projects into the vessel body inward of the neck, said annular side wall having inner and outer surfaces substantially parallel for the greater length of said stopper body, inner and outer compression plates engaging the opposite ends of the stopper body, an adjustable means for bringing said plates toward one another to compress the stopper body longitudinally and to expand the stopper body radially, said outer compression plate having a depending annular rib engaging the inner surface of the side wall at the outer end thereof to support the side wall with its annular flange on the lip of the neck, said inner compression plate having an annular upstruck rib disposed inwardly of the side wall of the stopper body and engaging the bottom wall of the stopper body and a peripheral lip disposed in a plane below

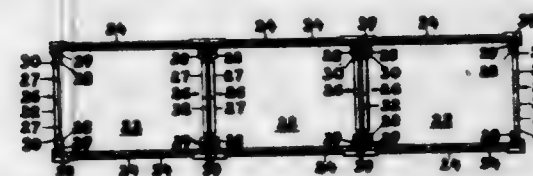
the upstruck rib, said upstruck rib upon movement of the compression plates toward one another lifting said bottom wall adjacent to the side wall and guiding the lower end of the stopper body outward onto the lip and into a bulge and into gripping contour sealing engagement with the vessel at the point of juncture of the neck and vessel body, the compression of the stopper body moving the opposite ends of the body into sealing contact with the neck.

3,004,681
TWO POSITION CAP
 Charles W. Jenkins, 1564 Waltham Road, and Charles Craig Waldbillig, 1860 Milden Road, both of Columbus, Ohio
 Filed Sept. 18, 1959, Ser. No. 840,832
 1 Claim. (Cl. 215-74)



A two position resilient cap co-axially supporting a swab stick within an elongated test tube of a type having an outwardly extending lip about its open end, comprising in combination, a top section, a skirt integrally connected at one end with said top section, a first annular inwardly directed flange defining an opening at the other end of said skirt and said first flange having an interior periphery less than the exterior periphery of said lip, a second annular inwardly directed flange spaced from said first flange and having an inner periphery substantially the same as said first flange, said inner peripheries being substantially equal to the outer periphery of said test tube, said first and second flanges defining a first annular groove therebetween, a third flange spaced from said second flange and defining a second annular groove, the bottoms of said first and second annular grooves having a circumference approximately equal to the greatest circumference of said lip, said skirt having a longitudinal recess extending from said opening through said flange and partially through the bottom of said first groove, said cap having a first position wherein said lip is in said first groove communicating the atmosphere with the interior of said tube by way of said recess, and a second position having said lip in said second groove wherein the interior of said tube is not in communication with the atmosphere.

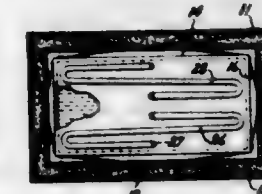
3,004,682
CARGO CONTAINER
 William A. Bertolini, Sanford, Bruno G. Caputo, Massapequa Park, and Calvin O. Smith, Huntington, N.Y., assignors to Grumman Aircraft Engineering Corporation, Long Island City, N.Y., a corporation of New York
 Filed May 12, 1959, Ser. No. 812,720
 5 Claims. (Cl. 220-1.5)



2. A cargo container adapted for use in abutting end-to-end relationship with at least one other like container and comprising a base, a top, side walls and end walls, substantially identical and aligned openings in said end

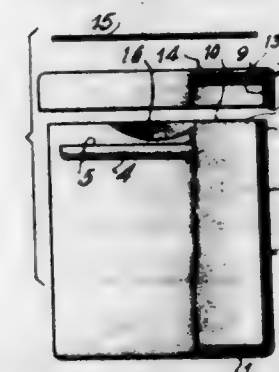
walls, door means of substantially identical size for closing said openings, and means for mounting said door means and including an angular hinge bar, a first hinge plate pivotally connected to one leg of said hinge bar and secured to the outer edge of said door means, a second hinge plate pivotally connected to the other leg of said hinge bar and secured to the interior of the container at a point remote from the edge of said door opening.

3,004,683
INSULATING HOUSING
 Theodor A. Buchhold, Schenectady, and Karl F. Schoch, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
 Filed Feb. 9, 1959, Ser. No. 791,953
 2 Claims. (Cl. 220-15)



1. A thermally insulated housing comprising an outer vacuum tight container of reinforced construction, a layer of hollow glass fiber insulating material, a median container having highly reflective sides supported within said outer container on said glass fiber insulating material, and a generally rectangular inner container supported within said median container with at least the space between said inner and median containers being evacuated to a high degree of vacuum, said inner container being secured within said median container by a pair of thin stay wires secured between each side of said inner container and said outer container in a pattern with the stay wires on two pairs of opposing sides connected from the bottom of the inner container to the top of the outer container, and the stay wires on the remaining pair of opposing sides connected from the top of the inner container to the bottom of the outer container.

3,004,684
CAN FOR FILMS AND THE LIKE
 Robert A. Lightburn, Lakeside Trail, Fayson Lakes, Butler, N.J.
 Filed Oct. 20, 1959, Ser. No. 847,583
 1 Claim. (Cl. 220-43)

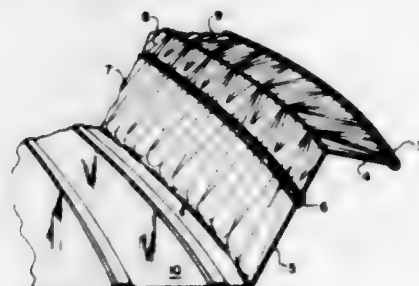


A can for rolls of film or the like, comprising a molded cup-like body of synthetic plastic material having a bottom wall and an integral dent-resistant, resiliently deformable side wall inherently capable of returning to its normal shape after deformation and providing an open end opposite said bottom wall formed by the edge of the side wall whose plane is perpendicular to the axis of the body, and a molded cap of synthetic plastic material removably connected to said body to close said open end, said cap having an inverted cup-shape and comprising a top

wall and an annular depending skirt flange having a flat edge surface encircling the rim portion of said side wall of the body exteriorly thereof for closing said open end, and there being exterior circumferential segmental flanges molded on said body in spaced apart relation circumferentially of the body inwardly of said open end providing flat upper surfaces forming abutments in a common plane perpendicular to the axis of said body engaged by the flat edge surface of said skirt flange when the cap is fitted on said body and exposing a portion of said edge of said skirt flange between them so that said exposed portions of the edge can be easily gripped by the fingers for removal of the cover, the rim portion of said body outwardly of said flanges and the inner surface of said skirt flange having complementary conically tapered surfaces for snug mutual frictional engagement as the cover is applied to the body, said rim portion of the body having at least one finger notch to facilitate gripping of the edge portion of a film roll within said body, said notch being disposed between one of said segmental flanges and said edge of said side wall of the body in offset relation circumferentially of the body to the spaces between said segmental flanges whereby the portion of the body side wall adjacent said notch is reinforced by said segmental flange.

3,004,685 DISPOSABLE PAN

August F. Hennies, Jr., Jeffersontown, Ky., assignor to Hennies Engineering Corporation, Jeffersontown, Ky., a corporation of Kentucky
Filed Aug. 1, 1960, Ser. No. 46,802
8 Claims. (Cl. 220-72)



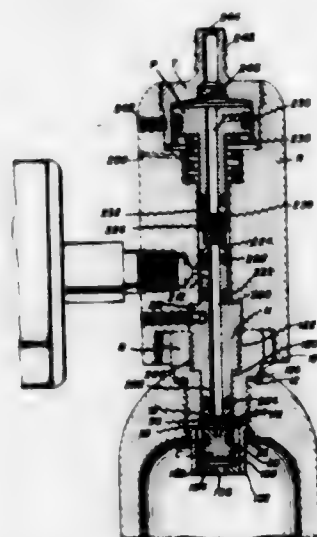
1. In a disposable foil pan made from a metal foil having a gauge thickness of from about .002 to about .005 inch, said pan comprising a base portion, an upwardly sloping wall, having vertical striations therein, a rim flange extending laterally therefrom, and disposed downwardly at an angle in the range of from 5 to 25 degrees from a horizontal plane and having striations in said rim, the combination with said wall and rim of a ridge imposed in the upper portion of said wall, which separates said wall into upper and lower wall portions and in which the vertical striations in the lower wall portions are lesser in number than the vertical striations in the upper wall portion and the striations in the rim are greater in number than the striations in either portion of the wall.

3,004,686 PORTABLE OXYGEN INHALER

Albert E. McKee, 8335 S. Halsted St., Chicago 20, Ill.
Filed June 6, 1958, Ser. No. 740,453
1 Claim. (Cl. 222-3)

A novel dispenser for compressed gases which comprises in combination a reservoir 10 for compressed gas, a check valve assembly located in one end of said reservoir, said check valve assembly comprising a main check valve housing B, a spring-loaded check valve C mounted in the lower portion of said check valve housing B and adapted to move in an axial direction within said check valve housing, said check valve C being pressed upwardly by a coiled spring member 108 seated in a lower

portion of the check valve housing B, and the upward movement of the check valve C being limited by a shoulder 115 on the upper interior part of said check valve housing, said check valve C containing a passageway 116 which is capable of alternately permitting or restricting the passage of gases through said check valve assembly depending upon the axial movement of the check valve C, an automatic straight-in-line pressuring-reducing gas regulator assembly, one portion of which is adapted to engage said check valve assembly and another portion of which is adapted to dispense gas at a pressure which is at a lower pressure than the gas in the reservoir, said automatic pressure reducing gas regulator comprising in combination a main regulator housing R of generally hollow cylindrical shape, the interior of which is adapted to receive a plurality of separate elements, a nozzle assembly N fitted into the lower end of said main regulator housing R, said nozzle assembly N containing an interior central passageway 200 extending from the lower to the upper end thereof, an O-ring adjacent to the lower outside end of said nozzle assembly N, an O-ring adjacent to the upper outside end of said nozzle assembly N, said lower O-ring being adapted to provide a seal between the exterior of said nozzle assembly N and the interior of said check valve assembly, and said upper O-ring being adapted to provide a gas seal between the exterior of said

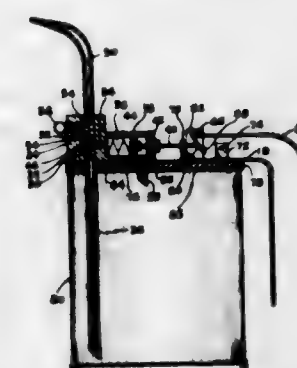


nozzle assembly N and the interior of said main regulator housing R, said nozzle assembly additionally containing a first lateral passageway 212 connecting the said interior central passageway 200 of the nozzle assembly N with the outer portion of said nozzle assembly so that the interior of said nozzle assembly is in open communication with the interior of said main regulator housing R and an O-ring is located on the exterior of said nozzle assembly N below said lateral passageway 212 and a second lateral passageway 216 is provided in the main regulator housing adjacent to the outlet of said first lateral passageway 212 in said nozzle assembly N, a top portion T fitted into the upper portion of the main regulator housing R, a spring-loaded piston-like element P mounted within the interior of said main regulator housing R and adapted to slide axially therein, the upper movement of said piston-like member P being limited by said fitted top portion T and the lower movement of said piston-like element T being limited by said fitted nozzle assembly N, and a continuous passageway 230 for gas through said piston-like element P and a passageway through said threaded top portion which is adapted to be alternately closed or opened depending upon the position of the piston-like element wherein said piston-like element P comprises a hollow shaft portion 230 having a relatively small circumferential seat 226 fixed on its lower portion and having a relatively large circumferential plunger section fixed on its upper portion, an O-ring 234 located around the periphery of said plunger section, an O-ring 234 located in

the lower part of said hollow shaft portion adjacent to but above said seat portion, a lateral passageway 232 located in said hollow shaft portion between said lower O-ring and said seat, said lateral passageway 232 being in open communication with an axial passageway 230 extending upwardly from the top of said seat 226 through the length of said hollow shaft portion, and a spring 238 adapted to apply force upwardly against the underside of said plunger-like element P.

3,004,687 PUMP OPERATED OILER MADE TO ATTACH TO OIL CANS

Arthur P. Gerfen, Box 1132, Cushing, Okla.
Filed Sept. 8, 1958, Ser. No. 759,572
4 Claims. (Cl. 222-82)



1. An oil can tapping and dispenser device comprising, in combination, a substantially rigid main body portion, a mounting plate supporting said main body portion, clamp means integral with said mounting plate releasably securing said mounting plate upon the end wall of a cylindrical can, said main body portion including a pump cylinder, a pair of ducts having piercing means carried by said main body portion for piercing the end wall of the can for tapping the contents therefrom, a discharge nozzle extending outwardly from said main body portion, an oil inlet check valve communicating with one end of said cylinder and with one of said ducts, an oil outlet check valve communicating with said one end of said cylinder and with said nozzle, a piston slidably supported in said cylinder means to effect reciprocating longitudinal movement of said piston, the other of said ducts communicating with the other end of said cylinder, said mounting plate assembly comprising a pair of spaced apart segmental circular plates, a handle grip member connected between said plates, and said main body portion being mounted upon said handle grip member.

3,004,688 CEMENT EXTRUDING GUNS

John A. Duran, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Sept. 21, 1959, Ser. No. 841,167
2 Claims. (Cl. 222-323)

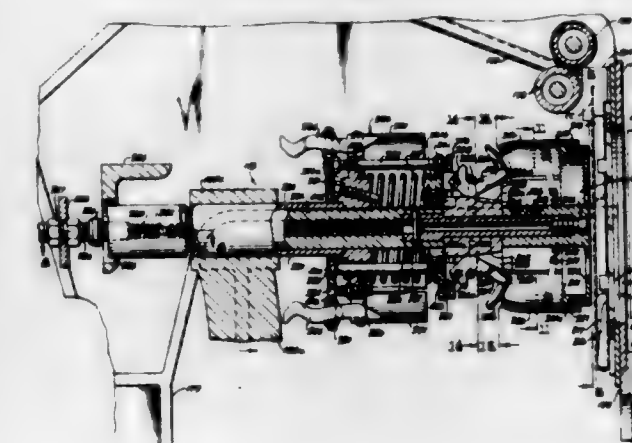
1. A portable hand-operated cement extruding gun having a body, a hand grip and a nozzle secured to said body, said nozzle being formed to provide a cylindrical bore with a discharge orifice adjacent to one end thereof, a plunger in said bore, means for moving said plunger along said bore toward said orifice to extrude molten cement from said bore out through the orifice, said means comprising a first lever pivotally mounted on the body and having an arm provided with a control surface extending above the body of the gun and an operating arm extending below said body and provided with an elongated abutment surface and a second lever pivotally

mounted on the body of the gun, a link operatively connecting one end of the second lever to said plunger, and a roller mounted on the other end of the second lever



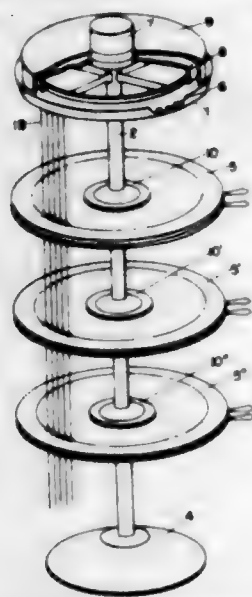
and adapted to be engaged by said abutment surface when the first-mentioned lever is swung in a direction to move the plunger toward said orifice.

3,004,689
MACHINE FOR FORMING PAPER CAPS
Leonard A. Erickson, Columbus, Ohio, assignor, by mesne assignments, to Papertynen Company, Columbus, Ohio, a corporation of Ohio
Filed May 13, 1960, Ser. No. 28,928
24 Claims. (Cl. 223-7)



1. In combination with a machine having a mold in which a blank in the form of a coil of flexible material is disposed and having means for positioning a flat blank of flexible material in alignment therewith, a head disposed in axial alignment with said mold for inserting and folding the flat blank within the coil blank in the mold, said head comprising a radially expandable and contractible pusher and pleating assembly, a radially expandable and contractible hold-down shoe assembly mounted for axial movement into the pusher and pleating assembly, and a radially expandable pick-up plate assembly, support means for supporting said assemblies in the sequence stated axially away from the mold and the positioned flat blank, and means for moving said support means toward the mold to cause said pusher and pleating assembly to first enter the mold, said hold-down shoe assembly to enter the pusher and pleating assembly to expand it against the mold, and said pick-up plate assembly to contract inwardly so as to insert the flat blank within the coil blank in the mold to form and pleat such blank and to fold adjacent edges of the two blanks together.

3,004,690
BEAD-STRINGING MACHINES
 Max Spool, Sound Beach, N.Y.
 (% I. S. Radin, 1039 Ranton St., Silver Spring, Md.)
 Filed Apr. 27, 1960, Ser. No. 25,149
 7 Claims. (Cl. 223-48)



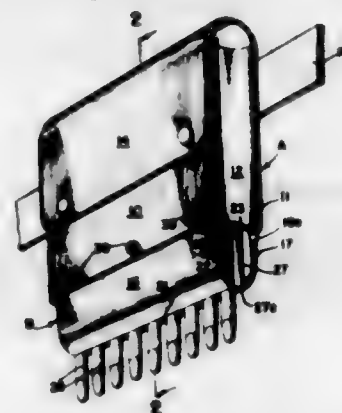
1. An apparatus for stringing pierced beads comprising a circular trough for the beads, said trough having a plurality of holes arranged in a concentric circle in the bottom of the trough, bead-wire supporting clamps located below the circular trough and arranged in a vertical column one clamp below the other, concentric ring-shaped rotary brushes which extend to the same vertical depth into the said circular trough, a motor and power-transmission arrangement for driving the ring-shaped rotary brushes through the beads in the trough, a plurality of bead wires, the top ends of which protrude into the said holes in the circular trough, one wire to a hole, said bead wires projecting downward through individual sets of holes in said bead-wire supporting clamps where said wires are supported, and ending below the lowest bead-wire supporting clamp, and a supporting structure which is essentially a base and upright post, the latter which secures the said circular trough, the bead-wire supporting clamps, the ring-shaped rotary brushes, and the motor and power-transmission arrangement in such relative positions that the motor and power-transmission arrangement drives the rotary brushes through the trough, which is supported by the upright post in vertical alignment over the bead-wire supporting clamps, also secured in vertical alignment by the upright post.

3,004,691
COMBINED SPOOL AND NEEDLE
THREADING DEVICE
 Herbert B. Prock, 855 Francisco Blvd., San Rafael, Calif.
 Filed Apr. 4, 1960, Ser. No. 19,624
 2 Claims. (Cl. 223-99)



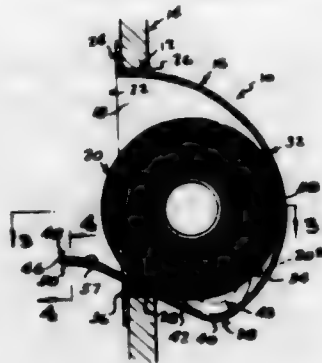
1. The combination of a thread carrying spool having a central spindle accommodating opening, a diamond loop wire needle threading device secured in an accommodating recess on one end of said spool with its loop centered over the opening in said spool, and a thread cutting blade recessed in a notch at the rim of a flange of the spool with its cutting edge tangent to the axis of the spool.

3,004,692
AMMUNITION DISPENSING POUCH
 Robert L. Burton, P.O. Box 1, Jasper, Ala.
 Filed June 26, 1959, Ser. No. 823,090
 4 Claims. (Cl. 224-15)



1. An ammunition dispensing pouch comprising an upper pouch section and a lower dispensing container section, said upper pouch section comprising front and rear and end flexible walls connected together in tubular formation open at the upper and lower portions thereof, a removable cover for the upper portion, said lower dispensing container section comprising front and rear walls overlapped with the front and rear walls of the upper pouch section affixed thereto and having lower curved portions terminating in a slot, said lower dispensing container section also including pairs of overlapped end walls pivoted together at intermediate portions and rocking on one another to open or close the slot, said pairs of overlapped end walls carried respectively by said front and rear walls of the lower dispensing container section, the lower dispensing container section opening immediately at its upper open end portion into the lower open end portion of the upper pouch section and the flexible walls of the upper pouch section yielding freely to the pivotal movements of the overlapped end walls of the lower section in the act of adjusting the width of the slot, detent means between the pairs of overlapped end walls for maintaining such overlapped end walls in selected angular positions, the lower portions of said overlapped end walls having escape mouths, and yieldable restraining means extending in alignment with the mouths.

3,004,693
ROLL PAPER HOLDER AND DISPENSER
 Dale C. Johnson, Lorne Rte., Box 606,
 Cottage Grove, Oreg.
 Filed Apr. 24, 1959, Ser. No. 808,831
 3 Claims. (Cl. 225-77)



1. A holder and dispenser for a roll of paper comprising a vertical wall which is rearwardly and concavely curved between its upper and lower ends, the distance between the upper and lower ends being greater than the initial diameter of said paper roll, said vertical wall merging at its lower end into a substantially flat up-

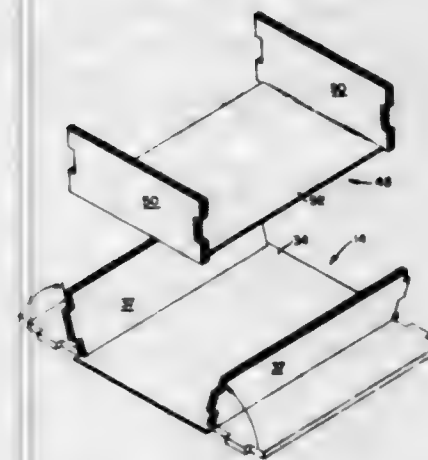
wardly and forwardly-extending ramp portion, the meeting of the ramp portion with the lower end of the vertical wall defining a transversely-extending trough which is narrower than the initial diameter of said paper roll, a lateral mounting flange means fixed to the side edges of the vertical wall and to the side edges of the ramp portion, said ramp portion having a forward end portion extending forwardly beyond the mounting flange, and the upper end of the vertical wall and a tongue on and extending forwardly from said forward end portion, said tongue being narrower than said forward end portion and having a transverse forward tearing edge.

3,004,694
CONTAINER STRUCTURES
 Clarence O. Karl, Danvers, Mass., assignor to Safe-Pack Container Co., Minneapolis, Minn., a corporation of Minnesota
 Filed Mar. 19, 1958, Ser. No. 722,541
 5 Claims. (Cl. 229-45)



1. A tubular container body formed from fibrous body sheet bent to desired cross-sectional shape and incorporating a butt seam joint between adjacently disposed marginal edges of the body sheet, said body sheet being characterized by springiness against permanent deformation and being provided with a layer of thin flexible material laminated to a major surface area of the body sheet on either side of the joint, a reinforcing strip interposed between the body sheet and surface of the laminating layer facing the same along one marginal edge of the joint and extending into overlapping relationship in respect to the opposite surface of the laminating layer on the opposite side of the joint, and said reinforcing strip being adhesively secured on both sides of the butt seam joint.

3,004,695
CARDBOARD BOX
 Orlando W. Foss, Melrose, Mass., assignor to General Box Company, Waycross, Ga., a corporation of Florida
 Filed Feb. 21, 1958, Ser. No. 716,604
 1 Claim. (Cl. 229-23)



A four-sided glued box structure comprising, in combination, a pair of laminated blanks, each of said blanks having a generally rectangular bottom layer of foldable sheet material with two parallel fold lines defining an intermediate portion and two side portions and also hav-

ing a pair of relatively stiff side plies of sheet material respectively adhesively attached to and congruently covering said side portions upon the same face of the bottom layer and forming with said side portions a pair of side panels, the opposite edges of each of the side panels, which edges are in quadrature with the edge bounding said intermediate portion, having notches cut through the full thickness thereof, one of said blanks overlying the other with the side panels of the two blanks arranged in a quadrilateral, the intermediate portions of the two blanks being of substantially the same area, the side panels of the blanks being erected and mutually joined to form the four sides of the box, said notches in said side panels being cut to form matching mortises and tenons which are mutually fittingly engaged to form a joint at each corner of the box, each joint including all of the plies of both side panels.

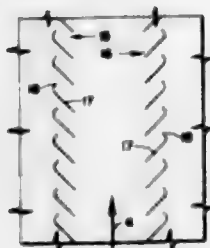
3,004,696
PARTITIONED CONTAINER
 Robert W. McCormick, Cleveland, Ohio, assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
 Filed Apr. 13, 1959, Ser. No. 805,879
 5 Claims. (Cl. 229-27)



2. A hexagonal compartmented container comprising a body portion formed from a single, rectangular blank of foldable paperboard having six elongated panels of substantially equal width defined by generally parallel score lines impressed in the blank and extending from edge to edge thereof, the blank having impressed therein a central score line extending at right angles to the parallel, panel-defining score lines to divide the blank into two half sections, there being also two sets of score lines impressed in the blank, each set extending at acute angles to the central score line and forming three adjoining, endwise aligned, diamond shaped areas, located symmetrically along the central score line and arranged with their transverse axes respectively coinciding with the first, third and fifth parallel score lines and with their apexes located respectively at the intersections of the central score line with the lateral edges of the blank and at the intersections of the central score line with the second and fourth parallel score lines, the blank being folded along the central score line to bring both half sections into face to face relation, such half sections being thus readied to form an outer container wall section and an inner section providing partitions, the folded sections being additionally folded into the form of a flat, collapsed tube with the opposed edges of the outer wall section in edgewise contacting relation to each other, and means for hingedly joining such last mentioned edges, the three diamond shaped areas, after the collapsed tube is expanded, being collapsible inwardly and axially of the tubular construction, whereby to cause the pairs of partitions adjoined to the inner sides of the respective diamond shaped areas to expand inwardly of the tube and form with the side walls three similar compartments each having a symmetrical diamond shape in cross-section.

3,004,697 TEAR LINE CONSTRUCTION FOR PAPERBOARD CARTONS

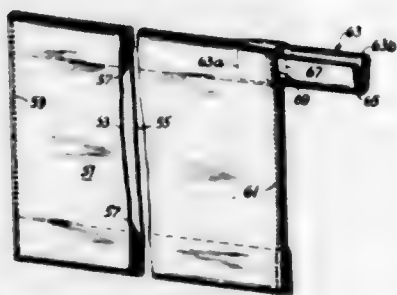
Orison W. Stone, Valley Cottage, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 25, 1957, Ser. No. 692,431
2 Claims. (Cl. 229-51)



1. In a carton made of paperboard stock, a tear line which comprises a succession of similarly disposed spaced cut lines arranged at an angle of approximately forty-five degrees to the line of tear, each cut line having at its forward end a hooked portion directed sharply around toward the line of tear at an angle of approximately forty-five degrees to the line of tear with the end of the hooked portion pointing to the central portion of the adjacent cut line at approximately right angles thereto.

3,004,698 BAGS

George H. Ashton, Sappington, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 14, 1958, Ser. No. 728,425
1 Claim. (Cl. 229-62.5)



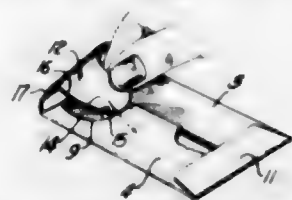
A bag made of heat-sealable material having a front wall and a back wall joined at the bag ends by gussets and joined at the bag sides by heat-sealed seams, a flattened tube of flexible heat-sealable material folded in half generally on its longitudinal center line extending through an opening in one side seam at one corner of the bag, said folded tube being in line with and straddling that one of the gussets which extends to said one corner and having a portion inside the bag and a portion outside the bag, said tube being heat-sealed where it extends through said opening at its exterior to the front and back walls and to the said one gusset, said tube having a non-heat-sealing tape adhered to its interior in the region in which the tube is heat-sealed to the front and back walls and said one gusset.

3,004,699 ENVELOPE

Eldon R. Stires, Columbus, Ohio, assignor to The Central Ohio Paper Company, Columbus, Ohio, a corporation of Ohio
Filed Sept. 7, 1960, Ser. No. 54,410
4 Claims. (Cl. 229-84)

4. An envelope comprising, a flat tubular body open at one end having front and back walls, the back wall being of double thickness along one side edge providing a pocket having an entrance opening toward the open

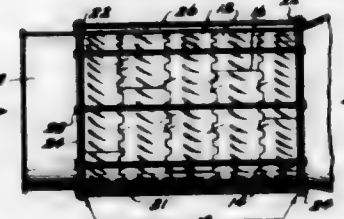
end of the envelope, the pocket entrance being defined by a lip on the outer thickness of the double thickness back wall, the lip slanting from a point at the open end of the envelope near the envelope side edge to a point



spaced downwardly from the envelope open end at the inner edge of the pocket, and a flap closure foldable over the open end and having a projecting locking tab traversing the pocket entrance lip and curving downwardly to lie within the pocket.

3,004,700 TURBINE ENGINE CASING

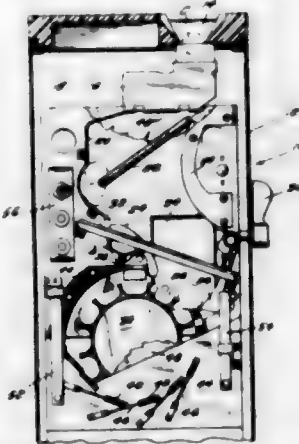
Robert Evans Warren, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed Aug. 18, 1959, Ser. No. 834,470
4 Claims. (Cl. 230-133)



1. A gas turbine engine casing assembly comprising: a plurality of annular sections having forward and aft faces thereon; inwardly-directed vanes affixed to said sections; and means to rigidly align the sections in an abutting end-to-end relationship to form said casing assembly including a plurality of longitudinally wedge-shaped projections on said forward and aft faces, some of which projections are wedge-shaped in a radially-outward direction, with the remainder of said projections being wedge-shaped in a radially-inward direction, said projections being adapted to interlock with oppositely longitudinally and radially wedged projections in the faces of abutting annular sections to form a single-walled casing assembly, and retainers for rigidly maintaining said annular sections in said interlocking relationship.

3,004,701 MOVABLE GUIDE

Walter Antonoff, Coventry, R.I., assignor, by mesne assignments, to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed Dec. 26, 1958, Ser. No. 783,039
2 Claims. (Cl. 232-7)

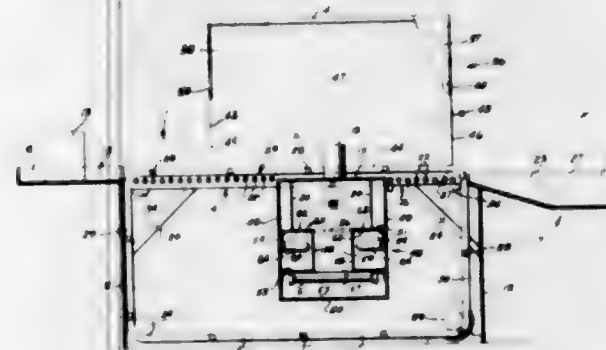


1. A coin machine having an inclined base plate, a rotor mounted on said plate having a plurality of periph-

eral pockets, means for guiding coins along said base plate to said rotor for reception by said rotor peripheral pockets, and an arcuate guide bar mounted on said base plate substantially concentric with said rotor and spaced from the outer peripheral edge thereof, and means for resiliently mounting said guide bar for radial movement with respect to said rotor, said means comprising a plurality of studs extending through said guide bar into securement with said base plate, and a resilient washer surrounding each stud and interposed between each said stud and said guide bar, whereby an outward thrust exerted along any point of said guide bar will result in the aforesaid radial movement.

3,004,702 AUTOMATIC CLASSIFICATION APPARATUS

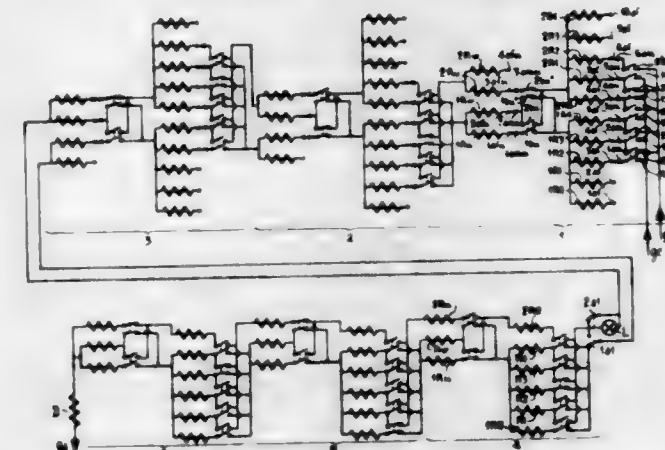
Phillip A. Kranz, Canoga Park, Calif.
(Rte. 1, Box 28, Melbourne Beach, Fla.)
Filed Jan. 22, 1957, Ser. No. 641,788
6 Claims. (Cl. 235-61.11)



1. Apparatus for determining the classification of a plurality of separate articles of different sizes and shapes, at least some of said articles having areas thereon of different combinations of chromatic colors to reflect corresponding different color combinations of light, whereby each corresponding color combination on each article is employed to designate the particular classification thereof, said apparatus comprising: sensing means responsive to light reflected from said colored areas to produce a different corresponding output signal for each of a plurality of said colors; a conveyor system to transport said articles serially to and from a sensing station adjacent said sensing means; means to illuminate said colored areas on said articles when each article is positioned at said sensing station; shielding means to prevent light reflected from said colored areas from illuminating said sensing means both before and after each article is positioned at said sensing station by said conveyor system; a plurality of two-state devices responsive to different combinations of said sensing means output signals generated by different corresponding color combinations on said articles for temporarily storing each sensing means output signal combination until light reflected from a particular article positioned at said sensing station is thereafter prevented from illuminating said sensing means by said shielding means; accumulation means for automatically registering the combination of the states of said two-state devices corresponding to the color combination on said particular article only after light reflected from all of said colored areas on all of said articles is prevented from illuminating said sensing means by said shielding means; and means for automatically resetting said two-state devices to their original states only after operation of said accumulation means to register the combination of the states of said two-state devices corresponding to the color combination of said particular article and before said immediately succeeding article is removed from said sensing station by said conveyor system.

3,004,703 CALCULATING MACHINE WITH POLARIZED RELAYS

Walter Hoppe, Bern, Switzerland, assignor to El-Re-Ma S.A. per lo sfruttamento di brevetti, Lugano, Switzerland, a corporation of Switzerland
Filed July 22, 1954, Ser. No. 445,069
Claims priority, application Switzerland July 31, 1953
25 Claims. (Cl. 235-159)



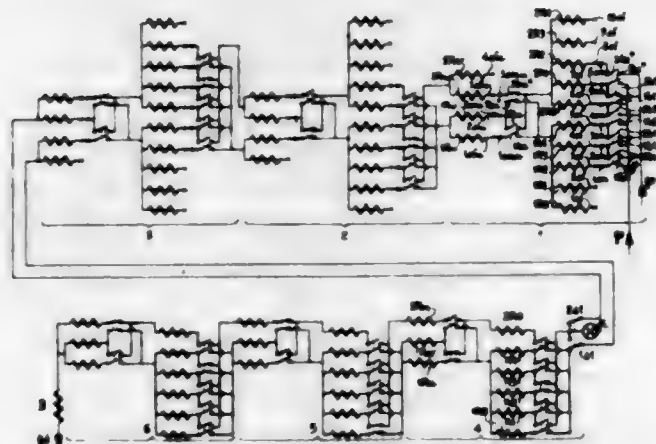
25. An electric calculating machine operated by current impulses, comprising at least a first, a second and a third group of contacts, operating elements for said contacts, the first group being for the purpose of introducing into the machine the numbers constituting the operands of an arithmetical operation, the contacts of said first group being electrically connected to the contacts of said second group and to said operating elements of the contacts of the third group, whereby the contacts of the third group are forced to assume a position determining the number corresponding to the result of an arithmetical operation, such as addition or the like, involving two other numbers determined by the contact closing positions of the said first and of the said second groups, respectively, when an impulse is transmitted into said contacts of said first and second groups, the contacts of at least one of the three groups being operated by three-position polarized relays having movable armatures, one position being a rest position and the others being working positions in which selected ones of said contacts are closed, said relays having polarized windings and control windings, the contacts actuated by the said three-position relays thereby defining different numbers according to the working position of said relays, a group of control numbers being connectable to the polarized windings or to said relay control windings, to thereby actuate the said polarized relays to one or the other of their respective working positions for addition, subtraction, multiplication or division, said armature carrying said contacts in the provision of switching elements comprising the said first, second and third groups of contacts, the control windings of the said relays of the third group of contacts being connected in series with the contacts of the first and second groups in the provision of a calculation circuit, electrical impulse generating means across the closed contacts of the first and second switch groups causing attraction of certain armatures of the relays of the third switch group, whereby the resultant closing of the contacts of said third group are adapted to define the number corresponding to the result of a simple relay operation for two numbers represented by the closed contacts of the said first and second switch groups, said control windings of the said relays of the second switch group being connected in series with the said switching contacts of the said third switch group in the provision of a transfer circuit, electrical impulse generating means across the closed contacts of the third switch group to cause attraction of certain of said contact carrying armatures of the said relays of the second switch group, whereby the contacts of said second switch group upon closing define a num-

ber depending on the one defined by the closed positions of the contacts of the third switch group, the said arithmetical operations being key controlled, said keys including means acting on multiple contact relays to provide functioning thereof in successive predetermined order, each of said multiple contact relays controlling at least one double two-position contact, and multiple contact relays controlled by said keys in circuit connection with the contacts of said second and third switch groups, said last-mentioned relays controlling double contacts movable to a position to reverse the polarity of electrical impulses from said impulse generating means according to the digits defined in said second and third groups to perform an arithmetical operation.

3,004,704

ELECTRICAL CALCULATING MACHINE WITH OPERATIONAL GROUPS OF SWITCHING ELEMENTS

Walter Hoppe, Bern, Switzerland, assignor to El-Re-Ma S.A. per lo sfruttamento di brevetti, Lugano, Switzerland, a corporation of Switzerland
Filed July 22, 1954, Ser. No. 445,070
Claims priority, application Switzerland July 31, 1953
30 Claims. (Cl. 235-159)



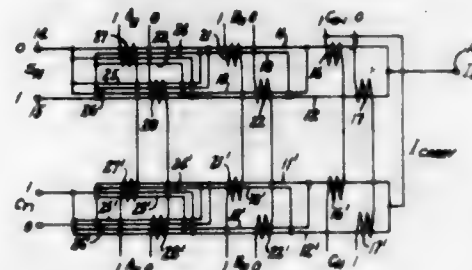
1. An electric calculating machine having a keyboard with a plurality of denomination rows, controlled by current impulses and intended to perform at least addition and subtraction; comprising at least three groups of switching elements, the first of these groups comprising multiple contacts directly operated by said keyboard capable of being closed according to different combinations in order to determine one of the numbers constituting an operand of a calculating operation, the second and third group each comprising multiple contacts, control relays for each respective second and third relay groups, each of these relays comprising at least one control winding and a movable armature, the contacts of the first group and those of the second group being connected together and to the control windings of the relays of the third group to form a calculator circuit, whereby a current impulse sent into the calculator circuit causes, during a calculation phase, the control windings of the relays of the third group to function, which determine a number constituting the result of an operation performed by means of the numbers determined by the closed contacts of the first and second groups; an impulse generator for alternately displacing the resultant number in the said third group in a calculation phase and in said second group in a transfer phase, the contacts of the third group being connected to windings of the relays of the second group so as to form a transfer circuit such that a current impulse sent by said impulse generator during a transfer phase, into this circuit causes the control windings of the relays of the second group to function, which determine a number dependent on the number determined by the closed contacts of the third group of switching elements;

the calculator and transfer control windings each comprising several denomination rows; this machine comprising also a group of control members acting on at least one of the calculator or transfer control windings in order to permit changing the result of the operation performed on the basis of the numbers determined by the contacts of the first and of the second group, the possible change consisting in the conversion of the number determined by the contacts of the first and of the second group into the complement number of said last-mentioned control members permitting the operation of an alternating sequence of calculator phases and transfer phases in order for the machine to perform, at will, at least addition and subtraction, without changing the closed position of the contacts of the first group of switching elements or the connections between the contacts of the first and the second group and the windings of the third group of switching elements.

3,004,705

SUPERCONDUCTIVE COMPUTER AND COMPONENTS THEREFOR

John Wood Bremer, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,285
35 Claims. (Cl. 235-164)



1. A digital arithmetic unit comprising a plurality of superconducting gate elements, there being at least two respective gate elements for each digit to be resolved by the arithmetic unit with all the gate elements being interconnected at the input end thereof to a source of electric current and to either one of two output terminals representing either a binary one or a binary zero, said gate elements forming at least two parallel current carrying paths for each digit to be resolved, and at least one pair of superconductivity modifying means for each digit to be resolved by the arithmetic unit with respective superconductivity modifying means representing a binary zero or a binary one and modifying a respective current carrying path, said modifying means being constructed from superconducting material having a critical magnetic field strength higher than said gate elements.

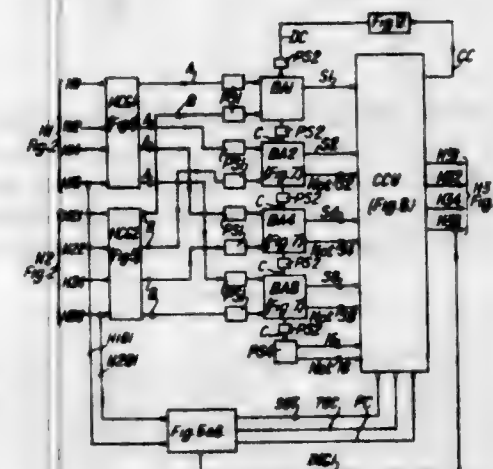
3,004,706

COMPUTING MACHINES

Ronald Percy Bowden Yandell, Streatham, London, England, assignor, by mesne assignments, to International Computers and Tabulators Limited, London, England, a British company
Filed Sept. 24, 1956, Ser. No. 611,667
Claims priority, application Great Britain Oct. 25, 1955
7 Claims. (Cl. 235-170)

1. Electrical computing apparatus comprising a store for numbers in different scales of notation each number being preceded by a scale-of-notation indication and each digit of the numbers being represented in a parallel binary code, a parallel binary coded adder having a plurality of orders each order having an output, means for simultaneously reading two numbers serially from the store for addition by said adder, notation control means connected to the store and arranged to store said scale-of-notation indication during the addition of the numbers, a number of radix lines providing outputs from said notation con-

trol means each radix line being appropriate to a different radix of said digits and the notation control means being operable during reading of the numbers from the store to energize the appropriate radix line for each pair of digits as they are read, a plurality of correction coding gates having inputs connected to said adder outputs, output lines corresponding to said parallel binary code orders connected to said gates and including a carry line connected to the adder, the correction coding gates including a gate for each parallel binary code order operable to route a binary sum unchanged on to the output lines

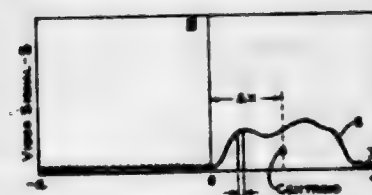


when the sum does not exceed the radix, and each radix line being connected to at least one gate of the remaining gates which are each connected to predetermined outputs from the adder so that energization of the radix line appropriate to the digits being added conditions the gates connected to said radix line to cause said gates to recode the binary sum output from the adder when it exceeds the radix to produce a corrected binary coded digit in the scale of notation indicated and a carry for addition to the sum of the next digits of the numbers.

3,004,707

PULSE CENTER DETERMINING SYSTEM

Robert E. Wilson, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 17, 1955, Ser. No. 547,586
2 Claims. (Cl. 235-183)

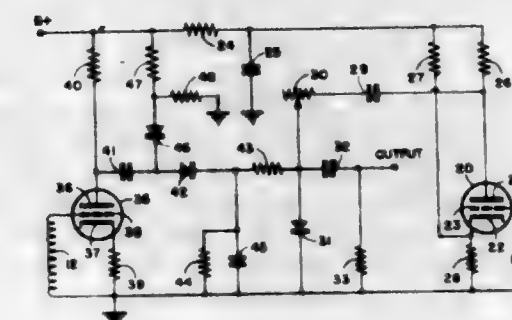


1. A system for determining the displacement in time of a video signal along a time-base from a predetermined point on the time-base, the system comprising, a source of video signals, a source of sawtooth sweep voltage linear with time beginning at a time corresponding to said predetermined point, a multiplier multiplying the video voltage by the sweep voltage at corresponding points in time, a first integrating circuit coupled to and integrating the product output of said multiplier, a second integrating circuit coupled directly to said video source, and a divider circuit coupled to the outputs of the two integrator circuits providing a signal corresponding to the ratio of the output of the first integrator divided by the output of the second integrator.

3,004,708

VACUUM TUBE ATTENUATOR

Robert A. Cunningham, Orlando, Fla., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 792,185
5 Claims. (Cl. 235-189)

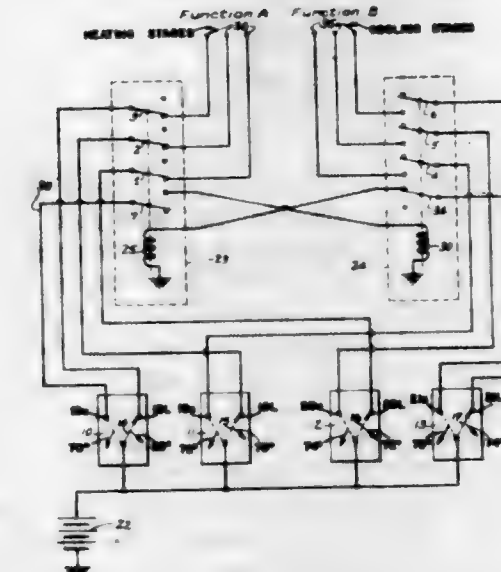


1. In a control network for controlling an error signal in accordance with a related control signal, the combination comprising: an error signal amplifier having an input circuit and an output circuit, said error signal being applied across said input circuit, and a first diode connected across said output circuit; a control signal amplifier having an input circuit and an output circuit, said control signal being applied across said input circuit, and said output circuit including a second diode connected in series with said first diode; and a source of direct currents for initially biasing said first and second diodes into conduction.

3,004,709

CONTROL CIRCUIT FOR A CONDITION REGULATION SYSTEM

James E. Hays, Prince Georges County, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 29, 1957, Ser. No. 649,550
7 Claims. (Cl. 236-1)



7. A control circuit for a condition regulation system having a plurality of condition increasing means and a plurality of condition decreasing means, each operable in response to an electrical control signal, a source of electrical energy for said control signals, a plurality of condition sensitive switch means each having a common terminal connected to said source of electrical energy, an upper terminal switchable to said common terminal for all conditions in excess of an upper limit, and a lower terminal alternatively switchable to said common terminal for all conditions lower than a lower limit, the response limits of condition for each switch being different so as to cover the range over which condition is to be

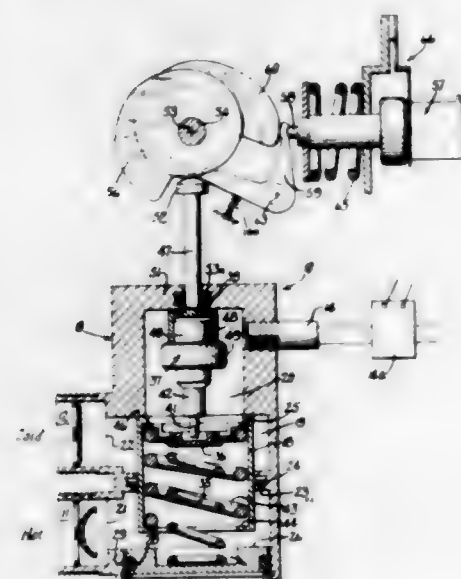
permitted to vary, an increasing condition control relay switch having electrical actuating means and a plurality of poles, a decreasing condition control relay switch having electrical actuating means and a plurality of poles, means connecting a plurality of said upper terminals through normally open contacts of said decreasing condition control relay switch to said condition decreasing means, means connecting a plurality of said lower terminals through normally open contacts of said increasing condition control relay switch to said condition increasing means, means to actuate said increasing condition relay switch and deactivate said decreasing condition relay switch when all of said condition decreasing means have been disconnected, and means to actuate said decreasing condition relay switch and deactivate said increasing condition relay switch when all of said condition increasing means have been disconnected.

3,004,710

ADJUSTABLE THERMOSTATIC VALVE

Robert W. Couffer, Jr., Oak Park, and Richard H. Powell, Lake Zurich, Ill., assignors to The Dole Valve Company, Morton Grove, Ill.

Filed Jan. 7, 1958, Ser. No. 707,546
3 Claims. (Cl. 236—12)



1. In a thermostatic mixing valve, a valve body having a mixing chamber therein, hot and cold water inlets into said mixing chamber, an outlet from said valve body and mixing chamber, a metering valve in said mixing chamber metering the flow of hot and cold water thereto, a thermal element in said mixing chamber for operating said valve and carried in said mixing chamber for longitudinal floating movement therealong, a control rod reacting against said thermal element, a cam engageable with said control rod, means for adjusting said cam to vary the position of said control rod, a lever engageable with said control rod, means for moving said lever to vary the position of said control rod irrespective of the position of said cam, a second cam engageable with said lever to limit movement thereof, and means for adjusting said second-mentioned cam to determine the limit of movement of said lever.

3,004,711

TEMPERATURE CONTROLLER

Jon H. Myer, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 28, 1958, Ser. No. 731,504
11 Claims. (Cl. 236—15)

7. In a thermocouple temperature control system having a thermocouple circuit comprising a thermocouple,

and a temperature controller responsive to the temperature induced voltage of said thermocouple, the improvement for overcoming thermal and mechanical lag which may be present in the system, which improvement comprises: means for generating in said thermocouple circuit an independent recurring waveform voltage, said means



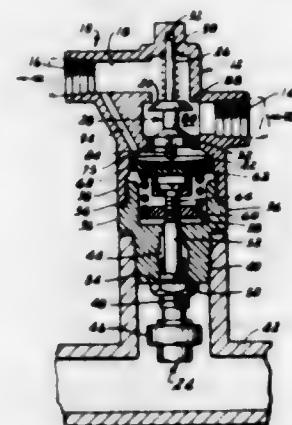
consisting essentially of magnetic field generating means inductively coupled to said thermocouple circuit, and mechanical means coupled to said generating means for periodically varying the magnetic field generated thereby, whereby to induce voltage changes in said circuit.

3,004,712

SNAP-ACTION THERMOSTATIC VALVE

Thomas Edmund Noakes, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed May 20, 1960, Ser. No. 30,477
6 Claims. (Cl. 236—48)



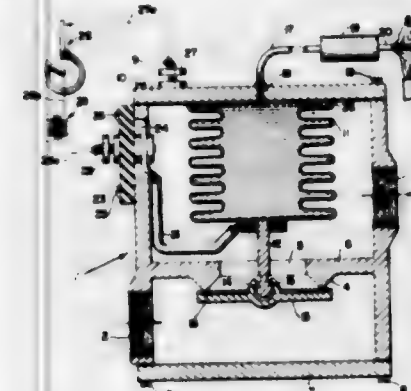
1. A snap-action thermostatic valve for liquid comprising a casing having inlet means and outlet means; a main passage for liquid flow through the casing from the inlet means to the outlet means; a valve element for controlling flow through the main passage; snap-action means including a snap disc; thermostatic means subject to reciprocal movement in response to changes of temperature; said thermostatic means being operative upon reciprocation in a first direction to actuate said snap-action means to suddenly move the valve element in one direction; biasing means constantly urging the valve element in the opposite direction; said biasing means being operative upon reciprocation of the thermostatic means in the second reverse direction to suddenly move the valve element in said biased direction; thrust means positioned upstream of the valve element for transmitting movement of the snap-action means to the valve element; said thrust means including a plug element; said main passage having an opening to slidably receive the plug element; a bypass passage for constant liquid flow through the casing from the inlet means to the bypass downstream side of the plug element and thence to the outlet means; said snap disc forming a wall portion of the bypass passage; said disc having an opening for the passage of liquid therethrough to permit equalization of liquid pressure on both sides thereof; and a restriction in the bypass between the inlet means and the bypass downstream side of the plug element.

3,004,713

COMBINATION VALVE AND SAFETY PILOT

Joseph O. Thorsheim, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 21, 1957, Ser. No. 697,964
2 Claims. (Cl. 236—68)



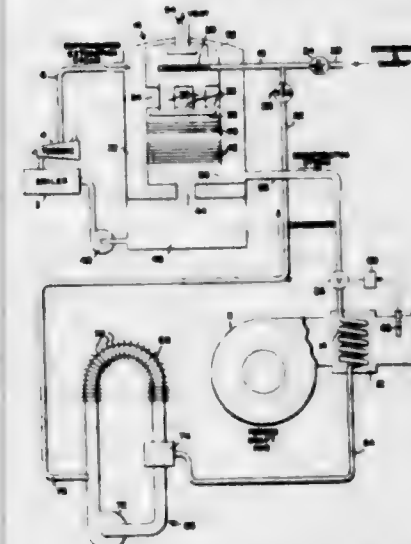
1. The combination comprising a metallic valve body having an inlet and an outlet and a passage therebetween; a valve seat extending across said passage; an electrically nonconductive valve cooperable with said seat, and an expandable chamber made of metallic electrically conductive material in said passage between said seat and said outlet; means operably connecting said valve to a movable wall of said chamber; another portion of said chamber being fixed to and electrically connected to said metallic valve body; a fluid-filled temperature responsive unit; a fluid passage between said chamber and said unit; and condition responsive means including electrical connections to said body and to said moving wall for passing a current through said wall thereby electrically heating said chamber so as to cause expansion of the fluid in said chamber; the fluid in said chamber being heated by the joint action of the temperature responsive unit and the electrical heating of said chamber by said condition responsive means; said fluid exerting sufficient expansive forces in said expandable chamber to open said valve only on the existence of the action of the temperature responsive unit and the simultaneous passage of electrical current to said expandable chamber.

3,004,714

HEATING SYSTEM

John E. Fearon, Atlanta, Ga., assignor to Cochrane Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 14, 1958, Ser. No. 708,698
1 Claim. (Cl. 237—67)



A system comprising a deaerator having means for the mixing of superheated steam and water in heat ex-

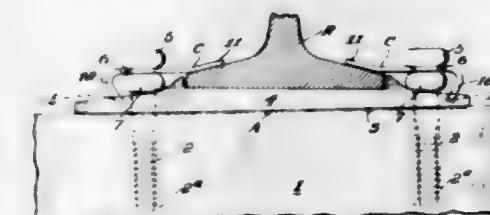
change relationship and producing substantially saturated steam at a pressure of 50-55 p.s.i.g., an air preheater, means for bleeding said saturated steam to said preheater, and pumping means for returning condensate from said preheater to said deaerator, the last-mentioned means comprising a centrifugal pump and recirculating connections including an eductor receiving said condensate.

3,004,715

BONDED TIE PLATE ASSEMBLY

William E. Gadd, Islesboro, Maine, assignor to Poor & Company, Chicago, Ill., a corporation of Delaware

Filed July 22, 1960, Ser. No. 44,670
3 Claims. (Cl. 238—287)



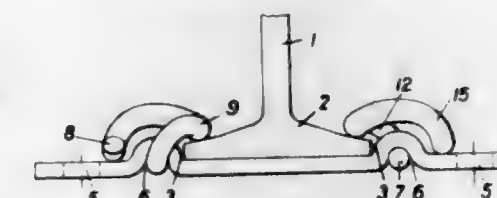
1. An integrated tie and tie plate assembly, comprising, in combination, a molded concrete tie provided with pre-formed holes whose inner ends may be enlarged and having its tie plate surface sandblasted in the area including said holes, a tie plate having openings to register with said holes, a layer of adhesive bonding the tie plate to the tie, and rail fastening means including a shank embedded in additional adhesive material filling the holes, said rail fastening means having its shank provided with a plurality of annular shoulders, and at least one longitudinal groove extending from approximately the tip thereof to approximately the mouth of the hole, an elongated head at the top of the shank disposed when the fastening is set in the adhesive to be at right angles to the rail, a spring rail engaging clip having its body provided with a slot to receive said head and to be interlocked therewith upon turning through an angle of 90°.

3,004,716

RAILWAY RAIL SECURING MEANS

Per Fande-Rolfen, Stabekk, Norway, assignor, by mesne assignments, to Lockspike Limited, London, England, a British company

Filed July 23, 1957, Ser. No. 673,645
Claims priority, application Norway Aug. 3, 1956
7 Claims. (Cl. 238—349)

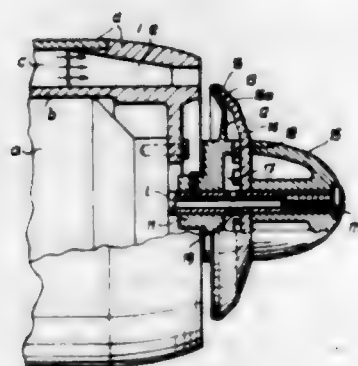


1. In combination, a fastening member comprising a length of resilient metal of rod form which is bent so as to have, progressing from one end of the length of metal to the other, a first portion which constitutes a substantially straight leg, then a second portion in the form of a reverse bend, then a third portion extending generally in the direction of said one end, then a fourth portion which extends from the third portion, generally to that side thereof upon which said leg is disposed, and constitutes a further reverse bend, and finally a fifth portion extending in the general direction towards the junction between the first and second portions, a railway rail, a flange at the base of the rail, a fixed anchorage member disposed adjacent the rail, portions of said anchorage member defining a passage which extends alongside the

rail, parallel to the length of the rail, and is closed at the top and open at least at one end, and a fixed unyielding surface which, as seen from the rail, is disposed outward of said passage, the fastening member having said first portion thereof inserted in said one end of the passage and said third and fifth portions thereof bearing one upon the top of the rail flange and the other upon said surface.

3,004,717

APPARATUS FOR PRODUCING AN AEROSOL
Karl Flury, Adlikwil, Zurich, Switzerland, assignor to Defensor AG., Zurich, Switzerland
Filed Apr. 25, 1958, Ser. No. 731,014
Claims priority, application Switzerland Apr. 27, 1957
3 Claims. (Cl. 239-224)



1. Apparatus for producing an aerosol mist, comprising a motor-driven blower for producing an air current, two centrifugal disks driven by the motor and having peripheral edges engaging each other, means to supply a liquid axially between said disks, said liquid being thrown out in a film between the edges of said disks, and means for guiding said air current axially over said peripheral edges of the disks for breaking up said film into mist drops, one of said centrifugal disks being rigid and provided at its peripheral portion with a frusto-conical inner face, the other disk having an elastically pliable frusto-conical peripheral portion substantially complementary to the frusto-conical inner face of said rigid disk, the conical portion of said other disk being arranged generally internally of the frusto-conical portion of said rigid disk, the peripheral edge of said other disk approaching the peripheral edge of said rigid disk due to centrifugal action to define therewith an annular aperture of diminishing size under increased speed of rotation.

3,004,718

PLASTIC SPRAY BOTTLE
William G. Gorman, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 15, 1958, Ser. No. 728,627
5 Claims. (Cl. 239-362)

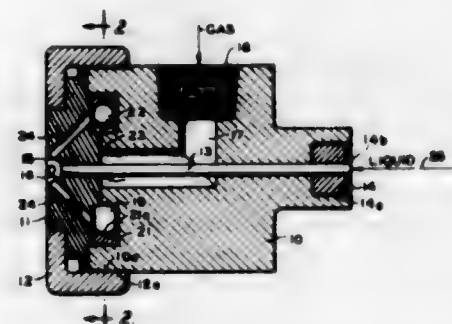


1. A spray device comprising a non-permeable container having a pouring neck and a removable cap and a flexible plastic squeeze bottle or the like having an

opening at one end thereof for removable disposition on said non-permeable container neck so that there is a passage between the squeeze bottle and the non-permeable container, similar means on said bottle and cap for selective securement to the neck of the container, spray-forming means at the opposite end of said squeeze bottle, and a capillary tube extending therefrom into the non-permeable container through said passage, the cap closing the non-permeable container when the flexible plastic squeeze bottle is removed, the latter closing the non-permeable container when in use.

3,004,719

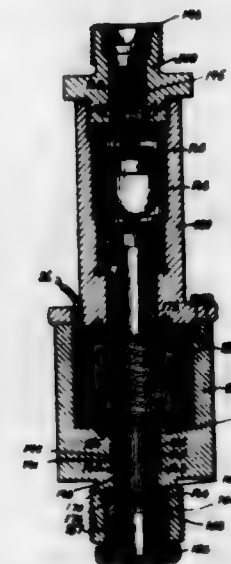
APPARATUS FOR SPRAYING VISCOUS LIQUIDS
Walter C. Pospisil, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,337
9 Claims. (Cl. 239-381)



8. A spray nozzle suitable for dispersing viscous liquids comprising a cylindrical body portion having a tubular channel passing therethrough from a threaded inlet in the wall of said body portion inwardly toward the center thereof and continuing axially to an outlet in one end of said body portion, said body portion having an annular rabbet in said end thereof concentrically positioned about said outlet and forming a core between said channel and said rabbet, said core containing three symmetrically spaced arcuate grooves passing tangentially from said channel to said rabbet; a ring member positioned inside and against the outer wall of said annular rabbet, said ring member having a concave surface on its face toward the axis of said body portion and being constructed of a highly wear resistant material; a solid ball freely contained within said rabbet and fitting smoothly against said concave surface of said ring member, said ball being rotatable about said annular rabbet against said ring member by the force of gas flowing through said channel and into said rabbet with a spiral flow imparted by the curvature and arrangement of said grooves in said core; a disk shaped head portion fitting against said end of said body portion, axially aligned therewith, and closing said annular rabbet and arcuate grooves forming an annular chamber and arcuate passages therefrom respectively, said head portion having an axial bore passing therethrough and terminating in a flared opening in the outer face thereof and said head portion containing four symmetrically positioned straight passages communicating said chamber and said flared opening, said straight passages forming equal angles with the axis of symmetry of said head portion and entering said chamber in the path of said ball so that said ball when directly over one of said straight passages substantially seals same from said chamber; a threaded collar securing said head portion to said body portion; and a main tubular conduit passing axially through said body portion, fitting snugly in said bore in said head portion and terminating at the beginning of said flared opening, said main conduit and said straight passages being positioned to issue converging streams toward substantially the same point.

3,004,720

FUEL INJECTION VALVE ARRANGEMENT
Heinrich Knapp and Leo Stelinka, Stuttgart, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Sept. 21, 1959, Ser. No. 841,061
Claims priority, application Germany Sept. 24, 1958
13 Claims. (Cl. 239-585)



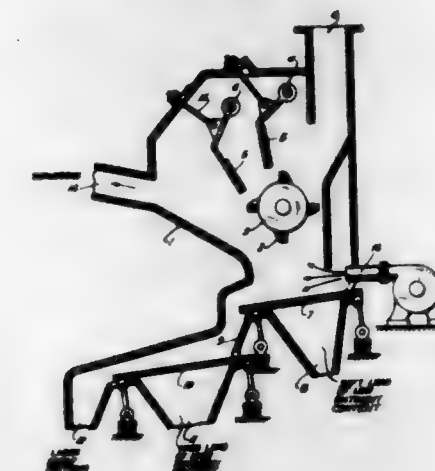
11. A valve arrangement comprising, in combination, valve body means including a hollow main body portion having a bore, an inlet portion formed with an inlet bore communicating with and aligned with said bore of said hollow main body portion, and a discharge portion formed with a small chamber and with a discharge duct communicating with the interior of said main body portion and having a valve seat; electromagnetic winding means located in said interior of said hollow valve body portion and including a wall defining an inner space; an armature member partly located in said inner space and having a portion located in said bore of said main body portion and in said inlet bore and being slidably mounted in the same, said armature member having an inner passage communicating with said inlet bore, and an oblique surface located in said inlet bore; an adjusting screw means passing through said inlet portion with said inlet bore and engaging said oblique surface for adjusting the position of said armature member; spring means abutting said armature member and said valve body means for urging said armature member against said screw means; a movable actuating member located in said inner space and forming a gap with said armature member surrounded by said winding means, said gap being adjustable by adjustment of said armature member by said adjusting means, said actuating member having a passage connecting said passage with said chamber and discharge duct; and a valve member secured to said actuating member and being movable with the same to and from a closing position engaging said valve means for closing said discharge duct, said valve member having a passage communicating with said passages and a duct connecting said last-mentioned passage with said small chamber.

3,004,721

SCRAP COMMUNUTING AND SORTING PROCESS
Odo Nötzel, Karnten, Austria, assignor to Hoesung Hartzerkleinerrungs- und Zement-Maschinenbau-Gesellschaft m.b.H., Münster, Westphalia, Germany
Filed Sept. 10, 1957, Ser. No. 683,138
Claims priority, application Germany Sept. 10, 1956
3 Claims. (Cl. 241-8)

1. A scrap comminuting and sorting process comprising the steps of exposing to a centrifugal impact comminuting action storage battery scrap made up essentially of four parts, all haphazardly arranged, as follows: first-

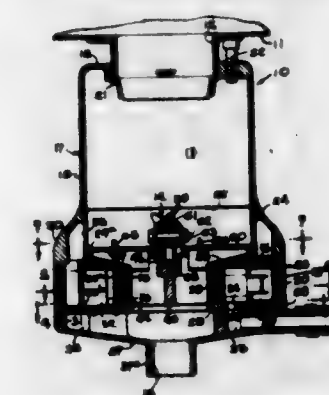
ly soft lead derived from the terminals, straps and connecting links, secondly active material of the plate consisting of metallic lead dust and lead compounds, lead oxide or lead sulphate depending on the degree to which the battery is discharged, thirdly hard lead, originating from the plates, with an antimony content of 7.5 to 8%, and finally the separators, said impact comminuting action reducing the soft lead and active material to a relatively fine granular size, the hard lead to a relatively coarse granular size, the separators to pieces of relatively large size, and the residue of the scrap to relatively large scrap portions larger than the coarse hard



lead granules; removing from the impact comminuting action substantially all of the separator pieces while the remaining scrap is still exposed to the comminuting action and before said remaining scrap is screened; first screening, after said removal of the separator pieces, the soft lead and active material of fine granular size from the remainder of the comminuted material made up substantially of the coarse hard lead and relatively large scrap portions; then screening the coarse hard lead from said relatively large scrap portions; and finally removing the latter relatively large scrap portions which are not screened.

3,004,722

WATER POWERED GARBAGE DISPOSAL DEVICE
John R. Hoagland, 4502 Sovereign Blvd., Rockford, Ill.
Filed Feb. 16, 1959, Ser. No. 793,335
6 Claims. (Cl. 241-46)



5. A water powered waste disposal unit having, in combination, a cylindrical housing defining a waste receiving cavity, means defining an annular chamber surrounding said cavity, a rotor casing disposed beneath the cavity and having a discharge opening for waste and water, said rotor casing having an arcuate recess extending part way around the wall of said casing, a rotor disposed within said casing coaxially therewith and mounted in the casing to turn about its own axis, a plurality of vanes mounted in said rotor to slide radially into and out of said recess upon turning of the rotor, a grinding means disposed within said cavity and mounted

on said rotor to rotate bodily therewith, means for supplying water under pressure to said recess to turn the rotor, said casing having a passage connecting said chamber and said recess at the inclined end thereof, said vane as it is cammed in by said inclined end being effective to pump water from the recess through the passage and into said chamber, and means defining annular passage connecting said cavity and said chamber for the discharge of water from the chamber over said grinding means thereby flushing the waste from the grinding elements and to said discharge opening.

3,004,723
FEED MILL MACHINE
Billy E. Carder, North English, Iowa
Filed Apr. 6, 1960, Ser. No. 20,458
2 Claims. (Cl. 241-189)

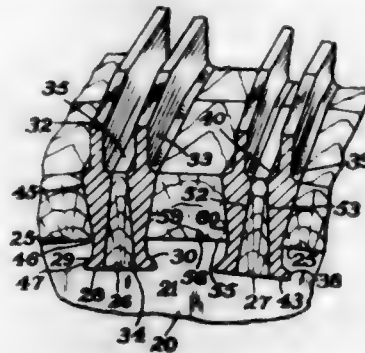


1. A feed mill for shelling ear corn, crumbling the cobs and shredding the husks comprising, a hollow elongated housing having a discharge opening at the bottom and an inlet opening formed in a side thereof through which ear corn enters, rotatable means mounted within said housing for movement about a normally horizontal axis, said rotatable means including a shaft having a plurality of radially extended ear corn engaging finger elements the outer ends of which are curved toward the direction of rotation of said rotatable means, a plurality of elongated bars supported on said shaft in a spaced relation therewith, said bars extended parallel to the horizontal axis of said rotatable means, an elongated perforated grate for coaction with said bars pivotally mounted at a lower end thereof to said housing in spaced relation to said bars, the remainder of said grate above said pivotal connection curving in a convolute manner partially about said rotatable means with the upper end of said grate contiguous with said bars so as to form a passage beginning at the lower end of said grate and between said grate and said bars continually narrowing in cross sectional area toward said grate upper end, whereby ear corn drawn by said finger elements into said passage is fractured by coaction of said bars with said grate, an angle iron supported in said housing in spaced relation from said horizontal axis, means for adjustably supporting said grate including a plurality of rods pivotally connected at their lower ends to said housing and curved complementary to said grate and connected thereto, the upper ends of said rods spaced radially outwardly from said grate and inserted through openings formed therefor in said angle iron, and means threadably mounted on said upper ends for adjustably locking said upper ends to said angle iron, whereby said rods are lockable in selective positions to radially adjust said grate relative to said rotatable means.

3,004,724
JORDAN PLUG
Bruno E. Prevost, West Boyford, Mass., assignor to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Nov. 3, 1958, Ser. No. 771,305
4 Claims. (Cl. 241-294)

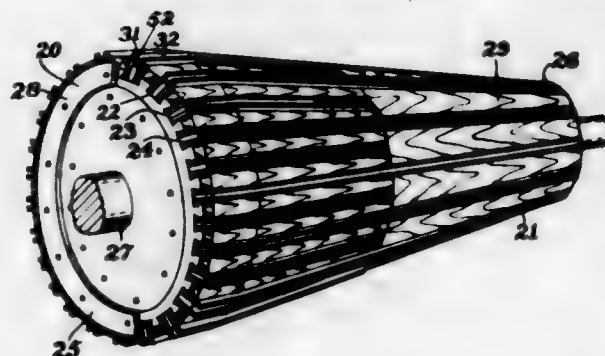
1. A plug for a rotary refiner comprising a plug body having a plurality of angularly spaced, longitudinally extending grooves of dovetail cross section in the surface thereof; a pair of plug bars seated in each said groove,

each bar of each pair having an inside and an outside, longitudinal shoulder therealong intermediate of the height thereof, a single planar, inside face converging from the inside shoulder to the bottom of the bar and a multi-planar, outside face including a face converging from the outside shoulder to said plug body surface and a face diverging from proximate said body surface to the bottom of the bar, said divergent face being flatwise against the adjacent dovetail wall of said groove; a single, narrow expandable filler of uniform, inverted keystone cross section seated in each said groove between the adja-



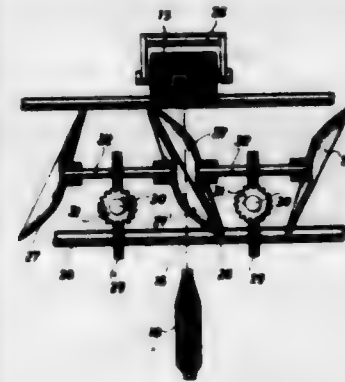
cent inside faces of the bars in said groove and extending from the groove bottom up to the inside shoulders of said bars, the inverted keystone cross section of said narrow expandable fillers locking the same against radial outward movement relative to said bars and locking said bars against radial outward movement relative to said groove and a wide expandable filler of inverted keystone cross section seated on the surface of said plug body between the adjacent outside faces of each adjacent pair of bars and extending from said body surface up to the outside shoulders of said bars.

3,004,725
DOUBLE BAR JORDAN PLUG
Bruno E. Prevost, West Boyford, Mass., assignor to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Sept. 9, 1959, Ser. No. 838,900
6 Claims. (Cl. 241-294)



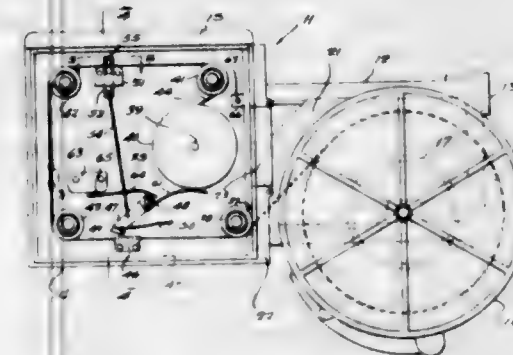
6. In a Jordan plug of the undercut dovetail groove type the combination of a pair of plug bars arranged at a spaced distance apart in each said groove, said bars being parallel and each of rectangular cross section; a narrow expandable filler of rectangular cross section seated in each said groove between the bars therein, a wide expandable separator of keystone cross section seated on the surface of the plug between each adjacent pair of bars in said grooves, said separators each having continuous grooves in the side faces thereof; first longitudinally spaced means punched in the material of the lower portion of said bars for anchoring the same in said undercut grooves and anchoring said filler therebetween and second longitudinally spaced means punched in the material of the intermediate portion of said bars for anchoring said separators between adjacent pairs of bars.

3,004,726
WINDING MACHINES, PARTICULARLY CROSS-WINDING MACHINES
Josef Küppers, M. Gladbach, Germany, assignor to Firma Franz Müller, Maschinenfabrik, M. Gladbach, Germany, a corporation of Germany
Filed June 3, 1958, Ser. No. 739,606
Claims priority, application Germany July 23, 1957
12 Claims. (Cl. 242-43.2)



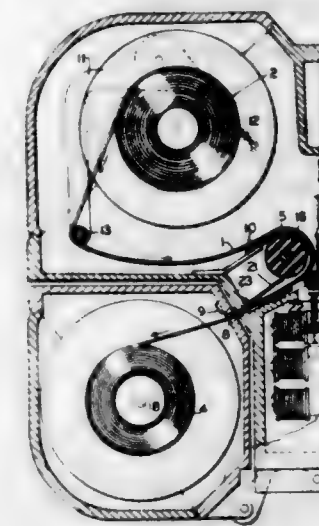
1. In a cross-winding machine including winding spools, thread guide means, each of the latter comprising two parts separated from each other by a slit extending entirely throughout said guide means and being disconnected at the inside thereof, so that said slit runs through without any member extending across said slit, and each of said parts being mounted on its outside and means engaging the outside of each of said parts for individual driving of said parts.

3,004,727
AUTOMATIC FILM CARTRIDGE LOADING MACHINE
Jerald R. Debenport, Jr., 1220 N. Parkside Drive, Tyler, Tex.
Filed Feb. 26, 1960, Ser. No. 11,320
7 Claims. (Cl. 242-55.11)



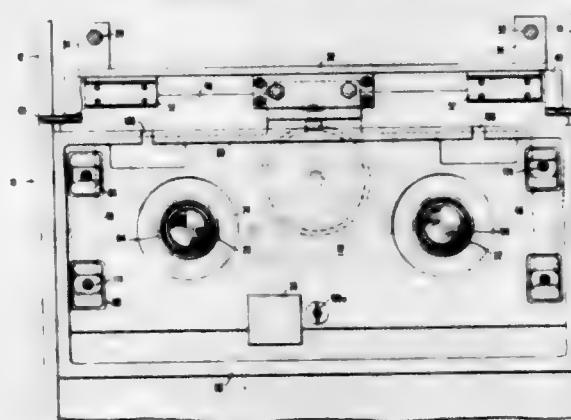
1. In a film rewinding device, a support, a driving shaft journaled on said support, a film developing cartridge engaged with said driving shaft, an electric motor mounted on said support, means drivingly coupling said motor to said shaft, means on the support defining a light-tight enclosure, a spindle in said enclosure adapted to rotatively receive a film spool, film guide means between said spindle and said film developing cartridge, said guide means including a movable trigger member mounted on said support and adapted to engage a first portion of the film from a spool mounted on said spindle, means biasing said trigger member in a direction substantially transverse to said first film portion, a normally open switch, an energizing circuit connected to said motor through said switch, means mechanically coupling said switch to said trigger member and holding said switch closed only while said first film portion engages the trigger member, means to clampingly engage a second portion of the film from said spool, and means to hold said last-named means in unclamping position while said first film portion engages said trigger means.

3,004,728
OSCILLOGRAPHIC RECORDER
Dan M. Ihle, Lynn, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 1, 1959, Ser. No. 856,423
8 Claims. (Cl. 242-55.11)



1. For use in an oscillographic recorder having a motive system for moving a recording strip between a supply spool and a takeup spool, an arrangement for stopping the movement of the strip from the supply spool upon the occurrence of a fault in the motive system comprising: a rotatable drive member positioned intermediate the supply and takeup spools for engaging and driving the strip, means to rotate said drive member, and first and second loading members positioned on opposite sides, respectively, of said strip adjacent to said drive member, one of said loading members being normally disposed out of contact with said drive member, said one loading member being movable relative to said drive member in response to the pileup of said strip in the region between said loading members upon a fault in said strip moving system, and said means to rotate said drive member being of sufficiently low torque as to be unable to overcome the frictional load imposed upon said drive member by contact with said one loading member.

3,004,729
TAPE CARTRIDGE AND LOADING MECHANISM
Earl D. Barkhoff, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 8, 1960, Ser. No. 1,387
14 Claims. (Cl. 242-55.13)



2. In a self-loading tape mechanism comprising: a tape transport mechanism having a face panel, a pair of tape reel driving spindles adapted to accommodate a pair of cartridge encased tape reels in driving relation mounted in said panel, a tape processing head mounted in said panel, means for supporting a tape reel cartridge

wherein tape reels within such cartridge are axially aligned with said tape reel driving spindles, an annular hood extending forwardly from said panel and providing a partial enclosure for said spindles and head, and means extending through said panel adapted to engage a tape reel cartridge on said supporting means and shift the same into contact with said hood.

3,884,730

ROLL BUSHING

Linsley S. Gray, Aurora, Ill., assignor to Gray Stamping and Manufacturing Company, a corporation of Illinois

Filed Apr. 28, 1958, Ser. No. 731,227
3 Claims. (Cl. 242-68.6)

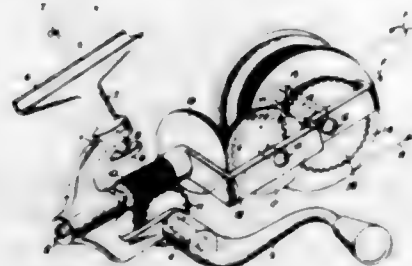


1. In a cylindrical roll of flexible material which is wound upon itself to provide a cylindrical channel extending through the center of the roll, a bushing for use as a re-enforcing insert in the coreless roll and which is adapted to fit entirely within the end of the channel of the roll, said bushing comprising a generally cylindrical metal shell having a central portion with an outer diameter less than the inner diameter of the channel and provided at one end with an external annular flange portions which is reversely bent in outwardly flared relation to said central portion of said shell, and said shell being provided at its other end with a plurality of circumferential ribs having an outer diameter which is substantially the same as the inner diameter of the channel, the outer edges of said ribs defining a supporting surface adapted to contact the inner surface of the channel so as to support the walls of the channel, each of said ribs being formed from adjacent sections of said shell which are folded back upon one another in a direction generally transverse to the axis of said shell, each of said ribs having sides in substantially face-to-face contact and sides of adjacent ribs being in substantially face-to-face contact, and said bushing terminating at said other end in an annular flange portion extending transversely of the axis of said shell and presenting an axial opening through said shell, said flange portion comprising a side of one of said ribs.

3,884,731

REEL FOR FISHING RODS

Paul Mauborgne, Bernouville (Eure), France
Filed Nov. 26, 1956, Ser. No. 624,321
Claims priority, application France Dec. 1, 1955
5 Claims. (Cl. 242-84.2)



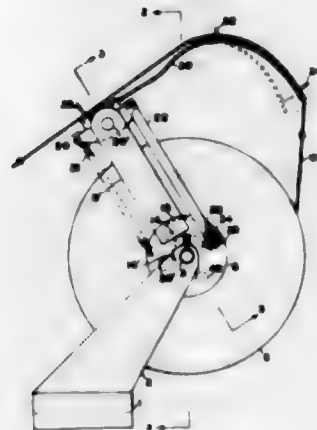
1. In a fishing reel adapted to be mounted on a fishing rod, including a spool, in combination, a primary support,

means carried by said primary support for mounting said spool for rotation about its axis, a second support in which the primary support is mounted for rotation about the axis of said primary support, means for selectively mounting the spool with its axis parallel to the fishing rod while casting or at right angles thereto in the reeling-in position, drive means, and gear means operatively connected with said primary support, said spool and said drive means to rotate the spool about its axis and simultaneously to rotate the primary support about its axis.

3,884,732

DOUBLE BRAKE MEANS FOR REEL

Arnold F. Fischer, 8 Taft Place, Lindenhurst, N.Y.
Filed Dec. 12, 1960, Ser. No. 75,436
4 Claims. (Cl. 242-156.2)

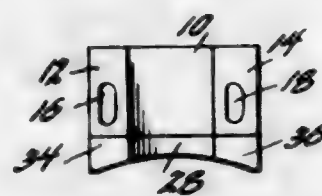


1. In means for dispensing wire from a reel of the type having a fixed mounting shaft for said reel and a pair of side spool holding members rotatably mounted on said shaft; brake means comprising a brake drum on one of said side members, a mounting plate fixedly mounted on said shaft adjacent said drum, a friction member pivotally mounted on said plate and adapted to bear against said drum, means to spring load said friction member with first and second separate springs each separately anchored to said fixed plate, first means to release said first spring in response to a predetermined first pulling tension on a strand mounted on said reel, and second means to release said second spring in response to a predetermined increased pulling tension on said strand.

3,884,733

YARN GUIDE ELEMENT

Alva C. Spivey, 2539 Jefferson St., Paducah, Ky.
Filed June 4, 1959, Ser. No. 818,149
3 Claims. (Cl. 242-157)



1. A yarn guide comprising a solid base member formed from shock and strain resistant plastic and having an end face, a recess formed in said end face extending in the direction of the recess axis through one dimension of said face and in a transverse direction less than the corresponding dimension of said face so as to terminate short of the edges of said face, and opposed notches cut into said face on either side of said recess, said notches communicating with said recess; and an insert of wear-resistant ceramic material disposed within said recess and restrained thereby against movement in said transverse direction, said insert having extensions projecting

laterally therefrom, said extensions being received within the notches in the face of said base member and serving to restrain the insert against axial movement relative to the recess axis in at least one direction.

3,884,734

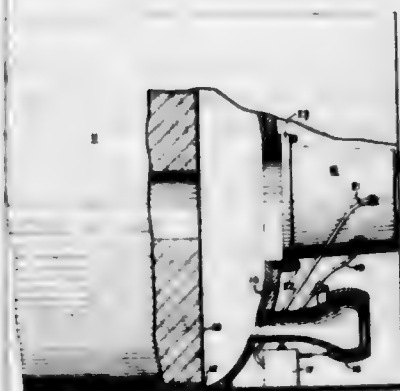
HYDRAULIC POWER SUPPLY

James E. Radford, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 27, 1959, Ser. No. 796,181

2 Claims. (Cl. 244-14)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a missile having a plurality of hydraulic actuators for effecting control of the missile in flight, an hydraulic power supply comprising; a rocket motor for generating propulsive gases, an open ended casing disposed against one end of said motor to receive a portion of the propulsive gases and partially filled with hydraulic fluid, a baffle plate closing the open end of said casing, and having a plurality of bleed holes to admit a portion of the propulsive gases into the casing, heat and corrosion resistant shield means bonded to said plate to protect it from erosion by said propulsive gases, a piston slidably disposed within said casing and operated by a portion of the propulsive gases from the rocket motor to pressurize the fluid in said casing, a plurality of bores in the wall of said casing, hydraulically connected to said actuators, normally closed spring biased valve means in said bores and opened by pressurized fluid to permit pressurized fluid to flow to said hydraulic actuators when said valve is open, and channel means in the walls of said casing to receive spent hydraulic fluid from said actuators, and port means connected to said channel means for discarding spent fluid.

3,884,735

PARTICLE DETECTION APPARATUS

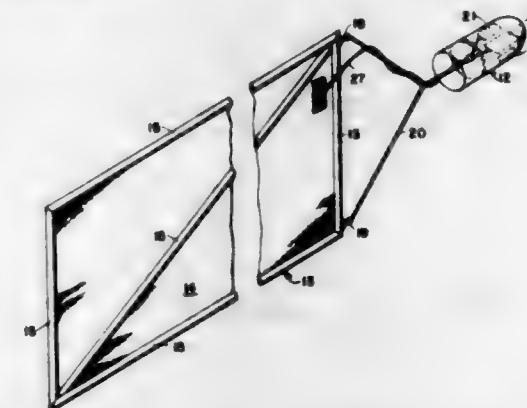
William H. Kinnard, Newport News, Va., assignor to the United States of America as represented by the Administrator of National Aeronautics and Space Administration

Filed Dec. 21, 1959, Ser. No. 861,152

14 Claims. (Cl. 244-14)

(Granted under Title 35, U.S. Code (1952), sec. 266)

9. An aerospace particle detection system comprising a propelled vehicle, a target sail disposed in said vehicle in a collapsed condition, said target sail being formed of alternate layers of polyester and aluminum materials, a continuous flexible tube attached to the periphery of said target sail, a container of an inflating medium disposed in said vehicle, a flexible conduit coupled to said container and to said tube for towing said target sail behind said vehicle upon ejection therefrom and for transmitting said inflating medium to said tube thereby effecting erection of said target sail, circuit means disposed in said vehicle, said circuit means including an electrical energy source



sponsive to energy flow variations in said circuit means resulting from the momentary ionization of said aluminum layers penetrated by particles colliding with said target sail.

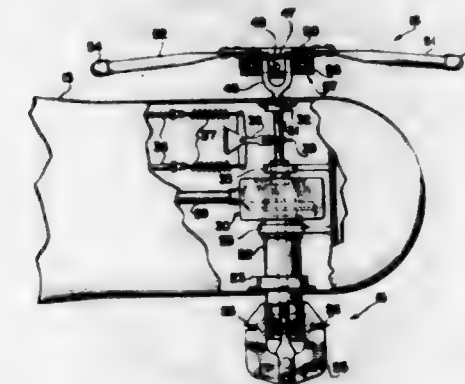
3,884,736

TAIL ROTOR FOR HELICOPTER

Irven H. Culver, Burbank, and Donald E. Walters, Calabasas, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Oct. 6, 1959, Ser. No. 844,712

9 Claims. (Cl. 244-17.21)



2. A tail rotor for a helicopter having a tail boom comprised of: collectively variable pitch rotor blades, means to mount said rotor blades about an axis transverse to said tail boom for rotation in a vertical plane, gyroscopic means, means to mount said gyroscopic means about an axis transverse to said tail boom for rotation in a vertical plane, means responsive to axial displacement of said gyroscopic means to collectively vary the pitch of said rotor blades to cause said rotor blades to return said gyroscopic means to the plane occupied prior to displacement.

3,884,737

RETRACTABLE BUOYANT SUPPORTING MEANS FOR VEHICLES

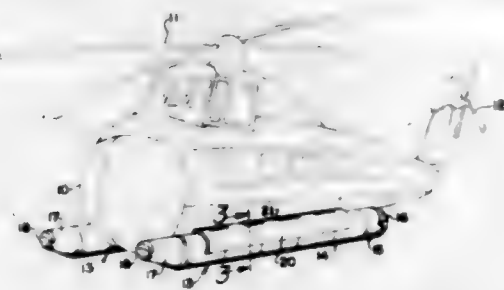
James F. Boyle and James R. Summer, Brielle, Robert J. Fraebel, Red Bank, and Raymond G. Lehberger, North Plainfield, N.J., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Oct. 25, 1957, Ser. No. 692,435

11 Claims. (Cl. 244-102)

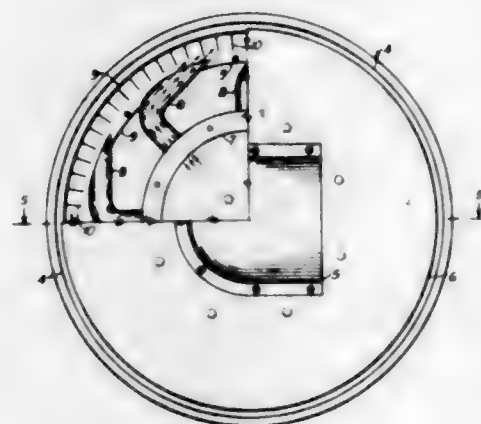
1. In a vehicle adapted to be supported on water; an inflatable buoyant supporting structure comprising a central section and inflatable, flexible auxiliary end sections communicating with the central section and extending longitudinally beyond the ends thereof when inflated; means for attaching said inflatable buoyant supporting

structure to said vehicle; means for supplying fluid to, and exhausting fluid from, said inflatable buoyant supporting structure; and longitudinally extending expansible means connected to said end section and extending longi-



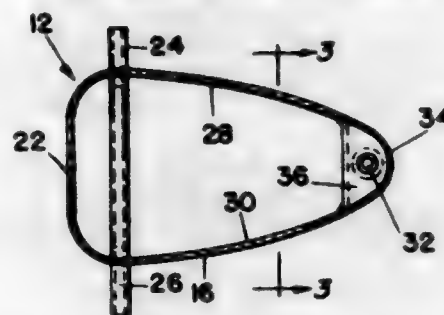
tudinally of said central section for retracting each of said end sections into said central section when said inflatable buoyant supporting structure is deflated.

3,004,738
AIRCRAFT LANDING WHEEL ROTATING MEANS
Gerald B. Peterson, Riverside, Ill.
Filed July 20, 1960, Ser. No. 44,133
1 Claim. (Cl. 244-103)



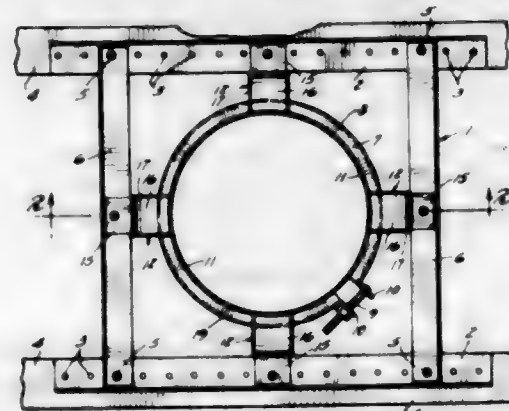
In combination with an aircraft landing-gear assembly including a wheel-axle of the cantilever-spindle type and an aircraft landing-wheel mounted for rotation thereon, an aircraft landing-wheel rotating means consisting of a torque-ring composed of an L-shaped in cross-section peripheral ring which has a plurality of substantially flat torque-ring buckets radially disposed and perpendicularly mounted thereon, said torque-ring secured for rotation to the rim of said landing-wheel; and secured to the end of said wheel-axle an air-distributor assembly composed of an air-chamber substantially cylindrical in shape, closed at the end which is secured to said wheel-axle and open at the other, and, secured to and extending radially outward from the cylindrical wall of said air-chamber and positioned to coincide with openings through said wall a plurality of air-distributor tubes shaped and positioned with the outer ends terminating in a beveled arc closely adjacent to the inner edges of said torque-ring buckets; and secured to the open end of said air-chamber a circular flat cover-plate of a diameter substantially equal to that of said torque-ring, said cover-plate having a circular opening through and at the center thereof; and secured to the outer face of said cover-plate and positioned over said circular opening an air-scoop having an open mouth and an air passageway extending rearward from the direction of flight to discharge into the opening through the said cover-plate.

3,004,739
GASOLINE TANK
Joseph G. Bunting, 2504 Jackson St., Apt. 7A, and George C. Bunting, 3223 S. 22nd St., both of Philadelphia, Pa.
Filed Aug. 27, 1959, Ser. No. 836,484
13 Claims. (Cl. 244-135)



1. A gasoline tank for aircraft comprising a triangular shaped container for the gasoline, an outlet pipe disposed within said container along the apex thereof, one end of said outlet pipe being open into said container and the other end of said outlet pipe being in communication with the outside of said container, a radially extending hole through said outlet pipe spaced from the one end of said outlet pipe, an annular gravity responsive valve member slidably disposed around said outlet pipe, said valve member being slidable longitudinally along said outlet pipe between a first position in which the valve member covers said hole and a second position in which the hole is uncovered, said valve member being in said first position when said outlet pipe is angled with said hole being higher than said one end of said outlet pipe, said valve member being in said second position when said outlet pipe is angled with said hole being lower than said one end of said outlet pipe, and means on said outlet pipe limiting the movement of said valve member between said first and second positions.

3,004,740
HANGER FOR FLUE PIPES
Byron D. Lane, 516 17th Ave. SW., Minot, N. Dak.
Filed Oct. 11, 1957, Ser. No. 689,660
3 Claims. (Cl. 248-57)

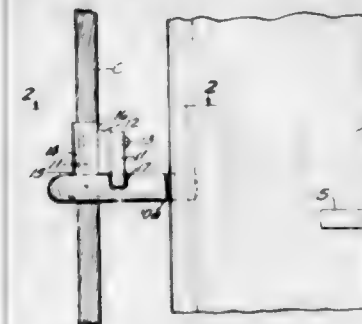


3. In a vent pipe holder, the combination which comprises a clamping band, means for drawing the ends of the band together around a pipe, and pipe engaging brackets mounted on said band, each bracket including a plate portion with triangular-shaped flanges on the sides thereof, and flanges extended from the outer ends of said plate portion and provided with openings therethrough.

3,004,741
CABLE SUPPORT LATCH
Roy E. Meyer, Red Wing, Minn.
Filed Aug. 18, 1958, Ser. No. 755,633
1 Claim. (Cl. 248-74)

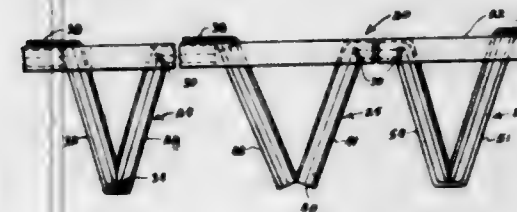
Apparatus for anchoring an upright cable at a point intermediate its ends to a tower to permit a safety ap-

pliance to be moved up and down along the cable, comprising a rigid hook oriented horizontally to permit the cable to extend upwardly through the bight of the hook, said hook having a shank adapted to be affixed to the tower and having an open end adapted to be spaced from the tower to permit the cable to be moved transversely into and out of the bight, an elongate, rigid and linear cable-cradling member of semi-circular shape and being affixed in the bight of the hook with the upright edges thereof facing toward the shank and the open end of the hook, a rigid cable-retaining bar having a flat sur-



face in confronting relation with the edges of the cable-cradling member at a position between the upper and lower ends of said member, and one end of said bar overlying the open end of the hook and the other end of the bar overlying the shank, a pair of upstanding ears on opposite sides of the bar and affixed on the shank, and a pivot extending through the ears and through the bar and permitting swinging of the bar in a vertical plane into and out of obstructing relation with respect to the cable-cradling member on the hook.

3,004,742
PALLETS WITH HOLDING TABS ON LEGS
Louis Davidson, 24 Waterview Road, Oceanside, N.Y.
Filed Nov. 28, 1958, Ser. No. 777,067
15 Claims. (Cl. 248-120)

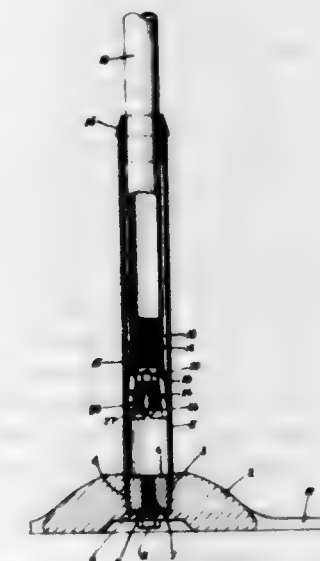


13. A load-carrying board pallet comprising a platform having a top surface on which a load is to rest, and having also a bottom surface and folding legs formed of material displaced from the platform and with each leg hinged at one end to the platform and with another end of each leg partly in contact with the bottom surface of the platform when the legs are in set-up condition, a tab extending from an upper end of each leg and through an opening in the platform and across a load-supporting area of the platform whereby the tab is held in place by the load resting on the platform and the tab.

3,004,743
MUSIC STANDS
Harry J. Wenger, Owatonna, Minn.
Filed Sept. 15, 1958, Ser. No. 760,981
2 Claims. (Cl. 248-161)

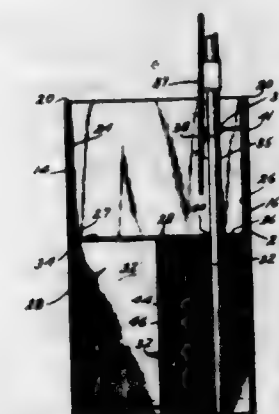
1. A base having a tapered bore therein, an outer member having a tapered end fitting the tapered bore of said base, a tapered plug within said outer member and expanding said tapered end of said outer member into frictional gripping engagement with the tapered bore of said base when said plug is forced downwardly, a cap screw traversing an aperture in the bottom wall of said

tapered plug and threadably engaging the tapered plug in said base outer member to draw said tapered plug into wedging engagement with said outer member, a bushing in the top of said outer member, an inner member slidably engaging said bushing and extending into said outer member, a friction plug secured to the lower end of said inner member, said friction plug having a split skirt, a resilient member frictionally retained within said split skirt, and a screw thread operated means clamping



said resilient member axially; whereby tightening of said screw thread operated means compresses said resilient member axially and expands it radially to force said split skirt into frictional engagement with the inside of said outer member, said cap screw being removable to provide access to said screw thread operated means of said resilient member; whereby said screw thread operated means may be operated independently of relative rotation between said inner and outer members.

3,004,744
PORTABLE DISPLAY CASE
Lyman G. Wall, Henrietta, N.Y., assignor, by mesne assignments, to Continental Can Company, New York, N.Y., a corporation of New York
Filed Mar. 26, 1958, Ser. No. 724,113
9 Claims. (Cl. 248-174)



7. A portable display case comprising in combination: four vertically extending side panels mutually hinged together at their vertical edges to define a rectangular frame, the lower portion of at least two non-adjacent side panels being adapted to support the case; a lining panel integrally joined at the upper edge of each of said side panels and directed downwardly therefrom flatwisely adjacent to the inner surface thereof; a pair of shelf segments each hinged to an edge of one of an oppositely disposed pair of said lining panels below the upper edges of said side panels and jointly defining a generally horizontal collapsi-

ble shelf panel, the upper portions of said side panels and said lining panels coacting with said shelf panel to define an upwardly open storage compartment; a tab horizontally hinged to one of said lining and side panels and having a first vertically directed aperture therein; one of said panels having a second aperture axially aligned beneath said first aperture for removably receiving and horizontally holding a vertically supported standard; a separate collapsible sheet-like member disposed intermediate the lower portions of said side panels, said member comprising three legs, the first of said legs being secured flatwise to one of said lower portions, the second and third of said legs being hinged to opposite ends of said first leg along vertical lines, said second leg having a horizontal length substantially equal to the diagonal distance across said frame, whereby said second and third legs may be selectively disposed at an angle with respect to each other beneath said shelf to jointly support it; and each of said shelf segments having a downwardly extending flap integrally hinged along an edge thereof and extending between said second legs; said second legs and said flaps being so disposed and arranged that when said frame is collapsed, said flaps act against each other to pivot said shelf segments upwardly, and when said frame is extended, said second legs act against said flaps to pivot said shelf segments toward a horizontal position.

3,004,745

ROTARY SHELF DEVICE

James W. Wilson, 5865 SW. 108th St., Miami, Fla.
Filed Sept. 5, 1958, Ser. No. 759,199
8 Claims. (Cl. 248-349)

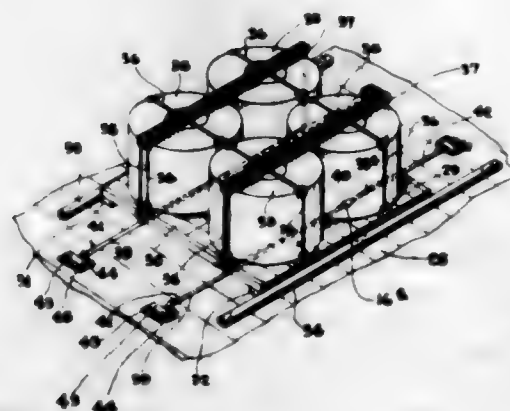


1. A rotary shelf device comprising a bearing plate, a pivot member projecting from the bearing plate, a shelf mounted on said pivot member, a retaining band secured to the periphery of said shelf, and a plurality of round headed tacks projecting through and securing the bearing plate to a desired structure, said tack heads slidably supporting the rotatable shelf.

3,004,746

METHOD AND APPARATUS FOR SECURING SHIFTABLE LOADS

Roy E. Swingle, Park Forest, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed July 21, 1958, Ser. No. 750,034
11 Claims. (Cl. 248-361)



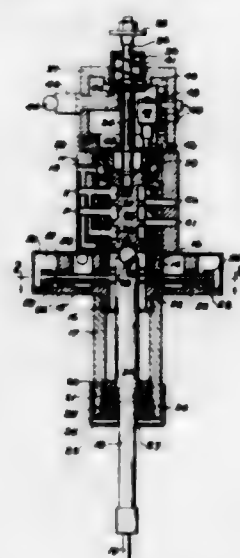
1. The method of securing a load to the wall of a transport vehicle comprising securing an encircling binder strap around a load and frictionally and slidably connect-

ing said binder strap to a connection and frictionally and slidably connecting said connection to another strap whose ends are secured to spaced apart regions of said wall.

3,004,747

TRACER FOR AUTOMATIC TWO-DIMENSIONAL FOLLOWER CONTROL

Frank Moore, Detroit, Mich., assignor to
Mansel Turchan, Dearborn, Mich.
Original application Oct. 19, 1956, Ser. No. 617,052, now
Patent No. 2,891,384, dated June 23, 1959. Divided
and this application Oct. 3, 1957, Ser. No. 688,062
6 Claims. (Cl. 251-3)



1. A tracer for an automatic control system comprising an upright body, a spindle universally mounted within said body and depending therefrom terminating in a stylus adapted to engage the profile of a template, an axially reciprocal fluid control valve in said body engageable with and responsive to deflections of said spindle, adapted for transmitting pressure fluid supplied to said body to one of two cylinder ports, valving means respectively connected to said cylinder ports adapted for selectively directing the pressure fluid under the control of said valve a series of right angularly related normally open limit switches in said tracer spaced around and from said spindle, one and a maximum of two adjacent limit switches being adapted to close on angular deflection of said spindle responding to changes in template profile, adapted to control such valving means, a series of radial coplanar right angularly related limit switch operating shafts slidably mounted upon the tracer with their inner ends resiliently biased into engagement with said spindle, a cross arm on the outer end of each shaft, and a contact on each arm normally engaging a corresponding limit switch contact.

3,004,748

FLOAT VALVE

Vernor E. Sprone and Everett D. Whisman, Columbus, Ind., assignors to Vernco Corporation, Columbus, Ind., a corporation of Indiana
Filed July 16, 1959, Ser. No. 827,524
1 Claim. (Cl. 251-234)

A valve construction comprising a body having a pair of vertically disposed, spaced apart, parallel faces and a top side; said body having a flow passageway therein discharging through a port on the top side of the body; a yoke straddling said body and extending along said faces; a hole extending transversely of the body opening through both of said faces, said hole being elongated in a vertical port closer carried by said yoke closing off said port allowing the yoke to be lifted and lowered vertically; a port closer carried by said yoke closing off said port upon rocking of the yoke on said pin; a second yoke

rockably straddling said first yoke rockably carried by said pin passing through the second yoke with a running fit; a rod rotatably engaging said second yoke; a member fixed relative to said body, said rod being screw-

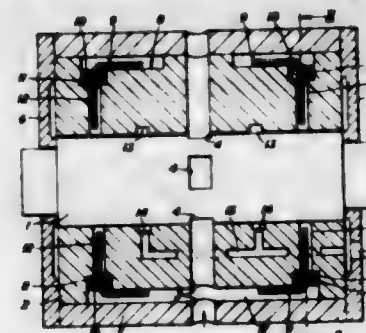


threadedly carried by said member, turning of said rod lifting and lowering said two yokes within the limit of vertical travel of said pin in said body hole; and a yoke rocker member carried by said first yoke.

3,004,749

FLUID-FLOW CONTROL VALVE

John D. North, Bridgforth, England, assignor to Boulton Paul Aircraft Limited, Codsall, England
Filed June 29, 1959, Ser. No. 823,748
3 Claims. (Cl. 251-309)



1. A valve comprising a valve body having a longitudinal bore therethrough, a valve member rotatable in said bore, a fluid inlet passage and a fluid outlet passage extending through said housing and opening into said bore, a transverse fluid flow passage through said valve member and alignable with said inlet and outlet passages in a selected rotated position of said valve member, and means for supporting said valve member in said housing for freedom of rotation including a set of transversely extending radial bores opening into said valve body bore on opposite sides of said inlet and outlet passages, fluid passage means in said valve body extending between said inlet passage and said radial bores for supplying fluid thereto, said fluid passage means including areas of restricted fluid flow whereby the flow of fluid through each of said radial bores is restricted, and fluid collecting means for removing fluid flowing in said longitudinal bore intermediate each set of radial bores and said inlet and outlet passages, said fluid collecting means including annular enlargements of said longitudinal bore, and fluid collecting passages in said valve body extending between said bore enlargements and an outlet point through said valve body.

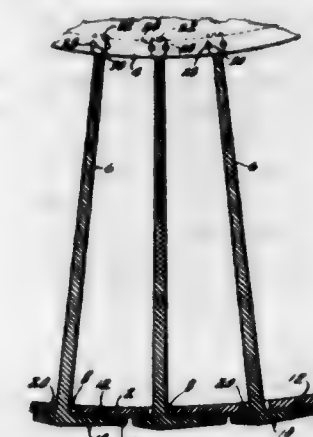
3,004,750

STATOR FOR COMPRESSOR OR TURBINE

Claude O. Broders, Simsbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Continuation of application Ser. No. 604,921, Aug. 28, 1956. This application Feb. 24, 1959, Ser. No. 795,000
9 Claims. (Cl. 253-78)

1. In a stator construction, inner and outer shroud rings, and vanes extending between said rings, one end

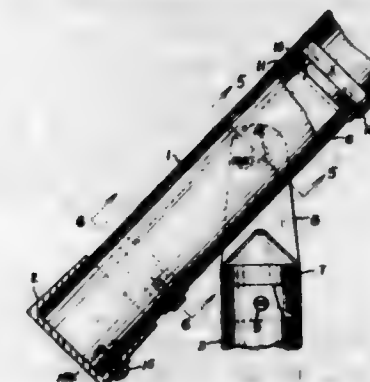
of each vane having an integral foot thereon substantially larger in area than the cross section of the vane and projecting beyond the vane in all directions within the plane of the foot and having a substantially flat surface on the side from which the vane extends, the associated shroud ring having an opening therein substantial-



3,004,751

HANDRAIL MOUNTING

William H. Woodward, 12033 Whitcomb, Detroit, Mich.
Filed Apr. 18, 1960, Ser. No. 23,032
7 Claims. (Cl. 256-67)



1. In a handrail and its mounting, the combination with a hollow rail formed longitudinally thereof with a downwardly opening elongated slot, of an adjuster for the rail inserted in and elongated longitudinally of the rail, a support for the rail having an upper end extending into the rail through said slot, means pivoting the adjuster transversely thereof and interiorly of the rail on said upper end and thus affording a selective angular relation of the adjuster to the support, and means rigidly securing the rail to the adjuster.

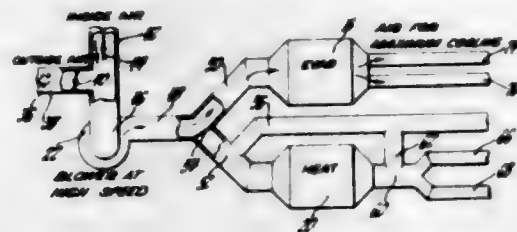
3,004,752

INTEGRATED AUTOMOTIVE HEATING AND AIR CONDITIONING SYSTEMS

Fred D. Ames and Philip S. Rogers, Lockport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,336
1 Claim. (Cl. 257-289)

An integrated heating and air conditioning system in an automobile having a passenger compartment partly enclosed by a windshield, said system comprising heater components adapted to transfer heat from engine coolant to air, evaporator components to remove heat from air, said components including a multiple speed blower, ducts

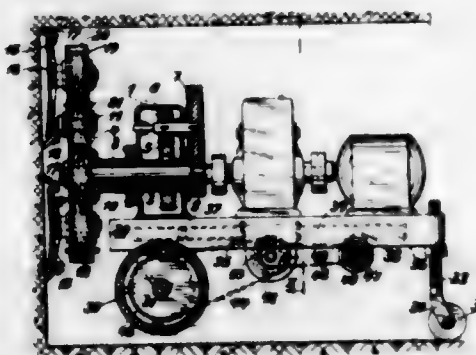
communicating with said passenger compartment and directly to said windshield for guiding air from said blower while the heat content of said air is modified by some of said components, temperature sensing thermistors in said compartment and the ambient air, a single multi-cam arrangement operatively connected to said components to effect said modification by heating and cooling and rotative through an angular range, said multiple speed blower being arranged to operate at reduced speed when said cam arrangement is in intermediate rotative positions as compared with speeds at cam arrangement positions further within said range, two reversible motors connected by a differentially operated double switch arrangement, the said double switch arrangement including two facing ring gears and a connecting pinion gear, one of said motors being connected through reduction gearing to one of said ring gears and to said cam arrange-



ment to drive the latter in either direction dependent upon the setting of said switch arrangement, the other of said motors having an output drive arranged to rotate the other of said ring gears whereby said pinion gear is adapted to operate said switch arrangement to determine said cam arrangement rotation direction, a bridge circuit including said thermistors and a bridge balancing potentiometer and connected to said other motor for supplying power thereto, a servo arrangement connecting the other of said ring gears to said potentiometer to balance the said bridge circuit and effect rotative position of said cam arrangement in accordance with temperature conditions determined by said thermistors, and said blower and ducts being arranged to direct some air to said windshield during any rotative position of said cam arrangement.

3,004,753
**TUNNEL BORING MACHINE HAVING OPPOSITE-
LY ROTATING TOOL HOLDERS ON A ROTAT-
ING CARRIER**

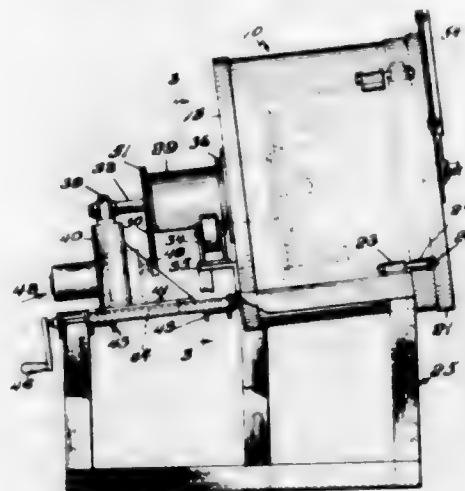
Sigmund Leopold Stk, Paffrathgasse 6,
Vienna II, Austria
Filed Jan. 22, 1958, Ser. No. 710,539
Claims priority, application Austria Feb. 4, 1957
1 Claim. (Cl. 262-7)



In a tunnel driving machine for driving tunnels in coal and other solid rock, a chassis with wheels, a drive motor carried by the chassis, a transmission arranged to be driven by the motor, a main drive shaft extending in the feeding direction and driven by said transmission, a hollow shaft concentrically surrounding said main drive shaft, reduction gear means transmitting the drive from said main to said hollow shaft to rotate the latter at a fraction

of the speed of the main drive shaft, a driving gear-wheel affixed to the main drive shaft, a casinglike carrier housing said driving gear-wheel and affixed to the hollow shaft to rotate therewith, said carrier having at least one outer end which is open in a radial direction, two gear shafts carried in the carrier and respectively located at opposite sides of the hollow shaft at a radial distance therefrom, a gear-wheel affixed on one of said gear shafts and meshing with said driving gear-wheel, a tool holder affixed to said one gear shaft and having a working range which includes the center of the cross-section of the tunnel, an idler gear-wheel affixed to the other gear shaft and also meshing with said driving gear-wheel, a casing cap adapted to be mounted and to be detachably affixed to the open end of the casinglike carrier, a gear shaft rotatably carried in the casing cap and extending parallel to the main drive shaft, a gear wheel affixed to the gear shaft within the casing cap and meshing with the idler wheel and rotated thereby in the sense of rotation of the driving gear-wheel, a tool holder affixed on the gear shaft of the casing cap and rotating in the opposite direction to the first-mentioned tool holder so that both tool holders offset at least in part the torques exercised on the rotating carrier.

3,004,754
ROTARY FURNACE OR FORGE
Beverly K. Walpole, Cranston, R.I., and Jack Fisher,
Taunton, Mass., assignors to National Furnace Cor-
poration, a corporation of Rhode Island
Filed Jan. 14, 1959, Ser. No. 786,852
4 Claims. (Cl. 263-7)

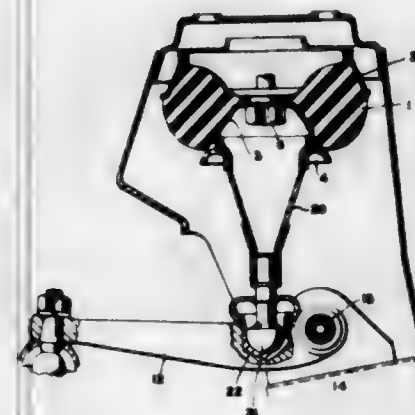


1. A furnace provided with a stationary substantially closed flame chamber, a rotary work holder in said chamber having a generally vertical base with work receiving tubes projecting generally horizontally from the base and spaced radially from its axis of rotation leaving an open center between the tubes, a member carried by said base, said member being positioned substantially along the axis of said work holder, a burner projecting into said chamber directed at said member for deflecting flames therefrom radially outwardly toward said work tubes and the recirculating of heated air about said tubes.

3,004,755
RUBBER SPRING SUSPENSIONS
Alexander Eric Moulton, Bradford-on-Avon, England,
assignor to Moulton Developments Limited, Bradford-
on-Avon, England, a company of Great Britain
Filed Dec. 4, 1959, Ser. No. 857,334
3 Claims. (Cl. 267-21)

1. An individual wheel suspension for a vehicle, comprising a prefabricated sheet metal box-like structure adapted to be attached to the vehicle sprung structure and providing a mounting for a journal to which is connected one end of a wheel suspension arm, the other end of the arm carrying the wheel, said sheet metal box-like struc-

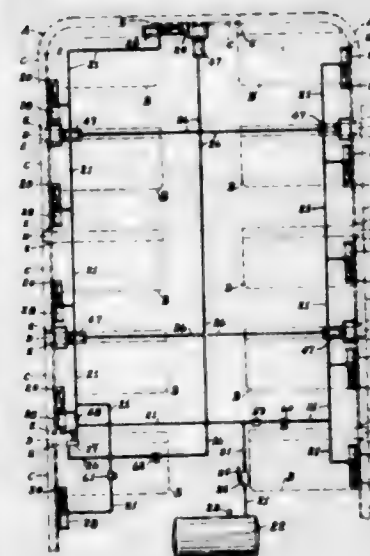
ture also providing a mounting for a rubber spring unit of general frusto-conical form being a solid of revolution generated from an inclined bonded rubber and metal sandwich of which the metal/rubber bonded interfaces are conical and the section of the rubber tapers from the inner interface towards the outer interface so that the



mean stress on the inner bonded surface is substantially equal to the mean stress on the outer bonded surface, and means connecting said arm to said spring unit so that upward deflections of the wheel in relation to the vehicle sprung structure produce and are resisted by corresponding but smaller deflections of said spring unit.

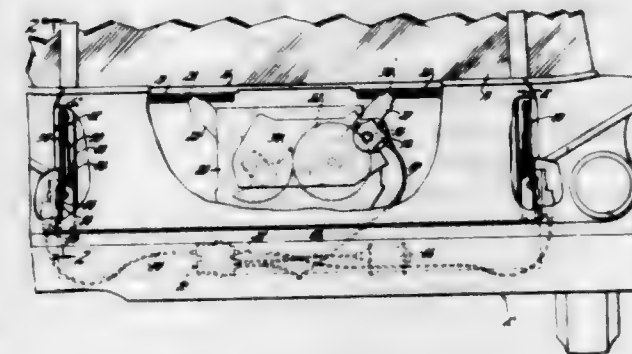
3,004,756
**EXIT RELEASING SYSTEM FOR PASSENGER-
CARRYING VEHICLES**

James L. Williams, R.R. 2, Box 202,
Freble County, Ohio
Filed July 1, 1958, Ser. No. 746,856
1 Claim. (Cl. 268-20)



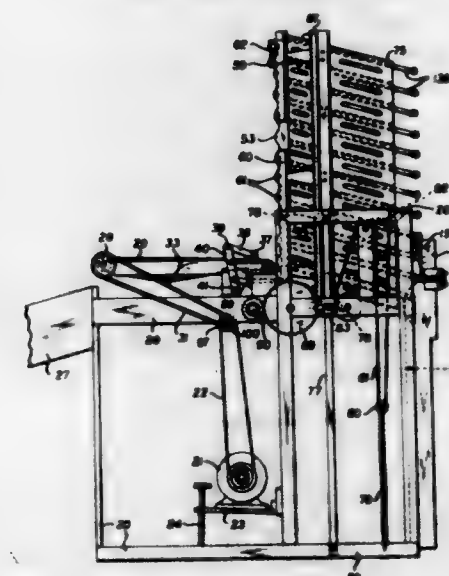
In a passenger-carrying vehicle having bottom-hinged closures, a system of closure latching and unlatching means, a system of closure pusher members, a primary air line system extending from an air storage tank to the latching and unlatching means, a secondary air line system extending from the primary air line system through a plunger-operated valve positioned between and connected with each of the air line systems, with the secondary air line being extended to each of the closure pusher members, with the plunger-operated valve being operated by an arm secured on and carried by one of the latching and unlatching means after the unlatching operation has been completed, and with the pushing operation occurring in sequence after the unlatching operation.

3,004,757
POWER-ACTUATED TAIL GATE
Thomas E. Lohr, Detroit, Mich., assignor to General
Motors Corporation, Detroit, Mich., a corporation of
Delaware
Filed July 8, 1960, Ser. No. 41,549
6 Claims. (Cl. 268-74)



1. A vehicle tail gate operating mechanism of the type having a tail gate pivotal about a horizontal axis to permit access to the rear end of the vehicle body and further having a slidable window retractable within the tail gate, in which a gear and lever mechanism is disposed within said tail gate for raising and lowering said window, a pair of lever devices connected to the sides of said tail gate and to the vehicle body, said lever devices being operable to move the tail gate between open and closed positions, gear reduction devices respectively connected to said lever devices, a transmission device, said transmission device including a plurality of output shafts and a single input shaft, a motor, drive means interconnecting said motor and said transmission input shaft, a pair of flexible drive shafts coupled to one of said transmission output shafts and respectively drivingly connected to said gear reduction devices, a flexible drive shaft connected to another of said transmission output shafts and drivingly connected to said window gear and lever mechanism, and a clutch device associated with each transmission output shaft and disconnectably coupling said shaft and said transmission input shaft.

3,004,758
VERTICAL COLLATING MACHINE
Luis Mestre, 305 E. 46th St., New York, N.Y.
Filed Mar. 3, 1960, Ser. No. 12,867
42 Claims. (Cl. 270-58)

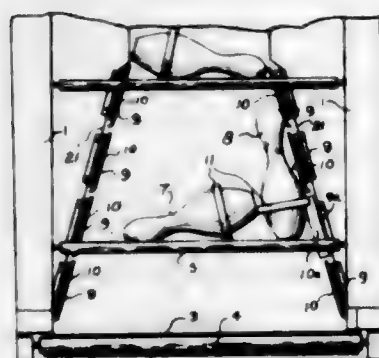


1. A vertical collating machine for collating sheets comprising a frame, storage means having a plurality of spaced partitions, providing a plurality of sheet storage pockets, means mounting the storage means on the frame for vertical movement thereon, driving mechanism connected with the storage means to move the same upward-

ly and downwardly, endless means carried by the frame with one end adjacent to the storage means and providing a pick-up position and connected with the driving mechanism to drive the same; pressure roll mechanism including pressure roll means, mounting means adjacent to the endless means and adjacent the end thereof at the storage means and supporting the pressure roll means for engagement with a sheet to press the same against the endless means, and operating means connected with the pressure roll means to move the latter over a projecting sheet and press the sheet against the endless means as each pocket passes adjacent the endless means; sheet ejecting mechanism including ejector means, ejector mounting means mounting the ejector means for movement towards and away from the endless means and into and away from contact with a pile of sheets in the pocket, and ejector operating means carried by the frame on the opposite side of the storage means from the endless means and operatively connected with the ejector mounting means and the ejector means in a pocket adjacent the endless means to move the ejector means towards and away from the endless means at pick-up position.

3,004,759
PIN AND BALL ELEVATOR RELEASE MECHANISM

James A. Bond, Toronto, Ontario, Canada, assignor to Philips Electronics Industries Ltd., London, Ontario, Canada
Filed Sept. 12, 1960, Ser. No. 55,206
Claims priority, application Canada July 29, 1960
3 Claims. (Cl. 273-43)



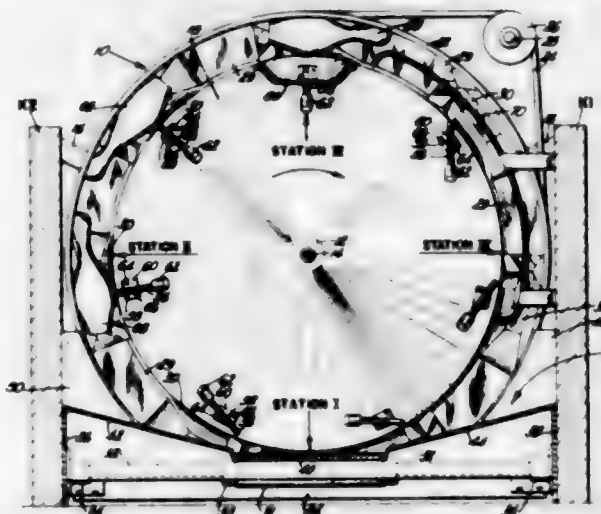
1. In a ball and pin handling mechanism; a vertical elevator comprising horizontally elongated lift members moving in a vertical direction, means feeding balls and pins to the lower end of said elevator, guiding surfaces converging in a vertical direction and restricting the working length of said lift members to reduce their carrying capacity with height wherein said guiding surfaces normally present a flat guiding surface substantially at right angles to the length of the lifts and wherein at least a portion of one of said guide members is resiliently pivotable, about an axis substantially parallel to the length of the guide, to a position whereat said portion presents a surface divergent laterally with respect to the direction of travel of said elevator.

3,004,760
BOWLING PIN CONVEYING MECHANISM

Henry C. Congell, Stamford, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 24, 1957, Ser. No. 705,239
14 Claims. (Cl. 273-43)

1. In a bowling pin spotting machine for use with a bowling alley having a pit at one end, mechanism for elevating bowling pins removed from the playing surface of said alley into said pit comprising a rotary member provided with an annular channel and spaced pin

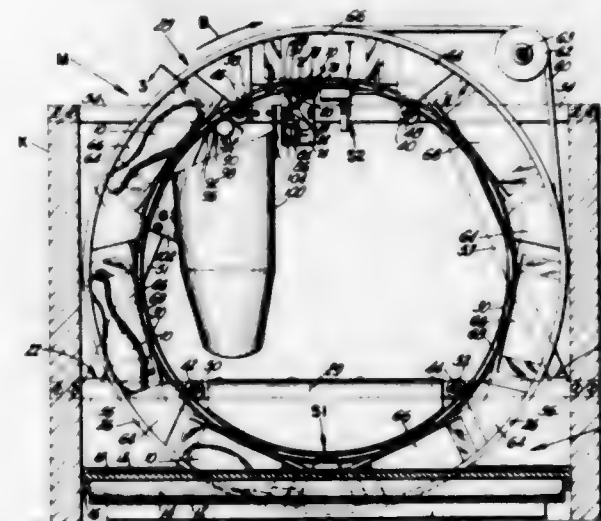
carrying portions, means mounting said member for rotation in a substantially vertical plane such that such portions of said channel pass successively through and out of said pit, means for rotating said member, means for moving said pins in said pit into said channel as said successive pin carrying portions thereof pass through said pit, gravity-actuated pin holding members mounted on



said channel and associated with each of the pin carrying portions of said channel and operative to coast with said channel and be gravity biased into engagement with pins in said portions in response to the rotation of said member, whereby pins are held in said channel against removal therefrom during the rotation of said channel.

3,004,761
PIN ELEVATING MECHANISM FOR BOWLING PIN SPOTTING MACHINES

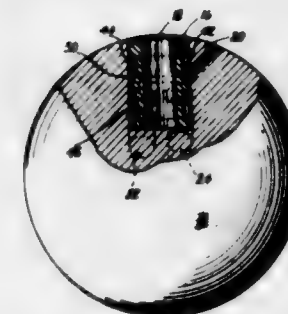
Henry C. Congell, Stamford, Conn., and Robert L. Holway, Sayder, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 24, 1957, Ser. No. 705,335
18 Claims. (Cl. 273-43)



1. In a bowling pin spotting machine for use with a bowling alley having a pit at one end, mechanism for elevating bowling pins removed from the playing surface of said alley into said pit comprising an annular channel, means mounting said channel for rotation in a substantially vertical plane such that portions thereof pass successively through and out of said pit, means for rotating said channel, means for moving said pins in said pit into said channel as said successive portions thereof pass through said pit, pin supporting means spaced from said channel and forming therewith elongated areas of support extending generally in the direction of movement of said channel, means securing said pin supporting means

on said channel for travel therewith, said pin supporting means being operative to support and hold pins in said channel against removal therefrom during the rotation of said channel, and mechanism located at a point remote from said pit for selectively releasing pins from said channel.

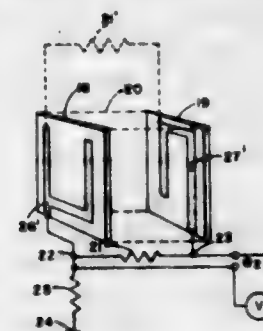
3,004,762
BOWLING BALL
Carl Frost, 11 Loraine Place, Teaneck, N.J.
Filed Sept. 19, 1960, Ser. No. 56,926
6 Claims. (Cl. 273-63)



1. A bowling ball having a finger hole, a generally cylindrical liner received in said finger hole, said liner being made of a somewhat yieldable material and being longitudinally split on one side all the way from top to bottom, and an adjusting screw directed generally transversely of the diameter of the split, so that the screw may be used to compress and thereby reduce the size of the finger hole formed by the liner.

3,004,763
DETECTION OF HITS ON TARGETS

Philip M. Knapp, Timonium, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed June 22, 1959, Ser. No. 821,928
11 Claims. (Cl. 273-102.2)

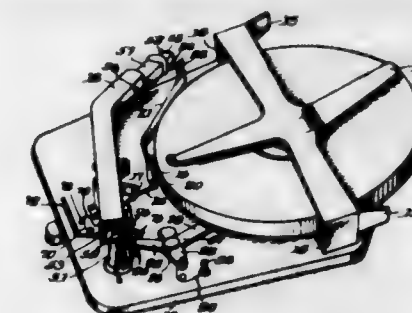


1. An electrically scoring target comprising two layers of electrically conductive material, a dielectric separating said layers, a first resistor having one end electrically connected to one layer and the other end electrically connected to the other layer, and a second resistor having one end connected to one layer and the other end electrically connected to ground, said layers being at substantially the same electrical potential and means to measure the potential across the resistors.

3,004,764
PHONOGRAPH APPARATUS
Marcel Jules Helene Stuur, 30 Square du Solbosch, Brussels, Bruxelles, Belgium
Filed May 16, 1956, Ser. No. 585,208
Claims priority, application Belgium May 27, 1955
17 Claims. (Cl. 274-9)

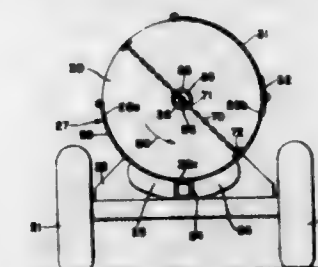
1. In a motor driven record player having a record turntable and a tone arm for playing the record, and adapted to receive a single record slid edgewise into

playing position on the turntable, said tone arm being supported for lateral pivotal movement from a rest position adjacent the turntable positioned vertically above the peripheral edge of the record on the turntable to a playing position over the turntable, the combination comprising, an actuator disposed in the path of movement of the record and arranged to advance and return in a continuous movement in the same direction between a rest and a playing position, said actuator in the playing position being free from engagement with the record, said actuator being adapted to be advanced partially toward the playing position by the record as it is inserted over the turntable, a turntable motor switch assembly, a record centering assembly, means coupling said actuator and said assemblies for operating the same in timed sequence whereby to energize the turntable motor and cause the turntable to revolve, and to center and hold



the record on the turntable, means independent of said turntable motor for completing the advance of said actuator to the playing position, a tone arm head pivotally carried by the tone arm for movement between a record engaging position and an elevated position above the record, tone arm head actuating means for raising and lowering said tone arm head relative to a record on the turntable, tone arm restraining means normally holding the tone arm in its rest position adjacent the turntable, and means coupling said actuator to said tone arm head actuating means and to said restraining means for operating the same by said actuator in timed sequence as an incident to the completion of the advance of said actuator to the playing position whereby to lower the tone arm head into playing relation with the record and after said playing relation has been attained to release the tone arm for travel across the record side.

3,004,765
MATERIAL UNLOADER HAVING BEATER CHAINS OF ADJUSTABLE LENGTH
Raymond S. Wilkes, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Dec. 12, 1958, Ser. No. 780,054
11 Claims. (Cl. 275-3)



1. A material unloader of the type described including a main frame; an elongated material container mounted on the frame having oppositely disposed and spaced apart side walls; a hollow shaft supported on the frame between the side walls and extending substantially the length of the container, said shaft having therein a plurality of axially spaced arm openings; an axially movable element contained within the shaft; a plurality of flexible arm

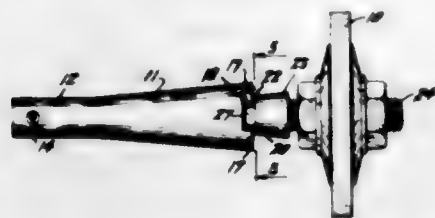
elements axially spaced along the shaft extending through said arm openings, each of said arm elements having an inner end connected to said axially movable element and an outer free end disposed in said container; means rotating the shaft for effecting discharge of the material by the arm elements; and means for moving the movable element axially for effecting the effective length of the arm elements in the container.

3,004,766
VACUUM CHUCK
Andrew J. Bryant, 900 Arthur Ave., Bristol, Pa.
Filed Nov. 2, 1959, Ser. No. 850,427
9 Claims. (Cl. 279-3)



1. A vacuum chuck for use with an electromagnet comprising, a hollow body, a perforated face plate across the top of the body, a flexible diaphragm spanning the body and dividing the body into upper and lower chambers, with the perforated face plate forming one side of the upper chamber, valve means on the body controlling communication between the upper chamber and atmosphere, and elements of magnetic material fixed to the diaphragm, whereby the chuck may be positioned over an electromagnet and by pulsating operation of the electromagnet attract and release the magnetic elements to cause pulsating movement of the diaphragm to draw a vacuum in the upper chamber.

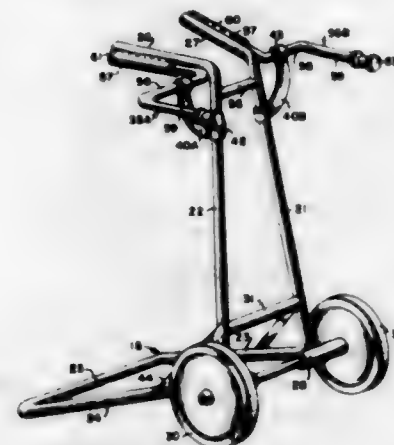
3,004,767
QUICK ACTING CHUCK
Monty P. Greene, 1241 Monroe St., and Arnold A. Vickerman, 25 S. Glencoe St., both of Denver, Colo.
Filed Apr. 18, 1960, Ser. No. 22,941
2 Claims. (Cl. 279-103)



1. A quick acting chuck comprising: a drive portion; means for connecting the rear extremity of said drive portion to a rotating element; a tapered axial socket formed in the forward extremity of said drive portion; a diametrically-extending flat-bottomed groove extending across said forward extremity and across the entrance of said socket, the sides of said groove forming two straight shoulders overlapping opposite sides of said entrance in parallel, spaced-apart relation, the portions of said shoulders overlapping said socket being inclined outwardly in a counterclockwise direction from the bottom plane of said groove to form a wedge-like locking notch in the under surface of each shoulder; a tapered shank fitted into said socket; two oppositely positioned parallel flat sides on said shank allowing the latter to pass between said straight parallel shoulders; and two circumferentially-arcuate projecting portions on said shank intermediate said flat sides, said latter portions being positioned to engage the inclined, wedge-like lock-

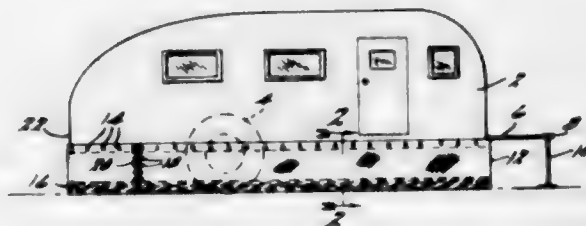
ing notches when said shank is rotated clockwise relative to said drive portion so as to urge the tapered shank into functional engagement with tapered axial socket.

3,004,768
CARRIER FOR OUTBOARD MOTORS
John W. Klages, Columbus, Ohio, assignor to The Columbus Auto Parts Company, Columbus, Ohio, a corporation of Ohio
Original application Aug. 13, 1958, Ser. No. 754,817. Divided and this application Nov. 24, 1959, Ser. No. 855,169
2 Claims. (Cl. 280-47.24)



1. A carrier for an outboard motor comprising in combination, frame means including a toe portion, spaced tubular frame portions forming forwardly extending motor support portions; a first socket means mounted on one side of the upper portion of said frame means; a second socket means mounted on the other side of the upper portion of said frame means; a first tubular handle portion rotatably carried in said first socket means; a second tubular handle portion rotatably carried in said second socket means; and means for selectively securing each of said handle portions in a rearwardly extending configuration and in a downwardly extending configuration, said means including a brace secured at one end to one of said tubular portions and provided with a concave other end for detachable spring pressed engagement with the other of said tubular portions.

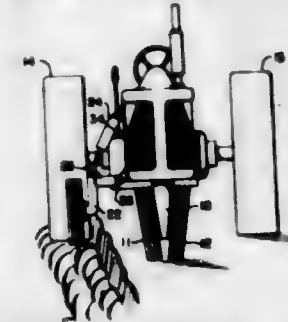
3,004,769
TRAILER SKIRT
Allen R. A. Turner, 509 E. McClellan, Flint 5, Mich.
Filed Sept. 9, 1958, Ser. No. 759,936
4 Claims. (Cl. 280-150)



1. In combination with a house trailer having a plurality of attachment means disposed along the bottom peripheral edge of said trailer, a trailer skirt, said skirt extending around the bottom peripheral edge of said trailer and downwardly to the trailer supporting surface and comprising a flexible member having means along the upper longitudinal edge thereof in detachable engagement with the attachment means disposed along the bottom peripheral edge of said trailer, a plurality of adjacently disposed continuous loops near the lower longitudinal edge thereof, at least one weighted, flexible rod being disposed within one of said loops whereby said

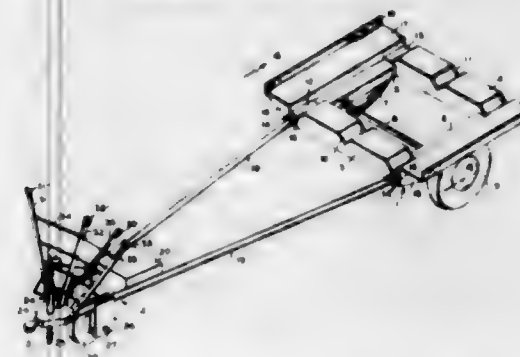
skirt is maintained in relatively fixed position with respect to the trailer supporting surface, and means for maintaining the lateral edges of said trailer skirt in proximate relationship with each other.

3,004,770
WEIGHT TRANSFER DEVICE FOR TRACTORS
Melvin E. Bettenhausen, 171st St. and 80th Ave., Tinley Park, Ill.; Valerie E. Bettenhausen, executrix of said Melvin E. Bettenhausen, deceased
Filed Sept. 16, 1958, Ser. No. 761,399
8 Claims. (Cl. 280-150)



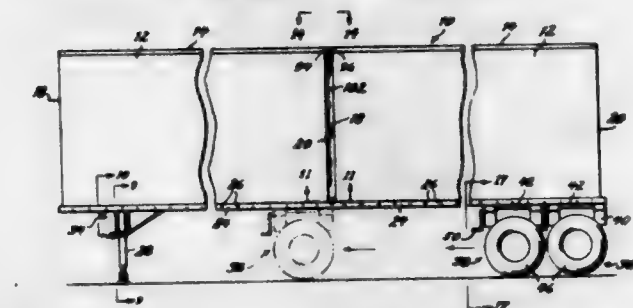
1. A weight transfer device for improving the traction of tractors and like vehicles when operated along unlevel ground, said device comprising a power actuable means and a ground engaging means mounted on the vehicle body, said power actuable means being arranged to introduce an inclined force between the ground engaging means when positioned at a location outwardly from the low side of the vehicle and a point high on the body of the vehicle which force is exerted in a direction crosswise of the tractor to transfer undue concentration of the weight of the vehicle from the low side of the vehicle, when tilted, toward the high side of the vehicle so as to improve traction of the vehicle.

3,004,771
FLOATABLE TRAILER
James Bashford Moore, Jr., P.O. Box 1109, Lexington, Ky.
Filed May 27, 1958, Ser. No. 738,194
6 Claims. (Cl. 280-414)



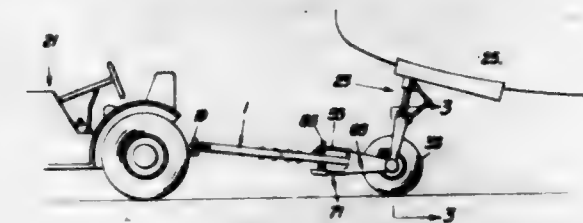
1. In a floatable trailer for a boat, a rear boat supporting buoyant section, a forward buoyant coupling section, means interconnecting said sections, said rear boat supporting section comprising a hollow buoyant frame defining a boat supporting platform and wheel means mounted on said frame, said hollow frame including a plurality of fluid-tight buoyant hollow beams secured to each other, said beams being the principal buoyant members of said platform, said forward coupling section including a buoyant hollow float, wheel means, coupling means for connecting said trailer to a vehicle, and jack means to raise said wheel means off the ground during attachment of said coupling means to said vehicle, said trailer having a density approximately that of water, said interconnecting means being rigidly secured to said forward section and pivotally secured to said rear section.

3,004,772
TANDEM AXLE SEMI-TRAILER CONVERTIBLE TO SINGLE AXLE SEMI-TRAILERS AND VICE VERSA
Charles L. Bohlen, Doylestown, Charles Bradford Sheppard, Meadowbrook, and Peter J. D'Orazio, Southampton, Pa., assignors to Strick Trailers, a Division of Fruehauf Trailer Co., Philadelphia, Pa., a corporation of Michigan
Filed May 18, 1959, Ser. No. 813,856
8 Claims. (Cl. 280-415)



1. An over-the-rod semi-trailer comprised of a pair of frameless van size cargo bodies each including a means to removably receive bogies, means separately and rigidly coupling said bodies together horizontally, said means transmitting tension, compression and shear forces from body to body in magnitudes sufficient to produce a unitary structure, and a pair of single axle bogies removably coupled adjacent each other to the rearmost body whereby any one of said bogies when uncoupled can be moved and removably coupled to the forward body so that after the bodies are uncoupled a pair of individual single axle trailers are produced.

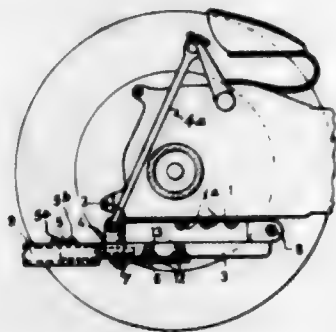
3,004,773
HITCHES FOR AIRCRAFT
Fred L. Ankeney, Rte. 3, Xenia, Ohio
Filed July 31, 1959, Ser. No. 830,754
4 Claims. (Cl. 280-446)



1. A hitch for an aircraft nose wheel assembly having a limited steering movement, said hitch comprising in combination a U-shaped yoke adapted to straddle a nose wheel assembly and be removably attached thereto, a vertical pivot element provided centrally on the bight portion of said yoke, a draft tongue having its rear end mounted on said pivot element and extending forwardly therefrom for lateral swinging movement relative to said yoke, and means for releasably retaining said tongue against swinging from a centralized position relative to the yoke, said means comprising a curved plate secured to the bight portion of the yoke and disposed horizontally below an intermediate portion of said draft tongue, said plate being formed with a central depression and portions of the plate on opposite sides of said depression constituting a track, a vertically slidable plunger carried by said intermediate portion of said tongue, roller means provided at the lower end of said plunger and rotatable about an axis parallel to the tongue, and resilient means biasing said plunger downwardly and urging said roller means to seat in said depression of said plate, said roller means being movable along said track upon upward sliding of the plunger against the bias of said resilient means during swinging of said tongue from its centralized position.

3,004,774 INTERCONNECTION BETWEEN TRAILER AND HAULING VEHICLE

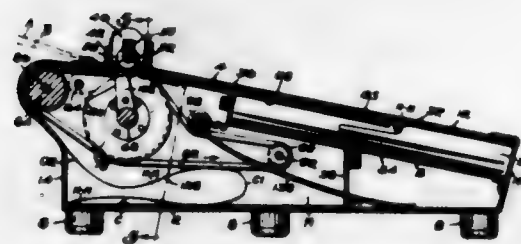
Jens Løf Løkke, Hærlund P.O., Mysen, Norway
Filed May 20, 1960, Ser. No. 30,564
Claims priority, application Norway June 4, 1959
2 Claims. (Cl. 200-447)



1. Interconnection between a trailer and a hauling vehicle, comprising a traction frame, means for securing said traction frame to said hauling vehicle, a laterally movable slide member on the traction frame, a vertical bolt on said slide member, a hauling rod one end of which is secured to said trailer, said hauling rod having, at its other end an aperture in which said vertical bolt is pivotally arranged, a transverse stay pivotally connected at one end to said traction frame and pivotally connected at its other end to said hauling rod, the last mentioned pivotal connection being to the rear of said vertical bolt.

3,004,775 AUTOGRAPHIC REGISTER

Julius B. Schlemmer, Beverly, Mass., assignor to Royal Business Forms, Inc., a corporation of New Hampshire
Filed Dec. 2, 1958, Ser. No. 777,683
4 Claims. (Cl. 282-15)

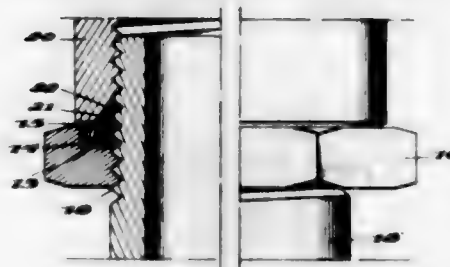


1. In an autographic register a compartment for holding a flat pack comprising a plurality of superimposed sheets of connected sheets, a writing table over which the sheets of the pack may be drawn, a collecting bin located under said table, a feeding mechanism including continuous longitudinally extending friction belts for drawing said sheets over said table, guide means for reversing the direction of and inverting the bottommost strip of connected sheets, said friction belts functioning in cooperation with the feeding means for engaging the underside of the said first bottommost sheet to move such first sheet to a flat inverted position in said collecting bin and to then engage the under side of the next bottommost sheet to cause said next sheet to be first rolled on itself until it overlies in non-inverted position the said first bottommost sheet while simultaneously moving the third bottommost sheet to flat folded inverted position over the said second bottommost sheet and in a position corresponding to said first sheet and thereafter so long as said

feeding means continues in operation to repeat the aforesaid procedures to reassemble all of the bottommost forms in a zigzag pack in said collecting bin.

3,004,776 PIPE COUPLING HAVING A SEALING NUT WITH A FRANGIBLE SECTION

Wilhelm Schardt, Rastvikavägen 18, Bromma, Sweden
Filed Dec. 12, 1958, Ser. No. 780,074
1 Claim. (Cl. 285-3)



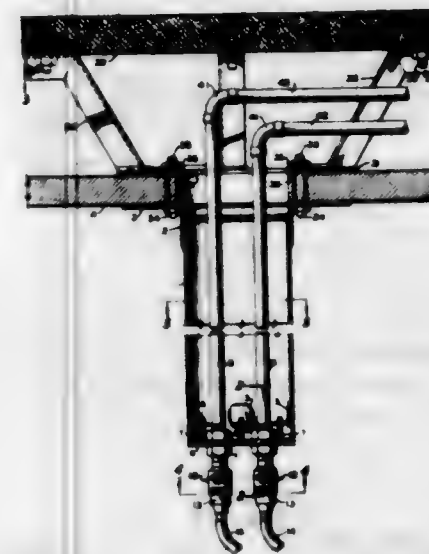
In combination, a first pipe having outside threading thereon, a connection piece having a threaded bore with a chamfer extending from the outer surface of said connection piece to said threaded bore and at least a portion of the threaded portion of said connection piece receiving said first pipe, a nut having inside threading screwed onto said first pipe and having a surface positioned adjacent the end surface of said connection piece, a cylindrical annular recess countersunk in said surface of said nut, a press ring rupturably attached to the cylindrical side wall of said cylindrical annular recess and extending beyond said first surface of said nut and spaced axially from the base of said annular recess, said press ring having an inside diameter greater than the root diameter of said nut threading and a surface overlying the base of said annular recess inclined so that the portion of said press ring having the greater diameter is in closer proximity to said recess base, and a sealing ring of resilient material of such shape and volume so as to completely fill the space defined by said annular recess, said press ring, said end surface of said connection piece, and said threaded portion of said first pipe, said sealing ring being urged into sealing contact with all the surfaces defining the aforementioned space upon rupture of said rupturable attachment, said rupture caused by the rotation of said nut on said first pipe threads so that said press ring is brought into contact with said connection piece whereby a shearing force is produced between said nut and said rupturably attached press ring and the rupture being such that said press ring is freely movable within said annular recess but precluded from removal therefrom by the sheared portions of said press ring and said cylindrical side walls thus in turn also precluding removal of said sealing ring.

3,004,777 OPERATING ROOM OVERHEAD GAS SERVICE SYSTEM AND FIXTURE THEREFOR

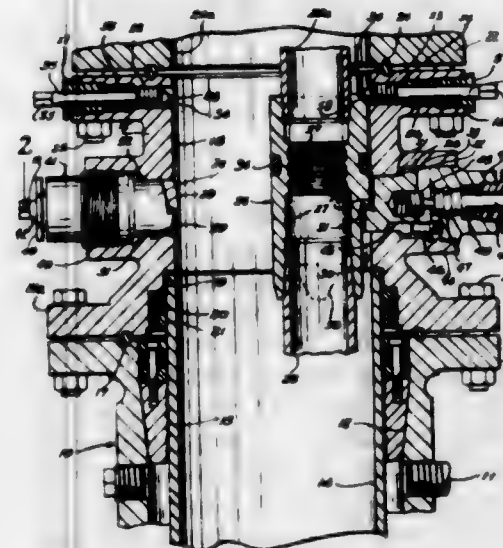
Alphonse L. Buonaccorsi, San Leandro, Calif., assignor to Logan Hospital Equipment Co., Glendale, Calif., a corporation of California
Filed Oct. 20, 1955, Ser. No. 541,601
1 Claim. (Cl. 285-64)

An operating room overhead service fixture arranged to be secured to a ceiling and comprising: a hollow cylinder externally threaded at its upper end; an internally threaded coupling collar threaded to the upper end of said cylinder, the upper end of said collar being provided with a laterally extending annular flange arranged to lie flush with the lower face of said ceiling; a plurality of lugs secured to and within said cylinder adjacent the lower end thereof; a plurality of conduits extending longi-

tudinally through said cylinder; a plate arranged to close the lower end of said cylinder; means for securing the lower ends of said conduits to said plate; means for se-

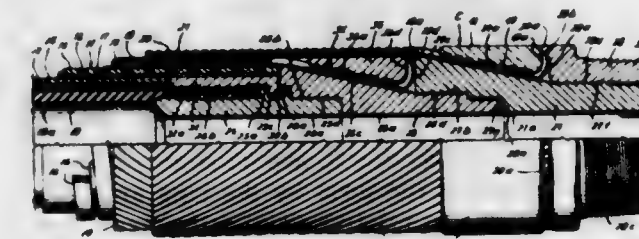


3,004,778
WELLHEAD APPARATUS
Leonard E. Williams, Marvin R. Jones, and John V. Pennington, Houston, Tex., assignors to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed Aug. 22, 1957, Ser. No. 679,621
12 Claims. (Cl. 285-137)



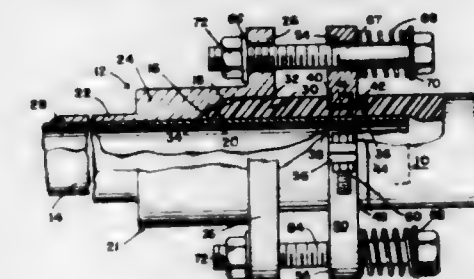
1. Wellhead apparatus, comprising a tubing head having a bore therethrough, a plurality of substantially sector-shaped hangers each having a longitudinal opening therethrough and being disposable in side-by-side relation within the bore for suspending tubing therefrom, a slot on an intermediate portion of the curved side of each of the hangers having a shoulder with a downwardly and an outwardly facing component, and rams on the tubing head each having a shoulder with an upwardly and an inwardly facing component on its inner end extendible into the bore to engage with the shoulder on a hanger for supporting each of said hangers against movement downwardly and laterally out of the position it occupies when so disposed, said rams being retractable out of engagement with the hangers to permit each of said hangers to be lowered beneath its supported position within the bore separately from other hangers supported therein.

3,004,779
END COUPLING FOR HOSE HAVING PLURAL LAYER WIRE REINFORCING
Roy H. Callen, 1701 1st City National Bank, and Leslie D. Richards, both of Houston, Tex.; said Richards assignor to said Callen
Filed June 7, 1957, Ser. No. 664,230
11 Claims. (Cl. 285-149)



1. An end coupling for a tubular conductor having a first tubular layer of wires therewith, including a first tubular body section, a first coupling ring surrounding said body section, the ends of said wires being confined between said body section and said coupling ring, co-active surfaces on said body section and said ring for swaging said ends of said wires therebetween so as to evenly distribute any pulling force on said wires to said surfaces, a second tubular layer of wires with said tubular conductor wrapped externally of said first layer of wires and over said first coupling ring, a second tubular body section threaded to said first tubular body section and forming a continuation thereof longitudinally, a second coupling ring surrounding said second body section with the ends of the wires confined therebetween, said first coupling ring having an external diameter substantially equal to the external diameter of said first tubular layer of wires, and said second coupling ring having an external diameter substantially equal to the external diameter of said second layer of wires.

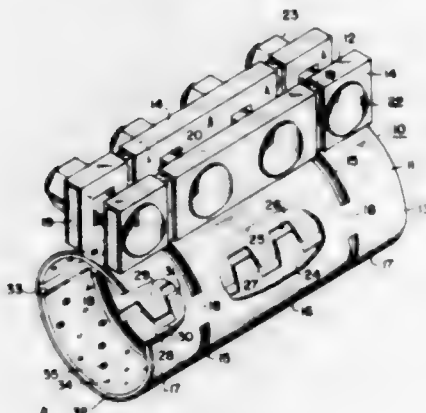
3,004,780
TEFLON HOSE FITTING
Merrill M. Malm, Park Ridge, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois
Filed Nov. 26, 1956, Ser. No. 624,337
1 Claim. (Cl. 285-242)



A coupling device for connecting a hose of relatively stiff material to another hose or to a port, said coupling device comprising a rigid socket member connected to said other line or port and including an inner sleeve, an outer sleeve having one end sealed to the inner sleeve and its other end enlarged and separated from the inner sleeve to define an annular socket having a continuous conical bottom wall and cylindrical inner and outer walls, said hose having a frusto-conical end adapted to be received in the socket, the slant angle of the frusto-conical end being different from the slant angle of the conical bottom wall of the socket to provide a continuous narrow annular area of contact between the hose end and socket member, and means for exerting axial pressure upon the hose end to force said hose end into the socket and against the inner sleeve to form a fluid-tight seal therebetween through said narrow annular area, said inner

sleeve being longer than the outer sleeve and extending beyond the end of the outer sleeve, said hose end having a radially extending wall disposed intermediate the axially outer ends of the inner and outer sleeves, and said means for exerting axial pressure upon the hose comprising an axially split ring disposed over the hose end and abutting upon the said radially extending wall, means for clamping the split ring over the hose and the hose upon the inner sleeve, resilient means interposed between the ring and said hose, and resilient means under stress between the ring and coupling and urging the hose through the intermediary of the ring and radially extending wall into the socket, said resilient means interposed between the ring and said hose serving to absorb some of the radial pressure exerted upon the hose by the ring and thus reducing the resistance to relative axial movement between the hose and the said inner wall, whereby to insure the presence of axial pressure upon the hose as aforesaid.

3,004,781
SLOTTED SHELL COUPLING CLAMP
Jolly L. Morris, R.D. 1, Cabot, Pa.
Filed Jan. 29, 1959, Ser. No. 789,867
10 Claims. (Cl. 285-349)

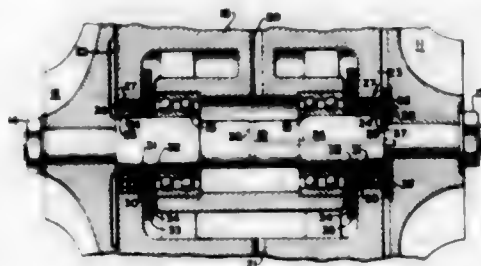


1. An improved coupling clamp for connecting adjacent end portions of a pair of fluid conduits in a sealing relationship comprising, sealing means encompassing end portions of the conduits, backing means encompassing said sealing means, metallic friction ring means encompassing the conduits adjacent opposite ends of said sealing means, a unitary longitudinally-split outer shell member encompassing said friction ring means and said backing means and having circumferentially extending slotted portions extending through said shell member intermediate said backing means and said friction ring means to provide end clamping portions on the shell, and means for selectively contracting portions of said shell member about said friction ring means and about said backing means independently of each other to provide a controlled gripping and sealing action about the end portions of the conduits.

3,004,782
SHAFT SEAL
John William Meermans, North Hollywood, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 13, 1957, Ser. No. 696,142
5 Claims. (Cl. 286-5)

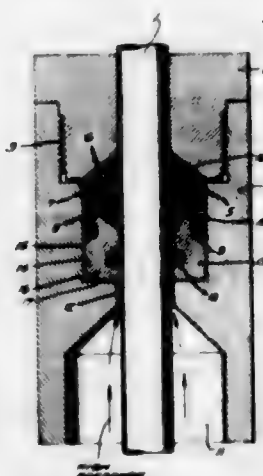
1. A fluid seal for a shaft rotatably mounted in a bore in a housing, comprising: a bushing fixedly mounted in said bore; sealing means mounted on said shaft, the sealing means including a labyrinth portion having a plurality of radially projecting lands in close fit with said bushing and a sleeve portion in close fit with the bushing inboard of said lands; a circumferential groove formed in the outer surface of said sleeve portion ad-

jacent the inboard end of said bushing; pumping means comprising a radially projecting flange formed on the sealing means and a plurality of radially extending ejection passages in said flange adapted to discharge into



the interior of said housing; and passage means connecting said circumferential groove with the pumping means for creating a suction in said groove to scavenge fluid from the surface of the bushing abutting said groove.

3,004,783
HIGH PRESSURE PACKING MEANS
Derrel D. Webb, Houston, Tex., assignor to Houston Engineers, Inc., Houston, Tex., a corporation of Texas
Filed Aug. 12, 1957, Ser. No. 677,480
4 Claims. (Cl. 286-12)



1. A high pressure cylinder unit comprising in combination a cylinder having an end closure wall, an axially movable rod extending slidably through an axial bore in said wall, said wall having two aligned counterbores of different diameters therein opening into each other, the inner counterbore having a continuously compensating packing structure disposed therein and extending partly into said outer counterbore of larger diameter, said packing structure including a metal pressure piston of a diameter corresponding substantially to that of said inner counterbore and having a flat inner end seated on the bottom surface of said inner counterbore, said piston member having an axial bore slidably receiving said axially movable rod, packing means mounted within the outer and inner cylindrical walls of said pressure piston sealingly engaging, respectively, the cylindrical surfaces of said smaller counterbore and said axially movable rod, the outer end of said pressure piston being conically indented, a resilient, non-metallic, multi-part packing means of trapezoidal cross-section seated in said conically indented end of said pressure piston, said multi-part packing having a bore snugly and slidably receiving said axially movable rod, said multi-part packing filling the remaining space in said inner counterbore and extending to within said outer counterbore, a packing gland through which said axially movable rod extends threadedly and adjustably received in said outer counterbore and having a conically indented inner surface corresponding to and bearing against said resilient packing of the trapezoidal cross-section, said axial bore in said end closure wall

being of a diameter to provide a small annular clearance for high pressure fluid to flow therethrough from said high pressure cylinder, the high pressure cylinder side of said closure wall conically sloping outwardly to direct the high pressure fluid through said small annular clearance to actuate said pressure piston member to axially compress said non-metallic, resilient packing with a force corresponding to the pressure existing with said cylinder for greater sealing efficiency.

3,004,784
COUPLING PIN
Max M. Selby, Los Angeles, Calif., assignor to Tubular Structures Corp. of America, Los Angeles, Calif., a corporation of California
Filed July 20, 1959, Ser. No. 828,418
12 Claims. (Cl. 287-2)



1. A coupling pin comprising: a pair of elongated pin members and an abutment means intermediate thereof, each of said pin members having a longitudinal axis and a plurality of outer peripheral surfaces about its longitudinal axis, the axis of one of said pin members being substantially parallel to the axis of the other of said pin members and transversely spaced therefrom, said pin members being insertable into the ends of a pair of tubular members having parallel and transversely spaced axes for coupling the tubular members, said pins being rotatable so as to align the axes of said pin members with the axes of the tubular members.

3,004,785
EXPANDING ROD JOINT
Robert W. Wolf, Philadelphia, Pa., assignor to Helmtz Division—Kelsey-Hayes Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 7, 1959, Ser. No. 785,359
4 Claims. (Cl. 287-64)

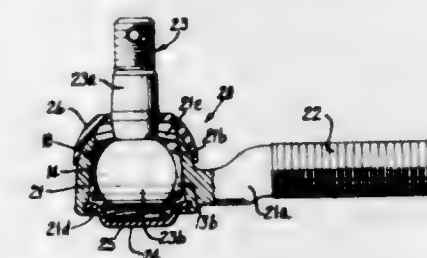


1. A rod joint comprising a pair of rods and a block for connecting the rods and absorbing the impact of forces tending to separate the rods, one end portion of the block being solid and the opposite end portion being bifurcated into end branches, and means connecting an end of each of the rods with one of the end branches, said end branches being formed by a recess disposed centrally in said bifurcated end portion of the block and defined by two grooves disposed longitudinally on opposite sides of the bifurcated end portion and each tapering both inwardly extending from its side of the end portion towards the longitudinal axis of the end portion and inwardly extending from the end of the block to a point adjacent the center of the block.

3,004,786
BALL JOINT
Edward J. Herbenar, Detroit, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed July 30, 1958, Ser. No. 752,011
9 Claims. (Cl. 287-90)

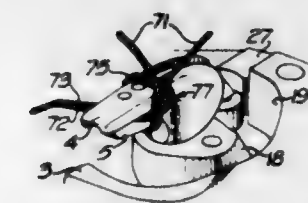
7. A ball joint construction comprising a housing with a closed end cavity converging toward an opening in the

opposite end, a ball stud having a substantially full ball end in the cavity and a shank projecting freely through the cavity opening, a longitudinally cleft molded synthetic resin sleeve in the cavity in longitudinal shifting relation having the cleft extending through the full length thereof and an outer periphery seated on the cavity wall and converging in the same direction toward said opening, said sleeve having a spherical hollow interior defining the major zone of a sphere and enveloping the substantially full ball end of the stud except at a narrow gap provided by the cleft and extending beyond both sides of the great circle of the ball end, said sleeve having a longi-



tudinally extending recess in the spherical hollow interior thereof remote from the cleft of the sleeve and providing a reduced thickness sleeve portion acting as a spring hinge to facilitate springing of the sleeve over the ball end of the stud, said recess and said cleft gap providing lubricant channels for supplying lubricant to the ball end of the stud, and spring means compression loaded between the closed end of the cavity and the sleeve urging the sleeve toward the cavity opening in the direction of convergence of the cavity wall and the sleeve periphery for decreasing the width of the cleft gap to maintain the sleeve in good bearing contact with the ball end of the stud.

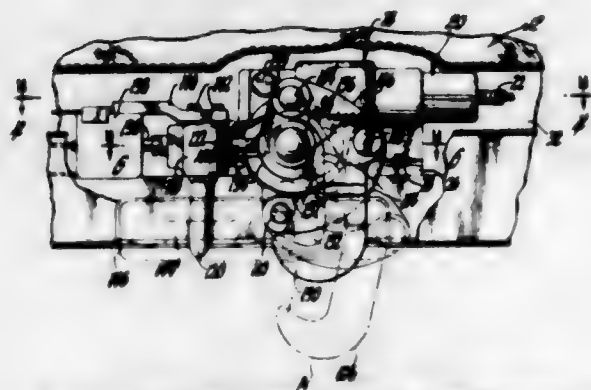
3,004,787
KNOTTER MECHANISM FOR BUNDLE TYING MACHINES
John Gray Walters, Sevenoaks, England, assignor to The Sheridan Service Company Limited, London, England, a company of Great Britain
Filed Apr. 29, 1960, Ser. No. 25,650
Claims priority, application Great Britain Jan. 29, 1960
8 Claims. (Cl. 289-11)



1. A knotter mechanism, suitable for use in a bundle tying machine, including a carriage mounted in a support frame of said tying machine for sliding movement between a rearward inoperative position and a forward operative position, a pair of co-operating knotter jaws mounted in said carriage for rotation about a common axis, one of said knotter jaws being tiltable about an axis normal to said common axis to effect opening and closing of said knotter jaws, cam means defining a cam path around said common axis of said knotter jaws, a cam follower carried by said tiltable knotter jaw and adapted to engage said cam means during rotation of said knotter jaws about their common axis, a plunger slidably mounted in said carriage and adapted to co-operate with said cam follower when said knotter jaws are in a closed position and releasable latch means to lock said plunger in a position of engagement with said cam follower thereby to maintain the jaws closed.

3,004,788 CLOSURE LATCH

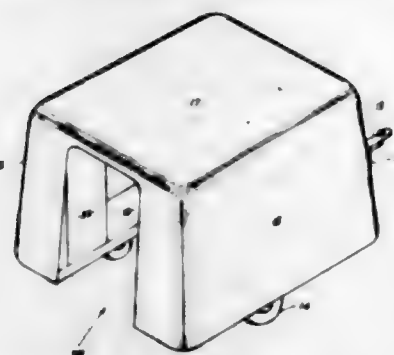
Floyd Ivan Duffy, Detroit, and Romeo Orbellio Ummeo, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,907
6 Claims. (Cl. 292-113)



1. A latch assembly comprising, in combination, a support, a lever swingably mounted on said support, a latch bolt pivoted to said lever for swinging movement therewith and swinging movement relative thereto between latched, unlatched and parked positions, a link pivotally interconnecting said support and said latch bolt to guide swinging movement of said bolt relative to said lever, the length of said lever and said link and the several pivots of said bolt to said link and lever and of said link and lever to said support being arranged to move said latch bolt generally linearly relative to said support upon movement of the bolt between unlatched and parked positions, the pivot of said lever to said bolt and the pivot of said link to said support being on diametrically opposite sides of said pivot axis of said lever on said support in the latched position of said bolt, swinging movement of said lever to move said bolt toward unlatched position folding said link and the portion of said bolt between the pivots thereof to said lever and to said link relative to each other to thereby move said bolt generally linearly relative to said support between said latched and said unlatched positions thereof.

3,004,789 FLOORLESS CAMPING TRAILER

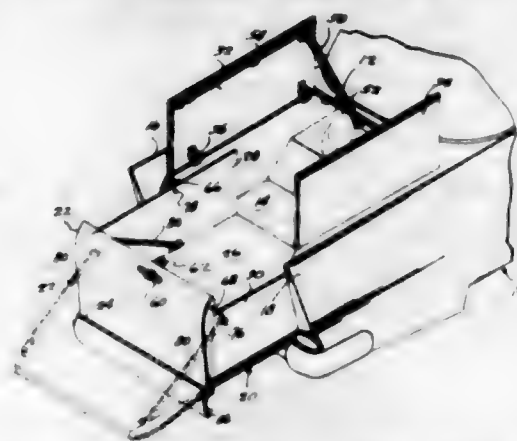
Allan Percy Wicken, 223 Salvado Road, Wembley, Western Australia, Australia
Filed Oct. 5, 1959, Ser. No. 844,299
8 Claims. (Cl. 296-23)



1. A substantially floorless roofed open front camping trailer comprising a substantially U-shaped chassis open at the rear and provided at the front with a draw bar, wheels fitted to each arm of the chassis, side walls projecting upwardly from each arm of the chassis and a roof connecting the upper edge of the side walls, the interior of the side walls being fitted with facilities for the storage of camping and cooking gear and clothing, which facilities are accessible to a person standing on the ground between the side walls.

3,004,790 ARTICLE CARRIER FOR AN AUTOMOBILE TRUNK COMPARTMENT

Harland A. Mayer, Hancock, Minn., assignor to Mar-May Development Corporation, Hancock, Minn., a corporation of Minnesota
Filed May 15, 1959, Ser. No. 813,581
3 Claims. (Cl. 296-26)



1. The combination with a vehicle body trunk compartment open at the top and at one end and including a floor and opposed side walls rising from said floor, of an article carrier including a floor panel and a wall panel rising from each side edge of said floor panel nested within said compartment with the upper end of each wall panel below and adjacent to the upper end of the adjacent compartment side wall, means embodying rollers rollably engaging said floor panel and said floor connecting said floor panel to said floor for movement along said floor from the nested position out of the open end of said compartment to an extended position, said carrier having a front panel closing the open end of said compartment when in the nested position, said front panel being hingedly connected along its lower end to said floor panel for movement from the compartment end closing position to a lay-down position when said carrier has been shifted to the extended position, brace means operatively connected to said front panel and the compartment side walls for holding said front panel in the lay-down position, a pair of doors arranged in edge-to-edge relation and normally extending over and closing the open top of said compartment, each of said doors being hingedly connected to the upper end portion of the adjacent side wall and being independently swingable to a position projecting out of the open top of said compartment, and spring means operatively connected to each of the hinge connections of said doors to thereby assist the doors toward the projected positions.

3,004,791 RECLINING CHAIRS

Friedrich F. Schlotzschke, Berlin-Scharnbergdorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Oct. 28, 1958, Ser. No. 770,181
3 Claims. (Cl. 297-85)



1. In a reclining chair having a support, a backrest pivotally mounted on said support for reclining movement thereon, a seat operatively connected with said

backrest, and a leg rest, an improved leg rest actuating and control linkage which comprises a leg rest actuating lever having its rear end operatively connected to said backrest and extending forwardly beneath said seat to a point near the front of the seat, said leg rest being pivotally mounted on the front end of said actuating lever, two links pivotally mounted on said seat at spaced points, one of said links being pivotally connected to said actuating lever and a connecting lever pivotally connected with both of said links, said connecting lever having a lost motion connection with said leg rest.

3,004,792 ARTICLE OF FURNITURE

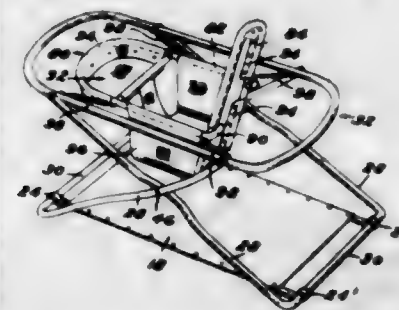
Edward N. Bell, 2334 Highland St., Des Moines, Iowa
Filed Dec. 18, 1959, Ser. No. 868,429
4 Claims. (Cl. 297-118)



1. In a combination chair and footstool, a first frame having an opening in its bottom, a second frame hinged to said first frame capable of being swung into either horizontal or vertical positions, a base member vertically slidably mounted in said first frame, supporting legs rigidly secured to and extending downwardly from said base member, at least one U-shaped member having its two ends operatively hingedly secured within said first frame and capable of extending downwardly to limit the upward sliding movement of said base member and capable of being swung upwardly to permit upward sliding movement of said base member, a spring for yieldingly holding said U-shaped member in downwardly extending position, and a cable means secured to said U-shaped member for facilitating the manual swinging of said U-shaped member toward a horizontal position.

3,004,793 BABY TENDER

Barbara J. Loomis, 2121 Alice St., Ann Arbor, Mich.
Filed May 18, 1959, Ser. No. 814,067
4 Claims. (Cl. 297-274)

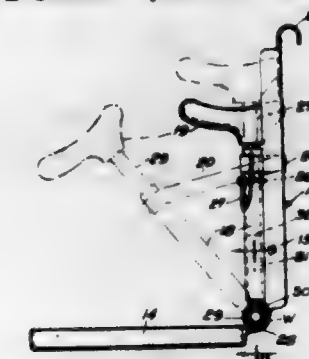


2. A baby tender comprising frame structure including an endless annular border frame having elongated laterally spaced parallel sides, a support for holding said border frame in horizontal position including a pair of legs for each side of said border frame, means pivotally connecting the upper ends of the legs of each pair to the corresponding side of said border frame at longitudinally spaced points, said legs of each pair extending downwardly from said border frame in crossing relation for engagement with a supporting surface, a baby chair unit carried by said border frame, said baby chair unit

including a U-shaped chair frame within said border frame, springs resiliently supporting said U-shaped chair frame from said border frame so that it occupies a plane parallel to that of said border frame and so that the arms of said U-shaped chair frame are parallel to said sides of said border frame, a seat of flexible material carried by said chair frame, a chair back between and pivoted to the arms of said U-shaped chair frame near the ends of said arms for swinging movement from a collapsed position in the plane of said chair frame to an upright position of use, said arms having integral offset end portions providing limit stops engageable with said chair back to determine its upright position.

3,004,794 ORTHOPEDIC CUSHION AND ARM REST UNIT

Marko S. Yerkovich, P.O. Box 126, Copper Harbor, Mich.
Filed July 14, 1960, Ser. No. 42,800
1 Claim. (Cl. 297-382)



An orthopedic cushion and arm rest unit comprising a seat cushion and a back rest cushion, a pair of horizontal, side-by-side fabric pieces interconnecting said seat cushion and back cushion and forming a web, a horizontal tube positioned in said web and extending substantially therethrough, a horizontal stub shaft extending into each end of said horizontal tube and forming a pivot hinge therewith, a vertical arm extending upwardly on each of said stub shafts, a tubular supporting member telescopically mounted on each of said vertical arms by the interlocking of an annular latching groove in each of said arms and a latching detent in the wall of each of said tubular supporting members, a pair of arm rest members arranged forwardly of the front surface of the back rest cushion and adjacent the sides of the latter, a tube attached to and depending downwardly from each arm rest, each tube being in telescopic engagement with one of said tubular supporting members, each of said tubular supporting members having a pair of aligned holes and each of said tubes having a series of pairs of aligned holes along its length, a pin extending through the pair of holes in each of said tubular supporting members and also through a pair of holes in each of said tubes to hold said arm rests at the desired adjusted height position on the respective tubular supporting members, and an elastic band extending across the back of said back cushion and attached at each end to one of said tubular supporting members adjacent the upper end of said tubular supporting members.

ERRATUM

For Class 297-412 see:
Patent No. 3,004,586

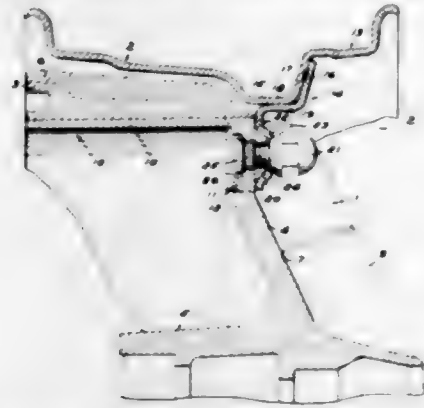
3,004,795 WHEEL AND BRAKE DRUM ASSEMBLY

Rupert L. Atkins, Grosse Pointe Woods, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed May 19, 1958, Ser. No. 736,053
17 Claims. (Cl. 301-6)

1. In a wheel and brake drum assembly, a brake drum having a web and an annular flange, a liner having an

annulus within and secured to said flange and having a portion projecting into an opening in said web, a wheel



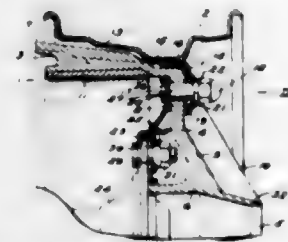
structure including a rim concentric with said drum, and means for clamping said wheel structure directly to said projecting portion.

3,004,796

WHEEL AND BRAKE DRUM ASSEMBLY

Rupert L. Atkin, Grosse Pointe Woods, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,243
7 Claims. (Cl. 301-6)



1. In a wheel and brake drum assembly, a brake drum having a web and an annular flange, a wheel structure, means detachably mounting said wheel structure on said drum near said flange, an annular mounting plate serving as a wheel body detachably secured along its radially outer margin to said drum at the inboard side of said web by said mounting means, a rotatable member, means detachably securing the radially inner margin of said plate to said rotatable member, said web being free of direct connection with said rotatable member and overlying and completely concealing said plate when the assembly is viewed from the outboard side and said web being exposed on the outboard side of the assembly for maximum cooling and simulating a wheel body in appearance.

3,004,797

ADJUSTABLE TREAD WHEEL

Edward R. Carolin, Royal Oak, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Apr. 23, 1959, Ser. No. 808,408
8 Claims. (Cl. 301-9)



1. An adjustable tread wheel comprising a wheel body, a rim encircling said wheel body in coaxial relation therewith, said wheel body being provided with a plurality of elongated axially and circumferentially inclined radial

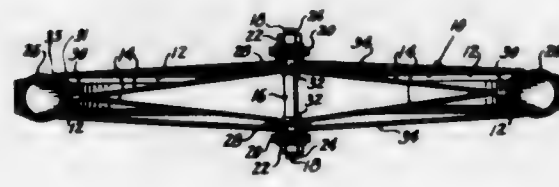
ly outwardly opening grooves of generally U-shaped cross-section disposed in spaced relation to one another circumferentially of said wheel body, said rim being provided with a plurality of elongated axially and circumferentially inclined radially inwardly projecting rails of generally U-shaped cross-section slidably received in said respective grooves for axial adjustment of said rim relative to said wheel body upon relative rotation of said rim and wheel body, the sides of said grooves and rails flaring from their bases at the same angle, and releasable clamping means for tightly clamping said rails in said grooves under a radial pressure with the flaring sides of said rails in surface-to-surface engagement with the flaring sides of said grooves to lock said rim on said wheel body in axially adjusted position, said rails and grooves being flexibly resilient and when tightly clamped by said means being deformed to provide a yielding wedging frictional engagement between the flaring sides thereof so that when the clamping pressure is released said rails and grooves will return to their undeformed condition and spring free radially thereby to facilitate adjustment.

3,004,798

COVER ATTACHMENT FOR WHEELS

John A. Tylke, Columbus, Nebr., assignor to Gustave Miller, Washington, D.C.

Filed July 10, 1958, Ser. No. 747,791
1 Claim. (Cl. 301-37)



A bicycle wheel comprising a hub having an axle extending therethrough, a plurality of spokes radiating from opposite ends of said hub and connected to corresponding opposite sides of a rim having peripherally extending flanges thereon, a tire mounted on said rim within said flanges and bulging outwardly therefrom, and a flat circular disc mounted on each side of said wheel, said discs being centrally apertured to extend about the ends of said axle and abut on the opposite ends of said hub, the circular periphery of each said disc abutting against its corresponding peripheral flange on said rim, and a plurality of oppositely disposed bolts extending inwardly through mating holes in said disc and an internally threaded sleeve for each pair of oppositely disposed bolts having said oppositely disposed bolts threaded therewithin securing said opposite discs in secure relationship to said hub and said rim flanges thereby providing said spoked wheel with the appearance of a true disc wheel.

3,004,799

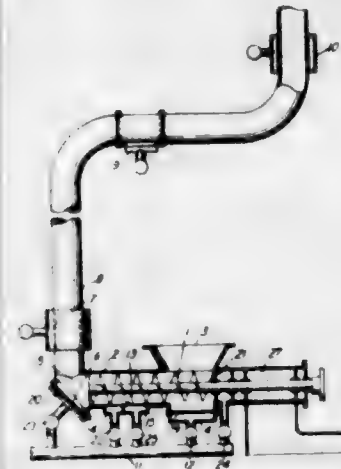
METHOD AND DEVICE FOR CONVEYING DRY POWDERED MATERIAL THROUGH A CONDUIT

Frantisek Tikal, 26 Ovalova, Prague, Czechoslovakia

Filed May 21, 1957, Ser. No. 660,684
Claims priority, application Czechoslovakia June 25, 1956
9 Claims. (Cl. 302-50)

1. A device for transporting dry, pulverized bulk material, comprising a mechanical pump for the bulk material, the pump including an elongated casing having at one end an inlet chamber for receiving the pulverized bulk material to be transported and at the other end a discharge chamber, a worm impeller rotatably mounted in said casing, said impeller having an axial shaft with a helical blade thereon, said device further comprising aerating means having porous wall surfaces opening into said casing, and means supplying a gaseous medium under

pressure to said aerating means so that the gaseous medium is dispersed in the pulverized bulk material to fluidize the latter and thereby reduce its resistance to movement through said casing by said impeller, said shaft being hollow to receive said gaseous medium, and said helical blade being hollow to define an aerating chamber in said



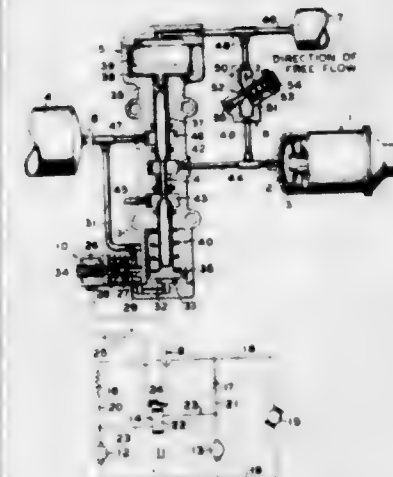
blade, said porous wall surfaces being disposed at said aerating chamber, and said shaft having radial bores opening into said aerating chamber so that a gaseous medium supplied to the hollow shaft is dispersed in the pulverized bulk material through said porous wall surfaces.

3,004,800

WHEEL SPIN INHIBITING APPARATUS

John R. Edmund, Berkeley, Calif., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Oct. 24, 1960, Ser. No. 64,640
7 Claims. (Cl. 303-21)



1. Vehicle brake control apparatus comprising the combination of brake cylinder means for applying a braking force to vehicle wheels, a source of fluid under pressure, valve means having one position to which it is yieldingly biased and in which it establishes a first communication via which fluid under pressure may be supplied to said brake cylinder means and released therefrom under manual control to effect application and release respectively of braking forces on the wheels, and a second position in which it closes said first communication and establishes a different communication via which fluid under pressure is supplied from said source to said brake cylinder means, two fluid pressure responsive means one of which is subjectable to fluid under pressure in a chamber at one side thereof to actuate said valve means from its said one position to its said second position and the other of which is subjectable to fluid under pressure in a chamber at one side thereof to exert an opposing force on said valve means which causes restora-

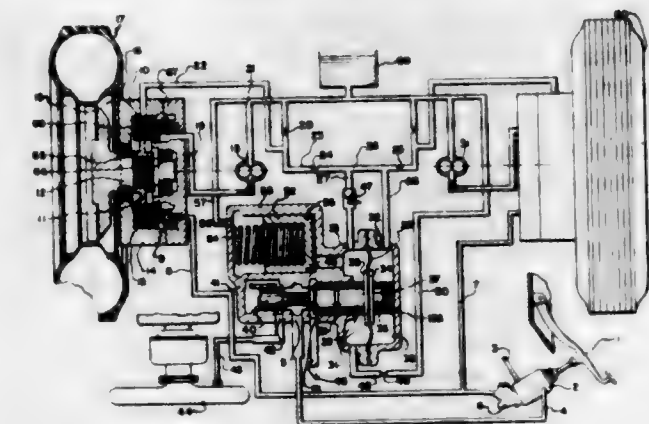
tion of said valve means to its said one position, passage means providing communication via which fluid under pressure supplied to the brake cylinder means flows concurrently to the chamber at one side of said other fluid pressure responsive means at an unrestricted rate and via which fluid under pressure is released therefrom at a restricted rate upon release of fluid under pressure from the brake cylinder means thereby causing a cycling operation of said valve means between its said one and said second positions so long as fluid under pressure is supplied to the chamber at one side of said one fluid pressure responsive means, and a valve device having one position to which it is biased and in which it releases fluid under pressure from the chamber at one side of said one fluid pressure responsive means and being operative to a second position in which it cuts off the release of fluid under pressure from said chamber at one side of said one fluid pressure responsive means and establishes a communication via which fluid under pressure is supplied thereto.

3,004,801

SYSTEM TO CONTROL WHEEL LOCKING DURING BRAKING

Clifford C. Wrigley, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 30, 1958, Ser. No. 745,600
8 Claims. (Cl. 303-21)



1. An anti-skid device for controlling the application of a vehicle wheel brake comprising in combination, vehicle wheels, each of said wheels connected to a shaft having a fluid cooling pump directly connected to said shaft, a braking means for controlling the rotation of said wheel, a wheel cylinder for applying said braking means, a manual control means assisted by a booster unit for operating a fluid displacement member, fluid conduit means connected to said fluid displacement member and said wheel cylinders, a means for controlling wheel locking by said braking means operating in response to fluid pressure from said fluid cooling pumps, said wheel locking control means comprising a diaphragm chamber in communication with said fluid pumps through conduit means, an accumulator in communication by conduit means with said diaphragm chamber on one side of said diaphragm, a check valve in the conduit means between said accumulator side of said diaphragm chamber and the output side of said pumping means to permit passage of fluid into said chamber only, a control orifice and conduit means between the accumulator side of said diaphragm chamber and the input side of said fluid pumps, a spring on the opposite side of said diaphragm biasing said diaphragm to decrease the volume on the accumulator side of said diaphragm chamber, a conduit means connecting said output side of said cooling pumps with the portion of said diaphragm chamber on said opposite side of said diaphragm, a member connecting said diaphragm to a valve spool, said valve

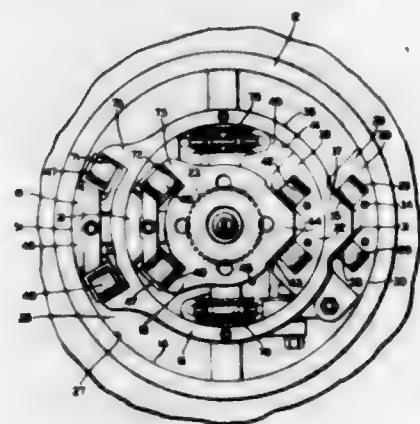
spool controlling the vacuum to the power booster unit in response to pressure from said cooling pumps and thereby controlling the skidding of said wheels.

3,004,802

ROLLER GUIDE CONSTRUCTION FOR CHAIR JACKS AND THE LIKE

John A. Mamer, Canton, Ohio, and Clarence G. Taylor, Oxnard, Calif., assignors to The Weber Dental Manufacturing Company, Canton, Ohio, a corporation of Ohio

Filed Oct. 23, 1959, Ser. No. 848,243
14 Claims. (Cl. 308-6)



1. Jack construction for chairs and the like including a stationary jack housing, an intermediate jack section telescoped within the jack housing reciprocal with respect to the jack housing, an inner jack section mounted telescoped within the intermediate jack section reciprocal with respect to said intermediate jack section, roller guide means mounted between the jack housing and intermediate jack section and between the intermediate jack section and inner jack sections during said reciprocal movement thereof, at least certain of the roller guide means between the jack housing and intermediate jack section and at least certain of the roller guide means between the intermediate jack section and inner jack section being selectively adjustable, the adjustable roller guide means between the jack housing and intermediate jack section having shoe means mounted on one of the housing and section and spaced roller means rotatably abutting the other of the housing and section, the adjustable roller guide means between the intermediate and inner jack sections having shoe means mounted on one of said sections and spaced roller means rotatably abutting the other of said sections, mounting means mounting the spaced roller means of each adjustable roller guide means adjustable toward and away from the shoe means thereof, and adjustment means operably connected between the spaced roller means and shoe means of each adjustable roller guide means for simultaneously moving the spaced roller means toward and away from the shoe means of said each adjustable roller guide means.

3,004,803

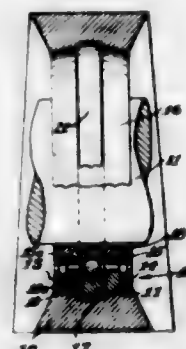
PILLOW BLOCK

Arthur S. Irwin, Jamestown, N.Y., assignor to Martin-Rockwell Corporation, Jamestown, N.Y., a corporation of Delaware

Filed Dec. 3, 1958, Ser. No. 777,986
4 Claims. (Cl. 308-72)

1. In combination with a bearing having an inner shaft supporting surface having an axis coinciding with the axis of a supported shaft and with an exterior convex spherical supporting surface with its locus located in said axis, a bearing supporting member having an inner spherical surface complementary to the exterior convex

spherical surface of said bearing and having an intermediate groove extending circumferentially within said bearing supporting member and separating said inner spherical surface into two portions, said exterior convex spherical surface of the bearing engaging said inner spherical surface to tiltedly support said bearing, a circumferentially extending spring member fitting in said groove and having edges recessed in said groove around the entire circumferential length of said edges and an intermediate portion intersecting the extension of the



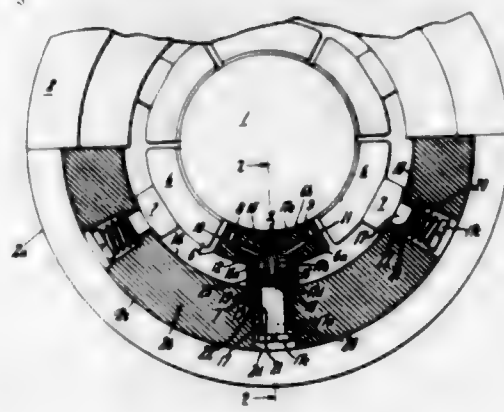
spherical surface of said bearing supporting member in an unflexed position for engagement by the spherical surface of said bearing and flexing into said groove to conform to the spherical surface of the ring member on engagement by the bearing so that the spring member grips the bearing to prevent circumferential rotation while permitting a tilting movement with the locus of the spherical surface of the bearing supporting member remaining on the axis of the inner surface of the bearing through the range of tilted positions thereof.

3,004,804

PIVOTED SHOE BEARING WITH FORCE-FEED LUBRICATION

Oscar Pinkus, Cambridge, and Richard J. Smith, North Wilmington, Mass., assignors to General Electric Company, a corporation of New York

Filed Aug. 26, 1959, Ser. No. 836,247
6 Claims. (Cl. 308-73)



1. A lubricated pivoted shoe for a journal bearing including a shaft and a coaxial radially spaced housing wall, said shoe being located between said shaft and said housing wall, said shoe defining a first arcuate wear surface disposed in rubbing relation with the shaft and defining first and second circumferentially separated axially extending oil supply recesses located adjacent but spaced from the respective ends of the wear surface, said shoe also defining a second arcuate fulcrum surface located radially outward from the first wear surface, whereby the shoe may rock on the second surface to aid in forming a wedge-shaped oil film, the shoe also defining first and second internal conduits communicating separately with and forming the only interconnection between said first and second recesses respectively, common oil supply conduit means connected to said first

and second internal conduits and extending through said second arcuate surface, and means to supply lubricant under pressure to said common oil supply conduit means.

3,004,805

JOURNAL LUBRICATOR

Llewellyn E. Hoyer, Wyckoff, and Edward R. Gorycya, Mahwah, N.J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,381
5 Claims. (Cl. 308-68)



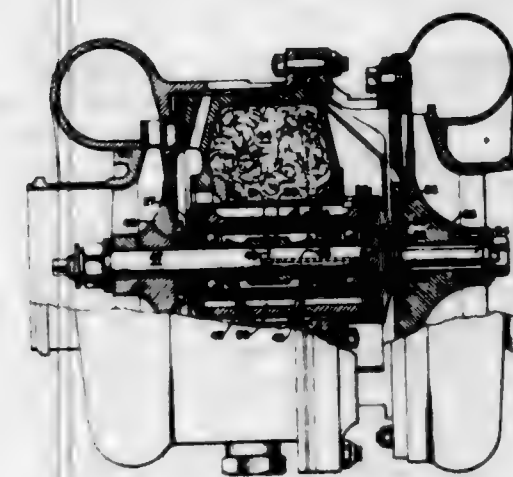
1. A lubricator for a journal disposed for rotation within a journal box and comprising, a base member in the form of a generally flat and rectangular sheet of flexible resilient hard rubber material having spaced-apart undercut slots formed therein, a pair of separate U-shaped one-piece arms composed of said material and each having ends formed complementary to said slots and removably mounted therein, wicking material secured to the convex sides of said arms opposite the base and including a portion disposed closely adjacent the medial part of said base member between said arms, and spring means embedded in said base and said arms.

3,004,806

LUBRICATION SYSTEM FOR HIGH SPEED MACHINES

Roy L. Schlusser, Long Beach, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Sept. 21, 1955, Ser. No. 535,643
10 Claims. (Cl. 308-187)

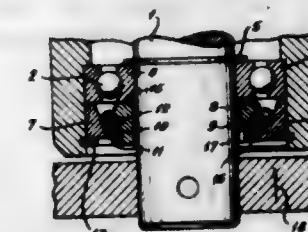


7. In high speed rotating machinery: a casing; a plurality of bearings supported in said casing; a shaft disposed for rotation in said bearings and extending through said casing; lubricating means for said bearings; sealing means for said shaft fixed in said casing between the ambient atmosphere and the bearings; a passage in said shaft extending from and communicating with the interior of said casing and extending axially beyond said sealing means; and centrifugal pumping means actuated by the rotation of the shaft and connected to the passage in the shaft outwardly of said sealing means for reducing the air pressure in the casing below that of the ambient atmosphere.

3,004,807

SEAL

Ernst Katschamp, Heilbronn, Germany, assignor, by means assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 10, 1957, Ser. No. 683,136
Claims priority, application Germany Sept. 18, 1956
8 Claims. (Cl. 308-187.1)



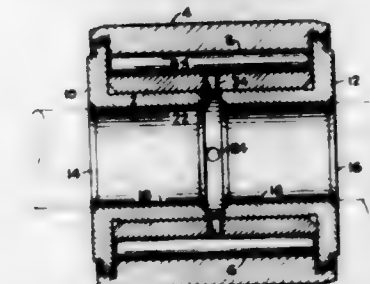
1. A shaft seal comprising a ball bearing positioned in a housing and adapted to fit about a shaft, said bearing having an inner race and outer race, and means for securing said bearing in said housing comprising a sealing ring having a surface pressed into sealing relationship with one of said bearing races, said sealing ring having an area which increases in cross-section as it extends inwardly into said housing, a retaining ring having a surface lying against the other bearing race and having an area of decreasing cross-section as it extends inwardly into said housing, said retaining ring and said sealing ring having tapered facing surfaces, and a resilient polyurethane plastic ring having a Shore A hardness of from about 60 to about 90 and a resiliency of from about 35% to about 55% compressed between the said tapered surfaces.

3,004,808

ROLLER BEARING ASSEMBLY

Vincent J. Powers, South Orange, N.J., assignor to Accurate Bushing Company, Garwood, N.J., a corporation of New Jersey

Filed Nov. 12, 1959, Ser. No. 852,282
5 Claims. (Cl. 308-212)



1. A roller bearing assembly comprising an inner race member, an outer race member, roller bearings located between said race members and engaging the bearing surfaces thereof and a pair of tubular sleeves each of which has a flange on the end thereof, said sleeves embracing one of said race members and positioned so that the flanges thereon project radially beyond the bearing surfaces of both said race members at opposite sides thereof so as to enclose the ends of the roller bearings and serve as end rings engageable by the roller bearings and by the other race member upon relative endwise movement of either the roller bearings or the other race member.

3,004,809

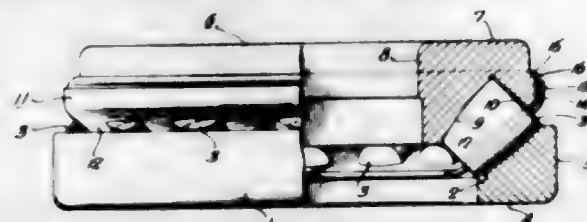
THRUST ROLLER BEARINGS

Axel Erlend Bratt, Goteborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden

Filed Dec. 19, 1957, Ser. No. 703,780
1 Claim. (Cl. 308-227)

A thrust roller bearing wherein the axes of the rollers are disposed obliquely relative to the axis of the bearing.

ing, a shaft race ring having a flange only at the outer ends of the rollers, a housing race ring surrounding the inner end of said shaft race ring and terminating short of the race ring flange, rollers located between said rings, a cage having a substantially conical portion located outside of the axes of the rollers and having roller pockets with sidewalls spaced apart less than the roller diameter so as to retain the rollers against outward displacement through said pockets and axial end walls spaced apart so as to retain the roller against axial dis-

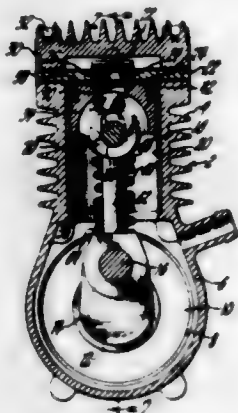


placement, and a radially-exposed substantially cylindrical extension on said cage encircling the shaft race ring, portions at least of said extension extending inwardly over a circular edge at the outer periphery of the shaft ring, the cylindrical extension of said cage being spaced from the peripheral surface of the shaft race ring and the pocket ends of the cage engaging the outer roller end surfaces so that the cage is supported by the rollers.

3,004,810 VARIABLE CLEARANCE VOLUME AIR COMPRESSOR

Jack B. King, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 15, 1958, Ser. No. 761,106
6 Claims. (Cl. 309-18)



1. In a gas compressor having a predetermined maximum outlet pressure, a piston having a vertically elongated slot extending transversely therethrough, a connecting rod, a wrist pin secured in said rod and extending into said slot, and resilient means reacting between said connecting rod and piston biasing said wrist pin into engagement with the lower end of said elongated slot.

3,004,811 PISTON RING ASSEMBLIES

George C. Mayfield, Richmond Heights, Mo., assignor to McQuay-Norris Manufacturing Company, St. Louis, Mo., a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,829
7 Claims. (Cl. 309-44)

1. In a piston ring assembly of the character wherein a pair of rails whose outer peripheries make edgewise engagement with a cylinder wall and are axially separated by a non-bottoming spacer-expander, said spacer-expander having a series of oppositely oriented humps some of whose crests define a major diameter, less than

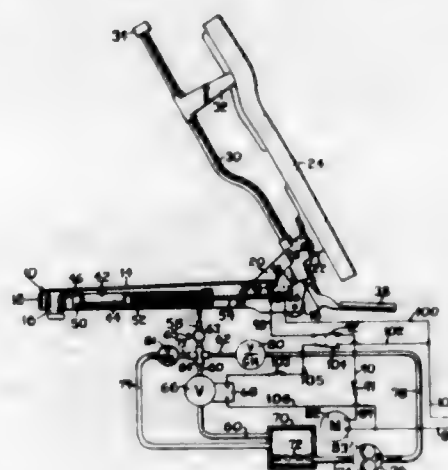
the outer diameter of said rails, of said spacer-expander and other of whose crests define a minor diameter less than the inner diameter of said rails, said first mentioned humps extending between said rails to separate the same, at least some of said last mentioned humps having an arcuate tab extending radially inward of said rails in



axially overlapping engagement with the inner periphery of one of said rails, the improvement which comprises: the locus of engagement between a tab and a rail being an edge defined by the intersection of two surfaces of the tab each of which surfaces makes a substantial angle with the inner periphery of the engaged rail.

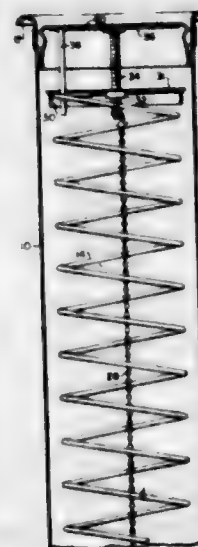
3,004,812 FLUID OPERATOR MECHANISM AND CONTROL ASSEMBLY THEREFOR

Richard A. Miller, 115 Jay St., Dayton 10, Ohio
Filed Apr. 16, 1958, Ser. No. 729,012
8 Claims. (Cl. 311-6)



1. Mechanism for operation of an adjustable chiropractic table of the type having a base with a body support member pivotally attached thereto, comprising a fluid motor pivotally attached to the base, a fluid motor including a piston rod attached to the body support member, a fluid conduit connected to the fluid motor, a fluid pump connected to the fluid conduit, electric motor means for operation of the fluid pump, an electromagnetically operable valve connected in the fluid conduit between the fluid motor and the fluid pump, a source of electrical energy, a limit switch connected to the source of electrical energy and carried by the base, means carried by the body support member for opening the limit switch upon pivotal movement of the body support member to a given angular position, a control switch connected to the motor and to the limit switch, the electric motor means being connected to the source of electrical energy for energization thereof when the limit switch and the control switch are closed, a second control switch mechanically attached to the first said control switch and electrically connecting the electromagnetically operable valve to the source of electrical energy when the second control switch is closed, the valve being in open position when the second control switch is closed, a fluid conduit connecting the fluid pump to the fluid motor, and a check valve within the last said fluid conduit preventing flow of fluid from the fluid motor to the fluid pump.

3,004,813
DISPENSING APPARATUS
Herbert L. Shivek, Brookline, Mass., assignor to Serv-O-Lift Corporation, Boston, Mass., a corporation of Massachusetts
Filed Sept. 26, 1957, Ser. No. 686,449
7 Claims. (Cl. 312-71)



1. Dispensing apparatus comprising, in combination, a tubular housing, a spring and a stationary spring-supporting plate mounted at the bottom of said housing, a dishware carrier movable in the upper portion of said housing and having a central bore and a guiding bushing, an axially movable spring adjusting plate having a screw-receiving nut and being mounted at the upper end of said spring, a vertical screw having an unthreaded portion at its upper end which is received within said central bore and guiding bushing of said carrier, a lower threaded portion engaged with the screw-receiving nut of the spring adjusting plate and a head rotatably supported by the carrier, whereby manual rotation of said vertical screw causes the axial movement of said spring adjusting plate toward or from the carrier.

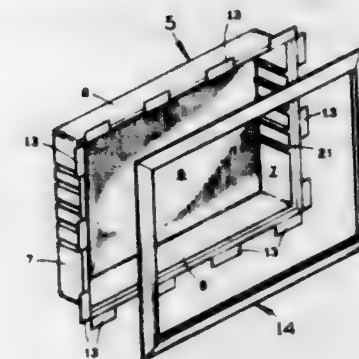
3,004,814
KNOCKDOWN DISPLAY TABLES
Howard L. Schulze, Greendale, Mo., assignor to American Fixture, Inc., St. Louis, Mo., a corporation of Missouri
Filed Jan. 9, 1961, Ser. No. 81,386
8 Claims. (Cl. 312-140.1)



1. A knockdown display table, comprising a plurality of elongated tubular metallic legs, each having at least two angularly related flat faces adapted for upright disposition when the leg is in assembled position, and being provided in each such face with a pair of vertically spaced longitudinally aligned apertures which are elongated in the upright direction when the legs are in assembled position, a plurality of side-wall forming panels each having oppositely presented lateral faces arranged for juxtaposed presentation to one of the flat faces of the legs

when in an assembled position, said lateral faces having elongated slots therein, hook-like elements mounted in and projecting from the slots in the lateral faces of each of said panels, said hook like elements being held rigidly and non-rockably in place within the slots, said hook like elements further including downwardly opening detent notches which at their upper ends are narrowed so as to have a width substantially equal to the thickness of the metal around the apertures in the legs and thereby being adapted for locking engagement in said apertures whereby to rigidly interconnect two legs, each of said legs, in turn, being engaged by hook-like elements of at least two different panels so that the plurality of legs and the plurality of panels are thus interconnected in the form of an upright enclosure, said panels each being provided on its inwardly presented face with a horizontally projecting flange having an upper horizontal face, the horizontal faces of said flanges being coplanar when the side panels are in assembled relation, and a bottom panel disposed in and extending across said enclosure, said bottom panel being supported upon the horizontal faces of said flanges and having vertical faces in snug-fitting abutment against the inwardly presented faces of the side panels.

3,004,815
WALL CABINET AND METHOD OF ASSEMBLY
Dennis B. O'Kain and Gilbert A. Viola, both of 410 E. 10th Circle, Hialeah, Fla.
Filed Apr. 27, 1960, Ser. No. 24,960
3 Claims. (Cl. 312-242)

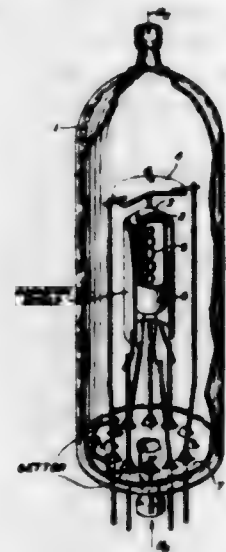


1. A wall cabinet that includes a molded plastics hollow body portion open upon its forward side and an overlying metallic frame, the marginal portion of the body being peripherally offset to form a forwardly facing seat, the marginal edge of the seat being provided with a plurality of integral spaced apart flexible tongues, the said frame being proportioned to overlie the marginal portion of the body portion and to extend beyond the body portion to overlie a wall area around a wall opening that receives the body portion, the frame having an intermediate portion that engages upon the seat of the body portion, the frame outwardly from the intermediate portion having a peripheral and rearwardly facing recess, an inwardly directed rib formed upon the outer marginal edge of the frame, the said frame adapted to engage upon the open side of the body portion with the several tongues engaging the recess in bowed snapping engagement behind the rib.

3,004,816
HYDROGEN BREAKDOWN OF CATHODES
Donald MacNair, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 16,559
3 Claims. (Cl. 316-8)

1. The method of processing an assembled thermionic tube containing a cathode, the latent emissive surface of

which comprises at least one alkaline earth carbonate, which comprises the steps of flowing a gas consisting



essentially of dry hydrogen through said tube at a temperature in the range of 750-1000° C. thereby reducing said carbonate to the oxide and evacuating said tube.

3,004,817 EVENTS RECORDER

Joseph S. Wagner, Levittown, Pa., assignor to Fischer & Porter Company, Hafsboro, Pa., a corporation of Pennsylvania

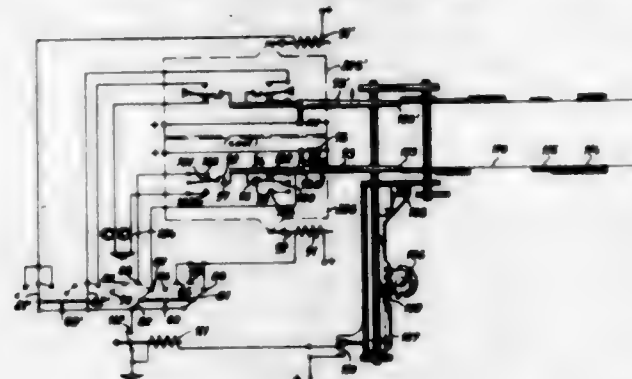
Filed Nov. 19, 1957, Ser. No. 697,402
12 Claims. (Cl. 346-34)



4. A recorder comprising tape feeding and guiding means, signal input terminals, coding means receiving inputs from said terminals and providing, for an input from each terminal, a combination of substantially simultaneous output signals identifying input signals, means receiving each combination of said output signals for recording them on said tape, means identifying on said tape the time of recording of a combination of said output signals, and means initiating high speed feed of said tape substantially concurrently with the recording of said output signals and for maintaining feed of said tape for a predetermined period following said recording.

3,004,818 AUTOGRAPHIC RECORDER ARRANGEMENT

Helmut Hermann Franz Dells, Kiel, and Karl Vöglin, Villingen, Black Forest, Germany, assignors to Kleinfeld Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed Nov. 13, 1959, Ser. No. 894,752
Claims priority, application Germany Nov. 21, 1958
19 Claims. (Cl. 346-49)

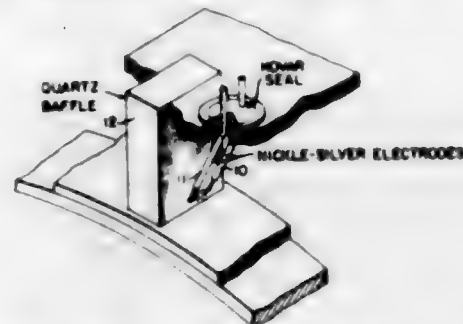


1. An autographic recorder arrangement, comprising, in combination, a record carrier means having at least one common predetermined recording area and being continuously movable in a predetermined direction; at least one first stylus means, operatively connected with a mechanism operable at various operational conditions, and arranged for recording varying operational conditions thereof on said common predetermined recording area of said record carrier; at least one auxiliary stylus means for recording phenomena occurring while said mechanism is non-operating, said auxiliary stylus means being arranged also opposite said common predetermined recording area of said record carrier means for producing thereon a recording of said phenomena distinct from the recording of said operational conditions of said mechanism, said auxiliary stylus means and said first stylus means being arranged and constructed so as to cause interference therebetween in case of both said stylus means being in operative position and recording in said common predetermined recording area, said auxiliary stylus means being movable between an operative position enabling it to effect recordings, and an inoperative position in which it is spaced from said record carrier means so as to avoid interference with said first stylus means; shifting means for moving said auxiliary stylus means between said operative recording position and an inoperative idle position; actuating means for actuating said shifting means; and control means interconnected between said actuating means and said mechanism for rendering said actuating means operable only when said mechanism is in non-operating condition.

3,004,819 ELECTROSTATIC RECORDER

Victor C. Anderson, San Diego, Calif., assignor to The Regents of The University of California, a corporation of California

Filed Apr. 9, 1956, Ser. No. 576,874
5 Claims. (Cl. 346-74)



1. A recording apparatus for storing electrical signals as electrostatic surface charges comprising, a member of dielectric material having an exposed surface, a record-

ing head comprising electrical discharge means adjacent said surface for ionizing the air adjacent said surface in a predetermined region, means for moving said surface of said dielectric member past said discharge means, a source of high frequency alternating voltage connected to said discharge means for producing an air-ionizing electrical discharge, and recording means for impressing a variable voltage differential between said recording head and said surface in said predetermined region whereby said variable voltage causes conduction through said ionized air and the production of variable electrostatic charges on the surface of said member.

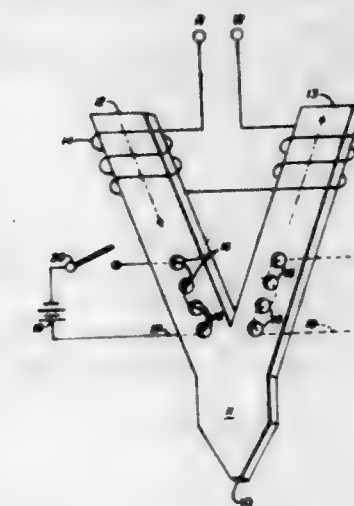
3,004,820 MAGNETIC BALANCED WINDING TRANSDUCER

William E. Howden, Berkeley, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Oct. 7, 1957, Ser. No. 688,558
7 Claims. (Cl. 346-74)

5. A magnetic transducer including a pair of magnetically parallel core members, an end of one member being joined with an end of the other member, the resulting junction being adapted to coact with a magnetic recording surface, a winding for each said parallel member,

means for energizing said windings to produce magnetic flux of opposing polarities in said parallel members effectively cancelling all flux at said junction, a second



winding on one of said parallel members arranged between said junction and the first said winding for generating quadrature flux to saturate a section of said member whereby the flux of the other said member predominates at said junction, and means to energize said second winding.

CHEMICAL

3,004,821 STABILIZED GASOLINE-SOLUBLE DIAZO DYE COMPOSITIONS AND PROCESS OF PREPARING SAME

Robert D. Gano, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

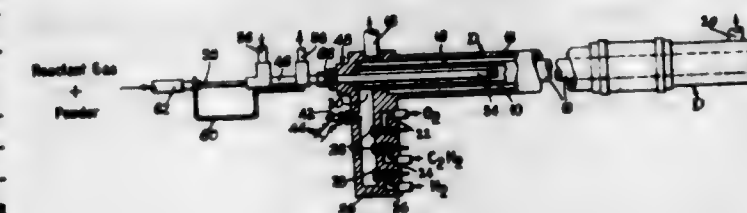
No Drawing. Filed Nov. 19, 1957, Ser. No. 697,339
3 Claims. (Cl. 8-3)

1. A process for preparing a gasoline-soluble and free-flowing stabilized crystalline diazo dye powder mixture, in which process at least two polymorphic dyes in their unstable crystalline form and taken from the group consisting of (a) 1-(p-phenylazophenylazo)-2-naphthol, (b) 1-(4-o-tolylazo-o-tolylazo)-2-naphthol, (c) 1-(4-phenylazo-2,5-xylylazo)-2-naphthol, (d) 1-(4-o-tolylazo-2,5-xylylazo)-2-naphthol, (e) 1-[4-(2,4-xylylazo)-2,5-xylylazo]-2-naphthol, in such proportion that one of said dyes is present in an amount up to 90% by weight of the mixture, are heated, under anhydrous conditions, at about 80° C. to below the melting temperature of said dyes for a period of from about 15 to 30 hours to convert at least 5% by weight of the original dye mixture to the stable beta-crystalline form, said beta-crystalline form of dye (a) having beta X-ray diffraction maxima at 11.4, 13.6, 18.9, 19.9, 20.2, 21.8, 24.7, 26.2, 27.0, 28.2, 29.0 and 34.8 degrees, said beta-crystalline form of dye (b) having beta X-ray diffraction maxima at 10.4, 12.0, 13.7, 14.2, 17.9, 20.2, 24.5, 25.8 and 28.3-degrees, said beta-crystalline form of dye (c) having beta X-ray diffraction maxima at 6.2, 8.6, 10.5, 11.0, 12.5, 17.2, 18.0, 19.4, 20.2, 21.0, 24.2, 26.0 and 28.0 degrees, said beta-crystalline form of dye (d) having beta X-ray diffraction maxima at 10.4, 11.9, 13.7, 18.0, 20.0, 23.4, 24.4, 25.6 and 28.2 degrees, said beta-crystalline form of dye (e) having beta X-ray diffraction maxima at 10.3, 11.8, 13.5, 17.8, 20.2, 24.3, 25.6 and 28.1 degrees, followed by recovering and grinding said stabilized mixture.

3,004,822 METHOD FOR UTILIZING DETONATION WAVES TO EFFECT CHEMICAL REACTIONS

Richard M. Poorman and George P. Hawley, Speedway, and Herbert B. Sargent, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York

Filed Jan. 31, 1958, Ser. No. 712,401
6 Claims. (Cl. 23-1)



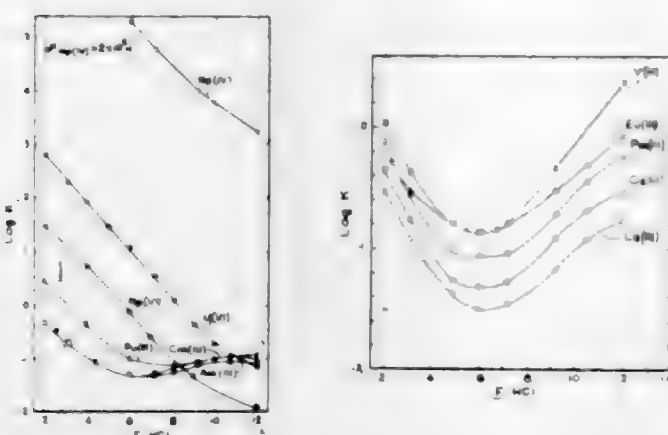
1. In the method of effecting a chemical reaction such as oxidation, reduction and carburization by directing a detonation wave against a comminuted solid reactant to produce a reaction product, wherein a predetermined ratio of fuel to oxidant in an ignition zone produces optimum flame velocity and temperature in said detonation wave, and wherein the atmosphere resulting from said detonation is not the optimum for effecting an efficient chemical reaction of said comminuted solid reactant, the improvement comprising adding a supplemental reactive gas in a reaction zone adjacent to the ignition zone to modify the detonatable composition in said reaction zone to suit the desirable reaction conditions for said comminuted solid reactant, thereby promoting the chemical reaction of said comminuted solid reactant and increasing the yield of reaction product.

3,004,823

METHOD OF SEPARATING NEPTUNIUM BY LIQUID-LIQUID EXTRACTION

Donald F. Peppard, Oak Park, and George W. Mason, Clarendon Hills, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed July 15, 1959, Ser. No. 827,410
4 Claims. (Cl. 23-14.5)



4. A method for separating Np IV values in an aqueous solution containing values of the group consisting of U VI, Pr III, Cm III, Am III, Y III, and lanthanide III, comprising acidifying the aqueous solution by HCl between about 6 F and 12 F, then bringing the aqueous solution into contact with a substantially immiscible organic liquid solution containing mono(2-ethylhexyl)-orthophosphoric acid in a solvent, agitating the two solutions together, discontinuing the agitation for a sufficient time to permit separation into a discrete aqueous phase and a discrete organic liquid phase, and then removing the organic liquid phase containing the preponderance of the neptunium values from the aqueous phase.

3,004,824

COPPER PHOSPHATE SALTS

John Benkenkamp, Morgan, N.J., assignor to Colgate Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 18, 1957, Ser. No. 646,525
3 Claims. (Cl. 23-105)

1. A process for producing copper phosphate solution in high purity which comprises treating an aqueous solution of a water-soluble salt selected from the group consisting of soluble copper salts and soluble phosphate salts with an ion-exchange resin selected from the group consisting of phosphate-containing anion exchange resins and copper-containing cation exchange resins, said copper salt solution being used with said phosphate-containing resin and said phosphate salt solution being used with said copper-containing resin, so as to form an aqueous solution containing dissolved copper cation and phosphate anion, and recovering said copper phosphate solution in high purity from said ion exchange resin.

3,004,825

PROCESS FOR MANUFACTURE OF SODIUM HYDROSULFITE

James Kamlet, New York, N.Y., assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Feb. 24, 1958, Ser. No. 716,861
3 Claims. (Cl. 23-116)

1. A process for preparation of sodium hydrosulfite which comprises reacting finely-divided sodium hydride with a gaseous mixture of about 10 percent by volume of sulfur dioxide and about 90 percent by volume of an inert gas at a temperature below about 100° C. with agitation, whereby hydrogen is evolved and an unstable addi-

tion compound of sodium and sulfur dioxide is formed, dissolving the said unstable addition compound in cold water to form an aqueous solution of sodium hydrosulfite, salting out the said sodium hydrosulfite as the dihydrate $\text{Na}_2\text{S}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$, and dehydrating said dihydrate to anhydrous sodium hydrosulfite.

3,004,826

PROCESS FOR OBTAINING SCHOENITE BY DIRECT TREATMENT OF KAINITE CONTAINING SODIUM CHLORIDE AS AN IMPURITY

Gerlando Marullo, Giovanni Perri, Giuseppe Tubiello, and Dante Cadorna, all of Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed July 21, 1958, Ser. No. 749,591
Claims priority, application Italy July 22, 1957

4 Claims. (Cl. 23-117)

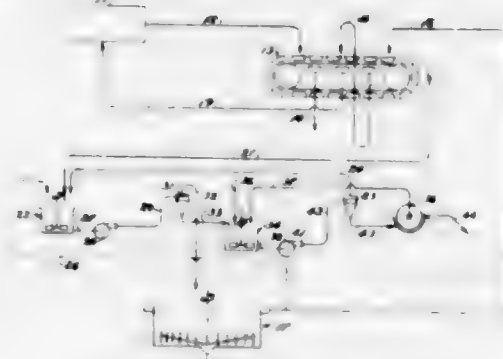
1. A process for obtaining schoenite by direct treatment of kainite mineral containing sodium chloride as an impurity, said treatment being carried out by means of sulphate mother liquors obtained by treating schoenite with water in order to separate potassium sulphate, characterized in that the kainite mineral, ground with a granulometry in the order of 0.05 to 0.1 mm. is gradually added to said sulfate mother liquors during a time of about 5 hours while stirring moderately so as not to cause excessive moving, and subsequently still agitating for about one hour, thus obtaining a crystal phase consisting of a crystalline mixture of schoenite and sodium chloride, in which the sodium chloride crystals have maintained their original grinding size while the schoenite crystals have a much higher size, in the order of 0.1 to 0.75 mm., and further characterized in that the separation of schoenite from the mixture with sodium chloride is thereafter carried out by means of a volumetric classification, thus obtaining the schoenite in the portion having higher granulometry.

3,004,827

TREATMENT OF BY-PRODUCT GYPSUM

Arthur Schaas, Brussels, Belgium, assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed Dec. 31, 1956, Ser. No. 631,778
3 Claims. (Cl. 23-122)



1. In the wet phosphoric acid process which includes the steps of reacting phosphate rock with sulfuric acid in a first reaction station to yield a slurry of by-product gypsum solids in liquid phosphoric acid and filtering such slurry at a filtration station to recover phosphoric acid as filtrate and impure by-product gypsum as filter cake, said gypsum containing residual soluble P_2O_5 ; an improved method of treating said by-product gypsum to remove impurities and to recover residual P_2O_5 therefrom, said improvement comprising the steps of removing such filter cake from the filtration station, repulping said cake with liquor to form a suspension having free settling characteristics while effecting removal of soluble P_2O_5 from said cake by dissolving said P_2O_5 in said liquor, subject-

ing said suspension to hydraulic classification to yield an overflow fraction comprising fine solid impurities suspended in one portion of such P_2O_5 bearing liquor and an underflow fraction comprising substantially pure gypsum suspended in another portion of such liquor, recovering substantially pure gypsum from said underflow fraction, separating said fine solid impurities from said overflow fraction to yield a substantially solids-free liquor containing soluble P_2O_5 , transferring said solids-free liquor to said filtration station and there passing it through said impure gypsum filter cake to wash the same thereby to effect recovery of residual phosphoric acid, and then flowing the resulting filtrate containing P_2O_5 and phosphoric acid-bearing liquor to the first reaction station for further reaction with sulfuric acid.

3,004,828

METHOD OF PREPARING CYANOGEN FROM HYDROGEN CYANIDE

William L. Pierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Nov. 25, 1959, Ser. No. 855,276
9 Claims. (Cl. 23-151)

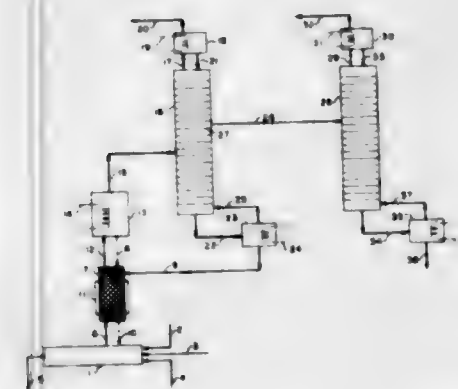
1. A method of preparing cyanogen which comprises reacting dry gaseous hydrogen cyanide with a solid dry cupric compound selected from the group consisting of cupric chloride, cupric sulfate, and copper chromite, under anhydrous conditions, at a temperature of about 100°-400° C.

3,004,829

HYDROGEN FLUORIDE PROCESS

Robert J. Boyle, Scotch Plains, N.J., and George Russell James, Armonk, N.Y., assignors to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,819
3 Claims. (Cl. 23-153)



1. Process for producing pure anhydrous hydrogen fluoride comprising reacting calcium fluoride and sulfuric acid, recovering an impure gas stream containing hydrogen fluoride together with entrained solids, mist, and gaseous impurities including water vapor, sulfur dioxide and inert gas, filtering and scrubbing said gas stream for solids and mist removal, cooling said gas stream to a temperature between about 67° F. to 72° F. whereby partial condensation results, recycling liquid condensate to said scrubbing, further partially condensing and distilling the residual gas stream in a first distillation zone to produce an overhead waste gas stream at a temperature between about 65° F. to 67° F. containing gaseous inerts, an aqueous liquid bottoms stream at a temperature between about 70° F. to 75° F. and an intermediate liquid process stream, cooling and refluxing said overhead gas stream to recover hydrogen fluoride content, discharging

the residual inerts-laden gas stream, recycling said aqueous liquid bottoms stream to said scrubbing step, withdrawing said intermediate liquid process stream at a temperature between about 63° F. to 68° F. from a stage of said distillation step above the entry of said residual gas stream and below the recycle of overhead gas stream reflux whereby said intermediate liquid process stream is recovered substantially free of impurities other than up to about 2% sulfur dioxide, separately further distilling said intermediate liquid process stream in a second distillation zone to produce an overhead gas stream containing sulfur dioxide and a liquid bottoms stream, cooling and refluxing said overhead gas stream to recover hydrogen fluoride content, discharging the residual sulfur dioxide-laden gas stream, and recovering said liquid bottoms stream of pure hydrogen fluoride product and substantially free of sulfur dioxide and water.

3,004,830

METHOD OF PRODUCING METAL BORIDES

Nils Orne, 81 Banergatan, Stockholm, Sweden

No Drawing. Filed Aug. 22, 1955, Ser. No. 529,924
Claims priority, application Sweden Aug. 26, 1954

3 Claims. (Cl. 23-204)

1. Method of producing borides of transition metals selected from the group consisting of titanium, zirconium, chromium, manganese, molybdenum, tungsten, columbium and tantalum, by forming into a vertical electric arc furnace container a cup shaped charge of an intimate mixture of finely comminuted components comprising an oxide of at least one of said transition metals, a boric acid component, and carbon, said cup shaped charge providing a central cavity for introducing vertically within said cavity electrode means for electric arc generation above the bottom and within the space said cup shaped charge provides, igniting an electric arc, between said electrode means to melt the boric acid component and to vitrify the wall of said cavity and to dehydrate the boric acid, increasing the energy of the electric arc to start and maintain the reduction of the boric acid and the transition metal components by said carbon component with the formation of carbon monoxide, the composition of said mixture being such that a protective monoxide atmosphere of superpressure is maintained in said cavity, and smelting by means of said generated electric arc a successively increasing boride lump of said reduced metal component into the bottom of said cavity.

3,004,831

PREPARATION OF HYDROGEN PEROXIDE

Fulton H. Hungerford, Titusville, Fla., and Richard J. Samelson, Corpus Christi, Tex., assignors, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,618
14 Claims. (Cl. 23-207)

1. In the method of producing hydrogen peroxide by alternate catalytic hydrogenation of a member of the group consisting of quinones and azobenzenes in liquid phase and in the presence of metallic hydrogenation catalyst, oxidation of the resulting hydrogenated product to liberate hydrogen peroxide and recovering the hydrogen peroxide, the improvement which comprises periodically reducing the pressure of hydrogen in contact with said liquid phase after the catalyst activity has diminished and passing an inert gas through said liquid while the catalyst is in contact therewith and while the hydrogen pressure is reduced, continuing said passage of inert gas until the activity of the catalyst has increased, and thereafter increasing the hydrogen pressure in contact with said liquid phase.

3,004,832
PROCESS FOR PRODUCING TITANIUM CARBIDE
Leif Asgaard, Plainfield, N.J., assignor to National Lead
Company, New York, N.Y., a corporation of New
Jersey

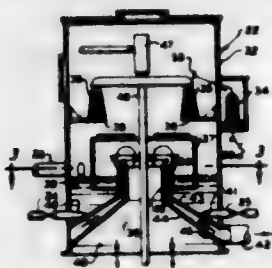
Jersey
No Drawing. Original application Aug. 16, 1954, Ser.
 No. 450,234, now Patent No. 2,819,152, dated Jan. 7,
 1958. Divided and this application Apr. 16, 1957, Ser.
 No. 653,075

2. ~~Citation~~ (CL 23-200)

1. Process for forming a titanium compound of carbon, the steps of: preparing a starting composition by forming a sulfate solution of titanium, hydrolyzing said sulfate solution in the presence of finely divided carbon particles to form a mixture comprising coalesced particles of a hydrated titanium compound and carbon, adding a soluble inorganic phosphate to the mixture to convert said hydrated titanium values of said mixture to titanium phosphate, and then calcining said mixture to form a finely divided titanium compound of carbon.

3,604,833
OPERATION OF AN OIL SEAL FOR ELECTRICAL
TERMINALS OF AN ELECTROPRECIPITATOR
Bruno F. Loewen, Berger, Tex., assignor to Phillips Pe-
trochemical Company, a corporation of Delaware

Filed May 4, 1959, Ser. No. 810,920
4 Claims. (Cl. 23-292.4)



1. A method for operating a furnace carbon black production operation wherein carbon black is recovered from furnace effluents in a high potential electroprecipitator, the improvement comprising pumping only carbon black furnace charge oil and directly injecting it tangentially under the surface and into the lower portion of a body of said charge oil in an oil seal zone in liquid sealing relation between the electrical precipitation zone and the high potential electrical terminal containing zone of said precipitator thereby maintaining said body of oil in circulatory movement and eliminating settling of inadvertently entrained carbon black, withdrawing charge oil from the top of said oil seal zone and introducing this withdrawn charge oil and suspended carbon black into a carbon black production furnace.

3,004,834
METHOD OF PROCESSING PHOSPHORUS
SLUDGE OBTAINED IN THE PRODUCTION
OF PHOSPHORUS

Helmz Harnisch, Köln, Friedbert Ritter, Buschhof, near Koulgsvinter, and Franz Rodin, Knapsack, near Köln, all in Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Köln, Germany, a corporation of Germany
No Drawing. Filed May 28, 1958, Ser. No. 738,315
Claims priority, application Germany Aug. 3, 1957
1 Claim. (Cl. 23-293)

1. A method for processing phosphorus sludge obtained in the production of phosphorus, which comprises steam distilling a phosphorus-containing aqueous sludge wherein the phosphorus particles are partially encased by contamination particles at a temperature of above about 100° C. and under a pressure of between 2 atmospheres absolute and about 20 atmospheres absolute, condensing the phosphorus vapor and steam, and separating pure yellow phosphorus from the condensate.

phorus from the phosphorus-steam-condensate, said condensation and separation of phosphorus being carried out in an inert atmosphere.

3,004,835
METHOD OF PREPARING SILICON RODS
Harry Grey Verner, Kirkwood, and John R. Knabler, Jr.,
Northwoods, Mo., assignors to Mallinckrodt Chemical
Works, St. Louis, Mo., a corporation of Missouri
Filed Nov. 20, 1958, Ser. No. 775,253



2. The method of producing silicon in the form of zone-refinable rods which comprises depositing silicon on a tantalum filament, leaching the deposit together with the embedded filament in hot aqueous hydrofluoric acid to dissolve a substantial portion of the tantalum filament and enable its removal, etching the resulting rod of silicon, from which the tantalum has been removed, in nitric acid containing a minor proportion of hydrofluoric acid, and then rinsing and drying the resulting zone-refinable rod of pure silicon.

3,684,836
REDUCTION OF SLAG FORMATION IN COAL-FIRED FURNACES, BOILERS AND THE LIKE
Harris Thompson, Downers Grove, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Aug. 13, 1958, Ser. No. 754,730

1. A composition useful in slag prevention in coal-fired furnaces comprising a mixture of small, dense particles of an average particle size in the range of 0.001 to 0.05 inch of 50-80% by weight of magnesium oxide particles obtained by the calcination of a member of the group consisting of magnesium ore and amorphous magnesium hydroxide and 20-50% by weight of alkaline earth phosphate salt particles.

3,604,837
FUEL FOR TWO-CYCLE INTERNAL COMBUSTION ENGINES
Lawrence E. Riemenhneider, 175 Park St.,
Chelsea, Mich.

No Drawing. Filed Aug. 9, 1956, Ser. No. 603,192
2 Claims. (Cl. 44-58)

1. A fuel for a two-cycle engine consisting essentially of a major proportion of naphtha and not substantially less than 6% by volume of an additive; the additive comprising a major proportion of liquid polymers of lower olefins having an average molecular weight of at least about 300, and about 0.5% to about 10% by weight of the additive of polypropylene glycol having an average molecular weight of at least about 600.

3,884,838
ANTIENOCK COMPOSITIONS
Melvin L. Larsen, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 24, 1956, Ser. No. 617,926
6 Claims. (Cl. 44—69)

1. Gasoline containing from about 0.02 to about 6.5

OCTOBER 17, 1961

CHEMICAL

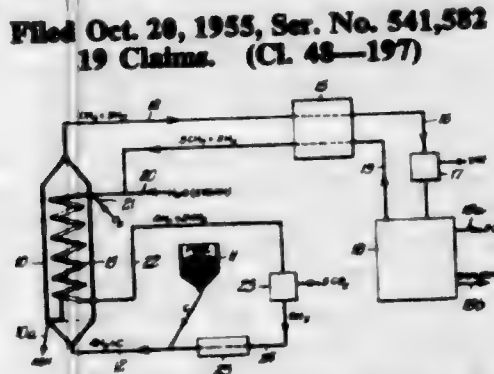
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grams of lead per gallon as an alkyllead antiknock compound, a scavenging amount of an organic halide scavenger capable of reacting with the lead during combustion in a spark ignition internal combustion engine to form relatively volatile lead halide, and a dialkyl phosphoramidate ester in which each alkyl group contains from 2 to 10 carbon atoms, said phosphoramidate ester being present in amount such that the phosphorus-to-lead atom ratio is from about 0.1:3 to about 1.6:3.

3,884,839

**GASIFICATION OF CARBONACEOUS
SOLID FUELS**

Earl L. Torquist, Elmhurst, Ill., assignor to Northern
Illinois Gas Company, Aurora, Ill., a corporation of
Illinois



1. In a process of manufacturing pipeline quality gas, the steps comprising arranging two reaction zones in direct heat transfer relation; reacting hydrogen with carbonaceous solid fuel in one zone in the presence of an excess amount of hydrogen to produce methane at a temperature and pressure which produces a product gas consisting essentially of methane and hydrogen; reacting methane with steam in the other reaction zone, at a temperature below the temperature in said one zone, to produce hydrogen in sufficient quantity to replace the hydrogen being consumed in the first zone; the available exothermic heat from the first reaction zone being utilized to supply to said other reaction zone at least a substantial part of the endothermic heat required to produce hydrogen; separating out at least a portion of substantially only the methane which is produced in the first zone, collecting the same and returning the excess hydrogen to the first zone for re-use in the process, together with the hydrogen produced in said other zone.

3,684,840

**SOLID COMPOSITE PROPELLANTS CONTAINING
POLYALKYLENE OXIDES**

Malcolm E. Pruitt, Lake Jackson, Joseph M. Baggett,
Freeport, and Wallace T. McMichael, Lake Jackson,
Tex., assignors to The Dow Chemical Company, Mid-
land, Mich., a corporation of Delaware

No Drawing. Filed Oct. 17, 1957, Ser. No. 690,630

2 Claims. (Cl. 267-52-5)

1. A solid propellant composition consisting essentially of an intimate admixture of a solid, inorganic oxidizing salt with a polymer of a lower alkylene oxide, wherein the said polymer is present in the amount from 60 to 5% by weight of the solid propellant.

3,004,841
JET OR ROCKET FUEL
 Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The
 Commonwealth Engineering Company of Ohio, Day-
 ton, Ohio
 Filed May 4, 1959. Ser. No. 810,653

1. A solid fuel mixture consisting essentially of finely divided particles of metal, said particles of metal being selected from the group consisting of aluminum, magnesium and beryllium, and mixtures thereof, particles of coal, and a fatty acid metal salt, the particle size of said coal and said metal being of a micron fineness of

twenty down to sub-micron size, said metal particles constituting between about 1% and 35% by weight of the total mixture of carbonaceous material and metal particles, said coal particles constituting the principal constituent, and said fatty acid metal salt comprising 0.1% to 5% by weight of the metal particles, and liquid ozone in the amount of 0.1 to 1.0% by weight of said fuel mixture.

3,004,242
**AMMONTUM NITRATE EXPLOSIVES AND
 THEIR MANUFACTURE**
 Hugh Charles Rowlinson, Beloeil, Quebec, Canada, as-
 signor to Canadian Industries Limited, Montreal, Que-
 bec, Canada, a corporation of Canada
 No Drawing. Filed Dec. 1, 1958, Ser. No. 777,220
 Claims priority, application Canada Feb. 4, 1958
 6 Claims. (Cl. 52-14)

1. A cast detonatable explosive composition, having a substantially rigid solid structure with from 10% to 50% by volume of gaseous pockets dispersed therein, consisting essentially of an intimate mixture of ammonium nitrate and from 2% to 20% by weight of at least one non-volatile fuel selected from the group consisting of hydrocarbon oils, hydrocarbon waxes, fats, cellulosic materials, urea, graphite, aluminum and ferrosilicon.

3,004,843
CONTROL OF AQUATIC PLANTS
Melvin J. Josephs, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,472
3 Claims. (Cl. 71-2.3)

1. A method for inhibiting the growth of aquatic plants which includes the step of introducing into the water adjacent the submersed portions of the plants a growth inhibiting amount of an *o*,*a*,*s*-trifluoro-4-nitro-m-cresol compound, said *o*,*a*,*s*-trifluoro-4-nitro-m-cresol compound being selected from the group consisting of *o*,*a*,*s*-trifluoro-4-nitro-m-cresol and its alkali metal, ammonium, and amine salts.

3,694,844

COMPOSITION AND METHOD FOR CONTROL OF VEGETATION

Leonard M. Stahlber, Pacific Palisades, and James D. Stone, Los Angeles, Calif., assignors, by mesne assignments, to United States Borax & Chemical Corporation

No Drawing. Filed Nov. 27, 1953, Ser. No. 394,992

2 Claims. (Cl. 71-2.4)

1. A herbicidal composition for application to soil to inhibit growth of plants therein, said composition consisting essentially of an organic herbicide of hormone type selected from the group which consists of 2,4-dichlorophenoxyacetic acid, 2,4,5-trichlorophenoxyacetic acid, 2-methyl-4-chlorophenoxyacetic acid, and the salts and substituted organic ammonium salts and amides of said acids; and a herbicidal agent which, when added to the soil, inhibits the destruction of said organic herbicide by micro-organisms in the soil, said herbicidal agent being selected from the group consisting of sodium and calcium borates, said organic herbicide being present in the composition in herbicidal quantity, and the borate being present in the composition in a ratio of borate to organic herbicide between about 5:1 and about 50:1.

3,004,845
**STABLE FORMULATIONS OF PLANT
 GROWTH STIMULANT**
 Raymond J. La Pierre, Lodi, N.J., assigner to March
 & Co., Inc., Rahway, N.J., a corporation of New
 Jersey
 No Drawing. Filed Jan. 23, 1953, Ser. No. 710,604
 10 Claims. (Cl. 71-24)

1. A water soluble solid plant growth stimulant preparation comprising a homogeneous mixture of about 0.1

ungelatinized starch in the reacted paste to form the adhesive and gelatinizing the ungelatinized starch between plies of the corrugated board, said functional groups being selected from the group consisting of halogen, aldehyde, vinyl, epoxy and nitrile.

3,004,856

PROCESS FOR THE BLEACHING OF WAXES OR OTHER WAX-LIKE MATERIALS BY OXIDATION AND THE NEW COMPOSITIONS OF MATTER THUS OBTAINED

Friedrich Ziemert, Genthofen, near Augsburg, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brunsing, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Feb. 26, 1957, Ser. No. 642,373
Claims priority, application Germany Mar. 2, 1956
11 Claims. (Cl. 106-370)

9. A composition of matter comprising bleached products of homogeneous mixtures of an ester wax of natural origin and an oxidation product of aliphatic hydrocarbons that are solid at room temperature, which oxidation product has an acid number between 10 and 80 and is contained in the homogeneous mixture in a quantity of 5 to 80 percent of the weight of this mixture, said bleaching having been carried out at a temperature of at least 90° C. by means of chromosulfuric acid and said bleached products consisting essentially of long-chain aliphatic carboxylic acids.

3,004,857

CORROSION-INHIBITIVE PIGMENT

David A. Merson, Mill Neck, and Edward J. Dunn, Jr., Fort Washington, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed July 12, 1960, Ser. No. 42,201
5 Claims. (Cl. 106-292)

5. A method for the production of a composite coated pigment which comprises the steps of forming an aqueous slurry of finely-divided silica and zinc oxide, deliquoring said slurry, calcining the solid portion of said slurry at a temperature between 500° C. and 750° C. to form a calcined product, forming an aqueous slurry of said calcined product, adding thereto a chromate selected from the group consisting of water-soluble chromates including chromium trioxide, said chromate being present in amount at least theoretically sufficient to form tetrabasic zinc chromate, ZnCrO₄·4ZnO, with said zinc oxide, said zinc oxide and said chromate being present in amount sufficient to form zinc chromate in amount between 20 and 80% by weight of the sum of said zinc chromate and said silica, and a water-soluble caustic in amount equivalent to between 0.5 and 1.5% K₂O, by weight of the zinc chromate formed.

3,004,858

TITANIUM DIOXIDE PIGMENT OF IMPROVED DISPERSIBILITY

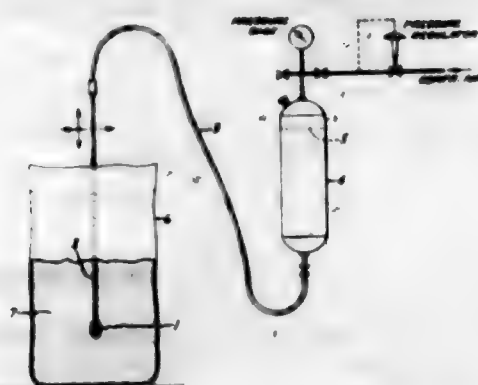
Gerard M. Sheehan and Walter R. Whately, Lynchburg, Va., and George Leathwhite Roberts, Jr., Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,132
15 Claims. (Cl. 106-300)

1. Dry titanium dioxide pigment of improved dispersibility in surface coating composition vehicles after compaction and storage, consisting essentially of dry titanium dioxide pigment particles uniformly carrying between about 0.01% and 3% by weight of a non-ionic alkylene oxide polymer containing at least five consecutive —C—C—O— groups, substantially all of said polymer being molecularly adsorbed on the surface of said pigment.

3,004,859

PROCESS FOR TREATING FILLERS

Hart K. Lichterwaiser, Rosford, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 28, 1958, Ser. No. 738,438
7 Claims. (Cl. 106-306)

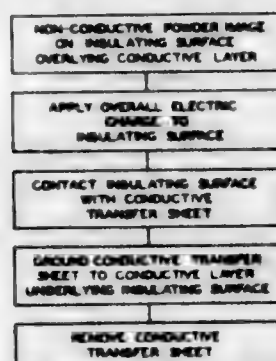


1. The process which comprises mixing from 5 to 50 parts by weight of a volatile lower alkylpolysiloxane having a boiling point of less than 250° C. with 100 parts of a bulk mass consisting essentially of a finely divided inorganic metallic oxide filler and allowing the filler and alkylpolysiloxane to remain in intimate contact with each other in a sealed container for at least 4 days at a temperature of from about 25 to 35° C. until the alkylpolysiloxane is intimately dispersed through the said filler by volatilization of the alkylpolysiloxane.

3,004,860

INDUCTION POWDER TRANSFER

Robert W. Gundlach, Spencerport, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Apr. 24, 1957, Ser. No. 654,950
6 Claims. (Cl. 117-17.5)



1. The method of transferring a releasable insulating powder image on an insulating surface overlying a conductive support to a conductive surface of a transfer member, comprising electrostatically charging the insulating surface together with the image thereon to a potential greater than about 200 volts and less than the breakdown potential of the insulating surface, contacting the insulating surface with the conductive surface, separating the conductive surface from the insulating surface and bringing the conductive surface to substantially the potential of the conductive support for a time extending at least from before until after separation of the surfaces.

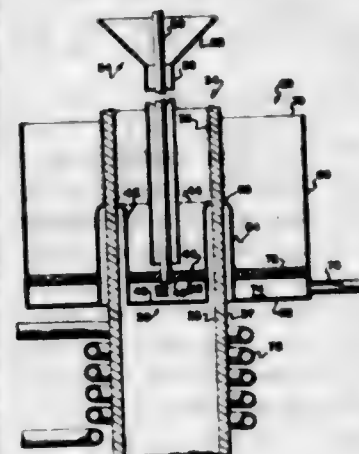
3,004,861

METHODS AND APPARATUS FOR APPLYING PROTECTIVE COATINGS

William J. Davis, West Reading, Pa., assignor to The Polymer Corporation, a corporation of Pennsylvania
Filed Jan. 12, 1956, Ser. No. 558,768
6 Claims. (Cl. 117-18)

6. A method of simultaneously coating the exterior and interior surfaces of a substantially vertically dis-

posed elongated tubular article comprising the steps of (1) forming a first fluidized bed consisting of a dense phase of solid, pulverulent, layer-forming material; (2) forming a second fluidized bed consisting of a dense phase of solid, pulverulent layer-forming material separated and disposed from the first fluidized bed by a gap which conforms substantially to the cross section of the article to be coated; (3) preheating the article; (4) inserting the article in said gap; and (5) simulta-



neously contacting the exterior and interior surfaces of said preheated article with the dense phases of the first and second fluidized beds, respectively, by permitting a portion of the dense phase from each bed to flow into contact with the adjacent heated surfaces of the article whereby the heat of the article causes softening and coalescence of at least some of the layer-forming material on the exterior and interior surfaces of the article to form the desired coatings.

3,004,862

HYDROCARBONACEOUS RESIN IMPREGNATED MATERIAL AND METHOD OF PREPARING SAME

Nathaniel M. Winslow, 2115 Riverside Drive, Cleveland 7, Ohio
Filed Mar. 25, 1960, Ser. No. 17,711
16 Claims. (Cl. 117-61)



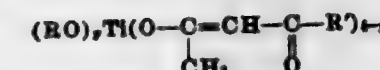
1. A process for impregnating a porous material, comprising mixing a pitch-soluble oxidizing agent with an essentially hydrocarbonaceous pitch having at 25° C. a specific gravity of at least 1.02, said pitch, when heated for 72 hours 450° C. in a closed vessel where distillation is not possible, yielding at least 60% of a solid material based on the weight of the pitch, said solid material, when heated to 950° C. at atmospheric pressure in the absence of oxygen, yielding a carbon residue amounting to at least 80% of said solid material, introducing said mixture in fluid condition into the pores of said porous material, heating said mixture while maintaining said oxidizing agent distributed uniformly throughout said mixture within the range of 165-400° C. for a time sufficient to obtain a reaction product having a draw point within the range of 150-275° C., whereby a partially-cured resin is formed and deposited within said material, and terminating said heating at a temperature below 400° C.

3,004,863

PROCESS FOR INCREASING THE SCRATCH RESISTANCE OF GLASS

Charles Louis Gray, Jr., Wilmington, and Robert Harold Dettre, Brandywine Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 4, 1960, Ser. No. 60,291
8 Claims. (Cl. 117-94)

1. In a process for increasing the scratch resistance of a glass body, the steps consisting of applying to the surface of said body an acid aqueous solution of an organic titanate, said solution having a pH value between 2 and 5, allowing the excess moisture to drain, and subjecting the treated glass to heating at a temperature sufficient to anneal glass but below that at which perceptible deformation of the shape of the glass body steps in, said organic titanate being an ester composition defined by the formula

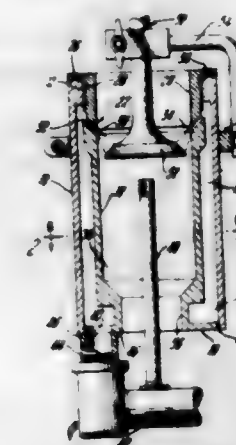


wherein R is an alkyl radical of 2 to 4 C-atoms, y is a number of average value from 1 to 2, and R' is a member of the group consisting of methyl, ethyl, methoxy and ethoxy.

3,004,864

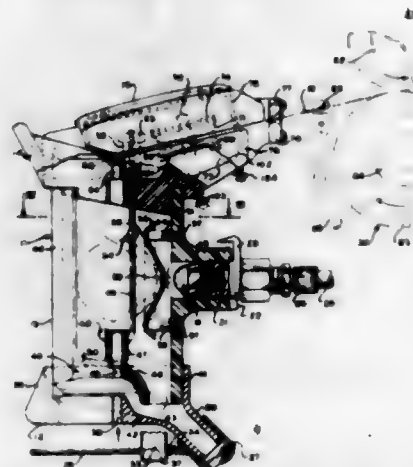
COATING POPPET VALVES

Dean K. Hamink, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Nov. 27, 1953, Ser. No. 394,583, now Patent No. 2,893,349, dated July 7, 1959. Divided and this application Aug. 28, 1958, Ser. No. 757,798
5 Claims. (Cl. 117-102)



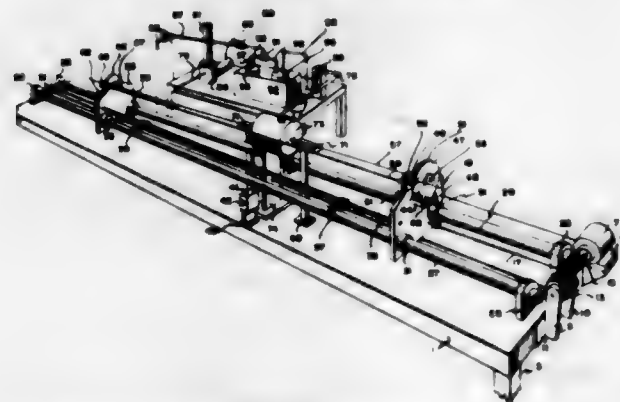
1. A method of providing a thin coating of aluminum on the head of a poppet valve which comprises immersing the head of said valve for a short period of time in a molten fluxing salt bath at a temperature between 1280° F. and 1400° F., thereafter dipping the head of said valve for not more than ten seconds in a molten coating metal bath selected from the group consisting of aluminum and aluminum base alloys, said bath being maintained at a temperature between approximately 1250° F. and 1325° F., removing the valve from said aluminum bath and rinsing the head thereof for a short period of time not in excess of approximately 15 seconds in a fluxing salt to remove some of the surplus molten coating metal from said valve head, thereafter blasting the entire seating face of said valve with air under a pressure of approximately 75 to 110 pounds per square inch for about 1/4 to 4 seconds to further remove excess coating metal therefrom and to provide a smooth layer of aluminum on the seating face of said valve, simultaneously blasting the head end face of said valve for a similar period of time with air under approximately the same pressure, and finally permitting the metal coating to solidify on said valve head.

3,004,865
APPARATUS AND METHOD FOR MOISTENING YARN OR OTHER THREAD
 Henry J. Schmitz, Lake View Drive, Box 24, Lake Neosho, N.J.
 Filed Oct. 16, 1959, Ser. No. 846,831
 23 Claims. (Cl. 117-104)



1. Apparatus for processing yarns and other thread, comprising a conditioning chamber having a body with an axis along which a thread is to travel upward, a nozzle for spraying liquid from, and secured to, a side of said chamber on thread as it travels therethrough, means for draining excess liquid from said chamber, means for guiding thread to a receiving aperture at the axis of said chamber, said chamber being provided with a slot on one side spaced from the nozzle and extending the full length thereof to allow for initial reception of the thread and disposition in said aperture.

3,004,866
METHOD AND APPARATUS FOR GAS PLATING NICKEL FILMS WITH UNIFORMITY OF RESISTANCE
 Wilbur M. Bolton, Piqua, and Raymond L. Ruse, Dayton, Ohio, assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
 Filed Nov. 4, 1957, Ser. No. 694,170
 3 Claims. (Cl. 117-107)



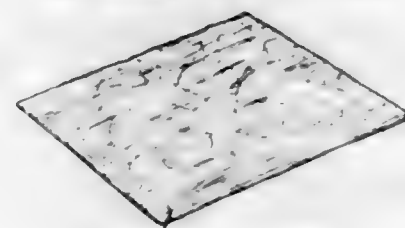
1. A process of metallizing elongated substrates which comprises the steps of supporting an elongated substrate for simultaneous rotational and longitudinal movement, rotating the substrate while simultaneously moving the substrate longitudinally through a housing defining a gas plating chamber, heating the substrate immediately prior to the passing of the substrate into the gas plating chamber and contacting the heated substrate with a thermally decomposable metal bearing gas which decomposes at the temperature of the heated substrate to deposit the metal of the gas on the substrate, circulating said thermally decomposable gas through the chamber as succeeding heated portions of the substrate traverse the chamber, and reversing the direction of longitudinal

movement of the elongated substrate while continuing the rotational movement of the substrate to repeatedly present the substrate to the gas in the chamber whereby a uniform continuous coating of metal is deposited on said substrate.

3,004,867
ADHESIVE TAPE CONTAINING A POLYAMINE HOLD IMPROVING COMPOUND
 Winifred Christina Collins, East Brunswick Township, Middlesex County, N.J., and John F. McElroy, Worcester, Mass., assignors, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
 No Drawing. Filed May 13, 1953, Ser. No. 354,882
 5 Claims. (Cl. 117-122)

1. An adhesive tape comprising a flexible backing, and a coating on at least one surface of said backing of an adhesive composition comprising a rubber selected from the group consisting of natural rubber and the copolymers of butadiene and styrene and from about 0.01 to about five percent by weight of the composition of a hold-improving compound selected from the group consisting of ethylene diamine, tetraethylene pentamine, 1,3-diamino-2-propanol, 3,3-imino-bis propylamine, propylene diamine, hexamethylene diamine, diethylene triamine, triethylene tetraamine, 3-isopropyl-amino-propylamine, 1,4-butane diamine dihydrochloride, and $R-NH-CH_2-CH_2-CH_2-NH_2$, wherein R is an eight-carbon straight chain tallow.

3,004,868
RESILIENT NON-WOVEN TEXTILE MATERIALS
 John K. Sumner, Plainfield, and Philip Surowitz, Middlesex, N.J., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
 Filed May 24, 1957, Ser. No. 661,280
 14 Claims. (Cl. 117-140)

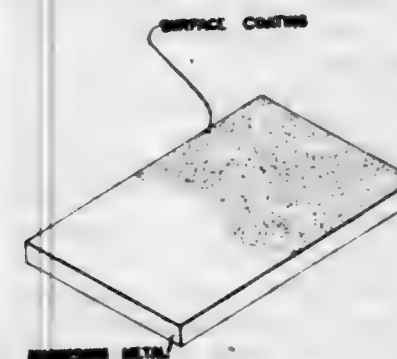


1. A resilient non-woven textile material comprising a fibrous web containing a mixture of from about 25% to about 100% by weight of non-cellulosic fibers and from about 75% to about 0% by weight of cellulosic fibers and a stabilizing and binder mixture substantially uniformly distributed throughout said web comprising a thermosetting synthetic resin and a thermoplastic synthetic tripolymeric binder agent prepared from (1) a lower alkyl ester of acrylic acid wherein said alkyl group contains from one to four carbon atoms, (2) an alkylene di-ester of an alkenoic acid wherein said alkylene group contains from two to four carbon atoms and (3) an alkenoic acid containing from three to five carbon atoms.

3,004,869
SURFACE TREATMENT OF MAGNESIUM METAL ARTICLES
 Henry J. Palumbo, Somerville, N.J., assignor to Johnson & Johnson Corporation, New York, N.Y., a corporation of New York
 Filed Aug. 28, 1959, Ser. No. 836,605
 8 Claims. (Cl. 117-46)

3. A process for the surface treatment of magnesium metal articles to produce a corrosion-resistant protective surface coating thereon which comprises providing

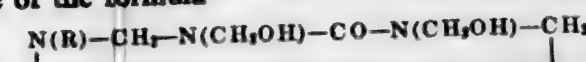
a substantially anhydrous mixture comprising about 90 to 10% by weight of an oil selected from the group consisting of hydrocarbon oils and fatty acid ester oils and about 10 to 90% by weight of a hydroxy compound selected from the group consisting of glycols, carbohydrates, and hydroxyl group containing ethers



thereof, covering the surface to be treated of the magnesium metal article with a layer of said liquid mixture, maintaining said article in contact with said layer for at least about 1 hour at a temperature of between about 150° and 350° F. and thereafter removing said liquid mixture from said article.

3,004,870
CREASEPROOF FABRIC
 Herman B. Goldstein, Cranston, R.I., assignor to Sun Chemical Corporation, Long Island City, N.Y., a corporation of Delaware
 No Drawing. Filed Jan. 9, 1958, Ser. No. 707,873
 13 Claims. (Cl. 117-139.4)

1. A process for creaseproofing cellulosic fabric which comprises impregnating the fabric with an aqueous solution of a 1-substituted 3,5-dimethylol-2,6-dihydrotriazin-4-one of the formula



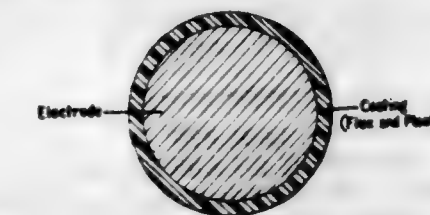
wherein R is a radical selected from the group consisting of alkyl, haloalkyl, hydroxyalkyl, cycloaliphatic and aralkyl radicals, said solution containing maleic acid, drying the fabric and curing said triazin-4-one by the application of heat.

3,004,871
RENDERING CELLULOSIC MATERIALS NON-ADHERENT
 Herbert Jack Leavitt, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
 No Drawing. Filed July 23, 1959, Ser. No. 828,949
 7 Claims. (Cl. 117-143)

1. The method of rendering cellulosic fibrous sheet material non-adherent to surfaces which normally adhere thereto, which comprises treating said material with a treating bath containing as sole active ingredients (1) a linear polydimethylsiloxane in which the siloxane chain is terminated by a member selected from the class consisting of silicon-bonded hydroxyl groups and silicon-bonded trimethylsiloxy groups, (2) a methyl hydrogen polysiloxane, (3) a polyalkyl silicate, and (4) a metallic salt selected from the class consisting of dibutyl tin dilaurate and dibutyl tin diacetate.

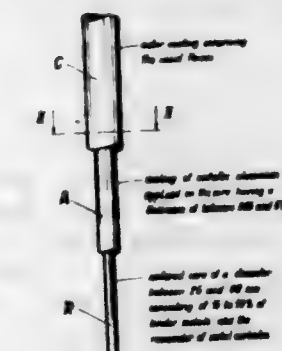
3,004,872
POLYETHYLENE BINDER FOR FLUX-COATED WELDING ROD
 Louis E. Stark, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York
 Filed Dec. 7, 1955, Ser. No. 551,513
 3 Claims. (Cl. 117-202)

1. A flux coated welding rod for brazing or welding having as a bonding agent in the coating, a polyethylene



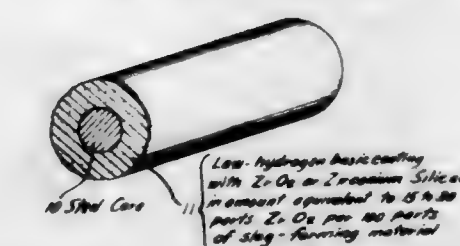
ing, said binder material being present in an amount not substantially less than 10% and not substantially more than 45%.

3,004,873
COATED WELDING ELECTRODE FOR ELECTRIC ARC WELDING
 Harald Strohmeyer, Kapfenberg, and Wilfried Mader, Kapfenberg-Hafendorf, Austria, assignors to Gebr. Bohler & Co. Aktiengesellschaft, Vienna, Austria
 Filed July 6, 1959, Ser. No. 824,913
 Claims priority, application Austria July 5, 1958
 9 Claims. (Cl. 117-204)



1. A coated welding electrode for electric arc welding having a sintered core of a diameter between 2.5 and 6.0 mm., a coating thereon of extruded metallic aluminum having a thickness of between 0.35 and 0.7 mm., the sintered core consisting of 15 to 50% of binder metals selected from the group consisting of iron, cobalt and nickel, and the remainder of metal carbides selected from the group of metals consisting of tungsten, titanium, chromium, tantalum, columbium and vanadium.

3,004,874
COATED WELDING ELECTRODES
 Paul Christiaan van der Willigen and Wilhelmus Gerardus Essers, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
 Filed Dec. 26, 1957, Ser. No. 705,353
 Claims priority, application Netherlands Feb. 1, 1957
 14 Claims. (Cl. 117-206)

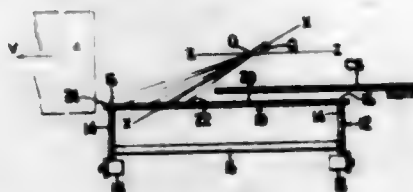


1. An arc welding electrode of the low-hydrogen type comprising a steel core, and a coating on said core and containing basic slag-forming material, said material consisting essentially of at least one of the substances selected from the group consisting of zirconium dioxide and zirconium silicate in an amount equivalent to about 15 to 30% by weight of zirconium dioxide calculated on the

weight of said material, waterglass as a binder in an amount at which the total amount of silicon dioxide in said material is not more than the amount of zirconium dioxide present, and an alkaline earth carbonate and an alkaline earth fluoride in a weight ratio of at least 2:1.

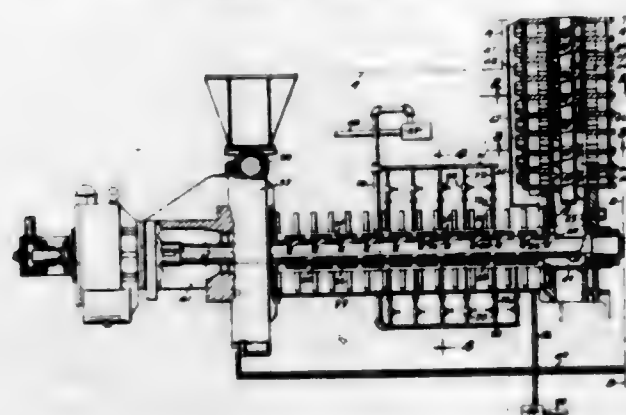
3,004,875 COATING GLASS SHEETS

William O. Lytle, New Kensington, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Nov. 22, 1957, Ser. No. 698,173
8 Claims. (Cl. 117-211)



1. In a method of providing a refractory sheet with a non-uniform metal oxide film by applying to the sheet heated to a temperature above 400° F. and below the softening temperature of the sheet a spray of a film forming composition capable of producing a metal oxide film thereon, the improvement which comprises orienting said sheet in a fixed plane, applying said spray about a fixed central axis thereof to a portion only of said sheet from a point of origin of said spray located in a plane spaced from the plane of said sheet, orienting the direction of said central axis of the spray in a fixed angular relation between on the order of 15° and on the order of 45° to the plane of said sheet, and providing relative translational motion between the heated oriented sheet and the spray at the point of origin thereof at a uniform velocity along a longitudinal axis lying in one of said planes, the central axis of the spray being obliquely disposed transversely of the axis of relative movement so that a film of non-uniform thickness transversely of the axis of relative movement is formed on the refractory sheet, said thickness varying from a minimum along a line intersected by an edge of said spray traversing the shortest possible straight line distance from the point of origin of the spray to the portion and increasing transversely of said longitudinal axis to a maximum along an edge of the sheet included in said portion directly exposed to said spray.

3,004,876
METHOD FOR WASHING FIBROUS MATERIAL
Carl W. Zies, Lakewood, Ohio, assignor to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Filed Mar. 28, 1957, Ser. No. 647,276
5 Claims. (Cl. 134-25)



1. A method of washing residual digestion liquor from a digested mass of fibrous material, said method com-

prising passing said material through an elongated enclosure from an entry end to a discharge end thereof, applying pressure continuously to the material in a direction adapted to simultaneously compact the material and assist in moving it in the direction aforesaid, arranging said enclosure into a series of operating sections, each section consisting of a washing zone and a drainage zone, providing apertures in the enclosure wall in registry with each drainage zone, injecting liquid into each washing zone, collecting drained liquid which escapes through the apertures in each drainage zone, re-injecting the collected liquid-liquor solution into a respective washing zone in a section nearer to the entry end of the enclosure whereby to establish a flow of washing liquid gradually increasing in liquor concentration in a direction counter to the direction of movement of the material being washed, prepressing the material to remove a relatively readily removable fraction of liquor from the material, continuously charging the prepressed material into said enclosure, and injecting into the material being prepressed the drainage liquid from a drainage zone of said enclosure.

3,004,877 HEAT-INSULATING UNITS FOR REFRIGERATOR CABINETS

Thomas S. Shuman, Bensenville, and Arthur J. Harder, Jr., Franklin Park, Ill., assignors to General Electric Company, a corporation of New York
Filed Oct. 8, 1957, Ser. No. 688,977
4 Claims. (Cl. 154-45)

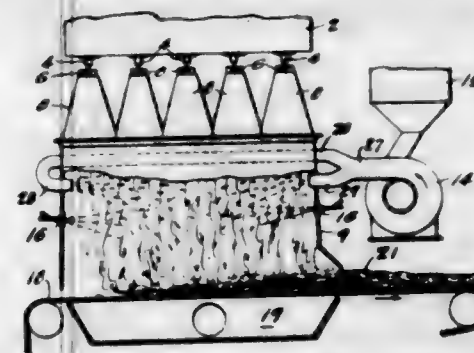


1. In combination, a deformable porous mass of solid poor heat-conducting material, an hermetically sealed bag enclosing said material, and a charge of a gas having a coefficient of thermal conductivity lower than that of air also enclosed in said bag and thoroughly permeating said porous mass of solid poor heat-conducting material, the walls of said bag being substantially impervious to said gas confined therein and also to atmospheric gases and to water vapor and being formed of a flexible multi-ply laminate, said laminate including an intermediate ply of calendered kraft paper having a thickness of about 5 mils to provide a high tear strength and an inner ply of vinylidene chloride copolymer resin having a thickness of at least about 1 mil to provide a low permeability to said gas and to atmospheric gases and to water vapor and an outer ply of polyethylene resin having a thickness of about 2 mils to provide a high abrasion resistance, said intermediate ply being respectively adhered to said inner ply and to said outer ply by inner and outer adhesive layers, each of said adhesive layers being flexible after setting thereof and having a low permeability to said gas and to atmospheric gases and to water vapor.

3,004,878
METHOD OF PRODUCING FIBROUS GLASS BUILDING BOARDS AND PRODUCT
James A. Tomlinson, Campbell, Calif., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Aug. 16, 1957, Ser. No. 678,586
5 Claims. (Cl. 154-45.9)

3. A method of producing a fibrous building board which comprises creating a web of glass fibers impregnated with an uncured binder, tearing the web into clumps and letting the clumps fall upon a collecting surface, inter-

spersing coarse, wet wood fibers among the clumps of the web as they fall upon the collecting surface, said wet



wood fibers being free of an excess of water, compressing the resulting mixed mass of glass fiber clumps and wood fibers and curing the binder while the mass is compressed.

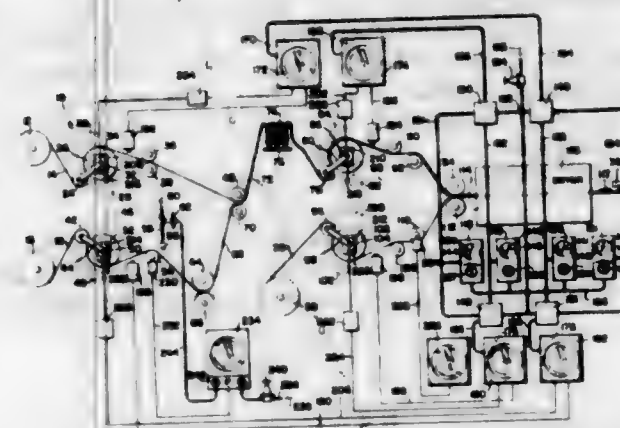
ERRATUM

For Class 156-3 see:
Patent No. 3,004,835

3,004,879
BRIGHTENING AND CLEANING COMPOSITION AND TREATMENT FOR MAGNESIUM AND MAGNESIUM-BASE ALLOYS
Lawrence Whitty, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 3, 1958, Ser. No. 771,680
6 Claims. (Cl. 156-20)

4. The method of cleaning and brightening the surfaces of a metal article composed of at least 85 percent magnesium consisting of admixing by volume 100 parts of an alkyl hydrogen ortho-phosphate with between 10 and 100 parts of an aqueous solution of nitric acid containing between 52 and 95 percent by weight of HNO₃ and contacting the surfaces of said article with the solution so made, at a temperature of between 15° and 30° C. for between 0.5 and 15 minutes.

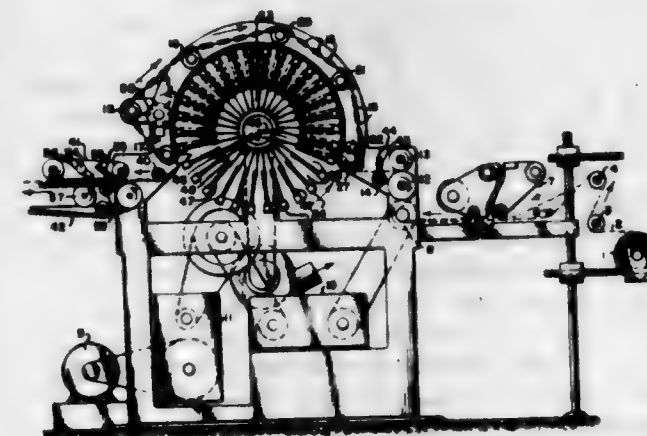
3,004,880
CONTROL METHOD AND APPARATUS
Kenneth B. Lord, Irvington on Hudson, N.Y., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,354
19 Claims. (Cl. 156-64)



1. A control apparatus to maintain a certain temperature and moisture content relationship between an upper single face moist board and a lower moist liner moving through a corrugating machine, comprising a first temperature sensing means positioned adjacent said upper single face board and being operably connected to send

a first electrical signal that is proportional to the temperature of said board to a first controller, a second temperature sensing means positioned adjacent said lower liner and being operably connected to send a second electrical signal that is proportional to the temperature of said lower liner to a second controller, an adjustable pressure regulating means having two ratio relays operably connected therewith to transmit an adjustable set point signal of increased magnitude to one of said controllers while it simultaneously transmits a set point signal of decreased magnitude to the other of said controllers, each of said controllers being responsive to differences in the magnitude of its associated electric and set point signals, said controller receiving said set point signal of increased magnitude being connected to transmit a control signal to a first wrap-arm actuating motor to thereby cause a wrap arm and roller unit attached to the shaft of said motor to be rotated in a direction to move a portion of said moving single face board into increased surface contact with a first heater roll and said controller receiving said second set point signal of decreased magnitude being operably connected to simultaneously transmit a control signal to a second wrap arm actuating motor to thereby cause a wrap arm and roller unit attached to the shaft of said last mentioned motor to be rotated in a direction to move a portion of said lower moist liner into a decreased surface contact with a second heater roll.

3,004,881
METHOD AND APPARATUS FOR PERFORMING LOCAL WORKING AT REGULAR DISTANCES ON A CONTINUOUSLY ADVANCING WEB OF MATERIAL
Leonard van der Meulen, 30 Marie de Molina, Madrid, Spain
Filed Oct. 9, 1956, Ser. No. 614,866
19 Claims. (Cl. 156-253)



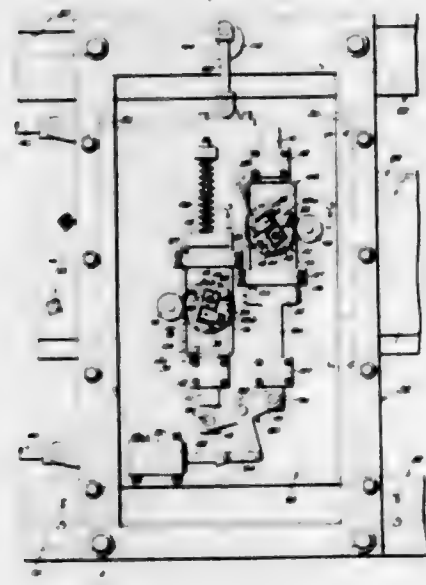
7. An apparatus for heat sealing a continuous web of material at locations which are spaced apart along the latter; comprising means defining an operation zone containing conveying mechanism including gripping means moving continuously along a predetermined path at a relatively slow speed and spaced apart in the direction along said path by distances smaller than that between the locations on the web where the latter is to be heat sealed, means for supplying the web to said conveying mechanism at one end of said path at a relatively high speed where said gripping means grip the web at said locations where the web is to be heat sealed and then convey the gripped locations along said path, while excess lengths of the web form loops between the adjacent spaced apart gripping means, heat sealing means associated with said gripping means and operative to heat seal the web at the gripped locations as the latter are conveyed along said path, and delivery means receiving the heat sealed web from said conveying mechanism and advancing the heat sealed web at a speed substan-

tially equal to said relatively high speed of the web supplying means in order to take-up slack in the web represented by the loops formed in the latter between said gripping means.

3,004,882

APPARATUS FOR AND METHOD OF PRODUCING FLOOR COVERING OF REPEATLESS INLAY PATTERN

Robert B. Cate and James C. Hartley, Branford, Conn., assignors to Vinylin Research Incorporated, Branford, Conn., a corporation of Connecticut
Filed Feb. 16, 1959, Ser. No. 793,593
19 Claims. (Cl. 156-423)



1. In apparatus for producing floor covering of a base and thereto bonded composition with a repeatless inlay pattern, the combination of a longitudinal track for supporting and guiding unbonded floor covering at its base so that its composition is exposed; a hollow die with a blanking edge of the outline of an inlay, said die being movable through a work stroke into and from blanking relation with the exposed composition to cut and carry a composition blank therefrom, said die being also movable transversely of said track into an infinite number of positions in which the exposed composition is within stroke reach of said die; means carried by said die for ejecting a composition blank from said die; means also carried by said die for injecting an inlay into said die; and means carried by and including said die and operative on a work stroke of said die for transferring an injected inlay from said die into the recess formed in the composition by said die on its previous work stroke.

ERRATUM

For Class 156-429 see:
Patent No. 3,004,585

3,004,883

FILM SPLICING DEVICE

Rowe G. Manchester, South San Gabriel, Calif., assignor to Rowe Line Corporation, South San Gabriel, Calif., a corporation of California
Filed Dec. 29, 1958, Ser. No. 788,479
9 Claims. (Cl. 156-506)

1. A film splicing device comprising the combination of means forming a table, means for locating a pair of film sections on said table with end portions thereof in overlapping relation, a shear blade assembly comprising two spaced blade elements adapted to hold said film sections on said table and a shearing blade movable between said blade elements in shearing relation therewith; means for locating said blade elements to extend at right angles

to the length of said film sections, said shearing blade having an opening therethrough, a film cutting knife, and means for guiding said knife through said opening and toward said overlapped film portions whereby to cut said



portions into abutting ends, said shearing blade being effective to shear a section of splicing tape laid over said blade elements and to press said sheared tape section against adjacent portions of said film sections.

3,004,884

SHEETED FIBROUS MATERIALS AND PROCESSES FOR THE MANUFACTURE THEREOF

James J. Ebert, Moylan, and Sydney Coppick, Ridley Park, Pa., assignors to Scott Paper Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 3, 1958, Ser. No. 739,478
13 Claims. (Cl. 162-166)

1. A paper characterized by high bulk comprising a basis of uni-axial fibrous material having uniformly admixed therewith three-dimensional, multi-axial assemblies containing the cell wall structure of partially disintegrated, cured aminoplast resin foam having a density below 0.8 pound per cubic foot.

3,004,885

SALTS OF ALKANETHIOLS

Milton Kosman, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 16, 1956, Ser. No. 616,140
6 Claims. (Cl. 167-22)

5. The method of combatting fungi which comprises exposing said fungi to a fungitoxic quantity of a composition comprising as the essential effective ingredient a salt of the formula



in which alk denotes an alkyl radical of from 1 to 8 carbon atoms, R is an alkylene radical of from 2 to 3 carbon atoms, n is an integer of 0 to 2 and X is an alkyl radical of from 8 to 18 carbon atoms.

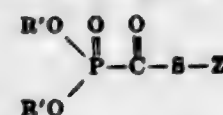
3,004,886

DERIVATIVES OF ALKALI METAL DIHYDRO-CARBYLOXYPHOSPHINYL THIOFORMATES

Daniel W. Grisley, Jr., Dayton, Ohio, and Samuel Allen Helminger, Warren Woods, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,426
27 Claims. (Cl. 167-22)

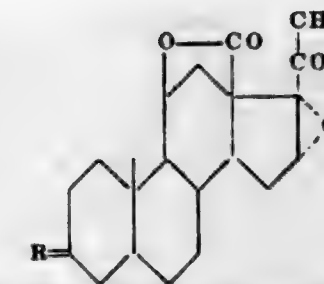
19. The method for controlling insect pests which comprises applying to the situs of the pest a pesticidal amount of an organic phosphorus compound of the formula



wherein R' is an hydrocarbonyl radical substantially free of acetylenic unsaturation containing 1 to 12 carbon atoms selected from the group consisting of alkyl, aryl, alkaryl and aralkyl radicals and Z is an organic radical selected from the group consisting of -S-R''.



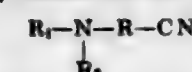
and -R''' is selected from the group consisting of alkyl, haloalkyl, aryl, haloaryl, nitroaryl, halonitroaryl, alkyl-aryl, alkylhaloaryl, alkylnitroaryl, arylalkyl, haloaryl-alkyl, and nitroarylalkyl radicals containing from 1 to 12 carbon atoms, and R''' is selected from the group consisting of alkenyl and haloalkenyl radicals containing from 2 to 12 carbon atoms.



3,004,887 INHIBITING THE GROWTH OF PLANT VIRUSES

Walter A. Darlington and John A. Stephens, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,694
17 Claims. (Cl. 167-22)

1. A method of inhibiting the multiplication of plant viruses comprising applying to plants a virus growth-inhibiting quantity of a compound selected from the class consisting of β - and γ -aminonitriles of the formula



wherein R is an aliphatic hydrocarbon of from 2 to 3 carbon atoms, and R₁ and R₂ are selected from the class consisting of hydrogen and aliphatic hydrocarbon radicals having from 4 to 18 carbon atoms provided that at least one of R₁ and R₂ is a hydrocarbon radical.

3,004,888

MASTITIS TREATMENT

Lloyd H. Conover, Quaker Hill, Conn., and Arthur R. English, Hoboken, N.J., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 12, 1959, Ser. No. 786,051
4 Claims. (Cl. 167-53.2)

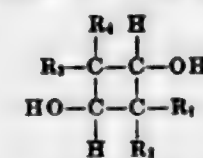
4. A method of treating bovine mastitis which comprises infusing into the udder of the infected host a composition containing at least 0.1% by weight of N-[1(5-nitro-2-furyl)-1-buten-3-ylidene]-3-aminooxazolid-2-one in a pharmaceutically acceptable vehicle.

3,004,889

CYCLOBUTANE ANALGESICS

Samuel Kuna, Westfield, and Armin G. Wilson, Highland Park, N.J., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 16, 1960, Ser. No. 29,153
17 Claims. (Cl. 167-65)

1. An analgesic composition in unit dosage form comprising a significant quantity of a pharmaceutical carrier and from about 0.1 grain to about 20 grains of a cyclobutane derivative having the following generic formula:



wherein each of R₁, R₂, R₃ and R₄ is a hydrocarbon radical containing up to about 8 carbon atoms.

3,004,890

NEW PREGNANE-18-ACID DERIVATIVES

Albert Wettstein, Karl Hemler, and Peter Wieland, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed June 29, 1959, Ser. No. 823,356
Claims priority, application Switzerland July 1, 1958
18 Claims. (Cl. 167-65)

1. A compound selected from the group consisting of a compound of the formula

771 O.G.-52

and a derivative thereof unsaturated in one of the positions 4:5 and 5:6, in which R stands for an oxo group, said oxo group being ethylenedioxy-ketalized when unsaturation is present in the 5:6-position.

15. The (18 \rightarrow 11)-lactone of 3 β :11 β :16 α -trihydroxy-20-oxo-allopregnane-18-acid.

3,004,891

STABLE, AQUEOUS SOLUTIONS OF SODIUM PHOSPHITE, SODIUM FORMALDEHYDE SULFOXYLATE, AND DIHYDROSTREPTOMYCIN SULFATE
William W. Armstrong, Oyster Bay, N.Y., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 17, 1959, Ser. No. 840,503
6 Claims. (Cl. 167-65)

4. A stable pharmaceutical preparation comprising a substantially neutral, aqueous solution of dihydrostreptomycin sulfate and from about 1 to about 8% w/v. of sodium phosphite and from about 0.3 to about 0.5% w/v. of sodium formaldehyde sulfoxylate.

3,004,892

FAT EMULSION AND PROCESS OF PRODUCING SAME

John G. Halmsworth, La Canada, Harold Hershenson, Burbank, and William O. Pool, Glendale, Calif., assignors to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada
No Drawing. Filed Mar. 27, 1959, Ser. No. 802,309
5 Claims. (Cl. 167-66)

1. A stable, sterile, nonpyrogenic, nontoxic fat emulsion for intravenous injection comprising: 10 to 35% w/v. of a low-melting, nontoxic, vegetable fat and a soybean phosphatide fraction in an amount of 6.7 to 9.3% by weight of the fat, said phosphatide fraction having a choline to phosphorus molar ratio of 0.65 to 0.85, an ethanolamine to phosphorus molar ratio of 0.14 to 0.28 and a serine to phosphorus molar ratio of not more than 0.026, and being derived from soybean phosphatide having a choline to phosphorus molar ratio of 0.3 to 0.6 by extracting said phosphatide with alcohol to form an extract containing 25 to 50% w/v. solids, cooling the extract to a temperature of -10 to 10° C., and separating the supernatant solution containing said phosphatide fraction.

3,004,893

ENTERIC COATED TRYPSIN AND CHYMOTRYPSIN ANTI-INFLAMMATORY COMPOSITIONS
Gustav Julius Martin, Philadelphia, Pa., assignor to Richardson-Merrell Inc., a corporation of Delaware
No Drawing. Filed Oct. 21, 1959, Ser. No. 847,701
8 Claims. (Cl. 167-73)

1. An article of manufacture for the introduction of trypsin into the blood stream for the systemic treatment of inflammation which comprises an orally administrable dosage unit in which the effective therapeutic ingredient consists of 10 to 50 mgs. of trypsin, said dosage unit being enterically coated the enteric coating being of sufficient thickness so as to resist dissolution and disintegration of the dosage unit in passing through the gastrointestinal tract until it reaches the ileum in which it disintegrates permitting liberation of the trypsin and absorption of the trypsin into the blood stream.

3,004,894

THERAPEUTIC COMPOSITION COMPRISING TETRACYCLINE AND A DIOXOLANE

Richard H. Johnson, Kalamazoo, and Donald P. Wallach, Richland, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Apr. 7, 1959, Ser. No. 804,577
10 Claims. (Cl. 167—82)

1. A therapeutic composition for parenteral administration comprising tetracycline as an essential active ingredient and, as a vehicle therefor, 2,2-dimethyl-1,3-dioxolane-4-methanol.

3,004,895

DIAPER RASH PREVENTATIVE

Samuel M. Schwartz, Peoria, Ill.
(6633 Fleeta Drive, El Paso, Tex.)
Filed Apr. 17, 1959, Ser. No. 807,122
14 Claims. (Cl. 167—84)

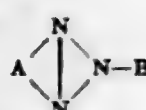
14. An improved diaper rash preventative diaper, comprising a moisture absorbent baby diaper and a diaper rash preventative pad disposed within said diaper, said pad comprising an envelope, at least a portion of which is of liquid-impeding material and at least a portion of which is permeable to the passage of ammonia gas, and an ammonia-immobilizing agent disposed within said envelope, said liquid-impeding portion and said ammonia gas permeable portion being disposed within said diaper in a position to approximate the urine source when said diaper is worn.

3,004,896

ULTRA-VIOLET LIGHT-ABSORBING COMPOSITION OF MATTER

Hansjorg Heller, Basel, Ernst Keller, Binningen, Basel-Land, and Hermann Gysling, Riehen, near Basel, Switzerland, and Fritz Mindermann, Grenzach, Baden, Germany, assignors to J. R. Geigy A.-G., Basel, Switzerland
No Drawing. Filed Dec. 10, 1957, Ser. No. 701,719
Claims priority, application Switzerland Dec. 14, 1956
8 Claims. (Cl. 167—90)

1. An ultraviolet light absorbing composition consisting essentially of a substantially colorless organic carrier, said carrier consisting essentially of a member selected from the group consisting of polyesters, polyester resins, polyamides, vinyl polymers, cellulose ethers, cellulose esters and polyhydrocarbons and having uniformly dispersed therein 0.01 to 10% of an actively UV absorbing compound of the formula:



wherein A represents an o-phenylene radical bound by two neighbouring carbon atoms to two nitrogen atoms of the triazole ring, and

B represents a phenyl radical which contains in 2-position an OH group and in further positions a member selected from the group consisting of H, lower alkyl, lower alkoxy, lower carbalkoxy, cyclohexyl, phenyl and halogen.

3,004,897

DENTAL PREPARATION

Joseph Shore, 5763 Woodcrest Ave., Philadelphia, Pa.
No Drawing. Filed Feb. 9, 1955, Ser. No. 487,210
11 Claims. (Cl. 167—93)

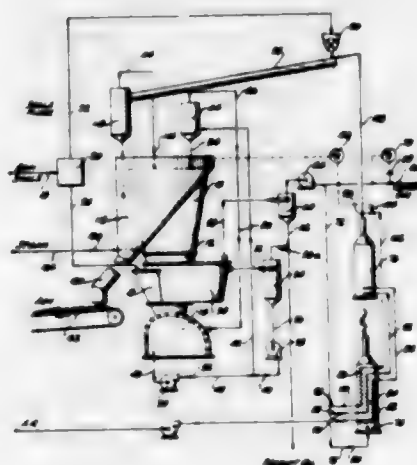
1. A tartar-combating preparation comprising as its essential tartar-combating content (a) about five parts of the tri-(monovalent-cation) salt of ethylenediamine tetracetic acid, (b) from about twelve to about twenty-four parts of a monovalent-cation hexametaphosphate; and (c) from about three to about six parts of at least one member of the class consisting of a monovalent cation

pyrophosphate and a monovalent cation triphosphosphate; and in each of (a), (b) and (c) the monovalent cation is a member of the class consisting of an alkali metal and the ammonium ion.

3,004,898

SHALE RETORTING PROCESS

Roland F. Deering, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Dec. 26, 1956, Ser. No. 630,577
15 Claims. (Cl. 202—16)



1. A process for treating hydrocarbon-containing and hydrocarbon-producing solids of different particle size which comprises separating said solids into a fines portion and a coarse portion; passing said coarse portion upwardly in the form of a dense bed from a solids feeder zone successively through a disengaging zone, a solids preheating and product cooling zone, and a retorting zone; passing a primary stream of hot eduction gas downwardly through said retorting zone to educt hydrocarbons from said coarse portion; cooling and partially condensing said hydrocarbons in said solids preheating and product condensing zone; removing the liquid and gas phases from said disengaging zone; separating said liquid and gas phases from each other; burning part of said separated gas as fuel in a primary heating zone; preheating a first and a second recycle stream of said gas and a stream of oxygen-containing gas in said primary heating zone; burning the preheated first recycle stream with the preheated oxygen-containing gas in a secondary heating zone to form a hot flue gas; combining said hot flue gas with the preheated second recycle stream to form a secondary hot eduction gas; concurrently contacting said fines portion with said secondary hot eduction gas in a fines eduction zone isolated from said retorting zone, thereby educting hydrocarbons from said fines; separating spent fines from the hot gaseous effluent of said fines eduction zone; passing the hot fines-free gaseous effluent into the top of said retorting zone as said primary hot eduction gas to contact said coarser portion therein countercurrently; and removing spent solids from the top of said retorting zone.

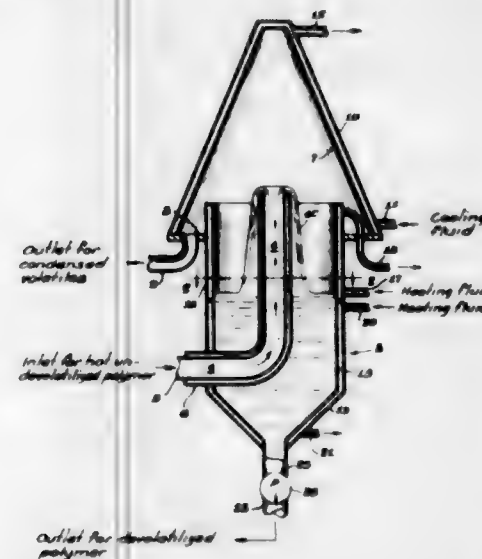
3,004,899

DEVOLATILIZING APPARATUS

James L. Amos, Samuel G. Ladington, and Wilson W. Hunt, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Jan. 9, 1957, Ser. No. 633,316
3 Claims. (Cl. 202—191)

1. An improved devolatilizing apparatus for polymeric compositions which comprises a devolatilizing chamber for a liquid polymeric composition that is to be devolatilized, said chamber being adapted to maintain said liquid polymeric composition at a substantially constant level

relative to the walls of said chamber; a positively cooled overhead dome on said chamber for condensing volatile constituents escaping from the polymeric composition being devolatilized in said chamber, said dome diverging outwardly and downwardly continuously from its top to bottom to enclose said chamber with the lowermost peripheral edge of the dome extending clear of and at least about as low as the upper peripheral edge of the chamber walls; means for collecting condensed volatiles from the lower peripheral portion of said dome; a central conduit for introducing the hot, undevolatilized polymeric composition into said chamber, said conduit terminating in ver-

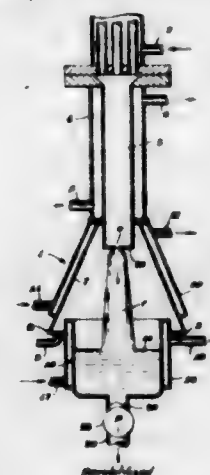


tical projection above the liquid level of the polymeric composition in said chamber and being adapted to discharge said hot polymeric composition in a cascading, fountain-like, enveloping flow downwardly about and in circumferential contact with the exterior projecting portion of said conduit; heating means for maintaining the walls of said chamber that are above the liquid level of said polymeric composition beneath a decomposing temperature for said volatile constituents; and heating means for maintaining the walls of said chamber that are below the liquid level of said polymeric composition at a flowing temperature for said polymeric composition.

3,004,900

APPARATUS FOR DEVOLATILIZING

Wilson W. Hunt, Samuel G. Ladington, and James L. Amos, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Jan. 9, 1957, Ser. No. 633,317
10 Claims. (Cl. 202—191)



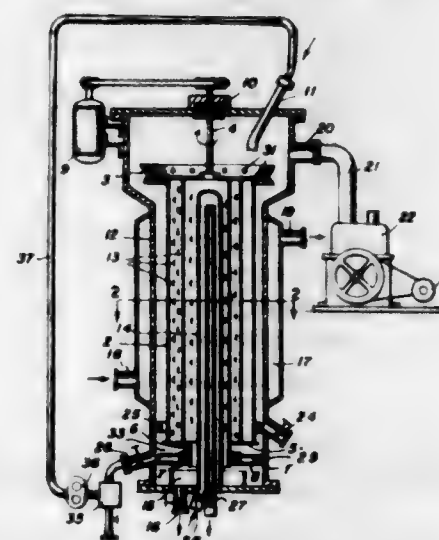
1. Improved apparatus for devolatilizing polymeric compositions which comprises a devolatilizing chamber for a liquid polymeric composition that is to be devola-

tilized, said chamber being adapted to maintain said liquid polymeric composition at a substantially constant level therein; a positively cooled overhead dome on said chamber for condensing volatile constituents escaping from the polymeric composition being devolatilized in said chamber, said dome diverging outwardly and downwardly continuously from its top to bottom to enclose said chamber and form a vapor space thereover with the lowermost peripheral edge of the dome extending clear of and at least about as low as the upper peripheral edge of the chamber walls; means at the bottom peripheral portion of said dome for collecting condensed volatiles from said dome; and means in the vapor space within said dome above the level of the polymeric composition that is adapted to be maintained in said chamber for centrally introducing the polymeric composition to be devolatilized in a free-falling and non-spattering stream into said chamber.

3,004,901

APPARATUS FOR FRACTIONAL DISTILLATION

Wilhelm Nerge, Rodenkirchen, near Köln, and Emil Keunecke, Köln, Germany, assignors to Leybold-Hochvakuum-Anlagen G.m.b.H., Köln-Bayenthal, Germany
Filed Oct. 14, 1959, Ser. No. 846,298
Claims priority, application Germany Sept. 16, 1959
13 Claims. (Cl. 202—236)



1. In an apparatus for fractional distillation under vacuum, the combination which comprises: cylindrical evaporating means for evaporating the material to be distilled; condenser means located along the axis of and surrounded by said evaporating means; a rotatable perforated spiral insert member positioned between said evaporating means and said condenser means and allowing the movement of vapors between said evaporating means and said condenser means to take place in a direction substantially vertical to said axis; and collector means positioned between said spiral insert member and said evaporating means for collecting liquid condensed on the surface of said spiral insert member and flowing down said surface under the influence of gravity, thereby preventing such liquid from being centrifuged onto said evaporating means.

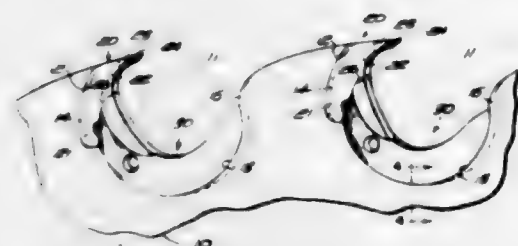
3,004,902

MANUFACTURE OF INSERTED-TOOTH SAW BITS AND SHANKS

Donald O. Beckner, South Lancaster, and Walter E. Lamlein, Leominster, Mass., assignors to Shoncks Saw & Steel Co., Fitchburg, Mass., a corporation of Massachusetts
Filed May 15, 1959, Ser. No. 813,544
2 Claims. (Cl. 204—23)

1. In the manufacture of insert tooth members for circular saws, the method which comprises selecting and

rough shaping steel stock to desired bit and shank conformation, forming a central longitudinal V-groove along the convex edges of the bits and shanks, grinding and surface-working the parts to operative form, collecting



a mass of the individual formed and worked parts, and subjecting them to a continuously prolonged percussive tumbling action in a fluid-admitting container while submerged in a plating bath of nickel sulfate and passing electrical plating current through said bath.

3,004,903

ANODIZING METHOD

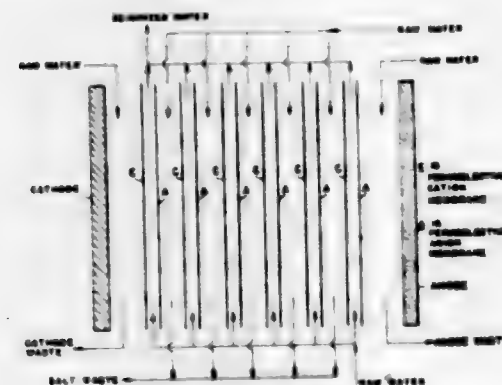
August Mendizze, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Aug. 29, 1946, Ser. No. 693,805
7 Claims. (Cl. 204—38)

1. The process of forming a layer of silver chloride on a body of silver which comprises maintaining said body of silver as an anode in an aqueous bath which has a pH below about 6.5, which contains chloride ions in a concentration between about .1 mol per liter and about 1 mol per liter, ions of a halogen of atomic weight greater than chlorine in a concentration of between about .00002 mol per liter and about .006 mol per liter, and nitrate ions in a concentration of between about .001 mol per liter and about .1 mol per liter.

3,004,904

ELECTRONEGATIVE SELECTIVE PERMEABLE MEMBRANE AND METHOD OF PRODUCTION

Harry P. Gregor, Hewlett, N.Y., and Harold I. Patzelt, Chicago, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
Filed May 25, 1955, Ser. No. 511,062
16 Claims. (Cl. 204—180)



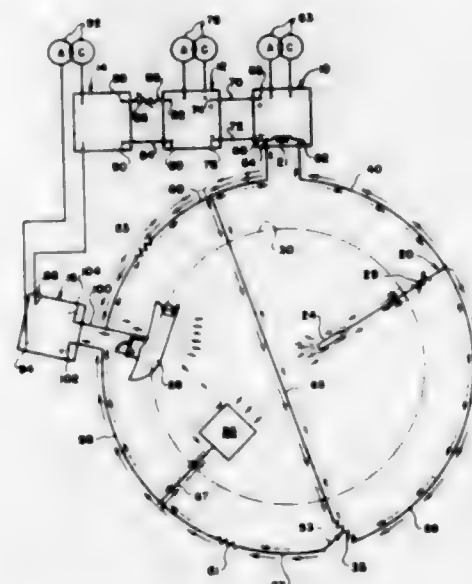
10. The method which comprises supplying a solution of an electrolyte to an electrolytic cell having an electronegative selective permeable membrane interposed between the anode and the cathode to form corresponding compartments, and passing an electric current through the cell to displace the cations of the electrolyte from the anode compartment to the cathode compartment, said membrane being a cast homogeneous mixture of 40-90% by weight of a water-insoluble, acid and alkali-resistant

thermoplastic film-forming polymer being an addition polymer of at least one mono-olefinic compound polymerized through the olefinic group, and 60-10% by weight of a substantially linear water-soluble electronegative polyelectrolyte, said membrane being cast in the form of a finely porous film from a solution of said mixture and having a maximum electrical resistance of 1000 ohms per square centimeter when at equilibrium in one-tenth normal sodium chloride solution.

3,004,905

CATHODIC PROTECTION SYSTEM

Roland C. Sabins, 522 Catalina Ave., San Diego, Calif.
Filed Feb. 9, 1959, Ser. No. 791,947
31 Claims. (Cl. 204—147)



1. In combination, a cathode, an anode, said cathode and anode being immersed in an electrolyte; a source of direct current having the negative side thereof connected to the cathode and having the positive side thereof connected to the anode to raise the potential of the cathode; a monitoring system comprising a monitoring anode in the electrolyte, a conductor constantly connecting the monitoring anode and the cathode, means including a current responsive device in the conductor responsive to the flow of current between the monitoring anode and the cathode for causing varying of the value of current flow from said source of current to the cathode, a resistance in the conductor interposed between said current responsive device and the cathode, a second conductor having one end connected with the first mentioned conductor between the current responsive device and the said resistance and having the other end connected with the first mentioned anode, and a resistance in the second mentioned conductor.

3,004,906

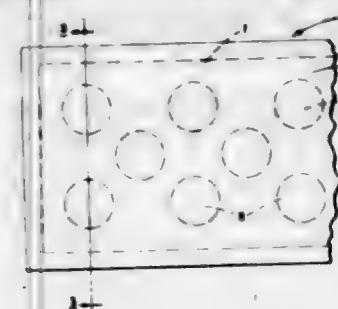
URANIUM FOIL NUCLEAR FUEL ELEMENT

Martin H. Binstock, Tarzana, Calif., assignor to North American Aviation, Inc.
Filed Nov. 9, 1956, Ser. No. 621,255
9 Claims. (Cl. 204—154.2)

1. A fuel plate for a plate-type nuclear fuel element comprising an integral sheet of uranium metal foil, said sheet having a plurality of perforations, a cladding bonded to said metal foil, the cladding surfaces being joined together through said perforations in said foil to impart structural integrity to said fuel plate.

6. A method of making a fuel plate for a plate-type nuclear reactor fuel element which comprises perforating a uranium metal foil, inserting said perforated metal into a

tube of a cladding material having a relatively low thermal neutron absorption cross section and metallurgically bonding said metal and said tube together, thereby joining



ing the cladding surfaces of said fuel plate together through the perforations in said uranium to impart structural integrity to said fuel plate.

3,004,907

FUEL TUBE ELEMENT AND METHOD OF PREPARING THE SAME

Walter Precht, Baltimore, and Raymond J. Geckle, Dundalk, Md., and John R. Bedell, Smithtown, N.Y., assignors to The Martin Company, Middle River, Md., a corporation of Maryland
Filed June 19, 1958, Ser. No. 743,029
7 Claims. (Cl. 204—154.2)



1. That improvement in the process of preparing clad nuclear reactor fuel elements of tubular type comprising the steps of providing a mandrel, treating the surface of the latter to prevent bonding thereon of components of the element, mounting a first aluminum tube on the mandrel, swaging a tip of said first tube to the mandrel, cold drawing said first tube on said mandrel to impart a selected thickness thereto and to conform its inner surface to the surface of the mandrel, chemically cleaning the said first tube, mounting a tubular core of a cermet containing aluminum and uranium dioxide over the cold drawn first tube, mounting a second aluminum tube over the so positioned core, swaging a tip of the second aluminum tube to the mandrel, mounting a protective tube over said second tube, swaging a tip of said protective tube to the mandrel and sealing it in leak-proof manner to the mandrel, elevating the temperature of the assembled components and of a drawing die, applying a vacuum to the assembled components and while maintaining said vacuum and the elevated temperature, hot drawing the component assembly through the heated die to effect metallurgical bonding of the adjoining surfaces between the first and second tubes and the core, and thereafter removing the protective tube.

3,004,908

TREATMENT OF FLUORINATED HYDROCARBONS

Robert Neville Hazeldine, No. 1 Kent House, Somers St., Cambridge, England
No Drawing. Filed Aug. 14, 1957, Ser. No. 678,025
7 Claims. (Cl. 204—163)

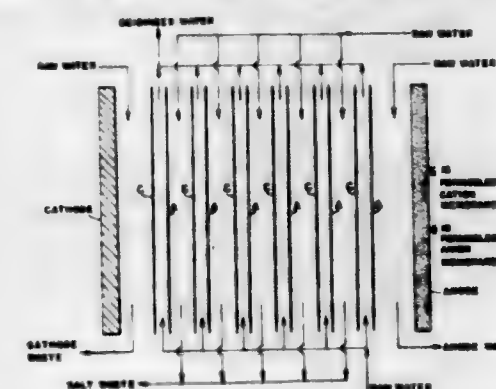
1. A method of purifying a saturated perhalocarbon in which the halogen constituents are selected from the group consisting of fluorine and chlorine and the atomic ratio of fluorine to chlorine is at least one, said perhalocarbon containing impurities selected from the group consisting of (1) hydrogen-containing compounds of structure R—H wherein R is selected from the group consisting of

perfluorocarbons, perfluorochlorocarbons, polyfluorohydrocarbons and polyfluorochlorohydrocarbons, and (2) compounds selected from the group consisting of olefinically unsaturated perfluorocarbons, perfluorochlorocarbons, polyfluorohydrocarbons and polyfluorochlorohydrocarbons, comprising subjecting such perhalocarbon to an oxidizing agent which provides oxygen in the reaction zone and to an energy source comprising actinic radiation effective to form free radicals from said impurities, for a time sufficient to oxidize the major part of the impurities to form products easily removable from said perhalocarbon but insufficient to cause degradation of a significant of said perhalocarbon.

3,004,909

ELECTROPOSITIVE SELECTIVE PERMEABLE MEMBRANE AND METHOD OF PRODUCTION

Harry P. Gregor, Hewlett, N.Y., and Harold I. Patzelt, Chicago, Ill., assignors to Nalco Chemical Company, a corporation of Delaware
Filed June 8, 1955, Ser. No. 513,944
15 Claims. (Cl. 204—180)



11. The method which comprises supplying a solution of an electrolyte to an electrolytic cell having an electro-positive selective permeable membrane interposed between the anode and the cathode to form corresponding compartments, and passing an electric current through the cell to displace the anions of the electrolyte from the cathode compartment to the anode compartment, said membrane being a cast homogeneous mixture of 40-90% by weight of a water-insoluble, acid and alkali-resistant thermoplastic film-forming polymer being an addition polymer of at least one mono-olefinic compound polymerized through the olefinic group, and 60-10% by weight of a substantially linear water-soluble electropositive polyelectrolyte, said membrane being cast in the form of a finely porous film from a solution of said mixture and having a maximum electrical resistance of 1000 ohms per square centimeter when at equilibrium in one-tenth normal sodium chloride solution.

3,004,910

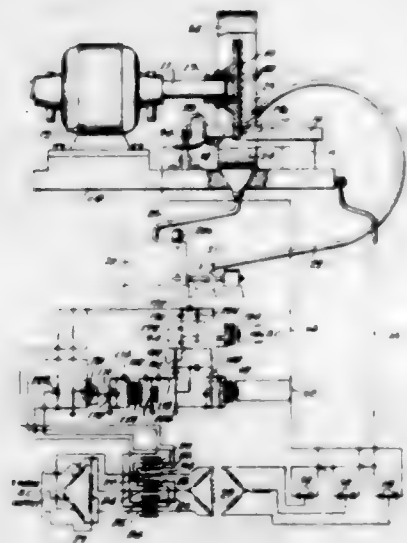
APPARATUS FOR ELECTROLYTIC CUTTING, SHAPING AND GRINDING

George F. Keeler, Dundee, Ill.
(6200 Doyle St., Emeryville, Calif.)
Original application Sept. 18, 1952, Ser. No. 310,244.
Divided and this application Dec. 3, 1957, Ser. No. 700,493

8 Claims. (Cl. 204—228)

1. Apparatus for supplying and controlling electric current for electrolytic grinding comprising in combination pick-up means responsive to a signal of high-frequency components arising in the electrolytic circuit of electrolytic-grinding equipment, filter means for rejecting low-frequency components in said signal, means for amplifying said signal, a power source of alternating current, means for rectifying said alternating current to provide a direct-current power source for the electrolytic

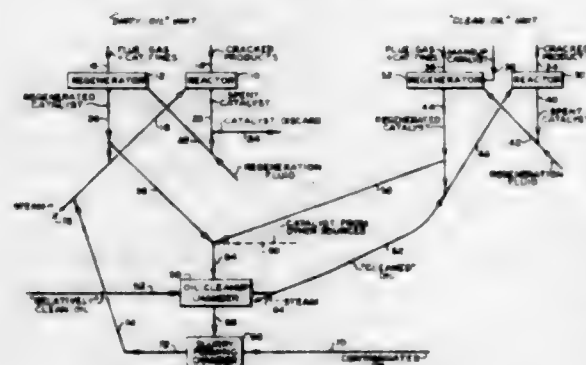
circuit of the electrolytic-grinding equipment, control means interposed between said power source of alternating current and said rectifier, and circuit connections



from said amplifier to said control means for activating said control means to reduce the flow of current in response to said signal.

3,004,911 CATALYTIC CRACKING PROCESS AND TWO UNIT SYSTEM

James W. Slover, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 858,943
10 Claims. (Cl. 208-78)



1. A process for catalytically cracking a first feed stock containing catalyst-contaminating metals in a first cracking unit including a first reactor and a first regenerator and a second feed stock containing a lesser amount of contaminating metals in a second cracking unit including a second reactor and a second regenerator, there being a small catalyst loss and replacement in the two units amounting to a fraction of a percent of the amount circulated per day, which process comprises circulating catalyst from said first reactor to said first regenerator for regeneration and back to said first reactor in admixture with said first feed stock; circulating catalyst from said second reactor to said second regenerator for regeneration and back to said second reactor in admixture with said second feed stock; passing said second feed stock through a hot contacting zone maintained below cracking temperatures prior to admixing same with catalyst from said second regenerator to clean said second feed stock; passing a portion of the regenerated catalyst from said first regenerator into said hot contacting zone to remove contaminants from said second feed stock and provide cleaner conditions in said second unit; separating the catalyst from the cleaned second feed stock before passing said feed stock to said second reactor and mixing catalyst from said hot contacting zone with said first feed before passing same to said first reactor.

3,004,912 DESULFURIZATION PROCESS UTILIZING METALLIC SODIUM AND RECYCLING OF SLUDGE

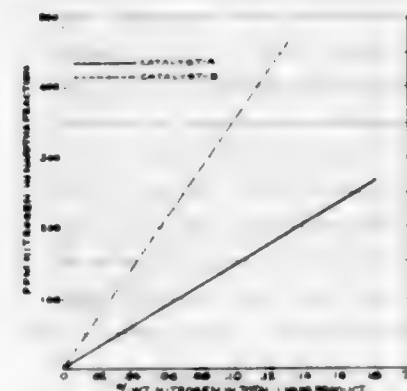
Thomas M. Kaneko and Virgil L. Hansley, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed Apr. 13, 1959, Ser. No. 806,059
5 Claims. (Cl. 208-208)



1. A continuous process for substantially desulfurizing crude diesel oil with a total amount of sodium equivalent to about 1 gram atom of sodium per 1 gram atom of sulfur present in said crude diesel oil, which consists of continuously contacting crude diesel oil with sludge from a previous desulfurization treatment and less than stoichiometric amounts of fresh sodium, vaporizing substantially desulfurized diesel oil from sludge contained in the resulting reaction product mixture, and continuously recycling a major proportion of said sludge for treatment of said crude diesel oil.

3,004,913 PROCESS FOR REMOVING NITROGEN COMPOUNDS FROM HYDROCARBON OIL

Stanley Tucker, Collingdale, Pa., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 11, 1958, Ser. No. 779,728
10 Claims. (Cl. 208-254)



1. A process for removing nitrogen from a nitrogen-containing hydrocarbon oil which comprises contacting said oil in the presence of hydrogen with a catalyst consisting essentially of 15 to 40 percent by weight silica, 1 to 8 percent by weight cobalt oxide, 3 to 20 percent by weight molybdenum trioxide and remainder alumina, at a temperature between about 650° F. and about 950° F., a liquid hourly space velocity between about 0.1 and about 10 and a hydrogen partial pressure between about 100 and about 5000 pounds per square inch gauge employing between about 200 and about 10,000 standard cubic feet of hydrogen per barrel of oil.

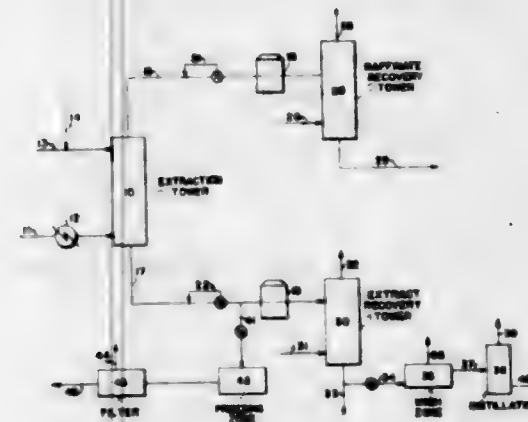
3,004,914 CATALYSTS AND HYDROGENATION PROCESSES USING THE CATALYST

Peter Thomas White, Sunbury-on-Thames, England, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation
No Drawing. Filed July 20, 1959, Ser. No. 828,067
Claims priority, application Great Britain July 25, 1958
11 Claims. (Cl. 208-255)

1. A catalyst comprising a member of the group consisting of nickel and nickel compounds supported on a base consisting essentially of sepiolite.
4. A process for the hydrogenation of organic compounds comprising contacting the compounds together with a catalyst comprising nickel supported on a base consisting essentially of sepiolite.

3,004,915 SOLVENT TREATING OF PETROLEUM FRACTIONS

Fred H. Kant, Cranford, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 863,033
7 Claims. (Cl. 208-323)



1. A process for treating a mineral oil fraction which comprises contacting said oil with a selective solvent comprising phenol and from about 1 to about 25 weight percent, based on the phenol, of a nitrophenol selected from the group consisting of ortho-nitrophenol, para-nitrophenol, 2,4-dinitrophenol, 2,6-dinitrophenol, and 2,4,6-trinitrophenol.

3,004,916 LUBRICATING OIL

Henry R. Ertelt, Fanwood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 2, 1957, Ser. No. 699,883
3 Claims. (Cl. 252-32.7)

1. An oil additive combination of (A) about 10 to 3 wt. percent of barium salt of dinonylnaphthalene sulfonic acid, wherein said nonyl groups are branched, (B) about 80 to 95 wt. percent of a material consisting essentially of a mixture of (1) p,p'-di-tetrayloctyl diphenyl amine, (2) p,p'-di-alpha-phenethyl diphenyl amine, (3) p-tertiary-octyl-p'-alpha-phenethyl diphenyl amine, (4) p-mono-tertiaryoctyl diphenyl amine and (5) p-mono-alpha-phenethyl diphenyl amine in the ratio of 50 to 70% by weight of compounds (1), (2) and (3) to 30 to 50% by weight of compounds (4) and (5), said product resulting from the reaction of 1.3 to 2.0 moles of a hydrocarbon mixture containing about 2 to 5 parts by weight of diisobutylene and one part by weight of styrene, with one mole of diphenyl amine, and (C) about 10 to 12 wt. percent of an oil-soluble zinc dialkyl dithiophosphate, wherein said alkyl groups contain 3 to 12 carbon atoms.

3,004,917 OIL COMPOSITIONS CONTAINING RUST INHIBITORS

Jean A. Fefer, Metuchen, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 14, 1959, Ser. No. 813,060
5 Claims. (Cl. 252-33.4)

1. A lubricating oil composition comprising a major amount of lubricating oil and about 0.5 to 5.0 weight percent of a rust inhibiting combination of an oil soluble barium alkyl aryl sulfonate of sulfonic acid having a molecular weight of 200 to 600 selected from the group consisting of high alkalinity barium sulfonates and a neutral barium dinonyl naphthalene sulfonate; and a polyethylene glycol dioleate having from 3 to 20 ethylene glycol units and wherein the weight proportion of said sulfonate to said dioleate is about 1:1 to 5:1.

3,004,918 PRODUCTION OF MAGNETIC FERRITE BODIES

Frank J. Schmettler, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 1, 1956, Ser. No. 581,858
2 Claims. (Cl. 252-62.5)

1. The method of making ferrite bodies having a large grain boundary which comprises sintering together for 10 to 20 hours at 800° C. to 1000° C. manganese carbonate and zinc oxide to form a homogeneous solid solution of manganese oxide and zinc oxide in which the ratio of manganese ions to zinc ions has a value between 1.0 and 1.5, mixing said sintered solid solution with only ferric oxide sufficient to give between 66% atom percent and 75 atom percent of iron in the total atoms of metals present, shaping a body from the resultant mixture, and firing said shaped body in an atmosphere containing between 0.5 percent and 2 percent by volume of oxygen at a temperature between 1075° C. and 1200° C. for between 3 hours and 48 hours said temperatures and times being so correlated as to give limited diffusion of said ferric oxide into said sintered solid solution to form a product consisting essentially of grains of manganese-zinc ferrite dispersed in a continuous matrix of ferric oxide.

3,004,919 ABSORBENT COMPOSITION FOR AN ABSORBENT REFRIGERATION SYSTEM

William F. Rush, Arlington Heights, and William G. Watters, Skokie, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 27, 1959, Ser. No. 836,421
2 Claims. (Cl. 252-67)

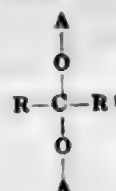
1. An absorbent composition for an absorption refrigeration system consisting of a mixture of lithium bromide and cesium bromide in water, said lithium bromide present in a mole ratio of 4.25-6.00 lithium bromide to 1 mole cesium bromide.

3,004,920 PROCESS FOR THE PRODUCTION OF SILICA ORGANOSOLS

John W. Ryznar, La Grange Park, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Feb. 13, 1958, Ser. No. 714,940
4 Claims. (Cl. 252-309)

1. The process of producing a colloidal silica sol consisting essentially of discrete particles of hydrated, colloidal silica suspended in a liquid medium which is composed primarily of a water-miscible ketone and a water-miscible alcohol combined in a molar ratio of 1:2, which comprises adjusting the pH of an aqueous colloidal silica sol to from 1.0 to 3.5, and then reacting sub-

stantially all the free water of said sol with a ketal of the formula:



where R and R¹ are lower aliphatic groups, the sum of which is no greater than three carbon atoms in chain length and A is a lower aliphatic group containing no more than 4 carbon atoms.

3,004,921 PREPARATION OF COLLOIDAL DISPERSIONS OF FINE-PARTICLE SIZE SILICA HYDROGEL IN POLYOLS

Ernest Stossel, New York, N.Y., assignor to Argus Chemical Corporation, Brooklyn, N.Y., a corporation of New York
No Drawing. Filed June 11, 1958, Ser. No. 741,239
2 Claims. (Cl. 252-309)

1. A process of preparing compositions consisting of colloidal dispersions of silica hydrogel of a particle size of about 5 μ , a water-soluble alkali metal salt used as an ingredient in humectants and a polyol selected from the group consisting of glycerine, ethylene glycol, polyethylene glycol, sorbitol, and the etherified derivatives of said polyols, which comprises mixing an alkali metal silicate with 0.2 to 50 parts by weight of said polyol, calculated on SiO₂, and precipitating silica hydrogel by acidifying the mixture with an acid capable of forming with the alkali metal of the silicate said humectant salt, thereby immediately solvating the precipitated silica hydrogel by the polyol present in the mixture, and evaporating water to a silica content from 8-25%.

3,004,922 EMULSIONS OF PHOSPHATIDES IN AQUEOUS ALCOHOL AND THEIR PREPARATION

Carl Heinz Buer, 159 Espenstrasse, Kohn-Brunnfeld, Germany
No Drawing. Filed Dec. 14, 1956, Ser. No. 628,231
Claims priority, application Germany Dec. 17, 1955
5 Claims. (Cl. 252-312)

1. A process for the preparation of stable emulsions of phosphatides comprising stirring a phosphatide containing naturally associated neutral fat in an amount of about .5 to 5 percent by weight of the phosphatide, into an aqueous solution having a temperature of about 70 to 80° C. and containing about 5 to 25 percent of ethyl alcohol and a carbohydrate, said carbohydrate being employed in an amount of about 6 to 35 percent by weight and said phosphatide in an amount of about 5 to 15 percent by weight of the emulsion.

5. A stable lecithin emulsion in aqueous alcohol consisting essentially of about 5 to 25 percent by weight of ethyl alcohol, about 5 to 15 percent of lecithin of a particle size of about 0.03 to 0.06 microns, a neutral fat in an amount of about 0.5 to 5 percent by weight of the lecithin, and about 6 to 35 percent, calculated on the weight of the emulsion, of a carbohydrate, the balance being water.

3,004,923 PROCESS AND COMPOSITIONS FOR INHIBITING AND PREVENTING THE FOAMING OF AQUEOUS SYSTEMS

Myron J. Jurich, Chicago, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,251
9 Claims. (Cl. 252-321)

1. The process of inhibiting and preventing the foaming of aqueous systems which normally tend to foam which comprises adding to such systems from one to 500 parts per million of an aliphatic olefinic hydrocarbon substituted succinic anhydride which contains from 12 to 35 carbon atoms in the aliphatic group.

6. A defoaming composition useful in inhibiting and preventing foaming in aqueous systems which comprises a major portion of an aliphatic hydrocarbon oil and from 2% to 40% by weight of an aliphatic hydrocarbon substituted succinic anhydride which contains from 12 to 35 carbon atoms in the aliphatic group.

3,004,924 DEMULSIFICATION OF OIL-IN-WATER EMULSIONS

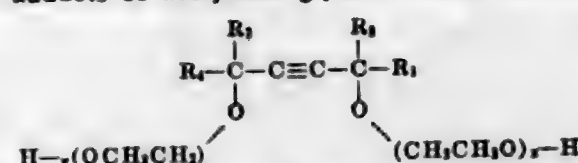
Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale and Alice Walker, Houston, Tex., assignors to Visco Products Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed Oct. 31, 1958, Ser. No. 776,919
7 Claims. (Cl. 252-344)

1. A process for resolving an oil-in-water emulsion into its component parts which comprises mixing into said oil-in-water emulsion an emulsion-breaking quantity of a water-dispersible, organic polyelectrolyte derived by the condensation of polyhalo lower alkane having a halogen group on two different carbons and a polyalkylene polyamine at a mol ratio of amino nitrogen in said polyamine to the halogen in said alkane in the range of 1:1 to 3:1, respectively, for 1 to 24 hours at 130-375° F., said polyalkylene polyamine having 2-3 carbons in the alkylene groups, and separating the resulting water and oil phases.

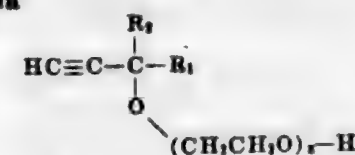
3,004,925 CORROSION INHIBITION

Robert J. Burch, North Plainfield, and George Davidovich, Bayonne, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 18, 1959, Ser. No. 800,118
6 Claims. (Cl. 252-396)

1. An aqueous solution consisting essentially of water, an agent which is normally corrosive to metals, said agent being selected from the group consisting of acids, bases, and salts, and a corrosion inhibiting amount of at least one member of the group consisting of ethylene oxide adducts of acetylenic glycols having the formula



in which R₁, R₂, R₃, and R₄ are members selected from the group consisting of alkyl, cycloalkyl, aryl, and aralkyl radicals and hydrogen and where R₁, R₂, R₃, and R₄ contain a total of at least seven carbon atoms, and x and y are integers totaling an average of between 3 and 25 and ethylene oxide adducts of acetylenic carbinols having the formula



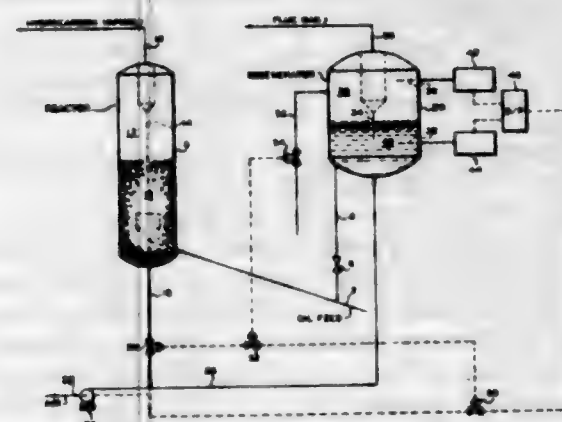
in which R₁ and R₂ are members selected from the group consisting of alkyl, cycloalkyl, aryl, and aralkyl radicals and hydrogen and where R₁ and R₂ contain a total of at least three carbon atoms, and x is an integer averaging between 3 and 30.

3,004,926 METHOD FOR CONTROLLING AFTER-BURNING IN THE TREATMENT OF FLUIDIZED REGENERABLE SOLIDS

Gordon D. Goering, Old Ocean, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 24, 1956, Ser. No. 618,133
10 Claims. (Cl. 252-417)

1. In a process for the regeneration of contaminated solids in the presence of oxygen in which the regeneration

is carried out in a fluidized state in a regeneration zone containing a dense phase bed superposed by a dilute phase in which the regeneration process variables include oxygen feed rate, dense phase bed level, solids circulation rate, heat removal rate and combinations thereof and in which the temperature of the dilute phase relative to the



dense phase varies due to after-burning in the dilute phase, the improvement which comprises measuring the temperature in each phase and adjusting at least one of said process variables responsive to a change in the difference between said temperatures whereby a predetermined temperature differential between the two phases is maintained.

3,004,927 POLYMERIZATION CATALYST

Heinz Wilhelm Meyer, Munich, Germany, assignor to Elektrochemische Werke München A.G., Holtriegelshreuth, Bavaria, Germany
No Drawing. Filed Oct. 20, 1958, Ser. No. 768,056
3 Claims. (Cl. 252-426)

1. A composition useful as a polymerization catalyst comprising a solution of an organic peroxide selected from the group consisting of peroxides and hydroperoxides of cyclohexanone and hydrocarbon substituted derivatives thereof in a lower alkyl phosphate, the alkyl of said alkyl phosphate having 1 to 4 carbon atoms and the concentration of said organic peroxide being about 15 to 50 percent by weight of said solution.

3,004,928 PREPARATION OF MANGANESE DIOXIDE CATALYST

Robert M. Haines and John W. Walsh, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Aug. 10, 1956, Ser. No. 603,239
6 Claims. (Cl. 252-430)

1. The method of preparing substantially anhydrous manganese dioxide in a finely divided state comprising dissolving a permanganate salt in methyl alcohol in the substantial absence of water and in admixture with a small amount of an aldehyde sufficient to increase the speed of reaction, and maintaining the solution at 60°-80° F., until formation of substantially anhydrous manganese dioxide is substantially completed.

3,004,929 METHOD OF PREPARING A CATALYST SUPPORT

Kenneth E. Lucas and Hilts O. Folkins, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 19, 1958, Ser. No. 775,046
11 Claims. (Cl. 252-442)

1. In a method of preparing a catalyst support by precipitating silica and alumina from solutions of silicon and

aluminum salts to produce a hydrogel containing more than 90% w. water and 70-90% silica on a dry-weight basis, filtering the precipitate to remove excess water, subjecting the precipitate to ion-exchange to remove undesired by-products, and washing the precipitate, the improvement which comprises air-drying the washed silica-alumina hydrogel at 225°-400° F. for a time sufficient to convert the hydrogel to a smooth paste containing an amount of water proportional to the amount of silica in the hydrogel in the range between the upper and lower lines in FIG. 1, extruding the paste through a die, cutting the extrudate into small pellets, and drying and calcining the pellets.

3,004,930 POLYMERIZATION CATALYST

Robert M. Engelbrecht and Joseph Q. Snyder, El Dorado, Ark., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 22, 1959, Ser. No. 821,690
6 Claims. (Cl. 252-442)

1. A catalyst consisting essentially of silica-alumina containing from about 0.05 to 10% by weight of total composition of a gallium halide.

3,004,931 HARDENABLE COMPOSITIONS COMPRISING EPOXIDE COMPOUNDS AND TETRAHYDROFURANE

Hans Brueschweiler, Basel, and Paul Zuppinger, Arlesheim, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Filed Mar. 23, 1959, Ser. No. 800,945
Claims priority, application Switzerland Feb. 5, 1959
4 Claims. (Cl. 260-2)

1. A process of reacting (1) a 1,2-epoxide compound having a 1,2-epoxide equivalency greater than 1 with (2) tetrahydrofuran, which comprises contacting (1) and (2) with a metal fluoroborate selected from the group consisting of the fluoroborates of copper, cobalt, magnesium, cadmium, mercury, calcium, strontium, barium, aluminum, zinc, tin, lead, iron and nickel as a catalyst, about 5-50 parts of tetrahydrofuran being employed for every 100 parts by weight of 1,2-epoxide compound, and curing the reaction product.

3,004,932 UNSATURATED β -DIKETONES AND POLYMERS AND CO-POLYMERS THEREOF

Aleksander Despic, Philadelphia, Pa., and Djuro Kosanovic, Belgrade, Yugoslavia, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 15, 1958, Ser. No. 708,978
15 Claims. (Cl. 260-2.2)

8. An ion-exchange resin consisting of a polymer of methacrylyl acetone, which resin possesses a complexing affinity for ferric ions.

3,004,933 PRODUCTION OF POLYURETHANE PLASTICS USING SCHIFF'S BASE CATALYSTS

Erwin Müller, Leverkusen, Christian Wiegand, Wuppertal-Elberfeld, and Günther Brann, Leverkusen, Germany, assignors, by mesne assignments, of one-half to Farbwerke Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Oct. 18, 1956, Ser. No. 616,606
Claims priority, application Germany Oct. 22, 1955
5 Claims. (Cl. 260-2.5)

4. In the manufacture of a cellular polyurethane plastic by a process which comprises reacting an organic poly-

isocyanate with water and an organic compound having a plurality of hydroxyl groups reactive with an —NCO group, said organic compound being capable of forming a polyurethane by reaction with an organic polyisocyanate, the method of making an elastic cellular polyurethane plastic which comprises reacting the organic polyisocyanate with water and an organic compound having hydroxyl groups reactive with an —NCO group and having an hydroxyl number below 150 in the presence of a Schiff's base having an active hydrogen atom capable of reacting with an —NCO group.

3,004,934

FLEXIBLE SHOCK-ABSORBING POLYURETHANE FOAM CONTAINING STARCH AND METHOD OF PREPARING SAME

Lucian P. Doermann and Robert N. Steel, South Bend, Ind., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 31, 1957, Ser. No. 693,531
7 Claims. (Cl. 260—2.5)

1. A flexible, shock-absorbing polyurethane foam comprising (A) 100 parts of a reaction product of from 1.02 to 1.9 moles of an organic diisocyanate and 1 mole of a polymer having a molecular weight of from 500 to 5,000 and having terminal alcoholic hydroxyl groups selected from the group consisting of polyesters and polyethers, (B) 1 to 10 parts of water, and (C) 1 to 100 parts of starch, said polyester being the sole polyester present and consisting essentially of a reaction product of a glycol with an aliphatic saturated dicarboxylic acid and said polyether having alkyl hydrocarbon chains separating ether linkages therein.

3,004,935

SELF-EXTINGUISHING ALKENYL POLYMER COMPOSITIONS CONTAINING POLYBROMO CYCLOHEXANES

Charles F. Raley, Jr., and William R. Nummy, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 24, 1958, Ser. No. 750,557
7 Claims. (Cl. 260—2.5)

3. A solid non-flammable, cellular, resinous body composed for the most part of a multiplicity of individually closed cells having thin walls of polystyrene containing from 0.5 to 4.5 percent by weight of a polybromocyclohexane selected from the group consisting of tribromotrichlorocyclohexane, tetrabromodichlorocyclohexane, pentabromomonochlorocyclohexane, hexabromocyclohexane, and mixtures thereof.

3,004,936

BUTADIENE COPOLYMER RUBBER-SILICA-PROTEIN MASTERBATCH AND PROCESS OF PREPARATION

Louis H. Howland, Watertown, and Woodrow W. White, Oxford, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 29, 1958, Ser. No. 757,925
13 Claims. (Cl. 260—8)

1. A process which comprises incorporating an alkali-metal silicate and a protein selected from the group consisting of glue, gelatin and casein in an alkaline latex of a rubber copolymer of a butadiene-1,3 with an unsaturated compound containing a polar group selected from the class consisting of amino, carbonyl, carbonitrile and chloroaryl groups, and coagulating said rubber and forming a masterbatch therewith of coprecipitated silica in the form of filterable crumbs by mixing an acid with such latex containing the alkali-metal silicate and protein to produce a pH of less than 7 in the aqueous

medium of the coagulated synthetic rubber and coprecipitated silica at the completion of the coagulation of the masterbatch.

3,004,937

RESINOUS COMPOSITION COMPRISING BUTADIENE POLYMER DRYING OIL AND AN ALKYL ACID PHOSPHATE

Walter L. Van Nostrand, Jr., Staten Island, N.Y., and Frank C. La Motta, Ford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 28, 1959, Ser. No. 816,379
8 Claims. (Cl. 260—15)

1. A coating composition comprising (1) a liquid polymer drying oil chosen from the group consisting of homopolybutadiene and copolymers of butadiene-1,3 and styrene containing 5 to 30 wt. percent styrene and 70 to 95 wt. percent butadiene-1,3 which polymer drying oil has been blown with air until the polymer contains 10 to 20% oxygen; (2) 1 to 5% of an alkyl acid phosphate having the formula R_2PO_4 in which R is a radical from the group consisting of methyl, ethyl, propyl, butyl and amyl containing 1 to 5 carbon atoms; and (3) a third component chosen from the group consisting of 20 to 40 wt. percent of a nitrocellulose, 20 to 50 wt. percent of an oil modified alkyd resin of a polybasic acid and glycerol, and 20 to 40 wt. percent of an amino-formaldehyde resin, each of said amounts being based on the air-blown polymer.

3,004,938

METHOD OF MAKING A SYNTHETIC RUBBER LATEX EMPLOYING ETHYL HYDROXYETHYL-CELLULOSE

Victor S. Chambers, Naugatuck, and Louis H. Howland, Watertown, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed May 4, 1959, Ser. No. 810,597
14 Claims. (Cl. 260—17)

1. The method of making a synthetic rubber latex which comprises subjecting to polymerizing conditions an aqueous emulsion of synthetic rubber forming monomers selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3 until a latex of 60% to 95% conversion is produced, and incorporating in the latex in the presence of at least 5% of unreacted polymerizable monomeric material based on the weight of the original synthetic rubber forming monomers at a temperature from 0° C. to 15° C., and then removing unreacted monomeric material from the latex, said ethyl hydroxyethyl cellulose having a viscosity in 2% aqueous solution at 20° C. of 15 to 600 centipoises.

3,004,939

METHOD OF MAKING POLYURETHANE RUBBER ARTICLES

Henry Roger Varvaro, Paterson, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 19, 1958, Ser. No. 755,866
9 Claims. (Cl. 260—22)

1. A method of making a polyurethane rubber article comprising in combination the steps of uniformly suspending in solid particulate form a crystalline primary diamine in a viscous suspending medium selected from the group consisting of a polyalkylene glycol having terminal hydroxyl groups and a molecular weight of from 500 to 5,000, a polyester having terminal hydroxyl groups which is a chain-extended self-condensation product of

an ester of a glycol with a saturated dicarboxylic acid, having an acid number less than 6, a hydroxyl number of from 22 to 225, and a molecular weight of from 500 to 5,000, and castor oil, and thereafter thoroughly dispersing such suspension in a polyurethane prepolymer having terminal isocyanate groups which is an uncured, liquid reaction product of a polymer having terminal hydroxyl groups and having a molecular weight of from 500 to 5,000, selected from the group consisting of a polyalkylene glycol and a polyester which is a chain-extended self-condensation product of an ester of a glycol with a saturated dicarboxylic acid having an acid number less than 6 and a hydroxyl number of from 22 to 225 with an excess of an organic diisocyanate, to form a two-phase system in which the primary diamine exists as uniformly dispersed solid particles, the resulting fluid mixture being characterized by having ample pot life at temperatures below the melting point of the primary diamine, thereafter imparting a desired shape to the fluid mixture, and subsequently heating the mixture to a temperature above the melting point of the primary diamine, whereby the mixture cures to a solid, rubbery state in which the diamine and the said viscous suspending medium are chemically combined with the prepolymer.

3,004,940

METHOD FOR INCORPORATING CARBON BLACK INTO RUBBER

William R. King, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed June 20, 1958, Ser. No. 743,509
6 Claims. (Cl. 260—27)

1. A method for the manufacture of rubber having improved abrasion resistance properties which comprises slurring water and undried carbon black pellets, said pellets containing from about 40 to about 55 weight percent water, obtaining a dispersion of carbon black in water; admixing said dispersion with a rubber latex; coagulating the resulting mixture to form a coagulum of rubber; adding curing agents to the rubber; and curing the rubber.

3,004,941

HEAT RESISTANT LIQUID RESIN COMPOSITION FROM PHENOL, FORMALDEHYDE AND DICYANDIAMIDE, AND PROCESS FOR MAKING SAME

Jerome J. Meestdagh, Springfield, and Charles A. Magarian, Hampden, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 17, 1958, Ser. No. 721,693
7 Claims. (Cl. 260—29.3)

5. An aqueous-solvated, liquid, water-dilutable, fusible dicyandiamide-formaldehyde resin composition in single package form adapted for shipping and storing thereof and exhibiting improved water-dilutability retention, the said composition comprising an aqueous-solvated, liquid, water-dilutable, fusible mixture of condensates of dicyandiamide-formaldehyde and phenol-formaldehyde of the type resulting from reacting 1.0 mol of dicyandiamide and 0.5–2.0 mols of formaldehyde in mol ratio in the presence of an alkaline-catalyzed water-dilutable reaction mixture of phenol-formaldehyde at a pH of 5.0–10.0 and a temperature of 40°–100° C. until a water-dilutable, liquid partial condensate of dicyandiamide and formaldehyde is formed as determined by the said partial condensate phobing in a quantity of water, the said phenol-formaldehyde reaction mixture being constituted of 1.0 mol of phenol to 0.8–3.0 mols of formaldehyde in mol ratio.

3,004,942

PROCESS OF INCREASING THE PARTICLE SIZE OF SYNTHETIC LATEX BY TREATMENT WITH POLYVINYL ALCOHOL AND VOLATILE ELECTROLYTE

Robert W. Brown, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,763
13 Claims. (Cl. 260—29.7)

1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3 which comprises adding to the latex 2% to 15% of an ammonium salt of carbonic acid and 0.03% to 1% of polyvinyl alcohol, said polyvinyl alcohol having a viscosity in 4% aqueous solution at 20° C. from 4 to 70 centipoises, said percentages being based on the weight of the solids of the latex.

3,004,943

SYNTHETIC RUBBER LATEX

Robert W. Brown and Victor S. Chambers, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,765
16 Claims. (Cl. 260—29.7)

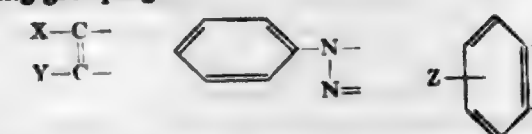
1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3 containing 2 to 10 parts of a water-soluble soap of soap-forming monocarboxylic acid per 100 parts of latex solids and having a pH from 8 to 11 which comprises reducing the pH of the latex to within the range of 5.5 to 7.5 in the presence of 0.05% to 1% of polyvinyl alcohol based on the weight of the latex solids, said polyvinyl alcohol having a viscosity in 4% aqueous solution at 20° C. from 4 to 70 centipoises, and thereafter increasing the pH of the latex to within the range of 8 to 11.

3,004,944

PROCESS OF MASTICATING RUBBER AND PRODUCT THEREOF

Theo Kempermann, Köln-Lindenthal, Friedrich Lober, Leverkusen-Bayerwerk, and Helmut Klappert, Köln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 8, 1958, Ser. No. 753,884
Claims priority, application Germany Aug. 13, 1957
17 Claims. (Cl. 260—30.2)

1. Process for the mastication of a member selected from the group consisting of natural rubber, rubbery diolefin homopolymers, and rubbery copolymers of diolefins and monoolefins which comprises masticating the same in the presence of metal-containing compounds which have a 16-membered macrocyclic ring system in which 8 carbon atoms and 8 nitrogen atoms are arranged alternatively and in which each second nitrogen atom forms a heterocyclic ring with the two adjacent carbon atoms by means of a linkage selected from one of the following groupings:



wherein X and Y represent a lower alkyl radical and Z

is selected from the group consisting of hydrogen, phenyl, lower alkoxy, halogen, and alkyl radicals and wherein the grouping



is contained at least once in the molecule.

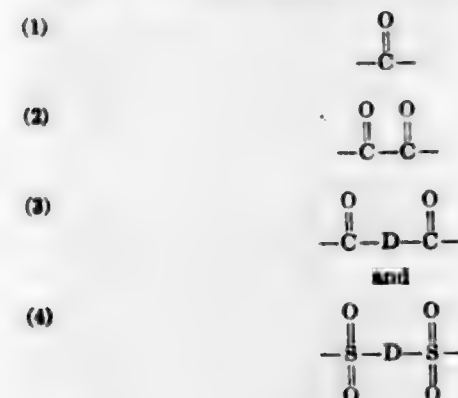
3,004,945 DIHYDRAZIDE-ISOCYANATE POLYMER AND SOLUTION THEREOF

John Farago, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 5, 1958, Ser. No. 778,291
8 Claims. (Cl. 260-30.8)

1. Novel synthetic, linear polymeric composition comprising recurring structural units of the formula:



wherein R is a divalent organic radical selected from the group consisting of aliphatic, aromatic, cycloaliphatic, and aliphatic-aromatic and R' is a divalent organic radical selected from the group consisting of



wherein D is a divalent organic radical selected from the group consisting of aliphatic, aromatic, or aliphatic-aromatic, said composition having an inherent viscosity of at least about 0.2.

5. A spinning solution comprising the polymeric composition of claim 1 in dimethylsulfoxide.

3,004,946 VINYLIDENE POLYMERS PLASTICIZED WITH NAPHTHENIC ACID DERIVATIVES

Samuel E. Jolly, Ridley Park, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Oct. 23, 1958, Ser. No. 769,101
4 Claims. (Cl. 260-31.8)

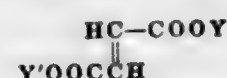
1. As a composition of matter, a vinylidene polymer plasticized with improved plasticizing esters prepared by contacting petroleum naphthenic acid material selected from the group consisting of naphthenic acids, an alkali metal salt of naphthenic acids, an ammonium salt of naphthenic acids, and esters of naphthenic acids with an ester-forming organic hydroxyl compound, said esters of naphthenic acids being adapted for the plasticizing of synthetic organic resins, with ozone at a temperature not exceeding 300° F. to provide increase in saponification number of at least 5 mg. of KOH per gram, and esterifying additional carboxyl groups produced in said contacting with an ester-forming organic hydroxyl compound suitable for producing plasticizing esters adapted for the plasticizing of synthetic organic resins.

3,004,947 POLYVINYL CHLORIDE PLASTICIZED WITH ADDUCTS OF ALKYLATED AROMATIC HYDROCARBONS AND FUMARATE ESTERS

Joachim Dazzi, Basel, Switzerland, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Original application Nov. 23, 1954, Ser. No. 470,798, now Patent No. 2,897,230, dated July 28, 1959. Divided and this application Feb. 4, 1959, Ser. No. 791,830

3 Claims. (Cl. 260-31.8)

1. A resinous composition comprising polyvinyl chloride plasticized with an adduct of one mole of an alkylated aromatic hydrocarbon having a total of from 9 to 27 carbon atoms and selected from the class consisting of alkylated benzenes, alkylated naphthalenes and alkylated biphenyls having one hydrogen atom attached to the α -carbon atom of a branched-chain alkyl group thereof, and from 2 to 20 moles of a fumarate of the formula



in which Y and Y' are selected from the class consisting of alkyl and alkoxyalkyl radicals of from 1 to 8 carbon atoms, said adduct having been formed by heating the alkylated aromatic hydrocarbon with the fumarate at a temperature of from 200° C. to 300° C.

3,004,948 MOLTEN COMPOSITION COMPRISING POLY-VINYL ESTER AND OCTADECANEDIOL, AND PROCESS FOR MAKING SAME

Guido von Rosenberg and Walter Brotz, Gersthofen, near Augsburg, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Luecke & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 24, 1958, Ser. No. 750,582
Claims priority, application Germany July 27, 1957
9 Claims. (Cl. 260-33.4)

1. A composition of matter comprising at least one polyvinyl ester of a saturated fatty acid having from 2 to 3 carbon atoms and 2 to 50 percent of octadecane diol calculated upon the total mixture.

3,004,949 STABILIZATION OF VINYL CHLORIDE POLYMERS WITH SULFUR CONTAINING COMPOUNDS

Fernand Chevassus, Paris, France, assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Sept. 6, 1957, Ser. No. 682,288
Claims priority, application France Oct. 11, 1956
3 Claims. (Cl. 260-45.75)

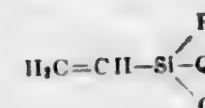
1. A vinyl chloride polymer composition containing, as color stabilizer therefor, a substance selected from the group consisting of mercaptobenzothiazol disulfide, mercaptobenzimidazol, and the zinc, sodium, cadmium, and tin salts of mercapto-benzimidazol, and having said stabilizer present in amounts no less than 0.1%.

3,004,950 COPOLYMERS OF CERTAIN ORGANOSILICON MONOMERS AND N-VINYL CYCLIC CARBAMATES

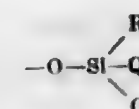
William F. Tonnigant and Wilhelm E. Wallis, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 5, 1958, Ser. No. 778,296
8 Claims. (Cl. 260-46.5)

1. A copolymer consisting essentially of (a) between about 1 and about 99 weight percent, based on the weight

of the copolymer, of a polymerized N-vinyl cyclic carbamate monomer selected from the group consisting of N-vinyl-5-methyl-2-oxazolidinone, N-vinyl-4-methyl-2-oxazolidinone and mixtures thereof; and (b) between about 99 and about 1 weight percent, based on the weight of the copolymer, of a polymerized monovinyl organosilicon monomer composition of the structure:



wherein G, Q and R are each independently selected from the group consisting of hydrogen, hydroxy, lower alkyl, and alkoxy groups containing from 1 to 4 carbon atoms and

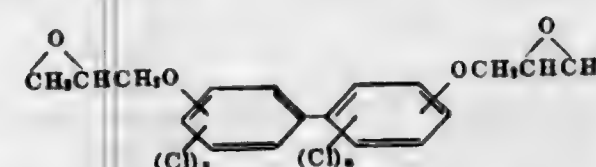


units in which each G, Q and R are independently as above defined with the limitation that at least one silicon atom is present but not more than 7 interconnected silicon atoms are present in each molecule of said monovinyl organosilicon composition.

3,004,951 DIGLYCIDYL ETHER OF DIHYDROXYPOLY-CHLOROBIPHENYLS AND EPOXY RESINS THEREFROM

Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,465
16 Claims. (Cl. 260-47)

1. A diglycidyl ether of dihydroxypolychlorobiphenyls having the formula



wherein the sum of x and n is a number from 5 to 8.

3,004,952 HARDENABLE COMPOSITIONS COMPRISING EPOXIDE COMPOUNDS AND BORON TRIFLUORIDES

Hans Brueschweiler, Basel, and Paul Zuppinger, Arlesheim, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Mar. 23, 1959, Ser. No. 800,944
Claims priority, application Switzerland Mar. 25, 1958
6 Claims. (Cl. 260-47)

1. A process which comprises reacting (1) a 1,2-epoxide compound having a 1,2-epoxide equivalency greater than 1 with (2) tetrahydrofuran, which comprises contacting (1) and (2) with (3) boron trifluoride, and (4) a complex-forming compound capable of forming a stable complex with boron trifluoride, selected from the group consisting of water, ammonia, ethylamine, ethylenediamine, monoethanolamine, piperidine, triethanolamine, urea, hexamethylene tetramine, trimethylamine, pyridine, aniline, toluidine and Schiff's bases, about 0.2 to about 3.0 parts by weight of the complex forming compound being employed for each part by weight of boron trifluoride and 5-50 parts by weight of tetrahydrofuran for every 100 parts by weight of the 1,2-epoxide compound, and curing the reaction product.

3,004,953 REACTION PRODUCTS OF PHENOLS AND DIISOPROPENYLBENZENE

Lawrence F. Sonnabend, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,276
6 Claims. (Cl. 260-62)

1. The polymeric heat and acid reacting alkylation catalyst catalyzed condensation product of 1 mole proportion of diisopropenylbenzene to 0.8-1.25 mole proportion of at least one phenol of the group consisting of phenol, alkylphenols, and bis-phenols having at least two available reaction sites per molecule wherein alkyl is inclusive of 1 to 4 carbon alkyl groups.

3,004,954 RESINOUS COMPOSITIONS COMPRISED OF A CROSS-LINKABLE ADDUCT OF COAL ACIDS AND A POLYFUNCTIONAL UREAL REACTANT

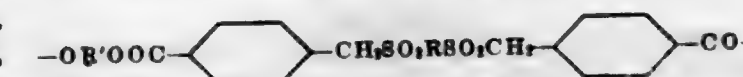
John L. Lang, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 3, 1957, Ser. No. 632,269
6 Claims. (Cl. 260-70)

1. Thermosetting, resin-providing composition comprised of a cross-linkable adduct of about one equivalent weight of coal acids and between about 0.5 and about 2.0 equivalent weights of a polyfunctional ureal reactant selected from the group consisting of urea, monomethylolurea, dimethylurea, methyleneurea, methylolmethyleneurea, biuret, other alkaline catalyzed reaction products of urea and formaldehyde that contain less than about ten condensed monomeric units in their molecules, alkaline reaction products of urea and difunctional 2 to 10 carbon atom aldehydes that contain less than about ten condensed monomeric units in their molecules and mixtures thereof, said coal acids being the water-soluble mixed aromatic polycarboxylic acids that are the products of the caustic oxidation of coal, which acids have an average molecular weight of about 250, an average equivalent weight of about 80, and contain an average of from about two and one-half to five carboxylic groups per aromatic nucleus in their molecule.

3,004,955 SULFONE POLYESTERS

Christian F. Horn, New York, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 7, 1957, Ser. No. 688,432
14 Claims. (Cl. 260-75)

1. A fiber-forming linear polymer consisting essentially of repeating structural units of the general formula



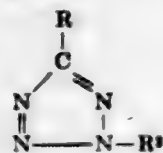
wherein R is a divalent saturated alkylene radical containing up to ten carbon atoms and R' is a divalent radical selected from the group consisting of saturated alkylene, alkylene ether and aralkylene radicals containing from two to ten carbon atoms.

3,004,956 HEAT RESISTANT RUBBER

Robert P. Cox, Madison, Wis., assignor to Bjorksten Research Laboratories, Inc., Fitchburg, Wis., a corporation of Illinois
No Drawing. Filed Feb. 20, 1956, Ser. No. 566,387
9 Claims. (Cl. 260-79.5)

1. As a composition of matter, a copolymer consisting of a compound selected from the group consisting of alkyl esters of alpha beta unsaturated monocarboxylic acids containing not more than four carbon atoms copoly-

from the group consisting of lower alkyl and alkenyl radicals and wherein one of the R and R¹ is a lower alkenyl radical; and compounds defined by the formula



R is a member from the group consisting of hydrogen, amino and lower alkenyl radicals and R² is a member from the group consisting of lower alkyl and lower alkenyl radicals and wherein one of the R and R² is a lower alkenyl radical.

3,004,960 DICYCLOBUTENYL ACETYLENES AND HOMOPOLYMERS THEREOF

James T. Handy, Wilmington, and Robert M. Joyce, Camden, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 9, 1957, Ser. No. 701,315
11 Claims. (Cl. 260-89.7)

bis(2-hydrocarbyloxy-3,3-difluorocyclobutenyl)-acetylene, in which the double bond in the cyclobutenyl group is between the carbons in the 1- and 2-positions and the nuclear carbon in the 4-position in each ring is unsubstituted.

3,004,961 POLYMERIC MATERIAL AND METHOD OF MAKING SAME

Hauptschein, Montgomery County, Pa., assignor to Monsanto Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 24, 1957, Ser. No. 685,801
7 Claims. (Cl. 260-92.1)

copolymer of an alkylene oxide, said alkylene oxide consisting solely of carbon, hydrogen and oxygen and containing not more than five carbon atoms in the molecule and a fluorinated unsaturated compound selected from the group consisting of trifluorochloroethylene, perfluoropropene, 1,1-difluoro-2-chloroethene and perfluorobutene, the molar proportion of alkylene oxide to fluorinated unsaturated compound being from about 1:100 to 1:1 and there being at least two alkylene oxide units in the copolymer molecule.

3,004,962 PROCESS FOR POLYMERIZATION OF 1-OLEFINS

John Matlack, Wilmington, Del., assignor to Hercules Chemical Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 27, 1957, Ser. No. 661,572
17 Claims. (Cl. 260-93.7)

the process of polymerizing a 1-olefin which comprises contacting said olefin, at a temperature of from about 0° C. to about 60° C., with the catalyst formed by mixing a metal, having a particle size of from about 1 micron to about 100 microns and selected from the group consisting of the group IV-B and group V-B of the periodic table, with from about 0.05% to about 5% based on the weight of olefin, of an inorganic compound selected from the group consisting of halogens, metal halides, and tri- and tetra-halides of said group, and V-B metals, said metals being present in an amount in molar excess of the amount of said inorganic

3,004,963 PURIFYING POLYMERIZED OLEFINS PREPARED WITH CATALYTIC METAL COMPOUNDS AND COMPOSITIONS THEREBY OBTAINED

Frank A. Bartolomeo and Harvey D. Ledbetter, Lake Jackson, and James M. McDuff, Angleton, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 16, 1955, Ser. No. 534,872
17 Claims. (Cl. 260-94.9)

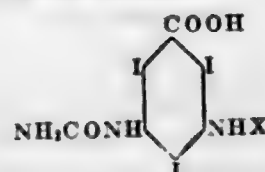
1. Method for removing and inactivating heavy metal constituents in catalyst residues from polymerized ethylenically unsaturated materials prepared with a heavy metal catalyst formed by admixing a strong reducing agent with compounds selected from the group consisting of the group IV-B, V-B and VI-B metals of the periodic system and containing catalyst residues in which there are incorporated heavy metal constituents after having been polymerized which comprises treating the polymerized product, containing said heavy metal constituents in the catalyst residue, with a lower molecular weight hydroxyalkylamine and subsequently isolating the purified and stabilized polymerized product.

3,004,964 3-AMINO-2,4,6-TRIHODO-5-UREIDOBENZOIC ACID COMPOUNDS

Philip E. Wiegert, St. Louis, Mo., assignor to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Filed July 23, 1958, Ser. No. 750,306
6 Claims. (Cl. 260-211)

1. A compound of the formula:



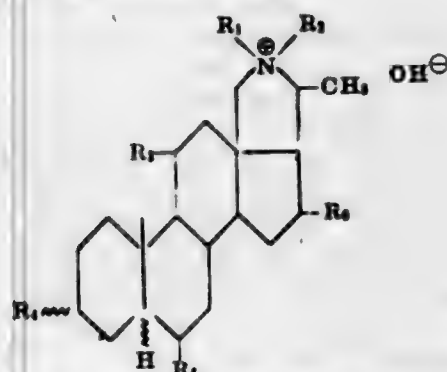
where X is selected from the group consisting of hydrogen and low acyl radicals, and the non-toxic salts and esters thereof.

3,004,965 PROCESS AND INTERMEDIATES FOR PREPARING STEROIDAL 17-18 LACTONES

James F. Kerwin, Broomall, and Manfred E. Wolff, Elkins Park, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

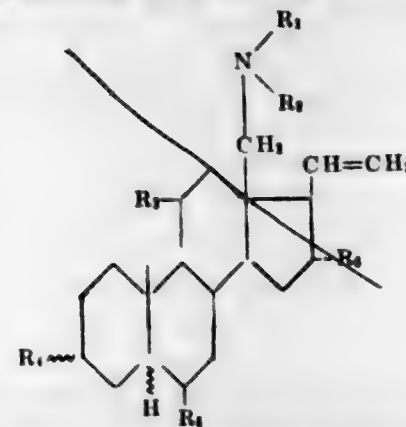
No Drawing. Filed Aug. 7, 1959, Ser. No. 832,165
23 Claims. (Cl. 260-239.5)

1. The method of preparing steroidal 17-18 γ-lactones which comprises heating until the effervescence ceases the quaternary hydroxide derivative of a conanine having the following structural formula:

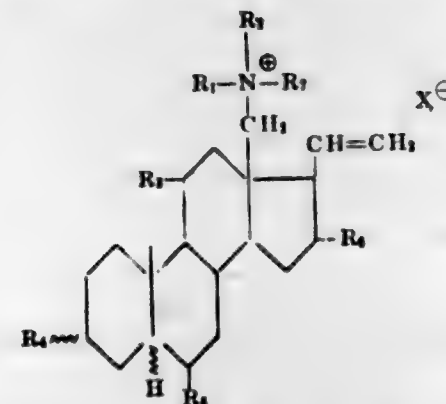


in which R₁ and R₂ are lower alkyl having from 1 to 4 carbon atoms; R₃ is a member selected from the group consisting of hydrogen, hydroxy and, when taken with the carbon atom to which it is attached, keto; R₄ is a member selected from the group consisting of hydroxyl, acetoxy and, when taken with the carbon to which it is attached, keto; β is a configuration selected from the group consisting of α and β; R₅ is a member selected from

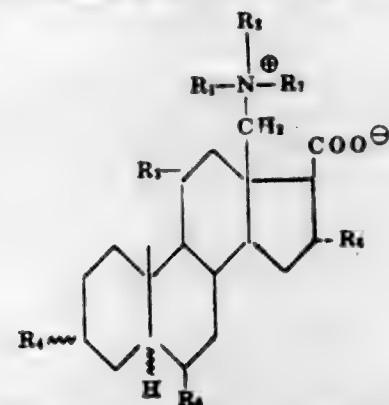
the group consisting of hydrogen, methyl, fluoro and hydroxyl; and R₆ is a member selected from the group consisting of hydrogen, methyl and hydroxyl, to form a 17-vinyl steroid having the following structural formula:



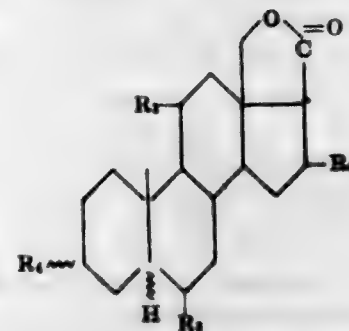
in which R₁₋₆ and β are as defined hereabove; reacting said 17-vinyl steroid with a reactive lower alkyl halide having from 1 to 4 carbon atoms to form a quaternary ammonium compound having the following structural formula:



in which R₁₋₆ and β are as defined hereabove, R₇ is an alkyl having from 1 to 4 carbon atoms and X⁻ is a reactive halogen atom having a minimum atomic weight of 35; reacting said quaternary ammonium halide with the hydroxide form of an anion exchange resin to form the quaternary hydroxide; oxidizing said quaternary hydroxide to form a betaine of the following structural formula:



in which R₁₋₇ and β are as defined hereabove; and heating at from about 50-150° C. said betaine to form a steroidal 17-18 γ-lactone having the following structural formula:



in which R₁₋₅ and β are as defined hereabove.

3,004,966

6-METHYL STEROID COMPOUNDS AND METHOD FOR PREPARING SAME

Vladimir Petrov and David Morton Williamson, London, England, assignors to The British Drug Houses Limited, London, England, a British company
No Drawing. Filed Aug. 18, 1958, Ser. No. 755,368
Claims priority, application Great Britain Aug. 28, 1957
8 Claims. (Cl. 260-239.55)

1. A compound selected from the group consisting of 3 β -hydroxy-6-methylpregn-5-en-20-one and its 3 β -acyloxy derivatives wherein the acyl radical is derived from a hydrocarbon carboxylic acid containing up to 10 carbon atoms.

7. 6-methyl-25D-furosta-5:20-diene-3 β :26-diol.

3,004,967

PROCESS FOR THE PRODUCTION OF 3 β -HYDROXY-16 α ,17 α -EPOXY-5-PREGNEN-20-ONE

Luis E. Miramontes, Mexico City, Mexico, assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,699
7 Claims. (Cl. 260-239.55)

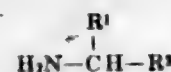
7. The process for the preparation of 3 β -hydroxy-16 α ,17 α -epoxy-5-pregnen-20-one which comprises the slow addition of one equivalent of hydrogen bromide, so that at no time there is an excess of hydrogen bromide in the solution, at a temperature range substantially between -10 and +10° C. to 3 β -acetoxy-5,16-pregnadien-20-one and stirring the 3 β -acetoxy-16 α -bromo-5-pregnen-20-one thus formed in lower alkanol solution with alkaline hydrogen peroxide.

3,004,968

PROCESS FOR THE MANUFACTURE OF AMINO-STEROIDS

Oskar Jeger, Zurich, Jaroslav Kalvoda, Basel, and Paul Buchschacher, Schwerzenbach, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed July 22, 1959, Ser. No. 828,709
Claims priority, application Switzerland Aug. 7, 1958
9 Claims. (Cl. 260-239.55)

1. Process for the manufacture of amino-steroids, wherein a keto-steroid is reacted with an amine of the formula



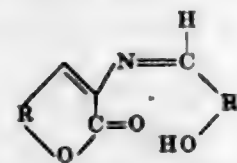
in which R¹ represents a member selected from the group consisting of a hydrogen, a substituted and an unsubstituted hydrocarbon radical, and R² a member selected from the group consisting of a substituted and an unsubstituted aryl radical, in the presence of a basic condensing agent and the arylidene-amino-steroid formed as an intermediate product is hydrolyzed to yield an amino-steroid.

3,004,969

3(SALICYLIDENE)AMINO-COUMARINS AND THEIR PREPARATION

Janet N. Paige, St. Louis, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 13, 1959, Ser. No. 792,992
4 Claims. (Cl. 260-240)

1. The salicylidene-3-amino coumarins corresponding to the formula



wherein each R represents a member of the group consisting of orthophenylene and substituted orthophenylene, in which the substituents are selected from the group consisting of halogen, amino, nitro, hydroxy, phenoxy, alkyl,

phenalkyloxy, alkyloxy, haloalkyl, hydroxyalkyl, and alkenyl of from 1 to 4, inclusive, carbon atoms; said alkyl moieties being of from 1 to 4, inclusive, carbon atoms.

3,004,970

HALOACETIC ACID METHOD FOR PREPARING THIAMORPHOLINEDIONES

Glenn S. Skinner, Newark, Del., and John B. Bickling, Lansdale, Pa., assignors, by direct and mesne assignments, to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 27, 1956, Ser. No. 580,983
3 Claims. (Cl. 260-243)

3. In the process for preparing a 2-R-2-R¹-4-R²-3,5-thiamorpholinedione wherein R is lower alkyl; R¹ is selected from the class consisting of lower alkyl and mononuclear aryl; R² is selected from the class consisting of hydrogen, lower alkyl, lower alkenyl, mononuclear aryl-lower alkyl and mononuclear aryl-lower alkenyl, the steps comprising contacting a mixture of α -R- α -R¹- α -mercaptoacetic acid and α -R- α -R¹- α -mercaptoacetamide with monohaloacetic acid and subsequently acidifying the reaction mixture to form a precipitate consisting of α -R- α -R¹-thiodiacetic acid and the corresponding monoamide, separating said thiodiacetic acid and said monoamide by fractional crystallization from an organic solvent, contacting the α -R- α -R¹-thiodiacetic acid obtained by said fractional crystallization with a compound selected from the class consisting of ammonia and lower alkyl primary amine, lower alkenyl primary amine, mononuclear aryl-lower alkyl primary amine and mononuclear aryl-lower alkenyl primary amine, and then pyrolyzing the product of the last mentioned contacting to 2-R-2-R¹-4-R²-3,5-thiamorpholinedione.

3,004,971

HALOACETATE METHOD FOR PREPARING THIAMORPHOLINEDIONES

Glenn S. Skinner, Newark, Del., and John B. Bickling, Lansdale, Pa., assignors, by direct and mesne assignments, to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 27, 1956, Ser. No. 580,984
6 Claims. (Cl. 260-243)

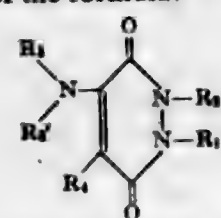
1. In the process for preparing a 2-R-2-R¹-3,5-thiamorpholinedione suitable for use as a chemotherapeutic agent wherein R is lower alkyl; R¹ is selected from the class consisting of lower alkyl and mononuclear aryl; the steps comprising causing a mixture of α -R- α -R¹- α -mercaptoacetic acid and α -R- α -R¹- α -mercaptoacetamide to react with a lower alkyl ester of monohaloacetic acid yielding a mixture of a mono-lower alkyl ester of α - α -disubstituted-thiodiacetic acid and a lower alkyl ester of α - α -disubstituted- α -carboxymethylmercaptoacetamide, separating the reaction products and then heating the alkyl ester of α - α -disubstituted- α -carboxymethylmercaptoacetamide with a strong mineral acid yielding the corresponding 2,2-disubstituted-3,5-thiamorpholinedione.

3,004,972

1-PHENYL-2-ALKYL-4-AMINO-3:6-DIOXO-1:2:3:6-TETRAHYDROPYRIDAZINES

Jean Druey, Riehen, and Konrad Meier and Alexander Staehelin, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed Mar. 3, 1958, Ser. No. 718,408
Claims priority, application Switzerland Mar. 29, 1957
11 Claims. (Cl. 260-250)

1. A compound of the formula:



wherein R₁ is a member selected from the group con-

sisting of phenyl, lower alkyl-phenyl, lower alkoxy-phenyl, halogeno-phenyl, nitro-phenyl and NH₂-phenyl, R₂ represents lower alkyl, R₃ and R₄ are members selected from the group consisting of hydrogen, lower alkyl, cyclopentyl, cyclohexyl, di-lower alkyl-amino lower-alkyl, hydroxy-lower alkyl, and, taken together, pyrrolidino, piperidino, morpholino and piperazino and R₄ stands for a member selected from the group consisting of hydrogen and lower alkyl.

7. 1-phenyl-2-methyl-4-dimethylamino-3:6-dioxo-1:2:3:6-tetrahydropyridazine.

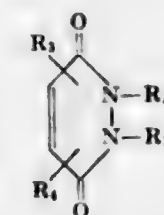
3,004,973

NEW TETRAHYDRO-DIOXOPYRIDAZINES

Jean Druey and Konrad Meier, Riehen, and Alexander Staehelin, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed May 7, 1958, Ser. No. 733,471
Claims priority, application Switzerland May 24, 1957
14 Claims. (Cl. 260-250)

1. 1-phenyl-2-methyl-4-ethoxy-3:6-dioxo-1:2:3:6-tetrahydropyridazine.

8. A member selected from the group consisting of 3,6-dioxo-1,2,3,6-tetrahydro-pyridazines of the formula



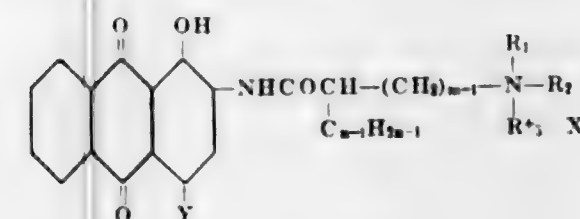
wherein R₁ represents a member of the group consisting of phenyl, lower alkyl-phenyl, lower alkoxy-phenyl, halophenyl, nitro-phenyl and amino-phenyl, R₂ stands for lower alkyl, R₃ is a member of the group consisting of hydrogen and lower alkyl and R₄ stands for a member selected from the group consisting of lower alkoxy, lower alkenyloxy, propargyloxy, lower alkoxy-lower alkoxy, halogeno-lower alkoxy, amino-lower alkoxy, lower alkyl-amino-lower alkoxy, di-lower alkyl-amino-lower alkoxy, morpholino-lower alkoxy, pyrrolidino-lower alkoxy, piperidino-lower alkoxy, piperazino-lower alkoxy, N-methyl-piperazino-lower alkoxy, N-(β -hydroxy-ethyl)-piperazino-lower alkoxy, benzyloxy, hydroxy-lower alkoxy and lower alkyl-mercapto, and therapeutically useful acid-addition salts of compounds in which R₄ contains an amino nitrogen group.

3,004,974

WATER-SOLUBLE SALTS OF ANTHRAQUINONE DYE STUFFS

Paul Grossmann, Binningen, and Paul Rhyner, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,629
Claims priority, application Switzerland Dec. 24, 1958
6 Claims. (Cl. 260-272)

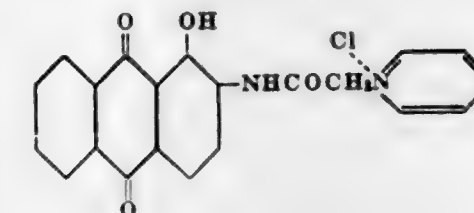
1. An anthraquinone dyestuff of the formula



in which R₁, R₂ and R₃ independently represent a member

selected from the group consisting of lower alkyl, cyclohexyl and benzyl and together with the nitrogen atom form a pyridine ring, m is a whole number from 1-2 and n is a whole number of at most 8, X represents a water-solubilizing anion and Y a member selected from the group consisting of hydrogen, hydroxyl, amino, lower alkylamino and phenylamino.

2. The dyestuff of the formula



3,004,975

HYDROGENATED BENZ-INDOLES AND PROCESS FOR THEIR MANUFACTURE

Cyril Grob and Ernst Renk, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed July 13, 1959, Ser. No. 826,457
Claims priority, application Switzerland July 2, 1957
16 Claims. (Cl. 260-285.5)

1. A process for the manufacture of benz-(cd)-indoles which consists of contacting a 1-X-8-amino-1:2:3:4-tetrahydro-naphthalene-1-carboxylic acid lactam, in which X stands for a member selected from the group consisting of lower alkoxy-methyl and lower alkenylenedioxy-methyl, (a) with a basic agent selected from the group consisting of oxide and hydroxides of alkali metals and alkaline earth metals, alkali carbonates, quaternary ammonium bases and basic ion-exchangers, and (b) with an acidic reagent selected from the group consisting of organic sulfonic acids and mineral acids, whereby carbon dioxide is split off.

14. The methiodide of 3'-amino-1-methyl-3-carbethoxy-7-diethoxymethyl-1:2:3:4:4a:7:8:8a-octahydro-5:6-benzquinoline-7-carboxylic acid lactam.

3,004,976

AROMATIC CARBOXYLIC ACID ESTERS OF 4-PHENYL-N-ALKANOL-PIPERIDINES

Adrian Marxer, Basel, Switzerland, assignor to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed July 16, 1958, Ser. No. 748,819
Claims priority, application Switzerland Aug. 19, 1957
10 Claims. (Cl. 260-294)

4. Succinic acid-mono-4-p-methoxyphenyl-piperidide.

9. A member selected from the group consisting of a compound of the formula:



in which Ph represents a member selected from the group consisting of phenyl, hydroxy-phenyl, lower alkoxy-phenyl, methylenedioxy-phenyl, lower alkyl-phenyl and halogeno-phenyl, R stands for a member selected from the group consisting of naphthoyl, benzoyl, hydroxy-benzoyl, lower alkoxy-benzoyl, methylenedioxy-benzoyl, lower alkyl-benzoyl, aminobenzoyl, halogeno-benzoyl and cinnamoyl, and Alk stands for lower alkylene of from 2 to 4 carbon atoms and separating the piperidyl nitrogen atom from the ester oxygen atom by 2 to 4 carbon atoms, and therapeutically acceptable acid addition salts thereof.

3,004,977

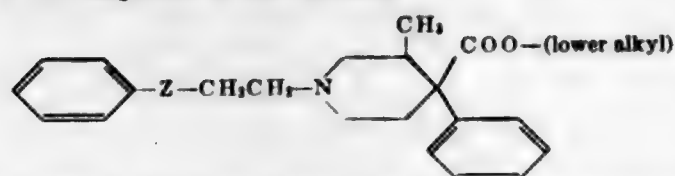
LOWER ALKYL ESTERS OF 1-(2-BENZOYLETHYL)-3-METHYL-4-PHENYLPYRROLIDINE-4-CARBOXYLIC ACID AND 1-(3-HYDROXY-3-PHENYLPROPYL)-3-METHYL-4-PHENYLPYRROLIDINE-4-CARBOXYLIC ACID

Paul A. J. Janssen, Antwerpse Steenweg 16', Vosselaar, near Turnhout, Belgium

No Drawing. Filed Apr. 29, 1960, Ser. No. 25,508

6 Claims. (Cl. 260-294.3)

1. A compound of the formula



wherein Z is a member of the class consisting of carbonyl and hydroxymethylene groups.

3,004,978

CERTAIN 1-TERT-AMINO LOWER ALKYL AZABENZIMIDAZOLES

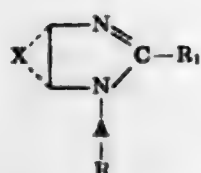
Alfred Hunger, Jindrich Kebrie, and Alberto Rossi, Basel, and Karl Hoffmann, Binningen, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Mar. 15, 1960, Ser. No. 15,057

Claims priority, application Switzerland Mar. 18, 1959

7 Claims. (Cl. 260-294.8)

1. A member selected from the group consisting of a 1-lower tertiary amino lower alkyl-azabenz-imidazole of the formula



and non-toxic acid addition salts thereof in which A stands for lower alkylene, and R for a tertiary amino substituent selected from the group consisting of di-lower alkyl-amino, pyrrolidino, piperidino, morpholino and piperazino, and in which R₁ stands for a member selected from the group consisting of hydrogen, hydroxy, mercapto, lower alkyl, lower alkoxy, lower alkylmercapto and halogen and X stands for the bonds necessary to complete a 6-membered pyridine ring selected from the group consisting of the unsubstituted pyridine ring and the mono-substituted pyridine ring the substituents on said pyridine ring being selected from the group consisting of hydroxy, mercapto, lower alkyl, lower alkoxy, lower alkylmercapto, halogen and nitro.

3,004,979

OXIMES OF CERTAIN TETRAHYDROPYRIDINE HYDROCARBON KETONES AND PROCESS

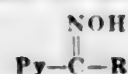
Jean Druey, Riehen, and Karl Schenker, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,613

Claims priority, application Switzerland Feb. 12, 1959

10 Claims. (Cl. 260-294.8)

1. Pyridine compounds of the formula:



in which Py is a member selected from the group consisting of unsubstituted and lower alkyl 1-R'-1:2:5:6-tetrahydro-pyridyl said pyridyl radical being attached at one of the positions 3 and 4 to the carbon atom bearing the oxime group, R stands for a member selected from the group consisting of lower alkyl, lower alkenyl and cyclopentyl, and R' is a member selected from the group consisting of lower alkyl, lower alkenyl, cyclopentyl and benzyl and therapeutically useful acid addition salts thereof.

3,004,980

THIOPHOSPHORIC ACID ESTERS

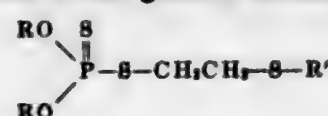
Gerhard Schrader, Opladen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Sept. 5, 1956, Ser. No. 607,995

Claims priority, application Germany Sept. 6, 1955

6 Claims. (Cl. 260-306)

1. A compound of the general formula



in which R stands for a lower alkyl radical and R' stands for a member selected from the group consisting of a thiophene radical, a monocyclic thiazole radical, a benzothiazole radical, an alkoxythiocarbonyl group and a thiocarbonyl group.

3,004,981

PROCESS FOR THE PREPARATION OF Δ-3,4-THIAZOLINES

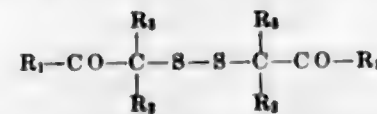
Friedrich Asinger, Langebrück, near Dresden, and Max Thiel and Hermann Haubal, Leuna, Germany, assignors to VEB Leuna-Werke Walter Ulbricht, Leuna, Germany

No Drawing. Filed July 16, 1958, Ser. No. 748,802

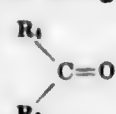
Claims priority, application Austria Aug. 9, 1957

9 Claims. (Cl. 260-306.7)

1. A process for the preparation of Δ-3,4-thiazolines, which comprises reacting a mixture of H₂S and NH₃ with a mixture of an α,α'-diketodisulfide of the general formula



and an oxo compound of the general formula



wherein R₁, R₂, and R₃ represent members selected from the group consisting of H, alkyl, aryl, aralkyl, cycloalkyl, cycloalkyl formed by a combination of the group R₁ and one of the groups R₂ and R₃ and cycloalkyl formed by a combination of R₂ and R₃, and R₄ and R₅ are members selected from the group consisting of H, alkyl, alkyl containing substituents inert in the reaction, aralkyl, cycloalkyl and cycloalkyl having from 5 to 6 carbon atoms formed by a combination of R₄ and R₅, said members being free from groups which would interfere with the reaction.

3,004,982

NEW BENZIMIDAZOLES

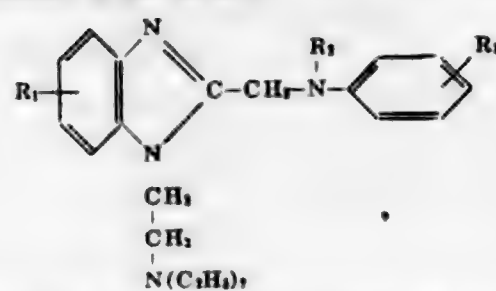
Karl Hoffmann, Binningen, and Alfred Hunger, Jindrich Kebrie, and Alberto Rossi, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,538

Claims priority, application Switzerland Nov. 27, 1958

5 Claims. (Cl. 260-309.2)

1. A member selected from the group consisting of benzimidazoles of the formula



in which R₁ and R₂ stand for a member selected from the

group consisting of hydrogen, alkyl and alkoxy containing 1-5 carbon atoms, nitro and halogen, and R₂ a member selected from the group consisting of hydrogen, lower alkyl, phenyl, benzyl and lower alkanoyl, and their therapeutically useful acid addition salts.

3,004,983

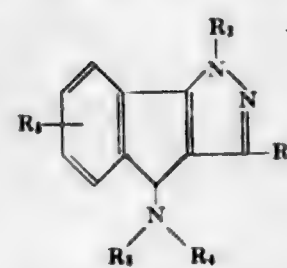
4-AMINOPYRAZOLO[3,4-a]INDENE DERIVATIVES

Bernard Loev, Broomall, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 16, 1960, Ser. No. 29,147

4 Claims. (Cl. 260-310)

1. A chemical compound of the class consisting of a free base and its nontoxic, pharmaceutically acceptable acid addition salts, the free base having the formula:



in which R₁ is a member selected from the group consisting of alkyl of from 1 to 6 carbon atoms inclusive, alkenyl of from 2 to 6 carbon atoms inclusive, cycloalkyl of from 3 to 6 carbon atoms inclusive, cycloalkenyl of from 4 to 6 carbon atoms inclusive, phenyl, aminophenyl, halophenyl, lower alkylphenyl and lower alkoxyphenyl; R₂, R₃ and R₄ are members selected from the group consisting of hydrogen, lower alkyl, benzoyl, benzenesulfonyl formyl, acetyl, propionyl, carbethoxy, carbomethoxy, and carbamoyl; and R₅ is a member selected from the group consisting of hydrogen, halogen, trifluoromethyl, lower alkyl, lower alkoxy, hydroxy, nitro and amino.

3,004,984

PYRAZOLONYL CARBINOLS, AND PROCESS OF MAKING SAME

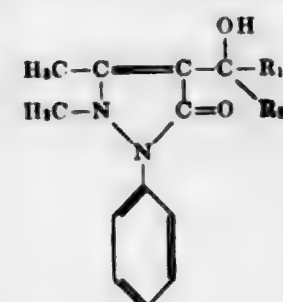
Kurt Stöck, Mannheim, Johann Daniel Achelt, Heidelberg-Schlierbach, Erich Haack, Heidelberg, Hans-Guenther Kromberg, Mannheim-Waldhof, and Hans-Georg Kurbjuweit, Mannheim-Friedensthal, Germany, assignors to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a corporation of Germany

No Drawing. Filed May 18, 1959, Ser. No. 813,632

Claims priority, application Germany May 17, 1958

6 Claims. (Cl. 260-310)

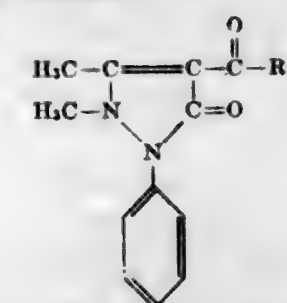
1. Antipyril methyl (n-propyl) carbinol.
2. Antipyril (n-propyl) carbinol.
3. Antipyril methyl (isopropyl) carbinol.
4. In a process of producing a pyrazolonyl carbinol of the formula



wherein

R₁ indicates a member selected from the group consisting of hydrogen and lower alkyl radicals, and R₂ is a lower alkyl radical,

the steps which consist in adding a pyrazolonyl carbonyl compound of the formula



wherein R₁ represents a member selected from the group consisting of hydrogen and lower alkyl radicals at a temperature not substantially exceeding 20° C. to a solution of a Grignard compound of the formula

XM₂R₃

wherein X is halogen and R₃ is a lower alkyl radical, in ether, said ethereal solution of the Grignard compound containing tetrahydrofuran, said Grignard compound being used in excess over the amount theoretically required for reaction with the carbonyl group, increasing the temperature of the reaction mixture to a temperature between about 30° C. and about 35° C. to complete the reaction, adding an aqueous saturated ammonium chloride solution at a temperature not substantially exceeding 20° C. to the reaction mixture to decompose the reaction product, separating the organic solvent layer from the aqueous layer, and removing, by distillation, the solvents from the organic solvent layer at a temperature not substantially exceeding 35° C.

3,004,985

MERCURY PROTO- AND HEMATOPORPHYRINS

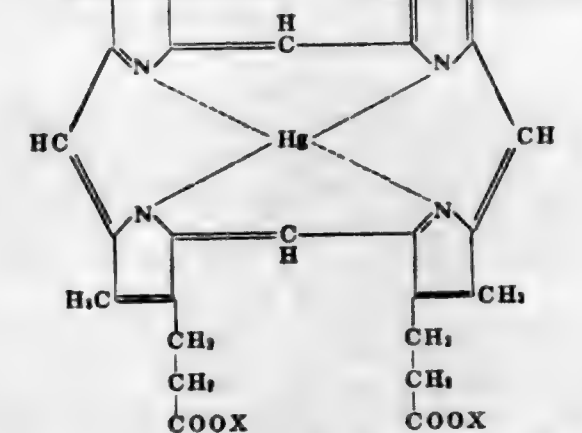
Misao Obika and Morie Sasaki, Tokyo, Katutaro Tanaka, Ichikawa, and Noboru Iijima, Tokyo, Japan, assignors to Daiichi Seiyaku Co., Ltd., Tokyo, Japan, a corporation of Japan

Filed May 7, 1957, Ser. No. 657,525

Claims priority, application Japan Feb. 7, 1957

4 Claims. (Cl. 260-314)

1. A mercury hematoporphyrin and its dialkali salts of the following constitutional formula:



wherein X is selected from the group consisting of hydrogen and alkali metal.

3,004,986

PHTHALOCYANINE PIGMENTS

Ben H. Kirby, Lock Haven, Pa., and Samuel E. Getty, Toms River, N.J., assignors, by mesne assignments, to Standard Ultramarine & Color Company, Huntington, W. Va., a corporation of West Virginia

No Drawing. Filed Feb. 8, 1957, Ser. No. 638,921

17 Claims. (Cl. 260-314.5)

1. A process consisting essentially of slurrying a phthalocyanine presscake with water containing a minor

from about 100° C. to about 160° C. which comprises incorporating with said compound a small amount of an alkyl acetate in which the alkyl group contains 1 to about 12 carbon atoms; said amount being sufficient to inhibit decomposition and being in the range of from about 1.5 to about 10 percent by weight based upon the weight of said compound.

3,004,999

STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME
Hymen Shapiro, Baton Rouge, La., and Herbert R. Neal, Farmington, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 8, 1959, Ser. No. 858,045
4 Claims. (Cl. 260-437)

1. A method of inhibiting the decomposition of an essentially pure alkyllead compound at temperatures from about 100° C. to about 160° C. which comprises incorporating with said compound a small amount of a monoamide containing from 1 to about 18 carbon atoms in the molecule and having the formula



wherein R is selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl, aralkyl, aryl and alkaryl radicals; said amount being sufficient to inhibit decomposition and being in the range of from about 1.75 to about 10 percent by weight based upon the weight of said compound.

3,005,000

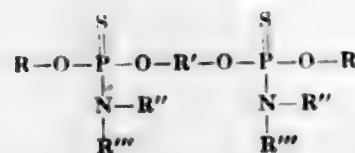
BETA-CHLOROETHYL DIPHENYLPHOSPHINITE AND METHOD OF PRODUCING SAME
Robert S. Cooper, Park Forest, Ill., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 7, 1960, Ser. No. 41,252
3 Claims. (Cl. 260-461)

1. Beta-chloroethyl diphenylphosphinite.
2. Method of producing beta-chloroethyl diphenylphosphinite which comprises reacting diphenylphosphinous chloride with at least a stoichiometric amount of ethylene oxide while maintaining the reaction temperature at not over about 50° C.

3,005,001

O,O'-(2-BUTENYLENE) AND (2-BUTYNYLENE) BIS-(O-ALKYL PHOSPHORAMIDOTHIOATES)
Herman O. Senkbell, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 14, 1960, Ser. No. 68,651
6 Claims. (Cl. 260-461)

1. The compounds corresponding to the formula:



wherein R is an alkyl radical containing from 1 to 8 carbon atoms, inclusive, R' is a member selected from the group consisting of $-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-$ and $-\text{CH}_2-\text{C}\equiv\text{C}-\text{CH}_2-$, and R'' and R''' are each selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 6 carbon atoms, inclusive.

3,005,002
SULFAMOYLPHENYL ESTERS OF ORGANIC PHOSPHATES

Gerald Berkelhammer, Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Feb. 6, 1961, Ser. No. 87,090
12 Claims. (Cl. 260-461)

1. A compound of the formula:



wherein R₁ and R₂ are lower alkyl radicals of from 1 to 4 carbon atoms, and R₃ and R₄ are members of the group consisting of hydrogen and lower alkyl radicals.

7. The method of preparing a compound of the formula:



wherein R₁ and R₂ are lower alkyl radicals of from 1 to 4 carbon atoms, and R₃ and R₄ are members of the group consisting of hydrogen and lower alkyl radicals which comprises reacting a di-lower alkyl phosphorochloridate with a member of the group consisting of p-hydroxybenzenesulfonamide and N-isopropyl-1-phenol-4-sulfonamide at a temperature of from 0° C. to 100° C., said reaction being conducted in an inert polar solvent and in the presence of an alkaline acid binding agent.

3,005,003

MANUFACTURE OF ORGANIC PHOSPHORUS COMPOUNDS

Arthur Henry Ford-Moore, Salisbury, England, and Geoffrey William Wood, Cambridge, Mass., assignors to Minister of Supply, London, England
No Drawing. Filed Mar. 31, 1955, Ser. No. 498,442
2 Claims. (Cl. 260-461)

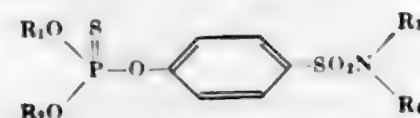
1. Process for producing a lower alkyl phosphorothioate which comprises transesterifying a lower trialkyl phosphite with an alkyl thioalkanol having lower alkyl groups in the presence of a dialkyl hydrogen phosphite catalyst at a temperature of about 145 to 150° C., reacting the resulting lower trialkyl phosphite ester with elemental sulfur to produce the lower trialkyl phosphorothioate, isomerizing the latter in the presence of an alkali metal alcoholate at about 130° C. to form the lower trialkyl phosphorothioate.

3,005,004

SULFAMOYLPHENYL ESTERS OF ORGANIC PHOSPHOROTHIOATES

Gerald Berkelhammer, South Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 1, 1959, Ser. No. 817,080
8 Claims. (Cl. 260-461)

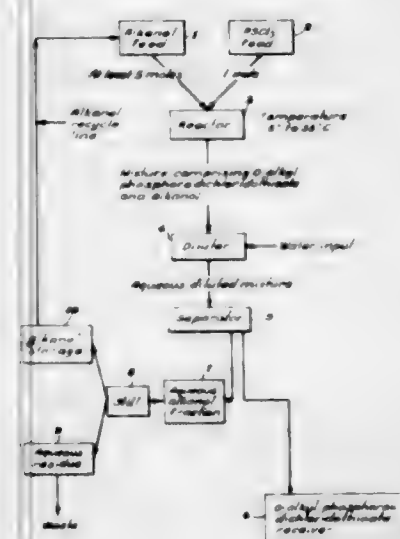
1. A compound of the formula:



wherein R₁ and R₂ are lower alkyl radicals of from 1 to 4 carbon atoms and R₃ and R₄ are members of the group consisting of hydrogen and lower alkyl radicals.

3,005,005

METHOD FOR THE MANUFACTURE OF O-LOWER ALKYL PHOSPHORODICHLORIDOTHIOATES
Edward J. Tabor, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,520
5 Claims. (Cl. 260-461)



1. A method for the production of an O-lower alkyl phosphorodichloridothioate which comprises reacting as the essentially sole reagents one molecular proportion of phosphorus trichloride with at least five molecular proportions of a lower alkanol at a temperature at which no more than one molecular proportion of hydrogen chloride is formed as a product of reaction, said temperature being not in excess of 35° C.

3,005,006

NEUTRAL PHOSPHOROTHIOATE ESTER COMPOSITIONS AND METHOD OF PREPARATION THEREOF

Allen F. Millikan, Crystal Lake, and Gifford W. Crosby, River Forest, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Dec. 12, 1957, Ser. No. 702,256
27 Claims. (Cl. 260-461)

1. A method of preparing neutral phosphorothioate esters by reaction of an acid ester, (RO)₂P(S)SH, where R is a hydrocarbon radical, with an alcohol of the group consisting of benzyl alcohol and derivatives of benzyl alcohol containing functional groups which are inert to said acid ester, at a temperature of 20° to 160° C.

19. A neutral phosphorothioate ester composition having a sulfur/phosphorus ratio greater than 2, prepared in accordance with claim 18, characterized by solubility in hydrocarbons and by insolubility in water.

3,005,007

PREPARATION OF ORGANOPHOSPHORUS COMPOUNDS FROM GLYCEROL AND PHOSPHORUS OXYHALIDES

William L. Pierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,357
9 Claims. (Cl. 260-461)

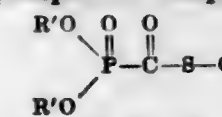
1. A method of preparing organophosphorus compounds which consists of reacting at least one compound of the formula: (RO)_nP(O)X_{3-n}, where X is halogen, R is selected from the group consisting of alkyl and aryl radicals and n is an integer from 0 to 2, with glycerol in solution in dimethylformamide.

3,005,008

DERIVATIVES OF DIHYDROCARBYLOXYPHOSPHINYL THIOFORMIC ACIDS AND PREPARATION OF THE SAME

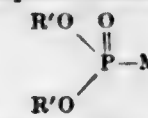
Daniel W. Grisley, Jr., and Gail H. Birum, Dayton, Ohio, and Samuel Allen Heiminger, Warren Woods, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,424
17 Claims. (Cl. 260-461)

1. An organic phosphorus compound of the formula

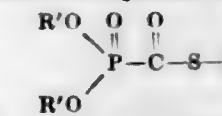


wherein R' is an hydrocarbyl radical substantially free of acetylenic unsaturation containing from 1 to 12 carbon atoms and selected from the group consisting of alkyl, aryl, alkaryl and aralkyl radicals and G is selected from the group consisting of alkali metal and alkyl radicals of from 1 to 8 carbon atoms.

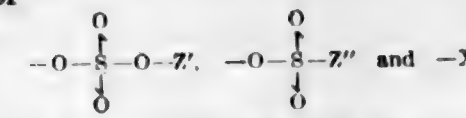
8. The method which comprises reacting an alkyl metal hydrocarbylphosphite diester of the formula



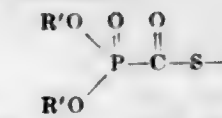
wherein R' is an hydrocarbyl radical substantially free of acetylenic unsaturation containing from 1 to 12 carbon atoms and selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl radicals and M is an alkali metal selected from the group consisting of sodium, potassium and lithium with carbonyl sulfide to form an organic phosphorus compound of the formula



wherein R' and M are as above defined, and then reacting said last formed compound with a compound of the formula R''Y wherein R'' is an alkyl radical of from 1 to 8 carbon atoms and Y is selected from the group consisting of



wherein Z' is an alkyl radical of from 1 to 8 carbon atoms, Z'' is selected from a group consisting of alkyl, aryl, alkaryl, aralkyl, haloalkyl and haloaryl radicals, and X is a halogen selected from the group consisting of chlorine, bromine and iodine and recovering from the last resulting reaction mixture an organic phosphorus compound of the formula



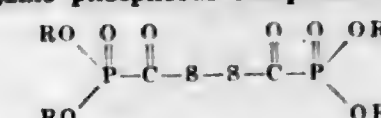
wherein R' and R'' are as above defined.

3,005,009

BIS(DIHYDROCARBYLOXYPHOSPHINYLOXO-METHYL)DISULFIDES AND METHODS FOR PREPARING THE SAME

Samuel Allen Heiminger, Warren Woods, Mo., and Daniel W. Grisley, Jr., Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,425
6 Claims. (Cl. 260-461)

1. An organic phosphorus compound of the formula



wherein R is an hydrocarbyl radical substantially free of

acetylenic unsaturation containing from 1 to 12 carbon atoms selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl radicals.

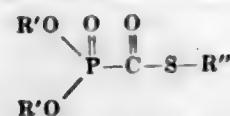
4. The method which comprises oxidizing an alkali metal dihydrocarbyloxyphosphinyl thioformate, said hydrocarbyl radical being substantially free of acetylenic unsaturation and containing from 1 to 12 carbon atoms selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl radicals, with a mild oxidizing agent selected from the group consisting of bromine, iodine, hydrogen peroxide, ferric chloride, sulfuric chloride, and nitrogen dioxide and recovering a bis(dihydrocarbyloxyphosphinyloxomethyl) disulfide as product.

3,005,010

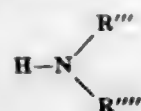
METHOD FOR PREPARING DIHYDROCARBYLOXYPHOSPHINYL FORMAMIDES

Daniel W. Grisley, Jr., Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,427
3 Claims. (Cl. 260-461)

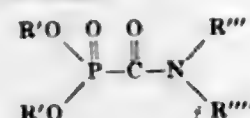
1. The method which comprises reacting a S-alkyl-dihydrocarbyloxyphosphinyl thioformate of the formula



wherein R' is a hydrocarbyl radical substantially free of aliphatic unsaturation containing from 1 to 12 carbon atoms selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl radicals and R'' is an alkyl radical of from 1 to 8 carbon atoms with a compound of the formula



wherein R''' and R'''' are each selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, and alkenyl radicals of less than 12 carbon atoms and recovering from the reaction mixture an organic phosphorus compound of the formula



wherein R', R'', and R''' are as above identified.

3,005,011

METHOD FOR PRODUCING TRIETHYL BORATE

Robert E. Bohm and Howard Steinberg, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Mar. 3, 1960, Ser. No. 12,506
6 Claims. (Cl. 260-462)

1. A method for continuously producing triethyl borate ester which comprises feeding a solution of at least about 3 moles of ethyl alcohol per mole of boric acid to the intermediate portion of a vertically disposed fractionating column while simultaneously feeding free ethyl alcohol to said column below said intermediate portion and feeding an azeotroping agent to said column above said intermediate portion; said azeotroping agent being inert to triethyl borate ester, capable of forming a ternary azeotrope with ethyl alcohol and water and having a constant boiling point less than about 115° C.; said free ethyl alcohol added in at least the stoichiometric amount necessary to make a ternary azeotrope with the water of reaction formed from the reaction of ethyl alcohol and boric acid and said azeotroping agent; establishing and maintaining a reflux ratio in said column such that the ternary azeotrope of water, ethyl alcohol and said azeo-

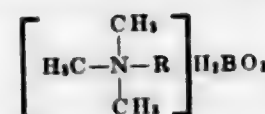
troping agent is removed from the top of the column and substantially pure triethyl borate ester is removed from the bottom of the column.

3,005,012

TETRAALKYLAMMONIUM BORATES

John F. Mulloy, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 20, 1959, Ser. No. 800,660
8 Claims. (Cl. 260-462)

1. Alkyltrimethylammonium borates having the formula:



wherein R is an alkyl radical of from 8 to 22 carbon atoms.

3,005,013

ORGANIC TERTIARY PHOSPHINES

Martin Grayson, Stamford, and Patricia A. Keough, Ridgefield, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 30, 1958, Ser. No. 770,574
9 Claims. (Cl. 260-464)

1. A process which comprises (a) reacting a compound of the formula



with a halogen-substituted compound having the formula ZX to produce the corresponding quaternary phosphonium halide having the structure



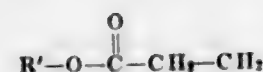
(b) reacting the quaternary phosphonium halide thus produced with a strong base, and (c) recovering a product corresponding to the formula



P in the above formulae representing phosphorus; A representing a beta-substituted ethyl functional moiety selected from the group consisting of



and



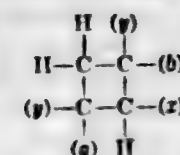
in which R is a member selected from the group consisting of H and an alkyl group having 1 to 6 carbon atoms and R' is an alkyl group having 1 to 6 carbon atoms; said beta-substituted ethyl functional group being attached directly to P through its alpha-carbon; Z representing a member selected from the group consisting of a substituted and unsubstituted, branched and straight chain alkyl; a substituted and unsubstituted, branched and straight chain alkenyl group; a substituted and unsubstituted cycloalkyl group; a substituted and unsubstituted cycloalkenyl group; said substituted alkyl, alkenyl, cycloalkyl, and cycloalkenyl groups having their substituents on a carbon atom at least three carbon atoms removed from the phosphorus atom and said substituents for the alkyl, alkenyl, cycloalkyl, and cycloalkenyl groups being selected from the group consisting of fluoro, chloro, phenyl, dialkylamino, nitro, carboxyalkyl, dialkylcarbamoyl, alkyl ether, alkyl thioether, aryl thioether, acetal, keto and hydroxyl; X representing a halogen atom; and n representing a value from 1 to 3.

3,005,014

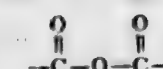
SULFONATED CYCLOBUTANE COMPOUNDS

James Herbert Wertz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 18, 1958, Ser. No. 722,137
10 Claims. (Cl. 260-464)

1. Cyclobutanes having the following structural formula



wherein (a) is selected from the class consisting of sulfo, and sulfo-lower alkyl groups and salts thereof; (b) is carboxyl; (x) is selected from the class consisting of H and (b); (x) and (b) together may equal a



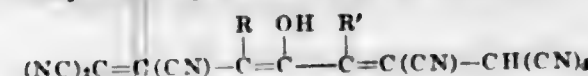
radical and (y) is selected from the class consisting of H and lower alkyl.

3,005,015

POLYCYANOHEPTATRIENES AND A PROCESS FOR THEIR PREPARATION

Lester R. Melby, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 14, 1959, Ser. No. 833,696
8 Claims. (Cl. 260-464)

1. Compounds represented by the formula



wherein R and R' taken separately are members of the class consisting of hydrogen and hydrocarbyl groups, and taken together represent a hydrocarbyl diradical.

3,005,016

ISOOCATENYL 2,4-DICHLOROPHENOXYACETATE

David W. Young, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
Filed June 1, 1959, Ser. No. 817,380
1 Claim. (Cl. 260-473)

Isooctenyl alcohol ester of 2,4-dichlorophenoxyacetic acid.

3,005,017

SYNTHESIS OF STEROIDS

Leonard J. Lerner, New Brunswick, Allen I. Laskin, Franklin Township, Somerset County, and Frank L. Weisenborn, Middlebury, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Oct. 7, 1959, Ser. No. 844,853
3 Claims. (Cl. 260-488)

1. A compound selected from the group consisting of 16 α -hydroxy-A-norprogesterone and esters thereof with hydrocarbyl carboxylic acids having less than ten carbon atoms.

3,005,018

SYNTHESIS OF STEROIDS

Frank L. Weisenborn, Middlebury, Leonard J. Lerner, New Brunswick, and Allen I. Laskin, Franklin Township, Somerset County, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Oct. 7, 1959, Ser. No. 844,869
3 Claims. (Cl. 260-488)

1. A member selected from the group consisting of 7 α -hydroxy-A-norprogesterone and esters thereof with hydrocarbyl carboxylic acids of less than ten carbon atoms.

3,005,019

DIHYDROMERCENYL MONOACETATE

Garry C. Kitchens, Packanack Lake, N.J., assignor to The Givandani Corporation, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 7, 1957, Ser. No. 688,420
3 Claims. (Cl. 260-489)

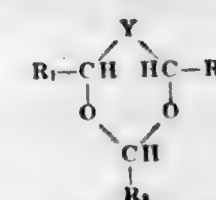
1. The process for preparing dihydromercenyl monoacetate, which comprises reacting dihydromyrcene with an epoxidizing agent in the presence of acetic acid at an elevated temperature to form hydroxytetrahydromyrcenyl acetate, reacting the latter with acetic anhydride at an elevated temperature, whereby tetrahydromercenyl diacetate is formed, and decomposing said diacetate by heat to form the desired dihydromercenyl monoacetate.

3,005,020

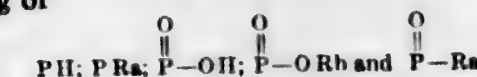
PHOSPHACYCLOHEXANES AND THE PREPARATION THEREOF

Sheldon A. Becker, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Mar. 3, 1959, Ser. No. 796,734
7 Claims. (Cl. 260-500)

1. Organophosphorous compounds of the formula



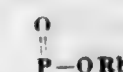
wherein R₁-R₃, respectively, represent a member selected from the group consisting of H; n-alkyl of from 1 to 8 carbon atoms; substituted n-alkyl of from 1 to 8 carbon atoms, said substituents being selected from the group consisting of hydroxy and halogen; phenyl; substituted phenyl, said substituents being selected from the group consisting of nitro, halogen and lower alkyl; cyclohexyl; benzyl; and Y represents a radical selected from the group consisting of



in which P represents phosphorous;



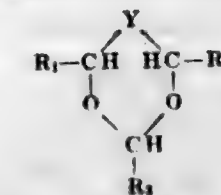
are groups within the above generic formula in which Ra is a member of the group consisting of alkyl of 1 to 6 carbon atoms, benzyl, phenyl and cyclohexyl and



is a group encompassed in the above generic formula in which Rb is alkyl of 1 to 6 carbon atoms.

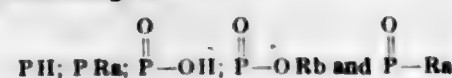
4. 2-cyclohexyl - 1,3-dioxo-5-phosphacyclohexan-5-oic acid.

7. A method of preparing 1,3-dioxo-5-phosphacyclohexanes of the formula

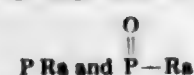


wherein R₁, R₂ and R₃, respectively, represent a member selected from the group consisting of H; n-alkyl of from 1 to 8 carbon atoms; substituted n-alkyl of from 1 to 8 carbon atoms, said substituents being selected from the group consisting of hydroxy and halogen; phenyl; substituted phenyl, said substituents being selected from the group consisting of nitro, halogen and lower alkyl; cyclo-

hexyl; benzyl; and Y represents a radical selected from the group consisting of



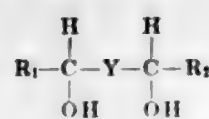
in which P represents phosphorous;



are groups within the above generic formula in which Ra is a member of the group consisting of alkyl of 1 to 6 carbon atoms, benzyl, phenyl and cyclohexyl and



is a group encompassed in the above generic formula in which Rb is alkyl of 1 to 6 carbon atoms; which comprises bringing together in the presence of an acid catalyst and under substantially anhydrous conditions an aldehyde of the formula R_2CHO and a bis (1-hydroxyalkyl) phosphorus compound of the formula



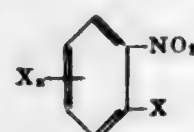
wherein R_1 , R_2 , R_3 and Y are as defined above, and recovering the resulting 1,3-dioxo-5-phosphacyclohexane product.

3,005,021

PROCESS OF PREPARING ARYLAMINO ACIDS
Robert E. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,349
8 Claims. (Cl. 260-518)

1. The process which comprises heating an ortho-halogen substituted nitrobenzene of the formula



in which X is a halogen selected from the class consisting of chlorine, bromine and iodine and n denotes a number of 0 to 4, with an alkali metal alcoholate of a secondary alcohol of from 3 to 18 carbon atoms and having at least one α -methylene group, in the presence of a secondary alcohol having from 3 to 18 carbon atoms and an inert liquid diluent at a temperature of from 50° C. to refluxing, and recovering from the resulting reaction product an N-(o-halophenyl)aminoalkanoic acid wherein the halogen is as above defined, wherein there are present from 1 to 5 of said halogen atoms attached to the phenyl ring and wherein there are present fewer carbon atoms in the alkanolic portion of the molecule than are present in said alcoholate.

3,005,022

PROCESS FOR THE PRODUCTION OF SULFONYLUREAS

William M. McLamore, Kew Gardens, and Gerald D. Leubach, Jackson Heights, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 28, 1958, Ser. No. 711,570
5 Claims. (Cl. 260-553)

1. The process which comprises contacting a compound selected from the group consisting of monoalkali metal and alkaline-earth metal salts of a sulfonamide having the formula RSO_2NH_2 , wherein R is a member of the

group consisting of phenyl, p-fluorophenyl, p-chlorophenyl, p-bromophenyl, p-nitrophenyl, p-acetylamino phenyl, p-tolyl, p-anisyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 3,4-dichlorophenyl and 3-chloro-p-tolyl, in an inert polar organic solvent selected from the class consisting of N,N-di-lower alkyl substituted derivatives of lower alkyl hydrocarbon carboxamides, lower dialkyl sulfoxides and lower dialkyl sulfones with a trisubstituted urea having the formula $(\text{R}'')_3\text{NCONHR}'$, wherein R' is a member of the group consisting of phenyl, p-chlorophenyl, p-bromophenyl, p-tolyl, p-anisyl, an alkyl group having from one to ten carbon atoms, an alkenyl group having from three to eight carbon atoms, a cycloalkyl group having from three to six carbon atoms and a cycloalkylalkyl group having from four to nine carbon atoms and R'' is a member of the group consisting of phenyl, p-chlorophenyl, p-bromophenyl, p-nitrophenyl, p-tolyl, p-anisyl, α -naphthyl and β -naphthyl, said process being conducted at a temperature in the range of from about 20° C. to about 150° C. for about 0.5 to about 18 hours.

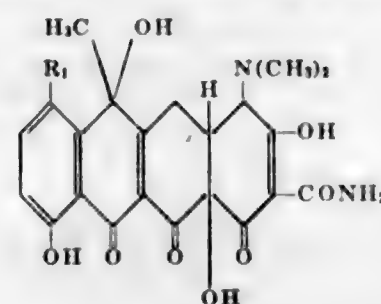
3,005,023

PRODUCTION OF TETRACYCLINE

Philip Andrew Miller, New City, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 5, 1957, Ser. No. 650,822
7 Claims. (Cl. 260-559)

1. The process of producing tetracycline which comprises contacting with hydrogen an inert polar organic solvent solution of a compound of the formula:



wherein R_1 is a member of the group consisting of hydrogen, bromine and chlorine at a temperature within the range of 0° C. to 100° C. and in the presence of a finely-divided noble metal catalyst until approximately 1 mole of hydrogen is absorbed when R_1 is hydrogen and until approximately 2 moles of hydrogen have been absorbed when R_2 is a member of the group consisting of bromine and chlorine and recovering the tetracycline thus formed.

3,005,024

1:3:3-ACETALDEHYDE-AMMONIA ADDUCTS OF TETRACYCLINE AND ITS ANALOGS

Hans H. Reinhard, Lyme, Conn., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed May 4, 1959, Ser. No. 810,560
8 Claims. (Cl. 260-559)

1. The process which comprises dissolving in a substantially anhydrous inert solvent a mixture of a tetracycline antibiotic selected from the group consisting of tetracycline, 7-chlorotetracycline, 7-bromotetracycline, 12a-deoxytetracycline, 6-demethyltetracycline, the 5a,6-anhydro derivatives thereof, 5-hydroxytetracycline, 5-hydroxy-12a-deoxytetracycline, 6-demethyl-6-deoxytetracycline, 6-demethyl-12a-deoxytetracycline, 6-deoxytetracycline, 6,12a-dideoxytetracycline, and 6-demethyl-6,12a-dideoxytetracycline with acetaldehyde and ammonia at about room temperature for a period of up to about 4 hours to cause the mixture to react to form an adduct of

the tetracycline antibiotic with the acetaldehyde and the ammonia.

5. The adduct of a tetracycline antibiotic selected from the group consisting of tetracycline, 7-chlorotetracycline, 7-bromotetracycline, 12a-deoxytetracycline, 6-demethyltetracycline, the 5a,6-anhydro derivatives thereof, 5-hydroxytetracycline, 5-hydroxy-12a-deoxytetracycline, 6-demethyl-6-deoxytetracycline, 6-demethyl-12a-deoxytetracycline, 6-deoxytetracycline, 6,12a-dideoxytetracycline, 6-demethyl-6,12a-dideoxytetracycline with acetaldehyde and ammonia in which the tetracycline antibiotic; acetaldehyde and ammonia are in the mole ratio of 1:3:3.

3,005,025

PREPARATION OF NEUTRAL CHLORTETRACYCLINE

Jerry Robert Daniel McCormick, New City, and Neva-Tay Kathleen Smith, Monsey, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,149
3 Claims. (Cl. 260-559)

1. In the process of converting chlortetracycline hydrochloride to chlortetracycline neutral the improvement which comprises slurrying chlortetracycline hydrochloride in a solvent system of the group consisting of 2-methoxyethanol and 2-ethoxyethanol and water containing alkali metal carbonate so as to adjust the pH of the solution to between 3.5 and 7.0 whereupon purified crystalline chlortetracycline neutral is obtained.

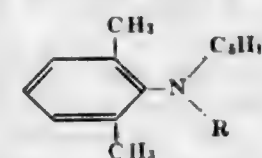
3,005,026

N-SUBSTITUTED-2,6-XYLIDINES

David A. Gordon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 17, 1958, Ser. No. 749,053
5 Claims. (Cl. 260-577)

1. A compound corresponding to the formula



wherein R represents a member of the group consisting of hydrogen and an alkyl radical containing 5 carbon atoms.

3,005,027

ALKYL HYDRAZINES

Jean Druey, Riehen, Paul Schmidt, Therwil, and Kurt Eichenberger and Max Wilhelm, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Filed May 17, 1960, Ser. No. 29,598
Claims priority, application Switzerland Nov. 26, 1957
4 Claims. (Cl. 260-583)

1. Pentyl-(2)-hydrazine.
3. 2-methyl-pentyl-(4)-hydrazine.

3,005,028

11 α -HYDROXY-A-NORPROGESTERONE

Richard W. Thoma, Somerville, and Frank L. Welsborn, Middlebush, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 28, 1959, Ser. No. 829,967
1 Claim. (Cl. 260-586)

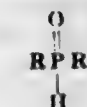
11 α -hydroxy-A-norprogesterone.

3,005,029 NOVEL ORGANOPHOSPHORUS COMPOUNDS AND METHODS OF PREPARING SAME

Sheldon A. Buckler and Martin Epstein, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

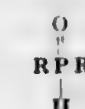
No Drawing. Filed July 1, 1959, Ser. No. 824,168
14 Claims. (Cl. 260-606.5)

1. As a new compound an organophosphorus oxide characterized by the formula



wherein R is selected from the radicals consisting of alkyl, substituted and unsubstituted, cycloalkyl, substituted and unsubstituted, and aralkyl, substituted and unsubstituted, and R' is selected from the radicals consisting of 1-hydroxyalkyl, substituted and unsubstituted, 1-hydroxycycloalkyl, substituted and unsubstituted, and α -hydroxyaralkyl, substituted and unsubstituted, said substituents for R and R' being selected from the group consisting of halo-, carboxy-, alkoxy-, nitro-, and hydroxyl-.

7. A method of preparing organophosphorus oxides corresponding to the formula



wherein R is selected from the radicals consisting of alkyl, substituted and unsubstituted, cycloalkyl, substituted and unsubstituted, and aralkyl, substituted and unsubstituted, and R' is selected from the group consisting of hydrogen, 1-hydroxyalkyl, substituted and unsubstituted, 1-hydroxycycloalkyl, substituted and unsubstituted, and α -hydroxyaralkyl, substituted and unsubstituted, said substituents for R and R' being selected from the group consisting of halo-, carboxy-, alkoxy-, nitro-, and hydroxyl-, which comprises bringing together into intimate contact phosphine and at least one molar equivalent of a member selected from the group consisting of alkyl ketones, substituted and unsubstituted, cycloalkyl ketones, substituted and unsubstituted, and aralkyl ketones, substituted and unsubstituted, said substituents corresponding to the substituents for R and R' given above, in the presence of a mineral acid and recovering the resulting corresponding organic phosphine oxide defined in the above formula.

3,005,030

MANUFACTURE OF SULFUR COMPOUNDS

Jacques D. Robinson, El Dorado, Ark., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed June 3, 1959, Ser. No. 817,854
19 Claims. (Cl. 260-609)

1. A process for preparing alkyl mercaptans which comprises reacting an olefin with H_2S in the presence of a catalyst system comprising BF_3 and a monohydric alkyl alcohol containing from 1 to 18 carbon atoms.

3,005,031

PROCESS FOR CHLORINATING NITRO AROMATIC HYDROCARBONS

Martin E. Friedrich, Penns Grove, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,246
9 Claims. (Cl. 260-646)

1. In the process of chlorinating a nitro aromatic hydrocarbon in the nucleus wherein chlorine is introduced into said nitro aromatic hydrocarbon in the presence of a nuclear chlorination catalyst, said nitro aromatic hydro-

carbon containing up to about 0.5% contaminating water, based on said nitrobody, the amount of said water present being sufficient to retard said nuclear chlorination, the improvement which comprises adding to said nitro aromatic hydrocarbon an amount of phosphorus chloride sufficient to overcome the chlorination retarding influence of said contaminating water.

3,005,032

SOLVENT EXTRACTION OF NAPHTHALENIC FROM NON-NAPHTHALENIC AROMATIC HYDROCARBONS USING DIMETHYL SULFOXIDE
Earle C. Makin, Jr., El Dorado, Ark., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 19, 1957, Ser. No. 679,862
4 Claims. (Cl. 260-674)

1. A liquid phase process for separating naphthalenic hydrocarbons from a mixture thereof with non-naphthalenic aromatic hydrocarbons which consists essentially of contacting said hydrocarbon mixture at a temperature ranging from 10° C. to 150° C. with a solvent composed of dimethyl sulfoxide containing an amount of water ranging from 0.5 to 40 volume percent which is sufficient to permit the separation of an extract phase and a raffinate phase, said solvent being employed in a solvent to hydrocarbon mixture volume ratio of from about 0.5:1 to about 20:1, separating an extract phase and a raffinate phase and recovering naphthalenic hydrocarbons from the extract phase.

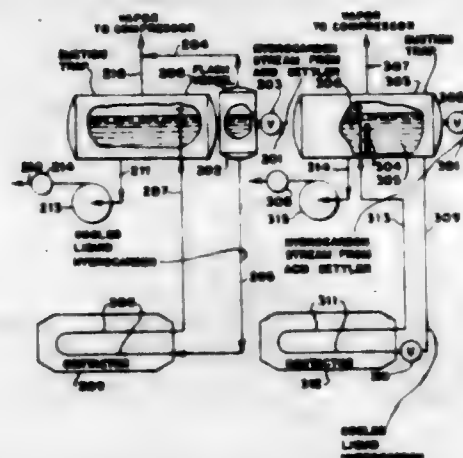
3,005,033

POLYMERIZATION OF OLEFINS
Robert M. Engelbrecht and Joseph Q. Snyder, El Dorado, Ark., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 22, 1959, Ser. No. 821,689
6 Claims. (Cl. 260-683.15)

1. A process for polymerizing polymerizable olefins which comprises contacting at least one of said olefins with a catalyst consisting essentially of nickel oxide-silica-alumina containing from 0.001 to 0.04 weight percent, calculated as lithium oxide, of a lithium compound convertible to lithium oxide upon heating.

3,005,034

PROCESS FOR ALKYLATION UTILIZING EFFLUENT REFRIGERATION
Robert R. Edison, Chicago Heights, and Reading Barlow Smith, Flossmoor, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
Filed July 7, 1959, Ser. No. 825,583
20 Claims. (Cl. 260-683.62)



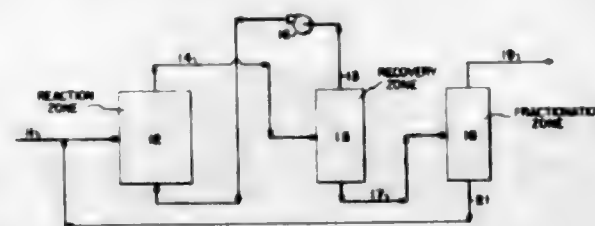
1. In an alkylation process wherein a lower isoalkane and a lower monoolefin are contacted in liquid phase with a liquid acid alkylation catalyst in an alkylation reaction step, a mixture of hydrocarbons is withdrawn with the

catalyst as effluent from the reaction step, the effluent is separated into a hydrocarbon phase and an acid phase in an acid separating step, the pressure on the hydrocarbon phase is reduced by means of a compression system in an evaporative cooling step whereby the hydrocarbons are refrigerated and the refrigerated liquid hydrocarbons are passed in indirect heat exchange with the alkylation reaction mixture, the steps of subjecting the hydrocarbon phase after it is removed from the acid settler to an evaporative cooling step to provide refrigerated hydrocarbon liquid and a first quantity of hydrocarbon vapors, passing the refrigerated hydrocarbon liquid as a refrigerant in indirect heat exchange with the alkylation reaction mixture whereby a portion of the refrigerated hydrocarbon liquid is vaporized to form a second quantity of hydrocarbon vapors, separating the resulting vapor and liquid portions of the refrigerant at substantially the same pressure as the evaporative cooling step while substantially impeding mixing of the liquid portion of the refrigerant with the hydrocarbon phase subjected to the evaporative cooling step, passing vapors produced to the compression system, and recovering alkylate from the hydrocarbon liquid remaining after the separating step.

12. Apparatus suitable for use in the alkylation of isobutane with a butylene in liquid phase and in admixture with sulfuric acid catalyst to form alkylate comprising a plurality of alkylation vessels provided with indirect heat exchange, means for regulating the temperature in the alkylation vessels, a separating vessel, means for transferring a mixture comprising sulfuric acid and hydrocarbons from the alkylation vessels to the separating vessel, a suction trap vessel provided with a weir, means for transferring hydrocarbons from the separating vessel to the suction trap vessel upstream of the weir, a plurality of means for supplying liquid hydrocarbons from the suction trap vessel upstream of the weir to the heat exchange means located in the alkylation vessels and from thence to the downstream side of the weir, and means for withdrawing hydrocarbon liquid from the downstream side of the weir for alkylate recovery.

3,005,035

LIQUID PHASE HYDROCARBON ISOMERIZATION WITH GAS PHASE PRODUCT TAKEOFF
Charles Newton Kimberlin, Jr., and Howard Emerson Merrill, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,318
8 Claims. (Cl. 260-683.67)

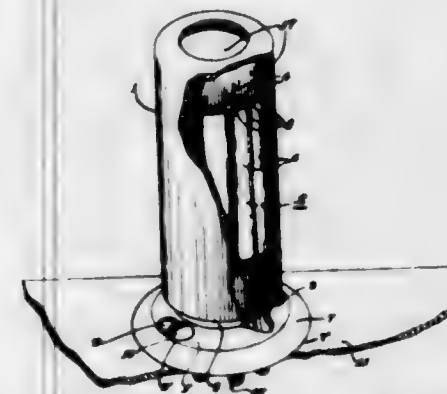


1. A process for the isomerization of a paraffin hydrocarbon of from 4 to 7 carbon atoms which comprises contacting the said hydrocarbon in the liquid phase in a reaction zone with a catalyst comprising aluminum bromide at a temperature in the range of about 40° to about 120° F., said temperature being below the boiling point of the said hydrocarbon under the conditions existing in the reaction zone, conducting a stream of hydrogen halide at a rate of about 200 to 4000 CF/B. through the reaction zone, removing isomerized product vapors from the reaction zone by means of said hydrogen halide stream as a stream separate from the catalyst, while leaving the higher boiling straight-chain homologs in the reaction zone, and separating isomerization product from the removed hydrogen halide.

ELECTRICAL

3,005,036

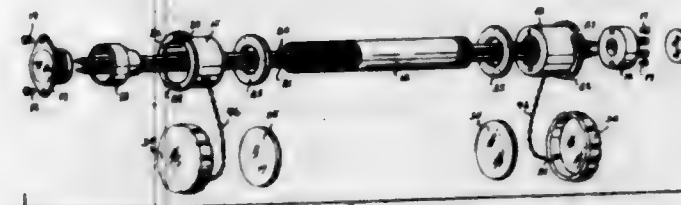
TUBE SHIELD
Allan Q. Mowatt, Lexington, Mass., assignor to Atlas E-E Corporation, Woburn, Mass., a corporation of Massachusetts
Filed Nov. 21, 1957, Ser. No. 697,865
7 Claims. (Cl. 174-35)



1. Apparatus of the character described for use with an electron tube and the like that is to be mounted within a socket upon a chassis, comprising an outer conductive shield housing for encasing the electron tube in the socket and provided with an integral indented base region the lower portion of which extends outwardly and then downwardly to contact the chassis in the region surrounding the tube socket, the outwardly and downwardly extending portion being resilient to permit of its becoming clamped tightly along its periphery to the chassis upon the application of pressure at one or more securing points along the said region of the chassis.

3,005,037

ELECTRICAL THROUGH-WALL OUTLET
David J. Miller, Sr., 912 S. 113th St., Omaha, Nebr.
Filed Dec. 10, 1958, Ser. No. 779,313
2 Claims. (Cl. 174-49)



1. In combination, a wall of a building, an electric socket in an area to the inner side of the wall and adapted to be in communication with a source of electricity, a conduit extending through said wall and at a point spaced apart from said socket, a cup portion threaded on the inner end of said conduit, a cup portion threaded on the outer end of said conduit, a resilient washer embracing said conduit and between said first cup portion and said wall, a resilient washer embracing said conduit and between the second cup portion and said wall, an electrical plug in said first cup portion, an electrical socket in said second cup portion, electrical lead wires in said conduit electrically connecting said plug and said socket that are in said cup portions, an electric cord, an electric plug on one end of said cord detachably engaging said first electric socket that is in the area to the interior of said wall, and an electric socket on the other end of said cord, detachably engaging the said plug that is in said first cup portion.

3,005,038

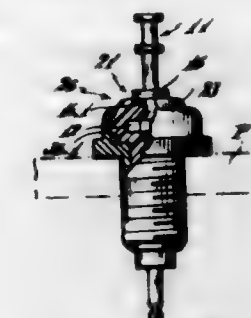
HIGH TEMPERATURE RADIO FREQUENCY CABLE AND METHOD OF MAKING THE SAME
Walter A. Donohue, Scotch Plains, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,213
1 Claim. (Cl. 174-102)



A high temperature radio frequency cable comprising a center conductor, a spaced concentric metal sheath, and a dielectric insulating medium between said sheath and center conductor comprising a porous mat-like dielectric composition of fiber and powder ingredients selected from the group consisting of pure silica and quartz, said dielectric composition including from 7% to 15% by weight of said fiber and the balance by weight of said powder, said fiber and powder being intermixed to break up the fiber and to intertwine the same with minute masses of said powder, said sheath holding said composition under compression and said composition having a dielectric constant of the order of 1.5.

3,005,039

LEAD THROUGH INSULATOR
Ralph Abrams, Sharon, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Original application Feb. 11, 1957, Ser. No. 639,325, now Patent No. 2,931,008, dated Mar. 29, 1960. Divided and this application Dec. 21, 1959, Ser. No. 1,835
3 Claims. (Cl. 174-152)



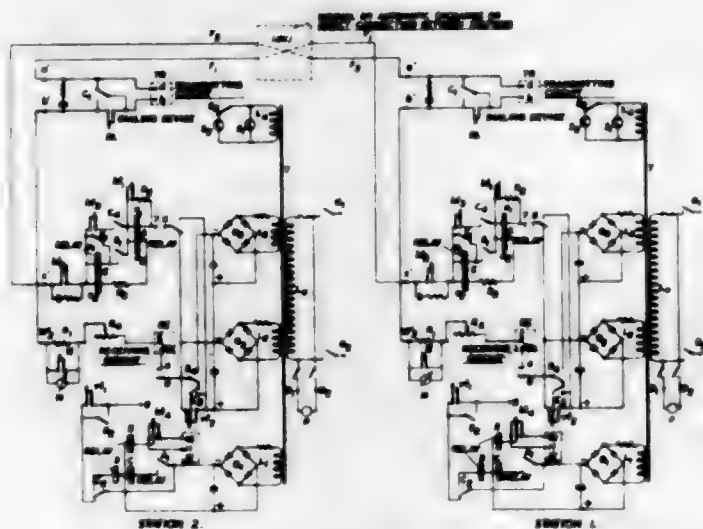
1. A composite article such as an insulating mount, comprising: an insulator body of material having physical properties characteristic of polyfluoroethylenes such as appreciable tendency to flow due to low internal friction and little tendency elastically to return after deformation to an original shape, said insulator body having a cylindrical cavity and two transverse deformation faces, one at an end of the insulator body and the other extending outwardly at an intermediate region thereof, forming an outwardly extending head portion between said deformation faces; a metal insert having connecting means at an end thereof, a core portion that fits said cavity of the insulator body, a transverse insulator confining face between said core portion and said connecting means and contacting said deformation face at an end of the insulator body, and a collar portion at the region of said head portion between said transverse confining faces of the insulator.

lator body; and a metal shell having a sleeve fitting around said insulator body and extending from said intermediate deformation face of the insulator body with an edge around said head portion beyond said collar portion of the metal insert, and said shell having inwardly extending transverse confining means contacting said outwardly extending intermediate deformation face of the insulator body, said head portion being confined in said shell under pressure to provide contact of said deformation faces of the insulator body with said confining face and said collar portion of the insert, the insulator body filling the space between the insert and the shell forming a bulge extending outwardly into the open space between said transverse confining face of the insert and said edge; whereby the insulator body is on the one hand sufficiently deformed to provide permanently firm attachment to the insert and the shell by confinement between the confining face and the core of the insert, the sleeve and the confining means of the shell, and is on the other hand sufficiently restrained to prevent flowing from such confinement.

3,005,040

CIRCUIT CLOSING AND BREAKING ARRANGEMENT FOR TELEPRINTERS

Karel Weber and Jaroslav Vana, Novy Hradec Kralove, Czechoslovakia, assignors to Tesla, narodni podnik, Prague Hloubetin, Czechoslovakia
Filed May 1, 1957, Ser. No. 656,314
9 Claims. (Cl. 178-4.1)



1. A circuit closing and breaking arrangement for teleprinters comprising switching circuits connected to a plurality of terminals and including a polarized relay for each teleprinter station, key operated circuit closing means for operating said polarized relay, a 60 volt circuit closed by operation of said polarized relay and control means for a motor of the associated teleprinter including an auxiliary relay operated by closing of said 60 volt circuit, and switch means engageable with said terminals, and having at least two different positions, said switching circuits serving to operatively connect the respective circuits of teleprinters at two directly connected stations in one of said positions of the switch means and to operatively connect the circuits of one of the teleprinters to an exchange in another of said positions of the switch means.

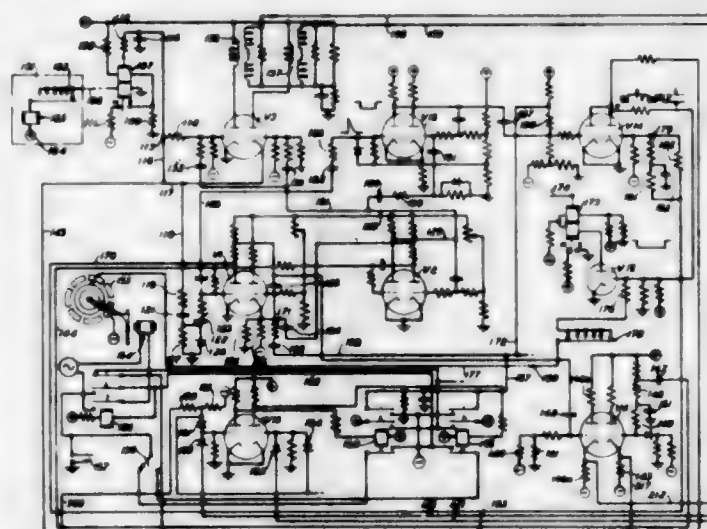
3,005,041

TELEGRAPH TRANSMITTER CONTROL SYSTEM

Gabe A. Sellers, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,462
11 Claims. (Cl. 178-4.1)

4. A telegraph station selector system having a code signal receiving circuit, a decoding circuit in said receiv-

ing circuit having a plurality of output terminals and adapted to apply a pulse to one of said terminals in response to reception of a particular signal by said receiving circuit, a normally non-conducting electron device having a grid and an anode, a control means connecting said one terminal of said decoding circuit to said grid of said normally non-conducting electron device to cause conduction in said normally non-conducting device

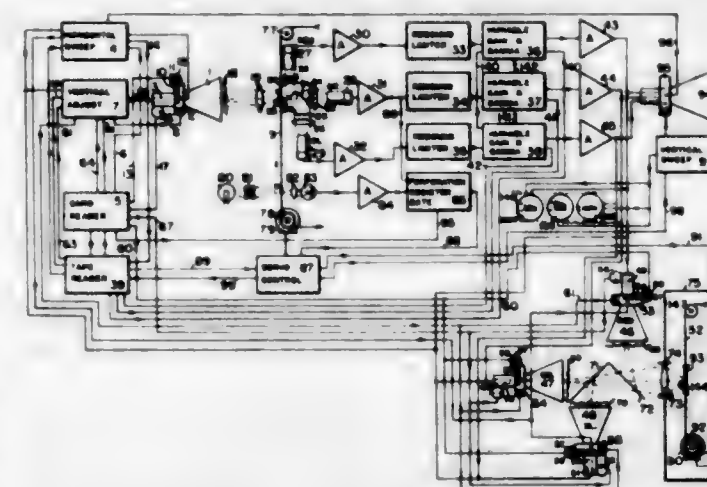


upon pulsing of said one terminal, a normally conducting electron device having a grid and an anode, a pulse time delay circuit, and a second control means connecting said anode of said normally non-conducting device to said grid of said normally conducting device including said pulse time delay circuit to suppress conduction in said normally conducting device when said particular signal has been received for a predetermined time.

3,005,042

ELECTRONIC MOTION PICTURE PRINTER

David S. Horsley, 3229 Kentucky Drive, Hollywood 38, Calif.
Original application Apr. 17, 1958, Ser. No. 729,121.
Divided and this application Jan. 12, 1959, Ser. No. 790,316
6 Claims. (Cl. 178-5.2)



5. In combination in an electronic printer for motion picture film having electronic means for converting the images on an original film to a video signal and further electronic means for forming corresponding images on an other film from said video signal; means for synchronizing motion of said films through the recited means which includes means for illuminating at least a part of opposite inner surfaces of successive perforations of the original motion picture film, waveform clipping means for converting the specular reflection from said surfaces to a sharp electrical pulse when said original film occupies a unique position with respect to said means for convert-

ing, electronic gating means roughly synchronizable to the motion of said original film to repetitively select predetermined said sharp electrical pulses, electromechanical means to move said other film electrically connected to said electronic gating means and operable upon the repetitively selected said sharp pulses to move said other film accurately synchronously with said original film.

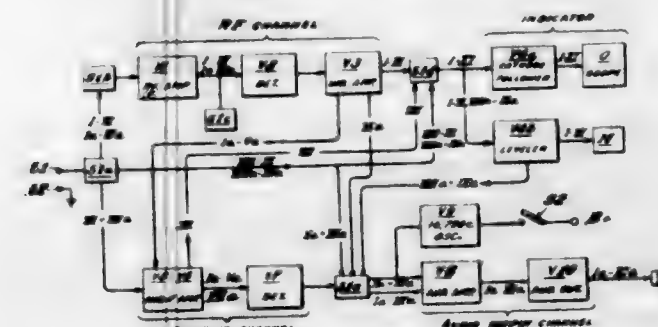
6. The combination claim 5 in which the original film is a color film and plural electromechanical means are provided synchronously operable upon said sharp pulses to move plural color separation films.

3,005,043

ELECTRONIC TESTING SYSTEM AND APPARATUS THEREFOR

Allan D. Russell, Medford, Mass., assignor, by mesne assignments, to Kingston Electronic Corporation, Cambridge, Mass.

Filed Jan. 12, 1953, Ser. No. 330,880
6 Claims. (Cl. 178-5.8)



1. In an electronic waveform analyzer of the character described for indicating signal distortion in the various channels of a television receiver; a signal-input terminal, an output terminal for video signals, an output terminal for audio signals, means in the form of electrical parts some of which when connected with others of the same in various combinations being functional with such others to constitute frequency channels each beginning at said signal-input terminal and terminating at one of said output terminals and each responsive to a distinct frequency different from the respective and distinct frequencies to which the others of said channels are responsive; said channels including a radio-frequency channel comprising a radio-frequency amplifier and detector, an audio intermediate-frequency channel comprising an audio intermediate-frequency amplifier and audio detector, and an audio output channel; electrical connections respectively to said parts and in each case incomplete by themselves to complete any of said channels from said signal-input terminal common to all of the latter, and ganged multi-contact switches associated with said connections and functional jointly with the latter to effect completion of each of said channels selectively and individually, a first one of said switches following said signal-input terminal, a second one of said switches being connected between said first-named detector and said output terminal for video signals, a third one of said switches being connected between said audio detector and said audio output channel.

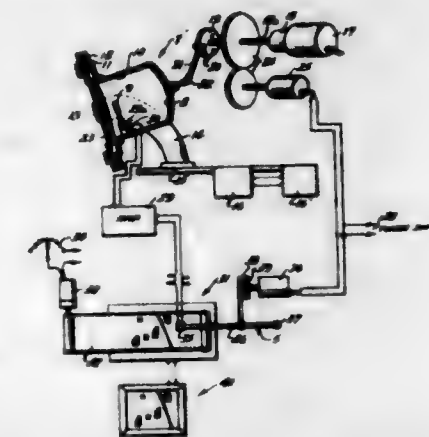
3,005,044

AUTOMATIC TERRAIN MAPPING SYSTEM

Marcel J. E. Golay, 372 Hollywood Ave., West End, N.J.
Filed Mar. 27, 1947, Ser. No. 737,687
5 Claims. (Cl. 178-6.6)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. An automatic mapping device comprising a scanning device on an aircraft for optically scanning at substantially right angles to the direction of movement of said aircraft, a radiation detector sensitive to infra-red rays, arranged to receive signals through the scanning device

and means for interpreting the signals received by said detector to record permanently the intensity of received

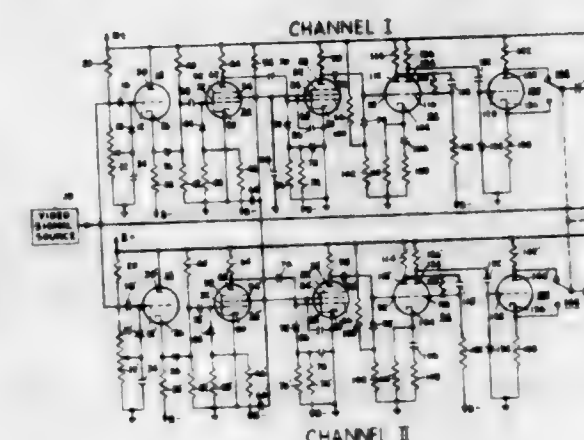


radiation with reference to spatial displacements of the scanning direction.

3,005,045

VIDEO QUANTIZING AND CONTOUR LEVEL APPARATUS

William J. Shanahan, New York, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 10, 1956, Ser. No. 564,833
4 Claims. (Cl. 178-6.8)

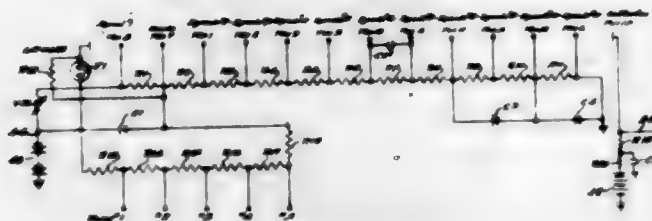


1. A video quantizing circuit comprising a plurality of substantially identical circuit channels having an input end in common for connection to a video signal source that translates a selected scene into a video signal, each of said circuit channels including a first means for blocking all of a video signal input thereto except for those amplitude excursions of the video signal input which extend beyond a predetermined signal amplitude level, the predetermined signal amplitude level in each of said channels respectively being different from one another, each of said circuit channels further including second means coupled to the first means thereof for producing a constant amplitude rectangular wave form wherein the leading edge of each pulse of the wave form from any one of said channels is substantially coincident with an amplitude excursion of the video signal in one direction across the predetermined amplitude level of that channel and the trailing edge of each pulse of the waveform from that channel being substantially coincident with an excursion of the video signal in the other direction across the predetermined signal amplitude level of that channel, and a circuit coupled to the output ends of all of said channels and responsive to the output signals therefrom for producing a signal which when applied to a cathode ray display device, will produce an image that is similar to the selected scene that was translated into the video signal.

3,005,046

TELEVISION CAMERA

Madison Cawein, Fort Wayne, Ind., and John A. Rado, Lancaster, Ohio, assignors to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Filed May 19, 1958, Ser. No. 736,141
15 Claims. (Cl. 178-7.2)

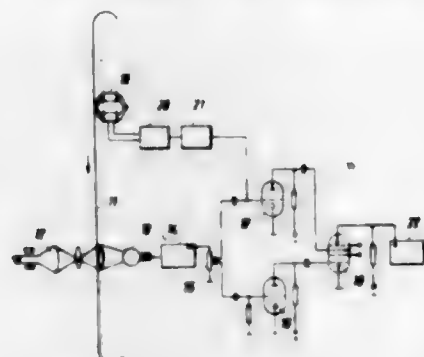


1. A television camera comprising a camera tube having a photosensitive cathode adapted to produce an electron image when subjected to an illumination pattern, an electron multiplier structure having at least four dynodes constituting at least three adjacent pairs of dynodes and an aperture, means including an anode at a positive potential relative to said cathode for causing electrons emitted by said cathode to enter the aperture in said electron multiplier structure and to impinge upon a first one of said dynodes, a collector electrode positioned adjacent the last one of said dynodes and at a positive potential relative to said last dynode for attracting electrons emitted thereby, and means including a voltage divider network for maintaining at low illumination levels substantially different voltage differences between each of a majority of the successive adjacent pairs of said dynodes comprising a voltage divider resistor for each of said adjacent pairs of dynodes having values of resistance all differing substantially from one another.

3,005,047

GAMMA CONTROL IN TELEVISION FILM

Horst Zachan, Darmstadt, Germany, assignor to Fernsch G.m.b.H., Darmstadt, Germany
Original application June 8, 1954, Ser. No. 435,235. Divided and this application Dec. 18, 1958, Ser. No. 781,341
Claims priority, application Germany June 9, 1953
10 Claims. (Cl. 178-7.2)

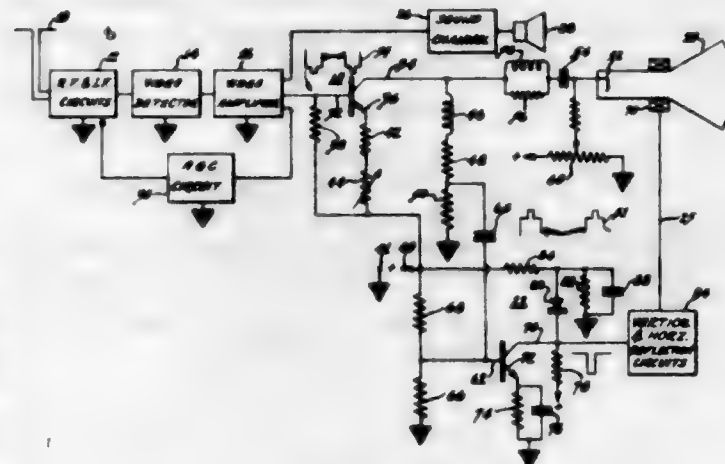


1. Television apparatus for reproducing scenes from moving picture records carrying an auxiliary record of control signals representing values respectively characteristic of the contrast of a particular scene record associated with said control signals, comprising first means including scanning means for scanning a record of a picture and video signal means for producing a series of electrical video signals in accordance with the light video pulses furnished by said scanning means, second means for deriving control signals from said record of control signals and for injecting the same into said video signal means and third means connected to said first and second means for adjusting the gamma applied during transmission to said video signals to a predetermined value by adjusting the transfer characteristic of the video signal means by said control signals.

3,005,048

SIGNAL AMPLITUDE DISCRIMINATORY CIRCUIT

Hunter C. Goodrich, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,192
4 Claims. (Cl. 178-7.3)



1. An amplitude discriminatory signal circuit for translating a predetermined range of signal information from an applied signal comprising, a semi-conductor device having base, emitter and collector electrodes, means for applying an input signal between said base and emitter electrodes of said device, biasing circuit means connected between said base and emitter electrodes to be traversed by the emitter current of said device and responsive to emitter current of said device to develop a bias potential of a magnitude to render said device non-conductive for the application of applied signals below a predetermined amplitude, a load impedance element and operating potential supply means connected in series between said collector and emitter electrodes, and circuit means including a unidirectionally conductive device connected in parallel with at least a portion of said load impedance element and poled to conduct in response to a predetermined potential variation across said load impedance element to prevent collector current saturation in said device in response to applied signals of increasing amplitude above said predetermined amplitude and to provide variation of said bias potential in response to the amplitude of said applied signal.

3,005,049

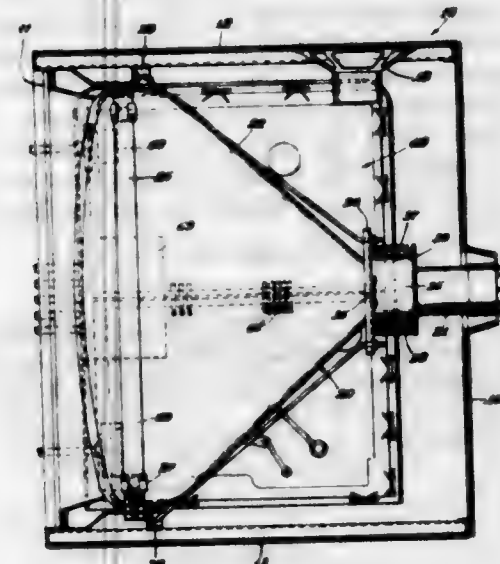
ELECTRONIC CHASSIS AND IMPROVED BASE THEREFOR

Raymond S. Yoder, Oak Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 681,591, Sept. 3, 1957. This application Sept. 16, 1959, Ser. No. 848,474
15 Claims. (Cl. 178-7.9)

15. A television receiver including in combination, a cathode ray image reproducer with a viewing screen disposed at one end thereof, a cabinet having a front bezel and a plurality of sides extending rearwardly therefrom and a back enclosing said sides, said cabinet being adapted to receive the image reproducer and including means to mount the same with the viewing screen thereof visible within said bezel, a panel supporting frame removably secured to, and electrically insulated from, one of said sides of said cabinet, said frame having a plurality of openings therethrough with ledge portions at the sides of said frame and raised portions intermediate said ledge portions, a printed circuit panel assembly with components for a plurality of television receiver stages carried thereby, means for clamping said panel assembly to said ledge portions and said raised portions for

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reinforcing the same to firmly support said components and including manually operable means for releasing said panel assembly from said frame, a plurality of rigid electrical contacts along one edge of said panel assembly

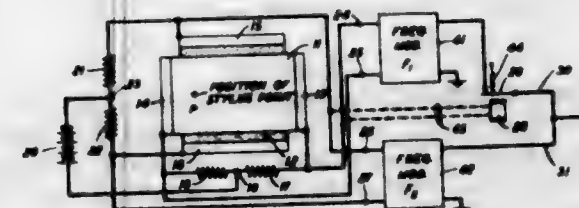


and a bank of corresponding resilient connectors adapted to be electrically connected to said contacts of said panel assembly whereby said panel assembly is removable by release of said fastening means and disengagement of said electrical connectors.

3,005,050

TELAUTOGRAPH SYSTEM

Walter Koenig, Jr., Clifton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1956, Ser. No. 631,138
1 Claim. (Cl. 178-20)



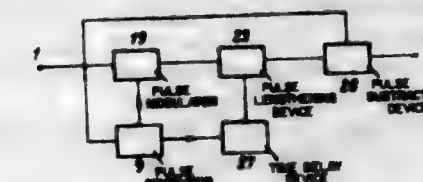
In a telautograph system, a transmitting station including a crossed pair of overlapping sheets, the adjacent faces thereof being of resistive material and normally out of contact with each other and a movable stylus for pressing said sheets together, means for deriving two signals representative of the position at which said stylus presses said sheets together, means responsive to said derived signals for causing two carriers to be modulated and transmitted to a receiving station, means actuated when said sheets are out of contact with each other for interrupting at least one of said two carriers, means for receiving and separating said two carriers at a receiving station, means for positioning a second stylus on a coordinate surface at said receiver in response to said two carriers, and means at said receiver responsive to said interruption of said one carrier for mechanically lifting said second stylus from contact with said coordinate surface at said receiver.

771 O.G.—54

3,005,051

NOISE ELIMINATION IN MULTIPLEX TRANSMISSION SYSTEMS WORKING ACCORDING TO THE TIME DIVISION PRINCIPLE

Karl Gösta Herbert Lindberg, Långkoping, Lars Bernhard Persson, Stockholm, and Jarl Morannar Thorsén, Hagersten, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Jan. 22, 1957, Ser. No. 635,243
Claims priority, application Sweden Jan. 24, 1956
5 Claims. (Cl. 179-15)

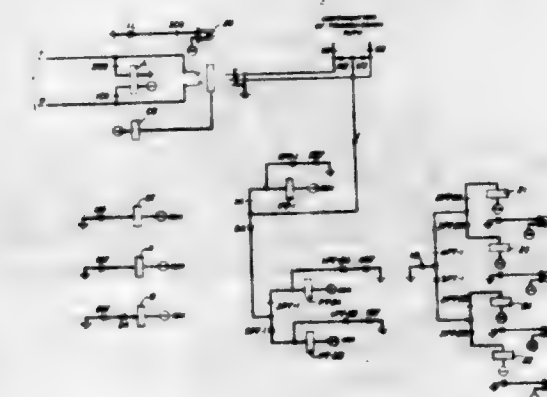


1. A device for suppressing low frequency disturbances in a multiplex transmission system in which the signals in individual channels of the system are transmitted as combined series of modulated pulses interleaved in time with respect to one another, said device comprising a storage circuit means, means charging said storage circuit with an electric magnitude existing immediately prior to the appearance of each individual channel pulse in a combined pulse series, means maintaining said electric magnitude for a period of time short in relation to the time interval between two adjacent channel pulses belonging to different channels, and means for subtracting said stored electric magnitude from the electric energy of said combined pulse series, said subtracting means including two inputs, one of said inputs being fed with channel pulses and the other being connected to said one input by a circuit including in series said storage circuit means and an electronic switch means, and switch control means generating a gate pulse series synchronized with the channel pulse series to effect opening of the switch means immediately before the appearance of a channel pulse and closing of the switch means upon disappearance of said channel pulse.

3,005,052

PARTY LINE IDENTIFICATION CIRCUIT

Robert E. Powers, North Andover, Mass., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 16, 1957, Ser. No. 684,848
5 Claims. (Cl. 179-17)



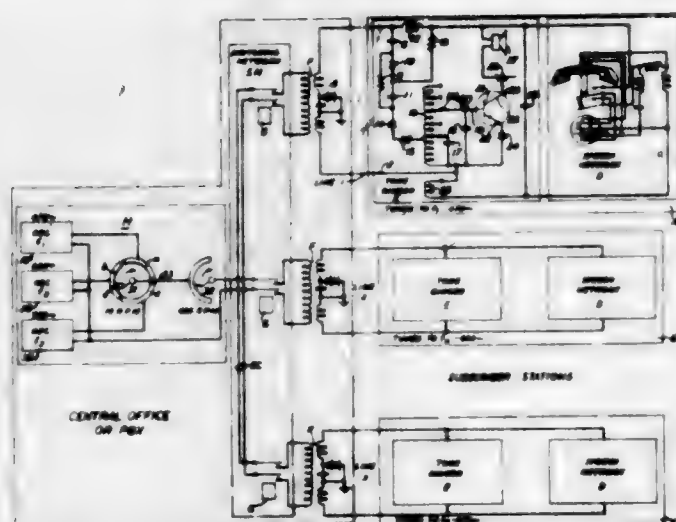
1. In a telephone system, a telephone line having more than two subsets thereon, each of said subsets having an impedance path to ground which is unique, a central office, means at said central office whereby a first test potential is applied to said line upon the initiation of a call from one of the subsets thereon, means effective after the application of said first test potential to said line and variably responsive in accordance with which

one of said subsets is initiating a call for selectively applying as a second test potential to said line one of a plurality of available test potentials, means responsive to the application of said second test potential for partially manifesting the identity of any calling subset, and means including said last named means solely responsive to the application of said first and second test potentials to said line for manifesting the identity of any calling subset thereon.

3,005,053

TELEPHONE SIGNALING SYSTEM

George F. Schmidt, Richmond Hill, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 9, 1957, Ser. No. 682,794
5 Claims. (Cl. 179-18)



1. In a telephone signaling system the combination of a central office, a plurality of subscriber stations, a private line connecting each of said stations with said central office, a signal device at one of said stations selectively responsive to a particular alternating current frequency, a signal device at another of said stations selectively responsive to a different particular alternating current frequency, a source of signaling current at said central office including means for generating the said particular alternating current frequencies, means at said central office for sequentially transmitting the said particular alternating current frequencies over each of said lines, and means at said stations for rendering each of the associated devices selectively responsive to a different one of said frequencies, whereby the signal devices at said stations are operated sequentially.

3,005,054

TELEPHONE SYSTEM

Kihelida Tajima, Goro Emori, and Eijiro Otsuka, % Totmaka Works of Hitachi Limited, 216 Totmaka-machi, Totmaka-ku, Yokohama, Japan, and Himeo Futaki, % Central Research Laboratory of Hitachi Limited, 280 aza Hanezawa, Oaza Kokubunjo, Kokubunji-machi, Tokyo, Japan

Filed Dec. 21, 1954, Ser. No. 476,794

Claims priority application Japan Mar. 27, 1954
3 Claims. (Cl. 179-32)



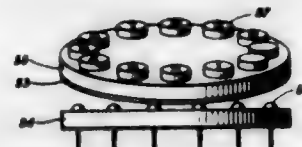
1. A multi-party automatic telephone system comprising a source of electrical potential, a plurality of telephone sets each including a transmitter circuit and a re-

ceiver circuit, a connecting circuit coupling said plurality of telephone sets in parallel to said source of electrical potential, a thermal variable resistance in said connecting circuit operatively associated with each telephone set and responsive to the use of the associated set for the generation of heat, said thermal variable resistance having an inflection in its resistance characteristic, and heat responsive means operated by said thermal variable resistance for rendering effective the receivers, the use of one telephone set causing a voltage drop in the associated thermal variable resistance and thus in said connecting circuit whereby less than the full electrical potential of said source is supplied to the remaining telephone sets, thereby rendering said remaining telephone sets ineffective.

3,005,055

TILTING DIAL CIRCUIT SELECTOR

Charles F. Matka, Fanwood, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 8, 1957, Ser. No. 688,929
12 Claims. (Cl. 179-90)



1. A designation transmitter comprising a bed plate, a plurality of mutually insulated electrical terminals mounted in a circular arrangement on said bed plate, an operating member bearing on its outer surface a plurality of marked bosses designating corresponding electrical circuits, means operatively connected to said bed plate for pivotally supporting said operating member in a normal position from which it may be tilted in any direction, a conductor disc having a radius approximating the radius of said circular arrangement of terminals, said disc being affixed to said operating member for engaging at least one of said terminals whenever said operating member is tilted in any direction, and means cooperating with said bosses and responsive to the application of pressure to a selected one of said bosses for quantizing the tilt of said operating member to one of a plurality of discrete angles.

3,005,056

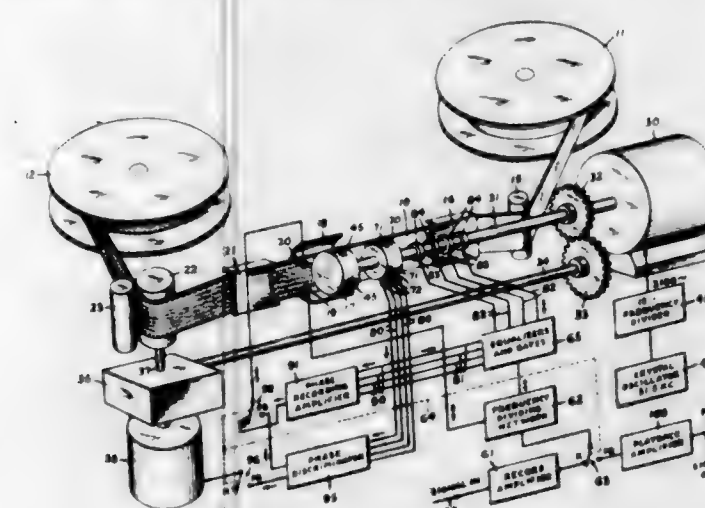
RECORDING REPRODUCING SYSTEM

Peter C. Goldmark, New York, and John W. Christensen, Forest Hills, N.Y., assignors to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York

Filed Feb. 2, 1956, Ser. No. 563,075
2 Claims. (Cl. 179-100.2)

1. Apparatus for reproducing a signal recorded on a tape in the form of successive longitudinally-spaced, transversely-running record tracks, said apparatus comprising, a capstan adapted by rotation thereof to move said tape longitudinally through a reproducing zone, a reproducing head adapted by successively sweeping transversely through said zone and over said tape to reproduce said signal from said tracks, means to provide respective phase indications of the longitudinal positions on said tape of said tracks and of the instantaneous transverse positioning of said head, a differential mechanism having first and second rotatable input shafts and a third rotatable output shaft of which the latter is coupled to said capstan to rotate it in proportion to the difference in the respective rotations of said first and second shafts, means to rotate said first shaft in phase synchronism with the transverse sweepings of said head to render the instantaneous rotational positioning of said capstan in constant phase rela-

tion with the instantaneous transverse positioning of said head while said second shaft is stationary, phase discriminator circuit means responsive to separate inputs of said two indications to produce at an output therefor an error signal of which the polarity and magnitude correspond to, respectively, the sense and the magnitude of the difference in time phase between said indications, and a phase motor directly connected between said output and said second shaft to translate said error signal into a rotation

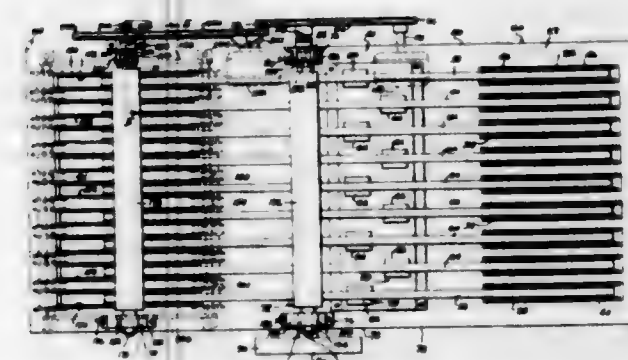


of said second shaft characterized by synchronization between the instantaneous angular phase of such shaft and said difference in the phase between said quantities, the said rotation at said second shaft being adapted by varying said otherwise constant phase relation to adjust the instantaneous longitudinal position of said tape so as to render recorded tracks thereon passing through said reproducing zone in longitudinal registration with said head.

3,005,057

MULTIPLE DUPLICATING TAPE RECORDER

Charles R. Locklin, 2140 Lochaven Road, Pontiac, Mich.
Filed May 15, 1957, Ser. No. 659,387
9 Claims. (Cl. 179-100.2)



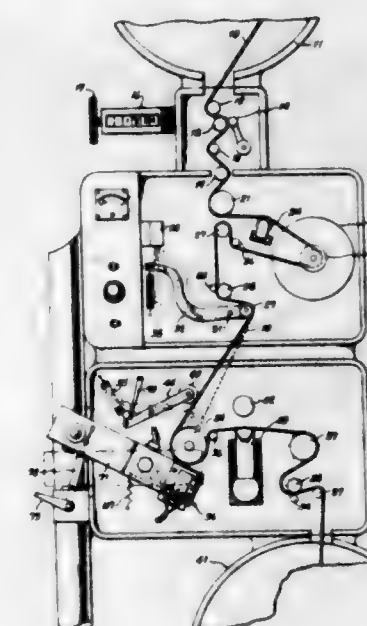
1. A multiple duplicating tape recorder for reproducing the sound track of a master tape from a master reel upon a multiplicity of duplicate tapes respectively wound from duplicate tape supply reels onto empty tape-receiving reels, said recorder comprising a supporting structure, a tape supply reel carrier on said supporting structure constructed and arranged to rotatably carry the master tape supply reel and the duplicate tape supply reels, an empty tape-receiving reel holder on said supporting structure spaced apart from said tape supply reel carrier and constructed and arranged to rotatably hold a multiplicity of empty tape receiving reels and an empty master tape-receiving reel, means on said supporting structure for directing the tapes into laterally-spaced parallel paths during at least a part of their travel from the master and duplicate reels to the empty reels, a master sound-reproducing head and duplicating sound-recording heads dis-

posed adjacent said master and duplicate tapes and adapted to be interconnected in a conventional sound-recording system, a rotary capstan device simultaneously drivingly engaging said master and duplicate tapes in synchronized tape-propelling relationship, means yieldingly and simultaneously engaging and urging said tapes into simultaneous propelled engagement with said capstan device, an empty-reel-rotating instrumentality including an elongated empty reel driving roll simultaneously rotatably engageable with the rims of the empty reels in said holder, and power-operated driving mechanism drivingly connected to said capstan device and reel-rotating instrumentality.

3,005,058

APPARATUS FOR USE IN PRODUCING SOUND MOTION PICTURE FILM

Clarence Robert Fine, Tomkins Cove, N.Y., assignor to Fine Sound, Inc., New York, N.Y., a corporation of New York
Filed Nov. 23, 1955, Ser. No. 548,697
15 Claims. (Cl. 179-100.3)



1. Sound recording apparatus comprising means for continuously translating a magnetically and optically recordable film blank web, means including a magnetic recording head at one position along the path of said web for magnetically recording electrical signals on said web, means including a magnetic pickup head at a predetermined position along the path of said web displaced from said recording head in the direction of motion of said web and in operative relation thereto for reproducing electrical signals corresponding to said magnetically recorded signals, recording means at the same said position along the path of said web as and in side-by-side relation to said pickup head and in operative relation to said web for making an optical recording of electrical signals on said web, and means coupling said pickup head to said recording means for supplying said reproduced electrical signals to said optical recording means.

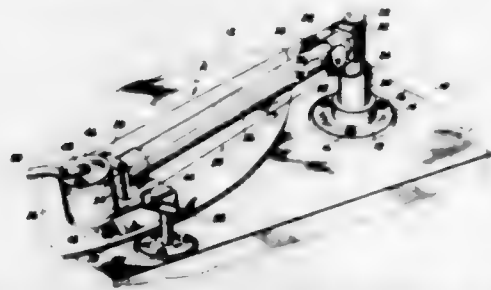
3,005,059

TONE ARM MECHANISM

Herbert P. Raabe, St. Paul, Minn.
Filed Dec. 29, 1958, Ser. No. 783,554
18 Claims. (Cl. 179-100.4)

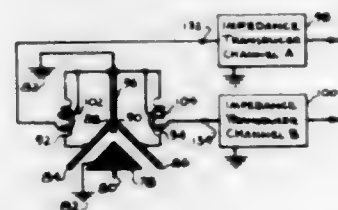
1. A tone arm comprising post means providing a first surface constituting a segment of a first cylinder, bobbin means providing a second surface constituting a segment of a second cylinder having a radius of curvature twice that of said first cylinder, a pick-up cartridge mounted on said bobbin means for rotation therewith, a reach mem-

ber between said post and bobbin means provided with oppositely facing third and fourth surfaces constituting segments of a third cylinder, belt means retaining said bobbin means and reach member in an assembled relationship with said post means so that said second surface



is in contact with said third surface and said fourth surface is in contact with said first surface, whereby when said reach member is swung through a given angle said second surface will roll about said third surface and said fourth surface will roll about said first surface.

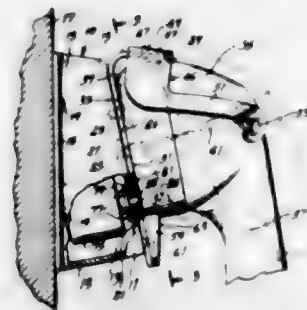
3,005,060
SIGNAL TRANSDUCING SYSTEMS
Paul Weathers, 809 Station Ave., Haddon Heights, N.J.
Filed Mar. 3, 1958, Ser. No. 718,641
12 Claims. (Cl. 179-100.41)



1. A variable capacity pickup unit, comprising in combination: a supporting structure; a depending highly compliant movable beam carried by said structure and having an electrically conductive surface, said beam having mounted therein a stylus element for engaging a groove of a movable record bearing medium having a groove, the configuration of which is varied in accordance with recorded information as said medium is moved; a first and a second electrically conductive plate supported by said structure in electrically insulating spaced apart relation to one another, with the surface of the first plate forming a substantially right angle with the adjacent surface of the second plate, said plates, as supported by said structure, being each spaced from said beam to form a first and a second variable capacitance element together having a common movable electrode comprising said beam, and each capacitance element having one fixed electrode comprised of said first and second conductive plates, respectively, so that the capacity of each capacitance element may be independently varied by movement of said beam along paths substantially perpendicular to the surface of its respective plate, said beam being so positioned between said plates as to permit said stylus to engage a groove of a grooved record bearing medium so as to permit changes in the configuration of said groove, while said medium is in motion, to be resolved into quadrature related vectors the magnitudes of which are represented by changes in the magnitudes of capacitance sustained by said first and second capacitance elements; and at least three access terminals carried by said structure and respectively coupled to said beam, said first plate, and said second plate to permit capacitance changes in said first and second variable capacitance elements to be separately detected at positions external to said pickup unit.

3,005,061
TELEPHONE HANDSET HANGER
George Cagen, Brooklyn, N.Y., assignor to Roswell Corporation, New York, N.Y., a corporation of New York

Filed Feb. 29, 1960, Ser. No. 11,568
6 Claims. (Cl. 179-146)



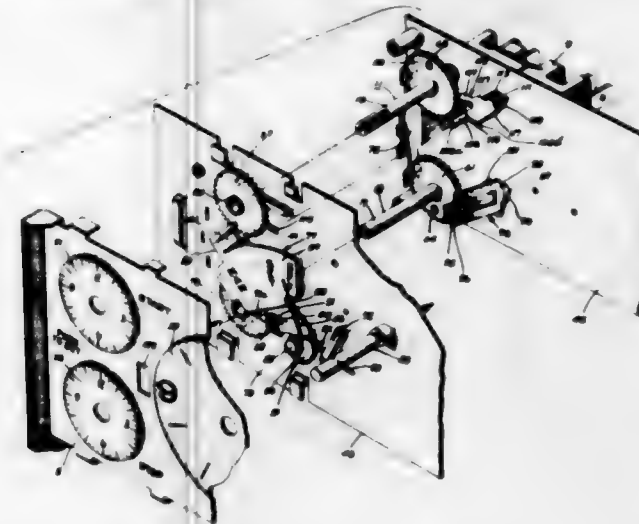
1. A bracket for supporting a telephone handset which has an instrument housing and a handle rigidly connected to and extending from said housing, said bracket being adapted to support said housing so as removably to hold said handset in position with the handle extending generally downwardly from said housing, said housing being defined by an operating front face and an exterior surface of convex contour disposed rearwardly with respect to said face, said bracket comprising a member providing a seat extending generally upwardly and downwardly and adapted to be engaged by said face of said housing, spring means supported by said member and having an element extending from said member transversely of said seat outwardly and over said convex surface of said housing when said housing is disposed between said spring means and said seat with said operating face adjacent said seat, said element having a form adapted to engage said convex surface of said housing rearwardly with respect to said face and so as to bias said housing to a position with said face in engagement with said seat, the space below said element and between said element and said seat being open downwardly and substantially unobstructed to provide for movement of said housing upwardly into said space, and an abutment supported by said member in downwardly spaced relation to said spring means and so as to be engaged by a peripheral portion of said housing that is adjacent said operating face thereof and at the opposite side of said housing from said surface thereof engaged by said element of said spring means as said housing is moved upwardly into said space so that the pressure of said spring means upon said convex surface of said housing is effective to hold said housing against said seat and so as to be supported by said abutment.

3,005,062
RANGE TIMER POSITION INDICATING DEVICE
Wladyslaw S. Zagorski, Morrison, Ill., assignor to General Electric Company, a corporation of New York

Filed May 25, 1960, Ser. No. 31,750
8 Claims. (Cl. 200-33)

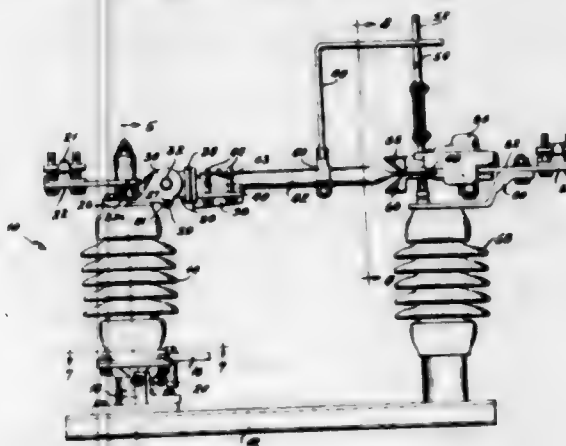
1. In a timer having a switch which may be selectively set for time controlled operation or to a manual closed position, means for actuating said switch between closed and open positions including first and second axially slidable and manually adjustable control members, said control members each having a set and a normal position and being axially slidable therebetween for controlling said switch, motor driven means for releasing said control members from their set positions to provide time controlled operation of said switch, means operated by one of said members for maintaining said switch in said man-

ual closed position unaffected by said motor driven means, and means actuated by said members for selectively indi-



cating the condition to which said switch is set by said control members.

3,005,063
SELF-ALIGNING SWITCH
Carl G. Zemels, Clayton, and Thomas B. Ortig, Florissant, Mo., assignors to James R. Kearney Corporation, St. Louis, Mo., a corporation of Delaware
Filed Feb. 27, 1959, Ser. No. 796,029
8 Claims. (Cl. 200-48)



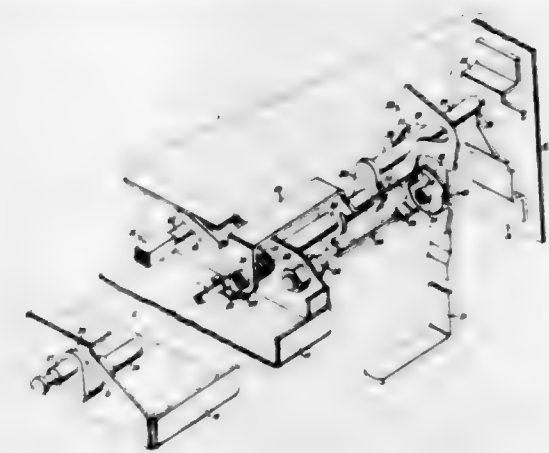
1. An electrical switch having a plurality of insulators, one of said insulators being movable, a switch blade mounted on one of said insulators for movement into and out of contact with a contact structure mounted on another of said insulators, said switch blade being journaled for limited rotation about a pair of axes perpendicular to each other and situated substantially in the plane of said movement into and out of contact with said contact and separate pairs of relatively movable contact surfaces on each of said pair of axes to form an electrically conductive path around the journals for said switch blade.

3,005,064
DRAWOUT MECHANISM FOR METAL-ENCLOSED ELECTRIC SWITCHGEAR

Leslie L. Baird, Swarthmore, and Ralph J. Baskerville, Drexel Hill, Pa., assignors to General Electric Company, a corporation of New York
Filed Feb. 5, 1959, Ser. No. 791,459
12 Claims. (Cl. 200-50)

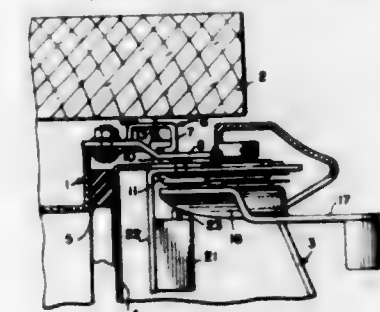
11. In a drawout mechanism for an electric circuit breaker: an enclosure unit; a removable circuit breaker unit adapted to contain the circuit breaker and disposed for reciprocating movement to and from a fully inserted position within the enclosure unit; racking means for the

circuit breaker unit including a rotatable actuating member pivotally mounted at its center of rotation on one of said units and having a generally involute camming slot therein, said involute slot being concentric about said center of rotation at one end thereof, a pin mounted for pivotal movement about an eccentric axis on said one unit



and disposed in said involute slot, and a bracket having an open-end slot therein mounted on the other unit, said pin being receivable in said open-end slot for engaging said bracket in driving relation thereby to impart said reciprocating movement to the circuit breaker unit as said actuating member is rotated except when the pin is located in said concentric end portion of said involute slot.

3,005,065
DOMESTIC APPLIANCE
David A. Jellies, Delafield, Wis., assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1959, Ser. No. 862,682
8 Claims. (Cl. 200-61.62)

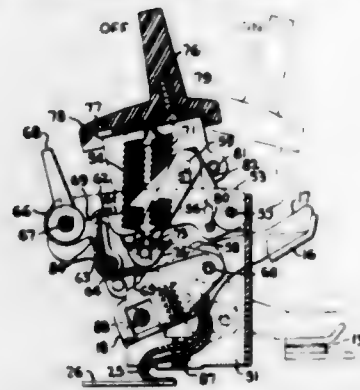


1. Combination latching and switch operating mechanism for a cabinet or the like provided with an access opening and a closure therefor, including a latching bolt on said closure and a strike on said cabinet for cooperation therewith, means for operating said bolt between latched and unlatched positions relative to said strike, an electric switch disposed in fixed position relative to said bolt operating means, means for operating said switch to a certain electric circuit condition upon predetermined movement of said bolt operating means in a latching direction relative to said bolt for interfitting engagement with said bolt for securing said bolt operating means against movement in said latching direction, means for operating said lockout means to effect said securement function when said bolt is withdrawn from said strike, and means for actuating said lockout means lever to disengage from said bolt upon movement of said bolt into a position relative to said strike permitting the bolt to enter into a latching relationship therewith, whereby said switch may then be operated to its certain electric circuit condition.

3,005,066

CIRCUIT BREAKER

David Barton Powell, Bristol, Conn., assignor to General Electric Company, a corporation of New York
Original application Dec. 19, 1958, Ser. No. 781,766. Divided and this application Oct. 10, 1960, Ser. No. 61,719
5 Claims. (Cl. 200-78)

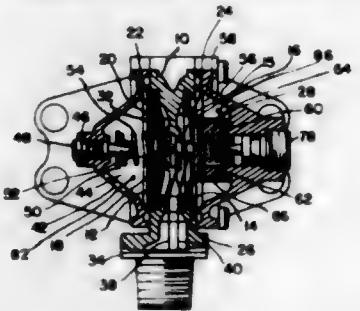


1. An electric circuit breaker comprising at least one stationary contact, at least one relatively movable contact movable into and out of engagement with said stationary contact, operating mechanism for operating said relatively movable contacts comprising a pair of generally planar opposed side plates, said side plates having opposed portions thereof return-bent toward each other to provide a pair of generally U-shaped portions in juxtaposed relation, a releasable trip member pivotally supported between said juxtaposed return-bent portions of said side plates, and a pivot pin passing through said return-bent portions and said trip member and retaining said side plates together and acting as a pivot pin for said trip member.

3,005,067

DIFFERENTIAL PRESSURE SWITCH

Richard E. Lefbold, Detroit, and Alton G. De Claire, Jr., Harper Woods, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Mar. 30, 1959, Ser. No. 802,700
9 Claims. (Cl. 200-83)

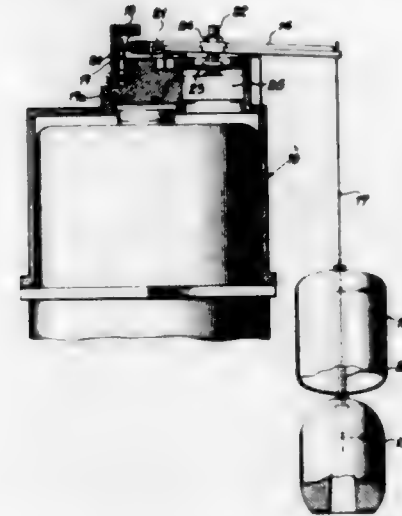


1. A differential pressure switch comprising a support body having an opening therethrough, a pair of laterally spaced seats at opposite sides of said opening, diaphragms on said seats defining therebetween and with the portion of said body surrounding the opening a central switch chamber, spider means on said body supporting a switch contact generally centrally of said switch chamber, electrically insulating oil filling said switch chamber, hollow caps overlying said diaphragms and sealed to said body to define pressure chambers therewith, means for connecting the interior of said pressure chambers with different sources of fluid pressure, an electrical contact carried by one of said diaphragms and movable thereby into and out of contact with said first mentioned contact, resilient means within one pressure chamber operatively engaging the diaphragm forming a part of said one pressure chamber and biasing said diaphragms in switch opening direction, a magnet fixed in said other pressure chamber, a magnetic member on said other diaphragm movable into engagement with a pole of said magnet when said diaphragms are in switch open position.

3,005,068

SUBMERSIBLE PUMP PUMPS AND SWITCH ASSEMBLIES THEREFOR

Abraham Pollak, Linfield, Pa.
Filed Dec. 15, 1958, Ser. No. 780,314
6 Claims. (Cl. 200-84)

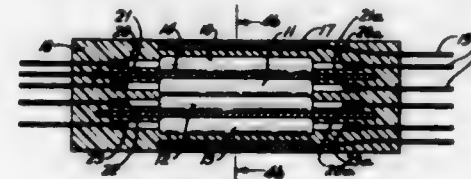


1. Float operated control means for sump pumps which comprises an electric switch to control the starting and stopping of the pump, a switch operating lever mounted to pivot on a horizontal axis to swing in one direction to open said switch and in the opposite direction to close said switch, a spring pressed element to engage and hold said lever yieldingly at a point between said opening and closing positions, and float operating means comprising a lower float of a density greater than that of the liquid to be pumped and suspended from said lever at a fixed distance therefrom and an upper float of less density than that of the liquid to be pumped and slidable from said lower float to said lever, the weight of said floats being sufficient to tilt said lever in one direction past the yielding engagement of said spring pressed element and the displacement weight of said upper float being sufficient to move said lever in the opposite direction past the yielding engagement of said spring pressed element.

3,005,069

REED RELAY FOR SMALL VOLTAGES

Frederick W. Sippach, Crafton Borough, and Robert H. Luppold, Jr., West Newton, Pa., assignors to Hagam Chemicals & Controls, Inc., Pittsburgh, Pa.
Filed Jan. 27, 1961, Ser. No. 85,313
5 Claims. (Cl. 200-87)



1. A reed relay unit comprising an elongated energizing coil, a layer of insulating material concentrically within said coil, a copper enclosure within said insulating layer, and two elongated gas filled reed relay capsules substantially enclosed by said copper enclosure.

3,005,070

MAGNETIC SWITCHING DEVICE

Stanford R. Ovshinsky, Detroit, Mich., assignor to Tamm Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 11, 1957, Ser. No. 645,259
22 Claims. (Cl. 200-87)

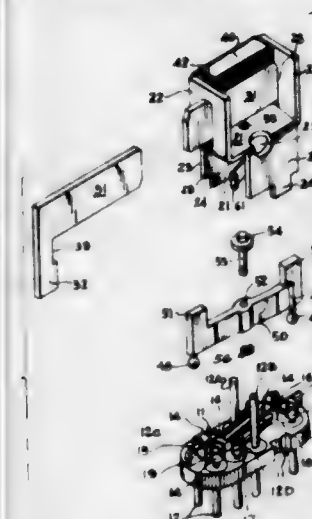
1. In a switch device, relatively movable plates one of which contains a cavity, magnetizable particles in said

cavity, conducting means completing a circuit to said particles, and magnetic means associated with said plates on both sides of said cavity and movable between a first and second position, said magnetic means being aligned with said cavity on opposite sides thereof when in said

to certain of said contact means for switching action therewith; and means extending from the region of said coil through said floor and connecting the coil with certain other contact means on the base member.



3,005,071
RELAY STRUCTURE
Daniel Brunicardi, Wood Dale, Ill., assignor to Comar Electric Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 30, 1958, Ser. No. 731,961
5 Claims. (Cl. 200-87)



1. In a relay, a one-piece frame structure comprising a common floor portion having a pair of parallel arms and a pair of parallel legs projecting in respectively opposite directions from each of the two opposite sides thereof, said pairs being angularly displaced 90° about an axis normal to said floor; said pair of arms being perforated to provide aligned pole slots therethrough, and said pair of legs constituting base-mounting and spacing legs; a base member having supporting engagement with said mounting legs; contact means on said base member; a coil having a bore disposed in alignment with said pole slots and disposed in a position between said pair of arms; pole pieces projecting through said slots into the bore of the coil and having offset pole-face parts extending to a level beyond said floor toward said mounting legs; an armature bearing carried on said floor at least on the side thereof toward said mounting legs; an armature pivotally mounted on said bearing for cooperative movement relative to said pole-face parts and relative

ELECTRICALLY CONTROLLED SWITCHING DEVICE

John T. L. Brown, Short Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 22, 1959, Ser. No. 847,935
15 Claims. (Cl. 200-87)



1. An electrically controlled switching device comprising a pair of electrical contacts, a pair of remanently magnetic members of a material exhibiting a plurality of stable remanent magnetization states, and electromagnetic field producing means associated with said members for controlling said contacts, said field producing means comprising a winding individually encompassing each of said members and mutual inductance means providing coupling between said members so that said switch operates upon the application of concurrent control signals to said windings and releases upon the application of a control signal to only one of said windings.

3,005,073

HIGH SPEED CIRCUIT BREAKER

Alexander Reiss and Gerhard Hillebrand, Neumunster, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed July 24, 1959, Ser. No. 829,358
Claims priority, application Germany July 30, 1958
4 Claims. (Cl. 200-94)



1. An automatic circuit-breaker comprising a fixed contact and a movable contact, a contact-actuating mechanism keeping said contacts in closed position under predetermined normal current conditions while allowing for the opening of said contacts under the influence of the electro-dynamic force produced by a predetermined overload current, and additional contact-actuating means connected with said contact-actuating mechanism producing a force component tending to keep said contacts in their respective end positions, which force component is reversed whenever said predetermined overload current has been reached, thereby opening said contacts independently

from the opening action of said contact-actuating mechanism, said additional contact-actuating means having a shaft actuated by said contact-actuating mechanism, a switch traverse connected with said shaft and moved thereby, a guide recess in said traverse, an unstable spring, a bolt connected with said movable contact and to one end of said unstable spring, said bolt being guided in said guide recess and having a first end position in which said contacts are closed and a second end position in which said contacts are opened, said bolt being movable from said first end position to said second end position and vice versa by said traverse and also independently from said traverse and said contact-actuating mechanism by the influence of the electro-dynamic force of a predetermined overload current passing through said contacts.

3,005,074

CIRCUIT INTERRUPTING DEVICES

Richard A. Arzapalo, East Orange, N.J., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Feb. 26, 1959, Ser. No. 795,630
2 Claims. (Cl. 200-120)



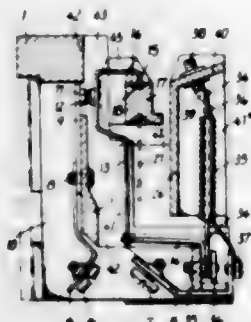
1. In a circuit interrupting device for protecting an electrical system, spaced apart terminals for connection to said system, current carrying means in circuit between said terminals, sealed container means surrounding said current carrying means, an arc extinguishing medium within said container and including trifluoromethylsulfurpentafluoride, said current carrying means being separable whereby an arc is struck within said chamber, said medium effecting extinction of said arc to interrupt the current in said system, at least a portion of said trifluoromethylsulfurpentafluoride being broken down by the action of said arc into carbon tetrafluoride and sulphur tetrafluoride to substantially increase the pressure within said container and thereby enhance said arc extinction.

3,005,075

POLYPHASE MOTOR PROTECTING SWITCH

Jakob Ellenberger, Altdorf, near Nurnberg, Germany, assignor to Ellenberger & Poenagen G.m.b.H., Altdorf, near Nurnberg, Germany

Filed Oct. 20, 1960, Ser. No. 63,795
Claims priority, application Germany Oct. 24, 1959
12 Claims. (Cl. 200-122)



1. A polyphase motor protecting switch comprising a plurality of bimetallic strips, each mounted in a fixed position at one end and a heating coil on each strip, a pair of contact members associated with each of said bimetallic strips and each having a contact thereon, one of said contact members of each pair forming a contact spring and mounted at one end and movable about said end relative to the other contact member to open and close said con-

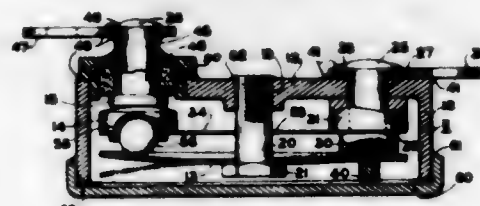
tacts, each of said movable contact springs and the associated heating coil being adapted to be connected to one side of one of several circuits, each of said other contact members being adapted to be connected to the other side of said circuit, a common pivotable control element, each of said bimetallic strips being in engagement at its other end with said control element, a common rocking member having V-shaped recesses in two opposite sides thereof, each of said movable contact springs engaging with its free end into one of said recesses and forming a pivot point for said rocking member, and a pivot member on and movable with said control element and engaging into the opposite recess in said rocking member so as to form a second pivot point for said rocking member, said rocking member being adapted suddenly to tip over in one direction about said two pivot points and thereby suddenly to separate all of said contacts when an excess current occurs in one of said circuits and the heating coil in said circuit is thereby heated so that the associated bimetallic strip is bent and thereby pivots said control element so as to shift said pivot member and said second pivot point of said rocking member.

3,005,076

THERMOSTATIC DEVICE

Charles S. Mertler, Mansfield, Ohio, assignor to Stevens Manufacturing Company, Inc., a corporation of Ohio

Filed May 19, 1958, Ser. No. 736,175
14 Claims. (Cl. 200-138)



1. A snap acting thermostat comprising a base, a resilient blade having first and second portions, first terminal means on said base mounting said first portion of said resilient blade to said base, a movable contact carried on the second portion of said resilient blade, a second terminal extending through said base in insulated relationship with respect to said first terminal, a second contact on the interior end of said second terminal and positioned for selective contact with said movable contact, a concave-convex bimetallic element having first and second sides, an abutment to engage said first side of said bimetallic element, a post on said first terminal means to engage said second side of said bimetallic element near one edge thereof, means to prevent rotation of said bimetallic element, a recess in said resilient blade, an insulated spacer fitting within said recess and acting between said resilient blade and said second side of said bimetallic element at a point generally opposite said post and said resilient blade resiliently urging said insulated spacer toward said bimetallic element, whereby said bimetallic element is adapted to snap between concave and convex positions upon temperature changes to move said movable contact through the agency of said insulated spacer into and out of engagement with said second contact.

3,005,077

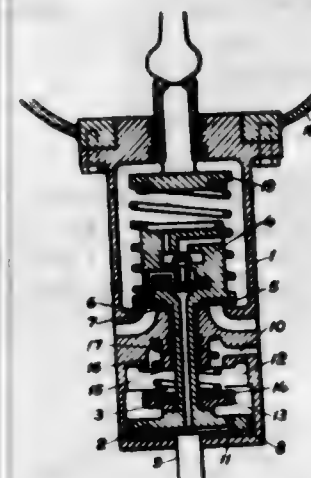
OPERATING DEVICE FOR A BLAST VALVE IN AN AIR BLAST CIRCUIT BREAKER

Haakon Forwald, Ludvika, Sweden, assignor to Allmanns Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden

Filed Mar. 19, 1959, Ser. No. 800,549
Claims priority, application Sweden Mar. 26, 1958
3 Claims. (Cl. 200-148)

1. In an air blast circuit breaker comprising a blast valve, operating means for the valve comprising a piston

operatively connected thereto and separating first and second spaces, means for supplying compressed air to the first space to move the piston in a first direction, means connecting the second space to free air, means responsive to movement of the piston to its end position in said first direction to close said connecting means, means to equalize the pressures in said two spaces, means operative when the pressures are equalized to move the



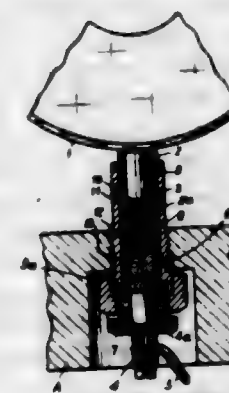
piston in a second direction, said connection closing means being responsive to pressure in said second space to maintain the connecting means in closed condition when the pressure in said second space remains substantially above that of the free air, and means independent of said connecting means to connect the second space to free air, said connection closing means being rendered inoperative when the pressure in said second space equals that of the free air.

3,005,078

ELECTRICAL CONTACT DEVICE

Andre Motin and Germain Rollat, Geneva, Switzerland, assignors to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a firm of Switzerland

Filed Sept. 8, 1959, Ser. No. 838,788
Claims priority, application Switzerland Sept. 18, 1958
2 Claims. (Cl. 200-166)



1. An electrical contact device for maintaining contact with a movable conductor surface comprising in combination, a sheath means for attaching to a support adjacent said movable conductor surface, a piston contact means slidably mounted in said sheath means for making electrical contact with said movable conductor surface, a biasing means for urging said piston to contact said movable conductor surface, a non-conducting guide bearing means slidably mounted intermediate and concentric with said sheath and said piston for insulating and guiding said piston in its movements, and a second biasing means for urging said non-conducting guide bearing means to contact said movable conductor surface thereby providing complete insulation and guide bearing for said piston contact means between said sheath and said movable contact surface.

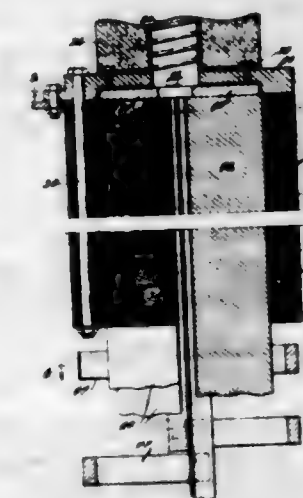
771 O.G.-85

3,005,079

METHOD AND APPARATUS FOR EFFECTING THERMAL BONDS

Harry O. Monson, Elmhurst, and Robert A. Jaros, Downers Grove, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 25, 1960, Ser. No. 24,626
8 Claims. (Cl. 219-9.5)



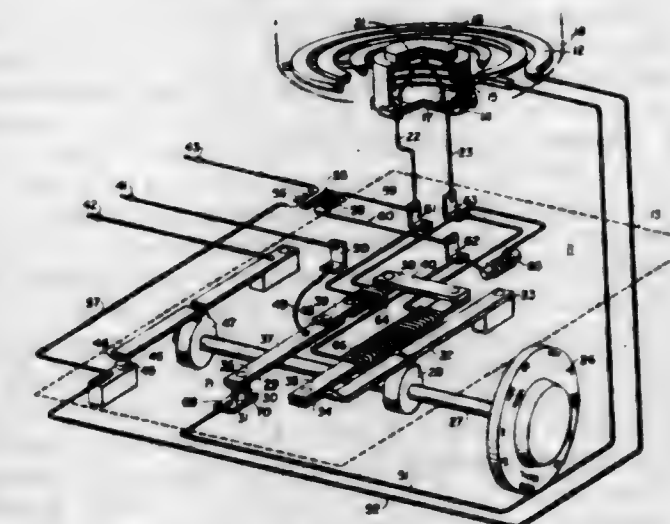
1. A device for effecting a metallic bond between a rod and a surrounding jacket comprising: a ferromagnetic core, said core comprising essentially a circular shell having six equally spaced wedge-shaped segments extending radially inward therefrom, two wedge-shaped electrical conductors within each space between adjacent core segments, said conductors insulated from one another and from said core segments, the inner surfaces of said segments and said conductors forming an aperture to receive said jacketed rod, means for electrically connecting the two electrical conductors immediately ad-jacent each core segment at the one ends of said conductors, means for serially connecting oppositely disposed pairs of electrically connected conductors forming three sets thereof, means for interconnecting the sets of serially connected conductors at their one electrical ends, and means for applying a three-phase alternating current to said sets of serially connected conductors at their other electrical ends.

3,005,080

AUTOMATIC TEMPERATURE CONTROL SYSTEM

Howard W. Bletz, Lexington, Ohio, assignor to Stevens Manufacturing Company, Inc., a corporation of Ohio

Filed Nov. 1, 1957, Ser. No. 693,958
15 Claims. (Cl. 219-20)



15. A temperature control for a vessel heated by a heating element energizable from voltage source ter-

minals, comprising, in combination, first and second control contacts, means to connect said voltage source terminals in circuit relationship with said control contacts and with said heating element for energization thereof, bimetallic means acting on said contacts, sensing control means connected to said voltage source and acting on said bimetallic means to relatively separate said contacts upon increase of temperature of said vessel, manual means to vary the relative position of said control contacts, said contacts being relatively variable in spacing through a boil range for said vessel, proportioning control means including said bimetallic means, said proportioning control means including a flexible pigtail connected to said bimetallic means for passage of load current through said bimetallic means and said pigtail, the variable spacing of said control contacts through said boil range causing variable amounts of load current through said bimetallic means to vary the rate of boiling despite a lack of change of temperature on said sensing control means.

3,005,061

HIGH INTENSITY HEAT AND LIGHT UNIT
Eldon E. Kordes, Newport News, Donald H. Trussell, Hampton, Deane J. Weldman, Tabbe, and George E. Griffith, Newport News, Va., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 4, 1960, Ser. No. 19,971
2 Claims. (Cl. 219-34)

(Granted under Title 35, U.S. Code (1952), sec. 266)

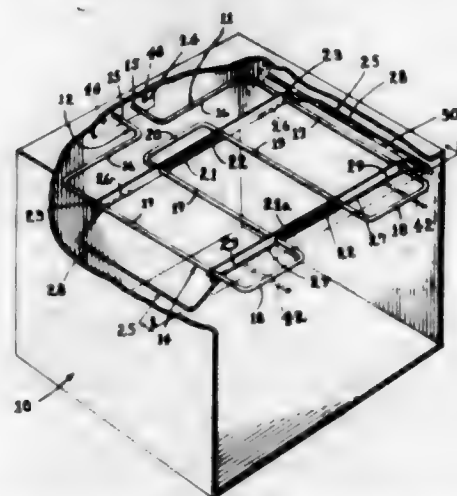


1. A high intensity heat and light radiating unit comprising a reflector plate having spaced outer and inner surfaces, a first plurality of straight grooves each having at least a semi-cylindrical curved surface formed in said outer surface of said plate, said grooves being disposed in equidistantly spaced parallel relation, a tubular lamp positioned in each of said grooves in semi-cylindrical contacting relation therewith, a coolant reservoir element having an inner surface conforming with the inner surface of said reflector plate connected to said reflector plate with said conforming surfaces disposed in abutting relation, said reservoir element being provided with a reservoir recess formed in said inner surface thereof opening upon said inner surface of said reflector plate, a second plurality of grooves formed in said inner surface of said reflector plate, said grooves of said second plurality opening upon said reservoir recess formed in said reservoir element inner surface, said second plurality of grooves being offset with respect to said first plurality of grooves with the semi-cylindrical portion of each groove of said first plurality of grooves being substantially symmetrically disposed between the deepest portion of two of said second plurality of grooves, at least two fluid flow conduits disposed between said reservoir recess and at least one outer surface of said reservoir element, an exterior recess formed in said outer surface of said reflector plate adjacent each end of said first plurality of grooves, an aperture formed through said reflector plate adjacent each end of each of said semi-cylindrical grooves and disposed in one of said exterior recesses, means adjacent each end of each of said lamps for electrically connecting each lamp end through the adjacent aperture through said reflector plate to a source of electrical energy including a connector element disposed in one of said exterior recesses in said outer reflector plate surface adjacent each end of each of said semi-cylindrical grooves, an elongated conductor element positioned in each connector element

and extensible through a reflector plate aperture beyond said inner surface thereof and substantially perpendicularly thereto, an electrical lead connected between each end of each lamp and one of said elongated conductor elements, conductor means carried by said reservoir element adjacent each of said apertures through said reflector plate electrically contactable by said elongated conductor elements when said reservoir element is connected to said reflector plate with said conforming surfaces in abutting relation, and electrical leads connected between said reservoir element carried conductor means and said source of electrical energy.

3,005,062

ELECTRIC HEATER ASSEMBLY FOR OVENS
George Edward Ammerman, Oakmont, Pa., assignor to Edwin L. Wiegand Company
Filed Apr. 28, 1958, Ser. No. 731,351
6 Claims. (Cl. 219-35)



1. A heater assembly for use in heating the interior of an oven, comprising a main sheathed tubular heating element having a terminal portion and a loop-shaped active heating portion, an auxiliary sheathed tubular heating element having a terminal portion and a loop-shaped active heating portion, the latter loop-shaped portion being greater than the former and circumscribing the same, means for supporting the terminal portions of said main and auxiliary heating elements, a pair of spaced sheet-metal braces extending cross-wise of and secured to the loop-shaped active heating portion of said main heating element, and a pair of U-shaped bendable wire members, each wire member having its legs welded to respective braces with a terminal portion of one leg of each wire member connected to the loop-shaped active heating portion of said auxiliary heating element, said wire members being bendable so that the bight portions thereof may be accommodated for engagement with different support surfaces found in various oven structures.

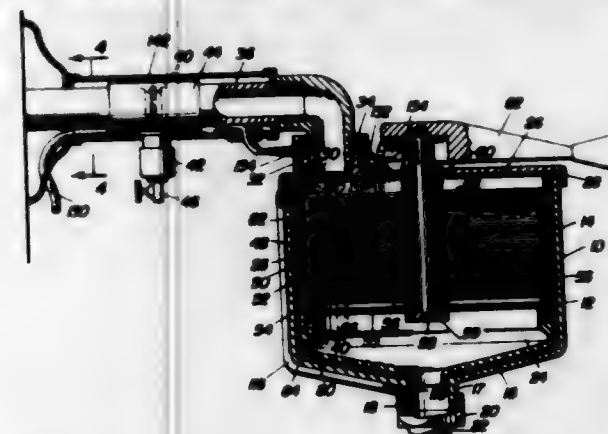
3,005,063

ELECTRO-HEATER

Lorenzo E. Mendoza and Roberto J. De Los Rios, both of 310 E. Adalee, Tampa, Fla.
Filed Oct. 29, 1958, Ser. No. 776,447
14 Claims. (Cl. 219-40)

1. A heater for a source, said heater comprising a housing provided with a liquid inlet and a liquid outlet, a first group of flat electrodes, a second group of flat electrodes interleaved with the electrodes of said first group, means for applying an electric potential to the electrodes of each group, said electrodes of the groups being spaced from each other to provide a liquid passage space across which current flows to heat the liquid, means for adjusting the position of said first group of electrodes with respect to the second group of electrodes, each electrode having an opening in alignment with said inlet and

through which water may flow, the openings of said second group of electrodes being moved into and out of registry with the openings of said first group of electrodes,

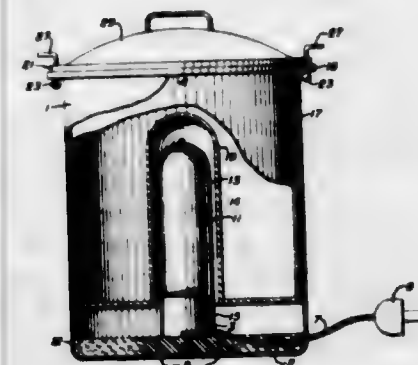


and means on at least some of said electrodes for supporting said electrodes spaced apart and for wiping across some of the electrodes when one group is adjusted with respect to the other group.

3,005,064

FOOD WARMER

Thomas M. Egan, 1464 Webb Ave., Detroit, Mich.
Filed Feb. 20, 1959, Ser. No. 794,688
4 Claims. (Cl. 219-45)



1. A food warmer comprising an open container having a removable inner lining, a heating element centrally mounted within said container and substantially surrounded by said inner lining and a perforated shield between said heating element and said inner lining, said container terminating in an outwardly extending flange at its open end and said liner terminating in an outwardly extending flange at its upper end, said liner flange being supported by said container flange, said container flange having a plurality of openings therein and said liner flange having a like plurality of subtending support members, said support members passing through said openings when aligned therewith and resting upon said container flange when misaligned therewith whereby a separation is created between said container and said liner when said support members are misaligned with said openings, said separation providing a means for venting a portion of the heat created by said heating element.

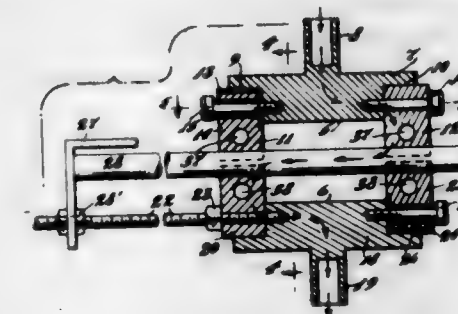
3,005,065

MECHANISM FOR HEATING ARTICLES PRIOR TO DEFORMING

Peter S. Vosbikian and Thomas S. Vosbikian, Melrose, Pa. (20th and Oxford Sts., Philadelphia, Pa.)
Filed Jan. 7, 1960, Ser. No. 983
1 Claim. (Cl. 219-50)

Mechanism for electrically heating a portion of an article prior to deforming, comprising an upper and a lower clamping head section, each consisting of an outer cross bar and spaced end bars at right angles to its respective cross bar, and having their free ends forming

clamping jaws, one end bar of one head section and the diagonally opposite end bar of the other section being insulated from their cross bar, said head sections having cooling passages for a cooling medium, a rod extending longitudinally from one head section, and a stop adjust-

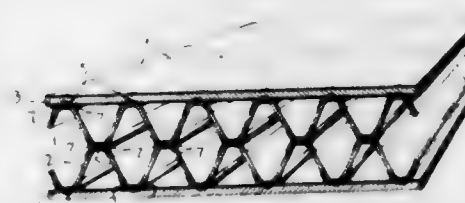


able on said rod to selectively position a work piece between said clamping jaws, said head sections having terminals for an electric circuit and said circuit being closed by the clamping of a work piece between the clamping jaws.

3,005,066

JOINING METHODS

Michael Watter, Philadelphia, Pa., assignor to The Badd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 16, 1959, Ser. No. 806,812
2 Claims. (Cl. 219-85)



1. The method for joining cylindrical core and planar skin sheet metal sandwich structure components along a tangential faying surface at which at least one of the components is substantially curved, which method comprises the steps of interposing between a cylindrical core component and an adjacent component a layer of a brazing material having a fusion temperature substantially less than that of the components, applying welding pressure urging the components together and enforcing contact between the components and the brazing material at a joining position, passing a welding current through the joining position fusing the braze material and subsequently forming a weld nugget between the components within the fused brazed metal, interrupting the supply of welding current while maintaining welding pressure, solidifying the fused brazed metal into a fillet about the weld nugget, and thereafter removing the welding pressure.

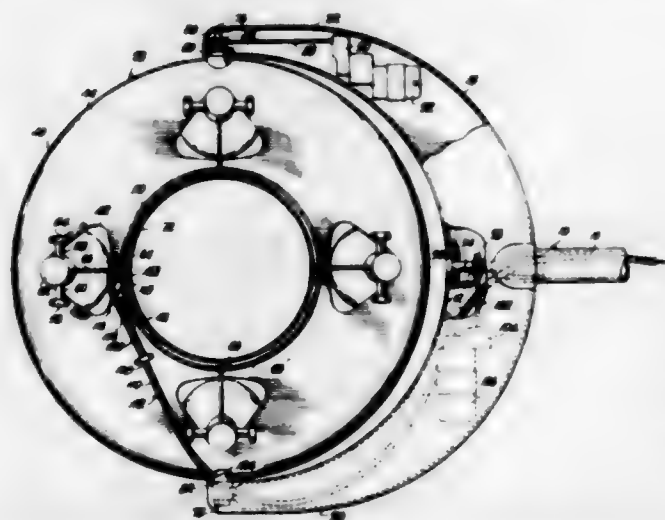
3,005,067

VARIABLE FOCUSING, MULTI-BEAM, ILLUMINATING DEVICE

Michael R. Klein, 6411 W. 67th St., Overland Park, Kans.
Filed July 28, 1958, Ser. No. 751,518
2 Claims. (Cl. 240-1.4)

1. In illuminating apparatus for use in surgical operating rooms or the like, upright post means; an arm mounted on said post means for vertical swinging movement relative to the latter; a normally horizontal frame; means for shiftably mounting said frame on said arm remote from said post means, said frame shifting relative to said arm to remain horizontal as said arm is swung to raise and lower said frame; a plurality of substantially unidirectionally radiative light sources; means pivotally mounting

each of said sources on said frame for swinging movement about separate, normally, substantially horizontal axes all substantially tangent to a common circle, said sources being disposed for directing the primary radiations therefrom generally downwardly along angularly converging paths; shiftable control means mechanically coupled with said means pivotally mounting each of said sources for simultaneously swinging said sources through substantially equal angles relative to said frame to vary



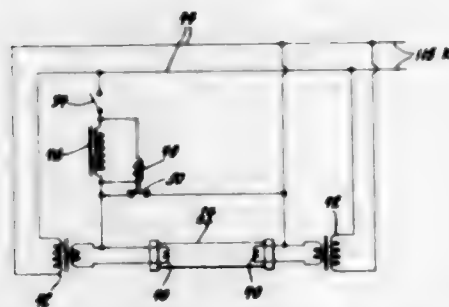
the focus of said primary radiations; and mechanical linkage means interconnecting said post means with said control means, the connection of said linkage means with said post means being at a zone of the latter spaced from the axis of swinging movement of said arm, for shifting said control means automatically as said arm is swung relative to said post means for correlation of said focus with the vertical position of the frame relative to a subject to be illuminated.

3,005,088

REFRIGERATING APPARATUS

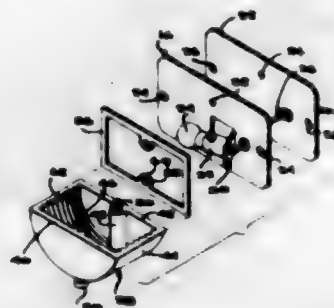
Verlos G. Sharpe, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 28, 1957, Ser. No. 662,178
3 Claims. (Cl. 240-4)



1. In combination, a refrigerator having a refrigerated food storage compartment therein, a fluorescent lamp lighting system, a power source of a given voltage, a fluorescent lamp disposed in said compartment and including an elongated tube having a pair of cathodes located at opposite ends thereof, a pair of terminals connected to each of said cathodes, means including a transformer having its primary connected to said power source for supplying power to said terminals at a reduced voltage for continuously heating said cathodes, conductor means for connecting one terminal of each of said cathodes across said power source, means including a switch for providing a direct short between a terminal of one of said cathodes and a terminal of the other of said cathodes, and a solenoid in one of said conductor means having an armature arranged to open said switch upon energization of said solenoid.

3,005,089
INDICATING DEVICE FOR A VEHICLE
Robert J. Robbins, 401 N. Michigan Ave.,
Greensburg, Ind.
Filed Apr. 24, 1959, Ser. No. 808,646
5 Claims. (Cl. 240-7.1)

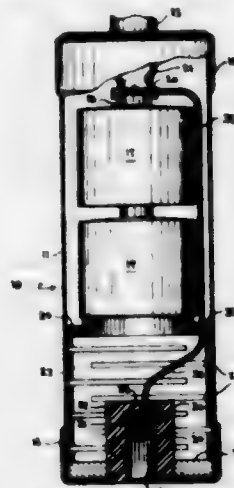


1. The combination with a vehicle body having a wall, of an indicating device comprising a resilient plate positioned so that it is in abutting face-to-face relation with respect to said wall, a mounting member having a front face and a back face positioned so that the back face is in abutting face-to-face relation with respect to said plate, means on said member and said plate for receiving fastening elements, fastening elements extending through the means on said member and plate for securing the member and the plate to said wall, a lamp socket on the front face of said member, a lamp bulb in said socket, and a transparent cover in the form of a hollow housing and shaped to wholly enclose said socket and bulb positioned so that it wholly encloses said socket and bulb with the open side adjacent to the front face of said member, and fastening elements extending transversely through said housing and detachably secured to the adjacent portions of said mounting member.

3,005,090

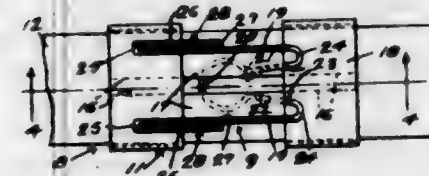
RECHARGEABLE BATTERY HANDLE

William C. Moore, 62 E. Elizabeth St., Skaneateles, N.Y.
Filed Dec. 12, 1958, Ser. No. 779,931
5 Claims. (Cl. 240-10.6)



1. A battery handle for electrically illuminated diagnostic instruments comprising a hollow casing, a plurality of rechargeable sealed, dry type battery cells mounted in stacked relation in said casing, a top closure for said casing having means for attaching an instrument thereto, a bottom closure for said casing, means in said casing for conducting current from said battery cells to the instrument through said top closure, and means in said casing for delivering current from an external source to said battery cells to recharge same, said last-named means including an insulated recessed contact in said bottom closure and an insulated conductor in said casing connecting said contact with one terminal of said battery cell stack, the other terminal of said battery cell stack being electrically connected to said casing.

3,005,091
ADJUSTABLE FLASHLIGHT HOLDER
Thomas F. Cote, 1230 Hood St., Chicago, Ill.
Filed Apr. 24, 1959, Ser. No. 808,598
8 Claims. (Cl. 240-52.5)

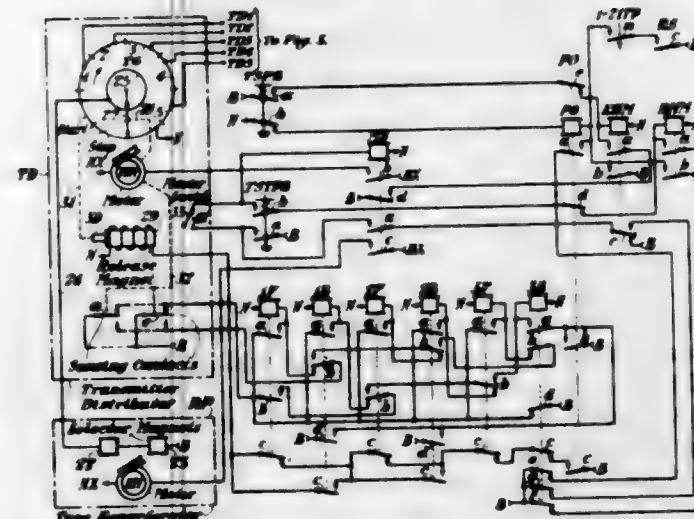


1. A flashlight holder comprising a flashlight engaging member formed from a single strand of resilient wire including a pair of corresponding elongated transversely spaced legs having outwardly turned back portions at corresponding ends thereof combining with complementary portions of said legs to form opposed clamping jaws which are elongated in a direction lengthwise of the legs and between which a flashlight is adapted to be releasably clamped, said flashlight engaging member including a loop formed by the intermediate portion of said strand, said loop being disposed between portions of said legs, being offset from the plane of the legs in a direction away from the clamping jaws and having an open end opening in a direction away from said jaws, said strand including portions forming diverging extensions of the open end of said loop and merging with the other ends of said legs, and a support to which said loop is detachably connected.

3,005,092

ROUTE REPORTING SYSTEM FOR RAILROAD CLASSIFICATION YARDS

Sh Hsueh Tsiang, Morristown, N.J., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 28, 1958, Ser. No. 736,513
8 Claims. (Cl. 246-2)



5. In a railroad classification yard provided with an automatic switching system to route cuts of cars into preselected storage tracks, a route reporting system for registering the destination track of each car of a train being classified into the yard, comprising a bank of storage repeater relays to receive the preselected route designation for a cut of cars next approaching the initial switch of said yard, the pre-selected route designation being stored by the selected energized combination of said repeater relays, holding circuits controlled by the occupied condition of the track portion including said initial switch for retaining energized an existing energized combination of said repeater relays while the corresponding cut traverses said initial switch, a car counting means having connections to the track at said initial switch and

actuated by the passage of cars over that switch for closing a contact periodically to indicate the completed passage of each car, a recording device operable in cycles to register the destination track for each car in multi-digit code on a recording medium, each recording cycle including at least one registering period for each digit of said code, a bank of sequencing relays, and control circuits therefor including contacts alternately closed by said device at the beginning and end of each registering period, said control circuits being effective to successively energize said sequencing relays to count the registering periods of each recording cycle, a first and a second manually operable control means for starting and stopping respectively the recording operation of said device to register an entire train, a coordination circuit having connections to said device and including contacts of said sequencing relays and a contact closed in response individually to the operation of said counting contact and of said first and said second manually operable control means, said coordination circuit being effective to initiate and coordinate a cycle of operation of said device for each car and for the beginning and the end marking of the route reporting operation for a train; and a code selection circuit network having connections to said device to select the proper codes to register the destination track of the corresponding car crossing said initial switch and at times the proper code to mark the beginning and the end of the route reporting operation, said code selection circuit network comprising a first network path including back contacts of said sequencing relays and energized position contacts of said repeater relays corresponding to a first digit of the destination tracks, a second network path including front contacts of the sequencing relay corresponding to the first registering period and energized position contacts of the repeater relays corresponding to a second digit of said destination tracks, and a third network path including front contacts of the sequencing relay counting the second registering period, said code selection circuit network further comprising a first and a second auxiliary network path including respectively contacts responsive to the operation of said first and said second manually operable control means.

3,005,093

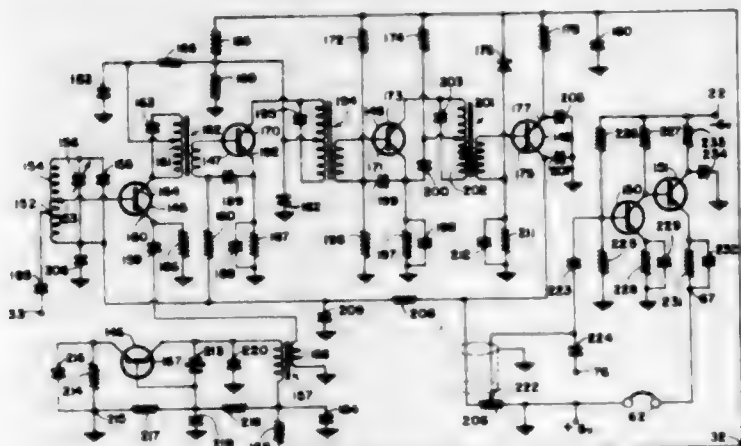
TRANSISTORIZED DETECTOR AND AUTOMATIC GAIN CONTROL CIRCUIT

John Eugene Roger Harrison, Rochester, N.Y., and Sholly Kagan, Natick, Mass., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Continuation of abandoned application Ser. No. 746,902, July 7, 1958, which is a division of application Ser. No. 715,165, Feb. 5, 1958, now Patent No. 2,990,452, dated June 27, 1961, which is a division of application Ser. No. 639,075, Feb. 8, 1957, now Patent No. 2,935,606, dated May 3, 1960. This application Sept. 16, 1960, Ser. No. 56,554
1 Claim. (Cl. 250-20)

In a radio receiver, the combination of a PNP type base-emitter fed mixer transistor having an emitter, collector and base; a plurality of intermediate frequency transistor stages in cascade with said mixer transistor, each stage comprising a PNP type transistor; a stabilized detector comprising an input transformer having a secondary with two terminals and a base-emitter fed NPN type detector transistor having an emitter, collector and base, the detector transistor base being connected to one of said terminals; a parallel resistance-capacitance network being connected between the other secondary terminal and a point of reference potential; a source of bias current having a positive terminal connected to said point of reference potential and also a negative terminal; an emitter load resistor between the detector emitter and the negative terminal of said source; a diode connected

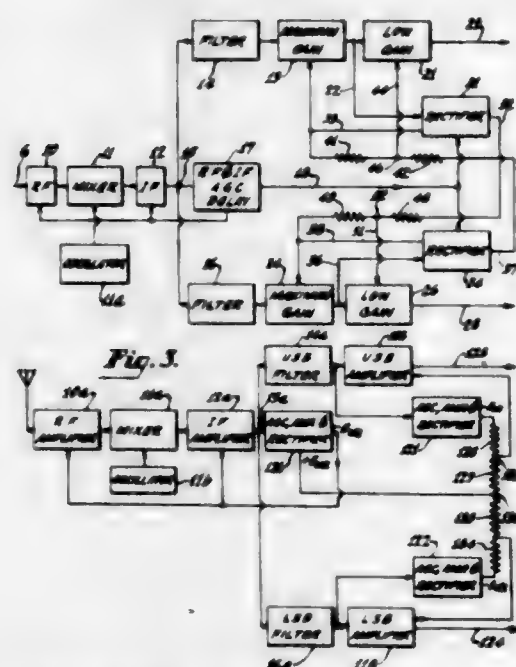
in a conductive direction in series between the negative terminal of said source and said other secondary terminal to provide initial forward bias on the detector transistor base of a polarity opposite to that resulting from detector collector current flow, the cathode of said diode being connected to said negative terminal; a first collector resistor between said detector collector and said point of reference potential; individual by-pass capacitors between said point of reference potential and the emitter and collector of said detector transistor; a resistive connection from the junction of said detector collector and the first



collector resistor to the bases of said mixer transistor and the first one of said intermediate frequency stage transistors, whereby as the input signal amplitude is increased, the voltage applied to said bases becomes more negative to control and increase base current in said mixer and first intermediate frequency stage transistors; and second and third collector resistances connected between the collectors of said mixer and said first intermediate frequency stage transistors and said negative terminal, the first collector resistor being included in the base returns of both controlled transistors.

3,005,094

AUTOMATIC GAIN CONTROL CIRCUIT
Charles H. Taylor, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,287
5 Claims. (Cl. 250-20)

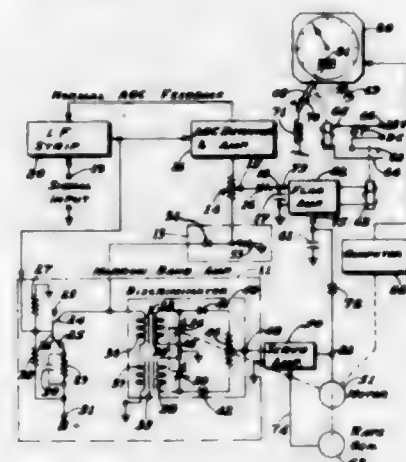


1. A circuit for producing an automatic gain control voltage for electronic apparatus having a single wide signal acceptance band means in an initial portion thereof followed by a pair of signal channels each having a more

restricted signal acceptance band, means coupled to said wide signal acceptance band means for developing an automatic gain control voltage, means for separating said total signal into a pair of signals, means for feeding each of said pair of signals to a respective more restricted signal channel providing a pair of relatively narrow band signals, means for developing a pair of voltages, each of said pair of voltages being proportional to said signal in the respective one of said restricted channels, means for applying said first developed gain control voltage to said means for developing a pair of voltages, means for comparing said pair of developed voltages to develop a first comparison voltage becoming more positive as said signal strength increases in said first channel, means for again comparing said pair of developed voltages to develop a second comparison voltage becoming more positive as said signal in said second channel increases, means for applying said first comparison voltage to said second channel to increase the gain thereof as said signal in said first channel increases, means for applying said second comparison voltage to said first channel to increase the gain thereof as said signal in said second channel increases.

3,005,095

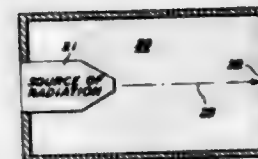
SIGNAL PRESENCE MONITOR FOR NOISE-TYPE SIGNALS
Harris A. Stover and Elmer C. Thulin, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 27, 1959, Ser. No. 796,021
2 Claims. (Cl. 250-20)



1. A monitoring means, comprising: a wide-band signal path adapted to receive a signal S; a first detector connected to said wide-band signal path and having an output of $S+N_1$, where N_1 is the noise from the output of said first detector; a narrow-band signal path adapted to receive said signal S, said narrow-band signal path including a tunable frequency discriminator; a second detector connected to said narrow-band signal path, said second detector having an output of $S+N_2$, where N_2 is the noise from the output of said second detector; adjustable adding means connected to the outputs of said detectors for balancing the noise N_1 against the noise N_2 so that when said signal S is absent the output voltage of said adding means is at a null; indicating means; and amplifying means having first and second inputs and an output, the first input of said amplifying means being connected to the output of said adding means, the second input of said amplifying means being connected to the output of said discriminator, and the output of said amplifying means being connected to said indicating means, whereby voltage derived from the output of said adding means causes said indicating means to indicate the presence of said signal S, and whereby voltage derived from the output of said discriminator will block said amplifying means and cause said indicating means to indicate a malfunction.

3,005,096 IRRADIATION OF MONOCLINIC GLYCINE SULPHATE

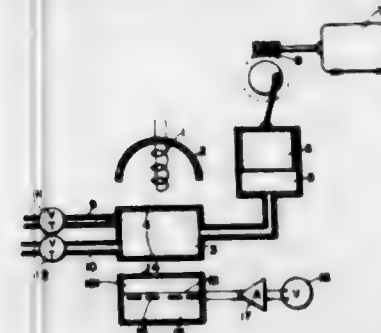
Alan G. Chynoweth, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 14, 1958, Ser. No. 735,270
6 Claims. (Cl. 250-42)



1. A method of selectively varying the hysteresis characteristic of a single crystal of monoclinic glycine sulphate comprising the steps of electrically polarizing the material, and then subjecting it to ionizing radiation from any one of a class of radiation sources consisting of X-rays, gamma rays and electrons, said ionizing radiation being of sufficient energy to cause substantially uniform penetration of said crystal.

3,005,097

METHOD AND APPARATUS FOR THE ANALYSIS BY RADIATION OF MIXTURES OF SUBSTANCES
Heinz Hummel, Frankfurt am Main-Unterliederbach, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Filed Aug. 16, 1957, Ser. No. 678,617
Claims priority, application Germany Aug. 18, 1956
12 Claims. (Cl. 250-43.5)



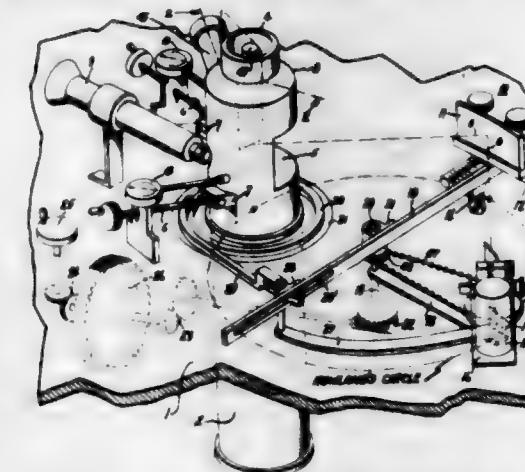
1. Instrument for the analysis of gases and vapors with a source of radiation, a concave reflector for focusing the radiation, a radiation receiver, a cell which is filled with the analysis gas, means for producing periodic pressure variations in the measurement cell, the radiation receiver consisting of a closed vessel filled with the gas components to be determined in the measurement gas, which vessel is closed by a ray-permeable window on the side facing the radiation source and by a diaphragm on the other side, as well as means for electrically indicating the position of said diaphragm.

3,005,098

X-RAY EMISSION ANALYSIS
Erwin C. Baechmann and James F. Norton, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Mar. 31, 1958, Ser. No. 725,431
9 Claims. (Cl. 250-51.5)

1. In an X-ray emission spectrometer, the combination comprising a sample holder assembly adapted to retain samples the composition of which is to be determined, means to produce X-ray emission spectra from samples retained in said holder assembly which spectra are characteristic of the sample composition, means to move said sample holder assembly to produce said X-ray spectra selectively from different portions of said sample, and

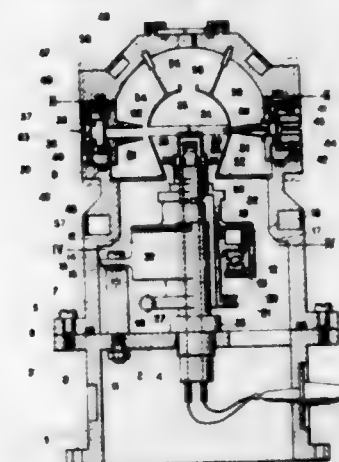
goniometer means selectively movable over a predetermined path to intercept and determine the wavelength of the X-rays emitted from said sample to ascertain the composition of the point on the sample, and means linked to said goniometer means to maintain it in a predetermined



positional relationship to the point of X-ray emission irrespective of the position of said sample holder assembly said last named means including an arm rotatably and translatably mounted about a path that is a fixed distance from the point of X-ray emission on said sample.

3,005,099

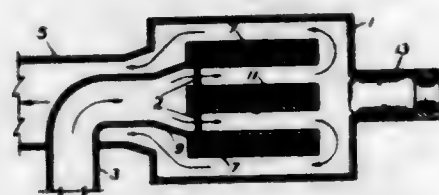
X-RAY DIFFRACTOGRAPH ENABLING DIAGRAMS TO BE TAKEN AT VERY HIGH TEMPERATURES
Fernand Fournier, Verville par Nesles-la-Vallee, and Alexandre Rimsky, Paris, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a corporation of France
Filed Oct. 23, 1958, Ser. No. 769,165
Claims priority, application France Oct. 26, 1957
6 Claims. (Cl. 250-51.5)



1. An X-ray diffractograph device comprising: a vacuum-tight diffraction chamber; means for creating a vacuum within said chamber; means for guiding a beam of X-rays across the space within the chamber; a metal support within said chamber for holding a sample to be examined in the path of said beam; an electron gun within said chamber for bombarding said support with electrons so as to heat said support and a sample thereon to a high temperature, said support being electrically connected with the anode of said gun and being highly heat conductive and having a melting point higher than any temperature to be imparted to it by the electron bombardment; mirror means within said chamber for reflecting back to the sample, heat radiation from the sample; X-ray pervious window means for transmitting X-ray diffraction from the sample to a radiation-sensitive member disposed about said chamber; and means in said chamber outside the paths of X-rays enabling measurement of the temperature of the sample at any moment.

3,005,100 NUCLEAR SCINTILLATION MONITOR

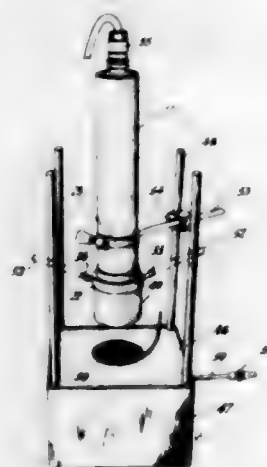
Thos J. Thompson, Belmont, Mass.
(14th Everett Ave., Winchester, Mass.)
Filed June 12, 1956, Ser. No. 590,933
15 Claims. (Cl. 250-71.5)



1. Apparatus for detecting nuclear radiations associated with a predetermined volume of a fluid medium having, in combination, at least one hollow member of scintillation material disposed within the fluid medium and extending along an appreciable portion thereof for producing scintillation radiations in response to the nuclear radiations in an appreciable portion of the fluid medium, the fluid medium being scintillation-radiation transmitting, and monitor means sensitive to the scintillation radiations for receiving the same through the fluid medium and producing an indication of such reception.

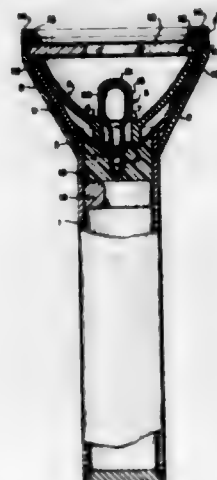
3,005,101 SCINTILLATION-COUNTER PROBE FOR HIGH TEMPERATURE SAMPLING

John R. Bradford, Lubbock, Tex., Nathan L. Dickinson, Westfield, N.J., Donald N. Feigar, Palos Verdes Estates, Calif., and William T. Hage, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 31, 1957, Ser. No. 693,572
12 Claims. (Cl. 250-71.5)



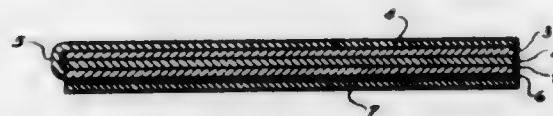
7. Testing apparatus for sensing radioactivity in a system fluid subjected to elevated pressures at elevated temperatures, said apparatus comprising, in combination, a radioactivity sensing element; a cup-shape light metal enclosure for said element having a substantially flat end wall and disposed within a cup-shape vacuum vessel, the inner surface of said vessel being spaced from the outer surface of said enclosure to provide a coolant chamber; means for circulating a coolant through said chamber; and a coil of high pressure tubing including an outwardly spiralling substantially flat section adjacent an end wall of said vessel and continuous with a helical section surrounding the side wall of said vessel, the coil having inlet and outlet connections respectively at the center of the spiral section and the remote end of the helical section for connection of the coil into the system for circulation of system fluid under system conditions through said coil; said vacuum vessel and coolant circulated through said chamber substantially isolating said element from the elevated pressures and elevated temperatures of the system fluid.

3,005,102
SELF LUMINOUS LAMPS
John G. MacHutchin and David L. Prosser, Berwick, Pa., and Charles H. Wright, Overland Park, Kans., assignors to United States Radium Corporation, Morristown, N.J., a corporation of Delaware
Continuation of application Ser. No. 650,247, Apr. 2, 1957. This application Dec. 4, 1958, Ser. No. 778,202
5 Claims. (Cl. 250-77)



1. In a self-luminous light emitting unit, a casing, a light source in the casing, a reflector mounted within the casing and about the light source to direct from the casing the light emitted from said source, said light source comprising a sealed bulb of transparent material resistant to darkening under beta-ray bombardment, a phosphor coating on the inside surface of the said bulb, a radioactive beta-ray emitting gas within said bulb at sub-atmospheric pressure, all points in said bulb being within average beta-trajectory distance of the nearest portion of phosphor, and a beta-ray absorbing shield seated over the bulb substantially transverse to the path of light directed out of the casing, said shield being light-reflective on the surface thereof seated against said outer bulb.

3,005,103
PHOSPHORS
Jay B. Hinson, The Ridge, Hartsdale, N.Y.
Filed Nov. 12, 1957, Ser. No. 696,306
2 Claims. (Cl. 250-80)

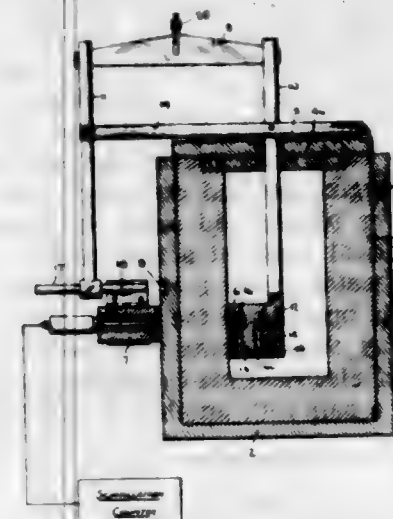


1. A light yielding phosphor-bearing sheet, consisting of a layer of sulfur-bearing phosphor particles adapted to absorb radiation and later emit light rays, carried in a permanently flexible resin, a cover for said layer consisting of a harder acrylic resin adapted to resist wear, a continuous aluminum foil sheet on which the phosphor-bearing layer is carried, and a continuous permanently flexible layer consisting of acrylic resin separating the phosphor-bearing layer from the aluminum and permanently inhibiting chemical reaction between the phosphor and the foil.

3,005,104
METHOD AND MEANS FOR TESTING METALS
Neil F. Ritchey, Westtown, Pa., assignor to Knapp Mills Incorporated, Long Island City, N.Y., a corporation of New York
Filed Sept. 17, 1958, Ser. No. 761,652
10 Claims. (Cl. 250-106)

1. The method of testing a thickness of material as an effective barrier to radiation, which method comprises

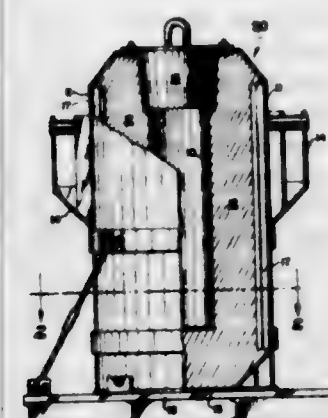
forming a defect having a predetermined radiation penetrability in the material to be tested to be used as a means for checking the accuracy of the testing operation and



measuring periodically in the testing operation the radiation through the material at said known defect to be sure that the testing operation is functioning properly.

3,005,105 SHIPPING CASK FOR RADIOACTIVE MATERIALS

Elmer C. Lusk, Columbus, Ohio, assignor, by mesne assignments, to The Edlow Lead Company, Columbus, Ohio, a corporation of Ohio
Filed Oct. 17, 1958, Ser. No. 767,935
6 Claims. (Cl. 250-108)

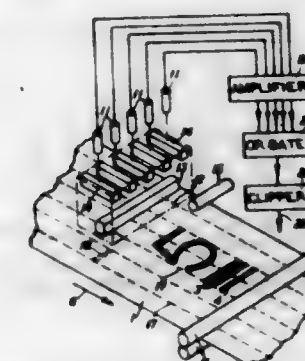


1. A carrying cask for radioactive materials which comprises: a thin, inner cylindrical container; an outer cylindrical shell, spaced outwardly from said inner container; and a monolithic cast-lead shielding material situated therebetween; characterized by a plurality of heat-conductive fins attached to said outer shell and extending into said lead mass, said fins providing a heat-conductive bridge from said lead mass to said shell across the void therebetween inherent in such a cast-lead carrying cask.

3,005,106
DATA SENSING APPARATUS
Colin Bernard Wilkins, Blackmore End, Wheathampstead, England, assignor to International Computers and Tabulators Limited
Filed Oct. 14, 1959, Ser. No. 846,459
Claims priority, application Great Britain Nov. 26, 1958
6 Claims. (Cl. 250-208)

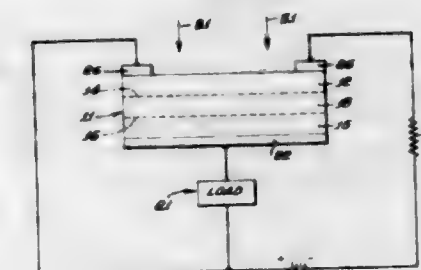
1. Apparatus for sensing significant character representing areas defined by marks recorded on a document, said

apparatus comprising a group of sensing devices arranged to provide a line of adjacent scanning areas; each of which is smaller than one of said significant areas; document feeding means operative to feed the document past the sensing devices so that said line of scanning areas is traversed in sequence by the significant areas representing a character; an electronic gate circuit with an input for each of the sensing devices and a single signal output;



and means to apply signals from each of the sensing devices to a corresponding input of the gate circuit, the gate circuit being responsive to the application of simultaneous input signals to produce at said single signal output a signal the amplitude of which is determined by that of the largest input signal, whereby the output signal amplitude is indicative of the presence of a significant area in any of said scanning areas.

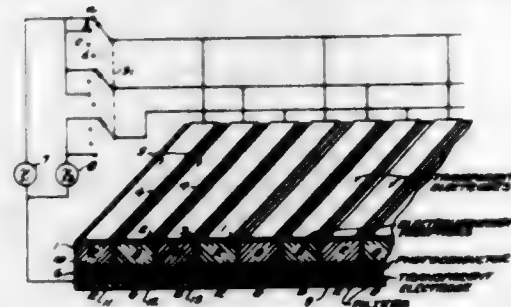
3,005,107
PHOTOCONDUCTIVE DEVICES
Harold Weinstein, Chicago, Ill., assignor to Hoffman Electronics Corporation, a corporation of California
Filed June 4, 1959, Ser. No. 818,089
4 Claims. (Cl. 250-211)



1. A photoconductive device comprising: a semiconductor having first, second, and third regions, said first and third regions having n-type conductivity, said second region having p-type conductivity, said first and second regions being separated by a first p-n junction, said second and third regions being separated by a second p-n junction, and said first region being photoconductive; first and second leads ohmically coupled to said first region, there being a high resistance path through said first region between said first and second leads when said first region is in a substantially non-illuminated condition and there being a low resistance path through said first region between said first and second leads when said first region is in a relatively illuminated condition; a third lead ohmically coupled to said third region, said first and third leads being coupled together through a load; a resistor; and a battery, said second and first leads being coupled together through said resistor in series with said battery, and said battery back-biasing said second p-n junction beyond voltage breakdown only when there is a high resistance path through said first region between said first and second leads.

3,005,108 SOLID STATE LIGHT AMPLIFIER FOR COLOR

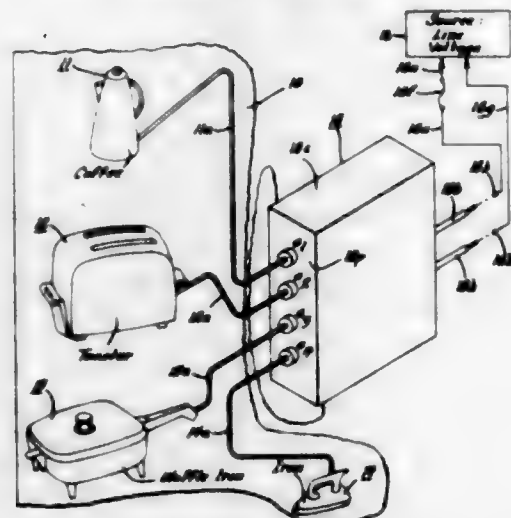
Radames K. H. Gebel, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the United States Air Force
Filed July 17, 1958, Ser. No. 749,307
4 Claims. (Cl. 250-213)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A wavelength differentiating light amplifier in the form of a relatively thin plate one side of which constitutes an incident image surface for receiving an optical image to be amplified and the other side of which constitutes an image viewing surface toward which the amplified image may be viewed, said amplifier comprising a plurality of like groups of elements with each element in a group corresponding to a different wavelength range of the light in said incident image, each element comprising a first part situated adjacent to said image viewing surface and a second part situated adjacent to said incident image surface, said first part comprising an electroluminescent source of light in the corresponding wavelength range only and said second part having an electrical conductivity that is sensitive to light in the corresponding wavelength range only, and a source of electrical energization coupled to said first part through said second part.

3,005,109 POWER SUPPLY INTERLOCK SYSTEM

Mearick Funkhouser, Dayton, and Jack W. Savage, Centerville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,361
9 Claims. (Cl. 307-34)



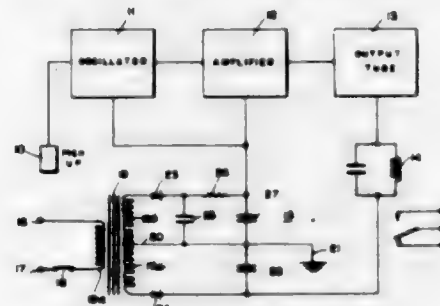
1. A domestic appliance load preference circuit for use with an overload protector, fuse means and the like through which power is supplied comprising, a source of power at a predetermined voltage value such as 110-120 volts, fuse means in series with one line connection from said source and having load current capacity of predetermined value such as 15 amperes and the like, multiple electrical loads such as a coffee maker, toaster, waffle iron and the like having total load current in excess

of the fuse means current capacity if all energized simultaneously from said same source yet having total load current only in pairs of loads of a value that can safely be coped with by said fuse means, a thermostatic means having a bimetal portion, hot wire and the like in series with each said electrical load, an electromagnetic relay means each including a relay coil energizable in response to predetermined series circuit closure for power supply to predetermined pairs of loads and plural switch arms provided by each relay means and movable in response to coil energization and de-energization so as to connect said power source and series fuse means only to a pair of electrical loads at a time until one thereof attains sufficient heating such that one of said thermostatic means effects opening of the power supply connection and said relay switch arms reconnect said power source to a further electrical load also energizable safely simultaneously in a pair with another of said loads.

3,005,110

POWER SUPPLY

David L. Elam, Roselle, Ill., assignor to Electro Products Laboratories, Inc., a corporation of Illinois
Filed July 30, 1958, Ser. No. 751,919
3 Claims. (Cl. 307-41)



3. An electronic sensing system, comprising: a sensing circuit subject to variations in sensitivity upon variation of the supply potential applied thereto; an indicating circuit having a first condition and a second condition responsive to said sensing circuit, the current drawn by said indicating circuit from a power source varying widely in amplitude depending on its condition; a power transformer having a primary winding connected with a source of alternating current, and having a pair of secondary windings with a common terminal; a first rectifier connected with the other terminal of one of said windings for supplying direct current to said sensing circuit; and a second rectifier connected to the other terminal of the other of said windings for supplying direct current to said indicating circuit, said rectifiers being oppositely phased to conduct on alternate half cycles, preventing interaction between said indicating and sensing circuits.

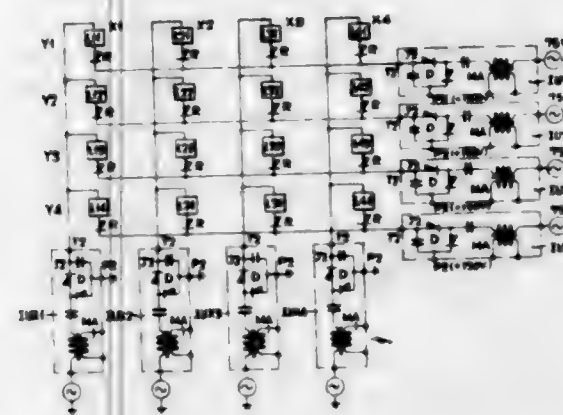
3,005,111

ELECTRIC CIRCUIT ARRANGEMENTS

Ronald William Stanley Kinsey and William Dennis Percy West, London, England, assignors to Siemens Edison Swan Limited, London, England, a British company
Filed Nov. 24, 1958, Ser. No. 776,084
Claims priority, application Great Britain Dec. 6, 1957
10 Claims. (Cl. 307-88)

1. An electric circuit arrangement comprising in combination with a load a first input unit including an impedance connected between one side of the load and a point of fixed potential, and a second input unit including an impedance connected between the other side of the load and a second point having a different fixed potential, each of said input units also individually including terminal means for connection thereto of an energizing alternating current source, a magnetic amplifier having a control winding and an alternating current winding of which

the latter winding is connected in circuit with the said impedance of the unit for energisation from said A.C. source, and rectifying means connected in circuit with said impedance with such polarity that, with the magnetic amplifier saturated and its alternating current winding therefore in a low impedance condition, the resultant, rec-

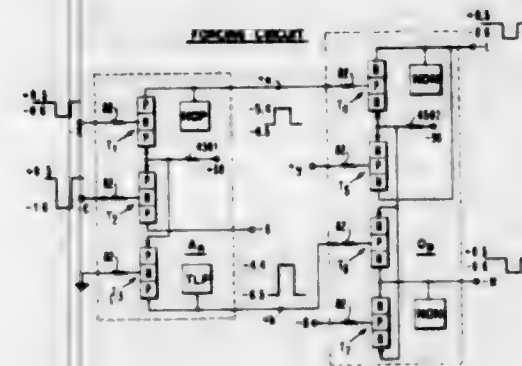


tified, voltage drop produced by the A.C. source across the impedance will bring the potential at the near side of the load towards that of the fixed potential point on the other side, the load being associated with unidirectionally conductive means permitting current flow through the load between the supply units in one direction only.

3,005,112

DIRECT COUPLED TRANSISTOR LOGIC USING COMMONED EMITTERS AND COMPLEMENTARY LOGIC BLOCKS

Robert M. Meade, Wassaic, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 14, 1960, Ser. No. 27,235
23 Claims. (Cl. 307-88.5)

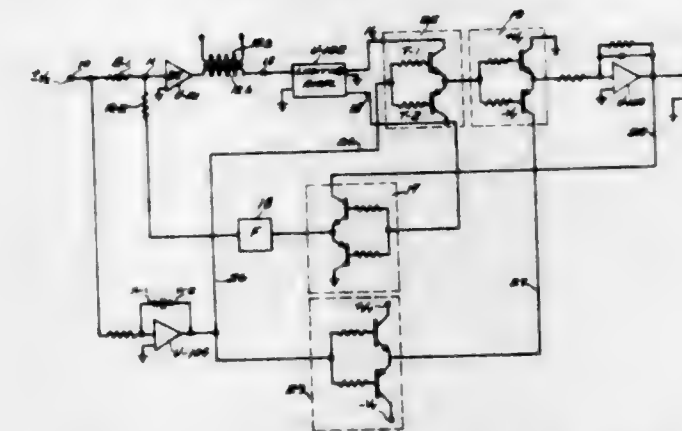


1. A forcing circuit, comprising a logical AND block and a logical OR block, each block including a plurality of transistors of like conductivity type and complementary to that of the other block, each transistor having emitter, base and collector electrodes, the emitters in the respective blocks being coupled together, means for applying different level potentials to said base electrodes, means in each block for applying substantially constant biasing current to said emitter electrode, whereby said current flows in that transistor in which the base electrode is at the most favorable potential level for conduction, and an output signal producing network coupling the collector electrode of a transistor in said AND block to a base electrode of a transistor in said OR block, said network producing a signal corresponding to the highest of said different level potentials, whereby the output from said OR circuit may be forced by the application of a signal from said coupling network.

3,005,113

ELECTRONIC COMPUTER CIRCUITS

Hermann Schmid and James L. West, Binghamton, N.Y., assignors to General Precision, Inc., a corporation of Delaware
Filed Aug. 19, 1959, Ser. No. 834,725
9 Claims. (Cl. 307-88.5)

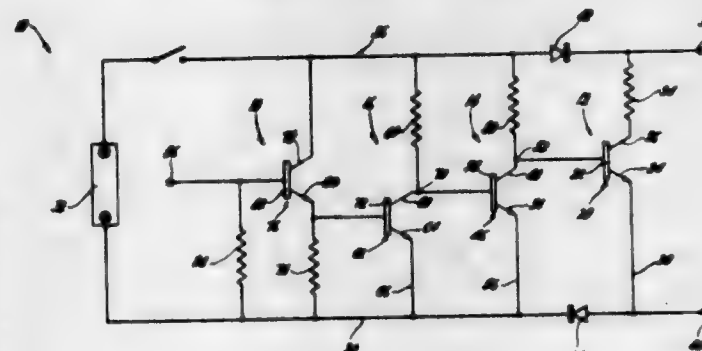


7. An electronic computer circuit for providing an output voltage which varies in accordance with the square root of an input voltage, comprising in combination; a pulse-modulation circuit operably responsive to said input voltage and a second voltage and operable to provide time-modulated rectangular-wave signals which vary directly in width in accordance with said input voltage and which vary inversely in width in accordance with said second voltage; a first transistor switching circuit comprising first and second transistors each having a base, an emitter and a collector, said bases of said transistors being connected to said rectangular-wave signals, said emitters of said transistors being connected together at a first common terminal, a third voltage being connected between said collectors; a direct-coupled amplifier; first circuit means including filter means for coupling said first common terminal to the input circuit of said amplifier, said amplifier providing said output voltage, said output voltage being connected to said pulse-modulation circuit to provide said second voltage.

3,005,114

POWER SWITCHING DEVICE

Eugene J. Martha, 49 Bruce Lane, Westbury, N.Y., and Stanley J. Gewirtz, 435 W. 119th St., New York, N.Y.
Filed Nov. 9, 1959, Ser. No. 851,666
4 Claims. (Cl. 307-88.5)



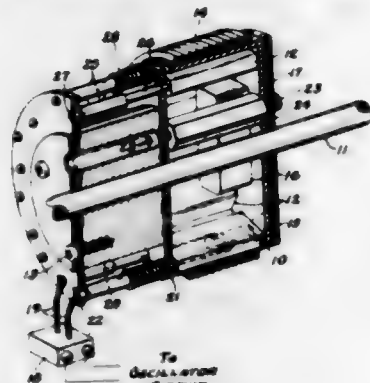
1. A power switching device comprising first and second transistor stages each including a base, an emitter and a collector, a source of direct current potential, means connecting the collector of said first stage to one side of said source, means including a degenerating impedance connecting the emitter of said first stage to the other side of said source, means including a biasing resistance connecting the base of said first stage to the other side of said source, signal input means connected to said base and to said other side of said source, means including a biasing resistance connecting the collector of said

second stage to said one side of said source, means connecting the emitter of said second stage to said other side of said source, and means connecting the base of said second stage to said emitter of said first stage such that said second stage provides an infinitely high impedance shunting said degenerating impedance signal input to said first stage at said signal input means initially causing a light conduction and then causing an avalanche effect bringing about heavy conduction in the emitter-collector current of said second stage, and switching means responsive only to said heavy conduction, said switching means including a third transistor having an emitter, collector and base, means connected to said base for biasing said third transistor for forward conduction, means for grounding one of the emitter and collector of said third transistor means for connecting a load between the ungrounded one of said emitter and collector and a source of power to be switched, and means connected to said base of said third transistor and to the biasing means for providing a low impedance clamp to ground for said base for neutralizing the forward bias from the biasing means and for neutralizing leakage current in said load.

3,005,115

TURRET ASSEMBLY

James H. Adamsbeck, Hiawatha, and Robert J. Rowley, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 26, 1958, Ser. No. 717,781
6 Claims. (Cl. 307-156)



1. A selective switching means comprising a housing and at least a pair of wiping contacts, said housing and wiping contacts arranged to move with respect to each other, said housing including a plurality of circuit components and a plurality of connective members constructed and arranged to connect individual ones of said circuit components to said wiping contacts as said housing and wiping contacts are moved with respect to each other, each of said connective members comprising a conductive member having a pin-receiving aperture in a first end thereof, an insulated coil form mounted on said connective member, coil means having two terminals and being wound on said coil form, one of the terminals of said coil means being electrically connected to one of said wiping contacts and the other terminal of said coil means being electrically connected to another wiping contact.

3,005,116

DISCONTINUOUS INDUCTION TYPE DYNAMO-ELECTRIC MACHINES

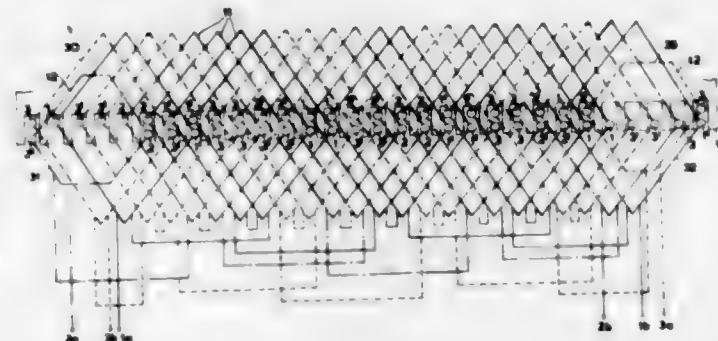
Albert Benjamin John Reece, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company

Filed June 2, 1958, Ser. No. 739,092

Claims priority, application Great Britain June 4, 1957
8 Claims. (Cl. 310-11)

1. A discontinuous induction-type dynamo-electric machine comprising, in combination, relatively movable co-operating primary and secondary members, a polyphase

A.C. winding mounted on the primary member and distributed along the length thereof in a manner so that when energized by a polyphase system of currents the specific electric loading of a portion at each end of the primary member is of a substantially lower value as compared with the specific electric loading of the central portion of the primary member between the end portions, and a plurality of matching conductors disposed at each of the respective junctions of the central and end portions which, when energized by alternating currents, produce alternating M.M.F.'s at the said junctions which



maintain the magnitude of the respective M.M.F.'s on either side of the said junctions substantially in proportion to the respective specific electric loadings on either side of the said junctions, so that the M.M.F. in each portion is rendered dependent on the specific electric loading of that portion alone, the resulting travelling magnetic field moving along substantially the whole length of the primary member at the same speed, but being of constant lower magnitude over said end portions, and inducing currents in the secondary member which react with the travelling field so as to exert propulsive forces on the secondary member.

3,005,117

ELECTRO-MECHANICAL DEVICE

Theodor A. Buchhold, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 20, 1959, Ser. No. 802,592
21 Claims. (Cl. 310-40)



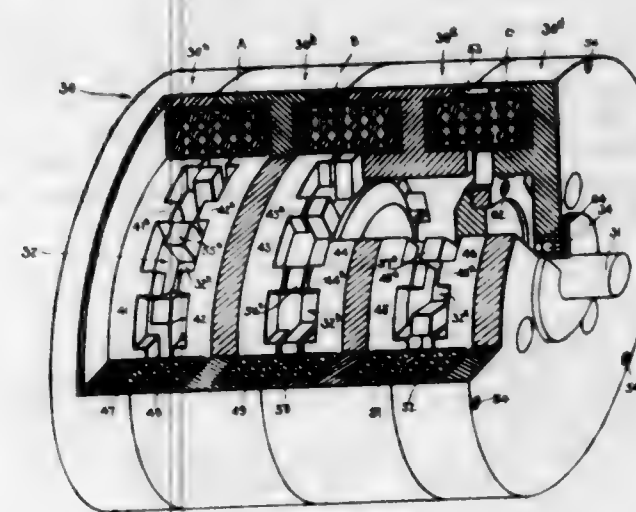
1. In a superconductive electro-mechanical device, a housing, a rotor member within the housing mounted for rotation about a given axis, magnetic means supported by the housing for stably suspending the rotor without physical contact with the housing, and field windings supported by the housing to confront portions of the rotor; said field windings, magnetic means, and portions of the rotor and

housing in the vicinity thereof being of superconductive material, said rotor portions in the vicinity of said field windings being formed to provide surface areas of increased magnetic pressure, and means for lowering the temperature of said members prior to energization to bring said superconductive materials to a superconductive state.

3,005,118

ELECTRIC MOTORS

Emil L. Ranseen, deceased, late of Chicago, Ill., by Agnes J. Ranseen, executrix, Chicago, Ill., assignor, by decree of distribution, to said Agnes J. Ranseen
Original application July 16, 1954, Ser. No. 443,798, now Patent No. 2,797,346, dated July 25, 1957. Divided and this application June 20, 1957, Ser. No. 667,008
16 Claims. (Cl. 310-49)

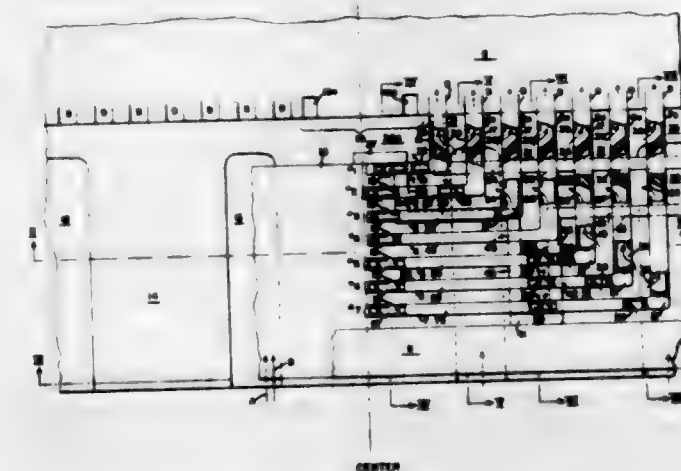


1. In an electric motor, the combination of stator and rotor elements, means to journal said elements co-axially with respect to each other, the stator element including a plurality of sections not less than three spaced in succession axially of the motor, each stator element including a plurality of stator poles spaced equidistant around the axis of the motor and at the same radius from said axis, the rotor element including a plurality of sections equal to the number of stator sections, each rotor section including a plurality of teeth spaced equidistant around the axis of the motor and at the same radius from said axis, the number of rotor teeth of each section being equal to the number of stator poles of such section, the teeth of each rotor section being simultaneously in full registry with the poles of the companion stator section for each angular advance of the rotor equal to 360 divided by the number of rotor teeth of such section, and the teeth of the several rotor sections being successively in full registry with the poles of the companion stator sections with progress of such full registry of the rotor teeth and companion stator poles of the sections in successive cycles of such full registry conditions of the sections, magnetizing coils for the several sections, each coil when energized generating a magnetomotive force producing flux flow between all of the poles of the corresponding stator section and all of the teeth of such rotor section, together with commutation means to electrically energize the magnetizing coils in succession, said commutation means including a commutator having a number of commutation elements equal to a full multiple of the number of motor sections, connections between the commutation elements and the coils in a progression around the commutator corresponding to cyclic progress of energization of the motor sections which have full registry of their rotor teeth and stator poles, and with one cycle of electrification of the stator coils for each cyclic electrification of the commutation elements, and means to electrify the commutation elements in said cycle of progress.

3,005,119

VENTILATION OF THE END WINDINGS OF LARGE DYNAMOELECTRIC MACHINE ROTORS

Nicholas Schmitt and David M. Willyoung, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 5, 1960, Ser. No. 47,802
4 Claims. (Cl. 310-61)



1. A dynamoelectric machine rotor having a central body portion defining axial winding slots circumferentially spaced on its periphery on either side of a pole portion and spindles at either end of the body, a rotor winding comprising axially extending slot-lying portions disposed in said winding slots and end turns extending beyond the rotor body including end turn axial portions formed by extensions of the slot-lying portions and end turn circumferential portions connecting said axial portions, said winding defining in at least its slot-lying portions longitudinal coolant passages in heat exchange relationship against centrifugal force, first blocking means disposed beneath and between the end turn axial portions and defining together with the rotor a first circumferentially extending inlet zone adjacent the rotor body slotted portion, said axial portions disposed in the inlet zone also defining winding gas inlet means communicating with the longitudinal passages of the slot-lying conductors, first inlet conduit means extending axially beneath the end turns for conducting a first portion of coolant gas to said first inlet zone, whereby cold gas may be furnished directly to the slot-lying portions, said first blocking means also defining on the opposite side thereof together with the rotor and the retaining ring an end turn cooling zone extending generally circumferentially adjacent the rotor body along the rotor pole portion and adjacent but axially outward of the first baffle means along the rotor slotted portion, said pole portion defining ports for removing the gas from beneath the retaining ring, second inlet conduit means introducing a second portion of coolant gas to the end winding cooling zone for cooling the end windings, and flow dividing means separating the first and second inlet conduit means preventing communication between the end winding cooling gas and the slot winding cooling gas.

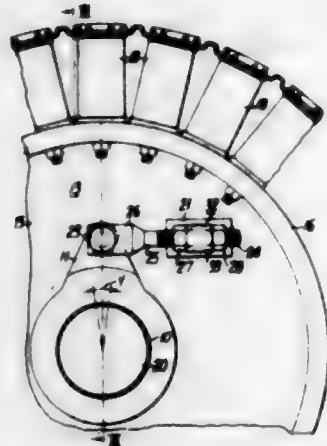
3,005,120

PHASE SHIFTING DEVICE FOR SYNCHRONOUS DYNAMOELECTRIC MACHINES

Ward B. Cart, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 5, 1959, Ser. No. 844,228
2 Claims. (Cl. 310-209)

2. An adjusting device for paralleling synchronous dynamoelectric machines comprising: a shaft having an arm mounted thereon for rotation therewith; a rotor having a hub and a spider; said hub having slip clearance on said

shaft and positioned adjacent said arm; means locking said hub to said shaft to prevent radial play between said rotor and said shaft; a mounting block attached to said spider; a rod transmitting driving torque between said rotor and said shaft, said rod having a clevis at one end



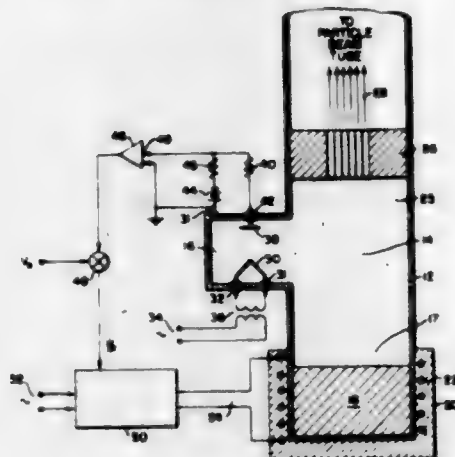
and a threaded portion at the other end, said clevis being removably attached to said arm and said threaded portion being adjustably mounted to said mounting block by suitable means to adjust the angular position of said rotor on said shaft.

3,005,121

BEAM INTENSITY CONTROL SYSTEM

James George Swampecott, Mass., assignor to National Company, Inc., Malden, Mass., a corporation of Massachusetts

Filed Sept. 14, 1959, Ser. No. 839,790
5 Claims. (Cl. 313-43)



1. Apparatus for producing a constant-intensity beam of gas particles for use in a molecular resonance frequency standard comprising, an evacuated envelope consisting of a main chamber and a communicating auxiliary chamber, means disposed in said main chamber adapted to hold the source material for said particles, means external to said envelope for heating said source material to produce particles thereof by effusion, a beam collimator disposed in said main chamber opposite said holding means, said beam collimator communicating with the outside of said main chamber, means disposed in said auxiliary chamber for ionizing said gas particles, means spaced from said ionizing means for collecting said ionized gas particles to form an ion current, and means responsive to said ion current for controlling said heating means, said ionizing means comprising a cathode, means for heating said cathode from outside said envelope, a grid spaced from said cathode, means for applying a positive potential to said grid with respect to said cathode, and said ion collecting means comprising an electrode shielded from said cathode by said grid, and means for applying a negative potential to said ion collecting electrode with respect to said cathode.

3,005,122
CATHODE RAY TUBE ENVELOPE
James C. Coleman and Ray W. Mayhew, Columbus, Ohio, assignors, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Sept. 23, 1959, Ser. No. 841,730
5 Claims. (Cl. 313-64)



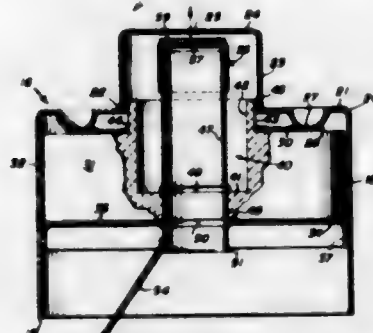
1. A cathode-ray tube component comprising a substantially funnel-shaped rigid envelope having flaring sidewalls extending between its large and small ends, said envelope having its larger end shaped to a substantially rectangular configuration, a neck tubulation projecting from said smaller end, thereby defining a peripheral convexly-shaped junction area between said sidewalls and said neck tubulation, the inner surface of the junction area having a basic circular shape modified by a series of four spaced-apart indentations each having an appreciable arcuate and axial extent.

3,005,123

ELECTRON GUN CONSTRUCTION

Leighton E. Griffiths, Pompton Lakes, N.J., assignor to Griffiths Electronics, Inc., Newark, N.J., a corporation of New Jersey

Filed July 16, 1959, Ser. No. 827,532
4 Claims. (Cl. 313-82)



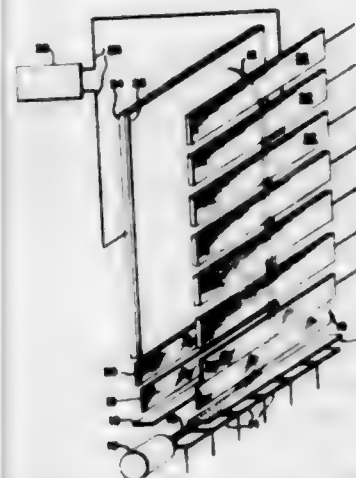
3. For use in an electron gun for cathode ray tubes, in combination, a number one grid cylinder having tandem arranged co-axial, large and small diameter portions, one about twice the diameter of the other, and an annular connecting portion, a perforated grid disc closing the remote end of the small diameter portion, integral spacing means on said annular portion projecting toward the remote end of the larger diameter portion, a single, thick insulating disc sized to fit into said large diameter portion and having a flat top engaged by said spacing means for positioning said disc a fixed distance from the flat underface of said annular portion, said disc having a central aperture of less diameter than said small diameter portion of the grid cylinder and an open topped well co-axial with said central aperture, a cathode tube fixed in said aperture and having a closed end positioned close to said perforated grid disc, said cathode tube projecting above the well bottom about 70% of its length to radiate most of its heat above the insulation disc, a radially thin annular barrier wall extending upwardly from said insulating disc, spaced from the cathode tube a distance substantially half of the tube diameter and entering said small diameter portion of said grid cylinder and spaced but slightly from the inner wall thereof, said cathode cylinder extending substantially above the top of said barrier wall and the wall of said well and the inner wall of said barrier being co-extensive.

3,005,124

ELECTRONIC DEVICE

William Ross Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada

Filed Apr. 11, 1957, Ser. No. 652,245
6 Claims. (Cl. 313-92)



1. An electron discharge device including a target comprised of an electrically conductive metallic imperforate supporting plate, a phosphor layer disposed in intimate contact with one surface of said target capable of effecting continued light emission responsive to excitation by an electron beam, means for initially delivering an electron beam selectively into registration with different portions of the imperforate metallic surface of the target at a relatively high velocity sufficient to effect the penetration of said metallic surface and to effect registration of information on the phosphor adjacent thereto, and means for thereafter controlling said beam to strike said metallic surface at a relatively low velocity to selectively heat different portions of said metallic surface without penetrating therethrough to thereby effect the erasure of the information registered on the adjacent portions of the phosphor layer.

3,005,125

DISPLAY SCREEN

Lyle W. Evans and Thaddeus V. Rychlewski, Seneca Falls, N.Y., assignors, by mesne assignments, to Sylva Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Dec. 5, 1957, Ser. No. 700,700
13 Claims. (Cl. 313-92)



13. A screen for an image reproduction device having a viewing panel comprising a plurality of spaced substantially non-luminescent material configurations disposed on said panel, a layer of luminescent material positioned upon said panel intermediate said configurations, and a layer of light emissive material positioned exclusively behind each of said configurations.

3,005,126

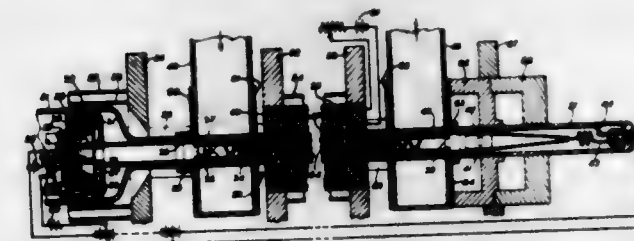
TRAVELING-WAVE TUBES

Charles C. Cutler, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 15, 1950, Ser. No. 168,202
20 Claims. (Cl. 315-3.5)

1. An amplifying space discharge device which comprises means defining a path of travel for electrons, an electron source, means adjacent said path for directing

a stream of electrons from said source lengthwise along said path in a predetermined direction, and continuous electromagnetic wave transmission means disposed along said path, said transmission means comprising successively, in the direction of electron flow, a region of substantially no attenuation per unit length, a region of distributed attenuation in which the attenuation per unit length is at least several times greater at the end of the region nearest said source than at the other end of the



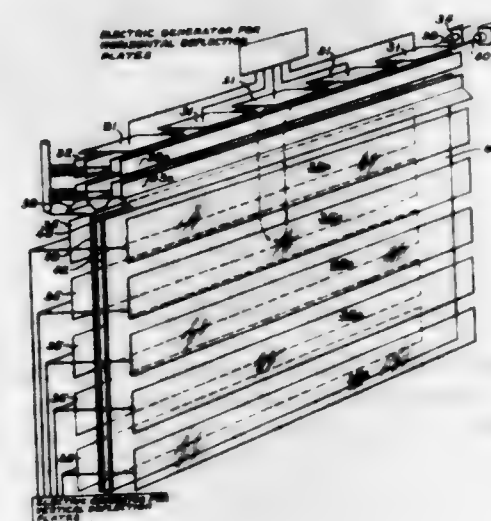
region, and another region of substantially no attenuation per unit length, the length of said region of distributed attenuation being at least as great as the combined lengths of said regions of substantially no attenuation, the attenuation in said region of distributed attenuation being concentrated preponderantly in the half of said region nearest said source, and the attenuation per unit length in said region of distributed attenuation being less than its maximum value over a major portion of the length of said region.

3,005,127

ELECTRONIC DEVICE

William R. Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada

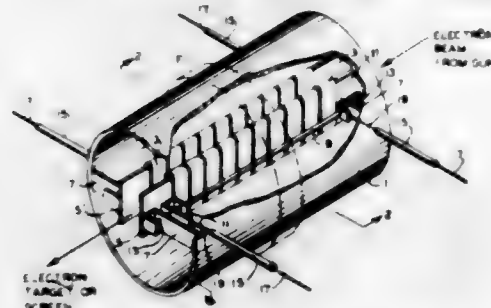
Filed Apr. 27, 1955, Ser. No. 504,281
26 Claims. (Cl. 315-13)



24. A cathode ray tube having a target including a plurality of sets of strips of fluorescent material arranged in a predetermined pattern on a face of said target, the strips of different sets being effective as excited to provide a different color output, means for delivering a beam of electrons along a marginal edge of said target, horizontal deflection means provided along said marginal edge for successively deflecting said beam to a zone adjacent said target, and means disposed adjacent said face of said target for selectively deflecting said beam toward said target and into registration with a predetermined set of said strips.

3,005,128

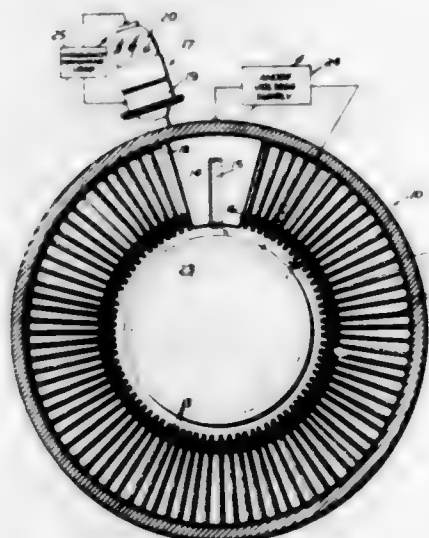
ELECTRON-BEAM DEFLECTION SYSTEM
Seymour Goldberg, Lexington, and Kenneth J. Germshausen, Newton Center, Mass., assignors to Edger-ton Germshausen and Grier, Inc., Boston, Mass., a corporation of Massachusetts
Filed Oct. 18, 1957, Ser. No. 690,950
11 Claims. (Cl. 315-18)



1. In a system having a portion connected to ground, an electron-beam deflection apparatus comprising a pair of spaced co-extensive helical windings each wound about, but maintained out of electrical contact with, a conductive ground plate connected to said ground of the system, thereby to maintain ground symmetry for each winding.

3,005,129

MAGNETRON OSCILLATORS
Edward C. Dench, Needham, Mass., assignor to Raytheon Company, a corporation of Delaware
Continuation of application Ser. No. 253,879, Oct. 30, 1951. This application Mar. 19, 1957, Ser. No. 647,161
10 Claims. (Cl. 315-39.3)



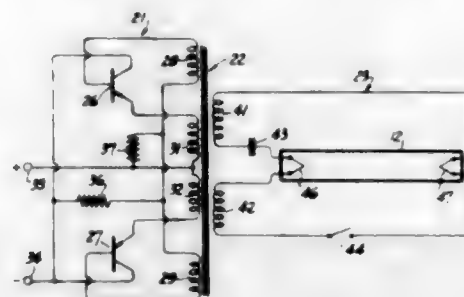
1. An electron discharge device comprising a slow wave signal propagating network structure having two mutually uncoupled terminations, a source of electrons spaced along a region adjacent a substantial portion of said structure, means for directing electrons from said source along paths adjacent said network structure in a reentrant stream, said network structure including output means coupled to one termination thereof for abstracting output energy and means for adjusting the operating frequency of said device including means for varying the velocity of said electrons and a variable reactive load coupled to said output means.

3,005,130

FLUORESCENT LIGHTING SYSTEM
Samuel A. Schwartz, 324 Langton Ave., Los Altos, Calif.
Filed Nov. 21, 1958, Ser. No. 775,425
6 Claims. (Cl. 315-206)

1. A lighting system of the type adapted to illuminate a fluorescent lamp from a D-C. power source comprising

an inverter, a transformer having first and second primary windings and at least first and second secondary windings, said primary windings being connected in circuit with said inverter and being closely coupled with respect to one another, said first secondary winding being loosely coupled with respect to the primary windings and being

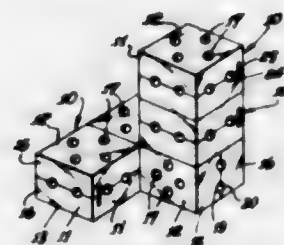


connected in circuit with said lamp, said second secondary windings being closely coupled to the primary windings and being connected in series circuit with said first secondary winding, and switching means adapted to selectively connect said second secondary winding in series with said first winding.

3,005,131

ELECTRIC BUILDING BLOCKS
Robert D. Melcher, 3540 Carmena Ave., Los Angeles 16, Calif., and Robert B. Jackson, 2440 Marion, Anaheim, Calif.

Filed Nov. 10, 1958, Ser. No. 772,813
2 Claims. (Cl. 317-101)



1. A mechanical system for assembling electronic circuits comprising a plurality of blocks of electrically non-conductive material, said blocks being identical in size and shape and each being of prism configuration of square cross-section having four side faces and two opposite end faces, the end faces being perpendicular to the side faces whereby the blocks are adapted to be placed in a compact three-dimensional arrangement in face-to-face abutment respectively, and with the abutment areas being coextensive with the areas of the faces which are in abutment respectively, each block having inside walls defining an internal central cavity for housing an electronic component, each block having a plurality of apertures formed therein, each aperture having two ends which open in the block faces, each aperture extending adjacent and being open to said cavity, tubular electrical contact elements disposed in the apertures respectively and extending from end to end of said elements to adjacent the end openings of the apertures respectively, each block face having at least two aperture end openings, certain of said tubular contact elements being angular for extending from adjacent an aperture end opening of one face of a block to an aperture end opening in an adjacent face of the block, others of said tubular contact elements being straight for extending to adjacent aperture end openings in antipodal faces of the block, the ends of said contact elements being spaced inwardly of the planes of their adjacent block faces whereby said elements do not project outwardly of the blocks, the end openings of the apertures being disposed within the perimeters of their block faces at predetermined posi-

tions for alignment with end openings respectively in abutting blocks, and cross-over electrical contact pins slidable tight into said tubular contact elements for releasably interconnecting the contacts of one block with the contacts of other blocks respectively and which other blocks are disposed in face-to-face abutment with said one block.

3,005,132

TRANSISTORS
Jacques I. Pantchevskoff, now by change of name Jacques I. Pankove, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 13, 1952, Ser. No. 293,330
1 Claim. (Cl. 317-235)

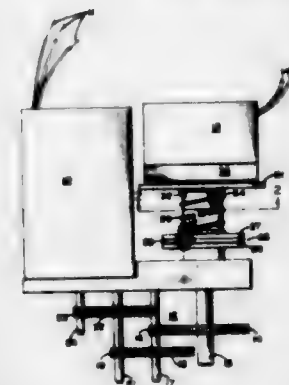


A semi-conductor device comprising a body of semi-conducting material of N-type conductivity, having two sides both sides of said body having indentations therein, at least one of said indentations having substantially an annular configuration co-axial with the other one of the said two indentations, an emitter junction of a predetermined area positioned within one of said indentations, a first region of P-type conductivity enclosed by said emitter junction, a collector junction having an area larger than that of said emitter junction symmetrically positioned with respect to said indentation of annular configuration, a second region of P-type conductivity enclosed by said collector junction, an emitter electrode connected to said first region of P-type conductivity, a collector electrode connected to said second region of P-type conductivity, and a base electrode symmetrically positioned with respect to said emitter electrode and in low resistance contact with a substantial portion of said body.

3,005,133

DRIVE FOR INDICATING MEANS AND THE LIKE

Carroll L. Key, Jr., State College, and Richard F. Trufant, Bellefonte, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 12, 1958, Ser. No. 714,932
7 Claims. (Cl. 318-15)

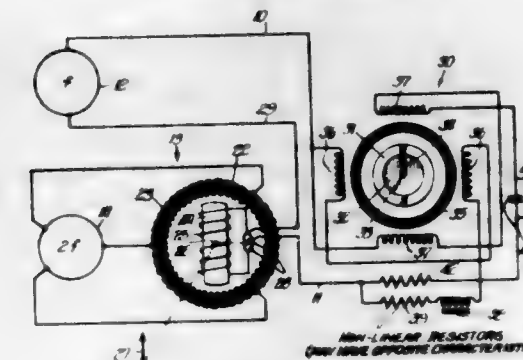


1. In a position controlling and indicating system adapted for use in self-propelled torpedoes the combination comprising: a one-turn potentiometer having a rotatable shaft; driving means including a reduction gear train for rotatably driving said potentiometer; a servo-motor for actuating said driving means; means to supply a control signal to said servo-motor whereby said servo-motor actuates said driving means in accordance with said control signal; a continuously engaged friction clutch

connecting said driving means and said potentiometer; a circular plate having an outwardly extending ear and concentrically mounted on said potentiometer shaft; a support adjacent said circular plate and having a recess at least partially covered by said circular plate and tangential thereto; and a stop member having a forwardly projecting pin engageable with said ear slidably disposed in said recess.

3,005,134

ELECTRIC CIRCUIT MEANS
Edmund O. Schwettner, Jr., 1001 Dundee Road, Northbrook, Ill.
Filed Jan. 10, 1958, Ser. No. 708,187
8 Claims. (Cl. 318-23)

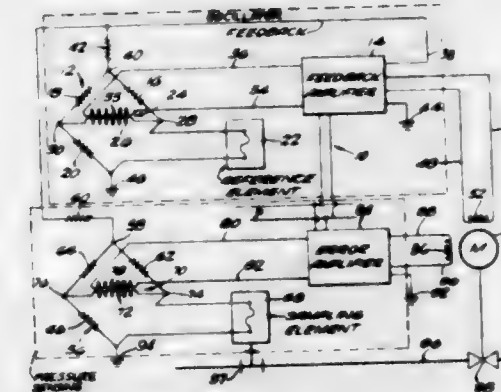


4. In combination, a first source of alternating current, a second source of alternating current having a frequency twice that of said first source, a load circuit connected for energization to said sources, means for shifting the phase of one of said alternating currents with respect to the phase of the other alternating current, a motor including a permanent magnet rotor and a stator having two winding means in spaced relation around said rotor, a non-linear resistor connected in series circuit relation with each winding means and each resistor and its winding means connected across said load circuit, each non-linear resistor being characterized by being capable of conducting current in one direction or the other whereby a direct current component flows through each winding means in one direction or the other and to an extent depending upon the phase relationship between said alternating currents and said rotor is moved to a position corresponding thereto.

3,005,135

SERVOMOTOR CONTROL SYSTEMS EMPLOYING TRANSDUCERS

Charles G. Palmer and David L. Pickens, Santa Ana, Calif., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed June 4, 1958, Ser. No. 739,799
9 Claims. (Cl. 318-29)



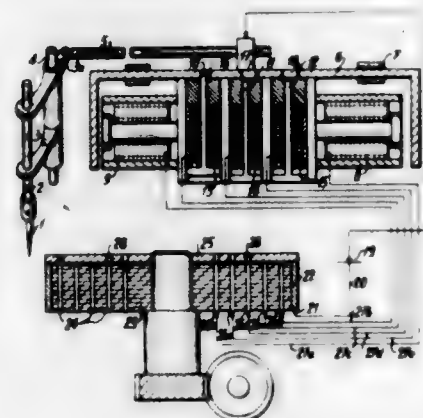
7. A highly sensitive control system comprising, a source of current flow which varies at a fixed frequency, a bridge network comprising a transducer, said bridge network associated with said source to have an input

signal the frequency of which corresponds to that of the current flow of said source, said bridge network being balanced only when said transducer is tuned to a frequency having a predetermined relationship to the frequency of said input signal, and a two-phase motor controlling the condition to which said transducer is responsive having a first operating winding in circuit with said source and a second operating winding in circuit with said bridge network for causing said motor to return said condition from an existing level to a predetermined level at a rate corresponding to the incremental difference between said predetermined level and the instantaneous levels of said condition throughout such return.

3,005,136

SEWING MACHINE WHEREBY STITCHES FORMING VARIOUS PATTERNS CAN BE PRODUCED AUTOMATICALLY

Ernst Flückiger, Geneva, Switzerland, assignor to Mefina S.A., Fribourg, Switzerland, a firm of Switzerland
Filed Apr. 16, 1958, Ser. No. 728,823
Claims priority, application Switzerland May 9, 1957
4 Claims. (Cl. 318-119)



1. In a control device for controlling the position of a machine element, especially for controlling the position of the needle bar or of the work feed device of a sewing machine, a digital programme controller furnishing electric signals, a series of electromagnets to which the said signals are transmitted, a series of mobile abutments controlled by the said electromagnets and each adapted to occupy two positions, a withdrawn position and a working position, a slidable control member which is connected mechanically to the said element which is to be controlled and finally a driving member operatively connected to said control member displacing it in the one or the other direction, the said control member comprising arresting surfaces distributed as a number of pairs, the two surfaces of each pair facing each other, each of the aforesaid mobile abutments cooperating with one pair of the said arresting surfaces, more precisely with one or with the other surface of the said pair, depending on the direction in which the said control member is moving at the instant when the said abutment comes into its working position, whereby each mobile abutment determines two stopping positions of the control member.

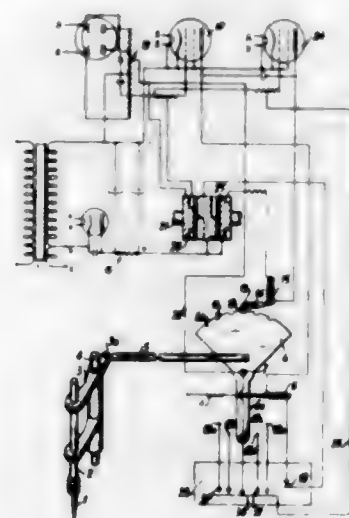
3,005,137

SEWING MACHINE WHEREBY STITCHES FORMING VARIOUS PATTERNS CAN BE PRODUCED AUTOMATICALLY

Charles Caron, Geneva, Switzerland, assignor to Mefina S.A., Fribourg, Switzerland, a firm of Switzerland
Filed Apr. 16, 1958, Ser. No. 728,868
Claims priority, application Switzerland May 15, 1957
4 Claims. (Cl. 318-119)

1. In a control device for controlling the position of a machine element, especially for controlling the position of

the needle bar or of the work feed device of a sewing machine, a digital programme controller supplying electric signals, a series of contact studs to which the said signals are transmitted, a driving member which is connected mechanically to the said controlled element, and which displaces it in one and the other direction, an exploring member operatively connected to said element, whereby it is displaced at the same time as the said element, opposite

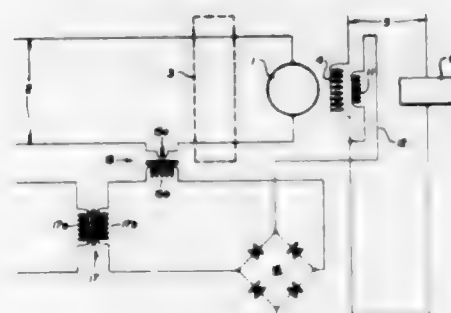


to said studs, with each of which it comes into contact successively, and, finally, an electrically controlled mobile abutting member, electrically connected to said exploring member so as to be operated at the instant when the said exploring member comes opposite the stud supplied with current by the programme, thus arresting the said controlled element in a position determined by the programme.

3,005,138

STABILIZATION OF D. C. SHUNT MOTORS

George B. Scheer, Berkeley, Calif., assignor to Henry J. Kaiser Company, Oakland, Calif., a corporation of Nevada
Filed Dec. 29, 1958, Ser. No. 783,366
1 Claim. (Cl. 318-332)



In combination with a direct current shunt mill motor, a system comprising a transducer, an auxiliary shunt field on said shunt motor, a transformer, and a rectifier assembly comprised of at least one rectifier, the primary coil of said transducer being electrically connected in series to the armature of said shunt motor and the secondary coil of said transducer being electrically connected to the secondary winding of said transformer, and secondary winding of said transformer also being electrically connected to said rectifier assembly, means electrically connecting said auxiliary shunt field of said shunt motor to said rectifier assembly and in turn to said transformer, whereby said transformer supplies current to the auxiliary shunt field of said shunt motor through the secondary winding of the transducer and the rectifier assembly thereby increasing the magnetic flux of the shunt field of said shunt motor upon increase of current in said armature of said shunt motor.

3,005,139

SERVO SYSTEM LEAD NETWORK

Bock M. Chin, West Peabody, and Gerald L. Sullivan, Rowley, Mass., assignors to General Electric Company, a corporation of New York
Filed May 19, 1960, Ser. No. 30,198
12 Claims. (Cl. 318-448)



1. In a data sampling circuit suitable for use in servo systems utilizing a modulated carrier input signal, a charging capacitor, a diode switching circuit including a switching signal to charge the capacitor in accordance with the amplitude of the carrier signal, the frequency of said switching signal being the same as the frequency of said carrier and the phase difference therebetween being substantially determined by the relationship:

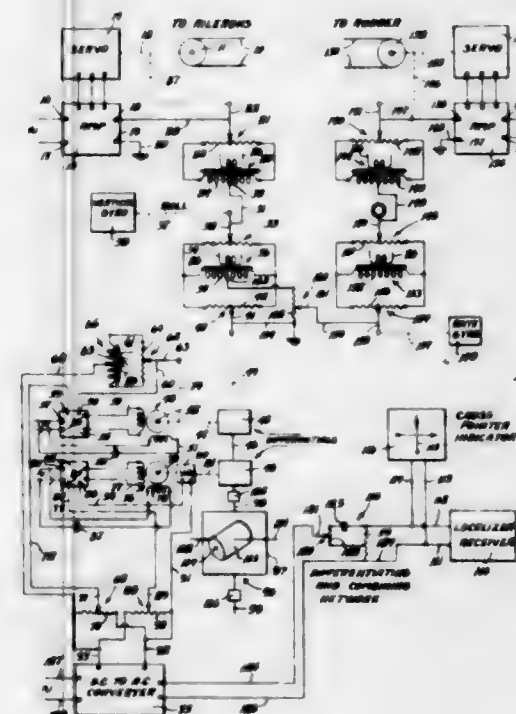
$$\theta = \frac{\pi}{2} - \tan^{-1} \omega RC$$

where: R is the resistance of said diode switching circuit and C is the capacity of said capacitor, said switching circuit connected such that there is no resistor in series with the diodes connected between the input signal and said capacitor to minimize the phase lag introduced thereby, and a second diode circuit to modulate the voltage developed across said capacitor in accordance with a reference signal having the same frequency as said switching signal.

3,005,140

RADIO CONTROLLED AUTOMATIC PILOTS

Waldo H. Killever, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 3, 1948, Ser. No. 24,869
23 Claims. (Cl. 318-489)



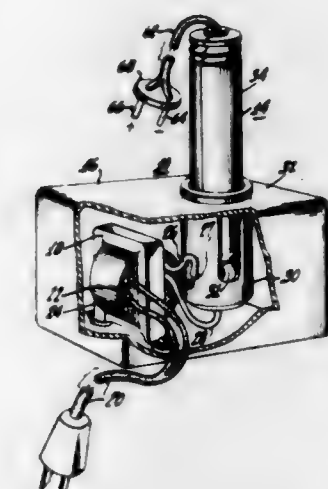
1. Control apparatus for a dirigible craft having a control surface for steering said craft, comprising: control

surface power means; control means for reversibly actuating said power means including a signal generator; attitude means responsive to movement about an axis and adapted to operate said generator to provide a signal proportional to the magnitude of said movement; further means for operating said signal generator, said further means comprising a variable rate motor means and a displacement motor means; and means for energizing said displacement motor means dependent on the distance of said craft from a course and the displacement of said motor; and means for operating said variable rate motor means at a speed dependent on the distance of said craft from said source.

3,005,141

BATTERY CHARGER

Clark H. Emmons, Pennsauken, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 30, 1959, Ser. No. 856,117
5 Claims. (Cl. 320-2)



1. A battery charger adapted for use either in the home or in an automobile having a socket for receiving an electric cigarette lighter, said charger comprising two releasably engageable parts, one of said parts comprising a first circuit, said first circuit having input means engageable with a source of alternating current and output means comprising a socket similar to said first-mentioned socket and adapted to releasably engage the other of said parts, said other of said parts comprising a casing of electrically insulating material, and a rectifying circuit in said casing, said rectifying circuit having input means and output means, said input means of said rectifying circuit extending through said casing and being engageable with said output means of said first circuit when said parts are engaged, and said output means comprising a cable extending outwardly from said casing and adapted to be connected to a battery to be charged.

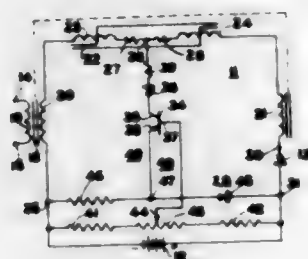
3,005,142

MAGNETIC AMPLIFIER CONTROL CIRCUIT

Elmo E. Moyer, Cuba, and Richard J. Klein, Canadea, N.Y., assignors to Acme Electric Corporation, Cuba, N.Y., a corporation of New York
Filed July 24, 1958, Ser. No. 750,774
15 Claims. (Cl. 321-16)

1. A rectifier circuit comprising, in combination, a rectifier device having an anode electrode, output means adapted to supply a direct current load, a saturable reactor having first and second windings, alternating voltage input means of a given value, a rectifier circuit connecting a voltage from said input means and at least one of said windings in circuit with said rectifier device and said output terminals to supply load current to said output terminals when the alternating voltage input is posi-

tive on said anode, a transistor, a transistor load circuit for said transistor connected to receive a voltage from said alternating voltage input means different from said given value and connected to control reset current through

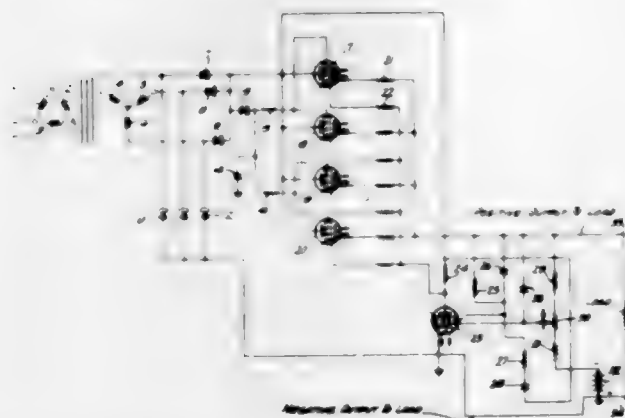


at least one of said saturable reactor windings, one of said load and reset currents passing through both said saturable reactor windings and the other passing through only one of said windings, and a transistor input circuit to control the conduction characteristics of said transistor.

3,005,143 ELECTRONICALLY REGULATED POWER SUPPLY

Edgar Eugene Thomas, Whittier, Calif., assignor to Gillilan Bros., Inc., Los Angeles, Calif., a corporation of California

Filed June 25, 1957, Ser. No. 667,868
12 Claims. (Cl. 321-18)



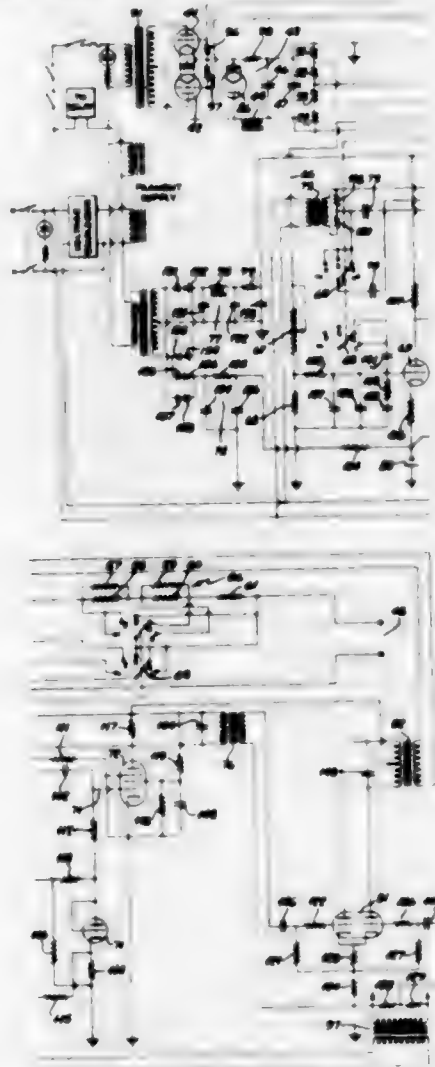
6. In a voltage regulating electrical power supply, the combination comprising; an alternating current power source; a first rectifying means connected to said power source and producing pulsating direct current voltage the minimum instantaneous amplitude of which is greater than zero; an output permitting an electrical load to be connected thereto so as to utilize electric power from said first rectifying means; a regulator circuit interposed between said output and said rectifying device, said regulator circuit including at least a first vacuum tube having at least an anode, electron emitting means, a control grid, and a screen grid, and being connected as a series regulator tube whereby current drawn at said output passes through said anode and said electron emitting means; and means for sensing variations in the voltage across said output and controlling the control grid voltage of said series regulator tube in accordance with said variations thereby to compensate for said output voltage variations; a second rectifying and filtering means receiving pulsating direct current from said first rectifying device and operating to supply a second direct current voltage having an average value greater than said pulsating direct current voltage and substantially less ripple than present in the said pulsating direct current voltage from said first rectifying device, said second rectifying and filtering means being connected to supply said second direct current voltage as a screen grid potential to said series regulator tube.

3,005,144 REGULATED POWER SUPPLY

David S. Colburn, Palo Alto, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Apr. 18, 1958, Ser. No. 729,296
3 Claims. (Cl. 321-18)

3. A regulated power supply including a thyatron having plate, grid and cathode elements adapted to be connected to a source of A.-C. voltage and serving to rectify the same to form a D.-C. voltage, means for sampling the output D.-C. voltage, a phase shifting network connected to receive the sampled output and form an A.-C. control signal whose phase with respect to the A.-C. signal is controlled by the sampled output, said phase shifting network including the secondary of a transformer connected to receive a reference voltage having a fixed phase with respect to the A.-C. voltage, a capacitor and a plurality of resistors serially connected across said transformer secondary, a vacuum tube having at least a plate, a grid and a cathode, the grid of said vacuum tube being coupled to the junction of said capacitor and one of said resistors, the cathode of said vacuum tube being coupled to the other side of said one resistor, whereby said reference voltage is coupled to the grid

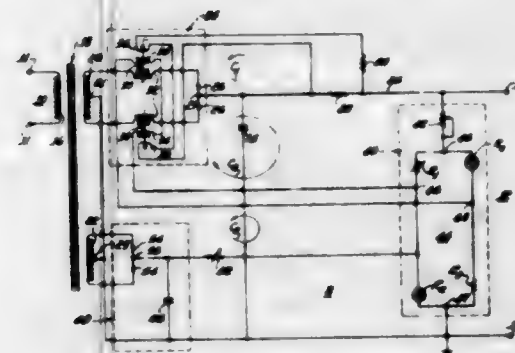


of said vacuum tube, a source of D.-C. voltage, said other resistor and said source of D.-C. voltage being serially connected between said plate and said cathode, means for applying the sampled output to the grid of the tube whereby the transconductance of the tube is varied in response to the sampled output, the variations in transconductance serving to vary the input resistance of said tube whereby the voltage phase in the phase shifting circuit is varied, means for deriving a control signal from said phase shifting network, a balanced amplifier serving to receive the controlled signal, means for applying a voltage of fixed phase to the balanced amplifier whereby the output signal has a relatively constant amplitude over the range of phase shift, and means for applying the output of the balanced amplifier to the grid of the thyatron to control the output from the same.

3,005,145 REGULATED VOLTAGE SUPPLY

Bernard F. McNamee, Altadena, Calif., assignor to Dressen-Barnes Corporation, Pasadena, Calif., a corporation of California

Filed Aug. 12, 1957, Ser. No. 677,570
5 Claims. (Cl. 321-19)



3. In a regulated power supply having a regulator input and a regulator output in which alternating current voltage applied to the regulator input is converted into direct current voltage at the regulator output, and employing a saturable reactor and a rectifier connected in a main circuit between said regulator input and said regulator output, said reactor having magnetic core means and including first and second control means for varying the saturation of said core means whereby the average current flowing through said main circuit is varied, the combination therewith of:

A Wheatstone bridge circuit having a pair of bridge input terminals and a pair of bridge output terminals, said bridge circuit including in one arm thereof a resistor having a resistance that varies with the current fed therethrough;
means connecting said bridge input terminals across said regulator output, the voltage across said bridge output terminals changing when the voltage at said regulator output changes irrespective of any changes in voltage across said regulator input;
means separately controlled by the alternating current voltage impressed across the regulator input for feeding a current to said bridge through an auxiliary circuit, the voltage across said bridge output terminals also changing when the voltage across said regulator input changes irrespective of any changes at said regulator output;

means controlled by current flowing from said rectifier to said regulator output for operating said first control means to vary the saturation of said core means; and
means connecting said bridge output terminals to said second control means for varying the saturation of said core means to counteract changes in regulator output voltage, the connections in such bridge circuit being such that changes in regulator input voltages and regulator output voltages that are of the same sign produce like changes in the current through said resistor whereby the resultant changes in resistance of said resistor act in the same sense to shift the gating time thereby jointly counteracting changes in output voltage.

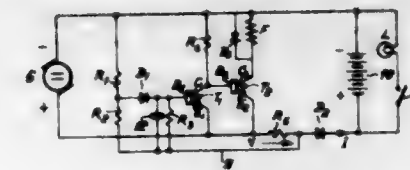
3,005,146 SYSTEM OF VOLTAGE AND CURRENT REGULATION FOR ROTARY GENERATORS

Jakob Lüscher, Geneva, Switzerland, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed May 2, 1958, Ser. No. 732,601
Claims priority, application Germany May 2, 1957
6 Claims. (Cl. 322-25)

1. A control system for a shunt-wound generator having an armature winding and a field winding and

being subject to variations of both the voltage generated and load current supplied by said generator, said system comprising a transistor amplifier having an emitter and a base forming a pair of input electrodes and an emitter-collector output path, means connecting said output path in series with said field winding, to control the field current and in turn the generated voltage in inverse relation to a varying control voltage applied to said input electrodes, load means connected to said generator, a resistor connected between one of the generator terminals and said load means to be traversed by said load current, a voltage divider circuit connected between the other generator terminal and the far side of said resistor in respect to said first generator terminal, a reversely biased reference junction diode connected between a point of said voltage divider circuit

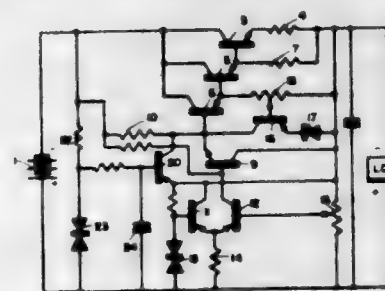


and one of said input electrodes, a conductive connection between the other input electrode and said first generator terminal, whereby to provide a first control voltage by said voltage divider circuit applied to said input electrodes through said diode, to maintain the generator terminal voltage substantially constant at a value determined by the breakdown voltage of said diode, and a further direct conductive connection between the far side of said resistor and said first-mentioned input electrode, whereby to provide a second control voltage by the voltage drop through said resistor applied to said input electrodes, said resistor having a value to cause a substantial reduction of the field current of said generator upon the occurrence of a load current exceeding a predetermined permissible limit value.

3,005,147 SHORT CIRCUIT PROTECTION FOR A TRANSISTORIZED POWER SUPPLY

James L. Thomas, La Habra, Calif., assignor to North American Aviation, Inc.

Filed Aug. 12, 1957, Ser. No. 677,702
4 Claims. (Cl. 323-9)



1. An overload protection circuit comprising a signal translating device having a pair of output electrodes and a control electrode for supplying current to a load from a source, means for controlling the current through said signal translating device in accordance with the current through said load, said means comprising means for establishing a voltage proportional to the current through said load, means for establishing a first reference voltage, current comparison means for comparing said voltage proportional to the current through said load with said first reference voltage, and means for connecting the output of said current comparison means to said control electrode for controlling said signal translating device in response thereto when said voltage proportional to said load current is greater than said first reference voltage,

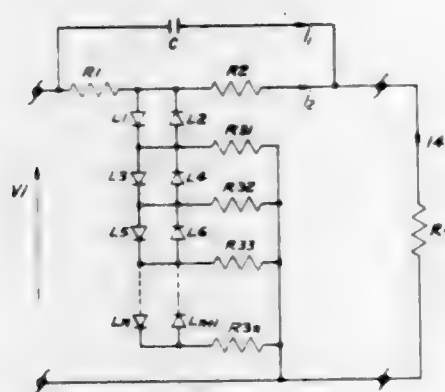
means for controlling the current through said signal translating device in accordance with the voltage across said load, said means comprising means for establishing a voltage proportional to the voltage across said load, means for establishing a second reference voltage, means for comparing the voltage across said load and said second reference voltage, and means for connecting the output of said voltage comparison means to said control electrode for causing said signal translating device to cease conducting when said load voltage is less than said second reference voltage.

3,005,148

VOLTAGE DERIVATION NETWORK

Hans Manne Alvar Salomonsson, Stockholm Sv, Sweden, assignor to Aktiebolaget Bofors, Bofors Sweden, a Swedish company

Filed June 13, 1957, Ser. No. 665,554
12 Claims. (Cl. 323-74)



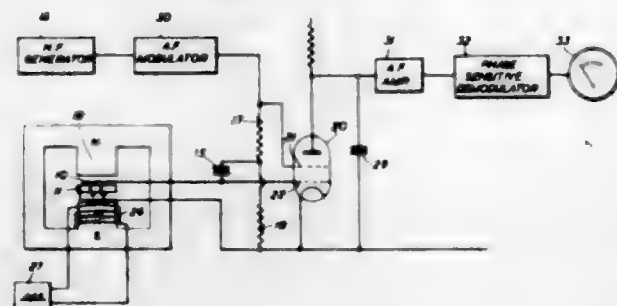
1. In a servo system having an error signal channel including a derivation network, wherein said derivation network comprises a series branch including a capacitive circuit component and a resistive circuit component connected in parallel and a parallel branch including a circuit component having a non-linear characteristic, said circuit component including two rectifiers connected parallel in opposition and a resistive circuit component connected in series.

3,005,149

NUCLEAR MAGNETIC RESONANCE DETECTORS

Edward Watson, Hayes, England, assignor, by mesne assignments, to Fairey Aviation Limited, Hayes, England, a company of Great Britain

Filed Oct. 20, 1958, Ser. No. 768,304
Claims priority, application Great Britain Oct. 21, 1957
3 Claims. (Cl. 324-5)



1. A nuclear magnetic resonance detector including means producing a magnetic field, a test coil adapted to receive a specimen and situated in the magnetic field with its axis transverse thereto, a series tuned circuit which includes the test coil and a capacitor in series, a mixing valve having at least two grids, means exteriorly of said valve for generating a radio frequency input signal, means coupling said input signal to the tuned circuit at the resonant frequency thereof, means

coupling the other of said grids to said tuned circuit to receive a signal having a phase shift component developed across the coil due to a condition of magnetic resonance in the sample, said valve producing an output corresponding to the product of said signals to thereby comprise a phase shift component and a radio frequency component, and means for filtering the said output to remove the radio-frequency component and leave a signal dependent on the phase shift caused by a sample in the test coil.

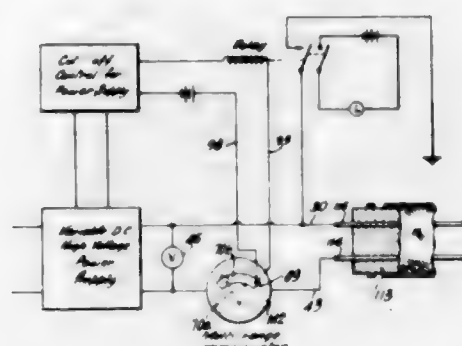
3,005,150

APPARATUS FOR DETERMINING THE CONDITION OF ELECTRICAL INSULATION

Samuel H. Behr, 1046 Pembroke St., Uniondale, N.Y.

Filed Nov. 15, 1960, Ser. No. 69,528
6 Claims. (Cl. 324-54)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for determining the condition of electrical insulation without damage to the insulation and where the insulation may be installed and only partially accessible for testing, which comprises power supply means for connection to said insulation and apply a direct voltage across said insulation and an initial voltage high enough to cause a small initial leakage current through such insulation but which initial voltage is well below the ionization voltage of such insulation, and adjustable to increase the applied voltage progressively through small uniform units of increase and cause increases in said leakage current, a voltmeter connected across said insulation and having a voltage indicating element that indicates the direct voltage applied across said insulation, multi-range current measuring means connected in series with said insulation and said power supply means and having an indicating member that indicates the leakage current passing through said insulation, a limit switch activated by said current indicating member at a selected position in the travel of that member, means activated by operation of said limit switch for interrupting the application of said direct voltage to said insulation, said current measuring means having its indicating member adjustable to set it, while indicating a small leakage current, to a position along its possible path of travel to said limit switch which represents approximately that fraction of the initial part of said path to its indicating position for said initial leakage current which corresponds to the fraction of the path of said indicating element from its zero position to the maximum desired position along its path representing maximum voltage to be applied.

3,005,151

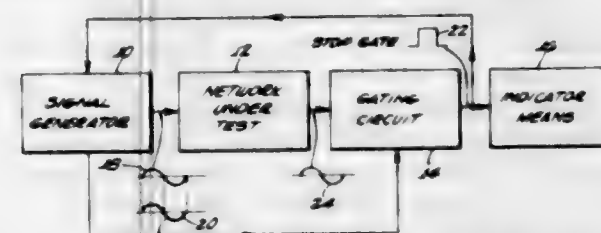
PHASE METER

Louis A. Ule, Alhambra, Calif., assignor to Gilliam Bros., Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 26, 1957, Ser. No. 642,357
21 Claims. (Cl. 324-57)

1. A phase meter for use in measuring the phase shift of a network to be tested, said phase meter comprising: a signal generator for both impressing a sinusoidal voltage on said network to produce an output signal there-

from and for producing an alternating signal synchronous with said sinusoidal voltage having half-periods equal to half-periods of said sinusoidal voltage, a gating circuit responsive to said network output signal and to said alternating signal for impressing a stop gate on said signal



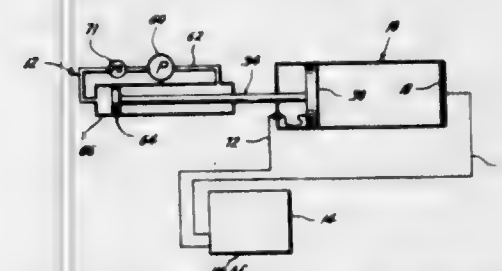
generator to stop the generation of said alternating signal at a time when the amplitudes of said signals bear a predetermined relationship with respect to each other, and means responsive to said stop gate for indicating its time width.

3,005,152

MOISTURE TESTER

Edwin J. Jennings, Jr., Ponca City, Okla., and John A. Reddick and Earl E. Berkley, Houston, Tex., assignors to Anderson, Clayton & Company, Houston, Tex., a corporation of Delaware

Filed Apr. 8, 1957, Ser. No. 651,473
4 Claims. (Cl. 324-65)



1. A moisture tester comprising, a test chamber adapted to hold a sample of fibrous material, said test chamber including a sidewall having an opening for inserting and removing a sample, and opposite ends, a first electrically conductive plate in the test chamber approximately one end thereof, a second electrically conductive plate in the test chamber approximately parallel to the first plate, said second plate being movable past the opening toward and away from the first plate, means electrically insulating the plates from each other through the chamber, fluid pressure means selectively advancing the second plate toward and retracting it from the first plate whereby a sample between the plates is compressed upon such advancing and released upon such retraction, control means in the fluid means controlling the force of compression on the sample, and an electrical circuit including the plates and a direct current electrical resistance meter directly converting the direct current electrical resistance of the compressed sample to percentage moisture content of the sample.

3,005,153

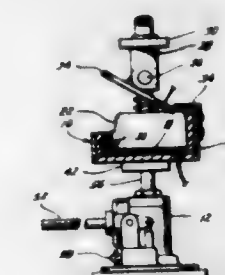
MOISTURE TESTER

Earl E. Berkley and John A. Reddick, both of Box 2538, Houston, Tex.

Filed May 26, 1958, Ser. No. 737,744
4 Claims. (Cl. 324-65)

1. In a moisture tester having a test chamber adapted to hold a sample of material, said chamber including an opening at one end for inserting and removing a sample, first and second electrically conductive plates associated with the test chamber, means electrically insulating the plates from each other through the chamber, means advancing the electrical plates towards each other whereby a sample between the plates is compressed, control means

controlling the force of compression on the sample, means retracting the electrical plates from each other thereby releasing the sample between the plates, the improvement comprising the first electrically conductive plate being pivotally mounted proximate the opening in the test



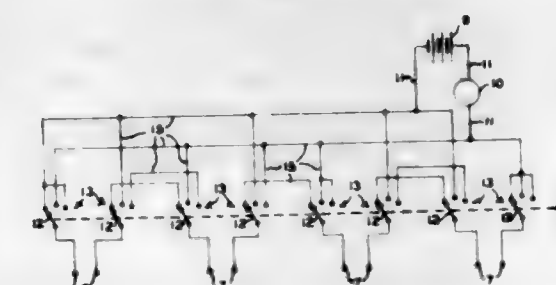
chamber, means yieldingly urging said first plate parallel to the second plate, and means associated with the first plate adapted to tilt said first plate as the electrical plates are retracted from each other thereby opening the test chamber.

3,005,154

MOISTURE TESTING ELECTRODE ASSEMBLY

Robert R. Moore, Glenview, and Lester R. Rabb, Evanston, Ill., assignors to Moore-Milford Corporation, Evanston, Ill., a corporation of Illinois
Continuation of abandoned application Ser. No. 591,359, June 14, 1956. This application Nov. 6, 1958, Ser. No. 772,653

2 Claims. (Cl. 324-65)



1. An electrical system for providing an indication corresponding to the moisture content of a plurality of test bodies comprising a plurality of pairs of electrodes, said plurality being a squared number, the electrodes in each pair being spaced identically apart to provide substantially equal effective lengths of electrode paths between the electrodes of each pair, electrical test circuit means for measuring the equivalent resistance across its terminals, a pair of terminal leads electrically connected to said test circuit terminals, a plurality of branch leads to said test circuit terminals, said switch means being movable to a first position to connect said pairs of electrodes in parallel, to a second position to connect said pairs of electrodes in series, and to a third position to connect the pairs of electrodes in a number of parallel branches equal to the square root of the number of said pairs of electrodes, the number of pairs of said electrodes serially connected in each branch being equal to the square root of the total number of said pairs of electrodes.

3,005,155

ELECTRIC TACHOMETER WITH VOLTAGE LIMITING MEANS

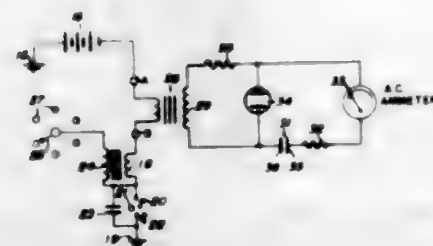
Thomas G. Faria, 13 Joyce Court, Niantic, Conn.

Filed Mar. 21, 1958, Ser. No. 722,974

3 Claims. (Cl. 324-70)

3. An electric tachometer adapted for connection into the primary circuit of an ignition system, said primary circuit providing pulsations of alternating direction, ir-

regular form and of a variable amplitude, the frequency of the pulsations bearing a direct relation to the speed to be measured, comprising in combination, a transformer having a primary connected in series with all components in said ignition primary circuit and comprising the sole addition thereto, a secondary for said transformer connected in a closed circuit including an A.C. milliammeter adapted to measure current pulses in said closed circuit



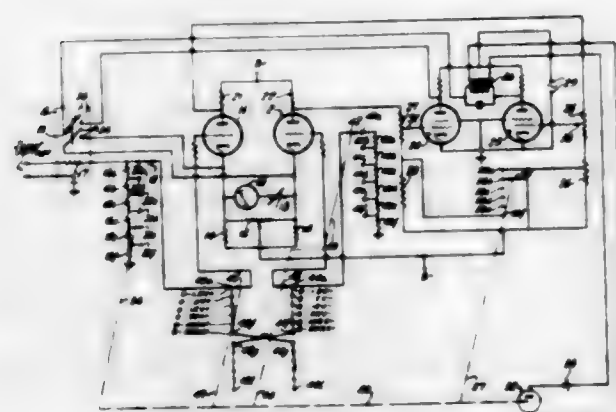
and show the effective sum thereof, a condenser connected in series with said milliammeter; and a single means only in parallel to both said secondary and said condenser-milliammeter series, said means comprising a diode having Zener characteristics and connected to regulate the maximum voltage amplitude applied to said milliammeter to a uniform value for each pulsation in one direction by said Zener characteristic and in the other direction by its forward regulating action.

3,005,156

AUTOMATIC RANGE SELECTOR

Max Hoberman, Fair Lawn, N.J., assignor to Bergen Laboratories Inc., Paterson, N.J., a corporation of New Jersey

Filed Jan. 18, 1956, Ser. No. 560,032
4 Claims. (Cl. 324-115)



1. A multi-range electrical indicating system comprising a first and a second amplifier tube each having a cathode, a control grid and an anode, a source of anode operating voltage connected in parallel relation to the anodes and cathodes of said tubes, biasing resistors connected to each of the cathodes of said tubes to provide normally equal cathode biasing potentials for said tubes, load resistors connected to each of the anodes of said tubes to provide a first anode output potential of said first tube normally balancing a second anode output potential of said second tube for zero input voltage between the grids and cathodes of said tubes, a multiple range current indicator connected between the cathodes of said tubes, input means for applying a varying grid input voltage to said first tube, to cause a current flow proportional to said input voltage through said indicator and effect an unbalance of said output potentials by decreasing said first output potential and increasing said second output potential, and vice versa, in proportion to

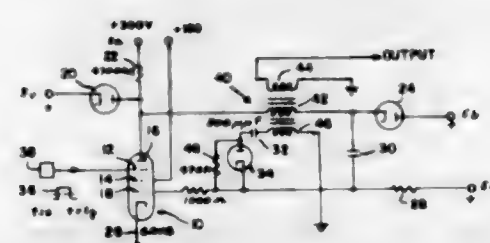
an increase and decrease, respectively, of said input voltage, a ring-shaped range potentiometer operatively connected between said input means and the grid of said first tube, rotary contact means cooperating with said potentiometer to subdivide an applied input voltage in fixed progressive predetermined steps, a pair of biased relays each having an input and an output, coupling means between each of the inputs of said relays and one of the anodes of said tubes, to control said relays by said first and second output potentials, respectively, biasing means for each of said relays to energize and operate the same during the periods of the respective output potentials exceeding predetermined upper limit values, continuously operating unidirectional actuating means for said contact means arranged for control by either of said relays, to operate said contact means upon either of said output potentials exceeding its limit value, whereby to automatically adjust said potentiometer to a resistance range corresponding to said input voltage such that the adjusted position of said potentiometer will cause said indicator to indicate on the most accurate range.

3,005,157

VARIABLE TIME DELAY PULSE GENERATOR

Frank L. Rees, Baltimore, Md., assignor, by means of assignments, to the United States of America as represented by the Secretary of the Air Force

Filed Aug. 10, 1960, Ser. No. 48,788
3 Claims. (Cl. 328-55)



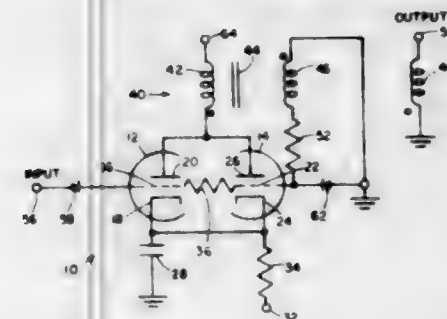
1. A variable time delay pulse generator comprising: an electron discharge device having a plate and a cathode with a control grid normally set approximately at ground potential and a suppressor grid normally biased beyond cutoff placed between the plate and cathode; a transformer having first, second and output windings; a first source of high positive potential; a second source of variable positive potential for determining the said time delay interval between switching on and pulsing; a third source of positive potential for determining the amplitude of the pulse flowing in said second winding; a fourth source of positive potential; the magnitudes of said sources of potentials range from high to low in the order of first through fourth sources; a first diode normally conducting having its anode connected to said first potential source and to the plate of said discharge device, and its cathode connected to the said second potential source; a second diode normally nonconducting having its anode connected to said third potential source, and its cathode connected to the plate of said discharge device through said first winding and to the control grid of said discharge device through a first capacitor; means for connecting said fourth potential source to said control grid through a resistance; means including a second capacitor for connecting said control grid to the cathode of said discharge device through said second winding; and means for applying a positive gating voltage to the suppressor grid for a predetermined time, thereby allowing the plate of said discharge device to conduct and rendering said first diode nonconducting, causing said second diode to conduct when the potential of said plate falls below the potential of said third potential source, and the resultant surge of voltage forming said pulse in said output winding.

3,005,158

CORE SATURATION BLOCKING OSCILLATOR

Robert J. Spilard, Brookhaven Township, Suffolk County, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 20, 1959, Ser. No. 847,672
3 Claims. (Cl. 328-58)



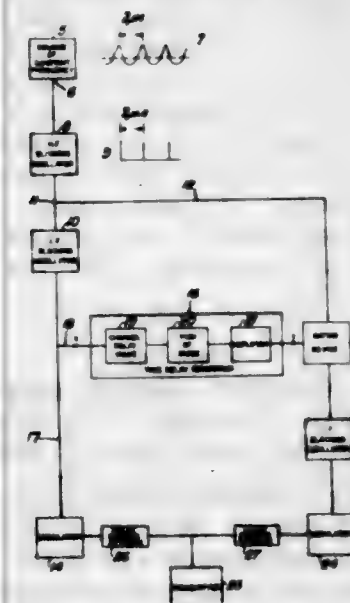
2. A core saturation controlled blocking oscillator for producing a square pulse in response to a triggering pulse comprising the combination of active means having an input element and an output element, transformer means having a primary coil, a secondary coil, and a saturable core, the latter being saturable at a primary current less than the saturation current of said active means, and means connecting said transformer means as positive feedback with the primary coil connected to said output element and the secondary coil to said input element, said saturable core consisting of members forming a magnetic loop including a saturable section of smaller cross-sectional area thereby saturable at flux values less than the remaining portions of said loop, permanent magnet means mounted in said loop for rotation to establish a bias flux in said loop, and a second magnetic loop including said saturable section, said primary and secondary coils mounted to provide magnetic coupling therebetween through said saturable section and to utilize said second magnetic loop to provide a continuous flux path through said section.

3,005,159

PULSE GENERATING SYSTEM FOR GENERATING ACCURATELY SPACED TIMING PULSES

John Forbes Allen, Maroubra, Sydney, New South Wales, Australia, assignor to Amalgamated Wireless (Australia) Limited, Sydney, New South Wales, Australia

Filed July 22, 1959, Ser. No. 828,837
Claims priority, application Australia Oct. 17, 1958
6 Claims. (Cl. 328-62)



1. An improved generating system for generating accurately spaced pairs of timing pulses comprising a source of frequency stabilised high frequency oscillations; means

771 O.G.—56

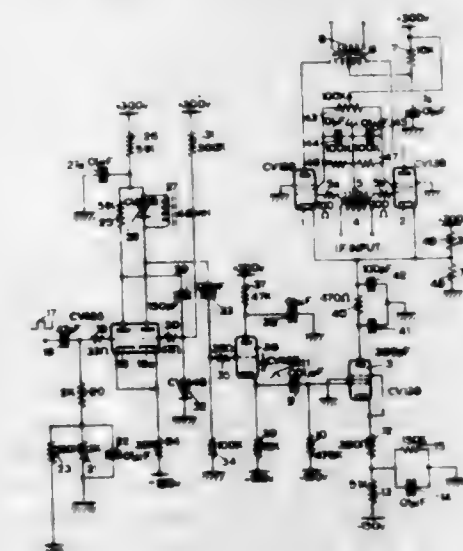
for utilising the output waveform from said source to trigger a high frequency pulse generator adapted to produce high frequency pulses in its output circuit in synchronism with the frequency of said source; means for applying said high frequency output pulses directly to a first low frequency pulse generator to cause said first low frequency pulse generator to produce low frequency output pulses, the time duration of which is short compared with the time interval between adjacent said high frequency output pulses; means for utilising said low frequency output pulses as the initial or reference pulses of said timing pulses; a delay network of variable time delay; means for applying said low frequency output pulses simultaneously to said utilising means and said delay network; and a gating circuit responsive to the pulses in the output of said network to selectively allow a high frequency output pulse applied directly to said gating circuit from the output of said high frequency pulse generator to be passed through said gating circuit to directly trigger a second low frequency pulse generator at the same frequency as said first low frequency pulse generator to produce pulses accurately spaced from said reference pulses by an adjustable time interval controlled by said network.

3,005,160

COINCIDENT SWITCHING WITH HIGH FREQUENCY COMPONENTS ELIMINATED FROM GATING PULSE

Gordon William Newbery, London, Peter Murdo Montgomery, Thames Ditton, and Peter Frederic Thomas Cryer Stillwell, Aylesbury, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed July 7, 1958, Ser. No. 747,082
Claims priority, application Great Britain July 13, 1957
11 Claims. (Cl. 328-91)



11. In radar apparatus including a radio receiver the provision, in an early stage thereof where the signal level is low, of a high frequency channel including an electrical gating circuit for gating low level radar signals in said channel, means for generating gating pulses, means for deriving from said generating means gating pulses containing substantially only frequency components lower than the frequency components of signals passed by said channel and means for feeding said pulses to said gating circuit.

3,005,161

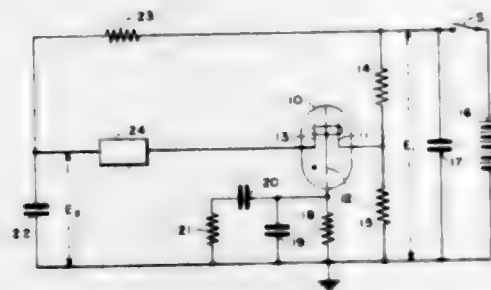
ELECTRONIC TIMER

George Bruck, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed July 21, 1960, Ser. No. 44,347
5 Claims. (Cl. 328-129)

1. An electronic timer comprising: a gaseous discharge tube having a main anode and auxiliary anode and a

cathode; means for applying a predetermined voltage between said auxiliary anode and said cathode sufficient to establish conduction between said auxiliary anode and said cathode; a condenser connected between said main anode and said cathode; means for charging said con-



denser to a voltage slightly greater than said predetermined voltage at a predetermined rate; and means for maintaining the voltage at said auxiliary anode substantially fixed whereby conduction between said main anode and said cathode results at a time determined by the rate said condenser is charged.

3,005,162 DERIVATIVE VOLTAGE REGULATION CIRCUIT

Donald J. Leslie, 313 S. Fair Oaks Ave., Pasadena, Calif.
Filed May 6, 1958, Ser. No. 733,339
2 Claims. (Cl. 328-267)



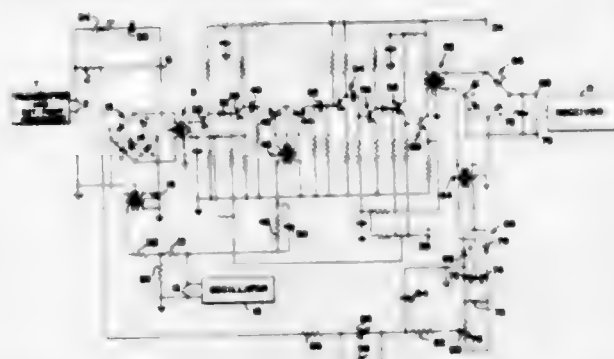
1. In an electrical system of the class including a regulated direct current voltage supply having a high voltage terminal and a load extrinsic to said voltage supply designed to be supplied with regulated voltage at a value lower than that of said high voltage terminal, the combination therewith of a serial connection between said high voltage terminal and said load including a constant voltage device, the serial connection being devoid of associated power consuming bleeder circuits so that the average or net current of the load is the average or net current through said constant voltage device.

3,005,163 ELECTRONIC CONTROLLER

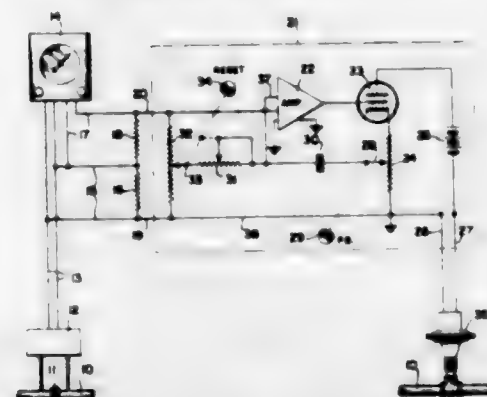
Leon H. Dülberger, Hollicong, and Shalom Kass, Philadelphia, Pa., assignors to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed Oct. 6, 1958, Ser. No. 765,582
12 Claims. (Cl. 330-10)

9. Control apparatus comprising a diode bridge, means providing alternating excitation to said bridge, means providing a direct current signal to said bridge, said bridge being balanced to provide an alternating output substantially proportional to the magnitude of said direct current signal, the alternating excitation of said bridge and the magnitudes of the direct current signals provided thereto being such that the diodes of the bridge operate at the

toes of their static characteristics, amplifying means receiving the alternating output of said bridge, means responsive to alternating output of said amplifying means and providing to a terminal a direct potential substan-



3,005,164
DIRECT CURRENT AMPLIFIER FEEDBACK
CONTROL CIRCUIT
William F. Newbold, Ambler, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 7, 1956, Ser. No. 563,903
6 Claims. (Cl. 330-108)

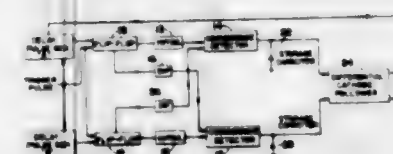


1. An electrical controller having a pair of input terminals and a pair of output terminals and comprising a direct current amplifier connected between said controller input and output terminals, a first potentiometer resistor connected across said input terminals and having a slider, a second potentiometer connected to said output terminals and having a slider, a feedback connection between the sliders of said first and second potentiometers, a condenser and a resistor connected in series in said feedback connection, a connection between an input terminal of said direct current amplifier and the junction point between said condenser and said resistor, and a further connection between another input terminal of said amplifier and one of said controller input terminals.

3,005,165
PULSE POSITION ERROR DETECTOR
Thomas E. Lenig, Morristown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Aug. 31, 1960, Ser. No. 53,322
2 Claims. (Cl. 331-11)

1. A pulse synchronization circuit for indicating the error in synchronization of first and second pulses, said pulses being produced in response to a trigger pulse and which pulses are delayed with respect to the trigger pulse, said circuit comprising first pulse forming means responsive to said first pulses and a trigger pulse for pro-

ducing a pulse, the leading edge of which is coincident with the occurrence of a pulse output of the first pulse generating source and the trailing edge of which is coincident with said trigger pulse, second pulse forming means responsive to said pulses and said trigger pulse for producing a pulse, the leading edge of which is coincident with the occurrence of a pulse output of said second pulse generating source and the trailing edge of which is coincident with said trigger pulse, first integrating means responsive to a pulse output of said first pulse forming means for shaping the leading edge of said last named output to provide a gradually decreasing slope, second integrating means responsive to a pulse output of said second pulse forming means for shaping the leading edge of said last named pulse output to provide a gradually decreasing slope, first differentiating means responsive to the pulse output of said first pulse



producing means for differentiating the leading edge of said last named pulse output, second differentiating means responsive to the pulse output of said second pulse producing means for differentiating the leading edge of said last named pulse output, first coincidence means responsive to the output of first integrating means and said second differentiating means for providing a first output when both inputs are present, second coincidence means responsive to said second integrating means and said first differentiating means for providing a second output when both inputs are present, third integrating means responsive to said first output for deriving a potential which is a function of the average value of said first output, fourth integrating means responsive to said second output for deriving a potential which is a function of the average value of said second output, differential means responsive to said third and fourth integrating means outputs for subtracting said outputs.

3,005,166
CONDITION RESPONSIVE OSCILLATOR WITH
PROTECTIVE CONTROL MEANS
David B. Savory, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed May 1, 1958, Ser. No. 732,392
7 Claims. (Cl. 331-62)

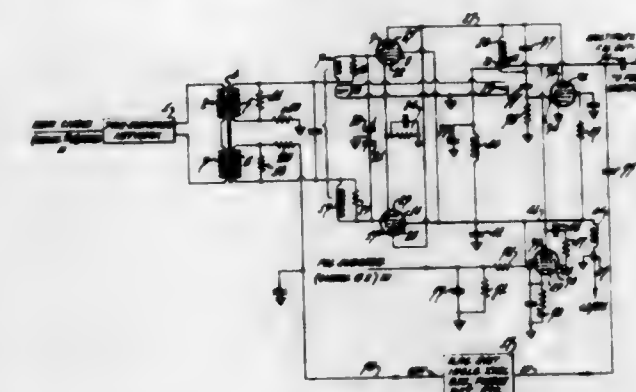


1. Protective control apparatus comprising, in combination: an oscillator having an input circuit and an output circuit; condition responsive means in said input circuit for changing the oscillatory condition of said oscillator when said condition attains a predetermined magnitude; protective means in said input circuit responsive to said change in oscillatory conditions and operating to fix the frequency of the oscillator and pre-

vent said condition responsive means from effecting further changes in said oscillatory condition once said condition has reached said predetermined magnitude; and a stationary metallic plate connected in said input circuit which when touched changes said oscillatory condition.

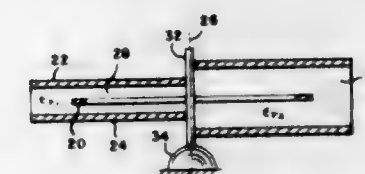
3,005,167 FREQUENCY MODULATION MULTIPLEX ARRANGEMENT

Adolf H. Bott, Collingswood, and Franklin E. Talmage, Westmont, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 14, 1958, Ser. No. 721,407
14 Claims. (Cl. 332-21)



1. An angular-velocity modulation multiplex transmitter comprising an oscillator having a tank circuit which includes a coil; a first reactance tube electrically coupled to said coil, a second reactance tube electrically coupled to a part only of said coil, means for feeding the intelligence constituting a first multiplex channel as modulation to said first tube, and means for feeding the intelligence constituting a second multiplex channel as modulation to said second tube, thereby to angular-velocity modulate said oscillator by the joint action of both of said reactance tubes.

3,005,168
MICROWAVE PHASE SHIFTER
David L. Fye, 51 Woodridge Road, Wayland, Mass.
Filed Oct. 8, 1959, Ser. No. 845,291
1 Claim. (Cl. 333-31)
(Granted under Title 35, U.S. Code (1952), sec. 266)

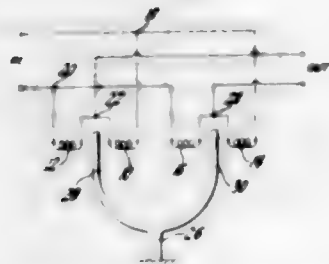


An adjustable microwave phase shifter comprising an arcuate conductor, a pair of conductive plates located on either side of said conductor and parallel thereto, means for pivoting said plates about an axis normal to the plates and passing through the center of the arc of said conductor, means dividing said plates into two sectors along a plane containing said axis, said sectors being of substantially the same angular extent as said arcuate conductor, dielectrics of different dielectric constants between the plates of the two sectors, the spacing of the plates in the sector having the dielectric of higher dielectric constant being greater than the spacing in the other sector by the amount required to produce equality between the characteristic impedances of the sections of transmission line formed by the arcuate conductor and the plates in each sector.

3,005,169 FREQUENCY SELECTIVE CIRCUIT

Anderson Boureco Boyd, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 699,771
1 Claim. (Cl. 333-71)

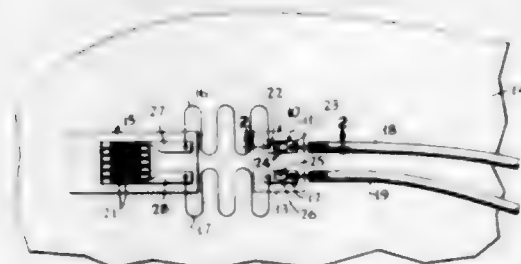


A frequency selective circuit comprising a bridge including an inductance coil in each arm of the bridge, one pair of diagonally opposite terminals of the bridge constituting input terminals, a first pair of said coils being disposed adjacent each other to provide a first common field and connected in series between the input terminals, a vibratile element located in the first common field, a second pair of said coils being disposed adjacent each other to provide a second common field and connected in series between the input terminals, a vibratile element located in the second common field, said vibratile elements being mechanically resonant at a selected frequency whereby the motional impedances of the coils of the first said pair vary in opposite phase and the motional impedances of the coils of the second said pair vary in opposite phase, said vibratile elements being in motional phase agreement with each other relative to the coils in diagonally opposite arms of the bridge circuit, the other pair of diagonally opposite terminals of the bridge constituting output terminals.

3,005,170 PRINTED-CIRCUIT TYPE LEAD WIRE CONNECTORS

James E. Starr, Norristown, Pa., assignor, by mesne assignments, to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 8, 1959, Ser. No. 838,776
1 Claim. (Cl. 338-2)



A solderable strain gauge lead wire connector for stress isolating, electrical interconnection of the stressable leads of an external circuit and the unstressable leads of a resistance strain gauge bonded to a workpiece, said connector comprising a unitary printed circuit laminate of a metal layer and an insulating layer, said metal layer being conformed as a pair of similar, symmetrical, rectangular junction patterns each having an outer closed edge and an inner closed edge defining between said edges two opposed major lead attachment surface areas at the narrower ends of said patterns and two symmetrical attenuated temperature gradient amplification surface areas at the sides of said patterns, each said inner edge being substantially elliptic and spaced from the narrower ends of each said outer edge a distance at least substantially equal to the

width of said ends, said temperature gradient amplification areas having length-to-width ratios predetermined with respect to soldering materials and reducing soldering temperatures maintained at one said major attachment area below solder fusion temperatures at the other of said major attachment areas, and means coextensive with said insulating layer adhesively bonding said connector to said workpiece.

3,005,171 ELECTRICAL RESISTANCE TYPE THERMOMETER

Paul Beckman, Glen Olden, Pa.
(944 Henrietta Ave., Huntingdon Valley, Pa.)
Filed Aug. 19, 1960, Ser. No. 50,633
2 Claims. (Cl. 338-28)

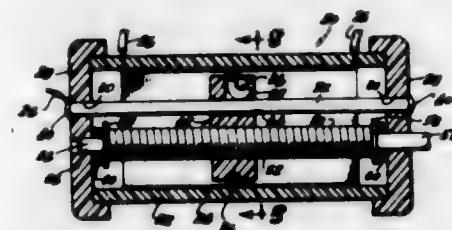


1. An electrical resistance type thermometer having an elongated bulb of insulating material provided with a pair of substantially parallel holes extending continuously throughout the length of the bulb, a lead at one end of one of said holes and another lead at the corresponding end of the other of said holes, and a temperature sensitive element of electrical conducting material extending through one of said holes in spaced relation to the wall thereof and reversely crossing over the end of the bulb and back through the other of said holes in spaced relation to the wall thereof, the ends of the filament being connected to the leads at one end of the bulb.

3,005,172
ADJUSTABLE ELECTRICAL INSTRUMENTS
Marian E. Bourne and Carl N. Boode, Riverside, and Edward D. O'Brien, Anaheim, Calif.; said Boode and said O'Brien assignors to Bourne, Inc., a corporation of California

Continuation of original application Ser. No. 660,247, May 20, 1957, now Patent No. 2,932,808, dated Apr. 12, 1960. This application Mar. 17, 1960, Ser. No. 17,726

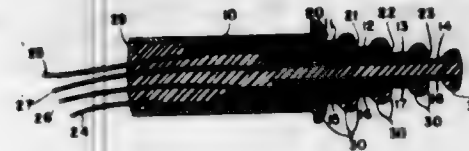
5 Claims. (Cl. 338-183)



1. A variable resistor comprising a housing having a cylindrical cavity provided therein, resistance means attached to the inner surface of said housing within said cavity, a lead screw rotatably mounted within said housing parallel to the longitudinal axis of said cavity, a slider of electrically non-conductive material having a threaded hole through which said lead screw is threaded, said slider being moved longitudinally of said cavity as

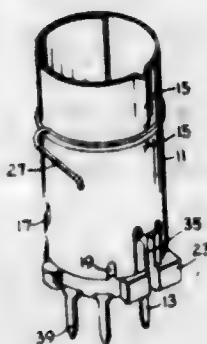
said lead screw is turned, a guide rod of electrically conductive material extending parallel to said lead screw, said guide rod being slidably received within a radial slot extending inwardly from the periphery of said slider, said guide rod serving to restrain said slider against turning with said lead screw, a circular contact ring on said slider wiping on said resistance means around substantially its entire circumference, said contact ring including an inwardly bent portion projecting down into said radial slot and wiping on said guide rod, and terminal means electrically connected to said resistance means and to said guide rod.

3,005,173
SLIP RING CONSTRUCTION
Leonard E. Aske, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,347
2 Claims. (Cl. 339-8)



1. An electric slip ring and sliding contact assembly comprising: a plurality of concentrically fitted current conducting tubes, each of said tubes having flange means extending laterally outward at one end thereof and said tubes being axially positioned relative to one another so that said flange means are axially spaced and so as to expose conductive cylindrical surfaces of said tubes near the flanged ends thereof in stepped relation; insulating means maintaining said tubes in spaced and fixed concentric relation to each other; insulating means abutting at least one side of each of said flange means of said tubes, said flange means serving to mechanically strengthen said abutting insulating means; a plurality of conductors individually and securely attached one to each of said tubes at the ends opposite the flanges; and sliding contact means engaging the exposed conductive cylindrical surfaces of said tubes and retained in axial spaced apart relation by said flange means and said abutting insulation means.

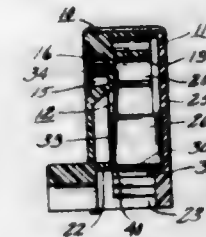
3,005,174
TUBE SHIELD
Marion J. Pifer, Williamsville, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed May 15, 1957, Ser. No. 659,330
2 Claims. (Cl. 339-14)



1. A shield assembly for an electrical device adapted to be employed in an electrical circuit having a grounding element and adjacent another electrical device comprising an open-ended electrically conductive tubular body portion formed with spaced protrusions, a contact element maintained upon said body portion by said pro-

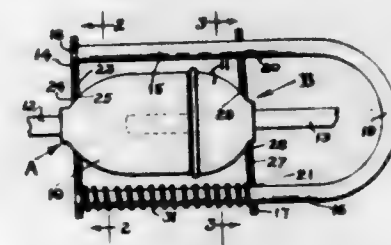
trusions having a conductor formed to extend from said body portion and engage said other electrical device, and a ground strap extending from said body portion formed to engage the grounding element in the electrical circuit.

3,005,175
SPRING BLADES FOR RECESSED END FLUORESCENT LAMPHOLDER
John M. Plstey, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Filed Oct. 2, 1958, Ser. No. 764,908
3 Claims. (Cl. 339-50)



1. A fluorescent lampholder comprising a housing with a recess in the front face for receiving a portion of a lamp base, a transverse partition forming the back wall of the recess, a pair of coplanar slots formed in the partition; the invention comprising a pair of unitary electrical contacts of flat resilient material, each contact being bent flatwise into a Z-shape, the base of each Z-shaped contact representing the terminal end, the shank of each contact being a spring portion, and the top of each contact being a cam portion for making electrical connection with the contacts of a lamp, each contact base being fixed in the housing, while each cam portion extends through one of the slots and is spring supported therein by the shank of its respective contact, the cam portions of the contacts being separated and disposed with relation to each other so that when a lamp is inserted into the recess of the housing, the cam portions will cooperate with contacts of the lamp thereby be pressed slightly toward each other as well as inwardly of the housing, the cam portions also swinging upwardly in an arc that is traced from the contact bases to provide a wiping action in cooperation with the lamp contacts.

3,005,176
RETAINER CLAMPS FOR ELECTRIC PLUG AND SOCKET CONNECTORS
Lloyd J. Berg, 1669 Lafond St., St. Paul, Minn.
Filed Jan. 27, 1960, Ser. No. 4,955
5 Claims. (Cl. 339-75)



1. A retainer clamp for electric plugs and sockets comprising an anchor member having means engageable with a socket for depriving such member of forward movement relative to the socket, a first rail and a second rail secured at their corresponding ends to and extending forwardly in parallelism from said anchor member, a follower member mounted on said rails and having an abutment portion for engagement with the rear of a plug plugged into the socket, said follower member being formed with a first bore therein in which said first rail is slidably received and with a second bore therein in

which the second rail is slidably received, the diameter of said second bore being considerably greater than the diameter of the second rail enabling the follower member to be biased relative to the rails fore and aft thereof, the diameter of the first bore being but slightly greater than the diameter of said first rail and such that the diametrically opposite portions of the wall of the bore at the opposite ends thereof will engage and grip said first rail upon the biasing of said follower member, said follower member being adapted to be moved along the rails toward the socket into biased disposition abutting the plug thereby to hold the plug against withdrawal from the socket.

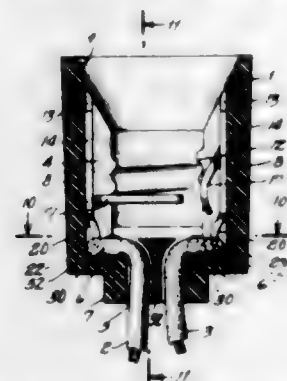
3,005,177

ELECTRIC LIGHT BULB SOCKETS

Gerhard Wieckmann, Whitestone, N.Y., assignor to Gilbert Manufacturing Co., Inc., Long Island City, N.Y., a corporation of New York

Filed May 14, 1958, Ser. No. 735,332

6 Claims. (Cl. 339-97)



1. An electric light bulb socket comprising a body portion, said body portion having an internal cavity with two side walls and a bottom wall, said body portion also being formed with an aperture that extends through the bottom wall of said cavity and adapted to accommodate a plurality of continuous, doubled-over, insulated, current-carrying wires when inserted into the cavity, a plurality of pins extending upwardly into said cavity from said bottom wall, each pin adapted to accommodate a respective wire looped over it to provide strain relief for the respective wire, a plurality of contact blade members each having a sharpened bottom portion, a plurality of grooves in said side walls each adapted to accommodate a respective contact member, the bottom portion of each of said contact members adapted to pierce the insulation of the respective wire and also adapted to press its corresponding wire against said bottom wall between a respective pin and a side wall.

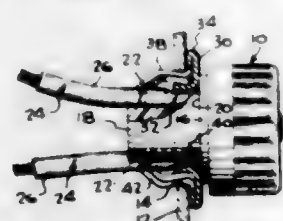
3,005,178

ELECTRICAL WIRING DEVICE AND MOUNTING MEANS THEREFOR

Harry E. Radack, Trenton, N.J., assignor to Circle F Mfg. Co., Trenton, N.J., a corporation of New Jersey

Filed Feb. 23, 1960, Ser. No. 10,161

5 Claims. (Cl. 339-128)



3. In an electrical wiring device and mounting means of the snap-in type intended for engagement in an aperture of a support, a wiring device body; a rear portion thereon; rearwardly facing abutment means on the body at the juncture of the same with said rear portion; a

finger support ring extending about the rear portion, said abutment means limiting the ring against forward movement in respect to the body and rear portion; a plurality of spring fingers projecting from the ring rearwardly of said shoulder and resiliently bowed for snap fastener engagement with the edge of the aperture of a support upon which the wiring device is to be installed; and at least one conductor wire extending from the body along the length of said rear portion and including an electrically insulative, resiliently compressible sheath, having a front part compressed between and frictionally bound against the ring and said rear portion, said sheath having a back part expanded in a direction radially outwardly from said rear portion and lying as an abutment limiting the ring against rearward movement in respect to said body and rear portion.

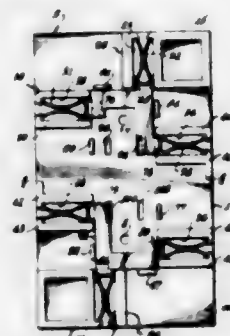
3,005,179

MULTIPLE ELECTRICAL OUTLET

Hammond H. Holt, Sherman Oaks, Calif., assignor, by mesne assignments, to Bri-Son Electronics, Inc., Los Angeles, Calif., a corporation of California

Filed July 28, 1959, Ser. No. 830,140

6 Claims. (Cl. 339-159)



3. A multiple electrical contact plug adapted to occupy a minimum of space from a wall outlet comprising a pair of sections having plates and walls extending perpendicularly from said plates, certain of said walls forming rectangular cavities having internal open ends and exterior edge openings, a contact spring unit in each of said cavities, certain of said spring contact units being interconnected in each section, a plurality of narrow tab walls mounted on one of said sections and adapted to close the internal open ends of the cavities in the opposite section when said sections are folded together, certain other of said walls forming the outside edge closure for said plug between said cavities.

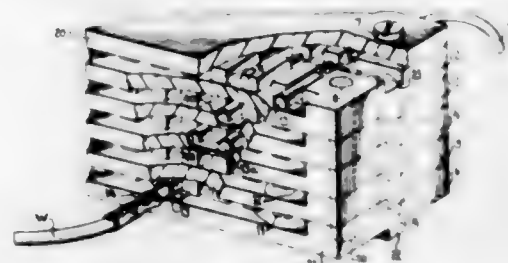
3,005,180

MULTIPLE-CONNECTOR STACKED TERMINAL BLOCKS

Elmer H. Dreber, East Norwalk, Conn., assignor, by mesne assignments, to AMP Incorporated, a corporation of New Jersey

Original application Aug. 19, 1954, Ser. No. 450,852. Divided and this application Feb. 4, 1960, Ser. No. 11,403

2 Claims. (Cl. 339-198)



1. A multiple connector assembly for stacking comprising an insulator block having on one surface sub-

stantially parallel transverse ribs defining connector insert receiving slots, connector inserts for said slots each including a base portion and a tubular portion at each end of said base portion for providing pin receiving receptacles on opposite faces of said block, a recess in each of said ribs, means extending laterally from said base portion for cooperation with a recess to maintain said insert against movement along the associated slot, rib and groove means on opposite surfaces respectively of said block for registering a plurality of blocks in a stacked arrangement, said lateral means and recesses being in longitudinal alignment with said groove so that the rib on the next adjacent block stabilizes the lateral means within said recesses.

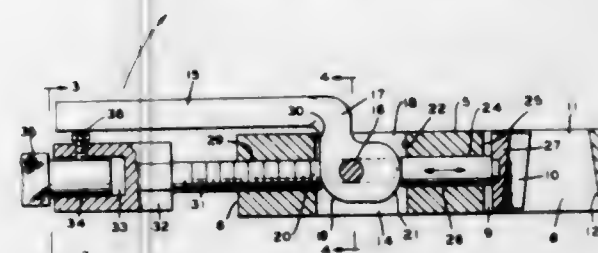
3,005,181

SNAP-ON BATTERY TERMINAL

Jack A. Ament, Rte. 2, Box 267, Apollo, Pa.

Filed Feb. 28, 1961, Ser. No. 92,235

3 Claims. (Cl. 339-239)



1. A terminal connection for a battery comprising, an elongated body, an opening formed transversely through one end of the body, a slot extending through the body spaced from the opening, a lever having a cammed end pivotally supported within the slot, a bore communicating between one end of the slot and the opening and having a plunger extending therethrough, a threaded bore extending from the other end of the slot to the other end of the body, an adjustable fulcrum threadably engaging in the threaded bore and protruding into the slot, said fulcrum projecting outwardly of the bore and terminating with a cable clamp, said lever adapted to rotate the cammed end within the slot and force the plunger into the opening to grippingly engage with a battery terminal post disposed therein.

3,005,182

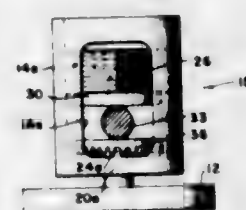
ANGULARLY ADJUSTABLE ELECTRICAL CONNECTOR

Joseph T. Janik, 6008 N. 28th St., Arlington 7, Va.

Filed Sept. 10, 1958, Ser. No. 760,276

6 Claims. (Cl. 339-245)

(Granted under Title 35, U.S. Code (1952), sec. 266)



4. An angularly adjustable connector for fixedly connecting an elongated extending member to a supporting structure in any one of a plurality of angular positions relative to said supporting structure comprising, a tubular connector body having openings formed in the walls thereof for positioning said extending member through the connector body, a connector securing means adapted to be fixedly joined to said supporting structure, a pressure bar on said securing means and located within the connector body and being adapted to bear against the

inside of said connector body, said connector body being axially movable and rotatable relative to said securing means; rigid selectively interlockable means on said securing means and said connector body adapted upon movement of said connector body towards said pressure bar to interengage for selectively preventing relative rotation between said connector body and said securing means, a pressure screw threadably mounted on said connector body for selective movement toward said pressure bar, and a pressure disk rotatably mounted on the innermost end of said pressure screw whereby said extending member is adapted to be clamped between said clamping means and said pressure bar.

3,005,183

UNDERWATER TRANSMITTER

Fred M. Mayer, 614 Stockton Circle, Leedom Estates, Ridley Park, Pa.

Original application Jan. 10, 1951, Ser. No. 205,396. Divided and this application June 25, 1957, Ser. No. 673,998

1 Claim. (Cl. 340-6)

(Granted under Title 35, U.S. Code (1952), sec. 266)



In a system of the character disclosed, means for intermittently transmitting sound signals from a sunken torpedo having a casing with a handhole therein comprising, in combination, a tubular housing mounted within the handhole, an oscillating device mounted at the base of said housing, a cover enclosing said housing and acoustically connected to the torpedocase, a transducer unit acoustically engaging said cover and adapted to transmit sound signals therethrough and through the casing when the transducer is operated, a battery having an opening therethrough and disposed within said housing between said transducer and said oscillating device, and a contact rod disposed within said battery opening and operatively connected to said oscillating device and said transducer whereby the transducer is operated from said oscillating device.

3,005,184

METHOD AND APPARATUS FOR SEISMOGRAPHIC SURVEYING

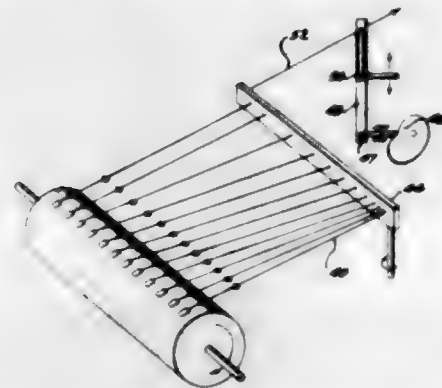
Carl H. Savit, Van Nuys, Calif., assignor to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware

Filed Oct. 28, 1957, Ser. No. 692,732

11 Claims. (Cl. 340-15)

9. In an apparatus for seismic surveying having a plurality of groups of detectors spaced proximate the surface of the earth at varying distances from a source of seismic disturbance, a reproducible recording medium having a time scale, and a plurality of reproducing means movable relative to said medium along said time scale

for reproducing said signals, each of said reproducing means corresponding to a specified group of detectors; means for adjusting the time-phase relationship of seismic energy detected at said detectors and transmitted as seismic detector signals comprising: motion distributing



means; connecting means connecting said reproducing means to said motion distributing means, said motion distributing means being constructed and arranged to distribute motion among said reproducing means substantially according to the relationship

$$B_n = CF(t)B_N(S_n/S_N)^y$$

where B_n is the relative motion of the n th reproducing means, B_N is the motion of the N th reproducing means, S_n is the horizontal distance of the n th detector from the source, S_N is the horizontal distance of the outermost detector N from the source, C is a function of the spread length of the detectors, $F(t)$ is a function of time t , and y is a predetermined number greater than 1 and less than 2; and means for actuating said motion distributing means.

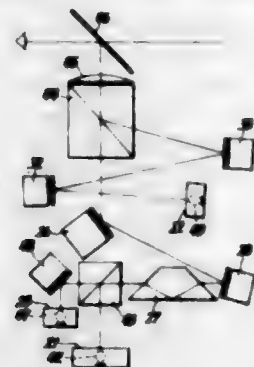
3,005,185

AIRBORNE APPROACH AID

Ronald William Cumming, Brighton, Victoria, and John Charles Lane, Camberwell, Victoria, Australia, assignors to Commonwealth of Australia, Canberra, Australia

Filed June 24, 1957, Ser. No. 667,644

Claims priority, application Australia July 4, 1956
4 Claims. (Cl. 340-27)



1. An airborne approach aid for a piloted aircraft comprising means on the aircraft for providing directly in the pilot's normal field of vision focussed at infinity and superimposed on the external scene a first display identifying a point, means for adjusting the position of the said display relative to the pilot's eye in accordance with variations of the weight, airspeed and incidence of the aircraft and variations of the direction and speed of the wind whereby a line from the pilot's eye to the said point continuously represents the instantaneous direction of motion of the aircraft relative to the ground, further means on the aircraft for providing a second display superimposed on said first display and in the form of a horizontal line representing the horizon and a vertical line representing a scale of angles subtended

at the pilot's eye, means for stabilizing the position of said second display against pitching and rolling of the aircraft whereby said horizontal line becomes coincident with the horizon, means on the aircraft for stabilizing the position of said second display in azimuth whereby said vertical line is maintained at a predetermined orientation from the pilot's eye, and further means on the aircraft similarly providing a third display superimposed on said first display and representing the position of the aircraft in relation to a radio beam such as an I.L.S. beam.

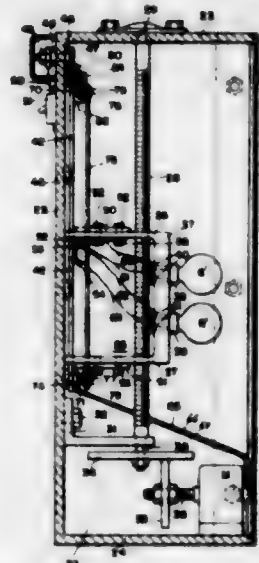
3,005,186

TIME LAPSE INDICATOR

John C. Van Aken, 159 Main St., Ridgway, Pa.

Filed Dec. 3, 1959, Ser. No. 857,078

3 Claims. (Cl. 340-43)



1. A traffic signal having standard Go and Stop lights, main power supply lines and a set of switch controlled conductors for each of the lights, in combination a time lapse indicator comprising a housing having side walls including a transparent face and upper and lower end walls, a rotatable lead screw mounted longitudinally of the housing between its end walls, a carriage having top and bottom plates providing a space therebetween, said plates being interconnected by a front panel and supported by said lead screw, a pair of longitudinally spaced light receptacles on the front panel of the carriage, one receptacle having an auxiliary Go light therein and the other having an auxiliary Stop light therein, connections between the one receptacle and the set of conductors of one standard light, other connections between the other receptacle and the set of conductors of the other standard light, a switch supported by the carriage and having connections to the power supply lines, a pivoted control arm for said switch having a free end disposed adjacent one wall of the housing, a reversible motor in the housing operatively connected to the lead screw for reciprocating the carriage within the housing, said top and bottom plates having edge portions positioned to cooperate with a wall of the housing to maintain the carriage panel aligned with the transparent face of the housing during the carriage reciprocation, a first set of electrical conductors between said switch and motor, a second set of electrical conductors being the switch and motor, a first stop on said one wall of the housing spaced from one of its end walls, a second stop on said one wall of the housing spaced from its other end wall, said free end of the pivoted control arm during movement of the carriage in one direction contacting said first stop to deenergize one set of electrical conductors and energize the other set and during movement of the carriage in its other direction contacting the second stop to energize the one set of electrical conductors and deenergize the other set.

3,005,187

AUTOMOBILE SIGNAL SYSTEM

Dominick J. Passa, 2408 N. Chevrolet Ave.,

Flint 4, Mich.

Filed Sept. 23, 1960, Ser. No. 58,106

2 Claims. (Cl. 340-52)



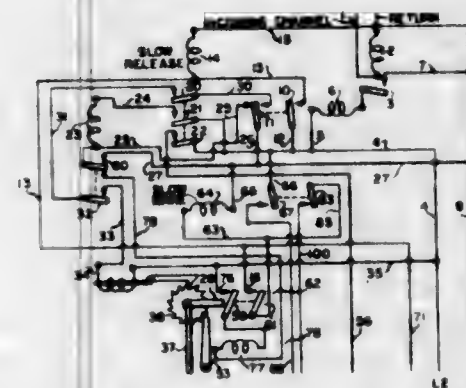
2. A signal system for an automobile having a battery, a switch controlled radio energized by said battery, a lighting system energized by said battery including a switch controlled head light circuit, a switch controlled parking light circuit and a tail light circuit in series with said head light circuit and in series with said parking light circuit, and a key controlled ignition switch, comprising a pressure responsive switch associated with said ignition switch wherein the contacts of said pressure responsive switch are closed by positioning the key in any position in said ignition switch, a conductor connecting one contact of said pressure responsive switch to said battery and a conductor connecting the other contact of said pressure responsive switch to a first electrically actuated signal, a conductor connecting said radio at a locus in the circuit extending from the cold-terminal of the radio switch to the radio to a second electrically actuated signal, a conductor connecting said tail light circuit to a third electrically actuated signal, an operator actuated multi-pole pressure responsive switch disposed within the seat of said automobile, conductors connecting said electrically actuated signals to separate poles of the multi-pole pressure responsive switch.

3,005,188

ELECTRIC CHANNEL SELECTORS

George Donald Hendricks, Campbells Island, Ill., assignor, by mesne assignments, to Gamco Corp., a corporation of Massachusetts

Continuation of application Ser. No. 473,880, Dec. 6, 1954. This application Feb. 18, 1960, Ser. No. 9,653
19 Claims. (Cl. 340-167)



7. A circuit for use with a step switch having first and second contact banks and arms rotatable thereover permitting selection of succeeding contacts on the second bank without rotation through the first bank, including in combination, an incoming single channel, an external source of electric signals connected thereto; a preconditioning circuit comprised of a key relay connected to said channel, a source of local power, a second relay energized from local power through contacts on said key relay, a slow release relay energized from local power through first contacts on said second relay, said slow release relay hav-

ing contacts closed for a short time after said second relay is deenergized, a fourth relay energized from local power through said contacts on said slow release relay and through back contacts on said second relay which are closed when said second relay is deenergized, holding contacts on said fourth relay maintaining said fourth relay energized while said slow release relay contacts remain closed, said fourth relay thereby preconditioned by a single incoming pulse; a solenoid on said step switch cooperative with a ratchet mechanism thereon for stepping said arms over said contacts, said solenoid energized from local power through contacts on said fourth relay during each incoming pulse after the first, hold contacts on said step switch closed after the first step, a slow make relay energized from local power through said hold contacts after a long incoming signal, a circuit including contacts on said slow make relay connecting local power to one of said step switch arms, a plurality of outgoing channels one connected to each contact on said contact banks, said long signal being sufficiently longer than the make time of said slow make relay to cause local power to flow to the outgoing channel contacted by said one arm; a make before break relay, a circuit including the last contact on said first bank in series with the coil of said make before break relay to connect same to local power through a contact on said slow make relay, said long signal incoming after a plurality of short pulses equal in number to said contacts on said bank serving to energize said make before break relay, a holding contact on said relay, a pause in incoming signal serving to reset said step switch arms to zero, succeeding short pulses serving to step said step switch arms, a very slow make relay energized from local power through said contacts on said second relay near the end of a very long incoming signal, a release contact in said last named holding circuit opened thereby; and a release solenoid on said step switch adapted to return said arms to their initial position when energized from local power through back contacts on said fourth relay when same is deenergized by said slow release relay.

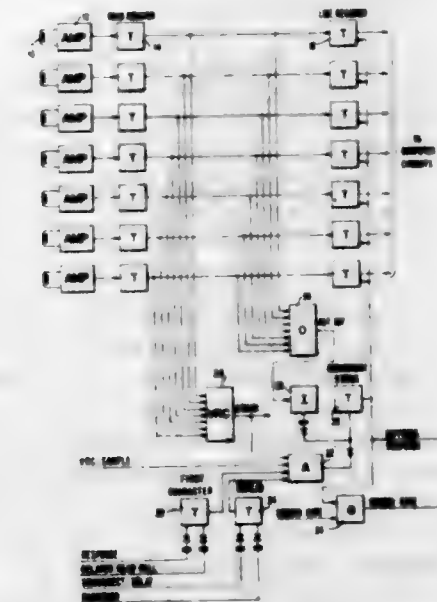
3,005,189

INTERRECORD NOISE ELIMINATION

Hugh A. O'Brien, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 17, 1958, Ser. No. 715,641

7 Claims. (Cl. 340-174.1)

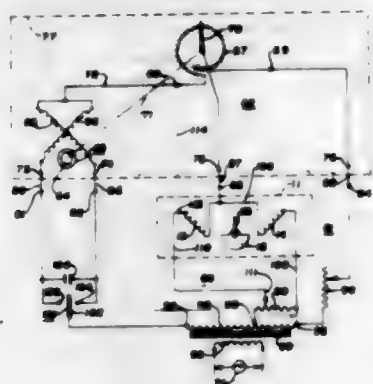


7. A magnetic tape reading system adapted to suppress the transmission of noise read from the space between records on the tape, a register system comprising a first character register for receiving pulses representing a character from a plurality of channels of the tape and a

second character register, connections between said first and second character registers for transmitting character representing pulses from said first character register to said second character register, means for determining the redundancy count of pulses received from the tape in said first character register and for producing a first control signal when the redundancy count of said pulses indicates the presence of an invalid character in said first character register, means for generating a second control signal indicating the reading of a first character following the reading of each complete record from the tape, a coincidence circuit having as inputs thereto said first and second control signals, a test pulse input to said coincidence circuit for detecting the simultaneous presence of said first and second control signals therein and for generating an output pulse upon the simultaneous presence therein of said first and second control signals, a bistable trigger having a first and second state connected to said coincidence circuit for receiving an output pulse from said coincidence circuit whereby said trigger is set to its first state and thereby generates a blocking potential, connections between said bistable trigger and said register system for transmitting said blocking potential to said register system to block transmission of character representing pulses through said connections between said first and second character registers, a second connection between said register system and said bistable trigger for setting said trigger to its second state, and means responsive to a signal indicative of a tape back spacing operation adapted to render inoperative said coincidence circuit whereby the output pulse therefrom is suppressed.

3,005,190 TELEMETERING CIRCUIT

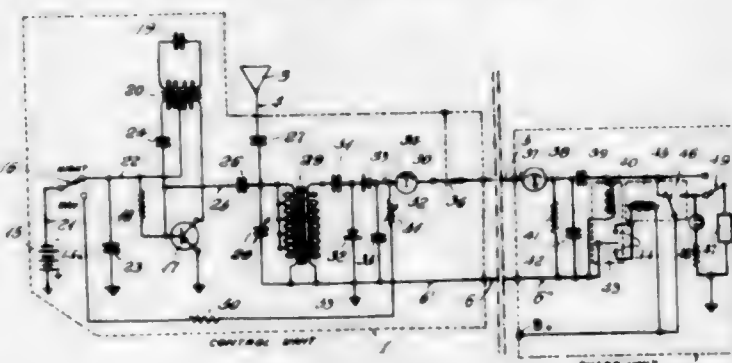
Emory V. Schneider, Alliance, Ohio, assignor to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Wilmington, Del.
Original application Apr. 13, 1955, Ser. No. 501,030. Divided and this application Aug. 13, 1956, Ser. No. 603,549
10 Claims. (Cl. 340-226)



1. A remote indicator circuit for indicating the position of an electrically operated movable device at a first location electrically energizable from an alternating current source at a second location, said source having first and second terminals and an intermediate voltage terminal, said circuit including a potentiometer at said first location and having first and second end connections and a movable blade contact adapted to be operated by said movable device upon electrical energization of said device, a remote indicating meter at said second location including a permeable vane cooperating with first and second coils, means for connecting said two meter coils in series for energization from said alternating current source first and intermediate voltage terminals, means for connecting said source first terminal to said potentiometer first end connection, means for connecting the junction point of said meter coils to said movable blade contact, means for connecting said electrical operated movable device between said source second terminal and said potentiometer second end connection, conductive means connected in said circuit and including said electrically operated movable device and at least part of said source to correlate the potentials of said potentiometer second end connection and said intermediate voltage terminal, said two meter coils and said potentiometer with said movable blade contact establishing a modified bridge in combination with said conductive means and with the connection through said movable device and alternating current source, whereby as the potentiometer movable blade contact is moved in a first direction from a median neutral position said first meter coil obtains increased energization relative to said second meter coil, and whereby as said potentiometer movable blade contact is moved in the opposite direction from the median neutral position said second meter coil receives increased energization relative to the first meter coil to move said permeable vane.

3,005,191 SECURITY ALARM SYSTEM

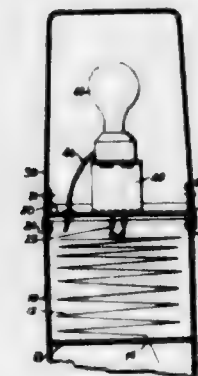
Kenneth H. Schmidt, Danbury, Conn., assignor to Mosler Research Products, Inc., Danbury, Conn., a corporation of Delaware
Filed July 10, 1957, Ser. No. 670,999
5 Claims. (Cl. 340-258)



1. An alarm system comprising a control unit disposed in the area to be protected, a guard unit disposed in an area remote from the protected area, and two connecting lines electrically interconnecting said guard unit and said control unit, said control unit comprising a direct current power source, an oscillator circuit, a manually operated switch having first and second operative positions, said switch when in said first position being effective to interconnect said power source and said oscillator circuit, an antenna system connected to said oscillator circuit, an antenna tuning circuit connected with said antenna system, a detection circuit interconnected with said antenna system, the output leads of said detection circuit being interconnected to said connecting lines, a bypass line effective to interconnect said switch with one of said connecting lines when said switch is in said second operative position, whereby when said switch is in said first position said oscillator, said antenna system and said detection circuit are energized and apply an alternating current signal to said connecting lines, said signal being modified upon any intrusion into the protected area, and whereby when said switch is in said second position said oscillator is deenergized and a direct current signal is applied from said power source across said connecting lines which signal provides means at the guard unit for supervising said connecting lines, said guard unit comprising an ultra sensitive balanced arm relay circuit energized from said connecting lines, an alarm indicator energized in response to the actuation of said balanced arm relay, and indicating means responsive to current flow through said connecting lines.

3,005,192 DISPLAY HEAD FOR WINDSHIELD SERVICE UNIT

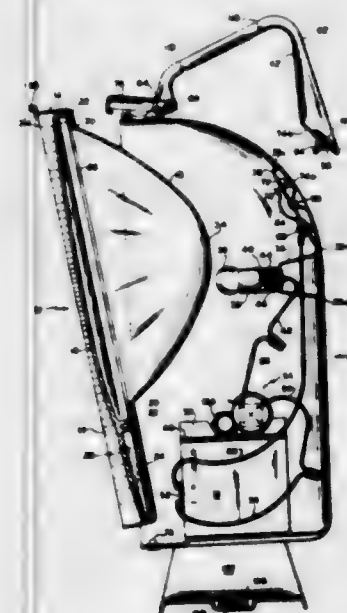
Gerald W. Wyant, 4343 Mayfair Ave., Montreal, Quebec, Canada
Filed May 31, 1960, Ser. No. 32,699
2 Claims. (Cl. 340-366)



1. A display head for a service unit comprising a dispensing cabinet having an open top, a cover for said dispensing cabinet, the said cover comprising a flat cover plate, a peripheral flange about said cover plate and extending above and below the plane of the plate, that portion of the peripheral flange located below the plate being outwardly offset with respect to the portion of the flange located above the plate and forming a shoulder therebetween, a hinge connecting one side of the outwardly offset portion of the flange with the adjacent top edge of the said dispensing cabinet permitting the said cover to fit over the open end of the cabinet, a bracket secured to the upper surface of said plate, a lamp mounted on said bracket and connected to a source of electric current, and a translucent hood fitted over said lamp and the upwardly extending portion of the peripheral flange, the said cover resting on the shoulder formed between the lower and upper portions of the flange, and secured to the latter portion.

3,005,193 HAZARD WARNING LAMP

George A. Knapp, Dewitt, Arthur J. Pulos, Fayetteville, and Douglas R. Clemmshaw, Syracuse, N.Y., assignors to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,310
13 Claims. (Cl. 340-366)

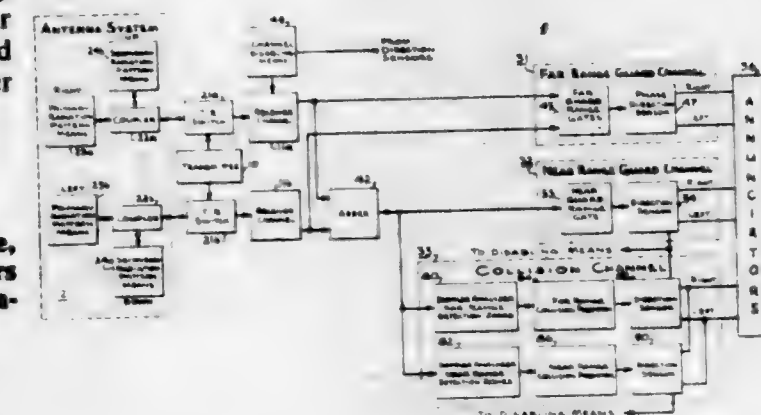


3. A portable flasher warning lamp of the character described comprising in combination an upstanding unitary housing, means connected to the rear wall of said housing for supporting a lamp bulb in the interior thereof,

means forming battery receiving compartments in the interior lower portion of said housing, a signal generator circuit supported by said compartment forming means, the front wall of said housing including a frame having a lens and a reflector for the lamp bulb mounted therein, said front wall being removable as a unit to open the entire front side of the lamp for easy access to said bulb supporting means, battery compartments and circuit, an upstanding carrying handle located at the top of said lamp, said handle being pivotally connected at one end to a point adjacent the front of said housing, the opposite end thereof being movable for swinging movement of said handle in a vertical plane towards or away from the housing, means on the opposite end of said handle engageable with coacting means on said housing when said opposite end is in contact therewith to releasably lock the handle against swinging movement, and a latch member pivotally mounted on said handle adjacent the pivotally connected end thereof, said latch member being engageable with the upper edge of said front wall frame and operable when said handle opposite end is swung into contact with said housing to lock said closure against removal, said latch member being disengageable from said front wall frame for removing said frame upon opposite swinging movement of said handle.

3,005,194 ANTI-COLLISION SYSTEM

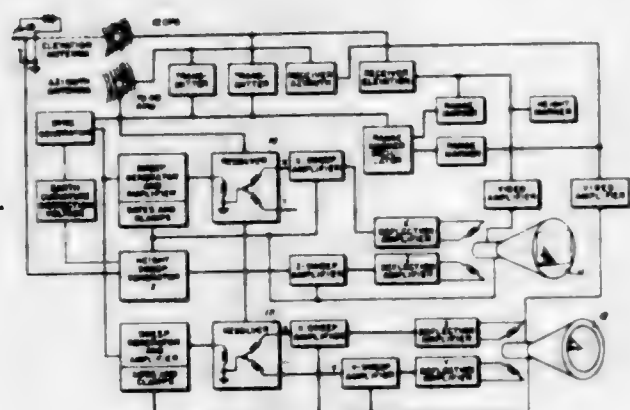
Everett M. Goodell, Palos Verdes Estates, and Emory Lakatos, Santa Monica, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 17, 1958, Ser. No. 729,119
8 Claims. (Cl. 343-7)



3. In an echo type range response system, the combination comprising: radiation transmitting and receiving means connected to provide return echo signals in the presence of an object in a region of space spaced from said system; frequency measuring and comparing means connected to compare the signals received by said receiving means with the signals transmitted by said transmitting means and to provide an output signal representative of the difference between the received and transmitted signals; means including an integrator circuit responsive in conduction substantially only to output signals from said measuring and comparing means exhibiting substantially no frequency change over a predetermined time interval, and means connected to said conduction responsive means to pass to said conduction responsive means only measuring and comparing means output signals representative of objects bearing a relative course in a direction generally toward said craft, thereby to provide an output from said conduction responsive means only in response to return echo signals representative of object and system relative paths of travel that will bring said object and system within a predetermined distance of each other within a given time interval.

3,005,195

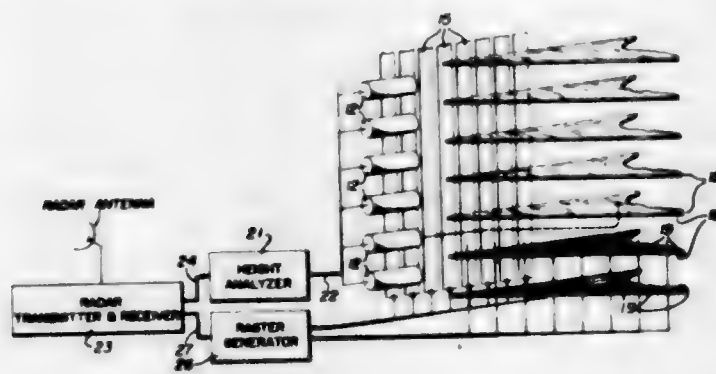
THREE COORDINATE DISPLAY SYSTEM
Richard Coburn, 2018 Catalina Blvd., and John Donahue,
244 Catalina Blvd., both of San Diego, Calif.
Filed Sept. 30, 1953, Ser. No. 383,414
6 Claims. (Cl. 343-7.9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. In a direction, ranging and elevation system, in combination, an antenna rotatable in azimuth and oscillatable in elevation, a cathode ray tube having beam deflecting means, means for obtaining a first sweep voltage having an amplitude proportional to the trigonometrical function of the azimuth angle of said antenna, means for applying said voltage to said first deflecting means to deflect the beam in a horizontal direction on the screen of said tube, means for obtaining a second sweep voltage having an amplitude proportional to the elevation angle of said antenna, means for applying said second voltage to said deflecting means to deflect the beam in a vertical direction on the screen of said tube, means for synchronously reducing both said voltages to zero intermittently at a predetermined frequency, the trace of said beam in response to deflection by said voltages simulating the appearance on said tube screen of a triangular area indicative of the elevation sweep of said antenna, said triangular area rotatable in synchronization with the azimuth sweep of said antenna about a vertical axis passing through the zero deflection position of said beam to present oblique projections of said triangular area at all azimuth positions except 90° and 180° azimuth.

3,005,196

THREE DIMENSIONAL RADAR INDICATOR
William Ross Aiken, Los Altos, Calif., assignor, by
mesne assignments, to Kaiser Industries Corporation,
a corporation of Nevada
Filed Mar. 27, 1956, Ser. No. 574,220
11 Claims. (Cl. 343-7.9)



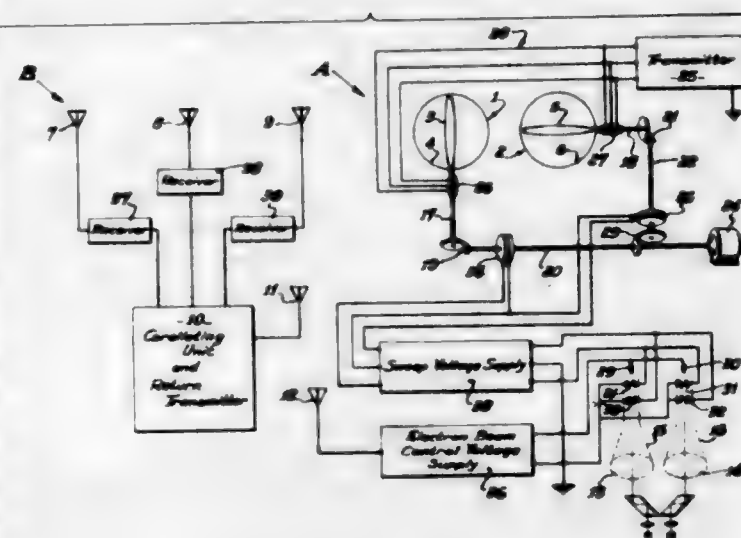
1. A three-dimensional display device adapted to provide a visual presentation of the relative position and altitude of objects in a given volume comprising a plurality of transparent, solid-surface target members supported in

juxtaposed relation to permit the concurrent viewing of the display on the lower target members through the target members which are disposed thereabove for comparison purposes, the solid surfaces of the different target members being supported in different planes to provide different planar displays for objects at different altitudes in said area, input means for said display device coupled to a signal source of a plurality of discrete signal sets, each of which signal sets indicates the relative position of each of the objects at a different one of said altitudes, and signal means coupled to said input means operative to energize said solid surfaces of the target members to display the relative positions of the objects in the area at each altitude, whereby a three-dimensional visual display of the position of the objects in different altitudes in a given volume is displayed on distinct and separate target surfaces which are disposed in non-planar, superposed relation with each other.

3,005,197

HERTZIAN WAVE SPACE SCANNING AND VIEWING

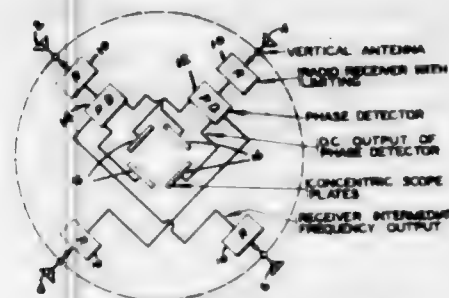
Douglas G. Shearer, Los Angeles, Calif. (% Metro-Goldwyn-Mayer Studios, Culver City, Calif.)
Filed Mar. 20, 1950, Ser. No. 150,682
26 Claims. (Cl. 343-112)



1. In a spatial orientation system, the combination of: a scanning station and a plurality of spaced remote scanned stations; radiating antenna means at the scanning station having directional scanning characteristics; receiving antenna means at each of the scanned stations; means for transmitting Hertzian wave signals from the radiating antenna means at the scanning station, the scanning station radiating antenna means being arranged to scan a selected space segment by producing in said space segment a Hertzian field wherein all points of the field in any one plane at any one instant of time have characteristics uniquely different from all other points in accordance with the spatial coordinates of said points with respect to the scanning station radiating antenna means; means for producing an intelligence signal in timed relationship with the existence at each receiving antenna means of a predetermined condition of Hertzian wave characteristics; means for collecting said intelligence signals and combining them into a series of signals, the time intervals among signals in the series being significant as to direction of scanned stations from the scanning station; means for transmitting the series of signals to the scanning station; and means at the scanning station for receiving said intelligence signals and translating same into a visible indication of the direction of each of the antenna means at the scanned stations as viewed from the scanning station.

3,005,198

VECTOR-PHASE RADIO DIRECTION FINDER
Thomas R. O'Meara, Los Angeles, Calif., assignor, by
mesne assignments, to the United States of America as
represented by the Secretary of the Navy
Filed Aug. 6, 1957, Ser. No. 676,695
8 Claims. (Cl. 343-113)

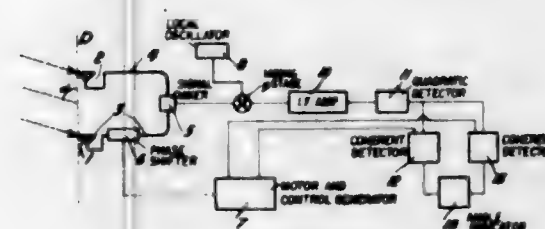


1. A vector-phase radio direction finder system comprising a plurality of antennas disposed in a regular polygonal array, a radio receiver channel for each antenna; said antennas being associated in pairs; a phase detector for each said pair of antennas connected to receive the output from the radio receiver channels for its pair of antennas and to produce a direct current output whose magnitude is a function of the phase difference between the radio frequency signals received by said pair of antennas; means for indicating the bearing relative to the center of said antenna array of a source of signals received by said antennas; and means responsive simultaneously to the outputs of all of said phase detectors for positioning said indicating means, said phase detector output responsive means being oriented and connected so that the effect, on the positioning of said indicating means, of the signals from each said pair of antennas bears the same corresponding relation to the direction of a line extending through the two antennas of each respective said pair; the distance between the most widely spaced of the antennas of said system being large compared to the wavelength of the signals being received.

3,005,199

RADIO-ELECTRIC MEASUREMENT OF THE ANGULAR POSITION

Pierre Paul Louis Grandsard, Vincennes, France, assignor
to Societe Alsacienne de Constructions Mecaniques
Mulhouse, Haut-Rhin, France, a corporation of France
Filed Sept. 11, 1957, Ser. No. 683,243
Claims priority, application France Oct. 18, 1956
7 Claims. (Cl. 343-118)



1. An apparatus for measuring the incident angle of electro-magnetic waves, said apparatus comprising two fixed antennae, summing means coupled to said antennae and adapted to effect the sum of the signals received on said antennae, phase shifting means included in the coupling between at least one of said antennae and said summing means for causing phase displacement of said signal as a function of time, amplifier means coupled to the output of said summing means, detector means coupled to the output of said amplifier means and adapted to give

an envelope of the signals received from said amplifier means, a pair of coherent detector means connected to the output of said detector means, means for respectively applying to said coherent detector means potentials displaced in phase with respect to each other by a constant phase value, and means connected to the output of said coherent detector means for measuring the resultant phase value, said resultant phase value corresponding to the difference in phase of the electro-magnetic waves received at said antennae, whereby the incident angle of said electro-magnetic waves are obtained.

3,005,200

THREE-ELEMENT, VECTOR-PHASE RADIO DIRECTION FINDER

Thomas R. O'Meara, Urbana, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 15, 1954, Ser. No. 416,451
7 Claims. (Cl. 343-123)



1. A direction-finding system comprising the combination of a plurality of spaced-antenna elements, a separate receiver channel for each antenna element, each of said receiver channels including a limiter stage to limit the amplitude of the signal in the output thereof, a plurality of phase detecting means for comparing the outputs respectively of each receiver channel separately with the output of at least another different receiver channel and for producing in the output thereof respective voltages whose amplitudes are proportional to the phase differences of the voltages compared, a cathode-ray tube indicating means having a beam-deflection means corresponding in number and spacing around the periphery of the tube to said antenna elements, and means coupling the respective outputs of said phase-detecting means to a different one of said beam-deflecting means to cause the beam of said cathode-ray tube indicating means to be deflected to a position indicating the direction of arrival of the received signal.

3,005,201

SANDWICH WIRE ANTENNAS
Walter Rotman, 8 Chiswick Road, Brighton, Mass.
Filed Nov. 8, 1957, Ser. No. 695,472
13 Claims. (Cl. 343-772)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A traveling wave sandwich wire antenna comprising a pair of parallel outer conductors at the same reference potential and an end fed inner conductor positioned substantially between said outer conductors, said inner conductor being shaped in an undulative pattern which repeats for a plurality of cycles, said undulations approaching and receding from said outer conductors.

DESIGNS

OCTOBER 17, 1961

191,572
BELT

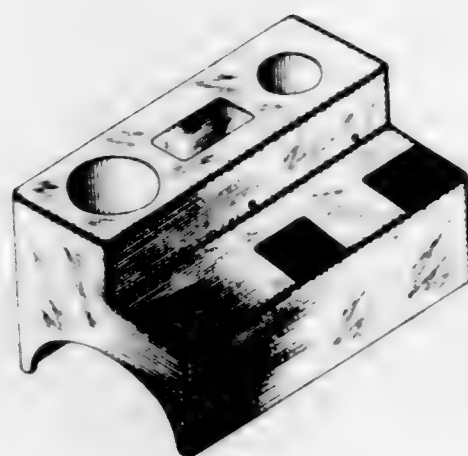
Moses Hall, 15 Voorhis Ave., Rockville Center, N.Y.
Filed July 8, 1960, Ser. No. 61,277
Term of patent 3½ years
(Cl. D3—10)



191,573

BATHTUB ATTACHMENT

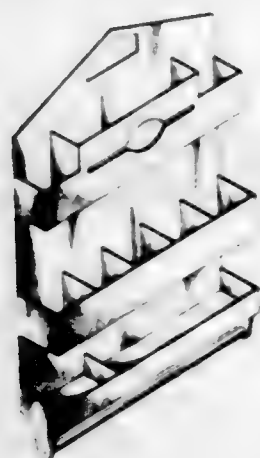
Walter Pierchalski, 353 Hazelwood Ave., Middlesex, N.J.
Filed Aug. 12, 1958, Ser. No. 52,174
Term of patent 3½ years
(Cl. D4—3)



191,574

COMBINATION RACK AND TOWEL BAR

Katherine S. Smith, 615 Colonial Drive, High Point, N.C.
Filed Jan. 12, 1961, Ser. No. 63,517
Term of patent 14 years
(Cl. D4—3)



191,575

OVERSHOE OR THE LIKE

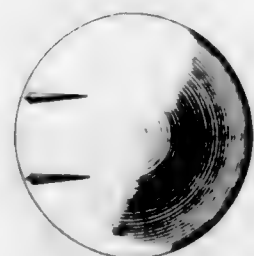
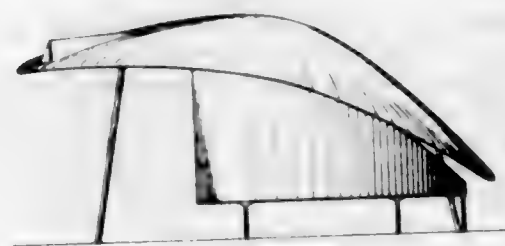
Stedman C. Pool, Essex, Conn., assignor to Essex Master
Mold Co., Inc., Essex, Conn., a corporation of Con-
necticut
Filed May 15, 1961, Ser. No. 65,153
Term of patent 7 years
(Cl. D7—4)



191,576

SHELTER

Kenneth S. Huseby, 658 E. Dundee, Palestine, Ill., and
Le Roy P. Belter, 81 Hill, Roselle, Ill.
Filed Mar. 1, 1961, Ser. No. 64,110
Term of patent 3½ years
(Cl. D13—1)



OCTOBER 17, 1961

U. S. PATENT OFFICE

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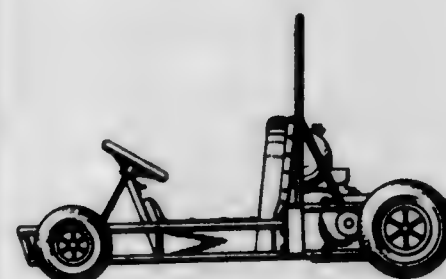
191,577
COMBINED MOUNTING BRACKET AND
RAILING POST
Louis Blum, 2312 Tibbary St., Pittsburgh 17, Pa.
Filed Apr. 1, 1960, Ser. No. 59,998
Term of patent 14 years
(Cl. D13—7)



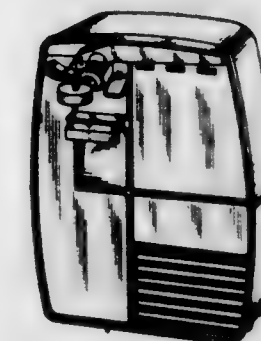
191,578
COMBINED MOUNTING BRACKET AND
RAILING POST
Louis Blum, 2312 Tibbary St., Pittsburgh 17, Pa.
Filed Apr. 1, 1960, Ser. No. 59,999
Term of patent 14 years
(Cl. D13—7)



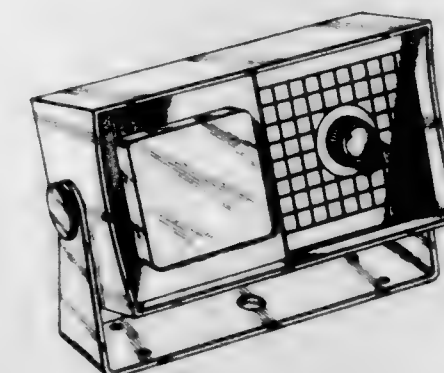
191,579
TRACK CART
Elvin T. Thompson, Alliance, Ohio, assignor to Lewis
Engines, Inc., Alliance, Ohio, a corporation of Ohio
Filed Feb. 13, 1961, Ser. No. 63,912
Term of patent 7 years
(Cl. D14—3)



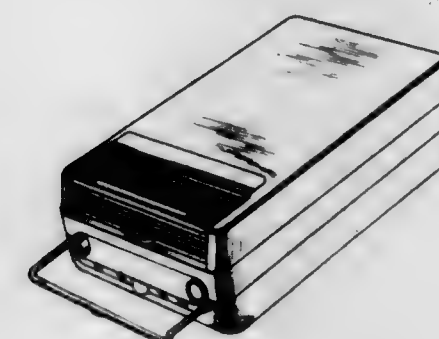
191,580
ELECTRIC CAN OPENER
Robert N. Freedman, Great Neck, N.Y., assignor to
Vogel Electronic & Appliance Corp., a corporation of
New York
Filed Mar. 2, 1961, Ser. No. 64,189
Term of patent 3½ years
(Cl. D22—2)



191,581
ELECTRONIC DEPTH METER
George T. Scharfenberg, Glen Lake, and John N. Polivka,
Minneapolis, Minn., assignors, by mesne assignments,
to Electro-Solid Controls, Inc., Minneapolis, Minn., a
corporation of Minnesota
Filed Oct. 24, 1960, Ser. No. 62,500
Term of patent 14 years
(Cl. D26—1)

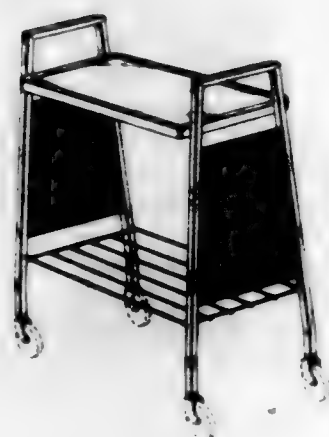


191,582
DICTATING MACHINE
Heinz Huebner, Fuerth, Germany, assignor to Max
Grundig, Fuerth, Bavaria, Germany
Filed Feb. 26, 1960, Ser. No. 59,535
Term of patent 14 years
(Cl. D26—14)



191,583

TELEVISION TABLE OR SIMILAR ARTICLE
 Le Roy Goldman, Park Forest, Ill., assignor to Comfort
 Lines, Inc., Chicago, Ill., a corporation of Illinois
 Filed Dec. 23, 1960, Ser. No. 63,326
 Term of patent 14 years
 (Cl. D33—14)



191,586

VELOCIPÈDE

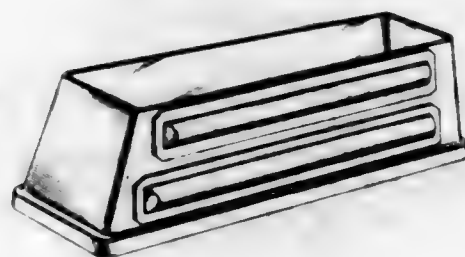
James H. Byrn and Herbert E. Rolfe, Jr., Garden City,
 and George Houtz, Northville, Mich., assignors to
 Evans Products Company, Plymouth, Mich., a corpora-
 tion of Delaware
 Filed Dec. 30, 1960, Ser. No. 63,402
 Term of patent 14 years
 (Cl. D34—15)



191,587

MOLD FOR GROUND MEAT

John S. Peterson, 7761 E. 11th St., Westminster, Calif.
 Filed Mar. 28, 1960, Ser. No. 59,904
 Term of patent 14 years
 (Cl. D44—1)



191,584

MOTOR DRIVEN JUMP ROPE

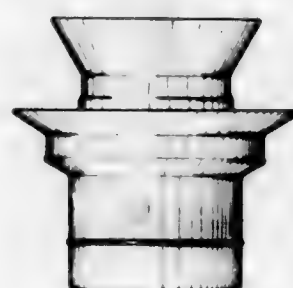
Ronald W. Tunnahill, 13658 Ruthier Ave.,
 Paramount, Calif.
 Filed Dec. 12, 1960, Ser. No. 63,199
 Term of patent 14 years
 (Cl. D34—5)



191,588

COMBINED BOWL AND COLANDER

Peter Schlumbohm, 41 Murray St., New York, N.Y.
 Filed Nov. 30, 1960, Ser. No. 63,032
 Term of patent 14 years
 (Cl. D44—15)



191,585

CHEERING ORNAMENT

Robert Eugene Miller, 75 Cedar Ave., Poughkeepsie, N.Y.
 Continuation of design applications Ser. No. 52,714 and
 Ser. No. 52,715, Sept. 22, 1958. This application Nov.
 21, 1960, Ser. No. 62,900
 Term of patent 14 years
 (Cl. D34—15)



191,589

DECANTER OR SIMILAR ARTICLE

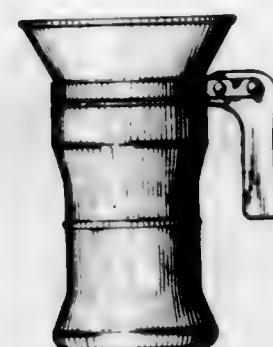
Peter Schlumbohm, 41 Murray St., New York, N.Y.
 Filed Nov. 16, 1960, Ser. No. 62,868
 Term of patent 14 years
 (Cl. D44—21)



191,590

DECANTER OR SIMILAR ARTICLE

Peter Schlumbohm, 41 Murray St., New York, N.Y.
 Filed Mar. 8, 1961, Ser. No. 64,190
 Term of patent 14 years
 (Cl. D44—21)



191,591

CONDIMENT DISPENSER OR THE LIKE

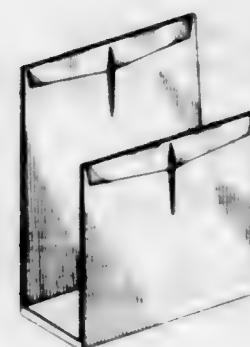
Bern E. Wolf and James H. Lee, Los Angeles, Calif.,
 assignors to Prestige Hardware Corporation, Industry,
 Calif., a corporation of California
 Filed May 11, 1961, Ser. No. 65,115
 Term of patent 14 years
 (Cl. D44—22)



191,592

NAPKIN HOLDER

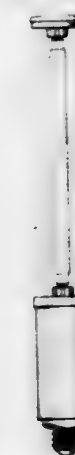
Bern E. Wolf and James H. Lee, Los Angeles, Calif.,
 assignors to Prestige Hardware Corporation, Industry,
 Calif., a corporation of California
 Filed May 11, 1961, Ser. No. 65,116
 Term of patent 14 years
 (Cl. D44—24)



191,593

LIGHTING FIXTURE FOR GASOLINE PUMPS

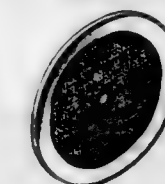
Robert V. Fredericks, 201 SW. 30th St.,
 Fort Lauderdale, Fla.
 Filed June 8, 1960, Ser. No. 60,874
 Term of patent 3 1/2 years
 (Cl. D48—31)



191,594

ESCUTCHEON PLATE

La Verne E. Clayton, Rockford, Ill., assignor to Amerock
 Corporation, Rockford, Ill., a corporation of Illinois
 Filed Apr. 4, 1960, Ser. No. 60,004
 Term of patent 14 years
 (Cl. D50—6)



191,595

CLAMP FOR PIPE WELDING OR THE LIKE

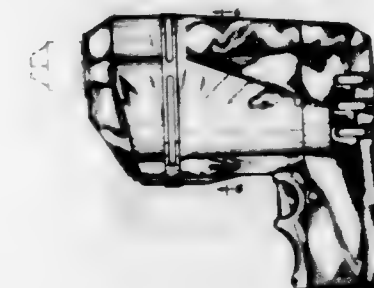
Oren B. Harms, Algona, Iowa, assignor of one-half to
 Ladish Co., Tri-Clover Division, Kenosha, Wis., a cor-
 poration of Wisconsin
 Filed Feb. 1, 1960, Ser. No. 59,209
 Term of patent 14 years
 (Cl. D54—13)



191,596

PORTABLE ELECTRIC DRILL

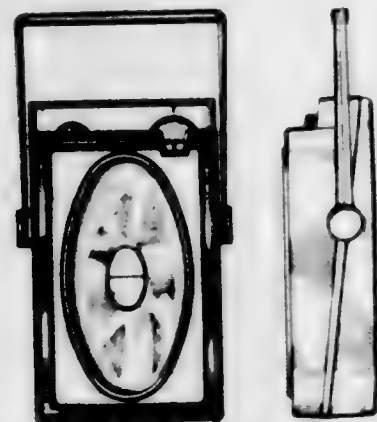
Thomas C. Butler, Baltimore, Md., assignor to The Black
 and Decker Manufacturing Company, Towson, Md.,
 a corporation of Maryland
 Filed July 25, 1960, Ser. No. 61,598
 Term of patent 14 years
 (Cl. D54—14)



191,597

PORTABLE RADIO CABINET

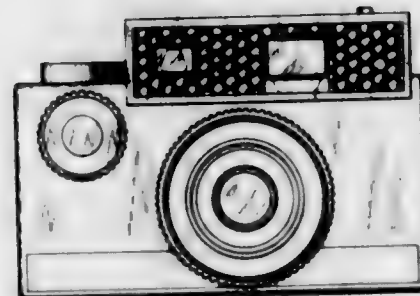
Malvin H. Beldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
 Filed May 29, 1961, Ser. No. 65,374
 Term of patent 14 years
 (Cl. D56-4)



191,600

CAMERA

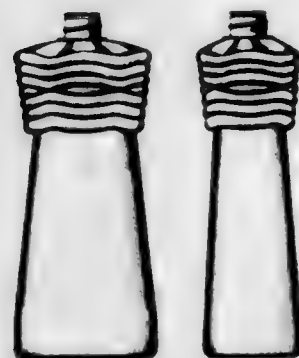
Raymond A. Gross, Royal Oak, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware
 Filed Nov. 14, 1960, Ser. No. 62,813
 Term of patent 7 years
 (Cl. D61-1)



191,598

BOTTLE

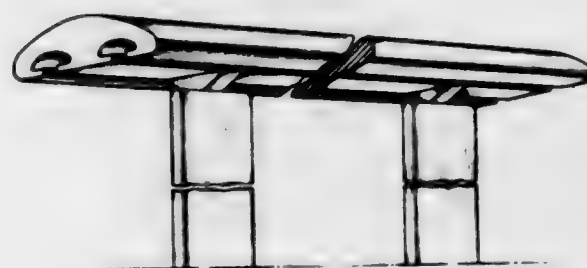
Arthur Louker, Philadelphia, Pa. (% Curley Co., Inc., Jefferson and Master Sts., Camden 4, N.J.)
 Filed Jan. 13, 1961, Ser. No. 63,553
 Term of patent 14 years
 (Cl. D58-6)



191,601

OVERHEAD RAILWAY TRACK UNIT

Allen G. Scott, Pico Rivera, Calif., assignor to The Progress Electronics Corporation, a corporation of Utah
 Filed May 26, 1960, Ser. No. 60,744
 Term of patent 14 years
 (Cl. D66-3)



191,599

BOTTLE

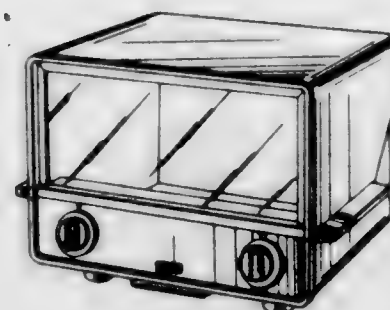
Percy Russell King, Leaside, Ontario, Canada, assignor to Javex Company Limited, Montreal, Quebec, Canada
 Filed Aug. 15, 1960, Ser. No. 61,753
 Term of patent 14 years
 (Cl. D58-8)



191,602

PORTABLE OVEN OR THE LIKE

Pierre L. Cresse, Akron, Ohio, assignor to Dominion Electric Corporation
 Filed Dec. 14, 1960, Ser. No. 63,225
 Term of patent 14 years
 (Cl. D81-10)



191,603

HANDBAG CLOSURE CLASP

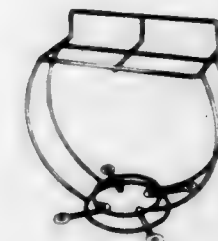
Etienne Aigner, 217 Haven Ave., New York, N.Y.
 Filed Apr. 14, 1961, Ser. No. 64,734
 Term of patent 14 years
 (Cl. D87-2)



191,604

BOWLING BALL CARRIER BAG INSERT OR SIMILAR ARTICLE

Oscar Cohen, New York, N.Y.
 (139-36 228th St., Laurelton, Queens, N.Y.)
 Filed Sept. 15, 1960, Ser. No. 62,153
 Term of patent 3½ years
 (Cl. D87-5)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 17TH DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Audrieth, Ludwig F., to Stauffer Chemical Co. Methods of making clay products and improved clay products. Re. 25,055, 10-17-61, Cl. 100-73.
 Fritzing, George H. Adhesive applicators. Re. 25,056, 10-17-61, Cl. 216-29.
 Juculano, Theodore C., to Marvel Equipment Corp. Releasable metal scaffolding connector. Re. 25,053, 10-17-61, Cl. 287-53.5.
 Lewis, George, to Otarien Listener Corp. Bone conduction receiver mounting for combined hearing aid and spectacle. Re. 25,059, 10-17-61, Cl. 179-107.
 Marvel Equipment Corp.: See—
 Juculano, Theodore C. Re. 25,053.
 Otarien Listener Corp.: See—
 Lewis, George. Re. 25,059.
 Rigby, Canby A., Sr. Storage battery terminal lug connector. Re. 25,054, 10-17-61, Cl. 136-134.
 Shawinigan Chemicals Ltd.: See—
 Stevens, Harold B. Re. 25,057.
 Stauffer Chemical Co.: See—
 Audrieth, Ludwig F. Re. 25,055.
 Stevens, Harold B., to Shawinigan Chemicals Ltd. Preparation of peracetic acid. Re. 25,057, 10-17-61, Cl. 260-502.
 Taft, Charles K., to The Warner & Swasey Co. Motor control system. Re. 25,058, 10-17-61, Cl. 318-280.
 Warner & Swasey Co., The: See—
 Taft, Charles K. Re. 25,058.

LIST OF DESIGN PATENTEEES

- Aigner, Etienne. Handbag closure clasp. 191,603, 10-17-61, Cl. D87-2.
 Amerock Corp.: See—
 Clayton, La Verne E. 191,594.
 Belter, Le Roy P.: See—
 Huseby, Kenneth S., and Belter. 191,576.
 Black and Decker Mfg. Co., The: See—
 Butler, Thomas C. 191,596.
 Blum, Louis. Combined mounting bracket and railing post. 191,577, 10-17-61, Cl. D13-7.
 Blum, Louis. Combined mounting bracket and railing post. 191,578, 10-17-61, Cl. D13-7.
 Boldt, Melvin H., to Zenith Radio Corp. Portable radio cabinet. 191,597, 10-17-61, Cl. D56-4.
 Butler, Thomas C., to The Black and Decker Mfg. Co. Portable electric drill. 191,596, 10-17-61, Cl. D64-14.
 Byrn, James H., H. E. Rolfe, Jr., and G. Houts, to Evans Products Co. Velocipede. 191,586, 10-17-61, Cl. D34-15.
 Clayton, La Verne E., to Amerock Corp. Escutcheon plate. 191,594, 10-17-61, Cl. D50-6.
 Cohen, Oscar. Bowling ball carrier bag insert or similar article. 191,604, 10-17-61, Cl. D87-5.
 Comfort Lines, Inc.: See—
 Goldman, Le Roy. 191,583.
 Crease, Pierre L., to Dominion Electric Corp. Portable oven or the like. 191,602, 10-17-61, Cl. D81-10.
 Dominion Electric Corp.: See—
 Crease, Pierre L. 191,602.
 Electro-Solid Controls, Inc.: See—
 Scharfenberg, George T., and Polivka. 191,581.
 Essex Master Mold Co., Inc.: See—
 Pool, Stedman C. 191,575.
 Evans Products Co.: See—
 Byrn, James H., Rolfe, and Houts. 191,586.
 Fredericks, Robert V. Lighting for gasoline pumps fixture. 191,593, 10-17-61, Cl. D48-31.
 Freedman, Robert N., to Vogue Electronic & Appliance Corp. Electric can opener. 191,589, 10-17-61, Cl. D22-2.
 Goldman, Le Roy, to Comfort Lines, Inc. Television table or similar article. 191,583, 10-17-61, Cl. D33-14.
 Grosso, Raymond A., to Sylvania Electric Products Inc. Camera. 191,600, 10-17-61, Cl. D61-1.
 Grundig, Max: See—
 Huebner, Heinz. 191,582.
 Hallo, Moses. Belt. 191,572, 10-17-61, Cl. D3-10.
 Harms, Oren B., to Ladish Co., Tri-Clover Division. Clamp for pipe welding or the like. 191,595, 10-17-61, Cl. D54-13.
 Houts, George: See—
 Byrn, James H., Rolfe, and Houts. 191,586.
 Huebner, Heinz, to M. Grundig. Dictating machine. 191,582, 10-17-61, Cl. D26-14.
 Huseby, Kenneth S., and L. P. Belter. Shelter. 191,576, 10-17-61, Cl. D13-1.
 Javex Co. Ltd.: See—
 King, Percy R. 191,599.
 King, Percy R., to Javex Co. Ltd. Bottle. 191,599, 10-17-61, Cl. D58-8.
 Ladish Co., Tri-Clover Division: See—
 Harms, Oren B. 191,595.
 Lee, James H.: See—
 Wolf, Bern E., and Lee. 191,591.
 Wolf, Bern E., and Lee. 191,592.
 Lewis Engines, Inc.: See—
 Thompson, Elvin T. 191,579.
 Lonker, Arthur. Bottle. 191,598, 10-17-61, Cl. D58-6.
 Miller, Robert E. Cheering ornament. 191,585, 10-17-61, Cl. D34-15.
 Peterson, John S. Mold for ground meat. 191,587, 10-17-61, Cl. D44-1.
 Pierchalski, Walter. Bathtub attachment. 191,573, 10-17-61, Cl. D4-3.
 Polivka, John N.: See—
 Scharfenberg, George T., and Polivka. 191,581.
 Pool, Stedman C., to Essex Master Mold Co., Inc. Overmold or the like. 191,575, 10-17-61, Cl. D7-4.
 Prestige Hardware Corp.: See—
 Wolf, Bern E., and Lee. 191,591.
 Wolf, Bern E., and Lee. 191,592.
 Progress Electronics Corp., The: See—
 Scott, Allen G. 191,601.
 Rolfe, Herbert E., Jr.: See—
 Byrn, James H., Rolfe, and Houts. 191,586.
 Scharfenberg, George T., and J. N. Polivka, to Electro-Solid Controls, Inc. Electronic depth meter. 191,581, 10-17-61, Cl. D26-1.
 Schlumbohm, Peter. Combined bowl and colander. 191,588, 10-17-61, Cl. D44-15.
 Schlumbohm, Peter. Decanter or similar article. 191,589, 10-17-61, Cl. D44-21.
 Schlumbohm, Peter. Decanter or similar article. 191,590, 10-17-61, Cl. D44-21.
 Scott, Allen G., to The Progress Electronics Corp. Overhead railway track unit. 191,601, 10-17-61, Cl. D66-3.
 Smith, Katherine S. Combination rack and towel bar. 191,574, 10-17-61, Cl. D4-3.
 Sylvania Electric Products Inc.: See—
 Grosso, Raymond A. 191,600.
 Tannahill, Ronald W. Motor driven jump rope. 191,584, 10-17-61, Cl. D34-5.
 Thompson, Elvin T., to Lewis Engines, Inc. Track cart. 191,579, 10-17-61, Cl. D14-3.
 Vogue Electronic & Appliance Corp.: See—
 Freedman, Robert N. 191,589.
 Wolf, Bern E., and J. H. Lee, to Prestige Hardware Corp. Condiment dispenser or the like. 191,591, 10-17-61, Cl. D44-22.
 Wolf, Bern E., and J. H. Lee, to Prestige Hardware Corp. Napkin holder. 191,592, 10-17-61, Cl. D44-24.
 Zenith Radio Corp.: See—
 Boldt, Melvin H. 191,597.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 17TH DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: See—
Hays, James E. 3,004,709.
AMP Inc.: See—
Dreher, Elmer H. 3,005,180.
Aagaard, Leif, to National Lead Co. Process for producing titanium carbide. 3,004,832, 10-17-61, Cl. 23-208.
Abbenante, Anthony. Tape cutter having means to adjust the length of the tape fed between cuts. 3,004,457, 10-17-61, Cl. 83-245.
Abbenante, Anthony. Machine for turning and spreading over-lock stitched garments. 3,004,504, 10-17-61, Cl. 112-203.
Abrams, Bernard W., to Clevite Corp. Exercise torpedo. 3,004,507, 10-17-61, Cl. 114-20.
Abrams, Ralph, to Cambridge Thermionic Corp. Lead through insulator. 3,005,039, 10-17-61, Cl. 174-152.
Accurate Bushing Co.: See—
Powers, Vincent J. 3,004,808.
Achells, Johann D.: See—
Stach, Kurt, Achells, Kroneberg, and Kurbjuweit. 3,004,984.
Acme Electric Corp.: See—
Moyer, Elmo E. and Klein. 3,005,142.
Acme Steel Co.: See—
Swingle, Roy E. 3,004,746.
Adair, Paul F., to Jet Ignition Co., Inc. Instrument. 3,004,530, 10-17-61, Cl. 123-119.
Adams, Ralph C., to Pfaunder Permutit, Inc. Underdrains. 3,004,688, 10-17-61, Cl. 210-293.
Adamsbeck, James H., and E. J. Rowley, to Collins Radio Co. Turret assembly. 3,005,115, 10-17-61, Cl. 307-156.
Advertising Products, Inc.: See—
Clark, Eugene W. 3,004,358.
Aiken, William R., to Kaiser Industries Corp. Electronic device. 3,005,127, 10-17-61, Cl. 315-13.
Aiken, William R., to Kaiser Industries Corp. Electronic device. 3,005,124, 10-17-61, Cl. 313-92.
Aiken, William R., to Kaiser Industries Corp. Three dimensional radar indicator. 3,005,196, 10-17-61, Cl. 343-7.9.
Aircraft Armaments, Inc.: See—
Barr, Irwin R., Bond, Gore, and La Costa. 3,004,475.
Knapp, Philip M. 3,004,763.
Air Equipment: See—
Garnier, George. 3,004,450.
Air Reduction Co., Inc.: See—
Burch, Robert J., and Davidowich. 3,004,925.
Aktiebolaget Bofors: See—
Salomonson, Hans M. A. 3,005,148.
Aktiebolaget Svenska Kullagerfabriken: See—
Bratt, Axel E. 3,004,809.
Aktiebolaget Svenska Flakfabriken: See—
Gustafsson, Rune. 3,004,348.
Alco Valve Co.: See—
Wiegand, Irvin E. 3,004,557.
Alexander, Stephen H., and A. J. Holberg: said Alexander assors. to Monsanto Chemical Co. Microcrystalline wax coating compositions. 3,004,854, 10-17-61, Cl. 106-14.
Allen, John F., to Amalgamated Wireless (Australasia) Ltd. Pulse generating system for generating accurately spaced timing pulses. 3,005,159, 10-17-61, Cl. 328-62.
Alliance Mfg. Co., Division of Consolidated Electronics Industries Corp.: See—
Schnelder, Emmor V. 3,005,190.
Allis-Chalmers Mfg. Co.: See—
Cart, Ward B. 3,005,120.
Harrer, Paul H. 3,004,377.
Tanke, Willard H. 3,004,611.
Allmanna Svenska Elektriska Aktiebolaget: See—
Forwald, George W. Traveling cleaner. 3,004,277, 10-17-61, Cl. 15-312.
Allred, Carl F., to Westinghouse Electric Corp. Thermoelectric heat pump. 3,004,393, 10-17-61, Cl. 82-3.
Aluminum Co. of America: See—
Towner, Raymond J., and Lyle. 3,004,331.
Amalgamated Wireless (Australasia) Ltd.: See—
Allen, John F. 3,005,159.
Ament, Jack A. Snap-on battery terminal. 3,005,181, 10-17-61, Cl. 329-239.
American Brake Shoe Co.: See—
Hoyer, Llewellyn E., and Goreyca. 3,004,805.
American Cyanamid Co.: See—
Berkelhammer, Gerald. 3,005,004.
Berkelhammer, Gerald. 3,005,002.
Buckler, Sheldon A. 3,005,020.
Buckler, Sheldon A., and Epstein. 3,005,029.
Grayson, Martin, and Keough. 3,005,013.
McCormick, Jerry R. D., and Smith. 3,005,025.
Miller, Philip A. 3,005,023.
Sheehan, Gerard M., Whately, and Roberts. 3,004,858.
American Fixture, Inc.: See—
Schulze, Howard L. 3,004,814.
American Machine & Foundry Co.: See—
Congelli, Henry C. 3,004,760.
Congelli, Henry C., and Holloway. 3,004,761.
American Machine and Metals, Inc.: See—
Bristol, Billy L. 3,004,485.
American Optical Co.: See—
Hicks, John W., Jr. 3,004,368.
American Radiator & Standard Sanitary Corp.: See—
Noakes, Thomas E. 3,004,712.
Ammerman, George E., to Edwin L. Wiegand Co. Electric heater assembly for ovens. 3,005,082, 10-17-61, Cl. 210-35.
Amos, James L.: See—
Hunt, Wilson W., Ludington, and Amos. 3,004,900.
Amos, James L., S. G. Ludington, and W. W. Hunt, to The Dow Chemical Co. Devolatilizing apparatus. 3,004,899, 10-17-61, Cl. 202-191.
Ampex Corp.: See—
Rehklau, George D. 3,004,658.
Anchor Hocking Glass Corp.: See—
Stover, Harry E. 3,004,297.
Anderson, Clayton & Co.: See—
Jennings, Edwin J., Jr., Reddick, and Berkley. 3,005,152.
Anderson, Victor C., to The Regents of the University of California. Electrostatic recorder. 3,004,819, 10-17-61, Cl. 346-74.
Andrus, Everett H., and G. M. Coon, to Textrol, Inc. Single stroke control system and fluid control unit therefor. 3,004,647, 10-17-61, Cl. 192-142.
Ankeney, Fred L. Hitches for aircraft. 3,004,773, 10-17-61, Cl. 260-446.
Antonoff, Walter, to Universal Controls, Inc. Movable guide. 3,004,701, 10-17-61, Cl. 232-7.
Arakelian, Arthur N., A. Rhodes, and T. R. Hopkins, to The Lubrizol Corp. Phosphorus and sulfur containing compositions and method for preparing same. 3,004,996, 10-17-61, Cl. 260-429.9.
Argersinger, John L., and H. M. Lowenstein, to Combustion Engineering, Inc. Method and apparatus for controlling fuel and/or feedwater flow in a once-through steam generator. 3,004,529, 10-17-61, Cl. 122-448.
Argus Chemical Corp.: See—
Stosel, Ernest. 3,004,921.
Armanville, Jean: See—
Maret, Claude, and Armanville. 3,004,350.
Armes, Fred D., and P. S. Rogers, to General Motors Corp. Integrated automotive heating and air conditioning systems. 3,004,752, 10-17-61, Cl. 257-289.
Armstrong, George W., and R. J. Neff. Foreign body detector. 3,004,662, 10-17-61, Cl. 209-72.
Armstrong, William W., to Chas. Pfizer & Co., Inc. Stable aqueous solutions of sodium phosphite, sodium formaldehyde sulfoxylate, and dihydrostreptomycin sulfate. 3,004,891, 10-17-61, Cl. 187-65.
Arnold, Harold G., to The Bauer Mfg. Co. Ladder. 3,004,625, 10-17-61, Cl. 182-228.
Arth, Glen E., R. E. Beyler, and L. H. Saret, to Merck & Co., Inc. 6a 16a-dimethyl-pregnenes. 3,004,994, 10-17-61, Cl. 260-397.45.
Arthur, Richard N., and K. H. Marcus, to Donnelly Mirrors, Inc. Rear view mirror for motor vehicles. 3,004,473, 10-17-61, Cl. 88-77.
Arzapalo, Richard. 3,005,074, 10-17-61, Cl. 200-120.
Ashton, George H., to Bemis Bro. Bag Co. Bags. 3,004,698, 10-17-61, Cl. 229-62.5.
Asinger, Friedrich, M. Thiel, and H. Hauthal, to VEB Leuna-Werke Walter Ulbricht. Process for the preparation of 3,4-thiazolines. 3,004,981, 10-17-61, Cl. 260-306.7.
Aske, Leonard E., to Minneapolis-Honeywell Regulator Co. Slip ring construction. 3,005,173, 10-17-61, Cl. 339-8.
Associated Electrical Industries Ltd.: See—
Kaine, Thomas, and Robinson. 3,004,849.
Atkin, Rupert L., to Kelsey-Hayes Co. Wheel and brake drum assembly. 3,004,795, 10-17-61, Cl. 301-6.
Atkin, Rupert L., to Kelsey-Hayes Co. Wheel and brake drum assembly. 3,004,796, 10-17-61, Cl. 301-6.
Atlas E-E Corp.: See—
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 Forwald, Haakon, to Allmanna Svenska Elektriska Aktiebolaget. Operating device for a blast valve in an air blast circuit breaker. 3,005,077, 10-17-61, Cl. 200-146.
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- Ledwith, Walter A., to United Aircraft Corp. Rocket nozzle tube construction. 3,004,386, 10-17-61, Cl. 60-35.8.
- Lee, Oscar C. Miffling machine inflation brushes. 3,004,274, 10-17-61, Cl. 15-56.
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- Leroux, Rene. Ships designed for the transport of liquefied gases. 3,004,509, 10-17-61, Cl. 114-74.
- Leside, Donald J. Derivative voltage regulation circuit. 3,005,162, 10-17-61, Cl. 328-267.
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- Leibold-Hochvakuum-Anlagen G.m.b.H.: See—
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- Licentia Patent-Verwaltungs-G.m.b.H.: See—
- Reiss, Alexander, and Hillebrand. 3,005,073.
- Lichtenwalner, Hart K., to General Electric Co. Process for treating fillers. 3,004,859, 10-17-61, Cl. 106-308.
- Lighburn, Robert A. Can for films and the like. 3,004,684, 10-17-61, Cl. 220-43.
- Limbach, Anthony P., to Union Carbide Corp. Apparatus for stretching plastic material. 3,004,284, 10-17-61, Cl. 18-1.
- Limbocker, Ray R., Jr., to Sun Oil Co. Dump ball. 3,004,604, 10-17-61, Cl. 166-169.
- Lindberg, Karl G. H., L. B. Person, and J. M. Thorsen, to Telefonaktiebolaget LM Ericsson. Noise elimination in multiplex transmission systems working according to the time division principle. 3,005,051, 10-17-61, Cl. 179-15.
- Link Research Corp.: See—
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- Locklin, Charles R. Multiple duplicating tape recorder. 3,005,057, 10-17-61, Cl. 179-100.2.
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- Loy, Bernard, to Smith, Kline & French Laboratories. 4-aminopyrazolo [3,4-c]indene derivatives. 3,004,983, 10-17-61, Cl. 250-310.
- Loewen, Bruno F., to Phillips Petroleum Co. Operation of an oil seal for electrical terminals of an electroprecipitator. 3,004,833, 10-17-61, Cl. 23-209.4.
- Logan Hospital Equipment Co.: See—
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- Logan, John W., Jr., and R. J. Bush, to Westinghouse Air Brake Co. Railway traffic controlling apparatus. 3,004,528, 10-17-61, Cl. 121-157.
- Lohr, Thomas E., to General Motors Corp. Power-actuated tail gate. 3,004,757, 10-17-61, Cl. 268-74.
- Lohka, Jens L. Interconnection between trailer and hauling vehicle. 3,004,774, 10-17-61, Cl. 280-447.
- Long, Alan G., and S. Eardley, to Glaxo Laboratories Ltd. Steroid compounds. 3,004,965, 10-17-61, Cl. 260-397.45.
- Loomis, Barbara J. Baby tender. 3,004,793, 10-17-61, Cl. 297-274.
- Lo Presti, Roy F., to Goodman Mfg. Co. Belt training troughing idler assembly for endless belt conveyors. 3,004,652, 10-17-61, Cl. 198-202.
- Lord, Kenneth B., to Minneapolis-Honeywell Regulator Co. Control method and apparatus. 3,004,880, 10-17-61, Cl. 150-64.
- Lorenz, Anton: See—
- Schlephacke, Fridtjof F. 3,004,791.
- Lorenz, John W., to The Trane Co. Fan control. 3,004,484, 10-17-61, Cl. 98-116.
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- MacCallum, Edward, to General Motors Corp. Cltp. 3,004,643, 10-17-61, Cl. 189-88.
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- Macomber, Stanley, to Macomber, Inc. Laminated tubular section structural members. 3,004,640, 10-17-61, Cl. 189-37.
- Macklis, Stanley L., to The New York Air Brake Co. High speed hydrodynamic pump. 3,004,495, 10-17-61, Cl. 103-101.
- MacNair, Donald, to Bell Telephone Laboratories, Inc. Hydrogen breakdown of cathodes. 3,004,816, 10-17-61, Cl. 316-8.
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- Macomber, Stanley. 3,004,640.
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- Mann, Leonard J., J. J. O'Connell, and C. H. Wurts, to General Motors Corp. Forced air cooled refrigerator. 3,004,401, 10-17-61, Cl. 62-158.
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- Marsden, John E. G. Gee, and B. B. Saxton, to James North & Sons Ltd. Form for glove dipping. 3,004,516, 10-17-61, Cl. 118-500.
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- Martin, Gustav J., to Richardson-Merrell Inc. Enteric coated trypan and chymotrypsin anti-inflammatory compositions. 3,004,893, 10-17-61, Cl. 167-73.
- Marullo, Gerlando, G. Perri, G. Tabiello, and D. Cadorin, to Montecatini Società Generale per l'Industria Mineraria e Chimica. Process for obtaining Schoenite by direct treatment of Kainite containing sodium chloride as an impurity. 3,004,826, 10-17-61, Cl. 23-117.
- Marx, John W., J. C. Trantham, and H. W. Parker, to Phillips Petroleum Co. Initiating in situ combustion in a carbonaceous stratum. 3,004,597, 10-17-61, Cl. 166-11.

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- Mattek, Charles F., to Bell Telephone Laboratories, Inc. Tilting dial circuit selector. 3,005,055, 10-17-61, Cl. 179-90.
- Mauborgne, Paul. Reel for fishing rods. 3,004,731, 10-17-61, Cl. 242-84.2.
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- Mayes, Fred M. Underwater transmitter. 3,005,183, 10-17-61, Cl. 340-6.
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- McCormick, Jerry R. D., and N. T. K. Smith, to American Cyanamid Co. Preparation of neutral chlorotetracycline. 3,005,025, 10-17-61, Cl. 260-558.
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- Druey, Jean, Meier, and Staehelin. 3,004,973.
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- Melvin, Fred J.: See—
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- Miller, Sidney E., C. M. Berry, and R. W. H. Chang, to General Mills, Inc. Process for the separation of waxy components from sterol-containing materials. 3,004,992, 10-17-61, Cl. 260-397.25.
- Millikan, Allen F., and G. W. Crosby, to The Pure Oil Co. Neutral phosphorothioate ester compositions and method of preparation thereof. 3,005,006, 10-17-61, Cl. 260-461.
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- Miramontes, Luis E., to G. D. Searle & Co. Process for the production of 3β-hydroxy-16α,17α-epoxy-5-pregnen-20-one. 3,004,967, 10-17-61, Cl. 260-239.55.
- Missbach, Günther, to Firma Alkett Maschinenbau G.m.b.H. Apparatus for the continuous moulding of thermoplastic materials. 3,004,289, 10-17-61, Cl. 18-19.
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- Moeller, Axel, to Moeller Mfg. Co., Inc. Remote control boat baller. 3,004,511, 10-17-61, Cl. 114-185.
- Moeller, Axel, to Moeller Mfg. Co., Inc. Vacuum ware stopper. 3,004,680, 10-17-61, Cl. 215-53.
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Morse, Charles L. Supplemental pneumatic tire. 3,004,576, 10-17-61, Cl. 152-175.
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Mueller, Emil G., to Westinghouse Air Brake Co. Tread brake apparatus for railway cars. 3,004,632, 10-17-61, Cl. 188-57.
Mueller, Alex C., 50% to Albert W. Moser. Film and shutter winding mechanism for photographic cameras. 3,004,482, 10-17-61, Cl. 95-31.
Muller, Erwin, C. Wiegand, and G. Braun, 1/4 to Farbenfabriken Bayer Aktiengesellschaft, and 1/4 to Mobay Chemical Co. Production of polyurethane plastics using Schiff's base catalysts. 3,004,933, 10-17-61, Cl. 260-2.5.
Muller, Ludwig. Device for varying the frequency of a vibration exciter. 3,004,389, 10-17-61, Cl. 60-53.
Mullins, James N., Jr. Dispenser and controls therefor. 3,004,398, 10-17-61, Cl. 62-136.
Mulloy, John F., to The Dow Chemical Co. Tetraalkylammonium borates. 3,005,012, 10-17-61, Cl. 260-462.
Murphy, James S., 1/4 to M. R. Simmons, and 1/4 to W. E. Kolb. Electronic dep hole condition analyzer. 3,004,613, 10-17-61, Cl. 175-45.
Mustard, Jack L.: See—
Foote, Jerry J., Mustard, and Rankin. 3,004,406.
Myer, Jon H., to Hughes Aircraft Co. Temperature controller. 3,004,711, 10-17-61, Cl. 236-15.
Naegeli, Werner, and H. Eichenberger, to Joh. Jacob Rieter & Co. Ltd. Feed roller arrangement in a combing machine. 3,004,300, 10-17-61, Cl. 19-118.
Nalco Chemical Co.: See—
Gregor, Harry P., and Patzelt. 3,004,904.
Gregor, Harry P., and Patzelt. 3,004,909.
Jurisch, Myron J. 3,004,923.
Ryznar, John W. 3,004,820.
Thompson, Harris. 3,004,836.
Napier, D. & Son Ltd.: See—
Minett, Herbert H. B. 3,004,496.

National Co., Inc.: See—
George, James. 3,005,121.
National Distillers and Chemical Corp.: See—
Hanaley, Virgil L., Schott, and McSharry. 3,004,848.
Kamlet, Jonas. 3,004,825.
Kaneko, Thomas M., and Hanaley. 3,004,912.
National Furnace Corp.: See—
Walpole, Beverly K., and Fisher. 3,004,754.
National Lead Co.: See—
Aggaard, Leif. 3,004,832.
Chevasus, Fernand. 3,004,949.
Merson, David A., and Dunn. 3,004,857.
National Rejectors, Inc.: See—
Erickson, Gustav F., and Melvin. 3,004,541.
Naulty, Albert M., to Baldwin-Lima-Hamilton Corp. Controllable pitch propeller. 3,004,609, 10-17-61, Cl. 170-160.32.
Nawara, Josef. Ship stabilizers. 3,004,510, 10-17-61, Cl. 114-126.
Neal, Herbert R.: See—
Shapiro, Hymin, and Neal. 3,004,997.
Shapiro, Hymin, and Neal. 3,004,998.
Shapiro, Hymin, and Neal. 3,004,999.
Neff, Robert J.: See—
Armstrong, George W., and Neff. 3,004,662.
Nerge, Wilhelm, and E. Keuncke, to Leybold-Hochvakuum-Anlagen G.m.b.H. Apparatus for fractional distillation. 3,004,901, 10-17-61, Cl. 202-236.
Newbery, Gordon W., P. M. Montgomery, and P. F. T. C. Stillwell, to Electric & Musical Industries Ltd. Coincident switching with high frequency components eliminated from gating pulse. 3,005,160, 10-17-61, Cl. 328-91.
Newbold, William F., to Minneapolis-Honeywell Regulator Co. Direct current amplifier feedback control circuit. 3,005,164, 10-17-61, Cl. 330-108.
Newby, Richard F. Apparatus for producing frozen confection. 3,004,404, 10-17-61, Cl. 62-342.
New York Air Brake Co., The: See—
Macklis, Stanley L. 3,004,495.
Nielsen, James S., and A. M. Rankin, to Goodyear Aircraft Corp. Tube routing machine. 3,004,477, 10-17-61, Cl. 90-15.
Nielsen, Carl A., to United States of America, Army. Optical insert for gas mask. 3,004,535, 10-17-61, Cl. 128-141.
Nightingale, Wesley W. Building construction. 3,004,302, 10-17-61, Cl. 20-2.
Nissen, George P. Bounding bed. 3,004,623, 10-17-61, Cl. 182-139.
Noakes, Thomas E., to American Radiator & Standard Sanitary Corp. Snap-action thermostatic valve. 3,004,712, 10-17-61, Cl. 236-48.
Nord-Aviation, Societe Nationale de Constructions Aeronautiques: See—
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Matthews, John K. 3,004,513.
North American Aviation, Inc.: See—
Binstock, Martin H. 3,004,906.
Thomas, James L. 3,005,147.
North American Phillips Co., Inc.: See—
Bugel, Roelof D. 3,004,411.
Dron, Albert A., Rozenendaal, van der Laan, Palthe, and Hellingsman. 3,004,408.
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Norton Co.: See—
Brooks, Raymond A. 3,004,373.
Norton, Frank M. Foldable screening for garage doors and the like. 3,004,592, 10-17-61, Cl. 160-114.
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Buschmann, Erwin C., and Norton. 3,005,098.
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Nowicki, Henry F., and H. J. Smiley, to James Lees and Sons Co. Pile fabric and method. 3,004,564, 10-17-61, Cl. 139-408.
Nummy, William R.: See—
Raley, Charles F., Jr., and Nummy. 3,004,935.
Nutter, Benjamin P., and H. E. Metcalf, to Johnston Testers, Inc. Jar. 3,004,616, 10-17-61, Cl. 175-297.
Nuut, August: See—
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Bourne, Marlan E., Boode, and O'Brien. 3,005,172.
O'Brien, Francis J.: See—
Peterson, Ramon F., and O'Brien. 3,004,329.
O'Brien, Hugh A., to International Business Machines Corp. Interrecord noise elimination. 3,005,189, 10-17-61, Cl. 340-174.1.
O'Connell, John J.: See—
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Mann, Leonard J., O'Connell, and Wurtz. 3,004,401.
O'Kain, Dennis B., and G. A. Viola. Wall cabinet and method of assembly. 3,004,815, 10-17-61, Cl. 312-242.
Olin, John F., to Monsanto Chemical Co. Dehydration of 2,2,6,6-tetramethylcyclohexanol. 3,004,990, 10-17-61, Cl. 260-345.2.

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Keith, Norval A., Koertge, Tranel, and Paula. 3,004,327.
Lerner, Leonard J., Laskin, and Weisenborn. 3,005,017.
Thoma, Richard W., and Weisenborn. 3,005,028.
Weisenborn, Frank L., Lerner, and Laskin. 3,005,018.
Oliver, Ernest L., Jr.: See—
Clayton, William R., H. F., and Oliver. 3,004,570.
O'Meara, Thomas, to United States of America, Navy. Three-element, vector-phase radio direction finder. 3,005,200, 10-17-61, Cl. 343-123.
O'Meara, Thomas R., to United States of America, Navy. Vector-phase radio direction finder. 3,005,198, 10-17-61, Cl. 343-113.
Opocensky, Willard J., and G. W. Seevera, to General Precision, Inc. Integrator ball carriage adjustment. 3,004,441, 10-17-61, Cl. 74-198.
Orlani, Americo, and Q. Cappelli, to Danker & Wohik, Inc. Apparatus for molding optical lenses. 3,005,234, 10-17-61, Cl. 18-17.
Orne, Nila. Method of producing metal borides. 3,004,830, 10-17-61, Cl. 23-204.
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Zemlin, Carl G., and Ortzig. 3,005,063.
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Tomlinson, James A. 3,004,878.
Webber, John J., and Hummel. 3,004,367.
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Coleman, James C., and Mayhew. 3,005,122.
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Page, John W., to Page Engineering Co. Rope wedge socket connector. 3,004,317, 10-17-61, Cl. 24-126.
Paige, Janet N., to The Dow Chemical Co. 3-(sallylidene-amino) coumarins and their preparation. 3,004,969, 10-17-61, Cl. 260-240.
Paige, Janet N., to The Dow Chemical Co. 3-(sallylidene-amino) coumarins and their preparation. 3,004,988, 10-17-61, Cl. 260-343.2.
Palmer, Charles G., and D. L. Pickens, to Borg-Warner Corp. Servomotor control systems employing transducers. 3,005,135, 10-17-61, Cl. 318-29.
Palthe, Bertold R. v. W.: See—
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Pande-Rolfen, Per, to Lockspike Ltd. Railway rail securing means. 3,004,716, 10-17-61, Cl. 238-349.
Pankove, Jacques L.: See—
Pantchechnikov, Jacques I., now by change of name to Jacques I. Pankove, to Radio Corp. of America. Transistors. 3,005,132, 10-17-61, Cl. 317-235.
Paperlynen Co.: See—
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Paris, William W., and D. D. Staker, to Monsanto Chemical Co. Acyclic substituted succinic anhydride condensed with diamines. 3,004,987, 10-17-61, Cl. 260-326.3.
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Parker, Harry W.: See—
Marx, John W., Trantham, and Parker. 3,004,597.
Rogers, Allen S., Hurley, and Parker. 3,004,603.
Parker, Harry W., and A. S. Rogers, to Phillips Petroleum Co. Process for recovery of hydrocarbons by in situ combustion. 3,004,598, 10-17-61, Cl. 166-11.
Parker, Humphrey F., and E. E. Robins, to Columbus McKinnon Corp. Conveyor power chain load pick-up unit. 3,004,498, 10-17-61, Cl. 104-94.
Parker Pen Co., The: See—
Kersten, William H., and Polan. 3,004,520.
Panas, Dominick J. Automobile signal system. 3,005,187, 10-17-61, Cl. 340-52.
Patzelt, Harold L.: See—
Gregor, Harry P., and Patzelt. 3,004,904.
Gregor, Harry P., and Patzelt. 3,004,909.
Pauls, Theron F.: See—
Keith, Norval A., Koertge, Tranel, and Paula. 3,004,327.
Pelsue, Ivor S.: See—
Endress, James W., Miller, and Pelsue. 3,004,396.
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Williams, Leonard E., Jones, and Pennington. 3,004,778.
Pennsalt Chemicals Corp.: See—
Hauptschtein, Murray. 3,004,961.
Peppard, Donald F., and G. W. Mason, to United States of America, Atomic Energy Commission. Method of separating neptunium by liquid-liquid extraction. 3,004,823, 10-17-61, Cl. 23-14.5.
Pepper, Donald J., and A. J. Miles, to Foster Wheeler Corp. Fin and tube assembly and method of bonding same. 3,004,328, 10-17-61, Cl. 29-157.3.
Perfecting Service Co.: See—
Williamson, John G. 3,004,563.
Pernik, Antonin, to Ustav pro vyzkum motorovych vozidel. Continuously variable speed transmission. 3,004,440, 10-17-61, Cl. 74-117.
Perri, Giovanni: See—
Marullo, Gerlando, Perri, Tubiello, and Cadorin. 3,004,826.

Persson, Lars B.: See—
Lindberg, Karl G. H., Persson, and Thorsen. 3,005,051.
Pesola, Jeannette E. Folding rack for beds. 3,004,267, 10-17-61, Cl. 5-318.
Peterson, Gerald B. Aircraft landing wheel rotating means. 3,004,738, 10-17-61, Cl. 244-103.
Peterson, Ramon F., and F. J. O'Brien, to Rudy Mfg. Co. Heat exchanger and method of construction. 3,004,329, 10-17-61, Cl. 29-157.3.
Petrow, Vladimir, and D. M. Williamson, to The British Drug Houses Ltd. 6-methyl steroids compounds and method for preparing same. 3,004,966, 10-17-61, Cl. 260-239.55.
Petrow, Vladimir, to The British Drug Houses Ltd. Process and intermediates for preparation of 17a-acetyloxy-6a-methylpregn-4-ene-3:20-diones. 3,004,991, 10-17-61, Cl. 260-397.4.
Petree, Herbert M., to Geo. J. Meyer Mfg. Co. Article orienting apparatus. 3,004,650, 10-17-61, Cl. 198-33.
Petters, Oscar R., to Precision Time Corp. Stem winding and setting watch movement. 3,004,382, 10-17-61, Cl. 58-68.
Pfaff and Kendall: See—
Langmack, Carl J. 3,004,635.
Pfaudler Permutit, Inc.: See—
Adams, Ralph C. 3,004,668.
Pizer, Chas., & Co., Inc.: See—
Armstrong, William W. 3,004,891.
Conover, Lloyd H., and English. 3,004,889.
McLamore, William M., and Laubach. 3,005,022.
Rennhard, Hans H. 3,005,024.
Phillips Electronics Industries Ltd.: See—
Bond, James A. 3,004,759.
Phillips, Bozema M.: See—
Phillips, William. 3,004,372.
Phillips, Edward H.: See—
Phillips, William. 3,004,372.
Phillips, Edwin D.: See—
Phillips, William. 3,004,372.
Phillips, Josephine B.: See—
Phillips, William. 3,004,372.
Phillips Petroleum Co.: See—
Cottle, John E. 3,004,629.
Crawford, Francis W. 3,004,594.
Crawford, Francis W., and Parker. 3,004,595.
Foote, Jerry J., Mustard, and Rankin. 3,004,406.
Goering, Gordon D. 3,004,928.
King, William B. 3,004,940.
Loewen, Bruno F. 3,004,833.
Loewen, John W., Trantham, and Parker. 3,004,597.
Parker, Harry W., and Rogers. 3,004,596.
Poupirt, Walter C., Jr. 3,004,719.
Rogers, Allen S., Hurley, and Parker. 3,004,603.
Slover, James W. 3,004,911.
Phillips, William, deceased (E. H., E. D. and J. B. Phillips, executors); one-fourth to B. M. Phillips, one-fourth to E. H. Phillips, one-fourth to E. D. Phillips, and one-fourth to J. B. Phillips. Apparatus for producing ophthalmic lenses. 3,004,372, 10-17-61, Cl. 51-131.
Phin, Sydney R. Apparatus for forming cartons from carton blanks. 3,004,478, 10-17-61, Cl. 93-44.
Picken, William. Collapsible ironing board. 3,004,356, 10-17-61, Cl. 38-117.
Pickens, David L.: See—
Palmer, Charles G., and Pickens. 3,005,135.
Pierce, Earl R., to General Motors Corp. Adjustable timing device. 3,004,410, 10-17-61, Cl. 64-25.
Pifer, Marion J., to Sylvania Electric Products Inc. Tube shield. 3,005,174, 10-17-61, Cl. 839-14.
Pignolet, Louis: See—
Pomper, Victor, and Pignolet. 3,004,610.
Pinet, Louis. Greenhouse frame and culture apparatus incorporating said frame. 3,004,543, 10-17-61, Cl. 135-5.
Pinkus, Oscar, and E. J. Smith, to General Electric Co. Pivoted shoe bearing with force-feed lubrication. 3,004,804, 10-17-61, Cl. 308-73.
Pipe, John, to Steelcase Inc. Door latch and lock. 3,004,420, 10-17-61, Cl. 70-118.
Pisciotta, Saverio S. Illuminated window sign for automobiles. 3,004,350, 10-17-61, Cl. 40-129.
Platay, John M., to General Electric Co. Spring blades for recessed end fluorescent lampholder. 3,005,175, 10-17-61, Cl. 339-50.
Pitner, Alfred, 1/4 to Societe Anonyme des Roulements & Aiguilles. Processes for manufacturing needle and like bearing races. 3,004,322, 10-17-61, Cl. 29-148.4.
Pitner, Alfred, 1/4 to Societe dite: Societe Anonyme des Roulements & Aiguilles. Process of manufacturing bearings and bearings resulting therefrom. 3,004,323, 10-17-61, Cl. 29-149.5.
Pittman, Roland, to Lear, Inc. All attitude single axis astroscopic reference. 3,004,437, 10-17-61, Cl. 74-5.34.
Pittsburgh Plate Glass Co.: See—
Hungerford, Fulton H., and Samelson. 3,004,831.
Lytle, William O. 3,004,875.
Place, Eugene W., J. H. Davidson, and J. D. De Santo, to United States of America, Navy. Arming device. 3,004,491, 10-17-61, Cl. 102-83.
Poirette Corseta, Inc.: See—
Laguzzi, Mario. 3,004,538.
Poisker, John D., to The Welsbach Corp. Gas stop. 3,004,550, 10-17-61, Cl. 137-246.15.
Polan, Roger: See—
Kersten, William H., and Polan. 3,004,520.
Pollak, Abraham. Submersible sump pumps and switch assemblies therefor. 3,005,068, 10-17-61, Cl. 200-84.
Polson, Paul. Paraffin scraper and rod guide. 3,004,605, 10-17-61, Cl. 166-176.
Polymer Corp., The: See—
Davis, William J. 3,004,861.

- Pomper, Victor, and L. Pignolet, to Societe Industrielle Generale de Mecanique Appliquees S.I.G.M.A. Hydraulic control systems for agricultural tractors. 3,004,610, 10-17-61, Cl. 172-7.
- Pond, Anthony V., to United Aircraft Corp. Independent feathering system. 3,004,608, 10-17-61, Cl. 170-160.16.
- Pool, William O.: See—
Hainsworth, John G., Hershenson, and Pool. 3,004,892.
- Poor & Co.: See—
Gadd, William E. 3,004,715.
- Poorman, Richard M., G. P. Hawley, and H. B. Sargent, to Union Carbide Corp. Method for utilizing detonation waves to effect chemical reactions. 3,004,822, 10-17-61, Cl. 23-1.
- Poplar Foundries, Inc.: See—
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- Porbes, Henry F.: See—
Medal, Leon E., and Porbes. 3,004,261.
- Porter, Lloyd G., 20%, to T. K. Hampton. Control mechanism. 3,004,493, 10-17-61, Cl. 103-38.
- Porter, Fritz A.: See—
Snow, Arthur, Porter, and Tomahin. 3,004,567.
- Pouppirt, Walter C., Jr., to Phillips Petroleum Co. Apparatus for spraying viscous liquids. 3,004,719, 10-17-61, Cl. 239-381.
- Powell, David B., to General Electric Co. Circuit breaker. 3,005,066, 10-17-61, Cl. 200-78.
- Powell, Richard H.: See—
Couffer, Robert W., Jr., and Powell. 3,004,710.
- Powers, Robert E., to Bell Telephone Laboratories, Inc. Party line identification circuit. 3,005,052, 10-17-61, Cl. 179-17.
- Powers, Vincent J., to Accurate Bushing Co. Roller bearing assembly. 3,004,808, 10-17-61, Cl. 308-212.
- Prager, Maurice, and P. S. Rice, to Maurice Franklin Mfg. Co., Inc. Clipboard or shingle vent. 3,004,483, 10-17-61, Cl. 98-37.
- Precht, Walter, R. J. Geckle, and J. R. Bedell, to The Martin Co. Fuel tube element and method of preparing the same. 3,004,907, 10-17-61, Cl. 204-154.2.
- Precision Time Corp.: See—
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- Pretzsch, Hans: See—
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- Prevost, Bruno E., to John W. Bolton & Sons, Inc. Jordan plug. 3,004,724, 10-17-61, Cl. 241-294.
- Prevost, Bruno E., to John W. Bolton & Sons, Inc. Double bar Jordan plug. 3,004,725, 10-17-61, Cl. 241-294.
- Process Filters, Inc.: See—
Ulrich, Edward A. 3,004,669.
- Prock, Herbert B. Combined spool and needle threading device. 3,004,691, 10-17-61, Cl. 223-99.
- Prosser, David L.: See—
MacHutchins, John G., Prosser, and Wright. 3,005,102.
- Pritt, Malcolm E., J. M. Baggett, and W. T. McMichael, to The Dow Chemical Co. Solid composite propellants containing polyalkylene oxides. 3,004,840, 10-17-61, Cl. 52-3.
- Pulliam, Robert A. Adjustable metal form. 3,004,321, 10-17-61, Cl. 25-131.5.
- Pulos, Arthur J.: See—
Knapp, George A., Pulos, and Clemmshaw. 3,005,193.
- Pure Oil Co., The: See—
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- Pierce, William L., and Sandner. 3,005,007.
- Folkins, Hillis O., and Lucas. 3,004,292.
- Haines, Robert M., and Walsh. 3,004,928.
- Lucas, Kenneth E., and Folkins. 3,004,929.
- Millikan, Allen F., and Crosby. 3,005,006.
- Quast, Gilbert W.: See—
Conley, Weld E., Katz, and Quast. 3,004,672.
- Quenou, Paul E., to The International Nickel Co., Inc. Treatment of nickel-containing silicate ores. 3,004,846, 10-17-61, Cl. 75-21.
- Quenot, Michel C. A., to Societe a Responsabilite Limitee dite: Etablissements Quenot & Cie. Steel tape for measuring internal dimensions. 3,004,346, 10-17-61, Cl. 33-138.
- Quikut, Inc.: See—
Carroll, Lawrence K., Messinger, and Whitcomb. 3,004,341.
- Raabe, Herbert P. Tone arm mechanism. 3,005,059, 10-17-61, Cl. 179-100.4.
- Rabb, Lester R.: See—
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- Radack, Harry E., to Circle F Mfg. Co. Electrical wiring device and mounting means therefor. 3,005,178, 10-17-61, Cl. 339-128.
- Radford, James E., to United States of America, Navy. Hydraulic power supply. 3,004,734, 10-17-61, Cl. 244-14.
- Radio Corp. of America: See—
Bott, Adolf H., and Talmage. 3,005,167.
- Emmons, Clark H. 3,005,141.
- Goodrich, Hunter C. 3,005,048.
- Pantchevnikoff, Jacques L. 3,005,132.
- Taylor, Charles H. 3,005,094.
- Waltke, Henry C., and Green. 3,004,649.
- Rado, John A.: See—
Cawein, Madison, and Rado. 3,005,046.
- Raimo, Anthony S. Pill dispenser. 3,004,566, 10-17-61, Cl. 141-18.
- Raine, Thomas, and J. A. Robinson, to Associated Electrical Industries Ltd. Zirconium alloys. 3,004,849, 10-17-61, Cl. 75-177.
- Raley, Charles F., Jr., and W. R. Nummy, to The Dow Chemical Co. Self-extinguishing alkyl polymer compositions containing polybromo cyclohexanes. 3,004,935, 10-17-61, Cl. 260-2.5.
- Ramos, Joe, and W. F. Hower, to Gulf Research & Development Co. Method of reducing the permeability of underground formations. 3,004,596, 10-17-61, Cl. 166-29.
- Rankin, Albert M.: See—
Nielsen, James S., and Rankin. 3,004,477.
- Rankin, Eugene E.: See—
Foote, Jerry J., Mustard, and Rankin. 3,004,406.
- Ranseen, Agnes J.: See—
Ranseen, Emil L. 3,005,118.
- Ranseen, Emil L., deceased, A. J. Ranseen, executrix; said A. J. Ranseen, by decree of distribution. Electric motors. 3,005,118, 10-17-61, Cl. 310-49.
- Raytheon Co.: See—
Dench, Edward C. 3,005,129.
- Reddick, John A.: See—
Berkley, Earl E., and Reddick. 3,005,153.
- Jennings, Edwin J., Jr., Reddick, and Berkley. 3,005,152.
- Reece, Albert B. J., to The English Electric Co. Ltd. Discontinuous induction type dynamo-electric machines. 3,005,116, 10-17-61, Cl. 310-11.
- Rees, Frank L., to United States of America, Air Force. Variable time delay pulse generator. 3,005,157, 10-17-61, Cl. 328-55.
- Rehklau, George D., to Ampex Corp. Container construction. 3,004,658, 10-17-61, Cl. 266-32.
- Reinold, Harold J., to General Motors Corp. Electrostatic paint spray. 3,004,517, 10-17-61, Cl. 118-427.
- Reiss, Alexander, and G. Hillebrand, to Licentia Patent-Verwaltungs-G.m.b.H. High speed circuit breaker. 3,005,073, 10-17-61, Cl. 200-94.
- Renk, Ernst: See—
Grob, Cyril, and Renk. 3,004,975.
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- Ritchey, Neil F., to Knapp Mills Inc. Method and means for testing metals. 3,005,104, 10-17-61, Cl. 250-106.
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- Rossi, Alberto: See—
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- Schleppack, Fridtjof F., to Anton Lorenz. Reclining chairs. 3,004,791, 10-17-61, Cl. 297-85.
- Schmid, Hermann, and J. L. West, to General Precision, Inc. Electronic computer circuits. 3,005,115, 10-17-61, Cl. 307-88.5.
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- Schneider, Emmor V., to The Alliance Mfg. Co. Division of Consolidated Electronics Industries Corp. Telemetering circuit. 3,005,190, 10-17-61, Cl. 340-226.
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- Senkbell, Herman O., to The Dow Chemical Co. O,O'-(2-butenylene) and (2-butenylene) bis-(O-alkyl phosphoramidothioates). 3,005,001, 10-17-61, Cl. 260-461.
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- Shafer, Homer J. Sealing construction for piston valve. 3,004,551, 10-17-61, Cl. 137-246.16.
- Shafer, Homer J. Piston valve construction. 3,004,552, 10-17-61, Cl. 137-246.22.
- Shanahan, William J., to United States of America, Navy. Video quantizing and contour level apparatus. 3,005,045, 10-17-61, Cl. 178-6.8.
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- Shapiro, Hymia, and H. R. Neal, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,004,998, 10-17-61, Cl. 280-437.
- Shapiro, Hymia, and H. R. Neal, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,004,999, 10-17-61, Cl. 280-437.

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- Shore, Joseph. Dental preparation. 3,004,897, 10-17-61, Cl. 167-93.
- Sidell, Philip A., G. N. Kaniwek, and O. B. Burgeson, to The Ingraham Co. Alarm control for time alarm. 3,004,380, 10-17-61, Cl. 58-21,12.
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- Skau, Evald L., to United States of America, Agriculture. Apparatus for measuring the absolute softness of yarns. 3,004,428, 10-17-61, Cl. 73-160.
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- Skinner, Glenn S., and J. B. Bickling, to Merck & Co., Inc. Halocetic acid method for preparing thiamorpholinediones. 3,004,971, 10-17-61, Cl. 260-243.
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Wettstein, Albert, and K. Heusler, to Ciba Pharmaceutical Products Inc. 17 β -methyl-20-keto-18nor-17a-pregnenes and process therefor. 3,004,993, 10-17-61, Cl. 260-397.45.
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Wiegert, Philip E., to Mallinckrodt Chemical Works. 3-amino-2,4,6-trinitro-5-ureidobenzoic acid compounds. 3,004,984, 10-17-61, Cl. 260-211.

Wieland, Daniel T., Jr. Moored mine. 3,004,488, 10-17-61, Cl. 102-13.
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Ziebold, Herbert W., to Gpe Controls, Inc. Leak-proof fluid system regulator. 3,004,554, 10-17-61, Cl. 137-415.
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84: 3,004,699	80: 3,005,103	239: 55: 3,004,986	583: 3,005,027	88: 3,005,112	328- 55: 3,005,157
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CLASSIFICATION OF DESIGNS

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

October 17, 1961

Volume 771

Number 3

TRADEMARKS
NOTICES

Patent Office Units Located at 1801 K Street N.W.

The following units of the Patent Office are located in the
Disc Building, 1801 K Street N.W.:

Board of Appeals
Board of Patent Interferences
Trademark Examining Operation
Trademark Search Room
Trademark Trial and Appeal Board

the examination must be directed to the Commissioner of
Patents and filed in the Patent Office not later than January
5, 1962.

Application blanks may be obtained from the clerk of the
Patent Office Committee on Enrollment, Room 3718, Depart-
ment of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Sept. 18, 1961. Chairman, Committee on Enrollment.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 15,375 (REMINGTON AND DESIGN), Standard
Typewriter Manufacturing Company, Typewriting machines;
Reg. No. 15,900 (Remington), same; Reg. No. 237,965
(STANDARD REMINGTON ETC. AND DESIGN), Reming-
ton Typewriter Company, Adding and accounting machines;
Reg. No. 233,916 (REMINGTON), same; Reg. No. 368,774,
same, Remington Rand, Inc., Typewriters and parts there-
of; Reg. No. 372,564, same, Electric dry shavers, attach-
ments, and parts thereof; Reg. No. 374,784, same, Copy-
holders and parts thereof, filed Aug. 21, 1961, D.C., S.D.
Calif. (Los Angeles), Doc. 1090/61-WB, Sperry Rand Cor-
poration v. Seawool Distributors, Inc. et al.

Reg. No. 15,900. (See Reg. No. 15,375.)

Reg. No. 237,965. (See Reg. No. 15,375.)

Reg. No. 233,916. (See Reg. No. 15,375.)

CONDITION OF TRADEMARK APPLICATIONS AS OF AUGUST 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]----- 13,451
Date of oldest new application----- February 13, 1961
Date of oldest amended application----- February 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50.		2-13-61	2-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B.		3-13-61	3-20-61
Renewals (All Classes)-----		8-14-61	8-24-61
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Applications filed during the month of August 1961-1947

Registrations Issued----- 204-No. 722,719 to No. 722,922
Renewals Issued----- 60

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PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address
orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 288,774. (See Reg. No. 15,375.)

Reg. No. 272,568. (See Reg. No. 15,375.)

Reg. No. 274,758. (See Reg. No. 15,375.)

Reg. No. 406,233 (RIPON FOODS INC. ETC.), Ripon Foods, Inc., Cookies, filed Aug. 5, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1486, *Ripon Foods, Inc. v. Bake-Line Products, Inc.*

Reg. No. 427,500 (MR. DONUT AND DESIGN), Finis L. Ragsdale, Doughnuts; Reg. No. 608,784 (MISTER DONUT), Mister Donut of America, Inc., Snack Bar services; Reg. No. 673,298 (DESIGN OF HUMAN), same; Reg. No. 683,370 (MISTER DONUT), Harwin Management Corporation, doing business as Mister Donut of America, Inc., Flour, filling and jellies for doughnuts, coffee and vegetable shortening, filed Aug. 24, 1961, D.C., S.D.N.Y., Doc. 61/3048, *Mister Donut of America, Inc. v. Miss Donut, Inc. et al.*

Reg. No. 633,850 (SPEAKMAN), Speakman Company, Shower heads, valves and accessories, shower and bath

ittings, hospital fittings, etc.; 2,534,542, J. Fraser, Adjustable spray showerhead, filed May 1, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7582, *Speakman Company v. Southeastern Plumbing Supply Co., Inc.* Judgment for plaintiff Aug. 17, 1961.

Reg. No. 634,285 (THE DINERS' CLUB), Hamilton Credit Corporation, now The Diners' Club, Inc., Extension of credit to customers who purchase at subscribing retail establishments and making collections from such customers through a central billing system; Reg. No. 649,729, same, The Diners' Club, Inc., Credit identification booklets, filed Aug. 30, 1961, D.C., S.D.N.Y., Doc. 61/3099, *The Diners' Club, Inc. v. Mardigan Corporation*.

Reg. No. 649,729. (See Reg. No. 634,285.)

Reg. No. 668,784. (See Reg. No. 427,500.)

Reg. No. 673,298. (See Reg. No. 427,500.)

Reg. No. 683,370. (See Reg. No. 427,500.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 111,695. Societe de la Viscose Suisse, Emmenbrucke, Switzerland. Filed Jan. 11, 1961.



For Synthetic Fibres and Filaments.
First use August 1957; in commerce in or about February 1958.

SN 113,272. Curlator Corporation, East Rochester, N.Y. Filed Feb. 8, 1961.

RANDO-ROV

Owner of Reg. Nos. 558,770, 707,480, and others.
For Roves Formed From Random Fiber Webs.
First use June 19, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 105,985. Johnson & Johnson, d.b.a. Tek Hughes, New Brunswick, N.J. Filed Oct. 7, 1960.

GAD-A-BAG

For Purses Containing a Comb and Brush.
First use Mar. 28, 1960.

SN 118,674. Farbwerke Hoechst Aktiengesellschaft, vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. Filed Apr. 26, 1961.

TREVIRA

Owner of German Reg. No. 743,499, dated Dec. 12, 1960; and U.S. Reg. Nos. 690,881, 711,159, and others.
For Luggage Items—i.e., Trunks, Suitcases, Boxes, Traveling Bags and the Like.

Class 4—Abrasives and Polishing Materials

SN 97,852. Midland Laboratories, Dubuque, Iowa. Filed May 25, 1960.

MIDCOTE

For Wax-Free Substance in the Nature of a Floor Polish and Floor Wax Substitute for Institutional and Industrial Use.
First use in or about January 1955.

SN 110,578. Brandt & Walther, Bremen, Germany. Filed Dec. 19, 1960.

Poliboy

Owner of German Reg. No. 676,540, dated May 24, 1955.
For Polish for Furniture and for Household and Kitchen Utensils (Except Leather Polish).

SN 116,877. Fuld Brothers, Inc., Baltimore, Md. Filed Mar. 31, 1961.

SPACE AGE

For Wax-Like Composition for General Cleaning and Polishing.
First use Mar. 8, 1961.

Class 5—Adhesives

SN 119,418. Peter Cooper Corporations, Gowanda, N.Y. Filed May 5, 1961.

PROCOL

For Animal Glue Adhesive Product.
First use Mar. 9, 1961.

SN 119,655. Velcol Chemical Corporation, Chicago, Ill. Filed May 9, 1961.

STIKVEL

For Hydrocarbon Base Adhesive.
First use Apr. 5, 1961.

Class 6—Chemicals and Chemical Compositions

SN 114,015. Eli Lilly and Company, Indianapolis, Ind. Filed Feb. 20, 1961.



For Chemicals for Garden and Agricultural Use—Namely, Herbicide.
First use Jan. 25, 1961.

Class 7—Cordage

SN 114,425. Bunn Supply Company, Chicago, Ill. Filed Feb. 27, 1961.

Bunn

For Twine.
First use September 1951.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 81,686. Max J. Doppelt, d.b.a. E. A. Carey Company, Chicago, Ill. Filed Sept. 21, 1959.

MAGIC INCH

For Smoke Conditioning Chamber in the Form of a Perforated Tubular Element Interposed in the Flow Path of the Smoke From the Burning to the Discharge End of a Tobacco Containing Device.
First use August 1948.

SN 116,421. Lewis F. Phillips, d.b.a. C.P. Plastic Engineering Company, Chicago, Ill. Filed Mar. 24, 1961.

BELAIRE

For Ash Trays.
First use June 17, 1959.

SN 121,165. The Bloch Brothers Tobacco Co., Wheeling, W. Va. Filed June 1, 1961.

WHITEHALL

For Smokers' Pipes.
First use January 1958.

Class 10—Fertilizers

SN 87,679. Hookrite Products Corp., Brooklyn, N.Y. Filed Dec. 21, 1959.

PLUG-O

For Combination Mulch and Soil Conditioner.
First use Aug. 24, 1959.

SN 104,338. L. Teweles Seed Co., Milwaukee, Wis. Filed Sept. 12, 1960.



The letter "T" is lined for the color green, but no claim is made to color.

For Combination Fertilizer and Weed Killer and for Fertilizers, Including Lawn Fertilizer, Bulb and Plant Food, and Rose Food.
First use Feb. 4, 1960, on rose food.

SN 116,557. Nutrilite Products, Inc., Buena Park, Calif. Filed Mar. 27, 1961.

KEY GREEN

For Plant Fertilizer.
First use July 3, 1959.

Class 11—Inks and Inking Materials

SN 113,912. Dale Marking Equipment Co., Inc., Brooklyn, N.Y. Filed Feb. 17, 1961.

DALEMARK

For Marking Inks.
First use Jan. 9, 1956.

SN 90,861. The Rollese Corporation, Los Angeles, Calif. Filed Feb. 12, 1960.

ROLLEZE

For Aluminum Windows.
First use January 1958.

SN 96,150. Southwestern Plastics, Inc., Houston, Tex. Filed Apr. 29, 1960.



For Skylights.
First use on or about Mar. 28, 1960.

SN 98,098. Jenn Air Products Company, Inc., Indianapolis, Ind. Filed May 31, 1960.

Astro-Lite

For Skylights.
First use Jan. 22, 1960.

SN 102,760. William Gold, Inc., New York, N.Y. Filed Aug. 16, 1960.

GROUTITE

For Plastic Composition Disposed Between Tiles for Decorative Effects.
First use Feb. 4, 1957.

SN 103,716. Flexforms, Inc., Englewood, Colo. Filed Aug. 31, 1960.

FLEX-TEE

For Prestressed Roof Deck.
First use Aug. 18, 1960.

SN 104,650. Glenn Succetti, Grass Valley, Calif. Filed Sept. 16, 1960.

THERMO-STEEL

For Heat Insulating and Acoustical Plaster.
First use on or about Aug. 23, 1960.

SN 108,206. Johns-Manville Corporation, New York, N.Y. Filed Oct. 11, 1960.

COLORCHIP

For Asbestos-Cement Sheets.
First use Sept. 9, 1959.

SN 106,587. Dry Mix Concrete Company, Franklin Park, Ill. Filed Oct. 18, 1960.

KRAC-KALK

For Calking Compound for Blacktop, Concrete Joints, Foundations, Steps and the Like.
First use Sept. 7, 1960.

SN 107,085. Vulcan Materials Company, d.b.a. Concrete Pipe Division, Mountain Brook, Ala. Filed Oct. 24, 1960.



The mark consists essentially of a pair of V-shaped symbols with their apexes directed toward each other, one V-shaped symbol having an elongated wedge-shaped symbol passing through its apex.

For Concrete Pipe.
First use Sept. 10, 1959.

SN 107,605. W. P. Fuller & Co., San Francisco, Calif. Filed Nov. 1, 1960.

FUL-TRIM

For Commercial Architectural Metal Products—Namely, Store Fronts, Window Walls, and Curtain Walls.
First use Mar. 25, 1960.

SN 107,703. H. H. Robertson Company, Pittsburgh, Pa. Filed Nov. 2, 1960.

V-WALL

The word "Wall" is disclaimed apart from the mark.
For Curtain Walls Including Extruded Mullions, Mullins, Infill Panels, Cover Caps.
First use Oct. 30, 1957.

SN 110,789. Reichhold Chemicals, Inc., White Plains, N.Y. Filed Dec. 23, 1960.

GARDLITE

For Reinforced Fiber Glass Panels.
First use Sept. 13, 1960.

SN 110,790. Reichhold Chemicals, Inc., White Plains, N.Y. Filed Dec. 23, 1960.

RIDGEWAY

For Fiber Glass Panels.
First use July 12, 1960.

SN 111,815. Serviced Products Corporation, Chicago, Ill. Filed Jan. 13, 1961.

NO-TRAK

For Joint Sealing Compound.
First use Dec. 30, 1960.

TM 771 O.G.—9

SN 112,783. Shop-In-Car Corp., Shelby, N.C. Filed Jan. 30, 1961.

SHOP-IN-CAR

For Drive-In Service Window.
First use November 1955.

SN 113,136. The Rapids-Standard Company, Inc., Grand Rapids, Mich. Filed Feb. 6, 1961.

RAPISTAN

Owner of Reg. Nos. 528,069 and 545,631.
For Structural Shapes.
First use July 12, 1954.

SN 113,731. The Johnson Rubber Company, Middlefield, Ohio. Filed Feb. 15, 1961.

THRUST-A-PAD

For Resilient Floor Pads for Use in Floor Cushion Mounting Systems for Attachment to Solid or Sleeper Type Sub-Floor Installations.
First use June 1958.

SN 113,917. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Feb. 17, 1961.

OXIBAK

Owner of Reg. No. 706,508.
For Refractory Brick of Magnesia and Dolomite.
First use May 16, 1960.

SN 114,958. Harvey Window Corporation, Dorchester, Mass. Filed Mar. 6, 1961.

SASH-TRAC

For Storm Windows.
First use Dec. 1, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 81,704. Lawrence W. Heinze, d.b.a. Fiberglass Progress Co., White Bear Lake, Minn. Filed Sept. 21, 1959.

GLASS MAID

For Sinks.
First use Mar. 15, 1957.

SN 94,797. Nibco Inc., Elkhart, Ind. Filed Apr. 11, 1960.
Owner of Reg. Nos. 190,106 and 632,522.

NIBCO

For Pipe Fittings, Valves for Fluid Conduits and Fluid Systems and Pipe Hangers.
First use Oct. 15, 1922.

SN 102,957. Thermotronics Corporation, Valley Stream, N.Y. Filed Aug. 18, 1960.

FLOW-TOUCH

For Line of Flow Control Devices and Associated Hardware for Installation in Water Lines.
First use July 29, 1960.

SN 104,137. Betts Machine Company, Warren, Pa. Filed Sept. 9, 1960.

GUSHER

For Air Operated Emergency Valves.
First use June 1960.

SN 104,767. Speedfast Corporation, Long Island City, N.Y. Filed Sept. 19, 1960.

SPEEDFAST

For Staples, Nails, Fasteners of Planar and Corrugated Forms.
First use Aug. 29, 1960.

SN 105,038. Whitey Research Tool Co., Oakland, Calif. Filed Sept. 22, 1960.

WHITEY

For Micro-Regulating, Needle and Fingertip Control Valves and Mixers, More Particularly Machines for Mixing Chemicals.
First use Aug. 12, 1946.

SN 107,285. Reliable Electric Company, Franklin Park, Ill. Filed Oct. 27, 1960.

WIRELINK

Owner of Reg. No. 561,306.
For Tension Splice Devices for Communications Wires.
First use Aug. 3, 1954.

SN 108,399. Société S.A.T.U.J.O (Société Anonyme), Paris, France. Filed Nov. 14, 1960.

FLEXIFORM

Owner of French Reg. No. 454,335, dated Dec. 6, 1955 (Seine); Natl. Inst. No. 65,405.
For Flexible Rubber Cores Used in the Manufacture of Concrete Pipes, Drains, and Sewers.

SN 111,005. National Metal Products Company, Pittsburgh, Pa. Filed Dec. 29, 1960.



For Door Bottom for Affixation to the Bottom of a Swingable Door and Having a Sealing Strip Which Closes the Space Between the Door and the Underlying Floor When the Door is Closed.
First use Apr. 25, 1960.

SN 113,339. Hindley Manufacturing Company, Cumberland, R.I. Filed Feb. 9, 1961.

PEG-LOK

For Metal Fixtures—Namely, Hooks.
First use Jan. 31, 1961.

SN 114,850. Faultless Caster Corporation, Evansville, Ind. Filed Mar. 3, 1961.

HOSTESS

For Casters.
First use Sept. 16, 1960.

SN 116,212. George W. Dahl Company, Inc., Bristol, R.I. Filed Mar. 22, 1961.

MITE

For Valves for Controlling the Flow of Fluids and Gases.
First use August 1958.

SN 116,413. L. R. Nelson Mfg. Co., Inc., Peoria, Ill. Filed Mar. 24, 1961.

SKY JET

For Lawn and Garden Sprinklers.
First use Dec. 29, 1960.

SN 116,490. Elkey Manufacturing Company, Chicago, Ill. Filed Mar. 27, 1961.

RIGIDBILT

For Custom Built Sheet Metal Products—Namely, Metal Sinks, Drainboards, and Sanitary Laundry Trays.
First use Nov. 21, 1939.

SN 118,340. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 21, 1961.

DELRIN

Owner of Reg. No. 597,795.
For Pipe, Tubing, Lines and Conduit, and Fittings Therefor, Made Wholly or in Part of Synthetic Resinous Plastic Material.
First use Sept. 16, 1960.

Class 14—Metals and Metal Castings and Forgings

SN 87,736. Sulphide Corporation Pty. Limited, Boolaroo, New South Wales, Australia. Filed Dec. 21, 1959.

IVY

Priority claimed under Sec. 44(d) on Australian Reg. No. A155,968, dated Sept. 10, 1959.
For Non-Ferrous Metals and Alloys.

SN 87,737. Sulphide Corporation Pty. Limited, Boolaroo, New South Wales, Australia. Filed Dec. 21, 1959.

SULCORP

Priority claimed under Sec. 44(d) on Australian Reg. No. A156,791, dated Nov. 2, 1959.
For Non-Ferrous Metals and Alloys.

SN 112,659. Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria. Filed Jan. 27, 1961.



Owner of Austrian Reg. No. 43,217, dated Apr. 13, 1960.
For Blown Steels; Alloyed and Not Alloyed Steels in Treated and Untreated Form Refined With Oxygen or Oxygen-Enriched Gases.

SN 117,315. Vanadium-Alloys Steel Company, Latrobe, Pa. Filed Apr. 6, 1961.

L-100-M

For Tool and Special Steels, Tool Steel Bars, Billets, Forgings, Steel Sheets, Circles, and Special Shapes.
First use Nov. 30, 1960.

SN 117,766. Blazon, Inc., Cuyahoga Falls, Ohio. Filed Apr. 13, 1961.

BLAZONITE

For Galvanized Steel Sheets.
First use Dec. 5, 1960.

Class 15—Oils and Greases

SN 115,195. Sulfo, Inc., Elizabeth, N.J. Filed Mar. 8, 1961.
Owner of Reg. No. 400,211.

MACHINE-KUT

For Metal Cutting Lubricating Compound.
First use Aug. 22, 1940.

SN 115,712. Nalco Chemical Company, Chicago, Ill. Filed Mar. 15, 1961.

NALCO

Owner of Reg. Nos. 298,080, 701,336, and others.
For Lubricating Compositions in Stick Form Especially Useful as Flange Lubricators on Locomotive Wheels.
First use Jan. 27, 1954.

SN 116,168. Sun Oil Company, Philadelphia, Pa. Filed Mar. 21, 1961.

SUNICOOL

Owner of Reg. Nos. 442,846, 548,922, and others.
For Liquid Coolant Used in Metal Working Operations.
First use Jan. 26, 1960.

SN 116,823. MM & C Company, Inc., Fort Walton Beach, Fla. Filed Mar. 30, 1961.

BOT-O-LUB

For General Purpose Dry Lubricant.
First use Oct. 6, 1960.

SN 117,553. Sun Oil Company, Philadelphia, Pa. Filed Apr. 10, 1961.

CENT A GRADE

For Gasoline.
First use Oct. 27, 1960.

SN 117,920. W. L. Spencer Co., Milwaukee, Wis. Filed Apr. 14, 1961.

BLANKONTROL

For Compound Used in Deep Drawing of Metals and Metal Presswork.
First use March 1961.

SN 118,059. Joseph Dixon Crucible Company, Jersey City, N.J. Filed Apr. 18, 1961.

SPRA-SAFE

For Glass Mold Lubricant.
First use July 27, 1960.

SN 118,292. Sinclair Refining Company, New York, N.Y. Filed Apr. 20, 1961.

DINO

Owner of Reg. Nos. 342,874, 364,576, and 366,048.
For Gasoline.
First use Apr. 3, 1961.

Class 16—Protective and Decorative Coatings

SN 100,271. Lenoir Wood Finishing Company, Lenoir, N.C. Filed July 5, 1960.

POLYSHIELD PLASTIC

No claim is made to the word "Plastic."
For Synthetic Liquid Surface Coating Composition Used as a Finish for Furniture and the Like.
First use June 20, 1960.

SN 106,428. The Patterson-Bargent Company, Cleveland, Ohio. Filed Oct. 14, 1960.

LUX-SOL

For Paint Thinner.
First use Sept. 2, 1960.

SN 110,727. Arkwright Merchandising Corporation, New York, N.Y. Filed Dec. 23, 1960.



Owner of Reg. Nos. 539,930 and 701,374.
For Paints, Enamels, Varnishes, Shellac, Coatings, Protective Coverings, Sealers and Waterproof Compounds for the Home.
First use June 2, 1944.

SN 112,526. Betty Davis Paint Manufacturers, Gainesville, Tex. Filed Jan. 26, 1961.

Betty Davis

The drawing is lined for red. Betty Davis Basa consents to the use and registration of the name "Betty Davis." For Paint.
First use Mar. 1, 1960.

SN 113,209. Great Lakes Paint and Varnish Company, Chicago, Ill. Filed Feb. 7, 1961.

FASHION TONES

For Paints, Varnishes, Enamels, Stains, and Paint Colorants.
First use during January 1941.

SN 113,328. Con-Lux Paint Corporation, Metuchen, N.J. Filed Feb. 9, 1961.

EPOLOID

For Chemical Resistant Catalytic Epoxy Enamel.
First use July 1960.

SN 114,385. Arvon Products Co., Inc., Philadelphia, Pa. Filed Feb. 24, 1961.

Cerami-Glaze

For Clear Resinous Coating.
First use on or about June 23, 1959.

SN 114,386. Arvon Products Co., Inc., Philadelphia, Pa. Filed Feb. 24, 1961.

Terazzo-Wall

For Multi-Color Paint.
First use on or about Aug. 30, 1960.

SN 115,015. Tnemec Company, Inc., North Kansas City, Mo. Filed Mar. 6, 1961.

TOPOX

For Coating in the Nature of a Paint for Interiors of Steel or Concrete Potable Water Tanks.
First use June 10, 1960.

SN 116,828. Meyer Magid, d.b.a. The Magi-Dyes Co., Palo Alto, Calif. Filed Mar. 23, 1961.

PLASTI-DYE

For Colored Sprays for Coloring Vinyls and Plastics.
First use Mar. 20, 1961.

SN 117,075. Airkote, Inc., New York, N.Y. Filed Apr. 4, 1961.

SPLEK

For Protective and Decorative Coating Compositions for Producing in a Single Spray Application Coatings Providing Particled Color and/or Multi-Color Effects.
First use early in January 1958.

SN 117,126. Norfolk Paint Corporation, d.b.a. Nuclear Research Associates, Quincy, Mass. Filed Apr. 4, 1961.

NUCLEAR

For Transparent Coatings for Floors.
First use Mar. 22, 1961.

SN 117,915. The Sherwin-Williams Company, Cleveland, Ohio. Filed Apr. 14, 1961.

FLAMBOYANT

For Lacquers and Base Coats for Same.
First use Feb. 8, 1960.

SN 118,075. Haydon Auto Painting Systems, Inc., New York, N.Y. Filed Apr. 18, 1961.

HAYDONIZED

For Auto Paints.
First use Mar. 15, 1961.

SN 118,076. Haydon Auto Painting Systems, Inc., New York, N.Y. Filed Apr. 18, 1961.



The term "Auto Painting" is disclaimed separate and apart from the mark. The drawing is lined for orange.
For Auto Paints.
First use Mar. 15, 1961.

SN 119,476. Columbia Technical Corporation, Woodside, N.Y. Filed May 8, 1961.

PYROSHIELD

For Heat Resistant Protective Film Forming Coating Material.
First use Mar. 29, 1961.

SN 119,574. The Tremco Manufacturing Company, Cleveland, Ohio. Filed May 8, 1961.

LIQUI-MAT

For Membrane-Forming Coating Composition for Roofs and the Like.
First use Mar. 3, 1961.

SN 119,671. Brulin & Company, Inc., Indianapolis, Ind. Filed May 10, 1961.

TERRASHIELD

For Sealing and Coating Composition for Floors.
First use Sept. 3, 1959.

Class 17—Tobacco Products

SN 107,284. Poul Petersen, d.b.a. Poul Petersen Tobaksfabrikker, Horsens, Jutland, Denmark. Filed Oct. 27, 1960.

ROYAL TIVOLI

For Smoking Tobacco.
First use July 4, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 118,037. Sterling Drug Inc., New York, N.Y. Filed Feb. 3, 1961.

WINSTROL

For Medicinal Preparation for the Treatment of Metabolic Disorders.
First use Jan. 18, 1961.

Class 19—Vehicles

SN 96,155. United States Rubber Company, New York, N.Y. Filed Apr. 29, 1960.

ROYAL

For Automobile Floor Mats.
First use Mar. 11, 1960.

SN 115,265. Skagit Plastics, Inc., La Conner, Wash. Filed Mar. 9, 1961.

SKAGIT

For Boats.
First use Nov. 19, 1955.

SN 115,395. Traville Corporation, Detroit, Mich. Filed Mar. 10, 1961.

TRAVILLE

For Motor Driven Vehicles—Namely, Passenger Automobiles Having Bodies Arranged and Furnished To Provide Living and Traveling Accommodations.
First use October 1960.

SN 118,668. Eaton Manufacturing Company, Cleveland, Ohio. Filed Apr. 26, 1961.

SAFE-CHEK

For Radiator Pressure Caps.
First use Feb. 28, 1961.

SN 119,011. Kit Manufacturing Company, Long Beach, Calif. Filed May 1, 1961.

TROJAN

For House Trailers and Mobile Homes.
First use Jan. 25, 1961.

SN 119,136. Kiekhaefer Corporation, Cedarburg, Wis. Filed May 2, 1961.

ALUMARINE

For Pontoons, Rafts, and Floats.
First use Mar. 16, 1961.

Class 20—Linoleum and Oiled Cloth

SN 105,055. Congoleum-Nairn Inc., Kearny, N.J. Filed Sept. 23, 1960.

TAKORK

For Linoleum Composition Sheets Containing Cork for Bulletin Boards.
First use Sept. 16, 1960.

SN 108,159. Color Tile of Colorado, Inc., Denver, Colo. Filed S.R. Nov. 10, 1960; Am. P.R. June 19, 1961.

COLOR TILE

The word "Tile" is disclaimed apart from the mark. The lining on the drawing indicates the use of shading.
For Wall and Floor Coverings Including: Plastic Wall Tile, Asphalt Tile, Rubber Tile, Solid Vinyl Tile, Vinyl Asbestos Tile, and Linoleum Tile.
First use on or about Jan. 1, 1954.

SN 117,177. The Dodge Cork Company, Incorporated, Lancaster, Pa. Filed Apr. 5, 1961.

SIBONEY

For Laminated Cork and Vinyl Tile.
First use July 1960.

SN 117,617. Congoleum-Nairn Inc., Kearny, N.J. Filed Apr. 11, 1961.

TEMPEST

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Feb. 8, 1961.

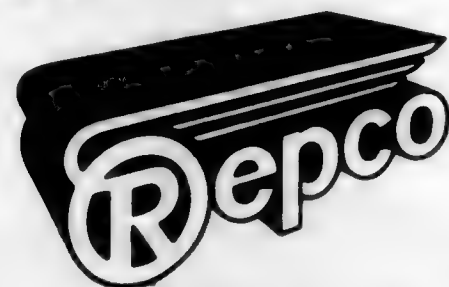
Class 21—Electrical Apparatus, Machines, and Supplies

SN 73,842. States Batteries, Inc., San Francisco, Calif. Filed May 15, 1959.

TWO BATTERY LINE

For Battery Hold Downs.
First use Mar. 17, 1959.

SN 79,287. Repco Limited, Carlton, Victoria, Australia. Filed Aug. 10, 1959.



Owner of Australian Reg. Nos. 107,928, 107,930, and 107,931, dated Oct. 25, 1951.

For Radio Receivers and Parts Thereof, and Domestic Electric Appliances—Namely, Radiators, Toasters, Irons, and Culinary Utensils.

SN 88,419. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Jan. 4, 1960.

"TOTAL SOUND STEREO"

For Stereophonic Receivers and Reproducing Equipment. First use Dec. 23, 1959.

SN 95,079. Hanlon & Wilson Company, Pittsburgh, Pa. Filed Apr. 14, 1960.

STEELY

For Rail Bonds. First use at least about 1953.

SN 102,187. Bowmar Instrument Corporation, Fort Wayne, Ind. Filed Aug. 8, 1960.

ELECTROSHIFT

For Electrically Actuated Two-Speed Gear Changing Devices Used in Aiming, Tuning, Scanning and Other Servo Systems.

First use July 22, 1960.

SN 103,551. Dixie Controller, Inc., Birmingham, Ala. Filed Aug. 29, 1960.

TIMBERLINE

For Electrical Controls for Saw Mill Edgers, Saw Mill Trimmers, Cut-Off Saws for Lumber, and Lumber Conveyors. First use June 29, 1960.

SN 104,726. Industrial Heater Co., Gardena, Calif. Filed Sept. 19, 1960.

INHECO

For Electrical Heating Equipment Particularly Electric Tubular Heaters, Electric Immersion Heaters, and High Temperature Resistors. First use Apr. 21, 1957.

SN 104,957. Standard Kollsman Industries Inc., Melrose Park, Ill. Filed Sept. 21, 1960.

standard kollsman

For Television and Radio Accessories and Supplies—Namely, Television Tuners, Radio Tuners and Parts of Tuners.

First use June 16, 1960.

SN 105,656. Motorola, Inc., Chicago, Ill. Filed Oct. 3, 1960.

COMPA-STATION

For Two-Way Radio Communications Transmitters and Receivers.

First use 1948.

SN 105,732. Fabbbrica Italiana Magneti Marelli S.p.A., Milan, Italy. Filed Oct. 4, 1960.



Priority claimed under Sec. 44(d) on Italian application filed May 16, 1960; Reg. No. 151,736, dated Nov. 9, 1960.

For Electric Ignition Devices, Magnets, Flywheel Magnets, Electric Distributors (Coil Ignition), Coils, Breakers, Advance Controls, Spark and Incandescence Plugs, Dynamo With Associated Switches and Regulators, Electric Starters and Associated Change-Over Switches, Accumulators, Transformers, Switches, Switchboards, Conduit Boxes, Terminal Blocks, Remote Switches, Fuses, Shield Devices Against Radio Noise; Electrical Windshield Wipers, Windshield Washing Devices, Window Regulators, Acoustical Signaling Devices; Overtake, Level, Direction, Stop and Control Devices, and Members, Parts and Fittings Thereof for Vehicles; Electropneumatic and Electric Devices for Transmissions, Horns, Windshield Wipers and Door Controls of Vehicles; Electric Accumulators, Self-Starter Batteries, Traction Batteries, Stationary Batteries, Parts and Fittings Thereof, Ceramic Materials and Insulators for Spark Plugs, Bare and Insulated Wires; Radiotelegraphy, Radiotelephony, Television and Sounding Diffusion (Including High Fidelity Systems) Plants and Apparatuses, Members Parts and Fittings Thereof; and Electricity Condensers.

SN 106,007. Square D Company, Park Ridge, Ill. Filed Oct. 7, 1960.



For Electrical Positioning Control Systems for Controlling the Movement of Movable Machine Elements and for Stopping the Elements in Selected Locations, and Components Thereof.

First use Sept. 15, 1960.

SN 106,193. Dr. Eugen Durrwachter, Döduco, Pforzheim, Germany. Filed Oct. 11, 1960.

SILARGON

Owner of German Reg. No. 518,449, dated Jan. 4, 1940. For Electrical Contacts and Parts Thereof.

SN 106,285. The Soundsciber Corporation, North Haven, Conn. Filed Oct. 12, 1960.

MAGIC MEMORY

Owner of Reg. No. 712,067. For Dictation Recording and Reproducing Machines; Parts and Associated Equipment Thereof. First use on or about Dec. 7, 1959.

SN 110,616. M-Tronics, Inc., Warren, Pa., assignee of Nu-Lite Corporation, Newark, N.J. Filed Dec. 21, 1960.

ULTRA-LUX

For Fluorescent Tubes. First use July 1, 1960.

SN 111,288. Perfect-Line Manufacturing Corp., Hicksville, N.Y. Filed Jan. 4, 1961.

SELECTROL

For Electric Switches. First use Dec. 28, 1960.

SN 112,528. The Electric Storage Battery Company, Philadelphia, Pa. Filed Jan. 26, 1961.



For Flashlights and Flashlight Cases. First use May 19, 1960.

SN 113,331. Cook Electric Company, Chicago, Ill. Filed Feb. 9, 1961.

HYDTROL

For Pressure Switches. First use at least as early as December 1948.

SN 113,357. Paramount Pictures Corporation, New York, N.Y. Filed Feb. 9, 1961.

TELEMETER

For Pay-Television Systems Including a Television Transmitter and Associated Equipment for Generating Signals Suitable for Transmission in Subscription Television, Equipment at a Receiver for Processing Subscription-Television Signals, and Computer Equipment for Processing Records Made at Each Subscription-Television Subscriber Receiver. First use during June 1951.

SN 115,331. George Gilbert, New York, N.Y. Filed Mar. 10, 1961.

TYPELITER

For Electric Lamps. First use Jan. 21, 1961.

SN 115,542. Sunbeam Lighting Company, Los Angeles, Calif. Filed Mar. 13, 1961.

STARAMA

For Fluorescent Light Fixtures. First use on or about Apr. 1, 1960.

SN 115,543. Sunbeam Lighting Company, Los Angeles, Calif. Filed Mar. 13, 1961.

EXAMATRON

For Arm-Mounted Examination Lamp. First use on or about Feb. 24, 1961.

SN 115,598. General Electric Company, Schenectady, N.Y. Filed Mar. 14, 1961.

SATIN-GLO

For Electric Lamps. First use Oct. 25, 1960.

SN 115,711. Motorola, Inc., Franklin Park, Ill. Filed Mar. 15, 1961.

COLOROLA

Owner of Reg. No. 597,555. For Television Receivers. First use Oct. 20, 1960.

SN 115,810. International Basic Economy Corporation, New York, N.Y. Filed Mar. 16, 1961.

VOLTALOC

For Solid State Standard Voltage Cell Which Provides an Extremely Accurate Direct Current Reference Voltage. First use Apr. 16, 1959.

SN 115,855. Tasker Instruments Corporation, Van Nuys, Calif. Filed Mar. 16, 1961.



For Multiple Channel Projection Type Visual Indicators. First use Jan. 19, 1961.

SN 115,856. Technipower, Incorporated, South Norwalk, Conn. Filed Mar. 16, 1961.

TECHNIPOWER

For Electrical Power Supplies. First use February 1961.

SN 115,871. AMP Incorporated, Harrisburg, Pa. Filed Mar. 17, 1961.

CAPITRON

Owner of Reg. No. 408,201. For Pulse Forming Networks, Transformers, Modulators, Delay Lines, Electrical Leads, and Electrical Connectors. First use second quarter of 1959.

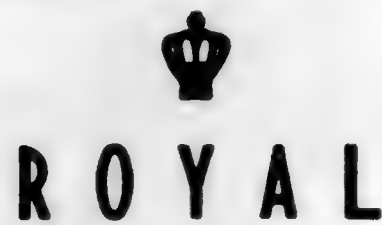
SN 115,969. Royal Appliance Mfg. Co., Cleveland, Ohio. Filed Mar. 17, 1961.



R
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Y
A
L

Owner of Reg. Nos. 85,770, 322,592, and others. For Electrically Operated Suction Cleaners and Parts Thereof. First use Apr. 30, 1956.

SN 115,970. Royal Appliance Mfg. Co., Cleveland, Ohio.⁴ Filed Mar. 17, 1961.



Owner of Reg. Nos. 85,770, 322,592, and others.
For Electrically Operated Suction Cleaners and Parts Thereof.
First use Sept. 30, 1957.

SN 116,845. The Shetland Co. Inc., Salem, Mass. Filed Mar. 30, 1961.

SWEeper VAC

The word "Sweeper" is disclaimed apart from the mark as shown.
For Electric Vacuum Cleaners.
First use December 1960.

SN 117,065. United Whelan Corporation, Brooklyn, N.Y. Filed Apr. 3, 1961.

BARBARA LANE

The trademark consists of the name of a fictitious person.
Owner of Reg. No. 672,841.
For Electric Hand Vibrators and Electric Hair Driers.
First use Sept. 28, 1960.

SN 117,088. Burndy Corporation, Norwalk, Conn. Filed Apr. 4, 1961.

VARILUG

Owner of Reg. Nos. 394,540 and 662,810.
For Electrical Connectors.
First use Jan. 1, 1936.

SN 117,089. Burndy Corporation, Norwalk, Conn. Filed Apr. 4, 1961.

VARISTUD

Owner of Reg. Nos. 394,540 and 662,810.
For Electrical Connectors.
First use Jan. 1, 1936.

SN 117,090. Burndy Corporation, Norwalk, Conn. Filed Apr. 4, 1961.

VARILINK

Owner of Reg. Nos. 394,540 and 662,810.
For Electrical Connectors.
First use Jan. 1, 1936.

SN 118,078. Herbert A. Henderson, d.b.a. H. A. Henderson, Los Angeles, Calif. Filed Apr. 18, 1961.



For Non-Conductive, Heat Dissipating Coatings for Electronic Components.
First use November 1956.

SN 119,941. Connecticut Telephone & Electric Corporation of Meriden, Meriden, Conn. Filed May 16, 1961.

STERILVOX

For Sterilizing Attachments for Telephone Handsets.
First use May 1, 1961.

SN 120,000. Paramount Supply, Inc., Chicago, Ill. Filed May 15, 1961.

IMPERIAL

For Radio Receiving Sets, Radio Tubes, Television Receiving Sets, Electric Floor and Table Lamps, Each Including the Usual Wired Assembly of a Base, Standard, Shade and a Socket for the Reception of an Incandescent Bulb but Not Including Night Lights Which Are Small Electric Lights, Electric Irons, Electric Toasters, Electric Percolators, Electric Waffle Irons, Electric Food Mixers, and Electric Heating Pads for General Use.
First use Jan. 15, 1961.

SN 120,142. Southern States Equipment Corporation, Hampton, Ga. Filed May 16, 1961.

SOUTHERN STATES



Owner of Reg. No. 595,461.
For Electric Apparatus and Parts Thereof—Namely, Electric Switches, Cutouts, Fuses, Fuse Links, Switch Operating Mechanisms and Connectors.
First use January 1958 on connectors.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 87,925. Utina-Elektrowerk G.m.b.H., Eutin, Holstein, Germany. Filed Dec. 23, 1959.

UTINA

Owner of German Reg. No. 688,033, dated Feb. 28, 1956.
For Agricultural Pasture Pumps, Watering Troughs for Cattle, Milking Machines and Accessories, Suspension Devices for Milk Cans, and Animal Drovers.
First use July 24, 1940; in commerce Apr. 4, 1957.

SN 95,887. Flex-O-Rail, Incorporated, Milton, Mass. Filed Apr. 27, 1960.

FLEX-O-RAIL

For Overhead Rail Conveyor System for Handling Meat.
First use Mar. 21, 1960.

SN 101,047. Sundstrand Corporation, Rockford, Ill. Filed July 18, 1960.

ENGELBERG

For Abrasive Belt Grinders and Related Machines.
First use December 1957.

SN 108,467. MCFlock, Inc., Los Angeles, Calif. Filed Aug. 26, 1960.

MCFLOCK

For Machines for Applying Flock.
First use July 6, 1960.

SN 104,786. L. E. Wilson, d.b.a. Wilson Welding & Fabricating Company, Osceola, Ark. Filed Sept. 19, 1960.

DOES-MORE

For Seed Bed Makers, 4-Row Rollers, Cultivators, Cross Plows, Disc Harrow Attachments, Harrows, Seed Houses and Hull Burners.
First use Mar. 17, 1955.

SN 105,807. Hazelett Strip-Casting Corporation, Winooski, Vt. Filed Oct. 5, 1960.

HAZELETT

For Machinery, Apparatus and Tools or Parts Thereof for Use in Casting Metal.
First use in or about 1935.

SN 106,152. Silbaugh Manufacturing Company, d.b.a. Dodgen Industries, Humboldt, Iowa. Filed Oct. 10, 1960.

PELLETIZER

For Mobile Apparatus for Preparing Animal Feed by Grinding, Mixing and Combining Natural Feeds Such as Hay, Grain and the Like With Feed Supplements, Additives and Concentrates.
First use Sept. 1, 1959.

SN 106,212. Metalart Automotive Products, Inc., d.b.a. Metalart Automotive Products Co., Kansas City, Mo. Filed Oct. 11, 1960.



For Replacement Parts for Automatic Automotive Transmissions.
First use about Sept. 1, 1960.

SN 107,538. The Youngstown Sheet and Tube Company, Youngstown, Ohio. Filed Oct. 31, 1960.



Owner of Reg. Nos. 418,803 and 694,730.
For Drawworks; Gear and Chain Power Transmissions; Catheads; Rotary Tables; Swivels; Traveling Blocks; Crown Blocks; Slush Pumps; Pump Spacers; Drilling Masts and Substructures; Drawworks, Mast and Pump Trailers; Pumping Units; Pumping Engines; Sucker Rods and Tubing; Polished Rods; Polished Rod Stuffing Boxes; Polished Rod

Clamps; Pressure Control Valves; Subsurface Pumps; Well Fences; Mud Tanks; Swivel Fittings; Tank Truck Loading Arms, Tank Car Loading Arms and Marine Loading Arms; Plastic Pipe and Fittings.
First use July 1, 1957, on pumping units.

SN 109,119. Stokvis Multiton Corp., Port Washington, N.Y. Filed Nov. 25, 1960.



Proprietor disclaims the illustration of a lift truck apart from the mark as a whole.
For Article Handling Equipment—Namely, Hand-Operated Lift Carts and Trucks.
First use Oct. 7, 1960.

SN 109,795. Holsclaw Bros., Inc., Evansville, Ind. Filed Dec. 7, 1960.

DRUM CADDY

No claim is made to the word "Drum" apart from the mark as shown.
For Handling Device for Drums.
First use Oct. 24, 1960.

SN 111,050. Sir W. G. Armstrong Whitworth Aircraft Limited, Baginton, near Coventry, England. Filed Dec. 27, 1960.

ROLAMAT

Owner of British Reg. No. B796,223, dated Oct. 5, 1959.
For Machinery—Namely, Roller Conveyors and Guide Rails Therefor and Parts Thereof.

SN 113,898. Bishman Manufacturing Company, Osseo, Minn. Filed Feb. 17, 1961.



For Tire Changing and Battery Equipment—Namely, Tire Changers, Bead Breakers, Tire Spreaders, Tire and Tube Buffers, Tire and Tube Vulcanizers, Tire Bead Expanders, and Battery Carrying Straps.
First use 1936.

SN 114,039. C. A. Norgren Co., Englewood, Colo. Filed Feb. 20, 1961.

SAFETY GREEN

For Bowl for Filter and Lubricator Units and the Like.
First use on or about Feb. 1, 1961.

SN 114,960. Illinois Tool Works, Chicago, Ill. Filed Mar. 6, 1961.

ILLINIZING

Owner of Reg. No. 356,041.
For Surface Finishing of Cutting Tools in Connection With Machine Tools, Tool Bits in Connection With Machine Tools, Milling Cutters, Planer Tools, Drawing and Extruding Dies, and Friction Resisting Parts of Machinery Such as Bearing Surfaces in General.
First use Jan. 29, 1961.

SN 115,288. Allied Witan Co., Inc., d.b.a. Allied Witan Company, Cleveland, Ohio. Filed Mar. 10, 1961.

ATOMUFFLER

For Mufflers for Muffling Noise of Cool Gases (Below 500° F.) and Used on Air Compressors, Vacuum Pumps, Blowers, Air Tools and Air Operated Equipment, Intake and Exhaust Mufflers.
First use May 1960.

SN 115,884. Avco Corporation, Nashville, Tenn. Filed Mar. 17, 1961.

AVCORAMIC

Owner of Reg. No. 537,719.
For Jigs and Fixtures for the Fabrication of Metal Paneling and Structural Material.
First use February 1961.

SN 116,146. National Automatic Tool Company, Inc., Richmond, Ind. Filed Mar. 21, 1961.



Owner of Reg. No. 709,010.
For Honing Tools and the Like and Parts Thereof.
First use Jan. 26, 1961; 1953 as to "Jes Cal."

SN 116,273. Union Special Machine Company, Chicago, Ill. Filed Mar. 22, 1961.

LEWIS

Owner of Reg. No. 533,040.
For Sewing Machines, Needles and Other Parts and Attachments Thereof.
First use Nov. 1, 1923.

SN 116,277. The Wood Shovel and Tool Company, Piqua, Ohio. Filed Mar. 22, 1961.

JET

Owner of Reg. No. 591,918.
For Shovels, Spades, and Scoops.
First use Oct. 28, 1960, on shovels.

SN 116,279. The Wood Shovel and Tool Company, Piqua, Ohio. Filed Mar. 22, 1961.

JET-LITE

Owner of Reg. No. 591,918.
For Shovels, Spades and Scoops; and Garden, Lawn and Farm Tools, Including Cultivators, Edgers, Grass Trimmers, Forks, Hoes, Rakes, Scrapers, Trowels and Weeders; and Replacement Handles Thereof.
First use Oct. 16, 1952.

SN 116,457. Apco Products Corp., New York, N.Y. Filed Mar. 27, 1961.

AUTOMATIC Coffee Shoppe

For Beverage Dispensers and Coin Operated Machines.
First use June 15, 1953.

SN 116,458. Aerojet-General Corporation, Azusa, Calif. Filed Mar. 27, 1961.

HYDROCKET

For Propulsion Units for Watercraft.
First use on or about Nov. 28, 1960.

SN 116,939. Unity Sewing Supply Co., Inc., New York, N.Y. Filed Mar. 31, 1961.



For Sewing Machine Parts and Needles.
First use March 1960.

SN 116,983. Deere & Company, Moline, Ill. Filed Apr. 3, 1961.



"John Deere" is not the name of any particular living individual, but is the name of the deceased founder of applicant's business. Owner of Reg. Nos. 88,248, 348,355, and 525,746.

For Agricultural, Earth-Working and Log-Handling Machinery and Implements, Tractors and Parts Thereof and More Particularly, Tractors, Gasoline and Diesel Internal Combustion Engines, Plows, Harrows, Packer-Mulchers, Subsoilers, Planters, Seeders, Cultivators, Rod Weeder, Rotary Hoes, Mowers, Hay Conditioners, Rakes, Balers, Combines, Windrowers, Corn Pickers, Forage Harvesters, Forage Blowers, Bean Harvesters, Cotton Harvesters, Beet Harvesters, Potato Diggers, Stone Pickers, Manure Spreaders and Loaders, Dry and Liquid Fertilizer Distributors, Wagon Box Holders, Portable Elevators, Corn Shellers, Hammer Mills, Crop Dryers, Sprayers, Cable Layers, Tire Pumps, Snow Plows, Earth Levelers, Scrapers, Scoops, Loaders, Backhoes, Scarifiers, Side Booms, Winches, Log Arches and Fork Lifts.
First use Aug. 1, 1956, on tractors.

SN 116,989. Elkhart Brass Manufacturing Company, Inc., Elkhart, Ind. Filed Apr. 3, 1961.

HAN-DRAULIC

For Hydraulic Operated Expanding Tool for Expanding Metal Tubing To Interconnect Hose to Couplings and Fittings.
First use Aug. 15, 1958.

SN 117,233. Trim-Master Corporation, Reading, Pa. Filed Apr. 5, 1961.

TRIMCO

For Cloth Handling and Trimming Machines and Parts Thereof, Including Thread Trimming Machines, Vacuum Devices for Disposal of Trimming Waste, Sold Either Separately or as Attachments for Thread Trimming Machines, Collar Notchers, Cloth Spreading Machines, Machines for Turning Trouser Legs and for Trimming Threads Therefrom, Cloth Creasing Machines, Electric Cloth Cutting Scissors, Tape and Ribbon Angle Cutting Machines and Shirt Folders.
First use Jan. 11, 1961, on vacuum devices for disposal of trimming waste.

SN 117,532. Quikut Incorporated, Fremont, Ohio. Filed Apr. 10, 1961.

QUIKKLE

Owner of Reg. Nos. 154,251, 569,670, and 594,181.
For Knives.
First use Sept. 9, 1960.

SN 117,533. Quikut Incorporated, Fremont, Ohio. Filed Apr. 10, 1961.



Owner of Reg. Nos. 154,251, 569,670, and 594,181.
For Kitchen Utensils Including Cutlery, Knives, Forks, Spoons, Juicers, Scrapers, Plastic Articles and Parts Thereof Including Handles for Such Utensils.
First use on or about June 10, 1960.

SN 117,584. Winget Limited, Rochester, Kent, England. Filed Apr. 10, 1961.

WINGET

Owner of British Reg. No. 381,808, dated Feb. 7, 1918.
For Machinery and Parts of Machinery for Mixing and for Moulding Concrete and Such Like Materials.

SN 117,836. Beaver Tool & Engineering Corporation, Gaylord, Mich. Filed Apr. 14, 1961.

OGESTO

For Tool Holders, Adaptors, Adaptor Sleeves, Boring Bars, Boring Heads, Arbors, and Parts of the Foregoing.
First use Dec. 20, 1960.

SN 117,884. Lewis-Shepard Products, Inc., Watertown, Mass. Filed Apr. 14, 1961.

TIERMASTER

Owner of Reg. Nos. 119,331, 682,824, and others.
For Materials Handling Equipment—Namely, Lift Trucks and Parts Thereof.
First use September 1960.

SN 120,140. Southern States Equipment Corporation, Hampton, Ga. Filed May 16, 1961.

SOUTHERN STATES



Owner of Reg. No. 600,732.
For Textile Machinery and Component Parts Thereof—Namely, Inspection Tables, Carding Machine Drives, Silver Collars, Doffer Combs, Comb Boxes, and Off End Stands.
First use January 1955.

Class 24—Laundry Appliances and Machines

SN 102,444. Nicholas G. Zaccaria, d.b.a. Pressco Supply Company, Philadelphia, Pa. Filed Aug. 10, 1960.

GOLDEN BOY

For All Purpose Pads and Cover Sets for Application to Ironing Boards, to Steam Press Machines, and to Flat Ironers and Mangles.
First use June 24, 1960.

SN 102,445. Nicholas G. Zaccaria, d.b.a. Pressco Supply Company, Philadelphia, Pa. Filed Aug. 10, 1960.

Golden Boy



For All Purpose Pads and Cover Sets for Application to Ironing Boards, to Steam Press Machines, and to Flat Ironers and Mangles.
First use June 24, 1960.

SN 102,919. General Electric Company, Schenectady, N.Y. Filed Aug. 18, 1960.

FREE SPAN

For Laundry Machines—Namely, Laundry Washing Machines and Laundry Drying Machines.
First use June 1, 1960.

SN 117,647. Raybestos-Manhattan, Inc., Manheim, Pa. Filed Apr. 11, 1961.

Thriftex

For Laundry Roll Covers and Pads.
First use Jan. 24, 1961.

TM 92

OFFICIAL GAZETTE

OCTOBER 17, 1961

Class 26—Measuring and Scientific Appliances

SN 75,578. George K. Porter, Incorporated, Hatfield, Pa. Filed June 11, 1959.



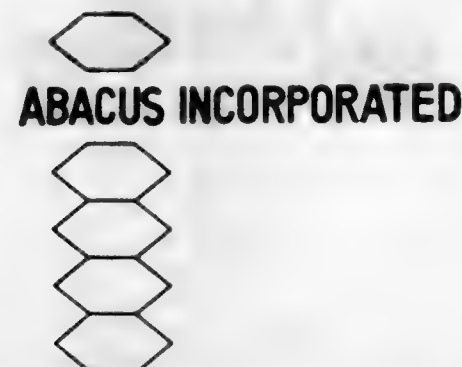
The drawing is lined for red.
For Gas Flow Rate Calibrators.
First use Feb. 10, 1959.

SN 76,068. Eastman Kodak Company, Rochester, N.Y. Filed June 19, 1959.

DACOM

For Apparatus for Converting Stored Data Into a Display on a Cathode Ray Tube and for Recording the Display.
First use June 11, 1959.

SN 82,181. Abacus, Incorporated, Los Angeles, Calif. Filed Sept. 28, 1959.



For Digital Modules Comprising Electronic Elements Arranged in Circuit.
First use June 19, 1959.

SN 82,736. United States Safety Service Co., Kansas City, Mo. Filed Oct. 5, 1959.

COMBO

For Safety Spectacles.
First use Sept. 4, 1959.

SN 89,334. Dearborn Chemical Company, Chicago, Ill. Filed Jan. 20, 1960.



For Plastic Burette Assembly Bottles for Use in the Water Treatment Field.
First use Dec. 4, 1959.

SN 94,293. Eugene A. Glassey, d.b.a. Exactel Instrument Company, Mountain View, Calif. Filed Apr. 4, 1960.

EXACTEL



For Servomechanical-Following Type Manometers.
First use on or about Mar. 11, 1957.

SN 94,615. Scientific Service Laboratories, Inc. and Textron Oil Corporation (joint owners), Dallas, Tex. Filed Apr. 7, 1960.

AQUATROLLER

For Electrical Liquid Level Controlling Device.
First use Feb. 29, 1960.

SN 94,838. Solar Products Limited, Philadelphia, Pa. Filed Apr. 11, 1960.

SOLINE

For Sensitized Papers, Blueprint and Diazo Types, Tracing Papers, Cloths, Mylar and Cronar Type.
First use Aug. 18, 1953.

SN 95,497. Harvey E. Hanson Company, d.b.a. Gilbert Davis Co., Paw Paw, Mich. Filed Apr. 21, 1960.

MOTOR GUIDE

For Vacuum Gauge for Motor Vehicles.
First use Mar. 31, 1960.

SN 97,846. Lumatron Electronics, Inc., New Hyde Park, N.Y. Filed May 25, 1960.

LUMATRON

For Electronic Instruments for Use in the Analysis, Display, Measurement, Conversion or Generation of Varying Electrical Signals Including Oscilloscopes, Pulse Generators, High Speed Amplifiers, Oscilloscope Sampling Converters, Trigger Frequency Converters, Semi-Conductor Test Sets, Ultra High Frequency Connectors, Cables, Coaxial Relays, Impedance Matching Pads, Probes and Attachments and Attenuators, Automatic Test Systems and Delay Lines.
First use July 16, 1959.

SN 101,525. The Vapor Recovery Systems Company, Compton, Calif. Filed July 26, 1960.

DYNAMATIC

For Liquid Level Gauges and Parts Thereof.
First use in January 1960.

SN 104,026. Electro Methods Ltd., Stevenage, England. Filed Sept. 7, 1960.

TRANSICORD

Owner of British Reg. No. 784,618, dated Dec. 1, 1958.
For Scientific and Electrical Apparatus and Instruments, More Particularly Chart Recorders Which Are Used for Graphically Indicating the Values of Variables Such as Temperature and Pressure Over Predetermined Time Periods.

OCTOBER 17, 1961

U. S. PATENT OFFICE

TM 93

SN 108,084. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Nov. 8, 1960.

MILK-TROL

For Panels and Thermostatic Devices for Temperature Control of Milk.
First use as early as Dec. 20, 1957.

SN 111,129. Sklenens Bisuterie, Narodni Podnik, Jablonec nad Nisou, Czechoslovakia. Filed Dec. 30, 1960.



Owner of Czechoslovakian Reg. No. 153,805, dated May 14, 1959.
For Technical and Laboratory Glassware.

SN 113,221. International Inspection Inc., Pasadena, Calif. Filed Feb. 7, 1961.

ULTRACOUPLER

For Electronic Apparatus Using Reflected Ultrasonic Waves for Inspection of Metals.
First use in July 1960.

SN 113,222. International Inspection Inc., Pasadena, Calif. Filed Feb. 7, 1961.

ULTRAGAGE

For Electronic Apparatus Using Reflected Supersonic Waves for Inspection of Metals.
First use July 1960.

SN 113,223. International Inspection Inc., Pasadena, Calif. Filed Feb. 7, 1961.

ULTRACHART

For Electronic Apparatus Using Reflected Ultrasonic Waves for Inspection of Metals.
First use April 1960.

SN 115,140. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 8, 1961.

PROJECTO-LITE

Owner of Reg. Nos. 657,744 and 715,759.
For Overhead Projectors.
First use Aug. 29, 1960.

SN 115,546. Textron Inc., Geneva, N.Y. Filed Mar. 13, 1961.

SHURSET

For Mountings for Spectacles and Eyeglasses.
First use March 1940.

SN 116,218. The Electric Storage Battery Company, Philadelphia, Pa. Filed Mar. 22, 1961.

GLAZE-ITE

Owner of Reg. No. 359,389.
For Cover Glass for Sight Openings of Welding Helmets, Handshields and Goggles.
First use Feb. 11, 1938.

SN 116,720. General Time Corporation, New York, N.Y. Filed Mar. 29, 1961.

ACROTIMER

For Timers, Specifically Interval Timers, Time Delay Timers, and Reset Timers.
First use July 1960.

SN 117,074. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Apr. 4, 1961.

NATAFLEX

Owner of German Reg. No. 742,170, dated Nov. 8, 1960; and U.S. Reg. Nos. 663,440 and 712,125.
For Photographic Apparatus and Devices as Well as Parts Thereof.

SN 117,154. Sun Chemical Corporation, New York, N.Y. Filed Apr. 5, 1961.

RUTH-O-MATIC

For Photocomposing Machines.
First use July 24, 1958.

SN 119,312. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed May 4, 1961.

DUOJECTOR

For Projectors.
First use in February 1961.

SN 119,367. Everpure, Inc., Chicago, Ill. Filed May 5, 1961.

EVERGUARD

For Automatic Liquid Level Alarms and Controllers.
First use June 26, 1959.

SN 119,419. Radiation Instrument Development Laboratory, Inc., Northlake, Ill. Filed May 5, 1961.

RIDL

For Radiation Detection and Measuring Apparatus.
First use on or before Nov. 7, 1951.

SN 119,474. Cenco Instruments Corporation, Chicago, Ill. Filed May 8, 1961.

COLOR.MATIC

For Titrators.
First use Mar. 3, 1958.

SN 119,539. Monroe Calculating Machine Company, Orange, N.J. Filed May 8, 1961.

MONROE | SWEDA

Owner of Reg. Nos. 601,640 and 710,574.
For Business Machines Including Cash Registers With or Without Punched Tape or Punched Tag Output; and Parts for Said Cash Registers.
First use not later than Apr. 25, 1960.

SN 119,762. Fabricon Company, Chicago, Ill. Filed May 11, 1961. SN 120,698. Cryo-Sonics, Inc., Los Angeles, Calif. Filed May 24, 1961.

MAGNA-SIGHTER

For Binocular Magnifying Apparatus.
First use Apr. 14, 1961.

SN 119,929. Butler Bin Company, Waukesha, Wis. Filed May 15, 1961.

ELECTROMATIC DIAL

The word "Dial" is disclaimed except in association with the other features of the mark.
For Dials for Scales Forming Part of Concrete Batching Plants.
First use Dec. 20, 1960.

SN 120,083. Expando Meter Company, Long Island City, N.Y. Filed May 16, 1961.

EXPAND-O-ADAPTER

For Expanded Scale Instruments Such as a Voltmeter.
First use Apr. 24, 1961.

SN 120,084. Expando Meter Company, Long Island City, N.Y. Filed May 16, 1961.

EXPANDO

For Expanded Scale Instruments Such as a Voltmeter.
First use Apr. 24, 1961.

SN 120,348. Seneca Audio-Visual Corp., Buffalo, N.Y. Filed May 18, 1961.

SAV-A-LAB

For Portable Laboratory Equipment for the Teaching of Languages.
First use Apr. 14, 1961.

SN 120,434. Samuel N. Nemer, Minneapolis, Minn. Filed May 19, 1961.

KAR KAM

For Cameras and Receptacles Therefor Adapted for Attachment to Automobile Dashboards.
First use May 9, 1961.

SN 120,497. Comroe Laboratories, Inc., Chicago, Ill. Filed May 22, 1961.

DIP-CHEK

For Conductivity Meter.
First use Mar. 10, 1960.

SN 120,666. Protection Controls, Inc., Skokie, Ill. Filed May 23, 1961.

COMBUSTOMETER

For Electro-Sensitive Instruments for Adjusting Flames for Optimum Efficiency.
First use Mar. 17, 1961.

SN 120,685. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed May 24, 1961.

SELECTAFLOW

For Thermostatic Operated Valves for Controlling Flow of a Heat Exchange Medium.
First use August 1954.

CRYO-SONICS

For Cryo-Genic Equipment—Namely, High Pressure Gas Storage Vessels and Cryo-Genic Vessels, Pumps and Vaporization Equipment.
First use Dec. 11, 1959, on high pressure gas storage vessels.

SN 120,758. Sears, Roebuck and Co., Chicago, Ill. Filed May 24, 1961.

LUMALITE

For Bathroom Scales.
First use on or about June 9, 1958.

SN 120,833. Triangle Business Machines, Inc., Los Angeles, Calif. Filed May 25, 1961.

TRI ANGLE

For Photocopy Machines.
First use May 27, 1960.

SN 120,888. Instrument Corporation of Florida, Melbourne, Fla. Filed May 26, 1961.

DIGITIME

For Electronic Timing System Comprising a Time Calibration Unit, a Second Class Frequency Standard, a Digital Time Accumulations System and a Readout System.
First use Feb. 4, 1961.

SN 120,931. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 29, 1961.

VARIOTRONIC

Owner of German Reg. No. 742,510, dated Nov. 15, 1960; and U.S. Reg. Nos. 618,645, 676,951, and 705,971.
For Automatic Apparatus for Commercial Printing of Photographic Negatives.

Class 27—Horological Instruments

SN 117,524. Novochoe S.A., La Chaux-de-Fonds, Switzerland. Filed Apr. 10, 1961.

MINICHOC

Priority claimed under Sec. 44(d) on Swiss application filed Dec. 14, 1960; Reg. No. 184,742, dated Mar. 6, 1961.
For Shock-Absorbing Bearings for Horological Pieces.

Class 29—Brooms, Brushes, and Dusters

SN 91,987. American Standard Mfg. Co., Chicago, Ill. Filed Mar. 2, 1960.

ORBITEX

For Mops, Dusters, and Yarns Therefor.
First use Feb. 22, 1960.

SN 107,210. Lester R. Pellet, Hillborough, Calif. Filed Oct. 26, 1960.

BRISTLE KLEEN

For Hair Grooming Brushes, Primarily for Animal Use.
First use in or about September 1959.

SN 111,531. Weiler Brush Company Inc., Crocco, Pa. Filed Jan. 13, 1961. **Class 32—Furniture and Upholstery**

DUALIFE

For Wire Brushes for Metal Cleaning.
First use Nov. 8, 1960.

SN 113,034. Star Brush Manufacturing Co., Inc., Boston, Mass. Filed Feb. 3, 1961.

SOFTOUCH

For Varnish Brushes.
First use Dec. 5, 1960.

SN 115,086. Star Brush Manufacturing Co., Inc., Boston, Mass. Filed Mar. 7, 1961.

LLAMELLA

For Paint and Varnish Brushes.
First use Dec. 5, 1960.

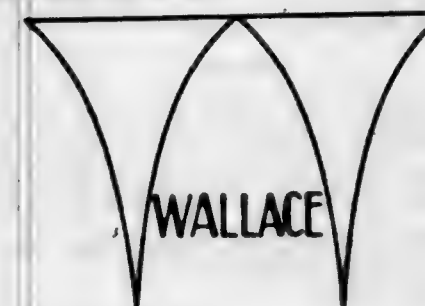
SN 118,144. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 19, 1961.

SPEEDEASY

For Cellulose Sponge Cloth.
First use Jan. 17, 1961.

Class 30—Crockery, Earthenware, and Porcelain

SN 115,863. Wallace China Co., Ltd., Huntington Park, Calif. Filed Mar. 16, 1961.



Owner of Reg. No. 530,862.
For Vitrified Hotel and Restaurant China—Namely, Plates, Serving Dishes, Cups, Saucers, Partitioned Plates, Creamers, Sugar Bowls, Mugs and Teapots.
First use Feb. 6, 1961.

Class 31—Filters and Refrigerators

SN 105,389. Eskey Manufacturing Co., Philadelphia, Pa., assignee of Standard-Kell Hardware Manufacturing Co., Inc., Brooklyn, N.Y. Filed Sept. 28, 1960.

PUR-FLO

For Grease and Air Filters.
First use Oct. 3, 1957.

SN 112,344. Whirpool Corporation, St. Joseph, Mo. Filed Jan. 23, 1961.

WONDERBAR

Owner of Reg. No. 586,973.
For Refrigerators, Refrigerator Parts, Automatic Refrigerators, Automatic Refrigerating Parts, Refrigerating Systems, and Stationary and Portable Refrigerators.
First use August 1962.

SN 87,827. Schnadig Corporation, Chicago, Ill. Filed Dec. 22, 1959.

INTERNATIONAL

Owner of Reg. No. 628,681.
For Furniture—Namely, Wood Furniture, Upholstery Furniture, Chairs, Arm Chairs, Upholstered Chairs, Davenports, Settees, Sofas, Lounges, Couches, Tables.
First use Nov. 9, 1946.

SN 91,970. Schnadig Corporation, Chicago, Ill. Filed Mar. 1, 1960.

MODERNA COLLECTION

No claim is made to the word "Collection" apart from the mark as shown.
For Upholstered and Living-Room Furniture.
First use Oct. 24, 1959.

SN 96,077. E. G. Barry Corporation, Columbus, Ohio. Filed Apr. 29, 1960.

KUSH-ONS

For Chair Pad Cushions.
First use Apr. 18, 1960.

SN 113,364. Randolph Metal Works, Inc., Philadelphia, Pa. Filed Feb. 9, 1961.

RANDO

For Outdoor Metal Furniture.
First use July 1, 1948.

SN 115,607. Kennedy Baby Bath Corporation, Chattanooga, Tenn. Filed Mar. 14, 1961.

HYGENETTE

For Combination Infant's Bath Tub and Dressing Table.
First use Feb. 13, 1961.

SN 116,138. Lil' Texas Spread, Inc., Newport News, Va. Filed Mar. 21, 1961.

LIL' TEXAS SPREAD

No claim is made to the word "Spread" apart from the mark shown.
For Sleeping Mattress or Pad.
First use Jan. 3, 1961.

SN 117,544. Shampaine Industries, Inc., St. Louis, Mo. Filed Apr. 10, 1961.

DINENSIONAL

For Furniture for Hospitals, Medical Offices and Professional Offices for Doctors, Dentists, and the like.
First use Feb. 1, 1960.

SN 118,867. Conway Bedding Company, Inc., Chicopee, Mass. Filed Apr. 28, 1961.

NYLOPRENE

For Mattresses, Pillows and Upholstered Furniture.
First use Feb. 15, 1960.

SN 118,899. Norcor Manufacturing Company, Inc., Green Bay, Wis. Filed Apr. 28, 1961.

NORCOR

For Folding Tables and Chairs.
First use in 1932.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 100,495. Cabot Corporation, Wilmington, Del., by merger from Godfrey L. Cabot, Inc., Boston, Mass. Filed July 8, 1960.

PETROCARB

For Calcinating Apparatus.
First use Aug. 20, 1954.

SN 104,834. The Steam-O-Matic Corporation, Sedalia, Mo., by change of name from National Engineering & Manufacturing, Inc., Sales Division, Sedalia, Mo. Filed Sept. 16, 1960.

ALASKAN

For Window Fans and Air Circulating Fans.
First use March 1948.

SN 106,743. Probat-Werke Von Gimbom & Co., Kommanditgesellschaft, Emmerich, Rhineland, Germany. Filed Oct. 19, 1960.

Probat

Owner of German Reg. No. 618,423, dated Mar. 27, 1952.
For Machines and Apparatus for Roasting Coffee, Coffee-Substitutes, and Cocoa.

SN 112,417. Star Metal Corporation, Philadelphia, Pa. Filed Jan. 24, 1961.

TEMPAIRE

For Hot Food Tables.
First use on or about Oct. 25, 1960.

SN 113,628. Elgen Manufacturing Corp., Long Island City, N.Y. Filed Feb. 14, 1961.

QUADRA-MATIC

For Heating, Ventilating, and Air Conditioning Damper Fixtures.
First use Dec. 27, 1960.

SN 114,810. Tennessee Stove Works, Inc., Chattanooga, Tenn. Filed Mar. 2, 1961.

TOWN HOUSE

For Gas Ranges.
First use Jan. 12, 1961.

SN 115,279. Weld Tooling Corporation, Pittsburgh, Pa. Filed Mar. 9, 1961.

BUG-O

For Machines for Torch Cutting and/or Welding.
First use on or about Oct. 9, 1958.

SN 115,616. E. L. Mustee & Sons, Inc., Cleveland, Ohio. Filed Mar. 14, 1961.

MODERNWAY

For Incinerators.
First use Jan. 30, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 118,829. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Feb. 16, 1961.

N - R

For Tires Composed Wholly or Principally of Rubber.
First use Jan. 13, 1961.

SN 113,830. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Feb. 16, 1961.

DUO - CORD

For Tires Composed Wholly or Principally of Rubber.
First use Jan. 13, 1961.

SN 116,495. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Mar. 27, 1961.

DELUXE CHAMPION

Owner of Reg. Nos. 367,329, 700,977, and others.
For Resilient Vehicle Tires.
First use July 1, 1940.

SN 117,975. Lee Rubber & Tire Corporation, Conshohocken, Pa. Filed Apr. 17, 1961.

ULTRA M 200

For Vehicle Tires.
First use November 1960.

SN 116,318. Anchor Coupling Co. Inc., Libertyville, Ill. Filed Apr. 21, 1961.

HDP

For Hydraulic Lines of Plastic Hose or Tubing.
First use Apr. 13, 1961.

SN 118,702. Michelin Tire Corporation, Woodside, N.Y. Filed Apr. 26, 1961.

RENOVEX

For Rebuilt Pneumatic Tires for Automotive Vehicles.
First use Mar. 23, 1961.

SN 119,124. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed May 2, 1961.

CURVE-FLO

For Belting.
First use Jan. 10, 1961.

Class 36 — Musical Instruments and Supplies

SN 96,716. Rosario Mazzeo, Boston, Mass. Filed May 9, 1960.

MAZZEO

For Musical Instruments—Namely, a System of Keys for Clarinets.
First use Mar. 12, 1957.

SN 108,949. Crusade Records, Inc., New York, N.Y. Filed Nov. 23, 1960.

Crusade

For Phonograph Records.
First use Nov. 1, 1960.

SN 117,582. Jack L. Westheimer, d.b.a. Westheimer Sales Co., Chicago, Ill. Filed Apr. 10, 1961.

EXOTICA

For Bongo Drums, Guitars, Music Stands, and Drum Heads.
First use June 21, 1960.

Class 38 — Prints and Publications

SN 117,244. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 10, 1961.



Owner of Reg. Nos. 575,975 and 611,418.
For Periodical Publication and Strip Charts for Use With Graphic Instruments.
First use April 1957.

Class 39 — Clothing

SN 75,403. Ben Cooper, Inc., Brooklyn, N.Y. Filed June 9, 1959.



For Masquerade Costumes.
First use June 2, 1959.

SN 85,915. Shoe Corporation of America, Columbus, Ohio. Filed Nov. 23, 1959.

Modern Life

For Shoes for Women and Girls.
First use Oct. 21, 1959.

SN 87,398. Belle Maid Foundations, Inc., Brooklyn, N.Y. Filed Dec. 16, 1959.

Sea Belle

For Women's Bathing Suits.
First use Oct. 28, 1959.

SN 89,294. Perfect Brassiere Company, Inc., Jersey City, N.J. Filed Jan. 19, 1960.

AIRBORNE

For Brassieres.
First use Dec. 9, 1957.

SN 91,378. Harry & Dan Grossman Furs, Inc., New York, N.Y. Filed Feb. 23, 1960.

TAWNY TONES

For Furs—Namely, Capes, Stoles, Jackets, Coats, Finished Fur Collars and Scarfs.
First use May 1, 1957.

SN 93,121. Alix of Miami, Inc., Miami, Fla. Filed Mar. 18, 1960.

Alix OF MIAMI

FLORIDA'S FIRST NAME
IN AMERICAN FASHION

The drawing is lined for blue but color forms no part of the mark. Applicant disclaims the verbiage "of Miami" and

"Florida's First Name in American Fashion" apart from the mark as shown. Owner of Reg. No. 632,740.

For Women's Outer Camisoles and Bras, Outer Shorts and Shirt Combinations, Swim Suits, Pedal Pushers, Slacks, Jackets, Blouses, Skirts, Beach Coats and Dresses; and Men's Shirts, Shorts, Slacks, Swim Suits, Sport Jackets and Beach Coats.

First use in or about August 1958.

SN 102,529. Airmaid Hosiery Mills, Dallas, Tex. Filed Aug. 12, 1960.

Leg-amour

For Ladies' Hosiery.
First use July 28, 1960.

SN 103,018. Ralph W. Green, d.b.a. Life Saver Garment & Disposable Pad Co., Vero Beach, Fla. Filed Aug. 19, 1960.

LIFESAVER

For Health Brief Containing a Disposable Pad.
First use July 16, 1960.

SN 103,226. Terri-Cord Mills, Inc., Warrington, Pa. Filed Aug. 22, 1960.

TERRI-CORD

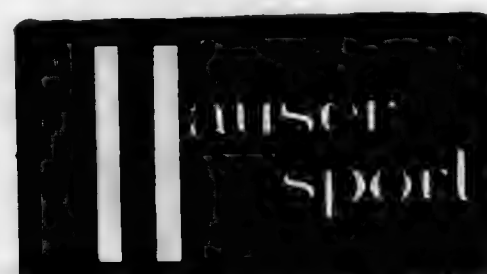
For Fabric for Use in Making Gloves.
First use in June 1960.

SN 104,117. Robert Hosiery Mills, Inc., Collegeville, Pa. Filed Sept. 8, 1960.

COZY CUFFS

For Knitted Stretch-Type Slipper Socks for Men, Women and Children.
First use July 12, 1960.

SN 104,259. Hauser S.A.R.L., Paris, France. Filed Sept. 12, 1960.



The descriptive word "Sport" and the geographically descriptive word "Paris" are disclaimed apart from the mark as shown.

For Men's and Ladies' and Children's Sports Clothing—i.e., Ski Slacks and Jackets, Rainwear, Beachwear, Coats, Skirts, Jackets, Hunting and Riding Garments, After-Ski Clothing, Sportswear for Town and Country.

First use January 1957; in commerce April 1958.

SN 105,612. Cliff Arquette, Gettysburg, Pa. Filed Oct. 3, 1960.

"CHARLEY WEAVER"

"Charley Weaver" is a pseudonym of the applicant "Cliff Arquette."

For Hats.

First use on or about Mar. 1, 1959.

SN 105,690. Samuel Sterenberg, d.b.a. Hi-Craft Clothing Co., Philadelphia, Pa. Filed Oct. 3, 1960.

SIR...for her

The lines on the drawing form a part of the mark and are not representative of color.

For Ladies' Slacks.

First use Apr. 15, 1960.

Subj. to Intf. with SN 112,121.

SN 105,763. Rosenblatt and Kahn, Inc., New York, N.Y. Filed Oct. 4, 1960.

A BAMBURY ORIGINAL

The word "Original" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 569,691 and 635,241.

For Children's Coats, Suits, Dresses, Pajamas, and Play Suits.

First use Apr. 2, 1937.

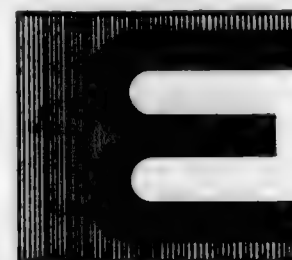
SN 107,021. Henry C. Lytton & Company, Chicago, Ill. Filed Oct. 24, 1960.

BLACKSTONE

For Men's Suits.

First use Aug. 20, 1960.

SN 107,248. Edmont, Inc., Coshocton, Ohio. Filed Oct. 27, 1960.



The drawing is lined for red but no claim is made to color.
For Gloves, Mittens and Aprons.
First use on or about Oct. 4, 1960.

SN 108,183. G. R. Kinney Corporation, New York, N.Y. Filed Nov. 10, 1960.

FLINGS

For Women's Shoes.

First use Sept. 15, 1960.

SN 109,773. Cay Artley Apparel, Inc., Johnstown, Pa. Filed Dec. 7, 1960.

Suzette Junior

The applicant disclaims the word "Junior" alone and apart from the mark as shown.

For Women's and Misses' Dresses.

First use on or about Aug. 14, 1939.

SN 109,774. Cay Artley Apparel, Inc., Johnstown, Pa. Filed Dec. 7, 1960.

Suzette
CLASSIC

The applicant disclaims the word "Classic" alone and apart from the mark as shown.

For Women's and Misses' Dresses.

First use on or about Jan. 15, 1941.

SN 109,864. Freeman Shoe Corporation, Beloit, Wis. Filed Dec. 8, 1960.

KEY MODERNS

For Men's and Boys' Shoes.

First use Nov. 2, 1960.

SN 110,442. Kitty Kelly Shoe Corporation, New York, N.Y. Filed Dec. 19, 1960.

KITTY KELLY

The name "Kitty Kelly" is fanciful and does not identify any living individual. Owner of Reg. No. 521,137.

For Certain Named Articles of Clothing—Namely, Ladies' and Children's Shoes, Slippers, Sandals, Heels, Inner and Outer Soles, Uppers, Tongues, Foot Rubbers, Overshoes; and Ladies' Hosiery, Hats, Blouses, Scarves, Gloves, Garment Belts and Dresses.

First use in 1929.

SN 111,594. Fashion Park, Inc., Rochester, N.Y. Filed Jan. 10, 1961.

ENNYWEATHER

For Men's and Young Men's Suits and Overcoats.
First use Feb. 28, 1916.

SN 111,693. Societe de la Viscose Suisse, Emmenbrucke, Switzerland. Filed Jan. 11, 1961.



For Hosiery, Shirts, Underwear, Ties for Men, Women and Children.

First use August 1957; in commerce in or about February 1958.

SN 111,929. Société Anonyme Jeanne Lanvin, Paris, France. Filed Jan. 16, 1961.

JEANNE LANVIN

The name of "Jeanne Lanvin" is that of the founder of applicant's business, now deceased. Owner of U.S. Reg. Nos. 574,367, 574,999, and 645,792.

For Women's Hosiery, Dresses, Coats, Shirts, Blouses, Hats, Scarves, and Lingerie.

First use in the year 1903; in commerce in the year 1910.

SN 112,121. The Cleveland Overall Company, Cleveland, Ohio. Filed Jan. 19, 1961.

shirts * by
SIR

The wording "Shirts By" is disclaimed apart from the mark as shown. The drawing is lined for blue.

For Men's and Boys' Dress and Sport Shirts.

First use Mar. 15, 1960.

Subj. to Intf. with SN 105,690 and SN 114,952.

SN 113,296. Opus 1 of Cambridge, Inc., Cambridge, Mass. Filed Feb. 8, 1961.

OPUS 1

For Skirts, Dresses, Blouses and Jackets.
First use on or about Apr. 1, 1960.

SN 113,326. M. Cohen and Sons Shoes Co., Inc., New York, N.Y. Filed Feb. 9, 1961.

WHIPPERSNAPPER

For Women's and Misses' Shoes Made of Leather or of Combinations of Leather and Fabric.
First use 1938.

SN 113,348. Donald D. McCarthy, Baltimore, Md. Filed Feb. 9, 1961.

FORWARD THRUST

For Soles of Shoes.
First use on or about July 1, 1960.

SN 114,642. The Rhodesian Bata Shoe Company Limited, Gwelo, Southern Rhodesia. Filed Feb. 28, 1961.

HEREFIT

Owner of Rhodesian and Nyasaland Reg. No. 1985/1959, dated Sept. 25, 1959.

For Boots, Shoes, Insoles, Slippers and Sandals of Leather, Fabric, Natural or Synthetic Textile Materials and Combinations Thereof, for Men, Women and Children.

SN 114,952. Genesco, Inc., Nashville, Tenn. Filed Mar. 6, 1961.

SIR-PANTS

For Suits, Top Coats, Overcoats, Slacks, Sport Coats and Jackets for Men, Boys and Youths.

First use Nov. 28, 1960.

Subj. to Intf. with SN 112,121.

SN 115,372. Olga Company, Van Nuys, Calif. Filed Mar. 10, 1961.

SUDDENLY SLIM

For Foundation Garments.

First use Feb. 10, 1961.

SN 115,880. Sidney Blumenthal & Co. Inc., d.b.a. The Adler Company, New York, N.Y. Filed Mar. 17, 1961.

STRAIGHT A'S

For Men's, Women's and Children's Socks.
First use Feb. 15, 1958.

SN 117,295. Olga Company, Van Nuys, Calif. Filed Apr. 6, 1961.

SUDDENLY TRIM

For Foundation Garments.
First use Feb. 23, 1961.

SN 118,198. The Manhattan Shirt Company, New York, N.Y. Filed Apr. 20, 1961.



Owner of Reg. Nos. 385,602 and 585,789.
For Pajamas, Outer Dress and Sport Shirts for Men and Women; Undershorts and Undershirts, Sport Shorts, Swim Trunks, Neckties and Robes for Men.
First use June 28, 1940.

Class 40—Fancy Goods, Furnishings, and Notions

SN 115,390. Walter Sporn d.b.a. Walter Sporn Co., Chicago, Ill. Filed Mar. 10, 1961.

BALLERINA

For Combs.
First use Feb. 16, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 111,606. Societe de la Viscose Suisse, Emmenbrücke, Switzerland. Filed Jan. 11, 1961.



For Woven, Netted and Knitted Fabrics for Men's, Women's and Children's Underwear and Outer Garments, Bed and Table Covers, Curtains, Carpets, Tapestry and for Decorative Purposes.
First use August 1957; in commerce in or about February 1958.

SN 113,321. Amity Fabrics Inc., New York, N.Y. Filed Feb. 9, 1961.

CANTONI VELVETEEN

The name of the goods "Velveteen" is disclaimed.
For Twill Back Velveteen.
First use January 1949.

SN 114,434. Chicopee Manufacturing Corporation, New Brunswick, N.J. Filed Feb. 27, 1961.

MISTEX

For Apparel Interlining Fabrics.
First use Nov. 23, 1960.

SN 114,895. Weeco Mills, Inc., Burlington, N.C. Filed Mar. 3, 1961.

SUPERTRIQUE 32

No claim is made to the numeral "32" apart from the mark as shown.
For Tricot Fabrics Sold in the Piece, for Making Lingerie, Blouses, Outer Wear and Other Apparel.
First use Mar. 2, 1961.

SN 115,067. M. Lowenstein & Sons, Inc., New York, N.Y. Filed Mar. 7, 1961.

MIGNONETTES

For Bed Sheets, Made of Cotton and/or Synthetic Fibres.
First use Feb. 9, 1961.

SN 116,198. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Mar. 22, 1961.

MINICARE NR

Owner of Reg. No. 633,705.
For Cellulosic Piece Goods.
First use Mar. 14, 1961.

SN 117,567. Tissages de Soieries Reunis (T.S.R.), Société Anonyme, Paris, France. Filed Apr. 10, 1961.

TISSAVERRE

Owner of French Reg. No. 445,921, dated Sept. 1, 1954 (Seine); Natl. Inst. No. 42,658.
For Fabrics Comprising Glass Fiber.

SN 117,612. Shirley Fabrics Corporation, New York, N.Y. Filed Apr. 13, 1961.

SPINDRIL

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof.
First use Jan. 10, 1961.

SN 118,123. American Viscose Corporation, Philadelphia, Pa. Filed Apr. 19, 1961.

AVICOLOR

For Fabrics for Apparel, House Furnishings and the Like.
First use Mar. 27, 1961.

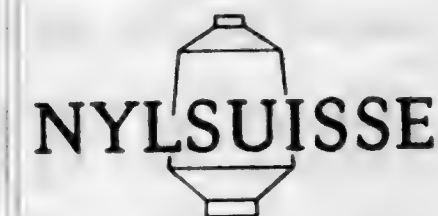
SN 118,566. David Crystal, Inc., New York, N.Y. Filed Apr. 25, 1961.

CRYSTAL

Owner of Reg. Nos. 404,780, 706,704, and others.
For Piece Goods for Dresses, Dress Ensembles, Coats, Suits, Slacks, Playsuits, Blouses, Skirts.
First use 1960.

Class 43—Thread and Yarn

SN 111,604. Societe de la Viscose Suisse, Emmenbrücke, Switzerland. Filed Jan. 11, 1961.



For Threads, Yarns and Spun Yarns.
First use August 1957; in commerce in or about February 1958.

SN 115,421. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Mar. 13, 1961.

NYLO SPORTS

Applicant disclaims the word "Sports" apart from the mark as shown. Owner of Reg. No. 573,317.
For Hand Knitting Yarn.
First use May 12, 1954.

Class 44—Dental, Medical, and Surgical Appliances

SN 99,118. Becton Dickinson and Company, Rutherford, N.J. Filed June 16, 1960.



Owner of Reg. No. 595,633.
For Hypodermic Syringes.
First use on or about May 18, 1960.

SN 99,119. Becton Dickinson and Company, Rutherford, N.J. Filed June 16, 1960.



Owner of Reg. No. 595,634.
For Hypodermic Syringes.
First use on or about May 18, 1960.

SN 99,120. Becton Dickinson and Company, Rutherford, N.J. Filed June 16, 1960.



Owner of Reg. No. 595,635.
For Hypodermic Syringes.
First use on or about May 18, 1960.

SN 114,800. Simmons Company, New York, N.Y. Filed Mar. 2, 1961.

DUAL HITE

For Hospital Beds and Parts Therefor.
First use Feb. 17, 1961.

SN 116,126. The Holter Research Foundation, Helena, Mont. Filed Mar. 21, 1961.

ELECTROCARDIOCORDER

For Cardiographs—Namely, a Miniature Tape Recorder Unit for Use in Conjunction Therewith.
First use Sept. 9, 1960.

SN 118,083. Johnson & Johnson, New Brunswick, N.J. Filed Apr. 18, 1961.

DYNA-FLEX

For Bandages.
First use Feb. 18, 1961.

SN 118,202. A/S Dumex (Dumex Limited), Copenhagen 8, Denmark. Filed Apr. 20, 1961.

STUCCA

Owner of Danish Reg. No. 1505/1953, dated Nov. 21, 1953.
For Material for Bandaging and Nursing Appliances.

SN 118,337. Cordis Corporation, Miami, Fla. Filed Apr. 21, 1961.

CORDIS

For Medical Instruments—Namely, Intercalative Angiographs, Cardiac Programmers, Automatic Alternating Tourniquettes, Multithermal Registers, Catheter Pressure Standards, Respiration Programmers and Medical Radio Telemeters.
First use Sept. 13, 1960 on automatic alternating tourniquets.

SN 118,473. The Motiloid Company, Chicago, Ill. Filed Apr. 24, 1961.

TEM-CURE

For Denture Acrylic Material.
First use Mar. 1, 1961.

SN 118,548. American Thermocraft Corp., Bloomfield, N.J. Filed Apr. 25, 1961.

THERMALITE

For Kit Used for Making Oral Prosthesis Including a Metal Bridge, Porcelain Powder to be Applied to the Bridge, and a Bonding Agent for the Bridge and Porcelain Powder.
First use Apr. 17, 1961.

SN 118,773. Disco Dental Imports Sales Co., Panorama City, Calif. Filed Apr. 27, 1961.

DISCO

For Dental Materials and Supplies, Including Dental Impression Materials, Dental Cements, Dental Amalgams, and Expansion Screw Mechanisms.
First use Jan. 30, 1961.

Class 46—Foods and Ingredients of Foods

SN 105,611. Cliff Arquette, Gettysburg, Pa. Filed Oct. 3, 1960.

CHARLEY WEAVER'S

"Charley Weaver" is a pseudonym of the applicant "Cliff Arquette."
For Candy.
First use on or about Mar. 1, 1959.

Class 50—Merchandise Not Otherwise Classified

SN 92,250. Giftie Pak Company, Dallas, Tex. Filed Mar. 7, 1960.



Applicant disclaims the word "Pak" except in connection with the mark as shown.

For Toilet Kits Including Soap, Face Powder, Body Powder, Tooth Brushes, Tooth Paste, Hand Lotions and Creams.

Shaving Cream, Shaving Lotions, First Aid Supplies, Including Disinfectant, Plastic Bandages, Gause Bandages, Absorbent Cotton, Adhesive Tape, Manicure Supplies Including Scissors, Nail Buffers, Fingernail Files, Emery Boards, Cuticle Cream.

First use Feb. 18, 1960.

SN 98,711. Jocelyn Iron & Steel Corp., Chicago, Ill. Filed June 9, 1960.

ADJUS # TEEL

For Metal Signboards and Structural Components Thereof.
First use May 25, 1960.

SN 105,777. The Wil-Nes Corporation, New York, N.Y. Filed Oct. 4, 1960.

WIL-NES

For Aquariums and Parts Thereof.
First use July 1, 1946.

SN 116,502. The General Tire & Rubber Company, Akron, Ohio. Filed Mar. 27, 1961.

MAGVYGEN

Owner of Reg. Nos. 584,403, 618,754 and 610,190.
For Flexible Magnetic Material in the Form of Continuous Strips, Extrusions and Sheets, of Plastic or Rubber-Like Material Having Magnetizable Metal Particles Incorporated Therein.

First use Mar. 6, 1961.

SN 118,691. Germain's, Inc., Los Angeles, Calif. Filed Apr. 26, 1961.

KINGTENT

For Plant Protector Covers.
First use Mar. 20, 1961.

TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials Class 12—Construction Materials

722,719. GAHNA MAROKINO. Loewengart & Company. SN 91,953. Pub. 8-1-61. Filed 3-1-60.

722,738. DOP. Dike-O-Seal, Incorporated. SN 96,105. Pub. 8-1-61. Filed 4-29-60.

722,789. SOLITE. Solite Corporation. SN 100,309. Pub. 8-1-61. Filed 7-5-60.

722,740. SEA NYMPH ETC. AND DESIGN. Sea Nymph Pool Corporation of America. SN 100,938. Pub. 8-1-61. Filed 7-15-60.

722,741. TRU KRAF. Southern Special Products Corporation. SN 101,903. Pub. 8-1-61. Filed 8-2-60.

722,742. AUTO-PILE. The Bailey Company, Inc. SN 101,924. Pub. 8-1-61. Filed 8-3-60.

722,743. CREST. Kaiser Manufacturing Incorporated. SN 104,280. Pub. 8-1-61. Filed 9-12-60.

722,744. KARVALUM. Morris Kurtzon, Inc. SN 106,676. Pub. 8-1-61. Filed 9-26-60.

722,745. THUNDERBIRD. Joe F. Rakes, d.b.a. Joe Rakes Company. SN 108,213. Pub. 8-1-61. Filed 11-10-60.

722,746. PLI-CREX. Sundure Paint Corporation. SN 110,109. Pub. 8-1-61. Filed 12-12-60.

722,747. STYLEKING. Stylemaster Corporation. SN 110,565. Pub. 8-1-61. Filed 12-20-60.

722,748. RICHARD GINORI. Societa Ceramica Richard Ginori. SN 101,984. Pub. 8-15-61. Filed 8-4-60.

722,749. FIBERTEX. Fibertex, Inc. SN 111,967. Pub. 8-1-61. Filed 1-17-61.

722,750. CLEARLINE. Olean Tile Company. SN 112,068. Pub. 8-1-61. Filed 1-18-61.

722,751. TEXLINE. Olean Tile Company. SN 112,069. Pub. 8-1-61. Filed 1-18-61.

722,752. ROXITE. Terox Corporation of America, d.b.a. Roxite. SN 112,504. Pub. 8-1-61. Filed 1-25-61.

722,753. FUTURA. Beauti-Dor, Inc. SN 112,675. Pub. 8-1-61. Filed 1-30-61.

Class 2—Receptacles

722,720. EXTRUSEAL. KVP Sutherland Paper Company. SN 113,733. Pub. 8-1-61. Filed 2-15-61.

722,721. LIQUI-BOX AND DESIGN. Liqui-Box Corp. SN 113,844. Pub. 8-1-61. Filed 2-16-61.

722,722. SYMBOL DEPICTING A TREE IN A TRIANGLE. Weyerhaeuser Company. SN 114,291. Pub. 8-1-61. Filed 2-23-61.

722,723. HUDSON. Hudson Pulp & Paper Corp. SN 114,769. Pub. 8-1-61. Filed 3-2-61.

722,724. MODUBOX. Hollywood Plastics, Inc. SN 114,959. Pub. 8-1-61. Filed 3-6-61.

Class 5—Adhesives

722,725. ORIGINAL BARGE CEMENT AND DESIGN. National Starch and Chemical Corporation, assignee of Fred Stuckler, d.b.a. Barge Cement Mfg. Co. SN 101,516. Pub. 8-1-61. Filed 7-26-60.

Class 6—Chemicals and Chemical Compositions

722,726. MONTREL. The Dow Chemical Company. SN 80,508. Pub. 8-1-61. Filed 8-31-59.

722,727. POLYCURE. Cooke Color & Chemical Company. SN 84,592. Pub. 8-1-61. Filed 11-4-59.

722,728. NEUTRAB. Dade Reagents, Inc. SN 93,671. Pub. 8-1-61. Filed 3-25-60.

722,729. ZELL-ERATOR. Elastizell Corporation of America. SN 101,164. Pub. 8-1-61. Filed 7-20-60.

722,730. WAYLAY. Stauffer Chemical Company. SN 101,280. Pub. 8-1-61. Filed 7-21-60.

722,731. COASTAL'S CLOE-AID AND DESIGN. Coastal Chemical Corp. SN 102,200. Pub. 6-20-61. Filed 8-8-60.

722,732. PUREX AND DESIGN. Purex Corporation, Ltd. SN 109,895. Pub. 8-1-61. Filed 12-8-60.

722,733. LYTHER-FYRE. The Rabin Company. SN 100,287. Pub. 8-15-61. Filed 7-5-60.

722,734. AQUATHOL. Pennsalt Chemicals Corporation. SN 110,947. Pub. 8-1-61. Filed 12-28-60.

722,735. VEROLAN. Verona-Pharma Chemical Corporation. SN 110,958. Pub. 8-1-61. Filed 12-28-60.

722,736. CRETESET. Continental Oil Company. SN 111,728. Pub. 8-1-61. Filed 1-12-61.

Class 7—Cordage

722,737. CIRCLE M BRAND AND DESIGN. Mohns Commercial Corporation. SN 110,350. Pub. 8-1-61. Filed 12-16-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

722,754. SLIMSERT AND DESIGN. Rosan Engineering Corporation. SN 99,008. Pub. 8-1-61. Filed 6-14-60.

722,755. TW AND DESIGN. Gus Sollberger, Inc. SN 106,353. Pub. 8-1-61. Filed 10-13-60.

722,756. WATER DEMON. Western Brass Works. SN 113,588. Pub. 8-1-61. Filed 2-13-61.

722,757. M. GREENBERG'S SONS. M. Greenberg's Sons, Inc. SN 113,724. Pub. 8-1-61. Filed 2-15-61.

Class 14—Metals and Metal Castings and Forgings

722,758. C & H AND DESIGN. Calumet & Hecla, Inc. SN 103,092. Pub. 8-1-61. Filed 8-22-60.

722,759. MARCARB. Johnson Products, Inc. SN 104,162. Pub. 8-1-61. Filed 9-9-60.

722,760. BRUTALOY. The Brewton Iron Works. SN 108,606. Pub. 8-1-61. Filed 11-17-60.

Class 15—Oils and Greases

722,761. COLLAG. Industrial Colloids Company. SN 104,271. Pub. 8-1-61. Filed 9-12-60.

Class 16—Protective and Decorative Coatings

722,762. PERMAFRESH. Sun Chemical Corporation. SN 99,252. Pub. 8-1-61. Filed 6-17-60.

722,763. VITRA-TILE. Pratt & Lambert Inc. SN 109,200. Pub. 8-1-61. Filed 11-28-60.

722,764. ZE-LIGHT. Cowman-Campbell Paint Co., Inc. SN 113,091. Pub. 8-1-61. Filed 2-6-61.

722,765. CRAFTINT UN-ART-CO AND DESIGN. The Craftint Manufacturing Company. SN 118,092. Pub. 8-1-61. Filed 2-6-61.

Class 17—Tobacco Products

722,766. CHARLES THE FIFTH AND DESIGN. Alles & Fisher, Inc. SN 113,786. Pub. 7-25-61. Filed 2-16-61.

722,767. NATURAL BLOOM. Alles & Fisher, Inc. SN 113,789. Pub. 7-18-61. Filed 2-16-61.

722,768. LA VICTORIA AND DESIGN. Alles & Fisher, Inc. SN 113,790. Pub. 7-18-61. Filed 2-16-61.

Class 18—Medicines and Pharmaceutical Preparations

722,769. REPRESENTATION OF A SUNBURST. Chas. Pfizer & Co. Inc. SN 79,077. Pub. 8-1-61. Filed 8-5-59.

722,770. MONTREL. The Dow Chemical Company. SN 80,507. Pub. 8-1-61. Filed 8-31-59.

722,771. PRIMAMYCIN. Beecham Research Laboratories Limited. SN 93,137. Pub. 8-1-61. Filed 3-18-60.

722,772. QUINTAMYCIN. Beecham Research Laboratories Limited. SN 93,138. Pub. 8-1-61. Filed 3-18-60.

722,773. ACNEGENE. Commerce Drug Co., Inc. SN 94,604. Pub. 8-1-61. Filed 4-7-60.

722,774. RIBENA. Beecham Foods Limited, d.b.a. H. W. Carter & Company. SN 99,909. Pub. 8-1-61. Filed 6-29-60.

722,775. VIO. Violin Corporation. SN 100,826. Pub. 8-1-61. Filed 7-13-60.

722,776. MODANE. The Warren-Teed Products Company. SN 105,400. Pub. 3-21-61. Filed 9-28-60.

722,777. NEO-VAC. Diamond Laboratories. SN 105,505. Pub. 8-1-61. Filed 9-30-60.

722,778. TRANGEST. Shulton, Inc. SN 106,437. Pub. 8-1-61. Filed 10-14-60.

722,779. DELACAPS. SIG Laboratories, Inc. SN 107,064. Pub. 5-23-61. Filed 10-24-60.

722,780. FAMILY FORMULA ONE-CAPS. U.S. Vitamin & Pharmaceutical Corporation. SN 107,715. Pub. 8-1-61. Filed 11-2-60.

722,781. SP-8. American Home Products Corporation, d.b.a. Whitehall Laboratories. SN 107,722. Pub. 4-4-61. Filed 11-3-60.

722,782. TOMACINE. American Hospital Supply Corporation. SN 108,592. Pub. 8-1-61. Filed 11-17-60.

722,783. DELTA-DOME. Dome Chemicals, Inc. SN 108,957. Pub. 8-1-61. Filed 11-23-60.

722,784. NACTISOL. McNeil Laboratories, Incorporated. SN 109,719. Pub. 8-1-61. Filed 12-8-60.

722,785. BISILAD. The Central Pharmacal Company. SN 109,944. Pub. 8-1-61. Filed 12-9-60.

722,786. ACREX. Pharmaceutical Specialties, Inc. SN 110,169. Pub. 8-1-61. Filed 12-13-60.

722,787. TUDAY. Fort Dearborn Pharmacal Company. SN 110,678. Pub. 8-1-61. Filed 12-23-60.

722,788. TYLAN. Eli Lilly and Company. SN 111,514. Pub. 8-1-61. Filed 1-9-61.

722,789. PHAR-MED ETC. AND DESIGN. Phar-Med, Incorporated. SN 114,838. Pub. 8-1-61. Filed 2-28-61.

722,790. SCOTT'S TONE-UP. Beecham Products Inc. SN 115,120. Pub. 8-1-61. Filed 3-8-61.

722,791. AZOSUL. Provident Pharmaceuticals, Inc. SN 116,257. Pub. 8-1-61. Filed 3-22-61.

Class 19—Vehicles

722,792. RIDEMASTER. Goerlich's, Inc. SN 111,369. Pub. 6-13-61. Filed 1-3-61.

722,793. AQUA-GEM. National Research Associates, Inc. SN 112,853. Pub. 8-1-61. Filed 1-31-61.

722,794. TRANSITER. American Seating Company. SN 114,159. Pub. 8-1-61. Filed 2-23-61.

722,795. EXPRESSWAY. American Seating Company. SN 114,160. Pub. 8-1-61. Filed 2-23-61.

Class 21—Electrical Apparatus, Machines, and Supplies

722,796. ZEISS. Carl Zeiss. SN 36,036. Pub. 5-16-61. Filed 8-22-57.

722,797. PIP. Mite Corporation, assignee of Teleprinter Corporation. SN 96,285. Pub. 8-1-61. Filed 5-2-60.

722,798. WEEPAK. Wells Manufacturing Company, Inc., d.b.a. Wells Electronics Company. SN 98,826. Pub. 8-1-61. Filed 6-10-60.

722,799. STEREOCART. H. H. Scott, Inc. SN 101,129. Pub. 8-1-61. Filed 7-19-60.

722,800. REPICON. General Products Corporation. SN 102,229. Pub. 8-1-61. Filed 8-8-60.

722,801. SUPREME 60. Penn-Union Electric Corporation. SN 102,503. Pub. 8-1-61. Filed 8-11-60.

722,802. BOWERS. General Battery and Ceramic Corp., assignee of Bowers Battery and Spark Plug Co. SN 102,823. Pub. 8-1-61. Filed 8-17-60.

722,803. GALVOROD. The Dow Chemical Company. SN 106,066. Pub. 8-1-61. Filed 10-10-60.

722,804. SONIFIER. Branson Instruments, Inc. SN 107,238. Pub. 8-1-61. Filed 10-27-60.

722,805. THYRACONTROL. Vectrol Engineering, Inc. SN 112,867. Pub. 8-1-61. Filed 1-31-61.

722,806. VINAFLEX AND DESIGN. Whitaker Cable Corporation, d.b.a. The Vinaflex Line. SN 113,165. Pub. 8-1-61. Filed 2-6-61.

722,807. ULYSSES S. GRANT. Sunbeam Corporation. SN 114,271. Pub. 6-13-61. Filed 2-23-61.

Class 22—Games, Toys, and Sporting Goods

722,808. COMMUNITY AND DESIGN. Society of Brothers, Incorporated, d.b.a. Community Playthings. SN 98,940. Pub. 8-1-61. Filed 6-13-60.

722,809. HAT AND HAND DESIGN. Merry Manufacturing Company. SN 101,188. Pub. 8-1-61. Filed 7-20-60.

722,810. PANTHER. Kroydon Company, Inc. SN 102,668. Pub. 8-1-61. Filed 8-15-60.

722,811. PENDULUM. Kroydon Company, Inc. SN 102,670. Pub. 8-1-61. Filed 8-15-60.

722,812. BOOM O RANG. Minnie Goldstein. SN 104,715. Pub. 8-1-61. Filed 9-19-60.

722,813. STAY-A-FLOAT. The American Pad & Textile Co. SN 103,043. Pub. 8-1-61. Filed 9-23-60.

722,814. SHEATH SENSATION. Mattel, Inc. SN 107,778. Pub. 8-1-61. Filed 11-3-60.

722,815. DI-BUR. Strait-Avery Company. SN 109,120. Pub. 8-1-61. Filed 11-25-60.

722,816. ZIP A CHEK. Irving Klein, d.b.a. Klein Enterprises. SN 110,862. Pub. 8-1-61. Filed 12-27-60.

722,817. ESP AND DESIGN. Joseph Bank Rhine. SN 112,935. Pub. 8-1-61. Filed 12-9-60.

722,818. BOBBER. Aeroplastics Corporation. SN 113,047. Pub. 8-1-61. Filed 2-6-61.

722,819. GINA. De Journette Manufacturing Company. SN 113,094. Pub. 8-1-61. Filed 2-6-61.

722,820. BENDO-JIG. Fish-Eze Products, Inc. SN 113,198. Pub. 8-1-61. Filed 2-7-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

722,821. DRIVLUG. Petersen Engineering Co., Inc. SN 80,943. Pub. 12-6-60. Filed 8-21-59.

722,822. AUTOCARBONATOR. Louis De Markus Corporation. SN 86,024. Pub. 8-1-61. Filed 11-25-59.

722,823. CHROME CRANK. Southern Plating Company. SN 106,439. Pub. 8-1-61. Filed 10-14-60.

722,824. MESHLOK. Voss Belting & Specialty Co. SN 110,385. Pub. 8-1-61. Filed 12-16-60.

722,825. SPEE-DEE. Karstrom Co. SN 112,463. Pub. 8-1-61. Filed 1-25-61.

722,826. LETTER L WITH FORK TINES. H. E. Laufer Co., Inc. SN 118,086. Pub. 8-1-61. Filed 4-18-61.

Class 24—Laundry Appliances and Machines

722,827. STRAP-TITE. John B. Delander, d.b.a. Torette Manufacturing Company. SN 85,316. Pub. 8-1-61. Filed 11-16-59.

722,828. WASCATOR. Aktiebolaget Wascator. SN 104,010. Pub. 8-1-61. Filed 9-7-60.

Class 25—Locks and Safes

722,829. TOTALOCK. Don C. Carver. SN 106,046. Pub. 8-1-61. Filed 10-10-60.

Class 26—Measuring and Scientific Appliances

722,830. UNIPULSER. Durant Manufacturing Company. SN 99,728. Pub. 8-1-61. Filed 6-27-60.

722,831. DIGISTROBE. General Precision, Inc. SN 105,158. Pub. 8-1-61. Filed 9-26-60.

722,832. THRULINE AND DESIGN. Bird Electronic Corporation. SN 109,551. Pub. 8-1-61. Filed 12-5-60.

Class 29—Brooms, Brushes, and Dusters

722,833. ST. The Pilres Corporation. SN 106,529. Pub. 8-1-61. Filed 10-17-60.

722,834. PLASBOND. Plasbond Corporation. SN 106,631. Pub. 8-1-61. Filed 10-18-60.

Class 30—Crockery, Earthenware, and Porcelain

722,835. SILVER SPRAY. J. J. Newberry Co. SN 106,340. Pub. 8-1-61. Filed 10-13-60.

722,836. LETTER L AND DESIGN. H. E. Laufer Co., Inc. SN 118,087. Pub. 8-1-61. Filed 4-18-61.

Class 31—Filters and Refrigerators

722,837. LINDE AND DESIGN. Union Carbide Corporation. SN 110,004. Pub. 8-1-61. Filed 12-9-60.

722,838. PORT-O-FLOOD. Bethlehem Steel Company. SN 110,251. Pub. 8-1-61. Filed 12-15-60.

722,839. REDI-PAC. Duluth Filter Company. SN 110,415. Pub. 8-1-61. Filed 12-19-60.

Class 33—Glassware

722,840. HELIOS. Spiegelau-Kristall Vertriebsgesellschaft m.b.H. SN 98,821. Pub. 5-16-61. Filed 6-10-60.

722,841. SILVER SPRAY. J. J. Newberry Co. SN 109,616. Pub. 8-1-61. Filed 12-5-60.

722,842. GEORGIAN. Libbey-Owens-Ford Glass Company. SN 117,889. Pub. 8-1-61. Filed 4-14-61.

722,843. LUXOLITE. Safetee Glass Company. SN 118,104. Pub. 8-1-61. Filed 4-18-61.

Class 36—Musical Instruments and Supplies

722,844. SUCCESS MOTIVATION. Success Motivation Institute, Inc. SN 108,107. Pub. 8-1-61. Filed 10-25-60.

Class 37—Paper and Stationery

722,845. DUCHART AND DESIGN. Duchart, Inc. SN 98,457. Pub. 8-1-61. Filed 6-6-60.

722,846. REMIND-O-GRAM. William E. Lubrecht, d.b.a. Remind-O-Gram Company. SN 103,283. Pub. 8-1-61. Filed 8-23-60.

722,847. MISS KITTY. Miss Kitty. SN 104,934. Pub. 8-1-61. Filed 9-21-60.

722,848. RIDGWAY'S. L. L. Ridgway Company, Inc. SN 106,641. Pub. 8-1-61. Filed 10-18-60.

722,849. LAMOPRINT. Riegel Paper Corporation. SN 107,879. Pub. 6-13-61. Filed 11-4-60.

722,850. CAPCOTE PE AND DESIGN. St. Regis Paper Company. SN 109,905. Pub. 8-1-61. Filed 12-8-60.

722,851. TEL-A-GLANCE. Joseph J. Turco. SN 110,590. Pub. 8-1-61. Filed 12-19-60.

722,852. CROWNOL. Crown Zellerbach Corporation. SN 113,989. Pub. 8-1-61. Filed 2-20-61.

722,853. DE & SE TINTS. The Mead Corporation. SN 114,120. Pub. 8-1-61. Filed 2-21-61.

722,854. PRINTFLEX. The Mead Corporation. SN 114,123. Pub. 8-1-61. Filed 2-21-61.

722,855. GIRAFFE. Zavody Bohemia, Narodni Podnik, d.b.a. Bohemia Works. SN 110,639. Pub. 8-15-61. Filed 12-21-60.

722,856. GAYLAMOUNT. Gaylord Bros., Inc. SN 114,205. Pub. 8-1-61. Filed 2-23-61.

722,857. READY-SEAL. Tension Envelope Corporation of Kansas City. SN 114,276. Pub. 8-1-61. Filed 2-23-61.

- 722,858. QUICKI-NOTE. National Blank Book Company. SN 114,335. Pub. 8-1-61. Filed 2-24-61.
 722,859. LOVELY LOOK. Mickie Steiger, Inc. SN 114,550. Pub. 8-1-61. Filed 2-27-61.
 722,860. SEEQUICK. Wheelux Manufacturing Co., Inc. SN 114,567. Pub. 8-1-61. Filed 2-27-61.
 722,861. SHOWGARD. Robert L. Weisberg, d.b.a. Vidiforms Company. SN 114,568. Pub. 8-1-61. Filed 2-27-61.

Class 38—Prints and Publications

- 722,862. FB AND REPRESENTATION OF ANCHOR. Egidio Bonella, d.b.a. Fratelli Bonella. SN 96,312. Pub. 8-1-61. Filed 5-3-60.
 722,863. BETWEEN THE LINES. Edith Kermit Roosevelt. SN 106,278. Pub. 8-1-61. Filed 10-12-60.

Class 39—Clothing

- 722,864. THE STAG LINE. S. Rudofker's Sons, Inc. SN 101,207. Pub. 8-1-61. Filed 7-20-60.
 722,865. THE JUMP SUIT BY ENRO. The Enro Shirt Company, Inc. SN 107,559. Pub. 8-1-61. Filed 11-1-60.
 722,866. TUF-DUK. Edmont Inc. SN 110,144. Pub. 8-1-61. Filed 12-13-60.

Class 46—Foods and Ingredients of Foods

- 722,867. GORAL. Mount Rose Canning Company, Inc. SN 69,079. Pub. 8-1-61. Filed 3-6-59.
 722,868. CHICK-N-RICH. Joseph E. Goldberg. SN 79,643. Pub. 8-1-61. Filed 8-17-59.
 722,869. KELLOGG'S ALL-STARS. Kellogg Company. SN 81,710. Pub. 3-8-60. Filed 9-21-59.
 722,870. SALLY LOU. Beatrice Foods Co. SN 91,138. Pub. 8-1-61. Filed 2-18-60.
 722,871. ARDELL. Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation). SN 94,722. Pub. 8-1-61. Filed 4-11-60.
 722,872. TOMATOES VERSATILE. Tiedemann & McMorran, Inc. SN 95,330. Pub. 8-1-61. Filed 4-18-60.
 722,873. BIG STEER. Diamond Crystal Salt Company, by change of name from Diamond Crystal Salt Co. SN 96,793. Pub. 6-20-61. Filed 5-10-60.
 722,874. RANCH GIRL. Pangburn Company, Inc. SN 98,813. Pub. 8-1-61. Filed 6-10-60.
 722,875. LITTLE IMP. Harbor House Foods Inc. SN 101,684. Pub. 8-1-61. Filed 7-29-60.
 722,876. TALMADGE AND DESIGN. Talmadge Farms, Incorporated. SN 101,825. Pub. 8-1-61. Filed 8-1-60.
 722,877. GERBEAUD AND DESIGN. Paprikas Weiss Importer. SN 104,099. Pub. 8-1-61. Filed 9-8-60.
 722,878. JUNE BARS. June Dairy Products Company, Inc. SN 104,165. Pub. 8-1-61. Filed 9-9-60.
 722,879. GLAD. Salada-Shirriff-Horsey Inc. SN 104,760. Pub. 8-1-61. Filed 9-19-60.
 722,880. OVEN QUEEN AND DESIGN. Valley Sales Company. SN 105,231. Pub. 8-1-61. Filed 9-26-60.
 722,881. DINNER DATE AND DESIGN. Valley Sales Company, d.b.a. Dinner Date Marketing Co. SN 105,232. Pub. 8-1-61. Filed 9-26-60.
 722,882. CONTROCAL. Milk Proteins Inc. SN 107,033. Pub. 8-1-61. Filed 10-24-60.
 722,883. TRU-RIPE. Mayfair Packing Company. SN 107,136. Pub. 8-1-61. Filed 10-25-60.
 722,884. DIXIE BOY. Southeastern Syrup Company. SN 107,219. Pub. 8-1-61. Filed 10-26-60.

- 722,885. GOLD LABEL. Richard A. Glass Company, Inc. SN 107,854. Pub. 8-1-61. Filed 11-4-60.
 722,886. QUERCUS RANCH. Quercus Ranch. SN 107,969. Pub. 8-1-61. Filed 11-7-60.
 722,887. CHARLESTON GARDEN. B. Altman & Co. SN 108,149. Pub. 8-1-61. Filed 11-10-60.
 722,888. WONDER-CAL. Sterling Pharmacal Company. SN 108,405. Pub. 8-1-61. Filed 11-14-60.
 722,889. NOODLE-RONI. Golden Grain Macaroni Co. SN 108,478. Pub. 8-1-61. Filed 11-15-60.
 722,890. FLIPJE AND REPRESENTATION OF SMALL BOY. Koninklijke Maatschappij "De Betuwe" N.V. SN 109,076. Pub. 8-1-61. Filed 11-25-60.
 722,891. NEO-CEBIPAK. Merck & Co., Inc. SN 109,502. Pub. 8-1-61. Filed 12-2-60.
 722,892. SHRIMP-EL-ETTS. Sanders Brine Shrimp Co. SN 109,522. Pub. 8-1-61. Filed 12-2-60.
 722,893. WIGWAM AND DESIGN. General Foods Corporation. SN 109,577. Pub. 8-1-61. Filed 12-5-60.
 722,894. WIGWAM DESIGN. General Foods Corporation. SN 109,578. Pub. 8-1-61. Filed 12-5-60.
 722,895. GOLDEN CHIP. The Miami Margarine Company. SN 109,611. Pub. 8-1-61. Filed 12-5-60.
 722,896. MORNING TREAT. Morning Treat Coffee Co., Inc. SN 109,988. Pub. 8-1-61. Filed 12-9-60.
 722,897. BLUE LABEL AND DESIGN. Curtice-Burns, Inc., assignee of Curtice Brothers Co. SN 110,316. Pub. 8-1-61. Filed 12-16-60.
 722,898. THERMFAST. Nopco Chemical Company. SN 110,457. Pub. 8-1-61. Filed 12-19-60.
 722,899. CHEEZPINS. Snack Products, Inc. SN 110,896. Pub. 8-1-61. Filed 12-27-60.
 722,900. PIPERESIN. Fritzsche Brothers, Inc. SN 111,179. Pub. 8-1-61. Filed 1-3-61.
 722,901. HOT ROCKS. Leaf Brands, Inc. SN 111,509. Pub. 8-1-61. Filed 1-9-61.
 722,902. SOUTHPORT. Pepperidge Farm, Incorporated. SN 111,539. Pub. 8-1-61. Filed 1-9-61.
 722,903. COUNT DOWN. Fisher Cheese Company. SN 111,734. Pub. 8-1-61. Filed 1-12-61.
 722,904. HARRISON HOUSE. Super Valu Stores, Inc. SN 112,500. Pub. 8-1-61. Filed 1-25-61.

Class 50—Merchandise Not Otherwise Classified

- 722,905. FLECK AND DESIGN. L. W. Fleckenstein, Inc. SN 99,505. Pub. 8-1-61. Filed 6-22-60.
 722,906. POLYCHROME. Polychrome Corporation. SN 116,069. Pub. 7-25-61. Filed 3-20-61.
 722,907. "PRINCESS BEE." L.K.R. Chemical Products Corporation. SN 116,240. Pub. 8-1-61. Filed 3-22-61.

Class 51—Cosmetics and Toilet Preparations

- 722,908. IRSA. Georg Dralle. SN 106,995. Pub. 8-1-61. Filed 10-24-60.

Class 52—Detergents and Soaps

- 722,909. ANSWER. The Pillsbury Company, assignee of Tidy House Products Company. SN 92,828. Pub. 5-23-61. Filed 3-14-60.
 722,910. ZOLV. Du Bois Chemicals, Inc. SN 109,049. Pub. 8-1-61. Filed 11-25-60.

Service Marks**Class 100—Miscellaneous**

- 722,911. DESIGN OF CROWN AND CONE. Thomas Carvel. SN 51,111. Pub. 8-1-61. Filed 5-6-58.
 722,912. OGC AND DESIGN. Overseas Guest Club, Inc. SN 94,336. Pub. 8-1-61. Filed 4-4-60.
 722,913. SUPERIOR AND DESIGN. Superior Motels, Inc., by change of name from Superior Courts United, Inc. SN 108,717. COLLECTIVE MARK. Pub. 8-1-61. Filed 11-18-60.
 722,914. TRAVEL SUPERIOR AND BE SURE! AND DESIGN. Superior Motels, Inc., by change of name from Superior Courts United, Inc. SN 108,718. COLLECTIVE MARK. Pub. 8-1-61. Filed 11-18-60.

Class 101—Advertising and Business

- 722,915. A LIBERTY BELL STORE AND DESIGN. Beller Electric Co. SN 83,696. Pub. 8-1-61. Filed 10-21-59.

Class 103—Construction and Repair

- 722,916. SUMMIT. Summit Corporation. SN 94,621. Pub. 8-1-61. Filed 4-7-60.

Class 107—Education and Entertainment

- 722,917. MEDIFILM REPORT. Schering Corporation. SN 93,552. Pub. 8-1-61. Filed 3-23-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 23—Cutlery, Machinery, and Tools, Class 31—Filters and Refrigerators and Parts Thereof

- 722,918. Vacu-Blast Company, Inc., Belmont, Calif. SN 76,292. Filed P.R. 6-22-59; Am. S.R. 8-18-61.
 722,921. Wheelabrator Corporation, Mishawaka, Ind. SN 68,770. Filed P.R. 3-2-59; Am. S.R. 7-17-61.

WAFFLE FLOOR

For Abrasive Blasting Rooms.
 First use Feb. 13, 1956.

GLASTUBE

For Filter Tubes for Dust Collectors.
 First use Feb. 6, 1959.

- 722,919. Ernest Scragg & Sons Limited, Macclesfield, England. SN 96,428. Filed P.R. 5-4-60; Am. S.R. 8-14-61.

SCRAGG

For Yarn Crimping Machines.
 First use Apr. 1, 1959; in commerce Mar. 10, 1960.

Class 43—Thread and Yarn

- 722,922. Emile Bernat & Sons Company, Jamaica Plain, Mass. SN 115,423. Filed P.R. 3-13-61; Am. S.R. 8-8-61.

- 722,920. Outboard Marine Corporation, Waukegan, Ill. SN 98,736. Filed P.R. 6-9-60; Am. S.R. 8-16-61.

NEW LIFE

For Used Outboard Motors.
 First use Oct. 1, 1959.

BEGINNERS PAK

For Packages of Hand-Knitting Yarn.
 First use Apr. 16, 1958.

TRADEMARK REGISTRATIONS RENEWED

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|----------------------------------------------------------------------|-----------------------------------------------------|
| 144,216. FULLER AND DESIGN. Cl. 13. 6-28-21. | 150,610. WHITE ROSE. Cl. 1. 1-3-22. |
| 146,121. SUNSET DYES (COLORANTES SUNSET). Cl. 6. 8-30-21. | 150,613. BB. Cl. 1. 1-3-22. |
| 146,607. "DIAMOND EDGE IS A QUALITY PLEDGE." Cl. 23. 9-13-21. | 150,620. TEXACO AND DESIGN. Cl. 15. 1-3-22. |
| 146,619. TOASTY TOP. Cl. 46. 9-13-21. | 150,826. SILVERTOWN. Cl. 35. 1-10-22. |
| 146,945. FRAISIA. Cl. 51. 9-27-21. | 151,369. STANDARD ETC. AND DESIGN. Cl. 16. 1-31-22. |
| 147,815. "DIAMOND EDGE IS A QUALITY PLEDGE." Cl. 26. 11-1-21. | 151,797. DISCOVERY. Cl. 46. 2-14-22. |
| 148,269. USOL AND DESIGN. Cl. 6. 11-8-21. | 151,800. HONEY DEW. Cl. 46. 2-14-22. |
| 148,960. GAINSBOROUGH. Cl. 39. 11-29-21. | 387,972. GREAT SEAL. Cl. 46. 6-10-41. |
| 149,512. STIM-U-PLANT AND DESIGN. Cl. 10. 12-13-21. | 388,306. CELANAIRE. Cl. 42. 6-17-41. |
| 149,711. SUNDAY NEWS—NEW YORK'S PICTURE NEWSPAPER. Cl. 38. 12-20-21. | 389,431. "EXPRESSLY YOURS." Cl. 51. 8-5-41. |
| 150,127. MOUNTAIN MIST. Cl. 1. 12-27-21. | 389,553. ALTRUSA AND DESIGN. Cl. 37. 8-12-41. |
| 150,594. EROLINE. Cl. 1. 1-3-22. | 389,733. RUBY'S AND DESIGN. Cl. 6. 8-19-41. |
| 150,599. ECONOMY. Cl. 1. 1-3-22. | 389,815. DRENE SUPREME. Cl. 52. 8-10-41. |
| 150,602. PARAGON. Cl. 1. 1-3-22. | 389,886. SOVEREIGN. Cl. 28. 8-26-41. |
| 150,603. PEARL. Cl. 1. 1-3-22. | 389,973. TRU-LUX. Cl. 26. 9-2-41. |
| 150,605. STERLING. Cl. 1. 1-3-22. | 389,974. CHATEAU NORVA AND DESIGN. Cl. 47. 9-2-41. |
| 150,609. MOONLIGHT. Cl. 1. 1-3-22. | 390,130. SPONSOR. Cl. 38. 9-9-41. |
| | 390,198. LUBINOL. Cl. 18. 9-9-41. |
| | 390,224. FABULOUS. Cl. 51. 9-9-41. |
| | 390,252. INDIA. Cl. 35. 9-9-41. |

390,269. COLONIAL AND DESIGN. Cl. 46. 9-16-41.	391,772. CD AND DESIGN. Cl. 12. 11-25-41.
390,320. SPRING BOUQUET. Cl. 52. 9-16-41.	392,099. BAR-D-SPRED. Cl. 46. 12-9-41.
390,448. THE VOICE OF BROADWAY. Cl. 38. 9-23-41.	392,181. TOP FLIGHT AND DESIGN. Cl. 46. 12-16-41.
390,584. THE SOVEREIGN GRAND LODGE AND DESIGN. Cl. 39. 9-30-41.	392,421. PARK AVENUE. Cl. 11. 12-23-41.
390,659. BETTA. Cl. 37. 9-30-41.	392,422. VULCAN. Cl. 11. 12-23-41.
390,685. FLUFFTERS. Cl. 39. 9-30-41.	392,540. VALUE. Cl. 11. 12-30-41.
390,847. SEEMARC. Cl. 37. 10-7-41.	392,541. VERTEX. Cl. 11. 12-30-41.
391,238. MANSCO. Cl. 39. 10-28-41.	392,591. PRONTOLAC. Cl. 46. 1-6-42.
391,386. TELENOWS AND DESIGN. Cl. 26. 11-4-41.	392,960. SNO SEAL. Cl. 46. 1-20-42.
391,527. SOOTHIES. Cl. 44. 11-11-41.	392,974. VENTURA MAID. Cl. 46. 1-20-42.
391,528. LADY DAINTY. Cl. 44. 11-11-41.	393,029. ROLLING PIN. Cl. 46. 1-27-42.
	393,155. ICE MAID. Cl. 46. 1-27-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

The following registrations issued Aug. 30, 1955

611,248. NAUD-O-KLEEN. Cl. 1.	611,402. CHAIN LIGHTNING AND DESIGN. Cl. 23.
611,249. MOBALOY. Cl. 1.	611,403. KWIK SKRAPE AND DESIGN. Cl. 23.
611,256. CAPSULUBE. Cl. 2.	611,405. STABIL SEAL AND DESIGN. Cl. 23.
611,260. LUMATONE. Cl. 2.	611,406. SILO DREAM. Cl. 23.
611,261. STREAK-O-STRENGTH. Cl. 2.	611,418. HTL AND DESIGN. Cl. 26.
611,273. MICROSPIN. Cl. 6.	611,421. OPTA-VUE. Cl. 26.
611,275. PERMA-SOLV. Cl. 6.	611,422. VM AND DESIGN. Cl. 26.
611,283. CHLOROWAX F. Cl. 6.	611,423. "THE LITTLE ATOM." Cl. 26.
611,295. GRANOFLEX. Cl. 12.	611,426. PIONEER. Cl. 26.
611,296. GRANEER. Cl. 12.	611,428. ULTRAMAGIC. Cl. 26.
611,307. FARLITE. Cl. 12.	611,431. REPRESENTATION OF A FAIRY. Cl. 31.
611,308. WEDGE SEAL AND DESIGN. Cl. 13.	611,432. "MARPAK." Cl. 31.
611,309. BOTTLE-CADDIE. Cl. 13.	611,434. MINIT-MAKE ETC. Cl. 32.
611,318. TERL. Cl. 13.	611,440. AMERICAN BOY. Cl. 38.
611,319. ISO MITE. Cl. 15.	611,450. SHOPERAMA. Cl. 38.
611,321. SEAL-PEEL. Cl. 16.	611,455. NI-PO AND DESIGN. Cl. 38.
611,324. WOOD-LAC. Cl. 16.	611,459. FRAME ETTE. Cl. 39.
611,332. SUN CONTROL. Cl. 16.	611,461. ARUMBA. Cl. 39.
611,334. RHU-MART AND DESIGN. Cl. 18.	611,462. RICKEY. Cl. 39.
611,335. ROSEGON. Cl. 18.	611,464. PINNACLE. Cl. 39.
611,338. TU-FLO AND DESIGN. Cl. 19.	611,465. AMY LYNN FASHIONS. Cl. 39.
611,339. DYNATROL. Cl. 19.	611,466. GOLDEN GIRL. Cl. 39.
611,340. TRAVELMASTER AND DESIGN. Cl. 19.	611,476. MOBY DICK AND DESIGN. Cl. 39.
611,341. OZOLITE AND DESIGN. Cl. 21.	611,477. ROUND ROBIN. Cl. 39.
611,344. DYL-A-COM. Cl. 21.	611,483. KASHUMBO. Cl. 39.
611,349. QUIET-SOUND. Cl. 21.	611,485. ERNEST CREATIONS AND DESIGN. Cl. 39.
611,350. SOUND-GOVERNOR. Cl. 21.	611,486. PINK LACE AND DESIGN. Cl. 39.
611,353. TWISTUB. Cl. 21.	611,488. KX. Cl. 39.
611,354. ACL AND DESIGN. Cl. 21.	611,491. NUTRANA. Cl. 39.
611,356. CO-YAGI. Cl. 21.	611,495. WYNOL. Cl. 42.
611,357. GRID-YAGI. Cl. 21.	611,507. SUN NUGGETS FROM CALIF. Cl. 46.
611,360. THERMOMAT. Cl. 21.	611,509. FRUIT KING AND DESIGN. Cl. 46.
611,363. VITROMIZOL. Cl. 21.	611,520. MADRE SCILIA. Cl. 46.
611,366. BABY'S PUNCH. Cl. 22.	611,530. H AND DESIGN. Cl. 48.
611,367. CREEPER'S BALL. Cl. 22.	611,531. AMERICAN AND DESIGN. Cl. 48.
611,368. SKI ANTICS. Cl. 22.	611,540. AQUASIL. Cl. 51.
611,369. ROCKER. Cl. 22.	611,543. CASTANET. Cl. 51.
611,371. TIDYFLO. Cl. 22.	611,546. TIPTON'S MIRACLE WASH. Cl. 52.
611,372. MERRY AND DESIGN. Cl. 22.	611,552. U-TYPE-IT. Cl. 101.
611,373. DRAW MASTER. Cl. 22.	611,556. ORKIN AND DESIGN. Cl. 103.
611,374. BAIT-O-TROLL. Cl. 22.	611,561. "THE PHANTOM PIRATE." Cl. 107.
611,376. LAS VEGAS WILD AND DESIGN. Cl. 22.	611,565. HUSQVARNA. Cl. 13.
611,378. DOOD-LOON. Cl. 22.	611,567. SOHN CREATION AND DESIGN. Cl. 13.
611,382. COVE BAY. Cl. 22.	611,573. WE'RE NOT THE BEST ETC. Cl. 19.
611,385. SQUEEZE 'N SQUEAL. Cl. 22.	611,579. SEAL-A-TUBE AND DESIGN. Cl. 35.
611,386. SNORKAIR. Cl. 22.	611,583. THE MUTUAL FUND JOURNAL. Cl. 38.
611,388. PEQUEA AND DESIGN. Cl. 22.	611,585. WESTERN FARM EQUIPMENT. Cl. 38.
611,391. DAZZLING DANE. Cl. 22.	611,590. BENTLEY BONNETS AND DESIGN. Cl. 39.
611,395. TENSIONHOLD. Cl. 23.	611,591. HEATHER TWEED. Cl. 42.
611,400. STEAMBARKER. Cl. 23.	611,592. "THRO-WAY." Cl. 44.
	611,593. MICRO-MIXED. Cl. 46.
	611,597. POP'N SERVE. Cl. 46.
	611,598. HOUSE OF IDEAS. Cl. 101.

INDEX OF REGISTRANTS

OCTOBER 17, 1961

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Adler, Benjamin, d.b.a. Adler Communications Laboratories, New Rochelle, N.Y. 611,854, can. Cl. 21.	Booth, F. E. Co., Inc., San Francisco, Calif. 392,099, ren. 10-17-61. Cl. 46.
Adler Communications Laboratories: See—Adler, Benjamin.	Boothe Fruit Co., Modesto, Calif., to Vacu-Dry Co., Oakland, Calif. 611,507, can. Cl. 46.
"Advertising Life" Agency, Fort Myers, Fla. 611,423, can. Cl. 26.	Bowers Battery and Spark Plug Co.: See—General Battery and Ceramic Corp.
Aeroplastics Corp., Venice, Calif. 722,818, pub. 8-1-61. Cl. 22.	Branson Instruments, Inc., Stamford, Conn. 722,804, pub. 8-1-61. Cl. 21.
Affiliated Laboratories: See—Kampf, Charles A.	Brewton Iron Works, The, Brewton, Ala. 722,760, pub. 8-1-61. Cl. 14.
Aktiebolaget Wascator, Goteborg, Sweden. 722,828, pub. 8-1-61. Cl. 24.	Brown, John Clark, Inc., Belleville, N.J. 611,484, can. Cl. 32.
Alcorn & Co., Inc., Boston, Mass. 611,592, can. Cl. 44.	Buckbinder, Arnold, Los Angeles, Calif. 611,332, can. Cl. 18.
Allen, Don, Buffalo, N.Y. 611,573, can. Cl. 19.	Calumet & Hecla, Inc., Calumet, Mich. 722,758, pub. 8-1-61. Cl. 14.
Alles & Fisher, Inc., Boston, Mass. 722,766, pub. 7-26-61. Cl. 17.	Capaulube Co., The, Minneapolis, Minn. 611,256, can. Cl. 2.
Alles & Fisher, Inc., Boston, Mass. 722,767-8, pub. 7-18-61. Cl. 17.	Cardinal Corp., The, Bradford, Pa. 611,583, can. Cl. 38.
Allis-Chalmers Mfg. Co., West Allis, Wis. 611,400, can. Cl. 23.	Carlisle Corp., Carlisle, Pa. 611,249, can. Cl. 1.
Altman, B. & Co., New York, N.Y. 722,887, pub. 8-1-61. Cl. 46.	Carlyle Industrial Corp., Brooklyn, N.Y. 611,296, can. Cl. 12.
Altrusa International, Inc.: See—International Association of Altrusa Clubs, Inc.	Carter, H. W., & Co.: See—Beecham Foods Ltd.
American Brewery, Inc., Baltimore, Md. 611,531, can. Cl. 48.	Carvel, Thomas, Yonkers, N.Y. 722,911, pub. 8-1-61. Cl. 100.
American Control Corp., Compton, Calif. 611,428, can. Cl. 26.	Carver, Don C., Columbus, Ohio. 722,829, pub. 8-1-61. Cl. 25.
American Home Products Corp., d.b.a. Whitehall Laboratories, New York, N.Y. 722,781, pub. 4-4-61. Cl. 18.	Celanese Corp. of America, New York, N.Y. 388,306, ren. 10-17-61. Cl. 42.
American Hospital Supply Corp., Evanston, Ill. 722,782, pub. 8-1-61. Cl. 18.	Central Pharmacal Co., The, Seymour, Ind. 722,785, pub. 8-1-61. Cl. 18.
American Pad & Textile Co., The, Pittsburgh, Pa. 722,813, pub. 8-1-61. Cl. 22.	Chapman & Smith Co., Chicago, Ill., to Chapman & Smith Co., Inc., New York, N.Y. 885,029, ren. 10-17-61. Cl. 46.
American Polymer Corp., Englewood, N.J. 611,363, can. Cl. 21.	Chapman & Smith Co., Inc.: See—Chapman & Smith Co.
American Seating Co., Grand Rapids, Mich. 722,794-5, pub. 8-1-61. Cl. 19.	Childhood Interests, Inc., Roselle Park, N.J. 611,366-7, can. Cl. 22.
Antonio Carras Corp., Brooklyn, N.Y. 611,520, can. Cl. 46.	Coastal Chemical Corp., Garfield, N.J. 722,731, pub. 6-20-61. Cl. 6.
Armour and Co., from Armour and Co., Chicago, Ill. 722,871, pub. 8-1-61. Cl. 46.	Collier, R. T., Corp., Los Angeles, Calif. 611,481, can. Cl. 31.
Arnold, F. R., & Co., to Dorla, Inc., New York, N.Y. 146,945, ren. 10-17-61. Cl. 51.	Colonial Stores Inc.: See—Pender, David, Grocery Co.
Arpin, L. G., Co., West Caldwell, N.J. 611,386, can. Cl. 22.	Commerce Drug Co., Inc., Brooklyn, N.Y. 722,773, pub. 8-1-61. Cl. 18.
Asbury Sportswear, Inc., Neptune, N.J. 611,485, can. Cl. 39.	Community Playthings: See—Society of Brothers, Inc.
Associated Brands, Inc.: See—Parfums Charbert, Inc.	Continental Oil Co., Ponca City, Okla. 722,736, pub. 8-1-61. Cl. 6.
B & M Mfg. Co.: See—Black, Charles A.	Cooke Color & Chemical Co., Hackettstown, N.J. 722,727, pub. 8-1-61. Cl. 6.
Bailey Co., Inc., The, Amesbury, Mass. 722,742, pub. 8-1-61. Cl. 12.	Cove Bay Tackle Co., Duluth, Minn. 611,362, can. Cl. 22.
Barge Cement Mfg. Co.: See—National Starch and Chemical Corp.	Cowman-Campbell Paint Co., Inc., Seattle, Wash. 722,764, pub. 8-1-61. Cl. 16.
Barkin, Levin & Co., Inc., New York, N.Y. 611,491, can. Cl. 39.	Craftint Mfg. Co., The, Cleveland, Ohio. 722,765, pub. 8-1-61. Cl. 16.
Bauman & Stoll, Inc., New York, N.Y. 611,461, can. Cl. 39.	Crawford Door Co., Detroit, Mich. 391,772, ren. 10-17-61. Cl. 12.
Beatrice Foods Co., Chicago, Ill. 722,870, pub. 8-1-61. Cl. 46.	Cronstroms Mfg. Co.: See—Cronstroms Mfg., Inc.
Beauti-Dor, Inc., Chicago, Ill. 722,753, pub. 8-1-61. Cl. 12.	Cronstroms Mfg., Inc., d.b.a. Cronstroms Mfg. Co., Minneapolis, Minn. 611,374, can. Cl. 22.
Beecham Foods Ltd., d.b.a. H. W. Carter & Co., Brentford, England. 722,774, pub. 8-1-61. Cl. 18.	Crown Zellerbach Corp., San Francisco, Calif. 722,852, pub. 8-1-61. Cl. 37.
Beecham Products Inc., Clifton, N.J. 722,790, pub. 8-1-61. Cl. 18.	Curtice Brothers Co.: See—Curtice-Burns, Inc.
Beecham Research Laboratories Ltd., Brentford, England. 722,771-2, pub. 8-1-61. Cl. 18.	Curtice-Burns, Inc., from Curtice Brothers Co., Rochester, N.Y. 722,897, pub. 8-1-61. Cl. 46.
Beller Electric Co., Newark, N.J. 722,915, pub. 8-1-61. Cl. 101.	Dade Reagents, Inc., Miami, Fla. 722,728, pub. 8-1-61. Cl. 6.
Bendix Aviation Corp., d.b.a. Bellpac-Pioneer Division, Teterboro, N.J. 611,426, can. Cl. 26.	De Journette Mfg. Co., Atlanta, Ga. 722,819, pub. 8-1-61. Cl. 22.
Bendix Westinghouse Automotive Air Brake Co., Elyria, Ohio. 611,588, can. Cl. 19.	Delander, John B., d.b.a. Torette Mfg. Co., St. Paul, Minn. 722,827, pub. 8-1-61. Cl. 24.
Bentley Bonnets: See—Bentley, Edward A.	De Markus, Louis, Corp., Buffalo, N.Y. 722,822, pub. 8-1-61. Cl. 23.
Bentley, Edward A., d.b.a. Bentley Bonnets, Chicago, Ill. 611,590, can. Cl. 39.	Diamond Alkali Co., Cleveland, Ohio. 611,283, can. Cl. 6.
Berg, Hedstrom & Co., Inc., New York, N.Y., to Husqvarna Vapenfabriks Aktiebolag, Husqvarna, Sweden. 611,565, can. Cl. 18.	Diamond Crystal Salt Co., from Diamond Crystal Salt Co., St. Clair, Mich. 722,873, pub. 6-20-61. Cl. 46.
Bernat, Emil, & Sons Co., Jamaica Plain, Mass. 722,922. Cl. 43.	Diamond Laboratories, Des Moines, Iowa. 722,777, pub. 8-1-61. Cl. 18.
Bethlehem Steel Co., Bethlehem, Pa. 722,838, pub. 8-1-61. Cl. 31.	Dike-O-Seal, Inc., Chicago, Ill. 722,738, pub. 8-1-61. Cl. 12.
Bird Electronic Corp., Solon, Ohio. 722,832, pub. 8-1-61. Cl. 28.	Dinner Date Marketing Co.: See—Valley Sales.
Black, Charles A., d.b.a. B & M Mfg. Co., Jonesboro, Ga. 611,309, can. Cl. 13.	Dobrats, Robert E., d.b.a. Master Machine Tool Co., Plantsville, Conn. 611,403, can. Cl. 23.
Bleeker-Kabler Co., to Ski Antics, Inc., Nisawa, Minn. 611,368, can. Cl. 22.	Doekia Products, Inc.: See—San-Nap-Pak Mfg. Co., Inc.
Bohemia Works: See—Zavody Bohemia, Narodni Podnik, Milaa, Italy. 722,862, pub. 8-1-61. Cl. 38.	Dole Corp.: See—Hawaiian Pineapple Co., Ltd.
Bonella, Egidio, d.b.a. Fratelli Bonella, Sesto San Giovanni, Milan, Italy. 722,862, pub. 8-1-61. Cl. 38.	Dome Chemicals, Inc., New York, N.Y. 722,783, pub. 8-1-61. Cl. 18.
Bonella, Fratelli: See—Bonella, Egidio.	Dorin, Inc.: See—Arnold, F. R., & Co.
	Dow Chemical Co., The, Midland, Mich. 722,726, pub. 8-1-61. Cl. 6.

- Dow Chemical Co., The, Midland, Mich. 722,770, pub. 8-1-61. Cl. 18.
Dow Chemical Co., The, Midland, Mich. 722,803, pub. 8-1-61. Cl. 21.
Dralle, Georg, Hamburg-Altona, Germany. 722,908, pub. 8-1-61. Cl. 51.
Du Bois Chemicals, Inc., Cincinnati, Ohio. 722,910, pub. 8-1-61. Cl. 52.
Duchart, Inc., New York, N.Y. 722,845, pub. 8-1-61. Cl. 37.
Duluth Filter Co., Duluth, Minn. 722,839, pub. 8-1-61. Cl. 31.
Dumari Textile Co., Inc., New York, N.Y. 611,464, can. Cl. 39.
Durant Mfg. Co., Milwaukee, Wis. 722,830, pub. 8-1-61. Cl. 26.
Eclipse Pioneer Division: See—
Eclair Aviation Corp.
Edmont Inc., Coshocton, Ohio. 722,866, pub. 8-1-61. Cl. 39.
Elastizell Corp. of America, Alpena, Mich. 722,729, pub. 8-1-61. Cl. 6.
Electronic Products Co. Ltd., Vancouver, British Columbia, Canada. 611,344, can. Cl. 21.
Elgood, E. J., Ltd., London, England. 611,295, can. Cl. 12.
Enro Shirt Co., Inc., The, Louisville, Ky. 722,865, pub. 8-1-61. Cl. 39.
Ernest Sohn Creations, Inc., New York, N.Y. 611,567, can. Cl. 13.
Farley & Loetscher Mfg. Co., Dubuque, Iowa. 611,307, can. Cl. 12.
Felmlee, J. T., Lewiston, Pa. 611,391, can. Cl. 22.
Fenton, Charles F., d.b.a. Fenton Co., New York, N.Y. 611-353, can. Cl. 21.
Fenton Co.: See—
Fenton, Charles F.
Fibertex, Inc., Woodbine, Ga. 722,749, pub. 8-1-61. Cl. 12.
Fisher Cheese Co., Wapakoneta, Ohio. 722,903, pub. 8-1-61. Cl. 46.
Fish-Eze Products, Inc., Los Angeles, Calif. 722,820, pub. 8-1-61. Cl. 22.
Fleckenstein, L. W., Inc., Butler, Wis. 722,905, pub. 8-1-61. Cl. 50.
Fort Dearborn Pharmacal Co., Chicago, Ill. 722,787, pub. 8-1-61. Cl. 18.
Freeman, Gilbert, Inc., Boston, Mass. 611,591, can. Cl. 42.
Fritzsche Brothers, Inc., New York, N.Y. 722,900, pub. 8-1-61. Cl. 46.
Fuller Brush Co., The, East Hartford, Conn. 144,216, ren. 10-17-61. Cl. 13.
Gaylord Bros., Inc., Syracuse, N.Y. 722,856, pub. 8-1-61. Cl. 37.
General Battery and Ceramic Corp., from Bowers Battery and Spark Plug Co., Reading, Pa. 722,802, pub. 8-1-61. Cl. 21.
General Foods Corp., White Plains, N.Y. 722,893-4, pub. 8-1-61. Cl. 46.
General Precision, Inc., Little Falls, N.J. 722,831, pub. 8-1-61. Cl. 28.
General Products Corp., Union Springs, N.Y. 722,800, pub. 8-1-61. Cl. 21.
General Tire & Rubber Co., The, Akron, Ohio. 390,252, ren. 10-17-61. Cl. 35.
Glass, Richard A., Co., Inc., Indio, Calif. 722,885, pub. 8-1-61. Cl. 46.
Goerlich's, Inc., Toledo, Ohio. 722,792, pub. 8-1-61. Cl. 19.
Goldberg, Joseph E., Chicago, Ill. 722,868, pub. 8-1-61. Cl. 46.
Golden Girl Frocks, Inc., New York, N.Y. 611,466, can. Cl. 39.
Golden Grain Macaroni Co., San Leandro, Calif. 722,889, pub. 8-1-61. Cl. 46.
Goldborough, John B., of Croton-on-the-Hudson, N.Y.: See—
Stim-U-Plant Tablet Co.
Goldstein, Minnie, Great Neck, N.Y. 722,812, pub. 8-1-61. Cl. 22.
Goodman, Alan D., d.b.a. Goodman Metal Products Co., Van Nuys, Calif. 611,318, can. Cl. 13.
Goodman Metal Products Co.: See—
Goodman, Alan D.
Goodrich, B. F., Co., The, Akron, Ohio. 150,826, ren. 10-17-61. Cl. 35.
Goodstein Bros. & Co., Inc., New York, N.Y. 611,477, can. Cl. 39.
Gorham Corp.: See—
Gorham Mfg. Co.
Gorham Mfg. Co., to Gorham Corp., Providence, R.I. 389-888, ren. 10-17-61. Cl. 28.
Grant, Foster, Co. Inc., to Foster Grant Co., Inc., Leominster, Mass. 389,973, ren. 10-17-61. Cl. 26.
Great Seal Co.: See—
Styron-Beggs Co., The.
Greenberg's, M., Sons, Inc., San Francisco, Calif. 722,757, pub. 8-1-61. Cl. 13.
Harbor House Foods Inc., Tampa, Fla. 722,875, pub. 8-1-61. Cl. 46.
Harvard Brewing Co., Lowell, Mass. 611,530, can. Cl. 48.
Havre de Grace Hosiery Mills, Inc., The, Havre de Grace, Md. 611,486, can. Cl. 39.
Hawaiian Pineapple Co. Ltd., San Francisco, to Dole Corp., San Jose, Calif. 151,800, ren. 10-17-61. Cl. 46.
Hawaiian Pineapple Co. Ltd., San Francisco, and Honolulu, Hawaii, to Dole Corp., San Jose, Calif. 151,797, ren. 10-17-61. Cl. 46.
Haynes, Joseph E., d.b.a. Wedge Seal Co., Baltimore, Md. 611,308, can. Cl. 13.
Hearst Consolidated Publications, Inc.: See—
New York Evening Journal, Inc.
Hearst Metrotone News, Inc.: See—
Pacific News Reel Theaters, Inc.
- Hershey Creamery Co., Harrisburg, Pa. 392,591, ren. 10-17-61. Cl. 46.
Hewitt Soap Co., Inc., The, Dayton, Ohio. 390,320, ren. 10-17-61. Cl. 52.
Hollywood-Maxwell Co., Los Angeles, Calif. 611,459, can. Cl. 39.
Hollywood Plastics, Inc., Los Angeles, Calif. 722,724, pub. 8-1-61. Cl. 2.
Houston Technical Laboratories, Houston, Tex. 611,418, can. Cl. 26.
Hudson Pulp & Paper Corp., New York, N.Y. 722,723, pub. 8-1-61. Cl. 2.
Husqvarna Vapenfabriks Aktiebolag: See—
Hedstrom, Berg, & Co., Inc.
Industrial Colloids Co., Kilmington, Pa. 722,761, pub. 8-1-61. Cl. 15.
Institut voor Marktverkenning: See—
Nederlands Instituut voor de Publieke Opinie.
International Association of Altruists Clubs, Inc., to Altruist International, Inc., Chicago, Ill. 389,553, ren. 10-17-61. Cl. 37.
Jeffries Banknote Co., Los Angeles, Calif. 390,847, ren. 10-17-61. Cl. 37.
Johnson Products, Inc., Muskegon, Mich. 722,759, pub. 8-1-61. Cl. 14.
Jones & Naudin Co., Gloversville, N.Y. 611,248, can. Cl. 1.
June Dairy Products Co., Inc., Jersey City, N.J. 722,878, pub. 8-1-61. Cl. 46.
KVP Sutherland Paper Co., Kalamazoo, Mich. 722,720, pub. 8-1-61. Cl. 2.
Kaiser Mfg. Inc., Houston, Tex. 722,743, pub. 8-1-61. Cl. 12.
Kampf, Charles A., d.b.a. Affiliated Laboratories, San Francisco, Calif. 611,543, can. Cl. 51.
Karstrom Co., Chicago, Ill. 722,825, pub. 8-1-61. Cl. 23.
Kellogg Co., Battle Creek, Mich. 611,378, can. Cl. 22.
Kellogg Co., Battle Creek, Mich. 722,869, pub. 8-1-61. Cl. 46.
Kendall Co., The, Walpole, Mass. 611,488, can. Cl. 39.
King Publications, Inc., San Francisco, Calif. 611,585, can. Cl. 38.
Kinella, James D., St. Paul, Minn. 611,597, can. Cl. 46.
Klein Enterprises: See—
Klein, Irving.
Klein, Irving, d.b.a. Klein Enterprises, New York, N.Y. 722-816, pub. 8-1-61. Cl. 22.
Koninklijke Maatschappij "De Betuwe" N.V., Tiel, Netherlands. 722,880, pub. 8-1-61. Cl. 46.
Kroydon Co., Inc., Boston, Mass. 722,810-11, pub. 8-1-61. Cl. 22.
Kurtzon, Morris, Inc., Chicago, Ill. 722,744, pub. 8-1-61. Cl. 12.
L.K.R. Chemical Products Corp., Detroit, Mich. 722,907, pub. 8-1-61. Cl. 50.
Laufer, H. E., Co., Inc., New York, N.Y. 722,826, pub. 8-1-61. Cl. 23.
Laufer, H. E., Co., Inc., New York, N.Y. 722,836, pub. 8-1-61. Cl. 30.
Leaf Brands, Inc., Chicago, Ill. 722,901, pub. 8-1-61. Cl. 46.
Lentheric, Inc., to Lentheric, Inc., New York, N.Y. 611,540, can. Cl. 51.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 722,842, pub. 8-1-61. Cl. 33.
Lilly, Eli, and Co., Indianapolis, Ind. 722,788, pub. 8-1-61. Cl. 18.
Linseed Oil Products Co., Alhambra, Calif. 611,324, can. Cl. 16.
Liqui-Box Corp., Columbus, Ohio. 722,721, pub. 8-1-61. Cl. 2.
Lith-O-Ware Products, Inc., Chicago, Ill. 611,376, can. Cl. 22.
Lowengart & Co., New York, N.Y. 722,719, pub. 8-1-61. Cl. 1.
Lubrecht, William E., d.b.a. Remind-O-Gram Co., Covington, Ky. 722,846, pub. 8-1-61. Cl. 37.
Manhattan Shirt Co., The, New York, N.Y. 391,238, ren. 10-17-61. Cl. 39.
Marie, Mae, Inc., New York, N.Y. 611,371, can. Cl. 22.
Marley Co., The, Kansas City, Mo. 611,432, can. Cl. 31.
Master Machine Tool Co.: See—
Dobrats, Robert E.
Mattel, Inc., Hawthorne, Calif. 722,814, pub. 8-1-61. Cl. 22.
Mayfair Packing Co., San Jose, Calif. 722,883, pub. 8-1-61. Cl. 46.
McNell Laboratories, Inc., Philadelphia, Pa. 722,764, pub. 8-1-61. Cl. 18.
Mead Corp., The, Dayton, Ohio. 722,853-4, pub. 8-1-61. Cl. 37.
Merck & Co., Inc., Rahway, N.J. 722,891, pub. 8-1-61. Cl. 46.
Merry Mfg. Co., Cincinnati, Ohio. 611,372, can. Cl. 22.
Merry Mfg. Co., Cincinnati, Ohio. 722,809, pub. 8-1-61. Cl. 22.
Metolco Corp., Los Angeles, Calif. 611,319, can. Cl. 15.
Miami Margarine Co., The, Cincinnati, Ohio. 722,895, pub. 8-1-61. Cl. 46.
Milk Proteins Inc., Detroit, Mich. 722,882, pub. 8-1-61. Cl. 46.
Miss Kitty, St. Louis, Mo. 722,847, pub. 8-1-61. Cl. 37.
Mohns Commercial Corp., San Francisco, Calif. 722,737, pub. 8-1-61. Cl. 7.
Morning Treat Coffee Co., Inc., Baton Rouge, La. 722,896, pub. 8-1-61. Cl. 46.
Mount Rose Canning Co., Inc., King George, Va. 722,867, pub. 8-1-61. Cl. 46.
National Blank Book Co., Holyoke, Mass. 722,858, pub. 8-1-61. Cl. 37.
National Research Associates, Inc., College Park, Md. 722-793, pub. 8-1-61. Cl. 19.

- National Starch and Chemical Corp., New York, N.Y., from Fred Stuckler, d.b.a. Barge Cement Mfg. Co., Wayne, N.J. 722,725, pub. 8-1-61. Cl. 5.
Nederlands Instituut voor de Publieke Opinie, d.b.a. Instituut voor Marktverkenning, Amsterdam, Holland. 611,455, can. Cl. 38.
Nesco, Division of New York Shipbuilding Corp.: See—
New York Shipbuilding Corp.
Newberry, J. J., Co., New York, N.Y. 611,462, can. Cl. 39.
Newberry, J. J., Co., New York, N.Y. 722,835, pub. 8-1-61. Cl. 30.
Newberry, J. J., Co., New York, N.Y. 722,841, pub. 8-1-61. Cl. 33.
New York Evening Journal, Inc., to Hearst Consolidated Publications, Inc., New York, N.Y. 390,448, ren. 10-17-61. Cl. 38.
New York Shipbuilding Corp., d.b.a. Nesco, Division of New York Shipbuilding Corp., Milwaukee, Wis. 611,261, can. Cl. 2.
News Syndicate Co., Inc., New York, N.Y. 149,711, ren. 10-17-61. Cl. 38.
Nite Corp., New Haven, Conn., from Teletypewriter Corp., Paramus, N.Y. 722,797, pub. 8-1-61. Cl. 21.
Nopco Chemical Co., Newark, N.J. 722,898, pub. 8-1-61. Cl. 46.
North American Dye Corp., to North American Dye Corp., Danbury, Conn. 146,121, ren. 10-17-61. Cl. 6.
Northrop Aircraft, Inc., Hawthorne, Calif. 611,339, can. Cl. 16.
Old Colony Knitting Mills, Inc., Newton Centre, Mass. 390-585, ren. 10-17-61. Cl. 39.
Olean Tile Co., Olean, N.Y. 722,750-1, pub. 8-1-61. Cl. 12.
Optics Mfg. Corp., Chicago, Ill. 611,421, can. Cl. 28.
Orkin Exterminating Co., Inc., Atlanta, Ga. 611,556, can. Cl. 103.
Outboard Marine Corp., Waukegan, Ill. 722,920, Cl. 23.
Overseas Guest Club, Inc., New York, N.Y. 722,912, pub. 8-1-61. Cl. 100.
Pacific News Reel Theaters, Inc., San Francisco, Calif., to Hearst Metrotone News, Inc., New York, N.Y. 391,386, ren. 10-17-61. Cl. 26.
Pangburn Co., Inc., Ft. Worth, Tex. 722,874, pub. 8-1-61. Cl. 46.
Paprikas Weiss Importer, New York, N.Y. 722,877, pub. 8-1-61. Cl. 46.
Parents' Institute, Inc., The, New York, N.Y. 611,449, can. Cl. 38.
Parfums Charbert, Inc., New York, to Associated Brands, Inc., Brooklyn, N.Y. 389,431, ren. 10-17-61. Cl. 51.
Parfums Charbert, Inc., New York, to Associated Brands, Inc., Brooklyn, N.Y. 390,224, ren. 10-17-61. Cl. 51.
Peck, Samuel, New York, N.Y. 611,465, can. Cl. 39.
Pender, David, Grocery Co., to Colonial Stores Inc., Norfolk, Va. 389,974, ren. 10-17-61. Cl. 47.
Pender, David, Grocery Co., to Colonial Stores Inc., Norfolk, Va. 390,269, ren. 10-17-61. Cl. 46.
Pennsalt Chemicals Corp., Philadelphia, Pa. 722,734, pub. 8-1-61. Cl. 6.
Penn-Union Electric Corp., Erie, Pa. 722,801, pub. 8-1-61. Cl. 21.
Pepperidge Farm, Inc., Norwalk, Conn. 722,902, pub. 8-1-61. Cl. 46.
Pequea Fishing Tackle, Inc., Strasburg, Pa. 611,388, can. Cl. 22.
Peterson Engineering Co., Inc., Santa Clara, Calif. 722,821, pub. 12-8-60. Cl. 23.
Pfizer, Chas., & Co. Inc., Brooklyn, N.Y. 722,769, pub. 8-1-61. Cl. 18.
Phantom Pirate, Inc., Saginaw, Mich. 611,561, can. Cl. 107.
Pharmaceutical Specialties, Inc., Monterey, Calif. 722,786, pub. 8-1-61. Cl. 18.
Phar-Med, Inc., East Detroit, Mich. 722,789, pub. 8-1-61. Cl. 18.
Pillsbury Co., The, from Tidy House Products Co., Shenandoah, Iowa. 722,909, pub. 8-23-61. Cl. 52.
Piles Corp., The, Secaucus, N.J. 722,833, pub. 8-1-61. Cl. 29.
Piasbond Corp., Santa Cruz, Calif. 722,824, pub. 8-1-61. Cl. 29.
Polychrome Corp., Yonkers, N.Y. 722,906, pub. 7-25-61. Cl. 50.
Pratt & Lambert, Inc., Buffalo, N.Y. 722,763, pub. 8-1-61. Cl. 16.
Presteel Co., Berkeley, Calif. 611,341, can. Cl. 21.
Procter & Gamble Co., The, Cincinnati, Ohio. 389,815, ren. 10-17-61. Cl. 52.
Provident Pharmaceuticals, Inc., Chattanooga, Tenn. 722-791, pub. 8-1-61. Cl. 18.
Pruyn, Francis L., of New York, N.Y.: See—
Stim-U-Plant Tablet Co.
Purepac Corp., New York, N.Y. 390,198, ren. 10-17-61. Cl. 18.
Purix Corp., Ltd., South Gate, Calif. 722,732, pub. 8-1-61. Cl. 6.
Quercus Ranch, Oakland, Calif. 722,886, pub. 8-1-61. Cl. 46.
Rabin Co., The, El Segundo, Calif. 722,733, pub. 8-1-61. Cl. 6.
Rakes, Joe, Co.: See—
Rakes, Joe F.
Rakes, Joe F., d.b.a. Joe Rakes Co., Tulsa, Okla. 722,745, pub. 8-1-61. Cl. 12.
Ralston Purina Co., St. Louis, Mo. 611,593, can. Cl. 46.
Remind-O-Gram Co.: See—
Lubrecht, William E.
Rhine, Joseph B., Durham, N.C. 722,817, pub. 8-1-61. Cl. 22.
Rhu-Mart Drug Co., Inc., Newark, N.J. 611,334, can. Cl. 18.
Richey & Gilbert Co., Yakima, Wash. 611,509, can. Cl. 46.
Ridgway, L. L., Co., Inc., Houston, Tex. 722,848, pub. 8-1-61. Cl. 37.
- Riegel Paper Corp., New York, N.Y. 722,849, pub. 8-1-61. Cl. 37.
Roosevelt, Edith K., New York, N.Y. 722,863, pub. 8-1-61. Cl. 38.
Rosan Engineering Corp., Newport Beach, Calif. 722,754, pub. 8-1-61. Cl. 13.
Rosenzweig, William, New York, N.Y. 611,476, can. Cl. 39.
Roxite: See—
Teror Corp. of America.
Royal McBee Corp.: See—
Royal Typewriter Co., Inc.
Royal Typewriter Co., Inc., New York, N.Y., to Royal McBee Corp., Port Chester, N.Y. 392,421-2, ren. 10-17-61. Cl. 11.
Royal Typewriter Co., Inc., New York, N.Y., to Royal McBee Corp., Port Chester, N.Y. 392,440-1, ren. 10-17-61. Cl. 11.
Ruby Chemical Co., The, Columbus, Ohio. 389,733, ren. 10-17-61. Cl. 6.
Rudolfer, S., Sons, Inc., Philadelphia, Pa. 722,864, pub. 8-1-61. Cl. 39.
Safetee Glass Co., Philadelphia, Pa. 722,843, pub. 8-1-61. Cl. 33.
St. Regis Paper Co., New York, N.Y. 722,850, pub. 8-1-61. Cl. 37.
Salada-Shirriff-Horsey Inc., Woburn, Mass. 722,879, pub. 8-1-61. Cl. 46.
Salinas Valley Vegetable Exchange, Salinas, Calif. 392,900, ren. 10-17-61. Cl. 46.
Salinas Valley Vegetable Exchange, Salinas, Calif. 393,155, ren. 10-17-61. Cl. 46.
Sanders Brine Shrimp Co., Ogden, Utah. 722,892, pub. 8-1-61. Cl. 46.
San-Nap-Pak Mfg. Co., Inc., to Doeskin Products, Inc., New York, N.Y. 390,659, ren. 10-17-61. Cl. 37.
Sawyer's Inc., Portland, Oreg. 611,422, can. Cl. 26.
Scherer Corp., Bloomfield, N.J. 722,917, pub. 8-1-61. Cl. 107.
Scott, H. H., Inc., Maynard, Mass. 722,799, pub. 8-1-61. Cl. 21.
Scott, Patricia, Inc., New York, N.Y. 611,483, can. Cl. 39.
Scrags, Ernest, & Sons Ltd., Macclesfield, England. 722,919, Cl. 23.
Sea Nymph Pool Corp. of America, New York, N.Y. 722,740, pub. 8-1-61. Cl. 12.
Sea-A-Tube Products, Inc., Roxbury, Mass. 611,579, can. Cl. 35.
Seal-Peel, Inc., New York, N.Y. 611,321, can. Cl. 16.
Shapleigh Hardware Co., St. Louis, Mo. 146,607, ren. 10-17-61. Cl. 23.
Shapleigh Hardware Co., St. Louis, Mo. 147,815, Cl. 26.
Shoperama Co., Valley Stream, N.Y. 611,450, can. Cl. 38.
Shulton, Inc., Clifton, N.J. 722,778, pub. 8-1-61. Cl. 18.
SIG Laboratories, Inc., Marshall, Ill. 722,779, pub. 8-23-61. Cl. 18.
Sitroux Co., Inc., The, to Sitroux Inc., New York, N.Y. 391-527, ren. 10-17-61. Cl. 44.
Sitroux Inc.: See—
Sitroux Co., Inc., The.
Skaggs, Horace G., Ashland, Ky. 611,373, can. Cl. 22.
Skarle, Inc., Baltimore, Md. 611,402, can. Cl. 23.
Ski Antics, Inc.: See—
Blecher-Kahler Co.
Smith, Joshua, (1908) Ltd., Manchester, England. 611,495, can. Cl. 42.
Snack Products, Inc., Downers Grove, Ill. 722,899, pub. 8-1-61. Cl. 46.
Societa Ceramica Richard Ginori, Milan, Italy. 722,748, pub. 8-15-61. Cl. 12.
Society of Brothers, Inc., d.b.a. Community Playthings, Rifton, N.Y. 722,808, pub. 8-1-61. Cl. 22.
Solite Corp., Richmond, Va. 722,739, pub. 8-1-61. Cl. 12.
Solberger, Gus, Inc., Houston, Tex. 722,755, pub. 8-1-61. Cl. 13.
Solv Co.: See—
Solv-co., Inc.
Solv-co., Inc., d.b.a. Solv Co., North Hollywood, Calif. 611-275, can. Cl. 6.
Southeastern Syrup Co., Jackson, Tenn. 722,894, pub. 8-1-61. Cl. 46.
Southern Plating Co., Anniston, Ala. 722,823, pub. 8-1-61. Cl. 23.
Southern Special Products Corp., Richmond, Va. 722,741, pub. 8-1-61. Cl. 12.
Sovereign Grand Lodge of The I.O.O.F., Baltimore, Md. 390-584, ren. 10-17-61. Cl. 39.
Spalding, A. G., & Bros., Inc., Chicopee, Mass. 611,369, can. Cl. 22.
Spiegelau-Kristall Vertriebsgesellschaft m.b.H., Munich, Germany. 722,840, pub. 8-15-61. Cl. 33.
Sponsor Co., Washington, D.C., to Sponsor Publications Inc., New York, N.Y. 390,130, ren. 10-17-61. Cl. 38.
Sponsor Publications Inc.: See—
Sponsor Co.
Standard Packaging Corp., Chicago, Ill. 611,260, can. Cl. 2.
Standard Packaging Corp., Chicago, Ill. 611,408, can. Cl. 23.
Standard Tar Products Co., Milwaukee, Wis. 148,269, ren. 10-17-61. Cl. 6.
Stauffer Chemical Co., New York, N.Y. 722,730, pub. 8-1-61. Cl. 6.
Stearns & Foster Co., The, Cincinnati, Ohio. 150,127, ren. 10-17-61. Cl. 1.
Stearns & Foster Co., The, Cincinnati, Ohio. 150,594, ren. 10-17-61. Cl. 1.
Stearns & Foster Co., The, Cincinnati, Ohio. 150,599, ren. 10-17-61. Cl. 1.
Stearns & Foster Co., The, Cincinnati, Ohio. 150,802-3, ren. 10-17-61. Cl. 1.

- Stearns & Foster Co., The, Cincinnati, Ohio. 150,605, ren. 10-17-61. Cl. 1.
 Stearns & Foster Co., The, Cincinnati, Ohio. 150,609-10, ren. 10-17-61. Cl. 1.
 Stearns & Foster Co., The, Lockland, Ohio. 150,613, ren. 10-17-61. Cl. 1.
 Steiger, Mickie, Inc., Chicago, Ill. 722,859, pub. 8-1-61. Cl. 37.
 Sterilex Co., Inc., The, New York, N.Y. 391,528, ren. 10-17-61. Cl. 44.
 Sterling Drug Inc., New York, N.Y. 611,273, can. Cl. 6.
 Sterling Pharmacal Co., Newark, N.J. 722,888, pub. 8-1-61. Cl. 46.
 Stim-U-Plant Laboratories, Inc.: See—
 Stim-U-Plant Tablet Co.
 Stim-U-Plant Tablet Co., to Francis L. Pruyn of New York, N.Y., and John B. Goldsborough of Croton-on-the-Hudson, N.Y., Newark, N.J., to Stim-U-Plant Laboratories, Inc., Columbus, Ohio. 149,512, ren. 10-17-61. Cl. 10.
 Strait-Avery Co., Pueblo, Colo. 722,815, pub. 8-1-61. Cl. 22.
 Stuckler, Fred: See—
 National Starch and Chemical Corp.
 Stylemaster Corp., Gardena, Calif. 722,747, pub. 8-1-61. Cl. 12.
 Styron-Beggs Co., The, Newark, Ohio, to Rodney D. Heymann, d.b.a. Great Seal Co., Coudersport, Pa. 387,972, ren. 10-17-61. Cl. 46.
 Success Motivation Institute, Inc., Waco, Tex. 722,844, pub. 8-1-61. Cl. 36.
 Summit Corp., Scranton, Pa. 722,916, pub. 8-1-61. Cl. 103.
 Sun Chemical Corp., New York, N.Y. 722,762, pub. 8-1-61. Cl. 16.
 Sunbeam Corp., Chicago, Ill. 722,807, pub. 8-13-61. Cl. 21.
 Sundure Paint Corp., Syracuse, N.Y. 722,746, pub. 8-1-61. Cl. 12.
 Super Valu Stores, Inc., Hopkins, Minn. 722,904, pub. 8-1-61. Cl. 46.
 Superior Courts United, Inc.: See—
 Superior Motels, Inc.
 Superior Motels, Inc., by change of name from Superior Courts United, Inc., Dania, Fla. 722,913-14, pub. 8-1-61. Cl. 100.
 Swann, Damon J., Advertising Agency: See—
 Swann, Damon J.
 Swann, Damon J., d.b.a. Damon J. Swann Advertising Agency, Atlanta, Ga. 611,598, can. Cl. 101.
 Talmadge Farms, Inc., Lovejoy, Ga. 722,876, pub. 8-1-61. Cl. 46.
 Taylor Machine Works, Louisville, Miss. 611,406, can. Cl. 23.
 Technical Appliance Corp., Sherburne, N.Y. 611,356-7, can. Cl. 21.
 Teleprinter Corp.: See—
 Nite Corp.
 Tension Envelope Corp. of Kansas City, Kansas City, Mo. 722,857, pub. 8-1-61. Cl. 37.
 Terox Corp. of America, d.b.a. Roxite, Franklin Park, Ill. 722,752, pub. 8-1-61. Cl. 12.
 Texaco Inc.: See—
 Texas Co., The.
 Texas Co., The, Houston, and Port Arthur, Tex., and New York, to Texaco Inc., New York, N.Y. 150,620, ren. 10-17-61. Cl. 15.
 Thermomat Co., Inc., Trenton, N.J. 611,360, can. Cl. 21.
 Tidy House Products Co.: See—
 Pillsbury Co., The.
 Tiedeman & McMorran, Inc., San Francisco, Calif. 722,872, pub. 8-1-61. Cl. 46.
 Tipton, Ralph M., Brookfield, Ill. 611,546, can. Cl. 52.
 Torette Mfg. Co.: See—
 Delander, John B.
 Transvision, Inc., New Rochelle, N.Y. 611,349-50, can. Cl. 21.
 Travelmaster Coach Corp., Elkhart, Ind. 611,340. Cl. 19.
 Trudelle Doll & Toy Mfg. Co., Inc., New York, N.Y. 611,385, can. Cl. 22.
 Turco, Joseph J., Franklin, Mass. 722,851, pub. 8-1-61. Cl. 37.
 Union Carbide Corp., New York, N.Y. 722,837, pub. 8-1-61. Cl. 31.
 United Pure Food Co., New York, N.Y. 392,181, ren. 10-17-61. Cl. 46.
 U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 722,780, pub. 8-1-61. Cl. 18.
 U-Type-It Co. of America, The, Jasper, Ind. 611,552, can. Cl. 101.
 Vacu-Blast Co., Inc., Belmont, Calif. 722,918. Cl. 23.
 Vacu-Dry Co.: See—
 Boothe Fruit Co.
 Valley Sales Co., Turlock, Calif. 722,880-1, pub. 8-1-61. Cl. 46.
 Vectrol Engineering, Inc., Stamford, Conn. 722,805, pub. 8-1-61. Cl. 21.
 Ventura Pacific Co., to Ventura Pacific Co., Montalvo, Calif. 392,974, ren. 10-17-61. Cl. 46.
 Verona-Pharma Chemical Corp., Union, N.J. 722,785, pub. 8-1-61. Cl. 6.
 Vidiforms Co.: See—
 Weisberg, Robert L.
 Vinaflex Line, The: See—
 Whitaker Cable Corp.
 Viobin Corp., Monticello, Ill. 722,775, pub. 8-1-61. Cl. 18.
 Voss Belting & Specialty Co., Chicago, Ill. 722,824, pub. 8-1-61. Cl. 23.
 Ward Baking Co., New York, N.Y. 146,619, ren. 10-17-61. Cl. 46.
 Warren-Teed Products Co., The, Columbus, Ohio. 722,776, pub. 3-21-61. Cl. 18.
 Washburn: See—
 Washburn, Frederick C.
 Washburn, Frederick C., d.b.a. Washburn, New Bedford, Mass. 611,395, can. Cl. 23.
 Weco Products Co.: See—
 Western Bottle Mfg. Co.
 Wedge Seal Co.: See—
 Haynes, Joseph E.
 Weisberg, Robert L., d.b.a. Vidiforms Co., Brooklyn, N.Y. 722,861, pub. 8-1-61. Cl. 37.
 Wells Electronics Co.: See—
 Wells Mfg. Co., Inc.
 Wells Mfg. Co., Inc., d.b.a. Wells Electronics Co., South Bend, Ind. 722,798, pub. 8-1-61. Cl. 21.
 Western Bottle Mfg. Co., to Weco Products Co., Chicago, Ill. 148,960, ren. 10-17-61. Cl. 39.
 Western Brass Works, Los Angeles, Calif. 722,756, pub. 8-1-61. Cl. 13.
 Weyerhaeuser Co., Tacoma, Wash. 722,722, pub. 8-1-61. Cl. 2.
 Wheelabrator Corp., Mishawaka, Ind. 722,921. Cl. 31.
 Wheelindex Mfg. Co., Inc., Peekskill, N.Y. 722,860, pub. 8-1-61. Cl. 37.
 Whitaker Cable Corp., d.b.a. The Vinaflex Line, North Kansas City, Mo. 722,806, pub. 8-1-61. Cl. 21.
 Whitehall Laboratories: See—
 American Home Products Corp.
 Winthrop-Stearns Inc., New York, N.Y. 611,335, can. Cl. 18.
 Woolsey, C. A., Paint & Color Co., Jersey City, N.J., to C. A. Woolsey Paint & Color Co. Inc., New York, N.Y. 151,369, ren. 10-17-61. Cl. 16.
 Woolsey, C. A., Paint & Color Co. Inc.: See—
 Woolsey, C. A., Paint & Color Co.
 Zavody Bohemia, Narodni Podnik, d.b.a. Bohemia Works, Ceske Budejovice, Czechoslovakia. 722,855, pub. 8-15-61. Cl. 37.
 Zeiss, Carl, Oberkochen, Wurttemberg, Germany. 722,796, pub. 5-16-61. Cl. 21.

PATENTS

NOTICES

Selected Non-Proprietary Names

The Public Health Service has informed the Patent Office that the names listed below have been selected by WHO as recommended international non-proprietary names for pharmaceutical preparations.

The procedure for selection of these names, by WHO, in-

cluding earlier publication in accordance with procedures published in the Chronicle of the World Health Organization, June-July 1955 issue, has been completed. WHO requests that these recommended names be recognized as the non-proprietary names for the substances concerned and that the necessary steps be taken to prevent acquisition of proprietary rights in the same.

Recommended International Non-Proprietary Names (Latin, English)	Chemical Name or Description
acediasulfonum natrium	4-carboxymethylamino-4'-aminodiphenylsulfone sodium
acediasulfone sodium	
acetyldigitoxinum	α-acetyldigitoxin
acetyldigitoxin	
acidum thyropropicum	3-[4-(4-hydroxy-3-iodophenoxy)-3,5-diiodophenyl]propionic acid
thyropropic acid	
acidum trethocanicum	3-hydroxy-3,7,11-trimethyldodecanoic acid
trethocanic acid	
aethoxasorutosidum	monomorpholinylethylrutoside
ethoxasorutoside	
allimemazinum	10-(2-methyl-3-dimethylaminopropyl)phenothiazine
allimemazine	
allylestrenolum	17α-allylestr-4-en-17-ol
allylestrenol	
allylprodinum	3-allyl-1-methyl-4-phenyl-4-propionyloxypiperidine
allylprodine	
amanoxinum	2-amino-4-anilino-s-triazine
amanoxine	
ambazonum	1,4-benzoquinone amidinohydrasone thiosemicarbazone hydrate
ambazone	
aminoacridinum	9-aminoacridine
aminoacridine	
aminoglutethimidum	2-(p-aminophenyl)-2-ethylglutarimide
aminoglutethimide	
aminopromasinum	10-(2,3-bisdimethylaminopropyl) phenothiazine
aminopromasine	
aminoxyltriphenum	3-dimethylamino,1,1,2-tris (4-methoxyphenyl)prop-1-ene
aminoxyltriphen	
amopyroquinum	7-chloro-4-(4-hydroxy-3-pyrrolidin-1'-ylmethylanilino)quinoline
amopyroquin	
amphenidonum	1-(m-aminophenyl)-1H-pyrid-2-one
amphenidone	
amphotericinum B	a polyene antibiotic substance obtained from cultures of <i>Streptomyces nodosus</i> , or the same substance produced by any other means
amphotericin B	
anisindionum	2-p-methoxyphenylindane-1,3-dione
anisindione	
benzethidinum	1-(2-benzoyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
benzethidine	
benzmalecenum	N-(2,3-di-p-chlorophenyl-1-methylpropyl)maleamic acid (α-form)
benzmalecene	
benzthiazidum	3-benzylthiomethyl-6-chloro-7-sulfamoylbenzo-1,2,4 (5H)-thiadiazine 1,1-dioxide
benzthiazide	
benzylsulfamidum	4-benzylaminophenylsulfonamide
benzylsulfamide	
bialamicolum	3,3'-diallyl-5,5'-bisdiethylaminomethyl-4,4'-dihydroxydiphenyl
bialamicol	
biperidenum	1-(bicyclo[2,2,1]hept-5-en-2-yl)-1-phenyl-3-piperidinopropan-1-ol
biperiden	
bretylil tosylas	N-o-bromobenzyl-N-ethyl-N,N-dimethylammonium tosylate (tosylic acid is p-toluene-sulfonic acid)
bretylium tosylate	
brompheniraminum	(2-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
brompheniramine	
broparocetrolum	1-bromo-2-p-ethylphenyl-1,2-diphenylethylene
broparocetrol	

New Applications Received During August 1961		Issue	
Patents.....	7,067	Patents.....	786—No. 3,005,202 to No. 3,005,987, incl.
Designs.....	431	Designs.....	49—No. 191,605 to No. 191,653, incl.
Plant Patents.....	10	Reissues.....	5—No. 25,060 to No. 25,064, incl.
Reissues.....	20		
Total.....	7,528	Total.....	840

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

styramatum	2-hydroxyphenethyl carbamate
styramate	
sulfachlorpyridazinum	6-chloro-3-sulfanilamido pyridazine
sulfachlorpyridazine	
sulfachrysoidinum	2-carboxy-4,6-diamino-4'-sulfamoylazobenzene
sulfachrysoidine	
sulfadiazolofonium natrium	sodium 2-(N-acetylsulfamoyl)-4,4'-diaminodiphenylsulfone
sulfadiazolofone sodium	
sulfadimethoxinum	2,4-dimethoxy-6-sulfanilamido pyrimidine
sulfadimethoxine	
sulfathidolum	5-ethyl-2-sulfanilamido-1,3,4-thiadiazole
sulfathidole	
sulfamethoxypyridazinum	6-methoxy-3-sulfanilamidopyridazine
sulfamethoxypyridazine	
sulfaphenazonum	1-phenyl-5-sulfanilamidopyrazole
sulfaphenazol	
sulfasomizolum	3-methyl-5-sulfanilamidothiazole
sulfasomizol	
sulfathiourea	1-sulfanilylthiourea
sulfathiourea	
sulfatolamidum	1-sulfanilylthiourea salt of p-sulfamoylbenzylamine
sulfatolamide	
sulfapyrazonum	1,2-diphenyl-4-(2-phenylsulfylethyl)-3,5-pyrazolidinedione
sulfapyrazone	
sulfogalacolum	potassium 4-hydroxy-3-methoxyphenylsulfonate
sulfogalacol	
sulocarbllatum	2-hydroxyethyl p-sulfonamidophenylcarbamate
sulocarbllate	
syrosingopinum	4-ethoxycarbonyl-3,5-dimethoxybenzoic acid ester of methyl reserpate
syrosingopine	
tacrinum	9-amino-1,2,3,4-tetrahydroacridine
tacrine	
tetrammonii bromidum	tetraethylammonium bromide
tetrammonium bromide	
thalidomidum	alpha-thalimidoglutarimide
thalidomide	
thiamazololum	1-methyl-2-mercaptimidazole
thiamazole	
thiambutosinum	1-(p-butoxyphenyl)-3-(p-dimethylaminophenyl)thiourea
thiambutosine	
thiamphenicolum	D(+)-threo-2-dichloroacetamido-1-(p-methylsulfonylphenyl)propane-1,3-diol
thiamphenicol	
thihexinoli methylbromidum	trans-a,a-(dithien-2-yl)-(4-dimethylaminocyclohexyl) carbinol methylbromide
thihexinol methylbromide	
thiopropazolum	10-[3-(4-(2-acetoxyethyl)piperazin-1-yl)propyl]-2-chlorophenothiazine
thiopropazate	
thiopropazolum	N,N-dimethyl-10-[3-(4-methylpiperazin-1-yl)propyl]-phenothiazine-2-sulfonamide
thiopropazate	
thiotepa	triaziridin-1-ylphosphine sulfide
thiotepa	
toloxychlorinololum	1,1'-(3-o-tolylxypropylene)dioxy bis (2,2,2-trichloroethanol)
toloxychlorinol	
triacetinum	glyceryl triacetate
triacetin	
triacectyloleandomycinum	the triacetyl ester of oleandomycin, an antibiotic substance obtained from cultures of <i>Streptomyces antibioticus</i> , or the same substance produced by any other means
triacectyloleandomycin	
triametololum	9a-fluoro-16a-hydroxyprednisolone
triametolone	
triazolum	1-methylpyrrolidin-3-ylmethyl benzilate
triazate	
trichlobionil chloridum	hexamethylenebis(dimethyl(1-methyl-3-(2,2,6-trimethylcyclohexyl)propyl)ammonium chloride)hemihydrate
trichlobionium chloride	
trifluoperazinum	2-trifluoromethyl-10-[3-(1-methylpiperazin-4-yl)propyl]phenothiazine
trifluoperazine	
trifluoperazinum	2-trifluoromethyl-10-(3-dimethylaminopropyl) phenothiazine
trifluoperazine	
trimethidinil methosulfas	(+)-3-(3-dimethylaminopropyl)-1,8,8-trimethyl-3-azabicyclo[3,2,1]octane di(methyl-methosulfate)
trimethidinil methosulfate	
trimethobenzamidum	N-(p-2-dimethylaminoethoxybenzyl)-3,4,5-trimethoxybenzamide
trimethobenzamide	
trinitratum	triethanolamine trinitrate
trinitrate	
tropigilum	tropyl 2,3-dimethylacrylate
tropigiline	
xylometazolinum	2-(4-tert-butyl-2,6-dimethylbenzyl)imidazoline
xylometazoline	

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

Sept. 18, 1961.

Board of Appeals Decisions Rendered in the
Month of September 1961

Examiner affirmed	321
Examiner affirmed in part	30
Examiner reversed	58
Total	409

Final Fee Transmittal Form

The Office has noted that many practitioners are not making use of the Final Fee Transmittal Form (POL-85A) which accompanies each Notice of Allowance (POL-85B). This form was designed and intended as a convenience in remitting the final fee. It is suggested that it will be a convenience to all concerned if this form is used.

Excerpts From Public Law 87-206

[87TH CONGRESS, H.R. 8599]

September 6, 1961

[75 Stat. 475]

AN ACT

To amend various sections of the Atomic Energy Act of 1954, as amended, and the EURATOM Cooperation Act of 1958, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 7. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by deleting in the descriptive title the words "MILITARY UTILIZATION," and inserting in lieu thereof "INVENTIONS RELATING TO ATOMIC WEAPONS, AND FILING OF REPORTS."

SEC. 8. Subsection c. of section 151 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"c. Any person who has made or hereafter makes any invention or discovery useful in the production or utilization of special nuclear material or atomic energy, shall file with the Commission a report containing a complete description thereof unless such invention or discovery is described in an application for a patent filed with the Commissioner of Patents by such person within the time required for the filing of such report. The report covering any such invention or discovery shall be filed on or before the one hundred and eightieth day after such person first discovers or first has reason to believe that such invention or discovery is useful in such production or utilization."

SEC. 9. Section 151 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"e. Reports filed pursuant to subsection c. of this section, and applications to which access is provided under subsection d. of this section, shall be kept in confidence by the Commission, and no information concerning the same given without authority of the inventor or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commission."

SEC. 10. Section 152 of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

"SEC. 152. INVENTIONS MADE OR CONCEIVED DURING COMMISSION CONTRACTS.—Any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission, shall be vested in, and be the property of, the Commission, except that the Commission may waive its claim to any such invention or discovery under such circumstances as the Commission may deem appropriate, consistent with the policy of this section. No patent for any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, shall be issued unless the applicant files with the application, or within thirty days after request therefor by the Commissioner of Patents (unless the Commission advises the Commissioner of Patents that its rights have been determined and that accordingly no statement is necessary) a statement under oath setting forth the full facts surrounding the making or conception of the invention or discovery described in the application and whether the invention or discovery was made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission. The Commissioner of Patents shall as soon as the application is otherwise in condition for allowances forward copies of the application and the statement to the Commission.

"The Commissioner of Patents may proceed with the application and issue the patent to the applicant (if the invention or discovery is otherwise patentable) unless the Commission, within 90 days after receipt of copies of the application and statement, directs the Commissioner of Patents to issue the

patent to the Commission (if the invention or discovery is otherwise patentable) to be held by the Commission as the agent of and on behalf of the United States.

"If the Commission files such a direction with the Commissioner of Patents, and if the applicant's statement claims, and the applicant still believes, that the invention or discovery was not made or conceived in the course of or under any contract, subcontract or arrangement entered into with or for the benefit of the Commission entitling the Commission to the title to the application or the patent the applicant may, within 30 days after notification of the filing of such a direction, request a hearing before a Board of Patent Interferences. The Board shall have the power to hear and determine whether the Commissioner of Patents. The Board shall follow the rules and procedures established for interference cases and an appeal may be taken by either the applicant or the Commission from the final order of the Board to the Court of Customs and Patent Appeals in accordance with the procedures governing the appeals from the Board of Patent Interferences.

"If the statement filed by the applicant should thereafter be found to contain false material statements any modification by the Commission that it has no objections to the issuance of a patent to the applicant shall not be deemed in any respect to constitute a waiver of the provisions of this section or of any applicable civil or criminal statute, and the Commission may have the title to the patent transferred to the Commission on the records of the Commissioner of Patents in accordance with the provisions of this section. A determination of rights by the Commission pursuant to a contractual provision or other arrangement prior to the request of the Commissioner of Patents for the statement, shall be final in the absence of false material statements or nondisclosure of material facts by the applicant."

SEC. 11. Section 157 of the Atomic Energy Act of 1954, as amended, is amended by adding at the end thereof the following new subsection:

"d. TERM OF LIMITATIONS.—Every application under this section shall be barred unless filed within six years after the date on which first accrues the right to such reasonable royalty fee, just compensation, or award for which such application is filed."

SEC. 12. The second sentence of section 158 of the Atomic Energy Act of 1954, as amended, is amended to read as follows: "If the court, at its discretion, deems that such licensee shall pay a reasonable royalty to the owner of the patent, the reasonable royalty shall be determined in accordance with section 157."

Approved September 6, 1961.

Patent Laws Pamphlet

Patent Laws Pamphlet, Revised Edition, of January 3, 1961, is available. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.—Price 30 cents.

Disclaimers

2,831,224.—Herbert Libberton, Chicago, Ill. MATRIX AND METHOD OF MAKING SAME. Patent dated Apr. 22, 1958. Disclaimer filed Sept. 19, 1961, by the inventor, and the assignee, Tenak Products Company.

Hereby enter this disclaimer to claims 6, 7, 8, 9 and 10 of said patent.

2,861,900.—George H. Smith, Kenmore, N.Y., and Richard C. Eschenbach and John F. Pelton, Indianapolis, Ind. JET PLATING OF HIGH MELTING POINT MATERIALS. Patent dated Nov. 25, 1958. Disclaimer filed Sept. 11, 1961, by the inventors; the assignee, Union Carbide Corporation, assenting.

Hereby enter this disclaimer to claim 3 of said patent.

2,884,541.—Frederick H. Nicoll, Mercer County, N.J. ELUCESCENT LUMINESCENT IMAGE DEVICE. Patent dated Apr. 28, 1959. Disclaimer filed Sept. 12, 1961, by the inventor, and the assignee, Radio Corporation of America.

Hereby enter this disclaimer to claim 1 of said patent.

2,980,032.—Kenneth C. Schneider, Bethel, Conn. FUEL PUMP. Patent dated Apr. 18, 1961. Disclaimer filed Sept. 20, 1961, by the assignee, Brown Engine Products, Inc.

Hereby enters this disclaimer to all claims of said patent.

Order of Examination of Amended Applications

Effective November 1, 1961, applications which have received at least two actions on the merits and which have been submitted for further consideration and action shall be treated as special. Such applications shall retain special status throughout their prosecution before the Examiner.

The Examiners are instructed to set a Shortened Statutory Period of three months for response in all third and subsequent actions which include a rejection of claims but which are not Final Rejections. The full six months for response should ordinarily be allowed for Final Rejections.

The practice of setting a Shortened Statutory Period of about forty-five days in *Ex parte Quayle* type of actions remains unchanged as well as the practice of long standing of considering an application special wherein an amendment is filed which clearly places the application in condition for allowance, Quayle action, or Final Rejection.

This change in procedure is adopted to reduce the time of pendency of applications before the Patent Office. This objective will not be realized if requests for extension of the Shortened Statutory Period are granted freely. Primary Examiners should, therefore, limit any extension to approximately one month, and then only upon a showing of real hardship. No further extension will be considered except on petition to the Commissioner.

DAVID L. LADD,
Commissioner of Patents.

Oct. 12, 1961.

Adjudicated Patents

(D.C.N.C.) Neely Patent No. 2,480,677 (267-107), for wire spring for upholstered spring structure. Claims 1 through 4 Held valid and infringed. *Universal Inc. v. Kay Mfg. Corp.*, 195 F. Supp. 241; 130 USPQ 455.

(C.D. Ill.) Nehls Patent No. 2,280,605 (330-94), for locking closure. Claims 1 to 5 Held valid and infringed. *Wayne Metalcraft Co. v. Berkson Products, Inc.*, 195 F. Supp. 581; 130 USPQ 394.

Patents Available for Licensing or Sale

2,766,334. Multiple Switch With Release Mechanism. Orion S. Gresson, 436 Cherry St., Elizabeth, N.J.

2,812,681. Electrically Operated Key-Changing Harp Mechanism. Arthur L. Carron, 110 Cherry St., Geneva, N.Y.

2,917,108. Combination Table and Bench Construction. Waco-Porter Corp., % P. D. Golic, 948 Leader Bldg., Cleveland 14, Ohio.

2,934,124. Vehicle Tire Cooling Device. Richard S. Mhlsten, Brooklyn, N.Y. Correspondence to: A. A. Orlinger, 11 W. 42nd St., New York, N.Y.

2,961,527. Mining Machine Having Cutting and Breaking Rolls and Suction Transporting Means. Gelsenkirchener Bergwerks A.G., Essen, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

2,999,666. Valves. Aktiebolaget Brody Armaturfabrik, Brody, Sweden. Correspondence to: Wendroth, Lind & Ponack, 1343 H St., N.W., Washington 5, D.C.

3,001,815. Fishing Lure. Oskar Zimmermann, 438 New St., Renfrew, Ontario, Canada.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Specialty Control Department, Waynesboro, Va.

2,993,104. Electromagnetic Relay.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind. Attention: Patent Counsel.

2,862,506. Core Clamping Means.

2,916,685. Direct Current Motor Speed Control System.

Applications for license under the following 7 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,900,483. Electric Catalytic Contact Device.

2,900,807. Defrostable Evaporator Structure.

2,987,066. Electric Control Arrangement for Appliances.

2,987,895. Automatic Ice Maker.

2,988,414. Adjustable Freezer Door Mount.

2,997,353. Refrigerator Cabinet Including Improved Liner Mounting Means.

2,997,356. Sliding Shelf.

Admiral Corporation is willing to sell or grant licenses under the following 14 patents upon reasonable terms to domestic manufacturers.

Replies may be addressed to: James T. Barr, Patent Counsel, Admiral Corporation, 3800 Cortland St., Chicago 47, Ill.

2,479,512. Phonograph Drive.

2,498,333. Phonograph Record Holding Spindle.

2,536,432. Record Changer.

2,536,453. Phonograph Record Changer.

2,536,477. Phonograph Record Player Control.

2,578,866. Plural Needle Pickup Apparatus.

2,608,451. Multiple-Speed Phonograph Turntable Drive.

2,695,526. Phonograph Drive.

2,707,639. Phonograph Record Player Control.

2,801,109. Phonograph Record Player.

2,868,547. Automatic Record Player Mechanism.

2,935,324. Record Player Spindle Adapter.

2,983,515. Automatic Record Player.

2,989,312. Automatic Record Player.

Classification Order No. 323

The following transfers are hereby ordered to take effect on Monday, October 2, 1961:

From Division 63 to MED. "A":

Class 260, CHEMISTRY, CARBON COMPOUNDS

Subclass 461 (that portion now located in Division 63)

From Division 91 to Division 67

Class 41, ORNAMENTATION

The reclassification of Class 41 has advanced to a stage at which concurrent examination of applications pending therein is no longer advantageous. Reclassification will continue to completion in the Classification Group.

M. C. ROSA,

Director, Patent Examining Operation.

Classification Order No. 324

The following transfer is hereby ordered to take effect on Monday, October 2, 1961:

From Division 25 to Division 31

Class 202, DISTILLATION

M. C. ROSA,

Director, Patent Examining Operation.

Classification Order No. 325

Classification Order No. 325, dated October 4, 1961 incorporates changes in the following classes:

250

334, TUNERS (New Class—Bulletin No. 444)

The above changes will be incorporated in the Manual of Classification replacement pages dated January 1962.

M. C. ROSA,

Director, Patent Examining Operation.

CONDITION OF PATENT APPLICATIONS AS OF AUGUST 31, 1961

Total number of pending applications (excluding Designs)	197,748
Total number of pending Design applications	5,227
Total number of applications awaiting action (excluding Designs)	94,168
Total number of Design applications awaiting action	1,304
Date of oldest new application	May 16, 1960
Date of oldest amended application	May 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS		DIVISIONS	
(I) STONE, I. G., CHEMICAL AND RELATED ARTS		6, 21, 28, 43, 46, 50, 55, 58, 60, 62, 64, 16, 26, 37, 41, 42, 44, 48, 51, 54, 56, 58, 2, 12, 13, 14, 21, 24, 57, 58, 61, 61, 62, 7, 11, 17, 27, 34, 35, 30, 53, 62	
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS		5, 8, 20, 29, 33, 36, 40, 52, 66	
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS		1, 4, 9, 10, 12, 22, 23, 28, 45, 47	
(IV) SPITMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES		3, 15, 19, 25, 30, 32, 49, 55, 67	
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		91, 92, 93, 94, 95	
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION			
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE			
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS			
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application	
(Roman numerals in parentheses indicate Examining Group)		New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working and Clasp		2-2-61	1-9-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasp		2-15-61	1-17-61
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors		2-10-61	11-10-60
4. (VI) FALLER, E. A., Material or Article Handling		2-6-61	2-1-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics		9-26-60	9-12-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides		10-17-60	10-14-60
7. (IV) ANDERSON, E. G., Optics		12-20-60	12-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds		2-6-61	2-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines		1-16-61	1-5-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making		12-21-60	11-14-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits		10-10-60	10-3-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls		9-20-60	10-3-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning		10-10-60	10-31-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics		10-24-60	9-2-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus		2-10-61	3-2-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems		9-9-60	9-5-60
17. (IV) LEIGHEY, E. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering		9-13-60	9-26-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors		3-1-61	3-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners		1-10-61	11-15-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors		3-1-61	2-27-61
21. (III) MADER, R. C., Textiles		12-8-60	12-8-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Disphragms and Bellows		11-21-60	10-21-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education		4-7-61	4-3-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders		2-7-61	1-30-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making		11-1-60	11-1-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers		11-1-60	11-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids		1-6-61	12-5-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes		10-21-60	13-2-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings		11-14-60	11-10-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)		2-27-61	2-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
21. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.	10-5-60	11-4-60
22. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).	12-2-60	12-1-60
23. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.	10-28-60	10-7-60
24. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.	11-3-60	11-23-60
25. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.	1-17-61	1-10-61
26. (V) EVANS, R. L., Measuring and Testing (part).	10-11-60	10-5-60
27. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.	10-3-60	10-10-60
28. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.	9-6-60	9-12-60
29. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).	12-5-60	11-22-60
30. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.	2-6-61	1-30-61
31. (II) LOVEWELL, N. N., Records; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.	12-2-60	11-30-60
32. (II) BRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.	10-5-60	10-6-60
33. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.	8-8-60	8-20-60
34. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.	5-16-60	5-3-60
35. (VD) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.	3-1-61	3-1-61
36. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).	9-1-60	9-9-60
37. (VD) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles.	12-30-60	1-3-61
38. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.	8-8-60	8-1-60
39. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.	10-7-60	10-7-60
40. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.	11-9-60	12-1-60
41. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.	9-6-60	9-6-60
42. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).	2-27-61	3-1-61
43. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.	1-5-61	1-6-61
44. (II) NELSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.	6-29-60	7-19-60
45. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.	10-20-60	10-24-60
46. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.	9-1-60	10-14-60
47. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.	9-2-60	9-6-60
48. (III) BRONAUH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting.	1-4-61	2-1-61
49. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.	10-19-60	10-21-60
50. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.	9-6-60	9-12-60
51. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.	1-4-61	2-2-61
52. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.	11-7-60	11-14-60
53. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.	10-24-60	10-11-60
54. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.	8-16-60	8-11-60
55. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).	9-1-60	9-9-60
56. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales.	7-5-60	6-9-60
57. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.	12-15-60	12-9-60
58. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.	9-6-60	9-2-60
59. (III) MONCURE, J. A., Industrial Arts.	5-12-61	5-12-61
60. (III) HUNTER, E. H., Household, Personal and Fine Arts.	5-12-61	5-9-61
61. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.	10-4-60	10-28-60
62. GAUSS, H., Radio Transmitters, Receivers and Tuners.	3-6-61	3-6-61
63. WAHL, R. A., Wire Working.	1-30-61	2-2-61
64. BERLOWITZ, W., Gas Separation.	1-9-61	12-23-60
65. REZNEK, J. (acting), Metallic Building Structures.	12-9-60	12-6-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.	2-3-61	1-23-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 660. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,359,777 to 2,361,905, inclusive
Plant Patents.....Numbers 643 to 646, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE LEOPOLD S. ROMITO

No. 6680. Decided May 5, 1961

[48 CCPA —: 289 F.2d 518; 129 USPQ 359]

1. PATENTABILITY—OBVIOUSNESS—ADVANTAGE OF CLAIMED DEVICE OVER REFERENCE—PROOF.

Where the Board of Appeals, upon analysis of the structure of the reference device, concluded it would be more difficult to operate than appellant's device *Held* that, upon independent analysis, "such a factual conclusion as was reached by the Board is not justified, in the absence of an actual demonstration, merely on the basis of patent drawings which are not required to be working drawings."

2. SAME—SAME—SAME—SAME.

"We are not impressed with the factually unsupported argument predicated on a contribution of increased ease of operation to this art."

3. SAME—PARTICULAR SUBJECT MATTER—"LOUNGE CHAIRS."

The decision of the Board of Appeals holding a claim on an application for a patent entitled "Lounge Chairs" unpatentable over prior art is affirmed.

APPEAL from the Patent Office. Serial No. 517,584.

AFFIRMED.

Albert J. Kramer for appellant.

Clarence W. Moore (Raymond E. Martin, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania.

RICH, J., delivered the opinion of the court.

This appeal is from the refusal by the Patent Office of the one remaining claim, no claim having been allowed, of application Ser. No. 517,584, filed June 23, 1955, entitled "Lounge Chairs." Appellant is said to be the president of a corporation manufacturing beauty salon furniture and equipment and the chair sought to be patented is of the type for use therein having a foot rest which can be raised by the occupant of the chair, after sitting down in it, through a mechanical linkage actuated by a hand lever at one side of the chair. This type of chair is admittedly old and the improvement sought to be patented is said to reside in the footrest-actuating linkage.

The sole issue is patentability over the prior art. The invention is defined in the appealed claim, aptly described by appellant's attorney as a "picture claim," which reads as follows:

7. A chair having a seat; walls, including a front wall, a rear wall and side walls, forming a hollow structure supporting said seat, a foot rest disposed in front of said seat, hinges connecting the foot rest to the said structure for movement of the foot rest between a substantially horizontal operative position and a substantially vertical inoperative position, a rocker shaft disposed within the hollow structure between the front and rear walls parallel to the foot rest, bearings carried by the side walls for rotatably supporting the ends of the shaft, a bracket carried by the front wall for supporting the center portion of the shaft, said shaft having an extension through a side wall of the hollow structure, said extension being bent to provide a handle for rotating the shaft, an arm having one end secured to the shaft and the other end projecting downwardly therefrom when the foot rest is in its inoperative position, a pitman between said foot rest and arm, said pitman being substantially horizontal when the foot rest is in its inoperative position and having an extended portion, and an abutment member carried by said arm for contacting said extended portion and arresting relative movement between the arm and pitman when the foot rest is in the operative position and the point of connection between said pitman and arm is displaced

upwardly from a straight line passing through the shaft and pivot point of the pitman with the foot rest, said structure having an aperture through which the pitman is disposed.

Simplified, the latter part of the claim describes a two piece prop consisting of the arm and the "pitman," which is another arm, the two arms being pivoted together and constructed so that they have a kind of knee joint, giving stiffness when in alignment and breaking only when the joint moves downwardly. One end of this prop is pivotally attached to the back of the footrest and the other end is fixed to the shaft under the seat which is rotated by the hand lever. Thus the occupant of the chair, by pulling the lever, rotates the shaft, raises the pivot point between the arm and pitman (which is the front link of the prop) so that the prop assumes its rigid position and thus supports the footrest, which has been raised in the process.

Appellant makes a point of the fact that the pitman is always in a substantially horizontal position. When the footrest is lowered its connection therewith moves downwardly as does the forward end of the arm attached to the shaft. In the down position the pitman and arm are disposed at a right angle to each other. In raising the footrest the forward end of the arm moves forward and upward in an arc and pushes the footrest up, acting through the pitman. When the arm and pitman are slightly over center and just beyond an aligned position they lock and form a rigid prop for the footrest. Appellant points to the "great mechanical advantage" and easy operation of this linkage.

Though 10 references are of record the only prior art relied on by the time the case reached the Board is:

Berry, 1,262,006, April 9, 1918.

Krikorian, 2,746,519, May 22, 1956, filed Aug. 13, 1953.

Martin, 2,777,506, January 15, 1957, filed February 6, 1952.

Fidel, 2,833,338, May 6, 1958, filed February 21, 1955.

Appellant asserts that there is novelty in the invention defined in claim 7, which novelty resides in the linkage *per se*, and the Patent Office Solicitor admits this in saying that the statutory basis for the rejection is found in 35 U.S.C. 103, not in Section 102.

The reference principally relied on is Fidel, which was first cited in the Examiner's answer. It did not issue until after final rejection. At applicant's request, the Board remanded the case for reconsideration by the Examiner, claim 7 was amended, and thereafter rejected "as being unpatentable over Fidel." It was the Examiner's view that if Fidel's linkage did not operate with sufficient smoothness and efficiency it would be obvious to a skilled mechanic, in view of knowledge possessed by "even the unskilled layman," how to alter Fidel's linkage to overcome its possible shortcomings.

While the Board said that "the only serious question before us is whether claim 7 as amended is patentable over Fidel," it discussed the Berry and Krikorian

patents and seems to have relied to some extent on the latter as an indication of what a person of ordinary skill in the art would know, as an "exemplification" of the common knowledge of the art.

Fidel discloses a chair very much like appellant's in that it has a boxed-in base, a hinged footrest, a rocker shaft in the base with an actuating lever on it, and a footrest-raising and supporting prop consisting of two pivoted arms which lock when in substantially aligned position. The location of the rocker shaft is higher in appellant's structure than in Fidel and the proportioning of the links or arms is somewhat different. In consequence, Fidel's prop folds upwardly while appellant's folds downwardly and this is the significance of the claim limitation that the pitman is horizontal when the footrest is folded. Fidel's corresponding part is vertical. Fidel's rocker shaft being near the bottom of the base, his hand lever is about twice as long as appellant's, a factor to be taken into consideration in considering ease of operation.

The principal burden of appellant's argument is that his footrest operating mechanism is easier to operate than Fidel's. The same argument appears to have been made in the Patent Office. In petitioning the Board for rehearing, the petition said:

Appellant's invention has been on the market for some time and many chairs built in accordance therewith are in commercial use. They are competitive with chairs constructed on the Fidel principle and are considerably easier to operate.

While there is no evidence in the record to support these bare assertions, similar argument seems to have led the Board to make a statement, on which appellant leans heavily, as follows:

Analyzing the structure of Fidel, we find that it would be difficult if not impossible to start moving the foot rest from the position of FIGURE 3 by operation of handle 25 only. [Emphasis ours.]

The position of FIGURE 3 is the folded position of the footrest in which the two arms of the prop are in their collapsed position, in which they make an acute angle with one another.

[1] Analyzing Fidel's structure ourselves, we think such a factual conclusion as was reached by the Board is not justified, in the absence of an actual demonstration, merely on the basis of patent drawings which are not required to be working drawings. Furthermore, even those drawings show that the Fidel footrest is hanging in a position in which the slightest force would cause it to swing like a pendulum on its hinges and even a short swing would so increase the angle between the folded arms of the linkage as to make starting the movement of the footrest easy, especially with the long hand lever provided. From that point on, as clearly taught by Fidel with constant reiteration, his assembly acts as a toggle in raising the footrest into its "operative" or raised position. Considering the downward movement of this toggle and the mechanical advantage a toggle provides,¹ its angle with respect to the footrest, and the length of the hand lever, it is by no means certain to us that Fidel does not have an advantage over appellant in

¹ Hawkins' Mechanical Dictionary (1909) thus defines "Toggle Joint": An elbow joint; a mechanism common in many forms of presses and in stone crushers; by its action it gives an enormous mechanical advantage. It consists of two rods or plates hinged together and employed to transmit a varying force by side pressure on the hinge, which is called the knuckle or knee from its resemblance to the knee of a man.

ease of operation, at least in the final raising. On the basis of the record we deem it impossible to say whether Fidel's or appellant's footrest would be easier to operate. [2] We are not impressed with the factually unsupported argument predicated on a contribution of increased ease of operation to this art.

In any case, both the Examiner and the Board held, notwithstanding acceptance, at least arguendo, of the ease of operation argument, that no more than ordinary mechanical skill would be required to make the slight changes in Fidel necessary to make it correspond to appellant's structure and that the improved results produced by the changes—if indeed there would be any—would be no more than the expected. We find no error in this conclusion.

While it may be true, as appellant argues, that there is no suggestion in Krikorian or in Fidel to replace any of the mechanism of one with parts taken from the other, Krikorian's disclosure of linkages in a rocking chair with a lever-operated footrest, and also Berry's footrest with a toggle and lever operator therefor, more than adequately support the Board's view that there is nothing patentable in appellant's structure over Fidel because nothing is involved other than obvious mechanical variations well within the skill of the art.

[3] The decision of the Board is affirmed.
AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE OTIS J. MCCULLOUGH

No. 6684. Decided May 5, 1961

[48 CCPA —; 299 F.2d 524; 129 USPQ 361]

1. PATENTABILITY—INVENTION—35 U.S.C. 103—OBVIOUSNESS. " . . . 35 U.S.C. 103 precludes patentability when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would be obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.' "

2. SAME—PARTICULAR SUBJECT MATTER—RADIOACTIVE GUIDING SYSTEM FOR MOTOR VEHICLES.

The decision of the Board of Appeals refusing claims in an application for a reissue patent, entitled "Radioactive Guiding System for Motor Vehicles," as unpatentable over the prior art is sustained.

APPEAL from the Patent Office. Serial No. 654,435. AFFIRMED.

James P. Burns, G. Howard White (Burns, Doane, and Benedict, and R. Werlin, of counsel) for appellant. Clarence W. Moore (D. Kreider, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals sustaining the Examiner's final rejection of claims 1 through 11, 13 through 16 and 18 in application Ser. No. 654,435, filed April 22, 1957, for reissue of Patent 2,750,583, granted June 12, 1956 and entitled "Radioactive Guiding System For Motor Vehicles." No claims are allowed and the appeal is only from the refusal of claims 8, 14, 15, 16 and 18.

The vehicle guidance system disclosed uses a substantially continuous guiding line of radioactive mate-

rial to determine the path which is to be traveled automatically by the vehicle. A radiation detector positioned on the vehicle senses deviations from the guiding line and provides a control signal which indicates the presence of a deviation by flashing a light or ringing a bell and which, additionally, corrects for the deviation by controlling a servomechanism to automatically steer the vehicle. Automatic vehicle guidance is said to be especially desirable for motor vehicle highway travel and airplane landings, especially under hazardous conditions arising from fog, rain, darkness and other factors which substantially impair visual observation.

Claim 8 is exemplary and reads:

8. A radioactive guide system for mobile vehicles, comprising the combination with a mobile vehicle having a steering apparatus, of a substantially continuous radioactive guiding line defining a travel path on a surface traversed by said vehicle, of a radiation detector means positioned on said vehicle to move therewith relative to said guide line, said radiation detector being constructed and arranged to receive radioactive radiations from said guide line in amounts varying in proportion to the variations in the position of said vehicle to said guide line, of a servo-mechanism controlling said steering apparatus, and means connecting said detector to said servo-mechanism for actuating said servo-mechanism in accordance with the variations in indication received by the detector from said guide line. [Emphasis ours.]

Several modifications are disclosed for application to highway guidance, one using radioactive material in the center line of the highway and another having the radioactive material in a guide line along which the center of the vehicle passes. In either case, however, the application says that a "generally well known radiation detector . . . such as a Geiger-Muller counter, ionization chamber, scintillation counter or the like," located on the vehicle, senses changes in the quantity of radiation received from the guide line. "Conventional electrical circuit[s]" connect the detector output to "visual and audible indicating devices" or "other known signalling arrangements," the detector output also being connected to "a suitable and generally conventional servo-mechanism" for controlling the vehicle's steering system. Since we consider the details of these circuits unimportant, at least insofar as the claims involved are concerned, suffice it to say that the output from the radiation detector is amplified, the amplifier output energizes a relay and the relay in turn actuates a single-pole, double-throw switch which controls the current to a reversible servomotor. The reversible motor is operatively connected to the steering mechanism of the vehicle to actuate it in response to the received signals to maintain the course of the vehicle.

The references are:

- Paulus et al. (1), 2,317,400, April 27, 1943.
- Paulus et al. (2), 2,339,291, January 18, 1944.
- Hamilton 2,520,680, August 29, 1950.
- Stern (British) 664,192, January 2, 1952.

Throughout the prosecution of the application involved, the Paulus et al. patents have been considered identical insofar as their broad disclosures and their application to the claims involved is concerned. Therefore, of these two patents we find it necessary to consider only No. 2,317,400, later filed but first to issue.

¹ This claim differs from claim 8 of the patent only in the addition to the patent claim of the limitation that the guide line is "substantially continuous." On the reexamination incident to the reissue application the Patent Office has reversed its position on patentability of the subject matter of this claim. The patent claim also omitted "radioactive" in the phrase "radioactive radiations" but we do not regard this as a difference of substance.

It discloses a vehicle and mobile body guidance system which uses a current-carrying conductor as a "substantially continuous" guiding line. A detector located on the vehicle and responsive to the magnetic field surrounding the current-carrying conductor has two pick-up coils which detect changes or variations in the magnetic field resulting from deviations by the vehicle from the guide line. Signals from the pick-up coils are applied to a pair of amplifiers connected in a balanced bridge type circuit. In response to the output or unbalance of the bridge circuit a "galvanometer type" sensing device visually indicates the direction of deviation and also operates a servomechanism to steer the automobile.

Hamilton discloses a corn planter which deposits radioactive material each time a seed is planted. When the next row is planted, a detector on the planter senses the radioactive material deposited during the planting of the previous row and so controls the planter that the seeds being planted are evenly spaced, corresponding to the spacing in the adjacent row. While Hamilton apparently prefers a reflecting or fluorescent material which can be detected by a light source, he clearly contemplates depositing in lieu thereof "a radioactive or previously magnetically energized material which then without special excitation . . . would . . . cause operation of the marker dropping and seed dropping mechanisms." Hamilton also mentions other inert substances such as nickel and iron which could "be electrically or magnetically detected." However, no automatic guidance of the tractor which draws the planter is contemplated and, moreover, when the marking is done by substances which are not visually detectable, the operator could not use the markings as an aid in guiding his tractor.

In the British patent to Stern, a plurality of spaced buoys mark the boundaries of marine channels which are to be traveled. Radioactive material within each buoy is shielded so as to emit one or more beams of radiation or, alternatively, a single rotating beam. The ship traversing the paths marked by the buoys has a radiation detector which may indicate quantity as well as direction of radiation, the quantity being inversely proportional to the square of the distance between the buoy and the ship. The patent also says that such a system can be used to provide a "directional aid on land and for aircraft." As in Hamilton, however, no automatic steering is disclosed.

The Board reversed the Examiner's rejection of the claims as being anticipated by either Stern or Hamilton alone, affirming, however, their rejection as being unpatentable over the Paulus et al. patents in view of either Hamilton or Stern. Paulus et al. was said to disclose a continuous guidance and control system and the secondary references were said to disclose "the use of radioactive material . . . in guiding the position of the land vehicle in Hamilton and a ship in Stern." The Board said:

. . . It seems to us that a person skilled in this art, and cognizant of the disadvantages of using a continuous current-carrying cable, would be led by the teaching in the Hamilton patent to substitute a line of continuous radioactive material in place of the continuous current-carrying cable of Paulus et al. and use a radioactive responsive means on the vehicle in place of the magnetic responsive means now disclosed by Paulus et al. in order to effectuate the control and steering functions of the Paulus patents. The use and basic features of a continuous guide line is clearly disclosed by Paulus et al. and this would suggest the use of a continuous line of radioactive material when used in connection with either Paulus et al. device.

Appellant contends that the prior art does not suggest a "continuous or substantially continuous radioactive guide means along the travel path" and since the Paulus et al. guidance system requires an energized cable directly below the vehicle and a detector responsive to the magnetic field surrounding the current-carrying conductor, he argues that any combination would require that "the entire circuitry of the Paulus disclosure be revised" so as to be responsive to an unenergized or inert indicating material. Additionally, he points out that the continuous conductor system of the Paulus et al. patents has so many disadvantages that "no practical employment of any suggestions of Paulus et al." is known. As respects Hamilton, he argues that since no guidance of the tractor is disclosed, it is "anything but apparent" that certain admitted defects of the Paulus system can be overcome by using a radioactive guide line. Hamilton, he says, would be totally inoperative if the radioactive material were deposited in a "substantially continuous" line. This deficiency is also said to be present in Stern in that a continuous guide line is not contemplated and, moreover, would constitute an "intolerable navigation hazard."

None of the references alone anticipates the admittedly novel combination. [1] Nevertheless, 35 U.S.C. 103 precludes patentability when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would be obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." As we construe the claims, the Paulus et al. patents show the over-all claimed combination with the exception of those limitations which we have italicized in claim 8 as above quoted. Those "differences" are the recitation of "radioactive," "radiation," and "radioactive radiation." Clearly what appellant seeks broadly to patent is the concept of using the radiations from a radioactive material as the standard or intelligence supplying medium in a guidance system instead of the magnetic field produced in the current-carrying wire of Paulus et al.

Appellant's arguments on patentability are not convincing. Each of the elements in the claimed combination is either well known or conventional. It is unnecessary, we feel, that there be a teaching in the prior art of how, specifically, to "completely revise" the Paulus circuitry. One skilled in the art would be able to devise the radiation detector arrangement, control circuits and servomechanisms, given the idea of using radioactive material as the guide. The sole issue is, therefore, whether it would have been obvious to one having ordinary skill in this art to substitute radiations from a radioactive material for the magnetic field of the current-carrying conductor in the combination disclosed by Paulus et al. Use of radioactive materials for determining position with respect to a fixed marker or indicator is old, in Hamilton with respect to a previously planted seed and in Stern with respect to the direction and distance to the buoys. We are of the opinion that these teachings would suggest to one having ordinary skill in the art the use of radioactive material as the source of guiding intelligence in place of the current-carrying conductor in Paulus. As taught by Hamilton, a radioactive mate-

rial is but one of the many marking or indicating materials one skilled in the art would know to be useful.

Appellant also argues that in Paulus et al. it is necessary that the vehicle pass directly over the current-carrying conductor while in the claimed combination, using a radioactive guiding line, the vehicle may traverse a path to one side of the guide. This argument ignores the language of the claims which clearly do not distinguish from a guidance system in which the vehicle passes directly over the guiding line, whether that line be of radioactive material or a current-carrying conductor. As we view the claimed combination, it is also immaterial that both Stern and Hamilton use spaced rather than continuous radioactive indicators. The continuous feature is clearly shown by the Paulus et al. patents.¹ From the other references it would be obvious that radioactive material could be used for guidance.

[2] We find no reversible error in the Board's decision which is, therefore, affirmed.

AFFIRMED.

Worley, Chief Judge, sat but did not participate in the decision of this case.

U.S. Court of Customs and Patent Appeals

WEISS NOODLE COMPANY v. GOLDEN CRACKNEL AND SPECIALTY CO.

No. 6685. Decided June 2, 1961

[48 CCPA —; — F.2d —; 129 USPQ 411]

1. TRADEMARK—CANCELLATION—DESCRIPTIVENESS—NAME IN FOREIGN LANGUAGE.

In a cancellation proceeding brought by appellee to cancel registration of the mark "HA-LUSH-KA" for egg noodles and egg noodle products, where the evidence showed that the mark was the phonetically spelled version of the Hungarian word, "haluska" which means inter alia, noodles, and the court found that the subject matter of the registration was the name in Hungarian, of at least some of the noodle products enumerated in the registration, *Held* that "As such it falls within the statutory prohibition of section 2(e) which proscribes the registration of merely descriptive words"; that "The name of a thing is the ultimate in descriptiveness"; and that "It is immaterial that the name is in a foreign language."

2. SAME—SAME—REGISTRABILITY—ERROR OF EXAMINER.

In connection with a cancellation proceeding, where the record showed that the Examiner had retreated from an objection to registration of a mark on the ground of descriptiveness after a showing of the applicant, *Held* that "If he committed error, it is no more binding in this cancellation proceeding than is the issuance of the registration in any other."

3. SAME—SAME—SAME—DE FACTO SECONDARY MEANINGS.

Marks may indicate origin or have acquired what may be called "de facto secondary meanings," due to temporary use by no one other than the applicant, for example and yet cannot be registered.

4. SAME—SAME—SAME—"HA-LUSH-KA" FOR EGG NOODLES AND EGG NOODLE PRODUCTS.

With respect to the registrability of "HA-LUSH-KA" for egg noodles and egg noodle products, the evidence showing that the mark was the phonetically spelled version of the Hungarian word "haluska" which means, inter alia, noodles, *Held* that "In the instant case registration of the

¹ Moreover, we note that the involved application says:

"The guide line may be continuous or may be interrupted by unmarked intervals which will normally be relatively short particularly if the vehicle is to be driven at relatively high speeds along the defined path."

Spacing would apparently depend upon allowable tolerances of the travel path.

Hungarian name for noodles, "haluska" or its phonetic equivalent in English, whether or not hyphenated, would be contrary to law for no one can be granted the exclusive use of the name of an article, either in our native tongue or its equivalent in any foreign language."

5. SAME—SAME—SAME—DESCRIPTIVENESS—SECONDARY MEANING.

"... the descriptive name of a product is unregisterable regardless of acquired secondary meaning."

6. SAME—SAME—SAME—SAME.

"In deciding whether the mark registered is in fact the name of the product, we look to the description of the products in the registration, not to the registrant's market practices."

APPEAL from the Patent Office. Cancellation No. 7,100.

AFFIRMED.

Herbert J. Jacobi for appellant.

Thomas L. Poindexter for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This is a cancellation proceeding. The Trademark Trial and Appeal Board granted the petition of Golden Cracknel and Specialty Co. to cancel Registration No. 627,468 of May 22, 1956, granted to Weiss Noodle Co. on application Ser. No. 644,651, published March 6, 1956, in Class 46.

The mark registered was "HA-LUSH-KA" (the quotes being part of the mark) for "Egg Noodles; and Egg Noodle Products—Namely, Macaroni, Spaghetti, and Egg Noodle Novelties in Different Shapes, All Having the Required Egg Content." The registration shows on its face that it was granted under section 2(f) and the asserted date of first use is Aug. 18, 1952.

The registration was cancelled on the ground that "HA-LUSH-KA" is nothing more than a hyphenated, phonetically spelled version of the Hungarian word "haluska" which means, inter alia, noodles and as such is the "common descriptive name for egg noodles." Significant statements in the Board's opinions (one on a request for reconsideration) are as follows:

Petitioner's record shows that it is a competitor of respondent in the sale of noodles, and that it has, since the end of 1957, used "Ha-Lush-Ka" to identify a type of noodle of its manufacture. "Haluska" is listed in a Hungarian-English Dictionary as the equivalent of "Galuska," which term is defined as "noodles, dumplings." A Hungarian born member of petitioner's firm testified that "Haluska" is pronounced as "Halushka" in the Hungarian language.

Respondent's exhibits comprise five packages of the various types of noodles which it sells ... one "Ha-Lush-Ka." The back portion of the "Ha-Lush-Ka" bag bears a Hungarian-Slavic recipe for "Kaposzta Hal-Lush-Ka or (Galuska)." "Kaposzta" is a Hungarian word meaning cabbage and the recipe is for making a cabbage noodle dish.

It is clear from the record in this case that "Galuska" means noodles; "Haluska" is the equivalent of "Galuska"; "Halushka" is the phonetic equivalent of "Haluska"; and that respondent, as well as the petitioner and others in the trade, have used "Ha-Lush-Ka" to identify a particular type of noodle.

And on petition for reconsideration:

"... attention is directed to 'A Dictionary of the Hungarian and English Language' by Arthur B. Yoland and 'English-Hungarian Dictionary' by Frans De Paula Bizonfy, copies of which are available for inspection in the Patent Office, wherein 'Haluska' is respectively defined as 'a kind of paste' and 'an edible paste,' and wherein the former, on page IX of the introduction, it is indicated that in the Hungarian language, the letter 'H' is pronounced like the (sh) in shut, wish, and the like.

As to the dictionary definitions, appellant, while not disputing their existence, argues that there is "no such word as 'HA-LUSH-KA' in the Hungarian language."

While the statement is true in the narrowest possible sense, the argument is without substance. The Hungarian word "haluska" is pronounced as though it were spelled "Halushka" (to an English-speaking person) and merely to hyphenate the phonetic version does not destroy its identity. Furthermore, Mr. Weiss, managing partner of the appellant company, owner of the registration, testified:

XQ249. How old were you when you came to the United States? A. I was ten years old.

XQ250. Had you ever heard the word, Hungarian word h-a-l-u-s-k-a, before you came to the United States at any time? A. I had heard that word, yes.

On review of the record, we are compelled to regard the subject matter of the registration as the name, in Hungarian, of at least some of the noodle products enumerated in the registration. [1] As such it falls within the statutory Prohibition of section 2(e) which proscribes the registration of merely descriptive words. The name of a thing is the ultimate in descriptiveness. *In re Cooper*, 45 CCPA 923, 254 F.2d 611, 117 USPQ 396. It is immaterial that the name is in a foreign language. *In re Northern Paper Mills*, 20 CCPA 1109, 64 F.2d 998, 17 USPQ 492.

Appellant appears to rely principally on the argument that even if "HA-LUSH-KA" ever was descriptive, it has become distinctive of appellant's product, has acquired a "secondary meaning" as an indication of the origin of appellant's product, which justified if, indeed it did not compel, the granting of the registration in the first place and now justifies continuance of the registration.

While it is true that the registration was granted after objection by the Examiner that "HA-LUSH-KA" is descriptive and "not capable of distinguishing applicant's goods in commerce from similar goods of others," which rejection was retreated from after a showing by appellant, the question here is whether the Examiner erred in not adhering to his rejection. [2] If he committed error, it is no more binding in this cancellation proceeding than is the issuance of the registration in any other. Appellant argues here, as it argued on the petition for reconsideration, that the Board overlooked the fact that registration was granted under section 2(f) because it had become distinctive and complained that the Board cited no authority for cancelling a registration issued under section 2(f). Before us appellant cites the case of *Bavarian Brewing Co., Inc. v. Heileman Brewing Co.*, 107 USPQ 245 (Com'r.), apparently for the proposition that upon a showing of distinctiveness a mark must be considered to be registrable, or at least for the proposition that such a showing imposes on petitioner here a very heavy burden which has not been discharged.

The Board's answer to this argument was that "HA-LUSH-KA," as the common descriptive name for egg noodles, "could not have acquired a secondary meaning as an indication of origin of respondent's noodles." [Italics ours.]

[3] We have recently had occasion to consider several situations in which various marks had in fact come to indicate origin or had acquired what we may call "de facto secondary meanings," due to temporary use by no one other than the applicant, for example, yet which cannot be registered. Compare *J. Kohstam, Ltd. v. Louis Marx & Co., et al.*, 47 CCPA 1080, 280 F.2d 437, 126 USPQ 362; *In re The Delator Concentrator Co.*, 48 CCPA —, — F.2d —, — USPQ —;

In re Shakespeare, 48 CCPA —, — F.2d —, — USPQ —; *De Walt, Inc. v. Magna Power Tool Corp.*, 48 CCPA —, — F.2d —, — USPQ —. [4] In the instant case registration of the Hungarian name for noodles, "haluska" or its phonetic equivalent in English, whether or not hyphenated, would be contrary to law for no one can be granted the exclusive use of the name of an article, either in our native tongue or its equivalent in any foreign language. *Holland v. C. & A. Import Co.*, 22 USPQ 249 (S.D.N.Y.); *Dadrian v. Yacubian et al.*, 98 Fed 872 (CCA-1). See also *Bart Schwartz International Textiles, Ltd. v. Federal Trade Commission*, 48 CCPA —, — F.2d —, — USPQ —. The reason was succinctly stated by the Board at the conclusion of its initial opinion, where it said:

"... respondent's registration of this term with the presumptions following therefrom is inconsistent with the right of petitioner and others in the trade to use 'Haluska' or 'Ha-Lush-Ka' as such [i.e. the descriptive name for egg noodles]."

The Examiner erred in accepting the showing of "distinctiveness" in granting the registration because no matter what the market situation may have been as to indication of origin or secondary meaning, the common descriptive name of the product cannot become a trademark owned exclusively by one vendor. The registration must therefore be cancelled.

The arguments predicated on the extent of appellant's sales of its product under the "HA-LUSH-KA" mark and the advertising expenditures related thereto cannot be given weight. While it is always distressing to contemplate a situation in which money has been invested in a promotion in the mistaken belief that trademark rights of value are being created, merchants act at their peril in attempting, by advertising, to convert common descriptive names, which belong to the public, to their own exclusive use. Even though they succeed in the creation of de facto secondary meaning, due to lack of competition or other happenstance, the law respecting registration will not give it any effect. When the Board said "HA-LUSH-KA" could not acquire a secondary meaning it meant that no secondary meaning of legal significance could be acquired. [5] It would perhaps be more realistic to say that the descriptive name of a product is unregistrable regardless of acquired secondary meaning. Contrary to the statement appellant quotes from the headnote of the Bavarian Brewing case, section 2(f) is not a "Congressional mandate to register all marks which have become distinctive," assuming we can conceive of the descriptive name of a thing as a "mark."

There is considerable emphasis in appellant's brief on the fact that appellant was the first to develop and market in this country a specific egg noodle product 1" wide, 0.080" thick, and 5" long, this being the product it identified as "HA-LUSH-KA." There are also overtones of unfair competition in the brief which suggests that the petitioner for cancellation copied the product as well as the name and seeks cancellation as a means of harassing appellant and forestalling suit for infringement. We are not concerned with these matters but only with the propriety of the registration which, it will be noted, is not specific to any particular kind of noodle. Indeed, it is so broad as to include, in the category of noodles, macaroni and spaghetti.¹

¹ To add our bit to the record, Muret-Sanders German-English dictionary (1910) defines the German word "Nudel" as "strips of dough or paste" and "italienische nudel" as "macaroni, (Faden)nudeln, vermicelli."

[6] In deciding whether the mark registered is in fact the name of the product, we look to the description of the products in the registration, not to the registrant's market practices.

The decision of the Board is affirmed.
AFFIRMED.

U.S. Court of Customs and Patent Appeals

BART SCHWARTZ INTERNATIONAL TEXTILES, LTD.

v.

THE FEDERAL TRADE COMMISSION

No. 6599. Decided April 14, 1961

[48 CCPA —; 289 F.2d 685; 129 USPQ 258]

1. TRADEMARKS—REGISTRABILITY—DESCRIPTIVENESS.

"There is no question but that the Italian word 'focco' is descriptive of 'spun rayon' and as such is subject to the general rule that a descriptive word in a foreign language cannot be registered in the United States as a trademark for the described product."

2. SAME—CANCELLATION—CANCELLATION SOUGHT BY FEDERAL TRADE COMMISSION—LANHAM ACT, SECTION 14 (c) AND (d).

"... Congress has specifically limited the grounds upon which [the Federal Trade Commission] may seek cancellation of a trademark registration to those listed in subsections (c) and (d) of Section 14 of the Lanham Act (15 U.S.C. § 1064 (c) and (d))."

3. SAME—SAME—LANHAM ACT, SECTION 14(c).

In regard to a petition for cancellation of the mark "focco" based upon alleged fraudulent misrepresentations in registrant's sworn declaration as to its ownership of the mark and as to the rights of others to use the mark, *Held* that "To sustain the ... cancellation petition under Section 14(c) of the Lanham Act, it is sufficient to prove that at the time of the application for registration the registrant knew that others had the right to use and were using the word 'focco' as the name of the product."

4. SAME—SAME—LANHAM ACT, SECTION 1 (a) (1).

Held that "The position of the Trademark Trial and Appeal Board is fallacious in that it is based on the assumption that registrant had a 'duty' to disclose to the Patent Office that the Italian word 'focco' meant staple rayon, since Section 1(a)(1) of the Lanham Act requires merely that an applicant for registration verify a statement that 'no other person, firm, corporation, or association, to the best of his knowledge and belief, has the right to use such mark in commerce, either in the identical form thereof or in such near resemblance thereto as might be calculated to deceive.'"

5. SAME—VERIFIED DECLARATION—OBLIGATION NOT TO MAKE KNOWINGLY INACCURATE OR MISLEADING STATEMENTS.

"The obligation which the Lanham Act imposes on an applicant is that he will not make knowingly inaccurate or knowingly misleading statements in the verified declaration forming a part of the application for registration."

6. SAME—CANCELLATION—FRAUD—MERE WITHHOLDING INFORMATION NOT FRAUDULENT.

"The mere withholding of information as to the meaning of the Italian word 'focco' is not such a fraudulent withholding of information as to warrant cancellation of the mark."

7. SAME—SAME—SAME—MISREPRESENTATION OF FACT IN DECLARATION.

Registration of the mark "FIOCCO" *Held* to have been "obtained fraudulently" within the meaning of Section 14(c) of the Lanham Act "because of the misrepresentation in the declaration concerning what appellant knew to be the right of others to use the word 'focco'." ... The evidence, ... establishes ... that [appellant] ... at the time he verified the application for registration of 'FIOCCO' as appellant's trademark knew that others had the right to use this word in 'commerce' for textile fabrics."

8. SAME—SAME—SAME—EVIDENCE.

"One acting in good faith who has been mistaken as to an essential fact would, it seems to us, wish to correct such a mistake when it was called to his attention. We think it is significant, therefore, that instead of so acting [appellant], when called as a witness to testify in this proceeding, concocted such a fanciful history of how he 'developed' the mark that we are unable to give it credence."

9. SAME—SAME—CANCELLATION SOUGHT BY FEDERAL TRADE COMMISSION—DESCRIPTIVENESS NOT GROUND FOR CANCELLATION.

"'Ground Two' of the petition for cancellation is based on the alleged descriptiveness of the mark but has not been considered for it does not state a ground for cancellation which can be asserted by the Federal Trade Commission in a cancellation proceeding under Section 14 of the Lanham Act."

APPEAL from the Patent Office. Cancellation No. 6,858.

AFFIRMED.

Fulton Brylawski (E. Fulton Brylawski, of counsel) for appellant.

Jess C. Radnor for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court.

The Federal Trade Commission, acting under Section 14 of the Lanham Act (15 U.S.C. 1064), petitioned for cancellation of appellant's Registration No. 623,601, issued March 20, 1956, on an application filed June 20, 1955, for the mark "FIOCCO" for "textile fabrics in the piece of cotton, rayon, synthetic fibers, and mixtures thereof." First use and use in commerce is alleged to be May 2, 1955.

The single issue before us, viz., was appellant's Registration No. 623,601 "obtained fraudulently" within the meaning of Sec. 14(c) of the Lanham Act (15 U.S.C. 1064(c)), must be resolved against the factual background of this case as revealed in the record before us.

The present proceeding is the first of its kind to reach this court. To understand the fact situation upon which it is based it is necessary to begin with the activities of the George White Textile Company in Kansas City during the early 1950's. This company had contracts with some Italian textile manufacturers and at that time was engaged in the business of importing textile fabrics from Italy.

The fabrics of chief interest in this business were those called "focco" in Italy. Such fabrics are made wholly or in part of spun rayon in which a continuous filament of rayon is cut to form short staple fibers. The cut fibers are spun to produce a yarn which is then woven into textile fabrics. This method of utilizing rayon was developed in Italy as early as 1929, and the new product, both in the form of "focco" yarns and fabrics containing stated amounts of "focco," was extensively promoted and sold in the United States throughout the following decade and until trade in it was terminated by the Second World War.

The record is clear that the word "focco" has for at least twenty years been used in the Italian textile industry to mean staple rayon yarn as distinguished from continuous filament rayon. The word "focco"

has been so used in the official tariff regulations of Italy for many years. Since at least 1945, it has been accepted by the United States Customs Bureau as meaning staple rayon.

George White, the dominant factor in the George White Textile Company, went to New York City during the latter part of August 1954, to secure financial backing and marketing facilities for his company. While in New York he met Bart Schwartz, a promoter and advertising specialist in the over-the-counter piece goods trade, whom he interested in the Italian textile fabrics, chiefly those made wholly or in part of "focco." As a result of this meeting an agreement was reached, and Bart and White International Textiles, Ltd., was incorporated under the laws of New York. Later, White and Schwartz decided that they, together with Zecchin (one of White's partners) and Rudolph (book-keeper for Schwartz), should visit Italy to secure franchises from the Italian manufacturers. During the trip to Italy in October of 1954, the party visited numerous Italian manufacturers and secured a number of exclusive, three-year franchises for the Western Hemisphere. While there, they ordered substantial amounts of samples of fabrics made of "focco" which were shipped soon thereafter.

After returning to the United States, Schwartz severed relations with White, organized Bart Schwartz International Textiles, Ltd., the appellant herein, and had this corporation substituted for the Bart and White International Textiles, Ltd., in all of the then existing franchises with the Italian manufacturers.

Schwartz subsequently severed relations with Zecchin and proceeded without either White or Zecchin in the promotion of business under the Italian textile import franchises. During the latter part of 1954 and early 1955, appellant received samples of fabrics containing specified amounts of "focco" and Schwartz corresponded with the Italian producers concerning the problem of "whether fabrics made of Focco yarn can be sold as unconditionally guaranteed washable." During the period from October 1954 until May 1955, shipping documents and letters received by appellant refer to the composition of the imported fabrics in terms of their "focco" content.

On June 20, 1955, appellant filed its application to register the word "FIOCCO" for "textile fabrics in the piece of cotton, rayon, synthetic fibers and mixtures thereof," which resulted in the granting of Registration No. 623,601, here in issue.

Shortly after the registration was granted, appellant filed the registration with the United States Customs Bureau, and for a time successfully stopped the importation of fabrics made of "focco." A "tear sheet" service was retained to check on advertising of "focco" fabrics by others and information thus secured was transmitted to appellant's attorneys who sent notices of infringement in large numbers to those in the trade who had advertised "focco" fabrics, and two suits for infringement of the trademark "FIOCCO" were instituted. At this point, the Federal Trade Commission filed the petition for cancellation here in issue. Subsequently, appellant instituted four more infringement suits based on its registration.

¹ A "sample," in this business, according to the testimony of George White, ranged from 5 yards up to 30 or 40 yards.

[1] There is no question but that the Italian word "fiocco" is descriptive of "spun rayon" and as such is subject to the general rule that a descriptive word in a foreign language cannot be registered in the United States as a trademark for the described product. See *In re Northern Paper Mills*, 20 OCPA 1109, 64 F.2d 906, 17 USPQ 492, and cases there cited.

[2] This fact is of no assistance to the Federal Trade Commission here, for Congress has specifically limited the grounds upon which it may seek cancellation of a trademark registration to those listed in subsections (c) and (d) of Section 14 of the Lanham Act (15 U.S.C. § 1084(c) and (d)). The Federal Trade Commission has, accordingly, asserted as "Ground One" of its petition to cancel the registration:

"... that said registration was obtained fraudulently in that at, and prior to, the time that application was made for said registration, the registrant was not the owner of the mark within the meaning of Section 1(a)(1) of the Trademark Act of 1946 and the registrant knew that other persons, firms, corporations or associations had the right to use and were using the mark sought to be registered contrary to the statement made and filed by the registrant as required by Section 1(a)(1) of said Trademark Act of 1946; ..."

[3] However, in the present proceeding, the Federal Trade Commission can prevail only by showing that the registration "was obtained fraudulently" within the meaning of this term as used in Section 14(c) of the Lanham Act, *supra*. The petition for cancellation is based upon alleged fraudulent misrepresentations in registrant's sworn declaration as to its ownership of the mark and as to the rights of others to use the mark. To sustain the present cancellation petition under Section 14(c) of the Lanham Act, it is sufficient to prove that at the time of the application for registration the registrant knew that others had the right to use and were using the word "fiocco" as the name of the product.

The Trademark Trial and Appeal Board in granting the petition for cancellation (121 USPQ 99), based its decision, at least in part, on the ground that appellant had withheld from the Patent Office a material fact, i.e., that Bart Schwartz at the time of signing the sworn statement on behalf of appellant knew that the word "fiocco" was an Italian word used to mean staple rayon and that by withholding such information the registration "was obtained fraudulently." Appellant here challenges this holding and asserts that it fully complied with the statutory requirements including the signing of the verified declaration containing the statement required by Section 1(a)(1) of the Lanham Act. In support of its position, appellant asserts that nothing in the Lanham Act requires an applicant for trademark registration to disclose the information which the Board held should have been disclosed.

[4] The position of the Trademark Trial and Appeal Board is fallacious in that it is based on the assumption that registrant had a "duty" to disclose to the Patent Office that the Italian word "fiocco" meant staple rayon. No authority is cited by the Board for this proposition. Any "duty" owed by an applicant for trademark registration must arise out of the statutory requirements of the Lanham Act, particularly those found in Section 1(a)(1). This section requires merely that an applicant for registration verify a statement that "no other person, firm, corporation, or association, to the best of his knowledge and belief, has the right to use such mark in commerce, either

in the identical form thereof or in such near resemblance thereto as might be calculated to deceive."

[5] The obligation which the Lanham Act imposes on an applicant is that he will not make *knowingly* inaccurate or *knowingly* misleading statements in the verified declaration forming a part of the application for registration.

[6] The mere withholding of information as to the meaning of the Italian word "fiocco" is not such a fraudulent withholding of information as to warrant cancellation of the mark. [7] Nevertheless, despite this holding it is clear to us that the registration "was obtained fraudulently" within the meaning of Section 14(c) of the Lanham Act because of the misrepresentation in the declaration concerning what appellant knew to be the rights of others to use the word "fiocco."

The evidence, both direct and circumstantial, establishes to our satisfaction that Schwartz on May 18, 1955, at the time he verified the application for registration of "FIOCCO" as appellant's trademark knew that others had the right to use this word in "commerce" for textile fabrics. His statement in the declaration is a misrepresentation of fact as distinguished from the mere expression of an opinion.

Bart Schwartz signed the verified declaration on behalf of appellant to induce the Patent Office to grant the registration in reliance upon this misrepresentation of fact. From the record as a whole it seems clear to us that Schwartz as appellant's president was not acting in good faith in this respect at the time he signed the declaration. From what we have found in the record it seems clear that he possessed knowledge of facts which was contrary to the statement made in the declaration.

[8] One acting in good faith who has been mistaken as to an essential fact would, it seems to us, wish to correct such a mistake when it was called to his attention. We think it is significant, therefore, that instead of so acting Schwartz, when called as a witness to testify in this proceeding, concocted such a fanciful history of how he "developed" the mark that we are unable to give it credence.

The extent of this fabrication is shown in the testimony of Schwartz. He testified that at the end of the trip to Italy in October of 1954, he discussed with an associate at breakfast in Milan the desirability of finding a "gimmick" in the textile and fashion world which would dramatize and "promote Italy to the masses." While engaged in this discussion, he testified he was attracted by the Italian wording on a box of Kellogg's corn flakes and noted "FIOCCHI di GRANOTURCO" (Italian equivalent of corn flakes), and that he told his associate that they "must study how to respell this name where it's a fast, quick name and will have a meaning." According to his testimony, he stayed up for hours, and at four o'clock in the morning he woke his associate and told him "Lou, I've got it"—and he showed him the word "fiocco."

We take the same view of this testimony as that so well expressed by the Trademark Trial and Appeal Board:

"It takes credulity to believe that Mr. Schwartz, a self-styled textile promotion man, would not have seen or heard of the word 'fiocco' in at least some of the rayon textile mills in Italy when the term has been in such long and common usage there to differentiate spun or short staple rayon

from continuous filament rayon; and it takes credulity even more to believe that from seeing the words "FIOCCHI di GRANOTURCO" on a box of corn flakes, Mr. Schwartz, who speaks no Italian, independently arrived at the word "FIOCCO" for use as a trademark on spun rayon or staple rayon textile fabrics—a word which has been in long and common usage in Italy to mean spun or short staple rayon.

We are unable to reconcile this fabrication in the testimony here presented with appellant's protestations of good faith in making the statements on which the registration was based.

It seems to be the essence of appellant's argument here that the rights of others were not misrepresented in the declaration because the trademark was sought for textile fabrics and not for the materials from which such fabrics were made. While now admitting knowledge of the use by others of the word "fiocco" to designate spun rayon fibers and the fiber content of fabrics, appellant would here justify the statement made in the declaration on the ground that such use by others was not the use of "fiocco" as a trademark for textile fabrics.

The phrase "textile fabrics" as used in the registration is somewhat redundant as to woven fabrics in that such fabrics are "textiles." Webster's New International Dictionary, Second Edition (1949) defines textile, a noun, as "that which is, or may be woven; a woven fabric or a material for weaving" (emphasis added). The registration as granted covers "textile fabrics in the piece of cotton, rayon, synthetic fibers and mixtures thereof." We think it is significant that Schwartz testified the mark "fiocco" is not used on cotton materials and that it is used only on materials which contain "fiocco" or which are 100% "fiocco."

Words such as "wool," "cotton," and "rayon" have long been used to designate both the fiber and the textile fabrics made therefrom. The record is replete with instances of use by others, prior to that alleged by appellant, of the word "fiocco" as the name of the material from which a textile fabric was woven. The record also contains numerous examples of the use by others of the word "fiocco" to designate the fiber content of various textile fabrics prior to appellant's asserted adoption of this word as its trademark.

The record also clearly establishes that Bart Schwartz had knowledge of this use of the word "fiocco" by others at the time he signed the declaration as president of and on behalf of appellant. At the first meeting between Schwartz and George White in White's hotel room in New York in August of 1954, White displayed his imported fabric samples to Crandall and Schwartz, which samples included many fabrics which were marked to show their "fiocco" content. White at that time explained the meaning of the word, which on the present record appears to have been then unknown to both Crandall and Schwartz. While the testimony before us is not clear as to subsequent meetings, there appears to have been a series of other meetings between Schwartz and White.

White, called as a witness testified that he had imported samples of fabrics made in Italy which he said had "always been known as fiocco" and which were described in sales to him as "fiocco." He testified also that when Schwartz first came to his room in the hotel in New York he showed Schwartz samples of Italian fabrics which had been brought from Kansas City. White's testimony that the fabric samples he showed Schwartz were marked "fiocco" is as follows:

Q48. Now, did any of these samples that you had and showed to Mr. Bart Schwartz include fiocco? A. Yes, it did, sir.

Q49. Was fiocco marked on any of the samples? A. Some of them were marked "fiocco."

Q50. In what way was fiocco marked? A. It was marked right on the edge of cloth similar to what Dell'Aqua has got right there.

Mr. Radnor: The witness pointing to petitioner's Exhibit R.

Q51. Were they marked in the manner that appears on petitioner's Exhibit R? A. Yes, sir. As is. At that time they weren't marked on the selvage. Just at the edge of the piece of cloth. Just like that.²

During the visit to the Italian producers in October 1954, Schwartz with the other members of the party visited numerous manufacturers and the fabrics of each producer were carefully examined and the "fiocco" content noted. In some instances, there were discussions with the manufacturers to the end that the "fiocco" content of the fabrics should predominate over that of other materials sufficiently to allow entry of the fabrics in the United States as rayon rather than as other fabrics which might require payment of a higher tariff rate.

It is clear, therefore, that prior to the date on which Schwartz, as president of appellant corporation, signed the declaration forming a part of the application for trademark registration, he had knowledge of the prior use by others both in Italy and in the United States of the word "fiocco" to identify the fiber content of the textile fabrics which contained fiocco yarn. The word "fiocco" when so used designates the textile fiber in the same way that wool, cotton, flax and other names identify these fibers as being the material from which such textile fabrics are made. This knowledge we impute to the corporate applicant as its responsibility for the factual misrepresentation made by Schwartz in the declaration.

We conclude, therefore, that the statement in the declaration sworn to by Schwartz that "no other person, firm, corporation or association, to the best of his knowledge and belief, has the right to use such trademark in commerce which may lawfully be regulated by Congress either in the identical form thereof or in such near resemblance thereto as might be calculated to deceive" was executed despite factual information to the contrary which we find from the evidence he possessed at that time.

Under the circumstances of this case, we find that such a false statement of fact in the declaration supports a holding that the registration in issue "was obtained fraudulently" within the meaning of Section 14(c) of the Lanham Act and that it should be cancelled.

The issue thus far discussed relates solely to "Ground One" of the petition to cancel the registration. [9] "Ground Two" of the petition for cancellation is based on the alleged descriptiveness of the mark but has not been considered for it does not state a ground for cancellation which can be asserted by the Federal Trade Commission in a cancellation proceeding under Section 14 of the Lanham Act.

² Appellee's motion to correct diminution of the record to include "petitioner's Exhibit R," referred to in the foregoing portion of the testimony, was opposed by appellant for the reason, among others, that "appellee-petitioner's Exhibit 'R' was not competent, relevant or probative evidence in the proceedings below, though it was introduced as part of the deposition of George White over appellant's objection." In view of this objection, we denied the petition and are left with the testimony of White which establishes that he showed Schwartz samples of fabrics which included "fiocco" some of which were marked "fiocco"—"right on the edge of cloth."

We find that the additional matter certified to the court as a part of the record was reasonably necessary to a proper determination of the issues raised by the assignment of errors. Therefore, the costs of printing such additional material are taxed against the appellant.

For the reasons herein set forth, the decision of the Trademark Trial and Appeal Board is affirmed.

AFFIRMED.

Worley, Chief Judge (dissenting):

There is entirely too much doubt in my mind that the record fairly supports the majority view that the registration "was obtained fraudulently" within my understanding of Section 14(c). I would reverse.

Martin, J. (dissenting):

I agree with the majority that it was not incumbent upon Schwartz to inform the Patent Office that "FIOCCO" was the Italian word used to describe spun rayon fiber if that be so.¹ However, I disagree with the ultimate conclusion of the majority because I believe that when a court finds one guilty of falsely swearing to a document, it must set forth very precisely the particular evidence which supports the charge.

The majority points out no specific evidence which can be the basis of its finding that Schwartz swore falsely in connection with his declaration concerning the trademark² at issue which the court must do to sustain its finding that Schwartz obtained the trademark fraudulently.

Schwartz, on behalf of Bart Schwartz International Textiles, Ltd., stated in the application that said corporation,

... has adopted and is using the trade-mark shown in the accompanying drawing for textile fabrics in the piece of cotton, rayon, synthetic fibers and mixtures thereof, in Class 42, Knitted, netted and textile fabrics, and substitutes therefor, and presents herewith five specimens (or facsimiles) showing the trade-mark as actually used in connection with such goods, the trade-mark being applied to labels affixed to the goods, and requests that the same be registered in the United States Patent Office on the Principal Register in accordance with the Act of July 5, 1946.

He declared:

BART B. SCHWARTZ, being duly sworn, deposes and says that he is the President of BART SCHWARTZ INTERNATIONAL TEXTILES, LTD. the applicant named in the foregoing statement, that he believes that said corporation is the owner of the trade-mark which is in use in commerce among the several states and that no other person, firm, corporation or association, to the best of his knowledge and belief, has the right to use such trade-mark in commerce which may lawfully be regulated by Congress either in the

identical form thereof or in such near resemblance thereto as might be calculated to deceive, that the drawing and description truly represent the trade-mark sought to be registered, that the specimens (or facsimiles) show the trade-mark as actually used in connection with the goods, and that the facts set forth in the statement are true. [Emphasis mine.]

Regardless of the question of descriptiveness as it pertains to the imported Italian fiber or fabric containing the fiber, or the conclusions to which one may come as to Schwartz's knowledge of the use of the word by others in a descriptive manner, the majority fails to cite any specific testimony which established that any person or corporation was using "FIOCCO" as a trademark to identify the source or origin of textiles containing this fiber or that Schwartz had knowledge that any person or corporation was using "FIOCCO" as a trademark for spun rayon or textiles made of that yarn at the time the declaration was made.

I do not believe that the testimony as to Schwartz's knowledge that "FIOCCO" was used to describe spun rayon or textiles containing spun rayon can be the basis for a charge of fraud involving a declaration concerning the use of the word as a trademark. It should be noted he declared his company was using the trademark for textile fabrics and that his company is the owner of the trademark and that no other person, firm or corporation, to the best of his knowledge or belief has "the right to use such trademark." [Emphasis mine.]

It seems to me that if the majority opinion is carried to its logical conclusion many who file or have filed applications under Section 2(f) of the Lanham Act for the registration of merely descriptive words as trademarks could be subject to the charge of fraud even though the only evidence offered is that others have used the words descriptively which fact was known to the would-be registrants.

To require one who has openly used a word as a trademark for the purpose of identifying his goods for a number of years to know that because others have used it descriptively he is subject to a charge of fraud if he obtains registration, would be establishing a precedent which will cause undue restraint or hardship on past, present and future applicants not contemplated or warranted by the provisions of the Lanham Act.

For example, this court has recently had before it a case involving facts wherein an applicant might have been charged with fraudulently obtaining a registration if the mark had been registered and the case involved cancellation rather than opposition proceedings under this majority opinion. In that case, applicant, using declaration similar to that at bar, endeavored to register "Power Shop" as its trademark for woodworking saws, whereas another corporation had been using the same words descriptively for many years on the same type of goods which were trademarked "Shopamith."³ Although there was no direct evidence in the record of that case that applicant's officers were aware of that descriptive use by the other corporation, in view of the extensive advertising

³ DeWalt, Inc. (Pennsylvania Corp.), DeWalt, Inc. (Delaware Corp.). (Assignees by means assignments, substituted) v. Magna Power Tool Corporation. — CCPA —; — F.2d —; — USPQ —.

¹ Although the record in this case may indicate that "fiocco" is used by the Italian textile industry to describe spun or staple rayon fibers, according to Marotti, "Technical Dictionary" (English-Italian, Italian-English, Firenze, 1957), the Italian textile industry uses "fiocco" to mean *fioccos*, *flock*, or *staple* when referring to material such as wool. Further, according to Denti, "Technical Dictionary" (Italian-English, English-Italian, Milan, 1955), when referring to textiles, the Italian equivalent of *staple fiber* is "fibra fiocco," the Italian equivalent of *staple rayon* is "fiocco rayon," the Italian equivalent of *staple rayon yarn* is "fiato di fiocco rayon." It is apparent, therefore, insofar as these dictionaries are concerned, "fiocco" means *staple* when used in the textile sense.

² "Trade-mark. The term 'trade-mark' includes any word, name, symbol, or device or any combination thereof adopted and used by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others." (Trademark Act of 1946, § 45.)

of competitive goods by that other corporation,⁴ I think it can be assumed and could easily have been proven that the applicant had such knowledge.

Under those circumstances, the charge of fraudulently obtaining the registration would be just as applicable in the DeWalt case as it is in the case at bar. Of course, I do not believe that it applies in either situation, but it appears to me that this is the logical result of the majority opinion.

U.S. Court of Customs and Patent Appeals

IN RE H. J. SELLER CO.

No. 6619. Decided May 5, 1961

[48 CCPA —; 289 F.2d 674; 129 USPQ 347]

1. TRADEMARKS—CONFUSING SIMILARITY—SERVICES—CATERING OF FOOD AND SALE OF FOOD.

Where an applicant for service mark registration contends that catering food service is so distinct from selling specific food products that there is no likelihood of the purchasing public's confusing its mark with that of the registrant held that "we cannot agree with this contention" inasmuch as "the difference between a service for the catering of food and the actual sale of food is a rather fine legal distinction not likely to be drawn by laymen."

2. SAME—SAME—USE OF ADDITIONAL FEATURE WITH REGISTERED MARK.

"The appellant * * * argues that confusion can be avoided by using accompanying legends with its mark and points to its menu * * * on which the trademark appears with the words 'caterers since 1873' in a decorative panel flanked by silhouettes of two servitors. The decision of this court in *Salem Commodities, Inc. v. Miami Margarine Co.*, 44 CCPA 932, 244 F.2d 729, 114 USPQ 124, disposes of that contention. The court there pointed out that there was no assurance that the applicant would continue to use a picture which it had always used in the past in connection with its mark and that it must, therefore, be presumed that the applicant intended to use the mark as registered rather than in connection with the picture."

APPEAL from the Patent Office. Serial No. 14,588.

AFFIRMED.

Dos T. Hatfield, Porter Chittick & Russell (Robert B. Russell, of counsel) for appellant.

Clarence W. Moore (George C. Roeming, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania.

KIRKPATRICK, J., delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board affirming the Examiner's refusal of registration to the appellant, H. J. Seller Co., of the mark "Seller's," in script, as a service mark for catering food. The refusal was upon the basis of the registration of "Seller's" also in script by Karl Seller & Sons of Philadelphia for smoked and cured meats—namely, bacon, bologna, dried beef, boneless butts, ham, luncheon roll, meat loaf, pork roll, sausage, and scrapple.

It appears from a menu distributed by the appellant at a flower show in Boston and offered in evidence that, in addition to its catering business, it sells food products including seafood, chicken a la king and

⁴ For example, almost four million circulars containing a descriptive use of "Power Shop" were distributed by the other corporation to its dealers and prospective purchasers of its competitive merchandise during a 3½-year period before the applicant attempted to obtain registration of the same words as a trademark.

braised beef at "better food markets everywhere," also that it serves luncheon and dinner at a restaurant in Wellesley, Massachusetts.

[1] The appellant's contention here is that the catering food service is so distinct from selling specific food products that there is no likelihood of the purchasing public's confusing its mark with that of the registrant. We cannot agree with this contention. The marketing practices of today are such that a customer who attends a banquet which he knows is catered by the appellant would, when he encounters a food product in the grocery store under an almost identical mark, naturally assume that it came from the catering firm. The fact that catering firms do market food can hardly be disputed by this appellant in view of its solicitation, on menus used by it in its catering business, of customers for the retail sale of its food products, and the difference between a service for the catering of food and the actual sale of food is a rather fine legal distinction not likely to be drawn by laymen.

It is, of course, possible that purchasers of the smoked meats would not be likely to call upon the smoked meat manufacturer for catering service. However, if customers of the catering service believe that the smoked meat in the grocery store comes from the caterer, it is not necessary that they also believe that the smoked meat manufacturer is the caterer. Either supposition creates confusion as to source or origin.

[2] The appellant also argues that confusion can be avoided by using accompanying legends with its mark and points to its menu above referred to on which the trademark appears with the words "caterers since 1873" in a decorative panel flanked by silhouettes of two servitors. The decision of this court in *Salem Commodities, Inc. v. Miami Margarine Co.*, 44 CCPA 932, 244 F.2d 729, 114 USPQ 124, disposes of that contention. The court there pointed out that there was no assurance that the applicant would continue to use a picture which it had always used in the past in connection with its mark and that it must, therefore, be presumed that the applicant intended to use the mark as registered rather than in connection with the picture.

The decision of the Trademark Trial and Appeal Board is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

KING-KUP CANDIES, INC. v. KING CANDY COMPANY

No. 6633. Decided April 14, 1961

[48 CCPA —; 288 F.2d 944; 129 USPQ 272]

1. TRADEMARKS—CONFUSING SIMILARITY—"KING-KUP" AND "KINGS" FOR CANDY.

Upon review of the decision below sustaining an opposition by appellee-opposer, based on registration of "KINGS," to appellant's application for registration of the mark "KING-KUP," both for candy, held that the Trademark Trial and Appeal Board properly relied on the proposition that "there is more than a probability that, if the marks should be used concurrently, the casual purchaser of candy, familiar with Kings' candies, would, as the board said, 'assume upon encountering "King-Kup" candy that "King-Kup" candy is a candy in cup form originating with opposer,"' that is, that "the purchaser would be very likely to assume that King's was engaged in promoting a particular product of its own manufacture."

APPEAL from the Patent Office. Opposition No. 37,239.

AFFIRMED.

William Steell Jackson and Sons (Edward Lovett Jackson, Joseph Gray Jackson, and John B. Armentrout, of counsel) for appellant.

Mason, Fenwick & Lawrence (Edward G. Fenwick, Jr., and G. Cabell Busick, of counsel) for appellee.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

KIRKPATRICK, J., delivered the opinion of the court.

This is an appeal by the applicant, King-Kup Candles, Inc., from the decision of the Trademark Trial and Appeal Board sustaining an opposition to the registration of the trademark, "King-Kup."

The opposer is King Candy Company, registrant of "King's" and "King's for American Queens," and its priority is not disputed.

Both parties are manufacturers of candy and the goods in connection with which the marks are used are generally the same.

Neither party has made any point of the slight difference between the words "King" and "King's" nor of the fact that each of the competing marks consists in part of the corporate name of one of the parties, nor do we. The question involved is not an applicant's right to use its mark but its right to registration.

The issue here is whether the applicant's mark so resembles either of the opposer's marks as to be likely to cause confusion or mistake or to deceive purchasers. We shall, therefore, consider "King's" only.

The Board found as a fact that the word "cup" indicates the form of a candy and that that term is so used generally in the trade and particularly in the applicant's advertising. It is applied to candies made and sold in the form of cups including milk chocolate peanut butter cups and milk chocolate coconut cups. It is clear, therefore, that the syllable "Kup," which is a full equivalent of the word "cup," is descriptive. The fact that king-cup is a dictionary recognized word for a common wild flower does not render its use in the candy business, in which "cup" is a descriptive term, fanciful or arbitrary.

In *The Bon Ami Company v. McKesson & Robbins, Inc.*, 25 CCPA 820, 93 F.2d 915, 38 USPQ 260, Judge Hatfield, in a special concurring opinion, said:

If all that a newcomer in the field need do in order to avoid the charge of confusing similarity is to select a word descriptive of his goods and combine it with a word which is the dominant feature of a registered trademark so that the borrowed word becomes the dominant feature of his mark, the registered trademark . . . soon becomes of little value . . .

Paraphrasing a part of the opinion of the court in *National Drying & Machinery Company v. Ackoff*, 129 F. Supp. 389 (E.D. Pa.), *aff'd.*, 228 F.2d 349 (an action for infringement of the trademark "National" used on different types of drying machinery by the trademark "National Dryer" used on electric hand dryers), it must be conceded that "King's" is almost as weak a mark as can be found. However, it is quite likely that a purchaser would have some difficulty in explaining which product he desired if he should try to identify it by its trade name. He would have to ask for King's cup candles as distinguished from King-

Kup cup candles, or vice versa. If a trademark, however weak, is to retain any value at all, its owner must be protected against a competitor's placing his customers in such a dilemma.

[1] One reason for the rule as stated in Judge Hatfield's opinion appears rather strongly in the present case, namely, that there is more than a probability that, if the marks should be used concurrently, the casual purchaser of candy, familiar with King's candles, would, as the Board said, "assume upon encountering 'King-Kup' candy that 'King-Kup' candy is a candy in cup form originating with opposer." In other words, the purchaser would be very likely to assume that King's was engaged in promoting a particular product of its own manufacture. This was the point mainly relied upon by the Board in its decision and we agree.

AFFIRMED.

SMITH, J., and MARTIN, J., dissenting:

The majority opinion and the decision of the Board seems to us to give an unwarranted scope to opposer's registration. We would, therefore, reverse the Board and dismiss the opposition. The mark on which the opposition is based is not "King," as it was treated by the Board and as it is treated in the majority opinion. The registration was granted on the possessive form of opposer's surname "King" written in a particular script.

The Board, and the majority in affirming the Board, treat the third party registrations as "irrelevant to the question of likelihood of confusion." Where, as here, the question of likelihood of confusion is based on an opposer's registration, prior third party registrations, while of limited evidentiary value, are nevertheless relevant to assist in determining the area in which such an opposer can assert exclusiveness of his mark.

The record contains third party registrations for candy prior to the granting of opposer's registration in which the word "King" appears in either of its plural or possessive form as part of the following marks:

Reg. No.	Date	Goods
567,608	Dec. 9, 1952	Chocolate confection candy pieces.
385,756	Mar. 18, 1941	Glazed fruits and candies, and chocolate candies.

The following prior third party registrations show the word "King" for candy.

Reg. No.	Date	Goods
531,707	Oct. 10, 1950	Orange marmalade and candy.
300,597	June 8, 1948	Candies.
438,212	Apr. 13, 1948	Candy.
420,581	Apr. 23, 1946	Candy bars, peanut butter and candy kisses.
415,116	July 10, 1945	Candy.
309,106	Jan. 2, 1934	Candies and chocolates.

The precise issue here, whether applicant's mark so resembles opposer's registered mark that when applied to applicant's goods it is likely to cause confusion or mistake or to deceive purchasers, should be decided against this background of third party registrations and our view that opposer has but a limited area in which it can assert exclusiveness for its mark.

Another feature of the majority opinion with which we do not agree is the dissection of applicant's mark in arriving at the conclusion that confusion, mistake

or deception of purchasers would be likely. This court has consistently held that marks must be considered in their entireties in determining whether such confusion, mistake or deception is likely to occur. *Lekas & Drivas, Inc. v. Tenth Avenue Trading Corp.*, 42 CCPA 1010, 223 F.2d 294, 106 USPQ 190; *Sleepmaster Products Co., Inc. v. American Auto-Felt Corp.*, 44 CCPA 784, 241 F.2d 738, 113 USPQ 63; *Goodall-Sanford, Inc. v. Tropical Garment Mfg. Co.*, 47 CCPA 821, 275 F.2d 736, 125 USPQ 189.

Applicant's mark is "King-Kup." Unless we are to ignore our prior holdings, the proper basis for comparison of the marks is to compare opposer's mark "King's" with applicant's entire mark "King-Kup."

Such a comparison leads to the conclusion that the marks are sufficiently different so that confusion, mistake or deception would not be likely.

Another aspect of this case, which is overlooked in the majority opinion, is found in the different meanings which are inherent in the two marks. Opposer's mark "King's" being the possessive form of the name "King" immediately associates it with an entity capable of possessing. Applicant's mark, however, has no such possessive connotation, the word "King" is here used as an adjective. Its use in this sense denotes a quality, or something attributable to the noun cup, spelled "Kup" in applicant's mark. As such the adjective use defines the range of application of the noun or specifies it as being distinctive from something else. In this sense the word "King" has many uses as in "kingbolt," "king cobra," "king crab," etc. It also has

acquired, due to extensive advertising uses by others, a suggestion of size as in "king" size cigarettes, etc.

When, as here, we are dealing with common words we must be ever alert to their precise meanings and characteristics. As Mr. Justice Holmes observed in a different context in *Towne v. Eisner* (1918), 245 U.S. 418, 425:

A word is not a crystal, transparent and unchanged. It is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used.

Here opposer's mark "King's," has been endowed by the majority opinion with the properties of the common chameleon and as such has been permitted to change the color of its skin and according to the mood of opposer to take on a color and content of meaning quite different from that on which registrability was predicated.

The word "King" per se standing alone in the candy field is, as shown by the prior third party registrations, a very weak mark. At this point we are in accord with the concession in the majority opinion that "King's" is almost as weak a mark as can be found. However, we would not sustain the present opposition, where the only source of likely confusion, mistake or deception arises from the use by applicant of the word "King" as a part of its entire mark "King-Kup." "King" when so used does not suggest or indicate the opposer could be the source of the candy on which applicant uses its mark. *Goodall-Sanford, Inc. v. Tropical Garment Mfg. Co.*, 47 CCPA 821, 275 F.2d 736, 125 USPQ 189.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,131,306, B. Walker, Motor vehicle, filed Sept. 1, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/170. *Brooks Walker et al. v. General Motors Corporation et al.*

2,411,200, Glover and Childers, Apparatus for supporting and cementing liners or casings in well bores; Re. 24,650, E. H. Clark, Variable orifice casing filling apparatus, filed Aug. 30, 1961, D.C., N.D. Tex. (Wichita Falls), Doc. 1461. *Baker Oil Tools, Inc. v. Totem Oil Tools, Inc.*

2,678,348, E. C. Ballard, Color television interlacing system, filed Sept. 8, 1961, D.C. Del. (Wilmington), Doc. 2369. *Philco Corporation v. Radio Corporation of America.*

2,694,562, C. H. Snyder et al., Apparatus for continuously digging coal; 2,677,909, same, Continuous mining machine with virtually separable cutter carrying units, filed Aug. 30, 1961, D.C., E.D. Ill. (Danville), Doc. 1894-D. *The Colmo Company v. Old Ben Coal Corporation.*

2,706,012, J. G. Talcott, Apparatus for erecting storage enclosures, filed Feb. 19, 1958, D.C.N.D. (Bismarck), Doc. 66. *James G. Talcott v. Jacobsen, Inc. et al.* Stipulation and order restraining defendant and dismissing certain prayers for relief in the complaint Sept. 5, 1961.

2,792,296, M. M. Wright, Herbicidal granular pellets and method of applying the same, filed Mar. 4, 1960, D.C., E.D. Ark. (Little Rock), Doc. LE-60-C-23. *Diamond Alkali Company et al. v. Reaser-Hill Corporation.* Consent judgment; patent held valid and infringed Sept. 8, 1961.

2,823,509, M. E. Lindsay, Cotton picking spindle; Re. 24,612 (of 2,787,100), same, filed June 24, 1959, D.C., S.D. Calif. (Fresno), Doc. 1964-ND. *Maurice E. Lindsay et al., doing business as Spindle Specialty Company v. Victory Tool & Die Co., Inc.* Consent judgment (notice Sept. 8, 1961).

2,835,017, B. R. Hoerr, Nail stake, filed May 5, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c692. *Dee Concrete Accessories Co. et al. v. Universal Form Clamp Company.* Patent held valid and infringed; defendant enjoined; second cause of action and counterclaim dismissed with prejudice Sept. 1, 1961.

2,851,532, M. G. Crosby, Multiplex communication system, filed Sept. 6, 1961, D.C., S.D.N.Y., Doc. 61/3165. *Crosby-Teletronics Corporation v. General Electric Company.*

2,867,314, C. W. Hansen, Auger conveyor, filed May 27, 1959, D.C., E.D. Wis. (Milwaukee), Doc. 59-C-106. *Charles W. Hansen v. Badger Northland, Inc.* Consent decree; claims 1, 2, 5 and 6 held valid and infringed; defendant enjoined Sept. 7, 1961.

2,877,909. (See 2,694,562.)

2,938,363, Dickinson and Bush, Refrigerators, filed Aug. 24, 1961, D.C. Del. (Wilmington), Doc. 2366. *Forster Refrigerator Corporation v. Beverage-Air Company.*

2,949,978, J. H. Halstead, Vehicle lifting apparatus, filed Sept. 1, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1158/61-MC. *John H. Halstead, doing business as Western Manufacturing Company v. The Joyce-Orland Company.*

2,972,006. (See Des. 180,009.)

2,977,946, J. A. Cobble, Sr., et al., Tufting machine, filed Apr. 28, 1961, D.C., E.D. Tenn. (Chattanooga), Doc. 3705. *Singer-Cobble, Inc. v. James A. Cobble, Sr. et al.* Order of dismissal for want of jurisdiction Aug. 20, 1961.

2,999,798, L. Crandall, Tire repair service, filed Sept. 11, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7717. *Specmade Products, Inc. v. Barnett Supply Co. et al.*

Re. 24,612 (of 2,787,100). (See 2,823,509.)

Re. 24,650. (See 2,411,200.)

Dec. 189,869, T. B. Clark, Cooking range; 2,972,036 (included by amended complaint Apr. 24, 1961), Pollock and Heedlich, Range, filed Mar. 8, 1960, D.C., S.D. Calif. (Los Angeles), Dec. 260/60-K, *The Tappan Company v. Norris-Thermador Corporation*. Consent judgment; claims 5-10 of Patent No. 2,972,036 held valid and infringed; injunction granted; 3rd cause of complaint and 1st, 2nd and 5th counterclaims dismissed with prejudice; 3rd and 4th counterclaims dismissed without prejudice (notice Aug. 21, 1961).

Dec. 189,568, S. Frankel, Combined radio and penholder, filed Sept. 1, 1961, D.C., S.D.N.Y., Dec. 61/3135, *Continental Merchandise Co., Inc. v. Astra Trading Corporation et al.*

REISSUES

OCTOBER 24, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,060 IMPACT HOLE FORMING METHOD AND MECHANISM THEREFOR

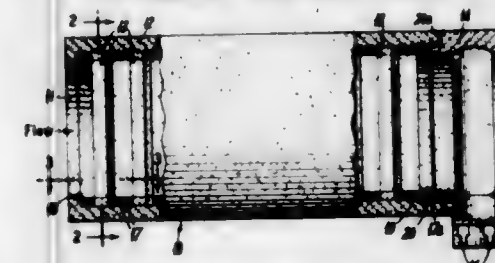
Frank E. Roland, Kent, Wash., assignor to R and W Construction Company, Inc., Auburn, Wash., a corporation of Washington
Original No. 2,918,258, dated Dec. 22, 1959, Ser. No. 656,248, May 1, 1957. Application for reissue June 15, 1960, Ser. No. 36,460
21 Claims. (Cl. 175-23)



1. In a method of impact hole forming by successive extended free fall drops of a stomper directly on the ground, arranging a hole casing only slightly larger than the stomper axially in the hole being formed, urging the hole casing downwardly into the hole under the force of at least a portion of the dead weight of the stomper but not the drop force of extended free fall thereof, and thereafter progressively and alternately dropping the stomper in fully guided free fall to deepen the hole and urging said hole casing further downwardly into the hole under such force until the desired hole depth is reached.

25,061 IMPINGEMENT-TYPE SEPARATORS

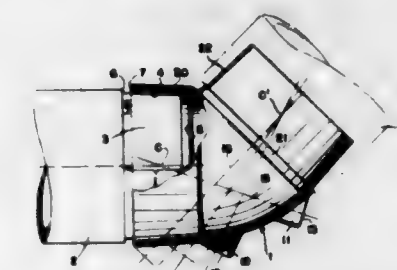
Samuel H. S. Raub, Bay Village, Ohio, and William M. Gaylord, Jr., New Canaan, Conn., assignors to Union Carbide Corporation, a corporation of New York
Original No. 2,956,641, dated Oct. 18, 1960, Ser. No. 661,450, May 24, 1957. Application for reissue May 1, 1961, Ser. No. 107,288
12 Claims. (Cl. 183-110)



1. In an impingement-type separator for the removal of finely divided matter from a gas stream, means for separating such matter comprising a series of struts having a curved cross-sectional shape and being positioned nor-

mal to the direction of the gas stream flow at substantially uniform intervals across the cross-sectional area of the separator and along the longitudinal flow path of said gas stream so that matter entrained in the gas stream is separated therefrom by impingement against said struts, and means for holding the struts in such position comprising a series of removable retainers adjacently positioned to each other, said retainers having recesses to hold opposite ends of said struts in position, and being arranged and constructed with pairs of recesses in adjacent retainers connecting with each other and contoured to each receive a section of the strut end.

25,062
DRIVE FITTINGS FOR PIPE OR CONDUIT
Davis M. Phillips, South Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Original No. 2,966,372, dated Dec. 27, 1960, Ser. No. 585,727, May 18, 1956. Application for reissue June 1, 1961, Ser. No. 110,313
2 Claims. (Cl. 285-39)



2. A drive fitting assembly comprising a pair of tubular impregnated fiber members and a third curvate tubular [Impregnated fiber] fitting member, each of said pair of members having an end portion and said curvate member having two end portions each of which is coupled in axially slidable frictional engagement with the said end portion of one of said pair of members, one of said members at each coupling having an outwardly faced tapered fitting surface extending therefrom and the other member including an inwardly faced tapered surface complementary to and in engagement with said first tapered surface, said engaged tapered surfaces before driving defining a cone of interference extending between the outer ends respectively of the engaged tapered surfaces, stop means to limit the relative movement of said surfaces as they are driven into tighter engagement whereby to provide a predetermined axial driving distance, and means whereby driving forces exerted on said curvate member act in a direction to unite said members with a minimum tendency for relative cocking and raking, making the joint substantially waterproof and root-proof, said means comprising a pair of impact driving bosses integral with and positioned on the longest radius external surface of said curvate member, each of said bosses having a flat driving surface presenting a small area relative to the diameter of said tubular members, said driving surface being substantially normal to a line lying in the plane containing the longitudinal axis of said curvate member and intersecting both the center point of a cone of interference and said driving surface at substantially the center thereof so that the resultant line of

force of any blow applied to said driving surface coincides with said line passing through said center point of said cone of interference.

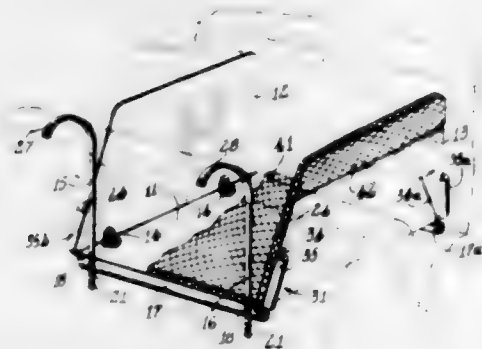
25,063

AUTOMOBILE ACCESSORY

Bernard Schiffman, Whitestone, N.Y.

Original No. 2,869,144, dated Jan. 20, 1959, Ser. No. 378,778, Sept. 8, 1953. Application for reissue June 17, 1959, Ser. No. 821,071

20 Claims. (Cl. 5-94)



14. A multipurpose automobile accessory having convertibility of function for use in the area between the vertical members of the front and rear automobile seats comprising the combination of a primary panel structure having a rear portion adapted to extend over the area of said rear seat, supporting means for the primary panel front portion extending from said panel adjacent said front seat to maintain said accessory in a substantially horizontal position; at least one side panel mounted along a primary panel edge other than those facing said auto front and rear seats, said side panel being pivotable thru 180° from a position overlying the primary panel to a

position forming an extension of the primary panel, means for retaining the side panel in a load supporting position out of the plane of the primary panel, said means including means for sustaining the side panel in a load sustaining position substantially coplanar with the primary panel.

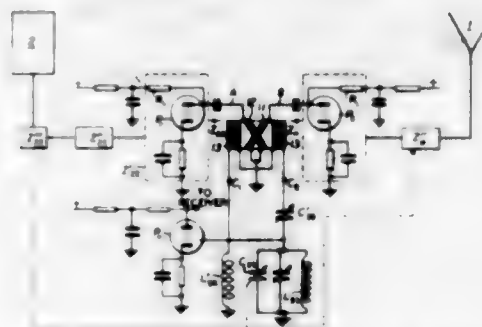
25,064

RADIO DIRECTION FINDER

Geoffrey G. Kruesi, Los Altos, Calif., assignor of 10

percent to Albert C. Nolte, Sr., New York, N.Y.
Original No. 2,910,693, dated Oct. 27, 1959, Ser. No. 666,147, June 17, 1957. Application for reissue Apr. 6, 1961, Ser. No. 103,672

23 Claims. (Cl. 343-113)



1. Radio direction finder of the class described, comprising: a directional antenna network; a [non-directional] second antenna network; a [compass] receiver network and coupling means interconnecting said directional antenna network, said [non-directional] second antenna network and said [compass] receiver network, said coupling means comprising means for rendering ineffective over a given frequency range one of the three possible generalized, individual coupling pairs among the three networks.

PATENTS

GRANTED OCTOBER 24, 1961

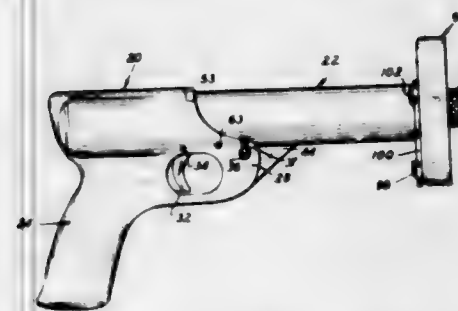
GENERAL AND MECHANICAL

3,005,202

EXPLOSIVELY ACTUATED TOOL

Robert C. Kravle, Newberg, Oreg., assignor to Omark Industries, Inc., Portland, Oreg., a corporation of Oregon

Filed Sept. 12, 1957, Ser. No. 683,631
14 Claims. (Cl. 1-106)



1. A powder actuated tool for driving studs, which comprises a body portion and a barrel portion having relative movement between an open condition and a closed condition of said tool, said body portion including an action housing and a breech block mounted in said action housing, said barrel portion including an elongated barrel housing and a barrel mounted in said barrel housing, said barrel housing having its rearward portion connected to the forward portion of said action housing for limited pivotal movement about an axis extending laterally of the axis of said barrel housing and for relative sliding movement between said housings to provide said relative movement, interengaging means on said breech block and said barrel for connecting said barrel to said breech block by a relative sliding straight line motion in one direction perpendicular to the axis of said barrel, and interengaging means on said housing to lock said barrel and breech block against relative sliding motion in a direction opposite said one direction when said tool is in closed condition.

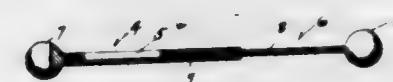
wearer's ear and provided at the side thereof toward the ear with an opening communicating with the ear, the exterior surface of said casing along a peripheral dimension thereof generally parallel to and adjacent the side of the wearer's head being of generally elliptical contour, said casing carrying exteriorly thereof spaced flanges integrally formed therewith and defining therebetween and with said exterior surface of said casing along said peripheral dimension a channel extending about said casing generally parallel to and adjacent the side of the wearer's head, said channel receiving therein the edge portion of the panel adjacent and along said elliptical peripheral contour of said aperture of said panel, said peripheral dimension of said casing along said channel between said flanges being substantially equal to the peripheral dimension of said aperture of said panel, the portion of said panel along the periphery of said aperture being slidable in said channel relative to said casing to adjust the angular position of said casing with respect to said side panel, said material of said side panel being substantially inelastic but sufficiently flexible and capable of being bias stressed adjacent said aperture therein to permit said sliding movement of said portion of said panel in said channel between said flanges while providing snug engagement of said portion of said panel with said exterior surface of said casing so as to cooperate with said casing and said flanges to hold the casing in any adjusted angular position.

3,005,204

ADJUSTABLE EYELET-COLLAR PINS

Samuel Silver, 170 Lelak Ave., Springfield, N.J.
Filed June 24, 1958, Ser. No. 744,281

2 Claims. (Cl. 2-132)



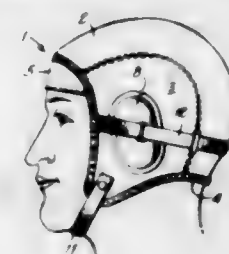
1. For an eyelet soft collar and tie combination, a pin consisting only of an elongate, straight, cylindrical, tubular member internally threaded and headed at one end, said tube being of uniform diameter throughout its length, and a straight, solid, elongate, cylindrical member of substantially uniform diameter throughout its length and externally threaded and headed at one end, the length of said tubular and solid members being substantially equal, the threads of at least one of said members extending substantially throughout its length and the solid member threadedly and adjustably engaging the tubular member, whereby collars of different sizes and styles may be suitably and repeatedly adjusted with a pin of one size, said members being similarly headed.

3,005,203

SOFT HELMET FOR CARRYING SOUND ATTENUATING EARMUFFS

Jackson A. Alleo, Carbondale, Pa., assignor to Leonard P. Frieder, Great Neck, N.Y.

Filed Feb. 11, 1959, Ser. No. 792,625
3 Claims. (Cl. 2-3)

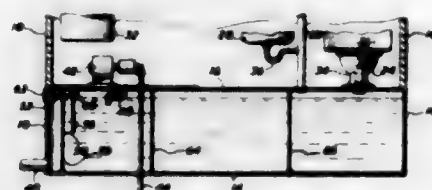


1. A helmet adapted to cover the head of the wearer comprising at least one side panel of flexible woven material adapted to engage the side of the wearer's head, said panel having an aperture of generally elliptical peripheral contour disposed adjacent the wearer's ear when the helmet is in place on the head, an ear piece having a rigid generally ellipsoidal casing adapted to cover the

3,005,205
UNITARY WASHROOM
Maurice J. Breen, 115 30th St., Toronto 14, Ontario, Canada
Filed Dec. 22, 1959, Ser. No. 861,331
3 Claims. (Cl. 4-1)

1. A washroom construction comprising: a septic tank defined by top, bottom and side walls, the upper defining wall of said tank being the structural floor of the habitable

portion of said washroom, means allowing continual discharge from said tank while maintaining liquid in said tank at a predetermined level, a toilet bowl rigidly attached to and located above said upper defining wall and



having an outlet connected to said tank through said upper defining wall, means whereby water may be supplied to said toilet bowl, means for flushing said toilet bowl and at least one port allowing the removal of materials from said septic tank.

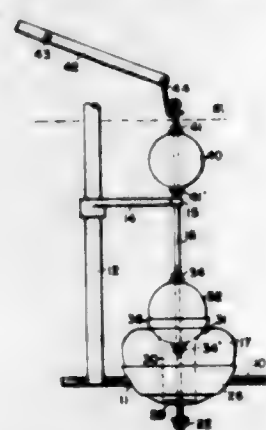
3,005,206

VALVE FOR A FLUSH TANK

Lewis L. Dollinger, Rochester, N.Y., assignor to Dollinger Corporation, Rochester, N.Y., a corporation of New York

Filed Aug. 13, 1959, Ser. No. 833,627

6 Claims. (Cl. 4-57)



sloping bottom wall, said bottom wall including a primary portion sloping downwardly from one end wall toward the opposite end wall and a secondary portion immediately adjacent said opposite end wall which is sloped downwardly more abruptly than the primary portion, a wave chamber at said opposite end of the pool opening into the same at the level of said bottom wall, and means in said chamber for forcefully displacing water therefrom for initial impingement against said secondary portion of the bottom wall, said wave chamber being of semi-cylindrical configuration having its diametrical portion contained within the plane of said opposite end wall, said opening having a vertical dimension which is a major portion of the height of the wave chamber and said opening extending a major portion of the length of said opposite end wall, the lower wall of said wave chamber being substantially at the level of the pool bottom at the opposite end wall, said means comprising a generally rectangular paddle having a vertical pivot at one end pivotally mounting the paddle about the center of curvature of the semi-cylindrical chamber, said paddle being slightly less in size than generatrix of said wave chamber, and mechanism for oscillating the paddle to sweep back and forth in said chamber about said pivot.

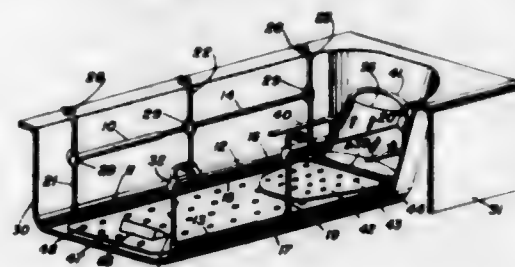
3,005,208

COLLAPSIBLE BATHTUB SEAT

Thelma L. Matthews, P.O. Box 513, Kreole, Minn.

Filed Dec. 11, 1959, Ser. No. 858,910

4 Claims. (Cl. 4-185)



1. A liner for the inner surface of a bathtub comprising a frame having telescoping side members, means for retaining the side members in position on the side walls of a bathtub, a mat of resilient material positioned in the frame, and a back rest pivotally mounted in one end of the frame.

3,005,209

SINK BOTTOM DISPOSAL RUBBER MAT

William D. Timmons, % Pretty Products, Inc., Coshocton, Ohio; William D. Timmons, Jr., Robert T. Timmons, and Harold E. Hunt, executors of said William D. Timmons, deceased, assignors to Pretty Products, Inc., Coshocton, Ohio, a corporation of Ohio

Filed Feb. 14, 1958, Ser. No. 715,315

3 Claims. (Cl. 4-187)



1. A sink bottom disposal mat comprising a one piece flexible flat mat having a plurality of projections formed extending from the bottom and top faces of said mat for spacing said mat from adjacent surfaces, said mat further having an entire central section thereof partially separated from the remainder of said mat providing a tongue of the same thickness and normally extending in the same plane as and integral at its base with said mat and having the edges of said tongue separated from said mat per-

3,005,207

SWIMMING POOL

Miklos Matral, 330 Vine Ave. NE., Warren, Ohio

Filed Jan. 13, 1959, Ser. No. 786,547

9 Claims. (Cl. 4-172)



5. A wave-producing swimming pool assembly comprising a pool having confining side and end walls and a

mitting the bending of said tongue from either the bottom or top of said mat from time to time leaving an opening similar to said tongue through said mat for the discharge of material therethrough, but normally positioned flat and contiguous with said mat top and bottom closing said opening.

3,005,210

SEAT SECTION OF A SOFA-BED FRAME

Louis Pokorny, Jr., Arlington Place, Ronkonkoma, N.Y., assignor of one-third to Louis Pokorny, Ronkonkoma, N.Y., and one-third to John M. Pokorny, Bellport, N.Y.

Filed Feb. 19, 1960, Ser. No. 9,950

7 Claims. (Cl. 5-13)



1. In a sofa-bed, a foldable frame and a mattress co-extensive and foldable with said frame, said frame including a section defining the sofa seat when the frame is in fully folded condition and defining the foot region of the bed when the frame is in fully unfolded condition, the foot region of said mattress being disposed beneath said frame section when the frame is in fully folded condition, said frame section comprising spaced parallel side rails and a bed spring extending between them, each of said rails having a depressed and narrowed region intermediate its ends, said bed spring including coil springs attached to said rail at intervals along the length of the latter, one of said intervals coinciding with the depressed and narrowed region of said rail whereby when said frame is in fully folded condition the area of said mattress adjacent the depressed and narrowed region of said rail is permitted to bulge upwardly above the level of said region.

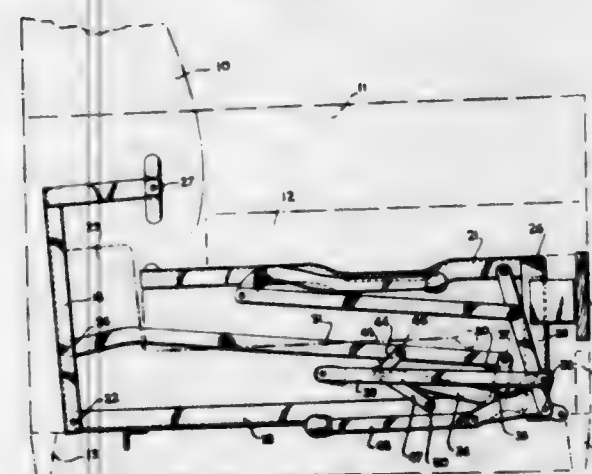
3,005,211

SOFA-BED MECHANISM

Louis Pokorny, Jr., Arlington Place, Ronkonkoma, N.Y., assignor of one-third to Louis Pokorny, Ronkonkoma, N.Y., and one-third to John M. Pokorny, Bellport, N.Y.

Filed Mar. 8, 1960, Ser. No. 13,689

1 Claim. (Cl. 5-13)



In a sofa-bed mechanism arranged in a sofa housing having a front board, sections pivoted to one another comprising a rear section and a lower horizontal section, said sections being foldable between a collapsed sofa position and an extended bed position, and a linkage system interconnecting said sections to constrain the mechanism to

fold and unfold in accordance with a predetermined pattern of movement, said linkage system including a lever of the first class fulcrumed to the lower horizontal section, a connecting link extending between the rear section and one arm of said lever, the other arm of said lever being extended to define a bed leg, an elevator arm having one end pivoted to the sofa housing, an extension link pivoted to the other end of said elevator arm and extending between said elevator arm and said connecting link, and a supporting link extending between the lower horizontal section and the pivot connecting said elevator arm and extension link, said links being so arranged that the extension link comes into substantial alignment with said elevator arm to raise the mechanism an added amount as the bed leg passes over the front board during the folding and unfolding movements of the mechanism.

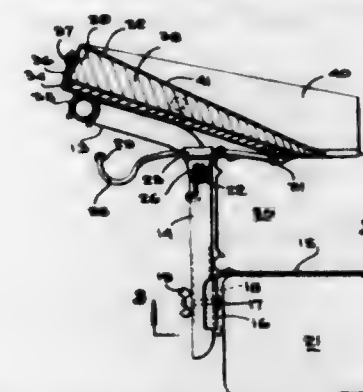
3,005,212

BED ATTACHMENT

Levi H. Barnhill, 153 Lakota Ave., Akron, Ohio

Filed Mar. 11, 1960, Ser. No. 14,300

3 Claims. (Cl. 5-327)



1. A support extension for a bed comprising a frame formed with a pair of depending parallel leg members, a pair of parallel blade members, means adjustably securing said blade members to said leg members perpendicularly thereto in positions to engage beneath respective spaced portions of a mattress adjacent one edge thereof, a transverse pivot rod rigidly secured between the top end portions of said leg members, a clamping member pivoted to said pivot rod and being formed to clampingly engage with the top surface of the mattress between said spaced portions so as to clamp the mattress between said clamping member and blade members, spring means urging said clamping member towards said blade members, and a cushion member mounted on said frame.

3,005,213

RESILIENT SEAT CONSTRUCTION AND METHOD

Warren D. Brown, Bloomfield Township, Oakland County, and Samuel M. Terry, Ann Arbor, Mich.; said Terry assignor to Stubbitt Greene Corporation, a corporation of Michigan, and said Brown assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Oct. 13, 1958, Ser. No. 766,769

9 Claims. (Cl. 5-354)



1. A resilient seat unit comprising a spring unit load supporting surface, a mesh fabric layer overlying one side of said load supporting surface, and an elastomeric

foam pad overlying said mesh fabric layer, a first portion of the elastomeric foam pad material extending through said mesh fabric partially embedding and adhesively bonded to said supporting surface and to said fabric layer and resiliently connecting the two, and a second portion of said foam pad material extending through said mesh fabric layer to form a topper pad on the side thereof away from said spring unit load supporting surface.

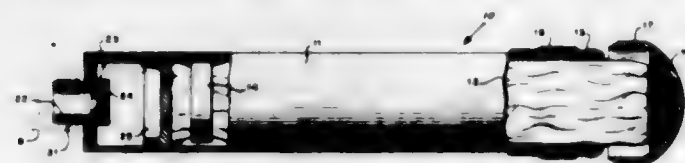
3,005,214

FLOTATION BLADDER ASSEMBLY UNIT

Adel J. Freundt, 17 S. York Road, Hatboro, Pa.
Filed Apr. 28, 1959, Ser. No. 809,579

7 Claims. (Cl. 9-8)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a flotation assembly, cylindrical casing means, means for connecting said casing means to a supply of buoyant pressure fluid, piston means in said casing means and movable throughout the length of said casing, bladder means having an open end connected to and enclosing one end of said casing means, a portion of said bladder means being folded into a piston-like shape with one end disposed within said open end of said bladder means and enclosed by said casing means, said piston means forming a gas tight separation between said bladder means and the supply of pressure fluid so that when the pressure fluid acts against said piston means the latter forces said bladder means out of said piston means whereby said bladder means is inflated.

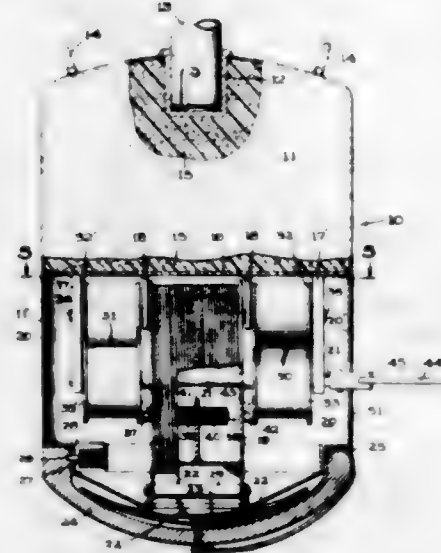
3,005,215

BUOY AND LIKE FLOATING OBJECT INCORPORATING MEANS FOR RESILIENTLY CONNECTING SAME TO ITS ANCHOR

Rutger B. Colt, Baltimore, and Rudolph J. Cerny, Timonium, Md., assignors to The Bendix Corporation, a corporation of Delaware

Filed May 19, 1959, Ser. No. 814,331

7 Claims. (Cl. 9-8)



6. A combination buoy and anchor therefor comprising: a buoyant housing, an anchor, pressure-responsive means releasably connecting said anchor to said housing, a cable drum rotatably mounted in said housing, an anchor cable wound on said drum and connected at its free end to said anchor, a constant-force spring assembly comprising an output reel adapted to be connected to

and rotate with said drum and a take-up reel having a prestressed constant-force ribbon spring wound thereon and adapted to be wound on and unwound from said output reel in response to variations in flotation forces acting on the buoy and tending to rotate the drum.

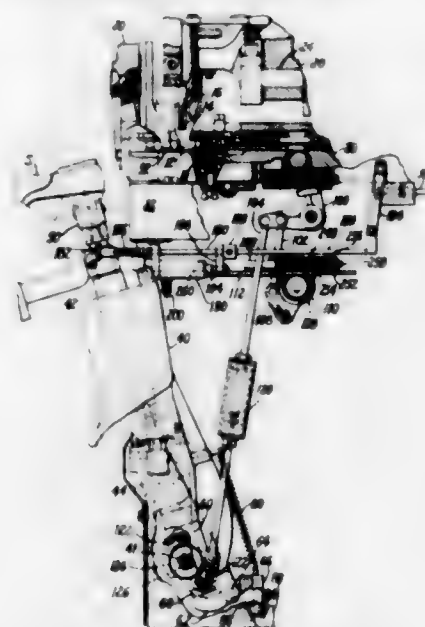
3,005,216

SHOE MACHINES

Emile A. Deschamps, Danvers, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Oct. 1, 1959, Ser. No. 843,870

12 Claims. (Cl. 12-12.3)



1. In a machine having instrumentalities for operating on a shoe in an automatic operating cycle, a control member movable to initiate such an automatic operating cycle, a support for a shoe on its last movable first lengthwise and then heightwise of a shoe thereon to present the shoe in position to be operated on by said instrumentalities, and an abutment member for engaging the shoe to limit heightwise movement thereof by said support, power operated means for effecting such movements of the support in the mentioned sequence, and means responsive to pressure of the shoe against said abutment for moving the control member to initiate an automatic operating cycle of said instrumentalities.

3,005,217

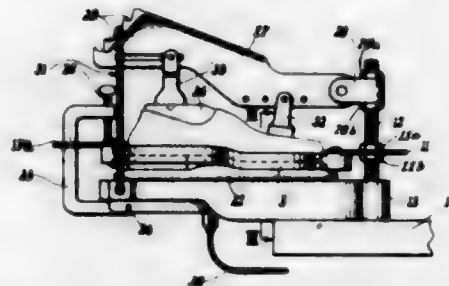
MEANS FOR APPLYING SOLES TO SHOES AND OTHER FOOTWEAR

Percy William Roland Hill Johnston, 22 Canberra Road, Toorak, Victoria, Australia

Filed Sept. 16, 1959, Ser. No. 840,411

Claims priority, application Australia Sept. 22, 1958

5 Claims. (Cl. 12-33.4)



1. In a device for bonding the marginal edge of a shoe upper to the corresponding portion of a sole, a base, a post fixed with said base and having a portion upstanding vertically therefrom, plate means fixed to said portion

for vertical adjustment therealong to vary the spacing over said base, a backing member comprising first and second sections, means fixing said first section at one end to said plate means to mount the same in a plane spaced above said base, means pivoting the corresponding end of said second section to said plate means for swinging in the plane of said first section, from a first open position to a second closed position wherein said sections conjointly define the outline of a shoe sole over and spaced above said base, means carried by said sections at the other ends thereof to releasably secure said sections together in closed position, and means carried by said base to releasably engage and limit movement of said other ends of said sections upwardly relatively to said base.

3,005,218

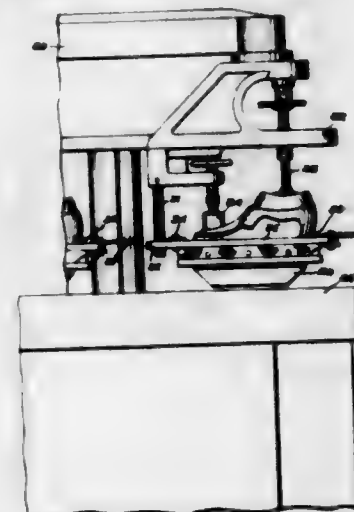
SOLE APPLYING METHOD FOR SHOES AND OTHER FOOTWEAR

Percy William Roland Hill Johnston, 2 Islington St., Collingwood, Victoria, Australia

Filed Dec. 29, 1959, Ser. No. 472

Claims priority, application Australia Sept. 22, 1958

3 Claims. (Cl. 12-142)



1. The method of cementively bonding a peripherally upwardly rimmed and inwardly flanged outer sole to a shoe upper having a marginal welt-like projection receivable in the channel of the sole formed by such rim and flange thereon, which comprises placing the upper in overlapped marginal relation on the outer sole with cement between juxtaposed sole and upper portions including the inner wall of such sole channel, applying upward pressure on the sole from below while holding the assembly downward at the heel and toe portions, and applying downwardly and inwardly effective hold-down and confining pressure externally upon the top face of the sole rim flange in opposition to said upward sole pressure and distributed uniformly above the entire periphery of the interengaged sole and upper marginal portions.

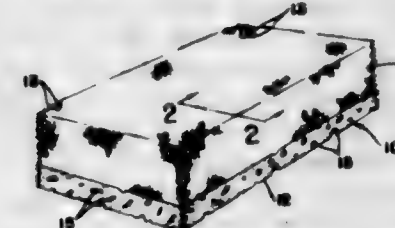
3,005,219

SCRUBBER

Clarence S. Miller, Mogadore, Ohio, assignor, by mesne assignments, to The Butcher Polish Company, Malden, Mass., a corporation of Massachusetts

Filed May 26, 1959, Ser. No. 815,968

4 Claims. (Cl. 15-98)



3. In a substantially non-absorbent reversible polyurethane cleaning pad, two polyurethane slabs and a

perforate intermediate layer uniting the two slabs in a plane substantially parallel to the surfaces of the cleaning pad, one slab being a retiform fully skeletal network of intertwining, interlocking, highly-resilient, tough, abrasion-resistant, high tenacity polyurethane thread-like filaments providing relatively large and substantially uniformly distributed communicating channels throughout the polyurethane retiform slab, the other slab being a gas-blown polyurethane sponge structure having cells distributed throughout the polyurethane sponge slab, the perforate intermediate layer providing intercommunicating passageways between the channels of the polyurethane retiform slab and the cells of the polyurethane sponge slab.

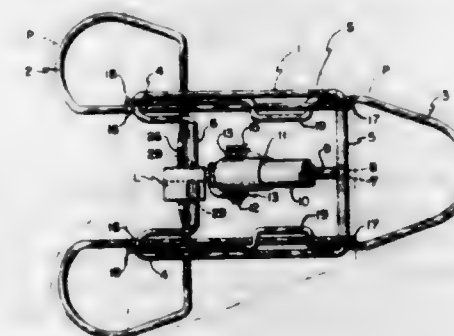
3,005,220

COLLAPSIBLE MOP SUPPORT

Lewis W. McPherson, Denver, Colo., assignor to Dust-Tex Corporation, Denver, Colo., a corporation of Colorado

Filed Mar. 31, 1958, Ser. No. 725,107

5 Claims. (Cl. 15-147)



5. A mop head comprising an elongate generally rectangular frame having parallel sides and opposed end portions, a pair of wing members for effecting connection with a swab having spaced opposed pockets including relatively near wing receiving entrances, each of said wings including a tip and connecting members extending from said tip for pivotal connection to the end of said frame opposite said tip, said connecting members for said wings crossing one another and being movable from a first position in which said wings are in substantially coplanar intersecting relation to a second position in which said wings are in collapsed angular intersecting relation relative to said frame, and means associated with said wings limiting the amount of collapsing of said wings to a position in which the tips thereof are spaced apart a distance no greater than the distance between the entrances of the pockets, and said wings being freely movable toward the coplanar position for insertion of said wings into said pockets without manipulating said tips.

3,005,221

SINGLE AND DOUBLE CUP BRUSH

Ralph F. Tugner, Elkton City, Md., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed July 1, 1959, Ser. No. 824,376

14 Claims. (Cl. 15-180)



8. A cup brush assembly comprising an outer cup element having a central opening formed in the bottom thereof, a nut disposed in the opening, an annular disc constituting a brush ring having tufts of fill material

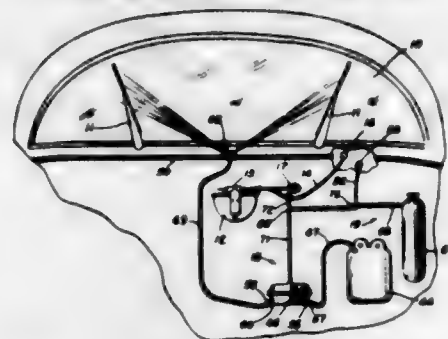
spaced about the perimeter thereof disposed in the outer cup with the tufts bearing against the side walls of the cup, means for clamping the brush ring in the cup, the bottom of the cup being provided with flaps radially inwardly bent and having the tips thereof overlapping the nut, and being adapted to be clamped between the nut and a shoulder upon the end of a drive shaft for the brush whereby to provide a drive between the shaft and the cup.

3,005,222

WINDSHIELD CLEARING SYSTEM

Edmond F. Webb, Franklin, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee

Filed May 7, 1958, Ser. No. 733,508
3 Claims. (Cl. 15-250.02)



1. A vehicle windshield cleaning system for vehicles comprising a suction operated wiper motor and a control valve therefor, a pneumatic actuating means including an inbuilt fluid bleed means, mechanical means to interconnect the actuating means with the control valve of the wiper motor, a washer unit including a nozzle, a pneumatically operated pump means, a reservoir of washing liquid, and interconnecting lines therefor, a source of fluid under a superatmospheric pressure having a supply line, fluid transmission means connecting said actuating means and said pump means with the supply line of said pressurized fluid source, and a manually actuated valve connected in the supply line of the source of pressurized fluid, said manually operable valve, when opened, directly connecting the pressurized fluid source to said actuating means to move the motor control valve through said mechanical means in one direction and to said pump means to actuate said means to supply liquid to the nozzle, said bleed means of the actuating means continuously bleeding pressurized fluid during an operation of the manual valve and providing thereby a time delay in the reverse movement of said mechanical means when said manual valve is closed.

3,005,223

PHONOGRAPH RECORD VACUUM CLEANER

William W. Taylor, 21830 Pacific Coast Highway, Malibu, Calif., and Richard O. Spencer, 640 Resalano Drive, Pacific Palisades, Calif.

Filed July 7, 1959, Ser. No. 825,452
5 Claims. (Cl. 15-310)



1. A phonograph record vacuum cleaner comprising a housing, a continuous elongated opening defined in said housing for receiving a phonograph record, roller means

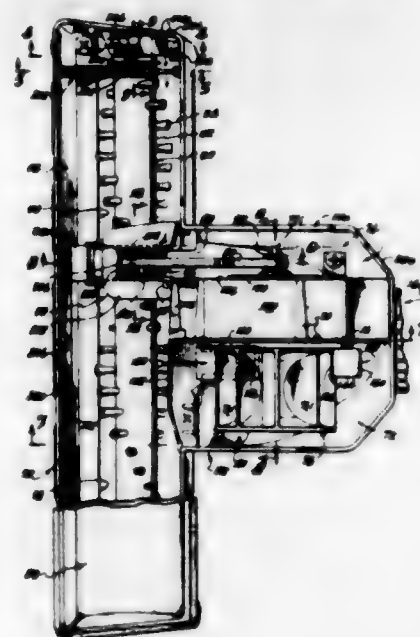
carried within said housing aligned with said opening for supporting said phonograph record, and means positioned on each side of said phonograph record within said housing for creating a vacuum, said vacuum creating means including a pair of spaced elongated tubes having opposed elongated apertures extending substantially radially from the periphery of the record toward the center portion thereof, said spaced tubes defining a bisecting plane therebetween coincident with the plane defined by said elongated opening.

3,005,224

AIR FLOW OPERATED BRUSH DEVICES FOR VACUUM CLEANERS

Gerald M. Magarian, Long Beach, Calif., assignor to Preco Incorporated, Los Angeles, Calif., a corporation of California

Filed Oct. 23, 1958, Ser. No. 769,257
5 Claims. (Cl. 15-372)



1. In a vacuum cleaning device of the character described, the combination of a casing divided into an elongate brush chamber with an elongate lower nozzle opening, an air motor chamber and a transmission chamber separated by a partition wall structure, the transmission chamber having an opening to the brush chamber, an air motor in the air motor chamber, a suction outlet connected to the air motor chamber, an air flow passage leading from the brush chamber into the air motor chamber to the air motor, a journaled shaft driven by the air motor and extending through the partition wall structure into the transmission chamber, a brush in the brush chamber in proximity to the nozzle opening and rotatable on an axis substantially parallel to the plane of and longitudinally of the nozzle opening, bearing members located in the end portions of the brush chamber journalling the brush for rotation on said axis, a slightly tensioned driving belt extending from the air motor shaft in the transmission chamber to the brush in the brush chamber, and bearing guide structures in the end portions of the brush chamber, each said structure embodying a plate extending across the chamber end, a substantially rectilinear bearing guide member carried by the plate at that side only of the associated bearing member which faces toward the air motor shaft, said guide member extending in a guiding plane which extends toward and away from the nozzle opening and which is substantially parallel to the brush axis and substantially normal to the plane determined by the brush axis and the extent of the driving belt, the bearing member having a substantially rectilinear face that is held against the guide member substantially solely by the

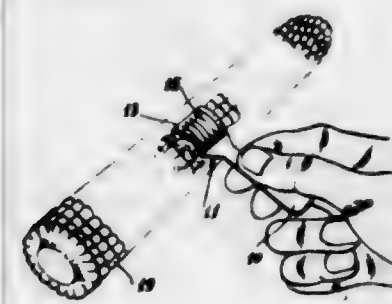
slight tension of the driving belt, and two elongate supporting members for the plate each joined to the plate at one end and mounted on the casing at their other ends, said supporting members being of substantially equal lengths and with their lengths substantially parallel to each other and to the extent of the guide member, all so that the brush is free to float in directions parallel to said guiding plane under substantially only its own weight.

3,005,225

DEVICE FOR APPLYING BUTTER TO CORN ON THE COB

Henry J. Faust, 332 Ocean Ave., Massapequa Park, N.Y., and Fred Burmann, 26 Arrow Lane, Hicksville, N.Y.

Filed Nov. 24, 1959, Ser. No. 855,131
4 Claims. (Cl. 15-514)



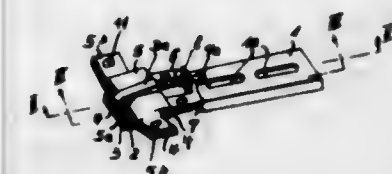
4. A device for applying butter to corn on the cob, said device comprising a handle portion, said handle portion merging into an arcuate portion, the curvature of said arcuate portion substantially corresponding to the surface of an average ear of corn, said arcuate portion having a plurality of transverse slits spaced along the axis of curvature, the material of said device adjacent each slit being formed to provide recesses and teeth projecting outwardly of the convex surface of said arcuate portion and inclined with respect thereto, said slits providing openings between said teeth through the concave surface of said arcuate portion and said recesses providing reservoirs for butter, said concave surface being substantially smooth, whereby movement of said teeth along a block of butter will operate to remove butter and force the same through said slits to the interior of said arcuate portion and into said reservoirs and thereafter, movement of the concave surface of said arcuate portion along an ear of corn will operate to spread the butter on the corn.

3,005,226

GUIDE SHOES FOR GUIDING MOVABLE ROOFS ALONG GUIDE RAILS

Johannes Werner, Offenbach, Germany, assignor to H. T. Golde, G.m.b.H. & Co. K.G., Frankfurt am Main, Germany

Filed Oct. 28, 1959, Ser. No. 849,352
Claims priority, application Germany Oct. 29, 1958
6 Claims. (Cl. 16-93)



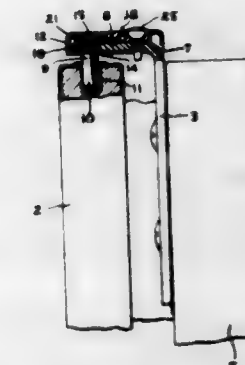
1. A guide shoe for a movable roof for guiding it along a guide rail, comprising a guide-shoe member having portions defining engaging surfaces positioned near the opposite sides of the guide rail, a substantially U-shaped compressible lining material adjacent said sides of the rail for sliding engagement therealong, means connecting said lining material with said guide-shoe member, a wedging member interposed between one of said portions of the guide-shoe member and one of the

limbs of said U-shaped lining material, said wedging member being adapted to be reciprocated in a direction substantially at right angles to the guide rail so as to urge said limb of the lining material against the guide rail for frictional engagement therewith.

3,005,227

HINGE STRUCTURE

Julius B. Horvay, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 11, 1960, Ser. No. 8,145
1 Claim. (Cl. 16-169)



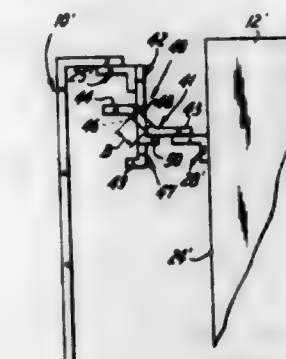
A pivot type hinge comprising a hinge bracket having a horizontally extending arm having a threaded opening therein, a hinge pin including a circular head and a threaded portion adjacent said head, said pin being removably threaded into said opening with the head thereof engaging said arm, said head including a plurality of teeth on the periphery thereof, a cap supported on said arm and including a flanged edge portion enclosing said arm and walls defining a recess enclosing said head, one of said recess walls being relatively straight and tangential to said head and including a plurality of notches for engaging said teeth to prevent rotation of said pin, and means for securing said cap to said arm at a single point removed from said head whereby said cap can pivot in a horizontal plane about said point for alignment of said notches with said teeth when said head is in engagement with said arm.

3,005,228

SEPARABLE HINGE

Irvin Friend, Rockaway Park, N.Y., assignor to Hollywood Appliances Inc., Jackson Heights, N.Y., a corporation of New York

Filed June 13, 1960, Ser. No. 35,628
1 Claim. (Cl. 16-171)



In a hinge, a first plate member having substantially parallel extending base and lip sections at its opposite ends and an intermediate inclined section connecting the two such that the lip section is slightly elevated above said base section, said intermediate section having spaced slots therein, and a second plate member having spaced projections thereon in register with and adapted to be inserted through said spaced slots, each of said projections having a flange at its end bent in one direction and

at least one flange at its base bent in the opposite direction for engaging the lip and base sections respectively of said first plate member to prevent accidental disengagement of said plate members.

3,005,229 RUBBER MIXER

Harry D. Walther, Waterford Township, Erie County, Pa., assignor to Skinner Engine Company, Erie, Pa., a corporation of Pennsylvania

Filed Dec. 18, 1958, Ser. No. 781,329
1 Claim. (Cl. 18-2)



A mixer for heavy plastic materials comprising a double cylindrical chamber having a bladed rotor in each of the cylinders thereof, said chamber being provided with a bottom discharge opening, a slidably mounted closure member for said opening, the upper side of said closure member comprising two plane surfaces meeting at a line substantially centrally of said chamber and the surfaces sloping inwardly from the side edges, said slidably mounted closure member comprising a cylinder, said closure member mounted on said cylinder, the axis of said cylinder being parallel to a ridge, a piston in said cylinder, said piston having a rod attached thereto and connected to said mixer and extending from said cylinder, fluid means on each side of said piston in said cylinder forcing said cylinder to a closed and to an open position, a cylinder cover bolted to the end of said cylinder remote from said rod, ways on said mixer, a first wing member integrally attached to each side of said cylinder and slidably supported on said ways, and a second wing member integrally attached to said cylinder cover at each side thereof and extending therefrom a substantial distance from the end thereof and away from said rod and said first wing members, said second wing members having a bottom surface disposed in a common plane with the surface of said first wing members, said second wing members slidably engaging said ways and being in alignment with said first wing members.

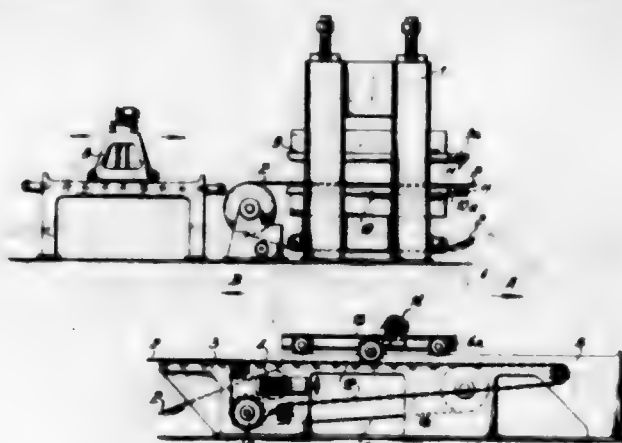
3,005,230 PLANT FOR THE FABRICATION OF CHIPBOARDS OR SIMILAR CONSTRUCTION MATERIALS BY MEANS OF AN INTERMITTENT WORKING SINGLE STORY PRESS

Will Hütter, Krefeld, Germany, assignor to Niederrheinische Maschinenfabrik, Becker & van Hullen, Krefeld, Germany

Filed Feb. 8, 1961, Ser. No. 87,944
6 Claims. (Cl. 18-4)

6. In a plant for the fabrication, by molding, of chipboard or similar construction materials, in combination, an intermittently operating single story press whose cycle comprises a molding work stroke and an idle stroke, a support frame adjacent said press, a rail bed mounted on said frame and directed towards said press, a carriage slidable on said bed, a charging station displaceable on said carriage longitudinally of said bed, an endless traveling conveyor belt for feeding chip stock to said press, disposed below said charging station, an endless movable chain in said frame, means in said frame for driving said chain and said belt, gearing operatively connecting said chain and said carriage away from said press and a

variable speed means for maintaining the charging station in such kinematic connection with said chain and conveyor belt that it stays back behind the traveling conveyor belt in the direction of the press by a distance determined by the relative speed at which it would move

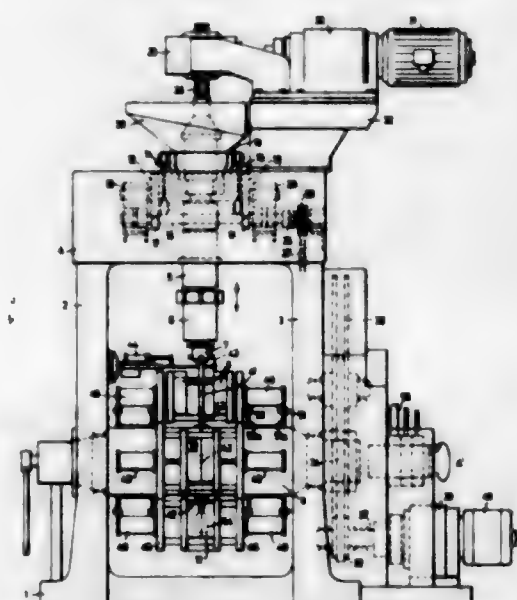


in reverse sense away from its press if the conveyor belt were at a standstill, and control means for interrupting the conveyor belt's travel during the working stroke of the press and for resuming its movement during its idle stroke.

3,005,231 MACHINE FOR PRODUCING HOLLOW BODIES OF THERMOPLASTIC SYNTHETICS BY EXTRUDING AND BLOWING

Helmut Pechthold, Scheidentalerstrasse 260a, Muden, Odenwald, Germany

Filed Aug. 31, 1960, Ser. No. 53,198
Claims priority, application Germany Sept. 9, 1959
10 Claims. (Cl. 18-5)



1. A machine for the automatic production of hollow bodies from thermoplastic materials by extruding a hose-shaped portion of said materials into a mold cavity and expanding the hose into the mold cavity by blowing, said machine comprising a frame structure, an extrusion press supported from said frame structure and having an extrusion head provided with an outlet nozzle movable to and fro in a rectilinear and vertical direction along the longitudinal axis of said head; a blow-molding device comprising a drum structure having mounting plate means journaled in said frame structure for rotation about an axis of said drum extending horizontally at right angles to said rectilinear direction, a plurality of split molds divided longitudinally in a vertical plane and respectively mounted on said plate means for rotation about said drum axis and for movement only in the

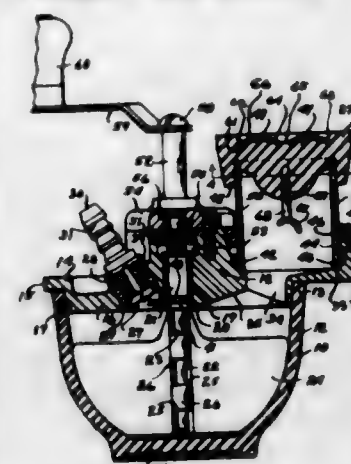
direction of said drum axis for opening and closing the respective split molds, control and actuating means mounted on said drum for actuating said split molds into open and closed positions in respective rotational positions of said drum, each mold in a predetermined respective rotary position of said drum being positionable to receive said hose of material from said outlet nozzle of said press; means for feeding a quantity of thermoplastic material into said extrusion press, drive means for reciprocating said press into and out of a respective one of said molds to deposit said hose of material therein, and means for severing said hose of material from said nozzle, and air-supply means fixedly mounted within said drum and separate from said molds for expanding said hose-shaped quantity of material to conform to the shape of said respective one mold.

3,005,232 CRUCIBLE FORMER AND SPRUE FORMER CARRIER

Edmund A. Steinbock, 333 Shawnee Terrace, Louisville, Ky., and Charles Armbricht and Edmund A. Steinbock, Jr., Louisville, Ky.; said Armbricht and said Steinbock, Jr., assignors to said Steinbock

Original application Apr. 23, 1951, Ser. No. 222,372. Divided and this application Dec. 6, 1954, Ser. No. 473,132

5 Claims. (Cl. 18-5.7)



3. The combination of a sleeve-like cementitious mold forming housing, and a crucible former and sprue former carrier comprising a body portion of an area in excess of the area of the mold forming housing, said crucible former and sprue former carrier body portion having formed inwardly of its periphery a continuous groove receiving one end of the mold forming housing, a projection from the crucible former and sprue former carrier body portion inwardly of the groove to project into the mold forming housing, a flange outwardly of the groove for embracing the said end of the mold forming housing, said crucible former and sprue former carrier being formed of flexible material, and an inflexible plate within the body portion of the crucible former and sprue former carrier rendering the said body portion inflexible, said inflexible plate having an area, at least, substantially equal to the interior of the mold forming housing and centrally apertured, and said plate being outwardly curved between its central aperture and periphery.

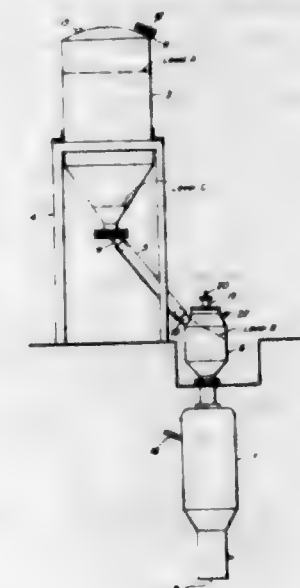
3,005,233 MELT SPINNING

Edward James Upton and Reuben Betteridge, both of Spondon, near Derby, England, assignors to British Celanese Limited, London, England, a British company

Filed Dec. 16, 1958, Ser. No. 780,852
2 Claims. (Cl. 18-8)

1. Apparatus for melt spinning comprising a melting vessel, a spinning head adapted to be fed from the lower part of the melting vessel, a melting device in the melting

vessel, a main storage vessel for the solid material to be melt spun, and an intermediate storage vessel arranged above, communicating with the top of the melting vessel and containing therein the normal top level of the material being melted, in combination with a pressure absorbing block between the bottom of the main storage vessel and the side of the intermediate storage vessel at the mentioned top level of the material being melted, comprising an inclined tube having a diameter to length ratio



of 1 to at least 6 leading from the bottom of the main storage vessel into the side of the intermediate storage vessel at an angle of inclination from the horizontal greater than the angle of repose of said solid material, said tube being open to the influence of gravity for the passage of said material to the intermediate vessel when called for by the normal top level of the material in the intermediate vessel; whereby pressure changes on said solid material in the main storage vessel are not transmitted to the intermediate storage vessel and a substantially constant level of said material is maintained in contact with the melting vessel by means of said tube.

3,005,234 APPARATUS FOR MOLDING OPTICAL LENSES

Americo Oriani, Freeport, and Guido Cappelli, Bronx, N.Y., assignors to Danker & Wohlk, Inc., Brooklyn, N.Y., a corporation of New York

Filed July 6, 1959, Ser. No. 825,191
2 Claims. (Cl. 18-17)



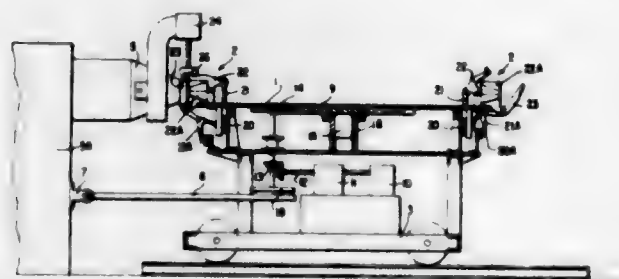
1. An apparatus for molding lenses from plastic materials including, in combination, a press frame, upper and lower die assemblies including vertically aligned dies

formed with die faces, the upper die assembly being mounted for vertical sliding movement in the frame and a hand lever for moving the same towards and away from the lower die, heating and cooling means associated with each die, the lower die assembly including a die casing surrounding the lower die and being vertically movable independently of said lower die, a sleeve mounted on said die casing and closely fitting the side walls of the lower die to form a dam element around said die for the plastic material while the latter is being heated to a molten state, said sleeve being formed with an upper annular cutting edge to trim excess plastic material from the aligned dies after the lens has achieved a desired thickness, and micrometer means for indicating said thickness of the lens as the molten plastic material flows outwardly from the die faces, whereby upward movement of the die casing and sleeve simultaneously stops such flow and trims said excess material.

3,005,235 AUTOMATIC INJECTION MOLDING APPARATUS

Jerome Patena, Vernon, France, assignor to Beta Shoe Company, Inc., Belcamp, Md., a corporation of Maryland

Filed May 6, 1958, Ser. No. 733,398
Claims priority, application France May 7, 1957
4 Claims. (Cl. 18—30)



1. A machine for molding plastic articles comprising an injection head including a discharge nozzle, a carriage disposed adjacent said injection head, a platform rotatably mounted on said carriage, means for rotating said platform in step-by-step fashion to index said platform relative to said injection head and including mechanism to operate the injection apparatus in timed relation to such indexing, a plurality of molds mounted on said platform for disposition successively in registry with said nozzle as the platform is indexed, each mold including a lower body part fixed to the platform, a front cover pivotally mounted for movement toward and away from said lower body part, and an upper body part pivotally mounted for movement toward and away from said lower body part as that particular mold is moved to indexed position, and means carried by said injection head and engageable with said mold parts for locking the several mold parts together during injection.

3,005,236 PROCESS FOR STRETCHING POLYCARBONATE FILAMENTS AND FILMS AT TEMPERATURE AT WHICH TANGENT OF DIELECTRIC LOSS ANGLE IS MAXIMUM

Alfred Reichle and Hans Wilsing, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Nov. 8, 1960, Ser. No. 67,893
Claims priority, application Germany Nov. 21, 1959
1 Claim. (Cl. 18—48)

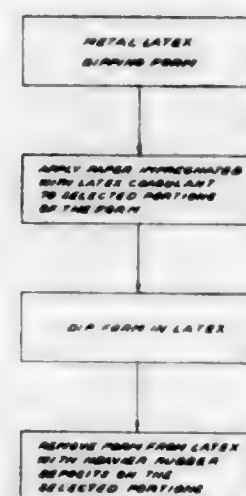
A process for the production of shaped elements with improved tensile strength from thermoplastic and crystallizable polycarbonates of high molecular weight by

stretching in a temperature range above the second order transition temperature and below the melting point which comprises carrying out the stretching at a temperature in the range from 5° C. below to 5° C. above that temperature at which the tangent of the dielectric loss angle of the filament to be stretched has its extrapolated maximum.

3,005,237 METHOD OF PRODUCING LATEX DIPPED ARTICLES

Everett V. Anderson, Bethany, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 13, 1959, Ser. No. 799,084
12 Claims. (Cl. 18—58.6)

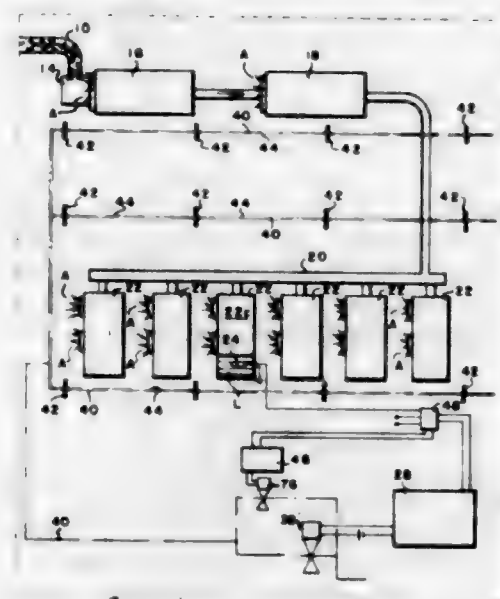


1. In the method of producing a latex dipped article having heavier deposits of rubber in selected portions of the article than in other portions of the article, the steps comprising applying to selected portions of the water impermeable surface of a dipping form fibrous sheet material impregnated with a latex coagulant, dipping the form with the coagulant impregnated fibrous sheet material thereon into latex, and thereafter removing the form from the latex.

3,005,238 MOISTURE CONTROL ARRANGEMENT AND METHOD

Curtis R. Manning, Gainesville, Ga., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware

Filed June 4, 1957, Ser. No. 663,478
14 Claims. (Cl. 19—66)

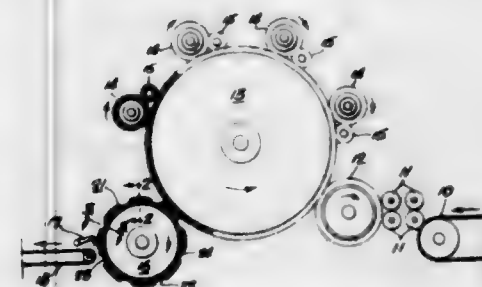


1. The process of forming a lap of staple fibers, comprising working staple fibers in a loose substantially open

state in air connection with the room air, forming said staple fibers into a progressing sheet in a substantially closed humidity-controlled room, detecting the moisture content of said fibers, in said sheet, and adjusting the humidity of said room dependent upon whether the detected moisture content in said progressing sheet is above or below a desired moisture content level, said detection being substantially continuous during the forming of said lap, and rendering a continuous indication on a recording medium of the moisture content detected in said lap sheet during the forming of said lap sheet, said indication being changed to a selected arbitrary value upon interruption of formation of said lap, said value being substantially different from the values normally recorded on said medium as an indication of moisture content in said fibers, and maintaining said arbitrary value indication only during said interruptions.

3,005,239 INTERRUPTED CARD CLOTHING

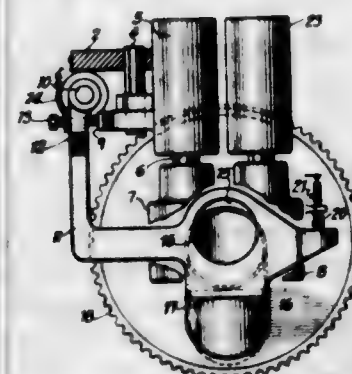
Charles W. Worley, Dahlonega, Ga., assignor to James Lees and Sons Company
Filed Sept. 15, 1959, Ser. No. 846,062
2 Claims. (Cl. 19—106)



1. In apparatus for producing irregular yarn continuously varying in weight per unit length along the length thereof, a carding set including a main cylinder and a generally cylindrical doffer coextensive in length with said main cylinder, and mounted adjacent thereto, said doffer having bands of card clothing mounted circumferentially thereof, said bands being of a uniform axial dimension about the complete circumference of said doffer, the bases of said bands defining a radially uniform concentric path around the periphery of the doffer, a substantially long arcuate peripheral area extending circumferentially around each band, and a plurality of arcuate depressions in each clothing band between said uniform arcuate areas.

3,005,240 SLIVER DEPOSITING APPARATUS

Helmrich O. Hess, Winterthur, Switzerland, assignor to Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, a corporation of Switzerland
Filed June 4, 1958, Ser. No. 739,821
Claims priority, application Switzerland June 7, 1957
5 Claims. (Cl. 19—166)

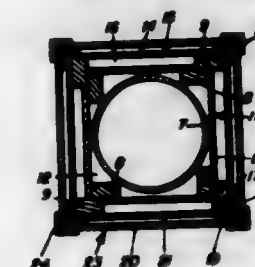


1. A sliver depositing apparatus comprising a rotatable funnel wheel having a funnel receiving the sliver and discharging the sliver along a circular path, a pair of

calender rollers for feeding the sliver into said funnel, said funnel wheel being axially movable towards and from said rollers, one of said rollers being movable towards and from the other of said rollers in a direction which is normal to the rotation axes of said rollers, an actuating means operatively connected to said movable roller and being responsive to the movements thereof, and a movable control member engageable by said actuating means to be moved thereby upon improper movement of said movable roller, said control member having a portion engageable by said funnel wheel for moving said control member upon axial movement of said funnel wheel due to improper conditions in the discharge of the sliver through said funnel, said control member being disengaged from said actuating means and from said funnel wheel, during normal operation of the apparatus.

3,005,241 RISER PIPE FROST CASING

Helmrich O. Hess, Winterthur, Switzerland, assignor to Helmer C. Osmundson, 610 S. 3rd St., Bemidji, Minn.
Filed Aug. 29, 1957, Ser. No. 680,975
3 Claims. (Cl. 20—5)



1. The combination of a vertical riser pipe of circular cross-section and a frost casing enclosing the pipe comprising a first and second rectangular closure surrounding said pipe, said second closure surrounding the first enclosure, the first enclosure including a first vertical stud of rectangular cross-section within each of its corners, each stud having line contact only at an inner edge with an outer surface of said pipe, first flat panels spaced from the pipe and having vertical side edges extending between adjacent studs and secured to said studs at their sides facing outwardly from said pipe, one of the side edges of each panel being spaced from the outermost corner of the stud supporting said one side edge so as to expose a portion of the stud surface in contact with said one side edge, said second rectangular closure comprising a second vertical stud of rectangular cross-section overlapping and secured in direct contact with the exposed portion of each of said first vertical studs and extending outwardly therefrom, second flat panels spaced from and generally parallel to said first panels extending between adjacent ones of said second studs and secured thereto at their sides facing outwardly from said pipe.

3,005,242 STAIR RAILING

Marvin H. Roberts, East Grand Rapids, Mich.
(1746 Jermala Drive, Toledo 6, Ohio)
Filed Nov. 19, 1958, Ser. No. 774,884
5 Claims. (Cl. 20—10)

1. In combination a standard stair railing, a bracket interconnecting a wall and said standard stair railing and an auxiliary stair railing for children comprising: hangers mounted on said brackets interconnecting the wall and said standard stair railing, said hangers being generally L-shaped, including a first arm and a second arm, said first arm having means for connection between said bracket and said standard stair railing, said second arm depending from said standard stair railing having clamping means at the lower end thereof; and an elongated rail

member; said rail member enveloped at points along its length by said clamping means, whereby said rail mem-



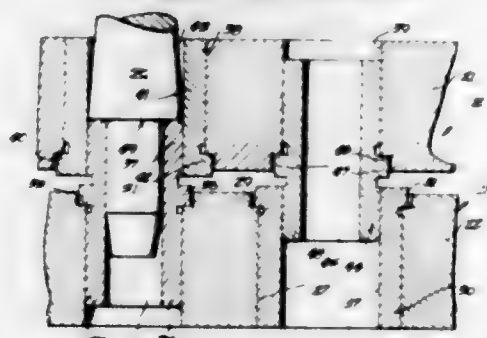
ber is rigidly positioned below said standard stair railing and lies generally parallel thereto.

3,005,243

CONNECTING AND ALIGNMENT BRACKETS OF MOLDER'S FLASK

Frank J. Yearling and Joseph F. Mavri, Milwaukee, Wis., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed June 8, 1959, Ser. No. 818,771
1 Claim. (Cl. 22-110)



A molder's flask comprising cope and drag sections, each section having upright spaced and opposed side walls, a pair of connecting and aligning brackets on opposite side walls of each section, each bracket including a horizontal member connected to a side wall and projecting laterally outwardly with respect thereto, said horizontal members each including first and second horizontally spaced openings, a large diameter sleeve permanently secured in each of said first openings, said large diameter sleeve having a large diameter bore, a small diameter sleeve permanently secured in each of said second openings, said small diameter sleeve having a small diameter bore, each small diameter sleeve having a projecting portion extending vertically from each said horizontal member, the small diameter sleeves of each section being in transverse alignment with the large diameter sleeves of each section, alignment pins for said sections, each pin having an elongated cylindrical body and a smaller diameter extension, whereby during assembly the extensions of said alignment pins are supported within the bores of said small diameter sleeves in mating relation and said small diameter sleeves engage the bores of said large diameter sleeves in mating relation whereby said sections are assembled and each section may be used interchangeably as either a cope or a drag.

3,005,244

PRODUCTION OF SHELL MOLDS

Reiner W. Erdle, Beverly Hills, Calif., and Roy C. Feagin, Mountain Lakes, N.J., assignors, by mesne assignments, to Howe Sound Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 9, 1958, Ser. No. 740,516
14 Claims. (Cl. 22-129)

1. A composition for making a high-strength refractory shell mold by coating on an expendable pattern, said com-

position being a fluid slurry consisting essentially of from 1/4 to 15 parts by weight of finely-divided solid refractory material suspended in 1 part by weight of an aqueous sol, said sol containing (on a dry basis) from 60% to 80% by weight of colloiddally dispersed silica and from 8% to 35% by weight of a resinous polymer.

3,005,245

METHOD FOR MAKING POLYMERIC FOUNDRY CORE OR MOLD

Clinton B. Howard, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,724
6 Claims. (Cl. 22-193)

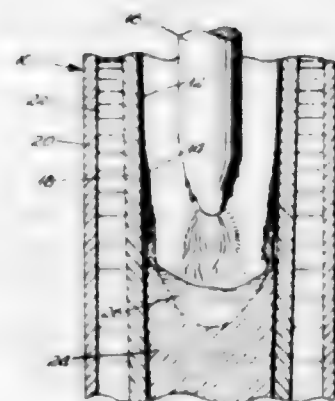
1. A method for making foundry cores and molds which comprises preparing a mixture consisting essentially of foundry sand, water, from 0.05-10% by weight, based upon the sand, of a water-soluble copolymer and from 2-40% by weight, based upon the water-soluble copolymer, of a water-soluble polyhydric alcohol, shaping said mixture and heating at a temperature of from 200-450° F. to evaporate water and harden said mixture; said water-soluble copolymer being selected from the group consisting of interpolymers of (a) an ethylenically unsaturated carboxylic monomer selected from the group consisting of maleic acid, maleamic acid, fumaric acid, fumaramic acid and mixtures thereof and (b) an alkylene monomer containing from 2-4 carbon atoms, and the ammonium salts thereof; said water-soluble copolymer having a molecular weight equivalent to that of an ethylene-maleic anhydride copolymer having a specific viscosity of from 0.1-3.0 as measured at 25° C. on a 1% by weight solution thereof in dimethylformamide.

3,005,246

METHOD OF PRODUCING HIGH-QUALITY INGOTS OF REACTIVE METALS

William L. Murphy and Max L. Pochon, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York

Filed Dec. 24, 1958, Ser. No. 782,793
7 Claims. (Cl. 22-216.5)



1. A process for producing ingots of a metal selected from the group consisting of tantalum, tungsten, molybdenum, columbium, titanium, vanadium and base alloys thereof from a consumable electrode in a surrounding liquid-cooled metal mold, said process comprising inserting a consumable mold liner, formed of the metal to be cast, into the liquid-cooled mold with substantially the entire opposing surfaces of the inserted liner and said mold being in direct heat transfer contact; and arc melting said consumable electrode in the thus lined liquid-cooled mold, said consumable liner having a thickness such that, as the molten metal derived from the consumable electrode rises in the mold, the heat of said molten metal and the heat of radiation from the arc cause the portion of the liner adjacent the molten metal and the

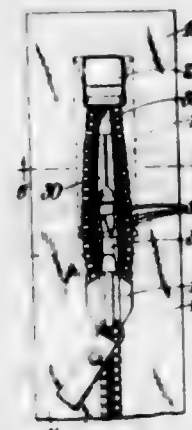
spatter adhering to the liner to melt whereby said metal spatter and said liner become an integral part of the final ingot.

3,005,247

SLIDING CLASP CONTINUOUS FASTENERS

Gandolph Doelter, Slough, England, assignor, by mesne assignments, to Omnifor S.A., Geneva, Switzerland, a Swiss company

Filed Aug. 18, 1958, Ser. No. 755,755
Claims priority, application Great Britain Jan. 8, 1958
4 Claims. (Cl. 24-285.1)



1. A sliding clasp continuous fastener of the kind in which each part of the fastener to be joined has a succession of elements held within a fold of a piece of flexible material and arranged to intercalate and interlock with the elements of the other part to form a joint between the two pieces of flexible material, the faces of the flexible material of the two parts on at least one side of the folds being held in abutting face-to-face relation at the joint when the joint is closed, and in which the sliding clasp includes a plough between the two parts which is operable to effect separation of the parts on movement of the clasp in the opening direction along the fastener and guide means for bringing the two parts together on movement of the clasp in the closing direction, the plough maintaining an opening between the parts around the plough when moved to the closing end of the fastener and said fastener having means for sealing the opening comprising a cover over the opening but leaving a passageway along the joint to permit passage of the plough, said cover including a sealing member for said passageway which makes sealing engagement under pressure with the flexible material at each side of the joint so as to act as a seal for the passageway when the plough is in the closed position.

3,005,248

HANDLE STICKING MACHINE

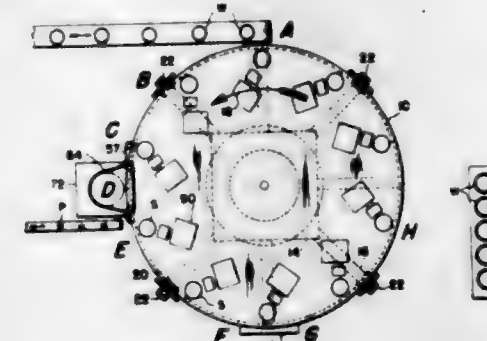
Walter L. Elliott, East Liverpool, Ohio, assignor to The Taylor, Smith & Taylor Company, East Liverpool, Ohio, a corporation of Ohio

Original application June 5, 1957, Ser. No. 663,626. Divided and this application Apr. 24, 1958, Ser. No. 736,945

9 Claims. (Cl. 25-22)

2. In a machine of the character described having pluralities of ware supports and relatively movable holders for green handles cooperable with one another to grip a green ware body in closely confronting position to the individual ones of the handle holders, said holders each comprising a forwardly moving slide and a pair of openable and closable handle clamping dies thereon, one of said dies being fixed and the other movable from a horizontal loading position, the combination with the plurality of ware supports and the plurality of handle holders, of a platform and a relatively rotatable turn-

table having a common supporting frame mounting the same in vertically spaced apart relationship, drive means connected for continuously revolving said turntable, each holder with one support being mounted operatively together as a pair to revolve with the turntable and with the elements of each pair mounted side by side on the turntable enabling the holder to move forwardly to confront the support, an actuator individual to each of said movable dies and engageable with means on said platform



rendering the actuators responsive to relative movement between said turntable and platform for automatically moving the respective movable dies from their horizontal loading position for closing said dies in succession to firmly clamp handles loaded in the holders for sticking, and a similarly responsive actuator connected to each slide for automatically sliding said clamped dies forwardly to thereupon bring the handle and the ware together.

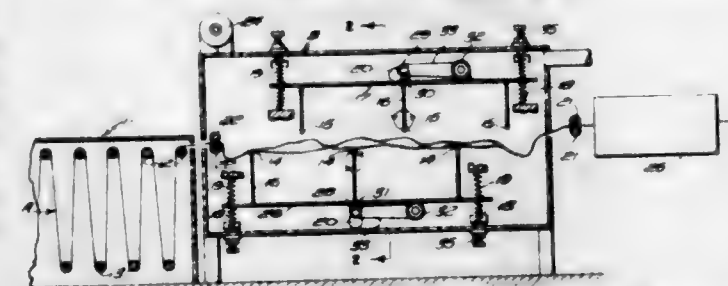
3,005,249

WITHDRAWN

3,005,250

MACHINE FOR FABRIC FINISHING TO REDUCE SHRINKAGE AND IMPROVE THE FEEL AND HAND OF CLOTH

Charles G. Hatry, P.O. Box 32, Manchester, Mass.
Original application Mar. 7, 1955, Ser. No. 492,436, now Patent No. 2,733,498, dated Feb. 7, 1956. Divided and this application Feb. 3, 1956, Ser. No. 563,285
11 Claims. (Cl. 26-18.5)



1. In a machine for treating a web of fabric, the combination of a plate, supporting springs on opposite sides of said plate, an impactor carried by the plate, means for moving said plate and thereby the impactor to give the web sharp, localized impacts while the successive impacted areas of the fabric are movable freely away from the impactor at the time of impact, and means for guiding the fabric in substantially lax condition past the impactor.

3,005,251

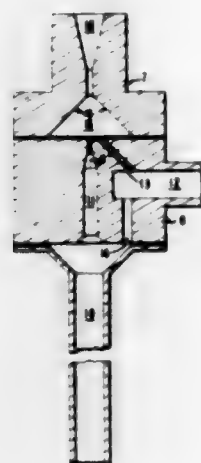
YARN FLUID TREATMENT PROCESS AND APPARATUS

Carl Edward Hallden, Jr., Avondale, Pa., and Karel Marenbeeld, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,549
13 Claims. (Cl. 28-1)

1. A process for imparting to a synthetic linear polymeric strand a dyeability rate at least 75% greater than

that of the starting material, comprising continuously feeding the strand into a treating chamber in a direction passing across an obstacle surface within the chamber, jetting a plasticizing stream of compressible fluid having a temperature of at least 300° F. at high velocity into the chamber across said strand feed direction at an angle of at least 20° to change the direction of movement of the strand toward the obstacle surface, imping-

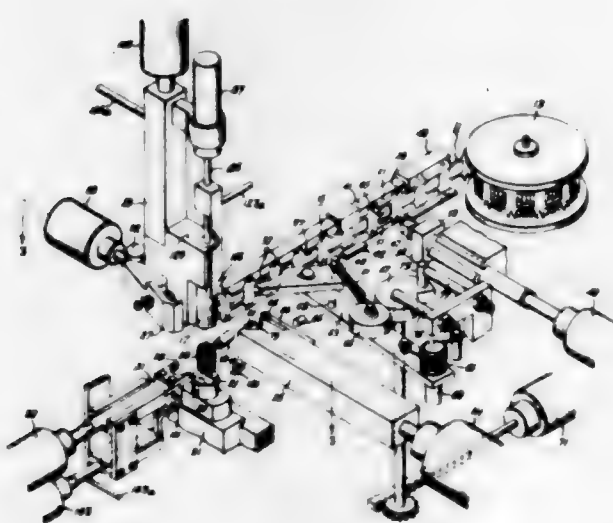


ing the strand in a plastic state against the obstacle surface to provide an abrupt change in the latter direction of movement of the strand and adjacent fluid, conducting the strand and fluid from the chamber, the strand being removed at a rate less than the feed rate to provide an overfeed of at least 12%, quenching the strand while simultaneously expanding and reducing the velocity of the adjacent fluid, removing the strand from the fluid, and winding it on a package.

3,005,252

ELECTRODE FORMING AND MOUNTING APPARATUS

Martin P. Golden, Rexford, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,408
6 Claims. (Cl. 29-25.2)



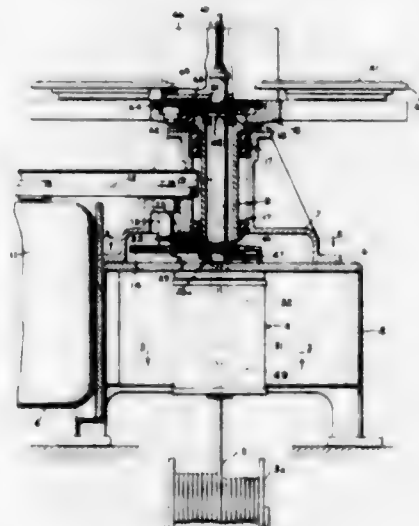
1. Apparatus for forming and mounting elements in base members carrying previously mounted upstanding concentric arrays of elements comprising, a forming and assembling station, means for holding one of said base members at said station, a recessed mandrel at said station movable vertically between a forming position and a delivery position, means reciprocable with said mandrel

for conforming and holding to said mandrel another element to be mounted in said base member in spaced relation to said array of elements, support means for aligning at least the other element of said concentric array of elements relative to the recess in said mandrel, and means for moving said mandrel to said delivery position with said other element thereon to fit said recessed mandrel over said array of elements and mount said other elements in said base member in spaced relation to said array and locking means operative responsive to said mandrel movement to said delivery position to secure the mandrel-carried element to said base member, and a reciprocable hold-down member within said mandrel engageable with said array during at least the first portion of the withdrawal of said mandrel from delivery position.

3,005,253

MANUFACTURE OF HEAT EXCHANGE TUBING

Herbert J. Venables III, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed Sept. 26, 1958, Ser. No. 763,514
15 Claims. (Cl. 29-33)



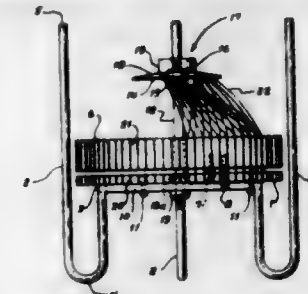
1. A machine for manufacturing finned tubing of the type having a plurality of individual fin sections extending outwardly therefrom comprising a rotatable head having an axially disposed passage therein, means for rotating said head, means on said head for supporting a coil of strip stock about said axial passage, said coil supporting means being rotatable with respect to said head, means operated in timed relation with the rotation of said head for reducing the exterior circumference of tubing to a uniform circumference and for advancing said tubing at a governed rate through said axial passage in said rotatable head, forming means on said head for removing strip stock from said coil and forming it into fin material having a plurality of individual fin sections connecting at one end to a base flange, means on said head for directing said fin material onto said tubing being advanced through said head thereby to wrap said fin material onto said tubing as said head is rotated around said tubing with said base flange of said fin material disposed in flat-wise engagement with said tubing and with said individual fin sections extending radially outward therefrom, and means carried by said head for driving said forming means to release a length of fin material for each revolution of said head that is less than the length demanded for helical wrapping onto the uniform circumference of said tubing being advanced through said axial passage by an amount within the permissible limit of elongation of said fin material for each wrap thereof onto said tubing so that a predetermined wrapping tension is continuously maintained in said fin material.

3,005,254
BRAZED ZIRCONIUM BASE ALLOY STRUCTURES

Donald E. Thomas, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed May 29, 1958, Ser. No. 738,628
5 Claims. (Cl. 29-194)

1. A brazed structure comprising two zirconium base alloy members having surfaces disposed close to one another, and a layer of brazing alloy disposed between and bonded to both surfaces, the alloy comprising from 0.1% to 2.5% tin, from 0.1% to 2% by weight of at least one metal selected from the group consisting of iron, nickel and chromium, from 1% to 10% beryllium and the balance being zirconium and not in excess of 0.5% of impurities.

of the end pattern in a plane with said axis passing through the center of said circle and at right angles to said plane, establishing a position on said axis in spaced relation with respect to said plane, which position is approximately the position of the closing end of said end pattern on said axis, establishing a relatively smaller circle than said circle of maximum circumference having its center

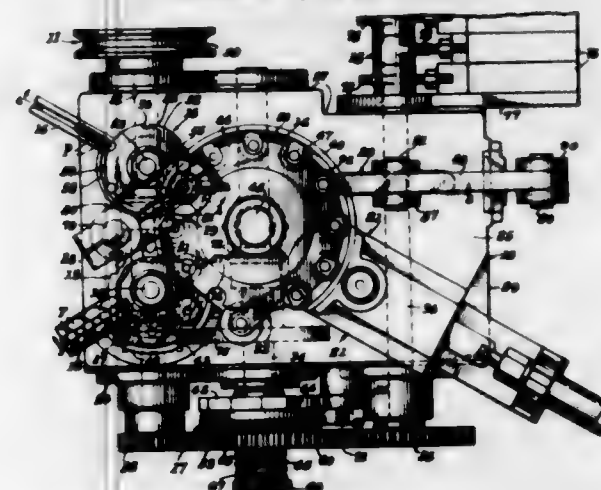


at about said approximate closing end position and lying in a plane perpendicular to said axis, passing thread between said circle of maximum circumference and said relatively smaller circle to form a net-work of thread therebetween, and expanding with uniform pressure said net-work outwardly from the inner side thereof to form an end curvature wherein all the threads are in uniform tension.

3,005,255

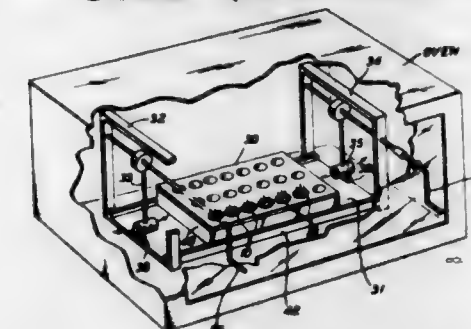
DRIVE RIVET ASSEMBLING MACHINE

Raymond O. Wilson, San Marino, Calif., assignor to Olympic Screw & Rivet Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 16, 1959, Ser. No. 799,598
7 Claims. (Cl. 29-208)



1. A machine for assembling the sleeves and pins of drive rivets that comprises an index disc having uniformly spaced marginal seats therein, a coplanar disc tangent to the index disc and having sleeve-transporting seats in the margin thereof to transport sleeves to the seats of the index disc, a third disc upwardly offset from the index disc and having marginal pin-transporting seats therein, the seats in the index disc and in the third disc being in vertical alignment when said seats reside in a line that extends through the axes of said latter disc, a pin in the pin-transporting disc, thereby, being vertically aligned above a sleeve in the index disc, air-operated means to push said pin from its seat in the third disc partly into the sleeve therebeneath, means to index the index disc and the two other discs to effect transfer of another sleeve to the index disc and align vertically another pin and a sleeve carried by the index disc, said index movement of the index disc moving a pin-provided sleeve out of vertical alignment with the air-operated means, and means to further set the pin into the sleeve of the pin-provided sleeve after such intermittent rotation of the discs.

3,005,257
FABRICATION OF SEMICONDUCTOR DEVICES
William M. Fox, Bethlehem, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 28, 1958, Ser. No. 757,736
1 Claim. (Cl. 29-471.1)



In the fabrication of a semiconductor device including a mounting member comprising a header and terminal members, the steps of mounting and connecting an alloy junction transistor element comprising solder coating a central portion of said header member, solder coating one face of a metal plated member, welding said plated member to a terminal of said header, mounting said transistor element between said plated member and said header and in contact with the solder-coated portions of said plated member and said header, securing the assembly in a metal jig, heating the assembly in an oven to at least the melting temperature of the solder and simultaneously subjecting the assembly to a series of low intensity accelerations of small amplitude and at a frequency of one every one to ten seconds thereby to expedite bonding of said transistor element to said header and said plated member.

3,005,256

DEVICE AND METHOD FOR DETERMINING THE END PATTERN OF FILAMENT WOUND PRESSURE VESSELS

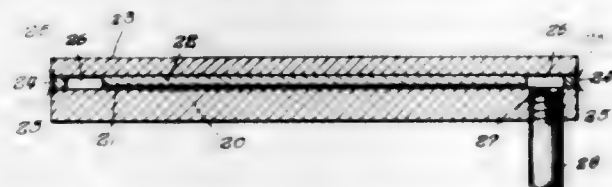
Richard E. Young, Rocky Hill, N.J., assignor, by means of assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 26, 1957, Ser. No. 699,078
14 Claims. (Cl. 29-487)

1. The method of determining end patterns of filament wound pressure vessels having a central axis which comprises, establishing the circle of maximum circumference

3,005,258
METHOD OF BRAZING WITH METAL POWDERS BELOW THE MELTING POINT OF EITHER METAL POWDER
George Stanley Sengdahl, Jr., Birmingham, and Jules G. Du Pre, Homewood, Ala., assignors to Chicago Bridge and Iron Company, Chicago, Ill., a corporation of Illinois
Filed July 10, 1958, Ser. No. 747,657
6 Claims. (Cl. 29-494)

6. In a process of producing clad plates by vacuum brazing, the improvement which comprises preparing a

cladding sandwich having a base plate and a cladding plate in face-to-face position with a homogeneous brazing mixture uniformly applied in a thin layer between the base plate and the cladding plate, the brazing mixture comprising a member of the groups consisting of (1) powdered manganese and powdered nickel containing at least 5% of each metal and in a proportion which yields an alloy of the metals having a melting point below the melting point of manganese, and (2) powdered manganese and powdered copper in a proportion which yields

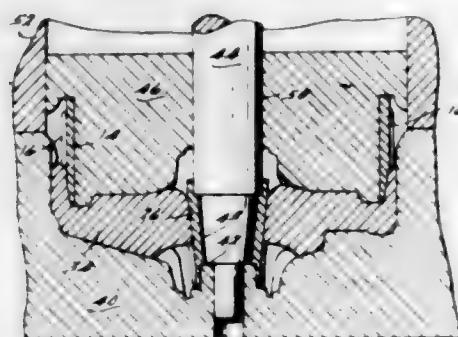


an alloy of the metals having a melting point below the melting point of copper and containing 10 to 68% manganese, evacuating the area between the base plate and the cladding plate and heating the sandwich while so evacuated to a temperature above the melting point of an alloy having the same composition as the powdered mixture but below the melting point of the metals in the brazing mixture and below the melting point of the base plate and cladding plate, and cooling the sandwich to an ambient temperature.

3,005,259

METHOD OF MAKING BRAKE DRUMS

Robert J. Benya, Grosse Pointe Woods, and Felix Cole, Center Line, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,886
6 Claims. (Cl. 29-505)



1. A method of making a brake drum comprising the steps of frictionally inserting an annular hub of relatively hard metal in a centrally located aperture in a relatively soft aluminum disc, said hub having keying means on the outer surface thereof, holding a cast iron liner ring closely adjacent a side of said disc and concentrically surrounding said hub, said ring having keying means on an exterior surface thereof, enclosing said hub disc and liner ring with relatively movable die members, actuating at least one of said die member to cause compressing of said aluminum disc to flow the same radially inwardly about said hub outer surface and ends and radially outwardly around the exterior surface of the cast iron liner and into the key portions thereon to provide a mechanical interlock between the several components of the assembly.

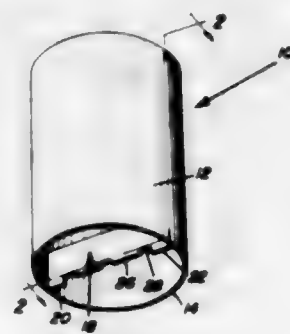
3,005,260

ROLL CUTTER

Kenneth K. Mene, 504 S. Broadway, Cortez, Colo.
Filed June 24, 1960, Ser. No. 38,476
7 Claims. (Cl. 30-302)

6. A dough cutter for sectioned rolls, comprising, tubular cutting means for peripherally separating from a sheet of dough, a disc of dough, section edge cutting means

operatively connected to the tubular cutting means for simultaneously forming a section defining cut in the disc of dough, recessed surface sectioning means operatively connected to the section edge cutting means for forming a



cleavage cut in the disc of dough in alignment with the section defining cut, and notch means formed in the recessed surface sectioning means for leaving connecting pillars of dough in the cleavage cut.

3,005,261

DENTAL APPARATUS

André Richard Haller, Ulrikon-Waldegg, Switzerland, assignor to A. Koelliker & Cie A.-G., Zurich, Switzerland

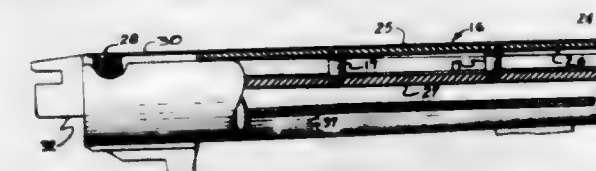
Filed July 29, 1957, Ser. No. 674,895
Claims priority, application Switzerland July 31, 1956
3 Claims. (Cl. 32-28)



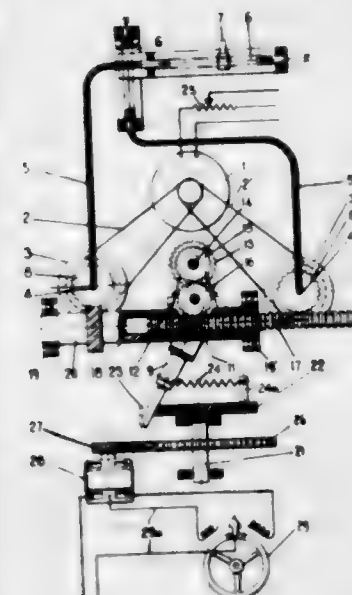
1. In a dental apparatus having an instrument carrying holder, driving means for the instrument mounted on the holder and an electric motor connected to said driving means, a liquid container, a spray nozzle on the holder, and a feed line connected between the liquid container and the spray nozzle for supplying liquid to the spray nozzle, the combination of electrical control means connected to said electric motor for controlling the supply of electricity to the electric motor for the driving means, a pressure gas feed line connected to the container, a relay operated valve means in the pressure gas feed line for controlling the supply of pressure gas to the container, a first electric heating device of constant heating capacity in heat transfer association with the liquid container, a second electric heating device in heat transfer association with the feed line leading to the spray nozzle at a section of the feed line situated closer to the instrument carrying holder than to the container, an electric circuit energizable independently of the electrical control means for the instrument, said circuit connecting said heating devices to a source of power, relay operated means in said circuit for adjusting the heating capacity of said second heating device from a first to a second value, and a relay means in said circuit connected to said relay operated means and said relay operated valve means,

said relay means having energizing means connected to said electrical control means and energized by current flow in the electric control means for actuating said relay means and said relay operated means for changing over the heating capacity of the second heating device from a lower to a higher value and for simultaneously actuating said relay operated valve means to open said valve means to supply pressure gas to said liquid container.

said bar member, said strip being sufficiently pliable so that its upper surface is drawn into the sight plane of said

3,005,262
CONTROL DEVICE FOR COORDINATOMETERS
IN PHOTOGRAMMETRIC EQUIPMENTS

Umberto Nistri, Via Della Vigna Navale 81,
Rome, Italy
Filed Feb. 8, 1957, Ser. No. 639,031
Claims priority, application Italy Sept. 27, 1956
3 Claims. (Cl. 33-1)



1. In combination with a Cardanic joint having interconnected outer and inner actuating members having intersecting Cardanic axes; a coordinatometer having an indicator point and having means for independently shifting the indicator point in two coordinate directions; two variable speed drives; means operatively connecting said drives to the coordinatometer, each speed drive being connected to drive the indicator point in one of its coordinate directions; means operatively connecting said inner and outer members to vary the speed of said variable speed drives responsive respectively to the movement of said members about the two coordinate axes; and a rod having a free end and another end fixed to said outer member for actuating the Cardanic joint; a control device comprising a disc, and means rotating said disc about an axis passing through the intersection point of said Cardanic axes, said disc having formed therein a slot containing said free end of the rod, whereby the rotation of said disc causes said rod to describe a cone of fixed aperture, the apex of which coincides with said intersection point.

3,005,263

SHOTGUN SIGHT

Henry K. Lockwood, Springfield, Mass., assignor to Savage Arms Corporation, Chicopee Falls, Mass., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,481
9 Claims. (Cl. 33-47)

6. A shotgun sight comprising a plurality of spaced upstanding supports carried by a gun, a bar member upheld by said supports in spaced relation to a barrel of said gun and having a surface disposed in a plane in predetermined relationship with the sight plane of said gun, a resiliently pliable elongated strip removably fitted on

gun when said strip is fitted onto said bar member, the upper surface of said strip providing the sighting surface of said gun.

3,005,264

DEPTH REGISTER

Charles S. Shaffer, Box 1017, Lubbock, Tex.
Filed July 28, 1958, Ser. No. 751,217
7 Claims. (Cl. 33-141)



1. A drill rig comprising a derrick, a fixed pulley block mounted on said derrick, a movable pulley block connected to said fixed pulley block by a cable, a gear rack pivotally suspended by its upper end from said derrick substantially parallel to the runs of said cable in between said fixed and movable pulley blocks, a pinion meshing with said rack, a pinion shaft fixed to said pinion, means supported and guided by said rack to maintain said pinion in operative relation to said rack, a clutch and register housing, means securing said clutch and register housing to said movable pulley block, a clutch and a register in said housing, said register having an operating shaft substantially in axial alignment with the axis of the movable pulley block and the pinion shaft, said pinion shaft projecting into said housing and being rotatably supported thereby, a clutch for positively connecting said register operating shaft and said pinion shaft in infinite angular positions and means to engage said clutch to measure the movement of said movable pulley block.

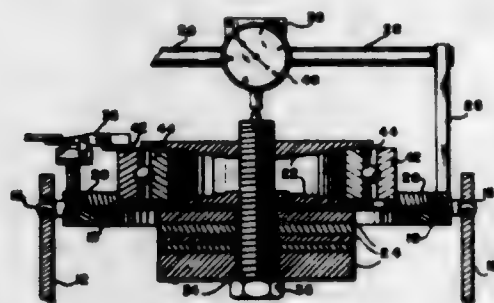
3,005,265

BEARING INSPECTION TOOL

Wade H. Martin, Jr., 43652 N. Highbee Ave., and Wesley V. Olds, 44112 N. Date, both of Lancaster, Calif.
Filed Apr. 3, 1959, Ser. No. 804,054
6 Claims. (Cl. 33-174)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. In a device for measuring the axial play or clearance of a ball bearing, a stand consisting of a metal plate, standards on opposite sides of said plate, an annular means pivotally mounted on said standards to be rotatable about its diameter in said standards, said means providing a seat for an outer race adapter, support means having clamping means thereon for clamping to

the inner race of a ball bearing to be measured, said supporting means rigidly supporting a weight coaxially with the inner race means for clamping the outer race



of said bearing to said adapter, and a dial indicator gauge mounted in constant contact with the said inner race clamping means.

3,005,266

METHOD OF REMOVING SURFACE WATER FROM ARTICLES

Hendrikus Cornelis Nicolaas van der Sanden, and Hendrikus Johannes Veenendaal, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 27, 1958, Ser. No. 724,241
Claims priority, application Netherlands Mar. 30, 1957
4 Claims. (Cl. 34-9)

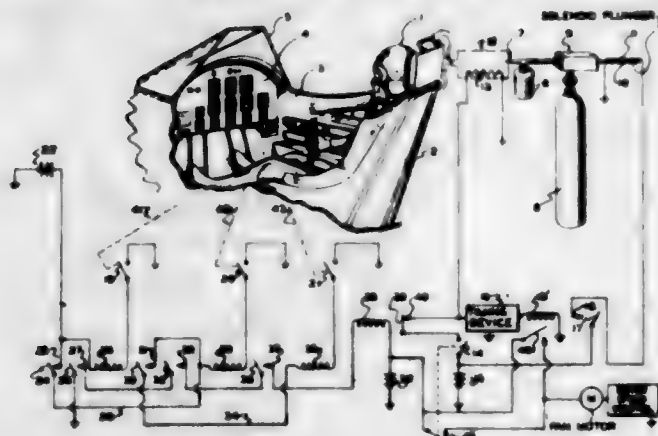
1. A method of removing water from the surface of a wet article comprising immersing said wet article in a water-removing composition consisting essentially of a hydrocarbon having a boiling point range between about 50° C. and 370° C. and a wetting agent in an amount of from about 0.1% to 8% by weight, said wetting agent being a water-insoluble salt of a nitrogen base selected from the group consisting of triethylalkyl-ammonium bases, trimethylalkyl-ammonium bases, and the n-alkylpyridine bases and the corresponding alkenyl derivatives in which the alkyl and alkenyl groups are straight chain radicals containing from 12 to 18 carbon atoms and an anion selected from the group consisting of the polyphosphates, hexametaphosphates, tetraoxalates, bichromates and persulphates, said wetting agent being soluble in a hydrocarbon-butanol mixture having a ratio of 9:1 to thereby form a separate water layer and drawing off said water layer.

3,005,267

SIMULATED AIRCRAFT FIRE SYSTEM

George A. Decker, Binghamton, N.Y., assignor to General Precision, Inc., Wilmington, Del., a corporation of Delaware

Continuation of application Ser. No. 613,749, Oct. 3, 1956. This application Feb. 13, 1959, Ser. No. 793,217
13 Claims. (Cl. 35-12)



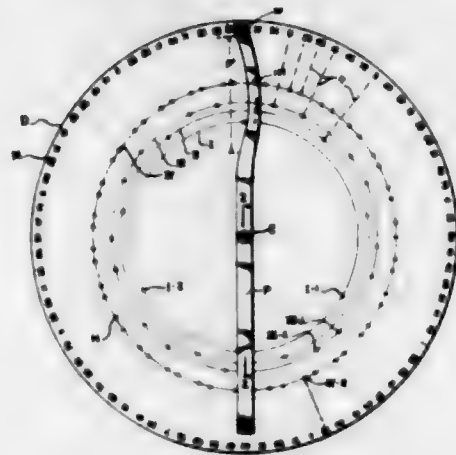
1. Smoke generator for grounded aircraft trainer apparatus to simulate aircraft fire employing a suitable liq-

uid substance, comprising a time delay device, electrical heating means, an instructor's switch for energizing the said heating means and starting the time delay device, atomizing means actuated by the time delay device upon expiration of a delay period to atomize said liquid, and means to direct the atomized material past the said heating means to the trainee's location in the form of smoke.

3,005,268

NUMBER GAME DEVICE

Russell S. Gold, 6040 Madison St., Ridgewood, N.Y.
Filed July 9, 1959, Ser. No. 826,021
2 Claims. (Cl. 35-31)



1. A mathematical device, comprising a chart having a plurality of spaced parallel columns, each of said columns being divided into a number of divisions equal to $(B-1)B^{x-1}$, where B is the base of a number system other than the decimal system and x is the ordinal number of the column, a plurality of numbers in the decimal system arranged in a further column outside of and parallel to said plurality of columns, the numbers in said further column while being in the base used in this column are in the sequence $0B^{x-1}$, $1B^{x-1}$, $2B^{x-1}$, $3B^{x-1}$, ..., $(n-1)B^{x-1}$ and an indicator movable in a predetermined direction over the chart to a plurality of positions, said indicator being provided with means for indicating one of said plurality of numbers at each of said positions, said numbers corresponding to respective marks of the divisions in said plurality of columns, said chart being a circular dial, said columns being arranged concentrically on the dial, said indicator being a disk overlaying said dial and rotatable thereon, said means being a cut-out window on said disk, said indicator having a sector cut-out exposing portions of said plurality of columns while covering said further column of numbers, and a plurality of recesses formed in one edge of said sector cut-out, said recesses corresponding in spacing to the spacing of said plurality of columns.

3,005,269

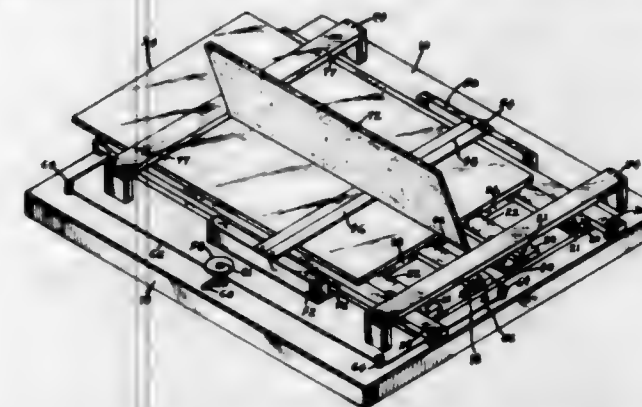
SLIDE RULE TRAINER

Francis L. Woolley, Port Washington, N.Y., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 27, 1959, Ser. No. 796,179
8 Claims. (Cl. 35-39)

(Granted under Title 35, U.S. Code (1952), sec. 264)
1. A slide rule demonstrator for an overhead projector comprising spaced apart substantially parallel transparent side members, and a movable transparent strip with a depending transparent flange, said transparent strip overlying said side members and being somewhat wider than the space between said side members, said transparent strip and said flange being substantially equal in length to said side members, said flange riding between both side mem-

bers, with slide rule indicia on the upper faces of said side members and on said depending flange, the indicia on said side members and depending flange being in the same plane, and a transparent cursor movably mounted

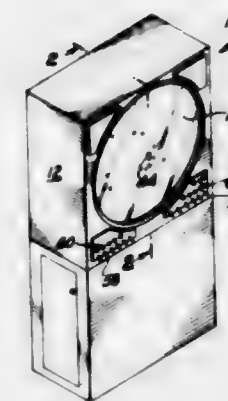


and retained over said side members and said overlying transparent strip and depending flange, and remote manipulation means mounted on said slide rule demonstrator and operatively connected to said movable transparent strip for movement thereof.

3,005,270

ORRERY

Clair Omar Musser, 12997 Blairwood Drive, Studio City, Calif.
Filed June 20, 1958, Ser. No. 743,403
16 Claims. (Cl. 35-45)



1. An orrery which comprises: a housing; a translucent screen located at one side of said housing, said screen extending in a flat plane; a hollow central shaft extending through said housing from adjacent to center of said screen, said shaft extending at a right angle to said screen; a plurality of tubular shafts rotatably mounted on said central shaft so as to be concentric with one another and with said central shaft; means for rotating said tubular shafts at different rates; an arm means attached to each of said tubular shafts so as to rotate therewith, each of said arm means terminating adjacent to said screen; a light bulb serving to simulate the sun attached to said central shaft so as to be visible from the outside of said housing; a light box simulating an asteroid belt mounted on the arm means attached to one of said tubular shafts, said light box extending completely around said central shaft and being located adjacent to said screen; a plurality of light bulbs mounted within said light box so as to illuminate the interior of said light box so that said light box may be viewed through said screen; other light bulbs, each of said other light bulbs being mounted on one of the remainder of said arm means, said other light bulbs being mounted adjacent to said translucent screen so as to be visible through said screen; circuit means for supplying current to each of said other light bulbs, and to said plu-

rality of light bulbs within said light box, said circuit means being mounted on said housing, each of said circuit means including switch means and variable resistance means for varying the amount of current supplied to said light bulbs.

3,005,271

VENTILATING INSOLE FOR FOOTWEAR

Harry Brahm, Box 1857, Balboa, Canal Zone, Panama
Original application May 20, 1954, Ser. No. 431,243, now Patent No. 2,797,501, dated July 2, 1957. Divided and this application June 19, 1957, Ser. No. 666,724
2 Claims. (Cl. 36-3)



1. A ventilating cushion insole unit comprising an insole blank, a porous, rubber-like cushion layer secured to one surface of said blank and being substantially coextensive therewith, said cushion layer being transversely severed into forward and rearward portions, a relatively impervious cover layer of pliable material extending over said cushion layer in conforming relation and bonded to the marginal portion of said blank, a pliable strip of airtight material wrapped around the severed edge of said rearward portion and adhesively secured thereto and to the insole blank and the cover layer to form a dividing wall between the cushion layer portions and a rearward pumping chamber, a first one-way air intake valve mounted in the heel margin portion of said insole unit and arranged to pass air into the rearward pumping chamber, and a flexible elongated member extending beneath the cushion layer from the shank area of the insole unit and through a close fitting opening in the dividing wall strip, said elongated member including a second one-way air intake valve adjacent its rearward end and being provided with air inlet conduits supplying air from the rearward pumping chamber to said second valve and air delivery conduits receiving air passed through said second valve and discharging such air into the forward position of said cushion layer, the area of the cover layer overlying the forward cushion layer portion being provided with a plurality of small spaced air discharge openings.

3,005,272

PNEUMATIC SHOE SOLE

Robert Shelare, Douglass Hills, New York, N.Y., and Frank Makara, 29 Orange Drive, Jericho, N.Y.
Filed June 8, 1959, Ser. No. 818,961
1 Claim. (Cl. 36-29)



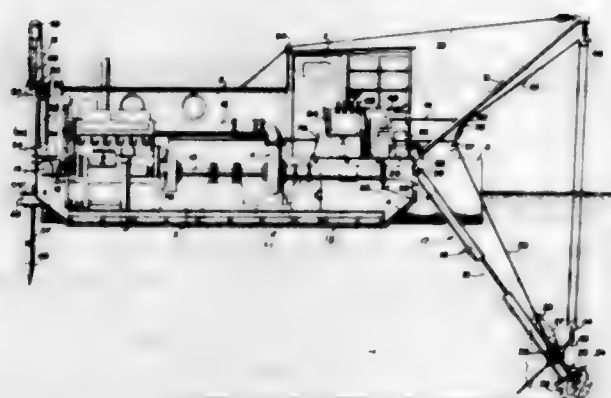
As an article of manufacture, an integral sponge rubber heel and sole combination unit adapted for attachment to shoe upper construction, consisting essentially of top smooth wall, a bottom wall having a plurality of transverse spaced-apart rearwardly sloped ribs, each rib having an elongated aperture centrally disposed therein, an elongated plastic flexible capsule having compressed gas there-

in disposed in each of said rib apertures, each of said ribs having a plurality of passageways disposed at a right angle thereto communicating between said capsule and the atmosphere, whereby the upper smooth wall of said sole is heat insulated from the walking area of said ribs contacting hot pavement.

3,005,273

DUXIE DREDGE

John H. Milne, 1732 NE. 144th St., North Miami, Fla.
Filed June 15, 1959, Ser. No. 826,281
1 Claim. (Cl. 37-64)



An apparatus of the character described comprising a portable barge, a float tank removably mounted upon each side of said barge, a vertically movable spud removably mounted upon each side of the rear end portion of said barge, a ladder pivotally connected to and removably mounted upon the forward end of said barge, a boom removably mounted upon the forward end of said barge, a cutter head, a drive shaft for said cutter head, a hydraulic motor for said drive shaft, said head, shaft and motor being mounted upon the outer end portion of said ladder, a pump mounted in said barge, an engine mounted in said barge and operably connected to said pump, a suction pipe extending from said pump and along and protectively within the side frame portions of said ladder to a point adjacent said cutter head, a discharge pipe extending from said pump to a point remote from said barge, and hydraulic means carried by said barge and operable by said engine for individually moving said spuds, said ladder, and said motor for said cutter head, the principal axes of said cutter head, drive shaft and its associated motor extending forwardly and downwardly at an angle of the order of 20° with respect to the principal axis of said ladder, and the center of area of the cutting portions of said head lying substantially on the longitudinal axis of said ladder, whereby said motor may be mounted relatively close to and protectively above the free end of said ladder and whereby the ladder-twisting torque exerted by said head is held at a minimum value.

3,005,274

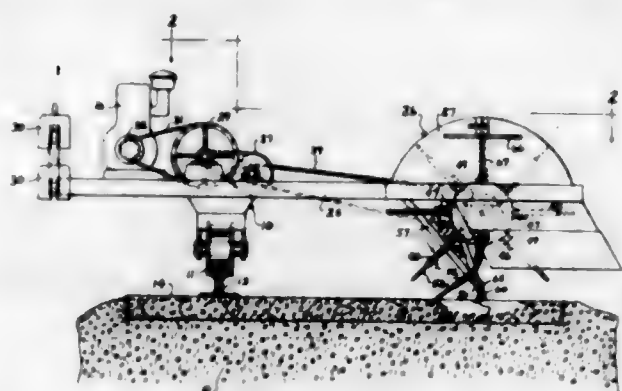
APPARATUS FOR REMOVING BALLAST FROM BETWEEN CROSSTIES

Royce G. Kershaw, Montgomery, Ala., assignor to Kershaw Manufacturing Company, Inc., a corporation of Alabama

Filed Mar. 11, 1960, Ser. No. 14,333
12 Claims. (Cl. 37-104)

1. Apparatus for removing ballast from cribs between crossties of a railroad track, comprising a main frame having wheels to ride on the track, a digging implement frame over the crossties, a brush-like digging unit mounted for rotation on said implement frame on an axis generally normal to the crossties and having flexible members that

extend below the crossties to dig ballast from the cribs, and means on the implement frame to support the same

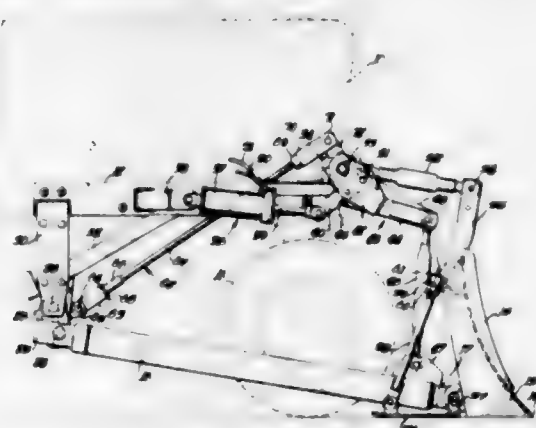


from the upper surface of the crossties for movement across the crossties from one crib to the next.

3,005,275

BULLDOZER

Roberto E. Febré, Saltillo, Coahuila, Mexico, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 28, 1958, Ser. No. 738,404
4 Claims. (Cl. 37-144)



1. A bulldozer attachment for a tractive vehicle, comprising a transverse blade, a rock shaft rockably mounted on the vehicle, lift arms carried by the rock shaft and operatively connected to the blade for raising and lowering the latter upon rocking the shaft, a pair of laterally spaced push bars pivotally connected to said blade and extending rearwardly therefrom, a hitch member pivoted on the vehicle for swinging relative thereto, means pivotally connecting the rear ends of said beams to said member for swinging therewith, said hitch member being swingable relative to the vehicle in response to pressure of the soil against said blade, a thrust member operatively connecting said hitch member to said rock shaft to actuate said lift arms to lift the blade upon movement of said hitch member relative to the vehicle, and power transmitting means on the vehicle operatively connected to said rock shaft for rocking the rock shaft to raise and lower the blade, said power transmitting means including lost motion means accommodating said actuation of said lift arms upon movement of said hitch means relative to the vehicle.

3,005,276

BADGES AND PIN-ATTACHING MEANS THEREFOR

Louis W. Rosen, 205 E. 63rd St., New York 21, N.Y.
Filed May 31, 1960, Ser. No. 32,822

2 Claims. (Cl. 40-1.5)

1. In a badge and pin combination, a badge member consisting of a thin sheet of resilient and transparent

material folded transversely intermediate its ends to define a panel having an upper and lower flap, each rearwardly intumed in confrontation with the reverse surface of said panel for the reception of a card or the like therebetween for display purpose; a straight pin of the common type having a pointed end at the terminal of its shank and a suitable head or top at the other end thereof, with attendant means for removably mounting the same preferably from and along the outer surface of said upper flap in a pre-set and interlockable combination adapted for securing said badge on to and flat against any face of a garment or the like; said attendant means consisting of an arm in prolongation of said shank but bent at right angles thereto, rearwardly of said outer surface, a complementary distance from said top for the manual manipulation of said pin for locking and unlocking purpose, also an archway with a uniform aperture at each end thereof, aligned along said outer surface and drawn upwardly out of said material in form sufficient to snugly receive the pin shank for channeling the same over the fixed linear course pre-established thereby, and also a hollow mound in horizontal alignment with said course, with an opening in its elevation facing the point of said pin and drawn upwardly out of



said material to a height slightly above the height of said mounted shank leading from the horizontal plane of said outer surface, said mound being otherwise spaced beyond the terminal of said archway a distance, in relation to the reach of said shank, sufficient to receive through its said opening and beneath its dome a complementary length of the pointed end of said pin when said shank is slid pointwise to pin-locked position, regardless of embodiment therewith of any such face material; means by which such locked position is prevented from disengagement, consisting of a barrier also drawn upwardly out of said material and so positioned whereby a vertical edge or wall thereof is adapted to abut the outer side of said arm after the latter has been fully revolved to downward position upon completion of said locking operation, and two other barriers of similar construction, so spaced on said upper flap in the region of said arm as to prevent, through similar abutment, any excess movement of said pin shank beyond that fixed for locked or unlocked positions; the lateral reach of said arm being such as to tower slightly above the top edge of said badge when revolved upwardly to vertical position and as to afford conspicuous and clear access to the same for locking or unlocking said pin while said badge is positioned on such garment or its equivalent.

3,005,277

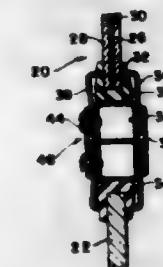
TELEPHONE BOOTH MOUNTING FOR ADVERTISEMENTS

Percival H. Sherrow, 84-15 Kendrick Road, Jamaica, N.Y.

Filed Feb. 12, 1958, Ser. No. 714,828
4 Claims. (Cl. 40-125)

1. In a telephone booth including corner posts, a wall panel assembly including an inside panel, an outside panel, and means spacing said panels apart and providing for the reception of an indicia-bearing panel therebetween, at least one of said panels being transparent, and means removably mounting said assembly in a wall of said telephone booth, said mounting means comprising a

compressible frame surrounding the edge of said assembly, a channel formed in each of two adjacent ones of said corner posts and adapted to receive reversed channel members, the bases of which loosely engage respective opposite peripheral edges of said frame, a pair of spaced members extending between said corner posts and also having respective channels adapted to receive reversed channel members, the bases of which loosely

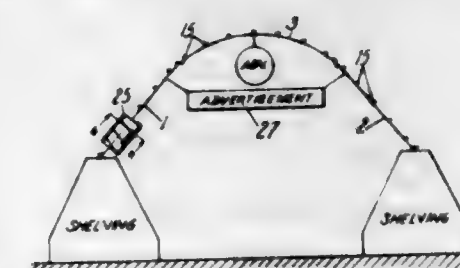


engage respective other peripheral edges of said frame, a retainer angle strip extending along each edge of said frame and adapted to have one leg between said frame and a wall of a respective channel and a wall of the corresponding reversed channel and another leg bearing on said frame, and means for retaining said strips under pressure against said frame, whereby said panel assembly is retained in position in a weather-protected manner.

3,005,278

ADVERTISING DISPLAY SUPPORTS

Louis P. Johnston, Kalamazoo, Mich., assignor to Johnston & Associates, Kalamazoo, Mich., a partnership
Filed Nov. 20, 1959, Ser. No. 854,277
10 Claims. (Cl. 40-128)



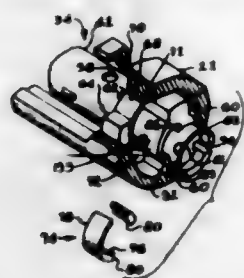
1. An advertising display support comprising a pair of anchor plate members having upstanding flanges with spaced holes therein, means including adhesive coatings on the bottoms of said anchor plate members for securing the members in spaced relation, an arch extending between said anchor members and consisting of terminal arch sections and at least one intermediate arch section, said arch sections including equally spaced side rods of self supporting flexible material and cross bars connecting the rods in equally spaced relation to the spacing of the holes in said anchor members, outwardly turned hooks on the lower ends of the rods of said terminal sections engaged through the holes in said anchor members, upwardly off-set and downwardly concave U-bends with longitudinally extending ends disposed below the remainder of the rods formed on one end of the rods of said intermediate arch section and one of said terminal sections, said bends being spaced substantially from the nearest cross bar permitting lateral flexing of the ends of the rods, interlock cross bars positioned in spaced relation at the other ends of said intermediate section and said other terminal section with the end interlock cross bars at the tops and ends of the rods of the sections and interior interlock cross bars on the undersides of the rods whereby the U-bends of the rods of one section engage the end interlock cross bar of an adjacent section and the longitudinally extending ends engage under the interior interlock bar, and display attaching elements on said sections consisting of rings secured to certain of said

cross bars in the planes of said sections and semi-circular loops attached to the insides of said rods perpendicular to the planes of said sections.

3,005,279

BOLT ACTION RIFLE WITH GAS DEFLECTING MEANS

Nicholas L. Brewer, deceased, late of Tarpon Springs, Fla., by Margaret W. Brewer, executrix, Tarpon Springs, Fla., assignor to Savage Arms Corporation, Chicopee Falls, Mass., a corporation of Delaware
Filed Nov. 20, 1958, Ser. No. 775,143
10 Claims. (Cl. 42-18)

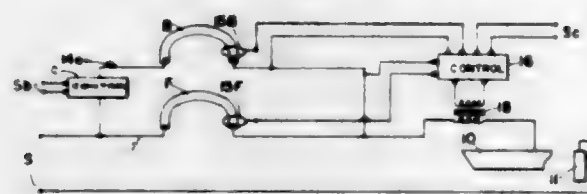


2. In a rifle, a bolt and receiver combination comprising a receiver having a lengthwise bore including gas escape ports extending radially outward of said bore, a bolt slidable and rotatable in said receiver, lugs carried by and projecting radially from said bolt, said receiver including means for lockingly engaging said lugs, said bolt including conduit means providing communication from the chamber of said rifle to said receiver for conducting rearwardly escaping gases to a predetermined location in said receiver when the bolt is in a breech locking position, a baffle member rotatably carried by said bolt and including radially projecting lugs, said receiver including means for holding the lugs of said baffle member in alignment with said gas escape ports when the bolt is rotated to its locked position whereby the lugs of said baffle member serve to deflect gases outwardly through the ports of said receiver.

3,005,280

GUIDING OF FISH BY ELECTRICAL IMPULSES

Alfred Vang, P.O. Box 864, Rancho Santa Fe, Calif., assignor of one-third to Anna Vang, and one-third to Alfred Vang, trustee
Filed Sept. 18, 1957, Ser. No. 684,743
4 Claims. (Cl. 43-4.5)



1. In the art of fishing, a method for inducing fish to move in given direction comprising applying a source of current to two electrodes in water containing the fish at a substantially constant rate and maintaining said rate for a given length of time and then suddenly increasing the current to a substantially constant value and then suddenly decreasing the current.

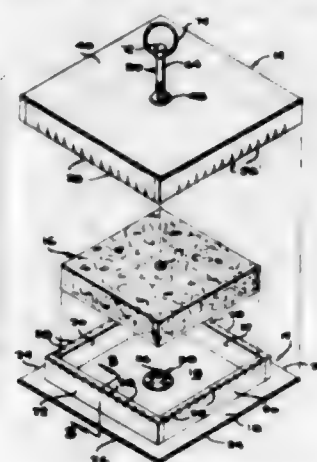
3,005,281

TROT LINE CONTAINER AND DISPENSER

Paul Reitzammer, 317 Pargond Drive, Monroe, La.
Filed June 10, 1960, Ser. No. 35,200
3 Claims. (Cl. 43-54.5)

1. A trot line container and dispenser comprising a box having a bottom wall having a peripheral edge, upstanding sidewalls and end walls spaced inwardly from

said peripheral edge, said walls having upper edges, there being a plurality of longitudinally spaced vertical slots in the upper edges of the walls, a cover for said box comprising a bottom wall having a peripheral edge and being of the size and shape of the box bottom wall, side walls and end walls depending from the cover bottom wall at its peripheral edge and having free lower edges to bear upon the box bottom wall at the peripheral edge thereof, the cover being centered relative to the box with the cover walls spaced outwardly from the box side walls, and means separably securing the box and the cover together, said securing means comprising a pivot having a first end secured centrally and removably to the box bottom wall, said cover top wall having a central



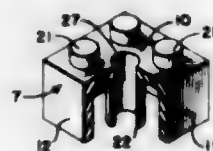
opening, said pivot having an intermediate portion extending through said opening, said pivot having a second end extending upwardly from the cover top wall, and a cap secured upon said second end of the pivot, said cap being removable from the pivot and the pivot being removable from the box bottom wall, and the cover and box separable from each other, the cover being invertible to rest upon a support and the box being supportable upon the cover top wall, the first end of the pivot being securable to the box bottom wall with its intermediate portion disposed in the opening of the cover top wall, and with the cap engaged on the second end of the pivot beneath the top wall of the cover, the box then being freely rotatable relative to the cover.

3,005,282

TOY BUILDING BRICK

Godtfred Kirk Christiansen, Billund, Denmark, assignor to Interlego A.G., Zug, Switzerland, a corporation of Switzerland

Filed July 28, 1958, Ser. No. 751,387
Claims priority, application Denmark Jan. 28, 1958
7 Claims. (Cl. 46-25)



3. In a toy building set, a pair of identical building blocks each comprising a hollow parallelepiped body open at one face and having a bottom and four side walls, primary projections extending normally outwardly from said bottom and arranged in two rows of opposed projections so that two adjacent pairs of said primary projections in each of said rows define a square, and at least one secondary projection on said bottom within the cavity coaxial with the center of one of said squares, the position of said primary projections relative to the walls and the secondary projection being such that a pair of primary projections of one block are clamped between at least one side wall and at least one secondary

projection of the other block when said pair of identical blocks are assembled by inserting at least two primary projections of one block into the cavity of the other block.

3,005,283

LIP MOVING MECHANISM FOR A DOLL OR THE LIKE

David Cohn, Brooklyn, N.Y., assignor to Model Plastic Corporation, White Plains, N.Y., a corporation of New York

Filed Jan. 30, 1956, Ser. No. 562,197
6 Claims. (Cl. 46-135)



3. A doll having a head and a body with a neck connecting them, the head and body being made of flexible plastic material and the head having a socket therein representing the mouth of the doll, the socket being of substantial depth and forming a roof, back and bottom for the mouth, at least a portion of the body being hollow from the neck down, and at least a portion of the head being hollow from the neck up to a location behind the mouth socket, lips at the front of the mouth socket movable between an open and a closed position, a lip actuator in the doll comprising a first lever having an upper portion above the mouth socket with its end against the inside of and operatively connected to the upper lip, a second lever having an upper portion below the mouth socket with its end against the inside of and operatively connected to the lower lip, a pivot connection joining the levers together at a location behind the mouth socket, said levers thereby being movable relative to one another, means operatively connected to each of said levers extending downwardly through the neck and into the body of said doll, the lower portions of said means diverging respectively toward the front and back of said body, and said lower portions of said means being biased away from one another and connected with said levers in such relation that said lips assume a given position which constitutes the normal position of the mouth and relative movement of said lower portions of said means toward one another causes relative movement of the levers in directions to move the lips away from their normal positions, and means holding the actuator in position with the ends of the levers against the inside surfaces of the lips.

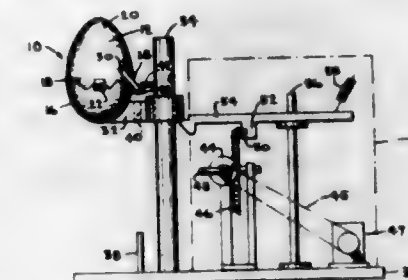
3,005,284

AMUSEMENT DEVICE WITH SEPARABLE OVAL

Angelo Giuliano, 754 Mace Ave., Bronx 67, N.Y.
Filed Oct. 26, 1960, Ser. No. 65,161
14 Claims. (Cl. 46-175)

11. An amusement device comprising a support, an upright secured to said support, a carrying member arranged for vertical movement along said upright between upper and lower positions, an egg-shaped structure mounted on said carrying member, said structure having

three sections including a base section and two top sections meeting said base section along a generally horizontal line, said top sections meeting along a generally vertical and central line, separating means operable to move apart said sections comprising a generally vertical channel defined in a section, a pin arranged for reciprocal movement within said channel, a pair of arms each having one end mounted on said pin and the other end secured to each of said top sections whereby said sections will be moved to closed relation when said pin is positioned at the bottom of said channel and will be moved apart by said arms when the pin is raised to the top of

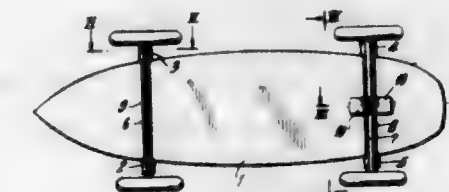


said channel, a first abutment member disposed near the base of the support and positioned to push up the said pin within the channel thereby to separate the sections when the egg-shaped structure is near the lower position, a second abutment member disposed near the top of the upright and positioned to push down the said pin within the channel thereby to close the sections when the structure is near the upper position, means operable for holding the carrying member in the upper position, and release means actuable for releasing the holding means for the descent of the carrying member by gravity to the lower position.

3,005,285

WHEELED VEHICULAR TOY

Alexander Glitz, Nurnberg, Germany, assignor to Schreyer & Co., Nurnberg, Germany, a German corporation
Filed Nov. 4, 1958, Ser. No. 771,837
4 Claims. (Cl. 46-201)



1. A miniature wheeled vehicular push toy for traveling, upon manual acceleration, by coasting due only to the momentum of its own mass, comprising a full-bodied, single-piece casting of relatively high density material, said body having in the bottom surface thereof downwardly open continuous U-shaped grooves coextensive with said body and extending transversely to the travel direction of said toy, a wheel axle loosely seated within each of said grooves and provided with a pair of wheels, said axle having a diameter smaller than its corresponding groove and less than the width of the bottom opening of said corresponding groove for free pendulous movement of the axle within its groove relative to said body, the extremities of said grooves forming alternate fulcrums for said pendulous movement of said axle, said body casting forming at each of said grooves at least one protuberance integral with said casting and extending below said bottom surface, said protuberance having pairs of axle-retaining prongs deformable toward each other by pinching, each prong pair forming opposed mutually inwardly-directed retaining ends extending beneath said axle for loosely retaining the axle from below within its corresponding groove while leaving clearance

for said free pendulous movement of the axle, whereby when one wheel of the vehicular toy passes over an irregularity, the axle of said one wheel can rock within its groove relative to said body, two of said protuberances of said casting being located at the respective axial ends of one of said grooves and projecting outwardly from the main body of said casting toward the respective wheels of the axle passing through said groove, said two protuberances having a shape of deformation extending downwardly and surrounding said axle along a more than semi-circular portion of the periphery.

3,005,286
TOY

Philip A. Derham, Audubon, Pa., assignor to Wilkening Manufacturing Co., Philadelphia, Pa., a corporation of Delaware

Filed June 3, 1955, Ser. No. 512,955
4 Claims. (Cl. 46-221)



3. A toy including a wheel-bearing member on each side thereof, each of said wheel-bearing members having two bearings, one behind the other and in axially offset relation to each other and wheels mounted in said bearings in axially offset relation to each other, the axial offsetting of said bearings and wheels of one wheel-bearing member being in the same direction as that of the other wheel-bearing member, so that the front wheels will be axially offset in relation to the rear wheels in the same direction on both wheel-bearing extensions.

3,005,287

MULCH AND PLANT FEEDER

Vernon E. Dudley, Scott Depot, W. Va., assignor to Gala Industries, Inc., Clifton Forge, Va., a corporation of Virginia

Filed Aug. 14, 1959, Ser. No. 833,847
7 Claims. (Cl. 47-25)

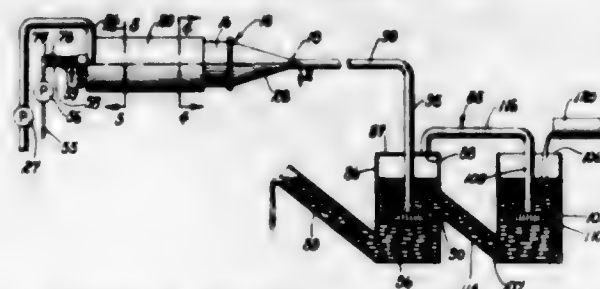


1. A mulch comprising: a sheet material disk forming an annular trough with an open top for encircling a plant, said trough being adapted for the reception of water and having drain holes therein, a foraminous container for a water soluble plant food mounted on the upper surface of said disk in the trough, a flange extending downwardly from the periphery of the disk to below the level of said trough and adapted to be embedded in the ground to anchor the disk in position, and keeper lugs provided at the underside of said container and removably received in openings provided in said disk whereby to removably retain said container in position.

3,005,288
METHOD AND APPARATUS FOR TREATING
SOILS BY ADDING CARBONIC ACID

Frank W. McGugin and Joel Hodgketh, Fresno, Calif., assignors to CO₂ Land Healers, Inc., Fresno, Calif., a corporation of California

Filed Jan. 26, 1959, Ser. No. 789,177
16 Claims. (Cl. 47-58)



1. A method of treating soils comprising spraying carbonaceous fuel under pressure into a combustion chamber, igniting the fuel spray to project an elongated flame into the chamber and through combustion to produce carbon dioxide gas, introducing air under pressure into the chamber circumferentially of the flame for supplying oxygen to the flame and for blowing said carbon dioxide gas toward an outlet for the chamber, passing said gas through an aqueous bath to provide a carbonic acid solution, and applying said solution to the soil to be treated.

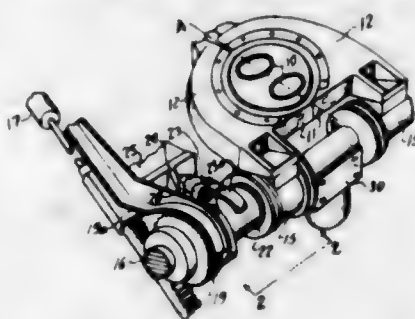
3,005,289

MOLD OPENING ADJUSTMENT MECHANISM

Albert G. Lauck, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Dec. 12, 1957, Ser. No. 702,289

4 Claims. (Cl. 49-41)



4. In the combination of a mold comprising sections movable to and from each other for respectively closing and opening the mold, and means for moving said sections in a common plane bodily towards each other to a mold closed position and away from each other to an extended mold open position, the improvement comprising means operable, at will, to limit the mold opening movement by said last-mentioned means to a release position intermediate the extended open position and the closed position of the mold, comprising a stationary mounting member, a stop member, and means for mounting the stop member on said stationary member permitting movement of the stop member to alternative positions into and out of the plane of movement of the sections of the mold, said stop member, when moved to its position in said plane of movement of the mold, limiting the opening movement of the mold from its closed position, thereby defining the release position of the mold.

3,005,290

GLASS BENDING MOULDS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

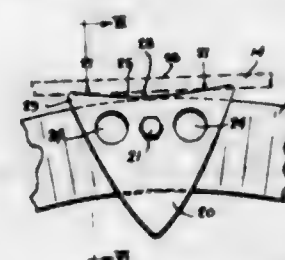
Filed Mar. 18, 1959, Ser. No. 800,184

Claims priority, application Canada Feb. 4, 1959

5 Claims. (Cl. 49-67)

1. A skeleton type glass bending mould comprising an elongated shaping surface defining a concave contour

and having a longitudinal extremity portion including a pointed longitudinal extremity, pivot means attached to said longitudinal extremity portion and extending outwardly from said pointed longitudinal extremity substantially longitudinally of the mould, and a glass supporting member pivotally attached to said longitudinal extremity



portion about said pivot means, said glass supporting member having an upper edge including space uppermost portions located longitudinally outwardly, above and flanking said pointed longitudinal extremity and an intermediate portion located longitudinally outwardly of and below said longitudinal extremity.

3,005,291

SKYLIGHT CONSTRUCTION

Lawrence C. Haber, 12932 118th Ave., Edmonton, Alberta, Canada

Filed Oct. 3, 1958, Ser. No. 765,181

1 Claim. (Cl. 50-52)



An improved construction for a skylight to cover openings in a roof surrounded by a curb comprising, an inner supporting frame adapted to fit over the curb, such inner supporting frame comprising an outer skirt having a flange and an inner skirt having a clip fitting over the flange and having frost resistance material therebetween and coupling the inner and outer skirts together, such frost resistant material extending below the inner supporting framework and adapted to contact the curb and provide a frost shield between the inner supporting framework and the curb, a translucent dome having an outwardly flared edge seated on the outer skirt, an outer framework engaging on the flared edge of the translucent dome and means securing the outer and inner framework together thus retaining the flared edge of the dome therebetween.

3,005,292

ANCHOR SLOT CHANNEL ATTACHMENT
BLOCK WITH RESILIENT ANTI-SKID RETAINING MEANS

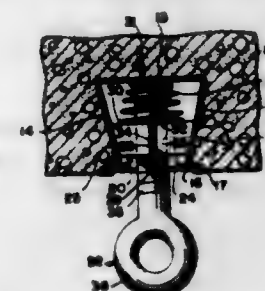
Frank D. Reiland, Chicago, Ill., assignor, by mesne assignments, to Gateway Erectors, Inc., Chicago, Ill., a corporation of Delaware

Filed Oct. 31, 1957, Ser. No. 693,582

1 Claim. (Cl. 50-71)

In combination with a metallic anchor slot channel of dovetail cross-section having a base wall and opposed side walls the latter of which converge to define a mouth of restricted width, the mouth being closed by a strip of relatively frangible material, an attachment device comprising a block having top and bottom faces and

opposed side wall surfaces the latter of which converge in conformity with the angle of convergence of said opposed side walls of the channel, the said block being provided with a threaded bore extending therethrough in a direction normal to the plane of said top face and the block being adapted to be thrust edgewise through said frangible strip and restricted mouth into the interior of the channel and thereafter rotated about a longitudinal axis to position the said side wall surfaces of the block for flat engagement with the converging side walls of the channel, and means for resiliently retaining the block in a selected position within the channel comprising a heli-



cal spring one end of which encircles said threaded bore and is fixed to the block and the other end of which seats against the base wall of the channel, the said spring being of cone-shape and includes a series of convolutions of progressively decreasing diameter, whereby the outer end of the spring may be compressed to a position closely adjacent to the top face of said block to facilitate thrusting of the latter through said strip of frangible material and into the said channel, and a locking element comprising a rod threaded through said bore and engaging the base wall of the channel to positively hold the block in its applied position.

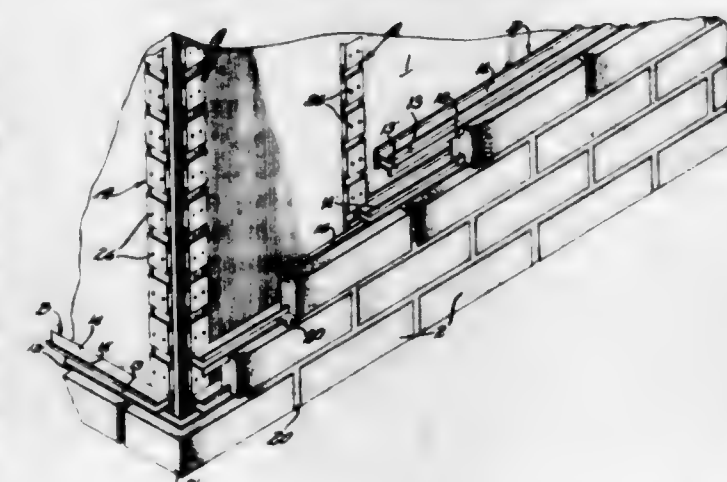
3,005,293

WALL FACING

Edgar D. Hunter, 1513 Northwick Road, Baltimore 18, Md.

Filed Apr. 1, 1959, Ser. No. 803,540

2 Claims. (Cl. 50-399)



1. A wall surface structure of individual brick units comprising, in combination, a plurality of vertical supporting members fixedly secured to a supporting wall, the vertical members being of channel form in cross section having a central section and two side walls, the width of the side walls being substantially shorter than the width of the central section, means extending through the central section of the vertical member into the supporting wall, a plurality of channeled horizontal brick engaging and supporting members fixedly secured to the vertical members, evenly spaced guiding and supporting lips formed in the vertical members and extending outwardly therefrom for receiving the lower edge of the horizontal brick supporting members, each horizontal brick support-

ing member being of a single elongated piece of continuous material having a flat rear section and two parallel side wall sections, the side wall extending outwardly at right angles from the flat rear section forming a narrow channel for mortar between the side walls substantially equal in width to the spacing between the brick units, the rear section of the horizontal member extending laterally beyond the plane of the outside surfaces of each of the side walls forming a flange on each side of the horizontal members and in a plane with the rear section for engaging the lip carried on the vertical member, the outer edges of the two side walls being continuous and turned outwardly in opposite directions and towards the respective outside surfaces of their respective parallel sides forming an acute angle with the portion of the wall surfaces adjacent the flat rear section, said bricks being of substantially uniform size and having therein a slot extending through their top and bottom elongated edges and along a line inwardly from their outer surfaces, said slots being of such dimensions as to slidably receive the said outwardly turned edges of the brick supporting members for supporting the bricks outwardly from the rear flat wall of the horizontal brick holding member, combination brick spacing and mortar control members engaging the turned-in edges of adjacent horizontal members positioned between the bricks for spacing the bricks horizontally from each other and for preventing the mortar from extending beyond the ends of the bricks between the horizontal brick supporting members, the mortar extending between the ends of the bricks to the depth of the spacing and mortar control members and between the rows of bricks between the side walls and rear flat surface of the horizontal brick supporting members, forming a continuous slab of mortar from the outer surface of each horizontal row of bricks to the rear flat surface of each horizontal brick supporting member for the full length of the said supporting members.

3,005,294

HONING DEVICES

Walter P. Kuskusik, Chicago, Ill., assignor to Ammco Tools, Inc., North Chicago, Ill., a corporation of Illinois

Filed Aug. 29, 1958, Ser. No. 758,034
11 Claims. (Cl. 51-184.2)



1. A honing device comprising a drive stem, a collar slidably supported on said stem, and having an end face perpendicular to said stem a nut threadedly engaging said stem, a spring compressed between said nut and said collar, a pair of hone carriers, a pair of arms each pivotally supporting adjacent one end thereof one of said carriers and being pivotally connected adjacent the other end thereof to said stem, said arms each having a channel portion adjacent said other end and being arranged with said channel portions opening toward each other and with the flanges of said channel portions overlapping, said flanges having beveled ends extending beyond the web of said channel portions, a pin extending through overlapping

portions of said flanges and through said stem adjacent one end thereof, whereby said arms may pivot from substantially parallel positions outward to spread positions, said collar bearing at said end face against the beveled ends of said flanges through action of said spring and thereby urging said arms toward spread position.

3,005,295

FLEXIBLE ABRASIVE BANDS

Philip C. Tucker, W. Main St., Westboro, Mass.

Filed Nov. 28, 1958, Ser. No. 777,147

3 Claims. (Cl. 51-188)



1. A flexible, reticular, abrasive band formed from a strip of an abrasive-coated fabric, the ends of said strip being firmly attached together, and having the warp yarns thereof at an angle of from about 0.5° to 2.5° with respect to a line parallel with the length of said strip and the edge of said band, said abrasive coated fabric comprising an open-mesh fabric having abrasive granules adhesively secured over the entire exposed surfaces of the yarns of said fabric but not filling the mesh openings of said fabric.

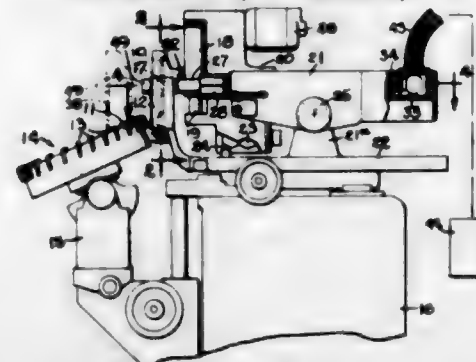
3,005,296

DUST COLLECTING AND DISPOSING SYSTEM FOR GRINDERS

Jan van Rooijen, Rockford, Ill., assignor to The Ingersoll Milling Machine Co., Rockford, Ill., a corporation of Illinois

Filed Apr. 19, 1960, Ser. No. 23,231

14 Claims. (Cl. 51-270)



1. In a grinder, the combination of, a support having laterally spaced parallel guideways thereon, bars slidable in said guideways and projecting therefrom, a head secured to the projecting end portions of said bars, at least one of said bars being tubular and having an air passage extending therethrough, a rotary abrasive wheel mounted on said head between said bars, a collecting hood communicating with said air passage and mounted on one end of said tubular bar to receive dust thrown from the periphery of said wheel, and means in said support defining a vacuum chamber communicating with the other end of said tubular bar.

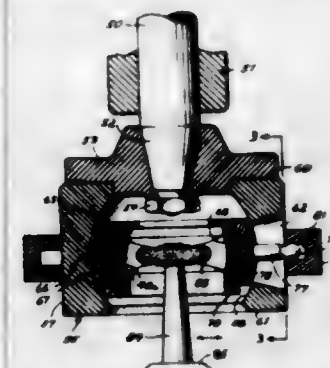
3,005,297

METHOD OF MANUFACTURING A RACEWAY

Attilio R. Spicacci, Germantown Manor, Greene and Horter Sts., Philadelphia, Pa.
Original application Feb. 6, 1959, Ser. No. 791,629, now Patent No. 2,971,387, dated Feb. 14, 1961. Divided and this application Sept. 28, 1959, Ser. No. 842,754
4 Claims. (Cl. 51-291)

1. In the method of manufacturing a bearing element, the steps which comprise: providing an annular member,

axially rotating said member, oscillating said member about a diameter fixed relative to said annular member



simultaneously with said rotation, and engaging a working element with a peripheral surface of said annular member during said rotation and oscillation.

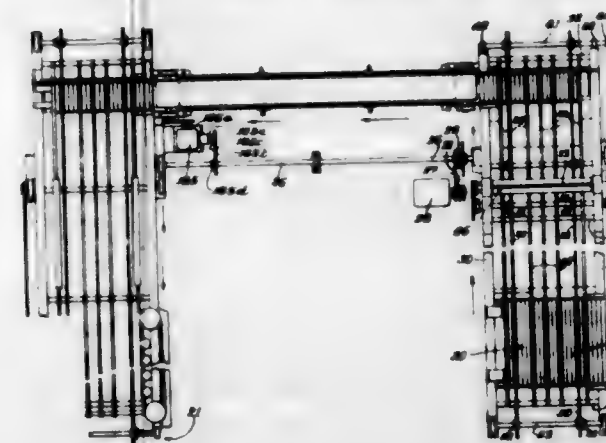
3,005,298

WRAPPING MACHINE

John V. Johnson, Winnetka, and Peter P. Stanley, River Forest, Ill., assignors to Reichel & Drews, Inc., Chicago, Ill., a corporation of Illinois

Filed Aug. 19, 1959, Ser. No. 834,696

26 Claims. (Cl. 53-224)



1. A machine for wrapping an object having generally the shape of a rectangular parallelepiped with a protective sheet by a plurality of consecutive wrapping operations comprising a conveyor apparatus for supporting and moving said object being wrapped and adapted to convey said object in a plurality of directions during said wrapping operations, means for supporting a protective sheet in a plane at substantially right angles to the path of movement of said object and adapted to release said sheet upon engagement of the leading side of said object with said sheet intermediate its edges, said sheet being of greater size than the width, height and length of said object, means engageable with the upwardly projecting portion of said sheet for folding the same down on the upper surface of said object, shoe means on each side of said conveyor comprising a second folding means adapted to engage the leading vertical portions of said sheet projecting laterally from the respective ends of said object and to fold the said vertical portions inwardly against the respective ends of said object, means for changing the direction of movement of said object on said conveyor approximately 90°, a third folding means on one side of said conveyor for engaging the lower flap of said sheet projecting laterally from underneath the other side of said object and for folding the same to a vertical position to cause said flap to engage and project upwardly above the vertical face of said other side of said object, a fourth folding means mounted on said one side of said conveyor and movable across the path of movement of said object for engagement with said upwardly projecting flap and for folding the same down on

top of said object and said previously folded portion of said sheet, means for changing the direction of movement of said object on said conveyor approximately 90° to a direction opposite to the initial direction of movement of said object, second shoe means on each side of said conveyor comprising a fifth folding means and adapted to engage the now leading vertical portions of said sheet projecting laterally from the respective ends of said object and to fold said vertical portions inwardly against the respective ends of said object, and sixth and seventh folding means on each side of said conveyor for engaging said upper and lower end flaps projecting laterally from the ends of said object and for folding the same downwardly and upwardly one over the other.

3,005,299

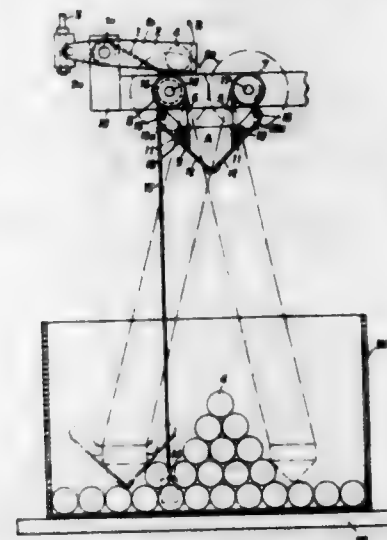
DEVICE FOR DEPOSITING BOBBINS AND THE LIKE INTO A COLLECTING MAGAZINE

Ernst Dietiker, Horgen, Switzerland, assignor to Maschinenfabrik Schwelger AG., Horgen, Switzerland

Filed May 11, 1960, Ser. No. 28,359

Claims priority, application Switzerland May 15, 1959

13 Claims. (Cl. 53-248)



1. In a device for depositing wound bobbins and the like from a supply chamber into a collecting magazine; the combination comprising laterally displaceable bobbin receiving means including flexible and extendable band means adapted to guide the transfer of bobbins between a supply chamber and a collecting magazine in a controlled manner, means in registry with said bobbin receiving means for raising and lowering said flexible and extendable band means of said bobbin receiving means, said means lowering said bobbin receiving means prior to receiving bobbins and raising said bobbin receiving means when the latter contains at least one bobbin.

3,005,300

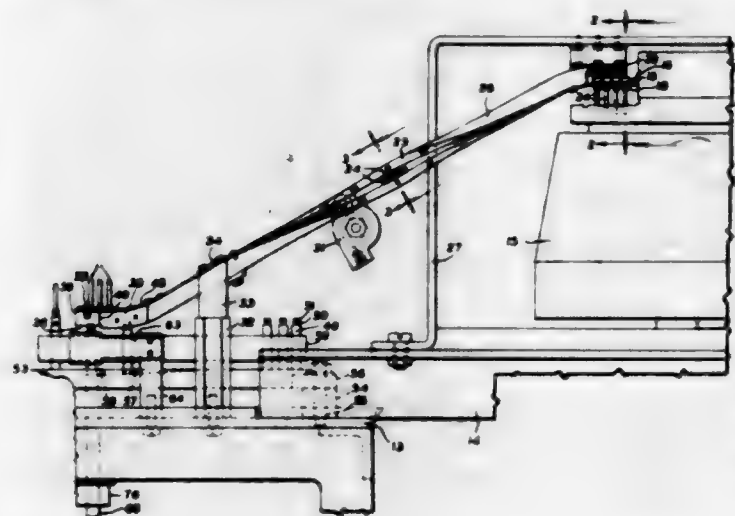
APPARATUS FOR POSITIONING CLOSURE CAPS ON VIALS

Walter A. Shields, Jamaica, N.Y.
(38-69 24th St., Long Island City 1, N.Y.)
Filed Sept. 8, 1959, Ser. No. 838,581

10 Claims. (Cl. 53-319)

1. In apparatus for positioning closure caps on vials, a platform to support a plurality of vials in upright position, a rotary member to successively transport the vials in spaced relation to each other along the platform, a chute to successively deliver a plurality of closure caps above the vials on the platform, means to yieldingly retain the foremost closure cap on the chute in vertically spaced alignment above a vial on the platform, and means to lift said vial and position the vial in the foremost closure cap, the rotary member being arranged to

slidably support the vials in upright position whereby the vial and positioned closure cap are moved from the



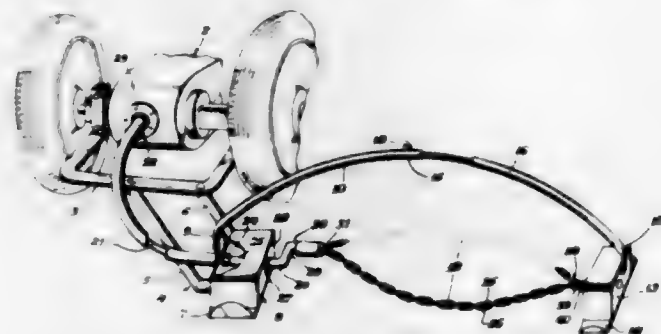
yielding retaining means and the lifting means on the platform by the rotary member.

3,005,301

CONTOUR MOWER

Peter Sammarco, Bellwood, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed June 22, 1959, Ser. No. 822,033
5 Claims. (Cl. 56-25)



1. A mower comprising a mobile frame having spaced supports thereon, a flexible mowing element having opposite ends, one end of said element being secured to one of said supports, an eccentric drive means associated with the other of said supports, and the second end of said mowing element being attached to said eccentric drive means, whereby when said eccentric drive means is rotated said mowing element will be swung in an arc to cause mowing action.

3,005,302

ROTARY CUTTER

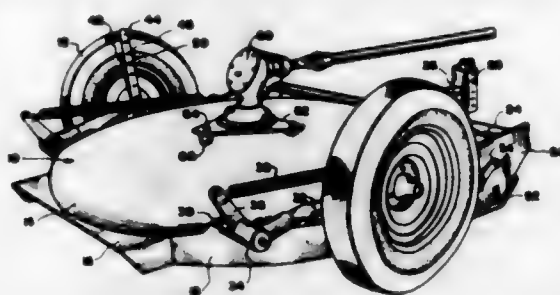
Carroll J. Lach, Pontiac, and Ira Mazon, Southfield Township, Mich., assignors to Dura Corporation, a corporation of Michigan

Original application Sept. 29, 1958, Ser. No. 763,853. Divided and this application June 26, 1959, Ser. No. 823,182

2 Claims. (Cl. 56-25.4)

1. In a rotary cutter, in combination, a frame comprising a dished annular deck member having a downwardly turned marginal flange, longitudinally extending, rigid side members fixed to said deck member at each side thereof, said side members extending downwardly and forwardly with respect to the marginal flange of said deck member, a laterally extending throat member fixed to said side members and to said deck member forwardly of said deck member, said deck member and said throat member being disposed in coplanar relation-

ship with the plane thereof inclined upwardly and forwardly with respect to said side members to provide an enlarged throat opening for receiving growth to be cut, a rigid cross bar fixed to said side members and to said



throat member at the forward ends thereof, and a rotatable cutter blade mounted on and below the central portion of said deck member for rotation in a plane parallel to and above the lower edges of said side members.

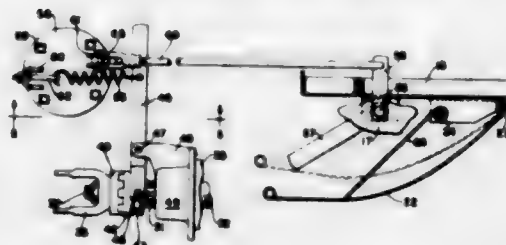
3,005,303

CLUTCH DEVICE FOR COTTON HARVESTER

Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere and Company, Moline, Ill., a corporation of Delaware

Filed Nov. 4, 1959, Ser. No. 850,843

11 Claims. (Cl. 56-41)



1. A cotton harvester having housing structure defining a fore-and-aft extending plant passage; harvesting mechanism carried in the housing structure on one side of the passage and extending into the passage for harvesting cotton from the plants; an uprightly disposed pressure wall on the opposite side of the passage; means mounting the wall on the housing to permit yielding outwardly relative to the passage upon pressure being applied thereto; drive means extending to the harvesting mechanism; a clutch in the drive means effecting a drive and no-drive condition for the harvesting mechanism; an upright shaft supported in the housing behind the yieldable wall; a radial arm on the shaft adapted to contact the yieldable wall to effect rocking of the shaft upon the wall yielding a determined amount; means biasing the clutch to effect a no-drive condition; a releasable lock for maintaining the clutch in position to effect a drive condition; and linkage extending from the shaft to the lock to effect release of the lock in response to rocking of the shaft to cause said clutch to move to effect the no-drive condition upon said wall yielding beyond said determined amount.

3,005,304

DEVICE FOR THE PRODUCTION OF LANG LAY WIRE CABLES

Carl Julianus Holm, Lerkendalsvei 19, Trondheim, Norway

Filed Aug. 19, 1957, Ser. No. 678,897

Claims priority, application Norway Aug. 25, 1956
2 Claims. (Cl. 57-12)

1. A device for winding cable comprising a source of a cable core, bobbins rotatable about the core to lay wire thereupon, a rotatable pulling device for moving the core so that the latter is twisted along its length, a rotatable take-up device for receiving the twisted cable, and means to rotate the bobbins, pulling device and take-up

device, said means rotating the bobbins slower than the supplied to said chambers, and means mechanically interconnecting said output motor, said air motor and said pulling device to provide a strain in the wire and the



take-up device slower than the pulling device to remove the strain.

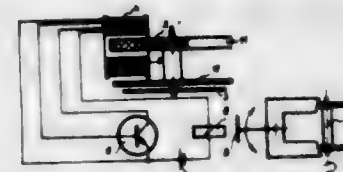
3,005,305

ELECTRIC WATCH

Fritz Thoma, St. Georgen, Black Forest, Germany, assignor to Klenzinger & Obergfell, St. Georgen, Black Forest, Germany

Filed Jan. 6, 1958, Ser. No. 707,440

Claims priority, application Germany Jan. 4, 1957
4 Claims. (Cl. 58-28)



1. In an electric watch or the like having an electronic drive control comprising a magnetic oscillator driven by a circuit including a battery, a transistor and a pair of induction coils, one of which is operatively connected to the transistor input, and the other coil and said battery to the transistor output, a polarized relay operatively connected to the transistor output with said battery and induction coil, and means controlled by said relay for driving a rotatable element of the watch, the resistance of said relay being operative to stabilize the operation of said transistor, the latter being arranged to operate as a switch without amplification, with the operating current of said battery being at a minimum value in linear voltage course for the maximum operating time.

3,005,306

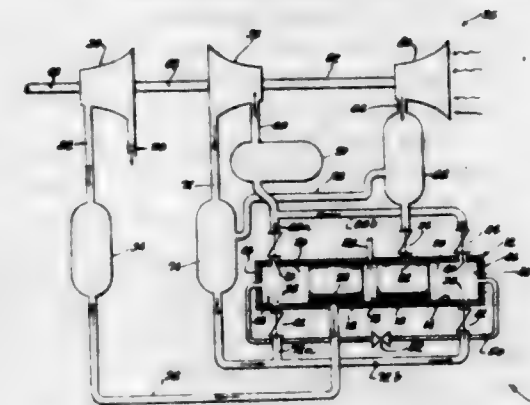
FREE PISTON ENGINE POWER UNIT

Vannevar Bush, Jaffrey, N.H.

Filed May 1, 1959, Ser. No. 810,329

5 Claims. (Cl. 60-13)

1. In a free piston engine comprising a cylinder, a pair of free pistons reciprocable therein, said cylinder having a compression chamber and a combustion chamber therein on the opposite sides of each of said pistons, a compressor for supplying compressed air to said combustion chamber, means for introducing the compressed air and fuel into said combustion chamber for combustion therein, and an output motor for receiving and expanding the gaseous combustion products from said combustion chamber to convert the energy of said products into mechanical work, the combination of: an air motor for receiving compressed air from said compression chamber and expanding such compressed air, said expanded air being



compressor for common mechanical operation, so that both the output motor and the air motor can drive the compressor.

3,005,307

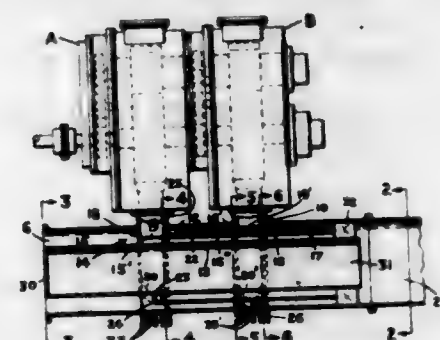
EXHAUST PULSE EQUALIZING ENERGY CONVERTERS FOR ROTARY COMBUSTION ENGINES

Hellmuth Walter, 181 Fernwood Ave.,

Upper Montclair, N.J.

Filed Jan. 20, 1959, Ser. No. 787,850

6 Claims. (Cl. 60-32)



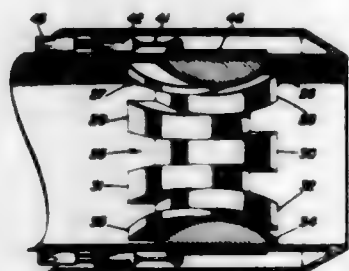
1. At least two pulse equalizing energy converters for use with at least two rotary combustion engines each having fluid inlets and exhaust outlets for receiving and delivering respectively inlet fluid and exhaust gases from and to the pulse equalizing energy converters, said pulse equalizing energy converters having a common housing including a first vessel mounted concentrically within said common housing to form a first annular space therebetween, a second vessel disposed in a portion of said first annular space and in concentric relation with said housing and a third annular space with said first vessel, said common housing including a first set of openings comprising an inlet and exhaust port and a second set of openings comprising an inlet and exhaust port, the inlet port of said first set of openings providing communication between said first annular space and the inlet of one of said rotary combustion engines, the exhaust port of said first set of openings communicating the third annular space with the last mentioned engine, the inlet port of said second set of openings communicating the first annular space with said other rotary combustion engine through a portion of said second annular space, the exhaust port of said second set of openings communicating another portion of said second annular space with the exhaust of the last mentioned engine, air inlet means disposed in said first annular space to provide working air for said rotary combustion engines, a first and second helical partition disposed in said housing, and to divide said first annular space and the portion of said second annular space communicating with the inlets of the rotary combustion through the inlet ports of said first and

second set of openings into an air inlet chamber, said first and second partitions and said second vessel coacting to divide the portion of said second annular space and said third annular space communicating with the exhaust of said rotary combustion engines through the exhaust ports of said first and second set of openings respectively into a first and second swirl chamber, said first helical partition and said second vessel being mounted in said housing and coacting to prevent direct flow of air from said first annular space to said second swirl chamber said second helical partition mounted in said housing and coacting with said second vessel to prevent direct flow of air from the first annular space to said first swirl chamber, both said helical partitions in spaced relation with each of the inlet and exhaust ports of both the first and second set of openings whereby side of said helical partition directs air flowing into said pulse equalizing energy converters into the inlet of one of said rotary combustion engines and the other side of said partition causes exhaust gases from the exhaust outlets of said engines to pass to the inlet of said swirl chamber in helical fashion, and said first and second swirl chambers being of a predetermined dimension to permit a blending together of the pulses of exhaust gases passed to the swirl chambers from the rotary combustion engines to provide a source of usable energy.

3,005,308

VARIABLE AREA NOZZLE ARRANGEMENT
Frank Bader, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 25, 1952, Ser. No. 306,261
6 Claims. (Cl. 60-35.6)



1. In combination with an aerial vehicle of the jet or ramjet types, a variable area exit nozzle arrangement for the jet, comprising, a group of fixed nozzle segments, a group of longitudinally movable nozzle segments, the nozzle segments of one group being alternately arranged with respect to the nozzle segments of the other group, the outer surfaces of said nozzle segments of each group being arcuate-shaped as presented to the longitudinal axis of said vehicle, and means for longitudinally moving said movable group of nozzle segments with respect to said fixed group of nozzle segments.

3,005,309

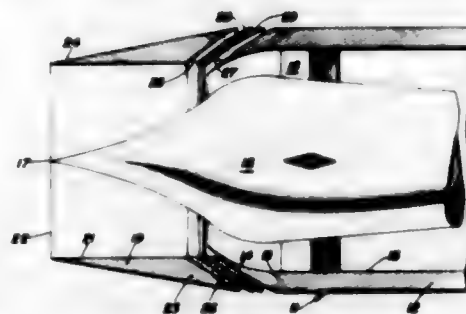
STREAMLINED RING FOR ASSURING OPTIMUM COMPRESSION IN A RAMJET

Randolph S. Roe, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 17, 1952, Ser. No. 320,896
9 Claims. (Cl. 60-35.6)

1. An air inlet for a ramjet, comprising a cowl defining a duct, a body mounted in said duct but partially extending forwardly therefrom, a streamlined member supported in front of and in spaced relation to said cowl and substantially forming an extension of said cowl which is separated therefrom by a slot, said streamlined member being substantially coextensive with the forwardly extending portion of said body and means for dividing said slot into a plurality of slots, whereby said

body produces useful shock waves when the ramjet attains supersonic speeds and the separation of the bound-



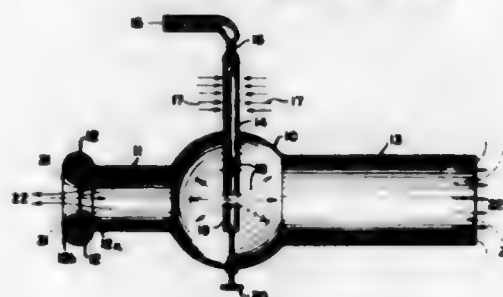
ary layer from the streamlined member is inhibited by said means.

3,005,310

PULSE JET ENGINE

Joseph Reder, also known as Josef Reder, Wiesloch, Heidelberg, Germany, assignor of thirty-three and one-third percent to Bernard Olcott and Associates, Fort Worth, Tex., and sixty-six and two-thirds percent to AB. Alex Pedersen, Stockholm, Sweden, a corporation of Sweden

Filed May 1, 1956, Ser. No. 581,947
14 Claims. (Cl. 60-35.6)



1. An energy converter comprising an intermittently detonating combustion chamber, fuel injector having means for intermittently injecting vaporized fuel at the intermittent detonating rate into said intermittently detonating combustion chamber and means for separately supplying to said chamber an oxidizer to mix with the vaporized fuel, said fuel injector comprising a tube having its discharge end disposed within the combustion chamber, a pressure reducing throttle section formed in the inlet end of said tube, and a member having an ultrasonic wave generating cavity positioned in proximity to and opening towards the discharge end of said tube, the inlet of the throttle section receiving liquid fuel at a substantially constant pressure selected to vaporize the fuel discharging into said tube and to impinge a portion of the discharging vaporized fuel from said tube upon the cavity in said member for generating ultrasonic waves at a frequency higher than the detonating frequency, said tube having a selected length so that the pressure variations produced by the intermittent detonations within the combustion chamber will produce a standing wave in the vaporized fuel contained in said tube having a fundamental frequency corresponding to the detonation rate, whereby the vaporized fuel will be pulsed at the detonation rate upon discharge from the said tube and the individual vapor fuel particles will be vigorously vibrated with the oxidizer at the ultrasonic wave rate.

3,005,311

GAS TURBINE ENGINE WITH COMBUSTION INSIDE COMPRESSOR

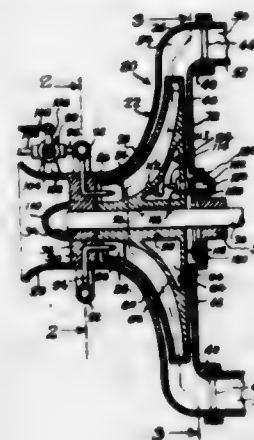
Frederick W. Ross, 719 N. Melborn Ave., Dearborn, Mich.

Filed Aug. 8, 1957, Ser. No. 677,834
9 Claims. (Cl. 60-39.35)

1. A gas turbine engine comprising a housing structure containing a rotor chamber, a rotor shaft rotatably

mounted in said housing structure, a rotor rotatably mounted within said rotor chamber in driving connection with said shaft and having gas-compressing blades with blade channels including inlets and outlets, a fuel injector mounted in said housing structure in fuel-injecting relationship to the inlets of said blade channels, and a fuel

and comprising a reactor member fixed to said sleeve at the end opposite said housing seal, a turbine fixed to said shaft, an engine driven impeller fixed to said gear and means defining a closed fluid circuit through said turbine, stator and impeller; and a positive displacement pump having a fluid outlet connected in fluid communication with said fluid circuit and driven by said gear.



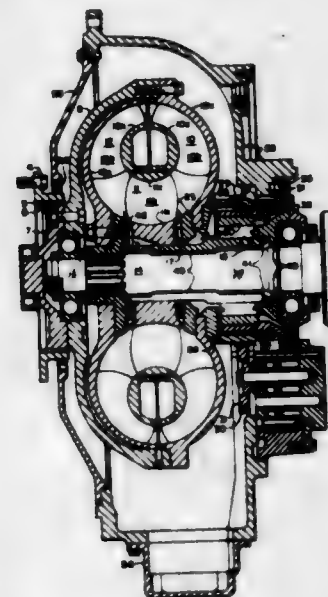
igniter positioned in the fuel discharge path from said injector, said igniter being disposed within said blade channels between said inlets and said outlets for igniting the fuel from said injector to burn within said blade channels between said inlets and said outlets of said blade channels.

3,005,312

HYDRAULIC TORQUE CONVERTER WITH COMPACT REACTOR BRAKE AND PUMP GEAR ASSEMBLY

Michael R. Jugan, Duquesne, Pa., assignor, by mesne assignments, to Rockwell-Standard Corporation, a corporation of Pennsylvania

Filed Oct. 11, 1957, Ser. No. 689,675
5 Claims. (Cl. 60-54)



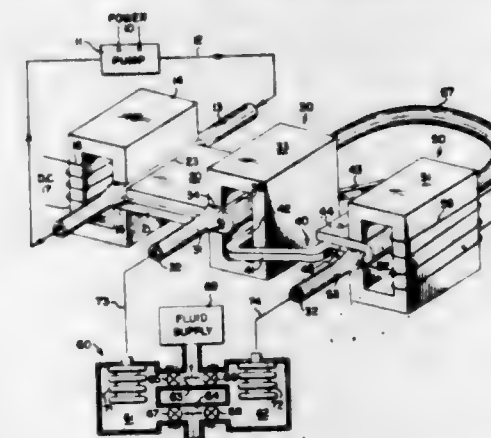
1. In a hydraulic drive assembly, an output shaft; a sleeve surrounding and concentrically journaled upon said output shaft; a fixed housing having an annular part surrounding a portion of said sleeve, a sprag type one way brake operatively interposed between said housing part and said sleeve to limit the rotation of the latter to but a single direction; and an external annular pump drive gear surrounding said housing part in radially spaced relation; cooperating radially spaced means on said housing and the inner periphery of said gear and the outer periphery of said sleeve providing fluid tight seals therebetween; said shaft, said sleeve, said part, said brake and said gear all being nested one within the other in surrounding relation to each other to provide an axially compact structure; and a torque converter arranged in coaxial relation axially adjacent said structure,

3,005,313

SELF-REVERSING APPARATUS

William L. Carlson, Jr., Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 13, 1959, Ser. No. 852,741
6 Claims. (Cl. 60-54.5)



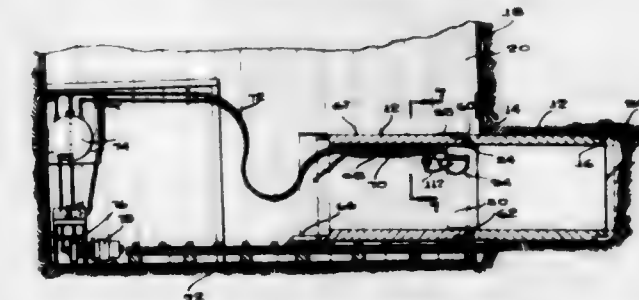
1. In a direct current electromagnetic conductive fluid operated reciprocating device: a first electromagnetic conductive fluid unit with a fluid flow channel wherein a conductive fluid is caused to flow by a direct electric current and a magnetic field angularly disposed to each other and to the direction of flow of said fluid; direct current source means continuously supplying said electric current; a second electromagnetic conductive fluid unit with a second fluid flow channel wherein said conductive fluid flows with a resultant second electric current and a constant unidirectional magnetic field angularly disposed to each other and to the direction of flow of said fluid; two bellows sealed conductive fluid filled chambers connected by said channels in a single series fluid circuit; and electric conductor means encircling the said first fluid unit and forming a current conductor for said second unit to generate said first magnetic field in said first channel; said device automatically reversing the direction of flow of said fluid upon said fluid being stalled by said bellows sealed chambers being operated to an extreme position.

3,005,314

METHOD AND APPARATUS FOR FORMING TUNNELS OR OTHER UNDERGROUND CONDUIT INSTALLATIONS

Wesley B. Cunningham, 2 Morris St., Charleston, W. Va.

Filed Jan. 10, 1958, Ser. No. 708,325
7 Claims. (Cl. 61-42)



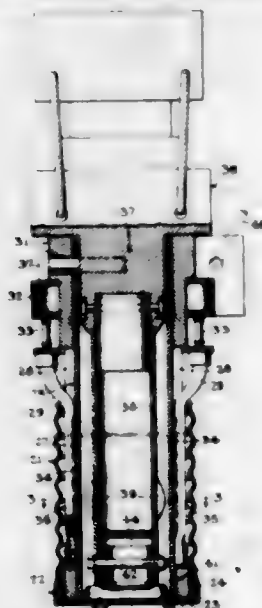
1. In a system for the installation of a subterranean conduit or the like wherein the conduit is composed of a plurality of individual hollow tubular sections placed in end-to-end abutting relationship so as to constitute a

series including a leading end section anchored against retrogressive movement, a trailing end section, and at least one intermediate section, the combination of inner and outer sleeves overlapping the respective ends of adjacent sections in engagement therewith; inflatable tubes arranged to advance the sleeves engaged thereby responsive to expansion of the tubes, the tubes alternating with the sections and being interposed between said ends in engagement with at least one of the sleeves, said tubes being connected to a source of fluid under pressure, in a series that includes at least a leading and a trailing tube; and means, including a plurality of valve assemblies each of which is connected to one of said tubes and to said fluid source, and electrical switch assemblies operatively connected to the valve assemblies, for expanding each of said tubes in turn, in an order progressing from the leading to the trailing tube, thereby to advance said sections responsive to advancement of the sleeves in engagement therewith, in an axial direction, in an order progressing from the leading to the trailing section.

3,005,315

FILE FORMING APPARATUS AND METHOD

Walter H. Cobb, 45 Upland St., Port Chester, N.Y.
Filed July 15, 1958, Ser. No. 748,699
7 Claims. (Cl. 61-53.72)



1. Apparatus for forming encased, cast-in-place concrete ball piles comprising in combination the casing; an inward directed annular flange at the lower end of said casing; a rigid tubular mandrel fitted into, and connected with and guiding the casing, said mandrel being at least as long as said casing; a seat formed on the mandrel at its lower end arranged to engage and seal against the upper face of said flange; a ram guided in said tubular mandrel; closure means carried by said ram at its lower end and fitted to the inner wall of said mandrel; means selectively effective or ineffective to connect said ram and mandrel together as a unitary structure in positions such that the closure means closes the lower end of the mandrel; and an anvil connected with said ram whereby hammer blows on said anvil may be delivered to said casing, mandrel and ram as an assembly or to said ram alone, depending upon the condition of the selectively effective means.

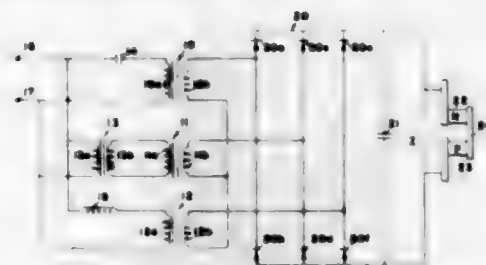
3,005,316

POWER SUPPLIES FOR USE IN THERMOELECTRIC REFRIGERATION SYSTEMS

Addison C. Sheckler, Cato, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,665
8 Claims. (Cl. 62-3)

1. A thermoelectric refrigeration system adapted to operate from standard single phase house current, com-

prising a plurality of electrically connected thermoelectric elements and a power supply for providing a unidirectional current to said thermoelectric elements to achieve a refrigeration effect, said power supply comprising a phase-splitting network for converting a single-

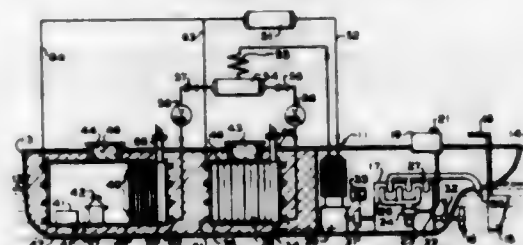


phase alternating current to a polyphase alternating current and a full-wave polyphase rectifier for rectifying said polyphase current and providing unidirectional current having a low ripple percentage to said thermoelectric elements.

3,005,317

COMBINATION DRY OR LIQUID CARGO VESSEL AND PROCESS

George P. Bunn, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 26, 1959, Ser. No. 848,692
2 Claims. (Cl. 62-45)

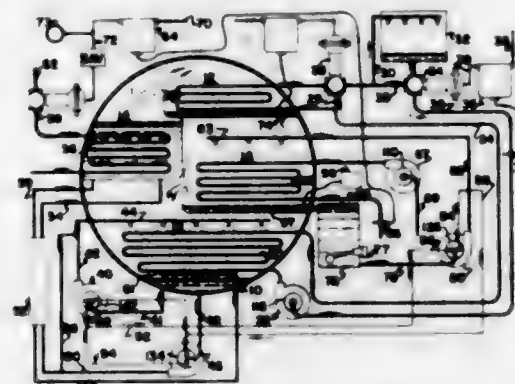


1. A cargo vessel having a hold therein, a layer of heat insulating material surrounding said hold, said hold having a floor and walls, a closed cycle refrigeration system in said vessel with its cooling pipes disposed inside said layer of insulating material to cool said hold, an accordion-folded, impervious, flexible bag mounted and disposed to expand and contract along a substantially horizontal axis in said hold, and means to expand and contract said bag along said axis to provide liquid cargo space inside said bag and dry cargo space outside said bag as desired, whereby said contraction will provide a clear space on said floor at one end of said bag for said dry cargo without the weight of said dry cargo resting on said bag.

3,005,318

ABSORPTION REFRIGERATING SYSTEM

Robert G. Mimer, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Sept. 15, 1958, Ser. No. 760,879
3 Claims. (Cl. 62-141)



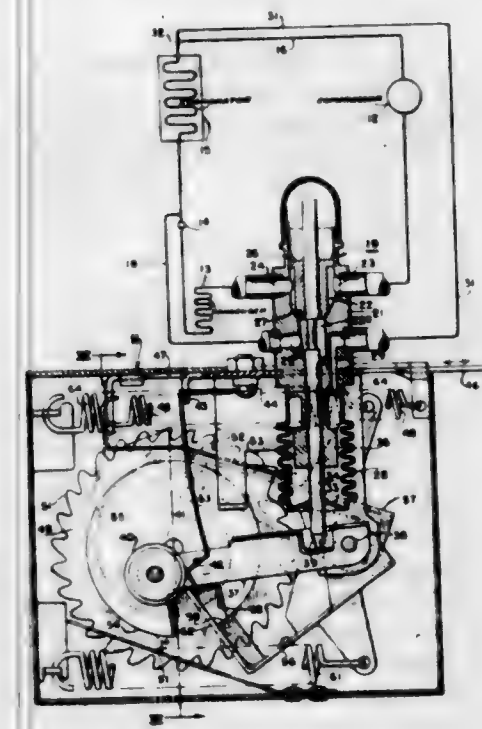
1. In an absorption refrigeration system, the combination of a generator, a condenser, an evaporator and an

absorber in a closed circuit, the circuit containing an absorbent and a refrigerant, conduit for conducting a concentrated solution of absorbent and refrigerant from the lower portion of said absorber to the upper portion of said absorber, first pump means in said conduit for moving said concentrated solution in said conduit, second pump means for conducting a dilute solution of absorbent and refrigerant from said absorber to said generator and means for conducting dilute solution from said second pump means to said conduit to dilute the solution in said conduit when the operation of said first pump means is terminated.

3,005,319

REFRIGERATION APPARATUS WITH HOT GAS DEFROST

Leslie B. M. Buchanan, Galloway, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 1, 1959, Ser. No. 856,566
7 Claims. (Cl. 62-156)

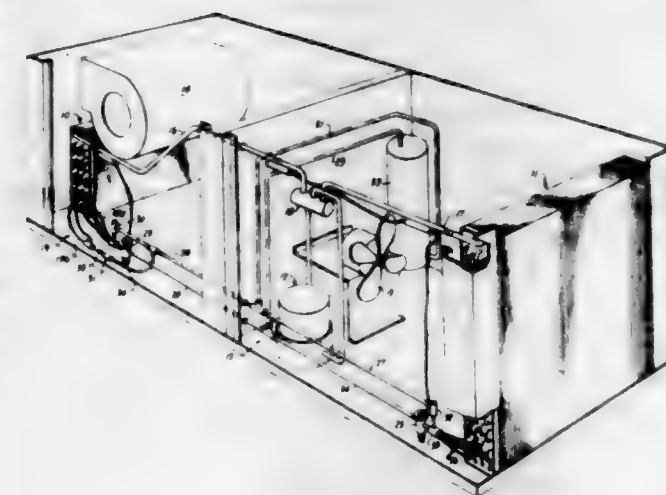


1. Refrigerating apparatus including a compressor, a condenser, a restrictor, an evaporator, said elements being connected in series flow circuit in the order named, said compressor having an inlet and an outlet, valve means connected to said circuit between the outlet of said compressor and said restrictor, a bypass conduit providing for refrigerant flow from said valve means to said evaporator bypassing said restrictor, said valve means having a body portion formed of good heat conducting material and having refrigerant flow passages therein, the refrigerant flow circuit between said compressor outlet and said restrictor extending through one of the passages in said valve body, a valve member movable to closed and open positions in said passages for directing refrigerant respectively to said restrictor or to said bypass conduit, means for moving said valve member to its open position, a device responsive to an increase in suction pressure beyond a predetermined value for actuating said valve member to its closed position, said device being carried by said body portion in heat transfer relation therewith, and a pressure line connecting said device to said circuit between said evaporator and the inlet of said compressor subjecting said device to the pressure in said circuit between said evaporator and said compressor inlet in closing direction of said valve member.

3,005,320

BALANCED REVERSE CYCLE HEATING AND COOLING SYSTEM

Cornell Bodell, Phoenix, Ariz., assignor to Wright Manufacturing Co., Phoenix, Ariz., a corporation of Arizona
Filed May 2, 1960, Ser. No. 26,298
6 Claims. (Cl. 62-160)

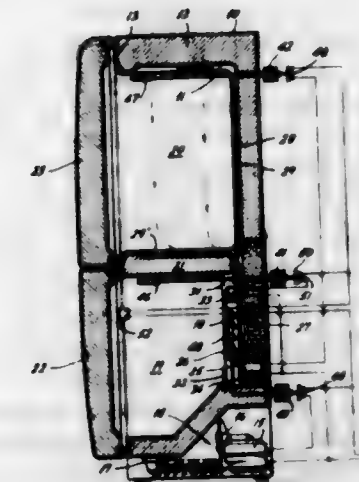


1. In a reverse cycle system, apparatus for either heating or cooling an enclosure and comprising in combination: a first bank of indoor coils having first leads and being connected to a first manifold line; a second bank of outdoor coils having second leads and being connected to a second manifold line; a compressor having suction and discharge connections; means for selectively connecting said discharge and suction connections to said first and second manifold lines respectively during the heating cycle and to said second and first manifold lines respectively during the cooling cycle; a first fluid transmitting means for collecting gas from said first leads and passing said gas to said second leads including first check valve means and means for expanding the gas passing therethrough; and a second fluid transmitting means for collecting gas from said second leads and passing said gas to fewer than all of said first leads including a second check valve means and means for expanding the gas passing therethrough.

3,005,321

MULTIPLE TEMPERATURE REFRIGERATOR

Michael H. Devery, Ambler, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 25, 1959, Ser. No. 835,934
4 Claims. (Cl. 62-186)



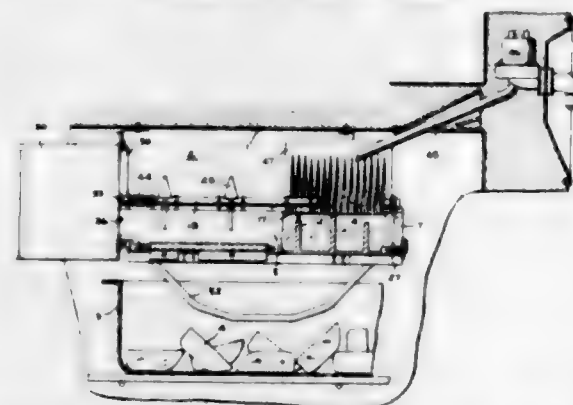
4. In a plural compartment refrigerator, the combination comprising: duct means in heat exchange relation with one of said compartments; a cooling plenum containing an evaporator, said plenum being disposed con-

tiguous the other of said compartments and separated therefrom by a partition apertured to provide a passage for the circulation of air between said plenum and said other of said compartments, means forming a communicating passageway between said plenum and duct means; and air circulating means for selectively controlling the movement of refrigerated air through each of said passageways in response to individual temperature conditions existing in each of said compartments.

3,005,322

AUTOMATIC ICE MAKER

Harold P. Harle, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1960, Ser. No. 25,431
4 Claims. (Cl. 62-353)



1. An ice maker comprising a mold having side and end walls, means including a transverse divider extending from one mold side wall part way to the other mold side wall to form adjacent compartments in said mold in which water is frozen into ice pieces, heating means for warming said mold and said transverse divider to free the ice pieces therefrom, a metal finger extending into said mold between said divider and said other side wall below the level of water in said compartments whereby said finger is frozen into engagement with the ice pieces formed in said compartments, said finger substantially bridging the space between said divider and said other mold side wall but being spaced therefrom, said finger being mounted for pivotal movement thereof along with said ice pieces adhering thereto about an axis adjacent said one side wall to said mold and upwardly and outwardly over said one side wall to an inverted position alongside of said mold, and a bumper arranged along said one side wall of said mold for engaging said ice pieces at points between said finger and said one side wall of said mold and freeing said pieces from said finger during movement thereof to said inverted position.

3,005,323

GENERATOR DRIVE SHAFT ASSEMBLY

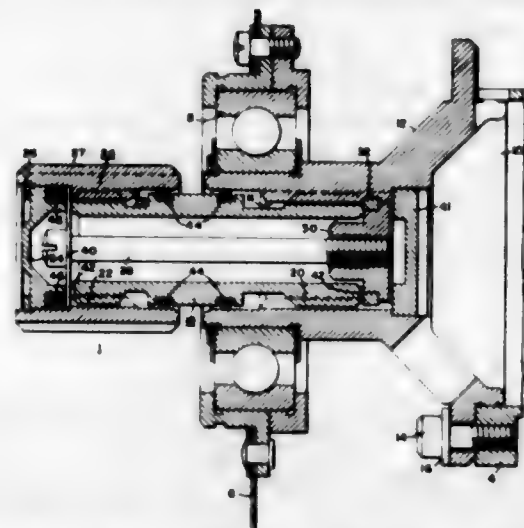
Leroy C. Carter, Lima, and Larry D. Creeger, Orange Township, Hancock County, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 19, 1959, Ser. No. 794,355

2 Claims. (Cl. 64-9)

1. A drive shaft assembly including a hollow rotatable shaft, a hollow spindle member disposed with one end extending into said hollow shaft, the shaft and said one end of the spindle member having interengaging splines to effect a driving connection, a hollow collar member extending over the other end of the spindle member and longitudinally spaced from the shaft, the collar member and said other end of the spindle member having interengaging splines to effect a driving connection, the spline connections between the shaft and the spindle member and between the spindle member and the collar member permitting some misalignment, said hollow spindle member containing lubricant, means at each end of the spindle member for permitting lubricant to flow to the inter-

engaging splines, means for holding the shaft, spindle member and collar member in assembled relation, and



means on the collar member for effecting a driving connection thereto.

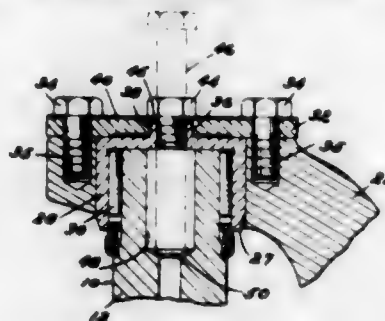
3,005,324

UNIVERSAL JOINT

Robert C. Zeller, Defiance, Ohio, assignor to The Zeller Corporation, Defiance, Ohio, a corporation of Ohio

Filed Jan. 11, 1960, Ser. No. 1,567

14 Claims. (Cl. 64-17)



2. A universal joint comprising a center member having pairs of trunnions with the axes of each pair in the same plane at right angles to the axes of the trunnions of the other pair, rotary members having bifurcated end portions supporting the respective pairs of trunnions, a separate bearing cup for each trunnion engageable in the corresponding furcation of said rotary members, a bearing plate overlying the base of said bearing cup and removably secured to said furcation to hold said bearing cup assembled on said trunnion, means for preventing relative rotation between said bearing plate and bearing cup including a non-circular aperture in said bearing plate and a boss of mating non-circular cross-section on said bearing cup received in said aperture, a threaded aperture in said boss, and means normally sealing said apertures against the escape of lubricant from said bearing cup.

3,005,325

CLUTCH MECHANISM

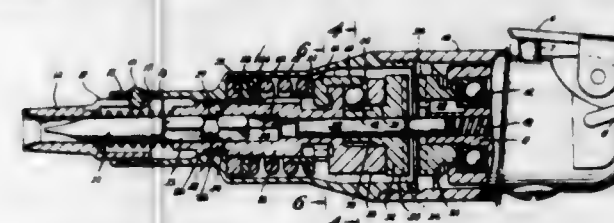
Richard E. Eckman, Houston, Tex., assignor to Reed Roller Bkt Company, Houston, Tex., a corporation of Texas

Filed Sept. 8, 1958, Ser. No. 759,616

12 Claims. (Cl. 64-29)

1. In a device of the character described, a pair of coaxially disposed members, rotation transmitting means between said members including a cam on one of said members, a radially movable detent on the other member engaging said cam, a dog mounted on one of the said members and arranged to pivot on an axis transverse to the axis of the said member, a single spring biasing said dog to maintain said detent in engagement with said cam to normally prevent relative rotation be-

tween said members, said cam upon a predetermined resistance to rotation of one of said members adapted



to drive said detent to deflect said dog and enable relative rotation between said members.

3,005,326

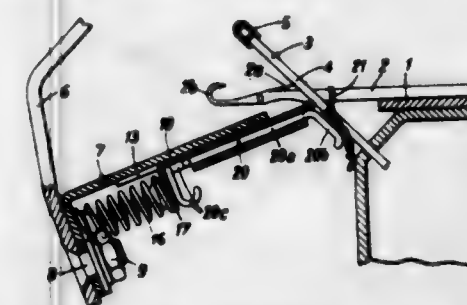
STRIPPER FOR HAND-KNITTING APPARATUS

Erich Baser, Dietikon, Switzerland, assignor to Palkz-Holding A.G., Zug, Switzerland, a company of Switzerland

Filed Feb. 20, 1958, Ser. No. 716,300

Claims priority, application Switzerland Nov. 16, 1957

4 Claims. (Cl. 66-60)



1. In a hand knitting apparatus a needle bed, a plurality of parallel knitting needles slidable on said bed, a striking comb connected with said bed, a lock slidably and reciprocatingly movable on said bed in a direction normal to the longitudinal axes of said needles for actuating said needles, a substantially plane retaining means connected to said lock for retaining the knitting on said comb, and at least two elements individually swingably mounted on said retaining means to swing on axes which are parallel to said retaining means and normal to the direction of the movement of the lock, each of said elements having an arm placed substantially parallel to the plane of said comb and adjacent to the knitting for pulling down the knitting hanging on the comb.

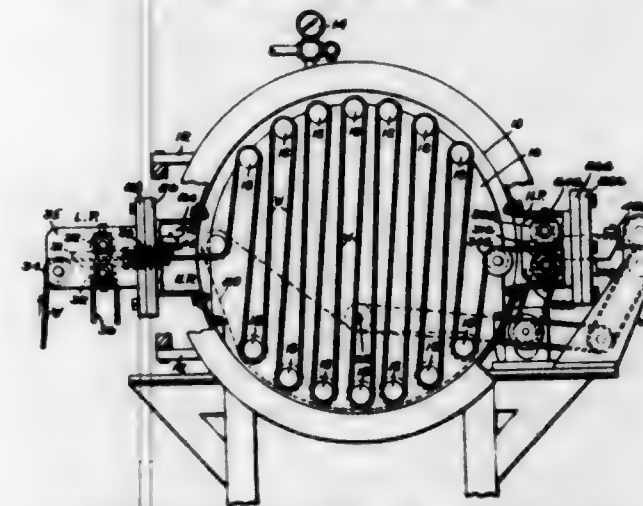
3,005,327

APPARATUS FOR TREATMENT OF LONG WEBS UNDER PRESSURE

Brooks Stevens, Jr., Concord, Mass., assignor, by mesne assignments, to Ames Textile Corporation, Lowell, Mass., a corporation of Massachusetts

Filed Nov. 21, 1958, Ser. No. 775,590

5 Claims. (Cl. 68-5)



4. In combination with a wall between two regions of differing pressure an elongated passageway through

the wall to pass a web and means associated therewith for operating on spaced points along the portion of the web within the passageway to press those points together so that the intervening portion forms a wad substantially filling the passageway which prevents equalization of the pressures.

3,005,328

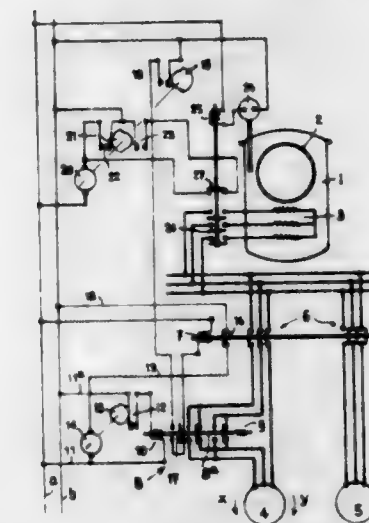
AUTOMATIC WASHING MACHINES

Joseph Gehrig, Jacob Burchhardt-Strasse 73, Basel, Switzerland

Filed Mar. 16, 1959, Ser. No. 799,661

Claims priority, application Switzerland Mar. 18, 1958

2 Claims. (Cl. 68-12)



1. An automatic washing machine, comprising in combination a tub having a rotatable drum therein, a low speed motor means which is reversible and connected to said drum for rotating the drum alternately in opposite directions, pole reversing switch means in the electric power supply to said low speed motor means for reversing the direction of said low speed motor means, a high speed motor means connected to said drum for spinning said drum in one direction at a high speed for centrifugally extracting the washing and rinsing liquid from the wash within said drum, a motor switch means in the electric power supply for said motors and completing the circuit to one of said motors while opening the circuit to the other of said motors, and program timer means connected to said pole reversing switch means and the motor switch means for said low speed and high speed motor means for controlling the sequence of the low speed drive and high speed drive of said tub, said program timer means and said pole reversing switch means being connected for moving said motor switch means for connecting the high speed motor means to the power supply and disconnecting said low speed motor means from the power supply only when the direction of rotation of said low speed motor means is the same as the direction in which said high speed motor means rotates.

3,005,329

LAUNDRY MACHINE OVERFLOW CONSTRUCTION

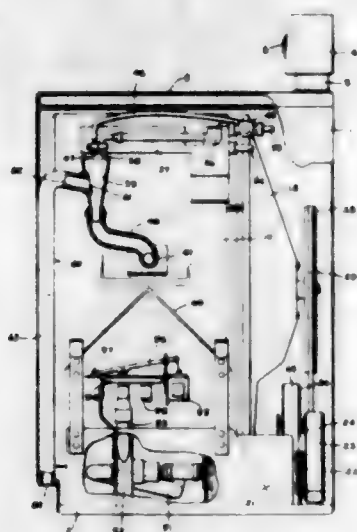
Aldan M. Stone, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Nov. 21, 1958, Ser. No. 775,464

3 Claims. (Cl. 68-20)

1. A domestic laundry machine comprising an enclosing cabinet; a substantially closed tub within said cabinet; water supply means for said tub comprising a first conduit adapted to be connected to a source of supply and having an outlet within said cabinet, a second conduit in said cabinet having an inlet separated from the outlet

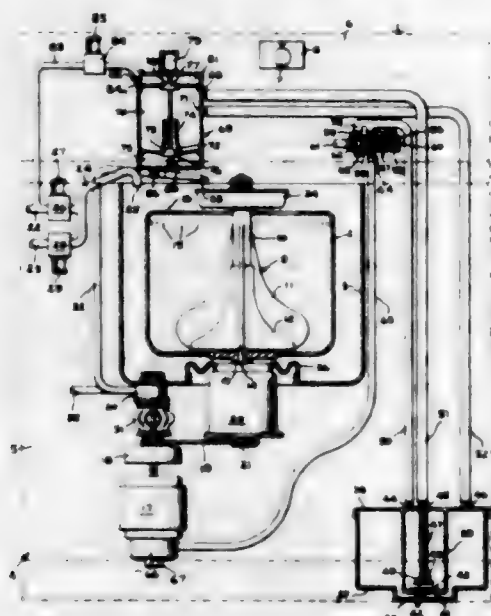
of said first conduit by an air gap and positioned to receive the flow from said first conduit, and means forming an overflow outlet from said tub positioned in the wall of said tub substantially above the maximum liquid level reached in said tub during proper operation of the machine, said second conduit extending downwardly from said inlet thereof and having its lower end connected to said tub overflow outlet; and a third conduit in said cabinet having an inlet connected to said second conduit in-



intermediate the ends thereof and having an outlet opening outside said cabinet below the level of said third conduit inlet, said third conduit having a first intermediate portion extending upwardly from said third conduit inlet and a second intermediate portion of substantially greater length extending downwardly to said third conduit outlet, said intermediate portions being entirely below the level of said second conduit inlet whereby overflow from said tub flows through said third conduit.

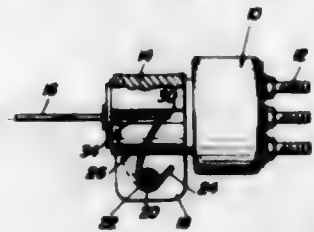
intermediate the ends thereof and having an outlet opening outside said cabinet below the level of said third conduit inlet, said third conduit having a first intermediate portion extending upwardly from said third conduit inlet and a second intermediate portion of substantially greater length extending downwardly to said third conduit outlet, said intermediate portions being entirely below the level of said second conduit inlet whereby overflow from said tub flows through said third conduit.

3,005,330
TREATING AGENT DISPENSER SYSTEM FOR ARTICLE-TREATING MACHINES
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1960, Ser. No. 25,411
3 Claims. (Cl. 68-207)



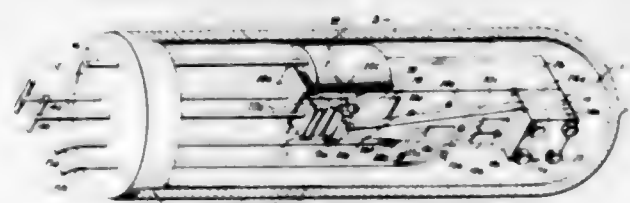
1. In an article-treating machine; a receptacle assembly for articles to be treated; means for treating said articles; a drive motor for operating said treating means; air compressing means driven by said motor; a storage container for a liquid article-treating agent having at least a portion thereof substantially sealed against the atmosphere; a first conduit interconnecting said compressing means and

3,005,331
KEY EJECTING LOCK DEVICE
Alfred C. Roberson, 1111 11th St. NW., Canton, Ohio
Filed Apr. 7, 1959, Ser. No. 804,730
5 Claims. (Cl. 70-388)



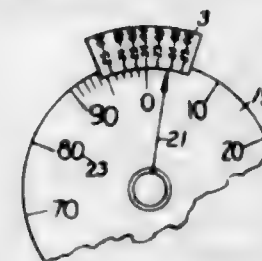
1. A key ejection lock mechanism comprising a lock body having a cylinder therein with the cylinder having a barrel, said body, cylinder and barrel being assembled in a manner to prevent longitudinal movement therebetween, said barrel adapted to receive an operating key, spring means carried by said lock mechanism and including a projecting finger extending into engagement with the key when the key is inserted into the barrel and for movement inwardly with the key, means on said barrel in alignment with the inner end of the key when the key is in innermost position for receiving the thrust of the finger on the spring means and transferring such thrust to said barrel when the barrel and key are rotated to key functioning position.

3,005,332
STRAIN GAGE CALIBRATION DEVICE
Ralph Michael McClintock, Boulder, Colo., assignor to the United States of America as represented by the Secretary of Commerce
Filed Mar. 17, 1959, Ser. No. 800,067
2 Claims. (Cl. 73-1)



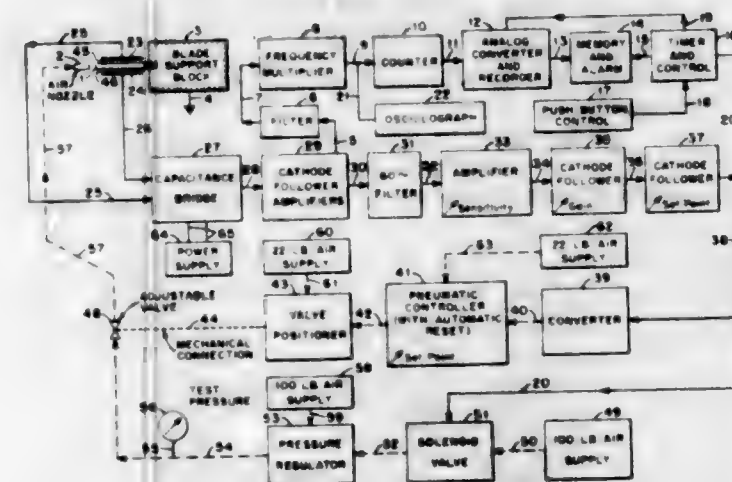
1. An electrical strain gage calibration device comprising a Dewar assembly containing a liquid refrigerant, a frame, a recessed portion in said frame parallel to the length thereof, a constant strength cantilever beam secured to said frame at one end thereof, a plurality of strain gages attached to opposite sides of said beam, a push rod attached to said frame to advance the frame into the Dewar assembly, a stepped block slidably mounted in said recessed portion of said frame and bearing against said frame, a pressure bar attached to the free end of said beam and in contact with one surface of the stepped block and a push rod attached to said stepped block for selectively positioning said block on the frame.

3,005,333
ATTACHABLE CHANGE GEAR FINDING SCALE FOR WATER METER TESTING
Abraham Adler Hirsch, 302 Dazell St., Shreveport, La.
Filed May 13, 1957, Ser. No. 658,825
2 Claims. (Cl. 73-3)



1. The combination in a liquid meter undergoing test for accuracy of registration, a set of change gears therein, a register with a dial and pointer thereon, said pointer being rotated in response to revolutions of said change gears, a test register resting on the casing of said liquid meter, a pointer on the dial face of said test register mounted radially on a shaft passing through said dial face and keyed on its bottom for insertion on the register dial pointer so as to be driven thereby and an auxiliary scale appropriately graduated in terms of change gear combinations and removably clamped to the periphery of said test register dial face, said scale being marked on a short segmental plate concentric with said test register dial face, the inside arc of said segmental plate overlapping the edge of said test register dial plate so that said test register pointer sweeps by the edge of said gear finding scale, readings for the purpose of change gear selection for said liquid meter being made according to the position of said test register pointer with reference to said auxiliary scale, said segmental plate being attached to the arc-shaped jaws of a hinged clamp which grips the periphery of said test register dial by means of spring pressure, said jaws being so formed as to limit the width of the overlap of said auxiliary scale on said test register dial thereby preventing interference with the revolution of said test register pointer.

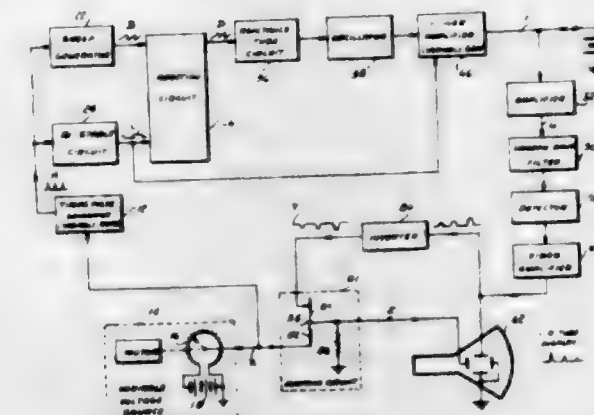
3,005,334
APPARATUS FOR NON-DESTRUCTIVE INSPECTION OF CANTILEVERED MEMBERS
Ernest R. Taylor, Knoxville, Charles H. Mahoney, Oak Ridge, and Clarence R. Lay, Kingston, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 24, 1959, Ser. No. 802,273
1 Claim. (Cl. 73-67.3)



A device for inspecting non-destructively a compressor blade or the like for faults that will cause premature structural failure of said blade under vibratory service, comprising a support block supporting said blade, an air nozzle disposed closely adjacent to said blade, a source

of air under pressure, a flow regulating valve, means feeding air from said source through said valve and to said air nozzle to thereby vibrate said blade for a selected test period, means disposed adjacent to said blade providing an output electrical signal that is of the same frequency as the frequency of vibration of said blade and that is proportional to the amplitude of vibration of said blade, means connected to said output electrical signal for converting said electrical signal to a pneumatic signal having a magnitude proportional to the amplitude of vibration of said blade, means responsive to said pneumatic signal and connected to said flow valve for continuously regulating the flow of air through said valve to thereby maintain a selected amplitude of vibration of said blade during said period, and means connected to said output electrical signal for measuring and indicating an excessive decay in said frequency of vibration below an allowable hysteresis decay during said test period as identification of a fault in said blade, said means for feeding air to said nozzle for a selected test period including a solenoid valve; and said means for measuring and indicating an excessive decay in said frequency of vibration comprising a series connected amplifier, filter, frequency multiplier, decade counter, analog converter and recorder, and memory and alarm unit; a timer and control unit having a push button control, said timer and control unit having a connection to said memory and alarm unit, a connection to said analog converter and recorder, and a connection to said solenoid valve, whereby said timer and control unit controls said solenoid valve to permit air to flow to said nozzle for said selected test period, and controls said analog converter and recorder and memory and alarm unit to thereby record a delayed initial frequency reading and a final frequency reading within said test period.

3,005,335
ULTRASONIC NONDESTRUCTIVE TESTING APPARATUS AND CONTROL THEREFOR
Donald C. Erdman, Pasadena, Calif., assignor to Electro-circuits Incorporated, Pasadena, Calif., a corporation of California
Filed May 1, 1957, Ser. No. 656,252
7 Claims. (Cl. 73-67.8)



1. In an apparatus for determining the propagation time of an ultrasonic wave in traveling between a transducer transmitting said ultrasonic waves and an object reflecting said ultrasonic waves, the combination of variable signal means for generating a range sweep signal of uniformly and cyclically varying amplitude; circuit means responsive to said range sweep signal for transmitting one of a series of alternate electrical signals during each cycle of said range sweep signal, each of said series of electrical signals comprising a plurality of electrical signals of uniformly and cyclically varying frequencies, alternate electrical signals in said series of electrical signals varying through offset frequency ranges while maintaining a constant frequency difference between corresponding portions of said alternate electrical signals; transducer means

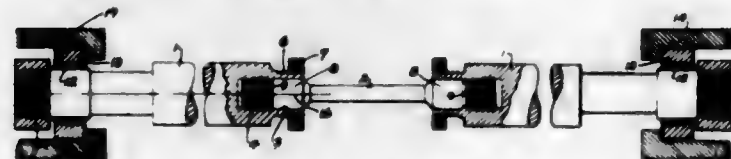
connected to said circuit means for converting said series of transmitted electrical signals into a corresponding series of transmitted ultrasonic waves, said transducer means transmitting said series of ultrasonic waves toward said object and receiving said ultrasonic waves reflected from said object and converting said received ultrasonic waves into corresponding received electrical signals; means connected to said circuit means and said transducer means for mixing said received electrical signals with the electrical signals then being transmitted; means responsive to said mixing means for selecting and amplifying only a video signal of a frequency equal to the constant difference frequency between said alternate signals of said series of transmitted electrical signals whereby said selected video signal is a function of the propagation time of said ultrasonic waves in traveling between said transducer and the object from which reflected; addition means for receiving and combining said video signals and said range sweep signal to produce a control range sweep signal having a slope which corresponds to the slope of the range sweep signal when no video signals are present and a slope which is reduced during the time when a video signal is present; and cathode ray tube means including beam deflection means connected in circuit with said video signal means and said addition means to display video signals in time relationship with said control range sweep signal, said control range sweep signal being applied to said beam deflection control means whereby said video signal display on said cathode ray tube is compressed in time relationship with respect to said control range sweep signal.

3,005,336

PRECISION SPECIMEN HOLDER

Forrester S. Wyman, Waltham, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania

Filed Nov. 6, 1958, Ser. No. 772,200
1 Claim. (Cl. 73-103)



A materials testing tension specimen holder having a straight cylindrical centering bore of normally constant diameter concentric throughout its length about a common axis and terminating at one end in a coaxial threaded recess to receive a threaded end of a specimen thereby to provide a threaded connection for transmitting to the specimen substantially the entire tension load, and the bore being open at its other end to receive initially through that end a snugly fitting complementary cylindrical section of the specimen so that the specimen axis is coaxial with said common axis independently of the threaded connection and said constant diameter of the bore being effective during specimen loading to be independent of any load transmitted through the specimen, whereby by loading the specimen through the threaded connection independently of the centering bore slippage in a direction axially of the bore may occur between the centering bore and the cylindrical section of the specimen during straining thereof under load, thereby to minimize bending effects from any misaligning tendencies of the threads.

3,005,337

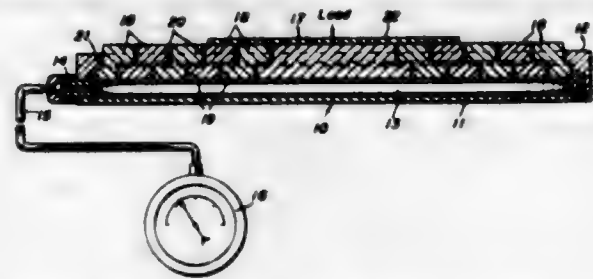
LOAD CELL WITH NESTING BEARING RINGS

Abdel H. El Waziri, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 14, 1960, Ser. No. 56,000
4 Claims. (Cl. 73-141)

1. A load cell comprising a base plate, a collapsible pancake chamber laid flatwise on said plate adapted to

contain a charge of liquid, a plurality of circular concentric nesting bearing members resting on said chamber



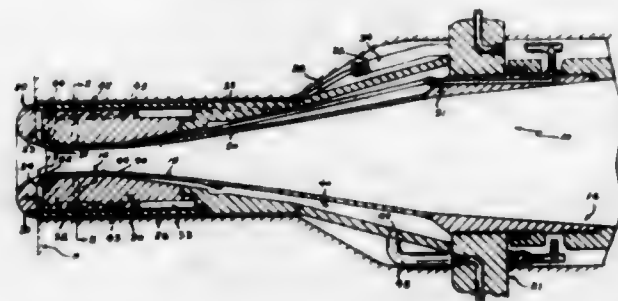
and means for indicating the pressure developed in said liquid by a load applied to certain of said members.

3,005,338

NOZZLE COOLING APPARATUS AND METHOD

Paul A. Libby, Freeport, Antonio Ferri, Rockville Centre, and Martin H. Bloom, Woodmere, N.Y., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Sept. 23, 1957, Ser. No. 685,763
10 Claims. (Cl. 73-147)



1. The method of cooling the wall of a conduit through which a main high energy gaseous stream is accelerated, comprising the step of introducing in a common direction with said high energy main stream a lower energy gaseous coolant stream of a different gas than said main stream, along the wall surface exposed to said high energy stream at a pressure and thickness sufficient to establish smooth, uniform flow between said streams, said gaseous coolant stream having differing density characteristics and having a sonic velocity greater than said main stream so as to provide a reduced stagnation temperature adjacent to the conduit wall.

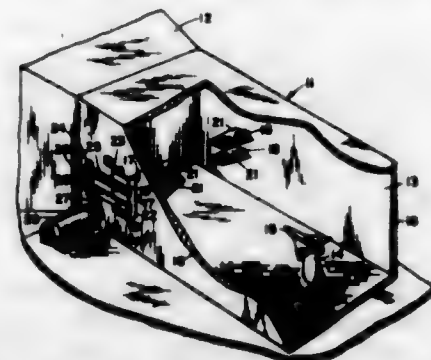
3,005,339

WIND TUNNEL AIRSTREAM OSCILLATING APPARATUS

Laurence K. Loftin, Jr., Newport News, Va., assignor to the United States of America as represented by the Administrator of National Aeronautics and Space Administration

Filed Sept. 28, 1959, Ser. No. 843,022
6 Claims. (Cl. 73-147)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A wind tunnel comprising an elongated tubular channel having opposed side walls for enclosing a flow of

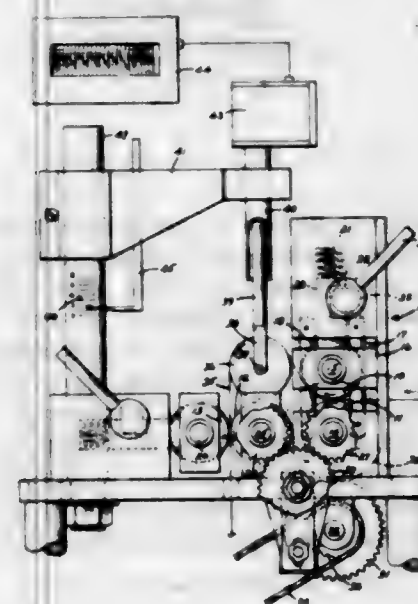
air, a plurality of vanes mounted in spaced, vertical relation on one of said side walls and projecting horizontally into said channel a distance less than half the width thereof, and means for producing oscillatory pitching motion of said plurality of vanes within predetermined limits angularly measured in each direction from the horizontal, thereby generating transverse sinusoidal wave motion in said flow.

3,005,340

FIBER DRAFTING ANALYZER

Robert A. Smith, Drexel Hill, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Oct. 11, 1957, Ser. No. 689,588
2 Claims. (Cl. 73-159)



1. A device for measuring the force required to draft a sliver, roving or like bundle of fibers, comprising a first set of drafting rolls, means for driving said drafting rolls at a preselected speed, a second set of drafting rolls having axes parallel to the axes of said first set, means for driving said second set from said first set at a greater rate of speed than said first set, said sets of drafting rolls being so positioned that planes tangential to the nips of the two sets of rolls intersect at an angle, a freely rotatable force sensing roller located intermediate the two sets of drafting rolls, said sensing roller being tangent to the plane of the nip of said second set of drafting rolls whereby the sliver or the like running between the two sets of drafting rolls and around said sensing roller will be attenuated between said force sensing roller and said second set of drafting rolls, means operatively connected to said sensing roller for recording the tension on the sliver or the like during its attenuation, means for fixedly adjusting the position of said sensing roller so that the distance between the point where the sliver or the like leaves said sensing roller and enters the nip of said second set of drafting rolls is slightly greater than the length of the fibers making up said sliver or the like, and scale means indicating the adjusted position of said sensing roller.

3,005,341

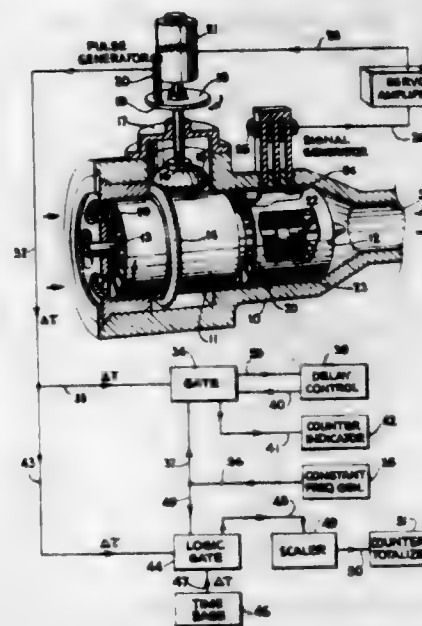
DIGITAL MASS FLOW METER

Robert M. Benson, 1355 Monument, Pacific Palmdale, Calif.

Filed May 15, 1957, Ser. No. 659,284
5 Claims. (Cl. 73-194)

2. A mass flow meter comprising, in combination: a casing; an impeller rotatably mounted in said casing; a turbine mounted in said casing in fluid coupling relationship

to said impeller; a variable speed motor exterior of said casing; coupling means coupling said motor to said impeller for rotating said impeller whereby fluid passing through said impeller and turbine imparts a first torque to said turbine; torque generating means for applying a constant second torque to said turbine in opposition to said first torque, whereby a deviation of the rotative position of said turbine from a given null position in which said first torque is balanced by said second torque, is a function of the difference between said first torque and



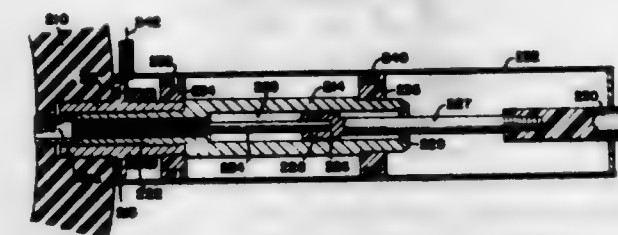
said second torque; sensing means for sensing said deviation of the rotative position of said turbine; control means connected to said sensing means and said motor to vary the speed of said motor in accordance with said deviation in a direction to decrease said deviation; and means responsive to said speed of said motor for periodically providing a number of pulses that are directly proportional to the mass flow rate of said fluid passing through said impeller and turbine, the total number of said pulses indicating the mass flow.

3,005,342

MAGNETIC FLOWMETER

Victor P. Head, Hathboro, Pa., assignor to Fischer & Porter Company, Hathboro, Pa., a corporation of Pennsylvania

Filed Oct. 21, 1958, Ser. No. 768,596
5 Claims. (Cl. 73-194)



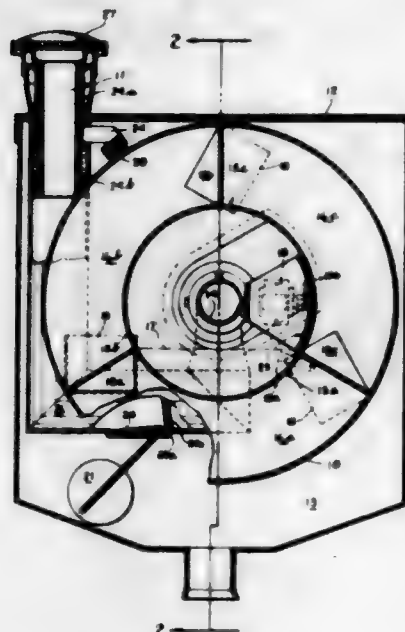
1. A flowmeter comprising a conduit for flowing liquid, electromagnetic means providing a magnetic field transverse to said conduit, means supplying current to said electromagnetic means, electrodes exposed to liquid flowing through said conduit and located on a line extending transversely through said field to pick up signals generated by the flow of liquid through said field, and means for measuring said signals, each of said electrodes comprising a metallic tube open to the liquid in said conduit, and means projectable through said tube to clean its bore, said electrodes being insulated from each other.

3,005,343

VOLUMETRIC DRUM METER

Robinson W. Brown and William E. Oakley, San Antonio, Tex., assignors of sixty percent to Vernon W. Borgs, Jr., Kilbuck, and forty percent to Ernest W. Porterfield, Waco, Tex.

Filed Aug. 23, 1957, Ser. No. 679,867
3 Claims. (Cl. 73-217)

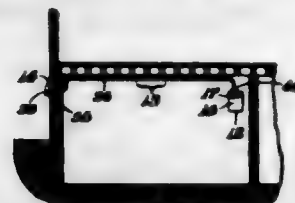


1. In a device of the character described, a housing, a drum rotatably mounted in said housing, an inlet pipe communicating with said drum, said drum having a series of spaced outer chambers each connected by an opening to a central chamber whereby material entering said spaced chambers successively from said central chamber effects rotation of said drum, means for counting the number of rotations of said drum and thereby indicating the amount of material passing through said drum, and valve means for substantially closing the openings from the central chamber to the outer chambers as each outer chamber becomes full.

3,005,344

REMOTE INDEX APPARATUS FOR A GAS METER

Paul W. Nelson, 62 Mildred Lane, Chester, Pa.
Filed July 2, 1958, Ser. No. 746,121
2 Claims. (Cl. 73-272)



1. In a combination with a gas meter having a sealed housing containing gas to be metered which is of essentially non-oxidizing and corrosion inhibiting character under pressure, a remote index located at a distance from said gas meter housing and including a remote index sealed housing containing lubricated parts; flexible shaft means connected between the remote index housing and the gas meter housing for conveying intelligence from said gas meter to said remote index; a sealed casing surrounding said flexible shaft means and extending between said remote index housing and said gas meter housing, said casing having fluid communication with both of said housings; and gas-tight connector means connecting the casing to the remote index housing and to the gas meter housing, the interior of said casing and said remote housing being filled with said gas under the

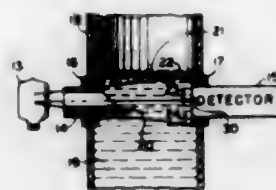
same pressure as in said gas meter housing, whereby the parts within said remote housing are inhibited against corrosion and the lubricant is protected against oxidation.

3,005,345

FLUID LEVEL INDICATOR

Maxime G. Kaufman, Camp Springs, Md., and Leonard O. Hayden, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

Filed May 1, 1959, Ser. No. 810,515
1 Claim. (Cl. 73-327)
(Granted under Title 35, U.S. Code (1952), sec. 266)

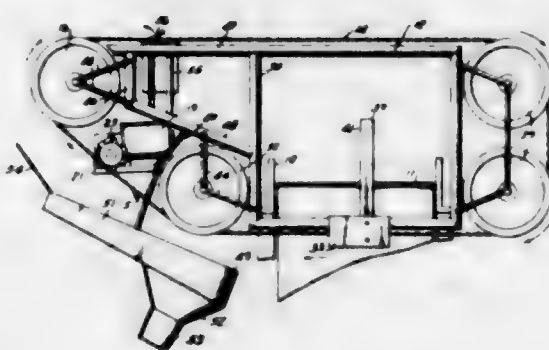


In a fluid level indicator, an elongated container for said fluid, a light source, a detector and an optical element having a truncated end; said optical element being mounted such that the truncated portion thereof protrudes into the fluid within the container; said light source, said optical element and said detector being aligned so that the light from said light source is directed through said truncated end onto said detector when a preselected fluid is present thereat and reflected by said truncated end along said elongated container and away from said detector when such preselected fluid is absent.

3,005,346

AUTOMATIC SAMPLER

Lawrence Pearson, Box 42, Chula, Ga.
Filed Sept. 12, 1957, Ser. No. 683,481
15 Claims. (Cl. 73-421)



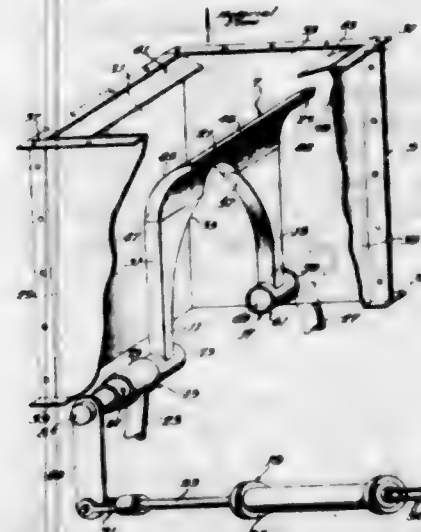
1. An automatic sampling machine adapted to be secured on the upper or outer end of a traveling belt of a conveyor comprising a frame mounted on the conveyor and having an opening therein through which the material to be sampled is to be projected, a plurality of pulleys rotatably mounted on the frame, a chain mounted around the pulleys and guided thereby to pass around the opening formed by the frame, a sample receiving box secured on the chain to be operated thereby and carried around the frame and past the opening through which the material is projected, a cutter bar secured to the box and projecting therefrom outwardly and having a cutting edge and a deflecting surface extending beyond the box, and means mounted on the frame and connected to drive the chain to pull the box and cutter bar with its deflecting surface through the projected material as the box passes under the projected material flow.

3,005,347

SAMPLING APPARATUS

James W. Smithson, Carlsbad, N. Mex., assignor to International Minerals & Chemical Corporation, a corporation of New York

Filed Aug. 8, 1958, Ser. No. 753,960
4 Claims. (Cl. 73-423)



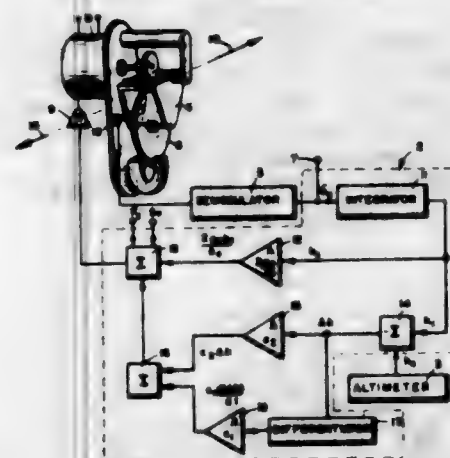
1. A sampling apparatus for sampling a flowing stream of granular material which comprises a substantially vertical chute, a hollow bifurcated sampling arm positioned within said chute with each of the hollow legs of said hollow bifurcated arm pivotally mounted on a hub assembly, said hub assemblies secured to substantially opposite walls of said chute, said hollow legs extending upwardly from said hub assemblies and terminating in an upper portion of said hollow arm, a sampling slot in said upper portion of said sampling arm through which granular material may enter said hollow sampling arm, and means for pivotally moving said sampling arm on said hub assemblies.

3,005,348

VERTICAL VELOCITY MEASURING SYSTEM

Kenneth L. Perkins, Anaheim, Richard R. Palmer, La Mirada, and John S. Anusman, Garden Grove, Calif., assignors to North American Aviation, Inc.

Filed Oct. 7, 1958, Ser. No. 766,175
8 Claims. (Cl. 73-503)



8. Means for measuring the vertical velocity of an object, comprising: an inertial accelerometer whose sensitive axis is stabilized to a vertical direction and adapted to generate an output signal; means responsive to signals generated by said accelerometer to create a first altitude signal; an altimeter for generating a second altitude signal; means responsive to said first and second altitude signals to generate a signal which is a measure of the difference between said altitude signals; means connected to generate a signal proportional to the derivative of said difference signal; means connected to generate a first correction signal proportional to said first altitude signal times a constant determined by the earth's gravitational effect; means connected to generate a second correction

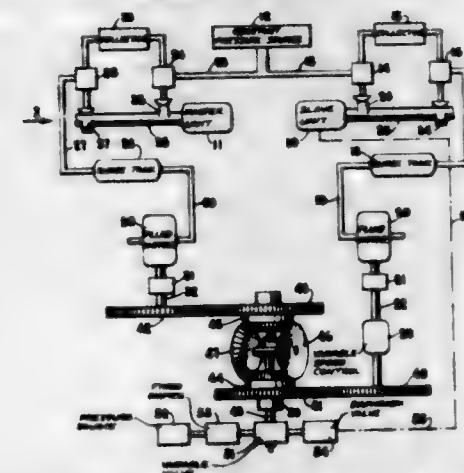
signal proportional to said derivative signal times a constant; and means connected to generate a third correction signal proportional to said difference signal times a constant; said first, second, and third correction signals being connected to bias said accelerometer.

3,005,349

DYNAMIC RATIO CONTROL APPARATUS

Wilhelm S. Everett, P.O. Box 429, Santa Paula, Calif.

Filed June 4, 1956, Ser. No. 589,128
4 Claims. (Cl. 73-587)



1. A dynamic ratio control apparatus for automatically maintaining a predetermined ratio between first and second shaft speeds, comprising, in combination: first and second transducer means for providing first and second quantities of gas that are functions respectively of said first and second shaft speeds; said first and second transducer means comprising a constant pressure source of said gas; first and second constant volume containers; first and second inlet poppet valves for opening and closing inlet conduits between said source and said containers respectively; first and second outlet poppet valves for opening and closing outlet conduits passing from said containers respectively; means on said shafts for alternately operating said inlet poppet valves and said outlet poppet valves at rates which are functions of said shaft speeds so that the quantities of gas passing from said first and second containers per unit time are functions of said first and second shaft speeds; first and second fluid motors connected to receive and convert said quantities of gas respectively into first and second rotational speeds having a ratio equal to said predetermined ratio; a variable speed control device connected to one of said fluid motors to change its rotational speed to a value equal to the value of the rotational speed of the other of said fluid motors so long as the ratio of said first and second rotational speeds remain equal to said predetermined ratio; differential means connected between said variable speed control device and said other of said fluid motors for providing an error signal that is a function of any difference between the rotational speed from said variable speed control device and the rotational speed of the other of said fluid motors; and control means responsive to said error signal for controlling one of said shaft speeds to maintain said predetermined ratio.

3,005,350

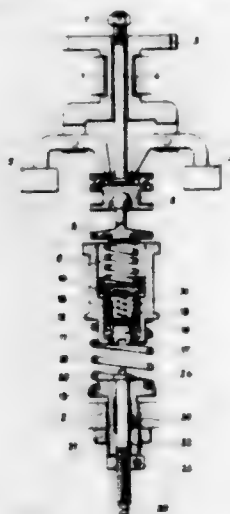
CENTRIFUGAL GOVERNOR

Walter Barth and Günter Jahn, Friedrichshafen, Germany, assignors to Maybach-Motorenbau G.m.b.H., Friedrichshafen, Germany, a firm of Germany

Filed Sept. 12, 1960, Ser. No. 55,437
4 Claims. (Cl. 73-544)

1. A centrifugal governor comprising a casing, an axially movable governor spindle having an end extending outside of said casing, said spindle having an end portion inside said casing, rotating weight means operatively connected to said end portion and to said casing for

axially moving said spindle upon a change of the rotational speed of said weight means, a coil spring placed in said casing coaxial of said spindle, a spring plate placed at one end of said coil spring and abuttingly cooperating with said end portion, a second coil spring placed in said casing coaxial of said spindle, a first spring plate element placed at one end of said second coil spring, a second spring plate element placed at the second end of said first spring, said spring plate elements having cooperating threaded cylindrical portions coaxial of said spindle, a spring plate means placed at the second end of said second spring and having a portion extending outside of said casing, and adjusting means including a locking member axially movably connected to said second spring plate element but not rotatable relative thereto, said locking



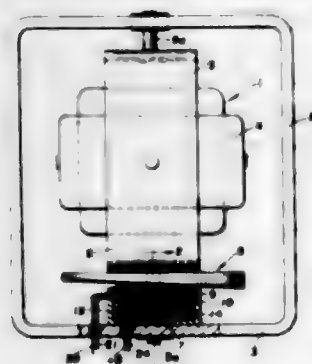
member and said first spring plate element individually including means engaging each other for preventing relative rotational movement of said locking member and said first spring plate element when said locking member is in a predetermined axial position relative to said first spring plate element, a locking spring interposed between said locking member and said second spring plate element for urging said locking member toward said predetermined axial position, said adjusting means including a rodlike element axially and rotatably movably extending through said spring plate means outside of said casing and having an end adapted to engage said locking member for pushing the latter out of said predetermined position against the action of said locking spring by axial movement of said rodlike element into said casing and to rotate said second spring plate element upon rotation of said rodlike element for adjusting the relative axial position of said spring plate elements.

3,005,351

APPARATUS FOR PROVIDING ALTERNATING POWER OF VARIABLE FREQUENCY

Lawrence E. Goodman, Urbana, Ill., and Joel M. Benjamin, Jr., Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 27, 1949, Ser. No. 123,878
7 Claims. (Cl. 74-5.6)



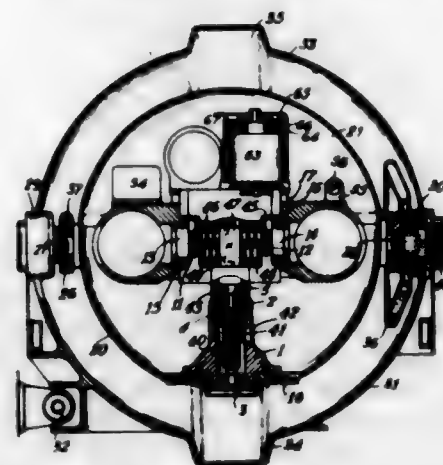
2. Means for varying the inductance of parts of apparatus for providing alternating power of variable fre-

quency, said means comprising a mass of magnetic material having a channel open at a plane face of said mass, two coils seated in said channel, a vane of magnetic material spaced from and overhanging said plane face, and a shaft carrying said vane, the plane of the vane being inclined to a plane normal to the shaft.

3,005,352

INERTIAL GUIDANCE DEVICE

René Jean Baptiste Claret, Sceaux, France, assignor to Societe de Fabrication d'Instruments de Mesure (S.F.I.M.), Massy (Seine and Oise), France
Filed Feb. 25, 1959, Ser. No. 795,488
Claims priority, application France Feb. 26, 1958
13 Claims. (Cl. 74-5.34)

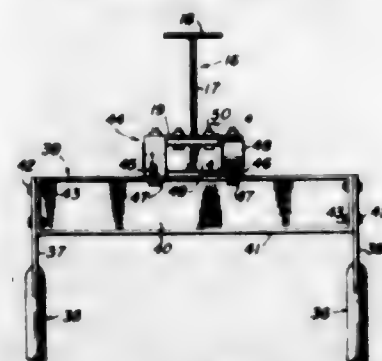


1. In an inertial guidance device, in combination, a platform, a plurality of movement detecting devices mounted on said platform for detecting the motions of said platform, a corresponding plurality of movement correcting inertia torque motors mounted on said platform for correcting the detected motions of said platform, and a free pivotal swivel joint support of said platform, being disposed in the vicinity of the centre of gravity of the assembly of said platform and detecting devices and correcting inertia torque motors hereupon mounted.

3,005,353

MEANS CONNECTING DOUBLE PITMAN TO PUMP UNIT EQUALIZER BEAM

Norris W. Gallaway, Fort Worth, Tex., assignor to American Manufacturing Company of Texas, Fort Worth, Tex., a corporation of Texas
Filed Aug. 5, 1960, Ser. No. 47,689
3 Claims. (Cl. 74-41)



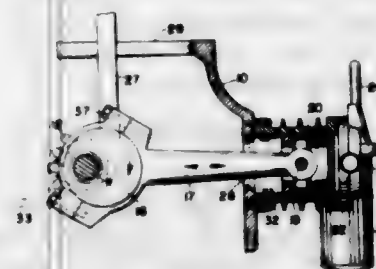
1. In a pumping unit including a walking beam and twin cranks: an equalizer beam pivotally connected to said walking beam, a pair of pitmans respectively pivotally attached to said cranks and extending therefrom, flexible straps respectively attached to the extending ends of said pitmans and extending therefrom in alignment therewith and having their largest surfaces disposed parallel with the plane of displacement of said walking beam, and means rigidly securing the extending ends of said straps to opposite ends of said equalizer beam.

3,005,354

AUTOMOTIVE AIR COMPRESSOR

Werner Haismann, Uthleben, near Nordhausen, Germany, assignor to VEB Schlepperwerk Nordhausen, Nordhausen, Harz, Germany, a corporation of Germany

Filed Jan. 28, 1960, Ser. No. 5,273
Claims priority, application Germany Feb. 23, 1959
5 Claims. (Cl. 74-44)



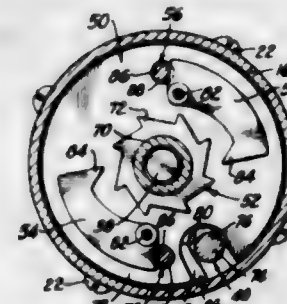
1. In an automotive vehicle, in combination, a transmission including a shaft and a gear fixedly mounted on said shaft, an eccentric slidably mounted on said shaft adjacent said gear with freedom of rotation relative thereto, co-operating clutch means on said eccentric and on said gear, a piston rod having an extremity embracing said eccentric for reciprocation upon rotation of the latter, air-compressor means including a piston connected with said rod and a cylinder reciprocally receiving said piston, said rod being positively engaged by said eccentric for displacement in unison therewith in axial direction of said shaft, and control means connected with said eccentric for axially shifting same into and out of an engaged position of said clutch means in which said eccentric is rotated by said shaft and reciprocates said rod.

3,005,355

ROTARY MOTOR ACTUATED STEPPING DRIVE FOR ROTARY SWITCH

Howard F. Mason, Los Angeles, Calif., assignor to Mason Electric Corporation, Los Angeles, Calif., a corporation of California

Filed June 6, 1960, Ser. No. 34,218
6 Claims. (Cl. 74-112)



1. In combination: a unidirectionally movable ratchet; a bidirectionally movable pawl engageable with said ratchet in driving relation during movement of said pawl in one direction; a bidirectionally movable structure; and pawl driving means acting on said pawl, and responsive to movement of said bidirectionally movable structure in said one direction, for moving said pawl in said one direction and for engaging said pawl with said ratchet in driving relation.

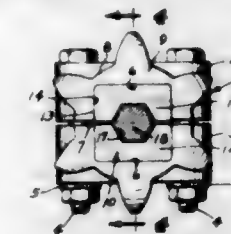
3,005,356

SPROCKET AND BUSHING THEREFOR

Ebenhard S. Gaudrud, Box 269, Owatonna, Minn.
Filed Jan. 12, 1959, Ser. No. 786,217
1 Claim. (Cl. 74-230.11)

A transversely separable transmission attachment for power shafts comprising a pair of elongated transversely separable outer body sections cooperating to define a cross-sectionally non-circular axial opening therethrough, a pair of elongated transversely separable inner body sec-

tions of equal length with said outer body sections and cooperating to define a cross-sectionally non-circular inner body fitting said axial opening through said outer body sections, said outer body sections having cooperating semicircular central portions, a pair of cooperating drive portions joining one end of said outer central body por-



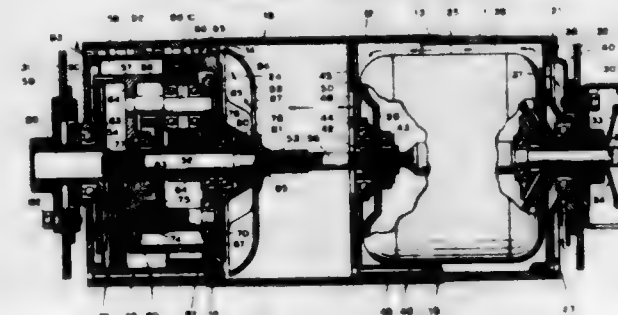
tion about one end of said inner body sections, and a pair of cooperating clamping portions joining the opposite ends of said outer central body portion about the other ends of said inner body section, whereby to securely mount and attach said drive and body portions of said attachment on power shafts of varying shapes and dimensions.

3,005,357

MOTORIZED PULLEYS

Joseph Dennis Christian, San Francisco, Calif., assignor to Holo-Flite International Incorporated, San Francisco, Calif.

Filed June 1, 1960, Ser. No. 33,258
11 Claims. (Cl. 74-421)



1. A pulley comprising drum, a first end wall detachably secured to one end of the drum, a second end wall detachably secured to the other end of the drum, an electric motor housed within one end of the drum, a first spigot, said motor having a housing carried at its outer end by said first spigot, said first spigot extending through the first end wall, said motor including a driven spindle coaxial with the drum, a speed reducing gearing housed within the other end of the drum and including a fixed housing, a second spigot extending through the second end wall and detachably connected to the outer end of said fixed housing, said gearing including a shaft coaxial with the motor spindle and connected thereto at its inner end and extending through said fixed housing to a position where its outer end is adjacent the second tubular spigot; a pinion on the outer end of said shaft, a countershaft mounted in the fixed gearing housing, a gearwheel on the countershaft meshing with said pinion, and gear means located between said pinion and the inner end of the shaft and connecting the countershaft drivably with the drum, whereby upon removal of the end wall and spigot the pinion and gearwheel become accessible and can be changed to obtain a different required driving ratio.

3,005,358

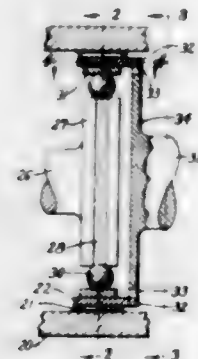
IRREVERSIBLE HIGH EFFICIENCY TRANSMISSION

C Walton Muser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed May 16, 1960, Ser. No. 29,407
7 Claims. (Cl. 74-640)

1. In a device for transmitting motion, a relatively rigid circular spline having teeth, a flexspline of different

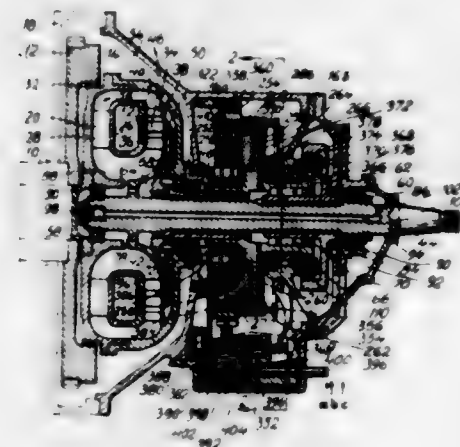
pitch diameter from the rigid spline, the flexspline having cooperating teeth of the same circular pitch as the rigid spline, coaxial with the rigid spline and having a deflectable wall, a wave generator operative to deflect the flexspline and to maintain the flexspline deflected in such manner that its teeth are engaged with the teeth



of the rigid spline in two diametrically opposed positions interspaced by positions at which the teeth are not in mesh, means for rotating the wave generator on the axis, a shaft turnable about the common axis and a radially variable interconnection between the flexspline and the shaft at a constant two diametrically opposed positions only.

3,005,359 HYDRAULIC TORQUE CONVERTER OF THE CLOSED CIRCUIT TYPE

Karl Gustav Ahlén, Stockholm, Sweden, assignor, by means assignments, to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden
Continuation of application Ser. No. 342,907, Mar. 17, 1953, which is a division of application Ser. No. 29,446, May 27, 1948, now Patent No. 2,719,616, dated Oct. 4, 1955. This application July 9, 1958, Ser. No. 747,412
4 Claims. (Cl. 74-732)

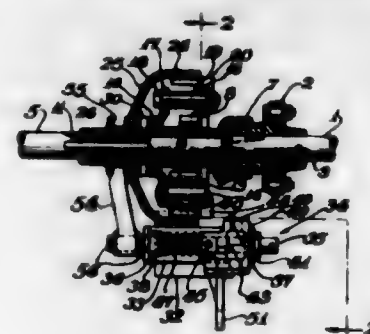


1. A hydrodynamic torque converter providing a toroidal chamber for working liquid defined by an outer wall and an inner wall, the inner wall being provided by an annular core structure spaced from the outer wall, said toroidal working chamber providing a closed circuit for circulation of the working liquid and said circuit comprising portions in which the flow of the working liquid is generally radially inward or generally radially outward, connected by portions in which the flow is generally axial, pump means including at least one ring of pump blades located in said circuit for circulating the working liquid therein, turbine means including at least two rings of turbine blades located in said circuit, reaction means including at least one ring of reaction blades located in said circuit, the blades of said reaction means being located in the portion of the circuit in which flow of the working liquid is generally radially inward, the arrange-

ment of the several blade means being such that the flow of the working liquid discharged from the pump is directed to a first ring of turbine blades from which the liquid is discharged directly to the reaction means and from the reaction means directly to a second ring of turbine blades, the discharge from the turbine means being delivered to the inlet of the pump means, said reaction means being rotatably mounted to permit rotation thereof, and power transmitting means interconnecting said reaction means and said turbine means to provide for simultaneous rotation of the turbine and reaction means at a fixed speed ratio relative to each other.

3,005,360 REVERSING MECHANISM

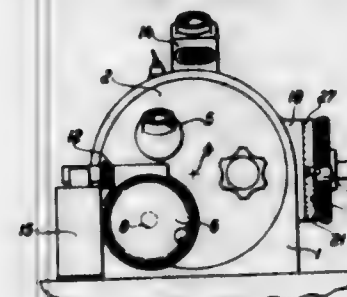
Ernest C. Carlson, Wheaton, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 10, 1960, Ser. No. 61,419
12 Claims. (Cl. 74-792)



1. In a reversing mechanism, the combination comprising a rotatable sun gear, an internally toothed rotatable ring gear and means integral and rotatable with the ring gear, a plurality of individually rotatable planet gears intermediate and in meshed engagement with the sun and ring gears, means carrying the planet gears rotatable about the axis of the sun and ring gears, the carrying means and means rotatable with the ring gear having means so formed and engageable with each other as to cause one of said carrying means and means rotatable with the ring gear to carry the other of said carrying means and means rotatable with the ring gear with it in unitary rotational movement during rotation of said one of said carrying means and means rotatable with the ring gear in one direction and thus prevent relative rotation between said carrying means and means rotatable with the ring gear during rotation of said one of said carrying means and means rotatable with the ring gear, in said one direction, actuator means for moving at least one of said carrying means and means rotatable with the ring gear axially away from the other of said carrying means and means rotatable with the ring gear so as to disengage the means of said carrying means and of the means rotatable with the ring gear engageable with each when in engagement with each other whereby to permit relative rotation between said carrying means and means rotatable with the ring gear, the length of the ring gear and lengths of the planet gears being such as to provide sufficient meshed engagement between the ring gear and planet gears for effective transmission of power between the two after disengagement of the means of said carrying means and of the means rotatable with the ring gear engageable with each other, and means engageable between the actuator means and said carrying means at least shortly after said disengagement to prevent rotation of said carrying means in the direction it tends to move after said disengagement whereby with said disengagement to reverse the directions of rotation of the sun gear and ring gear relative to each other as compared to the rotation of each prior to said disengagement.

3,005,361 SPINDLE-ADJUSTING MECHANISM FOR AN OPTICAL DIVIDING HEAD

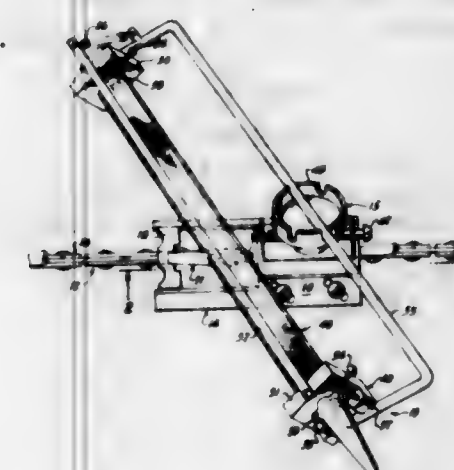
Lothar Meyding, Wetzlar (Lahn), and Friedrich Bender, Lohrberg (Lahn), Germany, assignors to Ernst Letz G.m.b.H., Wetzlar, Germany
Filed Nov. 24, 1958, Ser. No. 775,967
Claims priority, application Germany Nov. 28, 1957
10 Claims. (Cl. 74-825)



1. In an optical dividing head, a rotatable spindle, first gear means operatively connected to said spindle for coarse adjustment thereof, a manually operable crank operatively connected to said first gear means for operating said first gear means, second gear means drivingly coupled to said first gear means, an adjusting wheel operatively connected to said second gear means for operating said second gear means for fine adjustment of said spindle through said first gear means, and an electric motor drivingly connected to said second gear means to adjust said spindle through said first gear means.

3,005,362 FIXTURE FOR SHARPENING CHAIN SAW TEETH

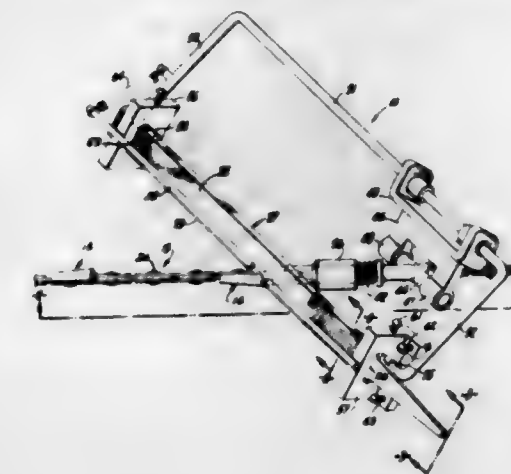
Charles Newman, 433 N. Harrison, Fort Bragg, Calif.
Filed Feb. 23, 1960, Ser. No. 10,300
9 Claims. (Cl. 76-36)



1. A fixture for supporting and aligning a file relative to a chain saw tooth, said device comprising: a file supporting platform having file supporting surfaces, a stop member mounted from said platform and adapted for engaging the trailing edge of a chain saw tooth, and a spring clip vertically mounted from said platform and being laterally resilient for engaging the leading edge of the depth gauge portion of a chain saw tooth, said clip having an elongated slot therein for straddling a guide wing portion of a saw chain, said slot having a width only slightly greater than the width of the guide wing; whereby said file platform may be rigidly mounted relative to a chain saw tooth, thereby positioning said file supporting surfaces relative to the cutting edges and faces of a saw tooth for proper sharpening.

3,005,363 PORTABLE CHAIN SAW FILING DEVICE

Charles Newman, 429 N. Harrison, Fort Bragg, Calif.
Filed Apr. 28, 1958, Ser. No. 731,278
10 Claims. (Cl. 76-36)



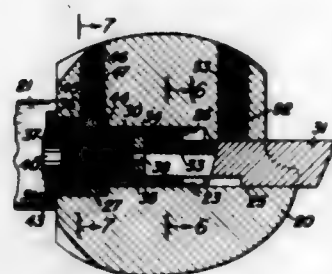
1. A device for the file sharpening of a chain saw tooth in which said tooth is provided with a depth gauge and with shank and toe portions having chisel cutting surfaces thereon which meet at a line of intersection, said device comprising: a clip adapted to snugly embrace said tooth, said clip having a notch therein engageable with the depth gauge of said tooth, a pin mounted in fixed relation to said clip, said pin having its axis parallel to said line of intersection of the cutting surfaces of said tooth, a link pivotally mounted at one end thereof on said pin and having a slide bearing at the other end thereof, a rod journaled in said slide bearing for rotation and longitudinal movement parallel to said pin, a file holding means carried by said rod for movement therewith, and an elongated file mounted in said file holding means in parallel spaced relation to said rod.

3,005,364 PROCESS OF PREPARING MATED EMBOSSING ROLLS

Frank Broderick, P.O. Box 31, New Providence, N.J.
Filed July 10, 1959, Ser. No. 826,215
1 Claim. (Cl. 76-107)

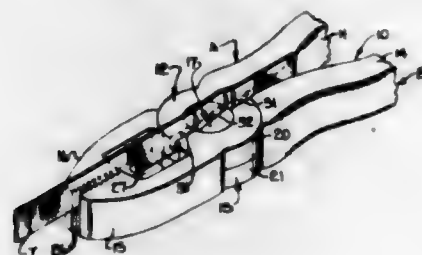
The process of preparing a pair of mated male and female embossing steel rolls for obtaining accurate registration to multi-color printing cylinders having a plurality of identical designs thereon for inline operation of said printing and embossing rolls comprising photoengraving a large soft steel female embossing roll with a large number of identical designs from an embossing separated photo-composed film to a very shallow depth, removing at most a small number of designs from the photo-composed film, photo-engraving a small soft steel female roll using said removed designs to substantially the very shallow depth of the large soft steel roll, hand tooling the photo engraved design on the small female roll to the full embossing depth with formation of rounded edges on said designs, heat hardening said small female roll, hob-etching said hardened female roll into a mating small male roll to effect a full embossing depth, heat hardening said small male roll, contacting said large soft steel roll with its shallow designs in register with the protuberances on the hardened small male roll to deepen and contour the etched plurality of designs thereon to full embossing depth, heat hardening said large female steel embossing roll, hob-etching said large hardened steel female embossing roll into a soft steel large male embossing roll to full embossing depth and heat hardening said large male embossing roll thereby producing a pair of matched hardened steel embossing rolls mated accurately to the printing rolls for inline operation.

3,005,365
BORING BAR
 Carl A. Billman, Rochester, N.Y.
 (35 Trowbridge Trail, Pittsford, N.Y.)
 Filed May 19, 1958, Ser. No. 736,254
 8 Claims. (Cl. 77—58)



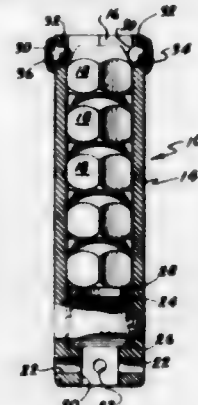
1. A tool blade assembly for a cutting tool body that has a socket therein adapted to receive said assembly in use, said assembly comprising a blade of generally equilateral triangular cross-section that is formed with a cutting tip at one end and with a peripherally threaded portion adjacent its opposite end, and a generally cylindrical barrel formed with a threaded bore in which said portion of said blade is threaded, said barrel being formed with an integral flange that has a flat face perpendicular to its axis to provide a gaging surface to permit the position of said blade to be measured precisely in said barrel, and a jam nut threadably adjustable in said barrel and adapted to be abutted against said opposite end of said blade to fix the longitudinal position of said blade.

3,005,366
TAPE PULLING PLIERS
 Robert J. Grimshaw, 4921 Bethel Church Road, Columbia, S.C., and Claude A. Derrick, Ballentine, S.C.
 Filed Apr. 22, 1960, Ser. No. 23,979
 4 Claims. (Cl. 81—5.1)



1. A hand tool for pushing and pulling flexible tape or the like, comprising first and second complementary members, at least a portion of said first member being superimposed over a corresponding portion of said second member, a pin extending through said portions and connecting said first and second members for relative pivotal movement, said first member being relatively rotatable with respect to said pin, means preventing relative rotation between said second member and said pin, means defining a passageway extending completely across the portion of said first member which is superimposed over the corresponding portion of said second member, an intermediate portion of said passageway extending across said pin, said passageway being straight when said first and second members assume a predetermined position for receiving a tape therein, and the intermediate portion of said passageway extending across said pin being offset with respect to the remainder of said passageway in response to relative rotation of said first member about said pin for crimping the tape received in said passageway, thereby frictionally binding the tape in the hand tool to facilitate pushing and pulling of the tape.

3,005,367
NUT-RETAINING SOCKET WRENCH
 Robert W. Voss, West Springfield, Mass., assignor to Moore Drop Forging Company, Springfield, Mass., a corporation of Massachusetts
 Filed Apr. 23, 1959, Ser. No. 808,475
 1 Claim. (Cl. 81—125)



A nut-retaining socket wrench comprising an elongated tubular member adapted to retain a plurality of nuts and having a cylindrical outer surface throughout its length, a polygonal nut-engaging inner surface, and an open end to receive said nuts, means disposed within said tubular member axially urging said nuts out of said open end, openings extending radially through wall portions of said tubular member adjacent said open end, the inner ends of said openings being of reduced diameter, metallic balls disposed in said openings and having portions extending into said tubular member to releasably retain said nuts therein and portions extending outwardly of said cylindrical surface, and an annular member of synthetic plastic material disposed on said cylindrical surface and overlying said openings, said annular member having a groove extending around its inner circumference interengaged with the outwardly extending portions of said balls, the interengagement serving to retain said annular member in place on said tubular member, said annular member urging said balls inwardly and being sufficiently resilient to permit said balls to be moved radially outward by the passage of nuts into and out of said tubular member.

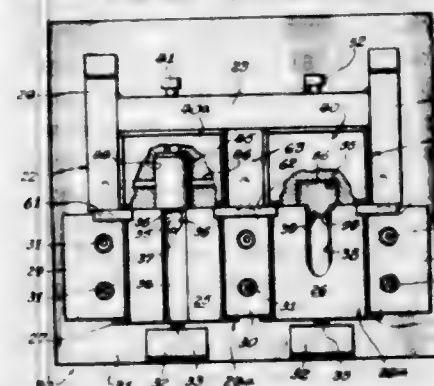
3,005,368
ADJUSTABLE PLIERS
 Walter J. Johnson, Buffalo, N.Y., assignor to United-Greenfield Corporation, Chicago, Ill., a corporation of Delaware
 Filed Apr. 15, 1960, Ser. No. 22,484
 3 Claims. (Cl. 81—410)



1. Adjustable pliers comprising a first handle member offset adjacent to one end and a jaw member rigidly carried by the offset, a second handle and jaw member

crossing the offset, means pivotally and slidably interconnecting the offset and the second handle and jaw member for movement of the pivotal connection along the offset, a series of spaced ratchet steps integrally formed on and across one side of the first handle member adjacent to the offset, an elongated straight pawl pivotally connected at one end to said means and extending along said one side of the first handle member and offset and selectively engageable at its other end with the ratchet steps variably to limit movement of the pivotal connection thereby to limit separation of the jaw members, spring means acting between the second handle member and the pawl urging the pawl toward engagement with one of the ratchet steps when the handle members are moved relatively together, and a part on the second handle member engageable with the pawl when the handle members are moved apart to move the pawl away from the ratchet steps, the handle members including interengaging parts to limit separation thereof such that the pawl will remain at all times substantially within the outline of the first handle member and offset to be protected thereby.

3,005,369
METHOD OF NOTCHING AND SHEARING THE ENDS OF TUBING IN THE PREPARATION OF TUBULAR ASSEMBLIES
 Frank Koster, Stone Park, Ill., assignor to Vogel Tool & Die Corporation, a corporation of Illinois
 Filed Nov. 25, 1957, Ser. No. 698,491
 1 Claim. (Cl. 83—40)

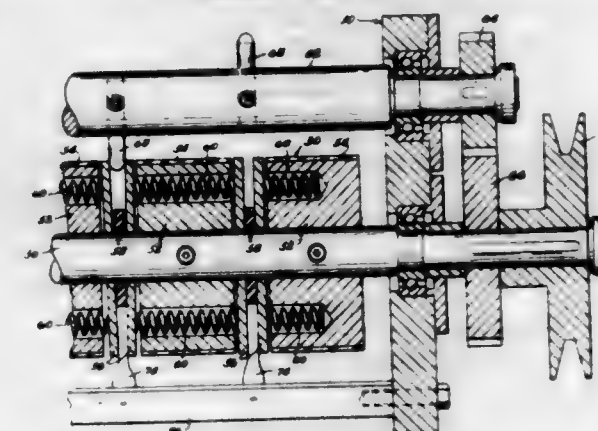


A method of shearing one end of a cylindrical member to shape the end thereof to fit against the side wall of a similar cylindrical member in a snug manner throughout the entire periphery of the contacting surface of the said two members, said method including selecting a female die having a grooved surface complementary to the cylindrical surface of the tube to be sheared and having a recess in the bottom of said groove of a circumferential extent less than one-half of but more than one-quarter of the circumference of said tube, the inner walls of said recess being joined by a curved wall, selecting a male die having a horizontal face and two vertical faces normal thereto and spaced apart a distance sufficient to form a snug sliding fit with the recess of said female die; and having one end thereof shaped complementary to the curved end of said recess in said female die, forming the complementary faces of the male and female dies with cutting edges, disposing said dies with their cutting edges in a nesting cutting relation, mounting a tube to be sheared in the groove of said female die with said end of said tube overlying said recess, confining the portion of said tube overhanging said recess to prevent the tube edge portions from flaring during punching, mounting said male die interiorly of said tube and above said recess and punching the tube from within so as to form a slot having axially extending sides converging at a sharp acute angle with the remaining periphery, supporting said tube in a second similarly grooved female and recessed die with the first formed slot diametrically opposite the bottom of the groove, selecting a second male die shaped complementarily to said second female die, disposing said dies

771 O.G.—63

with the axes thereof at an angle to each other, passing said male die through the slotted portion of said tube at an angle to the axis thereof from a point adjacent the rear edge of said slot toward the diametrically opposed portion of said tube and shearing said tube to remove an end portion of the tube so that the cut walls of the tube have the edges resulting from the cut converging at a sharp angle with the remaining periphery of said tube.

3,005,370
FILM PERFORATING APPARATUS
 Norman H. Nye, Cuyahoga Falls, Ohio, assignor to Pen-Mac-Nye Company, Akron, Ohio, a corporation of Ohio
 Filed Feb. 10, 1959, Ser. No. 792,344
 4 Claims. (Cl. 83—345)

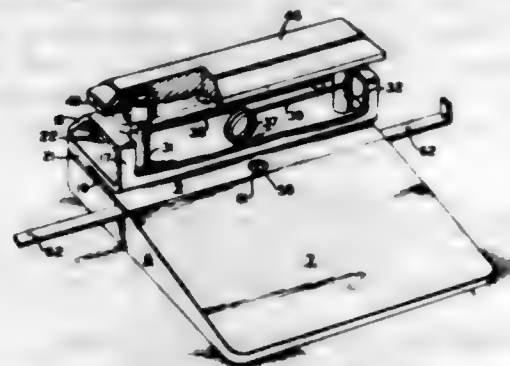


1. Apparatus for perforating films including a roll, means for moving the film around an arcuate portion of the roll under tension, a shaft positioned parallel to the roll, a plurality of double fish tail round pointed piercing pins carried by and extending radially of the shaft and of a length to extend within the periphery of the roll, means for rotating the shaft so that the engaging speeds of the roll and pins is substantially the same, said roll being formed from a plurality of axially short roll segments spaced axially apart to provide grooves in alignment with the pins, a pair of discs of a diameter equal to the diameter of the roll mounted in each groove and defining the side walls thereof, resilient means positioned between the discs and to the outside of the discs for holding the discs for limited axial movement to and from the side of the pins but allowing relative rotary movement of the discs with respect to each other and the roll segments, the double points of each pin being circumferentially aligned in the direction of their rotation, the edges of the discs cutting against at least the bottom portions of the double fish tails of the pointed pins, and resilient finger means extending between each pair of discs to direct the cut-out perforations out of the grooves.

3,005,371
DIRECT ACTION PAPER PUNCH
 William H. Milson, Los Altos, Calif., assignor to Zip Products Co., a partnership
 Filed Mar. 25, 1957, Ser. No. 648,226
 4 Claims. (Cl. 83—549)

1. A direct action paper punch comprising a frame forming a pair of parallel guides, a pair of plungers each being disposed in one of said guides, spring means engaging said frame and said plungers for urging said plungers into upper positions on said frame, an operating bar overlying and solely supported on both of said plungers, said operating bar having sockets therein within which the ends of said plungers are loosely received, and a pair of rubber-like sleeve connectors, each of said sleeve connectors being disposed to surround and frictionally engage a respective one of said plungers and being disposed within a respective one of said sockets and frictionally to engage said operating bar, said sleeve connectors being deformable to act as pivot connections

between said operating bar and said plungers when one end of said operating bar is depressed to depress one of



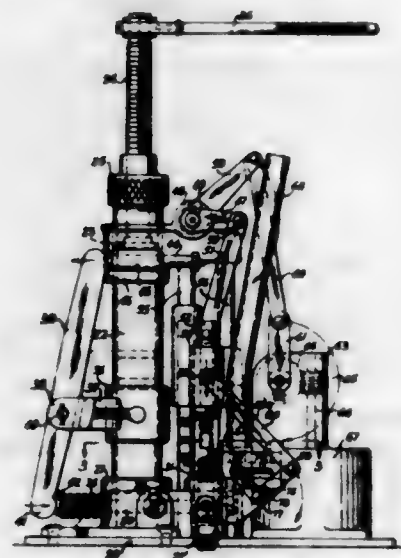
said plungers while said spring means retains the other of said plungers in said upper position.

3,005,372

RELOADING APPARATUS FOR SMALL ARMS AMMUNITION AND IN PARTICULAR REFERENCE TO THE SIZING AND LUBRICATION OF RAW BULLETS

William L. Hall, 1817 S. George Mason Drive, Arlington, Va.

Filed Mar. 11, 1959, Ser. No. 798,662
2 Claims. (Cl. 84-19)

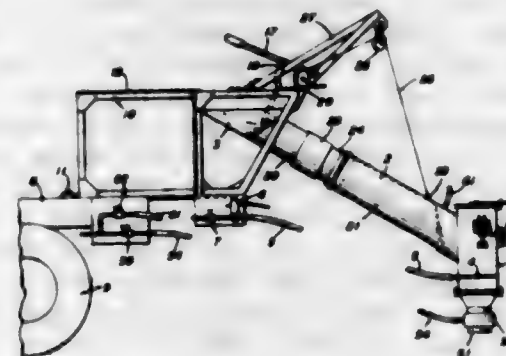


1. A raw bullet sizing and lubricating means comprising a base, a lubricant chamber mounted on said base, a vertically mounted die holder on said base, a die in said die holder, plunger means feeding lubricant from said chamber to said die, vertical guides on said base adjacent said die, a slide vertically movable on said guides, a casting at the top of said guides and mounted on top of said lubricant chamber, an axle extending through said casting, an arm secured to said axle, a link pivoted at one end to said slide and at its other end to said arm, a motor mounted on said base, an eccentric rotatable by said motor, a second arm on said axle, a second link pivotally connecting said second arm with said eccentric for reciprocating said slide, a die follower carried by said slide, a bullet feed tube having a lower end terminating adjacent said die, a horizontal slide carried by said base below said lower end of said bullet feed tube, and means actuated by movement of said vertically movable slide for moving said horizontal slide to move a raw bullet from said lower end of said feed tube into position in said die synchronously with the down stroke of said die follower, said last-mentioned means including a bell crank lever having the apex pivoted on said base, a pivotal and slidable connection between one leg of said bell crank lever and said horizontal slide, and a third link pivoted at one end to the other leg of said bell crank lever and at its other end to said vertical slide.

VEHICLE MOUNTED DISPENSER FOR CHARGING EXPLOSIVE MIXTURES IN BLAST HOLES

William R. Ramsen, Jr., Rogers City, Mich., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Feb. 6, 1958, Ser. No. 713,637
6 Claims. (Cl. 84-20)



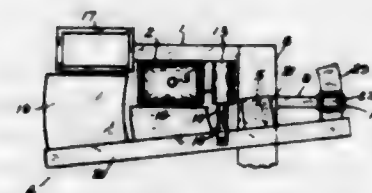
1. An apparatus for filling an explosive charge of granular material in a blast hole comprising a vertically extending spout, a support for said spout including means for centering its position over a blast hole, means for feeding granular material to said spout for gravitational movement therethrough into a blast hole, a damper valve in the path of gravitational movement of said material through said spout, means for adjusting the position of said valve to regulate the rate of flow of said material, said valve having a pivotal support for limited movement in a direction away from its adjusted position and a spring biasing its movement in said direction, said valve being movable to its said adjusted position against the action of said biasing spring in response to movement of granular material through said spout, and spray means under the control of said damper valve for injecting a spray of another material into the path of gravitational movement of said granular material through said spout upon movement of said valve thereby to its said adjusted position, said spray means including a control valve, a solenoid for actuating said control valve, and a limit switch operated by said damper valve controlling the operation of said solenoid.

3,005,374

NON-GLARE HEADLIGHT SYSTEM

Albert G. Thomas, Butler, Pa.
(133 Bollingwood Road, Charlottesville, Va.)

Filed Jan. 21, 1958, Ser. No. 710,305
3 Claims. (Cl. 84-1)



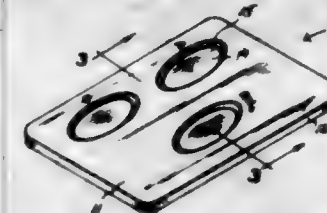
1. In a motor vehicle headlight system, means for producing illumination and means for effectively blocking the forward view of the driver of said vehicle and for effectively blocking the projection of illumination from said illumination producing means, radiation-sensitive means adapted to receive radiation from a source, said blocking means being adapted also to shield said radiation-sensitive means, and means controlled by said radiation-sensitive means for actuating said blocking means to block effectively said illumination and driver's view and said radiation-sensitive means concurrently, said controlled means including means for restoring said blocking means to a position making said illumination and the view of said driver effective.

3,005,375

BLOOD TYPING SLIDES

Leonard Sherman, 15340 Marlow, Oak Park 37, Mich.

Filed May 6, 1959, Ser. No. 811,339
1 Claim. (Cl. 88-14)



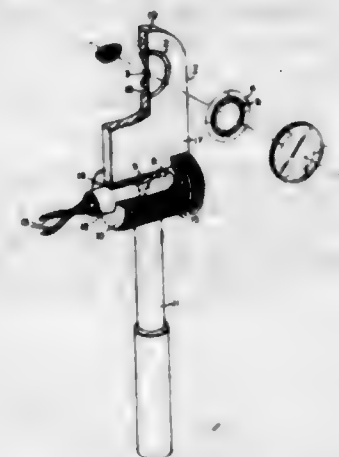
A blood typing slide consisting of a flat plate of plastic material, the plate having a plurality of recesses spaced from each other and depressed below its top surface, each recess having a flat bottom lying in a plane spaced below said plate, and a continuous marginal flange on said plate with its bottom edge substantially coplanar with the bottom surfaces of the flat bottoms of said recesses.

3,005,376

APPARATUS FOR LOCATING OPTICAL AXES

Paul F. Evans, Lanthicum, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 25, 1959, Ser. No. 822,787
3 Claims. (Cl. 88-14)



1. An apparatus for location of the optical axis of a lens or lenses to facilitate their alignment, said apparatus comprising a planar-shaped light-conducting member of light-conductive material adapted at one end to be exposed to a source of illumination, said substantially planar-shaped light-conducting member having a viewing aperture extending therethrough from a rear surface thereof to a front surface thereof, light-reflecting material substantially coating the outer surface of said light-conducting member with the exception of the area of its end which is adapted for exposure to a light source and with the exception of a portion of its front face surrounding the aforesaid viewing aperture, the rear surface of such member being provided with an annular inwardly extending reflector surface for directing light outwardly through the aforesaid area in the front face of same.

3,005,377

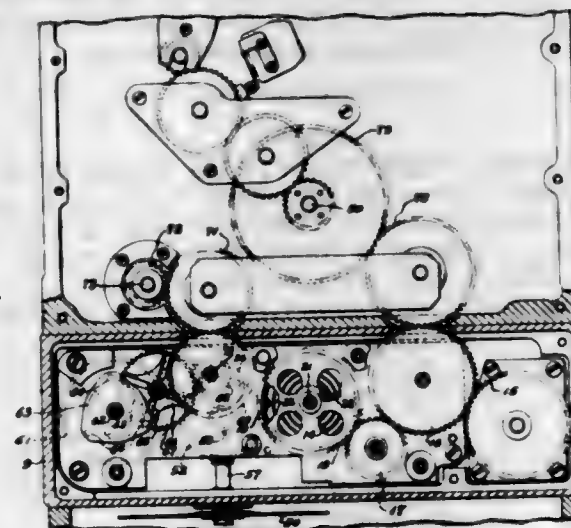
CAMERA DRIVE MECHANISM

Andre R. Brault, Merrick, and Ralph Lindberg, Malibu, N.Y., assignors to OPTOMECHANICS, INC., Malibu, N.Y., a corporation of New York

Filed July 19, 1956, Ser. No. 598,784
19 Claims. (Cl. 88-18)

1. A camera drive mechanism for a camera having a film exposure position comprising a spring motor having ends, winding mechanism connected with one end of the spring motor including an input member, driving mechanism connected with the other end of the spring motor including an output member and a Geneva mechanism connected with the output member, the spring having one end secured to the input member and the other end secured to the output member, locking means connected with the driving mechanism of the spring motor to lock the same against unwinding, means independent of the winding mechanism and drive mechanism and connected with the locking means to release and reload the

anism connected with the output member, the spring having one end secured to the input member and the other end secured to the output member, locking means connected with the driving mechanism of the spring motor to lock the same against unwinding, means independent of the winding mechanism and drive mechanism and connected with the locking means to release and reload the



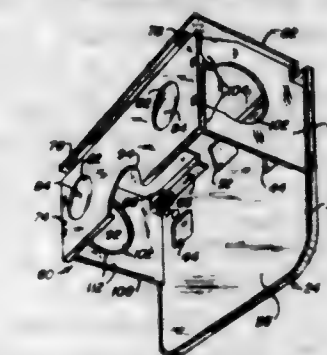
same for each operation of the shutter, a shutter connected with the driving mechanism between the output member and the Geneva mechanism, film transport means connected with the Geneva mechanism including a film transport sprocket adjacent to exposure position, and film feed means connected with the winding mechanism of the spring motor including a sprocket to feed film when the spring motor is wound.

3,005,378

FOLDED PLASTIC STEREOSCOPIC VIEWER

Kenneth E. Golden, Portland, Oreg., assignor to Sawyer's Inc., Progress, Oreg., a corporation of Oregon

Filed Dec. 7, 1959, Ser. No. 857,698
4 Claims. (Cl. 88-29)



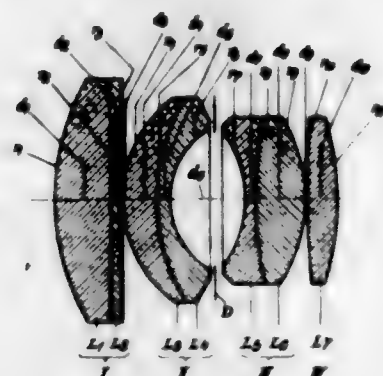
1. A collapsible stereoscopic viewer for viewing stereoscopic transparencies mounted in a flat carrier, said viewer comprising a flat, molded plastic holder for said carrier including a front member and a rear member, said front member being formed with a pair of light transmitting openings and the aligned portions of said rear member being of a light translucent material, means on said members for supporting said carrier with said transparencies aligned with said light transmitting openings, a lens carrying housing mounted on said front member including a molded plastic top plate, means hingedly connecting one edge of said top plate to said front member to permit said top plate to swing between an erected position substantially normal to said front member and a collapsed position wherein said plate is parallel to but spaced from said front member, a molded plastic front plate hingedly connected to the edge of said top plate opposite said one edge portion, said front plate being swingable between an erected position normal to said top plate and a collapsed position in which said front plate is swung into parallel relation with the undersurface of said top plate, a pair of

lenses, means on said front plate mounting said lenses therein, a pair of molded plastic side plates hingedly connected one to each of the opposite side edges of said front plate for swinging movement between a collapsed position parallel and adjacent to the rear surface of said front plate and an erected position normal to said front plate, and means on said side plates and said front member for releasably attaching said side plates to said front member to hold said housing in erected position.

3,005,379

HIGH-SPEED GAUSSIAN DUAL OBJECTIVE

Gunter Klenz, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Oct. 15, 1958, Ser. No. 767,464
Claims priority, application Germany Oct. 22, 1957
2 Claims. (Cl. 88-57)



1. An optical system comprising a Gaussian dual objective with four air-spaced lens members including a first doublet on the object side of the system composed of a biconvex front lens and a biconcave rear lens, a second doublet following said first doublet composed of a positive front meniscus and a negative rear meniscus, a third doublet separated from said second doublet by a diaphragm space, said third doublet being composed of a biconcave front lens and a biconvex rear lens, and a biconvex single lens following said third doublet on the image side of the system, each of said doublets having a cemented surface which is dispersive for the light rays impinging from said object side, said biconvex front lens L_1 , said biconcave rear lens L_2 , said positive front meniscus L_3 , said negative rear meniscus L_4 , said biconcave front lens L_5 , said biconvex rear lens L_6 , and said biconvex single lens L_7 having radii r_1 to r_{11} and thicknesses and air spaces d_1 to d_{10} whose numerical values, based upon a numerical value of 100 for the overall focal length of the system, together with the values of their refractive indices n_d and their Abbé numbers v are substantially as given in the following table:

Lens	Radius	Thicknesses and Air Spaces	n_d	v
L_1	$r_1 = +73.90$	$d_1 = 18.24$	1.6770	55.5
L_2	$r_2 = -476.90$	$d_2 = 3.01$	1.0980	31.2
L_3	$r_3 = +298.75$	$d_3 = 0.22$	air space	
L_4	$r_4 = +38.38$	$d_4 = 10.94$	1.6700	47.2
L_5	$r_5 = +61.32$	$d_5 = 4.49$	1.6166	30.6
L_6	$r_6 = +25.33$	$d_6 = 23.21$	diaphragm space	
L_7	$r_7 = -34.69$	$d_7 = 3.01$	1.6727	32.2
L_8	$r_8 = +126.21$	$d_8 = 15.43$	1.6583	57.3
L_9	$r_9 = -49.54$	$d_9 = 0.32$	air space	
L_{10}	$r_{10} = +214.42$	$d_{10} = 9.50$	1.7440	44.9
L_{11}	$r_{11} = -83.21$			

3,005,380
STRUCTURE FOR RECORDING TIME VALUES
Wayne E. Harrison and Elmer Llama, Tulsa, Okla., assignors to Midwestern Instruments, Inc., Tulsa, Okla., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,649
8 Claims. (Cl. 88-61)



1. In structure for forming timing lines on a moving strip in an oscillograph, shutter mechanism including a first and a second tube, said tubes being rotatable together as a unit, said first tube being movable with respect to said second tube, each tube being provided with a plurality of pairs of diametrically opposed openings, the openings of the tubes being aligned when said first tube is moved relative to the second tube in one direction, one pair only of the openings of said first tube aligning with but one pair of openings of said second tube when the first tube is moved in the opposite direction relative to said second tube.

3,005,381

SIGNAL DEVICE (MAGNETIC HANDLE)

Friedrich Reinholdt, College Point, N.Y.
(7 Oakdrive Ave., CHickadee, N.J.)
Filed Oct. 18, 1957, Ser. No. 691,090
1 Claim. (Cl. 88-80)



A portable, luminous warning reflector device for use as a signal for automobiles and the like comprising a handle, magnetic means housed in one end of said handle, adapted to be attached to a receptive surface for holding the handle in any desired position thereon, a disk like extension terminating from the other end of the handle, said extension having at least one circular pocket on at least one side thereof, reflecting means for said pocket, said pocket having peripherally arranged, split, inwardly curved means for holding the reflecting means in position in the pocket, said split means being disposed in a plane adjacent the longitudinal plane of the extension, said split means furthermore being resilient and adapted to yield upon pressing said reflecting means against the inner periphery of the curved means, to permit the insertion of the reflecting means inside the peripherally arranged means against the pocket and permit the split means to resume their position after the reflecting means has been inserted into the pocket and pressure has been removed from the reflecting means, and fastening means extending through the handle and magnetic means for securing the magnetic means and the handle.

3,005,382
REFLEX-REFLECTING SHEET MATERIALS
Victor Weber, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,592
8 Claims. (Cl. 88-82)



1. A flexible, light-transmitting, reflex-reflecting optical sheet heat-formable to shape as described and handleable as a discrete article, said sheet being transmissive to at least 5% and up to 50% of light directed upon its back surface and further being brilliantly reflex-reflecting of light directed upon its front face, and comprising a layer of reflex-reflecting complexes held in physical orientation in said sheet material by a flexible non-fibrous heat-formable light-transmitting binder, said complexes comprising minute sphere-lenses each in optical connection with an underlying specular-reflecting concentric cap on its back extremity away from the front face of said sheet material.

3,005,383

RETRACTIBLE REAR-VIEW APPARATUS FOR VEHICLES

James R. Pierson, 3627 Elizabeth St., Compton, Calif.
Filed Mar. 2, 1959, Ser. No. 796,377
3 Claims. (Cl. 88-93)



1. A rear view apparatus for use on a vehicle, said vehicle having a loading arm that undergoes movement in a vertical plane alongside the cab of said vehicle, comprising: a vehicle attachment frame secured to said vehicle; a mirror supporting frame movably carried by said vehicle attachment frame; a rear view mirror supported by said mirror supporting frame, said mirror normally being disposed in said vertical plane; spring means interposed between said vehicle attachment frame and said mirror supporting frame biasing the latter to its normal position wherein said mirror is disposed in said vertical plane; and cam bar means on said mirror supporting frame that are engaged by said loading arm as it undergoes said movement in said vertical plane to thereby temporarily urge said mirror supporting frame out of its normal position, said spring means returning said mirror supporting frame to its normal position when said loading arm and cam bar means are disengaged.

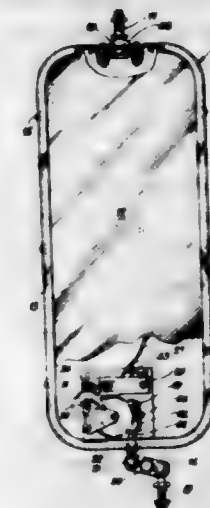
3,005,384

POWER ACTUATED REAR VIEW MIRROR

Arnold R. Baird, Springfield, Ill., and Delbert C. Balagna, Kansas City, Mo., assignors to Royal Engineering Co., Inc., Pleasant Plains, Ill., a corporation of Illinois
Filed Aug. 17, 1960, Ser. No. 56,104
4 Claims. (Cl. 88-98)

1. A remotely positionable side view mirror for use with an automotive vehicle which comprises in combina-

tion an enclosed housing having said mirror forming one face thereof, a reversible electric motor connected within said housing, first means extending from one side of said housing for connecting said housing to a holding bracket, said first means forming a pivotal connection between said housing and said connector, an axle pivotally connected from an intermediate portion thereof to said housing with the portion of said axle extending out of said housing terminating in a ball-acting member, the portion extending into said housing secured to a driving gear and said driving gear forming the terminal gear of a speed

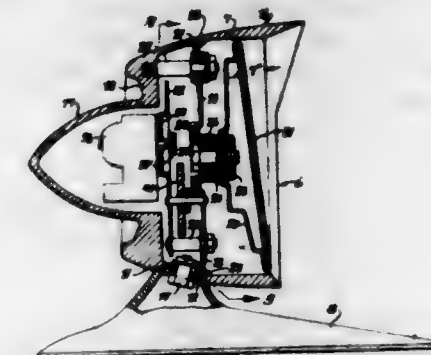


reducing gear train connecting said driving gear to said motor, a second means for connecting to a holding bracket, said second means terminating at one end in a bracket engaging member and at the other end in a ball-acting member, a double socket member embracing in one socket the ball-acting member of said second bracket engaging member, and in the other socket the ball-acting member of the axle, a wire extending from said motor to an energy source and to the remote operating position, and a switch at said remote position for operating said motor in both directions of rotation.

3,005,385

REMOTE CONTROLLED REAR-VISION MIRROR ALLOWING ACCURATE AIMING

Lynn C. Meade, Buffalo, and William Gray, Jr., Lake View, N.Y., assignors to Standard Mirror Company, Inc., Buffalo, N.Y., a corporation of New York
Filed Dec. 4, 1957, Ser. No. 700,590
5 Claims. (Cl. 88-98)



1. A remote controlled rear vision mirror for an automobile or the like comprising a housing in the form of a cup-shaped hollow shell having its mouth in the form of a generally vertical opening on the side facing to the rear of the automobile with its rim surrounding the fore-and-aft axis of the housing, a generally vertical supporting plate arranged in said housing transversely of said axis in spaced relation to said opening and with its rim arranged in closely spaced relation to the interior face of said housing, means removably securing said supporting plate to said housing, a rotatable member jour-

nalled centrally in and extending through said supporting plate to rotate about a generally horizontal fore-and-aft axis, a mirror panel arranged transversely of said axes between said supporting plate and opening and operatively connected to said rotatable member with its reflective face at an angle other than 90° to said axis of rotation of said rotatable member, a generally vertical motor supporting plate arranged transversely of said axes in spaced relation to and on the side of said first supporting plate, an electric motor in said housing on the side of said motor supporting plate remote from said mirror panel, means securing said motor supporting plate exclusively to said first supporting plate, an electric motor in said housing on the side of said motor supporting plate remote from said mirror panel, means securing the body of said motor exclusively to said motor supporting plate, and a train of speed reducing gears and pinions arranged between and rotatably mounted on said plates and operatively connecting the shaft of said motor with said rotatable member to nutate said mirror panel slowly in response to energization of the motor until it reaches the desired position for the particular driver.

3,005,386

CARTRIDGE CASE EJECTING MECHANISM

C Walton Munser, 66 McKay St., Beverly, Mass.

Filed Jan. 22, 1960, Ser. No. 4,161

4 Claims. (Cl. 89-1.7)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a cartridge case ejecting mechanism, the combination therewith of an assembly retaining ring, a case ejector cylinder having an extension with an inclined surface, an annular piston movable between said assembly retaining ring and said cylinder and terminating in a plurality of jaws each having an inclined surface, a plurality of case locking fingers each having intermediate its ends an inclined surface adapted to engage the inclined surface of said extension, a finger expanding ring surrounding said ejector cylinder and having an inclined surface adapted to engage the inclined surfaces of said jaws, a finger retaining ring coupled to the inner ends of said fingers and movable on said jaws and said expanding ring, means exerting between said assembly retaining ring and said finger retaining ring a force whereby said case is locked in said mechanism, and means operable upon movement of said piston to exert between said extension and said expanding ring a force whereby said locking fingers are released and said case is ejected from said mechanism.

3,005,387

APPARATUS FOR BUILDING ROADWAYS AND THE LIKE

Donald T. Heltnel and Michael I. Hudis, Warren, Ohio, assignors, by mesne assignments, to The Heltnel Steel Form & Iron Company, Warren, Ohio, a corporation of Ohio

Filed Aug. 26, 1954, Ser. No. 452,314

1 Claim. (Cl. 94-45)

Apparatus for forming the upper surface of a roadway and the like to a peaked, transverse profile, comprising screed means extending transversely of the intended roadway and including a pair of screed members in generally end-to-end relation, the adjoining end portions of said members being formed to interfit one with the other to

provide a lapped joint, screed support guides carried by the interfitting ends of said screeds, each screed member having a road defining surface corresponding to the desired transverse configuration of a portion of the upper surface of the intended roadway, roller means positioned above the peak of the intended roadway and supporting the screed support guides of the lapped end portions of said screed members, link means pivotally connecting said lapped end portions to permit relative angular movement and reciprocation of said screed members in unison, the other ends of said screed members adapted to be freely suspended to rest on the side forms so that respective



road defining surfaces thereof form an angle with each other, the apex of such angle coinciding with the peak of the intended roadway, means for reciprocating said screed members transversely of the intended roadway each along a path coincident with its road defining surface, means for moving said screed means longitudinally of the intended roadway to spread road surfacing material therealong in peaked, transverse profile, and means for shifting said roller means toward and away from the intended roadway to vary the angularity of the road defining surfaces of said screed members to thereby vary the height of the peak formed in the upper surface of the roadway.

3,005,388

ELECTROPHOTOGRAPHIC COPYING DEVICE

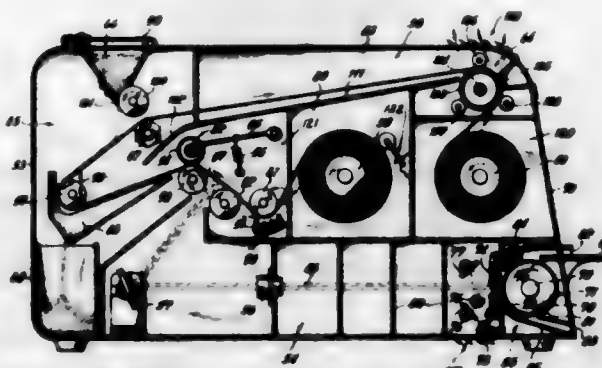
Walter Limberger, Hamburg, Germany, assignor to

Lamoprint Zindler KG., Hamburg, Germany

Filed Mar. 26, 1957, Ser. No. 648,671

Claims priority, application Germany Apr. 6, 1956

12 Claims. (Cl. 95-1.7)



1. An electrophotographic copying device for the continuous production of copies on a flexible carrier having an electrically chargeable photoconductive surface, comprising a dispenser for said carrier, a light-tight enclosure, guide means positioned in said enclosure for receiving the carrier from said dispenser and leading it through said enclosure along a looped path, having a lower run and an upper run following said lower run, with its photoconductive surface facing downward on said lower run and upward on said upper run, electrode means positioned in said enclosure adjacent said lower run for producing an electric charge on said photoconductive surface, said enclosure having an aperture underneath said lower run beyond said electrode means, optical means for directing light rays, reflected by a master copy to be reproduced, through said aperture onto the charged photoconductive surface of the carrier, hopper means positioned in said enclosure above said upper run for depositing a developing powder onto the illuminated photoconductive carrier surface, thereby converting the latent image on said sur-

face into a visible replica of said master copy, heating means positioned in said enclosure adjacent said upper run and beyond said hopper means for fusing said powder onto said surface and forming a permanent copy of said master image on said carrier, take-up means for the developed carrier positioned beyond said guide means, and mechanism in said enclosure for vibrating said carrier on its passage through said sloping portion in a manner effecting an even distribution of the developing powder thereon, said mechanism including a vibrator roller supporting said carrier at the junction of said upper run with said sloping portion and means for rotating said vibrator roller about a fixed horizontal axis in the sense of advance of said carrier but at an increased speed relative thereto, said vibrator roller being provided with peripherally spaced surface portions differing in their spacing from said axis whereby said carrier is oscillated and excess developing powder is shaken off at said sloping portion.

3,005,389

ELECTROPHOTOGRAPHIC COPYING DEVICE

Walter Limberger, Heymannstrasse 22,

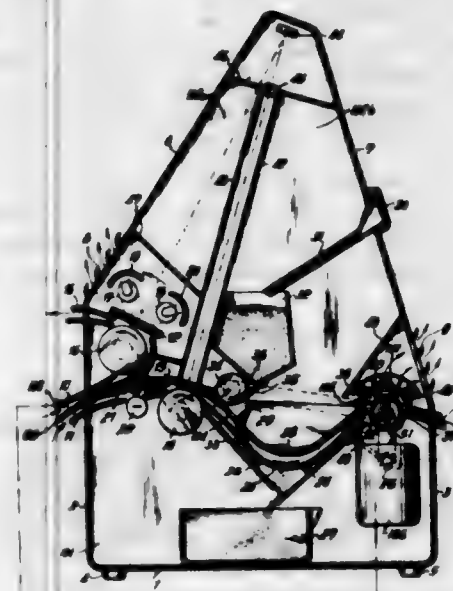
Hamburg 24, Germany

Original application Mar. 26, 1957, Ser. No. 648,671.

Divided and this application Mar. 24, 1958, Ser. No. 727,018

Claims priority, application Germany Mar. 28, 1956

12 Claims. (Cl. 95-1.7)



1. An electrophotographic copying device for the reproduction of a master copy on a flexible carrier having an electrically chargeable photoconductive surface, comprising a housing, a first frame, a first transparency in said first frame, first feed means for advancing below said first transparency the master copy to be reproduced, a second frame positioned close to said first frame and inclined at a small angle relatively thereto, a second transparency in said second frame, second feed means for advancing said carrier below said second transparency, partition means including said second frame in said housing defining a generally horizontal channel for the passage of the carrier with its photoconductive surface facing upward, walls rising substantially vertically from said second frame within said housing and forming an elongated flattened light tube terminating at said second transparency, optical focusing means of large focal length in said housing for directing light rays from said master copy through said first transparency, said light tube and said second transparency onto the upper surface of said carrier, said focusing means including a reflector aligned with said light tube at a location remote from said second transparency, the entire path of said light rays being generally transverse to said carrier surface, shield means including

said second frame and said walls isolating said optical means from said channel, electrode means positioned in said channel ahead of said second transparency for producing an electric charge in said photoconductive surface, hopper means positioned above said channel beyond said second transparency for depositing a developing powder onto the illuminated photoconductive carrier surface, thereby converting the latent image on said surface into a visible replica of said master copy, heating means positioned in said channel beyond said hopper means for fusing said powder onto said surface and forming a permanent duplicate of said master copy on said carrier, and feed means for successively advancing said carrier through said channel past said electrode means, said second transparency, said hopper means and said heating means.

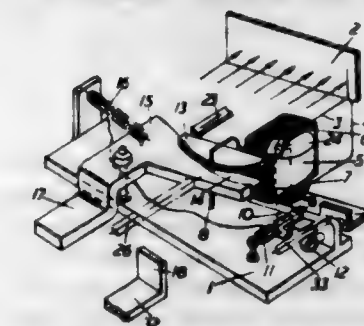
3,005,390

EXPOSURE CONTROL APPARATUS

Werner Hahn, Johannes Weiss, and Edith Berger, all of Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany

Filed Dec. 28, 1959, Ser. No. 862,320

5 Claims. (Cl. 95-10)



1. In a photographic camera including a housing, a shutter device, a first exposure factor setting means in the shutter device, a second exposure factor setting means in the shutter device, and a shutter cocking ring having a cocking lever extending therefrom; the provision of a photo-electric cell, a moving coil electrically connected to said cell, a pointer attached to the moving coil, a movable guide lever mounted in the housing, a return spring connected between said moving coil and said guide lever, a first movable element in engagement with said guide lever for setting the position of the latter and connected with said first exposure factor setting means so as to be settable thereby, a cam element mounted in the housing, a setting lever pivotally mounted in the housing, a spring connected between the setting lever and a fixed point in the housing, said setting lever having one part thereof provided with a cam profile which is positioned adjacent said cam element and another part thereof lying in the path of the cocking lever by which the setting lever is movable into a first position against the force of its spring whereby the pointer moves freely in the space provided between the cam element and the cam profile of the setting lever and into a second position determined by the position of the pointer whereby the pointer is clamped between the cam element and the cam profile of the setting lever under the influence of the spring, and a second movable element which is in engagement with said setting lever so as to be settable thereby and which is connected with said second exposure factor setting means.

3,005,391

CAMERA

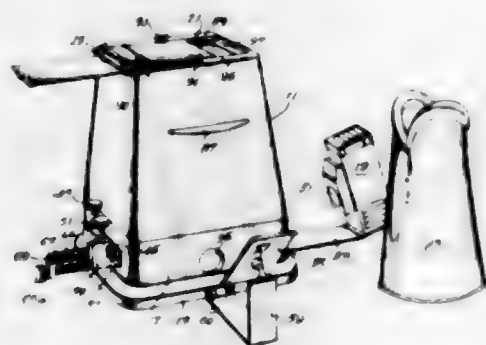
Robert O. Ragun, Oak Park, and Miles A. Snyder, Western Springs, Ill., assignors, by mesne assignments, to Chicago Carton Company, a corporation of Delaware

Filed Sept. 6, 1957, Ser. No. 682,537

5 Claims. (Cl. 95-11)

1. A camera of the class described, comprising a tubular housing having a lower end adapted to be positioned

on a surface to be viewed and having a side opening located adjacent said lower end, a lens having an adjustable aperture opening, a bracket mounted on said lower end of said housing for supporting said lens within said housing with the optical axis of said lens generally coinciding with the axis of said housing, means extending exteriorly of said housing through a side wall thereof from within said housing for adjusting the position of said lens in two directions at right angles in a plane normal to the axis of said housing to locate the field of view of said lens for viewing a selected segment of said surface,

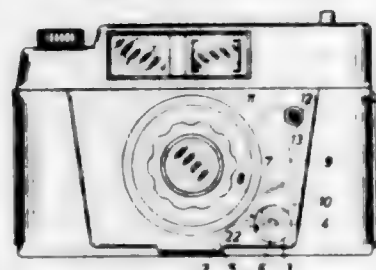


means for illuminating said surface to be viewed, a reflecting surface supported by said housing exterior thereof in position to view through said opening the area of the surface to be viewed located under said lower housing end, means extending exteriorly of said housing through a side wall thereof from within said housing for focusing said lens, means for adjusting the aperture opening of said lens, and means at the other end of said housing for positioning a cut film holder or a ground glass screen for receiving an image of the selected segment of the surface to be viewed.

3,005,392

CAMERA CAPABLE OF BEING SET FOR DIFFERENT TYPES OF OPERATION

Willy Kaden, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Feb. 11, 1960, Ser. No. 8,188
Claims priority, application Germany Feb. 18, 1959
11 Claims. (Cl. 95-11.5)

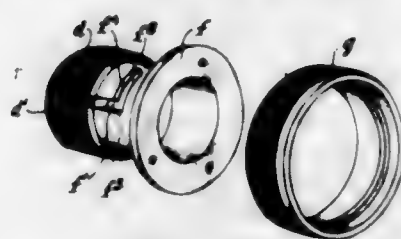


1. In a camera, in combination, a camera housing having a wall formed with an opening passing therethrough; manually operable setting means carried by said housing for setting the camera for a plurality of different types of operation one of which is flash operation; an electrical contact forming part of the flash operating structure of the camera and carried by said camera housing in the interior thereof, said contact being accessible through said wall opening at least when said setting means sets the camera for flash operation; and means operatively connected to said setting means and cooperating with said contact for preventing access to the latter except when said setting means sets the camera for flash operation.

3,005,393 PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVE WITH RANGE-FINDER CONTROL

Karlheinz Raab, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany

Filed Feb. 3, 1959, Ser. No. 790,948
Claims priority, application Germany Feb. 5, 1958
5 Claims. (Cl. 95-44)

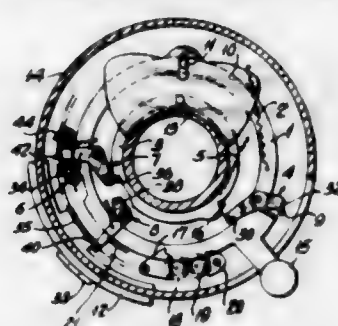


1. In a camera objective, in combination, a housing having first and second threads of different pitch, a lens barrel axially movable in said housing, a rotatable member matingly engaging said first threads and operatively coupled with said lens barrel for controlling the axial movement thereof, a range finder, a control element for said range finder matingly engaging said second threads, and a coupling member rigid with said control element coupled with said rotatable member for simultaneous rotation over a range of adjustment of said range finder while being decoupled therefrom in a terminal position of range-finder adjustment, one of said members being provided with a generally axially extending groove, the other of said members being provided with a projection positioned to engage said groove over a fraction of the range of displacement of said rotatable member, said groove having on one side a generally transverse extension accommodating said projection in said terminal position to enable further rotation of said rotatable member without entrainment of said coupling member and said control element.

3,005,394

PHOTOGRAPHIC SHUTTER

Heinz Schulze, Dresden, Germany, assignor to VEB Kamera- und Kleinwerke Dresden
Filed Sept. 25, 1956, Ser. No. 612,022
Claims priority, application Germany Sept. 26, 1955
6 Claims. (Cl. 95-63)



6. A shutter for an objective lens on a camera comprising a rotatable driving ring coaxial with the lens, a rotatable bearing ring coaxial with the lens, a plurality of peripherally arranged light-controlling shutter sectors each being hinged to both of said rings for movement into and out of the lens axis in response to movement of one ring relative to the other, whereby the shutter is opened and closed, ring biasing means for urging each of said rings in one direction, limit means for stopping the rotation of the rings and holding the rings so that the shutter is open, shutter cocking means for rotation of said rings against the urging of said biasing means and into an energized position where the blades are out of the lens axis and the shutter is opened, a releasable bearing ring catch for retaining said bearing ring in an energized position,

a releasable driving ring catch for retaining said driving ring in the energized position, reciprocable release means movable by an operator of the camera along a predetermined path intersecting said catches for first releasing said bearing ring catch to permit rotation of said bearing ring relative to said driving ring whereby said blades are moved into the lens axis and said shutter is closed, releasable stop means in the return path of said release means for catching said rotating bearing ring after a predetermined angle of rotation which corresponds to the position of the blades in the path of the lens axis to close the shutter when said driving ring is retained in the energized position, said release means upon movement in the predetermined path then releasing said driving ring catch to permit rotation of said driving ring relative to the stopped bearing ring through a predetermined angle whereby said blades are moved out of and then into the lens axis, said releasable stop means being released when said release means are returned along their predetermined path to an initial position after said driving ring has moved said blade means into the lens axis and closed the shutter whereby the blade means are moved out of the lens axis and the shutter is opened, and an escapement for retarding movement of said driving ring.

3,005,395

IRIS DIAPHRAGM FOR PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVES

Herbert Mahn, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed July 10, 1959, Ser. No. 826,362
Claims priority, application Germany Aug. 9, 1958
4 Claims. (Cl. 95-64)



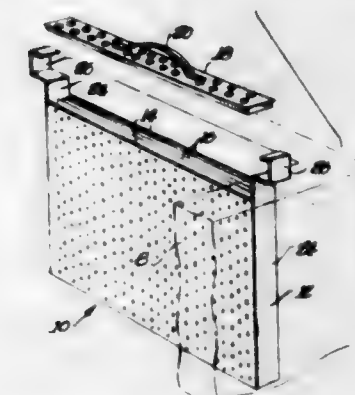
1. An iris diaphragm for optical objectives, comprising an annular support, a plurality of iris leaves pivotally mounted on said support at angularly spaced locations and in mutually overlapping relationship, said leaves defining a variable iris aperture, control means operatively engaging at least one of said leaves for swinging it about its pivot, adjacent ones of said leaves being provided with co-operating formations for displacing all of said leaves in the same sense upon a displacement of said one of said leaves by said control means, and restoring spring means anchored to at least one other of said leaves in opposition to the displacement of said leaves by said control means, said formations interconnecting said leaves in at least one chain starting with said one of said leaves and ending with said other of said leaves, said control means being adapted to displace all of said leaves in a given sense through the intermediary of said one of said leaves, said spring means closely overlying all of said leaves and engaging said support for maintaining said leaves in contact with the latter, a plurality of said leaves separated by other leaves being operatively engaged by said control means, said formations interconnecting said leaves in a plurality of chains each starting with one of said engaged leaves, said spring means being anchored to the last leaf of each chain, said control means comprising a setting member provided with a plurality of synchronized cams respectively bearing upon said engaged leaves.

3,005,396

PROCESSING BASKET

Dan W. Keller, Evanston, Ill., assignor to Calumet Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Nov. 10, 1958, Ser. No. 772,919
4 Claims. (Cl. 95-100)



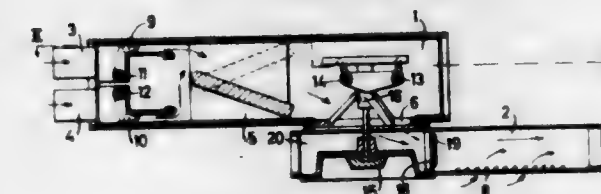
1. A processing basket for holding a plurality of photo-sensitive sheets in vertical position in a tank of processing solution comprising spaced endwalls extending across the ends of the basket and engageable with the ends of the sheets to limit endwise movement thereof, spaced side walls connecting the end walls, a perforated bottom wall connected to the end and side walls engageable with the lower edges of the sheets to support them, a plurality of spaced partitions extending between the end walls dividing the basket into a plurality of side by side compartments each extending the full length and height of the basket and adapted to hold the sheets in parallel vertical relationship, a perforate cover for the basket overlying the compartments and preventing removal of the sheets therefrom, and means on the basket for mounting it in fixed position in a tank, the side walls and the partitions being imperforate and the surfaces thereof facing the compartments being formed with smooth rounded projections thereon distributed substantially uniformly over said surfaces and engageable directly with the photosensitive surfaces of the sheets whereby the treating solution in the basket may be agitated by an agitating fluid entering the basket through its perforate bottom and passing around the sheets in the compartments to effect uniform processing of the photosensitive sheets in the basket.

3,005,397

OUTLET UNIT FOR VENTILATING PLANTS

Svend Helge Kristiansen, Naestved, Denmark, assignor, by mesne assignments, to Hi-Press Air Conditioning of America, Inc., New York, N.Y.

Filed Nov. 14, 1957, Ser. No. 696,490
2 Claims. (Cl. 98-40)



1. A ventilating system comprising a fixed enclosure arranged to receive air under pressure and having an opening in one wall, a second generally oblong enclosure having a corresponding opening in one side wall and adjacent to one end, said one side wall being located parallel and adjacent to said one wall of the fixed enclosure with the corresponding openings in alignment, support means between the fixed enclosure and the second enclosure for supporting the second enclosure for rotation relative to the fixed enclosure about an axis perpendicular to the two openings so that the second enclosure com-

municates with the fixed enclosure through the two openings, outlet means at the other end of the second enclosure to direct air received from the first enclosure away from the axis of rotation, a transverse partition in the second enclosure dividing this enclosure into a plenum chamber communicating with the fixed enclosure and an induction chamber communicating with the outlet means and having a plurality of orifices to direct air from the plenum chamber toward the outlet means, and a grille in one side of the induction chamber to permit air to be drawn in from outside the second enclosure by induction.

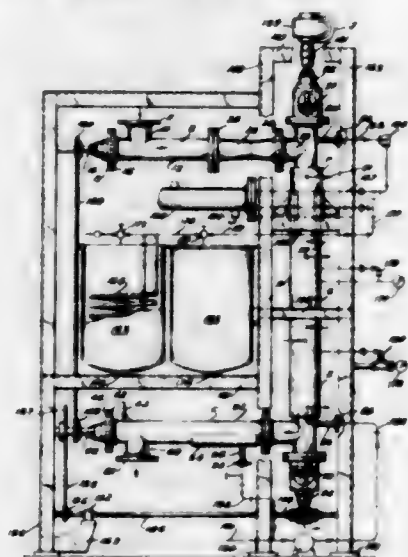
3,005,398

EXTRACTION APPARATUS

Robert A. Sandler, Colonia, N.J., assignor to Continental Copper & Steel Industries, Inc., Perth Amboy, N.J., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,370

7 Claims. (Cl. 99-289)



1. An extraction system for finely divided solid materials comprising a main extraction column and feeder and discharge columns connected to the ends thereof, said columns each having feed screws to feed the solid materials and means to feed the extracting liquid countercurrently to the solid materials in the main extraction column, said main column being vertical and said feeder and discharge columns being horizontal and said last two columns being provided with screws and said horizontal columns having casings closely embracing the screws and said screws having more widely spaced screw portions away from the main column and more closely spaced compression screw portions adjacent the main column to prevent passage of liquid into the feeder column and remove liquid from the solid materials in the discharge column respectively and said discharge column having a jacket at the lower side thereof to receive liquid removed from the discharge column by said more closely spaced screw compression screw portions.

3,005,399

FOOD MIXING APPARATUS

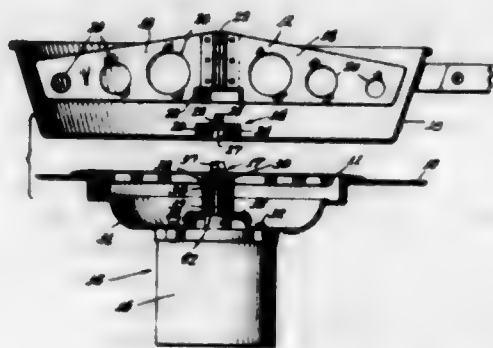
Maurice E. Libson, 416 Crown St., New Haven, Conn.

Filed Jan. 15, 1959, Ser. No. 786,960

3 Claims. (Cl. 99-348)

1. In combination an electric heating element adjustable to a plurality of predetermined heat levels forming a substantially flat supporting surface, a cooking vessel having a substantially flat bottom surface in heat transfer relationship therewith and supported thereon, stirring means adapted to be mounted in said vessel for traversing the bottom surface thereof, means wholly within said vessel secured to said bottom surface thereof and movable relative thereto for mounting said stirring means,

drive means adjustable to a plurality of predetermined speeds fixedly mounted adjacent said heating element and having retractable means projecting upwardly through said supporting surface adapted to removably operably engage said mounting means for imparting motion there-



to whereby said stirring means is caused to traverse said bottom surface, and means for adjusting said heating element through said predetermined heat levels, said adjusting means being connected to said drive means to adjust the speed thereof in relation to the heat of said heating element.

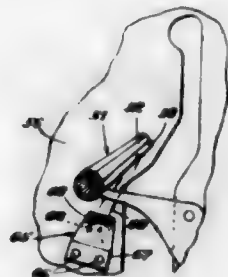
3,005,400

KNOTTER CLEANER FOR HAY BALERS

James H. Bernz, La Grange, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Apr. 22, 1958, Ser. No. 730,156

1 Claim. (Cl. 100-21)



In a baler comprising a bale forming chamber, a plunger reciprocally movable within said bale forming chamber, said bale forming chamber having a feed opening therein for the admission of material to be formed into bales, said plunger being arranged and constructed to move past said feed opening, a knotter mechanism mounted externally of said bale forming chamber, a strand carrying needle arranged and constructed to pass across said bale forming chamber and deliver a strand to said knotter mechanism, said bale forming chamber having an opening therein to permit passage of said needle, and said bale forming chamber having an aperture therein separate from the needle opening and located adjacent to and in direct alignment with said knotter mechanism whereby the reciprocative movement of the plunger causes air to be intermittently expelled through said aperture and maintain said knotter mechanism free of foreign matter, said knotter mechanism including a rotating hinged jaw billhook, deflector means mounted exteriorly of said bale forming chamber adjacent said aperture in a manner to direct air coming intermittently through said aperture toward said billhook, said deflector means including an angle bracket having a first flange lying flush with and attached to the surface of said bale forming chamber having the knotter mechanism thereon and having a second flange angled upwardly therefrom to substantially cover said aperture and directed toward said billhook.

3,005,401

EXPRESSING PRESS

Alfred W. French, Piqua, Ohio, assignor to The French Oil Mill Machinery Company, Piqua, Ohio, a corporation of Ohio

Filed Feb. 9, 1955, Ser. No. 487,138

4 Claims. (Cl. 100-93)



1. In a liquid expressing press of the character described having a main section including main drainage cage screen bars and a main end frame, the combination which comprises an extension expressing cage, means for mounting said extension cage coaxially with said main cage and beyond said end frame, a plurality of drainage screen bars in said extension cage of substantially the same radial height as said main drainage cage screen bars, and means on said main end frame for mounting said extension cage screen with said bars extending through said main end frame providing a continuous expressing pressure and drainage passage through said main section and said extension cage.

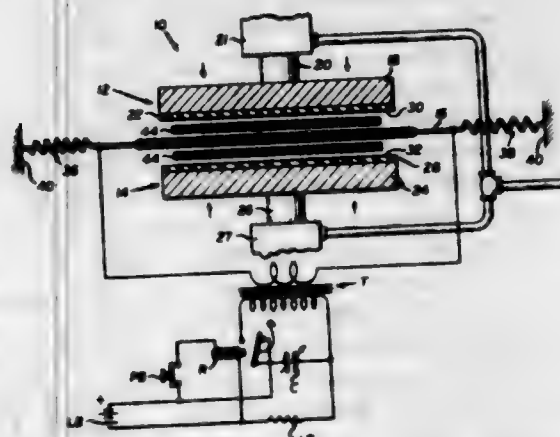
3,005,402

APPARATUS FOR HEAT SEALING A PLURALITY OF PAIRS OF SHEETS OF THERMOPLASTIC MATERIAL AT THE SAME TIME

Samuel L. Starger, Clark, Roland M. Levin, Linden, and Ivan J. Garbells, Clark, N.J., assignors to Research Associates, Inc., Linden, N.J., a corporation of New York

Filed Mar. 19, 1958, Ser. No. 722,586

15 Claims. (Cl. 100-93)



1. Apparatus for heat sealing flaccid thermoplastic sheets to one another, comprising a heating element, a first pressure means movable relative to said heating element to and from a first position in which said first pressure means applies a force to said heating element in a preselected direction and to and from a second position in which said first pressure means is spaced from said heating element, a second pressure means movable relative to said heating element to and from a first position in which said second pressure means applies a force to said heating element in a direction opposite to said preselected direction and to and from a second position in which said second pressure means is spaced from said heating element, the spaces between said heating element and said first and second pressure means when said first and second pressure means are in their respective second positions each being adapted to permit the passage of a pair of superposed thermoplastic sheets therethrough, and

means for concomitantly moving said first and second pressure means in opposite directions relative to said heating element so that both said pressure means are simultaneously in their respective first positions and both said pressure means are simultaneously in their respective second positions.

3,005,403

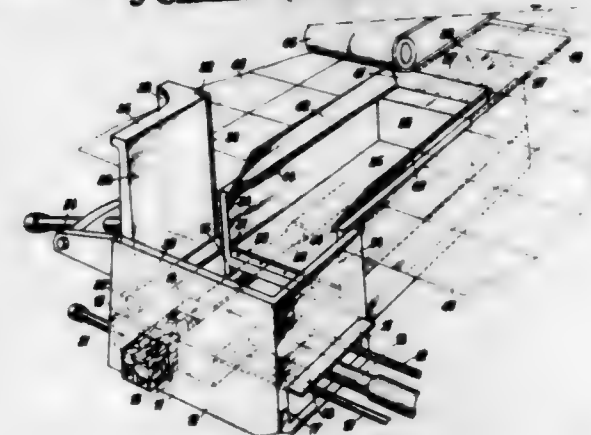
SCRAP METAL Baling PRESS

Fritz van Endert, Dusseldorf-Oberkassel, Germany, assignor to Waldemar Lindemann, Dusseldorf, Germany

Filed Jan. 24, 1957, Ser. No. 636,128

Claims priority, application Germany Feb. 13, 1956

5 Claims. (Cl. 100-96)



3. A press for the compression of scrap metal into bales which comprises a press box, a platen movable in the said press box, a means for moving said platen within said press box, a charging trough having an opening through which scrap metal can be discharged into the said press box above the path of movement of the said platen therein, a charging platen movable in the said charging trough, a means for moving said charging platen backwardly and forcefully forwardly in the said charging trough, a lid for the press box hinged to one side thereof which has an edge which is in substantially the same plane as the edge of the bottom of the said charging trough adjacent its opening into the press box and which, when the lid is closed, is situated below the bottom edge, and which lid forms, when open, a continuation of one side wall of said press box adjacent the said opening from the charging trough to the said press box, a means for opening and forcefully closing the said lid, a fixed retaining wall which extends upwardly forming an extension of the wall of the press box on the side of the opening of the press box opposite the hinged side of the lid of the press box and a fixed retaining wall which extends upwardly to form an extension of the wall of the press box on the side of the opening opposite the charging platen of the press against which scrap metal can be partially compressed and foreshortened by the action of the charging platen; the said upwardly extending walls and the hinged lid when in open position forming a chamber within which a charge of scrap metal can be partially compressed and foreshortened by the charging platen to dimensions which permit its downwardly movement into the press box by the action of the hinged lid as it closes the press box.

3,005,404

HYDRAULIC CONNECTING UNIT FOR PUNCH-PRESS RAMS

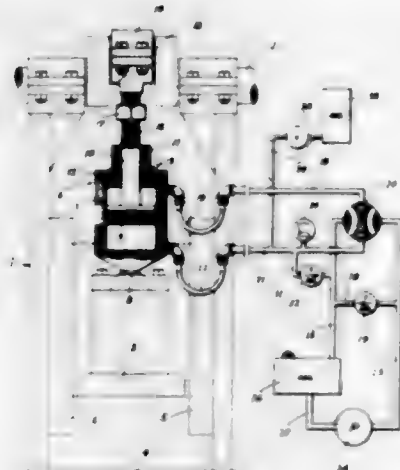
Emmitt M. Tucker, Sr., Medford, Oreg., assignor to Tucker & Sons, Grass Valley, Calif., a corporation of California

Filed Sept. 1, 1959, Ser. No. 837,437

2 Claims. (Cl. 100-257)

1. In a punch press which includes a crankshaft, a ram below the crankshaft and a work supporting bed below the ram, an extensible and contractible hydraulic unit

extending between the crankshaft and ram comprising a cylinder connected to and upstanding from the ram, a piston in the cylinder, and a piston rod upstanding from within the cylinder and connected to the crankshaft; the cylinder including a head having an upstanding rod-engaging sleeve, means to feed hydraulic fluid under

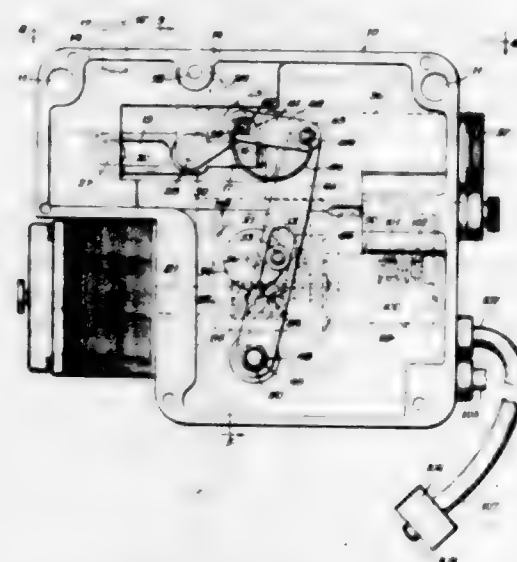


pressure to or withdraw the same from the cylinder above the piston while retaining any desired amount of fluid within the cylinder, the portion of the piston rod above the sleeve being threaded, and a nut adjustably mounted on the threaded portion of the rod for engagement with the upper end of the sleeve when the cylinder has been adjusted in position relative to the piston rod by admission or withdrawal of fluid to and from the cylinder.

3,005,405

STAMPING MACHINE

Herman A. Schubert, Wilmette, and Donald H. Spies, Glenview, Ill.; said Spies assignor to said Schubert
Filed Mar. 17, 1960, Ser. No. 15,743
9 Claims. (Cl. 101-41)



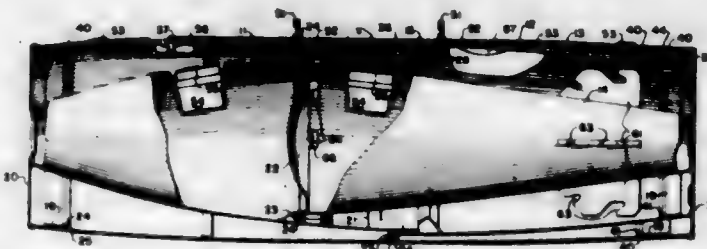
1. A stamping device comprising: a frame; a stamping head mounted on said frame for movement between a stamping position and a retracted position; power means on said frame and connected to said head to move said head between said positions, said power means including a driving member, a driven member, and a clutch between said members, said clutch having an actuating arm to engage and disengage the clutch, said arm rotating in a given path when said clutch is engaged; and control means including an actuating member movable to initiate a stamping cycle, and clutch actuating means opera-

tively associated with said clutch and connected to said actuating member to engage said clutch for only one revolution of said driven member for each movement of said actuating member whether that movement extends for a greater period of time than does said cycle or not, said clutch actuating means including a pair of fingers mounted on said frame for movement into and out of said path, said actuating means connecting said fingers to said actuating member to position one of said fingers in said path and the other out of said path and upon said movement of the actuating member to move said one finger out of said path and the other finger into said path.

3,005,406

FIRE BOMB

Howard W. Rouffeldt, Toledo, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 16, 1955, Ser. No. 508,832
6 Claims. (Cl. 102-4)



1. A collapsible fire bomb container comprising a nose section, a central section, an aft section and a tail section, said nose, aft and tail sections being generally conical and said central section being generally cylindrical in configuration, each of said nose, aft and tail sections having a maximum longitudinal dimension less than the length of said central section and of progressively decreasing diameter less than the inside diameter of the central section whereby said nose, aft and tail sections may be completely enclosed within the central section in telescopic array when the container is collapsed, a first annular member carried by an end portion of one of said sections and having an annular channel formed therein, a first gasket arranged within said channel, a second annular member carried by an end portion of another one of said sections, said second annular member having a second annular channel formed therein, a second gasket arranged within said second channel, a first flange formed on said first member in sealing engagement with said second gasket, a second flange formed on said second member in sealing engagement with said first gasket, means including a plurality of circumferentially arranged pins disposed radially within said members and locked to said second member for locking the sections together and maintaining said flanges in sealing engagement with said gaskets without applying stress to the central longitudinal portion of any of said sections, and cam means carried by said second member and engaged by said pins as the pins are driven into said members for forcibly moving said flanges into sealing engagement with said gaskets.

3,005,407

PROJECTILE NOSE STRUCTURE

George Albert Haraden, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1944, Ser. No. 537,466
3 Claims. (Cl. 102-70.2)

3. In a radio proximity fuze, a projectile nose having a body formed with a recess, said recess having at least one groove formed in its wall, electromagnetic wave genera-

ting means, and a spider having at least one rib on its surface to engage said groove in said recess so as to rigid-



ly mount said electromagnetic wave generating means in the recess.

3,005,408

PLASTICS SABOT

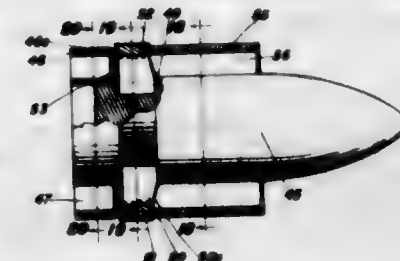
Stanley P. Prosen, Lanham, and Fredrick R. Barnett, Kensington, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 5, 1960, Ser. No. 7,066
4 Claims. (Cl. 102-93)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A two piece plastic sabot for a projectile having a slug, said sabot comprising a basic body portion of a thermosetting resin molded onto a slug, said body portion being substantially cylindrical and having one end portion of enlarged diameter to provide a bourrelet, and a thin walled external shell of a thermoplastics resin molded about but not adhering to that portion of the body not forming the bourrelet, a portion of said shell being of a thickness to increase the diameter of the body portion and shell to be greater than the diameter of the bourrelet.

3,005,409
PROJECTILE

Henry F. Dunlap and Charles E. Hablutzel, Albuquerque, N. Mex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 30, 1944, Ser. No. 543,006
3 Claims. (Cl. 102-93)



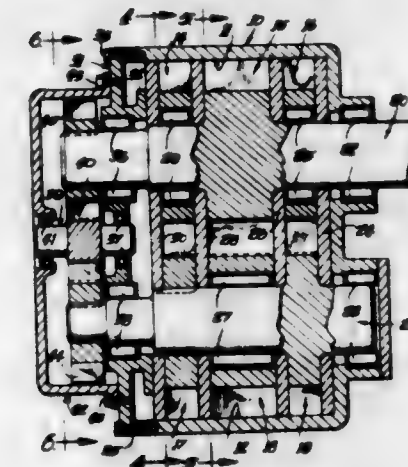
1. In a subcaliber sabot-projectile having a metal sub-caliber core, a sabot mounted on the core and positively secured thereto, the sabot projecting radially from the core a substantial distance for supporting and centering the core in a gun barrel, a turning band on the sabot, a substantially full caliber plastic bourrelet fitted closely on

the core in front of the sabot and engaged at its rear end with the front face of the projecting portion of the sabot, the bourrelet extending forwardly from the sabot for a distance substantially in excess of the sabot width, and a substantially full caliber plastic sleeve mounted on the core to the rear of the sabot and having an annular groove for receiving part of a shell case, said sleeve, bourrelet, sabot and band being releasable from the core by centrifugal force incident to rotation of the projectile when it emerges from the gun barrel.

3,005,410

BALANCED GEAR PUMP OR MOTOR

Don S. Strader, Mount Prospect, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Oct. 20, 1958, Ser. No. 768,364
9 Claims. (Cl. 103-4)



1. In a hydraulic fluid pump, a pump housing, a drive shaft rotatively carried through said housing, a pump driver gear fixedly carried on said drive shaft in said housing, a second drive shaft rotatively carried through said housing, a pump idler gear freely rotatively carried on said second drive shaft and meshing with said pump driver gear, a pair of pump driver gears fixedly carried on said second drive shaft on opposite sides of said pump idler gear, a pair of pump idler gears freely rotatively carried on said first drive shaft on opposite sides of said pump driver gear and meshing with said pair of pump driver gears, a plurality of separator plates positioned on each side of said gears to divide each pair of meshed gears into three separate pump assemblies, means connected to the ends of said drive shafts for driving said drive shafts in the same direction, an inlet and an outlet for each of said pump assemblies formed through said housing in respective alignment with the suction and discharge sides of said pump assemblies, means connecting the outlets of said pump assemblies in free fluid communication with each other, each of said gears being formed of substantially the same diameter, and said first pump driver gear being formed of a width substantially equal to the sum of the widths of said pair of pump driver gears.

3,005,411

AUTOMATIC REMOTE CONTROL APPARATUS

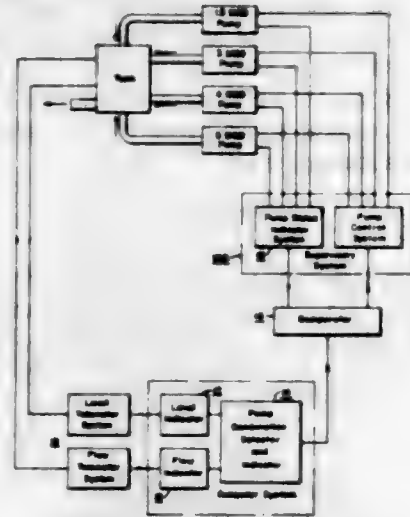
Weldon L. Metz, Churchill, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 29, 1957, Ser. No. 699,655

7 Claims. (Cl. 103-11)

1. In combination, means for indicating different conditions of liquid level and rate of liquid output from a tank; means controlled by said indicating means for selecting for proposed operation different combinations of different pumps for providing different rates of liquid input to maintain the liquid level in a predetermined steady condi-

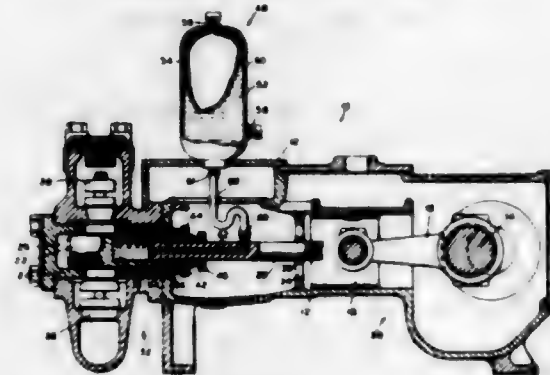
tion; means for indicating the actual status of operation of each of the pumps; means for comparing the pump combination selections with the actual status of operation indicators; and means responsive to said comparing means,



said pump combination selection means and said actual status of operation indicator means to control said pumps to eliminate any disagreement between said pump combination selection means and said actual status of operation indicator means.

3,005,412 AUTOMATIC PRESSURE COMPENSATOR FOR RECIPROCATING PUMPS

George F. Camp, 1730 S. 75th Ave., Tulsa, Okla.
Filed Oct. 10, 1960, Ser. No. 61,651
3 Claims. (Cl. 103-38)

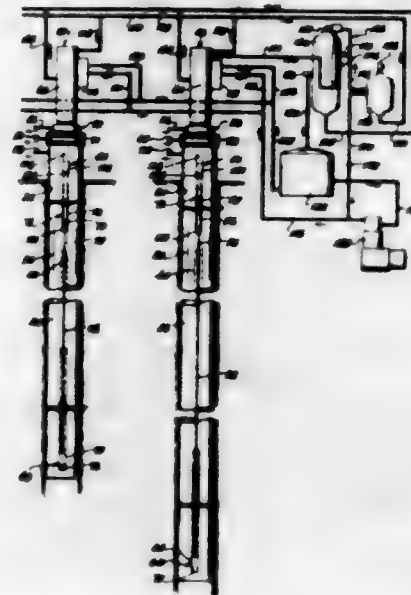


1. A pressure compensated pump adaptable for actuation by a prime mover, comprising, in combination, a cylinder; an inlet valve in communication with said cylinder; an outlet valve in communication with said cylinder; a cylindrical primary piston adaptable for reciprocable actuation in said cylinder whereby on the rearward movement of said piston fluid enters said cylinder through said inlet valve and on the forward movement of said primary piston fluid is expelled from said cylinder through said outlet valve, said primary piston having a cylindrical opening therein, the cylindrical axis of said opening substantially coinciding with the cylindrical axis of said primary piston; a cylindrical secondary piston adaptable to be reciprocably actuated by said prime mover, said secondary piston having the forward portion thereof slideably positioned in said cylindrical opening of said primary piston, said secondary piston having a longitudinal fluid passage formed therein, said fluid passage communication at one end with said opening in said primary piston and terminating at the other end exterior said secondary piston; a flexible hose communicating at one end with said fluid passage at the second mentioned end thereof; and a hydraulic pressure means in communication with the second end of said flexible hose whereby hydraulic force is applied through said hose and said fluid passage maintaining hydraulic pressure between said primary piston and said secondary piston.

3,005,413 ROD-TYPE FLUID OPERATED PUMPING SYSTEM

Clarence J. Coberly, San Marino, Calif., assignor to Kobe, Inc., Huntington Park, Calif., a corporation of California

Filed Apr. 1, 1957, Ser. No. 649,888
17 Claims. (Cl. 103-46)



1. In a fluid operated pumping system for two or more wells, the combination of: a supply reservoir; a supply pump having its inlet connected to said supply reservoir for supplying operating fluid under pressure; fluid operated pumping units for pumping the wells, respectively, each of said pumping units including a reciprocable assembly comprising a pump piston within the corresponding well and an engine piston connected thereto, said engine piston of said reciprocable assembly of at least one of said pumping units being connected to said pump piston thereof by a rod string and being adjacent the surface, each of said pumping units including engine valve means adjacent said engine piston thereof for alternately connecting said engine piston to said supply reservoir and the outlet of said supply pump so as to reciprocate said reciprocable assembly of such pumping unit, and said one pumping unit including a counterbalance piston connected to said reciprocable assembly thereof; a counterbalance accumulator; means for connecting said counterbalance accumulator to said counterbalance piston of said one pumping unit to counterbalance the weight of said rod string; a counterbalance reservoir; a compressor actuable by said one pumping unit in response to reciprocatory movement of said reciprocable assembly thereof and communicating with said counterbalance reservoir for pressurizing said counterbalance reservoir; and a fluid operated pumping means actuable by said one pumping unit for pumping fluid from said counterbalance reservoir into said counterbalance accumulator, said pumping means being connected in series with and being controlled by said engine valve means of said one pumping unit.

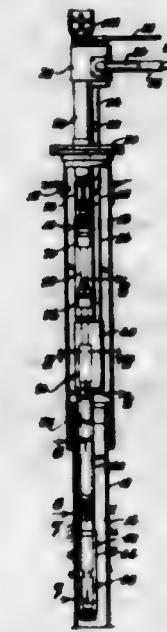
3,005,414 CLOSED FLUID OPERATED PUMPING SYSTEM WITH PARALLEL AND CONCENTRIC TUBINGS

Clarence J. Coberly, San Marino, Calif., assignor to Kobe, Inc., Huntington Park, Calif., a corporation of California

Filed July 6, 1959, Ser. No. 825,051
10 Claims. (Cl. 103-46)

1. In a fluid operated pumping system for a well, the combination of: upper supply, return and production tubings set in the well in side-by-side relation; an outer lower tubing set in the well below said upper tubings and aligned with and forming a downward continuation of one of

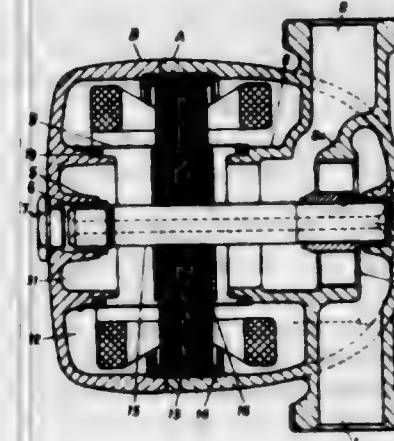
said upper tubings; intermediate and inner lower tubings disposed within and concentric with said outer lower tubing, one of said lower tubings being a lower supply tubing, another of said lower tubings being a lower return tubing, and the third of said lower tubings being a lower production tubing; and means interconnecting the



lower ends of said upper tubings and the upper ends of said lower tubings for connecting said lower supply tubing in fluid communication with said upper supply tubing, said lower return tubing in fluid communication with said upper return tubing and said lower production tubing in fluid communication with said upper production tubing.

3,005,415 CIRCULATING PUMP

Paul Akermann, Birsfelden, Switzerland, assignor to E.M.B. Elektromotorenbau A.G., Birsfelden, Switzerland, a company of Switzerland
Filed Nov. 12, 1958, Ser. No. 773,205
3 Claims. (Cl. 103-87)



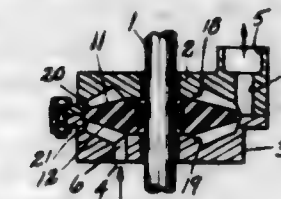
1. A pump-and-motor assembly including a liquid circulating pump and an electric motor driving said pump; said assembly comprising a housing having two separable portions, each housing portion including internally thereof a shaft bearing and an annular inwardly directed hub, a shaft having two ends supported in said shaft bearings, said shaft having a longitudinal bore interconnecting the ends thereof, one of said housing portions forming a spiral casing, a pump impeller seated on said shaft and located within said spiral casing, an annular tubular member sealingly connected to said hub of said one housing portion and extending into sealing relation with said hub of the other of said housing portions, said tubular member forming an inner cylindrical chamber and an outer annular chamber in said housing in coaxial relation with

said shaft, said cylindrical inner chamber communicating with said spiral casing and being adapted to be supplied with liquid from said pump impeller, a rotor seated on said shaft for rotation therewith within said inner chamber, an annular stator within said outer annular chamber and surrounding said rotor, said stator extending into both of said housing portions and centering the latter in coaxial relation with respect to each other, said annular tubular member having end portions and disposed in overlying relationship with respect to said respective hubs of said housing portions and extending a distance substantially greater than the width of said rotor and adjacent thereto, the end portions of said tubular member being disposed remote from said rotor, and means releasably interconnecting said housing portions with each other, said rotor having a diameter larger than said pump impeller to permit removal of said shaft with said pump impeller from said spiral casing through said tubular member when said housing portions are released by said interconnecting means.

3,005,416 PUMP

Richard S. Neely, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Filed Aug. 10, 1959, Ser. No. 832,686
8 Claims. (Cl. 103-117)



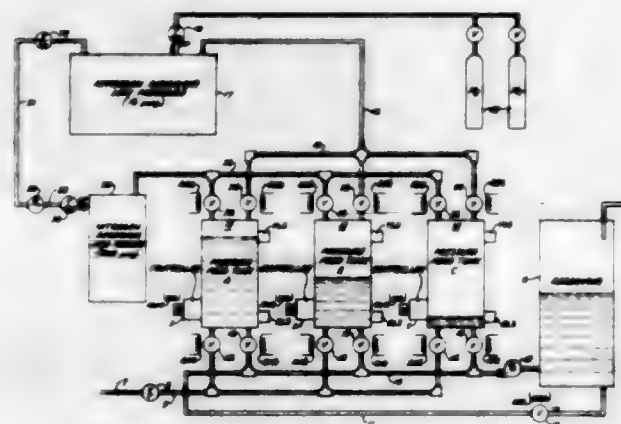
1. A rotary pump comprising a pump housing having two pairs of coaxial radially spaced oppositely inclined conical surfaces respectively disposed on opposite sides of the center of the chamber and with the surfaces of each pair extending axially away from the center of the chamber and converging toward each other and the pump housing further having two axially spaced surfaces respectively connecting the conical surfaces of each pair, the axial separation of said connecting surfaces varying from a maximum at one side to a minimum at the diametrically opposite side of the axis of said conical surfaces whereby the volume of equiangular segments of the pumping chamber alternately increases and decreases about the axis of the chamber, an impeller having a plurality of angularly spaced obliquely extending flexible blades bridging the space between the conical and connecting surfaces of the pump housing and deflected obliquely as said impeller is rotated by engagement with said connecting surfaces, and said housing having circumferentially spaced inlet and outlet openings with the outlet opening radially outward of the inlet opening, said inlet being located in a region in which the volume between adjacent blades is increasing as the impeller is rotated and said outlet being located in a region in which the volume between adjacent blades is decreasing as the impeller is rotated.

3,005,417 PNEUMATIC SYSTEM FOR PUMPING LIQUID

William A. Swamey, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 26, 1957, Ser. No. 655,271
7 Claims. (Cl. 103-238)

1. A pneumatic system for pumping fluid comprising, the combination with a fluid supply conduit, a fluid delivery conduit, and a plurality of liquid feed tanks respectively adapted to be filled with fluid from said sup-

ply conduit and to discharge such fluid under pressure into said delivery conduit, of a plurality of separate valve means respectively controlling the filling and discharge operation of said tanks, each of said separate valve means comprising a discharge valve connecting one of said tanks with said delivery conduit, a fill valve connecting said one tank with said supply conduit, and pneumatic valve means for conditioning said one tank for a liquid feeding operation by introducing gas under pressure to pressurize the liquid therein, each of said tanks having a separate motor driven controller operable in a cyclic manner and including a plurality of means respectively



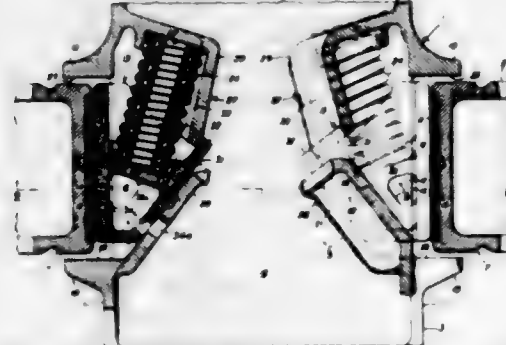
effective during each cycle of operation and at sequentially timed intervals for closing its discharge valve and operating its fill valve and its pneumatic valve means to thereby fill it with gas-pressurized liquid, and means providing for successive operation of said tanks comprising a lower limit control in each of said tanks which is actuated in response to the fluid therein falling to a predetermined level and includes means for actuating the motor driven controller for such tank and for opening the discharge valve of a succeeding tank, said motor driven controllers operating respectively at a predetermined timed interval after actuation by said lower limit controls to close said discharge valves.

3,005,415

SNUBBED RAILWAY TRUCK

Glenn F. Couch, Bergen, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland

Filed Jan. 22, 1959, Ser. No. 788,306
6 Claims. (Cl. 105-197)



1. In a snubbed railway truck having a side frame carrying supporting coil springs and on a guide column thereof a vertically directed friction surface, a bolster assembly comprising a bolster supported on said springs and having a pocket in a side thereof opening toward said friction surface, a horizontally directed friction surface defining a vertical extremity of said pocket, an oblique wedging surface in said pocket and inclined outwardly thereof toward said vertically directed friction surface and at an acute angle to said horizontally directed friction surface, a slot in an inner wall of said pocket

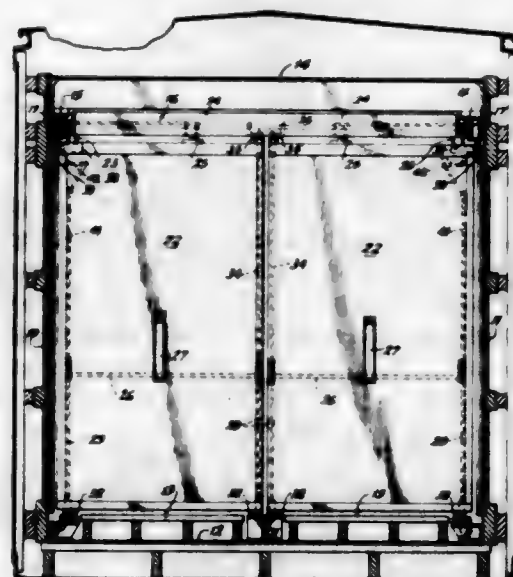
inwardly of said wedging surface, wedge means in said pocket and having vertically and horizontally directed friction faces frictionally engageable respectively with said vertically and horizontally directed friction surfaces, an oblique wedging face on said wedge means inclined in correspondence with and engaging said wedging surface, means on said wedge means normally projecting through said slot and overlapping said inner wall rearwardly thereof, and spring means in said pocket and inclined relative to said wedging and vertical friction surfaces, said spring means acting on said wedge means and through said wedging face and surface for urging said friction faces and surfaces into frictional engagement.

3,005,419

LADING SEPARATING MEANS

Russell M. Loomis, Palos Heights, Adolph G. Kuellmar, Chicago, and John S. Lundvall, Park Ridge, Ill., assignors to Union Asbestos & Rubber Company, Chicago, Ill., a corporation of Illinois

Filed July 6, 1959, Ser. No. 825,207
6 Claims. (Cl. 105-376)



1. In a car having spaced side walls, a floor and a roof, lading separating means comprising track means secured to the side walls adjacent to the upper edges thereof and extending longitudinally of the car, a carriage slidably mounted on the track means for movement longitudinally of the car thereon and extending transversely across the car, a door pivoted on the carriage on a vertical axis at the top and at the side edge of the door adjacent to a side wall of the car, an arcuate track on the carriage concentric with and spaced from said vertical axis, and supporting means carried by the top of the door spaced from said axis and slidably engaging the arcuate track and slidably supporting the top of the door on the track at a distance from the vertical axis for swinging about it.

3,005,420

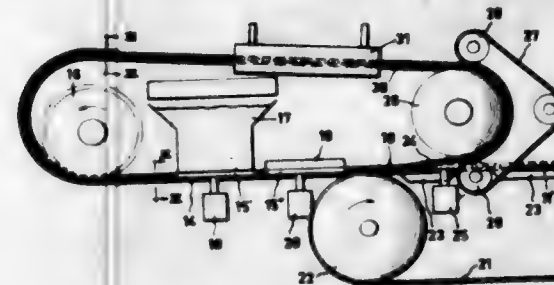
APPARATUS FOR MOULDING SUGAR CUBES

Olof Wiklund and Nils August Svante Wramstedt, Malmo, Ake Hans Gustaf Birch-Jensen, Arlov, and Gerhard Björk, Malmo, Sweden, assignors to Svenska Sockerfabriks Aktiebolaget, Malmo, Sweden, a corporation of Sweden

Filed Oct. 24, 1958, Ser. No. 769,500
Claims priority, application Sweden Nov. 1, 1957
22 Claims. (Cl. 107-8)

1. An apparatus for making moulded cubes of sugar from a moist composition of sugar crystals, comprising a plurality of successively arranged moulds each having mould recesses with a removal opening therein for permitting removal of a cube moulded therein, means for guiding the moulds in a closed path, conveying means for

moving the moulds in said path, means for filling a moist composition of sugar crystals into the moulds, said moulds being positioned in at least a part of said path with their removal openings facing downwardly, supporting means beneath said moulds in said part of said path and closing said removal openings in said part of said path, at least one vibrating supporting bar extending in the direction of movement of said moulds along said cube supporting means and having an upper surface, said surface being inclined with respect to the cube supporting surface of said cube supporting means and extending

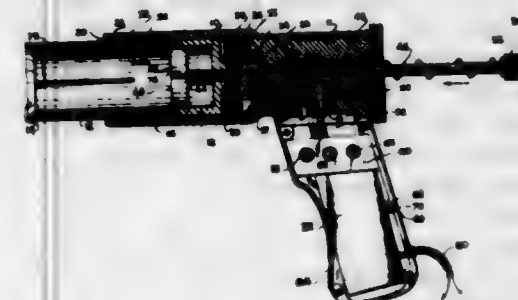


upwardly in the direction of movement of the moulds, each mould having at one end thereof and facing said cube supporting surface, a surface which has the same inclination as said upper surface of said vibrating supporting bar and is adapted to bear against said upper surface for vibrating the mould, and means for conveying the moulded cube away from beneath the vibrating support bar, whereby when the mould is vibrated, the cube moulded therein is caused to be removed and placed on the conveying means and conveyed away from beneath the moulds.

3,005,421

HIGH FREQUENCY ICE CREAM DISPENSER GUN DEVICE

Lawrence N. Lea, 1683 University Ave., Bronx, N.Y.
Filed Oct. 29, 1959, Ser. No. 849,522
4 Claims. (Cl. 107-48)



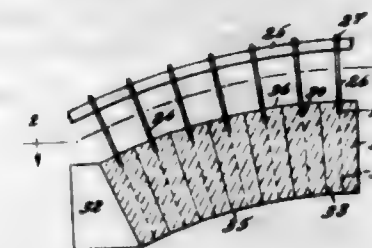
1. An implement for dispensing a frozen food product, comprising a tubular support having an open end, a cylindrical tubular cutting tool axially disposed in said support and movable through said open end, first electromechanical means for vibrating the tool to cut into a body of said frozen food product to form a cylindrical portion thereof in said tool, a plunger disposed and movable axially in said tool having a magnetic shaft operatively connected thereto for advancing the same to eject said portion of frozen food product from the tool, electromagnetic means for advancing the shaft and plunger, said support having a handle, switch means carried by said handle, said switch means being in circuit with said electromechanical means and said electromagnetic means for actuating the same, said electromechanical means including a pulsating circuit, said circuit comprising a generator of high frequency alternating current, a rectifier for converting said alternating current into unipolar periodically interrupted pulses, a coil receiving said pulses, and a magnetic member movable by said coil when the coil is pulsed; and spring means for retracting said magnetic member between said pulses, whereby said member is vibrated.

3,005,422

REFRACTORY ROOF

Russell Pearce Hewer, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania

Filed Nov. 28, 1958, Ser. No. 776,885
4 Claims. (Cl. 110-99)

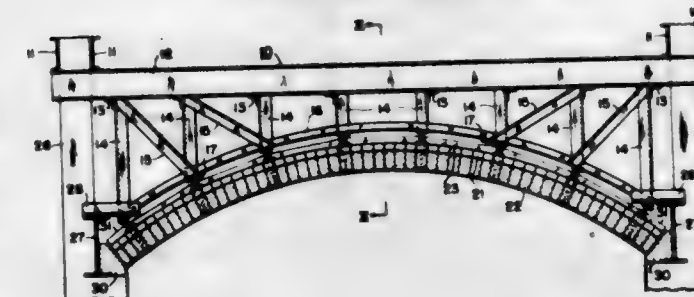


1. A refractory roof of curved arch form, comprising skewbacks in spaced relation, and between the skewbacks a plurality of tapered basic refractory roof brick each having two non-parallel radial sides, said brick being of the class consisting of magnesia and mixtures of chromite and magnesia containing at least 10 percent magnesia by weight, there being in each of the brick an oxidizable metallic internal plate in intimate contact with the refractory of the brick extending through the interior of the brick at a position remote from the outside of the brick in a radial plane over a major portion of the longitudinal and lateral dimension of the brick from a position adjacent the hot end, and there being in each radial joint between bricks in the direction of the load in the arch an oxidizable metallic continuous plate extending over a major portion of the longitudinal and lateral dimension of the brick, whereby on oxidation of the internal plates their resulting oxide diffuses into the brick leaving open spaces for thermal expansion where the internal plates were initially present and reacts with amounts of the magnesia present to form a magnesioferrite structure resistant to spalling, and the plates at the radial joints on oxidation produce oxide with positive dimensional increase.

3,005,423

RADIAL BASIC FURNACE ROOF

Levi S. Longenecker, 61 Mayfair Drive, Pittsburgh, Pa.
Filed Jan. 6, 1959, Ser. No. 785,284
11 Claims. (Cl. 110-99)



1. A furnace roof construction with comprises, an overhead framework provided with members defining a rigid holddown truss which spans the longitudinal extent of the roof, said framework having lower members in a spaced-apart relation therealong, a series of brick rows beneath said spaced-apart lower members in an arched relationship, each brick row extending longitudinally at right angles to said spaced-apart lower members, adjacent brick across said series of rows defining a ridge and valley relationship along said spaced-apart lower members, side plate members demountably embedded vertically along and between transversely adjacent brick of the brick rows and having notched end portions latch-engaging against vertical movement across between longitudinally-adjacent pairs of said spaced-apart lower mem-

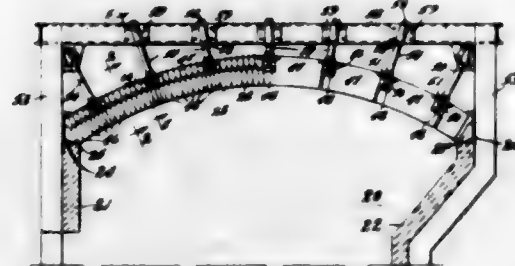
bers to suspend the brick rows therefrom, and the plate members along brick rows representing the ridges and valleys having side projections interlatching, therewith.

3,885,424

REFRACTORY ROOF CONSTRUCTION AND REFRACTORY BRICK

Russell Pearce Hesser, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania

Filed Feb. 19, 1959, Ser. No. 794,380
6 Claims. (Cl. 110-99)

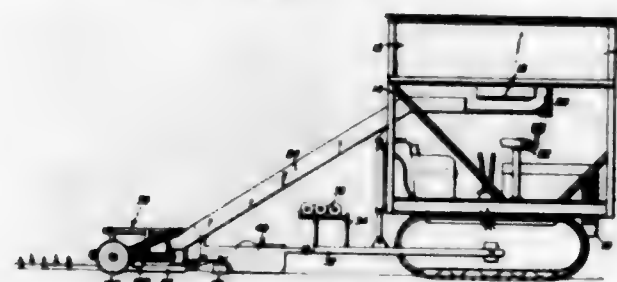


1. A refractory arch, spaced skewbacks, refractory brick extending between said skewbacks in arch form rows and supported at least partially on the skewbacks, an overhead supporting structure, beams supported from said overhead supporting structure and extending above said arch form rows in a longitudinal direction which is transverse to the rows of brick, said beams being substantially parallel and spaced from each other adjacent the cold ends of the brick, oxidizable metallic girder plates extending between rows of the arch brick in the direction from one skewback toward the other, and said plates extending from a position adjacent the hot ends of the brick and having portions extending out radially beyond the arch brick from the cold ends, substantially to a position beyond said beams, means for interconnecting said girder plates with the beams, hanger attachments extending beyond the cold ends of the brick, and hook hangers having hook portions extending over the girder plates beyond the arch form rows and having hook portions which engage the hanger attachments.

3,885,425

PINEAPPLE PLANTER

James F. Seifuku, 418 Kamele Road, Lanikai, Hawaii
Filed Sept. 13, 1957, Ser. No. 683,791
8 Claims. (Cl. 111-3)



1. A planter for setting pineapple plants, said planter comprising the combination of a plant feed chute having a discharge end, a frame, an endless conveyor carried by said frame, means connected to said conveyor for actuating said conveyor, a portion of said endless conveyor in registry with the discharge end of said plant feed chute, said endless conveyor having spaced fingers thereon which gather plants directly from said discharge end of said chute for movement by said conveyor, a guide connected to said frame and located adjacent to said portion of said conveyor and coacting with said portion of said conveyor to form a passageway within which the movement of the plants are constrained as they are propelled by said conveyor, said guide and conveyor having

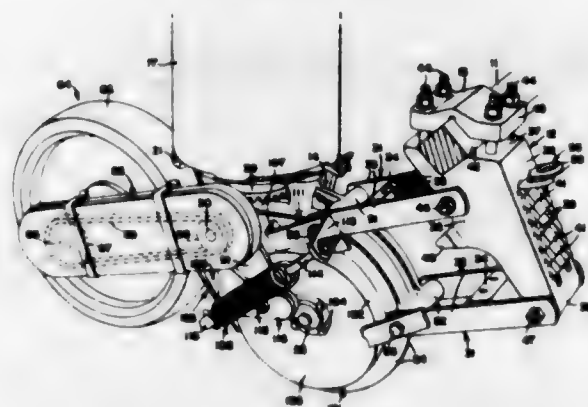
a plant discharge outlet from which the plants are adapted to drop, a moldboard attached to said frame and located alongside of said plant discharge outlet to form a backstop for the plants, and means for directing soil over the plants and against a portion of the moldboard.

3,885,426

PLANTERS

Knud B. Sorensen, Waterloo, Iowa, Arthur J. Bjorkan, Moline, Ill., and Leon F. Sanderson, Des Moines, Iowa, assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed May 2, 1958, Ser. No. 732,670
2 Claims. (Cl. 111-63)



1. An agricultural implement comprising a mobile support, a mounting bracket attached to said support, a furrow opener boot carrying a pair of disk furrow openers, material dispensing means carried by the furrow opener boot, parallel link means pivotally connected at their upper and forward ends with said bracket, a pair of generally vertically spaced transversely disposed pivot means connecting the lower rear ends of said parallel link means with said boot, whereby the latter is connected with said mounting bracket for generally free floating movement relative thereto, adjustable spring means connecting said boot with said bracket for applying a generally downwardly directed force to said furrow openers, a depth band fixed to each disk furrow opener so as to limit the depth of penetration of said furrow openers, a press wheel unit disposed in rear of said furrow openers and including a press wheel and wheel supporting arm means swingably connected with said furrow opener boot, means to drive said dispensing means from said press wheel, an extension on said press wheel unit, a biasing spring connected at one end with said extension, and means anchoring the other end of said spring with one of said transverse pivot means.

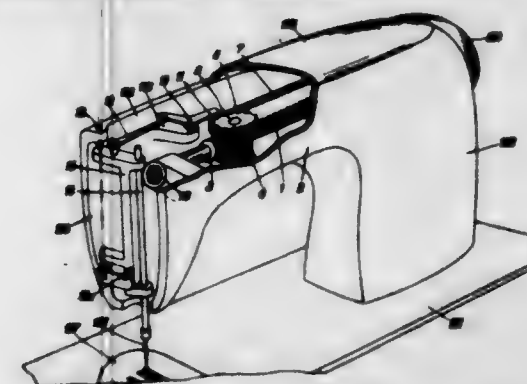
3,885,427

GUIDING MEANS FOR ZIG-ZAG SEWING MACHINE

Wolfgang Engel, Bielefeld, Germany, assignor to Anker-Phoenix Nähmaschinen AG., Bielefeld, Germany
Filed Feb. 29, 1956, Ser. No. 568,581
Claims priority, application Germany Mar. 2, 1955
3 Claims. (Cl. 112-158)

1. A zig-zag sewing machine of the type having a guiding means presenting cam surfaces operative to guide the movements of the needle bar, and including a control shaft disposed vertically in the arm of the machine adapted to drive said guiding means and operatively connected to the drive shaft of the machine, a drive gear disposed horizontally in the arm of the machine on said control shaft and having recesses, a cam follower mechanism in engagement with said cam surfaces, a needle bar oscillator and a needle bar mounted to respond to the movements of said cam follower, a flexible belt constituting said guiding cam means and having inwardly projecting conformations defining teeth engaging said recesses, said belt presenting

guiding cam surfaces of varying elevation determining the direction and magnitude of the lateral needle deflections, and a spring biased idler roller spaced from and disposed in parallel alignment with said drive gear and having recesses engaged by said teeth, said belt being of



the endless belt type and being disposed around said drive gear and said idler roller, said cam surfaces being defined in sections of said belt, said teeth being disposed endwise of said sections, and said belt being additionally provided with cam surfaces at least along one edge thereof.

3,885,428

SEWING MACHINE NEEDLE WITH COOLING CHARACTERISTICS

Herman Vom Lehn, Elizabeth, and Anthony J. Shest, Clark, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed June 24, 1958, Ser. No. 744,160
7 Claims. (Cl. 112-222)



1. A sewing machine needle comprising a long narrow solid blade portion having at least one thread receiving groove extending longitudinally thereof, and having a thread eye formed adjacent to one end of said blade; a needle point formed on the end of said blade nearest to said thread eye; a shank portion formed integrally with the end of said blade remote from said thread eye, said shank portion being adapted to be received by the needle clamp of a sewing machine, and said blade portion in addition being provided with a spiral groove.

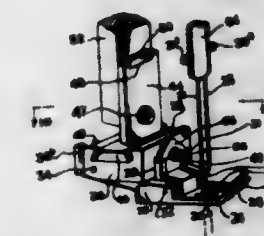
3,885,429

ADJUSTABLE PRESSER FOOT FOR SEWING MACHINES

Engene Wenchler, 288 Bel Air Drive, Manassas, N.Y.
Filed Apr. 14, 1960, Ser. No. 22,340
6 Claims. (Cl. 112-235)

1. A presser foot assembly for a sewing machine, comprising a block, a foot supported by the block, said foot having at least one slot therein for passing a sewing needle therethrough, a plate support for the block slid-

ably engaged therewith, said plate support having a beveled base, said block having a dovetail groove receiving said beveled base, and screw means inserted in the block for engaging the base and securing the block in a selected position with respect to the plate support so that said

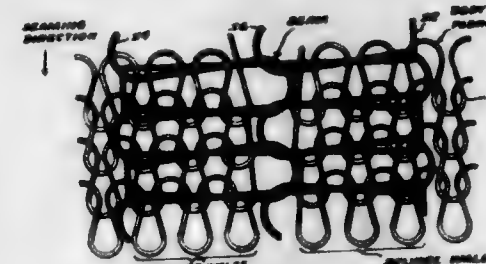


needle may pass through a selected point in said slot, said plate support being provided with means for securing the plate support to a stationary member of the sewing machine and means for guiding the plate support to position on the stationary member.

3,885,430

METHOD FOR FORMING A NON-BULKY SEAM IN LADIES' FULL-FASHIONED HOSIERY

Robert M. Matthews, Charlotte, N.C., and Roy E. Clark, Flowery Branch, Ga., assignors to Chadbourne Gotham, Inc., a corporation of North Carolina
Filed Dec. 23, 1957, Ser. No. 704,491
1 Claim. (Cl. 112-262)



A method of seaming knitted fabrics with a non-bulky seam that flattens when stretched, which method comprises feeding walewise selvage edges of fabric blanks for seaming along the wales while feeding to include in the seam 3 to 5 wales from each selvage edge of said blanks, seaming said walewise selvage edges with a seaming stitch chain formed by needle cast loops enchain with looper cast loops, while forming said stitches over a stitch finger of sufficient width to produce a seam of a width greater than the total width of the wales included in said seam so that the selvage edges are spaced apart upon stretching said fabric and the seaming stitches will lay substantially flat.

3,885,431

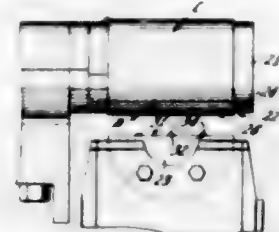
HYDRAULIC PRESS

Hugo Möller, Trollhättan, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Linköping, Sweden, a corporation of Sweden
Filed Nov. 7, 1956, Ser. No. 629,833
Claims priority, application Switzerland Nov. 10, 1955
1 Claim. (Cl. 113-44)

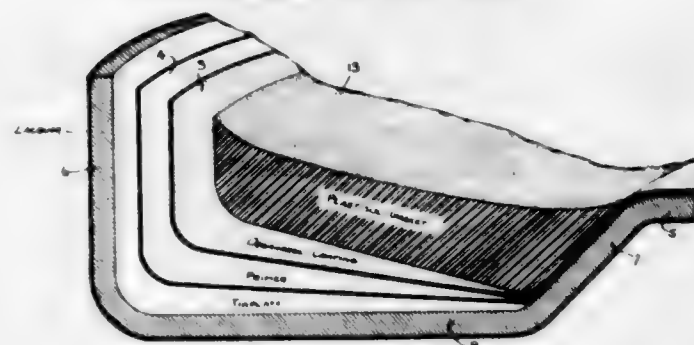
In a press for forming sheet metal: a fixed press bed; a press head mounted above the press bed between a lowered press-closed and raised press-open position; an annular tool holder on the press bed; a male forming tool supported on and projecting up from the press bed inside said annular tool holder, with the top thereof no higher than the top of the holder; a movable tool part vertically slidably fitted in said annular tool holder for movement between a raised position at which the top thereof is flush with the top of the annular tool holder to support a blank to be formed, to a depressed position inside the annular tool holder, said movable tool part being apertured to accommodate the stationary male forming tool; fluid pres-

sure means below the press bed to yieldingly support the movable tool part and resist depression thereof into the annular tool holder, said fluid pressure means including a plurality of pins vertically slidable through the press bed and bearing against the underside of the movable tool part; means on the press head defining a shallow downwardly opening cylindrical well coaxial with the annular tool holder and of a diameter no greater than that of the tool holder; an elastic membrane fixed to the head and extending across the mouth of the well to close the same; means in the head defining a vertical working cylinder above and spaced from the inner end of the well, and a coaxial bore substantially smaller in diameter than said working cylinder connecting the well and the working cylinder; a piston slidable up and down in the working cylinder; a plunger fixed to the underside of the piston and slidably fitted into the bore; the elastic membrane, the walls of the well and the lower end of the plunger providing a liquid-tight chamber; a liquid filling said chamber; means on the press to move the press head from its raised

and outer marginal hooks of a tubular can body in said side seam lock portion, bumping said interengaged hooks tightly together to complete said seam, and simultaneously with said bumping operation drawing radially inwardly the innermost layer of said seam immediately laterally ad-

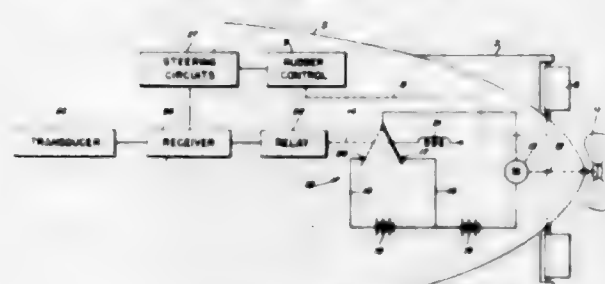


3,005,433
CLOSURE CAP AND METHOD OF MAKING SAME
William E. Risch, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Jan. 22, 1959, Ser. No. 788,447
1 Claim. (Cl. 113-121)



The method of making a closure cap which comprises coating one side of a sheet of tinplate with a thin coating of organosol having an easily evaporatable solvent therein, heating said sheet of tinplate to evaporate said solvent and cure said coating composition, fabricating said sheet of tinplate into at least a partially formed closure cap with said coating on the inside, flowing a plastisol gasket material into the inside of said closure in the shape of a ring to form a gasket, and heating said closure cap to cure said plastisol gasket and to fuse said plastisol gasket into said thin coating to form a securely bonded integral element.

3,005,434
TORPEDO CONTROL SYSTEM
Arthur F. Bennett, Berkeley Heights Township, Union County, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 14, 1953, Ser. No. 348,663
4 Claims. (Cl. 114-20)



1. In a self-propelled vehicle of the type equipped with an electric drive motor and means operative after launch-

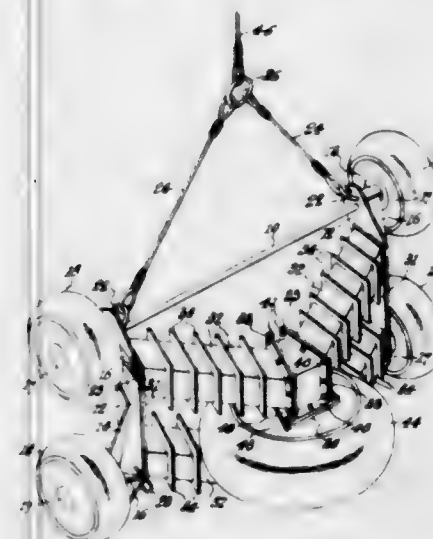
3,005,432
METHOD OF AND APPARATUS FOR VENTING SIDE SEAMS OF CAN BODIES
John J. Douders, Jr., Union, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed July 21, 1958, Ser. No. 749,700
4 Claims. (Cl. 113-120)

3. The method of forming the multiple layer lock portion of a lock and lap side seam on tubular can bodies, comprising the steps of loosely interengaging the inner

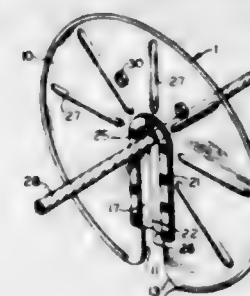
ing said vehicle for automatically steering said vehicle toward a target in response to detected acoustic wave energy coming from the target, said means including a transducer and receiver which converts said acoustic wave energy into an electric signal having an intensity varying with the strength of said acoustic wave, in combination therewith a first circuit connectible with the motor for reduced speed operation thereof, a second circuit connectible with the motor for full speed operation thereof, and means normally connecting said first circuit for said reduced speed operation and operative, in response to said electric signal when it exceeds a predetermined intensity, for disconnecting said first circuit and connecting said second circuit for full speed operation of said motor during the running of said vehicle.

3,005,435
FENDERING DEVICE FOR SHIPS
Charles D. Roach, 297 Richmond Road, Newport News, Va.
Filed June 24, 1960, Ser. No. 38,681
11 Claims. (Cl. 114-220)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A fendering device for protecting ships from harmful contact with an adjacent structure comprising a frame having a plurality of wheels thereon, said plurality of wheels having substantially parallel axes of rotation disposed in a common plane, an additional wheel connected to said frame and having an axis of rotation offset from said common plane and disposed at substantially right angles to said parallel axes, and means for suspending the frame and wheels thereon alongside a ship.

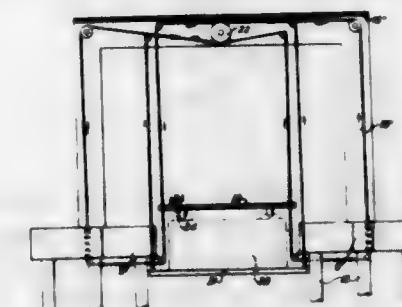
3,005,436
RAT GUARD FOR SHIP HAWSER
John R. Caldwell, 1747 Chestnut St., San Francisco, Calif.
Filed Jan. 12, 1959, Ser. No. 786,320
3 Claims. (Cl. 114-221)



1. A rat guard comprising a circular shield having a U-shaped opening formed therein; the closed end of said opening being semi-circular and concentric with the center

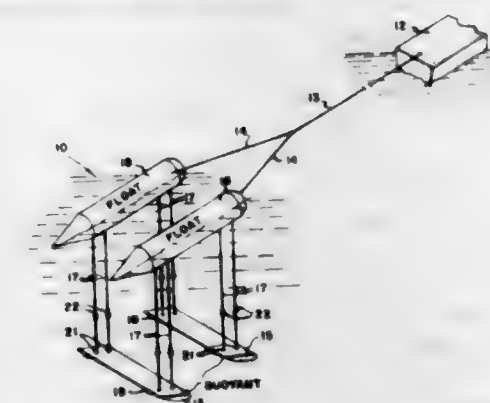
of the shield; a resilient member covering the U-shaped opening; said resilient member having a central opening therein concentric with the center of the shield, radial slits around said central opening forming gripping segments and a slit cut along the median line of said resilient member.

3,005,437
WHARF AND BERTHING SYSTEM
Agricol Jullien, Salin-de-Girand, France, assignor to Salicam, Compagnie Saliniere de la Camargue, Paris, France, a corporation of France
Filed June 24, 1959, Ser. No. 822,626
Claims priority, application France July 8, 1958
4 Claims. (Cl. 114-231)



1. Wharf and berthing system for boats comprising, in combination: a gangway structure having a shore end and a waterside end, said shore end pivotally attached to the shore, and said waterside end movably supported and recessed to receive the end of boat; means for displacing said waterside end for alignment with the level of the boat and means adjacent the waterside end of the gangway structure for grasping the end of the boat being berthed underneath the hull and above the deck, said grasping means comprising vise-like members, one of said members being pivotally mounted for movement in a vertical plane above the water, and the other said member is a beam submerged in the water, and means for operating said vise-like members to grasp the end of the boat adjacent the gangway structure.

3,005,438
RIGGING SYSTEM FOR FLOAT-SUPPORTED SUBMERGED BODIES
Thomas F. Muldowney, Panama City, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 2, 1960, Ser. No. 33,607
5 Claims. (Cl. 114-235)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. Means for supporting a water submerged body at a stabilized depth comprising a buoyant surface float, at least one depending elongated support member secured to said float and constrained to substantially vertical orientation, a buoyant body having a fairlead through which the distal portion of said support member is threaded, the buoyancy of said body being small compared to the resistance said body offers to vertical move-

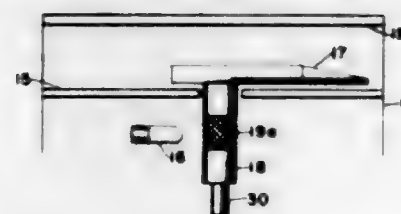
ment in the water, and a stop member carried by said support member above said distal portion at the desired depth of submergence for said body.

3,005,439

INDIRECTLY ILLUMINATED POINTER FOR INDICATING DEVICES

Warren H. Ellenwood, New York, and William A. Voehl, White Plains, N.Y., assignors to Avien, Inc., Woodside, N.Y.

Filed Apr. 20, 1959, Ser. No. 807,654
2 Claims. (Cl. 116—136.5)



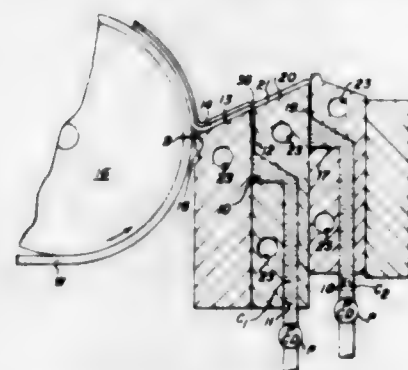
1. An illuminated pointer apparatus for an indicator comprising: a light source; a light conducting shaft having a multifaced knurl having facets lying in intersecting planes arranged to receive light from said light source; and a light conducting pointer member attached to said shaft, said pointer having a normally viewed surface adapted to be internally illuminated by light transmitted by said shaft to said pointer member.

3,005,440

MULTIPLE COATING APPARATUS

John F. Paddy, Harrow, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 8, 1959, Ser. No. 785,713
2 Claims. (Cl. 118—412)



1. A multiple-layer hopper for feeding a plurality of fluid coating compositions in superposed and distinct layer relationship to a point of deposition where they are simultaneously deposited onto the surface of a web moving relative thereto in such strata relationship, and comprising a block, a slide surface on said block inclined downwardly and terminating in a lip adjacent said point of deposition, a plurality of narrow distributing slots, one for each coating composition, extending through said block to said slide surface through which a thin layer of coating composition is adapted to be discharged onto said slide surface, the lowermost of said discharge slots spaced from said lip and the remaining distributing slots spaced above this lowest slot and from each other to provide an uninterrupted slide portion below each slot over which the layer of coating solution discharged therefrom flows by gravity to form a smooth layer of uniform thickness before, in the case of all but the lowest slot, it reaches the next lowest discharge slot and flows onto the top of, and along with, the layer of coating composition discharged therefrom, and, in the case of the lowest discharge slot, before it reaches the lip; the discharge end of at least one of said lowermost of said slots being wider

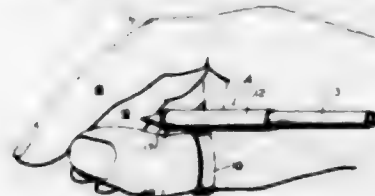
than the major portion of the slot and the enlargement in the slot being sudden and sufficiently great so as to produce a turbulence in the coating composition flowing through the wider portion of the slot and thereby heal any interruption of flow that may occur as the result of a blockage in the narrow portion of the slot.

3,005,441

THUMB MOUNTED PENCIL HOLDER

Hugh E. Glasscock, 3170 Greentree Way, San Jose, Calif.

Filed Aug. 17, 1959, Ser. No. 834,237
2 Claims. (Cl. 120—102)



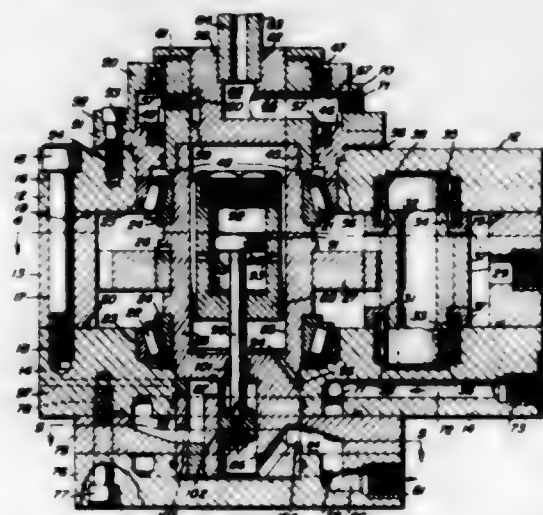
1. A retractable pencil comprising a ring adapted to fit snugly onto the thumb of a wearer, a pencil holding tube fixedly mounted on a side of said ring with its axis directed at a slight acute angle to the axis of said ring, so that when said ring is worn on a wearer's thumb, said pencil will be directed between the tip of the thumb and the index and second fingers of such wearer's hand with the thumb and fingers of such hand in a normal writing position, a pencil mounted for axial slidable movement in the tube, resilient means normally retracting the pencil into the tube, and an element on a side of the pencil for engagement by the index finger of such hand upon which said ring is mounted for axially extending the pencil into writing position.

3,005,442

DRILL HEAD ASSEMBLY

Roscoe T. McMillan, Huntington, W. Va., assignor to Acme Machinery Company, Huntington, W. Va., a corporation of West Virginia

Filed Jan. 19, 1961, Ser. No. 83,738
12 Claims. (Cl. 121—7)



1. A drill head assembly for a rock drill of the rotary percussion type comprising a housing, an elongated cylindrical member rotatably mounted in said housing, a drill carried at one end of said rotatable cylindrical member for rotation therewith, a hollow bore in said cylindrical member, a reciprocable member mounted for reciprocation in said hollow bore effective to deliver percussive blows to said drill, fluid actuated means in said housing for rotating said cylindrical member, passageways in the wall of said cylindrical member operative on rotation thereof to alternately admit and exhaust fluid to and from said hollow bore in said cylindrical member to effect reciprocation of said reciprocable member in timed relation to the rotation of said drill.

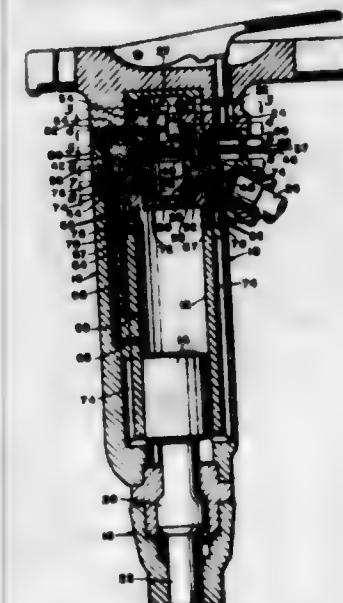
from said hollow bore in said cylindrical member to effect reciprocation of said reciprocable member in timed relation to the rotation of said drill.

3,005,443

ROCK DRILL

Loree A. D. Paulson, Phillipsburg, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 29, 1960, Ser. No. 11,539
8 Claims. (Cl. 121—25)



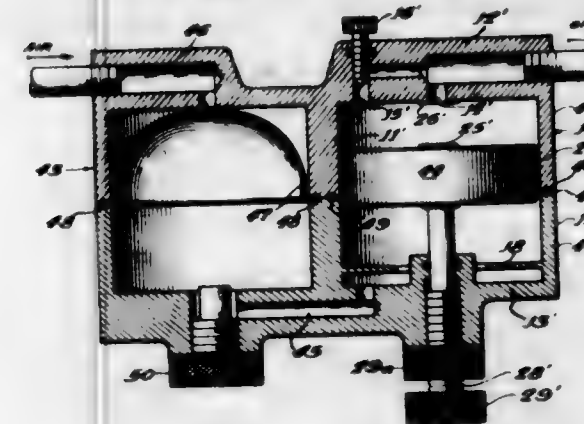
1. A pressure fluid actuated percussive type tool including a casing, a pressure fluid actuated piston reciprocable forwardly and rearwardly in said casing, a working implement positioned to be actuated by said piston, fluid distributing means to distribute fluid to the interior of the opposite end portions of said casing to reciprocate said piston, and means to control the distribution of fluid to move said piston rearwardly substantially slower than in the forward direction, and to momentarily delay the piston during its rearward stroke.

3,005,444

CONTROL MEANS FOR FLUID ACTUATED WORK CYLINDERS

James P. Stetzel, Racine, Wis., assignor to The Dumas Company, Racine, Wis., a corporation of Wisconsin

Filed July 27, 1959, Ser. No. 829,701
17 Claims. (Cl. 121—45)



1. Control means for a fluid actuated work cylinder comprising a closed control cylinder, an inlet at one end of said cylinder, a principal outlet at the other end of said cylinder, a by-pass outlet at said other end providing a restricted passageway, both of said outlets being adapted for connection with said work cylinder, a valve member disposed in said cylinder for closing said principal outlet, said valve member moving with a fluid contained

in said control cylinder toward the outlet end to close said principal outlet, means permitting the flow of fluid from the inlet side of said valve member through said by-pass outlet, whereby the fluid disposed within the control cylinder, upon application of fluid pressure at said inlet will be caused to flow into said work cylinder prior to the operation of said valve member at a given rate of flow through said principal outlet to cause the advance of said work cylinder, and whereby the rate of flow of fluid from said control cylinder into said work cylinder after the operation of said valve member will be at a lesser rate of flow to cause the feed of said work cylinder, and an adjustable stop member located in said control cylinder and adapted to be engaged by the inlet side of said valve member whereby the throw of said work cylinder under the condition of advance may be regulated.

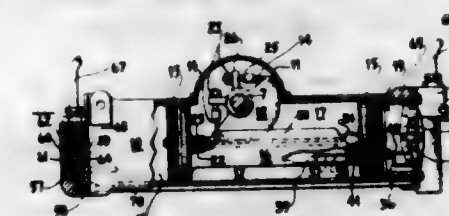
3,005,445

WINDSHIELD CLEANER MOTOR

William C. Riester, Buffalo, and Martin Bitzer, Kenmore, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.

Original application Sept. 26, 1955, Ser. No. 536,683, now Patent No. 2,889,818, dated June 9, 1959. Divided and this application Feb. 20, 1959, Ser. No. 799,832

3 Claims. (Cl. 121—164)



1. In an air motor for windshield cleaners, a body having a motor chamber, a piston in the chamber, a piston responsive valve mechanism operatively reversing the pressure differential on the piston and comprising a ported valve seat and a cooperating valve relatively movable to so reverse the pressure differential, and means operatively connecting the valve to the piston, said valve mechanism having two chamber ports opening into the chamber at opposite sides of the piston, one chamber port having an interposed parking valve normally closed to place said one chamber port in communication with said valve mechanism and operable to interrupt communication thereof with said valve mechanism, and a control valve operable selectively to alternately connect the valve mechanism and the parking valve to an operating pressure supply source, said parking valve when operative serving to connect the adjacent side of the chamber to the source in shunt relation to said valve mechanism.

3,005,446

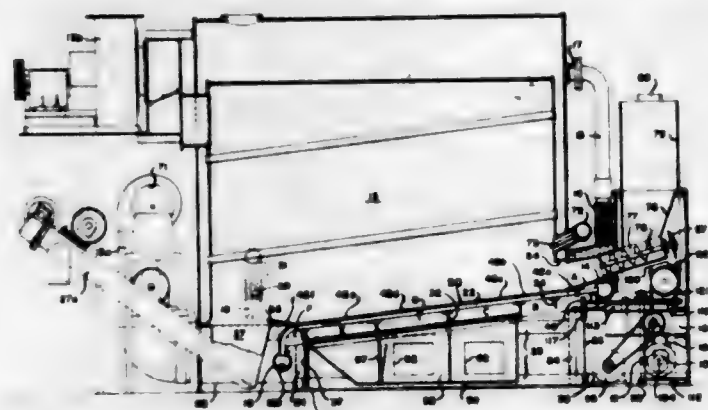
STOKER MECHANISM HAVING A PULSATORY GRATE

Paul O. Kock, Columbus, Ohio, assignor to Bituminous Coal Research, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed May 24, 1957, Ser. No. 661,376
5 Claims. (Cl. 122—376)

3. In a stoker unit, apparatus comprising, in combination, a cooled smooth unitary pulsatory grate, means to support said grate adjacent its ends only for pulsatory movement thereof, a plurality of cooling tubes in said grate, means for circulating coolant through said cooling tubes, a plurality of grate bars in side-by-side and end-to-end arrangement to provide a substantially continuous relatively smooth grate surface, said grate bars being generally shaped on the underside to fit against said cooling tubes, a preponderance of said grate bars being perforate to supply combustion air upwardly therethrough, a wind box supported by and below said grate to supply

said combustion air, said wind box having a transverse partition, a chute for fresh fuel having parallel longitudinally extending troughs in the bottom thereof, feed tubes at the forward ends of said troughs and overlying the grate bars across the entry end of said grate, transversely adjoining feed screws in said troughs extending into said feed tubes respectively, common means for driv-



ing all of said feed screws in a fuel feeding direction, breakable means for each feed screw respectively to transmit force to said feed screws from said common means, and smooth contour means operatively connected to said grate to drive said grate back and forth with a relatively short pulsatory substantially straight-line movement.

3,005,447

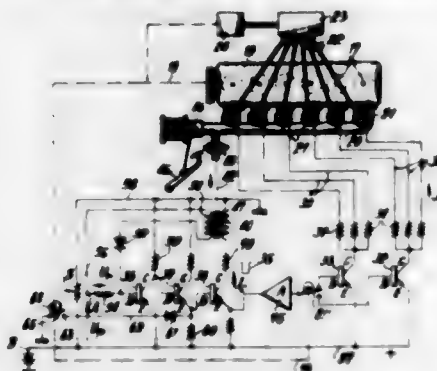
FUEL INJECTION ARRANGEMENT FOR INTERNAL COMBUSTION ENGINES

Günther Baumann and Heinrich Knapp, Stuttgart, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Oct. 5, 1960, Ser. No. 60,754

Claims priority, application Germany Oct. 7, 1959

14 Claims. (Cl. 123-119)



1. In a fuel injection arrangement for internal combustion engines having an air intake manifold and at least one electromagnetically actuable fuel injection valve, and including a source of electric energy, switching means responsive to electric pulses applied thereto and connected between said source and said valve for controlling the energization of the latter, and pulse generator means operable by the engine for producing electric output pulses in synchronism with the rotary speed of the engine; a regulating arrangement for varying the duration of energizing pulses applied through said switching means to the valve, comprising, in combination, first regulating means operatively connected with said air intake manifold and responsive to variations of a partial vacuum in said manifold, and conductively connected with said pulse generator means for subjecting the duration of the output pulses generated thereby to a first regulation in predetermined proportion to variations of said partial vacuum; and second regulating means cooperating with said first regulating means and connected with said pulse generator means and responsive to the frequency of said output pulses, for subjecting the duration of said energizing

pulses derived therefrom to a second regulation superposed on said first regulation and depending on varying speeds of the engine, whereby the duration of the pulses energizing the injection valve and therefore the fuel supply therethrough is automatically regulated depending upon degree of partial vacuum in the air intake manifold and upon the rotary speed of the engine.

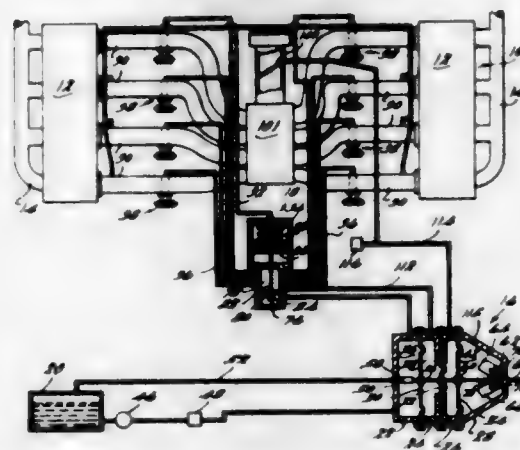
3,005,448

FUEL INJECTION SYSTEM

Thomas M. Ball, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Aug. 13, 1958, Ser. No. 754,766

11 Claims. (Cl. 123-119)



1. In a fuel injection system for an internal combustion engine having an intake manifold, said system having a fuel feed conduit for supplying fuel to said engine, a fuel injection nozzle adapted to be mounted in said manifold, said nozzle comprising a body having means thereon for receiving the fuel outlet end of said fuel feed conduit, fuel conduit means in said body operatively connecting said fuel outlet end to said manifold, adjustable air bleed means on said body communicating with the atmosphere and said fuel outlet end and operable to regulate the pressure drop across said fuel outlet end, and manifold pressure responsive means operatively connected to said air bleed means and said manifold to adjust said air bleed means according to manifold pressure.

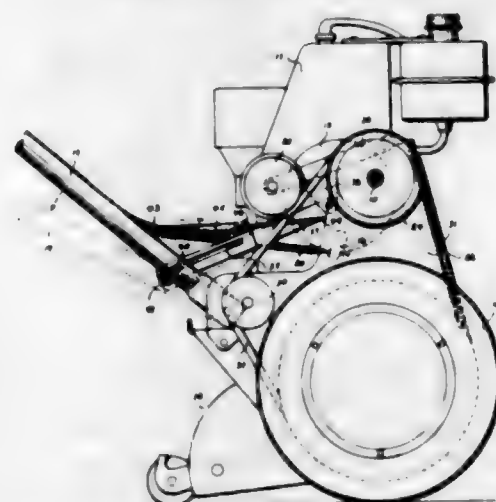
3,005,449

MEANS FOR STARTING INTERNAL COMBUSTION ENGINES

George I. Wood, Jr., and Floyd C. Egle, Des Moines, Iowa, assignors to Western Tool and Stamping Company, Des Moines, Iowa, a corporation of Iowa

Filed June 27, 1960, Ser. No. 38,960

5 Claims. (Cl. 123-179)



1. In combination, a chassis, at least one wheel supporting said chassis, an internal combustion engine on

said chassis having a wind-up spring starter; said starter having a wind-up shaft, a wheel secured to said first wheel, a wheel on said wind-up shaft of said starter, an endless member loosely embracing the wheel that is on said first wheel and the wheel on said wind-up shaft, and means for tightening said endless member on said two wheels whereby when said first wheel is rotating it will rotate said wind-up shaft.

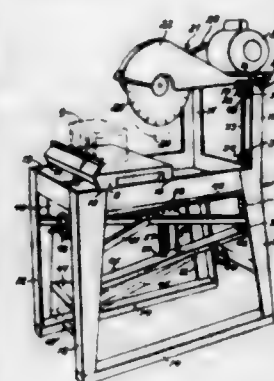
3,005,450

MASONRY SAW

Edward A. Zuzelo, 652 Broad Acres Road, Narberth, Pa.

Filed Sept. 4, 1959, Ser. No. 838,251

3 Claims. (Cl. 125-14)



3. In a masonry saw having a cutter assembly pivotally mounted and a tilt lever pivotally mounted below the cutter assembly, adjustable linkage interconnecting the tilt lever and the cutter assembly and comprising a sleeve pivotally attached to and upstanding from the tilt lever, a gearbox affixed to the upper end of the sleeve and rotatably mounting a gear threaded externally and bored and threaded internally, and a threaded arm adapted to fit within the bore of the gear and mesh therewith, the arm being connected to the cutter assembly and adapted, upon rotation of the gear in one direction, to be drawn into the sleeve and, upon rotation of the gear in the opposite direction, to be withdrawn from the sleeve, the sleeve being of length adapted to receive the maximum length of arm available, the gearbox also containing a second gear in mesh with the external threading of the first gear, the arm and sleeve, together with the gearbox and contents, being adapted to reciprocate upon pivoting of the tilt lever, thereby tilting the pivotally mounted cutter assembly, and a hand crank interconnected to the second gear and adapted to rotate it and thereby change the length of the arm received in the sleeve so as to alter the tilt of the cutter assembly at any given position of the tilt lever.

3,005,451

PORTABLE BARBECUE GRILL

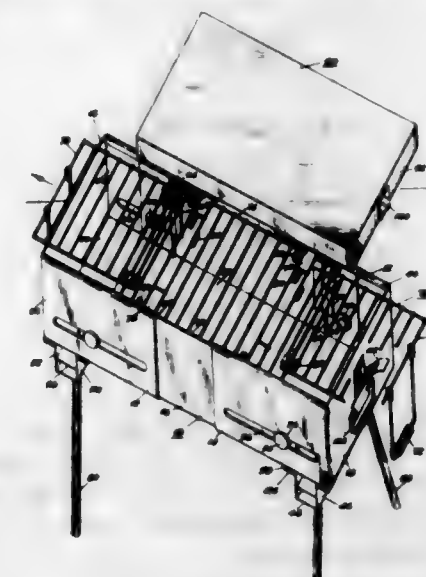
Lester L. Richart, 1433 E. Broadway, Tucson, Ariz.

Filed Jan. 26, 1959, Ser. No. 789,116

1 Claim. (Cl. 126-25)

A portable barbecue grill comprising an open-top fire-pan having end sections and a center section telescopically arranged, each section including sidewalls and a bottom wall, said end section closing on said center sections in such a manner that the size of said pan can be varied from a pan having an open-top corresponding in an area to the area of the bottom wall of said center section to a pan having an open-top corresponding in area to the collective area of the bottom wall of all sections, a channel rigidly affixed to said bottom wall adjacent each end thereof, a base member slidably mounted on each channel, a cooking rack having sections corresponding in size and number to the size and number of said sections, and support means supporting said rack in cooking position in said pan regardless of the degree of close-

ing of said end sections on said center section, said support means including vertically aligned pins affixed to the side walls of said center section, and hinge means connecting said rack sections together in such a manner



that said rack sections present a flat cooking surface corresponding in area to the area of the bottom of said center section when said rack sections are folded over on top of each other.

3,005,452

NASOLARYNGOSCOPE

Louis K. Pittman, 1749 Grand Concourse, Bronx, N.Y.

Filed Dec. 23, 1957, Ser. No. 704,722

14 Claims. (Cl. 128-11)



3. A nasolaryngoscope comprising an elongated viewing scope carrying a reflecting prism at one end thereof, a parallel elongated light-carrying means, and a sleeve, said light-carrying means and said viewing scope received within said sleeve and slidable therewithin relative to each other and relative to the sleeve, said sleeve member carrying a reflecting prism at one end thereof, corresponding to the prism carried by said viewing scope.

3,005,453

DEVICE FOR SUPPLYING A FREE DIVER WITH AIR BY MEANS OF A COMPRESSED-AIR BREATHING APPARATUS

Robert Wellenstels, Torringstrasse 10, Munich-Gernlinden, Germany, and Christian Rackerseder, Kreuzstrasse 18, Munich, Germany

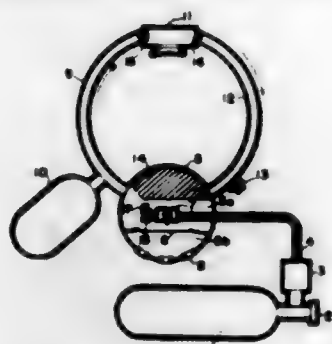
Filed Mar. 13, 1957, Ser. No. 645,847

Claims priority, application Germany Apr. 3, 1956

3 Claims. (Cl. 128-142)

1. In a subaqueous breathing apparatus, comprising a compressed-air supply tank, a pressure reduction valve connecting said supply tank with a low pressure line, a mouthpiece communicating with an intermittently operating inhaling valve regulating air flow through said low-pressure line and being controlled in response to the pressure in the lungs of the user and the surrounding water pressure, a variable volume storage means for low-pressure breathing air in communication with the mouthpiece adapted to receive and store a portion of the air exhaled by the user for reuse upon inhaling, a chemical absorption chamber interposed between said mouthpiece

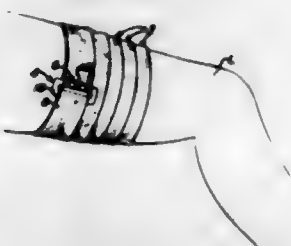
and said variable volume storage means during exhaling of the user, an exhalation valve communicating with said mouthpiece upon exhalation adapted to release exhaled air to the surrounding water upon attaining a predetermined



mined pressure within said variable volume storage means, and an adjustable valve in communication with said low-pressure line and said mouthpiece adapted to continuously supply the mouthpiece with air independently of said inhaling valve.

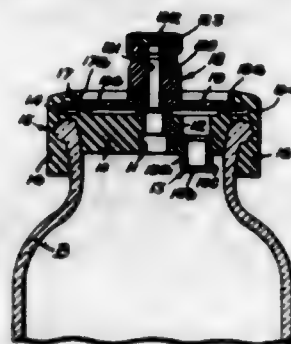
3,005,454 BANDAGES

William H. Bird, Bound Brook, N.J., assignor to Johnson and Johnson, a corporation of New Jersey
Filed Feb. 13, 1958, Ser. No. 715,063
2 Claims. (Cl. 128-171)



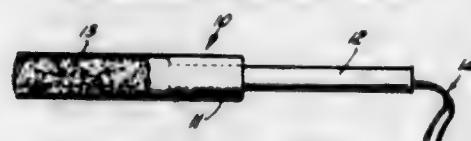
1. An article of manufacture comprising a strip of elastic bandage material adapted to be wrapped around the portion of a patient's body to be bandaged in a plurality of overlapping convolutions so that the inner end thereof will be held in place by succeeding convolutions, a first fastener component of a flexible material of sufficient flexibility to conform to the curvature of the underlying convolutions of said strip when wrapped around said body portion and having an opening therein receiving a portion of said strip intermediate the ends of said strip and being adjustable along the length of said strip so that it may be spaced from the outer end of the strip a distance substantially corresponding to the length of the outer convolution of the stretched strip, an outer portion of said first fastener component being disposed adjacent the outer face of the portion of said strip passing through said opening and an inner portion of said first fastener component being disposed adjacent the inner face of the portion of said strip passing through said opening, and a second fastener component fixed to the outer end portion of said strip and being adapted to cooperate with said outer portion of said first fastener component to separably connect said components together so as to secure the outer end portion of said elastic strip with respect to the remainder of said strip when said bandage has been wrapped on a patient, said first fastener component being readily movable along said strip when said bandage is in an unwrapped, extended state and held in position with respect to the remainder of said bandage through frictional engagement of said inner portion of said first fastener with adjacent convolutions of said strip when said bandage is wrapped in overlapping convolutions around a portion of a patient's body.

3,005,455
CONTAINER CLOSURE
Edward J. Poltras and Carl W. Walter, Holliston, Mass., assignors to Baxter Laboratories, Inc.
Filed June 24, 1955, Ser. No. 517,742
8 Claims. (Cl. 128-372)



1. A self-sealing closure for a container having an open mouth comprising in combination an elastic bushing adapted to plug the container mouth and having access and venting passages, valve means on said bushing and normally closing the venting passage, said valve means automatically operable to open said venting passage subject to differential pressure thereat, and a separable cap sealing the access passage and formed with a passage aligned with said access passage and closed by a puncturable diaphragm.

3,005,456
CATAMENIAL DEVICE
George Cooley Graham, Jr., Colonia, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Filed July 3, 1956, Ser. No. 595,716
13 Claims. (Cl. 128-285)



11. A catamenial tampon comprising an elongated mass of absorbent material adapted to be carried in the vagina of a woman during periods of menstrual discharge and means attached to said mass of absorbent material for removing said mass from the vagina, said absorbent material containing as an essential ingredient sodium carboxymethylcellulose which is fibrous in nature and substantially insoluble in water.

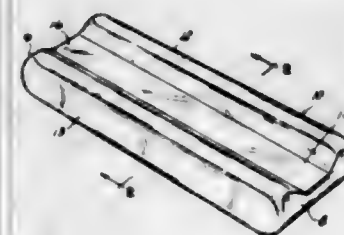
3,005,457
METHYL CELLULOSE SPONGE AND METHOD OF MAKING
Nathan Millman, Somerville, and Roger E. Homan, Neaham, N.J., assignors to Ortho Pharmaceutical Corporation, a corporation of New Jersey
No Drawing. Filed Apr. 1, 1957, Ser. No. 649,624
6 Claims. (Cl. 128-296)

2. A water permeable surgical sponge having a matrix essentially of methyl cellulose and characterized by substantially complete biological absorbability in a living animal body in between about 10 and about 60 days, and having a methoxyl content of from about 27.5 to 32.0%.

3,005,458
THERAPEUTIC MAGNET
Niles J. Brook and Louis P. Longo, Glastonbury, Conn., assignors to The Fargo Corporation, South Glastonbury, Conn., a corporation of Connecticut
Filed Dec. 29, 1958, Ser. No. 783,443
1 Claim. (Cl. 128-356)

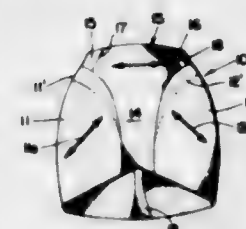
A therapeutic magnet for use in the treatment and prevention of hardware disease in animals, comprising

an elongated generally flattened bar of magnetic material dimensioned to fit within the reticulum of the animal and having its ends oppositely magnetized in a permanent manner, said bar being further dimensioned so that its width is approximately $\frac{1}{4}$ of its length and its thickness is approximately $\frac{1}{2}$ of its width, said bar having a first groove formed in the widest surface thereof and extending throughout its length from north to south pole, said first groove having a width occupying a major



portion of the bar surface and having a depth of approximately $\frac{1}{4}$ of its thickness, a second groove formed in the face of said magnet opposite to said first groove, said second groove being identical to the first groove so as to provide a bar having a generally H-shaped cross section that is symmetrical about the longitudinal axis thereof, each exposed corner of said bar being convexly outwardly rounded to minimize injury to the reticulum of the animal.

3,005,459
FOUNDATION GARMENT
Gladys W. Gelsmann, 2 Beekman Place, New York 22, N.Y.
Filed May 8, 1958, Ser. No. 733,973
12 Claims. (Cl. 128-528)



1. In a foundation garment, a downwardly-tapering front panel, a downwardly-tapering rear panel, said front and rear panels diverging symmetrically upwardly to meet and define arches at the upper sides of the garment, the opposing edges of the front and back panels defining continuous curvatures from points adjacent the lower edges of the front panel to the lower edges of the back panel, and a pair of side panels formed of relatively elastic material having components of resilience in both horizontal and vertical directions disposed respectively within said continuously curving edges, said front and rear panels, including the arches defined thereby, being formed of material having relatively stronger elasticity than the side panels, the front and rear panels and the arches formed thereby establishing a framework for supporting the side panels.

3,005,460
FOUNDATION GARMENT
Mario Laguzzi, New York, N.Y., assignor to Poirette Corsets, Inc., New York, N.Y.
Filed Jan. 4, 1960, Ser. No. 413
4 Claims. (Cl. 128-554)

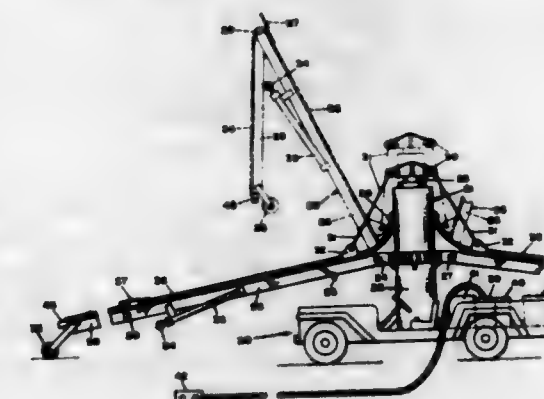
1. In a foundation garment, the combination of front and rear panels, and elastic side panels secured between said front and rear panels, said side panels comprising upper and lower portions with confronting edges, said upper and lower portions having wales normally extending

in a vertical direction to provide one-way stretch, the confronting edges of said upper and lower portions being disposed in angular relation to the vertical axis of the garment and elongated strip inserts secured along the confronting edges of said upper and lower portions adjacent their juncture, said inserts overlying the adjacent portions



of said upper and lower portions, said inserts being comprised of the same elastic material as said elastic panels and having similar wales, the wales of said inserts extending in angular relation to the wales of said upper and lower portions to provide reinforcement having one-way stretch in a different direction from the one-way stretch of said upper and lower portions.

3,005,461
APPARATUS FOR COVERING A PLAYING FIELD
Ray Arganbright, 1462 Wyandotte Road, Columbus, Ohio
Filed Oct. 30, 1958, Ser. No. 770,685
7 Claims. (Cl. 135-5)

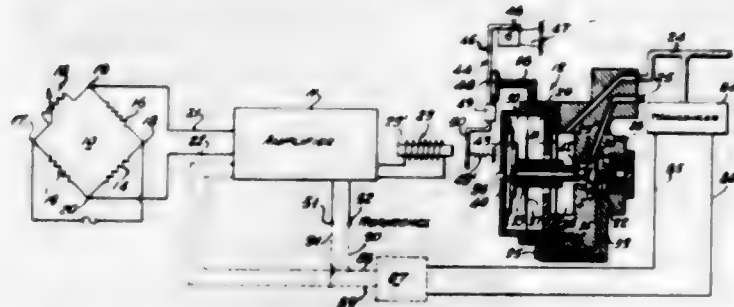


1. A field covering apparatus movable onto and off of a field for covering and protecting said field from weather elements, said apparatus comprising a vehicle; a plurality of extensible booms carried by said vehicle, said booms being provided with ground engaging means adjacent their outer ends; power operated means constructed and arranged to extend and retract said booms, and a field covering means carried by said booms and being extended and retracted thereby to cover and uncover said field.

3,005,462
CONTROL SYSTEM AND METHOD OF OPERATION
Leon Hillman, Englewood, N.J., and Richard A. Boltz, Yonkers, N.Y., assignors to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 29, 1959, Ser. No. 789,877
7 Claims. (Cl. 137-45)

1. A fluid control device comprising an amplifier for amplifying a control voltage variable relative to a predetermined value, an independent source of reference voltage interconnected with said amplifier to modify said amplified control voltage for adjustably relocating the

range of variations of magnitude of the amplified control voltage uniformly relative to a predetermined reference



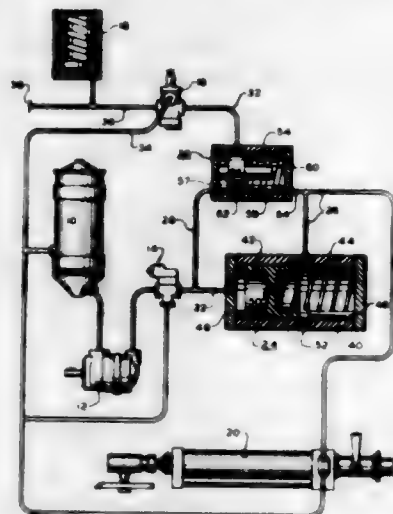
and electromagnetic fluid valve control means actuated by said amplified control voltage.

3,005,463

POWER TRANSMISSION

Theodore Van Meter, Birmingham, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan

Filed July 24, 1957, Ser. No. 673,834
3 Claims. (Cl. 137-117)



1. In a hydraulic power transmission for controlling the division of flow from a single source, the combination of: primary and secondary circuits; a first delivery conduit leading to said primary circuit and a second delivery conduit leading to said secondary circuit, said conduits having a point of common communication with said source; an orifice in said first conduit; and a pair of separately shiftable valves for regulating the flow between said circuits comprising, a first flow control valve in said first conduit having means to normally bias said valve to an open position and having opposed areas connected respectively to points upstream and downstream of said orifice so as to be shiftable in response to a predetermined pressure drop across said orifice to restrict said first conduit, and a second flow control valve in said second conduit having means to normally bias said second valve to a closed position and having opposed areas connected respectively to points in said first conduit upstream and downstream of said first valve so as to be shiftable in response to the pressure drop created by the shifting of said first valve, thereby opening said second conduit only after said first valve has shifted to restrict said first conduit.

3,005,464

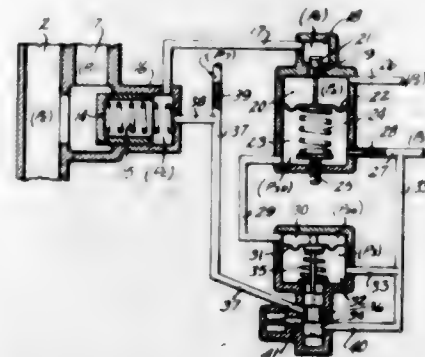
METERING HEAD CONTROL DEVICES

John W. Huckins, Wethersfield, Conn., assignor to Chandler-Evans Corporation, West Hartford, Conn., a corporation of Delaware

Filed Aug. 21, 1959, Ser. No. 835,235
10 Claims. (Cl. 137-117)

1. In an afterburner fuel control having a fuel metering valve and a fuel by-pass valve; a pressure drop regu-

lating mechanism, operatively connected to said metering and by-pass valves, for regulating the pressure drop across said metering valve, comprising: a main pressure-sensing diaphragm for causing the actuation of said by-pass valve, said diaphragm being subject, when there is no extraneous fuel leakage therethrough, to a fuel pressure differential equal to the fuel pressure drop ($P_1 - P_2$) across said metering valve, whereby said pressure drop is



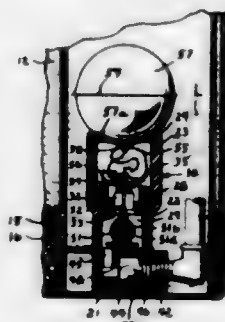
maintained at a preselected constant value; and first means, operatively connected to said diaphragm and said by-pass valve, for moving said by-pass valve in a direction to reduce said pressure drop, whenever extraneous fuel leakage through said diaphragm reduces the fuel pressure differential acting thereon to a preselected value below the value of said pressure drop when there is no leakage through said diaphragm.

3,005,465

FLOAT VALVE

Robert A. Whitlock and Hjalmer H. Anderson, Rockford, Ill., assignors to Aqua Matic Inc., Rockford, Ill., a corporation of Illinois

Filed Aug. 28, 1959, Ser. No. 836,643
7 Claims. (Cl. 137-391)



1. A float valve of the type adapted to be submerged in a liquid container comprising, a casing defining an internal chamber, said casing having a first passage leading downwardly into said chamber to provide communication between said chamber and the container and a second passage arranged for connection to a conduit, means defining upper and lower valve seats in said first passage, a lower valve member in said chamber cooperable with said lower seat and operative when raised to block the egress of liquid from said chamber through said first passage, float means having an upper valve member movable therewith and adapted to seat on said upper valve seat when said float means is lowered to block the ingress of liquid to the chamber, a stem attached to said lower valve member and extending upwardly through said lower seat, a flexible connector attached to said stem and to said upper valve member, said first passage defining a compartment between said upper and lower valve seats for receiving said connector when the float is in its lowered position, and means in said casing defining a partition between said lower seat and said compartment, said partition having a guide passage therein aligned with said lower seat for guiding

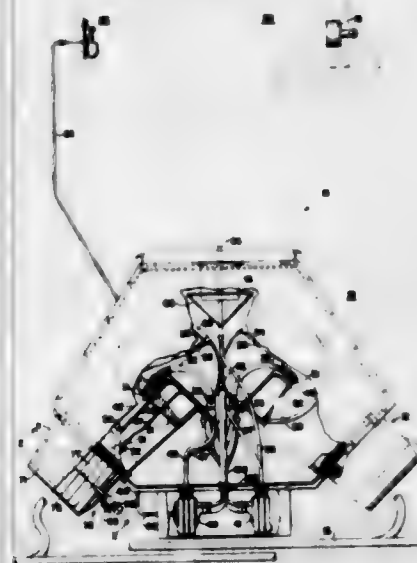
said stem and for supporting the flexible connector when the float is in its lowered position, said partition having flow passage means separate from said guide passage for passing fluid between said compartment and said lower seat.

3,005,466

SELF-CONTAINED VALVE

Joseph F. Chinlund, Northbrook, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed May 9, 1957, Ser. No. 658,127
6 Claims. (Cl. 137-486)



1. In an air conditioning system, a duct structure for carrying air conditioning medium, flow controlling means positioned in said duct structure to vary the flow of said air conditioning medium therethrough, regulator means for controlling said flow controlling means in said duct structure, a flow sensor in said duct structure upstream of said flow control means and comprising a first tube having a plurality of static pressure orifices and a second tube having a plurality of impact pressure orifices, means connecting said impact and said static pressure tubes of said flow sensor to said regulator means to operate said flow controlling means, and a variable orifice means positioned in said duct structure upstream of said flow sensor and adjustable to vary the orifice such that the flow of air conditioning medium therefrom impinges on said flow sensor in all adjusted positions and is varied in velocity with adjustment of said orifice means.

3,005,467

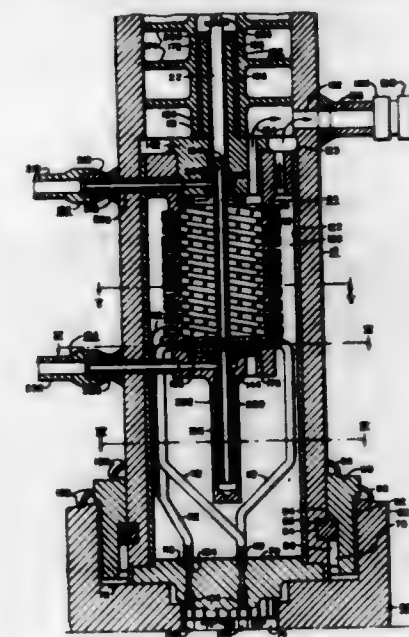
MULTI-PORT VALVE

Bernard P. Suchozn and James K. Perhacs, Munhall, Pa., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 24, 1958, Ser. No. 710,944
7 Claims. (Cl. 137-625.11)

1. In a multi-port valve, the combination comprising a cylindrical housing, a hollow cylindrical casing member mounted within said housing and having a plurality of inlet ports formed in the side wall thereof, conduit means for coupling said ports to a like number of fluid sources disposed exteriorly of said housing, a port selecting member threadably engaging the inner side wall of said casing and having at least one flow passage adapted to communicate at one end thereof with said inlet ports, means for rotating said port selecting member, said rotation producing simultaneous axial movement of the port selecting member by said threaded engagement to positions of communication of said flow passage with individual ones of said ports, a tubular extension coaxial with and secured to said casing member, an elongated tubular member se-

cured at one end to said port selecting member with the interior of the tubular member communicating with said flow passage, said tubular member loosely telescoping within said tubular extension and having its interior communicating with the annular space formed between said



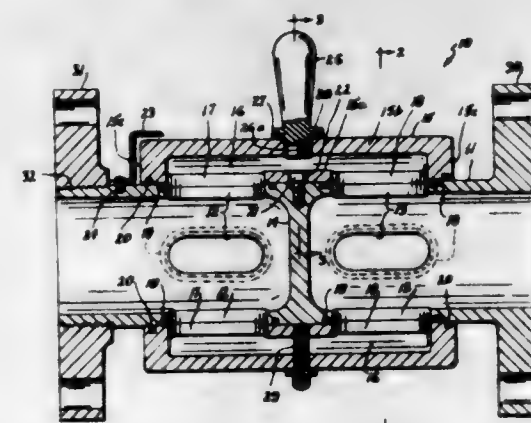
tubular member said tubular extension, and an outlet port located on said housing and communicating with said annular space, and seal means in the end of the casing between the telescoping members sealing the interior of the casing from said annular space.

3,005,468

ROTARY SLEEVE VALVES

Robert L. Erwin, P.O. Box 43, and Eldon E. Hulsey, P.O. Box 999, both of Durango, Colo.; said Erwin assignor of one-fourth to said Hulsey

Filed Aug. 13, 1958, Ser. No. 754,860
7 Claims. (Cl. 137-625.31)



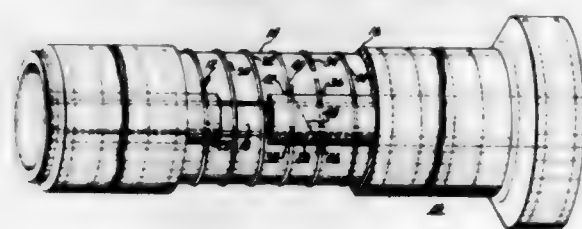
1. In a rotary sleeve valve, the combination of a tubular valve body provided with circumferentially spaced pairs of longitudinally spaced valve ports, a transverse partition provided in said valve body between the ports in each pair, a cylindrical sleeve rotatably positioned on said body and including spaced inner and outer walls defining an annular passage therebetween surrounding the body, the inner wall of said sleeve being provided with circumferentially spaced pairs of longitudinally spaced port openings in communication with said passage and registrable with the respective valve ports when the sleeve is rotated to a predetermined position relative to said body, the outer wall of said sleeve being formed with a screw-threaded opening, a threaded handle for rotating said sleeve removably mounted in said screw-threaded opening, and means concealed within said sleeve for limiting the extent of rotation thereof and preventing

longitudinal movement thereof relative to said body, said means comprising a stop element projecting radially outwardly from said body, the inner wall of said sleeve being provided with a slot extending partly around its circumference, said stop element being disposed in said slot and engageable with the ends of the latter, said handle being so positioned on said sleeve that removal of the handle permits access to the stop element through said screw-threaded opening.

3,005,469

PRESTRESSED PIPE

James T. Kenney, Arcadia, Calif., assignor, by mesne assignments, to Idevel Corp., Pasadena, Calif., a corporation of California
Filed July 7, 1958, Ser. No. 746,944
3 Claims. (Cl. 138—176)

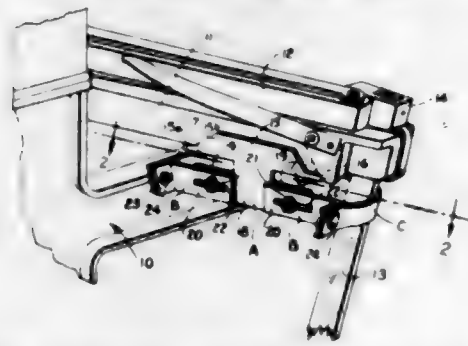


1. A concrete structure including a hollow concrete liner, a continuous metal strip under tension wrapped around the liner and extending from end to end of the liner, the liner having a groove extending lengthwise thereof and transversely of the wrapping strip, a cement material disposed in the groove and engulfing the metal strip along a narrow band where the turns of wire bridge the groove, the cement material having a bonding strength to the metal which is greater than the tension in the metal strip whereby successive turns of the metal strip are locked to each other to prevent loss of tension with a break in any turn of the metal strip.

3,005,470

CHECKING DEVICE FOR A LOOM

Otis L. Carter, P.O. Box 2206, Greenville, S.C.
Filed Nov. 5, 1956, Ser. No. 620,429
1 Claim. (Cl. 139—165)

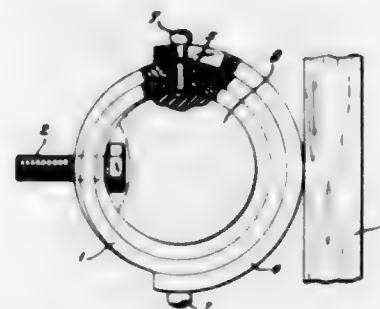


A shuttle checking assembly carried by the lay of a loom having a picker stick, and including, a bracket having fixed connection with the lay, at least one longitudinally projecting extension fixedly carried by said bracket below the lay and aligned therewith, a transverse element having fixed connection with said extension adjacent the end thereof projecting rearwardly transversely with respect to said extension and being disposed in substantial transverse alignment with the picker stick when in its ultimate rearward position immediately after receiving a shuttle, means providing for the longitudinal adjustment of said transversely rearwardly projecting element, a check strap, and means attaching one end of said check strap to said transversely rearwardly projecting element, so that the strap extends laterally along said transversely rearwardly projecting element and in alignment with said picker stick when in its ultimate rearward position.

3,005,471

BUFFER FOR POWER LOOMS

Franz Gottfried Reuter and Heinrich Nagenborg Jun, Lemförde, Hannover, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Feb. 19, 1958, Ser. No. 716,062
Claims priority, application Germany Feb. 21, 1957
6 Claims. (Cl. 139—166)

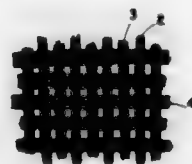


1. A buffer for a power loom having a tubular leather body, a foam core compressed within the cavity of said tubular body and substantially non-porous polyurethane discs secured to each end of said core.

3,005,472

WOVEN FABRIC

Robert Allen Kasey, Jr., Everett Harris Rinker, Jr., and Vernal Hardy Schewerman, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,044
3 Claims. (Cl. 139—426)



1. A woven fabric of improved covering power to transmitted light, durability to repeated laundering and uniformity of appearance, having a warp consisting of alternate ends of bulked and unbulkied twisted continuous synthetic organic filament yarns and a filling consisting of unbulkied substantially untwisted continuous synthetic organic filament yarn, said bulked warp yarn being of a denier 5% to 10% greater than the denier of the unbulkied yarn from which it is prepared.

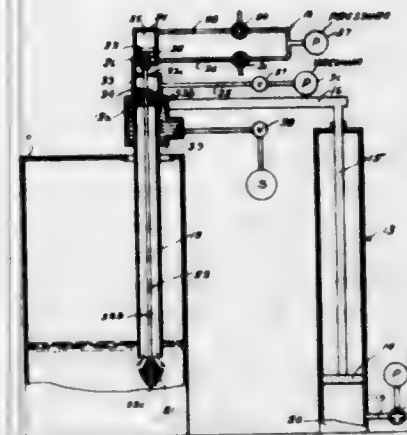
3,005,473

LIQUID FILLING DEVICE

Robert G. Ring, Whitehaven, Tenn., assignor to Chapman Chemical Company, Memphis, Tenn., a corporation of Illinois
Filed Jan. 20, 1959, Ser. No. 788,015
9 Claims. (Cl. 141—86)

1. A filling device for introducing liquid into a container, comprising an elongated vertically positioned filling tube, a foot valve affixed to the lower end of the tube, means for vertically lowering and raising said filling tube, means for opening and closing the foot valve, whereby liquid flowing through the tube while in its lowered position may be introduced into a container at a point beneath the liquid level in the container, an overflow reservoir at the upper end of the tube with the tube opening into the reservoir spaced from the bottom thereof for maintaining a liquid level in the reservoir and overflowing liquid into said tube, a source of liquid communicating with said reservoir below the level therein, conduit

means having an opening leading into the interior of the tube and having an opening at the bottom surface of the foot valve, and means communicating with said conduit

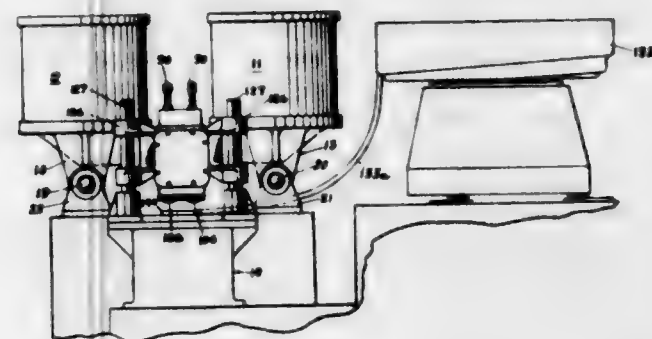


means via said tube for applying vacuum to said conduit means while the tube is in raised position, whereby drip-page of liquid from said foot valve is avoided.

3,005,474

DUAL TANK LAMP BASE FILLER

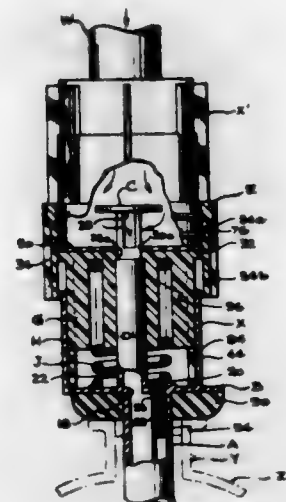
Chester O. Merchant, Harborcreek Township, Erie County, Pa., assignor to Swanson-Erie Corporation, a corporation of Pennsylvania
Filed July 21, 1958, Ser. No. 749,900
5 Claims. (Cl. 141—104)



1. A machine for dispensing material in a semi-fluid state comprising a machine support, a hollow head spaced laterally from said machine support, a pair of spaced, vertically extending column members supported on said support, means on said head receiving said column members for up and down movement thereon, valve means on said head, means for supporting receivers to receive said material from said head under said valve means, said valve means comprising a valve sleeve movable in said head when said head is moved down, a valve head disposed in said sleeve, a valve rod attached to said valve head, an air piston on said valve rod, a cylinder, said piston being slidable in said cylinder, air means connected to said cylinder to move said piston to open and close said valve head whereby a ring of said material is dispensed in one said receiver each time said piston opens said valve head, two tanks, spaced track members supported on said support, said tanks being slidably supported on said track members, a flexible hose, said hose connecting said tanks to said hollow head and allowing said head to move relative to said tanks, and a selector valve, said selector valve being disposed between said tanks and said hose and selectively connecting each said tank to said hose and said head, and air pressure means to apply air pressure to cement in said tanks to force said semi-fluid material through said hose into said valve head and out said valve means.

3,005,475
COMBINED LIQUID DISPENSING AND AIR VENTING APPARATUS

Richard W. Beall, Jr., 834 20th St., Hermosa Beach, Calif.
Filed June 13, 1960, Ser. No. 35,556
17 Claims. (Cl. 141—198)



1. A dispenser for use in discharging liquid under pressure to a predetermined level into a closed receptacle having a liquid discharge opening formed therein and concurrently venting said receptacle, comprising: a valve body that includes a first plate having an opening formed therein, a cylindrical shell which at least extends upwardly from the periphery of said plate and is affixed thereto, and a tubular sleeve extending downwardly from said plate and in communication with said opening; a second plate having a liquid discharge opening and an air discharge opening formed therein; a valve member of greater cross-sectional area than that of said opening in said first plate; a tubular valve member support extending upwardly from said second plate and in communication with said liquid discharge opening, said support being slidably and sealingly disposed in said sleeve, which support has said valve member rigidly affixed to the upper end thereof, with at least one port formed in the upper portion thereof; first means which tend at all times to move said second plate away from said first plate for disposing said valve member in a liquid-sealing position relative to said first plate; an internally and longitudinally positioned tubular member that defines a liquid discharge passage and an air discharge passage, said tubular member depending from said second plate, with said liquid and air passages being in communication with said liquid discharge and air discharge openings respectively; second means adjacent said second plate for effecting an air-tight seal with said discharge opening in said receptacle when brought into pressure contact with the portion of said receptacle surrounding said opening; third means in said air discharge passage that permit upward flow of air therethrough but seal said air discharge opening when liquid discharges upwardly in said air discharge passage; and fourth means that removably engage said shell for discharging liquid under pressure therein when said partitioned member extends downwardly into said receptacle and said valve member has been moved downwardly relative to said second plate to expose said port to said liquid, with said liquid continuing to discharge into said receptacle when said valve body is so disposed until the liquid level in said receptacle rises to said predetermined level to cover the lower end of said partitioned member, whereupon said liquid discharges upwardly in said air discharge passage to actuate said third means and flow from said liquid discharge passage ceases.

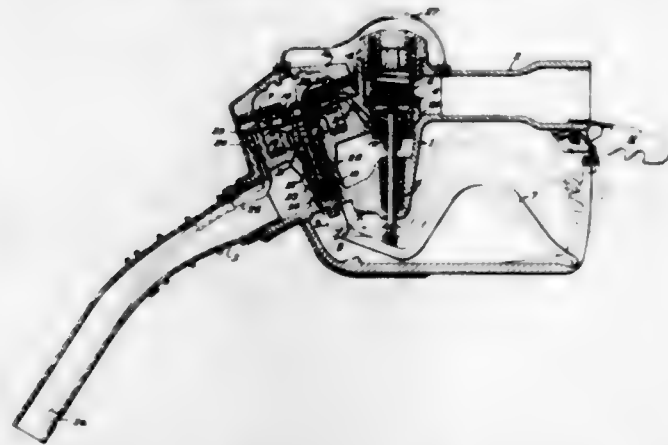
3,005,476

AUTOMATIC SAFETY NOZZLE

Richard M. Klass, Cincinnati, Ohio, assignor, by mesne assignments, to Dover Corporation, a corporation of Delaware

Filed Mar. 11, 1960, Ser. No. 14,323

9 Claims. (Cl. 141—225)



1. An automatic dispensing nozzle comprising a hollow body having an inlet means, a valve, manual operating means for opening said valve, means for latching said operating means in the valve-open position, and release means acting on said operating means to permit closure of the said valve, a chamber on said body, a pair of diaphragms in spaced concentric relationship in said chamber, a common connection between both of said diaphragms and said release means, means for producing a vacuum between said diaphragms whereby, due to the action of a sensing means, one of said diaphragms having a side open to atmospheric pressure may be moved to actuate said release means against the resistance of the second diaphragm, and means in connection with the inlet means of said nozzle for imposing upon the second of said diaphragms the pressure of fluid ahead of said nozzle, whereby failure or substantial diminution of said pressure will actuate said second diaphragm to operate said release means.

3,005,477

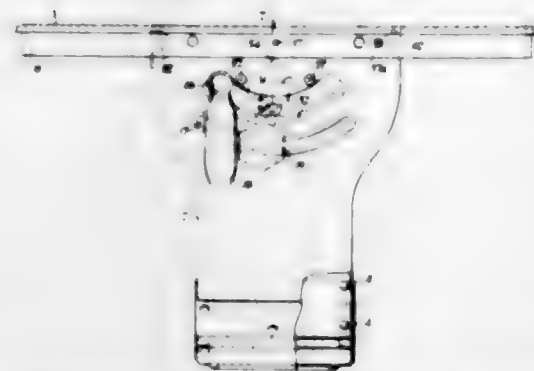
ROTARY TOOL WOOD WORKING MACHINES

Theo Sherwen, Mincinhampton, England, assignor to Horstmann & Sherwen Limited, Leamfield, Corsham, Wiltshire, England, a British company

Filed Dec. 3, 1958, Ser. No. 777,892

Claims priority, application Great Britain Dec. 23, 1957

2 Claims. (Cl. 143—47)



1. A woodworking machine comprising a main frame having opposed arms upstanding from a turntable base adapted for releasable clamping against a support surface on a pivot axis normal to said surface, a slotted work table carried by said arms, a slideway also carried by said arms beneath and substantially parallel to the plane of said work table, carriage means on said slideway for supporting a rotary tool with a working part thereof projecting through said slot, driving means on said carriage

for rotating said tool, said slideway being constituted by an oblong sub-frame having upper and lower frame members extending parallel to each other and to the plane of the work table and side arms which extend transversely to the aforesaid upper and lower members, said side arms having arcuate outer projections thereon and the main frame arms having arcuate inner face grooves in which said projections are slidably engaged to support said sub-frame for angular adjustment about a longitudinal axis which is centered both horizontally and vertically in said table slot, said lower sub-frame member being hollow and a clamping bolt extending therethrough and, at opposite ends, through registering arcuate slots in the respective main frame arms, said bolt being operable from one end of the machine to clamp said sub-frame in a desired position of angular adjustment.

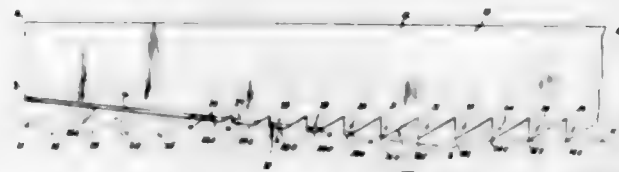
3,005,478

CUTTING IMPLEMENT

Don Laviano, 119 Washington Place, New York, N.Y.

Filed Oct. 9, 1958, Ser. No. 766,277

5 Claims. (Cl. 143—133)



1. An improved saw comprising a blade body having two substantially planar sides, a starting end, a trailing end, and a cutting edge extending from said starting end toward said trailing end, the portion of said cutting edge contiguous to said starting end being formed to provide a smooth knife-edge, and an adjoining portion of said cutting edge extending from said smooth knife-edge toward said trailing end and being formed with a series of cutting teeth, a first set of alternate teeth of the series slanting in a first sideward direction relative to the plane of a first side of the blade body and a second set of alternate teeth of the series interspersed with said first set slanting in a second sideward direction relative to the plane of a second side of the blade body, said cutting teeth nearest said trailing end being of substantially uniform height, having substantially uniform maximum sideward displacements from the planes of said first and second sides respectively, and being formed with tips of blunt cross-section, said cutting teeth nearest said smooth knife-edge being formed to provide knife-edged tips and the heights and the maximum sideward displacements thereof from the planes of said first and second sides respectively consecutively diminishing toward said smooth knife-edge such that said adjoining portion merges continuously into said smooth knife-edge.

3,005,479

ADZING APPARATUS CUTTER FOR RAILROAD CROSSTIES

George T. Blackwell, Jr., 812 2nd Ave. E., Oneonta, Ala.

Filed Aug. 1, 1960, Ser. No. 46,673

2 Claims. (Cl. 144—134)

2. A cutter and a holding head for adzing railroad cross-ties comprising, a disc-shaped metal structure having a beveled edge, two holding parts, the cutter being held between said parts and being mounted revoluble on a portion of one part, a bolt, said bolt having an integral head and tightening nut, part of said holding head having a hole of a size for said bolt to be inserted therethrough, each of said two holding parts having a hole therein, said holes being of a size for said bolt to be inserted therethrough, the inner part having shoulder means to prevent it from revolving, a round pin, said

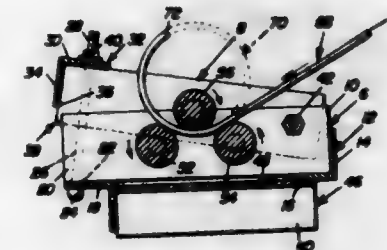
3,005,481

VEHICLE BRAKE DRUM LINER FORMING MACHINE

Emmitt Y. Scott, P.O. Box 66, Swainsboro, Ga., assignor of forty percent to E. H. Youngblood, Swainsboro, Ga.

Filed Sept. 30, 1957, Ser. No. 687,091

3 Claims. (Cl. 153—54)



1. A strip bending device comprising a frame structure embodying a relatively stationary lower frame section having spaced parallel side members, a first angle iron connecting the members together at one end, and a second angle iron connecting the members together at their other ends, and a third angle iron attached at its ends to the respective first and second angle irons and having a depending flange which is adapted to be secured between the jaws of a vise, a pair of lower spaced parallel freely turnable rollers mounted between the side members, and an upper frame carrying a cooperating roller and having side members hingedly connected to the first named side members and also having an angle iron connecting its side members and provided with bolts whereby the openable and closable ends of said sections may be adjustably bolted together.

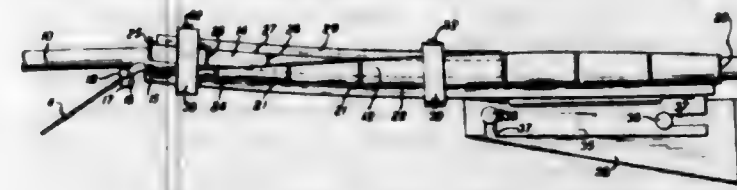
3,005,480

CABLE SHEATHING TOOL

Henry C. Slechts, Plainfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 2, 1955, Ser. No. 544,414

2 Claims. (Cl. 153—1)



1. A tool for use in forming a metallic strip on a cable core advanced longitudinally in a given path comprising a forming element having a flat entrance end for receiving the strip, a substantially cylindrical exit end concentric with the exit path and intermediate lateral portions curving from the flat entrance end to the cylindrical exit end to form a trough-like structure open from the entrance end for over half the length of the forming element, the forming element being bent arcuately longitudinally to produce a concave contour in the trough-like structure of the forming element, a trough-like guide inverted in the open portion of the trough-like structure of the forming element and bent arcuately longitudinally to produce a convex contour parallel with the concave contour of the forming element to guide the cable core and cause the cable core to exert a force against the central part of the metallic strip advancing through the forming element to cause it to travel in the laterally and longitudinally curved path provided by the forming element, the length of the curved path followed by the central part of the strip being substantially equal to the length of the spiral paths followed by the edges thereby minimizing stretching thereof, arcuately curved elongated reinforcing bars fixed respectively to outer surfaces of the forming element and the guide to maintain the arcuate curvature thereof, and U-shaped brackets having like legs thereof fixed respectively to the bars to maintain the relative parallel spaced positions of the forming element and the guide.

771 O.G.—65

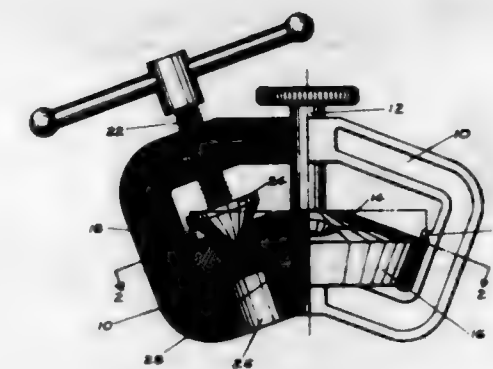
3,005,482

TUBE FLANGER

Andrew J. Richardson, 227 Ave. Q, Lubbock, Tex., assignor of one-third to Wendell Coffey, Lubbock, Tex.

Filed Oct. 7, 1959, Ser. No. 844,891

7 Claims. (Cl. 153—79)



1. A tube flanges comprising: a frame, a disc with a convex conic surface, a ring with a concave conic surface correlative to the conic surface of the disc, said ring co-axial with and surrounding the disc, said disc and ring being mounted on the frame, means for producing relative axial movement between the disc and ring, there being a plurality of matched notches in the conic surfaces of the ring and disc, said notches being serrated to better clamp a tube therein, means for preventing relative rotational movement between the ring and disc, there being access through the frame to said notches at the apex side of the ring and disc, and a flanging head on the other side of the ring and disc, means mounting said flanging head on the frame for movement toward and away from the disc.

3,005,483

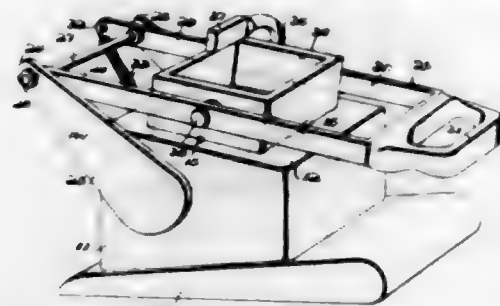
TRANSPARENCY MOUNTING MEANS

John R. Middles, 568 Madison St., St. Charles, Mo., and Richard M. Caccese, 103 W. Diamond Ave., Hazleton, Pa.

Filed Jan. 22, 1960, Ser. No. 4,582

5 Claims. (Cl. 156-583)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a means for heat sealing together upper and lower mounting frames for a photographic transparency with said transparency sandwiched between said frames, said frames having four sides; the improvement comprising a support for said frames and transparency, guide means comprising at least four rigid uprights fixed to said support in equispacial relation and each adapted to engage a different side of said frames centrally thereof to prevent lateral movement of the same on said support, said uprights having inner frame engaging surfaces adapted to engage said frames and each being formed with a series of vertically spaced serrations providing holding means adapted to resist the withdrawal of said frames from said guides in an upwardly direction, said serrations of each series being spaced apart distances less than the thickness of each of said frames, and means for heat sealing said frames together while said frames are held by said serrations.

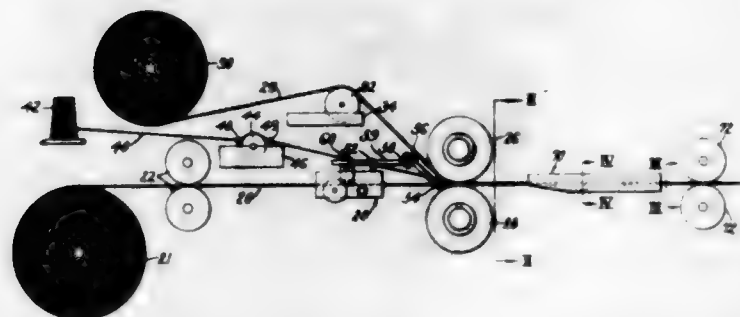
3,005,484

MACHINES FOR APPLYING REINFORCING CORDS TO THE EDGES OF A WEB

Barney E. Kuconis, Beverly, Mass., assignor to Hoague-Sprague Corporation, Lynn, Mass., a corporation of Massachusetts

Filed June 5, 1959, Ser. No. 818,386

2 Claims. (Cl. 156-438)



1. In a machine for making a reinforced composite web, a pair of opposed pressure rolls between which a first web and a second web are fed from converging paths, the second web being of greater width and adhesively coated on the surface engaging the first web, means for guiding a pair of reinforcing cords between said converging paths into engagement with the coated surface of the second web and thereafter into engagement with the edges of the first web, said guiding means including members guiding said cords and having portions engaging the opposite edges of the first web for precisely aligning the cords with said edges when the cords engage the coated surface of the second web, and means for folding the margins of the second web around the cords and the edges of the first web after passing through said rolls.

3,005,485

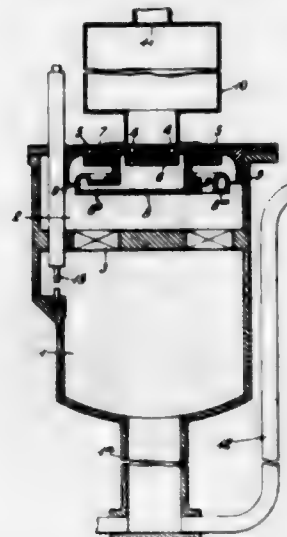
GASEOUS FUEL COMBUSTION APPARATUS

Leslie Salgo, Locusthill, Ontario, and John A. Kitchen, Markham, Ontario, Canada, assignors to Joseph Lucas (Industries) Limited, Birmingham, England

Filed Apr. 17, 1959, Ser. No. 807,071

Claims priority, application Great Britain May 7, 1958

1 Claim. (Cl. 158-7)



A gaseous fuel combustion apparatus comprising in combination a combustion chamber, a mixing chamber situated at one end of said combustion chamber, a flame trap situated between said combustion chamber and mixing chamber, fuel gas inlet valve means provided at the end of said mixing chamber remote from said combustion chamber, combustion air inlet valve means of annular form provided at the same end of said mixing chamber as said fuel gas inlet valve means and surrounding the latter, both of said valve means being intermittently closable by pressure pulses generated in said combustion chamber, and a gas diffuser which is mounted in said mixing chamber, and which has a central chamber enclosing said fuel gas inlet valve means, an annular hollow part surrounding and spaced from said central chamber, and passages establishing communication between said central chamber and the interior of said annular hollow part, the latter being provided with holes in its inner and outer peripheral portions for directing fuel gas from said diffuser into the path of the combustion air flowing through said mixing chamber from said combustion air inlet valve means to said combustion chamber.

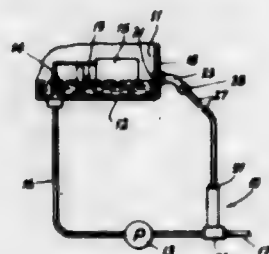
3,005,486

LIQUID LEVEL CONTROL FOR CARBURETORS

Hart B. Donnell, Afton, Mo. (359 Central Ave., Wood River, Ill.)

Filed Dec. 12, 1958, Ser. No. 780,117

2 Claims. (Cl. 158-38)



1. In combination with a fuel pump delivering fuel to a carburetor having a float chamber provided with a float valve therein for metering fuel from said pump to said carburetor, conduit means connected to the inlet side of the fuel pump for delivering fuel thereto, drain means in communication with the carburetor and said fuel pump for preventing the fuel supply within said carburetor from

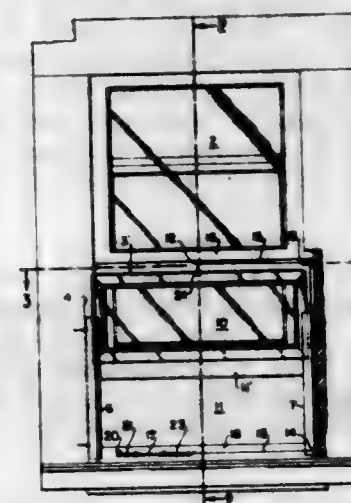
3,005,488

AUTOMATIC WINDOW CLOSER

John W. Murphy, 15 Deanside Ave., and Donald A. Edgar, 141 Tracy Ave., both of Lynn, Mass.

Filed Sept. 21, 1959, Ser. No. 841,184

1 Claim. (Cl. 160-5)



exceeding a fixed high level line independently of the metering action of said float valve, said drain means being in the form of a valve housing having an imperforate top except for a passage forming means connected to the float chamber and contiguous with said level, and said housing being connected at the bottom to the conduit means to the inlet side of the fuel pump, and a restrictor means in the drain means having a free cross-sectional area substantially less than that of the drain means and check valve means in said drain, said last named means comprising a float valve member that closes against a valve seat when the drain is empty and floats away from the valve seat when fuel is in the drain, said valve seat being connected to the restrictor means disposed at the bottom of the valve housing, and said valve member having a conical seating surface and said valve seat having a mating conical surface merging with the inside walls of the valve housing, and stop means at the top of said valve housing limiting the upward movement of said float valve member comprising spaced inwardly extending radial elements that pass fuel therethrough when contacted by the float valve member.

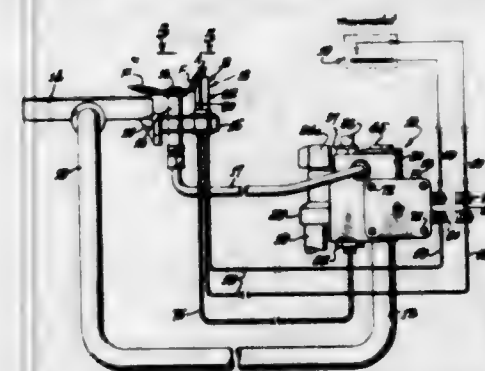
3,005,487

GAS VALVE CONTROL WITH FLURAL THERMOCOUPLES

Theodore H. Thiele, Rolling Hills, Calif., assignor to American Control Corporation, Compton, Calif., a corporation of California

Filed Jan. 11, 1957, Ser. No. 633,794

5 Claims. (Cl. 158-131)



1. In combination in burner control mechanism: fluid passage means having an inlet and an outlet; an operating valve in said passage means; a safety valve in said passage means between said inlet and said operating valve for admitting fluid to said operating valve; means forming a pilot port leading from said passage means between said valves; both of said valves having means which normally bias said valves to their closed positions; first electromagnetic means connected to said safety valve and energizable to hold said safety valve open against its biasing means; a second electromagnetic means mechanically connected to said operating valve and energizable to open said operating valve against its biasing means; means connected with said pilot port for providing a pilot flame; a first thermocouple adjacent the position of said pilot flame and energizable by said pilot flame to supply an electric current, said first thermocouple being connected in circuit with said first electromagnetic means and being capable of generating electromotive force to energize said first electromagnetic means to retain said safety valve in open position; a second thermocouple adjacent the position of said pilot flame and energizable by the heat of said flame, said second thermocouple being connected in circuit with said second electromagnetic means and being capable of generating electromotive force to energize said second electromagnetic means to open said operating valve; and time-lag-producing means for delaying opening of said operating valve by said second electromagnetic means until after energization of said first electromagnetic means by said first thermocouple.

3,005,489

COMBINATION WINDOW AND ROLLER SCREEN ASSEMBLY

William W. Crocker, Arlington, and Edward I. Bladell, Somerville, Mass., assignors to Crocker Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed Oct. 19, 1959, Ser. No. 847,155

3 Claims. (Cl. 160-28)



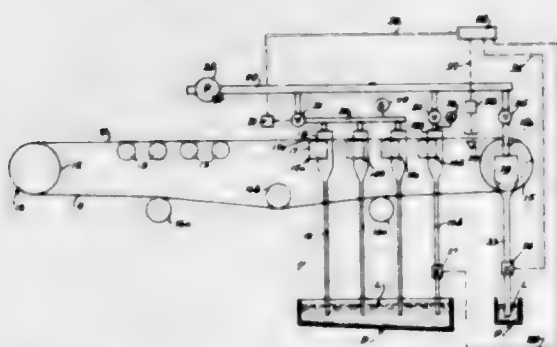
1. In a window assembly, a window frame, a sash slidably mounted within said frame, a roller screen, a housing for said screen mounted on the frame adjacent one end of the sash when said sash is in closed position, said housing having an aperture through which the free end of the roller screen projects toward the sash, a transverse member secured to the screen end outwardly of the housing, the sash having a transverse portion disposed ad-

adjacent the transverse member on the screen when the sash is in closed position, cooperating lip and rib means on said transverse members disposed in releasable overlying relation when the sash is in closed position, and movable cam means carried by one of said transverse members for securing said members with the lip and rib portions in overlying relation when the cam means is in operative position to cause the screen to be drawn out of the housing and across the window opening when the sash is slid toward open position, the lip and rib portions being inoperative to raise the screen with the sash in the absence of camming force when the cam means is in inoperative position.

3,005,490

PAPER MACHINE SUCTION BOX CONTROL

Edgar J. Justus, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Sept. 24, 1956, Ser. No. 611,532
8 Claims. (Cl. 162-252)

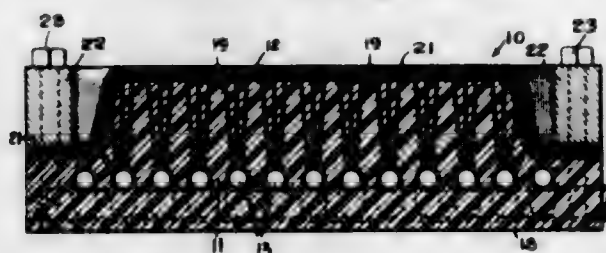


1. In a paper machine, a travelling forming wire carrying a wet web thereon, a plurality of suction boxes mounted in succession beneath said wire withdrawing water from the web, control means for controlling a vacuum in said suction boxes and means actuating said control means in response to water content of the web at a predetermined point in the travel thereof on said wire downstream of said suction boxes.

3,005,491

CHAMBERLESS MOLD AND PROCESS OF MAKING SAME

Roger Wells, Stamford, Conn., assignor to Diamond National Corporation, a corporation of Delaware
Filed Oct. 8, 1958, Ser. No. 766,000
8 Claims. (Cl. 162-411)



1. A process for making a chamberless perforated mold for suction molding pulp articles, comprising arranging a plurality of lengths of generally straight tubing in spaced parallel relation extending lengthwise entirely across the mold being made, closing one end of each of said lengths of tubing, connecting the opposite ends of each of said lengths of tubing into fluid communication with a tubular manifold extending along the mold, packing a mixture of glass strands and curable resin around the lengths of tubing to form a contoured mold body, curing said resin, and drilling a plurality of drainage perforations through the contoured mold body and into each of the lengths of tubing at equally spaced intervals therealong.

3,005,492

OIL FLOW CONTROL

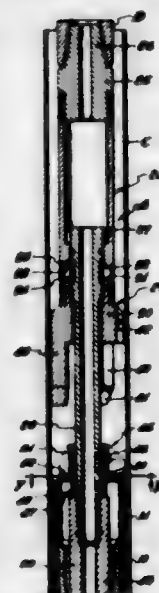
Peter W. Mathieson and Hermann G. Van Laar, Point Fortin, Trinidad, British West Indies, assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Mar. 24, 1959, Ser. No. 801,447
Claims priority, application Trinidad Dec. 23, 1958
10 Claims. (Cl. 166-30)

1. The process of inhibiting the inflow of earth particles from incompetent formations into well-bores drilled into said formations, which well-bores are provided with a casing having perforations opposite said incompetent formations, which comprises suspending pieces of a permeable elastic material in a carrier fluid non-reactive therewith, said pieces being substantially larger in all directions than all of said casing perforations, conveying said suspension down the well-bore to substantially the bottom thereof, forcing said carrier fluid together with said elastic pieces through the perforations and into the space outside said casing, thereby to fill at least partially the space between said perforated casing and the contiguous incompetent formation, terminating the injection of the carrier fluid, and reversing the flow through the casing perforations to cause the fluid in the incompetent formation to flow into the well-bore.

3,005,493

WELL BORE MILLING APPARATUS

Talmadge L. Crowe, Houston, Tex., and Earnest H. Clark, Jr., Downey, Calif., said Crowe assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Mar. 25, 1958, Ser. No. 723,839
8 Claims. (Cl. 166-55)



1. In apparatus for disintegrating a well tool set in a well conduit disposed in a bore hole, the well tool having a passage therein and the apparatus being adapted to be lowered in the conduit on a tubular running-in string; a mandrel; an impacting device telescoped over said mandrel and adapted to strike the well tool to disintegrate the same and release the well tool from the well conduit; a pilot secured to said mandrel and insertable in the passage to center the impacting device with respect to the well tool; said impacting device having means thereon for securing said impacting device to the tubular running-in string.

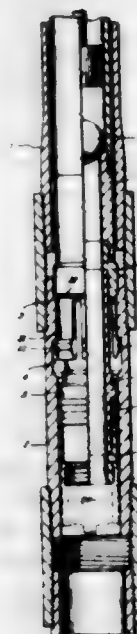
3,005,494

WELL TOOL MOUNTING

Douglas E. Daffin, Pasadena, Tex., assignor to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed Dec. 1, 1958, Ser. No. 777,270
1 Claim. (Cl. 166-136)

A hanger and pump assembly for use with a well tubing nipple having an internal latch keeper groove, a

smoothly finished bore surface below said keeper groove and an upwardly facing landing seat above said keeper groove, said assembly including a pumping unit, a tubular hanger body connected in end to end succession with the pumping unit and provided with a well fluid passage therethrough in flow communication with said pumping unit, upper and lower coupler rings sleeved on and secured to opposite ends of the tubular body and provided with attachment means for mounting the pumping unit selectively to either coupler ring, a downwardly facing abutment seat constituted by the lower peripheral corner of the

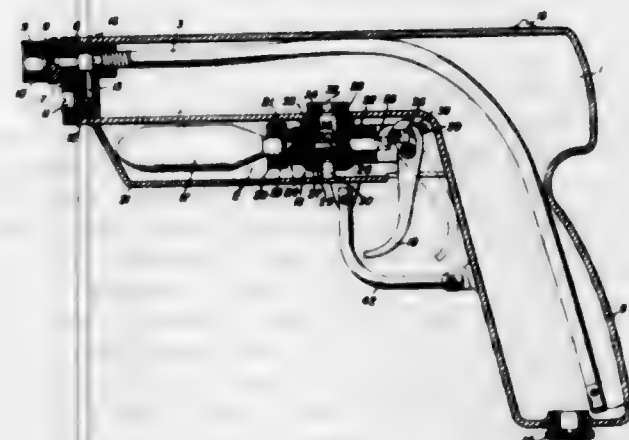


upper coupler ring to engage said landing seat, an inwardly flexible spring finger having its upper end integral with and projected downwardly from the lower corner abutment seat of said upper coupler ring and terminating at its lower end in a free tip portion positioned beside and radially outwardly spaced from said tubular body and provided outwardly thereof with a latch lug for reception within said keeper groove and an annular packer clamped by the lower coupler ring in embracing relation with said tubular body below said spring finger tip portion for sealing engagement with said smoothly finished bore surface.

3,005,495

HAND FIRE EXTINGUISHERS

Ernst Herberg, Jannitzerstrasse 15, Nuremberg, Bavaria, Germany
Filed Dec. 15, 1958, Ser. No. 780,598
Claims priority, application Germany Dec. 16, 1957
7 Claims. (Cl. 169-31)



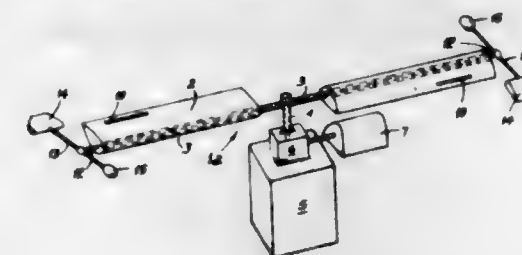
1. A combined hand fire-extinguisher and weapon comprising: a pistol simulating housing for containing fire extinguishing fluid, said housing including a barrel por-

tion and a grip portion; means for passing the fire extinguishing fluid from said housing including a nozzle positioned in the forward end of said barrel portion; a rupturable foil closing said nozzle; a compressed gas container on said housing; a trigger mounted for swingable movement on said housing; a striker actuated by movement of said trigger for puncturing said compressed gas container; means supporting said compressed gas container and said striker on said housing, said last mentioned means including an aperture therethrough for establishing fluid communication between said gas container and said housing; and a rupturable foil in said aperture.

3,005,496

AIRFOIL BOUNDARY LAYER CONTROL MEANS

John B. Nichols, Atherton, Calif., assignor, by mesne assignments, to Hiller Aircraft Corp., Palo Alto, Calif., a corporation of California
Filed Aug. 24, 1959, Ser. No. 835,627
9 Claims. (Cl. 170-135.4)



1. In an airfoil, fluid flow boundary layer control means comprising, a valve body fixed on said airfoil having a port, a closure member rotatable in said valve body about a spanwise axis to cover and uncover said port, a control arm carried by said closure member and operative when pivoted to rotate said closure member in said valve body, and means restraining said control arm against pivotal movement whereby said airfoil will pivot relative to said control arm in response to a change in the angle of attack of said airfoil and rotate said valve body on said closure member.

3,005,497

FAN BLADE AND HUB ASSEMBLY

Stephen W. Klonoski, Torrington, and Kenneth A. Merz, Cornwall, Conn., assignors to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed July 22, 1957, Ser. No. 673,193
8 Claims. (Cl. 170-160.53)

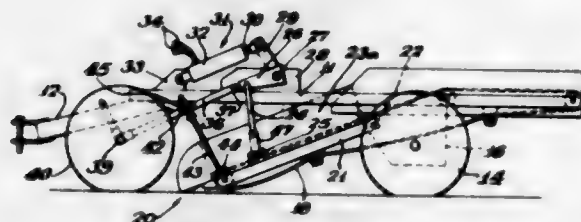


2. The combination in a rotary fan, of a hub centrally apertured to fit a drive shaft and rotatable about the axis of said shaft, a thin flat blade carrier perpendicular to said axis and having blades thereon which carrier has a central opening through which a portion of the hub extends, a first rigid washer surrounding said hub and connected therewith at the rear of the carrier, a second rigid washer surrounding said hub and connected therewith at the front of the carrier, a first rubber element surround-

ing the hub and having opposite flat faces respectively in pressed engagement with the front face of the first rigid washer and with the rear face of the carrier, and a second rubber element surrounding the hub and having opposite flat faces respectively in pressed engagement with the front face of the carrier and with the rear face of the second rigid washer, said faces of said first and second rubber elements having a plurality of uniformly spaced depressions therein with sharp corners which depressions in each face have an aggregate area at said face that is substantially less than one-half of the total face area and which depressions and corners in all of said faces augment the transmission of torque from the rigid washers to the carrier and which depressions and corners minimize the transmission of sound to said carrier and blades.

**3,005,498
POTATO DIGGER**

Edwin F. Huddle, Elmwood Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 25, 1959, Ser. No. 815,658
2 Claims. (Cl. 171-109)



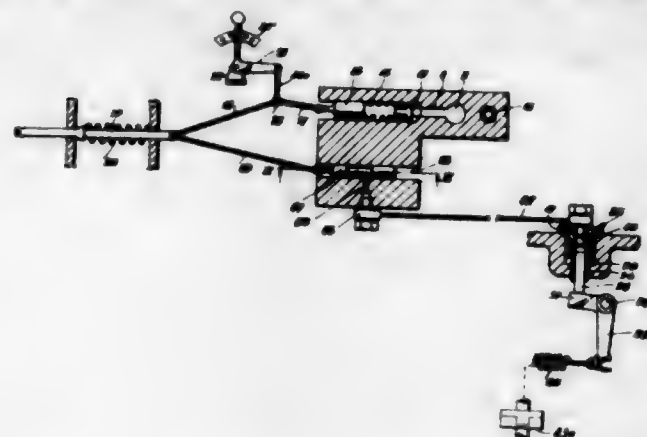
1. In a multiple row potato digger, a supporting frame, an inclined digger frame pivotally mounted on the supporting frame including relatively wide earth penetrating blade means adapted to span adjacent rows of potatoes and conveyor means adapted to receive and elevate potatoes dug by said blade means, lift means on the supporting frame operatively connected to the digger frame for raising and lowering the latter, a gauge wheel at each side of said blade means, an arm supporting each said gauge wheel, said arms extending rearwardly from said wheels and pivotally connected to said supporting frame for vertical swinging, a link connecting each said arm to said digger frame and accommodating relative movement therebetween, means on said link limiting upward movement of said arm relative to said digger frame, and a stop on said link engageable with said arm limiting the downward movement of each said arm relative to the digger frame, whereby said wheel-carrying arms are lifted when the digger frame is lifted.

3,005,499

TRACTOR CLUTCH DISENGAGING MEANS
Robert Marindin, Sprothorough, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 7, 1958, Ser. No. 726,790
Claims priority, application Great Britain Apr. 8, 1957
7 Claims. (Cl. 172-3)

1. In a tractor having a transmission including clutch means and an implement hitch means adapted to carry an implement and including a draft responsive member resiliently loaded so as to be movable in response to changes in draft load, a hydraulic power lift means including a ram cylinder and associated ram piston and a pump delivering fluid under pressure and a reservoir as a source of fluid, a hydraulic power lift control means having a chamber communicating the pump and the reservoir, a relief valve means operatively connected with said draft responsive member and communicating with the chamber and the reservoir, means disposed within the chamber controlling the flow of fluid under pres-

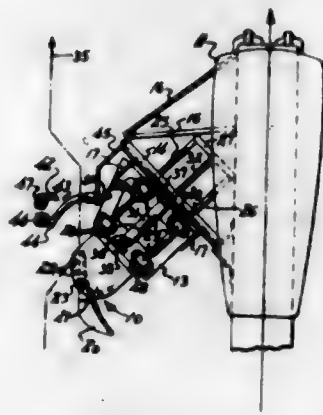
sure and operable to direct fluid under pressure from the pump and the cylinder to the reservoir for lowering the implement, to direct the fluid under pressure from the pump and cylinder through the relief valve to the reservoir for adjusting the position of the implement consequent upon draft forces exerted upon said draft responsive means, to direct fluid under pressure from the pump to the cylinder for raising the implement, and to direct



fluid under pressure from the pump to the reservoir for transport of the implement while the relief valve remains closed, and automatic clutch-disengaging means operatively connected with the draft responsive member and operable in response to an increase in pressure in the ram cylinder upon occurrence of excessive draft load to disengage said clutch means concomitant with actuation of said disengaging means by the member.

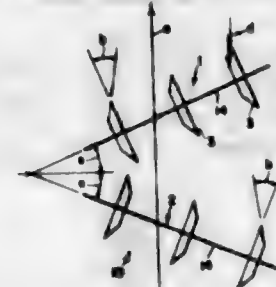
**3,005,500
AUTOMATIC RETRACTING MECHANISM FOR AGRICULTURAL MACHINERY**

Lloyd H. Lamouria, Davis, Calif., assignor to The Regents of the University of California, Berkeley, Calif.
Filed Aug. 23, 1957, Ser. No. 679,847
4 Claims. (Cl. 172-6)



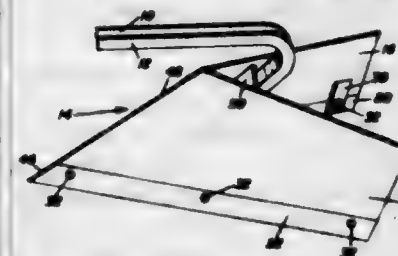
1. A device for sidewise retraction of a working portion of a machine relative to a frame of said machine, as said machine is working parallel to a row of obstructions and in between the obstructions of the row, comprising an hydraulic sensing device on said frame having a flexible sensor head that flexes under pressure; a bellows device on said frame hydraulically connected to said sensor head; means on said frame to translate said working portion sidewise a predetermined lateral distance relative to said frame; actuation means on said frame actuated by said bellows device for actuating the translating means; and time-delay means supported by said frame and operatively connected to said translating means for delaying return movement of the translating means and thereby delaying restoration of said working portion to its unretracted position after de-actuation of said actuation means.

**3,005,501
DISKS AND DISK IMPLEMENTS**
William R. Frank, Los Angeles, Calif., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,188
1 Claim. (Cl. 172-599)



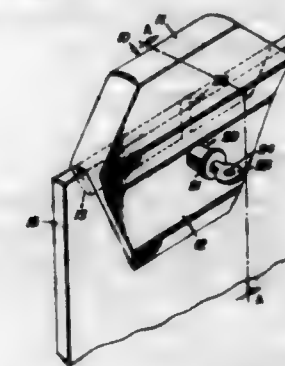
A disk implement comprising frame means adapted to be propelled along a normally forward direction of travel, a gang of disks carried thereby in axially aligned spaced apart relation, the axis of said gang being disposed generally diagonally at an angle relative to a line perpendicular to the direction of forward travel, each of said disks having a radially outer conical section that extends generally radially from the center portion of the disk at an angle to a plane perpendicular to the gang axis that is greater than the angle between the gang axis and a line perpendicular to the direction of forward travel, whereby in operation soil pressure due to forward movement of the gang is imposed against the back side of each disk generally uniformly across the back of the disk.

**3,005,502
SEED FURROW PLOW**
Joseph L. Teal, 1919 31st St., Lubbock, Tex.
Filed June 12, 1959, Ser. No. 820,013
4 Claims. (Cl. 172-726)



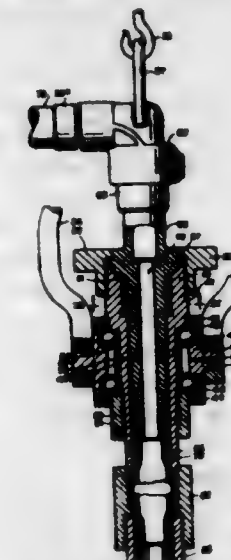
1. For use in seed planting to prepare the land prior to actual deposit of the seed, a seed furrow plow which prepares the lands on a level sufficient for planting as opposed to forming furrows within which to plant the seed as is customary, said plow having a pair of sides of polygonal outline and having forward edges which are sloped upwardly and rearwardly, a pair of blades secured beneath and extending along the entire length of and being co-terminous with the lower edges of said sides and having essentially coplanar lower edges disposed below all other portions of the plow whereby to leave a smooth bottom surface in the furrow and upwardly and rearwardly inclined leading edges, said leading edges of said blades and the front edges of said sides forming a straight apical line, means secured to and extending transversely between said sides and to which to fasten a plow beam, means including plates secured to the inner surfaces of said sides and blades for fastening said blades to said sides, an angle bracket secured to the inner surfaces of said sides and blades at the front edges thereof and overlying a portion of the inside surfaces of said blades for securing the front portions of said blades together and for rigidifying said sides at said apical line, said plow beam securing means comprising a flat plate extending across the space between said sides and having its ends secured to the latter, said plate being tilted to the vertical and being inclined upwardly and rearwardly, a fastening bolt extending through said plate and said plow beam.

**3,005,503
PLANK DRIVING HEAD**
J. Spickard, 721 11th St., Clarkston, Wash.
Filed July 2, 1957, Ser. No. 669,593
6 Claims. (Cl. 175-157)



1. A driving head adapted to be used for transmitting driving force to the top end of a plank having a side opening in the body thereof near the top end, said head comprising an anvil portion having an under face and legs depending from said anvil portion, said anvil portion and legs forming a groove with each other adapted to receive the top end of the plank to said under face of the anvil portion, one of said legs supporting a movable detent having means biasing said detent to a position where said detent is in the path of the plank into said groove and is operable away from the path as said driving head is bodily moved onto the plank against the bias of said biasing means, to a position of the detent where the detent engages the side of the plank and is out of the path, said detent being the same distance from the under face of said anvil portion as the opening in said plank is from the top end of the plank and being adapted to ride against said plank under the bias of said biasing means when the plank is in said groove, and said detent being forcefully projected into the opening in said plank by said biasing means when said detent and opening are aligned through having the plank received in said groove and said under face of the anvil portion seated on and properly disposed along the top end of the plank, thus securing the driving head and plank together as a unitary structure for the driving head to transmit driving force from the under face of said anvil portion to the top end of the plank.

**3,005,504
DRILLING DEVICE**
Herman W. Mayhew, Jr., Dallas, Tex., assignor to Gardner-Dever Company, a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,330
16 Claims. (Cl. 175-200)



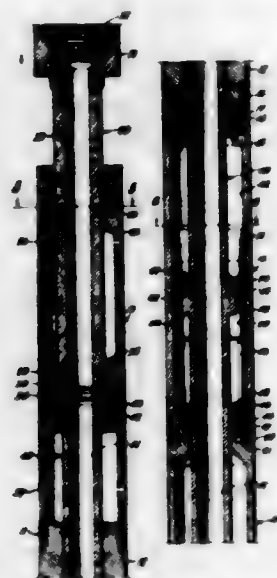
1. In a drilling device, an outer drill pipe; a rotatable spindle attached to the upper end of the outer drill pipe;

an inner drill pipe telescopically disposed in the outer drill pipe; a hollow head attached to the upper end of the inner drill pipe and being positioned in the spindle; and key and keyway means arranged between the spindle and the head whereby they may be rotated together; and means to secure the spindle and head together against relative longitudinal movement.

3,005,505

HYDRAULIC JAR

Derrel D. Webb, Houston, Tex., assignor to Houston Engineers, Inc., Houston, Tex., a corporation of Texas
Filed July 27, 1959, Ser. No. 829,658
8 Claims. (Cl. 175-297)



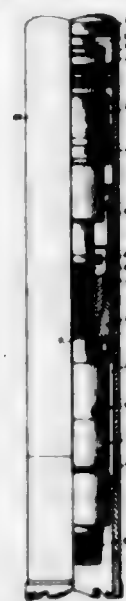
1. A hydraulic jar comprising an upper elongated hollow body portion, an intermediate elongated hollow body portion removably secured to the lower end of said upper body portion, a lower elongated hollow body portion removably secured to the lower end of said intermediate body portion, a coupling member removably secured to the lower end of said lower body portion, a reduced portion in said upper body portion adjacent the upper end providing a downwardly facing impact shoulder, said reduced portion having a non-circular bore extending therethrough, an elongated mandrel slidably and non-rotatably received in said bore and terminating within said upper body portion, a coupling member on the upper end of said mandrel above said upper body portion, a hammer member secured to the lower end of said mandrel and slidable within said upper body portion to engage said impact shoulder, a piston rod secured to said hammer member, said piston rod extending through said intermediate body portion and terminating within said lower body portion, a sleeve of less length than said intermediate body portion, said sleeve being slidably disposed in said intermediate body portion, an inwardly extending flange at the lower end of said sleeve, the lower wall section of said sleeve having longitudinally disposed slots therein, the intermediate wall section of said sleeve having a smooth cylindrical inner surface, said inner surface merging into a beveled section at the upper end of said sleeve and a piston on said piston rod slidably received in said sleeve and movable between the lower and upper ends of said intermediate body portion, said piston comprising an annular shoulder integral with said piston rod, a yieldable, metallic upwardly opening cup washer received on said piston rod in engagement with the upper surface of said annular shoulder, a retaining ring received on said rod and engaging the upper surface of said washer, a groove in said piston rod and a snap ring received in said groove and engaging said retaining ring to secure said washer in place, the upper surface of said washer being flared upwardly and outwardly and the outer sur-

face of said washer engaging the cylindrical inner surface of said sleeve during a portion of the upward movement of said piston to provide a seal therewith while permitting a relatively slow fluid flow around said sleeve from the upper to the lower side thereof.

3,005,506

WASH-OVER SPEAR APPARATUS

Franklin L. Le Bus, Sr., P.O. Box 2352, Longview, Tex.
Filed Nov. 3, 1958, Ser. No. 771,500
9 Claims. (Cl. 175-315)



1. In a wash-over apparatus for retrieving a stuck fish in a well bore comprising a wash-over pipe having a retrieving unit adapted to be positioned therein, said unit comprising an elongated mandrel having a slidable sleeve thereon, a slip cage slidably disposed on the mandrel below the sleeve and telescopically arranged therewith, a plurality of circumferentially spaced slips carried by the slip cage and alternately operable to gripping or non-gripping engagement with the wash-over pipe, a tapered coupling carried by the mandrel, means cooperating between the mandrel and the coupling and responsive to the rotation of the mandrel in one direction to move the coupling in a direction to engage said slips and to provide a radial outward movement thereof into engagement with the wash-over pipe, means connected to the retrieving unit for a make up connection with the stuck fish, said means comprising an unlatching mechanism carried by the retrieving unit and separable to permit removal of the retrieving unit with the wash-over pipe from the well bore without disturbing the make up connection with the stuck fish, friction means carried by the slidable sleeve and engageable with the wash-over pipe to provide for simultaneous movement therewith, the wash-over pipe movable in an upward direction to actuate the slips carried by the slip cage into a gripping engagement with the pipe and thereby connect the wash-over pipe to the retrieving unit for permitting separation of the unlatching mechanism, means carried by the slidable sleeve and responsive to rotation of the sleeve with the rotation of the wash-over pipe in one direction to lock the sleeve against the mandrel and prevent movement of the sleeve upon a simultaneous movement of the wash-over pipe.

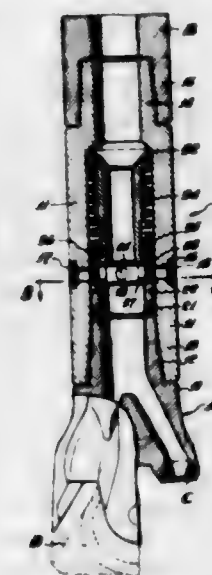
3,005,507

FLUID BY-PASS FOR ROTARY DRILL BITS

Ernest H. Clark, Jr., Downey, and William D. Myers, Norwalk, Calif., assignors, by mesne assignments, to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 687,215
16 Claims. (Cl. 175-324)

1. In drilling apparatus for a well bore: a tubular drill string; a drill bit secured to the drill string and having a

nozzle for discharging fluid from the drill string; said drill string having a side port in its lower portion above said bit for allowing fluid to flow between the interior and exterior of said drill string; valve means shiftable to port closing position in response to downward pumping of fluid through the drill string, said valve means including means responsive to pressure externally of said drill string to equalize the hydrostatic head of fluid internally of the drill string and tending to shift said valve means from port closing

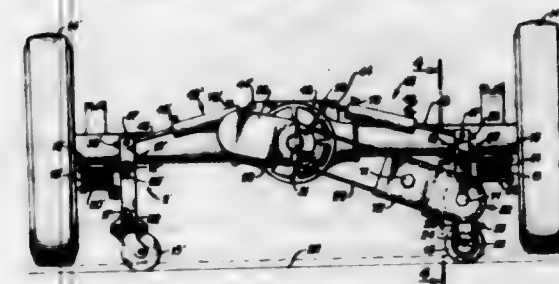


position to port opening position and also tending to hold said valve means in port opening position; and spring means engaging said valve means to shift said valve means to port opening position; said spring means exerting a force sufficient to maintain said valve means in port opening position during elevation of said drill string and drill bit in the well bore to permit simultaneous drainage of drilling fluid from said drill string through said port and bit nozzle.

3,005,508

PARKING ATTACHMENT FOR AUTOMOBILES

Rex V. White, 2048 S. La Cienega Blvd., Apt. 1, Los Angeles, Calif.
Filed Apr. 29, 1959, Ser. No. 809,809
3 Claims. (Cl. 180-1)



1. A parking attachment for powered vehicles, comprising: first and second auxiliary wheel-supporting structures, each being provided at the bottom thereof with a corresponding auxiliary transversely directed wheel means and each being pivotally attached above the bottom thereof with respect to a corresponding portion of a powered vehicle body adjacent a corresponding one of a pair of transversely spaced vehicle main wheels for pivotal movement around a fore-and-aft longitudinal axis perpendicular to the axis of rotation of said pair of vehicle main wheels between a retracted position with each of said auxiliary wheel-supporting structures being inwardly directed and lying immediately under the vehicle body and out of contact with an underlying road surface, and vertically downwardly extended position with each of said auxiliary wheel-supporting structures extending downwardly to a point effectively positioning

each of said auxiliary transversely directed wheel means at a level below the vehicle main wheels whereby a portion of the vehicle body will be lifted upwardly from an underlying road surface and will be supported by said auxiliary wheel-supporting structures and the auxiliary wheel means carried thereby; each of said auxiliary wheel-supporting structures being provided at the top thereof with oppositely directed actuator means controllably simultaneously oppositely actuatable from a location conveniently accessible to a driver of the vehicle for opposite movement of both of said auxiliary wheel-supporting structures between retracted and fully extended downwardly directed positions and vice versa; and power take-off means controllably effectively connecting a mechanically rotated drive shaft of the vehicle and said first auxiliary wheel means for controllably transversely driving same when it is in contact with an underlying road surface in the downwardly fully extended position in a direction corresponding to the direction of rotation of the drive shaft, said power take-off means extending transversely outwardly and angularly downwardly from its point of attachment to the mechanically rotated drive shaft of the vehicle adjacent a longitudinal center line of the vehicle to a point substantially directly below the pivotal mounting of said first auxiliary wheel-supporting structure and being pivotally connected to said first auxiliary wheel-supporting structure whereby said outwardly downwardly angularly inclined power take-off means, said vertically upwardly directed first auxiliary wheel-supporting structure when in the downward position, and the actuator means connected to the top of said wheel-supporting structure above the pivotal mounting of said wheel supporting structure effectively define a substantially polygonal configuration lying in a transversely directed plane with respect to the longitudinal fore-and-aft axis of the vehicle and extending between the centrally positioned mechanically rotated drive shaft of the vehicle and the transversely offset first auxiliary wheel-supporting structure in a manner such that movement of said first wheel-supporting structure into said retracted position will effectively shorten the distance between the pivotal connection of said power take-off means with respect to said first auxiliary wheel-supporting structure and the mechanically rotated drive shaft of the vehicle and will effectively disengage said first auxiliary wheel means from said vehicle drive shaft, said power take-off means being provided with slidably movable cover means and said first auxiliary wheel-supporting structure being provided with cover-lifting projecting pin means positioned below the pivotal connection of said power take-off means to said first auxiliary wheel-supporting structure, with said power take-off means being in the path of inward and upward arcuate travel of said cover-lifting pin means during movement of said first auxiliary wheel supporting structure into said retracted position for effectively lifting said cover means during said retracting movement and for effectively disengaging said power take-off means from said vehicle drive shaft by reason of the shortened distance between the pivotal connection of said power take-off means and said first auxiliary supporting structure and the vehicle drive shaft.

3,005,509

MOTOR VEHICLE FOR SUPPLYING POWER FOR MOVING AIRPLANES ON THE GROUND

Auldin D. Nolan, Palos Verdes, Calif., assignor to Air Logistics Corporation, Pasadena, Calif., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,631
25 Claims. (Cl. 180-11)

1. A motor vehicle for supplying power for moving an aircraft on the ground including: a vehicle body; steering means on said body; means for coupling the vehicle with an airplane for movement therewith on the

ground; means including a power source on said body for driving wheels of the landing gear of the airplane to propel the airplane on the ground; means mounting said driving means for movement about an axis in response to turning movement of the airplane while the



airplane is being driven by said driving means; and means operable in response to movement of said driving means about said axis for operating said steering means to maintain the vehicle in alignment with said landing gear wheels.

3,005,510 AUXILIARY DRIVE UNIT FOR VEHICLES

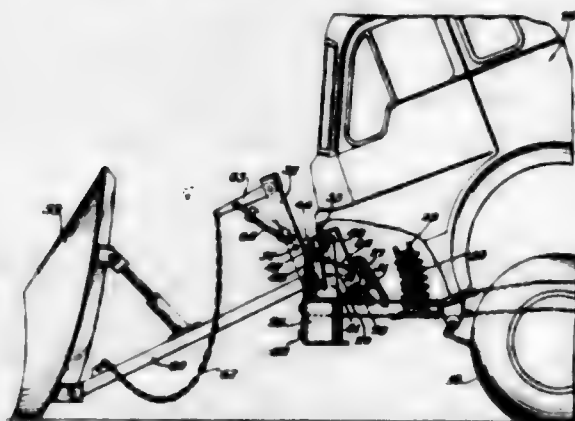
Delbert L. Phillips, 975 Somera Road,
Los Angeles 24, Calif.
Filed Mar. 9, 1959, Ser. No. 798,066
21 Claims. (Cl. 180-14)



1. A drive unit to drive a vehicle that has a pair of spaced ground wheels aligned with each other in tandem, said unit comprising: support means for positioning between the two wheels; a flexible belt in the form of a continuous loop; a plurality of rotary means inside said loop and carried by said support means in rolling contact with the inner surface of said belt to spread said loop into pressure contact with said two wheels; at least one power-actuated rotary means included in said plurality of means and engaging said belt to drive said loop; and support structure pivotally supporting said support means for rotation of the support means about a transverse axis inside said loop to permit said support means to turn bodily to whatever rotary position it may seek in response to the tensioning and driving of said loop.

3,005,511 GRILLE GUARD AND IMPLEMENT MOUNTING MEANS FOR MOTOR TRUCKS AND THE LIKE

Earl T. Riedy, Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 17, 1958, Ser. No. 709,507
3 Claims. (Cl. 180-39)

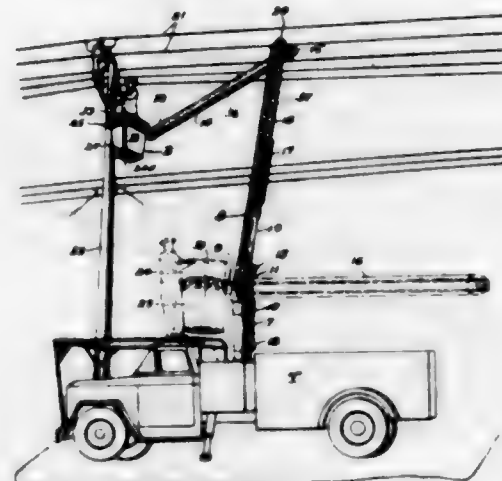


1. In a motor vehicle having a longitudinally extending chassis frame and an operator's compartment mounted on the forward end of said chassis frame for pivotal move-

ment about a transversely extending axis between a normally lowered position and a raised forwardly tilted position, said chassis frame including a transversely extending bumper disposed forwardly of the pivotal axis of said operator's compartment, the combination including said chassis frame and said operator's compartment, comprising, a substantially rectangular grille guard having a cylindrical latch pin projecting transversely outwardly from each transverse side thereof; means for pivotally connecting the lower end of said grille guard to said bumper for pivotal movement between a normally upright position and a forwardly inclined position, said means including a pair of transversely spaced bearing supports mounted on the top of said bumper; means operatively interconnecting said operator's compartment and said grille guard whereby pivotal movement of said operator's compartment effects simultaneous pivotal movement of said grille guard including a pair of transversely spaced links, each of said links having one end pivotally connected to said grille guard and its opposite end pivotally connected to said operator's compartment; and manually operable latch means carried by said chassis frame for releasably locking said grille guard in its normal upright position, said latch means including a transversely extending shaft mounted on said chassis frame for rocking movement about an axis vertically spaced above the pivotal axis of said grille guard, a latch member fixed to each end of said shaft having an open end slot, said latch members being movable between a first position wherein said latch pins are disposed within said slots when said grille guard is in its upright position and a second position wherein said latch members are moved out of locking engagement with said latch pin upon rocking of said shaft; an over-center spring device operatively interconnecting said latch members and said chassis frame for yieldably urging said latch members to their first and second positions; handle means connected to said shaft for imparting rocking movement thereto for moving said latch members between their first and second positions; and means carried by said operator's compartment and engageable with said latch members when in their second positions during pivotal movement of said operator's compartment from its normally lowered position to its raised forwardly tilted position for moving said latch members to their first positions.

3,005,512 AERIAL SUPPORTING STRUCTURE FOR LINE CONSTRUCTION AND MAINTENANCE WORKERS

Rex R. Vogan, Abington, Pa., assignor, by mesne assignments, to Asplundh Tree Expert Co., Jenkintown, Pa., a corporation of Pennsylvania
Filed May 31, 1960, Ser. No. 32,751
7 Claims. (Cl. 182-2)

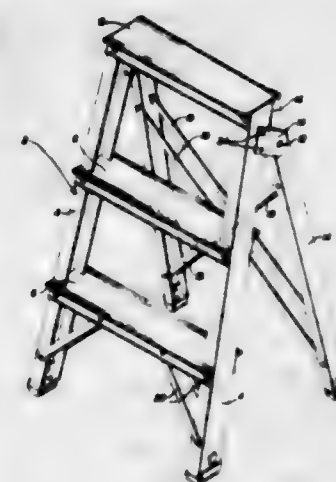


2. A basket for supporting a workman on the outer end of a pivoted boom in position for work on or around

electrically charged overhead wires, said basket comprising an open-topped, outer, structurally strong, load-carrying framework having a laterally extending arm by means of which the basket is swingably hung on the outer end of the boom, and a readily removable and replaceable open-topped, imperforate and water-impervious liner fitting the interior of the load-carrying framework and having a dielectric strength sufficient to prevent short circuiting from the wires to the framework through the body of the workman even in the presence of water.

3,005,513 STEPLADDERS AND STRUCTURAL COMPONENTS THEREOF

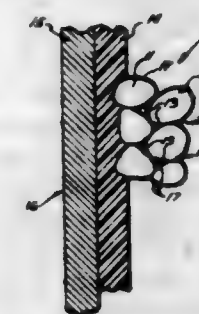
Clayton E. Larson, Weston, Conn., assignor to White Metal Rolling & Stamping Corporation, Brooklyn, N.Y., a corporation of New York
Filed Mar. 25, 1959, Ser. No. 801,751
2 Claims. (Cl. 182-165)



1. A stepladder comprising a front section including two side rails each comprising a central web, two spaced-apart lateral projections formed integrally with said web which parallel the longitudinal axis of the web and are normal to the web, means for connecting said two side rails in spaced-apart relation comprising a step including a central web, two spaced apart lateral projections formed integrally with said web which parallel the longitudinal axis of the web and project at an angle to the web, said central web being provided at each end with recesses spaced-apart a distance equal to the distance between said spaced-apart lateral projections of said side rails so that the lateral projections of the side rails may be inserted within the recesses provided in the central web of the step and attached to the lateral projections of the step, additional steps similarly fixed in a spaced-apart relation between said two side rails, a rear propping section comprising two side rails with angular upper ends, brace means for holding said rear section side rails in spaced-apart relation, means for pivotally attaching said rear section to said front section comprising a lug member carried near the top of one of the side rails of the front section and extending rearwardly of the rear edge of the side rail with one of the side rails of the rear section being pivotally connected thereto, a second lug member similarly attached to the other side rail of the front section and pivotally connected to the second side rail of the rear section, said lug members being spaced from the top of the front and rear section side rails so that the rear section side rails may be moved about the point of pivotal attachment to engage the angular upper ends of the rear section side rails with the rear edges of the front section side rails throughout a substantial extent of the angular surface and acting as the sole stop means for the rear propping section.

3,005,514 FLUID TREATING COLUMNS

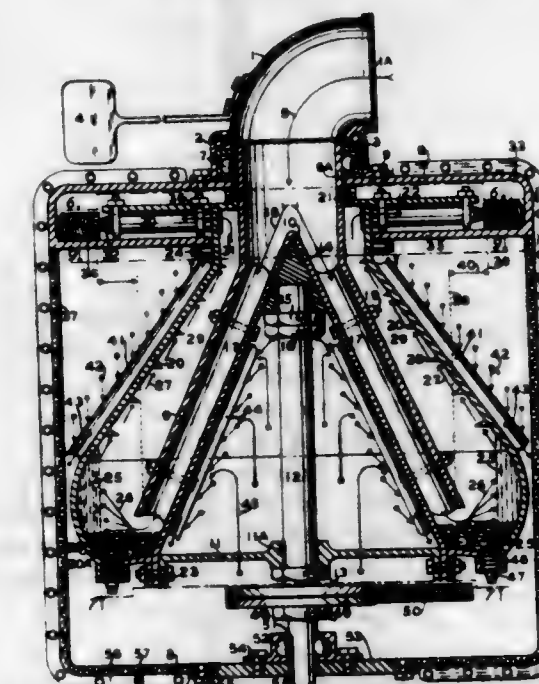
Leland G. Cole, Arcadia, Calif., and Stuart A. Gordon, Downsview, Ontario, Canada, assignors, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Apr. 20, 1959, Ser. No. 807,412
8 Claims. (Cl. 183-2)



1. A chromatograph column for chromatographic analysis of a gas, the chromatograph column comprising a fluid-impermeable envelope having an inlet and an outlet, a porous and permeable matrix having a plurality of interconnected interstices sealed within the envelope between its inlet and outlet, the matrix substantially filling the envelope, the interior of the envelope being disposed to extend into at least a part of the interstices at the periphery of the matrix between the inlet and outlet of the envelope, and a thin film of liquid chromatographic adsorbent disposed in the matrix to leave the interstices partially empty so the column is permeable to the flow of gas through it.

3,005,515 CENTRIFUGAL FLUID CLEANER

Alfred M. Caddell, 1318 W. Hunting Park Ave., Philadelphia 40, Pa.
Filed May 12, 1959, Ser. No. 812,668
6 Claims. (Cl. 183-17)



1. A centrifugal cleaner adapted to receive power from an outside source and when under power to draw into itself a gas carrying matter in suspension and discharge said gas freed from said matter at normal or above normal atmospheric pressures, the combination comprising a casing, an open-end duct movably mounted on said casing and communicating with a source of said gas, a rotor having a shaft and being comprised of an inner two-cone assembly and an outer cone secured thereto and to said shaft for rotation within said casing, said outer cone being spaced from said two-cone assembly to provide a

gas-flow channel therebetween, an open-end gas distributing chamber formed by the wall of said two-cone assembly having the greater radius for establishing communication with said duct, a plurality of pumping blades having communication with said distributing chamber and being positioned between said two cones throughout their length, said latter cones and said blades extending a distance in a direction opposite to and outwardly from said distributing chamber and terminating in ends having considerably greater radii than the diameter of said distributing chamber, said outer cone being comprised of a frusto-conical wall having a base curving inwardly for securement to said two-cone assembly, a sediment-receiving chamber formed at the juxtaposition of said wall and base, said sediment-receiving chamber being located substantially opposite to the greater radial termini of said blades and carrying a viscous fluid for receiving thereagainst the gas pumped by said blades, said frusto-conical wall extending in a direction opposite to said base and turning inwardly to form an annular construction terminating near but spaced from said distributing chamber, a plurality of open-end tubes comprising centrifugal pumps extending through said construction for establishing communication with the gas in said channel and a like number of nozzles secured on the radial ends of said tubes, said nozzles being positioned at a radius greater than that of the greater radial termini of said blades and being mounted to discharge said gas in a direction opposite to that of the rotor's rotation.

3,005,516 AIR FILTER

Joseph J. Klein, Glenview, Ill., assignor to Fiber Bond Corporation, a corporation of Illinois
Filed Aug. 5, 1957, Ser. No. 676,278
5 Claims. (Cl. 183-49)



1. A self-sustaining, deformable air filter comprising a self-sustaining, deformable, foraminated backing material and a porous fibrous web, said filter being deformed to provide an integral rim extending at an angle to the plane of the major portion of the filter, one outer surface of said fibrous web being adhesively bonded to one surface of said backing material, said fibrous web being held in said deformed shape by the adhesive bond between said one outer surface of said web and said backing material.

3,005,517

ACRYLONITRILE RECOVERY PROCESS

James D. Idol, Jr., Shaker Heights, Arthur J. Tiffin, Akron, and Evelyn J. Beale, Cleveland, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Aug. 14, 1959, Ser. No. 833,670
3 Claims. (Cl. 183-115)

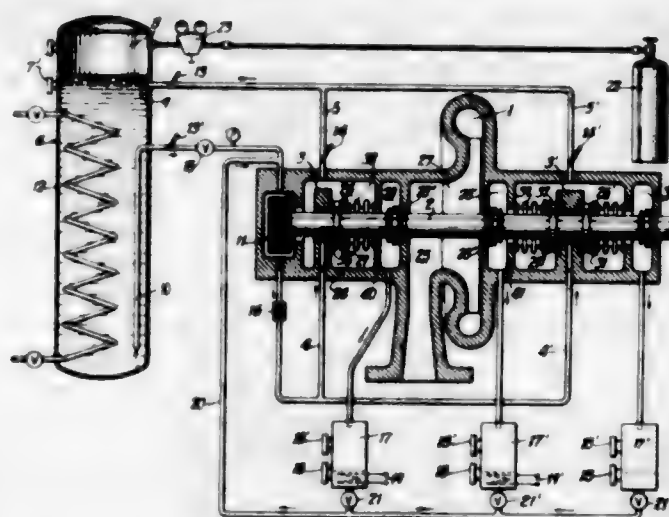
1. A process for the recovery of acrylonitrile from a gaseous mixture resulting from the catalytic vapor phase reaction of ammonia, propylene, and oxygen comprising acrylonitrile and ammonia which comprises the step of absorbing said acrylonitrile and ammonia in a solvent while maintaining the temperature of said solvent during

said absorption step at a temperature below about 75° F. whereby any reaction between said acrylonitrile and ammonia absorbed in said solvent is substantially precluded.

3,005,518 TURBOMACHINE PLANT, INCLUDING A CLOSED LUBRICATING, COOLING, AND SEALING FLUID CIRCUIT

Kurt Jassulter, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed Nov. 26, 1958, Ser. No. 776,528
Claims priority, application Switzerland Nov. 29, 1957
5 Claims. (Cl. 184-6)

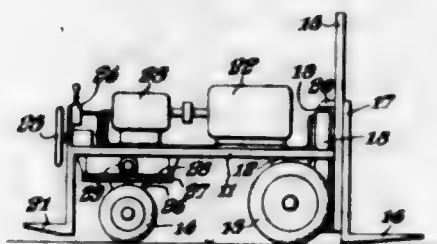


1. A turbomachine plant comprising a shaft, a rotor mounted on said shaft, a casing having a first compartment accommodating said rotor, a second compartment in said casing, said shaft extending through said second compartment, sealing means placed around said shaft in said second compartment, a bearing for said shaft placed in said second compartment, a fluid acting as sealing fluid around said sealing means and as coolant and lubricant in said bearing, a fully closed conduit circuit containing said fluid and including first conduit means connected to said bearing for supplying said fluid thereto, said second compartment receiving said fluid from said bearing, second conduit means connected to said second compartment for receiving said fluid therefrom and returning said fluid to said first conduit means, and pressure maintaining means connected to said conduit circuit for maintaining, at all times, including the standstill periods of said rotor, a predetermined pressure in said circuit which is at least as high as the highest operating pressure in said first compartment.

3,005,519

MECHANICAL LOAD HANDLING EQUIPMENT

Erik ten Kate, % "Brimex" Works, Yorktown Industrial Estate, Camberley, Surrey, England
Filed Dec. 11, 1959, Ser. No. 858,990
Claims priority, application Great Britain Jan. 9, 1959
3 Claims. (Cl. 187-9)



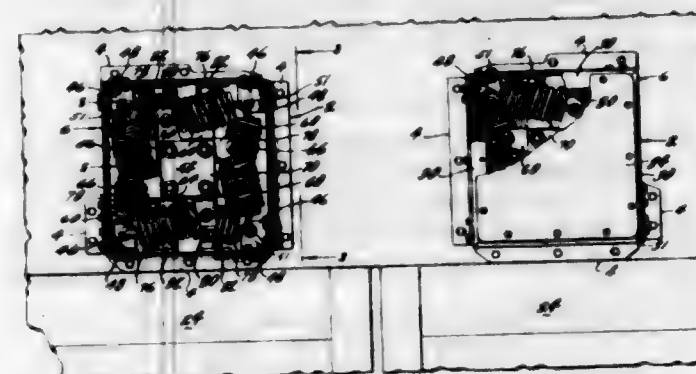
1. Mobile load handling equipment comprising a wheeled chassis, a power unit mounted on the chassis, a hydraulic pump driven by the power unit, a hydraulic

motor adapted to drive at least one of the chassis wheels, hydraulic lifting means, and hydraulic control means for separately controlling the hydraulic motor and the lifting means including separate valves and actuator therefor for the motor and lifting means respectively a locking slide connection between the said separate valve actuators, and means whereby operation of any of the actuators displace the slide to lock the remaining actuators in valve neutral position.

3,005,520

VIBRATION ABSORBER

Kenneth C. Mard, Stratford, and Anthony J. Pichnarek, Milford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,841
10 Claims. (Cl. 188-1)

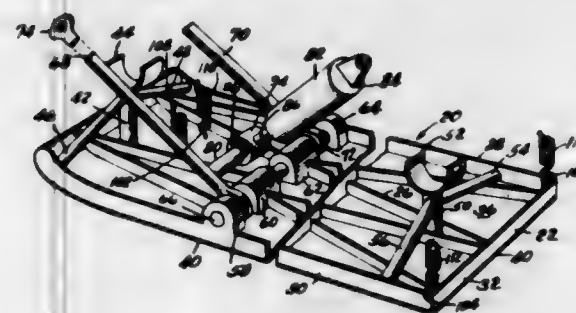


1. A vibration absorber having a casing, a suspended mass, spring means connecting said mass to said casing, said spring means including a first set of springs mounted in a first plane, said spring means including a second set of springs mounted in a second plane parallel to the first plane.

3,005,521

RUDDER BRAKE

Willard Edwin Blain, % Blain Mfg. Co., P.O. Box 175, Miami, Okla.
Filed July 23, 1958, Ser. No. 750,472
1 Claim. (Cl. 188-5)

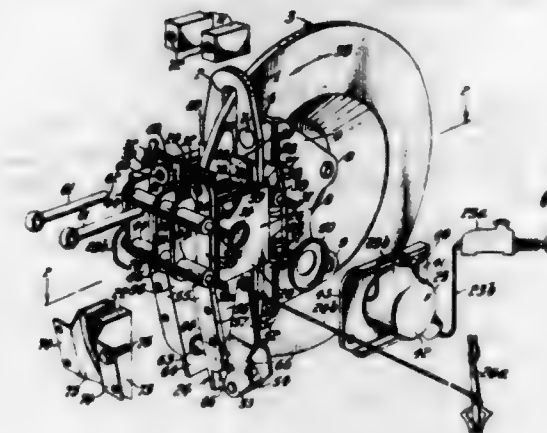


A combined rudder and brake for a vehicle having a frame with spaced axles connected thereto comprising a member having a substantially flat bottom surface, bearing means connected to said member above said bottom surface, rods pivotally connected at their respective ends to said bearing means and said frame, an expandable and retractable air motor pivotally connected to said rods and frame and adapted to extend at an angle rearwardly and upwardly toward said frame with respect to said member, a pair of vertically extending rests mounted on said member adjacent each end thereof, said rests engageable with said axles to stabilize said member with respect to said frame, spring means connected to said member and said frame for normally urging said rests upwardly into engagement with said axles, said motor being operable to move said rests out of engagement with said axles contemporaneous with moving said member into contact with the road surface beneath the vehicle.

3,005,522

DISC BRAKES

Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company
Filed Mar. 28, 1958, Ser. No. 724,562
Claims priority, application Great Britain Apr. 3, 1957
12 Claims. (Cl. 188-73)

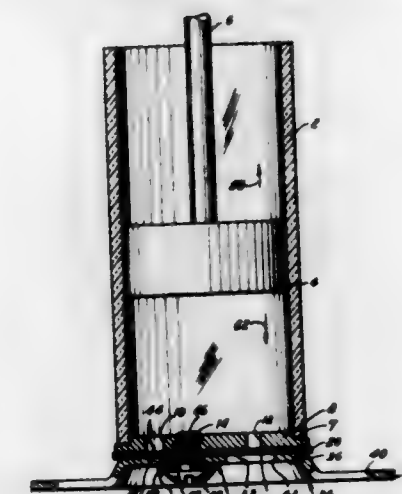


1. A disc brake comprising a rotatable disc, a non-rotatable housing straddling a portion of the periphery and side surfaces of said disc and comprising a supporting plate having a portion extending chordwise and normal to the surfaces of said disc on each side of the disc connected to each other at each end beyond the periphery of said disc, and a pair of rigid plates connected at one end beyond the periphery of said disc and extending radially inwardly on each side of said disc toward the center thereof and joined to and supported at their radially inner ends by said supporting plate to define a rectangular recess open at its axially-inner boundary to a braking surface of said disc, each said plate having an aperture formed centrally therein, a friction element confined in each said recess and movable therein axially into engagement with the sides of said disc, a cylinder mounted on the axially outer side of each said plate in alignment with said aperture and a piston in said cylinder freely slidable in said aperture and extending into engagement with one of said friction elements.

3,005,523

DAMPING DASHPOT

Richard D. May, Westport, Conn., assignor to Electric Regulator Corporation, Norwalk, Conn., a corporation of New York
Filed Oct. 6, 1959, Ser. No. 844,758
13 Claims. (Cl. 188-95)



1. In combination, a cylinder with a piston movable therein, said cylinder having a closed end comprising a wall with a fluid passage aperture therethrough, a mem-

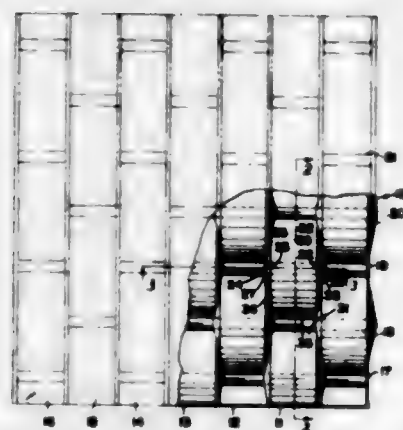
ber positioned against said wall and having a movable flap of lesser thickness than said member proper overlying and normally completely covering said aperture and movable to a position uncovering said aperture, and means for compressing said member proper adjacent said flap in a direction substantially perpendicular to the normal direction in which said flap extends while leaving said flap free to move, thereby biasing said flap relative to said aperture.

3,005,524

WOVEN STRUCTURAL MATERIAL

Sawyer M. Pomeroy, Lyndhurst, Ohio, assignor to The W. S. Tyler Company, Cleveland, Ohio, a corporation of Ohio

Filed Jan. 25, 1954, Ser. No. 485,836
1 Claim. (Cl. 169-82)



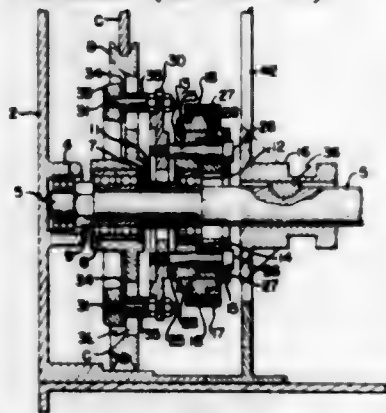
A woven structural material formed of longitudinal and cross strands in which the longitudinal strands are channel-shaped, said channel having a back and a web extending from each edge of the back in the same direction, said channel-shaped strands being bent alternately under stress over and under the cross strands and having at the one bend the channel back in tension and the webs in compression, forming in each channel a saddle back at its outer back face and extruded web sections forced outwardly from its sides, and having stretched web portions at the opposite adjacent bend with each web thinning in tension as it is bent in the opposite direction from the extruded section.

3,005,525

RECORDING APPARATUS CLUTCH FOR EARTH BORE DRILLING EQUIPMENT

Oliver V. Phillips, Littleton, Colo., assignor to The Geotex Corporation, Denver, Colo., a corporation of Colorado

Filed Sept. 30, 1957, Ser. No. 687,051
5 Claims. (Cl. 192-30)



1. In a drilling recording apparatus, a clutching mechanism comprising a shaft, a drive member journaled on said shaft, means for rotating said drive member an amount corresponding to vertical movement of the drill stem, a driven member journaled on said shaft, marking means including a stylus arm adapted to reflect on a

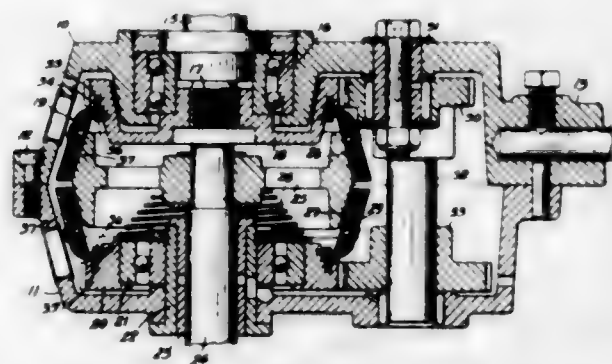
chart vertical movements of the drill stem with respect to time, means connected for limited movement with the driven member operable to cause movement of said marking means, a first clutch means comprising the driven member and a clutch body having a face engageable with the driven member, means for coupling and uncoupling said body face and driven member, cooperating means between the drive and driven members, including means operable when said first clutch means is engaged to cause, upon movement of said drive member a predetermined amount, corresponding movement of the driven member, said cooperating means including a clutch plate member interposed between said drive and driven members and movable axially of said shaft, and second clutch means including said plate member and a clutch ring carried thereby and engageable with said drive member, said second clutch means being operable when said first clutch means is disengaged to immediately cause the ring to engage the drive member and thus impart the exact corresponding movement of the drive member to said driven member.

3,005,526

CONICAL CLUTCH SLEEVES FOR TAPPING ATTACHMENTS

Asher I. Zagar, Brooklyn, N.Y., assignor to Etico Tool & Machine Co., Inc., Brooklyn, N.Y., a corporation of New York

Filed Oct. 10, 1958, Ser. No. 766,548
2 Claims. (Cl. 192-51)



1. In devices of the character described employing forward and reverse drive conical clutch sleeves operatively engaging a tool spindle driving clutch head, each of said sleeves forming large and small diameter ends thereon, said sleeves having circumferentially spaced and extending gripper shoes operatively engaged by said head in forward and reverse drives of said spindle, said shoes each comprising a body of molded material, the small diameter ends of said sleeves having circumferentially spaced and extending apertures, the full circumferential width of inner contracted ends of said shoes extending into said apertures in keying the shoes to said sleeves, means for securing the shoes to inner surfaces of said sleeves, and each shoe having a flange portion extending the full circumferential width of the shoe and overlying the large diameter end of the sleeves.

3,005,527

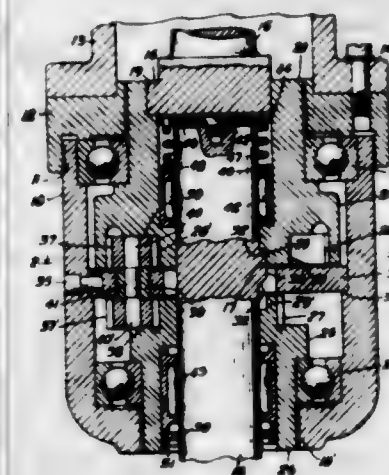
POSITIVE DRIVE TAPPING ATTACHMENTS

Asher I. Zagar, Brooklyn, N.Y., assignor to Etico Tool & Machine Co., Inc., Brooklyn, N.Y., a corporation of New York

Filed Nov. 17, 1958, Ser. No. 774,259
1 Claim. (Cl. 192-51)

In a clutch device, a forward drive member, a reverse drive member, means comprising circumferentially spaced pinion units placing the forward drive member in operative engagement with said reverse drive member, a driven shaft having an integral polygon clutch head arranged between and independently engaging both of said members, said members having on adjacent surfaces

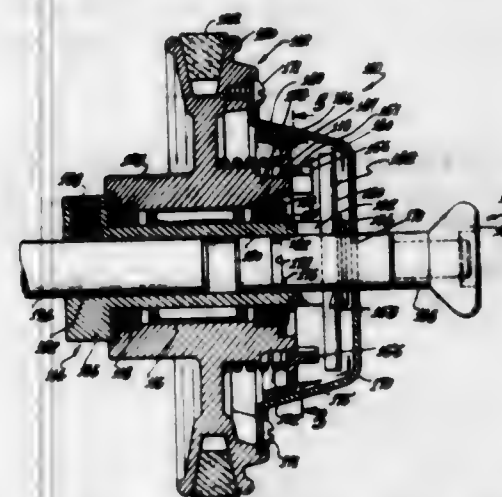
polygon sockets for reception of said head, means mounted on said driven shaft and operatively engaging the forward drive member for normally supporting said head in the socket of said forward drive member in the forward drive of said shaft, said shaft being actuatable to



move the head from the first socket into the socket of the reverse drive member in the reverse drive of said driven shaft, and said means comprising a coil spring arranged integrally within the forward drive member and fixed to and rotatable with said driven shaft.

3,005,528
CLUTCH

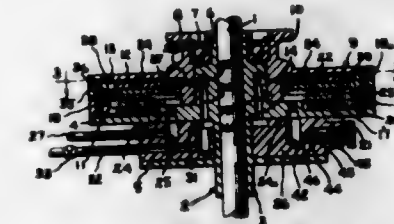
Warren Doble, North Hollywood, and Frank H. Sully, Burbank, Calif., assignors to Jabco Pump Company, Burbank, Calif., a corporation of California
Filed Aug. 19, 1957, Ser. No. 678,950
4 Claims. (Cl. 192-55)



1. In a clutch, the combination of: coaxial driving and driven rotary members one of which includes a cup-shaped cover rotatable therewith; two interengageable clutch means disposed within said cover and respectively carried by said rotary members, one of said clutch means being movable axially relative to the rotary member by which it is carried into engagement with the other of said clutch means, said other clutch means including an annular shoe means rotatable relative to the rotary member by which this clutch means is carried and movable axially of such rotary member into frictional engagement with said cover in a direction opposite to the direction of movement of said one clutch means into engagement with said other clutch means; spring means engaging said shoe means and biasing said shoe means into frictional engagement with said cover; and actuating means operatively connected to said one clutch means and projecting axially through said cover for moving said one clutch means axially into engagement with said other clutch means.

3,005,529
PNEUMATICALLY ACTUATED CLUTCHING MECHANISM

John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 23, 1960, Ser. No. 38,348
3 Claims. (Cl. 192-88)



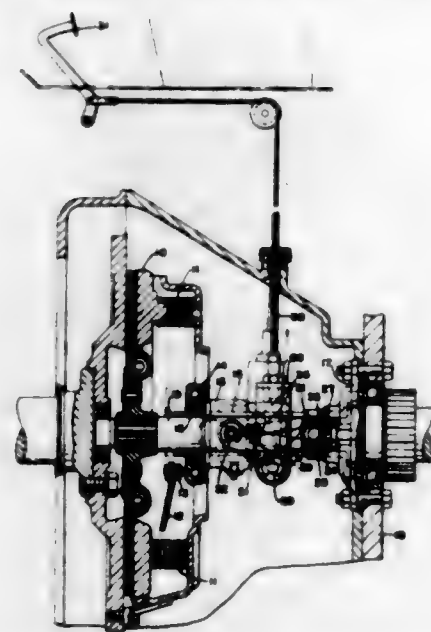
1. A pneumatically actuated clutching mechanism comprising: first and second coaxial relatively rotatable members respectively having axially displaced surfaces forming an annular chamber between said surfaces, said members respectively having sections in sealing relation to each other closing one end of said chamber, said first member including a part secured between said surfaces in axially movable non-rotatable relation to the remainder of said first member, said part including an annular clutching band axially movable into tight engagement with said second member surface thereby to clutch said members together and to seal part of the other end of said chamber, said part further having a back portion facing toward and spaced from said first member surface so as to be subjected to the pressure within said chamber, an annular sealing strip of flexible material secured at one end to said part and at its other end to said remainder of said first member thereby to close the remainder of said other end of said chamber, one of said members having an inlet passage extending from said chamber and adapted to be connected to a source of gas under pressure whereby said clutching band is movable against said second member surface with increasing force as the gas pressure in said chamber increases, one of said members having exhaust passage means extending therethrough from said chamber and adapted to be connected to atmosphere, weight means positioned within said chamber so as to be movable therewithin, said weight means being formed to close said exhaust passage means in one position thereof, spring means biasing said weight means to said one position, said weight means being movable under the influence of centrifugal force at a predetermined speed of rotation to a second position in which said exhaust passage means is uncovered, whereby the rotational speed transmitted by such clutching mechanism may be limited in accordance with the speed at which said weight means uncovers said exhaust passage means.

3,005,530
ACTUATING ASSEMBLY FOR CLUTCHES AND BRAKES

Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Filed July 14, 1958, Ser. No. 748,244
1 Claim. (Cl. 192-99)

In combination with two relatively rotatable structures having confronting faces for torque sustaining engagement with one another, one of said structures being movable in opposite directions to either establish or disestablish the torque sustaining engagement between said faces, the improvement which comprises an axially extending sleeve which is movable axially in one direction to effect movement of said one structure in one direction, a toggle for moving said sleeve axially, said toggle comprising a pair of rigid arms having a pivotal connection to one another and respectively extending in opposite directions away from said pivotal connection, one of said toggle arms away from said pivotal connection to the

other toggle arms being pivotally connected to said sleeve in force-transmitting relationship therewith, the other toggle arm away from said first-mentioned pivotal connection having a fixed pivotal support, said pivotal connection between the toggle arms being disposed at one side of the axis of movement of the sleeve, a flexible

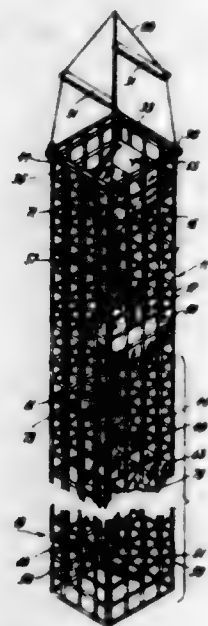


pull cable connected to said pivotal connection between the toggle arms and extending therefrom to the opposite side of said axis, and a stop stud fixed to said sleeve and interposed in the path of movement of said toggle to prevent the respective toggle arms from reaching a position in direct axial alignment with one another.

3,005,531

VERTICAL CHUTES

Anthony Scaramuzzi, 410 Broadway, Staten Island, N.Y.
Filed Apr. 8, 1959, Ser. No. 805,104
4 Claims. (Cl. 193—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A vertical chute comprising a box channel frame, a plurality of slotted vertical webs in spaced relation, a plurality of slotted horizontal webs in spaced relation interlaced and coupled to said vertical webs to form a webbing lattice constituting a passageway, a plurality of D rings secured to selected vertical webs near the upper end of said webs, and a plurality of harness hooks each secured to one of said selected vertical webs at the upper end of said web, whereby said end of said web is adapted to encircle a side of said frame with said hook secured to said ring to depend said lattice from

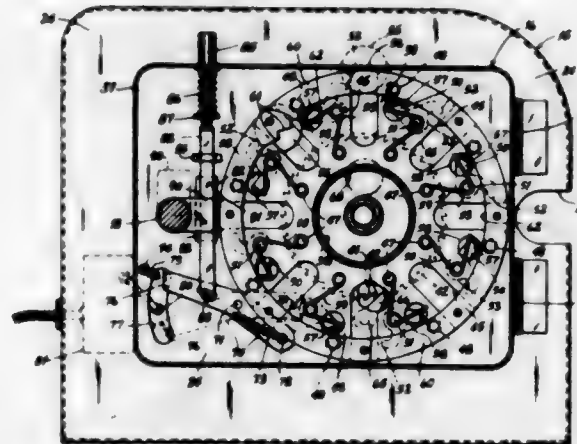
said frame, and a plurality of baffle slider boards depending alternately from opposite portions of the interior of the chute defined by said passageway at successive levels thereof.

3,005,532

DISPENSING AND CONTROLLING MACHINE

Thomas F. Hines, 50 Bonita St., Arcadia, Calif., and Willis L. Wells, Clayton, Mo.; said Wells assignor to said Hines

Filed Sept. 24, 1958, Ser. No. 763,033
10 Claims. (Cl. 194—71)



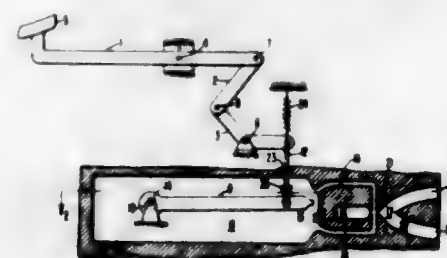
1. In a food dispensing machine: a dispenser having a magazine for containing a plurality of units of food, each in a different position in the magazine, the magazine being movable to bring each unit to dispensing position; a heater; coin-responsive means to render the dispenser movable to dispense the food to be prepared; means to render the heater operative, means operated by movement of the magazine to each dispensing position to cock the means to render the heater operative; and means operable independently of movement of the dispenser when the aforesaid means is cocked, for producing energization of the heater.

3,005,533

FLUID KEYBOARD USING JET-PIPE VALVES

Walter G. Wadey, Wynnewood, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 31, 1960, Ser. No. 66,063
12 Claims. (Cl. 197—15)



1. A keyboard device comprising: a fluid amplifier having at least two control signal inputs; movable jet producing means for selectively directing fluid to at least one of said control signal inputs; and a mechanical linkage for moving said jet producing means.

3,005,534

PAPER POSITIONING MEANS FOR BUSINESS MACHINES

John C. Morris, East Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,636
13 Claims. (Cl. 197—114)

9. In a business machine, the combination with a removable platen of a removable plate having upper and

lower vertical slots therein, means mounted on said plate for engaging said platen and rotating said platen through a selected number of line space increments, including movable slide means, pins on said slide means riding in said slots of said plate, and pawl means on said slide

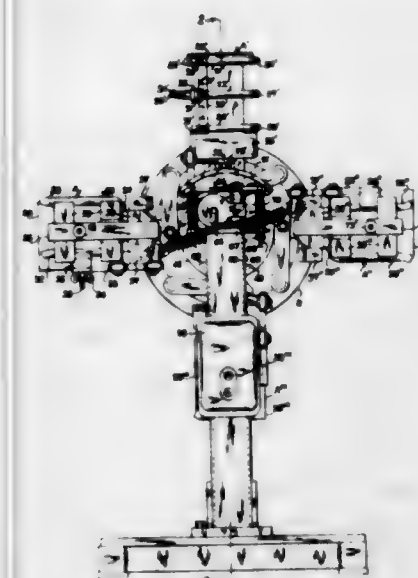


3,005,535

AUTOMATIC TRANSFER MACHINE

Fred R. Kerns, Cleveland Heights, and Robert R. Mease, Eastlake, Ohio, assignors to The Electric Storage Battery Company, a corporation of New Jersey

Filed Dec. 23, 1959, Ser. No. 861,558
10 Claims. (Cl. 198—33)



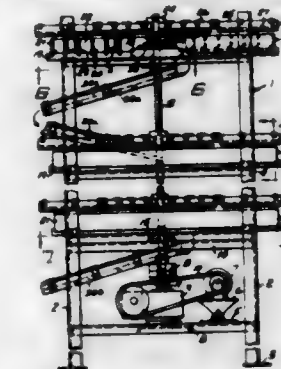
7. In an apparatus of the character described, a member, means supporting said member for rotation about a first axis, a plurality of workholders each adapted to receive a stack of plate-like articles, means pivotally connecting the workholders to said member spaced angularly about the first axis for pivotal movement about second axes generally perpendicular to the first axis, means for rotating said member about the first axis to carry the workholders sequentially through loading, working and unloading stations, means for pivoting each workholder in a first direction through an angle of the order of ninety degrees during its movement from the loading to the working station and for pivoting each workholder in a second direction through an angle of the order of ninety degrees during its movement from the working station to the unloading station, and means for vibrating each workholder while at said working station.

3,005,536

STORAGE UNITS

Michael Dabich, St. Clair Shores, Mich., assignor to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan

Filed Sept. 2, 1958, Ser. No. 758,528
4 Claims. (Cl. 198—45)



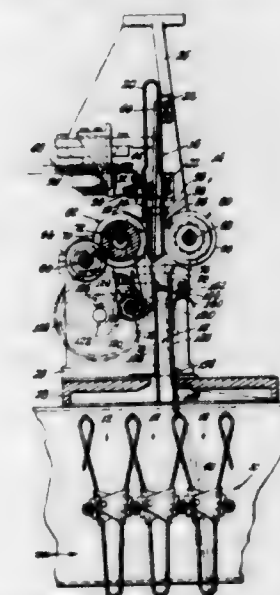
1. A storage unit including a supporting frame, substantially spirally wound ribbons secured on the frame in vertically spaced relation, the adjacent pairs of turns of each ribbon being spaced from one another to form a continuous and substantially spiral passage of substantially constant width between them, means supported between each adjacent pair of turns of each ribbon for supporting workpieces in the passage formed between them, carriers each mounted for movement around a relatively wide annular path extending across and above portions of all the turns on one side of one of the substantially spirally wound ribbons, a flexible wiper dependently secured to each carrier adapted to travel across the upper faces of workpieces in the passage beneath it and advance workpieces therealong, means for moving all the carriers around their annular path, and a chute extending between the inner extremity of the top spirally wound ribbon and the outer extremity of the spirally wound ribbon beneath it downwardly through which workpieces are adapted to travel, and a roller mounted across the path of movement of the wipers traveling adjacent the junction of the lower extremity of the chute with the outer extremity of the lower ribbon to raise the said wipers and permit unobstructed passage of the workpieces therebeneath.

3,005,537

MAIL HANDLING APPARATUS

Robert E. Schneck, Riverside, and Robert E. Mersereau, Rowayton, Conn., assignors to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Filed Nov. 2, 1959, Ser. No. 850,180
4 Claims. (Cl. 198—105)

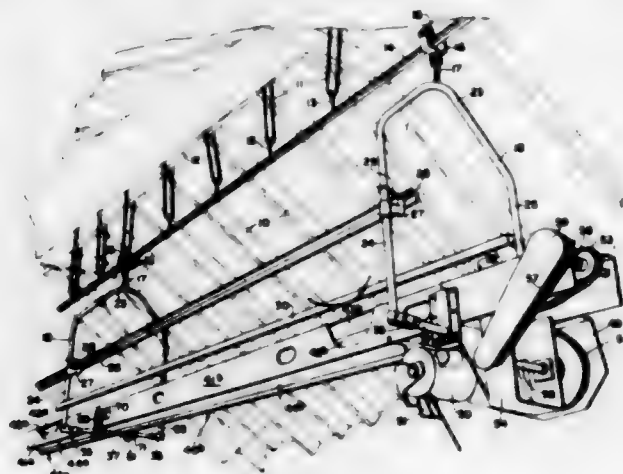


1. In combination: a continuously movable, variable speed conveyor including a plurality of receivers con-

tinuously movable at variable speeds in one-by-one succession past a loading location; a feeding device adjacent said conveyor; said feeding device comprising a first feed roller and a second feed roller; means mounting said first feed roller for shifting of the latter from a retracted position to an advanced position; said first feed roller, when in said retracted position, being spaced from said second feed roller to permit an article to be disposed between said feed rollers and, when moved to said advanced position, biasing said article against said second feed roller; means operatively arranged for rotatably driving one of said feed rollers at a speed proportional to that of the conveyor; and means operatively arranged for shifting said first feed roller between said advanced and retracted positions with a frequency proportional to the speed of the conveyor whereby an article is impelled from between the feed rollers into each of certain successive ones of said receivers regardless of changes in the speed of the conveyor.

3,005,538 CONVEYOR

Arnold B. Skromme and Orville P. Lance, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Continuation of application Ser. No. 708,238, Jan. 10, 1958. This application Dec. 11, 1958, Ser. No. 779,796
8 Claims. (Cl. 198—126)

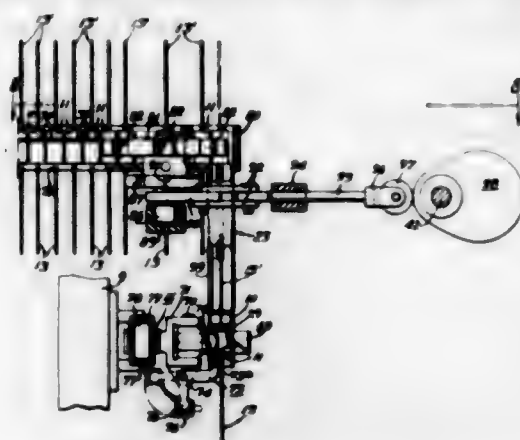


6. An elongated conveyor of the type described comprising: an elongated rail adapted for support above and longitudinal of the conveyor; a plurality of U-shaped hanger members spaced longitudinally relative to the rail, each of the U-shaped hanger members having a transverse bight portion and depending leg portions; means mounting the U-shaped members on the rail permitting longitudinal movement of the members on the rail; a plurality of elongated conveyor sections, each of the sections being generally similar in cross section with the other sections and disposed in end to end relation with the other sections to form a continuous uniform conveyor support; cross rods disposed under the sections for vertical support thereof; means pivotally and detachably connecting opposite ends of the cross rods to opposite depending leg portions respectively of the U-shaped hanger members; and conveyor means supported by the conveyor support for moving material lengthwise of the support.

**3,005,539
CONDENSER FINAL ASSEMBLY MACHINE**
Cary L. Wellington, Stamford, Conn., assignor to Wellington Electronics, Inc., a corporation of New York
Filed Mar. 30, 1956, Ser. No. 575,246
10 Claims. (Cl. 198—179)

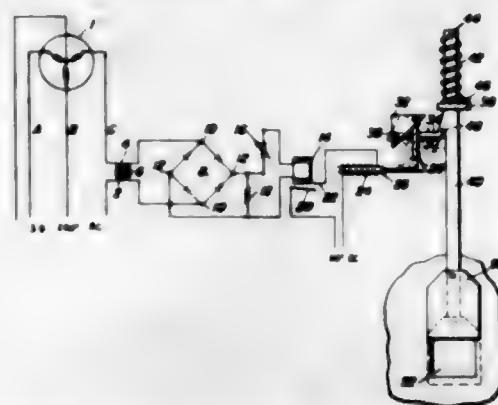
1. A machine for assembling electrical condensers comprising a conveyor means movable along a predetermined

path, supports on the conveyor means having means engaging and holding the sidewalls of the tubular condenser casings which are open at both ends, and separate holder



closure means movably supported on each support and adapted to move to hold an electrode assembly in place within the casing.

**3,005,540
SAFETY DEVICE FOR BUCKET ELEVATORS**
Philip D. Hinderaker, Astoria, S. Dak.
(2351 Beverly Road, St. Paul 4, Minn.)
Filed Dec. 24, 1957, Ser. No. 704,966
4 Claims. (Cl. 198—232)

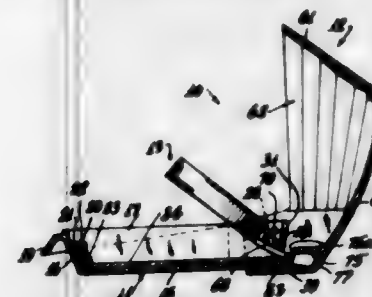


1. A safety device for grain elevators having a carrying belt comprising a motor, wires connecting said motor to a source of electrical energy, said motor drivingly connected to said carrying belt, electrical sensing means connected to at least one of said wires and responsive to a predetermined change of current therein, and electro-mechanical means operatively connected to said sensing means for incrementally controlling a flow of grain to said belt and safety means energized by said source of electrical energy for positive interruption of flow of grain when said source becomes disconnected from said motor.

**3,005,541
DISPLAY BOXES FOR WRIST WATCHES AND THE LIKE BANDED ARTICLES**
Benjamin Wisner, New York, N.Y., assignor to Custom Manufacturing Co., Jersey City, N.J., a corporation of New Jersey
Filed Apr. 19, 1960, Ser. No. 23,261
11 Claims. (Cl. 206—45.13)

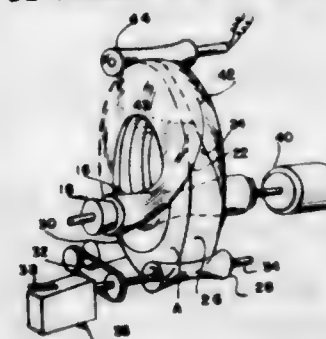
1. A box comprising a case having a bottom wall, a front wall, side walls and a rear wall, a cover having a top wall, side walls, a front wall and a rear wall, said rear wall of the cover being located rearwardly of the rear wall of the case, said side walls of the cover having portions straddling the side walls of the case, means on the side walls of the case, forward of its rear wall, and above its bottom wall engaging means on the straddling portions of the side walls of the cover and also located

forwardly of the rear wall of the case, to hinge the cover to case, said rear wall of the case being formed with a slot adjacent the bottom wall and below the hinge means, a holder for a banded article in the case and supported on the bottom wall of the case, said holder having a bottom, central, rearwardly extending arm projecting rearwardly through said slot having a rear end portion ex-



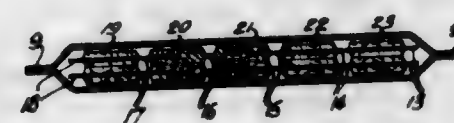
tending rearwardly beyond said rear wall of the case, and actuating means on the cover, located rearwardly of the rear wall of the case and above said rear end and adjacent thereto, whereby when said cover is swung open about said hinge means, said actuating means will press down on said rear end of said arm to swing said holder upwardly.

**3,005,542
METHOD OF PACKAGING ANNULAR SHAPED ARTICLES**
John W. Harrison, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Oct. 10, 1960, Ser. No. 61,741
31 Claims. (Cl. 206—46)



31. In combination: an annular shaped article having inner and outer peripheral portions separated by side walls, a cover for said article made of a heat shrinkable film, said cover having a preshrunk longitudinal center strip for covering the inner peripheral portion of the article and longitudinal unshrunk edge portions, each of said longitudinal unshrunk edge portions covering one side wall, the outer peripheral portion and at least a portion of the other side wall so that the unshrunk portions overlap on the outer peripheral portion of the article and a portion of both side walls, said unshrunk portions being subsequently shrunk to hold the cover on the article.

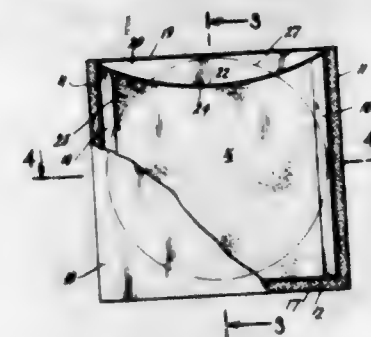
**3,005,543
CLEANING PRODUCT**
Edward A. Morse, Fanwood, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Filed Apr. 13, 1959, Ser. No. 806,113
2 Claims. (Cl. 206—56)



1. A nail polish remover pad of absorbent material impregnated with a controlled amount of a nail polish solvent and having a predetermined size and shape for

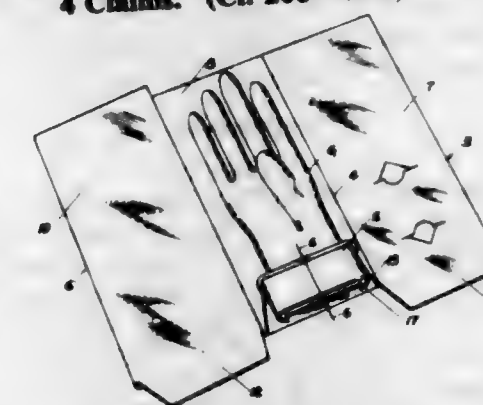
packaging, said pad being pressed and shaped into thin oblong rectangular strips for individual use, and said strips being connected by thin webs which permit them to be bent or folded with reference to one another to facilitate their individual use.

**3,005,544
JACKET FOR PHONOGRAPH RECORDS**
Arthur Chaplin, East Rockaway, N.Y., assignor to Nealco Corp., East Rockaway, N.Y., a corporation of New York
Filed May 27, 1960, Ser. No. 32,424
4 Claims. (Cl. 206—62)



1. A phonograph record package, said package comprising a pair of outer walls, spacer means securing said outer walls together along certain of their adjacent edges to leave one pair of adjacent edges open, a pair of facing inner walls interposed between and respectively secured to said outer walls, flexible means inward of said spacer means securing said inner walls together along certain adjacent edges of said inner walls to leave one pair of adjacent inner wall edges open in alignment with the adjacent open edges of said outer walls, a record interposed between said inner walls and flexible means, and a flap secured to and extending along one of said open inner wall edges, said flap having a free edge insertable in frictional engagement between the opposite outer wall and said record received between said inner walls.

**3,005,545
PACKAGE OF SURGICAL GLOVES**
Stanley Jay Stanley, Dallas, Tex., assignor to Stanley Supply Co., Inc., New York, N.Y., a corporation of New York
Filed Aug. 27, 1959, Ser. No. 836,369
4 Claims. (Cl. 206—63.2)



1. A package for surgical gloves comprising an inner cardboard folder in which a pair of surgical gloves may be enclosed, said folder being provided with flaps extending inwardly from transverse margins thereof, each of said flaps being bent back upon itself in the provision of a main tab which extends outwardly toward the transverse margins from which said flap extends, said flaps being adapted for retentive insertion under down-folded cuffs on the gloves, an auxiliary tab integrally formed on and operatively associated with each flap, said auxiliary tab being attached to the flap between the end of the main tab with which it is associated and the transverse margin from

which said flap extends, each of said auxiliary tabs extending inwardly into overlapping relation with respect to the main tab with which it is associated and being adapted for insertion into the wrist-portion of the glove in overlying relation to the flap with which it is associated, and an outer wrapper formed of steam-permeable parchmentized paper, said wrapper being disposed enclosingly around the folder.

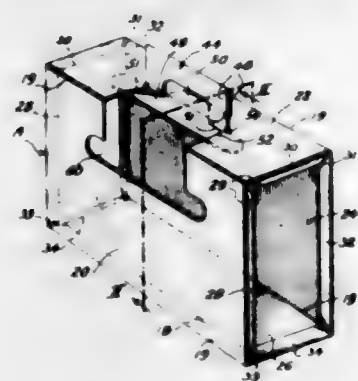
3,005,546

CARRYING CARTON

Stuart P. Sanford, West Orange, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 4, 1957, Ser. No. 694,366

6 Claims. (Cl. 286-65)



1. A tubular open-ended carton enclosing a row of articles each of which extend longitudinally of said carton and have their ends located at and disposed inwardly from the open ends thereof; said carton comprising a top and a bottom wall, a pair of side walls, and means retaining said row of articles in loaded position within said carton; said article-retaining means comprising an intumed flap of relatively stiff material at each end of said carton resiliently hinged to and coextensive with one of said side walls and one of the walls joined thereto, the intermediate corner-forming portion of each of said intumed flaps by virtue of the continuity and stiffness of said flaps being biased toward and nestingly seated against the respective corners of said carton thereby locking said flaps in intumed position, and the remaining portions of said flaps by virtue of the resiliency of the hinged juncture thereof with said carton being sprung away from the walls thereof into abutting engagement with the ends of each of the packed articles, whereby said row of articles is interposed between and locked in loaded position within said carton by the upstanding portions of said flaps.

3,005,547

SEPARATOR FOR PARTICULATE MATERIALS

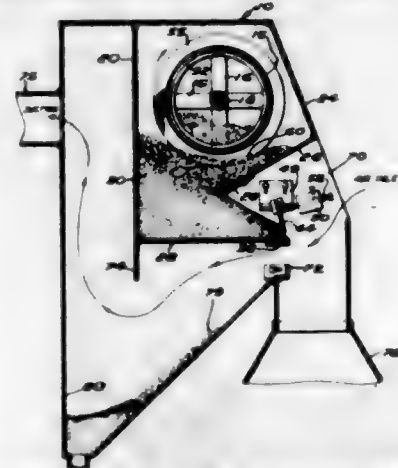
Ardee Horace Freeman, Granger, Ind., assignor, by mesne assignments, to Bell Intercontinental Corporation, South Bend, Ind., a corporation of Delaware

Filed Nov. 13, 1959, Ser. No. 852,812

10 Claims. (Cl. 209-32)

10. A particulate material separation device comprising an elongate hopper device having an elongate gravity discharge opening, a fixed gate plate disposed adjacent said opening and being of a length less than the length of said discharge opening to provide a controlled material passage gap below the gate plate and a free-flow material passage gap beyond such gate plate, a movable control plate hingedly mounted parallel to said fixed gate plate and counterweighted to oppose and remain closed against the weight of material moving thereagainst from below said fixed gate plate while opening in response to the added weight of material moving thereagainst through the free-flow gap portion of the device, means distributing feed material to said hopper device substantially uniformly

therewithin along the length of said discharge opening, and means directing a stream of air to pass through the



curtain of material released by opening of said movable control plate.

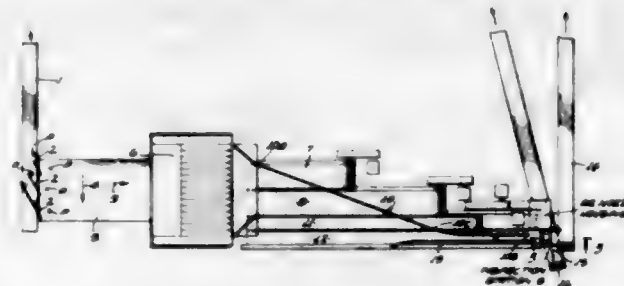
3,005,548

PEACH PIT FRAGMENT DETECTION MEANS AND TECHNIQUES

Robert H. Flanders, Concord, and John E. Dimick, El Cerrito, Calif., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York

Filed Aug. 16, 1956, Ser. No. 604,531

1 Claim. (Cl. 209-111.5)



In an arrangement of the character described for separating peach halves having pit fragments, an inspection station including a radiation source for illuminating an entire peach half and a plurality of radiation detection means spaced from said source and defining a path therebetween through which said peach halves are moved, each of said radiation detection means including a separate collimator tube with a collimator tube of one of said detection means being aligned in a straight line with a collimator tube of another one of said detection means to define a linear array of collimator tubes, means for projecting said peach halves through said path with said peach halves being in horizontal free flight and with the convex portions of said peach halves facing said source and with the cup-shaped portions of said peach halves facing said linear array of collimator tubes, each one of said detection means being sensitive to the radiation transmitted through a different portion of said peach halves and through a corresponding one of said array of collimator tubes, a single peach half deflection means, means coupled to and operated by said detection means for operating said single deflection means when a pit fragment changes the radiation impinging on any one of said collimator tubes, radiation masking means interposed between said peach half and said radiation detection means for limiting the radiation impinging on each of said detection means after transmission through said peach half, said masking means comprising an elongated slit having its longitudinal axis extending perpendicular to the direction of peach half movement, said array of collimator tubes being in close proximity to said slit and having an area for light transmission substantially equal to the area of said slit to receive substantially all of the radiation passing through said slit.

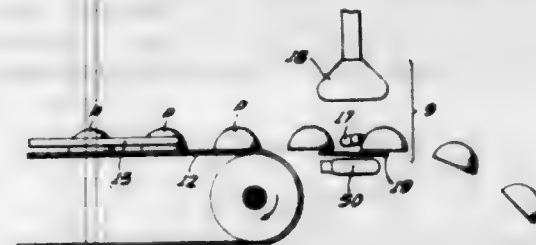
3,005,549

PEACH PIT FRAGMENTATION DETECTION MEANS AND TECHNIQUES

Robert H. Flanders, Concord, John E. Dimick, El Cerrito, and Roy Amara, Redwood City, Calif., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York

Filed Aug. 16, 1956, Ser. No. 604,558

7 Claims. (Cl. 209-111.5)



1. In a system for classifying comestibles, the steps including projecting said comestible in free horizontal flight, determining the translucency of such comestible while in free flight, and classifying said comestible in accordance with its translucency so determined in free horizontal flight.

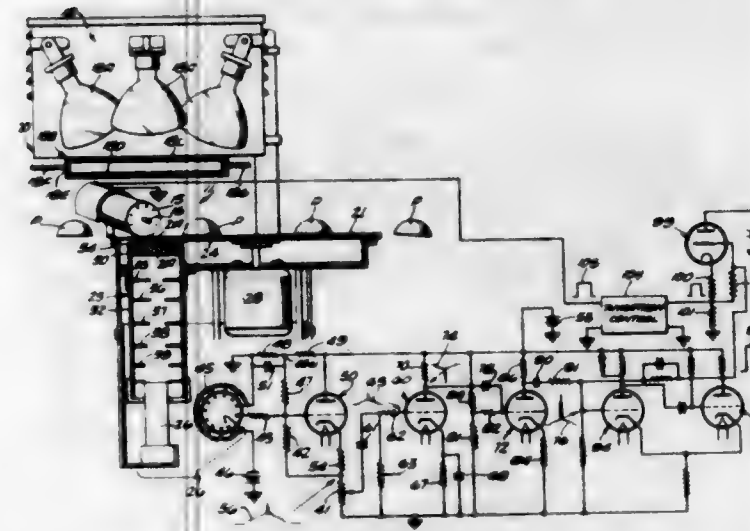
3,005,550

PEACH PIT FRAGMENT DETECTION MEANS AND TECHNIQUES

Robert H. Flanders, Concord, and John E. Dimick, El Cerrito, Calif., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York

Filed Apr. 26, 1957, Ser. No. 655,377

11 Claims. (Cl. 209-111.5)



1. In the method of classifying a peach half having a pit fragment from peach halves having no pit fragment attached thereto, the steps including moving said peach half along a path, scanning said peach half with a spot of radiation which moves and is transmitted through that portion of the peach half adjacent said fragment, said radiation being in the visible range of the spectrum, effectively measuring the radiation transmitted through said peach half to obtain a measurement as to its translucency, and deflecting said peach half from said path in accordance with such measurement.

3,005,551

CORN PITCHER

Donald A. Kesinger, Rock Island, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Aug. 27, 1959, Ser. No. 836,409

7 Claims. (Cl. 209-136)

1. An ear corn pitcher for corn harvesters comprising a hopper, an auger conveyor core rotatably driven within

said hopper, paddle members formed on said auger conveyor core at its central portion, said auger conveyor core having outwardly tapering end portions, screw flight mounted on said auger conveyor core end portions and joined with said paddle members in the center thereof, a



discharge housing adjoining said hopper around said paddle members and projecting upwardly and rearwardly and having a discharge opening at the upper rearward end thereof, whereby the paddle members pitch ears of corn from the hopper upwardly and rearwardly through the discharge opening of said discharge housing.

3,005,552

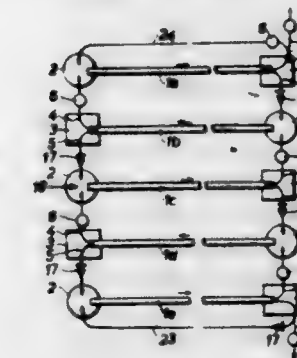
PROCESS AND APPARATUS FOR DEMIXING SUBSTANCES

Friedrich Horst Muller, Marburg an der Lahn, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Aug. 1, 1956, Ser. No. 602,485

Claims priority, application Germany Aug. 3, 1955

5 Claims. (Cl. 210-73)



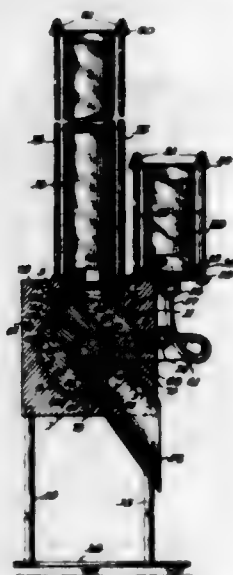
1. A process for demixing substances by the differences in magnitude in the viscosity values of the pure components which comprises introducing the substance to be demixed into the intermediate capillary conduit of a series of connected narrow capillary conduits, conveying the said substance through said capillary conduit in a laminar flow, dividing the flow at the outlet end of said capillary conduit into a central stream and a peripheral stream, removing the central stream and mixing the same in a mixing zone with the peripheral stream separated from the next succeeding conduit, passing the mixture through a second capillary conduit, dividing the flow at the outlet end of said second capillary conduit into a central stream and a peripheral stream, removing the central stream and mixing the same in a second mixing zone with the peripheral stream separated from the next succeeding conduit, repeating the said conveying, dividing and separating sequence at least one more time, thereafter taking off a portion of the central stream from the last conduit in the series, returning the remainder to the mixing zone of the same conduit, removing the peripheral stream separated from said intermediate conduit and mixing the same in a mixing zone with the central stream separated from the preceding conduit, passing the mixture through a second capillary conduit, dividing the flow at the outlet end of said second capillary conduit into a central stream and a peripheral stream, removing the peripheral stream and mixing the same in a second mixing zone with the

stream separated from the next preceding conduit, repeating the said conveying, dividing and separating sequence at least one more time and taking off a part of the peripheral stream from the first conduit in the series, returning the remainder to the mixing unit of the same conduit of the series.

3,005,553

MATERIAL EXTRACTING DEVICE

John T. Roberts, Glen Ellyn, and Julius A. Hjulian, Palos Heights, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed July 5, 1957, Ser. No. 670,329
2 Claims. (Cl. 210-83)



1. A method of successively extracting solid particles settling out from liquid over a period of time without causing substantial turbulence of the liquid and solid particles still unsettled therefrom comprising the steps of placing receptacle means in substantial fluid sealed relation with open bottomed means so as to form the lower part and bottom thereof, introducing liquid containing solid particles into said open bottomed means and receptacle means forming the lower part and bottom thereof, allowing passage of time within which settling of part of the solid particles to the bottom can occur, removing the receptacle means from under said open bottomed means and simultaneously closing the bottom of the open bottomed means to prevent substantial loss of liquid and solid particles, emptying the contents of the receptacle means including the solid particles settled out during the passage of time, filling the receptacle means with nonsolid containing liquid, opening the bottom of the open bottomed means and simultaneously moving the receptacle means into the fluid sealed relation with the open bottomed means so as to form the lower part and bottom thereof, allowing further time to elapse for permitting additional solid particles to settle out into said receptacle means, removing the receptacle means from under the open bottomed means, and emptying the contents thereof.

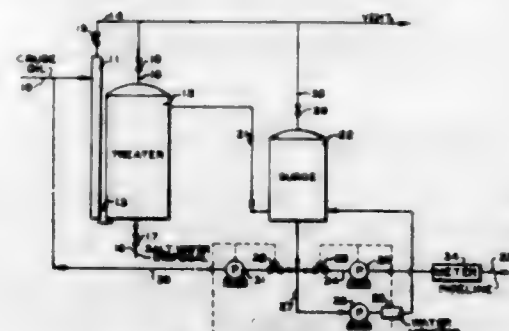
3,005,554

MEASUREMENT AND CONTROL OF B.S. AND W. IN OIL

Louis E. Kuntz, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 25, 1957, Ser. No. 686,192
9 Claims. (Cl. 210-96)

2. An oil transfer system comprising a first vessel for treating oil to remove B.S. and W. therefrom; a second vessel to receive the treated oil; first conduit means communicating between said first vessel and said second vessel to transfer oil from said first vessel to said second vessel; second conduit means communicating with said second vessel to remove oil therefrom; a first valve in said

second conduit means; third conduit means communicating between said second vessel and said first vessel to return oil to said first vessel; a second valve in said third conduit means; fourth conduit means communicating between a first region within said second vessel and a second region therein to withdraw and subsequently return a sample of oil; means disposed in said fourth conduit means to establish an electrical signal representative of the B.S. and W. content of the oil sample; a first relay having a holding coil therein; a second relay; a normally closed switch; a source of current; means connecting said source of current in series relationship with said switch,

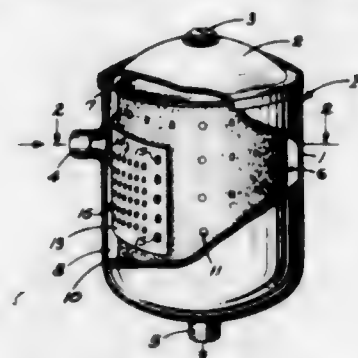


said holding coil, the contacts of said first relay and the coil of said second relay; means to apply said electrical signal to the coil of said first relay so that the contacts of said first relay are closed and said second relay is energized when said electrical signal exceeds a predetermined value, said switch being closed; a capacitor connected in parallel with the coil of said second relay; means to open said switch periodically for first predetermined time intervals; and means responsive to said second relay being actuated to close said first valve and open said second valve following a second predetermined time interval which is greater than said first predetermined time intervals.

3,005,555

MEANS FOR TREATING LUBRICANTS

Frederic M. Bosworth, 21130 Aberdeen Road, Rocky River 16, Ohio
Filed Feb. 9, 1955, Ser. No. 487,153
2 Claims. (Cl. 210-152)



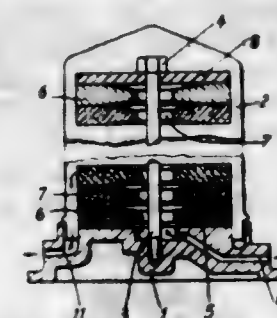
1. In an oil filter the combination of a filter shell having an inner cylindrical surface, a filter element disposed in said shell with an annular space between the inside of the shell and the exterior of the filter element, and an expendable reactant for deleterious constituents of internal combustion engine oil removably inserted in said annular space between the interior surface of said oil filter shell and the exterior of said filter element without deleteriously impairing the flow of oil through the filter, said reactant comprising a thin, bendable, resilient, perforate sheet having exposed surfaces reactant with said constituents of engine oil and having thickness not substantially greater than about 1/4 the radial dimension of said space, width appreciably less than the axial length of said space but more than one hundred times the thickness of the sheet, and length greater than width but less than the circum-

ferential length of said space, and having a ratio of surface to volume not substantially less than about 100:1, and having a surface area reactant to said constituents equal to from between about 1/4 to all the superficial area of said filter element, said sheet being manually bendable to a curvature of radius similar to but greater than the interior of said filter shell and having resilience when constrained to enter said annular space and engaging said shell frictionally and resiliently at the ends of the sheet on one side and engaging the filter element frictionally and resiliently in the middle of said sheet on the other side and tending to space itself otherwise from both said shell and said element.

3,005,556

FILTER

Carl Christian Jensen, Svendborg, Denmark
Filed Aug. 19, 1957, Ser. No. 678,932
6 Claims. (Cl. 210-488)

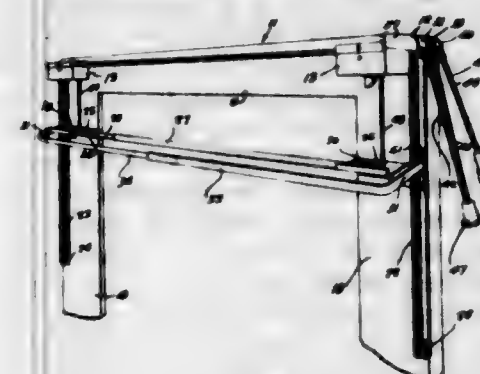


1. In a liquid filter, a tube-shaped filter body comprising a plurality of juxtaposed discs arranged in directly abutting relation to each other in a column and composed of compressible porous material, the thickness of each disc in normally uncompressed condition increasing continuously in the direction of liquid flow through said filter body, relatively movable rigid plate members positioned at opposite ends of said column in substantially parallel relation to each other, selectively adjustable tightening means engaging at least one of said plate members to produce relative movement of said plate members and thereby regulate the degree of compression exerted by said plate members upon said discs to cause a major area of each of the respective facing surfaces of adjacent discs to be in direct contact with each other and to cause the pores in said compressible material to be controllably reduced in size progressively in the direction of liquid flow.

3,005,557

SLIDING CURTAIN ROD

Gust Lundquist, 1924 Oaks Ave., and Carl W. Hess, 2125-27 Ogden Ave., both of Superior, Wis.
Filed Jan. 22, 1960, Ser. No. 4,079
3 Claims. (Cl. 211-103)



1. A curtain rod assembly comprising a window frame having upper corners and vertical side members, housings mounted on said upper corners in line with said side

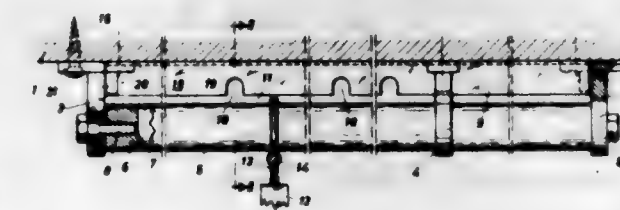
members, pendant latches pivoted in the housings and having lateral hooks on their lower ends, said housings having bottom walls provided with opening means through which the hooks extend, slides engaged with the frame side members beneath said housings, guide means mounted on the frame side members guidingly engaged with the slides, said slides having horizontal plates provided with slots through which the latch hooks can extend to engage beneath the horizontal plates to hold the slides in elevated positions, curtain rod means extending between and secured to the slides, spring means biasing the latches to engaged positions, first cable means engaged with the housings and connected to the latches for pivoting the latches to release their hooks from the horizontal plates, and second cable means engaged with the housings and connected to the slides for elevating the slides from depressed positions.

3,005,558

HOLDER DEVICE FOR CLOTHES SUSPENSERS

Axel Robert Sandgren, Stockholm, Sweden, assignor to AB Armaturhanterverk, Tibro, Sweden, a corporation of Sweden

Filed Oct. 10, 1960, Ser. No. 61,644
Claims priority, application Sweden Oct. 10, 1959
4 Claims. (Cl. 211-123)

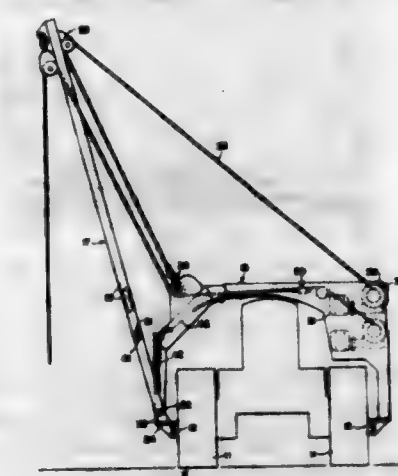


1. In a holding device for clothes suspenders having a suspending hook with a head portion at its outer end, the holding device having a bar for carrying the suspenders side by side, a rail arranged above and parallel to said bar and situated at a distance from the same, said distance being somewhat greater than the wire thickness of the suspending hook but being somewhat less than the height of said head portion of said hook, said rail at its lower border having notches for the passage of said head portion of said suspending hook when the suspender is arranged on said bar.

3,005,559

SIDE BOOMS

Samuel L. Toderick, Welland, Ontario, Canada, assignor to John Deere Plow Company (Limited), Welland, Ontario, Canada, a corporation of Canada
Filed May 23, 1958, Ser. No. 737,416
4 Claims. (Cl. 212-6)



4. The combination, in a tractor mounted side boom, of a vertically swingable boom, power means connected

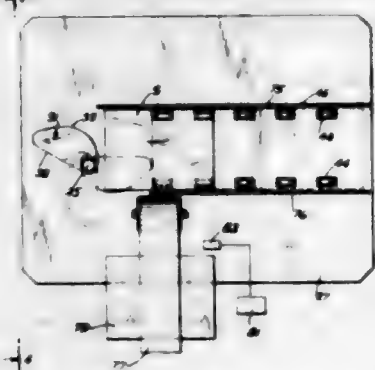
to raise said boom, and including a power control means having means biased to move into a reduced power position and movable into another position in which full power may be transmitted to the boom to raise and lower the latter, stop means for the boom for defining the upper limit of boom movement, comprising a spring member engageable by said boom as the latter approaches its upper position and serving to arrest the movement of the boom, said spring means being capable of exerting sufficient force to overcome the bias of said power control means whereby when the boom is out of contact with said spring means the latter serves to shift said power control means into a full power position.

3,005,560

STACK EJECTING MECHANISM

John Lopez, Westfield, N.J., assignor to Universal Corrugated Box Machinery Corporation, a corporation of New York

Filed Dec. 12, 1957, Ser. No. 702,310
8 Claims. (Cl. 214-6)

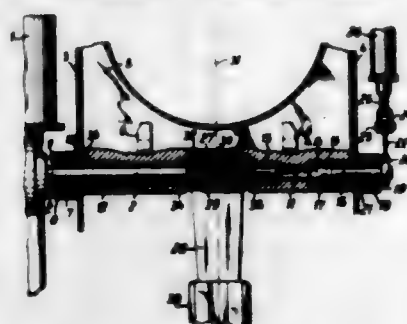


1. Equipment for ejecting a stack of flat articles comprising a supporting surface having a plurality of idly mounted rollers to carry such stack, an elongated rotatable member rising from said supporting surface at the rear thereof, drive means operatively connected to said member to rotate the latter, means intermittently to rotate said member through a complete cycle, said member in cross section having an elongated surface adapted upon rotation of said member to abut against the rear edge of such stack on the supporting surface to eject the latter therefrom, and means to stop rotation of said rollers prior to completion of a full cycle of rotation of said member and after the stack has been moved from said rollers.

3,005,561

DUST BIN TIPPING ARRANGEMENT

Hans Zeller, No. 50-60 Wormerstrasse,
Laubenthal (Rhine), Germany
Filed Oct. 13, 1959, Ser. No. 846,141
6 Claims. (Cl. 214-303)



1. A dust bin tipping arrangement for refuse collecting carts comprising in combination an emptying chute having side walls, a first bearing carried by one of said side walls and a second bearing carried by the other of said side walls in alignment with said first bearing, an emptying chute front plate having a bore extending through a lower portion thereof, spaced third and fourth

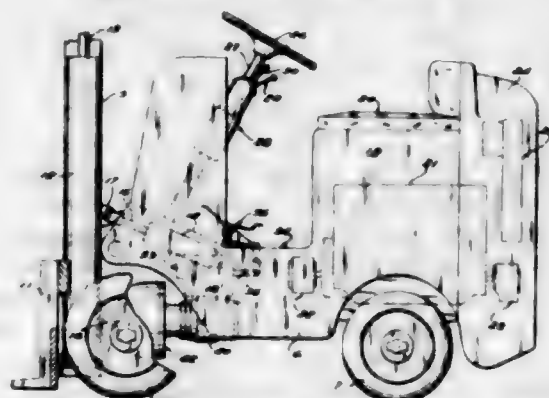
bearings seated in said bore, a driving shaft extending through said first bearing and being journaled in said third and fourth bearings, one end of said driving shaft terminating within said front plate and the other end thereof projecting outwardly of said first bearing, a pin disposed coaxially with said driving shaft and extending through said second bearing into said front cover bore to support the side of said front cover adjacent said second bearing, means rigidly securing said pin to said front plate with said front plate being freely rotatable on said driving shaft together with said pin, a centrally disposed opening in the lower portion of said front plate opening into said front plate bore, a swing arm initially disposed in a depending vertical position and having an upper portion extending through said front plate opening, said swing arm upper portion being disposed intermediate said third and fourth bearings and having a bore receiving said driving shaft, means connecting said swing arm to said driving shaft for rotation therewith and relative to said front plate, and driving means carried by said one side wall and connected to said driving shaft outwardly of said first bearing for imparting limited rotation to said driving shaft and said swing arm, whereby a dust bin engaged with said swing arm will be rotated into engagement with said front plate and further rotation of said driving shaft will result in swinging of said front plate with said driving shaft and said swing arm.

3,005,562

HYDRAULIC DRIVE FOR LIFT TRUCK

Walter M. Shaffer, Cleveland, Ohio, assignor to Towmotor Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 29, 1959, Ser. No. 849,588
15 Claims. (Cl. 214-701)



1. Hydraulic drive means for a lift truck having a tilt cylinder and a hoist cylinder, said lift truck having a pair of drive wheels, variable displacement hydraulic motor means operatively connected to said drive wheels, an internal combustion engine, a first gear pump operatively connected to and driven by said engine, a second gear pump having a capacity of about half the capacity of said first gear pump operatively connected to said engine to be driven thereby, a hydraulic fluid reservoir, a conduit connecting said reservoir to the input of said first gear pump, a tilt-hoist valve, a conduit connecting the output of said first gear pump to said tilt-hoist valve, a tilt plunger mounted for reciprocation in said tilt-hoist valve, conduit means connecting said tilt-hoist valve to said tilt cylinder whereby in response to tilt plunger movement hydraulic fluid from said first gear pump is directed into said tilt cylinder, a hoist valve plunger mounted for reciprocation in said tilt-hoist valve, conduit means connecting said tilt-hoist valve to said hoist cylinder whereby said hoist plunger may be moved to direct fluid from said first gear pump into said hoist cylinder, a drive control valve having a movable plunger therein, conduit means connecting said tilt-hoist valve to said drive control valve to lead hydraulic fluid from said tilt-hoist valve into said drive control valve, a conduit lead-

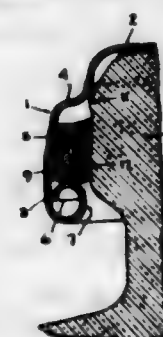
ing from said tilt-hoist valve through said drive control valve to the input side of said second gear pump, conduit means connecting the output of said second gear pump to said vehicle drive control valve, said drive control valve plunger and said drive control valve having cooperating passageways to direct the output of said second gear pump to said variable displacement motors, torque control valve means comprising means movable in response to changes in fluid pressure in the output of said first-named gear pump in said drive control valve, conduit means connecting said torque control means and said variable displacement motor to vary the displacement of said motors in response to variations in pressure in the hydraulic fluid from the output side of said first-named gear pump as sensed in said drive control valve.

3,005,563

CLOSURE CAP, METHOD OF MAKING SAME, AND SEALED PACKAGE THEREFOR

Harry E. Stever, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Mar. 11, 1958, Ser. No. 720,775
5 Claims. (Cl. 215-40)



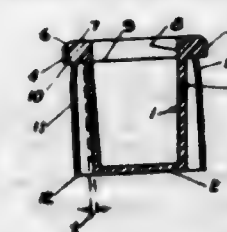
1. A sealed package comprising the combination of a container, the finish of said container having an inclined sealing surface and a bead above said sealing surface, and a closure cap having a cover portion and a depending skirt, said skirt having an outwardly extending portion to form a gasket-receiving channel and an intumed edge, the lower portion of said gasket-receiving channel being substantially in a vertical plane and the upper portion of said gasket-receiving channel being tapered inwardly, an annular gasket freely mounted in said gasket-receiving channel resting on said intumed edge and spaced from the top of the gasket-receiving channel, said gasket being adapted to bear against and cooperate with the inclined sealing surface below said bead and be wedged between the inwardly flared surface of the cap and the inclined sealing surface of the finish to form an hermetic seal with the sealing surface.

3,005,564

LABORATORY EQUIPMENT

Edwin G. Weichselbaum, Florissant, Mo., assignor to Biological Research, Inc., St. Louis, Mo., a corporation of Missouri

Filed Oct. 12, 1959, Ser. No. 845,918
6 Claims. (Cl. 215-41)



1. A closure for laboratory glassware such as test-tubes, sample tubes, and the like, which have substantially cylindrical necks terminating in a substantially circular mouth; said closure comprising a tapered plug-like element adapted

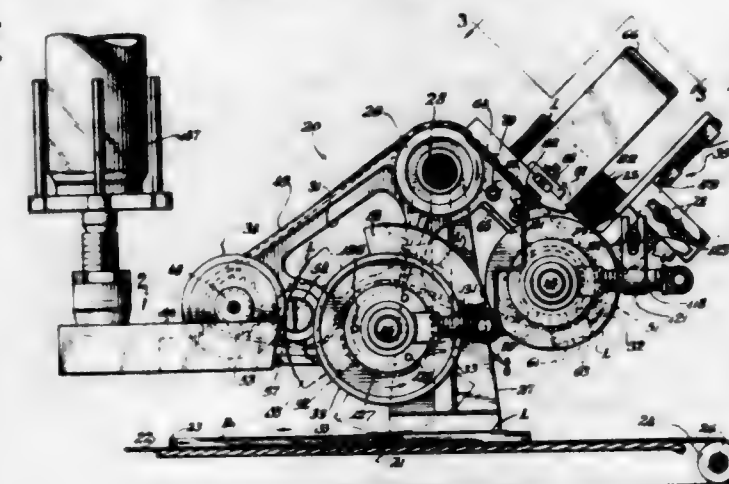
for insertion into said mouth and being integrally provided at its larger end with a diametrically enlarged collar, the angle of taper of the plug-like element being from 5° to 10° with respect to the longitudinal axis thereof, said collar having a depending skirt which encircles the plug-like element and is provided with an inwardly presented cylindrical face disposed in annularly spaced relation to the plug, said skirt being connected at its upper end to the collar by an axially inwardly tapering band, said band having a vertical height substantially shorter than the height of said skirt.

3,005,565

LABEL APPLYING HEAD FOR CUT LABELS

James E. Doane and Wayne F. Ridenour, Chicago, Ill., assignors to Cheshire, Incorporated, Chicago, Ill., a corporation of Illinois

Filed June 19, 1959, Ser. No. 822,985
5 Claims. (Cl. 156-571)



5. In a label applying machine for applying a precut label to a moving article; a label applying head of the type comprising a frame supporting a hopper for a stack of precut labels, a label picking roller adapted to remove a single label from the bottom of said stack, a label applying roller adapted to receive said single label from said picking roller and transfer same to said moving article including an adhesive applying roller cooperating with said label applying roller and adapted to place a film of adhesive on said label as it moves past said adhesive applying roller, the improvement in said label picking roller and said hopper comprising a central groove in said label picking roller, a gate mounted on said hopper and having an end thereof adapted to enter said groove, a suction manifold on said label picking roller, a suction opening in said groove, means in said label picking roller adapted to control the suction at said opening whereby said bottommost label is deformed at the leading end thereof into said groove, means extending across said groove at said suction opening for limiting the deformation of said label at said suction opening, lands on said label picking roller flanking said central groove, and suction openings spaced from said central suction opening for holding the trailing end of said label to the periphery of said roller.

3,005,566

TOOL FOR INSTALLING HOLLOW RIVETS

Roy G. Neighorn and Arthur H. Ramey, Portland, Oreg., assignors to Omark Industries, Inc., Portland, Oreg., a corporation of Oregon

Filed Apr. 21, 1958, Ser. No. 729,811
7 Claims. (Cl. 218-34)

1. A tool for installing hollow rivets comprising an elongated body portion having a guide way extending longitudinally thereof, a slider guided by said guide way for movement longitudinally of said body portion and having a longitudinally extending mandrel receiving slot

open along the length of said slider, a jaw structure mounted on the front end of said body portion and having openable jaw elements providing a passageway in alignment with said slot for passage of rivets through said jaw structure, a mandrel gripping structure mounted at the rear end of said body portion for releasably gripping the rear end of the mandrel, means for releasably holding said slider adjacent said gripping structure, said guide way being open along the length of said body portion so that an elongated mandrel having a rivet expanding head at its front end and a plurality of hollow rivets



strung on said mandrel can be loaded into said tool with said rivets positioned between said slider and said jaw elements by moving said head of said mandrel forwardly of said body portion through said passageway and moving the remainder of said mandrel transversely into said slot in said slider and into said gripping structure, said slider being engageable with the rear one of said rivets to feed a rivet through said jaw elements, and means to move said gripping structure away from said jaw structure to pull said head of said mandrel through a rivet held by said jaw elements.

3,005,567

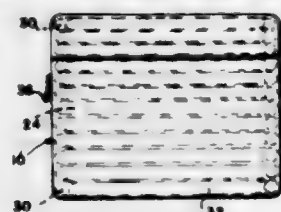
TRANSIT CASE

Richard C. White, Snowden Hill Road,
New Hartford, N.Y.

Filed July 7, 1960, Ser. No. 41,451

5 Claims. (Cl. 220-9)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a transit case, inner and outer spaced walls, providing four enclosing wall segments and a bottom segment, a cover for said transit case having vertical segments and a horizontal segment, inner and outer spaced walls on said cover forming four enclosing vertical walls and a horizontal top wall, endless self-sealing inflatable tubes positioned in the space between said walls and lying in horizontal and parallel relationship, inflatable linear tubes lying in parallel relationship between the inner and outer walls of the bottom section of the body of said case, and the top portion of the cover of said case.

3,005,568

RECEPTACLE CASE

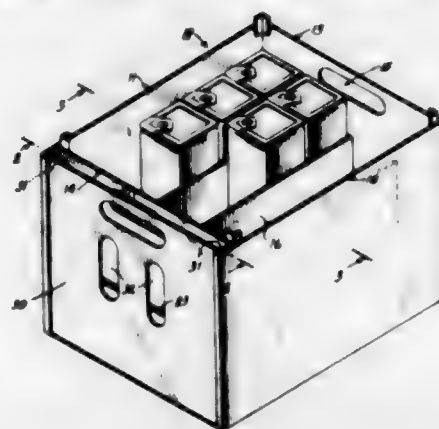
John W. Clune, Helene Road, Valley Cottage, N.Y., and
Herman W. Brunk, 590 Nepperan Ave., and William
Murray, 14 Hearststone Road, both of Yonkers, N.Y.

Filed Aug. 26, 1959, Ser. No. 836,160

7 Claims. (Cl. 220-21)

1. A rectangular receptacle case having side and end walls, a plurality of spaced longitudinal separating members within said case walls and affixed to the inside of said end walls, said separating members being vertically spaced above the bottom of end walls, longitudinal bar members having a shaft extending from each end there-

of, said shaft pivotally mounted in said end walls below said separating members, linkage means having handle means connected to said bar member shafts whereby said bar members may be pivoted within said receptacle case below said separating members and above the



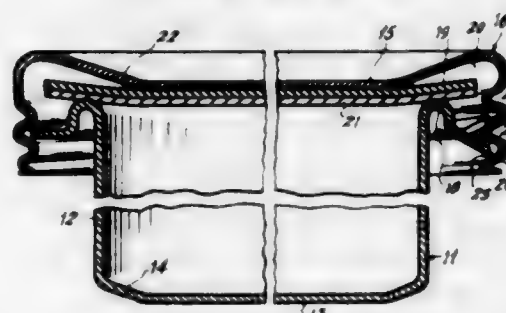
3,005,569

CONTAINER WITH FLANGE-THREAD AND COVER

Robert D. Williamson, Montclair, N.J., assignor to American Aluminum Company, Mountainside, N.J., a corporation of New Jersey

Filed May 12, 1960, Ser. No. 28,766

4 Claims. (Cl. 220-39)



1. A sheet metal container comprising a body formed by a side wall generally circular in section about a central axis open at one end and terminating at the other end in a bottom wall, a generally annular resilient flange outstanding from said side wall at the open end thereof, said flange uniting with said wall along an annular bead that presents a convex outer surface disposed in a plane normal to said axis to sealingly engage a closure member, the flange being disposed in a plane approximately perpendicular to said axis and being notched at its edge and displaced axially both ways at opposite sides of the notch and curved helically, and a screw cap including a top and a screw threaded skirt having a screw-threaded connection with the helical edge of said flange to close said open end of the body.

3,005,570

UNIT COMPRISING A METALLIC CONTAINER WITH A CIRCULAR LID

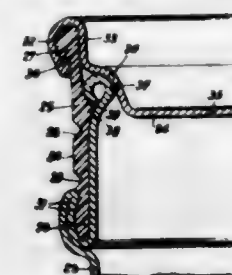
Georges Maulaz, Fribourg, Switzerland, assignor to Sotrametal S.A., Fribourg, Switzerland, a joint-stock company of Switzerland

Filed Sept. 1, 1959, Ser. No. 837,430

Claims priority, application Switzerland Sept. 15, 1958
4 Claims. (Cl. 220-54)

1. A container comprising a body and a circular closure, said body and said closure having bent flanges,

the bent portions thereof facing each other, a collar of resilient material provided with two circular grooves and having a pad at each end thereof, said collar being in firm engagement with the surface of said body intermediate said flanges and said collar having a conical tongue which firmly engages the outside of said body when said circular



closure is in engagement with the upper pad of said collar, said pads being fixedly clamped by the bent portions of said flanges, and an annular tearing strip in said collar defined by said two grooves, said strip having a pulling element whereby said strip can be torn off along said two grooves.

3,005,571

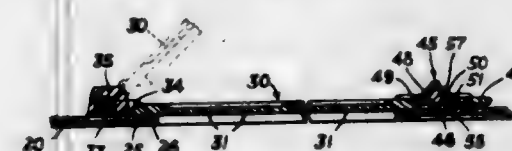
COVER LOCK

Hugh Hall, % Market-Maid, Inc., 122 E. Market St.,

Urbana, Ohio

Filed Mar. 25, 1959, Ser. No. 801,912

4 Claims. (Cl. 220-60)



1. A latch construction for securing a cover member in stationary position on a body, comprising a flexible portion on one edge of said cover member having an aperture of predetermined dimensions therethrough, a lug on said body and normally extending through said aperture in the closed position of said cover and including a stationary flexible mounting aligned with said aperture in the stationary position thereof for projection of said lug through said aperture, said lug and said aperture being so dimensionally related that they cannot be disengaged by forcing them relatively apart, said lug including a stem of less cross-sectional dimension than said aperture, a lip above said stem dimensioned to extend over one edge of said aperture and normally spaced at its intersection with said stem from said one edge of said aperture, and means providing a notch in said lug above said lip on the opposite side of said lug from said lip for receiving the edge of said aperture opposite said one edge in response to flexure of said cover portion into a position wherein said aperture is approximately aligned with said notch providing for movement of said lug about its flexible mounting to withdraw said lip from engagement over the edge of said aperture.

3,005,572

PLASTIC CASE CONSTRUCTION

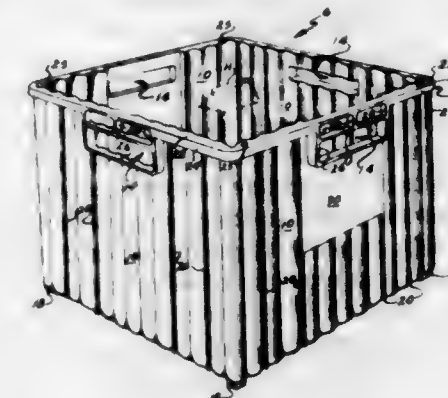
Lewis H. Gustafson, Northampton, Mass., and Arthur C. Rist, Riverside, Conn., assignors to Pro-Phy-Lac-Tic Brush Company, Florence, Mass., and J. D. Dunning Corporation, Darien, Conn., both a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,810

4 Claims. (Cl. 220-72)

1. A carrying case comprising an integrally molded structure of synthetic plastic material including a bottom, corrugated side walls, a flange extending around the top of said case, openings in opposite side walls and spaced

from the top flange, a flange around each of said openings extending outwardly of said side walls, and webs extend-



3,005,573

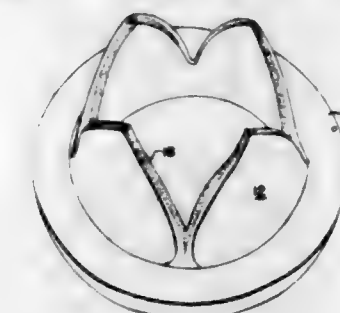
BLOWOUT DIAPHRAGM

Victor C. D. Dawson, Silver Spring, and Arnold E. Selgel, Chevy Chase, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 8, 1959, Ser. No. 845,296

2 Claims. (Cl. 220-89)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A rupturable diaphragm valve comprising a hemispherical body portion of a decreasing thickness and tapering uniformly from the base to the dome, said body portion being divided into segments by score lines of decreasing depth, said score lines decreasing in depth from the base to a common juncture at the dome, the body portion remaining along said score lines being of equal thickness throughout the extent of said score lines, and an integral rim portion, the interior wall of the rim being normal to the diametric plane of the hemispherical body portion, said wall being an extension of the inner wall of the hemispherical body portion at its base, said rim being of a thickness greater than the hemispherical body portion at its greatest thickness.

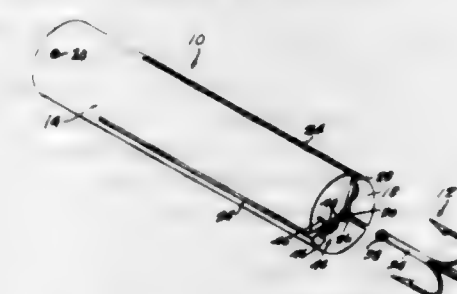
3,005,574

SAFETY FISHHOOK CONTAINER AND DISPENSER

Hugh F. Lovell, 4106 Lehigh, Houston, Tex.

Filed Dec. 11, 1959, Ser. No. 859,034

6 Claims. (Cl. 221-310)



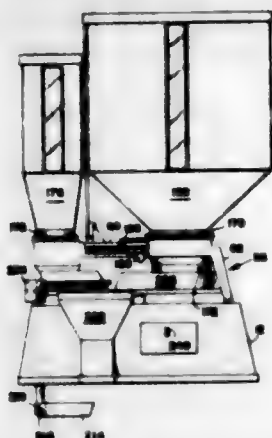
1. A safety fishhook container and dispenser comprising an elongated body having first and second ends and

an outer surface, said body having an axial bore having a closed end located near to and spaced from said first end and an open end opening through said second end, a longitudinal slot having a closed end spaced from said closed end of the bore and an open end opening through said second end of the body, said slot having an inward side opening into said bore and an outward side opening through the surface of the body, said bore being only large enough in diameter to slidably receive the shank and eye of a fishhook with its snell disposed in said slot, the bore being long enough to accommodate a plurality of fishhooks in end to end relationship, said slot being narrower than the bore and wide enough to slidably receive the snell of a hook and deeper than the snell and the barbed point on the snell, and releasable detent means mounted on the second end of the body with which a hook snell is adapted to retainably engage.

3,005,575

APPARATUS FOR BLENDING MATERIALS

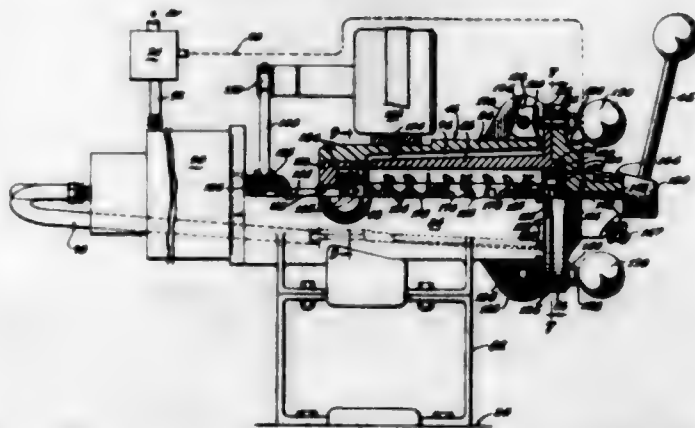
Nathaniel Brewer, Newtown, Pa., and Melville M. Wilson, Princeton, N.J., assignors to Wilson Products, Inc., Neshaug, N.J., a corporation of New Jersey
Filed Sept. 18, 1959, Ser. No. 840,945
11 Claims. (Cl. 222-56)



1. In combination, a container for dry free flowing material, a revolvable table for receiving material gravity discharged from said container, means for revolving said table thereby to draw material from said container in a stream having a substantially constant volumetric rate of flow, a barrier for discharging said stream of material from said table, a second container for dry free flowing material, a second revolvable table for receiving material gravity discharged from said second container, means for revolving said second table in a direction opposite to the direction in which said first table is revolved thereby to draw material from said second container at a predetermined volumetric rate, and a second barrier for discharging material from said second table for introduction into said steady stream of material thereby to establish a steady stream in which said materials are present in predetermined quantities, said means for revolving said second table including pawl means, a cam follower, spring biased means mounting said pawl means and cam follower for movement back and forth as a unit along an arcuate path concentric with said second table, a member fixedly secured to said second table for contact by said pawl means during said back and forth movement thereof, said pawl means being adapted to unidirectionally grip said member during said back and forth movement for intermittently advancing said second table, and means for urging said follower in one direction along said arcuate path for intermittently advancing said second table in response to rotation of said first table including a cam fixed relative to said first table and revolvable therewith for actuating said mounting means against said spring bias.

3,005,576
MIXING AND DISPENSING APPARATUS
Herbert L. Trautmann, San Marino, and George G. Stevenson, Los Angeles, Calif., assignors to Semco Research, Inc., Inglewood, Calif., a corporation of California

Filed Apr. 22, 1958, Ser. No. 730,134
12 Claims. (Cl. 222-146)

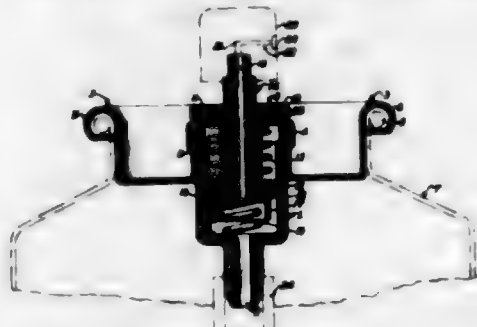


1. In an apparatus for mixing fluent materials, the combination of: an outer housing shell open at both ends; an inner mixer cylinder closed at its rear end and removably mounted in said shell, said inner mixer cylinder being open at its forward end and having a plurality of ports near its rear end to receive the two materials; a bearing in said closed end of the cylinder forming an axial opening; a mixer rotor for operation in said mixer cylinder including a rotor shaft to fit removably in said axial opening to be journaled by said bearing with the rear end of the shaft extending beyond the bearing; removable closure means to close the forward end of said mixer cylinder; and means forming at least one discharge port for dispensing the mixed materials from the forward region of the mixer cylinder.

3,005,577

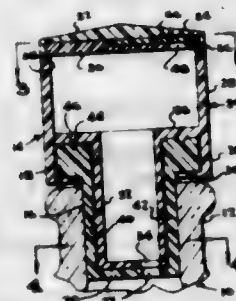
COMBINATION DISPENSING AND EXCESS PRESSURE RELIEF VALVE

Milo E. Webster, Rochester, N.Y., assignor to Otto Bernz Co., Inc., Rochester, N.Y., a corporation of New York
Filed Oct. 28, 1959, Ser. No. 849,296
11 Claims. (Cl. 222-397)



1. A combination dispensing and excess pressure relief valve comprising a valve housing with an open inlet end, means defining a dispensing passage-way extending through said housing, a first moveable valve member and cooperative valve seat sealing said dispensing passage-way, said first moveable valve member being moveable in a direction against fluid pressure from said inlet end of said housing to open said dispensing passage-way, a second moveable valve member and cooperative valve seat substantially coaxial with said first moveable valve member, and sealing said housing from the flow of fluid there-through from said inlet end, said second moveable valve member being moveable in a direction with fluid pressure from said inlet end of said housing to open said housing for the flow of fluid therethrough from said inlet end, and means resiliently urging said second valve member closed with a pre-determined force.

3,005,578
MEASURING ATTACHMENT FOR A BOTTLE NECK
Lena Mainieri, 150 State St. S., Hackensack, N.J.
Filed Dec. 19, 1958, Ser. No. 781,505
4 Claims. (Cl. 222-450)

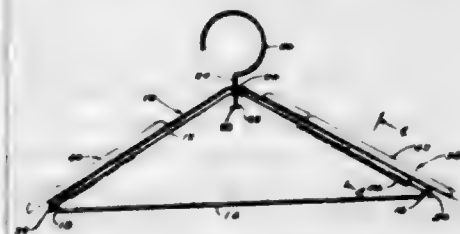


1. A measuring attachment for a bottle neck comprising a mounting means adapted to be received within and supported by a bottle neck, said mounting means having an external flange extending about the rim thereof and ing an ingress opening in the bottom thereof, a measuring receptacle including a bottom, a wall rising from and extending about the perimeter of said bottom, a cover closing the upper end of said wall, and a hollow stem depending from said bottom and having an ingress opening in the lower end, said receptacle being positioned so that the hollow stem is received within said mounting means, means connecting said receptacle to said mounting means for rotational movement relative to said mounting means, said connecting means embodying a skirt depending from the receptacle bottom and contiguous to and in alignment with the receptacle wall and an inwardly turned flange on the bottom of said skirt, said skirt and intumed flange and the portion of said receptacle bottom between said skirt and said stem rotatably embracingly receiving said external flange, and a projection on the under face of the aforesaid portion of said receptacle bottom slidably received in a groove formed in the upper face of said external flange, said cover being provided with an egress opening, a cap bridging the cover and secured to the upper end of the receptacle wall, said cap having a discharge orifice in registry with the egress opening of said cover, and a shutter normally between and bridging the registering discharge orifice and egress opening and connected to said cover for movement from the bridging position to a position out of bridging relation with respect to said registering discharge orifice and egress opening.

3,005,579

ADJUSTABLE COAT HANGER

James L. Thurber, 269 Perry St., Denver, Colo.
Filed Jan. 13, 1959, Ser. No. 786,482
2 Claims. (Cl. 223-89)



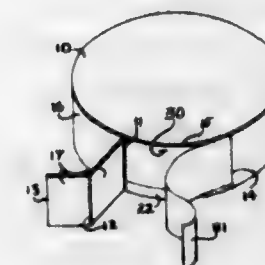
1. A clothes hanger comprising an inverted V-shaped member having legs of V-shaped cross section, a cross-bar extending between opposite legs of the inverted V-shaped member and affixed thereto adjacent the ends

thereof, a pad including slide means mounted on each of said legs, said slide means being resilient and adapted to slidably engage the surfaces of each leg under bias to frictionally restrain the movement of said pad against unintentional displacement along the length of a leg and stop means adjacent the extremity of each leg for limiting movement of said pads therebeyond wherein said stop means comprises a flap extending from each end of a leg of said V-shaped member, each of said flaps being flexibly joined to the respective ends of said legs, said flaps being so constructed and arranged that when bent into common alignment with a leg, a pad may be inserted and removed therefrom and when bent out of alignment, a pad is prevented from being removed.

3,005,580

TAPE DISPENSER-CONTAINER

John Peter Malta, 1545 E. 60th St., Chicago, Ill.
Filed July 14, 1958, Ser. No. 748,490
6 Claims. (Cl. 225-39)



1. A dispensing container for rolled materials, consisting of: two cooperating inner and outer telescoping container members forming a casing of suitable shape to enclose a roll of material; each of said container members comprising at least a closed end wall and a peripheral wall attached at right angles thereto; one of said container members having at least a portion of its peripheral wall open for the passage of material therethrough when a roll of material is contained within said dispensing container; the other of said container members having an opening substantially registerable with the opening in said first container member for passage of material therethrough; and a unitary member having an integral cutter suitable for cutting said material attached at at least one side of the opening of at least one of said container members.

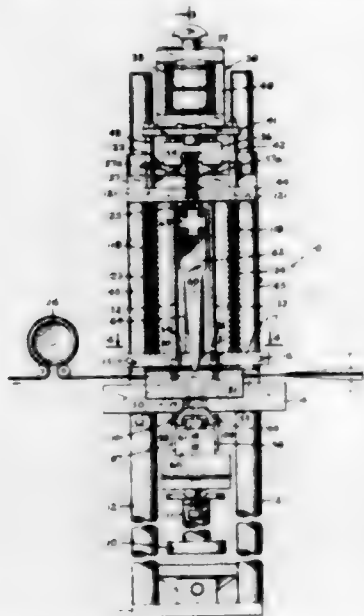
3,005,581

APPARATUS FOR GAPPING SLIDE FASTENERS

John E. Burbank, Stamford, Conn., assignor, by mesne assignments, to Cue Fastener, Inc., a corporation of New York
Filed May 18, 1956, Ser. No. 585,736
14 Claims. (Cl. 225-94)

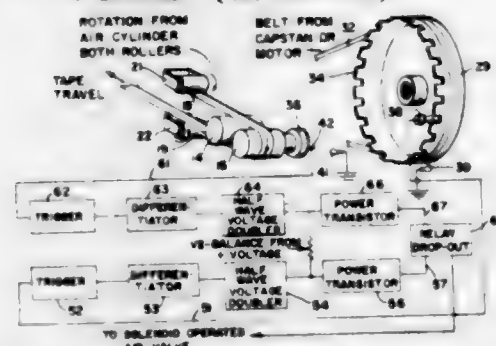
1. An apparatus for gapping slide fastener material having a pair of mated coils with slider guide beads at their outer edges and said coils being secured to strips of fabric, comprising a frame, means on said support for guiding and supporting an elongated piece of said slide fastener material, a pair of spaced-apart punching elements, means on said frame for guiding said punching elements into engagement with the coils of said fastener material to sever mated sections from said coils, means on said frame for moving said punching elements to sever said coils, a pair of relatively movable gripping members mounted on said frame for movement substantially transversely of said strip of fastener material between said punching elements and for movement relative to each other, means on said frame for moving said gripping ele-

ments relative to each other to grip said severed sections between them, and means for moving said gripping means



3,005,582
TAPE RECORDING AND REPRODUCING APPARATUS AND DRIVE SYSTEM THEREFOR
Dwight W. Brede, Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Aug. 13, 1959, Ser. No. 833,452
4 Claims. (Cl. 226—35)



1. In a tape apparatus of the type which includes a capstan drive and movable pinch roller, means forming a signal dependent upon the speed of the tape, means for developing a signal dependent upon the speed of the capstan surface, and means responsive to said signals serving to inhibit operation of the movable pinch roller until the signals indicate that the tape and capstan are travelling at the same velocity.

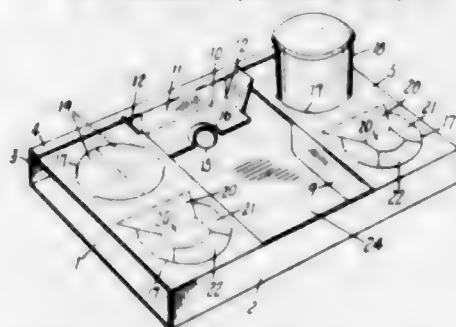
3,005,583
ADJUSTABLE SELF-CENTERING ROLL
Frank W. Butscher, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 24, 1959, Ser. No. 801,627
10 Claims. (Cl. 226—192)



1. Apparatus for positioning a moving object comprising a pair of coaxially opposed rotatable hollow cylinders

over which the object passes in a direction transverse to the axes of the cylinders, each of said cylinders having inner and outer ends with the inner ends adjacent each other, means supporting the outer ends of said cylinders, means extending through said cylinders coaxial therewith and arranged to provide a peripheral space to permit limited deflection of the adjacent ends of said cylinders, and means for changing the width of said peripheral space to vary the amount of deflection of the adjacent ends of said cylinders.

3,005,584
CARRYING TRAY
Merrill J. Coe, Kalamazoo, Mich., assignor to KVP Sutherland Paper Company, Kalamazoo, Mich.
Filed Feb. 13, 1961, Ser. No. 88,990
19 Claims. (Cl. 229—28)



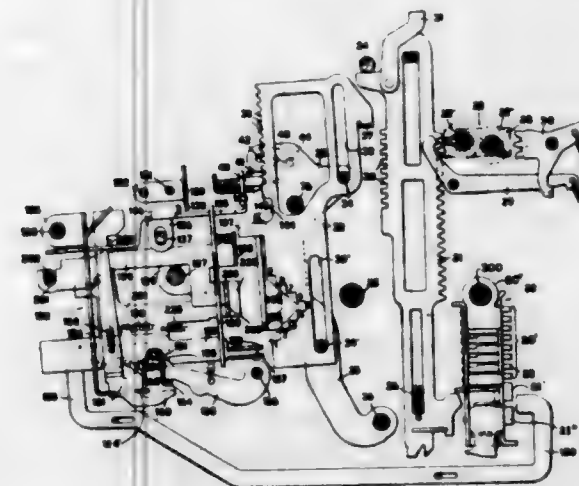
1. A collapsible serving tray formed of an integral blank comprising a bottom, side walls hingedly connected to the bottom, and spaced top members hingedly connected to and extending from one side wall, the other side wall having a sealing flap hingedly connected thereto and secured to top members, a latch comprising a base member secured to said bottom and provided with springable latches at the ends thereof which overlap said top members when the tray is collapsed, said top members having notch-like keepers on their inner edges with which said latches automatically engage when the tray is adjusted to erected position, there being a strut hingedly connected to the outer edge of said latch base member and the inner edge of said wall flap, said top members having integral strut members hingedly connected to their inner edges and foldable downwardly into supported engagement with the bottom when the tray is erected, said top members being slit and scored to define receptacle receiving openings therein and to provide downwardly deflectable segments, at least one of said segments for each opening constituting a bottom engaging top member supporting strut.

3,005,585
SHORT-CUT MULTIPLICATION MECHANISM FOR TEN-KEY CALCULATING MACHINES
Natale Capellaro and Teresio Gassino, Ivrea, Italy, assignors to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy

Filed Sept. 26, 1956, Ser. No. 612,206
Claims priority, application Italy Oct. 6, 1955
11 Claims. (Cl. 235—63)

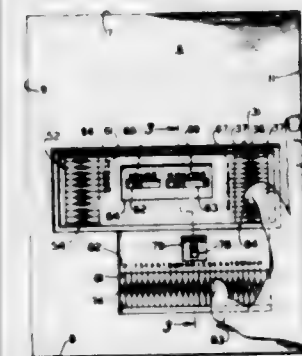
1. In a short-cut multiplication mechanism for calculating machines, a multiplier storage mechanism having a storing element in each denominational order, said storing element having two stepped portions, one representing the multiplier digits 5-9 requiring short-cut multiplication, the other representing the remaining multiplier digits 1-4, the one of said portions being ascending, the other being descending; a cycle counting device, and a sensing device cooperating with said storage mechanism for sequentially sensing said storing elements and setting said cycle counting device according to the differential travel made in sensing the stepped portions of the individual storing element, whereby upon sensing the one of said portions said sensing device is adapted

to travel an amount proportional to the complement to a second circuit including a relay and switching means a fixed number of the multiplier digit sensed, while on each said scoring unit for causing the first score entered



travelling an amount proportional to the multiplier digit itself upon sensing the other stepped portion.

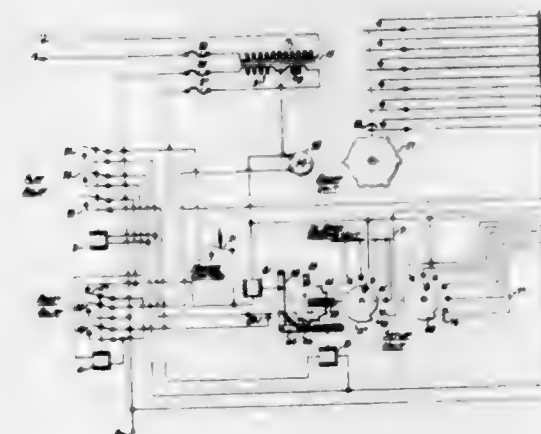
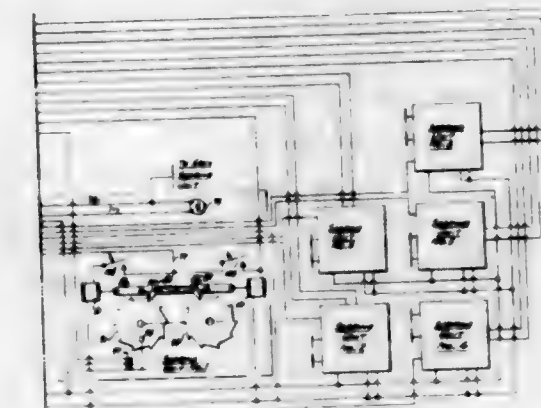
3,005,586
CALCULATING DEVICE
Ruben E. Stevenson, 1801 41st Ave., San Francisco 22, Calif.
Filed Oct. 30, 1958, Ser. No. 770,712
2 Claims. (Cl. 235—89)



1. An elapsed time calculating device comprising a base having sides and ends, means forming a first slide channel in said base parallel to said sides, means forming a second slide channel in said base parallel to said sides and merging with said first channel, means forming a third channel in said base parallel to said ends and overlying said first channel and said second channel, slides in said respective channels having numerals thereon, said slides being formed with operating notches therein, and the slide in said third channel overlapping the slides in said first and second channels, and means forming windows in said base exposing selected areas of said slide numerals and selected groups of said notches in locations for simultaneous manipulation of the slide in said third channel and one of the slides in said first and second channels by the thumb and finger of one hand of the user.

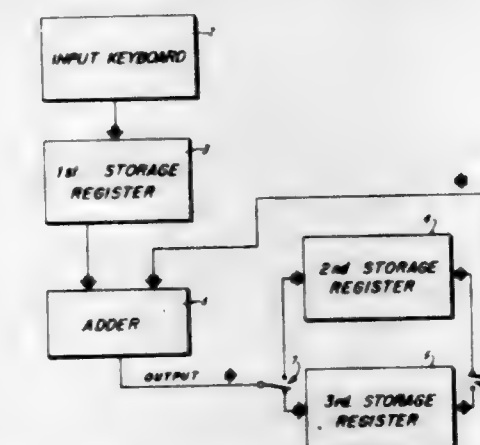
3,005,587
ELECTRICAL GAME SCORER
Melville K. Olson, 15756 Via Arroyo, San Lorenzo, Calif.
Filed July 25, 1957, Ser. No. 674,083
6 Claims. (Cl. 235—92)

1. An electrical game scoring machine comprising a plurality of scoring units, a first circuit including a master control switch for activating one said unit for each player,



on any scoring unit to disable said setup circuit, and a third circuit for resetting all scoring units to zero.

3,005,588
EMITTER TYPE ADDER
Shih Chieh Chao, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 14, 1955, Ser. No. 487,913
7 Claims. (Cl. 235—176)

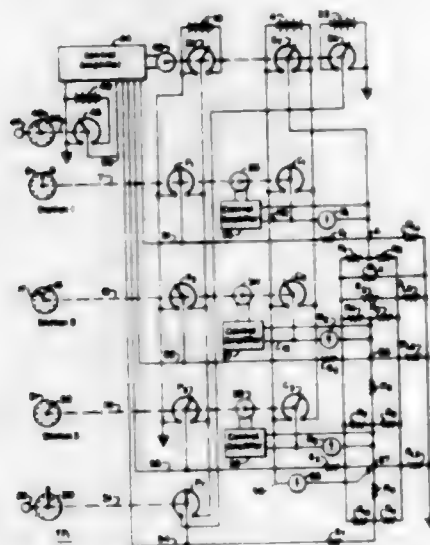


4. An adder comprising first and second emitters, each of which has a first stage and a plurality of successive stages operated in response to alternate operations of the preceding stage, each stage of each said emitters being arranged to emit a signal when operated, an output circuit, a circuit associated with each stage of each of said emitters for gating signals emitted thereby to said output circuit according to control voltages representative of two numbers to be added, means for connecting a first pulse train containing a predetermined number of pulses to said first stage of said first emitter, alternate pulses of said first pulse train being adapted to operate said first stage of said first emitter, means for connecting a second pulse train containing a predetermined number

of pulses to said first stage of said second emitter, alternate pulses of said second pulse train being adapted to operate said first stage of said second emitter, said second pulse train being out of phase with said first pulse train, whereby a number of separate and distinct signals corresponding to the sum of said two numbers is entered into said output circuit.

3,005,589

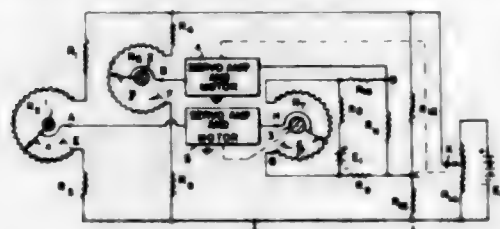
SIMPLIFIED ANALOG DISPATCH COMPUTER
Edwin L. Harder, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1957, Ser. No. 693,099
5 Claims. (Cl. 235-185)



1. An economic dispatch computer for a power distribution system involving a network connecting a plurality of stations comprising means for each station for producing a current proportional to the total power production of that station, means for each station for producing a voltage proportional to the incremental cost of said total power production of that station, impedance means proportional to the actual network resistances interconnecting said stations, said impedance means connected to said first mentioned means for providing voltage changes between stations proportional to the incremental losses in the network.

3,005,590

ANALOG DIVISION CIRCUIT
Thomas L. Giltinan, 1110 McGavack Place, Tullahoma, Tenn.
Filed June 24, 1960, Ser. No. 38,678
2 Claims. (Cl. 235-196)
(Granted under Title 35, U.S. Code (1952), sec. 266)

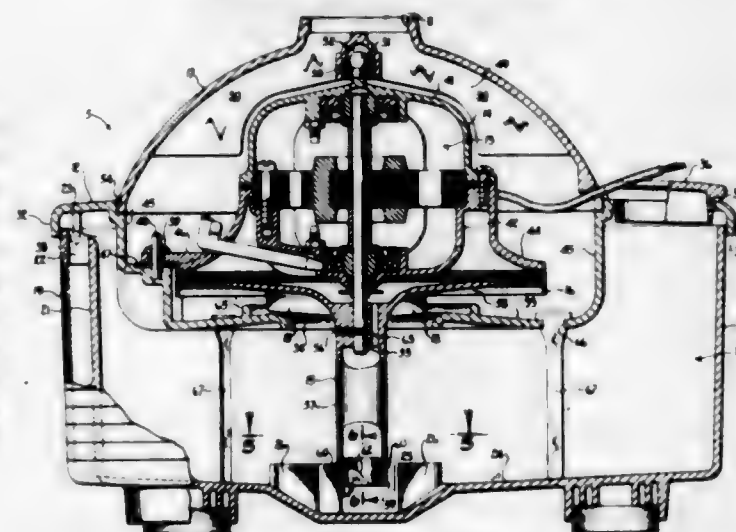


2. An analog division circuit comprising a dividend potentiometer, a divisor potentiometer and a quotient potentiometer, each potentiometer comprising a resistance element having first and second end terminals and a slider, each potentiometer also having a shaft mechanically coupled to its slider such that a linear relation exists between the angular position of the shaft and the resistance between the slider and the first end terminal of the potentiometer resistance element, a source of variable voltage, means connecting the resistance ele-

ments of said dividend and divisor potentiometers in shunt to said variable voltage source with the said first end terminals connected to the same terminal of said source, means for applying a fixed potential across the resistance element of said quotient potentiometer, a first servo system for comparing the potential between the slider and the said first end terminal of said divisor potentiometer with the fixed potential across the resistance element of said quotient potentiometer and operating to maintain equality between these potentials by adjustment of the voltage of said variable voltage source, a second servo system for comparing the potential between the slider and the said first end terminal of said quotient potentiometer with the potential between the slider and the said first end terminal of said dividend potentiometer and operating to maintain equality between these potentials by adjusting the position of the slider of said quotient potentiometer, the angular positions of the shafts of the dividend and divisor potentiometers constituting the input analogs of the dividend and divisor, respectively, and the angular position of the quotient potentiometer constituting the output analog of the quotient.

3,005,591

ATOMIZING TYPE PORTABLE HUMIDIFIER
Addison Ballard Bradley, Racine, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 28, 1961, Ser. No. 120,338
9 Claims. (Cl. 239-216)

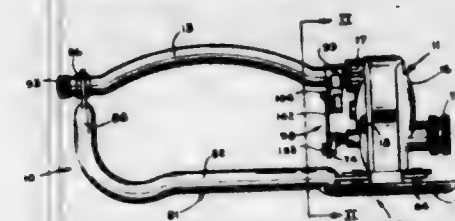


1. A humidifier of the type wherein water is mechanically atomized and then entrained in a current of air, comprising: a non-circular pan-like vessel; a cover over the top of the vessel having a substantially flat top wall coextensive in shape and size with the top of the vessel and a round depression at its center forming a bowl the sides of which are spaced from the sides of the vessel and the bottom of which has a hole at its center through which the interiors of the bowl and vessel are communicated; air inlet means at the upper edge portion of the vessel; a motor housing having an electric motor therein with its shaft protruding from the housing; a downwardly and outwardly directed skirt integral with the lower portion of the housing; a circular screen mounted on and depending from the peripheral edge portion of the skirt, the underside of the skirt forming a flared water guiding surface leading to the inner face of the screen; supporting arms projecting from the edge of the skirt above the screen and seated upon lugs on the side wall of the bowl to mount the motor housing and the screen in the bowl with the motor shaft projecting vertically downward coaxially of the hole in the bottom of the bowl and with the upper portion of the motor housing projecting out of the bowl; a combined pump and centrifugal impeller rotor fixed to the motor shaft to lift

water from the vessel and throw the same against the screen and atomize it; fan means on said rotor contiguous to the edge of the hole in the bottom of the bowl to draw air from inside the vessel through said hole and then direct the same radially outward toward the screen where said air entrains the atomized water; and a dome-like cover having a central discharge port at its top through which the moisture laden air issues, the dome-like cover and the upper portion of the motor housing cooperating to define an annular air passage leading from the top of the bowl to the central discharge port.

3,005,592

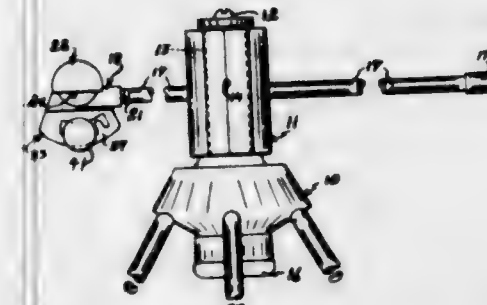
MECHANICAL DEVICE
Edwin W. Smith, Climax, Mich., assignor, by mesne assignments, to Turner Corporation, Sycamore, Ill., a corporation of Illinois
Filed Apr. 11, 1958, Ser. No. 727,900
5 Claims. (Cl. 239-242)



2. In a lawn sprinkler, an outlet shell and an inlet shell, means interconnecting said inlet and outlet shells to form a housing having an inner cavity, a partition member extending between said inlet and outlet shells and partitioning said cavity into a water wheel chamber adjacent the inlet shell and a gear chamber adjacent the outlet shell, said outlet shell having means forming a pair of spaced bearing supports thereon inside of said gear chamber, a bearing block in each bearing support, and each bearing block having formed therein on one side a bore for receiving a corresponding end of a gear shaft, each bearing block having formed on another side thereof a pair of spaced extensions extending toward said partition member, said partition member having formed therein an offset portion opposite each corresponding bearing block shaped to engage the corresponding bearing block between said extensions, thereby to retain the bearing blocks firmly in said bearing supports.

3,005,593

GOVERNOR FOR LAWN SPRINKLERS AND THE LIKE
Lloyd B. Smith, 824 N. 31st St., Birmingham, Ala.
Filed June 19, 1958, Ser. No. 743,098
11 Claims. (Cl. 239-252)

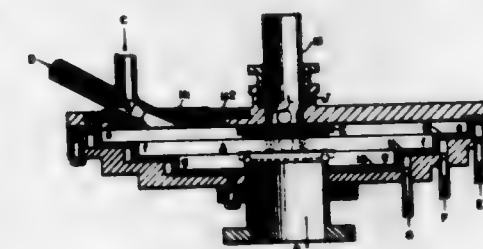


1. In a governor for a rotary member propelled by fluid jet stream discharging from the rotary member, a movable member having a portion spaced outwardly away from the point of discharge of the jet stream discharging from the rotary member and disposed partially to deflect the stream and thereby decrease its propelling

force, and centrifugally actuated means operatively connected to the movable member to move the same into contact with the jet stream upon rotation of the rotary member at greater than a predetermined speed.

3,005,594

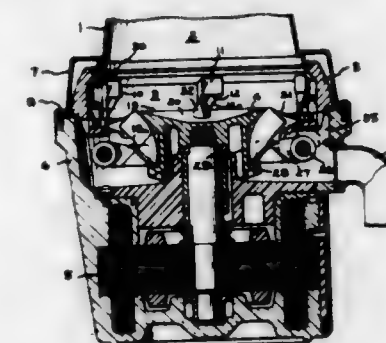
JET MILLS AND THE LIKE
Helmut Vogel and Martin Hartmann, Wolfenbuttel, and Herbert Spitzner, Berlin-Wilmersdorf, Germany, assignors to Schering A.G., Berlin, Germany, a corporation of Germany
Filed Feb. 16, 1960, Ser. No. 8,954
Claims priority, application Germany Feb. 24, 1959
8 Claims. (Cl. 241-39)



1. A jet mill for finely grinding solids, comprising a cylindrical chamber, which is provided with tangentially directed inlet nozzles for propellant gas, said nozzles being arranged on the periphery of the chamber, an injector nozzle directed tangentially in the same direction as the nozzles for the introduction of the material to be ground, said chamber having a central outlet opening for the discharge of the ground material and of the expanded propellant gas, said chamber having a pair of eccentrically mounted covers for variable adjustment of the injector nozzle whereby the horizontal angle α between the nozzle axis and the radius of the grinding chamber is adjustable.

3,005,595

WASTE DISPOSAL APPARATUS
Thomas E. Jenkins, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 31, 1960, Ser. No. 32,800
5 Claims. (Cl. 241-46)



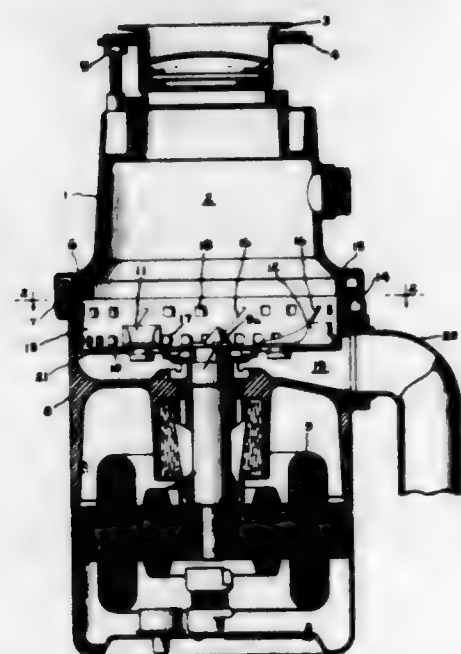
1. In waste disposal apparatus including a housing defining a grinding chamber, a material impelling device in said grinding chamber comprising a flywheel, means mounting said flywheel for rotation in said chamber, said flywheel having a smooth substantially circular generally elevated central area facing said grinding chamber and also having an annular wall surrounding said central area which has an outer surface facing said grinding chamber and inclining downwardly continuously from the periphery of said central area to the periphery of said wheel, said wall having an opening leading from the top to the bottom surfaces thereof, said opening being set back from the periphery of the flywheel so that the periphery is a continuous circular surface, a retractable material impeller having a portion within said opening, pivotal means pivotally connecting said impeller to said flywheel for

rotary movement about an axis below said annular wall adjacent the periphery of said wheel, and a stop for said impeller, said stop and pivotal means locating the center of gravity of said impeller so that the impeller is held against said stop when the wheel is stationary and locating said center of gravity above said axis when against said stop so that when the wheel is rotated said impeller is rotated by centrifugal force to move said portion out of said opening to expose it outside of said annular surface in material impelling position.

3,005,596

WASTE DISPOSAL APPARATUS

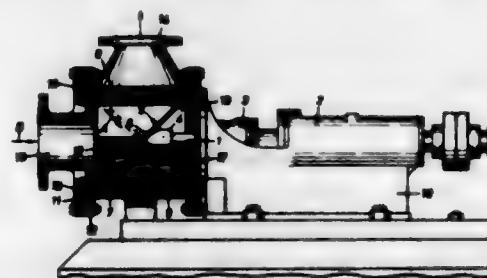
Thomas E. Jenkins, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 31, 1960, Ser. No. 33,001
5 Claims. (Cl. 241-46)



1. Waste disposal apparatus comprising a generally vertically extending casing enclosing a comminuting chamber, said casing having a top access opening for water and waste material, a generally vertically extending cylindrical wall member located at the bottom of said chamber having a plurality of apertures therein through which comminuted waste material may be expelled from said chamber, stationary shredding means within the lower portion of said chamber inwardly of said cylindrical wall member, an annular substantially horizontal shelf member below said apertures extending inwardly from said cylindrical wall member and terminating at its inner edge in a circular opening which lies inwardly from said stationary shredding means, rotary shredding means within the lower portion of said chamber for impelling waste material against said shredding means and for expelling waste material through said apertures, said rotary means including a circular flywheel closing the bottom of said cylindrical wall member and having a peripheral circular edge concentric with said inner edge of said shelf member and in close running proximity thereto to form a clearance gap that is spaced inwardly from the cylindrical wall member by the width of the shelf member to remove the gap from the high pressure grinding area, and said rotary means also including an impeller to overlie parts of said flywheel and said shelf to impel waste material deposited in said cylindrical wall onto said flywheel outwardly to said shelf where it is retained for comminution by engagement with said stationary shredding means and then projected outwardly through said apertures, and wall means below said cylindrical wall defining a drainage chamber communicating with said comminuting chamber through said apertures.

3,005,597
PUMP FOR FLUIDS CONTAINING SOLIDS

Georg Neld, 168 Schönleener Strasse, Berlin-Frohnau, Germany
Filed Mar. 31, 1958, Ser. No. 725,141
Claims priority, application Germany Apr. 11, 1957
10 Claims. (Cl. 241-255)

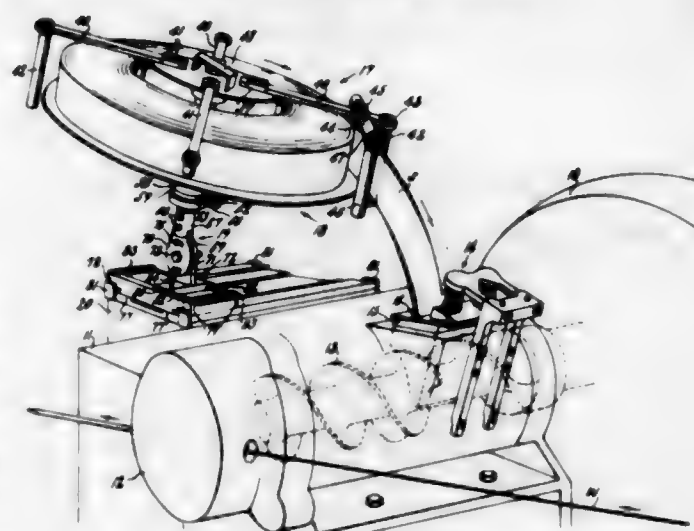


1. A rotary pump for conveying fluids such as effluents, thick pulps and like materials, comprising a cylindrical casing having an inlet and an outlet for the material being conveyed, a shaft extending at least partially into the casing concentric to the axis of the casing, a pump body supported by the shaft obliquely to the axis of the shaft, said pump body being defined as an elliptical disc having peripheral teeth-like components along at least two edges thereof, and the inner periphery of the cylindrical casing being provided with grooves of corresponding axial section with which said teeth-like projections of the disc cooperate so that on rotation of the shaft a combined rotary and oscillatory movement is imparted to the elliptical disc to scoop the material entering the inlet to the outlet while the teeth-like components and grooves coact to disintegrate any solid matter in the material, thereby preventing such matter from engaging and impairing the rotation of the shaft.

3,005,598

DEVICE FOR FEEDING PLASTIC MATERIAL TO AN EXTRUDER

Charles F. Varn, Staten Island, N.Y., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 28, 1956, Ser. No. 606,724
3 Claims. (Cl. 242-68)



2. A device for feeding a continuous strip of plastic material to the intake opening of an article forming apparatus, said device comprising a reel for carrying the coiled strip, a stand having rotatable reel supporting means, longitudinally adjustable means for locating the reel at the proper vertical distance from the intake opening and angularly adjustable means for locating the axis of the reel at the proper angle between a horizontal and vertical position, brake means engageable with the reel supporting means for controlling the rotation of the reel to feed the

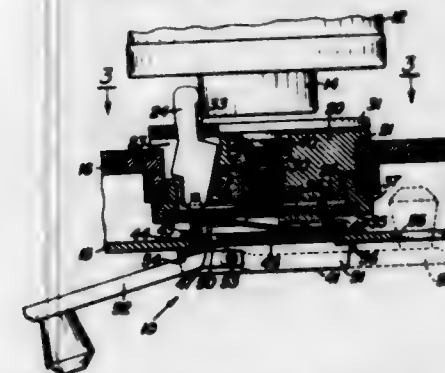
strip to the intake opening at the desired rate, and means mounted on the reel supporting means for guiding the strip from the reel to the intake opening, said guiding means being mounted for rotation relative to said reel supporting means and to said stand.

3,005,599

REWIND CLUTCH

Johannes H. G. Padelt, Rochester, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware

Filed Nov. 21, 1957, Ser. No. 697,941
4 Claims. (Cl. 242-71.6)

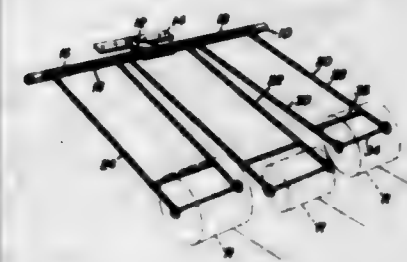


1. A film rewind mechanism for a camera that is adapted to have a film rewind spool disposed therein, comprising a mount rotatably mounted on the chassis of said camera and formed with a plurality of non-radial straight slots, a shaft rotatably mounted in said mount coaxially therewith, the walls of each of said slots being parallel to each other, said slots being identically oriented relative to the axis of said mount and having imaginary center lines that, if extended, would be tangential to a cylinder circumscribed about the axis of said mount, a rotary member secured on said shaft in axially-spaced relation from said mount to rotate with said shaft, said rotary member being formed with a plurality of arcuate slots corresponding in number to said non-radial slots, each said arcuate slot having walls that are eccentric of the axis of said shaft, a plurality of levers pivotally supported on said mount, each said lever being disposed in one of said straight slots and in one of said arcuate slots whereby upon rotation of said member relative to said mount in one direction all said levers are pivoted into operative engagement with said spool, and means for rotating said shaft in said one direction to effect pivotal engagement of said levers with the spool and to rotate the spool after said engagement has been effected.

3,005,600

BARBED WIRE DISPENSING AND REELING DEVICE

Dayton O. Hyde, Yamsay Ranch, Box 81, Chiloquin, Ore.
Filed Sept. 13, 1957, Ser. No. 683,726
3 Claims. (Cl. 242-94)



3. In an apparatus for dispensing barbed wire from a roll, the combination of a horizontal coupling bar comprising a tube provided at the top thereof with a longitudinal slot and provided in one longitudinal edge portion of said slot with a plurality of notches, portions of

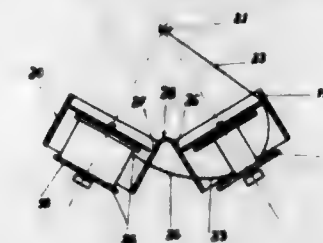
said tube between said notches constituting a plurality of transversely spaced upwardly opening books, and an elongated supporting frame including a pair of spaced side members and a pair of cross members connecting said side members together at the ends thereof, one of said cross members being slidably positioned in said tube and retained therein by said books with adjacent end portions of said side members selectively received in said notches whereby to releasably prevent said one cross member from sliding in the tube and whereby to connect said frame to said coupling bar with adjustment axially of the latter, said one cross member also being pivotable in said tube whereby said frame may rise and fall relative to the coupling bar, the other cross member of said frame affording an axle for a rotatable barbed wire roll.

3,005,601

METHOD AND MEANS FOR CONTINUOUSLY UNWINDING ELECTRIC AND THE LIKE WIRES WOUND OVER SPOOLS

Marius Bernard Gazet, Lyon, France, assignor to Etablissements G. Decombe, Lyon, France, a company of France

Filed May 15, 1956, Ser. No. 584,909
6 Claims. (Cl. 242-128)



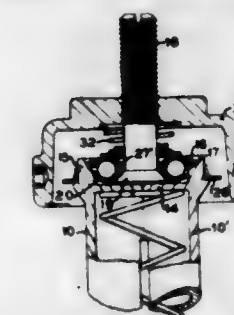
1. In a method for continuously unwinding at high speed electric and the like wires off flanged spools, the steps consisting in positioning at least two spools to be unwound each inside an individual casing, said casings having convergent axes meeting at a common point and being spaced from each other, connecting the end of the inner terminal section of the wire on the first spool external the one casing with end of the outer terminal section of the wire on the next spool external the other casing to form a wire element connecting the ends of the inner and outer terminal sections extending through the walls of the individual casings and between the later, unwinding the wires in succession each inside its casing and causing the unwound wire to pass through the meeting point between the two casing axes.

3,005,602

BOBBIN HOLDER SUSPENSION MEANS

Richard K. Whitehead, Sr., and Richard K. Whitehead, Jr., both of 1631 N. Gatewood Road, Emory University, Ga.

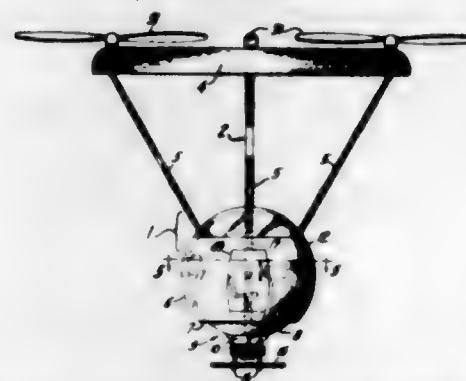
Filed Apr. 27, 1959, Ser. No. 809,001
9 Claims. (Cl. 242-130.2)



9. In a bobbin holder having a body suspended by an anti-friction bearing mounted on a stud having a threaded outer end, said bearing having an outer race encircling said stud and having clearance therewith, a labyrinth seal

for the clearance between said race and said stud, said seal including a first washer resting upon the outside of said outer bearing race and having an inside diameter less than the outside diameter of said threaded end portion, a second washer resting upon said first washer and having an inside diameter slightly larger than the outside diameter of said threaded end portion, a dust cap threadedly engaging said threaded end portion of said stud, and a spring between said dust cap and said washers urging said washers and said outer race together.

3,005,603
HELICOPTER
Thomas Gaskins, Palmdale, Fla.
Filed Sept. 8, 1958, Ser. No. 759,516
4 Claims. (Cl. 244-6)



1. Helicopter comprising concentric shells of spherical curvature lapping in a zone intersected by their common, normally horizontal, equatorial plane, and slidably interfitting whereby they are retained against separation and capable of universal relative movement about their common center, said shells defining a pilot's compartment, a rigid airfoil above said shells, a propeller mounted thereupon rotatable about an axis fixed relative to said airfoil, struts, themselves rigid and rigidly joined to said airfoil having their lower ends rigidly secured to one of said shells, said airfoil, struts and the shell to which they are secured constituting a sustaining member, the other shell being weighted so that its center of gravity is below the center of relative universal movement, whereby said other shell hangs stably suspended from said sustaining member, and control means accessible from within said pilot's compartment operatively engaged with said sustaining member for tilting the latter in any desired direction about the common center of said shells and for rotating said other shell in azimuth.

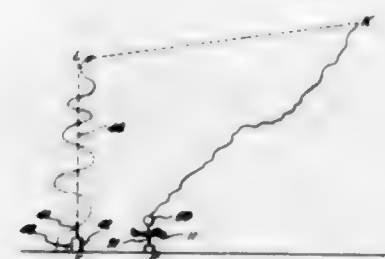
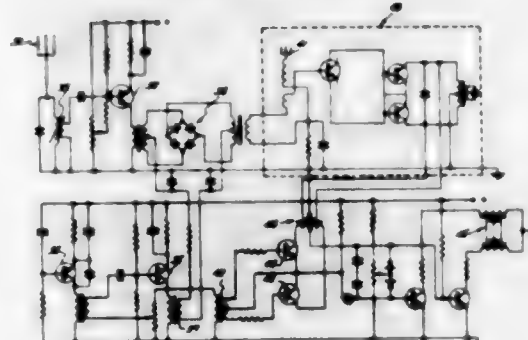
3,005,604
TETHERED BALLOON CONTROL
Willard F. McDonald, 1220 Fulton St., Elkhart, Ind.
Filed June 11, 1959, Ser. No. 819,605
5 Claims. (Cl. 244-33)



1. A control system for tethered balloons comprising a plurality of equi-spaced tether cables secured to the balloon, a traveling weight overlying each of said cables

and movable over said cable to pay out or pay in cable from said balloon, and means for moving said traveling weights horizontally along the top of the ground.

3,005,605
AUTOMATIC HOMING AIRCRAFT
Paul B. MacCreedy, Jr., 1065 Armada Drive,
Pasadena, Calif.
Filed Jan. 19, 1959, Ser. No. 787,415
2 Claims. (Cl. 244-77)

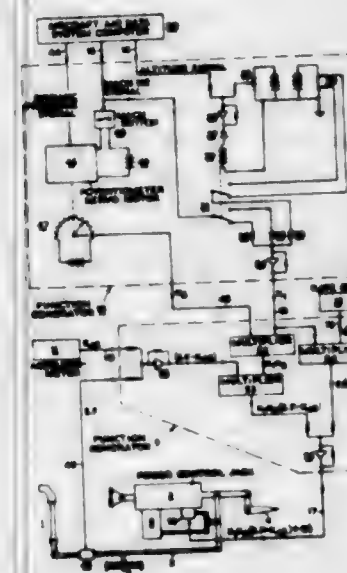


1. A homing transport system comprising a small unmanned aerodynamic vehicle capable of sustained free flight, means for initiating the free flight of the vehicle, a radio transmitter located at a ground station, radio signal reception means attached to the vehicle and including a first antenna constructed and positioned so as to give an omnidirectional horizontal response characteristic and a second antenna constructed and positioned so as to give a "figure-eight" response characteristic with respect to the heading of the vehicle, said radio signal reception means being operable in response to the receipt of a radio signal by said antennas from said transmitter to produce an output which is a function of the direction of the vehicle heading from a vertical axis extending upwardly from the ground transmitter location, vehicle direction of flight control means operable in response to the output of the reception means to cause the vehicle to home with respect to the vertical axis, and information collecting means borne by the vehicle.

3,005,606
AIRCRAFT MANOEUVRE BOOST CONTROL SYSTEMS
John Campbell Gibson, Lytham St. Annes, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Nov. 16, 1959, Ser. No. 853,322
Claims priority, application Great Britain Sept. 17, 1959
5 Claims. (Cl. 244-83)

1. An aircraft manoeuvre boost control system for improving the rate of response in pitch of the aircraft to movement of the pilot's control comprising, in combination with tailplane control means including a pilot's control stick, a tailplane power actuator, and a mechanical linkage connecting the control stick and the actuator, an accelerometer positioned in the aircraft to measure acceleration of the aircraft in pitch and to provide an acceleration-responsive electrical signal, electrical transducer means connected to said tailplane control means and operative to provide a signal which is a measure of

the force applied to the pilot's control stick by the pilot, electrical computer means connected to respond to the acceleration-responsive signal and to said signal which is a measure of the stick force and operative to produce a boost signal which increases with increase in the sig-



nal which is a measure of stick force and decreases with increase of said acceleration-responsive signal, and a connection between said electrical computer means and said power actuator to supply the boost signal to the actuator to supplement the pilot control transmitted along said mechanical control linkage.

3,005,607
APPARATUS FOR COOLING OF SUPERSONIC AIRCRAFT
Antonio Ferri, Rockville Centre, N.Y., assignor to Gruen Applied Science Laboratories, Inc., Hempstead, N.Y., a corporation of New York
Filed Feb. 18, 1957, Ser. No. 640,935
2 Claims. (Cl. 244-117)

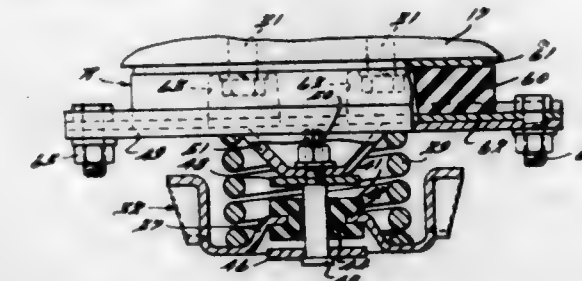


1. In a supersonic aircraft, apparatus for reducing the temperature of the skin of said aircraft in flight comprising a turbine rotor mounted in front of the nose portion of the fuselage of said aircraft for rotation by the airstream on an axis substantially coincident with the axis of said nose portion whereby the air passing through said turbine rotor will be directed along the skin of the fuselage of said aircraft, and an internal load driven by said turbine whereby the effective temperature of the air passing along the skin of said aircraft is reduced.

3,005,608
ENGINE MOUNT
William V. Andrews, Riverside, Ontario, Canada, and Darrell C. Frick, Detroit, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,645
5 Claims. (Cl. 248-8)

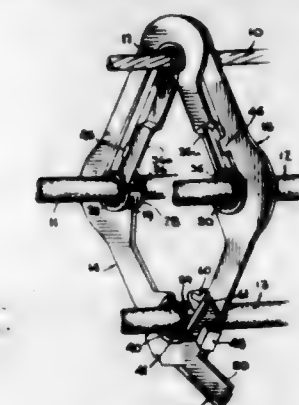
5. In a vibration damping mount for an engine or the like, a rear engine mount adjacent the engine output member comprising a bracket adapted to be mounted on a support, said bracket having an upstanding coil spring seat thereon, a compression-type coil spring mounted concentrically about said spring seat and projecting upwardly

thereabove, an aperture through said spring seat, a sound absorbing resilient bumper ring mounted on said seat and lining the aperture therein, a seat plate mounted on the top of said coil spring, a stud extending through the aperture in the bumper ring having stop members spaced from and arranged on opposite sides of the bumper ring with said stud being fixedly connected to said seat plate and a resilient block of rubber-like material mounted on



said seat plate in series arrangement with said coil spring and a front engine mount comprising an open-ended, U-shaped bracket adapted to be mounted on a support, a plate adapted to be mounted on a front portion of the engine and to extend between the spaced legs of the U-shaped bracket, and blocks of resilient, rubber-like material connected between said plate and said U-shaped bracket to resist the gravity load of the engine in shear and the fore and aft engine movement in compression.

3,005,609
CABLE SUPPORT AND SPACER
Edward J. Joffe, Summit, N.J., assignor to Park Plastics Co., Inc., Linden, N.J., a corporation of New Jersey
Filed Apr. 17, 1959, Ser. No. 807,173
11 Claims. (Cl. 248-61)

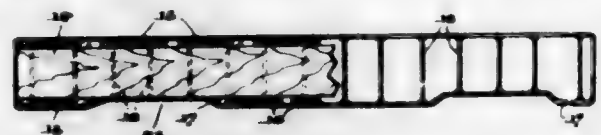


4. In a cable clamp of the class described, a pair of clamping plates each having an upper open hook portion to be applied over a single messenger cable through the throat of said hook portion and a lower hook portion to be applied about a lowermost cable, interlocking integral retaining and detent portions on each of said plates engaging one another when said plates swing about said messenger cable for locking said plates against separation along the axis of said messenger cable and also against relative pivotal movement, said hook portions of said plates being formed to disalign the hook throats when said retaining and detent portions are interlocked so that a barrier is presented to the cables within said hooks to hold said cables within said hooks.

3,005,610
PALLETS FOR HANDLING MATERIAL
Oscar F. Arthur, Silver Spring, Md., assignor to Flow Products, Inc., Washington, D.C., a corporation of the District of Columbia
Filed Jan. 25, 1960, Ser. No. 4,462
4 Claims. (Cl. 248-120)

1. A pallet structure that comprises a deck and a bottom, each comprising laterally-spaced slats having rows

of holes, stringer members disposed between the deck and the bottom and each having holes therethrough, in vertical alinement with adjacent rows of vertical holes through the deck and bottom, the bottom slats being spaced apart at areas intermediate the ends of the stringers, to provide spaces for the entry of lift forks beneath the stringers, a narrow binder of fusible material disposed along the lower ends of each row of holes in the



bottom slats and against holes in the stringers at said areas, a narrow binder of fusible material on the deck and disposed along the upper ends of each row of holes in the deck slats, and connector dowels extending through the various holes in the stringers, the deck and the bottom slats and welded at their respective ends to the adjacent upper and lower binders, to thereby hold the binders against the deck and bottom slats and against the undersides of the stringers at said areas.

3,005,611

LEG STRUCTURE FOR BRAZIER

George C. Terry, Garden City, N.Y., assignor to Kamkap, Inc., New York, N.Y., a corporation of New York

Filed June 3, 1959, Ser. No. 817,815
2 Claims. (Cl. 248-129)



1. A tripod leg structure for supporting a brazier type of charcoal grill having a bowl-shaped firebox, said structure including a pair of similarly shaped but oppositely formed inverted, generally L-shaped tubular members whose vertical portions form spaced legs and whose horizontal portions have an upwardly concave curvature, and which are inclined toward each other to form a substantially V-shaped support, the outer ends of said latter portions extending downwardly and inwardly toward each other and the lower ends thereof being shaped to form a semi-circular contour, and a third leg whose upper end is received and secured between said lower ends.

3,005,612

MOUNTING MEANS FOR FURNITURE LEG

Lee Drezner, 4731 N. Keating Ave., Chicago, Ill., and Selig H. Drezner, 4251 Jarvis Ave., Lincolnwood, Ill.

Filed Sept. 15, 1960, Ser. No. 56,213
4 Claims. (Cl. 248-188)



1. A leg construction comprising, in combination: a base plate adapted for connection to a body to be supported, a leg plate abutting said base plate, pre-formed

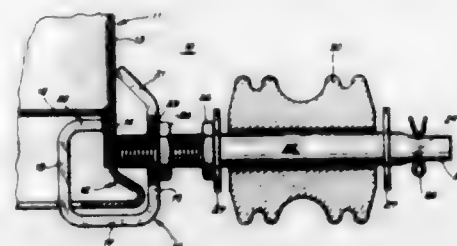
positioning means on said base plate and leg plate providing restraints for maintaining the leg plate and base plate in abutting relation and for limiting sliding movement between said leg plate and base plate in a first pair of directions transverse to each other, a selectively operable connector extending through said leg plate and base plate for securing said plates together, said connector providing restraint against sliding movement between said leg plate and base plate in a second pair of directions that are directly opposite to said first pair of directions, an elongated leg having a recess of non-circular periphery at one end thereof, said leg plate having a downwardly dished portion whose periphery is complementary with the non-circular periphery of the recess in said leg, the dished portion of the leg plate entering said leg and cooperating therewith to prevent rotation of the leg relative to said leg plate, and attachment means, including a part disposed between the leg plate and the base plate, carried by said leg and engaging the dished portion of the leg plate to secure the leg to the leg plate.

3,005,613

SECONDARY LEAD BRACKET

John V. Majewski, Hales Corners, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed May 20, 1959, Ser. No. 814,528
4 Claims. (Cl. 248-226)



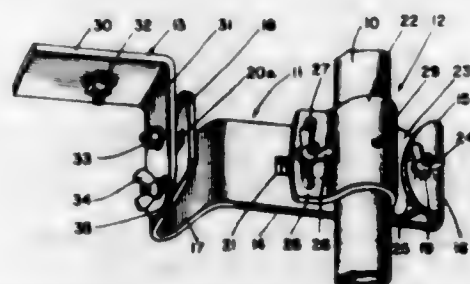
1. A mounting bracket comprising, in combination, a generally U-shaped member, the ends of the leg portions of said U-shaped member extending generally toward one another and engaging opposite sides of a mounting structure, the points of engagement between the ends of said legs and said mounting structure being spaced longitudinally one from the other along the surface of said mounting structure, and means engaging one of said legs and abutting against said mounting structure at a point spaced intermediate the points of engagement of said legs and said mounting structure for affixing said U-shaped member to said mounting structure.

3,005,614

APPARATUS FOR ATTACHMENT TO FURNITURE

John B. Daniell, 911 14th St., Santa Monica, Calif.

Filed Oct. 19, 1959, Ser. No. 847,430
4 Claims. (Cl. 248-230)



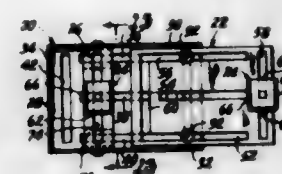
1. An apparatus for clamping to a furniture frame member, said apparatus comprising: a supporting member designed to extend across and into engagement with one side portion of said frame member, said supporting member having an angled end portion spaced from said

frame member; clamping means designed to engage an opposite side portion of said frame member; pivotable coupling means connecting said clamping means to said supporting member, said coupling means enabling pivotal movement of said supporting member with respect to said clamping means, adapter means designed for attachment to said angled end portion of coupling to a receptacle structure; and, adjustable coupling means co-operatively provided on said angled end portion and said adapter means for canting said adapter means at various angles with respect to said end portion.

3,005,615

BRACKET ASSEMBLY

Alvin H. McKay, Arlington, Va.
(Box 382, Rte. 4, Fairfax, Va.)
Filed Nov. 2, 1959, Ser. No. 850,322
19 Claims. (Cl. 248-265)



1. A bracket assembly comprising: first slotted bracket means including slotted flanges extending laterally from one side thereof; an independent slotted flat plate means; second independent slotted bracket means having apertured end flanges; separate rod supporting means having apertured walls; and means cooperable with said apertures and slots fastening said plate, brackets and supporting means together in selected positions.

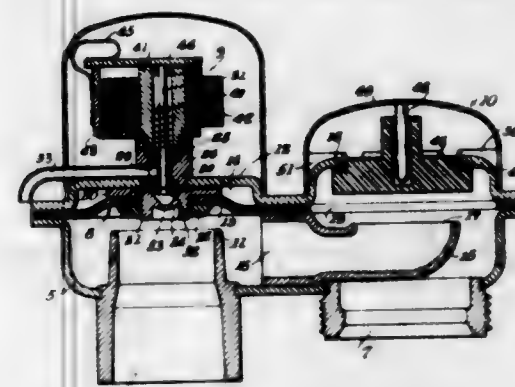
3,005,616

FLOW CONTROL VALVE

Harold A. Seele, 2311-21 Southwest Drive,
Los Angeles 43, Calif.

Original application Aug. 27, 1956, Ser. No. 606,258.
Divided and this application June 3, 1957, Ser. No. 663,112

1 Claim. (Cl. 251-46)



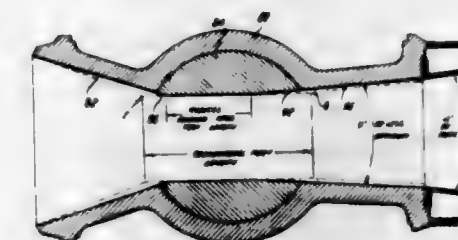
In a fluid valve of the pressure-operated diaphragm type with a diaphragm having a central opening therein, a pressure chamber, a bleeder valve to vent said chamber and having opening movement in a direction into the chamber a diaphragm hub for occupying such a diaphragm opening having a flange and adapted to receive a nut for clamping the diaphragm between the flange and the nut around the diaphragm hub, the hub having an inverted conical wall therein with a central orifice of bleeder size, the conical wall defining an upwardly facing depression facing said chamber and in register with the bleeder valve to provide a conical cavity for allowing movement of the bleeder valve therinto when the fluid valve is open.

3,005,617

PLUG VALVE

Adolph Wolfensperger, Oakland, Calif., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 29, 1957, Ser. No. 699,647
11 Claims. (Cl. 251-124)



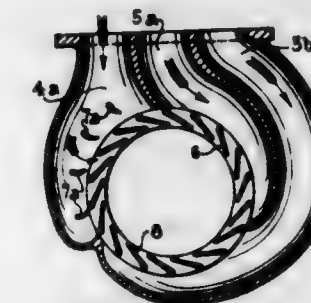
3. A recovery tube and plug valve assembly wherein the recovery passage is comprised of a few passage sections with successively increased maximum included angles of divergence, each section having a constant rate of cross-sectional increase in the direction of divergence, and wherein the initial recovery passage section has at least its entry portion formed integral with the downstream portion of the valve plug port.

3,005,618

TURBINE CASING

Alfred J. Buchl, Archstrasse 2, Winterthur, Switzerland; Hermann Walder, executor of said Alfred Buchl, deceased

Filed May 12, 1958, Ser. No. 734,666
Claims priority, application Switzerland July 23, 1957
3 Claims. (Cl. 253-56)



1. A gas inlet casing for a radial inflow turbine having a rotor provided with blading located therein, said casing comprising an outer wall and intermediate partition walls, said outer wall and intermediate partition walls defining at least two individual guide ducts for an incoming actuating gas arranged side by side in a plane passing through the inlet of the rotor blading and disposed substantially normal to the axis of rotation, a unitary nozzle ring ahead of said rotor blading for and adjoining said guide ducts, said nozzle ring having a plurality of guide blades, said partition walls and outer wall joining the guide blades defining said nozzle ring in the direction of rotation of the rotor, an inlet and outlet for the gas to and from said guide blades, said guide blades from said inlet to said outlet being of equal shape and equal direction relative to the direction of rotation of said rotor, each guide duct terminating at and embracing a section of the periphery of said nozzle ring, said guide ducts being so arranged that in one of said ducts the gas approaches at least a partial number of the guide blades of said nozzle ring in a direction opposed to the direction of rotation of the rotor, and in the remaining guide ducts the gas approaches all of the guide blades of said nozzle ring in the direction of rotation of said rotor, and deflecting blades separate from said guide blades, said deflecting blades being connected across said guide blades inlet to opposite parts of the wall of said one guide duct, said deflecting blades guiding the actuating gas in the direction of and into the guide blades of said nozzle ring.

3,005,619

CHUCK UNITS FOR A TIRE SPREADER

Silas M. Bowen, Acampo, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California

Filed Sept. 29, 1958, Ser. No. 763,914
1 Claim. (Cl. 254—50.3)

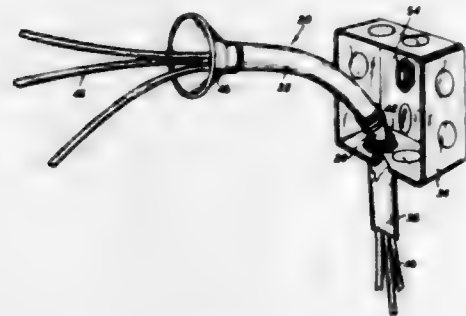


In a chuck unit for a tire spreader and which unit includes a body, a plurality of chuck jaws movably supported from the body for expanding and contracting movement relative thereto, and a control disc turnably mounted on the body and the rotation of which controls the movement of the jaws; a releasable locking device between the disc and body comprising a locking pin parallel to the axis of the disc, a housing mounted on the disc and projecting away from the body and in which the pin is slidable, a spring in the housing urging the pin toward the body, the latter having a hole into which the pin normally projects, a cross pin mounted in the locking pin and projecting through longitudinal slots in the housing, and a finger yoke straddling the housing and pivoted intermediate its ends on the ends of the cross pin, said yoke at one end being arranged to engage the outer face of the disc upon turning the yoke from a position crosswise of the housing to a position generally lengthwise thereof, the locking pin being retracted in said last named position of the yoke, and the latter then being releasably maintained in said last named position under the influence of the spring.

3,005,620

WIRE FEEDER

Harold K. Trunnell, 3195 Meadow Lane, Eugene, Oreg.
Filed Feb. 21, 1958, Ser. No. 716,693
10 Claims. (Cl. 254—134.3)



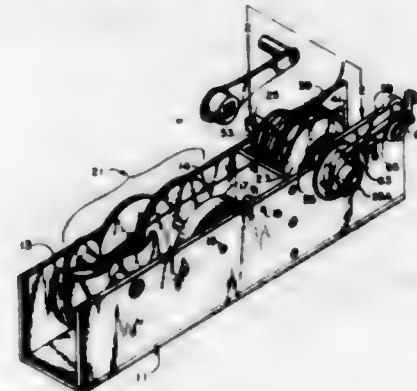
1. A wire feeder for guiding wires into a conduit, said feeder comprising a tubular body member terminating at one end in an end surface extending at an acute angle to the central axis of said body member to provide a pointed portion at one side of said end of said body member and an opening at said end of said body member extending rearwardly from said pointed portion and along the opposite side of said body member, a spring member attached to said body member and having a portion extending forwardly of said body member from said opposite side of said body member, said portion extending substantially in alignment with a portion of the wall forming said tubular body member.

3,005,621

CABLE TENSIONING APPARATUS

Richard L. Johnson, Red Bank, and Morton F. Roseman, Long Branch, N.J., assignors to the United States of America as represented by the Secretary of the Army

Filed Jan. 5, 1960, Ser. No. 672
1 Claim. (Cl. 254—175.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



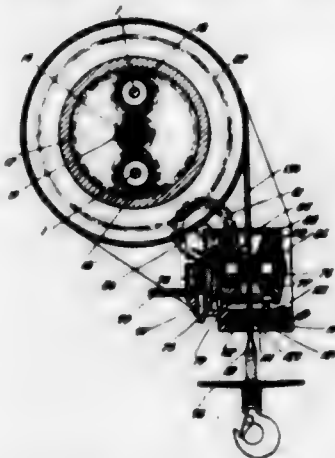
A support and tensioning device for a guy wire that extends between said device and an erective structure comprising a housing, a guy wire reel rotatable in either direction on a shaft in said housing, spring means in said housing for reeling in said guy wire onto said reel, means intermediate said reel and said spring for energizing said spring when guy wire is being payed out from said reel, means for tensioning said guy wire including a capstan rotatable with the shaft in said housing and rotatable in a first forward direction when guy wire is being payed out from said device and rotatable in a second reverse direction when said wire is being reeled in, said capstan being spaced from and in linear alignment with said reel and supporting at least one wind of said wire, said capstan having an externally threaded perpendicularly disposed flange, means for locking said capstan against rotation comprising an internally threaded lock nut engageable on said flange and a bearing plate intermediate said lock nut and said capstan whereby as said lock nut is rotated in one direction the capstan will be urged into frictional locking arrangement with said bearing plate, and means for allowing said capstan to rotate in one direction only when said guy wire is being reeled in to tension said wire intermediate the capstan and its secured position on said structure.

3,005,622

HOISTING WINCHES

Georges Garnier, Asnières, France, assignor to Air-Equipement Asnières, Seine, France, a French company

Filed Sept. 26, 1957, Ser. No. 686,508
Claims priority, application France Oct. 9, 1956
2 Claims. (Cl. 254—175.7)



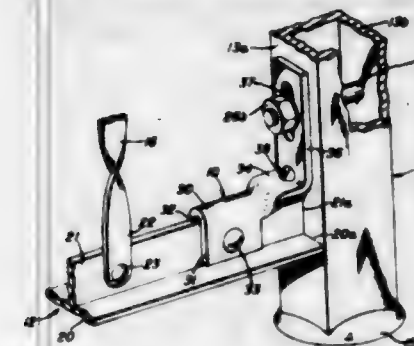
1. In the combination with a hoisting drum driven at different times in opposite directions and rope spooling

on and off said drum in said periods of reverse rotation, of companion rolls mounted in yielding engagement with the rope and geared together for automatically keeping the rope tight on the drum in both the winding on and unwinding operations, means controlled by direction of drum rotation for synchronously driving said rolls in the unwinding direction of drum rotation and means for locking said rolls in the winding on direction of drum rotation.

3,005,623

ADAPTOR FITTING FOR WROUGHT IRON RAILING

Edward J. Kessel, 2343 Ridgewood Road, and Robert S. Mankin, 167 Overwood Road, both of Akron 13, Ohio
Filed Mar. 24, 1958, Ser. No. 723,265
5 Claims. (Cl. 256—67)



1. A railing section for use with a pair of spaced upright support surfaces, comprising: first and second parallel rails of T-shaped cross-sectional configuration, with each said rail having a base portion and a leg portion that includes a flat spindle receiving surface and with said respective leg portions projecting towards each other from said parallel base portions; a plurality of elongate spindles having flat parallel opposed ends respectively receivable against said spindle receiving surfaces; fastening means for pivotally securing the ends of said spindles to said leg portions in coplanar relationship and with the ends of said spindles being spaced from said base, whereby said spindle may rotate relatively of said rails; adaptor units provided for attachment with the opposed ends of said rails; said adaptor units being identical and each including a U-shaped portion that is receivable over the projecting edge of said leg section; a mounting flange defined by said adaptor unit and being receivable against said upright support surfaces; first fastening means releasably interconnecting each said U-shaped portion with said leg portion of said rail adjacent thereto and retaining said U-shaped portion in position over said leg portion; second fastening means releasably retaining said mounting flange against said upright support surfaces; said adaptor units being locally weakened intermediate the point of connection with said first and second fastening means, whereby the angular relationship of each said U-shaped portion can be varied with respect to each said adjacent mounting flange.

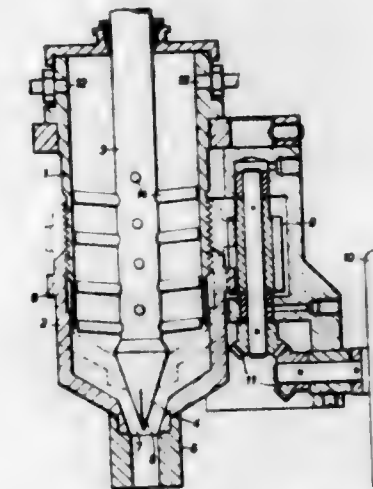
3,005,624

MIXING APPARATUS

Peter Hoppe, Trolsdorf, Karl Breer, Köln-Flittard, and Erwin Weinbrenner, Leverkusen, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,605
Claims priority, application Germany May 11, 1956
2 Claims. (Cl. 259—8)

1. An apparatus for mixing liquids comprising a mixing chamber, said chamber including a first portion and a second portion, said second portion being longitudinally movable with relation to said first portion, said first portion having a plurality of inlet means for introducing

liquids to be mixed, said second portion having an axially aligned frusto-conically shaped discharge outlet, said agitating means extending axially within said mixing chamber toward said discharge outlet, said agitating means including an end portion having a configuration complementary to that of said discharge outlet, said end

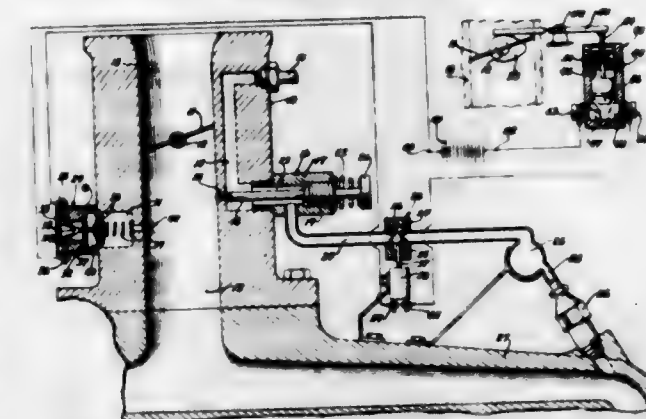


portion of said agitating means being provided with a graduated scale to indicate the size of the discharge outlet and means adapted for moving said second portion with respect to said first portion and said end portion of said agitating means to alter the size of said discharge outlet while said liquids are passing through said mixing chamber.

3,005,625

FUEL SUPPLY SYSTEM

George M. Holley, Jr., Grosse Pointe Park, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Nov. 22, 1957, Ser. No. 698,221
9 Claims. (Cl. 261—23)



1. In a pressure regulated fuel system for an internal combustion engine having an intake manifold with an induction passage therein, a throttle body having an intake passage communicating with said induction passage, a throttle valve controlling the flow of motive fluid through said intake passage, first means discharging fuel under a pressure above atmospheric within said intake passage at all times during engine operation, and second means including a fuel manifold for supplying fuel to said induction passage at a plurality of points downstream from the discharge of said first means.

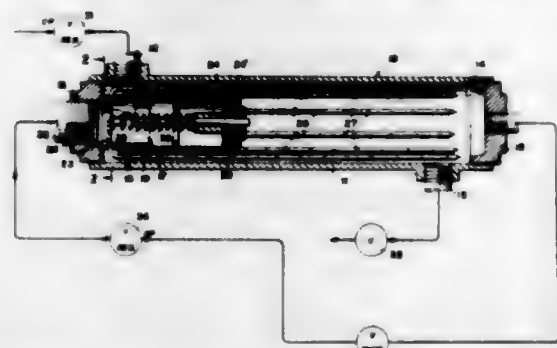
3,005,626

STEAM INJECTION HEATER EMPLOYING A PLURALITY OF HEATING UNITS

David C. Loomans, 251 S. Main St., West Bend, Wis.
Filed Jan. 20, 1958, Ser. No. 709,905
2 Claims. (Cl. 261—64)

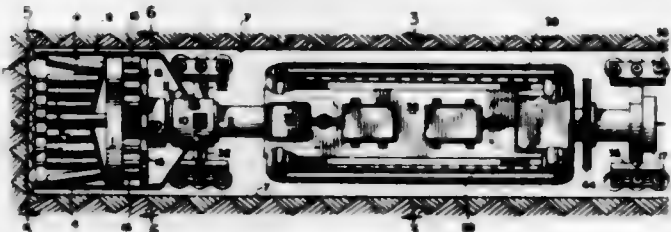
1. A steam injection water heater comprising in combination an elongated heater casing, said casing being pro-

vided with water inlet and outlet ports and a steam inlet port, a plurality of spaced elongated steam injection tubes longitudinally arranged within said heater casing to extend along substantially its full length, said tubes being provided with a plurality of spaced apertures extending substantially along their full length, means for connecting said water inlet port to a source of water under pressure, means for connecting said outlet port to a hot water load, valve means arranged within said heater casing at said steam inlet port for connecting said injection tubes to said steam inlet port, said valve means comprising a cylinder arranged within said casing and connected at one end to said steam inlet port and at the other end through a water



port to said casing interior and a valve element arranged within said cylinder and biased to close said steam inlet port, said cylinder being provided with a plurality of spaced apertures, means for connecting one end of each of said injection tubes to a different aperture in said cylinder, said valve means upon predetermined reduction of water pressure in said casing being actuated in a predetermined direction to connect said injection tubes to said steam inlet port, said valve means upon movement in said predetermined direction forcing water out of said cylinder through said water port, said water port serving as a damping means for controlling valve means fluctuations.

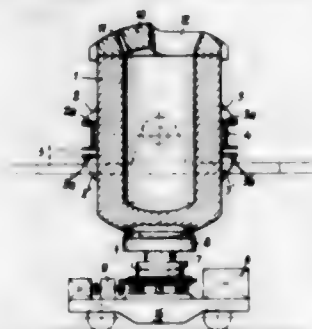
3,005,627
TUNNELING MACHINE HAVING SUCTION EXHAUST MEANS
William T. Tulin, 21 Hickory St., Chicago Heights, Ill.
Filed Aug. 5, 1958, Ser. No. 753,262
5 Claims. (Cl. 262-4)



1. A tunneling machine comprising a rotatably mounted work head having a plurality of cutting tools projecting forwardly therefrom, each of said tools having an annular cutting bit and said tools being of such number and so disposed on said work head that the arcuate cutting paths generated by angular movement of said bits about the work head axis will overlap radially from the center of the work head outwardly to the periphery thereof, means for turning said work head about its axis, an annular shield concentrically surrounding said work head, said shield being open at its forward end and extending forwardly of the work head substantially to the work plane of the radially outermost cutting bits, said shield being closed rearwardly of the work head to provide an enclosed chamber behind the work head, the maximum radial dimension of said shield from the work head axis being less than the radius of the cutting path of the radially outermost cutting bits carried by said work

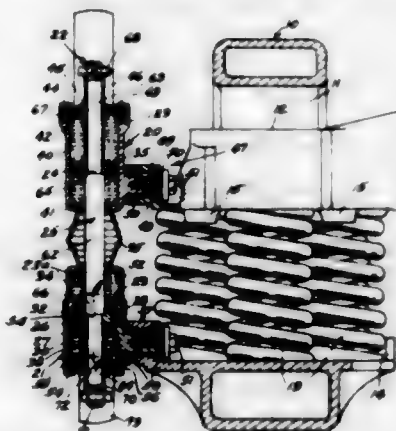
head for permitting passage of air to the said work plane along the tunnel wall, and suction means connected to said chamber adjacent the periphery of its rearward end for exhausting air from within said shield rearwardly of said work head, said air entering said shield radially at the forward end thereof and passing across said work plane to entrain cuttings generated by said bits, and said work head having openings therethrough for passage of said air and entrained cuttings into said enclosed chamber.

3,005,628
REFRACTORY LINED REFINING VESSELS
Rudolf Rimesch, Froeschberg, Linz (Danube), Austria, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz (Danube), Austria, a company of Austria
Filed May 21, 1959, Ser. No. 814,807
Claims priority, application Austria May 30, 1958
2 Claims. (Cl. 266-36)



1. A refining vessel comprising a shell having a closed end and an opposite open end, a refractory lining in said shell, a ring rotatable relative to said shell and encircling it at about the mid-portion of said shell, trunnions connected to said ring and supporting it for tilting movement around an axis transverse to the longitudinal axis of said shell, a first group of angularly spaced beams fixed to and projecting from said shell above said ring to support said shell thereon when the open end is directed upwardly, a second group of angularly spaced beams projecting from said shell below and in spaced relation to said ring, means engageable with the shell when its longitudinal axis is directed vertically to lift it and disengage said first group of beams from said ring and means for rotating said lifting means to rotate said shell relative to said ring.

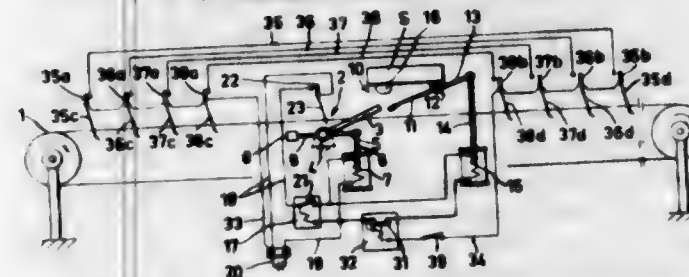
3,005,629
SELF-ADJUSTING STABILIZER FOR SPRING SUSPENSION
Ray C. Williams, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 17, 1957, Ser. No. 684,603
2 Claims. (Cl. 267-8)



1. A stabilizing mechanism for damping oscillations of a spring supported body constituting one of a pair of bodies movable relative to each other from different normal positions, said mechanism comprising a hydraulic

equalizing cylinder for attachment to and movable with said spring supported body, a snubbing cylinder for attachment to and having positive movement with the other body, an axially movable thrust rod common to and extending through both cylinders, an equalizing piston secured to said rod within the equalizing cylinder, a combined snubbing piston and valve secured to said rod within the snubbing cylinder, separate bodies of fluid media sealed in the separate cylinders and substantially filling them, means establishing a restricted by-pass for fluid across said equalizing piston, a pair of longitudinally spaced apart valve seats fixed to the inner wall of the snubbing cylinder in equally spaced relation to the combined snubbing piston and valve when the latter is in its neutral position, the said seats serving as stops for abruptly limiting the movements of the combined snubbing piston and valve from its neutral position and also cooperating therewith to define an annular passageway for fluid around the combined snubbing piston and valve, which passageway is progressively restricted by the movement of the said combined piston and valve from its neutral position, whereby the several parts of the mechanism cooperate during relative movements of said cylinders toward and away from each other from assumed normal positions to create increased pressure differentials at opposite sides of said equalizing piston and at opposite sides of said combined snubbing piston and valve and whereby continued movement of said equalizing cylinder and the body to which it is attached is damped by said pressure differential in said equalizing cylinder, and spring means abutting against at least one of said cylinders and effectively engaged with said rod to exert spring force thereon to adjust said combined snubbing piston and valve to its neutral position upon cessation of relative movement of said cylinders.

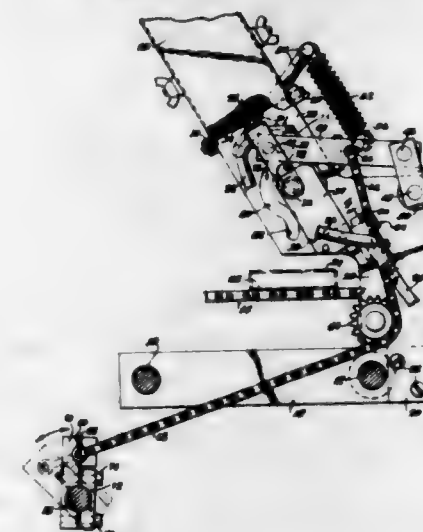
3,005,630
APPARATUS FOR FOLDING BED SHEETS AND LIKE ARTICLES
Lars Olof Bergman, Malmö, Magne Harry Malmström, Högbo, and Bengt Udén, Malmö, Sweden, assignors to Tvättbolaget I. Malmö AB, Malmö, Sweden, a corporation of Sweden
Filed May 26, 1958, Ser. No. 737,644
Claims priority, application Sweden May 31, 1957
9 Claims. (Cl. 270-68)



1. In an apparatus for folding bed sheets and like articles having a leading and trailing edge, the apparatus comprising a frame, a belt conveyor on said frame for successively receiving and transporting the articles, the combination of lifting and gripping means including a gripping member for temporarily retaining above said conveyor the leading edge of each article arriving thereon, means for operating said lifting and gripping means, first sensing means immediately ahead of said lifting and gripping means and connected to said operating means and actuated by the leading edge of said articles for causing the lifting and gripping means to grip and lift the leading edge of the article arriving thereon on the conveyor and then by the trailing edge of each article arriving thereon on the conveyor for causing said gripping member to drop the leading edge of each article on the trailing edge thereof, thus folding the article in halves and forming a fold as the lead portion of the folded article which moves past the lifting and gripping means

in the folded condition, a plurality of second sensing means arranged in two groups, one ahead of and one after said lifting and gripping means, to be actuated by the trailing edge and by the fold, respectively, of each article, the respective sensing means of one group being coupled with the respective sensing means in the other group in pairs with the two sensing means in each pair connected with each other and with said operating means and spaced from said lifting and gripping means on opposite sides thereof to cause, when actuated simultaneously, said gripping member to release its grip for folding the article in a predetermined ratio other than in halves, and selector means for connecting and disconnecting said second sensing means.

3,005,631
VACUUM CARD FEEDER
Robert F. McVicker and Omar Hansen, Jr., Anderson, Ind., assignors to Lynch Corporation, Anderson, Ind., a corporation of Indiana
Filed Jan. 26, 1959, Ser. No. 788,880
4 Claims. (Cl. 271-27)

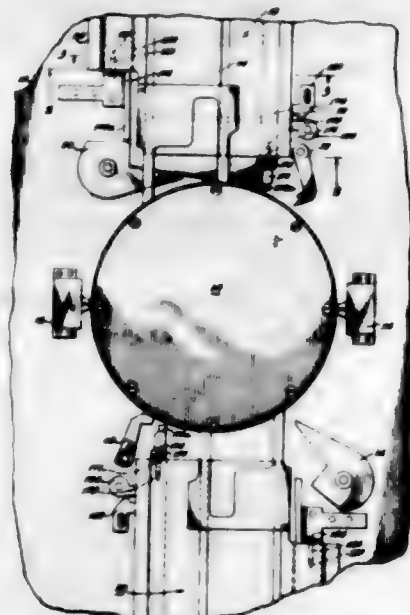


1. In a vacuum card feeder, a card pickup device, a swinging arm having one end pivotally connected therewith for moving the same, a link having one end pivotally mounted and its other end pivoted to the other end of said swinging arm for supporting the arm, a vacuum cup carried by said card pickup device, and means for imparting to said card pickup device a retracting movement relative to a card magazine, a swinging movement and an advance movement toward an article to deposit the card thereon, comprising a slotted and pivoted mounting for said card pickup device in which the slot thereof extends substantially parallel to the axis of said vacuum cup, a cam slot with a curved portion and a pair of straight portions at the ends of said curved portion to coact with the pivot between said arm and said card pickup device, said straight portions extending toward said card magazine axially thereof and toward said article laterally thereof of respectively, and a valve for controlling the connection of a vacuum line to said vacuum cup, connecting the vacuum to said vacuum cup before it contacts a card at the bottom of said magazine and discontinuing the vacuum connection just before the card is deposited on an article to be wrapped in the wrapping machine.

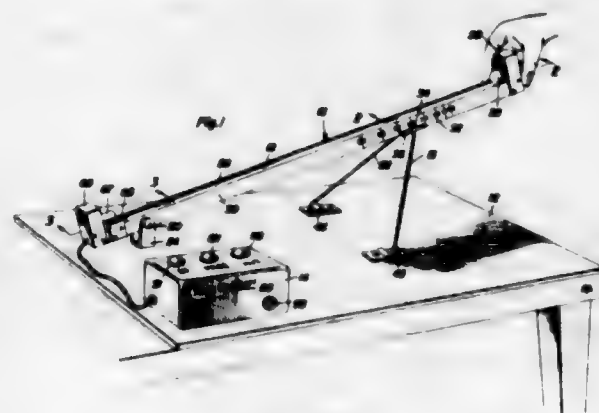
3,005,632
CARD PROCESSING APPARATUS
Allan Orner, Los Angeles, Calif., assignor to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed July 24, 1959, Ser. No. 829,430
22 Claims. (Cl. 271-61)

1. In apparatus for processing data on a plurality of information storage cards, the combination of: transport

means for the cards, a removable magazine having a pair of side walls and a mouth and constructed to hold the information storage cards in a stacked relationship, supporting means operatively coupled to the magazine for holding the magazine in a particular position thereon with the mouth of the magazine facing the transport means so that cards may be fed through the mouth of the magazine between the magazine and the transport means, a pair of card retaining slide members slidably mounted in respective ones of the side walls of the magazine to be individu-

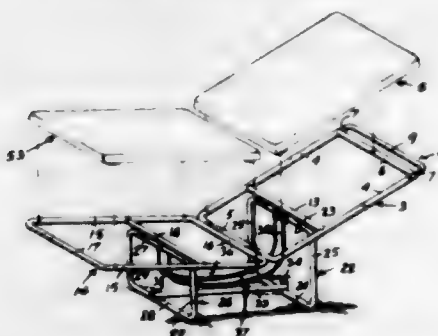


3,005,634
DEVICE TO TIME GUN DRAWING
Fred W. Goette III, 191 Stonewall Place, Macon, Ga.
Filed Sept. 29, 1958, Ser. No. 764,096
14 Claims. (Cl. 273-102.2)



ally movable between a first position in which the retaining slide members protrude outwardly from the mouth of the magazine and a retracted position, means coupled to the card retaining slide members for biasing the same to their first positions, and stop means positioned on the supporting means for engaging the card-retaining slide members to hold said retaining slide members stationary when the magazine is moved to its particular position on said supporting means so as to force the retaining slide members to their retracted positions with respect to the magazine when the magazine is in said particular position.

3,005,633
EXERCISING DEVICE
Oscar L. Riemer, 5971 Seminary Ave., Oakland, Calif.
Filed Sept. 22, 1958, Ser. No. 762,358
5 Claims. (Cl. 272-58)



1. An exercising device comprising the combination of; a pair of generally horizontally elongated sections in end-to-end relation adapted to support the body of a person thereon with the upper portion of such body on one section and with the lower portion of such body on the other section, means hingedly connecting the adjacent ends of said sections to enable movement of said sections to different positions in a vertical plane extending angularly relative to each other about said hinge means, a pair of separate vertically disposed, rigid supports respectively below each of said sections for supporting each section, means pivotally connecting the upper end

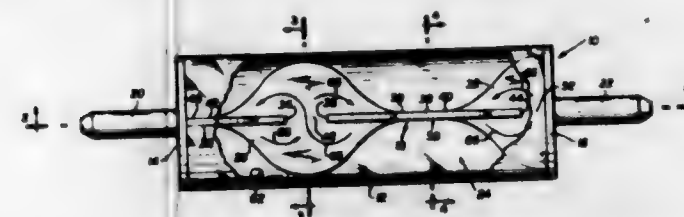
of each support to the section thereover to provide for movement of said sections and said supports relative to each other about parallel horizontal axes, horizontally extending rigid means extending between the lower end portions of said supports, means pivotally connecting the ends of said rigid means with said lower end portions to provide for movement of said rigid means and said lower end portions relative to each other about horizontal axes parallel with said first-mentioned axes, a generally U-shaped spring connected at its ends with the upper end portions of said supports yieldably holding said supports in positions in which said sections extend angularly relative to each other whereby movement of said sections relative to each other about said hinge means will be yieldably resisted by said spring only.

1. A device to time gun drawing and shooting, said device comprising a target having a normally closed target switch adapted to be opened by hitting the target, an electric potential source connected to said target switch, a two-position relay having first position and second position contacts and a coil in series with said target switch, a single-pole double-throw time initiating switch in series with said relay coil, a conductor extending from said time initiating switch to said source so that said relay coil is energized when said time initiating switch is momentarily moved from its first normal position to a second position thereby actuating said relay to its second position, a first signal circuit connected in series with the first position contacts of said relay so that said signal circuit is opened when said relay coil is energized a second signal circuit connected with said source through said relay second position contacts, a normally open time completion switch in said second signal circuit and connected across said relay coil and target switch, a timing structure adapted to close said time completion switch at a time interval after said time initiating switch is returned from its second position to said first normal position during which interval the target may be shot; and if hit said target switch is momentarily opened thereby interrupting the flow of current through said relay coil causing it to return to its first position at which said first position contacts thereof are closed thereby closing said first signal circuit.

3,005,635
AMUSEMENT DEVICE
Matthew Greene, 5 E. 10th St., New York, N.Y.
Filed Mar. 27, 1959, Ser. No. 802,411
6 Claims. (Cl. 273-109)

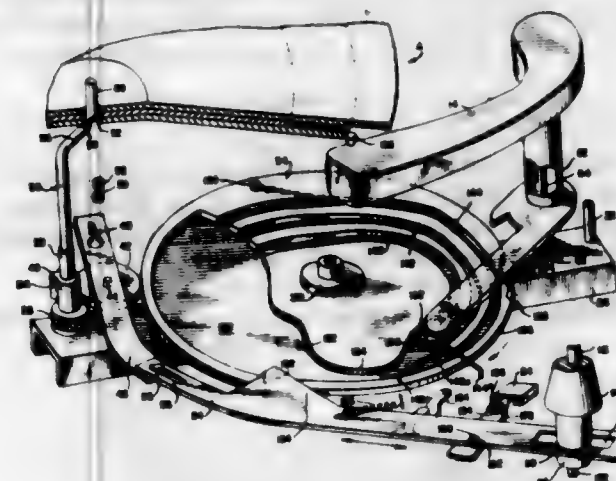
1. An amusement device, comprising a transparent hollow longitudinally extending member, a central member disposed within said hollow member, and a ball dis-

posed within said hollow member, said central member comprising at least three planar portions, at least two of said portions being disposed in the same plane and being spaced longitudinally from each other, another of said portions being angularly related to said last two mentioned portions and being disposed therebetween in intersecting relation therewith to thereby render the cen-



tral member as a support for said ball to roll on from one end thereof to the other in response to the tilting and rotation of said device, means connecting said central member to said hollow member for concomitant rotation, and a pair of elongated handles extending outwardly from the ends of said hollow member along the central axis thereof.

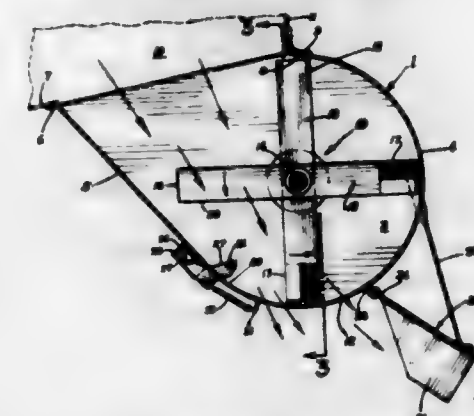
3,005,636
RECORD FEEDING ARRANGEMENT BY THE TONE ARM
Hans Christian Hansen, 38 Slotvej Charlottenlund, Copenhagen, Denmark
Filed June 30, 1954, Ser. No. 440,487
Claims priority, application Denmark June 30, 1953
26 Claims. (Cl. 274-10)



1. In a record changing phonograph having a support for a stack of records in spaced relationship from the playing position in the form of a platform from which the records can be sequentially released by being sideways displaced: a ballast arm operable to engage the top of said stack of records to retain them in horizontal plane, a record feeding arrangement for imparting a sideways movement to the lowermost record of said stack relatively to the other records thereof comprising an abutment member operable to engage the edge of said phonograph record, an inclined surface extending from below said member in a downward direction and in the direction against said support, said inclined surface having a top edge in a plane substantially parallel with a plane through the surface of said lowermost record, and positioning means for said record feeding member and said inclined surface operable to make them assume a relative position, when out of engagement with the edge of said lowermost record in which said top edge of said inclined surface is above the bottom plane of said lowermost record and in which the lower portion of said inclined surface is below said plane, including resilient means enabling said abutment member to be moved down-

wardly in the direction toward said bottom plane of said record by sliding engagement of said inclined surface against the edge of said record.

3,005,637
STRAW CUTTERS AND SPREADERS
Edgar E. Hettner, Roseau, Minn., assignor to Polar Industries, Inc., Roseau, Minn., a corporation of Minnesota
Filed Sept. 8, 1958, Ser. No. 759,664
8 Claims. (Cl. 275-3)

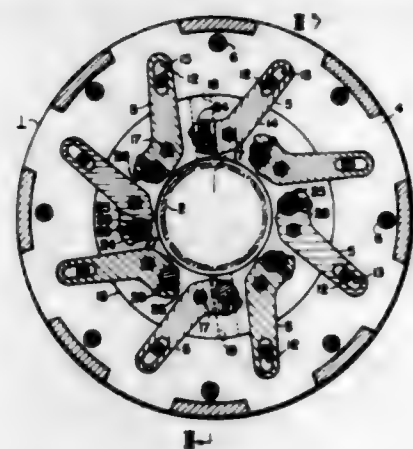


1. In an apparatus of the class described, a housing comprising a rear wall, a bottom wall, a forwardly and upwardly inclined front wall, and side walls, the upper marginal edges of the upright walls of the housing cooperating to define a receiving opening, said front wall having a plurality of spaced vertical slits therein, means on said walls for securing the housing to a combine with its receiving opening in communication with the usual discharge opening of the combine, a shaft extending lengthwise through said housing and having its end portions rotatably supported in bearings secured to said side walls, a plurality of cutter bars secured to said shaft in axially spaced relation for direct rotation therewith, said housing having a discharge opening in its bottom wall, a plurality of cutting elements, means for pivotally supporting said cutting elements on said front wall exteriorly thereof and with their swingable end portions extending through said slits into cutting relation to said rotatable cutter bars, and means connected to the swingable end of each cutting element and to fixed means on the housing for normally retaining the swingable end portions of the cutter elements in cutting relation to the rotary cutter bars, but permitting said cutting elements to yield independently of one another when an overload is delivered into the housing from the combine, whereby said cutting elements when engaged by said overload, may retract and permit the overload to pass uninterruptedly through the housing and its discharge opening without causing damage to the operating parts of the apparatus.

3,005,638
PIPE CHUCKS
William Mynard McConnell, Pittsburgh, Pa., assignor to Taylor-Wilson Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1959, Ser. No. 855,034
2 Claims. (Cl. 279-106)

1. In a toggle type chuck having a housing the combination comprising, a plurality of jaws disposed in said housing, pivot means in said housing in engagement with each of said jaws and forming a pivot about which said jaws move in their travel into and out of gripping engagement with a substantially cylindrical workpiece, a shiftable member in engagement with said jaws and operably connected to cooperating means for causing said jaws to travel into and out of engagement with said workpiece, each of said jaws having a work part which is op-

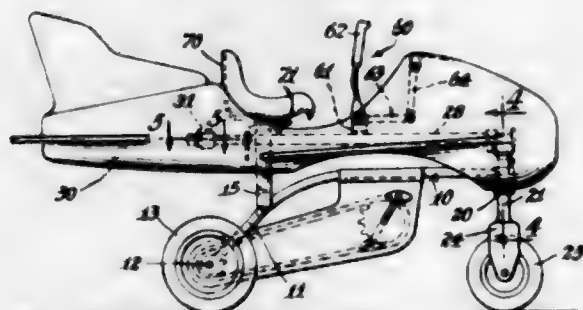
posite the workpiece when the jaw is in clamping engagement therewith and a second part connected to said work part and in engagement with said pivot means, said work part having a socket therein, a disk having a work surface extending along a first part of its periphery for engagement with said workpiece and being mounted in said socket with a second part of its periphery in slidable engagement with that part of said jaw defining said socket,



said socket defining a path of slidable rotative movement between the disk and the jaw upon engagement of the disk with the workpiece, said work surface being located on that part of the periphery of said disk substantially opposite said workpiece and being concave to provide an area of contact with the periphery of said workpiece, means carried by said jaw and positioned thereon for engagement with said disk to limit slidable rotative movement between the disk and the jaw.

3,005,639

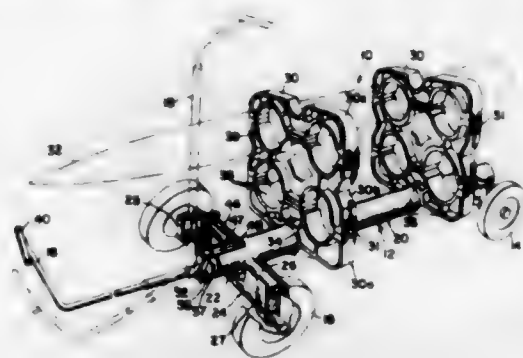
TOY VEHICLE SIMULATING AN AIRPLANE
Louis J. Buttacavole, Jersey City, N.J. (1412 85th St., North Bergen, N.J.), and Louis De George, Long Beach, Calif. (11 Cottage St., Jersey City, N.J.)
Filed Mar. 24, 1960, Ser. No. 17,358
6 Claims. (Cl. 280-1.12)



1. A toy vehicle comprising a frame adapted to be supported on a pair of rear wheels and a steering front wheel with a vertical steering post carried by said frame, a rocking member longitudinally mounted in said frame for oscillatory movement therein, an airplane fuselage mounted on said vehicle for pivotal movement relative thereto vertically and being yieldably connected to and guided at its forward end by the forward end of said frame, a control stick mounted on said vehicle adapted to oscillate the rocking member and the fuselage, said mounting for the stick including pivotal means about which said stick may be moved longitudinally of said fuselage, linkage means connecting said stick to the forward end of the fuselage adapted to raise and lower the same when the stick is moved about said pivot, and means operative to effect the steering movement of said post in a direction corresponding to the direction in which the stick is inclined laterally.

3,005,640
DOLLY

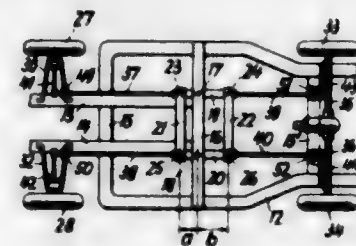
Clyde C. Cole, Oxnard, Calif.
(89 Hillview Ave., Ventura, Calif.)
Filed Jan. 16, 1958, Ser. No. 709,427
4 Claims. (Cl. 280-47.34)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A manually-drawn dolly comprising a chassis including a frame and a plurality of wheels, each wheel being suspended from the frame for independently vertical movement, thereto, said chassis having a front end being turnable by a steering arm, means connecting the arm to the front end for pivoting movement of said arm about a horizontal axis, selected ones of said wheels having brake mechanisms, said brake mechanisms being normally biased to a braking condition, actuating linkage supported on the frame and operated by said arm for restraining and releasing the brake mechanism when the arm assumes predetermined angles of elevation, said actuating linkage having sliding engagement with each brake mechanism to permit each of said selected wheels to be braked throughout vertical wheel movement.

3,005,641

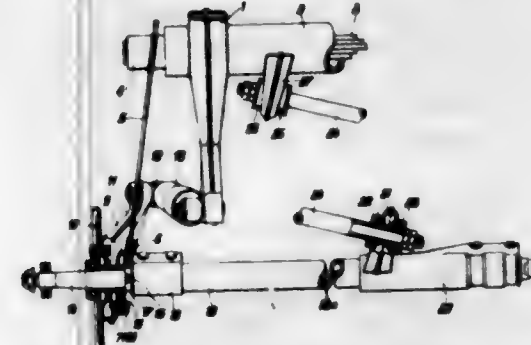
SUSPENSION MECHANISM FOR VEHICLES
Ernst J. H. Flais, Sindelfingen, Kreis Boeblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 1, 1957, Ser. No. 687,517
Claims priority, application Germany Oct. 4, 1956
13 Claims. (Cl. 280-104)



1. A wheel suspension for a vehicle having a frame and front and rear wheels, comprising torsion bars operatively associated with each of said wheels and extending substantially in the longitudinal direction of said vehicle, means for pivotably mounting each of said torsion bars on said frame, each of said torsion bars terminating at one end in a lever arm connected to one of said wheels so as to transmit the vertical movements of said wheel to one of said torsion bars to turn the same, a compensating frame comprising at least one longitudinal arm and two cross arms, means for pivotably connecting said longitudinal arm to said two cross arms, and means for pivotably mounting at least said one longitudinal arm on said vehicle frame, each of said torsion bars of said front wheels being rigidly secured to one of said cross arms, and each of said torsion bars of said rear wheels being rigidly secured to the other cross arm.

3,005,642

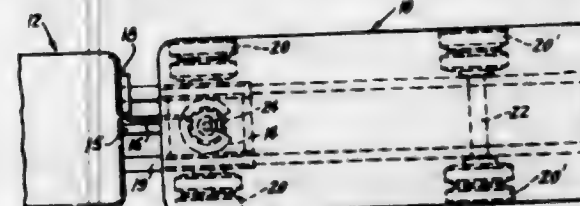
REAR WHEEL SUSPENSION, PARTICULARLY FOR MOTOR CARS
Karl Hertel, Dusseldorf, Germany, assignor to Auto Union G.m.b.H.
Filed Nov. 19, 1959, Ser. No. 854,118
Claims priority, application Germany Nov. 22, 1958
8 Claims. (Cl. 280-124)



1. In a rear wheel suspension for motor vehicles and the like, a vehicle frame, a torsion bar spring anchored to said vehicle frame, a split tubular torsionally resilient axle beam, an elastic crank arm consisting of a single straight flat leaf spring extending transversely to said torsion bar spring and said axle beam, rear wheel-carrying means connected with one end of said leaf spring and with said axle beam, means connecting the other end of said leaf spring with said torsion bar spring, a sleeve carried by said axle beam, a single bar extending transversely to the direction of the vehicle, means resiliently connecting one end of said bar with said sleeve and means resiliently connecting the other end of said bar with said frame, whereby said bar constitutes the sole articulated connection between said axle beam and said frame.

3,005,643

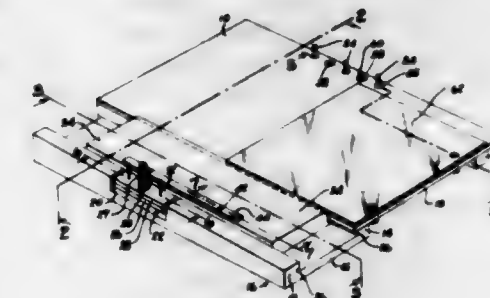
BRAKING SYSTEM FOR TRUCK TRAILERS
Frank C. Dugan and Charles F. Martin, both of 334 Ockley Drive, Shreveport, La.
Filed Nov. 4, 1960, Ser. No. 72,828
8 Claims. (Cl. 280-432)



1. In a tractor-trailer assembly, a trailer brake system comprising a fifth wheel device which includes a cylindrical wall, a disc within said wall, means connecting said fifth wheel to the trailer, a plurality of floating shoes between the outer periphery of the disc and the inner surface of said cylindrical wall, biasing means adjacent opposite ends of each shoe, said biasing means urging their respective shoes radially inward toward said disc, a switch contact means adjacent opposite ends of at least some of said shoes, a switch means on said cylindrical wall for each contact means, said switch means being arranged in an electrical network wherein the switch means for each of the shoes are individually electrically connectable to selected solenoid valves upon radial movement of said shoes, said solenoid valves being interposed in respective parallel fluid circuits between a source of fluid pressure and fluid-actuated trailer brakes, one of said parallel fluid circuits providing a fluid flow of greater pressure than the other, and a return-flow solenoid valve interposed in a return fluid circuit from said trailer brakes to said source of fluid pressure, said return-flow valve being alternatively opened and closed relative to said first mentioned solenoid valves.

3,005,644

PAYROLL ACCOUNTING BOARD
Peter J. Apol, 214 Lara St., Neptune Beach, Fla.
Filed Feb. 18, 1960, Ser. No. 9,648
3 Claims. (Cl. 282-29)



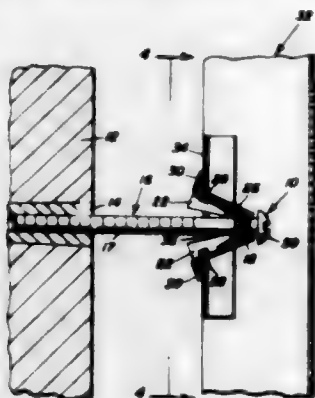
1. A sheet entry and copying apparatus having a writing area extending laterally of the apparatus between the foot and head thereof for use in making entries on a plurality of sheets positioned thereon in superimposed relation with duplicating media therebetween comprising a stationary platform with an upper flat surface to rigidly support a stack of third sheets of entry, means supporting said platform, the platform having means adjacent a side edge thereof for removably mounting the third sheets of entry of said stack pre-positioned longitudinally and laterally with respect to the writing area, a track element fastened to a longitudinal side edge of said platform and extending from the foot to the head thereof, longitudinal guide means formed in said track element and extending from the foot to the head thereof, a carriage with an upper flat surface of the platform to rigidly support at least part of a second sheet of entry, means mounting said carriage in said guide means and cooperating therewith for sliding longitudinal movement of the carrier from the foot to and from the head of said platform, means on said carriage for releasably holding said second sheet of entry thereon extending across the upper surface of the carriage and over the stack of third sheets of entry and pre-positioned laterally with respect to the writing area, clamping means on said platform adjacent the carriage for holding a sheaf of first sheets of entry pre-positioned longitudinally and laterally to extend transversely across the upper surface of the carriage and the platform above and registered with the second sheet of entry and the stack of third sheets of entry and to be leafed thereover one at a time, and means to index the longitudinal movement of the carriage to pre-determined successive positions on said track for registering successive portions of said second sheet of entry with the writing area and the other sheets of entry, and the plane of the track guide means and the cooperating carriage mounting means being inclined relative to the aforementioned planes to move the upper surface of the carriage through a vertical distance relative to the plane of the upper surface of the platform and related to the longitudinal movement of the carrier upon longitudinal movement of the carrier.

3,005,645
FASTENER

Bobby N. Leverette, P.O. Box 66, Ambrose, Ga.
Filed Mar. 11, 1959, Ser. No. 798,671
5 Claims. (Cl. 287-23)

1. A fastener for use in securing an article to a supporting member comprising an elongated body having one end adapted for fixed mounting upon said supporting member and adapted at its other end for connection with an article to be mounted having a supporting plate with an opening formed therethrough, said other end having a plurality of arms, means pivotally connecting the outer end of each arm to said other end for movement about

an axis extending transversely of said body, means engaging said arms for urging their inner free ends away from each other and from said body, a laterally extending flange formed on the inner end of each arm, said flanges extending away from said arms and from each other and adapted to engage the surfaces of said plate about the opening formed therethrough to restrict complete passage of said arms through said opening, said arms upon their outer surfaces, spaced slightly inwardly of



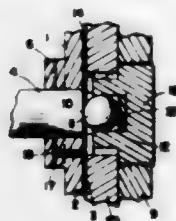
said flanges and adjacent their inner ends having means for engaging portions of said plate surrounding said opening through which said body projects whereby said urging means will expansively fasten said arms to said plate, said engaging means including recesses for receiving therein the adjacent portions of the rim of said opening in said plate whereby said recesses and said flanges will restrict movement of said fastener in either direction through said opening.

3,005,646

MEANS FOR SPACED ALIGNMENT

John P. Lekan, Hollywood, and Lester L. Kilpatrick, Downey, Calif., assignors to North American Aviation Inc.

Original application Jan. 7, 1952, Ser. No. 265,254, now Patent No. 2,750,579, dated June 12, 1956. Divided and this application Oct. 31, 1955, Ser. No. 546,376
7 Claims. (Cl. 287-53)



1. In combination, a shaft, a disc coaxial with said shaft, means for aligning said disc relative to said shaft, said aligning means comprising a coupling attaching said disc to said shaft and adjustable means for bending said coupling, a flat, rigid element parallel to said disc and coaxial with said shaft, means for spacing said flat, rigid element and said disc, said spacing means comprising a spacing ball and adjustable screw means bearing against said spacing ball, connected to space said element of rigid material relative to said disc.

3,005,647

BALL JOINT

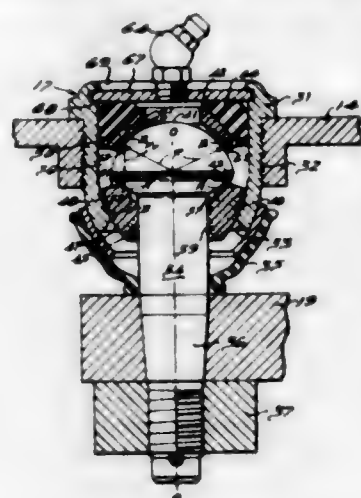
John E. Collier, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Aug. 7, 1957, Ser. No. 676,784

7 Claims. (Cl. 287-90)

5. A ball joint assembly comprising a housing having a first opening at one end to receive a stud and a second opening at the other end covered by a cover plate, said

housing having a surface of revolution constituting a bearing surface formed on the interior side walls thereof adjacent to and shaped to converge towards said first opening, a stud having the head portion positioned in said housing with the shank portion thereof projecting from said first opening, said head portion being spaced from the housing interior walls and including integral, angularly related, upper and lower annular bearing surfaces, a first bearing ring surrounding said stud shank portion and having an annular exterior surface of revolution of a dissimilar shape from the housing interior wall bearing surface seated on and arranged to have line contact bearing engagement with the housing interior side wall



bearing surface, said first bearing ring having an upstanding edge portion on the surface thereof adjacent said stud head in a line contact bearing engagement with the adjacent one of the bearing surfaces on the head of said stud, a second bearing ring having a bearing seat portion formed thereon by a converging surface of revolution that engages by line contact a convexly curved portion of the other bearing surface on the head of the stud, and resilient means in said housing arranged to load the stud head and urge the last-mentioned contacting bearing surfaces into engagement and to transmit thrust forces between the stud head and the housing interior walls.

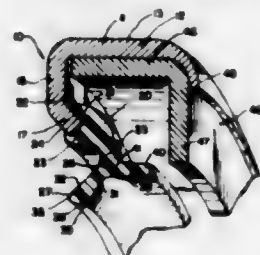
3,005,648

DUAL LIP SEAL

Dan A. Christensen, Menlo Park, Calif., assignor to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

Filed Mar. 19, 1958, Ser. No. 722,609

3 Claims. (Cl. 288-3)



1. A dual-lip radial rotary shaft seal comprising a rigid annular case and an elastomeric sealing member supported by said case, said sealing member having a radially extending flexing neck and a pair of sealing lips extending from said neck, one said sealing lip extending generally axially with faces converging toward each other away from said neck, so that said lip is narrower at its outer extremity than at its attachment to the neck; the other lip extending at an angle in the opposite axial direction and radially away from said case and having faces diverging from each other with its terminating edge wall at an included acute angle to the shaft axis and facing

in said opposite direction, so that when said seal is installed said other lip is engaged by an axial insertion of a shaft and the lips are swung about said neck bringing both lips into axial alignment but extending in opposite axial directions.

3,005,649

LOCKING MECHANISM FOR DOUBLE DOORS

Thomas J. Moynihan, 44 Frederick St., Newington, Conn.

Filed Jan. 15, 1960, Ser. No. 2,750

2 Claims. (Cl. 292-203)



1. A locking mechanism for swinging double doors comprising a keeper mechanism adapted to be secured to one of said doors adjacent the free edge thereof engageable with a stop molding for said door, said locking mechanism including a keeper adapted to engage the side of said stop molding remote from said one door to prevent the movement of the latter from a closed position toward an open position, actuating means carried by said locking mechanism and projecting beyond the free edge of said one door for moving said keeper into engagement with said stop molding, and an actuator adapted to be secured to said door adjacent the free edge thereof engageable with said actuating means to move said keeper into engagement with said stop molding upon movement of said second door toward the closed position, said actuating means including means for engaging said actuator by means of a lost motion connection after said keeper is completely engaged with said stop and during final movement of said other door to a completely closed position whereby even subsequent appreciable movement of said other door toward an open position relative to said one door will not disengage said keeper from said stop, means for locking said actuating means and said actuator against relative movement when said doors are in the closed position.

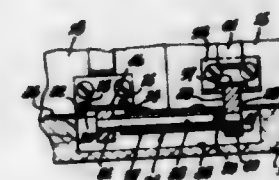
3,005,650

LATCHING DEVICE FOR SWINGING DOORS

Charles J. Schneisler, 137 Turner Ave., West Covina, Calif., and Herbert Wilzig, 1809 Stearns Drive, Los Angeles, Calif.

Filed June 15, 1959, Ser. No. 820,529

4 Claims. (Cl. 292-203)



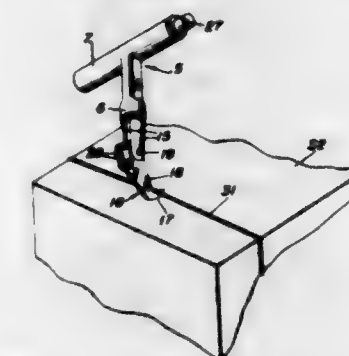
1. A latching device for cabinets or the like having first and second swinging doors, door frame members, a first vertical door frame member having a first door swingably hinged thereon and a second vertical door frame member having a second door swingably hinged thereon compris-

ing a mortise in a horizontal door frame member adapted to receive a rotating lock assembly, comprising a base plate member adapted for securing to a horizontal door frame member having a mortise therein, a first slot in said base member, a second slot in said base plate member, guide means on the top of said base plate member alongside said second slot in said base plate member serving as a guideway, a shaft rotatably secured beneath said base plate member, a first keeper secured to said rotatable shaft adapted to pass through said first slot in said base plate member, said first keeper having a hooked finger with a front cam curved surface and a rear concavity, a second keeper secured to said rotatable shaft adapted to pass through said second slot in said base plate member, said second keeper having a finger, tension means acting to urge said first keeper in a position below the top surface of said base plate member and acting to urge said second keeper in a position above the top surface of said base plate member, a holding strike member secured to said second door adapted to slidably pass through said guide means on said base plate member when said second door is swung to closed position, a latching strike member secured to said first door, said latching strike member having a horizontal face with a slot formed therein adapted to receive the hooked finger of said first keeper, said holding strike member being adapted to contact said second keeper when said second door is moved to closed position and to rock said rotatable shaft against the tension of said tension means thus rotating the hooked finger of said first keeper into locking position above the surface of said base plate member, said second keeper, under tension, serving to maintain said second door in closed position by exerting tension against said holding strike member, said strike member in turn being retained in position by said guide means acting as a guideway on said base plate member, said latching strike member being adapted to ride over said front cam curved surface of the finger of said first keeper when said first door is moved to closed position, said hooked finger of said first keeper being received by the slot in said latching strike member serving to retain said first door in locked position.

3,005,651
HAND HOOK

Jacob E. Flaker, 3483 Greenwich Road, Barberton, Ohio; Cathryn S. Flaker, administratrix of said Jacob E. Flaker, deceased, assignor to Cathryn S. Flaker, Akron, Ohio

Filed Nov. 19, 1956, Ser. No. 622,888
7 Claims. (Cl. 294-26)



1. A lifting device comprising: a member including a tubular and generally vertically extending shank and a tubular handle disposed generally normal thereto, said handle being connected to an upper portion of the shank with the interiors of each in communication with one another, a load engaging hook pivotally mounted on a lower end portion of the shank in projecting relation, a rod longitudinally slidable in the shank and operatively connected to the hook at a point offset from the pivot

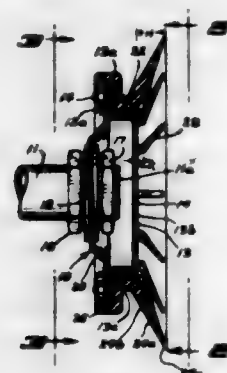
thereof for swinging same to a load engaging position, resilient means connected to the rod for moving it and the hook to the load engaging position, said rod having a portion movable into the handle, and a plunger slidable in the handle and engaged with the rod for preventing movement of the rod into the handle and releasably locking the hook in the load engaging position, said plunger normally projecting from the handle for manual actuation, said plunger being movable out of vertical alignment with the rod for permitting the hook to swing out of a load engaging position upon movement of the plunger, said hook having an upwardly facing load engaging and supporting surface, said surface being shaped and positioned so as to support and retain a load thereon when lifted by said handle and when in the load engaging position, and said surface being shaped and positioned so as to automatically release said load when said plunger is moved out of abutting engagement with said rod.

3,005,652

VACUUM GRIPPING DEVICE

Jack D. Helm, Maple Plain, Minn., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri

Filed Dec. 14, 1960, Ser. No. 75,789
8 Claims. (Cl. 294-64)



1. A vacuum gripping device for picking up an object comprising a vacuum cup including enclosing a vacuum chamber, means for placing said chamber in fluid communication with a vacuum source, said vacuum cup having a front perforated circular portion, and a vacuum seal member mounted on said cup to form a sealing engagement with the object to be picked up when the vacuum is applied to said chamber, said vacuum seal member having an annular gripping portion that has a front object engaging face extending radially outwardly from the circular portion and axially forwardly thereof and a plurality of spaced lands elongated in a radial direction formed on the front face of the gripping portion to engage the object to be picked up.

3,005,653

HELICOPTER CARGO PICKUP DEVICE

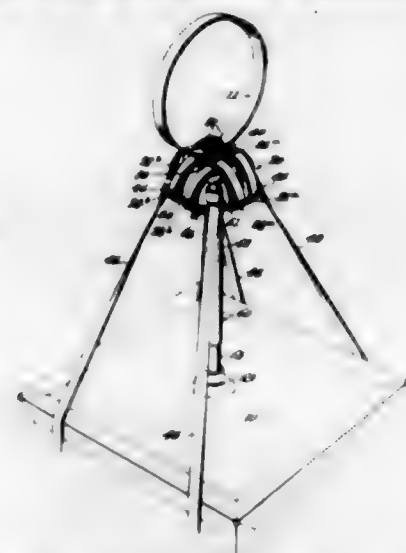
Reynolds G. Becker, Yorktown, Va., assignor to the United States of America as represented by the Secretary of the Army

Filed June 8, 1959, Ser. No. 818,981
4 Claims. (Cl. 294-74)

(Granted under Title 35, U.S. Code (1952), sec. 266)

2. A device for lifting cargo by helicopter comprising a carrying loop of sufficient rigidity to maintain an open shape, a telescoping tensioning rod spring-biased toward the extended position and positioned substantially vertically with its lower end in contact with said cargo, a flange attached to the upper end of said tensioning rod, a spider having a plurality of loops disposed between said flange and said carrying loop, clamping means in-

terconnecting said flange, said spider, and said carrying loop, a sling having straps for engaging and lifting a



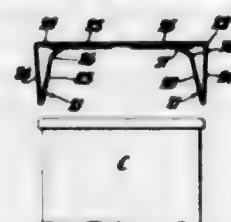
cargo, and means connecting the straps of said sling to the loops of said spider.

3,005,654

PAPERBOARD CAN HOLDER

Orison W. Stone, Valley Cottage, and Donald P. Doran, Bronx, N.Y., assignors to Continental Can Company, Inc., a corporation of New York

Filed May 13, 1955, Ser. No. 508,078
1 Claim. (Cl. 294-87.2)



An open-sided paperboard holder for containers having beaded ends, comprising a body terminating in a pair of opposed locking flanges, each locking flange extending at approximately right angles to the adjoining wall of the body and being formed as an extension adjoining said wall at a fold line, said extension being folded back on itself about a fold line, said extension being reversely folded about a fold line adjacent its free end, the portion thereof between said free end and the latter fold line lying against the wall and being adhesively secured thereto, said extension thereby forming a double walled flange whose sides are spaced apart where they adjoin the body, the inner wall thereof having cuts to receive the beaded ends of the containers, and the inner wall of the erected flange of the empty holder at points between said cuts being disposed thusly: that main portion of said inner wall which lies between the cuts and the edge of the flange being normally inclined outwardly and the remaining portions, which constitute connecting webs between said main portion and the reversely folded portion, being inclined outwardly at a smaller angle to the body than that represented by the inclination of said main portion, so that the connecting webs are in a position to pull said main portion toward the center of the body and draw it more tightly around the containers, said connecting webs being scored where they adjoin said main portion of the inner wall.

3,005,655

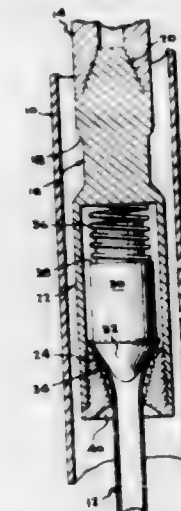
WELL TUBING RETRIEVING DEVICE

Clarence L. Jeffrey, 814 W. Center, Fairfield, Ill.

Filed July 2, 1959, Ser. No. 824,712
5 Claims. (Cl. 294-92)

1. A well tubing retrieving device comprising a head, means on the upper end of said head for attachment to a

support rod, a tubular extension projecting axially from the lower end of said head, a plug within and closing the lower end of said extension, said plug being provided with a bore extending from one end to the other end of said plug and tapering in an inward direction, a gripping means on a portion of the wall of said plug bore, and an anvil having a nose on one end positioned within said extension so that the nose extends into said bore, said



anvil being shorter than said extension and mounted for limited upward and downward movement within said extension, said tubular extension upon application of a downwardly directed force causing the downward movement of said anvil so that the nose enters into and presses the free end portion of a well tubing against said gripping means when said device is positioned so that the well tubing extends into the plug bore.

3,005,656

COT HOLDER FOR EMERGENCY VEHICLES

John Fulton, 607 1st St. NW., Belmond, Iowa

Filed Aug. 19, 1960, Ser. No. 50,732
6 Claims. (Cl. 296-19)



1. In a structure of the class described, an elongated linearly straight track having an open-ended keying channel, attaching and anchoring brackets secured to opposite end portions of the track, said brackets being adapted to rest atop an ambulance floor and having flanges which are adapted to be bolted down on the floor, said track means being provided at one end with an adjustably mounted collar supporting and carrying a spring-loaded latch, said latch embodying a horizontal flat plate overlying the keying channel and having a marginal edge disposed at an oblique angle and defining a cam surface, at least one latchable and retainable leg having a headed end slidably keyed and releasably held in the channel between the collar and a cooperating end portion of the latch, and a pull cord connected to and for remotely controlling the latch, said cord being provided at an operating end with a finger ring.

3,005,657

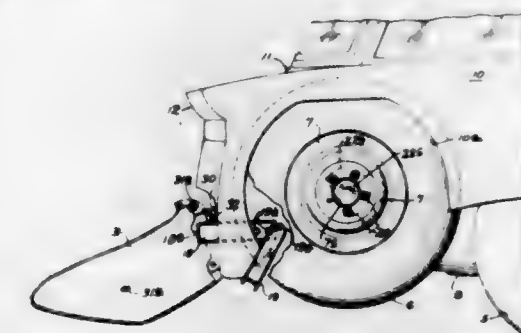
MOUNTING FOR SPARE TIRE IN VEHICLE FENDER

Brooks Walker, 155 Montgomery St., San Francisco, Calif.

Filed June 16, 1958, Ser. No. 742,385
7 Claims. (Cl. 296-37.2)

1. A vehicle having a rear wheel and tire, a spare wheel and tire, a body, said body having a substantially vertical

side wall portion forming a compartment for enclosing the rear wheel and tire and a portion rearwardly thereof for enclosing the spare wheel and tire, the rear portion having an opening therein of a width less than the diameter of the spare wheel and tire requiring the wheel and tire to be angularly disposed relative to the longitudinal dimension of the body when being removed from or mounted



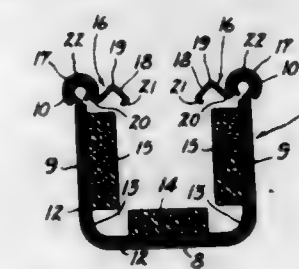
within said rearward portion, a rear bumper having at least one forwardly projecting end portion hinged thereto and pivotable to and from said opening, a bracket fixedly secured to said body and extending around at least a portion of said spare wheel, and means for securing said pivoting end portion to said bracket in position across said opening.

3,005,658

WINDOW PANE GUIDE

Carlos J. McKinney, Detroit, Mich., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Dec. 31, 1958, Ser. No. 784,344
8 Claims. (Cl. 296-44.5)



1. A guide for a sliding glass pane comprising a base member having a generally flat wall and formed for bending in its plane about an axis spaced therefrom and perpendicular thereto, and a one piece glass engaging sealing strip of resilient flexible plastic sheet material having a longitudinally continuous side edge portion attached to an edge portion of said wall and a longitudinally continuous bridging portion for bridging the space between said wall and a glass pane, said bridging portion and said attaching portion having angularly disposed portions connected along a longitudinal line about which the strip can flex when subjected to pressure between said wall and a glass pane and said bridging portion having a free glass engaging edge parallel to said longitudinal line, said glass engaging edge and said longitudinal line lying in a plane substantially perpendicular to said wall for bending with said base member substantially without distortion to the curvature of the edge of the wall to which it is attached.

3,005,659

ADJUSTABLE SUPPORTING STRUCTURE

Billy Woodrow Sanders, 805 Silver Ave., Greensboro, N.C.

Filed July 16, 1958, Ser. No. 748,866
12 Claims. (Cl. 297-19)

1. In combination, a structure comprising a sustaining member having opposite side surfaces, supporting means mounted on said opposite surfaces, said supporting means

including a pair of coordinatable legs, the extreme upper end of each leg comprising a planar surface angularly related to the longitudinal center line of the leg, said legs being pivotally mounted intermediate their ends on said side surfaces and adapted to extend downwardly in a divergent relationship while the upper ends of said legs converge relative to each other, the said upper ends



at their planar surfaces being positionable to engage in slidable contact with each other when the supporting means are in their upright position with the sustaining member in its substantially horizontal position, and thereby being capable of affording an adjustable movement to said sustaining member during said contact at the upper end surfaces of the legs.

3,005,660 RECLINING CHAIRS

Jack Isaac Winick, London, England, assignor, by mesne assignments, to Anton Lorenz, Boynton Beach, Fla.
Filed July 17, 1956, Ser. No. 598,327
Claims priority, application Great Britain July 25, 1955
2 Claims. (Cl. 297-61)



2. A reclining chair comprising a frame structure, a chair back pivotally mounted at its lower end on said frame structure, a seat pivotally mounted at its rear end on said frame structure at a point spaced from the pivotal mount of the chair back thereon, a four-bar actuating linkage for tilting the seat in response to pivoting movement of the chair back, said actuating linkage including as movable links an extension of the chair back depending below the pivotal mount thereof, a seat control lever pivotally mounted intermediate its ends on the frame structure forwardly of the chair back, the upper portion of said seat control lever being operatively coupled to the seat, and a seat actuating link mounted at one end on said chair back extension and at the other end on the lower portion of said seat control lever, the portion of the frame structure between the pivotal mounts of the chair back and seat control lever constituting the fixed link of the four-bar linkage, the seat actuating link being dis-

connected from the frame structure and translating forwardly in response to rearward tilting movement of the chair back, a head-rest hingedly mounted on the upper end of the chair back for pivotal movement relative to the plane of said chair back, a head-rest actuating link extending along the chair back and pivotally connected at its upper end to the head-rest, the lower end of said head-rest actuating link being pivotally mounted on said seat actuating link for forward and downward movement by actuation of the four-bar linkage, whereby to tilt the head-rest forwardly when the chair back is tilted rearwardly.

3,005,661 RECLINING CHAIR OF THE DOUBLE MOVEMENT TYPE

Fridtjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Oct. 27, 1958, Ser. No. 769,714
10 Claims. (Cl. 297-84)



1. A reclining chair comprising a support, a back-rest and a seat mounted on the support, for movement through a first motion phase from an upright sitting position to an intermediate semi-reclined position, and for further movement through a second motion phase to a fully-reclined position, a front and rear guide link for guiding the seat as the latter is moved relative to the support, a main guide link pivotally mounted on the support, means supporting said main guide link in an inactive position, during the first motion phase, the rear guide link being pivotally mounted on the support and the front guide link being pivotally mounted on the main guide link, the seat being movable rearwardly during said first motion phase in which it is guided by rearward pivoting movement of the front and rear guide link, and actuating means remote from said front guide link and engaging the main guide link for turning the latter about its pivotal mount on the support during said second motion phase, whereby during further rearward movement of the seat, the latter is guided by the rear guide link and by the main guide link and front guide link moving as a unit, said actuating means having a lost motion movement relative to the main guide link during the first motion phase.

3,005,662 LEG RESTS

William M. Emery, 44 Pittsford Way,
New Providence, N.J.
Filed Aug. 3, 1960, Ser. No. 47,215
4 Claims. (Cl. 297-438)

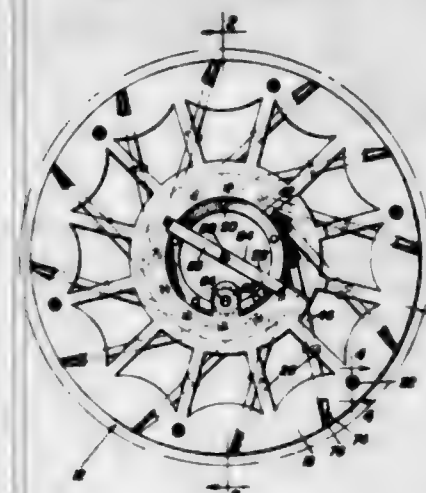


1. A leg rest comprising a series of panels articulated out of one integral board to form relatively stiff sections

and relatively flexible articulated hinge like sections, one end of said series of panels being folded to form a top portion having an arch therein designed to fit in the curve or hollow of an adult leg above the calf, a pedestal portion formed from the other end of said sections, and means to vary the height of said top by contacting an end of said pedestal portion optionally either against the under side of the top normally directly beneath the calf for the highest position of said top or against the under-side of said arch for the lowest position of said top.

3,005,663 TRACTION DEVICE

Peter W. Lee, Rte. 2, Box 208, Port Acres, Tex.
Filed Dec. 4, 1959, Ser. No. 857,340
2 Claims. (Cl. 301-47)



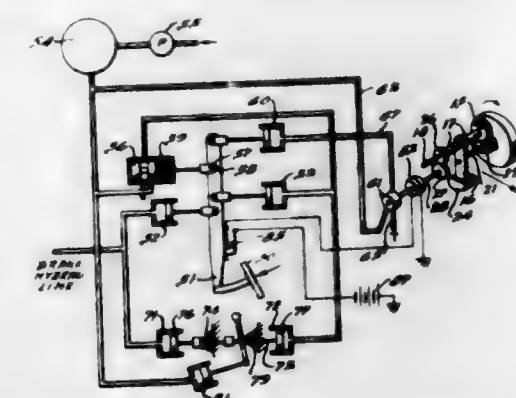
1. A traction device comprising the combination of a main body adapted to be attached to the wheel of a motor vehicle adjacent to the tire thereof and being of a diameter smaller than the diameter of the tire, said body embodying opposed spaced parallel inner and outer plates, a spacer interposed between said plates, the latter and said spacer being separably bolted together, a plurality of circumferentially spaced radial drive rods, means adjustably connected with the inner ends of said rods and carried by central hub portions of said plates for projecting said rods approximately radially outwardly from said body to ground-engaging positions, each rod having a gripper at its outer end, said spacer having a plurality of slots at the periphery thereof, and said grippers adapted to be withdrawn into said slots and moved therefrom in response to withdrawing and extending of said drive rods respectively, the means for extending and retracting said drive rods embodying a ring, means in said body mounting said ring for rotational movement, rack and pinion means for rotationally adjusting said ring, a first rigid bar having ends fixed to an inner peripheral surface of said ring, a second rigid bar spaced from but parallel to the first bar and having end portions resting firmly but removably on cooperating surfaces of one of said plates, and accessible means bolting said central portions of the bars together.

3,005,664 BRAKING CONTROL SYSTEM

Frederick J. Hoeven, 7 Lone Pine Court,
Bloomfield Hills, Mich.
Filed Aug. 7, 1957, Ser. No. 676,826
7 Claims. (Cl. 303-24)

1. A braking control system for a vehicle having wheels, a brake, a brake pedal, the combination with means for applying said brake upon the actuation of said pedal comprising a pendulum mounted on an axis extending transversely of the vehicle and subject to a reaction force in response to change in the forward linear velocity of the vehicle, a rotatable inertia element, means

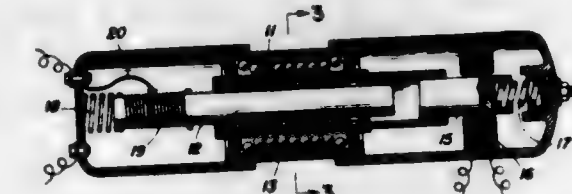
for coupling said inertia element with said wheels for rotation in co-ordinated relation with the angular velocity thereof, means for coupling said inertia element to said pendulum such that changes in the angular velocity of said wheels proportional to changes in the linear velocity of the vehicle produces forces opposite and substantially equal to said reaction force on said pendulum leaving said pendulum in balance in a normal position, a control



member movable by said pendulum in response to movement away from said normal position upon slippage of said wheels, means connected to said braking system and operable by said control member for reducing the braking action of said brake in response to slippage of said wheels, and means for coupling said control member with said pendulum in response to actuation of said brake pedal.

3,005,665 ANTI-FRICTION BEARINGS

John B. Thomson, 1029 Plandome Road, Manhasset, N.Y., and Robert C. Magee, Manhasset, N.Y.; said Magee assignor to said Thomson
Filed Mar. 3, 1958, Ser. No. 718,702
3 Claims. (Cl. 308-6)



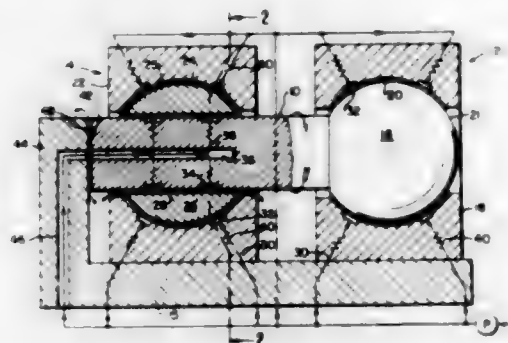
1. In an inertial sensing device, the combination comprising a housing, a bearing support mounted inside said housing, a linear anti-friction bearing having a plurality of rolling anti-friction elements, means mounting said linear bearing for axial movement in said bearing support, a sensing mass carried by said linear anti-friction bearing and axially moveable with respect thereto, means for reciprocating said linear bearing at a sufficiently rapid rate and through a sufficiently small amplitude to effect substantially no relative movement between said mass and said linear bearing due to said reciprocation, said reciprocation being operative to maintain said rolling anti-friction elements in a state of motion whereby the force required to move said mass relative to said linear bearing is substantially reduced.

3,005,666 HYDROSTATIC ROTARY COUPLING

Calvin S. Morner, Wellesley, Robert E. Maloney, Stoughton, and Conrad H. Benoit, Dedham, Mass., assignors, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed July 6, 1959, Ser. No. 825,242
5 Claims. (Cl. 308-122)

1. A hydrostatic rotary coupling comprising in combination, a shaft, means including a hydrostatic bearing

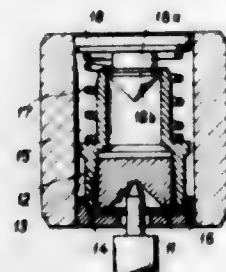
rotatably supporting one portion of the shaft and embodying minutely spaced outwardly and inwardly facing surfaces coaxial with the shaft, means providing a first port in said shaft including a portion terminating at an external surface of another portion of the shaft, said first port further including a portion communicating with said outwardly facing surface, fixed means disposed exteriorly of the shaft and having a surface in minutely spaced rela-



tion from said external surface of said shaft, said means disposed exteriorly of said shaft being formed with a second port in direct and continuous communication with said first port across the space between the last named minutely spaced surfaces, and means for supplying a metered flow of fluid to said second port, said second port conducting said metered flow of fluid to said first port for delivery to the space between said outwardly and inwardly facing surfaces.

3,005,667

SHOCK-ABSORBING BEARING FOR MOVABLE ELEMENTS OF SMALL MECHANISMS, NOTABLY OF MEASURING INSTRUMENT
Edouard Loretan, Le Sentier, Switzerland, assignor to Parechoc S.A., Le Sentier, Switzerland, a Swiss firm
Filed July 8, 1959, Ser. No. 825,769
Claims priority, application Switzerland July 10, 1958
1 Claim. (Cl. 308-159)

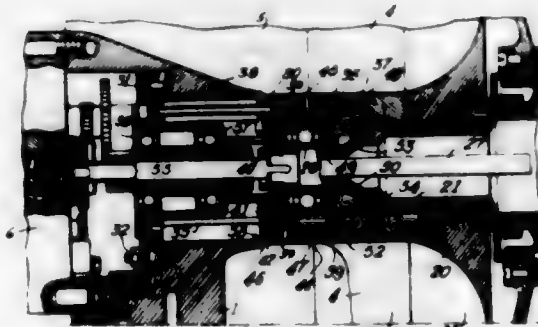


In a shock-absorbing bearing for the shaft of a small mechanism, notably of a measuring instrument, a bearing support having an annular centering seat, a movable bearing body comprising a pivot bearing provided with a conical recess receiving the end of said shaft and a tubular mount into one end of which the said pivot bearing is forced, said body being disposed with clearance within said bearing support, a central stud provided on the base of the said support engaged in the rear end of the said mount, the said stud having, between its tip and its base, a recessed portion by virtue of which the mount can rock in all directions while remaining engaged thereon, a bearing surface of the said body, situated in the immediate neighbourhood of the inlet of the said recess of the pivot bearing, and a resilient return device acting on said body for urging said bearing surface on said centering seat.

3,005,668
METHOD OF AND DEVICE FOR RELIEVING SHAFT VIBRATION

Joseph Szydowski, Basses-Pyrénées, Usine Turbomeca, Bordes, France
Original application Oct. 19, 1953, Ser. No. 386,761, now Patent No. 2,922,278, dated Jan. 26, 1960. Divided and this application July 24, 1958, Ser. No. 750,737

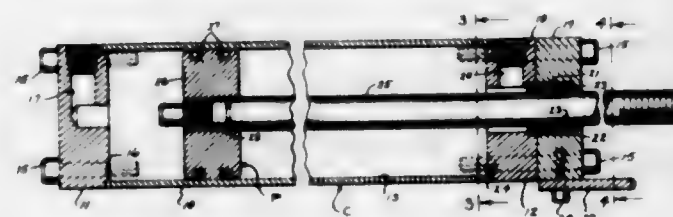
2 Claims. (Cl. 308-184)



1. In a power plant having a rotary shaft and a casing, the combination of a multiplicity of bearings through which said shaft rotates and, for one of said bearings, a cantilever mounting comprising a substantially cylindrical metallic cage secured at one of its ends to the power plant casing and the other end of which acts as a seat for receiving said bearing, said cage through which the shaft passes having elongated slots in the wall thereof between its two ends in order to change the normal critical vibration of said shaft and take it out of the normal operating speed range of said power plant, and a cantilever housing enclosing said cantilever mounting with sufficient clearance to allow whipping of said shaft and connected to said mounting at the end thereof which is secured to the power plant casing.

3,005,669

FLUID PRESSURE CYLINDER
Hermann A. Nunnemacher, Pewaukee, Wis., assignor to Galland-Henning Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 23, 1959, Ser. No. 848,302
2 Claims. (Cl. 309-2)



2. In a cylinder assembly, an elongated barrel of a square shape in cross section having a cylindrical bore extending longitudinally therethrough defining longitudinally extending corners at spaced points around the bore, end heads of a square shape in elevation for the terminals of the barrel having their sides flush with the sides of the cylinder, the inner faces of said heads being provided with circular bosses fitted in the barrel terminals, cap screws extending entirely through the heads and into the corners of the barrel, one of said heads constituting a support for slidably receiving a piston rod, and a mounting bracket having a portion thereof in facial abutment with the outer face of one of said heads, and said bracket being secured to the head and barrel by the said cap screws employed for holding the head in place.

3,005,670
FOLDING TABLE
Lawrence L. Schultz, 1809 Welland Ave. S., Minneapolis, Minn.
Filed Feb. 25, 1960, Ser. No. 10,896
3 Claims. (Cl. 311-89)

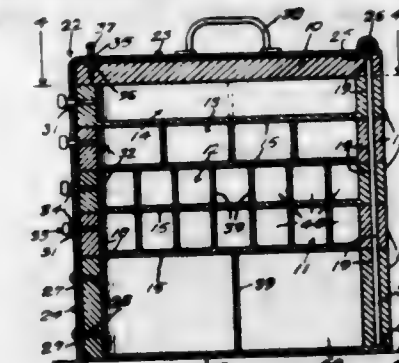


1. A folding table comprising a sectioned top, said top comprising a relatively narrow center section, a pair of relatively wide intermediate leaves each being jointed at its inner end edge to one of the opposite end edges of said center top section, and a pair of relatively wide end leaves each being jointed at its inner end edge to the outer end edge of one of said intermediate leaves, said table further comprising a pair of longitudinally sectioned elongated supports disposed in general parallelism with one another and in underlying engagement with said top, each of said supports comprising a relatively short center section rigidly secured to said overlying top center section, a pair of relatively long intermediate sections each hingedly jointed at its inner end to opposite ends of said center section and each being rigidly secured to a corresponding one of the overlying opposite intermediate top leaves, and a pair of relatively long end sections each hingedly jointed at its inner end to the outer end of one of said intermediate sections and each being rigidly secured to a corresponding one of the overlying opposite end top leaves, all of said sections of each support being transversely aligned with the respective corresponding section of the other support, said table further comprising a plurality of foldable legs, a pair of said legs being hingedly secured in underlying relationship to each of said end leaves of said top for supporting all of said leaves in open position and in general horizontal alignment with one another, said end leaves and end support sections, with their supporting legs folded thereunder, being inwardly and downwardly foldable throughout approximately 180° wherein they are positioned in general underlying relationship and in general parallelism with said adjacent intermediate leaves and intermediate support sections, said corresponding adjacent end and intermediate leaves and end and intermediate support sections, as folded in said parallel relationship, being thereafter unitly downwardly and inwardly foldable throughout approximately 90° wherein they are disposed in general normality with said center top section.

3,005,671
TACKLE BOX WITH SUPERPOSED TRAYS
Robert W. Majeski, Santa Barbara, Calif.
(P.O. Box 192, Temecula, Calif.)
Filed Jan. 29, 1960, Ser. No. 5,450
7 Claims. (Cl. 312-216)

1. A container comprising a bottom tray, a top plate and at least one intermediate tray, said parts being symmetrical in outline and being disposed in superposed stacked relation with said intermediate tray resting on the bottom tray and disposed beneath the top plate, a pivot element extending vertically through said trays and top plate and disposed adjacent a marginal portion of the container, an angular metal strap having a first end portion and a second end portion, said first end portion extending along the upper side of the top plate, said second end portion extending from top to bottom of the

container and being disposed remote from said marginal portion, means connecting said second end portion to the bottom tray remote from said pivot element, means connecting said first end portion to the top plate, said intermediate tray being swingable about said pivot element as an axis and relative to the bottom tray and top plate



for exposing the interiors of said trays, and latch means including a part associated with and carried by said intermediate tray and a part associated with said second end portion and detachably receiving the part carried by the intermediate tray for latching the container in a closed position with said intermediate tray disposed between and symmetrical to the bottom tray and top plate.

3,005,672
APPARATUS FOR OPERATING DRAWERS OR THE LIKE IN A DESK, CABINET OR THE LIKE
Otto Alfred Becker, Mainzer Strasse 201-209, Saarbrücken 3, Saarland, Germany
Filed Apr. 9, 1958, Ser. No. 727,320
Claims priority, application Germany Apr. 23, 1957
5 Claims. (Cl. 312-223)



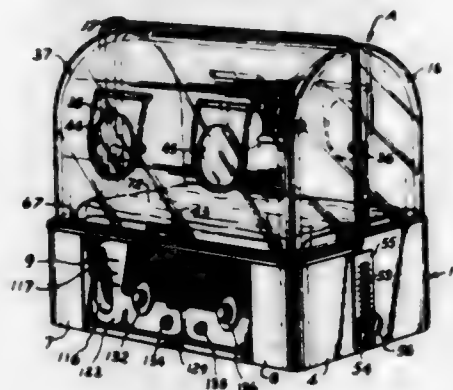
1. In a desk, cabinet or the like, equipment for automatically extending and retracting drawers, said equipment comprising the combination of an electromotor, transfer means, drive means and coupling means individual to each of the drawers; said electromotor driving a shaft carrying a first chain wheel in fixed relation thereto; each of said coupling means comprising a primary shaft and an output shaft, each of the primary shafts carrying a second chain wheel in fixed relation thereto; at least one endless chain operatively arranged as a transfer means to provide a driving connection between said first chain wheel and said second chain wheels; each of said coupling means also comprising an electromagnetically operated half coupling slidably keyed to the output shaft of the coupling means, said half coupling when energized engaging a coupling sheave fixed on said primary shaft; a cog-wheel fixed on each of said output shafts, said cog wheels positioned beyond the drawers intermediate the side edges thereof, a rack mounted to the bottom of each drawer in a line of symmetry intermediate the side edges of said drawer, said cog-wheels meshing continuously with said racks to form said drive means.

3,005,673

INCUBATORS FOR INFANTS

William Harold Smith and Rudolph Frohner, Norwalk, Conn., and Roy T. Adolphson, Webster Groves, Mo., assignors, by mesne assignments, to Shampaine Industries, Inc., St. Louis, Mo., a corporation of Missouri. Original application Apr. 23, 1957, Ser. No. 654,503. Divided and this application Oct. 13, 1958, Ser. No. 767,251.

8 Claims. (Cl. 312-270)

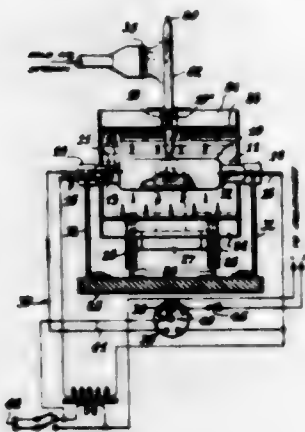


1. An incubator comprising a base housing have a drawer cavity and a top wall defining the upper margin of said cavity, means operatively mounted above the top wall for establishing a domed infant-sheltering incubator space, slide channels mounted on said base housing and projecting into said cavity, a drawer-like pan slidably movable on said channels having a flat upper wall disposed for close-fitting disposition beneath the top wall when the drawer pan is fully within the cavity, said top wall and upper wall each having a plurality of apertures which are in registration when the drawer pan is within the cavity whereby to permit air flow between the drawer pan and the space in the incubator above the top wall, and means for sealably securing the upper wall of the pan to said top wall.

3,005,674

METHOD OF DOSING MERCURY VAPOR LAMPS

Hugh D. Fraser, West Caldwell, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania. Filed Dec. 22, 1953, Ser. No. 399,774. 7 Claims. (Cl. 316-22)

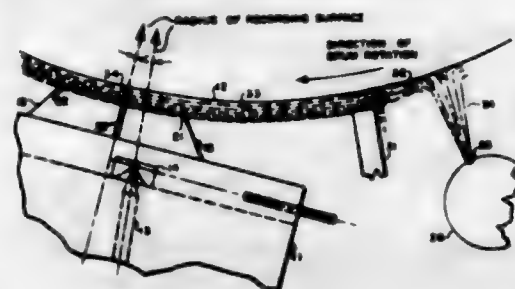


1. A method of lamp fabrication from its embryonic stage wherein a mercury loaded lamp envelope has a tubulation thereon, comprising sealing-off the outer end of said tubulation, vaporizing the mercury in the envelope and condensing a part thereof in said tubulation, and sealing-off the tubulation at its end next to the envelope.

3,005,675

FLUID BEARING CONTROL FOR A MAGNETIC HEAD

Carl W. Ledda, Islington, William J. Gorman, Lynn, and George E. Engmann, Saxonville, Mass., assignors to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware. Filed Mar. 16, 1956, Ser. No. 572,025. 6 Claims. (Cl. 346-74)



4. In a high-density magnetic data storage system, a vertical, cylindrical drum having a magnetic recording surface, a plurality of magnetic heads each including a pole face surface spaced about said recording surface, said pole face surfaces being biased against said recording surface, a drum motor for rotating said drum about its axis, means for exchanging data between said heads and said recording surface, means for maintaining constant separation between said pole face surfaces and said recording surface during operation comprising a sump of oil located below said drum, a pump motor, an oil pump actuated by said pump motor to place said oil under pressure, an oil strainer intermediate said sump and said pump, a pressure relief valve bypassing said pump to return said oil to the sump whenever the pressure exceeds a preset danger level, a first pressure bellows connected into the system, a high pressure cut-off switch actuated by said first bellows, said high pressure cut-off switch being normally closed but adapted to be opened by said first pressure bellows whenever the oil pressure exceeds a predetermined high pressure level, a second pressure bellows connected into the system, a low pressure cut-off switch actuated by said second bellows, said low pressure cut-off switch being normally open but adapted to be closed by said second pressure bellows whenever the oil pressure exceeds a predetermined low pressure level, a source of power to energize said motors, said switches interrupting current flow to said pump and drum motors respectively whenever the oil pressure falls outside the range of said predetermined pressure levels, an oil filter intermediate said two pressure bellows, a pressure gauge interposed between said filter and each of said pressure bellows, said pressure gauges adapted to measure the differential pressure across said filter, an oil gallery extending the length of the drum and spaced therefrom parallel to the drum axis, oil nozzles spaced along the length of said gallery facing the recording surface, said nozzles adapted to spray said rotating recording surface with jets of oil, an oil pressure regulator intermediate said oil gallery and said second pressure bellows adapted to regulate the pressure of said jets, an oil wiper spaced from said jets in the direction of drum rotation along the circumference of said recording surface, said wiper straining out metal and dirt particles to prevent damage to the magnetic surfaces and to forestall the loss of data due to lifting of the heads, said wiper further diverting the excess oil applied and returning it to the sump while smoothing the remainder to form a uniform film of oil having predetermined limits of thickness on said recording surface, the motion of said drum being imparted to said film of oil to create oil flow relative to said pole face surfaces and to develop a hydrodynamic effect, a component of force of said hydrodynamic effect balancing the biasing force applied to said heads at a predetermined mutual spacing of said pole face and recording surfaces, said oil film separating from said recording surface under the action of gravitational and centrifugal forces and being collected to be returned to the sump.

heads at a predetermined mutual spacing of said pole face and recording surfaces, said oil film separating from said recording surface under the action of gravitational and centrifugal forces and being collected to be returned to the sump.

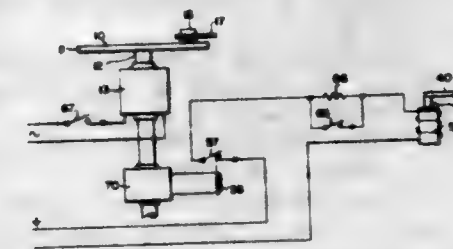
3,005,676

CONTROL FOR RETRACTABLE TRANSDUCERS

Donald T. Best and Harvey A. Draker, Philadelphia, and Otto Hohnschar, Morrisville, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan. Filed June 8, 1956, Ser. No. 590,286. 14 Claims. (Cl. 346-74)

3. In a memory storage system, the combination of a rotatable magnetizable disk, means for rotating said disk, a magnetic head assembly, means mounting said assembly

for movement toward and away from operative relation with said disk, means including a solenoid for shifting said assembly from one position to another, means responsive



to a speed of rotation of said disk for energizing said solenoid to shift said assembly in one direction, and means to move said assembly in the opposite direction when said solenoid is deenergized.

CHEMICAL

3,005,677

OXIDATION DYEINGS AND PRINTS

Konrad Wels and Helmut Kleiner, Köln-Stammheim, and Otto Bayer, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany. No Drawing. Filed Oct. 29, 1959, Ser. No. 849,431. Claims priority, application Germany Mar. 15, 1956. 12 Claims. (Cl. 8-32)

1. In the process for preparing oxidation dyeings and prints the improvement which comprises using as oxidizable dyestuff-forming substance at least one compound selected from the group consisting of N-glycosides and N-glycamines of aromatic amines having one to two carbocyclic nuclei.

3,005,678

CHROMIUM TANNING LIQUORS

Clifford N. Matthews, Palmersville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware. Filed Apr. 17, 1958, Ser. No. 729,177. 20 Claims. (Cl. 8-94.27)

1. A method of producing a chromium tanning liquor whereby a useful by-product is also produced which comprises reacting an alkali metal bichromate and a cyclohexyl compound in the presence of sulfuric acid, and separating the by-product, adipic acid, thus formed from the chromium tanning liquor.

3,005,679

GAS-LIQUID CONTACT METHOD

Felix L. Yonley, 66 Harrison St., Verona, N.J. Continuation of application Ser. No. 573,166, Mar. 22, 1956. This application Oct. 24, 1960, Ser. No. 64,553. 7 Claims. (Cl. 23-2)

1. The method of contacting liquid and gas, comprising maintaining a bed of particles of aggregate in a fixed position with the spaces between said particles constituting passages for liquids and gas therethrough, introducing gas beneath said aggregate bed and inducing a steady flow thereof upwardly through said bed, introducing liquid onto the upper surface of said bed of aggregate for downward flow by gravity through the passages therein, counter-current to the induced up-flow of said gas through said

passages, and maintaining the flow of said gas and of said liquid at a rate sufficient to flood said bed to maintain the



spaces between the particles substantially filled with liquid during normal operation.

3,005,680

METHOD OF SEPARATING NEPTUNIUM FROM PLUTONIUM IN AQUEOUS INORGANIC SOLUTION

Glenn T. Seaborg, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission. No Drawing. Filed Feb. 2, 1948, Ser. No. 5,991. 2 Claims. (Cl. 23-14.5)

1. A process for the separation of neptunium from plutonium in an aqueous inorganic solution containing neptunium, plutonium and sulphate ions, comprising contacting said solution with an alkali metal bromate, digesting the resulting mixture at a temperature of 15 to 25° C. for a period of time not more than that required to oxidize substantially all of the neptunium, adding lanthanum ions and fluoride ions, and separating the plutonium-containing precipitate thus formed from the supernatant solution.

3,005,681

PROCESS FOR SEPARATING PLUTONIUM (IV) VALUES FROM URANIUM AND FISSION PRODUCT VALUES, e.g., ZIRCONIUM AND COLUMBIUM, UTILIZING A LANTHANUM OXALATE CARRIER PRECIPITATE

Raymond W. Stoughton, Oak Ridge, Tenn., assignor to the United States Atomic Energy Commission
No Drawing. Filed Jan. 16, 1946, Ser. No. 641,627
3 Claims. (Cl. 23-14.5)

1. A process of recovering plutonium values from an aqueous plutonium (IV) salt solution, comprising adding lanthanum nitrate to said solution, adding a water-soluble oxalate-anions-containing substance to said solution at room temperature whereby a lanthanum oxalate precipitate is formed and plutonium values are carried on said precipitate, and removing said precipitate from the solution.

3,005,682

METHOD OF DISSOLVING PLUTONIUM DIOXIDE IN NITRIC ACID USING CERIUM IONS

Archie S. Wilson, Richmond, Wash., assignor to the United States Atomic Energy Commission
No Drawing. Filed Mar. 10, 1959, Ser. No. 798,554
6 Claims. (Cl. 23-14.5)

1. A method for bringing plutonium dioxide into aqueous solution comprising the addition of sufficient cerium ions in catalytic amounts to the dissolving mixture of plutonium dioxide and nitric acid, to cause the mixture to be from 0.001 to 0.02 molar in cerium ions.

3,005,683

SEPARATION OF TECHNETIUM FROM AQUEOUS SOLUTIONS BY COPRECIPITATION WITH MAGNETITE

Stanley J. Rimshaw, London, Tenn., assignor to the United States Atomic Energy Commission
No Drawing. Filed Dec. 11, 1959, Ser. No. 859,081
8 Claims. (Cl. 23-24)

1. A method of selectively separating technetium in the +4 oxidation state from an aqueous basic solution containing products of uranium fission which comprises contacting said solution with finely divided magnetite and thereafter recovering a technetium-bearing precipitate therefrom.

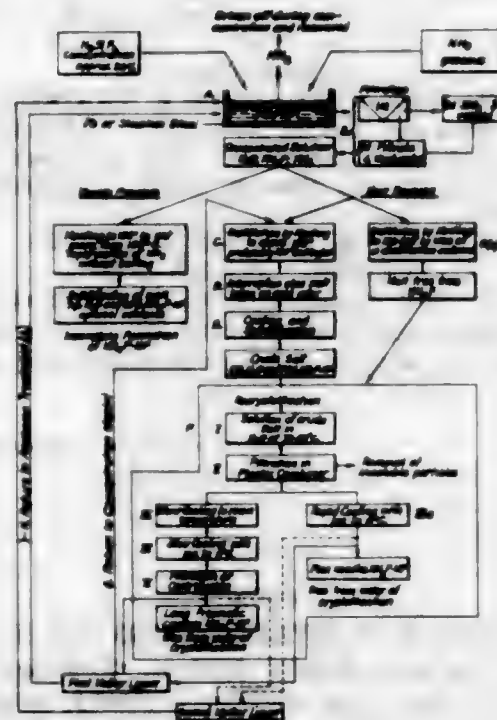
3,005,684

PROCESS FOR MAKING AMMONIUM BIFLUORIDE

Hans-Joachim Riedl, Recklinghausen, and Johannes Dahmlos, Holtern, Westphalia, Germany, assignors to Waseg-Chemie Aktiengesellschaft, Essen, Germany
Filed Oct. 25, 1957, Ser. No. 694,475
Claims priority, application Germany Oct. 25, 1956
2 Claims. (Cl. 23-88)

1. In a process for producing ammonium bifluoride from industrial fluosilicic acid by treatment with sufficient ammonia to form a precipitate of silicic acid and a solution of ammonium fluoride, separating said precipitate, and concentrating the resulting ammonium fluoride containing solution by distilling off water and ammonia, the improvement comprising the steps of feeding an aqueous solution of ammonium fluoride into the upper end of a distillation column heated at its lower end to about 200° C., at such rate that the temperature at the upper end of the column is maintained at about 105° C., and the temperature in the central zone of the column is maintained at about 115° C., withdrawing the resulting melt of ammonium bifluoride which is practically free from ammonium fluoride, continuously from the lower end of the column, solidifying the melt, recrystallizing the solidified crude ammonium bifluoride from water, and recycling the

mother liquor from the recrystallization step continuously into the column through the top end thereof counter-currently to the excess gases consisting of sublimating ammonium bifluoride, ammonia and water vapors re-

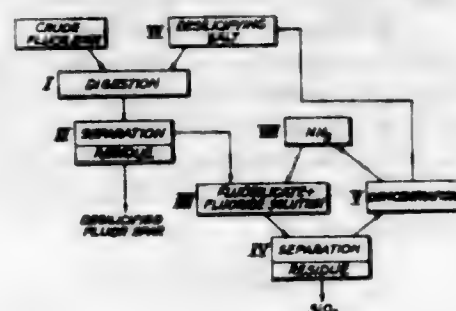


sulting from the conversion of ammonium fluoride to ammonium bifluoride, thereby continuously retaining the sublimating ammonium bifluoride in the process while the gaseous ammonia and water vapor leave the column at the top end of the latter.

3,005,685

PROCESS FOR DESILICIFYING FLUORSPAR AND THE LIKE MINERALS

Hans-Joachim Riedl, Recklinghausen, and Johannes Dahmlos, Haltern, Germany, assignors to Waseg-Chemie Aktiengesellschaft, Essen, Germany
Filed Aug. 19, 1958, Ser. No. 756,011
Claims priority, application Germany Aug. 28, 1957
5 Claims. (Cl. 23-88)

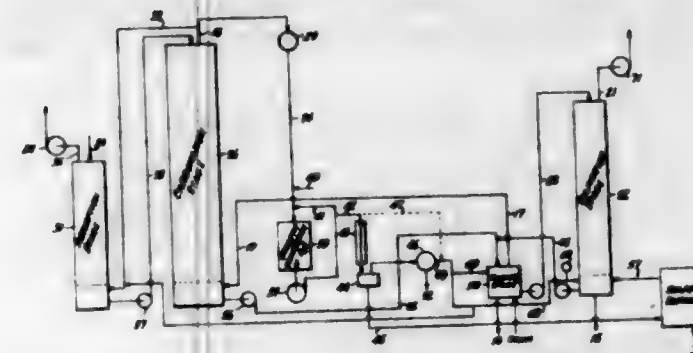


1. A process for desilicifying fluor spar having a relatively high content of silicic acid comprising the steps of digesting a SiO₂ containing fluor spar material with a desilicifying salt material selected from the group consisting of ammonium bifluoride and mixtures of ammonium bifluoride with ammonium fluoride so as to form ammonium fluosilicate, separating the desilicified fluor spar containing material from the latter, causing gaseous ammonia to act on the ammonium fluosilicate so as to decompose the same to form silicic acid, separating the latter from the resulting compounds of ammonium and fluorine, concentrating the compounds of ammonium with fluorine by heating to recover the said desilicifying salt and reintroducing the latter into the digestion step.

3,005,686

SODIUM SULFITE RECOVERY PROCESS

Gerrit G. De Haan, Longview, Wash., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed May 5, 1958, Ser. No. 733,177
11 Claims. (Cl. 23-131)

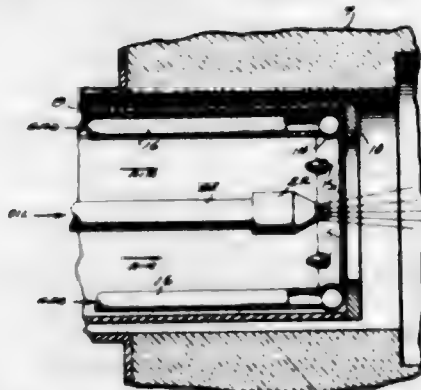


ing a non-condensable gas discharge means, a hydrocarbon solvent inlet means provided with a flow regulating means, a carbon black slurry discharge means and a condensate discharge conduit; a sampling conduit for conveying carbon black-bearing smoke from the vicinity of the exit end of said reactor to said solvent slurry vessel; a carbon black/solvent ratio sensing means operatively connected with said solvent slurry vessel responsive to a preselected carbon black/solvent ratio in said vessel and operatively connected to the flow regulating means of said hydrocarbon solvent inlet means; a liquid-solid separator provided with liquid and solid discharge means; means connecting said carbon black slurry discharge means for conveying slurry to said separator; a colorimeter communicating with said separator for determining the photometer of liquid discharged from said separator; and a photometer sensing means operatively connected with said colorimeter responsive to the photometer determined therein, said photometer sensing means being operatively connected to the flow regulating means of said one reactant injector means.

3,005,689

APPARATUS FOR MAKING CARBON BLACK
Theodore A. Rable, Amarillo, Tex., assignor to Continental Carbon Company, Houston, Tex., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,390
2 Claims. (Cl. 23-259.5)



1. In an apparatus for making carbon black comprising a primary cylindrical heat insulated reaction chamber having a cylindrical heat insulated inlet port; a circular sleeve disposed in and removable from said inlet port; the inner end of said circular sleeve terminating in an inwardly extending annular flange; said circular sleeve including its annular flange being substantially imperforate; a circular manifold disposed in said circular sleeve immediately adjacent the rearward side of said annular flange; a series of jets communicating with said circular manifold and directed rearwardly with respect thereto; at least one conduit for supplying fuel gas to said circular manifold; an oil supply pipe disposed axially of said cylindrical inlet port; the inner end of said oil supply pipe terminating adjacent to and spaced upstream of the rearward side of said circular manifold; and means for supplying combustion air to the interior of said circular sleeve.

3,005,690

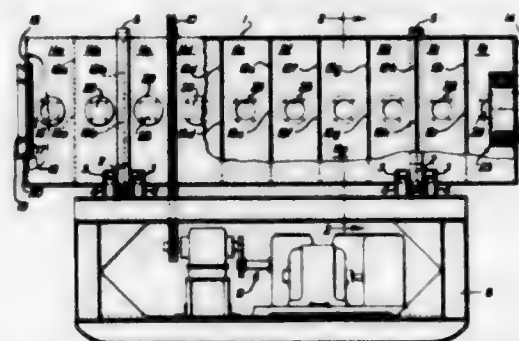
MULTIPLE COMPARTMENT ROTARY DRUM FOR THE LEACHING OF ORES OR RELATED PRODUCTS IN A CONTINUOUS COUNTERCURRENT SYSTEM

Charles Franky and Willard S. Swanson, Minneapolis, Minn., assignors to the United States of America as represented by the Secretary of the Interior

Filed Jan. 15, 1960, Ser. No. 2,791
3 Claims. (Cl. 23-269)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. An apparatus for treating solid particulate material with liquids which comprises, a vessel having a generally

horizontal axis of rotation, means for rotating said vessel about said axis, interior partitions in said vessel dividing said vessel into a series of open and unobstructed compartments, a pair of terminal end plates on said vessel, each of the terminal end plates having a central opening therein, each of said partitions having a flush opening therein spaced from the periphery of the vessel, the center of said opening being spaced from the axis of rotation, the partitions being arranged so that the openings in adjacent



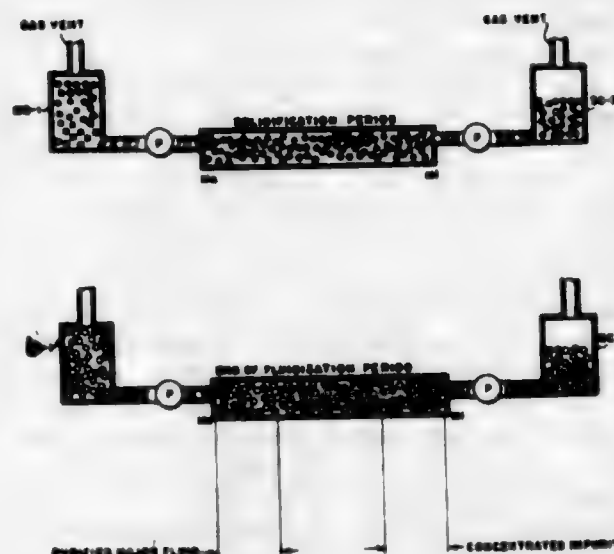
partitions are angularly displaced from each other relative to the axis of rotation of the vessel, means for feeding liquid into the vessel through one end plate opening, means for feeding solid particulate material into the vessel through the other end plate opening, said terminal end plate opening means being smaller than the opening in the partitions, filtering means for removing enriched liquid through the said other end plate, filtering means for removing treated solid particulate material through the said one end plate.

3,005,691

METHOD OF AND APPARATUS FOR SEGREGATING BY FRACTIONAL SOLIDIFICATION

Kenneth F. Griffiths, Newark, N.J. (201 Bloomfield Ave., Verona, N.J.), assignor of fifty percent to John L. Kerby, Larchmont, N.Y.

Filed June 22, 1959, Ser. No. 822,064
58 Claims. (Cl. 23-295)



1. The method of segregating by fractional solidification at least one ingredient from a material composed of at least one major and one minor ingredient characterized in that the concentration of one ingredient in a solidified portion of the material differs from that in a fluidized portion which comprises establishing a column of said material, said column having a minor end towards which a minor ingredient may be segregated dur-

ing a minor flow period and a major end towards which a major ingredient may be segregated during a major flow period; subjecting said material to a treating cycle having at least one solidification period and one fluidization period per cycle, wherein the fluid material in the column is moved towards the minor end of the column during a minor flow period while at least a portion of the major ingredient is in the solid state and wherein the material in the fluid state is moved towards the major end of the column during a major flow period while a larger portion of the major ingredient is in the fluid state; and continuing said treatment via a series of repeated cycles having at least one minor flow period and one major flow period in each cycle, thereby to segregate at least one minor ingredient at one end of the column while segregating the major ingredient at the other end.

3,005,692

COATED AMMONIUM NITRATE PROPELLANTS
Barnet R. Adelman, Los Angeles, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 21, 1956, Ser. No. 611,367
9 Claims. (Cl. 52-5)

1. An ammonium nitrate-containing rocket propellant grain coated with a mixture consisting essentially of micro-atomized, non-hygroscopic oxidizing material selected from the group consisting of ammonium perchlorate and potassium perchlorate dispersed in a compound selected from the group consisting of hydrocarbonaceous waxes, normally solid polystyrene resin, and normally solid thermoplastic polyloweralkene resins, said resin being fluid at a temperature below about 230° F., and mixtures thereof, said oxidizing material being present in a sufficient amount to provide a coating having burning properties similar to said propellant.

3,005,693

PROCESS FOR PREPARING ROCKET FUEL CONTAINING POLYMERIZED OLEFINS AND BORON

Charles L. Thomas, Swarthmore, and Chalmers G. Kirkbride, Wallingford, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 29, 1957, Ser. No. 693,025
5 Claims. (Cl. 52-5)

1. Process for preparing a high energy fuel composition which comprises forming a dispersion, in an inert liquid reaction medium, of finely divided boron and a solid metal halide catalyst in which the metal is selected from the group consisting of zirconium, chromium, vanadium, molybdenum and titanium together with an aluminum alkyl activator, the molar proportion of the activator to the metal halide being in the approximate range of 0.6:1 to 12:1, contacting the dispersion under polymerizing conditions with a normally gaseous olefin selected from the group consisting of ethylene, propylene and mixtures thereof to form solid polymers of molecular weight in the range of 5000-300,000, the amount of said olefin so contacted with the dispersion being sufficient to produce a reaction mixture in which the weight proportion of boron to polymer is from 10:90 to 80:20, and recovering from the reaction medium solid polymers having boron dispersed therein.

3,005,694

2,3,5,6-TETRACHLOROBENZOIC ACID AND SALTS THEREOF AND HERBICIDAL METHOD EMPLOYING SAME

Charles E. Entemann, Palmersville, Ohio, assignor, by mesne assignments, to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 23, 1958, Ser. No. 743,978
5 Claims. (Cl. 71-2.6)

1. 2,3,5,6-tetrachlorobenzoic acid and the salts thereof.
2. A method of killing plant growth which comprises

treating a plant with a herbicidal dosage of a substance selected from the group consisting of 2,3,5,6-tetrachlorobenzoic acid and the salts thereof.

3,005,695

4-(2-CHLORO-4-FLUORO-PHENOXY)-BUTANOIC ACID AND SALTS AND ESTERS THEREOF

Everett E. Gilbert, Morris Township, Morris County, N.J., and Christ N. Ylannos, Los Angeles, Calif., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed July 16, 1958, Ser. No. 748,787
8 Claims. (Cl. 71-2.6)

7. The method of combatting growth of monocotyledonous and dicotyledonous plants which comprises treating said plants with a compound selected from the group consisting of 4-(2-chloro-4-fluorophenoxy)-butanoic acid, a salt selected from the group consisting of the alkali metal, alkaline earth metal, ammonium, lower alkylamine and hydroxy lower alkylamine salts of 4-(2-chloro-4-fluorophenoxy)-butanoic acid and an ester selected from the group consisting of the lower alkyl and lower alkoxy lower alkyl esters of 4-(2-chloro-4-fluorophenoxy)-butanoic acid, in amount sufficient to cause deterioration of said plants.

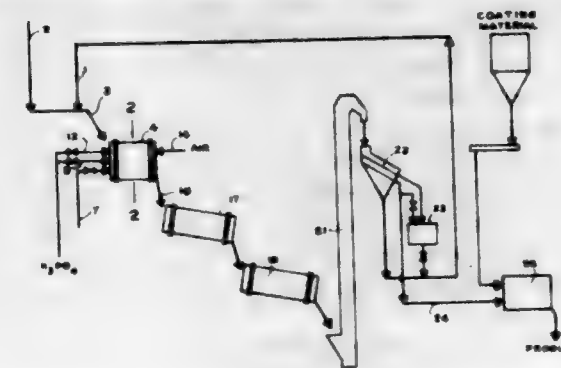
3,005,696

PROCESS FOR PRODUCTION OF AMMONIUM PHOSPHATE FERTILIZERS

Travis P. Hignett, Sheffield, and Milton R. Siegel, Robert S. Meline, and Glenn M. Blouin, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Dec. 6, 1957, Ser. No. 701,275
7 Claims. (Cl. 71-64)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A one-step continuous process for the production of granular fertilizer of about 15-50-0 grade which comprises continuously introducing fines of less than about 12-mesh size recycled from a later mentioned sizing step into the upper end of a horizontally inclined rotating drum; continuously introducing impure phosphoric acid into the upper end of said rotating drum at a controlled rate; continuously introducing ammoniating fluid into the upper end of said drum at a rate to neutralize the phosphoric acid to a degree such that approximately equal proportions of monoammonium phosphate and diammonium phosphate are formed; maintaining a bed of rolling discrete particles in the drum; continuously withdrawing granulated material from the lower end of the drum at a temperature in the range from about 150° F. to 210° F.; supplying substantially all of the heat for maintaining said temperature range from the heat of reaction of the reactants; maintaining the moisture content of granulated material leaving the drum in the range from about 1.5 percent to 7.0 percent; sizing the withdrawn granular material; separating the fine portion thereof; separating a portion of product-size material; crushing the remaining portion of product-size material and all the over-size material and recycling said crushed material together with said fine portion as fines to the rotating drum.

3,005,697

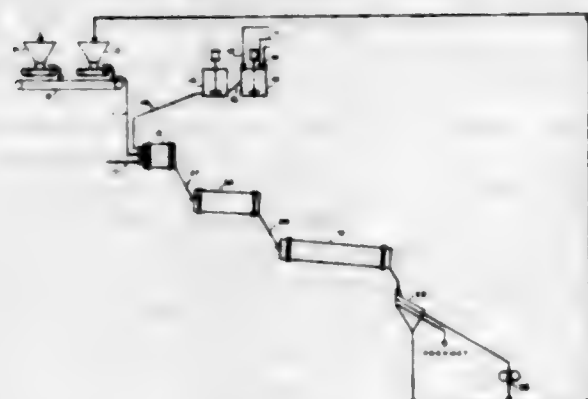
NITRIC PHOSPHATE PROCESS

David McKnight, Florence, Ala., Frank P. Achorn, Pascagoula, Miss., and Robert S. Mellie, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Apr. 9, 1958, Ser. No. 727,502

2 Claims. (Cl. 71-64)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for the production of granular nitric phosphate fertilizer which comprises extracting phosphate rock in particles at least fine enough to pass a standard 20-mesh screen, for about 20 to 30 minutes, with nitric acid having a concentration of about 57 percent to 60 percent HNO_3 in quantity sufficient to form a fluid slurry; introducing cool dry fines recycled from a later sizing step into a rotating drum; maintaining a bed of rolling solid particles comprising recycled fines in the drum; passing the slurry to the drum by gravity flow; distributing the slurry on the full length of the bed of rolling solid particles in a reciprocating spray in quantity sufficient to moisten the solid particles; introducing an ammoniating fluid beneath the bed of rolling solid particles in quantity sufficient to substantially neutralize the slurry; raising the temperature of the bed to about 130°F . to 150°F . by heat of reaction; controlling the temperature of the bed by controlling the proportion of fines recycled; withdrawing at least partially granulated nitric phosphate fertilizer from the drum; drying, cooling, and sizing the withdrawn material; and recycling fines to the rotating drum.

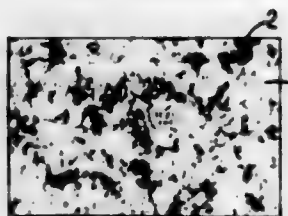
3,005,698

PRODUCING BRITTLE TITANIUM METAL

Luh C. Tao, Lincoln, Neb., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed Apr. 9, 1959, Ser. No. 805,346

6 Claims. (Cl. 75-5)



1. A process for subdividing pieces of metal selected from the group consisting of alpha-beta and beta type titanium base alloys which comprises: hydrogenating said pieces to provide therein a hydrogen content of between 0.5% and 2% by weight; heating said pieces at a temperature of between 825°C . and 875°C . for a period of at least 15 minutes; slowly cooling said pieces to a temperature below 800°C . and subsequently crushing said pieces.

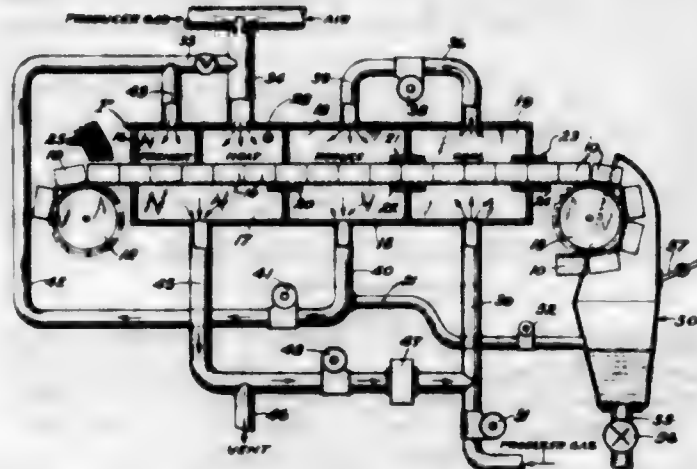
3,005,699

METHOD FOR CONVERTING IRON OXIDE TO MAGNETIC OXIDE

Louis J. Erck, Negaunee, Mich., and Thomas E. Ben, Cleveland Heights, Ohio, assignors to The Cleveland-CM's Iron Co., Cleveland, Ohio, a corporation of Ohio

Filed Oct. 9, 1957, Ser. No. 689,167

9 Claims. (Cl. 75-1)



1. In the beneficiation of low grade, iron bearing rock, the method of converting non-magnetic iron minerals into a magnetic state which comprises continuously carrying out each of the following steps: depositing a shallow gas permeable layer of non-magnetic iron ore on a traveling grate, moving said grate through successively arranged seal closed, communicating heating, reducing and cooling chambers, flowing gas through a closed circuit extending successively through the heating, cooling and reducing chambers, bringing a combustible gas into the circuit in advance of the heating chamber and burning said gas therein, passing the burning gas through the ore on the grate in the heating chamber, discarding part of the burned spent gas from the circuit after leaving the heating chamber, mixing a cool gas substantially free from uncombined oxygen with the remainder of the burned spent gas and passing said mixture through the cooling and reducing chambers and through the ore on the grate in both chambers and bringing gas from the reducing chamber into the heating chamber.

3,005,700

METAL FOAMING PROCESS

John C. Elliott, Anaheim, Calif., assignor, by mesne assignments, to Lor Corporation, a corporation of Delaware

Continuation of application Ser. No. 737,832, May 26, 1958. This application Mar. 14, 1960, Ser. No. 14,993

2 Claims. (Cl. 75-20)



1. The process of producing foamed metal comprising the steps of melting metal to be foamed, continuously introducing said metal into a reaction chamber by gravity flow, continuously introducing a solid state thermally decomposable foaming agent into said reaction chamber, intimately intermixing said metal and said foaming agent in said reaction chamber, said foaming agent being decomposed by the heat of said metal to cause foaming of said metal, said metal in a state of foaming being transferred from said reaction chamber by expansive force of metal foaming in said chamber, said transferred metal then being cooled to provide solidified foam metal product.

3,005,701

METHOD OF MAKING MELTING STOCK BY DIRECT REDUCTION

John E. Eberhardt, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania

No Drawing. Filed Oct. 15, 1957, Ser. No. 690,207

7 Claims. (Cl. 75-34)

1. In a process for producing non-pyrophoric metallic iron compacts suitable for melting in an open hearth or electric furnace, the successive steps of reducing iron ore to metallic iron powder at a temperature between $700-1100^\circ\text{F}$., compacting said metallic iron powder, heating said compacts to a temperature of $1450-2200^\circ\text{F}$. to render the compacts non-pyrophoric and cooling said compacts to approximately room temperature, all of said steps being carried out in a non-oxidizing atmosphere.

3,005,702

METHODS OF MANUFACTURING POROUS MEMBRANES

Georges Chandron, Paris, Michel Caron, Sevres, and Georges Cano, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a state administration of France

No Drawing. Filed Sept. 29, 1958, Ser. No. 764,021

Claims priority, application France Oct. 2, 1957

8 Claims. (Cl. 75-63)

1. A method of preparing a porous membrane which comprises making a solid metal alloy containing copper, zinc, at least two pentavalent elements of the group consisting of phosphorus, arsenic, and antimony, and as a grain refiner nickel, the percentages of copper and zinc in said alloy being within the range corresponding to brass and German silver alloys containing about 30 to 40 percent of zinc, forming this alloy to the shape of a thin membrane, annealing said membrane in a neutral atmosphere, first at a temperature ranging from 200 to 300°C ., then at a temperature ranging from 300 to 500°C ., to cause said pentavalent elements to segregate in the joints between the grains of the alloy, and subsequently heating said membrane in a vacuum to cause zinc to evaporate therefrom, said pentavalent elements accelerating zinc diffusion and evaporation.

3,005,703

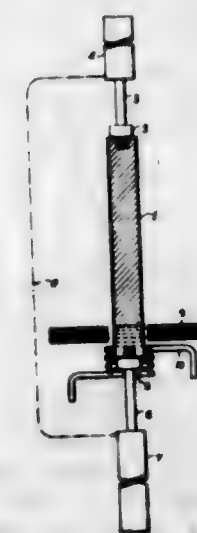
TREATMENT OF HEAVY METALS

Thomas Edward Allibone, Newbury, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Jan. 9, 1956, Ser. No. 558,121

Claims priority, application Great Britain Jan. 11, 1955

13 Claims. (Cl. 75-84.1)



1. A process of separating plutonium from uranium fuel rods which have been subjected to neutron bombardment in a nuclear reactor comprising adding an absorbent for plutonium to the metal which alloys with the plutonium without alloying with the uranium and which is of lighter atomic weight than the uranium, applying heating to melt a horizontally extending zone of the metal and said absorbent, progressing the molten zone upwardly to the top region of the uranium rod under treatment so that the absorbent is transferred by flotation to the top region and removing said absorbent together with the absorbed plutonium thereby leaving the unalloyed uranium substantially free of plutonium.

3,005,704

NICKEL BASE ALLOY FOR SERVICE AT HIGH TEMPERATURES

William H. Faulkner, Kokomo, Ind., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 23, 1958, Ser. No. 750,316

3 Claims. (Cl. 75-171)

1. A nickel-base alloy characterized by high stress-rupture strength at elevated temperatures, said alloy consisting essentially by weight of 14 to 16 percent chromium, 4.25 to 5.75 percent molybdenum, from 6.40 to 7.30 percent aluminum, from 0.05 to 0.15 percent boron, from 0.01 to 0.50 percent zirconium, up to about 0.05 percent carbon, and the balance substantially all nickel.

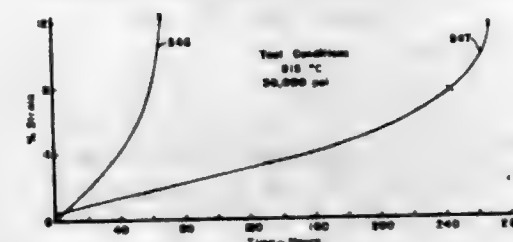
3,005,705

HIGH TEMPERATURE ALLOYS

Alexander W. Cochardt, Wilkins Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 30, 1959, Ser. No. 830,526

8 Claims. (Cl. 75-171)



1. A notch-ductile alloy having good stress rupture properties under load in a temperature range of from 650°C . to 870°C ., comprising, by weight, 27.7% to 32.5% nickel, 18% to 19.5% chromium, 7.25% to 8.75% tungsten, 3.5% to 4.5% molybdenum, 3% to 4% titanium, .01% to 1.5% hafnium, less than 2% iron, and the balance cobalt except for incidental impurities amounting to not more than 1%.

3,005,706

HIGH STRENGTH ALLOYS OF ZIRCONIUM

Donald E. Thomas and Stanley Kane, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed May 27, 1958, Ser. No. 738,003

5 Claims. (Cl. 75-177)

1. An alloy consisting essentially of from 0.1% to 2.5% by weight of tin, a total of from 0.1% to 2%, by weight of at least one metal from the group consisting of iron, nickel and chromium, from 0.03% to 1.0% by weight of beryllium, less than 0.5% by weight of incidental impurities, and the balance being zirconium.

3,005,707

DEVICES EXHIBITING PERSISTENT INTERNAL POLARIZATION AND METHODS OF UTILIZING THE SAME

Hartmut P. Kallmann, Flushing, and Barnett Rosenberg, New York, N.Y., assignors to Leonard E. Ravich, New York, N.Y.

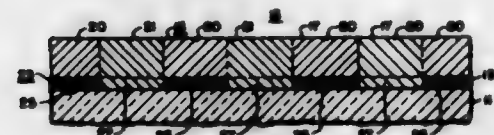
Filed Apr. 16, 1956, Ser. No. 578,437
14 Claims. (Cl. 96-1)

1. Apparatus comprising in combination a layer of photoconductive insulating material exhibiting the property of persistent internal polarization when exposed to radiation with a polarizing voltage applied thereto and having on one side a homogeneous electrode of conductive material transparent to the radiation to be detected and on the other side conductive islands secured to the polarizable material and insulated from one another, means for applying a direct current potential between said homogeneous electrode and all of the conductive islands connected electrically together, means for electrically connecting said homogeneous electrode and all of said conductive islands together to store an electrical signal in said device, and means for removing the electrical connection between said homogeneous electrode and the conductive islands to permit an electrical charge corresponding to the signal stored in said device to appear on said islands.

3,005,708

METHOD OF MAKING A SCREEN MEMBER

Kenneth R. Heise, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 29, 1957, Ser. No. 662,466
4 Claims. (Cl. 96-35)

1. A method of making a screen member, said method including the steps of applying a photosensitive layer upon a support member, said support member being transmissive to radiant energy of a given wavelength, said layer having a first surface adjacent said support member and a second surface on the opposite side of said layer from said first surface, directing radiations onto said second surface to expose portions of said photosensitive layer to a radiant energy pattern so that a boundary is formed within said photosensitive layer and within said exposed portions, said photosensitive layer being substantially completely insolubilized between said boundary and said second surface and incompletely insolubilized between said boundary and said support member, uniformly exposing said first surface to radiant energy of said given wavelength through said support member thereby substantially completely insolubilizing the previously incompletely insolubilized portion of said photosensitive layer below said boundary adjacent said support member and incompletely insolubilizing the remainder of said photosensitive layer adjacent said support member, removing the unexposed portions of said photosensitive layer, and removing said incompletely insolubilized remainder of said photosensitive layer between said support member and said boundary.

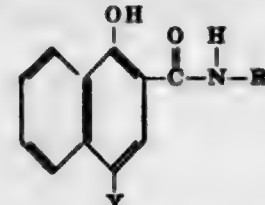
3,005,709

PHOTOGRAPHIC COUPLERS CONTAINING ACYLAMINO GROUPS

Robert F. Coles, North St. Paul, Minn., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 13, 1958, Ser. No. 708,374
4 Claims. (Cl. 96-55)

1. A silver-halide emulsion containing a coupler compound of the following general formula:



wherein R represents a branched tertiary alkyl group of from 8 to 24 carbon atoms in which the carbon atom connected to the nitrogen atom of the amide grouping is always tertiary, and Y is selected from the class consisting of hydrogen and halogen.

3,005,710

LATENSIFICATION OF PHOTOGRAPHIC EMULSIONS

Marilyn Levy, Red Bank, N.J., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed July 6, 1959, Ser. No. 825,375
5 Claims. (Cl. 96-65)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A method of latensification of photographic silver halide emulsions comprising treating the emulsion after exposure and before developing with an aqueous solution of guanidine carbonate whereupon the emulsion is developed in the conventional manner.

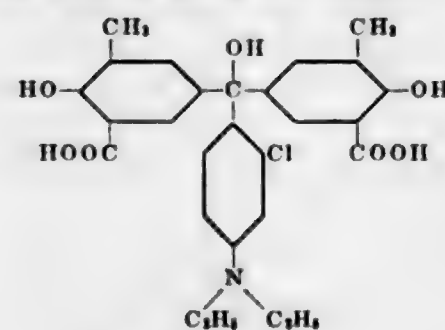
3,005,711

TRIPHENYLCARBINOL DYESTUFFS AS PHOTOGRAPHIC ANTIHALATION MATERIAL

Lothar Burgardt, Leverkusen-Bayerwerk, Ottmar Wahl, Opladen, and Helfried Klockgether, Leverkusen, Germany, assignors to AGFA Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 18, 1955, Ser. No. 546,284
Claims priority, application Germany Nov. 12, 1954
5 Claims. (Cl. 96-84)

1. A photographic light-sensitive material comprising a film support having thereon a light-sensitive silver halide emulsion layer and an antihalation layer containing a light-absorbing dyestuff having the formula:



3,005,712

YELLOW-COLORED MAGENTA-FORMING COUPLERS

David George Saunders and Edward Bowes Knott, Wealdstone, England, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 26, 1958, Ser. No. 763,769
11 Claims. (Cl. 96-100)

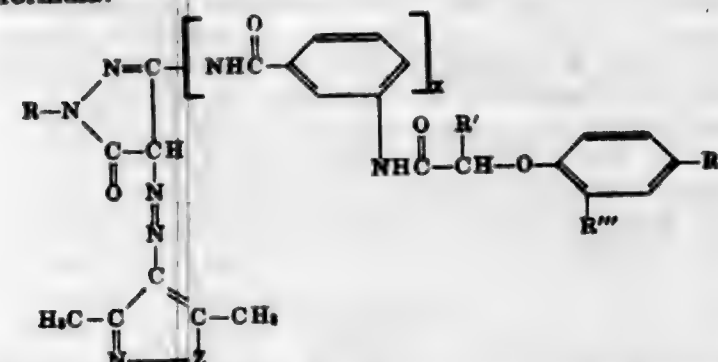
1. A photographic silver halide emulsion containing (a) a yellow-colored magenta-forming coupler compound

OCTOBER 24, 1961

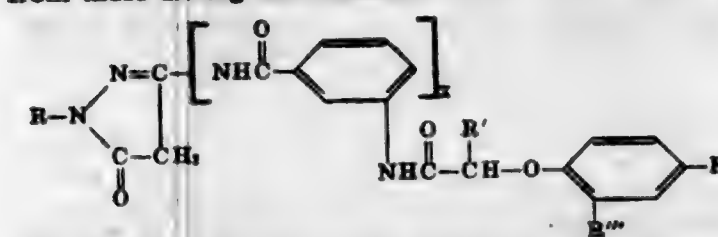
CHEMICAL

1057

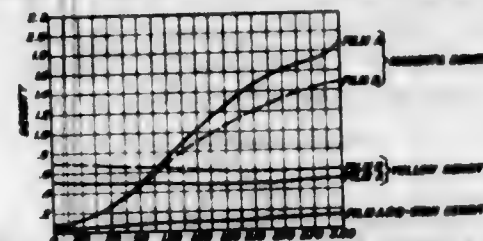
selected from the group consisting of compounds with the formula:



and (b) an uncolored magenta-forming coupler selected from those having the formula:



wherein R is a member selected from the group consisting of a 2,4,6-trichlorophenyl radical and a 4-tertiarybutylphenoxyphenyl radical; R' represents a member selected from the group consisting of a hydrogen atom and an alkyl group having from 1 to 3 carbon atoms inclusively;



X is an integer from 0 to 1; R'' is an alkyl group having from 4 to 6 carbon atoms; R''' is a member selected from the group consisting of a hydrogen atom and an alkyl group having from 1 to 6 carbon atoms; and Z is a group selected from the class consisting of an oxygen atom and a =NH radical.

3,005,713

METHOD OF IMPROVING PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Fritz Dersch, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,854
5 Claims. (Cl. 96-109)

1. A photographic silver halide emulsion containing a small amount of a gelatin derivative selected from the class consisting of the reaction product of gelatin with N-acetylhomocysteine thiolactone and the water soluble disulfide oxidation product thereof.

3,005,714

GALACTOSE OXIDASE

John A. D. Cooper, Evanston, Ill., assignor to Northwestern University, Evanston, Ill., a corporation of Illinois

Filed Aug. 26, 1959, Ser. No. 836,110
13 Claims. (Cl. 99-54)

1. A non-viable preparation which catalyzes the oxidation of galactose by molecular oxygen with high specificity, and which has no appreciable effect on the oxidation of glucose by molecular oxygen, comprising a concentrated dialysate extracted from *Polyporus circinatus* Fr. and possessing galactose oxidase activity.

7. A method for removing galactose from a substance containing it, without destroying any glucose therein,

which comprises admixing said substance in the presence of water and molecular oxygen with a non-viable enzyme system having catalase and galactose oxidase activity, and maintaining the admixture at a pH between about 6.5 and about 7.5 and at a temperature between about room temperature and about 60° C. until the galactose is converted into galactonic acid.

3,005,715

STABILIZATION OF GRAPE FLAVORED SOFT DRINK MIXES CONTAINING METHYL ANTHRANILATE

Stanley P. Raffensperger, Palos Park, and Ralph D. Vogt, La Grange, Ill., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 2, 1959, Ser. No. 790,332
4 Claims. (Cl. 99-78)

1. A process for preparing a fruit flavored soft drink mix which is stable against the formation of undesirable brown insoluble materials and which retains its original flavor intensity upon storage which comprises adding to a dry beverage mix containing methyl anthranilate and dextrose, an acid selected from the group consisting of fumaric acid and adipic acid.

3,005,716

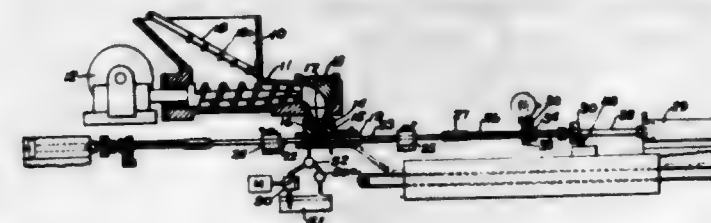
METHOD FOR MAKING SKINLESS SAUSAGES

Stephen T. Moreland, Wethersfield, Conn.

(6719 S. Oglesby Ave., Chicago 49, Ill.)

Filed Sept. 2, 1958, Ser. No. 758,178

2 Claims. (Cl. 99-109)



1. The method of making a skinless sausage which comprises introducing a measured quantity of sausage emulsion into a mold to form a link, applying a continuous pressure to the ends of the link, heating the sausage emulsion by applying an electrical current through the sausage emulsion between the ends of the link while simultaneously heating by conduction through the mold, continuing the application of heat and pressure until the sausage emulsion is coagulated and sterilized to self-sustaining form, and removing the coagulated and sterilized link from the mold.

3,005,717

PACKAGE AND LINER THEREFOR

Stephen Y. Philboa, 1919 S. Willow Ave., Fresno, Calif.

Filed Sept. 30, 1957, Ser. No. 687,293

7 Claims. (Cl. 99-171)

1. A packaged produce product comprising a sheet fiberboard container having a bottom and upstanding end walls and side walls defining an article receiving compartment; a reinforcing liner of sheet fiberboard material which is substantially rigid in edgeward dimension although having limited resilience and flexibility in its thickness dimension, the liner providing a bottom fitted to the bottom of the container and side walls integral with the bottom of the container and side walls integral with the bottom thereof, the liner having elongated partition portions integral with the side walls of the liner and inwardly extended in substantially parallel relation to the liner bottom each a distance approximately but less than one-half of the distance between the side walls, the parti-

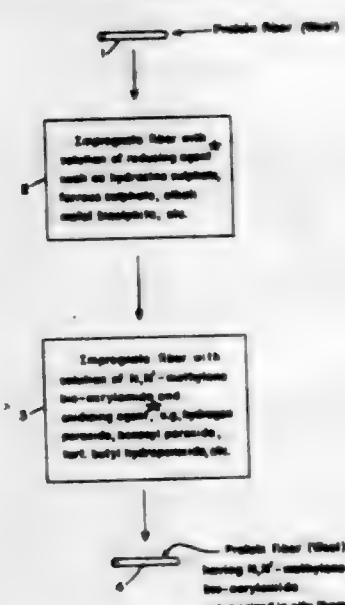
chromium and iron in which the articles are coated in the cold state with a coating medium comprising an aqueous gel made by partially reducing dichromate solution and the temperature is subsequently raised to above 320° C.

3,005,730

SHRINKPROOFING OF WOOL WITH N,N'-METHYLENE BIS-ACRYLAMIDE POLYMERIZED IN SITU AND THE MODIFIED WOOL

Clay E. Pardo, Jr., Albany, and Harold P. Lundgren, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
Filed Oct. 25, 1954, Ser. No. 464,659
8 Claims. (Cl. 117—141)

(Granted under Title 35, U.S. Code (1952), sec. 266)



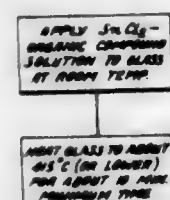
* Reducing agent and reducing agent constitute a reducing system.

8. A modified wool fiber comprising a wool fiber having N,N'-methylene bis-acrylamide polymerized in situ thereon.

3,005,731

METHOD OF APPLYING AN ELECTROCONDUCTIVE FILM TO A VITREOUS SURFACE

Paul D. Payne, Jr., Chalfont, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1958, Ser. No. 714,467
10 Claims. (Cl. 117—211)



1. The method of forming an adherent electrically conductive film on a vitreous body which comprises applying to said body at approximately room temperature a coating solution of substantially anhydrous stannous chloride and a volatile solvent thereof selected from the group consisting of glycerol, ethylene glycol, triethylene glycol n-propyl acetate and n-butyl acetate and thereafter heating said body to a temperature of at least 250° C.

TOBACCO COMPOSITION AND SMOKING UNIT CONTAINING MATERIAL FOR ELIMINATING DELETERIOUS MATTER

Charles A. Specht, Englewood, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland
No Drawing. Filed Dec. 19, 1957, Ser. No. 703,760
2 Claims. (Cl. 131—17)

1. A smoking mixture comprising shreds of tobacco commingled with a small amount of a finely divided mixture of kaolin clay and kaolin clay which has been reacted with sulfuric acid and then thermally desulfated without leaching of water-soluble reaction products.

3,005,733

TREATMENT OF PERMEABLE PLASTER ARTICLES TO AVOID CORROSION THEREOF

Andrew R. Blackburn, Westerville, and Richard E. Steele, Columbus, Ohio, assignors to Ram Incorporated, Columbus, Ohio, a corporation of Michigan
No Drawing. Filed Sept. 29, 1958, Ser. No. 763,807
7 Claims. (Cl. 134—22)

1. A method for treating a permeable plaster article such as ware-forming molds and preventing corrosion of the pores and surface of the permeable plaster article during such treating comprising dissolving calcium sulfate in water to be brought into contact with the permeable plaster article to saturate such water with calcium sulfate, and applying the calcium sulfate saturated water to the permeable plaster article in the treatment of the permeable plaster article.

3,005,734

LATEX MANUFACTURE

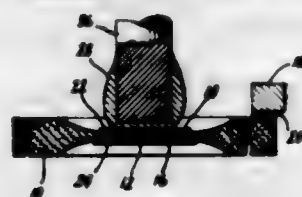
Pritchard F. Ellis, Baytown, Tex., assignor to United Rubber and Chemical Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,475
7 Claims. (Cl. 134—22)

1. A process for removing from the surfaces of reaction vessels a hard and adherent deposit of polymerization material formed during the emulsion polymerization of a member selected from the group consisting of a butadiene-1,3 and a butadiene-1,3 with at least one compound containing a terminal $\text{CH}_2=\text{C}$ group and polymerizable therewith which comprises: subjecting such surfaces to the action of an aqueous solution consisting of a water soluble soap.

3,005,735

METHOD OF FABRICATING SEMICONDUCTOR DEVICES COMPRISING CADMIUM-CONTAINING CONTACTS

George L. Schauble, Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 24, 1959, Ser. No. 829,436
14 Claims. (Cl. 148—1.5)



1. In the fabrication of a semiconductor device comprising a body of germanium, the steps of: applying to a surface region of said body a mass of a metal comprising cadmium and having a solidus temperature above 155° C.; heating said metal mass sufficiently to form a liquid mixture between it and germanium of said body, and cooling said liquid mixture below its solidus temperature.

3,005,736

HIGH-TOUGHNESS CAST-IRON FOR RELATIVELY THICK CASTINGS, AND METHOD OF PRODUCING SAME

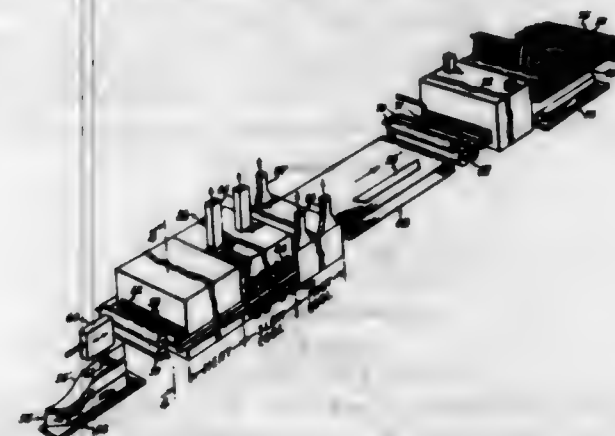
Lacien Peres, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, Seine, France
No Drawing. Filed Jan. 30, 1959, Ser. No. 790,038
Claims priority, application France Feb. 6, 1958
1 Claim. (Cl. 148—35)

A high strength malleable iron casting having a thickness greater than $\frac{1}{4}$ in. and which is white and free from graphite as cast, containing in addition to iron 2 to 3% carbon, 1 to 2.5% silicon, 0.1 to 2.5% manganese, 0.1 to 3% copper, 0.01 to 0.20% sulphur, and 0.02 to 0.15% phosphorus, a metal of the group consisting of titanium, zirconium and aluminum, in the amount of up to 0.5% in the case of titanium, up to 0.5% in the case of zirconium, and up to 0.20% in the case of aluminum, a whitening metal consisting of at least one member of the group consisting of magnesium, calcium, tellurium, selenium, tin, bismuth, and antimony, the quantity of said whitening metal being the reactive equivalent of 0.03 to 0.20% magnesium, and a promoter metal consisting of at least one member of the group consisting of molybdenum, nickel, copper, manganese, tungsten and vanadium, the quantity of said promoter metal being the reactive equivalent of 0.05 to 0.5% of molybdenum, said reactive equivalent of 1 part by weight of molybdenum being by weight for each of the other promoter metals, 4 parts of nickel, 10 parts of copper, 4 parts of manganese, 2 parts of tungsten and 0.3 part of vanadium, said casting having a structure resulting from treatment by the steps which comprise stripping the white casting from the mold at a temperature above the eutectoid transformation temperature which ranges from 750 to 1,000° C., immediately introducing said casting into an oven, stabilizing the temperature of said casting in said oven within the range of 740 to 850° C., effecting after said stabilizing martensitic hardening by immersion in a liquid medium at a temperature up to 250° C., nucleation tempering at a predetermined temperature within the range 425 to 500° C. for a period of time from 1 to 48 hours, and graphitizing annealing at a temperature within the range 850 to 1,100° C. for a period of time from 15 minutes to 8 hours, said casting containing after said treatment a very large number of very fine, uniformly-distributed, rounded graphite modules.

3,005,737

METHOD AND APPARATUS FOR MAKING LAMINATED TRANSFORMER CORES

Lloyd S. Blak, Williamstown, and Gordon C. Nonken, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed June 28, 1956, Ser. No. 594,477
3 Claims. (Cl. 148—111)



1. The method of flattening elongated electrical steel laminations which have been slit and sheared at room temperature from a twelve-thousandths of an inch or

fourteen-thousandths of an inch thick strip of previously heat-tension flattened and phosphate coated electrical steel which comprises passing the laminations flatwise and lengthwise as separate units over a series of parallel two-inch diameter synchronously rotating circular cylindrical rollers mounted on four-inch spaced centers in transverse alignment in a horizontal plane in a chamber heated to a temperature between 700° C. and 875° C. at which said steel is plastic whereby continuous bending in successively reverse directions of each lamination as it is lifted over the rollers and sags between the rollers in a plastic state causes sufficient flow of the steel to work out curvature producing internal mechanical strains, heating the bottom of each lamination to a higher temperature than its top as it enters said chamber so as to prevent its leading edge from curving downward between adjacent rollers during the initial period of its passage through said chamber while its thermal stresses are being relieved by writhing and before it becomes plastic, and progressively cooling said laminations without thermal shock at an increasing rate to a temperature at which they are no longer plastic by similarly passing them over a second set of generally similar rollers in a chamber into which controlled amounts of cooling air are introduced above and below said second set of rollers, the relative amounts of upper and lower air being so proportioned as to keep said laminations in contact with said second set of rollers and prevent them from being blown upward away from said second set of rollers.

3,005,738

HEAT TREATMENT OF HIGH ALUMINUM-IRON ALLOYS

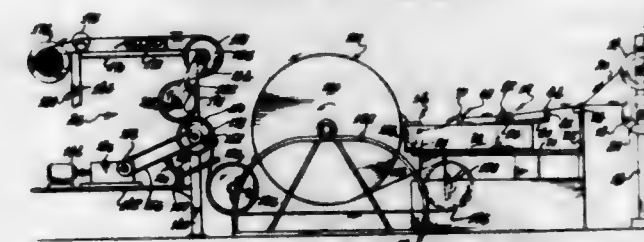
Dusan Pavlovic, Forest Hills, and Karl Foster, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Aug. 16, 1957, Ser. No. 678,539
6 Claims. (Cl. 148—120)

5. A method of reducing a brittle magnetic alloy plate, consisting essentially of 14 to 17.5 weight percent of aluminum and the remainder iron, to a thin tape of less than about 25 mils in thickness which comprises hot rolling such an alloy at a temperature above the recrystallization temperature thereof a plurality of passes and controlling the reduction per pass to 10 to 15 percent of the thickness of the material at the beginning of each pass.

3,005,739

METHOD AND APPARATUS FOR MAKING MULTICONDUCTOR CABLE

Donald D. Lang, 10061 Aldgate Ave., and John Ford, 8841 Orangewood Ave., both of Anaheim, Calif.
Filed Apr. 29, 1957, Ser. No. 655,625
6 Claims. (Cl. 156—47)



1. A method of making coated multi-conductor cable, which includes the steps of: aligning at least two polyvinylchloride coated conductors in side-by-side relationship; and applying tetrahydrofuran to the conductors, said tetrahydrofuran material having a solvent effect on the coating of the coated conductors to thereby fuse the conductors into a multi-conductor cable.

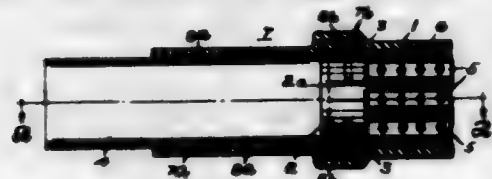
3,005,740 PRE-TREATMENT METHOD AND COMPOSITION FOR IMPROVING THE ADHESIVE QUALITIES OF RUBBER

John J. Hallio, Sr., 1053A 5th Ave. S., Airport Villa, Del.
No Drawing. Filed Sept. 29, 1958, Ser. No. 763,790
7 Claims. (Cl. 156-95)

5. A method for patching tubeless tires, said method being characterized by the steps of applying to the internal surface of the tire a mixture of a major amount of xylol, a minor amount of at least one chlorinated hydrocarbon selected from the class of carbon tetrachloride and 1,1,1-trichloroethane, and about 1/4 to 1% carbon disulfide by weight, evaporating off substantially all of the applied mixture, and then applying a patch to the so-treated surface.

3,005,741 MANUFACTURING FUSES HAVING CAPS MADE OF AN ELASTOMER

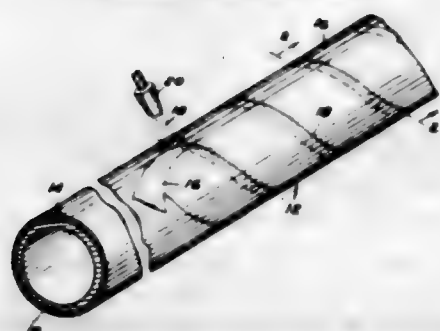
Harry H. Hallas, Newton, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Sept. 3, 1957, Ser. No. 681,535
3 Claims. (Cl. 156-152)



1. A method for manufacturing a blade contact type electric fuse having a cap of an elastomer which cap has a first flat tubular extension covering a portion of a blade contact of the fuse and which cap has a second substantially cylindrical tubular extension covering a portion only of the casing of the fuse, said method including the steps of placing thermosetting bonding material in strip-form upon both sides of said blade contact, of mounting said first extension upon said bonding material covered blade contact, of engaging a bare portion of said blade contact by a pair of electrically heated resistance elements, and of applying external pressure to said first extension tending to cause engagement under pressure of said first extension and of said blade contact, said method further including the steps of upturning said second extension, of applying a coat of cement in semi-liquid form to the bonding area between said second extension and said casing, and of thereafter turning said second extension into engagement with the surface of said casing.

3,005,742 METHOD OF FORMING A PIPE COVERING

Ted Kennedy, Jr., 1608 Granger Ave., Ann Arbor, Mich.
Filed May 16, 1958, Ser. No. 735,838
1 Claim. (Cl. 156-187)



A method of protecting conduit comprising wrapping the conduit with a flexible tape of a synthetic resinous plastic material by continuously helically winding the tape about the conduit with a lead such that each convolution marginally overlaps the next preceding convolution in

continuous pressure contact therewith so that a continuous seam develops at the overlap as the convolutions develop, interposing a solvent for the plastic material between the overlapping convolutions by locally applying the solvent during winding of the tape as aforesaid to the seam forming margin only of the tape at a point only slightly ahead of the developing seam and moving the point of application of the solvent in a helical path along the seam forming margin of the tape continuously and slightly ahead of the developing seam, and fusing the overlapping material of the tape together at the seam by the action of the solvent while said overlapping material is held in pressure contact as a result of the winding operation.

3,005,743 METHOD FOR JOINING WOOD ARTICLES WITH RESINOUS COAL ACIDS ADHESIVES

James R. Louch, Coleman, and Wesley L. Archer, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 9, 1957, Ser. No. 677,407
11 Claims. (Cl. 156-331)

1. Method for joining and adhesively binding together articles consisting essentially of wood fiber, which method comprises the steps of (1) preparing a dispersion in a liquid vehicle of a cross-linkable thermosetting resin-providing composition consisting of equivalent weight proportions not in excess of about 2:1 of either ingredient of (a) coal acids that are the water-soluble mixed aromatic polycarboxylic acids product of the oxidation of coal, which acids typically have an average molecular weight of from 200 to 300, an apparent average equivalent weight of from 70 to 90, and contain an average of from 2.5 to 5 carboxylic groups per aromatic nucleus in their molecule and (b) a polyfunctional organic compound selected from the group consisting of alcamines, polyamines whose polyfunctionality is derived from a plurality of active amine components thereof, organic polyhydroxy compounds whose polyfunctionality is derived from a plurality of hydroxy substituents thereon and their mixtures, (2) uniformly adding to and incorporating in said liquid dispersion a lesser proportion that is in excess of about 5 percent by weight, based on the total combined weight of the resinous and resin-providing solids in the resulting mixture, of a finely divided, particulate, solid additive that consists of a thermoset, cured and highly cross-linked coal acids resin derived from (c) said coal acids and (d) a polyfunctional compound selected from the above-indicated group; (3) applying the resulting adhesive admixture to the surface of at least one of the articles to be joined; (4) physically associating the articles to be joined and bound by bringing said articles together at surfaces thereof over which said adhesive admixture has been applied; and (5) subjecting said joined articles in the presence of said applied admixture to the influence of heat at a temperature between about 300 and 600° F. until said liquid dispersed, resin-providing, coal acids polyfunctional compound composition has been thermoset and cured and substantially all of the liquid vehicle for said admixture has been removed.

ERRATUM

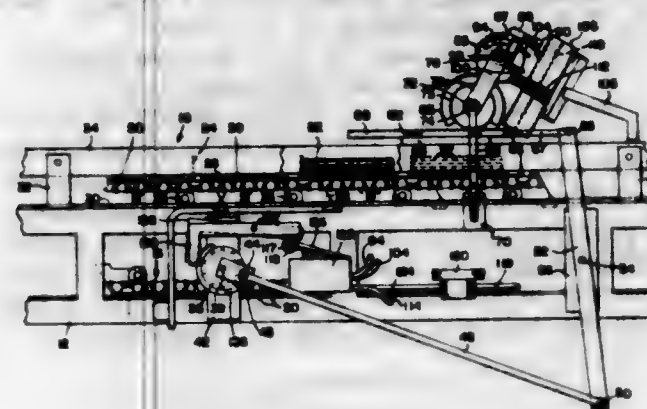
For Class 156-438 sec:
Patent No. 3,005,484

3,005,744 LABELING DEVICE

Arthur M. McFarlane, Rochester, N.Y., assignor to Ruser's, Inc., Rochester, N.Y., a corporation of New York
Filed Aug. 17, 1959, Ser. No. 834,113
12 Claims. (Cl. 156-566)

1. Apparatus for labeling meat as the meat is carried along by a moving conveyor, said apparatus comprising

a label holder mounted adjacent said conveyor, a transfer device, a suction cup mounted on said transfer device adjacent one end thereof in position to engage a label in said label holder adjacent one edge of the label, an outlet port on the transfer device spaced from said one end, means for swinging the transfer device from a posi-



tion adjacent said label holder to a position adjacent said conveyor, means for supplying air under pressure to said port when said device is adjacent said conveyor and while the label is still held by the cup to blow said opposite end of the label onto the meat, means for thereafter disengaging said one end of the label from the transfer device.

ERRATA

For Class 156-571 sec:
Patent No. 3,005,565

For Class 156-583 sec:
Patent No. 3,005,483

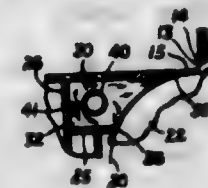
3,005,745 INORGANIC PAPERS AND METHODS OF MAKING SAME

Robert J. Holmes, Huntington, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 4, 1957, Ser. No. 643,500
16 Claims. (Cl. 162-152)

1. In a process for preparing a sheet-like product from siliceous stock material comprising incorporating into said stock from about 0.1 to about 10% of a chemically insolubilized N-vinyl lactam containing polymeric substance and then forming a sheet from said stock, the improvement which comprises maintaining the pH of the said stock material at from about 1.5 to about 2.5 during the incorporation of the polymeric substance.

3,005,746 PAPER MACHINERY

Joseph Baxter, Jr., Franklin, Ohio, assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed June 30, 1958, Ser. No. 745,479
8 Claims. (Cl. 162-199)



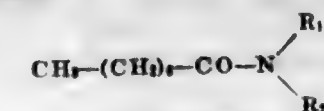
7. The method of eliminating air bubbles from the forming wire of a paper machine immediately prior to the delivery of stock thereto which comprises applying

steam to said wire under controlled pressure conditions causing said steam to displace air from within the interstices of said wire, and maintaining said steam pressure conditions throughout said wire and in the immediately surrounding atmosphere until the stock is applied to said wire to displace said steam therefrom.

3,005,747 INSECT REPELLENTS

Ernst Jacobi and Siegmund Lust, Darmstadt, and Albert van Schoor, Traisen, near Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany, a corporation of Germany
No Drawing. Filed Feb. 13, 1958, Ser. No. 714,941
Claims priority, application Germany Sept. 7, 1957
14 Claims. (Cl. 167-22)

14. A method of imparting insect repellency to a surface which comprises applying to the surface a composition containing an N-substituted caprylic acid amide of the general formula



wherein R₁ designates a member of the group consisting of hydrogen and lower alkyl and R₂ is lower alkyl, the total number of carbon atoms of R₁ plus R₂ being from 2 to 6 carbon atoms.

3,005,748 FUNGUS COMBATING WITH FERRIC NITROSO DIMETHYL DITHIOCARBAMATE CONTAINING TETRAMETHYL THIURAMDISULFIDE

Irving Gibbs, Norwalk, Conn., assignor to R. T. Vanderbilt Company, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 20, 1959, Ser. No. 807,322
3 Claims. (Cl. 167-22)

1. The method of combating fungus attack on vegetation which comprises applying to such vegetation ferric nitroso dimethyl dithiocarbamate of the formula



containing at least about 5% and not more than 30% by weight of tetramethyl thiuramdissulfide based on the ferric nitroso dimethyl dithiocarbamate.

3,005,749 METHOD FOR IMPROVING THE ABILITY OF SOIL TO SUPPORT PLANT GROWTH

Charles R. Youngson, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 4, 1959, Ser. No. 791,052
11 Claims. (Cl. 167-30)

1. An agronomical practice which comprises impregnating nematode infested soil with a nematocidal amount of a phosphate compound corresponding to the formula



wherein each X represents a member of the group consisting of hydrogen, chlorine, methoxy and methyl, n represents one of the integers 1 and 2, Y represents a member of the group consisting of oxygen and sulfur, R represents a member of the group consisting of amido and lower-alkylamido and R' represents a member of the group consisting of amido, lower-alkylamido, lower-alkoxy and alkoxyalkoxy containing up to 6 carbon atoms.

3,005,750

SYSTEMIC FUNGICIDES

Victor Flück, Leverkusen, Engelbert Kühle, Köln-Stammheim, and Richard Wegler, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 13, 1959, Ser. No. 799,119
Claims priority, application Germany Mar. 14, 1958
11 Claims. (Cl. 167—33)

1. Method of combating fungi which comprises applying to plants a sugar derivative of the formula



wherein Z stands for a radical of a Fehling's solution reducing sugar, and X stands for a member selected from the group consisting of alkyl, phenyl, chlorophenyl, dichlorophenyl, nitrophenyl, tolyl and cresyl radicals, and the group —NHR', R' being a member selected from the group consisting of alkyl, phenyl, chlorophenyl, dichlorophenyl, nitrophenyl, tolyl, cresyl, —COR'', —CSR'' and —SO₂R'' radicals, R'' being a member selected from the group consisting of phenyl, chlorophenyl, dichlorophenyl, nitrophenyl, tolyl and cresyl radicals.

3,005,751

COMBATING WOOD-BORING INSECTS WITH INSECTICIDES DISPERSED IN ISOPARAFFINIC HYDROCARBONS

Roy E. Stansbury, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Feb. 3, 1959, Ser. No. 790,807
9 Claims. (Cl. 167—38.6)

1. A method of protecting seasoned wood against the ravages of wood-destroying insects which comprises impregnating the wood with an insecticide dispersed in an isoparaaffinic hydrocarbon boiling in the range 350–600° F.

3,005,752

TREATMENT OF SOIL AND COMPOSITIONS THEREFOR

Clyde W. McBeth, Modesto, and Edmund F. Feichtmeir, Ripon, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Nov. 6, 1957, Ser. No. 694,748
2 Claims. (Cl. 167—39)

1. A fumigant composition having as active toxic ingredients 1,2-dibromo-3-chloropropane and a mixture of 1,3-dichloropropane and 1,2-dichloropropane, the amount of 1,2-dibromo-3-chloropropane being from about 18% to about 70% of the sum of the weights of the 1,2-dibromo-3-chloropropane and 1,3-dichloropropane.

2. In the treatment of soil by disseminating thereinto a volatile toxicant active against nematodes, the step which comprises disseminating into the soil as toxicant a composition defined by claim 1.

3,005,753

PHENOTHIAZINE ANIMAL FEED COMPOSITION

Donald E. Vierling, 4594 Doverdel Drive, Pittsburgh, Pa.
Continuation of application Ser. No. 623,439, Nov. 20, 1956. This application Dec. 16, 1958, Ser. No. 780,813
4 Claims. (Cl. 167—53)

1. As a new composition of matter, phenothiazine particles carrying a flavoring coating which constitutes between about 1 percent to about 20 percent by weight of the coated particles and covers at least about 30 percent of the surface thereof; a palatable, agglomerating, adhesive coating of between about 1 micron to about 5 microns in thickness; said second-named coating covering at least about 50 percent of the previously coated pheno-

thiazine particles; and livestock regimen disposed exteriorly of and attached to said second-named coating.

3,005,754

TETRACYCLINE FORMULATIONS

Alphonse Peter Gramatek, Syracuse, N.Y., assignor, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 16, 1957, Ser. No. 678,522
5 Claims. (Cl. 167—65)

1. A non-toxic, permanent, stable solution of a form of tetracycline comprising a form of tetracycline, calcium hydroxide and calcium chloride dissolved in a substantially anhydrous solvent selected from the group consisting of propylene glycol, glycerine and mixtures thereof, each of said calcium hydroxide and said calcium chloride being present in an amount by weight equal to at least one-tenth the weight of said form of tetracycline.

3,005,755

AQUEOUS SOLUTIONS OF QUINIDINE SALTS AND NICOTINAMIDE

Karl Schoen, Kew Gardens, N.Y., assignor to Endo Laboratories Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 30, 1956, Ser. No. 574,942
4 Claims. (Cl. 167—67)

1. Aqueous solutions of quinidine which comprise a salt of quinidine and nicotinamide.

3,005,756

DILUTER CONTAINING CARBON DIOXIDE FOR PRESERVING SEMEN

Noland L. Van Demark, Champaign, and Glenn W. Saltbury, Urbana, Ill., assignors to the University of Illinois Foundation
No Drawing. Filed Nov. 14, 1958, Ser. No. 773,822
15 Claims. (Cl. 167—74)

1. A diluter for preserving semen which comprises a buffered aqueous medium containing added carbon dioxide and having a pH within the range of from above 5.5 to about 7.5 and a buffering agent to maintain the diluter within said range.

3,005,757

PREPARATION OF CHLOROGENICASE

James C. Lewis, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Nov. 14, 1960, Ser. No. 69,236
3 Claims. (Cl. 195—45)

(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A process for preparing chlorogenicase which comprises culturing a chlorogenicase-producing strain of *Aureobasidium pullulans* on a nutrient medium containing a member of the group consisting of p-hydroxybenzoic acid and 3,4-dimethoxybenzaldehyde.

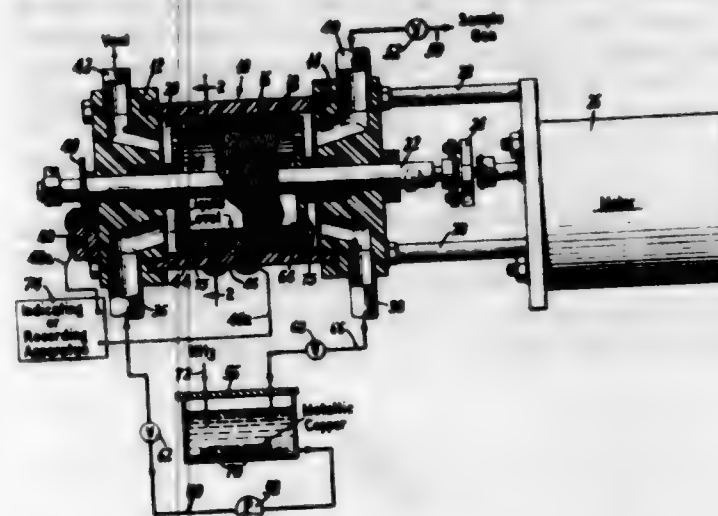
3,005,758

METHOD OF AND APPARATUS FOR ELECTRO-CHEMICAL GAS ANALYSIS

Stanford B. Spracklen, Hurricane, Donald N. Campbell, St. Albans, and Charles G. Fellows, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
Filed Feb. 13, 1956, Ser. No. 564,972
6 Claims. (Cl. 204—1)

1. A method for continuously measuring the concentration of a selected constituent in a sample gas mixture stream which comprises partially immersing a rotatable electrode in a body of reagent electrolyte solution selected to change in ionic content upon contacting said selected constituent the composition of the electrode being such that it is non-reactive with the solution and the

gas sample, rotating said partially immersed electrode at a substantially constant speed to form a thin continuous surface film of said reagent electrolyte solution covering the unimmersed surface of said rotatable electrode, concurrently passing said sample gas mixture stream in contact with said thin continuous surface film of reagent



electrolyte solution to effect a change in the ionic content thereof and form a dynamic concentration cell having a liquid interface, and measuring the potential developed between said rotatable electrode and said body of reagent electrolyte solution as an indication of the concentration of said selected constituent in said sample gas mixture.

3,005,759

ZINC ELECTROPLATING

William H. Sefranek and Hugh R. Miller, Columbus, Ohio, assignors, by mesne assignments, to American Zinc Institute, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 24, 1959, Ser. No. 800,555
4 Claims. (Cl. 204—55)

1. A method of bright, leveling zinc electroplating comprising plating zinc upon a conductive cathode from a zinc solution consisting essentially of about 1.3 to 1.6 mols per liter of zinc sulfate, about 0.15 to 0.3 mol per liter of citrate ions, about 0.08 to 0.12 mol per liter of saccharin, and about 0.005 to 0.02 mol per liter of p-toluene sulfonamide, said solution having a pH from about 2.3 to 2.5; providing the plating by a periodic current reversal cycle alternating between forward current for about 14 to 18 seconds at a cathode current density of about 200 to 250 amperes per square foot and reverse current for about 8 to 10 seconds at a cathode current density of about 200 to 250 amperes per square foot, while maintaining the temperature of said solution between about 112 and 120° F.

3,005,760

METHOD OF OPPOSING IRRADIATION-INDUCED VISCOSITY INCREASE IN EMPLOYMENT OF ORGANIC FLUIDS

Robert O. Bok, San Rafael, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Jan. 27, 1956, Ser. No. 561,963
1 Claim. (Cl. 204—154.2)

A method for the lubrication of mechanical elements situated in an irradiation flux of an intensity of approximately 0.5×10^{12} to 1×10^{12} neutrons per square centimeter per second, which comprises lubricating said elements with 16,19-dioxo-13,22-dithiatetradecane.

3,005,761

PROCESS FOR THE PREPARATION OF COKE WITH HIGHLY MODERATING PROPERTIES AND FOR THE USE THEREOF IN NUCLEAR REACTORS

Willem J. D. van Dijk, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Aug. 30, 1956, Ser. No. 606,989
Claims priority, application Netherlands Aug. 31, 1955
3 Claims. (Cl. 204—154.2)

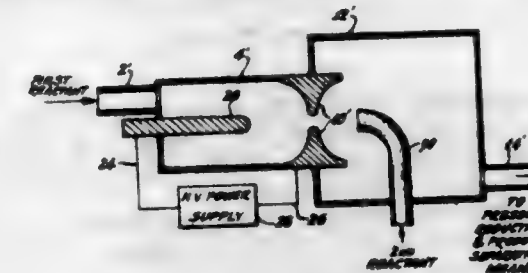
1. Process for the production of a moderator for nuclear reactors which comprises contacting a polycyclic aromatic oil with a gas rich in deuterium in the presence of a hydrogenation catalyst for a time to incorporate from about 1/5 to 1 deuterium atoms per carbon atom by hydrogen-deuterium exchange, then thermally decomposing the resulting product in the liquid phase to produce a solid non-graphitic coke and heating said coke for a time and a temperature between about 500° C. and 1000° C. to reduce the concentration of deuterium to between 0.5 and 5% by weight.

2. A solid non-graphitic coke containing from 0.5 to 5% by weight of firmly bound deuterium.

3,005,762

ELECTRIC DISCHARGE JET STREAM

John B. Fenn, near Princeton, N.J., assignor to Aero Chem Research Laboratories, Inc., a corporation of Maryland
Filed Jan. 20, 1958, Ser. No. 709,918
9 Claims. (Cl. 204—164)

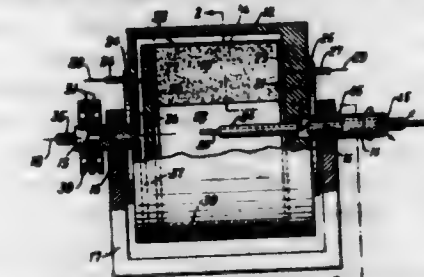


6. A process for the manufacture of chemicals comprising, exposing a first gas moving at relatively low velocity to a silent electrical discharge, expanding said first gas after excitation by said discharge into a region of lower pressure to form a high velocity gas stream, and then rapidly admixing a stream of a second gas with said high velocity stream to form a reaction product.

3,005,763

METHOD OF AND APPARATUS FOR SEPARATING CONSTITUENTS OF A LIQUID

Paul Kolkman, 100 E. 50th St., New York, N.Y.
Filed Sept. 26, 1958, Ser. No. 763,506
20 Claims. (Cl. 204—180)



11. The method of treating a solution to produce a first volume of concentrate product and a second volume of dilute product, the method comprising, introducing the solution into the spaces between bodies of ion exchange material; passing an electric current through said bodies and the liquid between them substantially transverse to the direction of the centrifugal force, below recited; centrifuging the solution by spinning said bodies and liquid to subject said bodies and the liquid to centrifugal

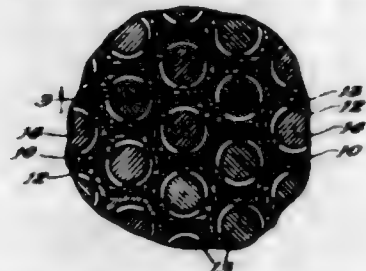
force; and withdrawing concentrate product liquid and dilute product liquid from zones of different radial spacing from the spin axis, concentrate liquid being withdrawn at a greater radial distance than dilute liquid.

3,005,764

NEUTRONIC REACTOR STRUCTURE

Farrington Daniels, Madison, Wis., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed May 24, 1948, Ser. No. 28,764
2 Claims. (Cl. 204-193.2)



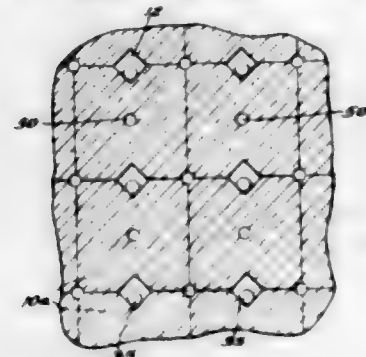
1. A neutronic reactor active portion comprising a plurality of vertically disposed, contiguous, rectilinear stacks or hexagonal blocks of beryllium oxide of equal size, said stacks having continuous, axial, cylindrical apertures of equal diameter extending therethrough, and axial cylindrical rods consisting of a uniform sintered mixture of uranium dioxide and beryllium oxide of lesser diameter than said apertures centered in said apertures.

3,005,765

DENSITY CONTROL IN A REACTOR

John Marshall, Jr., Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Feb. 21, 1946, Ser. No. 649,406
1 Claim. (Cl. 204-193.2)



A nuclear reactor comprising a mass of graphite having a plurality of spaced, parallel through channels arranged in a regular lattice, and natural uranium bodies arranged in said channels, the mass of graphite having additional channels free of uranium bodies and laterally displaced from the first-mentioned channels so as to be out of the lattice, the greatest number of additional channels being in the center of the reactor with a diminishing number of channels per unit volume from the center to the exterior, the additional channels having the effect of reducing the density of the graphite more at the center than at the exterior of the reactor thereby spreading neutron activity throughout the reactor.

3,005,766

THERMOELECTRIC SYSTEMS

Shepard Bartlett, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 27, 1957, Ser. No. 686,780
5 Claims. (Cl. 204-193.2)

1. In a fuel assembly for a neutronic reactor, the combination comprising a pair of spaced insulating end

plates, a plurality of elongated fuel elements suspended between said end plates in a generally parallel spaced array, and means for securing the end portions of each of said fuel elements to said end plates respectively, each of said fuel elements having an inner cladding member mounted thereon and substantially enclosing said fuel element, an outer cladding member mounted adjacent to said inner cladding member but spaced outwardly therefrom, some of said fuel elements each having a thermoelectrically positive member mounted within said outer cladding member and conforming substantially to the space between said inner and said outer cladding members, said positive member being secured to said inner and said outer cladding members in electrically and thermally conductive relation, the remainder of said fuel members each having a thermoelectrically negative member mounted within its outer cladding member and conforming substantially to the space between said inner



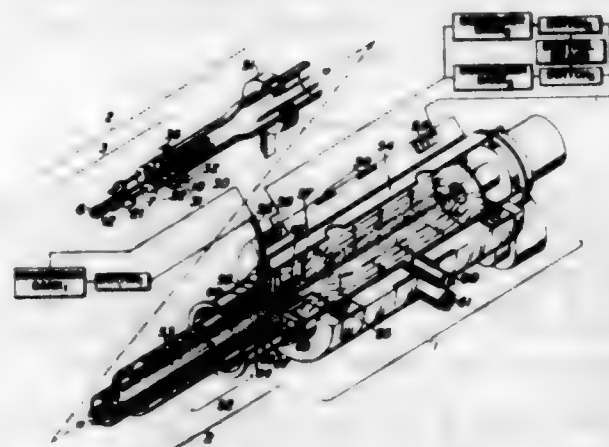
and said outer cladding members, said negative member being secured to said inner and said outer cladding members in electrically and thermally conductive relation, said outer cladding members substantially surrounding said inner cladding members respectively so as substantially to enclose said positive and said negative members respectively, said positive and said negative members spacing the confronting surfaces of the associated inner and outer cladding members so as electrically to insulate said members from one another save for conduction through said thermoelectric members respectively, and electrically conductive means for electrically connecting the inner cladding member of each fuel member to an inner cladding member of one of said fuel elements containing a relatively thermoelectrically dissimilar member and for connecting the outer cladding member of each fuel member to the outer cladding member of another of said fuel elements having a relatively thermoelectrically dissimilar member.

3,005,767

ROTATING PLASMA DEVICE

Keith Boyer, Jay E. Hammel, Conrad L. Longmire, Darragh E. Nagle, Fred L. Ribe, and James L. Tuck, all of Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 10, 1958, Ser. No. 773,111
10 Claims. (Cl. 204-193.2)



1. A neutron and light source comprising in combination an elongated, gas-tight, electrically conductive container, means for obtaining an ionized plasma of a low density gas within said container, said gas being selected from the class consisting of deuterium and deuterium and

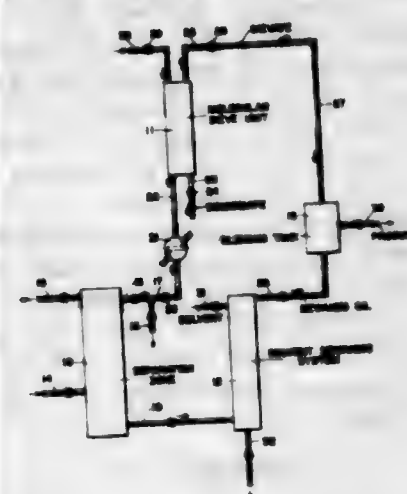
tritium, coil means surrounding said container for obtaining a longitudinal magnetic field therein and having a minimum strength near the midplane thereof and a maximum near each end, and electrode and associated power supply means for obtaining a radial electric field within said container in the presence of said ionized plasma, said electrode means comprising at least one electrode disposed to contact the central flux lines of said magnetic field and said power supply means having its output connected to said electrode and said container.

3,005,768

DEHAZING PROCESS

Robert F. Burke, Summit, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,775
8 Claims. (Cl. 208-28)



1. An improved method of producing a lubricating oil of low haze point from a hydrocarbon oil which comprises: segregating said hydrocarbon oil into a high boiling fraction boiling predominantly above about 1000° F. at atmospheric pressure and a low boiling fraction boiling below 1000° F. at atmospheric pressure; subjecting said high boiling fraction to solvent dewaxing in a dewaxing zone so as to remove haze producing normal paraffins and non-normals from said high boiling fraction, withdrawing dewaxed oil product from said dewaxing zone; subjecting at least a portion of said low boiling fraction to treatment with molecular sieve adsorbents in an adsorption zone, said molecular sieve adsorbents adsorbing haze producing, normal paraffins from said fraction, withdrawing non-adsorbed oil from said adsorption zone; and commingling said solvent-dewaxed oil and said non-adsorbed oil to form a lubricating oil of low haze point.

3,005,769

METHOD OF FRACTIONATING ASPHALTIC BITUMINOUS MATERIAL UTILIZING A SOLVENT-DENSITY-INCREASING SUBSTANCE

Leo Garwin, Oklahoma City, Okla., assignor to Kerr-McGee Oil Industries, Inc., a corporation of Delaware

No Drawing. Filed May 12, 1958, Ser. No. 734,399
14 Claims. (Cl. 208-45)

1. A method of separating asphaltic bituminous material including asphaltenes into at least two fractions, which method comprises separating a heavy fraction containing essentially asphaltenes from a lighter solvent fraction containing dissolved residual asphaltic bituminous material by treating in a single treating zone at elevated temperature and pressure each volume of the asphaltic bituminous material with at least two volumes of a solvent consisting essentially of one part of a density increasing substance and at least two parts of normally gaseous hydrocarbon having from three to four, inclusive, carbon atoms per molecule, the temperature of

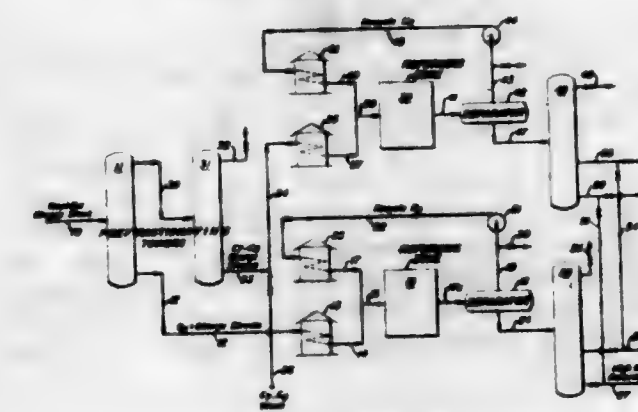
treatment being at least 200° F. and the pressure being at least equal to the vapor pressure of the solvent at the highest temperature present in the treating zone, the temperature and pressure being adjusted to provide an effective solvent density to separate a heavy asphaltene fraction of at least 0.43 g./ml. and less than 0.48 g./ml., the separated heavy asphaltene fraction being in the liquid phase and having a viscosity whereby it is freely flowable from the treating zone, and withdrawing the liquid phase asphaltene fraction from the treating zone.

3,005,770

PROCESS OF REFORMING NAPHTHAS

Irvin H. Lutz, Texas City, Tex., assignor, by means of assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Jan. 25, 1956, Ser. No. 561,216
5 Claims. (Cl. 208-140)



1. In the production of high octane gasoline by platinum catalyst reforming wherein catalyst activity is maintained by repeated periodic oxidative regeneration, the process of selective reforming which includes the steps of segregating a light naphtha charge stream comprising C₇ to C₈ hydrocarbons and a heavy naphtha charge stream comprising C₉+ hydrocarbons in the total naphtha charge, subjecting the heavy charge stream to reforming in the presence of a platinum containing catalyst and recycle hydrogen under high severity reforming conditions including a temperature in the range of about 875 to 1,000° F., a pressure in the range of about 100 to 500 p.s.i.g., a space velocity in the range of about 0.1 to 10 WHSV, a hydrogen rate in the range of about 1,000 to 10,000 standard cubic feet per barrel of feed and an average catalyst activity level, maintained by periodic oxidative regeneration, whereby a reformate having an octane number exceeding 95 CFR-R clear is produced, subjecting the light charge stream to a separate reforming operation in the presence of a platinum containing catalyst and recycle hydrogen under less severe reforming conditions within the above-defined ranges producing a reformate of about 88 to 93 CFR-R clear octane number, conducting the second of said reforming operations with catalyst of relatively low activity which is spent for reforming the heavy charge in the high severity operation to the first above specified octane number under the above defined conditions, and fractionating the reformates so produced to obtain stabilized high octane and low octane fractions.

3,005,771

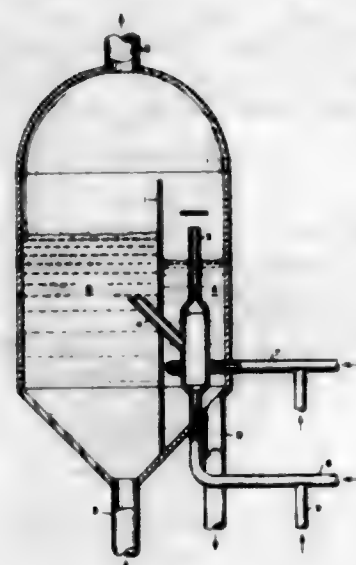
ISOMERIZATION OF OLEFINS IN STRIPPING

Arlo D. Bears and Willem J. Wolfson, Rotterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

Filed Jan. 19, 1960, Ser. No. 3,356
Claims priority, application Netherlands Feb. 13, 1959
4 Claims. (Cl. 208-150)

1. In the catalytic cracking of a hydrocarbon oil in a fluid catalytic cracking system with a silica-alumina con-

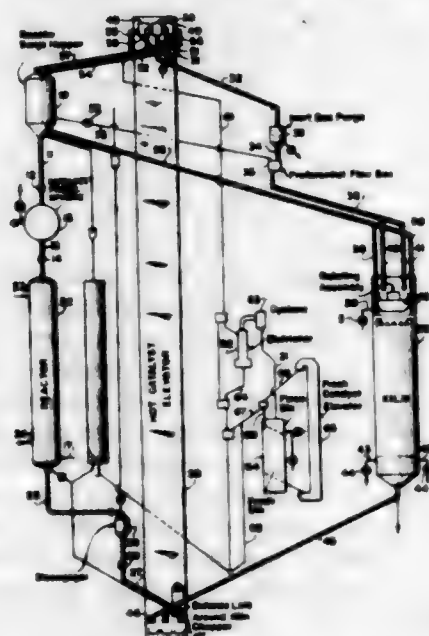
taining catalyst and wherein the used catalyst is continuously cycled to a regeneration zone after stripping it of occluded hydrocarbons with steam in a stripping zone, the improvement which comprises stripping said used catalyst in said stripping zone first with a mixture of steam and



an olefinic C_4 - C_5 hydrocarbon fraction containing less than the equilibrium ratio of internal olefins to terminal olefins and then with steam alone whereby there is obtained a stripped product having an increased ratio of internal to terminal olefins and at same time the catalyst is stripped for regeneration.

3,005,772 CATALYST TRANSFER APPARATUS IN MOVING BED SYSTEM

Eric V. Bergstrom, Byram, Conn., and Robert D. Drew, Wrentham, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Original application Apr. 8, 1957, Ser. No. 651,353, now Patent No. 2,941,874, dated June 21, 1960. Divided and this application Mar. 31, 1959, Ser. No. 803,286
2 Claims. (Cl. 208-173)



2. In a moving bed hydrocarbon conversion process in which a granular catalyst is passed as a gravitating bed through reaction and reconditioning zones and in which said catalyst is passed as a laterally confined compact stream through a steeply sloping flooded passage wherein fine particles are locked in the catalyst stream, the improvement comprising: passing the gravitating stream of catalyst through a zone intermediate the ends of said passage, said zone having its upper extremity sufficiently above the upper extremity of said passage to provide a free catalyst surface in said intermediate zone, said free catalyst

surface being the only free catalyst surface within said sloping passage, whereby granular particles flow freely across said surface and fine particles are released thereby to percolate to the lower extremity of said intermediate zone, withdrawing from the bottom of said intermediate zone a stream of catalyst enriched in fines content, transferring said fines-enriched catalyst stream to a fines removal zone for separation and removal of said fines from the granular catalyst and returning said granular catalyst to the process, whereby the fines content in said process is maintained at safe operating levels.

3,005,773 AQUEOUS DRILLING FLUID

Robert B. Alfred, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Apr. 11, 1958, Ser. No. 727,803
10 Claims. (Cl. 252-8.5)

1. An aqueous drilling fluid having improved resistance to thickening under high temperature well conditions which comprises an aqueous dispersion of a hydratable clay, 1-15 lbs./bbl. of an alkaline earth metal compound having water solubility at least as much as that of lime and a clay dispersant obtained prior to incorporation in the drilling fluid by heat treating an aqueous mixture of pyrogallol and at least an equivalent molar amount of an alkali metal hydroxide in the presence of iron at a temperature of at least 225° F. for a time of at least 1 hour, said dispersant being present in amount sufficient to inhibit thickening of the mixture under high temperature well conditions.

3,005,774 LUBRICANTS CONTAINING CROSS-LINKED POLYMERS AS THICKENING AGENTS

James E. Shewmaker, Fairwood, Eric O. Forster, Scotch Plains, Arnold J. Morway, Clark, and Jerome Panzer, Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 29, 1957, Ser. No. 674,574
10 Claims. (Cl. 252-39)

1. A soap-free lubricating composition consisting essentially of lubricating oil, about 0.1 to 40 weight percent of a cross-linked hydrocarbon polymer formed by irradiating with in the range of 0.5 to 75 megarontgens of high energy ionizing radiation a C_2 to C_{30} olefin polymer having an original molecular weight in the range of 10^3 to 10^6 , and about 3 to 40 weight percent of a metal salt selected from the group consisting of alkaline earth metal salts of C_2 to C_8 fatty acids, trisodium phosphate and disodium acid phosphate.

3,005,775 SYNTHETIC LUBRICANTS

Samuel Richard Pethrick and Maurice Barrington Sparks, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation
No Drawing. Filed Apr. 20, 1959, Ser. No. 807,323
Claims priority, application Great Britain May 1, 1958
17 Claims. (Cl. 252-57)

1. A lubricating composition consisting essentially of a blend of: a liquid aliphatic diester of the formula $R_4OOCR_1COOR_4$ where R_4 is an alkylene group having 4-14 carbon atoms and R_1 is an alkyl group having 4-18 carbon atoms, and 5-60% by weight of the composition of a polyester which is soluble in the diester and has the general formula

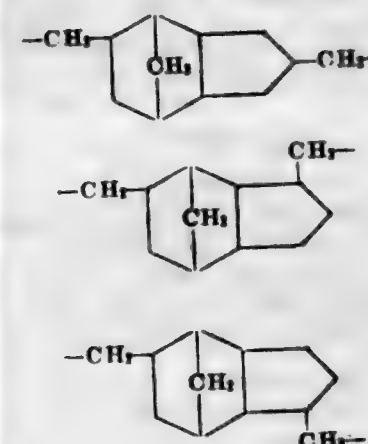


where:

n is an integer,

R_1 is an alkylene group having 6-10 carbon atoms, and

R_2 is at least one hydrocarbon radical selected from the group consisting of radicals of the formula



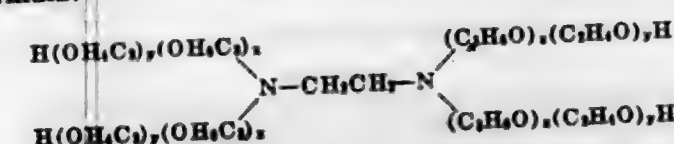
and

the viscosity of the polyester at 25° C. being at least 50 centistokes, and the relative proportions of diester and polyester in the blend being such that the viscosity of the blend at 210° F. is 4-10 centistokes.

3,005,776 HYDRAULIC FLUID COMPOSITION

Theodore W. Langer, deceased, late of Buffalo, N.Y., by Shirley A. Langer, administrator, New Haven, Conn., and Walter J. Ziemba, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 31, 1959, Ser. No. 863,371
3 Claims. (Cl. 252-77)

1. A hydraulic fluid composition consisting essentially of from about 30 to 70% by weight water, about 15 to 50% by weight of a freezing point depressant selected from the group consisting of water-soluble polyhydric alcohols and polyhydric ethers and from 8 to 40% by weight of a water-soluble organic thickener having the formula:



wherein x and y , respectively, are integers having a value of at least 8 and 100 whereby the average molecular weight of the compound is at least 20,000 with the oxypropylene groups constituting about 10 to 50% and the oxyethylene groups about 90 to 40%, by weight, of the compound.

3,005,777 MANUFACTURE OF SURFACE-ACTIVE COMPOSITIONS

Billy W. Terry, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,084
17 Claims. (Cl. 252-152)

1. In a process for manufacturing a water-soluble alkaryl sulfonate composition in which an alkaryl hydrocarbon is sulfonated with sulfur trioxide to produce a crude sulfonation product containing an alkaryl sulfonic acid, free oil and sulfuric acid, in which the alkaryl sulfonic acid is neutralized with an amine selected from the group consisting of alkyl amines and alkanol amines, and in which the amount of free oil in the crude sulfonation product is sufficient to cause gelling on neutralization, the improvement which comprises adding a sufficient amount of an amine sulfate selected from the group consisting of lower alkyl amine sulfates and lower alkanol amine sulfates thereto to provide a product free from gellation.

3,005,778 COMPOSITION FOR REMOVING CARBON AND SLUDGE FROM INTERNAL COMBUSTION EN- GINES

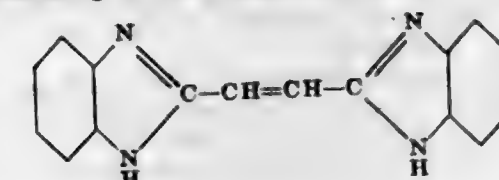
John Richard Sweetman, Paterson, N.J., assignor to Petro Chemical Laboratories, Inc., New York, N.Y., a corporation of Louisiana
No Drawing. Filed Mar. 2, 1956, Ser. No. 568,965
4 Claims. (Cl. 252-170)

1. A composition useful for removing carbon, sludge and lead deposits from the combustion chambers of internal combustion engines, comprising in parts by volume, approximately 50 parts of a refined paraffinic mineral oil having a pH between 6.9 and 7.1, approximately 50 parts of a solvent for tarry and gummy substances selected from the group consisting of xylol, toluol, and naphtha, approximately 2-4 parts of benzaldehyde and approximately 1/4 to 1/2 part of phenyl acetaldehyde.

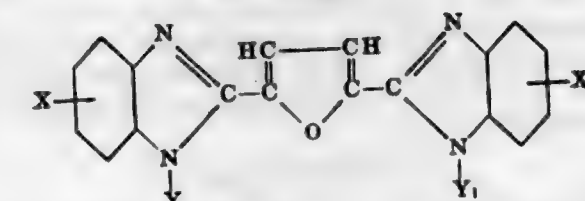
3,005,779 PROCESS FOR THE OPTICAL BRIGHTENING OF POLYACRYLONITRILE FIBERS

Franz Ackermann, Binningen, and Adolf Emil Siegrist, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Aug. 3, 1959, Ser. No. 831,067
Claims priority, application Switzerland Feb. 15, 1955
17 Claims. (Cl. 252-301.2)

16. A process for the optical brightening of polyacrylonitrile fibers which comprises applying to said fibers in aqueous medium from 0.01 to 3.0 percent, calculated on the weight of said fibers, of a member selected from the group consisting of the compound of the formula



and a compound of the formula



wherein X and X_1 each represents a member selected from the group consisting of a hydrogen atom, a chlorine atom and a lower alkyl group having at most 3 carbon atoms and Y and Y_1 each represents a member selected from the group consisting of a hydrogen atom, a lower alkyl group having at most 3 carbon atoms, a lower alkenyl group having at most 3 carbon atoms, a lower mono-hydroxy alkyl group having at most 3 carbon atoms, a lower di-hydroxy alkyl group having at most 3 carbon atoms and a benzyl radical.

3,005,780 STABILIZED TETRAETHYLLEAD ANTIKNOCK COMPOSITIONS

William Thomas Robinson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 11, 1958, Ser. No. 741,237
6 Claims. (Cl. 252-386)

1. A tetraethyllead antiknock composition consisting essentially of tetraethyllead and a halo-hydrocarbon scavenger agent for lead, said composition being maintained in contact with a nitrite compound taken from the group consisting of (1) water-soluble alkali metal nitrites and (2) water-soluble alkaline earth metal nitrites, said nitrite compound being present as an aqueous stabilizing solution of from about 1 to 25% by weight of said nitrite,

said solution having a pH within the range of 6 to 12, said nitrite being present in an amount within the range of 0.005 to 5% by weight of said tetraethyllead antiknock composition, and, said aqueous alkaline nitrite solution being substantially immiscible with said tetraethyllead halo-hydrocarbon scavenger agent composition.

3,005,781

PROCESS FOR REGENERATING PLATINUM-ALUMINA CATALYST

Michael D. Rierdan, Flukhill, N.Y., Norman D. Carter, Whittier, Calif., and Louis B. Bos, Flukhill, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Original application Sept. 29, 1955, Ser. No. 537,563, now Patent No. 2,932,660, dated Apr. 12, 1960. Divided and this application Apr. 17, 1957, Ser. No. 653,279

5 Claims. (Cl. 252-416)

1. In the oxidative regeneration of platinum-alumina reforming catalyst containing deposited carbon and adsorbed hydrogen wherein a stripping gas is passed over said catalyst to remove adsorbed hydrogen, the improvement which comprises passing a gas consisting essentially of a normally gaseous olefin over the carbon-bearing catalyst at temperature of 600° to 950° F. and pressure of atmospheric to about 300 p.s.i.g. until at least the major part of said adsorbed hydrogen has been desorbed from the catalyst by at least partial hydrogenation of said gaseous olefin.

3,005,782

GRANULAR POROUS MASS FOR AN ACETYLENE PRESSURE VESSEL AND THE PREPARATION THEREOF

John Arthur Tebbott, Morden, England, assignor to The British Oxygen Company Limited, a British company
No Drawing. Filed Apr. 12, 1960, Ser. No. 21,595
Claims priority, application Great Britain July 7, 1959
7 Claims. (Cl. 252-457)

1. A granular porous mass for filling pressure vessels for the storage of acetylene dissolved under pressure in a solvent, consisting of a dry mixture of 3-15% by weight of kieselguhr and 85-97% by weight of a granular meerscham having an inherent porosity of at least 75% as given by the formula:

$$P_i = 100(1 - d_a/d_t)$$

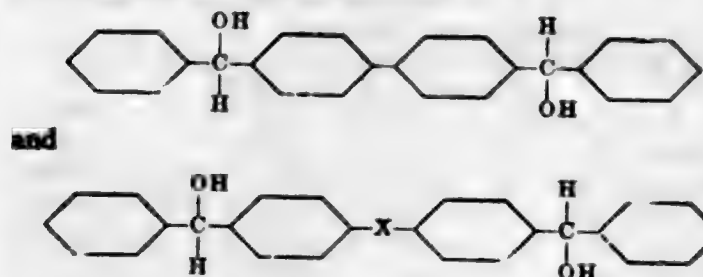
where P_i is the inherent porosity expressed as a percentage, d_a is the apparent density of the meerscham as determined in mercury and d_t is the true density of the meerscham as determined in acetone.

3,005,783

POLYETHER RESINS

Richard H. F. Mameke, Archie E. Ledingham, and Walter R. Boos, Guelph, Ontario, Canada, assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 12, 1959, Ser. No. 845,637
19 Claims. (Cl. 260-2)

5. A polyether resin which is a polyether of (A) a bifunctional bis (diarylcannabinol) selected from the group consisting of those of the formulas



wherein X is selected from the group consisting of O, —O—(CRR')_n—O— and (CRR')_n, where R and R'

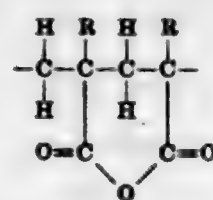
are selected from the group consisting of hydrogen and lower alkyl groups and n is an integer from 1 to 5, with (B) a different polyhydric alcohol wherein the hydroxyl groups are attached to aliphatic carbon atoms and are at least 4 carbon atoms apart, in relative proportions of from 50 to 90 moles of (B) per 100 moles of (A).

3,005,784

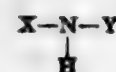
POLYMERS CONTAINING AMIDE AND CARBOXYLIC GROUPS

John F. Jones, Cuyahoga Falls, Ohio, and Robert M. Summers, Schenectady, N.Y., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,789
16 Claims. (Cl. 260-2.1)

1. The reaction product of a polymer consisting essentially of anhydride units of the structure



wherein R is a member of the class consisting of hydrogen and an alkyl group having from 1 to 10 carbon atoms with at least 20 mole percent based on said anhydride units of an amine having the structure



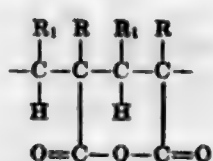
wherein X is a member of the class consisting of hydrogen and a hydrocarbon group having from 1 to 20 carbon atoms and Y is a member of the class consisting of hydrogen and a hydrocarbon group having from 1 to 20 carbon atoms.

3,005,785

POLYMERS CONTAINING ESTER AND CARBOXYL GROUPS

John F. Jones, Cuyahoga Falls, Harold Tucker, Akron, and Lawrence F. Arnold, Avon Lake, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,889
19 Claims. (Cl. 260-2.1)

1. The composition comprising the reaction product of a polymer consisting essentially of linear recurring anhydride units of the structure



wherein R is a member of the class consisting of hydrogen, chlorine, fluorine, bromine, a cyano group and hydrocarbon groups having from 1 to about 10 carbon atoms and R₁ is a member of the class consisting of hydrogen, chlorine, bromine and fluorine, and as the sole reactant at least 20 mole percent based on said anhydride units of a compound having the structure X—OH wherein X is a member selected from the class consisting of hydrocarbon groups of from 1 to 20 carbon atoms and groups of from 4 to 20 carbon atoms having only tertiary amino nitrogen and hydrocarbon substituents, said product containing ester groups so interspersed on the main polymer chain that not more than one ester group is formed from each anhydride group.

OCTOBER 24, 1961

3,005,786

PROCESS FOR SUSPENSION CONDENSATION OF EPIHALOHYDRIN ALKYLENEPOLYAMINE ANION RESINS

Albert H. Greer, Haddonfield, N.J., assignor to Pfander Permutit, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed July 30, 1959, Ser. No. 830,479
9 Claims. (Cl. 260-2.1)

1. A process for producing anion exchange resin beads which comprises dispersing an aqueous syrup of a partial condensate of an epihalohydrin and an alkylene-polyamine in an inert organic non-solvent suspending liquid with mechanical agitation in the presence of a dispersing agent selected from the class consisting of chlorinated rubber, chlorosulfonated polyethylene and polyvinyl chloride, maintaining the resulting dispersion at an elevated temperature until the resin gels, and finally curing the gelled resin by heating.

3,005,787

SUBBING LAYER FOR POLYCARBONATE FILMBASE

James R. Waring and Russell P. Easton, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 6, 1960, Ser. No. 33,925
5 Claims. (Cl. 260-8)

1. A subbing solution for bonding a hydrophilic colloid to a polycarbonate filmbase comprising an aqueous organic solvent solution containing as its essential components gelatin, a lower alkylene carbonate, cellulose nitrate and a copolymer of a lower alkyl acrylate and a lower alkyl methacrylate.

4. A multilayer material comprising a polycarbonate filmbase having on one surface thereof a dry, single subbing layer containing as its essential components gelatin, cellulose nitrate and a copolymer of a lower alkyl acrylate and a lower alkyl methacrylate.

3,005,788

DIAPHRAGM OF FEED PUMPS FOR LIQUID HYDROCARBONS

Lucien Péro, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed July 5, 1957, Ser. No. 670,152
Claims priority, application France July 7, 1956
4 Claims. (Cl. 260-8)

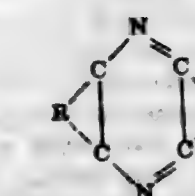
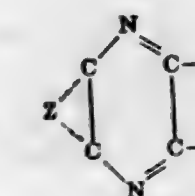
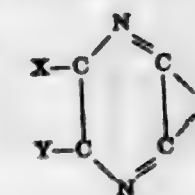
1. A method of preparing a hydrocarbon-resistant flexible composition adapted to be shaped to form elastic sheets and the like which comprises the steps of incorporating gelatin in dry form directly into an aqueous suspension of a butadiene-acrylonitrile copolymer having a content of about 25% to about 45% of acrylonitrile, said gelatin being effective to form a solution having a viscosity above 6° Engler measured at 60° C. on a broth containing 17.75% of gelatin and 82.28% of water allowing said gelatin to swell in said suspension, pouring the resulting pasty mixture onto heated rotating cylindrical surfaces to effect progressive evaporation of moisture from the mixture until the mixture is substantially dry, incorporating in said substantially dry mixture of gelatin and copolymer .0225 part by weight of stearic acid, .115 part by weight of zinc oxide, .0270 part by weight of mercaptobenzothiazole, and .0450 part by weight of sulfur, and calendering the resulting composition to form sheets having predetermined thickness.

3,005,789

DRIER COMPOSITION

Albert Bloom, Summit, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 11, 1955, Ser. No. 539,922
32 Claims. (Cl. 260-22)

1. A coating composition comprising a film-forming material containing a component selected from the group consisting of drying- and semi-drying oils and mixtures thereof and a diazine compound present in substantial amounts up to about 2% based on the weight of oil and selected from the group consisting of those having the formulae:



wherein X and Y are selected from the group consisting of hydrogen halogen, hydroxyl, nitro, and monovalent organic radicals and R and Z represent the atomic groupings necessary to form a fused ring on the diazine nucleus, said fused ring being selected from the group consisting of aromatic carbocyclic and heterocyclic ring structures, and mixtures thereof.

3,005,790

ROAD MARKING PAINT

James F. Wynn, Marietta, Ohio, and Harry N. Hamtischer, Evanson, Ill., assignors to American-Marietta Company, a corporation of Illinois
Filed Aug. 28, 1958, Ser. No. 757,823
9 Claims. (Cl. 260-22)



2. A reflective highway marking paint comprising a drying oil-base varnish vehicle containing between about 0.5 lb. and about 8 lbs. of a suspended mixture of glass particles per gallon of glass-free paint, said glass particles being a mixture of transparent glass beads having an average diameter of the order of about 3 to about 10 mils and glass fragments being of a size to be retained by a U.S. Standard No. 270 mesh screen and being constituted by a plurality of angularly intersecting substantially planar light reflecting faces the ratio of said glass beads to glass fragments being in the range between 2:1 and 1:8, and said fragments being present in sufficient concentration such that when applied to a highway as a marking paint the fragments provide with the binder a keying action

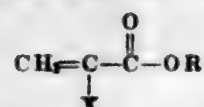
having a ball and ring softening point from 40° C. to 80° C. higher than the ball and ring softening point of from 50° C. to 100° C. of the original resin of which the adduct is formed, said original resin being the resinous polymerization product of a cracked petroleum distillate boiling 90% below 125° C., consisting essentially of conjugated dienes and olefins containing 5, 6, and 7 carbon atoms and containing less than 2% butadiene and less than 5% isoprene, comprising the steps of (a) preparing a solution of approximately 1000 parts of the said original resin and 1000 to 5000 parts of aromatic hydrocarbon solvent therefor, (b) adding to the said solution from 30 to 35 parts of tertiary butyl peroxide and from 300 to 600 parts of maleic anhydride, (c) gradually heating and stirring the mixture thus comprised until substantially all of the said maleic anhydride is in solution, (d) heating the said mixture to its boiling point of approximately 150° C. for reflux, and (e) continuing reflux until the maleic anhydride has been included in the adduct in a proportion of at least 10% of the total weight of the said adduct resin.

3,005,801

METHOD OF POLYMERIZING

Wallace A. Erickson, Chicago, Ill., and John A. Cornell, Berwyn, Pa., assignors to H. D. Justi & Son, Inc., Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 21, 1958, Ser. No. 775,342
17 Claims. (Cl. 260-78.4)

1. A method of producing a uniform low molecular weight solid polymer of an ester of the formula



wherein X is a radical of the group consisting of CH_2 — and $-\text{COOR}_1$ and R and R_1 are each a radical selected from the group consisting of alkyl, cycloalkyl, aralkyl, tetrahydrofuryl and tetrahydropyran-2-methyl comprising dispersing said ester of said formula in liquid droplet form in an aqueous acid solution having a pH of between about 1.5 and 6 containing as the sole dispersing agent for said monomer a hydrophilic carbohydrate in an amount of from about 0.2 to about 0.9% based on the weight of said monomer, said carbohydrate being selected from the group consisting of starch, gum tragacanth, agar agar, gum acacia, glycol cellulose and lower alkyl starch ethers to form liquid monomer droplets in which the average particle size of the suspended droplets is about 1–2 millimeters in diameter, adding a water-soluble iron salt as a promoter for peroxide polymerization to said solution, adding incrementally at a uniform rate to said solution an inorganic peroxide soluble in said acid medium which provides hydrogen peroxide as the polymerization catalyst in an amount of from 0.5% to about 3.5% of peroxide by weight of said monomer, this amount providing from about 0.001 to about 0.02% of hydrogen peroxide by weight of said aqueous acid solution, the ratio of said iron salt promoter to said peroxide being between about 1/300 mols to about 1/50 mols and heating the resulting mixture to a temperature of at least about 70° C. whereby solid polymer in a particle size range of about 2–20 microns precipitates from the aqueous acid solution, said temperature being above the decomposition temperature of said peroxide catalyst in said aqueous acid solution.

3,005,802

ADHESIVE SALT OF AN ESTER OF A MALEIC ANHYDRIDE COPOLYMER

John C. Sellers, North Tarrytown, N.Y., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,886
9 Claims. (Cl. 260-78.5)

1. An adhesive composition having a plasticity not greater than about 4.0 mm. and a cold flow not greater

than about 2.5 inches, comprising a cross-linked ester of a copolymer comprising about equimolecular proportions of maleic anhydride and a vinyl compound selected from the group consisting of styrene and vinyl toluene, said copolymer having an intrinsic viscosity in the range from about 0.2 to 2.0, about 70 to 95 percent of the potential carboxy groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol containing 6 to 16 carbon atoms, said ester having been reacted to form a salt with an inorganic polyvalent metal oxide, said salt formation being sufficient to impart to said ester a gel content in the range from about 10 to 100 percent by weight of the ester.

3,005,803

THIOETHER CONDENSATION PRODUCT AND PROCESS

Hans Holtschmidt, Köln-Stammheim, and Otto Bayer, Erwin Müller, and Günther Nischk, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Jan. 23, 1957, Ser. No. 635,595
Claims priority, application Germany Jan. 26, 1956
8 Claims. (Cl. 260-79)

1. A method for making a polythioether comprising reacting as the sole reaction ingredients thiodiglycol and 1,4-butylene-bis-hydroxyethyl glycol in the presence of p-toluene sulfonic acid to temperatures of about 150° C. to about 160° C. until the OH number is about 100.

3,005,804

CURING BUTYL RUBBER LATEX FILMS

Alfred L. Miller, Cranford, Anthony J. Petro, Elizabeth, and Kenneth W. Powers, Nixon, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 17, 1958, Ser. No. 780,942
10 Claims. (Cl. 260-79.5)

1. Sulfur vulcanized gum butyl rubber copolymer of isobutylene and a small amount of a diolefin, containing 4 to 6 carbon atoms containing as a vulcanization accelerator 1 to 6 parts by wt. of zinc diethyldithiocarbamate per 100 parts by wt. of rubber and 2 to 4 parts by wt. of ammonium chloride per 100 parts by wt. of rubber.

3,005,805

RUBBER WITH A CYCLIC TRIENE THEREIN

Leon Sherwood Mueckler, Jr., Metuchen, Augustus B. Small, Westfield, Clifford W. Muenig, Roselle, and Samuel B. Lippincott, Springfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 29, 1959, Ser. No. 816,731
2 Claims. (Cl. 260-79.5)

1. In a process for improving the ozone resistance of a rubbery copolymer of 70 to 99.5 parts by weight of isobutylene with 30 to 0.5 parts by weight of isoprene, the improvement which comprises adding 0.1 to 20 parts by weight of 1,5,9-cyclododecatriene per 100 parts of said copolymer and curing with sulfur at a temperature between 100° and 200° C. for between 1 minute and 5 hours.

3,005,806

HYDROCARBON RESINS

Morton Fefer, Metuchen, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 31, 1958, Ser. No. 770,941
4 Claims. (Cl. 260-82)

1. A process for preparing resins which comprises contacting a feed comprising about 65 to 99 wt. percent of

an unsaturated C_4 to C_{10} hydrocarbon fraction boiling within the range of about 15 to 130° C. composed of 10–30 wt. percent of a C_3 fraction having the following composition:

	Percent by weight
C_3 olefins	40 to 80
C_3 diolefins	10 to 30
C_3 paraffin hydrocarbons	10 to 35
C_3 aromatic hydrocarbons	0 to 5
Other C_3 hydrocarbons	0 to 2

10–40 wt. percent of a C_4 fraction having the following composition:

C_4 olefins	45 to 85
C_4 diolefins	2 to 20
C_4 paraffin hydrocarbons	2 to 20
C_4 aromatic hydrocarbons	0 to 10
Other C_4 hydrocarbons	0 to 10

30–55 wt. percent of a C_7 fraction having the following composition:

C_7 olefins	5 to 25
C_7 diolefins	5 to 30
C_7 paraffin hydrocarbons	5 to 20
C_7 aromatic hydrocarbons	30 to 70
Other C_7 hydrocarbons	0 to 10

8–25 wt. percent of a C_8 fraction having the following composition:

C_8 olefins	0 to 2
C_8 diolefins	0 to 2
C_8 paraffin hydrocarbons	0 to 2
C_8 aromatic hydrocarbons	30 to 90
Other C_8 hydrocarbons	20 to 60

and about 1 to 35 wt. percent of bicycloheptadiene with a Friedel-Crafts catalyst.

3,005,807

PROCESS FOR CARBOXYLATION OF ISOOLEFIN-DIOLEFIN COPOLYMERS

Henry G. Schutze, Baytown, Tex., and Willard H. Bonner, Jr., Wilmington, Del., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
No Drawing. Filed Nov. 19, 1956, Ser. No. 622,807
4 Claims. (Cl. 260-85.3)

1. A process which comprises reacting an isoolefin-conjugated diolefin copolymer of about 95 to 99 mol percent of normally gaseous olefin with about 5 to 1 mol percent of a C_4 to C_6 conjugated diolefin with about 0.2 to 1 mol of an alkali metal alkyl per mol of combined conjugated diolefin in the polymer in solution in a non-reactive organic solvent to obtain an alkali metal-containing intermediate product, carbonating said intermediate product in said solution with solid dry carbon dioxide to obtain an alkali metal carboxylate-containing copolymer, and acidifying said alkali metal carboxylate-containing copolymer with an excess of an acid to convert said carboxylate groups to carboxyl groups, the alkyl groups of said alkali metal containing 1 to 14 carbon atoms.

3,005,808

TREATING RECYCLE GAS

Roland Timothy Kelley and James Edward Walker, Baton Rouge, La., and Bruce R. Tette, Madison, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,269
10 Claims. (Cl. 260-85.3)

1. An improved continuous process for preparing butyl rubber which comprises polymerizing a mixture of a

major amount of C_4 to C_7 isoolefin and a minor amount of C_4 to C_{10} conjugated diolefin, said polymerization being carried out in the presence of a Friedel-Crafts catalyst at temperatures between about -130°C . and -60°C . in a methyl chloride diluent so as to form a slurry of the polymerized product in said diluent together with unreacted monomers and oxygen-containing organic polymerization poisons, admixing said slurry with water of sufficiently high temperature to produce a vaporized first stream comprising water, diluent, unreacted monomers and oxygen-containing organic polymerization poisons, transporting said first stream through a series of cooling, knockout and compressing zones so as to remove gross amounts of water content therefrom, intimately contacting the resultant first stream in an absorption zone with a solution of an alkylene glycol having from 2 to 6 carbon atoms, withdrawing from said absorption zone a second raffinate stream containing less water and polymerization poisons than said first stream, drying said second stream in the presence of alumina, and fractionating said dry stream to form a recycle stream for the polymerization reaction.

3,005,809

VINYL ALCOHOL-CROTONIC ACID COPOLYMERS

Arthur I. Lowell, Plainfield, and Alfo J. Baselli, New Providence, N.J., and William H. Taylor, Cleveland, Ohio, assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Sept. 5, 1957, Ser. No. 682,258
4 Claims. (Cl. 260-85.7)

1. The method of forming vinyl alcohol-crotonic acid copolymers which comprises reacting a vinyl acetate-crotonic acid copolymer with an excess of a lower alcohol in the presence of a base selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium methylate and potassium methylate, the amount of such base being at least sufficient to substantially completely neutralize the free carboxyl groups and to catalyze the alcoholysis of the acetyl groups of the copolymer.

3,005,810

POLYMERIZATION OF OLEFINS

Charles E. Scott, Drexel Hill, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Oct. 22, 1959, Ser. No. 847,909
6 Claims. (Cl. 260-93.7)

1. Method of preparing a polymer which comprises contacting an alpha-monoolefin having 2–20 carbon atoms at a temperature of -50 to 100°C . with a catalyst system comprising a complex of cyclododecatriene-1,5,9 and an aluminum halide selected from the group consisting of aluminum chloride and aluminum bromide, the molar proportion of cyclododecatriene to aluminum halide being in the range of 0.3–5.0.

3,005,811

PROCESS FOR POLYMERIZING DIOLEFINS IN PRESENCE OF VINYL CYCLOOLEFIN

Edward A. Youngman, Lafayette, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Apr. 25, 1958, Ser. No. 730,807
14 Claims. (Cl. 260-94.3)

1. A process for polymerizing conjugated diolefin hydrocarbons which comprises contacting the diolefin with a catalyst of the group consisting of cobaltous and divalent nickel halides in combination with co-catalyst

consisting of aluminum alkyl having from 1 to 8 carbon atoms per alkyl group in a substantially anhydrous solution containing at least 0.2 times the weight of the monomer of a non-conjugated vinyl cycloolefin at a temperature between 0° and 100° C. in the substantial absence of molecular oxygen and under substantially anhydrous conditions, and recovering as polymerization product a rubbery polymer of high cis-1,4 addition product content.

3,005,812

PROCESS FOR REMOVING SOLVENTS FROM CHLORINATED POLYETHYLENE RESINS

Herbert C. Wohlers, Syracuse, N.Y., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Filed Feb. 6, 1958, Ser. No. 713,542
10 Claims. (Cl. 260-94.9)

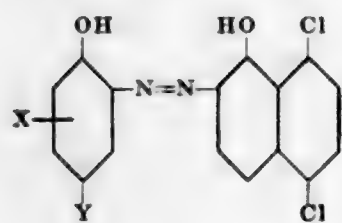
1. The process for removing solvent from chlorinated polyethylene resins containing between about 50% and about 72% chlorine, having average molecular weights between about 1,500 and about 10,000, and fusion temperatures between about 90° C. and about 220° C., which comprises gradually introducing a solution of such resin in a water-immiscible solvent having a boiling point below 100° C. under standard atmospheric conditions, into a dilute, aqueous solution of a water soluble surface active agent maintained under agitation at a temperature at least about 10° C. below the agglomeration temperature of the resin, and at least about 4° C. above the boiling point of the solvent, whereby solvent flash-distills, removing the volatilized solvent, and thereafter mechanically separating the resultant finely divided particulate solid resinous product from the aqueous medium.

3,005,813

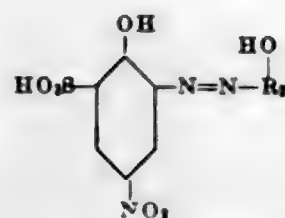
METALLIFEROUS AZO-DYESTUFFS

Jakob Brässel, Basel, and Arthur Buchler, Rheinfelden, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed May 20, 1954, Ser. No. 431,270
Claims priority, application Switzerland May 22, 1953
2 Claims. (Cl. 260-145)

1. A complex chromium compound containing one atom of chromium in complex union with two molecules of two different ortho:ortho'-dihydroxy monoazo-dyestuffs of which one corresponds to the formula



wherein X represents a sulfonic acid amide group and Y represents a member of the group consisting of a chlorine and a hydrogen atom while the other monoazo-dyestuff corresponds to the formula



wherein R₁ represents a member of the group consisting of a 1-hydroxy-5:8-dichloronaphthalene radical bound in 2-position to the azo linkage and a 6-methoxy-2-hydroxynaphthalene radical bound in 1-position to the azo linkage.

3,005,814

METAL-CONTAINING POLYAZO DYESTUFFS

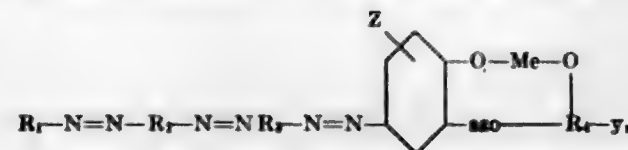
August Schweizer, Muttens, and Walter Wehrli, Riehen, Switzerland, assignors to Sandoz A.G., Basel, Switzerland

No Drawing. Filed Dec. 2, 1957, Ser. No. 699,949

Claims priority, application Switzerland Dec. 5, 1956

7 Claims. (Cl. 260-145)

1. A metal-containing polyazo dyestuff of the formula



wherein:

R₁ stands for a member selected from the group consisting of phenyl, mono-, di- and tri-substituted phenyl, and a sulfonaphthyl with from one to three sulfonic acid groups, the substituted phenyl being substituted with at least one member selected from the group consisting of methyl, methoxy, nitro, sulfonic acid groups and chlorine;

R₂ stands for a member selected from the group consisting of phenyl, mono- and di-substituted phenyl, naphthyl, and monosulfonaphthyl, the substituted phenyl being substituted with at least one member selected from the group consisting of methyl, ethyl, methoxy, sulfonic acid groups and chlorine;

R₃ stands for a member selected from the group consisting of phenyl, mono- and di-substituted phenyl, naphthyl and monosulfonaphthyl, the substituted phenyl being substituted with at least one member selected from the group consisting of methyl, ethyl, methoxy and chlorine;

the total number of sulfonic acid groups contained in R₁, R₂, and R₃ being from two to three;

R₄ represents a naphthalene radical linking both the groups -azo- and -O-Me- in ortho-position to each other and which is selected from the group consisting of naphthalene, lower alkanoylaminonaphthalene, benzoylaminonaphthalene, chlorobenzoylaminonaphthalene, nitrobenzoylaminonaphthalene, mononuclear arylaminonaphthalene, and phenonaphthazine.

y represents a water-solubilizing group,
z represents a member selected from the group consisting of hydrogen, lower alkyl and lower alkoxy,
Me represents a member selected from the group consisting of a copper atom and a nickel atom, and
n stands for one of the integers 1 and 2.

3,005,815

ION EXCHANGE RECOVERY OF NEOMYCIN FROM CRUDE CULTURE BROTHS

Thomas W. Miller, Carteret, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed May 17, 1957, Ser. No. 659,773

3 Claims. (Cl. 260-210)

1. A process for recovering neomycin from a filtered culture broth containing the same which comprises intimately contacting said culture broth with a polystyrene sulfonic acid resin cross-linked with 2 to 16 percent divinylbenzene at a pH of 5 to 8.5, eluting the resin adsorbate with dilute aqueous ammonia, and recovering neomycin from the resulting eluate.

3,005,816

NOVEL 18-NOR DERIVATIVES OF CORTISONE

Gaston Amiard, Nohy-le-Sec, and René Heymes, Romainville, France, assignors to Les Laboratoires Français de Chimiothérapie, Paris, France, a corporation of France

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,156

Claims priority, application France Dec. 24, 1959

4 Claims. (Cl. 260-239.55)

1. The 3-ethylene ketal of Δ¹⁸-18-nor-pregnene-3,11,20-trione.

3,005,817

12α-HALO-Δ²⁰⁽²²⁾-FUROSTENE-3β,26-DIOL-11-ONE

3,26-DIACRYLATE AND PREPARATION THEREOF
Josef Fried and Josef E. Herz, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application Apr. 5, 1956, Ser. No. 576,259, now Patent No. 2,963,493, dated Dec. 6, 1960. Divided and this application June 23, 1959, Ser. No. 833,119

3 Claims. (Cl. 260-239.55)

1. 12α-halo-Δ²⁰⁽²²⁾-furostene-3β,26-diol-11-one 3,26-diacrylate, wherein the acyl radical in the acyl radical of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,005,818

1-PHENYL-2,3-DIMETHYL-4-MORPHOLINO METHYL PYRAZOLONE(5) COMPOUNDS

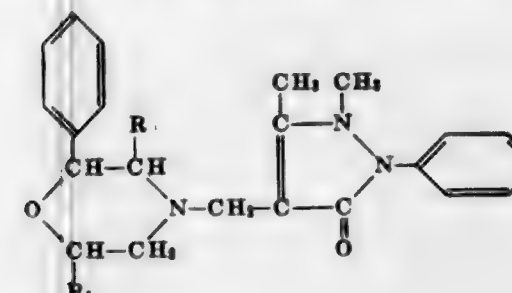
Harm Siemer, Konstanz, and Adolph Doppstadt, Konstanz-Litzelstetten, Germany, assignors to Ravensberg G.m.b.H., Chemische Fabrik, Konstanz, Germany

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,384

Claims priority, application Germany Apr. 3, 1958

3 Claims. (Cl. 260-247.2)

3. The 1-phenyl-2,3-dimethyl-4-morpholino methyl pyrazolone compound selected from the group consisting of the 1-phenyl-2,3-dimethyl-4-morpholino methyl pyrazolone compound of the formula



in which formula

R and R₁ indicate lower alkyl radicals with 1 to 5 carbon atoms,

and its non-toxic pharmaceutically acceptable acid addition salts.

3,005,819

PROCESS FOR THE PRODUCTION OF MELAMINE AND GUANIDINE SULPHATE

Harry Edward Jackson, Roseland, British Columbia, Canada, assignor to The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a company of Canada

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,393

6 Claims. (Cl. 260-249.7)

1. In a process for the production of a member selected from the group consisting of guanidine sulphate and melamine in which urea, ammonia and at least one member selected from the group consisting of sulphur dioxide and ammonium sulphamate are reacted in a reaction vessel as a temperature above about 200° C. and under a super-atmospheric pressure of ammonia and at least one member of the first mentioned group is separated and recovered from the reaction product, the improvement which

comprises providing elemental sulphur in the mixture subjected to reaction in amount constituting at least about 40%, by weight, of the reactants.

3,005,820

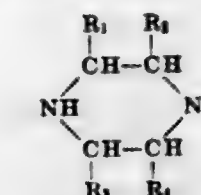
PROCESS FOR MAKING PYRAZINE AND ALKYL PYRAZINES

Moses Canker, Trenton, and George E. Baxter, Wyandotte, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,163

9 Claims. (Cl. 260-250)

1. A process for producing a pyrazine, which comprises, heating, vaporizing and passing a piperazine at the rate of about 0.08 to 0.8 gram per gram of catalyst per hour over a reduced, chemically neutral, copper chromite catalyst consisting essentially of about 40-85 weight percent CuO and about 60-15 weight percent Cr₂O₃ at a temperature of about 300-375° C. and at about atmospheric pressure, said piperazine corresponding to the formula,



wherein R₁, R₂, R₃ and R₄ are members selected from the group consisting of hydrogen, methyl and ethyl radicals.

3,005,821

PHENYLPIPERAZINYLALKYL AMIDES

Shin Hayao, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Sept. 22, 1958, Ser. No. 762,255

6 Claims. (Cl. 260-268)

1. A new composition of matter selected from the group consisting of phenylpiperazinylalkyl amides represented by the formula:



wherein R is a member of the group consisting of hydrogen atoms, chlorine atoms and methoxy radicals, C_nH_{2n} is an alkylene chain in which n is a number taken from the group consisting of 2,3,4,5 and 6 and Ar is 3,4,5-trimethoxyphenyl; and non-toxic water-soluble acid addition salts thereof having therapeutically acceptable anions.

3,005,822

NEW 1:4-DIHYDROXY-5-ACYLAMINOANTHRAQUINONES

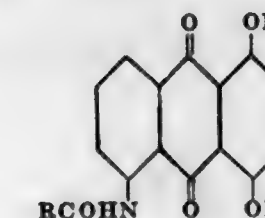
Walter Jenny, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed May 23, 1958, Ser. No. 737,212

Claims priority, application Switzerland May 27, 1957

12 Claims. (Cl. 260-272)

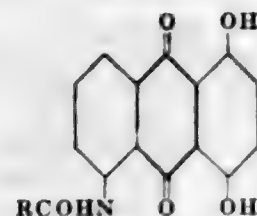
1. 1,4-dihydroxy-5-acylaminoanthraquinone of the formula



in which R— is an aromatic radical selected from the group consisting of phenyl, pyridyl, hydroxyphenyl, lower

alkoxyphenyl, lower alkylphenyl, trifluoromethylphenyl, halophenyl and phenoxyacetyl.

5. 1,4-dihydroxy-5-acylaminoanthraquinones of the formula



in which R stands for pyridyl.

3,005,823

5-QUINOLYL METHYLCARBAMATE

Warren W. Kaeding, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,185

1 Claim. (Cl. 260-287)

5-quinolyl methylcarbamate.

3,005,824

8-AZA-(LINEAR NAPHTHOTHIAZOLE)-4,9-QUINONES SUBSTITUTED IN THE 2-POSITION

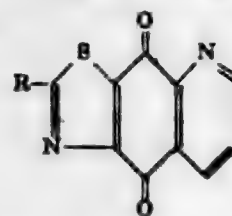
Gerhard Domagk, Wuppertal-Elberfeld, Karl-Wolfgang Schellhammer and Siegfried Petersen, Leverkusen, and Hans-Bodo König, Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,292

Claims priority, application Germany Mar. 29, 1958

7 Claims. (Cl. 260-288)

1. A compound selected from the group consisting of compounds represented by the following formula:



wherein R is selected from the group consisting of phenyl, 2-hydroxy-3-methoxyphenyl, 4-N,N-diethyl-aminophenyl, 4-sulfonyl-phenyl, 2-furyl and 4-pyridyl.

4. 2-(4-N,N-diethylaminophenyl)-aza-(linear naphthothiazole)-4,9-quinone.

3,005,825

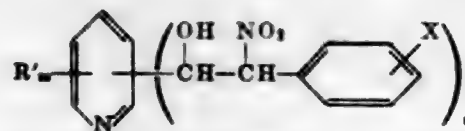
NITROALCOHOLS

Dale N. Robertson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

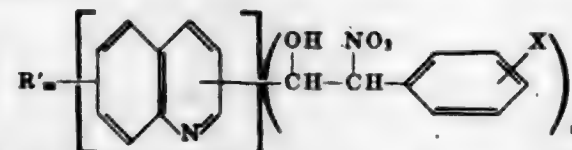
No Drawing. Filed Dec. 31, 1958, Ser. No. 784,082

10 Claims. (Cl. 260-289)

1. A nitroalcohol selected from the group consisting of (a) an α -(α -nitrobenzyl)pyridinemethanol having the structure



and (b) an α -(α -nitrobenzyl)quinolinemethanol having the structure



wherein R' is selected from the group consisting of methyl and ethyl, X is selected from the group consisting

of hydrogen, fluorine, chlorine and bromine, m is a number from 0 to 2, inclusive, n is an integer of from 1 to 2, inclusive; and wherein in the bis(nitroalcohols), the nitroalcohol groups occupy non-vicinal positions.

5. α -(α -Nitrobenzyl)-2-quinolinemethanol.

3,005,826

ORGANIC NITROGEN COMPOUND SEPARATION BY SELECTIVE ADSORPTION

Raymond N. Fleck, Whittier, and Carlyle G. Wight, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,146

10 Claims. (Cl. 260-290)

1. A process for treating a mixture essentially comprising basic and non-basic organic nitrogen compounds, which comprises: (1) contacting said mixture with a lean silica gel adsorbent for a period of time sufficient to effect adsorption of a substantial portion of said basic organic nitrogen compounds; (2) terminating said contacting before all of said non-basic organic nitrogen compounds have been adsorbed whereby there is obtained a rich adsorbent containing adsorbed basic organic nitrogen components of said mixture and a raffinate product which is rich in the non-basic organic nitrogen components of said mixture; and (3) treating said rich adsorbent to recover the adsorbed basic organic nitrogen components therefrom.

3,005,827

INDOLE COMPOUNDS

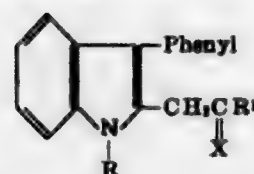
Uberto Teotino and Giulio Maffi, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed Jan. 5, 1960, Ser. No. 667

Claims priority, application Great Britain Jan. 5, 1959

6 Claims. (Cl. 260-319)

1. A compound of the formula



wherein R is a lower alkyl radical, X is a member of the class consisting of oxygen and H₂, and R¹ is a member of the class consisting of amino, lower alkylamino, lower dialkylamino, lower dialkylaminoalkoxy, hydrazino and lower alkyl-substituted hydrazino groups.

3,005,828

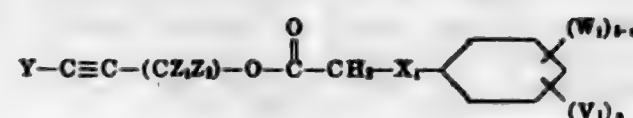
PHENOXYACETOXY-BUTYNE-2 DERIVATIVES

Joseph R. Baldridge, Mentor, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

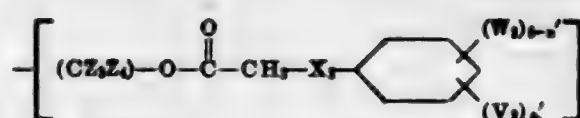
No Drawing. Filed July 28, 1958, Ser. No. 751,153

11 Claims. (Cl. 260-326)

1. Compounds represented by the structure:

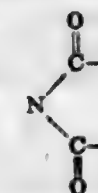


wherein Y is selected from the group consisting of hydrogen and



a and a' are numbers from 0 to 5, inclusive, X₁ and X₂

are selected from the group consisting of oxygen, NH, and



Z₁, Z₂, Z₃, and Z₄ are selected from the group consisting of hydrogen, and lower alkyl radicals, W₁ and W₂ are hydrogen and V₁ and V₂ are selected from the group consisting of chlorine, fluorine, bromine and iodine, lower alkyl radicals, OH, NO, NO₂, SO₂NH₂, and SO₂H.

5. 2-butyne-1,4-diol-bis-(alpha-phthalimido acetate).

3,005,829

3-ALPHA-ACYLOXY-11-KETO-D-HOMOETIOCHOLACTONE

Norman L. Wendler, Summit, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Jan. 24, 1955, Ser. No. 483,819. Divided and this application July 31, 1959, Ser. No. 838,373

2 Claims. (Cl. 260-343.2)

1. 3 α -acyloxy-11-keto-D-homoetiocholoactone wherein the acyl group represents lower alkanoyl.

3,005,830

STABILIZED BUTYROLACTONE COMPOSITIONS AND METHODS FOR MAKING SAME

Eugene V. Hort, Westfield, and Frederick Grosser, Midland Park, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,861

8 Claims. (Cl. 260-343.6)

5. A method for stabilizing butyrolactone to heat comprising adding thereto a stabilizing amount of formaldehyde.

3,005,831

PREPARATION OF MALEIC ANHYDRIDES AND CATALYSTS THEREOF

John A. Dreifels, Pittsburgh, Pa., assignor, by mesne assignments, to Pittsburgh Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 27, 1957, Ser. No. 648,898

8 Claims. (Cl. 260-346.8)

5. In the vapor phase catalytic partial oxidation process for the manufacture of a dicarboxylic acid anhydride from the group consisting of maleic anhydride and methyl maleic anhydride, the improvement comprising conducting the oxidation in contact with a catalyst comprising solid inert carrier particles having an adherent coating of an intimate mixture of vanadium pentoxide and molybdenum trioxide thereon produced by coating said inert carrier particles with a firmly adherent coating of an intimate mixture of vanadium pentoxide and molybdenum trioxide by contacting the carrier particles with an aqueous solution containing colloidal vanadium pentoxide and colloidal molybdenum trioxide prepared by fusing a mixture of V₂O₅ and MoO₃ wherein the ratio of V₂O₅ to MoO₃ is from 10:1 to 1:1, pouring said fused mixture into water with agitation to prepare said aqueous colloidal solution and evaporating the water from the colloidal solution while in contact with the carrier particles.

3,005,832

EPOXY ALCOHOL PRODUCTION

George B. Payne, Berkeley, and William J. Sullivan, Oakland, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed June 25, 1959, Ser. No. 822,737

6 Claims. (Cl. 260-348)

1. A process for preparing a vic-epoxy alkanol which comprises reacting together under substantially anhydrous

conditions a vic-epoxy alkanol of up to 8 carbon atoms and hydrogen at a pressure from about 500 to about 1400 p.s.i.g. and at a temperature from about 50° C. to about 200° C. in the presence of a catalytic amount of copper chromite.

3,005,833

PIGMENT DYESTUFFS OF THE ANTHRAQUINONE SERIES

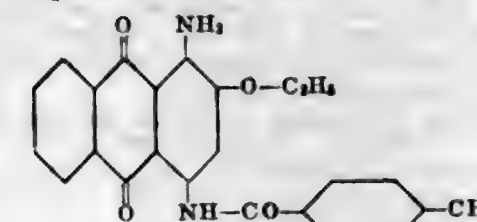
Ernst Gutzwiller, deceased, late of Basel, Switzerland, by Jenny Gutzwiller-Markees, administratrix, Basel, Switzerland, and Wolfgang Schoenauer, Riehen, Switzerland, assignors, by mesne assignments, to Saul & Co., Newark, N.J., as nominee of Fidelity Union Trust Company

No Drawing. Filed May 10, 1954, Ser. No. 428,855

Claims priority, application Switzerland May 13, 1953

4 Claims. (Cl. 260-377)

1. The pigment dyestuff of the anthraquinone series which corresponds to the formula



3,005,834

DEHYDRATION OF NUCLEAR HYDROXYLATED STEROIDS

Herman A. Drake, Galesburg, and Ralph B. Howard and Anne E. Fonken, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Apr. 29, 1957, Ser. No. 655,467

21 Claims. (Cl. 260-397.3)

1. A process for dehydrating nuclear hydroxylated steroids selected from the group consisting of steroids of the androstane series and pregnane series which comprises: contacting the hydroxy steroid, under anhydrous conditions and in a basic non-reacting organic medium, with (1) a compound selected from the group consisting of N-haloamides and N-haloimides and (2) anhydrous sulfur dioxide, the said anhydrous sulfur dioxide being added before total oxidation of the reactive hydroxyl group has occurred.

3,005,835

D-HOMO-18-NORESTRA-1,3,5(10)-TRIEN-17 α -ONES AND INTERMEDIATES THEREOF

William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 13, 1960, Ser. No. 55,721

7 Claims. (Cl. 260-397.5)

7. 3-methoxy-17 β -methyl-18-nor-13 α -estra-1,3,5(10)-triene-16 α ,17 α -diol.

3,005,836

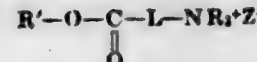
SALTS OF STEROIDAL AMINO ACID ESTERS

Ellis Rex Pinson, Jr., and Gerald D. Laubach, Jackson Heights, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 31, 1956, Ser. No. 607,284

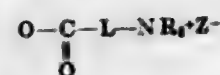
6 Claims. (Cl. 260-397.45)

1. A compound having the formula



in which R' is chosen from the class consisting of hydrocortisone, 14 α -hydroxy-hydrocortisone, and the 9 α -fluoro derivatives of these compounds, in each instance minus

the 21-position hydroxyl group, L is chosen from the class consisting of $-(CH_2)_n-$, $-O-(CH_2)_n-$ and $-NH-(CH_2)_n-$, n being an integer from one to two, each R represents a member of the class consisting of hydrogen, alkyl, hydroxyalkyl, aminoalkyl, aryl and aralkyl groups containing up to ten carbon atoms in each group, and Z^- is a pharmacologically acceptable anion, said group



being substituted at the 21-position of said steroid molecule.

3,005,837

2 α -METHYL-21-HALO-11-OXYGENATED 4-PREGNE-3,20-DIONES AND THE INTERMEDIATES IN THE PREPARATION THEREOF

Frank H. Lincoln, Jr., Kalamazoo, and William P. Schneider, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed Sept. 23, 1957, Ser. No. 685,375
7 Claims. (Cl. 260-397.45)

1. 2 α -methyl-9 α -halo-21-fluoro-11 β ,17 α -dihydroxy-4-pregnene-3,20-dione.
4. 2 α -methyl-11 β ,17 α ,21-trihydroxy-4-pregnene-3,20-dione 21-methanesulfonate.

3,005,838

6 α ,16 α -DIMETHYL-11-OXYGENATED-17 α -HYDROXY-UNSATURATED-PREGNANE-3,20-DIONES

Frank H. Lincoln, Kalamazoo, William P. Schneider, Kalamazoo Township, Kalamazoo County, and George B. Spero, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed Sept. 15, 1958, Ser. No. 760,849
1 Claim. (Cl. 260-397.45)

6 α ,16 α -dimethyl-9 α -fluoro-11 β ,17 α -dihydroxy-1,4-pregnadiene-3,20-dione.

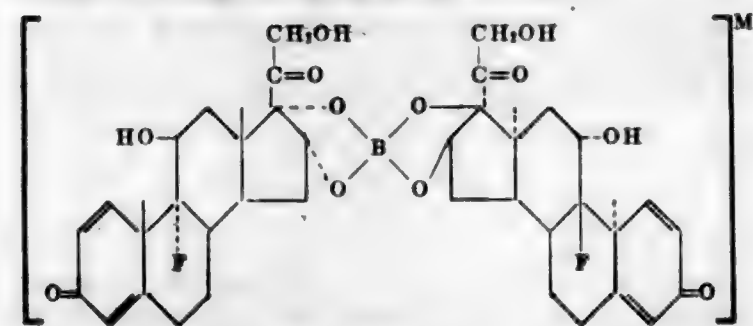
3,005,839

PROCESS FOR THE PURIFICATION OF CIS-16,17-DIHYDROXY STEROIDS

Lewis Joseph Leeson, Park Ridge, Siegfried Arthur Muller, Closter, and George Madison Sieger, East Paterson, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Jan. 21, 1959, Ser. No. 788,037
12 Claims. (Cl. 260-397.45)

1. A process for the separation and purification of 9 α -fluoro-16 α -hydroxyprednisolone which comprises adding said compound to a solution containing boric acid and an alkali metal carbonate, filtering off any solids, acidifying to a pH below about two, removing the precipitate and recovering the purified product therefrom.

11. The compound having the formula:



in which M is an alkali metal ion.

3,005,840 METHOD OF PREPARING MONOMERIC CYCLIC UNSATURATED ACIDS

Robert E. Beal, Elmwood, Ill., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Aug. 23, 1960, Ser. No. 51,472
3 Claims. (Cl. 260-413)

- (Granted under Title 35, U.S. Code (1952), sec. 266)
1. A method for preparing monomeric cyclic unsaturated acids comprising heating, at a temperature of about from 150° C. to 300° C., a member selected from the group consisting of polyunsaturated vegetable oils containing linolenic acid and the mixed free fatty acids thereof with excess alkali in an inert solvent and an inert atmosphere containing ethylene under pressure of at least about 45 p.s.i.

3,005,841

BROMINE-CONTAINING ORGANO PHOSPHATE

Milton Silverman, Modesto, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 23, 1960, Ser. No. 30,757
2 Claims. (Cl. 260-461)

1. Methyl 2,3-dibromo-3-(dimethoxyphosphinyloxy)butyrate.

3,005,842

AMINO ACID CONTAINING A CYCLOBUTANE RING AND METHOD OF PREPARATION

Glen W. Hedrick, Lake City, Fla., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application May 6, 1957, Ser. No. 657,458. Divided and this application Jan. 27, 1959, Ser. No. 791,511
1 Claim. (Cl. 260-468)

- (Granted under Title 35, U.S. Code (1952), sec. 266)
- The n-octyl ester of 3-amino-2,2-dimethyl cyclobutaneacetic acid.

3,005,843

O-CARBAZYL-DL-SERINE

William Shive and Charles Gordon Skinner, Jr., Austin, Tex.
No Drawing. Filed Dec. 15, 1959, Ser. No. 859,581
3 Claims. (Cl. 260-482)

1. A compound selected from the group consisting of O-carbazyl-DL-serine and its formaldehyde and benzaldehyde hydrazone derivatives.

3,005,844

HYDRAZONIUM SALT OF N-CARBOBENZOXO-DL-SERINE

William Shive and Charles Gordon Skinner, Jr., Austin, Tex.
No Drawing. Filed Dec. 15, 1959, Ser. No. 859,584
1 Claim. (Cl. 260-482)

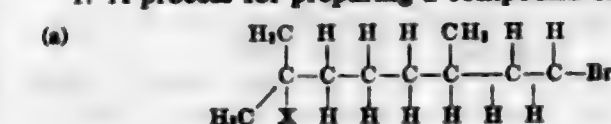
The hydrazone salt of N-carbobenzoxo-DL-serine.

3,005,845

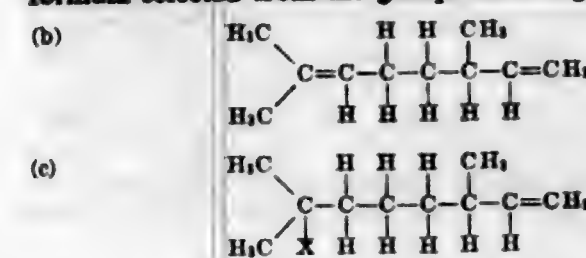
PROCESS INVOLVING THE ADDITION OF HYDROGEN BROMIDE TO 2,6-DIMETHYL-2,7-OCTADIENE, PRODUCTS THEREFROM AND PROCESS OF PRODUCING ESTERS

Joseph P. Bain, Jacksonville, Fla., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 16, 1959, Ser. No. 805,363
21 Claims. (Cl. 260-489)

1. A process for preparing a compound of the formula



which essentially comprises treating a compound of the formula selected from the group consisting of

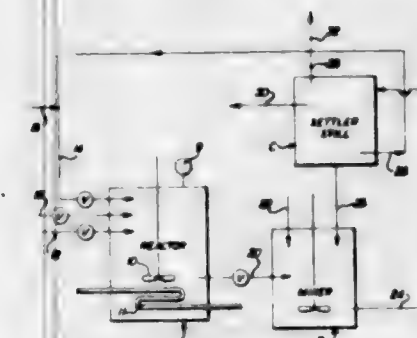


Where X in the Formula a and c is selected from the group consisting of bromine and chlorine, with substantially anhydrous hydrogen bromide, said treatment consisting of adding about two moles of hydrogen bromide to one mole of the compound of Formula b and about one mole of hydrogen bromide per mole of the compound of Formula c, said addition being conducted in the presence of a peroxide catalyst.

3,005,846

PRODUCTION OF ACIDS AND ESTERS

Bernard S. Friedman, Chicago, and Sherwood M. Cotton, Harvey, Ill., assignors to Sinclair Refining Company
Filed Apr. 6, 1959, Ser. No. 804,387
11 Claims. (Cl. 260-497)



1. A method which comprises reacting monoolefin and carbon monoxide in the presence of an HF mixture containing at least about two moles of hydrogen fluoride per mole of monoolefin at a temperature of about 10 to 200° F. and a pressure sufficient to maintain the liquid phase, said HF mixture also containing an agent selected from the group consisting of about 5 to 30% water and about 2 to 25 mole percent monohydric alcohol, contacting the product of this reaction with an agent selected from the group consisting of monohydric alcohol and water, separating a mixture of HF and said agent and recycling this mixture to the carbon monoxide reaction, said agents being selected consistently, and recovering an ester when monohydric alcohol is selected and an organic acid when water is selected.

3,005,847

AMINE SULFONATES

Ulric B. Bray, Pasadena, Calif., assignor to Bray Oil Company, Los Angeles, Calif., a limited partnership of California
No Drawing. Filed Apr. 17, 1956, Ser. No. 578,593
10 Claims. (Cl. 260-501)

1. The process of making amine sulfonates of mahogany acids substantially free of sulfates which comprises sulfonating a hydrocarbon lubricating oil and converting the resulting preferentially oil soluble sulfonic acids to an alkaline earth metal sulfonate, converting said alkaline earth metal sulfonate to an amine sulfonate by the simultaneous action of carbon dioxide, water and an amine on a solution of said alkaline earth metal sulfonate thereby converting the alkaline earth metal content of said sulfonate to carbonate, separating insoluble alkaline earth metal carbonate from the reaction mixture and recovering the amine sulfonate from the solution.

771 O.G.—70

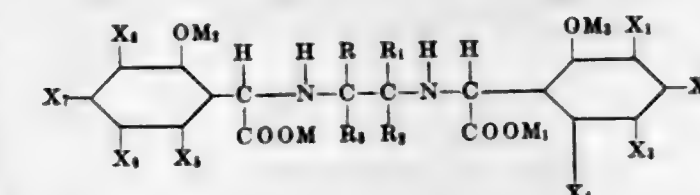
3,005,848

ETHYLENEDIAMINE DERIVATIVES CONTAINING AROMATIC RINGS

Martin Kneil, Yorktown Heights, N.Y., and Harry Kroll, Warwick, R.I., assignors to Galzy Chemical Corporation, a corporation of Delaware

No Drawing. Filed Sept. 9, 1957, Ser. No. 682,580
9 Claims. (Cl. 260-519)

1. A substance having the indicated general formula.



trons therefrom, means for accelerating said electrons and forming said electrons into a beam, said cathode being in a chamber which is isolated from said furnace chamber by at least one wall containing an aperture, means for evacuating said cathode chamber to a lower pressure than the furnace chamber to provide a low pressure zone, a magnetic focusing means creating a magnetic focusing field arranged to direct said electron beam from said low pressure zone through said aperture to the higher pressure zone, said magnetic field providing direction of said beam towards said cold mold with a force which is essentially free of voltage gradient and thus preventing electrical discharges despite the existence of an elec-

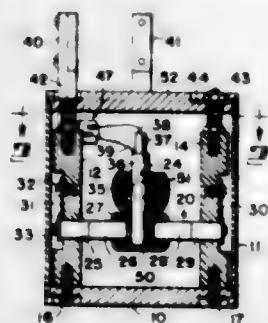


trical-discharge-supporting pressure with a high degree of ion formation in the path of the beam adjacent said mold, the distance between the nearest aperture through which the electron beam passes and the upper edge of the cold mold being substantially greater than the diameter of the cold mold to provide a large unobstructed volume for escape of gases from metal being melted in the cold mold, means for moving metal to be melted into position to be contacted by said electron beam within said cold mold, said vacuum pumping means associated with said cathode chamber having a sufficient pumping capacity to maintain said cathode chamber at a pressure less than .1 micron Hg abs. despite gases leaking through said aperture into the cathode chamber.

3,005,860

THERMOELECTRIC GENERATOR

George Bruck, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 50,973
1 Claim. (Cl. 136-4)



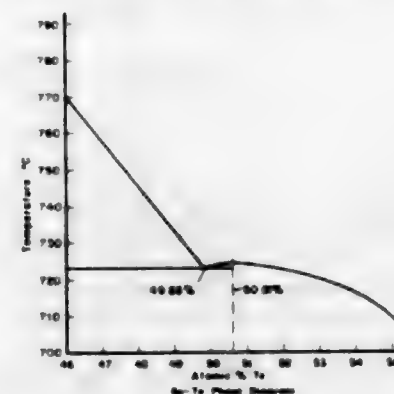
A thermoelectric generator comprising: a heat sink formed as a supporting base; a cylindrical metallic housing secured in upright relation to the heat sink; a first pair of metallic uprights mounted on the base member and disposed in diametric opposition to each other; a second pair of metallic uprights mounted on the base member and disposed in diametric opposition to each other, said second pair being angularly displaced from

the first pair of uprights by ninety degrees; a first metallic sleeve disposed in concentric relation to the uprights; a second metallic sleeve disposed in concentric relation to the uprights and vertically displaced from the first sleeve; a first series pair of metallic elements between the first sleeve and one of the first pair of uprights; a second pair of metallic elements between the first sleeve and the other one of said first pair of uprights; a third pair of metallic elements between the second sleeve and the first one of said second pair of uprights; a fourth pair of metallic elements between the second sleeve and the other of said second pair of uprights, each series arrangement of sleeve and pair of metallic elements and upright comprising materials forming a hot thermal junction adjacent the sleeve and a cold thermal junction adjacent the upright; a first ceramic thimble embracing the hot junctions adjacent the first sleeve; a second ceramic thimble embracing the hot junctions adjacent the second sleeve; an electrical heater element common to all of the hot junctions and projecting through both of said sleeves; individual end terminals connected to one upright of each pair of uprights and an electrical connection between the remaining uprights to provide a series arrangement of all of said junctions; and leaf springs individual to each pair of metallic elements and the associated uprights for biasing the associated pair of metallic elements into a secure position.

3,005,861

THERMOELEMENTS AND THERMOELECTRIC DEVICES EMBODYING THE SAME

William A. Tiller and James P. McHugh, Wilkensburg, and Robert H. Moss, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 10, 1959, Ser. No. 839,167
7 Claims. (Cl. 136-5)



1. A thermoelectric material having exceptionally good physical properties comprised essentially of a body of a fine two phase crystal structure composed of germanium telluride and having substantially the formula



the first phase being comprised of from 1 to 2 atomic percent of germanium and the second phase comprising from 99 to 98 atomic percent of germanium telluride having the approximate formula $\text{Ge}_{98.95}\text{Te}_{0.05}$.

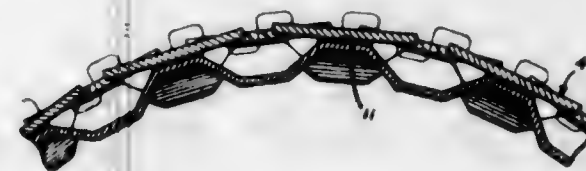
3,005,862

SOLAR BATTERY MOUNTING MEANS

Charles A. Escoffery, Los Angeles, Calif., assignor to International Rectifier Corporation, El Segundo, Calif., a corporation of California
Filed Sept. 15, 1958, Ser. No. 761,051
7 Claims. (Cl. 136-89)

1. In combination, a panel and a plurality of solar cells, said panel comprising a core sheet member of rigid sheet material provided with a plurality of hollow polyhedral indentations extending in opposite directions from a medial position of said sheet member, said indentations com-

prising one group of similarly oriented congruent indentations having polygonal outer wall portions located in uniformly spaced relation to and at one side of such medial position, and a second group of similarly oriented congruent indentations having polygonal outer wall portions located in uniformly spaced relation to and at the

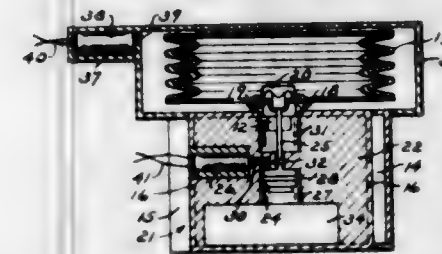


other side of said medial position, each indentation having a plurality of inclined substantially planar side wall portions extending divergently from the respective sides of its outer wall portion to said medial position, and means attaching said cells individually to individual nodes of one of said groups, the area of each cell being greater than the area of its respective node.

3,005,863

DEFERRED ACTION BATTERY

James Kermit Floyd, Euclid, and Carl F. Oestermeyer, Shaker Heights, Ohio, assignors to The Electric Storage Battery Company, a corporation of New Jersey
Filed Sept. 12, 1958, Ser. No. 760,603
11 Claims. (Cl. 136-90)

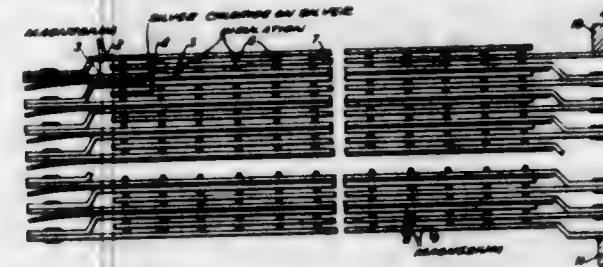


1. A deferred action battery comprising, in combination, a battery casing having at least one cell compartment, an electrolyte reservoir comprising collapsible bellows connected to said battery casing, said reservoir being separated from said battery casing by a rupturable diaphragm, knife means sealed in said reservoir for rupturing said diaphragm, electric squib operating means in said battery casing for drawing said knife through said diaphragm and into said battery casing, and means for forcing said electrolyte into said casing.

3,005,864

SEA WATER BATTERY

Duncan T. Sharpe, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 29, 1945, Ser. No. 585,415
9 Claims. (Cl. 136-100)



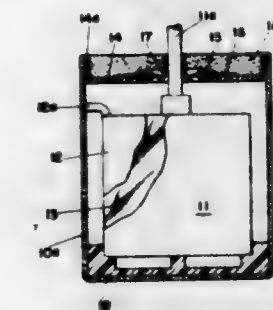
1. A battery electrode assembly adapted to function as an electric battery, when immersed in an electrolyte, comprising a plurality of elements each made up of three substantially flexible sheets of substantially the same shape, each having two substantially parallel straight edges, two of the sheets being formed of a material adapt-

ed to function as one electrode of a cell and being fastened together along one of said edges, the third sheet being formed of an electrochemically dissimilar material adapted to form the opposite electrode of a cell and being fastened along one of its edges to the edge of one of said first-mentioned sheets which is opposite to the edge at which it is fastened to the other of said first-mentioned sheets, said elements being assembled so that the sheet of each element which is unlike the other two sheets is sandwiched between but spaced from the two like sheets of the next succeeding element.

3,005,865

SEALING ASSEMBLY FOR BATTERIES

Erik Jönsson, Fallebo, Oskarshamn, Sweden, assignor to Svenska Akkumulator Aktiebolaget Jungner, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 4, 1959, Ser. No. 797,114
Claims priority, application Sweden Mar. 8, 1958
1 Claim. (Cl. 136-136)



The combination with an electric battery having a metal casing through an opening in one wall of which casing extends a battery terminal post, of a sealing assembly insulating said post from said casing and hermetically sealing said opening comprising at least two annular metallic elements disposed in coaxial relationship with each other and with said post and extending radially one from the other outwardly from said post, said elements having their adjacent peripheries glass-bonded together, one of said elements having at its inner periphery a sealing area bonded to said post and the other of said elements having a sealing area at its outer periphery bonded to said casing, said one of said elements consisting of a yieldable diaphragm which has a structural configuration in an annular region intermediate its said glass-bonded periphery and said post to provide movement in said region preferential to movement in the remaining regions of said one annular element, said movement in said region being in a direction axially of said post for minimizing the magnitude of forces developed at said sealing areas as the result of shocks applied to the battery of magnitudes which produce relative movement.

3,005,866

MEANS FOR CONNECTING OVERHEAD HIGH TENSION ELECTRICAL CABLES TO THE INSULATORS OF TRANSMISSION TOWERS

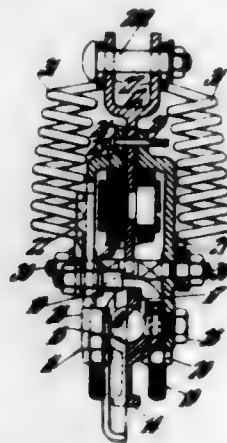
Hugh Fraser and William Gordon Cantlay, both of 3 Blairbeth Terrace, Burnside, by Rutherglen, Scotland

Filed Jan. 6, 1960, Ser. No. 774

Claims priority, application Great Britain Apr. 27, 1959
4 Claims. (Cl. 174-45)

1. A suspension unit for suspending an overhead high tension cable from an insulator pivotally suspended from a tower comprising an upper part for pivotal connection to the insulator, a lower part having clamping means by which a cable can be secured thereto, one of said parts having at least one roller and the other part having a track on which the roller bears whereby the lower part is supported by the upper part when said parts are in their

assembled positions, a shear pin extending through both parts whereby the two parts are normally retained in their assembled positions, said shear pin being such that it shears when the unit pivots about its pivotal support to a predetermined extent, as will occur when the cable on one side of the clamping device breaks, and thus permits the lower part together with the clamping means to move



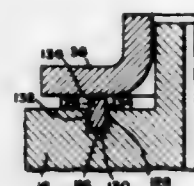
relative to the upper part so that the roller clears its track whereon the lower part together with the clamping means is permitted to drop, and at least one coil of ductile metal connecting the lower part to the upper part, which coil when the lower part drops extends and thereby restricts the drop, the insulator and extended coil then forming a continuation of the unbroken cable and reducing the shock on the tower supporting the unbroken cable.

3,005,867

HERMETICALLY SEALED SEMICONDUCTOR DEVICES

William B. Green, Greensburg, and Jean R. Fortier, Irwin, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 30, 1959, Ser. No. 849,788
6 Claims. (Cl. 174-50.54)



1. A sealed electrical device comprising a good thermally conductive support member having a peripheral flange having an upper surface, the support member being a metal selected from the group consisting of copper, copper base alloys, silver, silver base alloys, and aluminum and aluminum base alloys; a heat sensitive electrical component mounted on one surface of the support member disposed within the periphery thereof so that heat may be dissipated to the support member, the electrical component being adversely affected by heating to a temperature above a predetermined level; a ferrous base metal ring member hermetically mounted on the upper surface of the peripheral flange of the support member, the ring member having a narrow circular projection extending above the upper surface of the flange; a header element containing an insulating segment and an electrical conductor passing through the insulating segment, the header element having a laterally extending ferrous base metal flange adapted to fit against the circular ring member, the laterally extending ferrous base metal flange being welded to the circular ring member to cooperate with the support member to provide a

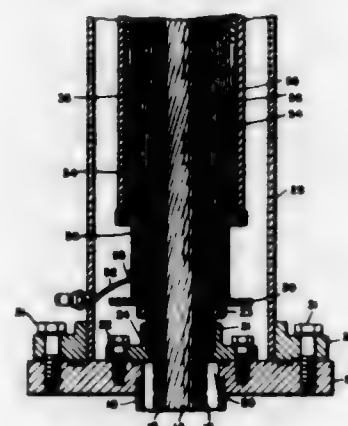
hermetic enclosure for the electrical component between the header member and the support member, the amount of heat developed during the welding of the ferrous flange to the narrow projection of the ferrous circular ring member being so small that the temperature of the electrical component does not reach the predetermined level which adversely affects the electrical component.

3,005,868

STRESS DISTRIBUTION IN TERMINATING DEVICES AND JOINTS FOR HIGH VOLTAGE CABLES AND METHOD FOR PRODUCING SAME

Sven O. Linderholm, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey

Filed June 2, 1958, Ser. No. 739,151
19 Claims. (Cl. 174-73)



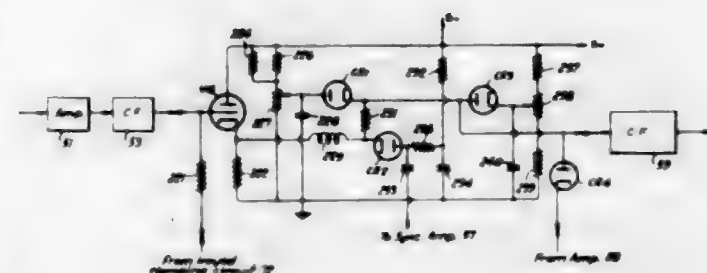
8. A build-up tube for use with a high voltage cable constituted by a preformed cylindrical winding of sheet insulating material which is continuous from one edge thereof to the other and a foil of conducting material coextensive with the insulating material throughout a substantial part of the turns thereof, one end of the tube being perpendicular to the axis of the tube, the inner edge of the foil being disposed progressively more distant from said one end of the tube according to a predetermined function of the turns of the winding to constitute a ground surface having a predetermined change of radial distance from the conductor of the cable with respect to distance along the cable, all for subsequent winding on the insulation of the cable to constitute an insulated portion of increased diameter therefor.

3,005,869

CIRCUIT FOR CLIPPING AND REINSERTING REFORMED SYNC PULSES IN COMPOSITE VIDEO SIGNAL

Ray M. Dolby, Cupertino, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Jan. 28, 1957, Ser. No. 636,536
4 Claims. (Cl. 178-7.1)



4. A circuit for clipping and blanking a composite video signal having a video signal component and a synchro-

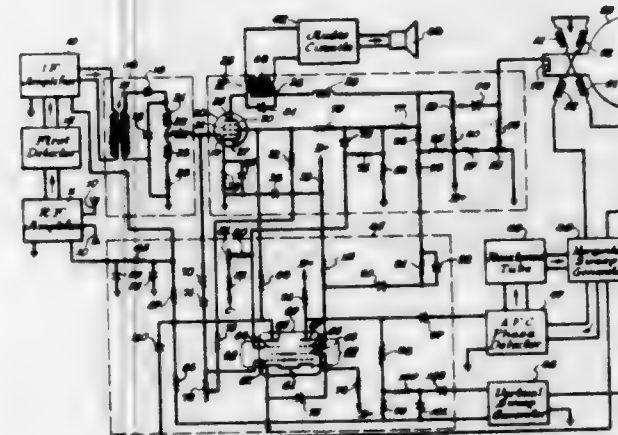
nizing signal component comprising: means for deriving said composite video signal; a first diode having its cathode coupled to said composite signal deriving means; a second diode having its anode coupled to said composite signal deriving means; direct current biasing means coupled to the anode of said first diode and to the cathode of said second diode for maintaining precise clipping levels for signals applied to said diodes; means including a rectifying device for providing blanking signals coupled to said cathode of said first diode and to said anode of said second diode at a junction terminal; and a utilization load coupled between said junction terminal and said rectifying device so that a modified composite video signal having noise-free blanking pedestals appears at said load.

3,005,870

TELEVISION RECEIVER

Donald W. Ruby, Maywood, and Walter J. Stroh, Barrington, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware

Filed Oct. 30, 1957, Ser. No. 693,364
1 Claim. (Cl. 178-7.3)



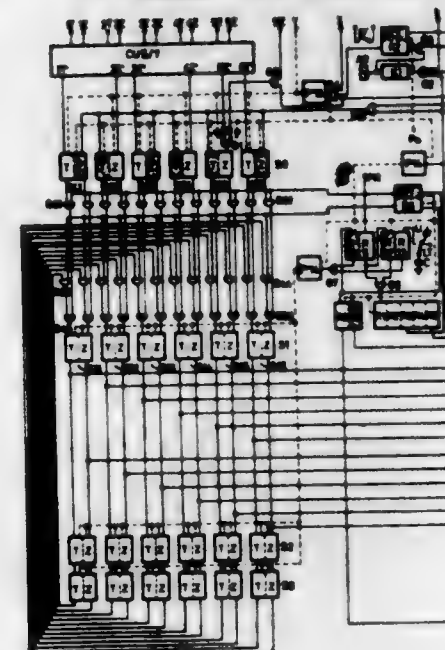
A television receiver comprising: a horizontal-frequency scanning signal generator for generating a scanning signal including periodic scanning pulses; a detector for developing a negative-polarity composite video signal; a video amplifier including screen, output and control electrodes and having said control electrode D.C. coupled to said detector for generating a positive-polarity composite video signal; a gain-control system including a cathode, a noise gate electrode, an additional control electrode and an anode arranged in the recited order; a time gating circuit coupling said scanning signal generator to said gain-control system for conditioning said system to conduct in time coincidence with said scanning pulses; coupling means for applying said negative-polarity and said positive-polarity composite video signals in time coincidence to said noise gate and additional control electrodes of said gain-control system, respectively; integrating circuit means connected to said gain-control anode for developing a gain-control potential representative of the average amplitude of the synchronizing signal components of the composite video signal; a bleeder network, including a source of positive potential and a screen dropping resistor, connected to said screen electrode of said video amplifier and having such a low value of bleeder current that potential variations of said screen dropping resistor are determined primarily by the flow of screen current in said video amplifier; and a biasing circuit including a low-pass filter interconnecting said screen dropping resistor and said noise gate electrode of said gain-control system for applying to said noise gate electrode a positive biasing potential which changes with variations in average amplitude of said positive-polarity composite video signal.

3,005,871

TELEPRINTER SIGNAL TRANSMISSION APPARATUS

Hans Rudolph, Munich-Solln, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a German company

Filed Mar. 17, 1959, Ser. No. 799,910
Claims priority, application Germany Mar. 21, 1958
11 Claims. (Cl. 178-26)



1. Teleprinter signal transmission apparatus comprising a code converter for translating teleprinter signals from a first code to a second code, a pulse distributor, a first storage device controlled by the output of the code converter, a second storage device, normally operative means for passing the character transferred to the first storage device also to the second storage device, at least two further storage devices, means responsive to pulses from the pulse distributor for transferring characters sequentially from the second storage device to successive ones of the further storage devices, normally inoperative means for transferring the character stored in the last storage device to the second storage device, a reading device for reading out the pulse combination of the character stored in the second storage device in time sequence, and means responsive to the receipt of a repetition-request signal for making said normally operative means inoperative and said normally inoperative means operative so that the reading device reads out in succession the characters passed to the second storage device from the last storage device.

3,005,872

MEANS FOR DECODING SIGNALS TELEGRAPHED IN BINARY CODE AND FOR CONTROLLING TELEPRINTERS

Oskar Vierling, Pretzfelder Strasse 174,

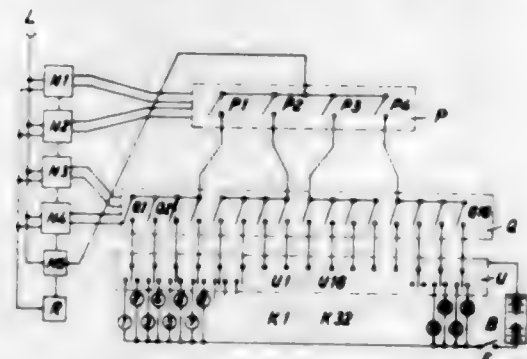
Ebermannstadt, Germany

Filed Sept. 28, 1959, Ser. No. 842,988

Claims priority, application Germany Sept. 30, 1958
6 Claims. (Cl. 178-33)

1. An arrangement for translating binary-coded telegraph signals in the form of n -digit impulse-element combinations, which are composed of n successive individual impulses of positive or negative potential, particularly an arrangement for the control of teleprinter receivers, characterized by a counting chain connected to the feeding conductor for the impulse-element combinations to be translated, with counting-chain links each containing two bi-stable semi-conductive elements, one of which is controllable into a conductive condition by a positive impulse and the other by a negative impulse, each counting-chain link also containing a first outlet conductor which is in-

fluenced by the controlling electrodes of the two semi-conductive elements, and comprises two second outlets which are each influenced by only one semi-conductive element, by controllable impulse gates controlled from time to time by the voltage between a first outlet electrode of the counting-chain link to be controlled and a first outlet electrode of the preceding counting-chain link, so that the counting-chain links are switched over individually and successively, and further characterised by the feature that in the branching circuit, one outlet in each case of an element located in one group of switches is connected with the inputs of $2m$ elements of the following switch group, (m being a small integer) that each element has m inputs, that the inputs of all the elements of one switch group are connected with the $2m$ second



outlet conductors of m successive counting-chain links, in such a way that each of the m inputs of an element are connected with one of the associated counting-chain links, that the inputs of the individual links of one group of switches are connected in a manner different from one another with the $2m$ second outlet conductors of the m counting-chain links, and that the first outlet of the last counting-chain link is connected with a switching element for the purpose of controlling the latter, which is arranged between the input conductor of the signals and the inputs of the first group of switches, so that this switching element becomes conductive when the last counting-chain link is actuated, and that a device known in itself is provided which restores the arrangement into the initial position after the translation of an impulse-element combination.

3,005,873

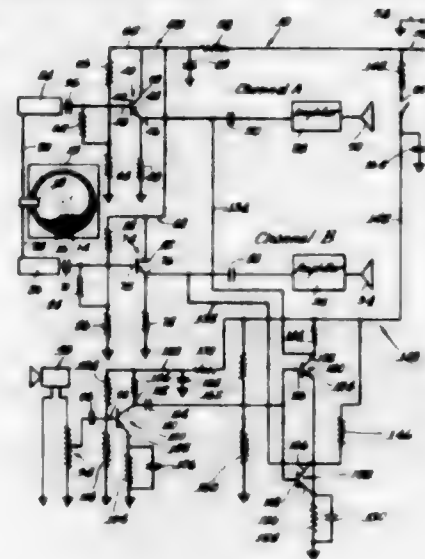
STEREOPHONIC BACKGROUND MUSIC AND PUBLIC ADDRESS SYSTEM

Ralph H. Janowsky, Lockport, N.Y., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio

Filed Feb. 1, 1960, Ser. No. 5,701
9 Claims. (Cl. 179-1)

1. A stereophonic background music and public address system comprising, in combination, two complementary sources of electrical signals for stereophonic sound, two electronic switches having inputs continuously coupled to said respective sound signal sources, two amplifiers continuously coupled to the outputs of said respective electronic switches, two loud-speakers driven by said respective amplifiers, first power circuit connected to energize both of said electronic switches to activate the latter, a normally inactive third electronic switch having an output coupled to the inputs of both said amplifiers, a microphone continuously coupled to the input of said third electronic switch, a normally inactive second power circuit connected to energize said third electronic switch to activate the latter, control switch means coacting with said second power circuit to controllably energize the latter, reactance means coacting with said second power circuit to effect a gradual energization and a gradual de-energization of the latter in response to operation of said control switch means, and means coupling said second

power circuit to both of said first mentioned electronic switches to suppress operation of the latter as an incident to energization of said second power circuit whereby a progressive energization of said second power circuit effects a progressive suppression of the acoustical reproduction of sound signals from said two sources and a



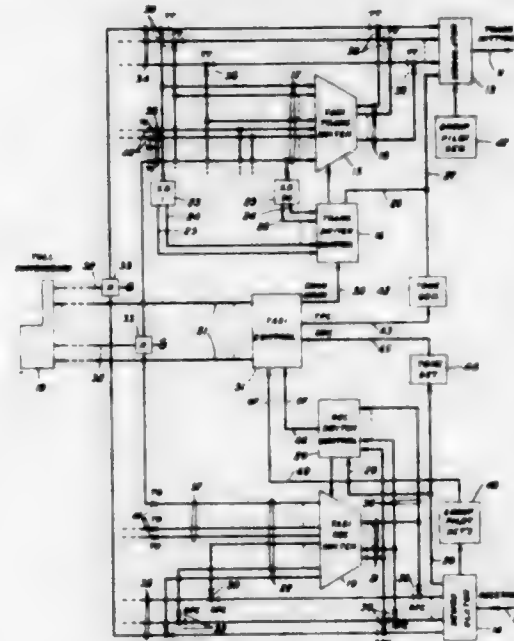
progressively increased acoustical reproduction of sound signals from said microphone and a progressive de-energization of said second power circuit effects a progressive ceasing of the acoustical reproduction of microphone sound signals and a progressive renewal of the acoustical reproduction of sound signals from said sources.

3,005,874

LINE SWITCHING AND CONTROL SYSTEM

Richard J. Jaeger, Jr., West Hempstead, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 4, 1959, Ser. No. 810,859
16 Claims. (Cl. 179-15)



1. A line control circuit for a time assignment speech interpolation system wherein active ones of a plurality of telephone trunks are connected to idle ones of a lesser plurality of transmission channels on a time division basis, said line control circuit comprising first means for registering the number of failed channels, a normally balanced bridge circuit, means responsive to said first registering means for inserting a first impedance in one arm of said bridge circuit proportional to the number of failed channels, means for detecting balance in said bridge

circuit, means responsive to said balance detecting means for adjusting the number of operative trunks, second means for registering the number of operative trunks, and means responsive to said second registering means for inserting a second impedance in another arm of said bridge circuit proportional to the number of inoperative trunks.

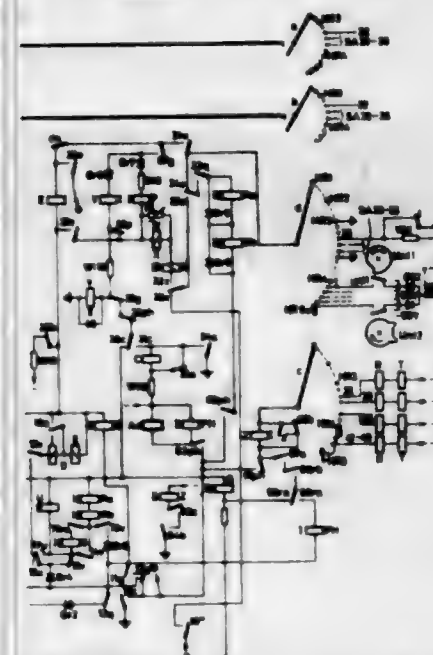
3,005,875

MOTOR-OPERATED ROTARY CONNECTOR FOR EXTENDING CALLS TO DIFFERENT CLASSES OF SUBSCRIBER STATIONS

Alfred Scheunert, Munich-Solln, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed May 27, 1959, Ser. No. 816,229

Claims priority, application Germany June 3, 1958
6 Claims. (Cl. 179-18)



1. A motor-operated rotary connector having access to individual subscriber stations and to private branch exchange stations and to party line stations, comprising an auxiliary wiper and bank contacts cooperatively associated therewith for controlling diverse switching operations in the extension of calls, a control relay, circuit means including said auxiliary wiper and said bank contacts and said control relay for effecting discriminating identification of said party line stations and said other stations, said discriminating identification of stations of different service classes being effected in said auxiliary contact bank according to groups, comprising group contacts disposed in said auxiliary contact bank ahead of the bank contacts of the respective groups, means for connecting different predetermined potentials to said group contacts to effect pretesting by the auxiliary wiper cooperatively associated with said auxiliary bank contacts, and circuit means controlled by said relay for respectively effecting immediate transmission of the first ringing signal to individual subscriber stations and to private branch exchange stations after completion of the corresponding selection operations and for securing transmission of complete code ringing to desired party line stations responsive to completion of the selection operations involving party line stations.

3,005,876

TELEPHONE SWITCHING CIRCUIT

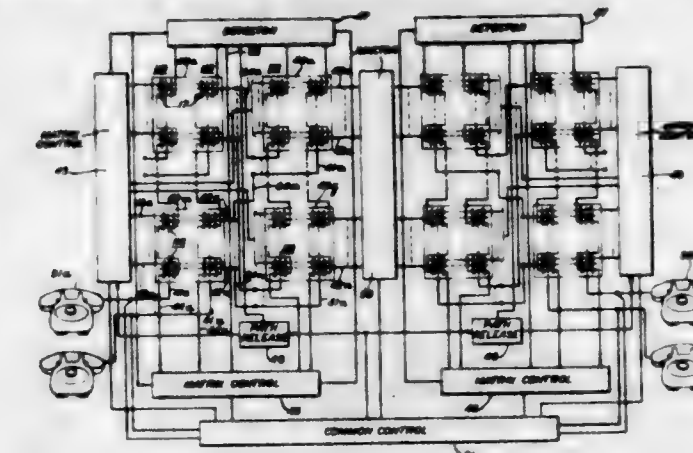
Raymond W. Ketchledge, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 4, 1959, Ser. No. 857,283

16 Claims. (Cl. 179-18)

1. A switching network for providing connections between first and second pluralities of telephone lines com-

prising a plurality of switches, means for controlling said switches comprising magnetic members of a material exhibiting a plurality of stable remanent magnetization states, means for applying particular signals to said switches to reverse the remanent magnetization state of



an operated switch, means for generating a readout signal upon said reversal, and means for detecting said readout signal and for applying signals to said operated switch to restore said reversed magnetization state before the contact condition of said switch changes.

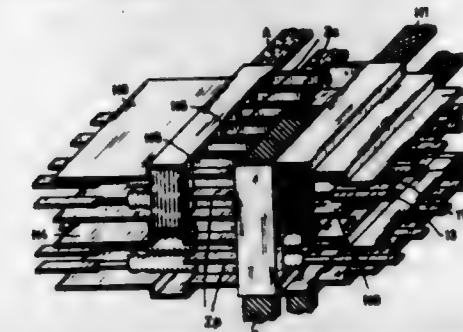
3,005,877

COORDINATE SWITCH

Rudolf Nitsch, Munich, Germany, assignor to Siemens und Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed Apr. 2, 1958, Ser. No. 726,006

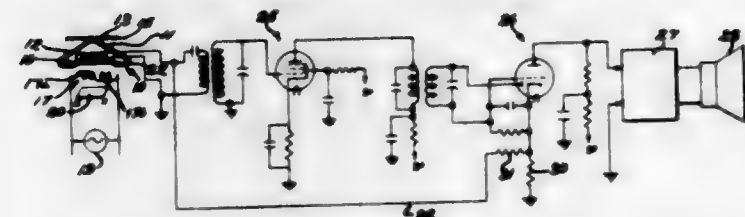
Claims priority, application Germany Apr. 5, 1957
15 Claims. (Cl. 179-27.54)



1. A coordinate switch for use in a signalling system, said switch having a plurality of similarly disposed contact sets transversely aligned in two coordinate directions, each contact set comprising a plurality of tube-protected contacts with the ends of the corresponding contact springs extending outwardly, and having a first actuating coil embracing a plurality of contact sets aligned in one coordinate direction and a second actuating coil disposed in crossing relationship with respect to said first coil and embracing a plurality of contact sets aligned in the other coordinate direction, and including a holding coil common to the contact sets embraced by one of said actuating coils, and further having a magnetic shunt containing an iron path formed by rectangularly abutting metallic strips which enclose the contact set disposed at the crossing point of said first and said second actuating coils, said iron path being operative to effect magnetic coupling with respect to said outwardly extending ends of the contact springs of the corresponding contact set, the metallic strips forming said iron path in the vicinity of said holding coil extending with respect to the correspondingly placed outwardly extending ends of said contact springs so as to effect responsive to energization of said holding coil solely magnetic coupling of said correspondingly placed ends of said contact springs and thus avoiding magnetically affecting neighboring contact springs operatively associated with other holding coils.

3,005,578 FEEDBACK FOR A FLUX GATE REPRODUCING SYSTEM

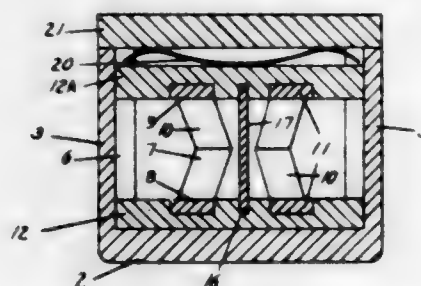
David E. Wiegand, Villa Park, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed Aug. 16, 1955, Ser. No. 528,696
11 Claims. (Cl. 179-100.2)



1. A magnetic playback system comprising a magnetic core having a non-magnetic gap for receiving a magnetic record medium, means for establishing a rapidly fluctuating exciting flux in said core, output means inductively coupled to said core for deriving an amplitude modulated output signal from said core dependent upon the signal flux recorded on the portion of the record medium at said gap, detector means connected to said output means for demodulating said output signal, and means connected to said detector means for establishing a feedback flux in said core of amplitude dependent upon the amplitude of said output signal.

3,005,579 BINAURAL MAGNETIC PICKUP HEADS

William D. Moshering, Box 105, Vermontville, Mich.
Filed Mar. 31, 1958, Ser. No. 725,226
14 Claims. (Cl. 179-100.2)



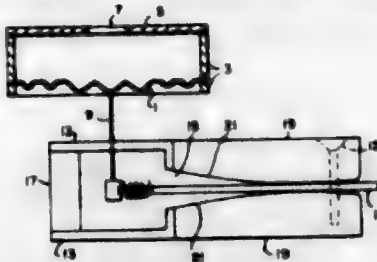
8. A magnetic pickup head comprising a U-shaped core piece, a support bar having a notch therein receiving and locating said core piece, the ends of the arms of said core piece being finished to a common plane, a second core piece secured in transversely extending relation to a second support bar and having its ends finished to a common plane, a U-shaped housing having upright internal slots formed in the side walls thereof adjacent the end of the housing, said support bars having their ends received and located in said slots with the ends of the core pieces in opposed coplanar relation, a cover secured over the top of said housing, means compressed between said cover and said second support bar and holding said core pieces in abutment, and a coil disposed around the base of one of said core pieces, the interior of said housing being filled with a plastic material solidified in situ in said housing and around said core pieces and said coil.

3,005,590 NON-LINEAR TRANSDUCER ARMATURE

Elvin D. Simshauser, Merchantville, N.J., assignor to the United States of America as represented by the Secretary of the Air Force
Filed May 6, 1960, Ser. No. 27,463
5 Claims. (Cl. 179-114)

1. An electromechanical transducer for a sound-powered telephone device comprising a magnet, a pair of pole pieces secured to and directed inwardly from the

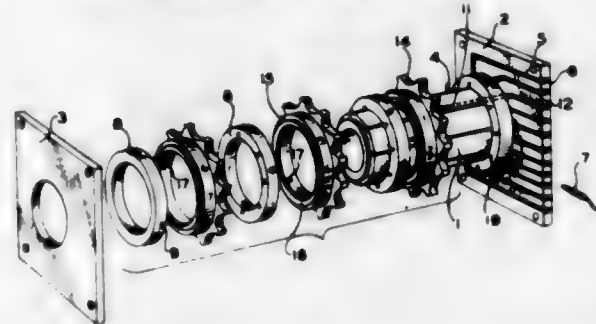
ends of said magnet, a pair of curved elongated spacer blocks secured to said pole pieces, and a reed armature clamped between said spacer blocks at the end farthest from said pole pieces and extending unsupported there-



from between the remaining portion of the said curved spacer blocks and said pole pieces, so that as the said armature bends away from center its unsupported length between the said spacer blocks decreases and stiffness increases.

3,005,581 ROTARY ELECTRIC SWITCH

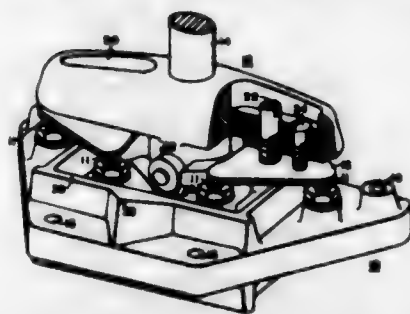
Orval T. Ellsworth, Long Beach, Calif.
(11742 Braddock Drive, Culver City, Calif.)
Filed Nov. 28, 1960, Ser. No. 71,980
8 Claims. (Cl. 200-11)



1. A rotary electric switch comprising a stationary shaft, supporting means in which the shaft is mounted, a plurality of circumferentially spaced bus bar conduits on the outside surface of said shaft, a stationary ring mounted on the shaft, an annular contact on one vertical face of the stationary ring, conductor means extending to the annular contact, a selector ring journaled on the shaft, a contact finger on said selector ring engageable with any one of said bus bars, and contact means connected to the contact finger and engageable with said annular contact.

3,005,582 SERIES-PARALLEL SWITCH

Guy H. White III, Farrell, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1958, Ser. No. 763,298
5 Claims. (Cl. 200-11)



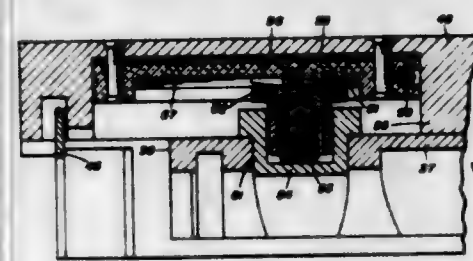
1. In a switch for changing electrical conductors from series to parallel circuit relation, in combination, a terminal block, a plurality of contact members mounted on said block and having surfaces disposed in substantially the same plane, a yoke rotatable about an axis perpen-

dicular to said plane, a pair of generally triangular-shaped plates carried by said yoke and rotatable in the plane of said contact surfaces, additional points on said block in substantially the same plane as said contact surfaces, each of said plates engaging two of said contact members and one of said additional points when the yoke is in the series position, and each plate engaging three contact members when the yoke is in the parallel position.

3,005,583 FIRING CONTROL SWITCH

Benjamin Schlachman, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Original application Mar. 29, 1957, Ser. No. 649,575, now Patent No. 2,901,945, dated Sept. 1, 1959. Divided and this application June 15, 1959, Ser. No. 824,760

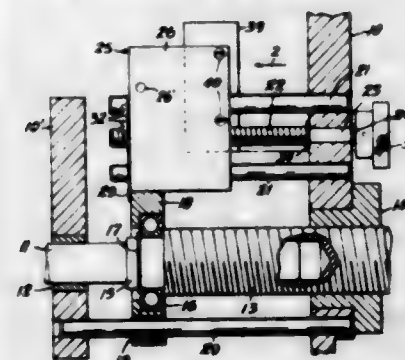
1 Claim. (Cl. 200-16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



Switch means for a gun feed mechanism comprising a flat metal plate having two longitudinally spaced recessed portions therein, each recessed portion having a contact support, each contact support having two spaced longitudinally extended ledges and two spaced metal contacts secured to said support in parallel with said ledges, an insulating fabric between said contact support and said metal plate, said contacts each connected to a wiring conductor, and a contact button for each recessed portion adapted to slide along the ledges of said support onto said spaced metal contacts thereby closing the electrical connection between said spaced metal contacts.

3,005,584 SWITCH DEVICES FOR LEAD SCREW TAPPING UNITS

Asher I. Zagar, Brooklyn, N.Y., assignor to Etico Tool & Machine Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed Sept. 23, 1959, Ser. No. 841,843
10 Claims. (Cl. 200-47)

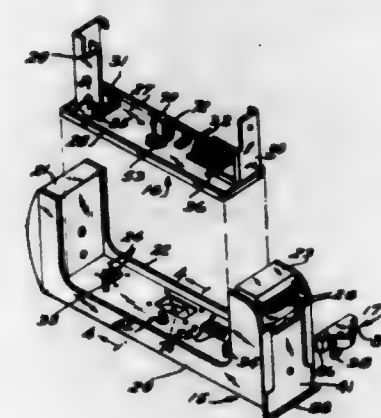


1. In lead screw tapping units employing a driven lead screw supported in the frame of the unit, a switch device controlling movement of the lead screw in at least one direction, said device comprising a block, a screw supported in the frame for adjusting the position of said block longitudinally with respect to said lead screw, means for keying the block against rotation in the frame, a switch supported on the block and including a protruding switch button, a lever pivotally supported on the block in align-

ment with said button, the lever including at one end an extended blade, the other end of the lever overlying said switch button, a switch actuating element supported on the lead screw and in which said lead screw is freely rotatable, means for keying and guiding said element in the frame in movement of the element with said lead screw in the forward and reverse movements of said lead screw, and said blade being disposed in the path of movement of said element for actuation by the element in depressing said button by the second named end of said lever.

3,005,585 SAFETY SWITCH ARRANGEMENTS

Hoel L. Bowditch, Foxboro, and Everett O. Olsen, Wrentham, Mass., assignors to The Foxboro Company, Foxboro, Mass.
Filed Sept. 12, 1958, Ser. No. 760,792
14 Claims. (Cl. 200-50)



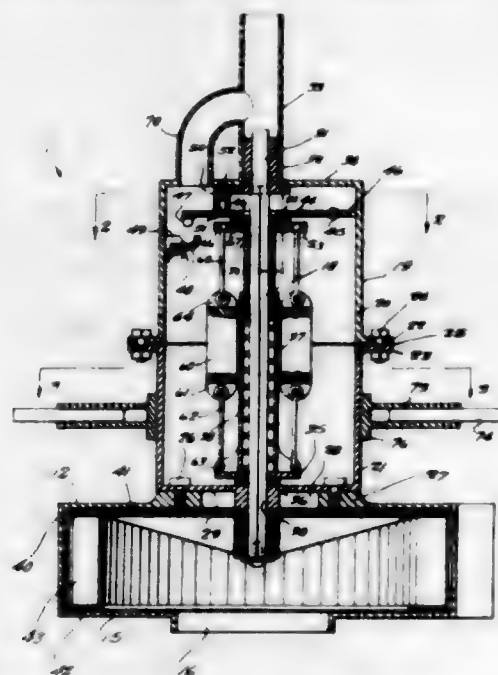
1. Electronic apparatus of the type having separate units with separate electric circuits adapted to be electrically connected by mounting one on the other and a plug for connecting one of the units to a source of electric current, the combination with said apparatus of a disconnect switch in each circuit of each unit, movable members having locking elements for engaging the units and one of the units and plug, respectively, for mechanically locking the units to each other and the plug to one of the units, and means operated by the movement of each of the movable members to locking and unlocking position to control operation of the disconnect switches to disconnect the circuits of all the units when the plug is to be inserted and removed and disconnect the circuit of an individual unit when it is to be mounted on and removed from the other unit.

3,005,586 SWITCH

Ralph N. Yeager, 2808 NW. 45th St., Oklahoma City, Okla.
Filed Dec. 31, 1959, Ser. No. 863,168
2 Claims. (Cl. 200-80)

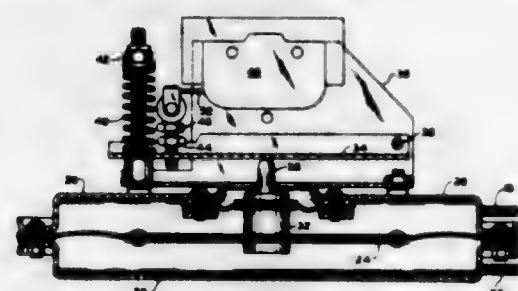
1. A fluid flow-responsive switch device comprising a generally circular housing adapted to be mounted vertically in a fluid flow conduit, said housing having a peripheral fluid inlet opening and a central bottom fluid discharge opening, a vertical squared shaft journaled in said housing, a vane assembly secured to the lower end of said shaft member and being disposed in the fluid flow path between said inlet opening and said discharge opening, whereby to rotate said shaft member responsive to fluid flow, a squared sleeve member slidably and non-rotatably engaged on said shaft member, collar means secured to said shaft member and spaced from said sleeve member, outwardly movable vertically elongated weight members normally disposed externally adjacent to and parallel to said shaft member, link means connecting the opposite ends of said weight members re-

spectively to said sleeve member and said collar means, a switch arm pivoted in said housing above and adjacent to said sleeve member, a contact member mounted in the housing subjacent said switch arm and being engageable by said switch arm, first spring means biasing said switch arm downwardly toward engagement with said



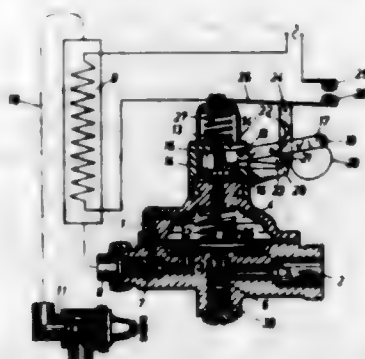
contact member, and second spring means biasing said sleeve member upwardly into engagement with said switch arm and opposing said first spring means, said weight members being movable outwardly by centrifugal force to overcome the force of said second spring means responsive to rotation of said shaft member above a predetermined speed.

3,005,887
AIR FLOW CONTROL APPARATUS
Aubrey H. Robson, Rock Island, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Apr. 16, 1958, Ser. No. 728,925
3 Claims. (Cl. 200-81.9)



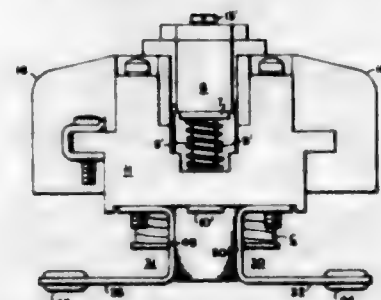
1. In a forced air heater-ventilator unit having air duct damper means controlled in response to departures in air duct velocity pressures from a predetermined air velocity pressure range, an air velocity pressure responsive device comprising: plate means pivotally fixed at one of its ends for pivotal movement thereabout in response to velocity pressure variations; spring means opposing pivotal movement of said plate means in a velocity pressure increasing direction; first and second snap acting electrical switches disposed adjacent one surface of said plate means; first and second switch elements for actuating said switches on said plate means and disposed to be moved into and out of switch actuating engagement with said switches upon pivotal movement of said plate means in a velocity pressure increasing and decreasing direction respectively; and means for selectively adjusting said actuating elements relative to said switches to provide selective sequential actuation of said switches corresponding to the limits of said velocity pressure range.

3,005,888
ELECTRIC CONTINUOUS-FLOW HEATER WITH WATER DEFICIENCY SAFETY DEVICE
Hans Pütz, Remscheid, Germany, assignor to Joh. Vaillant K.G., Remscheid, Germany
Filed Dec. 21, 1959, Ser. No. 861,833
Claims priority, application Germany Dec. 22, 1958
2 Claims. (Cl. 200-83)



1. In an electric continuous-flow heater including a water flow regulator, a water deficiency safety device, a diaphragm responsive to water flow for controlling said regulator and said safety device, and a snap-action switch for switching on electric current, the improvement which comprises a tappet connected to said diaphragm having two spaced-apart stop faces, a pivotally mounted rocker arm connected at one end to said switch and having the other end arranged between said stop faces, said stop faces being so spaced that after said rocker arm has been moved to the switch-on position, the end of said rocker arm is maintained in a rest position spaced from each of said stop faces a sufficient distance to permit movement of said diaphragm and normal operation of said water regulator.

3,005,889
ELECTROMAGNETIC DEVICES
William J. Powell, Beaver, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 28, 1958, Ser. No. 770,107
10 Claims. (Cl. 200-87)



1. In an electromagnetic contactor, in combination, an E-shaped magnetic core, said core including a plurality of U-shaped stacked laminations of magnetic material forming the bottom and two outer legs of the E-shaped core, and a plurality of generally rectangularly shaped laminations of magnetic material stacked to form the middle leg of the E-shaped core, a pair of identically shaped supporting frames of suitable non-magnetic sheet metal for the E-shaped core, each frame including a flat mount generally E-shaped, said stacked laminations being secured between the mounts of the frames to form a rigid E-shaped core structure, said generally rectangularly shaped laminations being so secured between the mounts to form a permanent air gap at the bottom of the middle leg of the E-shaped core, a sheet of non-magnetic non-conducting material disposed in the air gap, each of said mounts having a generally rectangular portion bent at right angles to the mount to give additional rigidity to the mounts, an extension at each end of the portion, a generally U-shaped bracket on each extension, said

extension having a narrowed connection between the brackets and the portion, whereby any distorting forces on the brackets do not, by reason of the resiliency of sheet metal, transmit distorting stresses to the mounts, a pair of spaced legs for each mount falling substantially in the plane of the used portion, the two legs associated with each mount being connected to the portion at its middle by a narrow resilient connection, whereby distorting stresses on the legs are not transmitted to the mounts.

3,005,890
SOLENOID OPERATED SWITCHES
James S. White, Webster Groves, Mo., and Frank J. Vargo, Cocoa, Fla., assignors to Ritepoint Pen and Pencil Company, St. Louis, Mo., a corporation of Missouri
Filed Aug. 20, 1959, Ser. No. 835,101
8 Claims. (Cl. 200-104)

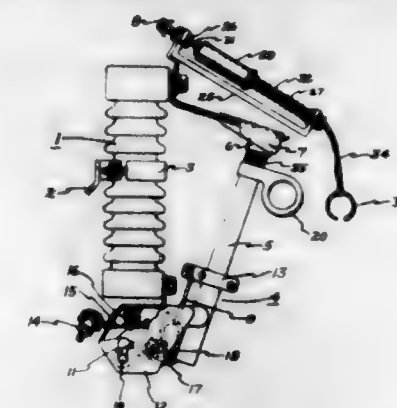


1. A switch comprising a pair of end members, means rigidly secured to the end members and holding them in opposed spaced relation in the provision of a cage, a solenoid rigidly mounted on the cage and having a hollow core, a rod-like armature shiftably mounted within the hollow core for movement axially with respect to the solenoid when the latter is energized and de-energized, an actuator rigidly secured to and movably with the armature, said actuator extending outwardly from the solenoid into the cage, said actuator having a peripheral slot, opposed electrical contact-elements mounted within the cage and insulated from each other, a spring-biased switch blade operatively mounted within the cage for swinging movement between said contact-elements whereby to make optional contact with either of said contact-elements, and a radially inwardly projecting actuator arm on the switch blade mechanically engaging the actuator slot whereby to swing the blade optionally into contactive engagement with either of said contact-elements responsive to movement of the actuator.

3,005,891
LOAD BREAK DEVICE
Francis J. Charewicz, Lanesboro, and Sidney R. Smith, Jr., Stockbridge, Mass., assignors to General Electric Company, a corporation of New York
Filed May 1, 1959, Ser. No. 810,424
9 Claims. (Cl. 200-114)

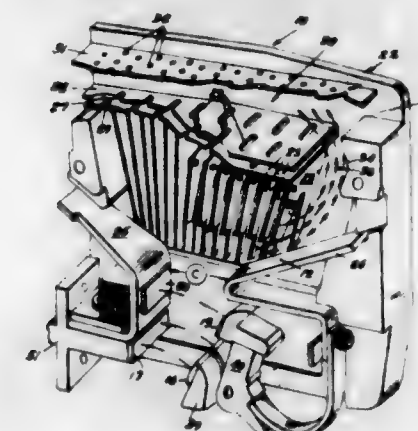
1. In combination, a switch having manually separable conducting parts normally carrying line current and an auxiliary circuit interrupter for interrupting line current, said auxiliary circuit interrupter being mounted on said switch and having separable arcing contact means, said auxiliary circuit interrupter normally being electrically connected to only one side of said switch, means for electrically connecting said switch and auxiliary circuit interrupter in shunt and then opening said switch and then said auxiliary circuit interrupter, means mounted

on said switch for compressing air and directing the same on said arcing contact means, and manual operating



means for actuating all of said means in a single manual operation.

3,005,892
ARC CHUTE DESIGN FOR CIRCUIT BREAKERS
Charles J. Yarrick, Haddonfield, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 19, 1957, Ser. No. 647,095
7 Claims. (Cl. 200-144)

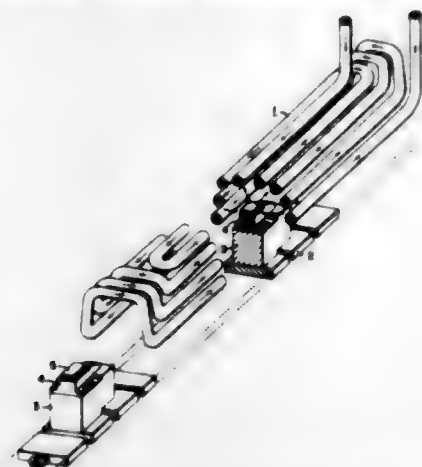


1. An arc extinguisher comprising an insulating housing and a plurality of arc plates positioned within said housing; said plurality of plates having a center slot and being positioned in spaced relation above and adjacent to cooperable contacts of a circuit interrupter; a baffle plate immediately above said plurality of arc plates and extending in a direction perpendicular thereto; said insulating housing containing a mixing chamber above said arc plates and being partially defined by said baffle plate; a passage within and at one end of said housing extending from said cooperable contacts directly to said mixing chamber; said passage by-passing said baffle plate and being defined on one side by an end arc plate and on the other side by said insulating housing; and a baffle means, parallel to and spaced from said baffle plate, partially defining said mixing chamber.

3,005,893
HEATING METHOD AND APPARATUS
Austin Dixon, Westmoreland City, and John F. Welland, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 19, 1959, Ser. No. 787,482
7 Claims. (Cl. 219-9.5)

1. The method of securing an electrically conductive material to a second material, comprising interposing heat responsive bonding material between said electrically conductive material and said second material, placing such assemblage on a movable support, and moving such assemblage and support through an alternating magnetic

field of a frequency and distribution which induces currents in said electrically conductive material causing heating of same, melting of such bonding material, and crea-

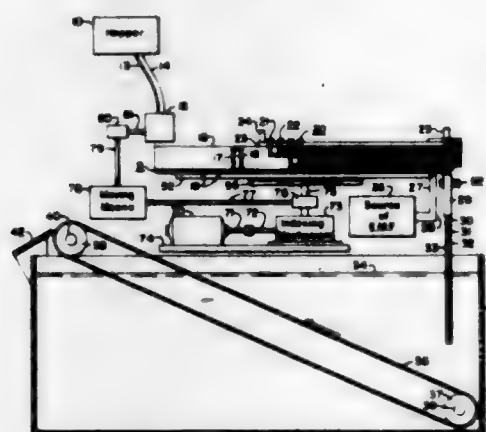


tion of forces holding such assemblage together in reaction with the support during transit through said field in the presence of the molten bonding material.

3,005,894

CARTRIDGE CASE HARDENING APPARATUS
Edward J. Carbo, Towson, and Robert F. Seehusen, Catonsville, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 16, 1957, Ser. No. 703,063
6 Claims. (Cl. 219—10.69)



6. In apparatus for heating elongated workpieces having lengthwise portions of differing mass, the combination of workpiece carrier means for conveying such workpieces along a prescribed path in an attitude perpendicular to such path, and an open-end multi-turn induction heating coil having a plurality of side portions of unequal length extending different distances along opposite sides of said path in perpendicularly spaced-apart parallel relationship with said path, between which side portions the aforesaid lengthwise portions of said workpieces pass respectively, said different distances along said path affording compensation for the differing mass of the lengthwise portions of the workpieces to be passed therebetween, whereby such portions of differing mass will be subject to the heating effect of said coil for differing periods of time and the workpieces including such portions will become heated accordingly.

3,005,895

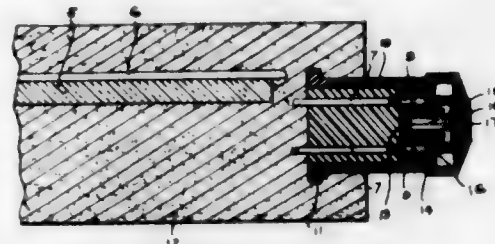
HEATED MASTIC SLAB

Frederick W. Jamison, Fort Lauderdale, Fla.
(1189 Colgate Drive, Pitcairn, Pa.)

Filed Apr. 8, 1960, Ser. No. 20,916
1 Claim. (Cl. 219—19)

A heated mastic slab for use in forming steps, walkways, driveways and other weight bearing surfaces to

prevent the accumulation of ice and snow upon the surfaces of the slab, comprising a molded rectangular body of concrete, a heater element disposed in the body to be parallel and spaced with respect to the upper and lower surfaces of the slab, the heater element comprising a sheet of relatively rigid insulation material having a multiplicity of heat radiating electrical conductors disposed upon its upper surface, the conductors being one continuous wire having its terminal ends terminating at the same end, the conductors being parallel and equidistantly spaced apart, the terminal ends of the conductor being fixed in electrical connection with a self connecting plug for connection with a source of electrical energy, the said plug being partially embedded in the concrete of the slab for self connection to conductors from the source



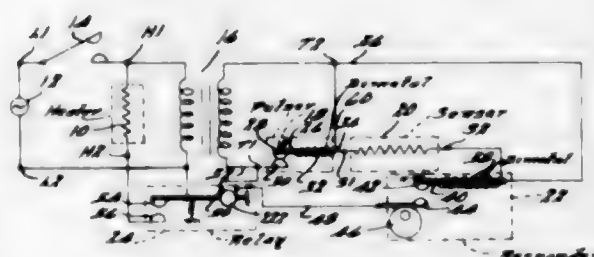
of energy, the said slabs being arranged in parallel relation to form the steps, walkways or the like and with a single pair of conductor wires from the source of energy connecting the several slabs in parallel, the sheet of insulation and its supported heat radiating conductors being molded into the slab with the sheet being relatively close to the upper surface of the slab whereby the major amount of radiated heat will be directed to the bearing surface and with the sheet very substantially retarding downward dissipation of the heat, the said conductors being assembled with respect to the insulation material by initially uniting the several flights of the conductors to the surface of the insulating material by spot adhesives, maintaining the several flights of the conductors in accurate spaced apart parallel relation.

3,005,896

THERMO-RESPONSIVE SYSTEM

George B. Whinery, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan

Filed Aug. 20, 1956, Ser. No. 604,867
19 Claims. (Cl. 219—20)



1. In a system for controlling a heating means in heat transfer relationship with a body to be heated, the combination of an electro-thermal responder including a pair of electrical contacts controlling the heating means, a polymetallic element effective when heated to close said contacts and a heater winding in heat transfer relation with said polymetallic element, electrically actuated apparatus for applying to said heater winding a series of electrical energy pulses, the heating of said polymetallic element by said winding being sufficient at each of at least some of said electrical energy pulses to close said electrical contacts, means including a second polymetallic element effective upon closure of said contacts tending to open said contacts, and sensing means including a resistance having a high temperature coefficient of resist-

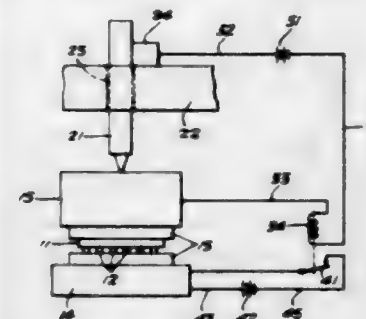
ance responsive to the temperature of the body for controlling the magnitude of the electrical energy pulses applied from said apparatus to said heater winding.

3,005,897

HEATER CONTROL CIRCUIT FOR ALLOYING APPARATUS

Harold Weinstein, Chicago, Ill., assignor to Hoffman Electronics Corporation, a corporation of California

Filed May 7, 1959, Ser. No. 811,709
6 Claims. (Cl. 219—20)



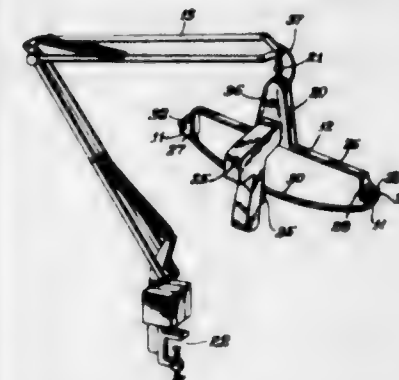
1. Apparatus for automatically stopping an alloying process when the alloying is completed, comprising: a vertically movable metallic member; a support member for supporting said movable member and permitting it to move only when an external force is applied to said movable member; a heater member for causing said alloying; a metallic weight member for resting upon a semiconductor-alloying material combination; and an electrical circuit that is closed only when said movable member makes contact with said weight member, said heater member heating said semiconductor-alloying material combination and causing said alloying only when said circuit is closed, the height of said combination decreasing when said alloying is completed, and said weight member dropping because of gravity when said height decreases, thereby breaking said circuit.

3,005,898

HEAT SEALING APPARATUS

Harry Rosenthal, 6540 N. Campbell Ave., Chicago, Ill.

Filed Oct. 24, 1960, Ser. No. 64,624
9 Claims. (Cl. 219—21)



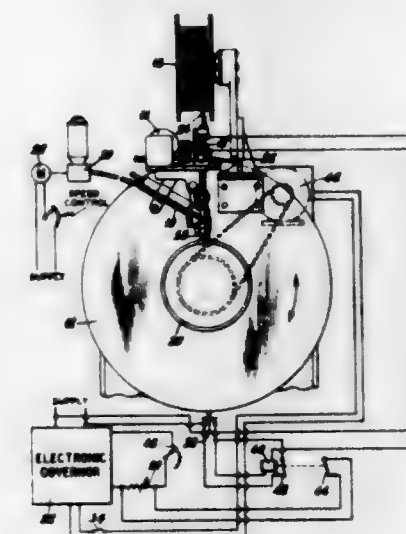
1. A device for sealing fusible material including in combination, a frame having a handle for positioning the same, an elongated flexible member supported by said frame and having a central portion spaced outwardly from said frame and intumed ends engaging said frame, an insulating layer on the outer side of said member, an elongated conducting element extending along said insulating layer, a coating of plastic material on said conducting element, and energizing means connected to said conducting element for supplying current pulses, said energizing means including switch means positioned on said handle and operative to apply a pulse of current to said element and to select the duration of said current pulse.

3,005,899

METAL ARC WELDING, COMPOSITION, AND APPARATUS

Walter L. Jensen, River Edge, Ralph P. Phillips, Colonia, and Gerard E. Claassen, Summit, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Dec. 30, 1958, Ser. No. 783,945
6 Claims. (Cl. 219—60)



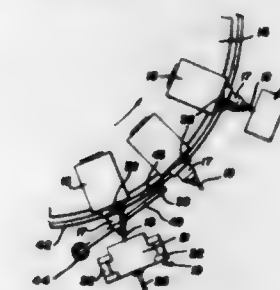
1. Circumferential all-position gas-flux shielded metal arc pipe welding apparatus, comprising the combination of a gas-flux shielded metal arc welding torch, carriage for said torch, means for guiding said carriage around the pipe to be welded with the extended longitudinal axis of the torch substantially intersecting the axis of such pipe, means for feeding a fusible metal wire electrode through such torch including a flux feed motor for feeding fluidized welding composition powder in a suitable shielding gas stream through such torch, and around such wire electrode, and means for controlling the speed of said carriage in predetermined arcs in its course about the pipe so that it moves at a faster rate when moving down compared to going up around the pipe.

3,005,900

METHOD OF AND APPARATUS FOR MAKING DIODE ELEMENTS

Albert F. Pityo, 1384 Pompton Ave., Cedar Grove, N.J.

Filed Feb. 11, 1960, Ser. No. 8,165
7 Claims. (Cl. 219—79)



1. In apparatus for making diode elements, a turret adapted to be indexed between shaving and welding stations, holding means for a lead wire carried by said turret, a stationary anvil at the shaving station engageable with one side of the lead wire, a reciprocating slide movable toward and from said anvil and including resilient hold down means engageable with the lead wire to clamp it to the anvil, shaving die elements carried by the slide on opposite sides of the hold down means and adapted to shave material from opposite sides of the lead wire at the shaving station to produce parallel clean flat faces on opposite sides of the lead wire at the shaving station, means to reciprocate said slide, means to index the lead wire ninety degrees upon its longitudinal axis while said

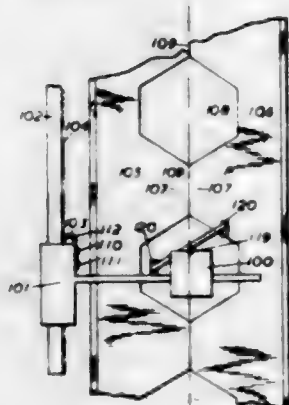
turret is being indexed from the shaving station toward the welding station so that said clean flat faces are arranged at right angles to their initial positions at the shaving station when the lead wire reaches the welding station, means to position a cat whisker element in overlapping relation with one of said clean flat faces and the welding station, and welding electrode means at the welding station to engage the cat whisker element and one of said clean flat faces and to electrically weld the cat whisker element to the other clean flat face of the lead wire at the welding station.

3,005,901

AUTOMATIC ARC-WELDING APPARATUS

Jack Asher Reuben King, Southport, England, assignor to The British Oxygen Company Limited, a company of Great Britain

Filed Sept. 16, 1959, Ser. No. 840,310
Claims priority, application Great Britain Sept. 17, 1958
3 Claims. (Cl. 219-125)



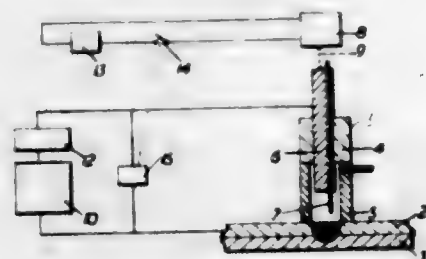
1. Automatic arc-welding apparatus comprising means for effecting relative movement between a welding head and the work, a light source associated with the welding head, photo-electric means responsive to light reflected off the work from the light source for effecting automatic starting and stopping of the relative movement, and means for controlling the commencement and termination of arc welding in predetermined relation to stopping and starting of the relative movement.

3,005,902

ELECTRIC ARC WELDING

Francis William Copleston, Finchley, and John James Orton, Stanmore, England, assignors to The British Oxygen Company Limited, a British company

Filed Apr. 13, 1959, Ser. No. 806,008
Claims priority, application Great Britain Apr. 21, 1958
7 Claims. (Cl. 219-127)



1. In the known method of producing a spot weld joining two overlapped metal members by enclosing a limited area of one surface of one of the metal members with a nozzle which surrounds a substantially non-consumable electrode that is spaced from the mouth of the nozzle, supplying a shielding gas to purge the space within the nozzle of deleterious gas, establishing an electric arc between the tip of the said electrode and the limited area to form a weld pool extending from the said one

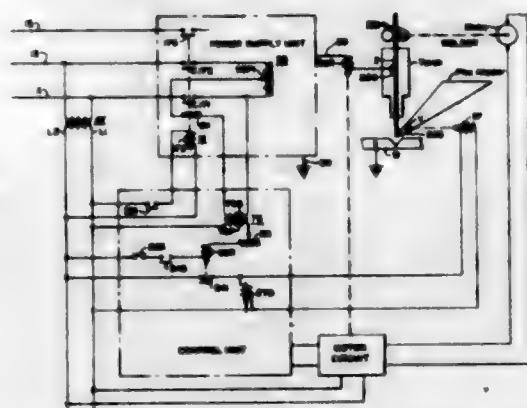
surface through the interface between the metal members and into the other metal member, and maintaining the nozzle in stationary contact with the said one surface until the welding cycle has ended, said electric arc having a main welding current portion and a current decay portion, the improvement which comprises moving the tip of the said electrode laterally over the weld pool during the passage of the main welding current, thereby increasing the area of interface fusion between the members.

3,005,903

ARC WELDING

Harry J. Bichel, East Aurora, and Alfred J. Baeselack, Clarence, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 6, 1957, Ser. No. 663,943
18 Claims. (Cl. 219-131)



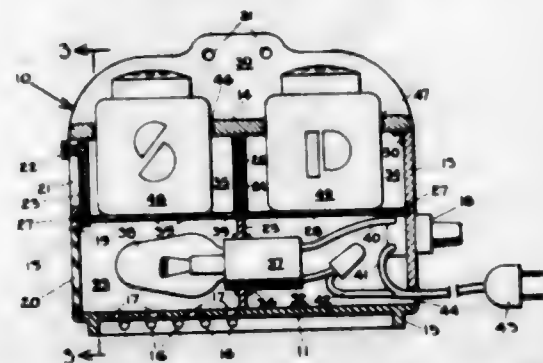
1. The method of welding work with a consumable electrode in a flux-submerged arc and with a substantially constant potential power supply, said supply being normally deenergized; the said method comprising advancing said electrode into contact with said work, after said electrode contacts said work depositing said flux, and after said flux has been deposited energizing said power supply while said electrode is in contact with said work to fire an arc between said electrode and said work to produce a weld.

3,005,904

COMBINATION SALT DRIER AND NIGHT LIGHT

William F. Thompson, 173 E. 9th St., Hialeah, Fla.

Filed July 15, 1960, Ser. No. 43,183
1 Claim. (Cl. 240-2)



A combination salt drier and night light comprising a receptacle, a front and rear wall, end walls attached to said front and rear wall and a bottom wall joining said first named walls, said front and rear wall having opposed slots disposed vertically on the inside surfaces thereof at substantially the mid-portion, a partition slidably mounted in said slots extending vertically substantially to the mid-portion of said receptacle, said partition having an opening, a light socket mounted in said opening, a lamp mounted in said socket and extending in the direction of one of said end walls, a switch mounted on the

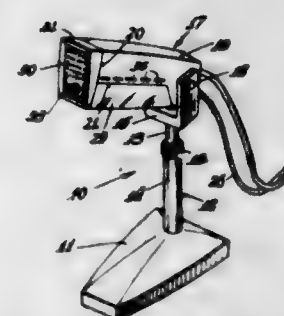
other of said end walls, electric wiring connecting said socket and said switch, further wiring connecting said switch and said socket extending through a bore in said other of said end walls for connecting to a source of electricity, a large opening in said one of said end walls, said large opening extending from said bottom wall to substantially the mid-portion of said receptacle, a transparent member placed in said large opening, a shutter slidably mounted on said one of said end walls above said transparent member whereby upon sliding said shutter downwardly said shutter will block off said transparent member, said end walls having opposed horizontally disposed slots at substantially the mid-portion of their inside surfaces, a horizontally disposed partition removably mounted on said receptacle having its end portions received by said horizontally disposed slots, a further vertically disposed partition slidably mounted in said slots in said front and rear walls and resting on said horizontally disposed partition, a cover removably mounted on said receptacle, said cover having an opening in said cover positioned on each side of said further portion, a salt dispenser placed in one of said openings in said cover adjacent said one of said end walls and said bottom wall and said horizontally disposed partition having openings in proximity to said one of said end walls whereby heat generated by said lamp will flow upwardly through said openings in said horizontally disposed partition to heat said salt dispenser and dehydrate the salt contained therein.

3,005,905

MICROPHONE APPARATUS

Maurice E. Lihson, 416 Crown St., New Haven, Conn.

Filed Sept. 25, 1958, Ser. No. 763,330
1 Claim. (Cl. 240-2)



A device of the character described comprising a housing having an open end wall and bottom wall, a standard connected to said housing for adjustably supporting the same above a surface, a microphone unit mounted in said housing and extending toward said open end for converting sound waves into audio frequency electrical signals, an end wall closure member removably connected to said housing and having perforations adapted to permit the passage of sound waves therethrough, circuit means for connecting said microphone unit to an amplifier, a light mounted in said housing and extending along said open bottom wall for illuminating said surface, a light transmissive bottom wall closure member removably connected to said housing, lower means formed in said housing for dissipating the heat generated by said light, circuit means for connecting said light to a source of current and a switch operably connected between said microphone circuit and light circuit for selectively or simultaneously operating said microphone and light.

3,005,906

HUB CAP ORNAMENT

Hardie T. Butler, Jr., 2015 Conrad Ave. SE.,

Atlanta, Ga.

Filed Aug. 19, 1959, Ser. No. 834,870

3 Claims. (Cl. 240-8.12)

1. The combination of a vehicle hub cap, a stub shaft provided with an axial bore and having inner and outer

ends, a headed screw extending inwardly through said bore into an aperture formed at the center of the hub cap and securing said stub shaft to the latter, an outturned annular shoulder provided at the inner end of said stub shaft, a washer positioned on said screw between the screw head and the outer end of the stub shaft, said washer being of a greater diameter than the stub shaft whereby to project radially outwardly beyond the same, an elongated ornament provided intermediate its ends with a hub having a bearing portion rotatably mounted



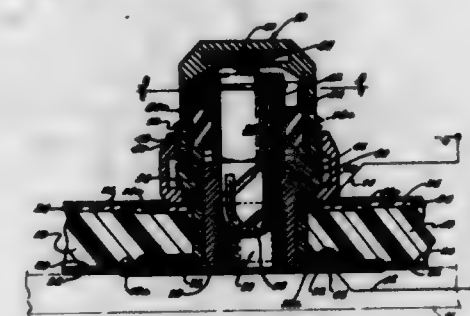
on said stub shaft between said annular shoulder and said washer and also having a counterbore at the outside of said bearing portion accommodating said washer and the head of said screw, one end portion of said ornament being heavier than the other whereby the ornament may assume a vertical position when the associated vehicle is not in motion, and an air flow responsive fin provided on said one end portion of the ornament for swinging the latter to a horizontal position during motion of the associated vehicle.

3,005,907

ILLUMINATED PANEL ASSEMBLY

James N. Dupree, West Covina, Calif., assignor to California Plasteck, Inc., Los Angeles, Calif., a corporation of California

Filed July 26, 1960, Ser. No. 45,390
20 Claims. (Cl. 240-8.16)



1. In an illuminated panel assembly for utilizing an electric lamp, the combination of: an insulating panel of light transmitting material having an aperture therein; a pair of electrical conductors carried by said panel adjacent the edge of the aperture; an electrically conductive bushing member extending through said aperture in said panel and having an outwardly extending radial flange for abutment with one of the opposite surfaces of said panel and for electrical contact with one of said conductors, said bushing member having a threaded portion projecting outwardly from the other of the opposite surfaces of said panel and further having at least one radial opening therein axially positioned to lie within the aper-

ture in the panel between said opposite surfaces thereof; an electrically conductive sleeve member adapted to be positioned on the other surface of said panel coaxial with said bushing member for abutment with said other surface of said panel and for electrical connection with the other of said conductors, said sleeve member having an inwardly extending shoulder; and a nut member of insulating material threadably engaging said threaded portion of said bushing member and engaging said inwardly extending shoulder of said sleeve member to clamp said sleeve member and the flange of said bushing member firmly against said opposite surfaces of said panel.

3,005,908

LAMPS USED FOR FISHING AND UNDERWATER WORK

Luigi Fasolo Farina, Via Giovanni, Cerna 23, Fiumicino, Rome, Italy
Filed Feb. 13, 1959, Ser. No. 793,120
Claims priority, application Italy Feb. 18, 1958
1 Claim. (Cl. 240-26)



A lamp, for use underwater during fishing operations and the like, comprising a cylindrical cage adapted to extend substantially vertically in operation, said cage having bars disposed vertically around its circumferential periphery and horizontally disposed rings interconnecting said bars at spaced intervals, the lowermost of said spaced horizontal rings being of greater thickness and weight than the other rings; a plate firmly connected to the tops of said bars; a cylindrical metal pipe firmly connected with said plate and extending vertically upwardly from the center thereof, a resilient tube within said pipe, a socket within said resilient tube, a bushing engaging said resilient tube and located above said socket, a sealing nut carried by said bushing, an incandescent bulb connected to said socket, said resilient tube tightly enclosing said socket and extending to fit over the neck of the incandescent bulb at one end and to be enclosed by said bushing and said sealing nut at the other end, current-carrying cables operatively connected to said socket and extending through said bushing, said gasket and said sealing nut, and a gasket located within said bushing and engaging said sealing nut and said cables to provide a watertight seal.

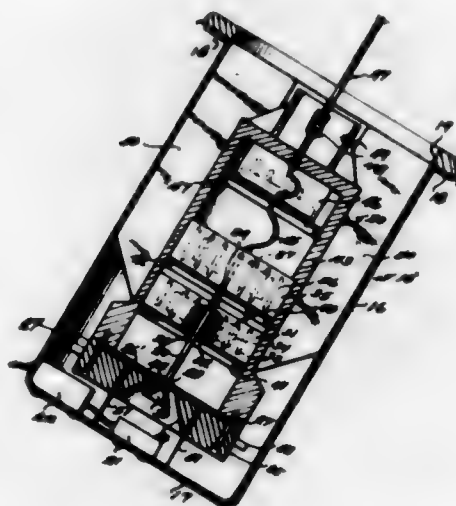
3,005,909

DISTRESS SIGNAL UNIT

Anthony R. Grandoff, Jr., 4619 Bay to Bay Blvd., Tampa, Fla.
Filed Mar. 18, 1960, Ser. No. 15,995
3 Claims. (Cl. 250-17)

1. A distress signal for aircraft, comprising a casing adapted to be mounted in an aircraft fuselage, said casing having an end opening exteriorly of the fuselage, a signaling unit in said casing adapted to be projected from said casing, an explosive charge positioned in said casing, means for firing said charge upon deceleration of said plane at an abnormal rate, said unit including an elongated sealed chamber, a radio signal transmitter positioned in the upper portion of said chamber, upper and

lower normally insert batteries connected in parallel, positioned in said chamber, each of said batteries including a battery casing, plates in said casing, the terminal plates of said battery being connected to said transmitter, a frangible acid containing receptacle positioned within each of said battery casings, and means for rupturing said acid containing receptacle coincident with detonation of said explosive charge, said last-mentioned means comprising a slidable rod extending through the bottom wall

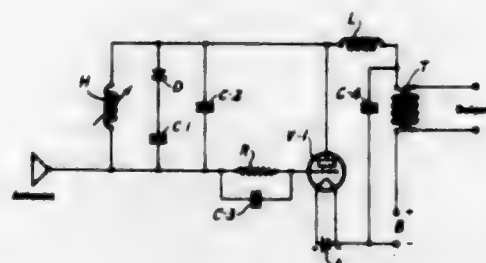


of said chamber and through said lower battery and terminating adjacent the lower surface of said frangible acid containing receptacle in said upper battery, a flange surrounding that portion of said rod immediately below said receptacle in said lower battery, a funnel-shaped member having its apex secured to the lower end of said rod and overlying said explosive charge, whereby upward movement of said rod will rupture said receptacle upon detonation of said explosive charge.

3,005,910

RADIO-FREQUENCY CIRCUIT

Richard R. Florac, 246 E. 46th St., New York, N.Y.
Original application Mar. 1, 1955, Ser. No. 491,314, now Patent No. 2,799,775, dated July 16, 1957. Divided and this application Nov. 14, 1956, Ser. No. 622,189
2 Claims. (Cl. 250-20)

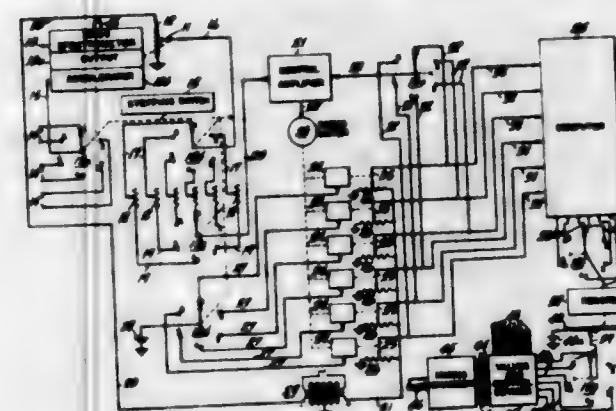


1. A radio receiver comprising an electronic oscillating and amplifying device having a plate, a grid and a cathode, a tuned circuit connected to the grid of said amplifying device, power supply means connected to supply a direct current between said plate and cathode, an antenna connected to said tuned circuit, and means for improving the performance of said receiver, said means comprising a crystal diode connected between said antenna and said tuned circuit, said diode being so connected to said tuned circuit that no direct current flows through said diode whereby the radiation of signals from said antenna by said receiver is greatly reduced.

3,005,911

GASEOUS MIXTURE ANALYZER

Ralph W. Burhans, Chagrin Falls, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 17, 1957, Ser. No. 703,440
3 Claims. (Cl. 250-41.9)

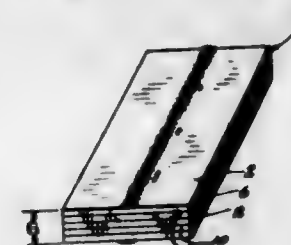


1. In a gaseous mixture analyzer of the type employing mass spectrometer means generating a plurality of signals serially each of which is a function of a like plurality of constituents of the gas, means responsive to said signals to provide constant outputs of amplitudes representative of said signals, and computer means responsive to said outputs to provide a like plurality of output signals respectively indicative of the amount of each constituent, the combination which comprises a stepping switch with a plurality of connections, successively made for successively conditioning the spectrometer to sensitivity to a different constituent, a plurality of contacts for successively rendering the computer responsive to spectrometer signals corresponding to such different constituents, servo means for adjusting computer inputs to correspond to spectrometer signals, a gate normally closed having an input connection, the gate being openable in response to energization of such input connection to energize the servo means, said stepping switch also having a plurality of switch contacts successively connectable to said gate input connection for opening the gate upon conditioning the spectrometer for a given constituent and rendering the computer responsive to spectrometer signals corresponding to the same constituent, and delay means interposed in the input connection to said gate for avoiding movement of the servo means during switching periods between conditioning to successive gas constituents.

3,005,912

METHOD OF PRODUCING VISUAL STANDARDS AND ARTICLE PRODUCED

Harry L. Babcock, Hammond, Ind., assignor, by means assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 4, 1955, Ser. No. 499,038
2 Claims. (Cl. 250-65)



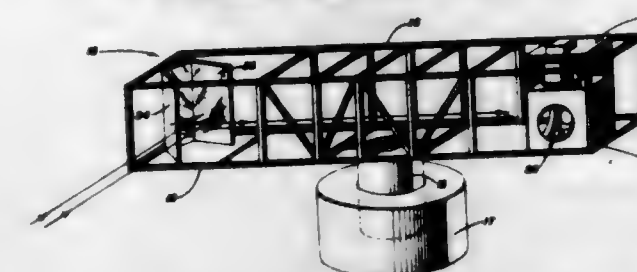
1. A method of producing a desired visual representation of a welding standard comprising the forming of defects in a metallic plate in such physical relation to each other so as to correspond to a predetermined standard, placing a substantially pure weld deposit in another metallic plate, placing said plates in juxtaposition

with each other, aligning the defects and the weld deposit, and photographing the plates to produce a radiograph image of an apparent weld deposit with predetermined desired defects therein.

3,005,913

INFRARED RANGE FINDER

John Strong, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 18, 1951, Ser. No. 247,123
8 Claims. (Cl. 250-83.3)

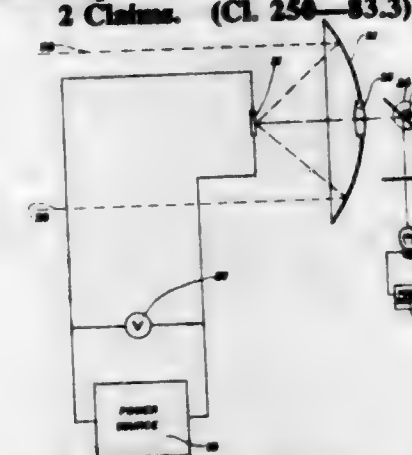


1. In a range finder of the character described, first and second directionally sensitive systems adapted to receive radiant energy from a target, said systems having axes spaced the length of a base line and defining a parallax angle when directed toward a target, the axis of said second system being angularly adjustable relative to said base line to define any one of a plurality of parallax angles related to target range, first and second rotary bolometer assemblies adapted to translate radiant energy received by said first and second systems into alternating electric signals of a given frequency upon synchronous rotation of said bolometer assemblies, means synchronously rotating said bolometer assemblies, means indicating the phase relationship of said first and second bolometer assembly signals, and means indicating the angularly adjusted position of said second system.

3,005,914

INFRARED DETECTING SYSTEM

William Feldman and Harry Frank Hicks, Jr., Rochester, N.Y., assignors, by means assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 24, 1957, Ser. No. 685,999
2 Claims. (Cl. 250-83.3)

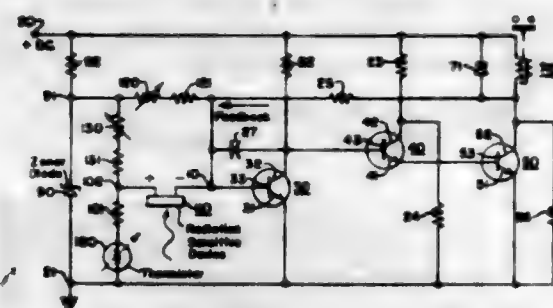


1. A device for detecting infrared energy comprising a photoconductive infrared sensitive detecting element, means for focusing infrared energy from a target onto said detecting element, an auxiliary source of infrared energy, means for focusing the infrared energy from said auxiliary source onto said detecting element and cyclically scanning said detecting element therewith, means for passing a unidirectional polarizing current of a constant magnitude through said detecting element, and means for sensing variations in voltage across said detecting element which occur as a result of the superposition of images of said target and said auxiliary source on said detecting element.

3,005,915

BISTABLE TRANSISTOR AMPLIFIER

Marshall P. White and Russell J. Hall, Cheektowaga, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 1, 1957, Ser. No. 656,342
1 Claim. (Cl. 250-214)



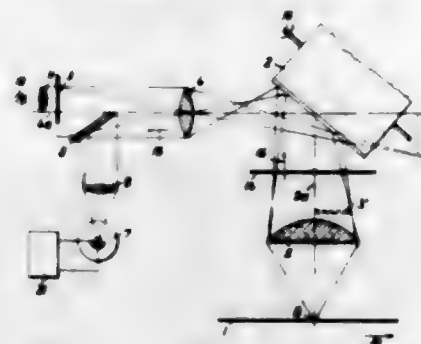
A bistable amplifier sensitive to radiation energy and comprising a plurality of stages, each of said stages comprising a semiconductor device having a base, an emitter and a collector electrode, said plurality of stages comprising an input stage, a preamplifier stage and an output stage, means for applying an input signal to said input stage comprising a bridge type circuit of two parallel branches having a radiation sensitive voltage generating device connected across said bridge, said bridge type circuit being connected to a constant voltage source and including temperature compensating means, an input circuit of each said stage including said base electrode of said semiconductor device, an output circuit of each said stage including said emitter and collector electrodes of said semiconductor device, circuit means connecting the output circuit of each stage to an input circuit of a succeeding stage, means for applying a voltage to said output circuit of each of said stages, means for feeding back a control voltage from said output circuit of said output stage to said input circuit of said input stage, capacitor means connected between said output circuit and said input circuit of said input stage, and means for connecting a load to said output circuit of said output stage, with said radiation sensitive voltage generating device being operative when sensing radiation energy to generate a control voltage for causing said input stage to become non-conducting and thereby cause said output stage to energize said load.

3,005,916

DEVICE FOR PHOTOELECTRICALLY SCANNING WEBS

Felix Lentze, Darmstadt, Germany, assignor to Licentia Patent-Verwaltungs G.m.b.H., Frankfurt am Main, Germany

Filed Sept. 26, 1960, Ser. No. 58,498
Claims priority, application Germany Sept. 28, 1959
7 Claims. (Cl. 250-219)



1. Device for photoelectrically scanning webs comprising: a slit shaped light source; optical means positioned in the path of the light of said light source producing an image thereof; a cylinder lens having a center plane defining two portions, one of said portions being disposed in said light path for contracting said image to

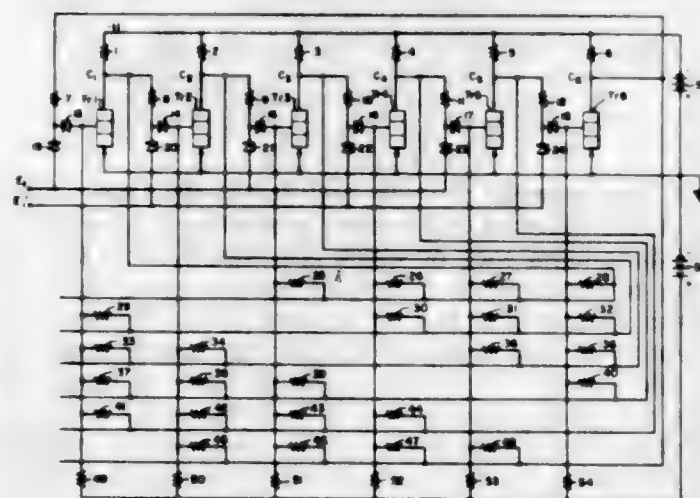
a spot; optical means in said light path for moving said spot over the surface of the web to be scanned; and photoelectric means for detecting the light reflected by said web and having passed through the other portion of said cylinder lens as defined by said center plane.

3,005,917

TRANSISTOR COUNTING CIRCUIT HAVING RESISTOR AND DIODE INTERSTAGE COUPLING MEANS

Viktor Hofmann, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany

Filed Nov. 28, 1958, Ser. No. 777,041
Claims priority, application Germany Dec. 5, 1957
4 Claims. (Cl. 307-88.5)



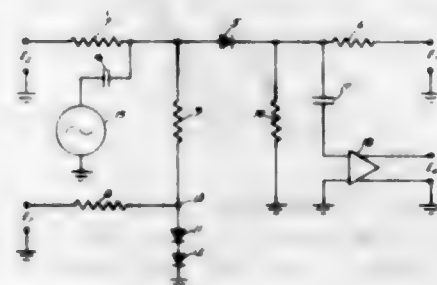
1. In a device for counting applied control signals, a plurality of counting stages, each stage including one controllable semiconductor having a conductive state of operation and a non-conductive state of operation and which is galvanically coupled to the controllable semiconductors respectively of the other stages, with each semiconductor having at least first and second control elements, said first element of each semiconductor being coupled through a resistance member to the second element of each other semiconductor except the next successive semiconductor such that only one controllable semiconductor of said counting device at a time will assume said non-conductive stage of operation and all the remaining semiconductors are in the conductive state of operation, and further with each first element being connected through a resistor and a diode to the second element of the transistor following in the counting direction.

3,005,918

TEMPERATURE COMPENSATED VOLTAGE COMPARISON CIRCUIT

John Richard Judkins, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 26, 1959, Ser. No. 836,313
5 Claims. (Cl. 307-88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A temperature compensated voltage comparison circuit comprising: a semiconductor comparator diode hav-

ing its anode and cathode coupled, respectively, to two voltages to be compared; means applying signal voltages to the anode of said comparator diode and means coupled to said comparator diode cathode responsive to the passage of any part of said signal voltages; a compensating voltage source applied to said comparator diode anode through a coupling impedance for compensating the voltage necessary to equalize the comparator diode threshold voltage; diode means similar to said comparator diode coupled between said compensating voltage source and ground, and subject to the same temperature as said comparator diode, to vary said applied compensating voltage in compensation for threshold voltage changes in said comparator diode resulting from temperature changes; and an impedance means coupled to said comparator diode cathode symmetrical with said coupling impedance in said compensating voltage coupling to said comparator diode equalizing the threshold voltage whereby voltages are compared on the anode and cathode of said comparator diode under all conditions of temperature variations.

3,005,919

DUAL-FUNCTION SWITCHING DEVICE

Julio Fleming Rodriguez Dias, 50 W. 12th St., New York 11, N.Y.

Filed Aug. 12, 1960, Ser. No. 49,287
8 Claims. (Cl. 307-141.4)



8. A relay system for providing first and second output circuits for a pair of sequentially energized and de-energized input circuit terminals; said relay system comprising a relay coil and a first and second relay contact; said first relay contact being operable between connecting position and disconnecting position to connect and disconnect respectively said first output circuit to said input terminals; said second relay contact being operable between connecting and disconnecting position to connect and disconnect respectively said second output circuit to said input terminals; said first relay contact being moved to said connecting position responsive to energization of said relay coil; said second relay contact being moved to said connecting position responsive to de-energization of said relay coil; a momentary contact connected for energizing said relay coil from said input terminals when said input terminals are energized, and a seal-in circuit including said first relay contact for retaining said relay coil energized when said momentary contact is opened after a momentary closing; said first circuit being energized from said input terminals after closure of said momentary contact and as long as said input terminals are energized; said second circuit being connected from said input terminals when said relay coil is de-energized; said input terminals comprising the output controlled terminals of a clock radio; said second circuit being connected to the gain control circuit of said radio.

3,005,920

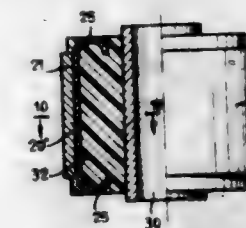
COMMUTATOR FOR DYNAMO ELECTRIC MACHINES AND MANUFACTURING METHOD

John Dolza, Turin, Italy, assignor to Fiat Societa per Azioni, Turin, Italy

Filed June 17, 1959, Ser. No. 821,044
Claims priority, application Italy Jan. 19, 1959
8 Claims. (Cl. 310-235)

1. Commutator for dynamo-electric machines comprising a supporting cylindrical body of electrically insulating material, a circumferential set of segments of strips

of electrical conducting material bonded to the center portion of a strip of strong reinforcing material, the end portion of the reinforcing material remaining bare, said segments attached to the periphery of the body, and said

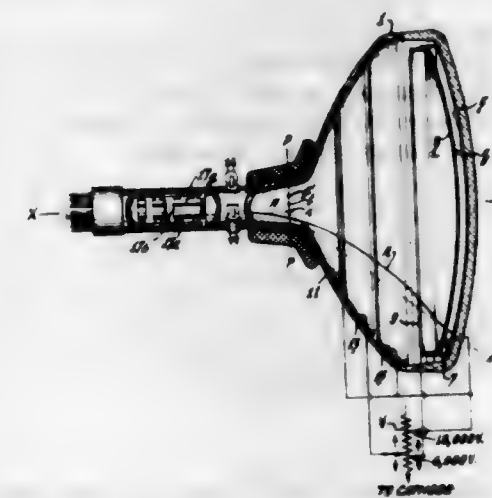


bare end portions of the strip of reinforcing material comprising fastening means for the segments, when bent to hook-shape toward the body axis and embedded in the insulating body material.

3,005,921

CATHODE-RAY TUBES OF THE FOCUS-MASK VARIETY

Richard H. Godfrey, Landville, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,248
5 Claims. (Cl. 313-85)



1. In a color-kinescope of the kind containing a beam source of electrons and an apertured mask through which beam electrons from said source pass in their transit to individual ones of the elementary areas of a color-screen of the mosaic variety and wherein said beam electrons are subjected (a) to outward refraction by reason of the presence of a decelerating electric field in the space between said source and said mask and (b) to inward refraction by reason of the presence of an accelerating focusing field in the space between said mask and said mosaic screen, the improvement which comprises: electrode means disposed adjacent to a marginal edge portion of said mask and electrically associated therewith for altering the degree of inward refraction to which said beam electrons are subject in the adjacent marginal portion of said mask-to-screen space to correspond substantially with that degree of outward refraction to which said beam electrons are subject prior to entering said last mentioned space.

3,005,922

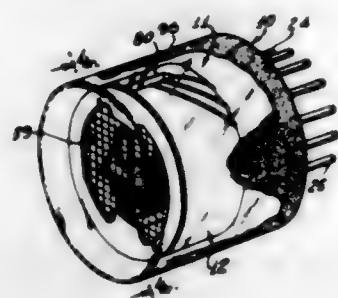
LUMINOUS DISCHARGE INDICIA TUBE

Bill J. Hart, Bloomington, Ill., assignor to National Union Electric Corporation, Bloomington, Ill., a corporation of Delaware

Filed Nov. 13, 1959, Ser. No. 852,760
6 Claims. (Cl. 313-109.5)

1. A plural indicia display device, comprising an enclosing envelope having a transparent portion through

which the indicia are viewed, a plurality of separate skeleton target electrodes in stacked array and in alignment with said portion of said envelope, and means to support said electrodes in spaced relation and substantially entirely free from intervening light obstruction or ab-

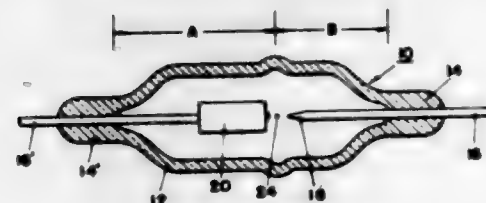


sorption elements, the last mentioned means comprising a cup-shaped member of insulation having at least one slot in the wall thereof, and means integral with each target electrode and interlocked with the walls of said slot to maintain said electrodes against radial displacement and in superposed viewing alignment.

3,005,923

MODULATED SHORT ARC LAMP ENVELOPE STRUCTURE

Norman C. Beese, Verona, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 29, 1959, Ser. No. 823,789
1 Claim. (Cl. 313-184)



A high pressure electric discharge lamp comprising a cylindrical light transmissive envelope having sealed ends and forming a discharge cavity therebetween, a gas filling said cavity, a first electrical conductor extending axially from one end of the envelope and having an electrode positioned within the discharge cavity, a second electrical conductor extending axially from the other end of the envelope and having an electrode positioned within the discharge cavity to provide an arcing gap with the first mentioned electrode, one of the conductor and electrode structures extending from one end of the envelope a greater distance than the other conductor and electrode structure extends from the other end of the envelope to locate the arcing gap off the geometrical center of the discharge cavity and said cylindrical envelope having an enlarged diameter portion embracing the arcing gap and providing a circumferential space thereabout whereby sound waves created within the cavity are defocused to provide for stability of operation.

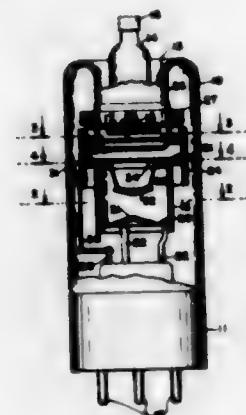
3,005,924

COLD CATHODE HYDROGEN THYRATRON

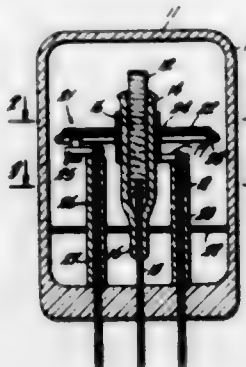
Arthur G. Reilly, Florham Park, and Joseph W. Esposito, Morris Plains, N.J., assignors to Tung-Sol Electric Inc., a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,837
7 Claims. (Cl. 313-185)

1. A gaseous discharge device comprising: a sealed envelope containing an ionizable gas at reduced pressure, an anode, a control electrode, and a cathode; said control electrode including a perforate grid conductor mount-

ed between the anode and the cathode; said cathode including a metallic conductor coated with a layer of



3,005,925
SELF-INDICATING THYRATRON
Max Yarmovsky, Livingston, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 773,907
5 Claims. (Cl. 313-197)



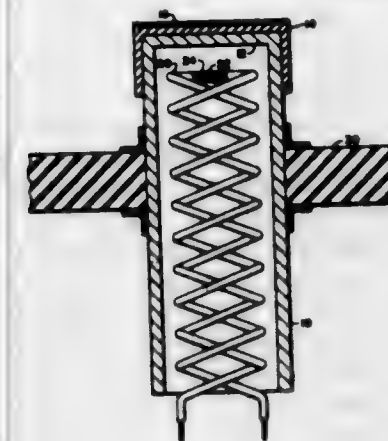
1. A three electrode gas filled discharge device positioned within a transparent envelope comprising, a cylindrical anode, a tubular insulator in axial alignment therewith surrounding the anode except for one end where a portion of the anode is exposed, a tubular control electrode surrounding the insulator for a portion of the insulator length, and a flat disc cathode mounted at right angles to the anode axis with a central hole through which the anode and control electrode extend, said cathode constructed of at least two different metals, one of said metals on the upper cathode surface adjacent to the exposed portion of the anode, the other of said metals covering the rest of the cathode surface and having a work function higher than the work function of the first mentioned metal.

3,005,926 CATHODE FOR ELECTRON DISCHARGE DEVICE

Clifford E. Horner, Watkins Glen, and Gene R. Fenster, Horseheads, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 22, 1959, Ser. No. 815,173
6 Claims. (Cl. 313-337)

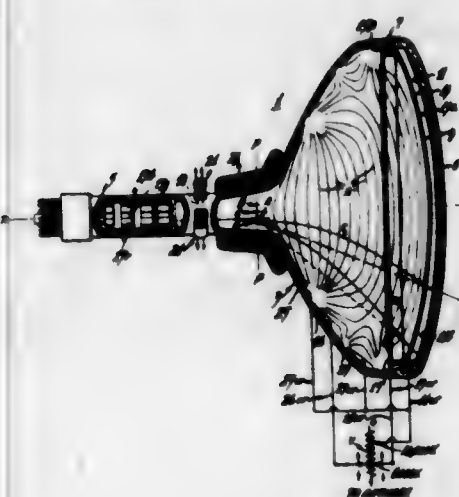
6. An indirectly heated cathode comprising a member containing nickel having an electron emissive coating on one surface thereof, a heater element containing tungsten material disposed facing a side of said nickel member remote from said electron emissive coating and

a layer of a material selected from the group consisting of molybdenum, tungsten, tantalum and the base alloys



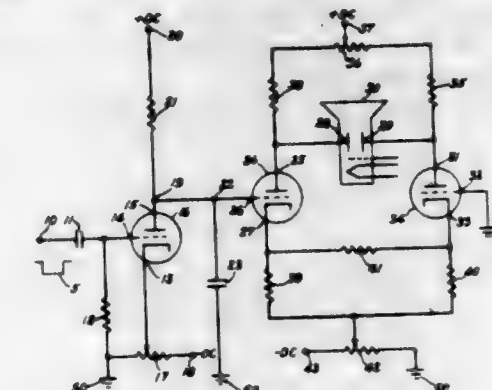
thereof disposed between said nickel member and said heater element.

3,005,927
CATHODE-RAY TUBES OF THE FOCUS-MASK VARIETY
Richard H. Godfrey, Landisville, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,249
5 Claims. (Cl. 315-9)



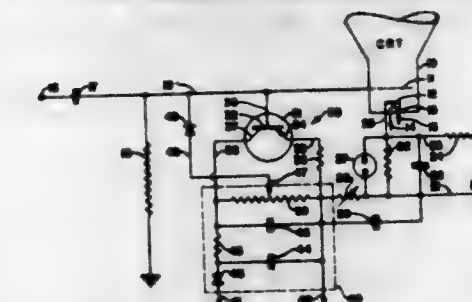
1. In a multi-beam cathode-ray tube of the focus-mask variety having a mosaic screen the individual elements of which are disposed at the terminals of substantially straight lines drawn through the mask-apertures to respectively different points in the tube's plane-of-deflection and wherein said electron beams normally traverse doubly curved paths in their transit to respective ones of said individual screen elements by reason of (I) the refractive effect of a decelerating electrostatic field in the space between said plane-of-deflection and said mask and (II) the unequal opposite refractive effect of an accelerating electrostatic focusing field in the mask-to-screen space, the improvement which comprises: electrode means including at least three spaced apart field electrodes circumscribing said first-mentioned space, and means for applying voltages to said field electrodes to establish a potential distribution among said field electrodes such that said unequal opposite refractive effects of said accelerating and decelerating fields upon said electron-beams are rendered substantially equal, whereby the terminals of said doubly curved beam paths are caused to coincide at said screen substantially with the terminals of said straight lines.

3,005,928
SAWTOOTH GATING SWEEP CIRCUIT PROVIDING ADJUSTABLE D.C. REFERENCE LEVEL
Walter L. Wuster, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 26, 1959, Ser. No. 795,875
5 Claims. (Cl. 315-26)
(Granted under Title 35, U.S. Code (1952), sec. 246)



1. A sweep circuit comprising: a cathode ray tube for display purposes, said tube having deflection plates; a differential amplifier including first and second triode sections coupled to a source of supply and to said cathode ray tube deflection plates; and a sawtooth generator including a triode having an anode coupled through a resistance to a source of positive potential and through a charging capacitance to ground, said resistance and capacitance elements having a resistance-capacitance time constant determining the wave shaping of the generated waveform and said anode further direct coupled to a grid of said first triode section, having a cathode coupled to an adjustable voltage source for said cathode to establish a circuit constituting means for providing an adjustable direct current voltage reference level at said anode and through direct coupling means to deflection plates of said cathode ray tube, and having a grid coupled to an input for a gating signal to provide for switching of said triode.

3,005,929
CATHODE-RAY TUBE BEAM GATE CIRCUITS
William George Reichert, Jr., Cedar Grove, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Apr. 18, 1958, Ser. No. 729,361
10 Claims. (Cl. 315-30)



1. A beam gate circuit for a cathode ray tube having at least grid and cathode electrodes, said circuit comprising a two-terminal bistable point contact transistor trigger circuit having base, collector and emitter elements; means coupling said trigger circuit to one of said electrodes, so that the tube is biased to cutoff when said trigger circuit is in one of its stable states of operation and is not biased to cutoff when said trigger circuit is in the other of its stable states of operation, including means for coupling the base element of said transistor to one terminal of the trigger circuit and means for coupling the emitter element of said transistor to the other terminal of the trigger circuit; means for triggering said trigger circuit in response to the leading and trailing edges of ap-

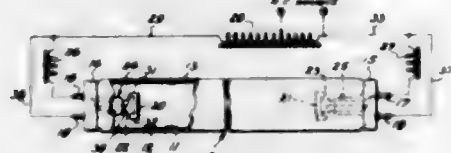
plied gate pulses; unidirectional conducting means coupled between the terminals of the trigger circuit; and means for biasing said unidirectional conducting means, so that neither of the stable states of operation of the transistor occurs in the saturation region of operation.

3,005,930

ELECTRIC DISCHARGE APPARATUS

Julien J. Mason, West Caldwell, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

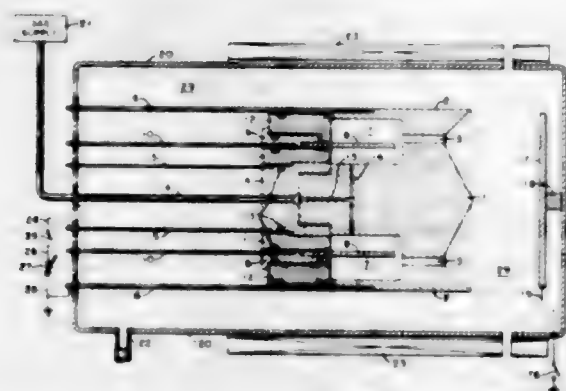
Filed Aug. 12, 1957, Ser. No. 677,623
5 Claims. (Cl. 315—85)



1. Electric discharge apparatus comprising an envelope containing an ionizable medium, arc-supporting means within said envelope between which a gaseous discharge occurs during the operation of said apparatus, said arc-supporting means comprising a plurality of main electrodes, at least one of which is thermionic, and a plurality of auxiliary electrodes disposed adjacent to and in paired relation with said main electrodes to constitute a plurality of main-and-auxiliary electrode pairs, said auxiliary electrodes being less electron-emissive than said main electrodes, circuit means for connecting the main and auxiliary electrode in each pair to each other and to an alternating potential, and an electrical-energy storage means in said circuit means between the input side thereof operable and each of said main electrodes to sustain during the operation of said apparatus a D.C. auxiliary discharge between each of said main electrodes and its adjacent auxiliary electrode of such duration that the current from each of the said main electrodes is maintained unidirectional and above a predetermined value, whereby the generation of high-frequency radiation incident with the fall of the main electrode current below said value is substantially eliminated.

3,005,931
ION GUN

Raphael A. Dandl, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 29, 1960, Ser. No. 18,461
6 Claims. (Cl. 315—111)



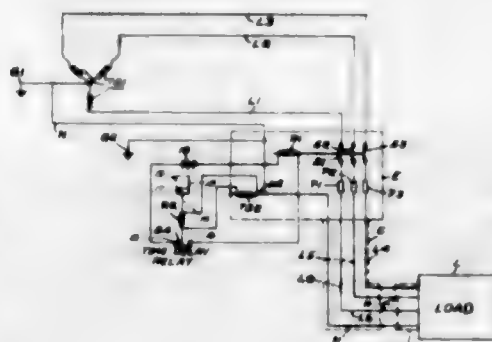
1. An improved ion gun comprising a container, an ion gun assembly disposed in one end of said container, said ion gun assembly comprising an anode and a cathode mounted in concentric relationship with a narrow annulus therebetween, an anode support member connected to said anode and mounted in one end of said container, a cathode support member mounted to said cathode and

disposed in said one end of said container, the rear portions of said anode and cathode being recessed to form an annular manifold, an intermediate electrode positioned within said manifold, a support member connected to said intermediate electrode and extending into said one end of said container, means for insulatingly supporting said support members in concentric relation with respect to each other, means for insulating said support members from said one end of said container, a source of gas supply, a gas supply feed tube connected to said gas source and extending through said member supporting said anode, an axial passageway within said anode connected to radial passageways within said anode, said radial passageway communicating with said manifold, said gas feed tube being in communication with the said axial passageway within said anode, a source of variable D.C. voltage, means for connecting said D.C. source between said anode and said cathode, means connected to and in communication with said container for evacuating said container, a baffle mounted to the other end of said enclosure in confronting relation with the face of said ion gun assembly, an electromagnetic coil disposed in concentric relation around said enclosure, said electromagnetic coil supplying a magnetic field, the magnetic field lines of said coil being substantially parallel to and in alignment with the annulus between said cathode and said anode, said coil extending from an area adjacent to the electrodes of said ion gun assembly to an area encompassing said baffle, said intermediate electrode within said manifold being aligned with the annulus between said anode and said cathode, the pressure within said container providing a pressure differential across said annulus, whereby the arc discharge established between said anode and said cathode by said variable D.C. supply substantially ionizes the gas flowing through said annulus by virtue of said pressure differential to provide a plasma beam substantially free of neutral gas particles.

3,005,932

PROTECTIVE CIRCUITS

Eustace C. Soares, Tenafly, N.J.
(Room 1010, 75 West St., New York 6, N.Y.)
Filed July 3, 1958, Ser. No. 746,361
6 Claims. (Cl. 317—18)



1. In a protective circuit for an A.C. supply source having a metallic equipment enclosure between said source and a load energized by said source, having first conductor means extending from said source into said enclosure, having over-current protective means within said enclosure, having second conductor means extending from within said enclosure to said load, having a grounded conductor extending from said source through said enclosure to said load, and having metallic conduit means around said second conductor means and said grounded conductor where it extends between said enclosure and said load, said conduit means being grounded to said load and to said enclosure, the improvement comprising a first

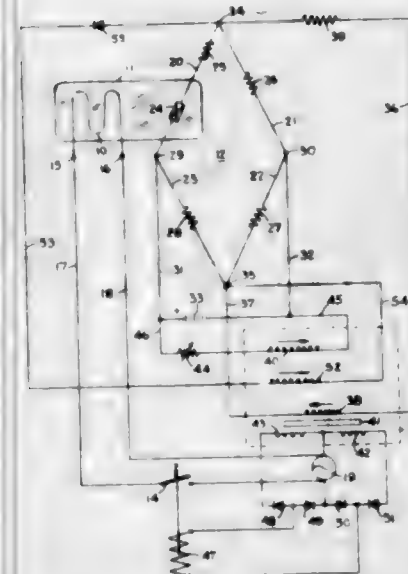
relay having an energizing winding and having normally closed switching means within said enclosure, a circuit connecting said switching means, said over-current protective means and said first and second conductor means in series, said protective means opening said last mentioned circuit when relatively large fault current flows in said last mentioned circuit, means within said enclosure grounding said grounded conductor to said enclosure, a second relay having an energizing winding and having a switch within said enclosure, means responsive to relatively small fault current too small to operate said protective means flowing from a high impedance fault through said conduit means, said enclosure, said grounding means and said grounded conductor, in series, to said source, connected to said winding of said second relay for energizing said second relay, and means including said switch of said second relay connected to said winding of said first relay for energizing said first relay.

3,005,933

FAIL-SAFE PROTECTIVE CIRCUIT FOR A MAGNETIC AMPLIFIER

Joseph A. Christ, Chicago, Ill., assignor to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware

Filed Oct. 21, 1957, Ser. No. 691,436
3 Claims. (Cl. 317—31)



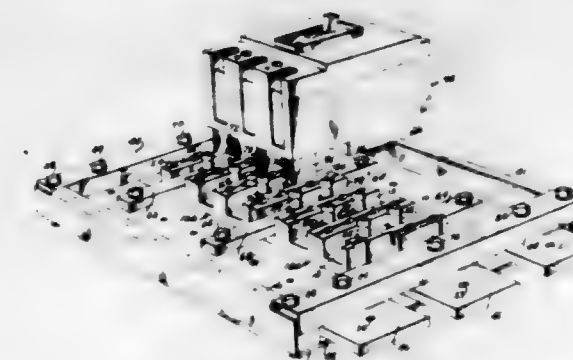
1. In combination, an electrical heater, an alternating current power source connected in circuit with said heater, a relay for opening and closing the alternating current power circuit, and a fail-safe control means for automatically controlling said relay in response to temperature conditions in the region served by said heater and comprising a Wheatstone bridge, a source of direct current power connected across cooperating input and return points of the bridge, a temperature sensing winding connected in the bridge and effective to vary the electrical potential across the bridge in response to temperature variations in the region served by said heater, a magnetic amplifier including a pair of gate windings connected in parallel with said alternating current power source and in series with said relay, a control winding connected across cooperating output and return points of said bridge and serving when energized to render said gate winding conductive and thereby activate the relay, a bias winding connected in circuit with said direct current power source in parallel with said bridge and having a polarity opposite to that of said control winding, whereby the flow of current through said bias winding opposes the conductivity of said control winding, and a normally dormant protective circuit connected across said bridge in parallel with said control winding, said protective circuit comprising means for blocking the flow of bridge

current therethrough when the potential across the bridge is below a predetermined value and a winding in series with said blocking means and having a polarity opposite to that of the control winding and providing a magnetic field of sufficient value to render the said control winding and consequently said gate windings nonconductive, when the potential across the bridge exceeds said predetermined value.

3,005,934

PANEL BOARD

Walter H. Vogelsberg, Norbeth, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 13, 1956, Ser. No. 621,666
4 Claims. (Cl. 317—119)



1. A panelboard assembly being comprised of a first, second and third bus bar, a pair of mounting blocks and an insulating block; said first and third bus bars being mounted and secured in spaced relationship in substantially in a first plane with said second bus bar being positioned between said first and third bus bar in a plane substantially parallel to said first plane, said insulating block having two legs on one surface thereof forming a substantially U-shaped channel extending in substantially the same direction as said bus bars; said insulating block being positioned on only said second bus bar so that said legs extend respectively between said first and second bus bar and said second and third bus bar; said U-shaped channel comprising the sole channel of said block having a bus bar disposed therein; said insulating block having grooves in the surface parallel to and opposite the surface containing the U-shaped channel; said grooves extending in a direction substantially perpendicular to the direction of said U-shaped channel; each of said said grooves extending in a direction substantially perpendicular to the direction of said U-shaped channel; each of said grooves receiving a connector strap secured to each of said bus bars; said connector straps having means by which circuit protective equipment can be electrically connected to said bus bars; said grooves serving to insulate and space said connector straps from each other; said insulating block serving to insulate each strap from the bus bars to which it is not secured; said insulating block having means whereby said circuit protective equipment may be mechanically secured to said insulating block.

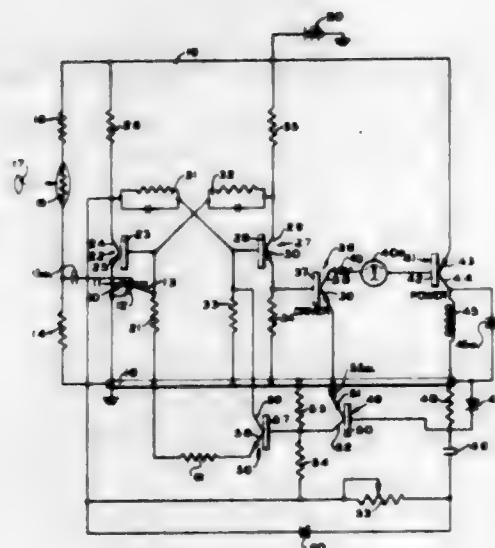
3,005,935

TRANSISTOR CONTROL CIRCUIT

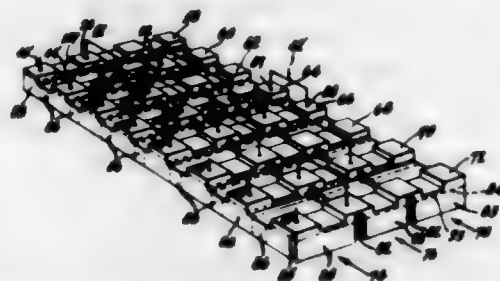
Richard A. Wood, Sunnyvale, Calif., assignor, by mesne assignments, of one-half to Genevieve I. Magnuson, and one-half to Genevieve I. Magnuson, Robert Magnuson, and Loh J. Fox, as trustees
Filed Nov. 12, 1957, Ser. No. 695,682
15 Claims. (Cl. 317—148.5)

1. An electrical timing circuit comprising a pair of semi-conductor devices, means connecting said devices together and to a source of current supply, means connected to said devices for controlling the electrical conductivity thereof so that only one of said devices is elec-

trically conductive at a given time, one of said devices being initially conductive, means connected to said initially conductive device responsive to a signal for reducing the conductivity of the initially conductive device so that the other of said pair of devices becomes conductive, a control solenoid, a storage device, means for energizing said solenoid and means for charging said storage device while the other of said devices is conductive, and means



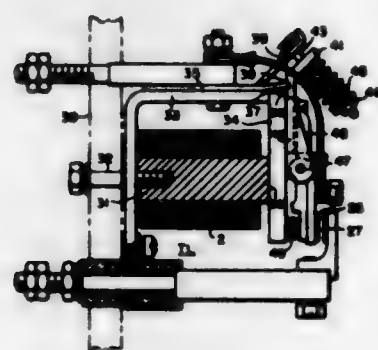
3,005,937
SEMICONDUCTOR SIGNAL TRANSLATING DEVICES
John T. Wallmark and Herbert Nelson, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Aug. 21, 1958, Ser. No. 756,378
13 Claims. (Cl. 317-235)



1. A circuit element comprising a body of semi-conductive material including a first zone of one conductivity type forming a junction with a second zone of different conductivity type, a plurality of grooves disposed in said body, at least one of said grooves extending through one of said zones and across said junction and another of said grooves extending only partially through one of said zones and spaced from said junction, said junction and said other groove defining a channel for the unipolar flow of charge carriers.

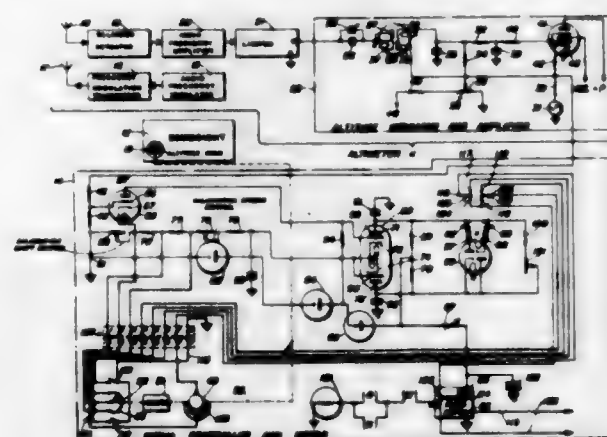
connected to said storage device for reducing the conductivity of said other device when said storage device is charged so that the energizing current through said solenoid is reduced, said last mentioned means including temperature responsive means responsive to the charging current of said capacitor, and means for connecting said temperature responsive means to said other semi-conductor device to substantially eliminate effects of temperature variations on the operation thereof.

3,005,936
ELECTROMAGNETIC TIMING DEVICE
Wilfrid H. Bergmann, Irwin, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 10, 1958, Ser. No. 747,770
7 Claims. (Cl. 317-178)



1. In an electromagnetic time limit device, in combination, a magnetic circuit including in the circuit the magnetic alloy Ni_2Mn possessing the property of a magnetic after-effect extending over a relatively long period of time, and including in the magnetic circuit a movable armature biased to an unactuated position, means for producing a magnetic flux in said circuit for a time interval to move the armature to its actuated position, whereby, after termination of said time interval by reason of the magnetic after-effect the flux slowly decays in the circuit to thus release the armature to its biased unactuated position after the expiration of a selected relatively long time period after the expiration of the mentioned time interval.

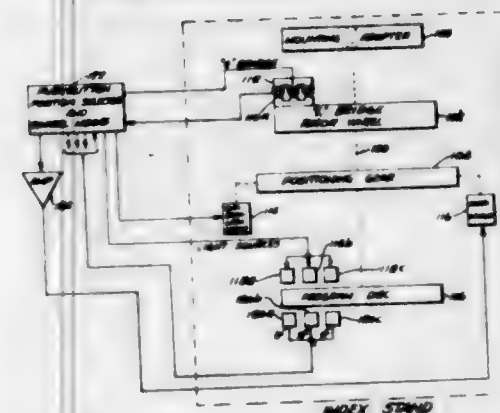
3,005,938
SERVOSYSTEM ALTITUDE ADJUSTMENT FOR BOMB SIGHT
Uselma Clarke Smith Dilks, Norbeth, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Original application Jan. 9, 1946, Ser. No. 640,113. Divided and this application Feb. 9, 1954, Ser. No. 409,281
6 Claims. (Cl. 318-28)



1. A servo controller responsive to an applied voltage of varying magnitude and a reversible servo motor having a movable member, said servo controller comprising a vacuum tube having an anode, a cathode and a control electrode, said control electrode being adapted to be connected to a source of the aforesaid applied voltage of varying magnitude, means varying the voltage of the cathode, a source of electrical current, a resistance connected between said source and said anode of the tube, a source of energy for said motor, means regulating said source to operate the motor either in a first direction or in a reverse direction, said movable member of the motor being coupled to the means for varying the voltage of the cathode, means producing a unidirectional reference potential of constant magnitude, and means including means responsive to changes in the voltage of the said anode for comparing the said voltage changes with the said reference potential to produce a control signal for actuating said regulating means so that the

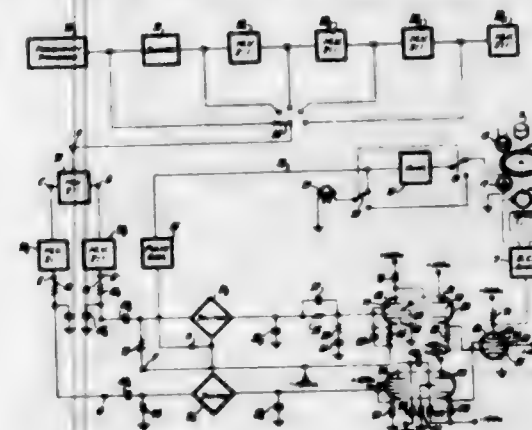
voltage of the anode is maintained substantially equal to the said reference potential, and whereby the position of the movable member is a function of the applied voltage.

3,005,939
PRECISION ANGULAR INDEXING SERVOSYSTEM
Morton Fromer, Maplewood, Rudolph F. Kemka, Hillsdale, and Samuel F. Lennox, Oakland, N.J., assignors to General Precision, Inc., a corporation of Delaware
Filed Dec. 8, 1959, Ser. No. 858,254
12 Claims. (Cl. 318-28)



1. A precision angular index stand for accurately positioning a shaft to any one of a discrete plurality of angular indices, said index stand including E bridge means and rough positioning means associated with each of said angular indices, torque means for applying a torque to said shaft of a magnitude determined by the amplitude of an input signal applied to said torque means and in a direction determined by the phase of said input signal, means for applying a constant amplitude signal of a given phase as said input signals to said torque means, whereby said shaft is caused to rotate in a given direction, and control means responsive to said rough positioning means for transferring said input signal from said constant amplitude signal to the output from said E bridge means in response to said shaft being rotated to a point in the vicinity of one of said angular indices.

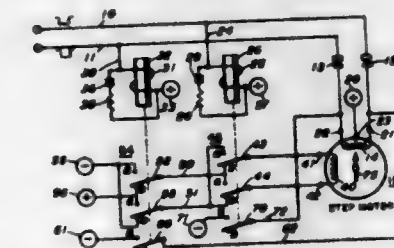
3,005,940
CONSTANT SPEED DRIVE MECHANISM
Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Continuation of application Ser. No. 698,627, Nov. 25, 1957. This application Feb. 2, 1959, Ser. No. 790,769
16 Claims. (Cl. 318-305)



1. A constant-speed drive for recording mechanisms and the like comprising a shunt-type D.C. motor, means driven by said motor for generating a pilot wave the frequency whereof varies directly with the rotational speed of said motor, and means for locking the rotational speed of said motor at a desired value giving a fixed frequency

from said generating means comprising means for developing two electrical waves of said fixed frequency the fundamental components whereof are in phase quadrature and supplying said electrical waves to a sine wave circuit and a cosine wave circuit respectively, means actuated by said pilot wave for simultaneously sampling the instantaneous magnitudes of the waves in said sine and cosine circuits, condensers connected in shunt in each of said circuits for storing charges proportional to said samples between sampling intervals, D.C. amplifying means responsive to the magnitude of the charge on the condenser in said sine circuit connected to supply operating current to one of the shunt circuits of said D.C. motor, means connected in said cosine circuit for advancing the phase of any alternating component in the charge of the condenser connected therein, and modulating means interconnecting said sine and cosine circuits to control the output of said D.C. amplifying means in proportion to the product of the outputs of said sine and cosine circuits.

3,005,941
STEPPER MOTOR CONTROL
Henry R. Heggen, Seaside, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 15, 1960, Ser. No. 22,455
11 Claims. (Cl. 318-443)

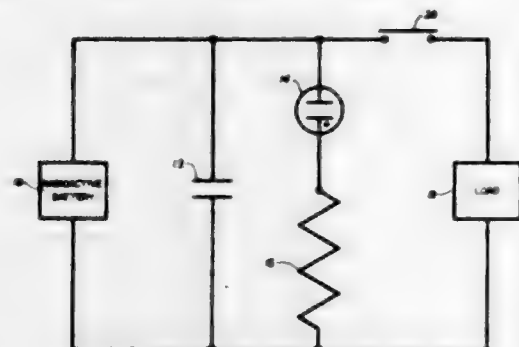


1. A control circuit for a motor having two stator windings producing fields at right angles to each other and a rotor that aligns itself with the resultant field of said two windings, said control circuit comprising: a local direct current source; a source of control pulses of substantial duration; normally de-energized relay means that is slow to operate and slow to release and having contacts connecting said local source to one of said stator windings in one polarity when de-energized and in the opposite polarity when energized and having contacts connecting said local source to said other stator winding only when energized; means connecting said source of control pulses to said relay and to the other stator winding in polarity-opposing relation to said connection of said local source thereto when said relay is energized, whereby said resultant field is normally that of said one stator winding alone in a reference direction, is of both windings and advanced 45° in response to a control pulse prior to operation of said relay by said control pulse, is of said other winding alone and advanced 90° in response to partial operation of said relay, is of said one winding alone in reversed polarity and advanced 180° in response to full operation of said relay, is of both windings in reversed polarity and advanced 225° in response to cessation of said control pulse, and is of said one winding and advanced 360° in response to release of said relay.

3,005,942
REGULATED POWER SUPPLY
Rene J. Perdreaux, Jr., Brooklyn, and Stanley Wallack, Jackson Heights, N.Y., assignors to Leconsa Corporation, a corporation of Massachusetts
Filed Mar. 16, 1955, Ser. No. 495,253
2 Claims. (Cl. 320-1)

1. In a regulated power supply circuit, a constant current radioactive battery, a capacitor connected across said battery, means for connecting a load across said

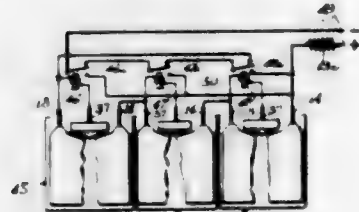
capacitor, and a non-linear resistor connected across said battery to pass current generated by said battery after a



predetermined voltage has been developed to maintain the voltage impressed across said capacitor at a predetermined value below the equilibrium voltage of said battery.

3,005,943 SEALED STORAGE CELL USING LIQUID ELECTROLYTE

Sol S. Jaffe, West Orange, N.J., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 10, 1957, Ser. No. 651,856
11 Claims. (Cl. 320-13)



1. A sealed storage cell capable of being repeatedly charged and discharged and having therein a liquid electrolyte and a gas space above the electrolyte, positive and negative electrodes immersed in said electrolyte, said positive electrode evolving oxygen when overcharged and said negative electrode having an auxiliary active material which is oxidizable when charged, an oxygen electrode having one portion in liquid contact with said electrolyte during both charge and discharge of the cell and another portion contacting said gas space, an auxiliary electrical circuit free of any potential source between said oxygen electrode and said negative electrode for permitting flow of current between said oxygen and negative electrodes responsive to electro-chemical reduction of oxygen gas from said gas space in the electrolyte at the oxygen electrode, a charging circuit for said cell connected between said positive and negative electrodes, and a relay having a coil connected in said auxiliary circuit and having switch contacts connected in said charging circuit, said switch contacts being normally closed and being opened to break said charging circuit as the relay is operated by current in said auxiliary circuit.

3,005,944 POWER SUPPLIES FOR USE IN THERMO-ELECTRIC REFRIGERATION SYSTEMS

Bruce E. Hill, Mason City, Iowa, assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Feb. 9, 1960, Ser. No. 7,666
7 Claims. (Cl. 321-5)

1. A power supply circuit adapted to supply a relatively ripple free unidirectional current to a substantially predetermined load impedance from a single phase source of alternating current comprising a first transformer and a second transformer, each said transformer having a primary and a secondary winding, a phase shifting net-

work connected with one of said primary windings, said phase shifting network comprising an inductor in series with said one primary winding and a capacitor connected in parallel with said one primary winding, said phase shifting network including said one primary winding being connected in parallel with the primary winding of the other of said transformers and with means to connect the said primary winding of said other transformer in parallel across a source of single phase alternating current thereby forming a series phase shifting circuit comprising said inductor in series with the parallel combination of said capacitor and said one primary winding wherein said series phase shifting circuit is connected in parallel with the primary winding of said other transformer and with said means to connect the primary winding of said other transformer across said source of single phase alternating current, the secondary winding of said first transformer bearing a relationship with the primary



winding thereof and with the windings of the second transformer such that the voltage induced therein bears a relationship to the voltage induced in the secondary winding of said second transformer as $\frac{1}{2} \sqrt{3}:1$, said secondary winding of said second transformer being center tapped, one end of the secondary winding of said first transformer being connected to the secondary winding of said second transformer at said center tap, the other end of the secondary winding of said first transformer and the ends of the secondary winding of said second transformer being operatively connected to the input of a polyphase rectifier, and the unidirectional current output terminals of said rectifier being connected to a load having a substantially predetermined impedance, said inductor and said capacitor having values of inductance and capacitance respectively chosen so as to provide substantially a minimum of ripple in said unidirectional current output supplied to said load by providing a substantially balanced three-phase input to said rectifier.

3,005,945 SEMICONDUCTOR DIODE PROTECTION

Erwin Salzer, Waban, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Oct. 27, 1958, Ser. No. 769,691
10 Claims. (Cl. 321-11)

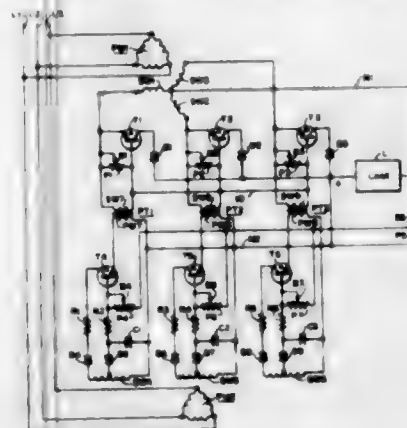


1. A semiconductor rectifier comprising an electric circuit, a semiconductor diode arranged in said circuit, a current-limiting cell fuse arranged in said circuit in series with said diode, said cell fuse including a casing having a predetermined cross-sectional area and a fusible element arranged in said casing, a system of spaced cooling fins for cooling said cell fuse, a common support for said system of cooling fins, metallic means for conducting heat from said fusible element to said common support of said system of cooling fins, and said metallic heat conducting means having a cross-sectional area being at no point of

said metallic heat conducting means substantially less than said predetermined cross-sectional area of said casing.

3,005,946 ELECTRICAL CIRCUIT

Bobble L. Thompson, Penn Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 29, 1959, Ser. No. 843,296
12 Claims. (Cl. 323-24)



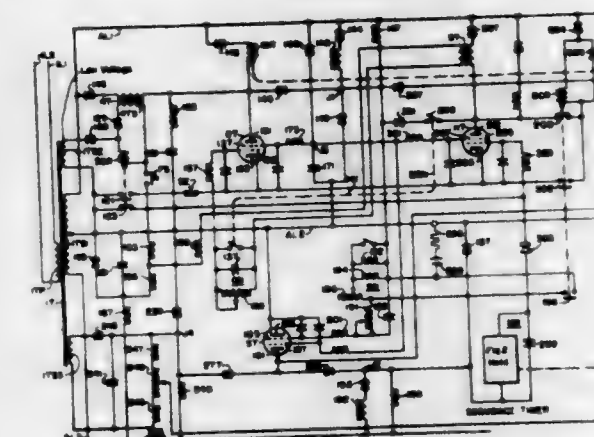
12. A load regulating circuit comprising a first transformer having a multi-phase secondary winding and having a first neutral, a power semiconductor switch having three terminals, for each phase of said winding, a load, a regulator winding for said load, means connecting said regulator winding to said neutral and in series with two of the terminals of the corresponding one of said switches, a plurality of pulse transformers having a secondary winding connected to the third terminal and to one of said two terminals of the corresponding one of said switches, said pulse transformers having primary windings, a second transformer having the same number of phases as said secondary winding of said first transformer, and having a second neutral, a plurality of semiconductor control switches, one for each of said phases, each of said semiconductor control switches having three terminals, means connecting each of said phases of said secondary winding of said second transformer in series with the primary winding of the corresponding one of said pulse transformers and two of the terminals of the corresponding one of said semiconductor control switches, a capacitor for each of said semiconductor control switches, means including a diode connected to the center of each of said phases of said secondary winding of said second transformer for charging the corresponding one of said capacitors during alternate half-cycles of the corresponding one of its phases, means for leaking the charges from each of said capacitors during the other half-cycles of the corresponding ones of its phases, means deriving a control voltage from said load, and means including said second neutral connecting said last mentioned means to the third terminal and to one of said two terminals of each of said semiconductor control switches, and connecting each of said capacitors to the third electrode and to one of said two electrodes of the corresponding one of said semiconductor control switches.

3,005,947 ELECTRIC DISCHARGE APPARATUS

Donald R. Scholtes, Virginia Beach, Va., and William E. Large, Clarence, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 31, 1957, Ser. No. 675,306
18 Claims. (Cl. 323-58)

1. In combination first, second and third supply conductors, means connected to said conductors for impressing alternating potentials of opposite phase between

said first and second and third and second conductors respectively, a first electric discharge device having an anode, a cathode, a first control electrode and a second control electrode, means for supplying a direct current potential having a magnitude substantially smaller than the amplitude of the alternating potential between said third conductor and said second conductor, a first time-constant network, including a capacitor and means for discharging said capacitor, a second time-constant network, means connecting said anode and cathode between said first conductor and said second conductor, with said cathode electrically nearest said first conductor, and said anode electrically nearest said second conductor, first rectifier means, second rectifier means, third rectifier means, means connecting in a first series circuit said third conductor, said second conductor, said capacitor, and said direct current potential and said first rectifier means with said first rectifier means poled to conduct positive current from said third conductor to said second conductor and said direct current potential opposing conduction through said first rectifier means, normally open switch means, means connecting said switch means between said third conductor and said second conductor so that when said switch means is closed



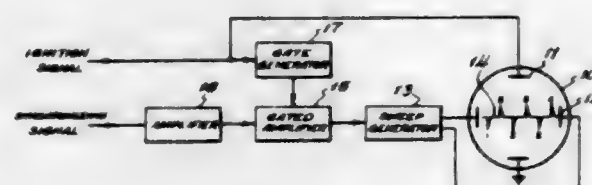
it reduces the potential between said last-named conductors to a low amplitude substantially lower than the magnitude of said direct-current potential, said capacitor being charged to a first polarity when said switch means is open, resistance means connecting said first control electrode to said cathode, means connecting in a series network said capacitor, said resistance means and said third rectifier means with said third rectifier means poled to oppose potential of said first polarity so that when said first network is charged to said first polarity said device is maintained conducting, means connecting in a second series circuit said third conductor, said second network, said second rectifier, said second control electrode and said cathode, said second network being charged in said series circuit to a polarity tending to maintain said device non-conducting and means connecting in a third series network said direct current potential, said second rectifier means and said switch means with said second rectifier means poled to conduct current produced by said direct-current potential so that said first network is charged to a polarity opposite to said first polarity when said switch means is closed, whereby current is conducted through said resistance means and said third rectifier means and said devices rendered non-conducting.

3,005,948 ENGINE ANALYZER

Alan Broder, Glen Oaks, and Carl M. Mengoni, New York, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 23, 1957, Ser. No. 635,912
10 Claims. (Cl. 324-16)

1. An engine analyzer having a cathode ray tube with first and second deflection means, ignition signal gener-

ing means for providing characteristic ignition signals, means operably coupling the ignition signal generating means to the first deflection means of the cathode ray tube, gate generator means responsive to predetermined ignition signals for providing a gating pulse in accordance therewith, pick-up means for providing synchronizing sig-

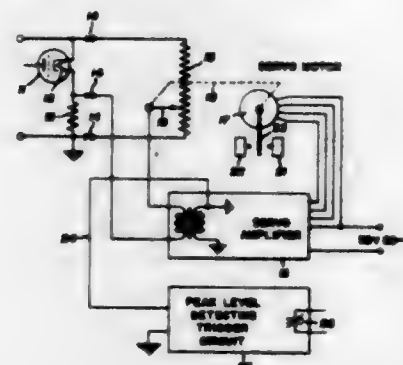


nals in accordance with engine revolutions, sweep voltage generating means operably coupled to the second deflection means, and gated control means responsive to the gating pulses and to the synchronizing signals for selectively triggering said sweep voltage generating means only when a gating pulse and a synchronizing signal coincide whereby a characteristic ignition pattern is displayed.

3,005,949

AUTOMATIC TESTING CIRCUIT

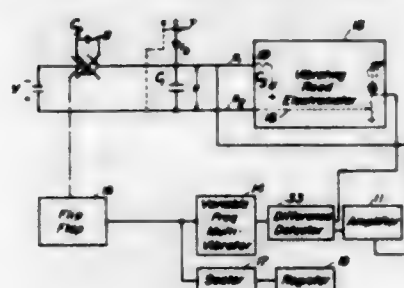
William S. Oakes, Jr., Pattersonville, and Sherman S. Barnhart, Jr., Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 12, 1957, Ser. No. 677,565
4 Claims. (Cl. 324-20)



1. A dynamic testing circuit for testing the dynamic impedance of electric circuit components simultaneously with the testing of such components for undesired defects such as short circuit and open circuit connections comprising an impedance bridge circuit adapted to have the electric circuit component under test connected in one arm thereof and having a variable impedance in another arm thereof, means for connecting a source of electric potential across the input of said bridge circuit, a servo amplifier fed by the output of said impedance bridge circuit, a servo motor controlled and drivingly connected to vary said variable impedance for maintaining the bridge circuit in a balanced condition during testing, a limit switch actuator driven by said servo motor, a pair of limit switches in the path of said limit switch actuator for actuation thereby upon variation of said variable impedance to predetermined limit values a continuously operating fast response peak level detecting transient responsive trigger circuit continuously operatively coupled to the electric circuit component under test, and a reject relay connected in the output of said trigger circuit for providing an output indication of the occurrence of transient electric signals developed in the component under test which exceed a preselected magnitude.

PRECISION INTEGRATOR FOR MINUTE ELECTRIC CURRENTS

Arthur Hemmendinger and Richard J. Helmer, Los Alamos, N. Mex., assignors to the United States Atomic Energy Commission
Filed Feb. 7, 1958, Ser. No. 714,006
2 Claims. (Cl. 324-111)



1. In an apparatus for measuring the integral of minute electrical currents, a source capacitor connected to the source of said electrical currents, a modulator-demodulator with negative feedback and in which the modulator is of the vibrating-reed type and having a response time which is longer than the time of variation of the currents to be measured, said modulator-demodulator having a high impedance input terminal, means electrically connecting one terminal of said source capacitor to said modulator-demodulator high impedance input terminal and the other terminal of said source capacitor to the modulator-demodulator feedback circuit, auxiliary amplifier means having an amplification factor equal to the gain of the modulator-demodulator and having a substantially instantaneous response rate and having its input capacitively coupled to the source capacitor, difference potential detecting means connected to both the output of the modulator-demodulator and the auxiliary amplifier means to provide a control potential proportional to the amplitude of departure from zero of the potential at said one terminal of the source capacitor, a discharge capacitor, a reversing switch and a potential source of known value, means responsive to said control potential for operating said reversing switch for successively reversibly connecting said discharge capacitor serially in a series comprising said potential source of known value and said source capacitor with the polarity of the known value potential source being opposite to the polarity of potential on the source capacitor in said series circuit and at a rate determined by the amplitude of the said control potential to thereby maintain the said one terminal of the source capacitor at zero potential, substantially, a scaler having its input coupled to the means for operating the reversing switch and a count recording register connected to the output of the scaler to indicate the number of discharges of said discharge capacitor which are required to cancel the quantity of electricity contained in the said minute electrical currents over any selected duration of measurement.

3,005,951

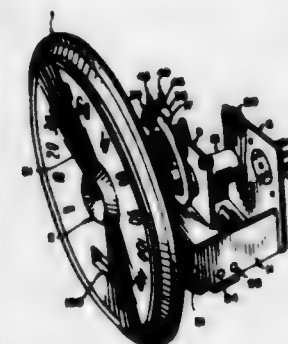
WIDE SCALE ELECTRICAL MEASURING INSTRUMENT

Adolph E. Gersch, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Apr. 29, 1957, Ser. No. 655,904
8 Claims. (Cl. 324-150)

2. A substantially uniform, wide scale electric instrument comprising a straight permanent magnet; a coil; a generally annular pole piece having an opening to permit threading of the pole piece through said coil; the pole piece having a substantially uniform cross-section and being substantial in mass relative to the magnet; magnetic structure engaging one pole of said magnet and

said pole piece providing a low reluctance magnetic circuit therebetween and closing said pole piece opening; mounting means rigidly securing said pole piece, magnetic structure and magnet rigidly together with said pole piece disposed about an axis parallel and noncoaxial with the axis of said magnet; means including a shaft coaxial with the axis of said annular pole piece pivotally supporting said coil for rotational movement along the circumferential length of said pole piece; at least one biasing



ELECTRICAL INSTRUMENTS AND METHOD OF ADJUSTING SCALE CHARACTERISTICS

Eugene M. Basinger, Bluffton, Ohio, assignor to The Triplett Electrical Instrument Co., Bluffton, Ohio, a corporation of Ohio
Filed Oct. 6, 1958, Ser. No. 765,552
3 Claims. (Cl. 324-151)

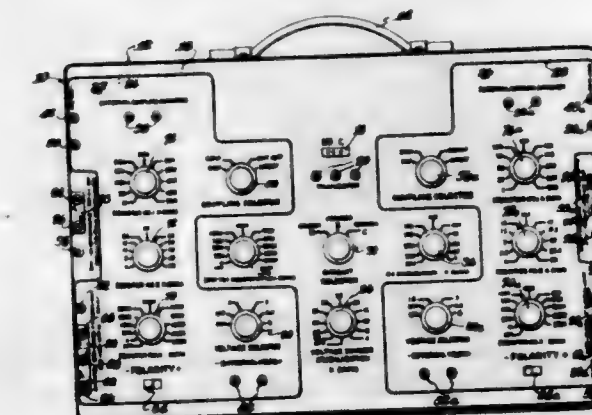


1. In a moving coil type electrical indicating instrument; a fixed magnetic frame comprising a permanent magnet and having opposed arcuate pole faces, one of said pole faces being magnetically associated with each of the poles of the magnet, an instrument movement mounted in the magnetic frame between the pole faces comprising an outer frame part and a coil rotatably mounted in the frame part having side portions extending along the said pole faces, a pair of bridge elements extending between the sides of the frame part inside the ends of the coil, a core rotatably mounted in said bridge elements on the axis of said coil, said core comprising at least two parts angularly adjustable relative to each other, said parts being in end to end relation and interconnected so that movement of one relative to the other will produce changes in the flux distribution in the air gap about the circumference and along the length of the said core.

3,005,953

TRANSISTOR CIRCUIT DESIGNING DEVICE

John H. Michels, Red Bank, N.J., and William Rutt, Great Neck, N.Y., assignors to Sprague Products Company, North Adams, Mass., a corporation of Massachusetts
Filed Sept. 3, 1957, Ser. No. 681,648
14 Claims. (Cl. 324-158)



1. A device for determining optimum parameters for a transistor circuit comprising a casing including a panel; socket means mounted upon said panel for connecting said transistor into said circuit; a number of separate circuits disposed within said casing including input, output, and common circuits; input and output terminal means connected respectively with said input and output circuits for respectively providing and metering an input signal thereto and deriving and metering an output signal therefrom; potential source means associated with said input and output circuits for providing operating voltages thereto; said input and output circuits respectively including manually variable impedance means; selector switch means mounted upon said panel and connecting said socket means with said input, output and common circuits in a preselectable variety of conventional transistor circuit configurations; additional variable impedance means disposed in arrangements which are connectable in predetermined advantageous circuit arrangements relative to said input, output and common circuits; control means operatively associated with each of said variable impedance means for adjusting the values of impedance provided by each of said variable impedance means and for optionally applying and removing their influence on their respective circuits; indicating means mounted upon said panel adjacent said control means for recording the settings of said control means which provide said optimum parameters; said additional variable impedance means including a first variable resistor means connected in series with said common circuit; a second variable resistor means connected across said output and said input circuits; and a third variable resistor means being connected across said input and said common circuits.

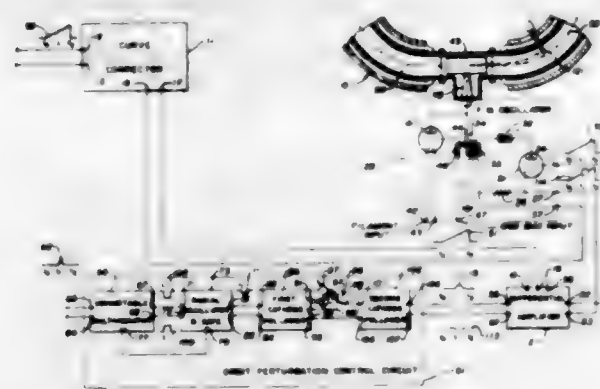
3,005,954

APPARATUS FOR CONTROL OF HIGH-ENERGY ACCELERATORS

Harry G. Heard, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 8, 1959, Ser. No. 805,111
6 Claims. (Cl. 328-236)

1. Control means for a charged particle accelerator employing a rising magnetic field and increasing accelerating voltage to accelerate particles in an orbit of constant radius comprising means producing a voltage pulse in timed relation to said increasing accelerating voltage, means including a radial oscillator and gate circuit for producing a half sine wave voltage from said voltage pulse, means producing a positive and negative counter-

part of said half wave, and means selectively applying said positive and negative counterparts upon said rising accelerating voltage for varying the rate of change of



accelerating voltage with respect to magnetic field in said accelerator to briefly vary the particle orbit therein whereby said beam is controllably directed in part upon target means during acceleration.

3,005,955

DEMODULATORS

Earl W. Grant, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed June 26, 1958, Ser. No. 744,757
12 Claims. (Cl. 330-10)



1. In a synchronous modulator-demodulator system having means for generating a modulated signal, means for generating a control signal having the frequency of the carrier frequency, a transistor having base, emitter, and collector electrodes coupled to said signal generating means; the improvement comprising means coupling the output of said modulated signal generating means in the emitter collector circuit of said transistor, and means coupling the output of said control signal generating means across the base and emitter of said transistor, and output connections for the demodulated signal coupled to said emitter and said collector.

3,005,956

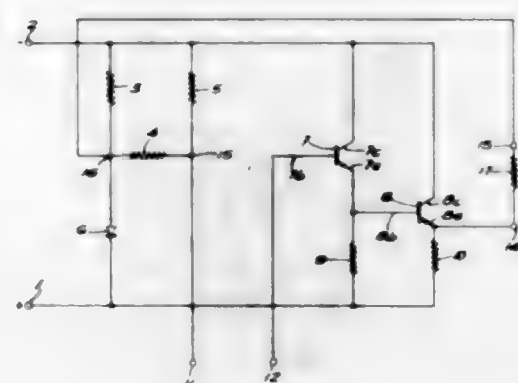
CURRENT AMPLIFIER FOR LOW IMPEDANCE OUTPUTS

Earl W. Grant, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed June 26, 1958, Ser. No. 744,760
4 Claims. (Cl. 330-14)

1. A current amplifier comprising a four-legged electrical bridge, one leg of said bridge containing a resistance, a diode in another leg of the bridge adjacent said first named leg containing said resistance and in series with said first-mentioned leg to form a junction therewith, a power input terminal electrically connected to the end of said resistance remote from said junction, another power input terminal electrically connected to

the end of said diode remote from said junction, the remaining legs of said bridge including a transistor and emitter resistance in series with the emitter of said transistor, the collector electrode of said transistor coupled to one power input terminal through an emitter resistance, a signal input terminal electrically connected between said first mentioned resistance and said diode, another signal input terminal electrically connected to the



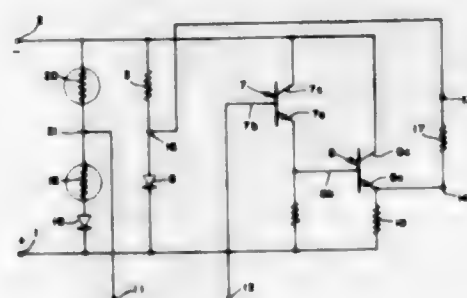
base of said transistor, an output terminal electrically connected to said emitter and another output terminal electrically connected to and between said first mentioned resistance and said diode, said bridge being substantially balanced with substantially no signal at said output when substantially no signal at said input, when the voltage drop across said diode is substantially equal to the voltage drop across the resistance connected to said emitter electrode.

3,005,957

CURRENT AMPLIFIER FOR LOW IMPEDANCE OUTPUTS

Earl W. Grant, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 29, 1960, Ser. No. 11,847
2 Claims. (Cl. 330-19)



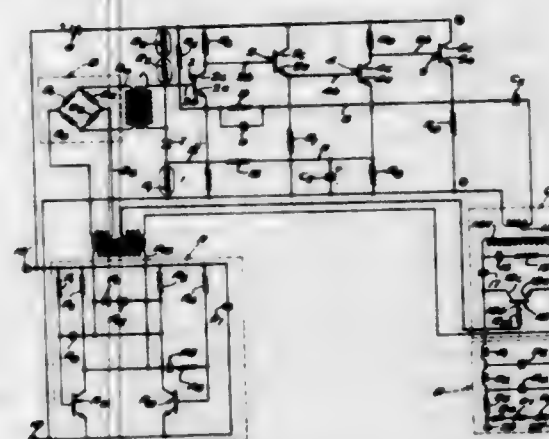
1. A current amplifier comprising power input terminals, a resistance diode network connected to said power input terminals, said network including in series a pair of resistors and a Zener diode in series, a signal input terminal coupled to said network at a point between said first-named resistors, a second resistance diode network including in series a resistance and a Zener diode coupled to said power input terminals, an output terminal for said amplifier coupled to said second network at a point between said resistance and said diode of said second network, a pair of transistors in cascade each having a collector, emitter and base electrode, a signal input terminal coupled to the base of one of said transistors and an output terminal coupled to the emitter of the second transistor, and the emitter of said first transistor coupled to the base of the second transistor, the collectors of said transistors coupled to one of said power terminals and the emitters of said transistor coupled to the other of said power terminals through individual resistances.

3,005,958

TEMPERATURE-SENSITIVE BIAS NETWORK

Earl W. Grant, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed June 26, 1958, Ser. No. 744,759
2 Claims. (Cl. 330-19)



1. An amplifier circuit comprising a pair of power terminals, four transistor stages, the transistor of each stage having a base, a collector, and an emitter and being connected across said power terminals, a signal input terminal to the first stage, the first one of said transistor stages being connected in common emitter configuration and having a collector load impedance with a resistive component, the second one of said transistor stages being connected in common collector configuration and having an emitter impedance with a resistive component, the collector of the transistor of said first stage being connected to the base of the transistor of said second stage, the third transistor stage being connected in common emitter configuration and having an emitter impedance with a resistive component, the emitter of said second stage transistor being connected to the base of the transistor of said third transistor stage, the fourth transistor stage being connected in common collector configuration, the collector of said third stage transistor being connected to the base of the transistor of said fourth transistor stage, an output terminal connection to one of said power terminals and to the emitter of said fourth stage transistor, an A.C. feedback coupling the emitter of said fourth stage transistor to the emitter of said first stage transistor, a D.C. feedback connection coupling the emitter of said third stage transistor to the base of said first stage transistor, a temperature compensating network comprising a plurality of impedance elements and having an intermediate point coupled to the input terminal of said first transistor providing a temperature coefficient compensating for changes in conductivity of the remaining portion of said amplifier circuit, shunted across the power terminals of said amplifier circuit.

3,005,959

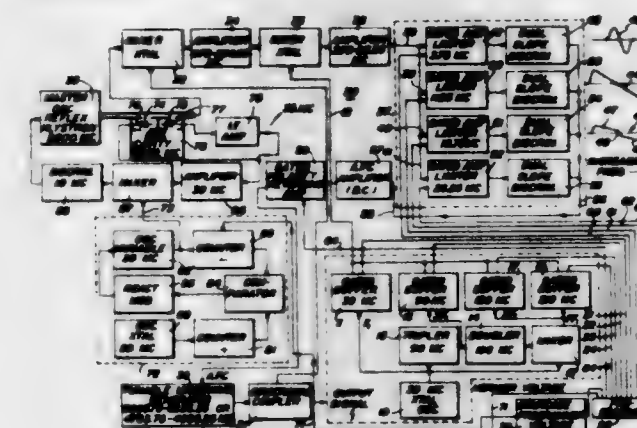
SIGNAL GENERATOR SYSTEM

George Bruck, Wyoming, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Aug. 25, 1959, Ser. No. 835,911
6 Claims. (Cl. 331-11)

1. A signal generation system, including a source of signals at frequency F , a generator having a frequency f to be controlled accurately step-wise over a wide range of frequencies by increments Δf , the frequency F approximating the center frequency of said generator, means for heterodyning the frequency F with the frequency f , to provide frequencies $f-F$ or $F-f$, means for providing any one of a plurality of fixed frequencies mF_1 , where m has values differing only by increments of two, a heterodyne device having an input circuit and an output circuit, means for supplying the selected one of said fixed fre-

quencies and the frequencies $f-F$ or $F-f$ to said input circuit of said heterodyne device for heterodyming therein to provide a frequency equal to the difference between mF_1 and $((f-F)$ or $(F-f))$, a plurality of frequency discriminators connectable selectively to the output of said heterodyne device, said frequency discriminators having each output voltages of opposite polarities in response to applied frequencies of opposite senses with respect to



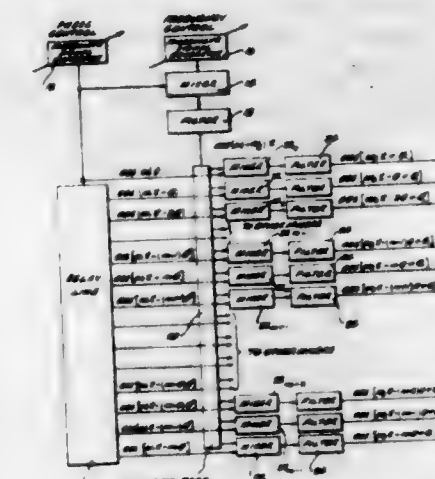
a predetermined center frequency, the center frequencies of said frequency discriminators having values $n\Delta f$, where n are integers different by a factor of two, and where said center frequencies are lower than the frequency F_1 and symmetrically arranged between the frequencies zero and F_1 , and an automatic frequency control channel coupled from said discriminators to said generator, Δf being a common factor of the frequency mF_1 .

3,005,960

APPARATUS FOR GENERATING MULTIPLE SIGNALS WITH INDEPENDENTLY CONTROLLABLE PHASE DIFFERENCES AND FREQUENCY

Bert D. Levenson, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Jan. 24, 1958, Ser. No. 711,102
7 Claims. (Cl. 331-38)

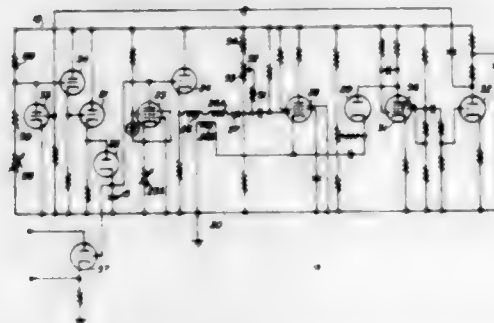


1. An apparatus for producing a plurality of output signals of the same frequency, successive ones of said signals having a determinable phase difference, said apparatus comprising a delay line adapted to receive a variable frequency signal at one extremity thereof; means for providing output junctions at a plurality of spaced points along said delay line; a plurality of mixers, each one of said mixers corresponding to a different output junction along said delay line; means for coupling each of said output junctions to an input circuit of the mixer corresponding thereto; means for applying a signal differing in frequency from said variable frequency by a predetermined number of cycles per second to the remaining

input circuit of each of said plurality of mixers; and means coupled to each of said mixers for isolating the signals appearing at the respective outputs thereof that are of a frequency equal to said predetermined number of cycles per second.

3,005,961 SELF-CYCLING TRIANGULAR WAVEFORM GENERATOR

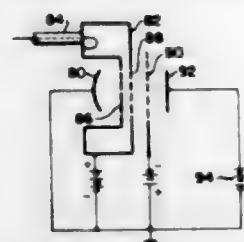
Reuben H. Wallace, Austin, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 3, 1960, Ser. No. 47,336
4 Claims. (Cl. 331-54)



1. A self-cycling triangular waveform generator comprising a multir comparator having an input and an output, linearly decreasing voltage generating means connected to said multir input, a phantatron square-wave generator having an input and an output, said multir output connected to said phantatron input, means for switching said linearly decreasing voltage generating means having an input and an output, said phantatron output connected to said switching means input, and the output of said switching means connected to said linearly decreasing voltage generating means for switching said generating means and determining the starting time and voltage thereof.

3,005,962 BEAM TUBE OSCILLATOR HAVING ELECTRON REFLECTING MEANS PROVIDING REGENERATIVE FEEDBACK

Donovan V. Geppert, Mountain View, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Jan. 7, 1957, Ser. No. 632,825
1 Claim. (Cl. 331-81)

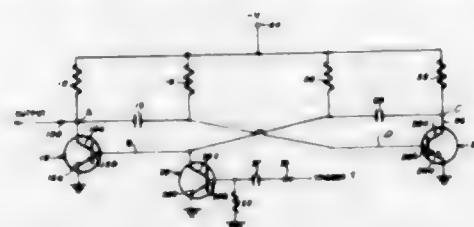


A high frequency oscillator comprising, in combination, a single cavity resonator having a predetermined resonant frequency and provided with gap-defining, apertured walls perpendicular to the axis of symmetry of said oscillator, a cathode for emitting a stream of electrons, an electron collector, means including first and second sources of potential for biasing said resonator and collector positively relative to said cathode and for projecting a stream of electrons along a path from said cathode through said resonator to said collector, said resonator being operative to velocity modulate electrons emerging from said gap at said predetermined frequency, said aperture having a diameter such that the ratio of its diameter to that of the electron stream emerging from said gap is greater than 2, an electron permeable planar electrode in the path of said

electron stream between said resonator and said collector, a third source of direct current potential connected to said electrode for maintaining said electrode at a negative potential with respect to said cathode, said electrode being spaced both electrically and mechanically from said gap-defining walls by a distance related to the potentials applied to said electrode and to said resonator and to said cathode such that a substantial portion of electrons velocity modulated by said resonator are reflected back through the gap-defining walls, the transit time for electrons traveling from said gap to said electrode and back to said gap being equal to an odd number of half-periods at said predetermined frequency whereby the reflected electron stream re-entering said gap is density modulated and the resonator excited at said predetermined frequency to maintain oscillations therein, the remaining portion of the electrons velocity modulated by said resonator passing said electrode and continuing along said path to said collector, said reflected stream constituting the sole source of regenerative feedback to said resonator, and means for extracting energy from said resonator.

3,005,963 TRANSISTORIZED MULTIVIBRATOR CIRCUIT ADAPTED TO OSCILLATE FOR ONLY A PREDETERMINED TIME

Phillip Emile, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed July 23, 1959, Ser. No. 829,160
4 Claims. (Cl. 331-113)
(Granted under Title 35, U.S. Code (1952), sec. 266)



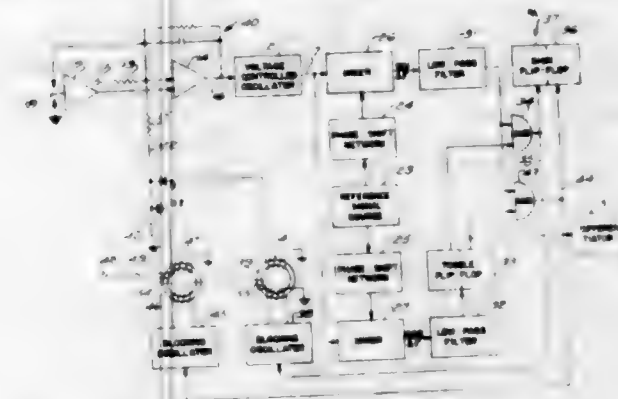
1. A multivibrator circuit adapted to oscillate for a predetermined number of cycles in response to an applied trigger pulse, said circuit comprising in combination: first and second transistors, first and second coupling capacitors, resistance means and voltage supply means all connected for free-running multivibrator operation, both said transistors being initially in the saturated condition, means for applying a triggering pulse to cut off one of said transistors, said transistors exhibiting the characteristic that a finite charge is required to change each transistor from its saturated to its cut off condition, and means including the values of said resistance means and said capacitors for successively reducing the amount of charge on said capacitors during each of said cycles of operation.

3,005,964 SIGNAL FORM CONVERSION APPARATUS

Bernard M. Gordon, Newton, Mass., assignor to Epsco, Incorporated, Boston, Mass., a corporation of Massachusetts
Filed Apr. 18, 1958, Ser. No. 729,321
3 Claims. (Cl. 332-19)

1. In a system having a chopper stabilized operational amplifier for converting an input signal amplitude into a directly proportional rate, apparatus in the feedback loop of said operational amplifier comprising, an oscillator providing an output signal having a frequency controlled in accordance with the amplitude of the output signal from said operational amplifier, a source of a signal of reference frequency, means for mixing said oscillator output signal with time quadrature components of said reference frequency signal to derive first

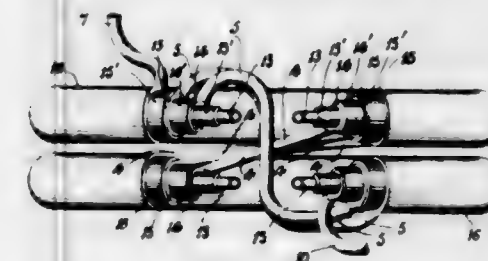
and second signals in time quadrature at difference frequency, first and second gating means jointly energized by said first signal, means responsive to said second signal for conditioning said first and second gating means during mutually exclusive time intervals in accordance with the relative phase between said first and second signals, means responsive to the output signal of the conditioned



gating means for providing a sign output signal characteristic of the polarity of said input signal, means responsive to said first and second gating means output signals for providing first and second oppositely polarized feedback signals having a magnitude indicative of said difference frequency, and means for coupling said first and second feedback signals to the input of said chopper stabilized operational amplifier.

3,005,965 ELECTRICAL IMPEDANCE DEVICES

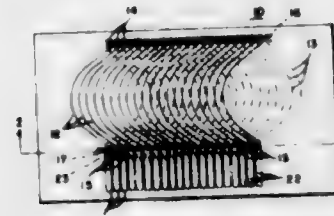
Urho L. Wertenen, 14881 Manor, Detroit 38, Mich.
Filed Feb. 8, 1956, Ser. No. 564,263
2 Claims. (Cl. 333-24)



1. An air core electrical impedance device comprising: an electrical series loop of two coaxially insulated conductors; a first terminal at the first end of the outer conductor; means connecting the other end of the outer conductor to the first end of the inner conductor; a second terminal at the other end of the inner conductor; means for supporting the device; and, at least one additional inner coaxially insulated conductor provided with terminal means at each end thereof.

3,005,966 PRINTED CIRCUIT DELAY LINE

John A. Strom, Chelmsford, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed June 17, 1960, Ser. No. 37,009
2 Claims. (Cl. 333-31)



1. A printed circuit skewed inductance coil, comprising, a dielectric support, a plurality of coil half turns of con-

ductive material having one direction of curvature on one surface of said support, a plurality of coil half turns of conductive material having a direction of curvature opposite to said first direction of curvature on the other surface of said support, each of said coil half turns having two terminals, each of the coil half turns on one side of said support having one terminal directly opposite a terminal of a corresponding coil half turn on the other side of said support, all of said coil half turns except the end turns on said one side of said support having their other terminal directly opposite a terminal of a coil half turn adjacent said corresponding coil half turn on the other side of said support, conductive means for connecting all of the opposite terminals of said coil half turns together to thereby provide a continuous coil, a plurality of capacitance elements on said support adjacent said coil half turns, and means for connecting said capacitance elements in parallel with the turns of said inductance coil.

3,005,967 FREQUENCY-COMPENSATED COAXIAL ATTENUATOR

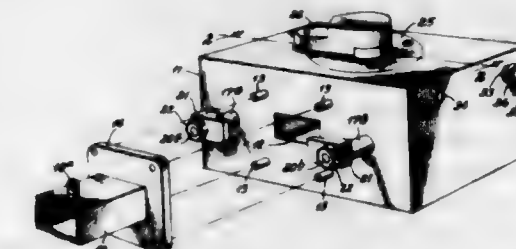
Bruno O. Weinschel, Bethesda, and Julian F. Cottrell, Silver Spring, Md., assignors, by mesne assignments, to Weinschel Engineering Co., Inc., Kensington, Md., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 24,998
7 Claims. (Cl. 333-81)



1. A high-frequency coaxial attenuator having opposed conductive surfaces lying between coaxial terminals, one of said surfaces being constituted by a thin layer of resistive material adhered to the surface of an insulating member to constitute a lossy-attenuator surface, and extending continuously between said coaxial terminals, except for a narrow circumferential gap; a thin layer of insulating material covering said layer of resistive material on both sides of said gap; and a further layer of conductive material covering said layer of insulating material for a portion of the axial extent of said resistive material on both sides of said gap, said further layer being electrically separated from said layer of resistive material by said layer of insulating material.

3,005,968 CLAMPING DEVICE FOR TESTING WAVE GUIDES

William T. Jones and Thomas L. Gray, Jr., Dallas, Tex., assignors to Texas Instruments Company, Dallas, Tex., a corporation of Delaware
Continuation of abandoned application Ser. No. 607,315, Aug. 31, 1956. This application July 10, 1958, Ser. No. 748,564
2 Claims. (Cl. 333-98)



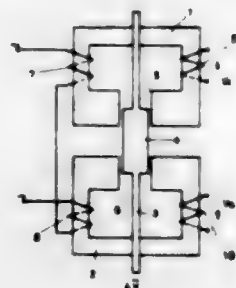
1. The combination comprising wave guide test apparatus including a block characterized by a flat face with at least two pins projecting normally therefrom and defining a through bore extending normally from said flat

face, a wave guide to be tested comprised of a guide section provided with tunable plug means and terminating in a flange presenting a flat surface and defining at least two holes, said wave guide being coupled to the wave guide test apparatus with the said flat surfaces in intimate contact, the guide section and the through bore of said block in registry and the said pins received through the holes defined by said flange, and means for coupling a propagation source of radio frequency energy to said block to propagate energy into the end of the through bore defined by said block remote from the flat face of said block, said block further defining a pair of cylinder chambers parallel to and on either side of the through bore, a piston received in each said chamber with its piston rod projecting out of said block normally from said flat face, said block further defining a compressed air inlet channel, an exhaust outlet channel and a pair of cylinder channels each communicating with one of said cylinders, a disc defining intersecting through bores positioned in said block for rotary movement relative thereto, a handle attached to said disc for rotating same, said disc adapted to be rotated to a first position whereat the intersecting bores of said disc place said compressed air inlet channel in communication with said cylinder channels to admit compressed air to said cylinder channels to move said pistons to the end of said chambers remote from said flat face, and to a second position whereat the intersecting bores of said disc place said exhaust outlet channel in communication with said cylinder channels to relieve the pressure from said pistons, and clamping lugs mounted on the ends of said piston rods and overlying the wave guide flange, said pistons when relieved of pressure arranged to extend said clamping lugs a sufficient distance beyond said pins to allow removal and insertion of said wave guide flange between said lugs and said pins.

3,005,969

POSITION TRANSDUCER ADAPTED TO TRANSDUCE THE DISPLACEMENT OF A MECHANICAL MEMBER INTO AN ALTERNATE VOLTAGE
Waclaw Wysocki, Milan, Italy, assignor to Construzioni Meccaniche Riva S.p.A., Milan, Italy, a company of Italy

Filed June 24, 1958, Ser. No. 744,200
Claims priority, application Italy July 6, 1957
5 Claims. (Cl. 336-134)



1. A position transducer, comprising two fixed generally C-shaped magnetic cores, each of said cores having its opposed ends spaced from each other, one of said cores being inverted with reference to the other, said cores being spaced from one another and having the spaces between their opposed ends aligned, a primary coil wound around one arm of each of said fixed magnetic cores, said primary coils being connected in series and connected to a source of alternating current, a secondary coil wound around another arm of each of said fixed magnetic cores, and a third magnetic core movably mounted in said aligned spaces to vary the magnitude of the air gaps between the opposed ends of the two fixed cores upon movement of said third core therein, whereby to induce in said secondary coils a voltage the magnitude of which varies in accordance with the position of said third core, the dif-

ference between the induced voltages in the secondary coils varying in accordance with the position of the movable core in said spaces.

3,005,970

INFRA-RED SENSITIVE PHOTOCONDUCTIVE CELL

Yves A. Rocard, Paris, France, and Bernard E. Bartels, Greenwood Landing, N.Y., assignors, by mesne assignments, to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia

Filed June 8, 1954, Ser. No. 435,248
4 Claims. (Cl. 338-18)



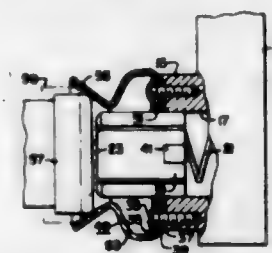
1. An infra-red sensitive photoconductive cell comprising a first tubular envelope disposed in at least partially telescoped relation surrounding a second tubular envelope with one end of said first envelope closed by a window substantially transparent to infra-red and the other end of said first envelope sealed to said second envelope; a disc member sealingly mounted in said second tubular envelope intermediate the ends of said first envelope to form a closed chamber defined by said first and second tubular envelopes, said window and said disc member; photosensitive material in said chamber on the surface of said disc member facing said window; electrodes carried by said disc member conductively connected to said photosensitive material and having end portions extending to the exterior of said photoconductive cell for connection to electrical circuit apparatus; the space between said first and second tubular envelopes being evacuated to minimize heat interchange between the inner and outer envelopes; a hollow body having a portion thereof removably secured in the other end of said first tubular envelope and arranged cooperable therewith to define a reservoir for a liquid cooling medium effective to lower the temperature of said photosensitive material below 0° C.

3,005,971

WEATHERPROOF LAMP HOLDERS FOR FLUORESCENT LAMPS

George C. Lennox, Southbury, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Filed Dec. 10, 1957, Ser. No. 701,802
6 Claims. (Cl. 339-94)



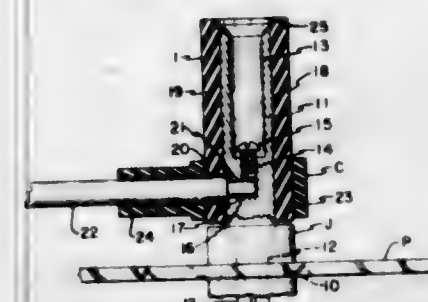
1. A lamp holder comprising a base, a portion on said base having an opening therein, a biased contact plunger slidable in said opening for receiving at least one lamp terminal, a tubular flexible and resilient sealing member on said portion of said base in alignment with

said opening, an outwardly flared end portion on said sealing member of a size for engaging a disc-like end portion of a lamp to form a seal therewith, and the inward face of said flared portion imposing forces axially and laterally inwardly of itself against said lamp end portion to effect said seal.

3,005,972

INSULATION CONNECTOR FOR USE WITH ELECTRICAL JACK AND PLUG STRUCTURES

Richard C. Koch, 5579 E. Lehigh Ave., Denver, Colo.
Filed Apr. 14, 1958, Ser. No. 728,478
2 Claims. (Cl. 339-101)



1. In combination, an electrical jack-plug structure including an elongate cylindrical body and an outer concentric elongate tubular member of frictional insulating material having an internal diameter equal to the diameter of said body for mounting in press-fit relation on said body with a bore passing through said elongate tubular member and said body normal to the longitudinal axes thereof for receiving an electrical wirelike conductor, and means in said body to engage said conductor for holding said conductor in electrical contact with said body; and an insulation connector composed of frictional insulating material including a first tubular member defined by a collar of limited length in relation to said elongate tubular member having an internal diameter equal to the outer diameter of said elongate tubular member for mounting in outer concentric, press-fit relation on said elongate tubular member in a position overlying the bore, and a second tubular member integrally formed with said collar and extending radially and outwardly therefrom perpendicular to the axis thereof, the opening formed by said second tubular member extending through said first tubular member for registry with the bore in said elongate tubular member and said cylindrical body whereby the opening and bore are aligned to receive the conductor.

3,005,973

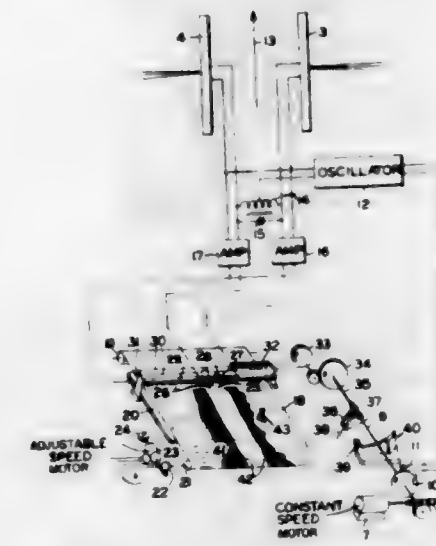
SUBMARINE LOCATING SYSTEM

Hans Kietz, Bremen, Germany, assignor to Atlas-Werke Aktiengesellschaft, Bremen, Germany, a firm

Filed Feb. 11, 1955, Ser. No. 487,494
Claims priority, application Germany Feb. 13, 1954
6 Claims. (Cl. 340-3)

2. Equipment for mapping objects on and near the sea bottom by echo-location, comprising elongated carrier means having its greatest dimension forming a horizontal axis, means for moving said carrier means through the water in a direction in alignment with said horizontal axis, an elongated transducer mounted on said carrier means with its greatest dimension parallel to said axis, said transducer having an elongated radiating surface the length of which is parallel to said axis and the width of which is downwardly inclined from the vertical, said length being more than substantially ten wavelengths and the width substantially one wavelength of emitted sound pulses, said transducer adapted to produce sound waves in a beam having a fan-shaped beam pattern occupying approximately a quadrant below the horizontal in a vertical plane transverse to said axis and having a narrow

width in a direction perpendicular to said vertical plane, said transducer including means adapted to periodically emit sound pulses in successive beam patterns toward the sea bottom and receive echoes returned from said objects at the sea bottom, recording means comprising means for moving a stylus in synchronism with the emission of said pulses across a recording strip, means connected to said transducer for applying received echo signals to said

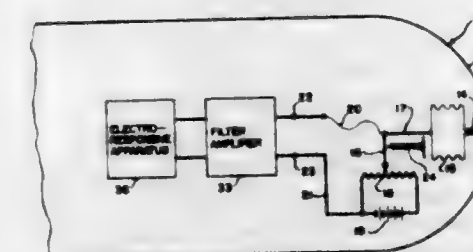


3,005,974

APPARATUS FOR DETECTING THE WAKE OF A VESSEL

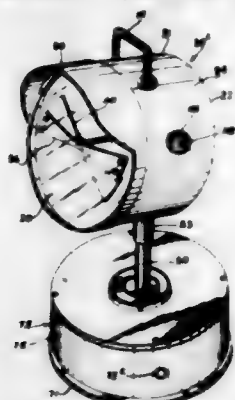
Doyle L. Northrup and Ernest R. Haberland, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 5, 1947, Ser. No. 784,210
4 Claims. (Cl. 340-4)

(Granted under Title 35, U.S. Code (1952), sec. 266)



3. In apparatus of the character disclosed adapted to be mounted within a torpedo for detecting the presence of a ship's wake in the fluid medium through which said torpedo moves, in combination, a torpedo having an aperture in the nose thereof, means forming a closed chamber within said torpedo, said chamber having a flexible diaphragm included therein, means communicating between said chamber and said aperture whereby changes in the pressure of said fluid cause movement of said flexible diaphragm as the torpedo enters said wake, transducer means for converting mechanical to electrical energy, an operative mechanical connection between said transducer means and said diaphragm whereby movement of the diaphragm in response to changes in the pressure in said chamber causes the generation of a voltage proportional to the rate of such changes, means for amplifying said voltage, and electro-responsive detecting and/or indication means operatively connected to said amplifying means for detecting and indicating said wake.

3,005,975
WARNING, SAFETY STOP AND DISTRESS
SIGNALLING LIGHTS DEVICES
 Lawrence N. Lea, 1683 University Ave., Bronx, N.Y.
 Filed Nov. 16, 1959, Ser. No. 853,054
 2 Claims. (Cl. 340—81)

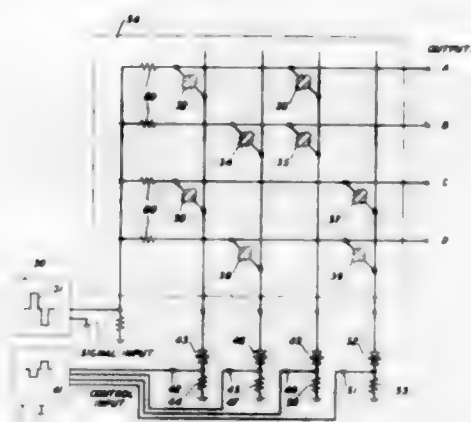


1. A warning signal device comprising a generally cylindrical housing having an open front end and a closed rear wall, a transparent colored lens mounted at said front end, a hood disposed over said open front end to shade said lens from extraneous light, a motor mounted in said housing, said motor having a forwardly extending shaft, a pair of vanes mounted on said shaft and angularly adjustable with respect to each other, at least one lamp mounted in said housing between said rear wall and said vanes so that the vanes cyclically interrupt light beams emitted by the lamp through said lens, a support for the housing extending radially therefrom, said support being a pipe, a power supply cable extending through said pipe and connected to said lamp and motor, and means for oscillating said housing and pipe alternately in one direction and in an opposite direction through 360° at a time, said means comprising a base, said pipe being rotatably supported on said base, motor means operatively connected to said pipe for driving the same, reversing switch means in circuit with said motor, and a power source in circuit with said switch means and motor means for energizing said motor means, said reversing switch means including a double-pole double-throw reversing switch carried by said base, said switch having an operating arm, a disk carried by said pipe, and an operating finger carried by said disk and disposed to operate said arm at the end of each full turn of the disk, pipe and housing through 360° of angular rotation, said disk carrying a pair of contact elements, another disk carried by said base, and a pair of ring contacts carried by said other disk, said contact elements being disposed to wipe said ring contacts respectively continuously during rotation of the first-named disk, pipe and housing, said power supply cable having wires connected to said contact elements, said power source having wires connected to the ring contacts respectively.

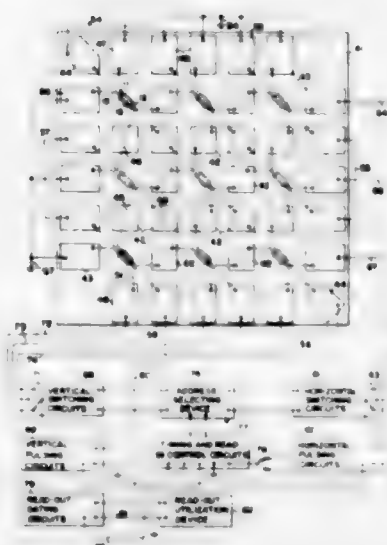
3,005,976
FERROELECTRIC CIRCUITS
 John R. Anderson, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
 Filed Nov. 21, 1955, Ser. No. 548,034
 13 Claims. (Cl. 340—166)

11. A switching circuit for transmitting pulses between an input terminal and selected ones of a plurality of output terminals comprising a plurality of ferroelectric gating circuits; each of said gating circuits being connected between said input terminal and a particular one of said output terminals; and a source of pulses to be gated connected to said input terminal; wherein each of said gating circuits includes an impedance element connecting said input and said output terminals, a ferroelectric capacitor having a dielectric material exhibiting two stable remanent polarization states and having two elec-

trodes, means connecting one of said electrodes to the output side of said impedance element, and means for selectively applying a potential to the other of said electrodes simultaneously with a pulse from said source being

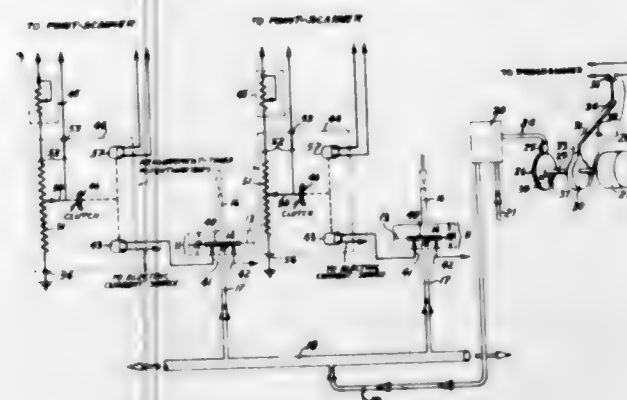


3,005,977
BISTABLE STATE MAGNETIC ELEMENTS AND
COUPLED CIRCUITRY
 Douglas C. Wendell, Jr., Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
 Filed Sept. 13, 1955, Ser. No. 533,987
 25 Claims. (Cl. 340—174)



1. A coupled circuit magnetic device, comprising: an electrical conductor unit including a plurality of substantially parallel elongated conductors insulated from each other by nonconductive coatings thereon; and a strip-shaped length of ferromagnetic material which extends continuously and closely around said conductor unit for a distance substantially longer than the periphery thereof, said conductor unit where encompassed by said length of ferromagnetic material being compact and substantially free of nonconductive spaces except for any gaps made unavoidable by conductor cross-sectional shape and by said insulating coatings on the conductors, and said strip-shaped length of ferromagnetic material being supported by, and lying closely adjacent to, a substantial portion of the surface of each such insulated electrical conductor which occupies a peripheral position in said conductor unit.

3,005,978
ELECTRO-PNEUMATIC DATA LOGGER
 Joseph S. Wapner, Hatboro, Pa., assignor to Flacher & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
 Filed Dec. 1, 1955, Ser. No. 550,405
 18 Claims. (Cl. 340—182)



1. An electro-pneumatic system for taking periodic readings of the level of a process-measurement or other measurement, including a pressure-operated electric switch, opposed pneumatic means in operative juxtaposition to said switch and arranged to open said switch when the effective forces of pneumatic pressures applied to said two means are unbalanced in one direction and to close said switch when unbalanced in the other direction, one of said two opposed pneumatic means being connected to a pneumatic line whose pressure-level is proportional to or represents the level of the measurement to be read, a cyclic sweep-pressure generator connected to the other of said two opposed pneumatic means, arranged to generate a pneumatic pressure cyclicly varying proportionately to time, from a null or threshold pressure to the maximum of the aforesaid measurement pressure, and electrical means operable by said switch for varying an electrical characteristic of an electrical signal-circuit in proportion to the time required for the sweep-pressure to balance the measurement-pressure.

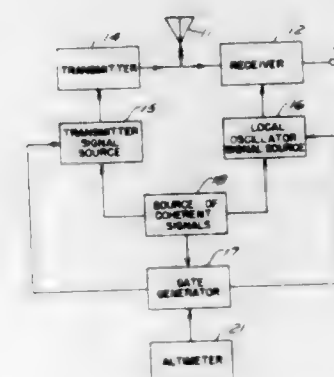
3,005,979
ELECTRICAL CONTROL APPARATUS
 Leonard Boddy, Ann Arbor, Mich., assignor to King-Seely Thermos Co., a corporation of Michigan
 Continuation of application Ser. No. 108,773, Aug. 5, 1949, now Patent No. 2,835,885, dated May 20, 1958.
 This application May 13, 1957, Ser. No. 658,888
 5 Claims. (Cl. 340—210)



1. In an electric gauging system for association with a source of electric energy having a variable voltage, a movable indicator, electrothermal gauging means integrally responsive to a variable current therethrough for positioning said indicator in accordance with the average magnitude of said current, current modulating means responsive to a variable physical condition to be gauged for varying the average current through said gauging means, voltage regulating means for controlling the supply of energy from said source to said gauging means and said current modulating means, said voltage regulating means comprising a tri-metallic strip, a pair

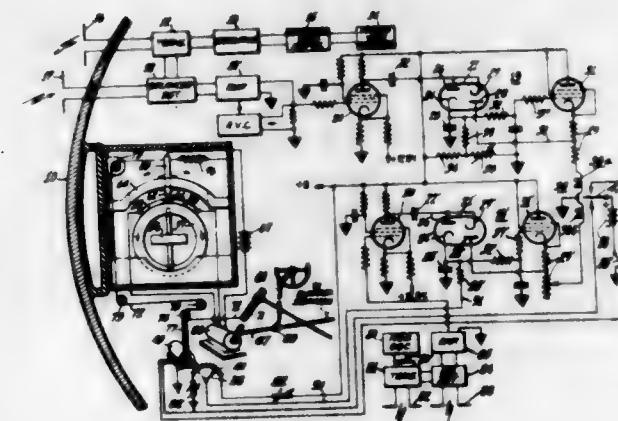
of electrical contacts the inter-relationship of which is controlled by said strip and a heater winding disposed in heat transfer relationship with said strip and connected in series with said contacts across said source, and circuit means for connecting the source, said pair of electrical contacts, a substantial portion of said tri-metallic strip, said electrothermal gauging means and said current modulating means in series with one another.

3,005,980
PULSED RADAR SYSTEM
 Maurice A. Meyer, Natick, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
 Filed Dec. 5, 1958, Ser. No. 778,504
 11 Claims. (Cl. 343—8)



3. In a pulsed Doppler radar system for providing an output signal characteristic of the relative velocity between said system and a predetermined energy scattering surface, apparatus comprising, a radar transmitter having nearly a 50% duty cycle for radiating pulses toward said scattering surface, a radar receiver responsive to said radiated pulse energy returned from said surface when said receiver is activated, means for controlling the pulse rate of said transmitter in accordance with the distance between said transmitter and said scattering surface, and means for activating said receiver only during time intervals which begin shortly after the termination of each radiated pulse and end just before the next radiated pulse whereby said receiver is activated nearly half the time while being insensitive to the direct radiation of said transmitted pulses.

3,005,981
RADAR CONTROL SYSTEM FOR GLIDE PATH
CONTROL OF AIRCRAFT
 Royden C. Sanders, Jr., Hightstown, and Ben R. Cole, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
 Filed May 19, 1944, Ser. No. 536,382
 3 Claims. (Cl. 343—14)

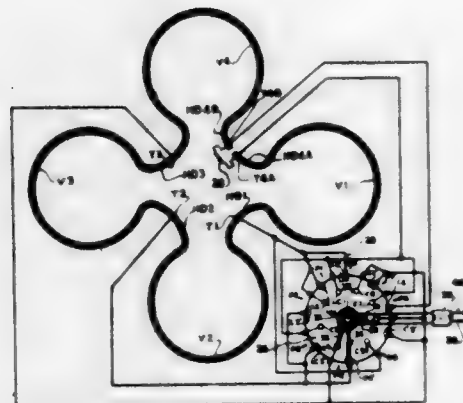


2. A control system installed in a dirigible air-borne device for guiding it downwardly toward a target, said

system comprising distance measuring means for producing an electrical quantity that is a predetermined function of the distance to said target, a frequency-modulated radio altimeter for producing a second electrical quantity that is a predetermined function of the altitude of said device, said altimeter including a frequency counter, means for biasing said counter to adjust the value of its output, a reversible motor, differential relay means for causing said motor to run in one direction or the other depending upon which one of said electrical quantities is the greater, means responsive to the rotation of said motor for changing said counter bias and thereby changing the value of said second electrical quantity in the sense to make said differential relay means stop said motor, and means for causing said aid-borne device to go to a lower or higher altitude in response to operation of said motor in the direction corresponding to an altitude measure that is too large or too small respectively.

3,005,982 INDOOR ANTENNA FOR TELEVISION RECEPTION

Philip Abraham Bernfeld, 153—14 73rd Ave.,
Flushing, N.Y.
Filed June 28, 1960, Ser. No. 39,280
10 Claims. (Cl. 343—724)



8. An antenna assembly comprising an array of conductive loops disposed in vertical planes at angles to each other, successive loops being connected by horizontal curved links center-tapped to define dipoles, two of said loops terminating in taps connected by a resistor, a multiple position switch having fixed contacts connected to taps of the links, rotatable contacts disposed to contact the fixed contacts at each position of the switch, and a transmission line having terminals making wiping contact with the rotatable contacts for selectively connecting individual ones of said loops to the transmission line at certain positions of the switch and for selectively connecting groups of serially connected loops and links in others of the switch positions, there being four of said loops and four of said dipoles in planes in said array at right angles to each other, said loops and links being formed by a single piece of bent conductive material.

3,005,983 FOCUSSED AND DEFLECTION OF CENTIMETER WAVES

Charles H. Chandler, Princeton, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Oct. 30, 1947, Ser. No. 783,174
6 Claims. (Cl. 343—753)

1. A scanning system for radiant electromagnetic energy comprising a focusing device, a transducer radiator element, said radiator element and focusing device being arranged for the passage of said energy therebetween, and a stack of spaced metallic plates parallel to

a component of the polarization of said energy, said plates having openings therein with aligned polygonal oppositely parallel straight edges and being positioned



for the passage of said energy therethrough in a direction parallel to said plates between said focusing device and said radiator element.

3,005,984
SLOTTED WAVEGUIDE ANTENNAS
Charles F. Winter, Wrentham, and John E. Walsh,
Wellesley, Mass., assignors to Raytheon Company, a
corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,416
4 Claims. (Cl. 343—771)

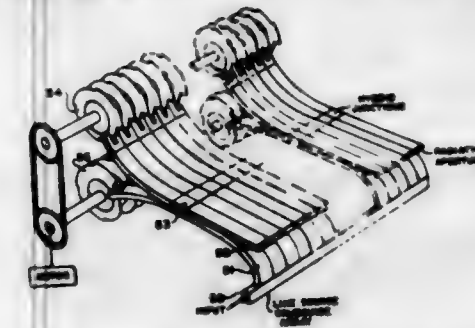


1. A dual pattern antenna comprising: a waveguide having two broad walls and two narrow walls; a plurality of regularly spaced coupling elements provided in one of said broad walls for coupling energy between said waveguide and free space, said coupling elements being arranged and adapted to provide divergent antenna patterns having a predetermined phase center separation, the coupling element intermediate the ends of said waveguide being longer and spaced farther distant from the longitudinal axis of said one broad wall than the other coupling elements, each of said other coupling elements progressively shorter and closer to said longitudinal axis, said coupling elements providing an increasing and then decreasing amount of coupled energy with respect to the ends of said waveguide whereby input power at each end of said waveguide is substantially attenuated before it reaches the opposite end and power received from free space within each of said antenna patterns is substantially coupled to one of said waveguide ends and power received from free space within another of said antenna patterns is substantially coupled to said other waveguide end.

3,005,985
PRE-PROGRAMMED SCANNING ANTENNA
Seymour B. Cohn, Calabasas, and Edward M. T. Jones,
Portola Valley, Calif., assignors to the United States
of America as represented by the Secretary of the
Army
Filed Sept. 19, 1957, Ser. No. 685,778
4 Claims. (Cl. 343—777)

3. A line source scanning antenna system for directing radiation at various angles in a predetermined sequence comprising a line array of input and output waveguides, a separate directional coupler for coupling radio frequency energy from each input waveguide to an output waveguide, a slotted stub terminating one end of each waveguide, a variable radius disc rotated in each slot for vary-

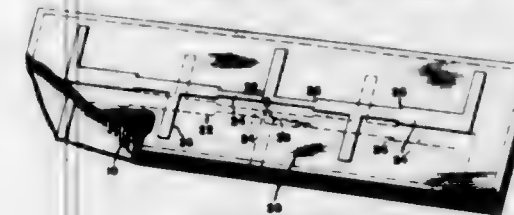
ing the electrical length of each waveguide, means for applying radio frequency energy to the other end of said



input waveguides, radiating means attached to the other end of said output waveguides.

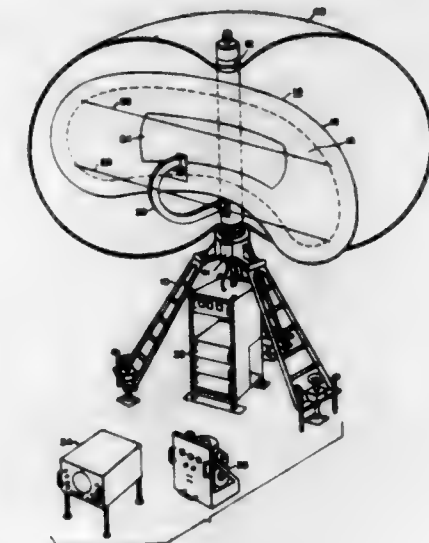
3,005,986 PARALLEL STRIP TRANSMISSION ANTENNA ARRAY

Richard H. Reed, Los Angeles, Calif., assignor to Hughes
Aircraft Company, Culver City, Calif., a corporation
of Delaware
Filed June 1, 1956, Ser. No. 588,921
6 Claims. (Cl. 343—810)



1. A microwave antenna array comprising: a central, substantially nonconductive, planar member having a plurality of transverse apertures; conductive strip members on each side of said planar member and spaced apart from each other, the broad faces of said strip members lying substantially parallel to the plane of said planar member and said strip members each including transmission and radiating elements, said strip members together providing a radiating array; and sheets of bonding material on each side of said planar member, coupling said strip members to said planar member.

3,005,987
INFLATABLE ANTENNA ASSEMBLY
Kent M. Mack, North Litchfield, and James W. Currie
and Stanley H. Sanborn, Baltimore, Md., assignors to
Westinghouse Electric Corporation, East Pittsburgh,
Pa., a corporation of Pennsylvania
Filed Feb. 19, 1957, Ser. No. 641,439
11 Claims. (Cl. 343—872)



8. In an antenna system, a collapsible base member, an upright shaft carried for rotation by said base member, an inflatable parabolic antenna carried by said shaft and comprising an endless inflatable tube which is generally elliptical in configuration when inflated, a pair of generally elliptical sheets of flexible non-conducting material fastened at their peripheries to opposite sides of said tube to form an enclosure, means for maintaining a pressure differential between the interior and exterior of said enclosure whereby the flexible sheets will form curved surfaces, wave energy reflective material fixed to the outer surface of one of said sheets, a wave energy feed mechanism for directing radio frequency energy toward said reflective material, and means for rotating said upright shaft member to impart scanning motions to said antenna.

DESIGNS

OCTOBER 24, 1961

191,605

HOOD OR THE LIKE

Nina L. Andrews, 162 John St., East Providence, R.I., and Harold W. Demopoulos, 190 Nelson St., Providence, R.I.

Filed Feb. 23, 1960, Ser. No. 59,483
Term of patent 3½ years
(Cl. D3—13)

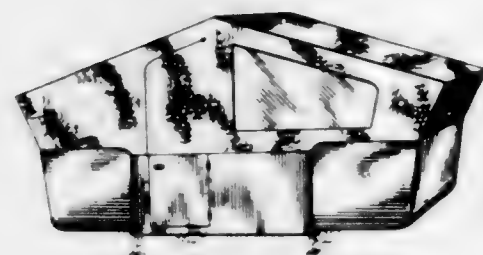


191,606

COMBINED TENT AND TRAILER

Raymond P. Smith, 10825 La Salle, Huntington Woods, Mich.

Filed June 17, 1960, Ser. No. 61,009
Term of patent 14 years
(Cl. D14—3)



191,607

TRUCK

Ralph G. Rutman, Allentown, Pa., assignor to Mack Trucks, Inc., Plainfield, N.J., a corporation of New York

Filed June 9, 1961, Ser. No. 65,538
Term of patent 14 years
(Cl. D14—3)



191,608

COMBINED SCREW DRIVER HOLDER AND KEY CHAIN

Sidney Blum, 30 E. 37th St., New York, N.Y.

Filed Aug. 8, 1960, Ser. No. 61,655
Term of patent 14 years
(Cl. D17—3)

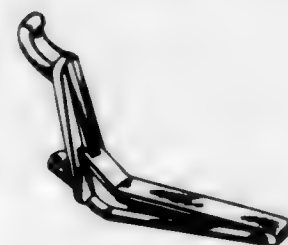


191,609

HOOK FOR A PERFORATED SUPPORT BOARD

Stanley H. Gordon, Cook County, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Filed Jan. 9, 1961, Ser. No. 63,474
Term of patent 14 years
(Cl. D17—12)

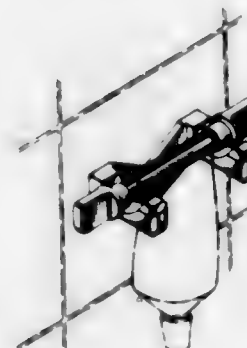


191,610

TUBE CONTENT DISPENSER

Stanley Gelb, Wyndmoor, Pa., assignor to Gell Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Nov. 30, 1960, Ser. No. 63,036
Term of patent 14 years
(Cl. D4—3)



OCTOBER 24, 1961

U. S. PATENT OFFICE

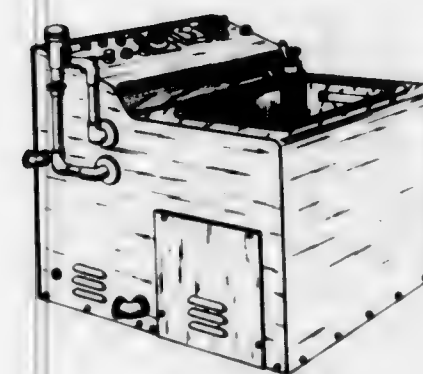
1123

191,611

ULTRASONIC CLEANING UNIT

Thomas J. Kearney, 17217 Westmoreland, Detroit, Mich.

Filed Mar. 23, 1961, Ser. No. 64,447
Term of patent 14 years
(Cl. D9—2)



191,614

SPINNER-TYPE FISHING LURE

George E. Elrod, 2622 W. Quail Road, Tucson, Ariz., assignor of one-half to Curtis F. Bennett, Jr., Tucson, Ariz.

Filed Apr. 12, 1961, Ser. No. 64,751
Term of patent 14 years
(Cl. D31—4)

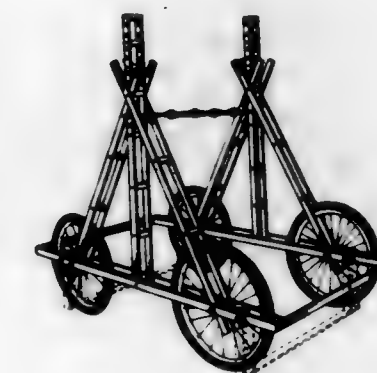


191,615

WHEELED TRAPEZE BAR

James William Gregory, 922 Hollywood Ave., Dallas, Tex.

Filed Sept. 13, 1960, Ser. No. 62,127
Term of patent 14 years
(Cl. D34—9)



191,612

FISH HOLDER FOR STRINGERS

Leo C. Pachner, Momence, Ill., assignor to P & K Incorporated, Momence, Ill., a corporation of Illinois

Filed July 29, 1960, Ser. No. 61,569
Term of patent 14 years
(Cl. D31—1)



191,613

FISHING LURE

Arthur R. Ralston, 5111 Independence Ave., Kansas City, Mo., assignor of one-third each to Reinold I. Nicolay and William A. Ralston, both of Independence, Mo.

Filed May 25, 1961, Ser. No. 65,345
Term of patent 14 years
(Cl. D31—4)

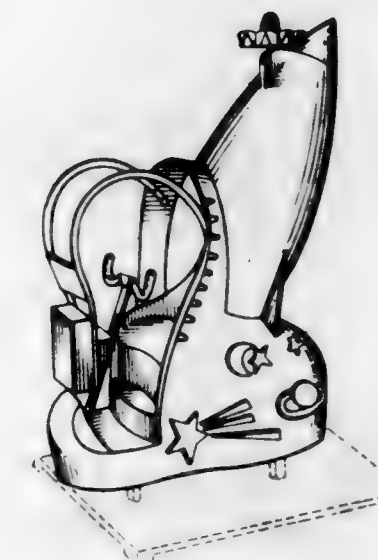


191,616

COIN OPERATED AMUSEMENT RIDE

David H. Braun, 950 W. 20th St., Hialeah, Fla.

Filed Mar. 2, 1961, Ser. No. 64,147
Term of patent 7 years
(Cl. D34—5)



191,617

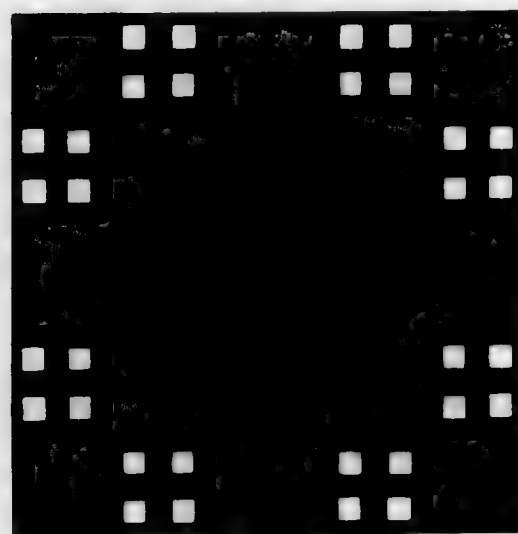
GAME BOARD

Joseph J. Goteri, 1217 E. 36th St., Brooklyn, N.Y., and Dan A. Padovano, 529 Carroll St., Brooklyn 15, N.Y.

Filed Oct. 31, 1960, Ser. No. 62,679

Term of patent 14 years

(Cl. D34-5)



191,618

VELOCIPÈDE

Carl W. Hedstrom, Gardner, Mass., and John Cuccio, Westport, Conn., assignors to Hedstrom Union Company, Fitchburg, Mass., a corporation of Massachusetts

Filed May 9, 1961, Ser. No. 65,081

Term of patent 7 years

(Cl. D34-15)



191,619

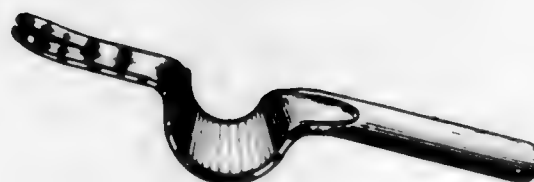
WEED PULLER OR SIMILAR ARTICLE

Robert Grabovac, 11217 Ave. N, Chicago, Ill.

Filed Nov. 28, 1960, Ser. No. 62,991

Term of patent 14 years

(Cl. D35-2)



191,620

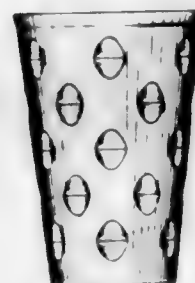
TUMBLER

Jack Bloch, Fort Worth, Tex., assignor to Loma Industries, Fort Worth, Tex., a corporation of Texas

Filed Sept. 21, 1960, Ser. No. 62,231

Term of patent 14 years

(Cl. D36-8)



191,621

SUPPORT FOR TRACTOR OR THE LIKE

Clovis O. Drake, 846 44th St. NW., Canton, Ohio, and Russell S. Drake, 3244 Twin Hills Road, Uniontown, Ohio

Filed Feb. 29, 1960, Ser. No. 59,570

Term of patent 14 years

(Cl. D41-1)



191,622

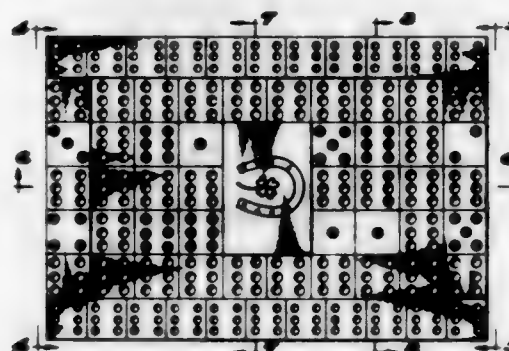
TRAY

Otis J. Goza, 317 S. Kenmore Ave., Los Angeles, Calif.

Filed Dec. 8, 1960, Ser. No. 63,154

Term of patent 14 years

(Cl. D44-10)



191,623

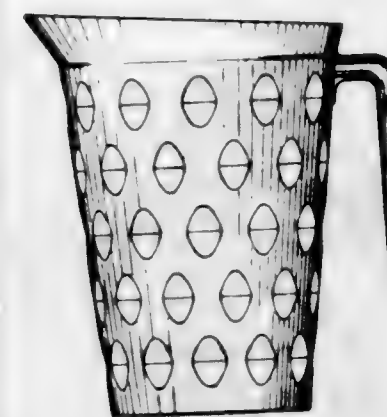
FITCHER

Jack Bloch, Fort Worth, Tex., assignor to Loma Industries, Fort Worth, Tex., a corporation of Texas

Filed Sept. 21, 1960, Ser. No. 62,230

Term of patent 14 years

(Cl. D44-21)



191,624

COFFEE MAKER

William M. Day, 11 Hatters Lane, Farmington, Conn.

Filed Nov. 9, 1960, Ser. No. 62,788

Term of patent 7 years

(Cl. D44-26)



191,625

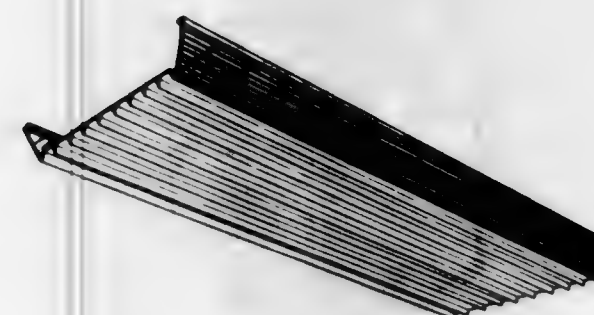
LIGHT DIFFUSER FOR LUMINAIRES

Ernest G. Johnson, St. Clairsville, Ohio, and Max M. Thomson, Mountville, W. Va., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed June 27, 1960, Ser. No. 61,117

Term of patent 14 years

(Cl. D48-16)



191,626

LAMP SHADE

Robert Bruce Heckman, Fort Atkinson, Wis., assignor to Thomas Industries Inc., Fort Atkinson, Wis., a corporation of Delaware

Continuation of application Ser. No. 44,730, Feb. 4, 1957. This application Feb. 26, 1958, Ser. No. 49,807

Term of patent 14 years

(Cl. D48-16)



191,627

LAMP SHADE

Robert Bruce Heckman, Fort Atkinson, Wis., assignor to Thomas Industries Inc., Fort Atkinson, Wis., a corporation of Delaware

Original application Feb. 26, 1958, Ser. No. 49,807.

Divided and this application Mar. 9, 1961, Ser. No. 64,706

Term of patent 14 years

(Cl. D48-16)



191,628

LIGHTING FIXTURE

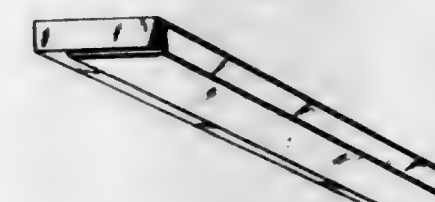
Josef Muller, Neheim-Husten, Germany, assignor to Lenze KG Lichttechnische Spezialfabrik, Neheim-Husten, Germany

Filed Oct. 24, 1960, Ser. No. 62,582

Claims priority, application Germany Apr. 23, 1960

Term of patent 7 years

(Cl. D48-23)

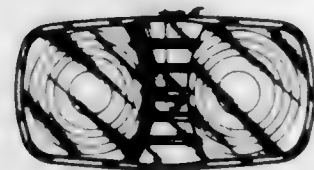


191,629

**CLEARANCE LAMP FOR COMMERCIAL
AUTOMOTIVE VEHICLES**

Donald S. Bruce, Holliston, Mass., assignor to Signal-
Stat Corporation, Brooklyn, N.Y., a corporation of
New York

Filed Mar. 23, 1960, Ser. No. 59,846
Term of patent 14 years
(Cl. D48—32)

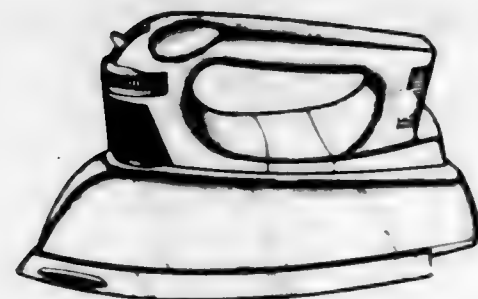


191,630

STEAM IRON

Alfred W. Madl, Milwaukee, Wis., assignor to John
Oster Manufacturing Co., Milwaukee, Wis., a corpora-
tion of Wisconsin

Filed Mar. 29, 1961, Ser. No. 64,540
Term of patent 14 years
(Cl. D49—6)

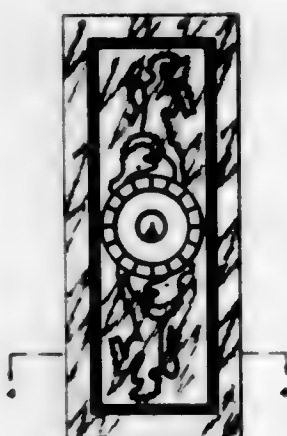


191,631

**COMBINED ESCUTCHEON PLATE
AND DOORKNOB**

Roy Stuart Denker, Redondo Beach, Calif., assignor to
Schlage Lock Company, a corporation
Filed May 23, 1961, Ser. No. 65,298

Term of patent 14 years
(Cl. D50—3)

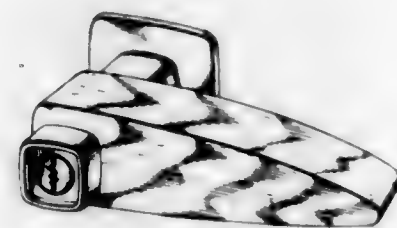


191,632

**COMBINED LOCK AND HANDLE UNIT
FOR DOORS**

Lea S. Schultz, Newport News, Va., assignor to Newport
News Shipbuilding and Dry Dock Company, Newport
News, Va., a corporation of Virginia

Filed Oct. 28, 1960, Ser. No. 62,650
Term of patent 14 years
(Cl. D50—7)

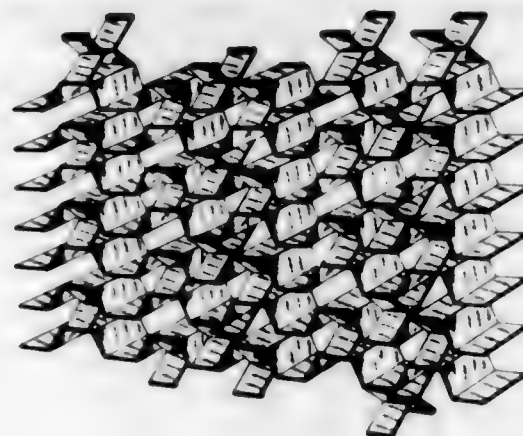


191,633

GRILLE

Edward C. Hallock, 86 Woodlane Ave., Summit, N.J.

Filed Sept. 28, 1960, Ser. No. 62,286
Term of patent 14 years
(Cl. D54—2)



191,634

SWAGING MACHINE

Raymond Joseph Krantz, Los Angeles, Calif., assignor,
by mesne assignments, to Northrop Aircraft, Inc.,
Beverly Hills, Calif., a corporation of California

Filed Mar. 20, 1959, Ser. No. 55,101
Term of patent 14 years
(Cl. D54—14)

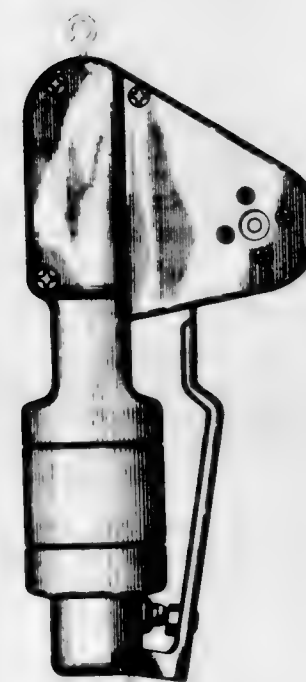


191,635

**PORTABLE CRIMPING TOOL FOR ELECTRICAL
CONNECTIONS**

George Urth, Verona, N.J., assignor to Buchanan Elec-
trical Products Corporation, Hillside, N.J., a corpora-
tion of New Jersey

Filed Jan. 12, 1960, Ser. No. 59,026
Term of patent 14 years
(Cl. D54—14)



191,637

**COMBINED CIGARETTE VENDING MACHINE
AND AUTOMATIC PHONOGRAPH**

Frank Realmuto, Bayside, N.Y., and Jerome J. Colombo,
Boston, Mass., assignors to Command Industries
Corp., Boston, Mass.

Filed Jan. 12, 1961, Ser. No. 63,515
Term of patent 14 years
(Cl. D56—4)

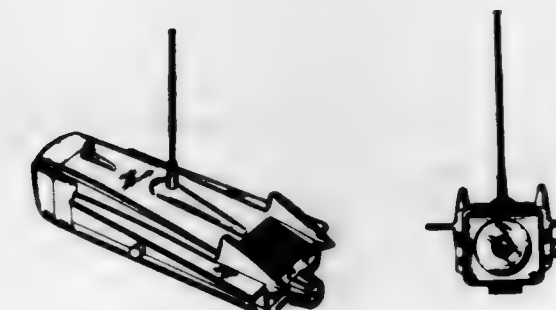


191,638

RADIO OR SIMILAR ARTICLE

Richard J. Harper, South Ozone Park, N.Y., assignor to
Nakasako Industrial Co., Inc., New York, N.Y., a cor-
poration of New York

Filed Apr. 18, 1961, Ser. No. 64,801
Term of patent 14 years
(Cl. D56—4)

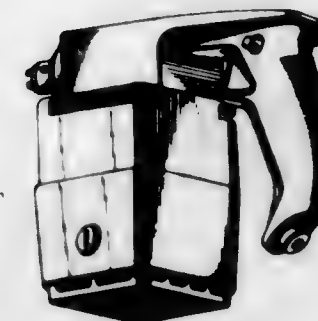


191,636

HAND DRILL

James M. Katzfey, Two Rivers, Wis., and Donald J.
Hutt, Philadelphia, Pa., assignors to H. K. Porter Com-
pany, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed Nov. 9, 1960, Ser. No. 62,792
Term of patent 14 years
(Cl. D54—14)

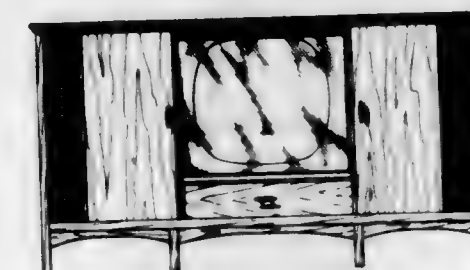


191,639

**COMBINED PHONOGRAPH, RADIO AND
TELEVISION CABINET**

Frank M. Freimann and Clyde L. Welbaum, Fort Wayne,
Ind., assignors to The Magnavox Company, Fort
Wayne, Ind., a corporation

Filed Sept. 15, 1960, Ser. No. 62,142
Term of patent 14 years
(Cl. D56—4)



191,640
BAG

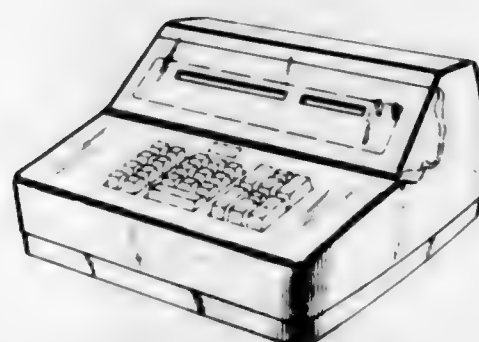
William F. Stark, Nashotah, and John H. Wahl, Hales Corners, Wis., assignors to Howard B. Stark Company, Pewaukee, Wis., a corporation of Wisconsin
Filed Jan. 16, 1961, Ser. No. 63,562
Term of patent 3½ years
(Cl. D58—2)

191,642
COMBINATION SEMI-RIGID STORAGE CONTAINER AND DRUM LINER

Thomas W. Winstand, Baltimore, Md., assignor to Hedwin Corporation, Baltimore, Md., a corporation of Maryland
Filed Mar. 24, 1959, Ser. No. 55,147
Term of patent 14 years
(Cl. D58—17)

191,643
CALCULATING MACHINE

Hans Krebs, Berlin-Schöneberg, and Karl Westinger and Ernst Altenburger, Oberndorf (Neckar), Germany, assignors to Olympia Werke A.G., Wilhelmshaven, Germany
Filed May 4, 1960, Ser. No. 60,453
Term of patent 14 years
(Cl. D64—11)

191,641
BOTTLE

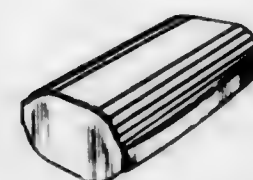
Ernest L. Du Free, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 64,194
Term of patent 14 years
(Cl. D58—6)

191,644
ADDING MACHINE

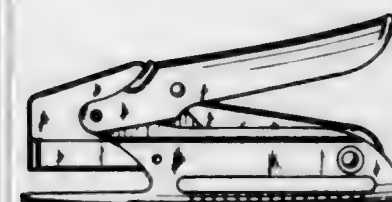
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferrar, Huntington Woods, Mich., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 7, 1961, Ser. No. 65,509
Term of patent 14 years
(Cl. D64—11)

191,645
CAKE OF SOAP OR THE LIKE

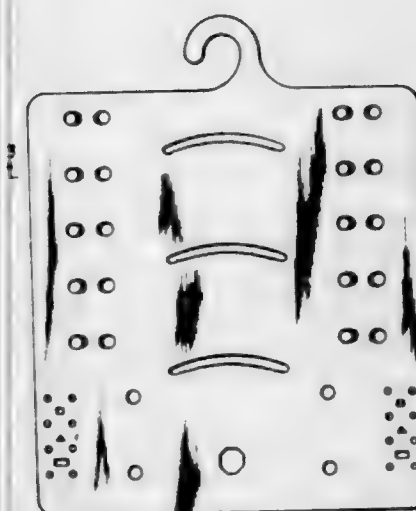
Charles T. Gerhart, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 12, 1959, Ser. No. 58,321
Term of patent 14 years
(Cl. D73—1)

191,646
STAPLING PLIER OR SIMILAR ARTICLE

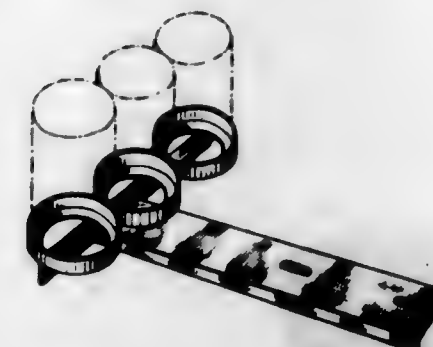
Henry Ruskin, Bayside, and Sheldon I. Cohen, Flushing, N.Y., assignors to Swingline Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,888
Term of patent 14 years
(Cl. D74—1)

191,647
HABERDASHERY HANGER

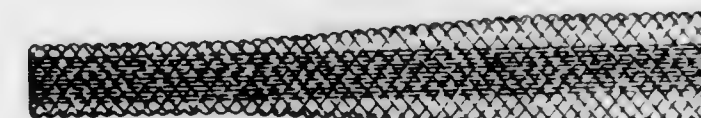
Karl B. Seeger, 2830 N. 40th St., Milwaukee, Wis.
Filed Apr. 28, 1960, Ser. No. 60,360
Term of patent 14 years
(Cl. D80—8)

191,648
MERCHANDISE DISPLAY SUPPORT BRACKET FOR CASH REGISTERS OR THE LIKE

George J. Perkins 44 Hawthorne Road, Barrington, Ill.
Filed Sept. 13, 1960, Ser. No. 62,241
Term of patent 14 years
(Cl. D80—9)

191,649
SANITARY NAPKIN

Elizabeth Dudley, Rose Valley Road, Wallingford, Pa.
Filed Jan. 8, 1960, Ser. No. 58,969
Term of patent 14 years
(Cl. D83—1)

191,650
CASING FOR AN AEROSOL-SPRAY DISPENSER

Ralph E. Kruck, Clinton, Conn., assignor to Metal Fabrications, Inc., Waterbury, Conn., a corporation of Connecticut
Filed Dec. 28, 1960, Ser. No. 63,368
Term of patent 14 years
(Cl. D83—1)

191,651
BARRETTE FINDING

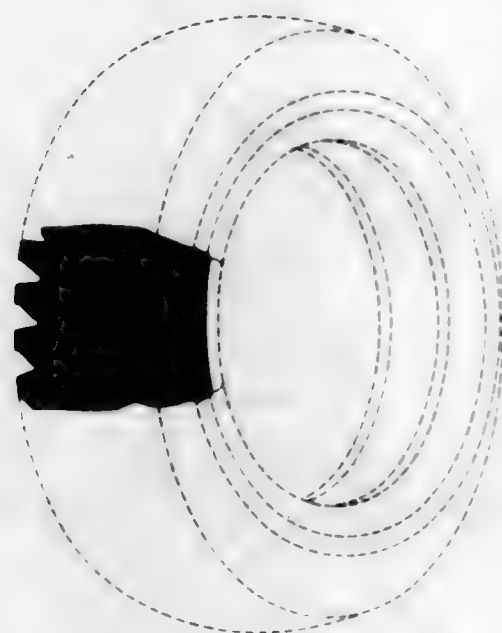
William A. Carroll, Warwick, R.I., assignor of fifty percent to The Lorne Company, Inc., Providence, R.I., a corporation of Rhode Island, and fifty percent to Riviera Trading Corporation, New York, N.Y., a corporation of New York
Filed Nov. 7, 1960, Ser. No. 62,745
Term of patent 3½ years
(Cl. D86—10)



191,452
TIRE

Carl F. Smajd, St. Clair Shores, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed May 26, 1961, Ser. No. 65,363
Term of patent 7 years
(Cl. D90-20)

191,453
LAWN SPRINKLER

John D. Beinert, Babylon, N.Y., assignor, by means of assignments, to International Patent Research Corp., New York, N.Y., a corporation of New York

Filed July 21, 1960, Ser. No. 61,454
Term of patent 7 years
(Cl. D91-1)



LIST OF REISSUE PATENTEEES

TO WHOM

PATENTS WERE ISSUED ON THE 24TH DAY OF OCTOBER, 1961

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- Gaylord, William M., Jr.: *See*—
Raub, Samuel H. S., and Gaylord, Jr. Re. 25,061.
Kruess, Geoffrey G., 10% to A. C. Nolte, Sr. Radio direction finder. Re. 25,064, 10-24-61, Cl. 343-113.
McGraw-Edison Co.: *See*—
Phillips, Davis M. Re. 25,062.
Nolte, Albert C., Sr.: *See*—
Kruess, Geoffrey G. Re. 25,064.
Phillips, Davis M., to McGraw-Edison Co. Drive fittings for pipe or conduit. Re. 25,062, 10-24-61, Cl. 285-39.
R. and W. Construction Co., Inc.: *See*—
Roland, Frank E. Re. 25,060.
Raub, Samuel H. S., and W. M. Gaylord, Jr., to Union Carbide Corp. Impingement-type separators. Re. 25,061, 10-24-61, Cl. 183-110.
Roland, Frank E., to R. and W. Construction Co., Inc. Impact hole forming method and mechanism therefor. Re. 25,060, 10-24-61, Cl. 176-23.
Schiffman, Bernard. Automobile accessory. Re. 25,063, 10-24-61, Cl. 5-94.
Union Carbide Corp.: *See*—
Raub, Samuel H. S., and Gaylord, Jr. Re. 25,061.

LIST OF DESIGN PATENTEEES

- Altenburger, Ernst: *See*—
Krebs, Hans, Westinger, and Altenburger. 191,643.
Andrews, Nina L., and H. W. Demopoulos. Hood or the like. 191,605, 10-24-61, Cl. D3-13.
Beinert, John D., to International Patent Research Corp. Lawn sprinkler. 191,653, 10-24-61, Cl. D91-1.
Bennett, Curtis F., Jr.: *See*—
Elrod, George E. 191,614.
Bloch, Jack, to Loma Industries. Tumbler. 191,620, 10-24-61, Cl. D36-8.
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Flanders, Robert H., J. E. Dimick, and R. Amara, to California Packing Corp. Peach pit fragmentation detection means and techniques. 3,005,549, 10-24-61, Cl. 209-111.5.
Flanders, Robert H., and J. E. Dimick, to California Packing Corp. Peach pit fragment detection means and techniques. 3,005,550, 10-24-61, Cl. 209-111.5.
Fleck, Raymond N., and C. G. Wight, to Union Oil Co. of California. Organic nitrogen compound separation by selective adsorption. 3,005,828, 10-24-61, Cl. 260-290.
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 Gibbs, Irving, to R. T. Vanderbilt Co., Inc. Fungus combating with ferric nitroso dimethyl dithio carbamate containing tetramethyl thiuramdisulfide. 3,005,748, 10-24-61, Cl. 167-22.
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 Grant, Earl W., to Statham Instruments, Inc. Current amplifier for low impedance outputs. 3,005,957, 10-24-61, Cl. 330-19.
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 Harrison, John W., to W. R. Grace & Co. Method of packaging annular shaped articles. 3,005,542, 10-24-61, Cl. 266-46.
 Harrison, Wayne E., and E. Linna, to Midwestern Instruments, Inc. Structure for recording time values. 3,005,380, 10-24-61, Cl. 88-61.
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 Heuer, Russell P., to General Refractories Co. Refractory roof. 3,005,422, 10-24-61, Cl. 100-99.
 Heuer, Russell P., to General Refractories Co. Refractory roof construction and refractory brick. 3,005,424, 10-24-61, Cl. 110-99.
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- Hutter, Will, to Niederrheinische Maschinenfabrik Becker & Van Hullen. Plant for the fabrication of chipboards or similar construction materials by means of an intermittent working single story press. 3,005,230, 10-24-61, Cl. 18-4.
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- Doble, Warren, and Sully. 3,005,528.
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- Jacobi, Ernst S. Lust, and A. Van Schoor, to E. Merck. Aktiengesellschaft. Insect repellents. 3,005,747, 10-24-61, Cl. 167-22.
- Jaeger, Richard J., Jr., to Bell Telephone Laboratories, Inc. Line switching and control system. 3,005,874, 10-24-61, Cl. 179-15.
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- Jaschke, Kurt, to Sulzer Freres, S.A. Turbomachine plant including a closed lubricating, cooling, and sealing fluid circuit. 3,005,518, 10-24-61, Cl. 184-8.
- Jeffrey, Clarence L. Well tubing retrieving device. 3,005,655, 10-24-61, Cl. 294-92.
- Jenkins, Thomas E., to General Electric Co. Waste disposal apparatus. 3,005,595, 10-24-61, Cl. 241-46.
- Jenkins, Thomas E., to General Electric Co. Waste disposal apparatus. 3,005,596, 10-24-61, Cl. 241-46.
- Jenny, Walter, to Ciba Ltd. New 1:4-dihydroxy-5-acylamino-anthraquinones. 3,005,822, 10-24-61, Cl. 260-272.
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- Johansen, John V., and P. P. Stanley, to Reichel & Drews, Inc. Wrapping machine. 3,005,298, 10-24-61, Cl. 53-224.
- Johns, William F., to G. D. Searle & Co. D-homo-18-norestra-1,3,5(10)-trien-17a-ones and intermediates thereto. 3,005,835, 10-24-61, Cl. 260-397-5.
- Johnson and Johnson: See—
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- Johnson, Wayne R., to Minnesota Mining & Mfg. Co. Constant speed drive mechanism. 3,005,940, 10-24-61, Cl. 318-305.
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- Johnston, Louis P., to Johnston & Associates. Advertising display supports. 3,005,278, 10-24-61, Cl. 40-128.
- Johnston, Percy W. R. H. Means for applying soles to shoes and other footwear. 3,005,217, 10-24-61, Cl. 12-33-4.
- Johnston, Percy W. R. H. Sole applying method for shoes and other footwear. 3,005,218, 10-24-61, Cl. 12-142.
- Jones, Edward M. T.: See—
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- Jones, John F., and R. M. Summers, to The B. F. Goodrich Co. Polymers containing amide and carboxylic groups. 3,005,784, 10-24-61, Cl. 260-21.
- Jones, John F., H. Tucker, and L. F. Arnold, to The B. F. Goodrich Co. Polymers containing ester and carboxylic groups. 3,005,785, 10-24-61, Cl. 260-21.
- Jones, William T., and T. L. Gray, Jr., to Texas Instruments Co. Clamping device for testing wave guides. 3,005,968, 10-24-61, Cl. 333-98.
- Jousson, Erik, to Svenska Akkumulator Aktiebolaget Jungner. Sealing assembly for batteries. 3,005,865, 10-24-61, Cl. 136-136.
- Judkins, John R., to United States of America, Navy. Temperature compensated voltage comparison circuit. 3,005,918, 10-24-61, Cl. 307-88-5.
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- Jullien, Agricol, to Salicam, Compagnie Saliniere de la Camargue. Wharf and berthing system. 3,005,437, 10-24-61, Cl. 114-231.
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- Kaeding, Warren W., to The Dow Chemical Co. 5-guinoil methylcarbamate. 3,005,823, 10-24-61, Cl. 260-287.
- Kallmann, Hartmut P., and B. Rosenberg, to L. E. Ravich. Devices exhibiting persistent internal polarization and methods of utilizing the same. 3,005,707, 10-24-61, Cl. 95-1.
- Kasey, Robert A., Jr., E. H. Rinker, Jr., and V. H. Scheuerman, to E. I. du Pont de Nemours and Co. Woven fabric. 3,005,472, 10-24-61, Cl. 139-428.
- Kaufman, Maxime G., and L. O. Hayden, to United States of America, Navy. Fluid level indicator. 3,005,345, 10-24-61, Cl. 73-327.
- Keller, Dan W., to Calumet Mfg. Co. Processing basket. 3,005,396, 10-24-61, Cl. 95-100.
- Keller, James P., H. G. Schutze, and A. T. Watson, to Esso Research and Engineering Co. Production of cyclic hydrocarbons. 3,005,855, 10-24-61, Cl. 260-673.
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- Kesinger, Donald A., to International Harvester Co. Corn pither. 3,005,551, 10-24-61, Cl. 209-136.
- Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Telephone switching circuit. 3,005,876, 10-24-61, Cl. 179-18.
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- Coberly, Clarence J. 3,005,414.

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- Koch, Richard C. Insulation connector for use with electrical jack and plug structures. 3,005,972, 10-24-61, Cl. 339-101.
- Kock, Paul O., to Bituminous Coal Research, Inc. Stoker mechanism having a pulsatory grate. 3,005,446, 10-24-61, Cl. 122-376.
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- Kristiansen, Svend H., to Hi-Press Air Conditioning of America, Inc. Outlet unit for ventilating plants. 3,005,397, 10-24-61, Cl. 98-40.
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- Kushnuk, Walter P., to Ameco Tools, Inc. Honing devices. 3,005,294, 10-24-61, Cl. 61-184-2.
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- Langer, Shirley A.: See—
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- Langer, Theodore W., deceased (S. A. Langer, administrator), and W. J. Ziemba, to Union Carbide Corp. Hydraulic fluid composition. 3,005,776, 10-24-61, Cl. 252-77.
- Large, William E.: See—
- Scholtes, Donald R., and Large. 3,005,947.
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- Larson, Clayton E., to White Metal Rolling & Stamping Corp. Stepladders and structural components thereof. 3,005,513, 10-24-61, Cl. 182-165.
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- Laviano, Don. Cutting implement. 3,005,478, 10-24-61, Cl. 143-133.
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- Lea, Lawrence N. Warning, safety stop and distress signalling lights devices. 3,005,976, 10-24-61, Cl. 340-81.
- Le Bus, Franklin L. Sr. Wash-over spear apparatus. 3,005,506, 10-24-61, Cl. 175-315.
- Ledin, Carl W., W. J. Gorman, and G. E. Engman, to Laboratory for Electronics, Inc. Fluid bearing control for a magnetic head. 3,005,675, 10-24-61, Cl. 346-74.
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- Lesona Corp.: See—
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- Lennox, Samuel F.: See—
- Fromer, Morton, Kemka, and Lennox. 3,005,939.
- Lentze, Felix, to Licentia Patent-Verwaltungs G.m.b.H. Device for photoelectrically scanning webs. 3,005,916, 10-24-61, Cl. 250-219.
- Lepetit S.p.A.: See—
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- Les Laboratoires Français de Chimiotherapie: See—
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- Levenson, Berl D., to Hughes Aircraft Co. Apparatus for generating multiple signals with independently controllable phase differences and frequency. 3,005,960, 10-24-61, Cl. 331-38.
- Leverette, Bobby N. Fastener. 3,005,645, 10-24-61, Cl. 287-23.
- Levin, Roland M.: See—
- Starger, Samuel L., Levin, and Garshells. 3,005,402.
- Levy, Marilyn, to United States of America, Army. Latensification of photographic emulsions. 3,005,710, 10-24-61, Cl. 96-65.
- Lewis, James C., to United States of America, Agriculture. Preparation of chlorogenic acid. 3,005,757, 10-24-61, Cl. 195-85.
- Libby, Paul A., A. Ferri, and M. H. Bloom, to United States of America, Air Force. Nozzle cooling apparatus and method. 3,005,338, 10-24-61, Cl. 73-147.
- Libson, Maurice E. Food mixing apparatus. 3,005,399, 10-24-61, Cl. 99-348.
- Libson, Maurice E. Microphone apparatus. 3,005,905, 10-24-61, Cl. 240-2.
- Licentia Patent-Verwaltungs G.m.b.H.: See—
- Lentze, Felix. 3,005,916.
- Lindberger, Walter, to Lumoprint Zindler KG. Electrophotographic copying device. 3,005,388, 10-24-61, Cl. 95-17.
- Lindberger, Walter. Electrophotographic copying device. 3,005,389, 10-24-61, Cl. 95-17.
- Lincoln, Frank H., W. P. Schneider, and G. B. Spero, to The Upjohn Co. 6a,16a-dimethyl-11-oxygenated-17a-hydroxy-unsaturated-pregnane-3,20-diones. 3,005,838, 10-24-61, Cl. 260-397-45.
- Lincoln, Frank H., Jr., and W. P. Schneider, to The Upjohn Co. 2a-methyl-21-halo-11-oxygenated 4-pregn-8 20-dione and the intermediates in the preparation thereof. 3,005,837, 10-24-61, Cl. 260-397-45.
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- Brault, Andre R., and Lindberg. 3,005,377.
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- Linderholm, Sven O., to The Ohio Brass Co. Stream distribution in terminating devices and joints for high voltage cables and method for producing same. 3,005,868, 10-24-61, Cl. 174-73.
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- Lockwood, Henry K., to Savage Arms Corp. Shotgun sight. 3,005,263, 10-24-61, Cl. 33-47.
- Loftin, Laurence K., Jr., to United States of America, National Aeronautics and Space Administration. Wind tunnel airstream oscillating apparatus. 3,005,339, 10-24-61, Cl. 73-147.
- Lorenz, Leo S. Radial basic furnace roof. 3,005,423, 10-24-61, Cl. 110-99.
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- Loomis, Russell M., A. G. Knellmar, and J. S. Lundvall, to Union Carbide & Rubber Co. Lading separating means. 3,005,419, 10-24-61, Cl. 105-376.
- Lopez, John, to Universal Corrugated Box Machinery Corp. Stack ejecting mechanism. 3,005,560, 10-24-61, Cl. 214-8.
- Lor Corp.: See—
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- Neely, Richard S. 3,005,416.
- Lorenz, Anton: See—
- Schneppack, Fridtjof F. 3,005,661.
- Winick, Jack I. 3,005,660.
- Loretan, Edouard, to Parechoc S.A. Shock-absorbing bearing for movable elements of small mechanisms, notably of measuring instrument. 3,005,667, 10-24-61, Cl. 308-159.
- Louch, James B., and W. L. Archer, to The Dow Chemical Co. Method for joining wood articles with resinous coal acids adhesives. 3,005,743, 10-24-61, Cl. 156-331.
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 Paulson, Loree A. D., to Ingersoll-Rand Co. Rock drill. 3,005,443, 10-24-61, Cl. 121-25.
 Pavlovic, Ivan, and K. Foster, to Westinghouse Electric Corp. Heat treatment of high aluminum-iron alloys. 3,005,738, 10-24-61, Cl. 146-120.
 Payne, George B., and W. J. Sullivan, to Shell Oil Co. Epoxy alcohol production. 3,005,832, 10-24-61, Cl. 260-348.
 Payne, Paul D., Jr., to Philco Corp. Method of applying an electroconductive film to a vitreous surface. 3,005,721, 10-24-61, Cl. 117-211.
 Pearman, Lawrence. Automatic sampler. 3,005,346, 10-24-61, Cl. 73-421.
 Pechthold, Helms. Machine for producing hollow bodies of thermoplastic synthetics by extruding and blowing. 3,005,231, 10-24-61, Cl. 18-5.
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 Perras, Lucien, to Regie Nationale des Usines Renault. Diaphragm of feed pumps for liquid hydrocarbons. 3,005,788, 10-24-61, Cl. 260-8.
 Perdreux, Rene J., Jr., and S. Wallack, to Leesona Corp. Regulated power supply. 3,005,942, 10-24-61, Cl. 320-1.
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- Petersen, Siegfried: See—
Domagk, Gerhard, Scheilhammer, Petersen, and Konig. 3,005,524.
- Pethrick, Samuel R., and M. B. Sparke, to The British Petroleum Co. Ltd. Synthetic lubricants. 3,005,775, 10-24-61, Cl. 252-57.
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- Pichnarcik, Anthony J.: See—
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- Pillbox, Stephen Y. Package and liner therefor. 3,005,717, 10-24-61, Cl. 99-171.
- Pinson, Ellis R., Jr., and G. D. Laubach, to Chas. Pfizer & Co., Inc. Salts of steroidal amino acid esters. 3,005,836, 10-24-61, Cl. 260-397.45.
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- Pittsburgh Chemical Co.: See—
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- Pittsburgh Plate Glass Co.: See—
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Tilgner, Ralph F. 3,005,221.
- Pitoy, Albert F. Method of and apparatus for making diode elements. 3,005,900, 10-24-61, Cl. 219-79.
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Pokorny, Louis, Jr. 3,005,211.
- Pokorny, Louis, Jr., 1/4 to L. Pokorny and 1/4 to J. M. Pokorny. Seat section of a sofa-bed frame. 3,005,210, 10-24-61, Cl. 5-13.
- Pokorny, Louis, Jr., 1/4 to L. Pokorny and 1/4 to J. M. Pokorny. Sofa-bed mechanism. 3,005,211, 10-24-61, Cl. 5-13.
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- Pomeroy, Sawyer M., to The W. S. Tyler Co. Woven structural material. 3,005,524, 10-24-61, Cl. 189-82.
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- Powers, Paul O., and H. R. Herman. Method of maleinizing petroleum resin. 3,005,800, 10-24-61, Cl. 260-78.4.
- Prasky, Charles, and W. S. Swanson, to United States of America, Interior. Multiple compartment rotary drum for the leaching of ores or related products in a continuous countercurrent system. 3,005,690, 10-24-61, Cl. 23-269.
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- Prosen, Stanley P., and F. R. Barnett, to United States of America, Navy. Plastics sabot. 3,005,408, 10-24-61, Cl. 102-93.
- Pütz, Hans, to Joh. Vaillant K.G. Electric continuous-flow heater with water deficiency safety device. 3,005,888, 10-24-61, Cl. 200-83.
- Raab, Karlheinz, to Jos. Schneider & Co., Optische Werke. Photographic or cinematographic objective with range-finder control. 3,005,393, 10-24-61, Cl. 95-44.
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- Rae, Randolph B., to United States of America, Navy. Streamlined ring for assuring optimum compression in a ramjet. 3,005,309, 10-24-61, Cl. 60-35.6.
- Raffensperger, Stanley P., and R. D. Vogt, to General Foods Corp. Stabilization of grape flavored soft drink mixes containing methyl anthranilate. 3,005,715, 10-24-61, Cl. 99-78.
- Ragan, Robert O., and M. A. Snyder, to Chicago Carton Co. Camera. 3,005,391, 10-24-61, Cl. 95-11.
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- Reder, Joseph, also known as Josef Reder, 33 1/4% to Bernard Oleott and Associates, and 66 1/2% to AB. Alex Pedersen. Pulse jet engine. 3,005,310, 10-24-61, Cl. 60-35.6.
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- Regie Nationale des Usines Renault: See—
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- Riedl, Hans-Joachim, and J. Dahmlos, to Wassa-Chemie Aktiengesellschaft. Process for desilicifying fluorospar and the like minerals. 3,005,685, 10-24-61, Cl. 23-88.
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- Riester, William C., and M. Bitzer, to Trico Products Corp. Windshield cleaner motor. 3,005,445, 10-24-61, Cl. 121-164.
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- Rimahaw, Stanley J., to United States of America, Atomic Energy Commission. Separation of technetium from aqueous solutions by coprecipitation with magnetite. 3,005,683, 10-24-61, Cl. 23-24.
- Rinesch, Rudolf, to Vereinigte Österreichische Eisen-und Stahlwerke Aktiengesellschaft. Refractory lined refining vessels. 3,005,628, 10-24-61, Cl. 266-36.
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- Roberts, Marvin H. Stair railing. 3,005,242, 10-24-61, Cl. 20-10.
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- Robson, Aubrey H., to American Air Filter Co., Inc. Air flow control apparatus. 3,005,887, 10-24-61, Cl. 200-81.9.
- Rocard, Yves A., and B. E. Bartels, to Hupp Corp. Infra-red sensitive photoconductive cell. 3,005,970, 10-24-61, Cl. 338-18.
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- Rosenthal, Harry. Heat sealing apparatus. 3,005,898, 10-24-61, Cl. 154-42.
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- Ruby, Donald W., and W. J. Stroth, to Zenith Radio Corp. Television receiver. 3,005,870, 10-24-61, Cl. 178-7.3.
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- Salgo, Leslie, and J. A. Kitchin, to Joseph Lucas (Industries) Ltd. Gaseous fuel combustion apparatus. 3,005,485, 10-24-61, Cl. 158-7.
- Salzer, Erwin, to The Chase-Shawmut Co. Semiconductor diode protection. 3,005,945, 10-24-61, Cl. 321-11.
- Sammarco, Peter, to International Harvester Co. Contour mower. 3,005,301, 10-24-61, Cl. 58-25.
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- Sanders, Royden C., Jr., and B. R. Cole, to Radio Corp. of America. Radar control system for glide path control of aircraft. 3,005,981, 10-24-61, Cl. 343-14.
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- Scheuert, Alfred, to Siemens and Halske Aktiengesellschaft Berlin and Munich. Motor-operated rotary connector for extending calls to different classes of subscriber stations. 3,005,875, 10-24-61, Cl. 170-18.
- Schlachman, Benjamin, to United States of America, Navy. Firing control switch. 3,005,883, 10-24-61, Cl. 200-16.
- Schliephacke, Fridtjof F., to A. Lorenz. Reclining chair of the double movement type. 3,005,661, 10-24-61, Cl. 287-84.
- Schnable, George L., to Phileo Corp. Method of fabricating semiconductor devices comprising cadmium-containing contacts. 3,005,735, 10-24-61, Cl. 148-1.5.
- Schoen, Karl, to Endo Laboratories, Inc. Aqueous solutions of quimidine salts and nicotinamide. 3,005,755, 10-24-61, Cl. 167-67.
- Scholtes, Donald R., and W. E. Large, to Westinghouse Electric Corp. Electric discharge apparatus. 3,005,947, 10-24-61, Cl. 323-58.
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- Schuessler, Charles J., and H. Wilsig. Latching device for swinging doors. 3,005,650, 10-24-61, Cl. 292-203.
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- Scott, Charles E., to Sun Oil Co. Polymerization of olefins. 3,005,810, 10-24-61, Cl. 260-93.7.
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- Seaborg, Glenn T., to United States of America, Atomic Energy Commission. Method of separating neptunium from plutonium in aqueous inorganic solution. 3,005,680, 10-24-61, Cl. 23-14.5.
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- Sheckler, Addison C., to Carrier Corp. Power supplies for use in thermoelectric refrigeration systems. 3,005,316, 10-24-61, Cl. 62-3.
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- Sherman, Leonard. Blood typing slides. 3,005,375, 10-24-61, Cl. 86-14.
- Sherron, Percival H. Telephone booth mounting for advertisement. 3,005,277, 10-24-61, Cl. 40-125.
- Sherwen, Theo., to Horstmann & Sherwen Ltd. Rotary tool wood working machines. 3,005,477, 10-24-61, Cl. 143-47.
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Shields, Walter A. Apparatus for positioning closure caps on vials. 3,005,300, 10-24-61, Cl. 53-319.

Shive, William, and C. G. Skinner, Jr. O-carboxyl-DL-serine. 3,005,843, 10-24-61, Cl. 260-482.

Shive, William, and C. G. Skinner, Jr. Hydrazonium salt of N-carboxy-DL-serine. 3,005,844, 10-24-61, Cl. 260-482.

Shonka, Francis R., J. E. Rose, and G. Failla, to United States of America, Atomic Energy Commission. Method of using and manufacturing plastic equivalent to organic materials. 3,005,794, 10-24-61, Cl. 260-37.

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White, Rex V. Parking attachment for automobiles. 3,005,508, 10-24-61, Cl. 180-1.

White, Richard C. Transit case. 3,005,567, 10-24-61, Cl. 220-9.

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Whitehead, Richard K., Sr., and R. K. Whitehead, Jr. Bobbin holder suspension means. 3,005,602, 10-24-61, Cl. 242-130.2.

Whitlock, Robert A., and H. H. Anderson, to Aqua Mattie Inc. Float valve. 3,005,465, 10-24-61, Cl. 137-391.

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1.5: 3,005,276	224: 3,005,356	100- 337: 3,005,754		228- 16: 3,005,573	
128: 3,005,277	225: 3,005,357	101- 338: 3,005,755		229- 16: 3,005,574	
128: 3,005,278	226: 3,005,358	102- 339: 3,005,756		230- 16: 3,005,575	
18: 3,005,279	227: 3,005,359	103- 340: 3,005,757		231- 16: 3,005,576	
4.5: 3,005,280	228: 3,005,360	104- 341: 3,005,758		232- 16: 3,005,577	
54.8: 3,005,281	229: 3,005,361	105- 342: 3,005,759		233- 16: 3,005,578	
	230: 3,005,362	106- 343: 3,005,760		234- 16: 3,005,579	
	231: 3,005,363	107- 344: 3,005,761		235- 16: 3,005,580	
	232: 3,005,364	108- 345: 3,005,762		236- 16: 3,005,581	
	233: 3,005,365	109- 346: 3,005,763		237- 16: 3,005,582	
	234: 3,005,366	110- 347: 3,005,764		238- 16: 3,005,583	
	235: 3,005,367	111- 348: 3,005,765		239- 16: 3,005,584	
	236: 3,005,368	112- 349: 3,005,766		240- 16: 3,005,585	
	237: 3,005,369	113- 350: 3,005,767		241- 16: 3,005,586	
	238: 3,005,370	114- 351: 3,005,768		242- 16: 3,005,587	
	239: 3,005,371	115- 352: 3,005,769		243- 16: 3,005,588	
	240: 3,005,372	116- 353: 3,005,770		244- 16: 3,005,589	
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	242: 3,005,374	118- 355: 3,005,772		246- 16: 3,005,591	
	243: 3,005,375	119- 356: 3,005,773		247- 16: 3,005,592	
	244: 3,005,376	120- 357: 3,005,774		248- 16: 3,005,593	
	245: 3,005,377	121- 358: 3,005,775		249- 16: 3,005,594	
	246: 3,005,378	122- 359: 3,005,776		250- 16: 3,005,595	
	247: 3,005,379	123- 360: 3,005,777		251- 16: 3,005,596	
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	249: 3,005,381	125- 362: 3,005,779		253- 16: 3,005,598	
	250: 3,005,382	126- 363: 3,005,780		254- 16: 3,005,599	
	251: 3,005,383	127- 364: 3,005,781		255- 16: 3,005,600	
	252: 3,005,384	128- 365: 3,005,782		256- 16: 3,005,601	
	253: 3,005,385	129- 366: 3,005,783		257- 16: 3,005,602	
	254: 3,005,386	130- 367: 3,005,784		258- 16: 3,005,603	

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457: 3,005,782	98.7: 3,005,810	490: 3,005,846	53: 3,005,846	185: 3,005,924	19: 3,005,958
253- 56: 3,005,818	94.3: 3,005,811	497: 3,005,846	90: 3,005,847	197: 3,005,925	11: 3,005,959
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259- 8: 3,005,824	247.2: 3,005,816	598: 3,005,851	74: 3,005,853	85: 3,005,930	19: 3,005,964
280- 2.1: 3,005,784	249.7: 3,005,819	600: 3,005,853	87.2: 3,005,854	111: 3,005,931	333- 24: 3,005,965
3,005,785	250: 3,005,820	618: 3,005,854	92: 3,005,855	22: 3,005,974	31: 3,005,966
3,005,786	269: 3,005,821	677: 3,005,856	19: 3,005,856	18: 3,005,982	81: 3,005,967
3,005,787	272: 3,005,822	679: 3,005,857	37.2: 3,005,857	31: 3,005,983	98: 3,005,968
3,005,788	287: 3,005,823	679: 3,005,857	44.5: 3,005,858	119: 3,005,984	134: 3,005,969
22: 3,005,789	288: 3,005,824	679: 3,005,857	19: 3,005,859	148.5: 3,005,985	336- 134: 3,005,969
3,005,790	289: 3,005,825	679: 3,005,857	81: 3,005,860	178: 3,005,986	338- 918: 3,005,970
3,005,791	290: 3,005,826	679: 3,005,857	84: 3,005,861	235: 3,005,987	339- 94: 3,005,971
39.4: 3,005,792	319: 3,005,827	679: 3,005,857	438: 3,005,862	318- 28: 3,005,988	101: 3,005,972
31.2: 3,005,793	329: 3,005,828	679: 3,005,857	301- 47: 3,005,863	305: 3,005,989	340- 3: 3,005,973
37: 3,005,794	343.2: 3,005,829	679: 3,005,857	303- 24: 3,005,864	443: 3,005,941	4: 3,005,974
45.5: 3,005,796	343.6: 3,005,830	679: 3,005,857	307- 88.5: 3,005,917	1: 3,005,942	81: 3,005,975
3,005,796	345.8: 3,005,831	679: 3,005,857	141.4: 3,005,919	13: 3,005,943	166: 3,005,976
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3,005,800	397.45: 3,005,835	679: 3,005,857	184: 3,005,868	58: 3,005,947	343- 5: 3,005,980
3,005,801	3,005,836	679: 3,005,857	309- 2: 3,005,869	16: 3,005,948	113: Re.25,064
3,005,802	3,005,837	679: 3,005,857	310- 235: 3,005,920	20: 3,005,949	724: 3,005,982
78.4: 3,005,803	3,005,838	679: 3,005,857	311- 89: 3,005,970	111: 3,005,950	758: 3,005,983
79: 3,005,803	3,005,839	679: 3,005,857	312- 216: 3,005,971	150: 3,005,951	771: 3,005,984
79.5: 3,005,804	397.5: 3,005,835	679: 3,005,857	313- 223: 3,005,972	151: 3,005,952	777: 3,005,985
3,005,805	413: 3,005,840	679: 3,005,857	270: 3,005,973	158: 3,005,953	810: 3,005,986
82: 3,005,806	451: 3,005,841	679: 3,005,857	318- 55: 3,005,921	226: 3,005,954	872: 3,005,987
85.3: 3,005,807	468: 3,005,842	679: 3,005,857		330- 10: 3,005,955	346- 74: 3,005,975

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

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Number 4

TRADEMARKS
NOTICES

Selected Non-Proprietary Names

The Public Health Service has informed the Patent Office that the names listed below have been selected by WHO as recommended international non-proprietary names for pharmaceutical preparations.

The procedure for selection of these names, by WHO, in-

cluding earlier publication in accordance with procedures published in the Chronicle of the World Health Organization, June-July 1955 issue, has been completed. WHO requests that these recommended names be recognized as the non-proprietary names for the substances concerned and that the necessary steps be taken to prevent acquisition of proprietary rights in the same.

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

accediasulfonum natrium	4-carboxymethylamino-4'-aminodiphenylsulfone sodium
accediasulfone sodium	
acetyl digitoxinum	acetyl digitoxin
acetyl digitoxin	
acidum thyropropicum	3-[4-(4-hydroxy-3-iodophenoxy)-3,5-diiodophenyl]propionic acid
thyropropic acid	
acidum trethocanicum	3-hydroxy-3,7,11-trimethyldodecanoic acid
trethocanic acid	
aethoxasorutosidum	monomorpholinylethylrutoside
ethoxasorutoside	
alimemazinum	10-(2-methyl-3-dimethylaminopropyl)phenothiazine
alimemazine	
allylestrenolum	17a-allylestr-4-en-17-ol
allylestrenol	

CONDITION OF TRADEMARK APPLICATIONS AS OF AUGUST 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	13,451
Date of oldest new application	February 13, 1961
Date of oldest amended application	February 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation		Oldest Application	
TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION		New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50		2-13-61	2-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 27, 28, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B		2-13-61	3-30-61
Renewals (All Classes)		8-14-61	8-24-61
Sec. 12 (c) Publications (All Classes)		7-17-61	7-17-61

Applications filed during the month of August 1961—1947

Registrations Issued	288—No. 722,923 to No. 723,210
Renewals Issued	60

For the quarter—July 1, 1961 through September 30, 1961

Applications filed	5687
Registrations issued	4404
Renewals issued	829
Cancellations under Section 8	1413

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Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

allylprodinum
allylprodine
amanozinum
amanozine
ambazonum
ambazone
aminoacridinum
aminoacridine
aminoglutethimidum
aminoglutethimide
aminopromazinum
aminopromazine
aminoxytriphenum
aminoxytriphenol
amopyroquinum
amopyroquin
amphenidonum
amphenidone
amphotericinum B
amphotericin B
anisindionum
anisindione
bensethidinum
bensethidine
bensmalecenum
bensmalecene
bensthiazidum
bensthiazide
benzylsulfamidum
benzylsulfamide
blalamicolium
blalamicol
biperidenum
biperiden
bretylli tosylas
bretyllum tosylate
brompheniraminum
brompheniramine
broparocetrolum
broparocetrol
bunamidolum
bunamidol
bupheninum
buphenine
butadiasamidum
butadiasamide
butthalitalum natrium
butthalital sodium
butypyrammonii iodidum
butypyrammonium iodide
calci benzanidosalicilas
calcium benzanidosalicylate
calci carbimidum
calcium carbimide
carisoprodolum
carisoprodol
chaulmosulfonum
chaulmosulfone
chlorazaniolum
chlorazaniol
chlorbenzoxaminum
chlorbenzoxamine
chlormethinum
chlormethine
chlormezanolum
chlormezanone
chlorophenothanum technicum
technical chlorophenothane
chloropyraminum
chloropyramine
chlorothiazidum
chlorothiazide
chlorphenocili amsonas
chlorphenocilum amsonate
chlorpropamidum
chlorpropamide
chlorphenoxaminum
chlorphenoxamine
chlorproguanilum
chlorproguanil
chlorprothixenum
chlorprothixene
chlorthioxazinum
chlorthioxazine
chymotrypsinum
chymotrypsin
cinnaamaverinum
cinnaamaverine
clemizolum
clemizole

3-allyl-1-methyl-4-phenyl-4-propionyloxypiperidine
2-amino-4-anilino-s-triazine
1,4-benzoquinone amidinohydrasone thiosemicarbazone hydrate
9-aminoacridine
2-(p-aminophenyl)-3-ethylglutarimide
10-(2,3-bisdimethylaminopropyl) phenothiazine
3-dimethylamino,1,1,2-tris (4-methoxyphenyl)prop-1-ene
7-chloro-4-(4-hydroxy-3-pyrrolidin-1'-ylmethyl)anilino)quinoline
1-(m-aminophenyl)-1H-pyrid-2-one
a polyene antibiotic substance obtained from cultures of *Streptomyces nodosus*, or the same substance produced by any other means
2-p-methoxyphenylindane-1,3-dione
1-(2-benzyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
N-(2,3-di-p-chlorophenyl-1-methylpropyl)maleamic acid (a-form)
3-benzylthiomethyl-6-chloro-7-sulfamoylbenzo-1,2,4 (3H)-thiadiazine 1,1-dioxide
4-benzylaminophenylsulfonamide
3,3'-diallyl-5,5'-bisdiethylaminomethyl-4,4'-dihydroxydiphenyl
1-(bicyclo[2,2,1]hept-5-en-2-yl)-1-phenyl-3-piperidinopropan-1-ol
N-o-bromobenzyl-N-ethyl-N,N-dimethylammonium tosylate (tosylic acid is p-toluene-sulfonic acid)
(3-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
1-bromo-2-p-ethylphenyl-1,2-diphenylethylene
3-(3-butyramido-2,4,6-trilodophenyl-2-ethylacrylic acid
1-(p-hydroxyphenyl)-2-(1-methyl-3-phenylpropylamino)propan-1-ol
N-(5-butyl-1,3,4-thiadiazol-2-yl)-p-chlorobenzenesulfonamide
a mixture of 100 parts by weight of the monosodium derivative of 5-allyl-5-isobutyl-2-thiobarbituric acid and 6 parts by weight of exsiccated sodium carbonate
butyldimethyl(2,3-dimethyl-5-oxo-1-phenyl-3-pyrazolin-4-yl)ammonium iodide
calcium 4-benzamido-2-hydroxybenzoate
calcium cyanamide
2-carbamoyloxymethyl-2-isopropylcarbamoyloxymethylpentane
di(p-(13-cyclopentyltridecanamido)phenyl)sulfone
2-amino-4-p-chloroanilino-s-triazine
1-(2-o-chlorodiphenylmethoxyethyl)-4-o-methylbenzylpiperazine
di-(2-chloroethyl) methylamine
2-(4-chlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
1,1-di(4-chlorophenyl)-2,2,2-trichloroethane with a proportion of 1-(2-chlorophenyl)-1-(4-chlorophenyl)-2,2,2-trichloroethane
N-p-chlorobenzyl-N',N'-dimethyl-N-pyrid-2-ylethylenediamine
6-chloro-7-sulfamoylbenzo-1,2,4(4H)-thiadiazine 1,1-dioxide
2,4-dichlorophenoxydimethyl-N-octylammonium amsonate (amsonic acid is 4,4'-diaminostilbene-2,2'-disulfonic acid)
3-(p-chlorophenyl)sulfonyl-1-propylurea
2-(1-p-chlorophenyl-1-phenylethoxy) ethyldimethylamine
N',N',4-dichlorophenyl-N'-isopropylidguanide
trans-2-chloro-10-(3-dimethylaminopropylidene) thiazanthen
2-(2-chloroethyl)-2,3-dihydro-4-oxobenz-1,3-oxazine
an enzyme, a-chymotrypsin, obtained in crystalline form from mammalian pancreas by aqueous acid extraction of its proenzyme, chymotrypsinogen, and subsequent conversion with trypsin to chymotrypsin
2-diethylaminoethyl 2-phenylcinnamate
1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

clemizolum penicillinum
clemizole penicillin
chloroxazonum
chloroxazone
chollini gluconas
chollinum gluconate
chollini theophyllinas
cholline theophyllinate
cyclandelatum
cyclandelate
cyclobenzaprinum
cyclobenzaprine
cyclophosphamidum
cyclophosphamide
cyclopregnolum
cyclopregnol
cyproheptadinum
cyproheptadine
demecarii bromidum
demecarium bromide
demethylchlorotetracyclinum
demethylchlorotetracycline
dequallini chloridum
dequallinum chloride
dexamethasonum
dexamethasone
dextbrompheniraminum
dextbrompheniramine
dextchlorpheniraminum
dextchlorpheniramine
diampromidum
diampromide
diathymosulfonum
diathymosulfone
dibemethinum
dibemethine
dichlorisolum
dichlorisone
dichlormezanolum
dichlormezanone
dihydrocodeinum
dihydrocodeine
dioxanidum
dioxanide
dimenoxadolum
dimenoxadol
dimepheptanolum
dimepheptanol
dimeprosanum
dimepropane
dimethazanum
dimethazan
dimethisteronum
dimethisterone
dimetholizolum
dimetholizine
dioxaphetyli butyras
dioxaphetyl butyrate
diphenoxylatum
diphenoxylate
diphoxasidum
diphoxaside
diploproverinum
diploproverine
dithiazanini iodidum
dithiazanine iodide
emylcamatum
emylcamate
ethionamidum
ethionamide
fenethasinum
fenethazine
ferrochollinatium
ferrochollinate
flumethiazidum
flumethiazide
fluorometholonum
fluorometholone
fluphenazinum
fluphenazine
furethidinum
furethidine
furmethonolum
furmethonol
furmethoxadonum
furmethoxadone
furostilboestrolum
furostilboestrol
glybuthiazolum
glybuthiazol
glyprothiazolum
glyprothiazol

benzylpenicillin combined with 1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole
5-chloro-3H-benzoxazol-2-one
2-hydroxyethyltrimethylammonium D-gluconate
2-hydroxyethyltrimethylammonium 1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
3,5,5-trimethylcyclohexyl a-phenyl-a-hydroxyacetate
5-(3-dimethylaminopropylidene)dibenzo(a,e)cycloheptatriene
N,N-bis(2-chloroethyl)-N'-(3-hydroxypropyl) phosphordiamidic acid cyclic ester
6β-hydroxy-3,5-cyclopregnan-20-one
4-(5-dibenzo(a,e)cycloheptatrienylidene)-1-methylpiperidine
N,N'-decamethylenebis-(trimethyl(3-N-methylcarbamoyloxyphenyl)ammonium bromide)
7-chloro-4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-1,11-dioxo-2-naphthacene-carboxamide
decamethylenebis(4-amino-2-methylquinolinium) bischloride
9a-fluoro-11β,17a,21-trihydroxy-16a-methylpregna-1,4-diene-3,20-dione
(+)-(3-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
(+)-(3-p-chlorophenyl-3-pyrid-2'-ylpropyl)dimethylamine
N-(2-[(methyl)phenethylamino]propyl)propionanilide
di[4-(4-hydroxy-2-methyl-5-isopropylphenylazo)phenyl]sulfone
N,N-dibenzylmethylamine
9a-11β-dichloro-17a-21-dihydroxypregna-1,4-diene-3,20-dione
2-(3,4-dichlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
7,8-dihydrocodeine or 4,5-epoxy-6-hydroxy-3-methoxy-N-methylmorphinan
N-dichloroacetyl-p-hydroxy-N-methylaniline
dimethylaminoethyl 1-ethoxy-1,1-diphenylacetate
6-dimethylamino-4,4-diphenyl-3-heptanol
9-(3-dimethylaminopropylidene)-2-methoxyxanthene
1,3-dimethyl-7-(2-dimethylaminoethyl)-2,6-dioxo-1,2,3,6-tetrahydropurine
17a-ethynyl-17-hydroxy-6a,21-dimethylandrosta-4-en-3-one
1-(2-methoxyphenyl)-4-(3-methoxypropyl)piperazine
ethyl-4-morpholino-2,2-diphenylbutyrate or ethyl-γ-morpholino-α,α-diphenylbutyrate
1-(3-cyano-3,3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
N'-acetyl-N'-(β-hydroxy-β,β-diphenylpropionyl)hydrazine
2-piperidinoethyl a-phenyl-a-piperidinoacetate
3-ethyl-2-[5-(3-ethyl-2-benzothiazolidinylidene)-1,3-pentadienyl]benzothiazolium iodide
1-ethyl-1-methylpropyl carbamate
2-ethylpyridine-4-carbothionamide
10-(2-dimethylaminoethyl)phenothiazine
a chelate prepared by reacting equimolar quantities of freshly precipitated ferric hydroxide with choline dihydrogen citrate
6-trifluoromethyl-7-sulfamoylbenzo-1,2,4(4H)-thiadiazine 1,1-dioxide
9a-fluoro-11β,17a-dihydroxy-6a-methyl-1,4-pregnadiene-3,20-dione
10-(3-[4-(2-hydroxyethyl)piperazin-1-yl]propyl)-2-trifluoromethylphenothiazine
ethyl 1-(2-tetrahydrofurfuryloxyethyl)-4-phenylpiperidine-4-carboxylate
5-morpholinomethyl-3-(5-nitrofurfurylideneamino)-2-oxazolidin-2-one
5-methyl-3-(5-nitrofurfurylideneamino)-2-oxazolidin-2-one
trans-3,4-bis-[4-(2-furoyloxy)phenyl]hex-3-ene
2-sulfanilamido-5-tert-butyl-1,3,4-thiadiazole
2-sulfanilamido-5-isopropyl-1,3,4-thiadiazole

Recommended International
Non-Proprietary Names
(Latin, English)

griseofulvinum
griseofulvin
halopenit chloridum
halopenitum chloride
haloperidolum
haloperidol
hedaquinil chloridum
hedaquinium chloride
hexadimethrial bromidum
hexadimethrine bromide
hexapropymatum
hexapropymate
hexcarbacholinal bromidum
hexcarbacholine bromide
homochlorocyclizinum
homochlorocyclizine
hydrargaphenum
hydrargaphen
hydrochlorothiazidum
hydrochlorothiazide
hydroflumethiazidum
hydroflumethiazide
hydroxindasatum
hydroxindasate
hydroxindasolum
hydroxindasol
hydroxychloroquinum
hydroxychloroquine
hydroxydloni natrii succinas
hydroxydlone sodium succinate
hydroxyprogesteroni acetat
hydroxyprogesterone acetate
hydroxyprogesteroni caproat
hydroxyprogesterone caproate
hydroxystenosolum
hydroxystenosole
imipraminum
imipramine
inproquonum
inproquone
intermedinum
intermedine
isopropamidii iodidum
isopropamide iodide
isoxsuprinum
isoxsuprine
kanamycinum
kanamycin

khellolidum
khellolide
levisoprenalinum
levisoprenaline
levomepromazinum
levomepromazine
levophenacylmorphanium
levophenacylmorphane
levopropoxyphenum
levopropoxyphene
lysergidum
lysergide
mannomustinum
mannomustine
methydrilinum
methydrilum
medroxyprogesteroni acetat
medroxyprogesterone acetate
melphalanum
melphalan
menadioli natrii sulfat
menadiol sodium sulfate
menadioni natrii bisulfat
menadione sodium bisulfite
mepensolate bromidum
mepensolate bromide
mephenoxalonum
mephenoxalone
mephenytoinum
mephenytoin
mestanololum
mestanolone
methazamidum
methazamide
methaqualonium
methaqualone
methasolamidum
methasolamide
methdiazinum
methdiazine
methocarbamolium
methocarbamol

Chemical Name or Description

7-chloro-4,6-dimethoxy-2,3-dihydrobenzofuran-3-one-2-spiro-1'-(2'-methoxy-6'-methyl-cyclohex-2'-en-4'-one)
4-bromobenzyl-3-(4-chloro-5-methyl-2-isopropylphenoxy)propyldimethylammonium chloride
4-(p-chlorophenyl)-1-[3-(p-fluorobenzoyl)propyl]piperidin-4-ol
hexadecamethylenebis-(2-isouquinolinium)dichloride
N,N,N',N'-tetramethylhexamethylenediamine trimethylene bromide polymer
1-prop-2'-ynylcyclohex-1-yl carbamate
N,N'-hexamethylenebis[(2-carbamoyloxyethyl)trimethylammonium bromide]
1-(p-chlorodiphenylmethyl)-4-methyl-1,4-diazacycloheptane
phenylmercuric methylenebis-(2-naphthyl-3-sulfonate)
6-chloro-3,4-dihydro-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
3,4-dihydro-6-trifluoromethyl-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
5-acetoxy-3-(2-aminoethyl)-1-(p-methoxybenzyl)-2-methylindole
5-hydroxy-1-(p-methoxybenzyl)-2-methyl-3-(2-aminoethyl)indole
7-chloro-4-[4-(N-ethyl-N-2-hydroxyethylamino)-1-methylbutylamino]quinoline
sodium 21-(3-carboxypropionyloxy)pregnane-3,20-dione
17 α -acetoxypregn-4-ene-3,20-dione
17 α -hexanoyloxypregn-4-ene-3,20-dione
17 β -hydroxy-17 α -methylandro-4-eno-[3,2-c]pyrazole
5-(3-dimethylaminopropyl)-10,11-dihydro-5H-dibenz[*b,f*]azepine
2,5-bisethylenimino-3,6-dipropoxy-1,4-benzoquinone
active principle of the *pars intermedia* of the pituitary
(3-carbamoyl-3,3-diphenylpropyl)diisopropylmethylammonium iodide
1-(p-hydroxyphenyl)-2-(1-methyl-2-phenoxyethylamino)propan-1-ol
an antibiotic substance obtained from cultures of *Streptomyces kanamyceticus* or the same substance produced by any other means
4,6-diamino-2-hydroxy-1-(4-amino-3,5-dihydroxy-6-hydroxymethyltetrahydropyran-2-yloxy)-3-(N-methylamino-3,4,5-trihydroxytetrahydropyran-2-yloxy)cyclohexane
4-methoxy-7-hydroxymethyl-5H-furo[3,2-g]benzopyran-5-one glycoside
1-(3,4-dihydroxyphenyl)-2-isopropylaminoethanol
(-)-2-methoxy-10-(3-dimethylamino-2-methylpropyl)phenothiazine
(-)-3-hydroxy-N-phenacylmorphinan
(-)-4-dimethylamino-3-methyl-1,2-diphenyl-2-propionoxybutane
7-methyl-4,6,6a,7,8,9-hexahydroindolo[4,3-f,g]quinoline-9-carboxydiethylamide
1,6-di-(2-chloroethylamino)-1,6-dideoxy-D-mannitol
5-benzyl-1,2,3,4-tetrahydro-2-methylpyrid[4,3-b]indole
17 α -acetoxy-6 α -methylpregn-4-ene-3,20-dione
p-di-(2-chloroethyl)amino-L-phenylalanine
2-methyl-1,4-naphthoquinol disodium sulfate
2-methyl-1,4-naphthoquinone sodium bisulfite
1-methyl-3-piperid-3-yl benzilate methylbromide
5-(e-methoxyphenoxy)methyl)oxasolidin-3-one
5-ethyl-3-methyl-5-phenylimidazolidin-2,4-dione
17 β -hydroxy-17-methyl-5 α -androstan-3-one
N-(ω -amino-p-methylbenzenesulfonyl)-N'-cyclohexylurea
2-methyl-3-e-tolyl-3H-quinazolin-4-one
5-acetylmino-4-methyl-1,3,4-thiadiazoline-2-sulfonamide
10-(1-methyl-3-pyrrolidinylmethyl)phenothiazine
(2-hydroxy-3-e-methoxyphenoxypropyl) carbamate

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

methohexitalum
methohexital
methotrexatum
methotrexate
methylechromonum
methylechromone
methylprednisolonum
methylprednisolone
monophosphothiaminum
monophosphothiamine
natrii carbasochromi sulfonas
carbasochrome sodium sulfonate
natrii hexacyclonas
sodium hexacyclonate
nialamidum
nialamide
nicomorphinum
nicomorphine
nicothiasonum
nicothiasone
nifurethasonum
nifurethasone
nihydrasonum
nihydrasone
norcodeinum
norcodeine
norlevorphanolum
norlevorphanol
normorphinum
normorphine
norvinisteronum
norvinisterone
octatropini methylbromidum
octatropine methylbromide
orphenadrinum
orphenadrine
oxadimedinum
oxadimedine
oxanamidum
oxanamide
oxybuprocainum
oxybuprocaine
oxyphenbutazonum
oxyphenbutazone
oxyphenacyliminum
oxyphenacylimine
oxyphenasatinum
oxyphenasatine
palmidrolum
palmidrol
paracetamolium
paracetamol
paridocainum
paridocaine
paromomycinum
paromomycin

pempidinum
pempidine
penicillinum
penicillinase
pentapiperidum
pentapiperide
perphenazinum
perphenazine
phanquinonum
phanquinone
phenactropinil chloridum
phenactropinium chloride
phenampromidum
phenampromide
phenazocinum
phenazocine
phenglutarimidum
phenglutarimide
pheniraminum
pheniramine
phenprobamatium
phenprobamate
phenpromethaminum
phenpromethamine
phenyracillinum
phenyracillin
phetharbitalum
phetharbitol
phytomenadionum
phytomenadione
phytonadioli natrii diphosphate
phytonadiol sodium diphosphate
pimindinum
pimindine

α -(+)-5-allyl-1-methyl-5-(1-methyl-2-pentynyl)barbituric acid
N-(4-[(2,4-diaminopteridin-6-ylmethyl)-N-methylamino]benzoyl)-L-(+)-glutamic acid
3-methyl-4H-chromen-4-one
11 β ,17 α ,21-trihydroxy-6 α -methylpregna-1,4-diene-3,20-dione or 6-methylprednisolone
monophosphoric ester of thiamine
sodium 2,3,5,6-tetrahydro-1-methyl-6-oxo-5-semicarbazonoindole-3-sulfonate
sodium 1-hydroxymethylcyclohexylacetate
N-isonicotinoyl-N'-(β -N-benzylcarboxamidoethyl) hydrazine
di-nicotinic acid ester of morphine
nicotinaldehyde thiosemicarbazone
5-nitrofuraldehyde 2-(2-dimethylaminoethyl) semicarbazone
5-nitro-2-furaldehyde acetylhydrazone
N-demethylated codeine or 4,5-epoxy-6-hydroxy-3-methoxymorphin-7-ene
(-)-3-hydroxymorphinan
N-demethylated morphine or 4,5-epoxy-3,6-dihydroxymorphin-7-ene
17 β -hydroxy-17 α -vinylestr-4-en-3-one
N-methyl-O-(2-propylpentanoyl) tropinium bromide
N,N-dimethyl-2-(α -tolylbenzoyloxy)ethylamine
N-(2-benzoxazolyl)-N-benzyl-N',N'-dimethylethylenediamine
1,2-epoxy-1-ethylpentane-1-carboxamide
2-diethylaminoethyl 4-amino-3-butoxybenzoate
1-(p-hydroxyphenyl)-2-phenyl-4-butylpyrazolidine-3,5-dione
(1,4,5,6-tetrahydro-1-methyl-2-pyrimidinyl)methyl α -cyclohexyl- α -phenylglycolate
3,3-bis(4-hydroxyphenyl)oxindole
N-(2-hydroxyethyl)palmitamide
p-acetamidophenol (acetaminophen)
1-methylpiperid-4-yl p-butylaminobenzoate
an antibiotic substance obtained from cultures of certain *Streptomyces* species, one of which is *Streptomyces rimosus*, or the same substance produced by any other means
1,2,2,6,6-pentamethylpiperidine
an enzyme obtained by fermentation from cultures of *B. cereus*
1-methylpiperid-4-yl 3-methyl-2-phenylvalerate
2-chloro-10-[3-(4-(2-hydroxyethyl)piperazin-1-yl)propyl]phenothiazine
4,7-phenanthroline-5,6-quinone
N-phenacylhomatropinium chloride
N-(2-(1-methylpiperid-2-yl)ethyl)propionanilide
1,2,3,4,5,6-hexahydro-8-hydroxy-6,11-dimethyl-3-phenethyl-2,6-methano-3-benzasocine
 α -2-diethylaminoethyl- α -phenylglutarimide
dimethyl(3-phenyl-3-pyrid-2'-ylpropyl)amine
3-phenylpropyl carbamate
1-methylamino-2-phenylpropane
2,5-diphenylpiperazine di[6-(phenylacetamido)penicillinate]
5,5-diethyl-1-phenylbarbituric acid
2-methyl-3-phytyl-1,4-naphthoquinone (vitamin K₁)
2-methyl-3-phytyl-1,4-naphthalene disodium hydrogen phosphate
1-(3-phenylaminopropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

pipamazinium	10-[3-(4-carbamoylpiperidino)propyl]-2-chlorophenothiazine
pipamazine	2-piperidinoethyl benzilate
pipethanatum	4-diphenylmethoxy-1-methylpiperidine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
pipethanate	polymer of ethylene oxide, propylene oxide and propylene glycol
piprinhydrinatum	a mixture of polymers formed from the reaction of formaldehyde and 4-hydroxybenzenecarboxylic acid
piprinhydrinate	a synthetic, loosely crosslinked, hydrophilic resin of the polycarboxylic type.
poloxalkolum	3-[2-phenyl-2-propionyloxymethyl]acetyloxy]-6,7-epoxytropene
poloxalkol	2-hydroxyiminomethyl-1-methylpyridinium iodide
polybenzarsolum	10-(2-diethylaminopropyl)phenothiazine hydrochloride
polybenzarsol	10-(2-dimethylaminopropyl)phenothiazine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
polycarbophilum	10-(2-dimethylaminopropyl)-2-propionylphenothiazine
polycarbophil	propyl 3-diacetylamino-2,4,6-trilodobenzoate
poskinum	sulfate of the strongly basic protein, protamine
poskine	10-(3-dimethylaminopropylidene)thiazanthene
pralidoximi methiodidum	1-(3,4-dihydroxyphenyl)-2-(α -methyl-3,4-methylenedioxyphenethylamino)ethanol
pralidoxime methiodide	pyrazine-2-carboxamide
profenamini hydrochloridum	an antibiotic substance obtained from cultures of <i>Nocardia lurida</i> , or the same substance produced by any other means
profenamine hydrochloride	<i>N</i> -isonicotinoyl- <i>N'</i> -salicylidenehydrazine
promethazini theoclas	2-hydroxyphenethyl carbamate
promethazine theoclate	6-chloro-3-sulfanilamido pyridazine
propiomazinum	2-carboxy-4,6-diamino-4'-sulfamoylasobenzene
propiomazine	sodium 2-(<i>N</i> -acetylsulfamoyl)-4,4'-diaminodiphenylsulfone
propyli docetrisoas	2,4-dimethoxy-6-sulfanilamido pyrimidine
propyl docetrisoate	5-ethyl-2-sulfanilamido-1,3,4-thiadiazole
protamini sulfas	6-methoxy-3-sulfanilamidopyridazine
protamine sulfate	1-phenyl-5-sulfanilamidopyrazole
prothixenum	3-methyl-5-sulfanilamidolethiazole
prothixene	1-sulfanilylthiourea
protokylolum	1-sulfanilylthiourea salt of <i>p</i> -sulfamoylbenzylamine
protokylol	1,2-diphenyl-4-(2-phenylsulfonylethyl)-3,5-pyrazolidinedione
pyrasinamidum	potassium 4-hydroxy-3-methoxyphenylsulfonate
pyrasinamide	2-hydroxyethyl <i>p</i> -sulfonamidophenylcarbamate
ristocetinum	4-ethoxycarbonyl-3,5-dimethoxybenzoic acid ester of methyl reserpate
ristocetin	9-amino-1,2,3,4-tetrahydroacridine
salinasidum	tetraethylammonium bromide
salinasid	α -phthalimidoglutarimide
styramatum	1-methyl-2-mercaptimidazole
styramate	1-(<i>p</i> -butoxyphenyl)-3-(<i>p</i> -dimethylaminophenyl)thiourea
sulfachlorpyridazinum	<i>D</i> (+)- <i>threo</i> -2-dichloroacetamido-1-(<i>p</i> -methylsulfonylethyl)propane-1,3-diol
sulfachlorpyridazine	<i>trans</i> - α,α -(dithien-2-yl)-(4-dimethylaminocyclohexyl) carbinol methylbromide
sulfachrysoidinum	10-[3-(4-(2-acetoxyethyl)piperazin-1-yl)propyl]-2-chlorophenothiazine
sulfachrysoidine	<i>N,N</i> -dimethyl-10-[3-(4-methylpiperazin-1-yl)propyl]-phenothiazine-2-sulfonamide
sulfadiazolifonum natricum	triaziridin-1-ylphosphine sulfide
sulfadiazolifone sodium	1,1'-(3- α -toloxypropylene)dioxy bis (2,2,2-trichloroethanol)
sulfadimethoxinum	glyceryl triacetate
sulfadimethoxine	the triacetyl ester of oleandomycin, an antibiotic substance obtained from cultures of <i>Streptomyces antibioticus</i> , or the same substance produced by any other means
sulfathidolum	
sulfathidole	
sulfamethoxypyridazinum	
sulfamethoxypyridazine	
sulfaphenazolum	
sulfaphenazol	
sulfasomizolum	
sulfasomizol	
sulfathiourea	
sulfathiourea	
sulfatolamidum	
sulfatolamide	
sulfapyrazonum	
sulfapyrazone	
sulfogalacolum	
sulfogalacol	
sulocarbilatium	
sulocarbilate	
syrocinopinium	
syrocinopine	
tacrinum	
tacrine	
tetrylammonii bromidum	
tetrylammonium bromide	
thalidomidum	
thalidomide	
thiamasolum	
thiamazole	
thiambutosolum	
thiambutosine	
thiamphenicolum	
thiamphenicol	
thihexinoli methylbromidum	
thihexinol methylbromide	
thiopropasolum	
thiopropasate	
thiopropazinum	
thiopropazine	
thiotepa	
thiotepa	
toloxychlorinololum	
toloxychlorinol	
triacetinum	
triacetin	
triacetyloleandomycinum	
triacetyloleandomycin	

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

triamcinolonum	9 α -fluoro-16 α -hydroxyprednisolone
triamcinolone	1-methylpyrrolidin-3-ylmethyl benzilate
trichlaxatum	hexamethylenebis[α -(dimethyl-1-methyl-3-(2,2,6-trimethylcyclohexyl)propyl)ammonium chloride]hemihydrate
trichlaxate	2-trifluoromethyl-10-[3-(1-methylpiperazin-4-yl)propyl]phenothiazine
trichlobisnili chloridum	2-trifluoromethyl-10-(3-dimethylaminopropyl) phenothiazine
trichlobisnium chloride	(+)-3-(3-dimethylaminopropyl)-1,8,8-trimethyl-3-azabicyclo[3,2,1]octaine di(methylmethosulfate)
triduoperazinum	<i>N</i> -(<i>p</i> -2-dimethylaminoethoxybenzyl)-3,4,5-trimethoxybenzamide
triduoperazine	triethanolamine trinitrate
triduoperazinum	tropyl 2,3-dimethylacrylate
triduoprazine	2-(4- <i>tert</i> -butyl-2,6-dimethylbenzyl)imidazoline
trimethidini methosulfas	
trimethidinium methosulfate	
trimethobenzamidum	
trimethobenzamide	
troinitratum	
troinitrate	
tropiglinum	
tropigline	
xylometasolum	
xylometasoline	

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 155,951 (ALFRED DUNHILL (in script)). Alfred Dunhill of London, Inc., Tobacco products; Reg. No. 293,753 (UNIQUE LIGHTER DUNHILL AND DESIGN), same, Portable and pocket cigar and cigarette lighters; Reg. No. 355,504 (DUNHILL), same, Razors; Reg. No. 356,504 (DUNHILL DOUBLE-CLARO), same, Tobacco products, particularly cigars; Reg. No. 404,313, same, Alfred Dunhill, Ltd., Pyrophoric lighters; Reg. No. 404,313, same, Tobacco, manufactured or unmanufactured, cigars and cigarettes; Reg. No. 404,313, same, Tobacco pipes, cigar and cigarette holders; Reg. No. 419,717 (ALFRED DUNHILL (in script)), same, Cosmetic preparations—namely, powder, rouge, lipstick, grease paints, hair oil, shampoo preparations, hair lotions, hair tinting preparations, etc.; Reg. No. 421,429, same, Soaps and shaving creams; Reg. No. 537,907 (DUNHILL), same, Pyrophoric lighters; Reg. No. 537,908, same, Tobacco pipes, cigar and cigarette holders; Reg. No. 534,705, same, Tobacco pouches made of leather; Reg. No. 539,502, same, Raw tobacco, smoking and chewing tobacco, snuff, cigars and cigarettes; Reg. No. 544,300, same, Billfolds, purses, handbags, document cases and wallets, all being goods made of leather; Reg. No. 541,949 (DUNHILL DOUBLE-CLARO), Alfred Dunhill of London, Inc., Tobacco products, particularly cigars; Reg. No. 634,071 (ALFRED DUNHILL), same, Men's ties, filed Sept. 7, 1961, D.C., S.D.N.Y., Doc. 61/3181, *Alfred Dunhill of London, Inc. v. Dunhill Sports, Ltd. et al.* Same, filed Sept. 11, 1961, D.C., M.D. Pa. (Scranton), Doc. 7380, *Alfred Dunhill of London, Inc. v. Dunhill's Inc. et al.*

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 5, 1962.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition for practice before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 5, 1962.

Application blanks may be obtained from the clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,

Sept. 18, 1961. Chairman, Committee on Enrollment.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 89,413. Crawford Associates, Inc., Palo Alto, Calif. Filed Jan. 21, 1960.

COOK-OUT

For Charcoal Briquets.
First use Oct. 30, 1959.

SN 94,171. Kleinwanslebener Saatucht vorm. Rabbethge & Giesecke Aktiengesellschaft, Einbeck, Hannover, Germany. Filed Apr. 1, 1960.

POLYHYCROP

Priority claimed under Sec. 44(d) on German application filed Nov. 6, 1959; Reg. No. 734,555, dated Mar. 10, 1960. For Agricultural Produce Including Agricultural Seed and Seedlings.

SN 94,172. Kleinwanslebener Saatucht vorm. Rabbethge & Giesecke Aktiengesellschaft, Einbeck, Hannover, Germany. Filed Apr. 1, 1960.

POLYCROP

Priority claimed under Sec. 44(d) on German application filed Nov. 6, 1959; Reg. No. 734,554, dated Mar. 10, 1960. For Agricultural Produce Including Agricultural Seed and Seedlings.

SN 98,237. Polyform Plastics Corp., New York, N.Y. Filed June 1, 1960.

POLYFORM

For Narrow Strips of Extruded Plastic Materials in Various Lengths for Use as a Belt or Strap or for General Use in the Industrial Arts.
First use in 1946.

SN 100,866. Vernon J. Schryver and Laura A. Schryver, d.b.a. Mount Rhyolite Ranch, Cripple Creek, Colo. Filed July 14, 1960.

MOUNT RHYOLITE RANCH

For Nursery Stock (Evergreen Trees), Ground Forest Compost (Leaf Mold), Ground Peat Moss.
First use Feb. 17, 1960.

SN 102,507. Pfister Associated Growers, Inc., Aurora, Ill. Filed Aug. 11, 1960.



No claim is made to the color for which the drawing is made. Owner of Reg. No. 659,657.
For Farm Seeds—Namely, Corn, Sorghum, Other Grains and the Like Including Hybrids Thereof.
First use Aug. 16, 1958.

TM 116

SN 103,343. Lakeland Nurseries Sales Corporation, New York, N.Y. Filed Aug. 24, 1960.

*Magniflora
Roses*

The word "Roses" is disclaimed apart from the use of the mark as set forth.
For Roses.
First use July 26, 1960.

SN 103,776. John Flynn & Sons, Inc., Salem, Mass. Filed Sept. 1, 1960.



Owner of Reg. No. 425,897.
For Tanned Leather.
First use Mar. 2, 1960.

SN 105,472. Elbert A. Thompson, d.b.a. Thompson Air Plastics, Mineola, N.Y. Filed Sept. 29, 1960.

PLAQ-WOOD

For Flexible Sheet Material Made of Laminated Vinyl Plastic and Wood Veneer.
First use Jan. 14, 1960.

SN 115,148. International Foam Corporation, Chicago, Ill. Filed Mar. 8, 1961.

SAF-T-FOAM

For Synthetic Foam.
First use Feb. 9, 1961.

SN 117,016. J. M. Huber Corporation, Berger, Tex. Filed Apr. 3, 1961.

BARDEN

For Clay.
First use Jan. 1, 1939.

Class 2—Receptacles

SN 116,135. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 21, 1961.

AUTO-SERV

Owner of Reg. Nos. 379,847 and 639,503.
For Dispensers for Sheet Products of Paper, Foil or Plastic in Roll or Pack Form.
First use Sept. 18, 1939.

OCTOBER 24, 1961

U. S. PATENT OFFICE

TM 117

SN 117,350. Max Klein, Inc., Ferndale, Mich. Filed Apr. 7, 1961.
SN 100,443. Safety Development Corp., Greensburg, Pa., by change of name from Foamex, Incorporated, Greensburg, Pa. Filed July 7, 1960.

Teramora

For Polyethylene Material Made Up Into Housewares—Namely, Dishpans, Wastebaskets, Mixing Bowls, Laundry Baskets, Utility Pails, and Watering Cans.
First use Mar. 16, 1961.

HYEX

For Chemical Compositions—Namely, Foaming or Wetting Agents for Generating High Expansion Foam Plugs for the Control of Fires.
First use Mar. 15, 1960.

SN 104,068. Cowles Chemical Company, Cleveland, Ohio. Filed Sept. 8, 1960.

NEULIN

For All-Purpose or Dry Laundry Sour.
First use Mar. 31, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 109,258. Leeds Travelwear, Inc., New York, N.Y. Filed Nov. 29, 1960.

SN 112,394. Merck & Co., Inc., Rahway, N.J. Filed Jan. 24, 1961.

AIR CRUISER

For Luggage.
First use October 1957.

Class 4—Abrasives and Polishing Materials

SN 115,643. Turtle Wax, Inc., Chicago, Ill. Filed Mar. 14, 1961.

KITCH'NETTE

For Polishing Preparations and Combined Cleaning and Polishing Preparations for Floors and the Like.
First use Feb. 21, 1961.

Class 5—Adhesives

SN 104,563. Tamms Industries Co., Chicago, Ill. Filed Sept. 15, 1960.



For Liquid Bond or Adhesive for Wood, Concrete, Tile, Plaster and Similar Materials Used in Buildings and Houses.
First use January 1954.

Class 6—Chemicals and Chemical Compositions

SN 96,737. Leon G. Rockwell, d.b.a. Rockwell Specialties Company, Dearborn, Mich. Filed May 9, 1960.

Ran-Life

For Rust Inhibitor Spray.
First use May 1, 1960.
TM 771 O.G.—11



Owner of Reg. No. 119,460.
For Electronic Chemicals for Use in the Manufacture of Electrical and Electronic Components, Devices, and Circuits.
First use Feb. 1, 1958.

SN 112,684. Chapman Chemical Company, Memphis, Tenn. Filed Jan. 30, 1961.

TIMPREG PAK

The word "Pak" is disclaimed apart from the mark.
Owner of Reg. No. 713,737.
For Wood Preservative Bandages for Application to Poles, Pilings and Posts.
First use June 2, 1960.

SN 112,889. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 1, 1961.

PORTRADOL

Owner of Reg. No. 393,748.
For Photographic Processing Chemicals.
First use Sept. 8, 1960.

SN 113,032. Rubon Incorporated, Independence, Mo. Filed Feb. 3, 1961.



The drawing is lined for green.
For Germicidal Treatment Composition for Dust Mops, Dusters, and Dust Cloths.
First use Nov. 4, 1959.

SN 117,907. Jerclaydon, Inc., Clifton, N.J. Filed Apr. 17, 1961.

GLAMORENE

Owner of Reg. Nos. 564,163, 704,088, and others.
For Instant Spray Starch for Ironing Purposes.
First use Feb. 12, 1961.

SN 118,562. Colgate-Palmolive Company, New York, N.Y. Filed Apr. 25, 1961.

ACTION

Owner of Reg. Nos. 121,409 and 679,406.
For Bleach.
First use Jan. 23, 1961.

Class 7—Cordage

SN 102,685. Norcross, Inc., New York, N.Y. Filed Aug. 15, 1960.

NORCROSS

Owner of Reg. Nos. 414,959, 520,531, and 659,843.
For Ribbon, Bows and Twine for Decorative Tying.
First use May 8, 1929.

SN 115,393. Texlon Corporation, Dallas, Tex. Filed Mar. 10, 1961.

TEX-STRAP

For Textile Ribbon Made of Viscose Rayon, Used for Strapping Purposes and Known as Non-Metal Strapping for Boxes and Bundles.
First use Feb. 20, 1959.

SN 117,040. Penn Associates, Inc., Philadelphia, Pa. Filed Apr. 3, 1961.

PENN-LACING

For Twine.
First use Aug. 6, 1954.

SN 117,041. Penn Associates, Inc., Philadelphia, Pa. Filed Apr. 3, 1961.

PENN-JACQUARD

For Twine.
First use Apr. 15, 1955.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 101,651. A. Stein & Company, Inc., Wilmington, Del., by merger and change of name from A. Stein & Company, Chicago, Ill. Filed July 28, 1960.

COLLECTOR'S ITEMS

For Cigarette Lighters, Ash Trays, Cigarette Boxes, and Humidors.
First use July 14, 1960.

SN 105,312. Sikeston Ceramics, Inc., Sikeston, Mo. Filed Sept. 27, 1960.



Applicant disclaims the word "Ceramics" apart from the trademark as shown.
For Ceramic Smokers' Articles—Namely, Ash Trays and Cigarette Holders.
First use Aug. 24, 1960.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 105,974. Gregory Industries, Inc., Lorain, Ohio. Filed Oct. 7, 1960.

NELSON

Owner of Reg. No. 560,410.
For Explosive Shells for Powder-Actuated Stud Driving and Stud Projectiles.
First use May 1944.

SN 116,101. Zenith Corporation, Clinton, Mo. Filed Mar. 20, 1961.

THE GREEN HORNET

For Rocket Propulsion Fireworks.
First use June 20, 1959.

Class 10—Fertilizers

SN 83,522. Sequoia Forest Industries, Inc., Dinuba, Calif., by change of name from Ivory Pine Company, Dinuba, Calif. Filed Oct. 19, 1959.

WALK-ON-BARK

For Landscaping Bark.
First use Sept. 1, 1958.

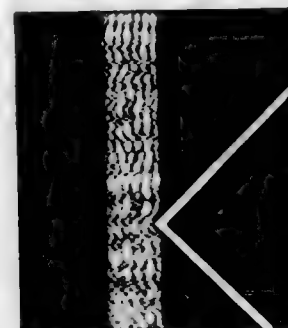
SN 114,147. Meryl L. Stoddard, Flint, Mich. Filed Feb. 21, 1961.

PETUNIA-LIZER

For Fertilizer.
First use Feb. 9, 1961.

Class 11—Inks and Inking Materials

SN 92,990. Kores Manufacturing Corporation, New York, N.Y. Filed Mar. 16, 1960.



The mark consists of a fanciful representation of the letter "K." The drawing is lined for gray, red, blue, and black, but no claim is made to color as a feature of the mark; the colors are shown only to indicate contrast.
For Carbon Paper, Ribbons for All Office Machines, and Duplicating Ink.
First use Oct. 15, 1959.

Class 12—Construction Materials

SN 95,914. Monostructure Inc., Sarasota, Fla. Filed Apr. 27, 1960.

PANELUX

For Light Transmitting Panels, Doors, and Skylights.
First use March 1959.

SN 105,977. Gregory Industries, Inc., Lorain, Ohio. Filed Oct. 7, 1960.

NELSON

Owner of Reg. No. 560,410.
For Construction Fastening Devices—Namely, Compression Set Locking Caps, Expansion Shell Anchors, and Studs for Curtain Wall, Bridge Shear Connectors, Concrete Anchors, and General Fastening.
First use May 1944.

SN 107,893. West Virginia Pulp and Paper Company, New York, N.Y. Filed Nov. 4, 1960.

DUREEN

For Plastic Surfaced Composite Wood Flakeboard Panels.
First use Oct. 27, 1960.
Subj. to Intf. with SN 108,297.

SN 108,297. Durel Incorporated, d.b.a. Durel, Inc., Dubuque, Iowa. Filed Nov. 14, 1960.

DUREL

For Laminated Panel Material Having a Plastic Surface and a Lignocellulose Core.
First use Sept. 20, 1960.
Subj. to Intf. with SN 107,893.

SN 109,220. Vaughan Interior Walls, Inc., Los Angeles, Calif. Filed Nov. 28, 1960.

VAUGHAN WALLS

No claim is made to the word "Walls" except in association with the mark as shown. Owner of Reg. No. 704,169.
For Metal Frames of Extruded, Stamped, and Rolled Shapes for Use With Partitions and Wall Constructions.
First use Nov. 16, 1960.

SN 113,858. Permalastic Products Company, Detroit, Mich. Filed Feb. 16, 1961.

CHEMCERAMIC

For Grout.
First use June 26, 1958.

SN 113,924. Kearsbey & Mattison Company, Ambler, Pa. Filed Feb. 17, 1961.

KAMFLEX

For Asbestos-Cement Boards.
First use Nov. 21, 1960.

SN 117,331. American Frame Company, Los Angeles, Calif. Filed Apr. 7, 1961.

REDIFRAME

For Metal Door Frames.
First use Mar. 21, 1961.

SN 117,354. The Flexicore Co., Inc., Dayton, Ohio. Filed Apr. 7, 1961.

FLEXICAST

For Concrete Beams, Concrete Girders, Concrete Columns, Concrete Grade Beams, Concrete Spandrel Beams and Concrete Flat Slabs.
First use Aug. 15, 1960.

SN 117,357. The Gibson-Homans Company, Cleveland, Ohio. Filed Apr. 7, 1961.

ETERNAFLEX

For Elastomeric Coating, Sealant, Putty, Glazing and Calking Compound.
First use Dec. 30, 1960.

SN 117,368. Industrial Corporation of America, Quakertown, Pa. Filed Apr. 7, 1961.

ARGOSEAL

Owner of Reg. No. 703,114.
For Parts of Doors of the Overhead Type, Either Manually or Automatically Operated—i.e., the Plastic Bonded Wood Fibre-Board Panels.
First use Nov. 15, 1954.

SN 117,390. Penn Metal Company, Inc., Boston, Mass. Filed Apr. 7, 1961.

DUAMESH

For Metal Lath.
First use November 1951.

SN 117,424. A.J. Industries, Inc., Springfield, Mo. Filed Apr. 10, 1961.

REYCO RIGIDS

For Structural Steel Beams.
First use Feb. 28, 1961.

SN 117,467. The Eagle-Picher Company, Cincinnati, Ohio. Filed Apr. 10, 1961.

MT

For High-Temperature Industrial Insulation Boards.
First use Mar. 6, 1961.

SN 117,503. Keaney & Mattison Company, Ambler, Pa. Filed Apr. 10, 1961.

T-DECK

For Asbestos Sheet Material for Use in Building Construction.
First use May 20, 1960.

SN 117,674. Air Master Corporation, Philadelphia, Pa. Filed Apr. 12, 1961.

TILT-MASTER

For Storm Windows.
First use Jan. 24, 1961.

SN 117,679. Avco Corporation, Nashville, Tenn. Filed Apr. 12, 1961.

AVBOARD

For Fireproof Building Material—Namely, Relatively Thin Light Sheet Metal Fabricated Into a Closed Channel Formation and Internally Reinforced and/or Insulated.
First use Feb. 21, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 75,617. Elco Tool and Screw Corporation, Rockford, Ill. Filed June 12, 1959.

TAPE O' SCREWS

For Screws—Namely, Wood Screws, Tapping or Sheet Metal Screws, Drive Screws, Lag Screws, Cap Screws, and Machine Screws.
First use Mar. 26, 1959.

SN 102,956. Thermotronics Corporation, Valley Stream, N.Y. Filed Aug. 18, 1960.

THERMCO

For Line of Flow Control Devices and Associated Hardware for Installation in Water Lines.
First use July 29, 1960.

SN 102,958. Thermotronics Corporation, Valley Stream, N.Y. Filed Aug. 18, 1960.

THERMOTRONICS

For Line of Flow Control Devices and Associated Hardware for Installation in Water Lines.
First use July 29, 1960.

SN 109,077. Koninklijke Fabrieken Diepenbroek & Reijgers N.V., Ulf, Netherlands. Filed Nov. 25, 1960.

ROYAL DRU

Priority claimed under Sec. 44(d) on Dutch application filed May 23, 1960; Reg. No. 137,759, dated June 27, 1960. Owner of U.S. Reg. No. 675,869.
For Household and Kitchen Utensils of Enamelled Cast Iron and Sheet Iron.

SN 110,170. Prestole Corporation, Toledo, Ohio. Filed Dec. 13, 1960.

PRESTIFLEX

For Spring Sheet Metal Cages for Application to an Apertured Panel and Receiving Nut Bodies or Stud Heads.
First use Dec. 5, 1960.

SN 112,149. Illinois Tool Works, Chicago, Ill. Filed Jan. 19, 1961.

S

Owner of Reg. No. 328,399.
For Washers.
First use Aug. 15, 1960.

SN 113,137. The Rapids-Standard Company, Inc., Grand Rapids, Mich. Filed Feb. 6, 1961.

RAPISTAN

Owner of Reg. Nos. 528,069 and 545,631.
For Fixed and Movable Racks for Storage and the Like.
First use July 12, 1954.

SN 116,254. Roland W. Pinger, d.b.a. The Independent Fitting Co., Portland, Oreg. Filed Mar. 22, 1961.

TIFCO

For Cast Metal Pipe Fittings, Including T's, Crosses, Angle Laterals, Adapters, L's, Couplings, Plugs and Caps.
First use 1935.

Class 14—Metals and Metal Castings and Forgings

SN 116,028. The O. Hommel Company, Carnegie, Pa. Filed Mar. 20, 1961.



For Metal Powders.
First use June 1, 1960.

SN 118,017. United States Steel Corporation, Pittsburgh, Pa. Filed Apr. 17, 1961.



Owner of Reg. Nos. 533,973, 620,690, and 710,791.
For Constructional Alloy Steel.
First use Nov. 19, 1954.

Class 15—Oils and Greases

SN 93,262. Avia-Verband trustfreier Benzin- und Heizöl-Importeure der Schweiz, Zurich, Switzerland. Filed Mar. 21, 1960. COLLECTIVE MARK.



Owner of Swiss Reg. No. 163,548, dated Oct. 5, 1956.
For Liquid Fuels, Gasoline, Kerosene, Motor Oils, Heating Oils.

SN 100,064. The Somerset Refinery, Inc., Somerset, Ky. Filed June 30, 1960.

SUPER SALE

For Petroleum Products—Namely, Gasoline, Kerosene and Lubricating and Fuel Oils.
First use Apr. 15, 1960.

Class 16—Protective and Decorative Coatings

SN 108,803. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Nov. 21, 1960.

MOPLEN

Owner of Italian Reg. No. 133,573, dated Oct. 2, 1957; and U.S. Reg. Nos. 711,667 and 711,971.
For Artists' Paints and Pastels and Protective Coatings of Plastic Material.

SN 113,208. Great Lakes Paint and Varnish Company, Chicago, Ill. Filed Feb. 7, 1961.

TRIPLE-KOTE

For Paints, Enamels, Undercoaters, Varnishes.
First use on or about Apr. 2, 1937.

SN 115,846. Rinsch-Mason Company, Detroit, Mich. Filed Mar. 16, 1961.

BETA-CRYL

For Paints—Namely, Thermosetting Acrylic Enamels.
First use Mar. 7, 1961.

SN 116,156. Pyroxylin Products, Inc., Chicago, Ill. Filed Mar. 21, 1961.

PROXSEAL

Owner of Reg. Nos. 335,349, 439,713, and others.
For Heat-Sealing Adhesive Compositions in the Form of Lacquers and Synthetic Resin Varnishes.
First use January 1956.

Class 18—Medicines and Pharmaceutical Preparations

SN 89,514. Lanolin Plus, Inc., Newark, N.J. Filed Jan. 23, 1960.

GELUCAPS

For Pharmaceutical Capsules—Namely, Capsules of Poly-vitamin and Mineral Preparations.
First use June 1942.

SN 92,699. Elder Bonds, Houston, Tex. Filed Mar. 14, 1960.

NU-LIFE

For Liquid Preparation of Herbs and Water for the Relief of Gas and Piles.
First use Mar. 1, 1960.

SN 101,697. Nutrilite Products, Inc., Buena Park, Calif. Filed July 29, 1960.

HARDCAP

For Vitamin Tablets.
First use Mar. 18, 1960.

SN 103,421. Starr Pharmacal Company, Los Angeles, Calif. Filed Aug. 25, 1960.

DEXTROID

For Refined Thyroid Extracted From Fresh Thyroid Glands.
First use in September 1950.

SN 108,996. Nicholas International Limited, Toronto, Ontario, Canada. Filed Nov. 23, 1960.

RESPAX

Priority claimed under Sec. 44(d) on Canadian application filed July 6, 1960; Reg. No. 121,790, dated Apr. 7, 1961.
For Preparation for the Treatment of Respiratory Conditions Including Sinusitis, Bronchitis, Asthma, and Hay Fever.

SN 109,040. Charles A. Crete, Marysville, Calif. Filed Nov. 25, 1960.



For Multivitamin Preparation for Children.
First use Oct. 14, 1960.

SN 110,182. Dr. Karl Thomae GmbH, Biberach an der Riss, Germany. Filed Dec. 13, 1960.

SEDAPERSANTIN

Owner of German Reg. No. 722,072, dated Feb. 12, 1959; and U.S. Reg. No. 674,865.
For Heart Preparation With Sedative Effect.

SN 114,515. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed Feb. 27, 1961.

SULSTACIN

Owner of Reg. No. 680,686.
For Pharmaceutical Preparations—Namely, Vaginal Creams and Jellies.
First use Feb. 9, 1961.

SN 114,624. Merck & Co., Inc., Rahway, N.J. Filed Feb. 28, 1961.

NEOFERM

For Antibiotic Feed Supplement.
First use Feb. 20, 1961.

SN 116,717. Charles E. Frosst & Co., Westmount, Quebec, Canada. Filed Mar. 29, 1961.

BLEVIDON

Priority claimed under Sec. 44(d) on Canadian application filed Jan. 14, 1961; Reg. No. 122,985, dated July 28, 1961.

For Pharmaceutical Preparations in the Form of an Anti-Neoplastic Agent.

SN 116,814. Gebauer Chemical Company, Cleveland, Ohio. Filed Mar. 30, 1961.

FLURO-METHANE

For Coolant Spray for Relief of Painful Muscle Spasm.
First use Feb. 3, 1960.

SN 116,904. Nicholas International Limited, Toronto, Ontario, Canada. Filed Mar. 31, 1961.

BLOATEMUL

Priority claimed under Sec. 44(d) on Canadian application filed Mar. 8, 1961; Reg. No. 122,890, dated July 14, 1961.
For Preparation for Bloat Treatment in Cattle.

SN 117,426. Affiliated Laboratories Corporation, White Hall, Ill. Filed Apr. 10, 1961.

ERYJET

For Erysipelas Vaccine for Veterinary Use.
First use Nov. 29, 1960.

SN 118,114. Testagar & Co., Inc., Detroit, Mich. Filed Apr. 18, 1961.

REDÖDERLEIN

For Pharmaceutical Preparation for Vaginal Therapy.
First use Mar. 2, 1961.

SN 119,567. Albert G. Siegel, d.b.a. Davis-Young & Co., Los Angeles, Calif. Filed May 8, 1961.

ANIVITE

For Vitamin-Mineral Preparation for Animals.
First use Nov. 10, 1960.

SN 119,727. The Vitamine Co., Inc., New York, N.Y. Filed May 10, 1961.

MENSAVITE

For Pharmaceutical Preparation for the Relief of Premenstrual Tension and Menstrual Cramps and Pain.
First use Mar. 14, 1961.

SN 119,733. Gelgy Chemical Corporation, Ardsley, N.Y. Filed May 11, 1961.

LOGAMEL

For Antispasmodic Preparation.
First use Apr. 25, 1961.

SN 119,747. Carter Products, Inc., New York, N.Y. Filed May 11, 1961.

LORA

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and To Achieve Sleep.
First use Feb. 28, 1961.

SN 119,793. The Purdue Frederick Company, New York, N.Y. Filed May 11, 1961.

BULCOID

For Preparation for the Treatment of Constipation.
First use May 5, 1961.

SN 120,191. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories, Stamford, Conn. Filed May 17, 1961.

EUTHYMIN

For Analeptic Pharmaceutical Preparation.
First use Apr. 21, 1961.

SN 120,639. Irwin, Neisler & Co., Decatur, Ill. Filed May 23, 1961.

ATENSEN

Owner of Reg. Nos. 584,670, 619,370, and others.
For Antihypertensive Agent.
First use May 5, 1961.

SN 120,837. Phar-Med, Incorporated, East Detroit, Mich. Filed Aug. 30, 1961.

SUPER-CAL

For Pharmaceutical Product—Namely, a Vitamin and Mineral Composition for Use as a Dietary Supplement.
First use March 1956.
Subj. to Intf. with SN 126,837.

Class 19—Vehicles

SN 107,049. John W. Penn, d.b.a. Penn Warehouse, South St. Paul, Minn. Filed Oct. 24, 1960.

POWER-BLOX

For Brake Shoes and Brake Parts for Automobiles and Trucks.
First use Mar. 22, 1960.

SN 108,804. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Nov. 21, 1960.

MOPLEN

Owner of Italian Reg. No. 133,573, dated Oct. 2, 1957; and U.S. Reg. Nos. 711,667 and 711,971.
For Rail Vehicles, Road Vehicles, Watercraft and Aircraft, Vehicle Propulsion Engines, Transmissions and Other Equipment for Such Vehicles and Craft, and Parts Thereof.

SN 116,594. Sutone Corporation, Los Angeles, Calif. Filed Mar. 27, 1961.

ALASKAN AIRE

For Automobile Seat Cushions.
First use Mar. 16, 1961.

SN 116,595. Sutone Corporation, Los Angeles, Calif. Filed Mar. 27, 1961.

AUTUMN AIRE

For Automobile Seat Cushions.
First use Mar. 17, 1961.

Class 20—Linoleum and Oiled Cloth

SN 117,178. The Dodge Cork Company, Incorporated, Lancaster, Pa. Filed Apr. 5, 1961.

UTILICORK

For Cork Tile.
First use in December 1956.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 91,429. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Feb. 23, 1960.

"SPACE-AGE STEREO"

Applicant disclaims the use of the word "Stereo" apart from the remainder of the mark.
For Stereophonic High-Fidelity Phonographs and Radio and Television Receivers.
First use Feb. 8, 1960.

SN 94,987. Richard J. Hanak, Merion Station, Pa. Filed Apr. 13, 1960.

PERSONAL PAGE

For Selective Paging System Consisting of a Transmitter and Individual Receivers Which Are To Be Selectively Signalled.
First use May 22, 1958.

SN 101,904. The Thomas & Betts Co., Elizabeth, N.J. Filed Aug. 2, 1960.

PALTAP

For Cable Tap or Branch Connectors.
First use Mar. 17, 1958.

SN 105,011. Motorola, Inc., Chicago, Ill. Filed Sept. 22, 1960.



For Radio Receiving Apparatus, Radio Transmitting Apparatus, Television Receiving Apparatus, Sound Record Playing Apparatus, Closed Circuit Television Systems Including Television Cameras and Transmitters and Control and Distribution Equipment Used Therewith, Phonograph Pickup Cartridges, Wave Signal Antenna Apparatus, Capacitors, Transformers, Vibrators for Electric Apparatus, Loudspeakers, Inductors and Coils, Crystals for Electronic Apparatus, Interference Eliminators for Radio and Television Apparatus, Battery Chargers, Microphones, Cavity Resonators, Waveguides, Telephone Handsets, Electric Power Line Couplers,

Electric Power Supplies for Converting Alternating Current to Direct Current and Direct Current to Alternating Current; Intercommunication Equipment for Wired Two-Way Communications Systems, Housings for Electrical Equipment Such as Receivers and Transmitters, Public Address Systems, Glass for Protecting Cathode Ray Tube Screens, Resistors, Electric Connector Sockets, Electric Wire and Cable, Electric Connector Plugs, Electric Terminal Strips, Electric Light Bulbs, Fuses for Electric Apparatus, Electrical Filter Units Selectively Responsive to Currents of Differing Frequency, Motor Generators, Loudspeaker Grill Cloth, Electric Audio Tone Generators, Electric Switches, Relays, Electric Motors, Electron Tubes, Electric Insulators, Spark Plates for Auto Electric Equipment, Tuning and Control Mechanisms for Electric Apparatus, Earphones, Headsets, Remote Alarm Indicating Systems, Remote Control Systems To Operate Garage Doors and Television Receivers, Microwave Carrier Generating and Receiving Apparatus, Supervisory Control Equipment, Power Line Carrier Equipment, Voltage Regulators, Plated and Printed Circuit Boards or Panels, Traffic Light Control Equipment Including Programmers, Coders, Transmitters, Receivers and Decoders, Audio Frequency Amplifiers, Batteries, Semiconductor Material and Devices Including Transistors and Diodes, and Crystal Oven Assemblies.
First use July 1955 on radio and television receiving apparatus.

SN 105,397. Warner Electric Brake & Clutch Company, South Beloit, Ill. Filed Sept. 28, 1960.

WARNER ELECTRIC

Applicant disclaims the word "Electric" apart from the composite mark shown. Owner of Reg. Nos. 527,445 and 600,279.
For Electrically Operated Force Transmitting Couplings Including Brakes and Clutches and Controls Therefor.
First use July 16, 1960.

SN 105,975. Gregory Industries, Inc., Lorain, Ohio. Filed Oct. 7, 1960.

NELSON

Owner of Reg. No. 560,410.
For Stud Welding Guns, Electric Arc Weldable Studs, Welding Power Sources and Controls, Ferrules for Shielding End Weldable Studs, and Arc Welding Flux.
First use May 1944.

SN 106,367. Warner Electric Brake & Clutch Company, South Beloit, Ill. Filed Oct. 13, 1960.

WARNERMATIC

Owner of Reg. Nos. 527,445 and 600,279.
For Electric Brake Controllers.
First use Sept. 16, 1960.

SN 106,534. Rock-Ola Manufacturing Corporation, Chicago, Ill. Filed Oct. 17, 1960.

REVERBA-SOUND

For Reverberation Units for Sound Systems for Use With Automatic Phonographs.
First use Aug. 9, 1960.
Subj. to Intf. with SN 107,367.

SN 107,367. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Oct. 28, 1960.

REVERBA SOUND

For Radio and Television Receivers.
First use Sept. 19, 1960.
Subj. to Intf. with SN 106,534.

SN 108,805. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Nov. 21, 1960.

MOPLEN

Owner of Italian Reg. No. 133,573, dated Oct. 2, 1957; and U.S. Reg. Nos. 711,667 and 711,971.

For Electric Cables, Transformers, Inductance Coils, Capacitors, Switches, Motors, Generators, Radio Apparatus, Insulators, Wiring Accessories for Lighting Purposes, and Other Electrical Devices, All Made of or Containing Plastic Insulating Material.

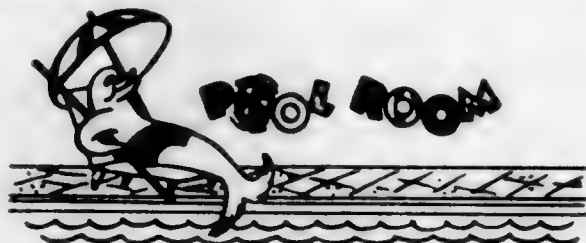
SN 109,576. Don E. Gealy, d.b.a. Daycoa Inc., Dayton, Ohio. Filed Dec. 5, 1960.

DAYCOA

For Incandescent Lamp Bulbs, Fluorescent Lamps, Fluorescent Starters, and Fixtures for Fluorescent Lamps. First use Nov. 21, 1960.

Class 22—Games, Toys, and Sporting Goods

SN 78,817. The Pool Room, Inc., Fort Lauderdale, Fla. Filed July 31, 1959.



For Swimming Pool Equipment and Novelties—Namely, Loops, Giant-Sized Pirate Treasure Coins, Novelty Signs, Large Floats in the Shape of a Bar of Soap and Similar Pool Items. First use May 15, 1960.

SN 106,514. Mattel, Inc., Los Angeles, Calif. Filed Oct. 17, 1960.

ORANGE BLOSSOM

For Doll Clothes. First use Sept. 2, 1960.

SN 106,515. Mattel, Inc., Los Angeles, Calif. Filed Oct. 17, 1960.

SINGING IN THE SHOWER

For Doll Clothes. First use Sept. 2, 1960.

SN 106,618. Mattel, Inc., Hawthorne, Calif. Filed Oct. 18, 1960.

OPEN ROAD

For Doll Clothes. First use Sept. 2, 1960.

SN 112,075. Remco Industries, Inc., Newark, N.J. Filed Jan. 18, 1961.

FIGHTING LADY

For Toy Battleship. First use Mar. 13, 1960.

SN 112,077. Remco Industries, Inc., Newark, N.J. Filed Jan. 18, 1961.

TUMBLE BUM

For Plastic Dice Cage Used in a Game. First use Feb. 10, 1960.

SN 112,402. Remco Industries, Inc., Newark, N.J. Filed Jan. 24, 1961.

SHMO

For Game Equipment Comprising a Playing Board, Game Pieces, a Dice Thrower and Playing Cards Containing Directions for the Movement of the Game Pieces on the Playing Board.

First use Feb. 10, 1960.

SN 114,210. W. Goebel Porzellanfabrik, Oeslau, near Coburg, Bavaria, Germany. Filed Feb. 23, 1961.

M.J. Hummel

The mark consists of the signature, M. J. Hummel, in German script, of the late Sister Maria Innocentia (Berta) Hummel, of the Franciscan Convent Siessen near Saalgau, Germany. Owner of U.S. Reg. No. 615,433.

For Dolls. First use July 1958; in commerce July 1958.

SN 115,458. Douglas W. English, d.b.a. Doug. English Lure Co., Corpus Christi, Tex. Filed Mar. 13, 1961.

BINGO

For Artificial Fishing Lures. First use Dec. 17, 1957.

SN 115,569. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Mar. 14, 1961.

KITTEN

For Dolls. First use Feb. 8, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 77,238. Yanmar Diesel Engine Co., Ltd., Kita-ku, Osaka, Japan. Filed July 7, 1959.



Priority claimed under Sec. 44(d) on application filed May 23, 1959; Reg. No. 671,597, dated May 1, 1961. For Diesel Engines, Parts and Accessories Thereof.

SN 98,006. Hanley Hydrojet, Inc., Prospect, Ohio. Filed Apr. 28, 1960. SN 105,887. Grasso's Koninklijke Machinefabrieken N.V., 's-Hertogenbosch, Netherlands. Filed Oct. 6, 1960.

HYDROJET

For Power Plants—Namely, Marine Jet Propulsion Units, Comprising an Internal Combustion Engine, a Water Pump Driven by Said Engine and Control Mechanism for Said Engine and Said Pump, and for Pump and Water Discharge Means.

First use December 1949.

SN 98,651. Gits Bros. Mfg. Co., Chicago, Ill. Filed June 8, 1960.

FORMULITE

For Synthetic Plastic Structural Elements Having Permanent Lubricant Properties for Use in Bearings, Seals and Impellers.

First use Apr. 7, 1960.

SN 100,378. Mark Auto Company, Inc., Layton, N.J. Filed July 6, 1960.



For Automotive Parts and Automotive Supplies—Namely, Motors, Transmissions, Mufflers, and Parts Thereof. First use Apr. 4, 1960.

SN 101,743. Bukama G.m.b.H., Hannover, Germany. Filed Aug. 1, 1960.

BUKAMA

For Air Tackers, Staples for Use in Staplers and Air Tackers, Tile Tackers, Air Pressure Rammers, Pad Staplers, Brad Tackers. First use August 1947; in commerce July 2, 1953.

SN 104,302. Norfolk Products Corporation, Norfolk, Conn. Filed Sept. 12, 1960.

CENTER SINK

Owner of Reg. Nos. 708,390 and 708,391. For Woodworking Drill and Guide Thereof. First use Aug. 12, 1960.

SN 104,731. Johnson Hydraulic Mfg. Co., Peoria, Ill. Filed Sept. 19, 1960.



For Hydraulic Truck Hoists, Telescopic Cylinders, Pumps and Valves. First use June 30, 1958.

SN 104,766. Speedfast Corporation, Long Island City, N.Y. Filed Sept. 19, 1960.

SPEEDFAST

For Industrial Stapling Devices, Industrial Nailing Devices, and Industrial Corrugated Fastener Applying Devices. First use Aug. 29, 1960.

GRASSO

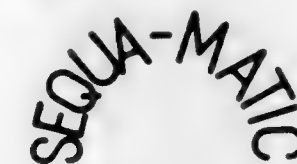
Owner of Dutch Reg. No. 127,644, dated Mar. 30, 1957. For Air Compressors and Pneumatic Tools.

SN 106,295. N.V. Wallramit Hardmetaal Maatschappij, Maassluis, Netherlands. Filed Oct. 12, 1960.

WICARIT

Owner of Dutch Reg. No. 133,424, dated Mar. 21, 1959. For Hard Metal Tools—Namely, Cutting Tools Including Turning Tools, Tools for Automatics, Milling Cutters, Reamers, Drills, Centres for Lathes and Grinders; Woodworking Tools Including Milling and Planing Tools, Router Cutters, Milling Cutters; Tools for Screw- and Bolt-Makers Including Extrusion Dies, Coldheading Dies, Cut-Off Knives and Quills, Punches; Presswork Tools Including Deep-Drawing Dies, Impact-Extrusion Dies, Punches, Blanking and Piercing Tools; and Mining Tools Including Rockdrill Bits, Coal Drills, Coal Picks, Boring Crowns.

SN 106,591. FMC Corporation, San Jose, Calif., by change of name from Food Machinery and Chemical Corporation, San Jose, Calif. Filed Oct. 18, 1960.



For Irrigation Equipment. First use Aug. 29, 1958.

SN 107,275. Mannesmann Aktiengesellschaft, Düsseldorf, Germany. Filed Oct. 27, 1960.

HYDROSTOP

Owner of German Reg. No. 717,763, dated Sept. 18, 1958. For Hydraulic Couplings, Brakes and Steering Apparatus for Tugboats.

SN 108,394. Rudd-Melikian, Inc., Hatboro, Pa. Filed Nov. 14, 1960.

COFFEE CUB

The word "Coffee" is disclaimed apart from the mark as shown. Owner of Reg. No. 698,135. For Coin-Operated Coffee Vending Machines. First use June 6, 1951.

SN 108,800. Midland-Ross Corporation, Cleveland, Ohio. Filed Nov. 21, 1960.



The word "Extruders" is disclaimed apart from the mark as shown. For Extruders and Accessories Thereof. First use Aug. 16, 1960, on extruders.

SN 109,307. Equipment Engineers Inc., Palo Alto, Calif.
Filed Nov. 30, 1960.

KREBS CYCLONE

For Hydraulic Separators for Use on Liquid-Solid Suspensions.
First use Oct. 23, 1953.

SN 114,166. Aronson Machine Company, Inc., Arcade, N.Y.
Filed Feb. 23, 1961.



Owner of Reg. No. 609,888.
For Work Supports for Adjustably Supporting Work Pieces While They Are Being Welded or Otherwise Worked Upon.
First use Jan. 15, 1957.

SN 114,437. Cochran Equipment & Service Company, Louisville, Ky. Filed Feb. 27, 1961.

CESCO

For Apparatus for Applying Closures to Rigid Foil Containers.
First use in or about May 1955.

SN 114,627. Modern Spacemaster Products, Inc., Great Neck, N.Y. Filed Feb. 28, 1961.

Carpet-Tender

For Carpet Sweepers.
First use Jan. 9, 1961.

SN 115,509. Nixdorf-Krein Manufacturing Company, St. Louis, Mo. Filed Mar. 13, 1961.

Spa Tong

The word "Tong" is disclaimed apart from the mark as shown and used.
For Kitchen Utensil for Lifting, Holding, Turning, and Otherwise Handling Food During the Cooking Thereof.
First use Jan. 13, 1961.

SN 117,797. M. Mole & Son Limited, Birmingham, England.
Filed Apr. 13, 1961.

MOLE

Owner of British Reg. Nos. B774,431 and B788,811, dated Feb. 17, 1958, and Mar. 23, 1959, respectively.
For Wrenches and Clamps.

Class 24—Laundry Appliances and Machines

SN 98,141. The Proctor-Sillex Corporation, Philadelphia, Pa.
Filed May 31, 1960.

Windsor

Owner of Reg. No. 585,865.
For Ironing-Board Pad and Cover Sets, and Ironing Tables.
First use Sept. 29, 1950.

Class 25—Locks and Safes

SN 115,389. J. Austin Smith & Son, Loudonville, Ohio.
Filed Mar. 10, 1961.

VARIMATIC

For Coin and/or Key Operated Locks.
First use Feb. 15, 1961.

Class 26—Measuring and Scientific Appliances

SN 116,527. Hyland Laboratories, Los Angeles, Calif.
Filed Mar. 27, 1961.

IMMUNOCRIT

For Laboratory Equipment for Use in Medical Diagnostic Procedure.
First use Feb. 28, 1961.

SN 119,639. Photochron Instruments, Inc., Westbury, N.Y.
Filed May 9, 1961.

PHOTOVERTER

For Photoelectric Components and Systems—Namely, Photoelectric Modulators and Control Components.
First use in April 1961.

Class 27—Horological Instruments

SN 107,066. Société Anonyme Mido, Bienne, Switzerland.
Filed Oct. 24, 1960.

Mido

AQUANAUT

Priority claimed under Sec. 44(d) on Swiss Reg. No. 181,752, dated June 25, 1960. Owner of U.S. Reg. No. 225,024.
For Watches and Parts of Watches.

Class 28—Jewelry and Precious-Metal Ware

SN 107,141. Perkel & Klein, New York, N.Y. Filed Oct. 25, 1960.

STAR-BLUE

For Men's and Women's Diamond Finger Rings.
First use June 29, 1960.

SN 114,364. Sarah Coventry, Inc., Newark, N.J. Filed Feb. 23, 1961. SN 110,896. Onondaga Pottery Company, Syracuse, N.Y. Filed Dec. 27, 1960.

SARAH COV.

The name "Sarah Cov." does not identify a living individual but is purely fanciful. Owner of Reg. No. 686,452.
For Costume Jewelry.
First use Jan. 18, 1960.

SILHOUETTE

For Dinnerware and Tableware Made of China.
First use Dec. 23, 1960.

Class 31—Filters and Refrigerators

SN 115,663. Hattie Carnegie, Inc., New York, N.Y. Filed Mar. 16, 1961. SN 101,772. General Ionics Corporation, Pittsburgh, Pa. Filed Aug. 1, 1960.

Miss Hattie

Owner of Reg. No. 680,783.
For Jewelry—Namely, Buckles, and Buttons Made in Whole or in Part of Precious Metal or Plated With the Same, Bracelets, Bracelet Chains and Links, Brooches and Pins, Earrings, Pendants, Finger and Scarf Rings, Lockets, Lavallieres, Breast Pins, Necklaces, Jewelled Hair Ornaments, Jewelled Shoe Buckles and Jewelled Cases and Holders.
First use Apr. 1, 1958.

Class 30—Crockery, Earthenware, and Porcelain

SN 78,572. Porzellanfabrik Schönewald, Schönewald, Oberfranken, Germany. Filed July 28, 1959.

FAIRWOOD



Owner of U.S. Reg. No. 630,432.
For Dinnerware—Namely, Plates, Cups, Saucers, Bowls, Platters, Turkeys and Serving Pieces Made of Porcelain.
First use Sept. 30, 1957; in commerce Sept. 30, 1957.

SN 110,487. Stetson China Company, Lincoln, Ill. Filed Dec. 19, 1960.

QUEEN ANNE

For China Dinnerware.
First use Mar. 1, 1936.

SN 110,488. Stetson China Company, Lincoln, Ill. Filed Dec. 19, 1960.

LINCONITE

For China Dinnerware.
First use July 1954.

SN 110,489. Stetson China Company, Lincoln, Ill. Filed Dec. 19, 1960.

COLONIAL LACE

For China Dinnerware.
First use July 1954.

ionette

For Water Deionizers.
First use May 1960.

SN 104,399. Ice All-O-Matic Manufacturing, Incorporated, Salt Lake City, Utah. Filed Sept. 13, 1960.



Applicant disclaims as an essential portion of the mark the ice cubes shown on the drawing.
For Ice Vending Machines.
First use May 31, 1960.

SN 112,019. The Bastian-Blessing Company, Chicago, Ill. Filed Jan. 18, 1961.

GRITROL

For Sintered Metal Filter.
First use July 21, 1959.

SN 116,284. American Air Filter Company, Inc., Louisville, Ky. Filed Mar. 23, 1961.

AMER KLEEN

For Unit Air Filters and Disposable Air Filter Pads.
First use Jan. 7, 1958.

Class 32—Furniture and Upholstery

SN 101,584. Johnson-Carper Furniture Company, Inc., Roanoke, Va. Filed July 27, 1960.



Applicant disclaims any exclusive rights in the word "Collection" apart from the mark as shown.
For Bedroom Furniture.
First use Apr. 23, 1960.

SN 106,913. Nove Industrial Corporation, Chicago, Ill. Filed Oct. 6, 1960.

CASUALITE

Owner of Reg. No. 705,988.
For Furniture—Namely, Lawn and Patio Furniture and Indoor Folding and Stacking Stools.
First use December 1957.

SN 114,323. Home Comfort Products Co., Princeville, Ill. Filed Feb. 23, 1961.



Owner of Reg. No. 651,185.
For Shelving Units and Accessory Parts Therefor.
First use Feb. 27, 1959.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 80,489. Basic Products Corporation, Milwaukee, Wis. Filed Aug. 31, 1959.

ROTAIR

For Heat Treating Furnaces for Metals.
First use June 19, 1959.

SN 81,312. Octagon Ventilator Co., Chicago, Ill. Filed Sept. 14, 1959.

AEROMATIC

For Roof Ventilating and Air Moving Equipment—Namely, Ventilators.
First use July 25, 1951.

SN 110,136. Baruda International Limited, Gardena, Calif. Filed Dec. 13, 1960.

BECKON-LYTE

For Candle Lamps.
First use Aug. 4, 1960.

SN 110,301. Baruda International Limited, Gardena, Calif. Filed Dec. 16, 1960.

BECKON-BEAM

For Candle Lamps.
First use Dec. 1, 1960.

SN 115,461. The Feeny Manufacturing Company, Muncie, Ind. Filed Mar. 13, 1961.

Jonny vent

For Odor Exhaust Devices and Parts Thereof for Toilets.
First use Feb. 27, 1961.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 103,423. Tradall S.A., Vaduz, Liechtenstein. Filed Aug. 25, 1960.

LYPSOID

Priority claimed under Sec. 44(d) on Liechtenstein Reg. No. 943, dated Mar. 4, 1960.
For Pneumatic Tires.

SN 106,266. Lewis Supply Co. Inc., New York, N.Y. Filed Oct. 12, 1960.

Leuroco

For Rubber Tubes for Bicycles.
First use June 1950.

SN 109,176. Flexibox Limited, Manchester, England. Filed Nov. 28, 1960.

CHEMIFLEX

Owner of British Reg. No. 797,943, dated Nov. 17, 1959.
For Precision Made Mechanical Seals for Rotary Shafts.

Class 36—Musical Instruments and Supplies

SN 106,562. Rembert Wuriltzer, New York, N.Y. Filed Oct. 17, 1960.

SACCONI

For Tail Adjuster for Violins.
First use Mar. 28, 1957.

Class 37—Paper and Stationery

SN 15,549. Leonard Tissue Corporation, Cambridge, Mass. Filed Sept. 12, 1956.

PUREX

For Toilet Tissue and Paper Towels.
First use Mar. 11, 1937.

SN 85,701. Western Tablet & Stationery Corporation, Dayton, Ohio, assignee of White and Wyckoff Manufacturing Company, Holyoke, Mass. Filed Nov. 19, 1959.

White & Wyckoff

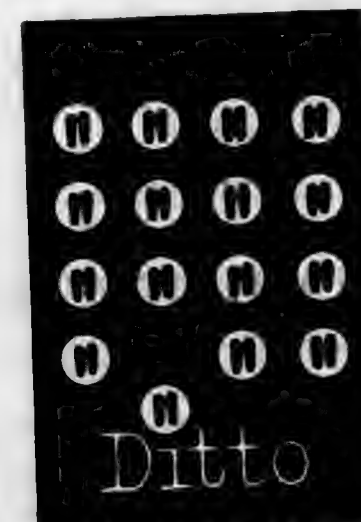
Owner of Reg. No. 296,025.
For Packages of Stationery for Letter-Writing Purposes.
First use Jan. 1, 1959; Jan. 10, 1933, as to "White & Wyckoff."

SN 99,867. Morgan Development Laboratories, Inc., New Canaan, Conn. Filed June 28, 1960.

STAMP-TELLER

For Combined Postal Scale, Letter Opener and Magnifier.
First use June 20, 1960.

SN 101,379. Ditto, Incorporated, Chicago, Ill. Filed July 26, 1960.



The word "Brand" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 518,433 and 518,434.
For Paper for General Duplicating and General Stationery Use.
First use June 25, 1959.

SN 103,655. Champion Papers Inc., Hamilton, Ohio, by change of name from The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Aug. 30, 1960.

PKG

For Paper and Paperboard Provided With Treated or Untreated Polymeric Coatings for Printing or Conversion Into Containers.
First use at least as early as July 5, 1960.

SN 104,475. Perry-Sherwood Corporation, New York, N.Y. Filed Sept. 14, 1960.

PERFAX

For Copy Paper.
First use on or about July 1960.

SN 106,321. Premold Corporation, West Springfield, Mass. Filed Oct. 11, 1960.

GEMTONE

For Paper—Namely, Specialty Paper Used in the Manufacture of Novelty Items and Other Applications Requiring Paper of a Latex Impregnated Type.
First use Sept. 27, 1960.

SN 106,469. Bergstrom Paper Company, Neenah, Wis. Filed Oct. 17, 1960.

WHITE PROTECTION

For Safety Paper.
First use Dec. 31, 1956.

SN 109,639. Speedrite Products, Inc., Wichita, Kans. Filed Dec. 6, 1960.

SPEEDRITE

For Fountain Type Pens Having Felt Nibs.
First use on or about Oct. 1, 1954.

SN 110,235. Northern States Envelope Co., Inc., St. Paul, Minn. Filed Dec. 14, 1960.

TO AND FRO

For Envelopes.
First use Oct. 7, 1960.

SN 115,777. Canadian Wallpaper Manufacturers Limited, New Toronto, Ontario, Canada. Filed Mar. 16, 1961.

BOXER

Owner of Canadian Reg. No. N.S. 32,650, dated June 18, 1949.
For Wallpaper.

SN 118,985. Fox River Paper Corporation, Appleton, Wis. Filed May 1, 1961.

PERMASIZED

For Writing Paper.
First use Apr. 12, 1961.

SN 119,525. Kimberly-Clark Corporation, Neenah, Wis. Filed May 8, 1961.

KIMFORM

Owner of Reg. Nos. 229,755, 713,877, and others.
For Wipers Made of Paper.
First use Apr. 28, 1961.

Class 38—Prints and Publications

SN 82,510. C. B. Guthrie Tariff Bureau, Inc., Washington, D.C. Filed Oct. 1, 1959.

**OFFICIAL MOTOR
FREIGHT TARIFF
DIRECTORY**

For Index of Motor Freight Tariffs, Issued Yearly.
First use Feb. 1, 1943.

SN 82,511. C. B. Guthrie Tariff Bureau, Inc., Washington, D.C. Filed Oct. 1, 1959.

**OFFICIAL
TARIFF
DIRECTORY**

For Index of Railroad Freight Tariffs, Issued Yearly.
First use Oct. 15, 1912.

SN 95,692. The Copley Press, Inc., Aurora, Ill. Filed Apr. 25, 1960.

THORN MC BRIDE

"Thorn McBride" is the name of a fictitious comic-strip character.
For Comic Strip.
First use Apr. 4, 1960.

SN 103,979. Statistical Tabulating Corporation, Chicago, Ill. Filed Sept. 6, 1960.

KEEPING TAB

For Company News Bulletin.
First use Aug. 2, 1960.

SN 104,102. Pit and Quarry Publications, Inc., Chicago, Ill. Filed Sept. 8, 1960.

DIRECTORY OF THE NONMETALLIC MINERALS INDUSTRIES

For Directory, Published Biennially.
First use 1958; about 1910 as to a section of a handbook.

SN 104,103. Pit and Quarry Publications, Inc., Chicago, Ill. Filed Sept. 8, 1960.

CONCRETE INDUSTRIES YEARBOOK

For Yearbook Dealing With Matters Pertaining to Concrete, Published Annually.
First use about July 1939.

SN 107,445. Gulf Oil Corporation, Pittsburgh, Pa. Filed Oct. 31, 1960.

TOURGIDE

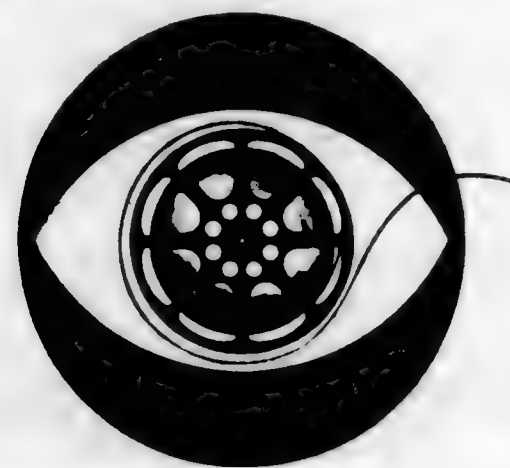
Owner of Reg. No. 290,381.
For Printed Publications of Interest to Motorists, Such as City, State, and Sectional Road Maps, Travel and Automobile Maintenance Reminders, Trip Log Books, Postpaid Request Cards for Tourguide Maps Marked To Show a Preferred Route for a Planned Journey, and Information Leaflets Listing State Gasoline Taxes and Speed Limits.
First use at least as early as May 1931 on printed publications within above category.

SN 107,695. Picot Laboratories, Inc., Mount Vernon, N.Y. Filed Nov. 2, 1960.

**Cancionero
Picot**

Without waiving any rights at common law, in other countries, or under other statutes, the word "Cancionero" is disclaimed except as shown. Owner of Reg. No. 500,179.
For Periodical Publication.
First use 1928.

SN 109,164. CBS Films, Inc., New York, N.Y. Filed Nov. 28, 1960.



For Motion Picture Television Films.
First use Apr. 8, 1957.

SN 113,489. Carnival Films Inc., Lodi, N.J. Filed Feb. 13, 1961.

CARNIVAL

For Home Movies.
First use during January 1960.

SN 114,270. Stamp World Inc., Brooklyn, N.Y. Filed Feb. 23, 1961.

STAMP WORLD

For Magazine Published From Time to Time for Philatelists.
First use Feb. 1, 1960.

SN 114,336. Augsburg Publishing House, Minneapolis, Minn. Filed Feb. 13, 1961.

Steps

For Church Periodical for Children for Educational Purposes.
First use Jan. 3, 1961.

SN 114,337. Augsburg Publishing House, Minneapolis, Minn. Filed Feb. 13, 1961.

Hand in Hand

For Church Periodical for Children for Educational Purposes.
First use Jan. 3, 1961.

SN 114,338. Augsburg Publishing House, Minneapolis, Minn. Filed Feb. 13, 1961.



For Church Periodical for Children for Educational Purposes.
First use Jan. 3, 1961.

SN 117,277. Humboldt Livestock Auction, Inc., Humboldt, Iowa. Filed Apr. 6, 1961.

Cattle Chatter

For Weekly Magazine.
First use on or about Nov. 15, 1960.

SN 117,479. General Aniline & Film Corporation, New York, N.Y. Filed Apr. 10, 1961.

ANSCOCHROME

Owner of Reg. No. 616,815.
For Photographic Prints and Pictures.
First use June 1, 1955.

SN 118,817. Black Arrow Publishers, Inc., Norristown, Pa. Filed Apr. 20, 1961.

THE NATIONAL BOWHUNTER

For Magazine.
First use July 1955.

Class 39—Clothing

SN 102,847. International Shoe Company, St. Louis, Mo. Filed Aug. 17, 1960.

FERRARI

For Men's Shoes.
First use October 1956.

SN 109,215. Leon Unatin and Muriel Unatin, Las Vegas, Nev. Filed S.R. Nov. 28, 1960; Am. P.R. Aug. 7, 1961.

LEON UNATIN ORIGINAL

Applicants disclaim the word "Original" apart from the mark.
For Women's Shoes.
First use Apr. 4, 1958.

SN 110,207. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Dec. 14, 1960.

Semi-Jams

For Pajamas for Men, Women, Boys, Girls, and Infants.
First use Sept. 26, 1960.

SN 110,827. Dutchess Underwear Corporation, New York, N.Y. Filed Dec. 27, 1960.

STRYDEFREE-CURVED-TO FIT

Owner of Reg. Nos. 338,773, 651,232, and others.
For Ladies' Wearing Apparel—Namely, Underwear, Nightgowns, Slips, Petticoats, Pajamas, Bloomers, Vests, Panties and Lounging and Hostess Robes.
First use Nov. 2, 1960.

SN 111,616. Simon Simple Originals, Inc., Orange, N.J. Filed Jan. 10, 1961.

GOOFY GOB

For Decorated Hats.
First use Mar. 25, 1959.

SN 115,722. Phillips-Van Heusen Corporation, New York, N.Y. Filed Mar. 15, 1961.

VANALUX

For Shirts, Pajamas, Sports Shirts, Underwear and Knit Shirts.
First use Sept. 19, 1956.

NATURE GIRL

For Ladies' Panties.
First use Feb. 21, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 87,949. Martin Fabrics Corporation, New York, N.Y. Filed Feb. 18, 1959.

VELONYL

For Velvet in the Piece.
First use Jan. 22, 1959.

SN 104,144. Celanese Corporation of America, New York, N.Y. Filed Sept. 9, 1960.

TRAVACEL

For Textile Fabrics for Home Furnishings.
First use in about December 1950.

SN 106,932. Stafler Company Limited, London, England. Filed Oct. 6, 1960.

STAFLEX

Owner of British Reg. No. 770,945, dated Nov. 7, 1957; and U.S. Reg. No. 675,286.
For Wholly or Partly Resin-Coated Piece Goods Made of Natural or Synthetic Fibres of Plastic Material for Use by Lamination for Stiffening and/or Reinforcing Garments, Draperies, and the Like.

SN 114,242. Minette Mills, Incorporated, Grover, N.C. Filed Feb. 23, 1961.

PETITUFT

For Bedspreads.
First use Nov. 12, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 90,134. Abar Manufacturing Company, Cleveland, Ohio. Filed Feb. 2, 1960.

SPRUCE

For Electrically Operated Instruments for Buffing, Filing, Brushing the Nails and Cuticle, and Massaging the Skin and Scalp.
First use in or about November 1950.

SN 106,303. Atco Surgical Supports, Inc., Cuyahoga Falls, Ohio, by change of name from The Akron Truss Company, Inc., Cuyahoga Falls, Ohio. Filed Oct. 13, 1960.



For Surgical Garments and Health Supports.
First use July 1959 on health supports.

SN 106,330. Kimberly-Clark Corporation, Neenah, Wis. Filed Oct. 13, 1960.

SLENDERLINE

For Sanitary Napkins.
First use Oct. 4, 1960.

SN 106,892. John E. Fieser, Clearwater, Kans. Filed Oct. 21, 1960.

ELECTRO-POLL

For Appliance for Dehorning Cattle.
First use on or about Aug. 1, 1960.

SN 114,737. Nu-Dent Porcelain Studio, Inc., New York, N.Y. Filed Feb. 24, 1961.

"EPO-TEX"

For Dental Bridgework, Jackets, Crowns, Veneer Facings, Dentures and Artificial Teeth.
First use Oct. 3, 1960.

SN 115,298. Harlan M. Buck, Inc., Baltimore, Md. Filed Mar. 10, 1961.

REG-U-TEMP

For Therapeutic Appliances, Particularly Portable Sitz Baths for Post-Operative and Other Therapy of Perineal, Rectal and Genital Areas.
First use September 1960.

SN 117,688. Cleo S. Chabot, Meriden, Conn. Filed Apr. 12, 1961.

TRICK

For Zippered Syringe Bag of Terry Cloth.
First use Mar. 20, 1961.

Class 45—Soft Drinks and Carbonated Waters

SN 89,998. Bercut-Richards Packing Co., Sacramento, Calif. Filed Feb. 1, 1960.



Owner of Reg. Nos. 544,211 and 528,032.
For Water.
First use Jan. 16, 1959.

SN 106,757. Tasty Mates Company, Camden, N.J. Filed Oct. 19, 1960.



The drawing is lined for green, however, color is not claimed as an integral portion of the mark.

For Soft Drinks in the Following Flavors: Pineapple-Orange, Pineapple-Grapefruit, Grapefruit-Lemon, Raspberry-Lemon and Punch.

First use Oct. 7, 1960.

Class 46—Foods and Ingredients of Foods

SN 77,336. Tri Associates, Inc., Minneapolis, Minn. Filed July 8, 1959.



For Milk Replacer in Powdered Form for Calves and Other Livestock.
First use Jan. 26, 1958.

SN 85,209. Childers' Foods, Inc., Bedford, Va. Filed Nov. 13, 1959.



For Canned Shredded Chicken and Chicken Broth, Fat, Gravy and Croquette Mix.
First use July 20, 1959.

SN 94,754. Fantasy Flavors, Inc., Wheaton, Ill. Filed Apr. 11, 1960.

FANTASY

For Ice Cream and Dried Fruit Mixes.
First use Mar. 31, 1958.

SN 99,242. Regal Stores, Inc., Indianapolis, Ind. Filed June 17, 1960.

LITTLE LYNN

For Canned Fruits; Canned Vegetables; Canned Fruit Juices; Apple Butter; Fruit Jellies; Fruit Preserves; Honey; Peanut Butter; Cranberry Sauce; Maraschino Cherries;

Pork and Beans; Minced meat; Hominy; Olives; Pickles; Cat-soup; Chili Sauce; Mustard; Canned and Bottled Mushrooms; Tomato Sauce; Tomato Paste; Mayonnaise; Sandwich Spread; Salad Dressings; Macaroni; Spaghetti; Egg Noodles; Rice; Tartar Sauce; All Purpose Flour; Tea; Vinegar; Margarine; Dog Food; Cat Food; Fluid, Canned and Powdered Milk, Cheese, Processed Cheese, Butter and Fresh Eggs; Coffee.
First use October 1959.

SN 102,441. Waples-Platter Company, d.b.a. Great Western Foods Company, Fort Worth, Tex. Filed Aug. 10, 1960.



The black background in the drawing is shown solely for the purpose of contrast and is not claimed as a feature of the mark. Owner of Reg. No. 521,081.
For Canned Pinto Beans.
First use May 25, 1960.

SN 103,859. King Candy Company, Fort Worth, Tex. Filed Sept. 2, 1960.

CHIFFON

For Candy.
First use Nov. 25, 1957.

SN 108,728. Martha White Mills, Inc., Nashville, Tenn. Filed Nov. 18, 1960.



The name "Martha White" and the portrait shown on the drawing are that of Martha White Lindsey, now deceased. Owner of Reg. Nos. 192,721, 538,025, and 544,349.
For Corn Meal Mix.
First use Jan. 15, 1956.

SN 108,978. Tony M. Harris, d.b.a. The Winery and as Golden-O Company, Decatur, Ill. Filed Nov. 23, 1960.



For Frozen Foods—Namely, Frozen Breaded Onion Rings.
First use Oct. 10, 1959.

SN 111,093. General Preserve Company, Inc., Brooklyn, N.Y. Filed Dec. 30, 1960.

JAM-B-ERRY

For Boysenberry Preserves.
First use Apr. 18, 1960.

SN 111,792. Foremost Dairies, Inc., d.b.a. Western Condensing Company, San Francisco, Calif. Filed Jan. 13, 1961.

BRISK

For Dog Milk Formula.
First use Oct. 22, 1960.

SN 112,174. Top-Scor Products, Inc., Louisville, Ky. Filed Jan. 19, 1961.

PO-EM

For Additives Consisting Principally of Glycerides Dispersed in a Suitable Cereal Base To Be Incorporated in Dough, Used in the Manufacture of Bakery Products.
First use April 1959.

SN 112,437. Jack Brown Produce, Inc., Sparta, Mich. Filed Jan. 25, 1961.

APPLE RIDGE

No claim to exclusive right is made with respect to the word "Apple," such word being the name of a species of the goods.
For Fresh Fruit.
First use Dec. 19, 1949.

SN 113,521. Reginald G. Hanson, d.b.a. Tested Products Co., Kansas City, Mo. Filed Feb. 13, 1961.

Csharp

For Vitaminized Candy.
First use June 29, 1960.

SN 114,001. Iglo N.V., Utrecht, Netherlands. Filed Feb. 20, 1961.

IGLO

Owner of U.S. Reg. No. 687,309.
For Frozen Vegetables.
First use April 1960; in commerce December 1960.

SN 114,036. Neptunalia Seafood Company, Thunderbolt, Ga. Filed Feb. 20, 1961.

SHRAB

For Frozen Shrimp Stuffed With Deviled Crab.
First use Dec. 3, 1959.

SN 116,330. Eldredge Mitchell, d.b.a. The Mitchell Co., Memphis, Tenn. Filed Mar. 23, 1961.

EL MITCO

For All Purpose Food Sauce and Salad Dressing.
First use Sept. 20, 1951.

TM 134

OFFICIAL GAZETTE

OCTOBER 24, 1961

SN 119,558. Plus Products, Los Angeles, Calif. Filed May 12, 1961.

TIGER'S MILK

For Cookies, Breads, Hamburger Buns, and Rolls.
First use Feb. 10, 1961.

SN 120,175. Cacao-en Chocoladefabrieken Bensdorp N.V., Bussum, Netherlands. Filed May 17, 1961.



Priority claimed under Sec. 44(d) on Dutch application filed Feb. 9, 1961; Reg. No. 140,166, dated Mar. 7, 1961.
For Cocoa-Powder, Chocolate, Confectionery, Biscuits, Cake, and Pastry.

SN 120,315. The Kansas Milling Company, Wichita, Kans. Filed May 18, 1961.

GOLDEN SEAL

Owner of Reg. No. 65,400.
For Wheat Flour.
First use Mar. 20, 1907.

Class 47 - Wines

SN 112,801. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. Filed Jan. 30, 1961.

BALI HAI

For Wines.
First use Jan. 13, 1961.

Class 49 - Distilled Alcoholic Liquors

SN 93,782. Vincent Flacomio and Joseph V. Flacomio, Baltimore, Md. Filed Mar. 28, 1960.



The words "Maryland Straight Rye Whiskey" are disclaimed. Owner of Reg. Nos. 324,792 and 344,127.
For Whiskey.
First use from at least Feb. 20, 1895.

SN 118,896. Mr. Boston Distiller Inc., Boston, Mass. Filed Apr. 28, 1961.

CAPTAIN'S CHAIR

For Whiskey.
First use Apr. 5, 1961.

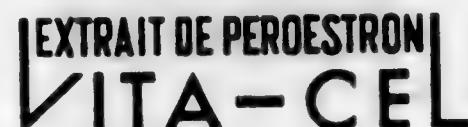
SN 119,163. George Zaninovich, Inc., d.b.a. Coronado Distillery, Orange Cove, Calif. Filed May 2, 1961.



For Brandy.
First use Jan. 10, 1961.

Class 51 - Cosmetics and Toilet Preparations

SN 96,321. Elizabeth of Sweden, Haledon, N.J. Filed May 3, 1960.



For Cosmetic Skin Lotions and Creams.
First use Nov. 1, 1959.

SN 115,438. Chesebrough-Pond's Inc., New York, N.Y. Filed Mar. 13, 1961.

HEADMAN

For Hair Tonic and Hair Dressing.
First use Feb. 21, 1961.

SN 115,893. Ciba Limited, Basel, Switzerland. Filed Mar. 17, 1961.

BINAFIX

Priority claimed under Sec. 44(d) on Swiss Reg. No. 183,188, dated Oct. 24, 1960. Owner of U.S. Reg. Nos. 301,633 and 665,505.
For Cosmetics—Namely, Hair Lotions and Creams.

SN 116,347. Sales Affiliates, Inc., New York, N.Y. Filed Mar. 23, 1961.



Owner of Reg. Nos. 93,179, 256,335, and 520,881.
For Oxidizing Agent for Use With Hair Colorings and as a Hair Bleach.
First use Feb. 21, 1961.

Class 52 - Detergents and Soaps

SN 105,133. Napoleon A. Barbeau, d.b.a. Barbeau Supply Co., St. Paul, Minn. Filed Sept. 26, 1960.

BOLARIS

For Bowl Cleanser in Liquid Form.
First use June 2, 1954.

SN 106,634. The Procter & Gamble Company, Cincinnati, Ohio. Filed Oct. 18, 1960.

CAPTURED BODY

For Hair Shampoo.
First use Sept. 8, 1960.

OCTOBER 24, 1961

U. S. PATENT OFFICE

TM 135

SN 107,126. Martin H. Gorney, d.b.a. Lindy Products, Boston, Mass. Filed Oct. 25, 1960.



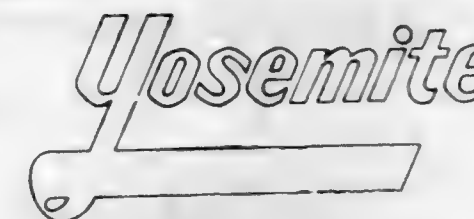
For Hair Shampoo.
First use Sept. 15, 1960.

SN 115,657. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Mar. 15, 1961.

BOOT

For Spray Spotter for Cleaning Fabrics.
First use Oct. 6, 1960.

SN 115,751. Yosemite Chemical Co., d.b.a. Yosemite Chemical Company, San Francisco, Calif. Filed Mar. 15, 1961.



Owner of Reg. No. 440,975.
For Detergent Compositions for Industrial and Institutional Cleaning Purposes.
First use January 1950.

SN 115,804. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Mar. 16, 1961.



For Detergent Composition for Cleaning Surfaces Soiled With Greasy Dust and Dirt.
First use Feb. 15, 1961.

SERVICE MARKS

Class 100 - Miscellaneous

SN 98,842. Armour and Company (Delaware corporation), Chicago, Ill., assignee of Armour and Company (Illinois corporation), Chicago, Ill. Filed June 13, 1960.

BCI

For Service Involving Obtaining and Supplying Semen From Critically Selected Bulls and Artificial Insemination of Cattle With Such Semen.
First use 1958.

SN 124,322. Atlantic Research Corporation, Alexandria, Va. Filed July 20, 1961.

ARC

Owner of Reg. No. 715,181.
For Research, Development, Production, Technical Survey, Editing, Informational and Consultant Services for Propellants, Explosives, Pyrotechnics, Smoke Signals, Chemical Igniters, Chemical Kinetics and Combustion, Thermo-Dynamics and Fluid Dynamics.
First use August 1949.

SN 124,323. Atlantic Research Corporation, Alexandria, Va. Filed July 20, 1961.



Owner of Reg. No. 715,181.
For Research, Development, Production, Technical Survey, Editing, Informational and Consultant Services in the Fields of Gas Generators, Rocket Motors, Rocket Launchers, Catalysts, Propellant-Actuated Separating Devices and Propellant Torches.
First use August 1949.

Class 101 - Advertising and Business

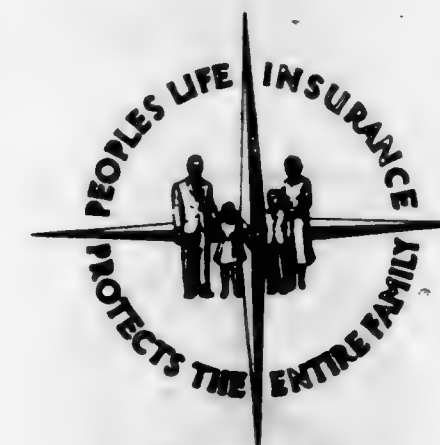
SN 109,486. Gallery Three Design Associates, Clifton, N.J. Filed Dec. 2, 1960.

GALLERY 3

For Industrial Design Services.
First use June 24, 1960.

Class 102 - Insurance and Financial

SN 113,442. Peoples Life Insurance Company, Washington, D.C. Filed Feb. 10, 1961.



Applicant hereby disclaims the term "Protects the Entire Family" apart from the mark as shown.
For Underwriting Life Insurance.
First use Sept. 15, 1957.

Class 103 — Construction and Repair

SN 87,260. Midas, Inc., Chicago, Ill. Filed Dec. 14, 1959.



Applicant claims the exclusive right to the use of the words "Muffler Shops" as a part of its trademark but not otherwise. Owner of Reg. Nos. 620,322, 681,974, and others. For Inspection of Automotive Exhaust Systems and Installation of Automotive Mufflers and Exhaust System Parts. First use on or about Dec. 19, 1958.

SN 100,917. Lombardi Engineering Company, Derby, Conn. Filed July 15, 1960.



Owner of Reg. Nos. 207,204 and 600,757. For Fabrication of Metal Parts for Others. First use in 1934.

Class 105 — Transportation and Storage

SN 105,734. Foster Freight Lines, Inc., Long Beach, Calif. Filed Oct. 4, 1960.



For Transportation of General Commodities Between the United States and Foreign Countries. First use Mar. 5, 1960.

COLLECTIVE MEMBERSHIP MARKS**Class 200**

SN 106,585. Consulting Engineers Council, Springfield, Ill. Filed Oct. 18, 1960.



For Indicating Membership in Applicant Association. First use July 29, 1957.

SN 113,373. Sanders World Travel, Inc., Washington, D.C. Filed Feb. 9, 1961.

PANORAMA

For Travel Agency Services. First use on or about Jan. 5, 1961.

SN 114,903. Eastern Air Lines, Inc., New York, N.Y. Filed Jan. 25, 1961.



For Air Transportation of Persons, Property and Mail. First use Jan. 8, 1950.

Class 106 — Material Treatment

SN 97,482. The Goldsmiths' Company of Canada Limited, Toronto, Ontario, Canada. Filed May 19, 1960.

ARRIS

Priority claimed under Sec. 44(d) on Canadian application filed Mar. 25, 1960; Reg. No. 119,491, dated Sept. 16, 1960.

For Application of Protective Coatings to Metallic Surfaces.

SN 110,297. Allied Biological Control Corporation, Boston, Mass. Filed Dec. 16, 1960.

TERRESTROL

For Making Surveys and Inspections of Brush, Weeds and Other Undesirable Vegetation and Eradicating Said Brush, Weeds and Vegetation by Chemical Treatment. First use Nov. 14, 1960.

SN 116,956. American Music Guild, Inc., Washington, D.C. Filed Apr. 3, 1961.



For Indicating Membership in Applicant's Record Club. First use Mar. 15, 1959.

**TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER****Class 1 — Raw or Partly Prepared Materials**

722,923. ROTENE. Montecatini, Società Generale per l'Industria Mineraria e Chimica. SN 80,732. Pub. 8-8-61. Filed 9-2-59.
722,924. AMBERLITH. Ulano Graphic Arts Supplies, Inc. SN 116,766. Pub. 8-8-61. Filed 3-29-61.
722,925. ATLAS. Armour and Company. SN 117,433. Pub. 8-8-61. Filed 4-10-61.
722,926. OLYMPIAN. Armour and Company. SN 117,436. Pub. 8-8-61. Filed 4-10-61.

722,940. AMOCO. The American Oil Company. SN 71,792. Pub. 8-8-61. Filed 4-20-59.
722,941. TRELEASE. Amchem Products, Inc. SN 76,782. Pub. 8-8-61. Filed 6-30-59.
722,942. NOROX. The Norac Company, Inc. SN 77,129. Pub. 8-8-61. Filed 7-6-59.
722,943. NORAC. The Norac Company, Inc. SN 77,131. Pub. 8-8-61. Filed 7-6-59.
722,944. REGAL AND DESIGN. Cabot Corporation, by merger from Godfrey L. Cabot, Inc. SN 99,491. Pub. 3-7-61. Filed 6-22-60.
722,945. CONTREET. The Roto Corporation. SN 112,315. Pub. 8-8-61. Filed 1-23-61.

Class 2 — Receptacles

722,927. SEE SHELL. S. Curtis and Son, Inc. SN 95,574. Pub. 3-21-61. Filed 4-22-60.
722,928. GOODVAL. Goodval Vacuum Paper Products Corp. SN 112,454. Pub. 8-8-61. Filed 1-25-61.
722,929. SPINA-SPICE. Lou Mar Co., Inc. SN 114,235. Pub. 8-8-61. Filed 2-23-61.

Class 7 — Cordage

722,946. TY-MOR. Birmingham & Prosser Company. SN 52,465. Pub. 8-8-61. Filed 5-28-58.
722,947. WIRECO BROWN STRAND. Wire Rope Corporation of America, Inc. SN 83,151. Pub. 8-8-61. Filed 10-12-59.
722,948. SILVERLINE. Rochester Ropes, Inc. SN 110,362. Pub. 8-8-61. Filed 12-16-60.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

722,930. BERNARD IMPORTS LTD. AND DESIGN. M. A. Weiner Company. SN 85,446. Pub. 8-8-61. Filed 11-16-59.
722,931. JANTZEN. Jantzen Inc. SN 110,857. Pub. 8-8-61. Filed 12-27-60.

Class 11 — Inks and Inking Materials

722,949. SEAGULL. Port Huron Sulphite & Paper Company. SN 106,532. Pub. 8-8-61. Filed 10-17-60.

Class 12 — Construction Materials**Class 4 — Abrasives and Polishing Materials**

722,932. SHARP. Upatol Corporation. SN 100,872. Pub. 8-8-61. Filed 7-14-60.
722,923. CONVERSATION. Ball Chemical Company. SN 103,517. Pub. 8-8-61. Filed 8-29-60.
722,934. HAVE. American Home Products Corporation, d.b.a. Boyle-Midway. SN 114,077. Pub. 8-8-61. Filed 2-21-61.
722,935. CARBIMET. Buehler Ltd. SN 114,679. Pub. 8-8-61. Filed 3-1-61.

722,950. MAGNA-FOLD. American Door Company, Inc. SN 34,654. Pub. 8-19-58. Filed 7-31-57.
722,951. JAL-O-VENT. Jones Engineering Co. SN 35,514. Pub. 4-15-58. Filed 8-14-57.
722,952. NEOPUTTY. Pennsalt Chemicals Corporation. SN 89,791. Pub. 8-8-61. Filed 1-27-60.
722,953. DEALERS RESERVE SUPPLY. Long Island Dealers Supply Co., Inc. SN 91,402. Pub. 8-8-61. Filed 2-23-60.
722,954. JALGRATE. Jones & Laughlin Steel Corporation. SN 100,611. Pub. 8-8-61. Filed 7-11-60.
722,955. DURO. Flat Metal Manufacturing Company. SN 101,769. Pub. 8-8-61. Filed 8-1-60.

Class 5 — Adhesives

722,936. WELD-O-SEAM. United States Rubber Company. SN 114,561. Pub. 8-8-61. Filed 2-27-61.
722,937. GLU-BIRD. Willhold Glues, Inc. SN 114,662. Pub. 8-8-61. Filed 2-28-61.
722,938. RAYCO. Raybestos-Manhattan, Inc. SN 115,166. Pub. 8-8-61. Filed 3-8-61.

722,956. FISSURLITE. Minnesota and Ontario Paper Company. SN 101,796. Pub. 8-8-61. Filed 8-1-60.
722,957. KLEAN-KOTE. The Flintkote Company. SN 102,224. Pub. 8-8-61. Filed 8-8-60.
722,958. BONNIE SUPERB. Kenron Awning and Window Corporation. SN 108,342. Pub. 8-8-61. Filed 8-24-60.
722,959. RUBATEX. Great American Industries, Inc. SN 105,440. Pub. 8-8-61. Filed 9-29-60.
722,960. BUTLER. Butler Manufacturing Company. SN 107,736. Pub. 8-8-61. Filed 11-3-60.
722,961. RESIPOX. Midwest Industrial Products Corp. SN 109,508. Pub. 8-8-61. Filed 12-2-60.
722,962. ACOUSTIFOLD. Cloray Corporation. SN 110,257. Pub. 8-8-61. Filed 12-16-60.
722,963. AZKEM. Harco Chemical, Inc. SN 110,333. Pub. 8-8-61. Filed 12-16-60.

Class 6 — Chemicals and Chemical Compositions

722,939. TEXGAS. Union Texas Natural Gas Corporation, assignee of Texas Natural Gasoline Corporation. SN 30,860. Pub. 8-8-61. Filed 5-27-57.

722,964. KEY Z BEAD. Keystone Steel & Wire Company. SN 110,861. Pub. 8-8-61. Filed 12-27-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

- 722,965. STYLIZED C. Conoflow Corporation. SN 102,390. Pub. 8-8-61. Filed 8-10-60.
- 722,966. PORT-O-SAN. Port-O-San Corp. SN 103,294. Pub. 8-8-61. Filed 8-23-60.
- 722,967. KEELARING. Keelavite Hydraulics Limited. SN 103,668. Pub. 8-8-61. Filed 8-30-60.
- 722,968. ROOM-WARE. Kason Display Hardware Inc. SN 109,420. Pub. 8-8-61. Filed 12-1-60.
- 722,969. VOSS AND DESIGN. Arthur H. Voss. SN 109,447. Pub. 8-8-61. Filed 12-1-60.
- 722,970. MELCO GRILL-IT. Melco Foundry & Manufacturing Co. SN 111,003. Pub. 8-8-61. Filed 12-29-60.
- 722,971. MIDGET-MIX. Fen-Mart, Inc. SN 112,242. Pub. 8-8-61. Filed 1-23-61.
- 722,972. WB WITHIN A CIRCLE. Wolverine Brass Works. SN 114,293. Pub. 8-8-61. Filed 2-23-61.
- 722,973. DIRECT-O-CAP. George J. Burke. SN 114,426. Pub. 8-8-61. Filed 2-27-61.

Class 14—Metals and Metal Castings and Forgings

- 722,974. GLX AND DESIGN. Great Lakes Steel Corporation. SN 78,703. Pub. 3-7-61. Filed 7-30-59.
- 722,975. ANOCAST. U.S. Reduction Co. SN 85,432. Pub. 8-8-61. Filed 11-16-59.
- 722,976. CONETIC NETIC ALLOYS ETC. AND DESIGN. Perfection Mica Company. SN 104,044. Pub. 8-8-61. Filed 9-7-60.
- 722,977. VIBROCAST AND DESIGN. Adams-Mills Corporation. SN 111,776. Pub. 8-8-61. Filed 1-13-61.

Class 15—Oils and Greases

- 722,978. POWER LIFE. Kenneth M. Rader, d.b.a. Power Life Oil Co. SN 100,640. Pub. 11-22-60. Filed 7-11-60.
- 722,979. TETRAMIX. E. I. Du Pont de Nemours and Company. SN 107,419. Pub. 8-8-61. Filed 10-31-60.

Class 16—Protective and Decorative Coatings

- 722,980. "ROCK-FLEX." Valspar Corporation, assignee of Rockcote Paint Co. SN 59,642. Pub. 7-14-59. Filed 9-26-58.
- 722,981. CALFONEX. The Falcon Corporation. SN 101,938. Pub. 8-8-61. Filed 8-3-60.
- 722,982. PITTIION. Pittsburgh Plate Glass Company. SN 107,583. Pub. 8-8-61. Filed 11-1-60.
- 722,983. BEMOCO. Thompson & Company. SN 109,645. Pub. 8-8-61. Filed 12-5-60.
- 722,984. BEAUTY BLENDED. Cutler's Paint Stores, Inc. SN 112,832. Pub. 8-8-61. Filed 1-31-61.
- 722,985. HARDCOTE. McDougall-Butler Co., Inc. SN 112,906. Pub. 8-8-61. Filed 2-1-61.
- 722,986. BEE-GARD. Bee Chemical Company. SN 112,998. Pub. 8-8-61. Filed 2-3-61.
- 722,987. NAM-L-FLO. Zac-Lac Paint & Lacquer Co. SN 113,175. Pub. 8-8-61. Filed 1-27-61.
- 722,988. GLITTER-GRIP. Continental Bowling Corporation. SN 113,269. Pub. 8-8-61. Filed 2-8-61.
- 722,989. LAKADIZE. Swale Chemicals Limited. SN 113,377. Pub. 8-8-61. Filed 2-9-61.
- 722,990. GALVA-SHEEN. The Hanna Paint Manufacturing Company. SN 113,916. Pub. 8-8-61. Filed 2-17-61.

- 722,991. TYGORUST. The United States Stoneware Company. SN 114,373. Pub. 8-8-61. Filed 2-24-61.

Class 17—Tobacco Products

- 722,992. THE MASTER CIGAR. Consolidated Cigar Corporation. SN 91,240. Pub. 8-8-61. Filed 2-19-60.

Class 18—Medicines and Pharmaceutical Preparations

- 722,993. SLOGETS. Geigy Chemical Corporation. SN 64,063. Pub. 8-8-61. Filed 12-11-58.
- 722,994. D. R. CALLAWAY'S GOLDEN HEALER. D. R. Callaway, d.b.a. D. R. Callaway Medicine Company. SN 78,366. Pub. 8-8-61. Filed 6-24-59.
- 722,995. SAL-PHENESIN. Marion Laboratories, Inc. SN 82,688. Pub. 8-8-61. Filed 10-5-59.
- 722,996. BRISTURIN. Bristol-Myers Company by merger from Bristol Laboratories, Inc. SN 83,044. Pub. 3-1-60. Filed 10-12-59.
- 722,997. DAY-ROUND. Drugmaster, Inc. SN 116,391. Pub. 8-8-61. Filed 3-24-61.
- 722,998. EVACTOL. Delta Drug Corporation. SN 117,171. Pub. 8-8-61. Filed 4-5-61.

Class 19—Vehicles

- 722,999. BEACON FLYER. Beacon Cycle and Supply Co. SN 90,481. Pub. 8-8-61. Filed 2-8-60.
- 723,000. AUTIQUE. Adell Industries, Inc. SN 109,833. Pub. 8-8-61. Filed 12-8-60.
- 723,001. THE JET AGE PUTT-NIK AND DESIGN. Cummings Enterprises, Incorporated. SN 110,411. Pub. 8-8-61. Filed 12-19-60.
- 723,002. JIM RATHMANN XTERMINATOR. Jim Rathmann Racing Products, Inc. SN 110,887. Pub. 8-8-61. Filed 12-27-60.
- 723,003. EIS AND DESIGN. The Eis Automotive Corporation. SN 111,658. Pub. 8-8-61. Filed 1-11-61.
- 723,004. SNOWCO AND DESIGN. The Snow Company. SN 113,454. Pub. 8-8-61. Filed 2-10-61.
- 723,005. EL DORADO. Honorbuilt Trailer Manufacturing Co. SN 114,483. Pub. 8-8-61. Filed 2-27-61.
- 723,006. SUPERLIFT. General Motors Corporation. SN 114,852. Pub. 8-8-61. Filed 3-3-61.
- 723,007. THUNDERBIRD. Thunderbird Products Corporation. SN 114,891. Pub. 8-8-61. Filed 3-3-61.
- 723,008. TYROMONT. Gebr. Kollensperger. SN 115,046. Pub. 8-8-61. Filed 3-7-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 723,009. FUSEMATIC. FPE Canada Limited. SN 78,981. Pub. 3-22-60. Filed 8-4-59.
- 723,010. ATC. Automatic Timing & Controls, Inc. SN 85,081. Pub. 5-23-61. Filed 11-12-59.
- 723,011. IPC DK AND DESIGN. Amphenol-Borg Electronics Corporation. SN 96,656. Pub. 8-8-61. Filed 5-9-60.
- 723,012. MA AND DESIGN. Magnetic Amplifiers Division of The Siegler Corporation. SN 101,632. Pub. 8-8-61. Filed 7-28-60.
- 723,013. "LUCIFER." Lucifer S.A. SN 101,960. Pub. 8-8-61. Filed 8-3-60.

- 723,014. MICRO-PATH. Micro-Path, Inc. SN 102,856. Pub. 8-8-61. Filed 8-17-60.
- 723,015. HUBBELL. Harvey Hubbell, Incorporated. SN 103,339. Pub. 8-8-61. Filed 8-24-60.
- 723,016. HOSPITALITY. McGraw-Edison Company. SN 103,505. Pub. 8-8-61. Filed 8-18-60.
- 723,017. TOAST 'N JAM. McGraw-Edison Company. SN 103,506. Pub. 8-8-61. Filed 8-18-60.
- 723,018. AMBITROL. Power Designs, Inc. SN 105,463. Pub. 8-8-61. Filed 9-29-60.
- 723,019. W WITH SINE CURVE. Wintriss, Inc. SN 105,585. Pub. 8-8-61. Filed 9-30-60.
- 723,020. TEALLECTRIC. Chemex Corporation. SN 107,896. Pub. 8-8-61. Filed 11-2-60.
- 723,021. STARFLYTE. Portable Electric Tools, Inc. SN 109,430. Pub. 8-8-61. Filed 12-1-60.
- 723,022. BUD BRITE AND DESIGN. Polaris Engineering Corp. SN 110,230. Pub. 8-8-61. Filed 12-14-60.
- 723,023. STIMULAIRE. Pierpont Industries, Inc. SN 111,542. Pub. 8-8-61. Filed 1-9-61.
- 723,024. MICROPOISE RELAY. Cook Electric Company. SN 112,441. Pub. 8-8-61. Filed 1-25-61.
- 723,025. DILLEY AND DESIGN. The Dilley Manufacturing Company. SN 112,606. Pub. 8-8-61. Filed 1-27-61.
- 723,026. GRIPPY. The Dilley Manufacturing Company. SN 112,607. Pub. 8-8-61. Filed 1-27-61.
- 723,027. TARRYTRON. Cook Electric Company. SN 113,330. Pub. 8-8-61. Filed 2-9-61.
- 723,028. K. Kimble Glass Company. SN 113,426. Pub. 8-8-61. Filed 2-10-61.
- 723,029. VARISYN. Space Ships, Inc. SN 113,455. Pub. 8-8-61. Filed 2-10-61.
- 723,030. NYLINE. Ward Leonard Electric Co. SN 113,583. Pub. 8-8-61. Filed 2-13-61.
- 723,031. PIROUETTE. El-Tronics, Inc. SN 113,704. Pub. 8-8-61. Filed 2-15-61.
- 723,032. PARACHRON. Paragon Electric Company. SN 113,758. Pub. 8-8-61. Filed 2-15-61.
- 723,033. FIXKIT. The Black and Decker Manufacturing Company. SN 113,899. Pub. 8-8-61. Filed 2-17-61.
- 723,034. TWIN-RITE-LITE. Flambeau Plastics Corporation. SN 113,995. Pub. 8-8-61. Filed 2-20-61.
- 723,035. CONVALURE. Polyplastex United, Inc. SN 115,252. Pub. 8-8-61. Filed 3-9-61.
- 723,036. Z-LYTE WITHIN A CIRCLE. William Belfer, d.b.a. Z-Lyte Company. SN 115,296. Pub. 8-8-61. Filed 3-10-61.
- 723,037. BOAT-A-LITE. Electr/Afloat Corp. SN 115,456. Pub. 8-8-61. Filed 3-13-61.
- 723,038. RDI AND DESIGN. Radiation Dynamics, Inc. SN 115,521. Pub. 8-8-61. Filed 3-13-61.
- 723,039. DYNAMITRON. Radiation Dynamics, Inc. SN 115,522. Pub. 8-8-61. Filed 3-13-61.
- 723,040. ROBOTOMICS. Robotomics Enterprises, Inc. SN 115,528. Pub. 8-8-61. Filed 3-13-61.
- 723,041. VEGATROL. Vega Electronics Corporation. SN 115,551. Pub. 8-8-61. Filed 3-13-61.
- 723,042. K-GRIP. Kings Electronics Company, Inc. SN 115,700. Pub. 8-8-61. Filed 3-15-61.
- 723,043. ROBERTS AND DESIGN. Roberts Electronics, Inc. SN 116,076. Pub. 8-8-61. Filed 3-20-61.
- 723,044. CAL-R. California Resistor Corporation. SN 116,290. Pub. 8-8-61. Filed 3-23-61.
- 723,047. 55 AND DESIGN. Heinrich Kaufmann & Söhne Indlawerk K.G. SN 89,160. Pub. 8-8-61. Filed 1-18-60.
- 723,048. VISCOMATIC. The Minster Machine Company. SN 98,806. Pub. 8-8-61. Filed 6-10-60.
- 723,049. SUR-TORK. American Machine & Foundry Co. SN 101,227. Pub. 8-8-61. Filed 7-21-60.
- 723,050. HUB LOK. Dana Corporation. SN 101,608. Pub. 8-8-61. Filed 7-28-60.
- 723,051. MIDLANTIC METAL FABRICATORS AND DESIGN. Knut H. Onsager, d.b.a. Midlantic Metal Fabricators. SN 101,888. Pub. 8-8-61. Filed 8-2-60.
- 723,052. LEEBAR. Stamlicarbon N.V. SN 104,332. Pub. 8-8-61. Filed 9-12-60.
- 723,053. CESCO. Corrugated Equipment & Supply Corp. SN 105,421. Pub. 8-8-61. Filed 9-29-60.
- 723,054. LODDING FLOATING DOCTOR. Lodding Engineering Corporation. SN 106,613. Pub. 8-8-61. Filed 10-18-60.
- 723,055. POSTERBORE. Trainer Associates, Inc. SN 106,772. Pub. 8-8-61. Filed 10-19-60.
- 723,056. MOBILTOW. Motec Industries, Inc., by change of name from Minneapolis-Moline Company. SN 109,884. Pub. 8-8-61. Filed 12-8-60.
- 723,057. DISCERSER. Herman Hockmeyer & Co. SN 110,056. Pub. 8-8-61. Filed 12-12-60.
- 723,058. KINGCUTTER. Charles Levin & Co., d.b.a. Charlescraft Products. SN 110,215. Pub. 8-8-61. Filed 12-14-60.
- 723,059. SAWSMITH. Yuba Power Products, Inc. SN 110,722. Pub. 7-25-61. Filed 12-22-60.
- 723,060. MISER MITE. Milesmaster Incorporated of America, d.b.a. Milesmaster, Inc. SN 111,202. Pub. 8-8-61. Filed 1-3-61.
- 723,061. FIRE MAN FIRE AND DESIGN. Safety Products Corp. SN 111,229. Pub. 8-8-61. Filed 1-3-61.
- 723,062. STAR-TOLERANZRING. Deutsche Star Kugelhälter G.m.b.H. SN 111,271. Pub. 8-8-61. Filed 1-4-61.
- 723,063. BRILLION AND DESIGN. Brillion Iron Works, Inc. SN 111,475. Pub. 8-8-61. Filed 1-9-61.
- 723,064. VERSA FEED. Foster & Allen, Inc. SN 111,660. Pub. 8-8-61. Filed 1-11-61.
- 723,065. HAN-D-AIR. International Basic Economy Corporation. SN 112,045. Pub. 8-8-61. Filed 1-18-61.
- 723,066. MIXOBLOC. Société Cidma (Société Anonyme). SN 112,493. Pub. 8-8-61. Filed 1-25-61.
- 723,067. SUPER SPEED AND DESIGN. International Basic Economy Corporation. SN 112,900. Pub. 8-8-61. Filed 2-1-61.
- 723,068. CONEY BURGER. Frank J. Wirken, d.b.a. Home-Burger Sales. SN 112,994. Pub. 8-8-61. Filed 2-2-61.
- 723,069. MAGNE TRACE. The New England Machine & Tool Company. SN 113,132. Pub. 8-8-61. Filed 2-6-61.
- 723,070. SNOWCO AND DESIGN. The Snow Company. SN 113,452. Pub. 8-8-61. Filed 2-10-61.
- 723,071. RAILEX. Rallex Corporation. SN 113,662. Pub. 8-8-61. Filed 2-14-61.
- 723,072. MINUTE MAGIC. De Walt, Inc. SN 113,698. Pub. 8-8-61. Filed 2-15-61.
- 723,073. CUB CADET. International Harvester Company. SN 114,002. Pub. 8-8-61. Filed 2-20-61.
- 723,074. GEOMETRIC DESIGN. Samuel M. Langston Company. SN 114,009. Pub. 8-8-61. Filed 2-20-61.
- 723,075. FARM FAIR. Marquette Corporation. SN 114,018. Pub. 8-8-61. Filed 2-20-61.
- 723,076. H & S. E. J. Shurtz Mfg. Co. SN 114,722. Pub. 8-8-61. Filed 3-1-61.
- 723,077. HYDRO SUB. Decatur Pump Company. SN 115,043. Pub. 8-8-61. Filed 3-7-61.
- 723,078. RYNO. R. G. Kupfer & Co. SN 115,496. Pub. 8-8-61. Filed 3-13-61.
- 723,079. ROTO-STAMP. Roto-Stamp Corporation. SN 116,078. Pub. 8-8-61. Filed 3-20-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 723,045. QUARTER MILKER. F. L. Carlson, d.b.a. Quarter Milker Company. SN 85,297. Pub. 8-8-61. Filed 11-16-59.
- 723,046. TERMITE. Belton Corporation. SN 88,804. Pub. 8-8-61. Filed 1-11-60.

723,080. **RS AND DESIGN.** Roto-Stamp Corporation. SN 116,079. Pub. 8-8-61. Filed 3-20-61.

Class 24 — Laundry Appliances and Machines

723,081. **FANCIFUL REPRESENTATION OF A MAN.** American Machine and Metals, Inc. SN 109,464. Pub. 8-8-61. Filed 12-2-60.
723,082. **QUICKIE.** Doris A. Fishman, d.b.a. Quik Company. SN 109,574. Pub. 8-8-61. Filed 12-5-60.
723,083. **ATC.** Automatic Timing & Controls, Inc. SN 85,083. Pub. 5-23-61. Filed 11-12-59.
723,084. **ACCURAY.** Industrial Nucleonics Corporation. SN 92,771. Pub. 8-8-61. Filed 3-14-60.
723,085. **UNICUL W. & J., Inc.** SN 104,785. Pub. 8-8-61. Filed 9-19-60.
723,086. **AD-LAB AND DESIGN.** Ariel Davis Manufacturing Company. SN 110,528. Pub. 8-8-61. Filed 12-20-60.

Class 27 — Horological Instruments

723,087. **NOVO DIAC.** Novochoe S.A. SN 108,075. Pub. 8-8-61. Filed 11-8-60.
723,088. **REPRESENTATION OF A WOODPECKER.** Novochoe S.A. SN 108,199. Pub. 8-8-61. Filed 11-10-60.
723,089. **REPRESENTATION OF A WOODPECKER IN A TRIANGLE.** Novochoe S.A. SN 108,200. Pub. 8-8-61. Filed 11-10-60.

Class 28 — Jewelry and Precious-Metal Ware

723,090. **KEYSTONE.** Pittsburgh Garter Company. SN 88,490. Pub. 8-8-61. Filed 1-5-60.
723,091. **EAST WIND.** Gorham Corporation, by change of name from Gorham Manufacturing Company. SN 101,775. Pub. 7-25-61. Filed 8-1-60.

Class 29 — Brooms, Brushes, and Dusters

723,092. **SUPER SWIRL.** Auto Craft Products, Inc. SN 99,275. Pub. 8-8-61. Filed 6-20-60.
723,093. **NEAT TEAT.** Joan T. Boyle, d.b.a. Plastic Farm Company. SN 109,552. Pub. 8-8-61. Filed 12-5-60.
723,094. **POWDERETS.** Cellulose Products Corporation. SN 109,668. Pub. 8-8-61. Filed 12-6-60.
723,095. **AB MONOGRAM.** American Brush Corporation. SN 110,249. Pub. 8-8-61. Filed 12-15-60.

Class 31 — Filters and Refrigerators

723,096. **FANDAIRE AND DESIGN.** Yuba Consolidated Industries, Inc. SN 101,222. Pub. 8-8-61. Filed 7-20-60.
723,097. **FOOD CHEF AND DESIGN.** Dixie-Narco, Inc. SN 101,482. Pub. 8-8-61. Filed 7-26-60.
723,098. **PRESSURE-MATIC.** McGraw-Edison Company. SN 110,554. Pub. 8-8-61. Filed 12-20-60.
723,099. **SCHREIBER INTERNATIONAL AND DESIGN.** Dr. Ing. August Schreiber, d.b.a. Schreiber-Klarsanlagen Dr. Ing. August Schreiber. SN 110,628. Pub. 8-8-61. Filed 12-21-60.
723,100. **DION.** Chemical Process Company. SN 110,739. Pub. 8-8-61. Filed 12-23-60.
723,101. **CHAMPION.** Tyler Refrigeration Corporation. SN 110,904. Pub. 8-8-61. Filed 12-27-60.
723,102. **WEAR-GUARD.** Fram Corporation. SN 111,089. Pub. 8-8-61. Filed 12-30-60.

Class 32 — Furniture and Upholstery

723,103. **STURDIFORM.** Eastern Steel Rack Co. SN 96,841. Pub. 8-8-61. Filed 5-11-60.
723,104. **UNI-TORQ.** Hoover Ball & Bearing Co., assignee of Universal Incorporated. SN 98,181. Pub. 8-8-61. Filed 5-31-60.
723,105. **HY-GEE-MAT.** Custom Covers, Inc. SN 102,305. Pub. 8-8-61. Filed 8-9-60.
723,106. **AJUSTRITE.** Ajusto Equipment Co. SN 109,832. Pub. 8-8-61. Filed 12-8-60.
723,107. **GRANILITE.** Sturdillite Products, Inc. SN 112,333. Pub. 8-8-61. Filed 1-23-61.
723,108. **BOURBON BARREL.** The San Hygiene Furniture Manufacturing Company. SN 112,779. Pub. 8-8-61. Filed 1-30-61.
723,109. **MARKETIER.** Market Forge Company. SN 114,868. Pub. 8-8-61. Filed 3-3-61.
723,110. **MISS FIXIT.** Globe Products Corporation. SN 114,953. Pub. 8-8-61. Filed 3-6-61.
723,111. **KENT.** The Kent Corporation. SN 115,063. Pub. 8-8-61. Filed 3-7-61.
723,112. **JOHNNY STEP.** Westland Plastics, Inc. SN 115,558. Pub. 8-8-61. Filed 3-13-61.
723,113. **CURVALUM.** Kennedy Baby Bath Corporation. SN 115,608. Pub. 8-8-61. Filed 3-14-61.

Class 33 — Glassware

723,114. **INSUL-MASTER.** Tucker Aluminum Products Inc. SN 118,832. Pub. 8-8-61. Filed 4-27-61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

723,115. **DUOTROL.** McGraw-Edison Company, assignee of International Metal Products Company. SN 50,060. Pub. 5-5-59. Filed 4-21-58.
723,116. **TRI-PAK.** Hupp Corporation. SN 95,284. Pub. 8-8-61. Filed 4-18-60.
723,117. **HORSE TORCH.** Pipe-Co, Inc. SN 100,724. Pub. 8-8-61. Filed 7-12-60.
723,118. **EAGLE LINE.** Titus Manufacturing Corporation. SN 107,520. Pub. 8-8-61. Filed 10-31-60.
723,119. **ISO-JET.** Bickley Furnaces, Incorporated. SN 110,595. Pub. 8-8-61. Filed 12-22-60.
723,120. **MAGIC CHEF—REPRESENTATION OF CHEF AND DESIGN.** Magic Chef, Inc., by change of name from Dixie Products, Inc. SN 111,591. Pub. 8-8-61. Filed 1-10-61.
723,121. **SUPER-SAVER.** Goodling Electric Company. SN 112,254. Pub. 8-8-61. Filed 1-23-61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

723,122. **MANGANESITE ETC. AND DESIGN.** Manganesite Jointings Limited. SN 98,714. Pub. 8-8-61. Filed 6-9-60.
723,123. **TURNPIKE.** Pennsylvania Tire Company. SN 101,031. Pub. 8-8-61. Filed 7-18-60.
723,124. **SWIFT.** Delaware Mercantile Company Inc. SN 108,431. Pub. 8-8-61. Filed 11-14-60.

Class 39 — Clothing

723,125. **LEE WESTERN.** The H. D. Lee Company, Incorporated. SN 51,641. Pub. 3-17-59. Filed 5-14-58.
723,126. **TURNABOUTS BY BIG YANK.** Reliance Manufacturing Company. SN 74,334. Pub. 9-6-60. Filed 5-22-59.
723,127. **CUSHIONAIRE.** Joseph Kanner Hat Co., Inc. SN 84,070. Pub. 11-8-60. Filed 10-27-59.
723,128. **TERRY-TEENS.** Craddock-Terry Shoe Corporation. SN 87,856. Pub. 7-12-60. Filed 12-23-59.
723,129. **MARCO CELLINI AND DESIGN.** Damon Creations, Inc. SN 88,598. Pub. 8-8-61. Filed 1-7-60.
723,130. **CIBELES AND DESIGN.** Manufacturas del Vestido S.A. SN 91,021. Pub. 8-8-61. Filed 2-16-60.
723,131. **VIP.** Jacobs Brothers, Inc. SN 96,704. Pub. 8-8-61. Filed 5-9-60.
723,132. **ALPENSTOCK.** Mavest, Inc. SN 98,803. Pub. 8-8-61. Filed 6-10-60.
723,133. **LIFE.** Coopers, Inc. SN 98,870. Pub. 8-8-61. Filed 6-13-60.
723,134. **PETI PETITE BY COLTON.** Morris Peltsman & Son, Inc., d.b.a. Colton. SN 99,446. Pub. 8-8-61. Filed 6-21-60.
723,135. **HAVE MORE FUN IN A RUGBY SPORT-CRAFTER JACKET.** Rugby Knitting Mills, Inc. SN 99,459. Pub. 8-8-61. Filed 6-21-60.
723,136. **QUALITY AT YOUR FEET.** Brown Shoe Company, Inc. SN 100,091. Pub. 8-8-61. Filed 7-1-60.
723,137. **SNOWCAPS.** Admiral Shoe Corporation, d.b.a. Mutual Shoe Sales Company. SN 100,338. Pub. 8-8-61. Filed 7-6-60.
723,138. **KIMOJAMA.** Stadium Manufacturing Company, Inc. SN 100,647. Pub. 8-8-61. Filed 7-11-60.
723,139. **CARLYLE OF CALIFORNIA.** Carlyle Shirt Company, Inc. SN 100,758. Pub. 8-8-61. Filed 7-13-60.
723,140. **MINIGARD.** Mine Safety Appliances Company. SN 101,021. Pub. 8-8-61. Filed 7-18-60.
723,141. **MARIMEKKO.** Marimekko Oy. SN 103,284. Pub. 8-8-61. Filed 8-23-60.
723,142. **THE VIRTUOSO.** White Stag Manufacturing Co. SN 103,499. Pub. 8-8-61. Filed 8-26-60.
723,143. **FREEMAN 77'S.** Freeman Shoe Corporation. SN 105,156. Pub. 8-8-61. Filed 9-26-60.
723,144. **MONTICELLO AND DESIGN.** Monticello Shirt Company, Inc. SN 105,450. Pub. 8-8-61. Filed 9-29-60.
723,145. **CAREERMAN.** Joseph H. Cohen & Sons, Inc. SN 109,169. Pub. 8-8-61. Filed 11-28-60.
723,146. **DON.** The Williamson-Dickie Manufacturing Company. SN 109,539. Pub. 8-8-61. Filed 12-2-60.
723,147. **COLORIFIC.** F. A. Mac Cluer, Inc. SN 109,602. Pub. 8-8-61. Filed 12-5-60.
723,148. **TURTLE.** Edmont Inc. SN 110,534. Pub. 8-8-61. Filed 12-20-60.
723,149. **EBS.** Edison Brother Stores, Inc. SN 111,395. Pub. 8-8-61. Filed 1-6-61.
723,150. **BLOT-A-DRY.** The Kendal Company. SN 111,671. Pub. 8-8-61. Filed 1-11-61.
723,153. **LIQUID-TITE.** Falcon Plastics Company. SN 92,370. Pub. 8-8-61. Filed 3-8-60.
723,154. **LIFE-TIME.** Nu-Vita Products, Inc. SN 97,412. Pub. 8-8-61. Filed 5-18-60.
723,155. **WONDR-DENT.** Westward Dental Products Co. SN 98,410. Pub. 8-8-61. Filed 6-3-60.
723,156. **TRULIFE.** Walter Kausch Enterprises, Inc. SN 105,820. Pub. 8-8-61. Filed 10-5-60.
723,157. **DUMEX AND DESIGN.** A/S Dumex (Dumex Limited). SN 107,841. Pub. 8-8-61. Filed 11-4-60.
723,158. **HEMOTROL.** Johnson & Johnson. SN 109,697. Pub. 8-8-61. Filed 12-6-60.
723,159. **MODESS TWO-PACK.** Personal Products Corporation. SN 109,732. Pub. 8-8-61. Filed 12-6-60.
723,160. **EXPEND-TEX.** The Massillon Rubber Company. SN 111,519. Pub. 8-8-61. Filed 1-9-61.
723,161. **PHYSIOTRON.** Physio-Health, Inc. SN 112,307. Pub. 8-8-61. Filed 1-23-61.
723,162. **ORTHO-TRAC.** Ortho-Trac Incorporated. SN 118,238. Pub. 8-8-61. Filed 2-7-61.
723,163. **PQ.** Penn Fruit Co., Inc. SN 62,035. Pub. 8-8-61. Filed 11-6-58.
723,164. **DAINTY.** Easton Potato Chip Company. SN 89,750. Pub. 8-8-61. Filed 1-27-60.
723,165. **I.P.P.** Idaho Potato Packers Corp. SN 92,020. Pub. 8-8-61. Filed 3-2-60.
723,166. **BILLIONAIRES.** Pangburn Company, Inc., d.b.a. Pangburn's. SN 93,628. Pub. 8-8-61. Filed 3-24-60.
723,167. **NATIONAL.** National Tea Co. SN 94,014. Pub. 8-8-61. Filed 3-30-60.
723,168. **GREEN FARMS.** Green Farms Produce Company, Inc. SN 95,823. Pub. 8-8-61. Filed 4-26-60.
723,169. **ARROWMINT AND DESIGN.** Wm. Wrigley Jr. Company. SN 96,158. Pub. 8-8-61. Filed 4-29-60.
723,170. **CANDY CHOPPERS.** Herman Goeltz Company. SN 99,056. Pub. 8-8-61. Filed 6-15-60.
723,171. **SIESTA AND DESIGN.** Foremost Dairies, Inc. SN 99,184. Pub. 8-8-61. Filed 6-10-60.
723,172. **PEANUT BOY.** Benjamin M. Baltus, d.b.a. Benmar Products Company. SN 99,911. Pub. 8-8-61. Filed 6-29-60.
723,173. **WECOBEE.** E. F. Drew & Co., Inc. SN 100,111. Pub. 8-8-61. Filed 7-1-60.
723,174. **SUPERSCOR.** E. F. Drew & Co., Inc. SN 100,113. Pub. 8-8-61. Filed 7-1-60.
723,175. **PAR-BAR.** Sports Candles, Inc. SN 112,414. Pub. 8-8-61. Filed 1-24-61.
723,176. **NUMA.** Alamo Citrus, Inc. SN 114,305. Pub. 8-8-61. Filed 2-24-61.
723,177. **E-Z SERVE.** John Morrell & Company. SN 114,334. Pub. 8-8-61. Filed 2-24-61.
723,178. **VITO.** The Pillsbury Company. SN 114,528. Pub. 8-8-61. Filed 2-27-61.

Class 50 — Merchandise Not Otherwise Classified

723,179. **FLEURS SUPREMES.** Florabelle Plastics Corporation. SN 64,825. Pub. 8-8-61. Filed 12-23-58.
723,180. **AMPLATE.** Ampower Corporation. SN 111,718. Pub. 5-16-61. Filed 1-12-61.
723,181. **PECK BAR.** James W. Devall. SN 118,815. Pub. 8-8-61. Filed 2-16-61.
723,182. **EATON.** Eaton Brothers Corp. SN 114,102. Pub. 8-8-61. Filed 2-21-61.
723,183. **MAGNABOARD.** Crown City Lumber & Mill Company. SN 117,096. Pub. 8-8-61. Filed 4-4-61.
723,184. **FLOWER FAN.** Nichols Wire & Aluminum Co. SN 117,219. Pub. 8-8-61. Filed 4-5-61.

Class 41 — Canes, Parasols, and Umbrellas

723,151. **SNOWCO AND DESIGN.** The Snow Company. SN 113,453. Pub. 8-8-61. Filed 2-10-61.

Class 44 — Dental, Medical, and Surgical Appliances

723,152. **TEL-E-EKG AND DESIGN.** John L. Walker, d.b.a. Johnnie Walker Surgical Service. SN 83,844. Pub. 8-8-61. Filed 10-22-59.

Class 51—Cosmetics and Toilet Preparations

- 723,185. PINK ANGEL. Chesebrough-Pond's Inc. SN 62,373. Pub. 4-21-59. Filed 11-13-58.
 723,186. MARIA BARBARA. Laboratorios Asteca, S.A. SN 73,937. Pub. 8-8-61. Filed 9-23-60.
 723,187. ALBERTO VO5. Alberto-Culver Company (Delaware corporation), assignee of Alberto-Culver Company (Illinois corporation). SN 112,670. Pub. 8-8-61. Filed 1-30-61.

Class 52—Detergents and Soaps

- 723,188. TURGASEPT. American Home Products Corporation, assignee of Doho Chemical Corporation. SN 61,791. Pub. 7-25-61. Filed 11-3-58.
 723,189. CLOR-ADE. Hagan Chemicals & Controls, Inc. SN 107,010. Pub. 7-18-61. Filed 10-24-60.

Service Marks**Class 101—Advertising and Business**

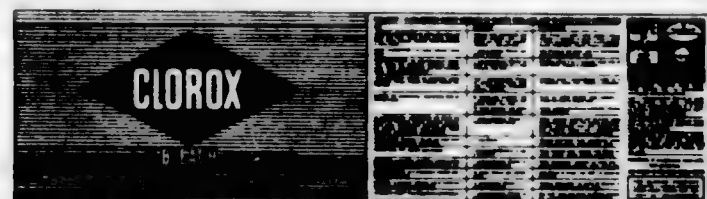
- 723,190. FLEXONICS. Calumet & Hecla, Inc., assignee of Flexonics Corporation. SN 89,756. Pub. 6-6-61. Filed 1-27-60.
 723,191. ANCHOR BUSINESS RECORDS AND DESIGN. Anchor Business Records. SN 91,193. Pub. 8-8-61. Filed 2-18-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6—Chemicals and Chemical Compositions

- 723,197. The Clorox Company, Oakland, Calif. SN 116,974. Filed 4-3-61.



The drawing is lined for vermillion, blue, and dark blue. For Bleaching Composition With Incidental Antiseptic, Germicidal and Cleansing Properties.
 First use in July 1958; in 1915 as to a vermillion diamond having a dark blue center; on July 15, 1914, as to the mark "Clorox."

Class 9—Explosives, Firearms, Equipments, and Projectiles

- 723,198. Bantam Match Corporation, Freeport, N.Y. SN 108,013. Filed P.R. 11-8-60; Am. S.R. 8-17-61.

MATCHETTES

For Matches.
 First use on or about May 11, 1960.

- 723,192. MEDIPHONE. Mediphone, Inc. SN 93,447. Pub. 11-1-60. Filed 3-22-60.

Class 102—Insurance and Financial

- 723,193. ADA Auto Damage Appraisers. SN 79,131. Pub. 8-8-61. Filed 8-7-59.

Class 103—Construction and Repair

- 723,194. HERBERT RICHHEIMER, INC. THE HOME IMPROVER AND DESIGN. Herbert Richheimer, Inc. SN 66,931. Pub. 8-8-61. Filed 2-2-59.

Class 107—Education and Entertainment

- 723,195. DISCOMANIA. World Wide Broadcasting System, Inc. SN 74,488. Pub. 8-8-61. Filed 5-25-59.

Collective Membership Marks**Class 200**

- 723,196. ALPHA GAMMA DELTA. Alpha Gamma Delta Fraternity. SN 117,675. Pub. 8-8-61. Filed 4-12-61.

Class 12—Construction Materials

- 723,199. H. W. Staples Company, St. Paul, Minn. SN 105,222. Filed P.R. 9-26-60; Am. S.R. 7-26-61.

GLAS-GARD

For Protective Grill for Doors.
 First use on or about Apr. 23, 1960.

Class 18—Medicines and Pharmaceutical Preparations

- 723,200. Professional Packaging Corporation, Chicago, Ill. SN 83,907. Filed P.R. 10-23-59; Am. S.R. 7-20-61.

MEDICI

For Medicinal Skin Preparations Sold to Hospitals—Name: Tincture of Benzoin, Topical Anaesthetic, Spray Containing Silicone, Topical Antiseptic, and Merthiolate Solution; and Surgical Glove Powder.
 First use Nov. 1, 1957.

- 723,201. Joe H. Bloodworth, Princeton, Ky. SN 106,180. Filed P.R. 10-11-60; Am. S.R. 7-31-61.

BLOODWORTH'S

For Medicine for Treatment of Ear Canker in Dogs and Other Animals.
 First use Sept. 1, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

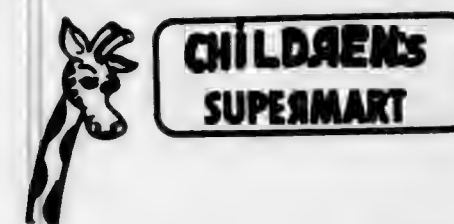
- 723,202. Lectrolite Corporation, Defiance, Ohio. SN 76,228. Filed P.R. 6-22-59; Am. S.R. 8-9-61.

SHO-PAK

For Wrenches Mounted on Display Stands.
 First use May 8, 1959.

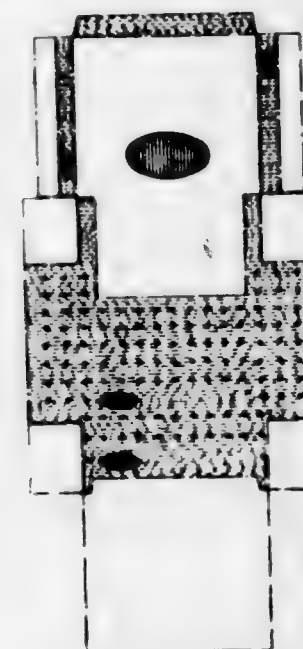
Class 37—Paper and Stationery

- 723,203. Children's Supermart, Inc., Washington, D.C. SN 94,964. Filed P.R. 4-13-60; Am. S.R. 7-28-61.



For Facial Tissues, Paper Towels, and Toilet Paper.
 First use Mar. 30, 1960.

- 723,204. Marcal Paper Mills, Inc., East Paterson, N.J. SN 99,594. Filed P.R. 6-23-60; Am. S.R. 6-29-61.



No claim is made to the representation of the package, per se. The drawing is lined for red and gray but no claim is made to color.
 For Paper Handkerchiefs.
 First use May 3, 1960.

Class 38—Prints and Publications

- 723,205. Rudolf Orthwine, d.b.a. Dance Magazine, New York, N.Y. SN 92,397. Filed P.R. 3-8-60; Am. S.R. 2-6-61.

BALLROOM DANCE MAGAZINE

For Periodical Publication.
 First use on or about Dec. 15, 1959.

- 723,206. The Miami Herald Publishing Company, Miami, Fla. SN 102,492. Filed P.R. 8-11-60; Am. S.R. 8-11-61.

THE JOE SMITH POLL

For Newspaper Feature Column.
 First use June 17, 1960.

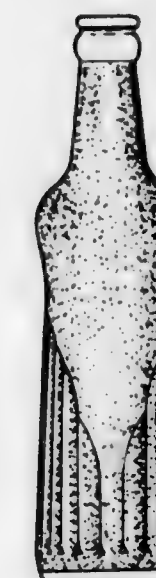
Class 45—Soft Drinks and Carbonated Waters

- 723,207. Simon Freres Ltd., Paris, France. SN 111,692. Filed 1-11-61.



Owner of French Reg. No. 480,059, dated Apr. 29, 1959 (Seine); Natl. Inst. No. 125,269.
 For Mineral and Sparkling Waters.

- 723,208. Crush International Inc., Evanston, Ill. SN 114,935. Filed 3-6-61.



The mark consists of the conformation of a bottle used as the container for applicant's soft drinks.
 For Soft Drinks.
 First use in July 1955.

Class 46—Foods and Ingredients of Foods**Class 50—Merchandise Not Otherwise Classified**

723,209. Spice Islands Company, South San Francisco, Calif.
 SN 95,326. Filed P.R. 4-18-60; Am. S.R. 4-24-61.



For Coffee.
 First use Apr. 6, 1960.

723,210. Alice C. Shepley, Novato, Calif. SN 100,544.
 Filed P.R. 7-8-60; Am. S.R. 8-21-61.

BUSY TAG

For Call Identification Labels for Telephone Switchboard
 Trunk Lines.
 First use Mar. 22, 1960.

TRADEMARK REGISTRATIONS RENEWED

- | | |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 143,340. FULLER AND DESIGN. Cl. 2. 5-31-21. | 390,195. BLUE SAPPHIRE. Cl. 51. 9-9-41. |
| 145,313. THE ANCIENT AND MYSTICAL ORDER ROSEA
CRUCIS AND DESIGN. Cl. 38. 8-2-21. | 390,311. BAG-SHAG. Cl. 22. 9-16-41. |
| 145,947. DMC. Cl. 42. 8-23-21. | 390,319. BLUE SAPPHIRE. Cl. 52. 9-16-41. |
| 145,948. DMC. Cl. 42. 8-23-21. | 390,370. WRIGHT & DITSON AND DESIGN. Cl. 22.
9-23-41. |
| 146,217. IVORY TOOTH-PASTE. Cl. 51. 9-6-21. | 390,472. WOODITE. Cl. 12. 9-23-41. |
| 146,678. AZO. Cl. 16. 9-20-21. | 390,495. VAPOSET. Cl. 11. 9-23-41. |
| 147,672. FLAKEWHITE. Cl. 46. 10-25-21. | 390,569. SAND DESIGN. Cl. 46. 9-30-41. |
| 148,635. ALEMITE. Cl. 23. 11-22-21. | 390,630. ARCHITEX. Cl. 1. 9-30-41. |
| 149,049. FEDERAL. Cl. 50. 12-6-21. | 390,632. BONTITE. Cl. 1. 9-30-41. |
| 149,050. FEDERAL. Cl. 50. 12-6-21. | 390,925. SINKRITE. Cl. 1. 10-14-41. |
| 149,273. ROYAL. Cl. 22. 12-6-21. | 391,079. STAR. Cl. 13. 10-21-41. |
| 149,362. FFFG. Cl. 46. 12-13-21. | 391,221. STEELITE. Cl. 21. 10-28-41. |
| 149,533. ROYAL. Cl. 22. 12-13-21. | 391,288. FREE STATE. Cl. 12. 10-28-41. |
| 150,016. AIR SHIP AND DESIGN. Cl. 46. 12-27-21. | 391,303. ORALINE. Cl. 51. 10-28-41. |
| 150,710. PUTZ CREAM. Cl. 4. 1-10-22. | 391,362. STONITE. Cl. 12. 11-4-41. |
| 150,717. FOOT TRAINER AND DESIGN. Cl. 39. 1-10-22. | 391,519. STROLLER. Cl. 26. 11-11-41. |
| 151,065. RAIN-KING. Cl. 39. 1-24-22. | 391,559. SYRETTE. Cl. 18. 11-18-41. |
| 151,091. WHITE MOUNTAIN BOND. Cl. 37. 1-24-22. | 391,689. MIDDLEWEIGHT CHAMP. Cl. 39. 11-18-41. |
| 151,130. FOUKE ST. LOUIS DRESSING & DYE AND DE-
SIGN. Cl. 1. 1-24-22. | 391,882. MULTI-FLEX. Cl. 35. 11-25-41. |
| 151,150. J. F. JELENKO & CO. AND DESIGN. Cl. 44.
1-24-22. | 392,124. SKY CHAMP AND DESIGN. Cl. 39. 12-9-41. |
| 151,664. ANGELL'S AND DESIGN. Cl. 18. 2-14-22. | 392,390. KNOLLWOOD. Cl. 49. 12-23-41. |
| 151,808. BEST EVER AND DESIGN. Cl. 46. 2-14-22. | 392,515. STAR. Cl. 23. 12-30-41. |
| 151,865. MASCO. Cl. 29. 2-14-22. | 392,607. CAN LABEL SHOWING WIENERS WITH YEL-
LOW BAND. Cl. 46. 1-6-42. |
| 387,668. CRAFTONE. Cl. 36. 5-27-41. | 392,613. A & P SUPER-RIGHT. Cl. 46. 1-6-42. |
| 389,687. STRATAGRAPH. Cl. 44. 8-19-41. | 392,984. PURSUIT. Cl. 46. 1-20-42. |
| 389,858. BUILT-IN WATCHMAN. Cl. 26. 8-26-41. | 393,030. GOLDEN LEAF. Cl. 48. 1-27-42. |
| 389,940. MORFLEX. Cl. 5. 8-26-41. | 393,293. MUZAK. Cl. 36. 2-3-42. |
| 389,998. BONNIE BROOK. Cl. 42. 9-2-41. | 393,301. RAYON BELASTRAW. Cl. 42. 2-3-42. |
| 390,052. TRIM. Cl. 48. 9-2-41. | 393,428. MONTANIN. Cl. 6. 2-17-42. |
| 390,109. FUL-O-PEP AND DOGS DESIGN. Cl. 46. 9-9-41. | 393,646. BONNIE LASSIE DOVESKINS. Cl. 39. 2-24-42. |

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- 104,710. THE TAG MAKERS. Cl. 37. 6-15-15.
 247,021. H-O. Cl. 4. 9-18-28.

The following registrations issued Sept. 6, 1955

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| 611,601. WAHKEEN. Cl. 1. | 611,639. FILL-MARK. Cl. 4. |
| 611,607. GALARAMA. Cl. 2. | 611,640. U-DO AND DESIGN (HUMAN HANDS). Cl. 4. |
| 611,610. ROLL-A-CORD AND DESIGN. Cl. 2. | 611,642. CHLORO-CHEM. Cl. 6. |
| 611,611. COFFEE CADDY AND DESIGN. Cl. 2. | 611,652. STA-FLUFF. Cl. 6. |
| 611,612. TRINKETRUNK. Cl. 2. | 611,653. FIRON "A." Cl. 6. |
| 611,613. RAINBOW FOAM. Cl. 2. | 611,655. FIRON "B." Cl. 6. |
| 611,617. ROLLA-BAG. Cl. 2. | 611,656. NATIONAL. Cl. 7. |
| 611,620. BLISTER-PAK. Cl. 2. | 611,661. TERRASTYLE. Cl. 12. |
| 611,621. COLLAPS-A-TAINER. Cl. 2. | 611,671. BELTREE. Cl. 13. |
| 611,623. PEN-E-NICKEL. Cl. 2. | 611,677. SEAL-PEEL. Cl. 16. |
| 611,627. KNOTTY PINE. Cl. 2. | 611,688. GROLAC. Cl. 18. |
| 611,629. "MY" TOOTH. Cl. 2. | 611,693. BENETRYCIN. Cl. 18. |
| 611,631. DAINTY POLISH. Cl. 4. | 611,690. PINOLES. Cl. 18. |
| 611,633. MAGIK-OLA. Cl. 4. | 611,699. ELECTROCORTEN. Cl. 18. |
| 611,637. VINYL LIFE LUSTRE. Cl. 4. | 611,700. TRIZATE. Cl. 18. |
| | 611,701. EPILON. Cl. 18. |
| | 611,703. AQUAMUNE. Cl. 18. |
| | 611,704. NARZETS. Cl. 18. |
| | 611,708. DRIV-EEZ. Cl. 19. |
| | 611,709. CYCLE KING. Cl. 19. |
| | 611,720. OERLIKON AND DESIGN. Cl. 21. |

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| 611,721. WANDELUX. Cl. 21. | 611,812. SHUR-TAPE. Cl. 42. |
| 611,722. SFR AND DESIGN. Cl. 21. | 611,813. PERMA-THAL. Cl. 42. |
| 611,724. STAGHOUND. Cl. 21. | 611,814. ANGOR-GLO. Cl. 43. |
| 611,728. DYMON-VANE. Cl. 21. | 611,819. TATE COSMOCRATIC AND DESIGN. Cl. 46. |
| 611,729. TEMPREX. Cl. 21. | 611,823. TEXO BOOSTER 54. Cl. 46. |
| 611,735. PLANETARY. Cl. 21. | 611,831. PADRE BRAND ITALIAN STYLE AND DESIGN.
Cl. 46. |
| 611,741. GROTESQUE DRAFTSMEN AT WORK. Cl. 21. | 611,840. GLORY OF NORWAY AND DESIGN. Cl. 46. |
| 611,748. PULS-ALERT. Cl. 21. | 611,842. ANTIQUE AUTOS. Cl. 46. |
| 611,751. WESTRIC AND DESIGN. Cl. 21. | 611,843. PRICE'S. Cl. 46. |
| 611,754. WESTRIC-LITE. Cl. 21. | 611,850. ALL-WIP. Cl. 46. |
| 611,755. RECOSTAT. Cl. 21. | 611,854. FLAVES. Cl. 46. |
| 611,756. GINASTA. Cl. 22. | 611,864. PHEZZHEN AND DESIGN. Cl. 46. |
| 611,757. DERWYN DE FOREST. Cl. 22. | 611,873. BOOT BUNNY AND DESIGN. Cl. 50. |
| 611,758. JAY HARVEY. Cl. 22. | 611,874. YARNTURE. Cl. 50. |
| 611,760. RED-LOK. Cl. 22. | 611,876. ZEN. Cl. 51. |
| 611,761. SWORDSMAN AND DESIGN. Cl. 23. | 611,895. BROOKMIRE. Cl. 100. |
| 611,763. QUICKSILVER. Cl. 23. | 611,904. REPRESENTATION OF HORSE DRAWN FIRE
ENGINE. Cl. 102. |
| 611,769. FLEX-I-DRI. Cl. 24. | 611,905. TELE-TRIP. Cl. 102. |
| 611,780. FERROMETER. Cl. 26. | 611,909. DEEP CLEANING AND DESIGN. Cl. 103. |
| 611,781. CALOTRON. Cl. 26. | 611,916. KINETIX. Cl. 106. |
| 611,784. OPTI-MIKE. Cl. 26. | 611,921. LUNCHEON AT SARDI'S. Cl. 107. |
| 611,785. MINOLTA-35. Cl. 26. | 611,923. THE ONLY GENUINE FRANKLIN COAL OF
THE SUSQUEHANNA VALLEY. Cl. 1. |
| 611,792. ARITH-ME-KAT. Cl. 26. | |
| 611,794. ANCYCLO AND DESIGN. Cl. 26. | 611,926. HANG-A-BOARD. Cl. 13. |
| 611,796. REG-U-FLOW AND DESIGN. Cl. 26. | 611,929. MIEHLE-DEXTER. Cl. 23. |
| 611,798. MZ-PLUS AND DESIGN. Cl. 26. | 611,932. KOLD-MAT. Cl. 31. |
| 611,799. DIXIE DOGWOOD. Cl. 30. | 611,933. VANISHING SHELF. Cl. 34. |
| 611,801. HOME GUILD. Cl. 31. | 611,939. IT'S THE LAW IN FLORIDA AND DESIGN.
Cl. 38. |
| 611,802. LASTING BEAUTY. Cl. 32. | 611,942. KRIS-KROS. Cl. 39. |
| 611,803. STUMP "FOREMOST" AND DESIGN. Cl. 32. | 611,945. FRAME-A-BED. Cl. 42. |
| 611,805. AIRLINER. Cl. 34. | |
| 611,806. PERMA-FLEX. Cl. 35. | |
| 611,809. CUSHION RIM. Cl. 36. | |
| 611,810. PAT JOHNSON. Cl. 39. | |

**TRADEMARK REGISTRATIONS AMENDED,
DISCLAIMED, CORRECTED, ETC.**

- 142,947. REPRESENTATION OF A TRIANGLE AND
RECTANGLE DESIGN. Cl. 4. 5-24-21. Brillo Manu-
facturing Company, Inc., Brooklyn, N.Y. Corrected: In
the certificate, lines 4 and 20, in the heading, after
"Company", Inc. should be inserted.
- 543,922. BARDEX. Cl. 44. 6-19-51. C. R. Bard, Inc.,
Summit, N.J. Amended to appear:
- 607,295. KOOL-BASE AND DESIGN. Cl. 34. 6-14-55.
Kool-Base Boiler Company, Springdale, Pa. Amended: In
the statement, column 1, line 1, before "Kool-" Kool-Base
Boiler Corporation, Springdale, Pa., assignee of is inserted,
column 2, lines 4 and 5 are deleted, and the drawing is
amended to appear:

BARDEX**KOOL-BASE**

- 597,554. SCOTTIE-CRAFT. Cl. 19. 11-2-54. John C.
Scott, Indianapolis Wire Bound Box Company, Fernwood,
Miss. Amended to appear:

Scottie Craft

- 627,274. SEQUIN. Cl. 20. 5-22-56. Congoleum-Natron
Inc., Kearny, N.J. Amended to appear:

SEQUIN**TRADEMARK REGISTRATIONS—NEW CERTIFICATES**

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term
of the original registrations.

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| 233,331. CUTAWL. Cl. 23. International Register Com-
pany. 9-27-27. New Cert. Sec. 7(c) to The Cutawl Cor-
poration, Bethel, Conn. | 607,295. KOOL-BASE AND DESIGN. Cl. 34. Kool-Base
Boiler Company. 6-14-55. New Cert. Sec. 7(c) to Kool-
Base Boiler Corporation, Springdale, Pa. |
| 265,503. MONTAGNAC. Cl. 42. E. de Montagnac & Fils.
12-31-29. New Cert. Sec. 7(c) to Montagnac Ltd., New
York, N.Y. | 657,561. EZY-SPRED. Cl. 10. Lafayette Farm Supply, Inc.
1-21-58. New Cert. Sec. 7(c) to M.F.A. Central Coopera-
tive, Columbia, Mo. |
| 597,554. SCOTTIE-CRAFT. Cl. 19. John C. Scott.
11-2-54. New Cert. Sec. 7(c) to Indianapolis Wire Bound
Box Company, Fernwood, Miss. | 661,682. HIGH FIDELITY. Cl. 38. Audiotom, Inc.
5-13-58. New Cert. Sec. 7(c) to The Billboard Publish-
ing Company, Cincinnati, Ohio. |

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OCTOBER 24, 1961

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

- A/S Dumex (Dumex Ltd.), Copenhagen 8, Denmark. 723,157, pub. 8-8-61. Cl. 44.
A/S Trondhjem Canning and Export Co., Trondheim, Norway. 611,840, can. Cl. 46.
Abelson Bedding Co.: See—
Abelson, David, d.b.a. Abelson Bedding Co., Brooklyn, N.Y. 611,642, can. Cl. 6.
Adams-Millis Corp., High Point, N.C. 722,977, pub. 8-8-61. Cl. 14.
Adell Industries, Inc., Detroit, Mich. 723,000, pub. 8-8-61. Cl. 19.
Admiral Shoe Corp., d.b.a. Mutual Shoe Sales Co., Manchester, N.H. 723,137, pub. 8-8-61. Cl. 39.
Air Controls, Inc., Cleveland, Ohio. 611,805, can. Cl. 34.
Ajusto Equipment Co., Bowling Green, Ohio. 723,108, pub. 8-8-61. Cl. 32.
Aladdin Laboratories, Inc., Minneapolis, Minn. 611,760, can. Cl. 22.
Alamac Knitting Mills, Inc., New York, N.Y. 611,813, can. Cl. 42.
Alamo Citrus, Inc., Alamo, Tex. 723,176, pub. 8-8-61. Cl. 46.
Alberto-Culver Co., from Alberto-Culver Co., Melrose Park, Ill. 723,187, pub. 8-8-61. Cl. 51.
Alla Products, Inc., Valparaiso, Ind. 611,623, can. Cl. 2.
Alligator Co., The: See—
Alligator Oil Clothing Co., to The Alligator Co., St. Louis, Mo. 151,065, ren. 10-24-61. Cl. 39.
Alpha Gamma Delta Fraternity, Chatham, N.J. 723,196, pub. 8-8-61. Cl. 200.
Amchem Products, Inc., Ambler, Pa. 722,941, pub. 8-8-61. Cl. 6.
American Brush Corp., Chicago, Ill. 723,095, pub. 8-8-61. Cl. 29.
American Cyanamid Co., New York, N.Y. 611,703, can. Cl. 18.
American Door Co., Inc., South Bend, Ind. 722,950, pub. 8-19-58. Cl. 12.
American Home Products Corp., d.b.a. Boyle-Midway, New York, N.Y. 622,934, pub. 8-8-61. Cl. 4.
American Home Products Corp., from Doho Chemical Corp., New York, N.Y. 723,188, pub. 7-25-61. Cl. 52.
American Machine & Foundry Co., New York, N.Y. 723,049, pub. 8-8-61. Cl. 23.
American Machine and Metals, Inc., East Moline, Ill. 723,081, pub. 8-8-61. Cl. 24.
American Metal Polish Co., Somerville, to American Metal Polish Corp., Boston, Mass. 150,710, ren. 10-24-61. Cl. 4.
American Metal Polish Corp.: See—
American Metal Polish Co.
American Oil Co., The, Chicago, Ill. 722,940, pub. 8-8-61. Cl. 6.
American Zinc Lead and Smelting Co., Boston, Mass., to American Zinc Sales Co., St. Louis, Mo. 146,678, ren. 10-24-61. Cl. 16.
American Zinc Sales Co.: See—
American Zinc Lead and Smelting Co.
Amphenol-Borg Electronics Corp., Broadview, Ill. 723,011, pub. 8-8-61. Cl. 21.
Ampower Corp., New York, N.Y. 723,180, pub. 5-16-61. Cl. 50.
Anchor Business Records, Havertown, Pa. 723,191, pub. 8-8-61. Cl. 101.
Ancient and Mystical Order Rosae Crucis, San Francisco, to The Supreme Grand Lodge of The Ancient and Mystical Order Rosae Crucis, San Jose, Calif. 145,313, ren. 10-24-61. Cl. 38.
Ancyclo Corp. of America, New York, N.Y. 611,794, can. Cl. 26.
Angell, James R., New Orleans, La. 151,664, ren. 10-24-61. Cl. 18.
Armour and Co., Chicago, Ill. 722,925-6, pub. 8-8-61. Cl. 1.
Art-N-Yarn Corp., Rochester, N.Y. 611,874, can. Cl. 50.
Associated Merchandising Corp., Newark, N.J., and New York, N.Y., to The Associated Merchandising Corp., New York, N.Y. 150,717, ren. 10-24-61. Cl. 39.
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Associated Merchandising Corp.
Associated Music Publishers Inc.: See—
Wired Radio, Inc.
Auto Craft Products, Inc., Kansas City, Mo. 723,092, pub. 8-8-61. Cl. 29.
Auto Damage Appraisers, Chicago, Ill. 723,193, pub. 8-8-61. Cl. 102.
Automatic Timing & Controls, Inc., King of Prussia, Pa. 723,010, pub. 5-23-61. Cl. 21.
Automatic Timing & Controls, Inc., King of Prussia, Pa. 723,083, pub. 5-23-61. Cl. 26.
Ball Chemical Co., Cleveland, Ohio. 722,983, pub. 8-8-61. Cl. 4.
Baltus, Benjamin M., d.b.a. Benmar Products Co., Milwaukee, Wis. 723,172, pub. 8-8-61. Cl. 46.
Bantam Match Corp., Freeport, N.Y. 723,198, Cl. 9.
Bard, C. R., Inc., Summit, N.J. 543,922, Am. 7(d). Cl. 44.
Bassick Mfg. Co., The, to Stewart-Warner Corp., Chicago, Ill. 148,635, ren. 10-24-61. Cl. 23.
Bausch & Lomb Inc.: See—
Bausch & Lomb Optical Co.
Bausch & Lomb Optical Co., to Bausch & Lomb Inc., Rochester, N.Y. 391,519, ren. 10-24-61. Cl. 26.
Beacon Cycle and Supply Co., Milwaukee, Wis. 722,999, pub. 8-8-61. Cl. 19.
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Bee Chemical Co., Lansing, Ill. 722,986, pub. 8-8-61. Cl. 16.
Begg, Annabell H., d.b.a. H-O Chemical Co., Denver, Colo. 247,021, can. Cl. 4.
Belfer, William, d.b.a. Z-Lyte Co., San Francisco, Calif. 723,036, pub. 8-8-61. Cl. 21.
Benjamin Electric Mfg. Co., Des Plaines, Ill., to Thomas Industries, Inc., Louisville, Ky. 391,221, ren. 10-24-61. Cl. 21.
Benmar Products Co.: See—
Baltus, Benjamin M.
Birmingham & Prosser Co., Chicago, Ill. 722,946, pub. 8-8-61. Cl. 7.
Bertsek, Andrew G., d.b.a. Kounting Kat Co., LaGrange, Ill. 611,792, can. Cl. 26.
Bickley Furnaces, Inc., Philadelphia, Pa. 723,119, pub. 8-8-61. Cl. 34.
Billboard Publishing Co., The: See—
Audiocon, Inc.
Birmingham Fire Insurance Co., Birmingham, Ala. 611,904, can. Cl. 102.
Black and Decker Mfg. Co., The, Towson, Md. 723,033, pub. 8-8-61. Cl. 21.
Blackman, Julius, Corp., d.b.a. Supreme Pharmaceutical Co., Jersey City, N.J. 611,693, can. Cl. 18.
Bloodworth, Joe H., Princeton, Ky. 723,201, Cl. 18.
Boyd Coffee Co., Portland, Oreg. 611,843, can. Cl. 46.
Boyle, Joan T., d.b.a. Plastic Farm Co., Ridgewood, N.J. 723,093, pub. 8-8-61. Cl. 29.
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Brillion Iron Works, Brillion, Wis. 723,063, pub. 8-8-61. Cl. 23.
Brillo Mfg. Co., Inc., Brooklyn, N.Y. 142,947, cor. Cl. 4.
Bristol Laboratories, Inc.: See—
Bristol-Myers Co.
Bristol-Myers Co., New York, by merger from Bristol Laboratories, Inc., Syracuse, N.Y. 722,996, pub. 3-1-60. Cl. 18.
Brookmire Investors Service, Inc., New York, N.Y. 611,895, can. Cl. 100.
Brown Co., Berlin, N.H. 151,001, ren. 10-24-61. Cl. 37.
Brown Shoe Co., Inc., St. Louis, Mo. 723,136, pub. 8-8-61. Cl. 39.
Buehler Ltd., Evanston, Ill. 722,935, pub. 8-8-61. Cl. 4.
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Burgin, Paul D.
Burgin, Paul D., d.b.a. Burgin Battery and Auto Repair, Kansas City, Mo. 611,735, can. Cl. 21.
Burke, George J., Hawthorne, N.Y. 722,973, pub. 8-8-61. Cl. 13.
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Burrus Mills, Inc., d.b.a. Burrus Feed Mills, Fort Worth, Tex. 611,823, can. Cl. 46.
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Cabot Corp., by merger from Godfrey L. Cabot, Inc., Boston, Mass. 722,944, pub. 3-7-61. Cl. 6.
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California Resistor Corp., Santa Monica, Calif. 723,044, pub. 8-8-61. Cl. 21.
Callaway, D. R., d.b.a. D. R. Callaway Medicine Co., Winston-Salem, N.C. 722,994, pub. 8-8-61. Cl. 18.
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Calumet & Hecla, Inc., Bartlett, from Flexonics Corp., Maywood, Ill. 723,190, pub. 6-6-61. Cl. 101.
Cambridge Grant Farm, Inc., Ashburnham, Mass. 611,864, can. Cl. 46.
Canadian Armature Works Inc., Montreal, Quebec, Canada. 611,729, can. Cl. 21.
Carlson, F. L., d.b.a. Quarter Milker Co., Estacada, Oreg. 723,045, pub. 8-8-61. Cl. 23.
Carlyle Shirt Co., Inc., New York, N.Y. 723,139, pub. 8-8-61. Cl. 39.
Cellulose Products Corp., Milltown, N.J. 723,094, pub. 8-8-61. Cl. 29.
Certified Creations, New York, N.Y. 611,613, can. Cl. 2.
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Charlescraft Products: See—
Levin, Charles, & Co.
Chatfield-Clarke Co.: See—
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Chemex Corp., New York, N.Y. 723,020, pub. 8-8-61. Cl. 21.
Chemical Process Co., San Francisco, Calif. 723,100, pub. 8-8-61. Cl. 31.
Chesebrough-Pond's Inc., New York, N.Y. 723,185, pub. 4-21-59. Cl. 51.
Children's Supermart, Inc., Washington, D.C. 723,203. Cl. 37.
Chiyoda Kagaku Seiko Kabushiki Kaisha, Higashi-ku, Osaka, Japan. 611,785, can. Cl. 26.
Ciba Ltd., Basel, Switzerland. 611,699, can. Cl. 18.
Clorox Corp., Cincinnati, Ohio. 722,962, pub. 8-8-61. Cl. 12.
Clorox Co., The, Oakland, Calif. 723,197. Cl. 6.
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Harbison-Walker Refractories Co.
Cohen, Joseph H. & Sons, Inc., New York, N.Y. 723,145, pub. 8-8-61. Cl. 39.
Cohn-Hall-Marx Co., to United Merchants and Mfg., Inc., New York, N.Y. 389,998, ren. 10-24-61. Cl. 42.
Cole, H. C., Milling Co., Chester, Ill. 149,362, ren. 10-24-61. Cl. 46.
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Conoflow Corp., Philadelphia, Pa. 722,965, pub. 8-8-61. Cl. 13.
Consolidated Cigar Corp., New York, N.Y. 722,992, pub. 8-8-61. Cl. 17.
Continental Bowling Corp., Pennsauken, N.J. 722,988, pub. 8-8-61. Cl. 16.
Continental Can Co., Inc., New York, N.Y. 611,617, can. Cl. 2.
Cook Electric Co., Chicago, Ill. 723,024, pub. 8-8-61. Cl. 21.
Cook Electric Co., Chicago, Ill. 723,027, pub. 8-8-61. Cl. 21.
Coopers, Inc., Kenosha, Wis. 723,133, pub. 8-8-61. Cl. 39.
Corrugated Equipment & Supply Corp., New York, N.Y. 723-053, pub. 8-8-61. Cl. 23.
Cosler, Arthur S., Jr., d.b.a. Ravavis Products Ltd., Columbus, Ohio. 611,873, can. Cl. 50.
Cradock-Terry Shoe Corp., Lynchburg, Va. 723,128, pub. 7-12-60. Cl. 39.
Crown City Lumber & Mill Co., d.b.a. Chatfield-Clarke Co., Pasadena, Calif. 723,183, pub. 8-8-61. Cl. 50.
Crush International Inc., Evanston, Ill. 723,208. Cl. 45.
Cummings Enterprises, Inc., Washington, Ga. 723,001, pub. 8-8-61. Cl. 19.
Curtis, S. and Son, Inc., Sandy Hook, Conn. 722,927, pub. 3-21-61. Cl. 2.
Custom Covers, Inc., New Rochelle, N.Y. 723,105, pub. 8-8-61. Cl. 32.
Cutawl Corp.: See—
International Register Co.
Cutler's Paint Stores, Inc., Philadelphia, Pa. 722,984, pub. 8-8-61. Cl. 16.
Damon Creations, Inc., New York, N.Y. 723,129, pub. 8-8-61. Cl. 39.
Dana Corp., Toledo, Ohio. 723,050, pub. 8-8-61. Cl. 23.
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Orthwine, Rudolf.
Dap Inc., Chicago, Ill. 611,801, can. Cl. 31.
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Decatur Pump Co., Decatur, Ill. 723,077, pub. 8-8-61. Cl. 23.
Delaware Mercantile Co. Inc., Stamford, N.Y. 723,124, pub. 8-8-61. Cl. 35.
Delta Drug Corp., Jacksonville, Fla. 722,998, pub. 8-8-61. Cl. 18.
Dennison Mfg. Co., Boston, Mass. 104,710, can. Cl. 37.
Derrington, C. E., d.b.a. Derrington Products Co., Jackson, Miss. 611,631, can. Cl. 4.
Derrington Products Co.: See—
Derrington, C. E.
Design Lab, Inc., Denver, Colo. 611,611, can. Cl. 2.
Deutsche Star Kugelhalter G.m.b.H., Schweinfurt, Germany. 723,062, pub. 8-8-61. Cl. 23.
Devall, James W., Fairhope, Ala. 723,181, pub. 8-8-61. Cl. 50.
De Walt, Inc., Lancaster, Pa. 723,072, pub. 8-8-61. Cl. 23.
Dexter Folder Co., Pearl River, N.Y. 611,929, can. Cl. 23.
Dilley Mfg. Co., The, Cleveland, Ohio. 723,025-6, pub. 8-8-61. Cl. 21.
Dixie-Narco, Inc., Ranson, W. Va. 723,097, pub. 8-8-61. Cl. 31.
Dixie Products, Inc.: See—
Magic Chef, Inc.
Doho Chemical Corp.: See—
American Home Products Corp.
Dollfus Mieg & Cie, Societe Anonyme, Mulhouse, France. 145,947-8, ren. 10-24-61. Cl. 42.
Dorn & Kirschner Band Instrument Co., Inc., Newark, N.J. 387,668, ren. 10-24-61. Cl. 36.
Drew, E. F. & Co., Inc., New York, N.Y. 723,173-4, pub. 8-8-61. Cl. 46.
Drugmaster, Inc., St. Louis, Mo. 722,997, pub. 8-8-61. Cl. 18.
Du Pont de Nemours, E. I. and Co., Wilmington, Del. 722-979, pub. 8-8-61. Cl. 15.
Eastern Steel Rack Co., Boston, Mass. 723,103, pub. 8-8-61. Cl. 32.
Easton Potato Chip Co., Easton, Pa. 723,164, pub. 8-8-61. Cl. 46.

Eaton Brothers Corp., Hamburg, N.Y. 723,182, pub. 8-8-61. Cl. 50.
Edison Brothers Stores, Inc., St. Louis, Mo. 723,149, pub. 8-8-61. Cl. 39.
Edmont Inc., Coshocton, Ohio. 723,148, pub. 8-8-61. Cl. 39.
Edsbyns Industri Aktiebolag, Edsbyn, Sweden. 611,761, can. Cl. 23.
Eis Automotive Corp., The, Middletown, Conn. 723,003, pub. 8-8-61. Cl. 19.
Electr-Afloat Corp., Chicago, Ill. 723,037, pub. 8-8-61. Cl. 21.
Ellis, Lacey B. Jr., Memphis, Tenn., to The Procter & Gamble Co., Cincinnati, Ohio. 146,217, ren. 10-24-61. Cl. 51.
El-Tronics, Inc., Warren, Pa. 723,031, pub. 8-8-61. Cl. 21.
Erie Mfg. Co., Erie, Pa. 611,780, can. Cl. 26.
Exeter Fruit Association, Exeter, Calif. 392,984, ren. 10-24-61. Cl. 46.
FPE Canada Ltd., Toronto, Ontario, Canada. 723,009, pub. 3-22-60. Cl. 21.
Falcon Corp., The, Brooklyn, N.Y. 722,981, pub. 8-8-61. Cl. 16.
Falcon Plastics Co., Los Angeles, Calif. 723,153, pub. 8-8-61. Cl. 12.
Federal Rubber Co., The, Cudahy, Wis., to United States Rubber Co., New York, N.Y. 149,049-50, ren. 10-24-61. Cl. 50.
Fen-Mart, Inc., Reno, Nev. 722,971, pub. 8-8-61. Cl. 13.
Flat Metal Mfg. Co., Franklin Park, Ill. 722,955, pub. 8-8-61. Cl. 12.
Fishman, Doris A., d.b.a. Quik Co., New York, N.Y. 723,082, pub. 8-8-61. Cl. 24.
Flambeau Plastics Corp., Baraboo, Wis. 723,034, pub. 8-8-61. Cl. 21.
Flexonics Corp.: See—
Calumet & Hecla, Inc.
Flintkote Co., The: See—
Grove, M. J., Lime Co. of Frederick County, The.
Flintkote Co., The, New York, N.Y. 722,957, pub. 8-8-61. Cl. 12.
Florabelle Plastics Corp., New York, N.Y. 723,179, pub. 8-8-61. Cl. 50.
Foote Mineral Co., Berwyn, Pa. 611,653, can. Cl. 6.
Foote Mineral Co., Berwyn, Pa. 611,655, can. Cl. 6.
Foremost Dairies, Inc., New York, N.Y. 723,171, pub. 8-8-61. Cl. 46.
Foster & Allen, Inc., Chatham, N.J. 723,064, pub. 8-8-61. Cl. 23.
Fouke Fur Co., St. Louis, Mo. 151,130, ren. 10-24-61. Cl. 1.
Fram Corp., Providence, R.I. 723,102, pub. 8-8-61. Cl. 31.
Freeman Shoe Corp., Beloit, Wis. 723,143, pub. 8-8-61. Cl. 39.
Freres, Simon, Ltd., Paris, France. 723,207. Cl. 45.
Fuller Brush Co., The, East Hartford, Conn. 143,340, ren. 10-24-61. Cl. 2.
Gabriel Co., The, Cleveland, Ohio. 611,728, can. Cl. 21.
Garment, Johnson, Co., Chicago, Ill. 611,810, can. Cl. 39.
Garner & Co., New York, N.Y. 611,607, can. Cl. 2.
Garwood Metal Co., Inc., Garwood, N.J. 611,671, can. Cl. 13.
Gehr, Kollensperger, Innsbruck, Austria. 723,008, pub. 8-8-61. Cl. 19.
Geigy Chemical Corp., Ardsley, N.Y. 722,993, pub. 8-8-61. Cl. 18.
General Motors Corp., Detroit, Mich. 723,006, pub. 8-8-61. Cl. 19.
General Plywood Corp., Louisville, Ky. 611,640, can. Cl. 4.
Genesee Brewing Co., Inc., The, Rochester, N.Y. 390,052, ren. 10-24-61. Cl. 48.
George, Herbert, Co., Chicago, Ill. 611,798, can. Cl. 26.
Gibson Mfg. Co.: See—
Gibson, Norman V.
Gibson, Norman V., d.b.a. Gibson Mfg. Co., Mission, Kans. 611,926, can. Cl. 13.
Ginasta Co., to Ginasta Corp. of America, New York, N.Y. 611,756, can. Cl. 22.
Ginasta Corp. of America: See—
Ginasta Co.
Globe Products Corp., Baltimore, Md. 723,110, pub. 8-8-61. Cl. 32.
Globe Roofing Products Co., Inc., Chicago, Ill., to Globe Roofing Products Co., Inc., Whiting, Ind. 391,362, ren. 10-24-61. Cl. 12.
Globe Roofing Products Co., Inc., to Globe Roofing Products Co., Inc., Whiting, Ind. 390,472, ren. 10-24-61. Cl. 12.
Goeltz, Herman, Co., Oakland, Calif. 723,170, pub. 8-8-61. Cl. 46.
Gooch Feed Mill Co., Lincoln, Nebr. 611,688, can. Cl. 18.
Goodling Electric Co., York, Pa. 723,121, pub. 8-8-61. Cl. 34.
Goodval Vacuum Paper Products Corp., New York, N.Y. 722,928, pub. 8-8-61. Cl. 2.
Gorham Corp., by change of name from Gorham Mfg. Co., Providence, R.I. 723,091, pub. 7-25-61. Cl. 28.
Gorham Mfg. Co.: See—
Gorham Corp.
Great American Industries, Inc., New York, N.Y. 722,959, pub. 8-8-61. Cl. 12.
Great Atlantic & Pacific Tea Co., The, to The Great Atlantic & Pacific Tea Co., New York, N.Y. 392,613, ren. 10-24-61. Cl. 46.
Great Lakes Steel Corp., Ecorse, Mich. 722,974, pub. 3-7-61. Cl. 14.
Green Farms Produce Co., Inc., Montalvo, Calif. 723,168, pub. 8-8-61. Cl. 46.
Grove, M. J., Lime Co. of Frederick County, The, Lime Kiln, Md., to The Flintkote Co., New York, N.Y. 391,288, ren. 10-24-61. Cl. 12.

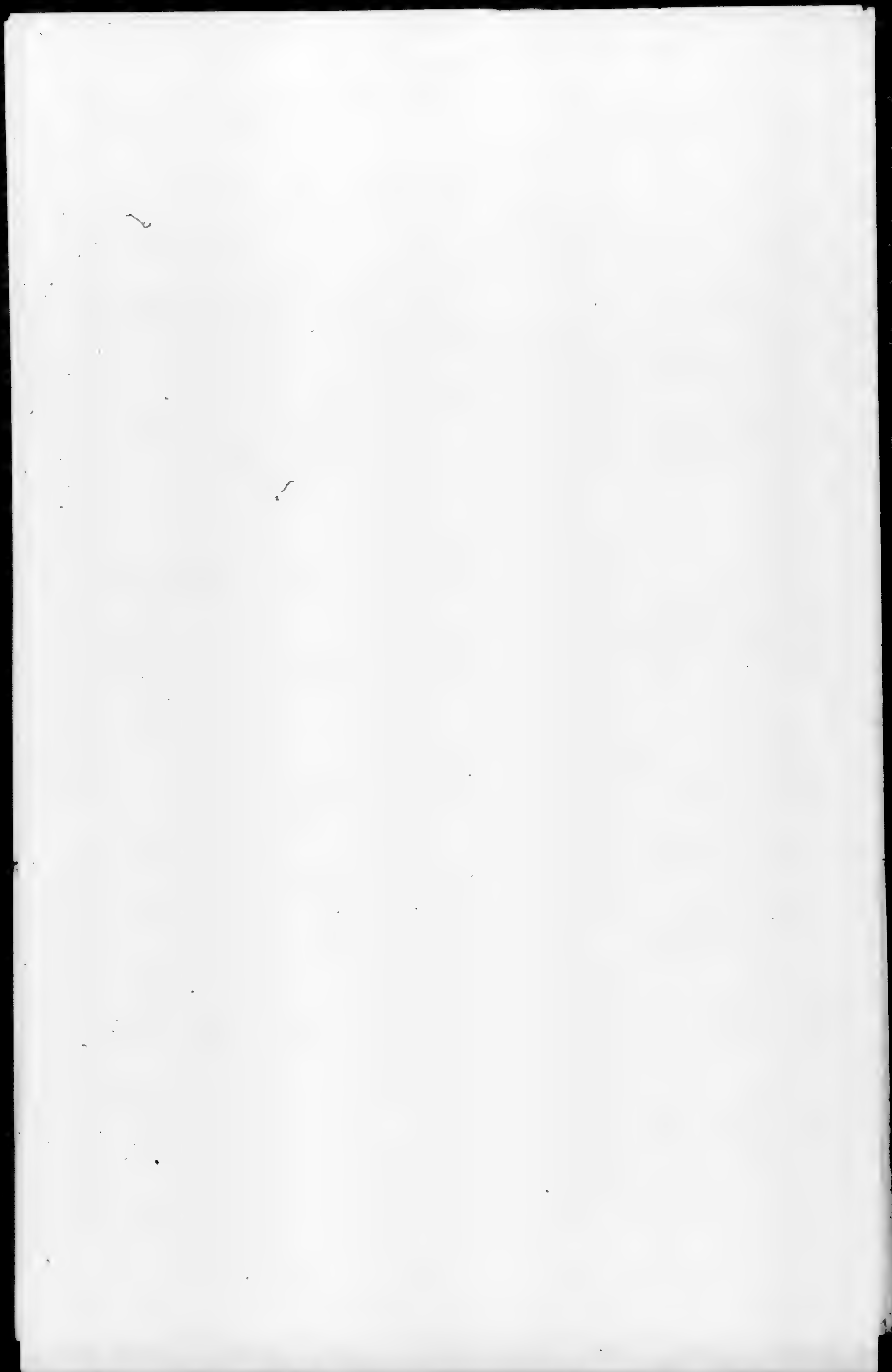
H-O Chemical: See—
Beggs, Annabell H.
Haelan Laboratories, Inc., now by change of name Connelly Containers, Inc., Philadelphia, Pa. 611,842, can. Cl. 46.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 723,189, pub. 7-15-61. Cl. 52.
Hanna, M. A., Co., The, Cleveland, Ohio. 611,923, can. Cl. 1.
Hanna Paint Mfg. Co., The, Columbus, Ohio. 722,990, pub. 8-8-61. Cl. 16.
Harbison-Walker Refractories Co., Pittsburgh, Pa., to John Leroy Coble, Alliquippa, Pa. 390,925, ren. 10-24-61. Cl. 1.
Harco Chemical, Inc., Stamford, Conn. 722,963, pub. 8-8-61. Cl. 12.
Hartford Rayon Corp., The, Rock Hill, Conn., to Magestic Rayon Corp., New York, N.Y. 393,301, ren. 10-24-61. Cl. 42.
Heileman, G., Brewing Co., La Crosse, Wis. 393,030, ren. 10-24-61. Cl. 48.
Hockmeyer, Herman, & Co., New York, N.Y. 723,057, pub. 8-8-61. Cl. 23.
Holding Interco S.A., to Werkseugmaschinenfabrik Oerlikon Buhle & Co., Zurich-Oerlikon, Switzerland. 611,720, can. Cl. 21.
Home-Burger Sales: See—
Wirken, Frank J.
Honorbuilt Trailer Mfg. Co., Lakeview, Calif. 723,005, pub. 8-8-61. Cl. 19.
Hoover Ball & Bearing Co., Saline, Mich., from Universal Inc., Bedford, Ohio. 723,104, pub. 8-8-61. Cl. 32.
House Beautiful Curtains, Inc., New York, N.Y. 611,812, can. Cl. 42.
House Beautiful Curtains, Inc., New York, N.Y. 611,945, can. Cl. 42.
Hovden Food Products Corp.: See—
Hovden, K. Co.
Hovden, K. Co., to Hovden Food Products Corp., Monterey, Calif. 151,808, ren. 10-24-61. Cl. 46.
Hubbell, Harvey, Inc., Bridgeport, Conn. 723,015, pub. 8-8-61. Cl. 21.
Hupp Corp., Cleveland, Ohio. 723,116, pub. 8-8-61. Cl. 34.
Husman Hatchery, Newman, Calif. 611,601, can. Cl. 1.
Idaho Potato Packers Corp., New York, N.Y. 723,165, pub. 8-8-61. Cl. 46.
Indianapolis Wire Bound Box Co.: See—
Scott, John C.
Industrial Nucleonics Corp., Columbus, Ohio. 723,084, pub. 8-8-61. Cl. 26.
Interchemical Corp., New York, N.Y. 390,495, ren. 10-24-61. Cl. 11.
International Basic Economy Corp., New York, N.Y. 723-065, pub. 8-8-61. Cl. 23.
International Basic Economy Corp., New York, N.Y. 723-067, pub. 8-8-61. Cl. 23.
International Harvester Co., Chicago, Ill. 723,073, pub. 8-8-61. Cl. 23.
International Metal Products Co.: See—
McGraw-Edison Co.
Intrastate Sile and Siron Dry Cleaners, Inc., Milwaukee, Wis. 611,909, can. Cl. 103.
Jacobs Brother, Inc., Baltimore, Md. 723,131, pub. 8-8-61. Cl. 39.
Jacobs, Melvin H., to Marshall-Burns, Inc., Chicago, Ill. 611,799, can. Cl. 30.
Jantzen Inc., Portland, Ore. 722,931, pub. 8-8-61. Cl. 3.
Jelenko, J. F. & Co., Inc.: See—
Jelenko, J. F. & Co.
Jelenko, J. F. & Co., to J. F. Jelenko & Co., Inc., New York, N.Y. 151,150, ren. 10-24-61. Cl. 44.
Johnson & Johnson, New Brunswick, N.J. 723,158, pub. 8-8-61. Cl. 44.
Jones Engineering Co., Des Plaines, Ill. 722,951, pub. 4-15-58. Cl. 12.
Jones & Laughlin Steel Corp., Pittsburgh, Pa. 722,954, pub. 8-8-61. Cl. 12.
Kampa Co., Inc., The, Minneapolis, Minn. 611,708, can. Cl. 19.
Kanner, Joseph, Hat Co., Inc., South Norwalk, Conn. 723-127, pub. 11-8-60. Cl. 39.
Kason Display Hardware Inc., Brooklyn, N.Y. 722,968, pub. 8-8-61. Cl. 13.
Kaufmann, Heinrich, & Sohne Indawerk K.G., Solingen, Germany. 723,047, pub. 8-8-61. Cl. 23.
Kausch, Walter, Enterprises, Inc., Detroit, Mich. 723,156, pub. 8-8-61. Cl. 44.
Kay-Gee Corp., Milwaukee, Wis. 611,932, can. Cl. 31.
Keelavite Hydraulics Ltd., Allesley, Coventry, England. 722-967, pub. 8-8-61. Cl. 13.
Kendall Co., The, Walpole, Mass. 723,150, pub. 8-8-61. Cl. 39.
Kennedy Baby Bath Corp., Chattanooga, Tenn. 723,113, pub. 8-8-61. Cl. 32.
Kenron Awning and Window Corp., Chicago, Ill. 722,958, pub. 8-8-61. Cl. 12.
Kent Corp., The, Covington, Ky. 723,111, pub. 8-8-61. Cl. 32.
Kerns Mfg. Corp., Long Island City, N.Y. 611,796, can. Cl. 26.
Ketay Mfg. Corp., now by change of name Norden Ketay Corp., New York, N.Y. 611,916, can. Cl. 106.
Keystone Steel & Wire Co., Peoria, Ill. 722,964, pub. 8-8-61. Cl. 12.
Klekhaefer Corp., Cedarburg, Wis. 611,763, can. Cl. 23.
Kimbale Glass Co., Toledo, Ohio. 723,028, pub. 8-8-61. Cl. 21.
Kings Electronics Co., Inc., Tuckahoe, N.Y. 723,042, pub. 8-8-61. Cl. 21.
Kool-Base Boiler Co., Springdale, Pa. 807,295. Am. 7(d). Cl. 34.

Kool-Base Boiler Corp.: See—
Kool-Base Boiler Co.
Kounting Kat Co.: See—
Bertak, Andrew G.
Kupfer, R. G. & Co., Brooklyn, N.Y. 723,078, pub. 8-8-61. Cl. 23.
Laboratorios Arteca, S.A., Mexico City, Mexico. 723,186, pub. 8-8-61. Cl. 51.
Lander Co., Inc.: See—
St. Denis Toilettries, Inc.
Langston, Samuel M., Co., Camden, N.J. 723,074, pub. 8-8-61. Cl. 23.
La Salle Hat Co., The, to Champ Hats, Inc., Philadelphia, Pa. 391,689, ren. 10-24-61. Cl. 39.
La Salle Hat Co., The, to Champ Hats, Inc., Philadelphia, Pa. 392,124, ren. 10-24-61. Cl. 39.
Lawrence Process Co., Inc., Lawrence, Mass. 611,806, can. Cl. 35.
Lectrolite Corp., Defiance, Ohio. 723,202. Cl. 23.
Lee, H. D. Co., The, Inc., Kansas City, Mo. 723,125, pub. 3-17-59. Cl. 39.
Lee Rubber & Tire Corp., Conshohocken, Pa. 611,724, can. Cl. 21.
Leonard, Ward, Electric Co., Mount Vernon, N.Y. 723,030, pub. 8-8-61. Cl. 21.
Levin, Charles, & Co., d.b.a. Charlescraft Products, Lincolnwood, Ill. 723,058, pub. 8-8-61. Cl. 23.
Lodding Engineering Corp., Auburn, Mass. 723,054, pub. 8-8-61. Cl. 23.
Long Island Dealers Supply Co., Inc., Oceanside, N.Y. 722-953, pub. 8-8-61. Cl. 12.
Lou Mar Co., Inc., Erie, Pa. 722,929, pub. 8-8-61. Cl. 2.
Lucifer S.A., Carouge, Geneva, Switzerland. 723,013, pub. 8-8-61. Cl. 21.
Luxury, Inc., to Beunit Mills, Inc., New York, N.Y. 393-648, ren. 10-24-61. Cl. 39.
M.F.A. Central Cooperative: See—
Lafayette Farm Supply, Inc.
Mac Cluer, F. A., Inc., New York, N.Y. 723,147, pub. 8-8-61. Cl. 39.
MacDonald, Ian, Modesto, Calif., to Madewell Products, Oakland, Calif. 390,311, ren. 10-24-61. Cl. 22.
Madewell Products: See—
MacDonald, Ian.
Magestic Rayon Corp.: See—
Hartford Rayon Corp., The.
Magic Chef, Inc., by change of name from Dixie Products, Inc., Cleveland, Tenn. 723,120, pub. 8-8-61. Cl. 34.
Magnetic Amplifiers Division of The Slegler Corp., New York, N.Y. 723,012, pub. 8-8-61. Cl. 21.
Manganese Jointings Ltd., London, England. 723,122, pub. 8-8-61. Cl. 35.
Manufacturas del Vestido S.A., Madrid, Spain. 723,130, pub. 8-8-61. Cl. 39.
Marcal Paper Mills, Inc., Paterson, N.J. 723,204. Cl. 37.
Marimekko Oy, Helsinki, Finland. 723,141, pub. 8-8-61. Cl. 39.
Marlon Laboratories, Inc., Kansas City, Mo. 722,995, pub. 8-8-61. Cl. 18.
Market Forge Co., Everett, Mass. 723,109, pub. 8-8-61. Cl. 32.
Marshall-Burns, Inc.: See—
Jacobs, Melvin H.
Marquette Corp., La Crosse, Wis. 723,075, pub. 8-8-61. Cl. 23.
Massasoit Co.: See—
Massasoit Mfg. Co.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laureton, N.J. 151,865, ren. 10-24-61. Cl. 29.
Massillon Rubber Co., The, Massillon, Ohio. 723,160, pub. 8-8-61. Cl. 44.
Mastic Tile Corp. of America, The, Newburgh, N.Y. 611,661, can. Cl. 12.
Mayer, Inc., New York, N.Y. 723,132, pub. 8-8-61. Cl. 39.
May, Donald M., d.b.a. May Engineering Co., North Hollywood, Calif. 611,741, can. Cl. 21.
May Engineering Co.: See—
May, Donald M.
Mayer, Oscar, & Co., Inc., Chicago, Ill. 392,607, ren. 10-24-61. Cl. 46.
McDougall-Butler Co., Inc., Buffalo, N.Y. 722,985, pub. 8-8-61. Cl. 16.
McGlynn Hays Industries, Inc., Belleville, N.J. 611,784, can. Cl. 26.
McGraw-Edison Co., Milwaukee, Wis. 723,016-17, pub. 8-8-61. Cl. 21.
McGraw-Edison Co., Elgin, Ill. 723,098, pub. 8-8-61. Cl. 31.
McGraw-Edison Co., Elgin, Ill., from International Metal Products Co., Phoenix, Ariz. 723,115, pub. 5-5-59. Cl. 34.
Mediphone, Inc., New York, N.Y. 723,192, pub. 11-1-60. Cl. 101.
Melco Foundry & Mfg. Co., Chicago, Ill. 722,970, pub. 8-8-61. Cl. 13.
Merck & Co., Inc., Rahway, N.J. 611,704, can. Cl. 18.
Merit Displays Co., Paterson, N.J. 611,620, can. Cl. 2.
Miami Daily News, Inc., The, Miami, Fla. 611,939, can. Cl. 38.
Miami Herald Publishing Co., The, Miami, Fla. 723,206. Cl. 38.
Micro-Path, Inc., Los Angeles, Calif. 723,014, pub. 8-8-61. Cl. 21.
Midlantic Metal Fabricators: See—
Onsager, Knut H.
Midwest Industrial Products Corp., Chicago, Ill. 722,961, pub. 8-8-61. Cl. 12.
Milesmaster, Inc.: See—
Milesmaster Inc. of America.

Milesmaster Inc. of America, d.b.a. Milesmaster, Inc., Chicago, Ill. 723,060, pub. 8-8-61. Cl. 23.
 Milk Foods, Inc., U.S.A., Modesto, Calif. 611,850, can. Cl. 46.
 Mine Safety Appliances Co., Pittsburgh, Pa. 723,140, pub. 8-8-61. Cl. 39.
 Minneapolis-Moline Co.: See—
 Motee Industries, Inc.
 Minnesota and Ontario Paper Co., Minneapolis, Minn. 722,956, pub. 8-8-61. Cl. 12.
 Minni, Adolpho, Phoenix, Ariz. 611,831, can. Cl. 46.
 Minster Machine Co., The, Minster, Ohio. 723,048, pub. 8-8-61. Cl. 23.
 Monark Silver King, Inc., Chicago, Ill. 611,709, can. Cl. 19.
 Montague Ltd.: See—
 De Montagnac, E. & Fils.
 Montanin Co., Inc., New York, N.Y. 393,428, ren. 10-24-61. Cl. 6.
 Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy. 722,923, pub. 8-8-61. Cl. 1.
 Monticello Shirt Co., Inc., New York, N.Y. 723,144, pub. 8-8-61. Cl. 39.
 Morrell, John, & Co., Ottumwa, Iowa. 150,016, ren. 10-24-61. Cl. 46.
 Morrell, John, & Co., Ottumwa, Iowa. 723,177, pub. 8-8-61. Cl. 46.
 Motee Industries, Inc., by change of name from Minneapolis-Moline Co., Hopkins, Minn. 723,056, pub. 8-8-61. Cl. 23.
 Muck, Rudolf, New York, N.Y. 611,809, can. Cl. 36.
 Mutual Shoe Sales Co.: See—
 Admiral Shoe Corp.
 Muzak Corp.: See—
 Wired Radio, Inc.
 Nathan, Emanuel, d.b.a. The Opticase Co., to The Opticase Co., Newark, N.J. 611,612, can. Cl. 2.
 National Alert, Inc., Colorado Springs, Colo. 611,748, can. Cl. 21.
 National Tea Co., Chicago, Ill. 723,167, pub. 8-8-61. Cl. 46.
 New England Machine & Tool Co., The, Berlin, Conn. 723,069, pub. 8-8-61. Cl. 23.
 Nichols Wire & Aluminum Co., Davenport, Iowa. 723,164, pub. 8-8-61. Cl. 50.
 Norac Co., Inc., The, Azusa, Calif. 722,942-3, pub. 8-8-61. Cl. 6.
 Norden Ketay Corp.: See—
 Ketay Mfg. Corp.
 Novochoe S.A., La Chaux-de-Fonds, Neuchatel, Switzerland. 723,087-9, pub. 8-8-61. Cl. 27.
 Nu-Vita Products, Inc., Pittsburgh, Pa. 723,154, pub. 8-8-61. Cl. 44.
 O'Keefe and Merritt Co., Los Angeles, Calif. 611,933, can. Cl. 34.
 Olin Mathieson Chemical Corp.: See—
 Squibb, E. R. & Sons.
 Onager, Knut H., d.b.a. Midantic Metal Fabricators, Easton, Md. 723,051, pub. 8-8-61. Cl. 23.
 Opticase Co., The: See—
 Nathan, Emanuel.
 Ortho-Trac Inc., East Paterson, N.J. 723,162, pub. 8-8-61. Cl. 44.
 Orthwine, Rudolf, d.b.a. Dance Magazine, New York, N.Y. 723,205, Cl. 35.
 Pangburn Co., Inc., d.b.a. Pangburn's, Fort Worth, Tex. 723,166, pub. 8-8-61. Cl. 46.
 Pangburn's: See—
 Pangburn Co., Inc.
 Paragon Electric Co., Two Rivers, Wis. 723,032, pub. 8-8-61. Cl. 21.
 Peerless Corp., The: See—
 Peerless Electric, Inc.
 Peerless Electric, Inc., now by change of name The Peerless Corp., New York, N.Y. 611,781, can. Cl. 26.
 Peltzman, Morris, & Son, Inc., d.b.a. Colton, New York, N.Y. 723,134, pub. 8-8-61. Cl. 39.
 Pemco Corp.: See—
 Porcelain Enamel & Mfg. Co. of Baltimore, The.
 Penn Fruit Co., Inc., Philadelphia, Pa. 723,163, pub. 8-8-61. Cl. 46.
 Pennsalt Chemicals Corp., Philadelphia, Pa. 722,952, pub. 8-8-61. Cl. 12.
 Pennsylvania Tire Co., Mansfield, Ohio. 723,123, pub. 8-8-61. Cl. 35.
 Perfection Mica Co., Chicago, Ill. 722,976, pub. 8-8-61. Cl. 14.
 Personal Products Corp., Milltown, N.J. 723,159, pub. 8-8-61. Cl. 44.
 Physio-Health, Inc., New York, N.Y. 723,161, pub. 8-8-61. Cl. 44.
 Pierpont Industries, Inc., Brooklyn, N.Y. 723,023, pub. 8-8-61. Cl. 21.
 Pillsbury Co., The, Minneapolis, Minn. 723,178, pub. 8-8-61. Cl. 46.
 Pipe-Co., Inc., McPherson, Kans. 723,117, pub. 8-8-61. Cl. 34.
 Pittsburgh Garter Co., Pittsburgh, Pa. 723,090, pub. 8-8-61. Cl. 25.
 Pittsburgh Plate Glass Co., Pittsburgh, Pa. 722,982, pub. 8-8-61. Cl. 16.
 Plastic Farm Co.: See—
 Boyle, Joan T.
 Polaris Engineering Corp., Chicago, Ill. 723,022, pub. 8-8-61. Cl. 21.
 Polyplastex United, Inc., Union, N.J. 723,035, pub. 8-8-61. Cl. 21.
 Porcelain Enamel & Mfg. Co. of Baltimore, The, to Pemco Corp., Baltimore, Md. 390,630, ren. 10-24-61. Cl. 1.
 Porcelain Enamel & Mfg. Co. of Baltimore, The, to Pemco Corp., Baltimore, Md. 390,632, ren. 10-24-61. Cl. 1.
 Port Huron Sulphite & Paper Co., Port Huron, Mich. 722,949, pub. 8-8-61. Cl. 11.
 Port-O-San Corp., Mount Vernon, N.Y. 722,966, pub. 8-8-61. Cl. 13.
 Portable Electric Tools, Inc., Geneva, Ill. 723,021, pub. 8-8-61. Cl. 21.
 Power Designs, Inc., Westbury, N.Y. 723,018, pub. 8-8-61. Cl. 21.
 Power Life Oil Co.: See—
 Rader, Kenneth M.
 Precision Dental Mfg. Co., Chicago, Ill. 611,629, can. Cl. 2.
 Procter & Gamble Co.: See—
 Ellis, Lexey B., Jr.
 Procter and Gamble Co., The, Cincinnati, Ohio. 147,672, ren. 10-24-61. Cl. 46.
 Professional Packaging Corp., Chicago, Ill. 723,200, Cl. 18.
 Quaker Oats Co., The, Chicago, Ill. 390,109, ren. 10-24-61. Cl. 46.
 Quarter Miler Co.: See—
 Carlson, F. L.
 Quik Co.: See—
 Flashman, Doris A.
 Rader, Kenneth M., d.b.a. Power Life Oil Co., Seattle, Wash. 722,978, pub. 11-22-60. Cl. 15.
 Radiation Dynamics, Inc., Westbury, N.Y. 723,038-9, pub. 8-8-61. Cl. 21.
 Bailey Corp., Brooklyn, N.Y. 723,071, pub. 8-8-61. Cl. 23.
 Karavis Products Ltd.: See—
 Cosler, Arthur S., Jr.
 Rathmann, Jim, Racing Products, Inc., Dallas, Tex. 723,002, pub. 8-8-61. Cl. 19.
 Raybestos-Manhattan, Inc., Passaic, N.J. 722,938, pub. 8-8-61. Cl. 5.
 Regulator Equipment Corp., Paterson, N.J. 611,755, can. Cl. 21.
 Reliance Mfg. Co., New York, N.Y. 723,126, pub. 9-6-60. Cl. 39.
 Reiton Corp., Pasadena, Calif. 723,046, pub. 8-8-61. Cl. 23.
 Republic Steel Corp., Cleveland, Ohio. 611,621, can. Cl. 2.
 Richards Brothers: See—
 Rose, John O.
 Richheimer, Herbert, Inc., Hicksville, N.Y. 723,194, pub. 8-8-61. Cl. 103.
 Roberts Electronics, Inc., Los Angeles, Calif. 723,043, pub. 8-8-61. Cl. 21.
 Robotomics Enterprises, Inc., Phoenix, Ariz. 723,040, pub. 8-8-61. Cl. 21.
 Rochester Ropes, Inc., Culpeper, Va. 722,948, pub. 8-8-61. Cl. 7.
 Rooto Corp., The, Detroit, Mich. 722,945, pub. 8-8-61. Cl. 6.
 Rose, John O., d.b.a. Richards Brothers, Marietta, Ohio. 611,696, can. Cl. 18.
 Roto-Stamp Corp., San Francisco, Calif. 723,079-80, pub. 8-8-61. Cl. 23.
 Rugby Knitting Mills, Inc., Buffalo, N.Y. 723,135, pub. 8-8-61. Cl. 39.
 Rush, Luther B., d.b.a. Rush Mattress & Furniture Co., Alexandria, La. 611,802, can. Cl. 32.
 Rush Mattress & Furniture Co.: See—
 Rush, Luther B.
 Safety Products Corp., Miami Beach, Fla. 723,061, pub. 8-8-61. Cl. 23.
 St. Denis Toilettries, Inc., to Lander Co., Inc., New York, N.Y. 390,195, ren. 10-24-61. Cl. 51.
 St. Denis Toilettries, Inc., to Lander Co., Inc., New York, N.Y. 390,319, ren. 10-24-61. Cl. 52.
 Samuels, T. W., Distillery, Inc., Deatsville, and Cincinnati, to T. W. Samuels Distillery, Inc., Deatsville, Ky. 392,390, ren. 10-24-61. Cl. 49.
 San Hygiene Furniture Mfg. Co., The, Akron, Ohio. 723,108, pub. 8-8-61. Cl. 32.
 Sardi's Enterprises, Inc., New York, N.Y. 611,921, can. Cl. 107.
 Schreiber, Dr. Ing. August, d.b.a. Schreiber-Klaranlagen Dr. Ing. August Schreiber, Hannover-Vinnhorst, Germany. 723,099, pub. 8-8-61. Cl. 31.
 Schreiber-Klaranlagen Dr. Ing. August Schreiber: See—
 Schreiber, Dr. Ing. August.
 Scott, John C., Indianapolis Wire Bound Box Co., Fernwood, Miss. 597,554, Am. 7(d), Cl. 19.
 Seal-Peel, Inc., New York, N.Y. 611,677, can. Cl. 16.
 Shepley, Alice C., Novato, Calif. 723,210, Cl. 50.
 Shurtz, E. J., Mfg. Co., Wichita, Kans. 723,076, pub. 8-8-61. Cl. 23.
 Smith Brothers, Inc., Poughkeepsie, N.Y. 611,854, can. Cl. 46.
 Smith, Oren D., Englewood, N.J. 611,610, can. Cl. 2.
 Snow Co., The, Omaha, Nebr. 723,004, pub. 8-8-61. Cl. 19.
 Snow Co., The, Omaha, Nebr. 723,070, pub. 8-8-61. Cl. 23.
 Snow Co., The, Omaha, Nebr. 723,151, pub. 8-8-61. Cl. 41.
 Societe Cidma (Societe Anonyme), Courbevoile, Seine, France. 723,066, pub. 8-8-61. Cl. 23.
 Societe Francaise Radio-Electrique, Paris, France. 611,722, can. Cl. 21.
 Softley, Ed. W., Butte, Mont. 611,633, can. Cl. 4.
 Solar Corp., d.b.a. Beam Mfg. Co., Milwaukee, Wis. 611,769, can. Cl. 24.
 Space Ships, Inc., Los Angeles, Calif. 723,029, pub. 8-8-61. Cl. 21.
 Spalding, A. G. & Bros., Inc.: See—
 Spalding Sales Corp.
 Spalding Sales Corp., to A. G. Spalding & Bros., Inc., Chicopee, Mass. 390,370, ren. 10-24-61. Cl. 22.
 Spice Islands Co., South San Francisco, Calif. 723,209, Cl. 46.
 Sports Candies, Inc., Burlington, Wis. 723,175, pub. 8-8-61. Cl. 46.

Squibb, E. R. & Sons, to Olin Mathieson Chemical Corp., New York, N.Y. 391,559, ren. 10-24-61. Cl. 18.
 Stadium Mfg. Co., Inc., New York, N.Y. 723,138, pub. 8-8-61. Cl. 39.
 Staley, A. E., Mfg. Co., Decatur, Ill. 611,652, can. Cl. 6.
 Stamcarbon N.V., Heerlen, Netherlands. 723,052, pub. 8-8-61. Cl. 23.
 Standard Knitting Mills, Inc., Knoxville, Tenn. 611,942, can. Cl. 39.
 Standard Packaging Corp., Chicago, Ill. 611,627, can. Cl. 2.
 Staples, H. W., Co., St. Paul, Minn. 723,196, Cl. 12.
 Star Expansion Bolt Co., New York, N.Y., to Star Expansion Co., Mountainville, N.Y. 391,079, ren. 10-24-61. Cl. 13.
 Star Expansion Bolt Co., New York, to Star Expansion Co., Mountainville, N.Y. 392,515, ren. 10-24-61. Cl. 23.
 Star Expansion Co.: See—
 Star Expansion Bolt Co.
 Stewart-Warner Corp.: See—
 Bassick Mfg. Co., The.
 Stone, Tom, Cordage Co., Chariton, Iowa. 611,656, can. Cl. 7.
 Stump, Howard D., d.b.a. Stump Sales & Engineering Co., South Bend, Ind. 611,803, can. Cl. 32.
 Stump Sales & Engineering Co.: See—
 Stump, Howard D.
 Sturdilite Products, Inc., Chicago, Ill. 723,107, pub. 8-8-61. Cl. 32.
 Supreme Grand Lodge of The Ancient and Mystical Order Rosae Crucis, The: See—
 Ancient and Mystical Order Rosae Crucis.
 Supreme Pharmaceutical Co.: See—
 Blackman, Julius, Corp.
 Swale Chemicals Ltd., Croydon, Surrey, England. 722,989, pub. 8-8-61. Cl. 16.
 Swift & Co.: See—
 Swift and Co.
 Swift and Co., to Swift & Co., Chicago, Ill. 389,940, ren. 10-24-61. Cl. 5.
 Swift and Co., to Swift & Co., Chicago, Ill. 390,569, ren. 10-24-61. Cl. 46.
 Tallmadge, L. H., Co., Inc., Cranston, R.I. 611,639, can. Cl. 4.
 Tele-trip Policy Co., Inc., New York, N.Y. 611,905, can. Cl. 102.
 Tenth Avenue Trading Corp., New York, N.Y. 611,810, can. Cl. 46.
 Texas Natural Gasoline Corp.: See—
 Union Texas Natural Gas Corp.
 Thomas Industries, Inc.: See—
 Benjamin Electric Mfg. Co.
 Thompson & Co., Oakmont, Pa. 722,983, pub. 8-8-61. Cl. 16.
 Thunderbird Products Corp., Miami, Fla. 723,007, pub. 8-8-61. Cl. 19.
 Titus Mfg. Corp., Waterloo, Iowa. 723,118, pub. 8-8-61. Cl. 34.
 Trainer Associates, Inc., New Castle, Del. 723,055, pub. 8-8-61. Cl. 23.
 Trich-O-matic Products, Inc., Fond du Lac, Wis. 611,876, can. Cl. 61.
 Tryon, Edw. K., Co., Philadelphia, Pa. 611,757-8, can. Cl. 22.
 Tucker Aluminum Products Inc., Hialeah, Fla. 723,114, pub. 8-8-61. Cl. 33.
 Tyler Refrigeration Corp., Niles, Mich. 723,101, pub. 8-8-61. Cl. 31.
 Ulano Graphic Arts Supplies, Inc., Brooklyn, N.Y. 722,924, pub. 8-8-61. Cl. 1.
 Union Texas Natural Gas Corp., from Texas Natural Gasoline Corp., Tulsa, Okla. 722,939, pub. 8-8-61. Cl. 6.
 United Merchants and Mfg., Inc.: See—
 Cohn-Hall-Marx Co.
 U.S. Reduction Co., East Chicago, Ind. 722,975, pub. 8-8-61. Cl. 14.
 United States Rubber Co., New York, N.Y. 149,273, ren. 10-24-61. Cl. 22.
 United States Rubber Co., New York, N.Y. 149,533, ren. 10-24-61. Cl. 22.
 United States Rubber Co.: See—
 Federal Rubber Co., The.

United States Rubber Co., New York, N.Y. 391,862, ren. 10-24-61. Cl. 35.
 United States Rubber Co., New York, N.Y. 722,936, pub. 8-8-61. Cl. 5.
 United States Stoneware Co., The, Tallmadge, Ohio. 722,991, pub. 8-8-61. Cl. 16.
 Universal Inc.: See—
 Hoover Ball & Bearing Co.
 Upatol Corp., Columbus, Ga. 722,932, pub. 8-8-61. Cl. 4.
 Valspar Corp.: See—
 Rockcote Paint Co.
 Valspar Corp., from Rockcote Paint Co., Rockford, Ill. 722,980, pub. 7-14-59. Cl. 16.
 Vega Electronics Corp., Cupertino, Calif. 723,041, pub. 8-8-61. Cl. 21.
 Vinylustre, Inc., Newark, N.J. 611,637, can. Cl. 4.
 Voss, Arthur H., Los Angeles, Calif. 722,969, pub. 8-8-61. Cl. 26.
 W. & J., Inc., Columbus, Ohio. 723,085, pub. 8-8-61. Cl. 26.
 Walker, John L., d.b.a. Johnnie Walker Surgical Service, Kansas City, Mo. 723,152, pub. 8-8-61. Cl. 44.
 Walker, Johnnie, Surgical Service: See—
 Walker, John L.
 Warner-Hudnut, Inc., now by change of name, Warner-Lambert Pharmaceutical Co., New York, N.Y. 611,700, can. Cl. 18.
 Warner-Lambert Pharmaceutical Co.: See—
 Warner-Hudnut, Inc.
 Weiner, M. A., Co., Sioux City, Iowa. 722,930, pub. 8-8-61. Cl. 3.
 Werkzeugmaschinenfabrik Oerlikon Buhle & Co.: See—
 Holding Interco S.A.
 Westinghouse Electric Corp.: See—
 Westinghouse X-Ray Co., Inc.
 Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., to Westinghouse Electric Corp., Pittsburgh, Pa. 389,858, ren. 10-24-61. Cl. 26.
 Westinghouse X-Ray Co., Inc., to Westinghouse Electric and Mfg. Co., East Pittsburgh, Long Island City, N.Y., to Westinghouse Electric Corp., Pittsburgh, Pa. 389,687, ren. 10-24-61. Cl. 44.
 Westland Plastics, Inc., Newbury Park, Calif. 723,112, pub. 8-8-61. Cl. 32.
 Westric Battery Co., Denver, Colo. 611,751, can. Cl. 21.
 Westric Battery Co., Denver, Colo. 611,754, can. Cl. 21.
 Westward Dental Products Co., San Francisco, Calif. 723,155, pub. 8-8-61. Cl. 44.
 White, S. B., Dental Mfg. Co., The, Philadelphia, Pa. 391,303, ren. 10-24-61. Cl. 51.
 White Stag Mfg. Co., Portland, Oreg. 723,142, pub. 8-8-61. Cl. 39.
 Wilhold Glues, Inc., Los Angeles, Calif. 722,937, pub. 8-8-61. Cl. 5.
 Williamson-Dickie Mfg. Co., The, Fort Worth, Tex. 723,146, pub. 8-8-61. Cl. 39.
 Wintriss, Inc., New York, N.Y. 723,019, 8-8-61. Cl. 21.
 Wire Rope Corp. of America, Inc., St. Joseph, Mo. 722,947, pub. 8-8-61. Cl. 7.
 Wired Radio, Inc., to Associated Music Publishers Inc., to Muzak Corp., New York, N.Y. 393,293, ren. 10-24-61. Cl. 38.
 Wirken, Frank J., d.b.a. Home-Burger Sales, Kansas City, Mo. 723,068, pub. 8-8-61. Cl. 23.
 Wolf & Deasauer Co., Fort Wayne, Ind. 611,721, can. Cl. 21.
 Wolverine Brass Works, Grand Rapids, Mich. 722,972, pub. 8-8-61. Cl. 13.
 World Wide Broadcasting System, Inc., New York, N.Y. 723,195, pub. 8-8-61. Cl. 107.
 Wrigley, Wm., Jr. Co., Chicago, Ill. 723,169, pub. 8-8-61. Cl. 46.
 Wynnitt Pharmaceuticals, Inc., New York, N.Y. 611,701, can. Cl. 18.
 Yuba Consolidated Industries, Inc., San Francisco, Calif. 723,096, pub. 8-8-61. Cl. 31.
 Yuba Power Products, Inc., Cincinnati, Ohio. 723,059, pub. 7-25-61. Cl. 23.
 Zac-Lac Paint & Lacquer Co., Atlanta, Ga. 722,987, pub. 8-8-61. Cl. 16.
 Z-Lyte Co.: See—
 Belfer, William.



PATENTS NOTICES

Selected Non-Proprietary Names

The Public Health Service has informed the Patent Office that the names listed below have been selected by WHO as recommended international non-proprietary names for pharmaceutical preparations.

The procedure for selection of these names, by WHO, in-

cluding earlier publication in accordance with procedures published in the Chronicle of the World Health Organization, June-July 1955 issue, has been completed. WHO requests that these recommended names be recognized as the non-proprietary names for the substances concerned and that the necessary steps be taken to prevent acquisition of proprietary rights in the same.

Recommended International Non-Proprietary Names (Latin, English)

Chemical Name or Description

acediasulfonum natrium
acediasulfone sodium
acetyldigitoxinum
acetyldigitoxin
acidum thyropropium
thyropropic acid
acidum trethocanicum
trethocanic acid
aethoxazorutosidum
ethoxazorutoside
allmemazinum
allmemazine
allylestrenolum
allylestrenol
allylprodinum
allylprodine
amanozinum
amanozine
ambazonum
ambazone
aminoacridinum
aminoacridine
aminogluthethimidum
aminogluthethimide
aminopromazinum
aminopromazine
aminoxyltriphenum
aminoxyltriphenyl
amopyroquinum
amopyroquin
amphenidonum
amphenidone
amphotericinum B
amphotericin B
anisindionum
anisindione
benzethidinum
benzethidine
benzmalecenum
benzmalecene
benzthiazidum
benzthiazide
benzylsulfamidum
benzylsulfamide
biamalicolum
biamalicol
biperidenum
biperiden
bretylli tosylas
bretyllium tosylate
brompheniraminum
brompheniramine
broparocetrolum
broparocetrol

4-carboxymethylamino-4'-aminodiphenylsulfone sodium
α-acetyldigitoxin
3-[4-(4-hydroxy-3-iodophenoxy)-3,5-diiodophenyl]propionic acid
3-hydroxy-3,7,11-trimethyldodecanoic acid
monomorpholinylethylrutoside
10-(2-methyl-3-dimethylaminopropyl)phenothiazine
17α-allylestr-4-en-17-ol
3-allyl-1-methyl-4-phenyl-4-propionyloxypiperidine
2-amino-4-anilino-s-triazine
1,4-benzoquinone amidinohydrazone thiosemicarbazone hydrate
9-aminoacridine
2-(p-aminophenyl)-2-ethylglutarimide
10-(2,3-bisdimethylaminopropyl) phenothiazine
3-dimethylamino,1,1,2-tris (4-methoxyphenyl)prop-1-ene
7-chloro-4-(4-hydroxy-3-pyrrolidin-1'-ylmethylanilino)quinoline
1-(m-aminophenyl)-1H-pyrid-2-one
a polyene antibiotic substance obtained from cultures of *Streptomyces nodosus*, or the same substance produced by any other means
2-p-methoxyphenylindane-1,3-dione
1-(2-benzoyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
N-(2,3-di-p-chlorophenyl-1-methylpropyl)maleamic acid (α-form)
3-benzylthiomethyl-6-chloro-7-sulfamoylbenzo-1,2,4 (2H)-thiadiazine 1,1-dioxide
4-benzylaminophenylsulfonamide
3,3'-diallyl-5,5'-bisdiethylaminomethyl-4,4'-dihydroxydiphenyl
1-(bicyclo[2,2,1]hept-5-en-2-yl)-1-phenyl-3-piperidinopropan-1-ol
N-o-bromobenzyl-N-ethyl-N,N-dimethylammonium tosylate (tosylic acid is p-toluenesulfonic acid)
(3-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
1-bromo-2-p-ethylphenyl-1,2-diphenylethylene

New Applications Received During August 1961

Patents	7,067
Designs	431
Plant Patents	10
Reissues	20
Total	7,528

Issue

Patents	1,181—No. 3,005,988 to No. 3,007,168, incl.
Designs	40—No. 191,654 to No. 191,693, incl.
Plant Patents	2—No. 2,099 to No. 2,100, incl.
Reissues	11—No. 25,065 to No. 25,075, incl.
Total	1,234

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

bunamiodylum	3-(3-butyramido-2,4,6-triiodophenyl)-2-ethylacrylic acid
bunamiodyl	1-(p-hydroxyphenyl)-2-(1-methyl-3-phenylpropylamino)propan-1-ol
bupheninum	N-(5-butyl-1,3,4-thiadiazol-2-yl)-p-chlorobenzene sulfonamide
buphenine	a mixture of 100 parts by weight of the monosodium derivative of 5-allyl-5-isobutyl-2-thiobarbituric acid and 6 parts by weight of exsiccated sodium carbonate
butadiasamidum	butyldimethyl(2,3-dimethyl-5-oxo-1-phenyl-3-pyrazolin-4-yl)ammonium iodide
butadiasamide	calcium 4-benzamido-2-hydroxybenzoate
buthallitalum natricum	calcium cyanamide
buthallital sodium	2-carbamoyloxymethyl-2-isopropylcarbamoyloxymethylpentane
butyrammonii iodidum	di(p-(13-cyclopentyltridecanamido)phenyl)sulfone
butyrammonium iodide	2-amino-4-p-chloroanilino-s-triazine
calci benzamidosalicylas	1-(2-o-chlorodiphenylmethoxyethyl)-4-o-methylbenzylpiperazine
calcium benzamidosalicylate	di-(2-chloroethyl)methylamine
calci carbinidum	2-(4-chlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
calcium carbinide	1,1-di(4-chlorophenyl)-2,2,2-trichloroethane with a proportion of 1-(2-chlorophenyl)-1-(4-chlorophenyl)-2,2,2-trichloroethane
carisoprodolum	N-p-chlorobenzyl-N',N'-dimethyl-N-pyrid-2-ylethylenediamine
carisoprodol	6-chloro-7-sulfamoylbenzo-1,2,4(4H)-thiadiazine 1,1-dioxide
chaumosulfonum	2,4-dichlorophenoxydimethyl- α -octylammonium amsonate (amsonic acid is 4,4'-diaminostilbene-2,2'-disulfonic acid)
chaumosulfone	3-(p-chlorophenyl)sulfonyl-1-propylurea
chlorazanium	2-(1-p-chlorophenyl-1-phenylethoxy) ethyldimethylamine
chlorazani	N-3,4-dichlorophenyl-N'-isopropylidiguanide
chlorbenzoxaminum	trans-2-chloro-10-(3-dimethylaminopropylidene) thiazanthene
chlorbenzoxamine	2-(2-chloroethyl)-2,3-dihydro-4-oxobenz-1,3-oxazine
chlormethinum	an enzyme, α -chymotrypsin, obtained in crystalline form from mammalian pancreas by aqueous acid extraction of its proenzyme, chymotrypsinogen, and subsequent conversion with trypsin to chymotrypsin
chlormethine	2-diethylaminoethyl 2-phenylcinnamate
chlormesanone	1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole
chlorophenothanum technicum	benzylpenicillin combined with 1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole
technical chlorophenothane	5-chloro-3H-benzoxazol-2-one
chloropyraminum	2-hydroxyethyltrimethylammonium D-gluconate
chloropyramine	2-hydroxyethyltrimethylammonium 1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
chlorothiazidum	3,5,5-trimethylcyclohexyl α -phenyl- α -hydroxyacetate
chlorothiazide	5-(3-dimethylaminopropylidene) dibenzo(a,e)cycloheptatriene
chlorphenocitil amsonas	N,N-bis(2-chloroethyl)-N'-(3-hydroxypropyl) phosphordiamidic acid cyclic ester
chlorphenocitil amsonate	6 β -hydroxy-3,5-cyclopregnan-20-one
chlorpropamidum	4-(5-dibenzo(a,e)cycloheptatrienylidene)-1-methylpiperidine
chlorpropamide	N,N'-decamethylenebis-(trimethyl(3-N-methylcarbamoyloxyphenyl)ammonium bromide)
chlorphenoxaminum	7-chloro-4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-1,11-dioxo-2-naphthacene carboxamide
chlorphenoxamine	decamethylenebis(4-amino-2-methylquinolinium) bischloride
chlorproguanilum	9a-fluoro-11 β ,17a,21-trihydroxy-16a-methylpregna-1,4-diene-3,20-dione
chlorproguanil	(+)-(3-p-bromophenyl-3-pyrid-2'-ylpropyl) dimethylamine
chlorprothixenum	(+)-(3-p-chlorophenyl-3-pyrid-2'-ylpropyl) dimethylamine
chlorprothixene	N-(2-[(methyl)phenethylamino]propyl)propionanilide
chlorthorazinum	di[4-(4-hydroxy-2-methyl-5-isopropylphenylazo)phenyl]sulfone
chlorthorazine	N,N-dibenzylmethylamine
chymotrypsinum	9a-11 β -dichloro-17a-21-dihydroxypregna-1,4-diene-3,20-dione
chymotrypsin	2-(3,4-dichlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
cinnamaverinum	
cinnamaverine	
clemisolium	
clemisole	
clemisolium penicillinum	
clemisole penicillin	
chloroxazonum	
chloroxazone	
cholnili gluconas	
cholnili gluconate	
cholnili theophyllinas	
cholnili theophyllinate	
cyclandelatum	
cyclandelate	
cyclobenzaprium	
cyclobenzaprine	
cyclophosphamidum	
cyclophosphamide	
cyclopregnolum	
cyclopregnol	
cyproheptadinum	
cyproheptadine	
demecaril bromidum	
demecarium bromide	
demethylchlorotetracyclinum	
demethylchlorotetracycline	
dequalinili chloridum	
dequalinium chloride	
dexamethasolum	
dexamethasone	
dexbrompheniraminum	
dexbrompheniramine	
dexchlorpheniraminum	
dexchlorpheniramine	
diampromidum	
diampromide	
diathymosulfonum	
diathymosulfone	
dibemethinum	
dibemethine	
dichlorisolum	
dichlorisone	
dichlormezanone	

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

dihydrocodeinum	7,8-dihydrocodeine or 4,5-epoxy-6-hydroxy-3-methoxy-N-methylmorphinan
dihydrocodeine	N-dichloroacetyl-p-hydroxy-N-methylaniline
dioxanidum	dimethylaminoethyl 1-ethoxy-1,1-diphenylacetate
dioxanide	6-dimethylamino-4,4-diphenyl-3-heptanol
dimenoxadolium	9-(3-dimethylaminopropylidene)-2-methoxyxanthene
dimenoxadol	1,3-dimethyl-7-(2-dimethylaminoethyl)-2,6-dioxo-1,2,3,6-tetrahydropurine
dimepheptanolium	17a-ethynyl-17-hydroxy-6a,21-dimethylandro-4-en-3-one
dimepheptanol	1-(2-methoxyphenyl)-4-(3-methoxypropyl)piperazine
dimeprosanum	ethyl-4-morpholino-2,2-diphenylbutyrate or ethyl- γ -morpholino- α , α -diphenylbutyrate
dimepropane	1-(3-cyano-3,3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
dimethasanum	N ² -acetyl-N ¹ -(β -hydroxy- β , β -diphenylpropionyl)hydrazine
dimethasan	2-piperidinoethyl α -phenyl- α -piperidinoacetate
dimethisteronum	3-ethyl-2-(5-(3-ethyl-2-benzothiazolidinylidene)-1,3-pentadienyl)benzothiazolium iodide
dimethisterone	1-ethyl-1-methylpropyl carbamate
dimetholisinum	2-ethylpyridine-4-carbothionamide
dimetholizine	10-(2-dimethylaminoethyl)phenothiazine
dioxaphetyl butyras	a chelate prepared by reacting equimolar quantities of freshly precipitated ferric hydroxide with choline dihydrogen citrate
dioxaphetyl butyrate	6-trifluoromethyl-7-sulfamoylbenzo-1,2,4(4H)-thiadiazine 1,1-dioxide
diphenoxylatum	9a-fluoro-11 β ,17a-dihydroxy-6a-methyl-1,4-pregnadiene-3,20-dione
diphenoxylate	10-(3-(4-(2-hydroxyethyl)piperazin-1-yl)propyl)-2-trifluoromethylphenothiazine
diphoxazidum	ethyl 1-(2-tetrahydrofurfuryloxyethyl)-4-phenylpiperidine-4-carboxylate
diphoxazide	5-morpholinomethyl-8-(5-nitrofurfurylideneamino)-2-oxasolidin-2-one
dipiproverinum	5-methyl-3-(5-nitrofurfurylideneamino)-2-oxasolidin-2-one
dipiproverine	trans-3,4-bis-(4-(2-furoyloxy)phenyl)hex-3-ene
dithiasanili iodidum	2-sulfanilamido-5-tert-butyl-1,3,4-thiadiazole
dithiasanili iodide	3-sulfanilamido-5-isopropyl-1,3,4-thiadiazole
emylcamatum	7-chloro-4,6-dimethoxy-2,3-dihydrobenzofuran-3-one-2-spiro-1'-(2'-methoxy-6'-methylcyclohex-2'-en-4'-one)
emylcamate	4-bromobenzyl-8-(4-chloro-5-methyl-2-isopropylphenoxy)propyldimethylammonium chloride
ethlonamidum	4-(p-chlorophenyl)-1-[3-(p-fluorobenzoyl)propyl]piperidin-4-ol
ethlonamide	hexadecamethylenebis-(2-isoquinolinium) dichloride
fenethazinum	N,N,N',N'-tetramethylhexamethylenediamine trimethylene bromide polymer
fenethazine	1-prop-2'-ynylcyclohex-1-yl carbamate
ferrocholnatum	N,N'-hexamethylenebis[(3-carbamoyloxyethyl)trimethylammonium bromide]
ferrocholnate	1-(p-chlorodiphenylmethyl)-4-methyl-1,4-diazacycloheptane
flumethasidum	phenylmercuric methylenebis(2-naphthyl-3-sulfonate)
flumethaside	6-chloro-3,4-dihydro-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
fluorometholonum	3,4-dihydro-6-trifluoromethyl-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
fluorometholone	5-acetoxy-3-(2-aminoethyl)-1-(p-methoxybenzyl)-2-methylindole
fluphenazinum	5-hydroxy-1-(p-methoxybenzyl)-2-methyl-3-(2-aminoethyl)indole
fluphenazine	7-chloro-4-[4-(N-ethyl-N-2-hydroxyethylamino)-1-methylbutylamino]quinoline
furethidinum	sodium 21-(3-carboxypropionyl)pregnane-3,20-dione
furethidine	17a-acetoxypregna-4-ene-3,20-dione
furmethonolum	17a-hexanoyloxypregna-4-ene-3,20-dione
furmethonol	17 β -hydroxy-17a-methylandro-4-eno-[3,2-o]pyrazole
furmethoxadonum	6-(3-dimethylaminopropyl)-10,11-dihydro-8H-dibenz(b,f)azepine
furmethoxadone	
furostilboestrolum	
furostilboestrol	
glybuthiazolum	
glybuthiazol	
glyprothiazolum	
glyprothiazol	
griseofulvinum	
griseofulvin	
halopenili chloridum	
halopenium chloride	
haloperidolum	
haloperidol	
hedaquinili chloridum	
hedaquinium chloride	
hexadimethrinil bromidum	
hexadimethrine bromide	
hexapropymatum	
hexapropymate	
hexcarbcholnili bromidum	
hexcarbcholnili bromide	
homochlorcyclisinum	
homochlorcyclisine	
hydrargaphenum	
hydrochlorothiazidum	
hydrochlorothiazide	
hydroflumethasidum	
hydroflumethaside	
hydroxindasolum	
hydroxindasate	
hydroxindasolum	
hydroxindasol	
hydroxychloroquinum	
hydroxychloroquine	
hydroxydioloni natril succinas	
hydroxydiolone sodium succinate	
hydroxyprogesteroni acetat	
hydroxyprogesterone acetate	
hydroxyprogesteroni caproat	
hydroxyprogesterone caproate	
hydroxystenosolum	
hydroxystenosole	
imipraminum	
imipramine	

Recommended International Non-Proprietary Names (Latin, English)	Chemical Name or Description
inproquonum	2,5-bisethylethimino-3,6-dipropoxy-1,4-benzoquinone
inproquone	active principle of the <i>pars intermedia</i> of the pituitary
intermedinum	(3-carbamoyl-3,3-diphenylpropyl) diisopropylmethylammonium iodide
intermedine	1-(p-hydroxyphenyl)-2-(1-methyl-2-phenoxyethylamino)propan-1-ol
isopropamid iodidum	an antibiotic substance obtained from cultures of <i>Streptomyces kanamyceticus</i> or the same substance produced by any other means.
isopropamide iodide	4,6-diamino-2-hydroxy-1-(4-amino-3,5-dihydroxy-6-hydroxymethyltetrahydropyran-2-yl)oxy)-3-(N-methylamino-3,4,5-trihydroxytetrahydropyran-2-yl)oxy) cyclohexane
isoxsuprinum	4-methoxy-7-hydroxymethyl-5H-furo[3,2-g]benzopyran-5-one glycoside
isoxsuprine	1-(3,4-dihydroxyphenyl)-2-isopropylaminoethanol
kanamycinum	(-)-2-methoxy-10-(3-dimethylamino-2-methylpropyl)phenothiazine
kanamycin	(-)-3-hydroxy-N-phenacylmorphinan
khellosidum	(-)-4-dimethylamino-3-methyl-1,2-diphenyl-2-propionoxybutane
khelloside	7-methyl-4,6,6a,7,8,9-hexahydroindolo[4,3-f,g]quinoline-9-carboxydiethylamide
levisoprenalinum	1,6-di-(2-chloroethylamino)-1,6-dideoxy-D-mannitol
levisoprenaline	5-benzyl-1,2,3,4-tetrahydro-2-methylpyrid[4,3-b]indole
levomepromazinum	17a-acetoxy-6a-methylpregn-4-ene-3,20-dione
levomepromazine	p-di(2-chloroethyl)amino-L-phenylalanine
levophenacylmorphinum	2-methyl-1,4-naphthoquinol disodium sulfate
levophenacylmorphin	2-methyl-1,4-naphthoquinone sodium bisulfite
levopropoxyphenum	1-methyl-3-piperid-3-yl benzilate methylbromide
levopropoxyphene	5-(a-methoxyphenoxy)methyl)oxazolidin-2-one
lysergidum	5-ethyl-3-methyl-5-phenylimidazolidin-2,4-dione
lysergide	17β-hydroxy-17-methyl-5a-androstan-3-one
mannomustinum	N-(m-amino-p-methylbenzenesulfonyl)-N'-cyclohexylurea
mannomustine	2-methyl-3-o-tolyl-3H-quinazolin-4-one
mebhydrolium	5-acetylmino-4-methyl-1,3,4-thiadiazoline-2-sulfonamide
mebhydrolin	10-(1-methyl-3-pyrrolidinylmethyl)phenothiazine
medroxyprogesteroni acetat	(2-hydroxy-3-o-methoxyphenoxypropyl) carbamate
medroxyprogesterone acetate	a-(+)-5-allyl-1-methyl-5-(1-methyl-2-pentynyl)barbituric acid
melphalanum	N-(4-[(2,4-diaminopteridin-6-ylmethyl)-N-methylamino]benzoyl)-L-(+)-glutamic acid
melphalan	3-methyl-4H-chromen-4-one
menadioli natrii sulfas	11β,17a,21-trihydroxy-6a-methylpregna-1,4-diene-3,20 dione or 6 methylprednisolone
menadiol sodium sulfate	monophosphoric ester of thiamine
menadioni natrii bisulfis	sodium 2,3,5,6-tetrahydro-1-methyl-6-oxo-5-semicarbazonoindole-3-sulfonate
menadiene sodium bisulfite	sodium 1-hydroxymethylcyclohexylacetate
mepenzolate bromidum	N-isonicotinoyl-N'-(β-N-benzylcarboxamidoethyl) hydrazine
mepenzolate bromide	di-nicotinic acid ester of morphine
mephenoalolum	nicotinaldehyde thiosemicarbazone
mephenoalione	5-nitrofuraldehyde 2-(2-dimethylaminoethyl) semicarbazone
mephentolium	5-nitro-2-furaldehyde acetylhydrazine
mephentol	N-demethylated codeine or 4,5-epoxy-6-hydroxy-3-methoxymorphin-7-ene
mestanololum	(-)-3-hydroxymorphinan
mestanolone	N-demethylated morphine or 4,5-epoxy-3,6-dihydroxymorphin-7-ene
metahexamidum	17β-hydroxy-17a-vinylestr-4-en-3-one
metahexamide	N-methyl-O-(2-propylpentanoyl) tropinilum bromide
methaqualonum	N,N-dimethyl-2-(a-a-tolylbenzyl)ethylamine
methaqualone	
methazolamidum	
methazolamide	
methdilazinum	
methdilazine	
methocarbamolum	
methocarbamol	
methohexitalum	
methohexital	
methotrexatum	
methotrexate	
methylichromonum	
methylichromone	
methylprednisolonum	
methylprednisolone	
monophosphothiaminum	
monophosphothiamine	
natrii carbazochromi sulfonate	
carbazoehrome sodium sulfonate	
natrii hexacyclonas	
sodium hexacyclonate	
nialamidum	
nialamide	
nicomorphinum	
nicomorphine	
nicotiazonum	
nicotiazone	
nifurethazonum	
nifurethazone	
nihydrazonum	
nihydrazone	
norcodeinum	
norcodeine	
norlevorphanolum	
norlevorphanol	
normorphinum	
normorphine	
norvinisteronum	
norvinisterone	
octatropini methylbromidum	
octatropine methylbromide	
orphenadrinum	
orphenadrine	

Recommended International Non-Proprietary Names (Latin, English)	Chemical Name or Description
oxadimedium	N-(2-benzoxazolyl)-N-benzyl-N',N'-dimethylethylenediamine
oxadimidine	1,2-epoxy-1-ethylpentane-1-carboxamide
oxanamidum	2-diethylaminoethyl 4-amino-3-butoxybenzoate
oxanamide	1-(p-hydroxyphenyl)-2-phenyl-4-butylpyrazolidine-3,5-dione
oxybuprocainum	(1,4,5,6-tetrahydro-1-methyl-2-pyrimidinyl)methyl a-cyclohexyl-a-phenylglycolate
oxybuprocaine	3,3-bis(4-hydroxyphenyl)oxindole
oxyphenbutazonum	N-(2-hydroxyethyl)palmitamide
oxyphenbutazone	p-acetamidophenol (acetaminophen)
oxyphenylaminum	1-methylpiperid-4-yl p-butylaminobenzoate
oxyphenylamine	an antibiotic substance obtained from cultures of certain <i>streptomyces</i> species, one of which is <i>Streptomyces rimosus</i> , or the same substance produced by any other means
oxyphenisatinum	1,2,2,6,6-pentamethylpiperidine
oxyphenisatine	an enzyme obtained by fermentation from cultures of <i>B. cereus</i>
palmidrolum	1-methylpiperid-4-yl 3-methyl-2-phenylvalerate
palmidrol	2-chloro-10-[3-(4-(2-hydroxyethyl)piperazin-1-yl)propyl]phenothiazine
paracetamololum	4,7-phenanthroline-5,6-quinone
paracetamol	N-phenacylhomotropinium chloride
paridocainum	N-(2-(1-methylpiperid-2-yl)ethyl)propionanilide
paridocaine	1,2,3,4,5,6-hexahydro-8-hydroxy-6,11-dimethyl-3-phenethyl-2,6-methano-3-benzasocine
paromomycinum	a-2-diethylaminoethyl-a-phenylglutarimide
paromomycin	dimethyl(3-phenyl-3-pyrid-2'-ylpropyl)amine
pempidinum	3-phenylpropyl carbamate
pempidine	1-methylamino-2-phenylpropane
penicillininum	2,5-diphenylpiperazine di[6-(phenylacetamido)penicillinate]
penicillinase	5,5-diethyl-1-phenylbarbituric acid
pentapiperidum	2-methyl-3-phytyl-1,4-naphthoquinone (vitamin K ₃)
pentapiperide	2-methyl-3-phytyl-1,4-naphthalene disodium hydrogen phosphate
perphenazinum	1-(3-phenylaminopropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
perphenazine	10-[3-(4-carbamoylpiperidino)propyl]-2-chlorophenothiazine
phanquinonum	2-piperidinoethyl benzilate
phanquinone	4-diphenylmethoxy-1-methylpiperidine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
phenactropinil chloridum	polymer of ethylene oxide, propylene oxide and propylene glycol
phenactropinilum chloride	a mixture of polymers formed from the reaction of formaldehyde and 4-hydroxybenzenearsonic acid
phenampromidum	a synthetic, loosely crosslinked, hydrophilic resin of the polycarboxylic type.
phenampromide	3-[2-phenyl-2-propionyloxymethyl)acetyloxy]-6,7-epoxytropene
phenazocinum	2-hydroxyiminomethyl-1-methylpyridinium iodide
phenazocine	10-(2-diethylaminopropyl)phenothiazine hydrochloride
phenglutarimidum	10-(2-dimethylaminopropyl)phenothiazine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
phenglutarimide	10-(2-dimethylaminopropyl)-2-propionylphenothiazine
pheniraminum	propyl 3-diacetylamin-2,4,6-trilodobenzoate
pheniramine	sulfate of the strongly basic protein, protamine
phenprobamatum	10-(3-dimethylaminopropylidene)thiathanthen
phenprobamate	1-(3,4-dihydroxyphenyl)-2-(a-methyl-3,4-methylenedioxyphenethylamino)ethanol
phenpromethaminum	pyrazine-2-carboxamide
phenpromethamine	an antibiotic substance obtained from cultures of <i>Nocardia lurida</i> , or the same substance produced by any other means
phenylacillinum	N-isonicotinoyl-N'-salicylidenehydrazine
phenylacillin	
phetharbitalum	
phetharbitol	
phytomenadionum	
phytomenadione	
phytonadioli natrii diphosphate	
phytonadiol sodium diphosphate	
pimindinum	
pimindine	
pipamazinum	
pipamazine	
pipethanatum	
pipethanate	
piprinhydrinatum	
piprinhydrinate	
poloxalkolum	
poloxalkol	
polybenzarsolum	
polybenzarsol	
polycarbophilum	
polycarbophil	
poskinum	
poskine	
pralidoximi methiodidum	
pralidoxime methiodide	
profenaminil hydrochloridum	
profenamine hydrochloride	
promethazinil theoclas	
promethazine theoclate	
propiomazinum	
propiomazine	
propyl docetrisoas	
propyl docetrisoate	
protamini sulfas	
protamine sulfate	
prothixenum	
prothixene	
protokylolum	
protokylol	
pyrazinamidum	
pyrazinamide	
ristocetinum	
ristocetin	
salinasidum	
salinasid	

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

styramatum	2-hydroxyphenethyl carbamate
styramate	
sulfachloropyridazinum	6-chloro-3-sulfanilamido pyridazine
sulfachloropyridazine	
sulfachrysoidinum	2-carboxy-4,6-diamino-4'-sulfamoylasobenzene
sulfachrysoidine	
sulfadiazolium natrium	sodium 2-(N-acetylsulfamoyl)-4,4'-diaminodiphenylsulfone
sulfadiazolium sodium	
sulfadimethoxinum	2,4-dimethoxy-6-sulfanilamido pyrimidine
sulfadimethoxine	
sulfathidolum	5-ethyl-2-sulfanilamido-1,3,4-thiadiazole
sulfathidole	
sulfamethoxy-pyridazinum	6-methoxy-3-sulfanilamidopyridazine
sulfamethoxy-pyridazine	
sulfaphenazolum	1-phenyl-5-sulfanilamidopyrazole
sulfaphenazol	
sulfasomizolum	3-methyl-5-sulfanilamidoisothiazole
sulfasomizol	
sulfathiourea	1-sulfanilylthiourea
sulfathiourea	
sulfatolamidum	1-sulfanilylthiourea salt of p-sulfamoylbenzylamine
sulfatolamide	
sulfapyrazonum	1,2-diphenyl-4-(2-phenylsulfonylethyl)-3,5-pyrazolidinedione
sulfapyrazone	
sulfogalacolum	potassium 4-hydroxy-3-methoxyphenylsulfonate
sulfogalacol	
sulcarbittum	2-hydroxyethyl p-sulfonamidophenylcarbamate
sulcarbittate	
syrosingopinum	4-ethoxycarbonyl-3,5-dimethoxybenzoic acid ester of methyl reserpate
syrosingopine	
tacrinum	9-amino-1,2,3,4-tetrahydroacridine
tacrine	
tetrammonii bromidum	tetraethylammonium bromide
tetrammonium bromide	
thalidomidum	α-phthalimidoglutarimide
thalidomide	
thiamazolum	1-methyl-2-mercaptolimidazole
thiamazole	
thiambutosinum	1-(p-butoxyphenyl)-3-(p-dimethylaminophenyl)thiourea
thiambutosine	
thiamphenicolum	D(+)-threo-2-dichloroacetamido-1-(p-methylsulfonylphenyl)propane-1,3-diol
thiamphenicol	
thibexinoli methylbromidum	trans-α,α-(dithien-2-yl)-(4-dimethylaminocyclohexyl) carbinol methylbromide
thibexinoli methylbromide	
thiopropazolum	10-[3-(4-(2-acetoxyethyl)piperazin-1-yl)propyl]-2-chlorophenothiazine
thiopropazate	
thiopropazinum	N,N-dimethyl-10-[3-(4-methylpiperazin-1-yl)propyl]-phenothiazine-2-sulfonamide
thiopropazine	
thiotepa	triaziridin-1-ylphosphine sulfide
thiotepa	
toloxychlorinolium	1,1'-(3-o-tolxyloxypropylene)dioxy bis (2,2,2-trichloroethanol)
toloxychlorinol	
triacetinum	glyceryl triacetate
triacetin	
triacetyloleandomycinum	the triacetyl ester of oleandomycin, an antibiotic substance obtained from cultures of <i>Streptomyces antibioticus</i> , or the same substance produced by any other means
triacetyloleandomycin	
triamcinolonum	9α-fluoro-16α-hydroxyprednisolone
triamcinolone	
triazolum	1-methylpyrrolidin-3-ylmethyl benzilate
triazate	
trichobisnoli chloridum	hexamethylenebis[dimethyl(1-methyl-3-(2,2,6-trimethylcyclohexyl)propyl)ammonium chloride]hemihydrate
trichobisnolium chloride	
trifluoperazinum	2-trifluoromethyl-10-[3-(1-methylpiperazin-4-yl)propyl]phenothiazine
trifluoperazine	
trifluoprazinum	2-trifluoromethyl-10-(3-dimethylaminopropyl) phenothiazine
trifluoprazine	
trimethidini methosulfas	(+)-3-(3-dimethylaminopropyl)-1,8,8-trimethyl-3-azabicyclo[3,2,1]octaine di(methyl-methosulfate)
trimethidinium methosulfate	
trimethobenzamidum	N-(p-2-dimethylaminoethoxybenzyl)-3,4,5-trimethoxybenzamide
trimethobenzamide	
troinfratum	triethanolamine trinitrate
troinfrate	
tropilinum	tropyl 2,3-dimethylacrylate
tropiline	
xylometazolum	2-(4-tert-butyl-2,6-dimethylbenzyl)imidazoline
xylometazoline	

Order of Examination of Amended Applications

Effective November 1, 1961, applications which have received at least two actions on the merits and which have been submitted for further consideration and action shall be treated as special. Such applications shall retain special status throughout their prosecution before the Examiner.

The Examiners are instructed to set a Shortened Statutory Period of three months for response in all third and subsequent actions which include a rejection of claims but which

are not Final Rejections. The full six months for response should ordinarily be allowed for Final Rejections.

The practice of setting a Shortened Statutory Period of about forty-five days in *Ex parte Quayle* type of actions remains unchanged as well as the practice of long standing of considering an application special wherein an amendment is filed which clearly places the application in condition for allowance, Quayle action, or Final Rejection.

This change in procedure is adopted to reduce the time

of pendency of applications before the Patent Office. This objective will not be realized if requests for extension of the Shortened Statutory Period are granted freely. Primary Examiners should, therefore, limit any extension to approximately one month, and then only upon a showing of real hardship. No further extension will be considered except on petition to the Commissioner.

Oct. 12, 1961.

DAVID L. LADD,
Commissioner of Patents.

Final Fee Transmittal Form

The Office has noted that many practitioners are not making use of the Final Fee Transmittal Form (POL-85A) which accompanies each Notice of Allowance (POL-85B). This form was designed and intended as a convenience in remitting the final fee. It is suggested that it will be a convenience to all concerned if this form is used.

Board of Appeals Decisions Rendered in the
Month of September 1961

Examiner affirmed	321
Examiner affirmed in part	30
Examiner reversed	58
Total	409

Foreign Patents Received in the Scientific Library as of
September 29, 1961

Country	Date received	Highest number
Australia:		
(Abstracts)	Apr. 18, 1961	63,890
(Patents)	Sept. 25, 1961	233,087
Austria	Sept. 25, 1961	216,500
Belgium	Sept. 15, 1961	570,300
Canada	Sept. 22, 1961	627,856
Czechoslovakia	Sept. 22, 1961	98,700
Denmark	Sept. 25, 1961	90,840
East Germany	Sept. 26, 1961	21,859
Egypt	July 3, 1961	2,357
Finland	June 1, 1961	31,290
France:		
(Patents)	Sept. 12, 1961	1,258,900
(Additions)	Aug. 16, 1961	75,100
Germany:		
(Auslegeschriften)	Sept. 6, 1961	1,110,580
(Patents)	Sept. 6, 1961	1,097,824
Great Britain	Sept. 22, 1961	876,980
India	Sept. 20, 1961	70,294
Ireland	May 22, 1961	22,700
Italy	June 20, 1961	579,100
Japan	Sept. 1, 1961	11,350,61
Netherlands	Sept. 5, 1961	98,970
Norway	Sept. 28, 1961	98,462
Pakistan	June 9, 1961	108,699
Poland	July 24, 1961	44,675
Rumania	Aug. 10, 1961	41,482
Sweden	Sept. 5, 1961	175,703
Switzerland	Sept. 27, 1961	355,747
U.S.S.R.	Sept. 13, 1961	138,892

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
Hungary: First received 5,792/1896
Ireland: Missing 1-10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,481/1941

Rules of Practice in Patent Cases

[37 CFR PART 1]

Notice of Proposed Rule Making

Notice is hereby given that the Patent Office proposes to amend the rules of practice in Patent Cases in the manner

indicated by the text given below. The amendment is proposed to be issued pursuant to the authority contained in Title 35, U.S. Code, sections 6 and 122.

All persons interested in presenting their views and objections or recommendations in connection with the proposed change are invited to do so on or before November 20, 1961, on which day a hearing will be held at 10:00 a.m. in Room 3886B of the Department of Commerce Building. All persons wishing to be heard orally are requested to notify the Commissioner of Patents of their intended appearance.

The purpose of the proposed amendment is to provide for the publication or the release for publication of decisions of the Board of Appeals, even though the application involved may not be open to public inspection. At the present time the decisions of the Board of Appeals which are published or available for publication are mainly those decisions which appear in the files of issued patents, in most of which the Examiner has been reversed. The published decisions give a distorted picture of the appeals decided by the Board of Appeals. Also, in many instances decisions on important issues have been rendered by the Board of Appeals which would be known and available to some Examiners and, of course, would be followed as precedents, though they could not be cited or be made public. On the other hand, in some instances actions inconsistent with decisions of the Board of Appeals may have been made by Examiners through lack of knowledge of such decisions. Also many fruitless appeals may have been taken on issues and questions which have been decided by the Board of Appeals, the decisions not having been made public.

It is not intended to publish or release for publication every decision of the Board of Appeals but only a selection of those considered desirable and useful. The determination as to the desirability for publication will be made in the first instance by appropriate officials of the Patent Office. The applicant will be notified that it is proposed to publish the decision in his case and given a time within which he may present reasons why it should not be published. Where a party requests, names of the applicant or of counsel or both may be omitted.

As to time of operation, it is specified that the new paragraph added to the rule will be applied in the case of appeals filed after the effective date of the amendment. With respect to decisions in appeals then pending, the procedure will be then same as hitherto, that is, a decision will not be published without the applicant's specific consent.

Proposed amendment. Section 1.14(b) of Title 37 CFR (Patent Rule 14(b)) is proposed to be amended by adding the following paragraph:

Decisions of the Board of Appeals in abandoned applications may be published or made available for publication in the Commissioner's discretion, unless the applicant timely presents sufficient reasons for not doing so.

The time and manner of taking effect is as follows: The amendment shall take effect 30 days after publication in the FEDERAL REGISTER and shall apply to decisions in appeals taken after that date; with respect to appeals filed before the effective date, no decision will be published or released for publication without the consent of the applicant.

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE, Jr.,
Assistant Secretary of Commerce for Domestic Affairs.
[F.R. Doc. 61-9596; Filed, Oct. 6, 1961; 8:45 a.m.]
Published in 26 F.R. 9514-15, Oct. 7, 1961

Adjudicated Patents

(C.A. Pa.) Tinnerman Patent No. 2,233,230 (151-41.75), for fastening device, *Held invalid. Products, Inc. v. George K. Garrett Co.*, 292 F.2d 137; 129 USPQ 438.

(C.A. Mass.) Osborne Patent No. 2,414,833 (162-129), for thermoplastic paper and process of preparing same. Claims 1 and 2 *Held* valid and not infringed. *C. H. Dexter & Sons, Inc. v. Kimberly-Clark Corporation*, 292 F.2d 371; 130 USPQ 1.

(C.A. Kans.) Jewett and Case Patent No. 2,714,066 (96-75), for planographic printing plate. Claims 1 to 5

Held valid and infringed. *Bewal, Inc. et al. v. Minnesota Mining & Mfg. Co.*, 292 F.2d 159; 129 USPQ 440.

(D.C.N.Y.) Richardson Patent No. 2,670,030 (297—85), for actuating device causing foot rest on reclining chairs to be elevated to a horizontal position when back was depressed. Claims 1 and 2 Held invalid. *Lorenz v. F. W. Woolworth Co.*, 195 F. Supp. 719; — USPQ —.

(D.C.N.Y.) Schlepachke Patent No. 2,880,785 (297—85), for actuating device causing foot rest on reclining chairs to be elevated to a horizontal position when back was depressed. Claims 1, 2, 7 and 10 Held invalid. *Id.*

Patents Available for Licensing or Sale

2,999,524. Tubeless Tire Rim and Spring Unit Supplement. John A. Marison, 458 E. Santa Clara St., San Jose, Calif.

The following 2 patents are offered by: William E. Clark, 305 Robinson St., Newport, Tenn.

2,999,333. Belt Hoop Spinner.

Des. Pat. 186,177. Hoop Roller.

Correspondence concerning the following 3 patents should be directed to: Richard Low, 1060 Broad St., Newark 2, N.J.

2,991,330. Teleprinter Reception System for Multichannel Operation. Tesla, narodni podnik, Prague, Czechoslovakia.

2,991,423. Low-Frequency Regenerative Amplifier. Tesla, narodni podnik, Prague, Czechoslovakia.

2,993,424. Panoramic Camera. Moopta Prerov, narodni podnik, Prague, Czechoslovakia.

General Electric Company is prepared to grant non-exclusive licenses under the following 55 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 6 patents may be addressed to: General Electric Company, Flight Propulsion Division, Cincinnati 15, Ohio, Attention: Patent Counsel.

2,933,234. Compressor Stator Assembly.

2,955,744. Compressor.

2,957,675. Damping Means.

2,973,937. Cooling Structure.

2,977,142. Supporting Means To Maintain Concentricity Between Two Members.

2,994,499. Conduit Clamp.

Applications for license under the following 49 patents may be addressed to: Patent Counsel, Electronic Components Division, General Electric Company, 316 E. 9th St., Owensboro, Ky.

Des. Pat. 186,791. Portable Television Receiver Cabinet.

2,875,367. Cathode Structures.

2,884,550. Ionization Gauges and Method of Operation Thereof.

2,888,406. Conductive Cements.

2,894,170. Electron Beam Amplification Apparatus.

2,898,498. Photoemitters.

2,900,281. Method of Bonding Metal Borides to Graphite.

2,904,512. Growth of Uniform Composition Semiconductor Crystals.

2,910,653. Junction Transistors and Circuits Therefor.

2,912,340. Forsterite Ceramic Bodies.

2,913,102. Getter Assemblage.

2,918,396. Silicon Carbide Semiconductor Devices and Method of Preparation Thereof.

2,918,670. Luminescent Presentation Apparatus.

2,920,232. Display Device With Storage.

2,922,067. High Frequency Energy Interchange Device.

2,922,906. Target Electrode Assembly.

2,922,934. Base Connection for N-P-N Junction Transistor.

2,923,038. Framing Apparatus.

2,923,844. Cathode Ray Tube Structure Including Convergence System.

2,923,847. Grid Shim.

2,925,516. Traveling Wave Tube.

2,925,524. Methods and Structures Correcting for Beam Deflections in a Television Picture Tube.

2,926,981. Method of Gettering Using Zirconium-Titanium Alloy.

2,927,240. Gaseous Discharge Device.

2,928,162. Junction Type Semiconductor Device Having Improved Heat Dissipating Characteristics.

2,928,971. Infrared Camera Tube.

2,928,986. Directional Output Magnetron System.

2,928,987. Magnetron Device and System.

2,929,954. Electrode Assemblies and Methods of Making.

2,930,918. High Damping Twisted Wire.

2,930,922. Electric Discharge Device Structure.

2,930,933. Voltage Tunable Magnetron.

2,931,935. Electric Discharge Device.

2,932,879. Single Crystal Electroluminescence.

2,933,633. Electric Discharge Device.

2,933,648. Information Display Apparatus.

2,934,392. Methods of Manufacturing Evacuated and Gas-Filled Devices.

2,935,305. Electric Discharge Device Cooling System.

2,935,306. Vapor Cooling Apparatus for Electric Discharge Devices.

2,935,645. High Frequency Electric Discharge Devices.

2,936,246. Burn-Resistant Phosphors and the Method of Preparation Thereof.

2,936,256. Semiconductor Devices.

2,937,306. Mount Structure for Electron Discharge Devices.

2,939,993. Traveling-Wave Tube Attenuators.

2,939,996. High Frequency Energy Interchange Device.

2,940,007. Magnetron Circuits.

2,942,137. Cathode Sleeve.

2,943,598. Wire Coating Apparatus.

2,945,150. Thermionic Cathodes and Methods of Making.

Correction

In the OFFICIAL GAZETTE of October 17, 1961, among the patents listed as being available for non-exclusive licensing by General Electric Company, Housewares and Commercial Equipment Division, 1285 Boston Ave., Bridgeport 2, Conn., Patent "2,991,677" should have been 2,991,627, Thermoelectric Blanket.

CONDITION OF PATENT APPLICATIONS AS OF AUGUST 31, 1961

Total number of pending applications (excluding Designs)	197,748
Total number of pending Design applications	5,227
Total number of applications awaiting action (excluding Designs)	94,168
Total number of Design applications awaiting action	1,304
Date of oldest new application	May 16, 1960
Date of oldest amended application	May 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS	
	New	Amended
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 66.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(III) REYNOLDS, E. R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	5, 8, 20, 29, 33, 36, 40, 52, 66.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES	3, 15, 19, 25, 30, 32, 49, 55, 67.	91, 92, 93, 94, 95.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION		
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION		
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE		
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS		
DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION		Oldest Application
(Roman numerals in parentheses indicate Examining Group)		
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	2-2-61	1-9-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clips	2-15-61	1-17-61
3. (VII) MARTELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	2-10-61	11-10-60
4. (VI) FALLER, E. A., Material or Article Handling	2-6-61	2-1-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	9-26-60	9-12-60
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	10-17-60	10-14-60
7. (IV) ANDERSON, E. G., Optics	12-20-60	12-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	3-6-61	3-3-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	1-16-61	1-5-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	12-21-60	11-14-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	10-10-60	10-3-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	9-20-60	10-3-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-10-60	10-31-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	10-24-60	9-2-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	3-10-61	3-2-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	9-9-60	9-8-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	9-26-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	3-1-61	3-1-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-10-61	11-15-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	3-1-61	2-27-61
21. (III) MADER, R. C., Textiles	12-8-60	12-6-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	11-21-60	10-21-60
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	4-7-61	4-3-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	2-7-61	1-30-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	11-1-60	11-1-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	11-1-60	11-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	1-6-61	12-5-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expandable Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	10-21-60	12-2-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	11-14-60	11-10-60
30. (VII) O'LEARY, R. A., Commminutors; Refrigeration; Fluid Sprinkling; Spraying and Diffusing, Separating and Assorting Solids (part)	2-27-61	2-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)		Oldest Application	
		New	Amended
31. (I) BOETTCHER, A. M. (SULLIVAN, A. D., acting), Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils.....		10-5-60	11-4-60
32. (VII) MARTIN, H. L., Gas and Liquid-Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part).....		12-2-60	12-1-60
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures.....		10-28-60	10-7-60
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating.....		11-3-60	11-23-60
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling.....		1-17-61	1-10-61
36. (V) EVANS, R. L., Measuring and Testing (part).....		10-11-60	10-5-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits.....		10-3-60	10-10-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins.....		9-6-60	9-12-60
39. (IV) WEILL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows).....		12-5-60	11-22-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages.....		2-6-61	1-30-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices.....		12-2-60	11-30-60
42. (II) SRAGOW, I. L. (acting), Electric Signaling (part); Non-linear Reactor Systems.....		10-5-60	10-6-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles.....		8-8-60	8-29-60
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes.....		5-16-60	5-3-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating.....		3-1-61	3-1-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Plastonable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part).....		9-1-60	9-9-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles Land Vehicles.....		12-30-60	1-3-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers.....		8-8-60	8-1-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring.....		10-7-60	10-7-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber.....		11-9-60	12-1-60
51. (II) WESTBY, G. N., Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems.....		9-6-60	9-6-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part).....		2-27-61	3-1-61
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifold; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination.....		1-5-61	1-6-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers.....		6-29-60	7-10-60
55. (VII) WHITMORE, H. B., Surgery; Dentistry; Artificial Body Members.....		10-20-60	10-24-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry.....		9-1-60	10-14-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting.....		9-2-60	9-6-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting.....		1-4-61	2-1-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating.....		10-19-60	10-21-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products.....		9-6-60	9-12-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths.....		1-4-61	2-2-61
62. (IV) LOWE, D. B. (VARNER, L. W., acting), Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus.....		11-7-60	11-14-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds.....		10-24-60	10-11-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions.....		8-16-60	8-11-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part).....		9-1-60	9-9-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales.....		7-5-60	6-9-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics.....		12-15-60	12-9-60
68. (II) ANGEL, C. D., Data Processors; Digital and Analog Computers.....		9-6-60	9-2-60
69. (III) MONCURE, J. A., Industrial Arts.....		5-12-61	5-12-61
70. (III) HUNTER, E. H., Household, Personal and Fine Arts.....		5-12-61	5-9-61
71. BAILEY, J. S. (KENT, A. P., acting), Ornamentation; Glass.....		10-4-60	10-28-60
72. GAUSS, H., Radio Transmitters, Receivers and Tuners.....		3-6-61	3-6-61
73. WAHL, R. A., Wire Working.....		1-30-61	2-2-61
74. BERLOWITZ, W., Gas Separation.....		1-9-61	12-23-60
75. REZNEK, J. (acting), Metallic Building Structures.....		12-9-60	12-6-60
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene.....		2-3-61	1-23-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1961, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,359,277 to 2,361,905, inclusive
Plant Patents.....Numbers 643 to 646, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals District of Columbia Circuit

ROY Y. SANDERS, JR. v. DAVID L. LADD, COMMISSIONER
OF PATENTS

No. 16,225. Decided June 29, 1961

[— U.S.App.D.C. —; — F.2d —; 130 USPQ 48]

1. PATENTABILITY—OBVIOUSNESS—COMMERCIAL SUCCESS NOT DETERMINATIVE.

"Though the plaintiff seems to have met a business need, and his process has achieved financial success, we are not convinced that the Patent Office and the District Court were wrong in holding that the application did not disclose patentable invention over the prior art."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—MARKED PHARMACEUTICAL TABLET AND PROCESS OF ITS MARKING.

The finding of the District Court that an application, covering a marked pharmaceutical tablet and the process of marking the tablet, did not disclose patentable invention over the prior art, sustained.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Edwin T. Bean, Jr., with whom Franklin D. Wolfe was on the brief for appellant.

Clarence W. Moore (Raymond E. Martin, of counsel) for the appellee.

Before EDGERTON, WASHINGTON and BURGER, Circuit Judges

PER CURIAM:

This is a patent case, under 35 U.S.C. § 145. Plaintiff-appellant's application, Serial No. 333,147, covered a marked pharmaceutical tablet and the process of marking such a tablet. [1] Though the plaintiff seems to have met a business need, and his process has achieved financial success, [2] we are not convinced that the Patent Office and the District Court were wrong in holding that the application did not disclose patentable invention over the prior art. See *Schafer v. Watson*, — U.S.App.D.C. —, 288 F.2d 144 (1961).

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE THE DEISTER CONCENTRATOR COMPANY, INC.

No. 6608. Decided February 21, 1961. Petition for rehearing denied June 2, 1961

[48 CCPA —; 289 F.2d 496; 129 USPQ 314]

1. TRADEMARKS—FUNCTIONAL FEATURE OF GOODS.

In agreeing with the statement that "A novel shape or appearance that is functional in character may not acquire any secondary meaning that would render it subject to exclusive appropriation as a trademark," and observing that the statement does not tell "how to determine when a novel shape or appearance is 'functional' or whether any shape that performs a utilitarian function falls in that category," *Held* that "A functional feature has been defined in the Restatement of the Law of Torts, Section 742, as a feature of goods which affects their purpose, action, or performance, or the facility or economy of procuring, handling or using them," and that the "courts have accepted this definition and have also held 'functional' the shape, size, or form of an article which contributes to its utility, durability or effectiveness or the ease with which it serves its function."

2. SAME—SAME—PATENT PROTECTION.

On review of rulings below that the rhomboidal design of the deck of appellant's shaking table is functional; that, as such, it is not a trademark; and that since the machinery "is made in accordance with an expired and a presently subsisting patent, others in the field have, or will have, upon expiration of the latter patent, the right to make similar machinery utilizing rhomboidal shaped decks," *Held* that "It is basic to our consideration, * * *, that the socio-economic policy supported by the general law is the encouragement of competition by all fair means, and that encompasses the right to copy, very broadly interpreted, except where copying is lawfully prevented by a copyright or patent"; that "since under the principle laid down in Article I, section 8, of the Constitution copyright or patent protection is necessarily limited in time, we are not seriously concerned with whether he who claims trademark rights of unlimited duration now has or did have patent protection, or what that protection is or was"; and that "We, therefore, see no reason to consider appellant's patents except to the extent they may contain evidence of the functionality of the outline shape sought to be registered as a trademark."

3. SAME—REGISTRABILITY—PRINCIPAL REGISTER—SIGNIFICANCE OF REGISTRATION—SECTIONS 1 AND 7(b).

"In contemplating the registration of a mark on the Principal Register we must bear in mind the significance of such registration. Under section 7(b) of the Lanham Act (15 U.S.C. 1057(b)) it constitutes 'prima facie evidence of the validity of the registration, registrant's ownership of the mark, and of registrant's exclusive right to use the mark in commerce in connection with the goods or services specified in the certificate' * * *. This means, so far as this case is concerned, that we cannot sanction registration on the Principal Register of anything unless the applicant for registration, absent a copyright or patent, would have the right under the general law to prevent others from using or copying it. Unless he has such right, he does not own a trademark. It is trite to say that the Lanham Act does not create trademarks. While it may create some new substantive rights in trademarks, unless the trademarks pre-exist there is nothing to be registered. Neither does it create ownership, but only evidence thereof. Under section 1, only 'The owner of a trademark' can apply for registration. Since the act nowhere defines ownership of a trademark * * *, the law of trademark ownership must be found outside the statute, in the absence of some specific provision to the contrary. We know of none * * *."

4. SAME—PURPOSE—DEFINITION.

"Trademarks enable one to determine the existence of common source; but not everything that enables one to determine source is a trademark."

5. SAME—SAME—PROTECTION.

"A trademark distinguishes one man's goods from the goods of others; but not everything that enables goods to be so distinguished will be protected as a trademark."

6. SAME—PROTECTION—SECONDARY MEANING.

"Some trademarks are words or configurations which are protected because they have acquired a 'secondary meaning'; but not every word or configuration that has a de facto 'secondary meaning' is protected as a trademark."

7. SAME—SAME—FUNCTIONAL FEATURE OF GOODS.

"A feature dictated solely by 'functional' (utilitarian) considerations may not be protected as a trademark; but mere possession of a function (utility) is not sufficient reason to deny protection."

8. SAME—SECONDARY MEANING—SECTION 2(f).

"As to appellant's argument based on the allegation that its outline shape has become 'distinctive' of its goods, the assumption seems to be that if that is so then section 2(f) requires that the Patent Office grant the registration. At least appellant says, 'It would vitiate the purpose of section 2(f) to refuse registration.' Mere reading of 2(f) answers this. There is nothing whatever in the section saying what shall be registered. It is purely negative, saying that if a mark has become distinctive, nothing 'here-

in' shall prevent registration. It then says the Commissioner may accept five years substantially exclusive and continuous use as a mark as prima facie proof of distinctiveness and that is all. The Commissioner is neither bound to accept it nor limited by the section as to what he may accept as proof of 'distinctiveness.' This leaves the question of trademark ownership, which is a prerequisite to registrability, to be determined by other law than section 2(f)."

9. SAME—SAME—FUNCTIONAL FEATURE OF GOODS.

"The fundamental distinction appellant overlooks is that between 'functional' shapes that are never capable of being monopolized, even when they become 'distinctive of the applicant's goods,' and shapes which can be monopolized because they are of such an arbitrary nature that the law does not recognize a right in the public to copy them, even if some incidental function is associated with them."

10. SAME—SAME.

"While there are many statements in the cases which seem to say that if a mark has acquired a 'secondary meaning' its owner will be protected in an exclusive right to use it, the clear weight of authority shows that the courts will not support exclusive rights in any word or shape which, in their opinion, the public has the right to use in the absence of patent or copyright protection."

11. SAME—SAME.

"* * * as to some words and shapes the courts will never apply the 'secondary meaning' doctrine so as to create monopoly rights. The true basis of such holdings is not that they cannot or do not indicate source to the purchasing public but that there is an overriding public policy of preventing their monopolization, of preserving the public right to copy. A certain amount of purchaser confusion may even be tolerated in order to give the public the advantages of free competition."

12. SAME—REGISTRABILITY—FUNCTIONAL FEATURE OF GOODS.

"Public acceptance of a functional feature as an indication of origin is, * * * not determinative of right to register. Preservation of freedom to copy 'functional' features is the determining factor."

13. EVIDENCE—JUDICIAL NOTICE.

Judicial notice taken of two standard texts well known in the field of mineral dressing.

14. SAME—SECONDARY MEANING—EVIDENCE—FUNCTIONAL FEATURE OF GOODS.

"It seems to us that this case perfectly exemplifies what we mean by a functional or utilitarian shape which is incapable of acquiring a legally recognizable 'secondary meaning' or of becoming an enforceable trademark for the simple reason that, absent patent protection, the public has the right to copy the shape and enjoy its advantages. Under no circumstances can it be accorded the legal protection to which trademarks are entitled. This being so, there is no need to consider the extensive efforts made by the use of what appellant calls advertising 'gimmicks' featuring 'rhomboidal' shapes or otherwise, to turn this outline shape of the goods, per se, into a registrable mark. It has attempted the impossible."

15. SAME—SAME—SAME.

"* * * we are not denying registration merely because the shape possesses utility but because the shape is in essence utilitarian. Where a shape or feature of construction is in its concept arbitrary, it may be or become a legally recognizable trademark because there is no public interest to be protected. In such a case protection would not be lost merely because the shape or feature also serves a useful purpose. * * * The Deister table deck, however, is shaped as it is only for reasons of engineering efficiency."

APPEAL from the Patent Office. Serial No. 31,474. AFFIRMED.

John H. Sutherland (Philip B. Polster, of counsel) for appellant.

Clarence W. Moore for the Commissioner of Patents. Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

RICH, J., delivered the opinion of the court.

This is an ex parte appeal from the refusal to register on the Principal Register, under section 2(f) of the Trademark Act of 1946, as a trademark for "ore concentrating and coal cleaning tables," the following alleged trademark:



Use of the above since 1906 is asserted and the application, Ser. No. 31,474, filed June 8, 1957, contains the following description:

The trademark consists of a substantially rhomboidal outline, and is applied to the goods by configuring the working surface thereof so that the exterior outline of such surface is substantially rhomboidal in plan; and five photographs showing the mark as actually used are presented herewith.

The photograph, or specimen, shows in plan view the top surface or deck of a concentrating or cleaning table, otherwise known in this art as a shaking table. Except for trifling variations which we ignore, the "exterior outline" of the table shown in the photograph corresponds to what is sought to be registered as a trademark.

To be somewhat more specific about what the alleged mark is, it might be well to describe in more detail the device itself. A shaking table is a device for separating solid particles suspended in a flowing film of water on the basis of differences in their size, specific gravity, or shape. The table proper or deck is a plane surface, the size of which is of the order of six by fifteen feet, which is inclined slightly from the horizontal and shaken with a differential movement in the general direction of its long axis and washed at right angles to the direction of motion by a stream of water carrying the particulate material to be separated, thus effecting the desired concentrating or cleaning action. Part of the surface of the table may be covered with "riffles" or ridges for trapping particles and moving them in a desired direction. Separation is effected by virtue of the fact that one class of particles will run off the end of the table and another class will run off the side.

According to the affidavit of appellant's president, its competitors all make their tables with rectangular or very nearly rectangular decks whereas appellant's decks have the outline shape above shown and sought to be registered as a trademark. Appellant claims to have been using this "distinctive outline shape" for more than fifty years and in 1920 Reg. No. 130,483, still in force, was obtained of a mark consisting of a design including the words "DEISTER OVERSTROM Diagonal Deck." More recent advertisements of record indicate substitution of the name "SuperDuty DIAGONAL-DECK" table as the name of the product. One advertisement run in February 1940 includes the statement, "The SuperDuty No. 6 Deister-Overstrom Ore

Concentrating Table, utilizing our exclusive and efficient Diagonal-Deck Design, is a complete new machine offered as the highest class job available today." The alleged mark, then, is the outline shape of the deck portion of a Deister-Overstrom table.

Rejection

The Examiner's initial rejection was on the ground that "it does not appear to be capable of distinguishing applicant's goods from those of others." Applicant then replied with thirty affidavits and other evidence occupying seventy-one pages of the record here intended to show that those in the trade do in fact recognize shaking tables having tops with the above exterior outline shape as applicant's goods and do so by virtue of that shape. We have no reason to doubt that they do. However, the Examiner again rejected, saying:

It is apparent that the shape of applicant's deck tables (table decks) is utilitarian and must be characterized as functional. It appears that applicant selected the rhomboidal shape or design to increase production and efficiency of its coal cleaning tables. It is believed that the rhomboidal outline design which applicant is seeking to register serves only to illustrate the shape of its table decks. In the case of *Ex parte Alan Wood Steel Company*, 101 USPQ 209, the Examiner-in-Chief held that "The fact that the design is recognizable is not sufficient to make it registrable, for if this were the criterion then every article made by one manufacturer in a form somewhat different from articles of like kind made by others would be registrable as an alleged mark."

On appeal, the rejection was affirmed, the Board saying:

There can be no question on the record presented but that the diagonal or rhomboidal design of the deck component of applicant's product is functional. As such, it is not a trademark. See: *In re Bourns*, 117 USPQ 38 (CCPA, 1958); *Alan Wood Steel Company v. Watson, Comr. Pats.*, 150 F. Supp. 861, 113 USPQ 311 (D.C.D.C., 1957).

Furthermore, since applicant's ore concentrating and coal washing machinery is made in accordance with an expired and a presently subsisting patent, others in the field have, or will have, upon expiration of the latter patent, the right to make similar machinery utilizing rhomboidal shaped decks.

The Board had reference, in the last paragraph, to patents No. 2,582,302 and No. 2,242,562 which appellant introduced into the record in its brief before the Board.

The Law

We shall first deal with the two cases relied on by the Board. In *In re Bourns*, 45 CCPA 821, 252 F.2d 582, 117 USPQ 38, we held that the appearance of a small potentiometer was unregistrable on the Supplemental Register because it was not capable of distinguishing the applicant's goods from those of others, within the meaning of section 23, Trademark Act of 1946. As can be seen from our opinion, especially when considered with another one handed down the same day in a design patent case of the same applicant on the same subject matter, *In re Bourns*, 45 CCPA 817, 252 F.2d 579, 117 USPQ 36, the features and proportions of appellant's device were found to result from considerations of utility rather than appearance. The screw head in one end, the eyelets in the side, and the location of the eyelets at the corners of the channel member were all found to be utilitarian, and the appearance as a whole was made up of these features. There was no showing that appearance as a whole or any element of it was intended to indicate source or was capable of doing so.

In *Alan Wood Steel Co. v. Watson, Comr. Pats.*, 150 F. Supp. 861, 113 USPQ 311 (D.C.D.C.), and *Ex parte Alan Wood Steel Co.*, 101 USPQ 209 (P.O. Examiner-in-Chief), which seems to us indistinguishable in principle from the present case, the alleged mark sought

to be registered was a raised non-skid pattern integrally produced on steel plate flooring. An illustration of it will be found in the opinion of Examiner-in-Chief Federico in 101 USPQ at p. 210. As his opinion also shows, some seventy affidavits were filed to establish that the design did in fact enable the affiants to recognize the plates as the product of the applicant. He concluded, nevertheless, that, in itself, that fact would not justify registration.¹ The case was taken to the District Court for the District of Columbia under 35 U.S.C. 145 where Judge Holtzoff sustained the refusal to register because the configuration of goods sought to be registered was "utilitarian" or "functional," citing *The J. R. Clark Co. v. Murray Metal Products Co.*, 219 F.2d 313, 104 USPQ 224. Judge Holtzoff said:

Were the law otherwise, it would be possible for a manufacturer or dealer, who is unable to secure a patent on his product or on his design, to obtain a monopoly on an unpatentable device by registering it as a trademark. The potential consequences to the public might be very serious, because while a patent is issued for only a limited term, a trademark becomes the permanent property of its owner and secures for him a monopoly in perpetuity. [113 USPQ at 312.]

We agree with the philosophy underlying that statement. To give appellant the trademark registration it asks for here would give it a potential perpetual monopoly on the outline shape of its shaking table deck. The basic issue here is whether the law permits such a monopoly.

In the *Clark* case, supra, the article was an ironing board or table with a perforated top made of expanded metal. The suit was one for patent infringement and unfair competition and on the latter issue it was contended that the distinctive appearance of the ironing board had acquired a secondary meaning justifying injunctive relief. The Court of Appeals for the Fifth Circuit gave as one of its reasons for refusing relief, asked for on the basis of "secondary meaning" (which is but another way of saying that the appearance of the ironing board had become capable of indicating the source of the goods), that

* * * the novel appearance of the flat expanded metal top of appellant's ironing table, being functional and a result of a well known manufacturing process, may not acquire any secondary meaning which would render it subject to exclusive appropriation by anyone in the trade. [104 USPQ at 230.]

[1] Judge Holtzoff, in the *Alan Wood Steel* case, restated the proposition thus:

A novel shape or appearance that is functional in character may not acquire any secondary meaning that would render it subject to exclusive appropriation as a trademark. [113 USPQ at 312.] [Emphasis ours.]

We agree with that statement but we observe that it does not tell us how to determine when a novel shape or appearance is "functional" or whether any shape that performs a utilitarian function falls in that category. Appellant argues that a mark whose primary significance is to indicate origin may be registered notwithstanding "a modicum of inherent functionality" and "that outline shape is not required to be wholly useless to qualify for registration." We also agree in general with those statements. What, then, is decisive of non-registrability in a situation like this?

A functional feature has been defined in the Restatement of the Law of Torts, section 742, as a feature of goods which affects their purpose, action, or performance, or the facility or economy of processing, handling or using them. The courts have accepted this definition and have also held "functional" the shape,

¹ What Mr. Federico actually said on this point is contained in the portion of the Examiner's letter we have quoted above.

size, or form of an article which contributes to its utility, durability or effectiveness or the ease with which it serves its function. *James Heddon's Sons v. Millrite Steel & Wire Works, Inc.*, 128 F.2d 6, 53 USPQ 579 (C.C.A. 6th), *J. C. Penney Co. v. H. D. Lee Mercantile Co.*, 120 F.2d 949, 50 USPQ 165 (C.C.A. 8th), *West Point Mfg. Co. v. Detroit Stamping Co.*, 222 F.2d 581, 105 USPQ 200 (C.C.A. 6th).

In the *J. C. Penney* case, speaking of the practice in the overall industry of copying competitors' improvements, the court said:

Such a practice is one of the privileges of our system of competitive enterprise. It insures to the public the benefit of all natural, useful progress in the industrial and commercial arts. Any article, structure or design, which is unpatented, may accordingly be imitated or appropriated in its functional aspects, if no unfair competition is involved in the manner of its use. [50 USPQ at 170.]

We would add only that copyright, as well as patenting, may temporarily prevent copying.² Like statements by the courts, that right to copy in the absence of such statutory protection is a fundamental aspect of our law, have been made on numerous occasions and an extensive consideration of the subject and review of authorities will be found in the *West Point* case, supra. In that case the court said:

The identical imitation of the goods of another does not in itself constitute unfair competition. [105 USPQ at 207.]

There is nothing unlawful in copying the unpatented products of another down to the last detail, except in so far as the resulting similarity may become a means of securing his customers through their belief, so induced, that your goods are his. [105 USPQ at 209.]

As to functional features which have acquired what is usually termed a "secondary meaning," the court quoted from the Restatement of the Law of Torts as follows: If an imitated feature is functional but has also acquired generally in the market a special significance as an indication of the source of the goods, the imitation is privileged if it is accompanied by reasonable effort to avoid deceiving prospective purchasers as to the source. This may frequently be done by prominent disclosure of the true source. [105 USPQ at 208.]

See *Sylvania Electric Products, Inc. v. Dura Electric Lamp Co.*, 247 F.2d 730, 114 USPQ 434 (C.C.A. 3rd), affirming 144 F. Supp. 112, 111 USPQ 17 (D.C.N.J.).

[2] It is basic to our consideration, therefore, that the socio-economic policy supported by the general law is the encouragement of competition by all fair means, and that encompasses the right to copy, very broadly interpreted, except where copying is lawfully prevented by a copyright or patent. And since under the principle laid down in Article I, section 8, of the Constitution copyright or patent protection is necessarily limited in time, we are not seriously concerned with whether he who claims trademark rights of unlimited duration now has or did have patent protection,³ or what that protection is or was. We, therefore, see no reason to consider appellant's patents except to the extent they may contain evidence of the functionality

of the outline shape sought to be registered as a trademark.⁴

[3] In contemplating the registration of a mark on the Principal Register we must bear in mind the significance of such registration. Under section 7(b) of the Lanham Act (15 U.S.C. 1057(b)) it constitutes "prima facie evidence of the validity of the registration, registrant's ownership of the mark, and of registrant's exclusive right to use the mark in commerce in connection with the goods or services specified in the certificate" (our emphasis). This means, so far as this case is concerned, that we cannot sanction registration on the Principal Register of anything unless the applicant for registration, absent a copyright or patent, would have the right under the general law to prevent others from using or copying it. Unless he has such right, he does not own a trademark. It is trite to say that the Lanham Act does not create trademarks. While it may create some new substantive rights in trademarks, unless the trademarks pre-exist there is nothing to be registered. Neither does it create ownership, but only evidence thereof. Under section 1, only "The owner of a trademark" can apply for registration. Since the act nowhere defines ownership of a trademark (see 68 Harv. L. Rev. 814, *Trade-Marks and Unfair Competition*, at p. 876), the law of trademark ownership must be found outside the statute, in the absence of some specific provision to the contrary. We know of none and appellant tells us that nowhere in the statute is a "functional" mark mentioned pro or con.

What must be determined, therefore, is whether appellant has the "exclusive right to use" the outline shape sought to be registered, in other words, whether appellant has, apart from possible temporary monopoly rights based on patent or copyright, the right to exclude others from using that shape in shaking table decks.⁵

On what basis does appellant claim to have the exclusive right to use its table deck outline? Specifically, its brief never comes to grips with this basic issue, perhaps because the Patent Office never raised the issue in that form but only in terms of "functionality." To that rejection appellant's reply, supported by the affidavit evidence, was twofold: (a) that its alleged mark had "become distinctive of the applicant's goods in commerce," the language of 2(f) (15 U.S.C. 1052(f)); and (b) that it had acquired a "secondary meaning."

These arguments are based on words and phrases rather than on matters of substance. We shall take them up in order and explain what we mean. Much confusion can be produced from statements made in the opinions which collectively constitute the case law

² This case is the reverse of the more common situation in that the patents were not cited by the Patent Office to show what the public would have a right to use when they expired, but were put in evidence by appellant to provide grounds for an argument that the structures shown in the patents did not have the outline shape it desires to register. As might be expected under these circumstances, the patents are only mediocre support for the Patent Office position.

³ At oral argument the Patent Office Solicitor, as he often has in other cases, said that the alleged mark was not registrable because it is "not a trademark." That is stating the same proposition in a shorthand form. To say one has a "trademark" implies ownership and ownership implies the right to exclude others. If the law will not protect one's claim of right to exclude others from using an alleged trademark, then he does not own a "trademark," for that which all are free to use cannot be a trademark.

in this field. [4] [5] [6] [7] It may be helpful, therefore, to begin by stating some applicable truisms:

(1) Trademarks enable one to determine the existence of common source; but not everything that enables one to determine source is a trademark.

(2) A trademark distinguishes one man's goods from the goods of others; but not everything that enables goods to be so distinguished will be protected as a trademark.

(3) Some trademarks are words or configurations which are protected because they have acquired a "secondary meaning"; but not every word or configuration that has a de facto "secondary meaning" is protected as a trademark.

(4) A feature dictated solely by "functional" (utilitarian) considerations may not be protected as a trademark; but mere possession of a function (utility) is not sufficient reason to deny protection.

[8] As to appellant's argument based on the allegation that its outline shape has become "distinctive" of its goods, the assumption seems to be that if that is so then section 2(f) requires that the Patent Office grant the registration. At least appellant says, "It would vitiate the purpose of section 2(f) to refuse registration." Mere reading of 2(f) answers this. There is nothing whatever in the section saying what shall be registered. It is purely negative, saying that if a mark has become distinctive, nothing "herein" shall prevent registration. It then says the Commissioner may accept five years substantially exclusive and continuous use as a mark as prima facie proof of distinctiveness and that is all. The Commissioner is neither bound to accept it nor limited by the section as to what he may accept as proof of "distinctiveness." This leaves the question of trademark ownership, which is a prerequisite to registrability, to be determined by other law than section 2(f). At this point we refer back to truism (2). The case law amply supports it. We have referred above to some of the cases to which we would now add reference to the "Shredded Wheat" case, *Kellogg Co. v. National Biscuit Co.*, 305 U.S. 111, 39 USPQ 296, wherein the Supreme Court, in denying protection against copying the pillow-shaped form of the product, said:

Sharing in the good will of an article unprotected by patent or trademark is the exercise of a right possessed by all—and in the free exercise of which the consuming public is deeply interested. [39 USPQ at 300.]

In that case the court said it was "without legal significance" that there had been a long delay between the coming into being of Kellogg's freedom to make shredded wheat biscuit upon expiration of patents and the exercise of that right, during which period the plaintiff had spent \$17,000,000 in advertising which identified the product as its manufacture. The court also said:

Kellogg Company's right was not one dependent upon diligent exercise. Like every other member of the public, it was, and remained, free to make shredded wheat when it chose to do so; and to call the product by its generic name. [39 USPQ at 299.]

... the name and form are integral parts of the goodwill of the article. To share fully in the goodwill, it must use the name and the pillow shape. And in the goodwill Kellogg Company is as free to share as the plaintiff. [39 USPQ at 300.]

Section 2(f) of the Lanham Act must be so construed as to take the foregoing basic principles into account.

Some cases in which this court has denied registration to functional shapes or features on the basis of

the foregoing principles are: *In re Vertex Hosiery Mills, Inc.*, 18 CCPA 725, 45 F.2d 249, 7 USPQ 252, *In re National Stone-Tile Corporation*, 19 CCPA 1101, 57 F.2d 382, 13 USPQ 11, and *Sparklets Corporation v. Walter Kidde Sales Company*, 26 CCPA 1342, 104 F.2d 396, 42 USPQ 73.

[9] The fundamental distinction appellant overlooks is that between "functional" shapes that are never capable of being monopolized, even when they become "distinctive of the applicant's goods," and shapes which can be monopolized because they are of such an arbitrary nature that the law does not recognize a right in the public to copy them, even if some incidental function is associated with them. Consider, for example, that the stitching in the *Simmons* case, cited infra, is functional as stitching. The Lanham Act, as appellant says, does not deal with this distinction.

[10] The "secondary meaning" aspect of the argument is the practical equivalent of the "distinctive" argument except that reliance is placed on a different expression. We refer back to truism (3). The distinction we should like to make here is between a de facto "secondary meaning" and one to which courts will attach legal consequences. While there are many statements in the cases which seem to say that if a mark has acquired a "secondary meaning" its owner will be protected in an exclusive right to use it, the clear weight of authority shows that the courts will not support exclusive rights in any word or shape which, in their opinion, the public has the right to use in the absence of patent or copyright protection. In the *Alan Wood Steel and J. R. Clark Co.* cases, supra, it was said that the shapes "may not acquire any secondary meaning." This was simply a refusal to give any legal significance to the existence of a de facto "secondary meaning" in shape indicative of source. In *Upjohn Co. v. Schwartz*, 246 F.2d 254, 114 USPQ 53 (C.C.A. 2d), the court simply stated that the size, shape, and color of medicinal capsules were "functional" features which "could not" acquire any secondary meaning. In the *Kellogg* case the Supreme Court said there is "no basis here for applying the doctrine of secondary meaning." In the same paragraph it said, speaking of the name "shredded wheat" which was claimed to have acquired a secondary meaning: The evidence shows only that due to the long period in which the plaintiff or its predecessor was the only manufacturer of the product, many people have come to associate the product, and as a consequence the name by which the product is generally known, with the plaintiff's factory at Niagara Falls. [39 USPQ at 299.]

Thus "Shredded Wheat" had a de facto "secondary meaning" as an indication of source, but the court refused to attach any legal consequence to that "secondary meaning." As to the shape of the shredded wheat biscuit the court ruled:

Where an article may be manufactured by all, a particular manufacturer can no more assert exclusive right in a form in which the public has become accustomed to see the article and which, in the minds of the public, is primarily associated with the article rather than a particular producer, than it can in the case of a name with similar connections in the public mind. Kellogg Company was free to use the pillow-shaped form, subject only to the obligation to identify its product lest it be mistaken for that of the plaintiff. [39 USPQ at 300.]

[11] Again what appellant fails to take into account is that as to some words and shapes the courts will never apply the "secondary meaning" doctrine so as to create monopoly rights. The true basis of such holdings is not that they cannot or do not indicate source

² At the present time and especially since *Mazer v. Stein*, 347 U.S. 201, 100 USPQ 325, there is a certain amount of overlap in the protection available through design patents and that available by copyright, insofar as a design may qualify as a "work of art" under 17 U.S.C. 5.

³ It is our view that the only significance of the existence of an expired patent on the article copied is that it adds another reason for saying that the public has the right to copy it, it being basic to the patent system that the public may copy when the term of a patent comes to an end, with certain exceptions. However, the right to copy is not derived in any way from the patent law; it is a right which inheres in the public under the general law except to the extent the patent law may remove it. The same is true of copyrights. When a temporary incursion on the public right ends, the public right remains. No new right is born.

to the purchasing public but that there is an overriding public policy of preventing their monopolization, of preserving the public right to copy. A certain amount of purchaser confusion may even be tolerated in order to give the public the advantages of free competition. To quote again from the Harvard Law Review, op. cit. p. 816:

The extent to which the owner of . . . a mark is given exclusive rights in it is determined by a tension between the desire to secure to producers the benefits of their labors by preventing consumer deception as to the source of goods, and the desire to keep free the means of expression necessary for effective competition. The public interest in preventing consumer deception or injury has rarely been thought of as the primary rationale behind trademark protection.

In final analysis it would seem to be self-evident that government economic policy as reflected in law must be determined by the legislature and the judiciary and cannot be left to depend wholly on the attitudes, reactions or beliefs of the purchasing public. [12] Public acceptance of a functional feature as an indication of source is, therefore, not determinative of right to register. Preservation of freedom to copy "functional" features is the determining factor.

Is the Alleged Mark a Functional Shape?

On this decisive factual question the Board relied on the two patents and some of the advertisements appellant put in the record, quoting therefrom the following items (all emphasis ours):

- (1) The deck, and hence the treating surface, is herein shown for purposes of illustration, as diagonal or rhomboidal in outline, which is of specific advantage. . . . The rhomboidal deck conforms closely to the oblique spread of the material and hence provides a highly efficient treating surface.
- (2) The rhomboidal shape of the deck permits the use of an unusually large number of efficient riffles.
- (3) . . . utilizing our exclusive and efficient Diagonal-Deck design.

While appellant criticizes a passage quoted by the Board from some source dehors the record, it admits in its brief to having published the following very similar statement:

- (4) The Super-Duty TABLE—OFFERS HIGHER CAPACITY—Small middling loads, a direct result of the DIAGONAL-DECK design. . . .

On the bases of such statements the Board said there was no question about the rhomboidal outline shape being functional.

Appellant makes a variety of attacks on this finding of fact which we need not analyze. It does not flatly deny the existence of some functionality but attempts to reduce it to a *de minimis* status. The arguments do not impress us and we do not agree that the functionality of the rhomboidal shape is either *de minimis* or secondary. It is clearly primarily and essentially dictated by functional or utilitarian considerations. We would be satisfied to so hold on the basis of the disclosures in the record, which contains no indication whatever that the shape was either arbitrary or intended, when adopted, to indicate origin. [13] However, as a precautionary check, we have referred to two standard texts well known in the field of mineral dressing, of which we take judicial notice. In Taggart's *Handbook of Mineral Dressing*, 1945, Sec. 11, page 74, we find the following:

19. DEISTER-OVERSTROM DIAGONAL-DECK TABLES

Description.—Decks of these tables are rhomboidal, with rectilinear motion in the direction of the short diagonal, which is also the tilting axis and the direction of all riffling.

The asserted ADVANTAGE of the rhomboidal as compared with a substantially rectangular shape is argued on the basis of Fig. 58. When treating a sized or classified feed on a rectangular deck, the area of table actually occupied by ore takes the form of a diagonal band from feed to concentrate

corners . . . [there follows detailed description with reference to letters on the diagram which depicts a deck indistinguishable in outline shape from the application drawing] . . . The rhomboidal deck . . . makes the additional riffled area BFJ available. All other things being equal, this added riffled area in the slime path will settle some material that would have been discharged by a rectangular table . . . The rhomboidal deck should, therefore, treat a larger tonnage of a classified feed or handle a longer-range feed than a rectangular table with equal tailing loss.

The argument is plausible. Certainly the opportunity for catching and bringing material to the cleaning plane is greater on the diagonal deck, and there is also a proportionately longer line of riffling on the line of cross-water flow below the emergence of any given riffle at the cleaning plane on the rhomboidal than on the diagonal [sic] deck. Hence there is more chance to catch heavy mineral scoured off the cleaning plane and represent it.

We think it is particularly significant that this item in Taggart's *Handbook* contains an illustration (Fig. 59(b)) corresponding exactly to the specimen photograph filed in the application at bar. It also gives us the deck dimensions which, referring to the application drawing, supra, starting with the right hand short side and proceeding clockwise, are: 6'8"—14'2"—6'3"—14'11". That is the table to which the above quoted text had reference. We are unable to reconcile this technical data, long available to the appellant's trade, "who are people with engineering and mechanical savvy," according to appellant's brief, with the statement in that brief that "no substantial functional advantage inheres in the mere outline shape sought to be registered."

Gaudin, *Principles of Mineral Dressing*, 1939, page 313, says:

The Deister and Deister-Overstrom tables utilize a different head motion and are roughly rhomboidal in shape. The rhomboidal shape results in some saving in floor space.

[14] It seems to us that this case perfectly exemplifies what we mean by a functional or utilitarian shape which is incapable of acquiring, a legally recognizable "secondary meaning" or of becoming an enforceable trademark for the simple reason that, absent patent protection, the public has the right to copy the shape and enjoy its advantages. Under no circumstances can it be accorded the legal protection to which trademarks are entitled. This being so, there is no need to consider the extensive efforts made by the use of what appellant calls advertising "gimmicks" featuring "rhomboidal" shapes or otherwise, to turn this outline shape of the goods, per se, into a registrable mark. It has attempted the impossible. In the words of the *J. C. Penney* case, supra:

Doubtless the advertising expenditures of the plaintiff, during the period when it was able to pre-empt and hold the field . . . were a material factor in acquainting the public with the . . . design and in opening the market for it. But these expenditures could not purchase for plaintiff the equivalent of a patent monopoly, nor operate to deprive the public of the right to competitive production in a field of functional values. [50 USPQ at 171.]

[15] It should be clear from what we have said that we are not denying registration merely because the shape possesses utility but because the shape is *in essence* utilitarian. Where a shape or feature of construction is in its concept arbitrary, it may be or become a legally recognizable trademark because there is no public interest to be protected. In such a case protection would not be lost merely because the shape or feature also serves a useful purpose. See *In re Simmons Company*, 47 CCPA 963, 278 F.2d 517, 126 USPQ 52. The Deister table deck, however, is shaped as it is only for reasons of engineering efficiency.

The decision of the Board is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE THE TODD CO., INC. (BURROUGHS CORPORATION, ASSIGNEE, SUBSTITUTED)

No. 6669. Decided June 2, 1961

[48 CCPA —; 290 F.2d 597; 129 USPQ 408]

1. TRADEMARK—REGISTRABILITY—SUPPLEMENTAL REGISTER—ISSUE.

Where the application is for registration on the Supplemental Register *Held* that the court has "to reflect only on the question whether the pattern sought to be registered constitutes a mark capable of distinguishing applicant's goods, not whether it does in fact or even whether it is a 'trademark.'"

2. SAME—SAME—DESIGN ON PAPER PRODUCTS.

"It may well be that the casual observer, unsophisticated in the non-functional details of safety paper products by which they can be recognized, instantly, as the product of one manufacturer or another, would not regard the mark sought to be registered as an indication of origin. But once he has been told, we do not have the slightest doubt that from that moment on he will recognize the paper bearing appellant's green staggered parallel unit design as [applicant's] product. . . . It is therefore capable of distinguishing applicant's goods, of indicating their origin."

3. SAME—SAME—DESIGN—ORNAMENTAL DESIGN.

Held that the fact that surface designs "incidentally serve to ornament a paper surface does not necessarily destroy their ability to indicate origin."

APPEAL from the Patent Office. Serial No. 14,417.

REVERSED.

Fidler, Beardsley & Bradley (Charles W. Bradley, Jr., Raymond E. Fidler and Roy E. Petherbridge, of counsel) for appellant.

Clarence W. Moore for the Commissioner of Patents. Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania. RICH, J., delivered the opinion of the court.

This appeal is from a two-to-one decision of the Trademark Trial and Appeal Board rejecting appellant's application, Ser. No. 14,417, filed August 22, 1956, to register a mark on the Supplemental Register.

The mark sought to be registered is illustrated, by a copy of the application drawing, in the published opinions of the Board at 123 USPQ 562 and will not be repeated here. Use since October 22, 1914, is asserted and the record shows continuous use since then.

The goods enumerated in the application are "Safety paper products, including checks, bank money orders, identification cards, birth certificates, passports, export licenses, merchandise coupons, stock certificates, operators' licenses, and gift certificates."

In addition to the drawing, there is a verbal description of the mark which reads, "The trademark consists of a repeating pattern of green parallel lines having overlapping offset portions, substantially as illustrated in the accompanying drawing. The drawing is lined for the color green." It should be added, as can be seen in the drawing, that the so-called parallel lines consist of units in the form of shallow elongated step shapes about 2 1/4" long wherein a central jog, which slopes upwardly and slightly to the right, is about 1/4" long. These units are arranged in an interlocking parallel pattern which is employed in use to cover the entire back surface of the safety paper product, a fact which has given rise to the controversy in this case.

The application was originally for registration on the Principal Register, an amendment asserted reliance on section 2(f), and finally the application was converted to ask for registration on the Supplemental Register. Notwithstanding the statement on the conversion amendment, as it appears in the record here, that it was "not entered," the Board treated the application as one for registration on the Supplemental Register and we shall so treat it.¹ The sole issue is whether the mark sought to be registered is "capable of distinguishing the applicant's goods" under section 23 of the Lanham Act.

The majority of the Board affirmed the Examiner's rejection which, it stated, was

on the ground that what is presented for registration is not capable of distinguishing applicant's goods since (a) it is functional, and (b) it is a surface decoration or ornamentation rather than an identifying symbol or device distinguishing applicant's goods in a trademark sense.

On point (a), functionality, the Board appears to have disagreed with the Examiner but failed to take decisive action on the point. The Board said:

It is not entirely clear from the record that the design presented for registration performs any real utilitarian purpose or function or that it was adopted for that purpose, so this ground of refusal requires no comment.

The solicitor's brief suggests that this point has, by the foregoing, been "removed from consideration by this court." This may indicate a disposition not to rely on it but we think this ground of rejection should be disposed of with finality. We agree that the design—or more accurately the "mark," which is in the nature of a design—does not perform any utilitarian purpose. We do not feel we are precluded from passing on it. We think that this ground does call for comment and our comment is that it is without substance and is reversed.

Turning to ground (b), the Board quoted first from the opinion of this court in the 1940 case of *In re Burgess Battery Company*, 27 CCPA 1297, 112 F.2d 820, 46 USPQ 39, and then from *In re Swift & Company*, 42 CCPA 1048, 223 F.2d 950, 106 USPQ 286, including the statement that the line distinguishing between mere ornamentation and ornamentation which is merely an incidental quality of a trademark is not always clearly ascertainable, and that the application of legal principles to fit one situation or the other requires proper reflection upon the impression likely to govern the ordinary purchaser in the market place.

Neither of those cases, so far as the decisions therein are concerned, is directly in point as the *Burgess* case was prior to the Lanham Act and concerned with an application to register under the 1905 act and the *Swift* case involved an application to register on the Principal Register of the 1946 act. [1] In the present case we have to reflect only on the question whether the pattern sought to be registered constitutes a mark capable of distinguishing applicant's goods, not whether it does in fact or even whether it is a "trademark." If it is a mark which can indicate source or origin, then ground (b) of the rejection must be reversed. *In re Simmons Co.*, 47 CCPA 963, 278 F.2d 517, 126 USPQ 52.

The Board, in its reflections, cited an early 1917 decision in *Ex parte Todd & Co.*, 122 Ms. D. 482, wherein

¹ It does not appear that reference to section 2(f), which is not appropriate to a Supplemental Register application, has ever been deleted. This technical detail remains to be attended to in the Patent Office upon termination of this appeal.

It was the view of Commissioner Clay that what was apparently the same design or mark involved here was ornamental, was a safety device, was not distinctive, and hence was not registrable under the 1905 Act. He said, "the eye or attention cannot get a hold on it, nor the memory retain it." This the Board adopted as its own view, giving it as the reason why the mark is "not capable of distinguishing." We cannot agree.

[2] It may well be that the casual observer, unsophisticated in the non-functional details of safety paper products by which they can be recognized, instantly, as the product of one manufacturer or another, would not regard the mark sought to be registered as an indication of origin. But once he has been told, we do not have the slightest doubt that from that moment on he will recognize the paper bearing appellant's green staggered parallel unit design as a Todd product. This is true with respect to most words, signs and marks by which intelligence may be communicated, of language itself and all forms of symbolism. Until there is a body of people who understand the meaning of any "mark" the mark is meaningless. One of the most ancient forms of the trademark, the silversmith's hall-mark, is meaningless except to those who have been made aware of the fact that it indicates origin. So with the mark at bar. Those who have learned that it indicates origin are able to recognize origin by means of it. The record shows that some people do so. It is therefore capable of distinguishing applicant's goods, of indicating their origin. We are, therefore, unable to sustain the only ground of rejection on which the Board relied.

[3] In the instant case, moreover, we express complete agreement with the views of the dissenting member of the Board, who pointed out, inter alia, that the record here shows that it has long been the practice in this industry to utilize distinctive over-all surface designs to indicate origin of safety-paper products and to advertise that they are intended to do so. The fact that they incidentally serve to ornament a paper surface does not necessarily destroy their ability to indicate origin.

The decision of the Board is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE HENRY W. REESE

No. 6660. Decided June 2, 1961

[48 CCPA —; 290 F.2d 839; 129 USPQ 402]

1. PATENTABILITY—PUBLIC USE—EVIDENCE—AFFIDAVITS BY APPLICANT.

"While the Board was correct in noting that applicant is an interested party, and while that interest should be taken into account in weighing the evidence, it is not enough, alone, to support a conclusion that he perjured himself in swearing there had been neither use nor sale of the improved tablets prior to the critical date."

2. SAME—OBVIOUSNESS—OPTIMUM PROPORTIONS OF KNOWN INGREDIENTS.

"Since the result sought and the ingredients used were known, we agree with the Board it was within the expected skills of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients. . . . Since the improved results alleged by applicant resulted from experimentation of an obvious nature and were nothing more than one would expect, they may not be relied upon to warrant the allowance of claims 41 and 42."

3. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—INTRODUCTION OF EVIDENCE NOT BEFORE THE PATENT OFFICE.

Where the appellant moved for leave to file a memorandum and affidavit to prove decrease in sales of the former product to counter a contention in the brief for the Commissioner, and the solicitor opposed the introduction of evidence which had not been before the Patent Office, *Held* that "The solicitor's position on this point is well taken and applicant's motion is denied."

4. PATENTABILITY—OBVIOUSNESS—COMMERCIAL SUCCESS—FAILURE OF PRIOR PRODUCT.

"No claims for the new 'Fomos' tablet can be allowed on the basis of the commercial failure of the old 'Fomos' tablet, and thus the additional evidence would not be pertinent to the issues here before the court."

5. PATENTABILITY—PARTICULAR SUBJECT MATTER—MEDICINAL CARRIER.

The rejection of claims to a medicinal carrier on the ground of prior public use or sale and of certain claims as unpatentable over prior art is reversed, while the rejection of certain other claims over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 392,980. MODIFIED.

Alfred E. Page and Blum, Moscovitz, Friedman & Blum, for appellant.

Clarence W. Moore (S. Wm. Cochran, of counsel) for the Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, and SMITH, Associate Judges, and Judge WILLIAM H. KIRKPATRICK, United States Senior District Judge for the Eastern District of Pennsylvania

SMITH, J., delivered the opinion of the court.

Appellant seeks reversal of the decision of the Board of Appeals, which affirmed the Examiner and held that claims 39-42, all of the claims in the case, are unpatentable over the prior art, and for the further reason that the application is barred by some twenty years of what the Examiner and the Board found to be prior public use.

The invention disclosed in the instant application, Serial No. 392,980, filed November 18, 1953, relates to improvements in a "Medicinal Carrier." One form of the invention, said to be especially useful, is a tablet for insertion in the vaginal cavity where, upon disintegration of the tablet, a medicinal agent, which may also be a spermicide, is released.

The assignee of the present application is Fomos Laboratories, Inc. Applicant has been associated with Fomos Laboratories, Inc., since 1936, and his affidavits of record herein establish some of the historical background of the present invention. From the affidavits we find that Fomos Laboratories, Inc., has been making and selling vaginal tablets under the name "Fomos" since 1932, and that the subject matter of the claims on appeal relates to asserted improvements in such tablets.

The affidavits also establish that the original "Fomos" tablets were compounded from the same active ingredients as the tablet disclosed in the application before us, namely: sodium bicarbonate, boric acid, tartaric acid, a medicinal agent, a foaming agent, a wetting agent, filler, and a binder. These original tablets were intended to perform their function as carriers by dissolving upon contact with the moisture of the body cavity after which a reaction of the ingredients occurred resulting in the production of a gas-generated foam which carried the medicinal agent into contact with the walls of the body cavity.

It is asserted in the affidavits that in actual use, the original "Fomos" tablets did not always function as intended. Complaints were received from users claiming that the tablet did not dissolve, and thus was useless. Even when the tablet did dissolve, users frequently complained of a burning sensation resulting from the reaction. Moreover, reports indicated that the tablets were stable for something less than six months.

It was discovered that even with a fresh tablet, frequently there was insufficient body moisture to dissolve the tablet and permit reaction of the ingredients. It also was found that the tablet did not dissolve as rapidly as desired. Variations in the amount of body moisture available to support the desired reactions were found to be a principal reason why varying results were obtained from fresh undeteriorated tablets.

In order to assure the desired operation of the old "Fomos" tablets it was necessary to so compound them that they were readily reactive to small amounts of moisture. This resulted in the production of relatively unstable tablets which had an undesirably short shelf life. The contact of water vapor from the air caused the boric acid and tartaric acid of the tablets to react and produce more water, which, in turn, caused further interreaction of the constituents of the tablet. That reaction, for practical purposes, resulted in the deterioration of the tablets while still in the supplier's stock.

The tablets here disclosed as an improvement on the original "Fomos" tablets are asserted to have solved the problem of how to provide adequate moisture to facilitate the desired reaction under all conditions of use and yet to provide a tablet having an adequate shelf life. The tablets are said to be more sensitive to moisture under the conditions of use than were the original "Fomos" tablets and thus are said to be readily disintegrated to ensure full and rapid reaction with whatever moisture is present in the body cavity. Yet the tablet of the present invention is said to be sufficiently insensitive to moisture prior to its use so that the shelf life was doubled over that of the old "Fomos" tablets.

Applicant has changed the proportions of boric acid, tartaric acid and sodium bicarbonate in the original "Fomos" tablets to obtain the benefit of the water-producing reaction between the boric and tartaric acids. The water produced by this reaction together with the structure of the tablet are asserted to improve the solubility of the tablet.

The shelf life and stability of the tablet are asserted by applicant to result from the new tablet structure. Applicant separately coats each of the active ingredients of the tablet with different binders, and separately granulates such coated ingredients. After drying they are formed into a single tablet. Applicant uses methyl cellulose as a coating for the tartaric acid, to provide a moisture barrier to isolate the tartaric acid from both the boric acid and the sodium bicarbonate. The sodium bicarbonate is coated with a foaming agent, and the boric acid is coated with a water solution of a common binder and the desired medicinal agent.

Since the rejection on the ground of public use goes to all the claims and the other issues relating to patentability of the claims become moot if that rejection is sustained, we shall first consider that ground. The

Board's finding that the tablets defined in the claims of the instant application were "in public use for twenty years prior to the filing date of the application," and were therefore not patentable under 35 U.S.C. 102(b), raises an issue of fact. The precise question is whether the evidence of record supports the finding of the Board that there was public use or sale of the tablet claimed in the application prior to November 18, 1952. The only evidence of record before us is found in affidavits submitted by the applicant, which affidavits were directed primarily to the issue of utility which had been raised by the Examiner. We shall review these affidavits in chronological sequence.

On January 17, 1955, Reuben Posner, one of the assignees of the instant application, and president of the other assignee, Fomos Laboratories, Inc., submitted an affidavit which contained the following paragraph:

I annex to this application a true copy of a report made by the Planned Parenthood Federation of America, Inc. I state that the formula of the Fomos tablet mentioned in this report is exactly the same as the formula of the tablet in the application.

In that report, under the heading "STATEMENT OF BACKGROUND MATERIAL," is the following statement:

The manufacturer reports that Fomos tablets have been used by physicians in private practice for twenty years.

On January 2, 1957, Posner submitted another affidavit, annexed to which was an "Exhibit A," which appears to be the same report of the Planned Parenthood Federation of America that had been annexed to his affidavit of January 17, 1955. However, in his affidavit filed January 2, 1957, Posner stated:

The "Fomos" tablets mentioned in "Exhibit A" are the tablets disclosed in this application, and are not the tablets previously manufactured under the name "Fomos" prior to November 18, 1952.

The applicant Reese also submitted an affidavit on January 2, 1957. Reese distinguished between the "Fomos" tablets of the application and those made and sold prior to November 18, 1952, and stated that the tablet disclosed in the application never was sold in the United States of America prior to November 18, 1952. Reese also pointed out the differences between the "Fomos" tablets sold in the United States prior to November 18, 1952, and the tablets claimed in his application.

On October 3, 1957, attorneys for applicant filed an amendment in which they traversed the Examiner's rejection on public use, stated that there was no such issue in the case, and explained that there are two tablets known as "Fomos" tablets, the old tablets and those of the application. An affidavit signed by Reese on September 24, 1957, was attached. In that affidavit Reese again distinguished between the old "Fomos" tablet which had been sold by Fomos Laboratories since 1934, and the "Fomos" tablet of the application, the "new Fomos" tablet, which had not been sold or offered for sale prior to November 18, 1952. Reese expressly traverses the Examiner's finding that the "Exhibit A" statement about twenty years use by physicians referred to the "Fomos" tablets of the application.

The Examiner and the Board in rejecting the application as being for an invention in public use or on sale more than one year prior to the filing date of the application (35 U.S.C. 102(b)), appear to rely mainly upon the Posner affidavit filed January 2, 1957, and "Exhibit A," attached thereto, from which it is asserted

that the applicant did not show that the Examiner erred in finding such public use.

We find no reasonable basis for the finding that there was public use of the claimed tablets prior to November 18, 1952. If Posner's affidavit and the "Exhibit A" are taken at face value, they constitute a factual contradiction, rather than an admission. It is impossible that the same tablet could have been in use for twenty years in 1954, and was never "manufactured . . . prior to November 18, 1952." Taken at face value the affidavit and "Exhibit A" seem to make these contradictory assertions. It is only by ignoring the second half of the sentence in Posner's affidavit that the Patent Office tribunals were able to construe the affidavit and "Exhibit A" as an admission of prior public use.

The brief on behalf of the Commissioner of Patents criticizes the affidavits submitted saying, "None of the affidavits includes a statement purporting to establish that the claimed tablets were not *in use* as opposed to being *used* prior to November 18, 1952." We think this position is not warranted. The clear implication is that tablets could not be *in use* prior to their manufacture.

Even if the affidavit and exhibit could be construed as such an admission, such an admission is contra to the positive averment made by Reese in the oath accompanying the application. The evidence submitted subsequently seems to us to clearly support the position of Reese and not to support the position of the Board. The Board seems to have relied upon the alleged failure of the applicant to respond to the Examiner's rejection, and indicates that applicant failed to state that the tablet of the application had never been *used* before November 18, 1952, and was equivocal with respect to the matter of sales prior to that date.

We do not find satisfactory support in the record for the Board's position. The applicant repeatedly stated under oath that the tablets had not been sold prior to the critical date. There is nothing equivocal in those averments. In applicant's affidavit filed on January 2, 1957, each of the novel features relied upon is set forth and applicant stated under oath that each of them had never been used before the critical date. Again, these averments are completely unequivocal. [1] While the Board was correct in noting that applicant is an interested party, and while that interest should be taken into account in weighing the evidence, it is not enough, alone, to support a conclusion that he perjured himself in swearing there had been neither use nor sale of the improved tablets prior to the critical date.

Finding, as we do, that there never was an admission of use or sale prior to the critical date, and that the confusion created in the record by the language of "Exhibit A" was subsequently clarified, we reverse the rejection by the Board based upon a finding of public use.

The other ground of rejection by the Board is based on finding of obviousness of the claimed invention over the prior art (35 U.S.C. 103). The issue thus presented is whether the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claim 39 is as follows:

39. A dry vaginal tablet which is soluble in water; said tablet consisting substantially wholly of dry granulated sodium bicarbonate which is coated with a foaming agent; and dry granulated tartaric acid which is coated with methyl cellulose which is resistant to water vapor; and dry granulated ortho-boric acid which is intermixed with a medicinal agent in a non-toxic level of said medicinal agent; and a filler; and a wetting agent; said tablet having substantially equal ratios by weight of said dry granulated tartaric acid and of said dry granulated ortho-boric acid, the total weight of said dry granulated tartaric acid and of said dry granulated ortho-boric acid being substantially 52% of the weight of said tablet; the total dry weight of said granulated sodium bicarbonate and said granulated tartaric acid and said granulated ortho-boric acid being substantially 84% of the weight of said tablet.

Claim 39, while setting forth the proportion of ingredients defines the assertedly new structure of the tablet. Claim 40 is dependent upon claim 39, differing from the latter only in limiting the medicinal agent to a spermicide.

Claim 41 is as follows:

41. A water-soluble dry vaginal tablet which consists of sodium bicarbonate, tartaric acid, ortho-boric acid, a filler, a wetting agent, and a medicinal agent in a non-toxic level of said medicinal agent; substantially 84% by weight of said tablet consisting of sodium bicarbonate, tartaric acid and ortho-boric acid; said tablet having substantially equal weights of tartaric acid and ortho-boric acid, the total weight of said tartaric acid and said ortho-boric acid being substantially 52% of the weight of said tablet.

Claim 42 is dependent on claim 41, and like it, relies for novelty on the assertedly new proportions of the ingredients.

The references relied upon to support this rejection are as follows:

- Curtis, 2,382,546, August 14, 1945.
- Lebram (British), 11,601, November 2, 1905.
- Gutman: Modern Drug Encyclopedia and Therapeutic Guide, New York (1934), page 446.
- Dickinson: Control of Conception, Williams and Wilkins Co., Baltimore, Md., 2d Ed. (1938), pages 74-75.
- Lesser: Drug and Cosmetic Industry, vol. 62, No. 6 (June 1948), pages 750-751.

The Gutman reference discloses the ingredients of the old "Fomos" tablet. However, Gutman is silent as to the proportion of the ingredients used and as to the structure of the tablet.

The Curtis patent is relied upon for showing that a greater degree of dissociation of boric acid may be achieved by adding to the mixture tartaric acid, which increases the H ion concentration of the mixture by the formation of complex, highly ionizable substances. It was concluded by the Examiner and the Board that Curtis taught that the reaction between boric acid and tartaric acid had long been known to increase the solubility of the two acids.

The Dickinson publication, "Control of Conception," refers to the known spermicidal effectiveness of the medicinal agents, hydroquinone and oxyquinoline sulfate, which applicant discloses. However, since applicant disclaims any reliance upon the specific spermicides used, we see no occasion to apply this reference.

The Lebram British patent issued in 1905 relates to an improvement in effervescent mineral baths. It appears from this reference to have been common practice to make mineral baths effervescent by adding a dilute, weak acid to them, and then pouring sodium bicarbonate into the solution. However, frequently the reaction was undesirably violent. Lebram sought to control the reaction by coating the bicarbonate with a water soluble gum or resin. Thus the reaction was

inhibited by the film of gum or resin which had to dissolve before the reagents could come into contact.

The Lesser article describes the use of methyl cellulose as a binder for aspirin tablets. Comparative tests with other binders ranked methyl cellulose first as to sieving, compression and disintegration, equalled only by a gum Karaya mucilage. As to disintegration, methyl cellulose compared favorably with starch because it absorbed water to produce an explosive type of disintegration.

[2] As pointed out by the Board, and as shown by the record here, claims 41 and 42 cover no more than what applicant asserts to be optimum quantities of each of Gutman's three principal ingredients to achieve a stated result. Since the result sought and the ingredients used were known, we agree with the Board it was within the expected skills of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients. The knowledge that boric acid would react with tartaric acid tells such a person that an optimum ratio exists. In view of the prior art teachings we agree with the conclusion that the proportions of ingredients would have been obvious to a person having ordinary skill in the art at the time the invention as claimed in claims 41 and 42 was made. Since the improved results alleged by applicant resulted from experimentation of an obvious nature and were nothing more than one would expect, they may not be relied upon to warrant the allowance of claims 41 and 42. "It has been repeatedly held that a patent should not be granted for an applicant's discovery of a result which would flow naturally from the teachings of the prior art." *In re Tanczyn*, 44 CCPA 764, 766, 241 F.2d 731, 112 USPQ 483.

Therefore, as to claims 41 and 42, which distinguish the tablet over the prior art only by the recited proportions of ingredients and the designation of a spermicidal agent, we affirm the rejection by the Board of Appeals.

Claim 39 and its dependent claim 40, differ from claims 41 and 42 in defining details of the structure of the tablet.

The Board held that since the Lebram patent suggests coating the ingredients with a binder and the Lesser article suggests using methyl cellulose, that claims 39 and 40 are drawn to an obvious, hence unpatentable, composition. But we think it is clear that

applicant is claiming neither the use of binders, as disclosed by Lebram, nor the use of methyl cellulose as a binder. Applicant's invention as claimed in claims 39 and 40 is a tablet which results from the separate moistening of the ingredients with a foaming agent, methyl cellulose and a gum binder respectively, and in the separate granulation and drying of each of the three ingredients of the tablet in such a manner that when they are compounded in the tablet by means of an additional binder they can interact under the conditions of intended use to achieve the purpose of the tablet. The tablets have a lengthened shelf life during which the ingredients are protected from vapor and interaction so that their initial properties are preserved and rendered effective when used.

Lebram teaches what has been done in the old "Fomos" tablets for years, namely: to mix the dried, combined ingredients with a binder, which incidentally inhibited their desired reaction. Lesser teaches the use of methyl cellulose in place of the other binder resins suggested by Lebram. Applicant, on the other hand, has in our opinion, produced a novel combination which was unobvious to one of ordinary skill in the art. We therefore reverse the rejection of claims 39 and 40.

There remains one further matter to be disposed of. In his brief the solicitor states that applicant's assertion that "the sales of said prior 'Fomos' tablets dropped steadily" was without support in the way of business records and other evidence. Whereupon applicant moved for leave to file a memorandum and affidavit to prove decrease in the sales of old "Fomos" tablets on the ground that the solicitor had raised a new issue. The solicitor opposed the introduction of evidence which had not been before the Patent Office.

[3] The solicitor's position on this point is well taken and applicant's motion is denied. [4] No claims for the new "Fomos" tablet can be allowed on the basis of the commercial failure of the old "Fomos" tablet, and thus the additional evidence would not be pertinent to the issues here before the court.

[5] The decision of the Board is reversed as to its rejection of all claims on the ground of prior public use or sale and as to its rejection of claims 39 and 40. It is affirmed as to the rejection of claims 41 and 42 on the prior art.

MODIFIED.

PATENT SUITS

Notices under 35 U.S.C. 290: Patent Act of 1952

- 2,416,123. A. H. Stemen, Corn picker roller; 2,416,124, same. Filed Aug. 22, 1961, D.C. Nebr. (Omaha), Doc. 01314. *A. Lakin & Sons, Inc. v. Garvey Manufacturing Company, Inc.*
- 2,416,124. (See 2,416,123.)
- 2,494,229. J. G. Collison, Bone surgery. Filed Sept. 15, 1961, D.C. Md. (Baltimore), Doc. 13/303, *The Collison Surgical Engineering Company v. Murray-Baumgartner Surgical Instrument Co., Inc.*
- 2,503,199. M. A. Goldblatt et al., Table with foldable and detachable legs; 2,725,004, same, Combined table and chair assembly for infants. Filed Aug. 29, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1141/61-WM, *Guild Industries Corporation v. Le Mar Corporation et al.*
- 2,563,794. Rickes and Wood, Vitamin B₁₂; 2,703,302, same. Vitamin B₁₂-active composition and process of preparing same. Filed Mar. 22, 1960, D.C., S.D.N.Y., Doc. 61/1073, *Merck & Co., Inc. v. Harvey Reisman et al.*
- 2,654,770. S. E. Schroeder, Automatic partition strip feeding mechanism; 2,723,002, same. Filed Sept. 8, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1188/61-TC, *Standard Brands, Inc. v. Western Partition Corporation.*
- 2,671,515. J. E. Hall, Well bore cleaning scraper; 2,781,816, J. E. Hall, Sr., Process for conditioning wells for cementing. Filed Aug. 28, 1961, D.C., W.D. La. (Lake Charles), Doc. 8433-LC, *Trojan, Inc. et al. v. Wellmaster Oil Tool Company et al.*
- 2,703,302. (See 2,563,794.)

2,711,315, C. H. Mosebach, Spring suspension and shock absorbing devices for automobiles, filed Sept. 19, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30254, *Carl H. Mosebach v. City of Philadelphia*.

2,718,234, B. J. Blumberg, Hygroscopic air escape valve, filed Sept. 15, 1961, D.C., S.D.N.Y., Doc. 61/3279, *Benjamin J. Blumberg et al. v. Border Plumbing & Heating Supply Co., Inc. et al.*

2,720,045, G. Miller, Transparency viewer, combined ejector and light switch, filed Dec. 23, 1958, D.C., S.D.N.Y., Doc. 141/134, *Gustave Miller v. Service Photo Suppliers Inc. et al.* Default judgment; patent held valid and infringed Sept. 14, 1961.

2,723,002. (See 2,650,770.)

2,725,004. (See 2,503,190.)

2,725,372, T. McCartan, Booth unit, filed Sept. 13, 1961, D.C. Conn. (New Haven), Doc. 8949, *Bee and Gee Manufacturing Co., Inc. v. Formatron Corporation*.

2,731,816. (See 2,671,515.)

2,800,631, T. E. Sueas, Method of carrying out melting processes, filed Sept. 19, 1961, D.C., N.D. Ohio (Cleveland), Doc. 37/226, *Henry J. Kaiser Company et al. v. Jones & Laughlin Steel Corporation*.

2,811,331, W. B. Everett, Timed surge neutralizer, filed Aug. 29, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1140/61-Y, *Wilhelm B. Everett et al. v. Thomsen Supply, Inc.*

2,828,068, Denison and Johnson, Spinning reel, filed Sept. 8, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40188, *Denison-Johnson, Inc. v. American Import Company*.

2,828,068 (a), Denison and Johnson, Spinning reel; 2,828,079, same, filed May 22, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 619/61-MC, *Denison-Johnson, Inc. v. Roddy Reels, Inc. et al.* Consent judgment; order holding patents valid and certain claims infringed; defendants enjoined (notice Sept. 15, 1961).

2,850,952, L. Hornbostel, Calendar stack with individually supported rolls; 2,855,100, same, Calendar stack, filed Aug.

24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1414, *The Black Clawson Company v. Beloit Iron Works*.

2,862,679. (See 2,828,679.)

2,874,400, I. T. Quarnstrom, Plastic mold base, filed Dec. 4, 1959, D.C.N.J. (Newark), Doc. 1074/59, *National Tool and Manufacturing Company v. Detroit Mold Engineering Company*. Consent judgment; patent held valid; complaint dismissed Sept. 12, 1961.

2,880,300, Gallagher and Pellino, Hot-box detector, filed Aug. 21, 1959, D.C., S.D.N.Y., Doc. 149/385, *General Electric Company v. Servo Corporation of America*. Notice of voluntary dismissal Sept. 12, 1961.

2,914,000, M. B. Wilcox, Hand warmer, filed Sept. 14, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/201, *Aladdin Manufacturing Company v. American Foreign Industries, Inc.*

2,947,186, H. Greenwald, Coin slide actuated timer, filed Apr. 3, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c570, *Zeolus Corporation et al. v. Borg-Warner Corporation et al.* Stipulation and order dismissing cause and all counterclaims with prejudice Sept. 7, 1961.

2,955,100. (See 2,850,952.)

2,990,736, L. Crandall, Tire repair device, filed Sept. 11, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1192/61-Y, *Specmade Products v. James R. Ray, et al. et al.* Same, filed same, D.C., N.D. Tex. (Dallas), Doc. 8897, *Specmade Products, Inc. v. Foster Tire & Supply et al.*

2,985,100. (See 2,850,952.)

2,995,361, J. P. Lopez, Feeding equipment, filed Sept. 13, 1961, D.C.N.J. (Newark), Doc. 765/61, *Bostitch, Inc. v. Universal Corrugated Box Machinery Corporation*. Same, filed Aug. 23, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61-C-621, *Universal Corrugated Box Machinery Corporation v. Bostitch-Eastern, Inc.* Dismissal pursuant to Rule 41, Sept. 29, 1961.

Des. 174,240, Tappan and Clark, Range; Des. 180,000, T. B. Clark, Cooking range, filed Sept. 13, 1961, D.C., N.D. Ohio (Cleveland), Doc. 37/217, *The Tappan Company v. General Motors Corporation*.

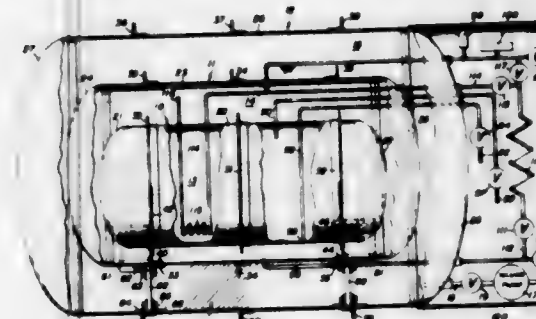
Des. 180,000. (See Des. 174,240.)

REISSUES

OCTOBER 31, 1961

Matter enclosed in heavy brackets [] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,065
CONTAINER AND METHOD OF DISPENSING LIQUEFIED GASES THEREFROM
Henry F. Daley, Allentown, Pa., and William H. Kachele, Cocoa Beach, Fla., assignors to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware
Original No. 2,907,177, dated Oct. 6, 1959, Ser. No. 538,474, Oct. 4, 1955. Application for reissue Dec. 1, 1960, Ser. No. 73,152
15 Claims. (Cl. 62-53)



15. A tank assembly for storage of a normally gaseous material in liquid phase comprising, in combination, an outer tank having insulation therearound, an inner tank within and spaced from said outer tank providing intervening volume for liquid coolant lower boiling than said material, a valved inlet for said material and a valved outlet for said material in liquid phase disposed outside said outer tank, a discharge conduit for said material interconnecting the bottom of said inner tank with said valved outlet, a charge conduit for said material interconnecting said valved inlet with the upper portion of said second tank, said charge conduit providing within said intervening volume an elongate passageway, a valved inlet for liquid coolant disposed outside said outer tank, a conduit interconnecting said last named valved inlet and said intervening volume, and means venting said volume to the atmosphere.

25,066
PLUG-TYPE DOORS FOR PRESSURIZED CABINS
Milton Heinemann and Varnell L. R. James, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Original No. 2,751,636, dated June 26, 1956, Ser. No. 500,636, Apr. 11, 1955. Application for reissue Apr. 8, 1957, Ser. No. 651,562
14 Claims. (Cl. 20-16)

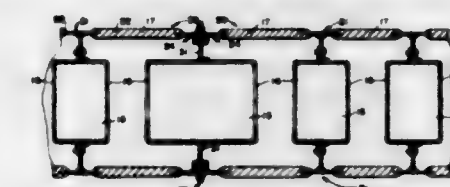
1. In combination with the structure of a pressurized aircraft cabin which has a doorway to the exterior defined by a sill, a lintel, and two spaced jambs, a door of a height just sufficiently less than the spacing between the sill and lintel to pass therebetween, and of a width exceeding the spacing between the jambs, whereby to be held seated from the interior upon said jambs by the cabin pressure, means pivotally connected to the door intermediate its sides, and pivotally connected to one side of the doorway, said means supporting and guiding the door for translational movement laterally of the doorway and for swinging movement about said pivotal connections, and motion-controlling means interconnecting the door

and the cabin structure, and coordinated with said supporting and guiding means to tilt the door about its pivotal connection to said means, and to displace the door laterally relative to the doorway, upon initiation of opening movement of the door, until one upright edge of the door swings outwardly through the doorway, and



its other upright edge swings inwardly, said supporting and guiding means and said motion-controlling means being further coordinated to displace the so outwardly swung edge of the door beyond its jamb, to leave the door in its open position outside of the cabin structure and at one side of the doorway.

25,067
ELECTRON FLOW DEVICE
Michael J. Zunk, West Allis, and George R. Mahn, Hales Corners, Wis., assignors to General Electric Company, a corporation of New York
Original No. 2,923,845, dated Feb. 2, 1960, Ser. No. 552,815, Dec. 13, 1955. Application for reissue Oct. 4, 1960, Ser. No. 60,537
4 Claims. (Cl. 313-82)



3. A sectional envelope structure comprising a pair of tubular envelope components, each having an open end of glass and a seal ring having a sleeve portion terminating in a sealing edge joined with the glass end of each component, said seal rings having each an outstanding circumferential flange, said components being disposed in end-to-end abutting relationship with the flange of said seal rings in facing engagement, said flanges being sealed together and formed with cooperating seats forming a pocket facing inwardly of said envelope structure, and an electrode carrying mounting having portions secured in said pocket.

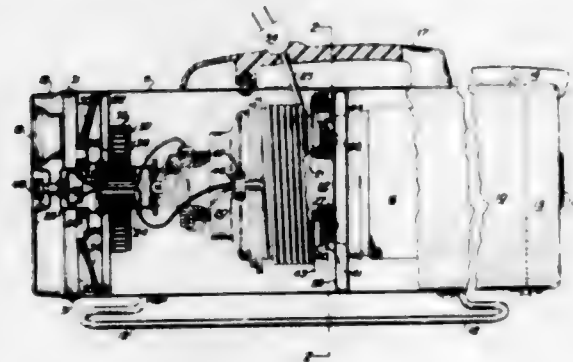
25,068

SUCTION CLEANER WITH CORD REEL

Dale C. Gerber, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio

Original No. 2,661,074, dated Dec. 1, 1953, Ser. No. 120,733, Oct. 11, 1949. Application for reissue June 19, 1961, Ser. No. 121,806

6 Claims. (Cl. 183—37)



3. In combination with a portable, electric appliance having a service cord, means for rotatably supporting an integral electric motor and cord reel assembly within said appliance, spring means urging said assembly to rotate in a direction to wind and store a service cord on said reel, an electric service cord for said appliance, means connecting the inner end of said service cord directly to said motor, and control means for selectively locking said rotatable assembly in different positions depending upon the length of extended service cord desired and for holding the service cord in a selected extended position against the reaction forces of said motor.

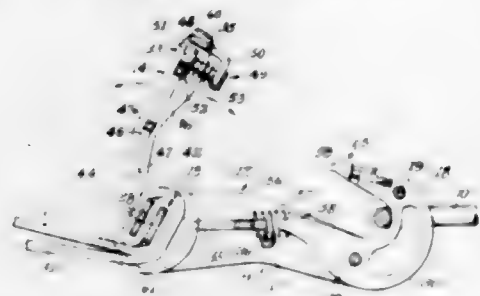
25,069

WEB-TENSIONING BUCKLE

Edwin C. Elsner, Pasadena, Calif., assignor, by mesne assignments, to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan

Original No. 2,874,431, dated Feb. 24, 1959, Ser. No. 628,771, Dec. 17, 1956. Application for reissue June 6, 1960, Ser. No. 34,348

11 Claims. (Cl. 24—77)



1. A web-tensioning buckle comprising a frame provided with an end adapted to be connected to a tension-receiving member, an open hook on the frame to which the tension-receiving member is connected, web-connection means carried by the other end of said frame, manually-operable means carried by the frame to intermittently rotate the web-connection means to foreshorten the web connected therewith and to increase the tension thereon relative to the tension-receiving member, said hook and the manually-operable member cooperating to constitute enclosed means confining the tension-receiving member, means to releasably latch said manually-operable means in non-operating condition, said latch means inter-engaging the open end of said hook and the manually-operable member, and means to disconnect the web-connection means from the manually-operable means to allow the stored-up force of the tension on the web to move the web-connection means to tension-released position, the last-mentioned means being operable only upon release of the latch means.

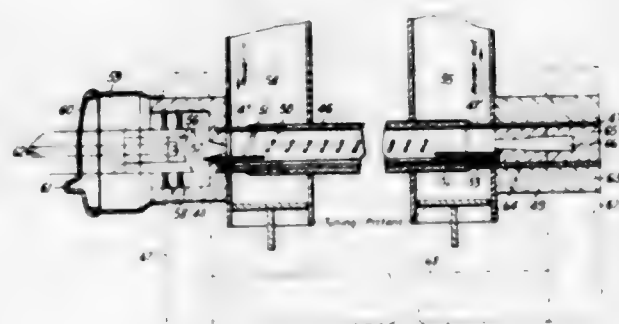
25,070

ELECTRON DISCHARGE DEVICES

Arnold H. W. Beck, Trumpington, Cambridge, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Original No. 2,829,299, dated Apr. 1, 1958, Ser. No. 176,925, Aug. 1, 1950. Application for reissue Aug. 28, 1959, Ser. No. 836,839

Claims priority, application Great Britain Aug. 12, 1949 7 Claims. (Cl. 315—3.5)



6. An electron discharge device having an electron beam source, a tunnel member for the flow of an electron beam therethrough, said beam source comprising an electron emitter, said tunnel member at no point having a greater cross-section than that of said electron emitter, means to focus said electron beam into a beam of given diameter, means to provide a magnetic field at a given distance from said source to maintain said given beam diameter constant, and means to shield said source from influence of said magnetic field surrounding at least a portion of said beam in the region of said source.

25,071

SNOW PLOW

Edwin E. Bucher, Davos, Switzerland

Original No. 2,751,697, dated June 26, 1956, Ser. No. 240,684, Aug. 7, 1951. Application for reissue June 9, 1958, Ser. No. 741,211

13 Claims. (Cl. 37—43)



1. In a snow plow having a power-driven blower, a casing having a cylindrical inner surface extending transversely to the path of the plow and being formed with a centrally located opening communicating with the intake opening of the blower, the improvements which comprise, a transversely divided rotor extending transversely to the direction of travel of the plow and having a plurality of blades carried by each half of the rotor, the outer edges of said blades defining a cylinder disposed in close proximity to said cylindrical surface of the casing, the several blades carried by the respective halves of said shaft having angularly pitched portions formed and arranged to impel snow outwardly and longitudinally from the trailing end portions of said blades into said centrally located intake opening of the blower along a spiral path not exceeding 180 degrees circumferentially of the rotor, portions of the several blades adjacent to the leading ends being forwardly inclined in the direction of rotation of the rotor, the length of the cylinder defined by said blades being less than twice the diameter of said cylinder and power-driven means for rotating said rotor.

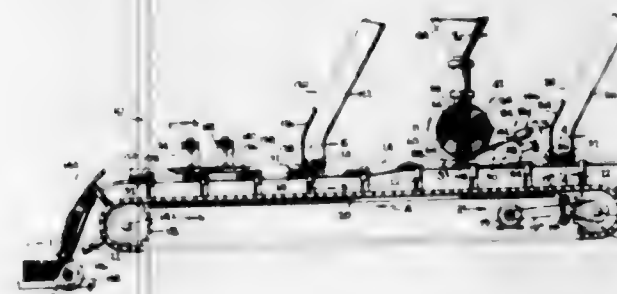
25,072

APPARATUS FOR APPLYING PASTE TO A COMESTIBLE WAFER

George C. Monaco, Little Neck, N.Y.

Original No. 2,923,257, dated Feb. 2, 1960, Ser. No. 680,719, Aug. 28, 1957. Application for reissue May 1, 1961, Ser. No. 107,289

2 Claims. (Cl. 107—1)



5. In an apparatus of the character described for applying a plastic comestible to an object, the combination of: means for advancing the object along a predetermined path of travel, and a comestible applicator, said applicator comprising a hopper, a tubular horizontal stationary cylindrical member having an open end and a closed end, said member having a hollow unobstructed interior, conduit means connecting the hopper to the open end of the cylindrical member, a circular extrusion plate having a central opening received rotatably on the horizontal cylindrical member so as to mount said plate for rotation about the horizontal axis of said member, said cylindrical member having a lateral through opening therein remote from the bottom of said member for leading the plastic comestible from the interior to the exterior of said member, said plate being located on and covering the portion of said cylindrical member which includes said lateral opening, said plate having a plurality of passageways leading from the central opening of said plate to outer terminals on angularly spaced sections of the periphery of the plate, the inner terminals of said passageways sweeping in succession over said lateral opening, said plate being located above the path of travel of the moving object, means for rotating said plate about said horizontal axis, said conduit means including means for forcing plastic comestible under pressure from the hopper into the unobstructed interior of the hollow cylindrical member through the open end thereof and then through the lateral opening in the cylindrical member into said passageways in succession when the outer terminals of the passageways are remote from their lowermost position, so that plastic comestible is extruded from the outer terminals of the passageways while the outer terminals are removed from their lowermost position, and cutting means for severing the extruded comestible at the lowermost outer terminal of said plate as said terminal passes over the moving object so as to deposit the comestible as a layer thereon.

25,073

COMPARTMENTED CARTON

Lawrence H. Phillips, Chattanooga, Tenn., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Original No. 2,965,278, dated Dec. 20, 1960, Ser. No. 699,999, Dec. 2, 1957. Application for reissue July 7, 1961, Ser. No. 126,770

3 Claims. (Cl. 229—28)

3. A collapsible compartmented carton, for separably containing a plurality of articles, formed of a one-piece blank of suitable sheet material such as foldable paperboard, comprising: a pair of spaced parallel vertical side walls; a pair of spaced parallel vertical end walls; one of said end walls comprising a single panel hingedly attached

at opposite edges to corresponding edges of respective side walls; the other of said end walls including a panel having one edge hingedly attached to an opposite edge of one of said side walls and having hingedly attached to another edge thereof a vertical single-ply first partition disposed between and extending parallel to the side walls to divide the carton into separate compartments, said partition extending the entire length of the carton and having hingedly attached to its opposite edge a flap adhesively secured to said one end wall, and a second vertical single-ply



partition cut from and hingedly attached to a medial portion of said first partition, said second partition extending normal to said first partition on opposite sides thereof and having hingedly attached thereto a pair of flaps, at least one of which is adhesively secured to one of said side walls; and top and bottom closure flaps hingedly attached to upper and lower horizontal edges of certain of the walls; the side walls, end walls, and partitions being hinged to each other on parallel vertical hinge lines so that the carton can be collapsed with the partitions secured to the respective end and side walls.

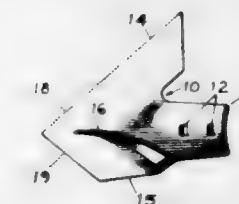
25,074

HILLER BLADES FOR FARM CULTIVATORS

Raymond E. Haynes, Bement, Ill.

Original No. 2,849,940, dated Sept. 2, 1958, Ser. No. 484,355, Jan. 27, 1955. Application for reissue Aug. 31, 1960, Ser. No. 53,596

4 Claims. (Cl. 172—770)



1. A hiller blade for plant row cultivators, comprising an attaching shank, a relatively wide soil loosening portion upwardly inclined towards the rear at one side of said shank, a relatively narrow soil loosening portion upwardly inclined towards the rear on the opposite side of said shank, the forward ends of said loosening portions merging into the point of the hiller blade, the relatively wide soil loosening portion being of greater length than the other soil loosening portion, a wing member integral with and mounted on the top surface of said narrow portion for throwing soil loosened by said narrow portion outwardly therefrom, said wing member being upright and extending rearwardly from adjacent the point of the hiller blade [rearwardly] and outwardly from said shank.

25,075

ROLLING MILLS

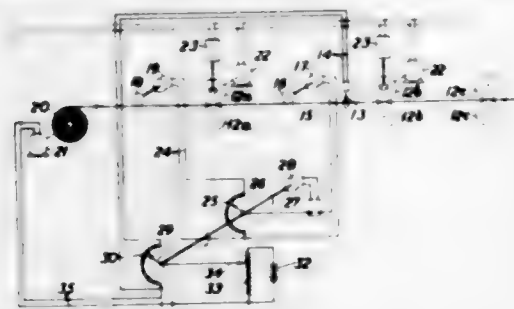
Wilfrid Cecil Frederick Hesselberg, Bromley, England, assignor to The British Iron & Steel Research Association, London, England

Original No. 2,851,911, dated Sept. 16, 1958, Ser. No. 483,910, Jan. 25, 1955. Application for reissue Sept. 13, 1960, Ser. No. 55,815

Claims priority, application Great Britain Jan. 26, 1954 10 Claims. (Cl. 80—32)

1. In a rolling mill having a motor operated final stand and at least one motor operated preliminary stand, manu-

ally adjustable means for [controlling] setting the thick-



ness of the strip issuing from said final stand, first variable signal generating means responsive to the velocity

of a partially finished strip supplied to said final stand, second variable signal generating means responsive to the thickness of said strip supplied to said final stand, third variable signal generating means responsive to the velocity of the strip issuing from said final stand, and a signal correlating means responsive to the setting of said manually adjustable means and all of said signal generating means, said correlating means [varying the speed of operation of said final stand motor so as to maintain the product of the thickness and velocity of said issuing strip constant to the product of the thickness and velocity of said supplied strip.] controlling said mill to adjust the thickness of the strip issuing from said final stand substantially to the value set by said manually adjustable means.

PLANT PATENTS

GRANTED OCTOBER 31, 1961

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,099

PECAN TREE

Ernest W. Moring, Pensacola, Fla., assignor to Simpson Nursery Company, Monticello, Fla., a partnership
Filed Jan. 8, 1960, Ser. No. 1,394
1 Claim. (Cl. 47-62)

A new and distinct variety of pecan tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of abundant and attractive foliage and consequent suitability for use as a shade tree, consistently abundant nut production, a distinctive habit of bearing nuts in clusters, a prominent and distinctive grayish cast in the color of both the nuts and the wood, a distinctive nut shape evidenced by a short point on the stem end and a long point on the opposite end, easy and clean separability of the kernels from the

nut shells and partitions, a plump form and attractive amber color of the kernels, and good resistance to pecan scab.

2,100

ROSE PLANT

Esther Gladys Fisher, Woburn, Mass., assignor to Arnold-Fisher Company, Woburn, Mass., a corporation of Massachusetts

Filed Sept. 2, 1960, Ser. No. 53,860
1 Claim. (Cl. 47-61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of medium to long flower stems, a long pointed bud form, a distinctive Current Red general color tonality, and long lasting qualities of the flower.

PATENTS

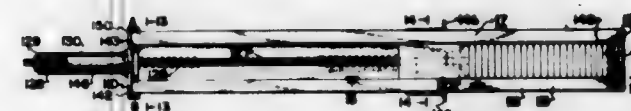
GRANTED OCTOBER 31, 1961

GENERAL AND MECHANICAL

3,005,988

STAPLING MACHINE

Joseph M. Kirtan, 1534 North 400 West,
Bountiful, Utah
Filed Feb. 12, 1959, Ser. No. 792,776
1 Claim. (Cl. 1-49)



For use with stapling machines, a front end load type staple cartridge having front and rear ends and including, in combination, an outer channel member having a base, a pair of upwardly extending, vertical sides integral with said base, and a pair of top flanges respectively integral with said sides, said top flanges being oriented toward each other; an inner channel member disposed within said outer channel member and having a base medially affixed to said outer channel member base and a pair of upwardly extending, vertical sides spaced from said outer channel member sides and from said outer channel member top flanges to form a staple travel path between the two channel members; an inverted channel section pusher having a top slideably disposed over said inner channel sides and beneath said outer channel top flanges and a pair of vertically depending side flanges disposed in said travel path in between said inner and outer channel members; spring means for urging said pusher toward said front end of the cartridge for advancing stored staples there-toward; means for releasably retaining stored staples in position preparatory to insertion of the cartridge into an associated stapling machine; and means including rod means for depressing and thereby releasing said retaining means to permit the stored staples to advance forwardly thereover.

3,005,989

BOW TIE CLIP

Earl M. Kitchen, 1254 Keniston, Los Angeles 19, Calif.
Filed Dec. 10, 1959, Ser. No. 858,759
5 Claims. (Cl. 2-154)



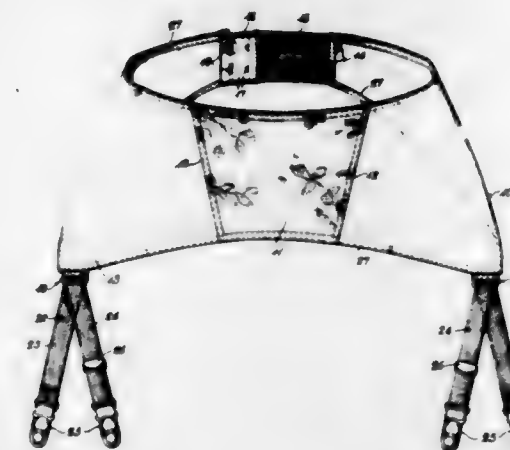
1. The combination of a bow tie having a knot, and a clip for attaching said tie to the wings of a collar, said clip comprising a transversely elongated front member including a flat intermediate portion and a pair of curved resilient end portions, horizontal upper and lower spacer plates provided integrally at the respective upper and lower edges of the intermediate portion of said front member and projecting rearwardly therefrom, a transversely elongated rear member including a flat intermediate portion and a pair of curved resilient end portions, hinge means provided at the upper edge of the intermediate portion of said rear member and connecting the same to the rear edge of the upper spacer plate of the front member whereby the rear member may be

swung rearwardly and upwardly relative to the front member to separate the curved end portions of the members for reception of collar wings therebetween, coating detent means provided at the lower edge of the intermediate portion of the rear member and on the lower spacer plate of the front member for releasably locking the members against relative swinging and thereby retaining said curved end portions in clamping engagement with collar wings therebetween, and means provided on the intermediate portion of the front member and engaging the knot of said tie whereby to separably attach the tie to said clip.

3,005,990

GARMENT SUPPORTING DEVICE

Harold A. Owen and Elizabeth C. Clark, Dover, Del., assignors to International Latex Corporation, Playtex Park, Dover, Del., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 702,837
1 Claim. (Cl. 2-306)



A stocking-supporting garment comprising a body encircling band having a waistline and an edge spaced therebelow and including a front body panel, a rear elastic band and a pair of hip-hugging sections, the front portion of the edge being concave and terminating in flattened end portions and adapted to extend completely across the front of the garment from one hip to the other; a grommet in the lower edge of each said hip-hugging section substantially at the lowest point, each grommet having a slidable surface fixed in substantially horizontal position; and a pendent looped garter strap slidably mounted in said grommet having a front stocking attaching means secured to the one free end and a back stocking attaching means secured to the other free end thereof, whereby movement of the body of the wearer permits the garter strap to slide over said slidable surface of the grommet to maintain continuous adjustment tensioning between the front and back attaching means for control of the stocking and to maintain the hip-hugging sections firmly in place against the body.

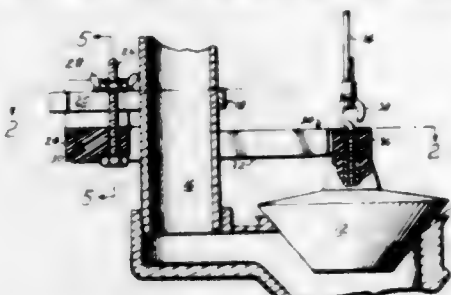
3,005,991

FLUSH VALVE GUIDE

Andrew J. Richardson, 227 Ave. Q, and Vernon L. Williams, 3516 23rd St., both of Lubbock, Tex.
Filed July 25, 1960, Ser. No. 45,206
5 Claims. (Cl. 4-57)

1. In a closet tank having a tube, an adjacent valve seat, a valve on the seat, and a lifter for the valve; the

improved valve guide comprising: an arm attached at one end to the valve, a wedge member, the other end of the arm pivoted to the wedge member, a split annulus encircling the tube, the annulus having wedge elements



extending therefrom, the wedge elements contacting and cooperating with the wedge member so that as they are moved together the annulus is clamped to the tube, and means for moving the wedge member and wedge elements together.

3,005,992

COLLAPSIBLE CONTAINER

Hetty B. Sullivan, 5260 Palm Drive, La Canada, Calif.
Filed Oct. 10, 1960, Ser. No. 61,538
6 Claims. (Cl. 4-110)



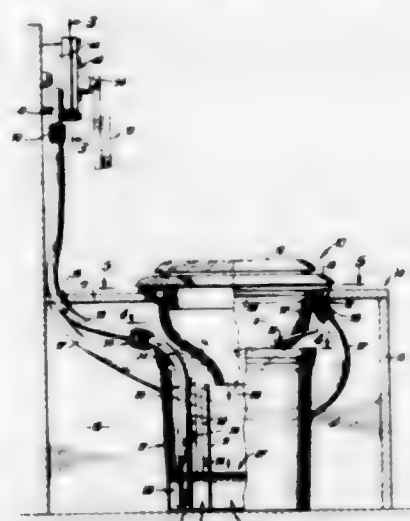
1. A disposable collapsible urinal comprising a frusto-conical wall having a central axis and an open smaller end, a bottom wall extending across and closing off the larger end of the frusto-conical wall and disposed in oblique angle to said axis, at least the frusto-conical wall being made of a relatively flexible material, both walls being made of fluid impermeable material, a pair of neck scores extending from the open smaller end along the generators defined by the intersection of the frusto-conical wall with a plane which includes the central axis and forms a dihedral edge with the bottom wall which is normal to said axis, there being two of said neck scores, each of said neck scores extending to a respective medial point on said generators; an upper medial score interconnecting said medial points and being disposed on that path on the opposite side of said generators from the bottom wall, which, when the smaller end of the frusto-conical wall is flattened by folding it along the neck scores so that the regions between them are brought together flat, the line defined by the upper medial score then becomes a substantially straight line; a pair of side scores extending respectively from the medial points to end points spaced from the bottom wall and from each other, said side scores converging toward each other as they extend away from their medial points; a first hinge portion along the bottom wall between said end points; a pair of transition scores extending respectively from the medial points toward the bottom wall, their intersections with the bottom wall being spaced from each other; a second hinge portion along the bottom wall between said last-mentioned intersections; a pair of basal scores interconnecting respective transition scores at points spaced from the last-mentioned intersections; a pair of basal scores interconnecting respective transition scores at points spaced from the last-mentioned intersections and the said end points; and a lower medial score extending along the frusto-conical wall between the medial points on the same side of the generators as the bottom wall and directly opposite the upper medial score; whereby when the neck scores are folded to press the regions between

them flat, and the region bounded by a medial score and the side scores is pressed toward the base, the frusto-conical wall bends at the hinge portions, and folds at the basal and transition scores to flatten out, that portion between the open end and a medial score can be folded over to flatten the entire structure, and the frusto-conical wall can be folded along one of the medial scores.

3,005,993

PORTABLE FLUSHING TOILET

Robert F. Corliss, 3160 E. Orange Grove Ave.,
Pasadena, Calif.
Filed July 18, 1960, Ser. No. 43,365
8 Claims. (Cl. 4-115)



1. The combination, comprising a cabinet structure including a substantially horizontally extending upper panel forming an enlarged aperture, means including a bowl structure downwardly received in said aperture and seated on the top surface of said panel about said aperture and a sewage receptacle underlying the bowl structure within said cabinet and adapted to hold a pool of sewage treatment liquid, the bowl structure being upwardly removable away from said receptacle to permit upward withdrawal and removal of the receptacle from said cabinet for periodic emptying, said bowl structure forming a channel extending at least part way about the upper interior of the bowl for confining flushing liquid to flow thereabout at approximately the level of said panel, said channel opening downwardly to discharge flushing liquid in a vortex flow path over the exposed inner surface of the bowl, said bowl having a downwardly opening sewage outlet within the upper interior of said sewage receptacle, bowl flushing means including a pump and suction and discharge conduits connected therewith, the suction conduit having an inlet in said receptacle and the discharge conduit having a jetting outlet in direct communication with said channel to discharge liquid therealong, whereby upon pump operation a stream of treatment liquid is withdrawn from the receptacle and circulated as flushing liquid onto the interior surface of the bowl for gravity return flow to the receptacle through the bowl outlet, and filtering means in said receptacle through which all treatment liquid reaching said suction conduit inlet is necessarily drawn, and releasable couplings in said conduits concealed within the cabinet structure below said upper panel and exposable upon upward removal of said bowl structure.

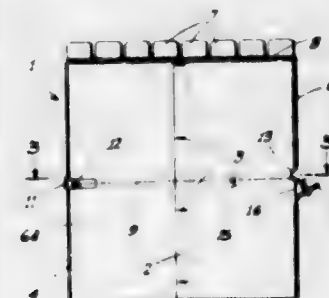
3,005,994

PORTABLE TOILET

Theodore Heil, Lodi, Calif., assignor to Heilite Trailers, Lodi, Calif., a limited partnership
Filed Apr. 28, 1959, Ser. No. 809,462
1 Claim. (Cl. 4-142)

A portable toilet device to support a disposable and flexible bag comprising an upstanding tubular body of

bendable but relatively stiff material, said body having a pair of opposed vertical score lines thereon and being initially collapsed by bending on said lines to a substantially flat condition and adapted to be expanded to a substantially circular form to then receive the bag, means to expand the body comprising an initially slack non-elastic tension cord connected at one end to the body adjacent one score line and extending in said body to adjacent the other score line, the body having an opening adjacent said other score line and through which the

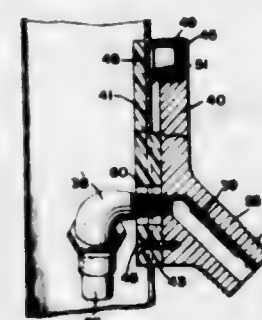


cord freely passes for finger grasping, the body being expanded upon outward pulling of the cord while the body at said other score line is relatively held against movement, and means to releasably secure the cord under tension with the body expanded; said last named means comprising an enlarged element on the cord intermediate its ends in position to lie outside and in contact with the body when the latter is fully expanded and of a size to freely pass through said opening; there being a cord-receiving slit in the body communicating at one end with and projecting from the opening.

3,005,995

SHOWER HEAD ADAPTER

Walter S. Bickford, 2116 Lone Oak Ave., Napa, Calif.
Filed Dec. 3, 1959, Ser. No. 857,197
1 Claim. (Cl. 4-145)



A movable shower head of the type having a frame having a front face, a vertical elongated slot formed in the front face of said frame and a shower head mounted for reciprocal movement within said slot comprising said shower head having two faces engaging opposite sides of the walls of the front face of said frame adjacent said slot and a spacer guide within said slot holding said two walls together, spring means carried by one of said two walls between the wall and front face to frictionally urge the other of said walls against the front face to frictionally hold said shower head against movement, and a flexible hose connected to said shower head and a source of water, said hose being confined entirely within said frame.

3,005,996

SINK STOPPERS

Robert W. Hyde, Cincinnati, Ohio, assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 781,034
3 Claims. (Cl. 4-295)

1. A sink stopper for use in conjunction with a drain opening having a waste disposer associated with it and

including a drain sleeve of the type having an inwardly extending rib spaced below the upper end thereof, said stopper comprising a rigid central member and a flexible outer member, said rigid member having a central recess, handle means extending upwardly within said recess, said rigid member being circumferentially adapted to receive said flexible member in encircling engagement therewith, said flexible member comprising a peripheral flap, a body smaller in dimension than said drain opening and having an acutely tapered outer surface to throttle flow



past it, legs formed integrally with said body and standing outwardly of said outer surface, each leg having a detent protruding from its outer edge which is spaced downwardly from said flap by an amount slightly greater than the amount by which said rib is spaced below the upper end of said sleeve, said flap and body having a central opening configured for engagement with said rigid member, whereby when said detents rest on the upper surface of said rib said outer surface is spaced from said sleeve, and whereby when said detents are engaged below said rib said flap seals said drain opening.

3,005,997

SOFA BEDS

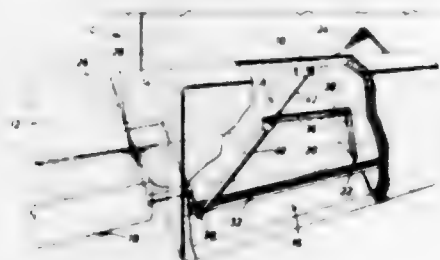
Martin Fox, Chicago, Ill., assignor to The Seng Company, a corporation of Illinois
Filed Mar. 28, 1957, Ser. No. 649,122
4 Claims. (Cl. 5-17)



1. A convertible sofa bed comprising: a rectangular base frame; an upright back on the rear of said base frame which has a fixed, forwardly extending upholstered portion the bottom of which overhangs and is substantially parallel to the top of said base frame; means supporting the front of the seat frame on the base frame for movement between a retracted sofa position and an extended bed position in both of which the front portion of the seat frame is supported directly on the base frame, movement of the seat frame to both said positions being limited by abutment with the base frame; a pair of guide track members on the ends of the base frame having a rearward guide track beneath and generally parallel to the bottom of the upholstered back portion, said rearward guide track terminating at its forward end substantially in the same vertical plane as the most forward part of the back and merging into a sharply upwardly inclined short forward guide track which terminates a short distance forward of said vertical plane; and depending brackets on the ends of the seat frame, each bracket having means interengaged with and traveling in one of said

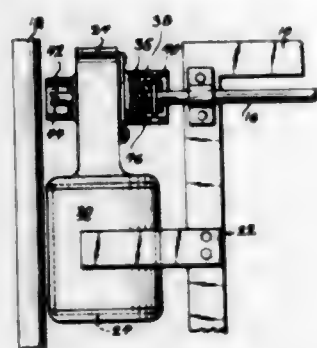
guide track members between a rearward sofa position and a bed position adjacent the forward extremities of said guide tracks, the height and position of said brackets and guide tracks being such that the upholstered seat in sofa position is inclined and has its rear portion beneath and substantially in contact with the bottom of the overhanging back portion and in bed position is horizontal and has its rear upper edge substantially in contact with only the most forward part of the back.

3,005,998
CONVERTIBLE SEAT AND COUCH UNIT
Samuel Zimmerspitz, 4 Hartley Ave., Toronto 10, Ontario, Canada
Filed July 17, 1958, Ser. No. 749,278
4 Claims. (Cl. 5-44)



4. A convertible seat and couch unit comprising a hollow frame defining a space, a bench movable between a seat position within said space and a couch position externally thereof, a leaf hingedly mounted on said frame for co-operation with said bench as a back rest therefor in its seat position, and an action connected to and communicating between said bench and leaf and contained within and concealed by said hollow frame co-ordinating the movement of said bench and leaf influencing said leaf to lie prone within said space in partially supported downwardly facing co-planar relation to said bench when the latter is in its couch position; said hollow frame having at least one slot extending along one edge thereof to one side of said space and said bench carrying at least one projecting trunnion connected to said action and projecting through and sliding in said slot; said slot having a blind end stopping said trunnion preventing movement of said bench externally of said space beyond a point at which said bench is overlapped by and supports said leaf when it is in its prone downwardly facing position aforesaid.

3,005,999
MOTOR DRIVE ARRANGEMENT FOR HOSPITAL BEDS AND THE LIKE
Steffen S. Brown, Dayton, Ohio, assignor to The Brown-Brockmeyer Company, Dayton, Ohio
Filed Feb. 21, 1958, Ser. No. 716,804
2 Claims. (Cl. 5-67)



1. A power unit for mounting on the rotatable adjusting shaft of a hospital bed to adjust the position of the bed and comprising a reversible geared head electric motor, said electric motor comprising an integral casing therewith for enclosing the speed reducing drive driven

by said motor to form said geared head, a low speed output shaft extending through said casing transversely to the axis of said electric motor, said output shaft being solid and having a socket member fixedly mounted on one end thereof for telescopic engagement with the end of said rotatable adjusting member, means on said socket member for drivingly interconnecting said socket member to said adjusting member, the other end of said output shaft having a transverse slot therein for driving engagement with a hand crank so that said adjusting shaft may be manually operated when said electric motor is not operating, means for rigidly mounting said electric motor on the frame of the hospital bed, and a cylindrical portion extending outwardly of said casing over said output shaft and extending beyond said socket member so as to form a protective enclosure over the driving connection between said output shaft and said rotatable adjusting member.

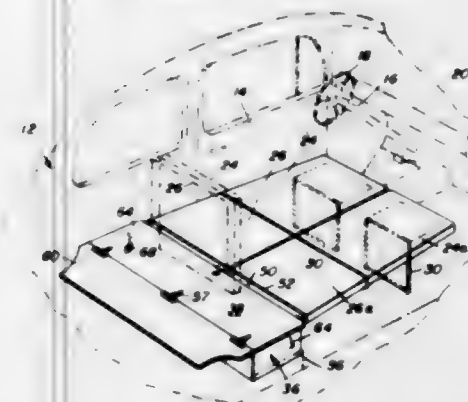
3,006,000
CAMP STRETCHER
Willem J. A. De Groot, 222 Corlett Drive, Bramley, Johannesburg, Union of South Africa
Filed Dec. 3, 1958, Ser. No. 777,993
Claims priority, application Union of South Africa Dec. 10, 1957
1 Claim. (Cl. 5-111)



A stretcher comprising first and second spaced U-shaped outer frame members each including legs and an interconnecting section connecting said legs, a pair of spaced inner frame members pivotally supporting said outer frame members in spaced relation, said inner frame members being separated by a predetermined spacing, the legs of said first U-shaped member being spaced from each other by a distance equal to said predetermined spacing, the legs of said second U-shaped member being spaced from each other a distance less than said predetermined spacing, the outer frame members being adapted to constitute with said pair of spaced inner frame members a substantially rectangular frame, the legs of said second U-shaped frame member being offset with respect to said spaced inner frame members, said second outer frame member being foldable with the legs thereof positioned between said inner frame members and said first outer frame member being foldable with the legs thereof positioned on top of said inner frame members, leg members pivotal on said frame members to positions whereat they are normal to said frame to support the latter, a first set of cables connected between said inner members and said first outer frame member, a second set of cables connected between said inner frame members and said second outer member, said cables having ends fixedly coupled to said inner frame members, means on said leg members and said outer members to engage said cables slidingly, a sheet of supporting material

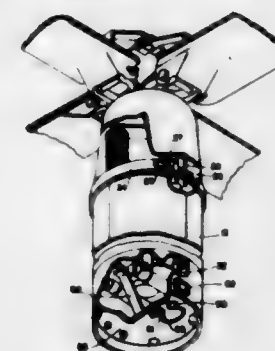
adapted for forming with said frame a body support, and wire means peripherally engaged on said sheet, said wire means including a plurality of flat projections extending outwardly of said sheet and constituted by two connected portions of wire extending along one another to provide surface contact therebetween, the frame members being tubular and having slits therein for frictionally engaging said flat projections.

3,006,001
CAMPER KIT FOR SMALL CARS
Don E. Llewellyn, 1531 N. Keystone Ave., Burbank, Calif.
Filed Feb. 16, 1960, Ser. No. 9,001
1 Claim. (Cl. 5-118)



A camper kit for automobiles comprising a pair of bed platforms, means for installing the platforms in lieu of the ordinary vehicle seats, each platform comprising a plurality of portions hinged together, a hinged supporting strut for at least one portion of each platform, means for connecting one end of each platform to an adjacent part of the automobile, such adjacent part comprising a storage compartment, said storage compartment installed in lieu of the rear seat of the automobile and including a hinged cover, an extension of the cover, said extension providing a head rest for the juxtaposed bed portions, adjustable retaining means for fastening the storage compartment in the automobile body, the bed platforms, when folded and raised while still connected to the storage compartment, providing an optional sleeping space, each platform being recessed to receive the support hinged to its underface and a hook comprising connecting means mounted on the edge of the unit to maintain the folded unit in desired position behind the front seat of the automobile.

3,006,002
AIR-SEA-RESCUE DRIFT BUOY
Frederick de W. Pingree, Woods Hole, Robert G. Walden, West Falmouth, and Harold E. Sawyer, Davisville, Mass., assignors to the United States of America as represented by the Secretary of the Navy
Filed Aug. 23, 1956, Ser. No. 605,910
5 Claims. (Cl. 9-8)



1. An air-sea-rescue drift buoy comprising, in combination, a watertight cylindrical housing, an acetylene gas

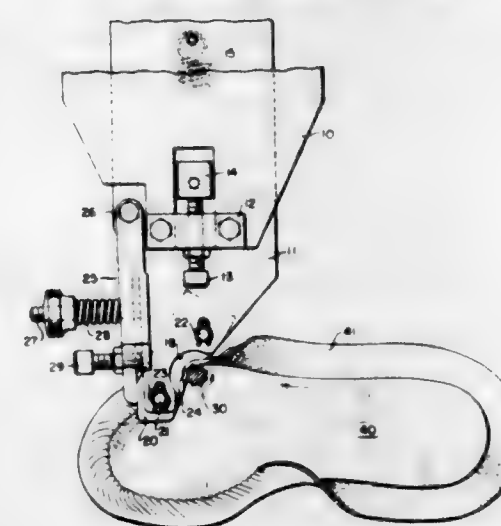
generator mounted within said housing, said generator having as its gas producing component a calcium carbide charge, a flexible watertight container secured to the upper portion of said housing, means for normally maintaining said container in a collapsed condition, and means responsive to the impact of the lower end of said cylindrical housing upon a fluid medium for permitting a volume of said fluid to enter said housing thereby to activate said gas generator, and means also responsive to said impact for permitting said container to be inflated by gas from said gas generator.

3,006,003
METHOD OF SWAGING INTERRUPTED THREADS IN A SHEET METAL NUT
Frank E. Johnson, Jr., Malden, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,481
2 Claims. (Cl. 10-86)



1. The method of forming partial threads on the inside wall only of a nut which comprises inserting, into an aperture in said nut surrounded by said wall, a mandrel having threads at opposite sides and having unthreaded opposite sides a shorter distance apart than the threaded sides and at right angles to the threaded sides, squeezing the inside wall of the nut against the threaded sides of the mandrel by the use of opposed unthreaded swaging dies to flatter portions of the wall of the nut and form partial threads in the inner surface only of said wall, rotating one of said nut and mandrel relative to the other to bring the unthreaded sides of the mandrel opposite the threaded portions in the wall and then moving one axially relative to the other free of any rotating motion, thereby to remove the nut from the mandrel.

3,006,004
UPPER AND COVER LASTING MACHINE
Walter W. Prue, 331 Minot Ave., Auburn, Maine
Filed Oct. 28, 1960, Ser. No. 65,770
10 Claims. (Cl. 12-24.5)

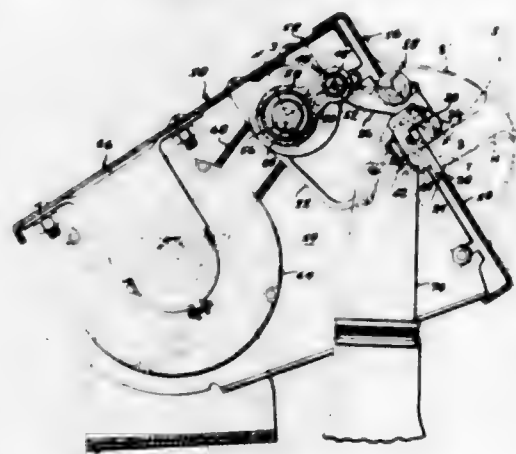


1. A cover lasting machine comprising a rotary octagonal and longitudinally fluted tool, a block having a co-operating recess with a reentrant curved wall partially surrounding the tool, and means for adjusting the block to cause a desired degree of frictional engagement of the tool with stock interposed between the tool and the wall

of the block at different points of contact for exerting either transverse draft or longitudinal feeding movement to the stock.

3,006,005 APPARATUS FOR TRIMMING HEEL TOP LIFTS

John G. Wright, Atlanta, Ga., assignor to The Auto-Soler Company, a corporation of Georgia
Filed Dec. 15, 1959, Ser. No. 859,690
3 Claims. (Cl. 12-85)



1. In apparatus for trimming heel top lifts and the like comprising a work supporting plate with an opening formed therein; and a bracket member at one side of said plate supporting a fixed blade flush with the other side of said plate, and carrying a cutter arm pivoted thereon for cutting action with said fixed blade, and journaling a drive shaft for said cutter arm; the improvement which comprises a diametrically enlarged, symmetrical, end portion on said drive shaft beyond the journal support therefor in said bracket member, an eccentric stub portion extending endwise from said enlarged end portion, and a connecting arm extending between said eccentric stub portion and said cutter arm for pivoting the latter from rotation of said drive shaft, said eccentric stub portion being axially bored and the bore thus formed extending sufficiently into said enlarged end portion to balance the operation of said drive shaft, said connecting arm being formed of a relatively lightweight metal and being fitted on the eccentric stub portion of said drive shaft with an interposed bearing means, said cutter arm being formed with a lateral stub portion on which said connecting arm is fitted with an interposed bearing means, and said cutter arm being additionally formed with a lateral boss for boring to provide an extended bearing at the pivot axis of said cutter arm on said bracket member.

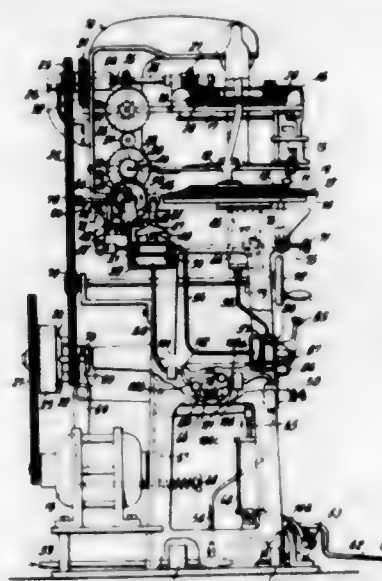
3,006,006 SOLE CUTTING MACHINE

Herbert R. Polleys, New Haven, Conn., assignor to Wellman Company, Medford, Mass., a corporation of Maine

Filed Sept. 22, 1960, Ser. No. 57,689
2 Claims. (Cl. 12-86.6)

1. A machine for cutting a pattern from a slab of rubber comprising a templet having a contour defining the desired pattern, means mounting said templet in a horizontal plane, a cutting knife adapted to cut said stock, means for driving said knife in circuit about the periphery of the templet, a clamping table comprising a cutting pad on the top surface thereof and adapted to receive the slab of uncut stock, means to move said table upwardly and downwardly to place the uncut stock in the path of the cutting knife as it is driven about its circuit including a table lift having a cylinder and piston, said piston being actuated by fluid pressure, a first valve means to control the flow of fluid to said cylinder and

having an outlet connected to said cylinder and having an inlet, second valve means having a normally closed inlet means, a normally open outlet means and normally open exhaust means, said second valve means having plunger means to open said normally closed inlet means and close said normally open exhaust means, a first conduit means coupling the inlet of said first valve means and the outlet of said second valve means, a second conduit means coupled to the inlet of said second valve means, whereby the said second conduit means may couple a source of pressurized fluid to the inlet of said second valve means, a second fluid actuated cylinder having a second piston, a third valve means having a



normally open exhaust means, an outlet and normally closed inlet means, a third conduit means coupling the outlet of said third valve means to said second cylinder, a fourth conduit means coupled to the inlet means of said third valve means, whereby said fourth conduit means may couple a source of pressurized fluid to the inlet of said third valve means, movable means having an actuating element to open the inlet means and close the exhaust means of said third valve, whereby said second cylinder may be actuated to move said second piston, means responsive to the movement of said second piston to move said plunger means to open said normally closed inlet means and close said normally open exhaust means of said second valve means.

3,006,007 SHOE LAST

Walter G. Kotyk, 2131A E. Prairie, St. Louis, Mo.
Filed Mar. 17, 1960, Ser. No. 15,620
10 Claims. (Cl. 12-136)

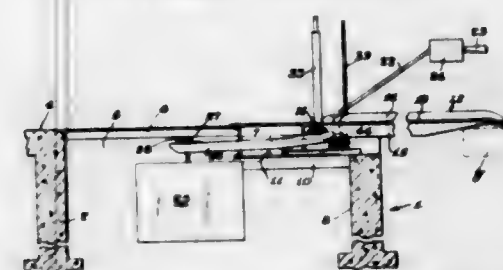


1. A shoe last having a reinforced toe portion comprising a first member extending from the tip of the toe portion to adjacent the joint portion of the last at an angle upward from the sole of the last, means for preventing rotational movement of said first member, and a second member extending from the sole of the last at a point

closely adjacent the tip of the toe portion of the last into said first member, said first member being composed of a material having a hardness greater than that of wood and said second member being composed of a material adapted to receive tacks therein.

3,006,008 DOCK BOARD CONSTRUCTION USED AS SELF ADJUSTING BRIDGE BETWEEN TRUCK AND DOCK

Martin Loomis, Clare, and Leon M. Abbott, Sanford, Mich., assignors to Loomis Machine Company, Clare, Mich., a corporation of Michigan
Filed Oct. 12, 1956, Ser. No. 615,570
5 Claims. (Cl. 14-71)

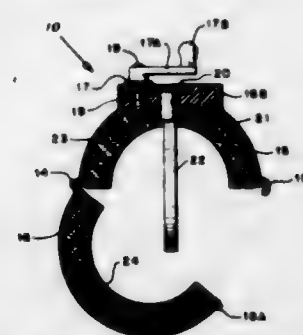


1. In combination, a support; a ramp member having a forward end and a rearward end and adapted to bridge a gap between said support and a vehicle to be loaded or unloaded; means pivotally mounting said ramp member at its rearward end for swinging movements from a lowered position to a raised position, and return, and for side to side movements relative to said support; a supporting member supporting said mounting means on said support for movements of said supporting member relative to said support fore and aft of said ramp member; and shifting lever means operatively connected to one of said members for imparting fore and aft movements thereto.

3,006,009 PORTABLE ROTARY GOLF BALL CLEANER

Beecher I. Hoffecker, 51 Weather Vane Road, Ridley Park, Pa.

Filed Feb. 18, 1959, Ser. No. 794,022
7 Claims. (Cl. 15-97)



1. A portable rotary golf ball cleaner comprising a hinged openable substantially spherical case having latching means, a holding means inside said case and adapted to firmly grip a golf ball inserted therein, said holding means being rotatable relative to said case, resilient cleaning material lining the inside of said case and contacting a golf ball when said ball is in said holding means, and means to rotate said holding means from outside said case.

3,006,010 CLEANSING PAD HOLDER

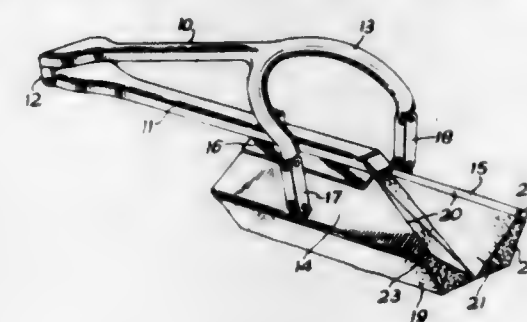
Henry Clare Ashley O'Rourke, 27 St. Leonards Terrace, London SW. 3, England

Filed Oct. 5, 1959, Ser. No. 844,357
Claims priority, application Great Britain Oct. 16, 1958
2 Claims. (Cl. 15-119)

1. A cleansing pad holder comprising a hand-grip including two relatively movable actuating members com-

771 O.G.—76

prising two arms, hinge means connecting said two arms together at one end of the arms, two opposed compressor members between which a cleansing pad is to be supported, means hingedly mounting said compressor members at the free end of one of said actuating arms for movement towards and away from each other, stirrup

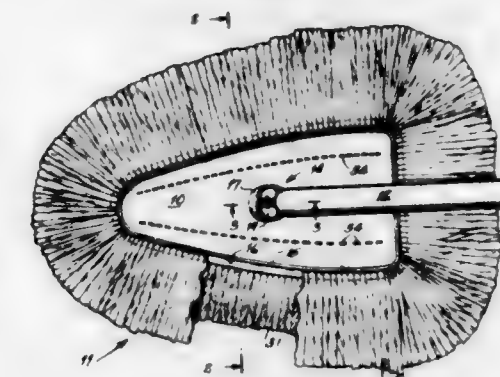


means supported at its mid portion upon the free end of the other of said actuating arms, the ends of said stirrup means being disposed upon opposite sides of said compressor members at least in certain positions of said compressor members, and a hinged link coupling each end of said stirrup means to the compressor member nearer thereto.

3,006,011 DUSTING MOP

Louis A. Littleton, Davis and Trenton Aves., Point Pleasant, N.J.

Filed Aug. 18, 1958, Ser. No. 755,706
1 Claim. (Cl. 15-229)



A mop head comprising a base plate constructed of a semi-rigid moldable plastic resin and integrally formed with a generally centrally located socket on the top side thereof for universally receiving a joint element on a mop handle, said base plate and socket walls being of substantially the same thickness, mop structure, and stitching securing said mop structure to said base plate to provide a unitary, disposable mop head, said base plate having a rib on the top side adjacently spaced of the edges of the base plate and said mop structure being secured by stitching outwardly of said rib.

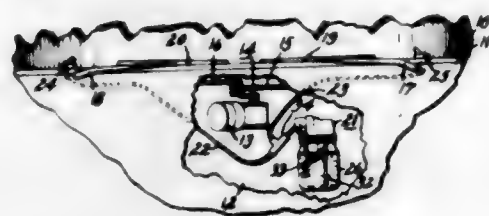
3,006,012 WINDSHIELD CLEANING SYSTEM

Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 25, 1957, Ser. No. 698,504
19 Claims. (Cl. 15-250.02)

1. A windshield cleaning system including, a wiper unit, a first motor for operating the wiper unit, a washer unit, a second motor for operating the washer unit, means to set both units in operation conjointly, and programming means for continuing conjoint operation of said units for a first predetermined number of revolutions of said

second motor, said programing means continuing operation of said wiper unit for a second predetermined number of revolutions of said second motor after said washer unit has stopped.



ber of revolutions of said second motor after said washer unit has stopped.

3,006,013
APPARATUS FOR AUTOMATICALLY ACTUATING AND STOPPING A WIPER OR WIPERS FOR VEHICLES

Masumi Kato, Toyoake-cho, Aichi-gun, Aichi-ken, Japan, assignor to Nippon Denso Kabushiki Kaisha, Kariya-shi, Aichi-ken, Japan

Filed Feb. 26, 1959, Ser. No. 795,785
Claims priority, application Japan Oct. 13, 1958
7 Claims. (Cl. 15-250.17)

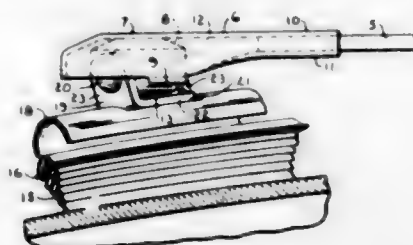


1. An apparatus for automatically actuating and stopping a wiper or wipers for vehicles, comprising a linkage mechanism, an electric motor for connection to an electric source, at least one wiper to be swung reciprocatingly by said electric motor through said linkage mechanism, at least one electric circuit including said electric motor by opening of which circuits said wiper is able to be stopped automatically in a determined position, and which is adapted to be opened completely in two steps of switching operation, an electric means inserted into said circuit and adapted to be actuated only in time interval between said two steps, and a mechanical deformation means inserted into said linkage mechanism and adapted to be actuated by said electric means, said mechanical deformation means being adapted to shift and stop the wiper into a predetermined position beyond a required wiping range and to open said electric circuit completely, said linkage mechanism having four pivot elements of which three pivot elements are included in said deformation means, only two of said pivot elements including one in said deformation means being rotary during normal wiping action, the other two being non-rotary during normal wiping action and rotary during shifting of the wiper into said predetermined position.

3,006,014
WINDSHIELD WIPER UNIT AND WIPER BLADE UNIT ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Mar. 25, 1957, Ser. No. 648,208
11 Claims. (Cl. 15-250.33)

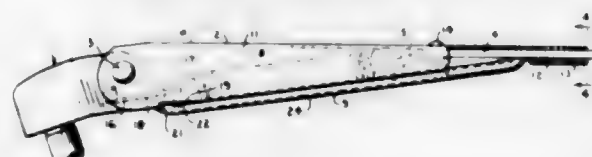
1. In combination: a spring-urged windshield wiper arm unit provided with a support and a wiper blade unit provided with a support, a nonmetallic bearing carried by one support, and pivot means carried by the other

support operatively connected to the bearing and having an axis disposed at an oblique angle with respect to the



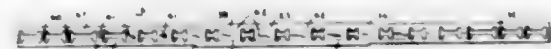
longitudinal axis of the blade unit in a plane normal to the direction of pressure exerted by the arm.

3,006,015
WINDSHIELD WIPER ARM STRUCTURE
Steve Zury, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Sept. 15, 1958, Ser. No. 761,152
5 Claims. (Cl. 15-250.35)



1. A channel member for use as a component in a windshield wiper arm, said member having marginal edge portions, at least one of which is interrupted to provide a dovetail recess, a cover for the channel member having a portion disposed in the recess, and means remote from the recess for fastening the cover to the member for locking the portion under stress in the recess.

3,006,016
WINDSHIELD WIPER BLADE
John W. Anderson, 578 Broadway, Gary, Ind.
Filed Mar. 7, 1958, Ser. No. 719,969
9 Claims. (Cl. 15-250.36)

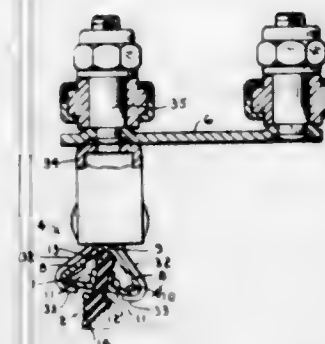


1. A flexible backing member for supporting the wiping element of a windshield wiper blade for curved windshields, said backing member being of a thickness equal to a minimum thickness required to provide the maximum of flexibility desirable for at least one longitudinal part of one portion of said backing member, and longitudinally spaced apart means of various sizes carried by another longitudinal portion of said backing member for producing a greater resistance to flexure throughout that portion of the backing member.

3,006,017
WINDSHIELD WIPER BLADE
Fred A. Krohm, Hobart, and Stanley L. Okleja, Gary, Ind., assignors to The Anderson Company, a corporation of Indiana
Filed Dec. 30, 1957, Ser. No. 705,870
8 Claims. (Cl. 15-250.37)

2. An elongate rigid member for a resilient windshield wiper element, said member being formed to include a pair of connected converging side walls, a pair of substantially coplanar bottom walls joined to the side walls to define a support which is substantially triangular in cross section, and a pair of upturned walls joined to the bottom walls and extending upwardly between the side

walls for supporting a resilient wiper element, and a connector carried by said member for attaching the latter to a wiper arm, said connector comprising a pair of



sloping walls engaging said converging side walls and a pair of intumed portions engaging said bottom walls for locking the connector to said member.

3,006,018
WINDSHIELD WIPER
Leo Golub, 45 Ruby Ave., Marblehead, Mass., and Max Zaiger, 49 Atlantic, Swampscott, Mass.
Filed Sept. 26, 1958, Ser. No. 763,703
12 Claims. (Cl. 15-250.42)



1. A windshield wiper blade assembly comprising a flat, multi-leaf, backing spring, a squeegee wiper blade carried by the spring, extending from end to end thereof, a stiff bridge member anchored at each end on the spring, at points spaced from the ends thereof, means for connecting the bridge to a windshield wiper arm, one leaf of the spring being inflexible adjacent each end and flexible between the inflexible ends.

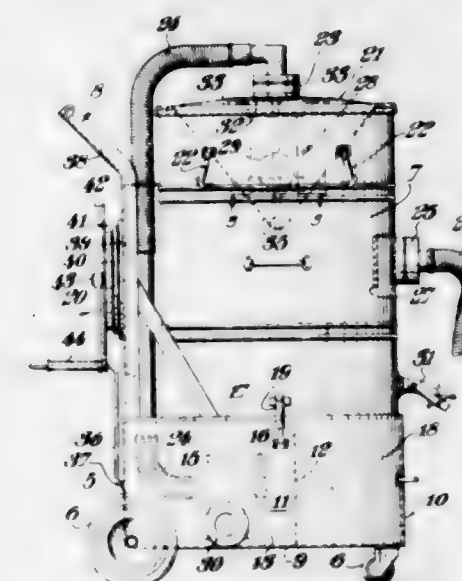
3,006,019
OVERHEAD ILLUMINATOR GRIDS
Charles U. Denton, 805 Central Bank Bldg., Denver 2, Colo.
Filed July 20, 1956, Ser. No. 599,169
7 Claims. (Cl. 15-268)



3. The combination with a light ray baffle comprising a frame adapted for mounting to a rigid object, a rod-like element removably mounted on said frame, and a plurality of thin panels of substantially identical shape mounted in spaced relation upon said rod-like element, each of said panels being mutually orthogonal to its adjacent panels and substantially half of said panels being

in substantial parallelism with the longitudinal axis of said rod-like element, the other half of said panels being substantially perpendicular to the longitudinal axis of said rod-like element, said panels which are perpendicular to said rod-like element being mounted thereon by a plurality of spring clips, said spring clips being provided with means for aligning the panels which are perpendicular to said rod-like element into parallel relationship therewith, said panels being provided along their lower margins with notches, of a tub means for washing said panels while mounted on the rod-like element, said tub means having an inclined plate in the upper portion thereof, said plate having means sized and located to engage the notches for supporting the rod-like element and panels associated therewith so that the latter may be conveniently washed and cleaned.

3,006,020
SUCTION CLEANING MACHINES
Gordon Thomas Fillery, 590/594 Wandsworth Road, London SW. 8, England
Filed Mar. 2, 1960, Ser. No. 12,318
Claims priority, application Great Britain Mar. 12, 1959
1 Claim. (Cl. 15-323)

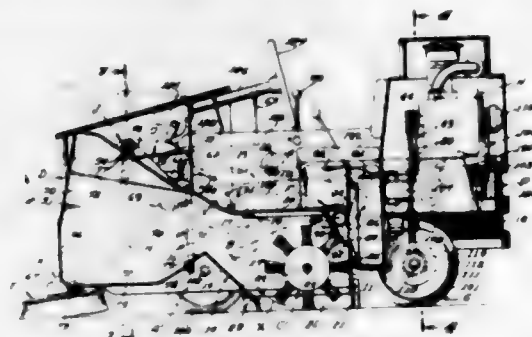


A suction cleaning machine comprising a wheel carriage, a closed compartment within the carriage, an electric motor and a suction fan driven by the motor both within the compartment, a removable bin upon the wheel carriage and overlying the motor fan compartment, a suction hose extending from the fan, a connector at the top of the bin for removably coupling the suction hose to the bin, a connector at the side of the bin for a dirt pick-up hose, a cable winding device carried by the carriage for coiling a length of electric cable from the electric motor for connection to a power point, said cable winding device comprising a non-rotatable spool, a tubular guide for said cable having a hand-grip portion, and means mounting said guide for rotation about the axis of said spool with one end of the guide positioned radially beyond the periphery of the spool and in the plane of one side of the spool, a frame suspended within the top part of the bin to carry a filter material for preventing escape of dirt through the suction connector, a float within the filter frame and means for guiding the float to close the connector at the top of the bin.

3,006,021
POWER DRIVEN STREET SWEEPER
Philip G. Patch, Pasadena, Calif. (% Kase & Associates, 3540 Wilshire Bldg., Los Angeles 5, Calif.)
Filed Dec. 30, 1957, Ser. No. 706,163
9 Claims. (Cl. 15-340)

1. A sweeper construction of the character referred to including, an elongate frame having laterally spaced, ver-

tically disposed sides, longitudinally spaced, vertically disposed front and rear bulkheads extending between the sides, a deck extending between the sides and the bulkheads and spaced from the bottom of the frame and a broom arch extending between the sides and spaced below the forward bulkhead, said frame defining a downwardly opening broom chamber with a forwardly disposed discharge opening intermediate its ends, wheeled supporting means for the frame, a prime mover carried by the frame and operatively coupled with the supporting means, an elongate spool-type broom positioned within the chamber to extend transversely thereof and engageable on the surface over which the sweeper is operated, mounting means pivotally supporting the broom from the frame, a rearwardly opening hopper pivotally carried by the frame at the forward end thereof to normally occur in open communication with the chamber and to collect material swept



through the discharge opening of the chamber by the broom, and drive means for the broom and connected with the prime mover, said broom having an elongate axle member projecting from the opposite ends thereof and through openings in the sides of the frame, said mounting means including, an elongate, downwardly and rearwardly inclined arm at each side of the frame, the upper forward end of each arm being pivotally mounted on the frame, the lower rear end of each arm rotatably supporting the end of the broom axle related thereto, and a double acting shock absorber fixed to and extending between each arm and the adjacent side of the frame, said drive means including a counter-shaft carried by the frame spaced forward and above the axis of the broom and in axial alignment with the pivotal axes of the arms, a manually releasable belt and pulley drive between the prime mover and the counter-shaft and a chain and sprocket drive between said counter-shaft and the broom axle.

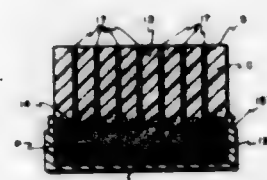
3,006,022
VACUUM CLEANER WAND HEAD
Vladimir A. Mamontov, 231 1/2 Lobos Ave.,
Pacific Grove, Calif.
Filed Aug. 10, 1959, Ser. No. 832,727
3 Claims. (Cl. 15-364)



1. A suction wand head, having: a tubular handle, a head, as part of the head thereof, an elongated beater

casing secured to an end of and with its elongation transverse said handle, a beater reel rotatably mounted in said casing and coextensive with the elongation thereof, said casing having formed therein a rectangular air opening whose length is substantially coextensive with said reel and casing elongations, said handle and said casing being so connected that air may flow in said opening, thru said casing, and then into and thru said handle; an air driven axial flow fan motor mounted in said handle with its axis coaxial of the axis of said tubular handle; means connecting said fan to said reel whereby rotation of said fan will rotatably drive said reel, said motor being driven by the flow of such air thru said handle; said reel having a shaft for so mounting said reel, loops along and extending radially of said shaft, and loosely threaded on each of said loops an annulus adapted to act as a swingle, said reel, loops, and annuli being so proportioned that portions of each annulus, upon rotation of said reel, are extensible thru said casing air opening a particular radial distance related to said reel, and each said annulus being loose enough on its said loop so that it may move radially thereof at least said particular radial distance; and secured to said casing a shelf surrounding said opening and in the plane thereof, and ribs formed in the face of said shelf which is away from said casing, said ribs being at an acute angle to the direction of elongation of said casing and coextensive with one edge of said shelf.

3,006,023
COMBINATION DAUBING AND POLISHING DEVICE
Samuel L. Worthington, 1621 Fuller Drive,
Salt Lake City, Utah
Filed Apr. 21, 1960, Ser. No. 23,774
9 Claims. (Cl. 15-506)

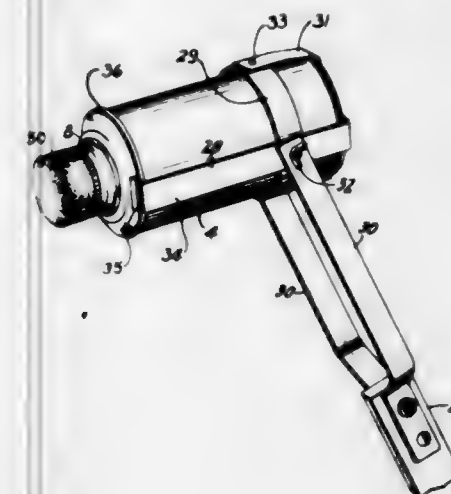


1. A combination daubing and polishing device having a single working surface, said device including, in combination, a cup-shaped container; a resilient, cellular member having a polish storage portion, pre-impregnated with a temporarily liquified, paste polish, disposed within said container and a polish conducting portion contiguous with said polish storage portion and extending outwardly therefrom beyond said container to terminate in a combination, daubing and polishing, work surface; and a cap releasably engaging said container, co-operating therewith to encase said resilient, cellular member, said resilient, cellular member being provided with at least one pin-hole aperture extending from said work surface into said polish storage portion of said resilient cellular member.

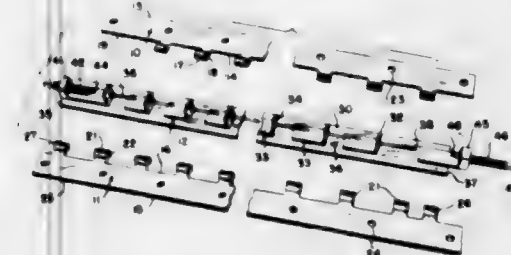
3,006,024
MARKING DEVICE
Evan S. Nelson and Charles J. Nelson, Iron Mountain, Mich., assignors to The Nelson Company, Iron Mountain, Mich.
Filed May 27, 1957, Ser. No. 661,955
7 Claims. (Cl. 15-565)

1. A paint hammer including an elongated container having a protruding neck of reduced diameter at its top end, a screw-type cap on the neck of the container having an opening therein, a felt pad extending over the opening in said cap and secured to the perimeter of the top of the cap, the entire thickness of said felt pad projecting above the top of said cap, said felt pad having a well opening therein in the face thereof adjacent to the opening

in said cap, said felt pad having capillary passages extending radially out from the well through the wall of the pad surrounding said well and generally parallel with



3,006,025
DISCONNECT HINGE APPARATUS
Anthony J. Duban, Fort Worth, Tex., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Aug. 4, 1959, Ser. No. 831,645
15 Claims. (Cl. 16-176)

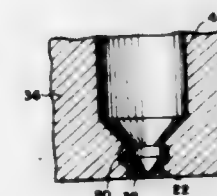


1. Disconnect hinge apparatus comprising first and second hinge plates and a strap member, said strap member having a plurality of hinge pins spaced apart from each other and each being aligned and pointed in substantially the same direction as adjacent hinge pins, said hinge pins being positioned between the lateral edges of said strap member, each said hinge plate having a plurality of hinge nodes adapted to fit on said plurality of hinge pins, each of said hinge pins accommodating a first plate hinge node and a second plate hinge node, and said hinge pins being of a length to completely project through said hinge nodes of said first and second hinge plates.

3,006,026
SPINNERET WITH ORIFICE INSERT
Wilhelm Martin and Wilhelm Heynen, Grebber, Germany, assignors to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany
Filed Feb. 28, 1958, Ser. No. 718,202
Claims priority, application Germany Mar. 2, 1957
4 Claims. (Cl. 18-8)

1. A spinnerette having an apertured spinning face, the walls of each of the apertures in said face defining a plurality of cylindrical cavities of progressively decreasing diameter in a given direction, and hollow inserts mounted in said apertures, said inserts having a spinning orifice in one end thereof and the other end thereof having an opening of greater diameter than said spinning orifice, the outer surface of said inserts being in the form

of a slightly tapered, substantially cylindrical section at the end adjacent said last-mentioned opening with the largest diameter of the taper at said end and a cylindrical portion at the end adjacent said spinning orifice, said cylindrical portion having a slightly smaller diameter than the cylindrical cavity of the smallest diameter and being posi-



tioned therein in coaxial relationship, the slightly tapered, substantially cylindrical section being press-fitted in a second hollow cavity adjacent the cavity of smallest diameter in tight frictional engagement with the walls thereof, the smallest diameter of said tapered section being slightly smaller than the diameter of said second hollow cavity.

3,006,027
METHOD AND APPARATUS FOR SPINNING AND STRETCHING VISCOSE RAYON
Friedrich Hildebrandt, Kassel-Bettenhausen, and Heinz Hose, Kassel-Ndzw., Germany, assignors to Spinnfaser Aktiengesellschaft, Kassel-Bettenhausen, Germany
Filed June 27, 1958, Ser. No. 744,960
3 Claims. (Cl. 18-8)

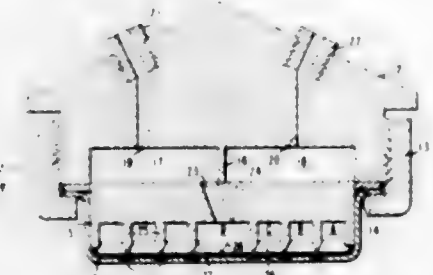


1. In a combination of apparatus for the production of viscose rayon requiring two separate baths for stretching and regenerating cellulose filaments from a viscose spinning solution, the improvement which comprises: means to extrude a plurality of filaments of viscose into a first acid coagulating bath; guide means to collect said plurality of filaments into a wide band of closely associated filaments; a feed roll means and a guide roll means arranged vertically with respect to each other which engage and vertically transport and stretch said filaments in a wide band; at least one pair of oppositely disposed spray nozzles arranged near the top of said wide band between said feed and draw roll means, said nozzles being located to spray a hot bath liquid against said wide band of filaments so that the bath liquid flows downwardly on the filaments; and means to collect the bath liquid near the lower end of said wide band between said feed and draw roll means.

3,006,028 SPINNING APPARATUS

James J. Calhoun, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 25, 1959, Ser. No. 815,705
8 Claims. (Cl. 18-8)



1. In apparatus for producing composite fibers comprising means for forwarding a plurality of fiber-forming materials to a spinning head and means for maintaining a separation of said materials to a point adjacent the inlet side of the orifices of a spinneret, the improvement which comprises a spinneret containing a plurality of spaced cylindrical orifices having an elongated cavity surrounding the inlet side of each orifice, each orifice being centered in the base of said elongated cavity, said elongated cavity having its major dimension in a plane essentially parallel to the surface of the inlet side of said spinneret with said separation means bisecting the major dimension of said elongated cavity to provide separate zones at each side of said orifice.

3,006,029 EXTRUDER MIXING SCREW

Ronald Luther Saxton, Yorklyn, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 13, 1958, Ser. No. 773,746
5 Claims. (Cl. 18-12)



1. An improved extruding device which comprises a mixing screw of novel geometrical design; said mixing screw being rotatable with a stationary cylindrical barrel receiving and discharging a plasticated thermoplastic material; said screw comprising a plurality of minor flights and minor channels being helically disposed at a helix angle of from 10°-90°; said minor channels having a width as measured at the outside surface of said screw of 0.1-0.9 times the outside diameter of said screw; and having a depth as measured on a radial line from the axis of said screw of 0.05-0.30 times the outside diameter of said screw; said minor flights and minor channels being interrupted by major channels which are helically disposed at a helix angle of from 10°-70° and each having a width as measured at the outside surface of said screw of from

$$\frac{0.1}{N} \text{ to } \frac{0.9}{N}$$

times the diameter of said screw, where N is the number of said major channels, and having a depth as measured on a radial line from the axis of said screw of 0.05-0.3 times the outside diameter of said screw wherein the number obtained by multiplying the width of the interrupting channel in inches and the cosine of the helix angle of the interrupting channel is less than the number obtained by multiplying the circumference of the mixing screw in inches and the tangent of the helix angle of the interrupting channel.

3,006,030 MANUFACTURE OF THREADED PLASTIC NIPPLES

Ambrose D. Paull, Wheeling, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a corporation of West Virginia

Filed Mar. 31, 1955, Ser. No. 498,139
2 Claims. (Cl. 18-16.5)



2. Apparatus for molding an externally-threaded tubular plastic nipple, the nipple having an edge-knurled flange at one end, a passage of decreasing diameter there-through with the larger diameter at the flanged end and with external threads on the nipple intermediate the flange and the other end of the nipple and spaced from said other end, the nipple thus having an unthreaded extension between the threads and said other end, said apparatus comprising a fixed cavity member the cavity of which is shaped to the exterior shape of the finished piece and which has an enlarged plastic-receiving force-guiding portion in its upper end, a flange-forming recess below said enlarged portion the peripheral walls of which are serrated and a tube-forming projection of lesser diameter projecting downwardly from the flange-forming recess, the said tube-forming projection having internal threads intermediate the top and bottom ends thereof, a pin having a sliding fit in the lower end of the tube-forming section of said cavity, said pin having a central projection with an annular shoulder at its base, the pin being of a length to extend into the finished piece in the mold a distance not exceeding the length of the unthreaded end portion of the molded nipple, a force positioned above the cavity in axial alignment with said pin, said force having a central projection of upwardly-increasing diameter, a shoulder at the base of said projection of a diameter to have a working fit in the flange-forming recess of the cavity, the force having an enlarged portion above said last-named portion having a sliding fit in the top of the force-guiding recess in the cavity member, the length of the projection on the force corresponding to the length of the opening through the finished piece from the outer end face of the flange to the beginning of said unthreaded other end of the finished piece, said force being movable from a position where the projection thereon contacts the projection on the said pin to a position where it is entirely clear of the cavity, the said pin being slidable in the cavity member from a lower level where it is positioned during molding to a position above the top of the cavity member.

3,006,031 APPARATUS FOR MAKING VENETIAN BLIND SLATS

Jay Leon Friedman, New York, N.Y., assignor to Aircraft Venetian Blind Manufacturing Company, St. Louis, Mo., a corporation of Missouri

Filed Mar. 13, 1952, Ser. No. 276,269
4 Claims. (Cl. 18-19)

1. A machine for making thin, narrow, elongated, transversely bowed, plastic slats of thermoplastic strip material suitable for use in Venetian blinds or like articles, comprising: means to draw a strip of stiff but flexible molecularly oriented thermoplastic material in an axial direction and to feed it lengthwise through heating means and forming means to be defined herein; a heating means for the strip, located in the path of its feed, said heating means

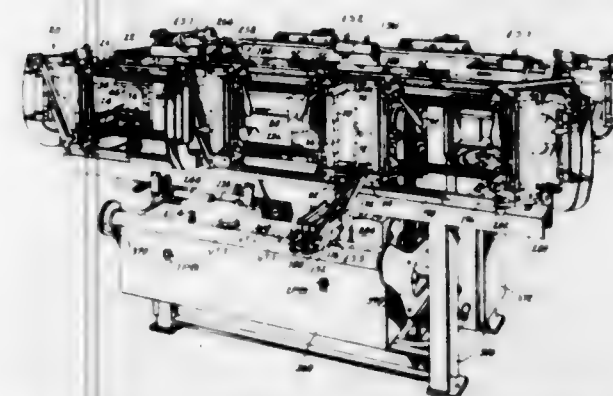
being adapted to raise the temperature of the strip to a degree enabling it to be given a permanent non-planar cross sectional shape but not high enough to destroy its molecular orientation or to render it flaccid; a forming means in the path of the feed into which the strip is fed from the forming means comprising opposed, elongated, lateral, edge-confining forming members on opposite sides of the strip path, each being shaped in the form of an angle with the apex of its inner side adapted to engage the edge of the strip, with one side below the edge of the strip and the other side diverging upwardly from the top of the strip, the members facing one another so that they to-



gether provide a groove through which the strip must pass, the forming members having their entrance ends spaced apart sufficiently to freely receive the strip, but having the lateral space between their edge engaging inner corners thereafter reduced so that the width of the groove is less than the width of the strip, to bow the strip transversely and to give it a non-planar cross section but not to bend it into a sharp corner, the forming means having a length, in the direction of travel of the strip, sufficiently great to form the warm strip, and having an additional length sufficiently great to hold the edges of the strip in confinement and the strip bowed, so as to enable the material to set in its non-planar shape.

3,006,032
PLASTIC INJECTION MOLDING MACHINES
Willard L. Baker, Ipswich, Loring J. Berggren, Beverly, Donald B. McIlvin, Danvers, and Frank W. Spencer, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

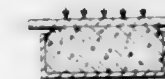
Filed Aug. 5, 1958, Ser. No. 753,228
6 Claims. (Cl. 18-30)



1. In a plastic injection molding machine having means including a piston and an injection nozzle for charging a mold cavity with fluid material, the combination of a carrier for mounting any one of a plurality of mold assemblies, a power operated conveyor for advancing the carrier from a loading station to an injection station, a pair of carrier positioning levers fulcrumed for opposite movement to position the mold assembly on the carrier in confronting relation to the injection nozzle while spaced

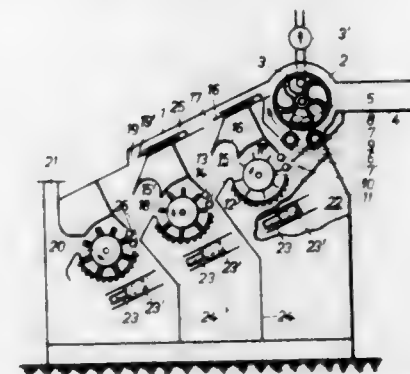
therefrom, a pair of abutment members for determining the operating position of said levers, respectively, means operating upon the completion of the positioning movement of said levers to cause the carrier to swing on a horizontal axis thereby to bring the mold assembly thereon into communication with the injection nozzle, and means operating upon the completion of such swinging movement of the carrier for causing the piston to inject a charge of fluid material into the mold cavity.

3,006,033
PROCESS FOR PREPARING A MOLDED CELLULAR ARTICLE
Roger E. Knox, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,502
5 Claims. (Cl. 18-48)



1. A process for preparing a molded cellular polyurethane article which comprises introducing into the cavity of a rigid mold a foamable polyurethane composition which is permitted to expand upward therein, employing a cover-plate for said mold which cover-plate uniformly rises in a substantially vertical direction when contacted by said expanding foamable composition, said cover-plate exerting a compressive pressure over substantially the entire surface of said expanding foamable composition, said compressive pressure being from about 10 to 90 percent of the maximum upward pressure exerted by said expanding foamable composition, immobilizing said cover-plate after said foamable composition has fully expanded and occupies from about 1.005 to 1.5 times the volume of the mold, applying sufficient pressure on said foam with the cover-plate when the foam has become tack-free to cause the foam, while still plastic, to conform to the dimensions defined by the cavity of said mold and the underside of said cover-plate, allowing said compressed foam to become non-plastic, removing said cover-plate and stripping said foam from the mold.

3,006,034
CASCADE CLEANER FOR FIBROUS MATERIAL
Arthur Würmli, Winterthur, Switzerland, assignor to Actiengesellschaft Joh. Jacob Rieter & Cie, Winterthur, Switzerland, a corporation of Switzerland
Filed Sept. 14, 1959, Ser. No. 839,679
Claims priority, application Switzerland Sept. 19, 1958
4 Claims. (Cl. 19-93)



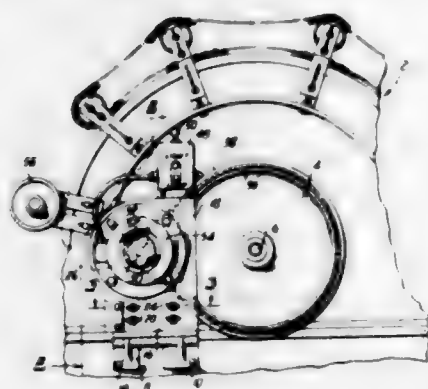
1. Cascade cleaner for fibrous material, comprising a casing, a suction chamber formed in said casing for receiving the material to be cleaned, an endless perforated revolving conveyor means placed in said suction chamber and having an outside surface for supporting the fibrous

material, means for maintaining a lower pressure on the inside of said conveyor means than on the outside thereof, means for removing the fibrous material from the outside surface of said conveyor means, a plurality of scutchers, a compartment formed in said casing for each of said scutchers for receiving the fibers thrown out by said scutchers, the compartment of a first one of said scutchers communicating with said suction chamber for receiving fibrous material to be cleaned therefrom, the compartment of said first scutcher communicating with the compartment of the second scutcher and so on for allowing consecutive movement of the material to be cleaned by said scutchers through said compartments, and duct means connecting at least one of said compartments with the portion of said suction chamber which portion is adjacent to the run of said conveyor means downstream of said means for removing the fibrous material from said conveyor.

3,006,035

COTTON CARDING MACHINE

Josef K. Gunter, 303 E. Trinity Ave., Durham, N.C.
Filed Sept. 19, 1960, Ser. No. 56,865
3 Claims. (Cl. 19—98)



1. A drive for a machine having a relatively large driven pulley for actuating said machine at one end thereof, said driven pulley having a smooth peripheral belt-engaging surface; said drive comprising a bracket adjacent said pulley, an electric motor mounted on said bracket and having a relatively small driving pulley thereon in radial alignment with said driven pulley, an integral endless driving belt of flexible elastomeric material trained around said driving and driven pulleys, said belt and said driving pulley having interengaging transverse ribs so that said motor positively drives said belt without slippage and wherein only the crests of said ribs bear on said surface of said driven pulley whereby said belt may slip on only the smooth peripheral surface of said driven pulley, upon starting said machine, to smoothly accelerate said driven pulley with said electric motor running at substantially full speed.

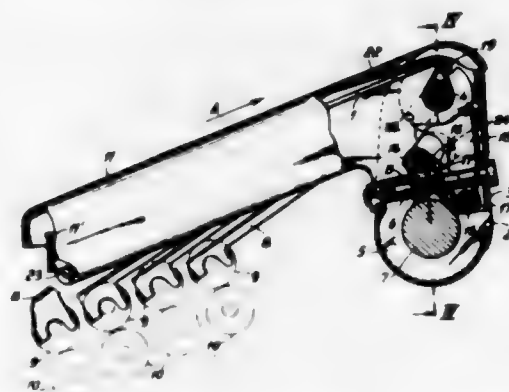
3,006,036

TEXTILE DRAWING MECHANISM

Kurt Schrotz, Fellbach, Baden-Württemberg, Germany, assignor to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung, Schweinfurt, Germany, a company of Germany
Filed Oct. 13, 1958, Ser. No. 766,974
Claims priority, application Germany Oct. 24, 1957
10 Claims. (Cl. 19—135)

1. A textile drawing mechanism; comprising a fixed support; a top roll carrying and weighting arm pivotally mounted on said support for swinging between a lowered operative position and a raised inoperative position; a locking device for releasably retaining said arm in said operative position including keeper means on said arm, and latch means pivoted on said fixed support and moved into locking engagement with said keeper means when said arm is in said operative position; and operating means

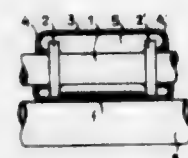
movably mounted on said support to act against said latch means for pivoting the latter out of locking engagement



3,006,037

RESILIENT TOP ROLL AND NIPPERS FOR DRAWING FRAMES OF SPINNING MACHINES

Aroldo Roberto Bettolo, Novara, Italy, assignor to S.p.A. Officina Meccanica Sant'Andrea Novara, Novara, Italy
Filed Apr. 21, 1958, Ser. No. 729,604
Claims priority, application Italy Apr. 29, 1957
4 Claims. (Cl. 19—142)



1. In a drafting apparatus for drafting sliver and the like, in combination, a pair of elongated members at least one of which comprises a roll, said members having in operation relatively moving peripheral surfaces co-operative in forming in operation a drafting zone between them, said members being disposed parallel and radially disposed relative to one another, said roll having a core provided with axially spaced collars fixed thereon for rotation therewith, a resilient sleeve disposed extending axially over said core for rotation with said roll with opposite ends disposed axially outwardly of the collars, said sleeve having an inner diameter greater than the diameter of said collars and portions thereof radially adjacent said collars radially spaced from said collars, and in operation said collars being disposed relative the other of said elongated members in position for bearing on corresponding portions of the sleeve radially adjacent thereof and causing said portions to bear on said other member thereby defining the width of the drafting zone along an axial length of the members intermediate the collars.

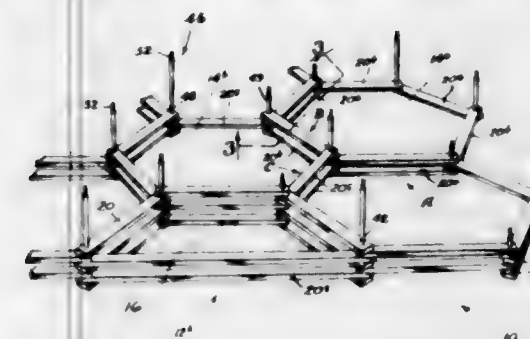
3,006,038

BIN CONSTRUCTION

Paul J. Sullivan, Jr., Portland, Oreg., assignor to Blue Line Exchange, Portland, Oreg., a corporation of Oregon
Filed Apr. 6, 1959, Ser. No. 804,452
8 Claims. (Cl. 20—1.2)

1. A grain storage bin comprising a honeycomb structure defining a plurality of vertically disposed cells of hexagonal horizontal section, said structure having walls comprising first, second, and third vertical stacks of spaced, elongated flat slats of equal width and thickness and lying flatwise in horizontal planes, the slats in each of said stacks overlapping and joining at their ends with slats of both of the other stacks to bound said hexagonal cells, each slat in a vertical stack being spaced vertically

from adjacent slats in the same stack a distance equal to double the thickness of each slat by reason of the over-



lapping of slats of the other stacks and separated from such adjacent slats by a void.

3,006,039

CONCEALED DOOR HINGE

Robert Brydolf, Pasadena, Calif., assignor, by mesne assignments, to M & H Industries, Anaheim, Calif., a corporation of California
Filed Aug. 1, 1958, Ser. No. 752,566
2 Claims. (Cl. 20—16)



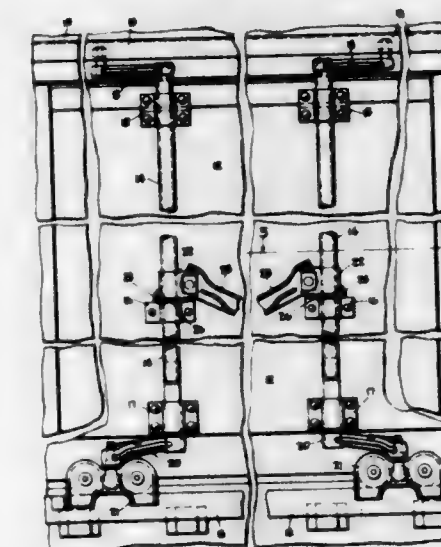
1. In combination with a door frame having an inner frame surface and a door having a central body insertable into said frame adjacent said inner frame surface and having a marginal lip adapted to overlie a front surface of said frame, said door having a rear surface and having in its rear surface and adjacent and perpendicular to one edge of said body a groove extending across said lip into said body, said body having a rear body surface, a sheet metal hinge and fastening means therefor, including: a door leaf comprising a flat door arm positioned in said groove and having adjacent one end thereof a flat door flange perpendicular to said door arm and seated against rear body surface, said door flange having therein door screw openings; door screws extending through said door screw openings and inserted into said rear body surface to fasten said door flange to said rear body surface; a frame leaf comprising a flat, generally L-shaped frame arm parallel to said door arm and insertable into said groove and having adjacent one end thereof a flat frame flange perpendicular to said frame arm and seated against said inner frame surface, said frame flange being disposed between said inner frame surface and said edge of said body when said body is inserted into said frame, said frame flange having therein frame screw openings, said frame arm having adjacent the other end thereof an edge seated against said front surface of said frame and provided with a pointed marking prong extending generally toward said frame flange, but spaced from and parallel to the plane thereof, and inserted into said front surface of said frame; frame screws extending through said frame screw openings and inserted into said inner frame surface to fasten said frame flange to said inner frame surface; and pivot means pivotally interconnecting the other ends of said door and frame arms and providing a pivot axis perpendicular to said door and frame arms and parallel to said door and frame flanges.

771 O.G.—77

3,006,040

LATERALLY MOVABLE DOORS

Thorvald Madland, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 12, 1959, Ser. No. 845,732
6 Claims. (Cl. 20—23)

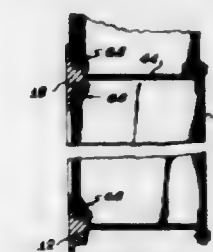


4. In a railway car having a side wall provided with a door opening and a door for closing the door opening, means supporting said door for lateral movement into and out of the door opening and longitudinal movement along the side wall, said means comprising vertical bars provided with cranks at the top and bottom thereof, brackets secured to said door and mounting said bars upon said door for rotation about their axes, and operating levers pivotally supported on said bars for vertical swinging movement, lugs supported upon said bars for rotation therewith, separate stop members on certain of said brackets, said bars being rotatable relative to said stop members, said stop members engaging said lugs and said levers after said door has been moved laterally out of the door opening and said levers are in vertical depending position, and means securing said stop members to said brackets, for the purpose set forth.

3,006,041

KNOCKED-DOWN GLASS-PANEL DOOR

Hans A. Thuet, Long Beach, and Harry S. Stevens, San Pedro, Calif., assignors of one-half to Stevens-Thuet Co., Long Beach, Calif., and one-half to Calcor Corporation, Huntington Park, Calif., both corporations of California
Filed Sept. 2, 1958, Ser. No. 758,246
1 Claim. (Cl. 20—36)



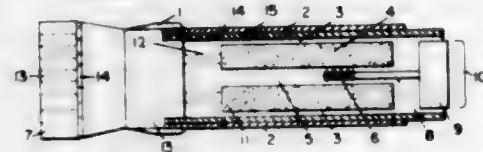
In a knocked-down panel door structure, a frame that receives a plurality of flat panels, comprising: a plurality of horizontal and vertical elongated frame pieces, each of said pieces including a front flange that extends transversely relative to the longitudinal axis of the piece with said front flange having a rearward protrusion at its mid-portion and said protrusion having a pair of rearwardly extending parallel walls that merge at their rear ends into a pair of rearwardly and inwardly extending inclined walls, said protrusion being formed along its length with

a pair of forwardly and inwardly extending, serrated continuous thread grooves which are normal to said inclined walls, said pieces further including a rearwardly extending web integral with said protrusion and a rear reinforcing flange on the rear of said web; clip means rigidly interconnecting the webs of said pieces whereby they collectively define a plurality of spaces receiving said panels; a plurality of V-shaped elongated sash angles, each of said sash angles having a first leg that abuts the rear edge of one of said panels to retain said edge against the rear of one of said front flanges, and a second leg formed with a plurality of longitudinally spaced apertures aligned with one of the continuous thread grooves of said front flange, said second leg abutting one of the inclined walls of said front flange; an elongated generally U-shaped weatherstripping seal carried by the edges of each of said panels and interposed between the rear surface of each of said front flanges outwardly of its protrusion and the front surface of the first leg of each of said sash angles; and fastener means extending through said apertures into said grooves.

3,006,042

AUTO AIR FRESHENER

Fred M. Calandra, 390 Ontario St., Buffalo 7, N.Y.
Filed May 27, 1959, Ser. No. 816,317
6 Claims. (Cl. 21-119)



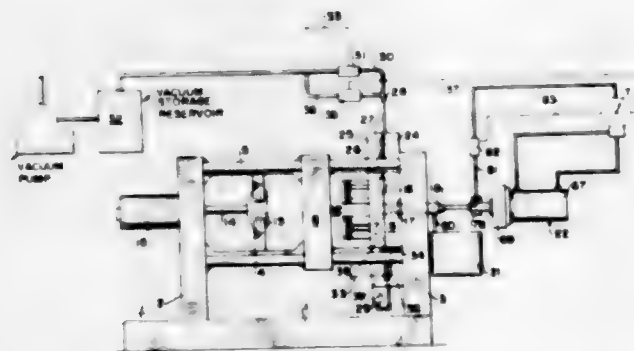
1. A deodorizer which comprises in combination an outer frame handle member and a cylindrical core insert, said core insert member telescopically positioned in said outer frame handle member and having at its extreme end heating portion an incense ignition means and having a central tube extending through substantially the length of said incense chamber, said ignition means consisting essentially of a heating coil and a coil support means said heating coil adapted to simultaneously contact a source of energy and an incense insert upon the exertion of pressure thereto, said coil support means extending into and adjustably supported by said central tube.

3,006,043

DIE CASTING MACHINE AND CASTING PROCESS

Walter M. Goldhamer, Shaker Heights, Ohio, assignor to Die Casting Research Foundation, Inc., New York, N.Y.

Filed Apr. 9, 1959, Ser. No. 805,200
19 Claims. (Cl. 22-73)



1. In a die casting machine including complementary die members which can be connected together to form

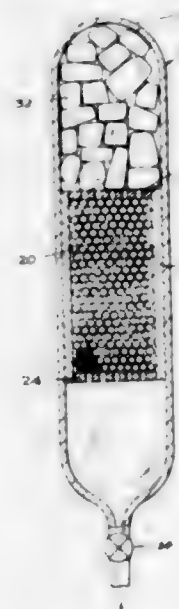
a die cavity and separated to remove the casting, at least one of the die members being movable into engagement with and away from the other die member, means for injecting molten metal under pressure into the die cavity, a separate metal cooling member secured to each die member, thermal insulating means disposed between the die members and the metal cooling members for suppressing the flow of heat from the die members into the metal cooling members, at least one of said metal cooling members being movable into engagement with and away from the other metal cooling member during movement of the die member to which it is secured, means defining a passageway between the engaged metal cooling members connected to a vacuum duct and to the die cavity, and means for cooling the metal cooling members to solidify metal in said passageway before the metal solidifies in the die cavity.

3,006,044

STRUCTURAL MATERIAL COMPOSITE PRODUCING APPARATUS

Edward F. Mayer, Novelty, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

Filed Sept. 21, 1959, Ser. No. 841,198
1 Claim. (Cl. 22-122)



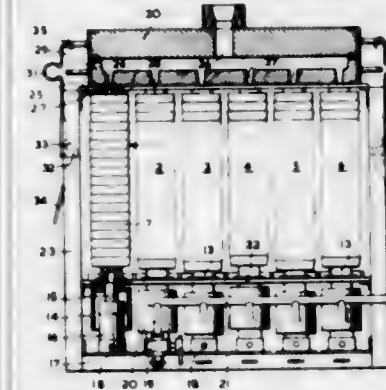
An apparatus for producing a composite structural material consisting of hollow inorganic spheres embedded in a metal matrix and possessing good mechanical strength and low thermoconductivity and which is capable of fabrication to desired dimensions by sawing and machining, which apparatus includes: a collapsible envelope made of a heat softenable material; mold means to confine a charge of hollow inorganic spheres in a first region of said envelope, said means consisting of at least one foraminous plug constituting a wall portion of said mold; means to confine a charge consisting of solid pieces of metal in a second region of said collapsible envelope, adjacent to and in direct communication with said first region through said foraminous plug; means to connect said envelope to a means to evacuate the atmosphere in said envelope; heating means to melt said metal and to soften that portion of the envelope surrounding and confining said metal; means to maintain a vacuum in said envelope, said heating means and said means to maintain a vacuum jointly constituting a means whereby the softened portion of the envelope collapses and forces the charge of metal, after it has been melted, into the voids between the hollow spheres, thereby forming on solidification of the metal, the desired low-weight, high-strength structural material.

3,006,045

METHOD AND DEVICE FOR MASS PRODUCTION OF CASTINGS AND PRODUCTS OBTAINED BY SUCH METHODS

Pieter Hekkelling and Adolf Johannes Jacobus Koch, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 20, 1958, Ser. No. 756,111
3 Claims. (Cl. 22-134)

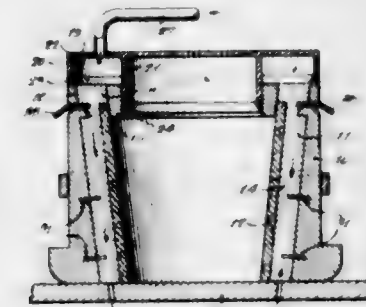


1. Apparatus for producing a plurality of castings comprising a plurality of molds assembled into a plurality of stacks in which each mold in the stack is separated from successive molds in a stack and a common supply duct in the stack to each mold is provided, a common supply duct for supplying a quantity of casting material to each stack which is then distributed to each mold in the stack, a supporting member at the base of each stack, a member common to all the stacks at the head thereof provided with ducts connecting said common supply duct with each stack, and a fluid operated piston for urging each supporting member and each stack independently of the others against the common member at the head of the stacks.

3,006,046

HOT TOP FOR INGOT MOLD AND METHOD OF MAKING THE SAME

Harry D. Shephard, Jr., Pittsburgh, and Willis C. Mellott, Connellsville, Pa., assignors to Hot Tops, Incorporated, Mount Braddock, Pa., a corporation of Pennsylvania
Filed Aug. 26, 1958, Ser. No. 757,240
3 Claims. (Cl. 22-193)

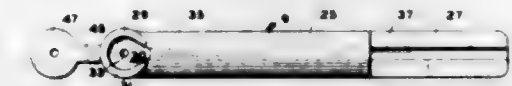


1. The method of lining a cast metal hot top casing with a preformed inner liner, comprising the steps of inverting the casing onto a support having a series of passages therein including entrance and exit portions so that the casing surrounds the entrance portion of said passages supporting the inner liner in position within the casing, mounting a wiper ring on the inverted exposed bottom end of the casing, positioning an outer pattern on the ring and an inner pattern on the exposed end of the liner, filling the void between the liner and the casing in the patterns with a granular refractory material containing a gas hardenable sodium silicate binder, impregnating said refractory material and binder with carbon dioxide gas to harden said binder by flowing said gas from the exposed end of said casing through said material and out through said passages thereby to set said refractory for supporting said liner, and removing said patterns.

3,006,047

HOSE SLING

George W. Wright and Harold N. Lee, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Apr. 18, 1960, Ser. No. 23,039
14 Claims. (Cl. 24-16)

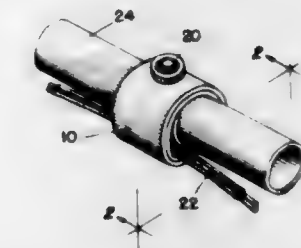


1. A hose sling of resilient, flexible material, comprising an elongated body having a greater width than thickness, having a tongue of less thickness than the body extending longitudinally from one end thereof and having a hollow boss at the other end, said boss having a perforated transverse wall defining therewith a socket, said body defining a tunnel which opens at one end in said socket and at the other end on one side of said tongue.

3,006,048

SELF-ADJUSTING FASTENER

Joseph H. Windish, 570 Highland St., Enhaute, Pa.
Filed Mar. 9, 1959, Ser. No. 797,959
2 Claims. (Cl. 24-16)



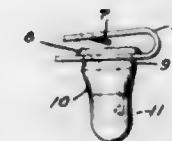
1. A self-adjusting fastener comprising a strip of resilient impermeate perforatable plastic material, a male snap fastener member, means solely on said male snap fastener member fixedly securing said member to said strip of material, a discrete free female snap fastener member operatively associated with said male snap fastener member, said male and female members having cooperating structure for perforating said strip of plastic material at a point on said strip of plastic material remote from the point at which said securing means fixedly secures said male member to said strip of material as said female member is engaged with said male member to form a closed loop of said strip of material.

3,006,049

FASTENING DEVICE

Arnold O. Jansson, Arlington, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

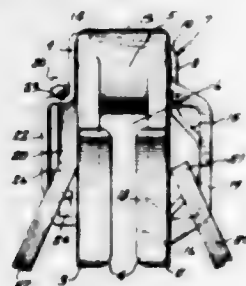
Filed Oct. 28, 1958, Ser. No. 770,112
1 Claim. (Cl. 24-73)



A fastener member for assemblies of the class described comprising a snap fastener member having a base portion, a support engaging snap fastener stud extending from said base portion, and a part engaging means assembled with said snap fastener member adjacent to said base portion for engaging a part to be held against a support, said stud being in the form of a yieldable snap fastener plug having a continuous wall for providing a seal against the passage of moisture when engaged in

a stud receiving aperture in a support, the said snap fastener member being formed of molded plastic material and the part engaging means being formed of metal and having a slot for easy assembly with the stud, and restricting projections on said part engaging means extending into the slot to hold the parts in assembly.

3,006,050
REVERSIBLE AUTOMATIC LOCK SLIDER
Alexander M. Brown, Holly Hill, Fla., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Sept. 29, 1958, Ser. No. 764,109
15 Claims. (Cl. 24—205.14)

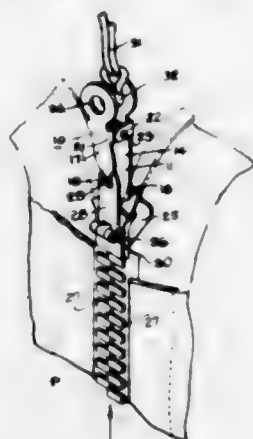


1. In a slider for slide fasteners having a pair of spaced-apart wing portions connected at one end by a neck portion, a substantially U-shaped member made of relatively thin yieldable metallic material so as to provide a pair of spaced-apart leg portions interconnected at one end by a transversely extending portion, said member disposed around said neck portion with one leg portion positioned on the outer side of each of said wing portions and with the transversely extending portion abutting the outer side of said neck portion, a loop-like portion arranged in each of said leg portions, a locking prong arranged on the outer end of one of said leg portions, one of said wing portions having an aperture therein into and through which said locking prong extends, a pair of spaced-apart longitudinally extending loop-like portions arranged on the outer side of said last mentioned wing with the loop portion of said last mentioned leg portion movably disposed in the space therebetween, a pull member having a trunnion portion arranged on one end thereof which is positioned between both the pair of spaced-apart longitudinally extending loop-like portions, the loop-like portion of the last mentioned leg portion and respective wing portion, a longitudinally extending lug-like portion arranged on the outer side of the other of said wing portions, means carried by the other leg portion for movably attaching it to said longitudinally extending lug-like portion whereby this other leg portion is movable longitudinally therealong, another pull member having a trunnion portion arranged on one end thereof which is positioned between the loop-like portion of the other leg portion and the other wing portion, and means arranged on the outer side of the other wing portion adjacent said last mentioned loop-like portion of said leg portion to limit the outward movement of said last mentioned pull member.

3,006,051
ZIPPER PULL AND GUARD DEVICE
Maurice E. Maeder, Moorestown, N.J. (Bridgeboro Road, Camden, N.J.), assignor of one-third to William Lease, Elkins Park, Pa., and one-third to Michael L. Brown, Philadelphia, Pa.
Filed Sept. 23, 1958, Ser. No. 762,800
5 Claims. (Cl. 24—205.15)

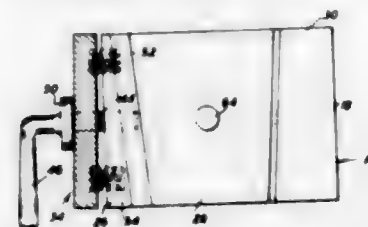
1. In a pull device for the slider element of a zipper type fastener having opposed stringers of interengageable teeth, a main member and an auxiliary member pivotally connected thereto conjointly comprising clip means adapted for detachable engagement with the pull tab of

the zipper slider element, said main member having a first part and a second part integrally formed with said first part, said main member first and second parts being relatively offset so that they are disposed respectively outside and inside of the zipper fastener during closing



thereof with the second part directly underlying the slider element, said main member first part operating as a pull extension for the slider element and said main member second part operating as an interceptor for said slider element during movement of the slider element in zipper-closing direction.

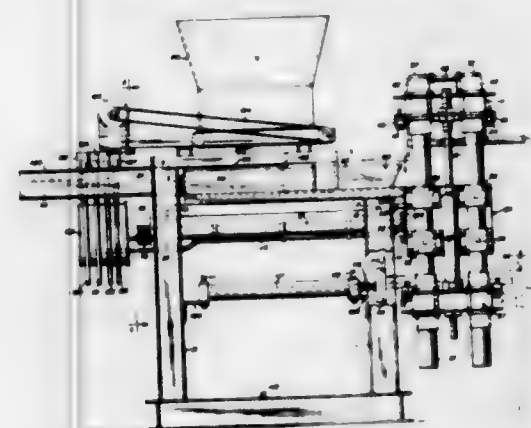
3,006,052
INSTRUMENT ATTACHING DEVICE
Donald B. Stickney, Portland, Oreg. (Box 415, Enterprise, Oreg.), and Donald B. Stickney, Jr., Portland, Oreg. (3100 Morris Ave., Corvallis, Oreg.)
Filed Jan. 13, 1959, Ser. No. 786,537
5 Claims. (Cl. 24—263)



1. An instrument attaching device comprising a base member for attachment to a support, an instrument holding member for attachment to an instrument and a clamping element carried by said base member, said base member and said clamping element having cooperating clamping portions defining the sides of a dovetail slot, said dovetail slot being tapered in a direction longitudinally of said slot, said clamping element being movable on said base member laterally of said slot between a release position and a clamping position, said instrument holding member providing a longitudinally tapered dovetail portion fitting said slot when said clamping member is in said clamping position, and means for moving said clamping element between said release position and said clamping position for clamping said dovetail portion in said slot and for releasing said clamping element to enable sliding of said dovetail portion longitudinally out of said slot, said base and holding members having interlocking portions comprising a transverse projection on one and a closely fitting transverse slot on the other for holding said dovetail portion in a predetermined position longitudinally of said slot when said dovetail portion is clamped in said slot, said base and holding members having cooperating cam portions adjacent said interlocking portions for separating said interlocking portions in a direction normal to said slot upon longitudinal entry of said holding member into said dovetail slot whereby said projection may enter said transverse slot, and said interlocking portion being releasable by manual movement of said dove-

tail portion in a direction normal to the longitudinal axis of said slot when said clamping element is in said release position.

3,006,053
MASONRY BLOCK APPARATUS
Robert F. Miller, Box 627, R.D. 2, Pottstown, Pa.
Filed Aug. 2, 1960, Ser. No. 46,960
20 Claims. (Cl. 25—41)



1. A masonry block apparatus comprising a main frame, a horizontal shaft rotatably mounted on said main frame, a generally rectangular mold frame open at the top and bottom and fixed to one end of said shaft exteriorly of said main frame, a mold open at the top and bottom secured in said mold frame, a core secured to said mold frame and disposed within said mold, guide rods fixed to opposite ends of said mold frame and extending above and below the same, an upper crosshead slidably mounted on said rods above said mold frame, a plate, yieldable means securing said plate to said crosshead, a vibrator mounted on said plate, pallet engaging means projecting downwardly from said plate, fluid pressure cylinders fixed to opposite ends of said mold frame, the pistons of said cylinders being connected to said crosshead, a lower crosshead slidably mounted on said rods below said mold frame, fluid pressure cylinders fixed to said lower crosshead, the pistons of said last named cylinders being adjustably connected to said upper crosshead, a second plate, yieldable means securing said second plate to said lower crosshead, a vibrator mounted on said second plate, push rods extending upwardly from said second plate, a pressure plate fixed to said push rod and slidably disposed in said mold between said core and the walls of said mold, stop rods projecting downwardly from said mold frame, stop means adjustably mounted on said stop rods for engaging said lower crosshead to limit movement thereof away from said mold frame, a pinion gear fixed to said shaft, a rack meshing with said pinion gear, a fluid pressure cylinder for actuating said rack to turn said shaft, mold frame and elements carried thereby from an upright mold filling position to an inverted block discharging position and return to said upright position, stop means for limiting rotary movement of said shaft and mold frame in both directions, a hopper mounted on said main frame, a mold fill drawer slidably mounted on said main frame below said hopper and above said mold frame, a conveyor for feeding cementitious material from said hopper into said fill drawer, an agitator in said fill drawer, a fluid pressure cylinder mounted on said main frame for moving said fill drawer from a drawer filling position below said conveyor to a mold filling position above said mold, block removing means comprising a fluid pressure cylinder mounted on said main frame, a block and pallet engaging ram carried by the piston of said last named cylinder and disposed below said mold frame and a wiper on said ram for wiping the surfaces of said mold, core and pressure plate when in inverted block discharging position, means for

supplying fluid pressure to said fluid pressure cylinders and valve means for controlling the operation of said fluid pressure cylinders, whereby said mold may be filled with cementitious material in upright position, a pallet placed on top of said mold and clamped in position by downward movement of said upper crosshead and pallet engaging means, said material compressed by upward movement of said lower crosshead and pressure plate, said material further compressed and vibrated during movement of said mold frame and elements carried thereby from upright to inverted position, the block ejected from said mold by simultaneous downward movement of said upper and lower crossheads, the block moved downwardly to block discharging position by further downward movement of said upper crosshead and the block and pallet removed from said pallet engaging means by operation of said ram.

3,006,054
CHIMNEY LINER CONSTRUCTION DEVICE
Clarence A. Dennis, 127 N. Dearborn St., Chicago, Ill.
Filed Mar. 8, 1960, Ser. No. 13,527
3 Claims. (Cl. 25—131)



1. A device for use in the construction of a liner within a chimney column, said device comprising a plurality of curvilinear inner form sections, means for releasably connecting said inner form sections together to form an inner annulus, a plurality of curvilinear outer form sections adapted to form an outer annulus circumjacent said inner annulus and within the chimney column, means intermediate said inner form sections in said inner annulus and said outer form sections in said outer annulus for maintaining a predetermined spacing therebetween, each of said outer form sections having an elongate rib member externally attached thereto, said rib member being disposed substantially parallel to the axis of curvature of said outer form section and extending substantially the height of said section, a plurality of radius arms mounted on said rib for pivotal movement about axes which are substantially normal to the axis of curvature of the corresponding outer form section, and elongate axial supporting member pivotally attached to said radius arms and movable on said arms toward and away from engagement with the chimney column, and means adjacent one edge of the corresponding outer form section for controlling the pivotal movement of said radius arms and the corresponding movement of said supporting member, whereby the annulus of said outer form sections may be removably positioned in spaced relationship with respect to the surrounding chimney column.

3,006,055

PROCESS FOR FULLING TEXTILE FABRICS

Robert Stuart Chapin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 21, 1958, Ser. No. 716,540
2 Claims. (Cl. 26—19)

1. A process for fulling a fabric produced from yarn containing from 10% to 40% by weight wool, the remainder of the fiber in the said yarn being synthetic, which comprises wetting out the said fabric with an aqueous medium containing 3% to 25% by weight of the said medium of a fulling aid, draining excess liquid from the said fabric until no more of the said liquid than about three times the weight of the said fabric remains on the said fabric and thereafter subjecting the said wet-out fabric to relaxed tumbling at a temperature between 100° F. and 200° F. for a period of at least 15 minutes to attain wool fiber migration into adjacent and crossing yarns.

3,006,056

YARN CLEARING APPARATUS AND METHOD

Pink L. Piercy, 128 Hudson St., Spartanburg, S.C.

Filed Mar. 2, 1960, Ser. No. 12,330
7 Claims. (Cl. 28—68)



1. In a yarn packaging machine having means for unwinding a strand of yarn endwise from a cone, bobbin, spool or other package and onto a desired package, and guide means disposed in spaced relation to and substantially in alignment with the axis of said unwinding package, said means preventing substantial lateral movement of the engaged portion of the strand during each unwound turn of strand from the last-named package, whereby each unwound turn of strand portion between said unwinding package and said guide means will generate substantially a conical surface, an improved means for clearing wild fibers and the like from said strand comprising, a transversely disposed plate positioned between and in spaced relation to said unwinding package and said guide means, said plate having a slot therein substantially aligned with the mean path of travel of said strand portion between the unwinding package and said guide means and through which the strand is adapted to pass, the opposed longer sidewalls of said slot being spaced apart a distance less than the diameter of a cross-section through said conical surface at said slot and greater than the strand diameter, whereby during each unwound turn from the package the strand will be caused to traverse said slot and successively engage the opposed longer slot sidewalls to clear the strand.

3,006,057

FLOOR COVERING

Philip C. Waite, Oshkosh, Wis., assignor to Waite Carpet Company, a corporation of Wisconsin

Filed Jan. 2, 1958, Ser. No. 706,619
6 Claims. (Cl. 28—78)



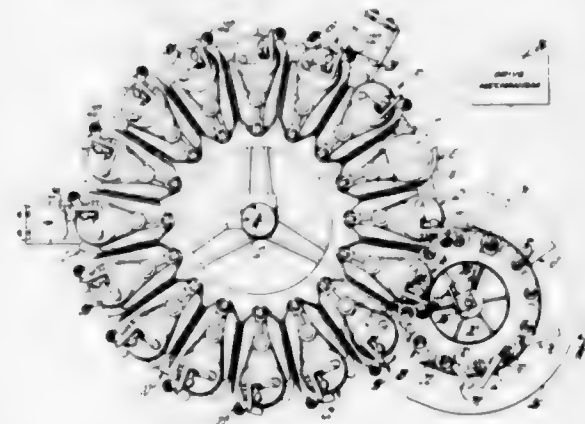
1. A floor covering, comprising, a base of flat woven carpet having warp strands of four-ply, multicolored yarn and substantially evenly spaced weft strands of twisted paper twine providing a relatively firm base of carpet quality having a relatively coarse texture, and a plurality of spaced rows of yarn tufts stitched weftwise in the base principally in the warp strands and between the weft strands one approximately adjacent every fifth weft strand reinforcing the covering weftwise and providing spaced bands of relatively soft pile of relatively fine texture on the base each band having a width approximately equal the spacing between bands so that only approximately half the base is covered with pile for receiving the principal wear on the floor covering and having a textured appearance contrasting with the texture of uncovered portions of the base.

3,006,058

HEADLAMP LEAD WIRE MOUNTING APPARATUS

Richard M. Goodwin, Richard L. Imler, and William E. Thompson, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 8, 1957, Ser. No. 651,390
3 Claims. (Cl. 29—25.2)



1. Apparatus for automatically forming lead wires and positioning the latter in a reflector comprising a main rotatable turret having a plurality of reflector support heads disposed adjacent its periphery, a lead wire transfer mechanism disposed over each of said reflector support heads, an auxiliary rotatable turret having plural lead wire support heads disposed adjacent its periphery, said lead wire support heads each including a support die disposed on said auxiliary turret and adapted to receive plural lead wires to be formed, movable dies disposed adjacent said turret for coaction with the support die to form the lead wires, means for locking said support die to said auxiliary turret during coaction of the support and movable dies, said turrets being arranged so that the lead wire support heads are disposed immediately below the transfer mechanisms with the rotative path thereof intersecting the path of the reflector support heads to define a transfer station,

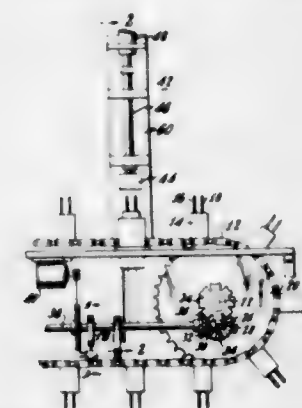
drive means connected with said turrets for intermittently indexing successive support heads on both turrets into said transfer station in synchronism, means at said station for alternately lowering and raising the transfer mechanisms for lifting lead wires in predetermined spaced relation from the lead wire support heads, means for releasing said support die from said auxiliary turret for limited relative motion thereon during operation of said transfer mechanism, and means at a subsequent station on the main turret for lowering said transfer mechanisms toward the respective reflector support heads for placement of the lead wires in the reflectors.

3,006,059

HIGH EFFICIENCY AUTOMATIC ASSEMBLING APPARATUS

Heinrich Hermann, Westfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed June 26, 1958, Ser. No. 744,799
4 Claims. (Cl. 29—25.19)



1. An automatic assembling apparatus comprising a support, an electrically conductive mandrel having a predetermined diameter fixed at one end thereof to said support, means for moving said support to a predetermined position, inspection means adjacent to said mandrel in said position, said inspection means including an electrically conductive sleeve having a larger inner diameter than said predetermined diameter, whereby said mandrel if bent to a predetermined magnitude is adapted to contact said sleeve, means for telescoping said sleeve over the other end of said mandrel, said other end of said mandrel being tapered, whereby end abutment of said mandrel with respect to said sleeve is prevented, and an indicating means electrically connected to said sleeve for providing an indication, only when said mandrel is bent to at least said predetermined magnitude.

3,006,060

GEAR FINISHING

John R. Newman, Jr., St. Clair Shores, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan

Filed Dec. 9, 1957, Ser. No. 701,622
3 Claims. (Cl. 29—103)



1. A gear finishing tool for crown shaving double helical gears, said tool being in the form of a cylindrical gear having teeth, each of said teeth comprising two portions disposed in endwise alignment, each of said portions being provided with grooves extending generally up and down the flanks thereof and forming cutting edges at the intersections between the sides of said grooves and the flanks of said tooth portions, each of said tooth portions

having flanks which are longitudinally concave and which are symmetrical about a plane of symmetry perpendicular to the axis of the tool and located substantially midway between the ends of each of said tooth portions.

3,006,061

IMPRESSION ROLLER

George J. Zahradnik, North Riverside, Ill., assignor to A. B. Dick Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 2, 1959, Ser. No. 784,490
1 Claim. (Cl. 29—124)



A roller for a printing machine, said roller comprising a hollow rigid core including a thin-walled cylindrical shell with a generally cylindrical cavity therein, said shell being formed in two generally semi-cylindrical parts with a longitudinal joint therebetween, a pair of end walls extending across the ends of said shell and closing the ends of said cavity, each of said end walls being formed in two generally semi-circular elements formed integrally with said semi-cylindrical parts of said shell, a pair of stub shafts extending outwardly from said end walls in opposite directions and along the axis of said shell, said stub shafts being greatly reduced in diameter relative to said shell, one of said stub shafts being formed integrally on one of said semi-circular end wall elements on one of said semi-cylindrical parts, the other stub shaft being formed integrally on one of said semi-circular end wall elements on the other semi-cylindrical part, said semi-cylindrical parts being identical in construction and having complementary interengageable joint elements thereon for holding said parts together to form said shell, said joint elements comprising a plurality of pins formed integrally with each of said parts and a plurality of openings in each of said parts for receiving the pins on the other part, one of said pins on each part having an end portion extending through and riveted into the corresponding opening in the other part to secure said parts together, and a soft rubber-like thin walled sleeve mounted around the outside of said shell and having a smooth cylindrical outer surface.

3,006,062

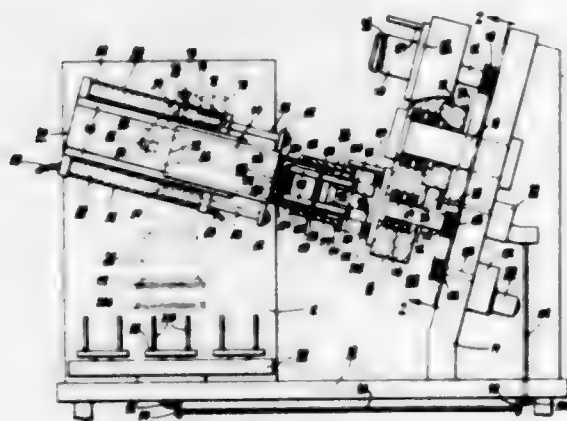
MACHINE FOR ASSEMBLING LAMINATED STATOR ASSEMBLIES

Fred W. Loy, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Aug. 16, 1956, Ser. No. 604,465, now Patent No. 2,910,767, dated Nov. 3, 1959. Divided and this application Feb. 16, 1959, Ser. No. 796,726
6 Claims. (Cl. 29—203)

1. Apparatus for selecting a group of laminations for the stator of an electric motor or generator, comprising, a base, means for aligning laminations relative to each other having a longitudinally protruding portion relative to a stacked grouping of a plurality of individual laminations, said protruding portion being engageable with a groove formed by a plurality of notches in the outer peripheral edge of each lamination as alignment thereof relative to each other is achieved by said protruding portion, a track means carried by said base, a carriage portion reciprocally moveable and retractable along said track means, ram mechanism attached to said carriage portion so as to be movably mounted with respect to said base in axial alignment to stack the lamina-

tions on said aligning means under compressive force equalling the pressure used in fastening the laminations together as a stator assembly, and gripping members including longitudinally and laterally movable articulated linkage operable concurrently by said ram mecha-



nism during application of compressive force whereby said gripping members engage and separate from the stack only a number of individual laminations required under duplicated conditions of assembly forces to provide a predetermined depth dimension in final assembly.

3,006,063 BRUSH SPRING INSTALLER

Martin R. Linan, 319 McKay Ave., San Antonio, Tex.
Filed Aug. 25, 1959, Ser. No. 836,041
3 Claims. (Cl. 29-205)
(Granted under Title 35, U.S. Code (1952), sec. 266)



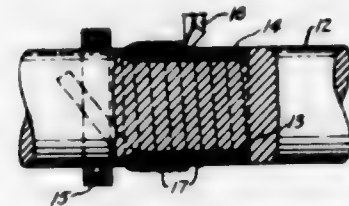
1. Apparatus for installing brush springs in aircraft generators and the like comprising an elongated holder including a handle portion at one end thereof, a first slotted post disposed on the other end of said holder, a lifter pivotally connected to and in angular relationship with said holder, said lifter having a handle portion at one end thereof, a forked jaw disposed on the other end of said lifter, said first slotted post extending through said forked jaw, a pivotable hook member disposed on said holder near said first post, said first slotted post being adapted to receive and retain a brush spring having a hooked portion adapted for engagement with said pivotable hook member, the compression of said handle ends operating to force the spring off said first slotted post and onto a second slotted post on a generator end plate, said pivotable hook member releasing said spring after installation on the generator end plate.

3,006,064 METHOD FOR REPAIRING WORN SURFACES IN SHAFTS

Ralph O. Watson, 415 5th Ave. South, Glasgow, Mont.
Filed Aug. 22, 1958, Ser. No. 756,718
6 Claims. (Cl. 29-401)

1. A method for repairing worn spots in a worn area in a shaft comprising the steps of machining the worn area of the shaft to a predetermined depth to eliminate

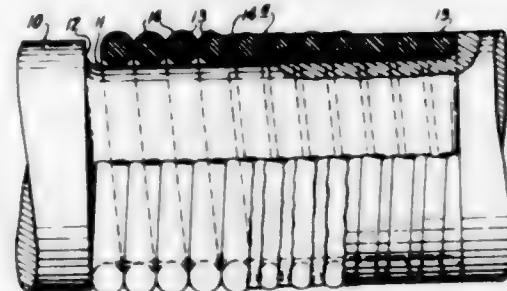
said worn area, fixing one end of a strand of wire material to the shaft and then rotating the shaft to wind the strand of wire onto the machined portion of the shaft



until said wire covers the entire machined area, applying solder flux, soldering the wire in place on the machined portion and then machining the shaft to its original diameter.

3,006,065 METHOD OF REPAIRING WORN SURFACES IN SHAFTS

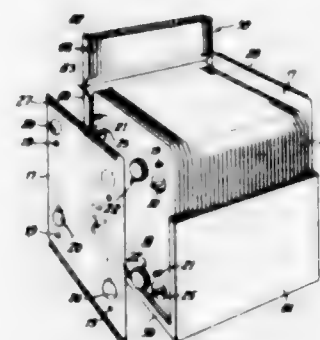
Ralph O. Watson, 772 Hastings Ave., Salinas, Calif.
Filed Jan. 30, 1959, Ser. No. 790,110
1 Claim. (Cl. 29-401)



A method of repairing a worn portion of a shaft consisting in first circumferentially chamfering the shaft at the worn portion thereof, winding a solder coated wire within the chamfered portion, so that a portion of its periphery projects outwardly beyond the chamfer, applying heat to the wire and solder, to cause melting of the solder around and internally of the so-formed coil, to cause setting of the wire within the chamfer as a filler and then smoothing off the projecting periphery of the filler to flushness with the other surface of the shaft.

3,006,066 METHOD OF MAKING AN ELECTRICAL PRECIPITATOR COLLECTOR SECTION

Harry W. Grossen, Chicago, and Robert H. Rayfield, Hinsdale, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 15, 1957, Ser. No. 678,458
5 Claims. (Cl. 29-421)



1. In a method for making an electrical precipitator collector section having a plurality of positive plates alternately stacked with a plurality of negative plates, the steps which comprise forming the said plates each with a pair of spaced holes on identical centers in said plates, the said positive plates having large and small holes respec-

tively on the said centers and the said negative plates having respective small and large holes on the said centers, stacking a number of the said plates in a holding fixture in such manner so that positive and negative plates alternate and provide positive plates at each end, then inserting a pair of tubes through the aligned holes in said stacked plates, expanding the said tubes so that they bind with the peripheries of the said small holes in the stacked said plates, assembling one of a pair of end negative plates on each side of the said stacked plates with the said tubes that are bound to the assembled negative plates passing through the said small holes in the said pair of negative plates and with insulators between said assembled plates and the said pair of end negative plates, the said insulators being mounted with respect to the said large holes in the said pair of end negative plates and the ends of the said tubes that are bound to the said positive plates, fastening the said tubes that pass through the said pair of end negative plates to the said pair of end negative plates thereby forming a complete assembly in which the said positive and negative plates are permanently held in spaced relation and removing said completed assembly from the said holding fixture.

3,006,067 THERMO-COMPRESSION BONDING OF METAL TO SEMICONDUCTORS, AND THE LIKE

Orson L. Anderson, Morristown, and Howard Christensen, Springfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 31, 1956, Ser. No. 619,639
6 Claims. (Cl. 29-470)

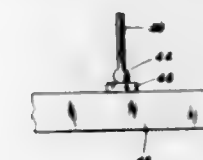


1. A method of bonding a metallic lead of a material selected from the group consisting of gold, silver, aluminum, copper, gold-plated copper and tinned copper to a semiconductive element of a material selected from the group consisting of silicon and germanium, said method comprising mechanically cleaning the surfaces to be bonded together, heating said metallic lead and said semiconductive element to a temperature approaching but less than the eutectic temperature of the combined materials and the dislocation forming temperature of the semiconductive material, pressing the surfaces to be bonded together with a pressure sufficient to cause at least 10 percent but not over thirty percent deformation of the metallic lead, and maintaining said temperature and said pressure until the lead is firmly bonded to the surface of the semiconductive element.

6. The process of making a low resistance mechanically strong electrical connection to a body of semiconductive material taken from the group consisting of germanium and silicon comprising the steps of bonding to the surface of said body a thin strip of the order of a mil wide of a metal taken from the group consisting of gold and aluminum, and pressing a wire lead of the order of a mil diameter of a metal selected from the group consisting of gold, silver, aluminum, copper, gold plated copper and tinned copper to said thin strip with a pressure sufficient to cause perceptible deformation of the wire, while maintaining the body and the wire lead at temperatures less than both the eutectic temperature of the combination of materials and the dislocation formation temperature of the semiconductor, for a time to form a strong bond.

3,006,068 TWIST-COMPRESSION BONDING OF METALLIC AND METALLIZED SURFACES

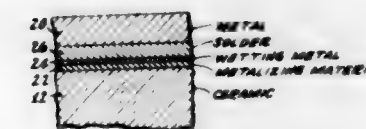
Orson L. Anderson, Summit, Peter Andreatch, Jr., South Plainfield, and Howard Christensen, Springfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 22, 1957, Ser. No. 647,886
6 Claims. (Cl. 29-470.1)



1. A method of bonding a metallic conductor to a metallized surface area of a semiconductive or ferroelectric element to form a mechanically strong bond having negligible electrical resistance, the conductor and the metallized area each being of a metal from the class consisting of gold, silver, platinum, aluminum, copper and iron, said method comprising pressing the end of said conductor against said area with a pressure sufficient to produce a deformation of five to twenty-five percent at the end of the conductor, reversibly rotating one of the contacting surfaces between said conductor and said element through an angle of between ten and twenty degrees with respect to the other to produce a substantially pure reversing rotational movement with respect to the axis perpendicular to the center point of the surface area of contact between them, continuing said movement at a rate of approximately one cycle, or oscillation, per second while maintaining said pressure for an interval of at least two seconds, discontinuing said twisting movement, and releasing said pressure.

3,006,069 METHOD OF SEALING A METAL MEMBER TO A CERAMIC MEMBER

James L. Rhoads and Morris Berg, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 23, 1957, Ser. No. 661,061
6 Claims. (Cl. 29-473.1)



1. The method of sealing a metal member to a ceramic member comprising the steps of: silk-screening onto only a predetermined seal area of said ceramic member at least one uniform layer of a first mixture composed of a powdered refractory metalizing material selected from the group consisting of Mo, W, Mo-Mn, Mo-Cu, and MoO₃, a solvent, and a binder; firing said ceramic member and layer to evaporate said solvent and binder and sinter said metalizing material; silk-screening onto said sintered first mixture layer at least one uniform layer of a second mixture composed of a powder of a metal selected from the group consisting of nickel and copper and capable of wetting said metalizing material, a solvent, and a binder; drying said second mixture layer; applying onto said second mixture layer at least one uniform layer of a hard solder capable of wetting said metal and said metal member; pressing said metal member into contact with said solder layer; and heating said members and layers to a temperature sufficient to cause said solder layer to flow and seal said members together.

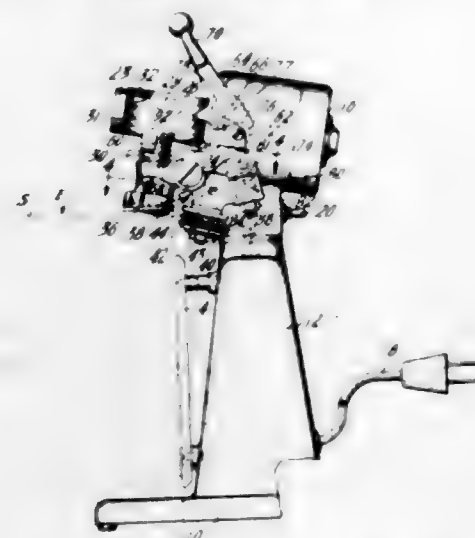
3,006,070

CAN OPENER

Ronald Erik Johan Nordquist, Summit, N.J., assignor to American Can Company, New York, N. Y., a corporation of New Jersey

Filed Nov. 27, 1959, Ser. No. 855,796

7 Claims. (Cl. 30—4)



1. A can opener adapted to cut through the outer layer of a can end seam, comprising cutter means engageable against said outer seam layer, spring means for exerting a predetermined pressure against said cutter means when said cutter means are in engagement with said outer seam layer to force said cutter means into said outer seam layer to a depth initially less than the thickness of said outer layer, means for repeatedly rotating said can on its axis to effect a gradually deepening cut in said outer seam layer, and stop means disposed in opposition to said spring means to terminate application of said pressure against said cutter means when said cutter means have cut into said seam to a depth substantially equal to the depth of said outer layer.

3,006,071

BEVERAGE, PUNCH-TYPE CAN OPENER

Gerald G. Griffin, Delaware County, Pa.
(524 Brookview Lane, Brookline, Havertown, Pa.)

Filed Nov. 5, 1959, Ser. No. 851,160

1 Claim. (Cl. 30—16)



A punch type can opener comprising a strap body bent into arch shape along its length, a can bead engaging lug adjacent one end of the strap body and extending toward said one end of the strap body for engaging the can bead, said one end of said strap body having a cutter portion extending beyond said lug for punching the end of the can to be opened, said cutter being sharpened, said opener being operative when the opener is pivoted about the lug in engagement with the bead of a can to produce punching force on the extremity of the cutter thereby punching an opening in the end of the can, said strap body being of a length and curvature to normally encompass at least half of a cylindrical can of a diameter substantially the diameter of the curvature of the arch shaped body whereby the opener will seat upon and grip the outer circumference of the can to be retained on the can.

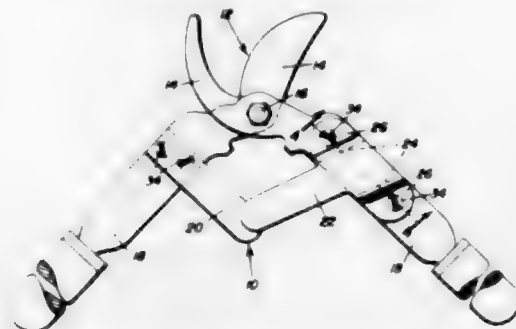
3,006,072

SHEAR BLADE THRUST ASSISTER

Francesco Nicoletta, San Anselmo, Calif.
(115 Clayton St., San Rafael, Calif.)

Filed Mar. 17, 1959, Ser. No. 799,916

3 Claims. (Cl. 30—266)



1. For use with a pair of shears having a pair of pivotally connected shear blades each with a handle portion on the opposite side of the pivot, a thrust assister comprising a pair of generally flat, elongated arms each having one end secured to one of said handle portions with the free end thereof extending laterally therefrom towards the other arm, said arms being disposed in sliding contacting overlapping engagement and in the same relation to each other as are the corresponding blades, one of said arms having on its secured end a pair of parallel laterally extending and laterally offset flanges which are parallel to said last mentioned arm by which the latter is secured to the corresponding handle portion forming a pocket between said last mentioned arm and the corresponding handle portion which is adapted to receive the free end of the other arm when said blades are pivoted to the closed position.

3,006,073

DENTAL APPLIANCE

Van B. McCarter, Cox Bldg., Jefferson St., Galax, Va.

Filed June 25, 1958, Ser. No. 744,386

5 Claims. (Cl. 32—69)



1. A dental mirror assembly adapted to be associated with a compressed air supply line for preserving a clear reflected image when water is flowing over the mirror surface incident to the use of high speed dental drills with water coolant, comprising a supporting body having a pair of extensions projecting in opposite directions therefrom, one of said extensions being adapted to be intercoupled with the compressed air supply line and the other of said extensions terminating in clamping means, said supporting body having a bore therein extending through said extensions and opening through the ends of said extensions remote from said supporting body, a dental mirror having an elongated rod projecting therefrom in inclined relation to the principal plane of said mirror and removably coupled to said supporting body for supporting said mirror at a fixed position projected from said supporting body, and a hollow tubular conduit rigidly supported at one end in said clamping means in communication with the bore in said other extension and terminating in compressed air discharge means including a nozzle having a flattened fan-shaped end portion disposed in substantial parallelism with the plane of the mirror and terminating in a narrow elongated exit orifice overlying and extending transversely of the surface of said mirror immediately adjacent said mirror surface, said fan-shaped

end portion being directed to discharge compressed air from said compressed air supply line in a fan-shaped pattern over the surface of said mirror along axes lying in a plane substantially paralleling the principal plane of said mirror so that water on said mirror surface is drawn to a substantially uniform thin film to minimize distortion of the image of the dental field viewed through the mirror.

3,006,074

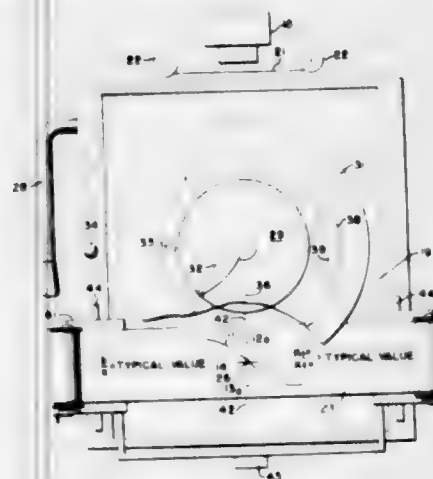
DATA PROCESSOR AND COMPUTER

Aaron Heller, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 30, 1958, Ser. No. 784,004

5 Claims. (Cl. 33—1)

(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A calculator comprising a slide rule having marked thereon a circular logarithmic scale, a transparent disc rotatably mounted on said slide rule, a radial reference having an index point formed on said disc, and a spiral intersecting said radial reference line, said spiral being so constructed that the angle between the radial reference line and a radial line to any point on the spiral is a logarithmic function of the distances from the point on the spiral and from the index point respectively to the center of said disc, a recorder strip disposed beneath said transparent disc and having inscribed thereon a curve to be evaluated, adjustable means for varying the position of said strip to align a preselected portion of the curve with a predetermined point on said radial reference line.

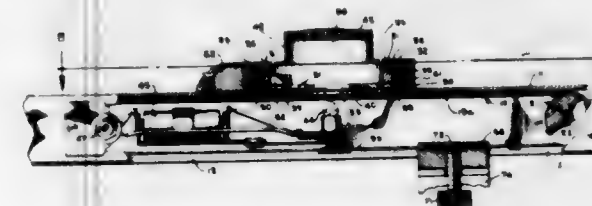
3,006,075

ENDLESS TAPE MEASURING DEVICE

Gerald V. Roch, 8001 Fishback Road, New Augusta, Ind.

Filed May 25, 1960, Ser. No. 31,748

5 Claims. (Cl. 33—125)



1. The combination with a machine having a moving member and a member fixed relative to the moving member, of a device for measuring travel of said moving member relative to said fixed member, comprising a tube; an endless tape; a tape holder at each end portion of the tube tensioning the tape therebetween and around which holders said tape may travel in two flights; said tube having a slot extending longitudinally therealong through one side; a tape clamp bracket extending through said slot and through which one of said flights may slid-

ingly extend; clamping means carried by said bracket selectively clamping said one flight to the bracket; means mounting said bracket in fixed position on said fixed machine member; means mounting said tube on said machine moving member; said tube having an opening through its uppermost side, through which opening the second of said flights may be visible; measurement indicia being positioned along opposite edge portions of the tape in fixed arrangement starting from a zero position on one edge portion and a zero position in transverse alignment with the first said zero position on the other edge portion, said tape further having a series of spaced apertures therethrough and therealong in approximately central alignment between said two series of indicia; means operable to shift said tape to a zero position; a source of light carried by said tube directing a light beam through said apertures in accordance with movement of said tube relative to said tape; a fine reading device reading in subdivisions of said indicia; and means actuating said fine reading device, said fine reading device including a shiftable, apertured tongue aligning its aperture with one of the apertures in said tape.

3,006,076

BRAKE DRUM GAUGE

Morris D. Wisti, Minneapolis, Minn., assignor to Andrew D. Wisti, doing business as Star Machine & Tool Company, Minneapolis, Minn.

Filed Apr. 27, 1960, Ser. No. 25,030

6 Claims. (Cl. 33—178)



4. A brake drum gauge having in combination, a bar, a housing offset from said bar slidably mounted thereon at one end thereof and adapted to be secured thereto at certain points thereon, a chamber in said housing substantially parallelepiped in form, a cylindrical dial disposed in said chamber having its axis parallel to the axis of said bar and having peripheral graduations thereabout, a reference member carried by said housing for association with said graduations, a contact pin integral with said dial axially disposed therethrough and journaled in said housing having its end portions extending therethrough, a spring in said chamber connected to said dial to normally urge said dial to rotate in the direction of the maximum reading of said graduations thereon, said contact pin having a helical groove therein, a pin in said housing to be seated in said groove to move said contact pin endwise when said contact pin is rotated, a second contact pin mounted at the other end of said bar in axial alignment with said first contact pin whereby when said pins are positioned in a brake drum in contact therewith at opposed points therein, as said gauge is moved from side to side said first contact pin will move outwardly to the

maximum extent of said brake drum and rotate said dial in a direction towards the maximum reading of graduations thereon.

3,006,077

APPARATUS FOR DEHYDRATION OF REFRIGERATION HERMETIC COMPRESSORS

Robert S. Goebel and Charles P. Scholz, Kettering, Ohio, assignors to Production Control Units, Inc., Dayton, Ohio, a corporation of Ohio

Filed Mar. 3, 1958, Ser. No. 718,668
10 Claims. (Cl. 34-48)



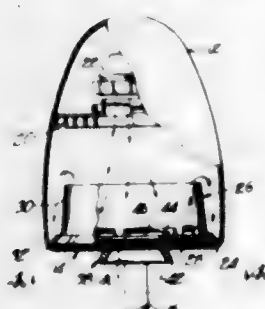
4. A control circuit having a power source for conducting electrical energy to a plurality of radiant heating units each of which is located adjacent a motor-compressor unit contained in a vacuum, current sensitive means in said control circuit connected with the winding of one of said motor-compressor units for continuously testing the temperature within said motor-compressor unit by measuring the increase or decrease of resistance of said motor winding, circuit making and breaking means in said circuit normally in a circuit making position operatively associated with said current sensitive means, said current sensitive means causing said circuit making and breaking means to be actuated into a circuit breaking position when the temperature in said one motor-compressor unit increases above the desired operating temperature and causing said circuit making and breaking means to be actuated into a circuit making position when said temperature drops below the desired operating temperature, general indicator means in said circuit responsive to a break in any portion of the circuit during the radiant heating cycle and specific indicating means in said circuit responsive to breaks in particular portions of the circuit during the radiant heating cycle.

3,006,078

DRYING APPARATUS

Edson B. Parker, Jr., and Blanch E. Parker, Bethel, Kans. (both of 8310 State Ave., Kansas City, Kans.)

Filed Aug. 3, 1959, Ser. No. 831,380
5 Claims. (Cl. 34-90)



1. In combination with a hair dryer having a hood with a normally downwardly directed, open mouth and

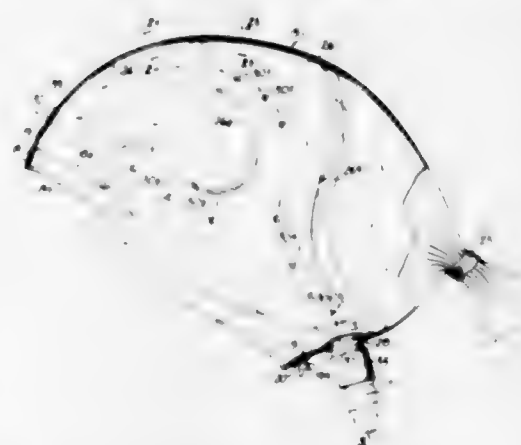
an inwardly extending lip encircling the mouth and disposed to direct heated air downwardly through said mouth; a drying container adapted to be disposed within the hood, said container having a bottom wall, a continuous, upstanding, frusto-conical side wall and opposed flanges on said bottom wall and extending outwardly from said side wall, said flanges being engageable with said lip whereby the container is supported in a position substantially entirely within the confines of the hood.

3,006,079

HAIR DRYER

Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed Apr. 17, 1957, Ser. No. 653,336
7 Claims. (Cl. 34-99)



1. A hair dryer comprising, a cap formed of flexible material, means adjacent the bottom edge of the cap for causing said cap to fit snugly around the head of the user below the hairline of the user to prevent escape of air toward the face or neck of the user, means defining an air distributing manifold of flexible material in said cap, means forming an inlet connection to said manifold located adjacent the bottom back of said cap, said manifold having a plurality of spaced air exit openings to discharge air from said manifold to the interior of said cap, said manifold comprising a first substantially U-shaped confined air passage portion having legs extending adjacent the bottom edge of the cap from an area adjacent said inlet means along both sides of said cap to points spaced from the front portion of said cap, said manifold further comprising second confined air passage portions in communication with said first confined air passage portions and extending from the lower portion of the cap upwardly toward the top of the cap, the openings in said first air passage portion being provided only in an area spaced upwardly from the bottom edge of the cap, whereby the lower area of said first air passage portion is adapted when the cap is applied to the head of a user to form a seal over the ear portions of the head of the user to avoid the flow of air over the ears of the user, and means defining a discharge opening in said cap at the top front portion thereof whereby the discharge of air is away from the face of the user.

3,006,080

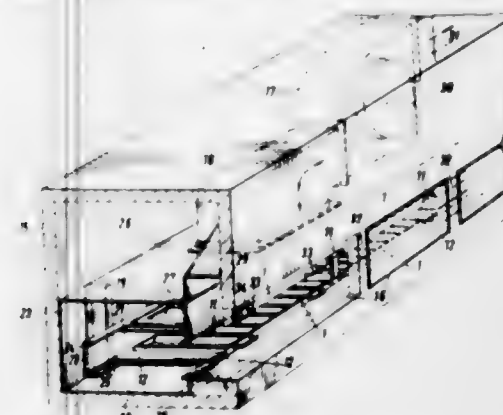
CONVECTION TREATMENT APPARATUS

William Wycliffe Spooner, Ilkley, England, assignor to The Spooner Dryer & Engineering Co. Limited, Ilkley, England

Filed Sept. 11, 1957, Ser. No. 683,313
Claims priority, application Great Britain Sept. 12, 1956
8 Claims. (Cl. 34-160)

1. In apparatus for the treatment of material and articles by convection with a gaseous medium; a pressure chamber having fixed side walls and end walls and a fixed rear wall and having an open front face, means

for conveying said material and articles along a path adjacent to and past said open front face, a gaseous medium discharge panel having at least one gaseous medium discharge opening in combination with a baffle member, said discharge opening extending transversely to said path of said conveying means, slideways across said open front face for receiving said panel so as to close said open front face apart from said discharge opening, a fan for delivering gaseous medium to said pressure chamber for discharge through said discharge opening generally normally towards said path of said



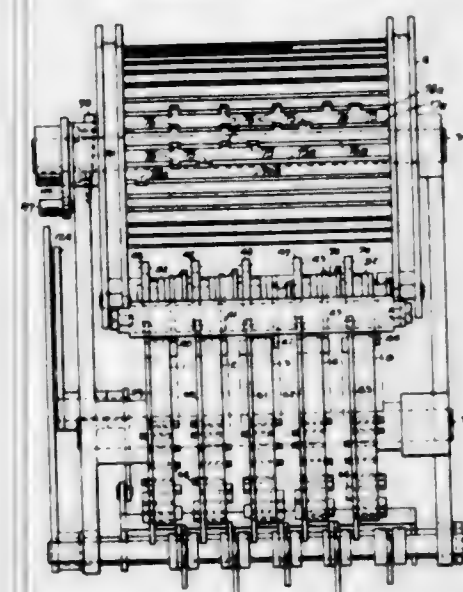
conveying means and said baffle member being disposed in the path of gaseous medium so discharged so as to deflect said discharged gaseous medium into a direction generally along said path of said conveying means, and at least one slit like nozzle disposed with its length substantially parallel to said path of said conveying means and with its width transverse of said path, said slit-like nozzle width being small compared with the transverse extent of said discharge opening, for directing a flow of gaseous medium so as to impinge directly at a relatively high velocity on a transversely limited area of the material and articles.

3,006,081

ENCODING KEYING DEVICE

Sture Nyberg, Zug, Switzerland, assignor to Anstalt Europäische Handelsgesellschaft, Vaduz, Liechtenstein

Filed June 8, 1959, Ser. No. 818,765
Claims priority, application Switzerland June 7, 1958
1 Claim. (Cl. 35-3)



A keying device for coding and decoding apparatus of the type comprising a series of keying members each mounted for cyclical movement step by step through a limited number of positions in each cycle of its movement, a series of sensing means each located at a fixed sensing station adjacent to one of said keying members, a plurality of control elements each mounted on one of

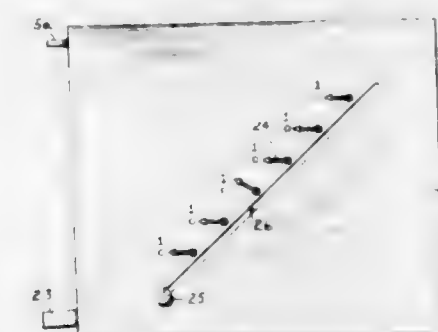
the said keying members and movable thereby so as to be presented thereby at the sensing station which is adjacent to the respective keying member each time said keying member occupies a definite one of its said positions in the course of its cyclical movement, each of said control elements being selectively setttable to an active or an inactive condition, each said sensing means being activatable by the movement of any active one of said control elements on the respective keying member to the respective sensing station, and a multiplicity of actuating means mounted for joint cyclical movement and for individual setting to an active or inactive condition under the control of the said sensing means, each of said actuating means including control means for rendering the same active in each cycle of the said joint cyclical movement in response to the presence of sensing means activated as foresaid at the sensing station adjacent to at least one of said keying members, and upon being rendered active being operative to move another of said keying members through a predetermined number of steps of the cyclical movement of the other keying member, wherein said device comprises a further means mounted for movement with said actuating means but not under the control of any of said sensing means for, on each cycle of the joint cyclical movement of said actuating means, moving at least a first of the said keying members through a first invariable number of steps differing from zero and differing from the limited number of positions through which said first keying member is movable in each cycle of its cyclical movement, and wherein the respective one of the said actuating means which is operable to move as aforesaid the n th of said keying members, the term n th denoting any particular member other than said first keying member of at least two said keying members included in a sequence constituted by said series of keying members, comprises control means as aforesaid which are responsive as aforesaid to the sensing means activatable by each keying member in a group composed of those of said keying members, including said first keying member, which extend to and include the $(n-1)$ th keying member of said sequence, so that in each cycle of said joint cyclical movement the n th of said keying members is moved through a second invariable number of steps in response to the presence of sensing means activated as aforesaid at the sensing station adjacent to any of the keying members of said group.

3,006,082

EDUCATIONAL DEVICE FOR TEACHING BINARY COMPUTATION

Miles A. Libbey, 116 Court Road, Eltham SE. 9, London, England

Filed Dec. 2, 1959, Ser. No. 856,802
13 Claims. (Cl. 35-30)



2. In a mechanically operated binary computer the combination comprising a plurality of pivotally mounted flip-flop relays stable in either of two positions arranged in series, one such position of each relay corresponding to a binary value of "0" and the other of said positions corresponding to a binary value of "1," said relays being

arranged in series and with each one positioned higher than the next adjacent one in the series, and a mass individual to and movable gravitationally into engagement with each of said relays to actuate the latter from one position to the other, said relays being arranged such that a mass actuating one of said relays to the "1" position is cast out and a mass actuating one of said relays to the "0" position is passed downwardly to and actuates the next adjacent relay in the series from one position to the other.

3,006,083

LADIES' WEDGE STYLE SHOES

Shigeru Ogasawara, No. 10, 1-Chome, Asakusayoshinocho, Daito-ku, Tokyo-to, Japan
Filed Feb. 9, 1959, Ser. No. 792,148
Claims priority, application Japan Mar. 5, 1958
2 Claims. (Cl. 36-2.5)



1. A ladies' wedge style shoe, comprising in combination: an instep assembly with a front cover portion adapted to lay over the front of the foot, the lower periphery of said front cover portion being inwardly folded, and a rear portion having a back and two side walls adapted to engage the wearer's heel below the shin bone, said rear portion extending around the back of the foot; an inner heel cover attached to the inside of said side walls and back around the lower periphery thereof; a wedge shaped heel cover member having a folded upper edge, fastened around the outside of said walls and back at the lower periphery, the fastening taking place inside the fold, the lower edge of said heel cover member being likewise inwardly folded; an inner sole and heel combination having a front sole portion and a wedge shaped heel attached to said front sole portion at the shank, said inner sole front portion being joined to said front cover portion of the instep assembly, the bottom edge of said inner sole being fastened to the fold of said front cover portion and, the heel being covered by said heel cover, the folded lower edge of said heel cover being fastened to said heel under said heel; and, an outer sole fastened to the underside of said inner sole and heel combination.

3,006,084

MOLDED RUBBER STORM BOOT

Frank M. Le Compte, Watchung, N.J., assignor to Tingley Rubber Corporation, a corporation of New Jersey

Filed Feb. 16, 1959, Ser. No. 793,562
1 Claim. (Cl. 36-7.3)

A molded rubber storm boot formed on its inner wall with a plurality of flexible and resilient inwardly projecting fins for contact with the heel portion of the shoe, said fins being arranged in definite spaced relation to provide open-ended passages for ventilation and being of sufficient width to act as spacers to separate the boot and shoe for positioning, said fins extending vertically of the boot and varying in width along their length in a direction transverse to the wall from which said fins extend, said fins starting in the heel area of the shoe widening out as the fins extend upwardly and finally running out in the upper portion of the boot above the shoe, said fins being contoured to fit between the boot and the heel portion of the

shoe to act as guides for easy ingress and egress of the shoe and extending above the upper edge of the shoe so as



thereby to resist any tendency of the shoe to pull out heel first during walking.

3,006,085

RIBBED OUTSOLE OF MOLDABLE MATERIAL

George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland

Filed Oct. 5, 1959, Ser. No. 844,488
1 Claim. (Cl. 36-59)



An outsole for an article of footwear, said outsole comprising a body portion extending from the toe to the heel and whose upper surface is designed for contact with the bottom of a lasted shoe, the tread surface of the sole having two series of transversely extending ribs integral with the body portion with intervening, transversely extending channels, one series being at the forepart portion and the other series being at the heel portion, each rib having one vertical face and one inclined face, the inclined faces of the ribs at the forepart portion sloping downwardly and rearwardly and those at the heel portion sloping downwardly and forwardly, the rear faces of the ribs at the forepart portion being concavely curved as viewed from the rear and the forward faces of the ribs at the heel portion being concavely curved as viewed from the front, a metallic shank stiffener embedded in the substance of the outsole at its shank portion and extending longitudinally of the shank portion, the two series of ribs being spaced apart at the shank portion, and a single rib intervening between said two series, said single rib being of truncated triangular section having its narrow lower face at the heel breast line and, at its junction with the body of the sole, being wider than any of the ribs of the respective series, said wider rib providing a body of sole material of such thickness as to afford secure anchorage for the rear end portion of the embedded shank stiffener, the peripheral edge of the sole proper comprising an uninterrupted, substantially horizontal shoulder substantially flush with the apices of the channels so that the end faces of the ribs are set back from the upper vertical portion of the peripheral edge of the sole and may be smooth and free from tags of the sole material.

3,006,086

SHOE GUARD

Frank E. Bird, Jr., 2908 Fisherville Road, Contesville, Pa.

Filed Mar. 31, 1960, Ser. No. 18,985
5 Claims. (Cl. 36-72)

1. A guard adapted to be adjustably and detachably secured to a shoe to protect the metatarsal area of the

foot comprising a rigid plate member shaped to conform generally to the metatarsal area of the foot, a shock absorbent pad secured to the underside of said plate member and conforming to the shape of said plate member, said plate and pad adapted to overlaid and cover



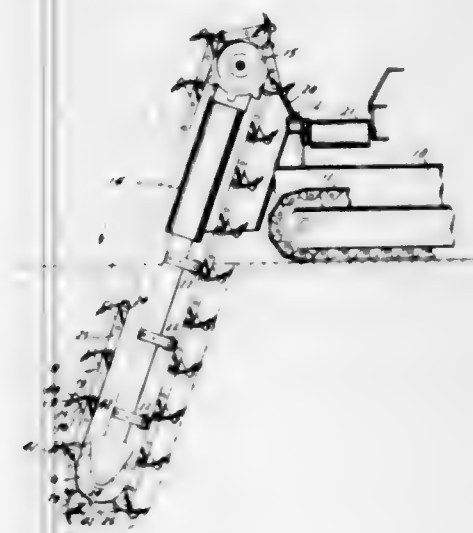
the shoe at the metatarsal area of the foot, and adjustable fastening means comprising a flexible member secured to the underside of said plate and adapted to engage said shoe in the portion of said shoe covered by said plate and pad to detachably secure said plate and pad to said shoe with the pad in engagement with said shoe.

3,006,087

BUCKET LINE FOR TRENCHING MACHINE

John F. Lindell, Newton, Iowa, assignor to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Nov. 12, 1958, Ser. No. 773,231
4 Claims. (Cl. 37-86)



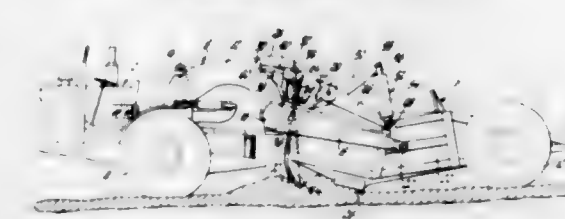
1. For use with a trenching machine having an endless loop of digger chain, the combination comprising, a pair of laterally spaced outer links and a pair of laterally spaced inner links pivotally connected together at the rear portion of said outer links and leading portion of said inner links, said inner links having intermediate their end portions a transverse bucket blade extending substantially beyond the sides of said inner links and projecting therefrom in a direction outwardly from said loop, each outer link having a trailing extension and a transversely extending cleaner blade on the rear portion of said extension projecting laterally in a direction away from said inner links, said cleaner blade being positioned at an angle with respect to said extension with its leading edge adjacent the inner edge of said extension and its trailing edge adjacent the outer edge of said extension, said cleaner blade on each said extension being transversely aligned with the cleaner blade on the other of said extensions and being positioned to cooperate with said transverse bucket blade for forming a dirt receiving bucket when said inner and outer links are in alignment and for moving across the forward face of said transverse blade upon inward pivoting movement of said outer links relative to said inner links.

3,006,088

APRON FOR SCRAPER

John M. Layton, Howell, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 4, 1958, Ser. No. 739,866
7 Claims. (Cl. 37-129)



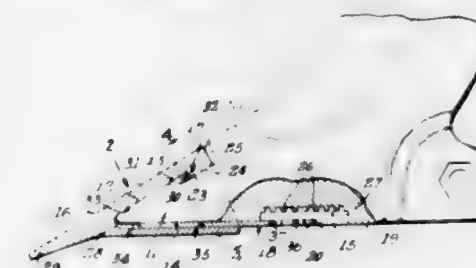
1. A vehicle comprising a drawn scraper bowl having laterally spaced side walls upstanding from a transversely extending floor and defining therewith an open bowl front for receiving and discharging material, an apron movable between a lowered position closing said bowl front and a raised position opening said front, laterally spaced apron-supporting arms each having one end pivotally connected to a respective bowl side wall on a first transverse horizontal axis, the other end of each of said arms being pivotally connected to said apron on a second axis parallel to said first axis, adjustable operating means operatively pivotally connected to said bowl on said first axis and to said apron at a point spaced from said first and second axes whereby said means may be operated to pivotally adjust and retain said apron in a plurality of positions relative to said arms, and means carried by said vehicle and connected to said apron for selectively moving the latter about said first axis between said lowered and raised positions.

3,006,089

RIPPER POINT ASSEMBLY

Forrest A. Johnson, Buena Park, Calif., assignor to Double J Breaker Co., Bell, Calif., a corporation of California

Filed July 27, 1959, Ser. No. 829,887
7 Claims. (Cl. 37-142)



1. A ripper point assembly comprising a forwardly directed projection on a shank or the like, a ripper point having a recess in which said projection loosely extends, interengaged means on the projection and the point to center the latter on the former and to hold the point against forward displacement from the mentioned projection, a wedge shim between the projection and point and disposed in said recess to lock together said interengaging means to lock the point on the projection, and an abutment on the projection engaged with the outer end of the shim to hold the same against retraction from wedging position.

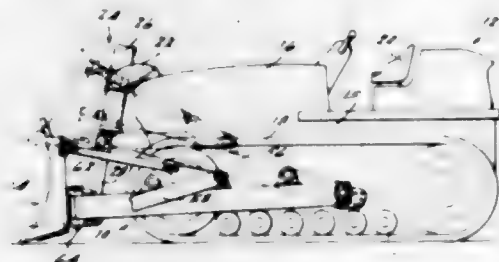
3,006,090

C-FRAME CONSTRUCTION FOR BULLDOZER
Joseph M. Gwinn, Jr., Dearborn, Mich., assignor to Gar Wood Industries, Inc., Wayne, Mich., a corporation of Michigan

Filed Apr. 4, 1958, Ser. No. 726,548
6 Claims. (Cl. 37-144)

6. A C-frame for movably mounting a work attachment on a tractor, said C-frame comprising a pair of

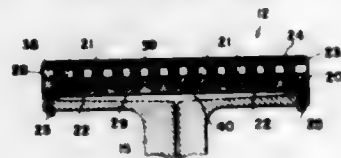
complementary frame sections, each section adapted to extend generally horizontally along one side of a tractor and across the front thereof toward the other frame section, means at the rear end of each of said frame sections for pivotally mounting said frame sections on the opposite sides of a tractor, pivot means pivotally connecting the front ends of said frame sections for pivotal movement relative to each other about a vertical axis, said



front ends being shaped to define a space therebetween rearwardly of and adjacent said pivotal connection when said rear ends of said frame sections are mounted on a tractor, means disposed in said space and mounted on the spaced portions of said front ends defining opposed recesses, one on each side of said space, and a connecting member removably supported in said opposed recesses for connecting a lifting mechanism to the C-frame.

3,006,091 PRESS BED

Cyril Joseph Roos, Cedarburg, Wis., assignor to American Heat-Seal, Inc., Milwaukee, Wis.
Filed Oct. 12, 1959, Ser. No. 845,899
11 Claims. (Cl. 38-66)



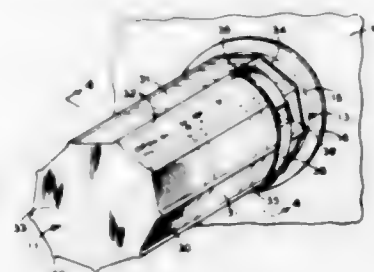
1. A bed for pressing machines comprising: a base plate having a plurality of inwardly tapered spring chambers defined therein in a generally bisymmetrical pattern relative thereto; conduit means, one extending downwardly from each of said chambers and coacting therewith to establish unobstructed communication through said plate; a plurality of springs, each having a lower portion extending into one of said chambers in seating engagement therewith and each having an upper portion extending outwardly therefrom; a dampening pad carried by said upper portions of said springs; and water permeable cover means enveloping said pad, springs, chambers and plate to define a self-contained unit therewith.

3,006,092

VEHICLE IDENTIFICATION APPARATUS
Herbert B. Sternberg, Brooklyn, N.Y., assignor to Auto Facto Systems, Inc., White Plains, N.Y., a corporation of New York
Filed Mar. 23, 1960, Ser. No. 17,085
6 Claims. (Cl. 40-2.2)

1. In a vehicle recording system, the combination comprising a bracket adapted to be fixed to and project from a part of a vehicle; and a cover removably engaged over said bracket and fabricated of embossable material to be imprinted with vehicle identifying indicia; said bracket and cover being formed with registrable openings for receiving a seal to deter tampering with said system; said bracket and cover being of similar polygonal cross sectional configuration of an odd number of sides; one of said sides having a width differing from that of the others of said sides; the cover conformably receiving the bracket

to prevent relative movement therebetween; the several faces of the cover providing areas for said imprinting; the odd number of sides, in conjunction with the one side



differing in width from the other sides, effectively deterring unauthorized imprinting of the cover faces and counterfeiting of the cover.

3,006,093

ROTATING DEVICE FOR MECHANICAL SIGNS
Robert L. Burk, 417 Lucerne Blvd., Los Angeles 5, Calif., and Frank Hedge, 12311 Clover Ave., Los Angeles 66, Calif.
Filed Mar. 2, 1959, Ser. No. 796,697
2 Claims. (Cl. 40-33)



1. Apparatus for rotating a sign comprising a platform adapted to be fixed upon a pedestal and to extend horizontally, a spindle mounted on and extending upwardly from the center of the platform, the outside surface of the spindle being formed of a plurality of axially aligned sections comprising a base section, a cylindrical collar section of smaller diameter than the base section and defining an upwardly facing annular bearing shoulder between the base and the collar sections, a frusto-conical section extending upwardly from the collar section and having an upper end of smaller diameter than the lower end of the frusto-conical section, the diameter of the collar section being not less than the diameter of the lower end of the frusto-conical section, and an upper-end cylindrical section of smaller diameter than the upper end of the frusto-conical section and defining an upwardly facing annular bearing shoulder between the upper-end and the frusto-conical sections, the upper end section having a circumferentially extending annular groove formed in the cylindrical surface thereof intermediate the ends of the upper section, a hub rotatable on the spindle and having inside annular bearing shoulders in engagement with said bearing shoulders respectively of the spindle for rotatably supporting the hub on the spindle, a snap ring extending in said spindle groove and engageable against the hub for releasably holding the hub down on the spindle, the hub having an annular flange coaxial with the spindle, a power unit on the platform and drivingly connected to said flange for rotating the hub on the spindle, a sign support comprising a hollow post surrounding the top of the spindle, an annular flange on said post, and fasteners for releasably securing said post flange on said hub flange whereby rotation of the hub will cause rotation of the sign support.

3,006,094

TRAVELING SIGN
Carmen Robert La Monte, 6802 S. Peoria St., Chicago, Ill.
Filed Feb. 29, 1960, Ser. No. 11,532
3 Claims. (Cl. 40-106.31)



3. In a display apparatus, the combination comprising a generally horizontal trolley line, a fixed anchor having one end of said line connected thereto, a display sign having a trolley wheel rotatably mounted thereon and supported on said line for movement therealong, an operating unit having a carriage movable vertically thereon, the other end of said line being connected to said carriage, a motor drive mechanism for moving said carriage upwardly and downwardly above and below the level of said anchor, means operable by said carriage upon moving upwardly to a predetermined point above the level of said anchor for reversing said drive mechanism so as to move said carriage downwardly, and means operable by said carriage upon moving downwardly to a predetermined point below the level of said anchor for again reversing said drive mechanism so as to move said carriage upwardly, said sign being operative to travel by gravity back and forth along said line through continuously repeated cycles as said carriage is moved upwardly and downwardly by said drive mechanism.

3,006,095

TRAPPED PERSON SIGNAL
Norbie H. Jones, 3031 N. 32nd St., Kansas City, Kans.
Filed May 11, 1960, Ser. No. 28,391
4 Claims. (Cl. 40-128)

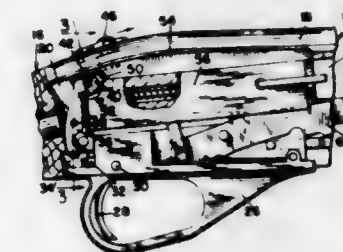


1. A trapped person signal device comprising, a housing for attachment to the outside of a building adjacent a window, said housing having connected side, end and top walls, a bottom plate member hinged to one of the side and end walls and adapted to swing from a bottom closing position to a depending position from said one of the side and end walls, a signal member formed of an elongate foldable structure adapted to be disposed in a folded stack, means connecting the lower portion of the folded signal structure to the bottom plate member in opposed relation to the hinging of said bottom plate member to the housing wall whereby said folded stack is normally positioned in stacked relation on said bottom plate member, and a lever having a portion pivotally mounted relative to the housing, a lug on the bottom plate member spaced from the hinged connection of the bottom plate member with the housing, means on said lever releasably engaging the lug on the bottom plate member to normally retain said bottom plate member in bottom closing position with the signal member in a folded stack

thereon, and means on the upper portion of the lever accessible from the building window opening for actuation of the lever to release the bottom plate member whereby the bottom plate member and the signal structure unfolds and swings downwardly to depend in a line from said housing to form a signal adjacent the window opening and visible exteriorly of the building.

3,006,096

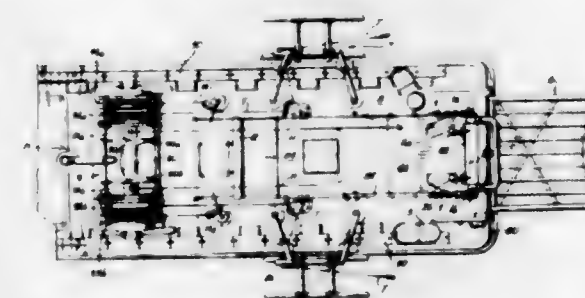
SAFETY MECHANISM FOR SLIDE ACTION REPEATING FIREARM
Frank T. Green and Wilfred I. Smith, Haydenville, Mass., assignors to Noble Manufacturing Co., Inc., Haydenville, Mass., a corporation of Massachusetts
Filed June 26, 1959, Ser. No. 823,063
1 Claim. (Cl. 42-70)



A slide action shot-gun comprising a main frame, a fore end manually slidable forward and rearward, and a sliding breech-bolt associated with the fore end for actuation thereby, in combination, on the main frame, a safety-lock lever, a trigger, a rearward extension on the trigger, said safety-lock lever being located adjacent a side surface of the main frame and behind the rearwardmost position of the breech-bolt, a safety thumb-slide on the main frame in exposed condition at the top exterior surface thereof, means on the safety slide controlling the lever, the lever being pivoted intermediate its ends, the lower end thereof engaging the rearward extension on the trigger, a recess at the rear end of the breech-bolt for receiving a portion of the safety-lock lever when that portion is moved relatively forwardly as the lever pivots about its axis under influence of the thumb-slide.

3,006,097

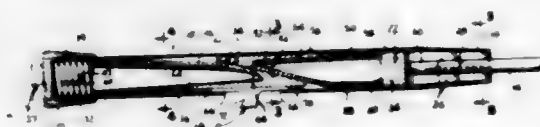
DOOR-SECURING STANCHION FOR TRAWLERS
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.
Filed Dec. 22, 1959, Ser. No. 861,325
17 Claims. (Cl. 43-8)



1. Mechanism for securement aboard a trawler of a door having a towing warp secured to it, and used to spread outwardly a wing of a net, said mechanism including legs having means for mounting them upon the trawler in a position to extend outboard, a cradle including elements mounted upon the outboard end of the respective legs and together defining a downwardly facing surface which is complementary to the door's upper surface, to engage and cradle an upwardly drawn door, and a guide for the towing warp mounted above and within the outline of said cradle, whereby a pull on the towing warp will draw the door into secured position relative to said cradle.

3,006,098

FISHING ROD HANDLE WITH RELEASABLE REEL AND ROD CLAMPING MECHANISM
 Raymond J. Harke, 5505 W. Potomac Ave., Chicago, Ill.
 Filed Dec. 8, 1958, Ser. No. 778,996
 11 Claims. (Cl. 43-22)



1. In a fishing rod handle having means associated therewith for releasably clamping a fishing rod proper thereto, in combination, a generally cylindrical tubular open-ended casing having a longitudinal bore extending therethrough, the forward end of said casing presenting a slight inward taper, thus providing an internal frusto-conical surface at the extreme forward end of the bore, a chuck slidably disposed within said tubular casing and having a series of contractible and expansible chuck fingers engageable with said frusto-conical surface, said chuck being movable bodily between a retracted position wherein said fingers are out of operative engagement with said frusto-conical surface and an advanced position wherein they engage said surface and are constricted thereby for clamping engagement with the butt end of a fishing rod proper, a closure cap telescopically received over the open rear end of said casing, spring means interposed between said closure cap and chuck for normally urging said chuck forwardly in the casing, said cap being axially slidable on the casing between an extreme retracted position wherein said spring means is ineffective and an extreme advanced position wherein said spring means is effective to urge the chuck forwardly in the casing, and a pin and bayonet slot connection between the closure cap and casing, said pin and bayonet slot connection establishing the two extreme positions of the closure cap on the casing.

3,006,099

ROLLER TIP FOR FISHING RODS, AND METHOD OF MAKING THE SAME
 James W. Gourley, Jr., La Habra, Calif., assignor to Axelson Fishing Tackle Mfg. Co., Santa Ana, Calif., a corporation of California
 Filed Jan. 9, 1959, Ser. No. 785,926
 1 Claim. (Cl. 43-24)

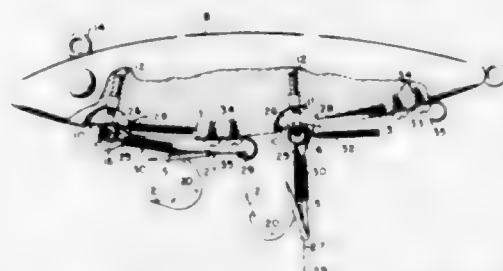


A roller tip for fishing rods comprising a socket member adapted to fit over the end of fishing rod, a combined line guide frame and fishing line roller support comprising a generally U-shaped unitary sheet metal element having opposed side flanges or cheeks with rounded peripheral portions and a connecting web portion, said side flanges defining between them a peripheral opening, said frame including a tubular mounting portion fitting over and secured to said socket member and comprising a pair of semi-cylindrical attaching members each integral with one of said opposed side flanges or cheeks and extending rearwardly therefrom, said cheeks being provided at their rounded peripheral portion with a continuous rolled over bead portion outlining the entire opening formed between said cheeks and extending continuously from points adjacent said semi-cylindrical attaching members along the boundary of the opening formed between the cheek mem-

bers and including the margin of the web portion, said web portion being cut away between the bead portion and the tubular mounting portion to provide a top opening of sufficient size to permit insertion or removal of a line guiding roller, and adapted to receive a line entering through said opening in said web passing over said roller and outwardly between the beaded peripheral portions of said cheeks, said roller being detachably mounted in said frame and of such size as to substantially fill the space between the opening in the web and the opening between said cheeks, said frame and roller providing line guiding means for the fishing line entering the frame through the opening in the web passing over said roller and outwardly through the space between the peripheral beaded portions at the margins of the cheeks.

3,006,100

FISH LURE TRIGGER MECHANISM
 Jack R. Zeman, 2741 NE, 10th Ave., Fort Lauderdale, Fla.
 Filed June 3, 1960, Ser. No. 33,804
 10 Claims. (Cl. 43-35)



1. In a fish lure having an elongated base with line-attaching means near its forward end, a shank having one end in pivotal connection with the base and formed at its opposite end with a hook having a reversely facing point, and trigger mechanism for the shank comprising a wire spring having an arm fixedly connected to the shank, extended alongside thereof from points beyond its opposite ends and formed with a medial coil proximate to the pivoted end of the shank, the spring portion beyond the coil and shank forming a foot disposed in wide-angular relation to the latter when in a freely relaxed state of expansion but adapted to engage resiliently with the base when the shank is swung toward the foot to reduce the angle therebetween, and a spring-engaging catch anchored to the base within the movement path of the spring arm, the latter, when engaged by the catch, being held relatively close to the base in retracted position whereby to sustain the shank in close relation thereto with the coil of the spring contracted to a state of maximum tension, the spring arm, when disengaged from the catch, acting to free the spring coil for expansion whereby to swing the shank to a relaxed wide-angle position relative to the spring foot and base engaged thereby.

3,006,101

SPRING-RESPONSIVE FISH HOOK
 Jack R. Zeman, 2741 NE, 10th Ave., Fort Lauderdale, Fla.
 Filed Dec. 24, 1959, Ser. No. 861,887
 4 Claims. (Cl. 43-36)



2. A fish hook comprising a rigid shank having an eye at one end and at its other end a return bend ter-

minating in a hook point facing generally toward the eye end of the shank, and an elongated spring lying alongside the shank and formed at one end with an impaling point facing oppositely of the shank hook point and disposed outwardly therebeyond and biased to advance its impaling point divergently away from the shank, means for restraining flexing movements of the spring to a plane transversely of that occupied by the shank hook, means fixedly anchoring the opposite spring end to the shank at a point adjacent its eye whereby to permit flexing of the free end portion of the spring toward and from the shank hook near a plane common therewith, and pressure-responsive interengaging means on the shank and spring in the free end portion of the latter for releasably holding the spring in a retracted tensioned position with its impaling point at minimum distance from the hook of the shank.

end of the sinker body projecting beyond the front end of said body, and attachment means for attaching the sinker to a fishing line, said attachment means being on the flat top side of the sinker body between the ends



thereof and being closer to the front end than to the rear end, the center of gravity of said sinker being between said attachment means and the rear end of said sinker.

3,006,102

ARTIFICIAL FISHING LURE
 Loyal H. Chapman, 9021 Club Road, Minneapolis, Minn.
 Filed Nov. 6, 1958, Ser. No. 772,263
 1 Claim. (Cl. 43-42)



An artificial fishing lure comprising in combination, an elongated body simulating a natural bait minnow, said body member having a head portion, a body portion having a hollow chamber and a longitudinally disposed slot, and a tail portion, an eye bolt mounted in the said head portion to connect the lure to terminal fishing tackle including a leader and a line, there being a relatively narrow axial bore in said body portion extending rearwardly from the chamber and outwardly of the lure through the said tail portion, a coiled spring mounted in said chamber and a long eye-bolt extending through said axial bore and the coiled spring in the chamber to the forward end portion thereof, a disc-like member rigidly secured to the forward end portion of the eye-bolt and being of slightly larger diameter than the spring, said spring being held slightly compressed between the disc and the rear end portion of the chamber, said slot being in communication with the hollow chamber, a plurality of graduations adjacent said slot to afford indicating indicia, a free movable member frictionally mounted in said slot for endwise movements therein, means associated with the disc and eye-bolt to impart rearward movement to said free movable member, said member remaining at its most rearwardly position in the slot when tension on the spring is released, a fish hook secured to the outer end portion of the eye-bolt whereby the force of the strike of a fish thereon will impart the initial rearward movement to the disc and eye-bolt and the free movable member.

3,006,104
FISH LURE
 Fred A. Allen, 189 Smith St., Concord, N.C.
 Filed Oct. 23, 1957, Ser. No. 691,822
 2 Claims. (Cl. 43-42.15)



1. A combination surface and submerged fish lure comprising a substantially frusto-conical buoyant head section having a concave depression in its upper end which is substantially normal to its longitudinal axis, and having a reduced depending lower end, said head section assuming a vertical position in the water, a plurality of weighted trailing sections pivotally interconnected and connected at one end to the lower end of said head section and depending in vertical relation from the head section, whereby the fish lure will float in a vertical position with the upper end of the head section above the water level and the trailing sections completely submerged and below said head section, each of said trailing sections being elongated and of less diameter than said head section, first hook means swivelly connected adjacent the lower end of said head section, and second hook means swivelly connected adjacent the free end of said trailing sections whereby the first hook means is disposed adjacent the water surface and the second hook means is spaced from and below said first hook means.

3,006,103

FISHERMEN'S SINKERS CAPABLE OF BEING USED AS LURES OR SPINNERS
 Graham St. Q. Scott, 23 Ebdon St., Queenstown, Cape Province, Union of South Africa
 Filed Apr. 20, 1959, Ser. No. 807,584
 Claims priority, application Union of South Africa Apr. 22, 1958
 13 Claims. (Cl. 43-42.06)

1. A fishing line sinker which consists of a single piece of heavy material forming the sinker body and being substantially heart shaped in plan view with the broad end thereof being the front end and the narrow tapering end being the rear end, said sinker body having a flat top side, a buffer element of resilient material on the front

3,006,105
CASTING APPARATUS
 Elmer Lewis, Box 760, Eustis, Fla.
 Filed Jan. 25, 1955, Ser. No. 483,983
 3 Claims. (Cl. 43-44.99)

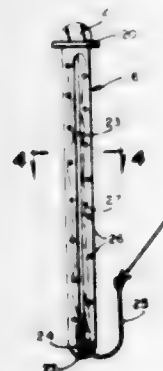
1. Casting apparatus adapted to be secured to a fishing line comprising a carrier member, means on the peripheral surface of said carrier member to which the fishing line is adapted to be secured, a hollow rider member having an interior chamber therein, means defining an access opening in said rider to said interior chamber in said rider member, rider-retaining means on the carrier displaced relative to the point of attachment of the fishing

line to the carrier so that when the carrier is freely supported from the line the retaining means is offset laterally from the axis of the fishing line, said rider retaining means including a member operable to retain the rider on the carrier in position wherein the said access opening is effectively closed by a confronting surface of the carrier, said rider retaining means being positioned relative to the point of attachment to the fishing line so that the mass of the rider member carried by the retaining means will tend to displace the carrier about the said point of attachment toward a position wherein the retaining means is no longer effective to retain the rider on the carrier when the carrier is freely suspended from the fishing line, the relative masses of the rider and the carrier, and the extension of the said offset being such that when the rider and carrier assembly is freely



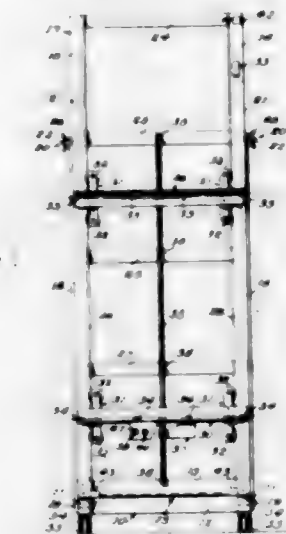
suspended from the said fishing line, the amount of said displacement is insufficient to release the rider from the retaining means so that said assembly may be cast as a unit, and the said relative masses of the rider and carrier and their respective forms being such that in free flight, after being cast as a unit, the retardation of the carrier, due to air resistance, will exceed the retardation of the rider from the same cause to an extent permitting a displacement of the carrier by the rider to free the rider from the retaining means while the assembly is in flight, and a flexible line secured to the carrier and to the rider at a point on the rider opposite the open end of said cavity to thereby cause the rider, when free from said carrier, to assume a position wherein material contained in said rider cavity may be displaced by gravity from the rider.

3,006,106
BAIT CONTAINER
Harry V. Shuler, P.O. Box 625, Ontario, Oreg.
Filed May 27, 1959, Ser. No. 816,088
3 Claims. (Cl. 43-55)



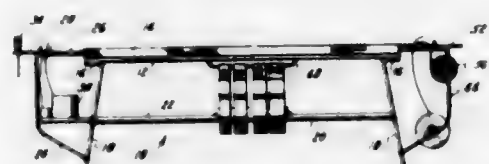
1. A single worm bait container for fishermen comprising a hollow rubber tube closed at its lower end and terminating with a radially extending flange at its upper end, said tube having a longitudinal slit formed intermediate said ends and having a plurality of perforations formed along its length, said slit being normally closed and adapted to receive the pointed end of a fish hook which engages with a single worm bait contained in the tube such that on removing the hook from the tube the worm is removed through the slit which resiliently opens to permit passage of the hook and the worm.

3,006,107
ARTISTS' STUDIO EASEL
Manuel J. Tolegian, 3960 Glenridge Drive,
Sherman Oaks, Calif.
Filed Feb. 4, 1959, Ser. No. 791,061
7 Claims. (Cl. 45-129)



1. In an artists' easel for supporting a picture panel while painting thereon, a base, a substantially vertical frame supported by said base, picture panel holding means mounted for up and down movement along said frame, said means including a lower panel engaging member and a separate and independently movable upper panel engaging member, and electrically actuated power means for vertically moving said lower panel engaging member at the will of the artist and for holding said lower panel engaging member in any position to which it is moved, said electrical power means including a motor, an up-switch for causing operation of said motor in a direction to raise said panel holding means, and a down-switch for causing operation of said motor in the reverse direction to lower said panel holding means.

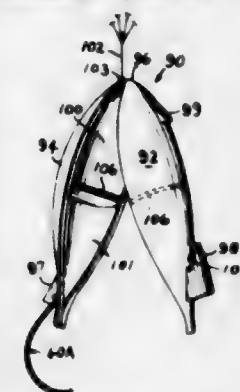
3,006,108
WORK BENCH
Harry J. Condit, 4421 N. Merced Ave., Baldwin Park, Calif., assignor to Harry J. Condit and Ruth M. Condit
Filed July 27, 1959, Ser. No. 829,707
5 Claims. (Cl. 45-138)



1. A work bench for upholstering furniture comprising a pair of elongated laterally spaced substantially parallel and horizontal support bars, a resiliently yieldable layer of material on the upper side of each support bar, a rigid crossbar adjacent each end of the support bars extending between the support bars and fixed to each support bar, an upwardly opening U-shaped support leg adjacent each end of the support bars and extending downwardly therefrom with the ends of each support leg fixed to the crossbar adjacent that end of the support bars, a horizontal shelf extending between the support bars in the plane of the support bars at each end of the support bars and extending outwardly from the ends of the support bars in the direction of the elongate extent of the support bars, each shelf defining a plurality of apertures extending through it, a plurality of vertically extending pegs fixed to the upper surface of each shelf and extending upwardly therefrom, a pair of C-shaped support brackets at each end of the support

bars and curving outwardly from the ends of the support bars, each pair of support brackets being aligned and having a portion extending in the direction of the elongate extent of the support bars and engaging the underside of the shelf at that end of the support bars with their aligned ends each engaging the end of one of the support bars and their other aligned ends each engaging one side of the support leg at that end of the support bars at a point intermediate the support bars and the end of the support leg remote from the support bars, a pair of horizontal laterally spaced braces disposed intermediate the support bars, each of the braces extending between the support legs and being fixed one to each side of each support leg, a horizontal elongated support shelf disposed on the braces and extending from one support leg to the other support leg and beyond at least one support leg to the outermost extremity of the pair of support brackets fixed to that support leg, said support shelf defining a notch intermediate its ends and between the support legs extending from one edge of the support shelf inwardly transversely to the elongate extent of the support shelf to adjacent the mid-point of the support shelf, a shaft extending in the direction of the elongate extent of the support shelf over the notch, and means for mounting the shaft on the support shelf.

3,006,109
TIME DELAY ACTION AND RELEASE FOR AIRBORNE TOYS
Arthur H. Boese, Oklahoma City, Okla., assignor of one-half to Novel Ideas Incorporated, Oklahoma City, Okla., a corporation of Oklahoma
Filed Apr. 15, 1959, Ser. No. 806,496
2 Claims. (Cl. 46-74)

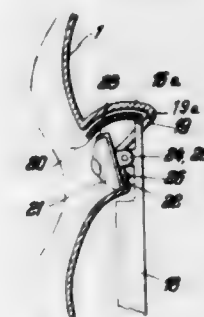


1. A toy rocket, comprising: an elongated streamlined hollow body having a head and a tail end, said body being longitudinally divided; spring actuated hinge means hingedly connecting said body halves together at their head ends and biasing said ends to open position; a stabilizing fin connected with each section of said body adjacent the tail end thereof, at least one of said body fins having a recess adjacent the surface of said body for forming a forwardly open slot; and flexible time delay release means comprising an elongated resilient member connected at one end with one of said fins and frictionally wrapped under tension around the tail end portions of said body halves and the other end portion disposed within the forwardly open slot in such manner as to be released therefrom in the flight of the rocket.

3,006,110
EYELID DEVICE FOR A DOLL
Willy Neff, Oftersheim, Baden, and Heinz Gassner, Mannheim-Neustadt, Germany, assignors to Rheinische Gummi- und Celluloid-Fabrik, Mannheim-Neckarau, Germany
Filed Feb. 14, 1957, Ser. No. 640,097
Claims priority, application Germany Mar. 16, 1956
5 Claims. (Cl. 46-166)

5. In combination with a hollow doll's head having a front face, a pair of eyesockets formed in said front face

and having each a rear wall spaced from said front face, each of said rear walls being formed with a slot extending in longitudinal direction of the head through said rear wall; a pair of eyeballs respectively located in said sockets and having each a front surface spaced from said rear wall and a rear surface facing said rear wall; a pair of lid members extending respectively in transverse direction of said eyeballs and being movable between an open position in which said lid members are located above said front surfaces of said eyeballs and a closed position in which said lid members are located in front of said front surfaces of said eyeballs, respectively; a pair of elongated weight means projecting substantially normal to said lid members from the rear edges thereof, said weight means having a thickness smaller than the width of said slots and extending substantially in a plane of symmetry of said lid members, respectively, and having each intermediate the ends thereof a pivoting portion ad-



jacent said rear faces of said eyeballs, respectively; and combined supporting and pivoting means connected to said pivoting portion of said weight means and supporting said weight means turnably about an axis normal to said plane of symmetry, said combined supporting and pivoting means including bearing means fastened to said rear wall and said eyeballs and having each a portion projecting through said slots, respectively, and pivoting means connecting said pivoting portion of said elongated weight means to said projecting portions of said bearing means, respectively, so that when said doll's head is turned about an axis parallel to said turning axis said lid members will move between said open and closed positions thereof to uncover and cover said front surfaces of said eyeballs, respectively, and whereby said combined supporting and pivoting means may be assembled with said weight means and said eyeballs before inserting said weight means through said slots in said rear walls of said eyesockets.

3,006,111
ARRANGEMENT IN OR RELATING TO MUSICAL BOXES
Fritz Koch, 26 Brettacherstrasse, Berlin-Zehlendorf, Germany
Filed June 17, 1958, Ser. No. 742,620
11 Claims. (Cl. 46-232)



1. In an amusement device, a non-ferromagnetic horizontal support surface, power mechanism including a

vertical drive shaft below said surface, magnetically attracted figures supported for free movement on said support surface, a driving part fixed to said vertical drive shaft and rotatable about an axis of rotation defined by said drive shaft, at least one gear wheel rotatably mounted on said driving part with its axis parallel to the axis of rotation defined by said drive shaft, spaced permanent magnets on said gear wheel, said permanent magnets cooperating with said magnetically attracted figures for driving the same, and abutment means intermittently engageable with said gear wheel whereby the figures on said supporting surface are moved in a first path of movement due to rotation of said driving part and a second intermittent path of movement due to engagement of said abutment means engaging said gear wheel.

3,006,112

GLASS BLOW MOLD MECHANISM FOR GLASSWARE FORMING MACHINES

George E. Rowe, Wethersfield, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Original application Nov. 16, 1953, Ser. No. 392,315. Divided and this application Feb. 3, 1958, Ser. No. 712,925

7 Claims. (Cl. 49—41)



4. In glassware forming apparatus, a one-piece blow mold having its axis disposed vertically and formed with a cavity, the walls of which taper downwardly and inwardly, said mold having open upper and lower ends, a bottom plate adapted at times to close the lower end of the mold and at all times positioned coaxially with the latter, means supporting the bottom plate at a fixed elevation comprising a rod axially aligned with and depending from the bottom plate, means for reciprocating the blow mold axially relative to the bottom plate whereby to position the latter at times at an elevation above the upper end of the blow mold for the removal of a finished article of glassware resting upon said bottom plate, the blow mold reciprocating means comprising a tubular support telescoped over the bottom plate supporting rod and a piston motor operable to reciprocate the tubular support.

3,006,113

SELF-COOLING ROOF STRUCTURE

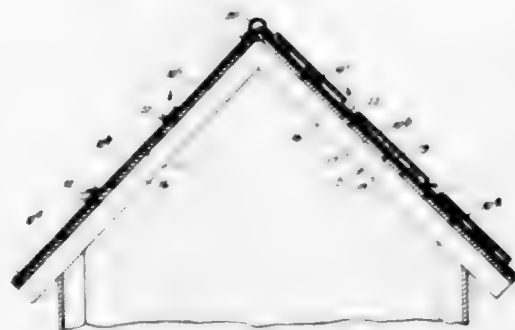
James F. Barnes, Van Nuys, and Herman I. Silversher, Tujunga, Calif., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California

Filed Feb. 12, 1957, Ser. No. 639,778

2 Claims. (Cl. 50—64)

1. In combination with an inclined roof, a plurality of roof panels covering said roof and providing a plurality of parallel, upwardly-inclined air passages, each of said

panels comprising at least four superposed foil sheets constructed of a reflective metal, adjacent sheets being united by interposed layers of a metal-bonding adhesive, each adhesive layer being a thermal insulator and having a thickness of about the order of said sheets, an intermediate layer of adhesive being interrupted between a pair of spaced parallel lines, said intermediate layer being so positioned in said panel as to have at least two foil sheets on each side thereof, the foil sheets below said intermediate layer being flat with the outermost foil



sheet thereof being adjacent said roof, the foil sheets above said intermediate layer of adhesive being longitudinally convexly deformed between said spaced lines to provide an air passage, the other layers of said adhesive being continuous and generally coextensive with said sheets, said panels being arranged in side-by-side relation and the foil sheets above said intermediate layer being shorter than the sheets below said intermediate layer in the direction of said lines, whereby said air passages are shorter than the inclined dimension of said roof.

3,006,114

HOLD-DOWN ANCHOR DEVICE FOR THE EMBEDDED CABLES OF PRESTRESSED CONCRETE GIRDERS

Bror Hillberg, Franklin Park, Ill., assignor, by mesne assignments, to Superior Concrete Accessories, Inc., a corporation of Delaware

Continuation of application Ser. No. 681,360, Aug. 30, 1957. This application Aug. 10, 1959, Ser. No. 832,862

6 Claims. (Cl. 50—130)



1. A hold-down anchor device for positioning the tensioning cables of a prestressed concrete girder within a girder form preparatory to concrete pouring operations, said anchor device comprising, in combination, a generally U-shaped, normally upstanding frame including a pair of flat spaced parallel side plates having appreciable thickness, and a connecting base extending between the lower ends of said side plates, said base being formed with an internally threaded bore adapted to receive therein the threaded end of a lag bolt whereby the frame may be secured to the base support of the girder form with the side plates extending vertically upwardly from said base support within the confines of the form, said base being in the form of a closely wound helical coil of rod stock, said side plates having the lower ends thereof pro-

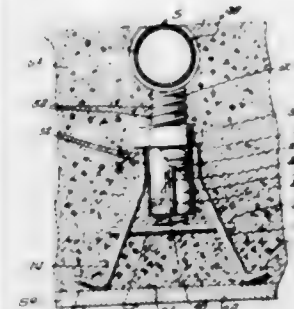
vided with longitudinally extending notches which extend upwardly from the bottom edges of the side plates and serve to bifurcate said lower ends of the side plates and form attachment fingers of rectangular cross section and with sharp right angle inner corners, each of said fingers having its sharp right angle inner corner welded to the outer surface of the coil along an axial line of tangency, said side plates being provided with a series of opposed pairs of holes therein with the various pairs being spaced progressively along the side plates outwardly from said base, and a traction pin received in each pair of opposed holes, each pin being adapted to overlie and tractionally engage one of the tensioning cables so as to receive the upward thrust thereof and space the same from said base support at the point of contact therewith when the cable is drawn taut.

3,006,115

SCREED CHAIR

Bror Hillberg, Elmwood Park, Ill., assignor to Superior Concrete Accessories, Inc., a corporation of Delaware
Continuation of application Ser. No. 604,982, Aug. 20, 1956. This application Mar. 15, 1960, Ser. No. 19,139

3 Claims. (Cl. 50—322)



1. A two-part, separable composite screed chair for maintaining a screed in fixed elevated position over a supporting surface in connection with the formation of a concrete body, said chair comprising a lower chair base adapted to be positioned on the supporting surface and to remain embedded in the concrete body after the concrete has been poured and become set, and an upper cradle part designed for removal from the chair base and withdrawal from the concrete body when the latter has become partially set, said chair base comprising a pair of semi-cylindrical sheet metal members each having radially extending side flanges on opposite sides thereof coextensive with the longitudinal extent of the member with the side flanges being disposed in a common plane, said members being positioned one against the other with said pairs of side flanges being disposed in coextensive face-to-face relationship and welded together so that the members define therebetween a vertically disposed open-ended tubular body providing a central bore having smooth vertical walls, with said welded flanges on each side of the body constituting radially outwardly projecting and longitudinally extending ribs having oppositely facing flat sides, a plurality of supporting legs of cylindrical rod stock having upper vertical lengths extending longitudinally along and welded to the sides of said ribs, said vertical lengths merging with downwardly and outwardly extending intermediate lengths and said intermediate lengths terminating at their lower ends in laterally extending foot portions adapted to rest on said supporting surface below the lower end of said tubular body whereby the latter is supported in an elevated position above the supporting surface, said upper cradle part comprising a cradle proper adapted to receive the screed therein and an elongated shank depending from said cradle proper and threaded throughout its vertical extent, and an adjusting nut threadably received on said shank, said shank being loosely and slidably received within said bore

with the nut resting on the rim of the latter whereby turning movement of the nut will vary the elevation of said cradle proper.

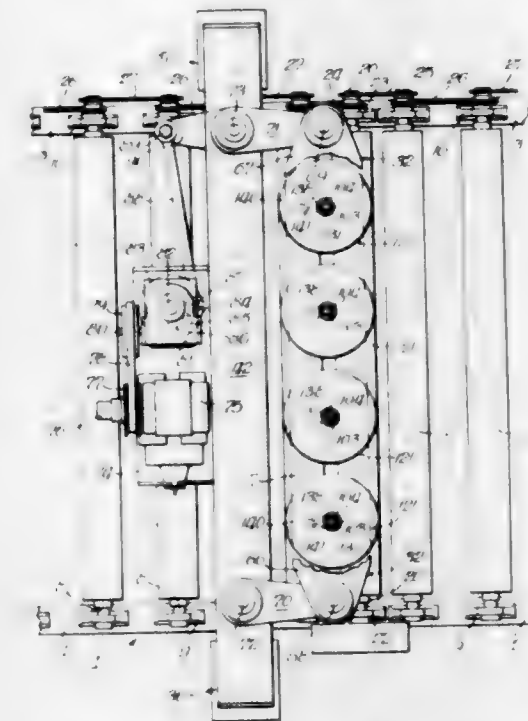
3,006,116

APPARATUS FOR HONING HARD SURFACED MATERIALS

Lloyd H. Knost, P.O. Box 415, Carthage, Mo.

Filed Feb. 17, 1959, Ser. No. 793,864

9 Claims. (Cl. 51—55)



1. A floating head structure for a slab honing machine comprising a slab conveyor, a support adjacent said conveyor, a spindle mounted for rotation upon said support, a finishing wheel carried by said spindle, means to drive said spindle, mechanism interposed between said support and said spindle to permit endwise shifting of said spindle and wheel in the direction of the conveyor, and power mechanism to endwise actuate said spindle between a raised inoperative position and a lowered operative position upon a slab comprising a single acting air cylinder, a piston member in said cylinder connected with said spindle to actuate said spindle in one direction, and a spring return means reacting between said support and spindle to normally urge said spindle into raised inoperative position, and air supply means connected with said cylinder including a valve for said supply means having a valve operating unit with trigger mechanism to actuate said unit, said trigger mechanism and said finishing wheel being oppositely disposed on either side of the path of travel of a conveyor actuated slab being processed by said machine with said trigger mechanism beneath said wheel, said trigger mechanism being located in the slab path to provide means responsive to the approach of a slab into working relation with respect to the finishing wheel whereby to automatically lower the finishing wheel upon the surface of said slab.

3,006,117

GEAR HONING

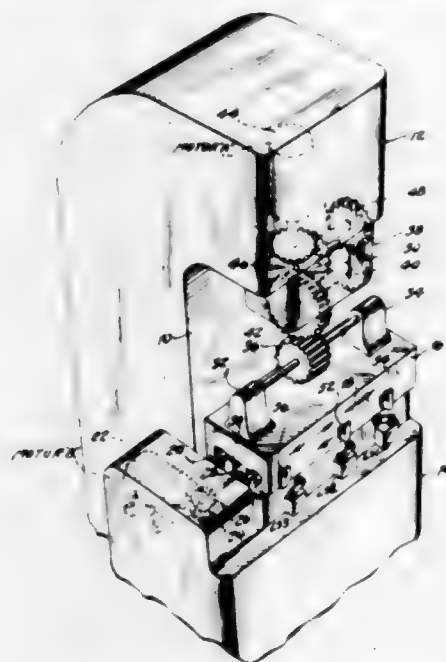
Carl Henry Motz, East Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan

Filed Nov. 24, 1958, Ser. No. 775,882

6 Claims. (Cl. 51—105)

1. A gear finishing machine comprising a frame, a rotary work support on said frame for a gear member, a rotary tool support on said frame for a gear-like tool member, means for effecting angular adjustment between said supports about an axis perpendicular to the axes of

said supports, guide means mounting one of said supports on said frame for traverse in a plane parallel to the axes of both of said supports, means for moving one of said supports toward the other to establish pressure contact between said members, means for driving one of said supports in rotation, the other support being rotatable as a result of meshed engagement between the members carried thereby, traverse drive means comprising an electric motor, and mechanical connections



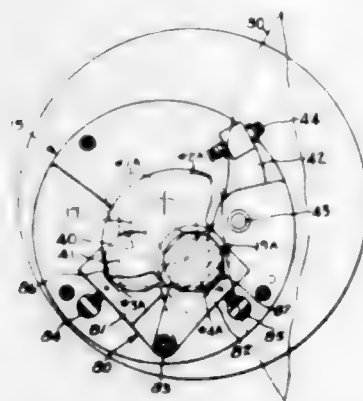
between said motor and one of said supports, cycle control means comprising a circuit including switches and switch actuating dogs movable relative to each other upon relative traverse between said supports, said switches and dogs being located to effect reversal of said motor to effect back and forth traverse of the support connected thereto, and including a switch and dog located to terminate a cycle in mid-traverse stroke with the common normal to the axes of said members intersecting a gear member on the work support.

3,006,118

WORK POSITIONING DEVICE

Roger H. Fournier, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Mar. 13, 1959, Ser. No. 799,243
6 Claims. (Cl. 51-237)



1. A crankpin positioning mechanism for a crankpin grinding machine having a pair of axially aligned rotatable work supports to support the opposite ends of a crankshaft comprising a pair of elongate pivotally mounted shaped members, a pivot stud on one of said supports to support one end of each of said shaped members each having crankpin engaging surfaces disposed at an angle to each other for sequentially engaging a given

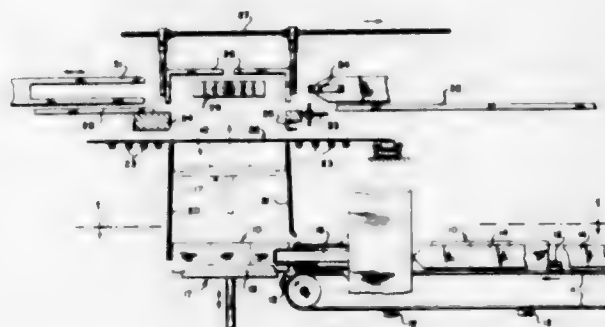
crankpin to position other crankpins successively for grinding, a pair of guide studs on the same one of said supports for supporting the other ends of said shaped members, attached to said rotatable work supports, adjusting means between the pair of guide studs and the shaped members to facilitate adjusting the position of said members, and yieldable means between the pair of guide studs and the shaped members yieldably to maintain the shaped members in predetermined positions.

3,006,119

WRAPPING MACHINE

Arthur L. Fingerhut, Westchester County, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

Filed Jan. 13, 1960, Ser. No. 2,177
7 Claims. (Cl. 53-24)



1. Apparatus for wrapping a plurality of compressible packages positioned in an array which comprises a vertically movable elevator in a wrapping station adapted to receive said array; means for elevating said array; means for placing a precut section of wrapping material on the upper surface of said array as the latter rests on said elevator; bucket means positioned above said array; nipping means spaced below the depending edges of said bucket means; means for compressing the ends of said array; means for elevating said array into said bucket; means for side-compressing the array during said elevation, said wrapping material being simultaneously folded about the upper face and the sides of said array as the latter is elevated, said nipping means firmly maintaining said wrapping material in said position during said elevation into said bucket thereby forming depending rear and front portions of wrapping material; means for horizontally moving the depending rear portion of said wrapping material into position against the lower portion of said array; means for moving said depending forward portion rearwardly and generally horizontally into place against the heretofore folded rear portion of said wrapping whereby the forward and the rear portions of the wrapping are juxtaposed and sealed together thereby forming a sleeve around said compressed array; yoke means in the plane of each end of said array adapted to reciprocate across each end face of the bundle and to thereby fold the rear flaps of the end side portions against said compressed array, said yoke being completely outside of the means for compressing the ends of said bundle; means for removing said end compressing means while said yokes are in position whereby said yokes maintain said pressure; means for horizontally moving said partially sealed bundle in a direction away from said yoke; end folding means for folding the unfolded end side portions as said array is moved; means for folding the lower end portions upwardly against said array; means for removing said yoke; means for maintaining said array under end compression after said yoke is removed; and means for folding said upper end portion down over said end and sealing the same thereby providing a sealed bundle under compression.

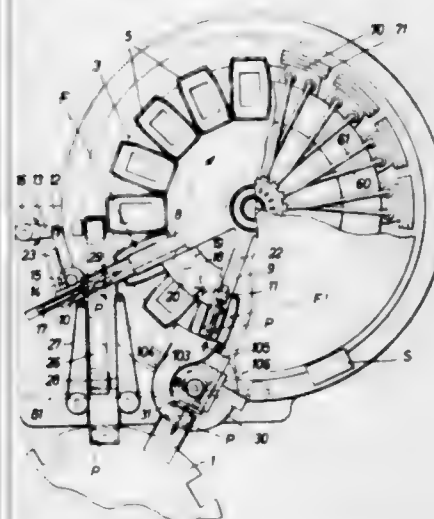
3,006,120

DEVICE FOR EVACUATING AND GAS-FILLING BAG PACKAGES

Alfred Grünhohk, Stuttgart-Bad Cannstatt, Germany, assignor to Firma Fr. Heiser, Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany

Filed May 12, 1960, Ser. No. 28,727

Claims priority, application Germany May 20, 1959
6 Claims. (Cl. 53-95)



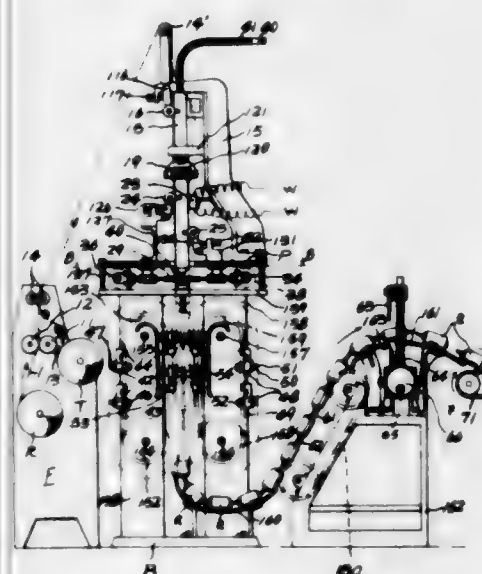
1. A package processing device comprising means provided with a plurality of chambers, a continuously rotatable rotor supporting said means, the chambers being arranged to receive successive packages, head-pieces on the rotor and operatively associated with the chambers, a pair of pivotable heat sealing jaws for each chamber, the jaws being mounted on the rotor and radially disposed with respect thereto, a package carrier fastened to each head-piece and provided with a radial, outwardly opening package receiving receptacle adapted for guiding each package received into position relative to said jaws, a bell-like part shiftably mounted on said rotor for each chamber, and means adapted to lower and raise said bell relatively to said head-piece, the bell, in its operating position, closing said head-piece.

3,006,121

MEANS FOR MAKING PAPER CONTAINERS AND FILLING THEM WITH FLUENT MATERIAL

Takeo Omori, 9-2 Chome, Soshigaya, Setagaya-ku, Tokyo, Japan

Filed July 29, 1959, Ser. No. 830,325
11 Claims. (Cl. 53-180)



1. In a machine for forming and filling paper containers, means for supplying a web of coated paper to

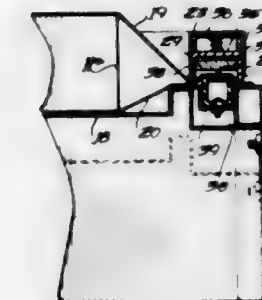
said machine, a tubular rectangular mandrel, a roller adjacent one side of the mandrel for pressing said web against said one side, said roller having flanges for folding the web about the two adjacent sides of the mandrel, further rollers adjacent each of said two adjacent sides of the mandrel for pressing said web against said two adjacent sides, said rollers having flanges for folding the web with the edges thereof in overlapping relation about the fourth side of said mandrel, means for heat sealing said overlapped edges of said web to form a rectangular tube encompassing said mandrel, a further roller following said heat sealing means for pressing the sealed edges against the mandrel to compact the seal, a pair of conveyors adjacent said mandrel for receiving and forwarding the tube thus formed, one of the conveyors having spaced apart heat sealing lugs engaging the tube, means within the mandrel for supplying fluent material to the tube, said conveyors forming a chain of filled and sealed paper cartons.

3,006,122

HEAT SEALING APPARATUS AND METHOD

Albert Weishauss, 140 W. 54th St., Chicago 7, Ill.

Filed Apr. 6, 1960, Ser. No. 20,439
9 Claims. (Cl. 53-182)



1. In package sealing apparatus, and the like, a frame, means for feeding a double web on said frame, means on said frame in the path of travel of said web for inserting a package between the plies thereof, and a sealing member movably mounted on said frame in the path of web travel, said member being L-shaped and adapted to seal said plies together adjacent the trailing edge of the package positioned therein, said member being equipped with a pair of elongated dependent flange portions adapted to urge said web against said frame, said frame being equipped with a raised portion in the path of web travel, said raised portion being adapted to be straddled by said flange portions.

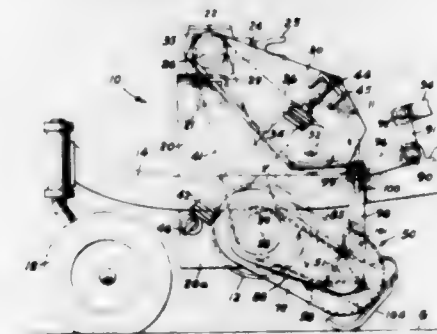
3,006,123

AGRICULTURAL IMPLEMENT

Horace G. McCarty and John K. Hale, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Original application Sept. 10, 1956, Ser. No. 608,880, now Patent No. 2,906,076, dated Sept. 29, 1959. Divided and this application Sept. 9, 1959, Ser. No. 839,003

1 Claim. (Cl. 56-1)



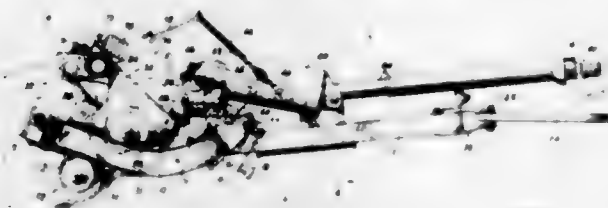
1. In a machine for forming and filling paper containers, means for supplying a web of coated paper to a machine for conditioning previously cut crop material to facilitate drying comprising a mobile frame adapted

to travel forwardly, a pair of cooperative treating rolls horizontally mounted on said frame one above the other and extending transverse to the direction of travel of the frame, the axes of said rolls being in a common plane which forms an acute angle with the ground on the material receiving side of the rolls, the axis of said one roll being in a vertical plane spaced forwardly of all portions of said other roll, and the axis of said other roll being in a horizontal plane spaced below all portions of said one roll.

3,006,124

HAY CONDITIONER

Emmett F. Glass, Akron, Horace G. McCarty, New Holland, and Leonard M. Bumm, Blue Ball, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 859,004
7 Claims. (Cl. 56-1)

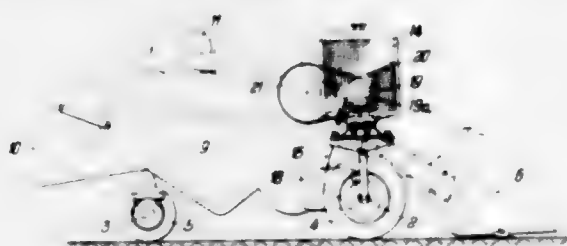


1. A hay conditioner comprising a frame, a first and a second roll mounted on said frame for rotation about horizontal, parallel axes, said rolls having peripheries normally in generally abutting relationship, said second roll being movable radially away from said first roll responsive to material passing between the rolls, means supporting said second roll on said frame for such movement including a member swingable relative to the frame, a lever pivotally mounted on said frame, a hold-down spring interconnected between said frame and said lever and operable to resist pivotal movement of the lever in one direction, lost-motion means pivotally connecting said member and said lever whereby when said second roll moves away from said first roll force is transmitted through said lost-motion means to said lever to pivot the lever in said one direction, the geometric relationship of said member, lever and lost-motion means being such that the hold-down force on said second roll materially decreases only after a given roll spacing has been achieved.

3,006,125

COMBINE HARVESTER AND DRIVE MOUNTING THEREFOR

Helmut Claas, 4 AM Kattenpatt, Harzewinkel, Westphalia, Germany
Filed May 11, 1959, Ser. No. 812,208
Claims priority, application Germany May 12, 1958
1 Claim. (Cl. 56-20)



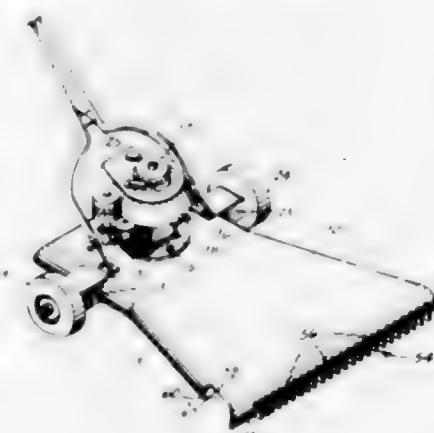
In a self-propelled combine harvester, a front axle, two rubber-tired drive wheels carried by said front axle, grain receiving means located upon one side of the harvester adjacent to one of said wheels, a driving engine, a mounting carrying said engine, a tubular support extending along one side of said other drive wheel and having a lower portion mounted upon said front axle and an upper portion connected with said mounting, a connecting

strut extending along the other side of said other drive wheel and having a lower portion mounted upon said front axle and an upper portion connected with said mounting, said support and said strut carrying said mounting to support said engine directly above the other drive wheel, the center of gravity of said engine being located vertically substantially directly above the center of said other drive wheel, and a drive operatively connecting said engine with said front axle.

3,006,126

POWER DRIVEN CHAIN CUTTER LAWN MOWER

Jasper D. Viverette, P.O. Box 277, Sharpsburg, N.C.
Filed July 7, 1960, Ser. No. 41,435
8 Claims. (Cl. 56-25)

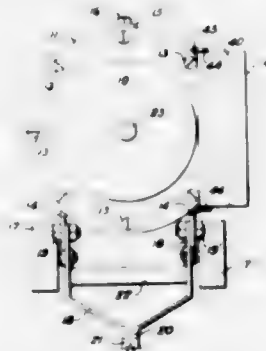


1. A lawn mower of the character described comprising a generally horizontally extending open bottom housing having a grass discharge opening in the forward portion of one side thereof, said housing having a straight laterally extending downwardly curved front wall, an endless cutter having a series of blades mounted for movement in a horizontal plane in said housing, a flat cutter bar mounted in said housing in parallel spaced relation to the forward wall of said housing, said endless cutter having one portion thereof in constant contact with said cutter bar, means driving said endless cutter, ground-engaging wheels supporting the rear portion of said housing, and a ground-engaging roller carried by said housing and supporting the forward portion thereof.

3,006,127

COMBINATION LAWN EDGER AND HEDGE TRIMMER

Jacob Becker, 705 NE. 64th Ave., Portland, Oreg.
Filed Jan. 20, 1958, Ser. No. 709,876
2 Claims. (Cl. 56-25.4)

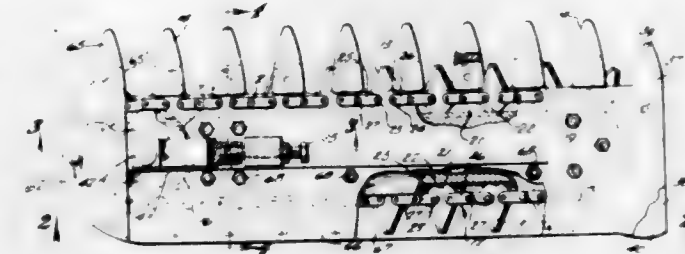


1. In a rotary grass cutter and sod trimmer: a main housing; a motor housing detachably mounted on the top of said main housing; a motor carried by said motor housing, said motor having a vertical drive shaft extend-

3,006,129

ENDLESS MOWER

Virgil Asbury Sayre, 399 S. Ogden Ave., Columbus, Ohio
Filed Aug. 12, 1959, Ser. No. 833,329
3 Claims. (Cl. 56-292)



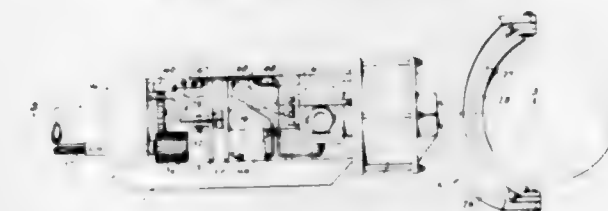
ing downwardly through said main housing, the lower end of said drive shaft being flattened on one side and threaded; a horizontal rotary cutter demountably and adjustably secured on said flattened and threaded lower end of said vertical drive shaft; a skid bar secured to the front of said main housing and depending to a point below said rotary cutter; two wheels spaced in a diametrically opposite relation mounted on said main housing rearwardly from said skid bar; a bevel gear secured on the said vertical drive shaft intermediately of said motor and said rotary cutter; a horizontal shaft rotatably mounted at right angles to said vertical drive shaft, said horizontal shaft extending outwardly from said vertical shaft through one side of said main housing and having a polyhedral outer end; a bevel gear secured to the inner end of said horizontal shaft, said bevel gear meshing with and being driven by said bevel gear on said vertical drive shaft; a circular vertical edger blade, having teeth around its outer peripheral edge and being detachably mounted on said polyhedral outer end of said horizontal rotatable shaft, said edger blade being provided with a circular hub concentrically thereof, said circular hub having there-through a polyhedral opening complementary to said polyhedral outer end of said horizontal shaft; an hollow cutter guard open at its lowermost edge and demountably attached to the side of said main housing through which said horizontal shaft extends, encasing said vertical edger blade downwardly to a point in line with the lowermost edge of said main housing, said cutter guard being indented inwardly at one edge of its outer surface, said indentation contacting the outer side surface of the teeth of said vertical edger blade, thereby cleaning said teeth; the said outer side surface of said hollow cutter guard provided with a circular opening there-through, said opening being complementary to and engageable upon the outer peripheral surface of the outer end of said circular hub of said vertical edger, retaining said vertical edger blade in engagement with said outer polyhedral end of said horizontal shaft.

1. In a reversible chain mower for use with a power take-off having a variable transmission, the improvement comprising an elongated bar having grooves in the edges, a sprocket rotatably mounted on one end of the bar, a chain trained over the sprocket and extended around the bar, cutter blades carried by the chain and having tongues extended into the grooves of the bar, spaced guards extended from the leading side of the bar, said guards having openings in which the chain and cutter blades are slidably mounted, a shaft upon which the sprocket is mounted, a shield connected to one end of said bar, an arm connected to said one end of said bar, a hub on said arm for mounting said shaft therein, a tongue on said arm mounted within said shield, a block on said tongue, a lug on said one end of said bar confronting said block, means mounted in said lug and connected to said block whereby said block, tongue, arm and shaft are moved laterally of said one end of said bar to adjust the tension of said chain.

3,006,130

TREE SHAKER APPARATUS

John P. Jones, Vaughn, Wash., assignor to A. D. Goodwin & Son, Inc., Manteca, Calif., a corporation of California
Filed Oct. 5, 1959, Ser. No. 844,429
6 Claims. (Cl. 56-328)



1. A tree shaker adapted to be attached to a tractor, comprising frame members spaced apart, a manifold connecting one end of said frame members, a cylinder connecting the opposite end of said frame members, a piston rod connected to said piston and passing through each end of said cylinder, a hollow boom connected to said manifold, a yoke threaded to one end of the piston rod, a saddle pivoted to said yoke, a resilient seat attached to the saddle, an air cylinder attached intermediate the frame members, a pipe line connecting said air cylinder to the first mentioned cylinder and manifold to reciprocate the piston, and electrically controlled means within the frame members to open and close said pipe lines.

3,006,131

PNEUMATIC BERRY STRIPPER

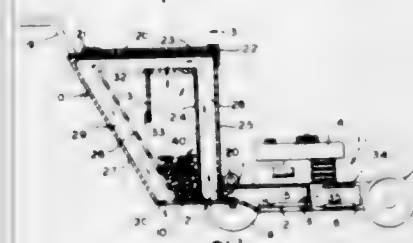
Fred McDowell, 1815 6th Ave., Neptune, N.J.
Filed Oct. 18, 1960, Ser. No. 63,390
5 Claims. (Cl. 56-330)

1. An apparatus for picking berries comprising an elevated substantially rectangular base, wheeled front and

3,006,128

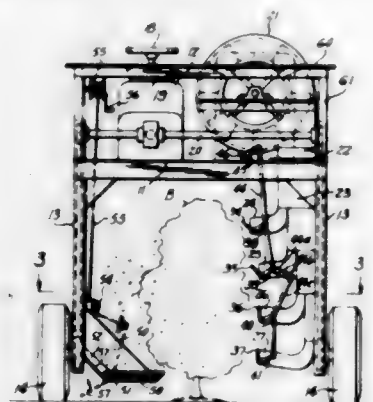
LAWN CARE UNIT

Alfred Welland, Clearwater, Fla., assignor of one-third to Robert M. Barr, Wayne, Pa.
Filed Apr. 20, 1960, Ser. No. 23,435
3 Claims. (Cl. 56-194)



1. A device for separating, collecting and discharging material propelled from a rotary mower comprising an open top receptacle having an inlet at one side, a bottom for said receptacle having an outlet adjacent the opposite side, a cover for said top, two partitions upstanding from the bottom of said receptacle respectively spaced from two opposite receptacle walls and terminating spaced from said cover to form a passage from said inlet to said outlet and also forming an open top chamber communicating with said passage means to support said receptacle with said outlet in close proximity to the ground, and impelling means to propel comminuted grass cuttings and debris through said passage, whereby gravity responsive debris at the passage portion drops into said chamber while the light cuttings discharge from said outlet to be spread in the wake of the grass cutter.

rear supports on the four corners of said base adapted to elevate the base above the top of a row of berry bushes with the supports straddling the row, a source of power on said base, a blower driven by said source of



power, a main vertical duct extending downwardly from said base between the front and rear supports on one side, a plurality of horizontal ducts extending from said main duct, and means carried by said apparatus for ejecting air sequentially from said horizontal ducts.

3,006,132

DEVICES FOR LATERALLY DISPLACING MATERIAL LYING ON THE GROUND

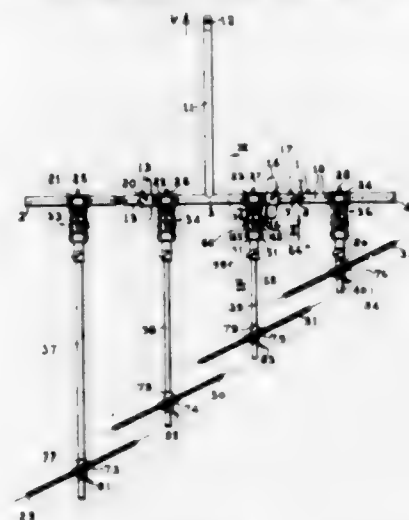
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a limited company of the Netherlands

Filed Sept. 30, 1957, Ser. No. 686,935
Claims priority, application Netherlands Sept. 29, 1956
6 Claims. (Cl. 56—370)



1. A device for displacing material lying on the ground comprising a frame member, at least three ground wheels operatively associated with and supporting said frame member, a transverse beam attached to said frame member, a first group of rake wheels directly connected to said frame member and operatively arranged thereon in side delivery relation, a beam separate from said frame member, a second group of rake wheels directly coupled to the second said beam and operatively arranged thereon in side delivery relation, and means operatively associated with said transverse beam and the second said beam and detachably supporting the second said beam on said frame member with said groups aligned in swath turning relationship.

3,006,133
SIDE DELIVERY RAKING DEVICE
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company
Filed June 17, 1957, Ser. No. 665,961
Claims priority, application Netherlands June 18, 1956
20 Claims. (Cl. 56—377)



1. A raking device adapted to be attached to a traction device, said raking device having a central longitudinally disposed axis and comprising an elongated transverse frame beam, at least two transversely spaced supporting members of unequal length detachably connected to said beam and extending rearwardly therefrom, said members being disposed substantially parallel to said axis and at least two vertically disposed rotary raking members, one connected to each supporting member at an acute angle relative to said axis, the two raking members being disposed on said supporting members at different distances from said beam so as to define a linear arrangement of raking members disposed at an acute angle to said axis for the turning of a swath or the side delivery raking of material lying on the ground as the device traverses the same, said supporting members and raking members being adapted to be rearranged on said beam to define a tedder.

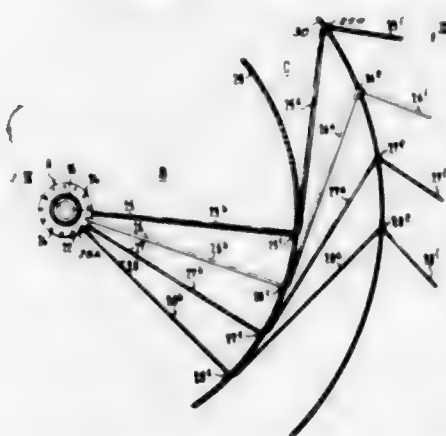
3,006,134

RAKING DEVICE

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, South Holland, Netherlands, a Dutch limited company

Original application Oct. 15, 1953, Ser. No. 386,278.
Divided and this application Nov. 19, 1958, Ser. No. 774,870

2 Claims. (Cl. 56—377)



1. A device for laterally displacing hay, grass, or other material lying on the ground comprising a mobile frame, overlapping rotatable rake wheels arranged in an echelon along said frame, draw means connected to said frame, at least one supporting wheel interconnected to said frame, axles for mounting said rake wheels, each of said

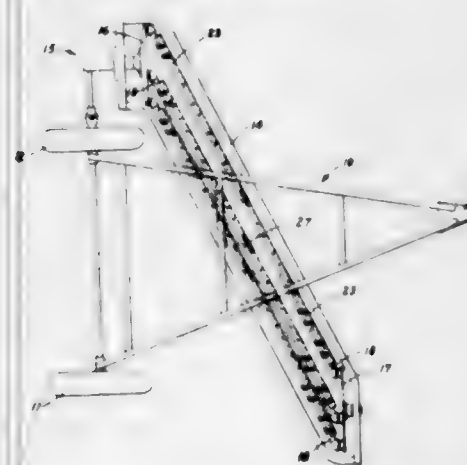
axles being rigidly secured to said frame and extending in a substantially horizontal direction therefrom with at least one rake wheel rotatably mounted on each said axle, each of said rake wheels consisting of an axle supportable hub, a substantially rigid center portion extending outwardly from said hub and concentric therewith, a plurality of resilient rods extending outwardly from said center portion, the inboard portion of each of said resilient rods comprising a supporting member for an outboard portion comprising a raking tooth, said raking tooth extending outwardly at an angle from said supporting member.

3,006,135

SIDE DELIVERY HAY RAKE

Horace G. McCarty, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Nov. 17, 1959, Ser. No. 853,524
6 Claims. (Cl. 56—377)



1. A side delivery reel type rake comprising a frame adapted for movement forwardly over the ground, a pair of spiders mounted on said frame for rotation respectively about spaced parallel axes extending generally in the direction of ground travel, a plurality of tine bars suspended between said spiders and having ends rotatably mounted thereon, one of said spiders being disposed laterally and rearwardly of the other whereby upon rotation of said spiders said tine bars successively move downwardly, laterally and then upwardly relative to the direction of ground travel on working strokes, a plurality of hay gathering tines spaced along each bar, the tines on a given bar depending therefrom in a generally vertical plane during the entire working stroke of the bar, a hay deflecting shield carried by each tine bar and disposed forwardly thereof, each shield having a plurality of hay deflecting faces, one of the faces of each shield lying in a plane inclined upwardly and rearwardly relative to the plane of the tines of the preceding bar on a working stroke whereby as a given tine bar completes its working stroke said one face of a shield carried thereby moves upwardly into the hay gathered by the tines of the preceding bar and deflects said hay forwardly and laterally away from the tines of said preceding bar.

3,006,136

METHOD AND APPARATUS FOR CONTROLLING THE TENSION IN TAPES

George Thomas Wilson Grieve, Shooters Hill, London, and Harold William Ritchie Watson, Abbey Wood, London, England, assignors to British Insulated Cables Limited, London, England, a British company

Filed Mar. 7, 1960, Ser. No. 13,125
Claims priority, application Great Britain Mar. 12, 1959
12 Claims. (Cl. 57—3)

1. A method of controlling the tension in tape as it runs on to a core on which it is to be wound, which

comprises applying a retarding force to the tape in excess of the winding tension, applying an advancing force to the tape between the point or points of application of the



retarding force and the winding point, and adjusting the value of the one applied force relative to the other to give the approximate residual winding tension required.

3,006,137

FLUID TWISTING APPARATUS

George Robinson Long, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 4, 1959, Ser. No. 810,670
4 Claims. (Cl. 57—77.33)



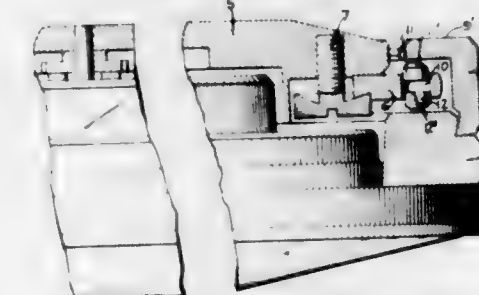
1. A fluid twister comprising a tubular yarn passageway, an inlet for admitting fluid into the yarn passageway and positioned to direct said fluid circumferentially about the inner periphery of the yarn passageway, a string-up slot for introducing an endless yarn transversely into the yarn passageway and releasable closure means for partitioning the yarn passageway from the string-up slot.

3,006,138

AUTOMATIC SELF-WINDING WATCH

Rene A. Flechter, 137 Hollywood Ave.,

Douglaston 63, N.Y.
Filed June 4, 1958, Ser. No. 739,764
6 Claims. (Cl. 58—82)



1. A watch of the character described comprising a rotor supported for oscillation on a fixed central trunnion, a plurality of anti-friction and wear-resistant elements fixed to the rotor and disposed in an arc adjacent its periphery, an additional plurality of anti-friction and wear-resistant elements fixed to the rotor and disposed

in an arc forming with the first-mentioned arc a complete circle with the trunnion as its center, and at least one fixed annular guide surface disposed adjacent said elements with a small clearance between said surface and said elements under normal conditions and in any position with relation to the force of gravity, whereby displacement of the rotor from its normal plane of oscillation about its axis in the watch movement may be limited by contact of at least one of said elements with said surface, said elements being jewels, each presenting toward the adjacent guide surface a rounded portion.

3,006,139

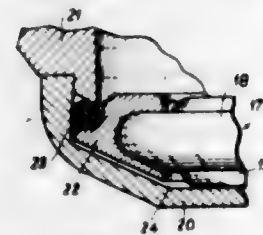
ELECTRIC WATCH

André Hug and André Beyner, Neuchâtel, and Fernand Guignard, Bienne, Switzerland, assignors to Ebauches S.A., Neuchâtel, and Fabrique de Boîtes La Centrale, Bienne, Switzerland, both firms of Switzerland

Filed Mar. 22, 1960, Ser. No. 16,821

Claims priority, application Switzerland Mar. 27, 1959

2 Claims. (Cl. 58—90)



1. In an electric timepiece, more especially a wrist watch comprising a case provided with a case body and with a back, and an electrochemical energy source, provided with an envelope, located in the said back, a packing disposed between the said envelope and the said back in such manner that a portion of the said envelope constitutes with the said back a fluid-tight compartment separate from the remainder of the interior of the said case, said packing being pressed between said energy source, said back and said case body.

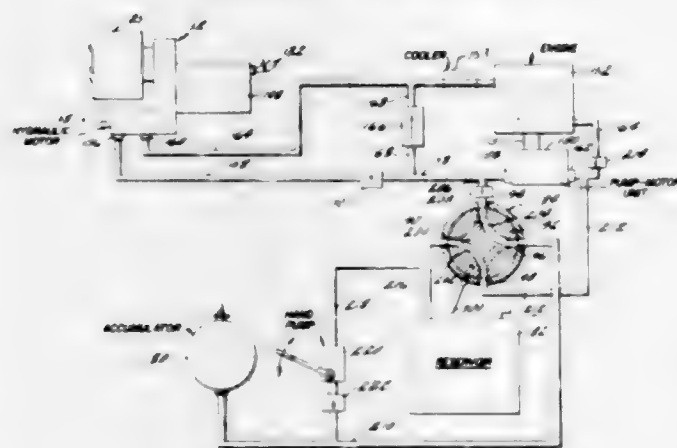
3,006,140

POWER SUPPLY SYSTEM INCLUDING ENGINE STARTING MEANS

George A. Dmitroff, Trumbull, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 3, 1957, Ser. No. 681,556

8 Claims. (Cl. 60—18)



1. In combination, a motor-driven component, said motor-driven component having an input shaft, a hydraulic motor, said motor having an output shaft, said motor having an inlet and outlet, said output shaft of said motor being drivingly connected to said input shaft of said component, means for providing hydraulic fluid for said motor, said means for providing hydraulic fluid for said motor having an inlet and outlet, an engine,

means operatively connecting said engine to said means for providing hydraulic fluid for said motor, a first conduit between the outlet of said means for providing hydraulic fluid for said motor and the inlet of said motor, a second conduit between the outlet of said motor and the inlet of said means for providing hydraulic fluid for said motor, an accumulator, valved means connected between said accumulator and said means for providing hydraulic fluid for said motor whereby said means for providing hydraulic fluid for said motor may be operated as a motor to start said engine, said valved means including a low-pressure discharge to permit flow from the outlet of said means for providing hydraulic fluid for said motor, a third conduit connecting said first conduit and second conduit, a relief valve in said third conduit, and a blocking valve in said first conduit between the place where said third conduit is connected thereto and said motor for preventing flow so that said accumulator can be charged when said means for providing hydraulic fluid for said motor is operated as a pump.

3,006,141

OPERATION OF JET ENGINES TO DECREASE BORIC OXIDE DEPOSITS

Eugene Becker, Grand Island, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed June 18, 1959, Ser. No. 821,321

2 Claims. (Cl. 60—35.4)

1. A method of minimizing boron oxide deposits within the combustion, turbine and exhaust sections of an air-breathing jet-type aircraft engine operating on a fuel containing at least one material selected from the class consisting of boranes and organoboranes which consists of introducing within such a section a mixture consisting essentially of sodium and cadmium metals containing about 5 to 25 weight percent of sodium in contact with surfaces upon which boron oxide would normally deposit in an amount sufficient to minimize boron oxide deposition.

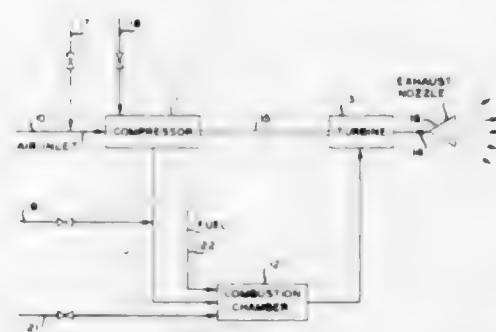
3,006,142

JET ENGINE COMBUSTION PROCESSES

Donald E. Carr, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 21, 1959, Ser. No. 860,751

17 Claims. (Cl. 60—35.4)



1. In the method of operating an aircraft turbo engine wherein air and a liquid hydrocarbon fuel are burned in a combustion zone of said engine and resulting gases are exhausted from said engine so as to impart thrust thereto, the step of introducing into said combustion zone an admixture comprising: from 10 to 90 weight percent of water; from 90 to 10 weight percent of a mixture consisting essentially of from 20 to 80 volume percent of a saturated unsubstituted aliphatic alcohol containing from 1 to 4 carbon atoms and from 80 to 20 volume percent of a paraffin hydrocarbon containing from 5 to 12 carbon atoms; and a small but effective amount of an emulsifying agent.

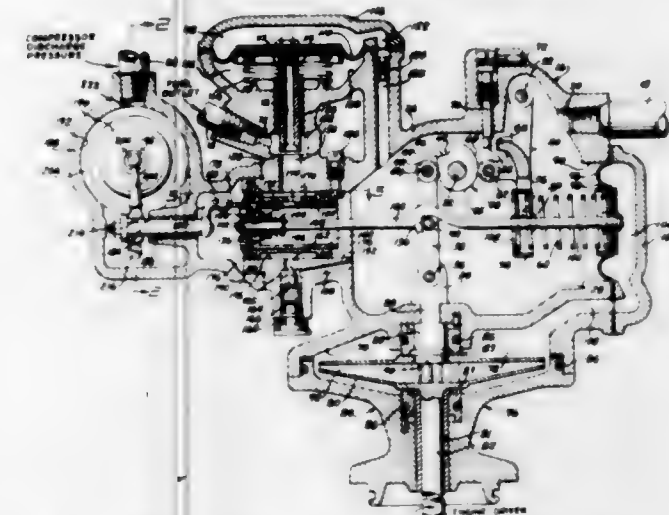
3,006,143

GAS TURBINE FUEL CONTROL

Warren H. Cowles and Dean F. Wheeler, Detroit, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Filed June 18, 1956, Ser. No. 592,187

3 Claims. (Cl. 60—39.28)



1. A turbine engine fuel control having a power selecting lever comprising, a housing having an unmetered fuel inlet and a metered fuel outlet, a first chamber contained within said housing communicating with said unmetered fuel inlet, a first lever located within said chamber and pivotally mounted at one end to said housing by a first pivot member, a cam member pivotally mounted on a shaft and rotatably positioned in accordance with the position of said power selecting lever, a roller pivotally mounted to the other end of said first lever and being in continual contact with said cam member, a second lever located within said first chamber and pivotally mounted at one end to said housing by means of a second pivot member, a second roller pivotally secured to said second lever and at times in engagement with said cam member, a diaphragm forming a portion of the wall of said first chamber, a first sleeve member having at least one port formed therein secured within said first chamber, a second sleeve member slidably received within said first sleeve member so as to be freely adjustable angularly and axially therein, a second port formed within said second sleeve member and at times in registry with said port formed within said first sleeve member, a rod member slidably received within said second sleeve member and operatively connected to said diaphragm, first spring means located about said rod and arranged so as to continually urge the said second sleeve member in one direction with respect to said rod member, a first abutment formed at the other end of said second lever, a second spring positioned about said rod and located between said diaphragm and said first abutment urging said diaphragm and second sleeve member in a metered fuel increasing direction, a second abutment formed on said first lever intermediate the ends thereof, an abutment receiving portion formed on said rod member, receiving and engaging said second abutment, a second chamber formed between a first housing portion and said diaphragm, speed responsive impeller means for creating a fluid pressure in accordance with the rotational speed of said turbine engine, said diaphragm and impeller means operative to urge said second sleeve member in the metered fuel increasing direction, conduit means communicating between said impeller and said second chamber so as to communicate pressure variations created by said impeller to said diaphragm, bellows means responsive to compressor discharge pressure secured to said second sleeve member so as to rotate said sleeve member and said second port formed therein with respect to said first sleeve member and the port formed therein in accordance with compressor discharge pressure, an annular chamber formed between said first sleeve mem-

ber and said first chamber receiving said first sleeve member, a first conduit portion downstream of said first sleeve member and in communication with said metered fuel outlet for receiving fuel metered by said ports formed in said first and second sleeve members, a throttling valve downstream of said first and second sleeve members controlling the pressure differential across said ports formed within said first and second sleeve members, a second conduit communicating between said annular chamber and said first chamber, and a threadably received needle valve cooperating with said second conduit for restricting the flow of fuel therethrough to a degree so as to allow a constant and continuous supply of fuel to said first conduit portion downstream of said first and second sleeve members regardless of the respective positions of the ports formed within said first and second sleeve members, and manually adjustable third abutment means positioned generally in the path of travel of said second lever so as to limit the movement of said second lever in the metered fuel decreasing direction by at times preventing said second roller from being in contact with said cam member as said cam member is rotated in the metered fuel decreasing direction.

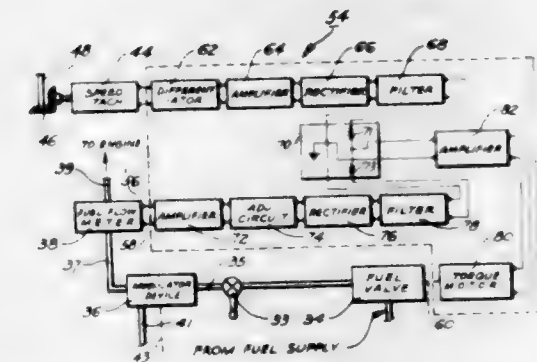
3,006,144

FUEL CONTROL APPARATUS RESPONSIVE TO APPROACHING ENGINE INSTABILITY

Samuel E. Arnett and Harry E. Starr, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed July 26, 1956, Ser. No. 600,182

7 Claims. (Cl. 60—39.28)



1. In fuel control apparatus for a combustion engine including a compressor having a characteristic range of unstable operation, the combination of a fuel conduit for supplying fuel to the engine, a fuel valve connected to said conduit for controlling the fuel flow through said conduit, valve means operative with said conduit for effecting a predetermined periodic variation in the rate of flow of fuel to said engine, first means operatively connected to said conduit for sensing said periodically varying flow of fuel therethrough, second means operatively connected to said compressor and responsive to the rate of change of speed of said compressor, fuel valve control means responsive to said first and second means for controlling said fuel valve and thereby the fuel supply to the engine as a function of said fuel flow and a change in the rate of change of speed of said compressor as the compressor operation approaches said characteristic range of unstable operation.

3,006,145

ANTISURGE CONTROL USING COMPRESSOR BLEED

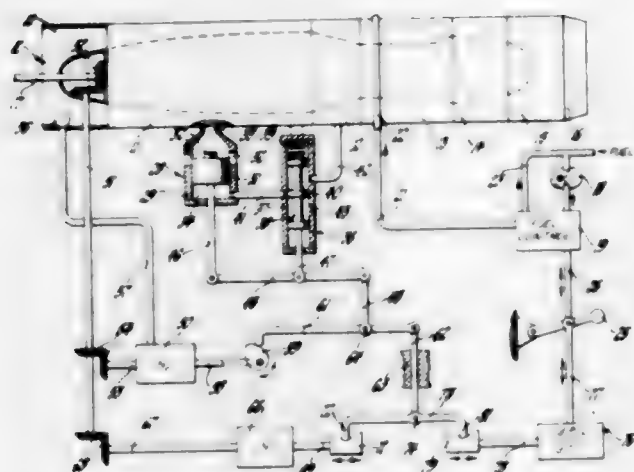
Albert J. Sobey, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 14, 1959, Ser. No. 846,469

7 Claims. (Cl. 60—39.29)

1. A compressor bleed system for a gas turbine engine comprising a compressor, combustion means supplied by

the compressor, a turbine supplied by the combustion means connected to drive the compressor, and means for supplying fuel to the combustion means, the bleed system comprising, in combination, at least one bleed valve connected to the compressor, means connected to the bleed valve for operating the bleed valve through a range of area from closed to open; and control means for the valve



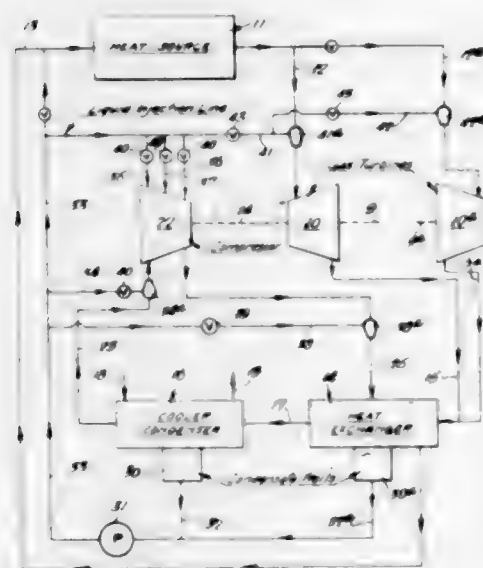
operating means including means generating a signal which is a scheduled function of corrected speed, means generating a signal which is a scheduled function of compressor acceleration, means responsive to a condition indicative of changes in engine fuel rate generating a signal which is a scheduled function of fuel rate transients, and means transmitting the signals from the said generating means to the said bleed valve operating means.

3,006,146

CLOSED-CYCLE POWER PLANT

Francis L. Jackson, Media, Pa., assignor to The Franklin Institute, Philadelphia, Pa., a corporation of Pennsylvania

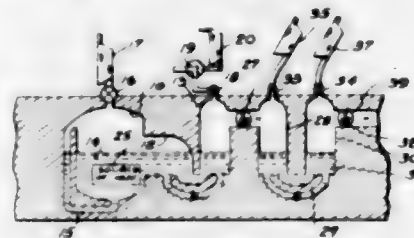
Filed Sept. 19, 1958, Ser. No. 762,134
7 Claims. (Cl. 60-40)



1. The method of improving a closed-cycle power system having a power means which expands, cools, and discharges a compressed heated gaseous fluid, said system passing the discharged gaseous fluid back to said power means after cooling, recompressing, and heating the same, said method comprising the steps of injecting a liquid having a boiling point substantially higher than the boiling point of the gaseous fluid into the compressed gaseous fluid prior to its passage into said power means, converting said liquid into dry vapor to constitute said

fluid a mixed fluid, condensing substantially all of said dry vapor after its discharge from the power means simultaneously with the cooling of the gaseous fluid, and collecting said condensed liquid for reinjecting the same into the gaseous fluid whereby said liquid is recycled through the system.

3,006,147
**HYDROSTATIC POWER PROCESS
AND APPARATUS**
Milford Geary, Chicago, Ill.
(R.R. 1, Polo, Ill.)
Filed Sept. 4, 1958, Ser. No. 759,023
6 Claims. (Cl. 60-49)



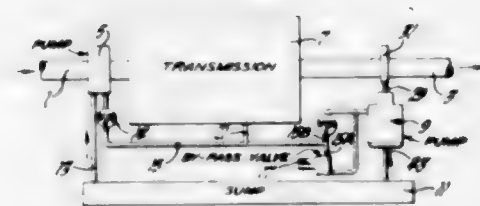
1. A power plant comprising a combustion chamber, an auxiliary chamber, a passageway interconnected between the lower portions of said chambers, a first storage chamber, a second storage chamber, means including a check valve interconnecting the upper portions of said auxiliary and first storage chambers to permit the flow of fluid from said auxiliary chamber to said first storage chamber, a passageway interconnecting the lower portions of said first and second storage chambers, heat generating means disposed in said combustion chamber for vaporizing a portion of a liquid contained in said chambers, and a plurality of means respectively connected to the upper portions of said chambers for converting fluid pressure into mechanical energy.

3,006,148

TRANSMISSION PUMP SYSTEM

Gilbert K. Hause, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 6, 1958, Ser. No. 765,416
3 Claims. (Cl. 60-52)



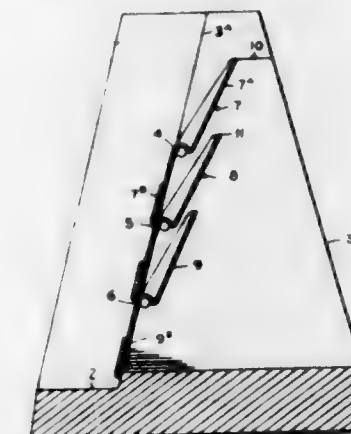
1. A fluid pressure supply for a transmission fluid pressure control system, a first pump adapted to be driven by a rotating element of the transmission for supplying fluid under pressure to said control system, a second pump adapted to be actuated by another rotating element of the transmission independent of said first rotating element for supplying fluid under pressure to said control system, means in said second pump for disconnecting said second pump from the rotating element in response to a predetermined discharge pressure, a first valve responsive to fluid pressure from said first pump to connect said pressure from said first pump to said means in said second pump to hold the second pump in a non-actuated position, and a second valve responsive to actuation of said second pump to connect said second pump discharge pressure to said control system.

3,006,149
**PRESSURIZED STORAGE SYSTEM AND
METHOD OF OPERATING**
Edwin E. Reed, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 3, 1956, Ser. No. 556,853
11 Claims. (Cl. 61-5)



1. An underground storage system for the storage of liquids under pressure which comprises, in combination: a cavern; a first tubing extending into said cavern and establishing communication between said cavern and the surface of the earth; a second tubing within said first tubing; a pump suspended from said second tubing and disposed within said first tubing at the region of communication of said first tubing with said cavern; a pump-actuated double-seated valve disposed below said pump in the lower end portion of said first tubing, said valve comprising a valve head disposed between and adapted to seat in either of spaced apart upper and lower annular valve seats but being normally closed at said upper valve seat and being moved to an open position when a valve stem attached to said valve head and extending through said upper valve seat is contacted by the pump body when said pump is lowered to an operating position, and being moved to a closed position at said lower valve seat when said pump is moved to a point below said operating position; means forming a seal at the surface of the earth at the point of entry of said first tubing; means including a slip joint for sealing said second tubing within said first tubing, said slip joint permitting limited vertical movement of said second tubing and said pump within said first tubing without breaking the seal between said tubings; means for introducing fluid to be stored into the cavern; and means for actuating said pump whereby said stored fluid can be removed from said cavern.

the lowermost plate, when approximately vertical, overlapping the upstream side of the upper portion of the plate below it down to the level of the horizontal axis of the latter plate and forming therewith a substantially



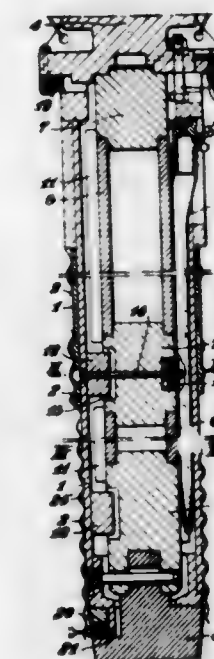
watertight seal, thereby relieving the pressure against the upper portion of the last mentioned plate sufficiently to enable the stream pressure against the lower portion thereof to force it into its approximately vertical position.

3,006,151

EXPANSIBLE MANDREL FOR SINKING OR DRIVING PIPES INTO THE GROUND

André Paul Jourdain, Embourg-lez-Liege, Belgium, assignor to Compagnie Internationale des Pleux Armes Frankignoul, Societe Anonyme, Liege, Belgium
Filed May 17, 1957, Ser. No. 659,930

Claims priority, application France May 22, 1956
5 Claims. (Cl. 61-53.72)



3,006,150
**AUTOMATIC SLUICE DEVICE FOR IMPOUNDING
LIQUIDS AT A RELATIVELY CONSTANT STORAGE LEVEL**

Cecil H. Bannister, Av. A. Villanueva 376,
Santiago, Chile

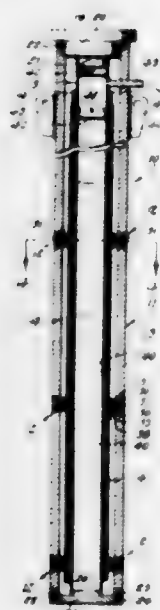
Filed Sept. 1, 1959, Ser. No. 837,374
7 Claims. (Cl. 61-26)

1. An automatic gate for use in a sluice of the type having conventional sidewalls, said gate comprising a plurality of plates pivotally mounted between said side walls to swing about parallel horizontal axes transverse to said sidewalls between an approximately vertical and an approximately horizontal position, the area of each plate above the axis about which it swings being greater than the area therebelow, said plates being mounted one above the other, with the lower portion of each plate other than

1. An expansible mandrel for positioning pipes in the ground, said mandrel comprising a plurality of radially movable longitudinal sectors cooperatively defining a predetermined cross-section, a central core of smaller dimension than said cross-section and arranged within said sectors and extending longitudinally thereof, said sectors defining a free space with the core, first radial guide means on said core, second radial guide means on each of the sectors and each cooperating with the first guide means for guiding the sectors in radial direction with respect to the core, said first and second guide means being located substantially in common planes extending outwardly from the center of said cross-section, elastic return means between each of the sectors and the core and tending to move the sectors towards the core in order to contract

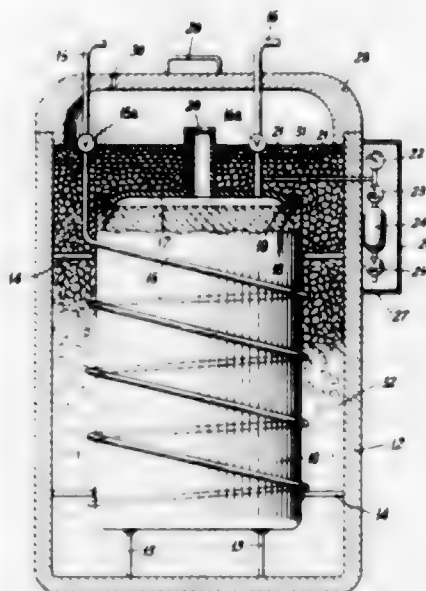
the mandrel, said return means being positioned substantially in said planes and being spaced from each other along the longitudinal extent of the core, at least two inflatable tubes associated with each sector and extending longitudinally thereof in said free space on both sides of said guide and return means, and means for connecting the inflatable tubes to a source of pressure medium to inflate said tubes for displacing the sectors radially outwards with respect to the core, the central core comprising tubular sections and intermediary sections having a substantially thicker wall than said tubular sections connecting the tubular sections, said second radial guide means being ribs fixed to the sectors and said first guide means being guideways provided in the intermediary sections.

3,006,152
PILE DRIVING MANDREL
Fredric Rusche, 30535 Rock Creek Drive,
Southfield, Mich.
Filed Apr. 17, 1959, Ser. No. 807,126
15 Claims. (Cl. 61—53.72)



1. A fluid pressure operated, expanding mandrel structure for the driving of corrugated pile shells and like elongated forms, comprising an external tubular core of length of the order of that of the form, a driving head engaged with one end of said core to receive and transmit heavy blows axially thereto, internal reaction means fixedly mounted within said core in radially inwardly spaced relation thereto at certain zones spaced angularly about the axis thereof, said core having radial apertures through the same, sets of gripping plugs received in said apertures for radial movement into and out of gripping engagement with the form to be driven, said plugs being radially inwardly sustained within said core by pressure plate members extending longitudinally within the core, spring means acting to normally urge said plugs radially inwardly in their respective apertures, fluid pressure inflatable means acting on said plugs, when inflated, to urge the latter outwardly for said gripping engagement with the form, comprising individual inflatable members mounted within and extending axially of said core, said inflatable members radially inwardly engaging and being sustained by said internal reaction means, said reaction means comprising an elongated hollow column of non-circular flat-sided cross section, said respective inflatable members inwardly engaging different sides of said column and acting in different radial directions between said column and said respective pressure plate members to urge said plugs outwardly, and means extending through said plugs from the outer ends thereof for removably mounting the same on said pressure plate members.

3,006,153
METHOD AND APPARATUS FOR STORING AND TRANSPORTING OZONE
Gerhard A. Cook, Clarence, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Aug. 29, 1960, Ser. No. 52,596
11 Claims. (Cl. 62—48)



1. A process for storing ozone including the steps of providing a body of adsorbent material; providing an ozone-containing feed gas and contacting such feed gas with the adsorbent body at a temperature below about -50°C . thereby adsorbing said ozone, at least part of said adsorbent body having an ozone-decomposing activity whereby the rate of decomposition is (1) less than 5% by weight of the total adsorbed ozone per 24 hours at temperatures below -75°C ., (2) between 2% and 20% by weight of the total adsorbed ozone per 24 hours at temperatures between -50 and -25°C ., and (3) at least 1% by weight of the total adsorbed ozone per minute at temperatures above 0°C . when the ozone loading is at least one pound per 100 pounds of said adsorbent body; and maintaining the ozone-containing adsorbent body at a temperature below about -50°C . during the ozone storage.

3,006,154
METHOD FOR REFRIGERATION AND HEAT TRANSFER
Clarence W. Brandon, 1806 S. Meridian, Tallahassee, Fla., assignor of twelve and one-half percent to Orpha B. Brandon, Birmingham, Ala., five percent to Harvey B. Jacobson, Washington, D.C., and fifty percent to N. A. Hardin, Catherine H. Newton, and Hazel H. Wright, all of Forsyth, Ga.
Filed Mar. 4, 1955, Ser. No. 492,211
16 Claims. (Cl. 62—115)

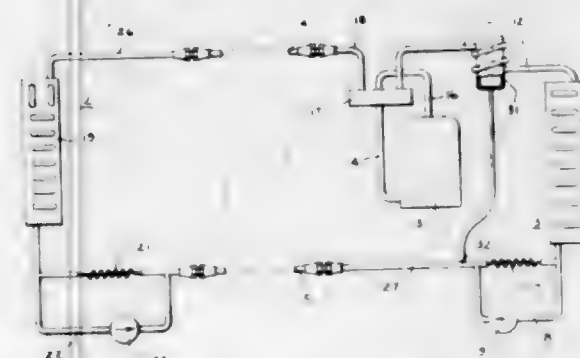
1. A method of refrigeration in a system having an evaporator, a condenser, and a pump operatively connected therewith for circulating the refrigerant in said system comprising: transferring refrigerant in its vapor phase by said pump from the evaporator to the condenser in order to convert it from its vapor to its liquid phase, said liquid phase forming a column substantially filling said condenser, simultaneously inducing a periodic compressive impulse into said column whereby to compress said refrigerant and to produce and maintain a standing sonic wave in the liquid column and thereby to increase the pressure peaks within the liquid in said column, said compressive impulse being of a velocity sufficient to effect a periodically induced rarefied area in said liquid column of a pressure sufficiently low to induce the introduction of vapor from said evaporator to be absorbed by said liquid after reversal of said periodic compressive impulse

immediately upon the instance of the next periodic compressive impulse, simultaneously withdrawing heat from the condenser, moving the refrigerant in its liquid phase



from the condenser to the evaporator, and permitting the refrigerant to expand from its liquid to its vapor phase in the evaporator.

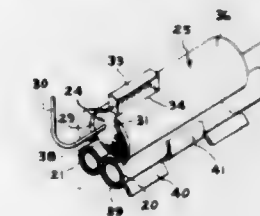
3,006,155
HEAT PUMP INCLUDING CHARGE MODIFYING MEANS
Harold G. Vanderlee and Herbert M. Brody, Tyler, Tex., assignors to General Electric Company, a corporation of New York
Filed Sept. 6, 1960, Ser. No. 54,220
3 Claims. (Cl. 62—174)



1. A heat pump comprising an indoor heat exchange unit and an outdoor heat exchange unit adapted for field connection to a pair of refrigerant lines leading through the wall of an enclosure to provide a closed refrigerant circuit; said indoor heat exchange unit including an indoor heat exchanger, an indoor refrigerant flow control means, and means for bypassing refrigerant around said indoor flow control means when refrigerant flow is in a direction from said indoor heat exchanger toward said indoor flow control means, said outdoor heat exchange unit including an outdoor heat exchanger, an outdoor refrigerant flow control means, means for bypassing refrigerant around said outdoor flow control means when said refrigerant flow is in a direction from said outdoor heat exchanger toward said outdoor flow control means, said outdoor and indoor flow control means being connected in series flow relation by one of said pair of refrigerant lines, a reversing valve having a conduit connecting with said outdoor heat exchanger, said reversing valve connecting with said indoor heat exchanger through one of said pair of refrigerant lines, a compressor having its suction and discharge lines connecting with said reversing valve for selectively directing the flow of high pressure refrigerant gas into either of said heat exchangers

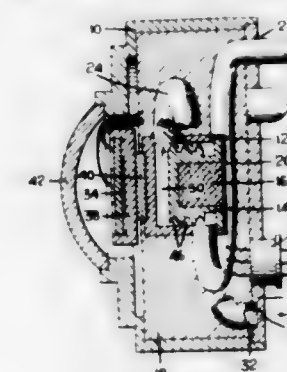
while withdrawing low pressure suction gas from the opposite heat exchanger, and a charge modifying receptacle having a two-way flow connection to said refrigerant line between said indoor and outdoor flow control means, said charge modifying receptacle being in heat exchange relationship with said conduit connecting said reversing valve to said outdoor heat exchanger so that refrigerant equal to the volume of said modifying receptacle is withdrawn and discharged into said circuit in response to the temperature of refrigerant gas flowing through said conduit between said outdoor heat exchanger and said reversing valve.

3,006,156
REFRIGERATION APPARATUS
Alfred G. Butsch, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,732
2 Claims. (Cl. 62—227)



1. In combination, an evaporator comprising a horizontal section consisting of a pair of longitudinally contacting tubes, a temperature sensing bulb comprising a closed cylinder having a radially extending projection on one side thereof and a fluid connection at one end thereof offset from the axis of said cylinder in the direction of said projection, and a clamp for securing said bulb to said horizontal section, said clamp consisting of a one-piece sheet metal body of generally S-shape to provide a loop for receiving said bulb and a reverse bend for engaging both of said tubes, said clamp having a slot in the upper portion of said open loop for receiving said projection and maintaining said fluid connection above the axis of said cylinder.

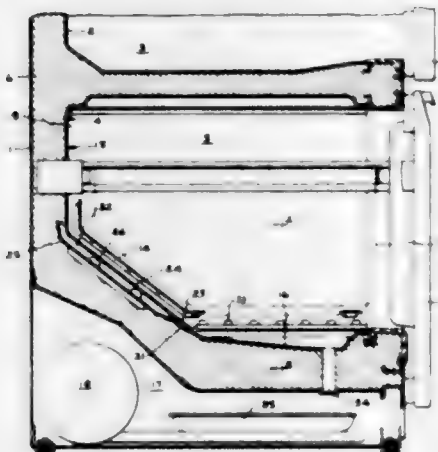
3,006,157
CRYOGENIC APPARATUS
George C. Haettinger and Richard M. Poorman, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed May 4, 1960, Ser. No. 26,814
9 Claims. (Cl. 62—259)



1. A refrigerated mounting means for small components which comprises a container, a refrigerant receptacle located within and substantially at the center of said container, insulating means surrounding said receptacle, a small component mounted within said container and in heat exchange relationship with said receptacle, refrigerant inlet and vent conduits passing through the walls of said container through the insulating means and connected to said receptacle at displaced points, and flow restriction

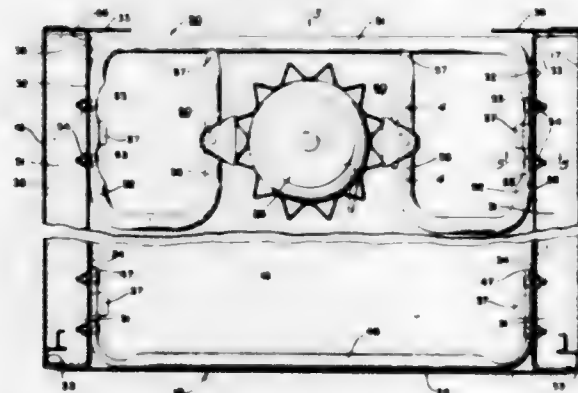
means located within said receptacle forming a non-linear flow path between said inlet and vent conduits such that the refrigerant is maintained in direct thermal contact with said receptacle along the flow path.

3,006,158
REFRIGERATOR CABINET CONSTRUCTION
Julius B. Horvay, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Nov. 9, 1959, Ser. No. 851,634
3 Claims. (Cl. 62-273)



1. A refrigerator cabinet comprising an outer shell, an inner liner spaced from said shell and including rear and side walls and defining a freezer compartment having an access opening at the front thereof, an evaporator in said compartment adjacent and parallel to one of said liner walls, insulation in the spaces between said liner and said shell and means for collecting defrost water formed on the outer surfaces of said liner during defrosting of said compartment and evaporator and directing the collected defrost water into said compartment comprising means extending outwardly and upwardly from the outer surface of the rear and side walls of said liner adjacent the bottom portions of said walls to form with said walls a trough for receiving defrost water draining from the outer surfaces of said walls, and a baffle composed of heat insulating material disposed above said trough and in spaced relation with the liner wall adjacent said evaporator, said baffle including a lower edge portion extending into said trough, and a plurality of openings in said walls for permitting the flow of said water from said trough into said liner.

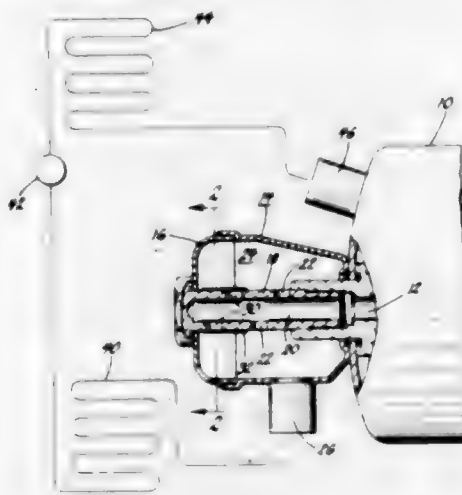
3,006,159
REFRIGERATING APPARATUS MOUNTING MEANS
Richard C. Brown, Vandalla, and Robert Smith, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,375
8 Claims. (Cl. 62-295)



1. In a refrigerator, a plurality of walls defining a cabinet having a food storage chamber therein, the side walls

of said cabinet depending below said chamber to provide opposite walls of an open bottom machine compartment beneath the chamber, a refrigerating system associated with said cabinet including a refrigerant evaporator for cooling said food storage chamber and a casing containing a motor-compressor unit of said system, means providing a combined rigid structural tie between the lowermost portion of said opposite walls of said open bottom compartment and a support therein for said casing, said means comprising a length of metal tubing having a part extending transversely across said compartment intermediate its opposite walls and provided with a portion adjacent each end thereof looped in the same direction away from said transverse part, the outer side of each of said looped portions of said tube being fastened to an opposite compartment wall against movement relative thereto to form said rigid tie therebetween, said looped portions being spaced from one another with their inner sides paralleling each other and directed toward said transverse part of said tube providing opposed mounting ledges on said combined means within said open bottom compartment, the end of said inner parallel sides of said looped portions of said tube abutting and being secured to said transverse part thereof, and means for supportingly anchoring said casing upon said opposed mounting ledges.

3,006,160
REFRIGERATING APPARATUS
John H. Heldorn, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,726
6 Claims. (Cl. 62-296)



1. In a silencer for refrigerant compressors and the like, an exhaust collecting chamber, a tubular member projecting into said chamber at one end thereof, said tubular member having a plurality of radial apertures formed therein, a yieldable sleeve surrounding only a portion of said apertures and arranged to close said portion of said apertures at low exhaust pressure and serving to open said portion of apertures in response to an increase in pressure.

3,006,161
OXYGEN COOLING SYSTEM
Otto Schueller, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 24, 1961, Ser. No. 84,738
10 Claims. (Cl. 62-312)

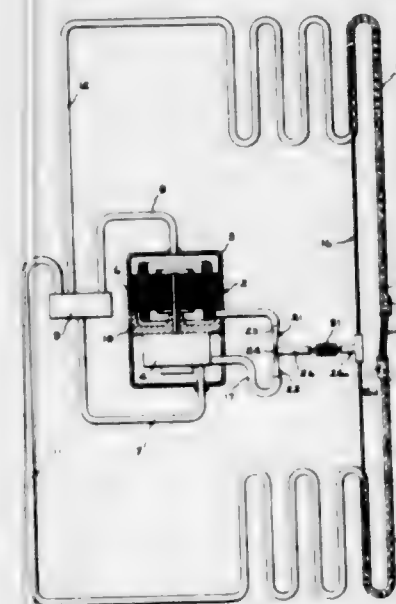
(Granted under Title 35, U.S. Code (1952), sec. 266)
1. A self-contained oxygen cooling system comprising an insulated container having oxygen inlet and outlet means, upper and lower compartments each containing a supply of coolant and in respective communication with said oxygen inlet and outlet means and means for trans-

ferring a supply of oxygen admitted into said oxygen inlet respectively in heat transfer relation through the supply of coolant in each compartment, said means comprising an upper precooler device positioned within said upper compartment and immersed within its respective supply of coolant in communication with said oxygen inlet means for receiving and partially cooling the supply of oxygen admitted thereto by said oxygen inlet means



and passed through said upper precooler device, in combination with, a porous, fabric-covered evaporator enclosing a nonporous, lower cooler device positioned within said lower compartment and immersed within its respective supply of coolant in communication with said oxygen at one end thereof and with the outlet end of said upper precooler device at the other end thereof for receiving and further cooling the supply of oxygen delivered thereto from said precooler device.

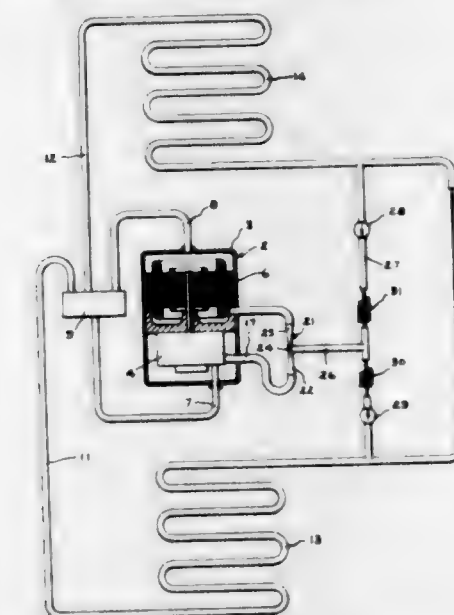
3,006,162
COMPRESSOR MOTOR COOLING ARRANGEMENT FOR REVERSIBLE REFRIGERATION SYSTEM
Don J. Massa, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,412
4 Claims. (Cl. 62-324)



1. A reversible refrigeration system for an air conditioning unit adapted for heating and cooling an enclosure comprising a motor-compressor unit, an indoor heat exchanger and an outdoor heat exchanger connected in reversible refrigerant flow relationship, means for reversing the flow of refrigerant through said system thereby to operate each of said heat exchangers interchangeably as a condenser or as an evaporator, a hermetic casing surrounding said motor-compressor unit for containing a

high pressure refrigerant gas, a discharge passage leading from said compressor of said unit into said hermetic casing for conducting compressed refrigerant gas into said casing for cooling said motor, said discharge passage including an aspirating means for creating a low pressure region in said discharge gas as said gas passes through said aspirating means, a capillary having one end thereof communicating with said indoor heat exchanger and the other end thereof communicating with said outdoor heat exchanger for expanding refrigerant from condenser pressure to evaporator pressure during either direction of refrigerant flow through said system, a portion of said capillary adjacent said other end of said capillary communicating with said outdoor heat exchanger being in heat exchange relationship with said indoor heat exchanger and a portion of said capillary adjacent said one end of said capillary communicating with said indoor heat exchanger being in heat exchange relationship with said outdoor heat exchanger, and a liquid refrigerant supply conduit having one end connecting with said capillary at a point between said portions thereof in heat exchange relationship with said heat exchangers, said conduit connecting at its other end with said aspirating means for conducting liquid refrigerant from said capillary into said low pressure region of said aspirating means where it mixes with and cools said discharge gas in said passage prior to entering said hermetic case, said heat exchanger operating as an evaporator during either direction of refrigerant flow through said system cooling that portion of said capillary prior to its connecting point with said refrigerant supply conduit so that there is little pressure drop in that portion of said capillary prior to said connecting point with said refrigerant supply conduit as compared to the pressure drop in that portion of said capillary after said connecting point with said refrigerant supply conduit.

3,006,163
COMPRESSOR MOTOR COOLING ARRANGEMENT FOR REVERSIBLE REFRIGERATION SYSTEM
Paul I. Koolker, Lyndon, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,430
5 Claims. (Cl. 62-324)

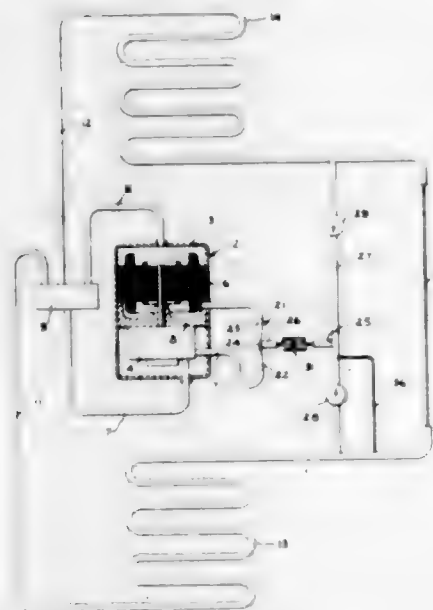


1. A reversible refrigeration system for an air conditioning unit adapted for heating and cooling an enclosure comprising a motor-compressor unit and a pair of heat exchangers connected in reversible refrigerant flow relationship, expansion means connected between said heat exchangers for expanding refrigerant from condenser pressure to evaporator pressure, means for reversing the flow of refrigerant through said system thereby to operate each

of said heat exchangers interchangeably as a condenser or as an evaporator, said motor-compressor unit being mounted in a hermetically sealed casing for containing a high pressure refrigerant gas, a discharge passage leading from said compressor of said unit into said hermetic casing for conducting compressed refrigerant gas from said compressor into said casing for cooling said motor, said discharge passage including an aspirating means for creating a low pressure region in said discharge gas stream as said gas passes through said aspirating means, a refrigerant bypass tube connecting between said heat exchangers in parallel with said expansion means, a liquid refrigerant supply conduit connecting at one end with said refrigerant bypass tube and at the other end with said low pressure region of said aspirating means for introducing liquid refrigerant into said discharge passage so that said high pressure discharge gas flowing into said casing and over said motor is mixed with and cooled by said liquid refrigerant to maintain said motor temperature within safe operation conditions, and check valve means in said refrigerant bypass tube on opposite sides of said connection with said condensed refrigerant supply conduit for preventing flow of liquid refrigerant through said tube in the direction of said heat exchanger being operated as an evaporator during either cycle of operation of said system.

3,006,164

REVERSIBLE REFRIGERATION SYSTEM
Stephen L. McMillan, Wheaton, Ill., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,431
3 Claims. (Cl. 62-324)

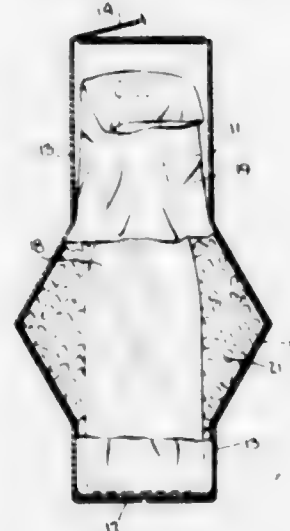


1. A reversible refrigeration system for an air conditioning unit adapted for heating and cooling an enclosure comprising a motor-compressor unit, an indoor heat exchanger and an outdoor heat exchanger connected in reversible refrigerant flow relationship, a first capillary connected between said heat exchangers for expanding refrigerant from condenser pressure to evaporator pressure, means for reversing the flow of refrigerant through said system thereby to operate each of said heat exchangers interchangeably as a condenser or as an evaporator, said motor-compressor unit being mounted in a hermetically sealed casing for containing a high pressure refrigerant gas, a discharge passage leading from said compressor into said casing for conducting compressed refrigerant from said compressor into said casing for cooling said motor, said discharge passage including an aspirating means for creating a low pressure region in said discharge gas stream as it passes through said aspirating means, a refrigerant bypass tube connected between said heat exchangers in parallel with said first capillary, a liquid refrigerant supply

conduit connecting at one end with said refrigerant bypass tube and at the other end with said aspirating means for introducing liquid refrigerant into said discharge passage for cooling said high pressure refrigerant gas flowing through said discharge passage, check valves in said refrigerant bypass tube on opposite sides of the connection with said liquid refrigerant supply conduit for preventing flow of liquid refrigerant through said tube in the direction of said heat exchanger being operated as an evaporator during either cycle of operation of said system, and a second capillary means having one end connected to said refrigerant bypass tube at some point between said check valves and having its other end connecting with said indoor heat exchanger for introducing expanded refrigerant into said indoor heat exchanger during operation of said system on the cooling cycle when said indoor heat exchanger operates as an evaporator.

3,006,165
CONTAINERS

Ernest G. Mittelberger, San Francisco, Calif., assignor to Paul Masson, Inc., Saratoga, Calif., a corporation of California
Filed Oct. 31, 1956, Ser. No. 619,566
1 Claim. (Cl. 62-371)



A receptacle comprising, in combination: an elongated outer container of polygonal transverse cross-section, said container having lateral walls formed of flat sheet material, said walls being joined together along contiguous edges thereof and being foldably interconnected along said edges whereby said walls may be selectively flattened for shipment or brought into an expanded upright condition for use; integrally formed foldable cover members connected to opposite end portions of said lateral walls as extensions thereof, said cover members forming top and bottom closures for said container with said lateral walls in said upright condition, the foldable interconnection of said lateral walls along said contiguous edges being at least weakened intermediate the ends of each edge whereby said container may be laterally expanded intermediate its ends by spreading the edges of said lateral walls apart at said weakened interconnections, said spreading being accompanied by a decrease in the distance between said top and bottom closures, said interconnection between said lateral wall being maintained adjacent to said top and bottom closures; a flexible and laterally expansible watertight bag disposed in said container, said bag being dimensioned to fill said container with said lateral edges spread apart, said bag being adapted to receive a bottle therein having a height less than the decreased distance between said top and bottom closures and transverse dimensions receivable within said container, with said lateral edges positioned together, the increased central cross-sectional area of said container which is provided by the spreading apart of said edges

defining a space enclosed within said bag and adapted to receive ice therein, said ice being disposed within said bag and laterally engaging said bottle in direct contact therewith.

3,006,166

REFRIGERATOR WITH AIR CIRCULATION OUTSIDE OF LINER

Paul E. Kronenberger and Orson V. Saunders, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,294
3 Claims. (Cl. 62-407)

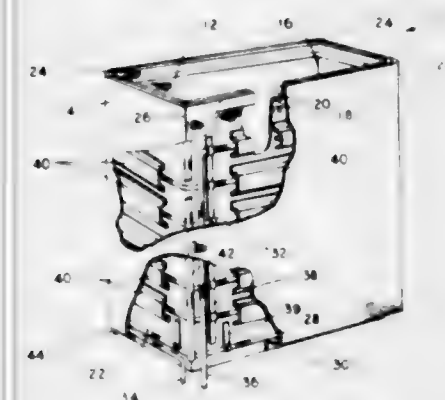


1. A refrigerator including an inner liner having top and bottom and rear and side walls, insulated walls surrounding said inner liner having substantially entire wall portions spaced from said side and rear walls of said inner liner to form a space therebetween, a cooling unit located within the upper portion of said inner liner, a baffle in the form of an incomplete dividing wall beneath said cooling unit within said liner separating the interior of the liner into a cooling unit compartment above and a storage compartment below, a container in the lower portion of said storage compartment spaced from the side and rear and bottom of said inner liner, said side and rear walls having inlet openings above said baffle and outlet openings opposite said container.

3,006,167

EUTECTIC TANK

Glenn G. Lorch, Grand Rapids, Mich., assignor to Kari Kold Company, Grand Rapids, Mich., a corporation of Michigan
Filed June 5, 1958, Ser. No. 740,110
4 Claims. (Cl. 62-438)



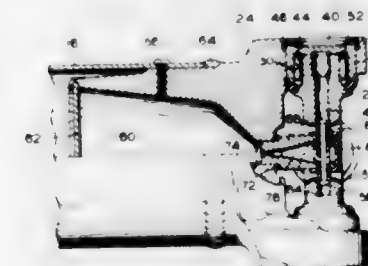
2. A eutectic tank for holdover cold boxes, and comprising; concentric spaced annular walls defining a polygonal

tank and having the upper and lower edges thereof secured together to form a closed space therebetween, a eutectic solution received within said space, and refrigerating lines received within said space and spirally coiled about the inner of said walls from the bottom to the top thereof, the eutectic-receiving space between said tank defining walls being radially no greater in the corners of said polygon than along the sides thereof to provide a uniform distribution of eutectic solution between said walls and relative to said refrigerating lines.

3,006,168

SELF-LUBRICATING UNIVERSAL JOINT

John A. Kayser, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Feb. 17, 1960, Ser. No. 9,388
11 Claims. (Cl. 64-17)

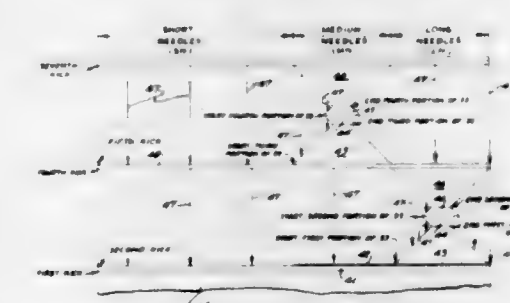


2. In a self-lubricating universal joint the combination comprising a connecting member having a main lubricant reservoir, means forming an auxiliary reservoir communicating with said main reservoir and adapted to supply lubricant to the surfaces which are to be lubricated, and means positioned between said reservoirs for restricting the lubricant flow, the lubricant being supplied to said auxiliary reservoir from said main reservoir in response to changes in axial movement of the universal joint.

3,006,169

METHOD FOR PRODUCING SEAMLESS SPLIT TOE HOSIERY

Thomas D. Strunk, Adairville, Ky., assignor to Auburn Hosiery Mills, Inc., Auburn, Ky.
Filed Feb. 6, 1958, Ser. No. 713,738
6 Claims. (Cl. 66-48)



1. A method of producing hosiery having a split toe comprising a plurality of forwardly projecting seamless, cup-shaped toe portions on an independent needle circular knitting machine comprising at least one needle bank, said needle bank including a plurality of separate groups of needles, said method comprising the steps of knitting with one of said groups of needles, narrowing the fabric knitted by said one of said groups of needles by progressively rendering inactive terminal needles thereof, thereafter widening the fabric knitted by said one of said groups of needles by progressively activating terminal needles thereof to produce a first cup-shaped toe portion of said split toe, rendering said one of said groups of needles inactive and activating another group of needles, knitting with said other group of needles, narrowing the fabric knitted by said other group of needles by progressively rendering inactive terminal needles thereof, and

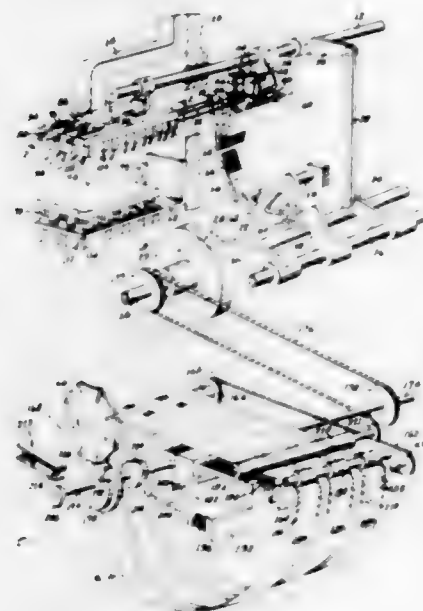
thereafter widening the fabric knitted by said other group of needles by progressively activating terminal needles thereof to produce a second cup-shaped toe portion of said split toe, the production of each of said cup-shaped toe portions further including widening by progressively activating terminal needles of said groups and then narrowing by progressively inactivating terminal needles of said groups after said initial narrowing is completed and prior to the start of said final widening.

3,006,170

SELECTIVE POSITIONING SYSTEM

René L. Chapuis, Glens Falls, N.Y., assignor to H. & F. Binch, Inc., Glens Falls, N.Y., a corporation of New York

Filed July 17, 1958, Ser. No. 749,174
12 Claims. (Cl. 66—86)



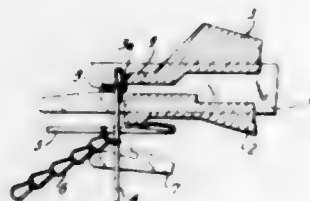
4. A yarn guide bar positioning system for a knitting machine, comprising a plurality of aligned cylinders having pistons mounted therein, means connecting each of said pistons to the next succeeding cylinder whereby movement of a piston imparts to the succeeding cylinders a corresponding movement, a yarn guide bar operatively connected to one of said pistons, and control means for actuating any one of said pistons independently of the others for positioning said yarn guide bar in a predetermined pattern.

3,006,171

NEEDLE ARRANGEMENT FOR KNITTING MACHINES

Hans Scheller, Faurndau, Kreis Goppingen, and Wilhelm Ullmann, Eisingen, Fils, Germany, assignors to Gebr. Scheller, Eisingen, Fils, Germany

Filed Dec. 29, 1959, Ser. No. 862,504
Claims priority, application Germany Dec. 29, 1958
16 Claims. (Cl. 66—88)



1. In a knitting machine, in combination, a sinker head having a first presser edge; a set of movable sinkers mounted on said sinker head above said first presser edge; a set of reciprocable first needles located below

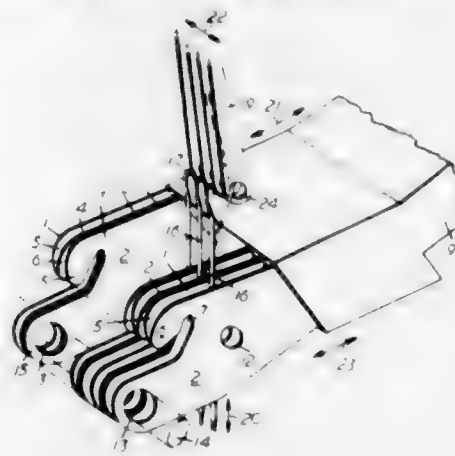
said first presser edge; a second presser edge located above said sinkers and extending parallel to said first presser edge; and a set of second needles extending transverse to said sinkers and presser edges, said second needles having resilient normally open hooks and being movable between a higher position in which said hooks of every *n*th second needle engage said second presser edge, and a lower position in which the hooks of said second needles engage said first presser edge; hooks engaged by said presser edges being closed so that hooks of said second needles closed by said second presser edge pass outwardly of the corresponding kinks formed in a thread between said sinkers and second needles whereby the corresponding first needles receive the corresponding thread portions, while the hooks of said second needles not engaged by said second presser edge remain open to catch the other kinks of the thread and then, closed by said first presser edge, draw the corresponding thread portions through loops suspended on said first needles.

3,006,172

FLAT WARP KNITTING MACHINES

Allan William Henry Porter, Burton-on-Trent, England, assignor to Hobourn-F.N.F. Limited

Filed Mar. 28, 1960, Ser. No. 18,038
Claims priority, application Great Britain Apr. 16, 1959
5 Claims. (Cl. 66—109)



1. In a flat warp knitting machine of the type comprising a row of needles each comprising a shank and a hook on the end of said shank, means for reciprocating said needles, at least one row of warp thread guide eyes, and means for swinging said guide eyes to and fro across said row of needles, the improvement which consists of a sinker assembly comprising a plurality of elongated sinker means arranged in a row with at least one sinker means located between each adjacent pair of shanks, said at least one sinker means comprising two resilient neb portions which project longitudinally and downwardly from said sinker means and terminate in diverging tips, each of which tips extends away from the other towards a neb portion of the adjacent sinker means on the opposite side of a needle, and means for reciprocating said sinker means in a direction transverse to said shanks, whereby during a knitting operation a thread passing through the hook of one of said needles and moving towards the tips of said neb portions is caused to pass under one of said neb portions.

3,006,173

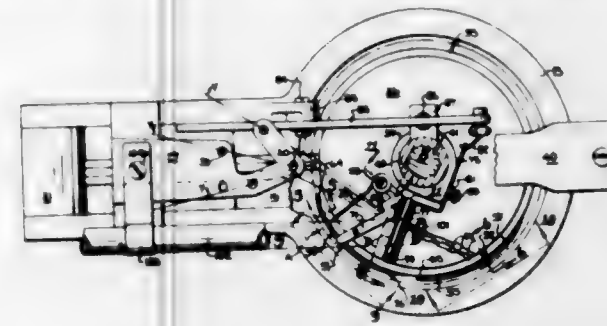
YARN CLAMPING AND CUTTING MEANS AND METHOD FOR KNITTING MACHINES

Floyd R. Shoaf, 674 S. Union St., Concord, N.C.

Filed Mar. 27, 1956, Ser. No. 574,168
30 Claims. (Cl. 66—140)

2. A method of controlling yarn extending from a knitting machine which comprises severing the yarn ad-

jacent the needle circle and withdrawing and holding



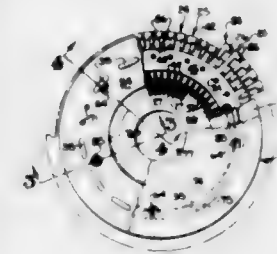
the free end extending from the yarn feeding means by a suction current.

3,006,174

PATTERN DEVICE WITH MOVABLE BUTTS

Salomao J. Haddad, Charlotte, N.C., assignor, by mesne assignments, to Southern Mill Equipment Corporation, Charlotte, N.C., a corporation of North Carolina

Filed Jan. 6, 1958, Ser. No. 707,293
Claims priority, application Brazil Jan. 7, 1957
8 Claims. (Cl. 66—156)



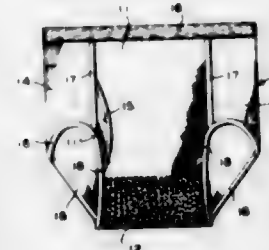
5. A pattern device for a knitting machine comprising a cylindrical pattern carrier provided with a cylindrical outer face and having a plurality of axially spaced circular rows of substantially radially extending slots therein, independent pattern elements positioned in the slots for inward and outward movement relative to and radially of the carrier, each pattern element having an operating end adapted to project outwardly relative to the outer face of the carrier, and means for securing each of said pattern elements in each of at least two adjusted positions and in at least one position of which the respective operating end projects outwardly from said outer face of said carrier.

3,006,175

UNDERWEAR

John E. Morgan, Tamaqua, Pa., assignor to John E. Morgan Patents, Inc., Tamaqua, Pa., a corporation of Pennsylvania

Filed May 5, 1958, Ser. No. 733,005
7 Claims. (Cl. 66—177)



1. A method of producing men's undershorts, ladies' panties and the like, comprising a rib knit body and a crotch portion of increased porosity and elasticity knitted to said body comprising, rib knitting a first section of fabric with cooperating needle banks having opposed independently mounted needles, continuing said rib knitting by projecting the needles of one of said needle banks on

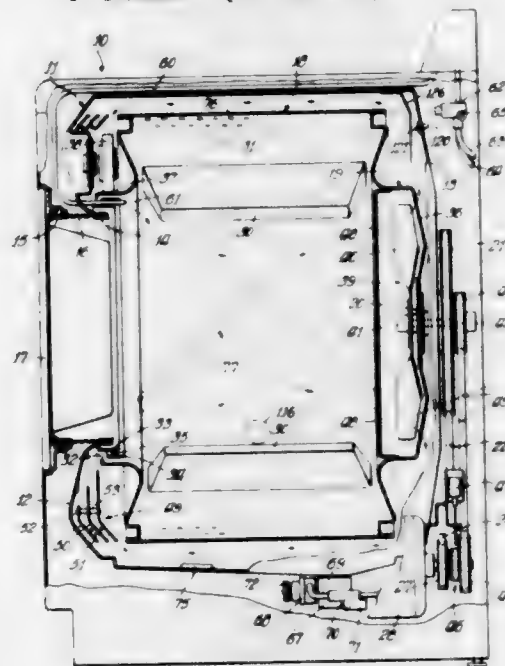
only some of the knitting courses to a tuck position to produce a second section of knitting in which the fabric knitted is of increased porosity and elasticity, to thereby provide a single knitted piece having a rib knitted section knitted to a patterned section of increased porosity and elasticity, severing an undergarment blank from said single knitted piece to provide a crotch section of increased porosity and elasticity and sewing said blank to form an undergarment in which said rib knit body includes said first section of fabric and said patterned section constitutes the crotch portion thereof.

3,006,176

COMBINATION WASHER-DRYER

Curtis E. Behrens, Effingham, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed June 3, 1960, Ser. No. 33,818
9 Claims. (Cl. 68—12)



8. In a combination washer-dryer including a rotatable cylindrical fabric-containing basket having scoops on the outer cylindrical surface thereof, a casing enclosing said basket, a transmission for rotating said basket at a relatively low speed and a relatively high speed, means for admitting a predetermined quantity of fluid into said casing, means operable to control said transmission to rotate said basket at relatively high speed to cause the scoops to pick up and disperse the admitted fluid about the basket and interior of the casing to flush accumulated lint from the basket and casing; and means for draining the lint-laden fluid from the casing.

3,006,177

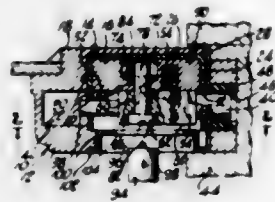
LEATHER

Norman Limon Holmes, Beverley, and Peter Bryan Curtis, Harrow-Weald, England, assignors to Richard Hodgson & Sons Limited, London, England, and The General Electric Company Limited, London, England, both British companies

No Drawing. Filed Oct. 21, 1958, Ser. No. 768,536
Claims priority, application Great Britain Oct. 22, 1957
14 Claims. (Cl. 69—21)

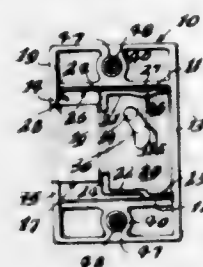
1. A method of manipulating leather which comprises heating the leather under conditions effective to ensure that at least part of the bound water present therein is temporarily freed whilst avoiding any appreciable evaporation from the leather, whereby the leather is rendered pliant, manipulating the resultant heated leather as required, and thereafter allowing the freed water present in the leather to re-enter into its bound form.

3,006,178
WINDOW LATCHING DEVICE
 Michael Rifkin, 458 Lake Ave., Lyndhurst, N.J.
 Filed Dec. 3, 1957, Ser. No. 700,457
 4 Claims. (Cl. 70—90)



1. A latching device, comprising a bracket mounting a latching member for axial movement between first and second positions and means for locking said latching member in one of said positions thereof comprising a part disposed in fixed relation with said bracket and a lock bolt adapted for engagement with said part in the locking position of said latching member, said latching member and said fixed part being provided with registering apertures and keyways, said lock bolt having a head at one end and a key at the opposite end thereof, said lock bolt being mountable in said registering apertures with said key aligned with said registering keyways to a locking position in which said head is disposed in substantially flush relation with the adjacent surface of said latching member, said lock bolt in said locking position having the key rotated out of alignment with the registering keyways rearwardly of said fixed part aperture to thereby prevent the retraction of said lock bolt from said latching member, the rotation of said lock bolt to align said key with said keyways conditioning said lock bolt for retraction from said latching member to an unlocked position.

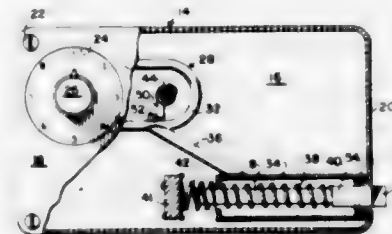
3,006,179
RIM LOCK ASSEMBLY
 Francis L. Erickson, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
 Filed June 12, 1958, Ser. No. 741,570
 5 Claims. (Cl. 70—129)



1. In a rim lock assembly for mounting upon the interior of a door, a bolt housing, a bolt slidably mounted in said housing and having a locking projection movable into and out of an end wall of said housing, a knob rotatably mounted on said housing at the exterior thereof, a shaft affixed at one end to said knob and rotatable in said housing, a cam member mounted on the other end of said shaft within the housing and provided with an eccentric pin, said bolt having a curved cam slot into which projects and moves said eccentric pin for moving the bolt and its locking projection to retracted position or to projected and locked position upon turning of said knob, its cam member and pin, and a leaf spring in said housing having a concave portion adjacent one end and a projection adjacent the other end, said bolt having a depression for receiving the concave portion of the spring when the bolt is retracted for tensionally retaining said bolt in unlocked position, a shoulder on said bolt engaging and flexing the projection on said spring when the bolt is moved toward its projected, locking position in which the pin is moved to adjacent one end of the slot,

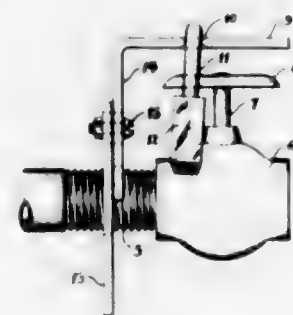
said slot having a high point adjacent said one end whereby as the pin rides over this high point, the compression on the projection of the spring is relieved and this projection forces the bolt inwardly against the pin to retain the bolt in dead-locked position.

3,006,180
COMBINATION LOCK LATCH MEANS
 James A. Walston, 4618 Pattie, Wichita, Kans.
 Filed Apr. 28, 1958, Ser. No. 731,395
 3 Claims. (Cl. 70—153)



1. Latch means for a door, window, or the like, having a frame and hingedly mounted in a casing, comprising, in combination, a flat housing having a bottom, sides and a cover and secureable to said frame, a dial-type combination lock having a U-shaped engaging member slidably and operatively mounted in the body thereof and fixedly secured in said housing with the dial operator of said lock projecting outwardly through an opening in said cover, an elongated casing slidably mounted in said housing and rigidly connected to said U-shaped engaging member of said lock to slide therewith by a connecting link secured thereto, a bolt slidably mounted in said last-named casing to move therewith and projecting out of same and projectable through an aperture in the side of said housing when said casing is in extended position, a first helical spring in compression mounted around said bolt in said casing and contacting same to urge said bolt into an extended position, a second helical spring in compression mounted in said housing and contacting said last-named casing to urge same to extended position and said engaging member to extended position, a latch operator mounted in said housing and having a handle projecting out of said cover thereof, means secured to said U-shaped engaging member of said lock engageable with said latch operator to slidably operate said U-shaped engaging member upon operation of said latch operator to retract said bolt.

3,006,181
GATE VALVE LOCKING DEVICE
 Albert Sarti, Sacramento, Calif., assignor to Perkins Welding Works, Sacramento, Calif.
 Filed May 15, 1958, Ser. No. 735,513
 1 Claim. (Cl. 70—180)



A gate valve locking device for gate valves in pipe lines operable by hand wheels comprising, a first rectangular

plate having an elongated cut-out portion with a semi-circular lower end positioned symmetrically with respect to its longitudinal axis and adapted to receive the pipe of the pipe line and having elongated openings therein on the opposite sides of the elongated cut-out portion and parallel to the latter, a second right angle plate having elongated openings in one arm positioned on the opposite sides of the longitudinal center line of the latter and alignable with the elongated openings in the first plate and having its other arm adapted to overlies the hand wheel of the gate valve and a hole therein adapted to receive the hasp of a padlock also passing through a space between adjacent spokes of the hand wheel, and machine screws in the aligned elongated openings in the plates.

3,006,182
KEY HOLDER
 Edward Hanna, Leonardo, N.J.
 (169 Valley Drive, Navesink, N.J.)
 Filed Jan. 29, 1958, Ser. No. 711,979
 4 Claims. (Cl. 70—456)

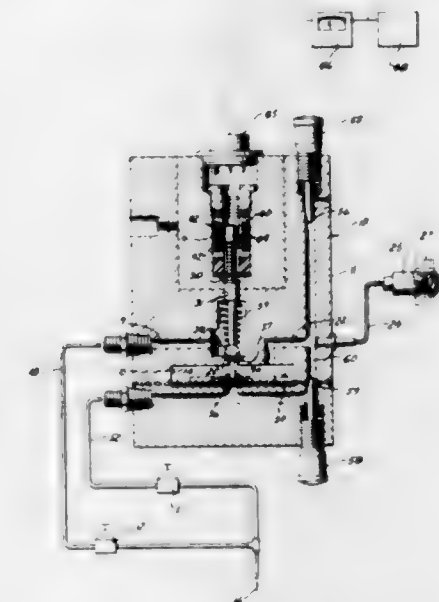


1. A key holder of the character described comprising a body of sheet material having front, top and back portions constructed with an internal region to contain heads of a plurality of key loops, said body having a plurality of parallel slots in the top portion along said region each narrower than the diameters of the heads of said key loops, said slots each extending to an enlarged opening in the front portion for passage of said heads therethrough, the enlarged openings being arranged in a linear path adjacent the juncture of said top and front portions, a sheet spring with an end section supported parallel to said juncture and arranged to normally abut said front portion and overlying said openings for holding inserted key loops in the holder and impede their passage through said openings, said sheet spring having a slot substantially spaced from its said end section and engaged with a lip formed integrally with and extending from said front body portion for securing and seating said sheet spring in said body in predetermined alignment and uniform coaction of its end section with said openings.

3,006,183
GAGING DEVICE
 Ralph C. Baker, Dayton, Ohio, assignor to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware
 Filed Apr. 3, 1958, Ser. No. 726,104
 7 Claims. (Cl. 73—37.9)

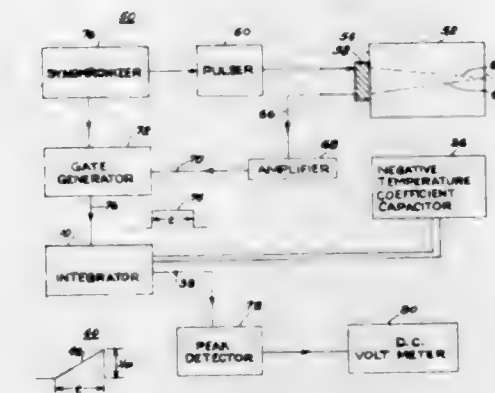
1. Gaging apparatus including a first pressure regulator for receiving air under pressure and providing a constant pressure supply, an auxiliary pressure regulator and a gage head which controls flow in accordance with a gaged product characteristic, passage means for connection to a source of fluid under pressure, said passage means placing said first pressure regulator, auxiliary pressure regulator and gage head in series communication in the order claimed, said auxiliary pressure regulator having a flexibly movable pressure controlling member au-

tomatically operative to maintain supply pressure to said gage head constant under varying flows through said gage



head, and gaging means having a direct operative connection to said member for measuring its position.

3,006,184
ULTRASOUND THICKNESS GAUGE
 Richard G. Goldman, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
 Filed June 17, 1957, Ser. No. 665,904
 4 Claims. (Cl. 73—67.8)



3. An ultrasound thickness gauge for measuring the thickness of an object comprising an electro-mechanical vibration transducer, a pulser providing electrical pulses to drive said transducer, an amplifier connected to said transducer to amplify echo pulses detected thereby, a gate generator, a synchronizer simultaneously to cause operation of said pulser and to begin operation of said gate generator, means interconnecting said amplifier and said gate generator, a saw tooth wave form generator including an amplifying device having a first electrode and a second electrode, a load resistance having one end thereof connected to said first electrode and the other end thereof connected to a source of B+ potential, means interconnecting the output of said gate generator and said second electrode so that the output of said gate generator controls the flow of current through said amplifying device, means for measuring the peak amplitude of the saw tooth wave form generated, and a variable capacitor connected between said first electrode and said second electrode and having the capacitance thereof variable in accordance with the temperature of the object being measured to change the slope of the saw tooth wave form generated so as to obtain the same peak amplitude for different temperatures of the object being measured.

3,006,185 **INSTRUMENT FOR MEASURING MECHANICAL QUANTITIES ACCORDING TO THE CARRIER-FREQUENCY METHOD**

Arnold U. Huggenberger, Ackersteinstrasse 119,
 Zurich 10/49, Switzerland
 Filed July 31, 1958, Ser. No. 752,361
 Claims priority, application Germany Oct. 29, 1957
 15 Claims. (Cl. 73-88.5)



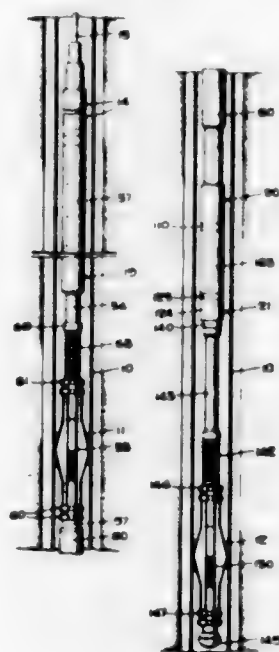
1. In an apparatus for the measurement of displacements, stresses and strains on an object, in combination, a measuring unit and a testing unit for said measuring unit, said units being respectively provided with first and second multiple connector means complementary to each other, said units being detachably coupled together by the interengagement of said first and second connector means; said measuring unit including amplifier means, a pair of first impedance elements connected to the input of said amplifier means, said elements forming two impedance arms of a bridge circuit adapted to be completed by means of two strain-gauge elements connected with the object of measurement, modulating means connected to the output of said amplifier means, circuit means for connecting a source of carrier oscillations across said bridge circuit and to said modulating means, calibrating impedance means, and first switch means for selectively connecting different parts of said calibrating impedance means in one of said arms of said bridge circuit along with one of said first impedance elements thereof; said testing unit including a pair of second impedance elements connected via said second and first connector means to said first impedance elements as the other two arms of said bridge circuit, testing impedance means, second switch means for selectively connecting different parts of said testing impedance means in one of said other arms of said bridge circuit along with one of said second impedance elements thereof, and indicator means connected via said second and first connector means to the output of said modulating means for indicating the electric output energy of the latter in different positions of said first and second switch means.

3,006,186 **FREE POINT INDICATOR FOR DETERMINING THE POINT AT WHICH STUCK PIPE IS FREE IN A WELL**

Theodore L. Berry, Santa Fe Springs, Calif., assignor to The Dis-Log Tubular Survey Company, Whittier, Calif., a partnership
 Filed Apr. 29, 1957, Ser. No. 656,478
 18 Claims. (Cl. 73-151)

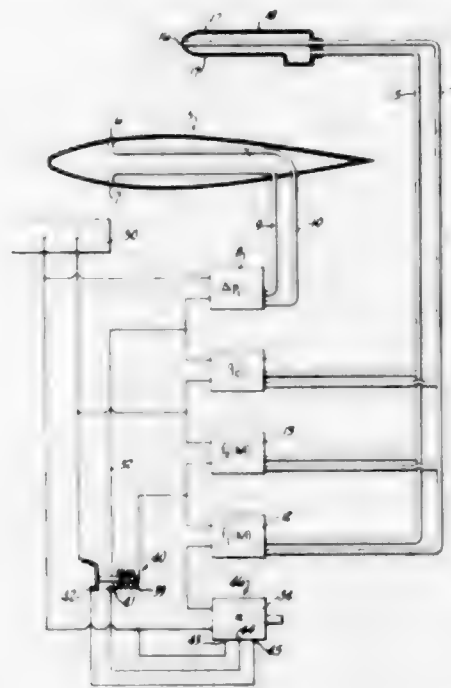
1. An instrument of the class described comprising a conductor cable adapted to be lowered into a pipe in a well, a weight connected thereto so as to be suspended thereby, upper and lower seating means adapted to seat against the interior of the pipe at upper and lower points respectively, means including an electrical strain gauge responsive to vertical strains of the pipe connecting the upper and lower seating means, means permitting but limiting vertical movement of the weight relatively to

the seating means whereby the weight may force the seating means downwardly in the pipe to said upper and lower points respectively and thereafter the weight may be lifted by the conductor cable to a neutral position to take



the weight off the seating means, and means electrically connected through the conductor cable to the strain gauge for determining whether a change of position of the seating means has occurred due to a strain or change of strain imposed on the pipe.

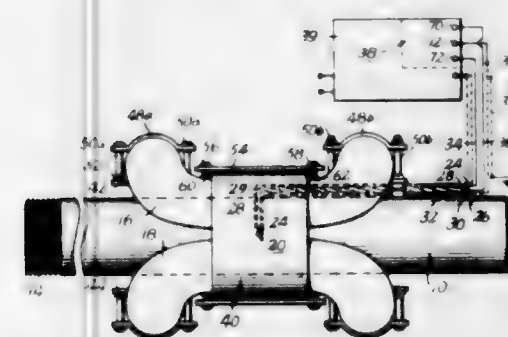
3,006,187 **DEVICE FOR MEASURING AERODYNAMIC ANGLE OF ATTACK** Erik Alvar Wilkenson, Geneva, Switzerland, assignor to Svenska Aeroplan Aktiebolaget, Linköping, Sweden, a corporation of Sweden Filed Sept. 14, 1955, Ser. No. 534,331 2 Claims. (Cl. 73-180)



2. Means for generating an output which is proportional, through a wide range of values of Mach number, to the aerodynamic angle of attack of an aerodyne having an airfoil, said means comprising: means defining a Wheatstone bridge circuit having variable resistances in

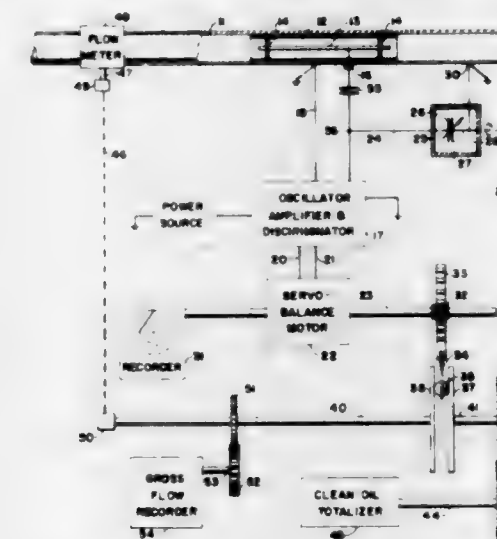
each of its legs; means on the aerodyne for sensing the differential between the pressures at two spaced locations on the airfoil of the aerodyne, between which locations a pressure difference normally exists in consequence of flight, and for adjusting the electrical resistance of one leg of the Wheatstone bridge to a value proportional to the pressure difference sensed; means including a Pitot-static tube for sensing the impact pressure due to forward movement of the aerodyne and for adjusting the electrical resistance of a second leg of the Wheatstone bridge to a value proportional to the impact pressure thus sensed; means including a Pitot-static tube for adjusting the electrical resistance of a third leg of the Wheatstone bridge to a value which is proportional to a function of Mach number and of an empirically determined constant for the aerodyne; means for adjusting the electrical resistance of a fourth leg of the Wheatstone bridge to a value which is proportional to another function of Mach number; means for adjustingly adding and subtracting electrical resistance in one of the legs of the Wheatstone bridge in amounts such as to at all times maintain the bridge in balance, and for producing an output which is a function of the amount of resistance so added or subtracted, which output will at all times be proportional to the aerodynamic angle of attack of the aerodyne.

3,006,188 **MAGNETIC FLOWMETER SYSTEM** Nell E. Handel, Wrentham, and Stocker S. Sturgeon, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts Filed Sept. 14, 1954, Ser. No. 455,924 5 Claims. (Cl. 73-194)



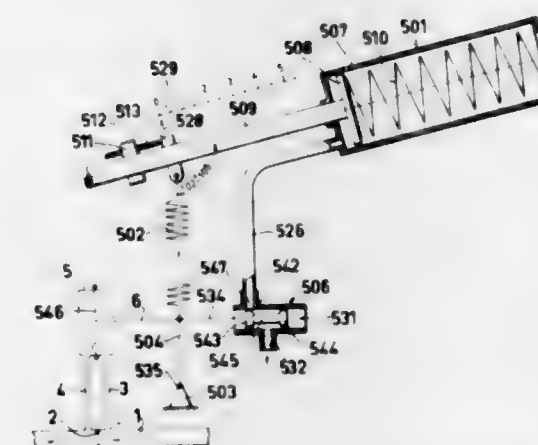
1. Signal amplification apparatus for use with alternating-current induction flowmeters of the type including a fluid flow pipe having two electrodes disposed on opposite sides of said pipe and in electrical contact with the fluid within said pipe to produce an A.-C. flow signal, said apparatus comprising, in combination, an amplifier having a balanced input circuit including first and second terminals and a common neutral terminal, said input circuit being balanced about said common neutral terminal, first and second signal transmission means for coupling said first and second input terminals respectively to correspondingly ones of the flowmeter electrodes, a reference lead comprising shield means surrounding said first and second signal transmission means and connected to said common neutral terminal to maintain that terminal at a reference potential equal to the potential of the fluid within said pipe, case means for said amplifier to provide shielding therefor, said common neutral input terminal being electrically insulated in said amplifier from said case means, by-pass circuit means comprising second shield means surrounding said first shield means and connecting said case means to the fluid in said flow pipe, and feedback means coupled between the output of said amplifier and said input circuit, said feedback means including circuit means for developing an A.-C. feedback signal that opposes and tends to equal the A.-C. flow signal fed by said transmission means to said input terminals.

3,006,189 **FLUID FLOW RECORDER** William J. Warren, El Cerrito, Roger L. Wixson, Oakland, and Fred C. Schneider, Berkeley, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware Filed June 25, 1956, Ser. No. 593,403 3 Claims. (Cl. 73-194)



1. An apparatus for determining the amount of water contained in an oil and water mixture comprising: a measuring capacitance cell, the dielectric of said measuring capacitance cell being formed by the oil and water mixture; a linearizing capacitor of predetermined size disposed in series with said measuring capacitance cell; a balancing capacitor cell coupled in parallel with said measuring capacitance cell and linearizing capacitor to form a measuring network; means for impressing an alternating signal across said network; means for varying the capacitance of said balancing capacitor cell to maintain a zero phase angle in said measuring network; and indicating means for indicating the capacitance of said balancing capacitor cell.

3,006,190 **MEASURING APPARATUS FOR EFFECTING A COUNTERFORCE TO ANOTHER SQUARELY VARYING FORCE** John Jansson, Stockholm, Sweden, assignor to AB A. Ekstroms Maskinaffar, Stockholm, Sweden Filed Apr. 22, 1957, Ser. No. 654,095 Claims priority, application Sweden Apr. 27, 1956 3 Claims. (Cl. 73-205)



1. In a measuring device for a linearly variable quantity in which a force is produced which varies as the square of the quantity, means for providing a linear indication of the quantity by measurement of the force comprising, a member movable by the force, a lever bearing at one end against said member and pivotally connected at its other end to a fixed point, a cylinder

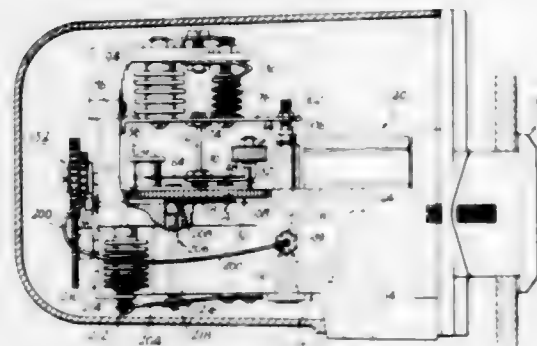
spaced from the pivoted end of the lever, a piston within the cylinder, a piston rod connected to the piston and extending from the cylinder, a tension spring connecting the piston rod and the one end of the lever and prestressed by an amount which is between 0.5% and 2% of the distance between the ends of the spring when in its unstressed condition, said cylinder lying at an angle of between 102-105° to the lever when the latter is in a position of equilibrium, means controlled by movement of the member in one direction upon application of the force thereto for moving the piston in the opposite direction to tension the spring for applying a counterforce on the member to return it and the lever to the position of equilibrium, and a linear scale for indicating the movement of the piston rod.

3,006,191

FLOW MEASURING APPARATUS

Norman S. Graves, Foxboro, and William R. Britte, Bellingham, Mass., assignors to The Foxboro Company, Foxboro, Mass.

Filed Apr. 25, 1960, Ser. No. 24,541
9 Claims. (Cl. 73-206)



1. In condition-measuring apparatus of the type adapted to convert a non-linear condition measurement signal to an output signal linearly corresponding to the value of the condition, and wherein said apparatus comprises: a balanceable member, force-producing means for applying to said member a first force proportional in magnitude to said condition measurement signal, rotatable means including means to develop a centrifugal force in accordance with the speed of rotation thereof, power means for causing said rotatable means to rotate in one direction, transfer means for applying to said balanceable member a second force corresponding to said centrifugal force and in opposition to said first force, control means responsive to changes in the balance of forces applied to said balanceable member, said control means including means to selectively operate said power means to provide acceleration or permit deceleration of said rotatable means as required to maintain said first and second forces in balance, whereby the speed of rotation of said rotatable means corresponds to the value of the condition being measured; the improvement in said measuring apparatus which comprises brake means arranged when actuated to apply a force to said rotatable means to restrain its rotation in said one direction, and brake actuating means under the influence of said control means to actuate said brake means whenever said power means is operated to permit deceleration of said rotatable means.

3,006,192

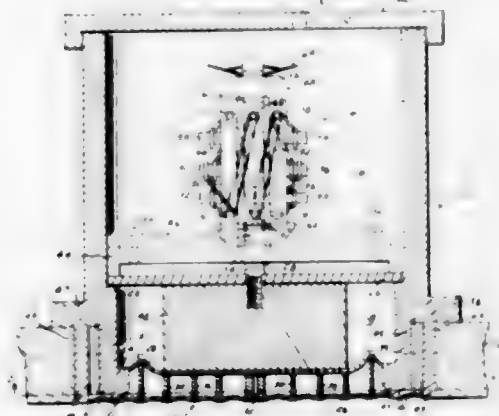
PRESSURE GAUGE

Yao T. Li, 28 Orchard St., Watertown, Mass.

Filed Mar. 12, 1957, Ser. No. 645,594
6 Claims. (Cl. 73-406)

1. In a pressure gauge including a casing adapted to be inserted into an opening in a wall of a chamber and having a pressure sensing device in the casing exposed to the pressure in the chamber; a cooling system for the

gauge comprising means forming a pair of passages in the casing for directing a cooling medium to and from the pressure sensing device, means forming an annular space in the casing about the periphery of the sensing device and isolating the outer portion of the casing



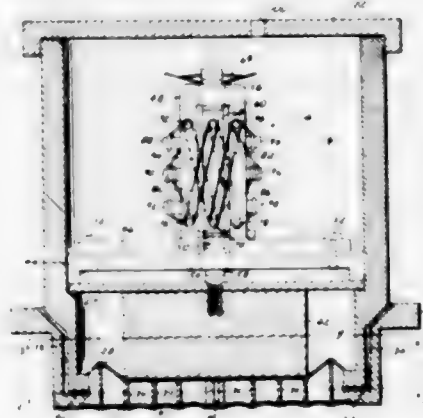
adapted to engage the walls of the combustion chamber from the inner portion of the casing, a thin flexible member closing the space, and means forming a second pair of passages in the casing independent from the first recited pair and free of communication with said first recited pair connected to the space for directing a cooling medium through the space.

3,006,193

PRESSURE GAUGE

Yao T. Li, 28 Orchard St., Watertown, Mass.

Filed Mar. 12, 1957, Ser. No. 645,595
7 Claims. (Cl. 73-406)



1. In a pressure gauge, a cylindrical casing open at at least one end, an inwardly extending flange formed at the open end of the casing, a first spirally formed diaphragm connected to the flange and closing the open end of the casing, a second spirally formed diaphragm secured to the flange and spaced inwardly from the first diaphragm and defining a cavity between them, a ribbon having its ends secured to opposite sides of the flange and forming a double spiral between the diaphragms, the double spiral of the ribbon and the opposing faces of the diaphragms forming a single spiral passage from the flange to the center of the cavity and back to the flange, a force transmitting member mounted on the second diaphragm with its periphery spaced inwardly from the flange, the portion of the ribbon disposed between the diaphragms and beyond the periphery of the force transmitting member extending above the bottom of the force transmitting member and causing the outer marginal portion of the second diaphragm to extend upwardly in an inwardly direction from the flange and downwardly and inwardly from the last named portion of the ribbon to the transmitting member, a signaling device secured to the trans-

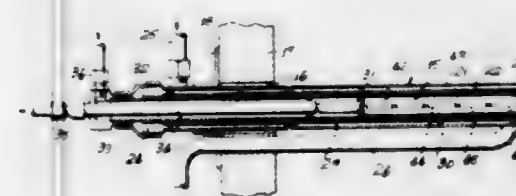
mitting member and responsive to movement of the transmitting member and an inlet and an outlet passage formed in the casing for directing a cooling medium through the spiral passage between the diaphragms.

3,006,194

GAS SAMPLE TUBE

William E. Greene, Pasadena, and Alfred D. Robinson, El Monte, Calif., assignors, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California

Filed Mar. 3, 1958, Ser. No. 718,541
20 Claims. (Cl. 73-421.5)



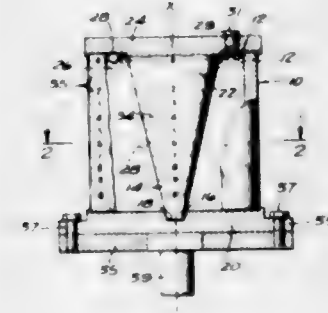
1. In a gas sample tube for withdrawing a sample from a gas flow path, the combination of: a tubular member having an open end adapted to be positioned in the gas flow path; means for establishing a magnetic field within said tubular member; and means for directing a flushing fluid through said tubular member past said magnetic field and out said open end.

3,006,195

GAGE

Louis D. Statham, Beverly Hills, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed July 28, 1958, Ser. No. 751,218
13 Claims. (Cl. 73-501)



11. A device for measuring rotational speed, which comprises a container, a downwardly tapered surface of revolution within said container, said surface being disposed axially of the vertical axis of said container, a liquid substantially filling said container, a discrete mass in said liquid, said discrete mass being buoyant in said liquid, and being immiscible and inert with respect to said liquid, and means for locating the position of said discrete mass adjacent said tapered surface and measuring the rotational speed of said device on said axis corresponding to the position of said discrete mass along said surface.

3,006,196

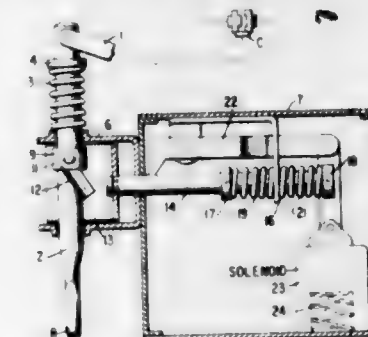
CONTROLLER FOR MACHINES

George E. Brackett, Candia, N.H., assignor to Basic Products Corporation, West Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 18, 1960, Ser. No. 2,875
9 Claims. (Cl. 74-2)

1. A controller comprising an actuator movable back and forth along a predetermined path between operative and inoperative positions, a main spring yieldingly urging

the actuator toward inoperative position, a holder for holding the actuator in operative position, the holder being movable back and forth transversely of said path between retracted and holding positions past an idle position, a double-faced cam on the holder and a cam follower on the actuator, the cam being inclined to said path so that when the actuator is in operative position the follower is opposite one face of the cam at one end of the cam and when the actuator is in operative position the follower is opposite the other face of the cam at the other end of the cam, the follower traveling along said one face of the cam from said first end to and beyond said second end



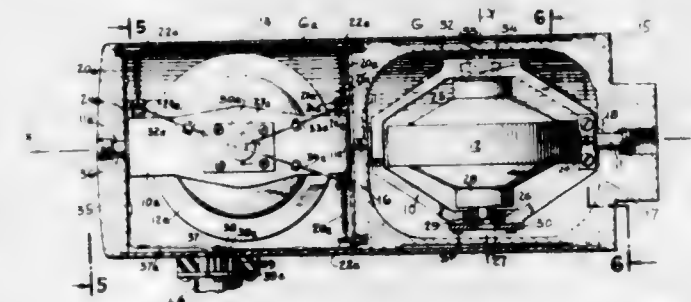
when the actuator is moved to operative position, thereby to move the holder to holding position, the follower traveling along said other face to and beyond said first end when the actuator returns to inoperative position, a latch to retain the holder in holding position, and spring means for moving the holder, the spring means being in equilibrium when the holder is in idle position and biased in one direction when the follower reaches said one end of the cam to bring said one face opposite the follower and biased in the other direction when it reaches said other end of the cam to bring said other face opposite the follower.

3,006,197

STABILIZING INSTRUMENT

Theodore W. Kenyon and Ernest H. Pallme, Old Lyme, Conn., assignors to Kenyon Laboratories, Inc., Deep River, Conn., a corporation of Connecticut

Filed Jan. 18, 1960, Ser. No. 2,924
3 Claims. (Cl. 74-5.22)

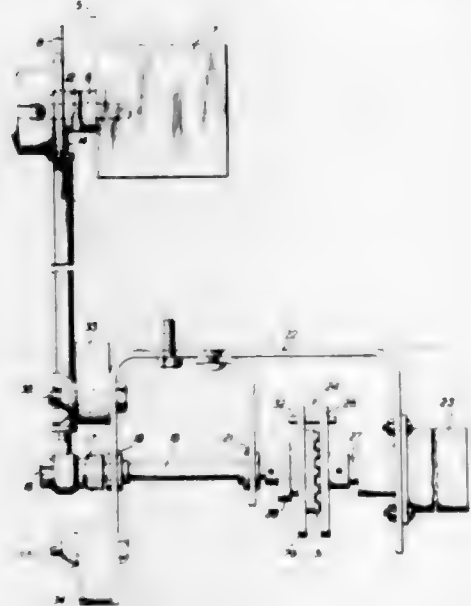


1. Apparatus for use with sighting devices comprising a casing, frame means within the casing having axially aligned bearings, a gimbal having oppositely extending aligned trunnions mounted for free rotation in said bearings on the longitudinal axis of said casing, said gimbal having oppositely disposed axially aligned openings perpendicular to the longitudinal axis of said casing, bushings mounted in said openings, resilient cushioning means for said bushings, a rotor having an axle supported by said bushings, a second gimbal having oppositely extending aligned trunnions mounted for free rotation in said bearings on the longitudinal axis of said casing, said second gimbal having oppositely disposed, axially aligned openings perpendicular to the longitudinal axis of said casing and also perpendicular to the first-named axially aligned openings, bushings mounted in said second-named openings, resilient cushioning means for said last-named

bushings, and a second rotor having an axle supported by said second-named bushings so as to be crossed at substantially 90° with said first-named axle while the trunnions of said gimbals lie axially aligned.

3,006,198 ELECTRO-MECHANICAL SHAFT POSITIONING DEVICE

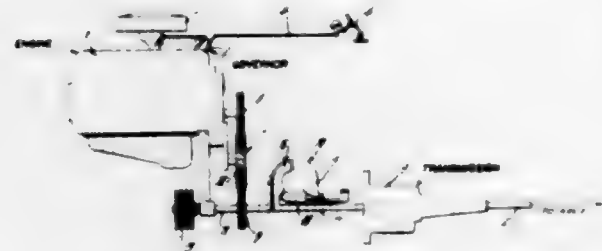
Charles L. Cohen and Donal F. Luse, Jr., Hyattsville, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 6, 1959, Ser. No. 797,804
2 Claims. (Cl. 74-10.2)



1. An electromechanical shaft positioning device comprising a reversible electric motor, a clutch operatively connected to said electric motor, a driving lever operatively connected to said clutch for rotation in either of two directions, adjustable stop members mounted in the rotational path of said driving lever for limiting movement thereof, a driven shaft movable in either of two directions, a driven lever journaled on said driven shaft, means mounted on said driven shaft for manually rotating the same to a preset position, releasable lock means mounted on said driven lever to secure said driven shaft to said driven lever at a preset position, and a link interconnecting said driving lever and said driven lever for proportionally rotating said driven shaft in response to rotation of said electric motor.

3,006,199 TORQUE TRANSMITTING MECHANISM

Howard W. Christenson and James J. Mooney, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 14, 1956, Ser. No. 571,423
5 Claims. (Cl. 74-15.84)

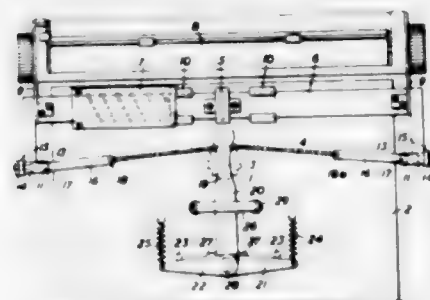


4. In a vehicle driven by an engine capable of developing a certain maximum engine torque, the combination of a governor arranged to be driven at a speed having a constant predetermined proportion to engine speed, manually operable control means for adjusting the

governor so as to afford different relatively constant engine speeds, a power shaft, gearing arranged to drivingly interconnect the engine and the power shaft, a variable speed transmission for driving the vehicle, the transmission including a hydrodynamic torque converter having an element thereof drive connected to one end of the power shaft, and a power takeoff device drive connected to the other end of the power shaft and requiring a predetermined torque for relatively constant speed operation, the torque converter being arranged and constructed to transmit a maximum torque not greater than the difference between maximum engine torque and the predetermined torque required by the power takeoff device so that the power takeoff device is operated at a relatively constant speed uninfluenced by variations in the load on the hydrodynamic torque transmitting device.

3,006,200 MOTION CONVERTING APPARATUS

James Woodhead, Allwynds, Sollersbott West, Letchworth, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed Aug. 19, 1958, Ser. No. 756,014
12 Claims. (Cl. 74-30)



1. Motion converting apparatus comprising a generally circular disc shape drive member mounted for rotation about an axis through the center and normal to the plane of the disc; driving means operatively connected to the disc to impart unidirectional rotation thereto; a driven member having two opposite longitudinal sides; mounting means carrying independently the drive member and the driven member, said driven member being so positioned that one of its sides is in engagement with the periphery of the disc, rotation of the disc producing relative motion between the disc and driven member substantially in the direction of the longitudinal axis of the driven member; stop means at both ends of the driven member; and cam means operative when the point of engagement between the disc and the driven member is at either end of the driven member to engage the stop means and maintain the driven member in engagement with the disc, continued rotation of the disc when in engagement with one end of the driven member transferring the point of engagement from one side to the other side of the driven member and when engaging the other end transferring the point of engagement from said other side to said one side, said mounting means permitting limited movement of the driven member transversely to the length thereof in the plane of the disc.

3,006,201 WELL PUMP MEANS

Milburn M. Ross, 631 N. Bluff, Wichita, Kans.
Filed Nov. 12, 1957, Ser. No. 695,673
3 Claims. (Cl. 74-41)

3. In a well pumping apparatus having a Samson post, a walking beam carried by said Samson post, and means to rock said walking beam up and down in operation, the improvement comprising, in combination, a horsehead, said horsehead being pivotally mounted on one end portion of said walking beam, said horsehead having an

arcuate portion forward of the point of pivot of said horsehead and an arm portion projecting rearwardly of the point of pivot of said horsehead, said forward portion of said horsehead being constructed and adapted to carry a pump rope or cable, a connecting member secured to said Samson post and pivotally secured in an



end portion to a fixed point on said rearwardly projecting arm portion of said horsehead and being otherwise out of contact with said horsehead, said well pumping apparatus being constructed and adapted so that the axis of said connecting member and the point of pivot of said horsehead are substantially in line when said horsehead reaches its upper limit of movement.

3,006,202 ROTARY AND PERCUSSIVE TOOL

Walter H. Moorhead, Richmond Heights, Ohio, assignor to Samuel J. Forbes, Cleveland, Ohio
Filed Mar. 17, 1958, Ser. No. 722,034
13 Claims. (Cl. 74-56)



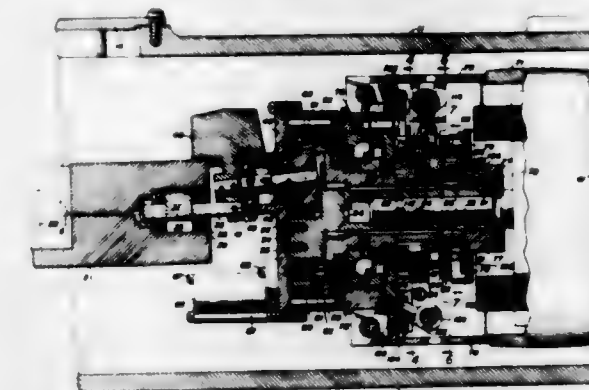
1. A rotary impact tool comprising a housing member, a constantly rotatable shaft journaled in the housing member and having first and second ends, the shaft first end being formed to provide a tool holder rigidly rotatable with said second end, the shaft second end including means for driving connection to a source of rotative force, said shaft having a cam surface formed intermediate the ends, a cam follower member disposed between the cam surface and the shaft second end, resilient means urging said follower member into contact with said cam surface, selector means carried by one of the members and operably connectable directly to the other of the members, said selector means having first and second adjustment positions, said selector being in said first adjustment position when relative reciprocation of said cam surface and said follower member is permitted, and said selector means being in said second adjustment position when relative reciprocation between said cam surface and said cam follower member is prevented.

3,006,203 RADAR SCANNING NUTATOR

Ben W. Sewell, Tulsa, Okla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 20, 1948, Ser. No. 50,148
15 Claims. (Cl. 74-86)

4. In a scanning nutator, an antenna feed assembly with a spherical bearing at one end, an oscillation shaft

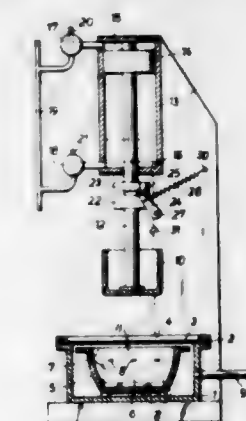
at the other end; supporting means for the shaft comprising an arm, a shaft upon which the arm is rotatable, means to support the last named shaft eccentric to the axis of the assembly, and a counter balance weight on the arm at the end opposite the oscillation shaft; a motor having a drive shaft in alignment with the spherical bearing; means connected with the motor shaft for rotating



end portion to a fixed point on said rearwardly projecting arm portion of said horsehead and being otherwise out of contact with said horsehead, said well pumping apparatus being constructed and adapted so that the axis of said connecting member and the point of pivot of said horsehead are substantially in line when said horsehead reaches its upper limit of movement.

3,006,204 ARRESTING DEVICE FOR PARTS MOVING UP AND DOWN

Eugen Weber, Zurich, Switzerland, assignor to Hydro-Chemie Aktiengesellschaft, Zurich, Switzerland
Filed July 11, 1958, Ser. No. 748,573
1 Claim. (Cl. 74-100)

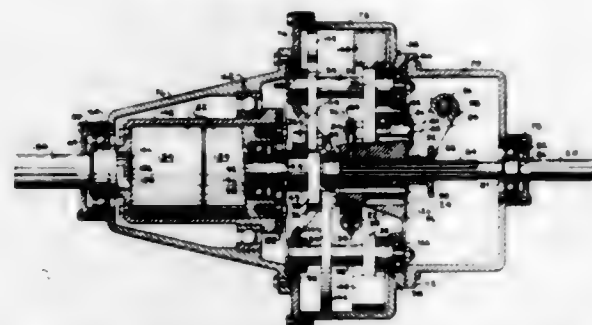


In a fluid-actuated mechanism comprising at least one upwardly and downwardly movable part having an enlargement thereon, a device for retaining said movable part in lifted position consisting essentially of fixed pivot means, a retaining lever pivoted thereon, a spring one end of which is fixed and the opposite end of which is operatively connected to said retaining lever at a point thereof situated with reference to the said pivot means in a direction opposed to the direction of action of the spring on said retaining lever, a fixed abutment in the path of angular displacement of said retaining lever for limiting on one side said angular displacement thereof, said enlargement having a groove comprising an axially extending funnel portion and a transversely extending portion connected to the bottom end of said funnel portion, a roller on said retaining lever engageable, while the latter contacts said abutment, by said funnel portion of said groove on movement of said movable part for coupling the latter to said retaining lever by engagement of said roller in said transverse portion of said groove, whereby further movement causes said retaining lever to swing away from said abutment into a position caus-

ing said spring to exert an upwardly directed force on said movable part, through said retaining lever, roller, and enlargement.

3,006,205 TRANSMISSIONS

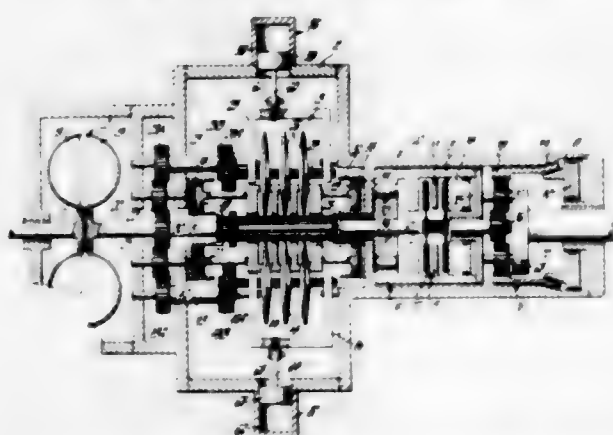
Haviland H. Platt, 19 E. 53rd St., New York 22, N.Y.
Filed Feb. 24, 1959, Ser. No. 794,994
13 Claims. (Cl. 74—125)



1. A speed transmission comprising a shaft, a cam mounted to turn with and to slide axially along said shaft, said cam being axially elongated and having axially progressively changing radical contour displacements of Archimedian spiral form, a plurality of overrunning co-axial clutches, an output member connected in common to all of said clutches, a plurality of spaced cam followers operatively engaging said cam and arranged to similarly track said cam, and means kinematically connecting said cam followers and said clutches.

3,006,206 INFINITELY VARIABLE RATIO TRANSMISSION

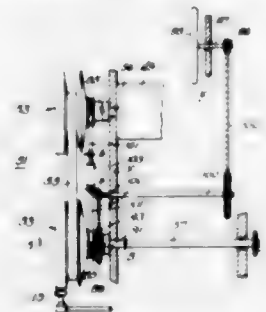
Oliver K. Kelley, Bloomfield Hills, and Douglas T. Lewis, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,448
20 Claims. (Cl. 74—190.5)



1. A variable speed friction transmission comprising in combination, an engine power input shaft, a power delivery shaft, first and second friction disc means connected, respectively, to said shafts for rotation therewith and meshing with each other, a pivotally mounted carrier for supporting said engine driven power input shaft for rotation, means for varying the position of said carrier to change the transmission drive ratio, said means including a hydraulic servo operatively connected to said carrier, a source of fluid under pressure adapted to be connected to said servo, and a pressure control valve for controlling the pressure supplied to said servo from said fluid pressure source, said servo being effective to change the position of said carrier to change the transmission drive ratio in response to change in pressure in said servo as determined by said control valve, and fluid pressure responsive means for applying a contact loading force to said discs to prevent slippage of said discs with respect to each other.

3,006,207 BALER DRIVE MECHANISM

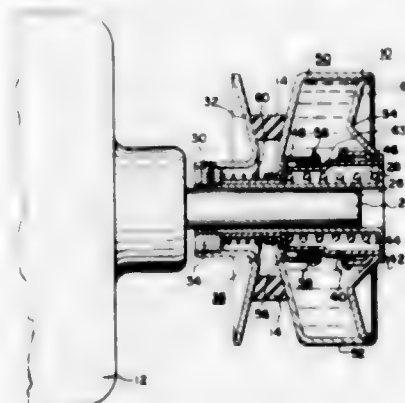
Stanley D. Russell, Racine, Wis., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Application Sept. 8, 1953, Ser. No. 378,904, now Patent No. 2,834,177, dated May 13, 1958, which is a division of application Ser. No. 13,969, Mar. 10, 1948, now Patent No. 2,674,839, dated Apr. 13, 1954. Divided and this application Aug. 2, 1957, Ser. No. 678,756
5 Claims. (Cl. 74—230.17)



1. A variable speed transmission for connecting a power input shaft and a power output shaft, said shafts being parallel and being spaced from one another, each of said shafts including a splined portion, a pulley attached to each of said shafts, each pulley including a pair of spaced-apart discs whose adjacent surfaces define the groove of said pulley, each of said discs being adapted to rotate with said shaft, one of the discs of each pair being fixed to its associated shaft and the other disc of said pair slidably engaging said splined portion of said shaft for longitudinal movement therealong, the adjacent surfaces of said fixed disc and said movable disc evenly diverging from each other from a point adjacent said shaft to a point on the rim of said disc, the groove defined by said surfaces tapering inwardly toward said shaft, a V-belt connecting said pulleys and being adapted to run in said groove between said fixed discs and said movable discs, and means for applying force to said movable discs to adjust the spacing between said fixed discs and said movable discs, the last mentioned means including a cam member adapted to operatively engage each of said movable discs, a free running thrust bearing intermediate said cam member and said movable disc, said cam members being interconnected by means affording relative movement of one of said pairs of discs while effecting compensating movement in the other of said pairs of discs, said interconnecting means including a resilient body, and means for moving one of said cam members to effect a change in the spacing of said discs, and a corresponding change in the effective diameter of said pulleys.

3,006,208 VARIABLE DIAMETER PULLEY

Laszlo Z. Pokorny, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,369
9 Claims. (Cl. 74—230.17)

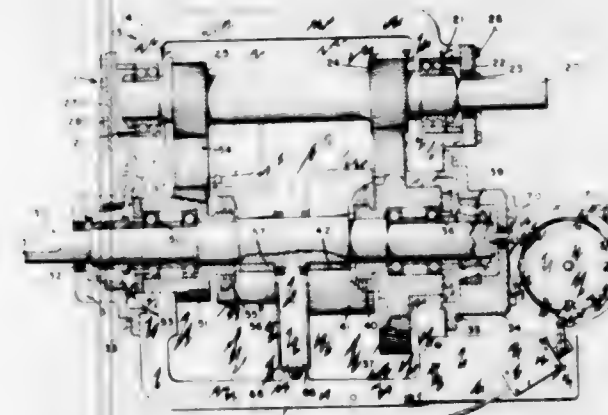


1. A variable diameter pulley assembly including, a hub, a first pulley half immovably attached to said hub,

a second pulley half rotatable with said hub but movable axially relative thereto, a sleeve rotatable with said hub but movable axially relative thereto, said second pulley half being in the form of an annulus having at least a part of its inner axial wall formed by an elastomeric diaphragm, said elastomeric diaphragm engaging a pair of spaced reaction shoulders, one of said shoulders being on said annulus and the other of said shoulders being on said sleeve, and expansible temperature-responsive means contained within said annulus for effecting axial movement of said second pulley half.

3,006,209 REVERSING TRANSMISSION

David E. Stromberg, Traverse City, Mich., assignor to Stromberg-Carlson Tool & Die Company, Traverse City, Mich., a corporation of Michigan
Filed Aug. 1, 1958, Ser. No. 752,571
4 Claims. (Cl. 74—377)



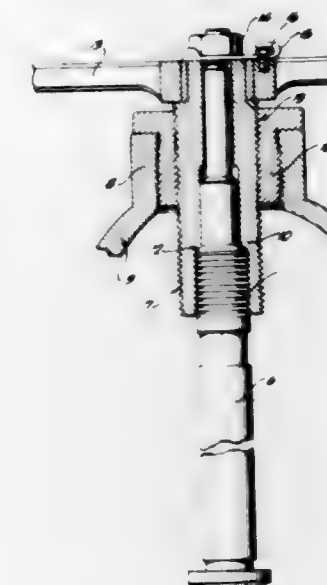
1. In a machine tool having a reciprocating bed, the combination comprising: a bed driving means adapted to translate rotary motion to reciprocating lineal motion, said means having a rotatable driving shaft; a rotary motion reverser having an input shaft and an output shaft; a pair of gear trains each having a driving gear mounted on and rotatable with said input shaft and a driven gear concentric with and freely rotatable with respect to said output shaft; one of said gear trains having one more gear than the other thereof whereby the driven gear thereof rotates oppositely of the driven gear of the other of said gear trains; a pair of clutches each having one element thereof secured to said output shaft for rotation therewith; a second element of one of said clutches being secured to the driven gear of said one gear train and a second element of the other of said clutches being secured to the driven gear of said other of said clutches whereby the direction of rotation of said output shaft is determined by alternate engagement of said clutches; means for driving said input shaft in a constant direction; and means connecting said output shaft to said driving shaft for transmitting rotary motion therebetween.

3,006,210 REPLACEABLE THREADED SLEEVE FOR GATE TYPE VALVES

Howard C. Dumm, Long Beach, Calif., assignor to Pacific Valves, Inc., Long Beach, Calif., a corporation of California
Filed Dec. 21, 1959, Ser. No. 860,980
3 Claims. (Cl. 74—424.8)

1. A valve stem actuating means for a valve which valve includes a bonnet and yoke, and a stem extending through the bonnet, comprising the combination of a stem sleeve surrounding the stem adjacent the upper end of the stem, means removably securing said stem sleeve to said stem, said means nonrotatably mounting the stem

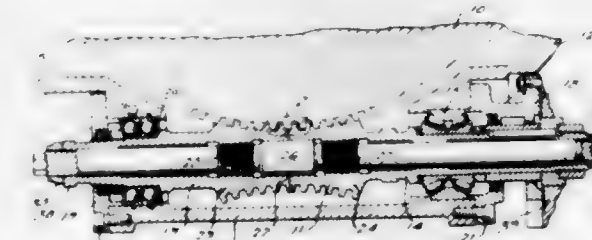
sleeve on the stem, a yoke sleeve threaded into said yoke, said yoke sleeve being interiorly threaded to receive ex-



terior threads on the stem sleeve, a hand wheel, means nonrotatably attaching the hand wheel to said stem sleeve.

3,006,211 WORM AND WORM WHEEL DRIVE

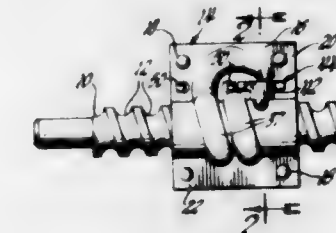
Otto Mueller, 13 Byfield Lane, Dearborn, Mich.
Filed July 5, 1960, Ser. No. 40,695
5 Claims. (Cl. 74—440)



1. In a reduction drive, a worm wheel having teeth thereon, a worm having a thread thereon matable with the teeth of the wheel, said worm being constructed in two halves, a shaft having spaced threads of different numbers of turns per inch on which the worm halves are mounted, and means for securing the worm halves in fixed relation to the shaft permitting the shaft and a worm half to be relatively rotated to bring the flanks of the thread into engagement with the teeth while maintaining the two worm halves in abutting relationship.

3,006,212 STAMPED BALL NUT

David A. Galonska, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,244
6 Claims. (Cl. 74—459)



1. In a stamped ball nut of the type described comprising a pair of mating parts grooved in a complementary manner to provide a helical ball race and a return ball passage interconnecting the ends of said race, the com-

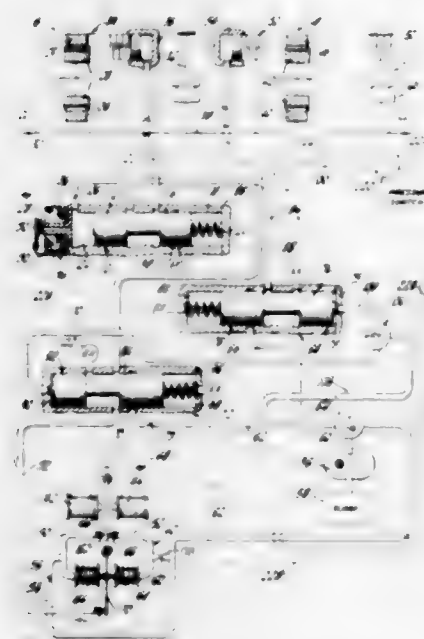
bination of a pair of deflector elements one at each end of said race, each said element carrying a finger portion extending through an opening in one of said parts into said race and further carrying tang means whereby such element is connected to one of said parts.

3,006,213

TRANSMISSION CONTROL SYSTEM

Douglas G. Wilson, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 14, 1957, Ser. No. 696,465
27 Claims. (Cl. 74-472)



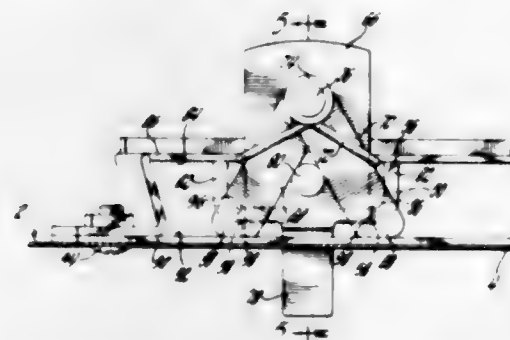
1. In a control device for a torque transmitting mechanism including driving and driven members, control means for varying the torque transmitting ability of the mechanism in accordance with deviations in the rate of speed change of one of the driving and driven members above and below a desired rate standard of change, and means responsive to the torque transmitting ability of the mechanism for initiating operation of the control means.

3,006,214

LEVER OPERATING AND LOCKING DEVICE

Arthur W. Hollar, Jr., Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 30, 1958, Ser. No. 745,604
4 Claims. (Cl. 74-536)



1. The combination comprising, a support having a pair of spaced juxtaposed generally parallel surfaces, an operating member, means mounting said member on said support for movement relative to and between said surfaces, a locking member, means mounting said locking member on said operating member for movement relative thereto about an axis generally parallel to said surfaces, and means biasing said locking member into engage-

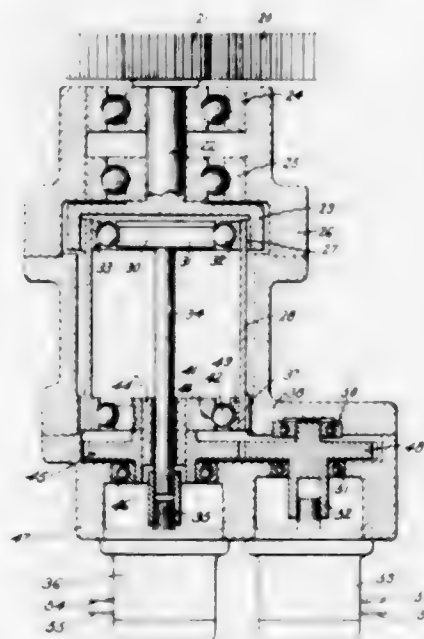
ment with one of said surfaces to bias said operating member into engagement with the other of said surfaces and thereby lock said operating member in position relative to said surfaces.

3,006,215

TORQUE EQUALIZER

C. Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Oct. 11, 1960, Ser. No. 61,964
17 Claims. (Cl. 74-665)



1. In a torque equalizer, an output device, a plurality of driving shafts each operatively connected to the output device, bearings journalling the driving shafts, an equalizer shaft for each driving shaft bearings journalling the equalizer shafts, gearing interconnecting each equalizer shaft to a corresponding driving shaft, said gearing including input means for relatively moving said driving shaft with respect to said equalizer shaft while said equalizer shaft is rotationally stationary, a control motor operatively interconnected to each input means driving said input means and through the gearing driving the driving shaft, an equalizing fluid motor-pump for each equalizer shaft operatively interconnected thereto to selectively drive said equalizer shaft in either direction or hold said equalizer shaft stationary in respect to rotation, each equalizing fluid motor-pump having a fluid connection at each side thereof, fluid means for connecting the fluid connections of a plurality of the equalizing motor-pumps on one side together, and fluid means for connecting the fluid connections of said plurality of equalizing motor-pumps on the other side together.

3,006,216

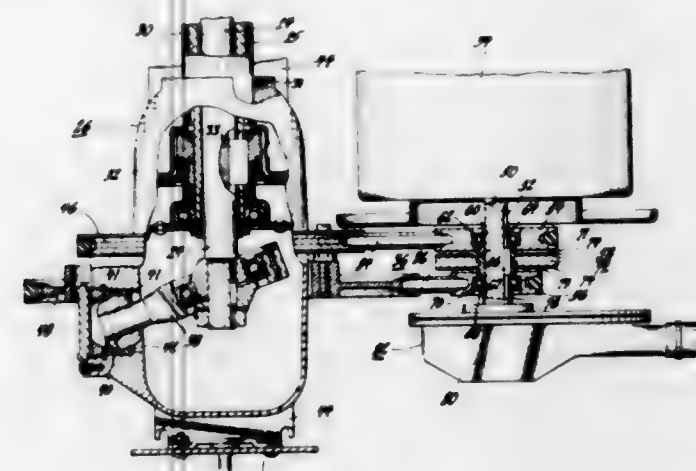
DOMESTIC APPLIANCE

Kenneth O. Sisson and Byron L. Brucken, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 28, 1958, Ser. No. 738,361
4 Claims. (Cl. 74-665)

1. In combination, two shaft means concentrically arranged, an enclosing housing completely enclosing the one adjacent end of each of the shaft means, the opposite adjacent ends of each of said shaft means protruding out of said housing, means preventing relative rotation of said two shaft means, said housing including a relatively stationary portion enclosing said shaft means and a rotatable portion rotatable with respect to the normally stationary portion and said shaft means, means responsive to said rotatable portion for reciprocating one of said

shafts or rotating the other of said shafts, a driven flange on said rotatable portion having a non-horizontal agitate section for reciprocating one of said shafts and a non-horizontal spin section for rotating the other of said shafts, a reversible, single speed motor for rotating said rotatable portion, said motor having a shaft substantially normal to said rotatable portion, and means responsive to the operation of said motor for varying the speed of said rotatable portion, said responsive means including



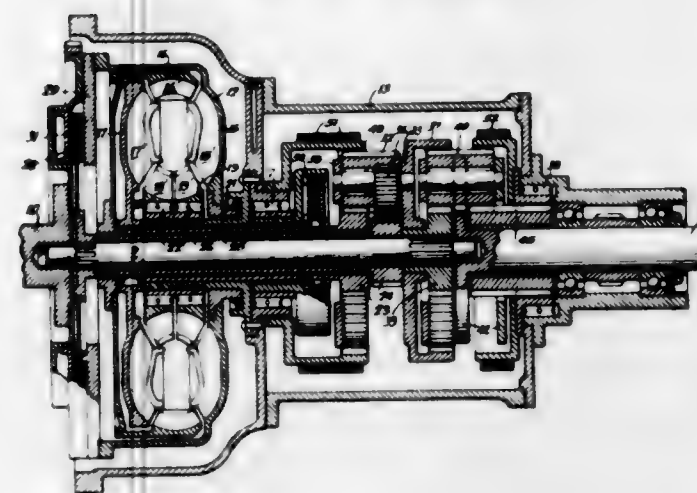
an agitate drive member having a driving surface parallel to said agitate section, an agitate screw member keyed to said shaft for directing said agitate drive member into engagement with said agitate section, when said motor is rotated in one direction, a spin drive member having a driving surface parallel to said spin section, and a spin screw member keyed to said shaft for directing said spin drive member into engagement with said spin section when said motor is rotated in another direction.

3,006,217

TRANSMISSION

Adiel Y. Dodge, % A. Y. Dodge Co., 206 S. Main St., Rockford, Ill.

Filed Sept. 16, 1957, Ser. No. 684,342
1 Claim. (Cl. 74-688)



A transmission comprising a hydraulic torque converter including a vaned driving impeller, a first vaned turbine receiving liquid from the impeller outlet and having its vanes so curved that the liquid urges it forward under all driving conditions, a second vaned turbine receiving liquid from the outlet of the first vaned turbine and having its vanes so curved that the liquid urges it forward under all driving conditions, a vaned stator between the outlet of the second turbine and the inlet of the impeller urged rearwardly by the liquid during hydraulic torque multiplication, a differential gear set including four relatively rotatable members interconnected by gearing, means to connect one of said members to a load, means to con-

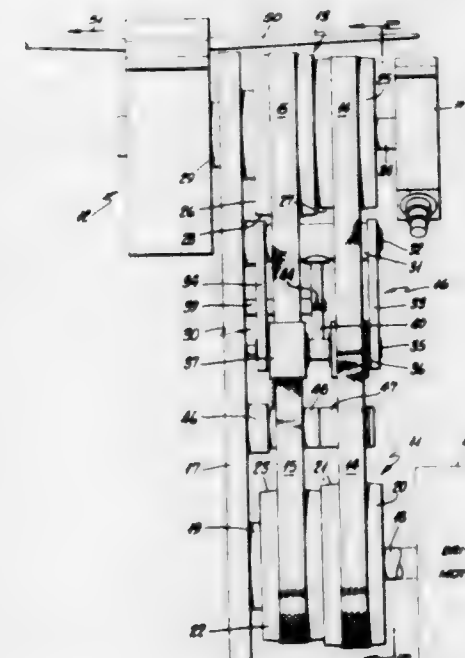
nect two other of said members to the first and second turbines respectively, each of said last two members tending to turn the other in a reverse direction through the gearing when rotation of said one of the members is resisted and a clutch to connect the fourth of said members to the impeller.

3,006,218

SPEED CONTROL ARRANGEMENT

Alexander R. Maxey, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Mar. 28, 1960, Ser. No. 17,903
11 Claims. (Cl. 74-722)



8. A speed regulating arrangement comprising: a driver means including a motor with a belt driving member having a first and a second annular surface; a driven means including a rotatable load with a belt driven member having a first and a second annular surface; a first flat endless belt connecting an annular surface of said belt driving member to an annular surface of said belt driven member to urge rotation of said driven means at a first non-slip speed; a second flat endless belt connecting an annular surface of said belt driving member to an annular surface of said belt driven member to urge rotation of said driven means at a second non-slip speed, each of said belts capable of slipping to rotate said driven means at a speed intermediate said non-slip speeds; and means to increase the tension in one of said belts and to simultaneously decrease the tension in the other of said belts to vary the amount of slippage in said belts and thereby vary the rotational speed of said driven means.

3,006,219

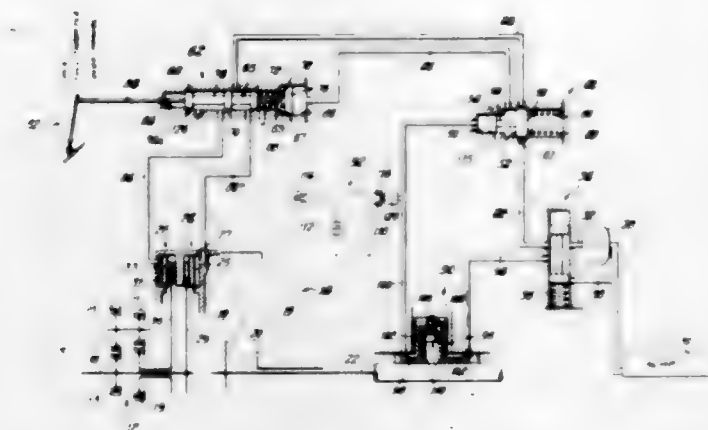
TRANSMISSION CONTROL

Joseph B. Snoy, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Mar. 13, 1958, Ser. No. 721,198
4 Claims. (Cl. 74-730)

1. A control apparatus for an automatic transmission having an input shaft, an input gear set, a torque converter including an impeller, a turbine and a stator, said input gear set being adapted operably to connect said input shaft and said impeller, and an output shaft for said converter; comprising a first clutch normally operative to interconnect said input shaft and said impeller to transmit power to said impeller at a predetermined speed ratio, a second clutch operative upon actuation to transmit power to said impeller through said gear set at a predetermined lower ratio, manually actuatable means

for controlling the actuation of said second clutch when a lower input ratio to said impeller is desired and means

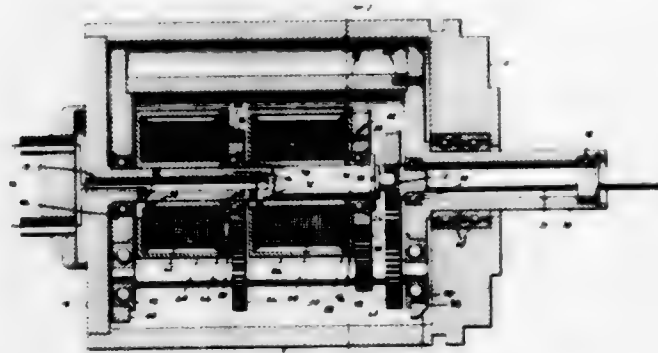


for preventing actuation of said second clutch above a predetermined vehicle speed.

3,006,220

MULTIPLE RATIO SPEED CHANGER

Donavon L. Feaster, New Haven, Ind., assignor to Bowmar Instrument Corporation, Fort Wayne, Ind.
Filed Nov. 17, 1958, Ser. No. 774,454
11 Claims. (Cl. 74-766)



1. A multi-speed power transmission comprising relatively rotatable input and output shafts, a carrier mounted on and rotatable with said input shaft, a first sun gear on said output shaft and rotatable therewith; a support, said carrier being rotatably mounted on said support, second and third sun gears directly mounted for rotation on said support; first, second and third planetary gears meshed with said first, second and third sun gears, respectively, said planetary gears being connected together for rotation, said planetary gears being rotatably mounted on said carrier, and two electromagnetic actuators fixedly mounted on said support on opposite axial sides of said third sun gear and alternatively engageable with said second and third sun gears for selectively holding the latter against rotation, the gear ratio between said second sun and said planetary gears being different than the ratio between said third sun and said third planetary gears.

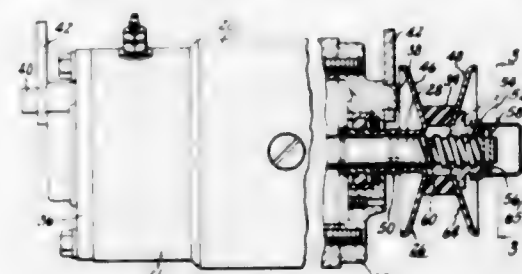
3,006,221

DYNAMOELECTRIC UNIT DRIVE

Harold J. Cromwell, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 16, 1957, Ser. No. 684,037
8 Claims. (Cl. 74-810)

1. A cranking and current generating system for use with an internal combustion engine, comprising in combination; a dynamoelectric unit having an output shaft, said unit being constructed and arranged to rotate said shaft as a driving member when the unit acts as a starting motor for the engine and to act as a current generator when the shaft is rotatively driven by said engine, a

threaded portion on said shaft, a V-groove pulley half secured to said shaft, a second pulley half cooperable with the secured pulley half to define a V-groove, said second pulley half being threadedly received on the threaded portion of said shaft, a pulley drivingly connected to said engine, a belt connecting the engine driven pulley with both halves of the pulley on the shaft, the second pulley half being arranged on the threaded portion of said shaft

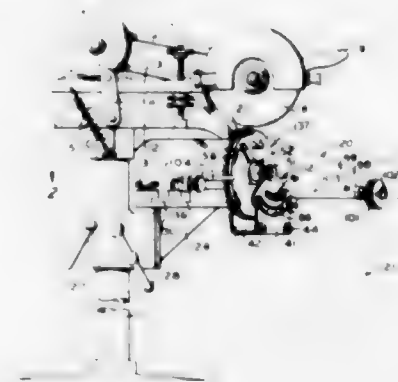


and cooperating with said belt to move toward said secured pulley half when the engine is driving said shaft, and to separate from said secured pulley half when the unit acts as a motor, and a pivotal mounting for the unit arranged so the reactive torque generated within unit aids in tightening the belt and the separation of the second pulley half from the first pulley half when the unit is operating as a motor.

3,006,222

APPARATUS FOR SHARPENING CHAIN SAWS

James McEwan, 138 Stockton Ave., San Jose, Calif.
Filed Dec. 20, 1957, Ser. No. 704,093
13 Claims. (Cl. 76-37)



1. In a sharpener for a chain saw, a frame, a sharpening element mounted on the frame for movement between an inactive position and an active sharpening position, saw holding means on said frame including a saw support comprising two discs in side-by-side relation, said discs being mounted about axes at a slight angle to each other whereby at one portion of their periphery the discs are urged together at a saw clamping position adjacent to the active position of the sharpening element.

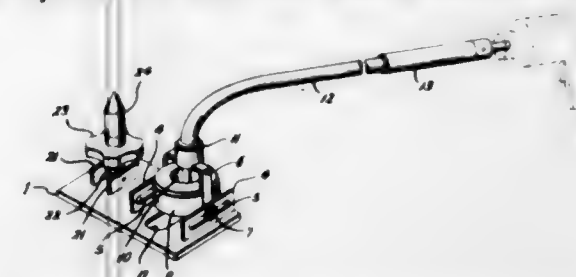
3,006,223

PLATE BORING DEVICE

John G. Broussard, P.O. Drawer 370, Edna, Tex.
Filed Aug. 4, 1959, Ser. No. 831,575
4 Claims. (Cl. 77-62)

1. A plate boring device having an elongated platform, a passageway adjacent one end of and extending through said platform, a bracket mounted on said platform over said passageway, means for adjusting said bracket horizontally and for selectively moving said bracket into an angular position, a tubular cable guide having a portion adapted to extend from said bracket in a plane substantially parallel to said platform, an exter-

nally threaded stud mounted to pivot laterally on said plate from adjacent the other end thereof, internally threaded



spike mounted on said stud and an integral external flange on said spike.

3,006,224

ROLL FORMING MACHINE

Michael J. Celovsky, Detroit, Mich., assignor to Industrial Tool Engineering Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 30, 1957, Ser. No. 681,334
3 Claims. (Cl. 80-35)



1. A roll forming machine comprising a supporting base, roller stands movable with respect to one another along the path of the rolling on said supporting base, fastening means between each of the roller stands and said base, a series of pairs of rollers carried by said roller stands with each of said rollers having a roller shaft extending axially thereof, bearing means rotatably supporting said roller shafts and said rollers on said roller stands, a series of fluid motors with each fluid motor having a drive shaft, coupling means between said roller shafts and said drive shafts, control valves cooperable with said fluid motors with the rollers in each pair being driven by a different fluid motor and with one of the control valves associated with each of said fluid motors for controlling the fluid flow thereto and thereby controlling the velocity of the associated roll driven by the fluid motor even though the rollers in each pair may have diameters at variance with one another, means connected to the stands for detachably supporting the fluid motors, and power means for operating said fluid motors comprising a motor, a hydraulic pump unit powered by said motor, a shut-off valve connected to said pump unit, a pilot connected to said shut-off valve for operating the shut-off valve, a pressure header and a return header in communication with said shut-off valve, and fluid lines connecting the pressure header and the return header with each of said fluid motors.

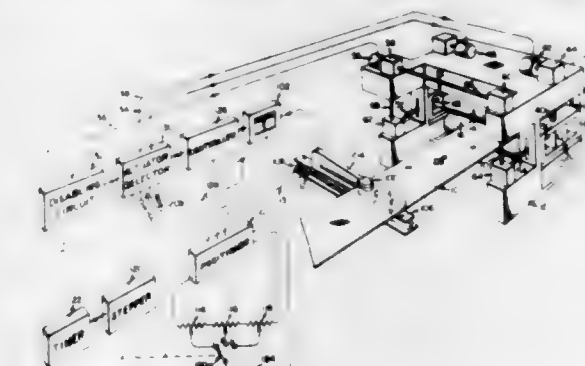
3,006,225

SPECIAL MILL CONTROLS

Leo G. Mamas, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed July 8, 1957, Ser. No. 670,572
6 Claims. (Cl. 80-56)

1. Apparatus for automatically maintaining a desired linear dimension profile across the width of a flow of

material formed in continuous fashion by co-acting flow regulating elements, comprising means including a first actuator for adjusting said elements at one portion thereof to produce a first value of said linear dimension, means including a second actuator for adjusting a second portion of said elements spaced from said first portion thereof to produce a second value of said linear dimension, means including a third actuator for adjusting a third portion of said elements intermediate said first and second portions to produce a third value of said linear dimension, a single gauging device located on the output side of said flow regulating elements and movable across

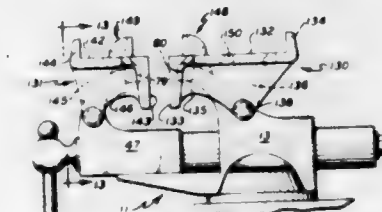


said width for inspecting said first, second and third dimension values, means for moving said gauging device in repeating sequence to provide an indication of said dimension at said portions, controller means for providing a control signal adapted to energize one of said actuators when said indication deviates from a predetermined value, switching means for routing said control signal successively to the one of said actuators in synchronism with said inspection sequence, and disabling means responsive to a control signal energizing either of said first and second actuators for interrupting the circuit supplying power to said third actuator for the duration of one cycle of said sequence.

3,006,226

BENCH VISE

John W. Poysa, 3001 W. Verdugo Ave., Burbank, Calif.
Filed Sept. 15, 1958, Ser. No. 761,036
2 Claims. (Cl. 81-38)



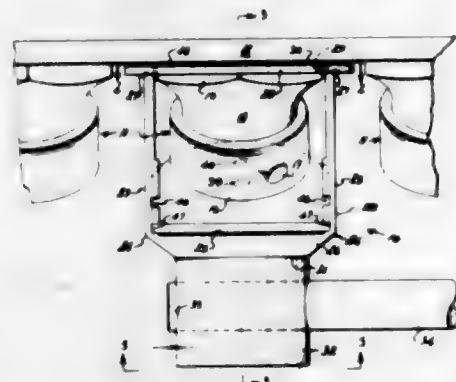
1. In a bench vise, the combination of: a stationary main jaw assembly, a movable main jaw assembly suitably disposed and related to the stationary main jaw assembly for gripping work objects between the two jaw grips of the two assemblies, an auxiliary stationary jaw assembly attachable to the stationary main jaw assembly, and an auxiliary movable jaw assembly attachable to the movable main jaw assembly, each of said auxiliary jaw assemblies comprising a table, a front flange depending from said table, a pair of spaced webs depending from said table and extending rearwardly from said flange, a recess being formed at the juncture of said flange with said table and between said webs for snugly receiving therein the jaw grip of the respective main jaw assembly, a block depending from said table and rearwardly displaced with respect to said flange for supporting said table on said respective main jaw assembly in substantially horizontal position, each of said main jaw assemblies having formed therein oppositely disposed, substantially

aligned recesses, and resiliently urged pins carried by each of said webs and engageable in said recesses for holding the auxiliary jaw assembly against movement in one direction, and each of said tables having an upwardly extending auxiliary jaw grip and said auxiliary jaw grips being so disposed for gripping work objects of greater width than can be accommodated between the jaw grips of the two main assemblies.

3,006,227

WRENCH FOR HYDRANT OUTLETS

Lyle Robert Fitch, Leslie L. Fitch, and Rene Rodigou, San Francisco, Calif.
Filed Dec. 12, 1960, Ser. No. 75,224
7 Claims. (Cl. 81-125)

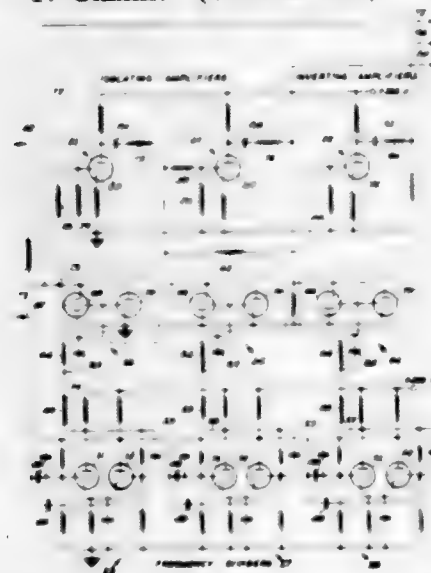


1. A wrench for installing and removing a conduit fitting in a hydrant manifold, said fitting having a straight threaded section for connection with a conduit supply main, a flat-sided torque transmitting section axially aligned and integral with said threaded section and an outlet conduit section integrally attached to said torque transmitting section and having an end portion with its central axis located at a fixed predetermined angle with relation to the axis of said threaded section, said wrench comprising: a frame; a socket plate attached to said frame, said socket plate having an inner cutout section with the same shape as and adapted to fit around said integral flat sided torque-transmitting means on said fitting; a face plate mounted within said frame and means on said face plate to attach said end portion of said fitting to said face plate while the wrench is being used to turn said fitting.

3,006,228

CIRCUIT FOR USE IN MUSICAL INSTRUMENTS

James Paul White, 6711 Charles St., Philadelphia, Pa.
Filed Nov. 14, 1957, Ser. No. 696,404
17 Claims. (Cl. 84-1.01)



1. A musical instrument tone quality circuit comprising a pulse generator responsively coupled to an original

input signal applied across its input terminals for generating across its output terminals pulses at fundamental frequency corresponding to that of the original input signal, at least one frequency divider having its input terminals coupled to the output terminals of the pulse generator for producing across its output terminals a square wave having a period equal to two raised to some integer power times the period of the original input signal, and a gate circuit having input, control and output terminals the input signal being applied to said input terminals, having a portion of which corresponds approximately to the original input signal, and the output terminals of the frequency divider are coupled to the control terminals a portion of the original input signal passing to the output terminals of the gate once each full cycle of the signal output from the frequency divider.

3,006,229

ELECTRONIC ORGAN

George H. Hadden and Richard H. Campbell, Jr., Laconia, N.H., assignors to Kinsman Manufacturing Co., Inc., Laconia, N.H., a corporation of New Hampshire
Filed Apr. 22, 1959, Ser. No. 808,098
2 Claims. (Cl. 84-1.24)

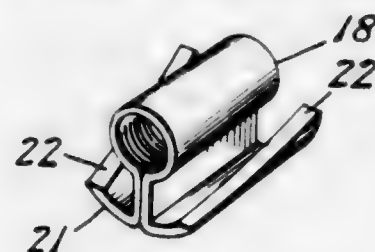


1. In an electronic musical instrument a plurality of tone generators, amplifier means, an output means driven by said amplifier means, a plurality of switches selectively connecting said tone generators to the input of said amplifier means, percussion keying means connected for ganged operation with said switches, attenuation means interconnecting said percussion keying means and the input of said amplifier, and means selectively connecting said percussion keying means directly to said output means.

3,006,230

SHEET METAL WEDGE NUT HAVING WEDGING END PORTIONS

Herbert J. McCauley, Jr., 731 W. Ferry St., Buffalo 22, N.Y.
Filed July 22, 1958, Ser. No. 750,131
6 Claims. (Cl. 85-32)



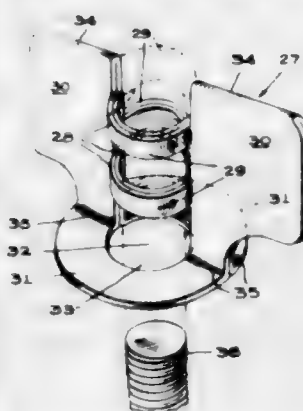
2. A wedge nut comprising a continuous metallic strip wherein the central portion thereof is of cylindrical form, the ends of said strip extending radially from said central portion in juxtaposition, thence arcuately in opposite directions to lie along a common arc substantially concentric with said cylindrical portion to provide an external arcuate bearing surface, the terminal edges of said arcuate portions being formed to provide oblique coplanar inclined wedging surfaces facing generally away from said

bearing surface, and the interior of said tubular portion being threaded to receive screw means, said oblique terminal edges being flattened to provide greater surface area than the raw edge of the metallic strip.

3,006,231

SHEET METAL LANCED NUT HAVING ALTERNATELY OFFSET STRAPS

Simon S. Kahn, Glen Ridge, N.J., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Original application Jan. 28, 1957, Ser. No. 636,693, now Patent No. 2,917,966, dated Dec. 22, 1959. Divided and this application Apr. 30, 1959, Ser. No. 810,027
1 Claim. (Cl. 85-32)



A unitary screw-retaining article in the form of a wing-nut, said nut comprising a body fabricated from a flat blank of sheet material and forming symmetrical halves at opposite sides of a central laterally extended fold line, said blank having a plurality of parallel lanced perforations through substantially its longitudinal center, said perforations defining strap members intermediate each pair of perforations terminating in winged extremities at each side of the body, said blank also having oppositely symmetrical cut-out areas at its ends adjacent the respective outer-most strap members in spaced relation to its marginal extremities, and said blank being folded over on itself about said central fold line into duplicate oppositely aligned halves, with the strap members of the respective halves of the folded blank aligned in doubled contiguous relation, each of said end areas being bent oppositely outward along the lines of the respective outer-most strap members and so disposed that the cut-out areas join to form a screw-receiving apertured base of the wing-nut, said base being disposed in a transverse plane substantially perpendicular to the body of the nut, and the pairs of doubled strap members being alternately and arcuately offset in opposite directions and defining a generally cylindrical internally screw threaded socket, with the straps of the respective halves of the folded blank alternately disposed on opposite sides of the central axis of said socket and thereby positively interlocking said halves together when the wing-nut is applied onto a screw.

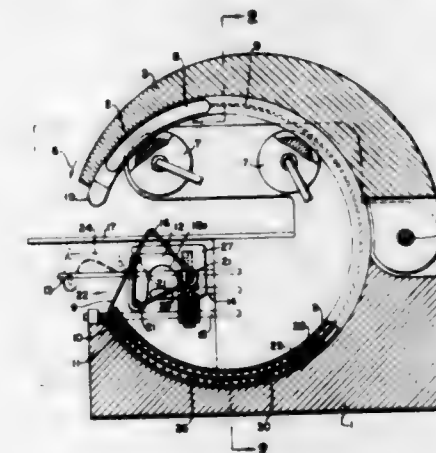
3,006,232

APPARATUS FOR ATTACHING REINFORCEMENTS TO NETS

Lennart Ludvig Lindholm, Teg, Umea, Sweden, assignor to Bertil Waldemar Bourwall, Umea, Sweden
Filed June 13, 1960, Ser. No. 35,820
Claims priority, application Finland June 19, 1959
1 Claim. (Cl. 87-62)

Apparatus for attaching reinforcements to nets, comprising, in combination: a frame; a reinforcement for accommodating the edge meshes of a net; a vertically disposed tubular open ring needle guided in said frame and having a yarn spool, said ring needle being revolvable in a circular path for winding and delivering the yarn and being open to provide a gap between its ends to permit

said reinforcement and net meshes to be disposed within the circular path; a table having a plane disposed approximately in the center of rotation of said ring needle for carrying a net and the reinforcement; a tying claw below said plane of said table and within the circular path of the needle for receiving yarn from the yarn spool and forming knots, said tying claw having at least three spaced horizontal claw pins and being movable outwardly with respect to said circular path; means mounting said tying claw for pivotal movement to an angled position relative to the circular path; means guiding said ring needle and

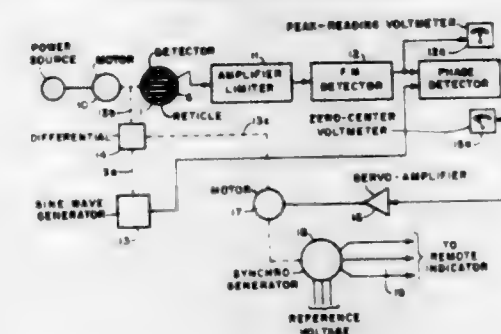


said tying claw for movement to cooperate in a predetermined series of motions for tying a knot in such a manner that said ring needle passes yarn during an initial revolution from said ring needle through at least one edge mesh of a net and in a coil over said reinforcement and inside said circular path over said claw pins, then passes another coil of yarn around said reinforcement and claw pins, and after said tying claw is moved to said circular path passes another turn of the yarn through the double coil about said claw pins for forming a knot around said reinforcement which takes place after the coil has been carried away and tightened.

3,006,233

OPTICAL NAVIGATIONAL INSTRUMENTS

Melvin S. Stiles, Rochester, and Robert N. Strahl, Pittsford, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 703,182
6 Claims. (Cl. 88-1)



1. In combination in a driftmeter for aircraft of the class described, a photoelectric light detector for generating a complex wave corresponding to random reflecting relatively moving objects on the ground, a grating, said grating being rotatably disposed with respect to the light detector so as to chop the light to the detector, a motor for continuously driving said grating to frequency modulate said complex wave at the chopping frequency, a limiting amplifier coupled to the output of said detector for holding said complex wave at a substantially constant amplitude, a frequency-modulation detector coupled to the output of said amplifier for detecting the frequency modulating component; a sine-wave generator driven by a linkage coupled to said motor, a differential mechanism in said

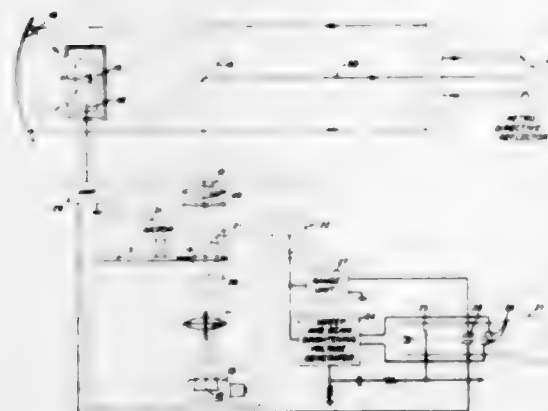
linkage to vary the phase relation of the sine wave generator and said rotatable grating; a phase detector for comparing the phase of the output of said frequency-modulation detector and the output of said sine-wave generator, and a servo feedback connection coupled between said phase detector and said differential for automatically adjusting said phase relation to a predetermined value, and means for indicating the feedback error quantity to quantitatively show said phase relation.

3,006,234

ELECTRO-OPTICAL SYSTEM

William Herriott, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 8, 1947, Ser. No. 784,925
10 Claims. (Cl. 88—1)



1. In combination, means for generating a main beam of light, a movable member positioned in the path of said beam for periodically transmitting light therefrom in pulse form, means for producing from said beam a smaller light beam which is displaced with respect to said main beam to such an extent and position that said movable member periodically transmits the pulse of light from said smaller beam ahead of each pulse of said main beam, and means for utilizing said pulses of light from said smaller beam to control apparatus utilizing said pulses from said main beam.

3,006,235

VELOCITY MEASURING SCANNER FOR AIRCRAFT

Chester Brandon, Guaynabo, Puerto Rico, assignor to General Precision, Inc., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,883
2 Claims. (Cl. 88—1)



1. Apparatus for determining the relationship between the ground speed of an airborne vehicle and its height above ground, in combination, optical means for

projecting an image of ground terrain, a photosensitive element interposed in the projection of said image of ground terrain said photosensitive element having an electrical output substantially proportional to the intensity of the light impinged upon it, a rotating grid interposed in the projection of said image of ground terrain to produce optical variations of said image of ground terrain appearing at said photosensitive element, first means for converting the output of said photosensitive element into first particular values, second means for converting the rotational velocity of said rotating grid into second particular values, said first and said second particular values being rotational velocities of mechanical elements suitably arranged to permit the extraction of their differences, and differential means coupled to said first and said second means for extracting the difference between said first and said second particular values to produce a quantity corresponding to the ratio of velocity to height.

3,006,236

APPARATUS FOR ASTRONOMICAL NAVIGATION

Robert A. H. Michaud, Paris, France, assignor to Sud-Aviation, Societe Nationale de Constructions Aeronautiques, Paris, France, a company of France
Filed June 9, 1958, Ser. No. 740,613

Claims priority, application France June 17, 1957
13 Claims. (Cl. 88—2.4)



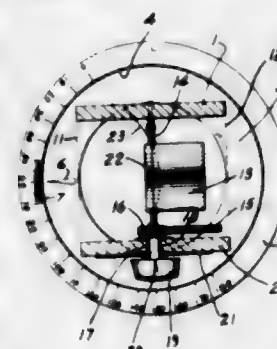
1. In a pendular sextant type of astronomical navigation instrument mountable on a movable body for orientation in both vertical and horizontal planes and having reference means for forming a reference basis of the local vertical direction and having also an optical system having an optical axis directionally defined by two mirrors giving said axis the form of an inverse N, and forming a luminous point which is an optical image of an observed star on an image surface the limits of which are fixed in the focal plane of said optical system; the improvement comprising the combination of said means with scanning means for scanning said image surface in its entirety, at regular intervals, and for scanning said reference basis at regular intervals occurring in integer multiples of said first-mentioned intervals, means for generating a first group of electric pulses from said image surface scanning, means for generating a second group of electric pulses from said reference basis scanning, means for counting the pulses of the first group in each image surface scanning only during the time which elapses during the passing of said reference basis scanning means between said reference basis and said luminous point, and means for averaging the counting results for all the images scanned.

3,006,237

OPTICAL DEVICE FOR VIEWING AND GENERATING CURVED LINES

Robert B. King, 1627 E. Mendocino St., Altadena, Calif., and Charles E. Roos, Riverside, Calif. (2507 Ridge-wood Drive, Nashville 5, Tenn.)

Filed Sept. 11, 1959, Ser. No. 839,487
7 Claims. (Cl. 88—2.4)



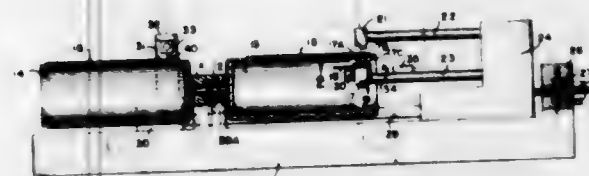
1. In a device of the character disclosed, a cylindrical lens adapted to be placed in close proximity to and over a segment of a curved line, the axis of the cylindrical lens lying in a plane bisecting a chord of said segment, and means for tilting the axis of said cylindrical lens about an axis of rotation parallel and in close proximity to said chord of the segment with the axis of the lens remaining in a plane perpendicular to the plane of the segment, through a given angle such that when the segment of the curve covered by the lens is viewed through the lens from any point along a line perpendicular to the plane of the segment, will appear as a straight line coinciding with the chord of the segment of the curved line.

3,006,238

DIFFERENTIAL DENSITY X-RAY FILM ANALYZER

Howard C. Eberline, Santa Fe, N. Mex., assignor to Eberline Instrument Division of Reynolds Electrical and Engineering Co., Inc., Santa Fe, N. Mex.

Filed Aug. 31, 1956, Ser. No. 607,515
11 Claims. (Cl. 88—14)



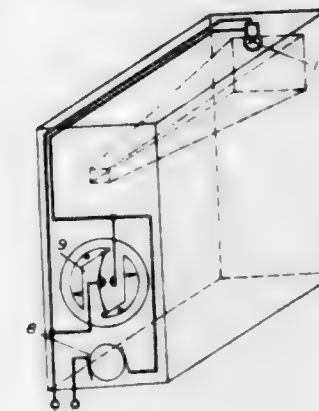
1. Apparatus for producing solid line, contour diagram representing portions of an image within selected specific optical density limits between a selected precise upper limit of density and a selected precise lower limit of density, said image having varying densities over a range encompassing said upper and lower limits, comprising means to progressively scan the image with a first beam of radiant energy, means to produce a signal in response to said first beam of radiant energy proportional to the density of the portion of the image being scanned, means responsive to said signal for selecting only portions of said signal which are representative of the densities of the image between said upper and lower limits, means to progressively scan a photosensitive element with a second beam of radiant energy, means responsive to said selected

portions of said signal to activate and extinguish said second beam of radiant energy, whereby solid line contours are produced by said second beam of radiant energy on said photosensitive element and accurately represent the said portions of the image of the selected specific density between the selected precise upper and lower limits and whereby a diagram representing information contained in said portions of the image having the selected specific density between the selected precise upper and the selected precise lower limits can be accurately obtained.

3,006,239

SPEED CONTROL AND SIGNAL IN MOTION PICTURE CAMERA

František Smolař, Modrany, Czechoslovakia, assignor to Meopta, národní podnik, Modrany, Czechoslovakia
Filed Sept. 5, 1957, Ser. No. 682,101
3 Claims. (Cl. 88—16)



1. In a motion picture camera having a housing, a view-finder, and an electric drive supplied with current from a source thereof, the combination of a centrifugally controlled contact governor connected with the drive of the camera, and a device for checking the maintenance of the frame frequency within a selected range, said device including a signalling means indicating whether the frame frequency is maintained within said selected range by producing visible signals in the field of view of said view-finder, said signalling means being connected to the source of current in parallel with the contacts of said governor, said signalling means being arranged inside the camera housing but outside the image field of said view-finder, the electric connection of said signalling means to said source being controlled by said contacts of said governor while said signalling means also functions as a regulating resistance for said governor.

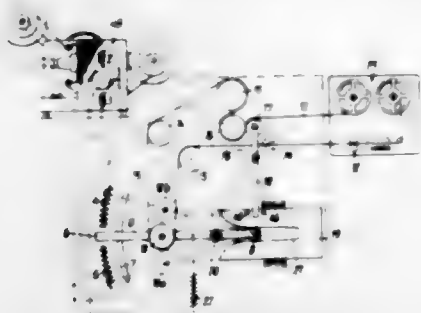
3,006,240

SYNCHRONIZING DEVICE FOR A FILM PROJECTOR AND A SOUND TAPE APPARATUS

Hermann Höller, Vienna, Austria, assignor to Alois Handler and Karl Vockenhuber, both of Vienna, Austria
Filed Aug. 3, 1959, Ser. No. 831,150
Claims priority, application Austria Aug. 12, 1958
6 Claims. (Cl. 88—16.2)

1. In combination with a film projector having a reversible, variable speed, film drive motor for advancing film longitudinally in opposite directions, and a sound playback apparatus having a recording tape advanceable longitudinally in opposite directions, a synchronizing apparatus for synchronizing the film projector and the playback apparatus comprising, means having means for sensing at least travel of said tape for automatically sensing in both directions of film and tape travel any differences between the length of film advanced and the corresponding length of tape normally spooled when the projector and playback apparatus are in synchronous

operation, means responsive to the last-mentioned means operably connected to said film drive motor comprising a compensating gear system for automatically variably operating the film drive motor to cause film advancement in synchronism with the tape and including means for automatically controllably applying a counter-torque to



the motor when operating in either of said directions and the film and tape travel are out of synchronism and for reversing the motor when the difference between said length of film advanced and said length of tape normally spooled exceeds a predetermined limit thereby to maintain the projector and playback apparatus in synchronism.

3,006,241 METHOD AND APPARATUS FOR OVERHEAD PROJECTION

Alvin M. Marks, 149-61 Powells Cove Blvd., White-stone, N.Y., and Mortimer M. Marks, 166-25 Crydus Lane, Beechhurst, N.Y.

Filed Feb. 1, 1957, Ser. No. 637,798
17 Claims. (Cl. 88-16.6)



1. The method of projecting a three-dimensional display for a viewer comprising providing a first screen having reflecting areas with open spaces therebetween with such dimensions as to reflect and transmit apparent whole images to a viewer, providing a second screen, arranging the screens such that the second screen is spaced rearwardly of the first screen such that a viewer located in front of the first screen can see apparent whole images when projected on the first screen and the second screen, projecting a first image from a point in front of the first screen on the first screen, and simultaneously projecting a second image from a point in front of said first screen, flattening the projected beam of said second image to decrease its cross-sectional height, directing said flattened beam in a path which will clear the margin of said first screen, and expanding the flattened beam to its original cross-sectional shape while directing the expanded beam upon said second screen.

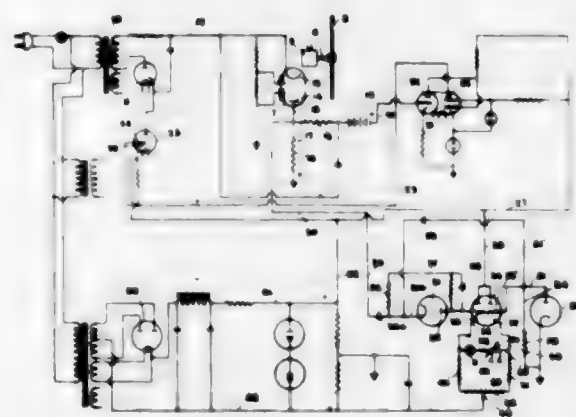
3,006,242 OPTICAL TEMPERATURE MEASURING APPARATUS

Vincent G. Shaw, Penn Township, Allegheny County, Pa., assignor to Latronics Corporation, a corporation of Pennsylvania

Filed Apr. 1, 1958, Ser. No. 725,550
12 Claims. (Cl. 88-22.5)

7. A temperature measuring device comprising a photo-sensitive element with an energizing circuit and an out-

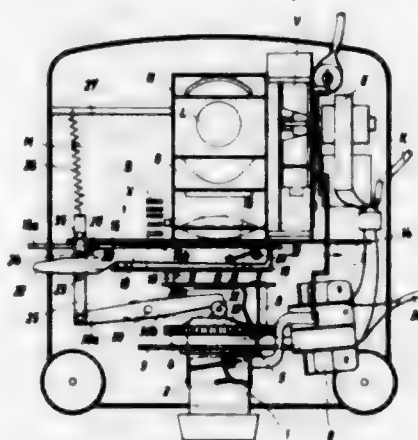
put circuit, a control circuit connected into the energizing and output circuits for establishing the minimum level of radiant energy to which the photo-sensitive element will respond and to reduce the sensitivity of said element as the overall radiant energy increases above said minimum level to thereby avoid fluctuation in the response of the light-sensitive element with changes in the overall light intensity to which it is exposed, means comprising an aperture and single light path from the aperture to the photo-sensitive element over which light passes from a light source to the photo-sensitive element, a filter in said single light path between the aperture and the photo-sensitive element having two contrasting filter areas for



passing separate wave bands of light therethrough and which are movable alternately across said light path and through one or the other of which the photo-sensitive element is constantly exposed to light passing through the aperture, means for moving said filter areas across said light path at a speed above the speed of response of said control circuit to variations in overall light energy above the minimum level to thereby generate pulsations of unequal intensity in the output circuit of said element due to the unequal radiant energy in the two wave bands of light to which the photo-sensitive element is alternately exposed, and means for detecting and indicating the difference between the intensities of the alternating pulsations.

3,006,243 SLIDE PROJECTOR

Erich Zillmer, Saarbrückener Strasse 263,
Braunschweig-Lehndorf, Germany
Filed Apr. 24, 1959, Ser. No. 808,762
Claims priority, application Germany Apr. 28, 1958
8 Claims. (Cl. 88-28)

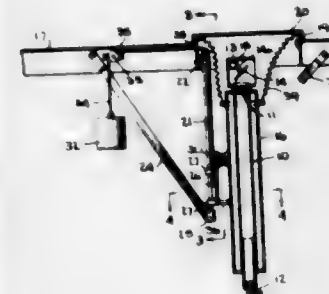


1. In a slide projector having a housing, a guide tube carried by said housing, a projector lens mounted in said guide tube so as to be rotatable and axially slidable therein and to be focused thereby, a lamp housing having a projector lamp and a light aperture being in axial alignment with said guide tube, a slide magazine adapted to hold a plurality of slides and to be moved parallel to the

optical axis of the lens, a movable slide carrier for engaging one slide at a time in the magazine, moving the slide out of the magazine and in front of said light aperture of said lamp housing and for returning said slide into said magazine and an actuating mechanism for actuating said slide carrier and moving said magazine in predetermined sequence comprising in combination an electric motor, a driving member rotatable by said motor, a driving wheel rotatably mounted on and carried by said guide tube and driven by said driving member, a control disc mounted on said driving wheel so as to form a rotatable unit therewith, a crank pin on said unit engageable with said slide carrier for reciprocating the latter when said unit is rotated, a cam secured to said unit, a control lever pivoted intermediate its ends and having one end in the path of said cam, an advancing member movable parallel to said magazine and pivotally connected to the other end of the control lever for movement thereby under the control of the cam, and coupling means actuated by said slide carrier to connect the advancing member with said magazine when said slide carrier has moved a slide from said light aperture into said magazine and to disconnect the same when said slide carrier moves from said magazine to said light aperture.

3,006,244 OPTICAL TELESCOPE MOUNT

William B. Farrington, Upper Montclair, N.J., assignor to Farrington Engineering Corporation, Upper Montclair, N.J., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,127
9 Claims. (Cl. 88-32)



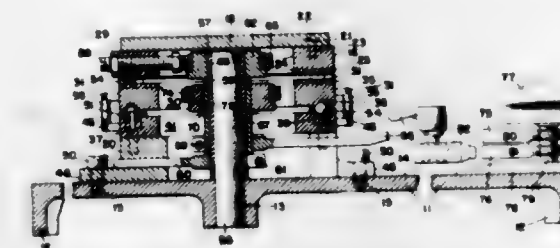
1. In a telescope mount of the class described for moving a telescope tube from an inactive position at one side of a protective partition to an active position projecting through an opening in said partition, an assembly including a casing carrying said telescope tube for rotary displacement about its central longitudinal axis, elevating means supporting said assembly for linear displacement of said tube to and from active position relatively to said partition, and means supporting said assembly for pivotal movement of said tube to vary the inclination thereof.

3,006,245 PANTOGRAPH TYPE MICRO-POSITIONER

Manuel M. Bycer, Upper Darby, and Frederick W. Kulicke, Jr., Philadelphia, Pa., assignors to Kulicke & Soffa Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 28, 1960, Ser. No. 17,883
8 Claims. (Cl. 88-40)

1. A multi-stage micropositioner comprising, a base; a first-stage slider, having a vertical internal bore, mounted on said base and capable only of reciprocal horizontal motion with respect thereto along a first linear axis; a second-stage slider, having a vertical internal bore, mounted on said first-stage slider and capable only of reciprocal horizontal motion with respect thereto along a second linear axis angularly displaced from said first linear axis; a first-stage eccentric cam mounted horizontally within the bore

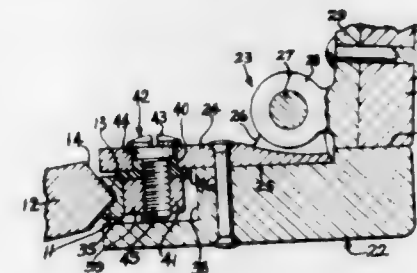
of said first stage slider; linking means connecting the edge of said cam and the peripheral wall of said bore; a second-stage eccentric cam mounted horizontally within the bore of said second-stage slider; linking means connecting the edge of said second-stage cam and the peripheral wall of



said bore; pantograph operating means remote from said slider; and rotating proportional means connected to said pantograph means and said eccentric cams for transmitting the motion of said pantograph to said cams and, in turn, to said sliders.

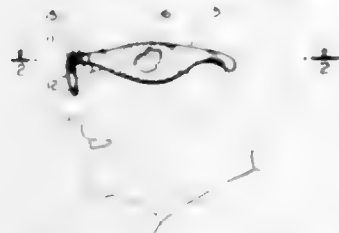
3,006,246 OPHTHALMIC MOUNTINGS

Norman S. Di Lorenzo, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 19, 1958, Ser. No. 743,097
3 Claims. (Cl. 88-41)



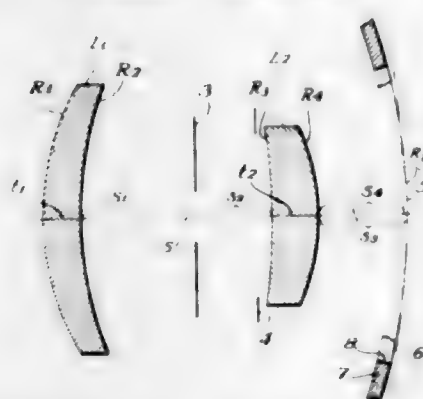
1. In a lens supporting structure for an ophthalmic mounting, the combination of a pair of spaced metallic eyewires, an outwardly disposed metallic lug on each of said eyewires having a threaded opening therein, a bridge connecting said eyewires together, detachable metallic brow parts each having a longitudinally channelled portion fitted over a respective one of the upper sections of said eyewires, said detachable parts each having a recess opening into said channelled portion for receiving the lug of a respective one of said eyewires and being of a width considerably greater than the thickness of said lug, one of the side walls of each of said recesses having an opening therethrough and means for connecting each of said detachable brow parts to a respective one of said eyewires, said connecting means comprising a screw having an enlarged head overlying its respective opening in said detachable brow parts, a reduced shouldered portion adjoining said head closely fitted in and being of a controlled length such as to extend only partially through the opening in a respective one of said detachable brow parts, a further reduced threaded shank extending from said shouldered portion and threaded into the lug of a respective eyewire, and an initially cylindrically shaped bushing of compressible plastic material in surrounding relation with said shank between said lug and shouldered portion, the material of said bushing filling the remaining portion of said opening, said bushing being of a controlled initial length such as to be outwardly flanged adjacent said lug in response to the tightening of the screw to form a resilient cushion between said metallic lug and said side wall of the metallic detachable brow part having the opening therethrough.

3,006,247
EYEGLASS ASSEMBLY WITH PAD-BEARING BOWS
 Jeannette Davis, 1211 Selby Ave., Los Angeles, Calif.
 Filed Aug. 17, 1959, Ser. No. 834,006
 4 Claims. (Cl. 88-52)



1. Eyeglasses comprising a frame containing lenses, two bows attached to said frame for contacting the temples of the wearer, each of said bows bearing at least one pad on its inner side having an extended surface of frictional coefficient against normal human skin of at least 0.35 and thus presenting a contact surface for the temples of the wearer of sufficient magnitude to prevent by frictional resistance any rotation of said frames about said pads, whereby the said eyeglasses may be worn with said frame out of contact with the nose of the wearer.

3,006,248
WIDE ANGLE OBJECTIVE
 Walter R. Linke, Chicago, and Irving C. Sandback, Morton Grove, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
 Filed Sept. 12, 1958, Ser. No. 760,697
 2 Claims. (Cl. 88-57)

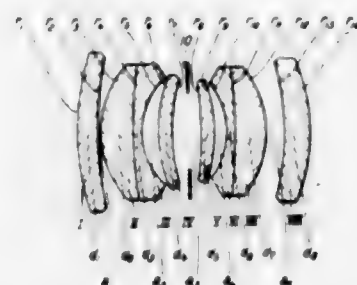


1. In a camera, a stop, a cylindrical film plane, and an objective including a front component composed of a simple positive meniscus lens in front of and concave to the stop and a rear component composed of a simple positive meniscus lens behind and concave to the stop, and being further characterized in that the objective conforms substantially to the following table in which dimensions are in terms of inches, L_1 and L_2 designate the lenses, and proceeding from front to rear R_1 to R_4 the respective radii of curvature of the surfaces, R_F the radius of curvature of the film plane, t_1 and t_2 the axial thicknesses, s the axial separation, s_1 and s_2 the respective axial separations of the front lens and the stop and the rear lens and the stop, s_3 the axial distance between the rear lens and the film plane, and n_D the respective indices for the D line and V the Abbe dispersion numbers:

[Equivalent focal length=1.833. Back focal length=1.465. $R_F=9.000$

L_1	$R_1=.934$ $R_2=1.392$	$t_1=.140$ $s=.772$ $s_1=.417$ $s_2=.325$	$n_D=1.523$	$V=58.6$
L_2	$R_3=-2.280$ $R_4=-.797$	$t_2=.160$ $s_3=1.454$	$n_D=1.523$	$V=58.6$

3,006,249
PHOTOGRAPHIC OBJECTIVE
 Walter Mandler, Midland, Ontario, Canada, assignor to Ernst Leitz Canada Limited, Midland, Ontario, Canada
 Filed Sept. 30, 1958, Ser. No. 764,339
 Claims priority, application Germany Oct. 1, 1957
 3 Claims. (Cl. 88-57)



1. A high speed photographic objective comprising two groups of elements which groups are arranged on opposite sides of a diaphragm and are substantially symmetrical with respect thereto, each group comprising four concavo-convex meniscal elements each of which faces the diaphragm with its concave side, the element nearest the diaphragm and the element farthest from the diaphragm each being a positive element and the two remaining elements being cemented together and forming a composite negative element, said photographic objective being constructed substantially in accordance with the following data:

[$f=100$ mm.— $F:2$]

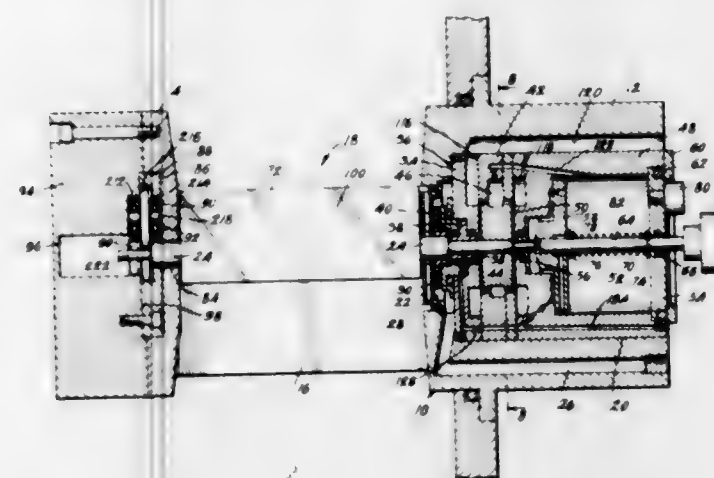
	Radial	Thick- nesses and Axial Separa- tions	N_D	V
I.....	$r_1=+87.0$ $r_2=+121.4$	$d_1=6.9$ $a_1=0.6$	1.7440	44.9
II.....	$r_3=+33.1$ $r_4=+147.9$	$d_2=10.4$ $d_3=3.0$	1.7440	44.9
III.....	$r_5=+24.2$ $r_6=+49.4$	$a_2=5.4$ $d_4=4.4$	1.6668	33.09
IV.....	$r_7=+60.7$ $r_8=-117.9$	$a_3=10.0$ $d_5=4.4$	1.7200	50.31
V.....	$r_9=-82.2$ $r_{10}=-26.2$	$a_4=3.9$ $d_6=3.0$	1.7200	50.31
VI.....	$r_{11}=-182.1$ $r_{12}=-34.4$	$d_7=10.4$ $a_5=6.0$	1.6989	30.05
VII.....	$r_{13}=-84.3$ $r_{14}=-61.9$	$d_8=8.9$	1.7440	44.9

wherein r_1, r_2, \dots represent the radii of the individual surfaces of the elements, d_1, d_2, \dots represent the thicknesses of the elements, a_1, a_2, \dots represent the axial separations between the elements, N_D is the index of refraction for the sodium D line, and V is the Abbe number.

3,006,250
SHAFT BEARING ASSEMBLY AND SEALING SYSTEM FOR HIGH SPEED TURBINES
 Willard E. Buck, Boulder, Colo., assignor to Beckman & Whitley, Inc., San Carlos, Calif., a corporation of California
 Filed June 17, 1960, Ser. No. 36,938
 16 Claims. (Cl. 88-74)

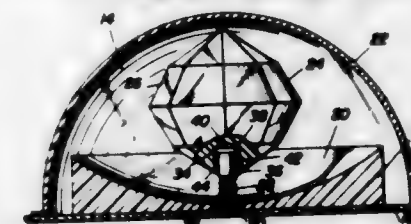
1. A gas-driven turbine of a type particularly suited for use in turning a mirror in a high-speed camera oper-

ated at a negative pressure which comprises, a housing having a longitudinal bore and a side-opening mirror cavity communicating with said bore and separating said housing into right and left end portions, right and left shaft bearing assemblies mounted respectively in the right and left end portions of the housing providing journals for a shaft mounted for rotation therein, a mirror shaft journaled for rotation within the right and left shaft bearing assemblies and including at least one polished mirror-forming surface visible through the mirror cavity, a turbine rotor having a bladed periphery attached to the mirror shaft for rotation therewith inside the right end portion of the housing in surrounding relation to the turbine rotor and cooperating therewith to define a gas intake passage open at one end to receive gas from a high pressure source thereof and deliver it substantially tangentially to the bladed periphery, said turbine stator also cooperating with the right shaft bearing assembly to define therewith at least one exhaust passage connected to receive exhaust gases from the turbine rotor and deliver them to the atmosphere, means for delivering lubricant under pressure to at least the right shaft bearing assembly of the right and left shaft bearing assemblies, said lubricant cooperating with the right shaft bearing assembly and the mirror shaft to define a vacuum seal located between the exhaust passage and mirror cavity that effectively prevents the flow of gas therebetween, flinger means attached to the mirror



shaft for rotation therewith in at least the right end portion of the housing between the right shaft bearing assembly and the mirror cavity, said flinger means being adapted to receive lubricant escaping from the bearing assembly along the mirror shaft in the direction of the mirror cavity and direct it centrifugally into the wall of the bore, cover-forming means attached within the bore between each flinger means and the mirror cavity, said cover-forming means including a central opening adapted to loosely receive the mirror shaft and at least one passage connected to receive gas from within the mirror cavity at a point displaced radially from the mirror shaft and deliver it to said central opening, and vacuum conduit-forming means opening onto the periphery of each flinger means between the adjacent shaft bearing assembly and cover-forming means, said vacuum conduit-forming means being adapted upon connection to a negative pressure source to withdraw lubricant from the housing before it enters the mirror cavity and also to suck gas from the mirror cavity into the passage in the cover-forming means and along the mirror shaft in counterflow relation to any lubricant moving along said shaft in the opposite direction that has passed the flinger means thus effectively preventing said escaping lubricant from fogging the mirror.

3,006,251
REFLECTING SIGNAL FOR AIRCRAFT
 Daniel R. Wells, Washington, N.J.
 (Rte. 1, Hackettstown, N.J.)
 Filed July 21, 1958, Ser. No. 749,815
 9 Claims. (Cl. 88-81)



1. A reflecting signal for an aircraft to facilitate detection of the aircraft while in flight and exposed to the sun rays, said reflecting signal comprising a polyhedron having a plurality of facets with light reflective surfaces to reflect the sun rays, a swivel mounting said polyhedron on a part of the aircraft for rotational movement and a spring connected with the swivel, a mounting base attached to one end of said spring, means securing the other end of said spring to said reflective device whereby said reflective device shakes in response to vibrations of the aircraft, and a mirror located between said base and said light reflecting device so that at least some of the light rays reflected from said device impinge on the surface of said mirror and are directed outwardly from the aircraft in many directions.

3,006,252
MIRROR
 Raimund Kacowski, 443 St. Patrick St. W., Magog, Quebec, Canada
 Filed June 8, 1959, Ser. No. 818,850
 2 Claims. (Cl. 88-85)



1. A reflecting mirror comprising a generally concavo-convex, transparent inner disk having a silver coating on a portion of its convex side for providing a magnifying mirror, a flat, transparent outer disk fixedly superimposed on the marginal portion of the concave side of said inner disk and having a silver coating on a portion of its back corresponding to and aligned with the uncoated portion of the inner disk and providing a plane mirror, the uncoated portion of said flat disk being aligned with and corresponding to the coated portion of the inner disk and being clear for exposing the magnifying mirror, and a frame for the disks.

3,006,253
AIRCRAFT LOAD-RELEASE DEVICE
 Jean Charles Parot, Paris, France, assignor to Sud-Aviation, Societe Nationale de Constructions Aeronautiques, Paris, France, a French company
 Original application June 7, 1956, Ser. No. 589,931, now Patent No. 2,921,501, dated Jan. 19, 1960. Divided and this application Aug. 19, 1959, Ser. No. 841,916
 4 Claims. (Cl. 89-1.5)

1. In an aircraft having a fuselage and an opening formed in the bottom thereof, the combination with a pair of door panels forming a faired closure for said opening, both panels being free to move between closed and open positions and being provided with facing notches

along the edges thereof which are adjacent in said closed position, linkage means secured to fixed points of said fuselage and to said panels for guiding the movements of the latter between said closed and open positions, a load carrying member disposed in said fuselage above said opening, means to releasably attach a load to said member, said load carrying member being movable vertically between a retracted position in which said load lies within said fuselage and an extended position in which said load carrying member lies entirely outside of said fuselage, of a source of electric current, closure actuating means including a first electric motor to move said door panels between said closed and open positions thereof, extensible and retractable means to move said load carrying member between said retracted and extended positions thereof, the portion of said means passing through said opening in



said extended position accommodating said panel notches, a second electric motor for actuating said extensible and retractable means, switch means for connecting said first motor and said second motor to said source and for reversing the direction of running of said motor, and end-of-stroke abutment means on said closure actuating means and on said extensible and retractable means to operate said switch means so as to cause said second motor to move said load carrying member between said retracted and extended positions only when said first motor has moved said door panels into said open position thereof and to cause said first motor to move said door panels towards closed position when said load carrying member has been moved by said second motor into said retracted and said extended position.

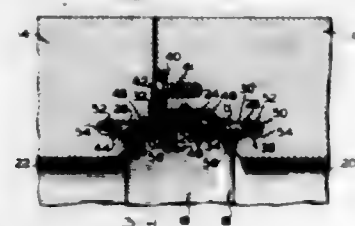
3,006,254

SELF-ENERGIZING BREECH SEAL FOR GUNS
Robert J. Thierry, Averill Park, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Filed Feb. 17, 1960, Ser. No. 9,402

4 Claims. (Cl. 89-26)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a gun having two separable members respectively provided with a bore extending thereinto from an end thereof for receiving high pressure gasses generated therein from the discharge of ammunition, said members being adapted for actuation to a closed relationship wherein the bores of similar diameter are coaxially aligned and the ends of the members are in abutment, a seal system for preventing the escape of the gases between the ends of the members when in closed relationship, said seal system including a ring seal energizable by the pressure of the gases in the bores, said ring seal being provided with a pair of sealing sections extending oppositely from a central section parallel to the longitudinal axis of said ring seal, a first seat formed in one of the members for receiving said central section of said ring seal and one of said sealing sections, means for retaining said ring seal in said first seat, a second seat

formed in the other one of the members for receiving the other one of said sealing sections when the members are in closed relationship, said first and second seats being formed so as to be open to the bores when the members are in closed relationship to permit action of the gases in the bores against the inside surfaces of said sealing sections, a sealing surface provided around the outside of each of said sealing sections, a sealing surface provided in each of said first and second seats so as to have contact with the associated ones of said sealing surfaces in said sealing sections when the members are in closed relationship, an annular pocket formed in each of said first and second seats, an orifice formed between each of said first and second seats and the inside surface of the associated one of said pockets for concentrating the pressure of the gases from the bores against said sealing sections when passing from the bores to said pockets and for delaying the impingement of the gases from the bores against the area of contact between said sealing surfaces on said sealing sections and said first and second seats, and structure formed in said first and second seats so as to coincide with the geometry of said ring seal for supporting said ring seal to prevent a yielding thereof by gas pressure when applied thereagainst.

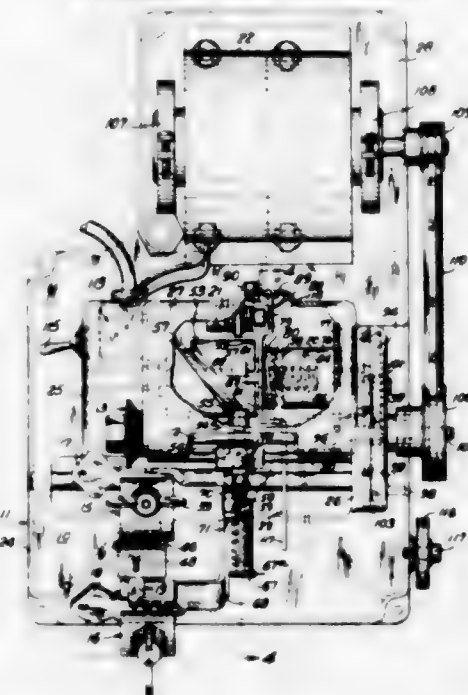
3,006,255

KEY CUTTING MACHINE

Sidney H. Horwitz, Cleveland, Ohio, assignor to The National Key Company, Cleveland, Ohio, a corporation of Ohio

Filed July 2, 1959, Ser. No. 824,606

5 Claims. (Cl. 90-13.05)



1. In a key cutting machine, a frame, a rotatable cutter supported by said frame, a carriage mounted for traversing movement relative to said cutter, workholder means on said carriage for holding a key blank to be operated on by said cutter, feeler and profile members co-operably effective between said frame and carriage for controlling cutter-engaging movement of said key blank, an electrically energizable motor for rotating said cutter, drive means effective between said motor and carriage for causing the traversing movement of the latter including a rotatable clutch means having a clutch member shiftable axially of the clutch rotation axis to engaged and disengaged positions, manual means comprising a lever extending transversely of said rotation axis and swingable through an engaging movement for shifting said clutch member to its engaged position to start said traversing movement, releasing means for shifting said clutch member to its disengaged position to terminate said traversing movement, said lever being swingable through a return movement by said releasing means, and switch means

controlling the motor energization and co-operably disposed relative to said lever to be actuatable in response to the engaging and return engagements of said lever for causing starting and stopping of said motor.

3,006,256

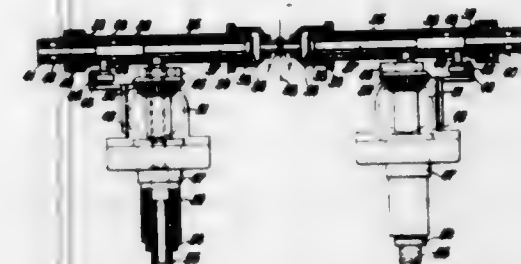
DEVICE FOR OPENING ONE END OF BAG TUBES TO FORM THE BAG BOTTOMS IN PAPER BAG MANUFACTURING MACHINES

Martin Rowe, am Bahnhof, Tecklenburg, Germany (% Patentanwalt Adolf O. Berglein, Bayerstrasse 35/37, Munich 15, Germany)

Filed Apr. 4, 1957, Ser. No. 650,796

Claims priority, application Germany Apr. 5, 1956

3 Claims. (Cl. 93-28)



1. A device for opening one end of a bag tube during the travelling of the bag tube in a path plane in paper bag manufacturing machines comprising at least two suction tubes on opposite sides of said bag tube path plane, a sucker on each of said tubes, at least two rotatable drive shafts arranged parallel to said bag tube path plane, and perpendicular to the direction of movement of said bag tube through said machine and disposed on opposite sides thereof, said suction tubes fixed on said rotatable drive shafts, a spring-urged valve disposed within each of said suction tubes in substantial axial alignment therewith, said valve disposed between the sucker end of said suction tube and the point of connection of said tubes with said drive shafts, said vacuum line extending from said suckers through said suction tubes and through an opening provided longitudinally of said rotatable drive shafts, said vacuum line continuously under vacuum influence, axially reciprocable spring-urged tappet shafts connected to said valve for opening and closing said valve in each of said suction tubes, said tappet shafts holding said valve in yieldable closed position, control means effecting simultaneous opening of said valves at the instant when the suckers are engageable with a paper tube in the path plane, said control means acting upon said tappet shafts to open said valves at said instant.

3,006,257

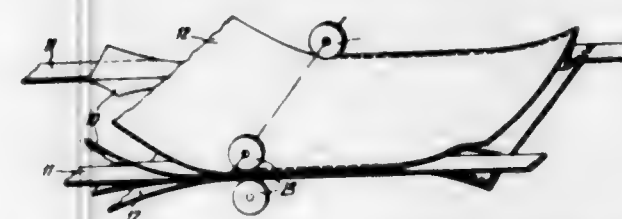
METHOD FOR PRODUCING BAGS AND THE LIKE CONTAINERS OF THERMO-WELDABLE MATERIAL THROUGH WELDING OF ELEMENTARY COMPONENT PARTS

Rene Orsini, Casablanca, Morocco, assignor to S. A. Plastus, Fribourg, Switzerland, a corporation of Switzerland

Filed Oct. 1, 1957, Ser. No. 687,543

Claims priority, application France Oct. 2, 1956

6 Claims. (Cl. 93-35)



1. A method for producing accordion-shaped bags and the like articles, comprising two flat walls and collapsible lateral walls connecting the latter with each other,

771 O.G.—81

consisting in laying between two films of compound material having a thermo-weldable surface facing the other film and adapted to form the first mentioned walls, a plurality of parallel sheaths of thermo-weldable material having two superposed walls, inserting inside said sheaths in registry with at least the central section thereof a narrow strip of non thermo-weldable material, welding simultaneously the films to the medial longitudinal sections of the cooperating sheath surfaces and cutting the films, sheaths and strips approximately along the medial longitudinal line of said medial sections and removing the insert strips.

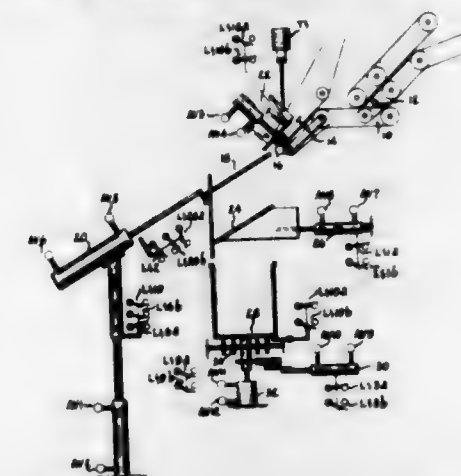
3,006,258

MATERIAL HANDLING SYSTEM

Theodore B. Jochem, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Dec. 29, 1958, Ser. No. 783,413

15 Claims. (Cl. 93-93)



1. In a control system for stacker for stacking into batches predetermined numbers of units of flexible material flowing in a lapped stream and for reversely stacking into bundles predetermined numbers of such batches and for delivering such bundles, program control means for said stacker comprising means carrying coded information indicative of the number of units to be stacked in each successive batch and the number of batches to be stacked in each bundle, information storage means, manual means for initiating operation of said storage means, means responsive to operation of said storage means for introducing therein from said carrying means information concerning a plurality of successive batches and for operating said stacker through a make ready cycle thereby to prepare said stacker for the receipt of units from said stream, means responsive to the units in said stream flowing into said stacker for operating the latter to form batches and bundles in accordance with the stored information and to deliver said bundles, and means responsive to the formation of each batch for operating said storage means in sequence with said stacker to store information concerning an additional batch thereby to maintain said storage means in readiness to control said stacker as the units for each succeeding batch flow therein.

3,006,259

PROPORTIONAL SPACE RECORDING DEVICES

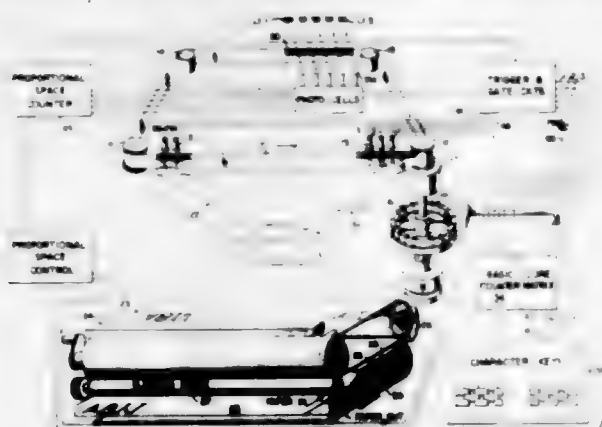
Robert T. Blakely, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 4, 1956, Ser. No. 589,107

5 Claims. (Cl. 95-4.5)

1. A matrix controlled device comprising an array of memory elements wherein each element is adapted to assume one of two stable conditions to represent information data in response to the application of electrical impulses of predetermined polarity and magnitude, said

elements being arranged in coordinate rows and columns with a plurality of conducting lines including one line for each row and one line for each column of said array and each memory element forming a junction device connected to the corresponding row and column lines, and having, in combination, means for applying impulses to said lines to cause a selected memory element to change from one to the other stable condition, said means being characterized by the provision of an electronic stepping switch, the stages of which are connected to each related column line at successive cycles, and including means for applying a data representing impulse to a selected one of said row lines, whereupon the impulses applied to both connections of a selected one of said memory elements are coincident and effective to cause a change in the condition of the selected element, a second stepping



device, and diagonal readout lines through said memory elements to restore the changed memory element back to its normal condition and create a differentially timed readout impulse, said diagonal lines being connected sequentially by said second stepping device, xerographic recording devices including a movable element bearing character shapes and means for projecting said shapes, said movable element being synchronized with said stepping device for selecting the various diagonal matrix lines related to the various character shapes, a series of light flashing sources arranged to be illuminated in sequence to step the recording images in sequence along a recorded line, and proportional spacing control means including character width space indicia on said moving element and cooperating with said illuminating devices to vary the time of flashing according to the differential widths of the characters selected.

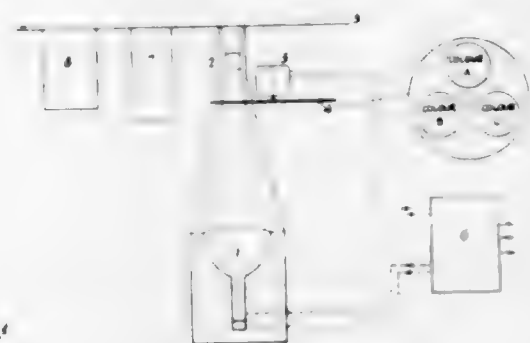
3,006,260 PRODUCTION OF PHOTOGRAPHIC COLOUR RECORDS

Robert Charles Morris Smith, Ilford, England, and Eustace Raymond Townley, Hillington, Glasgow, Scotland, assignors to Ilford Limited, Ilford, England, a British company

Filed Aug. 4, 1958, Ser. No. 752,928
Claims priority, application Great Britain Aug. 9, 1957
2 Claims. (Cl. 95-12)

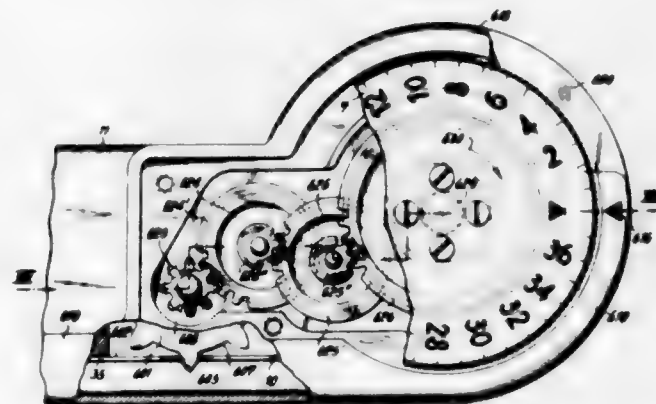
1. Apparatus for photographing, processing and projecting preselected signals appearing as traces on a cathode ray tube face, which comprises a cathode ray tube, a camera for photographing traces on the phosphor face of said tube on to photographic light-sensitive film held stationary for a pre-determined time interval in said camera, a processing unit for said film and a projection unit for said processed film, means for causing the film to traverse stepwise from said camera through said processing unit and said projection unit, a filter unit having a plurality of filter elements of different colour transmission characteristics, the said different colours being included in the response of the phosphor of the

cathode ray tube, means for bringing said filter elements one at a time into the path of light from said cathode ray tube to said camera, and means responsive to random electrical signals which are of intrinsically different character or which are electrically pre-coded to differentiate them, to feed signals of one character at a time to the cathode ray tube so that they are displayed as traces on the face of said tube, and simultaneously to move



the said filter unit to bring into active position a filter element pre-selected for the particular signals being so displayed, the said signals being thus displayed and the filter unit moved in respect of the signals of each different class received by said means, the said film being coated with at least two selectively colour-sensitive silver halide emulsion layers which may be processed to yield different colour images and the processing unit being adapted to process said film to yield said colour images.

3,006,261
FILM COUNTER FOR MAGAZINE CAMERA
Wilhelm Kopp, Wiesbaden-Sonnenberg, Hermann Ploss, Frankfurt am Main, and Hans Hell, Wiesbaden-Freudenberg, Germany, assignors to Adox Kamera-werk G.m.b.H., Wiesbaden-Biebrich, Germany
Filed May 1, 1957, Ser. No. 656,348
Claims priority, application Germany May 2, 1956
6 Claims. (Cl. 95-34)



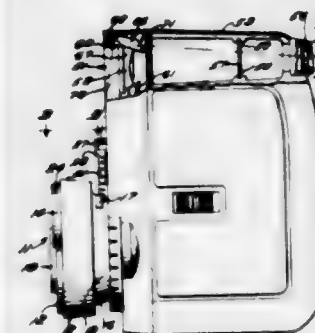
1. In a camera, in combination, a magazine having a top wall; a gear turnably supported in said magazine for cooperation with film perforations to be turned solely by movement of the film during operation of the camera, said gear being completely independent of film advancing mechanism of the camera; an indicator disc turnably carried by said magazine on said top wall thereof and at the exterior thereof for indicating the number of exposures which have been made; a shaft connected with said gear to be turned thereby and extending from said gear upwardly through the top wall of said magazine; a gear train located on said top wall and operatively connected with said shaft and disc for transmitting rotation of said shaft to said disc, said top wall being formed at its exterior with a recess defined at least in part by a light-trapping lip and the top end portion of said shaft, said gear train and said disc being located in said recess, said lip having an elevation at least as high as the upper-

most parts of said shaft, gear train and disc so that said shaft, gear train and disc do not protrude above said lip; and a camera housing into which the magazine is placed for exposure of the film therein, said camera housing having a top wall formed with an opening through which at least part of said disc is visible.

3,006,262 AUTOMATIC EXPOSURE CONTROL PHOTOGRAPHIC CAMERA

David M. MacMillin, Wilmette, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

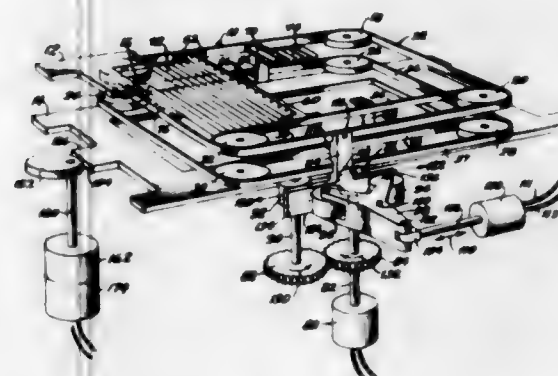
Filed May 29, 1959, Ser. No. 816,797
1 Claim. (Cl. 95-44)



In a camera, a casing, a viewfinder tunnel at the top of the casing, an eye-piece at the rear of the tunnel, a field lens having a beveled upper edge at the front of the tunnel, an annular mask between the field lens and the eye-piece and having a rectangular opening and a notch in the lower portion thereof, an inverting prism cemented to the upper edge of the field lens and having an upper forward reflecting surface and a bottom reflecting surface along with a rear beveled refracting surface for transmitting an image from the space in front of the front face of the casing to the eye-piece, indicator means visible through the notch, a turret rotatable on the casing and projecting in front of the front face thereof and having indicia facing the upper reflecting surface, an arcuate cover having windows therein projecting from the front of the casing toward one side of and above the turret, rotatable indicia bearing means below the cover, and a rotatable disc having indicia on the periphery mounted rotatably on the front of the casing toward the other side of and above the turret.

3,006,263
FOCAL PLANE SHUTTER
Eugene W. Elliott, Oak Park, and Elmer J. Bury, Wheaton, Ill., assignors, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware

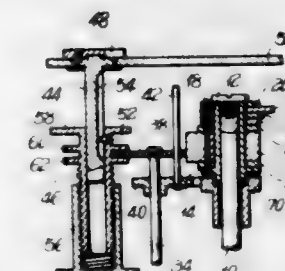
Filed July 31, 1957, Ser. No. 675,309
19 Claims. (Cl. 95-57)



1. An improved high speed focal plane shutter comprising in combination a pair of pleated expansible shut-

ter curtains, adapted to be transported across the exposure area of a photographic camera, a first transverse member secured to an edge of one shutter curtain, a second transverse member secured to an edge of the other shutter curtain, said first and second transverse members defining a slit therebetween, a constant speed driving motor, and selectively actuatable linking means including contra-rotating friction drive roller means, drive band means, and selectively operable clutch means for selectively engaging said drive band means with either one of said friction drive roller means for coupling said driving motor to said pair of pleated expansible shutter curtains for causing each of said curtains to be driven across the exposure area at a constant speed and in a desired direction.

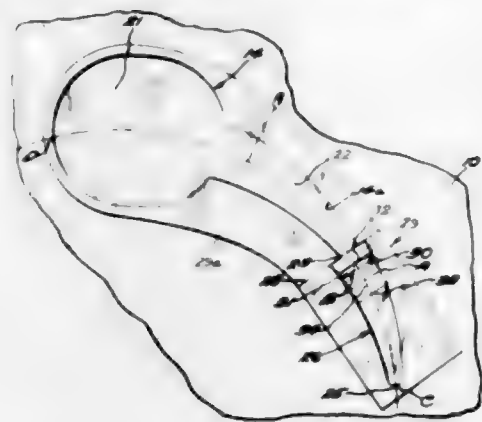
3,006,264
EXPOSURE REGULATOR FOR A FOCAL PLANE
SHUTTER CAMERA
Keiji Koda, Tokyo, Japan, assignor to Kabushiki Kaisha Aires Shashinki Selsakusho, Tokyo, Japan
Filed Jan. 27, 1959, Ser. No. 789,306
4 Claims. (Cl. 95-57)



1. In a focal plane shutter camera comprising a first movable curtain and a second movable curtain and means for moving said curtain successively across the shutter aperture with appropriate time delay so as to constitute a shutter slot between the rear edge of said first curtain and the front edge of said second curtain, a first shaft for receiving said first curtain rolled up thereon, a second shaft for receiving said second curtain rolled up thereon, said shafts mounted in parallel relationship so as to be turnable about their respective axis; a cam mounted on said first shaft for rotation therewith, said cam having a continuously varying contour in the direction of length thereof, said cam having its maximum diameter adjacent one end thereof and its minimum diameter adjacent the other end thereof, a pawl, means mounting said pawl opposite the periphery of said cam so that said pawl is turnable about an axis which is parallel to the axis of said first shaft and so that said pawl is adapted to be actuated by said cam and so that said pawl is movable in the direction of its axis so as to vary the time when it is actuated by said cam, means for moving said pawl in the direction of its axis, said means for moving said pawl axially comprising a dial shaft, a dial mounted upon said dial shaft, means mounting said dial shaft so that it is parallel to said first shaft and to the axis of said pawl and is turnable about the axis of said dial shaft but is non-slidable in the direction of the axis thereof, an externally threaded member, means mounting said externally threaded member axially slidably upon said dial shaft, an internally threaded member, means fixably mounting said internally threaded member relative to the movable members with said externally threaded member received within said internally threaded member, and a pair of axially spaced circumferential flanges on the periphery of said externally threaded member, said pawl being turnably received between said flanges, said flanges being thereby axially slidable in linear relation to the turning of said dial so as to move said pawl also in linear relation to the turning of said dial and means coupling said pawl and said second shaft for actuating said second shaft when said pawl is actuated.

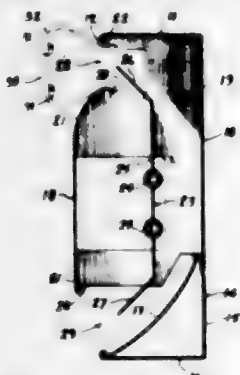
3,006,265
EXPOSURE CONTROL WITH DIFFRACTION
COMPENSATION
 Mervin W. La Rue, Jr., Barrington, Ill., assignor to
 Bell & Howell Company, Chicago, Ill., a corporation
 of Illinois

Filed Aug. 7, 1959, Ser. No. 832,198
 3 Claims. (Cl. 95-64)



1. An exposure control mechanism for a photographic camera comprising at least one iris blade having an elongated segmental aperture formed therein operable to define a diaphragm opening, a first segment being defined by edge portions of said blade converging toward a neck, a second segment being defined by edge portions of said blade converging to a vertex from said neck, the greatest minor axis of said second segment being twice as great as the minor axis of said first segment at said neck, the rates of convergence of the edge portions of said blade defining said first and said second segments being equal, and a light transmission filter effective to block the transmission of 50% of the light therethrough which strikes said filter being mounted on said blade and covering said second segment.

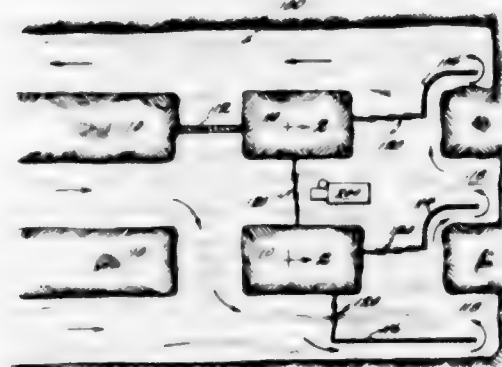
3,006,266
BASEBOARD HEATER
 Duane L. Ripley, Pittsburgh, Pa., assignor to Edwin L.
 Wiegand Company, Pittsburgh, Pa.
 Filed Aug. 18, 1959, Ser. No. 834,569
 1 Claim. (Cl. 98-40)



A baseboard heater, comprising an elongated back panel adapted to be disposed along the baseboard area of a room, said back panel having an upper overhanging wall extending outwardly therefrom and terminating in a rolled lip, an elongated front panel, bracket means for holding said front panel spaced forwardly of said back panel, the upper margin of said front panel terminating in a rolled lip which is parallel to but spaced from the lip of said back panel, said lips defining therebetween an outlet for heated air, and a grille overlying and protecting said outlet, said grille comprising a plurality of spaced wires extending lengthwise of said outlet and a plurality of U-shaped wires each having its bight connected to and extending cross-wise of said spaced wires, the legs of said U-shaped wires providing spring fingers

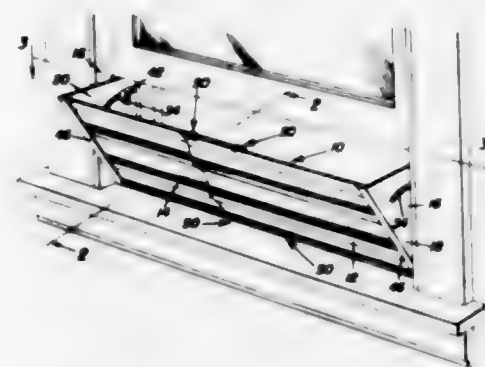
which are contracted to enter the opening between said spaced lips and thereafter permitted to expand into gripping engagement with said lips.

3,006,267
MINE FLY PAD
 Irvin Hargis, P.O. Box 289, Pleville, W. Va.
 Filed Dec. 3, 1959, Ser. No. 857,058
 1 Claim. (Cl. 98-50)



A flexible brattice member assembly for mines comprising: suspension means and at least three brattice member sections depending therefrom, vertical edge portions of respective sections depending in stepped and progressive overlapping relation to each other, each of said sections being constructed of plural layers of heavy brattice cloth, said layers of cloth being secured firmly in configured relation by multiple rows of stitching, the multiple rows of stitching for said sections being disposed on edge portions thereof, and plural stitching for said sections which is intermediate of the respective edge portions and horizontal to top and bottom of the brattice member sections, defining reinforced quilting areas within the respective sections.

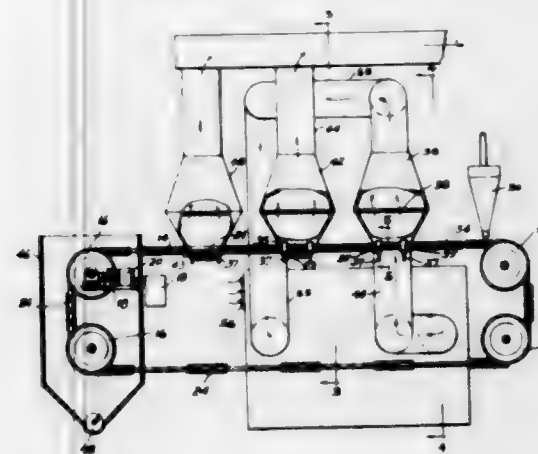
3,006,268
WINDOW VENTILATOR
 Paul F. Du Bois III, 702 Summit Ave., Westfield, N.J.
 Filed Jan. 7, 1959, Ser. No. 785,363
 3 Claims. (Cl. 98-99.4)



1. A widow ventilator of the extensible type including partially overlapped, elongated and longitudinally aligned panels adapted to extend across and cover the lower portion of a window opening, means connected with the remote ends of said panels adapted to removably mount the remote ends of said panels between the vertical side edges of a window opening, means securing said panels together against lateral movement away from each other and for longitudinal sliding movement relative to each other, said securing means comprising generally U-shaped clips carried by the upper and lower edges of at least one of said panels, each of said clips having an offset U-shaped portion slidably receiving therein the corresponding overlapped marginal edge portion of the other panel.

3,006,269
RICE PROCESSING MACHINE
 George V. Bardet, Berkeley, Calif., and Robert C. Glesse,
 Bettendorf, Iowa, assignors to M.J.B. Co., a corpora-
 tion of Delaware

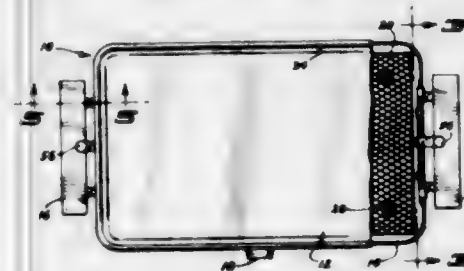
Filed Jan. 12, 1959, Ser. No. 786,141
 1 Claim. (Cl. 99-237)



In a machine for processing brown rice, a processing line comprising a pair of endless chains, a plurality of trays having perforated bottoms suspended between said chains and carried thereby, said trays passing through a series of work stations evenly spaced along the path of travel of said chains, means for driving said chains simultaneously whereby the chains advance a tray from one work station to the next, a loading station located on said path of travel wherein a measured quantity of rice is placed on each tray as it stops thereunder, a heating station adjacent to said loading station, said heating station having means for blowing hot air upwardly through the rice at the heating station and having a chamber located over the means for blowing hot air, whereby rice will be blown from a tray and suspended within the chamber while hot air is blown through the tray and will drop back into the tray upon discontinuation of blowing air there-through, a cooling station adjacent to said heating station whereby cold air is drawn through said rice and a discharge station whereby rice is discharged from each successive tray as it passes by said station.

3,006,270
ELECTRIC GRILL WITH REMOVABLE
GRIDDLE
 Elwood M. Graham, Hopkins, Minn. (% The M. H.
 Graham Corp., 2900 Emerson Ave. S., Minneapolis 8,
 Minn.)

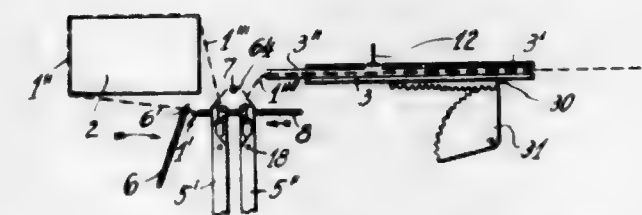
Filed Dec. 29, 1959, Ser. No. 862,544
 3 Claims. (Cl. 99-425)



1. In a cooking appliance, a removable cooking member having a depending peripheral flange, a bowl shaped body member supporting the cooking member inside of said flange, a carrying handle at each of two opposing body member ends and each having support means extending through the respective body ends to the inside thereof, each body member opposing end having a central transversely elongated opening extending below the depending flange, a latch bar transversely slidably mounted inside of each opposing body end and each having elon-

gated apertures for receiving the support means to limit the transverse travel of said latch bar, latch means on the latch bar, a latch operating handle outside the body at each opposing end and each having a support bar extending through the respective central opening and being respectively rigidly attached to a latch bar, catch means on the cooking member underside and being disposed transversely adjacent and immediately below the latch means, the operating handle being movable for transversely sliding the latch bar for engaging the latch means with the catch means to lock the members together, and the elongated apertures limiting the transverse travel for preventing engagement of the support bars with the respective body opening edges.

3,006,271
APPARATUS FOR THE MECHANICAL TYING
OF TWINE, CORD, AND THE LIKE
 Eugen Billiani, Immenstadt, Allgau, Germany, assignor
 to Hanfwerke Fussen-Immenstadt Aktiengesellschaft,
 Fussen, Allgau, Germany
 Filed Aug. 24, 1956, Ser. No. 606,146
 Claims priority, application Germany Jan. 14, 1956
 23 Claims. (Cl. 100-29)



1. Apparatus for the mechanical knotting of twine, cord, and the like, comprising a first tool, by which a string is unwound from a ball of string, a parcel support, a second pair of tools formed with normally aligned passages, said second tools being arranged in juxtaposed relationship on one side of said parcel support, and adapted to have the leading end of the string passed through said passages in the direction of the parcel support, said first and second tools being so constructed that the leading end of the string can be drawn by hand therefrom and moved over the parcel to be tied, a third tool which projects from the other side of the parcel support and is disposed below the parcel support for gripping the leading end of the string, the third tool thus passing the string end below the parcel support to a position in front of said second tools facing the parcel support, said first tool being movable out of the zone of said second tools, said second tools being adapted to move downwardly, at right angles to the string passing through them toward the third tool, while at substantially the same time carrying out rotational movements in opposite directions respectively through 270°, a fourth tool constructed and adapted to form a string disposed between said second tools at approximately their original level into two loops which are symmetrical with respect to the ball and the parcel, a fifth tool adapted to pass through the passages of said second tools and the loops formed thereby, for taking the leading string end over from the third tool and drawing it through the loops, said fourth tool and said second tools being adapted to release the string so that the string becomes entwined, a sixth tool adapted for movement over the entwined portion in such a manner that the string parts directly following the loops are received in a recess provided in the sixth tool and emerge at the top of the sixth tool, while the loops and the end of the string pulled through the loops remain below the sixth tool, said first tool by which the string is held in position being adapted to slide back and tension the string part leading to the ball of string so that by cooperation with the movement of the sixth tool the loops

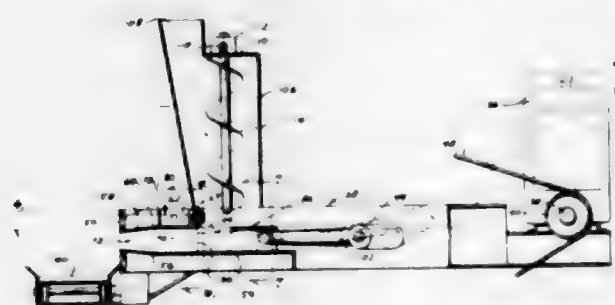
are drawn together to form narrow eyes and the section of the string connecting the two loops is folded over by the sixth tool whereby a double knot is formed, a cutting device adapted to cut off the string parts projecting from the knot, all of said tools and the cutting device being so constructed and adapted as to return automatically to their initial position on completion of each of their respective functions, and means for driving all said tools.

3,006,272

HAY CONDITIONING DEVICE

Dale W. Brady, Altoona, Iowa, assignor to Brady Manufacturing Corporation, Des Moines, Iowa, a corporation of Ohio

Filed Mar. 18, 1959, Ser. No. 800,144
6 Claims. (Cl. 100-93)



1. Apparatus for forming hay briquets comprising, in combination, a frame means; a hay inlet chute extending vertically above said frame means; means for delivering prechopped hay to said chute; means carried by said frame means defining a precompression chamber below said chute having opposed open ends and an at least partially open top wall; auger means in said chute for conveying hay delivered to said chute into said precompression chamber through said top wall; a series of compression chambers defined by a plurality of spaced vertically-disposed walls having rear cutting edges and at least two spaced horizontal walls extending the length of said vertical walls and secured along the rear portions thereof in fixed relation to said vertical walls, the forward portions of said horizontal walls being free to move relative to each other; screw means for adjusting the separation between the opposed forward portions of said horizontal walls, said series of compression chambers being horizontally contiguous with one open end of said precompression chamber; plunger means reciprocally movable within said precompression chamber from a forward position adjacent said compression chambers and closing said top wall to an aft position remote from said compression chambers and where said top wall is open; first cutter means supported by said frame means and having a cutting edge adjacent the forward end of said top wall and immediately to the rear of said compression chambers; a second cutter means carried by said plunger means and having a cutting edge at the top forward end of said plunger means; means to rotate said auger and reciprocate said plunger means whereby hay is fed to said precompression chamber, said plunger moves through said precompression chamber, and said second cutter means moves past said first cutter means severing hay entering said precompression chamber and forcing the same into said series of compression chambers.

3,006,273

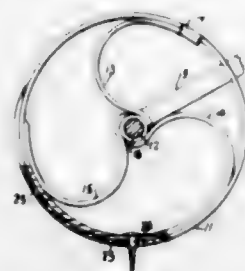
ADJUSTABLE ROTARY SPACER

Lawrence George Sommer, 1765 Edgewood Road, Redwood City, Calif.

Filed May 1, 1959, Ser. No. 810,380
3 Claims. (Cl. 101-114)

1. An adjustable rotary spacer comprising a segment of a coiled spring having its ends overlapping to form

the rim of a wheel, a hub for said wheel, a plurality of spring pressed extensible spokes for connecting said rim to said hub, there being a slot through one of said overlapping ends of said coiled spring segment and a plurality of slots through the other overlapped end of said coiled spring segment, means for selectively registering individual slots of said plurality of slots with said first



mentioned slot to vary the circumference of said rim and form an opening therethrough, means for mounting a container on the inside of said rim for dropping suitable material through said opening to form marks on a surface when said wheel is rolled thereover, and means connected to said hub for rolling said wheel over a surface.

3,006,274

LITHOGRAPHIC PRINTING METHOD

Raymond L. Oransky, Portland, Maine, and John R. Romig, Willoughby, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Jan. 15, 1959, Ser. No. 786,909
2 Claims. (Cl. 101-149.2)

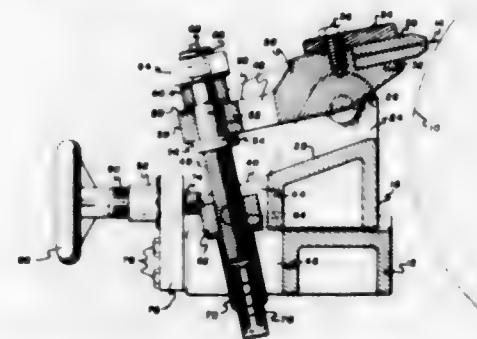
1. A method of restoring the erased image area of a coated paper base lithographic printing plate comprising: applying to said erased image area a restoring composition in the form of a solution of a salt selected from the group consisting of stannic chloride, cerous cerium nitrate, uranyl chloride, and the chlorides and nitrates of aluminum, zirconium, thorium, chromic chromium, cupric copper, zinc and ferric iron; allowing the solution so applied to said erased image area to dry thereby restoring said area for receipt of a new image; and then delineating a new image in the restored area of said plate.

3,006,275

MICROMETER DOCTOR BAR ASSEMBLY

Claude V. Allen, Richmond, Va., assignor to The Intaroto Machine Company, Inc., Richmond, Va., a corporation of Virginia

Filed May 13, 1960, Ser. No. 28,969
11 Claims. (Cl. 101-157)



1. In a rotary intaglio printing press, the combination of a printing cylinder, a doctor blade for wiping the cylinder mounted in a swivel bar, a support plate for said blade and swivel bar movable toward and away from said cylinder, pivot means between said support plate and swivel bar for permitting changing of the angle of the doctor blade with respect to the cylinder, and micrometer adjusting means for said support plate and swivel bar for accurately setting and resetting the position and angle of the doctor blade relative to the cylinder.

3,006,276

PAPER FEEDERS FOR PRESSES

Clovis F. Deslauriers, 310 W. 73rd St., New York, and Walter A. Shields, Jamaica, N.Y.; said Shields assignor to said Deslauriers

Filed Feb. 29, 1960, Ser. No. 11,774
12 Claims. (Cl. 101-279)



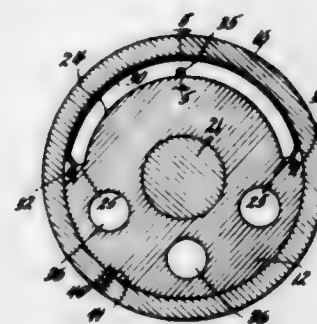
1. In a paper feeder for a press having a reciprocating bed and a rotating roller above the bed, a hopper having a bed supporting a stack of paper sheets at one end of the press bed, kicker bar slidably mounted below the plane of the hopper bed and extending transversely above said hopper bed, the opposite transverse edge portions of the kicker bar being recessed with one transverse edge portion recessed to a greater depth than the other recessed edge portion for feeding paper sheets of different thicknesses, means to reciprocate the kicker bar actuated by the reciprocation of the press bed, the kicker bar being removably mounted on the reciprocating means to position the proper recessed edge portion for engagement with the lowermost paper sheet on the hopper bed, and means to receive the lowermost paper sheet from the recessed edge portion and move said sheet to a position to be engaged by the press roller.

3,006,277

PLATE CYLINDERS FOR PRINTING PRESSES

Robert P. Willard, Durham, N.H., assignor to Kidder Press Company, Inc., Dover, N.H., a corporation of Delaware

Filed May 15, 1959, Ser. No. 813,397
5 Claims. (Cl. 101-378)



1. A printing plate cylinder system comprising a core member having journals at its ends for rotatably mounting it in its bearings in a printing press, said core member having an accurately ground cylindrical surface for approximately 180° of its periphery and centered on the axis of the core member, the remaining portion of said periphery being recessed from a cylindrical configuration, at least one readily removable and interchangeable rigid cylindrical printing sleeve surrounding said core member and having an internal cylindrical surface of the same curvature as said ground surface on said core member, expansible means disposed in the recessed portion of said core member and within said rigid sleeve, means for

expanding said means at will for exerting substantially unilateral outward pressure upon the inner surface of said sleeve to cause a portion of said inner surface to conform exactly to the ground surfaces on said core member and thus to be positioned exactly concentric with said core member, and printing means carried by the outer surface of said sleeve.

3,006,278

PRINTERS' FURNITURE

Edward M. Heinz, Sr., 136 W. John St., Hicksville, N.Y.

Filed Nov. 2, 1959, Ser. No. 850,125
6 Claims. (Cl. 101-402)



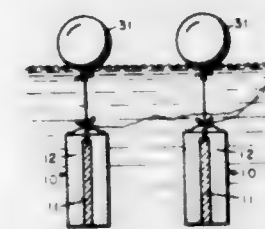
2. Printers' furniture, comprising an elongated outer member having a registering outer end surface, recessed sides, and two parallel bottom portions having opposed grooves, an elongated inner member comprising side portions sliding in said recessed sides of the outer member, a bottom sliding between said bottom portions of the outer member and having ridges extending within said grooves, and a registering outer end surface, and means locking said inner member in one of a plurality of positions relatively to said outer member.

3,006,279

OFFSHORE SEISMIC EXPLORATION

Robert W. Lawrence, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed June 6, 1957, Ser. No. 664,059
9 Claims. (Cl. 102-22)



1. An explosive device comprising at least one elongated container, at least one longitudinally extending core of a dynamite within each such container, characterized by a detonation rate of at least 1,000 and less than about 3,000 meters per second, and a material filling the remainder of said container, as a sheath around said core, and being capable of self-sustained decomposition in response to detonation of said core and also detonatable in response to said detonation but only to the extent that propagation of wave action from the resulting detonation takes place through a portion of said sheath charge, the said sheath material comprising a carbonaceous material and from 80 to 98 weight percent ammonium nitrate.

3,006,280

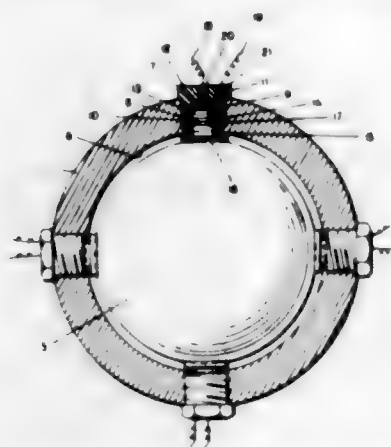
FUZE

Milton J. Rogers and Jerome B. Meyer, Baltimore, Md., assignors to Aircraft Armaments, Inc., Baltimore, Md., a corporation of Maryland

Filed Apr. 13, 1954, Ser. No. 422,796
7 Claims. (Cl. 102-70.2)

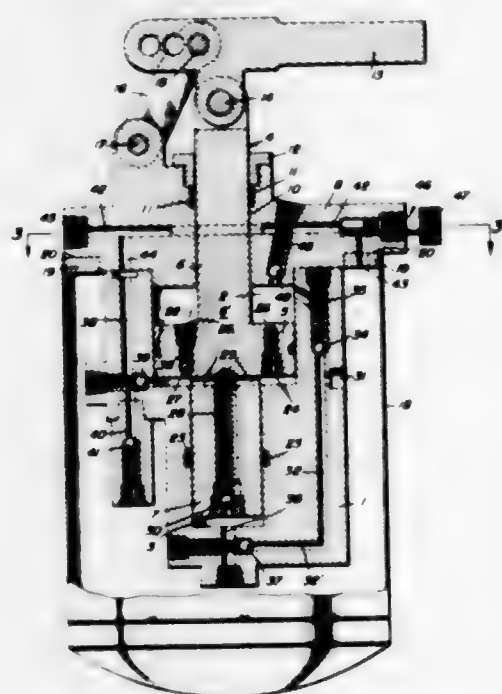
1. An acceleration sensitive fuze for generating electrical energy comprising, a housing having a generally spherically shaped cavity, a spherically shaped mass carried within said cavity, said mass having a diameter

less than the diameter of said cavity, said housing having a plurality of openings formed therein in communication with said cavity, piezoelectric crystal units carried by said housing within said openings and projecting into said cavity and engaging said mass to suspend the same within the cavity and out of contact with the housing wall, said



crystal units being responsive to the forces exerted thereon by said mass due to accelerations in any direction for generating electrical energy, and means electrically connecting with said crystal units and completing an external circuit conducting electrical energy generated from within said fuze.

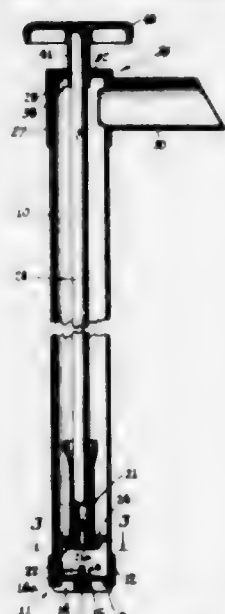
3,006,281
HYDRAULIC PUMP UNIT
John Joseph Delaney, 419 Luzerne Ave.,
West Pittston, Pa.
Filed July 8, 1960, Ser. No. 41,600
15 Claims. (Cl. 103-37)



1. In a fluid pump adapted to automatically change its displacement with changes in discharge pressure comprising, in combination, a fluid supply reservoir, a pump body formed with a piston chamber of selected diameter and a coaxial chamber of less diameter, a unitary multiple function piston comprising an enlarged median section reciprocable in the piston chamber and provided with upper and lower integral coaxial plunger extensions of less diameter, the upper extension being reciprocable wholly within the piston chamber and the lower extension being reciprocable in the said piston chamber and within the lower coaxial chamber; valve means embodied in the median piston section, adapted to be closed at low operating pump pressure and to be opened at a predetermined higher operating pressure; valve controlled fluid inlet means connected with the reservoir and com-

municating with the upper end of the piston chamber and with the lower end of the coaxial chamber of less diameter; a first valve-controlled discharge means connected with the upper end of the piston chamber and a second valve-controlled discharge means connected with the lower end of the piston chamber, and a valve-controlled axial duct within the body of the lower coaxial plunger extension communicating at one end with the lower end of the piston chamber and at the other end with the lower end of the chamber extension of less diameter.

3,006,282
ALL-PLASTIC HAND PUMP
Earl L. Sisson, Stratford, Conn., assignor to Beckson Manufacturing Co., Easton, Conn., a partnership
Filed Oct. 21, 1957, Ser. No. 691,193
9 Claims. (Cl. 103-153)

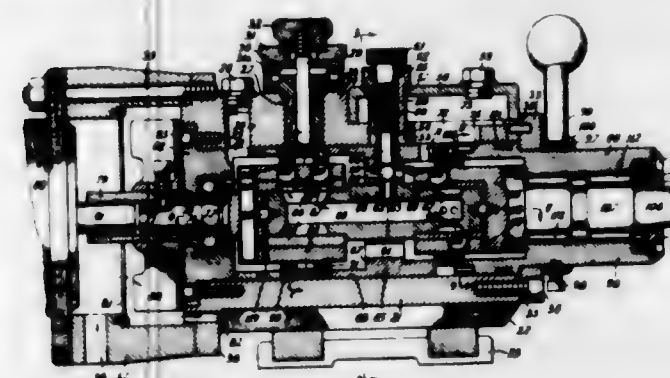


1. In a hand pump, a cylinder having a discharge opening at one end; a plunger movable in said cylinder in a path toward and away from said discharge opening, said plunger having one-way check valve means by which it impels fluid toward the discharge opening when the plunger is moved in the direction thereof; a hollow rigid plastic plunger rod connected to said plunger and extending therefrom inside the cylinder past the discharge opening thereof, said plunger rod having an extremity disposed exteriorly of the cylinder and provided with a handle by which pulling force may be exerted on the rod, thereby to move the plunger in a direction toward the said discharge opening for the purpose of forcing fluid from the cylinder out through the said opening; an end cap on the cylinder adjacent the said discharge opening thereof, through which the said plunger rod extends; and an annular means carried by said end cap and movable radially inward in response to hydraulic pressure within the cylinder, for slidably gripping with a force proportional to said hydraulic pressure the said plunger rod, thereby to increase the effective seal with said rod and minimize leakage of fluid from the cap past the rod, said means comprising a flexible bearing bushing carried by the said end cap and constituting a yieldable sleeve bearing for the said plunger rod.

3,006,283
HYDRAULIC TRANSDUCER
Felix Haar, East Bentleigh, near Melbourne, Victoria, Australia, assignor to Felix Haar, East Bentleigh, Albert Leslie Cohen, Sandringham, and Leslie Herbert Stanley Cohen, Moorabbin, all near Melbourne, Victoria, Australia
Filed Feb. 21, 1957, Ser. No. 641,667
5 Claims. (Cl. 103-161)

1. In a fluid transmission, a housing defining a reservoir chamber therein adapted to be filled with a hydraulic

fluid, a shaft journaled for rotation in said housing, a longitudinally extending core element supported within said chamber and being provided with both a longitudinally extending high pressure passageway therein and with a plurality of radially oriented and angularly spaced flow ports therethrough communicating with said passageway, a rotatably mounted member coaxially circumjacent said core element and being connected with said shaft so as to be rotated in enforced synchronism therewith relative to said core element and being provided with two axially spaced rows each comprising a plurality of radially oriented and angularly spaced cylinders disposed in pairs so that each pair at one end thereof is successively aligned with the respective flow ports for communication therewith upon relative rotation between said rotatable member and core element, each of said cylinders communicating at the other end thereof with said reservoir, a plurality of pistons respectively reciprocable within said cylinders for displacing fluid therefrom through certain of said flow ports and into said passageway upon relative rotation between said rotatable member and core element, a pair of cams respectively circumjacent said rows of cylinders for engagement with the pistons therein to effect reciprocation thereof upon relative rotation between said

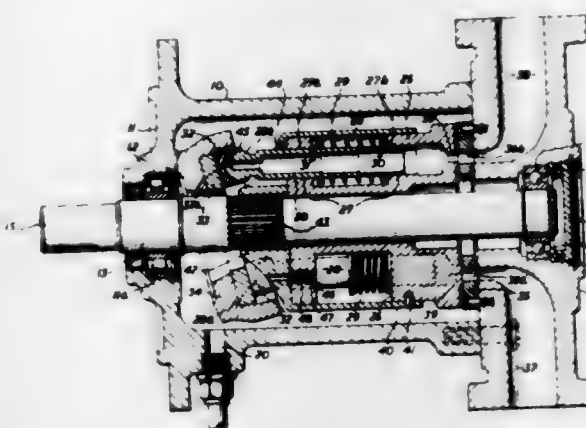


rotatable member and core element and being supported by said housing for selective angular adjustments with respect thereto and with respect to each other, an adjusting element connected with said cams for selectively changing the relative angular positions thereof between a first position of synchronous displacement of each of said pairs of pistons defining a maximum torque-transmitting position wherein the volume of fluid displaced into said passageway by said pistons is maximized and a second position of synchronous opposition defining a minimum torque-transmitting position wherein the volume of fluid displaced into said passageway by each of said pairs of pistons is minimized, said core element having a plurality of radially oriented and angularly spaced transfer grooves interposed between said flow ports and each being in continuous and open communication with said chamber for receiving hydraulic fluid therefrom, said pairs of cylinders being successively brought into alignment with said transfer grooves for being supplied with hydraulic fluid therefrom upon relative rotation between said rotatable member and core element, and release valve structure in communication with said passageway for permitting the escape of fluid therefrom whenever the fluid pressure therein exceeds a predetermined level.

3,006,284
SWASH-PLATE PUMP
Arnold Pitt, 5 Hillgarden Road, Weston, Ontario, Canada, and Tadeusz Badzich, 3344 Colwyn Road, Cleveland, Ohio
Filed Mar. 21, 1960, Ser. No. 16,502
9 Claims. (Cl. 103-162)

1. In a swash plate pump, a ring-shaped cylinder block having a plurality of bores, each bore being arranged

with its longitudinal axis extending in the same general direction as the longitudinal axis of the cylinder block, the cylinder block having an annular gallery which extends into the cylinder block from a peripheral surface of the cylinder block intermediate its ends, and which intersects each of the bores to divide each bore into two axially spaced portions, a piston within each bore and having a



sliding fit therein, the pistons each terminating within one of the bore portions at one end of the cylinder block for that bore portion to provide a working cylinder for the piston, and each extending through the other bore portion at the other end of the cylinder block, and a sleeve extending between the ends of the cylinder block in sealing relationship therewith for it to define with the gallery a closed annular space through which the pistons extend.

3,006,285
MEANS FOR MOVING CARS TO STORAGE STALLS
Glenn A. Diehl, Seattle, Wash., assignor to Rota Parking, Inc., Seattle, Wash., a corporation of Washington
Filed Oct. 13, 1958, Ser. No. 766,949
6 Claims. (Cl. 104-50)



1. A transfer vehicle for use in the mechanical parking of automobiles, comprising: a main framework having supporting wheels revolvably disposed at each end thereof, said wheels adapted to operatively engage trackage secured longitudinally of platforms on which automobiles are stored; power driven means for positioning automobile wheel engaging rollers on each of the front and rear tread surfaces and below the wheel axle, to move and stop the automobile as the transfer vehicle is moved with respect to the platform supporting the automobile; power driven means for positioning said rollers consisting of a vertical drive shaft driven through a self-locking gear drive by an electric motor; a circular plate fixedly secured to said shaft and having a drive pin opening disposed parallel to said shaft; a revolvable head disposed on the upper end of said shaft and having a driven pin adapted to coact with said drive pin opening to selectively couple said head to said shaft; remote control means for operating said drive pin; a horizontal roller disposed for swinging about said shaft to engage the tread portion of an automobile tire or to move said roller to a position parallel to the plane of said tire; said transfer vehicle adapted to move an automobile lengthwise of its supporting platform and electric current supply means for remotely controlling said roller positioning means and said drive means.

3,006,286

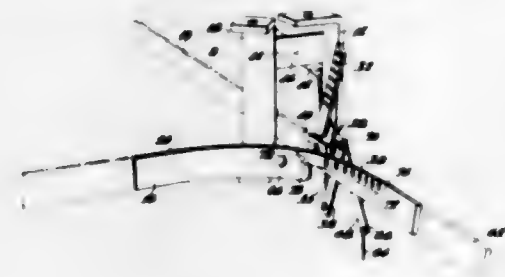
AMUSEMENT VEHICLE APPARATUS
Karl W. Bacon, Mountain View, and Edgar O. Morgan,
Palo Alto, Calif., assignors, by mesne assignments, to
Walt Disney Productions, a corporation of California
Filed May 22, 1959, Ser. No. 815,127
8 Claims. (Cl. 104-63)



1. In a vehicle apparatus of the type in which a vehicle is guidedly conducted along a path the combination comprising: a rail mounted on and extending along said path; a vehicle having a path-supported pair of rear wheels straddling said rail; a nosewheel assembly pivotally mounted in the front end of said vehicle and including tandem individually castered wheels to rollingly support the front end of said vehicle on top of a head of said rail, said assembly including a means for each of said castered wheels to limit the range within which said castered wheels can be displaced relative to the longitudinal centerline of said rail, the top of said rail having a surface to permit swivelling of said castered wheels to opposite sides of the longitudinal centerline of said rail; and a pair of rollers mounted on said assembly for contact with the opposite sides of said rail on axes of rotation offset longitudinally of said assembly from the pivotal axis of said assembly to dirigibly control said assembly for changes in direction corresponding to changes in direction of said rail.

3,006,287

AUTOMATIC TRACK SWITCH
Carl Oscar Schmidt, Jr., Wyoming, Ohio, assignor to The Cincinnati Butchers Supply Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 7, 1958, Ser. No. 733,598
2 Claims. (Cl. 104-100)



1. An automatic track switch for directing trolleys of an overhead conveyor, comprising in combination, a main track section and a spur track section spaced therefrom and disposed angularly to the main track section, a main switch point, means pivoting said main switch point to the main track section about an axis parallel to the horizontal and in position to be struck by a trolley and moved thereby in a vertical plane to an operative position in parallelism with said main track section from an initial inoperative position directly above and at an inclination thereto, a spur switch point, means pivoting said spur switch point to the spur track section about an axis parallel to the horizontal, said spur switch point having a free end to span the space between the track sections, the spur switch point being pivoted to the spur track section in such manner that in inoperative position the spur switch point is positioned directly above and at an inclination to the spur track section so as to be struck by an advancing trolley and moved thereby in a vertical plane about its pivot to an operative position coplanar with the track sections,

said switch points and track sections being of substantially equal widths thereby providing a trackway of substantially uniform width throughout, hanger means fixed to the track sections for suspending the latter from an overhead support, a bridge on the hanger means, a rocker element having opposite ends and an intermediate portion, means pivoting said intermediate portion of the rocker element upon the bridge for movement of the rocker element substantially parallel to said bridge, and a connecting rod depending from each end of the rocker element, said connecting rods having lower ends, each pivoted to a switch point for moving the switch points in opposite manners in correspondency with movements of the rocker element, the rocker element and connecting rod arrangement being such that when one switch point is in operative position, the other switch point has its pivoted end portion disposed directly over its associated track section and said other switch point is steeply inclined with respect to its associated track section so as to serve as an abutment against which a trolley is adapted to bear.

3,005,288

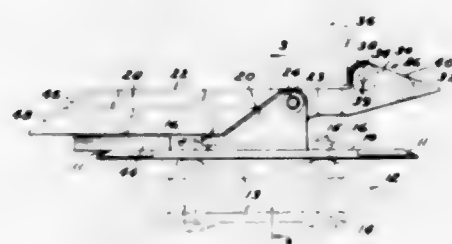
METHOD AND APPARATUS FOR TREATING SOILS BY ADDING CARBONIC ACID
Frank W. McGugin and Joel Hedgpeth, Fresno, Calif., assignors to CO₂ Land Healers, Inc., Fresno, Calif., a corporation of California
Filed Jan. 26, 1959, Ser. No. 789,177
16 Claims. (Cl. 47-58)



10. A method of amending alkaline soil containing calcium carbonate and base exchange compounds containing sodium ions comprising flowing irrigation water containing carbonic acid over the soil whereby the carbonic acid reacts with the calcium carbonate to release calcium ions which displace sodium ions in the base exchange compounds in the soil, and carrying the released sodium ions away in said irrigation water.

3,006,289

OVERLOAD RELEASING PUSHER DEVICE FOR FLOOR CONVEYORS
Loren T. Gaumer, Covina, Calif., assignor to Jervis B. Webb Company, Detroit, Mich., a corporation of Michigan
Filed May 10, 1957, Ser. No. 658,420
9 Claims. (Cl. 104-172)

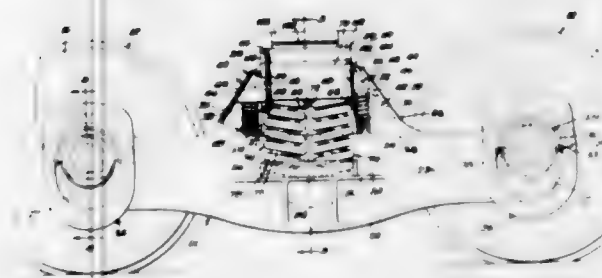


1. A conveyor carrier pusher device of the type having a pivotally mounted pusher member normally urged to a position for engaging a carrier drive member, characterized by said pusher device having a base portion including means for pivotally mounting said pusher member thereon on an axis transverse to the direction of conveyor travel for movement of said pusher member between driving and disengaged positions, said pusher member having a driving surface for engaging said carrier drive member, said driving surface being located rela-

tive to said pivotal axis so that the reaction force between said driving surface and said carrier driving member has a releasing component tending to produce pivoting of said pusher member driving surface to said disengaged position; said pusher member including an integral counter-weight portion, said counter-weight portion being located relative to said pivotal axis so as to exert a moment counteracting said releasing component and thereby establishing a normal driving force between said pusher member driving surface and said carrier drive member.

3,006,290

RAILWAY CAR TRUCK
Albert F. Seelig, Jr., St. Louis, Mo., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed June 23, 1958, Ser. No. 743,928
5 Claims. (Cl. 105-197)



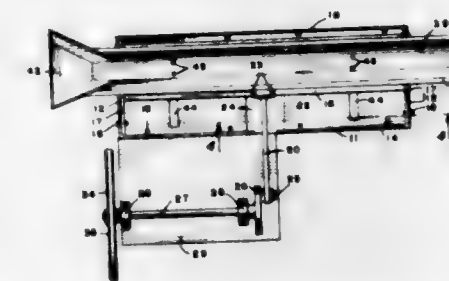
1. In a railway car truck, the combination of: a side frame having vertically extending members horizontally spaced from each other at their upper ends and defining an opening therebetween, one of said members having a wedge wall and horizontally spaced side walls connected to the wedge wall and defining therewith a pocket, a bolster spring-supported by the side frame in the opening and vertically movable between said members, said bolster having a recess aligned with and facing said pocket and defined by a pair of mutually facing substantially vertical lugs and by a third lug extending between and interconnecting said pair of lugs, a friction surface on said bolster in said recess, a friction shoe having a wedge wall, a friction wall, and spaced side walls, said shoe being partly disposed in the pocket with the wedge walls engaged and the side walls being engageable respectively, to laterally constrain said shoe relative to the side frame, said shoe also being partly disposed in said recess with said friction wall and friction surface frictionally engaged and said shoe side walls being engageable, respectively, with said substantially vertical lugs to limit lateral movement of the bolster relative to the shoe, said friction shoe also being spaced from and engageable along its lower edge with the third lug to limit upward movement of the bolster, and spring means disposed between said side frame and friction shoe for actuation thereof.

3,006,291

MACHINES FOR FORMING MATERIALS INTO BALLS
Tomas De Aquino Montez, 1541 Stone St., Pueblo, Colo.
Filed Apr. 27, 1959, Ser. No. 809,193
6 Claims. (Cl. 107-8)

1. A machine for forming balls from bulk material comprising: a supporting structure; a trough supporting element mounted on said supporting structure so as to be free to reciprocate transversally of the longitudinal axis of said trough; a longitudinally inclined trough supported by said trough supporting element; a rotary shaft mounted on said structure to one side of said trough and parallel to the longitudinal axis of the latter; a connecting means between said shaft and said trough acting to convert the rotary motion of said shaft into reciprocal movement of

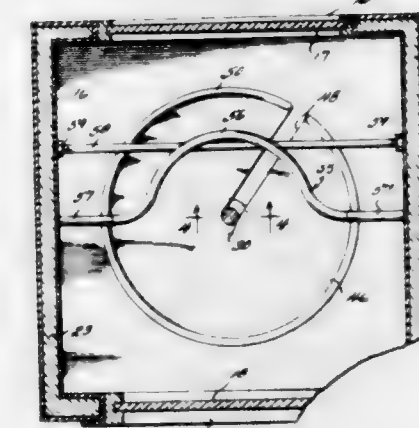
said trough transverse to the longitudinal axis of the latter so that material introduced at the higher extremity of



said trough will gravitate longitudinally down said trough on a zig-zag path under the influence of the reciprocal transverse movement of said trough.

3,006,292

PIE BAKING APPARATUS
Clair E. Hilgers, 6132 Saratoga Circle, Dallas, Tex.
Filed Dec. 23, 1960, Ser. No. 78,068
3 Claims. (Cl. 107-60)



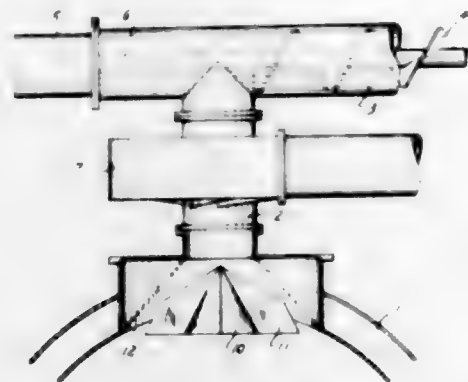
1. Pie baking apparatus comprising an insulated casing, a vertical shaft in said casing, motor means for rotating said shaft, a plurality of vertically adjustable collars on said shaft, a flat imperforate circular aluminum tray mounted on each collar, heating elements extending transversely across said casing above and below each tray, each heating element being comprised of a pair of opposite straight cold end sections and a central arcuate hot section, said arcuate section being co-axial with said circular trays and spaced substantially midway between the center and the rim of the trays, and a transverse supporting rod having its ends journaled in said casing positioned beneath each arcuate section.

3,006,293

FUEL FEEDER
Marius Van Uye Pieterse, The Hague, Netherlands, assignor to N.V. Stookwerk, Rijswijk, Netherlands
Filed Sept. 25, 1957, Ser. No. 686,086
4 Claims. (Cl. 110-104)

1. In an arrangement for feeding solid fuel to a furnace or the like, in combination, a combustion chamber having a top wall; a conduit in said top wall forming an elongated passage through said wall, said passage having an axis extending in a vertical direction, said conduit having an upper orifice, a lower orifice, and a wall portion of arcuate cross section intermediate said orifices; means for feeding solid fuel particles into said conduit at said upper orifice in such a manner that the same pass in straight axial direction as a continuous stream of solid fuel particles through said conduit from said upper orifice thereof downwardly past said wall portion of arcuate cross section, leaving said conduit through said lower orifice thereof; a supply of com-

pressed air; and means for admitting said compressed air to said conduit intermediate said orifices thereof into said continuous stream of solid fuel particles passing downwardly through said conduit in a substantially horizontal plane and in substantially tangential direction, all of said air admitting means being directed in the

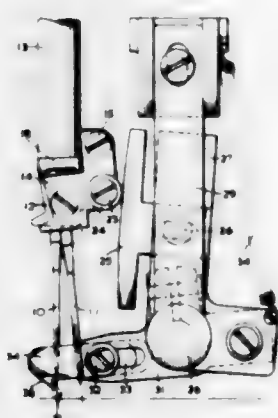


same direction so as to force said solid fuel particles to descend in said conduit along a substantially helical path whereby said solid fuel particles spread outwardly upon leaving said lower orifice and are discharged into said combustion chamber over an area greater than said lower orifice.

3,006,294 STITCHING OF FASTENER MEMBERS TO TAPE AND THE LIKE

William Simpson, Birmingham, England, assignor to Newey Brothers Limited, Birmingham, England, a British company

Filed Dec. 29, 1959, Ser. No. 862,589
Claims priority, application Great Britain Jan. 2, 1959
5 Claims. (Cl. 112-2)



1. An attachment for a sewing machine for securing a line of fastening members to fabric with at least one line of stitching intersecting the line of fastening members and having a vertically reciprocating needle bar, comprising a needle-holding block mounted on the needle bar for angular movement about an axis at right angles to the line of feed of the fabric, spring means urging the block angularly in one direction, a member angularly movable about a stationary axis, a cam on said member adapted to be engaged by a portion of said block, as the needle bar descends for holding said block in a limiting position against the action of the spring means, and a feeler on said member lying just in advance of the path of the descending needle and closely adjacent to the surface of the fabric, whereby the engagement of the feeler with a part of a fastening element which would be in the path of the descending needle moves said member angularly and displaces said cam into a position such that as the needle descends the spring means move the block angularly and the needle is deflected clear of the fastener element.

3,006,295 SHOE MACHINES

Robert William Bradshaw, Leicester, England, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed Mar. 9, 1960, Ser. No. 13,849
Claims priority, application Great Britain Apr. 14, 1959
9 Claims. (Cl. 112-46)



1. A machine for attaching a welt to a work piece, said machine having stitch forming and feeding devices, comprising a work support for an under side of the work piece, a presser foot engaging the upper side of the work piece, a needle acting to engage the work piece from the upper side, a guide located below the level of the work piece for directing movement of the welt along the work support toward the point of operation of the needle at a position obscured by the work piece, a welt severing knife spaced in advance of the point of needle operation and movable transversely of the guide, and electromagnetic means for actuating said knife including a control switch connected with said electromagnetic means, in combination with means mounted entirely above the level of the upper surface of the work piece at a position of unobscured visibility for actuating the control switch.

3,006,296 YARN FEED AND CONTROL MECHANISM

Montgomery B. Penman, Bloomsburg, Pa., assignor to The Magee Carpet Company, Bloomsburg, Pa., a corporation of Pennsylvania

Filed Apr. 2, 1957, Ser. No. 650,160
4 Claims. (Cl. 112-79)

1. In a multiple needle tufting machine having a yarn supply, a bank of reciprocating needles operating to pass loops of yarn through a fabric, means for drawing a length of yarn from the yarn supply to provide a supply of slack yarns when the needles move to a loop forming position, a unidirectional clamp above and below said yarn drawing means for holding said yarns against movement in a direction towards said yarn supply but permitting free movement of the yarns in the opposite direction, a pattern control mechanism between the needles and yarn drawing means for selectively holding the yarns against movement, a yarn locking mechanism between the clamp below the yarn drawing means and said pattern mechanism operable independently of the pattern control mechanism and yarn drawing means to simultaneously hold all the yarns against movement when the needles move to a loop forming position and the yarn drawing means is operated to draw a length of yarns from the yarn supply, and means operating with the needles for drawing a length of yarns from yarns drawn

by said first drawing means not held by said pattern mechanism when said locking mechanism is operated to

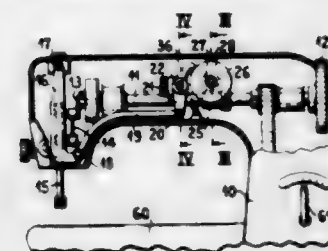


release the yarns and the needles return to a starting position.

3,006,297 SEWING MACHINE WITH ZIGZAG STITCHING ATTACHMENT

Emil Urscheler, Dietikon, Zurich, Switzerland, assignor to Turissa-Nachmaschinenfabrik A.G., Dietikon, Zurich, Switzerland

Filed Jan. 13, 1956, Ser. No. 559,033
Claims priority, application Switzerland Mar. 5, 1955
2 Claims. (Cl. 112-158)



1. Sewing machine with zigzag attachment comprising a casing, a needle bar, a guide member pivotally mounted in the casing to guide the needle bar, a link connected to the guide member, an oscillating lever mounted on an axle and pivotally connected to the link, a plurality of illustrative indicating elements on the casing corresponding to specific stitch cycles to be carried out by the needle bar, a control member connected to cooperate with the lever and having a plurality of grooves therein, and a single setting knob slidably mounted on the housing connected directly to the axle and operatively connected to the control member to set the needle stitch cycle to operate the guide member by the link and oscillating lever from one of said grooves in the control member, means responsive to the movement of the knob for selecting the specific illustrative indicating element corresponding to the specific needle cycle determined by the control member.

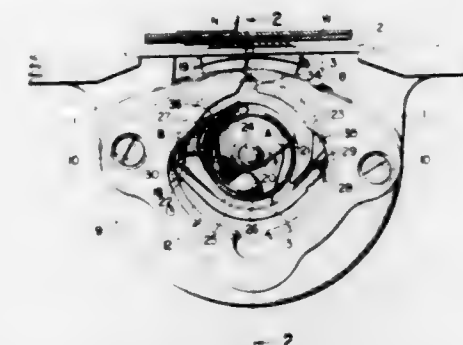
3,006,298 LOOP TAKERS FOR SEWING MACHINES

Ralph E. Johnson, Mountlake, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Aug. 28, 1958, Ser. No. 757,798
7 Claims. (Cl. 112-192)

4. In a sewing machine having a frame including a work supporting surface, an endwise reciprocating needle

movable through and thereby defining a point of stitch formation on said work supporting surface, and an oscillating shuttle mechanism cooperating with said needle in the formation of two-thread lock stitches, said shuttle mechanism comprising a shuttle body having an internal circular raceway, a shuttle having a discontinuous peripheral bearing rib journaled in said raceway for oscillation, a loop seizing beak upon one end of said bearing

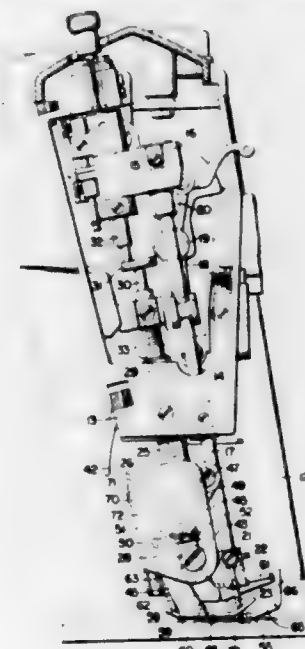


rib and formed to effect seizure of a needle thread loop upon clockwise movement of said shuttle, means for imparting oscillation to said shuttle, and means for mounting a thread carrying bobbin in said shuttle, and means for directing a bobbin thread lead from said shuttle to the point of stitch formation and relatively to the path of oscillation of said loop seizing beak to provide for movement of said loop seizing beak between the needle and the bobbin thread lead.

3,006,299 ALTERNATING PRESSER DEVICE FOR SEWING MACHINES

John P. Enos, Union, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed June 27, 1958, Ser. No. 745,167
2 Claims. (Cl. 112-235)



1. In combination with a sewing machine having a presser bar, and an endwise reciprocating needle bar, an alternating presser attachment comprising an attachment frame, means for securing said attachment frame on said sewing machine presser bar, a work feeding foot, means pivotally securing said work feeding foot on said attachment frame, a work holding foot, means slidably securing said work holding foot on said attachment frame for translatable movement substantially parallel to the longitudinal axis of said sewing machine presser bar, an attachment actuating lever, an arm formed on said lever,

means pivoting said lever with respect to said attachment frame for operative engagement of said lever arm by said needle bar, means locating said last named pivoting means so that the actuating lever arm is perpendicular to the longitudinal axis of said needle bar when the needle bar is at the lower end of its stroke, and means on said work holding foot disposed in driven engagement with said actuating lever.

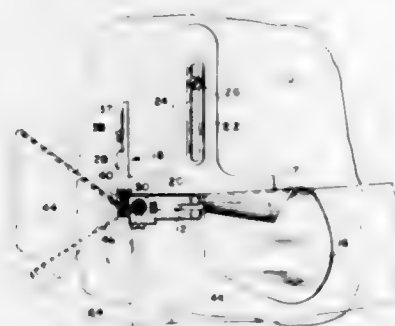
3,006,300

HEMMING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Albert L. Stancel, Jr., Lanett, Ala., assignor to West Point Manufacturing Company, West Point, Ga., a corporation of Georgia

Filed Apr. 16, 1959, Ser. No. 806,912

5 Claims. (Cl. 112-252)



1. In combination with a sewing machine having a presser foot and a work-plate, a combined hemmer and thread cutting attachment comprising: a hemmer disposed forwardly of said presser foot; a cutter holder disposed to the rear of and in close proximity to the presser foot, bracket means securing the cutter holder in fixed relationship to said hemmer and the line of work passing therethrough, said holder including a body portion and a tapered foot portion extending therefrom transversely to the line of work, a slot extending through said body portion and into said foot portion, a cutter blade mounted within said slot and including an exposed segment within and distant from the terminal end of said foot portion.

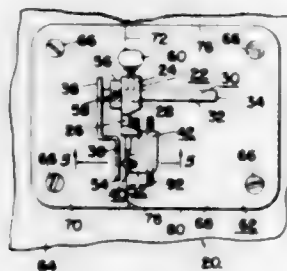
3,006,301

SEWING MACHINE FOR CONCEALED SLIDE FASTENERS

William T. Leonard, Reading, and Kenneth F. Diehm, Temple, Pa., assignors to Irving Constant, New York, N.Y.

Filed May 19, 1958, Ser. No. 736,385

3 Claims. (Cl. 112-260)



1. In a sewing machine for sewing concealed slide fastener tapes to a cloth article which includes a bed, a needleplate carried on the upper surface of said bed intermediate the edges of said bed, a presser foot, said needleplate comprising a planar inside portion and a planar outside portion, said inside portion having a planar wall substantially perpendicular to and adjacent said outside portion so that said portions are arranged in step-wise fashion, said wall having a needle receiving notch extending from the uppermost surface of said inside por-

tion to said outside portion, said outside portion having a needle hole therethrough below said notch and in communication therewith, said presser foot being superposed above said needleplate, said presser foot having a needle guide notch in the instep edge thereof with said instep-edge being disposed closely adjacent to said wall, the needle guide notch of said presser foot being disposed over said needle receiving notch, and at least one longitudinal feed dog slot in said inner portion, said feed dog slot extending substantially parallel to said wall, whereby a cloth article disposed on said inside portion may be advanced by a feed dog in said slot.

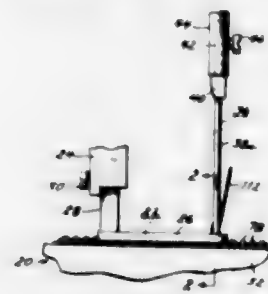
3,006,302

METHOD FOR MOUNTING A CONCEALED SLIDE FASTENER INTO A CLOTH ARTICLE

Ambrose J. McNamara, White Plains, N.Y., assignor to Irving Constant, New York, N.Y.

Filed Dec. 15, 1958, Ser. No. 780,443

9 Claims. (Cl. 112-262)



1. In a method for mounting a slide fastener upon the adjacent flaps of a cloth article which slide fastener comprises a pair of mating fastener element-carrying tapes, each of which tapes carries its elements on a welted inside edge, said slide fastener lacking a bottom stop adjacent the bottommost slide fastener element on each of its tapes, said slide fastener including an element free gap on its tapes having a length appreciably greater than the length of the slide fastener's slider, with said gap being disposed between the bottommost slide fastener elements on each of the tapes and the bottom end portion of the slide fastener, and said slide fastener including means joining the bottom end portions of the tapes together, the steps which comprise placing the slider on said tapes in said gap, applying a first line of stitching to join one fastener element-carrying tape of the slide fastener to one flap of the cloth article while maintaining the slider of the slide fastener within the gap and spaced from the bottommost element of said one tape, said first line of stitching extending into the gap a spaced distance above the slider, applying a second line of stitching to join the other fastener element-carrying tape of the slide fastener to the adjacent flap of the cloth article while maintaining the slider of the slide fastener within the gap and spaced from the bottommost element of said other fastener element-carrying tape, said second line of stitching extending into the gap a spaced distance above the slider, said first line of stitching being applied by passing said one tape and flap under the needle of a sewing machine in one direction, and said second line of stitching being applied by passing said other tape and flap under the needle of the sewing machine in the opposite direction, moving the slider a spaced distance from the gap onto the slide fastener elements of the slide fastener so that the slider is carried upon the stitched portions of the tapes a spaced distance from the gap, with mating elements of the tapes intermediate the gap and the slider joining the tapes together, cutting off the bottommost portion of the slide fastener along a line extending through the gap a sufficient distance below the bottommost slide fastener elements on each of the tapes to provide room for a bottom stop below the bottommost

slide fastener elements on each of the tapes while the elements of the tapes intermediate the slider and the gap are matingly engaged, and applying a bottom stop to the inside welted edges of the tapes adjacent the bottommost slide fastener elements on each of the tapes.

3,006,303

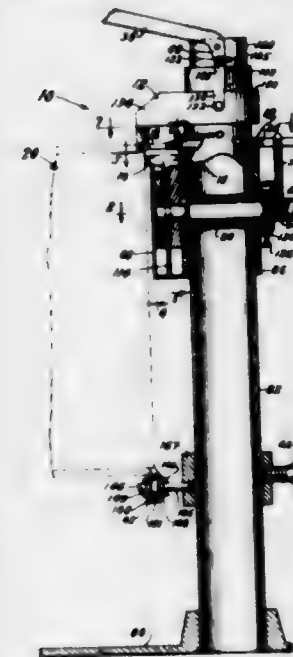
DEVICE FOR OPENING CANS

Claude A. Young, 126 N. Kensington St.,

La Grange, Ill.

Filed Apr. 9, 1958, Ser. No. 727,383

7 Claims. (Cl. 113-1)



1. A can opener for cans of the type having, at each end thereof, the rim of the can closure overlying and extending beyond the rim of the can body and having said rims doubled over outwardly against the outer surface of the can body with the rim of the closure being folded over the rim of the can body to form a ridge that projects outwardly from the end of the can in which ridge a portion of the closure rim is interposed between the can body and the can body rim, said can opener comprising a support structure adapted to form the frame of the can opener, an anvil member secured to said support structure and comprising an upper depending rigid projecting element defining an internal shoulder positioned thereon and proportioned to engage the outwardly projecting edge of said can ridge on the top end of a can positioned in upright position below same, means for securing said shoulder of said anvil member against said edge of said can ridge including means for supporting the can in said upright position under said projecting element, said projecting element being proportioned to extend short of said can end when said shoulder engages said can ridge edge, a wedge member and a hammer member reciprocally carried by said support structure and mounted for movement in vertical planes substantially parallel to the plane of said projecting element and to the central axis of the can body when a can is supported in said upright position, said planes being disposed adjacent to and exteriorly of the body of the can when the latter is disposed in said upright position, said wedge member being formed with a wedge shaped upwardly projecting end portion projecting toward said shoulder that terminates in a substantially convexly curved wedge tip and thereby is proportioned to enter between the doubled over portions of said rims and the can body and on movement toward said shoulder, to deflect the doubled over portions of said rims laterally outwardly of the body to form a pocket between said rims and the can body said hammer member being formed with a blunt head portion projecting toward said shoulder

der that is positioned laterally outwardly of said end portion of said wedge member a distance corresponding to the width of said pocket laterally of the can body, whereby said head portion is positioned to engage the outwardly projecting edge of the deflected rim portions on movement of said hammer member toward said shoulder to flex the closure rim away from the can body rim, said head portion at the edge thereof adjacent the plane of said projecting element defining a rounded corner, said corner engaging the edge of said deflected rim portions in moving toward said shoulder, said hammer member having a path of movement that vertically exceeds that of said wedge member the amount required to raise said rims laterally of the can and further move said closure rim toward separation of same from the body rim, said head portion of said hammer member being spaced from said end portion of said wedge member circumferentially of the can ridge against which said anvil member shoulder engages, means for reciprocating said wedge and hammer members in their respective planes, and means for consecutively presenting pockets formed by said wedge member to the plane of movement of said hammer member as further pockets are formed by said wedge member whereby the closure is separated from the can body by uncoupling the closure from the can body.

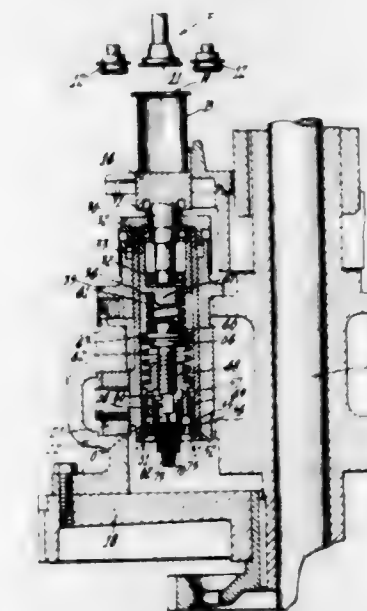
3,006,304

CAN CLOSING MACHINE

Zeno Peter Renzi, Union, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed May 23, 1957, Ser. No. 661,150

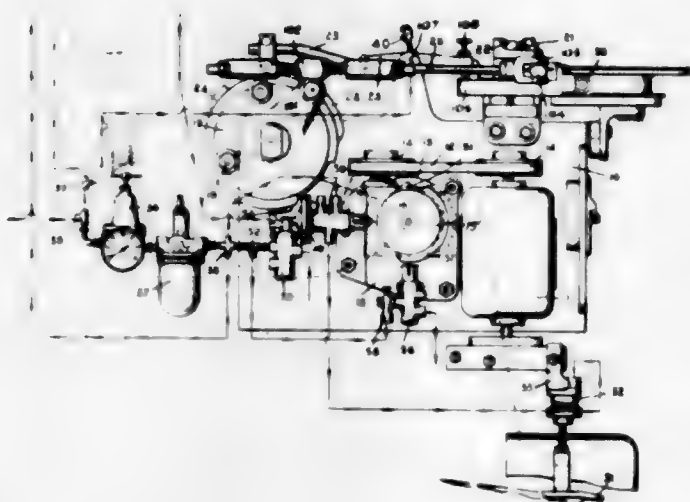
4 Claims. (Cl. 113-19)



1. In a can closing machine comprising a chuck, seaming rollers movable radially toward and from said chuck and cooperating therewith in succession to effect a cycle of first and second seaming operations in forming a double seam uniting flange parts of a can body and a superimposed closure, a lifter unit mounted for vertical reciprocation under said chuck and including a sleeve having a support mounted for axial reciprocation therein and connected through resilient means to said sleeve, said support being adapted for holding thereon a can body and a superimposed closure in alignment with said chuck, and means for vertically reciprocating said sleeve to raise said can body and its superimposed closure from a lowermost position to a first clamping position against said chuck and, later in the seam forming cycle, to raise said sleeve further and then, after completion of the seam forming cycle, to lower said body and closure to said lowermost

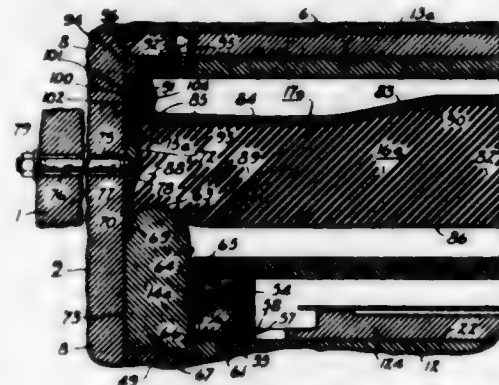
position, the improvement wherein said sleeve is formed with a ledge on a lower inner portion thereof, and said resilient means comprises a relatively light lower spring resting on said ledge, a stop member on said sleeve adjacent the top of said lower spring, a washer resting upon the upper end of said spring and normally spaced vertically from said stop member, an upper relatively heavy spring resting at its lower end on said washer and carrying said support on its upper end, whereby said means for vertically reciprocating said sleeve first raises said can body and closure thereon into contact with said chuck, then compresses said relatively light spring to apply light clamping pressure preliminary to and during a said first seaming operation on the flange portions of the can body and closure, then abuts said stop against said washer, and thereafter compresses said relatively heavy spring to apply increased clamping pressure on said can parts during said second seaming operation and completion of the double seam between said can body and closure flanges to insure precise formation of said double seam.

3,006,305
MEANS FOR FEEDING WORK-PIECES TO POWER-PRESSES AND LIKE MACHINES
Frederick Arthur Evans, 76-78 Hunters Vale, Birmingham, England
Filed July 16, 1953, Ser. No. 368,435
1 Claim. (Cl. 113-38)



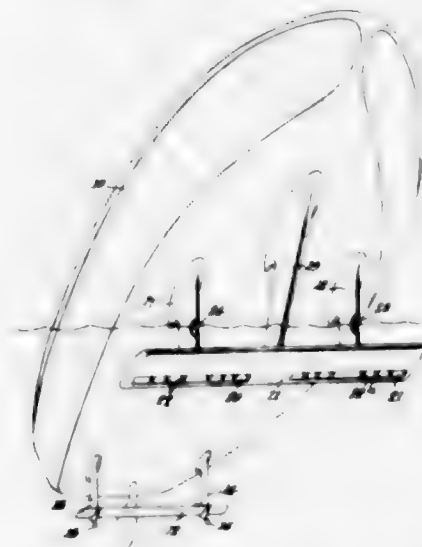
Automatic mechanism for feeding individual components to a power press incorporating cooperating tools for performing an operation on a component, a crankshaft for actuating one of said tools, and a clutch for coupling said crankshaft to a power driving means to make a single operative stroke, comprising an angularly reciprocating arm, means on the end of the arm for picking up a component at a point remote from the tools in one angular position of the arm and for transferring it to the tools and releasing it in another angular position of the arm, power driven mechanism independent of the press for reciprocating said arm, a fluid pressure actuator for said press clutch, a valve controlling the admission of fluid to said actuator, means on a moving part of said power driven mechanism for opening said valve to energize the actuator and engage said clutch at a predetermined point in the cycle of movement of the reciprocating arm, and means actuated by the crankshaft of the press for closing said valve when the crankshaft is set in motion, the means for opening said valve comprising a cam on a rotating part of said power driven mechanism, the means for closing said valve comprising a diaphragm actuated by pressure fluid controlled by a normally closed valve which is opened by a cam on a part of the press when the press is set in motion.

3,006,306
HYDRAULIC PRESS
Paul O. Pfeiffer, Cuyahoga Falls, and Charles O. Stemons and Walter A. Hartz, Akron, Ohio, assignors to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 7, 1956, Ser. No. 563,984
5 Claims. (Cl. 113-44)



3. A hydraulic press having a retainer ring with internal vertical surfaces providing a substantially rectangular enclosure, a forming pad of elastic rubber extending the full length and width of said enclosure, a rigid rim member having an inner face vulcanized to the marginal edge of said forming pad and an outer face engaging said vertical surfaces substantially throughout the periphery of said enclosure, means for holding said rim member in a fixed position in said enclosure, a rigid upper member in said enclosure having a marginal portion overlying said rim member and having vertical outer surfaces normally engaging the vertical inner surfaces of said retainer ring substantially throughout the periphery of said enclosure, a sealing gasket of elastic rubber-like material mounted in the space between said marginal portion of said upper member and said rim member and completely filling said space, and means forming an expansible chamber above said pad including a thin elastic rubber diaphragm for engaging said sealing gasket and the marginal portion of said pad.

3,006,307
MARINE CRAFT SUPPORTING HYDROFOIL HAVING DEPTH CONTROLLING SLOTS
John Algot Johnson, 9 Sheridan Drive, Short Hills, N.J.
Filed Oct. 12, 1960, Ser. No. 62,306
6 Claims. (Cl. 114-66.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. In a marine craft having a buoyant hull and hydrofoils for supporting the hull above the surface of the water at operating speeds of the craft wherein said hydrofoils comprise unitary members extending transversely of the hull one near the stern and one near the bow in

fixed position relative to the hull and at least the bow hydrofoil is connected to the hull by spaced apart hollow struts, means automatically controlling the operating depth of said hydrofoils when supporting said hull above the water comprising fluid outlet passages in the form of elongated narrow slots in the under surface of said bow hydrofoil disposed near the trailing edge of this hydrofoil, a fluid inlet passage in the leading edge of each of said hollow struts positioned to extend above and below the surface of the water when the hydrofoil is at the desired operating depth in the water, conduit means connecting the fluid inlet passage in each hollow strut and the corresponding fluid outlet passage in said bow hydrofoil for the passage of fluid from the fluid inlet passage in the corresponding strut to and out of the fluid outlet passages in said bow hydrofoil to thereby augment the lift effect of the hydrofoil, the depth of submergence of said fluid inlet passages controlling the proportion of air to water in the fluid flowing through said struts and said hydrofoil and the proportion of air to water in said fluid directly affecting the lift of said bow hydrofoil to maintain the hydrofoil substantially at a constant operating depth.

3,006,308
FORE-AND-AFT SAIL SETTING AND MAGAZINE CONSTRUCTION
Stephen Enke, New Haven, Conn.
(Economics & Business, Duke University, Durham, N.C.)
Filed Mar. 28, 1960, Ser. No. 17,860
9 Claims. (Cl. 114-102)

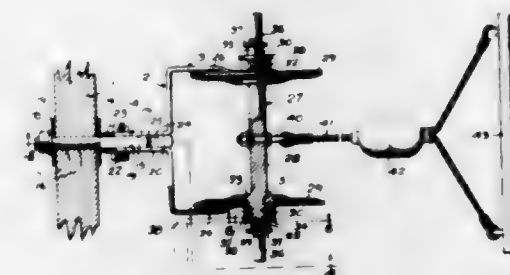


8. A flexible sail magazine, adapted for connection to the end of a rigging line of a vessel, comprising a flexible cable of a length and diameter adapted to slidably receive all of the slider mounting means of a fore-and-aft type sail thereon, a relatively rigid end structure secured to said flexible cable at each end thereof, a threaded rotatable coupling member on the said end structure at one end of said flexible cable, a complementary threaded coupling member on the end structure at the opposite end of said flexible cable, said coupling members being interengageable to form an endless flexible sail magazine.

3,006,309
TOWING APPARATUS
Paul D. Rowley, 3249 Skanders Drive, Flint, Mich.
Filed Aug. 14, 1959, Ser. No. 833,783
2 Claims. (Cl. 114-235)

1. A towing apparatus for attachment to the stern of a boat, said apparatus comprising a flat sided elongated lug rigidly attached to the transom of the boat and pro-

jecting rearwardly therefrom, a bracket having a pair of closely spaced parallel legs extending forwardly along opposite flat sides of said lug and having a pair of greater spaced legs extending rearwardly and beyond said lug, a pivot pin extending through the forward end portions of said closely spaced legs and said lug, a cross pin extending between and rigidly fixed to said closely spaced legs of said bracket, said cross pin being parallel with and rearwardly of said pivot pin, said lug having its upper edge portion notched for reception and bottoming of said cross pin when said bracket is swung on said



pivot pin to its lowermost position, said notch being of an arcuate shape and having its opposite sides on substantially true arcs from the center of the pivot pin and arranged relative to the cross pin so as to form contact of the lug with the cross pin at least along the rear side of the notch and thereby applying a portion of a rearward pull load on the bracket to the lug at such location, a spool rotatably supported by and between said greater spaced rearwardly directed legs of said bracket, a tow line having an end thereof fixed to said spool, and a crank arm for rotating said spool.

3,006,310
SIDE WHEELER INFLATED RAFT
Minnie H. Penland, 239 Bonair, La Jolla, Calif., and Stuart M. Hallum, 3572 Texas, San Diego, Calif.
Filed Aug. 24, 1959, Ser. No. 835,499
4 Claims. (Cl. 115-23)

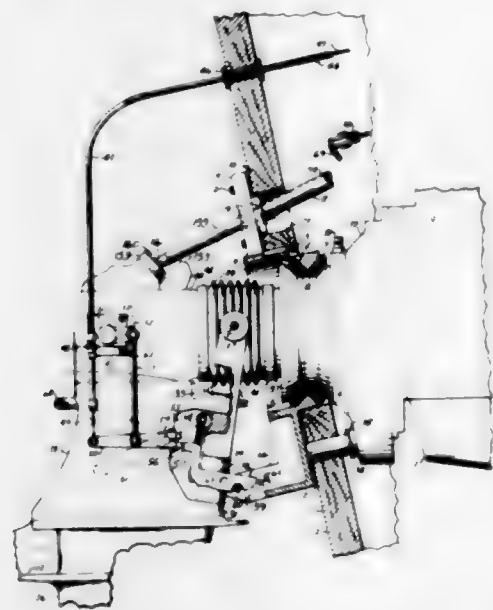


1. In combination with an inflatable raft, a paddle wheel assembly, comprising: a rigid yoke extending transversely below and around both sides of said raft; the ends of said yoke having angularly upwardly disposed plate portions extending inwardly and terminating above said raft; bearings fixed on said plate portions; shafts freely rotatably mounted in said bearings and extending angularly outwardly and downwardly from said raft; paddle wheels mounted on the outer ends of said shafts; each of said paddle wheels having a plurality of tapered blades having their edges converging to narrow tip portions at the outer ends thereof; the inner ends of said shafts having manually operable cranks integral therewith.

3,006,311
BOAT STEERING MEANS INCLUDING A SWINGABLE AND TILTABLE OUTBOARD UNIT
Nils Hansson, Goteborg, Sweden, and James R. Wynne, Miami, Fla.; said Hansson assignor to AB Penta, Goteborg, Sweden
Filed June 15, 1960, Ser. No. 36,266
11 Claims. (Cl. 115-35)

1. In an assembly for steering a boat hull, a water reaction element, means mounting said element outwardly of said hull on an upright pivot axis, a ball member

having a bore extending therethrough, an elongated tiller rod member having one end portion fittingly and slidably engaged in said bore and having a ball formed thereon at a fixed portion thereof spaced therealong from said one end portion thereof, said hull having an opening therethrough, means on said hull at said opening forming a first ball socket opening inwardly and opening outwardly of said hull, and means forming a second ball

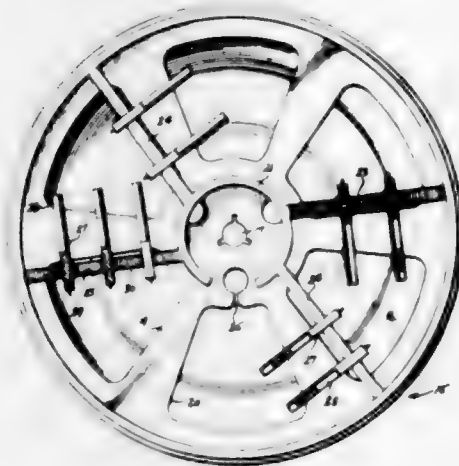


socket attached to said reaction element offset from said upright pivot axis, the ball of one of said members being caged in said first ball socket, said one member having an integral tiller arm portion extending inwardly of said hull from said first socket and said inwardly extending tiller arm portion comprising means for swinging said members on said ball in said first socket, the ball of the other of said members being caged in said second ball socket.

3,006,312

INDEX POINTER FOR RECORDING AND MOVIE REELS

George M. Bradley, 605 Oklahoma Ave., Lincoln, Ill., and Juan Supero, Menard, Ill. (% Mrs. Gertrude Rentshler, 605 Oklahoma Ave., Lincoln, Ill.)
Filed July 31, 1959, Ser. No. 836,842
2 Claims. (Cl. 116-114)



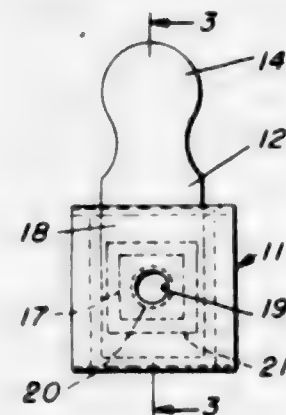
1. In a film reel assembly, including a hub provider with a center pin hole, and a spider top portion extending about the hub, said top portion being provided with a plurality of openings arranged in spaced relation therearound, an index pointer supporting bar adjacent each opening and extending radially outwardly from said hub, an index pointer arranged transversely of and adjustably mounted on each of said bars, each pointer having a needle at one end thereof and being disposed so that

the needle overlies the adjacent opening in said spider top portion, each of said pointers being provided with an inclined flat portion adjacent the other end thereof, said flat portions being provided with identifying indicia.

3,006,313

TELLTALE FOR OVERHEATED BLOOD STORAGE CONTAINERS AND THE LIKE

Willard M. Huyck, Woodland Hills, and Vincent A. Romito, North Hollywood, Calif., assignors to Aseptic Thermo Indicator Company, North Hollywood, Calif., a corporation of California
Filed Dec. 14, 1959, Ser. No. 859,283
7 Claims. (Cl. 116-114)

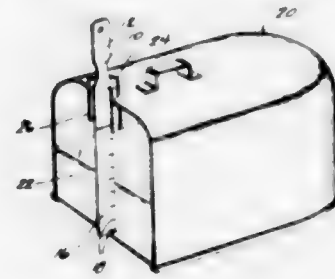


1. A telltale device comprising an envelope having a window in its front face; an absorbent indicator pad within said envelope visible through said window; a reservoir pad within said envelope in juxtaposed position relative to said indicator pad; a removable impervious separator initially disposed between said indicator pad and said reservoir pad; and means for manually removing said separator to bring said indicator pad into contact with said reservoir pad; said reservoir pad having absorbed therein a material whose melting point corresponds to a selected critical temperature for said telltale, whereby when said separator is removed while the temperature is lower than the critical temperature, said material, if subsequently heated above said critical temperature, melts and absorbs into said indicator pad and becomes visible through said window.

3,006,314

GAS TANK OIL GAUGE

David V. Malec, Pewaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,246
2 Claims. (Cl. 116-118)



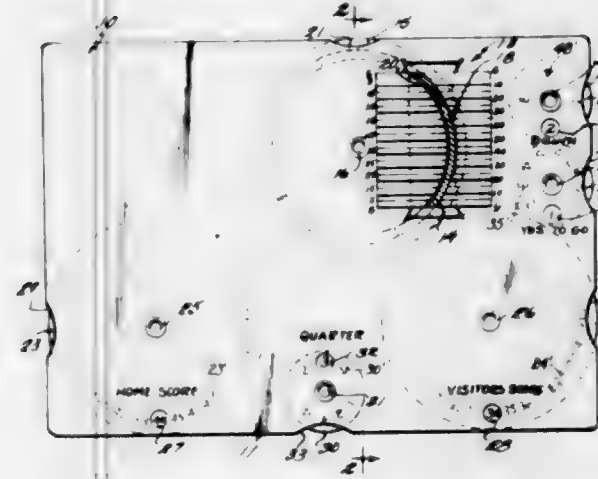
1. A gauge insertable within a fuel tank of predetermined volume and configuration and to be filled with a mixture of components in a desired ratio, the gauge determining the quantity of one mixture component to be added to the tank to complete a tank of fuel mixture of desired ratio when the tank is filled with another mixture component, said gauge comprising a stick wettable by the mixture and having a handle at one end and a scale comprising graduations marked on the stick and having

numerical designations progressively increasing from the handle to the other end, each such designation indicating, when the stick is wet to the level of said designation, the amount of one of said components to be added to the tank preliminary to filling the tank with the other of said components.

3,006,315

SCORING INDICATOR

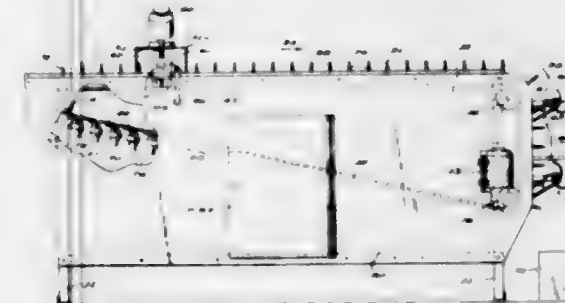
David Rothman, 5219 Jason, Houston, Tex.
Filed Apr. 8, 1960, Ser. No. 20,908
1 Claim. (Cl. 116-133)



A scoring indicator for a football game comprising a front plate and a rear plate, aligned portions of the edges of each plate defining an arcuate cut away portion, a simulated football field on said front plate and having suitable indicia thereon, an arcuate slot in said front plate extending the length of said simulated field, a disc rotatably mounted between and frictionally engaging said plates and adapted to be held in a set position thereby, said disc having a circumferential portion in underlying relation to said arcuate slot and visible therethrough and extending into said cut away portion, an arcuate multi-color band on said disc to indicate opposing teams and a ball position mark on said band, said scoring indicator adapted to be held in one hand and said disc manipulatable in either direction thereby.

3,006,316

AUTOMATIC SPRAY PAINTING APPARATUS
Robert W. Wullenwaber, Rolling Hills Estates, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 774,061
5 Claims. (Cl. 118-11)

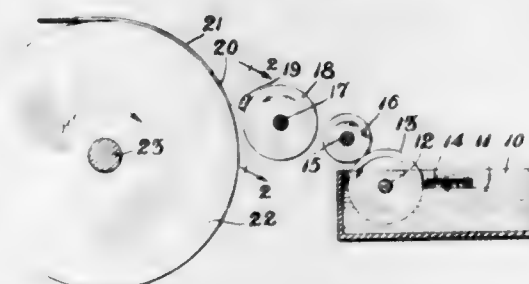


1. Apparatus for use in spray painting a predetermined portion of the central region of each of a sequence of two ended articles, comprising: a conveyor adapted to be driven past a spray station; a paint spray gun located at said spray station; a plurality of spaced article holders mounted upon said conveyor, said article holders being adapted for supporting the articles to be painted, said article holders being adapted to mask one end of each of said articles from the paint to be sprayed; a plurality of

masks, each of said masks being adapted to fit over and mask the other end of each of said articles from the paint to be sprayed thereby leaving said central region of each of said articles exposed to the paint spray; individual drive means associated with each of said article holders for rotating said article holders when said holders are conveyed past said spray station; means for intermittently selectively actuating said spray gun as each of said article holders passes before said spray station to thereby spray the unmasked central region of an article held by said holder; and means for automatically removing said masks from said other ends of said articles after said central regions of said articles have been painted.

3,006,317

KNURLED STRIP ADHESIVE APPLYING DEVICE
Frank W. Showalter, Dayton, Ohio, assignor, by mesne assignments, to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Sept. 8, 1955, Ser. No. 533,131
4 Claims. (Cl. 118-212)

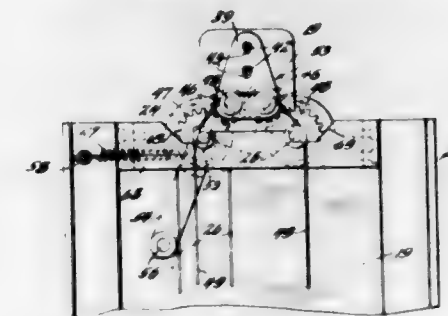


1. In an adhesive applying device for evenly applying adhesive to a predetermined areas of an envelope which comprises an applicator roll, a knurled rubber applicator affixed to said roll and engageable with said predetermined area only, a metering roll mounted adjacent said applicator roll, a feed roll mounted adjacent said metering roll, an impression roll mounted adjacent said applicator roll, all of said rolls being mounted for reverse rotation with respect to each adjacent roll respectively, the feed roll and the applicator roll turning in one direction and the impression roll turning in the opposite direction, means for applying adhesive to said feed roll whereby said adhesive is transferred from said feed roll to said metering roll and thus to said applicator, whereby said knurled applicator is adapted to evenly spread said adhesive in a predetermined area on said envelope whereby said adhesive is applied in a substantially continuous pattern over said entire predetermined area.

3,006,318

APPARATUS FOR APPLYING SOLDER COATINGS TO SURFACES

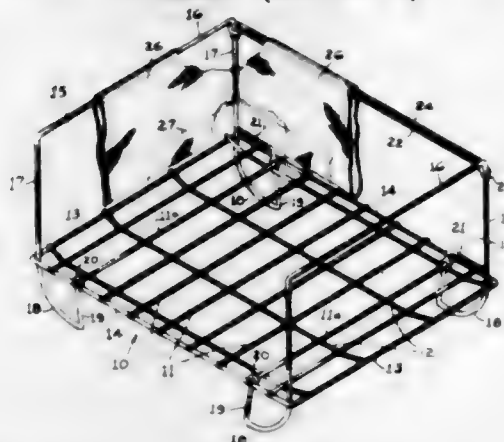
Raymond Monroe, Jr., Greensboro, N.C., and Tom E. Moore, Cumberland, Va., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 26, 1958, Ser. No. 724,062
7 Claims. (Cl. 118-217)



6. In an apparatus for coating articles, a pair of coating rollers, guide means for mounting said rollers for relative

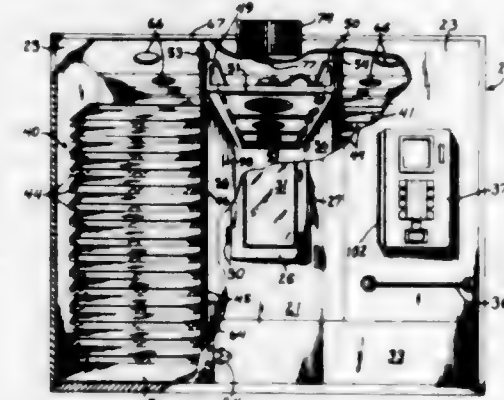
translatory movement toward and away from each other, a first pair of spaced gears connected respectively to said pair of rollers, a second pair of meshing gears, means for mounting said second pair of gears to move between and into mesh with said first pair of gears, and means for urging said first pair of gears toward each other and said second pair of gears into mesh with said first pair of gears whereby said rollers are urged to move toward each other in said guide means.

3,006,319
FRAME FOR BEDS FOR SMALL ANIMALS
Joseph D. McCrory, 516 Regina Drive, Burlington,
Ontario, Canada
Filed Sept. 17, 1959, Ser. No. 840,686
2 Claims. (Cl. 119-1)



1. A collapsible bed for small animals, comprising a rectangular base frame in the form of a wire grill, two side walls consisting of a top rail disposed parallel to the plane of the frame, vertical members projecting downwardly from each end of the top rail through the frame touching the inner corners formed thereby, said vertical members further extending beneath said frame in an arcuate manner to terminate in upwardly extending legs hingedly secured at their upper ends to horizontally disposed wires forming part of said wire grill, said wires being positioned parallel with the side of said base and disposed inwardly therefrom, said side walls and said legs being retained in a vertical position by a strut slidably secured at each end to the vertical members of said side walls, said legs spacing said frame from the ground when extended and lying in the same plane as the bottom of the frame when in collapsed position.

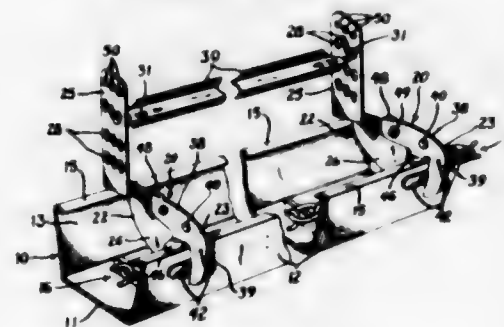
3,006,320
INCUBATION MACHINE
Ralph K. Bailey, Springfield, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,789
4 Claims. (Cl. 119-37)



1. In an egg setter, a cabinet having four walls and a ceiling and floor, means dividing the interior of said cabinet into left and right egg retaining compartments hav-

ing an aisle therebetween running substantially from the front wall to the back wall, a fresh air inlet conduit mounted on the exterior of said cabinet on said ceiling over said aisle, thermostatically controlled blower means forming a part of said conduit and operable to introduce fresh air thereinto for cooling said cabinet, means forming an air inlet opening in said ceiling for receiving fresh air from said inlet conduit, an air circulating fan in said cabinet, means supporting said fan in said aisle adjacent said inlet opening to receive fresh air therefrom and to direct said air downwardly toward said floor, said egg retaining compartments each including means defining an air entrance opening near the floor and air ventilating passageways for the upward flow of circulating air there-through, means forming exhaust openings in said ceiling positioned over said compartments, and an exhaust duct mounted on the exterior of said cabinet to receive stale air through said exhaust openings displaced from within said cabinet by said blower means.

3,006,321
POULTRY FEEDING TROUGHS
Ralph K. Bailey, Springfield, Ohio, assignor to The Buckeye Incubator Company, Springfield, Ohio, a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,304
5 Claims. (Cl. 119-61)



2. An overhead support clamp connected to one side wall of a feeding and watering trough with an inwardly turned rim, comprising an inner clamping member having an upwardly extending support portion arranged in overlying relation to said trough and connectable to an overhead trough support and an integral inwardly extending bottom clamping portion, said bottom clamping portion having means arranged for engagement with the inside surface of said one wall below said rim, a generally L-shaped outer clamping member pivotally movable above said rim on said inner member between an open position and a closed clamped position and having a bottom leg provided with means arranged for engagement with the outside surface of such wall in said closed position, said outer member further having a top leg movable adjacent said inner member and provided with lock means engageable with said bottom portion to secure said inner and outer members in said closed clamped position on the trough.

3,006,322
ANIMAL COLLAR
Matt J. Vitol, Woodstock, Va., and Owen P. Bricker III, Lancaster, Pa., assignors of seventy-five percent to said Vitol and twenty-five percent to said Bricker
Filed Mar. 27, 1959, Ser. No. 802,409
11 Claims. (Cl. 119-106)

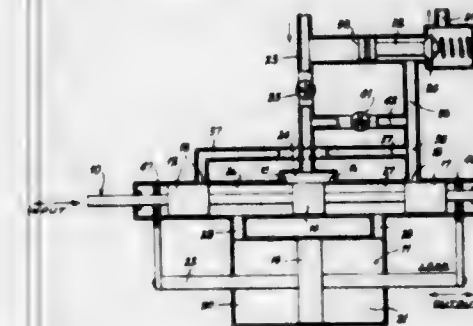
1. An animal collar comprising, a length of material to encircle the neck of an animal, a pair of end slides threaded on the material and freely slidable therealong, the material having ends projecting beyond the end slides and being overlapped and secured in opposed end slides so that the material forms a loop and movement of the end slides along the material will vary the length of the overlapped ends and thus the circumference of the loop.

a locking slide having a pair of parallel openings there-through through which the overlapped ends of the material pass, whereby the locking slide is slidable on the over-



lapped ends of the material intermediate the end slides, and means carried by the locking slide to clamp the locking slide to the overlapped ends of the material.

3,006,323
HYDRAULIC SERVO POWER VALVE WITH MANUALLY OPERABLE SAFETY PROVISIONS
Ralph B. Tilney, Clayton, Mo., assignor to Alco Valve Company, St. Louis, Mo., a corporation of Missouri
Filed July 25, 1957, Ser. No. 674,234
3 Claims. (Cl. 121-41)

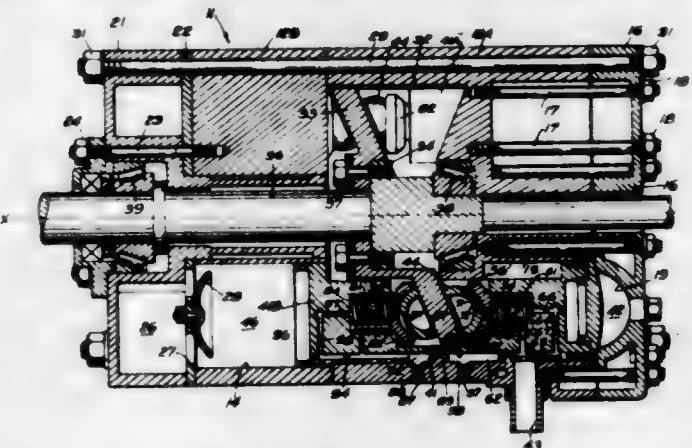


1. A control device comprising a manually movable input member and an output member adapted to be connected to a work load and movably controlled by the movement of said input member, said output member comprising a cylinder movable by hydraulic pressure, said input member including valve means for porting hydraulic fluid under pressure to the cylinder to control the movement of said output member, said valve means including a plurality of valve elements operable by the movement of the input member, said input member being movable in one direction to port hydraulic fluid under pressure to one side of the cylinder and movable in a reverse direction to port fluid to an opposite side of the cylinder and valve means for trapping fluid within the device when the hydraulic pressure is interrupted, said valve means comprising a check valve in an inlet conduit for the hydraulic fluid and a separate check valve in an outlet conduit which is adapted to be closed by failure of hydraulic pressure within said inlet conduit and means for porting trapped fluid from one side of the cylinder to the other side through the valves of the input member and through a unidirectional check valve to provide for movement of the cylinder when the hydraulic system is interrupted, said check valve being normally closed when the hydraulic pressure fluid is not interrupted.

3,006,324
RECIPROCATORY PISTON ENGINES
Edwin L. Shaw, Oxnard, Calif., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Oct. 6, 1960, Ser. No. 60,837
9 Claims. (Cl. 121-119)

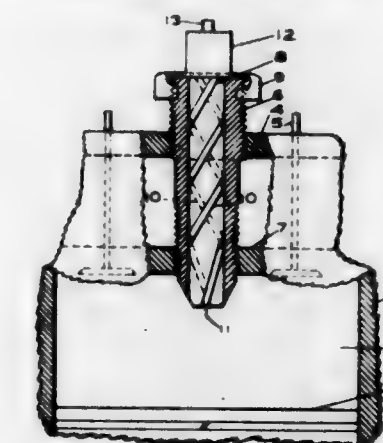
7. In a barrel engine of the kind which includes a plurality of power pistons reciprocable in parallel cylinders

formed in a cylinder block, a swash plate rotatable about an axis extending parallel to the cylinders, and a piston shoe interposed between each power piston and the swash plate, and wherein each piston shoe is slidable on the swash plate to convert the linear motion of the power pistons to rotary motion of the swash plate, means for supplying a fluid under pressure between each piston shoe and swash plate to balance both the gas and inertia loads of the power piston which are exerted on the piston shoe during reciprocation of the piston, said means comprising a bore formed internally of each power piston and extending axially therein, a balance piston slidably



mounted within each bore and defining a fluid-pressurizing chamber therein, first conduit means for conveying fluid to each of said fluid-pressurizing chambers, valve means for preventing reverse flow of fluid from the chambers through the first conduit means, whereby movement of each balance piston inwardly of its bore during reciprocation of the associated power piston is effective to pressurize the fluid within each of the fluid-pressurizing chambers in proportion to the applied load on the power piston, and second conduit means for conducting fluid under pressure from each chamber through an associated piston shoe and between the adjacent surfaces of the piston shoe and swash plate.

3,006,325
ANTI SMOG SCAVENGING ATTACHMENT FOR INTERNAL COMBUSTION ENGINES
Curtis McClellan Phillips, Rudyard, Mont.
Filed Apr. 25, 1960, Ser. No. 24,455
3 Claims. (Cl. 123-1)

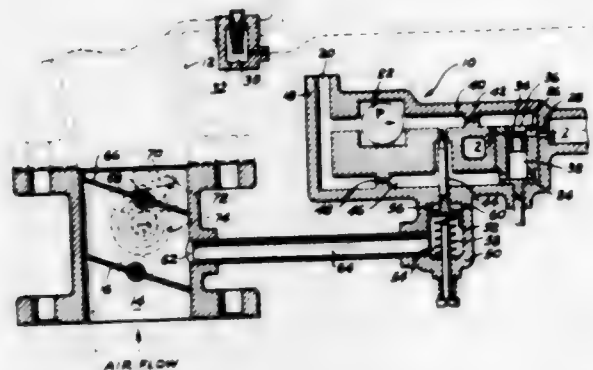


1. A unit by which air under pressure may be injected into the combustion chamber of an internal combustion engine cylinder, said unit including a casing adapted for mounting in the cylinder projecting into the combustion chamber, a core in the casing having one or more spiral channels extending lengthwise of the core, the casing having an air inlet, the core having a passage communicating between the air inlet and spiral channels, and said channels having outlets delivering into the combustion chamber.

3,006,326

FUEL SUPPLY SYSTEM

Frederik Barford, Detroit, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 17, 1960, Ser. No. 9,291
3 Claims. (Cl. 123-119)

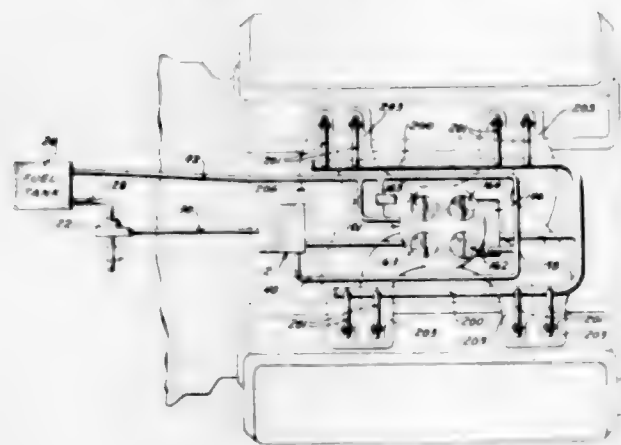


1. A fuel supply system for an internal combustion engine having a source of fuel and an induction passage with a throttle therein comprising a conduit adapted to connect said source with said engine, a pump in said conduit, a by-pass connected to said conduit on either side of said pump, a valve controlling the flow through said by-pass, a housing, a movable wall in said housing operatively connected to said valve and dividing the interior of said housing into first and second chambers, means venting said first chamber to the atmosphere, a port in said induction passage downstream of said throttle, passage means connecting said port to said second chamber, resilient means in said second chamber urging said wall in a direction to close said valve, an unbalanced air valve mounted in said induction passage downstream of said port, said air valve being urged toward open position in response to air flow through said induction passage and a thermostat operatively connected to said air valve for urging said air valve toward closed position.

3,006,327

FUEL CONTROL

George M. Holley, Jr., Grosse Pointe Park, Alton G. De Claire, Jr., Harper Woods, and Donald J. Cameron, Roseville, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Jan. 30, 1956, Ser. No. 562,150
22 Claims. (Cl. 123-119)

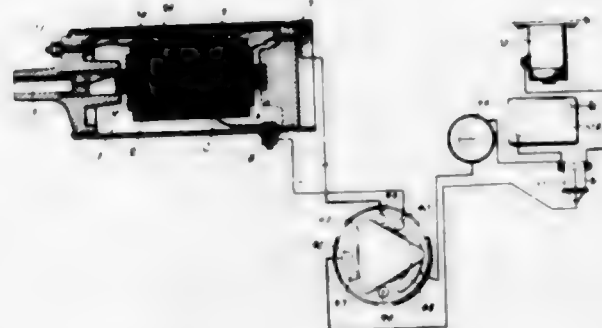


1. A fuel supply system for an internal combustion engine having an intake manifold and a throttle valve therein, comprising manifold vacuum-actuated means for supplying partially-atomized idle fuel to said intake manifold on the engine side of said throttle valve and a main metering system having means for supplying additional liquid fuel under a constant positive pressure to said intake manifold at engine speeds above idle and in quantities dependent upon engine speed and manifold pressure,

said main metering system having means for increasing the flow of said liquid fuel at a rate such that the total quantity of fuel is proportional to air flow through said intake manifold.

3,006,328

STARTING IGNITION BOOSTER SYSTEM
Yoshio Kinoshita, No. 4 Kawashima-cho Nakano-ku, Tokyo, Japan
Filed Oct. 17, 1958, Ser. No. 767,939
1 Claim. (Cl. 123-179)



In an ignition system for vehicles comprising in combination a source of potential, starter means, a relay connected between said source of potential and said starter means, an ignition coil including primary and secondary windings, said primary winding including terminal and intermediate taps, and switch means including a plurality of circularly disposed and spaced electrical contacts, said switch means including a manually rotatable, equilateral, triangular-shaped conductor plate rotatable on an axis of rotation about which said contacts are concentrically disposed, said conductor plate including three equally spaced apex portions, a first of said switch contacts connected to said source of potential and constantly engaged by one of said apex portions, a second of said switch contacts connected to said intermediate tap, a third of said switch contacts connected to said relay, said apex portions being engageable each with a respective one of said first, second and third switch contacts during a first switch position, a fourth switch contact connected to said terminal tap, said conductor plate including a second switch position in which a circuit is closed between said first and fourth switch contacts, said conductor plate including a neutral position in which said one apex portion is engaged with said first switch contact and no current flows through said conductor plate.

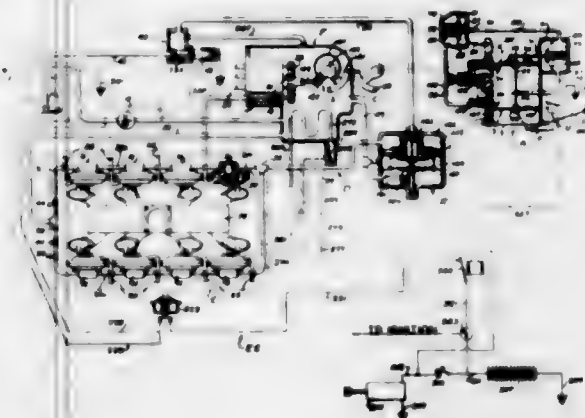
3,006,329

FUEL INJECTION SYSTEM

James F. Armstrong, St. Louis, and Charles K. McConnell, Creve Coeur, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Apr. 6, 1959, Ser. No. 804,518
38 Claims. (Cl. 123-179)

17. In a fuel injection system for an internal combustion engine, throttle means for controlling flow of air to the engine, means for measuring the flow of air to the engine, a source of fuel, a fuel delivery system for delivering fuel from said source under pressure to an outlet at the engine, fuel metering means for controlling the delivery of fuel, a connection between said air measuring means and said fuel metering means including an engine temperature responsive means for changing the phase of the fuel metering means relative to the air measuring means, a datum pressure system connected to receive fuel under pressure from said delivery system and having a return to said source, means in said datum pressure system for limiting the return flow of fuel to said source, pressure responsive means for controlling the

pressure at said outlet connected into said datum pressure system between said delivery system and said flow-limiting means, a pressure regulator in said datum system for regulating the pressure therein relative to delivery pressure, means operable in response to sudden opening of the throttle means for temporarily by-passing said flow-limiting means temporarily to relieve the pressure in the



datum system, and means responsive to relief of pressure in the datum system to admit fuel from said fuel delivery system to said datum system to maintain pressure in the datum system above a predetermined minimum.

18. In a fuel injection system as set forth in claim 17, means responsive to starting the engine for actuating said by-pass means.

3,006,330

SPEAR GUN

Paul H. De Bach, 4985 Chicago Ave., Riverside, Calif., assignor of one-third to Henry U. Meyer, Riverside, Calif.

Filed Oct. 12, 1959, Ser. No. 845,708
4 Claims. (Cl. 124-22)



1. In a spear gun of the type having guide means for an arrow having a plurality of notches therein, a trigger release means for the arrow and resilient means for engagement in one of said notches and a longitudinally extending rod carrying a forward handle, the improvement comprising: a sleeve slidably mounted on said rod; a cross-bar carried by said sleeve, said cross-bar carrying said resilient means and means for releasably locking said sleeve in position adjacent the forward end of said rod.

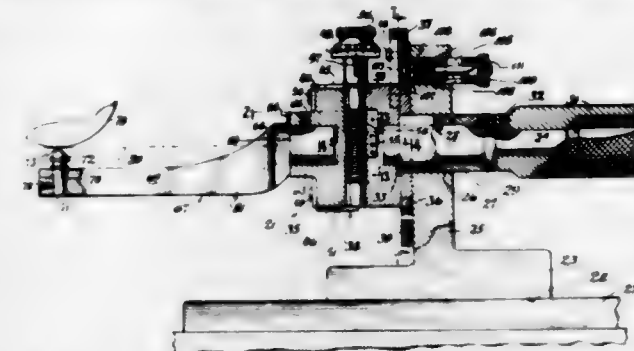
3,006,331

APPARATUS FOR DRESSING GRINDING WHEELS AND HOLDING WORK PIECES THERETO

Carl A. Akert, 948 Cuyler Ave., Chicago, Ill.
Filed Mar. 24, 1958, Ser. No. 723,538
18 Claims. (Cl. 125-11)

1. A grinding wheel auxiliary tool comprising: a base, a vertical support bracket rigidly fixed to said base, a carrier assembly revolvably mounted about an axial shaft carried by said base bracket, a housing and a head mounted for adjustable movement diametrically of the axis of rotation of the carrier assembly, a work engaging member detachably carried by the head, a micrometer screw drivably associated with the head to move the work engaging member relative to said shaft for measured dis-

tances in either of opposed directions from said shaft axis, and means in association with the micrometer screw calibrated to the work engaging member to indicate and directly measure linear positioning movement of the head



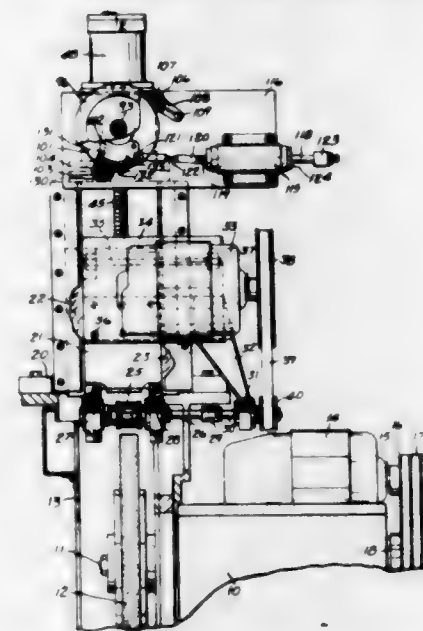
and the work engaging member carried thereby for predetermining the arc of movement of said work engaging member relative to a grinding wheel rotatively mounted in fixed relation thereto.

3,006,332

POWERED ROTARY TRUING DEVICE

James G. R. Cooper, Westboro, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Oct. 10, 1958, Ser. No. 766,591
5 Claims. (Cl. 125-11)



1. A grinding wheel truing apparatus for grinding machines having a rotatable grinding wheel, means for rotating said grinding wheel at the normal grinding speed, a truing apparatus therefor including a base, a slide on said base which is movable toward and from the grinding wheel, a motor driven rotatable truing wheel on said slide, a feeding mechanism to move said slide to advance the truing tool, a positioning mechanism to move said slide rapidly to position the rotating truing wheel into operative engagement with the grinding wheel while said grinding wheel is rotating at the normal grinding speed, means simultaneously to actuate the feeding and positioning mechanisms to initiate a truing cycle and means automatically to reset said feeding mechanism and to separate the truing wheel from the grinding wheel after a predetermined truing operation.

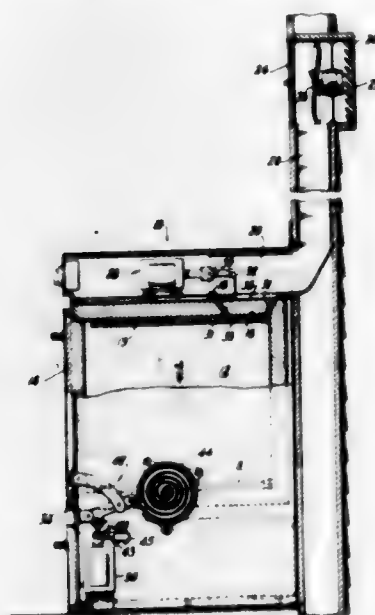
3,006,333

OVEN VENTILATION

Henry W. Niemann, R.D. 1, Redding, Conn.
Filed July 22, 1959, Ser. No. 828,744
9 Claims. (Cl. 126-19)

1. An oven having a door, electrical means for opening said oven door, electrical means for closing said

opened door, electrical means for ventilating the oven including a vent with a closure approximately opposite said door, electrical control means for starting in se-

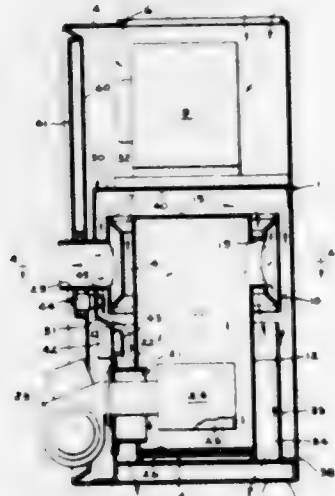


quence the operation of said ventilation means followed by said door opening means, and electrical control means for operating the door closing means and simultaneously stopping the operation of said ventilation means.

3,006,334

WARM AIR FURNACE

Robert W. Newell, Yardley, Pa., assignor to General Electric Company, a corporation of New York
Filed Apr. 27, 1959, Ser. No. 809,120
2 Claims. (Cl. 126-110)



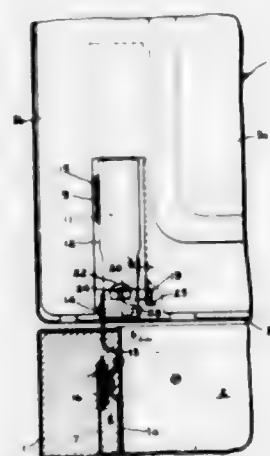
1. A furnace comprising a casing including side, front and end walls and having a return air inlet opening in one end wall and a heated air outlet opening at the other end wall, a heat exchanger unit within said casing, said unit comprising a closed first section in spaced relation with said casing and having one end disposed adjacent said other casing end wall in front of said outlet opening, said unit including a hollow second section surrounding and spaced from the other end of said first section at approximately the mid section of said casing, a flue connection on said second section, a burner disposed in said one end of said first section, a conduit connecting said first section with the second section for flow of combustion products from said first section to said

second section, a blower positioned in said casing adjacent said one end wall for circulating return air through said casing and between said first and second sections and out of said casing through said air outlet, and temperature responsive means for controlling the operation of said blower and said burner and including a first thermal switch means having a thermal actuating element positioned within said casing adjacent said first section at a point between said second section and said burner for energizing said blower in response to an increase in temperature of said first section and for de-energizing said burner upon an excessive increase in the temperature of the air blown through the space between said sections and over said element by said blower, and a second thermal switch means having a thermal actuating element positioned between said casing and said second member adjacent to and responsive to the temperature of said flue connection and second member for de-energizing said burner upon an excessive increase in the temperature of said flue connection and second member when said blower is not operating, the positioning of said thermal actuating elements providing controlled operation of said furnace when said furnace is in either a vertical position resting on said one casing end wall or in a horizontal position resting on either of said casing side walls.

3,006,335

REMOVABLE DOOR STRUCTURE

Kermit B. Keeling, Sr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Nov. 21, 1958, Ser. No. 775,458
5 Claims. (Cl. 126-191)

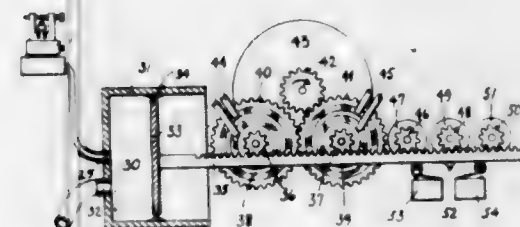


1. A removable door structure, a body having a vertical wall with a door opening therein, a pivoted door adapted to close said opening, a pair of first hinge means rigidly secured to said body at the bottom edge of said opening, a pair of second hinge means pivotally secured to said first hinge means respectively, a pair of door supporting members secured to said door and arranged to removably engage said pair of second hinge means respectively, said door being swingable between a vertical closed position and a horizontal fully open position, and a manually movable stop element mounted on at least one of said second hinge means for alternate movement between two positions, a first position in locking engagement with the related first hinge means when the door and said second hinge are in substantially the fully open position, and a second position out of locking engagement with the said related first hinge means but into locking engagement with the door, whereby said door is normally locked to the second hinge means and may only be fully removed from said body when said door is in the substantially fully open position and said stop element is in its said first position in locking engagement with the related first hinge means.

3,006,336

SERVO-SPIROMETER

Norbert W. Burils, St. Louis, and Milton J. Reinert, Ferguson, Mo., assignors to Custom Engineering and Development Co., a corporation of Missouri
Filed July 22, 1957, Ser. No. 673,441
10 Claims. (Cl. 128-2.08)



1. Volume and flow testing apparatus comprising a variable capacity air chamber for holding air to be inhaled and exhaled by the testee, a pressure transducer communicating therewith and generating a signal proportional to the pressure changes in said chamber from the inhalation and exhalation by the testee, a piston in said air chamber to vary its effective capacity, a rack gear integral with and driving said piston, a pair of pinion gears rotatable to control the movement of said rack gear and piston, a pair of magnetic clutches controlled by the proportional signal from said pressure transducer to control the driving of said pinion gears and the position of said rack and piston selectively in response to variations of pressure in the pressure transducer to compensate for said pressure variations produced by said testee in the variable capacity air chamber, and a constant speed electric motor in continuous operation to supply power to drive said pinion gears, rack and piston and an electrical circuit operating upon the output signal of the pressure transducer to selectively and proportionally energize one of the clutches to couple power from the electric motor to drive the rack and piston in such direction to compensate for variations of pressure detected by the pressure transducer.

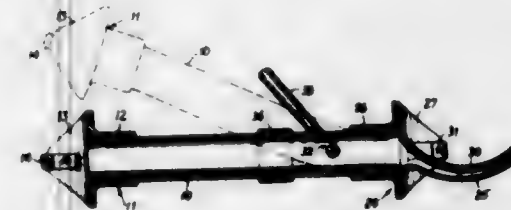
3,006,337

AIRWAY FOR ARTIFICIAL RESPIRATION

Edward Aguado, P.O. Box 4525, Plaza Station, St. Louis, Mo.

Filed Aug. 28, 1959, Ser. No. 836,812
1 Claim. (Cl. 128-29)

In an airway for artificial respiration, a main tube, a mouthpiece connected to one end of said tube, a curved, hollow tongue depressor having one end communicating with the interior of said main tube and having the opposite end open, said tongue depressor extending outwardly from the center of said mouthpiece, the mouthpiece having an ovoid flange adapted to fit between the gums and lips of the victim, and having biting surfaces



disposed on opposite sides of said tongue depressor, said main tube being provided with an aperture, a secondary tubing selectively located in said aperture and communicating with said main tube so as to introduce a supply of oxygen, and a resilient collar slidably mounted on said main tube yet tightly gripping the periphery of said tube, the resilient collar selectively covering said aperture upon removal of said secondary tubing.

771 O.G.-82

3,006,338

NON-ADHERENT SURGICAL DRESSING

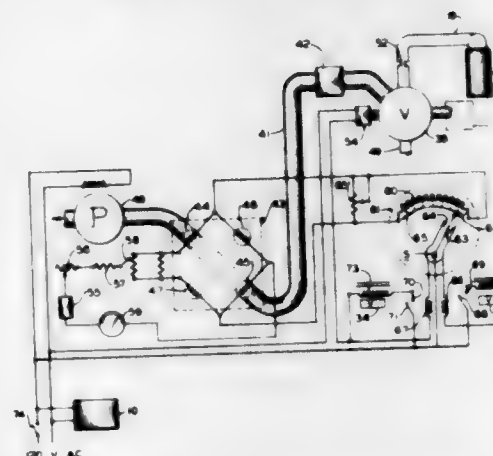
Thomas Parry Davies, Skipton, England, assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Oct. 7, 1954, Ser. No. 461,020
Claims priority, application Great Britain Oct. 12, 1953
8 Claims. (Cl. 128-156)

6. A surgical dressing comprising a porous fibrous fabric impregnated with polythene, said polythene being in particulate form and said fabric thereby being foraminous and permeable to fluids.

3,006,339

OXYGEN TENTS

William Harold Smith, Norwalk, Conn., assignor, by mesne assignments, to Shampaine Industries, Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 6, 1958, Ser. No. 765,645
12 Claims. (Cl. 128-191)

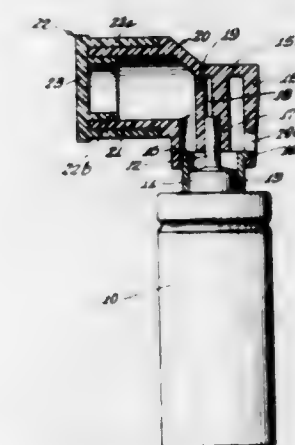


1. An oxygen tent comprising means for circulating breathing medium, means for supplying oxygen to said breathing medium, means for admitting room air to said breathing medium, and control means for automatically shutting off the supply of oxygen and admitting room air to the breathing medium when the oxygen content of the breathing medium reaches a predetermined maximum level, said control means also being operable automatically to open the oxygen supply and shut off the room air when the oxygen content of the breathing medium reaches a predetermined minimum level.

3,006,340

DISPENSING PACKAGE

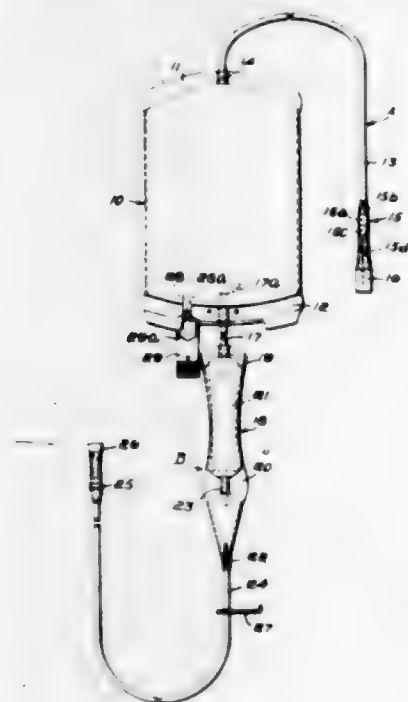
Philip Meshberg, 290 Euclid Ave., Fairfield, Conn.
Filed Mar. 3, 1958, Ser. No. 718,511
3 Claims. (Cl. 128-203)



1. A dispensing package for an aerosol comprising an aerosol container having an aerosol therein, valve means for dispensing a measured quantity of said aerosol for each operation thereof, said valve means including a projecting stem portion having a passage therein for said

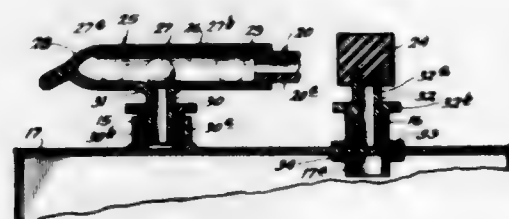
aerosol, means for directing said dispensed aerosol comprising a member mounted on said stem and having a laterally extending nozzle provided with a passage communicating with said passage in said stem, and pin and slot means interconnecting said member and container, said slot forming a tortuous path for said pin to prevent inadvertent movement of said member to operate said valve stem connected thereto, said pin and slot means being adapted to prevent operation of said member and said stem.

3,006,341
MEDICAL FLUIDS HANDLING AND ADMINISTERING APPARATUS
Edward J. Poitras, 198 Highland St., Holliston, Mass.
Filed Mar. 29, 1954, Ser. No. 419,496
9 Claims. (Cl. 128—214)



1. Apparatus for handling and administering medical fluids, comprising a collapsible bag, a fluid outlet on the bag, a fluid administering set permanently sealingly connected at said outlet and incorporating therein a drip chamber, means removably sealing the administration set at the end remote from the bag, and a closure element positioned within the apparatus at said outlet and maintaining said bag closed when said sealing means is removed to open said administration set, said closure element manipulable from without and through the walls of the apparatus to remove it from its outlet closing position and thereby to open said bag to said administration set.

3,006,342
BLOOD COLLECTION EQUIPMENT
Robert C. Reimann, Morton Grove, and Henry E. Metz, Glenview, Ill., assignors to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed June 20, 1958, Ser. No. 743,334
2 Claims. (Cl. 128—214)



2. In blood collection apparatus, a valve coupling a blood delivery conduit and a blood storage receptacle, said valve comprising an elongated, flexible tubular mem-

ber closed at one end and coupled at the open end to one end of said conduit, a port in said member intermediate the ends thereof and removably coupled to said receptacle, a rigid ball movably positioned in said tubular member, the coupled ends of said conduits and said member providing a stop for the movement of said ball from the closed end to the open end of said tubular member.

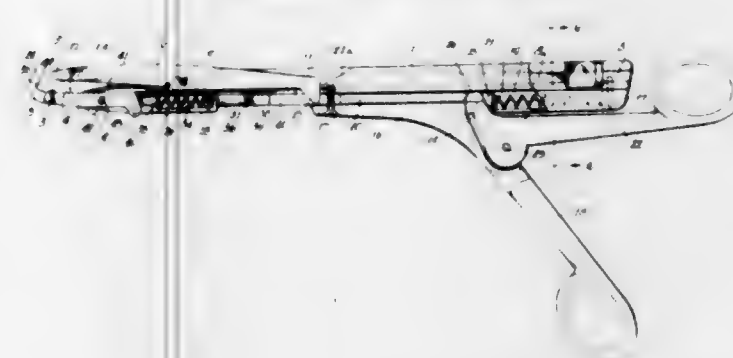
3,006,343
COLOSTOMY OR ILEOSTOMY APPLIANCE
Thomas R. Baxter, 202 N. Edgewood Road, Mount Vernon, Ohio
Filed Feb. 11, 1957, Ser. No. 639,277
11 Claims. (Cl. 128—283)



1. A colostomy or ileostomy appliance comprising, in combination; a re-usable mounting ring structure for temporary support of a disposable bag comprising a separate, initially flat, semi-rigid, washer-like, annulus of limited flexibility and substantially rectangular cross section having an outer diameter of the order of about three inches, an appreciable thickness of the order of about an eighth of an inch and a width several times greater than its thickness with the ring structure initially having a substantially flat inner bearing face of certain annular outline and an opposite outer face, said annulus being formed from elastic plastic material selected from the group consisting of such of the flexible polyethylenes, the flexible polymers and copolymers of vinylidene chloride resins, and the flexible polystyrenes as take a physical set when held in distorted condition at a temperature of about 37° C. to conform to the contours of an area of a person's abdomen when physically clamped thereto and in use under the influence of body heat and clamping stress takes a physical set diametrically to a shape corresponding generally to the shape of the body portion over which it is clamped; a pair of harness anchoring means mounted to the outer face of said annulus at substantially diametrically-opposite points each in the form of an elongated rigid levering member extending outward from the outer annulus face and having an inner shank portion anchored in said annulus, an outer engaging head portion and an intervening outer shank portion; a disposable bag of relatively thin, flaccid and flexible stock separate from and having a large open mouth removably lapped against said annulus circumferentially thereof with portions of the bag mouth extending over the outwardly-extending outer shank and head portions of said rigid anchoring levering members; and body-encircling harness means physically to clamp said ring structure to an area of a person's abdomen with the bearing face of said ring structure shaped to and held at all points firmly against the abdominal area and with substantial maintenance of the annular outline thereof free of undue buckling, said harness means carrying a pair of laterally spaced-apart and opposed engaging means each having a portion detachably engaged about the outwardly-extending outer shank portion and beneath the outer head portion of one of said rigid anchor-

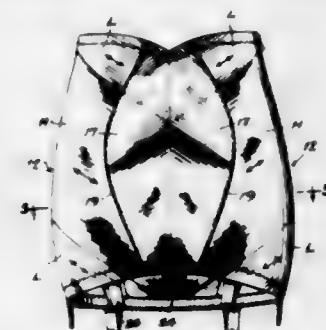
ing levering members with said harness means disconnectably extending between the pair of the latter, the portion of the bag mouth extending over the outwardly-extending outer shank and head portions being temporarily gripped between the outer shank portions and the engaging means carried by said harness means.

3,006,344
SURGICAL LIGATOR AND CUTTER
Isaac J. Vogelfanger, 86 Irving Place, Ottawa, Ontario, Canada
Filed Feb. 24, 1959, Ser. No. 794,914
8 Claims. (Cl. 128—318)



1. A surgical ligator and cutter comprising an elongated body member having a forward end, a rearward end, and a fixed jaw adjacent said forward end, said jaw being a pair of laterally aligned spaced clip-receiving sections, an arm pivotally mounted intermediate its ends in said body member, said arm having a movable jaw adjacent one end thereof, said movable jaw having a pair of laterally aligned spaced clip-engaging sections each overlying one of said clip-receiving sections, a cutter pivotally mounted in said body member and having a path of movement located between said clip-receiving and clip-engaging sections and intersecting the plane of each said clip-receiving sections and said clip-engaging sections, a bar slidably mounted in said body member, cam means for rocking said arm in response to an initial degree of reciprocal movement of said bar to move said movable jaw towards said fixed jaw, and cam means for rocking said cutter in response to a subsequent degree of reciprocal movement of said bar to move said cutter in said path.

3,006,345
BODY MOLDING GARMENTS
Eileen A. Rockwell, Bridgeport, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Filed May 1, 1959, Ser. No. 810,382
6 Claims. (Cl. 128—548)



1. In a body molding garment, a front panel, a rear panel, and a pair of side portions connected to the side edges of said front and rear panels along seam lines extending from the top to the bottom edge of the garment, and having top and bottom edges respectively in the circumferential line of the top and bottom edges of

said front and rear panels, said side portions comprising pairs of forward and rearward side sections of one-way stretch elastic material vertically co-extensive with said side portions and connected together along substantially vertically extending neutral areas extending from said top edge to said bottom edge, the forward side sections for the full height between said top and bottom edges of said side portions having their stretch directions diagonally downward from said neutral areas to the front panel and to said bottom edge of said side portions and said rearward side sections having their stretch directions diagonally downward from said neutral areas to said rear panel and to said bottom edge of said side portions.

3,006,346
FILTERS FOR CIGARETTES AND CIGARS AND METHOD OF MANUFACTURING SAME
Edwin L. Golding, 10573 Ashton, Los Angeles, Calif.
Filed Dec. 15, 1958, Ser. No. 780,376
9 Claims. (Cl. 131—10)



1. A filter comprising: at least two layers of porous material; and a relatively thin layer of adhesive having openings therethrough disposed between said layers of porous material and adapted to bond said layers of porous material together, said adhesive layer comprising adsorbent, finely divided material.

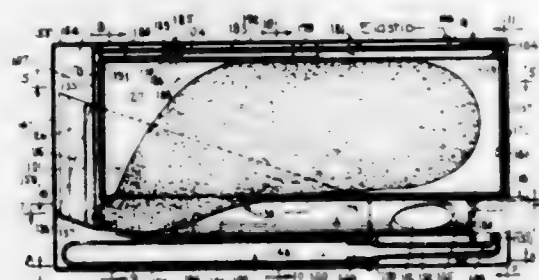
3,006,347
ADDITIVES FOR SMOKING TOBACCO PRODUCTS
Josiah L. Keaton, Old Town Community, near Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey
No Drawing. Filed Sept. 21, 1959, Ser. No. 841,001
13 Claims. (Cl. 131—15)

1. A tobacco product comprising tobacco and a wrapper therefor, said wrapper having added to a portion thereof a tobacco flavorant encapsulated in a film-forming vehicle having as a basic chemical constituent a substance selected from the group consisting of polysaccharides, polypeptides, and mixtures thereof.

3,006,348
CIGARETTE ROLLING MACHINES AND THE LIKE
Thomas A. Banning, Jr., 5520 S. Shore Drive, Chicago, Ill.
Filed Sept. 10, 1958, Ser. No. 760,149
61 Claims. (Cl. 131—59)

1. In a cigarette roller, the combination of means to produce a continuous length of cigarette including a tubular cigarette wrapper having a spiral seam extending along its length and enclosing the cigarette tobacco, said means comprising a hollow horn of internal size substantially the same as the diameter of the cigarette, said horn having a wrapper entrance portion and a cylindrical delivery portion having a delivery end, means to supply to the interior surface of the wrapper receiving portion of said horn a wrapper strip in spiral fashion during advance of the wrapper strip through the horn from the wrapper entrance portion of the horn to the delivery end thereof, said means to supply the wrapper strip to the wrapper entrance portion of the horn being constituted to supply

the wrapper strip in a direction non-parallel to the axis of the horn by an angular amount corresponding to the spiral angle of the wrapper strip within the horn, means to progressively curl the wrapper strip into a cylindrical spiral in advance of the entrance portion of the horn and during travel of the wrapper strip to the entrance portion of the horn and to bring the edges of the wrapper strip into proximity to each other, means to secure said edges together, means to advance through the horn the wrapper strip so supplied to the entrance portion of the horn and means to supply tobacco to the concave face of the wrapper strip at a location in advance of the entrance portion of the horn and in advance of the location where the edges of the wrapper strip are brought into proximity with each other, said tobacco supply means including a hopper in proximity to the concave face of the means which progressively curls the wrapper strip aforesaid, said hopper comprising an enclosure having a pair of parallel walls reaching to said location which is in advance of the entrance portion of the horn, and the hopper having an opening in proximity to the concave face of the wrapper strip at said location, said hopper opening extending from a first defined end location in proximity to the

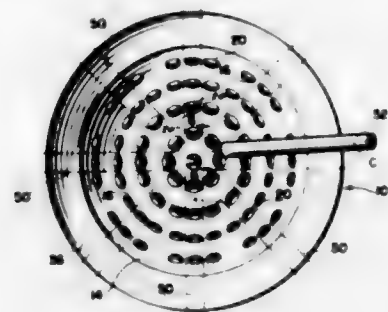


wrapper entrance portion of the horn to a second defined end location farther removed from said wrapper entrance portion of the horn, the interior of the hopper being in communication with the concave face of the wrapper strip through said opening, a stripper strip within the hopper and substantially normal to the interior surfaces of said parallel hopper walls and of width substantially the same as the distance between said parallel wall surfaces, means to anchor a first defined end of the stripper strip with respect to one of said defined end locations of the opening, means to support a second defined portion of the stripper strip in proximity to the other of said defined end locations of the opening, said stripper strip between said first defined end of the stripper strip and said second defined portion of said stripper strip defining the perimeter of the body of tobacco in the hopper, and means in connection with the stripper strip to produce tension in said strip and to urge shortening of the length of the perimeter of the body of tobacco within the hopper with production of forces in said body of tobacco to urge delivery of tobacco from said body through the hopper opening and against the concave surface of the wrapper strip.

3,006,349
CIGARETTE POSITIONING ASH TRAY
Stanley P. Garson, 168 Boston St., Apt. 9, Seattle, Wash.
Filed Mar. 31, 1958, Ser. No. 725,353
4 Claims. (Cl. 131-240)

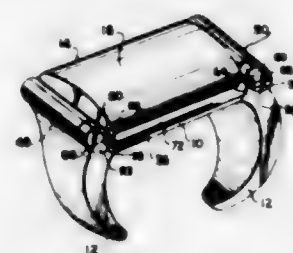
1. A cigarette positioning ash tray, comprising: a base portion having a bottom and an upstanding rim adapted to form in coaction with said bottom a storage chamber for the reception of ash, cigarette butts and the like; a downwardly dished sheet metal cover screen of substantially conical form provided with a plurality of openings; upstanding metal bar portions spanning said openings and dividing said openings into smaller openings on opposite

sides of said bar portions, said bar portions extending upwardly above the surface of said cover screen and



adapted to form lodgement means to assist in the positioning of cigarettes and means for positioning said screen on said base portion.

3,006,350
COMBINED WATERPROOF BRACELET AND VANITY CASE
Armin Grünfeld, 66-10 Yellowstone Blvd., Forest Hills, N.Y.
Filed May 18, 1959, Ser. No. 813,963
2 Claims. (Cl. 132-83)

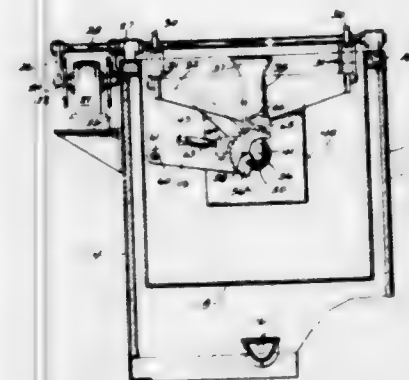


1. An article of the character described, comprising a hollow rectangular base, wrist-encircling members integrally formed with and depending from the base, a rectangular cover for the base, means for effecting a waterproof seal between the base and cover including a sponge pad, and a pair of tubular cosmetic containers integral with said base and members and disposed across the ends of the base, each of said containers having a removable cap extending laterally of the ends of the base and carrying a cosmetic, said cover having pins extending from ends thereof, and interlocking elements carried by the caps and engaged by the pins when the cover is closed on the base, said caps and containers having groove and stud connections, said interlocking elements being a pair of spaced pins on each cap located in the path of movement of the cover pins so that the pins on the cover automatically turn the caps oppositely angularly to lock and unlock the caps as the cover is being closed and opened respectively, said cover being hingedly connected at one end to one of said tubular cosmetic containers, said connection including hinge knuckles on the end of the cover and a coating hinge knuckle on the adjacent container.

3,006,351
ROTO DUNKER AND PROCESSING HOT TANK
Clarence G. Grube, 4500 Meadow View East, Brookfield, Wis.
Filed May 6, 1959, Ser. No. 811,497
1 Claim. (Cl. 134-112)

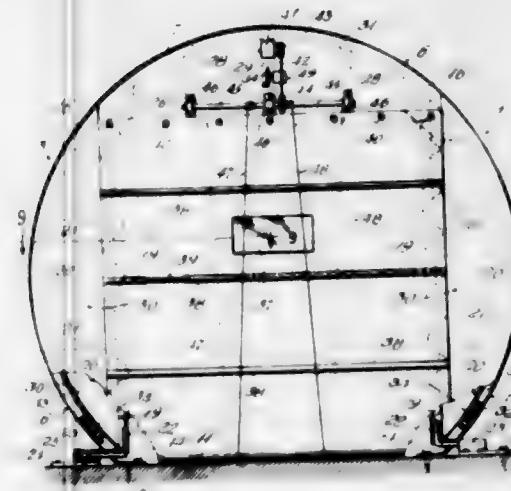
In a device of the character described, a rotatable basket, a ratchet gear affixed to one end thereof, means for vertically reciprocating said basket in a cleaning

solution, multiple spring-pressed pawl means for rotating said gear and basket during downward movement thereof,



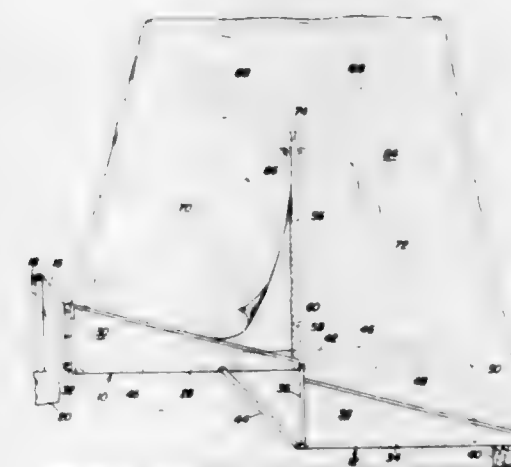
and pawl means for preventing reverse rotation of the basket during the upward movement thereof.

3,006,352
DOOR FRAME AND ROLL-UP DOOR MECHANISM FOR AIR LOCKS
Robert Frank Hozak, Chicago, Ill., assignor to Cld Air Structures Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 27, 1959, Ser. No. 855,703
6 Claims. (Cl. 135-1)



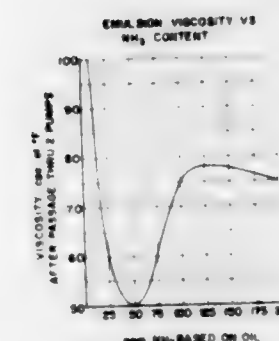
3. A collapsible air lock for flexible air-pressure supported building structures comprising a pair of arcuate-shaped end support members disposed in aligned spaced relation and pivotally mounted at their bases to allow said support members to raise to an elevated position as the air-pressure supported building is elevated, one of said support members secured in a side wall opening of the building structure, a generally square door frame having a horizontal top member carried by each of said end support members, an air impermeable fabric covering secured to the perimeter of the arcuate end support members and extending therebetween to form an arcuate tunnel-like structure, air impermeable fabric panels secured intermediate the arcuate-shaped end support members and the door frame carried thereby, an air impermeable fabric door panel secured to the horizontal top member of each door frame, said door panels disposed on the high pressure side of said door frames and covering the openings formed by said door frames, a control shaft rotatably mounted to the end support members above each door panel, motor means for selectively rotating said shafts and control lines connecting said door panels and the rotatable control shafts for rolling up said fabric door panels when the motor means are energized.

3,006,353
CAMP GEAR STRUCTURE
Morgan B. Richardson, 5330 Valle Vista Drive, La Mesa, Calif.
Filed Mar. 28, 1960, Ser. No. 17,979
5 Claims. (Cl. 135-4)



1. A camp gear structure comprising a pair of parts relatively pivotable from a closed position to an open position; elongated support means pivotally carried adjacent the inner end thereof by one of said parts; bow means slidably carried by said support means and effective to support a canopy; elongated means fixed at one end to one of said parts, in engagement with said support means adjacent the outer end of said support means, and fixed at the opposite end thereof to said bow means to thereby first pivot said support means to a substantially vertical position and thereafter slidably urge said bow means toward the outer end of said support means to deploy the canopy to its operative position when said hinged parts are pivoted to said open position; and means operative to maintain said support means in said substantially vertical position.

3,006,354
METHOD FOR TRANSPORTING LIQUIDS THROUGH PIPELINES
Harry J. Sommer, Lafayette, and Warren C. Simpson, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware
Filed Mar. 15, 1956, Ser. No. 571,856
1 Claim. (Cl. 137-13)

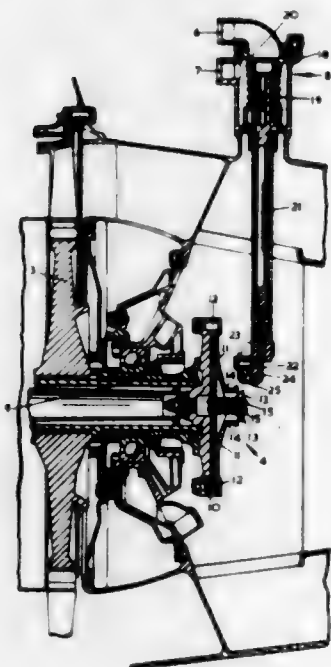


In the pipeline transportation of sequential consignment of a relatively low viscosity crude petroleum oil followed by a dispersion of a relatively high viscosity oil dispersed in water said dispersion having between about 25% and 45% by weight of suspending water based upon the total weight of high viscosity oil and water and between about 35 and about 100 p.p.m. by weight, based on the high viscosity oil of ammonia, the step comprising forming between the two oils a separating dispersion comprising a relatively high viscosity crude

oil dispersed in between about 48% and about 65% by weight of water, based on the weight of oil and water in the separating dispersion, and pumping the low viscosity crude and the two dispersions in sequence through the pipeline.

3,006,355 TURBINES

Albert Thomas, Coventry, England, assignor, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Mar. 9, 1959, Ser. No. 798,202
Claims priority, application Great Britain Mar. 13, 1958
4 Claims. (Cl. 137-31)



1. A gas turbine engine including a turbine, combustion chamber means capable of supplying working gases to said turbine, means for supplying fuel to said combustion chamber means, means for interrupting said supply of fuel and centrifugally-operable trigger means comprising a plurality of symmetrically-arranged radially-extending arms rotatable with the turbine and each held at a position spaced radially from the axis of rotation of the turbine, each arm having an extension in the axial direction at the radially-inner end thereof and being biased against centrifugal force by so pre-stressing the arms that they tend to spring in a direction opposed to the direction of the centrifugal deflection, abutment means being provided to limit movement of the arms in the said opposed direction, the biasing being sufficient only to resist centrifugal force until a predetermined speed has been reached, the arms being deflected outwardly about their holding positions at said predetermined speed to actuate said interrupting means.

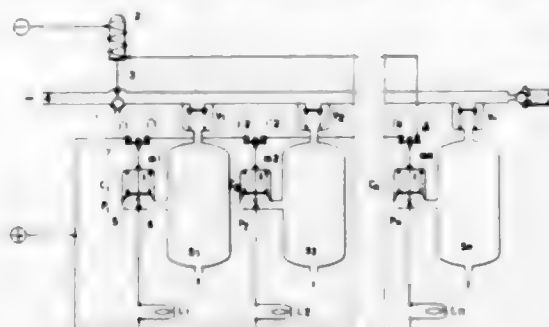
3,006,356

CONTROL OF THE IDLE VALVE OF A COMPRESSOR HAVING A PLURALITY OF RECEIVER SECTIONS

Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli, Milan, Italy, a company of Italy
Filed Feb. 8, 1957, Ser. No. 639,054
Claims priority, application Italy June 28, 1956
6 Claims. (Cl. 137-108)

1. A control for feeding a plurality of tanks comprising a compressor conduit, a valve in said conduit for selectively discharging said conduit, an electrically operated device for controlling said valve, a source of electrical power, an electrical circuit connecting said device with said source, and switches connected in series in said circuit for opening the same; said switches respectively

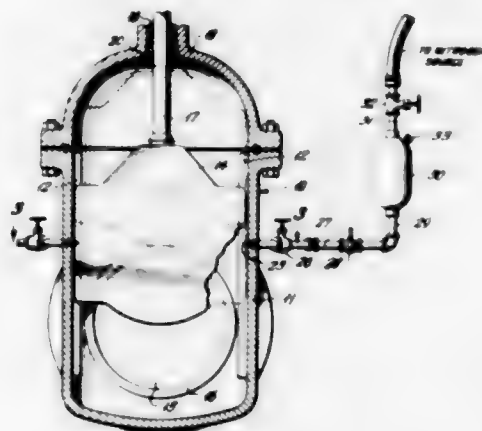
being operatively associated with different ones of said tanks and being responsive to predetermined pressures therein for cooperatively operating said device and a



check valve between said conduit and each of said tanks, said valve being responsive to pressure in the associated tank to selectively permit feeding thereof.

3,006,357 VALVES

Rudolph C. Woerner, Houston, Tex., assignor to Petro-Tex Chemical Corporation, Houston, Tex., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,162
7 Claims. (Cl. 137-237)



1. A valve for high temperature operation comprising a valve body having inlet and outlet openings; a valve seat positioned in said body; ways positioned opposite to each other in said body; a gate for closing and opening the valve, said gate slidably mounted on said ways; lubrication passageways in said valve body terminating in orifices in the surface on which said gate slides for lubricating the contacting surfaces between said ways and gate, said orifices being exposed near the end of a lubricating stroke; and means for forcing a measured amount of lubricant through said orifices during said lubricating stroke and for blowing the orifices free from lubricant when the contacting surface of said gate has passed over said orifices.

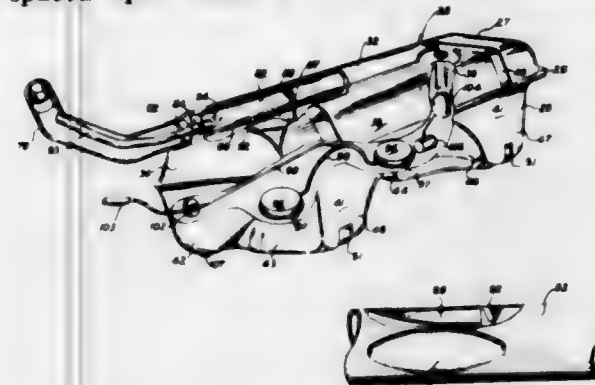
3,006,358

SADDLE TYPE FUEL TANK

Eugene Edward Hildebrandt, Dearborn, and Arthur Marc Sterren, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 6, 1956, Ser. No. 602,116
4 Claims. (Cl. 137-246)

1. An improved fuel filler construction for a compartmentalized fuel tank for a motor vehicle or the like, said fuel tank having a generally transversely extending upper tank section and a lower tank section secured to said upper tank section, said lower tank section having a medially disposed longitudinally extending tunnel-like section defining a pair of fuel compartments open to each other adjacent the underside of said upper tank section, a single opening in one of the tank sections for the ad-

mission of fuel and a second opening in the same tank section for the passage of air, a transversely disposed filler tube in said fuel admission opening and having a portion of its length extending both inwardly and outwardly of the fuel tank, mounting means securing said filler tube to the underside of the upper tank section, a pair of spaced apart inlets in the filler tube defining a

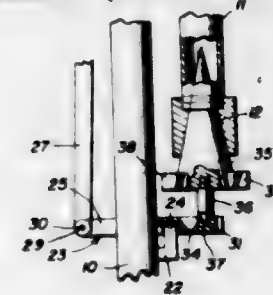


fuel inlet for each of said compartments, said first inlet diverting substantially one half of the fuel into one compartment and the second inlet dumping the remaining fuel into the other compartment, a transversely disposed breather tube mounted in said second opening, one end of said breather tube being spaced apart from the inside end of the filler tube and the other end of the breather tube communicating with the outside end of the filler tube.

3,006,359

TOILET FLUSH TANK INTAKE VALVE

Everett A. Lister, 75 Giralda Walk, Long Beach 3, Calif.
Filed Nov. 20, 1958, Ser. No. 775,225
2 Claims. (Cl. 137-332)



1. A toilet flush tank intake valve comprising a generally inverted U-shaped filler pipe having one end portion connected to a supply pipe, a rocker arm pivotally secured, at an intermediate point, on said one end portion of said filler pipe, a valve seat on the discharge end of the filler pipe, a float arm pivotally mounted, at an intermediate point, on the bend of the filler pipe, means comprising a link operatively connecting said float arm to one end of the rocker arm, a bearing on the other end of the rocker arm, a vertical spindle journaled in said bearing, a valve on said spindle engageable with the seat for controlling the discharge of water from the filler pipe, and fins on the valve for engagement by the water for rotating said valve.

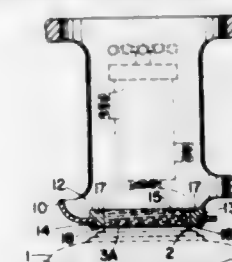
3,006,360

CAP-STAND FOR GAS CYLINDERS

Peter Rolfe Oxenham, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,793
2 Claims. (Cl. 137-382)

1. A cap and stand for compressed gas cylinders, which cylinders have a neck on one end with an opening to accommodate a valve assembly, the cap and stand comprising a cylindrical body of a length and diameter sufficient to encase the valve assembly and form a stand for the cylinder, said body of the stand having

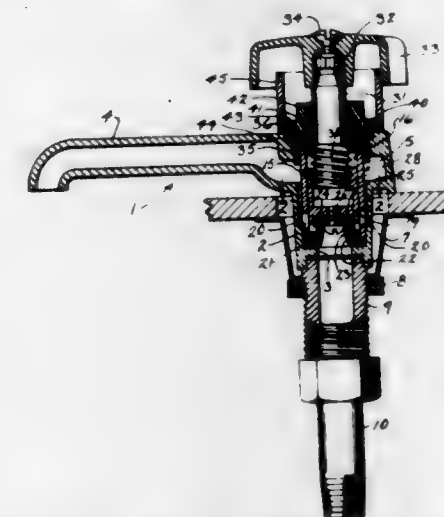
openings at opposite sides sufficiently large to permit access to the valve, hand holds on said cylindrical body, said cylindrical body having a base portion with a circular opening concentric with the body portion of said



cylindrical body, a swivel collar irremovably fixed in said opening, said collar having an opening adapted to fit over the neck of said cylinder and be affixed thereto so that the cap and stand may be rotated thereon.

3,006,361 VALVE UNIT

Wilfred W. Reinemann, Kohler, Wis., assignor to Kohler Co., Kohler Village, Wis., a corporation of Wisconsin
Filed Oct. 15, 1957, Ser. No. 690,280
3 Claims. (Cl. 137-454.5)



1. In a valve unit the combination comprising a valve cage in the form of an open ended sleeve; an inlet valve seat open through the center having a rim that seats against the edge at one end of the valve cage sleeve to form an extension of the sleeve that presents an endwise facing bearing surface defining the terminus of the valve unit, which valve seat further defines a portion extending around the edge of the valve cage sleeve into the interior of and in frictional engagement with the valve cage and forms a seat facing inwardly of the valve cage; a valve plunger of uniform cross-section to provide a substantially coextensive bearing surface adjacent the inner sleeve surface of said valve cage and axially slidable totally within the valve cage, said valve plunger having a valve at one end in facing relation to said seat of the inlet valve seat and having an axially extending thread at its opposite end; means preventing rotation of the valve plunger with respect to the valve cage; and a rotatable operating stem threadedly engaged at one end with said axial thread of said valve plunger and extending from the valve cage to terminate in an operating end.

3,006,362

REGULATING-VALVE MEANS

Paulsen Spence, Baton Rouge, La.
Original application Mar. 7, 1952, Ser. No. 275,275, now Patent No. 2,787,285, dated Apr. 2, 1957. Divided and this application Feb. 26, 1957, Ser. No. 652,328
1 Claim. (Cl. 137-489.5)

In a pressure-regulating system of the character indicated, a main valve including a body having an inlet port

and an outlet port and a main-valve member therebetween, said valve also having a bonnet opening overstanding said main-valve member on the inlet side thereof, pressure-responsive actuating means for said main-valve member, an integral pressure-responsive pilot valve secured at said bonnet opening and having a pilot-valve member exposed within the inlet side of said main valve, pressure-responsive actuating means for said pilot-valve member and including a control-pressure connection

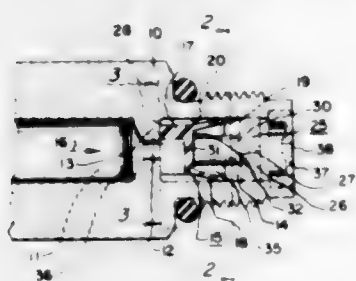


downstream from said main valve, a connection from the downstream side of said pilot-valve member to said pressure-responsive actuating means for said main-valve member, said last-mentioned connection including a bleed connection to the downstream side of said main valve, said pressure pilot including resilient means biasing the control pressure characteristic thereof, a motor carried by said pilot valve for preloading said resilient means, and means including said motor for automatically increasing the preload on said resilient means in predetermined steps and at predetermined time intervals.

3,006,363

CHECK VALVE

George W. Jackson and Gene L. Daffer, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 20, 1958, Ser. No. 775,280
4 Claims. (Cl. 137-525)



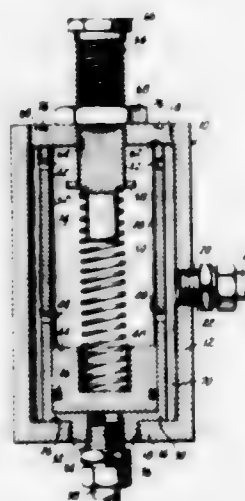
1. A check valve providing for flow of fluid in one direction, comprising, a body member having a wall provided with an opening in said wall for flow of fluid through the body and said wall, said body also having a chamber adjacent said wall coaxial with said opening, a valve member of resilient material positioned in said chamber, said valve member having a body portion comprising a plurality of axially extending segments each having a generally ellipsoidal contour in transverse cross section disposed relative to one another with their longitudinal axes generally parallel and each having a face at one end thereof engageable with said wall and positioned around said opening, said segments being in spaced relationship where-

by to provide longitudinally extending passages between the said segments radiating from a central space encompassed by the said segments, said central space being in axial alignment with said opening in said wall, said body portion having an open-ended cup-shaped skirt portion extending from the opposite end of said body portion with the terminus end of said skirt portion providing a peripheral lip engaging the inner periphery of said chamber and expansible against said inner periphery to seal against pressure flow of fluid in a direction into said open-ended skirt portion and contractible from the inner periphery on pressure flow of fluid in the opposite direction to allow fluid flow in the said opposite direction, and a stop member positioned in said chamber adjacent the said skirt portion of said valve and engageable by said valve member to limit axial movement of the valve member relative to said wall by the spaced relationship of the stop member relative to said wall, said stop member having an enlarged head portion engaging the inner periphery of said chamber whereby to retain said stop member in position in said chamber relative to said wall, said stop member also having a stem portion projecting from said head portion coaxial therewith and coaxial with said valve member and said opening in said wall and projecting into the open-ended skirt portion of said valve member for engagement by said body portion whereby to limit the axial movement of the valve member relative to said wall by the spaced relationship between the end of said stem portion and said wall.

3,006,364

ADJUSTABLE BY-PASS VALVE AND ACCUMULATOR

William M. Osborn, 3349 Zuni St., Denver, Colo.
Filed Oct. 1, 1959, Ser. No. 843,670
8 Claims. (Cl. 137-538)



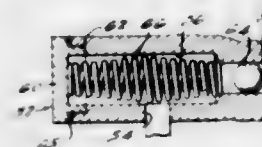
1. An adjustable by-pass valve and accumulator comprising: an outer tubular member having a smooth cylindrical inner wall, an open end and a closed end having a bore therethrough; an inner tubular member having an external smooth cylindrical wall having a diameter which is less than the internal diameter of the inner wall of said outer member and receivable within said outer member to define a central cylindrical chamber and an annular chamber, of uniform internal and external diameters extending the length of said inner tubular member, said central cylindrical chamber having an open end and a closed end; an axial boss on the closed end of said inner tubular member having an external diameter equal to the internal diameter of the bore in the closed end of the outer tubular member and adapted to be received therein; an axial bore in the closed end and boss of said inner tubular member providing a flow passage; apertures in the wall of said inner tubular member spaced from the closed end thereof; a piston valve reciprocable

within said inner tubular member and adapted to cover and uncover said apertures; resilient means acting on said valve to urge the valve toward said closed end to cover said apertures; an aperture in the wall of said outer tubular member providing a flow passage; and common closure means to close the open ends of the inner tubular member and annular chamber.

3,006,365

PRESSURE RELIEF VALVE

James J. Duffy, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 2, 1957, Ser. No. 669,642
10 Claims. (Cl. 137-539)

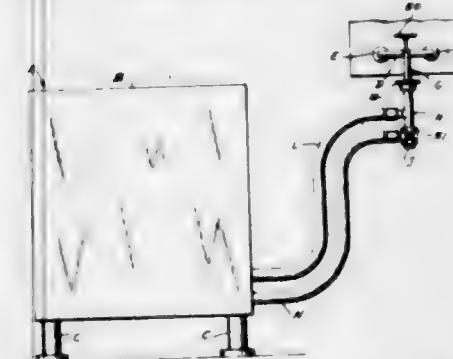


3. In a hydraulic circuit including a pressurized conduit and a region of relatively reduced pressure; a pressure relief valve mechanism including a housing, a bypass passage formed in said housing interconnecting said conduit with said region of reduced pressure, said bypass passage including a spring chamber and a section of reduced cross sectional area, the latter communicating with said pressurized conduit, a valve element movably disposed in said reduced area section, the cross sectional dimension of said valve element being substantially equal to the corresponding dimension of said section of reduced cross sectional area, a shoulder formed at the juncture of said spring chamber and said section of reduced cross sectional area and a spring located in said spring chamber and seated on said shoulder, said spring being engageable with said valve element upon movement of the latter toward said spring chamber, said valve element thereby assuming a floating condition during operation, the pressure force acting on said valve element being balanced by the force of said spring whereby a regulated pressure is maintained in said region of reduced pressure.

3,006,366

MULTIPLE PURPOSE WATER CONNECTOR

Georg Jagusch, 1712 Gates Ave., Brooklyn, N.Y.
Filed July 7, 1958, Ser. No. 746,940
1 Claim. (Cl. 137-562)



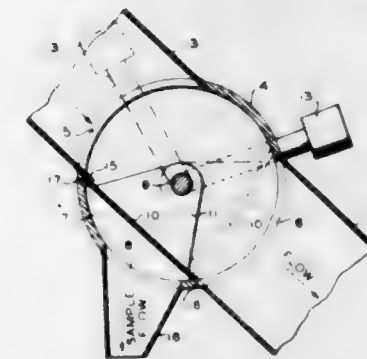
A domestic washing machine of the type having a vertical tubular flow connection with a single top threaded inlet connection from a sink faucet and a single bottom outlet to a sink, said washing machine having two parallel superimposed lateral inlet and outlet threaded end conduit connections extending transversely from the side of the flow connection and having upper and lower junctions with the tubular flow connection, the axes of the vertical tubular flow connection and the lateral connections being positioned in the same vertical plane, a spring seated inlet ball check having a vertical coil spring

771 O.G.—83

3,006,367

VALVE

Ralph R. Thompson, Pasadena, and Edgar W. Bransch, Jr., Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,338
3 Claims. (Cl. 137-610)



1. A flow conduit comprising, in combination, a rectangular valve plate pivotally mounted on a shaft within a cylindrical valve body having an inlet opening, an outlet opening, and a discharge opening, a first rectangular pipe having its longitudinal axis at right angles with the axis of said valve body in register with said inlet opening, a second rectangular pipe having its longitudinal axis at right angles with the axis of said valve body in register with said outlet opening, an actuating element in cooperating relationship with said plate fixed to said shaft from without said valve body, said plate being of sufficient size to block flow through said outlet opening in one position of said plate and through said discharge opening in another position of said plate, said plate in cross section being positioned along and having a dimension substantially equal to a cord of a circular cross section of said cylindrical valve body, thereby being adapted to produce a scraping action on said valve body as it is moved therein, said first pipe having an extension forming a substantially linear lip at said inlet opening against which lip said plate abuts when in position to block flow through said discharge opening, said plate in said latter position forming a continuation of a wall of said first pipe and the corresponding wall of said second pipe.

3,006,368

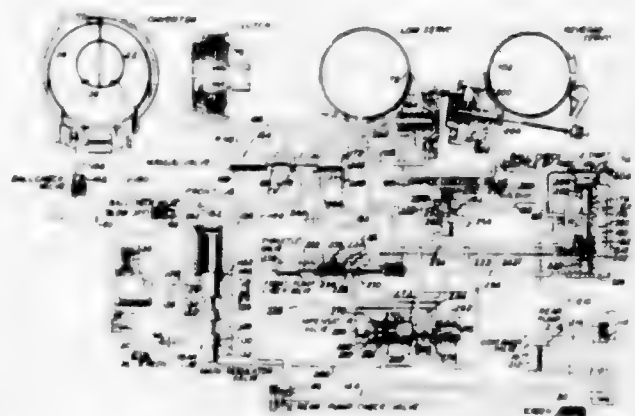
TRACTOR BRAKE SYSTEM PROTECTIVE VALVES

Robert H. George, Melrose Park, Pa., assignor to Brake-master Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 13, 1958, Ser. No. 773,645
4 Claims. (Cl. 137-614.2)

1. A protective valve for interposition in the fluid lines between the tractor and trailer brake components of tractor trailer type automotive brake systems and for isolating the tractor brake system upon rupture of the fluid lines comprising a housing having a plurality of longitudinally axially aligned housing sections with separable threaded connections therebetween, a first of said housing sections having a fluid connection for the delivery of a controlling pressure fluid thereinto, a second

of said housing sections having a fluid delivery connection communicating with the interior thereof, a third of said housing sections having a supply fluid connection in communication with the interior thereof for pressure fluid supply thereto, a piston in said first housing section against which said controlling pressure fluid is applied, a resilient member urging said piston in opposition to the force of said controlling pressure fluid, said piston having a valve stem extending longitudinally axially therefrom in said housing and from said first housing section into said second housing section, said valve stem having a passageway therein, said passageway having venting openings and said first housing section having vent ports in communication with the atmosphere and with which said venting openings are in communication, a valve member disposed in said second and third housing sections longitudinally axially movable with respect to said stem, said valve member and said stem

control the distribution of fluid pressure in said conduit structure, passage means for subjecting one portion of said other valve element part to a first pressure signal, means for subjecting another portion of said other valve



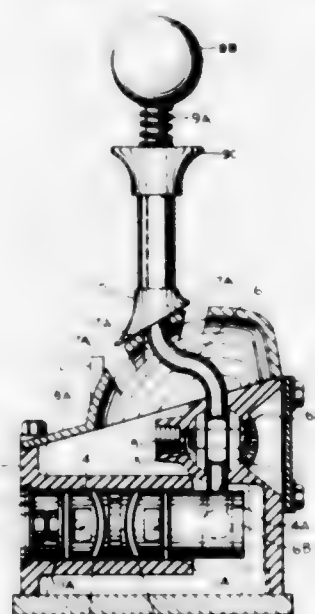
element part and said one valve element part to a second pressure signal, and a pressure modulator valve means disposed in said annular valve chamber for controlling the magnitude of said second pressure signal.

3,006,370

CONTROL SYSTEM FOR ACTUATORS

Edwin H. Parkhurst, Jr., Cleveland Heights, Ohio, assignor to Park Manufacturing Company, Cleveland, Ohio

Filed July 25, 1960, Ser. No. 45,100
1 Claim. (Cl. 137-622)



A pressure control system of the type designated, comprising a casing provided with a cylindrical bore connected to a plurality of inlet and outlet ports, a second cylindrical bore connected to a plurality of other inlet and outlet ports, a slide valve within each of said cylindrical bores, a single shift lever pivotally connected to each of said slide valves arranged to move said slide valves longitudinally and rotatably to open and close selected outlet ports.

3,006,371

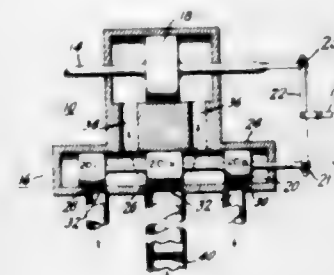
LOW GAIN AND LONG TRAVEL VALVE

Walter B. Giles, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed June 19, 1956, Ser. No. 592,279
3 Claims. (Cl. 137-622)

1. A low gain, long travel valve unit having a sleeve member, drain ports provided on said sleeve member, a supply port on said sleeve member, porous means within

each of said drain and supply ports, means coupling said supply port to a source of fluid, filter means between said source of fluid and said supply port to prevent clogging



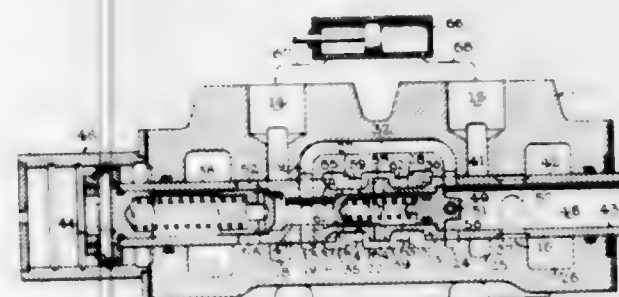
of said supply port, and stem means reciprocating within said sleeve member and cooperating with said porous means to obtain a low flow through said various ports for a long movement of the stem means.

3,006,372

CONTROL VALVE WITH CAVITATION-MINIMIZING REPLENISHING CIRCUIT

Charles A. L. Ruhl, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey

Filed Apr. 22, 1959, Ser. No. 808,043
7 Claims. (Cl. 137-622)



1. In a control valve of the type including a housing containing inlet and exhaust ports and first and second motor ports, and a movable valve element carrying valving heads which cooperate with seats in the housing to control communication between said ports, and in which the valve element has a first position in which it isolates each motor port from the other three ports, a second position in which it isolates the inlet port from the exhaust port, establishes a flow path between the inlet port and the first motor port, and establishes a flow path between the exhaust port and the second motor port, and a third position in which it isolates the inlet port from the exhaust port, establishes a flow path between the inlet port and the second motor port, and establishes a flow path between the first motor port and the exhaust port, the improvement which comprises a flow restriction located in the flow path connecting the exhaust port and the first motor port; a replenishing circuit including a replenishing passage connecting the flow path between the second motor port and the inlet port with a point in the flow path between the first motor port and the exhaust port upstream of the flow restriction, and a replenishing valve located in the replenishing passage and shiftable in passage-opening and passage-closing directions; resilient means biasing the replenishing valve in the passage-closing direction; first means responsive to the pressure in the flow path connecting the second motor port and the inlet port for urging the replenishing valve in the passage-closing direction; second means responsive to the pressure in the flow path connecting the first motor port and the exhaust port upstream of the flow restriction for

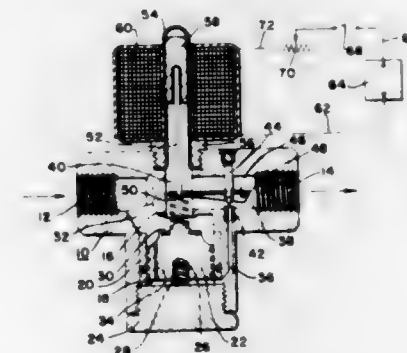
urging the replenishing valve in the passage-opening direction; and means carried by the movable valve element and by the housing and associated with the replenishing circuit for preventing flow through the replenishing passage when the movable valve element is in its second position.

3,006,373

AUTOMATIC MODULATING CONTROL VALVES

Edward C. Ehlke, Brookfield, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 27, 1960, Ser. No. 32,209
7 Claims. (Cl. 137-623)



1. A modulating solenoid valve including a valve body having an inlet and outlet, a piston within said valve body, said valve body being provided with a piston chamber for receiving said piston, said chamber having a closed end, said valve body being provided with a valve seat between said inlet and said outlet, a main valve connected to said piston and adapted to engage said valve seat to control the flow of fluid from said inlet to said outlet, a restricted fluid passage extending from the inlet to the closed end of the piston chamber, a second fluid passage of lesser restriction extending from the closed end of the piston chamber to said outlet, said valve body being provided with a stationary valve seat for said second passage, a pilot valve cooperating with said stationary seat for said second passage for controlling the flow of fluid through said second fluid passage, spring means providing a resilient connection between said main and pilot valves, and electromagnetic means for controlling the position of said pilot valve for positioning the main valve in proportion to its energization.

3,006,374

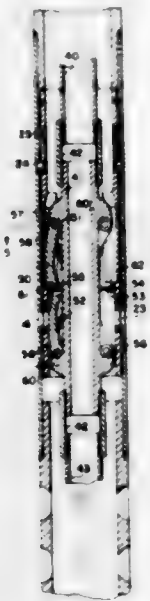
MECHANICALLY OPERATED LINER WASHING COLLAR

William Prachner, Serbia, Brunel, Borneo, assignor to Shell Oil Company, a corporation of Delaware

Filed May 19, 1958, Ser. No. 736,095
4 Claims. (Cl. 137-625.38)

1. A tubular valve for well casings comprising: a first ported tubular member; a tubular valve member disposed in said first tubular member, said tubular valve member having ports formed therein and in addition being movable axially between a first position in which the ports in said tubular member are aligned with the ports in said first tubular member and a second position in which the ports are misaligned; first dog means disposed on an actuator to engage a first recessed shoulder formed on said valve member and move said valve member in one direction; second dog means disposed on said actuator to engage a second recessed shoulder formed on said valve member and to move it in the other direction at least one continuous inwardly projecting longitudinal land formed on the interior wall of said tubular valve member and means including rotation of said actuator for aligning said first and second dog means with said longitudinal land to force said dog

members inwardly out of engagement with said first and second recessed shoulders and permit said actuator to pass

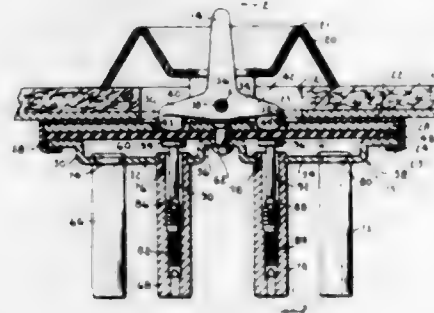


through said tubular valve member without moving the tubular valve member axially.

3,006,375 VALVE

Ralph H. Wise, Tampa, Fla., assignor, by mesne assignments, to The Anderson Company, a corporation of Indiana

Filed Oct. 3, 1957, Ser. No. 687,935
8 Claims. (Cl. 137-627.5)

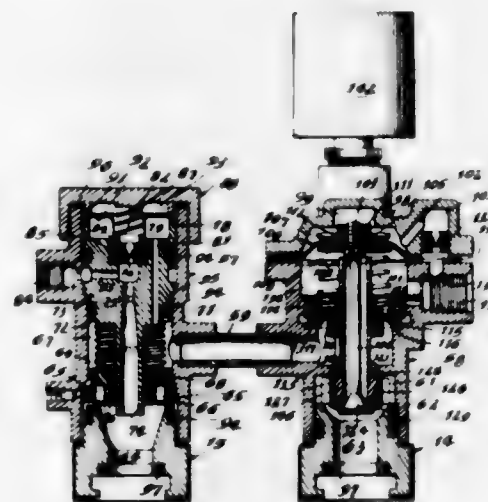


1. Valve mechanism for directing fluid flow to either of the input conduits of a reversible motor, comprising a sheet metal plate having spaced recess portions stamped therein, a diaphragm of elastomeric material overlying said plate in face-to-face contact therewith save for said recess portions, a sheet metal mounting plate overlying said diaphragm in face-to-face contact therewith, a sheet metal cover plate overlying said mounting plate in face-to-face contact and having an opening in the central portion thereof, the peripheral portion of said cover plate being flanged downwardly around the edges of said mounting plate and inwardly under the first recited plate and clamping all said plates and diaphragm together, clamp means passing through the first-recited plate between the recess portions, the diaphragm and the mounting plate, whereby the two recessed portions in conjunction with said diaphragm define two chambers, an inlet and an outlet communicating with each chamber, a spring-actuated one-way valve in each inlet and means extending from each valve to adjacency with the diaphragm, the central portion of the mounting plate having struck upwardly therefrom two opposed lugs establishing a pivot and also having formed therein two openings overlying the means extending from said valves, a rocker arm pivoted intermediate its ends on said lugs, a lever projecting from the mid-portion of said arm and the ends

of said arm having tabs projectable through said openings on the rocking of said arm for selectively actuating said valves, the cover plate having at least two upstanding spring clips engageable with the wall of an opening in a panel, said clips being formed with pockets therein, an escutcheon having a slot therein for said lever and adapted to be disposed on the opposite face of said panel, said escutcheon having spring arms engageable with the pockets in said clips for detachably mounting said cover plate.

3,006,376 AUTOMATIC CONTROL VALVE FOR WATER SOFTENERS OR CONDITIONERS

Robert E. Schulze, Deerfield, and Edmund J. Heartstetdt, Glenview, Ill., and Robert J. Jauch and Christian W. Kruckeberg, Fort Wayne, Ind., assignors to Culligan, Inc., Northbrook, Ill., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,359
13 Claims. (Cl. 137-630.19)



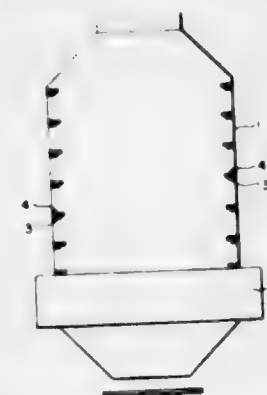
6. An automatic valve assembly for controlling the direction and flow of liquid therethrough, comprising a valve unit having a valve body with an inlet port, and untreated liquid inlet, a by-pass port for the passage of untreated liquid and a drain port, valve means in said body including two vertically spaced elastic diaphragms bridging the valve body and dividing the interior of the body into an upper chamber above the upper diaphragm, an intermediate chamber between said diaphragms and communicating with said drain port and a chamber below the lower diaphragm communicating with said by-pass port, a valve stem secured at one end to the upper diaphragm and movable relative to said valve body, a valve at the lower end of said valve stem, a plunger tube encompassing but spaced from said valve stem to provide an annular passage therebetween and movable relative to said valve body, said plunger tube connected intermediate its ends to the lower diaphragm, said valve on the valve stem normally closing the lower end of the plunger tube and being moved to open position relative to the plunger tube when the upper diaphragm is depressed by line pressure from above, tension means between the upper and lower diaphragms to normally close the plunger tube with the valve on the valve stem, an elongated plunger valve on the lower end of the plunger tube, spaced annular valve seats in said valve body between which the plunger tube moves for sealing contact with either of said seats, a chamber in said valve body between said valve seats and communicating with said inlet port and said untreated liquid inlet with liquid being directed from said inlet port into said chamber and to said untreated liquid outlet, an outlet port, a by-pass port and

a regenerant port and a single external conduit connecting the by-pass ports of the valve unit and the eductor unit in predetermined spaced relation, said valve body having a passage from said inlet port to said upper chamber, a pilot valve controlling flow from said inlet port to said upper chamber, said pilot valve when actuated allowing line pressure of the entering untreated liquid to depress the upper diaphragm causing the plunger valve to seat on the lower valve seat and the valve stem to move to open the annular passage in the plunger tube to communicate with the untreated liquid inlet and the drain port, the inlet port of the valve unit communicating with the service line and the eductor unit through the external conduit.

3,006,377 APPARATUS FOR STORING OR TREATING MATERIALS IN THE FORM OF COARSE PIECES

Guenther Hamprecht, Limburgerhof, Pfalz, and Heinrich Bellmuth, Bad Dürkheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed July 30, 1958, Ser. No. 752,128
Claims priority, application Germany Aug. 2, 1957
2 Claims. (Cl. 138-37)

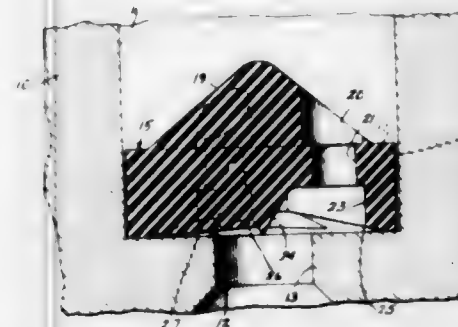


2. A cylindrical receptacle through which coarse pieces of coke or the like are passed which comprises ring members attached to and projecting from the inner wall of said cylindrical receptacle, said ring members being arranged in several spaced cross-sectional planes of said receptacle, said ring members being concentric to and in contact with said inner wall and extending inwardly substantially at a right angle to said wall; said cylindrical receptacle including ingress means for said coarse pieces at its top and means for withdrawing said coarse pieces at the bottom of said receptacle.

3,006,378 RESILIENT PLURAL ORIFICE FLOW CONTROL

Howard L. Erickson, Bensenville, and William H. Corbett, Chicago, Ill., assignors to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Feb. 27, 1958, Ser. No. 717,867
3 Claims. (Cl. 138-46)



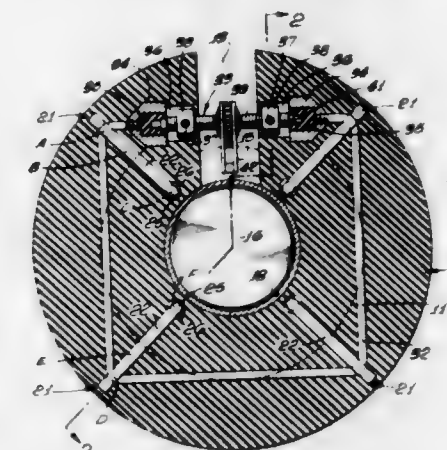
1. In a uniform rate of flow control device, a housing having a flow passageway therethrough, an annular seat

in said passageway facing in an upstream direction, means for maintaining a substantially constant rate of flow through said housing over a wide range of variations in pressure at the inlet end thereof comprising a resilient disk having a generally cylindrical outer wall and seated on said seat adjacent its periphery and having a plurality of flow control orifices leading therethrough, spaced radially outwardly from the center thereof equal distances and inwardly from the outer wall thereof, and angularly spaced equal distances apart, and uniformly restricting in cross-sectional area upon increases in pressure upstream of said disk, and a generally conical silencing flow diverting projection at the center of said disk inwardly of said orifices and facing in a downstream direction, said orifices dividing the stream flowing along said flow passageway into a plurality of separate streams and reducing the concentrated areas of high and low velocities and said flow diverting projection preventing the streams flowing through said orifices from head on collision and uniformly diverting the streams to merge upstream of the outlet and thereby reducing turbulence at the downstream side of said flow control device and noise in said flow control device.

3,006,379 QUICK-CONNECT COUPLING APPARATUS CAPABLE OF CONTAINING FLUIDS UNDER HIGH PRESSURES

Ernest D. Hauk, 1315 E. 23rd St., Signal Hill 6, Calif., assignor of fifteen percent to Richard L. Gausewitz, Santa Ana, Calif.

Filed Mar. 14, 1960, Ser. No. 14,971
11 Claims. (Cl. 138-89)

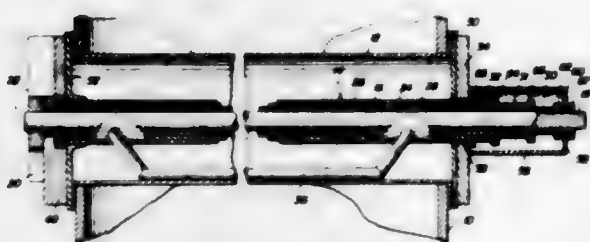


1. A quick-connect coupling and closure apparatus adapted to be associated with the flanges of pipes, vessels, valves, and the like, which apparatus comprises a backup element adapted to be forced axially against a flanged element, a substantial number of pivot elements each having one portion adapted to apply pressure to said backup element axially toward the end face of said flanged element and another portion adapted to apply pressure to a generally radial opposite surface of said flanged element, means to mount said pivot elements in spaced relation about the peripheral portion of said backup element and in such manner that each of said pivot elements may pivot about a plurality of axes, a substantially closed elongated tension element pivotally associated with all of said pivot elements and being continuous except for a gap between the end portions of said tension element, said tension element and said pivot elements being so constructed and associated that movement of said end portions of said tension element toward each other effects pivotal movement of said pivot elements in such directions that said portions of said pivot elements force said backup element and flanged element toward each other, and means to draw said end portions of said tension element toward each other.

3,006,380

BOILER TUBE REPAIR DEVICE

Ralph Santoso and John J. Mahoney, both of
298 Proctor Ave., Revere, Mass.
Filed May 1, 1959, Ser. No. 810,305
9 Claims. (Cl. 138—91)



1. A readily-insertable end-closing temporary repair device for a defective boiler tube while, for example, the boiler is being used, comprising a readily-insertable and removable ready-to-install device usable by a single workman and insertable from the end adjacent the workman and embodying a plurality of concentric telescopically assembled sleeves, a rod mounted lengthwise in the bore of the innermost sleeve, a tube-end closing and sealing head mounted on and carried by the distal ends of the sleeves and rod respectively, said head including a plurality of cooperating segmental plates which, prior to insertion into the bore of the tube, may be aligned one behind the other and all radiating in the same direction and manner and being longitudinally spaced apart, the adjacent inner ends of the sleeves and rod, respectively, being available to the workman so that by progressively turning the rod and sleeves in a predetermined step-by-step manner the segmental plates may be brought together and assembled in a manner to define the stated closing and sealing head, and means connected with the respective inner proximal end portions of said sleeves and rod for locking the sleeves in a predetermined relationship and correctly providing said head, said head functioning to span and seal the distal end of the boiler tube, and adjustable closing and sealing means at the proximal associated end portions of the sleeves and rod and serving to effect a closure for the proximal end of said boiler tube.

3,006,381

FLEXIBLE CONDUIT

Edward M. Rothermel and Russell B. Waddell, Jr.,
Waynesville, N.C., assignors to Dayco Corporation, a
corporation of Ohio
Original application Sept. 20, 1956, Ser. No. 611,007,
now Patent No. 2,822,857, dated Feb. 11, 1958. Di-
vided and this application Apr. 2, 1957, Ser. No.
650,261

2 Claims. (Cl. 138—122)

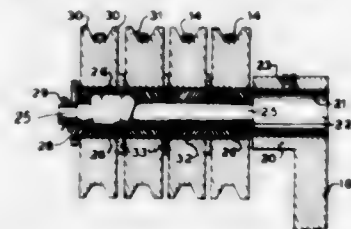


1. A corrugated flexible conduit comprising a reinforcing helix having axially spaced turns, and an elastomeric thermoplastic tube having a uniform diameter and wall thickness partially surrounding and embracing said turns and extending inwardly therebetween to only substantially the plane of the inner surface of said helix, said tube being deformed within its elastic limit and exerting a radially inward force against said helix which tends to shorten said helix and constitutes the only force acting upon said helix and the only agent holding the tube and helix together as a unitary conduit.

3,006,382

HARNESS SHEAVE SHAFT WITH FLOATING NYLON BUSHING

Floyd L. Broome, P.O. Box 698, Atlanta, Ga.
Filed Mar. 16, 1959, Ser. No. 799,800
3 Claims. (Cl. 139—84)

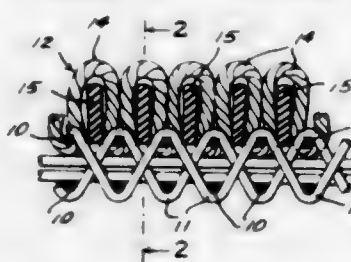


1. A harness sheave shaft and bearing assembly comprising a shaft bracket having a shaft receiving collar, a steel sheave shaft including an end portion secured within said collar, said shaft including a portion of reduced diameter, a plurality of plastic sleeves having an internal diameter greater than the external diameter of said portion of reduced diameter and of approximately equal overall length thereto mounted thereon, a plurality of wooden sheaves mounted respectively on said sleeves, each having an internal bore of a diameter greater than the external diameter of the sleeve on which it is mounted, each sheave having a pair of spaced peripheral flanges defining a harness cord groove, spacer washers loosely mounted on said sleeves between said sheaves, a washer on the end of said shaft for retaining said sheaves, and means engaging said shaft and retaining said last mentioned washer.

3,006,383

PILE CARPET

Levon Mahmarian, 304 24th St., Union City, N.J.
Filed Sept. 11, 1959, Ser. No. 839,508
7 Claims. (Cl. 139—406)



1. A loop pile floor covering comprising a backing and pile loops bound therein and extending upwardly above the surface thereof, said loops being disposed in aligned rows, and a fillerwise yarn of a soft resilient material extending through the loops of a row, said fillerwise yarns being disposed above said backing and being of a size to fill a portion only of the area of said loops and being adapted to hold said loops at least partially distended above the surface of said backing, the upper part of said loops normally extending above and being spaced from said fillerwise yarns to permit said loops to be at least partially compressed before being brought into engagement with said fillerwise yarns, said loops normally when in extended position enclosing and shielding said fillerwise yarns from view and forming substantially the entire exposed surface of said floor covering.

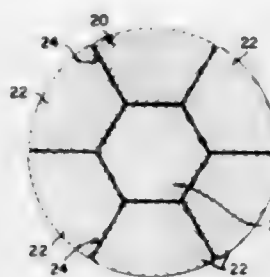
3,006,384

WOVEN WIRE BELT FOR PAPER MAKING MACHINES

Hugh E. Brown, Cleveland Heights, Ohio, and Ardelle Glaze, Fort Wayne, Ind., assignors, by mesne assignments, to The Tyler-Wayne Research Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 11, 1960, Ser. No. 49,040
7 Claims. (Cl. 139—425)

1. Woven wire fabric for paper making machines comprising interwoven warp and weft wires, said warp wires

being drawn braided strands in which the outer elements are formed from stainless steel and are united

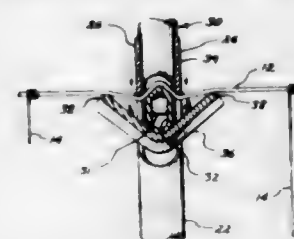


throughout their lengths by an internal matrix of copper material.

3,006,385

MEANS FOR TIGHTENING A WOVEN WIRE FENCE

George P. Whitmore, Box 63, Madrid, Iowa
Filed Sept. 15, 1958, Ser. No. 761,021
2 Claims. (Cl. 140—106)



1. In a fence tightening tool, a normally vertical rod, two parallel spaced apart ears on the upper end of said rod, a substantially horizontal handle pivotally connected near one of its ends to said rod between said ears, said ears having upper portions normally extending above said handle, an arcuate-shaped indentation at correspondingly similar points on each of the upper portions of said ears, said indentations being capable of receiving a straight segment of wire therein and therebetween, a wire engaging portion on said handle which dwells in a vertical plane directly below the arcuate-shaped indentation in each of said ears; a bracket on said handle having opposite outer ends which extend upwardly and outwardly to terminate in spaced alignment with said wire engaging portion on said handle; said wire engaging portion on said handle and said outer ends on said bracket serving as points of support for a straight wire as said handle is pivoted in one direction to engage the arcuate-shaped indentation on each of said ears with such a straight wire; said ears engaging such a wire only at points adjacent the wire engaging portion on said handle.

3,006,386

REFILL DEVICE FOR CARTRIDGES OF BALL POINT PENS

Harry H. Greis, 25 E. 213th St., Bronx, N.Y.
Filed Nov. 20, 1959, Ser. No. 854,359
2 Claims. (Cl. 141—30)

1. A filling device for a cartridge tube of a ball point pen, comprising a cylindrical container of viscous ink, said container having open and closed ends, a removable cap closing the open end of the container for repeatedly filling the container with said ink, a long cylindrical filling tube communicating with the interior of said container for receiving said ink therefrom, said tube having a length at least as long as that of said cartridge tube, and a diameter equal to the interior of said cartridge tube so that said cylindrical filling tube is forced out of said cartridge tube by pressure of ink as the cartridge tube is filled with ink from the filling tube, while air is prevented from entering the cartridge tube, said container having a rigid cylindrical wall, a cylindrical disk secured to said

tube inside the container, said disk being slidable in said container in frictional contact with said cylindrical wall to apply pressure to the ink in the container, said disk having a central hole registering with a passage in said filling tube so that ink under pressure passes through said hole and passage, said closed end of the container being formed by a flat bottom wall with a central aper-

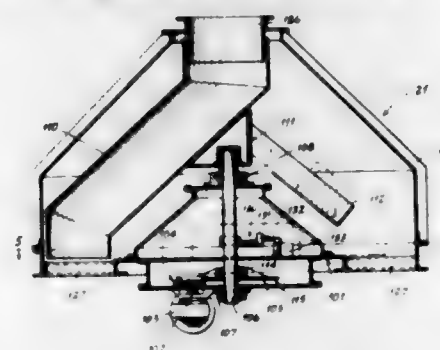


ture, said filling tube being axially slidable through said central aperture as said disk moves in the container, said cap being threaded and engaged upon a corresponding threaded portion of said container to resist the pressure on the ink as said disk is moved in the container against the ink, said filling tube having a tapered tip end to facilitate entry of the filling tube in said cartridge tube, and another cap having a threaded bore for detachably engaging on a thread near the tip end of the filling tube, said filling tube having a length at least as long as the combined lengths of the interior of said container and said cartridge tube.

3,006,387

BULK STORAGE TURNHEAD

Kermit W. Rodemich, 505 S. Polk, Millstadt, Ill.
Filed Aug. 29, 1957, Ser. No. 680,937
10 Claims. (Cl. 141—94)



8. A turnhead having a dispensing spout vertically movable with a shaft to and from a sealed position with selected station openings in a turnhead base, turnhead drive means for moving the dispensing spout in an elevated unsealed position in indexed relation to said selected station openings, said drive means including a rotatably powered member cooperating with said shaft through a lost motion means whereby said shaft may move vertically with respect to said rotatably powered member.

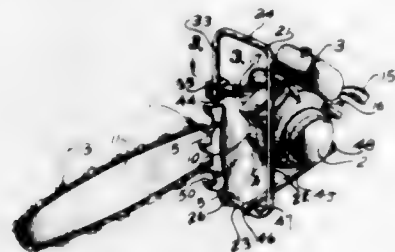
3,006,388

ADJUSTABLE BALANCE FOR CHAIN SAW HANDLE

George R. Root, Baxter Springs, Kans., assignor to Root Manufacturing Company, Inc., Baxter Springs, Kans., a corporation of Kansas
Filed Oct. 6, 1960, Ser. No. 60,843
9 Claims. (Cl. 143—32)

3. A chain saw apparatus comprising in combination a power unit, a frame, means mounting the power unit

on the frame, said frame including a side member having forward upper and lower portions, a lug on the forward upper portion of said side member having a slot extending longitudinally with the side member, a handle frame member forwardly of said power unit having upper and lower legs extending toward said side member, means

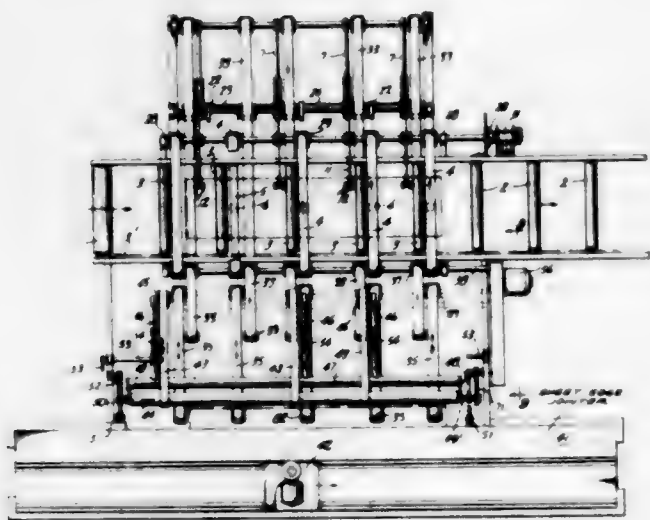


rotatably attaching said lower leg to the lower portion of said side member, said upper leg being turned downwardly alongside said lug, and means securing said downwardly turned portion of the upper leg to said lug for adjustment of the upper portion of said handle frame fore and aft with respect to said side member and said power unit.

3,006,389

DOUBLE EDGE VENEER JOGGER AND JOINTER
John J. Pearl, Lebanon, Oreg., assignor to Cascades Plywood Corporation, Portland, Oreg., a corporation of Delaware

Filed May 12, 1958, Ser. No. 734,688
14 Claims. (Cl. 144-117)



6. In a jogging machine for sheets, jogging means supporting the lower edges of sheets which are disposed in upright planes, sheet supply means at one side of said jogging means engageable with sheets in substantially horizontal position and swingable to tilt such sheets into upright position on said jogging means, and means at the same side of said jogging means as said sheet supply means engageable with jogged sheets for moving them away from said jogging means in the direction opposite the direction in which they were moved into the jogging means.

3,006,390

**PORTABLE POWER-OPERATED
EDGE-TRIMMING TOOL**

Max Draenert, Bahnhofstrasse 16, Reichenbach (Fils), Germany

Filed Sept. 26, 1958, Ser. No. 763,741
Claims priority, application Germany Sept. 27, 1957
1 Claim. (Cl. 144-117)

A portable power operated cutting tool for trimming the edges of plates of artificial material permanently connected with a base plate and comprising a body with

a lower face having a substantially longitudinally disposed slot the side edges of which constitute two stationary blades, a movable double-edged cutting blade interposed therebetween and mounted in said longitudinally disposed slot for cooperation with said stationary blades, an abutting face arranged beneath said cutting blade to be applied against the base plate connected with said plate to be trimmed, said abutting face lying

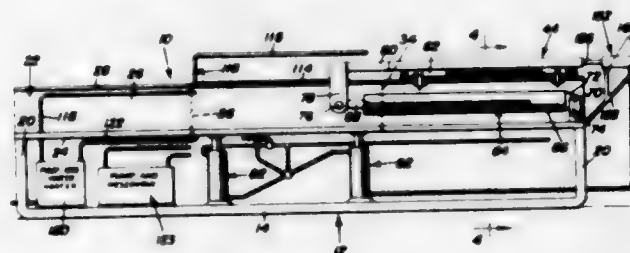


in the same plane with a side edge of said slot constituting one of said stationary blades, said abutting face being constituted by the outer marginal face of an angle iron releasably secured with its other leg to said body of said cutting tool, whereby upon cutting off said plate of artificial material the edges of said plate permanently connected therewith.

3,006,391

PORTABLE HYDRAULIC VENEER MILL

Albert E. Karschney, Aura, Mich.
Filed Jan. 2, 1959, Ser. No. 784,535
8 Claims. (Cl. 144-162)



1. A veneer mill comprising a block support, a slicing blade, means mounting said slicing blade for movement over said block support for slicing veneer from a block of wood, and lift means connected to said block support and operable by said slicing blade mounting means on the return stroke of said slicing blade to elevate said block support, said lift means including an extensible fluid motor, a fluid pump, a fluid line connecting said fluid pump to said fluid motor, and an actuator for said fluid pump aligned with said slicing blade mounting means for engagement thereby.

3,006,392

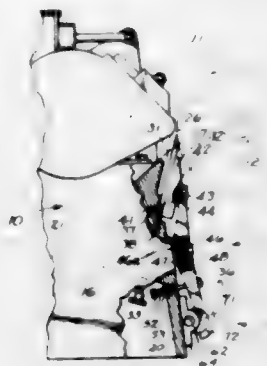
KNIFE HOLDER FOR LATHES

Harold F. Elford, Portland, Oreg., assignor to Elford Plywood Machinery, Inc., Portland, Oreg., a corporation of Oregon

Filed Mar. 13, 1959, Ser. No. 799,141
7 Claims. (Cl. 144-212)

4. In a veneer lathe having a frame, a knife supported on the frame, and plural clamping levers pivoted on the frame for clamping the knife to the frame, the improvement comprising cam mechanism for each clamping lever for generating clamping pressure therein, said cam mechanism comprising a cam having a curved cam surface and a mounting for the cam rotatably supporting the cam, said mounting being supported on said frame and

including shiftable means accommodating shifting movement of the cam rotation axis toward and away from the pivot axis for the clamping lever simultaneously with



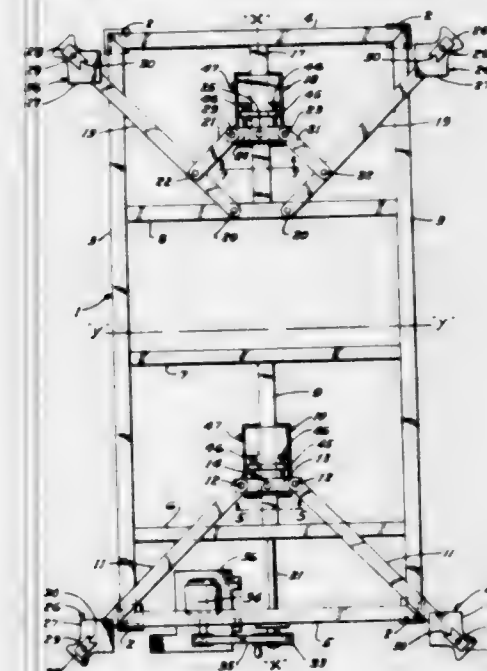
the rotation of the cam, and a curved wear surface provided the clamping lever contacting the cam surface of its cam.

3,006,393

**DEVICE FOR ASSEMBLING AND TRUING
RECTANGULAR FRAMES**

Ralph R. Wagner and Robert C. Wagner, both of R.R. 4, Bellevue, Ohio

Filed July 2, 1959, Ser. No. 824,727
3 Claims. (Cl. 144-291)



1. A device for assembling and squaring rectangular frames and comprising a support, a stationary member thereon, a movable member mounted on the support for movement relative thereto toward and away from the stationary member in a lineal path parallel to the plane in which the frame is to be supported, drive means for driving the movable member in opposite directions, selectively, along said path, two pairs of arms, the arms of one pair being pivotally connected at their inner ends to the stationary member for swinging movement parallel to said plane in a direction toward and away from a reference plane through, and extending endwise of, said path and normal to said predetermined plane at opposite sides of said reference plane, to different positions, the arms of the other pair being connected at their inner ends to the movable member for swinging movement independently of each other parallel to said predetermined plane at opposite sides of, and toward and away from, said reference plane to different positions which are independent of the position of the movable member along said path, coordinating means connecting the arms of said one pair and the support for constraining said arms of said one pair to swing at all times in equi-angular relation to said reference plane to said

different positions, corner engaging jigs pivotally mounted on the outer ends of the arms, respectively, for free movement about axes normal to said predetermined plane, said jigs being disposed for receiving the corners of a rectangular frame while the frame is disposed thereon parallel to said predetermined plane, and for self-adjustment about their respective pivotal axes, relative to their associated arms, into corner fitting positions, relative to the frame.

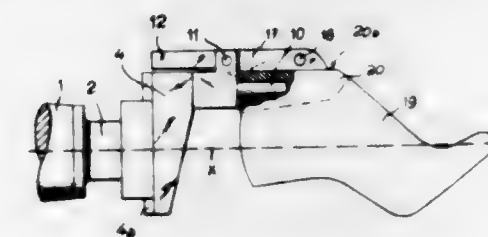
3,006,394

**METHOD OF MAKING LASTS FOR FOOTWEAR
AND DEVICE THEREFOR**

Leonello Gamboni, Milan, Italy, assignor to Incom S.p.A., Milan, Italy

Filed June 7, 1960, Ser. No. 34,428

Claims priority, application Italy June 13, 1959
2 Claims. (Cl. 144-325)



1. Method of turning a complete last for a shoe from a longitudinally extending blank having a vertical ankle extension defining a blind hole, said hole extending longitudinally into said ankle extension toward from above the heel part of the blank, said method comprising; supporting the blank on the mandrel of a lathe by means of a longitudinal bolt extending into said hole; clamping the blank on the bolt by means contacting said ankle extension only; machining the blank entirely by turning, excepting said ankle extension; and removing said ankle extension by machining, whereby the surfaces of said last that contact said shoe are maintained in the shape of the finished last as originally turned.

3,006,395

MULTIPLE CHAMBERED TOOL HANDLE
George A. Dye, 7518 Bluffton Road, Fort Wayne, Ind.

Filed June 15, 1959, Ser. No. 820,176

4 Claims. (Cl. 145-63)



1. In a multiple bit tool, a central elongated tubular member having a nose at its lower end, a shoulder integral with and projecting laterally from said tubular member approximately midway the length of the latter, a cap affixed to the upper end of said tubular member, a cylin-

drical sleeve enclosing said tubular member and of greater diameter than and of less length than the latter mounted for reciprocation as well as rotative movement between said shoulder and said cap, means on the lower end of said sleeve and said shoulder to hold said parts against relative rotative movement when engaged with one another, said sleeve having spaced apart longitudinally disposed bit receiving chambers therein each communicating throughout its length with the exterior wall of said tubular member, a downwardly inclined wall at the lower end of each chamber abutting said tubular member, the wall of said tubular member enclosed by said sleeve having a longitudinal slot sufficiently wide to receive a bit from the adjacent chamber and of less length than the latter, the lower end of said inclined wall disposed approximately aligned with the lower end of said slot when the upper end of the sleeve is engaged with said cap, and spring means interposed between said cap and said sleeve to normally hold the lower end of said sleeve in abutting engagement with said abutment shoulder.

3,006,396

COLLAPSIBLE CONTAINER

Walton W. Cushman, Webb City, Mo.
(6428 Lumar Drive SE., Washington 22, D.C.)
Filed Feb. 11, 1959, Ser. No. 792,683
7 Claims. (Cl. 150—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A collapsible container having a generally cylindrical body and removable head members for closing both ends thereof, said heads being interchangeable, the cylindrical body and the removable head members being formed from an elastomer, said body portion having at each of its opposite ends a pair of spaced external annular beads, an annular steel reinforcing ring embedded in each of said beads, each of said head members having a central web and a peripheral portion in the form of an integral annular inflatable tube, the heads being located within the end portions of the cylindrical body at points between each pair of ring-reinforced external annular beads, and valve means carried by each of the head members whereby to permit inflation of the annular inflatable tubes to expand the material of the body between the reinforced pairs of beads to sealingly close the ends of the container.

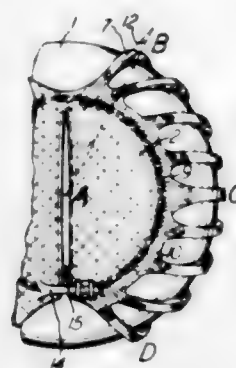
3,006,397

TRACTION HARNESS

Frank Akutowicz, 2007 Harvey Road, Wilmington 3, Del.
Filed Mar. 2, 1961, Ser. No. 92,900
7 Claims. (Cl. 152—221)

1. In a traction harness fitted to a road vehicle tire said traction harness made of tire cord, rubber and wire and comprising traction loops vulcanized in position by connecting loops of tire cord and rubber and webs of tire cord and rubber the combination of a mitten-like

configuration of said loops and webs of sectorial outline outboard of said tire and segmental outline inboard of said tire, said sectorial outline having a common arcuate

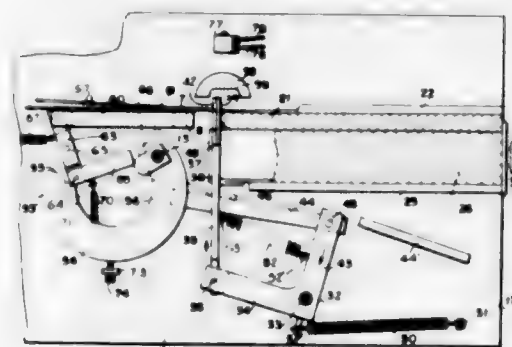


boundary with said segmental outline, said traction loops occupying said common arcuate boundary, said connecting loops reinforcing the edges of said webs.

3,006,398

BUCKLE APPLYING MACHINE FOR BALE TIES OR STRAPS

Lewis S. Hatch, Rte. 2, P.O. Box 202, San Benito, Tex.
Filed Oct. 11, 1957, Ser. No. 689,712
4 Claims. (Cl. 153—1)

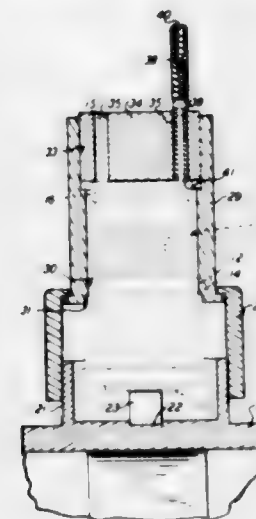


1. A machine for applying an eyelet buckle to a bale strap comprising: a frame member, a longitudinally disposed strap support mounted on said frame member, an anvil head portion having an inner end formed adjacent one end of said support for slidably receiving and engaging a portion of a bale strap, a buckle receptacle positioned beneath said support having an outlet located adjacent said anvil head portion, a buckle guideway extending transversely between said receptacle outlet and said anvil head portion, feeding means movable within said guideway for raising an eyelet buckle from a lower position adjacent said receptacle outlet to a raised strap receiving position adjacent said anvil head portion, strap folding means including a curved hammer member rotatably mounted on said frame for movement between a remote position below said support to a loop-forming position adjacent the upper surface of said anvil head portion, means for operating said feeding means to raise a buckle to said strap receiving position in order to manually move a portion of said bale strap through the buckle eyelet, said operating means rotating said strap folding means to loop-forming position after said buckle has been raised to strap receiving position and then returning said means to said remote position for withdrawing said feeding means to lower position, and guide means on the machine above the inner end of the anvil which the buckle engages so as to be moved from its raised position to a substantially horizontal position on the anvil as said portion is folded by the hammer.

3,006,399

FIXTURE FOR STRAIGHTENING AND ALIGNING MAGNETRON PINS

Howard W. Garbe, Allentown, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 3, 1952, Ser. No. 291,419
2 Claims. (Cl. 153—32)

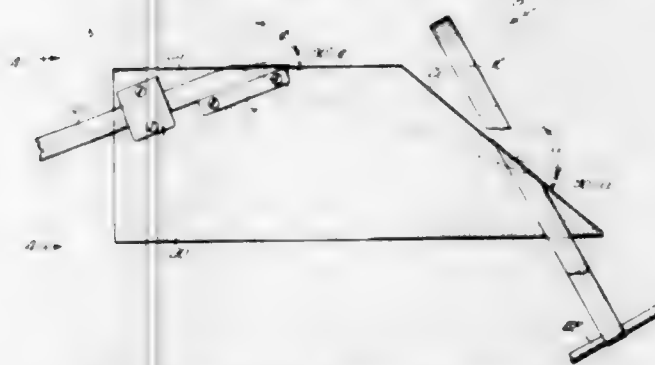


1. A fixture for straightening and positioning a flexible pin like part, fixed adjacent one end thereof to a portion of an article, relative to a reference surface of the article, the fixture comprising a resilient support for the article, a hollow retaining member surrounding the support, a housing for the article adapted for interconnection with the retaining member by forcing the article against the resilient support to partially compress the support, the housing having a reference surface caused to closely engage the reference surface of the article by a force created in the partially compressed support to position the article in the housing and a locating surface spaced from said reference surface, a member having an aperture to receive the pin like part adapted to be supported by said portion of the article at a position controlled by said locating surface, and an element receivable in the aperture and guided thereby to straighten and position the pin like part relative to the reference surface of the article.

3,006,400

METHOD FOR MAKING COIL SPRINGS

Edwin E. Foster, P.O. Box 714, Austin, Tex.
Filed Feb. 1, 1960, Ser. No. 5,684
9 Claims. (Cl. 153—66)

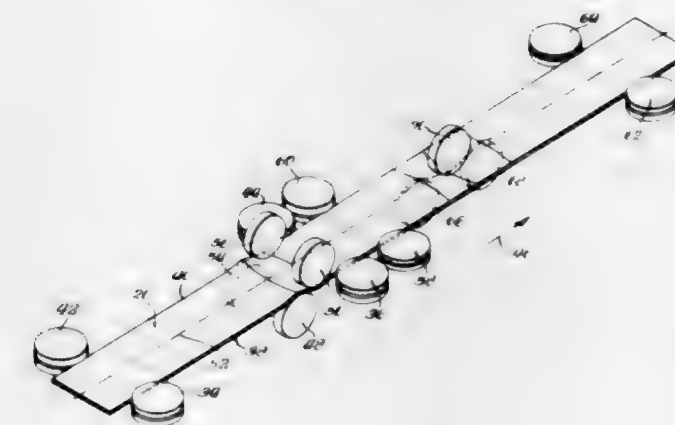


1. In a method for making a spiral spring composed of a spring ribbon having a set tending to cause said ribbon to assume a concave-convex cross-section and a convoluted longitudinal section, the steps comprising inducing a set in a spring ribbon so that when unrestrained, it forms a helix having a pitch length greater than zero and then inducing a set in said ribbon so that when unrestrained, it forms a helix having a pitch length of substantially zero.

3,006,401

APPARATUS FOR CONDITIONING METAL STRIP HAVING NON-UNIFORM STRESSES THEREIN

James N. Wognum, Roy A. Moody, and Emil Simach, Chicago, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 23, 1957, Ser. No. 691,978
4 Claims. (Cl. 153—93)



1. Apparatus for conditioning an elongated metal strip comprising guide means for supporting a strip along a predetermined datum path, means for deflecting the edge sections of the strip extending in the direction of the datum path first in one direction and then in the other direction out of the datum path to work the strip plastically substantially throughout the thickness thereof, means to hold the center section of the strip in the datum path at points disposed transversely of said edge section deflecting means, means for deflecting the center section of the strip at a point disposed along the datum path from said edge section working means to deflect the strip out of the datum path in one direction and then in the other direction to work the center section of the strip plastically substantially throughout the thickness thereof, and means for holding the edge sections of said strip in the datum path transversely adjacent to said center section deflecting means.

3,006,402

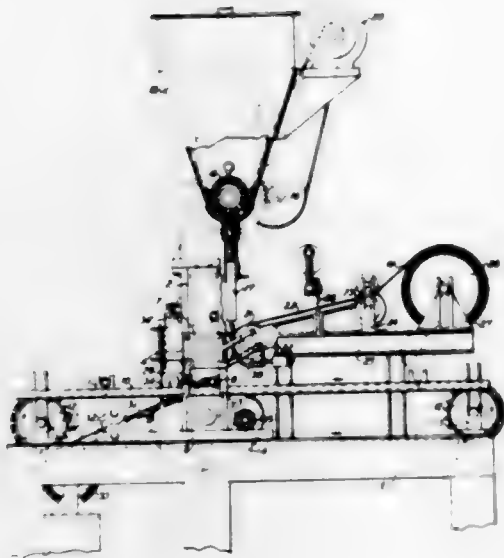
APPARATUS FOR FORMING GLASS REINFORCED PLASTIC PIPE

John Ferla, 5 Whitney Place, East Orange, N.J.; Irma Ferla, executrix of said John Ferla, deceased, assignor to herself

Filed Aug. 31, 1955, Ser. No. 531,686
2 Claims. (Cl. 156—192)

1. In a machine for producing pipe, the combination with a mandrel adapted to receive layers of composition material thereon, of means for supplying plastic composition material in superposed layers on the mandrel, said means including a calendaring roll located above said mandrel, a movably mounted pressure feed roll located laterally of said calendaring roll and adapted to be moved into and out of frictional engagement with the calendaring roll, said mandrel and rolls being heated, a hopper located above said rolls having a discharge outlet arranged to direct plastic composition material therefrom into the bite between the pressure feed roll and calendaring roll forming a layer on the calendaring roll for transfer thereby to the mandrel, power means connected with the calendaring roll for raising and lowering the latter, means located laterally of said pressure feed roll on the side thereof opposite said calendaring roll for supplying a web of glass fibrous material into the bite between the pressure feed roll and the calendaring roll

in superposed relation on said composition material on said calendering roll for transfer in layers spirally on said



mandrel with the fibrous material superposed on said composition material.

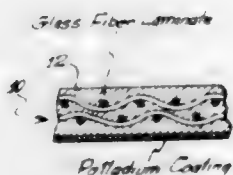
3,006,403

METHOD OF FABRICATING HEAT REFLECTING AND INSULATING MATERIAL AND PRODUCT RESULTING FROM SAID METHOD

Roydon B. Cooper, Sunland, and Andrew H. Malinovsky, Huntington Park, Calif., assignors, by mesne assignments, to Barrier, Inc., West Los Angeles, Calif., a corporation of California

Filed Oct. 8, 1957, Ser. No. 689,008

10 Claims. (Cl. 154-44)



1. In a method of fabricating a thermoreflective material, the steps of: impregnating a plurality of laminae of glass fiber cloth with a phenol formaldehyde resin to create a laminate; superimposing said impregnated laminae one upon the other; subjecting said laminate to heat and pressure to attain an article of a desired shape and fully cure said resin; coating a surface of said article with a liquid metallic coating including a soluble salt of a noble metal; and subjecting said coated surface to a temperature in excess of the curing temperature of said resin and in a range of 400-1000° F. to fix and stabilize said metallic coating.

7. A heat insulating body having a laminated base of glass fiber cloth impregnated with phenol formaldehyde resin upon the surface of which is deposited a reflective coating heat fused on said surface at temperatures in the range of 400-1000° F. and incorporating a metal drawn from the noble metal group and having embodied therein a fusing substance adapted to create a bond between said metal and said surface of said base upon which it is deposited.

3,006,404

POWER ACTUATED ADJUSTABLE CAM BEAD WEDGE TOOL

Don J. Marshall, 3816 Granada Ave., Baltimore, Md., assignor of one-half to Marshall H. Wentz, Baltimore, Md.

Filed Nov. 12, 1959, Ser. No. 852,503

1 Claim. (Cl. 157-1.26)



A power-operated tool device, comprising, a substantially triangular shaped clevis bracket having a tubular passage extending therethrough at one side of said bracket, an adjustable rod slidably received in said tubular passage of said bracket and extending therethrough, said rod having a semi-circular shaped hook on one end providing a mating abutment for engaging a hook flange on a tire rim, means for releasably locking said rod in an adjusted position in said tubular passage of said bracket, said bracket having a yoke spaced from said tubular passage, an actuator motor assembly pivotally mounted in said yoke and having a thrust transmitting member connected thereto for extension and retraction thereby; in combination with means including an adjustable cam wedge positioned at the free end of said thrust transmitting member and adjustable to compensate for tire rims having bead-engaging flanges of different widths, said cam wedge including a spade shaped body having an arcuate lip at one end thereof and its other end coupled to said thrust transmitting member, said body having an intermediate flattened tire-forcing surface on the rear face thereof, said rear face having a recess provided therein, the opposite forward face of said body being provided with a slot-like cavity running lengthwise thereof, a movable cam member positioned in said cavity and arranged to move lengthwise of said body, said cam member having a forward wedgelike upper camming surface and a traverse downwardly extending tongue at its rear edge, said body having a plurality of parallel spaced grooves cut across the forward surface thereof to receive said tongue of said movable cam member for selected lengthwise positions thereof for yieldably securing said cam member in any one of said selected positions, whereby the direction of the line of thrust of said thrust transmitting member can be changed at a proper time for tire rim flanges of different sizes.

3,006,405

FUEL IGNITER GAP SETTING DEVICE

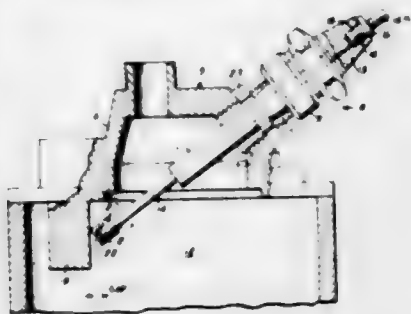
Alexander J. Battey, Skaneateles, and Charles J. Noll, Auburn, N.Y., assignors to Auburn Spark Plug Co., Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 28, 1959, Ser. No. 842,818

11 Claims. (Cl. 158-28)

4. In a fuel burner having a fixed ground terminal in the combustion chamber thereof, an igniter comprising

a center electrode adapted to be projected into said combustion chamber to a point adjacent said ground terminal, and a spark penetrable spacing device of consumable electrical insulating material including an explosive substance, carried on the firing end of said electrode and projecting longitudinally beyond said firing end a dis-

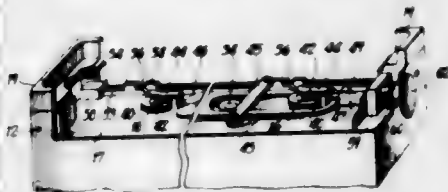


tance defining a predetermined gap setting, and in line for abutment with said ground terminal, whereby, when said device abuts said ground terminal, the firing end of said electrode is spaced therefrom the distance of said predetermined gap setting, and when a spark penetrates said device and combustion occurs in said chamber, said device is destroyed, leaving a predetermined gap.

3,006,406

HEATING APPARATUS

John Ansell Goddard, Ashted, England, assignor, by mesne assignments, to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Mar. 18, 1958, Ser. No. 722,187
3 Claims. (Cl. 158—32)



1. Heating apparatus of the character described including a casing constructed to hold fuel of the butane type under pressure, a plurality of burner units disposed in spaced relation along a wall of said casing and each communicating with the interior of said casing, each of said burner units having a closure valve provided with a depressible stem which is exposed at the mouth of the burner, valve closure members disposed respectively adjacent said burner units and mounted to move between positions wherein they respectively depress and release said stems, means for conjointly actuating said closure members comprising a valve adjusting member mounted to move back and forth along said wall and connected to said closure members to move the latter between their positions above set forth, individual flame regulating means for each of said burner units comprising an angularly movable member which respectively increases and decreases the flame when turned in opposite directions, a manually operable control member mounted to move in different directions, and means connecting said control member with said angularly movable members to conjointly adjust their angular positions.

3,006,407

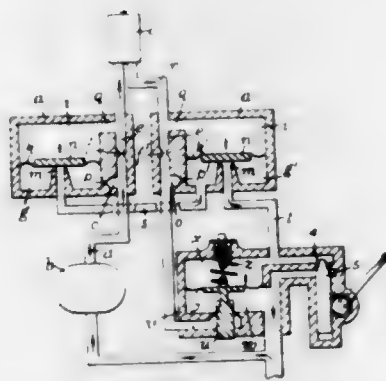
LIQUID FUEL BURNER SYSTEM

Kelvin Shew, Shirley, Solihull, England, assignor to Joseph Lucas (Industries), Limited, Birmingham, England

Filed Mar. 24, 1958, Ser. No. 723,299
2 Claims. (Cl. 158—36.3)

1. A liquid fuel burner system comprising in combination a burner of the swirl type, a fuel pump, a fuel supply

pipe leading from the fuel pump to the burner, a spill pipe leading from the burner, a pair of similar proportional-flow valves connected respectively to the fuel supply and spill pipes, each valve having a closure member, a pressure-responsive member carrying the closure member, a chamber divided by the pressure-responsive member into two compartments, a main passage provided at a position intermediate its ends with a restriction and interconnecting portions of the pipe to which the corresponding valve is connected, an unrestricted passage connecting one of the two compartments to the main passage at the side of the restriction therein nearest to the burner, a restricted passage connecting the other com-

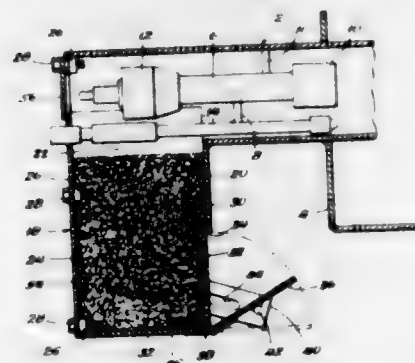


partment to the main passage at the other side of the restriction therein, and a seating for the closure member in the said other compartment, a passageway communicating at opposite ends respectively with the seating of the valve connected to the fuel supply pipe and with the said other compartment of the valve connected to the spill pipe, a throttle in the spill pipe at a position further from the burner than the valve connected to the spill pipe, means adapted to bias said throttle to its closed position, a secondary spill passage communicating with the seating of the last mentioned valve, means for creating a pressure difference in the secondary spill passage, and means responsive to the pressure difference in the secondary spill passage for actuating the throttle.

3,006,408

FLASHBACK RETARDER ARRANGEMENT FOR FIRED EQUIPMENT

Roy Shepherd, Dallas, Tex., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed July 31, 1958, Ser. No. 752,226
1 Claim. (Cl. 158—112)



Apparatus for use with a firebox associated with burner equipment, said apparatus comprising an elongated hollow casing adapted to be attached at one end to the firebox, fuel supply means extending in said casing, the end of the casing adapted to be attached to the firebox and being in open communication with said firebox, an

air inlet means located adjacent the end of said casing remote from the firebox, a hood enclosure secured to said casing and having an open end in registry with the air inlet means, said hood enclosure being provided with an opening means and defining a chamber between the air inlet means and the opening means, an air pervious material substantially filling said chamber, a portion of the material extending across the air inlet means of said casing to be in intimate thermal association with the fuel supply means in said casing, thereby to conduct heat away from the fuel supply means to lower the temperature adjacent the fuel supply means, permeable retaining means overlying said opening means to maintain said pervious material in said chamber, and closure means supported by said hood enclosure to coact with its opening means to control the quantity of air passing through said opening means.

3,006,409

FOLDABLE DOORS OR PARTITIONS

Hector M. Pemberton, Vermont, Victoria, Australia, assignor to Biltwell Accessories Proprietary Limited, North Melbourne, Victoria, Australia, a company of Victoria

Filed Mar. 26, 1959, Ser. No. 802,083
Claims priority, application Australia Apr. 2, 1958
8 Claims. (Cl. 160—84)



1. A foldable closure comprising an articulated lazy tongs framework including fixed and movable stanchions, semi rigid strip members on both of said stanchions, said strip members having opposite ends and including a bead adjacent one of said ends, flexible covers foldably between said stanchions, said flexible covers including a beading strip detachably engageable with said bead of the strip member with the bead and beading strip adjacent one another, said flexible covers having a top and bottom, and fastener means on said covers adjacent said top and bottom for detachably engaging said covers with the articulated lazy tongs framework.

3,006,410

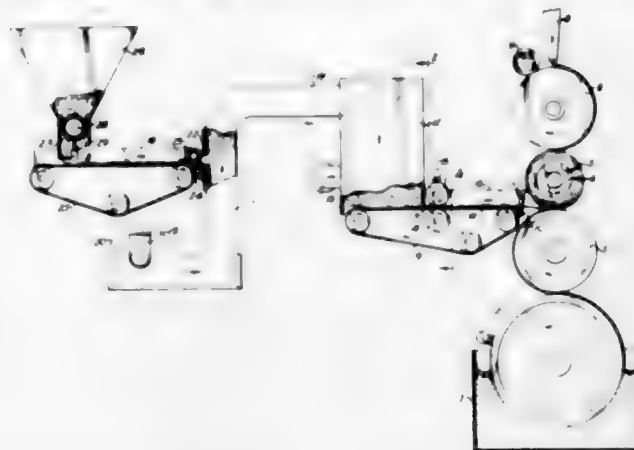
MACHINES FOR PRODUCING REINFORCED PLASTIC PIPES

John Ferla, 5 Whitney Place, East Orange, N.J.; Irma Ferla, executrix of said John Ferla, deceased, assignor to herself

Filed Aug. 31, 1955, Ser. No. 531,685
2 Claims. (Cl. 162—284)

1. In a machine for producing pipe, a vat containing a liquid suspension of composition material, a rotating mandrel thereabove, means below said mandrel for transferring layers of said material from said vat onto said mandrel, a hopper for containing asbestos cementitious material and disposed above said mandrel, a vertically adjustable calendaring roll interposed between said hopper and mandrel for transferring layers of said asbestos cementitious material from said hopper onto said mandrel interposed between the layers of said composition material on said mandrel and compressing the sandwiched layers of both said materials on said mandrel,

means for supplying a reinforcing web of loose glass fibrous material to the mandrel between said layers of



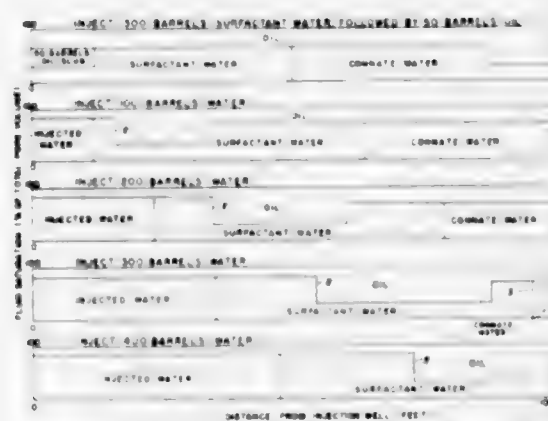
composition and asbestos fibrous material, whereby the glass fibrous material is intermeshed with the layers of said composition and asbestos cementitious materials.

3,006,411

SURFACTANT-WATER SECONDARY RECOVERY PROCESS

Orrin C. Holbrook, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Mar. 31, 1958, Ser. No. 724,941
7 Claims. (Cl. 166—9)



1. A method for recovering petroleum oil from natural underground reservoirs comprising injecting through an input well and into a reservoir an aqueous solution of a water soluble surfactant in an amount sufficient to form a wide band of surfactant-containing fluid in the producing formation, injecting a slug of oil having a density and viscosity approximating that of said petroleum behind said solution in an amount sufficient to form a continuous, advancing oil front, injecting flood water after said oil slug, and recovering oil from said reservoir through a producing well.

3,006,412

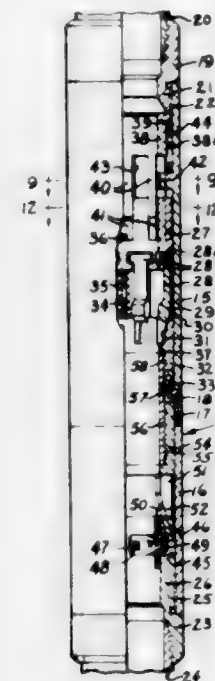
OUTSIDE PIPE CUTTER

Cicero C. Brown, P.O. Box 19236, Houston, Tex.

Filed Nov. 10, 1958, Ser. No. 773,107
12 Claims. (Cl. 166—55.6)

3. In an outside pipe cutter, a tubular body adapted to receive a pipe to be cut, anchor means for releasably engaging said pipe slidably mounted on the body for rotation relative thereto, fluid pressure actuated clutch means movably mounted in the body to clutch said anchor means to the body for rotation therewith, inwardly movable cutter knives on the body, means resiliently biasing said knives outwardly to inactive position, knife-actuating means including a feed sleeve fixed to the anchor means, a feed member carried by the body and a screw feed connection from said feed member to said feed sleeve, said feed member being rotatable with said body relative to said feed sleeve while said anchor means

is engaged with said pipe, wedge members rigidly secured to the feed member and movable therewith in response to rotation of said feed member relative to the feed sleeve to urge said knives inwardly into cutting engagement with said pipe to sever the same, and said feed



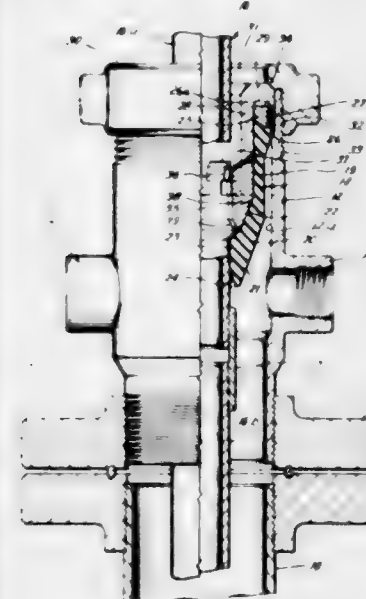
member and said wedge member being retractible through said screw feed connection by rotation of the severed portion of said pipe relative to the body while said anchor means is engaged with said portion of the pipe whereby to release the knives for movement to said inactive position.

3,006,413

PIPE STRIPPER FOR WELLHEADS

Cicero C. Brown, % Brown Oil Tools Inc.,
P.O. Box 19236, Houston, Tex.

Filed Jan. 10, 1958, Ser. No. 708,170
5 Claims. (Cl. 166—82)



1. A tubing stripper, comprising, a generally tubular housing mountable on a wellhead, a flexible resilient sealing sleeve co-axially disposed in the bore of said housing, means securing one end of said sleeve in fluid-tight engagement to the housing, the opposite end of said sleeve comprising a generally conical portion tapering inwardly toward the longitudinal axis of said sleeve and defining a constricted bore through said portion adapted to provide slidable sealing engagement about the exterior of a pipe string being withdrawn therethrough, and a metallic core

means for reinforcing said sleeve, said core means comprising a tubular body extending into the bore of said one end of said sleeve in close fitting engagement therein, and a radially expandible and retractible metallic collar member secured to the inner end of said body and disposed inside the bore of the sleeve adjacent the interior of said tapered end portion, said collar member comprising a plurality of complementary arcuate segments, cooperating means on the inner end of said body and the adjacent ends of said segments forming a radially slidable connection between the segments and said body, the configuration of the external periphery of said segments conforming substantially to that of the adjacent inner wall portions of said sleeve, and the radial thickness of said segments being such as to have continuous contact with the exterior of said pipe string and with the inner wall of said sealing sleeve.

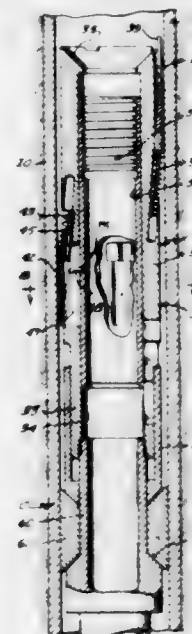
3,006,414

DOUBLE-ACTING LINER HANGER

Erwin Burns, Los Angeles, Calif.

(% Burns Tool Co., 8346 Salt Lake Ave., Bell, Calif.)

Filed Oct. 14, 1957, Ser. No. 689,930
8 Claims. (Cl. 166—124)



1. A liner hanger and packer of the character referred to adapted to be engaged in a well casing including, a cylindrical body, a cylindrical barrel fixed to and depending from the body to connect with a liner, a plurality of upwardly and inwardly inclined guideways, and a plurality of downwardly and inwardly inclined guideways in the body, slips slidably engaged in the guideways to engage the wall of a casing, spring means between each slip and the body to normally urge the slips longitudinally from an in, unactuated position, to an out, actuated position, said slips in the upwardly inclined guideways being relieved and weakened, an expansible packer carried by the barrel, an actuating sleeve engaged in the body to connect with a setting tool extending into the well casing and operable to shift therein, a follower slidably carried by the barrel to engage the packer, connecting means between the actuating sleeve and the follower whereby downward movement of the sleeve in the body causes the follower to exert expansive pressure onto the packer, and coupling means between the actuating sleeve and the relieved slips whereby downward movement of the sleeve shifts the said relieved slips into wedging engagement with the casing, said setting tool and said sleeve having parts to normally engage and hold the slips in their in, unactuated position, and to disengage from the slips when the setting tool and sleeve are operated to set the packer, said relieved slips adapted to collapse when the hanger is urged upwardly in the casing by the setting tool.

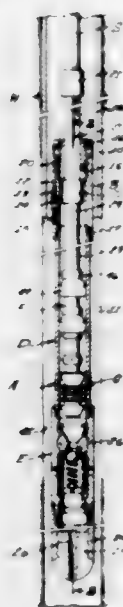
3,006,415

CEMENTING APPARATUS

Erwin Burnus, Los Angeles, and Peter J. Fiel, Downey, Calif. (both % Burns Tool Co., 8346 Salt Lake Ave., Bell, Calif.)

Filed July 8, 1958, Ser. No. 747,223

5 Claims. (Cl. 166—156)



1. A well cementing apparatus of the character referred to including, a fluid conducting float collar engaged in a string of casing depending into a well, said float collar including an elongate, vertically disposed, tubular body with an annular downwardly facing shoulder in its upper end portion, an annular core of easy to drill material in the body and having an annular radially outwardly and upwardly inclined seat adjacent opposing the said shoulder and a check valve mechanism in the core to check the upward flow of fluid therethrough, an elongate fluid conducting drill pipe string depending into the casing from the top of the well, an elongate vertically disposed fluid conducting tool fixed to the lower end of the drill pipe string to establish open communication therewith and carrying packers to slidably engage and seal in the casing, an elongate, vertically disposed tubular fluid conducting adapter engaged with and depending from a cementing tool and having a radially inwardly projecting shear pin in the lower end portion, a casing string wiping plug including an elongate, vertically disposed body of flexible material having a tubular fluid conducting core and a plurality of vertically spaced, radially outwardly projecting flanges, the lowermost flange being upwardly inclined to cooperatively engage the seat in the float collar and adapted to be urged past the shoulder in the collar to establish locked engagement therebelow and an upwardly projecting cylindrical boss on the casing string wiping plug having an annular, outwardly opening channel about its periphery, a central upwardly opening socket with a cylindrical side wall and terminating in the boss to establish an annular bottom and an annular radially inwardly opening recess carrying an expansible snap ring in the wall of the socket and spaced above said bottom, said boss on the casing string wiping plug being normally engaged in the lower end of the adapter with the shear pin engaged in the channel therein and a drill pipe wiping plug having an elongate cylindrical head, and an elongate vertically disposed body of flexible material projecting upwardly from the head, the head having a radially outwardly projecting flange and a radially outwardly opening channel below the flange and carrying a sealing ring, the body having a plurality of vertically spaced, radially outwardly projecting flanges adapted to establish sealed wiping engagement in the drill string, said drill string wiping plug being insertable into the drill string at the top of

the well and to be urged downwardly therein by fluid pressure to engage the casing string wiping plug so that the head thereof enters the socket in the casing string wiping plug to shut off flow therethrough and so that the head seats on the bottom of the socket, the O-ring seals on the wall of the socket and the flange on the head is urged past the snap ring in the socket to establish locked engagement therein.

3,006,416

STOP DEVICE FOR WELL PIPES

Erskine E. Roach and Ivan W. Baker, Houston, Tex., assignors to Harold Brown Company, a corporation of Texas

Filed July 21, 1958, Ser. No. 749,945

7 Claims. (Cl. 166—217)



1. A stop device for well pipes, comprising, a body insertable in a well pipe, said body carrying a downwardly tapering slip expander and a laterally enlarged portion defining an upwardly facing external shoulder about the body spaced below said expander, a collar mounted about the exterior of the body above said shoulder for longitudinal sliding movement relative to said expander, a plurality of upwardly extending pipe gripping slips supported on the collar for radial movement, said slips being expandable by engagement with the expander in response to relative longitudinal movement therebetween, latch means releasably securing said collar to the body at a position to initially hold said slips out of expansive engagement with said expander, said latch means including separable latch elements on the collar and the body so constructed and arranged as to release said collar by inertial reaction in response to a downwardly directed impactive force applied to said body, by an impact-imparting means operated through the well pipe and said inertial reaction of said collar being operative upon release of said collar to produce said relative longitudinal movement between the slips and the expander.

3,006,417

AXIAL FLOW FANS

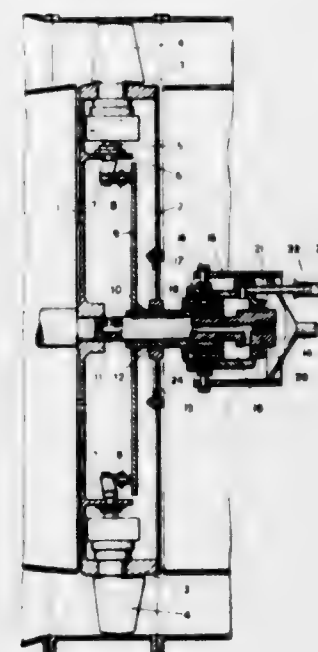
Jan C. Busquet, Hengelo (O), Netherlands, assignor to Koninklijke Machinefabriek Gebr. Stork & Co. N.V., Hengelo (O), Netherlands

Filed Dec. 15, 1958, Ser. No. 780,444

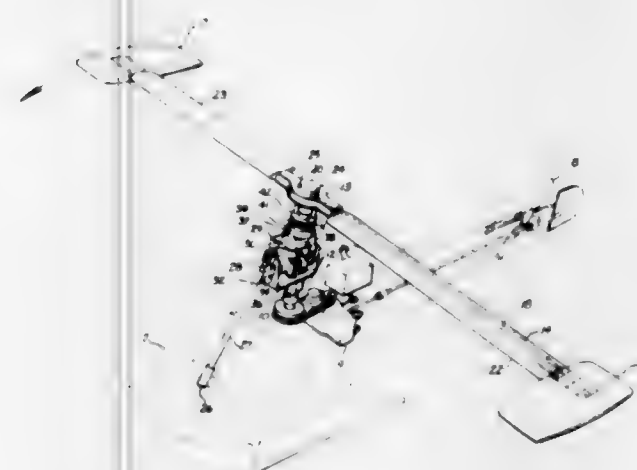
Claims priority, application Netherlands Jan. 15, 1958
2 Claims. (Cl. 170—160.23)

1. An axial flow fan comprising, in combination, a rotary main shaft, a closed hollow hub mounted on said shaft, adjustable impeller blades rotatably supported by and externally of the hub, said hub and said blades constituting together the impeller of the fan, shanks associated with the blades and passed through the peripheral wall of the hub, a control mechanism mounted for axial movement on the shaft and passed through a side wall of the hub in a gas tight manner, said control mechanism being operatively connected with the shanks of the blades, a casing forming part of the external por-

tion of the control mechanism and defining a closed chamber, at least one passage interconnecting said chamber and the cavity within the hollow hub, and a source



3,006,418
HELICOPTER ROTOR CONTROL DEVICES
James F. Spielman, North Road, Bantam, Conn.
Filed Mar. 23, 1959, Ser. No. 801,178
4 Claims. (Cl. 170—160.24)



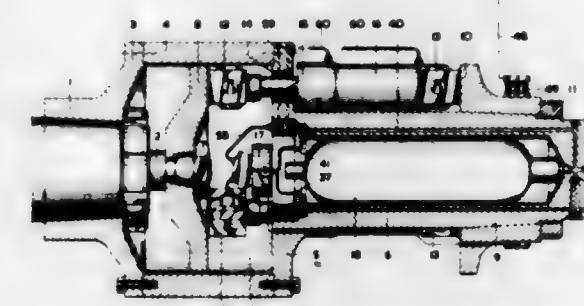
2. A helicopter rotor blade, said rotor blade comprising: a horizontally extending support, a rotor wing mounted in a horizontal plane on the said support, said rotor wing being rotatively movable relative to the said support about an axis running lineally through the said support, said rotor wing having a greater distance to the trailing edge thereof from the said axis than to the leading edge thereof from the said axis, means fixing said rotor wing against lineal movement relative to the said support, and control means extending lineally through the said support, said control means being rotatively movable about the said axis by pilot control whereby to adjust the angle of incidence of the said rotor blade in use on a helicopter, said control means being rotatively flexible under torsion loading.

3,006,419

APPARATUS FOR ADJUSTING THE PITCH OF THE BLADES OF A MARINE PROPELLER
Hendrik Klaassen, Drunen, and Willem Daane, Vlijmen, Netherlands, assignors to Lips N.V., Drunen, Netherlands, a corporation of the Netherlands

Filed Jan. 11, 1960, Ser. No. 1,468

Claims priority, application Netherlands Jan. 12, 1959
7 Claims. (Cl. 170—160.32)



1. Apparatus for adjusting the pitch of the blades of a marine propeller comprising a hollow propeller shaft, a control rod within said shaft and axially movable with respect thereto to adjust the pitch of the blades, a servomotor comprising a number of units having a first part and a second part extending around the outside of the propeller shaft and at least approximately equally divided around the periphery of said shaft, said first part being connected to the outside of the shaft, a casing having a radial end wall provided with openings formed as a widened part of the propeller shaft, a yoke disposed in said casing and being connected to the said control rod, said second part extending through one of said openings in said radial end wall and engaging said yoke, and means to actuate said servomotor.

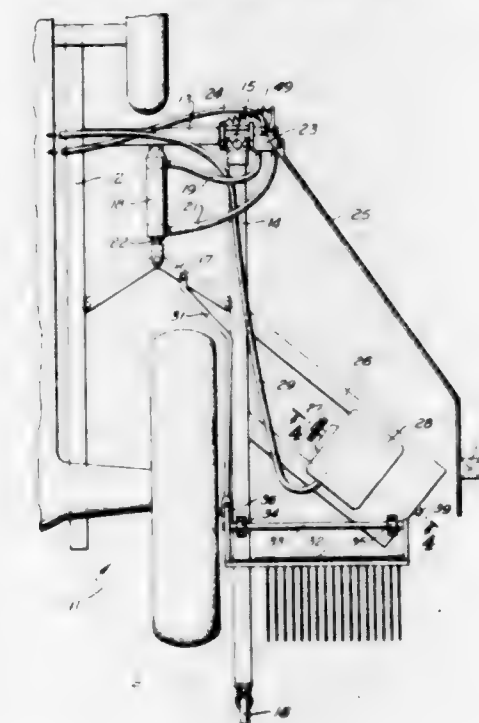
3,006,420

CULTIVATOR ATTACHMENT FOR TRACTORS

John J. Coogan, 6045 Mission Blvd., Riverside, Calif.

Filed Sept. 3, 1958, Ser. No. 758,835

6 Claims. (Cl. 172—5)



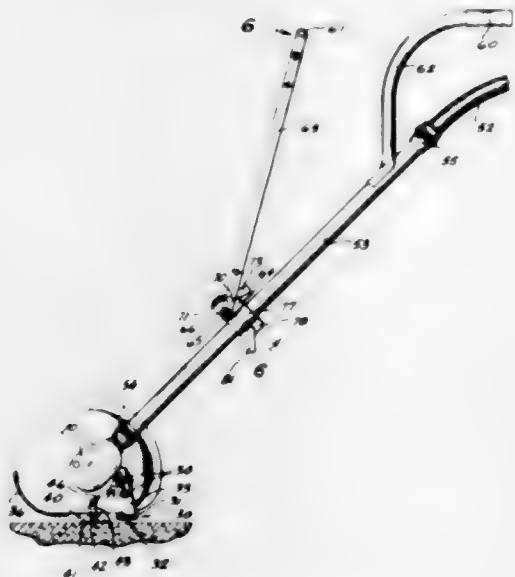
1. A cultivator attachment for tractors comprising a bracket extending outwardly from said tractor, an arm universally mounted on the outer end of said bracket

and extending rearwardly therefrom, said arm being swingable between a retracted position alongside said tractor and a laterally extended position, a cultivator rigidly mounted on said arm and extending outwardly therefrom, a rake mounted on said arm rearwardly of said cultivator, said rake being swingable vertically about a horizontal pivot, a cylinder and piston mounted on said bracket, a toggle joint extending between said tractor and said arm, a rod extending between said piston and said toggle joint, and a link connected between said toggle joint and said rake, said link being operable to swing said rake upwardly as said toggle joint is actuated by said cylinder and piston to move said arm from said extended position to said retracted position.

3,006,421

LAWN EDGER •

Harvey O. Feilbach, Milwaukee, Wis., assignor to Francis J. Trecker, West Allis, Wis.
Filed Aug. 13, 1956, Ser. No. 603,685
8 Claims. (Cl. 172-15)



1. In an apparatus for establishing the edge of a lawn along a structure; a rotatable shaft; a source of power connected to rotate said shaft; a cutting blade secured to said shaft to rotate with it; a brush secured to said shaft to rotate with it contiguous to said cutting blade; a shield supported adjacent to said brush and cutting blade and formed to direct dirt propelled by said cutting blade and brush at an angle to the path of travel of the apparatus so that it may be discharged onto the lawn away from the structure; an edging guide adjustably mounted to support said shaft at a predetermined height and adapted to engage the structure along which the edge of the lawn is being established and to slide relative to the structure to guide said rotating cutting blade and brush along a path parallel to the edge of the structure to establish an edge in the lawn adjacent to the structure; a surface guide operable selectively and independently of said edging guide to support said shaft a predetermined distance above the surface of the structure for maintaining said rotating brush and cutting blade in position to operate upon soil and vegetation which may have accumulated upon the surface of the structure; an elongated handle connected to the apparatus; a grip fixed to said handle; a second grip adjustably mounted on said handle for movement toward and away from said handle and for movement longitudinally of said handle; and clamping means operable to clamp said second grip in a selected position; whereby the operator may grasp said grips for manipulating the apparatus in performing the lawn edging operation.

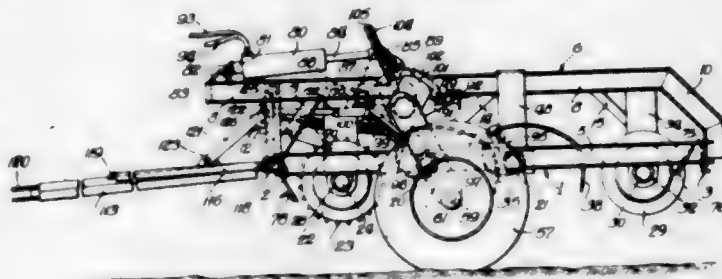
3,006,422

AUTOMATIC MECHANISM FOR OPERATING A WHEEL SUPPORTED MULCHER

Russell L. Mighell, Kewanee, Ill., assignor to Kewanee Machinery & Conveyor Company, Kewanee, Ill., a corporation of Illinois

Filed Mar. 3, 1959, Ser. No. 796,778

17 Claims. (Cl. 172-142)



15. In an agricultural implement having a supported frame, a pair of rock bars rotatably carried on said frame, tooth members on said rock bars, and depth control mechanism for said tooth members comprising a power operated cylinder, interconnected link mechanism extending between said cylinder with said rock bars, and adjustable gauge mechanism interposed into said interconnected link mechanism comprising a first element mounted for rocking motion upon said frame, a second element mounted for rocking motion relative to said first element, and said interconnected mechanism providing an operating connection from the cylinder end thereof with said first element to rock the latter and having a second operating connection provided from the rock bar end thereof with said same first element to manipulate said rock bars and tooth members, said second operating connection comprising a slot formed in said first element, a pin for said slot carried by said second operating connection, and adjustable means cooperatively carried by said two elements to predetermine the angular relations therebetween, said adjustable means including a gauge lug disposed at the site of the slot and arranged for relative movement therealong to limit the slot length available to said pin, different slot lengths providing different depths of penetration of said tooth members on the rock bars.

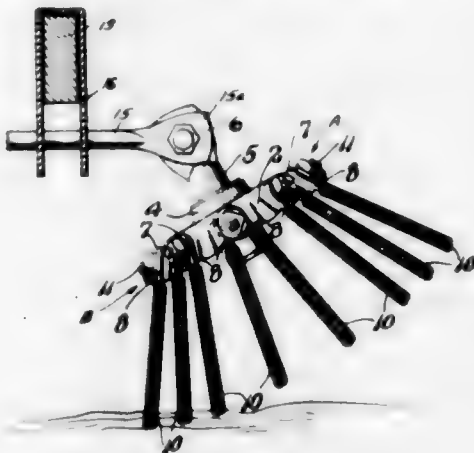
3,006,423

ROTARY MULCHER AND WEEDER

Cornelius Buddingh and Marinus Buddingh, both of 35800 100th, Caledonia, Mich.

Continuation of abandoned application Ser. No. 555,426, Dec. 27, 1955. This application Apr. 3, 1958, Ser. No. 727,517

2 Claims. (Cl. 172-523)



1. Structure as described, comprising, means movably supported on the ground, a shaft adapted to be mounted on said means with its axis inclined to the vertical, a dome of frusto-conical form rotatably mounted on said

shaft, said dome having a depending outwardly and downwardly extending flange, a plurality of spaced, short rods secured to said flange having short outwardly and downwardly extending free end portions and an elongated flexible, yieldingly resisting member surrounding and connected at one end portion to each of said rods at the free end portions thereof and in alignment therewith, diverging downwardly from the axis of said shaft, said members coming to substantially vertical position in succession on rotation around said shaft and said free end portions thereof engaging the ground at and proximate said substantially vertical position.

3,006,424

ROCK DRILL BITS AND CUTTING INSERTS THEREFOR

Curt Vilhelm Dahlin, Sandviken, and Kaljo Käärrik, Stockholm, Sweden, assignors to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden

Filed Apr. 20, 1959, Ser. No. 807,573

Claims priority, application Sweden May 23, 1958

2 Claims. (Cl. 175-410)



1. A rock drill bit adapted for percussive drilling comprising a drill bit body and a cutting insert fastened in a groove in said body by brazing, said cutting insert consisting of sintered metallic material consisting essentially of tungsten carbide and a bonding metal selected from the group consisting of cobalt, nickel and iron and having a cutting edge surface, a plane base surface opposite to said cutting edge surface, plane side surfaces which converge toward each other from said base surface to said cutting edge surface and end surfaces, said edge surface being convex with respect to said base surface and being wider adjacent the ends thereof than adjacent the middle thereof, said side surfaces protruding from said groove a distance of from 2 to 6 millimeters and the shortest distance between said side surfaces being from 3 to 5 millimeters while the distance between said side surfaces adjacent to said base surface is from 2 to 3 times said shortest distance between said side surfaces.

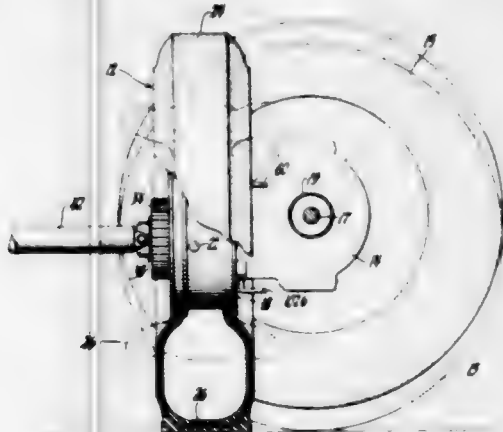
3,006,425

PARKING AID

Jule Brinn, Oak Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 17, 1959, Ser. No. 834,154

9 Claims. (Cl. 180-1)



2. In a vehicle comprising a differential housing at the rear thereof, together with a propeller shaft operably connected to the mechanism within said housing and a

pair of rear road wheels whose axes are fixed and disposed in transverse relation to the longitudinal center line of the vehicle, apparatus for facilitating parking of the vehicle including: an auxiliary wheel rotatably carried by said differential housing with its axis disposed in fixed parallel relation to said center line, said axis having a fixed position with reference to said axes under all operating conditions of the vehicle, a pneumatic tire on said auxiliary wheel incorporating means whereby the tire when in deflated condition is radially contracted and out of contact with the road surface, such condition being the normal condition of said tire, means carried by the vehicle for driving said auxiliary wheel in either direction, a source of air pressure carried by the vehicle and means having connection with said source for inflating and deflating said tire, the latter when in inflated condition having a diameter such that it engages the road surface to maintain said road wheels in an elevated position with respect to such surface.

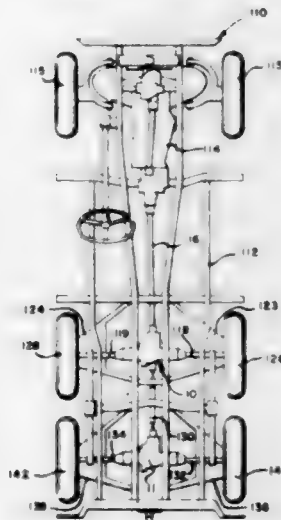
3,006,426

VEHICLE AXLE CONSTRUCTION

Edmund J. Popiel, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Aug. 20, 1959, Ser. No. 834,997

1 Claim. (Cl. 180-22)



In a vehicle having a front mounted engine and a pair of rear mounted driving assemblies in tandem, said assemblies including a first differential rigidly secured to the chassis of said vehicle and having swing axles universally connected to output shafts extending from the sides of said differential, said differential having a longitudinal one piece shaft, a pinion gear directly splined to said shaft, a ring gear engaging said pinion gear, said ring gear being connected to said swing axles by differential gearing, said engine being connected to one end of said shaft, the other end of said shaft extending rearwardly through the housing of said differential, said assemblies including a second differential rigidly secured to said chassis and in longitudinal alignment with said first differential, swing axles extending laterally from the sides of said second differential, a shaft connecting said other end and the input of said second differential.

3,006,427

THREE WHEELED TRACTOR WITH ADJUSTABLE WHEEL BASE

Cornelis van der Lely, Maasland, Netherlands (7 Bruschnain, Zug, Switzerland)

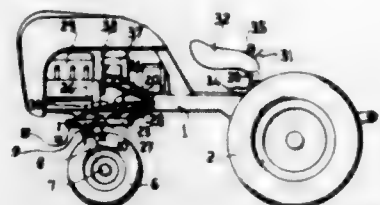
Filed Feb. 8, 1957, Ser. No. 639,081

Claims priority, application Netherlands Feb. 9, 1956

6 Claims. (Cl. 180-27)

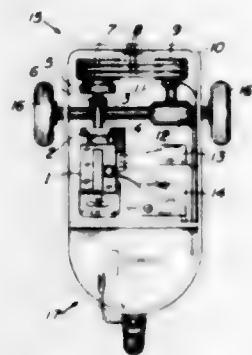
1. An agricultural tractor comprising support means, two wheels on said support means at one end of the same, said wheels being spaced transversely of the di-

rection of travel of the tractor, at least one steerable wheel at the other end of said support means and positioned substantially midway between the first said wheels, a single steering means operatively associated with said steerable wheel, means on said support means for supporting an operator in at least two different positions for operating the tractor by said single steering means in opposite directions of travel, power means



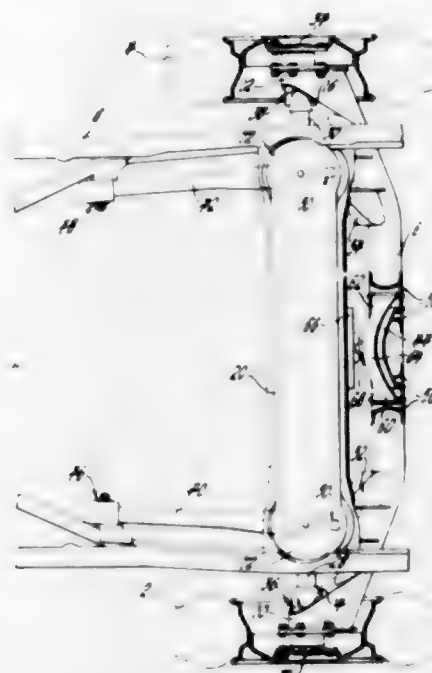
on each of said two wheels for driving the same and means operatively associated with said steerable wheel for adjusting the steerable wheel from a first to a second position relative to the first said wheels for changing the wheel base of the tractor, said means defining a vertical axis about which the steerable wheel is rotatable over an angle of 180° from said first position into said second position, said vertical axis being displaced from the vertical axis through the center of the steerable wheel.

3,006,428
MOTOR VEHICLE DRIVING AND WEIGHT DISTRIBUTION ARRANGEMENT
John C. Westmont, 2308 Kendall Ave., Madison, Wis.
Filed Apr. 15, 1958, Ser. No. 728,686
4 Claims. (Cl. 180—54)



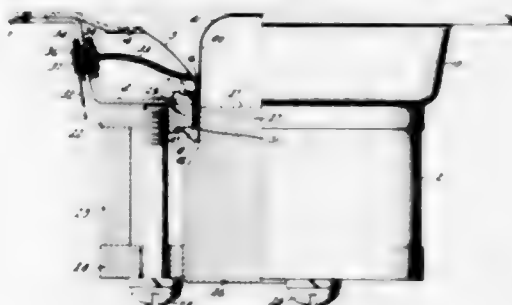
1. In combination with a motor vehicle chassis and motor vehicle drive axle, a drive arrangement comprising a power unit, a clutch, a brake, a transmission and a differential, with means for transmitting power between said power unit and said clutch, brake, transmission and differential, said power unit situated immediately forward of said drive axle and adjacent one side of said motor vehicle chassis, said clutch situated to the rear of said power unit and also to the rear of said drive axle with power transmitted between said power unit and said clutch, said brake situated to the rear of said drive axle on the opposing side of said chassis from said clutch with power transmitted between said clutch and said brake, said transmission and differential situated adjacent to said drive axle immediately forward of said brake and on the opposing side of said chassis from said power unit and said clutch, with power transmitted between said brake and said transmission and differential and with power transmitted between said transmission and differential and said drive axle.

3,006,429
SUSPENSION SYSTEM FOR VEHICLE DRIVING WHEELS
Von D. Polhemus, Franklin, and Johannes W. Rosenkrands, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 21, 1957, Ser. No. 691,478
3 Claims. (Cl. 180—73)



1. In combination, a vehicle including a supported chassis portion, a supporting chassis portion including driving wheels, a dead axle extending transversely beneath the supported portion and having opposite longitudinally extending arm portions supporting said wheels on a common axis of rotation, a pair of generally longitudinally directed links arranged in laterally spaced apart relation, means pivotally connecting one end of each link to said supported portion and the other end of each link to said dead axle on a common axis, a center link disposed between and above said longitudinal links, one end of said center link being pivoted to said supported portion and the other end being pivoted to said dead axle on an axis parallel with but spaced from said last mentioned common axis, and spring means disposed between said supported and supporting portions, said spring means engaging said supporting portion between said wheel axis and the axis defined by the pivotal connection between said center link and said dead axle.

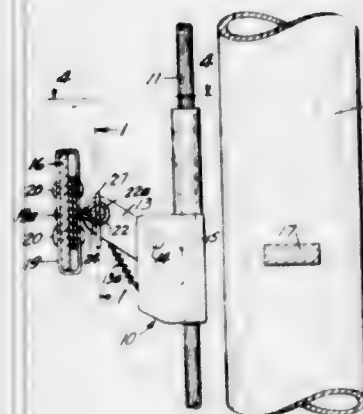
3,006,430
LOUDSPEAKER CONSTRUCTION
Adelore F. Petrie, Camillus, and Duane R. Aubrey, Auburn, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 23, 1959, Ser. No. 841,889
12 Claims. (Cl. 181—31)



1. In a loudspeaker having a pole piece and a voice coil positioned around said pole piece, a phasing dome comprising a one-piece cup-shaped member fitted around the

periphery of said pole piece and extending frontwardly thereof, the bottom of said cup-shaped member being in front of and spaced from said pole piece a sufficient distance for the member to function as a phasing dome for said loudspeaker, said fitting of the one-piece cup-shaped member around the periphery of the pole piece insuring accurate centering of the phasing dome with respect to the pole piece.

3,006,431
APPARATUS CONNECTING THE SAFETY BELT WITH THE SAFETY APPLIANCE
Roy E. Meyer, Red Wing, Minn.
Filed Aug. 4, 1958, Ser. No. 752,989
4 Claims. (Cl. 182—5)

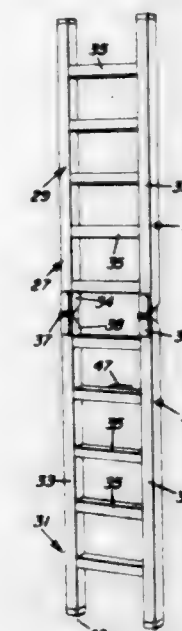


1. Apparatus for securing a workman to the apertured control member of a safety appliance, said apparatus comprising a belt applicable to the workman's body in tight-fitting relation, a rigid structure affixed to the belt in a predetermined orientation, said rigid structure having a pair of outwardly projecting, side-by-side and spaced apertured portions to receive the apertured control member therebetween, the apertures of said spaced portions being horizontally aligned with each other, one of said apertures having a non-circular shape, a removable horizontally oriented pin projecting through the horizontally aligned apertures in said spaced portions and having a head at one end adjacent the non-circular aperture, the pin also having a non-circular shank portion adjacent the head and disposed in said non-circular aperture and being cooperatively shaped in relation to the non-circular aperture to prevent rotation of the pin about a longitudinal axis, said pin being adapted to extend through the aperture of said control member when the control member is assembled between the spaced portions of the rigid structure, the other end of said pin being bifurcated to define a vertical slot, a vertically oriented toggle element in the bifurcated end of the pin and extending transversely of the pin outwardly therefrom in both directions to prevent withdrawal of the pin from the apertures, and pivot means mounting the toggle element on the pin to provide for free swinging of the toggle element into alignment with the pin to permit removal of the pin from the apertures, the toggle element having upper and lower ends, the lower end of the toggle element being substantially heavier than the upper end to normally maintain the toggle element in vertically oriented position for preventing withdrawal of the pin from the apertures.

3,006,432
SECTIONAL LADDER
Rupert S. Gurley, Box 1186, Kodiak, Alaska
Filed Dec. 22, 1959, Ser. No. 861,402
13 Claims. (Cl. 182—23)

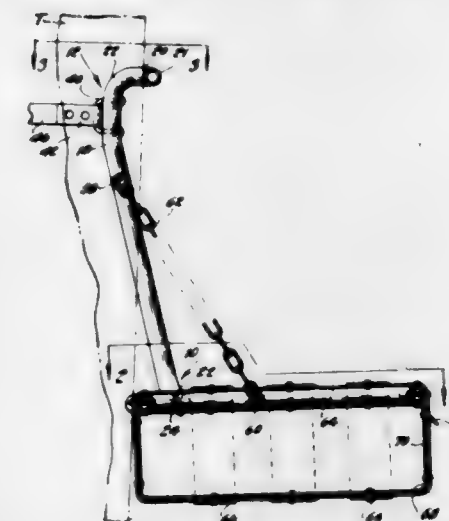
1. A sectional ladder comprising a female ladder section having channeled side stiles and channeled steps, and a male ladder section adjustable longitudinally of said

female section and having side stiles and steps movable into and out of the side stiles and steps of the female section in different adjusted positions of the male section.



tion to nest in said female section, said female section and male section when nested interlocking to hold said male section in adjusted position.

3,006,433
TREE-ATTACHED FOLDING SEAT
Roy G. Farver, P.O. Box 537, Brighton, Mich.
Filed July 15, 1959, Ser. No. 827,305
1 Claim. (Cl. 182—187)



A folding seat adapted to be attached to the trunk of a tree, comprising a seat bottom structure, an upstanding seat back structure, a pivot member pivotally connecting the rearward portion of said seat bottom structure to the lower portion of said seat back structure for effecting unfolding of said structures from an approximately coplanar closed position to an approximately mutually perpendicular open position, foldable diagonal brace members secured at their opposite ends to said structures at locations spaced apart from said pivot member and extending between said structures at oblique angles thereto, and means connected to the upper portion of said seat back structure for securing said seat back structure to the tree trunk, said seat back structure including an open-centered substantially rigid frame of approximately inverted U-shaped form with a substantially rigid top bridge member and downwardly-extending side members depending therefrom in laterally-spaced approximately parallel relationship, the seat back structure on the rearward side thereof having a centrally-disposed substantially rigid concave portion adapted to matingly engage the tree trunk.

3,006,434

LADDER CONSTRUCTION

Howard B. Rich, Carrollton, Ky., assignor to Howard B. Rich, Inc., Carrollton, Ky., a corporation of Kentucky

Filed Mar. 9, 1960, Ser. No. 13,804

3 Claims. (Cl. 182-206)



1. A ladder which comprises a pair of spaced rails, hooks mounted on upper ends of said rails for supporting the ladder, a plurality of rungs mounted on said rails, there being a circumferentially extending groove in each rail opposite each rung and a pair of pins mounted in each rung, each groove having an arc portion concentric to the face of the rail, each pin extending transversely of and being received in one of the grooves of one of the rails to support the rung, the rails being swingable between an operative position in which the hooks extend transversely of the rungs and a folded position aligned with the rungs, each groove having a straight portion extending tangentially from one end of the arc portion, the pins engaging the straight portions when said rails are in operative position.

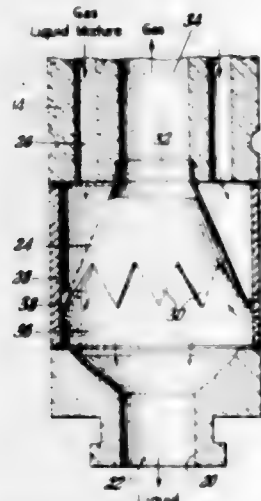
3,006,435

LIQUID ENTRAINMENT SEPARATOR

William J. Alton, Cleveland, Lawrence M. Deeks, Westlake, Thomas J. O'Donnell, Cleveland, and Samuel H. S. Raub, Bay Village, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Jan. 29, 1958, Ser. No. 711,846

4 Claims. (Cl. 183-2)



1. In a gas absorption column, wherein a gas is absorbed into a liquid to make a solution product and wherein at least some of said solution product becomes entrained in unabsorbed gas, which column comprises a multiplicity of substantially parallel tubes wherein some of said gas dissolves in said liquid and some of said solution becomes entrained in said gas; a shaft substantially parallel to said tubes through which unabsorbed gas is removed from said column; and an exit port through which solution product is withdrawn from said column; the improvement comprising providing an extension near the bottom of said column between the lower end of said

tubes and said exit port; and further providing a substantially conical member within said extension having serrations along the edge thereof adjacent said extension and communicating with said shaft, said tubes being substantially normal to the projected area of said conical member and being so disposed as to be spaced substantially uniformly over the entire surface area of said conical member, said member and said column extension being adapted to receive said unabsorbed gas having solution product entrained therein and to separate said entrained solution from said unabsorbed gas, said separated solution product passing along said serrations onto said extension and thence on to said exit port, said separated unabsorbed gas passing between said serrations through said conical member to said shaft and thence out of said column.

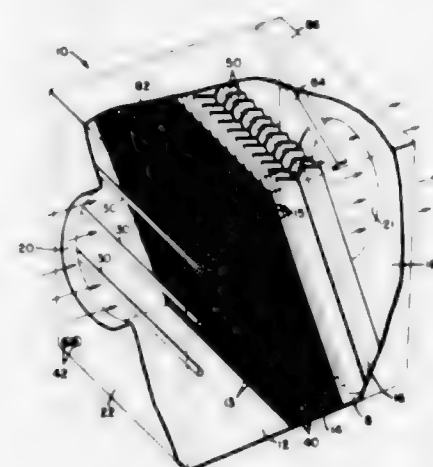
3,006,436

AIR WASHER

Herman S. Starbuck, Cincinnati, and Howard E. Liebelt, Norwood, Ohio, assignors to S & C Manufacturing Co., Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 9, 1958, Ser. No. 727,387

5 Claims. (Cl. 183-22)



1. An air washer comprising a closed housing, said housing including an inlet means and an outlet means, said housing being divided into at least four in-line chambers between said inlet means and said outlet means for permitting air flow from said inlet means to said outlet means successively through said in-line chambers, a spray chamber being disposed adjacent to and in communication with said inlet means for receiving air from said inlet means, spray means disposed within said spray chamber for directing a spray of fluid downstream of the housing for thoroughly wetting air passing through the spray chamber, a scrubber chamber being defined adjacent to said spray chamber and downstream thereof, said scrubber chamber being inclined at a sharp angle to the direction of normal flow of air through the housing, said scrubber chamber including a plurality of loose, right cylindrical rings random-packed and forming a ring bed having a thickness of at least substantially six times the height of one of said rings for imparting at least six directional changes to a flow of air passing through the scrubber chamber, the fluid spray from the spray means in said spray chamber producing a continuous flow of fluid onto and downwardly through said scrubber chamber for continuously wetting the surfaces of said rings, the fluid draining downwardly at a sharp angle out of the air stream passing through the apparatus, a drying chamber being defined downstream of said scrubber chamber, and including a plurality of elongate baffles arranged to impart at least three directional changes to a flow of air passing through the apparatus, and a collection chamber being defined downstream of said drying chamber, said collection chamber being disposed adjacent to and in communication with said outlet means.

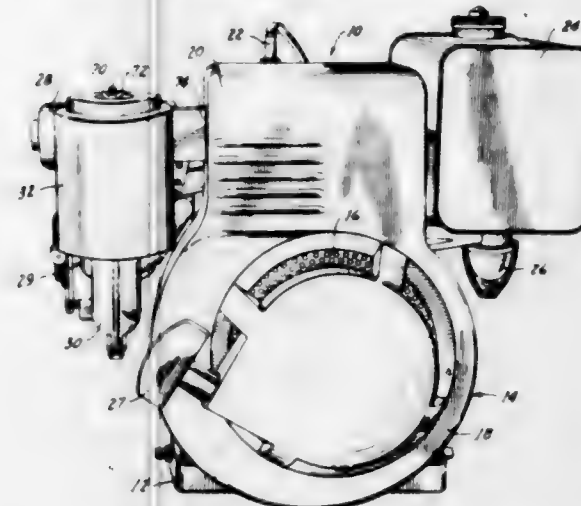
3,006,437

AIR CLEANER AND METHOD

Wilfred W. Lowther, Chicago, Ill., assignor to Novo Industrial Corporation, a corporation of New York

Filed Sept. 11, 1959, Ser. No. 839,486

4 Claims. (Cl. 183-36)



1. A method of cleaning the inlet air for an air cooled engine which has a shrouded fan driven by its crankshaft for blowing air under pressure over the engine cylinders, including the steps of tapping some of the air from inside the shroud and conveying it to a separate housing, tangentially introducing the tapped air into one end of the separate housing to set up a swirl of air to thereby centrifuge the dirt in the air to the outside, discharging the dirt from the other end of the separate housing, and separately discharging the air from the center of the separate housing to the engine.

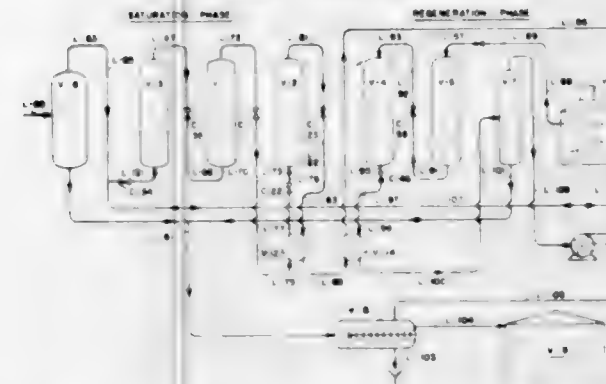
3,006,438

ADSORPTION PROCESS

Harry William De Yarmett, Lake Charles, La., assignor to Shell Oil Company, a corporation of Delaware

Filed Apr. 29, 1958, Ser. No. 731,774

4 Claims. (Cl. 183-114.2)



1. In a process employing a plurality of sequentially shifted adsorbent beds for the removal of water vapor and condensable hydrocarbons from wet natural gas by contacting the gas with an adsorbent material to effect an adsorption of water and hydrocarbons thereon and wherein the adsorbent is then heated to release the water and hydrocarbons, thereby regenerating the adsorbent material, the improvement comprising utilizing at least five adsorbent beds which are each stepwise and in turn: (1) cooled from an elevated regeneration temperature to a hydrocarbon adsorbing temperature by a sweep stream of said natural gas, at least partially stripped of its hydrocarbon content; (2) used to adsorb hydrocarbons and water that remain in the sweep stream exiting from the bed then in step (1); (3) employed to adsorb hydrocarbons and water from the wet natural gas prior to its use as the sweep gas of step (1); (4) heated to a moderately high temperature by a hot, desorbing gas stream, whereby it gives up at least part of its adsorbed hydrocarbons

to said desorbing gas; (5) heated to a somewhat higher regeneration temperature by the desorbing gas stream prior to its passage to step (4), thereby completing regeneration of the bed; and wherein the natural gas stream being processed is passed through the three beds occupying the position of steps (3), (1) and (2) in that order; and wherein the desorbing gas is passed in a closed cycle through the beds of steps (5) and (4) in that order, thereby becoming laden with hydrocarbons and water; thereafter cooling said laden desorbing stream by heat exchange against the stripped natural gas stream from step (2) to effect at least some condensation of water and hydrocarbons which are then separated from the desorbing gas; and subsequently heating and recycling the stripped desorbing gas.

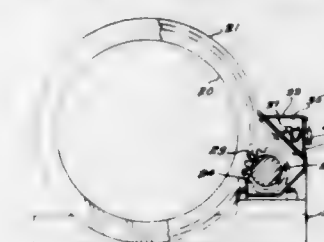
3,006,439

HOUSING FOR SPRAY LUBRICATING SYSTEM

Lawrence J. Molinaro, Silver Bay, Minn., assignor to Reserve Mining Company, Silver Bay, Minn., a corporation of Minnesota

Filed Feb. 28, 1958, Ser. No. 718,315

3 Claims. (Cl. 184-6)



1. In apparatus of the type described wherein a rotatable member is provided with an external, peripheral ring gear and with driving means consisting of a driven pinion in mesh engagement with said ring gear, means providing a spray lubrication system for the gear-pinion couple including a guard enclosure, an opening in said enclosure in operating registry with said couple, a closure member for said opening, said closure member being hinged along an edge of said opening for swinging movement outwardly and away from said couple, spray nozzle means carried on an inner face of said closure member and directed towards the intermeshing zone of said gear-pinion couple, and flexible connecting means operatively connected to said spray nozzle means for supplying lubricant and pressure fluid to said spray nozzle means.

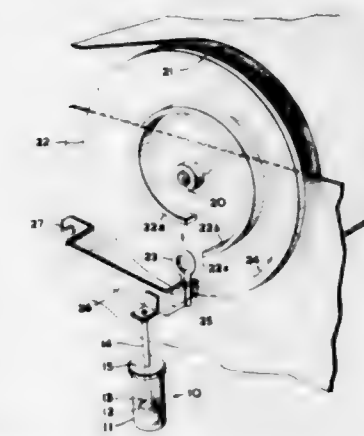
3,006,440

DASHPOT

William Mayall, 215 St. Clair Blvd., Hamilton, Ontario, Canada

Filed Dec. 17, 1958, Ser. No. 781,074

7 Claims. (Cl. 188-96)



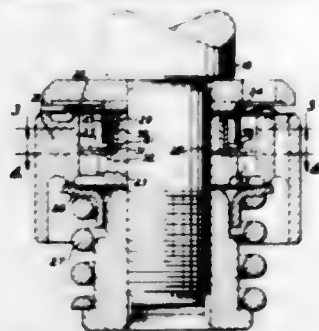
1. A dashpot, comprising a container for a liquid, a quantity of liquid within and partially filling the container, a piston within the container and arranged to move up and down with its longitudinal axis substantially vertical, the

piston being of less density than the liquid and having a side wall which is spaced from a juxtaposed side wall of the container, the piston having an internal cavity which is open at an upper surface of the piston to permit the liquid to flow freely into the cavity when the piston is submerged and having a perforation located at a position below said upper surface and which communicates with the cavity, and operating means acting on the piston for forcing the piston downwardly into the liquid, the combined weight of the piston and the operating means being less than the weight of liquid displaced by said piston when said piston is submerged in said liquid to a position in which the internal cavity is filled with liquid, whereby the piston and operating means will be displaced upwardly by the liquid when such movement is permitted by said operating means.

3,006,441

SHOCK ABSORBER

Charles V. Bliven, Belleville, and Ivis J. Allen, Ann Arbor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,303
3 Claims. (Cl. 188-100)



1. A telescopic type hydraulic shock absorber having a pair of relatively reciprocable parts, one of said parts forming a division between two fluid chambers and having an opening therethrough permitting restricted fluid flow between said chambers, an annular recess in said part aligned with said opening, an orifice member mounted in said annular recess and having an axially extending hub seated against the wall of said recess and a radially extending flange seated immediately adjacent the base of said recess, the radially extending flange of said orifice member having an opening therein positioned in general alignment with the opening in said part but having a different configuration than the opening in said part, a valve member rotatably mounted in said annular recess and having an axially extending hub rotatably mounted upon the hub of said orifice member and a radially extending flange positioned immediately adjacent the radially extending flange of said orifice member, the radially extending flange of said valve member having an opening therein overlapping the opening in said orifice member and providing a variable effective opening between said chambers upon rotation of said valve member relative to said orifice member, and a temperature responsive element operatively connected to said valve member to rotate the latter in response to temperature changes.

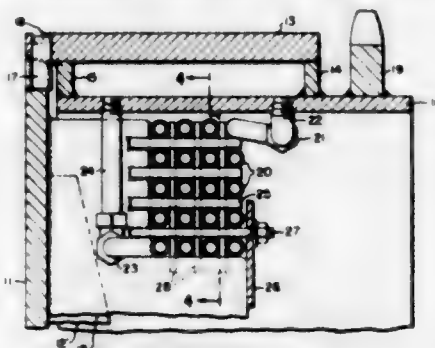
3,006,442

TEMPERATURE-CONTROLLED BRAKE SYSTEM

Alvin H. Wilkinson, Talala, Okla., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 775,053
2 Claims. (Cl. 188-264)

1. A temperature-controlled brake system, comprising a rotatable drum, a cylindrical brake rim mounted on said drum, a concentric inner wall attached to said rim and defining therewith a circumferential cooling chamber adapted to contain a limited quantity of cool-

ing liquid, a spirally formed coil concentrically mounted with respect to said rim and rotatable therewith, said coil being arranged in several banks disposed at progressively increasing distances from the axis of rotation and communicating with said chamber by means of inlet and outlet connections arranged in spaced relation to one another, said chamber and said coil constituting a closed

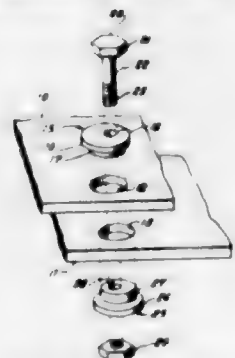


system wherein liquid within said chamber is vaporized by frictional heat generated at the rim and thereby forced through said inlet connection to said coil where the vaporized liquid is condensed and returned to said chamber through said outlet connection by centrifugal force produced in the outer turns of the coil by the rotation thereof.

3,006,443

METHOD AND APPARATUS FOR ATTACHING JUXTAPOSED MEMBERS

Joseph T. Siler, Dallas, Tex.
Filed Dec. 20, 1954, Ser. No. 476,469
6 Claims. (Cl. 189-36)



4. A fastening apparatus for securing together in fixed relationship a pair of contacting members having contacting surfaces, each contacting member having a hole therein, which holes are in substantially opposed relationship; a pair of adapters, each being unitary and having an enlarged head and a reinforcing body of reduced diameter, one of said reinforcing bodies being rotatably fitted in each of said holes with the head positioned against the outer faces of the contacting members; a passage extending longitudinally through the head and body of each such unitary adapter and located eccentrically with respect to the longitudinal axis thereof, said passages being arranged to be aligned by rotation of the adapters in the holes; an elongated fastening shaft arranged to be inserted through the aligned passages in contacting engagement with the inner sides thereof; and means to secure said shaft and said contacting members in fixed relationship with reference to said adapters.

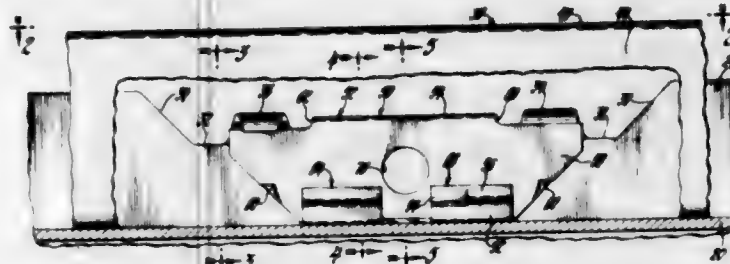
3,006,444

CLIP

Edward MacCallum, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,588
6 Claims. (Cl. 189-88)

1. A clip for securing a flanged molding to a pinch-weld, said clip comprising a clip body having a center section and two side sections integrally formed there-

with and extending downwardly therefrom to provide an inverted channel-like cross section throughout the length of said clip, said body center section being undercut adjacent each end of said clip to form apertures defined by said center section and side sections extending through said body for receiving clip-holding tabs formed on the pinchweld, said body side sections each having a pair of flanges integrally formed therewith and extending outwardly therefrom to provide a substantially horizontal



section and then extending upwardly and outwardly to provide a molding flange retaining section and then extending upwardly and inwardly to provide a flange end section, at least one of said flanges having a tongue struck from said flange section adjacent said molding flange engaging section and extending outwardly and downwardly relative to said clip body to provide a molding flange retainer, said body side sections also having substantially aligned apertures formed therethrough for receiving clip anchor means.

3,006,445

COMBINED ACCELERATOR AND BRAKE CONTROL MECHANISM

Robert E. Lee Green, Pomona, Calif. (1137 24th St., Santa Monica, Calif.), and Francis D. Ammen, Los Angeles, Calif.; said Ammen assignor to said Green
Filed June 2, 1958, Ser. No. 739,321
13 Claims. (Cl. 192-3)



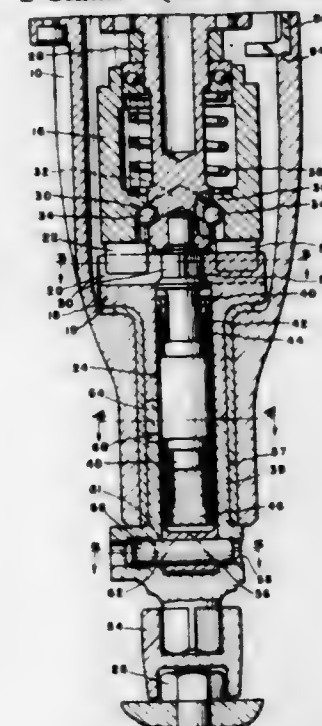
1. In a combined control mechanism for the carburetor and for the brake mechanism for an automobile, adapted to be controlled by the same foot of the driver, the combination of a brake-actuating lever with means for pivotally supporting the same in an inclined position forward of the driver's position, and so that the said lever can rock about a transverse axis adjacent its upper end, while its lower end is in a position to receive pressure from the heel of the driver's foot; an actuator stem adapted to be connected to the carburetor, with means for guiding the stem forward; an accelerator lever aligned with the brake-lever, and with the lower end of the accelerator lever supported on the upper face of the brake-lever, with the upper tip-portion of the accelerator lever lying adjacent the end of the stem and projecting across the same so that pressure of the toe-portion of the driver's shoe can actuate the stem to advance and control the carburetor to accelerate the automobile, all of said parts cooperating when the driver's heel depresses the brake-lever, to withdraw the said tip-portion of the accel-

erator lever, from the end of the stem, thereby preventing any accidental acceleration of the automobile while the braking of the automobile is maintained.

3,006,446

IMPACT TOOLS

Henry Harrison and Henry C. Harrison, Port Washington, N.Y., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 25, 1954, Ser. No. 405,708
1 Claim. (Cl. 192-30.5)

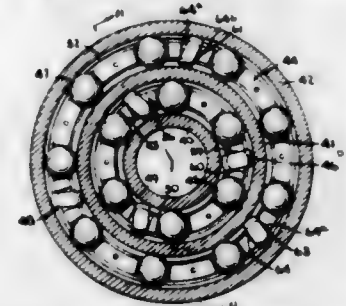


In a rotary impact tool having a casing, an anvil in the casing, a rotational hammer adapted to deliver a series of hammer blows to the anvil, said anvil having an elongated forwardly extending portion, a rotationally stressed spring element extending into said portion and engaged at its rearward end to said anvil against rotation relative thereto and adapted at its forward end portion to be engaged to a work piece, and means for connecting the spring element to the anvil to hold said spring in such stress position, said means including a connector engaged to the forward end portion of the spring against movement in either direction relative to the spring and having a loose interlocking connection with the anvil to permit limited relative rotation between the anvil and the forward end of the spring whenever the spring is additionally stressed by rotation of the anvil relative to the work piece.

3,006,447

SPRAG CLUTCH BEARING

Arthur S. Irwin, Jamestown, N.Y., assignor to Martin-Rockwell Corporation, Jamestown, N.Y., a corporation of Delaware
Filed Apr. 15, 1958, Ser. No. 728,602
2 Claims. (Cl. 192-45.1)



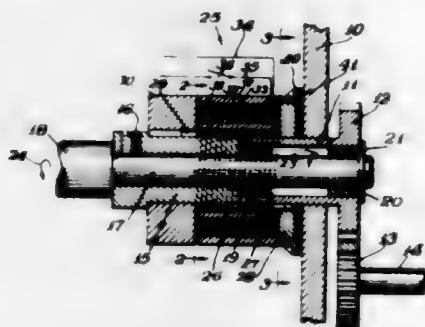
1. A sprag-type one-way clutch bearing comprising outer, inner and intermediate rings with the intermediate ring having an inner and an outer race and said outer and inner rings each having a race facing a respective race on said intermediate ring, retaining cages between

said inner and intermediate rings and between said intermediate and outer rings, each of said cages having two sets of circumferentially spaced openings with the openings of each set circumferentially aligned, anti-friction elements in a respective set of openings engaging a respective race at bearing areas moving with said anti-friction elements, a set of sprags in the other set of openings in one retaining cage and a set of sprags in the other set of openings in the other retaining cage, each sprag having rounded ends for engaging said races over gripping areas generally circumferentially aligned with the bearing areas of a corresponding set of anti-friction elements, said sprags of one set tilted at an opposite angle to the radial from the other set of sprags to lock the intermediate ring relative to the movement of either of the other rings whereby the anti-friction elements between the outer race and intermediate race move solely in one direction and the anti-friction elements between the intermediate race and the inner race move solely in the other direction to prevent fretting of the races on occurrence of oscillatory motion between the inner and outer races.

3,006,448

CLUTCH MECHANISM

Merrill J. Fox, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 2, 1959, Ser. No. 784,748
7 Claims. (Cl. 192-81)



1. In combination; driving and driven cylindrical members in endwise relation, rotatable about a common axis and having the same external diameter; a prestressed helical clutch spring extending over and normally slightly gripping the external surfaces of said members and providing the driving connection therebetween when said driving member is rotated in one direction to rotate said driven member in the same direction, an armature in the form of an annular disc rotatably mounted on said driving member and connected to one end of said helical spring, and a stationarily mounted magnetic circuit including a stationary coil surrounding said helical spring and disposed adjacent said armature for attracting the same on energization thereof to hold said armature against rotation and thereby unwind said spring from said driving member on continued rotation thereof in said one direction and interrupt the driving connection to said driven member.

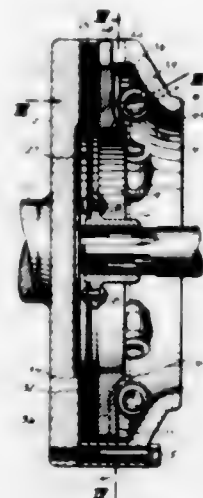
3,006,449

CENTRIFUGAL CLUTCH WITH ROLLER-TYPE FLYWEIGHTS

Richard Binder, Schwelinfurt am Main, Germany, assignor to Fichtel & Sachs A.G., Schwelinfurt am Main, Germany, a corporation of Germany
Filed Feb. 14, 1958, Ser. No. 715,388
Claims priority, application Germany Feb. 16, 1957
1 Claim. (Cl. 192-105)

A centrifugal clutch, comprising in combination, a revoluble driving member; a revoluble driven member, said driving and driven members having a common axis of rotation; a housing rigidly connected to said driving member; an axially displaceable pressure plate disposed within said housing for rotation therewith, said pressure

plate having a flat surface facing an inner end portion of said housing, said driven member having a pair of friction surfaces on opposite sides thereof disposed for engagement with said pressure plate and driving member upon axial displacement of said pressure plate is one direction; spring means yieldingly urging said pressure plate in the opposite direction; said flat surface having a plurality of symmetrically arranged radially outwardly extending grooves formed therein, said inner end surface of said housing having a control surface formed thereon which is shaped as a smooth continuous 360° surface of revolution concentric with said common axis of rotation, the spacing between said control surface and said flat surface decreasing progressively proceeding outwardly from said common axis, and a plurality of roller members each freely movable along one of said grooves in engagement



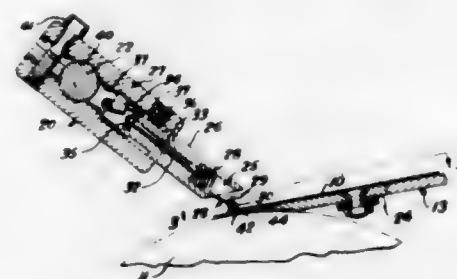
with said flat surface, the inner end of each groove being curved outwardly to said flat surface, simultaneous engagement by said roller member with the end of said groove and said control surface limiting inward movement of said roller member toward said common axis, the outermost periphery of said roller member being curved, when viewed in radial section, with a curvature the radius of which is smaller than the minimum radius of curvature of the portion of the control surface engageable thereby as viewed on a plane perpendicular to said common axis, whereby said roller member engages said control surface with rolling line contact along a line defined by a generatrix of said surface of revolution, radial outward movement of said roller members forcing said pressure plate in said one direction to cause engagement of said clutch.

3,006,450

SHEET DETECTOR FOR USE WITH PRINTING PRESS

Elmer Dale Nash, Dayton, Ohio, assignor to Harris-Inter-type Corporation, Cleveland, Ohio, a corporation of Delaware

Filed May 2, 1958, Ser. No. 732,502
13 Claims. (Cl. 192-127)



1. In a mechanism for continuously and successively feeding sheets to a predetermined position, a sensing device for sensing the presence or absence of a sheet at said

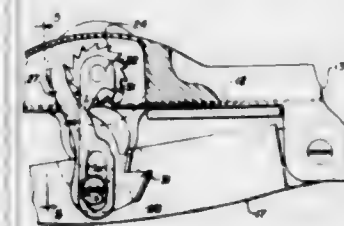
predetermined position, said sensing device comprising a first member, means movable supporting said first member for movement from an inactive position wherein said first member is disposed to be clear of sheet material in said sheet position to a first position wherein said first member is disposed to engage one side of the sheet material disposed in said sheet position and to a second position beyond said first position from said inactive position in the absence of material at said sheet position, said first member having a first part adapted to engage said sheet material and a second part displaced from said first part to be clear of said sheet material when said first member is in its said first position, said second part comprising an electrical contact portion, a second member having an electrical contact portion, and means supporting said second member in position to be engaged by said contact portion of said second part when said first member is in its said second position.

3,006,451

HAND OPERATED EMBOSSEING TOOL

David W. Souza, Oakland, Calif., assignor to Dymo Industries, Inc., Berkeley, Calif., a corporation of California

Filed Apr. 27, 1959, Ser. No. 809,072
4 Claims. (Cl. 197-6.7)

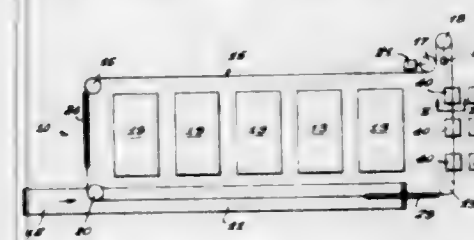


3. In a tool for embossing a continuous strip of material having a body, a handle pivoted to said body, die means on said body actuated by movement of said handle towards said body for embossing said strip, a ratchet wheel, a strip feed roller disposed rearwardly of said die means and operatively connected for rotation with said ratchet wheel, and a pawl operatively connected to said handle releasably engaging said ratchet wheel for unidirectional rotation thereof for advancing said strip past said die means upon movement of said handle away from said body, said body having strip viewing means positioned forwardly of said die means through which embossed indicia on said strip are visible; the combination therewith of a detent independent of said pawl engageable with said ratchet wheel during each direction of rotation thereof whereby said strip may be advanced in order to expose the last embossment through said viewing means and then retracted an equal amount to properly position the strip for the next succeeding embossment.

3,006,452

MATERIAL HANDLING APPARATUS

Bernard M. Hill, Chicago, Ill., assignor to Northern Electric Company, Chicago, Ill., a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,377
5 Claims. (Cl. 198-19)



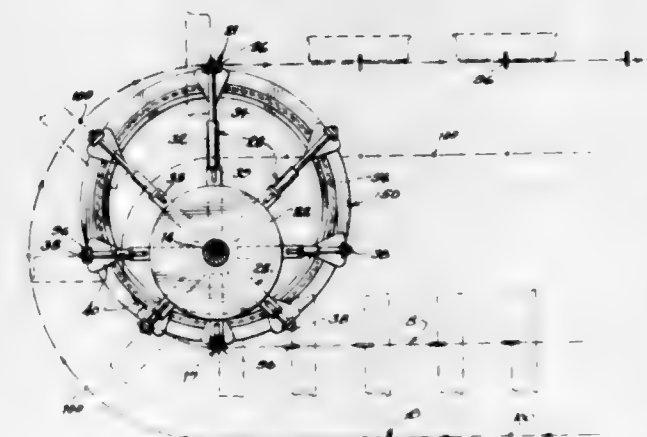
1. Material handling apparatus comprising in combination: an endless conveyor disposed to move adjacently to a source of material, and adjacently to a destination sta-

tion; a series of material carriers secured to said conveyor and being movable therewith, each of said carriers including a material-storage tray having a normally horizontal substantially flat material support surface, one edge of which surface is free of any obstruction to discharge of material stored in said tray; each of said carriers also including an elongated bracket, the lower end of which is disposed below and secured to said tray, said bracket extending around one edge of said tray remote from said obstruction-free edge, thence in a generally upward and inward direction to a pivot point above and substantially in line with the center of gravity of said tray, said one edge of the tray being the sole edge having an obstruction to loading of the tray; each of said carriers further including means acting at said pivot point on said bracket and located a substantial distance above the center of gravity of said tray and said bracket; a material support member at said destination station and disposed adjacent to said conveyor; and means associated with said support member, responsive to the presence of said material thereon, and operative only in the absence of said material to effect pivoting of one of said trays in one direction to transfer material carried on said one tray onto said support member; said one of said trays being responsive to gravity, upon movement past said pivoting-effecting means, to pivot to a material-carrying attitude.

3,006,453

CONVEYER TRANSFER MECHANISM

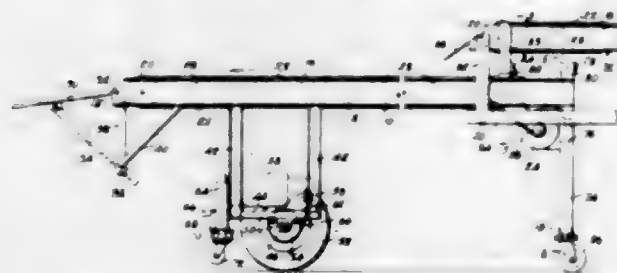
Roger Tonelli, Chicago, Ill., assignor to Radio Steel & Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed May 20, 1957, Ser. No. 660,163
15 Claims. (Cl. 198-25)



1. A station for automatically transferring material from one moving conveyer system to another, comprising one conveyer system on which the material to be transferred is brought to the station, another conveyer system to which the material is transferred from the station, a fixed support associated with said conveyers, a movable support mounted on said fixed support for movement along a predetermined path in a plane, motive means connected to said movable support, material holders movably mounted in spaced relation on said movable support, each of said material holders including a base portion and an extensible portion, each base portion being pivotally connected to said movable support to permit rocking movement of the material holders relative to the movable support, a material holding unit on each of said extensible portions, a fixed guide track, each of said extensible portions having a guide portion riding in said guide track being, said guide track so shaped that the motion of said movable support and the engagement between the guide portion on the material holder and the guide track conducts the material holding units in succession to a first transfer point in the station to be loaded

with material arriving on the one conveyor system and to a second transfer point adjacent the other moving conveyor system for transfer of the held material to said other moving conveyor system.

3,006,454
TELESCOPING CONVEYOR ASSEMBLY
Abe D. Penn, 140 S. Eudora St., Denver, Colo.
Filed Dec. 19, 1958, Ser. No. 781,739
2 Claims. (Cl. 198—89)

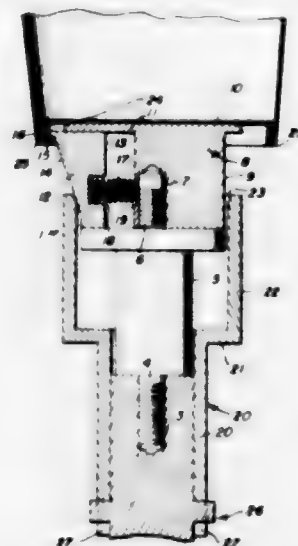


1. A telescoping conveyor assembly comprising, at least two sections having a carriage and an independent conveyor unit supported thereon, the conveyor units each including a pair of transversely spaced substantially parallel side frame elements having power-driven conveyor means supported therebetween adapted to transport materials from one end to the other, the carriage of each section having upright elements with casters on the lower ends thereof supporting the rear end of the conveyor unit, the carriage of one section including power-driven wheeled means supporting the front end of the conveyor unit and powered by a reversible motor operatively connected thereto and adapted upon actuation to move the assembly from place to place, and further adapted for telescoping the sections and the carriage of a second section including roller means depending from the front end thereof supported for rolling engagement on the side-frame elements of the first-mentioned section to provide for relative longitudinal movement between an extended and a retracted position, wherein the power-driven wheeled means includes a pair of non-steerable drive wheels, vertically-disposed jack means are carried by the power-driven wheeled means operative upon actuation to lift the drive wheels free of the supporting surface, and caster means are mounted on the lower end of the jack means for swinging movement about a substantially vertical axis, said caster means being operative with the drive wheels raised to permit the front end of the conveyor assembly to be swung from side-to-side.

3,006,455
CUP HOLDER
Solis Dudnick, 3111 W. 77th St., Prairie Village 15, Kans.
Filed Oct. 1, 1957, Ser. No. 687,443
6 Claims. (Cl. 198—162)

1. A device for holding a cup having a bottom wall and a short skirt depending downwardly therefrom, comprising a first member including an end member having a periphery of such a size as to be positionable internally of the short skirt and against the bottom wall of the cup, a plurality of spurs, said first member having a plurality of longitudinally-extending slots disposed immediately below said end member, each of said spurs being positioned in a different one of said slots and having an end portion adjacent said end member so as to be disposed internally of the short skirt of a cup when said end member is disposed internally thereof, said spurs being disposed in the slots for movement transversely of said first member between a first position wherein said end portions of said spurs are disposed internally of the periphery of said end member and a second position wherein said end portions of said spurs are disposed externally of the periphery of said end member and define

a periphery at least as great as that of the skirt of the cup said spurs sloping inwardly from said end portion, a sleeve disposed about and axially slidable on said first



member and disposed below said end portions of said spurs, means for biasing said spurs toward said second position and means for raising said sleeve to move said spurs to said first position.

3,006,456
ENDLESS WHEELED LINK CHAIN CONVEYOR
Howard J. Ferris, Gulfport, Fla., and Robert G. Ferris and Robert L. Yuenger, Harvard, Ill., assignors to Starline, Inc.
Filed Apr. 15, 1959, Ser. No. 806,491
12 Claims. (Cl. 198—177)



12. An endless wheeled link chain conveyor having alternate load bearing links and guide links in a split tubular track, comprising: a load bearing link having an upright frame which is narrow in its central portion and flares to provide a pair of laterally spaced pivot ears at each of its ends, there being aligned holes in each pair of ears and upright wheel means journaled in and flanking the central portion of the frame to roll in the tube flanking the split; cruciform pin means having transverse arms extending through the aligned holes in each pair of ears, said pin means also having upright arms between and extending above and below the ears; and a guide link having parallel, horizontal side plates with aligned openings at their ends pivotally engaging said upright arms above and below the pivot ears of the load bearing link, a guide wheel between said side plates, and a fastening member extending through the side plates and the hub of the wheel to rotatably support the wheel and fasten the side plates together in engagement with said upright arms.

3,006,457
CONVEYOR SYSTEM
Carl J. Weiss, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,419
7 Claims. (Cl. 198—188)

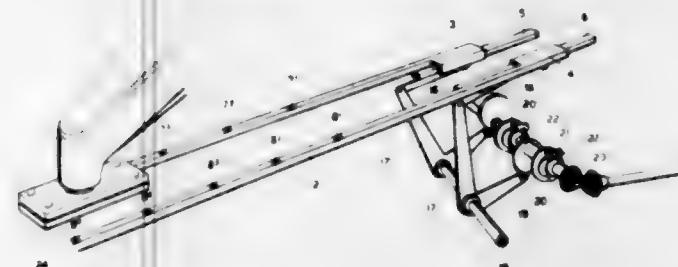
1. In a conveyor system having a first conveyor and a second conveyor for conveying articles therealong, a diverting station on the first conveyor, diverting mechanism mounted on said first conveyor at the entry side of said diverting station for diverting articles from said

first conveyor to said second conveyor, said diverting mechanism comprising a diverting arm having a normal non-diverting position wherein said arm is clear of articles traveling along said first conveyor and a diverting position wherein said arm is displaced by a predetermined angle from said normal position to extend across said first conveyor, means pivotally supporting one end of said diverting arm for rotation between said normal and diverting positions, and operating means for rotating said diverting arm comprising an electrical motor,



a driving cam, means connecting said motor to rotate said cam through a predetermined angle, and a cam follower secured to said diverting arm pivotal supporting means and spaced from the center of rotation thereof, said cam follower being actuated by said cam when rotated to cause movement of said diverting arm from said normal position to said diverting position, and said cam follower engaging said cam at a radial point whereby any impact on said diverting arm is transmitted to the center of rotation of said cam to prevent such impact from causing rotation of said cam.

3,006,458
SYSTEM FOR THE FEEDING OF PLATES IN ADDRESS-PRINTING MACHINES
Ivo Splazzl, Milan, Italy, assignor to Fabbbrica Italiana Macchine Aziendali, Milan, Italy, a company of Italy
Filed July 7, 1958, Ser. No. 746,905
Claims priority, application Italy July 24, 1957
4 Claims. (Cl. 198—221)



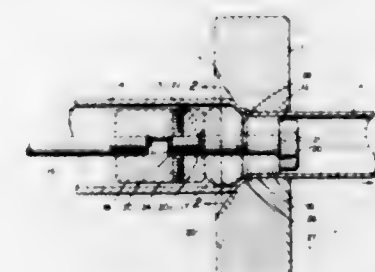
1. A plate feeding mechanism for an address printing machine comprising a pair of elongated feed bars spaced laterally from and parallel to one another to support the plates to be fed, said feed bars being mounted to reciprocate longitudinally to and fro in forward and reverse directions, means on both feed bars to engage respective plates to move each plate forward during forward movement of one of said feed bars, and means for moving one of said feed bars in a forward direction while simultaneously moving said other feed bar in a reverse direction, said feed bar moving means comprising a pair of coaxially mounted substantially identical cams, said cams being angularly spaced from one another and in phase opposition, means connecting one of said cams to one of said feed bars to reciprocate said one feed bar and identical means connecting the other of said cams to the other of said feed bars to reciprocate said other feed bar, and means for driving both said cams simultaneously to thereby intermittently reciprocate each of said feed bars in opposite directions simultaneously.

3,006,459
DEVICE FOR TURNING OVER LINE SLUGS COMPOSED BY A LINE-COMPOSING MACHINE
Mario Covini, Milan, Italy, assignor to Linotype S.p.A., Milan, Italy, a company of Italy
Filed Sept. 28, 1960, Ser. No. 60,767
Claims priority, application Italy Sept. 30, 1959
7 Claims. (Cl. 199—61)



1. The combination with a line-composing machine having a part which is reciprocable in a straight line, of an oscillatory table, a guide member secured to said table to receive a line slug from said machine, and means operatively connected to said reciprocal part for rotating said table in one direction during movement of said part in one direction.

3,006,460
DRAWING PLUG
John J. Poncar, 4189 Brainard Road, Cleveland, Ohio, assignor of one-half to Bruce B. Krost
Filed Apr. 30, 1959, Ser. No. 810,020
8 Claims. (Cl. 205—7)



1. An improved drawing plug for use inside of a tube being drawn through a tube-drawing die having a gradually diminishing bore into which the tube is advanced and a cylindrical bore coinciding with the minimum diameter of said gradually diminishing bore and through which the tube is drawn from the gradually diminishing bore to reduce its outside diameter to the diameter of said cylindrical bore, said drawing plug having a bearing portion adjacent its forward end, said bearing portion having a substantially cylindrical outer wall adapted to be located within said cylindrical bore and to bearingly engage the inner wall of said tube being drawn radially inwardly of said cylindrical bore, said drawing plug having an enlarged drawing portion, said enlarged drawing portion having a diameter larger than the diameter of said bearing portion and larger than the diameter of said cylin-

dical bore, said drawing portion having an annular surface adapted to bearingly engage the inner wall of said tube radially inwardly of said gradually diminishing bore, said bearing portion scraping the inner wall of said tube as the tube is drawn to smaller diameter through the cylindrical bore of said die and pushing material scraped from said inner wall rearwardly toward said annular surface of the drawing plug, said drawing portion extending forwardly of said annular surface toward said bearing portion in a gradually diminishing diameter decreasing at a rate in excess of the rate of decrease of the said gradually diminishing bore to allow an annular open space within said tube extending longitudinally of said tube between said annular surface and said bearing portion, said annular open space being adapted to accommodate said scraped material, the drawing plug at said annular surface obstructing the rearward movement of said scraped material between the inner wall of the tube and said annular surface to subject said scraped material in said open space to pressure from the accumulations of scraped metal during the drawing operation, said drawing plug having an opening extending therethrough from said annular open space at a location radially inward of the maximum circumference of said annular surface to a location rearwardly of said annular surface to permit said scraped material under said pressure to escape from said annular open space rearwardly of said annular surface.

3,006,461

PACKAGED BOTTLE WITH ROTATION PREVENTING INSERT MEMBER

James B. McGinnis, Burlingame, Calif., assignor to Fromm & Sichel, Inc., New York, N.Y., a corporation of New York

Filed Dec. 21, 1959, Ser. No. 860,984
8 Claims. (Cl. 206-45.31)



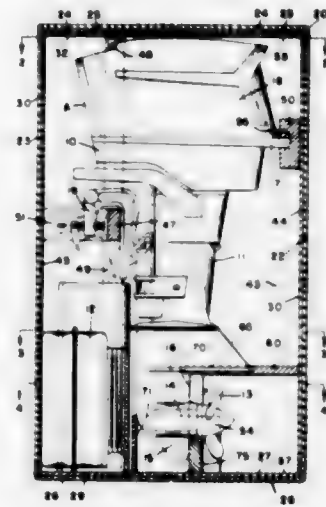
1. In a packaged article comprising a bottle of circular transverse cross-section having a chordal rectilinear groove formed in its bottom, said bottle being disposed within a folding box of polygonal transverse cross-section revolvably circumscribing the circular cross-section of said bottle, said bottle having a label affixed to its side and said box having a window formed in one of its sides through which said label may be observed when said label is in register with said window, said label being disposed in a predetermined circumferential position with respect to said groove, the improvement which comprises the provision of an insert member interposed between the bottom of said bottle and the bottom of said box, said insert member being formed of flat sheet material of polygonal peripheral configuration corresponding to the transverse cross-sectional configuration of said box, said insert member fitting snugly within the inner periphery of said box at the bottom thereof whereby said insert member is held against rotation, said insert member having at least one projection formed thereon which extends into said groove with said label in register with said window, said projection positively locking said bottle against rotation with respect to said box, whereby said label is positively maintained in register with said window.

3,006,462

OUTBOARD MOTOR PACKAGE

Paul F. Boeye, Mound, and Roger A. Sorensen, St. Paul, Minn., assignors to Northwestern Corrugated Box Co., Minneapolis, Minn., a corporation of Minnesota

Filed Dec. 3, 1959, Ser. No. 857,040
4 Claims. (Cl. 206-46)



1. In an outboard motor package having a carton with lateral walls and end walls connected thereto, the combination of a wrapper extending about the motor and received in said carton, said wrapper having spaced side walls spaced from the side walls of the carton, said side walls having slots therein, a cavitation plate pad having a cavity therein receiving the cavitation plates of the motor, said pad extending through the slots in said side walls of the wrapper and engaging the side walls of the carton, a stand comprising a U-shaped wall structure enveloping the motor drive shaft housing and skeg and a vertical pad attached to said wall structure and disposed between the propeller and skeg, said stand resting upon the bottom of the carton.

3,006,463

SELF-FUSING TAPE

Herbert M. Bond, St. Paul, and Gaylord L. Groff, North St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Feb. 28, 1957, Ser. No. 643,181
7 Claims. (Cl. 206-59)



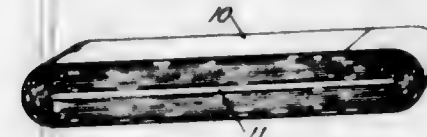
1. A handleable, flexible, ozone-resistant silicone composition adapted to fuse onto itself to form a void-free seal at room temperature in up to about one week's time after left in snug contact with itself, said composition being a blend, at least 60% of which is insoluble in xylene, and comprising 100 parts by weight of highly cured silicone gum polymer having a ratio of organic groups to silicon atoms of about 1.9 to 2.0, a silicone resin, said resin being a copolymer composed essentially of $R_3SiO_{1/2}$ units and SiO_2 units, where R is an organic radical and where the ratio of $R_3SiO_{1/2}$ units to SiO_2 units in said copolymer is between about 0.6 and 0.9, inclusive, and at least about 20 parts of a reinforcing filler powder.

3,006,464

PRESSURE-SENSITIVE ADHESIVE TAPE ROLL

Robert B. Snell, White Bear Township, Ramsey County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Oct. 2, 1958, Ser. No. 764,833
2 Claims. (Cl. 206-59)



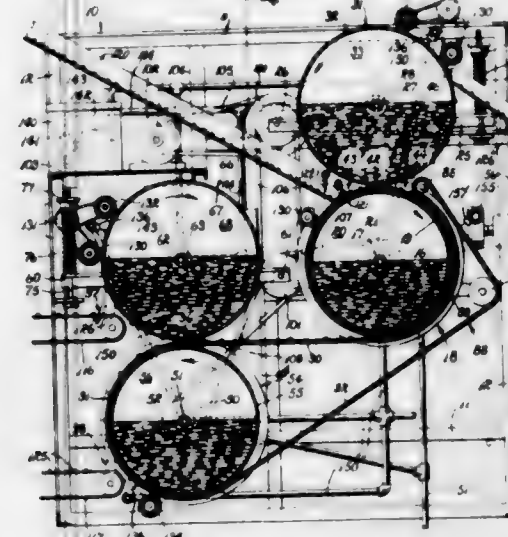
2. An article consisting of a shuttle-like fully-flattened roll of a long length of pressure-sensitive adhesive tape having a backing coated with a rubber-resin type pressure-sensitive adhesive, said tape being wound in overlapping relationship upon itself, with each of overlaps of said tape adherent to underlying layers thereof, and with the flattened opposing central surfaces of said tape in adhesive contact with each other and in planar face-to-face relationship, said compact shuttle-like fully-flattened roll of pressure-sensitive tape being free of telescoping.

3,006,465

ARTICLE SEGREGATION

Louis M. James, 2781 N. Grantland, Fresno, Calif.

Filed Jan. 26, 1959, Ser. No. 788,999
10 Claims. (Cl. 209-45)



10. In an apparatus for segregating raisins according to their degrees of surface stickiness and wherein some of the raisins have peripherally spaced areas of different degrees of stickiness; a support; first conveying means mounted in the support for carrying non-segregated raisins in a predetermined forward direction through a first raisin receiving station; means engaging and cooling said conveying means; a first raisin adherent member mounted in the support in engagement with the conveying means at said first station, for contacting such raisins as they pass through said first station, and for picking out those raisins which adhere to such member; means engaging and heating said first member; second conveying means mounted in the support in engagement with said first conveying means in forwardly adjacent spaced relation to said adherent member with respect to the direction of movement of the first conveying means for conveying the raisins which do not adhere to said first member to a second raisin receiving station and for re-orientating such non-adherent raisins during travel from the first to the second station so that the raisins pass through the second station in a different attitude from that through said first station; second raisin adherent member being mounted in the support in engagement with the second conveying means, adjacent to the second station, for contacting raisins passing there-

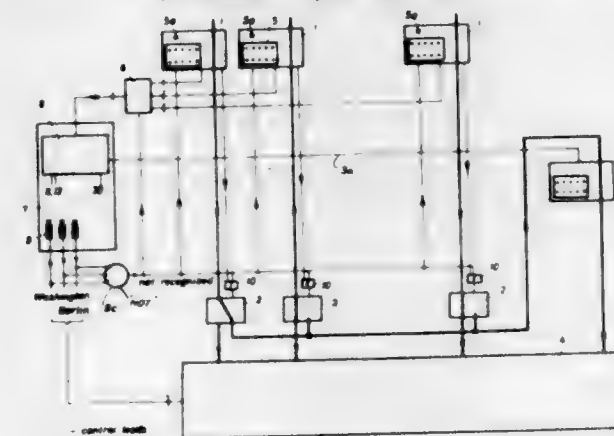
through, and for picking out those raisins which adhere to said second adherent means; means engaging and cooling said second conveying means during its engagement with said second member and means engaging and heating said second member.

3,006,466

ARTICLE SORTING CONTROL ARRANGEMENT

Karl Steinbuch, Reichenbach, near Karlsruhe, and Ulrich Schottle, Stuttgart, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 6, 1959, Ser. No. 797,703
Claims priority, application Germany Mar. 8, 1958
3 Claims. (Cl. 209-72)



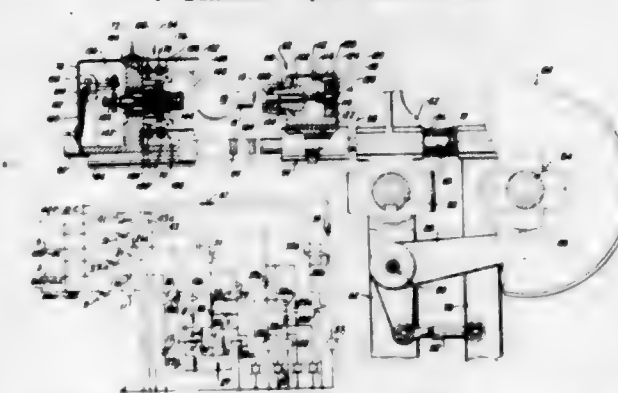
1. An article sorting arrangement comprising a plurality of operators' positions for keying a code corresponding to the destination of said articles to be sorted, a processing means, a conveying path extending between each of said operators' positions and said processing means, an article deflecting means in each of said conveying paths adapted when operated to deflect said article from said conveying path, translating means common to said operators' positions for decoding said destination code connecting means for sequentially connecting said operators' positions to said translating means on a one-at-a-time basis, said translating means including circuit means for providing a control signal indicative of the destination of said article, gate means operable responsive to the non-appearance of said control signal for operating said deflecting means and said connection means to deflect said article from said conveying path and to advance the said connecting means to a different operator's position.

3,006,467

LAMP TESTING APPARATUS

Donald L. Snyder, Montoursville, and Robert A. Helwig, Williamsport, Pa., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Dec. 26, 1957, Ser. No. 705,327
7 Claims. (Cl. 209-80)

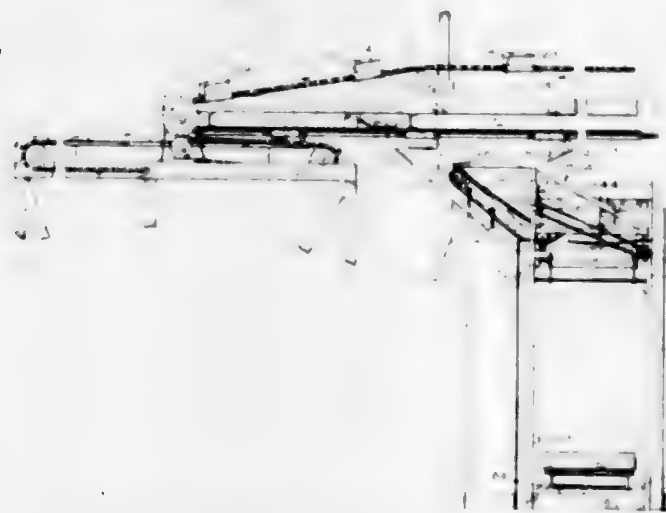


1. Apparatus for inspecting a finished photoflash lamp to determine whether or not its base is properly seated thereon, said apparatus comprising: a lampholder for

supporting said lamp; a plurality of electrically conducting fingers; means for effecting disposition of said fingers in encompassing relationship with respect to the envelope of said lamp; an electrical circuit including said fingers as contacts, said circuit including means, responsive to deflection of at least one of said fingers by said lamp envelope, to actuate said lampholder and effect release of the lamp therefrom; and means for energizing said electrical circuit.

3,006,468
**AUTOMATIC LUMBER SORTER
AND STACKER**

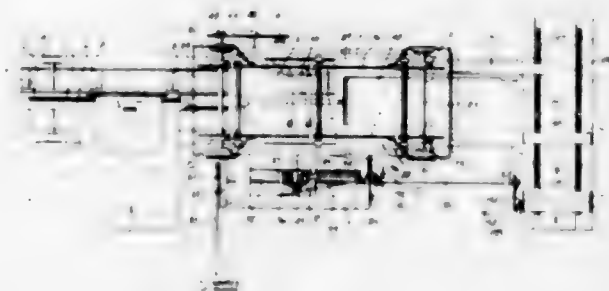
William M. Blake, Coos Bay, Oreg., assignor to Moore Oregon Lumber Co., a corporation of Nevada
Filed Dec. 8, 1958, Ser. No. 778,976
7 Claims. (Cl. 209—90)



1. An automatic lumber sorter and stacker including a series of stations to which boards of predetermined decreasing length are to be delivered successively, a pair of endless main conveyor chains driven in unison in a horizontal path, a support frame for said conveyor chains, said conveyor chains moving over said successive board delivery and stacking stations, board-supporting hooks spaced equal distances apart pivotally mounted on said conveyor chains in transverse registration respectively and extending downwardly from the bottom courses of said conveyor chains respectively, guide means for lining up one end of each board as each board is placed on a pair of said hooks leaving the other end of the board extending at random, each hook having a board-supporting arm extending oppositely from the direction of travel of said conveyor chains, latch means for each hook capable of holding the hook in board-carrying position when suspended from its conveyor chain, but enabling said hook to swing downwardly to board-discharging position when said latch means is released, a latch-releasing assembly located ahead of each delivery and stacking station for releasing the hooks carrying a board when the assembly is actuated, actuating means in each releasing assembly arranged for engagement by said other random length end of the board when the board has a length equal to that desired for a particular station, said latch-releasing assemblies and said stations so arranged that decreasingly shorter boards will be discharged at successive stations, a lift assembly in each station, a pair of skids located below each latch-releasing assembly and said main conveyor chains leading forwardly and downwardly to the top of the lift assembly, whereby a board discharged from its hooks by a latch-releasing assembly will drop onto the skids for delivery to the corresponding lift assembly, layer feed means restraining the delivery of boards from the skids to the corresponding lift assembly so as to cause a desired layer of boards to be delivered to said lift assembly with each operation of said layer feed means, electrically-operated means for operating said layer feed means, a pair of movable rest-supports at the top of each

lift assembly for receiving each layer of boards delivered from the skids, electrically-controlled rest-support operating means for moving said rest-supports into and out of discharging position, a lift and lift motor in each lift assembly, controls for said lift motor, a multiple switch assembly connected to each lift motor and to the rest-support operating means at each station for synchronizing the movement of the rest-supports to discharging position and the downward movement of the lift, and an actuating element for the multiple switch assembly operated by the delivery of a layer of boards onto the rest-supports.

3,006,469
CHECK-WEIGHING APPARATUS
Francis A. Craig, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed July 1, 1955, Ser. No. 519,452
10 Claims. (Cl. 209—121)

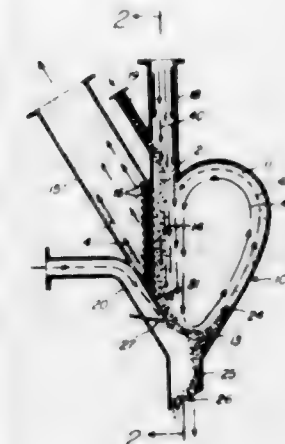


1. In a conveyor system, apparatus for detecting articles not of the proper weight comprising a flat-surfaced table-like structure over and along which the articles are moved, conveyor means arranged at one end of said table-like structure centrally thereof for delivering the articles thereto without interruption, means for delivering the articles to said first conveyor means, a weighing station arranged with and positioned adjacent each side of said table-like structure, a vertically activated weighing platform arranged at each of said weighing stations substantially in the plane of the top of said table-like structure on and over which the articles are moved, two conveyor means arranged at a spaced distance above said table-like structure and said weighing stations with one arranged adjacent each side thereof for moving the articles over the respective platforms and along said table-like structure, laterally reciprocable means for moving the articles alternately from said first conveyor means into the paths of either of said second conveyor means, laterally actuated kicker means arranged forwardly of each of said platforms for removing articles not of the proper weight from the table-like structure, and means responsive to the vertical movement of each of said platforms for controlling the actuation of said kicker means.

3,006,470
**APPARATUS FOR CLASSIFYING
PARTICULATE MATERIAL**
Jan H. Franken, Heemstede, Netherlands, assignor to Bureau van Tongeren N.V., Heemstede, Netherlands, a company of the Netherlands
Filed June 20, 1958, Ser. No. 743,241
6 Claims. (Cl. 209—132)

3. A classifier for the division of particulate material in which there is a chamber comprising two parallel walls and a partially curved and partially flat third wall therebetween completing the chamber, there being an opening at the upper part of the third wall, an exhaust duct for the fines in the third wall below the opening and a plurality of slats arranged one above the other across the entrance to the fines exhaust duct, and an inlet duct connected to the opening in the upper part of the third wall adapted to deliver the material to be classified substantially vertically downwardly directly in front of the slats,

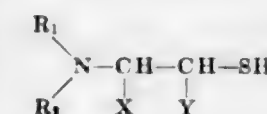
the third wall having a major curved portion on the opposite side of the inlet duct from the exhaust duct whereby an eddy current is adapted to be set up within the



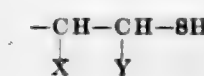
chamber moving downwardly on the side of the exhaust duct with some of the gas flowing into the chamber at the inlet duct escaping with a fines fraction at the exhaust duct, and moving upwardly on the side of the major curved portion of the third wall, in combination with an exit at the bottom of the chamber for removal of a coarse fraction; whereby the upward part of the eddy current is adapted to bring any remaining fines around to the slats again for exhaust through the slats after gravity has dropped a coarse fraction at the exit at the bottom of the chamber.

3,006,471
FLOTATION OF ORES
Lionel B. Luttinger, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Nov. 6, 1959, Ser. No. 851,254
8 Claims. (Cl. 209—166)

1. A method of separating zinc sulfide from ores containing it which comprises comminuting said ore to free the zinc minerals subjecting said comminuted ore to froth flotation in the presence of at least 0.001 lb. per ton of said ore of a promoter of the formula



in which each of R_1 and R_2 is selected from the group consisting of hydrogen, an organic radical, and a further group



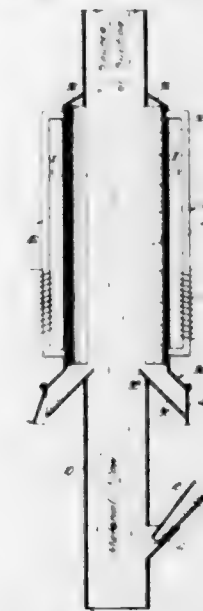
and X and Y are selected from the group consisting of hydrogen and alkyl, separating the floated zinc sulfide from the tailings and recovering said zinc sulfide.

3,006,472
**MAGNETIC SEPARATOR AND METHOD
OF SEPARATING MATERIALS**
Francis H. Clute, Rocky Ford, Colo., assignor to The Clute Corporation, Rocky Ford, Colo., a corporation of Colorado
Filed Nov. 12, 1957, Ser. No. 695,744
7 Claims. (Cl. 209—214)

1. The method of separating from granular materials, substances contained therein and possessing the property of being attracted by a magnet, said method comprising the steps of magnetizing a plurality of spaced magnetic cores, the intensities of the magnetic forces in the mag-

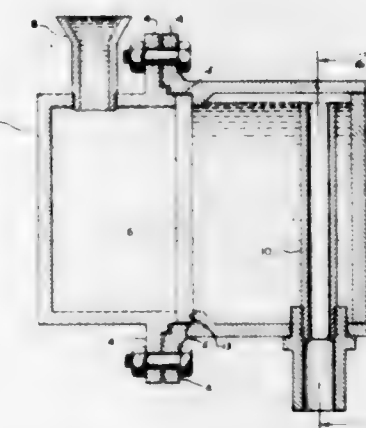
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netic fields produced by the magnetic cores being different; feeding said materials into an air stream; directing said materials through said fields in successive order and along a path of travel remote from the cores to pull the substances out of said path of travel; demagnetizing said



cores to eliminate the fields; and directing the substances attracted by the cores to separate points remote from the fields and remote from said path of travel.

3,006,473
FILTERING OF MOLTEN ALUMINUM
Erwin J. Gamber, Cleveland, Ohio, assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 3, 1958, Ser. No. 771,275
6 Claims. (Cl. 210—69)

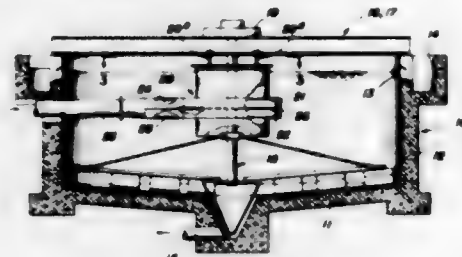


1. In the filtration of molten aluminum, the method comprising: providing a porous carbon filter plate impregnated with aluminum and having a protective aluminum pad upon at least one surface thereof; providing a filtering chamber adapted to be partitioned by said filter plate and to maintain the exposed surface on the intake side of the said filter plate below the level of the molten aluminum passing therethrough; inserting said impregnated filter plate with at least one protective pad thereon in said filtering chamber with an aluminum pad facing the inlet side of said filter chamber; preheating said filtering chamber and impregnated filter to a temperature above 1000° F. but below the melting point of the said aluminum pad and impregnant in said carbon filter plate; introducing molten aluminum into said filtering chamber to melt the said aluminum pad and impregnant; and thereafter passing molten aluminum through the said carbon filter plate, the surface portion of said carbon filter plate exposed to the molten metal being maintained below the level of said molten aluminum.

3,006,474 METHOD AND MEANS FOR CONVERTING THE KINETIC ENERGY OF A FLUID STREAM INTO RANDOM TURBULENCE

Elliot Bryant Fitch, Weston, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed Feb. 5, 1959, Ser. No. 791,787
17 Claims. (Cl. 210-84)

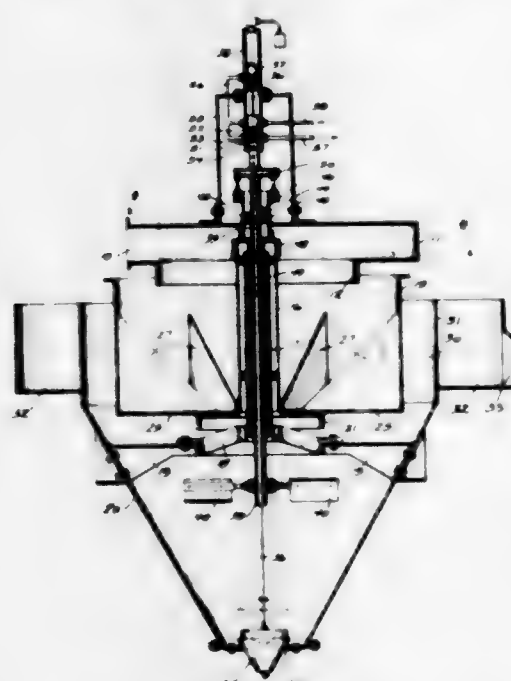


6. A method for dispersing flow energy, which comprises maintaining one continuously fed stream of fluid in one direction along one radially outwardly as well as laterally confined path, maintaining another continuously fed stream of fluid along a separate radially outwardly as well as laterally confined path in the opposite direction, maintaining said oppositely directed streams adjacent to each other substantially about a common axis, simultaneously discharging the fluid of the respective streams toward said axis into a transverse confined common zone of shear between the fluids of the two oppositely directed streams, whereby the directional flow energy of the streams is converted into random turbulence throughout said transverse confined common zone of shear surrounded by said radially confined paths, and axially displacing the liquid from said zone of random turbulence by said continuously fed streams.

3,006,475 AUTOMATIC SOLIDS DISCHARGE VALVE FOR CLASSIFIERS

Charles E. Wood, deceased, late of Milwaukee, Wis., by Gertrude S. Wood, administratrix, Milwaukee, Wis., assignor of one-third each to Helen W. Aker, Hackensack, N.J., Jean W. Re, Pawling, N.Y., and Gertrude S. Wood, Milwaukee, Wis.

Filed Sept. 3, 1958, Ser. No. 758,722
12 Claims. (Cl. 210-112)



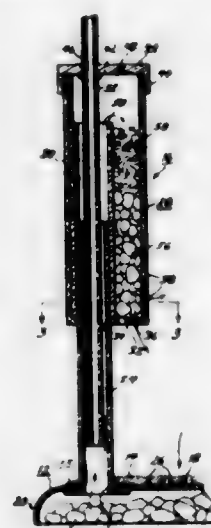
1. In a classifier having a receptacle in which liquid-entrained solids accumulate and which is provided with a discharge port and a valve therefor, means for auto-

matically opening the valve when a predetermined accumulation of solids occurs in such receptacle, said means comprising a valve rod, a bed-finder mounted for rotation in the receptacle where solids accumulate, a rotor driven by flow of liquid and having a yieldable driving connection with the bed-finder, the bed-finder being biased toward advanced position in the direction of its rotation respecting said rotor and means for opening the valve upon the yielding of the bed-finder respecting said rotor and in opposition to its said bias consequent upon encountering a bed of solid material in the receptacle.

3,006,476 AQUARIUM FILTER

Abby Halpert, Brooklyn, N.Y., assignor to Halvin Products Co., Brooklyn, N.Y., a partnership

Filed June 19, 1959, Ser. No. 822,984
3 Claims. (Cl. 210-169)



1. An aquarium filter comprising a housing having an outer wall and a bottom wall, a divider tube fixedly secured to said bottom wall with the inner peripheral surface of said divider tube being substantially coextensive with an aperture in said bottom wall, an output tube extending through said aperture into said divider tube, said output tube and divider tube having a friction fit therebetween, the upper end of said output tube being lower than the upper end of said divider tube, the upper end of said divider tube being spaced below a top on said housing, a vent in said top of said housing, filter material disposed within said housing between the outer peripheral surface of said divider tube and the inner peripheral surface of said outer wall on said housing, an air feed tube having an outer diameter smaller than the inner diameter of said output tube, said air feed tube extending through the top of said housing with one end of said air feed tube being disposed within the output tube below the bottom wall of said housing, and a plurality of holes in the bottom portion of said housing.

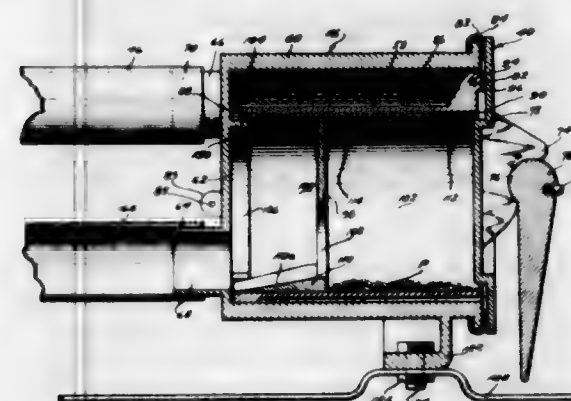
3,006,477 FILTER

Marion R. Karecki, St. Joseph, Mich., assignor to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware

Filed Aug. 29, 1957, Ser. No. 681,053
4 Claims. (Cl. 210-195)

1. In a separator, inner and outer generally cylindrical members comprising a closed outer housing and an open-ended inner shell disposed within said housing on substantially a horizontal axis, said inner shell being eccentrically offset towards the bottom of said outer housing and together therewith forming an outlet flow compartment providing a generally horizontal fluid flow path, said housing having an upper outlet formed therein communicating with said outlet flow compartment, and an

inlet near the bottom thereof in communication with the interior of said shell and providing a generally horizontal fluid flow path thereto, said shell having a generally vertically disposed partition dividing the interior thereof into a trap compartment and an entrance compartment, said partition having an aperture formed therein in register with said inlet, and said shell being spaced at one

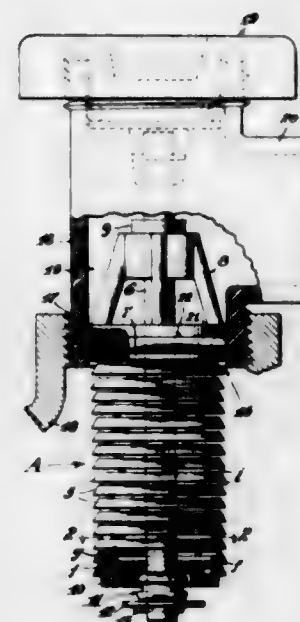


end from said housing adjacent the top thereof to communicate said trap compartment with said outlet flow compartment, whereby fluid is directed into said trap compartment in one horizontal direction so that cleared fluid is discharged through the space between said shell and housing and from said outlet flow compartment in an opposite horizontal direction and impurities are retained in said trap compartment.

3,006,478 STRAINER

Paul G. Mueller, 330 S. La Peer Drive, Los Angeles, Calif.

Filed Nov. 19, 1956, Ser. No. 623,097
5 Claims. (Cl. 210-356)



1. A screen for the purpose set forth comprising a multiple of complementary annular screen elements loosely assembled in a stack in substantially axial alignment, spacing studs on said elements arranged to abut adjacent elements to space the elements apart and thereby form open passages therebetween, and means for holding said elements in the stack with adjacent elements in laterally slidable relation to each other comprising pins on one of adjacent elements projecting interiorly of the other adjacent element in spaced relation to the inner periphery of the latter.

3,006,479 FILTER DEVICES

John Gunnar Wallin, Landskrona, Sweden, assignor to Aktiebolaget Forenade Superfosfatfabriker, Landskrona, Sweden, a corporation of Sweden

Filed Aug. 18, 1960, Ser. No. 50,373
Claims priority, application Sweden Sept. 11, 1959
8 Claims. (Cl. 210-401)

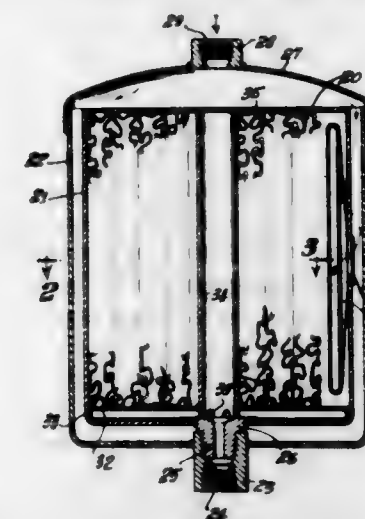


1. A filter device comprising a pair of horizontal parallel spaced rotatable rolls, a traveling endless carrier belt supported around said rolls, an endless filter cloth placed around said carrier belt, the upper run of said filter cloth resting on said carrier belt but the lower run depending loosely below the same, rib means on said carrier belt along the longitudinal edges thereof, each rib having a longitudinal slot in the inner face thereof, the upper run of said filter cloth being confined between said rib means and attached to said carrier belt by having each of its longitudinal margins inserted into the said slot in the adjacent rib, means for continuously releasing the filter cloth from said rib means at the transition of said filter cloth from the upper to the lower run, and means for continuously deflecting said rib means outwardly at the transition of the filter cloth from the lower to the upper run thereby widening said slots to allow the margins of said filter cloth to enter the same causing said cloth to be confined again by said rib means and attached to said belt.

3,006,480 GATHERED SOCK OIL FILTER

John K. Russell, Los Angeles, Calif., assignor to Lubert-Finer Incorporated, Los Angeles, Calif., a corporation of California

Filed Sept. 19, 1958, Ser. No. 761,980
12 Claims. (Cl. 210-493)



1. A filter element for use in an oil filter or the like, comprising a plurality of flat, elongated tubes of flexible filter material joined along opposed longitudinal edges to form a single filter element, said filter element having interior passages for fluid communication between said tubes, said filter element having an inlet opening providing for fluid flow into the interior thereof, said filter element being gathered longitudinally inwardly of at least some of said edges to decrease the length of the filter element and provide sides having irregularly corrugated surfaces extending inwardly varying distances from each edge toward the opposite edge and transversely of the length thereof.

3,006,481
ADJUSTABLE SUPPORT FOR FEEDING EQUIPMENT AND THE LIKE
 Nathan A. Gussack, Yonkers, N.Y., assignor to Grant Pulley & Hardware Corporation, West Nyack, N.Y., a corporation of New York
 Filed May 6, 1960, Ser. No. 27,317
 3 Claims. (Cl. 211-117)

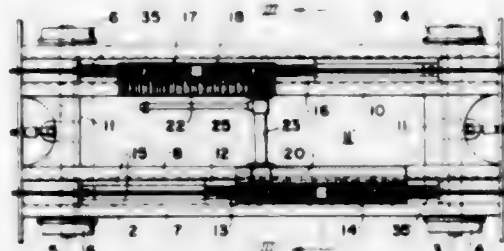


2. An adjustable support for hospital feeding equipment and the like comprising an open ended tube, a cap for the upper end of said tube, means releasably mounting said cap on the upper end of said tube, means mounted upon said cap for suspension of said tube from a hook and the like on a ceiling and the like so that said tube depends vertically from said ceiling, a bushing within the bore of said tube below the upper end of said tube, a rod extending slidably into said tube and slidably through the bore of said bushing, a head of enlarged diameter releasably attached to said rod above said bushing, said head being slidable within said tube but being of greater diameter than the diameter of said bushing, said rod extending below said tube, support means for containers and the like secured to the lower end of said rod, said rod comprising a plurality of cylindrical main rod sections and cam sections connecting successive main rod sections, each said cam section comprising a frusto-conical portion connecting at its end of larger diameter with the top of a main rod section and connecting between the bottom of a main rod section and the other end of said frusto-conical portion, and latch means mounted on said tube for releasably engaging said other ends to releasably maintain said rod in selected vertical positions.

3,006,482
TWO-POSITION FLEET-THROUGH TROLLEY FOR UNLOADERS
 Howard E. Dykeman, Pittsburgh, Pa., assignor to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Dec. 10, 1958, Ser. No. 779,346
 5 Claims. (Cl. 212-81)

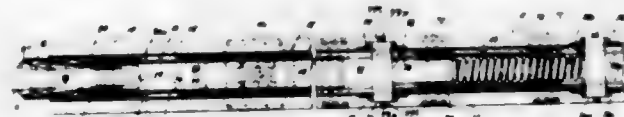
1. In a material handling apparatus, a fleet-through trolley and bucket arrangement comprising a trolley, a bucket having sheaves for separate hold and close cables, the trolley having a main frame, a sheave-carrying frame slidably mounted in the main frame at one side of the longitudinal axis of the main frame for relative longitudinal movement in the main frame, a second sheave-carrying frame slidably mounted in the main frame at the other side of said longitudinal axis for relative longitudinal movement in the main frame, a pair of longitudinally-spaced sheaves in each of said sheave-carrying

frames, a hold cable passing around one sheave on one sheave-carrying frame, thence around a sheave on the bucket and then around the diagonally-opposed sheave of the other sheave-carrying frame, a close cable passing around the other sheave in the first sheave-carrying frame, then around a sheave on the bucket and then around the



diagonally opposite sheave of the other sheave-carrying frame, means for positioning the two sheave-carrying frames at relatively opposite limits of their travel in the main trolley frame and for simultaneously shifting them in opposite directions to the opposite limits of their travel in the main frame whereby to effect rotation of the bucket about its vertical axis through a limited arc.

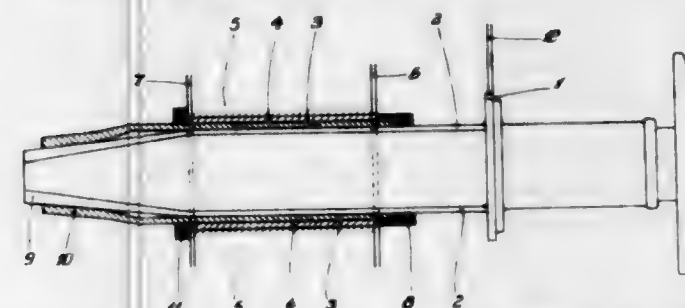
3,006,483
RAILWAY CAR UNDERFRAME ARRANGEMENT
 Wallace E. Baillie, Cleveland Heights, and Donald Willison, Lyndhurst, Ohio, assignors to National Castings Company, a corporation of Ohio
 Filed July 6, 1959, Ser. No. 825,043
 11 Claims. (Cl. 213-8)



1. A railway car underframe comprising: a pair of end sills; a plurality of cross members serially spaced between the end sills; a hollow center sill of uniform transverse cross section extending from one end sill to the other with said cross members and end sills extending laterally from both sides of the center sill in fixed attachment thereto; a draft and buff column of greater length than the center sill in longitudinally movable relation therewith; said column extending within the entire length of the center sill and comprising an intermediate elongate member and a pair of end pods, each pod attached to one of opposite ends of the member and defining a pocket for housing a cushioning gear and an associated coupler butt; each pod being generally complementary in external periphery to the internal periphery of the center sill and of larger transverse cross section than the member, and being attached to the member with opposite lateral surfaces of the pod in laterally outwardly offset relation with corresponding opposite lateral surfaces of the member to expose longitudinally inner end surfaces of the pod constituting stop shoulders at each side of the column facing toward the longitudinal center of the underframe; said member being thereby disposed within the center sill with a clearance between opposite lateral sides of the member and corresponding adjacent inner lateral surfaces of the center sill; a pair of stop cleats in longitudinally-facing opposing relation with the stop shoulders of each pod; each cleat being attached to one of said inner lateral surfaces of the sill within one of said clearances, and being positioned inwardly from an end of the sill in spaced relation with its corresponding opposed stop shoulder; said pairs of cleats being spaced to define a range of movement of the column relative to the sill; cushioning means housed centrally within the member and disposed operatively between the center sill and the column for cushioning impact loads between

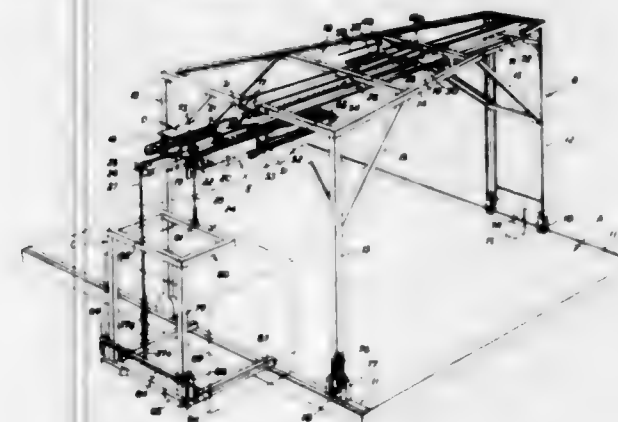
the column and the sill; the cushioning means comprising resilient means for urging the column to a neutral intermediate position within said range from any position therein at either side of said position; each pod, at said neutral position, extending into said sill a distance greater than the distance between the stop shoulders of the other pod and its corresponding opposing cleats.

3,006,484
DEVICES FOR RAILWAY VEHICLES DESIGNED TO WITHSTAND LONGITUDINAL BUFFERING STRESSES
 Paul Marie Gabriel Alphonse Pringiers, Angleur, Belgium, assignor to Cockerill-Ougree, Societe Anonyme, Seraing, Belgium
 Filed Oct. 12, 1959, Ser. No. 845,768
 Claims priority, application Belgium Oct. 14, 1958
 3 Claims. (Cl. 213-220)



1. Buffering apparatus for a railway vehicle in combination with a conventional shock absorber, said apparatus comprising: a first cylindrical tube having one end rigidly secured to said shock absorber, said first tube having an end opposite to said one end of tapering section, a second cylindrical tube co-axially on the first tube and in frictional engagement therewith, said second tube including a tapering section engaging the tapering section of the first tube, and a third tube rigid with the vehicle coaxially and frictionally holding the second tube at its outer periphery, said third tube having an outer end and including a holding flange at said outer end adjacent the second tube to prevent axial movement thereof, the said tubes cooperating together such that upon application of a predetermined axial stress to said first tube the conical part of the first tube axially retracts and dilates the conical part of the second tube whereby a counter stress proportional to the strength of the structure of the vehicle is induced.

3,006,485
VEHICLE UNLOADING OR LOADING DEVICES
 John Crawford Martin, Toronto, Ontario, Canada, assignor to Diesel Equipment Limited, Toronto, Ontario, Canada
 Filed Dec. 29, 1958, Ser. No. 783,247
 5 Claims. (Cl. 214-75)



1. Vehicle unloading and loading devices in combination with a vehicle platform comprising a frame rising above said platform, elevated load supporting means mov-

ably carried by said frame, a carriage slidably carried by said load supporting means, load lifting and lowering means suspended from said carriage, means for actuating said load lifting and lowering means for lifting a load, means for moving said load supporting means to project partially beyond the edge of said vehicle and actuating means for locating said carriage in relation to a load to be lifted and for moving said carriage and said load lifting and lowering means along the path of said load supporting means, from a point within the confines of the platform of said vehicle to a point beyond said edge of said vehicle or vice versa, and means for locking said carriage relatively to said load supporting means, said carriage being operatively connected to said means for moving said load supporting means as to cause said load supporting means to move when said carriage is locked and to cause said carriage to move on said load supporting means when unlocked.

3,006,486
MATERIAL HANDLING SYSTEM FOR FREIGHT VEHICLES
 Lawrence M. Cook, Hugh D. Granbery, and John R. Grubbe, Dallas, Tex., and Hugh L. Jacobs, Oklahoma City, Okla., Carl N. Morgan, administrator of the estate of Hugh L. Jacobs, deceased; assignors to Socony Mobil Oil Company, Inc., a corporation of New York
 Filed July 21, 1959, Ser. No. 828,500
 3 Claims. (Cl. 214-75)



2. The combination with the body portion of a freight vehicle having means for completely enclosing the body portion, said means including a load supporting platform, a roof, four vertical defining means, one of said vertical defining means being door means adapted for opening to the full width of said body portion, a system for loading and unloading said body portion comprising parallel tracks mounted in the upper portion of said body portion, adjacent to the vertical defining means and perpendicular to the door means, hoisting means, means extending between said parallel tracks and movable therealong for supporting said hoisting means for movement parallel to and transverse to said parallel tracks, said hoisting means thereby being adapted to operate over substantially any point within said body portion, means for extending said parallel tracks outside of said body portion, thereby enabling said hoisting means to operate over an area beyond the rear end of the body portion, comprising track members individually and rotatably mounted on vertical supports situated wholly within said body, said vertical supports each having a bearing means located adjacent to the load supporting platform with a diagonal brace running from said bearing means to a point adjacent the outermost end of the extension track, the extension track members being of a length smaller than the width of said body portion are thereby adapted to being folded to a position wholly within the body portion thereby enabling the door means to be fully closed.

3,006,487
LOAD PLATFORM FOR VEHICLES
 Fallero Gelli, 405 Ashford Ave., Dobbs Ferry, N.Y.
 Filed Apr. 22, 1959, Ser. No. 808,088
 15 Claims. (Cl. 214-83.24)

1. In a vehicle, load bearing means comprising a platform, a pair of spaced rails extending in parallelism lengthwise of the vehicle and connected to said platform,

said rails having vertical sections depending from said platform and upper and lower horizontal flanges integral with the longitudinal edges of said vertical sections, said upper horizontal flanges being secured to said platform and being provided on their inner surfaces with longitudinally extending grooves, a roller support fastened to the floor of the vehicle beneath the platform and extending longitudinally of the vehicle in parallelism with an adjacent to each rail, two longitudinally extending series of spaced rollers mounted on said support so that their rotational axes are located between the upper and lower flanges of said rail with which said support is associated, one series of said rollers riding in the longitudinal grooves

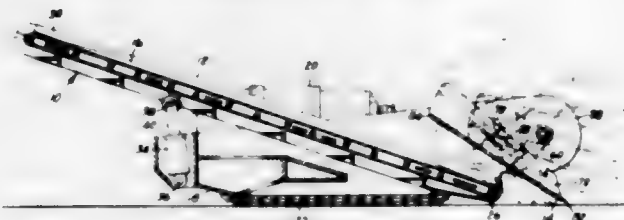


of said upper flanges and the other series of said rollers riding on the inner surfaces of said lower flanges opposed to said grooved flange surfaces, and platform operating means for slidably moving said rail flanges relative to said associated series of said rollers, said operating means including mechanical means connected to said platform and operable to move the latter in two directions longitudinally relative to said vehicle, an electric switch, and electrically operated means controlled by said switch and operatively connected to said mechanical means to cause the latter to move said platform in one longitudinal direction or the other under the control of said switch.

3,006,488

SHOVEL LOADING MECHANISM

Alexander W. Calder, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 5, 1958, Ser. No. 719,348
6 Claims. (Cl. 214-91)



1. A loading machine comprising a frame with a spaced pair of oppositely driven rotatable shafts having drive arms rigidly connected thereto respectively, shovel means, one of said drive arms being pivotally connected to said shovel means, the other of said drive arms being slidably connected to said shovel means and wherein said other drive arm is rotated at twice the speed of said one drive arm.

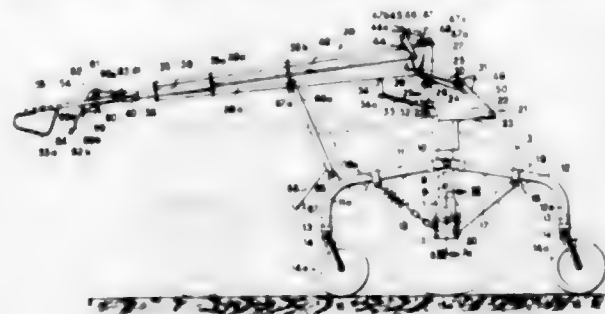
3,006,489

DEVICE FOR LIFTING AND HANDLING BALES OF STRAW FODDER OR THE LIKE

Pierre Ealet, Charleville, France, assignor to Societe Anonyme dite: Etablissements Gustin Fils, Deville, France, a corporation of France
Filed Mar. 14, 1960, Ser. No. 14,700
Claims priority, application France Mar. 16, 1959
6 Claims. (Cl. 214-147)

1. A device for lifting and handling loads adapted to be attached to a vehicle such as an agricultural tractor, said device being characterized by the fact that it comprises a suspension and running gear including an elongated generally vertical supporting member (1, 6, 8) adapted to be pivotally mounted on said tractor near its rear axle, symmetrical front and back arms (11, 12), means (10) pivotally connecting said arms to said supporting member for swinging movement about an axis parallel to said rear axle, said connecting means being

gated generally vertical supporting member (1, 6, 8) adapted to be pivotally mounted on said tractor near its rear axle, symmetrical front and back arms (11, 12), means (10) pivotally connecting said arms to said supporting member for swinging movement about an axis parallel to said rear axle, said connecting means being



vertically adjustable on said supporting member, a wheel (14a) pivotally mounted on the free end of each arm, a load lifting boom (28) rotatably attached to said supporting member above said pivotal connecting means for swinging movement about an axis parallel to the axis of said arms, and additional means (16, 17) connecting said arms to said supporting member at points vertically spaced from said pivotal connecting means.

3,006,490

FORK TRUCKS

George R. Dempster and Harry W. Jones, Knoxville, Tenn., said Harry W. Jones assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee

Filed Nov. 1, 1955, Ser. No. 544,177
14 Claims. (Cl. 214-317)



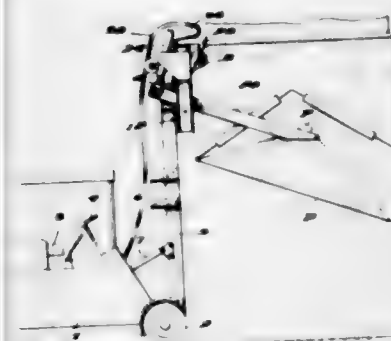
1. In transporting and dumping equipment, the combination with a container adapted for discharging the contents therefrom, of a base structure adapted to be mounted on a motor vehicle, an upright frame connected with the base structure, an elevator structure movably mounted on the upright frame, means connected with the elevator structure for lifting the container, an automatic hook constructed for secure engagement with the container body portion, means for closing over the hook after engagement thereof with the container body portion, power means for opening the hook closing means from closed relation to the hook and a flexible device extending to the hook power means through the elevator structure.

7. In a fork truck, the combination of a carriage frame, a pair of fork arms adjacent opposite sides of said frame, means pivotally connecting said arms on upright axes with the frame, each of the arms having a finger connected therewith and extending inwardly therefrom, and a torsion spring in position to engage the finger upon outward movement of the adjacent arm normally tending to restore the arm to its initial position, each torsion spring including a pair of coils having a loop portion therebetween extending in embracing relation with the finger and acting thereon to swing said arm.

3,006,491

MATERIAL HANDLING DEVICES

Marian N. Braubach, San Antonio, Tex., assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed May 11, 1956, Ser. No. 584,385
13 Claims. (Cl. 214-317)



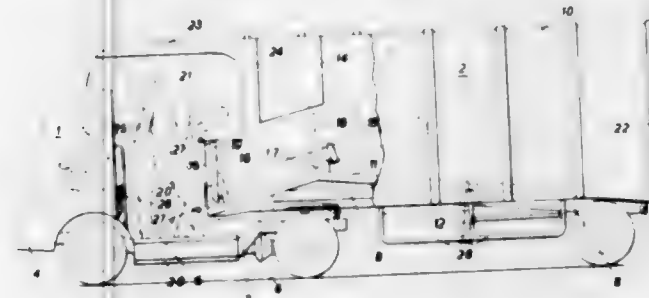
1. In a material handling device, the combination with an elongated container having lifting pins on opposite ends thereof and having a bail connected with the container for supporting the body thereof, of a carriage, catch means on the carriage engaging the bail to lock the container to the carriage, means for raising and lowering the carriage, a pair of arms spaced apart transversely of the carriage in embracing relation with the container beneath the lifting pins thereof, and means pivotally mounting the arms on the carriage for swinging movement in upright directions relative thereto for dumping the container while locked to the carriage.

3,006,492

LOAD CARRYING VEHICLE

Ernest Houghton, Redlums, Scarth Hill, Ormskirk, England, assignor of one-half to The Lord Mayor, Aldermen and Citizens of the City of Liverpool, Lancashire, England

Filed Aug. 12, 1957, Ser. No. 677,499
7 Claims. (Cl. 214-510)

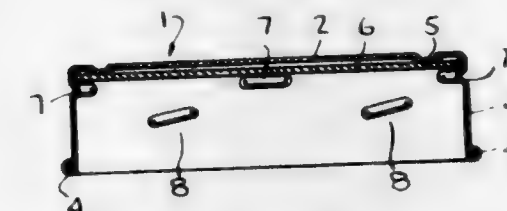


7. A load carrying vehicle for the transport of compactible material comprising a tractor and semi-trailer in articulated union and embodying front wheels near the front of the tractor, a driven axle near the rear of the tractor and rear wheels supporting the semi-trailer, a driving position on the tractor approximately above the front wheels, a transverse walk-through platform on the tractor in front of the driven axle and a transverse partition between the driving position and the platform to isolate the driving position from the platform, which latter extends from side by side of the tractor so as to be accessible from both sides of the tractor, a closed body on the trailer capable of being rearwardly tipped and extending forwardly to said platform beyond the driven axle and provided with a loading opening at its forward end above the level of the platform and with doors at its rearward end through which the load can be discharged and against which the load can be compacted by tipping of the body and means for elevating the forward end of the body into the rearwardly tipping position.

3,006,493

CLOSURE CAP

Daniel D. Acton, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Aug. 14, 1958, Ser. No. 755,053
1 Claim. (Cl. 215-44)



A closure cap comprising a cover portion and a skirt portion, a plurality of spaced inclined indentations on said skirt portion forming locking cams, said locking cams being on the same elevational plane with each other and being located in the upper zone of said skirt portion, a liner in said closure cap and a second plurality of circumferentially spaced indentations formed in the upper zone of said skirt portion adjacent said cover portion above the level of said locking cams and in close adjacency to said level to form liner-retaining lugs to support and retain said liner in said cap, each of said liner-retaining lugs being of approximately the same length as each of said locking cams and being located directly above the space between two of said locking cams, the leading and trailing edges of each cam being circumferentially spaced from the trailing and leading edges respectively of the next adjacent pair of lugs, and the spacing of the lugs above the level of the cams and the circumferential spacing of the lugs from each other being such that when the cap is screwthreadedly seated on a container having circumferentially spaced thread segments each lug will be spaced circumferentially short of the leading edge of one of said thread segments.

3,006,494

PISTON STOPPERS FOR AMPOULES

Helmut Reibeling, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
Filed Dec. 23, 1959, Ser. No. 861,559
Claims priority, application Germany Dec. 31, 1958
1 Claim. (Cl. 215-47)



Piston stopper for ampoules, said stopper being in the form of an elongated cylinder of solid elastic material, said cylinder having like cavities at each end and spaced peripheral grooves in the side thereof, each cavity having a diameter slightly greater than one half the diameter of the cylinder and a depth substantially one fourth the length of the cylinder, and the peripheral grooves being substantially semicircular in cross section and equally spaced from the ends of the cylinder.

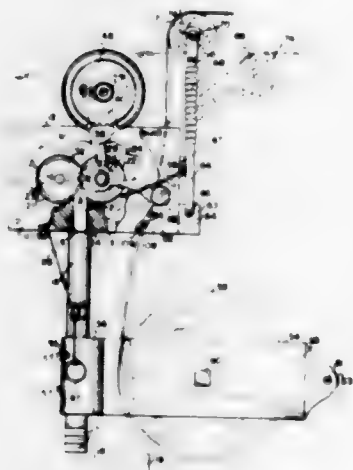
3,006,495

CONSTRUCTION TAPE APPARATUS

Billy G. Miller, Salt Lake City, Utah, assignor to Clarice J. Seifert, Ogden, Utah
Filed Dec. 12, 1958, Ser. No. 780,151
5 Claims. (Cl. 156-526)

3. An applicator machine, adapted to carry a roll of construction tape, for depositing cement on the underside of said construction tape as the roll unwinds and

applying, simultaneously, in a continuous manner, the cement laden, unrolled tape to adjacent, Sheetrock panels over a selected, mutual junction area thereof and in the direction of junction orientation, said machine including, in combination: a regulator housing having an inlet orifice and an outlet orifice, said inlet orifice being adapted for connection to a source of cement under suitable pressure; guideway means for directing tape travel past said outlet orifice so that, as the tape progresses, the underside thereof moves in close proximity with said outlet orifice to receive cement therefrom; roller means coupled to said regulator housing for rolling said tape, when cement laden, onto the junction area of adjacent wall panels; and means responsive to the translational movement of said regulator housing in accomplishing the above mentioned rolling of the construction tape for regulating the flow of cement from said inlet orifice to said outlet orifice so as to deposit a uniform layer onto



said tape, said regulating means including a regulator interposed between said inlet and outlet orifices and in communication therewith, and wherein said regulator housing includes a pair of intersecting cylindrical cavities each exhibiting a cylindrical wall, and wherein said regulator comprises a pair of gears each pivotally mounted in a respective one of said cylindrical cavities and in intermeshed relationship, the spacing between the gear teeth of each gear and the respective cavity wall being sufficient to permit the gears to turn within the cavities and transport said cement via gear teeth interstices along said cavity walls to said outlet orifice but not so large as to permit cement passage between the gear teeth outer periphery and the cavity wall, and wherein said regulating means includes a pair of wheels fixedly disposed with respect to said regulator housing and gear means intercoupling at least one of said wheels to one of said cavity gears.

3,006,496

COLLAPSIBLE CONTAINER

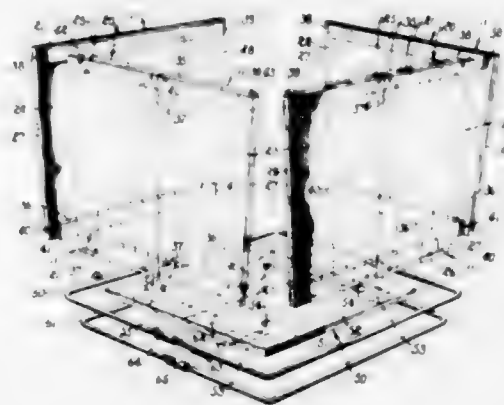
John J. Weiman, Rte. 1, Box 214, Visalia, Calif., assignor of one-half to Andrew J. Caglia, Fresno, Calif.

Filed Sept. 16, 1957, Ser. No. 684,016

1 Claim. (Cl. 217-12)

A plant container adapted to be disassembled and separated from the plant while the plant is located in a planting hole in the ground or in other restricted area comprising a frusto-pyramidal side wall circumscribing an interior for the container adapted to receive a growing medium and a plant embedded therein, the side wall having an upper end portion of maximum circumference, a lower end portion of minimum circumference, and an intermediate portion between the upper and lower portions of a circumference less than the maximum circumference but greater than the minimum circumference, said

upper end portion circumscribing an upper opening through which such a plant extends from the interior of the container, the side wall circumscribing an axis for the container and having a substantially rectangular cross-section normal to said axis, the side wall including a plurality of separably interfitted wall sections, each of the wall sections including a trapezoidal side panel having inner and outer surfaces, upper and lower edges of maximum and minimum length respectively, and opposite side edges, with adjacent side edges of adjacent sections being in contact and forming angulated corners of the side wall, each wall section including a pair of elongated upper and lower cleats of substantially rectangular cross-section individually secured transversely to the inner surface of their respective side panel adjacent to such panel's upper and lower edges, each cleat having opposite end edges in adjacent spaced relation to the side edges of such side panel thereby forming notches endwardly of the opposite end edges of each cleat whereby with the adjacent side edges of adjacent sections in contact, the notches along one side edge of each side panel receive the upper and lower cleats of the adjacent wall section in fitted relationship therein and whereby the notches along the opposite side edge of each panel receive the panel of the wall section adjacent to said opposite side edge in fitted relationship therein; a rectangular bottom wall fitted within the side wall sections and rested on the lower cleats in



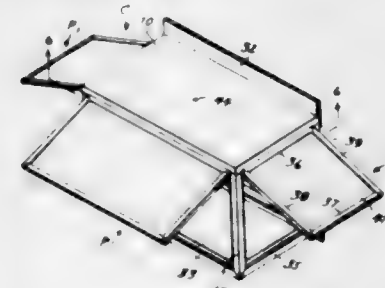
opposed relation to said upper opening; and upper and lower, releasably enclosed bands of substantially cylindrical cross-section, each band having a substantially fixed circumference when enclosed, of rigid, rectangular shape corresponding to the periphery of the side wall, the circumference of the upper band being less than said maximum circumference but greater than said intermediate circumference, the circumference of the lower band being greater than said minimum circumference but less than said intermediate circumference, the upper and lower bands being in circumscribing relation to the wall with the upper band being in engagement with the outer surfaces of the panels above the intermediate portion and with the lower band being in tangential engagement with the outer surfaces of the panels below said intermediate portion, the bands being slidable on the wall toward said end portion of maximum circumference and into increased friction-tight constriction about the wall, the interfitted side edges of the panels precluding movement of any of the panels inwardly of the container out of said rectangular pyramidal forming relation when so constricted by the bands, the bands also being slidable on the wall toward said end portion of minimum circumference for separation from the wall sections, and the bands having releasably interconnected end portions to facilitate removal thereof from around a plant in the container and subsequent to separation of the wall sections from the plant and such growing medium.

3,006,497
HOLDER FOR LIDS OR CAN COVERS
Emil J. Doeblner, 58 Dundee St., Buffalo, N.Y.
Filed Mar. 22, 1961, Ser. No. 97,585
7 Claims. (Cl. 220-18)



1. A holder for a container cover, said holder including an upright plate adapted to be secured to a support, an outwardly extending plate secured in fixed relation to said upright plate, a hinge having a part supported on said outwardly extending plate and a part secured to said cover, said outwardly extending plate having its outer edge shaped to conform to the contour of the upper portion of a container to guide the same into correct relation to said holder to receive the cover.

3,006,498
AIR-CONDITIONER COVER
Albert B. Thiede, 206 E. Coulter Ave., Collingswood, N.J., and David C. Gafvert, 18 Greibe Ave., Bristol, P.O., Edgley, Pa.
Filed Jan. 15, 1959, Ser. No. 787,008
3 Claims. (Cl. 220-36)

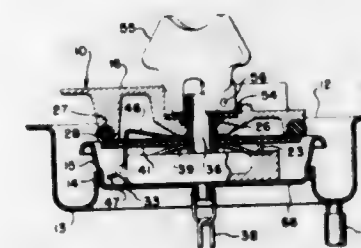


1. In an air-conditioner cover, a fixed framework comprising a top wall, an end frame, and side frames depending from said top wall; a protective panel pivotally mounted on each of said frames at its top edge, a star wheel pivotally mounted on the underside of said top wall and including four arms, a thrust rod connecting each of said panels to one of said arms below the axis of the pivotal mounting of that panel, a link connected to the other of said arms and extending inwardly of said fixed framework to an accessible position, and co-operating elements of a detachable detent on said link and fixed framework.

3,006,499
SAFETY MEANS FOR TANK CAPS
Philip W. Corbett, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,884
4 Claims. (Cl. 220-40)

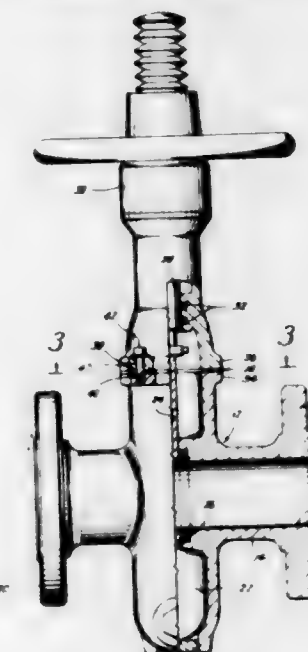
1. A tank cap assembly for a receptacle having a filler opening and a supporting ring therearound, said cap assembly comprising a body member, a locking member rotatably and rectilinearly mounted on said body member, an actuating handle connected to said locking member for

rotating said locking member into position for rectilinear movement by said actuating handle into clamped engagement with said supporting ring, a projecting lug on said locking member, a spring member, means for fixedly locating



ing said spring member relative to said body member, said spring member having a portion thereof normally positioned for engagement by said projecting lug to prevent rotative movement of said locking member by said actuating handle.

3,006,500
BONNET GASKET
Ronald A. Gulick, Houston, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Apr. 6, 1959, Ser. No. 804,237
4 Claims. (Cl. 220-46)

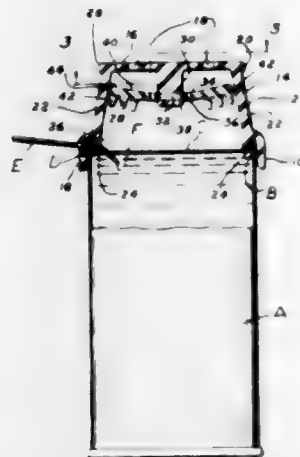


1. A flange connection for a bolted flanged opening of a pressure vessel comprising a pressure vessel body having an opening surrounded by a flange provided with a multiplicity of bolt holes, a bonnet for closing said opening, the bonnet being surrounded by a flange having bolt holes registering with the bolt holes in the flange surrounding the body, a gasket interposed between said flanges, the gasket comprising a rigid portion provided with holes which register with the holes in the flanges and a continuous resilient deformable portion secured to the inner periphery of the rigid portion, the resilient deformable portion having two parallel sides one being attached to the inner periphery of the rigid portion and the other being the bore of the gasket, the side attached to the inner periphery being of the same axial length as the rigid portion, the resilient portion then angularly diverging from said side to two parallel faces which are parallel to the plane of the rigid portion, the thickness of the resilient deformable portion at the parallel faces being substantially greater than the rigid portion so that when the flanges are drawn together the resilient portion will be under a relatively uniform load and approaches but does not extend past the inner periphery of the flanges and means passing through said bolt holes to draw said flanges together.

3,006,501
OVERFLOW CATCHER FOR EFFERVESCENT FLUID CONTAINERS

Albert Rash and Lisbeth K. Ballard, both of 121 N. 17th Ave., Phoenix, Ariz., assignors of one-third to O. C. Williams

Filed Dec. 19, 1960, Ser. No. 76,833
8 Claims. (Cl. 220-85)

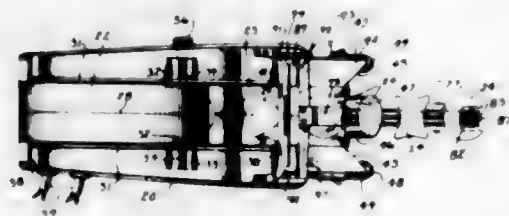


1. In an overflow catcher for effervescent fluid containers, the combination of: a substantially inverted cup-shaped resilient structure having a substantially resilient skirt disposed to surround the upper portion of a beer can or the like; said skirt having a lower portion disposed to be placed closely adjacent an inner annular portion of a can rim; said skirt having an opening in the side wall thereof disposed intimately to fit and receive a can opener for insertion therethrough to open the top of the can inwardly of said skirt; a top portion of said catcher having gas escape openings therein; a support extending downwardly from said top; a disc-shaped structure carried by said support, said disc-shaped structure underlying said openings and having a peripheral portion spaced from the interior of said cup-shaped structure and extending outwardly beyond said gas escape openings, said disc-shaped structure thereby disposed to limit upward movement of spray and/or foam of effervescent fluid when a can is opened at its top portion and fluid passes upwardly through an opening formed therein internally of said skirt.

3,006,502
DISPENSER FOR PRECUT PRESSURE SENSITIVE TAPE

Frederic S. Tobey, Sharon, Mass., assignor to W. H. Brady Co., Milwaukee, Wis., a corporation of Wisconsin

Filed Nov. 24, 1958, Ser. No. 775,856
10 Claims. (Cl. 221-73)

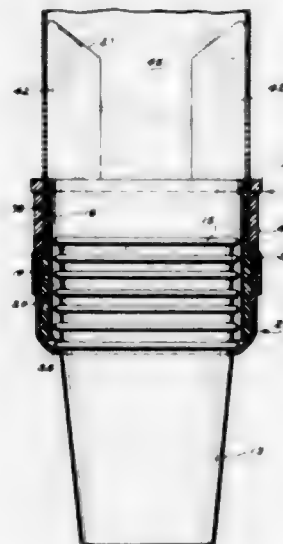


1. A dispenser for precut pieces of pressure sensitive tape, which tape is removably mounted on a strip of liner which has a continuous slit down the center centered on the pieces of tape, the whole being rolled up into a roll, which dispenser comprises: a main frame; means for supporting the roll on said frame for convenient unwinding; means supported on said frame for pulling on the liner to unwind the roll; means supported on said frame for guiding the liner from the roll to the pulling means, said guiding means including, as tape removing means,

two edges diverging symmetrically forward with respect to the line of travel of the center of the liner, over which edges the liner is drawn to split it along its slit and peel it from the pieces of tape in two divergent halves; and means for actuating the pulling means; said dispenser being characterized by the fact that the means for supporting the roll comprises: a concave depression on the main frame, said depression being curved longitudinally and straight transversely to accommodate the roll; a pair of roll guides, each comprising a flat longitudinal plate slidable transversely in the depression in close contact therewith; and means for simultaneously and at the same rate moving these guides toward or away from each other at will, whereby the depression may accommodate, between these guides, rolls of different widths and maintain each roll centered with respect to the tape-removing means.

3,006,503
CUP DISPENSING DEVICE
John G. O'Neill, 5156 Sheridan Ave. S., Minneapolis, Minn.

Filed Sept. 26, 1957, Ser. No. 686,533
1 Claim. (Cl. 221-307)



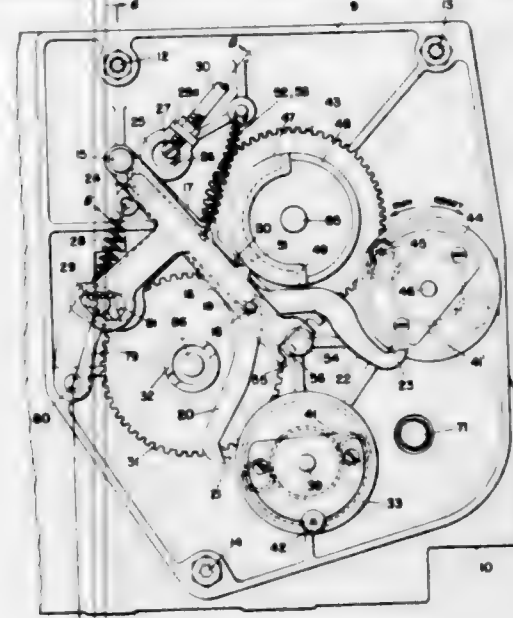
A cup dispensing device having in combination, a rigid upstanding container for nested cups, a rigid open-ended cylindrical member having a shoulder formed thereabout and having a plurality of spaced annular grooves about the lower portion thereof, an adapter comprising a plate member having a circular opening therein fitting over said cylindrical member, a collar about said cylindrical member for supporting said adapter, a plurality of upstanding fingers attached to said plate member spaced about said opening thereof, said fingers being positioned to be disposed within the inner side of said container to hold the same in a stable upright position, a flange formed by said plate member for supporting said container and a resilient open-ended cylindrical member having a plurality of spaced annular detents therein and a restricted lower end opening having said detents mating with said grooves about said cylindrical member to be removably secured thereto for removably holding said cups in operating position.

3,006,504
PRESELECTING MECHANISM FOR FLUID DISPENSING APPARATUS
Einar T. Young, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Aug. 27, 1958, Ser. No. 757,578
17 Claims. (Cl. 222-15)

1. In a fluid dispensing apparatus, a rotatable actuating member, means for manually adjusting said member angularly to a setting corresponding to a desired

quantity of fluid to be dispensed, a counter having one wheel driven through an angle proportional to the quantity of fluid dispensed; a mechanical coupling between said one wheel and said rotatable member operating to cause rotation of said member by said one wheel, said mechani-

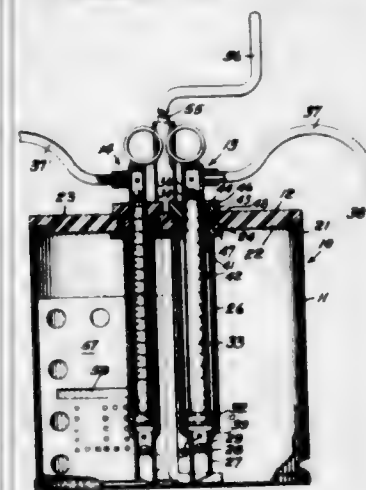


cal coupling operating to cause resetting of said rotatable member to its original, manually-adjusted angular setting when said counter is reset to zero, and means operating automatically in response to the reaching by said member of a predetermined angular position for stopping the dispensing of fluid from said apparatus.

3,006,505
APPARATUS FOR MIXING AND DISPENSING MEASURED QUANTITIES OF FLUID PIGMENTS

Isador Levin, Baltimore, Md., assignor to Baltimore Paint and Chemical Corporation, Baltimore, Md., a corporation of Maryland

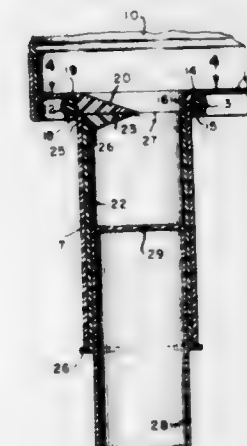
Filed Jan. 30, 1959, Ser. No. 790,081
6 Claims. (Cl. 222-26)



1. A dispenser for thin or viscous colorant liquids or pastes, such as paint pigment, comprising a container having an open top and an annular peripherally extending inwardly directed flange, a cover of transparent material having a downwardly directed disc-like extension centrally thereof, said extension having wall means generally perpendicular to the plane of said cover and being slightly smaller than the opening defined by said flange, a first pump mounted in a bore in said cover and having a pump barrel and eduction tube extending into said container, a valve seat in said eduction tube and a ball valve adapted to seat on said valve seat, a piston in said barrel having a hollow plunger attached thereto and

extending upwardly out of said barrel, said piston and plunger being rotatable in said pump barrel, a second valve seat in said plunger, a second ball valve adapted to seat on said second valve seat, a laterally extending spout having a downwardly directed discharge end secured in fluid communicating relationship with said plunger adjacent the top thereof, said plunger having graduations on the exterior surface thereof proportional to the capacity of said pump at various positions of said plunger, an opening extending downwardly through said cover and spaced from said barrel the same distance as the discharge end of said spout, an agitator having a shaft extending through a second bore in said cover and having the lower end thereof in said container, a paddle on said shaft having a refill-indicating indicia thereon, the side of said spout abutting said shaft when the discharge end of said spout is over said opening, and a second pump and spout mounted in a third bore in said cover, said second pump having a substantially smaller barrel than said first pump, the discharge end of the spout of said second pump being above said opening and the side of the spout of the second pump abutting said shaft in one position thereof, whereby both said pumps may be brought into positions abutting said shaft to thereby locate the discharge ends of the spouts thereof over said opening, and whereby said pumps may be caused to rapidly dispense a measured quantity of pigment from said container.

3,006,506
MEASURING AND DISPENSING SPOUT
Charles E. Germano, Poughkeepsie, N.Y.
(38 Materiel Squadron, APO 130, New York, N.Y.)
Filed Oct. 27, 1959, Ser. No. 849,078
2 Claims. (Cl. 222-49)

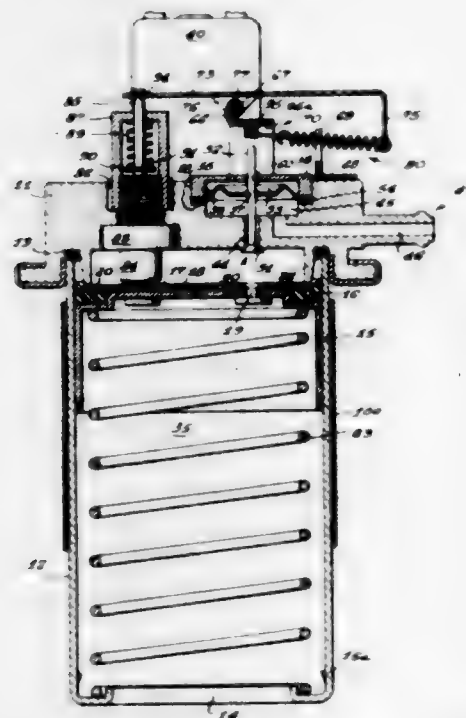


2. The combination of a container for material to be dispensed and telescopic measuring and dispensing apparatus housed entirely within said container, said container having an opening with an outwardly extending integral ring thereabout, a resilient collar within said ring, a first transparent sleeve slidably carried by said collar, means on the inner end of said first sleeve for engaging said collar when said sleeve is extended, a substantially semi-circular closure portion partially closing said inner end of said first sleeve, a second transparent sleeve rotatably mounted in said first sleeve, means preventing axial movement of said second sleeve, a substantially semi-circular closure portion partially closing the inner end of said second sleeve and located in proximity to the closure portion of said first sleeve, a manipulating flange on the outer end of said second sleeve whereby said second sleeve may be rotated to dispose the closure portion thereof in opposed relation to the closure portion of said first sleeve to prevent the passage of material therethrough or may be rotated to produce an opening of variable size to control the flow of material, and a removable cylindrical plug slidable lengthwise within said second sleeve.

3,006,507

TEMPERATURE SENSITIVE METERING DEVICE
Carl C. Bauerlein, Lincolnwood, Ill., assignor to The
Dole Valve Company, Morton Grove, Ill., a corpora-
tion of Illinois

Filed Sept. 21, 1959, Ser. No. 841,238
5 Claims. (Cl. 222-54)



1. A fluid control valve comprising a valve body having a fluid chamber and having inlet and outlet ports opening to said chamber adjacent one end thereof, a movable wall defining a portion of said chamber and movable to vary the volumetric capacity thereof, valve means associated with each of said ports being energizable to permit fluid flow therepast, means for heating the fluid contained within said chamber, and means operable to effect energization of one of said valve means and simultaneous deenergization of the other of said valve means as a function of the temperature of fluid within said chamber.

3,006,508

METHOD OF EXTRACTING SUBSTANCES FROM COLLAPSIBLE TUBES

Oscar E. Preidel, 1925 S. 16th St., La Crosse, Wis.
Filed Sept. 17, 1958, Ser. No. 761,597
6 Claims. (Cl. 222-98)

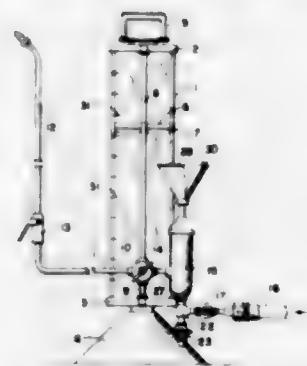


1. A tube squeezer comprising a frame, a base integral with said frame, side plates substantially perpendicular to said base, vertical grooves in said side plates, a first roller rotatably supported in said grooves, a second roller rotatably supported in said grooves below said first roller, spring means secured to said base member biasing said second roller against said first roller, a plurality of arms rotatably secured on said second roller, said plurality of arms having a cam surface engaging said first roller, and a notch at one end of said cam surface whereby said second roller may be forced downwardly from said first roller against the bias of said spring means and said notch will engage said first roller to secure said second roller in the down position.

3,006,509

FLUID PRESSURE DEVICE

Joseph C. Fuller, 525 S. Gertruda, Redondo Beach, Calif.
Filed Apr. 3, 1959, Ser. No. 803,949
5 Claims. (Cl. 222-133)



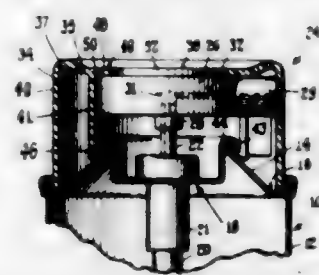
1. A device for providing a pressurized fluid of pre-determined composition comprising a source of water under pressure; a first conduit; a first valve in said first conduit for controlling the flow therethrough; a chamber series connected in said first conduit downstream of said first valve, said chamber including a closable opening into the interior thereof through which an additive may be inserted, and a second closable opening through which fluid may be drained from said chamber; a four-way valve in said conduit downstream of said chamber; a duality of conduits connected to said four-way valve; a cylinder; a floating piston in said cylinder, one of said duality of conduits connecting with one end of said cylinder and the other of said duality of conduits connecting with the opposite end of said cylinder; and a discharge conduit connected to said four-way valve whereby either of said duality of conduits is selectively connectable to said source of water under pressure, said discharge conduit being thereby connected to the other of said duality of conduits which is not so connected to said source of water under pressure.

3,006,510

AEROSOL CAP CONSTRUCTION

Philip H. Sagarin, Bridgeport, Conn., assignor to VCA Incorporated, Bridgeport, Conn., a corporation of Connecticut

Filed Oct. 20, 1959, Ser. No. 847,623
6 Claims. (Cl. 222-182)



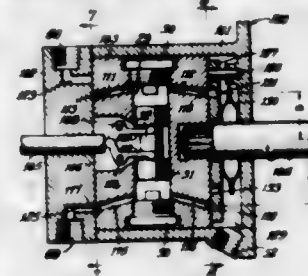
1. In an aerosol dispenser, a manually operable valve construction carried by a container, said construction including an upwardly extending, accessible and depressible actuating part having a side nozzle; and a fixed cap surrounding said depressible part and having a top wall provided with a recess to provide access thereto, said cap being mounted on the container and having guard portions surrounding said recess which are at least as high as the said depressible part to prevent accidental or inadvertent actuation of the part by contact with a broad-surfaced exterior object, and said cap having a pair of annular and concentric, spaced walls in the form of depending skirts at least one of which engages the container for support of the cap, said walls having aligned openings receiving the side nozzle of the actuating part and the top surfaces of the depressible part and of said top wall constituting substantially continuations of each other and together forming the top surface of the dispenser.

3,006,511

FUEL INJECTOR APPARATUS

Wolfgang E. Meyer, State College, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Jan. 29, 1958, Ser. No. 711,863
3 Claims. (Cl. 222-250)



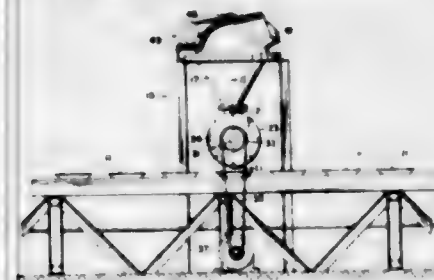
1. In a fuel injection system for an internal combustion engine having a plurality of combustion cylinders; a source of fuel under pressure; and a fuel injection distributor adapted to receive fuel under pressure from said pressure source and deliver said fuel to the various combustion cylinders of the engine; said distributor comprising the combination of a rotatable rotor having a pair of opposite end faces; a casing for said rotor; a pair of face pieces in said casing in face-to-face contact with said end faces; a plunger reciprocably disposed in said rotor; said rotor being provided with a port in one of its end faces in communication with one end of said plunger and with another port in the other of its end faces in communication with the other end of said plunger; said end pieces each being provided with a plurality of ports therethrough in communication with internal cavities within said casing connected to said source of fuel under pressure and being provided with ports alternately disposed with respect to said first named ports which are connectable to different ones of said engine cylinders; one of said face pieces having fuel under pressure within said cavities applied to it to hold the face pieces in fluid tight contact with said rotor; a shaft extending through said casing connected to rotate said rotor; and a second shaft in alignment with said first named shaft extending through said casing and rotor and having a rib disposed within a groove in said plunger for limiting the stroke of the plunger; said rotor ports being disposed with respect to the ports in said face pieces so that as said rotor rotates, the port in one of the rotor end faces is alternately connected to fuel pressure ports and engine cylinder ports in the corresponding face piece and the port in the other rotor end face is at the same time alternately connected respectively with the engine cylinder ports and the fuel pressure ports and the fuel pressure reciprocates the plunger and the plunger pumps fuel to the engine cylinders.

3,006,512

MATERIAL DISPENSING MACHINE

Maurice F. Keathley, Sr., and Robert O. Manspeaker, both of 2255 Young Ave., Memphis, Tenn.; said Manspeaker assignor to said Keathley

Filed July 16, 1958, Ser. No. 748,939
6 Claims. (Cl. 222-333)



6. In a viscous liquid material dispensing mechanism, valving means for the material, means for supplying the material under pressure to said valving means, said val-

ing means including means establishing a discharge aperture, means interposed between said discharge aperture and said material supplying means for completely confining the material whereby pressure of the material is allowed to build up, said means interposed between said discharge aperture and said material supplying means including a rotatable member having an annular body, said annular body being interposed between said discharge aperture and said material supplying means, means for rotating said annular body, said body being provided with at least one port therethrough movable upon rotation of said body into register at regular intervals with said discharge aperture for releasing pre-determined amounts of the material under pressure at regular intervals.

3,006,513

SPOUT AND CAP SEALING MEANS

Arthur J. Collins, 7314 N. Milwaukee Ave.,
Chicago 48, Ill.

Filed Nov. 19, 1958, Ser. No. 775,018
4 Claims. (Cl. 222-542)



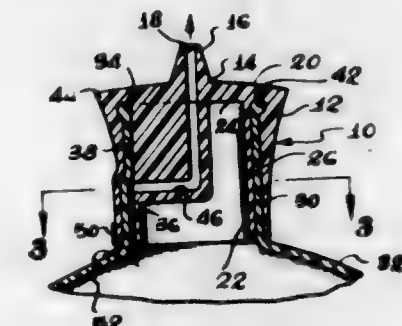
1. In combination, a plastic pouring spout and an integral plastic cap-engaging ring, the two being generally circular and concentric, the ring being positioned outwardly of the pouring spout and being secured thereto by readily breakable spaced members, the spout being provided on its exterior with an outwardly extending flange and an outwardly extending shoulder spaced therefrom adapted to frictionally engage an outlet neck of a container, the ring and spout adapted to be pressure engaged within a container cap, the breakable members which connect the ring and spout being of such strength as to be readily severed by relative rotation of the cap with respect to the spout as the cap is screwed into closing position on the neck.

3,006,514

DISPENSING VALVE

Leonard M. Collins, Los Angeles, Calif., assignor to Pressure Dispensers, Inc., Hollywood, Calif., a corporation of California

Filed Mar. 12, 1958, Ser. No. 720,936
6 Claims. (Cl. 222-553)

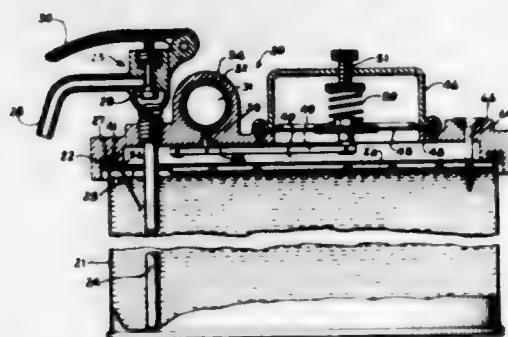


4. In combination, a dispensing valve and a container therefor having an outlet spout which comprises: a dispensing valve housing; means defining with the interior of said housing a generally cylindrical channel, said channel being slightly enlarged near one end thereof; means defining an outlet passage in communication with said generally cylindrical channel, and passing through said housing, said container outlet spout being adapted to rotatably and slidably engage the walls defining said channel and having an enlarged bead at one end thereof which is complementary to the enlargement in said chan-

nel whereby to prevent axial displacement of said valve from said spout and to prevent leakage from said container, said container spout having an inlet passage formed in the wall thereof communicating with the interior of said container, said inlet passage communicating with said outlet passage upon rotation of said dispensing valve housing to a given position and being sealed from said outlet passage means upon rotation of said dispensing valve housing less than 360° from said given position.

3,006,515 BEVERAGE CONTAINER AND DISPENSER DEVICE

Wilbur G. Midnight, P.O. Box 617, Ogden Dunes, Ind.
Filed Sept. 16, 1957, Ser. No. 684,318
9 Claims. (Cl. 222—396)



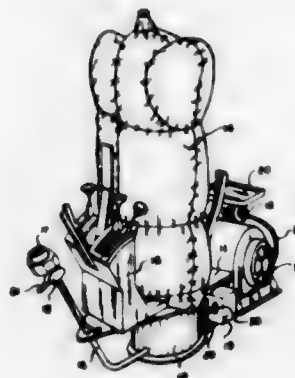
1. In a dispensing device for carbonating and dispensing a beverage under pressure from a generally cylindrical disposable container having a cover sealed thereon, said device including a head substantially coextensive with said container cover and having a depending annular rim defining a recessed portion on the lower surface of said head, means fastening said head to said container in sealed relation with said recessed portion forming a chamber between said head and said cover, said chamber communicating with the container through a tubular conduit depending from said head and adapted to extend through an aperture in the container cover into said chamber, said conduit being immersed in the beverage within the container, and a spigot on said head including a dispensing valve and a spout communicating with said tube under the control of said valve, the improvement comprising, means on said head for supplying carbon dioxide to said chamber, means for regulating the supply of carbon dioxide to said chamber, and a pressure sensitive diaphragm mounted in said head and having one surface exposed in said chamber and the other surface exposed to the atmosphere, said diaphragm being operative in response to pressure changes within said chamber for actuating said regulating means to maintain a regulated dispensing and carbonating pressure in said chamber and container.

3,006,516 GARMENT FINISHER AND MEANS FOR CONTROLLING FLOW OF PROCESSING FLUIDS THERETO

Frank H. Richterkessing, Louisville, Ky., assignor to W. M. Cassell Manufacturing Company, Louisville, Ky., a corporation of Kentucky
Filed Sept. 5, 1957, Ser. No. 682,147
18 Claims. (Cl. 223—70)

1. A garment finisher having a distendable, fluid-pervious bag, a stationary base assembly, a blower for directing air under pressure through said base assembly and into said bag, a steam source for furnishing steam into said bag and having a steam control valve, a motor for driving said blower, means including a normally closed damper mounted in said base assembly between said blower and bag and openable under pressure of air sup-

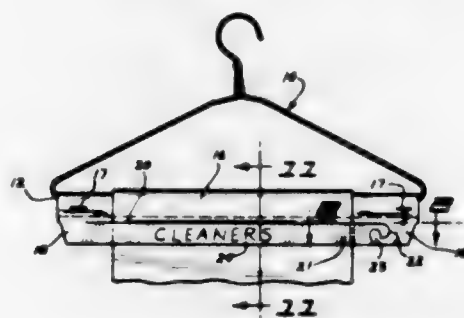
plied from said blower, a form mounted on said assembly and supporting said bag, a solenoid for actuating said steam control valve, and means including a timer having an electrical circuit to said motor and to said solenoid and adapted to operate said motor concurrently with, and subsequent to valve-actuation operation of said solenoid whereby air may be furnished selectively under pressure



into said bag concurrently with, and subsequent to steam flow thereinto.

3,006,517 CLOTHES HANGER ATTACHMENT

John H. Moorhouse, Clear Lake, Minn.
Filed Nov. 5, 1959, Ser. No. 851,035
4 Claims. (Cl. 223—91)



1. A garment clamping attachment for use in connection with a clothes hanger having a cross bar comprising a substantially rectangular member of stiffened sheet material having a width substantially the length of said cross bar, one end portion of said member being reversely folded over said cross bar, the remaining portion of said member depending from said cross bar, a transversely extending flap portion being struck from said depending portion and having one end integral with said depending portion and having its other end free and formed inwardly of the adjacent side of said depending portion, and means formed in said adjacent side of said depending portion for locking engagement with said free end portion of said flap.

3,006,518 NEEDLE THREADERS

William W. Lillard, 925 Palm Ave., Beaumont, Calif.
Filed Nov. 24, 1958, Ser. No. 776,052
9 Claims. (Cl. 223—99)



1. The combination with a metal sewing needle having an eye longer than its width, of a needle threader body member of thin flexible, resilient cellulose material, said

body being made from a strip of said material folded at least once lengthwise to provide a plurality of strip elements narrower than the length of said eye, each of said strip elements having a diverging relation to the adjoining strip elements for stiffening said body member, said body material in said strips being sufficiently flexible and resilient that said strip elements may be readily collapsed toward each other sufficiently to be passed through said eye as said body member is advanced operatively through said needle, the forward end portions of said strip elements being cemented together along a short section of their lengths, and a loop of workpiece-pulling soft, strong thread operatively attached to said body member for trailing therebehind, the forward ends of said loop threads being cemented to areas on the inner surfaces of said strip elements so as to safeguard said loop thread ends against being subjected to disruptive, detaching action by the metal about said needle eye.

3,006,519 VEHICLE LOAD CARRYING ATTACHMENT

Herbert W. Doane, Yakima, Wash., assignor to Sun Manufacturing Company, a corporation of Washington
Filed Jan. 22, 1959, Ser. No. 788,331
6 Claims. (Cl. 224—42.1)



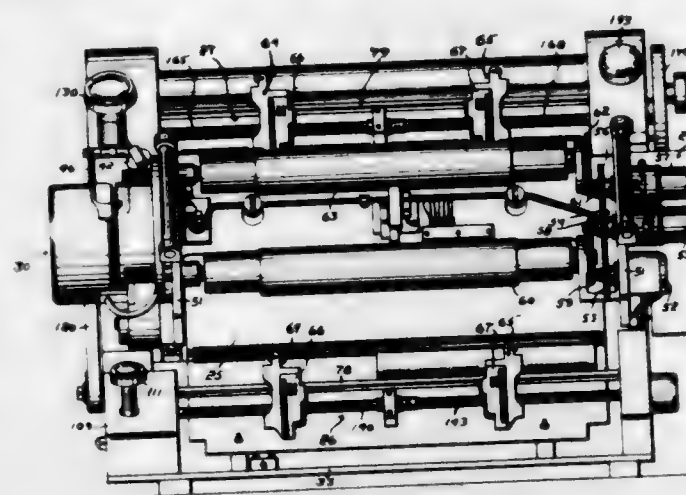
1. A carrier for a generally symmetrical car top comprising an enclosure including a floor and a skirt depending below said floor, symmetrically arranged supporting means for the enclosure comprising elongated plates extending out of said skirt beneath the same transversely thereof to expose the plates outwardly of the skirt, brackets fixed to and depending from said floor over said plates and within the skirt, pairs of upstanding lugs on said plates within the skirt straddling and pivoted to said brackets to space the skirt above the plates and form with the plates articulated joints for pivoting said plates about axes extending transversely of said plates and supporting said floor for self-leveling on a car top, with the joints concealed by said skirt, and hook means swiveled on said plates outwardly of the skirt for easy access thereto and attachable to side gutters of a car top.

3,006,520 PAPER FEED FOR HIGH SPEED PRINTERS

Frank R. House, Franklin, Mass., assignor to Analex Corporation, Concord, N.H., a corporation of New Hampshire
Filed Sept. 21, 1959, Ser. No. 841,191
10 Claims. (Cl. 226—75)

1. In a high speed printer, a paper feed including an infeed pair of laterally spaced tractors, an outfeed pair of laterally spaced tractors, each tractor gripping an appropriate margin of the paper and, when driven, positively advancing the paper relative to it, a drive for said tractors, and means to affect the lateral positions of the

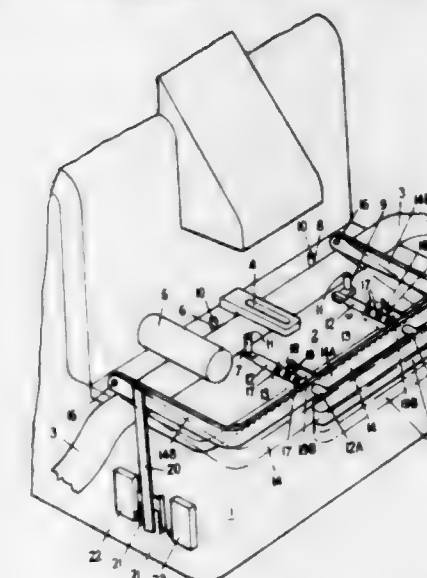
tractors engaging one edge of the paper independently of and, optionally, together with the tractors engaging the



other edge thereof, said tractor positioning means being operable while said tractor drive is in operation.

3,006,521 TAPE HANDLING MECHANISM

George Archibald Wapling, East Sheen, and Eugene Donetti, Wembley, England, assignors to Associated Automation Limited, London, England, a British company
Filed Nov. 24, 1959, Ser. No. 855,173
Claims priority, application Great Britain Nov. 26, 1958
8 Claims. (Cl. 226—174)



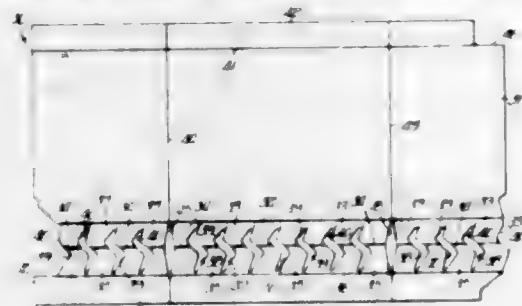
1. Tape handling mechanism comprising pairs of spaced, tape edge guiding members, and a movable mounting for at least one of each pair of guiding members, the motion of the said one movable mounting having horizontal and vertical components, whereby the member carried by the said one movable mounting may be moved laterally and downwardly from a tape engaging position to a retracted position.

3,006,522 COLLAPSIBLE CONTAINER

Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed Mar. 11, 1957, Ser. No. 645,177
20 Claims. (Cl. 229—5.5)

1. An end construction of a cylindrical container member comprising a plurality of radially inwardly extending flanges, and an end closure disk supported by said flanges, each of said flanges being formed from a pair of interconnected fingers one of which is connected to

the body portion of said container member and the other of which is connected to a continuous marginal band extending inwardly from the end of said container member provided with said flanges and in engagement with a surface of said body portion, one of the fingers of each pair being shorter in length than the other, said shorter finger being connected with said body portion



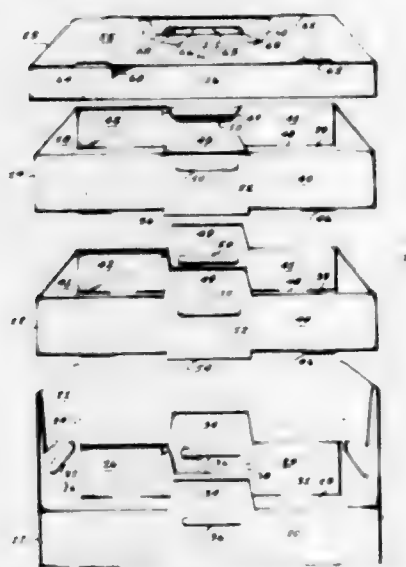
and the other finger being connected with said band, said band being in engagement with the outer surface of said body portion and being movable relative thereto toward and away from the opposite end of said container member, the movement of said band toward said opposite end being limited by abutment means carried by said body portion to maintain the other finger of each flange in angular bracing relation with the shorter finger interconnected therewith.

3,006,523

SHIPPING CASE

Clifford H. Keith, Atlanta, Ga., assignor, by mesne assignments, to The Mead Corporation, Dayton, Ohio, a corporation of Ohio

Filed Dec. 31, 1958, Ser. No. 784,184
13 Claims. (Cl. 229-15)



1. A multi-tray shipping case, comprising bottom, top and intermediate trays vertically nestable to form a multi-tray case, the bottom tray having walls extending upwardly into engagement with the top tray; and latching means for detachably latching said walls to said top tray to form an integral case.

3,006,524

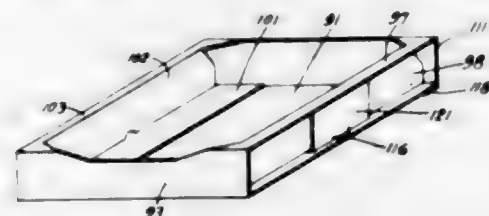
SHIPPING AND DISPLAY CARTON

Charles Todd, Yakima, Wash., assignor to Western Corrugated, Inc., a corporation of California
Substituted for abandoned application Ser. No. 684,095, Sept. 16, 1957. This application Feb. 29, 1960, Ser. No. 11,576

4 Claims. (Cl. 229-16)

1. A tray formed from a single folded blank comprising: a rectangular base having a first sidewall panel joined at right angles thereto along a first score line, said first sidewall panel being articulated at either corner of the opposite edge thereof to parallel strips perpendicular to

said first sidewall panel, said strips being spaced from said base and positioned substantially parallel thereto, said parallel strips terminating at the far ends thereof at a second perpendicular side panel, said second perpendicular side panel being joined to said strips by means of score lines at opposite corners of said panel, said second sidewall panel having means at the opposite edge thereof for securing said second sidewall panel to said rectangular base, the aforementioned parallel strips each having a perpendicular downwardly depending panel joined thereto along a score line running longitudinally of said strips,



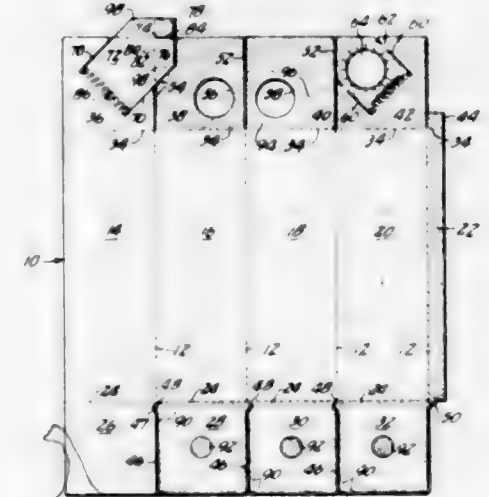
said panel extending to said base, said depending panels serving as end-walls for said tray, said depending panels terminating in articulated perpendicular panels adapted to lie against the base of said tray, a portion of the base area lying beneath each of said perpendicular panels being severed from said base on all but one side and hinged to said base along lines directly beneath points where said end walls strike said base whereby to form flaps, and means for securing said flaps to the exteriors of said perpendicular end walls in an overlying relationship said panels lying against the base of said tray being of sufficient size to cover entirely the holes formed in the said rectangular base when said flaps are secured to said end walls.

3,006,525

CONTAINER

Edmund P. Herrmann, Glen Ridge, N.J., assignor to Hudson Pulp & Paper Corporation, New York, N.Y., a corporation of Maine

Filed Oct. 11, 1957, Ser. No. 689,511
8 Claims. (Cl. 229-17)



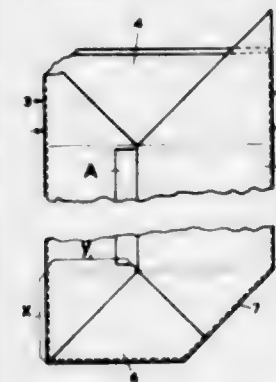
1. A tubular paperboard container for liquid comprising a body portion formed of integrally joined side panels in angular relation, a bottom portion integrally joined in watertight relation with the lower end of said body portion, a top portion including four top flaps extending from said side panels, the first and second lower-most of said top flaps each having an aperture therein and being positioned whereby said apertures are in registry, the third of said folded top flaps having a plug portion formed from said flap integral therewith and fitting securely into said registered apertures, and an uppermost flat top flap having a tear strip overlying and secured to said plug portion whereby the plug portion is removed from the apertures when the tear strip is torn and lifted upwardly.

3,006,526

TRIANGULAR LINED CARTON

Harry Alexander, 78 Station Road, New Barnet, and John Hugh Powell, 19 Chesham St., London, England
Filed Feb. 10, 1960, Ser. No. 7,860

Claims priority, application Great Britain Feb. 18, 1959
5 Claims. (Cl. 229-22)



1. A carton comprising, in combination, two major side panels, two minor side panels, said panels being foldably connected at their longitudinal edges with said minor panels being joined together and being joined to said major panels which are also joined together, said panels being movable from a flat position in which said minor panels lie alongside each other in the same plane to an erected position in which said minor panels swing apart through 180° to again lie in the same plane, triangular end flaps foldably connected to the lower ends of said major panels and to each other, the unjoined edges of each of said triangular end flaps being equal in length to the width of one of said minor panels, the unjoined edges of each of said triangular end flaps forming an angle of 90° with the edges of said triangular end flaps which are joined to each other, two triangular minor end flaps foldably joined to the lower ends of said minor panels, said minor end flaps being foldably joined to each other, the joined edges of each of said minor end flaps forming an angle of 90°, and a flexible end closure sealed to the unjoined edges of said end flaps and said minor end flaps, said end closure extending beyond the lower ends of said panels a distance equal to the width of one of said minor end panels.

3,006,527

CONTAINER CONSTRUCTIONS

Alden A. Lofquist, Jr., Madison, N.J., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Oct. 7, 1958, Ser. No. 765,839
7 Claims. (Cl. 229-22)



1. A blank cut and scored to form a liquid retaining carton when folded comprising a rectangular bottom, a first rectangular wall joined along one edge of the bottom, a second rectangular wall joined along the opposite edge of the bottom, a pair of isosceles right triangular side walls, and a pair of collapsible wall members each being located between the hypotenuse of one side wall and an edge of the second rectangular wall normal to the said opposite edge of the bottom.

3,006,528

PAPERBOARD CONTOURED POST EGG CARTON
Richard F. Reifers, New Canaan, Conn., assignor to Diamond National Corporation, a corporation of Delaware

Filed July 10, 1959, Ser. No. 826,320
14 Claims. (Cl. 229-28)



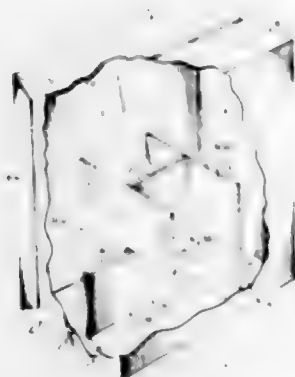
1. A blank for a paperboard egg carton comprising, in order, a truck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, hinge forming means separating said flaps and panels, said bottom panels each having a pair of transversely extending slots therein adjacent the lateral margins thereof, said longitudinal partition panels having a transversely extending end slot therein adjacent each lateral margin thereof, extending continuously from adjacent the hinge forming means between one said longitudinal panel and the adjacent bottom panel to adjacent the hinge forming means between the other longitudinal panel and the other bottom panel, each of said longitudinal partition panels further having a pair of intermediate slots therein between said end slots, each said intermediate slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, said full depth cross partitions each having extensions with a pair of facing hooks thereon and a pendent member between said extensions, each said shallow depth cross partition having a pair of spaced triangular apertures at the margin thereof that is adjacent said other shallow depth cross partition, the width of said longitudinal partition panels being coequal and greater than the width of said front panel, the hinge forming means between each bottom panel and each longitudinal partition panel comprising a plurality of spaced diamond shaped crease formations, each said formation lying between the planes of said transversely extending slots, the hinge forming means between said pair of longitudinal partition panels comprising a plurality of pairs of diverging fold lines, each such pair of fold lines diverging from a point on the boundary between said two longitudinal parti-

tion panels and extending to the adjacent margin of the closest transverse slot, one pair of said diverging fold lines extending from the point on the boundary into said transversely extending end slots adjacent each lateral margin, and a pair of said pairs of diverging fold lines extending from the point on the boundary from opposite sides of said intermediate slots and extending into the margins thereof, said last mentioned hinge forming means further comprising an interrupted fold line extending across said blank between said pair of longitudinal partition panels and completing said boundary, and slits in said longitudinal partition panels each extending from adjacent one of said crease formations to adjacent said boundary between the transverse end and intermediate slots, said partition panels including integral foot lugs extending into said bottom panels and separated therefrom.

3,006,529 CARTONS

James A. Richardson, Burnaby, British Columbia, Canada, assignor to Unipak Cartons Ltd., Vancouver, British Columbia, Canada, a company of British Columbia

Filed Nov. 18, 1959, Ser. No. 853,975
4 Claims. (Cl. 229-28)



1. A one-piece blank for forming a multi-cell carton having mutually transverse partitions therein defining article receiving compartments; said blank comprising a plurality of main panels joined together along first parallel score lines and adapted, upon folding along said first score lines, to form end walls and side walls of the carton; a secondary panel connected to each main panel by means of a common score line at right angles to said first score lines; each of said secondary panels being adapted, upon folding along said common score line to form a bottom wall of the carton; a pair of first and second tertiary panels each connected, by means of a second score line parallel to said common score line, to a selected and spaced pair of secondary panels; each of said first and second tertiary panels having a primary portion and an auxiliary wing portion, said portions being integrally and hingedly connected together along a common hinge line normal to said second score line; a cut-out portion in each of said first and second tertiary panels extending across said common hinge line with the major portion of each of said cut-outs being located in said wing portion; a pair of third and fourth tertiary panels, each connected, by means of a second score line parallel to said common score line, to one of a remaining pair of secondary panels, said tertiary panels being alternately arranged; each of said third and fourth tertiary panels having a primary connecting portion and an auxiliary portion integral therewith, each of said primary connecting portions being located adjacent to a said auxiliary wing portion and being adapted to be secured thereto in face-to-face contact, whereby, on folding of the blank and erection of said carton, each of said auxiliary wing portions is adapted to hinge about its hinge line and to extend at right angles

to its said primary portion; a locking tongue integral with and projecting from a marginal side edge of each of said auxiliary portions of said third and fourth tertiary panels and coplanar with the latter, said edge being remote from the associated said integral primary connecting portion; each of said locking tongues having dimensions substantially similar to the dimensions of said cut-outs and being in alignment with the latter; whereby, on folding of the blank and erection of said carton, said locking tongue of said third tertiary panel is adapted to enter and cooperate with said cut-out in said second tertiary panel and to be in face-to-face contact with said fourth tertiary panel and coplanar with said wing portion of said first tertiary panel; said third and fourth tertiary panels and said wing portions of said first and second tertiary panels thereby forming a first pair of complementary partitions within said carton and in face-to-face contact with one another; said primary portions of said first and second tertiary panels forming a second pair of complementary partitions within the carton, said second pair of partitions being spaced apart and transverse to said first pair of partitions; said cooperation of said locking tongues and said cut-outs positively locking said partitions in mutually cooperating position with one another.

3,006,530 PAPERBOARD CARRIER HAVING MEANS FOR SEPARATING CANS THEREIN

Homer W. Forrer, Atlanta, Ga., assignor, by mesne assignments, to The Mead Corporation, Dayton, Ohio, a corporation of Ohio

Filed Oct. 31, 1958, Ser. No. 771,033
5 Claims. (Cl. 229-40)



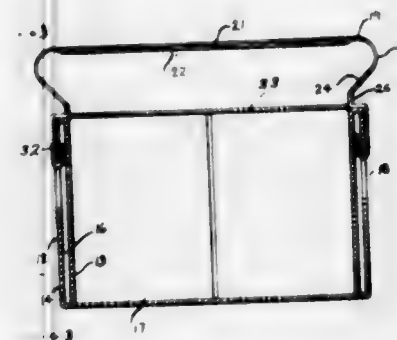
1. A paperboard blank for forming a carrier for two rows of cans having top and bottom rim portions, said blank being scored transversely to define a first panel arranged centrally with respect to the length of said blank, a pair of panels foldably hinged at opposite sides of said first panel, and a pair of lap panels foldably hinged at the sides of said pair of panels opposite said first panel sides, a strip foldably hinged to the panel edges perpendicular to the transverse score lines arranged between adjacent panels, the strips being relatively narrow and adapted to be folded in face to face contact with the panels defining said blank to provide a double thickness of paperboard at said edges, one of the strips having a lateral extension extending therefrom oppositely said first panel and being of substantially the same length as said first panel, said first panel having apertures arranged therein for gripping said paperboard carrier, and said lateral extension having apertures therein adapted for alignment with the apertures in said first panel and having

a hinge line arranged intermediately thereof whereby a portion of said lateral extension in the erected carrier is downwardly folded and arranged between the top rim portions of the two rows of cans.

3,006,531 COMBINED HANDLE AND BASKET

John C. Bertram, Mayville, N.Y., assignor, by mesne assignments, to Bertram Wire Products, Inc., Buffalo, N.Y., a corporation of New York

Filed Feb. 23, 1955, Ser. No. 489,963
2 Claims. (Cl. 229-52)



1. The combination with a corrugated box-board basket having spaced sides, each of said sides comprising spaced walls joined along their top edges by a substantially flat ledge portion, and the outer wall of each of said sides having a slot therein a short distance beneath the ledge portion thereof giving access to the space between said walls, of a detachable handle formed throughout from transversely substantially flat strap metal of a width several times the thickness thereof and comprising a generally horizontal hand gripping portion, the opposite ends of said gripping portion extending downwardly to generally vertical flange portions substantially vertically aligned with the inner walls of said sides, generally horizontal flange portions extending outwardly from said vertical flange portions substantially completely across said ledge portions, and generally vertical leg portions extending downwardly from said horizontal flange portions along the outer walls of said sides exteriorly of said basket and terminating in inwardly facing and upwardly opening hook portions projecting through said slots, said hook portions providing pockets receiving only the outer ones of said walls in slip-fitting relation therewith, and terminating between said spaced walls, whereby the interior of said basket is free and clear of said hook portions, said hook portions and said leg portions being intimately engaged with said outer walls throughout substantially the entire distance from the upper edges of said slots to said ledges and said horizontal flange portions having intimate bearing contact with said ledge portions substantially completely thereacross, thereby detachably securing said handle to said basket in rigid relation therewith and against accidental disassembly therefrom upon downward pressure on said hand gripping portion while enabling engagement and disengagement of said handle and basket at will.

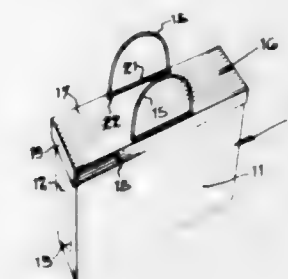
3,006,532 SHOPPING BAG COVER

Joseph B. Fine, Cincinnati, Ohio, assignor to Triangle Bag Company, Covington, Ky., a corporation of Arkansas

Filed June 4, 1959, Ser. No. 818,206
2 Claims. (Cl. 229-54)

1. The combination comprising a bag formed of relatively thin flexible sheet material and having a bottom panel, side walls and end walls, two flexible handle loops

projecting upwardly from the side walls opposite one another, a rectangular cover having side walls and end walls depending therefrom to form an open rectangular box, two opposed elongated slots, each of said slots being centered on the longitudinal edge of said cover parallel to the side wall and in opposed parallel relation to each other, each of said slots being as long as the width of said handle loops and each end of each slot being configured to provide a detent notch, said handle loops



operatively engaging said slots and projecting therethrough so as to meet each other permitting balanced carrying while each forms an oblique angle with said cover with the lower ends of said handle loops engaged in said detents whereby the said handle loops are maintained in spaced relationship and whereby the side walls and end walls depending from said cover confine the open end of said bag to a rectangular outline.

3,006,533 COMPRESSOR

Harold E. Adams, Norwalk, Conn., assignor to Nash Engineering Company, South Norwalk, Conn., a corporation of Connecticut

Filed Nov. 7, 1958, Ser. No. 772,568
12 Claims. (Cl. 230-79)

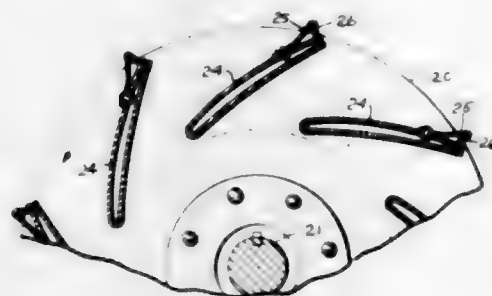


1. A gas pump of the liquid ring type comprising in combination a body including at least two lobes, a rotor operative therein, the body and rotor including partition members for dividing the working space into two pumping chambers each including at least two independently operable lobe portions each capable of being applied to a separate pumping service, separate ported members defining the inner boundaries of the respective pumping chambers and including passages to transmit gas to and from the respective chambers and defining at least one independently operable inlet for each lobe portion of each chamber and at least one outlet for each pumping chamber, and heads closing the outer ends of the respective chambers and having passages therein constructed and arranged to transmit gas to and from the said ported members, each head being provided with a separate head inlet connecting each pumping chamber inlet and an outlet connecting each pumping chamber outlet whereby each chamber can be independently applied to at least two separate pumping services.

3,006,534

CENTRIFUGAL FANS

John E. McDonald, Newton, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 2, 1959, Ser. No. 850,234
4 Claims. (Cl. 230-134)

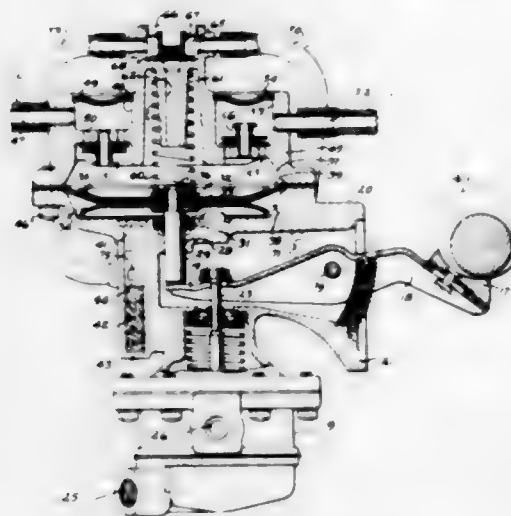


1. In a rotor for a centrifugal fan, said rotor having a back plate, having a front plate with an axial gas inlet opening, and having a plurality of spaced-apart, backwardly inclined blades supported between said plates with their leading edges adjacent to said opening and their trailing edges adjacent to the periphery of said rotor, the improvement comprising the addition to said blades of metal gas deflection strips having leading ends cantilever supported to said blades between said leading and trailing edges and having trailing ends which extend to said trailing edges of said blades and at said trailing edges of said blades project forwardly of the driving faces of said blades into the gas passing said driving faces for deflecting the gas passing said driving faces forwardly of said trailing edges of said blades, said trailing ends of said strips being adjustable to positions where they do not project forwardly of said driving faces.

3,006,535

SUCTION BOOSTER

Jack M. White, Normandy, Mo., assignor, by mesne assignments, to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 5, 1954, Ser. No. 414,363
2 Claims. (Cl. 230-170)



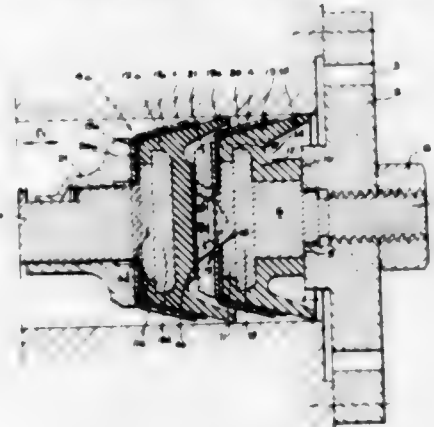
1. In a motor vehicle, the combination of an engine having an intake manifold, a suction booster pump driven from the engine including a pump chamber, a fluid displacement member mounted in the chamber, positively acting means to move the displacement member in a direction to force air from a portion of the chamber, resilient means acting on said displacement member for producing suction in a portion of said chamber and compressed by said positively acting means for producing

compression in said chamber, an intake connection from said pump to drive the suction motor of a vehicle accessory device, a first exhaust connection leading directly from said booster pump chamber to the intake manifold of said engine, check valves controlling the intake and exhaust connections, a by-pass connection to atmospheric pressure, a second exhaust connection leading directly from said pump chamber connecting said chamber with said by-pass connection, and a check valve in said second exhaust connection, said last-named check valve being so loaded as to be operable upon accumulation of back pressure in said first exhaust connection to such a degree as to hold the check valve in the first exhaust connection closed and thereby permit the discharge of air from said pump chamber to said by-pass connection to relieve pressure on said fluid displacement member.

3,006,536

PISTONS OR FLAP-VALVES FOR COMPRESSORS AND PUMPS

André Chausson, Asnières, France, assignor to Societe Anonyme des Usines Chausson, Asnières, France, a French company
Filed July 28, 1959, Ser. No. 830,089
2 Claims. (Cl. 230-172)



1. A compressor comprising a cylinder, a valve in said cylinder for controlling discharge therefrom, and a piston in said cylinder for compressing fluids to be discharged by said valve, said piston including a threaded rod with an integral core of larger dimension to form a shoulder, said core having an integral flange of larger dimension, a flexible packing surrounding said core and said flange, said packing having a substantially flat portion overlying the face of said flange and an outer wall of frusto conical shape and forming a thin annular lip bearing against the wall of said cylinder, a cap fitted on said rod and bearing against said shoulder and partially overlapping said frusto conical wall, a substantially rigid cup fitted on said rod and partially overlapping said cap, and a nut threaded on said rod and retaining said cup and cap against said shoulder.

3,006,537

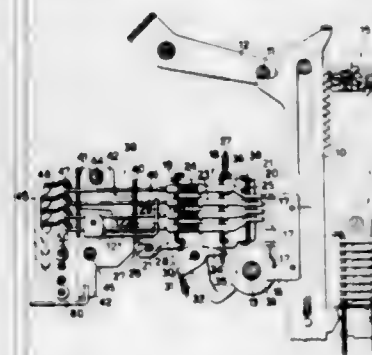
TAPE PUNCHING APPARATUS FOR ACCOUNTING MACHINES AND THE LIKE

Teresio Gassino and Guglielmo Lanza, Ivrea, Italy, assignors to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy

Filed Apr. 4, 1958, Ser. No. 726,547
Claims priority, application Italy Apr. 10, 1957
9 Claims. (Cl. 234-24)

1. In an accounting machine having a set of actuators arranged in denominational orders, each of said actuators being movable from a normal position to a position representing a significant digit to represent a multidigit amount, a tape punching apparatus for sequentially punching a code combination for each digit of said amount according to a predetermined multiunit code, said apparatus comprising a coding device including a

code member connected to each of said actuator, said code member being formed with code projections arranged according to said multiunit code to represent a different code combination in each of the positions of the actuator to which the code member is connected, a multi-order storing device including in each order a plurality of interponents equal in number to the number of units of said code and selectively settable by the projections of the code member of the same order according to the represented code combination, means for moving one of said devices toward the other device thereby causing the projections of each code member according to the represented code combination to set the interponents of the

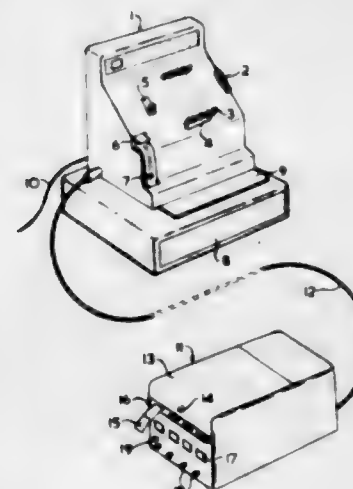


plurality of the same order, a sensing mechanism having a set of sensing elements equal in number to the number of units of said code and each one engageable by a predetermined one of the set interponents of each plurality, means for moving said sensing mechanism order by order in a transverse path with respect to said storing device for causing the set interponents of said pluralities to sequentially engage said sensing elements, an interposer connected to each sensing element and shiftable thereby upon engagement of said sensing element by one of said interponents, a punch pin connected to each interposer, and power means cyclically engageable with each shifted interposer in timed relationship with the movement of said sensing mechanism to operate the connected punch pin.

3,006,538

COMBINATION OF A CASH REGISTER, ACCOUNTING OR LIKE MACHINE, AND A TICKET OR STAMP ISSUING MECHANISM

Johann J. Deutsch, Zurich, Switzerland, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Dec. 14, 1956, Ser. No. 628,461
Claims priority, application Great Britain Aug. 29, 1956
13 Claims. (Cl. 235-2)



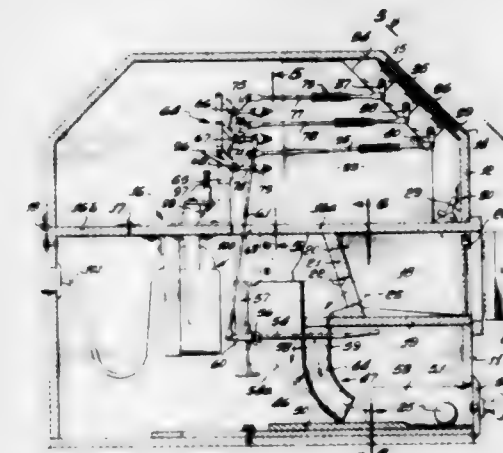
1. The combination of a cash register, accounting or similar machine including a totalizer in the said machine, means to enter amounts of a transaction into said totalizer, switching means including a plurality of stationary con-

tacts and a differentially settable means settable to engage the stationary contacts in accordance with the amount set up in said totalizer, and a ticket or stamp issuing device remotely situated from the said machine and having scanning means connected to the stationary contacts of said switching means for reading the amounts set therein, means under control of said scanning means for issuing tickets or stamps from said device, and means for driving simultaneously said scanning means and said issuing means whereby tickets or stamps will be issued representing the amount of the transaction entered in said totalizer.

3,006,539

VOTING MACHINE

Frank H. Manning, 310 1/2 W. Compton Blvd., Compton, Calif., assignor of forty percent to Wilma I. Johnston, Gardena, Calif.
Filed Apr. 21, 1958, Ser. No. 729,773
15 Claims. (Cl. 235-53)



1. A voting machine comprising a housing, a horizontally extending partition floor therein, means forming below said floor a pair of downwardly extending ways accessible selectively through corresponding openings in the housing structure to receive a voting ball, movable elements below said floor and respectively actuable by the ball traveling one or the other of said ways, a pair of totalizing counters in a closed section of the housing above said floor and readable from the outside of the housing, and mechanism mounted on said floor and operatively connected through the floor to said elements and counters to transmit ball actuation of one of the elements to its respective one of the counters.

3,006,540

PROGRAM CONTROL DEVICE FOR ACCOUNTING MACHINES HAVING A TRAVELING PAPER CARRIAGE

Teresio Gassino and Natale Capellaro, Ivrea, Italy, assignors to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy

Filed Apr. 15, 1959, Ser. No. 806,574
Claims priority, application Italy Apr. 24, 1958
13 Claims. (Cl. 235-60.46)

1. In an accounting machine having power means and a traveling paper carriage, a set of column stops mounted on said carriage and movable bodily therewith, means movably mounted on a stationary support and adapted to be actuated to arrest said carriage, a lug on each column stop for actuating said arresting means upon reaching a predetermined columnar position, said lug being variably located on the various column stops of said set along a given direction, the variably located lugs having all a uniform length on said column stop, a reciprocable member operable for moving said arresting means along said direction to a position corresponding to a selected one of said variable locations, an operating

member variably settable in a first direction by a column stop upon having actuated said arresting means to assume a position relative to said reciprocable member corre-



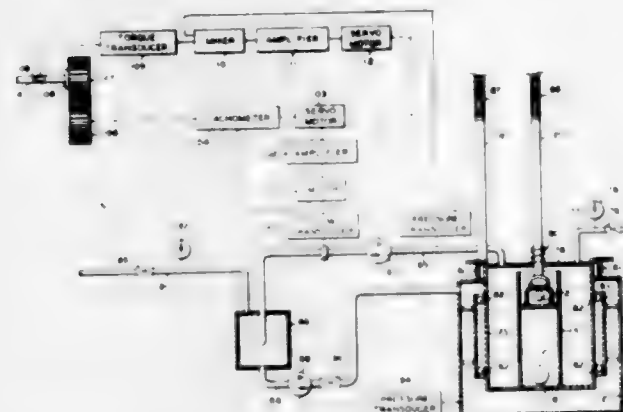
sponding to said selected location, and a power driven cam element for moving said operating member through a constant extent in a second direction to positively operate said reciprocable member.

3,006,541

PUMPING SYSTEM SIMULATOR

Frank W. Bobb, Webster Groves, Mo., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 14, 1958, Ser. No. 721,568
6 Claims. (Cl. 235-61)



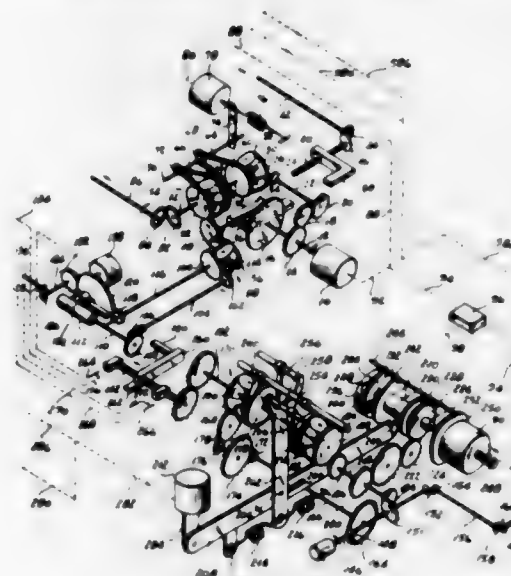
1. Apparatus for simulating a pumping system which includes a sucker rod string, tubing surrounding said sucker rod string, an oil column between said tubing and said string, a first downhole pump actuated by said string to elevate said oil column, and means positioned at the surface to raise and lower said string, comprising: a plurality of units connected together, each including a first shaft representing a tubing segment, a second shaft representing an oil column segment, a third shaft representing a string segment, a disk coupled to each shaft and having a moment of inertia representing the inertia of the corresponding segment, a drag means coupled to each shaft to exert a force thereon retarding rotary motion in a manner representative of the weight of the corresponding segment, means coupling the oil shaft and the tubing shaft to simulate viscous drag between the oil column segment and the tubing segment, means coupling the oil column shaft and the string shaft to simulate the viscous drag between the oil column segment and the string segment, and clutch means in the oil column shaft to permit rotation in only one direction; means coupled to the first end of said string shaft to impart rotary motion thereto to simulate said means positioned at the surface; means retaining the corresponding first end of said tubing shaft stationary; a drag means coupled to the corresponding first end of said oil column shaft to simulate pressure tending to prevent oil from being discharged at the surface; a tank having hydraulic fluid disposed therein; a second downhole pump in said tank, said second pump being of substantially the same configuration as said

first pump; means connecting the second end of said string shaft to said second pump to actuate said second pump in response to rotary motion of said string shaft; a conduit communicating with said tank to receive the flow of fluid therefrom, a third pump in said conduit, means coupling said third pump to said oil column shaft; means to establish a first signal representative of the rate of rotation of said oil column shaft; means to establish a second signal representative of the pressure in said conduit; means to compare said first and second signals; and means responsive to said means to compare to vary the rate of rotation of said oil column shaft and said third pump.

3,006,542

SYNCHRONIZER FOR TRACKING COMPUTERS

Carl F. Schaefer, Port Washington, N.Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 15, 1950, Ser. No. 195,779
20 Claims. (Cl. 235-61.5)



1. A synchronizer for tracking computers, including in combination a computer in which the coordinates of a point of aim from a moving craft are continuously derived to control a sighting system for maintaining a line of sight from the craft to the point of aim, in which one of said coordinates is along the line of sight and the other of said coordinates is transverse to the line of sight, a motor, a transmission from said motor to the computer input controlling one of said coordinates, said transmission comprising a high speed gear train and a low speed gear train, electrical means for selectively rendering one of said gear trains operative, a signal channel for controlling said means, electrical means for selectively initiating the operation of the motor in a predetermined direction, a signal channel for controlling said last means, manually operable means for selectively energizing said channels and means driven by said gear trains for driving said computer input.

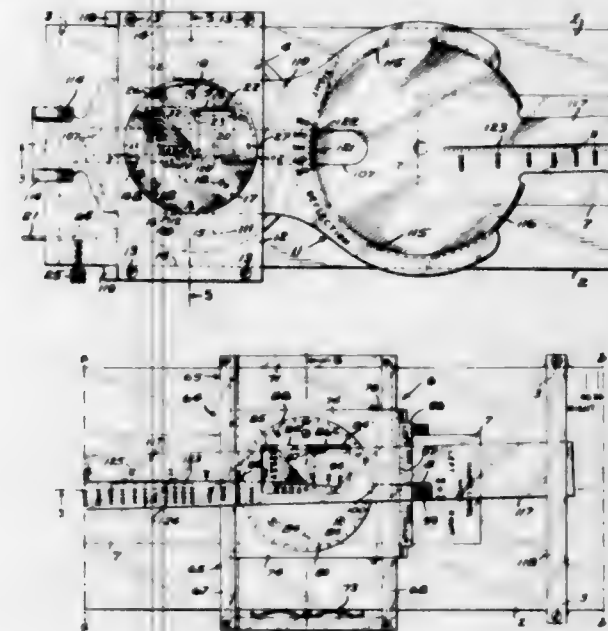
3,006,543

FIRE CONTROL COMPUTER

George A. Crowther, Manhasset, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Nov. 13, 1958, Ser. No. 773,667
9 Claims. (Cl. 235-61.5)

1. In an instrument for computing the elevation and deflection angles for directing the fire of a heavy gun of known ballistics which is mounted upon a ship, which instrument comprises: a base; a settable gun dial assembly mounted on said base, scales carried by said gun dial assembly by which said gun dial assembly may be set

in accordance with the known relative gun ship bearing with respect to a target, the known speed of the gun ship, and the known time of flight of a projectile between the gun ship and the target; a settable target dial assembly mounted on said base adjacent said gun dial assembly, scales carried by said target dial assembly by which said target dial assembly may be set in accordance with the known relative target bearing with respect to the gun ship, the known speed of movement of the target, and the known time of flight of a projectile between the gun ship and the target; and a settable ballistic protractor assembly mounted on said base for longitudinal, transverse and rotary movement in cooperative relation

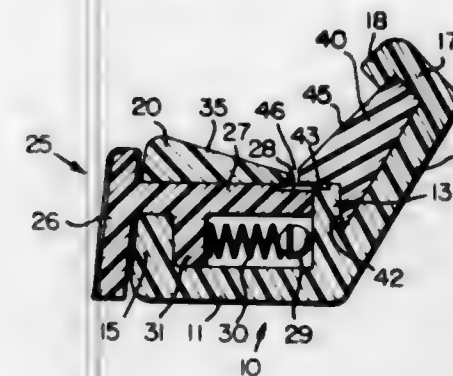


to said gun dial assembly and said target dial assembly; said protractor assembly having an index mark which is adapted to be brought into register with the time of flight scale carried by the gun dial assembly in accordance with the known time of flight, and a time of flight scale which is adapted to have the known time of flight marking thereon brought into register with the known time of flight marking on the time of flight scale carried by the target dial assembly, said protractor assembly also having scales for indicating the elevation and deflection angles for a known time of flight when the protractor assembly is so set in conjunction with the settings of the gun dial and target dial assemblies.

3,006,544

SLIDE RULE

Donald W. White, 84 Brooklawn Drive, Rochester 18, N.Y.
Filed Oct. 3, 1960, Ser. No. 59,983
9 Claims. (Cl. 235-70)



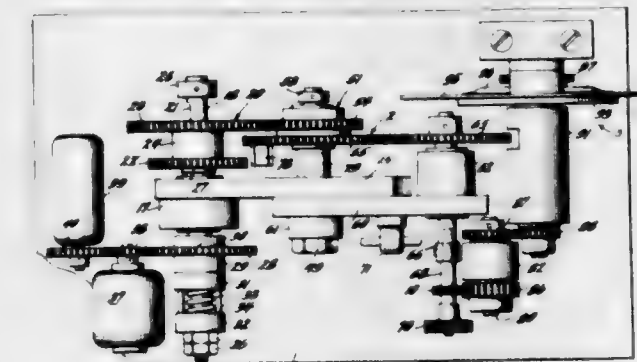
1. A slide rule comprising a base, a first scale fixed to said base and graduated on its readable face, a second scale slidable on said base longitudinally of the first scale

and also graduated on its readable face, the readable faces of the two scales being inclined to one another at a wide obtuse angle, the two scales being spaced laterally from one another along their adjacent longitudinal edges, and an indicator slidable longitudinally relative to both scales and having an indicating portion disposed in the space between the two scales.

3,006,545

AUTOMATIC MECHANICAL GEAR TOOTH COUNTER

Sigmund Rappaport, Port Washington, and Victor H. Seliger, Kew Gardens, N.Y., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,234
9 Claims. (Cl. 235-91)



1. A gear tooth counting apparatus of the character described comprising a rotatably mounted test gear shaft adapted to have a test gear the teeth of which are to be counted, removably secured thereon for rotation therewith; a master gear shaft rotatably mounted in fixed position; a plurality of master gears all having the same number of teeth but each having a different tooth pitch, means by which any selected one of said plurality of master gears may be removably mounted on said master gear shaft in mesh with a test gear mounted on said test gear shaft, the tooth pitch of said selected one of said plurality of master gears being the same as the tooth pitch of a test gear mounted on said test gear shaft; an indicator shaft rotatably mounted in fixed position adjacent said master gear shaft; a graduated indicator dial mounted on said indicator shaft; a pair of meshing gears one of which is secured on said master gear shaft and the other of which is secured on said indicator shaft; means by which said test gear shaft and a test gear mounted thereon are rotated, the rotation of said test gear imparting rotation to said master gear shaft through the said selected one of said master gears mounted thereon, and said master gear shaft imparting revolution to said indicator shaft and said dial mounted thereon through said pair of meshing gears; the ratio of said pair of meshing gears being such that said dial is advanced one graduation per advancement of each tooth on said test gear.

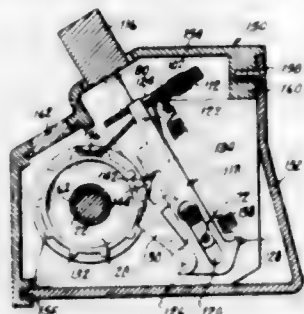
3,006,546

COUNTER MECHANISM

Lloyd J. Lapointe, Manchester, Conn., assignor to The R. C. Morse Corporation, a corporation of New York
Filed Apr. 17, 1959, Ser. No. 807,080
7 Claims. (Cl. 235-134)

1. In a counter, a plurality of number wheels representing successive higher orders mounted on a common shaft for rotation from one digit position to the next higher digit position, an operating lever for each of said number wheels mounted for manual reciprocation from a first to a second position in a plane tangent to said number wheels, a spring connected to said operating levers to return the same to said first position after manual operation thereof into said second position, a pawl mounted on each of said

levers, means for engaging said pawls with said number wheels when said levers are in their second position, means for holding said levers in said second position when moved thereinto, means on each of said number wheels operative upon a complete revolution thereof for engaging in driving relation the operating lever of the number



wheel of immediately higher order whereby the force of the spring of said last named operating lever is augmented by the rotational force of the number wheel of immediately lower order and said number wheel of immediately higher order is rotated from one digit position to the next higher digit position.

3,006,547

FREQUENCY DIVIDING CIRCUITS

Horace Fellows and Reginald Edward Albert Head, Wolverhampton, England, assignors to Jean Faure-Herman, Boulogne-sur-Seine, France

Filed Feb. 27, 1957, Ser. No. 642,780
7 Claims. (Cl. 235-151)



7. A flowmeter comprising, a flow-responsive element, pulse producing means actuated by said element for producing a series of pulses having a repetition rate which varies in accordance with the flow velocity to be measured, a divider connected to receive pulses from said pulse producing means, a gate circuit interposed between said pulse producing means and said divider, said gate circuit being controllable for selectively blocking and unblocking the passage of pulses from said pulse producing means to said divider, an oscillator connected to said gate for controlling the blocking operation thereof, said oscillator being an oscillator of fixed frequency which generates pulses at a uniform repetition rate, ratio adjusting means connected to said oscillator for varying the mark-space ratio of said oscillator pulses, and measuring means connected to receive pulses from said divider after division thereby, said ratio adjusting means permitting adjustment of the effective division rate of said divider with respect to pulses produced by said pulse producing means and delivered to said measuring means.

3,006,548

ELECTRONIC MULTIPLYING ARRANGEMENTS

Joachim Schulze and Erdmann Hess, Limbach-Oberfrohna, Germany, assignors to VEB Buchungsmaschinenwerk Karl-Marx-Stadt, Karl-Marx-Stadt, Germany

Filed July 5, 1957, Ser. No. 670,011
Claims priority, application Germany Jan. 11, 1957
3 Claims. (Cl. 235-160)

1. In a multiplier having a multiplier receiving device of pre-selected digital capacity a first control circuit having a pre-selected digital capacity equal to the capacity of said multiplier receiving device, a first pulse source

triggering said multiplier receiving device and said control circuit, re-cycle means in said multiplier receiving device and said control circuit, said multiplier receiving device being adapted to be preset to a chosen multiplier so that the re-cycling of said control circuit occurs after the recycling of said multiplier receiving device by a number of pulses equal to the chosen multiplier, a second source of pulses of frequency equal to the frequency of said first source of pulses and phased behind said first source of pulses, a product counter connected to said second source of pulses, a switch between said second source of pulses and said product counter, means turning



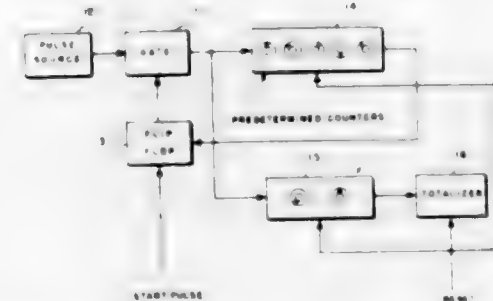
on said switch upon re-cycling of said multiplier receiving device and turning off said switch upon re-cycling of said first control circuit, a multiplicand receiving device adapted to be preset, and a multiplicand control circuit adapted to be preset by the multiplicand receiving device to the complement of the chosen multiplicand for counting the number of re-cycles of said multiplier receiving device, and gate means serially connected with said switch and adapted to be permanently shut in response to recycling of said multiplicand control circuit whereby the number of re-cycles of multiplier receiving device is equal to the chosen multiplicand.

3,006,549

DIGITAL DIVIDER

William R. Hughes, Sylmar, Calif., assignor to the United States of America as represented by the Secretary of the Army

Filed Sept. 30, 1957, Ser. No. 687,314
5 Claims. (Cl. 235-160)



1. A system for dividing a first number by a second number comprising a source of pulses, a first presettable predetermined counter preset to said second number and coupled to said source through a gate, a pulse totalizer connected to the output of said first counter to count the pulses therefrom, means to open said gate to permit feeding pulses from said source to said first counter, and means to close said gate, the last-named means comprising a second presettable predetermined counter set to said first number and connected to the output of said gate, means feeding pulses from said junction of the output of said gate and the input of said first counter simultaneously to the inputs of said counters, means feeding a gate closing pulse from the output of said second

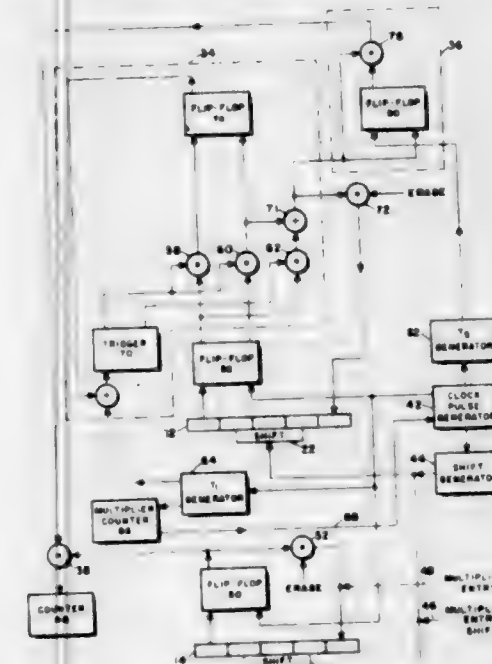
counter to said gate, whereby said gate will be closed when a total number of pulses equal to said first number passes therethrough and said first counter will divide said number by said second number so that the pulses applied to and indicated on said totalizer will be equal to the quotient of said first number divided by said second number.

3,006,550

DIGITAL MULTIPLIER

Ewell Calvin Johnson and Yu Chi Ho, Royal Oak, Mich., assignors to The Bendix Corporation, a corporation of Delaware

Filed Jan. 11, 1957, Ser. No. 633,569
6 Claims. (Cl. 235-165)



1. A digital multiplier unit comprising: a first serial recirculating register; a second serial recirculating register; a serial adder having a first input connected to the output of said first serial recirculating register, a second input, and an output to the input of said first serial recirculating register, and being operative to provide a carry pulse at such times as pulses appear simultaneously on both of its inputs; means for inserting a first binary number to be multiplied into said second serial recirculating register in such a manner that the digits emerge from said register in order of descending significance; means for simultaneously shifting the contents of said first and said second registers; means for applying a pulse to the second input of said serial adder simultaneously with the emergence of the digit of highest significance from said serial second recirculating register, the total number of pulses so added being equal to the second number to be multiplied; means for providing a pulse in the first shift period following the addition of a pulse to said serial adder in which no carry pulse is generated by said serial adder; and means for providing an output pulse from said multiplier when such non-carry pulse occurs simultaneously with the emergence of a "one" from said second serial recirculating register, the sum of said output pulses being approximately equal to the product of the two numbers being multiplied.

3,006,551

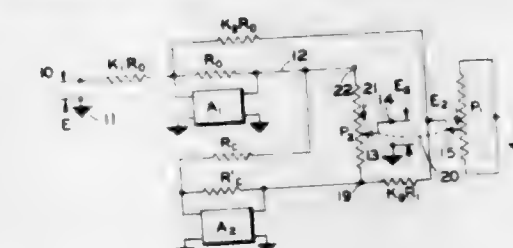
ANGLE FUNCTION COMPUTER

William H. Newell, New York, Henry F. McKenney, Flushing, and Edmund C. Bennett, Great Neck, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware

Filed June 15, 1948, Ser. No. 33,186
5 Claims. (Cl. 235-186)

1. An electrical computer system comprising a linear amplifier, a resistor connected in the input circuit of said amplifier, a source of fixed voltage connected in series

between said resistor and ground, a second resistor connected between the input and output ends of said amplifier, said output end being connected to one end of a linear potentiometer having a variable tap, the other end of said potentiometer being connected through a third resistor to the variable tap of a second potentiometer having its ends grounded, said taps being displaceable in unison from their mid-positions by amounts representing the angle whose sine is to be obtained, said input end being connected through a fourth resistor to said last varia-



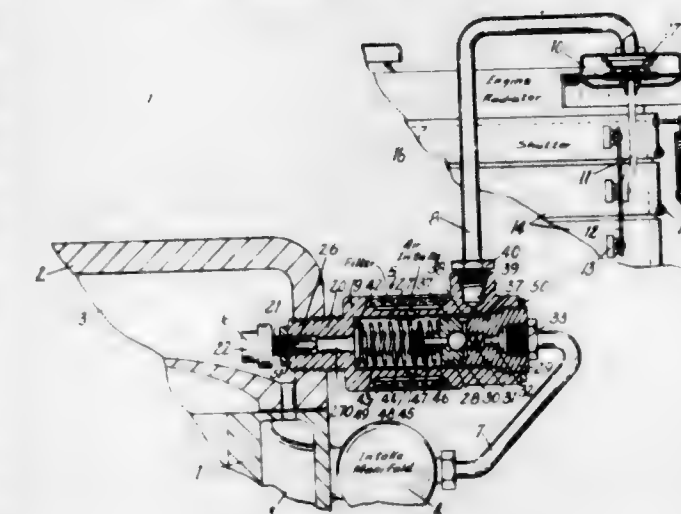
ble tap, said output end being connected through a fifth resistor to the input of a second linear amplifier, a sixth resistor connected between the input and output ends of said second amplifier, the output end of said second amplifier being connected to the junction of the first potentiometer and the third resistor, said resistors having a relationship to produce an output voltage between the tap of said first potentiometer and ground approximately proportional to the sine of the angle represented by the displacement of said taps from their mid-positions.

3,006,552

THERMOSTATICALLY ACTUATED VALVE FOR REGULATING VACUUM CONNECTIONS

David R. Ferris, Cadillac, Mich., assignor to Kysor Heater Company, Cadillac, Mich.

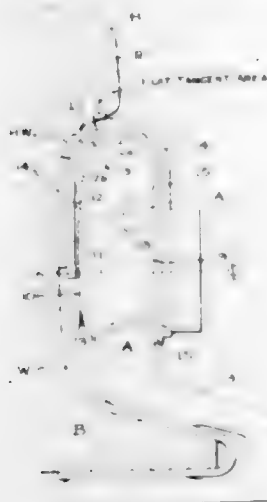
Filed Mar. 23, 1959, Ser. No. 801,030
11 Claims. (Cl. 236-35.3)



8. A thermostatically actuated valve comprising means forming a valve cavity with opposed large and small seats at opposite ends thereof, a valve element positioned in said cavity and adapted to alternatively close against said seats with a movement of the order of .005 inch, a first spring biasing said valve element to said small seat, a tappet positioned to move said valve element against said large seat, a thermo-responsive element having a push pin opposed to said tappet and extensible towards the tappet when the thermo-responsive element is heated, a second spring biasing said push pin to retracted position independently of said tappet, a third spring abutted between said push pin and said tappet, means connecting said small valve seat to the atmosphere, means adapted to connect said large seat to a source of vacuum, and means adapted to connect said valve cavity to a pressure differential actuated motor.

3,006,553

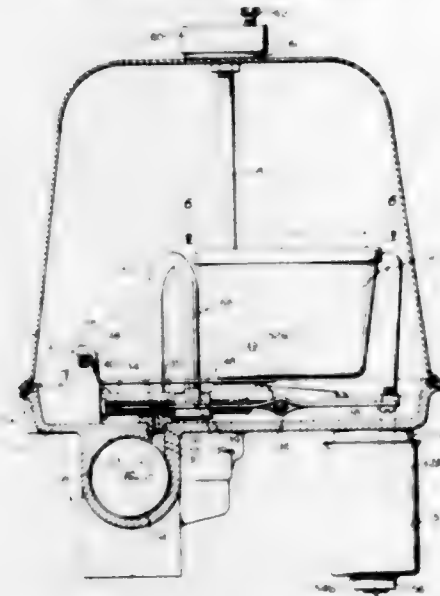
RADIAL HEAD ARMORED INSULATED JOINT
James A. Greer, Kensington, Calif., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed June 17, 1959, Ser. No. 821,022
1 Claim. (Cl. 238-152)



In an insulated rail joint wherein the rails have head-web load transmitting fillets each formed on a circular arc disposed between a flat tangent adjacent the outer bottom face of the rail head and the related arc of the rail web, joint bars each having a head and a foot portion connected by a web, a load bearing surface on said bar head formed on a circular arc whose radius is shorter than the radius of the arc of the head web fillet of the rail and an inverted substantially U-shaped laminated metal armor and fiber insulation unit fitted over the head of each bar, the bight of said unit having metal and insulating surfaces formed on radii of different lengths, the radii of said head-web fillets, the armor and the insulation all having a common center lying in the head of the bar, whereby solely subjecting the fiber insulation of said unit to uniform load transmitting stresses between the mating arcs of the head-web fillets and the bar head.

3,006,554

SPRINKLER CONTROL SYSTEM
James A. Harris, 61 Gregory Place, Oakland 19, Calif.
Filed Oct. 1, 1959, Ser. No. 843,859
12 Claims. (Cl. 239-67)

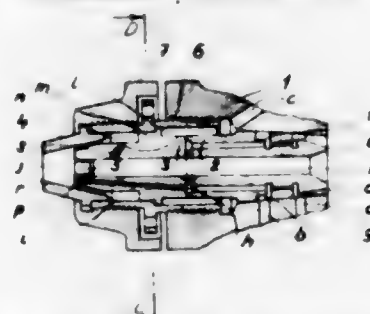


1. In a sprinkler control system having a valve controlling the water supply to a sprinkler during the sprinkling cycle, a casing, a syphon float in said casing, means including a pivoted lever for pivotally mounting said syphon float in said casing, water evaporation means having a surface exposed to the atmosphere, means controlled by said lever controlling said valve, said syphon

float having an opening in the top thereof for receiving water so that said syphon float is tilted on the pivot of said lever when said syphon float is filled a predetermined amount, said lever operating said last mentioned means to close said valve when said syphon float is tilted to its lower position, said syphon float having a syphon with one end in said float and means connected its other end to said evaporation means so that it syphons the water out of said float into said evaporation means when said syphon float is tilted to its lowered position, said evaporation means having means for controlling the time at which syphoning of the water from said syphon float begins in accordance with evaporation from said evaporation means.

3,006,555
BURNER ASSEMBLIES FOR METAL-SPRAYING GUNS

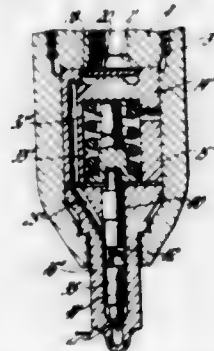
Vaclav Navara, Ledec upon Sazava, Czechoslovakia, assignor to Kovo-Finls, narodni podnik, Ledec upon Sazava, Czechoslovakia
Filed Nov. 13, 1958, Ser. No. 773,731
4 Claims. (Cl. 239-83)



1. A burner assembly of a metal-spraying gun, the assembly having a front and a rear end and comprising at least a single burner member and at least a single nozzle member, the burner member having a longitudinal axis and being formed with an axial bore for the reception of the metal to be sprayed, the bore extending from the rear end to the front end, the nozzle member spacedly surrounding the burner member and defining therewith passages for cooling air, said passages including grooves and an annular space, the grooves extending in a generally axial direction from points at the rear end side of the burner assembly to points at the front end side and being circumferentially spaced, the annular space being provided at the front end, the grooves discharging into the annular space.

3,006,556

UNIT FUEL PUMP-INJECTOR
William S. Shade and Conrad A. Telchert, Grand Rapids, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,063
5 Claims. (Cl. 239-88)

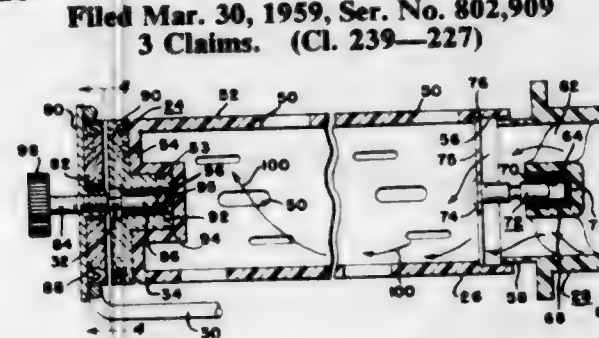


5. In a unit fuel pump-injector having a pump cylinder open at one end for fuel delivery, said cylinder having an end face defining its said open end, a check valve closable against said face, and an injector opposite said cylinder end including an injection valve openable in

response to a predetermined fuel delivery pressure developed by the pump and supporting means for said check valve and injection valve, said means having a passage for fuel flow to the injection valve from said cylinder open end including a cavity surrounding the check valve, and a protuberance in said cavity limiting opening movement of the check valve.

3,006,557

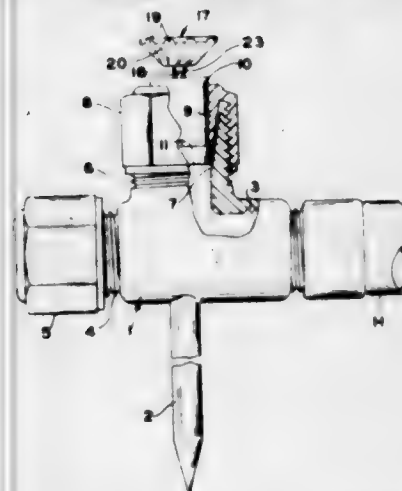
COMBINATION RECIPROCATING AND ROTARY SPRAY TUBE FOR A DISHWASHER
James Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,909
3 Claims. (Cl. 239-227)



3. A fluid spray device comprising, a cylindrical walled fluid distributing means having an open end, a closed end and radial slots in the cylindrical wall between said ends, a pivot shaft in said open end, first support means for rotatably supporting said fluid distributing means at said closed end thereof, second support means for rotatably supporting said fluid distributing means at said open end thereof and having an elongated bearing for receiving said shaft, a swirl inducing means in communication with said open end and having vane means adapted to impart a swirl to fluid entering said open end for rotating said distributing means by the frictional drag between said fluid and said distributing means before said fluid exhausts from said slots, fixed magnetic means having a north pole on said first support means, and rotatable magnetic means having a north and south pole attached to the closed end of said distributing means, whereby said north pole on said fixed magnetic means is brought sequentially into juxtaposition with said north and south poles of said rotatable magnetic means to reciprocate said distributing means axially when fluid is swirlingly entering said open end.

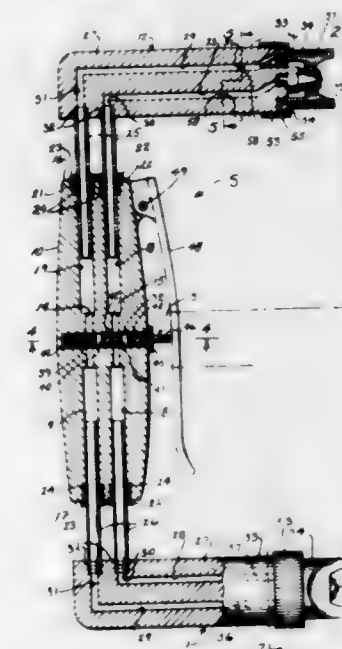
3,006,558

LAWN SPRINKLER NOZZLE
Arthur W. Jacobs, 5994 Columbia Road, North Olmsted, Ohio
Filed Mar. 19, 1958, Ser. No. 722,476
6 Claims. (Cl. 239-267)



6. A spray nozzle assembly comprising a tubular housing adapted to be secured to a fitting body and with a passageway therethrough terminating in a bore; a baffle

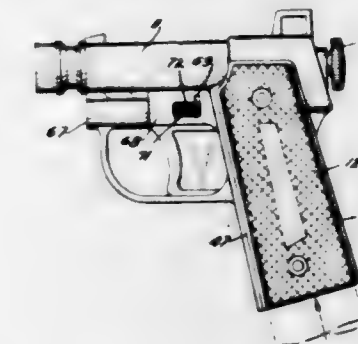
3,006,559
DUAL HEAD SPRAY GUN
Herbert M. Schmidt, 26th and Superior Ave., Sheboygan, Wis.
Filed Feb. 16, 1960, Ser. No. 9,006
2 Claims. (Cl. 239-414)



1. A spray gun comprising a body of general U-shape having a relatively flat elongated central section and spaced parallel extending end sections, a pair of spaced tubes secured to each end section and telescopically received in a respective end of said central section, means for adjusting and holding said tubes in any given position toward and away from said central section, a spray head positioned on the outer extremity of each end section, ports and ways in said central section and said end section providing communication of said spray heads and said tubes with a source of paint and air supply respectively, and a single valve control for regulating the paint and air supply evenly and simultaneously to both spray heads.

3,006,560

SPRAY GUN
Jules Rosenkranz, New York, N.Y., assignor to Lafayette Brass Mfg. Co., Inc., a corporation of New York
Filed Nov. 14, 1958, Ser. No. 773,921
1 Claim. (Cl. 239-456)



A spray gun comprising a barrel having a longitudinal bore, a pistol grip at one end of the barrel, said pistol grip having a recess therethrough extending parallel to the length thereof, said grip having an inlet port and a passage-

way leading into the barrel and isolated from said recess, a stem slidably mounted in said barrel bore and movable longitudinally thereof, a valve seat at the nose end of the barrel, a valve member carried by the stem, means resiliently reacting against said stem normally to urge the valve member against said seat, a trigger assembly operatively connected to said stem to actuate the latter, said trigger assembly comprising a plate slidable in said recess and conformed at its forward edge to simulate a trigger, a trigger guard extending from said pistol grip to said barrel, said plate having a longitudinal projection at the upper portion of its front and rear edge, said rear projection being operatively connected to said stem for actuation of the latter, means to guide the front projection of said plate, said barrel having a pair of walls depending therefrom and straddling the upper edge of said plate, said upper edge having a plurality of ratchet teeth formed thereon, said walls having a pair of transversely aligned slots, a detent extending through said slots and slidably mounted with respect to said ratchet teeth, said detent having a recess at its lower edge adapted to provide clearance for said ratchet teeth, means resiliently urging said detent against said teeth to retain the stem in actuated position, means to effect movement of the detent clear of said teeth for release of the trigger assembly and said stem, and means to effect movement of said stem independently of said trigger assembly.

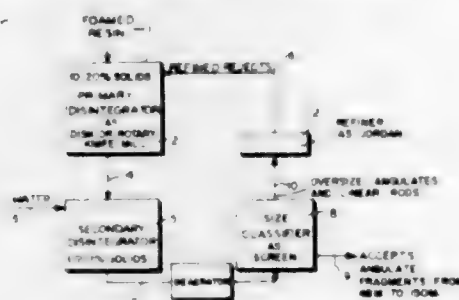
3,006,561

DISINTEGRATION OF RESIN FOAMS

James J. Eberl, Moylan, and Sydney Coppick, Ridley Park, Pa., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania

Filed Apr. 11, 1960, Ser. No. 21,373

10 Claims. (Cl. 241-29)



9. A process of converting a cured, three-dimensional, reticulated urea-formaldehyde resin foam into a component of a paper furnish which comprises mechanically disintegrating said resin foam under progressively increasing rigorous conditions into angulate agglomerates of sizes and shapes compatible with wood fibers and halting such disintegration prior to material decomposition into discrete linear rods and classifying the product to recover substantially only the angulate fragments passing through a screen of less than 48 mesh and retained on a screen of 150 mesh, which fragments possess spatial geometric size adapting them for combination with cellulose fibers.

3,006,562

GYRATORY CRUSHER

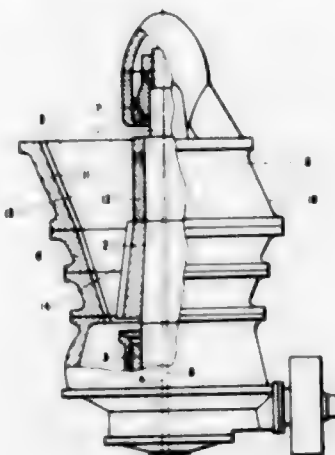
Adolf Thomas, Duisburg, Germany, assignor to Esch-
Werke K.G., Duisburg, Germany, a firm

Filed July 10, 1959, Ser. No. 826,161

Claims priority, application Germany Nov. 3, 1958
5 Claims. (Cl. 241-156)

1. In a gyratory crusher of the class described, an inlet ring having an inlet mouth, a breaking head, a breaking mantle, means for establishing an eccentrically gyrating movement of said breaking head about the axis of said breaking mantle, said inlet ring put on the upper end of said breaking mantle having one sided conical up-

wardly increasing enlargement and being provided at the interior surface with breaking ribs, a head axle carrying said breaking head, an upper elongated portion of said head axle located opposite the region of said enlargement



and being provided with a breaking sleeve, the space between said breaking ribs of said enlargement and said sleeve serving as a fore-breaking space, said interior surface of said enlargement being arranged concentrically with respect to the axis about which the head gyrates.

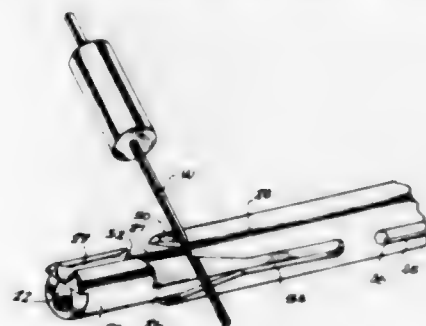
3,006,563

TOOL FOR CONNECTING WIRES TO TERMINALS

John R. Bos, Grand Haven, and Robert B. Shulters, Spring Lake, Mich., assignors to Gardner-Denver Company, Quincy, Ill., a corporation of Delaware

Filed Apr. 18, 1955, Ser. No. 501,967

4 Claims. (Cl. 242-7)



3. In a tool for connecting a wire to a terminal, the combination comprising, a bit for winding the wire about the terminal and comprising a generally cylindrical member having a longitudinally disposed terminal receiving recess in the outer end portion thereof and having a longitudinally extending wire receiving groove in the peripheral surface of said outer end portion, and extending axially thereof, said bit being transversely relieved intermediate its ends to define at least one longitudinally extending substantially planar guide surface intersecting a radial plane passing through said groove adjacent the bottom of said groove, a sleeve disposed about said bit and mounted for relative longitudinal movement with respect thereto between a retracted position wherein said substantially planar guide surface is exposed so that the wire can be laid thereacross and a forward position wherein the outer end of the sleeve overlies the outer end portion of said bit, and said sleeve having a guide surface on the forward end thereof for engaging the wire upon forward movement of said sleeve, said substantially planar guide surface and said sleeve guide surface co-operating during the forward movement of said sleeve to guide the wire into and along said groove.

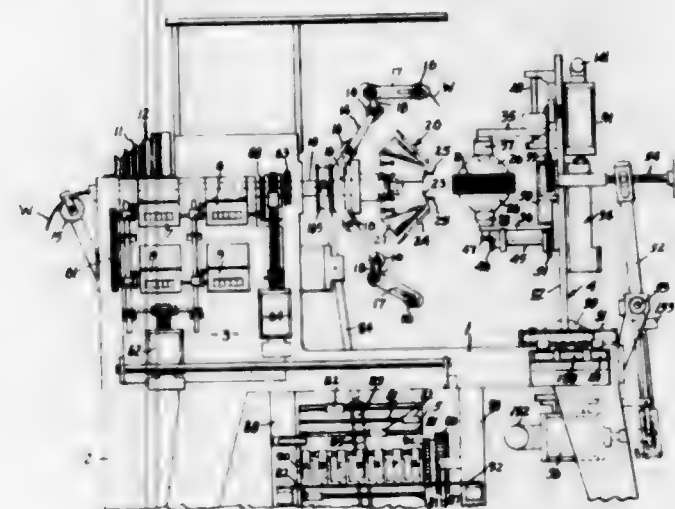
3,006,564

COIL WINDING APPARATUS

Bertram H. C. Hambleton, deceased, late of Maple Heights, Ohio, by Beatrice H. V. Hambleton, executrix, Maple Heights, Ohio, assignor to Vincent K. Smith, doing business as Electric Motor Development Co., Wickliffe, Ohio

Filed Jan. 29, 1957, Ser. No. 636,959

6 Claims. (Cl. 242-13)



1. A coil winding apparatus comprising a holder including opposite frusto-conical heads disposed adjacent the axial ends of an externally slotted body and adapted to clamp such body therebetween so as to expose a selected pair of axially extending slots for winding of a wire coil therein and across the axial ends of such body from one slot to the other, such pair of slots being spaced apart a relatively short distance such that wire pulled across the ends of said body from one slot to the other is pulled primarily against the sides of such slots; a winding head provided with converging wings that are adapted to be aligned with such selected pair of slots; a flyer arm rotatable about said winding head; means for feeding a wire under tension from said flyer arm whereby the wire, when secured at its end in fixed position relative to such body, slides along said wings and is guided thereby into the selected pair of slots when said wings are aligned therewith; a wire compactor on said winding head along which the wire slides inwardly toward such body as the wire is laid across the ends of such body whereby the wire is pulled toward the bottoms of such pair of slots; and means for so rotating said flyer arm, said compactor being provided with wire-contacting surfaces that are spaced axially from the respective ends of such body to cause the wire to be wound into a coil whose end portions are spaced axially from the respective ends of such body.

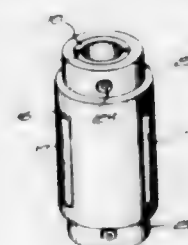
3,006,565

BOBBIN CLUTCH

Eugene V. Pelletier, 324 N. Main St., Woonsocket, R.I.

Filed June 30, 1960, Ser. No. 39,960

3 Claims. (Cl. 242-46.4)



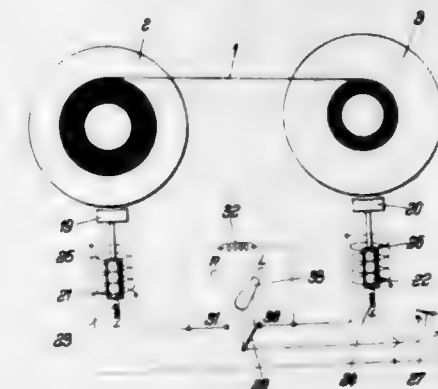
1. A bobbin clutch comprising a sleeve to receive a spindle, means to secure the sleeve to a spindle, a plurality of symmetrically disposed cam surfaces carried by said sleeve, a shell coaxial with and embracing the

sleeve and cam surfaces and provided with a plurality of axially elongated slots corresponding to the number of said cam surfaces, a cylindrical tube in each slot, each tube being of a size to pass through each slot and disposed with its axis generally parallel to the axis of said sleeve and shell, each tube having an axial bore, pins fixed in said shell, one pin entering the bore of each tube, said pins each being of a size smaller than said bore whereby relative movement of the tubes and shell may occur and yet the outward movement of the tubes is limited when engaged and urged outwardly by said cam surfaces due to relative rotation of said shell and sleeve.

3,006,566

BRAKING MAGNETIC TAPE REELS

Siegmund Loewe, 68 Ridge Road, Yonkers, N.Y.
Original application Oct. 3, 1956, Ser. No. 613,794, now
Patent No. 2,962,237, dated Nov. 29, 1960. Divided
and this application June 13, 1960, Ser. No. 38,690
Claims priority, application Germany Oct. 5, 1955
1 Claim. (Cl. 242-55.12)



Magnetic tape recording arrangement comprising a pair of reels alternately driven for rotating in two directions for winding and rewinding the tape, braking means for stopping the rotation of said reels, electromagnetic coils for actuating said braking means, a choke, an electrical energizing source, and a commutator switch, said braking means consisting of two braking shoes, each engageable with one of said reels and actuated by one of said electromagnetic coils, said choke being alternately connected into the circuit of one or the other of said coils by means of said commutator switch for delaying the energization of that one of said coils which is connected to said energizing source via said choke the braking effect of one of said braking shoes thus being increased and performed sooner than the other.

3,006,567

APPARATUS FOR SERVING STRIPS AND TAPE

Robert L. Collins, Nashua, N.H., assignor, by mesne assignments, to Nashua Corporation, Nashua, N.H., a corporation of Delaware

Original application Aug. 14, 1957, Ser. No. 678,195,

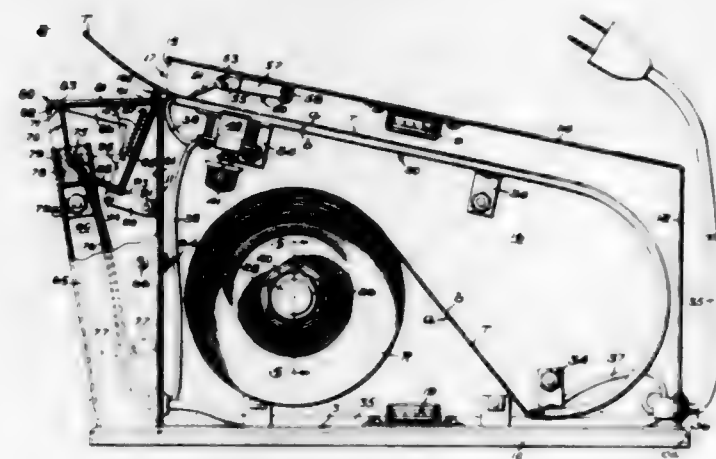
now Patent No. 2,929,907, dated Mar. 22, 1960. Divided and this application Apr. 10, 1958, Ser. No.

727,579

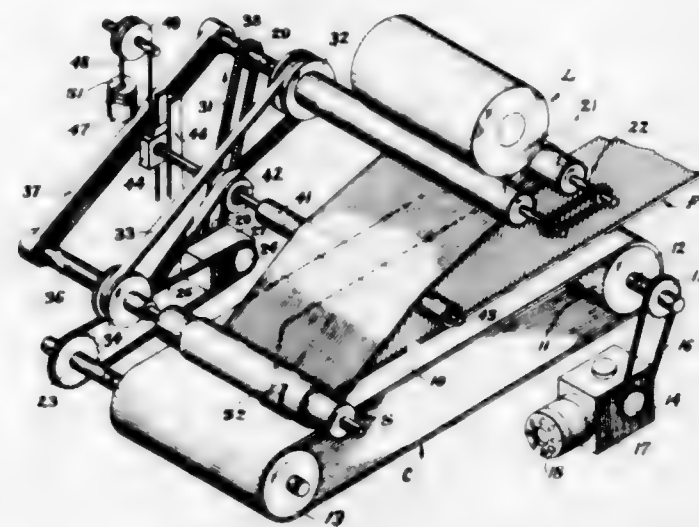
1 Claim. (Cl. 242-55.53)

Dispensing apparatus for tape, comprising a frame adapted to mount a tape supply roll, roll mounting and controlling means on the frame, and a housing compartment for the roll mounting and controlling means and defined by said frame, said compartment including enclosant bottom, top, opposite end and vertical longitudinal side walls and presenting a tape delivery station, a supporting base for said frame having a longitudinally extending flange laterally projecting beyond the adjacent edges of the compartment bottom, top, and end walls, one of the compartment longitudinal side walls being bodily separable and adapted to be removably set on such base

flange and being shaped and dimensioned to abut laterally the side edges of the top and end walls when it is so set on the base flange, and magnetic catch means for retaining such removable longitudinal side wall in installed position subject to instant bodily removal by lateral separation from said abutment with said top and end walls and in any order of separation with respect to said walls individually, said catch means comprising top and bottom permanent magnetic members secured to longitudinal medial portions of the base and top walls adjacent the bodily separable wall location and said sep-



3,006,569
SELF-ALIGNING STOCK WIND-UP
Victor H. Hasselquist, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
Filed Jan. 27, 1958, Ser. No. 711,311
9 Claims. (Cl. 242-67.3)



1. Wind-up apparatus for coiling rubberized fabric stock in a cloth liner comprising a belt conveyor for said stock, a liner let-off roll, and a stock and liner wind-up roll, means to drive said conveyor belt, means on which said liner let-off roll is supported to drive said let-off roll at the same or a slightly higher peripheral speed as that of said conveyor belt, an impositive drive which tends to turn said wind-up roll at a nominal peripheral speed that is somewhat higher than the peripheral speed of said conveyor belt and let-off roll, and means responsive to liner tension connected to said impositive drive to decrease the torque transmitted by said impositive drive to said wind-up roll as the liner tension increases.

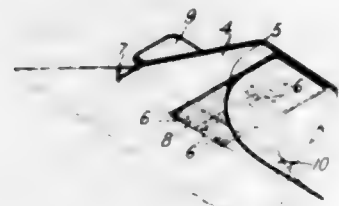
3,006,570
ADJUSTABLE BINDING FEEDING CAGE FOR SEWING MACHINES
Ronald Boser, 5 North Lane, Huntington, N.Y.
Filed Apr. 14, 1960, Ser. No. 22,178
3 Claims. (Cl. 242-68.7)



1. A binding tape feeding device, comprising a pair of flat plates, a plurality of pins rigidly secured between the peripheries of the plates for substantially halfway around and holding the plates in fixed, spaced, parallel disposition, freely rotatable tubular rollers respectively sleeved on the pins between the plates, a spacer plate adjustably disposed between said pair of plates, means for adjusting and retaining the spacer plate in a selected position between said plates and parallel thereto, said means comprising a rod extending axially from said spacer plate, a tubular nipple secured to the one of said plates and extending axially therefrom, said rod being slidably received in said nipple, and screw means for holding the rod in a selected position in said nipple whereby the spacer plate is held in selected spacing from the other plate.

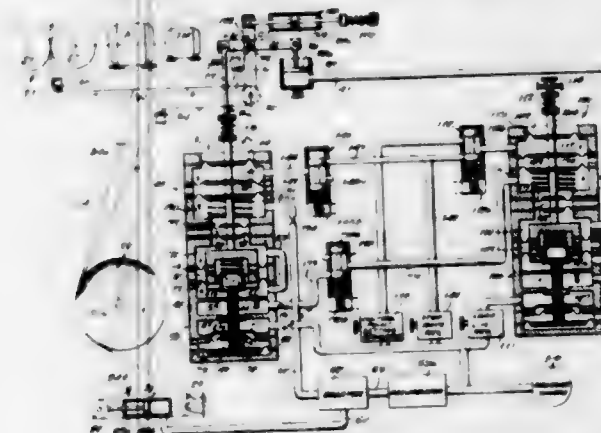
1. For releasably holding the free end of the web of a web-roll to the body of the roll while the roll is rotating, a tab comprising two portions having adhesive areas on their remote faces, adhesive areas between said two portions having their major dimension extending lengthwise of the tab, said tab also including portions applied to the adhesive areas of the remote faces of said first-named portions to protect them before use and which provide tongues for pulling the tab and the free end of the web when the tab is applied to the latter.

3,006,568
ADHESIVE TAB
Claude Edward Frederick Willis, London, England, assignor to R. W. Crabtree & Sons Limited
Filed Mar. 2, 1960, Ser. No. 12,314
7 Claims. (Cl. 242-58.5)



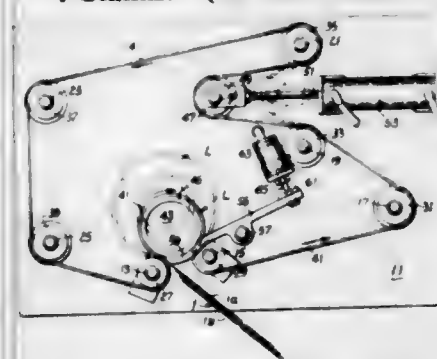
of said plates, said pair of plates being circular, a sleeve extending axially from the other of said plates, a bracket having a shaft telescopically received in said sleeve and screw means for fixing the shaft in position in said sleeve, said bracket having perpendicularly disposed arms for supporting the device upon a support, said shaft being secured to one of said arms, and brace bars secured between the sleeve and said other plate holding said sleeve in axial extension from said other plate.

3,006,571
WEB TENSIONING SYSTEM
George Viscchultz, Berkeley, Ill., assignor to Michle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,728
26 Claims. (Cl. 242-75.42)



5. In a system for controlling the tension in a web drawn from a supply roll, a controller having a control element and means for providing an output signal proportional to the net input force on said element, means responsive to changes in the web tension for applying a correspondingly changing first input force to said control element, means for applying a second input force to said element which opposes the first force, means for decreasing said second input force as the rate-of-change of said output signal increases, and means for applying a braking force to the supply roll which is proportional to said output signal.

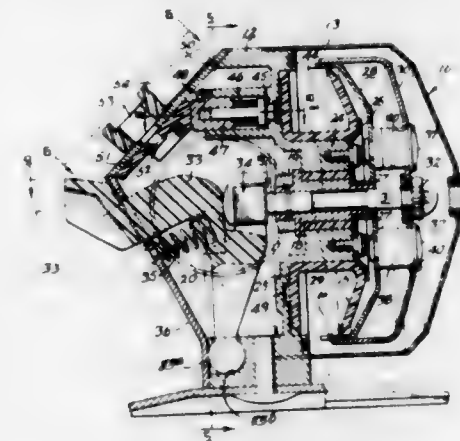
3,006,572
BELT WRAPPER FOR MAGNETIC CORES
Alfred S. Cooper, Toronto, Ontario, Canada, assignor to Moloney Electric Company, St. Louis, Mo., a corporation of Delaware
Original application Sept. 20, 1957, Ser. No. 685,170. Divided and this application Jan. 8, 1959, Ser. No. 785,688
4 Claims. (Cl. 242-78.5)



1. Apparatus for making magnetic cores from packets of segments of magnetic strip material comprising a table, a winding form supported on the table and extending upward therefrom, said winding form being rotatable on a vertical axis and being shiftable laterally on the table, a plurality of pulleys extending upward from the table, an endless belt trained around the pulleys and the winding form, one of said pulleys being a drive pulley, said belt

extending from a first of said pulleys in a loop around the winding form and thence around a second of said pulleys, said first and second pulleys being spaced apart a distance such as to define a throat therebetween narrower than the diameter of the winding form for insertion therethrough of packets to be wound on said winding form, a shoe movably mounted in said throat, and means for biasing said shoe into engagement with the winding form and packets being wound thereon.

3,006,573
SPINNING REEL
Joseph M. Holahan, Jr., Abington, Pa., assignor to True Temper Corporation, a corporation of Ohio
Filed Dec. 10, 1957, Ser. No. 701,852
4 Claims. (Cl. 242-84.2)

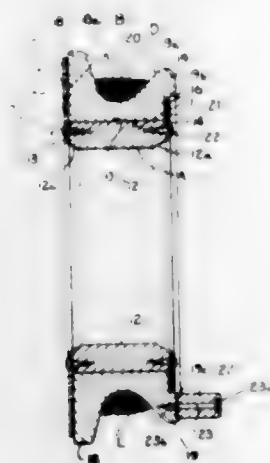


1. In a spinning reel comprising a housing, a spool carried by the housing, a pair of telescoping cup members mounted coaxially with the spool each having a peripheral flange adapted to surround at least a substantial portion of the spool, means to cause relative rotation between the spool and the cup members, the peripheral flange of one cup member having means on the terminal edge thereof to engage and wrap a line about the spool upon relative rotation between the spool and said one cup member, means mounting said cup members for relative axial movement and for limited relative angular displacement with respect to each other between a position wherein said terminal edge of the peripheral flange of said one cup member is covered by the peripheral flange of the other cup member and a position wherein said terminal edge of said one cup member is exposed to the spool, latch means interconnecting said cup members and operable to maintain said other cup member in said position wherein the terminal edge of the peripheral flange of said one cup member is covered by the peripheral flange of said other cup member, said latch means being actuatable upon said relative angular displacement of the cup members with respect to each other to be disengaged from said other cup member, and resilient means operably connected with said other cup member normally urging said other cup member to said position wherein said terminal edge of said one cup member is exposed to the spool, said resilient means being operable upon disengagement of said latch means from said other cup member to urge said other cup member to said position wherein said terminal edge of said one cup member is exposed to the spool.

3,006,574
HAND REEL
Elbert C. Hardy, P.O. Box 107, Islamorada, Fla.
Filed Nov. 4, 1958, Ser. No. 771,789
2 Claims. (Cl. 242-96)

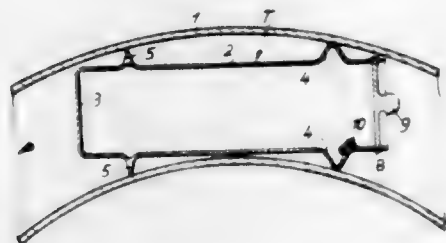
1. A hand reel including, a relatively large annular support of substantial thickness having a bore therein of sufficient size to accommodate the hand of the user, said

support of substantial thickness having a bearing surface on the periphery thereof, an annular rotatable reel member having a bore therein sufficiently large to be received upon the bearing surface of the support, a substantially vertical flange carried by the periphery of said reel adjacent one of the edges thereof, an outwardly and upwardly directed flange carried by the periphery of said reel adja-



cent the other edge thereof, said flanges defining a yarn channel which tapers outwardly on one side to permit yarn to feed freely off of the reel without turning of the reel, and a flexible annular disc having a bore therein of substantially the same size as the bore in said support carried by one edge of said support overlying a substantial portion of said reel member for increasing the friction thereon by pressure applied at any point thereof.

3,006,575
PNEUMATIC DISPATCH CARRIER
Friedrich Tonne, Robert-Haug-Weg 11,
Stuttgart, Germany
Filed May 21, 1959, Ser. No. 814,895
Claims priority, application Germany May 28, 1958
2 Claims. (Cl. 243—35)



1. As an article of manufacture: a pneumatic dispatch carrier having a bottom and a tubular wall, said bottom and said wall consisting of a single piece of thermoplastic synthetic material, said annular wall having two outwardly protruding annular beads confining with said wall and with each other an annular groove, and an elastic annular seal located and firmly held between said beads and protruding outwardly from said tubular wall in radial direction thereof and tapering in outward direction.

3,006,576
AIRPLANE HAVING TWO SEPARABLE FLYABLE SECTIONS
Enoch A. Elijah, 36 Saify Bldg., opposite Gandhi Gardens, Karachi 3, Pakistan
Filed Dec. 19, 1958, Ser. No. 781,508
3 Claims. (Cl. 244—2)

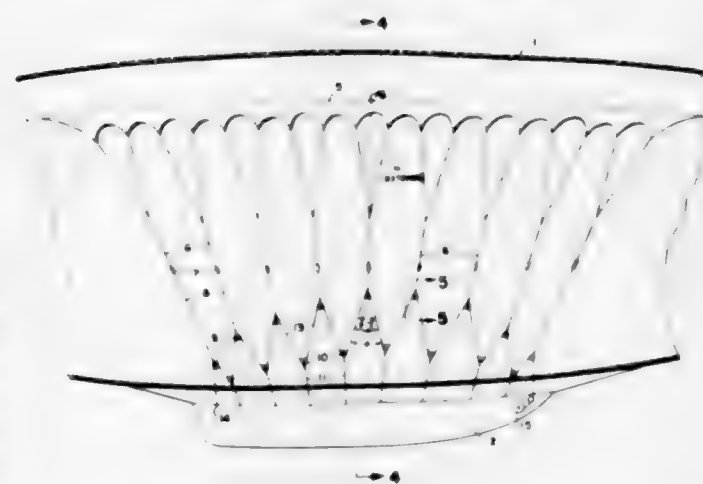
3. An airplane comprising a lower main flyable section and an upper secondary flyable section, said lower main section having a longitudinal fuselage, wings on and extending from opposite sides of the fuselage and having leading edges, engine nacelle means mounted on said lead-

ing edges, said main section having a horizontal longitudinal roof plate, said upper secondary section having a central body portion overlying and extending along said fuselage, wings on and extending from opposite sides of said body portion and spacedly overlying the wings on the lower main section and having leading edges, engine nacelle means on the leading edges of the secondary section which are staggered relative to the nacelle means of the main section wings, said secondary section body portion having a lower plate overlying and spaced above the



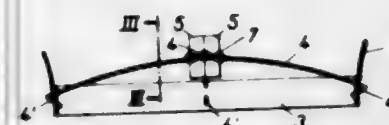
roof plate of the main section, and releasable locking means having interengageable components on said lower and roof plates, and operating means for operating components to engaged and released positions, said locking means comprising sleeves fixed on and depending from said lower plate, a longitudinally shiftable locking assembly mounted upon said roof plate, said locking assembly having locking rods engageable in said sleeves, and spring means acting between said locking assembly and said roof plate and biasing said locking assembly toward its locking position.

3,006,577
CAR SUPPORT FOR NON-RIGID AIRSHIPS
Eugene A. Schott, Akron, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Aug. 6, 1959, Ser. No. 832,102
6 Claims. (Cl. 244—30)



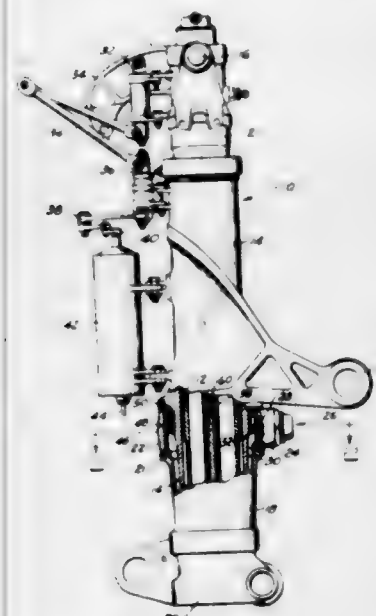
3. In an airship, an envelope adapted to receive lifting gas, a car adapted to be secured to the underside of the envelope, an outside set of support means extending between the car and the outside of the underside of the envelope, an inside set of support means extending between the upper inside of the envelope and the car, and at least one set of said support means including quickly adjustable means having pulleys alternately connected to the car and the envelope and a cable running over the pulleys and operable at the car to simultaneously adjust the effective length of the said one set of support means for rapidly changing the respective proportion of car weight carried by the outside set of support means and by the inside set of support means.

3,006,578
FIRE BALLOON
Björn Rödset, Storgaten 12, Halden, Norway
Filed Feb. 25, 1959, Ser. No. 795,431
Claims priority, application Norway Feb. 26, 1958
2 Claims. (Cl. 244—31)



1. A collapsible fire balloon, comprising an inflatable envelope closed at the top and having a lower open end, a ring made from a pliable material and secured to said open end, two crossed flexible wires having ends which are fastened to said ring approximately 90° apart, said wires being fastened together at their intersection for rotation with respect to each other around said intersection when said wire ends are moved together to flatten said ring, said wires being longer than said ring diameter and curved upwardly when said wires are 90° apart and said ring is expanded, and straight when said wires are moved together and said ring is flattened, and at least one wick secured to said wires at their intersection, whereby said envelope of said collapsible balloon is folded around said flattened ring and crossed wires in a package having a width of less than the diameter of said ring.

3,006,579
STEERING DISENGAGING MECHANISM
George E. Frederick, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,134
3 Claims. (Cl. 244—50)

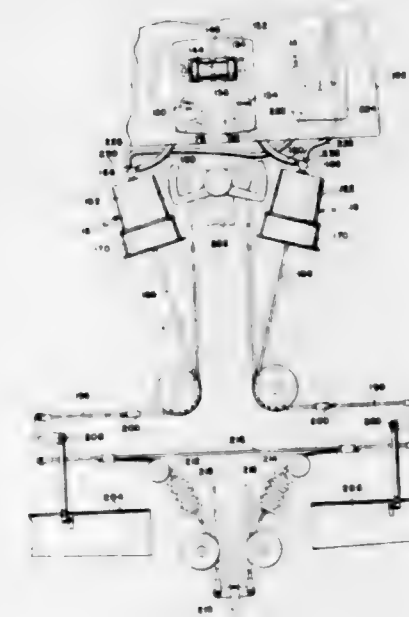


1. In a steering mechanism, the combination of a tubular support member, a rotatable wheel supporting member having generally a cylindrical shape over a substantial portion of the length thereof and rotatably mounted on one end of said tubular support member, a ring shaped cam member having a contoured surface secured circumferentially to said tubular support member and projecting within said rotatable wheel supporting member, said rotatable wheel supporting member including an opening in the cylindrical shaped portion thereof adjacent the contoured surface of said cam member, a steering collar rotatably mounted on said wheel supporting member and external thereto, a locking device rigidly

771 O.G.—87

supported by said steering collar including a locking plunger spaced cooperatively to said opening so that said plunger is operative to project into said opening and interlock said steering collar and said wheel supporting member, said locking device further including means for maintaining said plunger in said projected position, and cam follower means positionally responsive to the contoured surface of said cam member operative with said last named means for releasing said plunger from said projected position.

3,006,580
FLIGHT CONTROL MEANS FOR AIRCRAFT
Alick Clarkson, Paul Spur, Ariz.
Filed Feb. 9, 1959, Ser. No. 791,905
9 Claims. (Cl. 244—78)

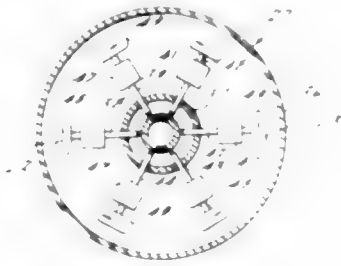


1. In an aircraft having control surfaces to effect roll and yaw motions of the aircraft, a flight control means comprising: a pair of vacuum operated actuators for operative connection to said control surfaces; a source of vacuum; a valve assembly including a body; a generally cylindrical sleeve mounted in said body and having limited rotation therein; a valve element freely rotatably mounted in said sleeve; said body having a pair of outlets communicating through said sleeve to said source of vacuum; said actuators being connected to said outlets; said valve element having channels therein to connect said outlets selectively to said source of vacuum by rotation of the valve element; alignment means attached to said valve element to hold the same in a neutral position partially obstructing both of said outlets equally; a rate sensitive gyro pivotally mounted on an axis inclined in a generally vertical plane to the roll axis of the aircraft, whereby said gyro is sensitive to roll and yaw motions of the aircraft; said gyro being operatively connected to said alignment means to shift said valve element and thereby apply correcting motions to said control surfaces corresponding to the motions of the aircraft.

3,006,581
VEHICLE AND STEERING APPARATUS THEREFOR
Harry Langman, 913 Congress St., Ypsilanti, Mich.
Filed Dec. 11, 1958, Ser. No. 779,768
22 Claims. (Cl. 244—79)

3. In a gyroscopic unit for use in a steering apparatus, a shaft, a supporting frame rotatably mounted on said shaft, a plurality of gyroscopic wheels supported by said frame on equidistantly spaced radial axes, means for

rotating said wheels in either of opposite directions on their respective axes, and means for selectively energizing said rotating means in response to changes in the angular position of said frame on said shaft, whereby

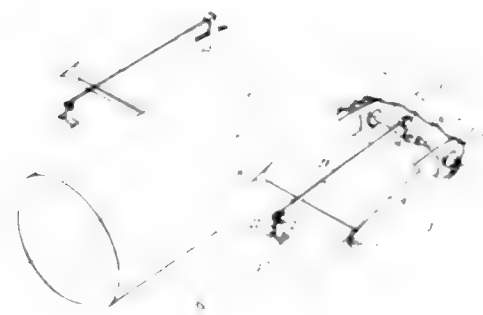


the resultant gyroscopic force exerted by said wheels will be substantially along a line fixed with respect to said shaft axis regardless of the angular position of said frame on said axis.

3,006,582

STABILIZING DEVICE

Richard E. Geiger, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 10, 1956, Ser. No. 603,284
2 Claims. (Cl. 244-82)



1. In combination a vehicle adapted to move through a fluid medium, said vehicle having a center of gravity and a longitudinal axis, said vehicle adapted to normally move through the medium in a direction substantially parallel to its longitudinal axis, a shaft mounted on said vehicle, said shaft being mounted forward of the center of gravity of the vehicle and so that the shaft is substantially normal to the longitudinal axis of said vehicle, an airfoil mounted on said shaft for free rotation about said shaft, a trim tab pivotally mounted on the rear of said airfoil, support means fixedly mounted on the shaft, support means fixedly mounted on the tab, a bar pivotally connected to the support means affixed to the shaft and pivotally connected to the support means connected to the trim tab, the center of lift of said airfoil being located between the shaft and the trim tab.

3,006,583

LOCKING AND ACTUATING MECHANISMS FOR AIRCRAFT CANOPIES

William Bathie Cowan, Lytham St. Annes, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Nov. 19, 1957, Ser. No. 697,437
Claims priority, application Great Britain Jan. 25, 1957
3 Claims. (Cl. 244-121)

1. A mechanism for deflating a pneumatic sealing, drawing locks, and raising the canopy of an aircraft cockpit in the proper sequence, and conversely lowering the

said canopy, locking the said locks and inflating the said sealing in the proper sequence, to be operated both from inside and on the ground from outside the aircraft, comprising in combination: a cockpit, a canopy hinged to the said cockpit, latches locking the said canopy in the closed position to the said cockpit, a first locking lever pivotally mounted inside the said cockpit, a second locking lever mounted outside on the said cockpit, an inflatable seal interposed between the said cockpit and the said canopy, a control valve controlling the inflation and deflation of the said seal, mechanical linkage operatively connecting the said locking levers to one another, to the said control valve and to the said latches, a source of hydraulic pressure having a sump, a hydraulic jack operatively connected to the said cockpit and to the said



canopy for opening and closing the latter, a selector valve controlling the hydraulic connection of said jack alternatively to the said pressure source and sump thereof, an electric current source, two solenoids operatively connected to the said selector valve and adapted to adjust the same to the positions for opening and for closing the said canopy respectively, and two throw-over switches electrically shunted in parallel to one another and each mechanically associated with one of the said locking levers and electrically connected to the said electric current source and to both of the said solenoids, and having a rest position de-energizing both said solenoids and two working positions in one of said working positions energizing one of the said solenoids, and in the other working position energizing the other solenoid.

3,006,584

BALLOON LOAD LOWERING MECHANISM

Paul E. Yost, Sioux Falls, S. Dak., assignor to General Mills, Inc., a corporation of Delaware
Filed Jan. 28, 1957, Ser. No. 636,558
5 Claims. (Cl. 244-127)



1. A balloon load lowering mechanism for a balloon including in combination, a balloon, a supporting frame adapted to be attached to said balloon, a shaft and reel rotatably mounted in said frame, cable means secured at one end to said reel and wound therearound, said cable means having its other end adapted to be secured

to a load, a retainer means fastened between said balloon and said cable means, means located on said supporting frame for severing said retainer means when said balloon reaches a prescribed altitude, braking means located on said supporting frame actuated by rotation of said shaft, said shaft rotatable as the load drops downwardly upon severance of said retainer means, whereby retardation of the movement of said load is caused by the action of said braking means actuated by rotation of said shaft, as said load moves to an extended position below the balloon.

3,006,585

CAPSULE PNEUMATIC SYSTEM FOR AIRCRAFT

Edward H. Replogle, Buffalo, N.Y., assignor to Scott Aviation Corporation, Lancaster, N.Y.
Filed Oct. 3, 1958, Ser. No. 765,235
7 Claims. (Cl. 244-140)



1. A capsule pneumatic system in combination with an aircraft capsule and an aircraft having an aircraft air supply tank and comprising: a capsule air supply tank arranged in said capsule; an aircraft-tank pressure regulator supplied by air from said aircraft supply tank and discharging into an outlet chamber; a capsule-tank pressure regulator supplied by air from said capsule supply tank and also discharging into said outlet chamber; and a capsule pressurizing regulator tubularly connected with said outlet chamber.

3,006,586

KITE-DISPENSED TOY

George Strelakos, Jr., 784 Atlantic St., Stamford, Conn.
Filed Apr. 27, 1959, Ser. No. 808,992
3 Claims. (Cl. 244-155)

2. In combination, a kite, a string controlling flight thereof comprising portions of two diameters arranged with the smaller diameter adjacent the kite, and a toy including a member of thin sheet material provided with a central hole of somewhat larger diameter than that of the larger diameter string and a slot leading from said hole to the outer edge of the member of a width less than the diameter of the larger string to retain the member on the string when the larger string is in the hole, and said slot of a width wider than the diameter of the smaller string to permit release of the member when the smaller string is in the hole, said member being of a size to provide sufficient surface area in a plane at right angles to the string whereby pressure of the wind flowing toward the kite will cause the member to slide along the larger string to the smaller string to be released thereby, and a tubular

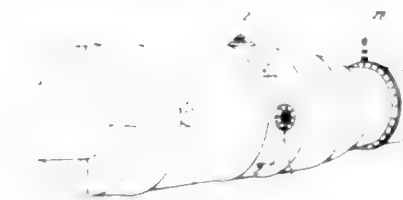
bearing sleeve in the hole in the member of normally only slightly larger diameter than the hole whereby the sleeve is retained in the hole during normal movement of the

member on the string and the member may have relative movement on the sleeve should the sleeve engage an obstruction on the string.

3,006,587

SUSPENSION DEVICE FOR JET PROPULSION UNITS

Louis Francois Jumelle, Vitry-sur-Seine, Max Andre-Jacques Morel, Choisy-le-Roi, Paul Joseph Legrand, Paris, and Konrad August Werner Eichholtz, Dammarie-les-Lys, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed Nov. 8, 1957, Ser. No. 695,448
Claims priority, application France Nov. 12, 1956
3 Claims. (Cl. 248-5)



1. A device for mounting a jet propulsion unit in an aircraft nacelle comprising a main support disposed in a plane located in the vicinity of the center of gravity of the jet propulsion unit at right angles to the unit axis and including a plurality of trunnions bolted to said nacelle and bearings each carrying one of said trunnions, said bearings having part spherical surfaces which engage in correspondingly shaped bushings mounted on the jet propulsion unit casing, at least one of said bushings being slidably mounted in a slide rigidly fixed to the casing and extending in a parallel direction with said unit axis, said trunnions and bearings being arranged to withstand stresses tangential to said casing, and a further support spaced from the main support and including at least one link having one end pivotally connected to said nacelle and the other end pivotally connected to said jet propulsion unit casing.

3,006,588

FISHING ROD HOLDER

Francisco B. Lemi, 454 W. 26th St., Chicago 16, Ill.
Filed Nov. 14, 1960, Ser. No. 68,949
11 Claims. (Cl. 248-39)

8. A rod holder, comprising: a base having a stationary member and a movable member, each member having a first side and an opposite second side, means securing said members to each other for relative rotation about an axis from a compact position to an extended position, said first sides being in face-to-face relationship in said

compact position in coplanar relationship in said extended position; at least three aligned ears spaced apart in a direction parallel to said axis and secured to the second side of said stationary member; a standard in each space

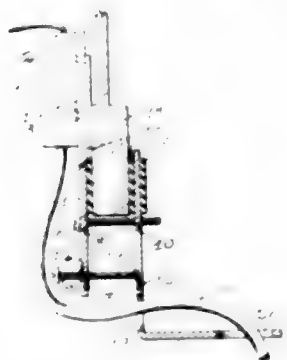


between adjacent ears; means comprising a rod extended through said ears and said standards and mounting said standards on said ears for rotation about an axis parallel to the first said axis; and a rod holding bracket mounted on each of said standards.

3,006,589

HOLDING DEVICE

James L. Drysdale, Montreal West, Quebec, Canada, assignor to The Bell Telephone Company of Canada, Montreal, Quebec, Canada, a corporation of Canada
Filed Apr. 18, 1960, Ser. No. 22,817
5 Claims. (Cl. 248-74)



1. A holding device adapted to be clamped on a supporting surface comprising in combination: a flat plate member, an L-shaped plate member, the two elements being arranged such that, when assembled together the bottom face of the L-shaped member extends a predetermined distance below the bottom edge of the flat plate member, and the top edge of the flat plate member extends a predetermined distance above the top edge of the L-shaped member, apertures and fastening means extending therethrough disposed at the bottom portion of that part of the members where their side faces oppose each other, apertures disposed in the said extended and horizontal portions of the L-shaped plate member.

3,006,590

CORRUGATED PALLET

Lowell E. Hoag, 223 W. South St., Athens, Mich.
Filed Sept. 21, 1959, Ser. No. 841,329
7 Claims. (Cl. 248-120)

2. In a pallet construction, a one-piece base sheet having coplanar strip portions and a plurality of channel-shaped sections depending therefrom between the strip portions, each channel-shaped section including a plural-

ity of areas in which the base wall of said channel-shaped section is hingedly joined with a zone on each of the side walls of said channel-shaped section and in which each of said side walls is cut to form two flaps which are hingedly joined to opposite side edges of said zone,

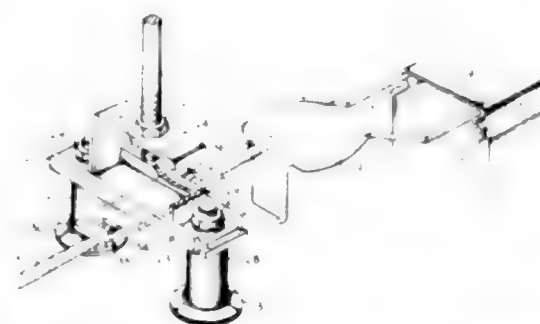


corresponding flaps on said side walls of each area being bent toward each other into overlapping relationship and secured together so that each area defines a leg depending from said strip portions, whereby each channel-shaped section defines a plurality of legs spaced apart along said section.

3,006,591

HANGER FOR ELECTRICAL DISTRIBUTION SYSTEM

Frederick J. Somes, Jr., Grosse Point Shores, Mich., assignor to General Electric Company, a corporation of New York
Filed Oct. 13, 1959, Ser. No. 846,153
2 Claims. (Cl. 248-317)

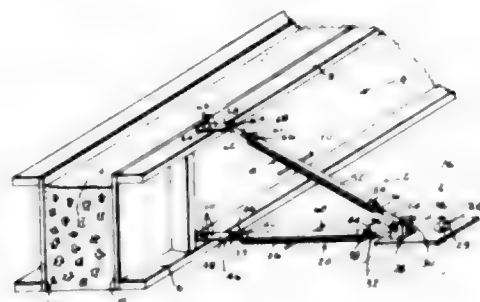


1. For use with an electric power distribution system adapted to be installed by the roll-in method, hanger means comprising a generally planar plate member, a pair of spaced downwardly extending supporting posts rigidly attached to said plate member, a pair of guide rollers carried by the said supporting posts at the outer ends thereof respectively, said plate member having a pair of spaced apart integral lug portions adapted to receive a cable therein, and means for attaching said hanger means to the end of a suspending rod.

3,006,592

FORM BRACE

Thomas J. Davis, Jr., 505 College Ave., Lubbock, Tex.
Filed Dec. 29, 1959, Ser. No. 862,698
2 Claims. (Cl. 248-354)



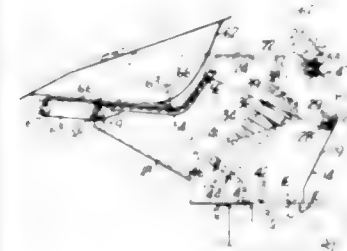
1. A single-unit adjustable brace for accurately positioning a form with respect to a given surface, said brace comprising a base plate having an upper face with a stake-receiving aperture in one end portion thereof; two

spaced uprights attached to the other end portion of said upper face in spaced relation to said aperture and extending at least substantially perpendicularly from said upper face; an arm including an elongated tubular member carrying threaded couplings at either end thereof; a handle bar reciprocally mounted in and projecting laterally from said tubular member, and two rods, each rod having threads on at least one end thereof cooperating with one of the threaded couplings carried by said tubular member, the other end of one of said rods being secured between said uprights, the other end of the other of said rods carrying an apertured plate for securing said arm to said form; and a second arm above said first mentioned arm including an elongated tubular member carrying threaded couplings at either end thereof, a handle bar reciprocally mounted in and projecting laterally from said second tubular member, and two rods, each last mentioned rods having threads on at least one end thereof cooperating with one of the threaded couplings carried by said second tubular member, the other end of one of said second mentioned rods being pivotally connected between said uprights in spaced relation to one of said first mentioned rods, the other end of the other of said second mentioned rods carrying an apertured plate pivotally coupled thereto for securing said second mentioned arm to a form, said first and second tubular members being at least partially hollow and carrying a lubricant therein, said first and second arms extending forwardly of said base plate, said base plate having a length which is a fraction of the length of said arms.

3,006,593

MULTIPLE POSITION SEAT

John R. Plate, Milwaukee, Robert Carlin, Greenfield, and Lester E. Kleist, Menomonee Falls, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Mar. 11, 1957, Ser. No. 645,321
2 Claims. (Cl. 248-376)



1. In combination with a tractor of the type having an operator's standing platform spaced below the steering wheel and a seat supporting structure disposed vertically between said platform and steering wheel including a pair of spring biased, forwardly projecting, substantially parallel arms, the combination comprising: a load supporting member; first pivot means connecting the forward end of said member to one of said arms for rotation about a first transverse axis; second pivot means connecting said member to the other of said arms for rotation about a second axis parallel to said first axis; a link pivotally connected to said structure for forward and rearward vertical swinging movement; a seat pivotally connected to said link on a third axis in parallel spaced relation to the pivot connection between said link and said structure; a first pair of cooperating abutments on said link and member, respectively, for limiting swinging movement of said link forwardly at a point in which it forms a forward extension of said member and supports the forward part of said seat in a first operator seating position, the rear portion of said seat being supported on said member in said first position; a second pair of cooperating abutments on said link and member, re-

spectively, limiting swinging movement of said link rearwardly at a point at which said link extends upwardly and rearwardly and supports the forward part of said seat in a second operator's seating position of higher elevation than said first position, said seat being retracted rearwardly in said second position sufficiently to permit the operator to stand on said platform; and a seat supporting part formed on said structure for supporting the rearward part of said seat in its second position at an elevation above its first position, said seat being swingable forward about said third axis to a third position in which it rests against said steering wheel when said link is pivoted forwardly to form an extension of said member.

3,006,594

LINKAGE SEAT ADJUSTER WITH STRAIGHT LINE MOVEMENT

Erich Gruendler, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 12, 1958, Ser. No. 773,210
17 Claims. (Cl. 248-424)



1. A seat adjuster comprising a pair of frames, a first pair of pivotally connected links having one link pivoted to one frame and the other link pivoted to the other frame, a second pair of pivotally connected links having one link pivoted to the one frame and the other link pivoted to the other frame, means for moving the one frame, and other separate means directly interconnecting each of the frames with each of the linkage pairs to guide the movement of the one frame along a substantially straight path.

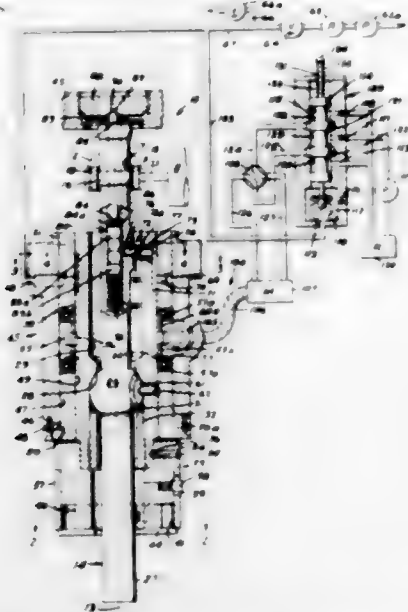
3,006,595

TRACER MECHANISMS

Roy Rosebrook, Los Angeles, Calif., assignor, by mesne assignments, to Banstrom Industries, Inc., Los Angeles, Calif., a corporation of Connecticut
Filed Apr. 21, 1958, Ser. No. 729,948
7 Claims. (Cl. 251-3)

1. A control for controlling relative movements of machine tool elements along a pair of mutually perpendicular machine tool coordinate axes under regulation derived from contact with the profile of a pattern, said control comprising: a pair of mutually perpendicular control means; a stylus linked to both of said control means so as to adjust them in response to the angular position of said stylus, the stylus having a longitudinal axis, said control including a housing having an opening from which the stylus projects, and means for angularly biasing the stylus and for limiting the maximum change of adjustment of the control means, said means for biasing and limiting comprising: a sleeve rotatably mounted in said opening, said stylus being mounted in said sleeve so as to be universally deflectible therein, but restrained against rotation around its axis relative to the sleeve, said stylus having an axial bore at one end; a spring seated in

said bore; a compensator member seated against the spring and axially slidable in said bore; an adjustment member connected to the housing; a push rod between said adjustment member and said compensator member, the adjustment member adjusting the axial position of the rod and compensator member; a pair of tapers on said compensator member; an anvil comprising a shank and a flat head, said shank passing through said stylus to contact one of said tapers, the flat head being disposed between the stylus and the sleeve; a rate control pin passing through said stylus to contact the other of said tapers, whereby the axial position of said compensator member



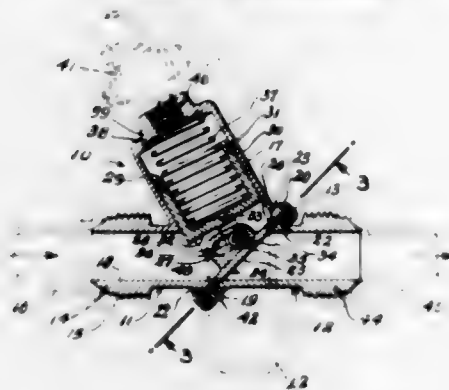
determines the radial distance which the anvil and the rate control pin project from the stylus; a nozzle in said sleeve in alignment with and in proximity to the anvil and positioned so that fluid discharged by it impinges on the anvil; stop means in said sleeve contactable by said rate control pin; bias means attached to said sleeve for exerting a deflecting force on said stylus; reversible means for rotating said sleeve; a fluid system connected to and discharging through said nozzle whereby the system is responsive to stylus deflection; and power means for controlling said reversible means responsive to pressure in said fluid system as varied by the spacing between said nozzle and anvil.

3,006,596

FLAPPER VALVE

Norman Nelson, West Hartford, Conn., assignor to Flo-Control Company, Plainville, Conn., a corporation of Connecticut

Filed July 24, 1959, Ser. No. 829,333
1 Claim. (Cl. 251-33)



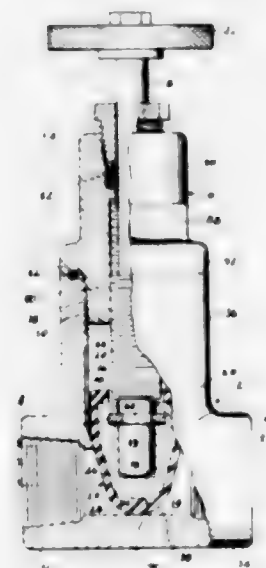
A fluid flow valve assembly comprising, in combination, a body member having a flow passage therethrough including inlet and outlet openings, a valve seat surrounding said flow passage and inclined at an angle of 45° to the axis of said inlet opening, a disk like flapper valve pivotally mounted for engagement with said valve

seat to arrest fluid flow through said valve, said flapper valve having on one side an inclined cam slot, a control cylinder integral with said body member, a cup-shaped piston slidably fitted in said cylinder and defining with said cylinder an expansible chamber communicating with the upstream side of said seat through a bleed hole formed in said piston, a pair of parallel lugs fixed to said piston and carrying a cross pin, a roller journaled on said cross pin and slidably mounted in said inclined cam slot, a spring positioned in said chamber urging said piston and flapper valve to a seat engaging position, a shut-off valve controlling flow through a vent conduit communicating with said chamber whereby in the open position of said shut-off valve said chamber is vented resulting in rapid opening of said flapper valve and in the closed position of said shut-off valve equalization of fluid pressure on opposite sides of said piston is obtained by means of said bleed hole resulting in said flapper valve being urged to seat engagement position under the bias of said spring.

3,006,597
VALVE

William C. Hookway, Morristown, N.J., assignor to Cooper Alloy Corporation, Hillside, N.J., a corporation of New Jersey

Filed Jan. 7, 1957, Ser. No. 632,940
1 Claim. (Cl. 251-88)



A gate valve comprising a valve body, said body having a cylindrical flow passage acting also as a valve seat, said passage being a straight-through unobstructed passage, a bonnet, a vertical valve stem received in said bonnet, and a gate rotatably carried at the lower end of the stem, said gate being in the form of an inverted frusto conical plug having a sealing surface the horizontal sections through which are circular, the plug and stem being so arranged that the orientation of the plug may be random, the sealing surface of the lower end of said plug conforming to the surface of a portion of a sphere having approximately the same diameter as the passage through the valve body at the gate, the frusto conical surface of said plug being divergently tangential to said lower spherical portion of said plug, and the said passage acting as a valve seat to receive the lower end of the plug when the valve is closed, the seat above said lower end of the plug being frusto conical to mate with the frusto conical portion of the plug, the core of said plug being made of a rigid material, and the surface of said plug being a cover made of a soft material, the top of the cover extending inward over the core and being adapted to bear against the upper end of the bonnet when the valve is fully opened, thereby reducing pressure on the packing of the valve stem, said core rotatably receiving the lower end of the valve stem and being locked against axial movement thereon by a

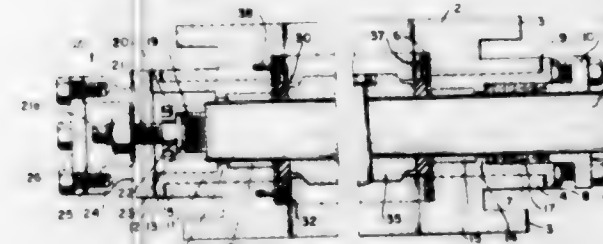
generally U-shaped insert received in mating grooves in the core and stem, and said insert being held in position by the aforesaid cover, said plug seating randomly and sealing both ports formed by the cylindrical passage on opposite sides of the plug.

3,006,598

BUTTERFLY VALVE

Hugh B. Carr and Anthony F. Yaska, Carnegie, and Selwyne P. Kinney, Crafton, Pa., assignors to S. P. Kinney Engineers, Inc., Carnegie, Pa., a corporation of Pennsylvania

Filed July 8, 1958, Ser. No. 747,134
4 Claims. (Cl. 251-171)



1. A butterfly valve comprising a valve body having a circular passageway therethrough, a rotatable shaft passing through the body diametrically across the passageway, a circular valve disk on said shaft having a hub portion at each edge of the disk surrounding the shaft, a rubber seating ring encircling the interior of the passageway in said body and with which the periphery of the disk makes sealing contact when the disk is rotated by the shaft to a closed position, the seating ring having diametrically opposite openings therethrough through which the shaft passes, the areas of the ring around said openings bearing at all times against the hub portions of the valve disk, the body having a bushing therein about the shaft at each side of the disk slidably fitted into the body for limited movement axially of the shaft, each bushing having its inner end bearing against the outer surface of that portion of the rubber seating ring that surrounds the shaft, each bushing having an internal rib intermediate its ends with a bearing sleeve fitted around the shaft and fitted inside the bushing with one end of the bearing sleeve contacting the rubber seating ring immediately surrounding the shaft and its outer end bearing against the internal rib of the bushing, the shaft terminating in the first of said two bushings and projecting entirely through and beyond the second of the two bushings, a closure over the outer end of the first bushing, means on said closure for adjusting the shaft in an axial direction relative to both bushings, a packing in the second bushing around the projecting shaft end, and a gland on the second bushing around the shaft for compressing the packing.

3,006,599

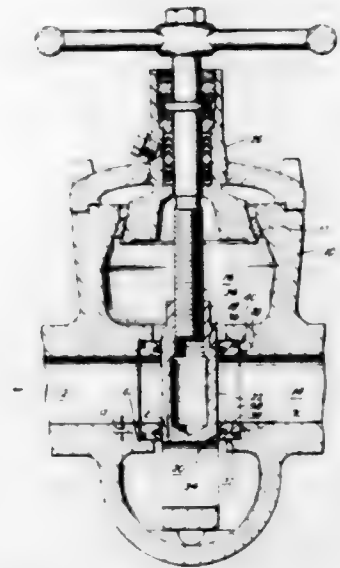
VALVE SEAT

Louis F. Eckert, Jr., Houston, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed July 20, 1959, Ser. No. 828,363
6 Claims. (Cl. 251-172)

1. A gate valve formed of a housing with a bore therethrough, a valve chamber intersecting said bore, valve gate mechanism in said chamber, facing annular recesses surrounding said bore, seat members positioned in said recesses, each said seat member comprising: an annular

ring of a lesser diameter than the annular recess whereby it loosely fits in said recess, the face of the annular ring opposing the rear wall of the recess being of reduced diameter to form a pocket, a rubber covered Belleville spring forming a rear seal positioned in said pocket, an annular resilient sealing member extending from the face



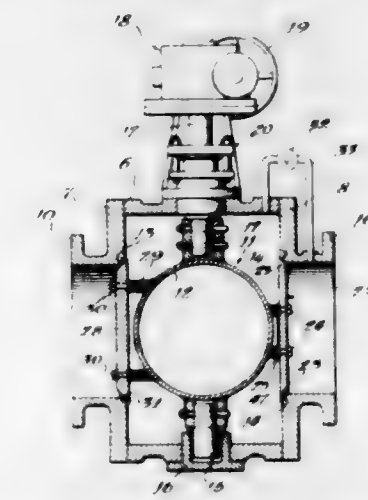
of the seat opposing the gate, the rear seal applying initial load to the seat to form an initial seal with the gate and thereafter forming a seal around the recess so that as pressure in the upstream bore increases the force of the upstream seat against the gate will be correspondingly increased.

3,006,600

ROTARY VALVE

Donald G. Fawkes, Chicago, Ill., assignor to Henry Pratt Company, a corporation of Illinois

Filed Dec. 28, 1956, Ser. No. 631,275
8 Claims. (Cl. 251-175)



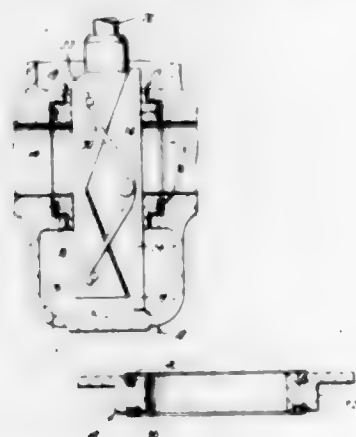
2. A rotary valve, comprising: a housing having a pair of spaced seats respectively about an inlet and an outlet, said seats being capable of sustaining scraping damage; a rotor rotatably mounted in the housing and having a hollow cylindrical body for alignment with the seats in open valve position; a disc on each side of the body cooperatively simultaneously swingable across the seats to close the valve, each said disc being positioned to swing across its seat without tight scraping contact therewith during said swinging, the upstream disc having clearance with its seat in the closed position to allow continuous but restricted flow of fluid under pressure into said housing, the downstream disc being a unitary element extending fully across the outlet when disposed across the seat thereof, and having a resiliently flexible peripheral portion for movement into contact with its seat under influence of fluid pressure within the valve

housing entering through the clearance between the closed upstream disc and its seat, said upstream disc providing a clearance with its seat in the closed position which allows a greater flow into said housing than the clearance provided by the downstream disc with its seat in the unflexed position allows out of the housing; and a vent passage in said housing having a venting capacity to relieve fluid under pressure therein faster than fluid under pressure is admitted by said upstream disc to thereby unseat said downstream disc to allow rotation of said rotor and thereby opening of said valve without damaging said outlet seat.

3,006,601

SEAT FOR GATE VALVE

Clifford E. Anderson and Louis F. Eckert, Jr., Houston, Tex., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 28, 1958, Ser. No. 724,638
1 Claim. (Cl. 251-196)



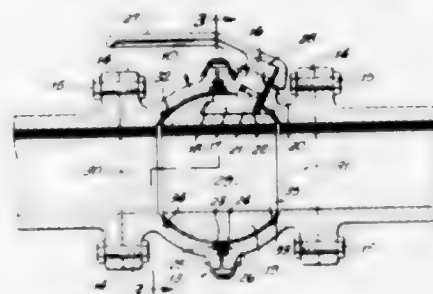
A through conduit gate valve formed of a housing with a bore therethrough, a valve chamber intersecting said bore, parallel expanding gate mechanism located in said valve chamber, said gate mechanism provided with a passage alignable with the bore in the open position and a solid portion to cover said bore in the closed position, facing annular recesses surrounding the bore, each recess having an end wall intersecting the bore, an annular wall concentric with the bore, one side open to the bore and one end open to the valve chamber, a seat member in each of said recesses, each seat member being formed of an annular ring having a passage aligned with the bore, the outer diameter of each seat member being of a lesser diameter than the annular wall of its recess whereby each seat member loosely fits into its recess, the axial length of each seat member being greater than the axial length of its recess whereby a portion of each seat member protrudes into the valve chamber to form a sealing face, each sealing face of each seat member provided with an annular groove, a deformable plastic sealing member positioned in said annular groove, said deformable plastic sealing member extending beyond the plane of the sealing face to form an area of sealing contact in cooperation with a face of the gate mechanism, each seat member having an axially outward face which opposes the end wall of its recess, said axially outward face provided with an annular groove, the inner diameter of the annular groove in the axially outward face being of a lesser diameter than the inner diameter of the groove in the sealing face, a deformable plastic sealing member positioned in said annular groove, the deformable plastic sealing member extending beyond the plane of the axially outward face, said gate mechanism expanding in fully open and fully closed positions of the valve to force the seat members into their respective recesses and establish seals between the faces of the gate mechanism and the deformable plastic sealing members of the sealing faces

of the seat members and seals between the deformable sealing members of the axially outward faces of the seat members and the end walls of the recesses, the gate mechanism contracting from such fully expanded position prior to moving from one position to another whereby, since the inner exposed area of the sealing face is greater than the inner exposed area of the axially outward face, the upstream seat member will be retained in its recess and will not result in a dragging contact with the upstream face of the gate mechanism.

3,006,602

OFFSET STEM BALL VALVE

Martin A. Usab, Costa Mesa, Calif., assignor, by mesne assignments, to Consolidated Thermoplastics Company, Stamford, Conn., a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 730,990
3 Claims. (Cl. 251-315)

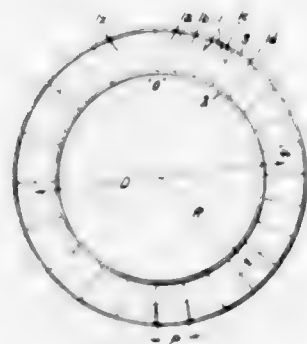


1. In a ball valve, the combination of: a valve body having first and second housing sections and means for joining said sections in assembled relationship to define a spherical valve chamber, said first and second sections having aligned inlet and outlet passages respectively communicating with the chamber, said means for joining providing for rotation of the sections relative to each other about the axis of said passages, one of said sections having a radial opening therethrough at an oblique angle to said axis; a ball having a stem slidably inserted into said radial opening from within said chamber, said ball having a passage therethrough for alignment with said inlet and outlet passages, said stem being rotatably mounted in said opening for movement of said ball between open and closed positions of the valve; and first and second annular gaskets carried in said first and second housing sections respectively for contacting said ball in sealing engagement and positioning said ball within said chamber.

3,006,603

TURBO-MACHINE BLADE SPACING WITH MODULATED PITCH

William J. Caruso and Boris M. Wundt, Fitchburg, Mass., assignors to General Electric Company, a corporation of New York
Filed Aug. 25, 1954, Ser. No. 452,036
13 Claims. (Cl. 253-39)



11. In a fluid-dynamic turbo-machine, the combination of a first nozzle member with an annular row of fluid delivering nozzles, a relatively rotatable wheel having

a circumferential row of blades adapted to receive motive fluid from said nozzles, both said nozzles and said blades having a frequency of spacing which changes progressively and substantially uniformly, the pattern of said frequency changes occurring only once around the complete periphery of the respective nozzle and wheel members.

3,006,604

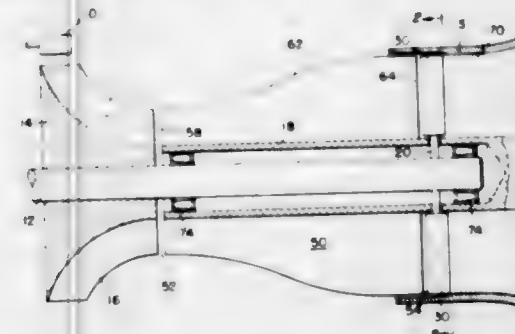
SELF-REVERSING EXDUCER FOR GAS TURBINES

Charles La Forest Miller, 5108 Seventh Road S., Arlington, Va.

Filed Dec. 2, 1958, Ser. No. 777,797

2 Claims. (Cl. 253-52)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A gas turbine comprising an inner drive shaft having an impeller fixedly mounted thereto at one end, fluid means for selectively rotating said inner drive shaft in either direction, an outer tubular power shaft mounted concentrically of the drive shaft, said outer power shaft having one end disposed adjacent the impeller and its other end disposed beyond the other end of the inner drive shaft, a plurality of baffles fixed to and extending axially along the outer wall of the power shaft providing fluid passageways therebetween, each of said passageways having a fluid inlet at said one end of the power shaft adjacent the impeller and an outlet at said other end of the power shaft, a group of equally spaced slots in said power shaft extending circumferentially thereof and a group of equally spaced blades extending radially and circumferentially of the inner drive shaft and having supporting means extending through said slots and secured to said shaft, said slots and blades being equal in number providing a group of blade and slots lost motion connections between the shafts, alternate blades of said group having opposed faces of concave shape and other blades of the group having opposed faces of convex shape, adjacent blades of the group providing a cooperating pair of concave and convex faces, said lost motion connections being constructed and arranged on rotation of the inner drive shaft in one direction to position cooperating pairs of faces adjacent the outlet of each passageway for deflecting fluid from the passageways in the opposite direction from that of said one direction of rotation of the inner drive shaft and on rotation of the inner drive shaft in the other direction to position other cooperating pairs of faces adjacent the outlets of the passageways for deflecting the fluid from the passageways in the opposite direction to that of said other direction of rotation of the inner drive shaft.

3,006,605

BLADED ROTOR AND THE LIKE FOR AXIAL FLOW FLUID MACHINES

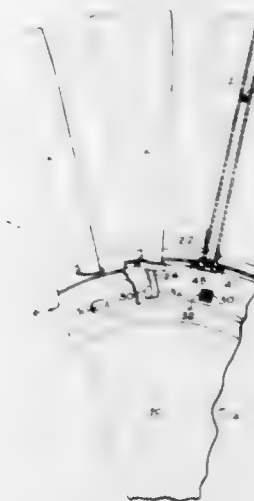
Edward A. Stalker, 406 N. Farragut St., Bay City, Mich.

Filed June 4, 1958, Ser. No. 739,832

6 Claims. (Cl. 253-77)

1. In combination in an axial flow rotor adapted to change the pressure of a fluid, a metal sheet defining a blade support disk having an axis of rotation and having

a plurality of prepierced peripherally spaced holes there-through, a plurality of blades peripherally spaced about said disk with the spans thereof extending radially outward from said disk relative to said axis, each said blade having an integral leg positioned along an axially facing side of said disk with a tenon thereof in a said hole in radially outward bearing relation on said disk for the engagement thereof by said tenons to support the blade by said disk against centrifugal force in operation of said rotor, each said tenon being of generally flat form extending in the general radial direction defining a generally

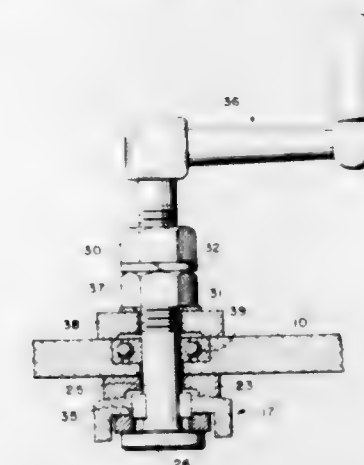


rectangular cross section thereof at said disk to provide sufficient radial extent of said tenon to support said blade against centrifugal force in use, said prepierced holes having a generally rectangular cross section conforming closely to said cross section of said tenon for the receipt thereof within said holes in close fitting relation, said tenons being brazed to said disk at the sides of said holes thereof and rim means secured to said disk, said rim means encircling said disk with the rim thereof extending from front to rear of said blades and from blade to blade to sustain variations in said fluid pressure.

3,006,606

LEVELING DEVICE

Norman R. Pohl, Miamiville, and Robert H. Knese, Cincinnati, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,206
1 Claim. (Cl. 254-101)



In a device for adjustably supporting a radar antenna platform member relative to a ground member, the combination of a hollow externally threaded lower jack screw member, an internally threaded nut formed as a base member secured to the ground member and being adjustably engaged by the jack screw to provide vertical positional adjustment of the jack screw relative to the ground member, a hollow upper jack screw member

formed with a downwardly depending nut portion fixedly secured to the jack screw and with an inwardly extending flange, a first washer inserted between said flange and said platform, a bolt having a vertically extending stem projecting through said platform and a head overlapping the lower side of said flange, a second washer inserted between said head and said flange, said first washer and said flange being formed with complementary concave and convex surfaces, respectively, to permit limited tilt of the platform relative to the upper jack screw member, a key securing said flange to said stem for rotation therewith, roller bearing means imbedded in said platform for journaling said stem, lock nut and washer means concentric with said stem and disposed upwardly of said platform for securing said bolt against vertical displacement, and a crank for rotating the subassembly of stem, key, and jack screw members to adjust the vertical position of said platform member.

3,006,607

METHOD AND APPARATUS FOR INTRODUCING LINES THROUGH CONDUITS

James C. Hamrick, Charlotte, N.C., assignor to Jet Line Products, Inc., Charlotte, N.C., a corporation of North Carolina

Filed Oct. 22, 1959, Ser. No. 848,119
7 Claims. (Cl. 254-134.4)



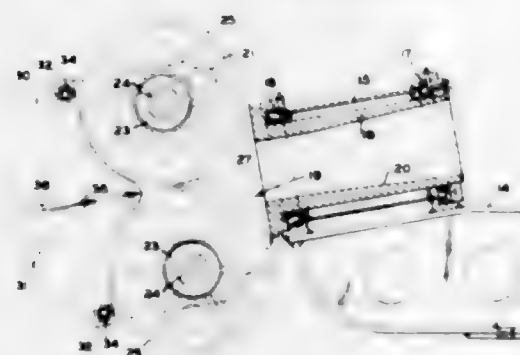
1. The method of introducing a pliable line through a conduit having at least one angular bend therein comprising the steps of directing fluid pressure against a flexible line package having an outer diameter less than the internal diameter of the conduit, blowing the line package freely through the conduit by the fluid pressure, guiding the line package past all angular bends in the conduit by flexing the line package to substantially conform to the shape of each such angular bend as it moves therethrough, and paying out line from the line package in response to the movement of the line package through the conduit.

3,006,608

DRAGLINE FAIRLEAD

Charles Cimino, Lorain, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio

Filed June 10, 1958, Ser. No. 741,133
1 Claim. (Cl. 254-190)



A dragline fairlead comprising a sheave frame having a tubular shank portion and carrying a pair of sheaves for rotation about parallel axes that are spaced apart a distance such that the pitch diameters of said sheaves

are tangent, each sheave being formed with a peripheral groove of approximately semi-circular cross-section, said sheaves thus forming a circular passage therebetween, said circular passage being aligned with the center line of said tubular shank portion of said sheave frame; spaced tapered bearing means supporting said tubular shank for turning about an axis coincident with the center line of said tubular shank portion, said axis being tangent to both said sheaves; and cable guide members fixed to said sheave frame and having central opposed ridges and uniformly sloping sides facing one another, elongated spacing collars between said guide members for firmly holding said guide members apart, said collars being at the outer extremities of said guide members on opposite sides of said ridges and being outwardly spaced from said tubular shank bearing portions a distance, along the axis of said center line of said tubular shank, greater than the diameter of said sheaves whereby said sheaves may be laterally removed from said frame without disassembling said fairlead, the outer edges of said guide members being arcuate, with the center of said arcuate edges being the tangent point of said sheaves and said axis, said guide members along said ridges thus extending substantially outwardly as far from the tangent point of said sheaves as the outer extremities of said guide members and providing an equal elongated moment arm for all cable positions so that when a cable extending tangentially between said sheaves is pulled at an angle to the plane of said sheaves and to the center line of said tubular shank portion, the cable is caused to slide along one of said uniformly sloping sides thus exerting a turning force on said sheave frame through such elongated moment arm.

3,006,609

FLUIDIZED HEAT EXCHANGER

Andrew J. Anthony, Tarryville, Conn., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York

Filed Sept. 12, 1955, Ser. No. 553,662
1 Claim. (Cl. 257-55)



Regenerative heat exchange apparatus for the transfer of heat from a heating fluid to a fluid to be heated comprising in combination a first conduit that defines a passageway for the heating fluid and a second conduit subjacent thereto that defines a passageway for the fluid to be heated; storage means for particulate material positioned above the first conduit; a first aspirator in the first conduit having a suction inlet in the storage means adapted to draw particulate material from the storage means into the first conduit in response to the flow of the heating fluid therethrough; collecting means in the first conduit adapted to remove heated particulate matter from the heating fluid; a second aspirator in the second conduit having a suction opening in the collecting means of the first conduit adapted to draw heated particulate material into the second conduit in response to the flow of the fluid to be heated therethrough; a second collecting means in the second conduit adapted to effect release of particulate material from the fluid; and means adapted to lift particulate material from the second collecting means to the storage means for a repeat cycle of operation.

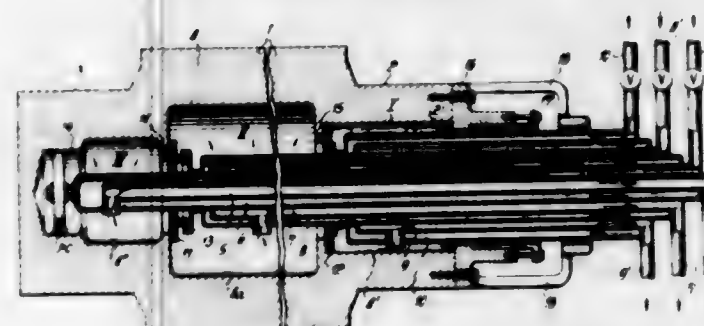
STEAM AND HOT WATER HEATING DEVICE FOR CALENDER ROLLERS

Peter Siegel, Krefeld, Germany, assignor to Joh.

Kleinschmieders Söhne, Krefeld, Germany

Filed Aug. 21, 1959, Ser. No. 835,240

Claims priority, application Germany Sept. 4, 1958
14 Claims. (Cl. 257-95)



1. In combination for use in connection with calenders and the like: a roller provided with an axial bore subdivided into a plurality of bore sections, conduit means mounted in said bore and extending thereinto from the outside of said roller for conveying heating fluid into and discharging fluid from said bore, and sealing means surrounding said conduit means and sealing at least some of said bore sections with regard to each other, said conduit means including means for individually and independently conveying heating fluid to and discharging fluid from at least some of said bore sections.

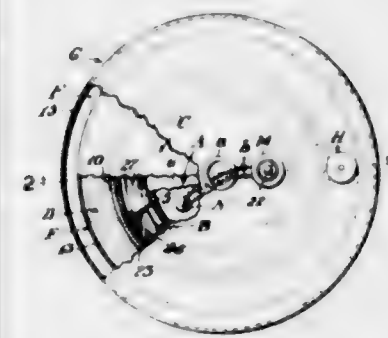
3,006,611

HEAT EXCHANGE APPARATUS

Timothy Isham, 532 S. Hobart Blvd., Los Angeles, Calif.

Filed June 18, 1959, Ser. No. 821,280

5 Claims. (Cl. 257-191)



1. In a heat exchange apparatus, a housing adapted to contain a source of heat, a casing encompassing said housing and enclosing a vacuum chamber, a heat conductive flange on said housing leading spirally therearound, a reciprocal heat-gate in said vacuum chamber, a heat conductive flange embodied in said gate disposed in overlying relation to the flange on said housing in normal spaced relation thereto, means for actuating said heat-gate to dispose said flanges into superficial contact with each other, and means for conducting heat from said heat-gate.

3,006,612

HEAT EXCHANGERS

Richard M. Herbert, York, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Mar. 17, 1958, Ser. No. 721,739

6 Claims. (Cl. 257-241)

1. A heat-exchanger comprising, a pair of opposed walls in spaced parallel planes; a corrugated, spirally wound baffle plate extending between and enclosed by said walls, the corrugations being normal to the plane of said walls, the convolutions of said baffle plate being

spaced apart to provide a spiral fluid passageway between the convolutions normal to said corrugations and having an inlet and an outlet; and a tube bundle having



an inlet and an outlet, said tube bundle being spirally wound in said fluid passageway in a plane normal to said corrugations forming a second fluid passageway.

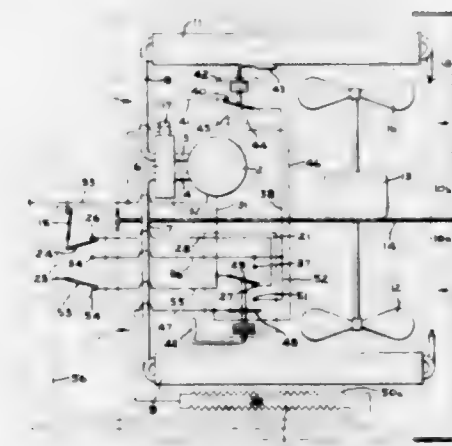
3,006,613

SELF-CONTAINED AIR CONDITIONING APPARATUS ADAPTED FOR HEATING, COOLING AND DEHUMIDIFICATION

Gerard G. Coyne, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Mar. 21, 1960, Ser. No. 16,474

3 Claims. (Cl. 257-290)



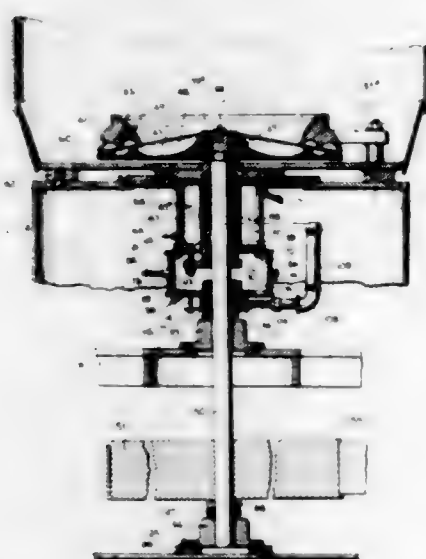
1. In a self-contained air conditioning unit for heating and cooling an enclosure, a reversible cycle refrigeration system having indoor and outdoor interconnected heat exchangers, each of said heat exchangers operable interchangeably as a condenser or as an evaporator, means for circulating an air stream from indoors over said indoor heat exchanger and means for circulating an air stream from outdoors over said outdoor heat exchanger, means to condition said refrigeration system for operation on the heating cycle with the inside heat exchanger operating as a condenser, means to condition said system for operation on a cooling cycle with the inside heat exchanger operating as an evaporator, an auxiliary heater for heating air from said enclosure, said auxiliary heater being arranged on the downstream side of said indoor heat exchanger, a thermostat arranged on the upstream side of said indoor heat exchanger in said indoor air stream, said thermostat including a compressor control switch responsive to the temperature of said indoor air stream for energizing an electrical circuit to said compressor according to the temperature of said indoor air stream, said thermostat also having a heater switch adapted to energize a circuit including said auxiliary heater when said temperature within said enclosure falls a certain number of degrees below a predetermined temperature, and a normally open overriding heater switch

for energizing a circuit including said auxiliary heater under indoor air temperature conditions which would normally cause said thermostat heater switch controlling said auxiliary heater to de-energize said heater thereby permitting selective operation of said auxiliary heater during cooling operation of said air conditioning unit to permit de-humidification of said indoor air.

3,006,614 CUPPED TYPE ROTOR AND VACUUM STUFFING BOX

Edward J. Beach, Brooklyn, N.Y., assignor to Abbe Engineering Co., New York, N.Y., a corporation of New York

Filed Apr. 20, 1959, Ser. No. 807,627
3 Claims. (Cl. 259—104)



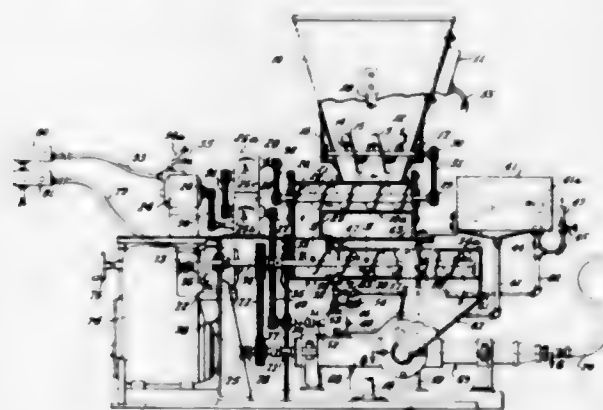
1. A mixing apparatus, comprising a closed tank having a removable cover and a bottom, means for establishing a vacuum in the tank, paddles rotatably supported in the tank for circulating the contents thereof, a stationary milling element supported near the bottom of the tank, a rotatable milling element supported for rotation adjacent the stationary milling element, a drive shaft extending through the bottom of the tank, a pair of spaced bearings, said shaft being rotatable in said bearings, a stuffing box with packing, sealing the tank against leakage, means for cooling the packing in the stuffing box by means of circulating liquid, means for maintaining the packing of the stuffing box under vacuum to prevent air from reaching the tank via the stuffing box, the last-named means including a cylindrical housing, said housing being formed by a pair of semicylindrical plates, said plates having edges disposed in abutment with gaskets therebetween, clamping means securing the plates together, means for creating a vacuum in said housing, said housing having a bottom formed with a reentrant well, means for supplying water to said well, a sealing ring movably seated in the well, and spring means in the well holding the sealing ring seated in the well and sealing the housing to maintain the vacuum therein.

3,006,615
CONTINUOUS MIXING, METERING AND DELIVERING APPARATUS
Walter R. Mason, Jr., Cincinnati, Ohio, assignor to Hoge Warren Zimmermann Co., Cincinnati, Ohio, a corporation of Ohio

Filed July 5, 1957, Ser. No. 670,282
10 Claims. (Cl. 259—154)

1. A continuous metering, mixing and delivery apparatus comprising a hopper for dry material, a ribbon type conveyor horizontally disposed in the lower part of said hopper, a solid flight metering screw conveyor also dis-

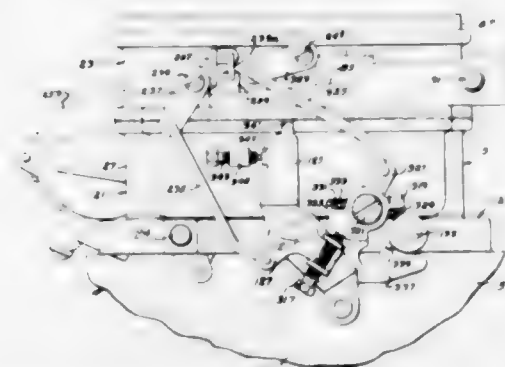
posed in said hopper beneath and parallel to said ribbon type conveyor, there being a relatively small space between said ribbon type conveyor and said solid flight conveyor, vibrating means for said hopper, said ribbon type conveyor urging the material in a given direction and said solid flight conveyor urging the material in the opposite direction, the delivery end of said ribbon type conveyor terminating adjacent the input end of said second screw, a water pump, means to maintain a constant head against said pump, a horizontal mixing tube, a conveyor screw in said mixing tube, said tube having a loading aperture at one end and a discharge opening at the other end, means for introducing material from said solid flight conveyor into said tube through said



loading aperture, conduit means from said water pump to said tube, means adjacent said loading aperture to introduce water pumped through said conduit means by said water pump into said tube, a receptacle beneath said discharge opening to receive a slurry of mixed material and water from said tube, a slurry pump, means to introduce said slurry from said receptacle into said slurry pump, conduit means for leading the mixed slurry from said pump, and means to drive said ribbon type conveyor, said vibrating means, said water pump, said conveyor screw and said slurry pump, said last mentioned means including a first motor for driving said ribbon type screw, said solid flight screw and said water pump, and a second motor for driving said conveyor screw and said slurry pump.

3,006,616
MULTI-BARREL CARBURETOR
Harold A. Carlson, Brentwood, Olin J. Eickmann, St. Louis, and Robert J. Smith, St. Anns, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

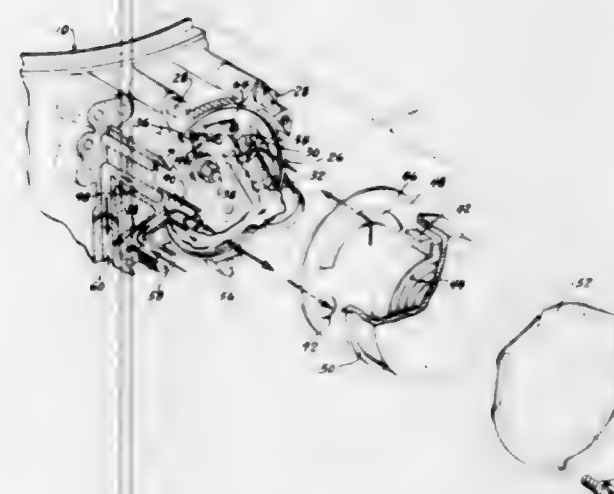
Filed Jan. 5, 1959, Ser. No. 784,986
8 Claims. (Cl. 261—23)



1. In a carburetor having a first mixture conduit and a second mixture conduit, vertically spaced first and second venturis in their respective conduits, nozzles to discharge fuel into their respective venturis, a first reservoir for containing fuel to be supplied to the first conduit, a second reservoir for containing fuel to be supplied to

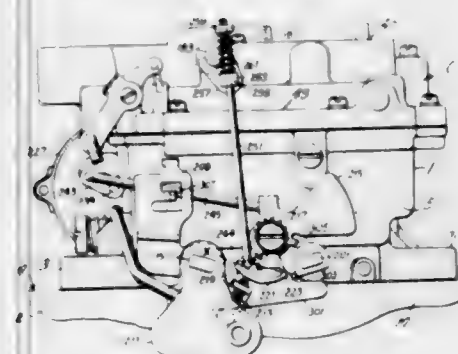
the second conduit, said second reservoir having a fuel inlet adapted to be connected to a source of fuel, and a fuel outlet to supply fuel by gravity into the first reservoir when the head of fuel in the second reservoir increases above a predetermined level, and means including a valve in said inlet for controlling the flow of fuel from said source into said second reservoir to cut off flow of fuel from said source when the fuel in the first reservoir reaches a predetermined level below the level of fuel in the second reservoir.

3,006,617
AUTOMATIC CHOKE ADJUSTMENT
James T. W. Moseley, Grosse Pointe Park, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Mar. 20, 1958, Ser. No. 722,758
13 Claims. (Cl. 261—39)



1. In a carburetor for an internal combustion engine, a choke valve, a source of suction related to engine operation, temperature responsive means influencing the position of said choke valve, pressure responsive means communicating with said source of suction and being operatively connected to move said choke valve, and second temperature responsive means for increasing the amount of choke movement due to said pressure responsive means in accordance with increase in temperature without restricting the operativeness of said pressure responsive means.

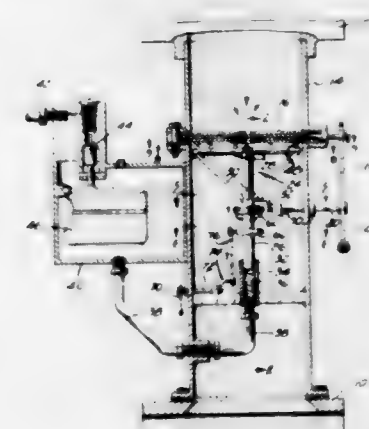
3,006,618
AUTOMATIC CHOKE MECHANISM
Harold A. Carlson, Brentwood, and Wenford E. Highley, Normandy, Mo., and Morris C. Brown, Pontiac, Mich., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Feb. 3, 1959, Ser. No. 790,957
6 Claims. (Cl. 261—39)



1. In a carburetor for an internal combustion engine, said carburetor having a mixture conduit, a throttle valve and a choke valve for said mixture conduit, means re-

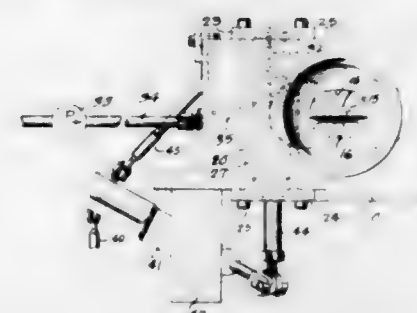
sponsive to engine temperature for controlling the position of the throttle valve at idle and for controlling the position of the choke valve, said control means being adapted to establish a fast idle position of the throttle valve when the engine is cold and a normal idle position of the throttle valve when the engine is warmed up, said control means being adapted to hold the choke valve closed when the engine is cold and to allow the choke valve fully to open before the engine is warmed up, and means interconnecting the throttle valve and said control means for moving the choke valve in closing direction in response to opening of the throttle valve.

3,006,619
APPARATUS FOR CARBURETION
Robert A. Greene, Daytona Beach, Fla.
Filed Sept. 22, 1958, Ser. No. 762,369
14 Claims. (Cl. 261—41)



1. In a carburetor; means forming a vertical air passage, a plurality of fuel supply jets in distributed relation in said air passage, first means operable for moving said jets vertically in the air passage thereby to vary the rate of fuel flow through the jets, second means adjacent the supply jets for varying the effective area of said air passage, and said first and second means being interconnected for simultaneous movement during at least a part of the respective movements thereof.

3,006,620
CARBURETORS
John J. Cybart, Jr., 62 Sunnyside Drive, Shelton, Conn.
Filed Nov. 3, 1958, Ser. No. 771,489
5 Claims. (Cl. 261—50)



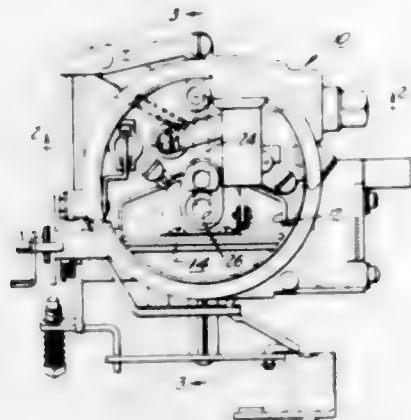
1. A carburetor comprising a body including an air passage adapted for connection to an engine inlet manifold, means for feeding fuel to said air passage comprising a hollow sleeve mounted in the body provided with an inlet opening in one side and an outlet opening on the other side communicating with a fuel passage leading to the air passage, a sliding valve in said sleeve provided with a chamber open on one side in alignment with the inlet and closed on the opposite side over the outlet, said closed side provided with a series of small holes there-through spaced from each other longitudinally of the

valve, means for connecting the inlet to a supply of fuel under pressure, and means for sliding the valve to bring one or more of the small openings into alignment with the outlet to supply fuel thereto.

3,006,621

CARBURETOR

Albert H. Winkler, Elmira, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 15, 1960, Ser. No. 15,085
4 Claims. (Cl. 261-69)



1. In a carburetor, an induction passage, a fuel bowl, a fuel discharge jet connecting said fuel bowl to said induction passage, a metering restriction in said jet, a fuel well connected at one end to said jet downstream of said restriction, a tube in said well spaced from the side walls of said well, means sealing the space between said tube and said well at said one end of said well, a conduit connecting said well intermediate the ends of said tube with said fuel bowl, and valve means responsive to an engine operating condition for controlling the flow through said conduit.

3,006,622

FLUID CONTACT SYSTEM

Yoshiharu Shimokawa, Kawasaki-shi, Japan, assignor to Chiyoda Kako Kensetsu Kabushiki Kaisha, Tokyo-to, Japan, a corporation of Japan
Filed Aug. 20, 1958, Ser. No. 756,247
Claims priority, application Japan Aug. 26, 1957
3 Claims. (Cl. 261-79)



1. A counter-current fluid contacting device comprising a plurality of concentric cylinders, a tangential inlet to the outer of said cylinders for the admission of a light fluid in a circumferential direction, a center inlet to the inner of said cylinders for the admission of a heavy fluid, center outlets to said inner cylinder for exit of said light fluid, a tangential outlet from a cylinder intermediate said inner and outer cylinders for the exit of said heavy fluid, a plurality of tangential fine slits defined by and interconnecting said concentric cylinders, said slits slanted to cause the tangential flow of said light fluid from outer to inner cylinders in the same circumferential direction of flow and for the tangential passage outward of heavy fluid urged by centrifugal force in the same circumferential direction as the flow of said light fluid.

3,006,623
FLUID DISTRIBUTOR FOR PACKED COLUMNS

James Francis Ross and Richard Hall Hudson, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,444
2 Claims. (Cl. 261-110)

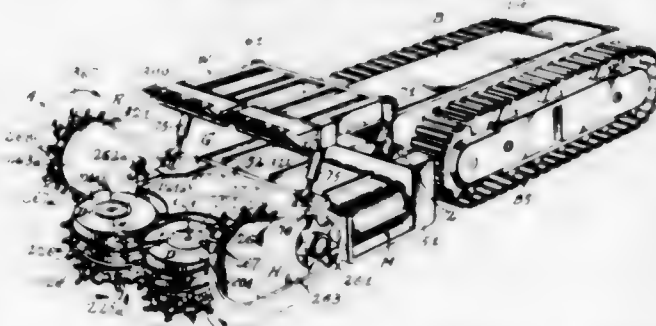


1. In a column, improved means for distributing the downflowing liquid which comprises at least one horizontal plate member secured to the inner wall of said column, a plurality of chimney members mounted on said plate for the passage of lighter fluid upwardly there-through, a downcomer for the downward discharge of liquid accumulating on said plate, a liquid distributor arranged to receive the liquid from said downcomer comprising a vertical cylindrical, thin-walled member, arranged in spaced relation to the inner wall of the column, vertical slits uniformly spaced around the lower portion of said cylindrical member dividing said lower portion of said cylindrical member into a multiplicity of elongated fingers, at least a portion of said fingers being bent in the form of a smooth curve so that the free ends of said fingers are arranged in a suitable pattern to distribute the downflowing liquid in the desired manner directly over the cross-section of the column, slots of uniform depth cut in the top portion of said cylindrical member to provide an overflow weir above each of said fingers, a plate member arranged within the upper part of said cylindrical member below the bottom of said weir slots forming a tray or reservoir of liquid which may thus overflow through said weir slots and thence onto and down the said fingers.

3,006,624

CONTINUOUS MINING MACHINE HAVING VERTICAL CUTTING ROTORS

Frank Doxey, Sydney, Nova Scotia, Canada, assignor to Dominion Coal Company, Limited, Sydney, Nova Scotia, Canada
Filed Apr. 15, 1958, Ser. No. 728,698
Claims priority, application Canada Feb. 25, 1958
6 Claims. (Cl. 262-9)



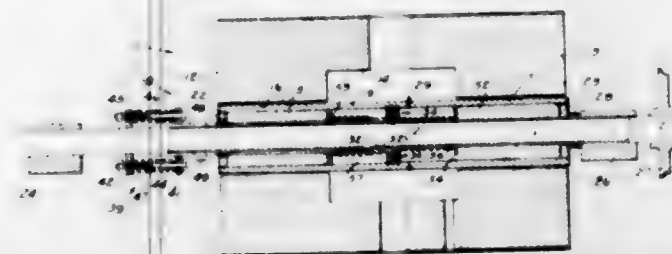
5. A cutting rotor for mining machinery comprising a cylindrical body provided with spirally arranged lands intervened by flutes, said lands being provided with spaced-apart cutting-bits, said rotor having a vertical axis and a top face inclined in the same sense as said lands

with respect to a plane perpendicular to said vertical axis thereby being adapted to fling material in an upward and rearward direction with the rotation of the rotor about said axis.

3,006,625

FURNACE SHAFTS

Frank J. Boron, Elyria, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,321
8 Claims. (Cl. 263-6)

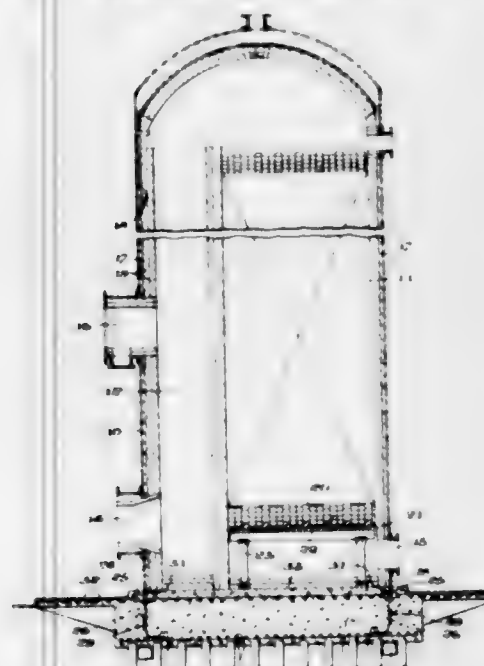


8. A support assembly adapted to be continuously subjected to high ambient temperatures and comprising, an outer tubular shaft, an inner support shaft adapted to be cooled below the temperature of said outer shaft, said outer shaft being movable in longitudinal and radial directions with respect to said inner shaft by a varying temperature differential between said shafts, and support means for supporting a central portion of said outer shaft from the inner shaft for any temperature differential therebetween, said support means comprising first and second members each having mating complementary tapered surfaces, said first member being mounted on the inner shaft, and said second member being fixed for longitudinal movement with said outer shaft in a manner such that the tapered surface of said second member is substantially continuously in sliding contact with the tapered surface of said first member during longitudinal and radial movement of said outer shaft.

3,006,626

BLAST FURNACE STOVE BOTTOM CONSTRUCTION

Edward A. Lejeck, Pittsburgh, and Archie J. Merritt, East McKeesport, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,688
4 Claims. (Cl. 263-19)



1. A blast furnace stove bottom construction comprising: a concrete foundation mat for the bottom of a blast furnace stove, a steel plate bottom section for the

vertical shell portion of a checkerwork containing stove with the bottom section accurately leveled in the concrete foundation mat for the stove, the lower portion of the bottom section being embedded in the mat below the top but above the base thereof and the upper portion of the bottom section projecting above the top of the mat in position for the uniting therewith of the next vertical section of the shell, and anchor rods rigidly integral with the bottom section terminating at their upper ends below the top of the mat and extending downwardly into the portion of the mat below the lower extremity of the bottom section therein and anchored there in the concrete of the mat.

3,006,627

DAMPING APPARATUS, PARTICULARLY OF THE ARTICULATED TYPE, FOR SUSPENSION SYSTEMS OR OTHER OSCILLATING ASSEMBLIES

Jean-Felix Paulsen, Paris, France, assignor to Societe Luxembourgeoise de Brevets et de Participations, Luxembourg, a Luxembourg society
Filed June 24, 1957, Ser. No. 667,333
Claims priority, application France June 25, 1956
1 Claim. (Cl. 267-57.1)

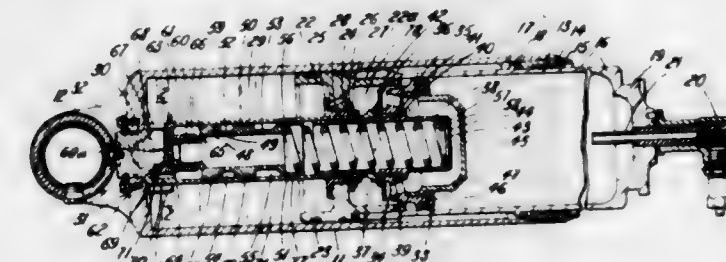


Damping apparatus for an oscillating assembly comprising a sleeve member defining a cylindrical bore, a cylindrical member disposed coaxially in the bore and having its central portion spaced from the sleeve member by an annular clearance of about $\frac{3}{100}$ to $\frac{3}{10}$ millimeter and having end portions of greatly reduced diameter relative to said central portion thereof, means mounting the cylindrical member and the sleeve member for relative rotation in response to oscillation of the assembly including resilient means tightly engaged between the sleeve member and said end portions of the cylindrical member whereby the members are relatively movable transverse one another, and a fluid material consisting essentially of polyisobutylenes having a molecular weight of about 5,000-8,000 disposed in said clearance to damp the rotational and transverse movements of the members.

3,006,628

FLUID-DAMPED SHOCK ABSORBERS

Reginald Utting, Gloucester, England, assignor to Rotol Limited, Gloucester, England, a British company
Filed Apr. 27, 1959, Ser. No. 809,183
Claims priority, application Great Britain June 13, 1958
10 Claims. (Cl. 267-64)



1. A shock absorber comprising an outer tubular member and an inner tubular member telescoping within the outer member, a piston on the end of the inner member within the outer member and in substantially fluid-tight connection with the interior of said outer member, said tubular members defining two fluid chambers one on

each side of said piston, a hollow tube located within said outer member and being axially movable as one with said outer member, said tube extending in fluid tight relationship through said piston, and having flow passages therethrough connecting the chamber defined by the outer tubular member with the interior of the hollow tube, and an opening through which the interior of the hollow tube is in fluid communication with the chamber defined by the inner tubular member, a piston valve slidable within said tube and having a piston face subject to the pressure in the chamber defined by the outer tubular member, said piston valve having a permanently open constriction therethrough also placing the chamber defined by the outer tubular member in communication with the interior of the hollow tube, and resilient means urging said piston valve into a position in which it closes off said flow passages in the hollow tube.

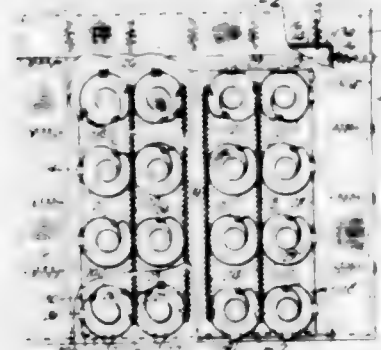
3,006,629

BASE CONSTRUCTION FOR CHAIRS, COUCHES AND THE LIKE

Louis S. Sinykin and Alex C. Olsen, Minneapolis, Minn., assignors to Levin Bros., Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Sept. 9, 1958, Ser. No. 759,944

5 Claims. (Cl. 267-99)



1. A base construction for chairs, divans and the like, comprising a rigid generally rectangular frame having opposite sides and also having ends, a spring construction comprising a plurality of separate spring units assembled in side by side spaced relation, with the ends of said units disposed adjacent the opposite sides of the frame, each unit including a plurality of upright coiled springs arranged in a plurality of aligned rows spaced from each other, each row including a plurality of side-by-side coiled springs engaging each other, each unit also including resilient means tying the springs in each row together and also tying the spaced rows of springs together, a frame wire having a generally rectangular shape and enclosing said assembly of side-by-side spring units at the top convolutions of said coiled springs, and said frame wire having opposite sides extending across and between the ends of said spring units, means securing said frame wire to the top convolutions of said coiled springs, and means supporting and connecting the lower convolutions of the springs in said units to said frame.

3,006,630

WIND TUNNEL ACCESS MECHANISM

Oscar C. Holderer, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

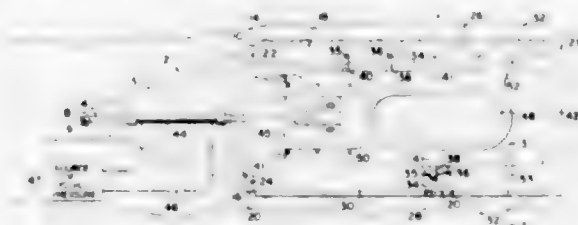
Filed Sept. 9, 1960, Ser. No. 55,100

8 Claims. (Cl. 268-66)

(Granted under Title 35, U.S. Code (1952), sec. 266)

8. A wind tunnel access mechanism secured to a wind tunnel comprising: a U-shaped member provided with a pair of spaced parallel channels, and a plurality of apertures joining said channels with the inner portion of said member; means for providing access to said channels; a pair of bars arranged for movement in said channels,

said bars being provided with a plurality of angled slots intermediate their ends, and an aperture in each end; means, adapted to engage one of the end apertures in each of said bars, for locking said bars in place; a plurality of bolts having one end extending thru said plurality of apertures and their other end slidably connected with said slots; a hinge having one end connected to the base portion of said U-shaped member; a movable member connected, adjacent one of its ends to the other end of said hinge, said movable member being provided with a plurality of apertures in alignment with said apertures in



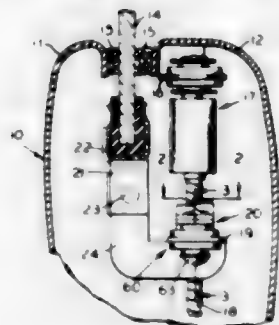
said U-shaped member; means secured to said movable member, adjacent its other end, for controlling the means for locking said bars, when said movable member is actuated; a triangular member having its base pivotally secured to the aperture in one end of said bars, adjacent said hinge, said triangular member being provided with an oblong slot adjacent its vertex; stationary means, extending thru said slot, for slidably retaining said triangular member; means having one end pivotally attached to said triangular member and its other end pivotally secured to said hinge for actuating said movable member; and means for controlling operation of said last-named means.

3,006,631

MOTION-TRANSMITTING MECHANISM

Ralph H. Wise, Davis Island, Tampa, Fla., assignor to The Anderson Company, a corporation of Indiana
Continuation of application Ser. No. 514,575, June 10, 1955. This application Sept. 18, 1958, Ser. No. 761,753

12 Claims. (Cl. 268-124)



1. In a window regulator for a window movable into and out of a vehicular body component and actuatable by a nut assembly carried by the window for travel along a rotatable threaded shaft, the improvements in said nut assembly which comprise a carrier mounted on the window, a plurality of rotatable shaft-engaging elements journaled by said carrier, one of said elements also being movable relative to said carrier in a plane radial to said shaft, and spring means carried by said carrier and engaging said one element to bias the same in said radial plane toward the shaft.

3,006,632

ELECTRODE POSITIONING MEANS

Carl L. Fuller, Wellsville, N.Y., assignor to Apra Precipitator Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 17, 1958, Ser. No. 774,446

1 Claim. (Cl. 269-115)

Means for temporarily positioning a cylindrical discharge electrode coaxially within a regular polygonal col-

lecting surface comprising a pair of diametrically slotted positioning disks arranged in face-to-face engagement with their diametric slots opening in opposite directions to provide a composite annular member surrounding the discharge electrode, said disks having an outer diameter



somewhat less than the distance between sides of the polygonal collecting surface; and a protuberance extending axially and in the same direction from the face of each disk adapted to permit their insertion into the collecting surface and around the discharge electrode in a plane normal to the longitudinal axes of said electrode.

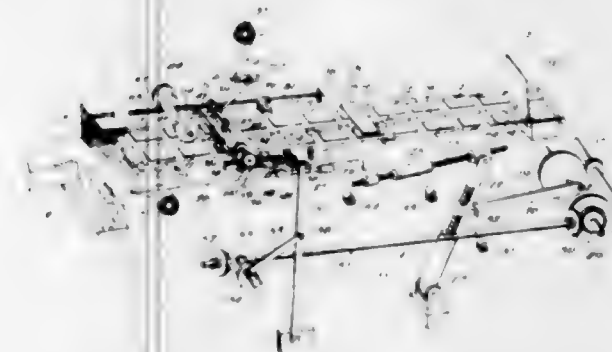
3,006,633

LINING REGISTER CONTROL FOR A CASE FORMING MACHINE FOR BOOKS

Robert L. Schoenberger, Jr., Crawfordsville, Ind., assignor to R. R. Donnelley & Sons Company, a corporation of Delaware

Filed Oct. 2, 1958, Ser. No. 764,933

5 Claims. (Cl. 270-52)



1. In a case maker, means for providing a plurality of liners seriatim in accurate registration with a plurality of travelling case elements, comprising: a liner supply device; means transferring the liners seriatim in a predetermined spaced relationship from the liner supply device to the case elements; and means for effecting a lineal phase displacement between the liner supply device and the transferring means including mechanism coordinated with the travel of the case elements for adjusting the position of the liner supply device bodily relative to the transferring means to adjust the phase position of the liners in the transferring means and resultingly the position of the liners relative to the case elements.

3,006,634

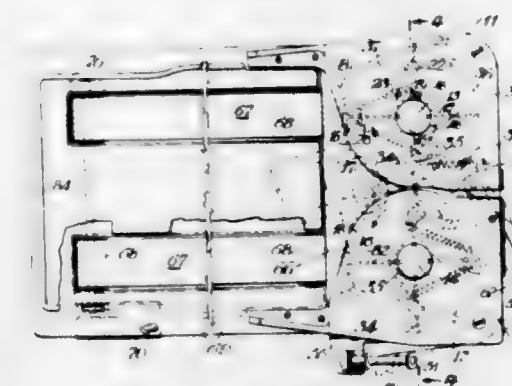
FANFOLDING MACHINE

Joseph L. Lawrence, San Francisco, and Philip H. Allen, Saratoga, Calif., assignors to Cycle Equipment Company

Original application July 23, 1954, Ser. No. 445,342, now Patent No. 2,910,292, dated Oct. 27, 1959. Divided and this application Mar. 20, 1959, Ser. No. 800,756

7 Claims. (Cl. 270-73)

1. In a fanfolding mechanism, a frame, folding mechanism on said frame, said frame including parts providing a passage for tape through the folding mechanism



through the folding mechanism, and conveyor means on said platform for exerting a feeding action on the folded tape received from the folding mechanism, whereby the presence of static electricity on the tape does not interfere with its progress.

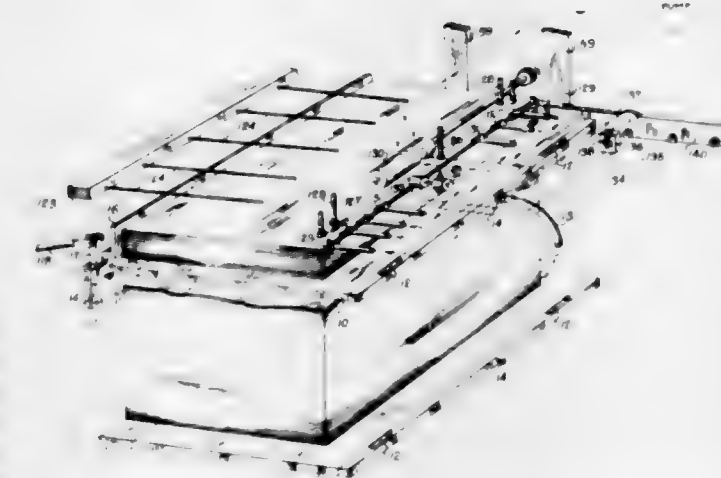
3,006,635

METHOD AND MEANS FOR FEEDING SHEETS

Thomas J. Elliott, Cleveland, and Sherman S. Watts, Shaker Heights, Ohio, assignors to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

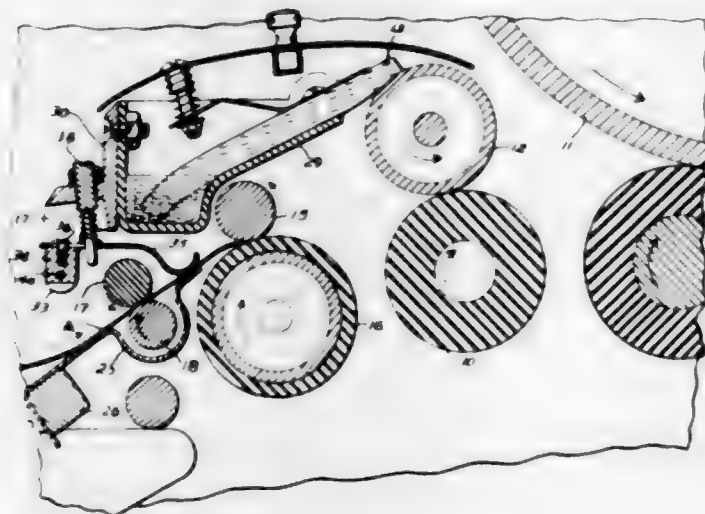
Filed Dec. 13, 1957, Ser. No. 702,604

19 Claims. (Cl. 271-30)



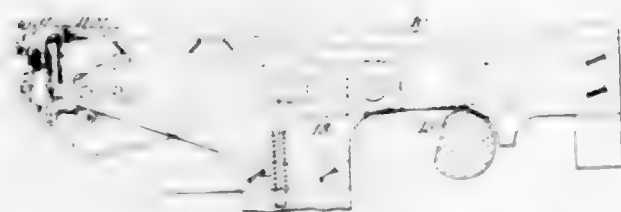
1. In a sheet feeder, stacking gauges for the forward edges of a pile of sheets, a transverse baffle at the upper ends of the stacking gauges flush with the rear faces thereof, a pair of pull-in rolls disposed forward of and slightly above said baffle, a hinged flap adjoining the upper edge of said baffle having an up position flush with the rear surface of the baffle and a forwardly inclined down position for guiding a sheet into the bite of said rolls, means for separating and raising an edge of the top sheet above the pile, means for directing a blast of air forward beneath the raised edge of the top sheet while said flap is in said up position whereby the air blast builds up force behind the baffle and flap to float the remainder of the sheet upwardly above the pile, stop means to prevent the sheet from being blown up substantially above the flap when in its up position, means for turning said flap to its down position once during each cycle, and means for feeding the air-supported sheet forward over said down-turned flap into the bite of said pull-in rolls.

3,006,636
SHEET FEED FOR DUPLICATING MACHINES
 Mustafa J. Ajam, Amherst, N.H., assignor to Standard Duplicating Machines Corporation, Everett, Mass., a corporation of Massachusetts
 Filed Feb. 5, 1958, Ser. No. 713,503
 7 Claims. (Cl. 271—51)



1. In a duplicating machine, a pair of forwarding rolls, a pair of feed rolls, an electric circuit, electric power mechanism in said circuit operating said feed rolls, electrically operated starting and stopping means acting to start the machine and to stop it after one revolution, a series of contacts in said circuit and arranged in separately movable pairs lengthwise of the bite of said forwarding rolls and in position to be separated electrically by a sheet of paper after passing the bite of said forwarding rolls, the separation of any pair of contacts by the passage of a sheet of paper acting to break the circuit and start the feed rolls and stop them at the end of one revolution.

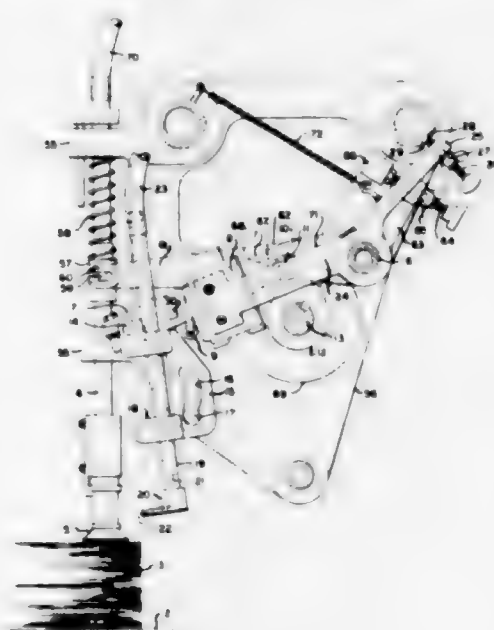
3,006,637
SHEET FEEDING MACHINES
 Headley Townsend Backhouse, "Les Rayons" (Vaod), Corsy-Conversion, Switzerland
 Filed Dec. 9, 1959, Ser. No. 858,425
 Claims priority, application Great Britain Dec. 17, 1958
 3 Claims. (Cl. 271—60)



1. In a sheet feeding machine of the kind having a feed table and front lay mechanism which comprises a front lay and means for moving the lay upwardly and downwardly between an upper operative position in which it projects above the feed table for engagement by a front edge of a sheet advancing over the table and a lower inoperative position in which it lies clear of the front edge of the sheet, a smoother blade projecting rearwardly from the lay when the lay is in its operative position over the top of the table and operative to hold down the front edge of a sheet adjacent the front lay, a bell crank lever having a fulcrum attached to the lay for up and down movement therewith, said smoother blade being carried by an arm of the bell-crank lever which extends upwardly from the fulcrum, the other arm of the lever extending rearwardly from the fulcrum and fixed means co-operating with the said other arm to restrict up and down movements of the free end thereof

whereby as the fulcrum moves down with the lay the bell-crank lever is rocked to move the smoother blade forwardly clear of the lay face and as the fulcrum moves up with the lay the bell-crank lever is rocked to move the smoother blade rearwardly to the position in which as aforesaid it projects rearwardly from the lay over the table.

3,006,638
FILE SUPPORT CONTROL MECHANISM
 Elmer J. Geisler, Jr., Castle Shannon, Pa., assignor to Miller Printing Machinery Co., Pittsburgh, Pa., a corporation of Pennsylvania
 Filed Jan. 6, 1959, Ser. No. 785,262
 4 Claims. (Cl. 271—62)



1. Mechanism for changing the elevation of a pile support in apparatus for moving sheets to or from a pile of sheets carried by the pile support to maintain the top of the pile of sheets at a predetermined elevation comprising electric means including a mounting member, a switch mounted on the mounting member, means cyclically operable in a path as sheets are moved to or from the pile to detect the elevation of the top of the pile and in relation to the switch operating the switch when the switch is in the path of such means, means operable upon operation of the switch for changing the elevation of the pile support and means for adjustably positioning the mounting member to in turn adjustably position the switch in relation to said cyclically operable means to predetermine when the switch will be operated thereby and hence predetermine the elevation at which the top of the pile is maintained.

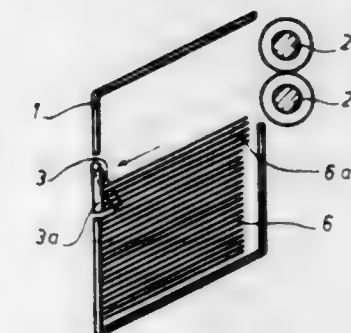
3,006,639
DOCUMENT STACKING MECHANISM
 Arthur R. Spalding, Chicago, and Hugo Solner, Evanston, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
 Filed May 26, 1958, Ser. No. 737,685
 11 Claims. (Cl. 271—68)

1. Document stacking means including a frame, a first shaft journaled on said frame and extending horizontally above a document as it enters the stacking means, a first pulley secured to said first shaft at a location midway the side edges of a document, means including a second shaft non-rotatably mounting thereon a second pulley disposed in aligned spaced relation with and slightly below said first pulley for rotation on said frame about an axis parallel to the axis of rotation of said first pulley, a first belt trained at a slight angle from the horizontal over said pulleys, a pair of guide wheels fastened to said sec-

ond shaft on opposite sides of said second pulley each having a diameter greater than the diameter of said second pulley plus two thicknesses of said belt and having friction surfaces, a plate mounted on said frame below said belt, a pulley frame movably mounted upon said plate, spring means reacting between said pulley frame and said plate and urging said pulley frame upwardly, a pair of high center pulleys rotatably mounted in spaced relation on said pulley frame a distance apart substantially less than the distance between said first and second pulleys, a belt trained over said high center pulleys with

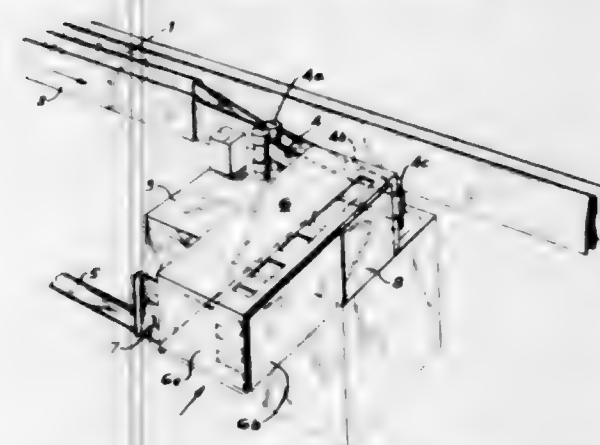
tary to said belt, means for mounting said container on said stacking station with the side parallel to the plane of the face of said belt and encompassing said belt whereby said belt communicates with the interior of said container, and said carriage including a portion extending within said container and movable with said carriage to provide a backstop for articles delivered within said container by said movable belt.

3,006,641
FULL-POCKET SIGNALLING DEVICES FOR MACHINES OPERATING WITH RECORD CARDS
 René Souchoy, Paris, France, assignor to Compagnie des Machines Bull (Société Anonyme), Paris, France
 Filed Mar. 5, 1959, Ser. No. 797,423
 Claims priority, application France Mar. 6, 1958
 2 Claims. (Cl. 271—88)



the upper pass being juxtaposed to the lower pass of said first belt for engaging documents singly therebetween for movement toward said second pulley, support means movably mounted on said plate having a portion disposed underneath said pair of guide wheels, spring means biasing said support means to urge said portion thereof upwardly, and a document receiving table mounted on said portion of said support means and having a convex upper document receiving surface to which said pair of guide wheels are tangent in the absence of a document and between which documents are stacked one above the other in the order in which they are received.

3,006,640
ARTICLE STACKING ARRANGEMENT
 Wolfgang Kellig, Berlin-Friedenau, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
 Filed June 30, 1959, Ser. No. 824,034
 Claims priority, application Germany July 3, 1958
 3 Claims. (Cl. 271—87)



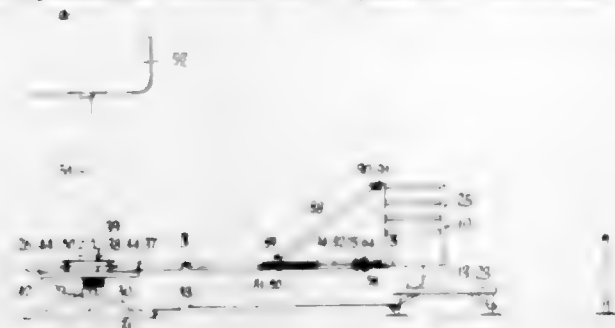
1. An arrangement to stack flat articles, comprising in combination, a stacking station, a movable belt for successively delivering said articles to said stacking station, a movable carriage and means for slidably supporting it on said station for movement in a direction normal to the direction of movement of said belt, a removable stacking container having a base and a side cut complement-

1. In a record card machine, in combination: a card receiving pocket having an inclined base with a lower edge and an upper edge, and a vertical side wall which intersects said base along said lower edge; a card feeding means for sequentially directing cards in the pocket towards said wall in a direction approximately parallel to the base of said pocket, said feeding means having an outlet in a vertical plane which intersects said base along said upper edge; an organ movable from a first to a second position against the action of a return device, when it is subjected to a predetermined effort in a parallel direction to the base, said organ in its first position protruding from said wall, inside said pocket, downwardly extending from a point located at a distance from said base approximately equal to the distance between said base and said outlet of the feeding means, and in its second position being closer to said wall than in the first position; whereby cards which are first fed into the pocket fall down under said organ and come to rest with an edge bearing on said wall, whereas cards which are fed after a card has come to rest immediately under said organ, come to rest with an edge bearing on said organ and exert an effort upon said organ in a parallel direction to said base so as to urge said organ into its second position, a movement of said organ from its first to its second position thus indicating that a predetermined number of said last-mentioned cards have been fed into the pocket.

3,006,642
AMUSEMENT RIDE
 Norman Bartlett, 915 NE. 173rd St., North Miami Beach, Fla., assignor of one-half to Marjorie Bartlett, North Miami Beach, Fla.
 Filed Oct. 9, 1959, Ser. No. 845,344
 6 Claims. (Cl. 272—34)

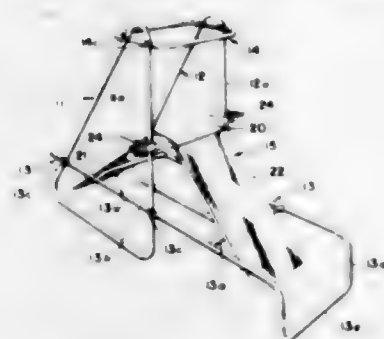
1. In an amusement ride of the roundabout type, a relatively vertical central rotatable support, a plurality of arm means radiating therefrom, each arm means being pivoted to said central support for raising and lowering movement, a passenger carrier at the outer end of each arm means, said passenger carriers having fore and aft ground wheels, means for propelling said carriers around a generally circular path defined by said arm means, the outer portions of said arm means comprising a pair of

arm portions, one of said arm portions being of relatively fixed length and the other arm portion being resiliently extensible, said arm portions being pivoted to each other about a horizontal axis, said fixed length arm portion being pivoted to the upper portion of the associated passenger carrier on a generally horizontal axis



and the extensible arm portion being pivoted to a lower portion of said associated passenger carrier, whereby the lower portion of each passenger carrier may move outwardly to banked position under the influence of centrifugal force by resilient extension of said extensible arm portion and relative pivotal movements of said several pivotal connections.

3,006,643
BODY EXERCISING BENCH
Edgar F. Ryan, Beachwood, Ohio
(653 Broadway, Bedford, Ohio)
Filed Apr. 14, 1959, Ser. No. 806,380
2 Claims. (Cl. 272-58)



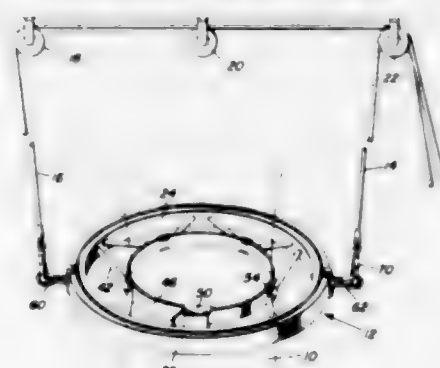
1. A living human-body-supporting bench device comprising: a pair of horizontally spaced parallel like closed right triangular tubular frame members with longer vertical legs disposed centrally of said device, a trapeze member horizontally disposed between like upper apical regions of the said frame members, a generally U-shaped frame member with the free ends of the parallel legs thereof disposed horizontally and in parallel vertically spaced relation to horizontal shorter legs of said right triangular frame members, the yoke end portion of said U-shaped member being bent downwardly into vertical disposition at the end of the device opposite said triangular frame members, said U-shaped frame member having transverse frame elements rigidly secured between the horizontal reaches thereof on opposite sides of said vertical legs, and means for immediately supporting a living human body including a vertical adjustable central portion having opposite ends slidably embracing and engage with said vertical legs and adapted to be secured at selected vertical positions on said vertical legs, the adjustable central portion having a substantially greater dimension transverse of the device than in a direction longitudinal to the device, the last said means also including oppositely extending portions narrower than the normal adult human body and supported by respective transverse frame elements at regions spaced from said vertical legs, said parallel legs being spaced outwardly from respective sides of said oppositely extending portions the last said means providing a support substantially unyielding to the body.

3,006,644
MAGNETIC JUMP AND REACH BOARD
George H. Usher, 1270 Spruance Road, and Arnold J. Hiserman, 12 Shady Lane, both of Monterey, Calif.
Filed Feb. 5, 1958, Ser. No. 713,337
5 Claims. (Cl. 272-59)



1. A jump and reach board, comprising: a backboard, a sliding iron scale having a face opposed to said backboard and a free face away from said board, guide means holding said scale adjacent said board and guiding one for relative movement with respect to the other, retaining means secured and acting between said board and scale to limit such movement after a manual relative positioning of said board and scale, graduations on the free face of and along said scale, a handle secured to said scale adjacent one end of said graduations, means for supporting said board in a vertical position, and a magnet for selectively marking said graduations by adhering to said scale.

3,006,645
ACROBATIC TRAINING AID
Don C. Frazier, P.O. Box 276, Rantoul, Ill.
Filed May 27, 1959, Ser. No. 816,141
4 Claims. (Cl. 272-60)



1. An acrobatic training device comprising an annular frame embodying coplanar concentric inner and outer companion rings having opposed grooved surfaces with the grooves thereof registering and providing a raceway, a plurality of anti-friction balls mounted in said raceway and insertable and removable by way of a plugged hole provided therefor in the outer ring, a body encircling belt adapted to embrace the body of a trainee, said belt being provided at circumferentially spaced points with sleeves, the inner peripheral portion of said inner ring being provided with equidistant circumferentially spaced open-ended arcuate passages occupying circumferentially spaced positions occurring between the spaces existing between the sleeves, a single elastic shock cord having circumferentially spaced portions passing slidably through the passages in the inner ring and other circumferentially spaced portions laced through their respective cooperating sleeves, those sleeves at the rear side of the belt being fixed to adjacent complementary portions of the shock cord yet permitting the belt to be balanced and well suspended from and by way of the inner ring, said outer ring being provided at diametrically opposite points with slots, said slots being situated to the left and right of the user,

and a pair of diametrically opposite looped straps having end portions connected to the outer ring by way of the slots, said straps being adapted to accommodate instructor-controlled ropes.

3,006,646
EXERCISING DEVICES
Menotti Nanni, 1049 3rd Ave., Monroe Heights, Riviera Beach, Fla.
Filed July 6, 1959, Ser. No. 825,251
1 Claim. (Cl. 272-67)



A device of the class and for the purpose described comprising an elongated cylindrical tube enclosing an unobstructed smooth cylindrical compartment of constant diameter throughout having closure caps sealing the ends thereof, a concentrated weight consisting of a cylindrical piston having a length substantially smaller than the length of said compartment slidably mounted in the compartment between said closure caps and having an unobstructed restricted passage extending longitudinally therethrough, a lubricant on the walls of said compartment, cushioning means on the opposed inner sides of the closure caps adapted to be contacted by the piston at the opposite extremes of its movement in said compartment, said piston having longitudinally spaced sleeve gaskets thereon in snug engagement with the compartment walls whereby upon tilting of the tube at an angle to the horizontal the piston moves by gravity toward the downwardly tilted end thereof at a slow substantially constant speed independent of the angle of tilt.

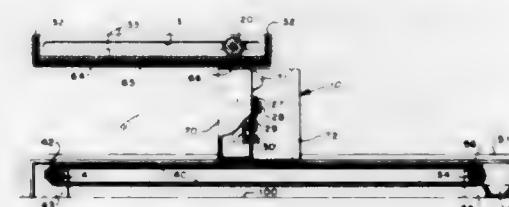
3,006,647
BATTING PRACTISE DEVICES
Elmer Lee Haskett, Pueblo, Colo. (1126 32nd Ave., Greeley, Colo.), assignor of one-half to Keith William Curtis, Greeley, Colo.
Filed May 1, 1959, Ser. No. 810,423
4 Claims. (Cl. 273-26)



1. A batting practise device comprising: a base; a vertical standard arising from said base; a ball-supporting arm secured to and extending horizontally from said standard; a bracket shaft supported by said standard a short distance above and parallel to said supporting arm; a baseball; a flexible element suspending said ball from said arm so that it will swing when struck by a baseball

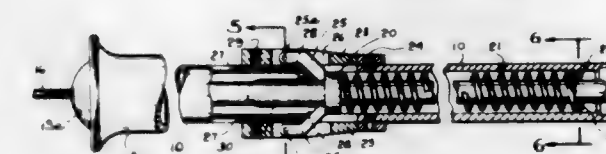
bat; and a horizontal pad supported by said bracket shaft above and to one side of said ball-supporting arm for receiving the impact of said ball and limiting the upward movement thereof and the arc travelled by the ball to substantially less than 180 degrees when the latter is struck by a bat.

3,006,648
ARCHERY RANGE
John P. Devitt, Jr., Orelana, Pa. (723 Walnut St., Philadelphia 6, Pa.), and Roland D. Ciccarone, 615 Hamilton St., Norristown, Pa.
Filed Feb. 11, 1960, Ser. No. 8,049
4 Claims. (Cl. 273-102.2)



1. An indoor archery range adapted for compact multiple use comprising a plurality of elongated lanes disposed in side by side relationship, each lane being provided with a target unit, each target unit including a target face, sensing means to sense an impact on said face, means to add and record said impacts to provide a score and score indicating means to display said score, each target unit being supported on target support means provided over each lane and extending at least partially therealong and including an elongated channel, each target unit having target positioning means, each positioning means including an electric motor mounted on said target unit and a drive wheel connected to said electric motor, said drive wheel positioned in and movable along said elongated channel to hang said target unit from said target support means and to move said target unit along said channel, each lane being provided with an arrow return means to return arrows from said target unit to one end of said lane, said arrow return means comprising a movable belt extending substantially the entire width of each lane, a roller at each end of said lane, said belt being disposed over said rollers, and means to drive at least one of said rollers to drive said belt continuously in one direction.

3,006,649
ANIMAL IMMOBILIZER
Edward J. Gesick, Terrill Hills, and Willis L. Mynatt and John W. McCoy, San Antonio, Tex., assignors to Southwest Research Institute, a corporation of Texas
Filed July 11, 1958, Ser. No. 747,930
3 Claims. (Cl. 273-106.5)



1. In a device of the character described, a missile having a chamber adjacent its forward end, a drug carrying capsule in said chamber, a hypodermic needle connected to the front end of said capsule and communicating with said capsule and extending forwardly of said missile, said capsule having a rear opening, and means for automatically effecting injection from said capsule through said hypodermic needle upon impact of said missile, said means comprising a plunger extending into said capsule through said rear opening within said missile and resilient means for actuating said plunger, and means for retaining said resilient means in compressed condition and for auto-

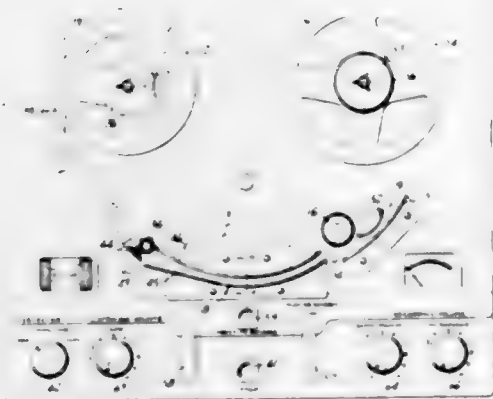
atically releasing said resilient means upon impact of said missile, said last named means comprising means extending through the wall of said missile and operatively connected to said plunger and automatically releasable upon impact of said missile with an object.

3,006,650

MAGNETIC TAPE MACHINE

William Austin Ellmore, Menlo Park, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Aug. 21, 1957, Ser. No. 679,446
13 Claims. (Cl. 274-4)



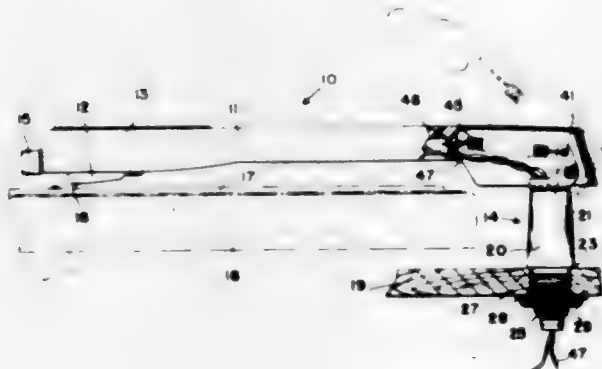
1. In a magnetic tape machine, means for mounting tape supply and takeup devices, said tape supply device being in the form of a reel adapted to be rotated for supplying a length of magnetic tape and being adapted to store a length of wrapped pliable magnetic tape having a leader attached to the outer end of the same, the leader being stiffer than the tape and having a length of the order hereinafter specified, a transducing head adapted to cooperate with the tape for recording and/or reproducing operations, capstan driving means for engaging the leader and the tape and serving to pull the tape past the transducer head, the leader having a length greater than the distance between the supply device and the capstan means, and leader guide means extending from said tape supply device to the capstan means for guiding the leader from the tape supply device to the capstan means responsive to unwinding the leader from the supply device.

3,006,651

MOUNTING MEANS FOR PHONOGRAPH TONE ARMS

Robert R. Burdick and Duane E. Punkar, Conneaut, Ohio, assignors to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio

Filed May 20, 1958, Ser. No. 736,530
6 Claims. (Cl. 274-23)



1. Mounting means for a phonograph tone arm comprising an elongated outer sleeve having a bore there-through adapted to be secured to a supporting base,

said bore terminating in a restricted opening, an elongated inner member, said inner member having an enlargement at the lower end thereof, said enlargement being slightly larger than said restricted opening, said outer sleeve and said inner member being formed from resilient material to permit assembly and thereafter to prevent disassembly of said outer sleeve and said inner member, and means to secure said phonograph tone arm to said inner member.

3,006,652

PHONOGRAPH TONE ARM CONSTRUCTIONS

David Mankovitz, New York, N.Y.

(795 Vaughan Road, Toronto 10, Ontario, Canada)

Filed Apr. 9, 1959, Ser. No. 805,267

14 Claims. (Cl. 274-23)



1. In a phonograph tone arm construction for operative use with a sound track disc and a pick-up element adapted for coaction with said disc along a predetermined radial line thereof, the combination of an elongated arm member supporting said pick-up element, a track member wholly disposed laterally beyond said disc and having an edge portion extending in a direction parallel to said radial line, roller means supported by said track member, said arm member being of a length greater than the radius of said disc and operatively extending outwardly beyond the periphery of the disc, said arm member being rollably supported by said roller means, and connecting means between said members and holding said arm member in fixed angular relation to the longitudinal extent of said track member, said roller means being in constant engagement with said edge portions whereby the operative movement of said pick-up member will cause said arm member to rollably move along said track member in the direction of said edge portion.

3,006,653

CHUCK FOR GEARS AND THE LIKE

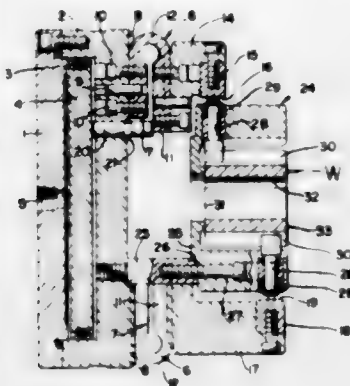
Milton L. Benjamin, Shaker Heights, and David D. Walker, Chagrin Falls, Ohio, assignors to Erickson Tool Company, Solon, Ohio, a corporation of Ohio

Filed Oct. 14, 1960, Ser. No. 62,685

12 Claims. (Cl. 279-4)

1. A gear chuck comprising a jaw mounting plate; series of axially and circumferentially offset jaw assemblies on said plate; a gear holding cage detachably secured to said plate; said cage comprising a ring having series of radially outwardly spring biased locators with outer ends in contact within the respective jaw assemblies and with inner gear tooth engaging ends; and an actuator for mov-

ing said jaw assemblies outwardly for corresponding outward movement of said locators whereby a gear to be chucked may be positioned within said cage for engage-



ment by the inner ends of said locators upon inward movement of said jaw assemblies and corresponding inward movement of said locators.

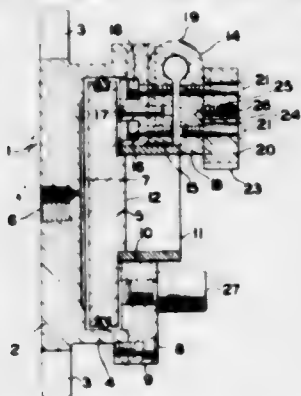
3,006,654

SPRING JAW CHUCK

Milton L. Benjamin, Shaker Heights, Ohio, assignor to Erickson Tool Company, Solon, Ohio, a corporation of Ohio

Filed May 7, 1959, Ser. No. 811,708

14 Claims. (Cl. 279-23)



3. A chuck comprising a base plate; a jaw mounting plate secured to said base plate and defining a cylindrical chamber therewith; a piston reciprocable in said chamber; a circular series of workpiece gripping jaw assemblies secured on said jaw mounting plate including generally U-shaped spring members, each spring member including a first radially extending leg secured on said jaw mounting plate, a second radially extending leg having a free end secured to a jaw member disposed to engage a workpiece, and a resilient leg-connection portion; and an actuator engaged between said piston and said second legs of said spring members effective, when fluid under pressure is admitted into said chamber, to swing said second legs away from said first legs about said resilient leg-connecting portions in a direction such that said jaw members are moved relatively away from a workpiece, said jaw members springing back to workpiece engaging positions upon release of the fluid pressure in said chamber.

3,006,655

WEIGHT DISTRIBUTING TRUCK BED ATTACHMENT

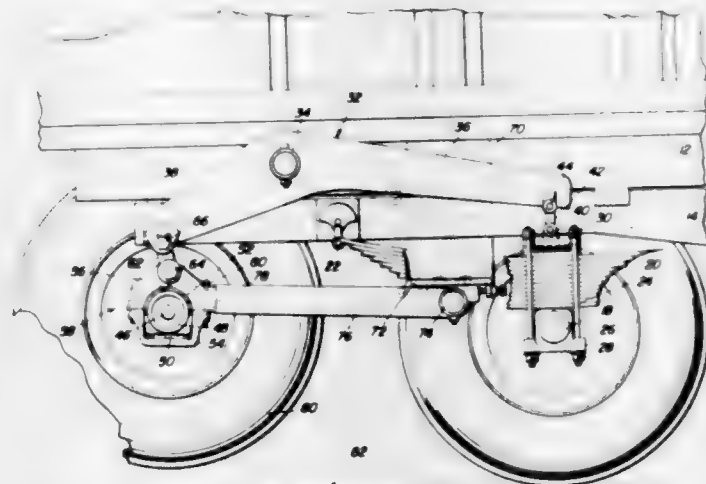
Luther S. Flite, Natchez, Miss., assignor to Natchez Steel Products Company, Inc., Natchez, Miss., a corporation of Mississippi

Filed June 11, 1959, Ser. No. 819,619

7 Claims. (Cl. 280-104.5)

1. A truck bed attachment for distributing the weight of a loaded bed over a greater number of wheels than the distributed weight of an unloaded bed comprising in

combination with a truck frame having a resiliently suspended live axle, a rigid equalizing bar pivotally supported by said truck bed, first means terminally and pivotally connecting said bar to said live axle, said first means including a shackle having a shackle link, a towed axle, second means terminally and pivotally connecting said bar to said towed axle remote from said live axle, said second means including a shackle link, said resilient suspension



associated with said live axle being of sufficient strength to raise said bed when in an unloaded condition relative to said live axle whereby said pivot point between said bar and bed will be raised to elevate said towed axle relative to said live axle, said pivotal support point between said equalizing bar and said truck bed being positioned closer to said second means than said first means whereby the live axle will support greater than 50% of the load when the live axle and towed axle support the load.

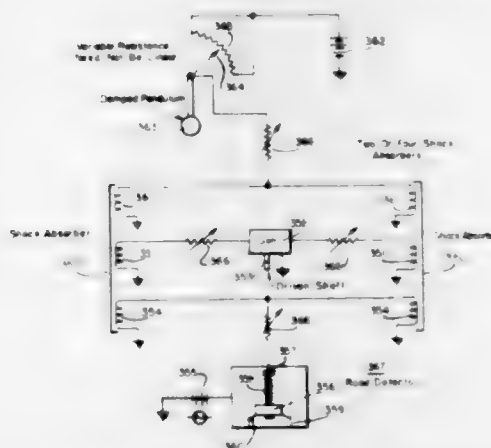
3,006,656

AUTOMATIC ACCESSORY CONTROL FOR MAGNETIC PARTICLE SHOCK ABSORBERS

Benton Hall Schaub, P.O. Box 34, Gambrills, Md.

Filed Sept. 19, 1955, Ser. No. 535,013

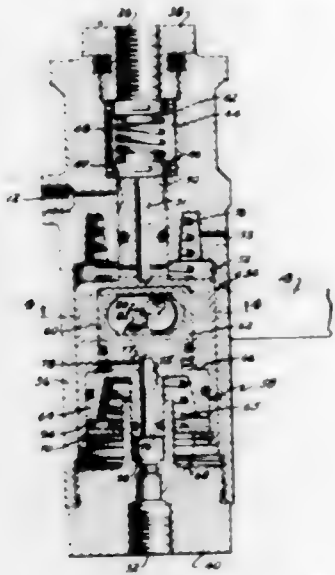
12 Claims. (Cl. 280-112)



1. In combination, an automotive vehicle having a body member, a plurality of running wheels supporting said body and a suspension system mounting said body on said wheels, said system comprising shock absorber means having relatively movable members having a magnetic particle mass containing iron and a second metallic chemical element resistant to heat and corrosion positioned in force transmitting relation between said movable members, means to apply a magnetic field to said particles, turn sensing means and means to equalize at least partially the road reaction on the inner and outer wheels of said vehicle when in motion, said turn sensing means controlling both the action of said magnetic field on said particles and said equalizing means.

3,006,657
HEIGHT CONTROL AND LEVELING VALVE
FOR AIR SPRINGS

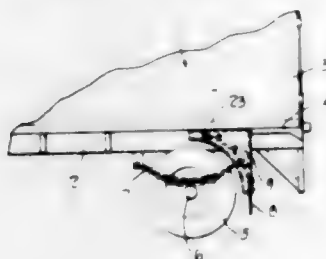
Darold A. Augustin, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
 Filed Dec. 9, 1957, Ser. No. 701,497
 6 Claims. (Cl. 280-124)



1. Control valve mechanism for regulating the air pressure within a vehicle air spring for selectively establishing the height of a vehicle frame above an axle at one of two levels and for maintaining the vehicle frame at said selected height, comprising a combined height control and leveling valve having a casing adapted to be mounted on the frame and having an inlet supplied with compressed air and an exhaust port connected to atmosphere, valve means in said casing for controlling the flow of compressed air from said inlet to said air spring or from said air spring to said exhaust port, said casing having a control port adapted to be supplied with compressed air or connected to atmosphere, control means in said casing for operating said valve means including a pressure responsive member movable in opposite directions in response to flow of air pressure to or from said control port, and cam means responsive to the relative movement between the frame and axle and operatively connected with said valve means for operating the latter through said pressure responsive member independently of the position of the latter.

3,006,658
VEHICLE SPLASH GUARD AND BRACKET
 Fred L. Wenham, 20050 Shaker Blvd., Shaker Heights, Ohio, and Samuel J. Kosik, Jr., 16616 Glendale, Cleveland, Ohio

Filed Aug. 29, 1957, Ser. No. 680,970
 5 Claims. (Cl. 280-154.5)



1. In a conversion unit of the class described, in combination, a flexible flap member adapted to be connected at its upper edge to a vehicle body, and a bracket adapted to be connected to such body and the flap for rigidifying the flap, to minimize swinging movement of said flap member, said bracket comprising a first generally hori-

zontal edge portion for connection to such vehicle body, a second edge portion extending downwardly from the first, a third edge portion extending from the first to the second and contoured to correspond generally to the periphery of a tire, and said bracket further including means to attach an edge of the flap member thereto.

3,006,659
TREADLE SCOOTER

Gilbert Krasnoff, 251-09 Thornhill Ave., Little Neck, N.Y., and William Krasnoff, 295 Clinton Ave., Brooklyn, N.Y.

Filed Oct. 27, 1960, Ser. No. 65,376
 4 Claims. (Cl. 280-221)



1. A treadle-operated scooter comprising a frame composed of two spaced side frame members, a rear axle supported across the rear ends of the side frame members, a wheel rotatably mounted on the rear axle, a wheel rotatably mounted on the frame at the front thereof, a treadle pivotally mounted on the side frame members intermediate their ends, a pinion loosely mounted on one end of the rear axle, a rack bar pivotally connected at one end to the treadle in mesh with the pinion and actuated by movement of the treadle, said rear wheel having a hub portion and clutch mechanism associated with said hub portion including a hub portion on the pinion, an annular flange on the free end of the hub portion of the pinion, a ring mounted in the hub portion of the rear wheel, teeth on the inner periphery of the ring, a spring pressed pawl mounted on the flange of the hub portion of the pinion normally contacting the teeth on the ring when the pinion is turning in one direction and sliding over said teeth when the pinion is turning in the reverse direction whereby movement of the pinion is transmitted to the rear wheel, the pivotal mounting of the treadle consisting of a sleeve around each side frame member in opposed relation, a tubular member supported across the space between the sleeves, a shaft extending through said tubular member and projecting outwardly thereof, a bail member pivotally mounted on the projecting ends of the latter shaft, said treadle mounted on and fastened to said bail member.

3,006,660
ARTICULATED VEHICLE
 Herbert Merz, 1 Am Engelbosteler Damm, Hannover, Germany
 Filed Nov. 28, 1958, Ser. No. 777,055
 Claims priority, application Germany Nov. 29, 1957
 6 Claims. (Cl. 280-406)

1. In an articulated vehicle train comprising a towing vehicle and a semi-trailer including articulated joint means therebetween, said towing vehicle and semi-trailer including fluid-pressure-operated braking systems imposing compressive forces at said articulated joint means resulting from braking of said vehicle train causing the accompanying tendency toward reduction of dynamic axle loading of said semi-trailer; fluid pressure displacing means

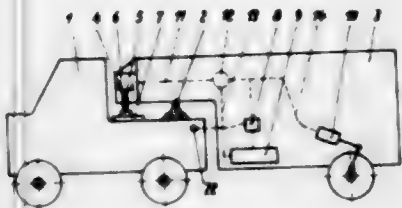
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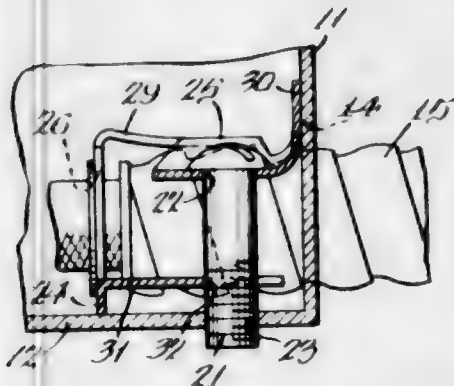
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connected in said semi-trailer braking system and opera-
tively connected between said towing vehicle and semi-
trailer and subject to the compressive forces of said articu-



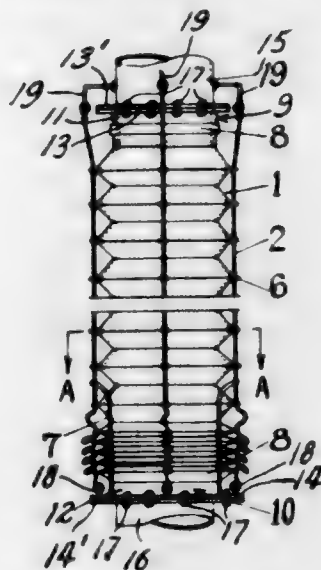
lated joint means, and means for activating said fluid pres-
sure displacing means in response to the braking of said
vehicle train.

3,006,661
CABLE CLAMP FOR CONNECTING BOXES
Everett A. McNeill, Baldwin, N.Y., assignor to Appleton
Electric Company, Chicago, Ill., a corporation of
Illinois
Filed Jan. 19, 1959, Ser. No. 787,770
1 Claim. (Cl. 285-12)



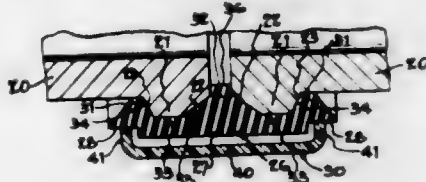
In a clamping member for securing cables or the like
to a connecting box having side walls and a bottom wall,
the cables entering the box through suitable openings in
one side wall of the box adjacent the bottom wall thereof,
the combination comprising a pair of connected main
wings disposed at approximately a right angle with re-
spect to each other, the first of said wings having a pair
of spaced openings enabling a pair of cables to be passed
through the same via the box wall openings, the second
of said wings being spaced from the bottom wall of the
box and defining spaced clamping means for gripping
said cables, said second wing having a hole intermediate
said clamping means for receiving a fastening element
engageable with the box for mounting said clamping
member therein, a pair of relatively narrow bendable and
severable elements connecting said wings at laterally
spaced points at the angular corner therebetween, said
clamping member being mounted with said bendable ele-
ments spaced from the box walls and bottom wall, an
elongate tongue connected to said first wing and extend-
ing therefrom adjacent the bottom of the box in spaced
generally parallel relation with said second wing, said
tongue having an aperture alined with the hole in said
second wing and of such a size to relatively snugly re-
ceive the fastening element, said tongue also having a
longitudinal slot parallel to said narrow elements inter-
secting said aperture, and said slot being of a width slightly
smaller than the diameter of said fastening element,
whereby said tongue may be separated from the fastening
element when said first wing is bent upwardly and away
from said second wing while the fastening element re-
mains engaged with the box, and said first wing may be
separated from said second wing by severing said narrow
elements.

3,006,662
FLEXIBLE CONNECTING TUBE FOR CONVEYANCE
Hideo Katsuhara, Tokyo, Japan, assignor to Onoda
Cement Company Limited, Onoda City, Japan
Filed Mar. 21, 1958, Ser. No. 723,006
2 Claims. (Cl. 285-114)



1. A flexible connector for use with a pair of con-
duits for conveying a fluent material from a relatively
unstable location to a relatively fixed location, said flex-
ible connector comprising an elongated, flexible tubular
body including connecting means at opposite ends for
connection between said conduits, said body comprising
a plurality of longitudinally spaced, circumferential pleats
extending around said body for permitting extension,
contraction and lateral movement between said conduits
in a range of 360°, longitudinally spaced and aligned
guide means extending in circumferentially spaced rela-
tion, laterally from said body, flexible reinforcing ele-
ments extending longitudinally and loosely through said
guide means, said reinforcing elements being secured at
one end to one of said connecting means at one end of
said body, the other end of said flexible reinforcing
means extending beyond the connecting means at the
other end of said body for securement to one of the
pair of conduits secured thereat to said body, said flex-
ible reinforcing means being foldable and extendable
with said body and limiting maximum longitudinal ex-
tension of the same, and guides fixed to the connecting
means to which said one end of the flexible reinforcing
means is secured and extending longitudinally in spaced
relation along said body for receiving said flexible tubu-
lar body when it is collapsed.

3,006,663
PIPE CLAMP WITH RESILIENT MEMBER
Martin S. Bowne, Clearfield, Ky., assignor to Lee Clay
Products Company, Clearfield, Ky., a corporation of
Kentucky
Filed Aug. 11, 1958, Ser. No. 754,488
6 Claims. (Cl. 285-233)

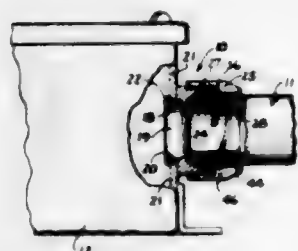


1. A pipe joint combination comprising a pair of pipes
each having a barrel portion terminating in an annular
shoulder at at least one end thereof, said pipes being dis-
posed in end-to-end relation with the annular shoulders

adjacent each other, a continuous elastomeric sleeve circumferentially straddling said adjacent shoulders, annular inwardly directed beads fixed against axial outward movement to said sleeve and located adjacent the respective endwise portions thereof, the said beads respectively having internal shoulder faces engaging the axially outer surfaces of said shoulders to confine the shoulders between said beads, each of said beads having its axially outer surface chamfered inwardly to provide a portion, which said portion overhangs and is spaced outwardly from said barrel portion, said sleeve also comprising means engaging said adjacent pipe ends to prevent substantial relative movement of the pipe ends toward one another, a contractible clamp encircling said sleeve and having inwardly directed annular projections at the endwise portions thereof engaging the said outwardly overhanging portions of said beads, the clamp having portions disposed inwardly adjacent said projection spaced from said sleeve, whereby said projections are effective to pivot inwardly the overhanging portions of said beads upon contraction of said clamp, said overhanging portions of said beads being sufficiently rigidly interconnected to said beads to deform said beads into generally axial and circumferential sealing engagement with said shoulders as said overhanging portions are pivoted inwardly upon contraction of said clamp.

3,006,664 SELF-SEALING FITTING FOR FLEXIBLE CONDUIT

Arthur I. Appleton, Northbrook, and Norton A. Appleton, Northfield, Ill., assignors to Appleton Electric Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 6, 1958, Ser. No. 707,227
1 Claim. (Cl. 285-248)

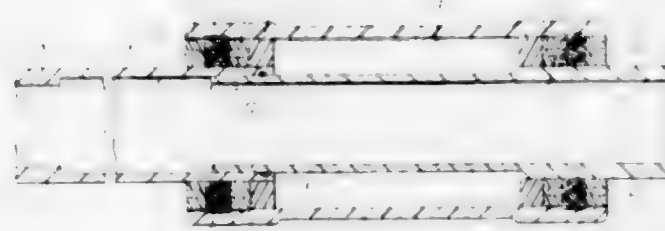


A fitting adapted for attachment to the free end of a conduit having a yieldable outer sheath thereon comprising, in combination, a sleeve-like body having a main bore and having a counterbore at one end thereof, a tapered seat in said body situated between the bore and the counterbore, said seat tapering inwardly from the counterbore toward the main bore, a transverse shoulder situated between said tapered seat and the main bore, external threads on said body disposed in surrounding relation with the counterbore and said inwardly tapered seat, an annular thimble adapted to fit over the free end of the conduit and having an inner sleeve portion adapted for insertion into the conduit along the inner peripheral wall thereof and having means for positively attaching said thimble to the conduit, said thimble further having an outer sleeve portion disposed in radially spaced surrounding relation with said inner sleeve, one end of said outer sleeve being fixed to said inner sleeve, the opposite end of said outer sleeve terminating in a substantially radially outwardly extending deformable sealing flange, said thimble being constructed and arranged for said one end to fit initially into said body with said outer sleeve extending through said counterbore into contact with said tapered seat and with said flanged opposite end being spaced outwardly of said counterbore, an annular sealing nut having threads engaging the said external threads on said body, said nut having a sleeve portion on the end thereof remote from said body defining a bore for receiv-

ing and supporting said conduit, and a tapered internal shoulder in said nut decreasing in diameter from the threaded end of said nut toward the sleeve end of said nut and terminating in a cylindrical portion of a diameter greater than that of said nut bore and said cylindrical portion terminating in an abrupt annular shoulder, said tapered internal shoulder being of sufficient diameter to engage said sealing flange and being of sufficient slope to bend said flange over said outer sleeve opposite end to form a sealing bead and urge said sealing bead radially inward against the conduit sheath as an incident to the tightening of said nut, said bead being received in said cylindrical portion and abutting said abrupt annular shoulder so that the tightening of said nut on said body will produce an increased axial thrust on said thimble forcing said thimble into sealed relation with said tapered seat and into abutting relation with said transverse shoulder.

3,006,665 TELESCOPIC PIPE JOINT WITH MEANS TO ASSURE RECTILINEAR MOVEMENT

Paul Ratliff Harris, "Trundles," 71 Park Ave., Eastbourne, England
Filed Feb. 16, 1959, Ser. No. 793,644
Claims priority, application Great Britain May 1, 1958
3 Claims. (Cl. 285-302)



1. An expansion coupling for connecting the ends of tubes subject to large variations in length because of temperature changes in a fluid pressure system, comprising a pair of fluid conduction tubes slidably telescoped one within the other and being constructed and arranged as to be mutually supporting, a tubular member of larger cross sectional dimension than the tubes and spaced radially from said tubes to extend over the telescoped end portions thereof, the interior surfaces of the end portions of the tubular member being interruptedly threaded dividing the threads at each end into two portions, a ring of packing material at each end of the tubular member between said threaded portions and engaging the exterior surface of a tube, a pair of circumferentially threaded annular plates threaded to said tubular member at each end and said ring of packing material positioned between said plates whereby threading the plates of each pair together radially expands the packing ring into sealing engagement with the tubular member and the corresponding tube, a first flange secured to the end of one of said tubes and extending radially to slidably engage the inner surface of the tubular member, a second flange secured to the other tube and spaced inwardly from the end thereof a distance nearly equal to the length of the tubular member, said second flange also extending radially to slidably engage the inner surface of the tubular member, both said first and second flanges being positioned within the confines of the tubular member to engage the innermost surface of the inner one of each pair of annular plates and limit separation of the tubes upon withdrawal movement of either telescoping tube, said flanges being engageable with each other to limit inward telescopic movement of either tube whereby said flanges serve not only as stops to limit such telescopic movements but also as bearing guides to assure rectilinear movement of the tubes and the tubular member upon movement of any one of them with respect to another.

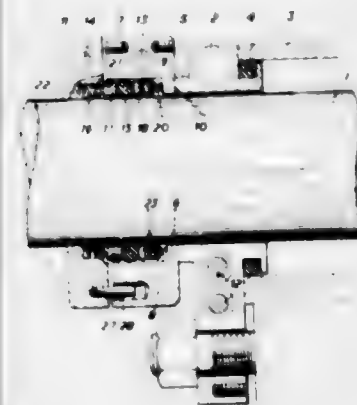
3,006,666 SNAP-RING COUPLING FOR TELESCOPING TUBULAR ELEMENTS

Robert M. Stanley, Denver, Colo., assignor to Stanley Aviation Corporation, Aurora, Colo., a corporation of New York
Filed Feb. 13, 1959, Ser. No. 793,151
6 Claims. (Cl. 285-320)



4. In combination in a releasable coupling, first and second elements having adjacent end portions thereof adapted to be received one within the other in telescoping relation, stop-forming means carried by the first element in spaced relation to the telescopic end thereof and adapted to engage the second element limiting the relative axial movement therebetween, latch-forming means carried by the second element in spaced relation to the telescopic end thereof, and spring-wire bail means depending from the first element for swinging movement into position overlying the second element when against the stop-forming means, said bail means including a generally arcuate portion adapted to be sprung into locked position behind the latch-forming means for releasably holding the first and second elements in assembled relation wherein the stop-forming means comprises a pin having an opening therethrough, and the spring-wire bail means comprises a continuous ring mounted within the opening in the pin and sized to loosely encircle the first element.

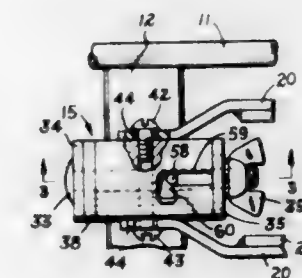
3,006,667
PACKINGS FOR ROTARY SHAFTS AND THE LIKE
James Stepheas, Bradford, England, assignor to United States Metallic Packing Company Limited, Bradford, Yorkshire, England, a British company
Continuation of application Ser. No. 509,036, May 17, 1955. This application June 4, 1959, Ser. No. 818,116
Claims priority, application Great Britain Apr. 25, 1952
10 Claims. (Cl. 286-11.15)



1. A packing for a rotatable shaft or the like, comprising a casing, a rotatable packing ring, and a non-rotatable packing ring all surrounding said shaft, means coupling said non-rotatable packing ring to said casing to maintain said non-rotatable packing ring against rotation with said shaft, means coupling said rotatable packing ring to said shaft, for rotation with said shaft, said rotatable packing ring and said non-rotatable packing ring each having an annular sealing face and said faces being in face-to-face sealing engagement with each other, a resilient sealing ring surrounding said shaft and blocking passage of fluid from one side of said packing to the

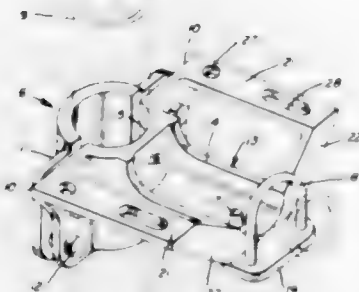
other side of said packing and being shiftable axially of said shaft, a first surface and a second surface each facing away from an annular sealing face and being exposed respectively to the fluid pressures existing at the two sides of said packing, a first means located between said first surface and the annular sealing face from which said first surface faces away to transmit pressure exerted on said first surface to the annular sealing face from which said first surface faces away to urge said annular sealing faces into sealing engagement with each other, a second means located between said second surface and the annular sealing face from which said second surface faces away to transmit pressure exerted on said second surface to the annular sealing face from which said second surface faces away to urge said annular sealing faces into sealing engagement with each other, and spring means positioned to exert force on at least one of said packing rings in a direction and in an amount sufficient to maintain said annular sealing faces in sealing engagement when the fluid pressure existing at one side of said packing is substantially equal to the fluid pressure existing at the other side of said packing, the force exerted by said spring means being predetermined to be insufficient by itself to maintain said annular sealing faces in sealing engagement when the absolute pressure existing at one side of said packing is one atmosphere and the absolute pressure existing at the other side of said packing is substantially zero, said first and second surfaces being located with respect to each other and to said annular sealing faces and having a predetermined area relation to said annular sealing faces so that, of the pressure exerted on one of said surfaces and the pressure exerted on the other of said surfaces, the greater absolute pressure urges said annular sealing faces into sealing engagement with each other irrespective of which pressure is greater, said greater absolute pressure being sufficient, irrespective of the force exerted by said spring means, to maintain said annular sealing faces in sealing engagement.

3,006,668
LOCKABLE UNIVERSAL IMPLEMENT HEAD
Roger B. Stewart, Union City, Ind., assignor to Reit-Price Manufacturing Co., Inc., Union City, Ind., a corporation of Indiana
Filed Dec. 3, 1959, Ser. No. 857,137
2 Claims. (Cl. 287-14)



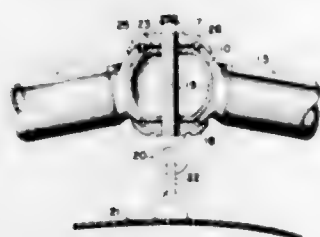
1. A lockable universal head for attachment of an implement handle comprising a support having oppositely disposed arms arranged for mounting in upstanding relation on an implement, a cylinder, means rotatably mounting said cylinder between said arms including a spindle on said arms and extending longitudinally through said cylinder, means for adjusting the resistance of said cylinder to rotation including an elastomeric washer positioned between said cylinder and one of said arms, and handle attaching means on said cylinder for securing a handle for pivotal movement on an axis transverse to the longitudinal axis of said cylinder.

3,006,665
SHELVING CLAMP
 William H. Novales, 20 Pacific Ave.,
 San Francisco 11, Calif.
 Filed June 30, 1958, Ser. No. 745,411
 2 Claims. (Cl. 287-54)



1. A clamp comprising: a first and a second curved body part forming opposite segments of a cylinder and adapted to engage a vertical pipe on opposite sides thereof; a pair of flange extensions on opposite sides of each of said body parts, the flange extensions on each of the said body parts being substantially parallel to the flange extensions on the other body part, each pair of said flange extensions lying in the same plane; a semi-cylindrical support integral with the first of the said body parts, said support being secured to said first body part intermediate the said flanges thereof and directly opposite the portion thereof adapted to engage a vertical pipe, said semi-cylindrical support extending in a direction normal to the said plane of the said flange extensions of the said first body part, the supporting surface of said semi-cylindrical support lying in a horizontal plane when said body portion is engaged with a vertical pipe, said semi-cylindrical support having means thereon permitting a horizontal pipe to be secured thereto; a wing integral with each of the said flange extensions of said first body portion, said wings being positioned at either side of the said semi-cylindrical support, said wings extending parallel to the said semi-cylindrical support and normal to the said flanges, said wings being mounted in a plane above the plane of the said semi-cylindrical support when the said first body portion is engaged with a vertical pipe, each of the said wings having means thereon permitting a horizontal member to be secured thereto.

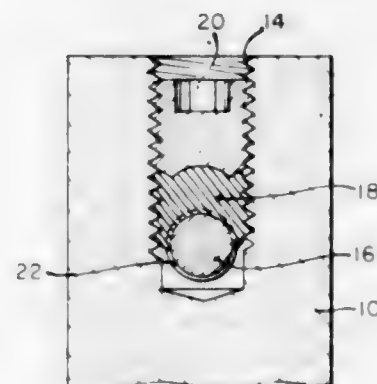
3,006,670
FRAME FOR SUPPORTING DOMED STRUCTURES
 Clarence J. Schmidt, Cuyahoga Falls, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
 Filed June 2, 1959, Ser. No. 817,588
 2 Claims. (Cl. 287-54)



f. A domed frame comprising a multiplicity of frame members each having at an end thereof a spherical retaining flange with a concave spherical face exposed

axially outward, a ball having a spherical surface against which the spherical retaining flanges are seated, a pair of clamping collars each having an annular grooved face outwardly surrounded by a concave peripheral flange, said flange having a spherical surface engaging over said retaining flanges, said ball and said clamping collars having aligned openings and having their spherical surfaces concentric, and a bolt extending through the aligned openings of said clamping collars and said ball for positively clamping said frame members against relative movement in a plurality of angular positions.

3,006,671
INTERNAL STAKING
 Willard J. Opocensky, Glendale, Calif., assignor to General Precision, Inc., a corporation of Delaware
 Filed Aug. 3, 1959, Ser. No. 831,132
 4 Claims. (Cl. 287-54)

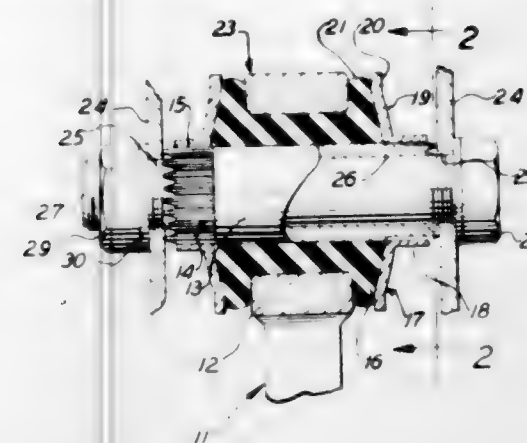


1. A clamping assembly for use with shafts, and the like, including: a body member having a first hole therein for receiving a shaft and having a second hole therein of larger diameter than said first hole transversing and intercepting said first hole and extending across said first hole to form a space surrounding the periphery of said first hole and thereby surrounding at least a portion of the shaft received in said first hole along a portion of the axial length of said shaft, at least one relatively soft member capable of being cold flowed and adapted to be positioned in the second hole in said body member, and relatively hard means for engaging said relatively soft member to cause the same to be cold flowed from the second hole in said body member into the space surrounding the shaft received in said first hole and into intimate engagement with the peripheral surface of said portion of the axial length of such shaft to positively lock the shaft in said body member and prevent axial and rotational movement thereof.

3,006,672
RESILIENT MOUNTING MEANS FOR PIVOTAL CONNECTION
 Jacques Bajer, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed Dec. 30, 1959, Ser. No. 862,838
 9 Claims. (Cl. 287-85)

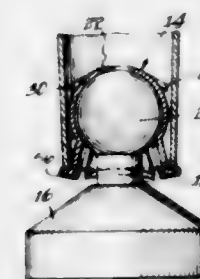
8. A resilient bushing mounting for an eye member comprising in combination a cylindrical member, an elastomeric bushing embracing said cylindrical member, a pair of retainers, each retainer having a bore receiving an end portion of said cylindrical member and having a radially outwardly extending flange, said flange of each retainer being adjacent one end of said elastomeric bushing, and interlocking means between said cylindrical mem-

ber and said retainers to prevent axial movement therebetween, the retainers when assembled on said cylindrical



member holding said elastomeric bushing in a state of compression.

3,006,673
FOOT RETAINER
 Edwin Grant Swick, Bartlett, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
 Filed Jan. 19, 1959, Ser. No. 787,403
 8 Claims. (Cl. 287-87)

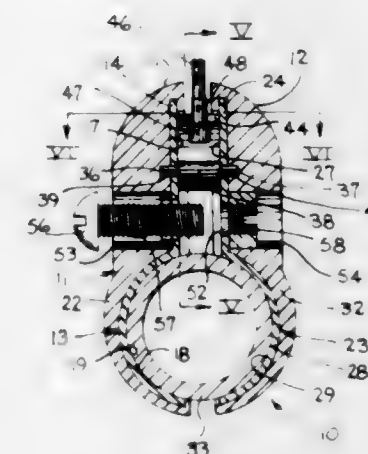


1. A one piece sheet material device for connecting a workpiece having an enlarged end portion with a tubular member comprising a central section insertable into the tubular member, a plurality of prongs circumferentially spaced around and extending generally radially from said central section for engaging an interior surface of the tubular member for resisting withdrawal of the device, and a plurality of generally axially extending leg sections spaced around and joined to said central section between said prongs, said leg sections including first portions adjacent said central section combined together for providing a socket for receiving and retaining the enlarged end portion of a workpiece, said leg sections including intermediate portions flaring outwardly from said first portions for engaging an interior surface of said tubular member when said device is inserted within the tubular member for radially collapsing said first portions into gripping engagement with said workpiece end portion, and said leg sections including means adjacent free ends thereof for engaging said tubular member for limiting entry of the device within the tubular member.

3,006,674
UNIVERSAL CONNECTOR
 Rodger F. Becker, Kalamazoo, Mich., assignor to Aero-Motive Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
 Filed Jan. 7, 1960, Ser. No. 1,111
 6 Claims. (Cl. 287-92)

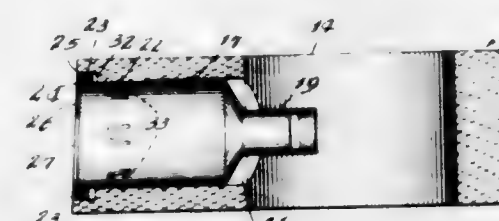
1. A device for effecting a universal connection between a cable and a hose, comprising: a pair of substantially identical clamping members, each clamping mem-

ber having a substantially planar surface and an adjacent concave surface, each planar surface having a recess therein; a pivot pin having end portions snugly receivable into said recesses, said pin being of greater axial length than the distance between said planar surfaces, whereby said clamping members are spaced from each other; a collar loosely and rotatably encircling said pivot pin between and spaced from said planar surfaces, said collar having a radially disposed opening there-



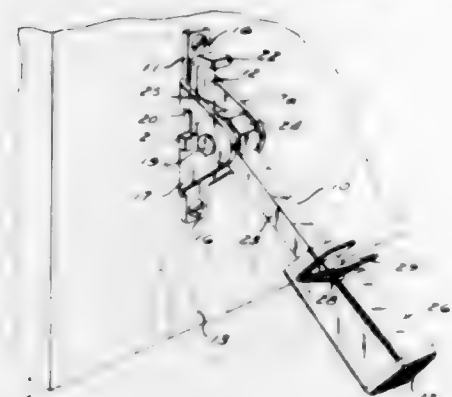
through; screw means engageable with said members for holding said pin against and between said clamping members; a swivel head engaged with the cable and having a portion of reduced diameter extending through and swiveled within the opening in said collar, said swivel head being disposed within said collar and said cable extending between and beyond said planar surfaces, whereby said cable can be rotated around its own axis and that of said pivot pin.

3,006,675
DOOR LATCH BOLT ASSEMBLY
 Francis L. Erickson, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
 Filed Feb. 17, 1958, Ser. No. 715,832
 2 Claims. (Cl. 292-337)



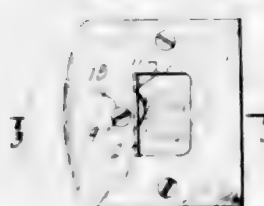
1. In a door latch bolt assembly for a lockset in which said assembly is bodily received in a cylindrical opening in the edge of a wooden door, said latch bolt assembly including a latch bolt housing having a cylindrical part and a latch bolt contained therein, a cylindrical sleeve mounted on and telescoping one end of said cylindrical part of the housing and provided with circumferentially spaced outwardly and forwardly projecting tabs, said sleeve and housing each having at one end a radially outwardly projecting flange with the flanges in abutting relation, and a circular face plate bridging the outer end of said housing and provided with an annular lip encompassing and joining the flanges on the telescoping ends of said housing and sleeve and having a slot for passage of the latch bolt, said latch bolt assembly when installed in an opening in the edge of the door having its face plate received in said opening so as to lie flush with the edge of the door and said tabs are anchored in the wood about said opening and provide the sole retaining means for said assembly.

3,006,676
COMBINATION DOOR CHECK AND STOP
 John Germock, Jr., 20270 Lake Shore Blvd.,
 Cleveland 23, Ohio
 Filed Jan. 21, 1960, Ser. No. 3,813
 1 Claim. (Cl. 292-338)



A combined door stop and check comprising a plate adapted to be attached to a door, the sides thereof forming a vertical channel on the front side of said plate, a rectangular operating arm having one enlarged octagonal-shaped end in its vertical plane and disposed within said channel and pivotally connected thereto for movement in a vertical plane and a plastic sleeve slidably mounted on the other end of said arm, a V-shaped spring clip having rectangular apertures therein through which said arm extends mounted in a similar V-shaped recess in said sleeve and affixed to said arm for adjusting and holding said sleeve in fixed position on said arm, a rubber bumper mounted on the remote end of said sleeve and a rectangular key slidably mounted within said channel adapted to engage one of the octagonal surfaces of said arm to lock said arm in a fixed operating or non-operating position.

3,006,677
ADJUSTABLE STRIKE PLATES
 John Royalty, 401 Berry Ave., Hayward, Calif.
 Filed Nov. 27, 1959, Ser. No. 855,880
 4 Claims. (Cl. 292-341.18)



1. An adjustable strike plate comprising a plate having a bolt receiving passage having a lip beveled for easy advance of the bolt, and an eccentric and a pivot therefor and mounted on the underside of the plate for projection beyond the lip for cooperation with the bolt, said pivot having a countersunk head and operable from the exterior of the mounted strike plate, with the eccentric fixed on the inner end of the pivot.

3,006,678
FISH GAFF
 Gustaf O. Johnson, 149 Larson Ave., Elkhart, Ind.
 Filed May 20, 1960, Ser. No. 30,653
 10 Claims. (Cl. 294-26)

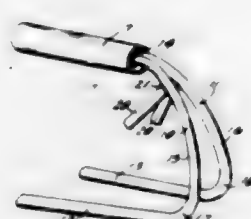
10. A gaff comprising a tubular body member constituting a handle and having a hook tip receiving opening therein, a hook pivotally mounted on said body member to be projected therefrom or to be collapsed with the tip

portion thereof in said opening, means for supporting said hook in its projected position in substantial alignment with said body member, and a hook lock and ejector member slidably and rotatable in said body member and having an opening therein alignable with said hook receiving opening in said body member to receive the tip portion of the hook in its collapsed position and having



a keeper retainingly engageable and disengageable with the hook when it is in collapsed position by rotating manipulation of said lock and ejector member, said body member and lock and ejector member having coaxing keeper and latch means engageable to prevent longitudinal movement of said lock and ejector member with said hook lock and ejector means in hook retaining position.

3,006,679
FINGERED LIFTER FOR TILE AND BLOCKS
 Harold P. Gray, 522 3rd St., Traverse City, Mich.
 Filed Aug. 24, 1959, Ser. No. 835,621
 1 Claim. (Cl. 294-92)

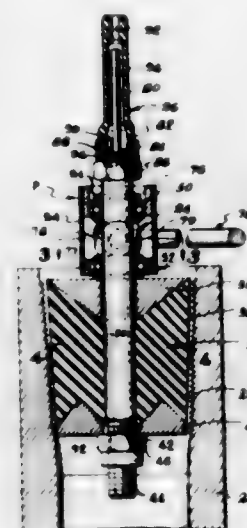


A tool for handling blocks and tile and comprising the combination with exactly two laterally spaced fingers in general parallelism and having free ends, of a handle spaced above said fingers and substantially parallel thereto and having an end centered between the free ends of said fingers at a level above such ends, the other end of said handle being tubular, means for connecting the handle to the fingers and comprising bars anchored side by side in the tubular end of the handle and extending laterally divergently and obliquely downwardly and forwardly therefrom and connected with said fingers materially ahead of the handle, and fixed prongs rigidly connected with the respective bars intermediate the handle and the said connection of the bars with the fingers and directed obliquely downwardly and rearwardly toward the free ends of the fingers from the respective points of connection of the prongs with said bars.

3,006,680
PIPE HANDLING APPARATUS FOR USE IN AND ABOUT A DERRICK
 James N. Gregory, 5651 Sorrento Drive,
 Long Beach, Calif.
 Filed Oct. 28, 1957, Ser. No. 692,671
 4 Claims. (Cl. 294-93)

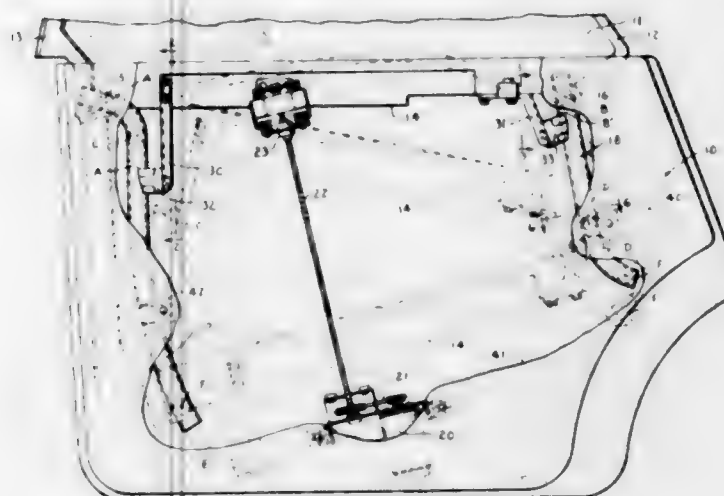
1. Pipe handling apparatus, comprising: a vertically extending hollow stem; a packer member carried by said stem and including a retainer disposed at the lower portion of said stem, a pusher disc axially slidably carried by said stem above said retainer, and a resilient member interposed between said retainer and said pusher disc; cam means supported by said stem for urging said pusher disc downwardly so as to squeeze said resilient

member into sealing engagement with the upper end of a pipe to be handled; a handle operatively attached to said cam means for effecting the operation thereof, said handle being movable between a generally horizontal position to a generally vertical position to squeeze said



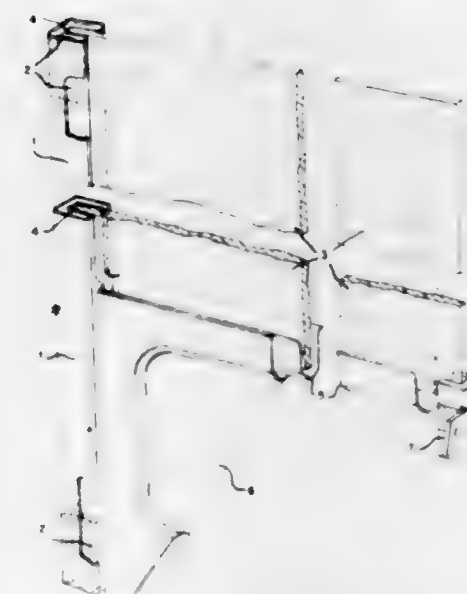
resilient member into sealing engagement with the upper end of said pipe; bearing means interposed between said handle and said resilient member whereby the latter may undergo relative rotation; and valve means mounted on the upper end of said stem for controlling the flow of fluid therethrough.

3,006,681
VEHICLE WINDOW STABILIZER
 Ralph H. Wise, Tampa, Fla., assignor, by mesne assignments, to The Anderson Company, a corporation of Indiana
 Filed July 10, 1957, Ser. No. 670,901
 20 Claims. (Cl. 296-44.5)



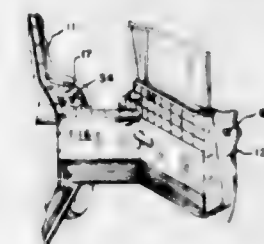
15. A stabilizing structure for automobile door windows where the window is maneuvered in a plurality of directions as well as being tilted endwise in the opening and closing thereof, comprising a track to guide the window through a predetermined path in said maneuvers, means to actuate the window along said track, stabilizing means including a rigid arm having one end attached to the lower edge of the window, with the arm extending generally downward adjacent said track and defining a cantilever parallel to the plane of the window, the lower end of said arm having fixed thereto spaced elements extending toward and adapted to receive said track therebetween during portions of the maneuvering of the window, to thereupon brace the window against lateral shocks.

3,006,682
SLIDABLE WINDOW FOR VEHICLE
 George C. Batley, Solihull, Birmingham, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed Jan. 6, 1959, Ser. No. 785,256
 Claims priority, application Great Britain July 17, 1958
 5 Claims. (Cl. 296-44.5)



1. In a vehicle body having a door structure mounted thereon, the upper horizontal edge of said door structure defining the lower edge of a window opening in said body, a side support channel at one side of said door structure, said side support channel comprising an elongated member extending from within said door structure to a point above said upper horizontal edge and defining a vertical edge of said window opening, a window, a glazing channel secured to said window along one vertical edge thereof, said glazing channel extending below the lower horizontal edge of said window, and spaced channel-shaped bearing means secured over said glazing channel adjacent the upper and lower ends thereof and slidably engaged within said side support channel, said side support channel being of sufficient length so that said bearing means guide said window from end to end thereof in both fully opened and fully closed position.

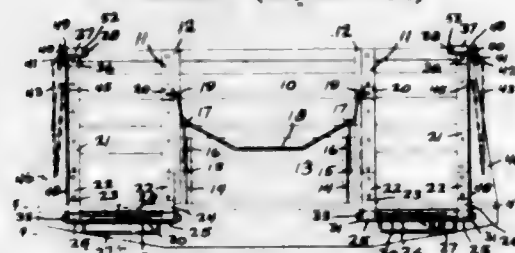
3,006,683
VEHICLE DOOR HINGE
 Raymond P. Smith, Huntington Woods, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
 Filed July 30, 1958, Ser. No. 751,997
 2 Claims. (Cl. 296-46)



1. In a vehicle body having a body opening and a door associated therewith movable between closed and open positions, a hinge member and a control member each pivotally connected at one of its ends to a body frame member for rotation about adjacent substantially vertical pivot axes, and adjacent substantially vertical pivot means connecting said door to the other ends of said hinge member and control member, the distance between said pivot axes being unequal to the distance between the pivot axes of

said pivot means, thereby establishing a nonparallel four-bar linkage system for controlling the movement of said door, said linkage system causing said door to move substantially bodily laterally outwardly of the vehicle body during the initial phase of opening movement and then to bodily swing on said hinge member about the pivot axis of the latter on said body frame member, said hinge member swinging in the direction of opening movement of said door as the latter is swung by said control member in a counterdirection about its pivotal connection to the hinge member, said control member controlling the swinging movement of said door relative to said hinge member so that the plane of the door becomes slightly angularly displaced relative to its initial plane coincident with the plane of the vehicle body opening, said hinge member swinging in excess of ninety degrees from door closed to door opened position, the lateral displacement of the edge of said door which moves furthest outwardly of said vehicle body during door opening movement being substantially function of the effective length of the hinge member plus the product of the length of the door between said edge and the point of connection to said hinge member multiplied by the sine of the displacement angle between a plane parallel to the initial plane of said door in closed position and the plane thereof when said hinge member is normal to said initial plane.

3,006,684
END GATE AND LATCHING STRUCTURE
Leonard J. Reimer, Danbury, Iowa
Filed May 18, 1960, Ser. No. 29,835
5 Claims. (Cl. 296-51)

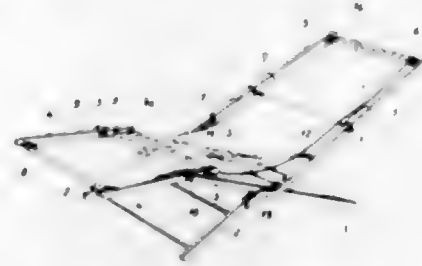


1. In combination with a wagon box, an end gate including latching structures at the upper corners thereof, and at the lower corners thereof, retaining members attached to said wagon box adapted to cooperate with said latching structures, means for locking said upper latching structures against displacement while releasing said lower latching structures, and means for locking said lower latching structures against displacement when releasing said upper latching structures, said latching structures including flanges attached to said wagon box having arcuate openings therein, upper and lower bearings attached to said end gate including upper shafts journaled in said upper bearings, said openings having slot portions, said upper shafts including flattened end portions adapted to pass through said slot portions when said upper latching structures are to be released, means for retaining said upper latching structures in said locked position including latch bars attached to said upper shafts, chains attached to said latch bars, the weight of said chains providing means for maintaining said flattened portions substantially at right angles to said slot portions.

3,006,685
FOLDABLE DECK-CHAIR
Fritz Ewert, 85 Neumarkterstrasse, Munich, Bavaria, Germany
Filed Jan. 21, 1958, Ser. No. 710,270
Claims priority, application Germany Jan. 25, 1957
1 Claim. (Cl. 297-30)

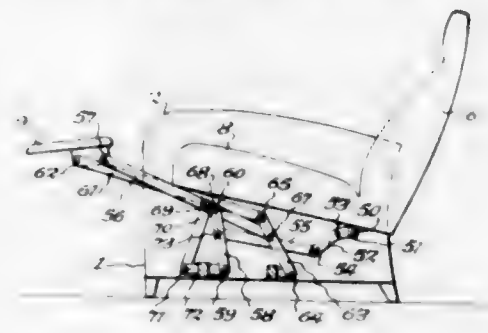
A foldable deck-chair comprising a back support of two bars and an end cross bar, a pair of front legs connected to the two bars, a pair of rear legs movably con-

nected to the back support at the part where the front legs are connected to the two bars and each having an extending portion, a pair of bars pivotally connected to the extending portions of the rear legs and having a cross bar forming a leg support, a cover for the chair secured



to the cross bar of the back support and the cross bar of the leg support, the pair of bars forming the leg support extending rearwardly beyond their pivotal connections, and resilient means connected to the back support to hold the latter in substantially horizontal swinging position.

3,006,686
RECLINING CHAIRS
Peter Stewart Fletcher, Boynton Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Original application Dec. 8, 1955, Ser. No. 551,876. Divided and this application Feb. 4, 1959, Ser. No. 796,191
3 Claims. (Cl. 297-84)

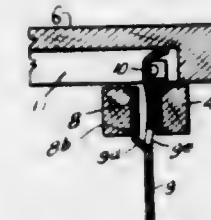


1. A reclining chair comprising a support, a back rest and a seat mounted on said support to tilt between upright and tilted positions, a leg rest disposed adjacent and below the front of said seat, two pairs of links at each side of said seat, the links of each pair being hinged together, one link of each pair being pivotally connected to the leg rest and the other link of each pair being pivotally connected to said support, the pairs of links at each side of said seat being operatively interconnected through an extension of at least one link of one pair beyond its hinge, and the links of each pair which are pivotally connected to said support having such connections to the support at the lower ends of those links, and means connected to one of said pairs of links and operable automatically when the back rest is tilted for causing advance and elevation of said leg rest when the back rest is moved into tilted position, and for causing retraction of said leg rest when the back rest returns to its upright position, said means that is connected to one of said pairs of links including a lever pivoted intermediate of its ends on said support and having one arm connected with said back rest and a link connecting the other arm of said lever with one of said pairs of links.

3,006,687
ANCHOR ELEMENT FOR ARMCHAIR TRAY
Alfred E. Brandon, Bronx, N.Y.
Filed June 17, 1958, Ser. No. 742,658
1 Claim. (Cl. 297-153)

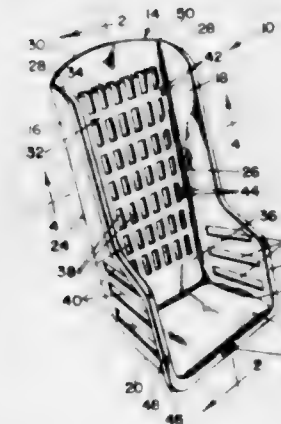
In a chair having armrests, a plurality of apertures in each of the armrests, a tray adapted to rest on and be detachably secured to said armrests, said tray including anchor means insertable in corresponding pairs of said

apertures, said means including a pair of elongated spring strips, each spring strip pivotally mounted adjacent one of its ends on the underside end of said tray, each of said strips having a lateral projection intermediate its ends spaced from the pivotally mounted end, each of said strips also having an angular portion adjacent said pivotally mounted end, said angular portions of said strips engaging the underside of the tray when the elongated strips are pivoted to a position substantially perpendicular



to said underside to be inserted in said apertures, each said lateral projection engaging the underside periphery of one of the apertures in the armrests when said strips are inserted thru a corresponding pair of said apertures whereby the tray is detachably secured to said armrests, the free ends of said spring strips forming handle means for springing the lateral projections out of engagement of the periphery of said apertures when said angular portions are engaging the underside of the tray to thereby detach the tray from the armrests.

3,006,688
BABY SEAT
Alfred J. Onelle, 680 Montcalm Place, St. Paul, Minn.
Filed Jan. 30, 1959, Ser. No. 790,184
10 Claims. (Cl. 297-457)

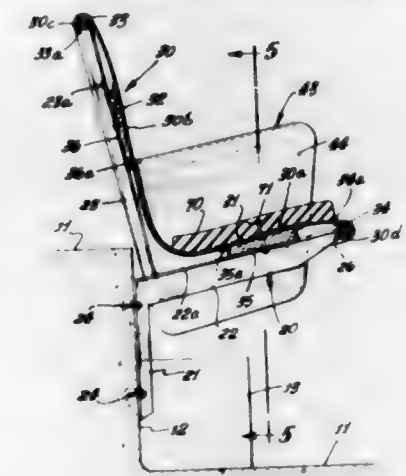


10. A baby seat comprising a one-piece body of flexible resilient sheet material including a seat portion having front, rear and side edges, a back portion extending upwardly from the rear edge of said seat portion with the lower, upper and side edges thereof residing in a plane forming a predetermined angle with said seat portion, said back portion having a raised section extending from the rear edge of the seat portion at a lesser angle than said plane so that said section is offset to a greater degree near the upper edge of said back portion, and side portion integral with the side edges of said seat portion and the side edges of said back portion.

3,006,689
STADIUM SEATING STRUCTURE OR THE LIKE
Reno P. Eppink, Whittier, Calif. (% California Church Furniture Co., 11900 Center St., Hollywood, Calif.)
Filed May 15, 1959, Ser. No. 813,442
2 Claims. (Cl. 297-457)

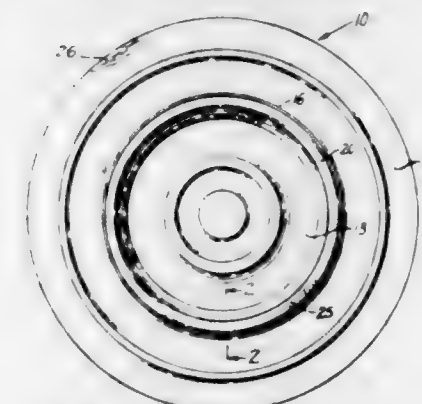
1. In combination: a unitary bench made of thin material of substantially uniform cross-section and having the characteristics of Fiberglas; said unitary bench having a seat portion and a back portion; said bench having

longitudinally uniform reinforcing means including a first reinforcing beam extending along the rear of the back portion, and a second reinforcing beam extending beneath the seat portion; beam enclosing pocket members made of material having the characteristics of Fiberglas and bonded to the bench for attaching the reinforcing beams to the bench; and a plurality of supports for the bench, each



support having three arms, one arm extending in a plane that is vertical with respect to the bench and adapted for attachment to the vertical step face of a stadium, the second arm extending behind the bench back portion and secured to said first beam, and the third arm extending beneath the bench seat portion and secured to said second beam.

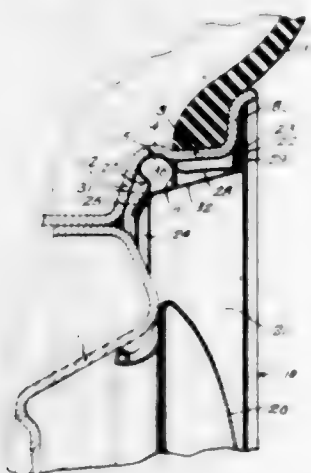
3,006,690
AUTOMATIC WHEEL BALANCING DEVICE
Comer C. Pierce, 537 Riverside Ave., Jacksonville 2, Fla., assignor of forty-nine percent to Comer C. Pierce, Jr., Jacksonville, Fla.
Filed Nov. 3, 1959, Ser. No. 850,665
1 Claim. (Cl. 301-5)



An automatically effective wheel balancing attachment for a vehicle wheel of the type having a rim with a tire mounted thereon, said rim having a substantially vertical outer wall portion and an annularly disposed outwardly extending flange portion, the intersection of said wall portion and said flange portion forming a bight; said attachment comprising a plastic annulus having a substantially oval cross section with a substantially straight outer wall, a plastic to metal adhesive permanently securing said annulus in said bight with said straight outer wall substantially flush with the outer edge of said flange, said annulus having an annular centrally disposed concentric chamber therein, mineral oil of relatively heavy viscosity substantially filling said chamber, and a quantity of freely movable individual lead shot particles dispersed in said mineral oil, whereby upon rotation of said wheel during normal travel said shot is gradually so dispersed in said mineral oil by centrifugal force as to assume a position wherein the effective weight of said shot is disposed diametrically opposite any heavy spots in the tire

and wheel assembly occasioned by wear or damage, to counterbalance such spots and establish a dynamic balance of said wheel, the viscosity of said mineral oil and its complete filling of the interior of said chamber and the gradual disposal of the shot occasioned thereby precluding sudden weight shifts due to any sudden impact against the tire and consequent sharply fluctuating imbalance.

3,006,691
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd.,
Detroit, Mich.
Filed May 19, 1958, Ser. No. 736,023
8 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim having a generally radially inwardly facing annular flange with a generally radially and axially inwardly facing shoulder thereon, a trim ring cover member for disposition over the tire rim including radially inner and outer marginal portions, and a retaining finger clip behind the trim ring and having opposite terminal ends engaged with said marginal portions, the radially outermost of said marginal portions having an underturned flange crimpingly engaging the associated finger clip terminal, the radially innermost marginal portion having an underturned flange providing an abutment against which the associated finger clip terminal is thrustingly engageable, the finger clip having an intermediate generally radially outwardly projecting shoulder loop portion including a portion facing generally radially and axially outwardly and retainingly engageable in snap-on pry-off relation with the rim flange shoulder, said inner margin engaging terminal of the clip finger being in general thrust alignment with the rim-shoulder-engaging portion of the shoulder loop portion and resiliently deflecting the contiguous portion of the trim ring cover by said thrusting abutment with said underturned inner marginal flange as an incident to radially inward deflection of said shoulder loop portion in moving into and out of engagement with said rim flange shoulder.

3,006,692
VEHICLE WHEEL
Richard C. Schubert, Lincoln Park, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 4, 1958, Ser. No. 739,707
1 Claim. (Cl. 301—63)

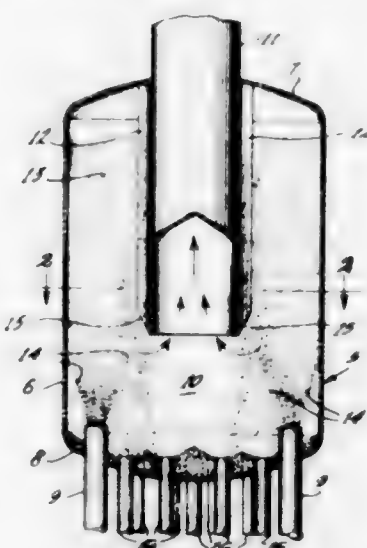
A bipartite sheet metal vehicle wheel having a first part comprising a generally radially extending web and an integral generally axially extending rim, said web having a circumferentially arranged series of bolt holes near its inner edge, an annular axially extending contour in said web radially outwardly of said bolt holes, a second part comprising a demountable flange having a generally radially extending web positioned adjacent said first mentioned web and having a generally axially

extending rim forming a continuation of said first mentioned rim, said second web having an axial cylindrical flange formed on its inner edge positioned concentrically about said annular contour, a series of angularly spaced apertures in one of said webs, a corresponding series of angularly spaced circumferentially extending locking tabs on the other of said webs, said locking tabs being offset axially from the plane of said other web and generally parallel thereto, locking means between said webs operative when said webs have rotated to inter-



locked relationship to prevent subsequent rotation between said first and second parts, said locking means comprising a pair of aligned holes in said webs and spring pressed means positioned through said holes, safety members extending axially from a plurality of said locking tabs through the apertures in said one web and having flanged ends extending in a circumferential direction opposite to said locking tabs, said safety members being arranged to overlap said one web when the locking tabs are in alignment with their corresponding apertures to prevent inadvertent disengagement between said first and second parts.

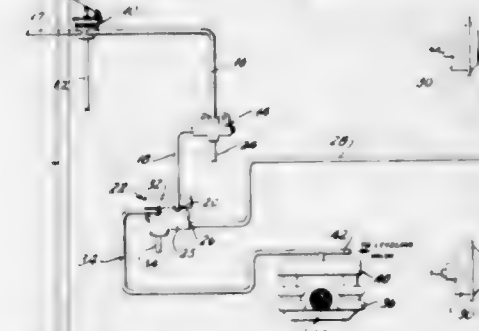
3,006,693
DISENGAGEMENT OF SOLIDS FROM LIFT GAS IN PNEUMATIC LIFT
Charles K. Clauch, Jr., Claymont, Del., and Numer M. Kapp, Swarthmore, Pa., assignors to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,428
4 Claims. (Cl. 302—59)



1. A method for disengaging granular solids from a combined stream of lift gas and solids discharging from the upper end of a confined lift path, which comprises the steps of: discharging said combined stream at a low level within the peripheral region of a broad confined disengaging zone having its upper boundary at a distance above the discharge end of the lift path sufficient to permit complete gravitational deceleration of a substantial

major portion of the discharged solids, the axis of said discharge being inclined slightly away from the adjacent side of said zone so that a major portion of the decelerated solids descend outside the divergent envelope of the rapidly-rising lower portion of the discharging stream of solids; collecting and withdrawing the disengaged solids at the bottom of said zone, below the discharge level of said lift path; and withdrawing said lift gas from said zone in an upward direction and at below solids-supporting velocity from a location horizontally spaced from said envelope and well above the maximum level of rebound for disengaged solids rebounding from the surface of the layer of solids collected at the bottom of said zone, whereby the solids rising from the upper end of the confined lift path and the solids rebounding from the bottom of said zone remain sufficiently remote from the lift gas withdrawal outlet, and the disengaged solids falling adjacent to said outlet have sufficient gravitational acceleration, to minimize their reentrainment in the outgoing gas stream.

3,006,694
BRAKE CONTROL VALVE
Harry M. Valentine and Charles E. Gates, Elyria, Ohio, assignors to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,217
4 Claims. (Cl. 303—22)

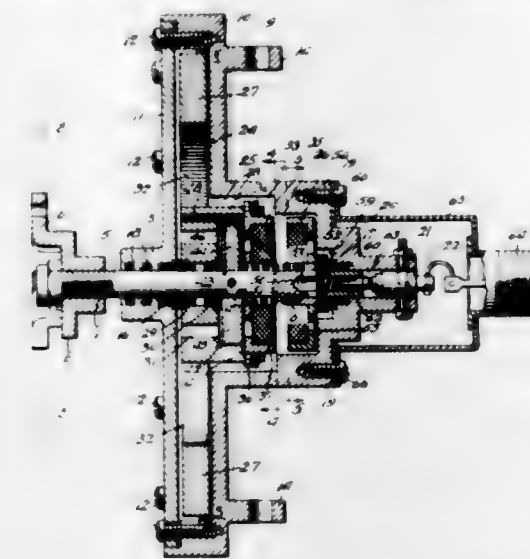


1. In combination with a vehicle having air springs and means for controlling the pressure in the air springs in proportion to vehicle loading, a braking system including a brake valve, brake actuators and a proportioning valve mechanism connected between said brake valve and said actuators, said proportioning valve comprising a casing having an inlet port connected to said brake valve, an outlet port connected to said actuators, and a control port connected to said air springs, said valve mechanism being adapted to maintain the pressure supplied to the outlet port through the valve mechanism at a value less than but proportional to the pressure supplied to the inlet port whenever the pressure at said outlet port exceeds the pressure at said control port, said mechanism including an inlet valve in the casing for connecting and disconnecting said inlet and outlet ports and a pressure responsive element for operating said valve having an area responsive to the inlet pressure, a greater area responsive to the outlet pressure, and a third area equal in value to the difference between the first two areas and responsive to the pressure at said control port.

3,006,695
ANTI-SKID DEVICE
Richard E. Woodworth, Wheaton, Ill., assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 15, 1957, Ser. No. 690,342
8 Claims. (Cl. 303—24)

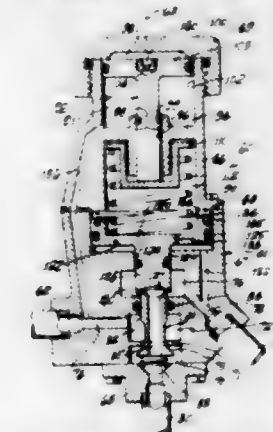
8. A shaft deceleration detector, comprising a rotatable shaft, an inertia mass rotatable about the axis of said shaft, a one-way overrunning clutch connected between said shaft and said mass for driving said mass while enabling said mass to overrun said shaft, a first magnet secured to and rotatable with said mass, a second magnet

adjacent said first magnet and mounted on said shaft for rotation therewith and sliding movement therealong, each of said magnets having a plurality of unlike poles facing



the other magnet, and control means operable by movement of said second magnet along said shaft to produce a deceleration signal.

3,006,696
BRAKE CONTROL SYSTEM WITH PRESSURE MODULATION
Gordon W. Yarber, % General Delivery, Cornell, Calif.
Filed Dec. 23, 1957, Ser. No. 704,364
33 Claims. (Cl. 303—24)

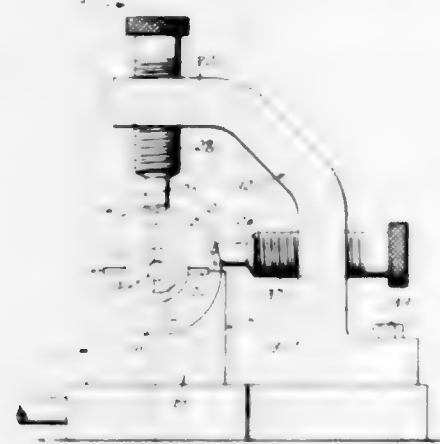


33. In a control system for a vehicle wheel brake that is normally actuable in response to a variable fluid pressure, said system comprising a supply line and means actuable manually to supply a selected fluid pressure to the supply line to actuate the brake; the improvement which comprises the combination of pressure regulating valve means having an input connected to a source of fluid pressure and an output connected to the brake, said pressure regulating valve means comprising a valve and a valve actuating member normally acting to control the output pressure in accordance with a control force applied to the valve actuating member, structure forming a cylinder, a piston movable in the cylinder, resilient means coupling the piston and the valve actuating member, and conduit means for supplying to the cylinder a pressure derived from the supply line pressure.

3,006,697
GAS LUBRICATED BEARING
Joseph A. Rawlins, Tenafly, N.J., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,534
3 Claims. (Cl. 308—9)

1. An air bearing of the character described comprising a high-speed rotary shaft having a cylindrical bearing surface, a base plate, a journal box in which said shaft

is rotatably mounted; said journal box comprising a bearing block secured to said base plate and a bearing cap which is mounted on said bearing block for vertical and transverse floating movement with respect thereto, said bearing block and said bearing cap being each provided with opposed similar semicircular bearing surfaces which are disposed about the said cylindrical shaft bearing surface, the radii of said bearing block and said bearing cap semicircular bearing surfaces being slightly greater



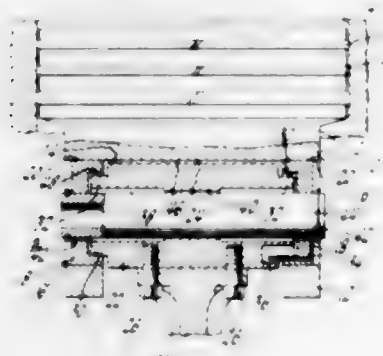
than the radius of said cylindrical shaft bearing surface to thereby provide a clearance space about said cylindrical shaft bearing surface, and pressure means by which said bearing cap is yieldingly biased downwardly and transversely with respect to said bearing block and said shaft, whereby said bearing cap may be moved vertically and/or transversely against said pressure means by the pressure of the air drawn into said clearance space by the rotation of said shaft.

3,006,698

BEARING ASSEMBLY

William G. Dilworth, La Grange, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 25, 1959, Ser. No. 855,301
4 Claims. (Cl. 308-23)

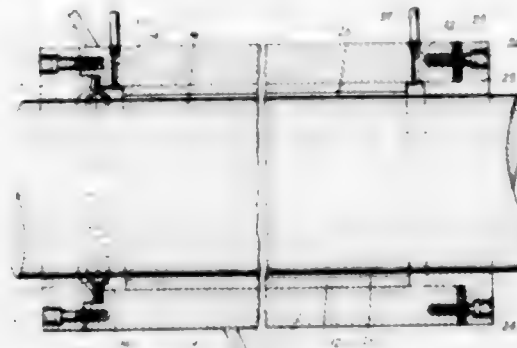


1. A composite bearing assembly for cyclically variable loads comprising a bearing and a journal, said bearing including a secondary bearing element having a bearing surface held in engagement with the bearing surface on said journal, said bearing including a primary bearing element having a bearing surface adapted to engage the bearing surface on said journal and supported by said secondary bearing element, a preloaded spring acting between said elements to space the bearing surface of said primary element away from the bearing surface of said journal for all values of load on the bearing assembly below a predetermined value, the bearing surface on said primary element being engageable with the bearing surface on said journal when the load on said bearing assembly exceeds said predetermined value to overcome the preload on said spring.

3,006,699
FORCED PRESSURE SEALED LUBRICATING
SYSTEM FOR CAST IRON BEARINGS

Robert W. Erlbacher, 920 N. Fountain,
Cape Girardeau, Mo.

Filed June 9, 1958, Ser. No. 740,723
2 Claims. (Cl. 308-36.1)



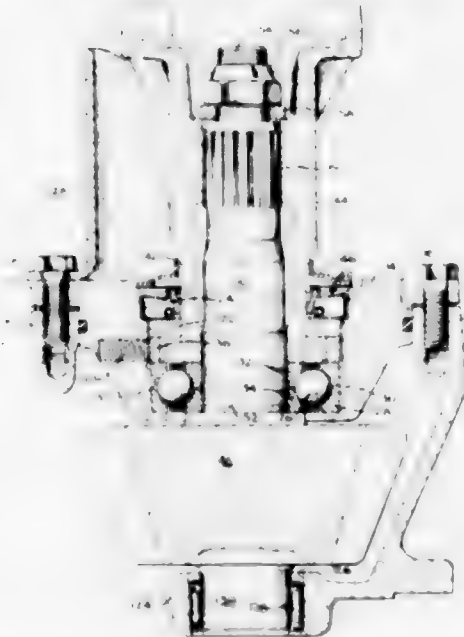
1. A bearing for massive rotary shafts comprising a housing, a cast iron sleeve supported within said housing and receiving said shaft, a collar sealing one end of the housing and a sealing support means for sealing the second end of the housing comprising a sealing block and a pair of annular flexible seals fitting around the shaft and secured to said housing, said seals having an opening slightly less than the diameter of the shaft and having their inner peripheries in divergent positional relationship and said sealing block having vertical wall means removably secured to a vertical end wall of the housing with the peripheral portions of said seal fastened in vertical relationship between the block and the housing, and means for forcing oil through said bearing at a controlled greater pressure than the pressure to which the exterior of the bearing is exposed, said means including a pump and an adjustable standpipe for establishing a controllable oil pressure on the oil passing through the bearing, and a return line from the bearing leading into a reservoir connecting with said pump, said return line terminating above the reservoir whereby visual inspection may be made of the oil passing into the reservoir.

3,006,700

PRELOADED BEARING STRUCTURE

Raymond E. Hoffmann, Milford, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Aug. 7, 1959, Ser. No. 832,244
5 Claims. (Cl. 308-178)

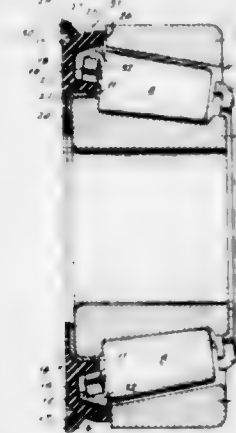


1. A bearing structure for rotatably mounting a rotary torque delivery member, mounting shaft extensions situated on either side of said rotary member, a separate

bearing support disposed on each side of said rotary member, first bearing means for journaling one shaft extension in one of said bearing supports, a second bearing means for rotatably journaling the other shaft extension in the other bearing support, said second bearing means including a ball bearing unit having a two-part inner race, an outer race and a plurality of ball bearing elements disposed between said races, each inner race part being engageable with said bearing elements, said inner race parts normally having a predetermined clearance therebetween, and means for applying an axial force to said inner race parts which tends to urge the same to a relative position of zero clearance and to preload said bearing elements, said force applying means including a sleeve surrounding said other shaft extension and engageable with one of said inner race parts, the other inner race part being anchored to said other shaft extension.

3,006,701
SEAL

George W. Curtis, Fort Myers, Fla., assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio
Continuation of application Ser. No. 460,480, Oct. 5, 1954. This application June 17, 1958, Ser. No. 742,975
9 Claims. (Cl. 308-187.1)



1. A sealing member comprising a radially extending diaphragm, a mounting portion formed on the inner end of said diaphragm, said mounting portion including a radially extending flange and an axially extending flange, a sealing portion formed on the end of said diaphragm radially outwardly from said mounting portion, said sealing portion including an axially extending sealing ring formed on said diaphragm, a radially extending sealing ring formed on said axially extending sealing ring adjacent said diaphragm, an annular groove formed between said radially extending sealing ring and said diaphragm, a second annular groove formed between said radially extending sealing ring and said axially extending sealing ring, and a third annular groove formed between said axially extending sealing ring and said axially extending flange of said mounting portion adjacent to said diaphragm.

3,006,702

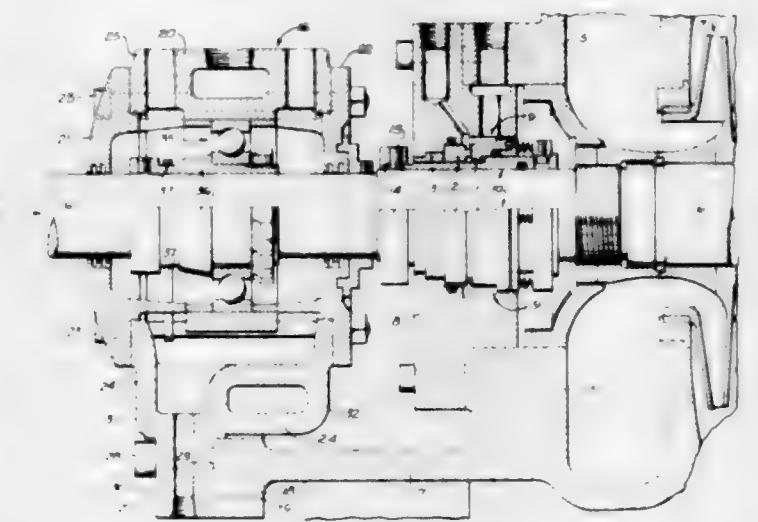
BEARING ASSEMBLY

Daniel A. Jack, Battle Creek, Mich., assignor to Union Pump Company, Battle Creek, Mich., a corporation of Michigan

Filed May 2, 1960, Ser. No. 26,250
5 Claims. (Cl. 308-189)

1. Means for two-position reversible supporting of a bearing for mounting a shaft end which projects outwardly from a machine casing, said means for two-position reversible supporting of a bearing includes a bearing body and mounting means for said bearing body, said mounting means being in the form of a flange extending sidewise from said bearing body, and being nearer one

end of said body than the other, the opposite sides of said flange being symmetrical with a plane perpendicular to the longitudinal axis of said bearing, said support means also including a member extending outward from the end of said machine casing and having an end face at an angle to a plane perpendicular to said shaft which will match and fit against the side of the sidewise extending flange of said bearing body, said outward extending



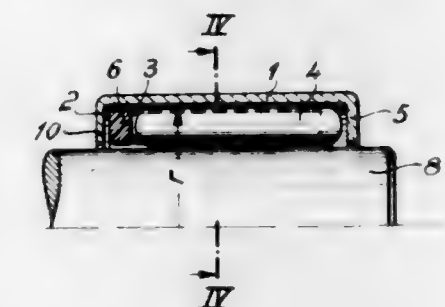
member also having an inner face of a size such that said bearing body will fit therein with either side of the flange of the latter fitting up against the end face of said flange on the end of said outward extending member of said machine casing, and means for releasably joining said flanges together, whereby reversing the bearing body on the outer end of said member extending outward from said machine casing will vary the spacing of said bearing from the end of said machine casing.

3,006,703

NEEDLE BEARINGS

Emil Bensch, Herzogenaurach, near Nurnberg, Germany, assignor to Industriewerk Schaeffler O.H.G., Herzogenaurach, near Nurnberg, Germany, a German company

Filed May 27, 1958, Ser. No. 738,195
Claims priority, application Germany May 31, 1957
1 Claim. (Cl. 308-212)



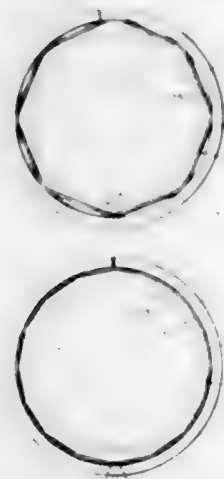
A needle bearing comprising a metal sleeve, a radially extending flanged-over hardened rim at one end of the sleeve, said sleeve and rim together constituting a race, cylindrical needles equidistantly spaced one from another having convex terminal portions at opposite ends thereof, and a cylindrical cage made of plastic material positioned co-axially with said sleeve between said rim and the end of the sleeve opposite the rim, said cage having an unbroken annular end ring and circumferentially spaced prongs of the same number as said needles equidistantly spaced one from another extending axially from said end ring towards the rim of said sleeve, said prongs each having along opposite sides thereof axially extending concave surfaces, the concave surfaces of adjacent prongs defining between said adjacent prongs substantially cy-

lindrical pockets in which said needles are rotatably disposed, said needles at one end facing said rim and extending beyond the distal ends of said prongs, and the main annular wall of the race at the end of the race opposite to said rim having an inwardly extending flanged over portion to retain said cage and needles.

3,006,704

PISTON RING

Henry Guyer, Zurich, Switzerland, assignor to Nova-Werke Junker & Ferber, Zurich, Switzerland
Filed Nov. 12, 1959, Ser. No. 852,306
Claims priority, application Switzerland Nov. 20, 1958
17 Claims. (Cl. 309-29)



1. A piston ring assembly adapted to be received in the grooves of a piston, comprising a piston ring mounted in the groove of said piston to seal the same, a loading spring mounted in the groove of the piston and disposed out of contact engagement with the bottom wall of the groove in said piston, and bearing against the piston ring at circumferentially spaced apart locations, said spring having its ends arranged to abut one another at least in the compressed state of said spring, said spring in its uncompressed state having the form of an *n*-sided convex polygon with its edges bearing on the piston ring and the portions of the spring forming the polygon sides being adapted to buckle outwardly with increasing inwardly directed radial pressure on the piston ring.

3,006,705

COMBINATION TABLE, SAND BOX OR WADING POOL

Billy Oliver Williams, McMoresville, Tenn., and Johnny Leon Williams, Box 104, McKenzie, Tenn.
Filed Oct. 14, 1957, Ser. No. 690,092
4 Claims. (Cl. 311-3)



1. An article of furniture, comprising a rectangular table top and vertically extending side walls extending downwardly therefrom, four socket members carried by said side walls at the respective corners of the article, table legs detachably positioned in said corner socket members, two additional socket members carried respectively at about the middle of one pair of said opposite side walls, a canopy, supporting standards, provided with

annular stops, for said canopy, said standards being seated in said two additional socket members with their annular stops bearing against their corresponding socket member.

3,006,706

EXTENSIBLE LEG

Don M. Park and Alan B. Park, Metropolis, Ill., assignors to Metropolis Bending Company, Metropolis, Ill., a corporation of Illinois
Filed Sept. 18, 1959, Ser. No. 840,917
6 Claims. (Cl. 311-77)



1. In a table including a top, a plurality of leg units, and means pivotally securing said leg members to said top for movement to and from operative positions, each said leg unit comprising a wooden member having a bore extending thereinto from the lower end thereof, the combination therewith of a metal tube telescopically received in said bore and protruding downwardly therefrom, support means engaging the protruding end of said metal tube, said metal tube having at least one longitudinally extending slot therein, a metal ferrule carried by the end of said wooden member and terminating adjacent the open end of said bore, and an elongate generally axially extending wire spring received in the bore of said metal tube and retained therein under radial compression, said wire spring having a radially outwardly extending U-shaped offset section with radially extending legs and a longitudinally extending base, said offset section being of a width and length as to be snugly received in said slot and to resiliently protrude therethrough when said slot is moved out of the bore in said wooden member to provide a support shoulder to engage said ferrule and prevent axially inward movement of said metal tube until said offset section is forced back into said bore, said metal tube being of a size as to engage said bore to be retained thereby against lateral movement and having a radially outwardly extending tab thereon immediately above and diametrically opposed to said slot to seat on the inner surface of said ferrule to aid in locking said metal tube in an extended load carrying position.

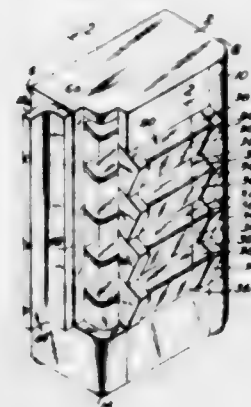
3,006,707

DISPENSING AND DISPLAY CABINET

Anthony T. Rossi, 224 N. 18th St. W., Bradenton, Fla.
Filed Apr. 30, 1958, Ser. No. 732,015
7 Claims. (Cl. 312-121)

2. A dispensing and display cabinet comprising enclosing walls including a front wall, a plurality of vertically spaced shelves within said cabinet, the forward ends on said shelves extending to but not substantially beyond said front wall, said shelves dividing the interior of said cabinet into a plurality of compartments, said front wall having apertures above each shelf and communicating with said compartments, panels extending upwardly at the forward ends of said shelves and extending outwardly through said front wall apertures, end walls substantially closing the side gaps between said panels and said cabinet walls, an opening remaining between said front wall and the upper edges of said panels and providing access to individual compartments through which items con-

tained in said compartments may be individually removed, said apertures and said panels having a width less than the width of said shelves, a portion of said cabinet walls

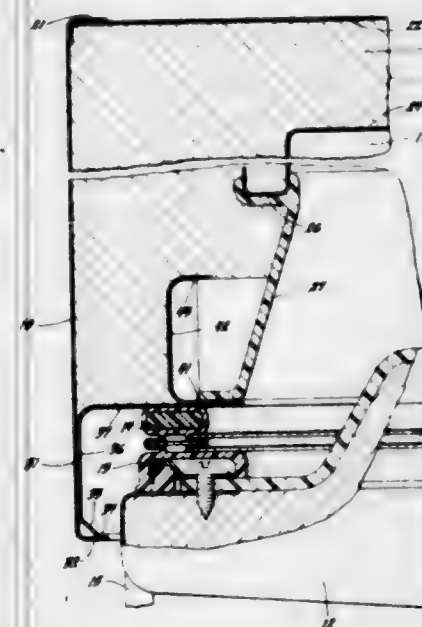


laterally outwardly spaced from said apertures being openable to provide access to said compartments for the refilling thereof.

3,006,708

REFRIGERATOR CABINET

Orson V. Saunders, Dayton, and Richard C. Brown, Vandalia, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,813
14 Claims. (Cl. 312-214)



1. A cabinet construction comprising, a one-piece sheet of metal fabricated to provide an inverted substantially U-shaped shell forming the outer top and side walls of said cabinet, a liner within and spaced from said shell defining a storage chamber in the cabinet open at its front, insulating material disposed in the space between said shell and said liner providing said cabinet construction with an insulated main body portion about said chamber, a door hingedly mounted on said cabinet adapted to abut same and close the open front of said chamber, said one-piece sheet metal shell having a multifarious edge formation across said cabinet top wall and downwardly along its side walls projecting forwardly of said main body portion, said forwardly projecting edge formation providing said cabinet construction with an uninsulated front portion integral with said shell and complementary to said insulated main body portion, said multifarious shell edge formation including a first part extending from and being flush with said cabinet outer walls, a second part bent laterally from the forward terminating point of said first part inwardly toward said chamber opening at a right angle with respect to said

cabinet outer walls forming a front surface for the cabinet spaced from said main body portion thereof, a third part bent rearwardly of the cabinet from said second part at an acute angle relative thereto against said first part spaced with respect to said forward terminating point thereof forming therewith and with said second part a plurality of walls of a hollow substantially triangular-shaped corner post reinforcing the cabinet construction thereat and a fourth part bent from that portion of said third part lying against said first part at substantially a right angle to said outer cabinet walls providing a door jamb at the front of said main body portion inset relative to said front surface of the cabinet construction for engagement by said door, and said forwardly projecting integral complementary shell edge formation concealing the juncture of said door with said door jamb while the door is closed and when said cabinet is viewed from its sides.

3,006,709

COLLAPSIBLE CABINET

Harold L. Krey, Philadelphia, Pa., assignor to Livingston & Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed July 13, 1959, Ser. No. 826,844
9 Claims. (Cl. 312-262)

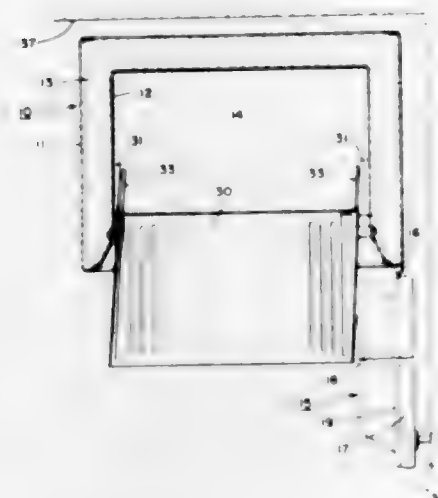


1. A collapsible cabinet comprising, a unitary symmetrical door frame assembly, a separate sides and rear wall assembly, a top section, a bottom section, and two doors detachably hinged to said door frame assembly, said sides and rear wall assembly comprising a pair of parallel side panels and a rear panel substantially orthogonal to said side panels, each side panel along its rear vertical edge being hinged to a different vertical side edge of said rear panel and at its front vertical edge being turned inwardly at a right angle to form a vertically extending flange, said door frame assembly including a pair of parallel vertical side columns spaced horizontally from one another substantially the width of the cabinet, each door frame side column at its rear edge being turned inwardly to form a vertically extending flange disposed in flatwise contact throughout its vertical extent with a different one of the vertically extending side panel flanges, a plurality of fastening elements disposed at spaced vertical intervals along the contacting flanges and clamping the same together to thereby secure said door frame assembly to said sides and rear wall assembly, each of said sides and rear wall panels having pocket formation disposed at the top and bottom thereof with the pockets openings facing upward, and said top section and bottom section each having opposite side and rear downwardly turned flanges seated in the corresponding top and bottom pocket formations to thereby close the cabinet and rigidify the same.

3,006,710 REFRIGERATOR CABINET SHELF ARRANGEMENT

Carl F. Petkowitz, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 15, 1960, Ser. No. 49,741
11 Claims. (Cl. 312-311)

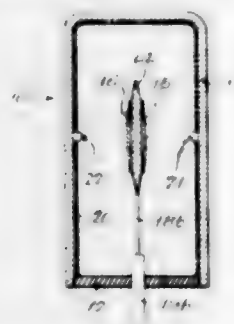


1. A cabinet comprising in combination, a plurality of walls forming a chamber in said cabinet provided with a front access opening, a door hingedly secured to said cabinet at one side of the chamber opening, said door being engageable with a forward surface of said cabinet about said chamber opening and including a portion projecting therefrom inwardly into the chamber beyond said surface, an article support in said chamber occupying substantially all of the horizontal cross-sectional area thereof intermediate said projecting portion of said door and walls of the chamber, means mounting said support within said chamber for gliding movement in a straight-line direction outwardly thereof through its access opening while mounted on said mounting means, said door being swingable into at least a 90° open position with respect to said cabinet whereby said projecting portion of the door is located in front of said chamber opening in the path of straight-line movement of said support there-through, the front part of the end of said article support adjacent said one side of the chamber opening being spaced inwardly from the upright chamber wall thereat, and said spaced end part of said support clearing and being shiftable along said projecting portion of said door at said 90° open position thereof upon moving the support to and fro said chamber.

3,006,711 CRYSTAL ASSEMBLY

John F. Silver, Park Ridge, Ill., assignor, by mesne assignments, to The James Knights Company, Sandwich, Ill., a corporation of Delaware

Filed May 13, 1959, Ser. No. 812,975
5 Claims. (Cl. 310-8.1)

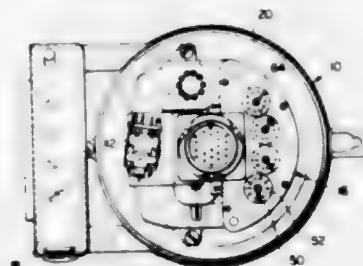


1. In a crystal assembly, the combination comprising an evacuated, hermetically sealed metal envelope, a crystal mounted in said envelope and having a metal

coating on the surface thereof electrically connected with a lead extending through and insulated from said envelope, a layer of electrically insulating material on the interior metallic surfaces of said envelope, and a spot of metal projecting through said layer and located substantially opposite said metal coating, whereby application of a voltage between said lead and said spot may sputter metal from the latter to the metal coating to decrease the operating frequency of the crystal.

3,006,712 METER READING AND RECORDING DEVICES

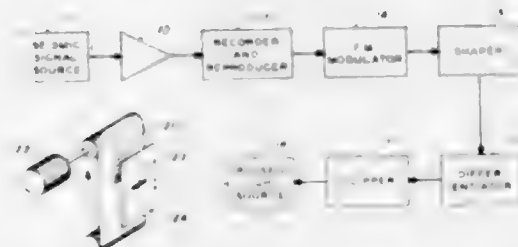
Harold Frank Eichacker, Wethersfield, Conn., assignor, by mesne assignments, to Ripley Company, Incorporated, Middletown, Conn., a corporation of New York
Filed Sept. 12, 1958, Ser. No. 760,613
3 Claims. (Cl. 346-14)



1. In a meter, a pair of metal plates and an electrical-insulating plate, means maintaining said plates in parallel spaced relation with said insulating plate intermediate said metal plates, a plurality of spaced digit shafts journaled in said metal plates to extend transversely thereof, power input means for said digit shafts, means drivingly interconnecting said shafts at progressive digital reduction ratios, plural groups of electrical contact points fixed to said insulating plate to form circular arrays concentrically of said shafts, a wiper type contactor fixed to each shaft between one of said metal plates and said insulating plate, each said contactor comprising a metal collar, output means for said contactors, means for adjustably clamping the collar to a shaft, a washer-like dielectric member fixed to each collar to extend radially thereof, a pair of helical contactor springs fixed to each dielectric member, said springs extending axially from opposite sides thereof, each said dielectric member being positioned on its shaft to lightly urge the free end of one of said springs against the contact points of the shaft encircling array, a collector structure encircling each shaft for continuous engagement by the other spring of the contactor, and an output for said collector structure.

3,006,713 SEISMIC DATA DISPLAY

Walter W. Klein, Jr., and Ole A. Fredriksson, Fullerton, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Oct. 1, 1956, Ser. No. 613,121
2 Claims. (Cl. 346-108)



1. The method of simulating a variable-density photographic record of seismic detector signals independently of exposure characteristics of the photographic film upon

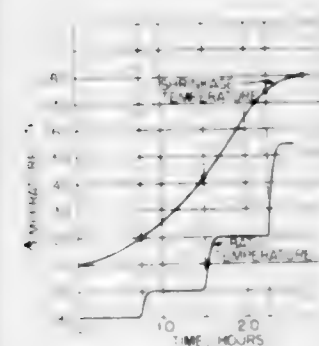
which said record is printed, which comprises the steps of generating a first electrical signal consisting of a train of waves modulated in amplitude in accordance with variations in the amplitude of a seismic detector signal, generating a second electrical signal consisting of a series of constant amplitude electrical pulses, controlling the repetition rate of said series of pulses in said second electrical signal in accordance with said modulation of said first signal, maintaining a constant duration for each of said controlled pulses within said series of pulses, ener-

gizing a light source to produce light pulses of substantially constant intensity for each pulse in said controlled second electrical signal, and recording as a function of time a plurality of said light pulses as exposed parallel portions on said photographic record, the variations in total area of said record exposed by said recorded parallel portions corresponding to variations in the amplitude of said seismic detector signal and being independent of the exposure characteristic of said photographic film.

CHEMICAL

3,006,714
TREATMENT OF ANIMAL SKINS
Alexis E. Ushakoff, Beverly, Mass., assignor to Nathan W. Levin, New York, N.Y., Alexis E. Ushakoff, Somerville, Mass., and J. B. Hatton, Grand Haven, Mich., as trustees

Filed Oct. 1, 1956, Ser. No. 613,338
10 Claims. (Cl. 8-94.18)



1. In the process of extracting and replacing water in water-wet untanned animal skin by treating said skin with an inert water miscible organic solvent, the method of increasing and rendering uniform the permeability of the skin to the solvent comprising contacting said skin with an aqueous bath containing at least about 0.5 percent of formaldehyde based on the weight of the wet skin at least until the shrinkage temperature of the skin has reached 155° F., while maintaining said bath at a temperature below the shrinkage temperature of the skin and at a pH such that the pH in the skin is between about 2 and 9, then contacting said skin with a liquid consisting essentially of said inert water-miscible organic solvent until the water in the skin is extracted and replaced by solvent.

3,006,715
PROCESS OF SPINNING ACRYLONITRILE POLYMER FILAMENTS FROM SOLUTION OF DIMETHYL SULFOXIDE AND A NON-SOLVENT
Donald Joseph Lyman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 18, 1957, Ser. No. 690,900
4 Claims. (Cl. 18-54)

1. The process comprising the steps of admixing at least 10% by weight of a polymer of acrylonitrile containing at least about 85% by weight of combined acrylonitrile in a mixed solvent medium comprising from about 40% to about 80% by volume of dimethyl sulfoxide and an organic non-solvent for the acrylonitrile polymer having a boiling point between about 40° C. and 150° C. selected from the group consisting of acetone, methyl ethyl ketone, 4-methylpentanone-2, diethyl ether, 1,2-dimethoxyethane, tetrahydrofuran, 1,3-dioxane, dioxolane, acetonitrile, ethyl acetate, n-amyl acetate, methylene

chloride, carbon tetrachloride, benzene, and toluene, dissolving said polymer in said solvent medium by heating the mixture to form a solution containing at least about 10% by weight of the acrylonitrile polymer and having a viscosity between about 25 and about 750 poises, and spinning the solution into a filament at a temperature substantially less than that required for spinning a solution of the same acrylonitrile polymer in dimethyl sulfoxide and having substantially the same viscosity as the solution of the polymer in the mixed solvent medium.

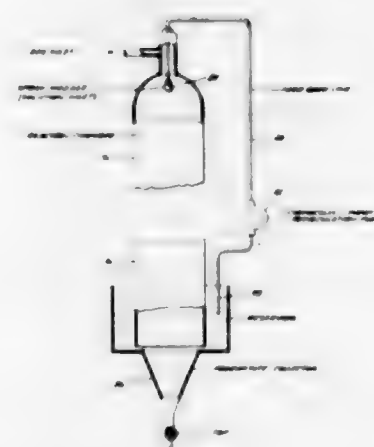
3,006,716
CORROSION PREVENTION WITH POLYAMINE-CARBOXYLIC ACID PRODUCT IN BLACK LIQUOR EVAPORATION PROCESS
Otto L. Hudrlik, Portland, Oreg., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Dec. 17, 1958, Ser. No. 780,919
12 Claims. (Cl. 21-2.5)

8. In a process for evaporating black liquor in a multiple effect evaporating system of the type comprising a plurality of series-connected ferrous metal evaporators for successively concentrating dilute black liquor, each evaporator comprising a single effect, with the first effect containing the most concentrated black liquor and the last effect containing the most dilute black liquor, means for heating the first effect to temperatures which produce steam under super atmospheric pressures, means for counter-currently transferring the generated steam from the first effect through the series of evaporators to the last effect, and whereby said generated steam is utilized for heating the dilute black liquors; the improvement which comprises the steps of adding to said last effect from 1 to 100 parts per million of a compound from the group consisting of oxyalkylated alkylene diamines containing a single long aliphatic hydrocarbon chain having at least 10 carbon atoms, attached to one of the nitrogen atoms the oxyalkylation having been with a lower alkylene oxide to link oxyalkylene groups to at least one of the nitrogen atoms to the extent that at least 5% by weight of said oxyalkylated diamine is water dispersible, and the acid addition salts of said oxyalkylated diamines, with aliphatic carboxylic acids containing less than 10 carbon atoms from the group consisting of aliphatic monocarboxylic acids, aliphatic dicarboxylic acids, hydroxy aliphatic monocarboxylic acids, and hydroxy aliphatic polycarboxylic acids, said compound being further characterized by the fact that the initial alkylene diamines prior to oxyalkylation contain 2 to 6 carbon atoms connecting the amino nitrogen atoms, whereby the ferrous metals of the multiple effect evaporator exposed to the corrosive steam vapors of all the effects are rendered substantially non-corrosive, transferring said concentrate to the next effect and successively repeating the concentrations and additions of said chemicals until the black liquor concentrate is withdrawn from the first effect.

3,006,717
REGENERATION OF COPPER AMMONIUM SALT SOLUTION
 Vernon T. Atkinson, Pasadena, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
 Filed Feb. 26, 1959, Ser. No. 795,829
 11 Claims. (Cl. 23—2)

initial extraction step and prior to said separation step, with an extractant consisting essentially of a material selected from the group consisting of methyl isobutyl ketone, ethyl ether, ethyl acetate, butyl ether and butyl acetate, to extract ferric iron values from said aqueous feed solution thereby preventing polymer formation when said feed solution is treated in said separation step, and separately recovering a substantially ferric iron-free aqueous feed solution and an extract phase containing said extractant and ferric iron.

3,006,720
PROCESS FOR PRODUCING HIGH PURITY SELENIDES OR SULFIDES
 Robert C. L'Heureux, Santa Barbara, Calif., assignor to International Telephone and Telegraph Corporation
 Filed Aug. 1, 1958, Ser. No. 752,562
 2 Claims. (Cl. 23—50)



1. A continuous process for producing in a reaction vessel having solely one gas conduit, metal sulfide and metal selenide materials of sufficient purity for phosphor and semiconductor use comprising the steps of feeding gaseous material through the sole gas conduit into the vessel at a rate equal to that at which the gaseous material is consumed in the reaction hereinbelow mentioned, said gaseous material being selected from the class composed of hydrogen selenide and hydrogen sulfide, injecting at the top of said reaction vessel a finely divided aqueous solution of salt selected from the class composed of cadmium chloride and zinc chloride, whereby said finely divided solution in gravitating through the gaseous material presents a high surface-to-volume ratio which insures reaction of the gas and salt without saturation of the solution, continuously withdrawing liquid and solid material from the base of said reaction vessel thereby maintaining a predetermined liquid level in said reaction vessel, filtering out said solid material and collecting said solid material as product, recharging the filtrate with said salt and respraying said recharged solution into said reaction vessel.

3,006,721
PROCESS OF MAKING A SODIUM CHLORITE PRODUCT AND PRODUCT OBTAINED THEREBY

Paul Mollard, Pierre-Benite, France, assignor to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France

Filed Mar. 8, 1960, Ser. No. 13,507
 Claims priority, application France Mar. 10, 1959
 3 Claims. (Cl. 23—85)

1. The process of making a sodium chlorite product, which comprises producing sodium chlorite trihydrate crystals in a first stage and thereafter, in a second stage, heating the sodium chlorite trihydrate crystals externally to a temperature not exceeding 38° C. for a time suffi-

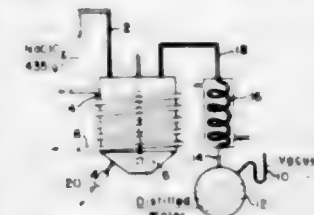
3,006,718
METHOD OF TREATING EXHAUST VAPORS CONTAINING UNBURNED FUEL HYDROCARBONS
 Wright Wesley Gary, Los Angeles, Calif., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland
 No Drawing. Filed Oct. 16, 1959, Ser. No. 846,798
 5 Claims. (Cl. 23—2)

1. A method of treating exhaust vapors containing unburned fuel hydrocarbons which comprises contacting air-diluted exhaust vapors with a vapor permeable mass of discrete particles of thermally desulfated, sulfuric acid-reacted kaolin clay at elevated temperature and passing exhaust thus treated into the atmosphere.

3,006,719
SOLVENT EXTRACTION PROCESS FOR SEPARATING HAFNIUM FROM ZIRCONIUM
 Franklyn D. Miller, Golf Manor, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
 Filed July 17, 1957, Ser. No. 672,383
 5 Claims. (Cl. 23—22)

1. In the process for separating hafnium from zirconium values which comprises contacting a feed material containing zirconium and hafnium tetrahalides, said tetrahalides being selected from the group consisting of tetrachlorides, tetrabromides and tetraiodides, with water to form an aqueous feed solution, contacting said aqueous solution in a separation step with ammonium thiocyanate, methyl isobutyl ketone, and hydrochloric acid, and separating the resulting hafnium-rich phase from a zirconium-rich, hafnium-depleted phase, the improvement which comprises contacting said aqueous feed solution, in an

cient to partially dehydrate the crystals and thereby form a sodium chlorite product constituted by a kernel of sodium chlorite trihydrate surrounded by a shell of anhydrous sodium chlorite, and controlling the external dehy-



dration to produce a sodium chlorite product having a content of anhydrous sodium chlorite between 70 and 90% by weight.

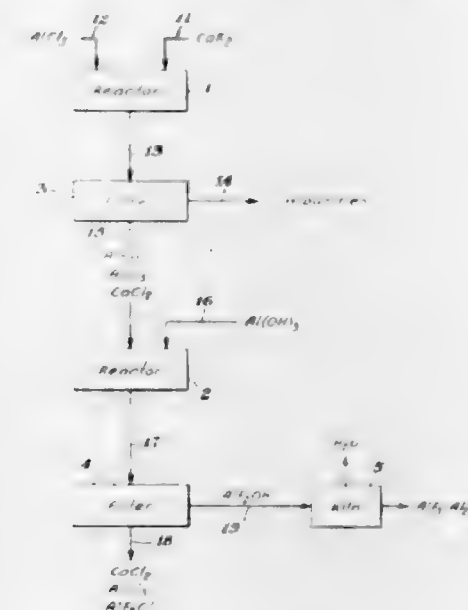
3,006,722
PROCESS FOR THE PRODUCTION OF METAL CHLORIDES
 Charles Alexander Sutherland, Trail, British Columbia, Canada, assignor, by mesne assignments, to Nova Beaucage Mines Limited, Montreal, Quebec, Canada, a company
 No Drawing. Filed May 13, 1958, Ser. No. 734,858
 4 Claims. (Cl. 23—87)

1. The process for the production of the pentachloride of an element selected from the group consisting of niobium and tantalum from material which contains said element in oxide form which comprises the steps of compacting a substantially uniform mixture of said material, powdered aluminum and powdered carbon, into pieces of a predetermined shape, the aluminum being present in the compacted pieces in about the stoichiometric amount required for complete reduction to metal in elemental form of the oxides of those metals which are present in said compacted pieces in oxide form and whose oxides are reducible by aluminum, and the carbon being present in the compacted pieces within the range of from about 50% to about 200% in excess of the stoichiometric amount required to form carbides of those metals; igniting a charge of said compacted pieces in an inert atmosphere at a temperature of from about 1600° C. to about 2200° C. in a reaction zone wherein reaction throughout the charge to form carbides of those metals is complete within about 30 seconds from the time of ignition to form strong, porous, sintered pieces without appreciable change from their original shapes and which contain said element as a carbide thereof, reacting so-sintered pieces with chlorine in an atmosphere substantially free from oxygen and water vapour to convert the carbide of said element to the pentachloride thereof, and separating and recovering the said pentachloride from the product of the chlorination reaction.

3,006,723
PROCESS FOR THE SEPARATION OF ALUMINUM FROM SILICON IN ALUMINUM SILICATE ORES
 Frederick D. Loomis, Philadelphia, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
 No Drawing. Filed Mar. 20, 1959, Ser. No. 800,642
 7 Claims. (Cl. 23—88)

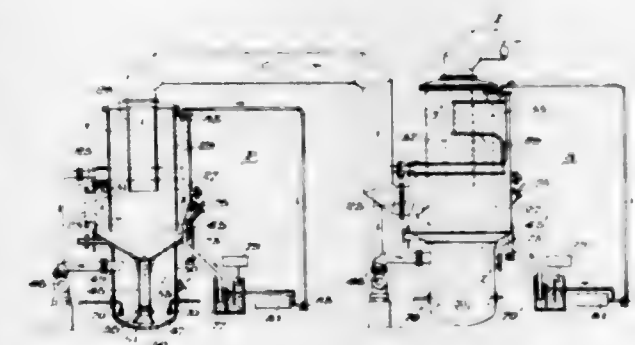
1. The process for the separation of aluminum from silicon as they occur in a high silica aluminum ore containing aluminum silicate and selected from the group consisting of bauxite, clay and kyanite comprising reacting the said ore while in a finely-divided state and in anhydrous condition with a fluoride of a metal selected from the group consisting of alkali metal fluorides and alkaline earth metal fluorides and which metal forms a water soluble chloride, a reducing agent and chlorine, the said reactants being brought together simultaneously and in intimate mixture while maintaining a reaction temperature of at least 600° C. until substantially all of the silicon has been released as silicon tetrafluoride.

3,006,724
PREPARATION OF ALUMINUM HYDROXY FLUORIDE
 Bob R. Harrell, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
 Filed Apr. 10, 1959, Ser. No. 805,475
 6 Claims. (Cl. 23—88)



1. A process for the preparation of AlF_2OH , which comprises intermixing an aqueous solution of aluminum chloride with particulated calcium fluoride to react the aluminum chloride with the calcium fluoride to obtain calcium chloride and aluminum chlorofluoride in a resulting solution, separating the undissolved constituents of the reacted mass from the resulting solution, adjusting the pH of the separated solution to a pH in the range of 1.2 to 4, intermixing with the pH adjusted solution an aluminum oxy compound selected from the group consisting of the active form of aluminum oxide and aluminum hydroxide, heating the resulting mixture to a temperature of 40° to 90° C. to react the aluminum chlorofluoride to obtain a precipitate of AlF_2OH , and recovering the AlF_2OH from the reacted mass.

3,006,725
PROCESS FOR RECOVERING AMMONIA AS A SALT FROM COKE OVEN GAS
 Ormond L. Henry, Allison Park, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
 Filed Feb. 21, 1957, Ser. No. 641,594
 3 Claims. (Cl. 23—107)



1. A process for the recovery of the ammonia from coke oven gas as the salt, diammonium phosphate, and as the salt, ammonium sulfate, which comprises spraying said gas with a first solution which is comprised of free phosphoric acid and diammonium phosphate and which is saturated with respect to its content of diammonium phos-

phate and has a pH value of 6.5 to 7 to absorb ammonia from said gas so as to form a product consisting essentially of diammonium phosphate crystals, recovering said diammonium phosphate crystals, removing from said gas substantially all of the first solution which may be entrained therein, said gas still containing some residual ammonia because of said first solution being inherently incapable of absorbing all of the ammonia from said gas, thereafter spraying said gas with a second solution which is comprised of free sulfuric acid and ammonium sulfate and which is saturated with respect to its content of ammonium sulfate and has a sulfuric acid content of 2 to 8% to absorb the residual ammonia to form a product consisting essentially of ammonium sulfate crystals, and recovering said ammonium sulfate crystals.

3,006,726

PROCESS FOR UPGRADING CRUDE ALKALI METAL SULFATES

Wilbur Simon, Crystal Lake, Ill., assignor to Morton Chemical Company, Woodstock, Ill., a corporation of Delaware

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,770
11 Claims. (Cl. 23—121)

1. A process for upgrading a crude alkali metal sulfate containing from 1 to 20 percent of an alkali metal chloride and 0.05 to 5 percent of an iron compound calculated as ferric oxide, which comprises treating said crude alkali metal sulfate in a granular state with a process gas containing sulfur dioxide, water and oxygen, maintaining the temperature of reaction during said treatment at a temperature of between about 800° F. and below the fusion point of the reaction mixture until the alkali metal chloride content is reduced to a concentration of below about 0.3 percent by weight of the solid reactant, and thereafter continuing said reaction at a temperature above about 1000° F. to convert the iron compounds to a white compound whereby a white, free-flowing, substantially bisulfate-free composition is produced.

3,006,727

PREPARATION OF HYDROGEN FLUORIDE

Robert Palmer Ruh and Ralph Anderson Davis, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 3, 1958, Ser. No. 746,335
10 Claims. (Cl. 23—153)

1. A process for the preparation of hydrogen fluoride which comprises: passing a mixture of an excess of hydrogen and a fluorine-containing organic compound over activated carbon maintained at a temperature of at least 500 degrees centigrade, and, separating hydrogen fluoride from the resulting mixture.

3,006,728

PREPARATION OF CERAMIC GRADE TITANIUM DIOXIDE

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

Filed Sept. 10, 1959, Ser. No. 839,140
9 Claims. (Cl. 23—202)

5. A process for purifying a titanium dioxide material contaminated with compounds of metals which form colored oxides and thereby disqualify the material as a ceramic grade-TiO₂ which comprises: chlorinating the impurities in a carbon-free charge of said material at a temperature between about 500° C. and 850° C. by contacting said material in finely divided form with a mixture of moist air and chlorinating gas selected from the group consisting of HCl, Cl₂, COCl₂ and mixtures thereof, containing in addition to the moisture originally present in the gases constituting said mixture, sufficient additional

moisture to increase the moisture in said mixture to between 0.5% and 5% of water vapor, which is an amount of water vapor sufficient to inhibit chlorination of the



titanium dioxide while permitting quantitative removal of the impurities from said charge, and recovering the purified product.

3,006,729

RECOVERY OF HIGH CONCENTRATION CARBON MONOXIDE FROM COPPER LIQUOR USED TO PURIFY AMMONIA SYNTHESIS GAS

Robert B. Moore and Vernon T. Atkinson, Pasadena, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed June 9, 1958, Ser. No. 740,771
11 Claims. (Cl. 23—204)



1. A method for the recovery of a gas rich in carbon monoxide from a copper-containing solution, which has been used to absorb carbon monoxide from ammonia synthesis gas, which consists essentially of contacting a copper-containing solution with a synthesis gas under carbon monoxide absorbing conditions including a pressure of the order of approximately 2,000 pounds per square inch gage, containing the used solution at said pressure, said used solution containing substantial amounts of hydrogen and nitrogen and small amounts of carbon monoxide and carbon dioxide as well as traces of other gases, flashing said used solution at a pressure of the order of 40 pounds per square inch gage removing therefrom a first stream of gases containing a substantial amount of hydrogen and nitrogen and carbon monoxide which are unavoidably absorbed during said contacting, then further flashing the once-flashed solution at about zero pounds per square inch gage obtaining a second stream of gases containing substantially more carbon monoxide and substantially less hydrogen and nitrogen than said first stream of gases and then recovering gases remaining in the twice-flashed solution obtaining a third stream of gases rich in carbon monoxide and containing only small quantities of hydrogen and nitrogen.

3,006,730

METHOD OF PRODUCING DIBORON TETRACHLORIDE

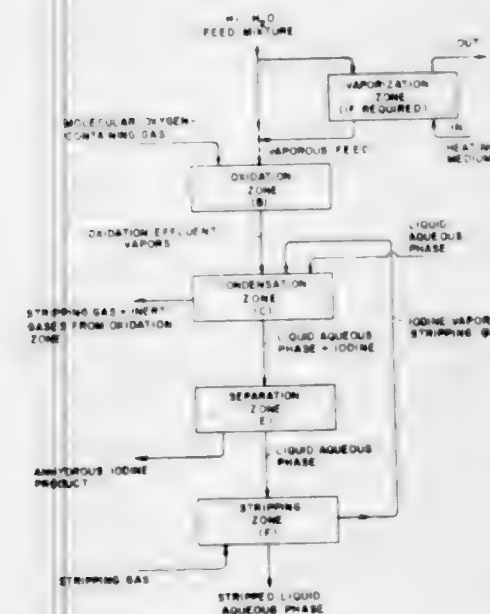
Allen L. McCloskey, Orange, and Robert J. Brotherton and James L. Boone, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Nov. 9, 1959, Ser. No. 851,548
2 Claims. (Cl. 23—205)

1. The method of producing diboron tetrachloride which comprises reacting boron monoxide with at least stoichiometric amounts of boron trichloride at a temperature of at least about 100° C. in a substantially anhydrous oxygen-free atmosphere, and recovering diboron tetrachloride from the resultant reaction.

3,006,731

PROCESS FOR THE RECOVERY OF IODINE

Robert L. Magovern, El Cerrito, Harold C. Ries, Berkeley, and Irwin L. Breier, Lafayette, Calif., assignors to Shell Oil Company, a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,163
16 Claims. (Cl. 23—216)



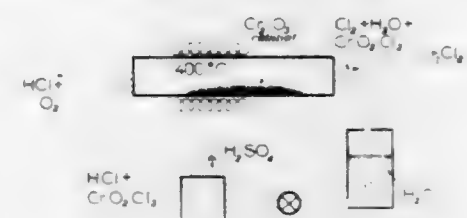
1. A process for recovering as substantially anhydrous iodine the total iodine content of a mixture essentially comprised of substantial amounts of each of at least the first two of hydrogen iodide, water and iodine, comprising contacting said mixture in an oxidation zone, in vapor phase, with a molecular oxygen-containing gas, and thereby oxidizing substantially quantitatively the hydrogen iodide in said mixture to iodine, directly contacting in a condensation zone the resulting vaporous mixture with a liquid aqueous phase containing from none to a minor amount of hydrogen iodide, and thereby condensing the iodine therein, said direct contact being the only means for cooling said vaporous mixture and condensing said iodine therein, passing the resulting condensed mixture, comprised primarily of iodine and a liquid aqueous phase, to a separation zone wherein iodine is separated as an immiscible phase from the liquid aqueous phase, withdrawing, as product, substantially anhydrous iodine from said separation zone, withdrawing at least a part of the said liquid aqueous phase in said separation zone from said zone, passing said withdrawn liquid aqueous phase to a stripping zone wherein said aqueous phase is contacted with a gas to strip iodine from the liquid phase, and passing the effluent gases, containing iodine, from the said stripping zone to the aforesaid condensation zone, wherein the iodine in said effluent gases is condensed.

3,006,732

CHLORINE PRODUCTION

Pierre Baumgartner, Asnieres, Pierre Bedague, Roque-toire, and Jean Claude Balaceanu, Paris, France, assignors to Institut Français du Pétrole des Carburants et Lubrifiants, Paris, France

Filed Jan. 6, 1959, Ser. No. 785,288
Claims priority, application France Jan. 9, 1958
8 Claims. (Cl. 23—219)



1. In a continuous process for the production of chlorine by catalytic oxidation of hydrogen chloride with an oxygen-containing gas, in the presence of a Cr₂O₃ catalyst, at a temperature lower than that at which CrO₂Cl₂ is decomposed to a chromium oxide consisting essentially of Cr₂O₃, the improvement of admixing chromium oxychloride vapors at a molar ratio to the rate of hydrogen chloride of more than 1:10,000 to the flow of gaseous reactants over said chromic oxide catalyst, thereby maintaining the activity of the catalyst at substantially the initial activity thereof over a prolonged period.

3,006,733

STABILIZED LIQUID OZONE

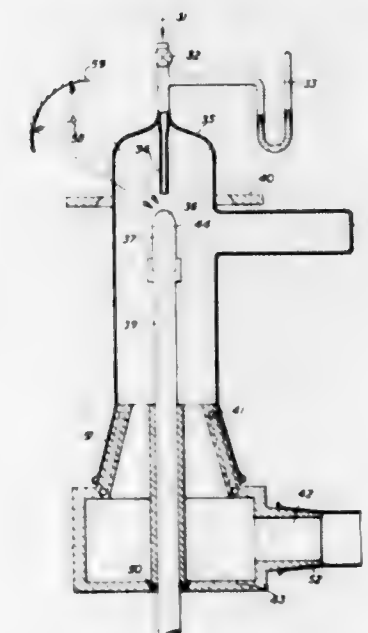
James S. Logan, Niagara Falls, and Arthur Roaldi, Lancaster, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Jan. 30, 1958, Ser. No. 712,277
2 Claims. (Cl. 23—222)

1. A liquid ozone composition consisting of liquid ozone and about 0.5 to 25 weight percent based on the ozone of nitric acid.

3,006,734

PROCESS FOR PREPARING PURE SILICON

James S. Logan, Niagara Falls, and Arthur Roaldi, Lancaster, Northampton, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Filed Nov. 14, 1957, Ser. No. 696,567
2 Claims. (Cl. 23—223.5)



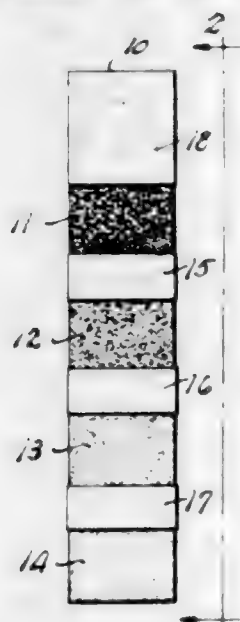
1. A method of producing highly pure silicon, comprising supporting a pure silicon seed crystal in an evacuated chamber; heating by thermal radiation a por-

tion of said seed crystal, free of contact with other bodies, to a temperature at which the electrical resistance of said portion is responsive to inductive heating; inductively heating said portion to produce a surface of molten silicon; directing a stream of substantially pure silane through a restricted passageway against said surface; continuously rotating said seed crystal while moving it relative to the zone of inductive heating at a rate equivalent to that at which silicon is deposited on said crystal and continuously evacuating said chamber to maintain a pressure drop in said passageway of from about 0.5 to 1.0 cm. of mercury and establish a rate of flow of said stream to produce silicon both by gas phase decomposition of said silane and by decomposition of said silane at said surface and effect a build-up of 1.5 to 5 grams per hour of highly pure silicon upon said seed crystal.

3,006,735

QUICK-DIP INDICATOR

Robert H. Jordan, Chicago, Ill., assignor to Morton Salt Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 22, 1959, Ser. No. 841,570
10 Claims. (Cl. 23-230)



8. A method for measuring the hardness of water which comprises momentarily contacting said water with a quick-dip indicator comprising a carrier absorptive to water, said carrier having a plurality of individual areas, each of which is impregnated with a substance color-responsive to a different concentration of calcium and magnesium ions, said substance in each individual area comprising a derivative of an aminopolycarboxylic acid and an indicator color-responsive to the presence of calcium and magnesium ions, the amount of said derivative being varied in the individual areas to achieve the different color-responsivenesses, the contacting step being sufficient to completely immerse said individual areas, whereby concentration of calcium and magnesium ions is indicated by the color response of those individual areas color-responsive to concentrations not in excess of the concentration of calcium and magnesium ions in said water.

3,006,736

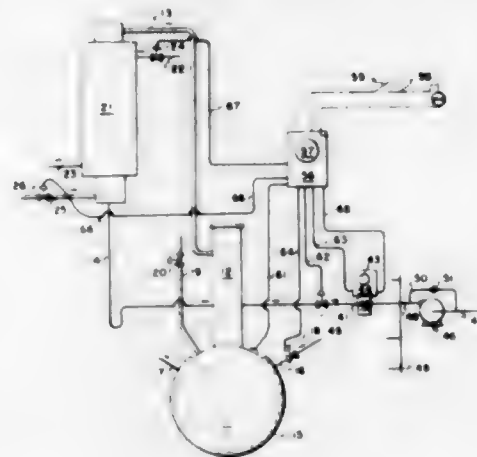
CHEMICAL REACTION CONTROL APPARATUS

Warren E. Green, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 2, 1958, Ser. No. 777,773
4 Claims. (Cl. 23-253)

1. In an apparatus for carrying out an exothermic chemical batch reaction involving a mass of comminuted solid and a pressurized highly volatile fluid, the com-

bination of a reactor container, a temperature measuring means connected for indicating the temperature in the container, a feed mechanism connected to the container to supply a reactant during the course of the reaction and having a measuring means for measuring the quantity of reactant fed, a coolant fluid conduit in heat-exchange relation with the container, agitating mechanism within the container for agitating the mass of solid during the reaction to improve the temperature uniformity throughout the mass, the agitating mechanism including a sensing means indicating when no agitation is taking place, said container having a vent for relieving its internal pressure to cause some of the highly volatile fluid to volatilize off and absorb heat thereby cooling the container contents, timing means connected for indicating the duration of a reaction begun in the container, and fluid flow control means connected to supply the above



cooling action, said flow control means including a first control connected to the temperature measuring means to establish cooling action in response to a predetermined excessive temperature in the container, a second control connected to the temperature measuring means to establish cooling in response to a container temperature above a predetermined low temperature, and shift elements connected to the feed measuring means, timing means, agitation sensing means and flow control means to cause the flow control means to be actuated only by the first control in response to the simultaneous (a) lack of completion of the reactant feed, (b) lack of completion of a predetermined reaction time, and (c) operation of the agitator, said shift elements being also connected to cause the flow control means to be actuated only by the second control in response to any other combination of reactant feed, reaction time and agitator operation conditions.

3,006,737

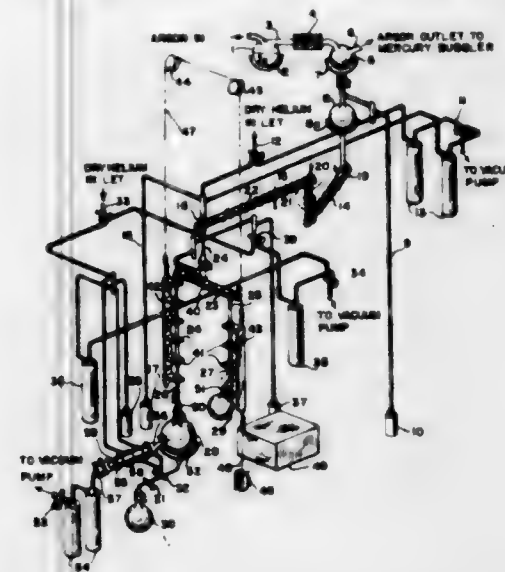
APPARATUS FOR CONTINUOUS PREPARATION OF ULTRAPURE SILICON

Guy H. Montes, Bedford, Bernard Rubin, Arlington, and Walter B. Jackson, Waltham, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed June 2, 1959, Ser. No. 817,686
4 Claims. (Cl. 23-264)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An apparatus for obtaining ultrapure silicon comprising a synthesis unit for obtaining SiI_4 , said synthesis unit comprising a container for I_2 , means to apply heat to said container, a container for SiI_4 , means connected between said containers with Si therein, heat means for said last-mentioned means, and means for passing an inert gas over said heated I_2 and through said Si to deposit SiI_4 in its container; a sublimation section, means connecting said sublimation section with said container for SiI_4 , means to heat the SiI_4 in its said container to allow the material to flow into said sublimation section

which comprises a hopper connected with said last-mentioned connecting means, a manifold connected with said hopper, means for heating said hopper and manifold, and means for applying a vacuum to said sublimation section; a zone refining section comprising a zone hopper connected to said manifold to receive sublimed SiI_4 from the sublimation manifold, an enriching ampoule connected at one end of said zone hopper, a stripping ampoule connected at the other end of said zone hopper, heat supply means on said zone hopper, spaced heat supply means at predetermined intervals on each of said ampoules, means for reciprocating said spaced heat



means, a void former in each ampoule, a receiver for each ampoule having a connection thereto at the end remote from the hopper end of the ampoule, and means for supplying an inert atmosphere to the zone-void section; a decomposition section, means connecting the decomposition section with the receiver from said enriching ampoule, heat means for said enriching ampoule receiver, said decomposition section comprising a vacuum pump means for evacuating said decomposition section, a container for an ultrapure single crystal silicon bar, means for heating said silicon bar such that said SiI_4 from said enriching ampoule receiver is caused to pass over said heated bar to deposit ultrapure silicon thereon.

3,006,738

BURNER FOR PRODUCTION OF FINELY DIVIDED OXIDES

Ernst Wagner, Rheinfelden (Baden), Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany, a corporation of Germany

Filed Oct. 10, 1957, Ser. No. 689,427
2 Claims. (Cl. 23-284)



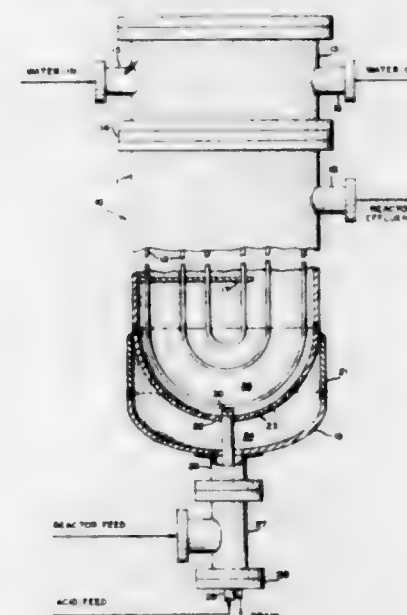
1. A burner for the production of finely divided oxides, comprising an elongated tube having a mixing chamber

in its inlet, and gas inlet ducts leading at least one gaseous compound by tangential entry thereto, an intermediate gas flow-rectifying section in line with the mixing chamber and having therein a series of spaced baffles arranged in symmetrically displaced relation to each other and each comprising flat sheets crossing the axis of the tube and disposed with their width in the direction of gas flow thus directing the mixed unburned gaseous constituents from the mixing chamber in divided, flow-rectifying and stabilizing paths, and a burner outlet nozzle of substantially the full cross-sectional area of the burner tube located beyond the rectifying section, leading the mixed, unburned and now stabilized gaseous constituents without constriction to form a flame of substantially the full diameter of the tube.

3,006,739

APPARATUS FOR CONTACTING IMMISCIBLE FLUIDS

Joe Van Pool, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,891
8 Claims. (Cl. 23-285)



1. A contacting apparatus comprising a U-tube heat exchanger having an elongated shell, a U-tube bundle connected to an inlet and outlet header at one end of said shell, an outlet in said shell near said header and a head member closing the opposite end of said shell, a perforated partition disposed transversely in said shell forming a feed zone between said head member and said tube bundle, means for admitting fluid into said feed zone, a conduit passing into said shell through said partition and terminating near the face of said partition toward said tube bundle, and means for dispersing fluid from said conduit across said face of said partition.

3,006,740

CONTACTING VESSEL WITH SOLIDS BED AND SCREENS

Vincent A. Maggio, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,796
6 Claims. (Cl. 23-288)

1. Apparatus for effecting contact between a fluid and granular solids which comprises: a tank; a bed of granular contacting solids within a portion of said tank constituting a solids chamber, an adjoining portion of said tank constituting an antechamber, said bed having an end surface directed toward and in flow communication with said antechamber throughout an area substantially equal to the full cross section of the bed for the distributed en-

dissolved therein up to about one part by volume of hexachlorocyclopentadiene per hundred parts of petroleum oil.

3,006,751

METHOD FOR DESUCKERING TOBACCO

William H. Brugmann, Jr., Milltown, N.J., and Howard L. Yowell, Newbury, England, assignors to Standard Oil Development Company, a corporation of Delaware
No Drawing. Filed Nov. 26, 1954, Ser. No. 471,507
2 Claims. (Cl. 71-2.7)

1. An improved process for desuckering tobacco plants which comprises applying to said plants an aqueous emulsion comprising a highly refined petroleum white oil, 0.1 to 20 volume percent of a non-ionic emulsifying agent based on the oil, and 0.001 to 5.0 wt. percent based on the oil of 2,2'-methylene bis-(4-methyl-6-tertiary butyl phenol) to retard oxidation of the oil to phytotoxic materials.

3,006,752

TRITHIOPHOSPHITES AS DEFOLIANTS

Lyle D. Goodhue, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 22, 1958, Ser. No. 730,047
4 Claims. (Cl. 71-2.7)

1. A method for defoliating cotton which comprises applying to the mature plant a defoliating quantity of tritertiary butyl trithiophosphate dispersed in an isoparaffinic hydrocarbon fraction boiling in the range 260-800° F.

3,006,753

METHOD OF MAKING MIXED FERTILIZERS CONTAINING VERMICULITE

Edward William Harvey, Cream Ridge, N.J., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Filed Feb. 25, 1958, Ser. No. 717,326
2 Claims. (Cl. 71-29)

1. The method of preparing a mixed fertilizer which comprises mechanically mixing acidic phosphate fertilizer ingredients with expanded vermiculite, premixing urea and a polymethylol urea concentrate, preheating said mix to about 50° C., incorporating the resulting slurry into the mechanically mixed acidic fertilizer ingredients to form ureaform in-situ and ammoniating the resulting mixture to partially neutralize the mixture and obtain a mixed fertilizer product with the ureaform uniformly distributed in the vermiculite, said urea and polymethylol urea concentrate being added in such proportions that the total mol ratio of urea to formaldehyde in the resultant mixture lies within the range of 1.3-2.

3,006,754

PRODUCTION OF SUPERPHOSPHATE FERTILIZERS

Robert E. Sullivan, Anaconda, Mont., assignor to The Anaconda Company, a corporation of Montana
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,459
4 Claims. (Cl. 71-41)

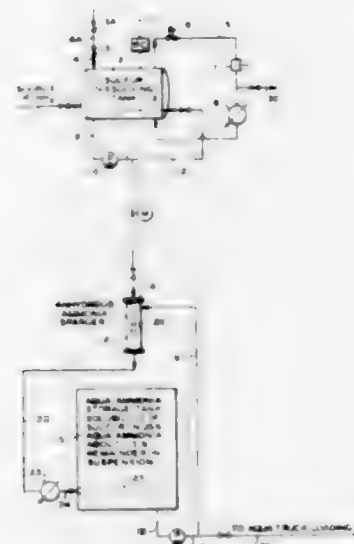
1. A process for the production of a treble superphosphate having an available phosphate content equivalent to at least about 50 percent P_2O_5 by weight which consists essentially of reacting phosphoric acid at a concentration equivalent to from about 40 to about 42 percent P_2O_5 by weight in a reaction vessel with a crushed mineral selected from the group consisting of burned lime and limestone in proportions such that the P_2O_5/CaO ratio in the reaction mixture is between 2.55 and 2.65, and dis-

charging the mixture while still fluid from the reaction vessel onto a moving conveyor, the discharged product solidifying while moving on said conveyor to form a solid treble superphosphate in which the available phosphate content is equivalent to at least about 50 percent P_2O_5 by weight and in which, on a dry basis, the P_2O_5/CaO ratio is between 2.4 and 2.5 and the residual unreacted phosphoric acid content is less than about 2 percent by weight.

3,006,755

SUSPENSION OF SULFUR IN AQUA AMMONIA AND METHOD AND APPARATUS FOR PRODUCING SAME

Lloyd W. Adams, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 16, 1957, Ser. No. 672,237
11 Claims. (Cl. 71-61)



1. A method for forming a suspension of sulfur in aqueous ammonia which comprises the steps of intimately mixing essentially only sulfur with liquefied ammonia in a sulfur solution zone under substantially liquid phase conditions so as to cause solution of sulfur in said liquefied ammonia, withdrawing at least a portion of said solution thus obtained from said solution zone, intimately contacting said withdrawn portion with a material selected from the group consisting of water and aqueous ammonia in a mixing zone to obtain said suspension, and recovering said suspension as a product of the method.

3,006,756

EXTRACTION OF PRECIOUS METAL COMPOUNDS FROM AN AQUEOUS SOLUTION

Theodor Völker and Herbert Zima, Darmstadt, Germany, assignors to Rohm & Haas G.m.b.H., Darmstadt, Germany
No Drawing. Filed Aug. 20, 1957, Ser. No. 679,132
Claims priority, application Germany Sept. 6, 1956
9 Claims. (Cl. 75-118)

1. Method for extracting a precious metal compound from an aqueous solution of a salt of a precious metal, which comprises bringing the solution into contact with a water-insoluble macromolecular compound selected from the group consisting essentially of para-cyanogen, polyazomethines, cyclized polyacrylonitrile, cyclized polymethacrylonitrile, cyclized polyvinylidene cyanide, cyclized copolymers of acrylonitrile and methylmethacrylate, and cyclized copolymers of acrylonitrile and methylacrylate, and then separating said solution and said macromolecular compound, whereby the content of metal compounds in said aqueous solution is reduced.

**3,006,757
COPPER BASE BRAZING ALLOY AND MIXTURES**

George S. Hopkin III, Cincinnati, and Kimble S. Songer, Hamilton, Ohio, assignors to General Electric Company, a corporation of New York
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,793
4 Claims. (Cl. 75-159)

1. An improved copper base brazing alloy consisting essentially of, by weight, 27-29% Ni, 1.8-2.2% Si, 9.7-10.3% Mn with the balance Cu.

3,006,758

ZINC ALLOY

Raymond E. Giuliani, Park Forest, and John D. Scudder, Chicago, Ill., assignors to Hydrometals, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Jan. 5, 1960, Ser. No. 514
6 Claims. (Cl. 75-178)

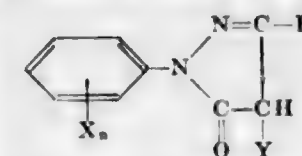
1. A high grade zinc base alloy characterized by a high dynamic ductility, ease of hot rolling and low cold bend value, containing from about 0.08 to about 0.15% titanium, from about 0.15 to about 0.35% copper, from about 0.001 to about 0.05% chromium, up to about 0.05% manganese, and the balance zinc.

3,006,759

TWO-EQUIVALENT MAGENTA-FORMING COUPLERS FOR COLOR PHOTOGRAPHY

Anthony Loria, Warren A. Reckhow, and Ilmari F. Salminen, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 3, 1959, Ser. No. 831,006
14 Claims. (Cl. 96-55)

1. A method of producing a magenta-colored image in an exposed photographic silver halide emulsion-layer by developing said emulsion layer with a primary aromatic amino developing agent in the presence of a novel magenta-forming coupler having the formula:



wherein X is a halogen atom; n is an integer of 2 to 3; R is a group selected from the class consisting of alkyl radicals having from 1 to 20 carbon atoms, a phenyl radical, an alkyl substituted phenyl radical in which the alkyl group has from 1 to 10 carbon atoms of the benzene series, and a furyl radical; and Y is a halogen atom.

3,006,760

PHOTOGRAPHIC MATERIALS

Fritz Dersch and Millet R. De Angelus, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 23, 1958, Ser. No. 769,090
10 Claims. (Cl. 96-67)

1. A photographic material comprising a light-sensitive silver halide emulsion sensitized with a water soluble polyoxyalkylene compound in which the terminal hydroxy groups have been replaced with halogen, said compound having a molecular weight of at least 300.

3,006,761

POLYETHYLENE TEREPHTHALATE SHEET MATERIAL

Maximilian Karl Reichel and Wilhelm Neugebauer, Wiesbaden-Biebrich, Germany, assignors to Kalle Aktiengesellschaft, Wiesbaden-Biebrich, Germany, a corporation of Germany
No Drawing. Filed Sept. 5, 1957, Ser. No. 682,087
Claims priority, application Germany Sept. 7, 1956
2 Claims. (Cl. 96-75)

2. A base film of oriented polyethylene terephthalate, coated with a uniform continuous layer of a synthetic

superpolyamide directly adhered to said base film, said superpolyamide being a linear polycarbonamide containing at least five carbon atoms in the chain of repeating units between the carbonamide groups, and said superpolyamide having distributed therein a light-sensitive compound capable of hardening the super-polyamide when struck by light.

3,006,762

SENSITIZERS FOR PHOTOGRAPHIC EMULSIONS

Fritz Dersch, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 9, 1959, Ser. No. 791,849
5 Claims. (Cl. 96-107)

1. A photographic material comprising a base having a light-sensitive organic colloid silver halide emulsion thereon, such material additionally containing poly-N-vinyl-2-oxazolidone to increase the sensitivity of said emulsion, said poly-N-vinyl-2-oxazolidone having at least eighty N-vinyl-2-oxazolidone groups in the molecular chain.

3,006,763

METHOD OF PRODUCING A DRY SUGAR-COCOA MIX

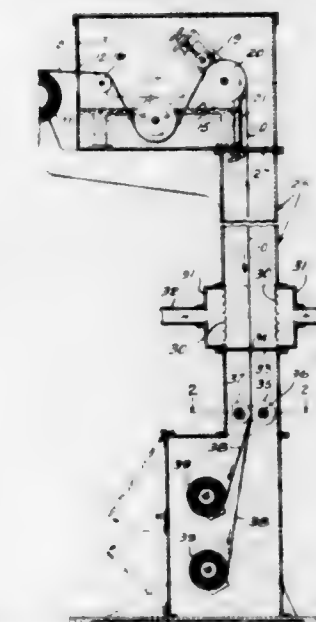
Willard Marcy, Philadelphia, and Raymond Netsch, Line Lexington, Pa., assignors to The American Sugar Refining Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed June 3, 1954, Ser. No. 434,328
8 Claims. (Cl. 99-26)

1. The method of producing a dry sugar-cocoa mix having aggregates composed of individual particles of sugar and cocoa cemented together which comprises applying to and admixing with a preformed dry mixture containing separate, individual sugar and cocoa particles a limited amount, between about 2% and 9% of the dry mix, of an aqueous liquid in a state of fine subdivision and with agitation of the mix to cause the formation of a freely-flowing mixture of small aggregates composed of sugar and cocoa particles, and drying the resulting mixture causing solid sugar deposited from the liquid to act as a binder between the solid particles.

3,006,764

TEA BAG

Clay W. Stephenson, Houston, Tex., and Norman D. Van Horn, Haddon Heights, N.J., assignors, by mesne assignments, to Duncan Coffee Company, Houston, Tex., a corporation of Texas
Filed Feb. 17, 1959, Ser. No. 793,934
2 Claims. (Cl. 99-77.1)



1. A tea bag comprising a sealed paper bag containing tea, said paper being water pervious and being impreg-

nated with a mixture consisting essentially of sodium cyclamate and saccharin in an amount of about 40 to 82 milligrams, the saccharin in said mixture constituting from 5% to 25% thereof.

3,006,765

CONTINUOUS BREAD MAKING PROCESSES WITH PROTEIN ADDITIVE

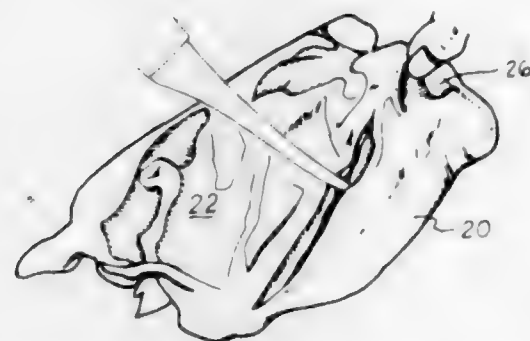
Charles G. Ferrari, Evanston, Ill., assignor to J. R. Short Milling Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Jan. 20, 1959, Ser. No. 787,794
7 Claims. (Cl. 99-90)

1. In the production of bread by the continuous process comprising preliminarily mixing a fermented yeast brew with other conventional dough-forming ingredients, then mechanically working the preliminarily-mixed ingredients at such a high speed as to develop a soft, putty-like dough in a few minutes, continuously extruding such dough as it is formed, cutting the extruded dough into loaf pieces, and baking the same, the improvement which comprises introducing continuously into the ingredient mixture prior to such high speed mechanical working step an organoleptically bland, finely particulate, isolated soybean protein material consisting essentially of protein of the globulin type, 40-50% of the protein having a molecular weight of at least 300,000, a material proportion thereof having a molecular weight of at least 600,000, said soybean protein having a reactively available -SH content of from zero to not more than 7×10^{-6} moles/gram, said soybean protein being introduced at a rate providing a proportion thereof equal to 0.5-20% of the weight of flour employed.

3,006,766

METHOD OF PREPARING A BREAST OF CHICKEN PRODUCT

Walter M. Zolezzi, San Francisco, and Milton L. Brandt, San Mateo, Calif., assignors to O'Brien, Spotorno, Mitchell & Compagno Bros., Inc., a corporation of California
Filed Mar. 8, 1960, Ser. No. 13,594
10 Claims. (Cl. 99-107)

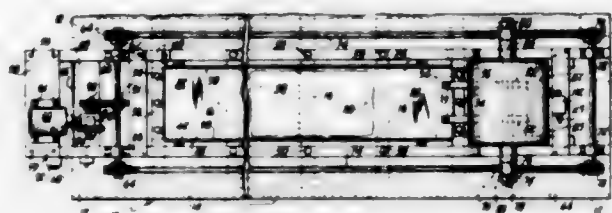


1. A method of preparing a breast of chicken product comprising: separating the superficial and deep pectoral muscle from the carcass and removing said muscles therefrom; separating the superficial and deep pectoral muscles one from another; partially severing the uppermost layer of said pectoral muscle from the main portion thereof, the planes of severance extending parallel to the surface of the said muscle and in opposite directions toward the longitudinal edges of said pectoral muscle and retaining hinges of meat joining said main portion to the two flaps formed from the uppermost layer by said severing operation; opening said flaps so as to form a generally diamond-shaped slab of breast meat; expanding the said slab by pounding the upper surface thereof; placing stuffing material at the center of the expanded slab of breast meat so formed; placing a slab of deep pectoral muscle over said stuffing material and wrapping the superficial pectoral muscle tissue thereabout.

3,006,767

METHOD FOR TREATING MEAT

Thad T. Huckabee, P.O. Box 749, Albany, Ga.
Filed June 9, 1960, Ser. No. 35,091
4 Claims. (Cl. 99-107)



1. The process of distributing treating fluid in, and removing excess treating fluid from, a piece of meat, comprising: progressively moving a rolling weight in one direction across a stationary piece of meat containing a treating fluid, starting from one edge and working toward the opposite edge, and moving the rolling weight at a speed sufficiently low to cause the treating fluid to be substantially uniformly distributed in the meat and to force any excess treating fluid out of the meat, whereby the meat is given an opportunity to absorb and retain all but excess treating fluid without damaging the meat or permanently reducing its dimensions.

3,006,768

PROCESS FOR THE TENDERIZING OF MEAT USING WATER

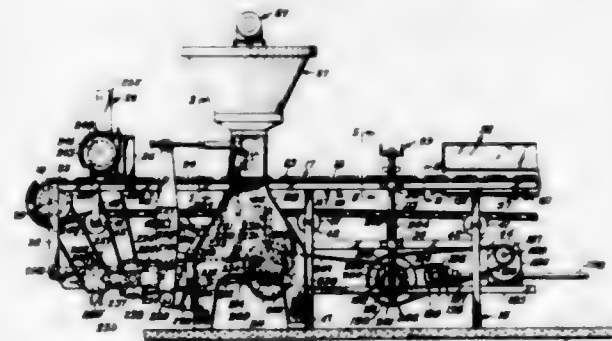
Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California
No Drawing. Filed Sept. 1, 1959, Ser. No. 837,330
1 Claim. (Cl. 99-107)

In a method for increasing the tenderness and juiciness of cooked beef, lamb and veal the step of adding water in the muscle portion of the meat by multiple entry injection of 1-3% water by weight under pressure of from 40 to 100 pounds per square inch and at a temperature of approximately 100° F. directly into the muscle of freshly slaughtered animals whereby the muscle bundle fibers are uniformly penetrated, separated and saturated by the water thereby promoting hydrolytic activity of the natural enzyme during normal aging of the meat and increasing the tenderness of the meat in the cooking process.

3,006,769

MANUFACTURE OF CHEESE SLABS OR THE LIKE

Benedict E. Meulemans and William H. Pauly, Green Bay, Wis., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 26, 1954, Ser. No. 452,260
5 Claims. (Cl. 99-116)



2. A method of forming stacks of cheese slabs having single sheets of divider material intermediate each slab, said method comprising separately depositing measured quantities of heated cheese on single sheets of divider material, partially cooling said cheese, molding each of

said measured quantities of cheese into a slab while still partially hot and while still positioned on said divider material, further chilling said slabs to set up said cheese on said divider material, and thereafter forming groups of said cheese slabs with said divider material intermediate each adjacent slab.

3,006,770

CONTROLLED CRYSTALLIZATION OF SHORTENING

Lars H. Wiedermann, Des Plaines, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Feb. 24, 1960, Ser. No. 10,543
7 Claims. (Cl. 99-118)

1. A method of preparing a plastic shortening agent having an improved equilibrium between inter- and intracrystal composition to produce a fully tempered product which comprises: spraying a liquefied normally solid shortening composition having a solid fat index at 50° F. of less than 45 units and a solid fat index at 100° F., of less than 25 units into a crystallizing atmosphere, adjusting the temperature of said crystallizing atmosphere to a level of about 60-70° F. whereby plastic particles are formed, and collecting the plastic shortening particles.

3,006,771

FAT COMPOSITION FOR MARGARINE AND OTHER PURPOSES

Vigen K. Babayan, Livingston, N.J., assignor to E. F. Drew & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed July 24, 1958, Ser. No. 750,588
9 Claims. (Cl. 99-118)

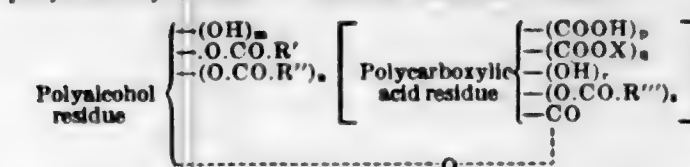
1. A fat composition for incorporation in margarine comprising a coconut type oil interesterified with the triglycerides of fatty acids having 8, 10, 16 and 18 carbon atoms, the relative proportions of the acids in said interesterified oil being about 10-25% of capric and caprylic, about 25-65% of lauric and myristic, and about 15-60% of palmitic and stearic, the product having a setting point of about 20°-28° C., a Wiley melting point of 88°-108° F., and a penetration at 70° F. of about 35-70.

3,006,772

MARGARINE, ANTISPATTERING SUBSTANCE AND METHOD OF MANUFACTURING THE SAME

Gerardus Martinus Maria Houben and Everhardus Wilhelmus Jonker, Gouda, Netherlands, assignors to N.V. Koninklijke Stearine Kaarsenfabrieken "Gouda-Appolo," Gouda, Netherlands, a corporation of the Netherlands
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,028
Claims priority, application Netherlands Mar. 5, 1958
22 Claims. (Cl. 99-123)

1. A method for making margarine antispattering comprising adding to said margarine a mixed ester of an aliphatic polyalcohol, a fatty acid residue and an aliphatic polycarboxylic acid of the schematical formula



wherein

X=one molecule of a polyalcohol less one OH.

R.CO.=fatty acid residue with 8-24 C-atoms,

R''.CO. and R'''.CO.=fatty acid residue with 1-24 C-atoms,

The letters m, n, p, q, r, s and t represent the following integers: $t=1$ to 2 ; $q=0$ to 1 ; $s=0$ to 2 ; $q+r+s=0$ to 3 ; $t+s \leq 3$; $p=1$ to 2 ; $r=0$ to 2 ; $p+q=1$ to 2 ; $p+r+s=2$ to 3 ; $n=0$ to 1 ; $m+n+t=2$ to 3 .

3,006,773

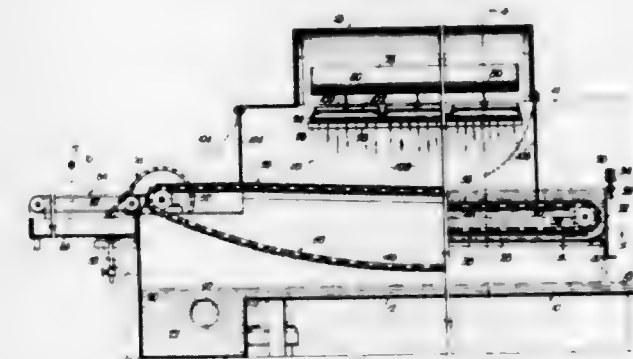
FRUIT PRODUCT AND METHOD OF PRODUCING SAME

Gerald A. Fitzgerald, 128 River Drive, Hadley, Mass., assignor of one-third to Raymond R. Colton and one-third to Sydney W. Dean, Jr., New York, N.Y.
No Drawing. Filed June 30, 1959, Ser. No. 823,857
7 Claims. (Cl. 99-134)

1. A method of preparing a fruit product comprising comminuting and homogenizing a mixture comprising uncooked fruit and added sugar while maintaining the temperature of the mixture below the freezing point of water.

3,006,774

METHOD OF FREEZING FOOD PRODUCTS
Ralph S. Zebarth, Hickman Mills, Mo., assignor to Gordon Johnson Company, Kansas City, Mo., a corporation of Missouri
Filed Dec. 16, 1957, Ser. No. 703,150
3 Claims. (Cl. 99-192)



1. The method of freezing food products comprising supporting a plurality of said products for movement along a preselected path of travel; continuously advancing said plurality of products along said path of travel and with all of said products moving at a predetermined speed; passing the lowermost portions only of all of said products through a pool of liquid having a predetermined temperature below the freezing point of the products; pouring liquid over the products from above the latter in the form of a plurality of relatively closely spaced, individual streams gravitating onto all exposed portions of each of the products extending above said pool; causing the liquid in said pool to flow continuously in a direction opposed to the direction of travel of said products; and discontinuing pouring of said liquid over the products and passage of the same through the pool after the products have been frozen to a predetermined depth.

3,006,775

CERAMIC MATERIAL AND METHOD OF MAKING THE SAME

Franklin P. H. Chen, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,681
6 Claims. (Cl. 106-39)

1. A hard, dense, mechanically strong, electrically insulating ceramic material formed of a substantially homogeneous micro-crystalline mass of synthetic crystals selected from the group consisting of lithium aluminum silicate crystals and lithium silicate crystals, and com-

binations thereof, said material having the following approximate composition in percent by weight:

	Percent
Li_2O -----	4-30
SiO_2 -----	50-80
Al_2O_3 -----	3-25
Fluxing agent -----	Up to 15

3,006,776 OPTICAL GLASS

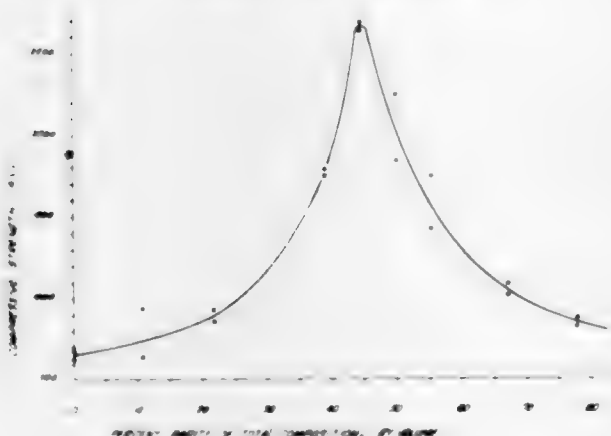
Walter Geffcken, Mainz, Germany, assignor to Jenbacher Glaswerk Schott & Gen., Mainz, Germany
No Drawing. Filed July 12, 1954, Ser. No. 442,886
Claims priority, application Germany July 17, 1953
4 Claims. (Cl. 106-54)

1. Optical glass with a high refractive index having the following composition in weight percent:

B_2O_3 -----	36.0	CaO -----	10.0
ZrO_2 -----	4.0	SiO_2 -----	10.0
La_2O_3 -----	34.0	ZnO -----	6.0

3,006,777 BUILDING MATERIALS

Owen W. Atkin, Henderson, Nev., assignor to American Nuclear Shield Corporation, Reno, Nev., a corporation of Nevada
Filed Aug. 22, 1960, Ser. No. 51,073
3 Claims. (Cl. 106-97)



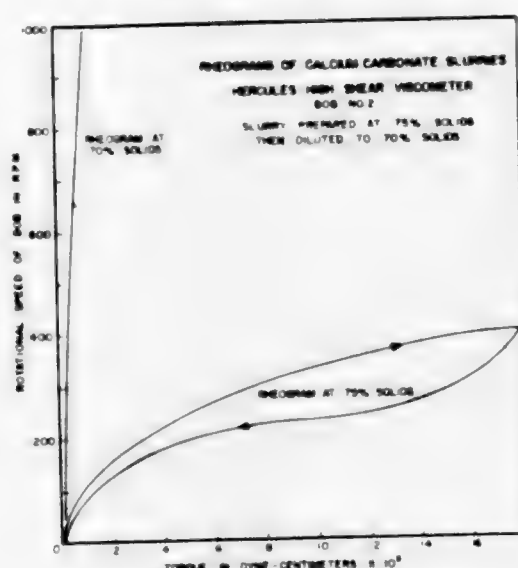
1. A building material composition which consists essentially of a conventional aggregate, barium sulphate particles, and a binder selected from the group consisting of Portland cement, clay and gypsum lime, the barium sulphate constituting about 40% to 50% by volume of dry ingredients.

3,006,778
WAXY COMPOSITION SUITABLE AS AN IMPREGNATING AGENT, A PROCESS FOR ITS PRODUCTION, AND IMPREGNATION OF POROUS, ESPECIALLY CELLULOSIC MATERIALS OR OBJECTS WITH THE AID OF THIS COMPOSITION
Eric Johansson, Lovbrunna Gard, Taby, Sweden
No Drawing. Filed Mar. 4, 1957, Ser. No. 643,532
Claims priority, application Sweden Mar. 8, 1956
12 Claims. (Cl. 106-123)

2. A waxy composition having water-repellent properties when used as impregnating agent for cellulosic materials, said composition comprising a mixture of esters of tall oil acids containing from 3-23 percent of rosin acids, from 6-9 percent of unsaponifiable matter and from 68 to 91 percent of fatty acids, with at least one high molecular monohydric, aliphatic alcohol having from 12 to 36 carbon atoms, the said mixture of esters having an acid number within the range of from 0 to 100, and said composition further comprising at least one salt selected from the group consisting of salts of zinc and tin with mineral acids.

3,006,779 CONTINUOUS CALCIUM CARBONATE SLURRY PROCESS

Clyde W. Leaf, Trenton, George E. Hall, Jr., Wyandotte, and Irwin A. Davis, Oak Park, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
Filed Jan. 9, 1959, Ser. No. 785,866
9 Claims. (Cl. 106-306)



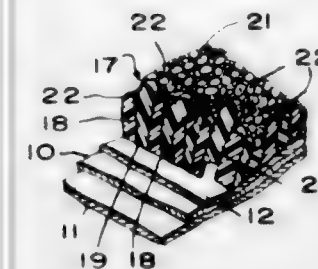
1. A continuous process for preparing a high solids, low viscosity slurry of calcium carbonate, which comprises: establishing within a body of aqueous slurry containing about 70-78 percent by weight of calcium carbonate and about 0.4-2.0 percent by weight of dispersant, at least one hydraulic attrition zone, imparting, thereby, intense turbulence, high kinetic energy and a velocity of at least about 1500 feet/minute to the slurry in said zone relative to the body of slurry, adding about 70-78 percent by weight of calcium carbonate, about 0.4-2.0 percent by weight of dispersant and about 22-30 percent by weight of water simultaneously to said zone and continuously removing therefrom a high solids, low viscosity slurry of calcium carbonate, said process being carried out at about ambient temperatures and at such rate as to maintain the body of slurry at approximately constant volume; said calcium carbonate being characterized in that it is a finely divided, relatively nonaggregated calcium carbonate having an apparent particle size within the range of about 0.05-0.30 micron as determined by electron micrographs; and said dispersant consisting of a homogeneous mixture of (a) from about 81-88 percent by weight of sodium phosphate glass having a molar ratio of sodium oxide/phosphorous pentoxide of from about 0.9/1 to about 1.5/1, (b) from about 10% to about 15% by weight of zinc oxide and (c) from about 0.5-8.0 percent by weight of a compound selected from the group consisting of the salt and hydroxide of an alkali-metal selected from the group consisting of potassium and lithium, wherein the concentration of said dispersant is based upon the dry weight of calcium carbonate.

3,006,780 CELLULAR COATING AND METHOD OF PRODUCING THE SAME

Harry S. Shaffer, Cincinnati, Ohio
(1040 SE. 7th Ave., Pompano Beach, Fla.)
Filed Nov. 4, 1959, Ser. No. 850,862
25 Claims. (Cl. 117-18)

17. An insulated paperboard bucket, the outer surface of said bucket having adherent thereto a continuous cellular polystyrene layer composed of in situ expanded agglomerated polystyrene beads, the periphery of said beads remote from said surface being generally spheroidal, the lateral walls of said beads being adhered to each other

throughout substantially their entire extent, the outer surface of said layer being textured and presenting the



appearance of agglomerated globules, said layer being generally one bead deep.

3,006,781 PHOSPHOR COATING METHOD

William C. Martyn, Lyndhurst, Ohio, assignor to General Electric Company, a corporation of New York
Filed Mar. 7, 1960, Ser. No. 12,969
5 Claims. (Cl. 117-33.5)



1. The method of coating a glass lamp envelope with a luminescent material which comprises suspending the luminescent material in an ammoniacal aqueous binder solution consisting of 0.3% to 0.8% by weight of binder solids to weight of luminescent material and wherein the binder solids consist of the copolymer of methyl vinyl ether and maleic anhydride and of polyacrylic acid, the proportion of polyacrylic acid to total binder solids being increased in accordance with the degree of irregularity of the envelope, and allowing the suspension to drain through the envelope.

3,006,782 OXIDE COATED ARTICLES WITH METAL UNDERCOATING

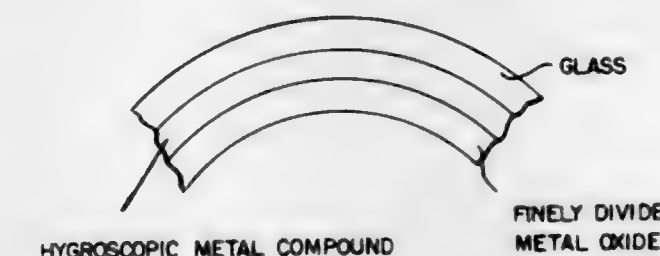
William Maxwell Wheelton, Jr., Framingham Center, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
No Drawing. Original application Mar. 9, 1956, Ser. No. 570,602. Divided and this application Nov. 5, 1958, Ser. No. 771,940
16 Claims. (Cl. 117-46)

1. Process for coating rigid materials to protect them from oxidation and for other purposes comprising fusing metal having a melting point over 200° C. thus producing

molten metal, atomizing said molten metal to produce particles of molten metal, freezing the particles in situ upon the rigid piece of material to form a metal coating thereon, thereafter fusing material consisting of refractory metal oxide which has a melting point of over 1000° C. producing thereby molten metal oxide, atomizing the molten metal oxide to form discrete molten particles thereof, coincidentally projecting said molten particles of metal oxide on to the surface of said metal coating and freezing the molten particles of metal oxide in situ thereon to form a coating of said metal oxide having a melting point of over 1000° C. upon said metal coating.

3,006,783 METHOD OF APPLYING LIGHT-DIFFUSING LAYERS TO GLASS SURFACES AND GLASS OBJECTS

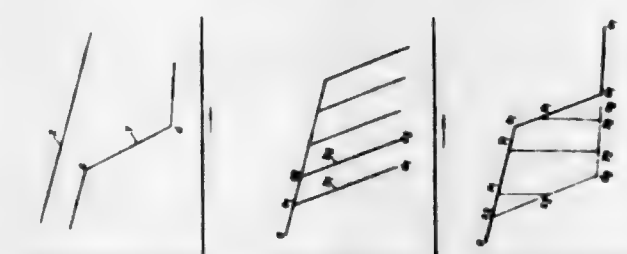
Pieter Willem Haalijman, Gerardus Hendricus Janssen, and Petrus Cornelis van der Linden, all of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Phillips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1956, Ser. No. 626,716
Claims priority, application Netherlands Dec. 8, 1955
7 Claims. (Cl. 117-54)



1. In the method of covering a glass surface with a light-diffusing layer obtained by combustion of a metal which settles as smoke on the glass surface, the step of first applying to the glass surface a coating consisting of a hygroscopic metal compound which improves adhesion of the light-diffusing layer to the glass.

3,006,784 FORMATION OF ALDEHYDE CONDENSATION PRODUCTS

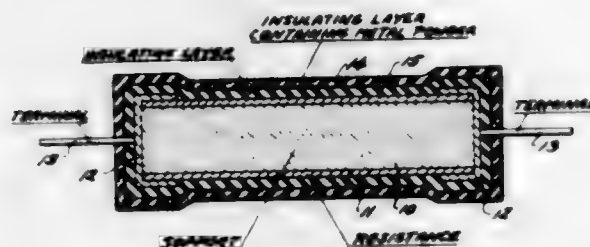
John James Ryan and Peter John Taylor, Manchester, England, assignors to Tootal Broadhurst Lee Company Limited, Manchester, England, a British company
Filed Apr. 30, 1956, Ser. No. 581,508
Claims priority, application Great Britain Apr. 29, 1955
16 Claims. (Cl. 117-161)



1. A process which comprises impregnating a fibrous material with a solution in an ionizing solvent of the ingredients of an amino-aldehyde resin, whose formation is catalysed by acid, containing in solution a dihydrogen salt of orthophosphoric acid with a metal selected from the group consisting of lithium, barium, calcium, strontium, magnesium, zinc, copper, ferrous iron, manganese, cadmium and cobalt, and thereafter evaporating said solvent from and heating the impregnated material whereby to effect condensation of the resin-forming ingredients.

3,006,785 ELECTRIC RESISTORS

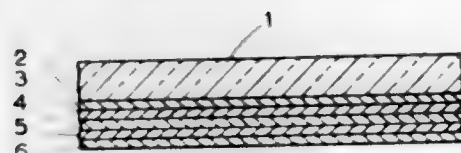
Giovanni Campeggio, Varese, Italy, assignor to S.E.C.I. Società Elettrotecnica Chimica Italiana S.p.A., Milan, Italy, a company of Italy
Filed Dec. 29, 1958, Ser. No. 783,180
Claims priority, application Italy Apr. 16, 1958
2 Claims. (Cl. 117—217)



1. An electric resistor comprising a resistance element, at least one layer of insulating paint in direct contact with said resistance element, and at least one additional layer of insulating paint overlying the first mentioned layer and containing approximately 10% of a powdered metal selected from the group consisting of magnesium, aluminum, titanium, copper, zinc and alloys thereof, to avoid changes in the resistance of said element as a result of exposure to moisture.

3,006,786 PHOTO-EMISSIVE SURFACES

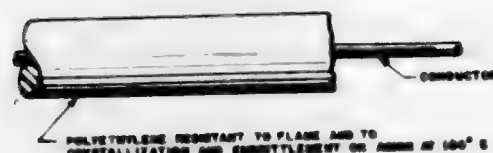
Eric James Sjöberg, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed Dec. 1, 1958, Ser. No. 777,339
Claims priority, application Great Britain Dec. 6, 1957
18 Claims. (Cl. 117—219)



7. A method of making a photo-emissive surface which comprises depositing tellurium onto a surface, sensitizing said tellurium by depositing thereon an alkali metal, depositing thereon a substance selected from the group consisting of antimony, a compound thereof and an alloy thereof and then sensitizing said substance by the deposition thereon of at least two alkali metals all of said alkali metals being different.

3,006,787 METHOD OF IMPROVING PROPERTIES OF FLAME RESISTANT POLYETHYLENE AND PRODUCTS THEREOF

Bernard A. Blew, New York, N.Y., and Albert H. Steinberg, Newark, Ohio, assignors to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed Sept. 12, 1958, Ser. No. 760,592
9 Claims. (Cl. 117—232)



1. The method of maintaining substantially unimpaired the resistance to crystallization and embrittlement as a result of aging, and the resistance to deformation

under load at elevated temperatures, without substantial impairment of the flame resistance, of polyethylene to which 18 to 47 parts by weight of antimony trioxide and 10 to 30 parts by weight of chlorinated paraffin containing 70% of combined chlorine to 100 parts by weight of polyethylene have been added for the purpose of imparting flame resistance, which comprises including 2 to 20 parts by weight of neoprene in the mixture.

3,006,788 WINDSHIELD WIPER ARM AND BLADE ASSEMBLY

Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Original application May 7, 1954, Ser. No. 428,245. Divided and this application Jan. 24, 1958, Ser. No. 710,926
10 Claims. (Cl. 134—6)



6. A method of wiping two differently formed curved areas of a windshield which comprises moving a wiper arm and a resiliently flexible wiper blade thereon in a direction to cause the blade to wipe first one area and then causing the blade to slide along the arm and tilt about its longitudinal axis as it is moved on the other area to continuously maintain the blade in normal wiping surface-conforming relationship therewith.

3,006,789
METHOD OF PRODUCING TRANSISTORS
Louis Marius Nijland, Eindhoven, Netherlands, assignor to North American Philips Company, Inc.
Filed June 10, 1959, Ser. No. 819,313
Claims priority, application Netherlands June 26, 1958
5 Claims. (Cl. 148—1.5)



1. In the method of making a diffused transistor on a body of semiconductive material of one conductivity type, wherein first and second opposite-conductivity-type-forming impurities are diffused into the body from its surface, said first impurity having a greater solubility in the semiconductive material and a smaller diffusion coefficient than that of the second impurity, whereby there is formed within the body an inner zone of the opposite conductivity type determined by the second impurity and forming a junction with the body interior, and an outer surface zone of the said one conductivity type determined by the first impurity and forming a junction with the inner zone, the improvement comprising, before diffusing in the first and second impurities, first diffusing into the body a third impurity having a greater solubility than that of the first and second impurities and a diffusion coefficient at least equal to that of the first impurity and of the opposite conductivity-forming-type as the latter to form a surface zone within the body of the said opposite conductivity type and of higher conductivity and thereafter removing part of the said high conductivity surface zone thereby exposing the body interior after which the first and second impurities are diffused into the body, and contacting the high conductivity surface zone remaining to effect an ohmic connection to the said inner zone.

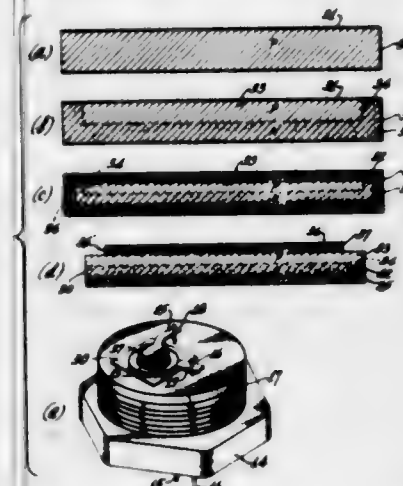
3,006,790 FLUX CONTAINING CARBOXYPOLY-METHYLENE

Charles W. Ewing, Centerville, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Oct. 20, 1958, Ser. No. 768,031
2 Claims. (Cl. 148—23)

1. In a fluoro-borate flux consisting essentially of a fluoride and a borate, the improvement consisting of the combination of said flux with carboxypolymethylene in quantities of between 1/4% and 2% by weight of the flux on an anhydrous basis.

3,006,791 SEMICONDUCTOR DEVICES

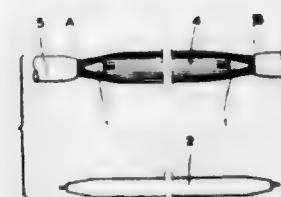
William M. Webster, Jr., Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,577
6 Claims. (Cl. 148—33)



1. A transistor comprising a low resistivity emitter region, an abrupt emitter-base junction, a high resistivity base region, a gradual base-collector junction, and a continuously graded low resistivity collector region.

3,006,792 TELECOMMUNICATION SUBMARINE ELECTRIC CABLES

Riccardo Monelli, Milan, Italy, assignor to Pirelli Società per Azioni, Milan, Italy
Filed Aug. 7, 1959, Ser. No. 832,358
1 Claim. (Cl. 156—51)

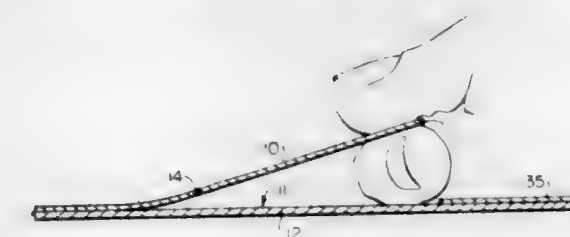


In the manufacture of an armored repeater-incorporating telecommunication submarine cable which is characterized by a coaxial conductor pair-providing core, the method which comprises spacedly surrounding a continuous length of core with flexible core axis-parallelizing armouring wires of high tensile strength, simultaneously travelling said core and armouring wires longitudinally while extruding and successively embedding corresponding lengths of said core and wires in sheath-providing plastic, interrupting the supply of plastic while the core and wires are still travelling whereby to provide a sheath gap exposing said core and wires, next temporarily spreading said wires and removing a section of said core at the site of said sheath gap, the insertion of a repeater

771 O.G.—90

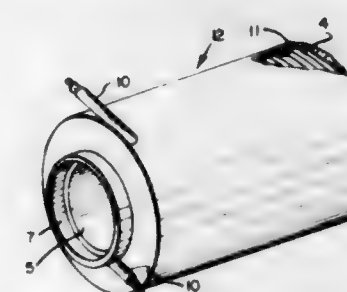
in said gap and the electrical connection of the repeater to the gap-defining ends of said core conductors, returning said wires to their initial position surrounding said core, and finally applying a gap-covering plastic sheathing to said wires and repeater.

3,006,793
ADHESIVE PRODUCTS
Seth Wheeler III, Painesville, Ohio, assignor to Avery Adhesive Products, Inc., Monrovia, Calif., a corporation of California
Filed Aug. 19, 1960, Ser. No. 50,687
2 Claims. (Cl. 154—53.5)



1. An article of manufacture comprising a web combination extending in a long direction and including a base web having an adhesive coating on one surface and a protective flexible fibrous backing sheet in apposite relationship with said adhesive coating and constituting means for protecting and for accomplishing containment of said adhesive coating, said backing sheet having along its length a succession of narrow embrittled zones which are integrally included in said backing sheet to thereby integrally form part of said means for protecting and for accomplishing containment of said adhesive coating, said zones extending across said backing sheet from side to side thereof and in skewed relation to both the lengthwise and widthwise directions of said web combination.

3,006,794
ARTICLES OF MANUFACTURE SUCH AS ELECTRICAL COILS AND METHOD OF PRODUCING THE SAME
Allen C. Sheldon, Fort Wayne, Ind., assignor, by mesne assignments, to Rea Magnet Wire Company, Inc., Fort Wayne, Ind., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,763
3 Claims. (Cl. 156—89)



2. In a process of forming an electric coil having inorganic electrical insulation, the step of (a) providing a solid electrical conductor in the form of a wire, prior to the application of the electrical insulation, with a film of a resin which is heat decomposable without substantial carbonization well below 500° C., the step of (b) applying over the resin inorganic insulation material in fibrous form and which retains its integrity at temperatures above 500° C. but which has an inner resilient layer of high softening point pervious to the passage of gases and an outer layer of a lower sintering point than the material of the inner layer and conductor, said outer layer also being pervious to the passage of gases, the step of (c) winding the insulated conductor into a coil form having superposed layers, the step of (d) heating the coil sufficiently

to effect the decomposition of the resin and the expulsion of the volatiles through the fibrous resilient, pervious layers to thereby form an annular gap about the conductor of the winding inwardly of the insulation, the step of (e) without cooling the coil raising the temperature to the sintering point of the fibers of the outer layer to form a non-porous film of the material of the fibers and which film is impervious to the passage of oxygen of the air, and the step of (f) cooling the coil to room temperature.

3,006,795

DECALCOMANIA AND PROCESS OF MAKING SAME

Harry S. Brickell, Pittsburgh, Pa., assignor to The Metal Decal Company, a corporation of Pennsylvania
Filed Aug. 22, 1956, Ser. No. 605,614
2 Claims. (Cl. 156—3)



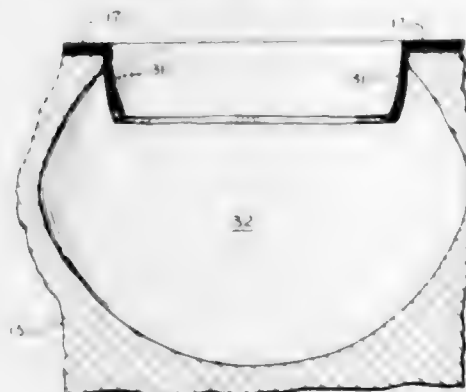
1. The method of making a decalcomania transfer in which the decalcomania pattern is a continuous flexible film which comprises the steps, in the order named, of first releasably adhering a sheet of thin flexible material to one surface of an etch-resistant supporting flexible film, printing a pattern to appear on the decalcomania on the exposed surface of the material with an etch-protecting adhesive resist, leaving the remaining area of the material exposed, treating the composite sheet so prepared with an etching medium to completely remove those portions of the material not so printed upon with the resist, adhering the resist coated surface of the material to a water-soluble glue surface of a decalcomania paper, and then removing the etch-resisting supporting film to expose that surface of the etched pattern which was initially adhered to the supporting film, whereby the resist is then interposed between the pattern and the decalcomania paper.

3,006,796

ETCHING METHOD

Norman C. Bridwell, Washington Township, Lucas County, Ohio, assignor, by mesne assignments, to Jones Graphic Products of Ohio, Inc., a corporation of Ohio

Filed Apr. 18, 1958, Ser. No. 729,399
4 Claims. (Cl. 156—13)



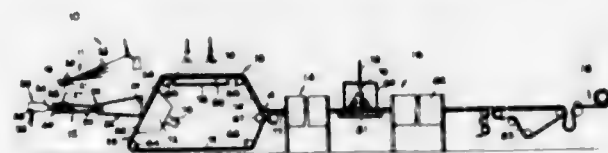
1. A method for controlling the configuration of an etched pocket in a metal plate which comprises applying to a metal plate having a partially formed pocket extending below a major surface thereof a continuous layer of a light-sensitized coating composition, which layer covers the major surface of the plate and the walls which define the pocket, the coating composition being an aqueous dispersion comprising from 5 percent to 25 percent of a thermal reaction product of from 0.7 part to

2.5 parts of an acrylic monomer and one part of a partially hydrolyzed polyvinyl alcohol, insolubilizing a portion of the coating which covers the walls defining the pocket, while preventing exposure of at least one other portion of the coating which covers such walls, by exposing the coating to light incident from a plurality of sides of the plate at an acute angle greater than zero relative to the coated major plate surface, washing unexposed coating from the plate to expose bare metal, and subjecting the exposed metal to the action of an etchant therefor.

3,006,797

PROCESS AND MACHINE FOR PRODUCING FIBROUS MATS

Dominick Labino, Maumee, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed Mar. 19, 1956, Ser. No. 572,445
4 Claims. (Cl. 156—28)



1. Apparatus for producing a bonded fibrous mat comprising, means for producing a gaseous flow stream of high velocity, means for dividing a continuous multi-fibered strand into unit lengths and directing said lengths into said flow stream, a first duct adapted to receive said flow stream and entrained strand lengths and form said flow stream into an elongated rectangular band, said first duct having a discharge opening, a second duct, said second duct having an entrance opening, said entrance opening being positioned in coacting spaced relation to said discharge opening and partially exposed to the atmosphere, said second duct being adapted to receive the flow stream from said first duct and diffuse it in enlarging array, means for collecting the fibers from said second duct as a uniform random mat, means for coating said mat with a fluidized binder, and means for hardening said binder.

ERRATA

For Class 156—51 see:
Patent No. 3,006,792
For Class 156—89 see:
Patent No. 3,006,794
For Class 156—192 see:
Patent No. 3,006,402

3,006,798

METHOD OF MAKING HONEYCOMB

Kenneth M. Holland, Orinda, Calif., assignor to Hexcel Products, Inc., Berkeley, Calif., a corporation of California
Filed Mar. 23, 1959, Ser. No. 801,072
2 Claims. (Cl. 156—197)



1. A method of manufacturing a honeycomb section having the axes of its cells disposed at an oblique angle

relative to the median plane of the section comprising the steps of: applying to rectangular sheet material spaced parallel lines of adhesive in a direction extending at an oblique angle in reference to both major axes of the rectangular sheet; providing a plurality of rectangular sheets of web material of equal dimension with the oblique lines applied thereto as aforesaid; superposing and adhesively uniting said sheets one upon the other in a stack with the spaced parallel lines of adjacent sheets staggered relative to one another; subsequently expanding the adhesively uniting sheet material into honeycomb with the axes of its cells disposed at an oblique angle relative to the open cell face surfaces of the honeycomb.

3,006,799

PROCESS FOR APPLYING FINISHING OVERLAYS TO PANELS

Jack J. Adams, Midland, and Glen L. Gunderman, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 1, 1958, Ser. No. 725,511
22 Claims. (Cl. 156—283)

1. A process for applying overlays to substratum having at least part of its exposed surface composed of a member selected from the group consisting of cellulosic fibers and mineral fibers comprising the steps of (1) depositing the polymeric solids of an aqueous latex of an organic thermoplastic material on a flexible, porous web; (2) dewatering and drying the so-treated web at a temperature below the fusion temperature of said organic thermoplastic material; (3) bringing said web of step (2) and the substratum into compressive pressure relationship at an elevated temperature until fusion of said organic thermoplastic material is complete; and (4) releasing the so-formed laminate from the conditions of applied pressure and elevated temperature.

3,006,800

METHOD OF FORMING A REINFORCED DOUBLE SHEET OF CELLULOSE ACETATE

Richard Lasker, Scarsdale, N.Y., and Clyde K. Billeb, Shorewood, Wis., assignors to Milprint Incorporated, New York, N.Y., a corporation of Delaware
Filed Mar. 12, 1957, Ser. No. 645,464
1 Claim. (Cl. 156—290)



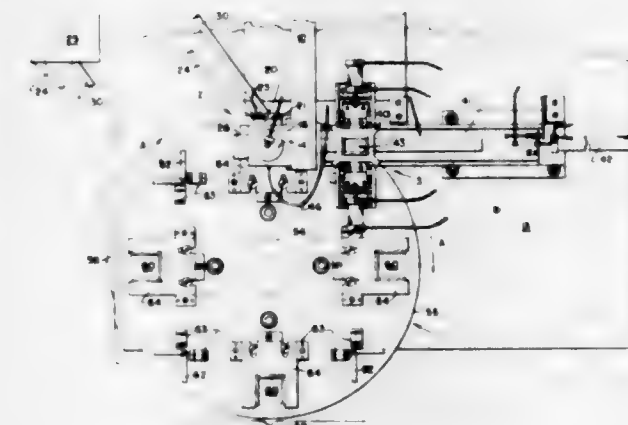
A method of forming a leaf of superposed, heat-sealed layers of transparent, heat-marrable cellulose acetate sheets, which comprises moving a web of transparent, heat-marrable cellulose acetate, which has a longitudinal axis, forwardly in the direction of said axis at constant, forward, longitudinal speed through a pressure-applying zone, directly applying a hot, solid, transparent and self-sustaining film of polyethylene to a selected flat face of said web along a contact line of said selected flat face of said web which is lateral to said longitudinal axis and which is anterior to said pressure-applying zone, maintaining the temperature of said film at substantially 400° Fahrenheit to 600° Fahrenheit at said contact line, maintaining the temperature of said web at substantially 70° Fahrenheit at said contact line, moving said film in unison with said web and in contact with said selected face beyond said contact line and through said pressure-applying zone, pressing said film and said web against each other in said pressure-applying zone at said selected face to self-adhere said film and said web against each other at said selected face, maintaining the temperature of said pressure-applying

ing zone at substantially 60° Fahrenheit to 100° Fahrenheit to cool said applied film within said pressure zone and cooling said film to a maximum of substantially 150° Fahrenheit close to the exit end of said pressure-applying zone, moving said web and said film at sufficient speed forwardly to provide a period of only a fraction of a second for the movement of said film and said web from said contact line through said pressure-applying zone, superposing selected web portions with the exposed surfaces of the polyethylene film layers thereof in contact with each other, and heat sealing said exposed surfaces to each other at a heat-sealing temperature of substantially 225° Fahrenheit to 250° Fahrenheit during a heat-sealing period of a fraction of a second, thus avoiding the heat-marring of said cellulose acetate.

3,006,801

POSITIONED FUSING MACHINERY

Edward C. Pfeffer, Jr., Troy, N.Y., assignor to Cluett, Peabody & Co., Inc., Troy, N.Y., a corporation of New York
Filed Nov. 1, 1960, Ser. No. 66,457
6 Claims. (Cl. 156—380)



1. A device for the automatic positioned fusing of a label treated with thermoplastic material to a fabric garment part comprising a high frequency electrical source including a first stationarily mounted electrode and a second electrode mounted for reciprocating movement along a straight line path towards and away from said first electrode, means for positioning a label on said second electrode while in its raised position, rotatable means extending between said electrodes and adapted when rotated to carry a garment part into a position above said first electrode, and means operatively connected to said second electrode for lowering this electrode to bring said label thereon in contact against said garment part.

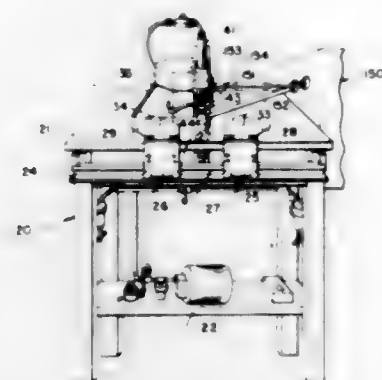
3,006,802

AUTOMATIC STAY FUSING DEVICE

Edward C. Pfeffer, Jr., Troy, N.Y., assignor to Cluett, Peabody & Co., Inc., Troy, N.Y., a corporation of New York
Filed Apr. 13, 1959, Ser. No. 806,100
4 Claims. (Cl. 156—380)

1. A device for the automatically positioned fusion of a thermoplastic collar stay to a fabric collar comprising a table having a track means connected along one edge thereof, a block mounted on said table and having a laterally extending end spaced above said table, a high frequency electrical source including a first electrode stationarily mounted on said table beneath said laterally extending end of said block and a second electrode mounted on said laterally extending end of said block for reciprocating movement toward and away from said first elec-

trode means for positioning a thermoplastic stay on said second electrode while said electrode is in its raised position, and a platen shaped to receive a collar thereon in an orientated position, said platen being slidably dis-



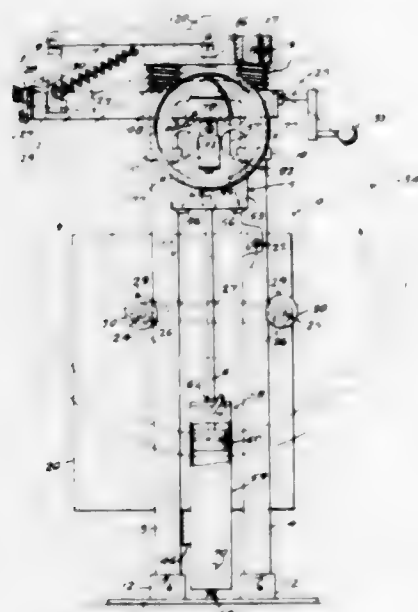
posed on said track means and adapted to be moved with a collar in position thereon to a predetermined position along said track means to accurately position said collar between said electrodes and relative to the thermoplastic stay in position on said second electrode.

3,006,803

TIRE TREAD APPLYING MACHINE

Robert L. Scully, Oak Harbor, Wash., assignor to Balloon Tire Mould Co., Inc., Los Angeles, Calif., a corporation of California

Filed Oct. 27, 1958, Ser. No. 769,779
7 Claims. (Cl. 156-407)



1. In a tire supporting mandrel for positioning within the casing of a tire in a tire tread applying apparatus, the combination of: a wheel mounted for rotation about an axis parallel to the axis of rotation of the tire, said wheel having a convex periphery; and first and second rollers mounted for rotation about axes substantially radial to said axis of rotation of the tire with a roller disposed on each side of said wheel and within the periphery of said wheel, each of said rollers having a convex periphery, which said wheel and rollers adapted to engage the interior surface of the tire casing.

ERRATUM

For Class 156-526 see:
Patent No. 3,006,495

3,006,804
MANUFACTURE OF CELLULOSIC PRODUCTS
John Wallace de Vos and Harry B. Kellogg, Appleton, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Dec. 13, 1957, Ser. No. 702,722
5 Claims. (Cl. 162-36)



1. A process for recovering and reconstituting spent pulping liquor from a pulping process wherein the pulping agent is a liquor containing as active chemical 60-80% sodium sulfite, 30-10% sodium sulfide and not more than about 12% inactive chemical, which consists of the steps wherein the spent liquor is separated from the pulp and concentrated by evaporating to a solids content of about 50-70%, the concentrated spent liquor is burned to produce a gaseous fraction containing sulfur dioxide and a solids fraction containing sodium sulfide and sodium carbonate in a mole ratio of sulfide to carbonate of about 1 to 2.5, the solids fraction is dissolved in water to form a sodium sulfide-sodium carbonate solution, the solution is partially evaporated to form a sulfide portion consisting of an aqueous phase containing sodium carbonate in an amount not more than about 12% by weight of the chemical content of the original pulping liquor and the sodium sulfide and a solid phase containing the balance of the sodium carbonate, the solid and aqueous phases are separated, the sodium carbonate of the solid phase is dissolved in water to form a carbonate solution, the gaseous fraction is scrubbed with the carbonate solution to form a sulfite portion, the sulfite portion is fortified with sodium ion and sulfite ion in an amount sufficient to increase the sodium sulfite content of said sulfite portion so that the sulfur content of said portion is 60-80% of the sulfur content of the original pulping solution, and the sulfide and sulfite portions are combined to form a reconstituted cooking liquor.

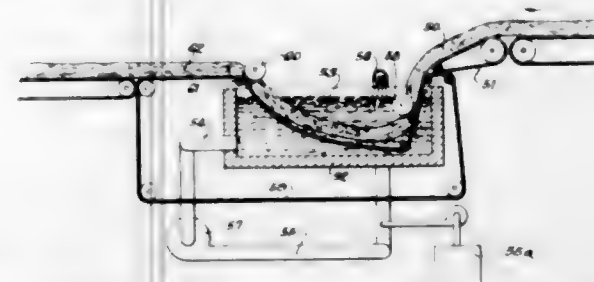
3,006,805
METHODS FOR MANUFACTURING FIBROUS STRUCTURES

Jack H. Waggoner, Newark, Ohio, assignor to Owens-Corning Fiberglass Corporation, a corporation of Delaware

Original application Sept. 12, 1950, Ser. No. 184,355, now Patent No. 2,772,603, dated Dec. 4, 1956. Divided and this application Aug. 17, 1956, Ser. No. 609,338
15 Claims. (Cl. 162-101)

7. In the method of manufacturing a fibrous structure of low density, the steps of incorporating a carbonate compound in particle form with glass fibers bonded into a self-sufficient mass with a binder consisting essentially of pulp fibers uniformly distributed throughout the mass

and selected from the group consisting of asbestos pulp and cellulose pulp, and acidifying the mass while wet



with aqueous medium to cause release of carbon dioxide from the carbonate particles for entrapment in the wet fibrous mass to increase the porosity thereof.

3,006,806

SIZED PAPER AND PROCESS THEREFOR

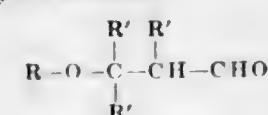
Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Feb. 15, 1957, Ser. No. 640,335
10 Claims. (Cl. 162-158)

1. A sized paper of felted cellulose fibers comprising a major content of cellulose and about 5 to 35% by weight of finely-divided filler, said cellulose fibers having been beater-sized with about 1/4% to 8% on the dry weight of the paper of an organic cationic polymer and about 1/2% to 8% of an alkylketene dimer in which the alkyl has 6 to 20 carbon atoms.

3,006,807
SLIMICIDE

Marvin Legator, Modesto, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Apr. 20, 1959, Ser. No. 807,313
15 Claims. (Cl. 162-161)

7. In the preparation of paper, the improvement comprising adding to water employed in said preparation a compound having the formula



wherein R represents a hydrocarbyl group and each R' is individually chosen from the class consisting of a hydrogen atom and a lower alkyl group to provide a biocidal effective concentration of said aldehyde in said water.

3,006,808

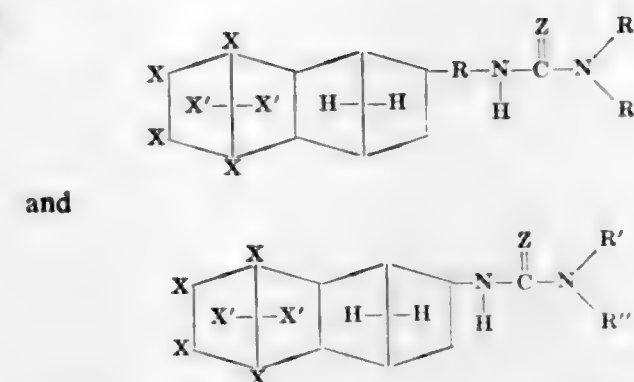
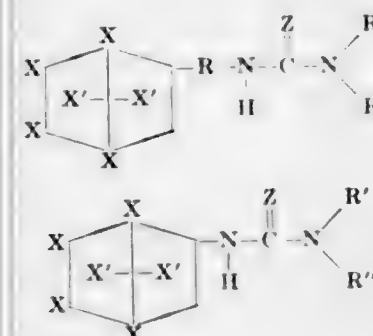
THIOUREA FUNGICIDES

David Emerson Ramey and Milton Silverman, Modesto, Calif., assignors to Shell Oil Company, a corporation of Delaware

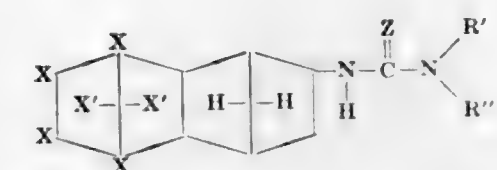
No Drawing. Original application Dec. 30, 1957, Ser. No. 705,786. Divided and this application Dec. 21, 1959, Ser. No. 1,152

6 Claims. (Cl. 167-30)

1. The method of combatting fungi on living plants comprising applying a fungicidal toxic amount of a compound of the formula selected from the group consisting of



and



wherein X is halogen, X' is selected from the group consisting of hydrogen, halogen and lower alkoxy, R is alkylene of from 1 to 10 carbon atoms, Z is selected from the group consisting of oxygen and sulfur, and R' and R'' are individually selected from the group consisting of hydrogen, alkyl of from 1 to 10 carbon atoms, alkenyl of from 1 to 10 carbon atoms and hydroxyethyl.

3,006,809

COCKROACH ATTRACTANT

Herman Gershon, North Bergen, N.J., assignor to Pfister Chemical Works, Inc., Ridgefield, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 7, 1960, Ser. No. 20,520
5 Claims. (Cl. 167-48)

1. A method of attracting cockroaches comprising exposing an attractant composition in the vicinity of an area of cockroach infestation, said composition containing a feather hydrolyzate prepared by heating moist feathers of fowl under superatmospheric pressure, drying the heated feathers to produce a feather meal, reacting said meal in admixture with water and a mineral acid selected from the group consisting of sulfuric and hydrochloric acids to produce an acid hydrolyzed product, neutralizing said acid hydrolyzed product and separating the feather hydrolyzate from said product, as a cockroach attractant therein.

3,006,810

METHOD AND PRODUCT FOR IMPROVING THE ECONOMIC VALUE OF DOMESTIC ANIMALS

Byron M. Shinn, Western Springs, and Emil Kaiser, Chicago, Ill., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 11, 1958, Ser. No. 747,820
8 Claims. (Cl. 167-53)

1. The method of increasing the growth of ruminants of the class consisting of females and male castrates including the step of introducing into said ruminants during at least a portion of the growth period of the immature ruminants an effective amount of a substance selected from the group consisting of 4,4'-oxygenated 3,3'-substituted diethylstilbestrol derivatives and 4,4'-oxygenated 3,3'-substituted hexestrol derivatives, the substituents at said 3,3' positions being selected from the class consisting of aliphatic straight chains containing at least two carbon atoms, aliphatic branched chains, and aromatic rings.

4. An animal feed comprising a nutrient material and an effective amount of a substance selected from the group consisting of 4,4'-oxygenated 3,3'-substituted diethylstilbestrol derivatives and 4,4'-oxygenated 3,3'-substituted hexestrol derivatives, the substituents in said 3,3' positions being selected from the class consisting of aliphatic straight chains containing at least two carbon atoms, aliphatic branched chains and aromatic rings.

3,006,811

METHOD FOR IMPROVING THE ECONOMIC VALUE OF POULTRY

Byron M. Shinn, Western Springs, Emil Kaiser, Chicago, and John F. Roland, Jr., Glenview, Ill., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed July 11, 1958, Ser. No. 747,819
5 Claims. (Cl. 167-53.1)

1. The method of improving the finish of poultry including the step of introducing into immature poultry during at least a portion of the growth period thereof an effective amount of a substance selected from the group consisting of 4,4'-oxygenated 3,3'-substituted diethylstilbestrol derivatives and 4,4'-oxygenated 3,3'-substituted hexestrol derivatives, the substituents in said 3,3' positions being selected from the class consisting of aliphatic straight chains containing at least two carbon atoms, aliphatic branched chains, and aromatic rings.

3,006,812

N-DESACETYL COLCHICEINE FOR THE TREATMENT OF GOUT

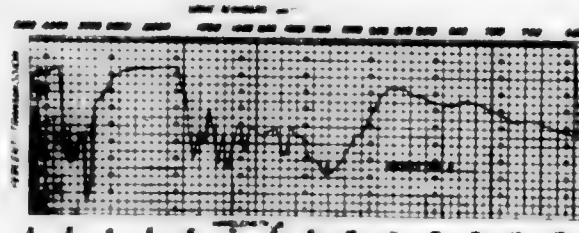
Stanley L. Wallace, Brooklyn, N.Y., assignor to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France
No Drawing. Filed Sept. 21, 1960, Ser. No. 57,394
2 Claims. (Cl. 167-65)

1. The process of alleviating the pain and effecting treatment in cases of gout in persons without exerting excessive toxic reactions which comprises administering to said persons afflicted with acute gout a dose of up to about 16 mgm. of N-desacetyl-colchicine.

3,006,813

ANTIBIOTIC

Julian E. Philip, Lake Forest, and Jay R. Schenck, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed Nov. 21, 1956, Ser. No. 623,589
3 Claims. (Cl. 167-65)



1. A method for the preparation of non-toxic, acid addition salts of ristocetin B which comprises the steps of (a) slurring a filtered fermentation beer resulting from the deep culture, aerobic fermentation of the micro-organism *Nocardia lurida* NRRL 2430 with an activated carbon to adsorb thereon the antibiotic activity present in the filtered beer, (b) filtering the slurry to separate the carbon and washing the carbon repeatedly with an acidified, aqueous, polar, organic solvent to free the adsorbed acid-addition salts therefrom, (c) removing the organic solvent from the combined washings by distillation and adjusting the pH of the resulting aqueous solution to about 5.0, (d) passing the aqueous solution of said acid-addition salts through a carbon chromatographic column packed with a composition comprising six grams each of carbon and diatomaceous earth per gram of solids present in said aqueous solution to adsorb the said acid-addition salts on the carbon, (e) washing the carbon column with water to remove extraneous, water-soluble, unadsorbed material, (f) thereafter washing the carbon column with an acidified, aqueous, polar, organic solvent and collecting fractions of eluate from the column and (g) concentrating the fractions having an Rf value of between

about 0.10 to 0.20 on strips buffered with a solution containing 0.95 molar sodium sulfate and .05 molar sodium hydrogen sulfate when developed in a solvent system consisting of 80 parts methanol and 20 parts deionized water v./v. containing 1.5% sodium chloride w./v. to obtain the resulting acid-addition salt as a solid residue.

3,006,814

STABILIZED DEXTRAN COMPOSITION

George L. Stanko, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Apr. 12, 1957, Ser. No. 652,345
7 Claims. (Cl. 167-78)

1. A composition of matter consisting essentially of at least about 6% dextran having an average molecular weight of $75,000 \pm 25,000$ and a molecular weight range between 25,000 and 200,000 dissolved in aqueous media and a water-immiscible, non-toxic, polyhydric alcohol humectant dissolved in said aqueous media at a concentration between about 1 percent and 5 percent.

3,006,815

HEAT STABILIZATION OF ENZYMES AND METHOD

Don Scott, Chicago, Ill., assignor to Fermo Laboratories, Inc., a corporation of Illinois
No Drawing. Filed Aug. 24, 1956, Ser. No. 605,934
12 Claims. (Cl. 195-68)

1. The method of stabilizing a glucose-oxidase-catalase enzyme preparation against destruction of enzyme activity by heat in the presence of moisture comprising drying said enzyme preparation to constant weight at temperatures below about 45° C., and coating said dry enzyme preparation with an insulating layer of cold water soluble methyl cellulose which is non permeable to aqueous media at temperatures above the deactivation temperature of said enzyme preparation.

10. A pre-dried heat-stabilized glucose oxidase-catalase enzyme preparation adapted to be added to heat-processed aqueous foods for removal of the free oxygen therein and capable of withstanding destruction by heat in the presence of moisture during filling, pasturizing and closing operation during which the food is packaged into containers, said preparation comprising solid active glucose oxidase and catalase enzymes dried to constant weight at temperatures below about 45° C. surrounded with a coating of cold water soluble methyl cellulose which is non-permeable to aqueous media at temperatures above the deactivation temperature of said enzyme preparation.

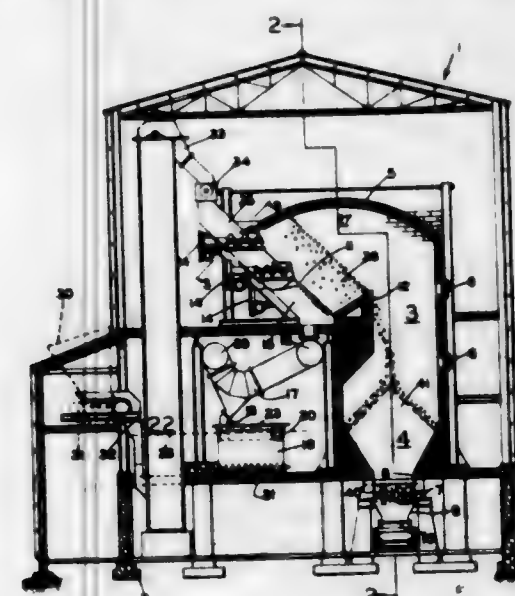
3,006,816

OIL SHALE RETORT AND METHOD

John H. V. Finney, Longmont, Colo., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Dec. 13, 1957, Ser. No. 702,571
10 Claims. (Cl. 202-7)

8. A process for the continuous retorting of oil shale for the pyrolysis of organic material contained therein which comprises maintaining a spent shale bed of substantial thickness in the lower portion of a combustion zone, maintaining a biased relatively shallow uniform depth raw shale bed in the upper portion of said combustion zone, the angle of the surface of said raw shale bed being maintained at the angle of repose of the shale under treatment, continuously feeding raw shale into the under surface of said raw shale bed uniformly throughout the extent thereof to thereby maintain a relatively uniform depth raw shale bed and to progressively move upper layers of said raw shale bed beyond the angle of repose whereby surface shale of said raw shale bed falls by gravity onto said spent shale bed, directing a stream

of air through said spent shale bed to simultaneously cool the spent shale and to heat air for the combustion of residual carbon in the spent shale bed, drawing hot gases of combustion from said combustion zone substantially uniformly through said raw shale bed generally counter-currently to the raw shale feed to said raw shale bed to pyrolyze the organic material contained therein for oil



recovery, removing oil and eduction gases from said raw shale bed through the same outlets, said outlets distributed substantially coextensively over the under surface of said raw shale bed, removing the recovered oil from the treatment, and removing ash from the bottom of said spent shale bed at a rate sufficient to maintain a desired depth therein.

3,006,817

PURIFICATION OF PYRROLIDONE FOR THE POLYMERIZATION TO POLYPYRROLIDONE

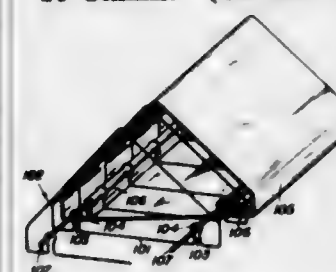
William O. Ney, Jr., Lincoln Township, Washington County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Jan. 27, 1958, Ser. No. 711,116
3 Claims. (Cl. 202-42)

1. The process for rendering 2-pyrrolidone containing minor amounts of water anhydrous for the formation of polypyrrolidone which comprises the steps of adding xylene to a mixture containing the 2-pyrrolidone and distilling at least a part of the xylene therefrom at a temperature in the range of about 30° C. to about 60° C., and at a pressure in the range of about 10 to 30 mm. of mercury.

3,006,818

METHOD OF FABRICATING SOLAR STILL IN CONTINUOUS LENGTHS

Risto P. Lappala, Madison, Wis., and Harry O. Rennat, Fort Collins, Colo., assignors to Bjorksten Research Laboratories, Inc., Fitchburg, Wis., a corporation of Illinois
Filed May 31, 1957, Ser. No. 662,666
10 Claims. (Cl. 202-234)



1. A solar still fabricated from wire and plastic comprising: a continuous, helical wire framework, two rods

and a transparent plastic cover; said framework comprising two upright loops on the base wire of each segment of said wire helix, each loop having a ring and a narrow portion which in combination looks like a cotter pin, said loops separated by a distance on the base wires of each segment of the wire helix, and said loops in series comprising two parallel rows of loops separated by said distance; said transparent cover wrapped around the exterior of said wire framework and drawn up through the narrow portions and rings of said series of loops; one of said rods drawn through the rings of one row of said plastic covered loops and another rod drawn through the rings of the other row of said plastic covered loops; said wire framework and still in combination having three parallel channels of substantially unlimited length separated by said parallel rows of plastic covered loops, the walls of said channels formed by said two rows of plastic covered loops.

3,006,819

METHOD OF PHOTO-PLATING ELECTRICAL CIRCUITS

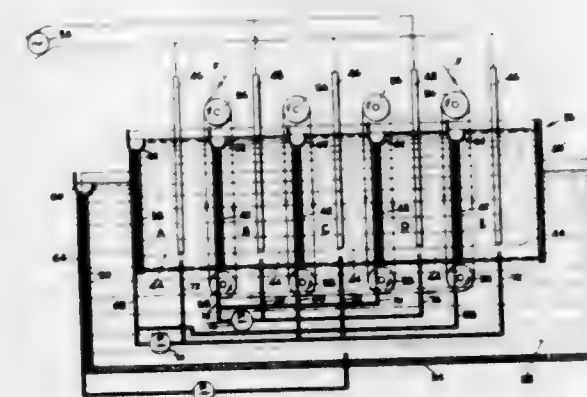
William J. Wilson, Nashua, N.H., and Harry Takesian, Groveland, Mass., assignors, by mesne assignments, to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed June 13, 1955, Ser. No. 515,110
1 Claim. (Cl. 204-15)

The method of printing electrical circuits in a desired configuration on an insulating panel which comprises: forming a photographic silver image on the surface of said insulating panel of the intended conductive path of said circuit; coating said photographic image with a catalytic agent consisting essentially of a chloride salt of palladium; then immersing said insulating panel in an aqueous solution containing a metallic salt selected from a group of metals consisting of nickel and cobalt and a reducing agent which will cause a film to be deposited of the metal of said salt on said image by chemical reduction; and plating said metal film with a more highly conductive metal to provide said printed electrical circuit.

3,006,820

METHOD OF ANODIZING SLIDE FASTENERS

Hans Berman, Forest Hills, N.Y., assignor to Conmar Products Corporation, Newark, N.J., a corporation of New Jersey
Filed Aug. 21, 1956, Ser. No. 605,287
3 Claims. (Cl. 204-23)



1. A method of anodizing the fastener elements of a pair of meshed slide fastener stringers of continuous length, each stringer having the fastener elements secured in spaced relation to the edge of a tape, said elements being interconnected by an electrical conductor extending longitudinally of each tape, the conductor being sufficiently thin so that the flexibility of the stringers is not appreciably impaired, said method comprising continuously passing said stringers through a plurality of adjacent compartments each containing an electrolyte and an

electrode, said compartments being open at their top and bottom ends with the electrolytes in said compartments being electrically insulated from each other by an insulating liquid extending partially into said compartments at their bottom ends and by the atmosphere at their top ends, the electrolyte in at least one of the compartments comprising an anodizing solution, a source of current connected to said electrodes, said stringers passing through the electrolytes in spaced relation with respect to said electrodes the path of movement of said stringers being from the electrolyte in one compartment, through said insulating atmosphere, into the electrolyte in an adjacent compartment, through said insulating liquid, and back into the electrolyte of said one compartment, the anodizing current being supplied to the fastener elements by a circuit extending from one electrode, through the electrolyte in which a segment of the stringers is located, to the fastener elements, through said electrical conductors interconnecting the fastener elements in a portion of the meshed stringers between electrolytes, to the fastener elements in the segment of the stringers in the electrolyte in an adjacent compartment, through the electrolyte in said adjacent compartment, and to the electrode in said compartment, the distance between the electrolytes being sufficiently short and the rate of movement of the stringers being sufficiently rapid so that the time for the stringers to pass between electrolytes is less than the time which will allow the interconnecting conductors to unduly overheat.

3,006,821

MANUFACTURE OF SILVER CHLORIDE ELECTRODES

Horace E. Harling, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 29, 1945, Ser. No. 585,417

6 Claims. (Cl. 204—38)



1. The process of preparing an electrode for an electric cell which comprises anodizing the surface of a silver body by passing an electric current, in a direction such that the body acts as an anode, between a cathode and said silver body through an aqueous electrolyte containing chloride ions while the silver body is immersed therein until a layer of silver chloride has been deposited on the surface of said body, passing an electric current, in a direction such that said body acts as a cathode, between said anodized silver body and an anode through an aqueous electrolyte in which the silver body is immersed until a portion of said silver chloride has been reduced to form a plurality of conductive filamentary bridges of metallic silver extending between the surface of the silver body and the external surface of the silver chloride layer and immersing said body in a solution of a reducing agent capable of reducing the silver chloride to metallic silver upon contact until a thin layer of porous metallic silver has been formed on the surface of the silver chloride.

3,006,822

ELECTRO-DEPOSITION OF NICKEL COATINGS

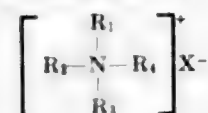
Hans Guenther Todt, Berlin-Charlottenburg, Germany, assignor, by mesne assignments, to Langbein Pfannhauser Werke, A.G., Neuss (Rhine), Germany, a corporation of Germany

No Drawing. Filed May 8, 1957, Ser. No. 657,704

8 Claims. (Cl. 204—49)

1. In a bath for electro-depositing lustrous nickel and comprising an aqueous acidic solution of at least one

nickel salt selected from the group consisting of nickel sulfate, nickel chloride, nickel fluoborate and nickel sulfamate; a compound of the general formula



wherein R_1 , R_2 and R_3 are members selected from the group consisting of hydrogen, alkyl and aryl radicals, R_4 is an alkyne radical and X is a member selected from the group consisting of halogen and hydroxide, said compound being dissolved in the bath in a concentration of about 0.005 to 1 gram/liter.

3,006,823

PLATING BATH AND PROCESS

Alden J. Deyrup, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 7, 1959, Ser. No. 844,876

4 Claims. (Cl. 204—51)

1. An aqueous electrolytic plating bath for the plating of bright chromium plate, said bath comprising per 1000 g. of bath an amount of chromium glycolate to provide the bath with 0.1 to 1 gram-mole of chromic ion, 0.07 to 3 total gram-moles of glycolic acid, 0.2 to 3 gram-moles of an alkali metal salt of an acid having a dissociation constant of at least $K=10^{-2}$, and 0.2 to 2 gram-moles of boric acid, said bath being substantially free from fluorine, having a pH of between 1.5 and 3.0, and in which the molar ratio of carboxylic acid to chromium is between 0.7:1 and 3.0:1.

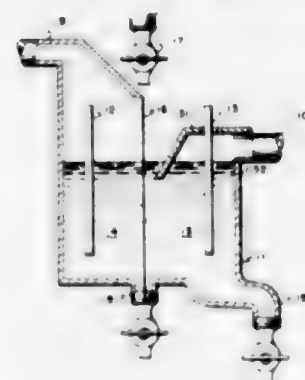
3,006,824

PRODUCTION OF METALS BY ELECTROLYSIS

Joseph B. Story, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 29, 1958, Ser. No. 764,028

2 Claims. (Cl. 204—59)



1. An electrolysis process for producing an alkali metal comprising maintaining an electrolyte bath having a first electrolyte and a second electrolyte, the said first electrolyte, consisting essentially of an alkali metal chloride in water, being in contact with an anode and said second electrolyte being in contact with a cathode which is incapable of alloying with the alkali metal produced, the said second electrolyte consisting essentially of (a) an alkali metal iodide dissolved in diethylene glycol dimethyl ether, and being (b) contiguous to the first electrolyte; maintaining said first electrolyte and second electrolyte divided by a thin vertically supported stationary film of metallic mercury; passing an electric current through the electrolyte bath so that the alkali metal of the alkali metal chloride dissolved in the first electrolyte is electrolytically dissolved into the thin mercury film and concurrently the so-deposited alkali metal is electrolyzed from said mercury film into the said second electrolyte and thence upon the cathode; and then removing the alkali metal from the second electrolyte.

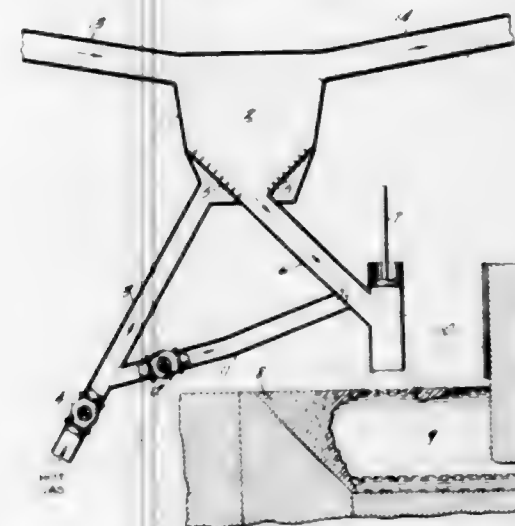
3,006,825
METHOD OF CHARGING ALUMINUM FURNACES

Mathias Övrom Sem, Smestad, Oslo, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

Filed Dec. 18, 1958, Ser. No. 781,405

Claims priority, application Norway Dec. 19, 1957

3 Claims. (Cl. 204—67)



1. The method of charging electrolytic aluminum furnaces with alumina which comprises moving such alumina with the aid of gravity over a fluidizing bed toward the furnace, collecting gases from such a furnace, burning the combustible elements of such gases, passing the hot gases from such combustion through the alumina on such fluidizing bed whereby such alumina is rendered more fluid and its flow toward the furnace is assisted and at the same time fluorides of the hot gases are absorbed by the alumina, and introducing such alumina into the furnace whereby charging of the furnace is aided and fluorides are returned to the furnace.

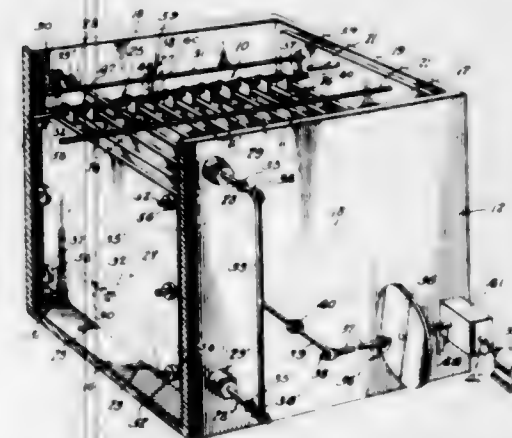
3,006,826

ELECTROLYTIC METHOD AND APPARATUS FOR THE PRODUCTION OF METAL HYDROXIDE

Paul S. Roller, 4021 9th St. NW., Washington, D.C.

Filed Oct. 8, 1956, Ser. No. 615,218

32 Claims. (Cl. 204—96)



1. The method of electrolytically producing metal hydroxide from metal electrodes and an aqueous liquid non-solvent to said metal hydroxide comprising introducing the liquid into a case containing a plurality of said metal hydroxide-producing electrodes, passing electrolyzing current across said electrodes, during electrolysis passing resilient elements over the surfaces of said electrodes to thereby remove from the surfaces an electrode-generated, soft gel-like metal hydroxide film prior to its hardening on the surfaces whereby a deposit thereon including crusts formed from the soft film is prevented and re-

sultant scraping for removal of said deposit is avoided, and discharging the liquid containing metal hydroxide from the said case.

3,006,827

METHOD OF PICKLING TITANIUM AND COMPOSITIONS USED THEREIN

Vincent J. Capuano, Hamden, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

No Drawing. Filed Jan. 6, 1959, Ser. No. 785,123

4 Claims. (Cl. 204—141)

1. A method of removing oxide scale and stain from the surfaces of articles of titanium and titanium based alloys which comprises immersing the article in a pickling-electrolyte bath which consists essentially of an aqueous solution of about 5.25 to 8.40 percent by volume of nitric acid, about 0.48 to 0.60 percent by volume of hydrofluoric acid, about 7 to 13 percent by weight of sulfamic acid and about 2 to 3.5 percent by weight of a sulfate salt of a metal of group II of the periodic table of elements, connecting the immersed article as an electrode in an electrical circuit, passing a direct current between said article and a second electrode and periodically reversing the flow of current.

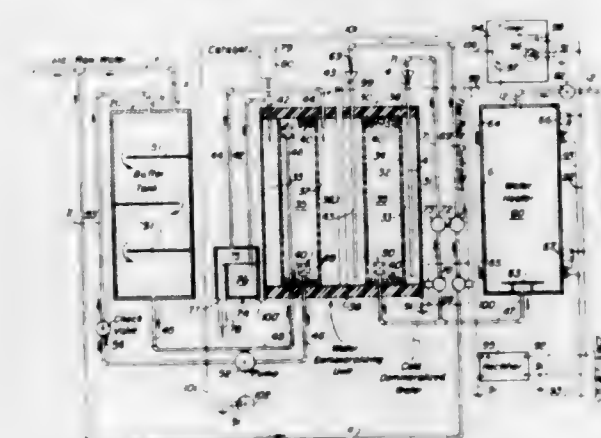
3,006,828

WATER DEMINERALIZING METHODS AND SYSTEMS

Joseph J. Gaysowski, Chicago, Ill., assignor to General Electric Company, a corporation of New York

Filed Dec. 9, 1957, Ser. No. 701,464

14 Claims. (Cl. 204—151)



1. The method of demineralizing raw water, comprising providing a unit including structure defining first and second and third chambers having a first diaphragm as a common wall between said first and second chambers and a second diaphragm as a common wall between said second and third chambers and having an anode arranged in said first chamber and a cathode arranged in said third chamber and having a porous ion exchange bed arranged in said second chamber and characterized by both cation exchange and anion exchange, providing a buffer space having a volume at least as large as that of said second chamber, introducing a charge of previously demineralized water into said buffer space from said second chamber, introducing raw water into said buffer space and into admixture with the previously demineralized water therein, whereby the resulting mixed water in said buffer space has a concentration of dissolved mineral salts therein that is substantially less than that of the raw water, circulating the resulting water from said buffer space into said second chamber and through said porous ion exchange bed and into contact with said first and second diaphragms and from said second chamber back into said buffer space, whereby said ion exchange bed is subjected to degeneration by the exchange of sorbed hydroxyl ions and hydrogen

ions for the anions and cations of the mineral salts dissolved in the water circulated therethrough and with the result that the circulated water is demineralized, drawing off demineralized water from said second chamber, conducting a first stream of water as an anolyte through said first chamber into contact with said anode and said first diaphragm, conducting a second stream of water as a catholyte through said third chamber into contact with said cathode and said second diaphragm, and conducting a direct current from said anode to said cathode through the water in said first and second and third chambers and through said first and second diaphragms and through said ion exchange bed, whereby said ion exchange bed is subjected to regeneration by the exchange of the sorbed anions and cations of the previously mentioned salts for hydroxyl ions and hydrogen ions and with the migration of the released anions and cations mentioned respectively through said first diaphragm into said anolyte and through said second diaphragm into said catholyte.

3,006,829 PROCESS FOR TREATING LINEAR POLYPROPYLENE

Paul M. Cook, Menlo Park, James B. Meikle, Palo Alto, and Bruce Graham, Los Altos, Calif., assignors, by mesne assignments, to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
No Drawing. Filed Mar. 15, 1956, Ser. No. 571,610
14 Claims. (Cl. 204-154)

1. A process for the treatment of linear polypropylene comprising incorporating in said linear polypropylene a minor amount of a member selected from the group consisting of rubber accelerators and vulcanizing agents containing an element selected from the group consisting of sulphur, selenium and tellurium and a sulfonyl hydrazide, and exposing said linear polypropylene to high energy ionizing radiation to a dosage of at least 1×10^6 rep.

3,006,830 METHOD FOR IMPROVING THE DYEABILITY OF FIBER-FORMING CELLULOSE ESTERS

Lamar C. Cloninger, Midland, and Frederick M. Arnesen, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,908
9 Claims. (Cl. 204-154)



1. A method for improving the receptivity to direct and acid type dyestuffs of shaped articles of fiber-forming cellulose esters which comprises thoroughly impregnating at least the surface of the shaped article with between about 1 and about 75 weight percent, based on the weight of the cellulose ester substrate, of a sulfonated alkenyl aromatic monomer compound of the structure:

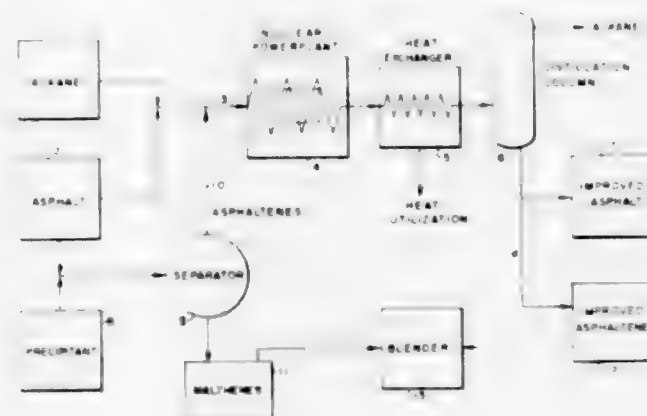


wherein R is selected from the group consisting of hydrogen and methyl, Ar is an aromatic radical having from 6 to 10 carbon atoms, n has a value of 0 or 1, and X is selected from the group consisting of hydrogen and alkali metals; then subsequently exposing the intimately mixed cellulose ester substrate and sulfonated monomer impregnated thereof to a field of high energy radiation

having a minimum intensity of about 40,000 roentgens per hour which is applied until a dosage between about 0.25 and 10 mreps. is effected and at least a portion of the sulfonated monomer graft copolymerizes with the cellulose ester substrate.

3,006,831 RADIATION OF ASPHALTS

John C. Illman, El Cerrito, Calif., assignor to Shell Oil Company, a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,250
3 Claims. (Cl. 204-154)



1. In the process for the preparation of asphalt compositions having improved weatherability, the steps comprising admixing substantial proportions of asphalt containing at least 5% by weight of asphaltenes and an alkane having 5-36 carbon atoms per molecule, exposing the mixture so formed to high energy ionizing radiation for a dosage of 10^7 to 1.5×10^8 rads and recovering the irradiated asphalt product, the exposure being sufficient to substantially improve the weatherability of the asphalt.

3,006,832 METHOD OF MAKING NUCLEAR FUEL ELEMENTS

Jay W. Moore, Middle River, Md., and Glenn M. Ellis, Roan Mountain, Tenn., assignors to The Martin Company, Middle River, Md., a corporation of Maryland
No Drawing. Filed May 9, 1958, Ser. No. 734,111
3 Claims. (Cl. 204-154.2)

1. An improved method for rolling cermet sheet which comprises the steps of pressing a powder mass comprising a layer of particles of a matrix metal admixed with particles of a refractory oxide and a layer of metal particles in contact with the periphery of the first said layer of particles, sintering the green compact so obtained so as to form a cermet layer metallurgically bonded to a peripheral metal strip, and rolling the resulting composite sintered sheet to desired thickness, said metal strip acting to prevent cracking of the periphery of the cermet layer along the lines of juncture therebetween.

3,006,833 PROCESS FOR THE PHOTOCHEMICAL CHLORINATION OF BENZENE

Aylmer H. Maude and Madhav R. Bhagwat, Niagara Falls, Carson E. Lisman, Lewiston, and David S. Rosenberg, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

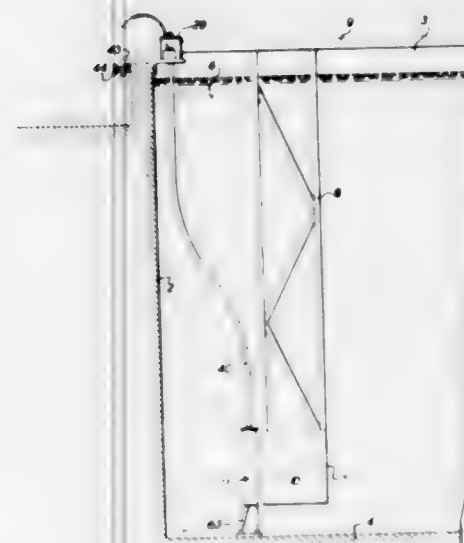
No Drawing. Filed Sept. 1, 1953, Ser. No. 377,963
1 Claim. (Cl. 204-163)

In a process for the production of the gamma isomer of benzene hexachloride by the light-catalyzed addition chlorination of benzene, the steps which include: introducing chlorine into a solution of benzene in acetylene tetrachloride containing from about 2 to about 15 percent

by weight of unreacted benzene at a rate such that a ratio of gamma isomer to delta isomer produced is maintained between 2.0 to 1.0 and 4.0 to 1.0; and, irradiating the reaction mixture with actinic light having an intensity of about 75 to 9000 foot candles.

3,006,834 IRRADIATION FACILITY

Ernest Loeb, Silver Spring, Md., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a corporation of Delaware
Filed Dec. 12, 1958, Ser. No. 780,044
5 Claims. (Cl. 204-193.2)



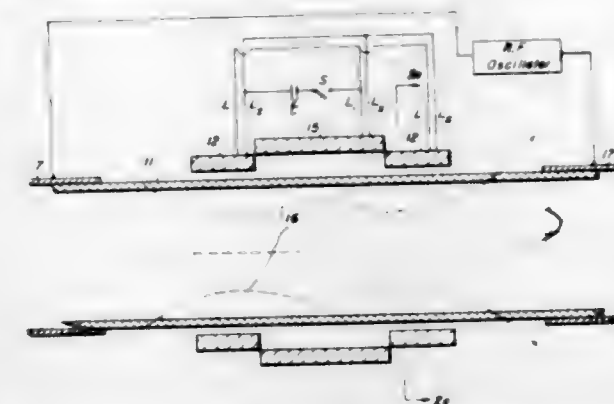
1. In a portable irradiation facility for a nuclear reactor having a core of fuel elements submerged in a pool of water, a housing to be positioned adjacent said core, a wheel journaled within said housing, sample holders pivotally mounted on said wheel, transfer means to move samples into and out of said holders, and actuating means to rotate said wheel to position a selected holder in registry with said transfer means, said transfer means comprising a transfer box adapted to contain a casket to receive an irradiated sample, a conduit connecting said housing to said transfer box, and means to move said samples through said conduit between said transfer box and said sample holders.

3,006,835 NEUTRON SOURCE USING MAGNETIC COMPRESSION OF PLASMA

Warren E. Quinn, Los Alamos, N. Mex., William C. Elmore, Swarthmore, Pa., and Edward M. Little, Keith Boyer, and James L. Tuck, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 25, 1959, Ser. No. 795,570
5 Claims. (Cl. 204-193.2)

1. A neutron source comprising in combination an insulating tube of low Z-number materials and of generally cylindrical shape, a filling of a thermonuclear fuel in said tube at low pressure, said fuel consisting of at least 50 atomic percent deuterium and the balance tritium, single turn coil means of very low resistance and very low inductance coaxially surrounding at least a portion of said tube, said coil means terminating in circumferentially adjacent ends and external circuit means connected to said coil ends for obtaining a damped rapidly oscillating electrical current in said coil means, said coil means and said tube being shaped and disposed to confine within said portion of said tube the portion of said gas ionized by the use of said external circuit means, and ionizing

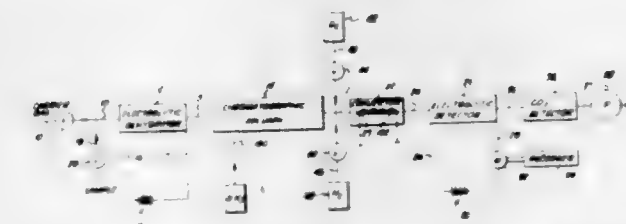
means consisting essentially of band electrodes surrounding said tube at opposite ends of said portion surrounded



by said coil and a source of RF voltage connected across said electrodes.

3,006,836 ELECTROLYTIC DETECTING APPARATUS

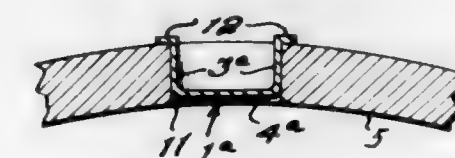
Leland G. Cole, Arcadia, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Jan. 27, 1958, Ser. No. 711,318
3 Claims. (Cl. 204-195)



1. Apparatus for detecting in a sample the presence of one of the two elements of water comprising a reaction chamber for chemically combining the element in the gas phase to be detected with the other element to form water, an electrolytic decomposition cell connected to the reaction chamber, a solid hygroscopic electrolyte in the cell for sorbing water, means for electrolytically decomposing the water sorbed by the electrolyte, means for measuring the decomposition current, and diffusion means for separating one of the decomposition products from the sample during the sorption and electrolysis.

3,006,837 APPARATUS FOR ELECTROPLATING METAL CYLINDERS EQUIPPED WITH PORTS

Harry Pennington, 119 W. Summit Place, San Antonio 12, Tex.
Original application Apr. 11, 1952, Ser. No. 281,824.
Divided and this application Nov. 2, 1954, Ser. No. 466,362
1 Claim. (Cl. 204-280)



A combination of units especially adapted for electroplating operations which comprises:

- (a) a metallic cylindrical wall liner structure for internal combustion engines having at least one port intermediate its ends,
- (b) a port bleeder located in each of said ports,
- (c) each of said port bleeders being channel-shaped,
- (d) each of said port bleeders having a substantially flat central section conforming in shape to the shape of the ports of said cylinder,

(e) each of said port bleeders having spaced parallel flanges on opposite sides of said flat section whose outer ends diverge slightly and which press against the side walls of said ports so as to hold the bleeders resiliently in position during the plating operation,

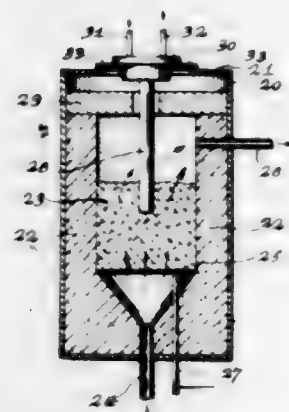
(f) each of said port bleeders serving to close off the port it is located in,

(g) each of said port bleeders having its said flat section depressed slightly below the interior surface of said metallic cylindrical wall structure,

(h) said port bleeders being electrically conductive so that when the said wall structure is plated, the port bleeders receive a deposit of metal and the metal deposited on the cylinder is smoothly rounded over the edges of the ports.

3,006,838 ELECTROTHERMIC FLUIDIZED BED APPARATUS

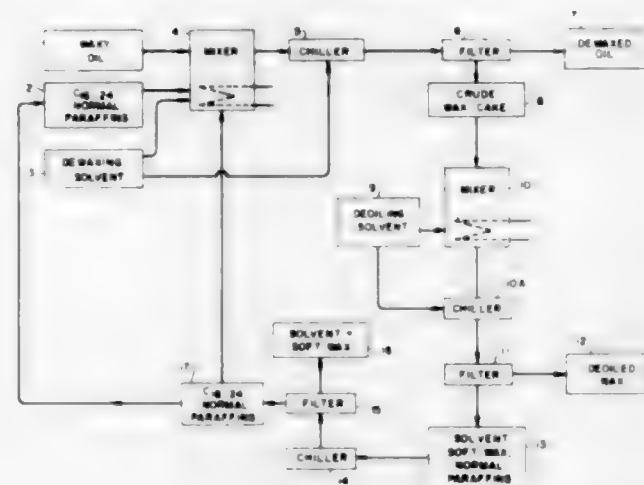
Herbert S. Johnson, Shawinigan South, Québec, Canada, assignors to Shawinigan Chemicals Limited, Montreal, Québec, Canada, a corporation of Canada
Filed Sept. 8, 1958, Ser. No. 759,769
2 Claims. (Cl. 204—312)



1. In an apparatus for obtaining high temperatures in a fluidized bed of electrically conductive particles heated by the passage of electricity therethrough, comprising: (a) a reaction chamber enclosed by a heat-insulating structure, to retain a bed of hot fluidized electrically conductive particles in the lower portion of the chamber, (b) gas inlet means to admit and distribute fluidizing gas over the whole internal cross-section of the chamber at the bottom thereof, (c) gas outlet means to conduct gases from the upper portion of the chamber to points outside the chamber, (d) at least two electrodes at different potentials entering the chamber and terminating within the lower portion of the chamber, at least one of the said electrodes entering the upper portion of the chamber, and (e) means connecting the electrodes to a source of power, the improvements which consist of (1) gas-tight electrical insulation around each electrode which enters the upper portion of the chamber, said insulation surrounding its associated electrode at the point of entry to the heat-insulating structure and forming the only connection, other than the fluidized bed, between the electrode and the heat-insulating structure, and (2) radiant-heat shielding separated from the said insulation and positioned between the said insulation and the fluidized bed, said radiant-heat shielding being a heat-insulating baffle mounted near the top of the chamber, said baffle having an aperture larger than said electrode entering the upper portion of the chamber through which said electrode passes, the aperture being positioned in relation to the insulation and the electrode so that the radiation from the fluidized bed which passes through the aperture falls only on the electrode and not on the insulation, the said baffle occupying the whole cross-sectional area of the chamber except the aperture.

3,006,839 DEWAXING HYDROCARBON OIL Karekin G. Arabian and Robert J. Olson, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware

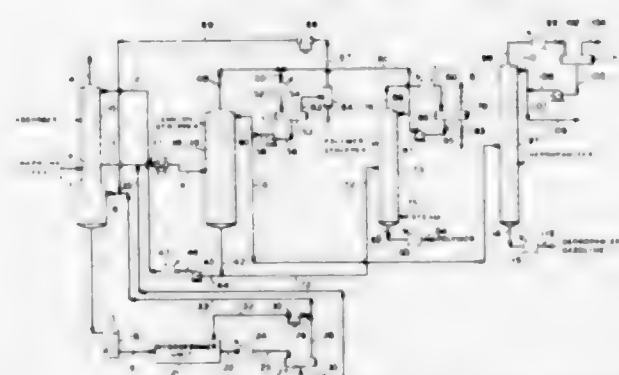
Filed Jan. 6, 1959, Ser. No. 785,155
8 Claims. (Cl. 208—33)



1. In the art of solvent separation of waxes and oils in mixtures of the group consisting of mixtures of heavy distillate petroleum lubricating oil with heavy distillate wax and mixtures of residual petroleum lubricating oil with residual petroleum wax feed mixtures containing at least about 25% by weight of wax by filtration involving the forming, washing, drying and discharging of a wax cake, the steps comprising mixing a dewaxing solvent with the wax-bearing oil, which mixture if unmodified tends to deposit a wax filter cake permitting only a relatively slow filtration rate, modifying the mixture by adding thereto 2-30% by volume based on the wax-bearing oil waxes consisting essentially only straight chain hydrocarbons having 16-24 carbon atoms per molecule, chilling the mixture to a temperature between -15° F. and +15° F. to precipitate wax whereby co-crystallization of the added straight chain wax with waxes in the waxy oils occurs, and passing the chilled mixture to the filter to remove the wax and to separate dewaxed oil, the filtration rate of the modified mixture being substantially higher than that of the unmodified mixture.

3,006,840 GENERAL REFORMING PROCESS Martin R. Smith, Glen Ridge, N.J., and Charles Bednars, Port Washington, N.Y., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,436
5 Claims. (Cl. 208—82)



1. In a reforming process wherein a light hydrocarbon oil is passed in contact with a reforming catalyst under reforming conditions to produce a reformed effluent comprising gasoline, polymer and normally gaseous product, the improvement which comprises passing the total effluent of said reforming step directly to a first separation zone, in said first separation zone separating at an elevated

pressure a gaseous fraction from a liquid fraction, passing the liquid fraction from the first separation zone to a second separation zone maintained at a lower pressure but at a higher temperature than said first separation zone to effect separation of a major portion of the reformed gasoline product from the polymer product without decomposition of the polymer product, recovering the major portion of the gasoline product from the upper portion of said second separation zone, recovering the polymer product containing a minor portion of the gasoline product from the bottom of the second separation zone, passing a portion of the recovered polymer product containing gasoline product to a third separation zone maintained at a lower pressure and temperature than said second separation zone, introducing sufficient steam to the lower portion of said third separation zone to reduce the partial pressure of the polymer and strip gasoline product therefrom without decomposing the polymer and recovering stripped gasoline product from the upper portion of said third separation zone for combining with the recovered gasoline product of said second separation zone.

3,006,841 HYDROCARBON CONVERSION PROCESS Vladimir Haensel, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware No Drawing. Filed Sept. 16, 1953, Ser. No. 380,605 8 Claims. (Cl. 208—139)

1. In the reforming of a hydrocarbon charge stock containing paraffins, naphthenes and less than about 0.01% by weight of total sulfur, and boiling within the gasoline range by contacting said stock and a hydrogen rich gas at reforming conditions with a catalyst comprising a refractory oxide support and a metal dehydrogenating component consisting essentially of a member selected from the metals and compounds of the metals in the platinum group, which catalyst effects dehydrogenation of naphthenes and hydrocracking of paraffins, the improvement which comprises adding a sulfur promoter to the reforming zone independently of said catalyst and during the reforming, in an amount so that the total sulfur content entering the reforming zone is from about 0.01% to about 0.06% by weight of the total charge, thereby maintaining the dehydrogenating activity substantially constant.

3,006,842 METHOD FOR REDUCING SLUDGE DEPOSITION OF FUEL OILS

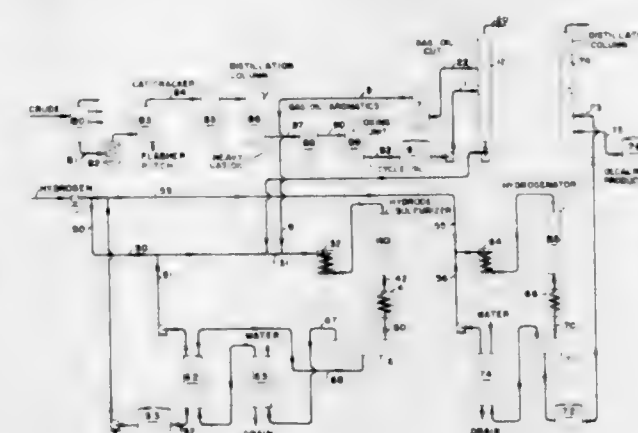
Robert Greatorex and Demetrios Theodore Emmanuel Zalichl, Sunbury-on-Thames, and William Arthur Partridge, London, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation
No Drawing. Filed July 20, 1959, Ser. No. 828,065
Claims priority, application Great Britain July 23, 1958
6 Claims. (Cl. 208—177)

1. A method of reducing the tendency of a residual fuel oil to deposit a waxy sludge on storage, which consists in chilling the residual fuel oil from an upper temperature of at least 110° F. to a lower temperature not higher than 90° F., at a rate of at least 0.1° E. per minute.

3,006,843 PREPARING HYDROCARBON FUELS BY SOLVENT EXTRACTION, HYDRODESULFURIZATION AND HYDROGENATION OF CRACKED GAS OILS Raymond C. Archibald, Berkeley, Calif., assignor to Shell Oil Company, a corporation of Delaware Filed Nov. 26, 1957, Ser. No. 698,949 4 Claims. (Cl. 208—211)

1. The method of preparing liquid hydrocarbon fuels which comprises fractionally distilling a sulfur-containing cracked gas oil, whereby a fraction boiling over a

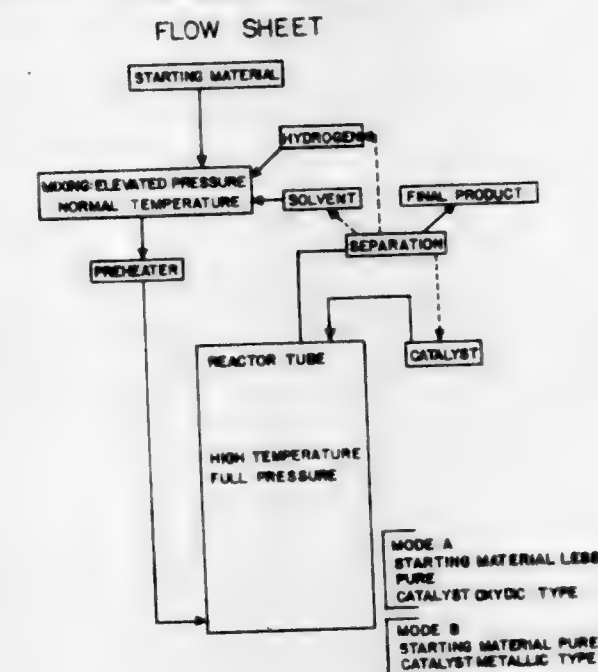
substantial portion of the range from about 400 to 650° F. is isolated, solvent extracting said fraction whereby an aromatic concentrate substantially free from aliphatic hydrocarbons is obtained, partially hydrogenating said aromatic concentrate at a temperature within the range from about 600 to about 900° F. in the presence of hydrogen and a sulfur resistant hydrogenation catalyst



whereby the aromatic content of the product is reduced 40-70%, substantially completely hydrogenating the partially hydrogenated product at a temperature within the range from about 300 to about 700° F. and fractionally distilling the hydrogenated product, whereby a substantially alicyclic fuel substantially free of acyclic aliphatic and aromatic hydrocarbons and having a boiling range within the limits from about 325° F. and about 650° F. is obtained.

3,006,844 CATALYTIC HYDROGENATION OF HYDROCARBONS IN THE LIQUID PHASE Jean Limido and Jean Miquel, Paris, and Clement Thonon, Rueil-Malmaison, France, assignors to Institut Français du Pétrole des Carburants et Lubrifiants, Paris, France

Filed Feb. 14, 1958, Ser. No. 715,402
Claims priority, application France Feb. 15, 1957
9 Claims. (Cl. 208—216)



1. A process for the liquid phase catalytic hydrogenation treatment of a hydrocarbon starting material comprising the steps of admixing a hydrocarbon material selected from the group consisting of crude impure hydrocarbon fractions, unsaturated light hydrocarbon mixtures, and mixtures of unsaturated and saturated light

hydrocarbons, said material having as an average two to about fourteen carbon atoms per molecule and a molecular weight of 25 to 200, with an organic hydrocarbon solvent having an average number of carbon atoms per molecule higher than that of said hydrocarbon starting material and which is inert with regard to said material and has a critical point substantially higher than the maximum pressure and temperature applied during the subsequent hydrogenation step; subjecting the resultant mixture in the liquid phase to pressures and temperatures at which said hydrocarbon material would be in the gaseous state in the absence of solvent and to the action of hydrogen in the presence of a catalyst conventionally used for the hydrogenation treatment of hydrocarbons said pressures being above normal pressure up to about 100 atmospheres and said temperatures between 100° and 500° C.; and separating the resultant product from the solvent and excess hydrogen.

3,006,845

WATER-IN-OIL EMULSION WELL FLUID AND MATERIALS FOR PREPARING SAME

Orien W. Van Dyke and William A. Reddie, Houston, Tex., assignors to Magnet Cove Barium Corporation, Houston, Tex., a corporation of Arkansas
No Drawing. Filed Apr. 2, 1956, Ser. No. 575,326
8 Claims. (Cl. 252-8.5)

1. An improved well fluid comprising a water-in-oil emulsion, containing water in quantity sufficient to supply from 20 to 80 volume percent of total water and oil content stabilized with a non-ionic oil-soluble emulsifier and a non-ionic water-soluble emulsifier, said emulsion containing sufficient oleophilic hydrocarbon sulfonate and expanded perlite to increase the ability of said emulsion to suspend weighting material therein, sufficient of a pitch containing higher molecular weight materials derived from the processing of a crude material which is selected from the class consisting of animal fats, vegetable oils, tall oil, and the amine and nitrile derivatives thereof to increase the stability of the emulsion at elevated temperatures, and sufficient of magnesium oxide to further increase the stability of the emulsion, said magnesium oxide having an iodine value of at least 5 milligram equivalents per 100 grams.

3,006,846

HYDROXYLATED ASPHALT AND DRILLING FLUID CONTAINING THE SAME

Charles A. Stratton, Washington County, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Sept. 12, 1958, Ser. No. 760,563
19 Claims. (Cl. 252-8.5)

1. In a process of drilling a well with well drilling tools, the step of circulating in said well a drilling fluid containing hydroxylated asphalt in an amount sufficient to reduce the filtration rate of said drilling fluid, said hydroxylated asphalt being prepared by fusing sulfonated asphalt with an alkali at a temperature within the range of about 302 to 752° F.

3,006,847

INCORPORATION OF ALKALI AND ALKALINE EARTH METALS IN OIL, AND RESULTING PRODUCT

Morris A. Wiley and Kenneth L. Kreuz, Fishkill, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Mar. 13, 1957, Ser. No. 645,666
6 Claims. (Cl. 252-18)

1. A process for preparing a detergent concentrate which comprises providing a mixture consisting essentially of a hydrocarbon lubricating oil, selected from the class consisting of mineral lubricating oils and alkylene polymer oils, and a basic metal compound selected from

the class consisting of alkali metal and alkaline earth metal oxides and hydroxides in an amount sufficient to provide about 5-34 percent by weight of metal in the said mixture, heating the said mixture at a temperature of at least about 300° F. but below 400° F. for at least 2 hours, thereafter heating the said mixture to a higher temperature in the range 400-700° F. but below the decomposition temperature of the said lubricating oil while blowing air through the said mixture at a rate of at least about 0.09 liter of air per hour per gram of the said lubricating oil during the said heating, and separating any unreacted basic metal compound from the resulting product.

3,006,848

CLAY GREASE MANUFACTURING PROCESS

Gerard P. Caruso, New Orleans, La., assignor to Shell Oil Company, a corporation of Delaware
Filed Feb. 18, 1960, Ser. No. 9,655
14 Claims. (Cl. 252-28)

1. In the process for the preparation of a clay grease composition wherein a grease-forming amount of clay and a water-proofing amount of a hydrophobic amino amide are dispersed in a lubricating oil and subjected to homogenizing, whereby a grease structure is formed, the improvement which comprises adding to the preformed grease in the absence of more than about 5% by weight of water, 0.25-1% by weight of oil-dispersible amido amines formed between 0.3-0.6 equivalents of fatty acids having 14-22 carbon atoms per molecule and a mixture of 1 equivalent of polyethylene polyamines, 20-80% by weight of the mixture comprising polyamines having 2-3 nitrogen atoms per molecule, the remaining fraction being polyethylene polyamines having an average molecular weight within the range 200-500.

3,006,849

LUBRICANT COMPOSITION

John J. Plemich, Whiting, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Oct. 14, 1958, Ser. No. 767,092
16 Claims. (Cl. 252-34.7)

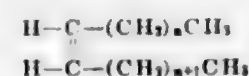
1. A substantially transparent aqueous base lubricant and coolant composition comprising a major amount of water and from about 0.001% to about 10% of an additive mixture comprising (a) about 5-70% of an alkanolamine, (b) about 3-90% of an aliphatic polycarboxylic acid having from about 12 to about 60 carbon atoms per molecule, and (c) about 5-40% of an alkyl ester of phosphoric acid, said additive mixture imparting lubricity and anti-rust properties to said composition, and said composition having a pH between about 6 and about 13.

3,006,850

RUST PREVENTIVE COMPOSITION

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Oct. 31, 1956, Ser. No. 619,384
9 Claims. (Cl. 252-46.6)

1. A rust preventive composition comprising a major proportion of an oil and from about 0.0001% to about 5.0% of an oil-soluble acidic hydrolyzed reaction product of a phosphorus sulfide and a medial olefin having the general structure



wherein n is an integer of 8 to 20, said hydrolyzed reaction product being obtained by reacting medial olefin with a phosphorus sulfide, in the mole ratio of about 2:1 respectively, at a temperature of from about 325° F. to about 500° F. and hydrolyzing the resultant reaction product.

3,006,851

HIGH TEMPERATURE DYE-THICKENED GREASE COMPOSITION

Donald E. Loeffler, Walnut Creek, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Feb. 11, 1959, Ser. No. 792,462
6 Claims. (Cl. 252-51.5)

1. A grease composition comprising a major amount of a lubricating oil gelled to a grease consistency with a combination of 5-35% by weight of a compound of the group consisting of indanthrene dyes, indogen dyes, N-acyl-9,10-dihydroxy-1,4-diaminoanthracenes, N-acyl-9,10-dihydroxy-1,2-diaminoanthracenes, N-acyldiaminoanthraquinones and N-acylaminophenols, and 1.5-20% by weight of saturated aliphatic hydrocarbyl diamines having 2-10 carbon atoms per molecule.

3,006,852

LUBRICATING COMPOSITIONS AND PROCESS OF LUBRICATION UTILIZING CERTAIN POLYOXY-PHENYLENE COMPOUNDS

Emmett R. Barnum and Clarence L. Mahoney, Berkeley, and Karl J. Sax, Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Dec. 9, 1957, Ser. No. 701,285
5 Claims. (Cl. 252-52)

1. A composition consisting essentially of 10-90% by weight of unsubstituted polyoxyphenylene compounds having the general formula $\text{R}-\text{O}-[\text{R}-\text{O}]_n-\text{R}$ wherein R is a phenylene radical and n is an integer from 1 to 4, and 90-10% by weight of substituted polyoxyphenylene compounds of the same general structure wherein the phenylene radicals are substituted with substituents of the class consisting of tertiary butyl radicals and alpha cumyl radicals, the substituted and unsubstituted polyoxyphenylene compounds having from 3 to 6 phenylene radicals per molecule.

3,006,853

SQUARE LOOP CADMIUM-NICKEL FERRITES

Bariane R. Eichbaum, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 19, 1957, Ser. No. 703,731
4 Claims. (Cl. 252-62.5)

4. The product formed by heating a mixture of 12 mol percent CdO, 33 mol percent NiO and 55 mol percent Fe_2O_3 in an uncovered platinum boat at 1200° C. for one hour, said product having a resistivity of 4×10^5 ohm centimeters and a dielectric constant of 20 at 10⁶ cycles per second.

3,006,854

FERRIMAGNETIC GARNET

Seymour Geller, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,635
5 Claims. (Cl. 252-62.5)

1. A ferrimagnetic garnet consisting essentially of a solid solution having a garnet structure represented by the formula $(\text{YM}_2\text{N}_2\text{Fe}_2\text{O}_{12})_x(\text{Y}_2\text{Fe}_2\text{O}_{12})_y$, where M is a divalent cation selected from the group consisting of Ca, Ba, and Sr, and N is a tetravalent cation selected from the group consisting of Zr and Hf, where x is at least .001 but less than 1, and y equals $(1-x)$.

3,006,855

FERRIMAGNETIC GARNETS

Seymour Geller, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,636
6 Claims. (Cl. 252-62.5)

1. A ferrimagnetic garnet consisting essentially of a solid solution having a garnet structure represented by the formula $(\text{M}_2\text{Fe}_2\text{Sn}_2\text{O}_{12})_x(\text{Y}_2\text{Fe}_2\text{O}_{12})_y$, where M is a

divalent cation selected from the group consisting of Ca, Ba, and Sr, where x is at least .001 but less than 1, and y equals $(1-x)$.

3,006,856

METHOD OF MAKING YTTRIUM-ALUMINUM-IRON GARNETS

Bertram A. Calhoun and Wilbert L. Shevel, Jr., Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,320
8 Claims. (Cl. 252-62.5)

6. The method of preparing high speed, low moment yttrium-aluminum-iron garnets of the composition



which comprises providing 1.0 gram of Al_2O_3 and 6.3 grams of Fe_2O_3 , calcining said powders at 1000° C. in air for one hour, mixing the calcined powders with 6.7 grams of Y_2O_3 , further calcining the mixture at 1300° C. in air for an additional hour, shaping said powders into core bodies of 30 mils inside diameter, 50 mils outside diameter and 12 mils thickness, sintering said bodies in a temperature range of 1440-1470° C. for 8 hours in an oxygen oxidizing atmosphere and quenching the garnet formed to room temperature during two minutes.

3,006,857

FERROELECTRIC CERAMIC COMPOSITION

Frank Kulcsar, Fairview Park, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 13, 1959, Ser. No. 805,985
15 Claims. (Cl. 252-62.9)

2. A novel composition of matter consisting essentially of lead zirconate and lead titanate effectively in solid solution in a mol ratio of from 60:40 to 45:55, and containing, as a substituent for an equivalent amount of lead therein, from zero to 20 atom percent in the aggregate of at least one alkaline earth metal selected from the group consisting of calcium and strontium, and further containing, in oxidic form at least one element from the group consisting of chromium and uranium in an aggregate quantity corresponding on a mol basis to an addition of about 0.1 to 1.5 weight percent of chromium oxide.

3,006,858

METHOD OF IMPROVEMENT OF HEAT TRANSFER COEFFICIENT IN HEAT EXCHANGERS

David B. Boles, Chicago, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Jan. 2, 1958, Ser. No. 706,553
7 Claims. (Cl. 252-73)

1. A method of increasing the heat transfer coefficient between a petroleum hydrocarbon oil and the wall of a heat exchanger through which said oil is passed which comprises: feeding into said oil stream a detergent and from 0.25% to about 1% by weight of water, based on the weight of said oil, said detergent being selected from the group consisting of triethanolamine and the condensation product of ethylene oxide and a fatty compound selected from the group consisting of an alkyl amine having from 8 to 36 carbon atoms in its alkyl group, an alkyl monocarboxylic fatty acid having from 8 to 36 carbon atoms in its alkyl group, a rosin amine, and the condensation product of monoethanol amine and an alkyl fatty acid containing from 8 to 36 carbon atoms in its alkyl group; each mol of said fatty compound being condensed with from 2 to 15 mols of ethylene oxide; the quantity of said detergent added to said stream being from about 0.1% to about 20% by weight based on the weight of the added water.

3,006,859

PROCESSING OF RADIOACTIVE WASTE

Rudolph T. Allemann, Richland, and Benjamin M. Johnson, Jr., Kennewick, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Aug. 23, 1960, Ser. No. 51,471
6 Claims. (Cl. 252-301.1)

1. A process of concentrating a radioactive fission-product-and salt-containing waste solution derived from the chemical processing of neutron-irradiated uranium fuel elements prior to disposal, comprising adding sugar to said solution; spraying said solution into a heated space whereby water evaporates and a powder is formed; heating said powder to at least 220° C. in the presence of oxygen whereby ignition takes place, the sugar is decomposed to carbon and the salts are decomposed by said carbon; heating the powder to a temperature of between 800 and 900° C. whereby it melts; and cooling the melt whereby a compact mass of high density is obtained.

3,006,860

ASPHALT EMULSIONS

Walter E. Heinz, Roxana, Ill., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed June 25, 1959, Ser. No. 822,730
5 Claims. (Cl. 252-311.5)

1. An oil-in-water asphalt emulsion having about 50-70 percent by weight of asphalt and an emulsifying proportion of water dispersible alkali metal soap of higher fatty acids, the asphalt phase being a paving grade asphalt, the aqueous phase having a pH between 10.0 and 11.2 and consisting essentially of water, an emulsion viscosity increasing combination of a water-swelling clay having a base exchange capacity of about 15-100 milliequivalents exchangeable base per 100 grams of clay and a water-dispersible cellulose derivative of the group consisting of alkali metal salts of carboxymethyl cellulose, methyl cellulose, hydroxy ethyl cellulose and mixtures thereof, the weight proportion of clay to cellulose derivative being between about 6:1 and about 2:1, the maximum amount of ash-forming components being 2% by weight based on the asphalt.

3,006,861

LEAK DETECTOR FLUID

Myron E. Browning and Clarence J. Kastrop, Fort Worth, Tex., assignors to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
No Drawing. Filed Oct. 4, 1957, Ser. No. 688,120
3 Claims. (Cl. 252-408)

1. An aqueous composition for simulating the leakage characteristics of liquid hydrocarbon fuels which are in the viscosity range of from 0.3 to 1.3 centistokes and in the surface tension range of from 15 to 72 dynes per centimeter consisting of from .005 to 8 grams per liter of 2-ethyl-hexanol, from .01 to 2 grams per liter of a water soluble dye, from .1 to 20 grams per liter of sodium heptadecyl sulfate, and the remainder being water.

3,006,862

METHOD OF REPLENISHING LOST COPPER FROM A COPPER CATALYST SOLUTION

Charles G. Hard, Houston, Tex., assignor to Hard-Lowe Company, South Houston, Tex., a corporation of Texas
No Drawing. Filed June 18, 1959, Ser. No. 821,092
6 Claims. (Cl. 252-415)

1. The method of replenishing lost copper from a copper catalyst solution of copper chlorides and solubilizing agents therefor selected from the group consisting of alkali metal chlorides and alkali earth metal chlorides comprising, heating said solution to about 600

to 700° C., introducing copper slag obtained from previous regenerations of copper catalyst solutions, and passing chlorine gas through the melt until most of the copper in the slag is dissolved in the melt.

3,006,863

TITANIUM-LOADED MOLECULAR SIEVES

Charles R. Castor, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,959
3 Claims. (Cl. 252-455)

1. As a new composition of matter a dehydrated rigid three-dimensional crystalline metal aluminosilicate zeolite of the molecular sieve type capable of adsorbing benzene internally, such zeolite containing at least one material selected from the group consisting of elemental titanium and oxides thereof in the inner adsorption region of said crystalline metal aluminosilicate zeolite.

3,006,864

PROCESS FOR PREPARING AN ATTRITION RESISTANT CATALYST OR CATALYST SUPPORT

Fred J. Buchmann, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Aug. 18, 1955, Ser. No. 529,355
16 Claims. (Cl. 252-463)

1. A process for preparing an attrition resistant catalyst of the alumina base type which comprises preparing an aqueous acidic dispersion of an aluminum compound in the form of a hydrosol which is readily convertible to alumina on dehydration, spray drying said solution to produce dry highly attrition-resistant particles larger than about 15 to 25 microns, mixed with less attrition-resistant particles, subjecting all of said particles to an attrition action to reduce the less attrition-resistant particles to fines small than about 20 microns, elutriating the fines in water to form a second aqueous dispersion in the form of a hydrosol, removing coarser particles, redispersing said fines, and repeating the spray-drying, attrition, elutriating and redispersing steps until the less attrition-resistant particles are substantially eliminated.

3,006,865

REFRACTORY COMPOSITION

Samuel Ruben, 52 Seacord Road, New Rochelle, N.Y.
No Drawing. Filed Nov. 10, 1958, Ser. No. 772,690
6 Claims. (Cl. 252-518)

3. An electrically conducting oxidation-resistant pressed and sintered refractory compact consisting essentially of 2% to 25% by weight of vanadium pentoxide and 98% to 75% by weight of molybdenum disilicide, said compact being the reaction product of heating a pressed mixture of the constituent powders to about 690° C. and thereafter to a temperature in the order of 1000° C.

3,006,866

SYNTHETIC RESINS HAVING ANION-EXCHANGE PROPERTIES

Herbert Corte, Leverkusen, and Otto Netz, Köln, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Dec. 2, 1958, Ser. No. 777,616
Claims priority, application Germany Dec. 2, 1957
17 Claims. (Cl. 260-2.1)

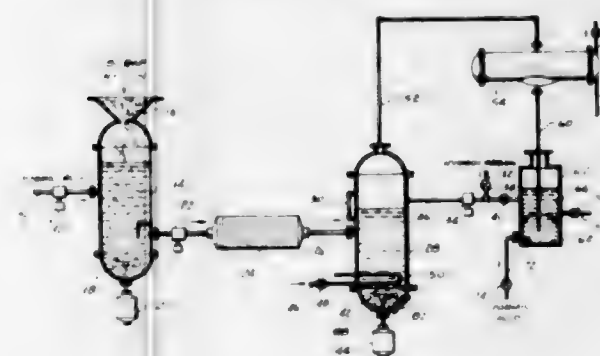
1. A process of producing a water-insoluble anion-exchange resin which comprises reacting in swollen form a benzene-insoluble cross-linked unsubstituted polymer of an aromatic vinyl hydrocarbon with a cyclic N-(halogeno-alkyl)imide at an elevated temperature to introduce into

said polymer at least 1 N-alkyl cyclic imide group per 2 aromatic nuclei, said N-alkyl cyclic imide being reacted with said polymer in an amount of at least 0.5 molecular proportion of imide per aromatic nucleus in the polymer, and then hydrolyzing the resulting product so as to effect saponification of the N-alkyl cyclic imide groups introduced into the polymer.

3,006,867

METHOD OF RECONSTITUTING NYLON BY SOLUTION IN FORMIC ACID AND DISTILLATION WITH HYDROCARBON

Jack Simon, Paterson, N.J., assignor to General Plastics Corporation, Paterson, N.J., a corporation of New Jersey
Filed Jan. 31, 1958, Ser. No. 712,437
4 Claims. (Cl. 260-2.3)



1. A method of reconstituting a synthetic plastic comprising a long-chain polymeric amide in which the amide groups form an integral part of the main polymer chain which includes the steps of dissolving waste material formed of said synthetic plastic in formic acid, mixing a hydrocarbon selected from the group consisting of n-hexane, n-heptane, cyclohexane, hexene, cyclohexene, benzene, and toluene with the solution in an amount sufficient to form an azeotropic mixture, then heating the azeotropic mixture to a temperature sufficiently high to vaporize the azeotropic mixture and removing the vapors from the distillation zone to leave behind the desired said synthetic plastic.

3,006,868

METHOD OF PRODUCING FOAMED RUBBERS

Paul Stamberger, Baltimore, Md., and Walter M. Fuchs, Aachen, Germany; Frieda W. Fuchs, sole heir and sole personal representative of said Walter M. Fuchs, deceased, said Frieda W. Fuchs, assignor to Crusader Chemical Co., Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Aug. 30, 1957, Ser. No. 681,185
8 Claims. (Cl. 260-2.5)

1. In the method of preparing a foamed latex sponge rubber article wherein air is beaten into a negatively charged rubber latex dispersion so as to form a foam and the foam is then gelled to a solid with an alkali metal silico-fluoride gelling agent, the improvement which consists in increasing the speed of gelation and decreasing the tendency of the foam to shrink on gelation by thoroughly mixing into the latex dispersion, prior to foaming, a stable aqueous dispersion of a water insoluble germicidal quaternary ammonium salt of an acid selected from the group consisting of rosin acids and the saturated and unsaturated soap-forming acids containing from 12 to 18 carbon atoms which organic quaternary ammonium compound is further characterized by having at least three carbon atoms directly bonded to the quaternary nitrogen atom, one of said carbon atoms being part of an aliphatic chain of at least ten carbon atoms.

3,006,869

METHOD OF INCREASING THE FLOWABILITY OF UNCURED VINYL ESTER RESIN FOAMS

Edmund H. Schwencke, New York, N.Y., and William J. Smythe, Ridgewood, N.J., assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 29, 1953, Ser. No. 401,044
2 Claims. (Cl. 260-2.5)

1. The method of producing a foam of high flowability from polymerized material from the group consisting of polyvinyl chloride and copolymers of vinyl chloride and vinyl acetate dispersed in sufficient plasticizer to provide a free flowing mass, which comprises dispersing an inert gas under pressure throughout such a free flowing mass in a closed container, discharging said mass from said container under the influence of the pressure maintained in said container and at a temperature below the gelling temperature of said mass, said mass being discharged in ungelled state in the form of an expanded, creamy foam, collecting said foam in a mass having a free surface from which released gas may escape, and subjecting said foam to shear forces to break some of the gas filled cells and release gas therefrom sufficient to increase the flowability of the mass to the desired level.

3,006,870

PREPARATION OF POLYURETHANE FOAM CONTAINING AN ALKYLTHIURAM-DISULFIDE OR AN ALKYL DITHIOCARBAMATE

Fritz Steinfatt, Opladen, Günther Braun, Leverkusen, and Bernhard Schmidt, Berlin, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Sept. 25, 1956, Ser. No. 612,048
Claims priority, application Germany Sept. 26, 1955
4 Claims. (Cl. 260-2.5)

1. In the manufacture of a cellular polyurethane by a process which comprises reacting an organic polyisocyanate with an organic compound having at least two reactive hydrogen atoms, said organic compound being capable of reacting with said organic polyisocyanate to form a polyurethane, the improvement which comprises mixing the said components with from about 0.2 percent to about 5 percent by weight of a member selected from the group consisting of a tetra-lower alkylthiuram-disulfide and zinc di-lower alkyl dithiocarbamate prior to substantial chemical reaction of said components.

3,006,871

METHOD OF MAKING CELLULAR FURANE RING COMPOUND MODIFIED UREA-FORMALDEHYDE CONDENSATES AND ARTICLES OBTAINED THEREBY

George B. Sunderland, White Plains, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 23, 1959, Ser. No. 822,207
7 Claims. (Cl. 260-2.5)

1. A method of making a resilient, thermally hardened cellular article of manufacture exhibiting improved compressive strength and abrasion resistant properties which comprises: (1) forming an aqueous suspension having a resin solids content of from about 20 to 40 percent of (A) a urea-formaldehyde condensate which has been modified by a furane ring compound selected from the group consisting of furfural and furfuryl alcohol, said modified condensate having a mol ratio of urea to formaldehyde of from about 1:1 to 1:2, respectively, and a weight ratio of urea-formaldehyde condensate to furane ring compound of from about 1:0.05 to 1:0.5, respectively, and (B) from about 1 to 2 percent by weight, based on

the weight of said resin solids, of a surface active foaming agent, (2) aerating said aqueous suspension to produce a resinous foam having a specific gravity of from about 0.05 to 0.06 and (3) heat curing said resinous foam in the presence of an acid catalyst whereby said resinous foam is converted to a substantially insoluble and infusible state.

3,006,872

COAGULATION OF DISPERSED POLYMERIC ORGANIC MATERIAL WITH POLY(ETHYLENE OXIDE), AND PRODUCT THEREOF

Donald B. Benedict, Chappaqua, N.Y., and David Q. White, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 28, 1957, Ser. No. 692,520
13 Claims. (Cl. 260—3)

12. A composition comprising a natural rubber latex and poly(ethylene oxide) which has a reduced viscosity value of at least 1.0 as measured at a concentration of 0.2 gram of said poly(ethylene oxide) in 100 milliliters of acetonitrile at 30° C., in an amount sufficient to coagulate said composition at elevated temperatures.

3,006,873

RUBBER ARTICLE CONTAINING OIL COATED REFLECTANT PARTICLES AND PROCESS OF MAKING

Merritt A. Taylor, West Haven, Conn., assignor to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut
No Drawing. Filed May 16, 1958, Ser. No. 735,677
10 Claims. (Cl. 260—5)

2. A reflectant rubber article having a reflectance value greater than 42, comprising a rubber having distributed uniformly therethrough reflectant particles coated with a thin oil film, the oil coated reflectant particles comprising by weight from about 6 to about 20% of the weight of the rubber, the ratio by weight of oil to reflectant particles being from about 3:10 to about 10:3, the weight of reflectant particles being at least about 3% of the weight of the rubber and the weight of oil being less than about 10% of the weight of the rubber.

3,006,874

THERMOSETTING LIGNIN CONTAINING RESIN

Emile A. Cambron, Cornwall, Ontario, Canada, assignor to Howard Smith Paper Mills Limited, Montreal, Quebec, Canada
No Drawing. Filed Oct. 24, 1958, Ser. No. 769,281
2 Claims. (Cl. 260—17.5)

1. A method of producing a thermosetting laminating resin comprising forming the monomeric monomethylol derivative of acetone and formaldehyde in alkaline solution, reacting said derivative with phenol, and thereafter treating the phenol-modified derivative with water insoluble alkali lignin and additional formaldehyde to form the thermosetting resin.

3,006,875

WATER-REPELLENT MASONRY COATING COMPOSITION CONTAINING FILLER COATED WITH AN ORGANOPOLYSILOXANE AND MASONRY COATED THEREWITH

Leo Liberthson, New York, N.Y., and Henry Lipkind, Nutley, N.J., assignors to Sonneborn Chemical and Refining Corporation, a corporation of Delaware
No Drawing. Filed Mar. 15, 1955, Ser. No. 494,545
6 Claims. (Cl. 260—22)

1. A waterproof masonry coating material comprising an oleo-resinous base paint containing a pigment, a drying oil and a synthetic resin and additionally containing as filler about 25–35% by weight of an inert material selected from the group consisting of silica and the silicates of calcium, aluminum and magnesium having a

particle size, of from 30–80 mesh and coated with an organopolysiloxane selected from the group consisting of lower alkyl and lower alkyl aryl polysiloxanes, the alkyl radical of said group members containing up to 2 carbon atoms.

3,006,876

UNSATURATED POLYESTER RESINS WHICH CURE IN THE PRESENCE OF AIR, AND TO A PROCESS OF PREPARING THE SAME

Hermann Dellus, Hamburg-Lokstedt, and Wilhelm Becker, Hamburg Wandsbeck, Germany, assignors to Reichhold Chemicals, Inc., Detroit, Mich.
No Drawing. Filed June 26, 1958, Ser. No. 744,665
Claims priority, application Germany July 13, 1957
9 Claims. (Cl. 260—22)

1. A process of making tack-free film and articles with tack-free surfaces in the presence of air which comprises curing by copolymerization (A) a polymerizable monomeric vinyl compound, and (B) an unsaturated alkyd made by partially reacting in a first stage (1) at least one member of a group consisting of ethylenically unsaturated dicarboxylic acids and anhydrides thereof and mixtures thereof with a member of a group consisting of dicarboxylic acids and anhydrides thereof having no unsaturation other than benzoid, (2) at least one polyhydric alcohol, and (3) at least one member of a group consisting of unsaturated fat acids and rosin acids and mixtures thereof, and in a separate stage completing the reaction by the addition of (4) allyl glycidyl ether.

3,006,877

RESIN SOLUTIONS SUITABLE FOR PRODUCING COATINGS

Marcel Herzberg, Paris, France, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Filed June 2, 1959, Ser. No. 817,461
Claims priority, application France June 11, 1958
13 Claims. (Cl. 260—24)

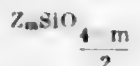
1. Resin solutions suitable for producing coatings, which solutions comprise (A) an 1,2-epoxy-resin, (B) a member selected from the group consisting of coal tar pitch having a softening point of at least 60° C. (measured by the ring-and-ball method) and bitumen having a softening point of at least 45° C. (as measured by the ring-and-ball method), (C) a hardening agent for epoxy-resins, (D) as a solvent a member selected from the group consisting of methylisobutylketone, methylethylketone, cyclohexanone and *o*-, *m*- and *p*-dichlorobenzene.

3,006,878

FLUOROALKYL SILOXANE COMPOSITION

Thomas D. Talcott, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Apr. 8, 1959, Ser. No. 804,866
11 Claims. (Cl. 260—29.1)

1. A vulcanizable composition consisting essentially of (1) a polysiloxane having a viscosity at 25° C. of at least 100,000 cs. and consisting of at least 90 mol percent units of the formula $RCH_2CH_2Si(CH_3)_2O$ in which R is a perfluoroalkyl radical of from one to three carbon atoms, any remaining siloxane units in (1) having the formula



in which each Z is selected from the group consisting of aliphatic hydrocarbon radicals of less than three carbon atoms and the phenyl radical and *m* has an average value of from 1 to 3 inclusive, (2) from 1 to 30 parts by weight per 100 parts of polysiloxane (1) of an hydroxylated organosilicon compound of not more than 110 silicon atoms having attached to at least 50% of the silicon atoms by a carbon-silicon bond at least one radical of the

formula RCH_2CH_2 — in which R is as above defined, any other organic radicals attached to said silicon atom being monovalent hydrocarbon radicals of less than seven carbon atoms, said compound (2) containing per molecule at least 0.25% by weight silicon-bonded hydroxyl groups, essentially all the remaining silicon valences being satisfied by oxygen atoms attached to other silicon atoms, (3) from 0.25 to 10 parts by weight per 100 parts of polysiloxane (1) of benzene-soluble organosilicon compounds containing the group R''_nSi , where R'' is selected from the group consisting of hydrocarbon radicals, hydrocarbonoxy radicals, halogenated hydrocarbonoxy radicals and halogenated hydrocarbon radicals containing less than 3 fluorine atoms, *n* has an average value of from 1 to 4 inclusive and the remaining silicon valences are satisfied by any of the group consisting of hydrogen atoms, oxygen atoms attached to other silicon atoms, hydroxyl radicals and silicon atoms, (4) a vulcanizing agent and (5) from 15 to 100 parts by weight per 100 parts of polysiloxane (1) of a reinforcing silica filler.

3,006,879

AQUEOUS RESIN SOLUTION CATALYZED WITH TWO SALTS AND PROCESS OF IMPREGNATING FIBERS THEREWITH

John James Ryan and Peter John Taylor, Manchester, England, assignors to Tootal Broadhurst Lee Company Limited, Manchester, England
Filed Aug. 12, 1958, Ser. No. 754,665
Claims priority, application Great Britain Aug. 14, 1957
13 Claims. (Cl. 260—29.3)

1. An aqueous solution of the ingredients of an aldehyde resin selected from the group consisting of urea-formaldehyde, melamine-formaldehyde, and phenol-formaldehyde resins, whose formation is catalyzed by acid, containing in solution an acid salt of a polybasic acid selected from the group consisting of phosphoric, phosphorous, pyrophosphoric, malonic, maleic, tartaric, and succinic acid having a first dissociation constant in water of at least 10^{-4} , and also a salt with an acid stronger than said polybasic acid of a metal selected from the group consisting of lithium, barium, calcium, strontium, magnesium, zinc, copper, ferrous iron, manganese, cadmium and cobalt of which a less acid salt with said polybasic acid will separate from the solution before the acid salt of said metal with said polybasic acid when water is removed from said solution.

3,006,880

THREE-PHASE AQUEOUS EMULSION COMPRISING CONTINUOUS AQUEOUS PHASE CONTAINING NON-IONIC EMULSIFIER AND TWO OILY DISCONTINUOUS PHASES

Lucius Schibler, Riehen, and Hans Gassmann, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Mar. 28, 1955, Ser. No. 497,418
Claims priority, application Switzerland Apr. 5, 1954
20 Claims. (Cl. 260—29.4)

1. A stable three-phase aqueous emulsion, of which (a) the first internal oily phase consists of a solution, in a substantially water-immiscible alcohol, of a hardenable methylol compound of an aminoplast forming substance selected from the group consisting of urea, thiourea, guanidine, biuret, dicyandiamide and aminotriazines containing at least two primary amino groups, the methylol compound being etherified with a substantially water-immiscible alcohol; of which (b) the second internal oily phase consists of a water-insoluble organic liquid comprising a major proportion of aliphatic hydrocarbons; and of which (c) the external continuous phase is an aqueous medium containing as the only emulsifying agent a non-ionic synthetic emulsifier.

3,006,881

POLYMERIZATION OF FLUORINE SUBSTITUTED OLEFINS IN THE PRESENCE OF PERFLUOROCHLORO-CARBOXYLIC ACIDS AND SALTS THEREOF, AND RESULTING LATEX

Archibald N. Bolstad, Afton, Minn., and Fred W. West, Wayne, N.J., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed May 14, 1958, Ser. No. 735,133
11 Claims. (Cl. 260—29.6)

1. A process for preparing a polymer of ingredients consisting of a halogen-substituted olefin in which at least half of the substituents attached to carbon are fluorine atoms and which contains from 2 to 5 carbon atoms, which comprises polymerizing said halogen-substituted olefin in the presence of a polymerization initiator in an aqueous medium containing a dispersing agent selected from the group consisting of saturated aliphatic perfluorochloromonocarboxylic acids which have between 4 and 33 carbon atoms and which are prepared by hydrolyzing a telomer of trifluorochloroethylene, and the water soluble inorganic salts of the aforesaid acids.

3,006,882

PROCESS FOR DYEING FIBER-FORMING POLYAMIDES FROM THE MELT

Hans Altermatt and Jakob Koch, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Sept. 18, 1959, Ser. No. 840,822
Claims priority, application Switzerland Oct. 6, 1958
6 Claims. (Cl. 260—37)

1. A process for dyeing fiber-forming polyamides which comprises incorporating into the molten polyamide a finely divided 3, 4, 9, 10 perylene tetracarboxylic acid diimide.

3,006,883

METHOD OF PRODUCING A PHENOL FORMALDEHYDE ACETONE RESIN

Emile A. Cambron, Cornwall, Ontario, Canada, assignor to Howard Smith Paper Mills Limited, Montreal, Quebec, Canada
No Drawing. Filed Oct. 24, 1958, Ser. No. 769,320
3 Claims. (Cl. 260—43)

1. A method of producing a thermosetting laminating resin comprising reacting acetone and formaldehyde in alkaline solution to form a monomeric monomethylol derivative thereof, and reacting said derivative with phenol and thereafter with additional formaldehyde to form the thermosetting resin.

3,006,884

POLYURETHANE RESINOUS MATERIALS

Leslie Nathan Phillips, Farnborough, England, assignor to National Research Development Corporation, London, England, a British corporation
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,663
Claims priority, application Great Britain Jan. 3, 1958
5 Claims. (Cl. 260—45.75)

1. A method of improving the storage stability and cross-linking cure characteristics of a polyurethane adduct formed as the reaction product of a linear polyol and a diisocyanate, comprising mixing about 0.08–0.5% in weight/volume ratio of a hydrolysable antimony chloride with said reaction product after it has been formed.

3,006,885

STABILIZED POLYOLEFIN COMPOSITIONS

David M. Dickson, Jr., Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 24, 1959, Ser. No. 835,438
8 Claims. (Cl. 260—45.75)

1. A stabilized polypropylene composition comprising polypropylene, and in intimate admixture therewith a nickel phenolate of a bis-(*p*-alkylphenol) monosulfide in

which the alkyl group contains from 2 to 12 carbon atoms in combination with at least one of the group consisting of 2(2'-hydroxyphenyl)-2,2,4-trimethyl-polyalkylchromans, 4(2'-hydroxyphenyl)-2,2,4-trimethyl-polyalkylchromans, and alkylidene-bis-(alkylphenol)s.

3,006,886

STABILIZED POLYOLEFIN COMPOSITIONS
William M. Schilling, West Chester, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 24, 1959, Ser. No. 835,442
16 Claims. (Cl. 260-45.75)

1. A stabilized polyolefin composition comprising a solid stereoregular polymer of an olefin selected from the group consisting of butene-1, 3-methylbutene-1, 4-methylpentene-1, and pentene-1 and in intimate admixture therewith a nickel phenolate of a bis(p-alkylphenol) monosulfide in which the alkyl group contains from 2 to 12 carbon atoms.

3,006,887

PROTECTIVE COATINGS FOR POLYESTER RESINS

Blaine O. Schoepfle, Niagara Falls, and Paul Robitschek, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Aug. 27, 1956, Ser. No. 606,211
13 Claims. (Cl. 260-45.95)

1. A plastic article comprising a polymerized halogen-containing unsaturated resinous reaction product of a polybasic acid and a polyhydric alcohol and an adherent, weather resistant, transparent coating, said coating comprising (1) a material selected from the group consisting of the polymeric forms of acrylic and methacrylic acid esters, polystyrene, polyethylene, polyvinyl chloride and mixtures thereof and characterized by drying to a transparent, tack-free film and (2) a 2-hydroxybenzophenone in an amount between about one percent and about fifty percent by weight of said material.

3,006,888

STABILIZED DIENE POLYMERS WITH PARA-TERT-ALKYL CATECHOL

Richard J. Reynolds, Walnut Creek, and Sven H. Ruettman, Oakland, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Feb. 3, 1958, Ser. No. 712,663
2 Claims. (Cl. 260-45.95)

1. A composition comprising a polymer of butadiene wherein at least 60% of the polymer is in the cis 1,4-form, and from 0.5-5.0 parts per hundred of para-tert-alkyl catechol, said alkyl group having from 4 to 8 carbon atoms.

3,006,889

POLYMERS OF VINYL CHLORIDE AND CHLORINATED POLYMERS OF VINYL CHLORIDE BLENDED WITH CHLORINATED POLYOLEFINS
Hans-Helmut Frey, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brünig, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Dec. 27, 1956, Ser. No. 630,724
Claims priority, application Germany Jan. 3, 1956
5 Claims. (Cl. 260-45.5)

1. A composition of matter comprising (1) a member selected from the group consisting of polyvinyl chloride, chlorinated polyvinyl chloride, a copolymer of vinyl chlo-

ride with a vinyl monomer copolymerizable therewith, and a chlorinated copolymer of vinyl chloride and a vinyl monomer copolymerizable therewith, and (2) about 10-70% by weight of the composition of a product prepared by chlorinating in a homogeneous system a macromolecular polymer of a monoolefin of 2 to 3 carbon atoms, said product containing about 20-60% by weight of chlorine.

3,006,890

NEW RESIN COMPOSITIONS AND CURING AGENT THEREFOR

William C. Duckworth, Atlanta, and Samuel L. Norwood and Thomas W. Sauls, College Park, Ga., assignors to Tennessee Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 21, 1958, Ser. No. 749,603
4 Claims. (Cl. 260-47)

1. A composition comprising a mixture of a glycidyl polyether of polyhydric organic material of the group consisting of polyhydric alcohols and phenols and an amount of bis(3,4-diaminophenyl) sulfone curing agent effective to cure said mixture to a solid resinous product upon heating, said amount being 80%-125% of equivalency on the basis of one replaceable amino hydrogen atom per epoxy group.

3,006,891

EPOXIDE RESIN PROCESS AND COMPOSITION

Otho Leroy Nikles, Phoenixville, Pa., assignor to Ciba Products Corporation, Phoenixville, Pa., a corporation of Delaware
No Drawing. Filed Jan. 27, 1959, Ser. No. 789,261
8 Claims. (Cl. 260-47)

1. A process for producing essentially linear 1,2-epoxy resins of higher molecular weight and higher melting point from low molecular weight low melting point 1,2-epoxy resins having a molecular weight of about 340 to about 1000, which comprises reacting a low molecular weight 1,2-epoxy resin with a dihydric phenol in admixture with about 5 to about 600 parts per million based on the weight of the dihydric phenol, of a lithium salt as catalyst, which yields lithium ions in the reaction mixture.

3,006,892

EPOXIDE RESIN COMPOSITIONS

Otho Leroy Nikles, Phoenixville, Pa., assignor to Ciba Products Corporation, Phoenixville, Pa., a corporation of Delaware
No Drawing. Filed Jan. 27, 1959, Ser. No. 789,262
10 Claims. (Cl. 260-47)

1. A process for producing essentially linear 1,2-epoxy resins of higher molecular weight and higher melting point from low molecular weight low melting point 1,2-epoxy resins having a molecular weight of about 340 to about 1000, which comprises reacting a low molecular weight 1,2-epoxy resin with a dihydric phenol in admixture with lithium hydroxide as catalyst, said lithium hydroxide being present in effective amount of less than 0.006% based on the weight of the dihydric phenol.

3,006,893

PHENOLIC RESINS

Charles P. West, Metuchen, and Howard H. Leiner, New Brunswick, N.J., and Ronald Saltzman, Brooklyn, N.Y., assignors to American Potash and Chemical Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 26, 1959, Ser. No. 802,254
16 Claims. (Cl. 260-57)

1. The process for the preparation of phenolic resins which comprises, reacting phenol with a formaldehyde-supplying resinification agent in the presence of a rare earth salt catalyst under refluxing conditions, said phenol

and formaldehyde being present in a molar ratio of from about 1.0 to 1.5 moles phenol for each mole formalde-



hyde, and removing water produced as a result of the reaction during refluxing.

3,006,894

PROCESS FOR POLYMERIZING A VINYLIDENE COMPOUND IN THE PRESENCE OF AN ALKALI CATALYST

Evan Franklin Evans, West Chester, Pa., and Lester David Grandine, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 12, 1957, Ser. No. 671,387
11 Claims. (Cl. 260-63)

1. A process for polymerizing to a fiber-forming molecular weight a vinylidene monomer of the class consisting of



wherein —X is a member of the class consisting of



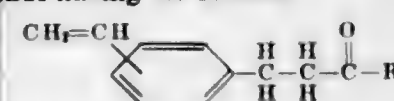
and —CHO, Y is a member of the class consisting of hydrogen, lower alkyl and phenyl and Z is a member of the class consisting of hydrogen and phenyl which comprises agitating at a temperature within a range of from about -100° C. to about +10° C., until a period of rapid temperature rise is observed, a solution of the said monomer and an alkaline salt from the class consisting of an alkali cyanide, an alkali earth cyanide, an alkali sulfide, an alkali earth sulfide, an alkali hydrosulfide, and alkali earth hydrosulfide, an alkali phenoxide, an alkali phthalimide, an organic quaternary ammonium hydroxide, an alkali hydroxide, an alkali mercaptide, an alkali thiophenoxide, an alkali succinimide, an alkali dimercaptide and an alkali diphenoxide, the solvent of the said solution being essentially anhydrous, free of components containing active hydrogen and capable of dissolving the polymer formed.

3,006,895

VINYLBENZYL KETONES AND ESTERS AND POLYMERS THEREOF

Richard C. Sovish, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,901
23 Claims. (Cl. 260-63)

1. Compounds having the formula



wherein R represents a member of the group consisting of methyl, phenyl, 3,3,3-trifluoroacetyl, acetyl and phenacyl.

3,006,896

HARDENABLE CONDENSATION PRODUCTS AND A PROCESS FOR PREPARING THEM

Karl Horst, Hofheim (Taunus), and Heino Wellens and Ludwig Orthner, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brünig, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Jan. 21, 1958, Ser. No. 710,195
22 Claims. (Cl. 260-70)

1. A process for preparing nitrogen-containing hardenable condensation products which comprises (a) heating a mixture of one molar part of a polyamine of the general formula $\text{NH}_2(\text{C}_n\text{H}_{2n}\text{NH})_x\text{H}$ wherein n and x are integers from about 2 to 3 with about 2 molar parts of urea, when x is 2, and with about 2 to 3 molar parts of urea, when x is 3, to a temperature of about 90 to 160° C., the amount of urea being sufficient to react with all of the primary amino groups of the polyamine with evolution of ammonia but insufficient to react with all of the secondary amino groups thereof; (b) reacting the urea-modified polyamine thus obtained with about 0.2 to about one mol, per mol of polyamine, of a long chain aliphatic compound having the general formula RX wherein R is an alkyl group containing about ten to eighteen carbon atoms and X is a member of the group consisting of reactive —COOH, —COCl, —NCO, —CONHCH₂OH and —OCH₂Cl groups; and (c) further reacting the products thus obtained by heating to a temperature of 40 to 100° C. in an aqueous solution at a pH of 7 to 10 with about 0.5 to 2 mols of formaldehyde per urea group reacted with said polyamine in step (a), whereby methylol groups are formed.

3,006,897

DIISOCYANATE-MODIFIED ACID-TREATED POLYESTERS

John A. Parker, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 7, 1958, Ser. No. 772,408
7 Claims. (Cl. 260-75)

1. In the method of making an organic diisocyanate-modified polyester wherein an unmodified polyester prepared from at least one dicarboxylic acid and at least one glycol is reacted with an organic diisocyanate, said unmodified polyester having an acid number in the range of 0-10, a hydroxyl number in the range of 20-100, and a number average molecular weight in the range of 2000-4500, the improved method of making a gelled product having a real, three-dimensional network which comprises adding to said unmodified polyester an alpha-beta ethylenically unsaturated compound having 4-5 carbon atoms selected from the group consisting of maleic acid, fumaric acid, citraconic acid, itaconic acid, and anhydrides thereof in an amount of 0.03-0.5 moles of said compound per mole of said unmodified polyester, maintaining the mixture of said compound and said unmodified polyester at a temperature in the range of 20°-115° C. to cause a carboxyl group on said compound to react with a hydroxyl group on said polyester and form a carboxylic-acid-terminated polyester, and subsequently adding to the acid-modified polyester at a temperature in the range of 80°-150° C. an organic aromatic diisocyanate in an amount of 0.6-1 equivalents per equivalent of said acid-terminated polyester at least sufficient to form a gel having a real, three-dimensional network.

3,006,898

PRODUCTION OF POLYMERIC UREAS

Henry A. Walter, Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,743
7 Claims. (Cl. 260-77.5)

1. A process for producing linear polymeric ureas which is carried out in a substantially anhydrous reaction

medium comprising a cyanic acid-producing compound selected from the class consisting of lower alkyl nitroso ureas, aromatic nitroso ureas, cycloalkyl nitroso ureas and nitro urea and a diamine having less than ternary substitution on the amine radicals thereof, in an inert organic solvent for said diamine the said solvent having a boiling point of between 60–220° C. and wherein (a) cyanic acid is produced in situ in said medium from said cyanic acid-producing compound, and (b) the said cyanic acid reacts with the said diamine to produce an intermediate product (c) which intermediate product then polymerizes to produce the said linear polymeric urea, the said process being carried out while maintaining the said reaction medium under reflux conditions.

3,006,899

POLYAMIDES FROM REACTION OF AROMATIC DIACID HALIDE DISSOLVED IN CYCLIC NON-AROMATIC OXYGENATED ORGANIC SOLVENT AND AN AROMATIC DIAMINE

Harold Wayne Hill, Jr., and Stephanie Louise Kwolek, Wilmington, Del., and Paul Winthrop Morgan, West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 28, 1957, Ser. No. 642,941

11 Claims. (Cl. 260—78)

1. A process for preparing a high molecular weight wholly aromatic polyamide comprising reacting an aromatic diamine with an equimolar amount of aromatic diacid halide, the amine groups in the aromatic diamine and the acid halide groups in the aromatic diacid halide being attached directly to non-adjacent carbon atoms in aromatic rings, using the aromatic diamine in aqueous solution and the aromatic diacid halide dissolved in a cyclic non-aromatic oxygenated organic solvent of the group consisting of cyclic tetramethylene sulfone, 2,4-dimethyl cyclic tetramethylene sulfone, tetrahydrofuran, propylene oxide, and cyclohexanone, the reaction being carried out by agitating the aqueous aromatic diamine with the solution of aromatic diacid halide to produce visible turbulence at a temperature below 100° C. in the presence of an acid acceptor to produce a polyamide having an inherent viscosity of at least 0.6 when determined in solution in concentrated sulfuric acid at 30° C. at a concentration of 0.5 gram of polymer per 100 cubic centimeters of solution.

3,006,900

PRODUCTION OF WATER-SOLUBLE COPOLYMERS OF METHACRYLAMIDE AND N-VINYLPYRROLIDONE

Hans Flkentscher and Hans Wilhelm, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed May 13, 1958, Ser. No. 734,830

Claims priority, application Germany Aug. 22, 1953

4 Claims. (Cl. 260—78)

1. A process for the production of a high-molecular weight water-soluble copolymer which comprises copolymerizing (A) methacrylamide and (B) from at least 10% up to about 90% by weight of n-vinylpyrrolidone, with reference to the total weight of monomers, in aqueous solution at a temperature between 20° C. and 150° C. and in the presence of an azo-bisnitrile catalyst, whereby the resulting copolymer has a K-value of at least about 35.5.

3,006,901

NON-IGNITABLE ELASTOMERS

Benjamin D. Halpern, Jenkintown, Wolf Karo, Elkins Park, and Albin H. Gaspach, Philadelphia, Pa., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 25, 1958, Ser. No. 730,777

1 Claim. (Cl. 260—78.5)

The addition copolymer of 40–97 parts by weight of 2,2,2-trifluoroethyl ester of acrylic acid with 3–60 parts of maleic anhydride.

3,006,902

VINYLDENE CHLORIDE, VINYL CHLORIDE HIGHER ALKYL ACRYLATE TERPOLYMERS

Alexei Trofimov, 56 Boylston St., Cambridge, Mass.; Philip K. Isaacs, 186 Mason Terrace, Brookline, Mass.; and Donald Goodman, 5 Leland Road, Brookline, Mass.

No Drawing. Filed Jan. 12, 1959, Ser. No. 786,000

5 Claims. (Cl. 260—80.5)

1. A biaxially oriented heat shrinkable terpolymer of 75–80% vinylidene chloride, 15–20% vinyl chloride and 5–10% of an alkyl acrylate having 8 to 18 carbon atoms in the alkyl group said terpolymer having been prepared by polymerizing said alkyl acrylate in an aqueous emulsion in the presence of a catalyst selected from the group consisting of peroxy compounds and azo compounds, 5 to 10 minutes after initiating the polymerization of said alkyl acrylate adding said vinylidene chloride and said vinyl chloride and continuing the polymerization, said polymerization being carried out at 20–40° C. at a pH of 2.0–3.0 and stopping the polymerization when 80–90% of the total monomers are converted to terpolymer, and thereafter biaxially stretching the terpolymer.

3,006,903

POLYMERIZATION PROCESS

Albert J. Haefer, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 29, 1957, Ser. No. 655,470

6 Claims. (Cl. 260—92.8)

1. A suspension polymerization process for the manufacture of an easily processed polyvinyl chloride which possesses good properties especially with respect to heat distortion temperature comprising forming a charge including vinyl chloride monomer, at least 150 parts of water, 0.1 to 3 parts of an oil soluble peroxide polymerization catalyst, from about 0.07 to 0.3 part of a water soluble synthetic emulsifying agent, from about 0.01 to about 0.25 part of a water soluble hydrophilic colloid and from 2 to about 12 parts of carbon tetrachloride, the proportion of water, catalyst, emulsifying agent and carbon tetrachloride being based on 100 parts by weight of the vinyl chloride monomer initially introduced; agitating said charge to provide a Pfaunder Agitative Intensity Factor of from about 2 to about 6 while heating and maintaining the charge at a temperature of 40 to 70° C.; and recovering the so-formed polymer.

3,006,904

POLYMERIZATION OF MONOOLEFINS WITH ALCOHOL-CONTAINING CATALYST

Michael Jahrstorfer, Heidelberg, and Hermann Spaenig and August Weickmann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rheinland-Pfalz, Bundesrepublik, Germany

No Drawing. Filed Apr. 2, 1957, Ser. No. 650,077

Claims priority, application Germany Apr. 6, 1956

2 Claims. (Cl. 260—93.7)

1. A process for the production of polymers which comprises polymerizing an olefin selected from the group

consisting of ethylene, propylene, and isobutylene in the presence of a catalyst which has been formed by the reaction of (a) a metal selected from the group consisting of aluminum and zinc, (b) a halide of a metal selected from the group consisting of titanium and vanadium, and (c) a saturated aliphatic monoalcohol containing up to 6 carbon atoms, the molar ratio of said metal a to said halide b varying between about 0.75:4 to 4:0.75, the amount of alcohol c present in the reaction mixture being from about 0.25 to about 1.33 mols for each mol of said metal a and from about 0.25 to about 1.33 mols for each mol of said halide b, said reaction taking place in the presence of a hydrocarbon diluent.

3,006,905

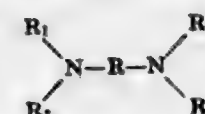
PREPARATION OF COPOLYMERS

Edward M. Geiser, Downers Grove, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Feb. 16, 1959, Ser. No. 793,285

17 Claims. (Cl. 260—94.2)

13. A process which comprises copolymerizing a diolefin hydrocarbon of from 4 to 10 carbon atoms per molecule with an alkylene diamine of the formula:



wherein R is an alkylene group of from 2 to 4 carbon atoms and R₁, R₂, R₃ and R₄ are selected from the group consisting of hydrogen and alkyl and hydroxyalkyl groups of from 1 to 3 carbon atoms, said copolymerization being effected in an N,N-dialkylamide of from 3 to 11 carbon atoms per molecule at a temperature of from about 0° C. to about -40° C. in the presence of a polymerization catalyst selected from the group consisting of boron trifluoride, hydrogen fluoride and boron trifluoride-ethyl ether complex.

3,006,906

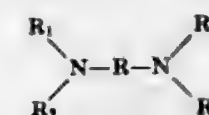
PREPARATION OF POLYMERS OF ISOBUTYLENE AND AN ALKYLENE DIAMINE

Edward M. Geiser, Downers Grove, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed July 21, 1958, Ser. No. 750,052

14 Claims. (Cl. 260—94.8)

6. A process for the preparation of a resinous product from a mono-iso-olefin of from 4 to about 8 carbon atoms per molecule and an alkylene diamine of the general formula



wherein R is an alkylene group and R₁, R₂, R₃ and R₄ are selected from the group consisting of hydrogen and alkyl and hydroxy-substituted alkyl groups, said process comprising reacting said olefin and diamine in an N,N-dialkyl amide containing up to 9 carbon atoms per molecule at a temperature of from about 0° C. to about -40° C. and in contact with a polymerization catalyst comprising a fluoride selected from the group consisting of hydrogen fluoride and boron trifluoride, said fluoride being in an amount of at least about 5% by weight of said olefin and diamine, and recovering the resultant reaction product.

3,006,907

PROCESS FOR FINISHING POLYOLEFINS

Karl Rehn, Hofheim (Taunus), and Ernst Junghans, Siegfried Sommer, and Herbert Bestian, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 17, 1956, Ser. No. 578,587

Claims priority, application Germany Apr. 20, 1955

9 Claims. (Cl. 260—94.9)

1. The process of finishing polyolefins which have been produced by low-pressure polymerization of a lower olefin in the presence of a catalytic amount of a catalyst comprising an organometallic compound and a compound of a metal of sub-groups IV–VI of the periodic table, which comprises the steps of treating a suspension of the polyolefin with an aqueous alkaline material to kill the catalyst, separating the major portion of the suspension medium from the polyolefin, suspending the separated polyolefin in water, and then subjecting the aqueous polyolefin suspension to water-vapor distillation while maintaining the pH of the suspension within the range from about 7 to about 9.

3,006,908

HEAT TRANSFER IN EXOTHERMIC REACTIONS

Robert F. Dye, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 8, 1957, Ser. No. 651,444

13 Claims. (Cl. 260—94.9)

1. In a process which comprises charging to a reaction zone as reactant materials a slurry of polymerization catalyst in a hydrocarbon solvent, liquid and inert under conditions of the process, and a polymerizable hydrocarbon, and circulating a vaporizable liquid as a coolant through a cooling zone in indirect heat exchange relation with the reaction materials in said reaction zone, said coolant partially vaporizing and thereby removing heat from said reaction zone, the improvement which comprises adding to said coolant a fluid which is gaseous under the conditions of temperature and pressure in said cooling zone prior to circulating said coolant through said cooling zone, vaporizing a portion of said coolant and added fluid substantially immediately upon introduction into said cooling zone, and recovering liquid and vaporous coolant and said gaseous added fluid.

3,006,909

PRODUCTION OF SOLID POLYETHYLENE WITH ZIRCONIUM OXIDE, SILICA-ALUMINA CATALYSTS

Donald R. Witt, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 13, 1957, Ser. No. 683,708

8 Claims. (Cl. 260—94.9)

1. A process which comprises contacting ethylene at a temperature in the range 100 to 550° F. with a catalyst active for ethylene polymerization and consisting essentially of zirconium oxide associated with a silica and alumina composite to form a normally solid polymer of ethylene.

3,006,910

CATALYTIC POLYMERIZATION OF MONOOLEFINS

Ervin G. Pritchett, Silverton, and James R. Gibbs, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 15, 1958, Ser. No. 755,125

5 Claims. (Cl. 260—94.9)

1. In a catalytic process for polymerizing a monoolefinic aliphatic hydrocarbon of two to six carbon atoms to a normally solid polymer in an inert liquid hydrocarbon reaction medium using as the polymerization catalyst a combination of (1) a tin hydrocarbon and (2) a group

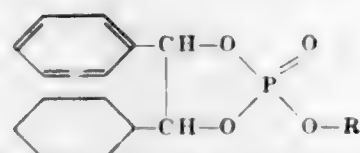
IVb metal tetrahalide, the improvement which comprises adding water to the reaction mixture, the total amount of added water being in the range of from about 2 to about 200 millimoles per mole of the tin hydrocarbon component of the catalyst, said catalyst being characterized by containing, in mole ratio, from about 0.5 to about two moles of the tin hydrocarbon per mole of the group IVb metal tetrahalide and used for said polymerization in an amount of from about 0.01 to about one percent based on the weight of the monoolefinic aliphatic hydrocarbon subjected to polymerization.

3,006,911

PRODUCTION OF ALCOHOL PHOSPHATES AND PRODUCTS

Tyunosin Ukita, Tokyo, Japan, assignor to Takeda Pharmaceutical Industries, Ltd., Osaka, Japan
No Drawing. Filed June 26, 1959, Ser. No. 823,002
Claims priority, application Japan June 28, 1958
16 Claims. (Cl. 260-211.5)

1. A process for preparing an alcohol phosphate, which comprises reacting an alcohol with hydrobenzoin cyclic phosphorochloridate, thereby producing a cyclic phosphate of the formula



wherein R is the residue of the alcohol, and removing the hydrobenzoin moiety from the said cyclic phosphate by the action thereon of hydrogen in the presence of a hydrogenation catalyst.

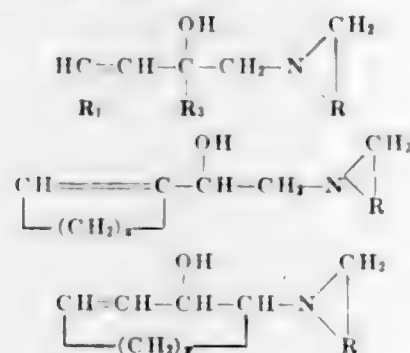
16. 2',3'-O-isopropylideneadenosine - 5' - hydrobenzoin cyclic phosphate.

3,006,912

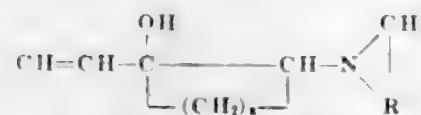
PRODUCTION OF UNSATURATED DERIVATIVES OF ETHYLENE IMINE

Karl Vierling, Heidelberg, and Heinz Oettel and Gertrud Wilhelm, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rheinland-Pfalz, Germany
No Drawing. Filed Feb. 8, 1957, Ser. No. 638,923
Claims priority, application Germany June 26, 1954
6 Claims. (Cl. 260-239)

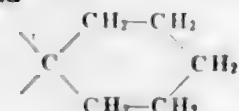
5. A compound selected from the group consisting of



and

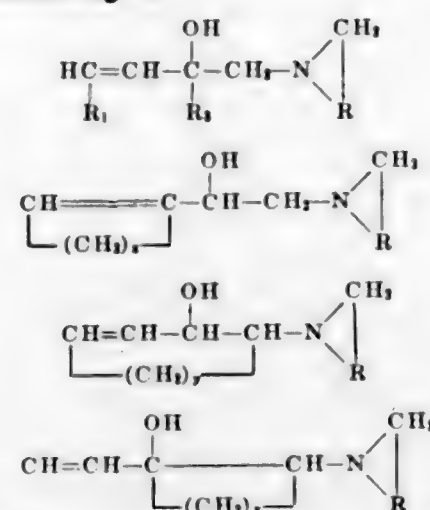


wherein R is a bivalent radical selected from the group consisting of $>CH_2$, $>CHR'$ wherein R' is an alkyl group of 1-4 carbons, and

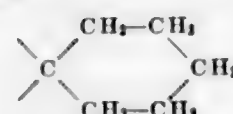


R₁ and R₂ are selected from the group consisting of hydrogen and an alkyl group of 1-4 carbons, x is an even integer between 4 and 6, inclusive, and y is an even integer between 2 and 4, inclusive.

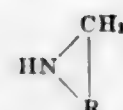
6. A process for preparing a compound selected from the group consisting of



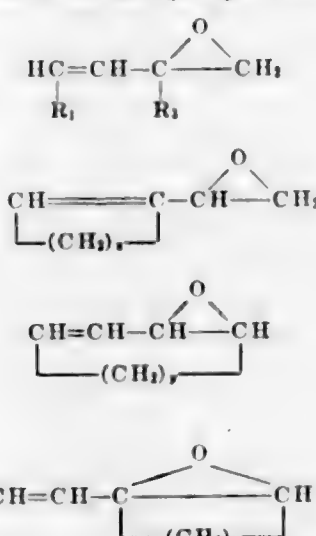
wherein R is a bivalent radical selected from the group consisting of $>CH_2$, $>CHR'$ wherein R' is an alkyl group of 1-4 carbons, and



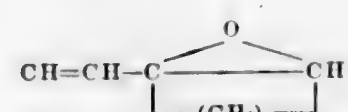
R₁ and R₂ are selected from the group consisting of hydrogen and an alkyl group of 1-4 carbons, x is an even integer between 4 and 6, inclusive, and y is an even integer between 2 and 4, inclusive, which process comprises reacting at a temperature not above 100° C. an imine of the formula



wherein R has the meaning set forth above with an epoxy compound selected from the group consisting of



and



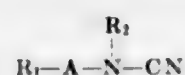
wherein R₁, R₂, x and y have the meaning set forth above.

3,006,913

PROCESS FOR PREPARING (N,N-ALKYLENE-IMINO)-LOWER ALKYL-GUANIDINES

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed June 10, 1959, Ser. No. 819,208
25 Claims. (Cl. 260-239)

1. A member of the group consisting of compounds of the formula:



in which R₁ represents 1-N,N-alkylene-imino, in which alkylene contains from four to ten carbon atoms, A stands

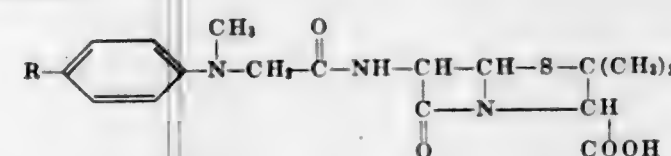
for lower alkylene and R₂ represents a member of the group consisting of hydrogen and lower alkyl, and acid addition salts thereof.

3,006,914

PENICILLIN COMPOSITIONS

Homer E. Staveland, Evansville, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
No Drawing. Filed June 27, 1958, Ser. No. 744,912
5 Claims. (Cl. 260-239.1)

5. A penicillin composition having the following formula:



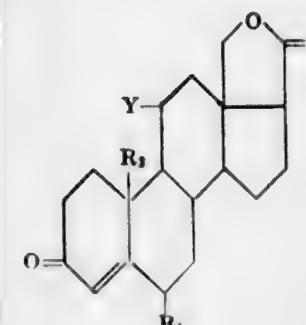
where R is selected from the group consisting of (R¹)₂N- and R¹-O- and R¹ is selected from the group consisting of methyl and ethyl.

3,006,915

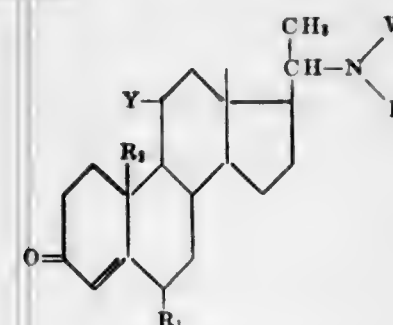
PROCESS FOR THE PREPARATION OF 3-KETO-Δ⁴-17,18-STEROIDAL LACTONES AND NOVEL STEROID INTERMEDIATES

James F. Kerwin, Broomall, and Manfred E. Wolff, Elkins Park, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 11, 1960, Ser. No. 1,450
19 Claims. (Cl. 260-239.5)

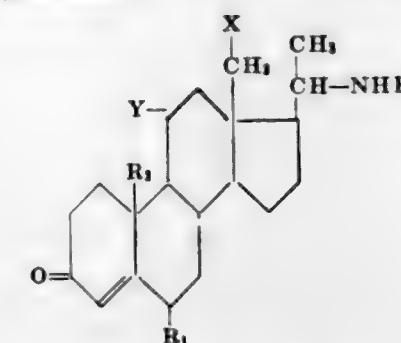
1. The method of forming 3-keto-Δ⁴-17,18-steroidal lactones having the following formula:



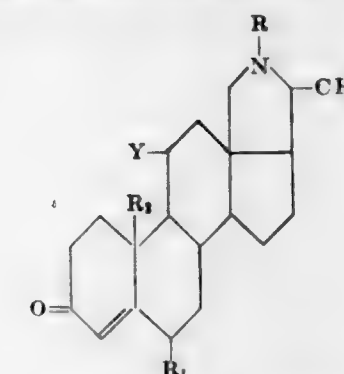
in which Y is a member selected from the group consisting of hydrogen and keto; R₁ is a member selected from the group consisting of hydrogen, fluoro and methyl; and R₂ is a member selected from the group consisting of hydrogen and methyl, which comprises irradiating with ultraviolet light in the presence of trifluoroacetic acid a 3-keto-Δ⁴-20-(N-alkyl-N-haloamino)-steroid having the following formula:



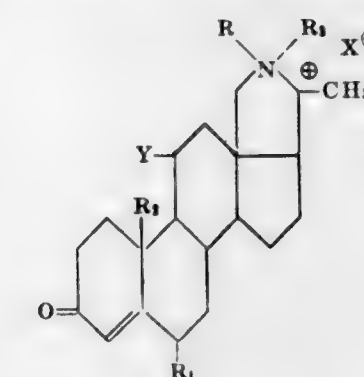
in which W is a halo member selected from the group consisting of chloro and bromo; R is lower alkyl of from one to four carbon atoms; and Y, R₁ and R₂ are as



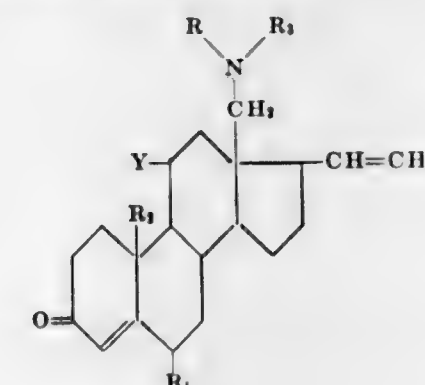
in which Y, W, R, R₁ and R₂ are as defined above; treating said 18-halo steroid with alkali to form a 3-keto-Δ⁴-conanine having the following formula:



in which Y, R, R₁ and R₂ are as defined above; treating said conanine with a reactive lower alkyl halide having from one to four carbon atoms to form a 3-keto-Δ⁴-quaternary ammonium steroid having the following formula:

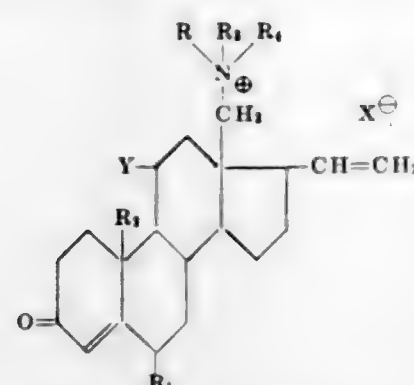


in which R₂ is lower alkyl of from one to four carbon atoms; X[⊖] is a reactive halogen atom having a minimum atomic weight of 35; and Y, R, R₁ and R₂ are as defined above; treating said quaternary ammonium halide with the hydroxide form of an anion exchange resin to form the quaternary ammonium hydroxide; heating said quaternary hydroxide to form a 18-dialkylamino-Δ⁴-20-steroid having the following formula:

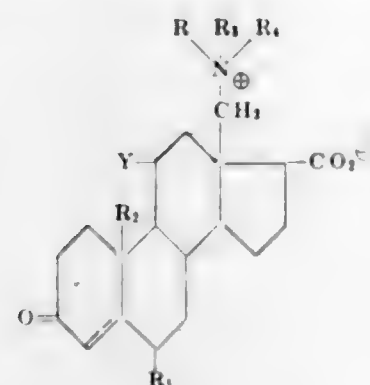


in which Y, R-R₂ are as defined above; treating said 18-dialkylamino steroid with a reactive lower alkyl halide having from one to four carbon atoms to form a 3-keto-

Δ^4 -quaternary ammonium steroid having the following formula:



in which R_4 is lower alkyl of from one to four carbon atoms; X^- is a reactive halogen atom having a minimum atomic weight of 35; and Y, $R-R_3$ are as defined above; treating said 3-keto- Δ^4 -quaternary ammonium halide with the hydroxide form of an anion exchange resin to form the 3-keto- Δ^4 -quaternary ammonium hydroxide; oxidizing said 3-keto- Δ^4 -quaternary hydroxide to form a betaine of the following formula:



in which Y, $R-R_4$ are as defined above; and heating said betaine.

3,006,916

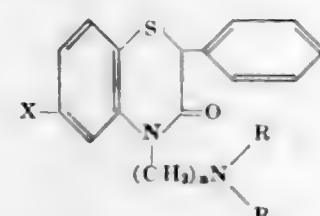
4 - (ω-DIALKYLAMINOALKYL)-2-PHENYL-3-KETO-2,3-DIHYDRO-1,4-BENZOTHAZINES AND SALTS THEREOF

Stanley O. Winthrop, Montreal, Quebec, and Roger Gaudry, Mount Royal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 4, 1958, Ser. No. 739,670

8 Claims. (Cl. 260-243)

1. A compound selected from the group which consists of the bases of the formula



where R represents lower alkyl, n is an integer selected from the group consisting of 2 and 3, and X is selected from the group consisting of hydrogen and chlorine; and the hydrohalide and methohalide quaternary salts of said bases.

2. 4 - (3' - dimethylaminopropyl) - 2 - phenyl - 3-keto-2,3-dihydro-1,4-benzothiazine.

3,006,917 2,2-BIS(p'-HYDROXY-PHENYL)-3-OXO - DIHYDRO-1,4-BENZOXAZINES AND THEIR O-ACYL AND O-ALKYL DERIVATIVES

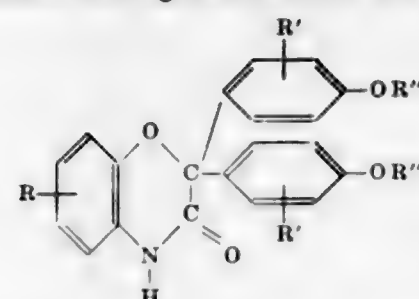
Ernst Seeger, Biberach on the Riss, Germany, assignor to Dr. Karl Thomae G.m.b.H., Biberach on the Riss, Germany, a corporation of Germany

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,452

Claims priority, application Germany Oct. 16, 1959

5 Claims. (Cl. 260-244)

1. Compounds having the structural formula



wherein

R is selected from the group consisting of hydrogen and lower alkyl,

R' is selected from the group consisting of hydrogen, lower alkyl and lower alkoxy, and

R'' is selected from the group consisting of hydrogen, lower alkanoyl and lower alkyl.

3,006,918

NEW α-PYRAZINYL PHENYLACETIC ACID DERIVATIVES WITH CENTRAL DEPRESSANT ACTIVITY AND THEIR MANUFACTURE

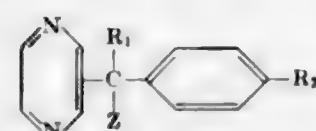
David Karel de Jongh, Heemstede, and Antoine M. Akkerman, Hendrik Kofman, and George de Vries, Amsterdam, Netherlands, assignors to N.V. Nederlandsche Combinatie voor Chemische Industrie, Amsterdam, Netherlands, a limited liability company of the Netherlands

No Drawing. Filed July 6, 1959, Ser. No. 824,958

Claims priority, application Netherlands July 5, 1958

9 Claims. (Cl. 260-250)

6. A substituted phenylacetic acid derivative having the formula:



in which R_1 is selected from the group consisting of hydrogen, loweralkenyl-, loweralkynyl- and loweralkynyl- radicals, R_2 is selected from the group consisting of hydrogen, chloro-, fluoro- and loweralkoxy radicals, the term "lower" meaning having not more than 5 carbon atoms, and Z is selected from the group consisting of cyano and unsubstituted carbonamido.

3,006,919

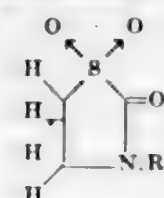
NOVEL HETEROCYCLIC SULFONES AND PROCESS FOR MAKING THE SAME

Richard Joseph Gaul, Cleveland, Ohio, and Winfried Josef Fremuth, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,057

8 Claims. (Cl. 260-306.7)

1. A compound of the formula:



in which R is a member selected from the group consisting of 2-cyanoethyl, 2-carboxyethyl, 2-carbamoyl ethyl, benzyl and phenyl.

3,006,920 N-SUBSTITUTED 2,5-BISHALOMETHYL-PYRROLIDINES

Werner Richard Boehme, Somerville, and Edgar Slegmund Schipper, Highland Park, N.J., assignors to Ethicon, Inc., a corporation of New Jersey

No Drawing. Filed July 6, 1959, Ser. No. 824,954

9 Claims. (Cl. 260-313)

1. A member of the group consisting of 1-R-2,5-bishalomethylpyrrolidine wherein R is a member of the group consisting of lower alkyl, phenyl, halo-substituted phenyl, lower alkoxy-substituted phenyl, lower alkyl-substituted phenyl, benzyl and phenethyl, and therapeutically active addition salts.

3,006,921

TRIFLUOROMETHYL SUBSTITUTED PHTHALOCYANINES

Viktor Weinmayr, Landenberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 31, 1957, Ser. No. 706,235

11 Claims. (Cl. 260-314.5)

2. Polyhalogeno-poly(trifluoromethyl) copper phthalocyanine, wherein the halogen is of atomic number not exceeding 35 and the number of trifluoromethyl radicals is not greater than four.

3,006,922

PRODUCTION OF HIGHLY CHLORINATED PHTHALOCYANINES EASILY DISPERSIBLE IN SPINNING MELTS

Georg Geiger, Binningen, Basel, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland, a Swiss firm

No Drawing. Filed July 20, 1959, Ser. No. 828,063

Claims priority, application Switzerland Aug. 4, 1958

11 Claims. (Cl. 260-314.5)

1. A process for the preparation of highly chlorinated copper phthalocyanines which are easily dispersible in spinning melts, consisting essentially in heating finely dispersed highly chlorinated copper phthalocyanine in an organic solvent selected from the group consisting of dimethylformamide, trichlorobenzene, nitrobenzene, 1-chloro-naphthalene and 2-chloro-naphthalene, at a temperature of 150° C. to 250° C.

3,006,923

PROCESS FOR PREPARING LEUCO SULFURIC ACID ESTERS OF VAT DYESTUFFS

Otto Fuchs, Fritz Meltinger, and Friedrich Ische, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Sept. 16, 1958, Ser. No. 761,287

Claims priority, application Germany Sept. 19, 1957

10 Claims. (Cl. 260-316)

1. In the process for preparing leuco sulfuric acid esters of vat dyestuffs selected from the group consisting of unsubstituted anthrimide carbazoles, benzoylamino-substituted anthrimide carbazoles, alkoxy-substituted dibenzanthrones, halogen-substituted dibenzpyrene-7,14-diones, substituted thioindigo dyes and acylamino-substituted anthraquinones by reaction with a compound of the group consisting of sulfur trioxide and compounds yielding sulfur trioxide, the improvement which consists in carrying out said reaction at a temperature of about 10° C. to 60° C. in the presence of an organic carboxylic acid amide having a formula of the group consisting of the following two formulae



wherein R_1 and R_2 represent lower alkyl groups.

4. In the process for preparing the leuco sulfuric acid ester of 1,1',5,1''-trianthrimide-2,2',6,2''-carbazole, the step which consists in contacting the leuco compound of said vat dyestuff at a temperature of about 40° C. to 60° C. with sulfur trioxide, N-methylacetamide and ethylene chloride.

3,006,924

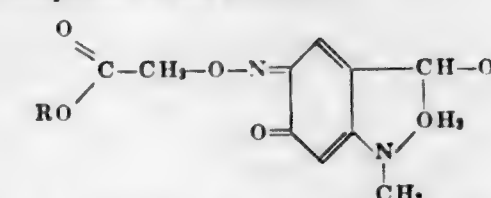
ADRENOCHROME DERIVATIVE

Desider Fleischhacker, New York, and Norman Barsel, Laurelton, N.Y., assignors to International Hormones, Inc., Hicksville, N.Y., a corporation of New York

No Drawing. Filed May 4, 1960, Ser. No. 26,682

3 Claims. (Cl. 260-319)

1. A compound of the formula:



wherein R is selected from the group consisting of hydrogen and a non-toxic water soluble pharmacologically salt forming cation.

3,006,925

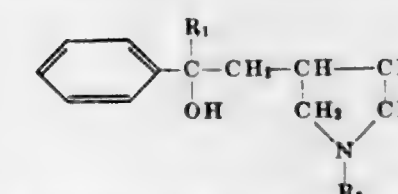
3-PYRROLIDYL ETHANOLS

Rolland Frederick Feldkamp, William Milner Coates, and John Raymond Corrigan, Evansville, Ind., assignors to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Mar. 13, 1959, Ser. No. 799,072

8 Claims. (Cl. 260-326.5)

1. A compound selected from the group consisting of 1-phenyl-1-substituted-2-(3-pyrrolidyl)ethanols having the formula



wherein R_1 is selected from the group consisting of phenyl, tolyl, and cyclohexyl, and R_2 is lower alkyl; and the therapeutically acceptable acid addition salts of said compound.

3,006,926

PRODUCTION OF CYCLIC ETHERS

Leslie C. Case, Lafayette, Ind., and Laurence F. Schmoey, Wilmington, Del., assignors to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,835

4 Claims. (Cl. 260-333)

1. A method of making cyclic ethers which comprises feeding a mixture of an alkanediol in which the hydroxyl groups are separated by a chain of from 2 to 5 carbon atoms and concentrated sulfuric acid into a hot aqueous solution of a caustic alkali and distilling off the cyclic ether thereby produced.

3. The method of making 3,3-dimethyloxetane which comprises feeding a mixture of 2,2-dimethylpropane-1,3-diol and concentrated sulfuric acid into a hot aqueous solution of a caustic alkali and distilling off the 3,3-dimethyloxetane thereby produced.

3,006,927

METHOD OF MAKING HYODESOXY-CHOLIC ACID

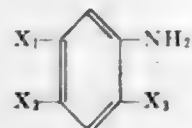
Horst Liebig, Berlin-Zehlendorf, Germany, assignor to Riedel-de Haen, A.G., Seelze, near Hannover, Germany

No Drawing. Filed May 11, 1961, Ser. No. 109,250

Claims priority, application Germany May 27, 1960

16 Claims. (Cl. 260—397.1)

1. Process for the isolation of hyodesoxycholic acid from crude bile acid mixtures which comprises the steps of esterifying a crude bile mixture, dissolving the resulting ester in an alkyl ether containing from 4 to 8 carbon atoms, adding to the ether solution an aromatic amine having the formula:



in which X_1 , X_2 and X_3 are selected from the group consisting of hydrogen and an alkyl group, and a fused benzene ring formed by X_1 and X_2 , to precipitate therefrom an ester-amine adduct of hyodesoxycholic acid, separating said ester-amine adduct, treating said adduct with alkali to liberate the ester, and acidifying to recover the hyodesoxycholic acid.

3,006,928

19-NOR-TESTERONE-17-TRANSHEXAHYDRO-TEREPHTHALATE

Andre Allais, Paris, and Charles Hoffmann, Nolsy le Grand (Seine and Oise), France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Continuation of applications Ser. No. 596,166, July 6, 1956, now Patent No. 2,959,601, dated Nov. 8, 1960, and Ser. No. 700,264, Dec. 3, 1957, now abandoned. This application Apr. 5, 1960, Ser. No. 20,021

Claims priority, application France Dec. 10, 1956

1 Claim. (Cl. 260—397.4)

The 19-nor-testosterone ester of trans-hexahydroterephthalic acid mono-n-butyl ester.

3,006,929

1-METHYL-17-ALKYL-19-NORTESTOSTERONES

Frank B. Colton, Chicago, Ill., and Daniel Lednicer, Durham, N.C., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 24, 1957, Ser. No. 685,806

1 Claim. (Cl. 260—397.4)

1-methyl-17-ethyl-19-nortestosterone which melts substantially at 200° C.

3,006,930

16-ETHERS AND 16,17-CYCLOBORATE ESTERS OF 16 α ,17 α -DIHYDROXYPROGESTERONE AND PROCESS OF PREPARING

Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 11, 1958, Ser. No. 779,532

10 Claims. (Cl. 260—397.4)

1. 16 α ,17 α -dihydroxyprogesterone 16 α ,17 α -cycloborate.

ESTRADIENE SERIES COMPOUNDS AND THEIR PRODUCTION

Masamoto Nishikawa, Nishinomiya, and Hikoichi Hagihara, Osaka, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Higashi-ku, Osaka, Japan

No Drawing. Filed Feb. 5, 1959, Ser. No. 791,259

Claims priority, application Japan Feb. 7, 1958

7 Claims. (Cl. 260—397.4)

3. $\Delta^{1,4}$ -androsteradiene-19-ol-3,17-dione 19-benzoate.

5. A process for producing $\Delta^{1,3,5(10)}$ -3-hydroxy-norpregnanes, which comprises subjecting a member selected from the group consisting of the 19-acetates and 19-benzoates of the corresponding $\Delta^{1,4}$ -3-keto-19-hydroxy-pregnanes to hydrolysis by the action of a member selected from the group consisting of hydrochloric and chlorosulfonic acid, and then subjecting the resultant hydrolyzate to the elimination of formaldehyde and simultaneous aromatization by the same member selected from the group consisting of hydrochloric acid and chlorosulfonic acid in the same reaction mixture.

3,006,932

PRODUCTION OF ERGOSTEROL FROM YEAST

Joseph Green, London, Stanley Albert Price, Crawley, and Elisha Eliazar Edwin, Surbiton, England, assignors to Vitamins Limited, London, England, a British company

No Drawing. Filed May 8, 1956, Ser. No. 583,358

Claims priority, application Great Britain May 12, 1955

11 Claims. (Cl. 260—397.25)

1. In a process for the production of ergosterol from yeast the step of subjecting the yeast while moist and while retaining yeast protein substantially unimpaired to the action of a catalytic, non-solvent amount of a water-soluble amino compound which is a mild base having a dissociation constant between 1×10^{-8} and 1×10^{-2} to liberate the bound ergosterol, the proportion of amino compound being between 0.5 and 5%, by weight, calculated on the yeast.

3,006,933

11 α -HYDROCARBYLSULFONYLOXY-3,5-PREGNADIENES

George R. Allen, Jr., Paramus, N.J., William S. Allen, Pearl River, N.Y., and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 9, 1958, Ser. No. 747,328

6 Claims. (Cl. 260—397.45)

1. The compound 3,17 α ,21-triacetoxy-16 β -bromo-11 α -p-toluenesulfonyloxy-3,5-pregnadiene-20-one.

3,006,934

PROCESS FOR THE PURIFICATION OF DARK-COLORED RAW FATTY ACID AMIDES

Gerhard Dieckelmann, Dusseldorf-Holthausen, Germany, assignor to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Feb. 17, 1959, Ser. No. 793,680

Claims priority, application Germany Feb. 22, 1958

11 Claims. (Cl. 260—404)

1. A process for the purification of a raw, dark colored fatty acid amide material, which comprises treating said fatty acid amide material in the molten state with an oxygen yielding agent selected from the group consisting of hydrogen peroxide and adducts thereof, perborates, percarbonates, performic acid, and peracetic acid at a temperature between about 100° C. and a temperature about 20° C. above the melting point of said material, accompanied by stirring of the molten material.

3,006,935

NEW POLYGLYCOL ETHER DERIVATIVES

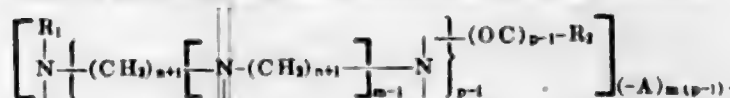
Otto Albrecht, Neuweil, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed July 9, 1956, Ser. No. 596,392

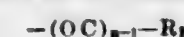
Claims priority, application Switzerland July 15, 1955

9 Claims. (Cl. 260—404.5)

1. As a levelling agent for dyeing with a complex metal dyestuff, in which dyestuff one atom of metal selected from the group consisting of chromium and cobalt is bound in complex union with two molecules of an azodyestuff and which complex metal dyestuff contains at most one member selected from the group consisting of carboxy group and sulfo group, a polyglycoether derivative which contains 40 to 100 $-\text{CH}_2\text{CH}_2\text{O}-$ groups and in its free base state corresponds to the formula



in which R_1 and R_2 represent aliphatic hydrocarbon radicals containing from 8 to 21 carbon atoms, R_1 and



together contain at least 20 carbon atoms, A represents a radical of the constitution



(in which k is a whole number), and m , n and p each represent a whole number of at the most 2.

3,006,936

POLYESTERS FROM EPOXY-CONTAINING OLIGOMER MATERIALS AND PROCESS OF MAKING SAME

Thomas W. Findley, La Grange, Ill., John L. Ohlson, Bedford, Mass., and Frank E. Kuester, La Grange, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Apr. 10, 1957, Ser. No. 651,821

5 Claims. (Cl. 260—406)

1. A method for preparing cross-linked polyesters comprising: heating and reacting an epoxy-containing fatty material having an average of more than 2 oxirane groups in internal open-chain portion of the fatty molecule with a stoichiometric amount of a trialkoxy boroxine.

3,006,937

ESTER OILS AND PROCESS FOR THEIR PREPARATION

Karl Buchner, Duisburg-Hamborn, and Heinrich Schwarz, Oberhausen-Sterkrade, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Filed Dec. 15, 1953, Ser. No. 398,416

Claims priority, application Germany Dec. 18, 1952

14 Claims. (Cl. 260—410)

1. A low pour-point oil suitable as a low-temperature lubricating oil, comprising a monocarboxylic acid-mono-hydric alcohol ester having a terpene compound, obtained by the catalytic addition of carbon monoxide and hydrogen to the alkylene double bond of a terpene hydrocarbon containing an alkylene radical, as one of the monocarboxylic acid and monohydric alcohol components, and an aliphatic compound as the other component.

3,006,938

REFINING OF TREE BARK WAX

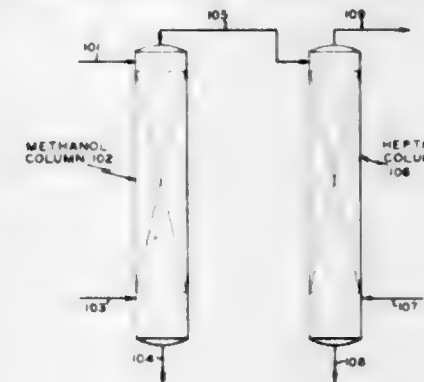
Fred W. West, Paterson, N.J., and Leo Friend, New Rochelle, N.Y., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed Nov. 28, 1956, Ser. No. 624,940

17 Claims. (Cl. 260—412.8)

1. A method of refining a Douglas fir bark derived wax product which is soluble in a normally liquid paraffin

having from 5 to 10 carbon atoms, which comprises admixing said wax product with an immiscible solvent system having a normally liquid paraffin phase in contact with an alcohol phase, said paraffin phase comprising a



paraffin having 5 to 10 carbon atoms, said alcohol phase comprising an alcohol having 1 to 4 carbon atoms, allowing the components of the wax to equilibrate between the phases and recovering a hard wax fraction from the paraffin phase.

3,006,939

PRODUCTION OF COMPOUNDS OF THE BETA-CYCLOGERANYLIDENE SERIES

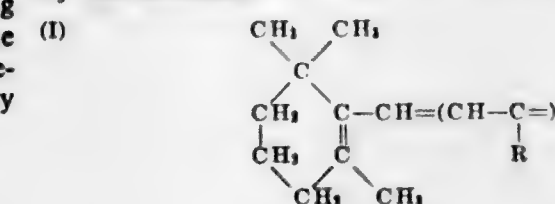
Horst Pommer and Wilhelm Sarnecki, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 10, 1959, Ser. No. 798,344

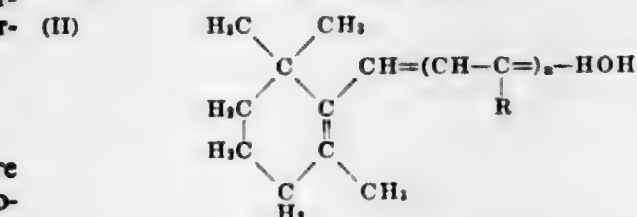
Claims priority, application Germany Jan. 17, 1957

15 Claims. (Cl. 260—413)

1. A process for the production of compounds containing the beta-cyclogeranylidene radical in which the oxygen of the carbonyl group belonging to a compound selected from the group consisting of aldehydes, ketones and formic acid esters is replaced by a group characterized by the formula



which comprises condensing (A) the reaction product of (a) a compound of the formula



wherein n in the above formulae represents one of the figures 0, 1, 2, 3 and 4 and R is selected from the group consisting of H and $-\text{CH}_3$, and (b) a triarylphosphine selected from the group consisting of triphenyl phosphine and a lower alkyl substituted triphenyl phosphine and (c) a proton donor not exerting an oxidizing action and not exerting a reducing action during the condensation, said proton donor being selected from the group consisting of a strong inorganic acid and a strong organic acid with (B) said compound bearing a carbonyl group and with (C) a proton acceptor as an acid binding agent said proton acceptor being selected from the group consisting of an inorganic base, an organic base, and an organo-metallic compound whereby a condensation product is formed containing said beta-cyclogeranylidene radical.

3,006,940

CYCLOPENTADIENYL METAL CARBONYL COMPOUNDS AND METHODS FOR THEIR PRODUCTION

Ernst Otto Flecher, Walter Hafner, and Hans-Otmar Stahl, Munich, Germany, assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 7, 1956, Ser. No. 569,975
Claims priority, application Germany Mar. 12, 1955
12 Claims. (Cl. 260-429)

1. As novel compositions of matter, organo-metallic compounds having the general formula



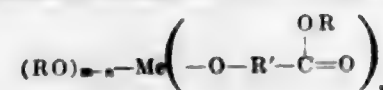
wherein C_5H_5 represents a cyclopentadienyl group, X represents a metal selected from the group consisting of chromium, molybdenum and tungsten, Z represents a member selected from the group consisting of hydrogen, alkali metals, and alkaline earth metals, and n is an integer having a value equal to the valence of Z.

3,006,941

STABILIZED METAL ALCOHOLATES

Anton Mudrak, Broadview Heights, and Larry E. Stevick, Parma, Ohio, assignors to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Aug. 22, 1960, Ser. No. 50,853
17 Claims. (Cl. 260-448)

1. As a new composition of matter the reaction product of a metal alcoholate and a lactone said new composition of matter having the following general formula:



wherein R is an alkyl radical selected from the group consisting of methyl, ethyl, isopropyl, secondary butyl, normal butyl, hexyl, 2-ethyl hexyl, lauryl, tridecyl, n-octadecyl, isooctadecyl, cetyl and stearyl, Me is a metal selected from the group consisting of aluminum, zirconium and titanium, R' is an alkylene radical having a carbon chain length of from C_2 to C_4 , n is an integer from 1 to a number equal to the valence of said metal, m is an integer equal to the valence of said metal, and the oxygen to metal linkages are such as to form compounds selected from the class consisting of chelate compounds and open chain compounds.

3,006,942

RECOVERY OF BY-PRODUCT ALUMINUM AND PREPARATION OF ALUMINUM ALKYL

John F. Nobis, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed July 11, 1957, Ser. No. 671,144
8 Claims. (Cl. 260-448)

1. In a process for preparation of trialkylaluminum by (1) reacting an alkyl aluminum halide with an amount of sodium at least stoichiometrically sufficient to provide a reaction product mixture consisting essentially of trialkylaluminum and, as by-products, sodium halide and elemental aluminum, and (2) separating the trialkylaluminum from said product mixture thereby providing a by-product mixture of said sodium halide and elemental aluminum, the method for recovery and utilization of the by-product elemental aluminum in said by-product mixture which comprises (3) reacting the elemental aluminum in said by-product mixture with an amount of an alkyl halide at least stoichiometrically sufficient to convert the by-product aluminum to a mixture of dialkylaluminum halide and monoalkylaluminum dihalide in the presence of sodium halide, and (4) subjecting the resulting mixture of mono- and di-alkyl aluminum halides in presence of sodium halide to reaction with an amount of sodium sufficient to convert a substantial amount of the alumi-

num content of said alkyl aluminum halides to trialkylaluminum to provide a reaction product mixture consisting essentially of said trialkylaluminum, sodium halide and aluminum.

3,006,943

PREPARATION OF PHENYL-SUBSTITUTED CHLOROSILANES

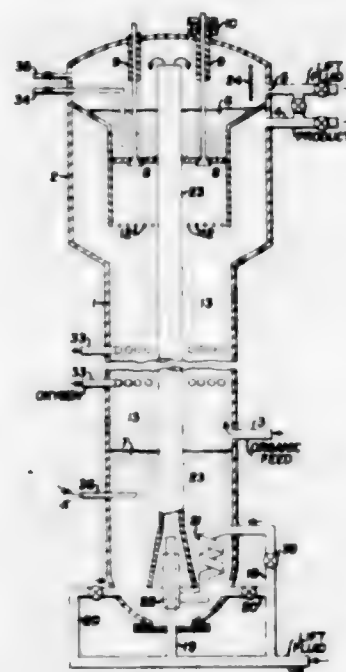
Siegfried Nitzsche and Paul Buchheit, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany
No Drawing. Filed Feb. 6, 1959, Ser. No. 791,541
Claims priority, application Germany Feb. 25, 1958
2 Claims. (Cl. 260-448.2)

1. The method of preparing phenyl substituted chlorosilanes consisting essentially of (1) separating as a mixture substantially all of the disilane by-products from the reaction of CH_3Cl and Si to produce methylchlorosilanes, (2) phenylating the said disilanes by mixing the disilanes with chlorobenzene in an inert high-boiling solvent and thereafter adding sodium metal to the mixture with concurrent heating and stirring to a temperature above the melting point of the sodium metal and (3) contacting the phenylated disilanes with chlorine.

3,006,944

HIGH TEMPERATURE OXIDATION

Merrell R. Fenske and Jennings H. Jones, State College, Pa., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,799
14 Claims. (Cl. 260-451)



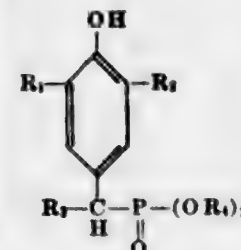
1. A process for oxidizing a methylenic hydrocarbon feed having 2 to 30 carbon atoms per molecule and at least 25% of these carbon atoms in the form of methylenic groups, which comprises mixing said hydrocarbon with an oxygen-containing gas such that the mole ratios of total free oxygen to total oxidizable feed exceed about 0.3, passing the mixture through a reaction zone at an average elevated temperature between about 500° and 750° C., also passing through the reaction zone relatively cool finely divided inert solids evenly dispersed throughout the reaction zone in a concentration of about 0.05 to 10.0 volume percent of solids per volume of reaction space and sufficient to maintain the reaction space throughout at a temperature below 750° C., the mixture being passed through the reaction zone at a rate such that the residence time of the mixture at the elevated temperature is between 1 and 20 seconds, and separating oxygenated and unsaturated compounds from the oxidized mixture.

3,006,945

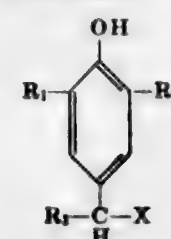
PREPARATION OF ORGANIC COMPOUNDS

Lloyd E. Goddard, Detroit, and Joseph D. Odenweller, Birmingham, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 1, 1960, Ser. No. 53,385
11 Claims. (Cl. 260-461)

1. A process for preparing compounds having the formula:



wherein R_1 is an alkyl radical having from 1 to 12 carbon atoms, R_2 is an alkyl radical having from 3 to 12 carbon atoms, R_3 is selected from the group consisting of hydrogen, alkyl radicals having from 1 to 12 carbon atoms and mononuclear aryl radicals having from 6 to 12 carbon atoms and R_4 is an alkyl radical having from 1 to 12 carbon atoms, said process comprising reacting a compound having the formula:



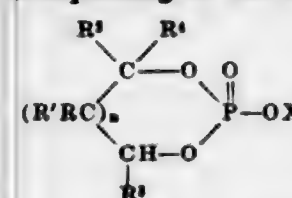
wherein R_1 is an alkyl radical having from 1 to 12 carbon atoms, R_2 is an alkyl radical having from 3 to 12 carbon atoms, R_3 is selected from the group consisting of hydrogen, alkyl radicals having from 1 to 12 carbon atoms and mononuclear aryl radicals having from 6 to 12 carbon atoms and X is a halogen, with a trialkyl phosphite wherein the alkyl groups each have from 1 to 12 carbon atoms.

3,006,946

PRODUCTION OF HETEROCYCLIC PHOSPHORUS-CONTAINING COMPOUNDS AND PRODUCTS

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 4, 1953, Ser. No. 340,399
16 Claims. (Cl. 260-461)

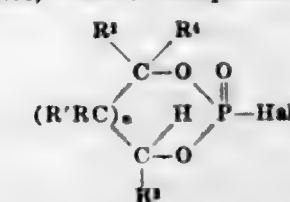
1. Heterocyclic phosphorus containing compounds having structures corresponding to the formula:



wherein R, R', R², R³, and R⁴, respectively, designates a radical of the class consisting of hydrogen and the lower alkyl radicals; n is an integer from 0 to 1; and X designates a radical of the class consisting of the alkyl radicals having 1 to 16 carbon atoms, and the cyano-substituted alkoxy-substituted, monocyclic aryloxy-substituted, haloalkoxy-substituted, monocyclic haloaryloxy-substituted, and phenyl-substituted lower alkyl radicals and the cyclohexyl radical.

7. Process for producing 2-substituted oxy derivatives of heterocyclic phosphorus-containing compounds, which comprises reacting, in the substantial absence of added water, a monohydric compound of the class consisting of the alkanols containing 1 to 16 carbon atoms and the cyano-substituted, alkoxy-substituted, monocyclic aryl-

oxy-substituted, haloalkoxy-substituted, monocyclic haloaryloxy-substituted and phenyl-substituted lower alkanols and cyclohexanol, with a compound of the formula:



wherein R, R', R², R³, and R⁴, respectively, designates a radical of the class consisting of hydrogen and the lower alkyl radicals; Hal designates a radical of the class consisting of chlorine and bromine; and n is an integer of from 0 to 1 and eliminating the by-product hydrogen halide as formed, the said monohydric compound and the phosphorus-containing compound being reacted in the ratio from around 1 to around 2.6 mols of the former per mol of the latter, at temperatures within the range from 0° C. to around 125° C.

3,006,947

PRODUCTION OF HETEROCYCLIC PHOSPHORUS-CONTAINING COMPOUNDS

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 12, 1957, Ser. No. 702,276
15 Claims. (Cl. 260-461)

1. Process for producing heterocyclic phosphorus-containing esters, which comprises reacting in approximately equimolecular proportions (1) an ester of the class consisting of the dichlorophosphate, dibromophosphate, dichlorothionophosphate and dibromothionophosphate esters of a monohydroxy compound of the class consisting of (a) the aliphatic unsubstituted monohydric alcohols containing 1 to 18 carbon atoms, and (b) the lower alkanols substituted on one to two carbon atoms by one to two radicals of the class consisting of the chloro, bromo, cyano, alkoxy, chloroalkoxy, bromoalkoxy, phenoxy, tolyloxy, and corresponding phenoxy and tolyloxy radicals substituted on one to two carbon atoms of the ring by a member of the class consisting of the chloro and bromo radicals; (c) the lower alkenols; (d) the monohydric phenols having 6 to 8 carbon atoms; and (e) the corresponding monohydric phenols having one to two carbon atoms of the carbocyclic ring substituted by a member of the class consisting of the chloro, bromo and nitro radicals and alkyl radicals having one to 12 carbon atoms, with (2) a diol of the class consisting of the 1,3-alkanediols having from 3 to 32 carbon atoms; corresponding 1,3-alkanediols substituted on at least one of the carbon atoms by at least one member of the class consisting of chlorine, bromine, and the phenyl and benzyl radicals; the 2-(1-hydroxyalkyl)cyclohexanols having 1 to 20 carbon atoms in the hydroxyalkyl group; and corresponding 2-(1-hydroxyalkyl)cyclohexanols substituted on 1 to 2 of the carbon atoms of the cyclohexanol ring by at least one lower alkyl radical, in the presence of a volatile solvent inert to the reactants, at temperatures within the range from around 0° C. to around 125° C. and eliminating the by-product hydrogen halide as formed.

3,006,948

SYNTHESIS OF CYANOACETYLENE

John Happel, Yonkers, Charles J. Marsel, New York, and Anthony A. Reidlinger, Richmond Hill, N.Y. (all % Dept. of Chemical Engineering, New York University, New York 53, N.Y.)
No Drawing. Filed Apr. 23, 1958, Ser. No. 730,243
2 Claims. (Cl. 260-465.9)

1. A process for the preparation of cyanoacetylene which comprises in combination the steps of reacting propargyl aldehyde with hydroxylamine in an aqueous reaction medium at a pH value of 5-9 at temperatures in

the range of 0° to 50° C., subjecting the resulting propargyl aldoxime to dehydration in the presence of acetic anhydride, and recovering cyanoacetylene therefrom.

3,006,949

PROCESS FOR THE PURIFICATION OF NITROGEN-CONTAMINATED ALKANEDIOIC ACIDS AND ESTERS

George P. Brown, Jr., West Deer Township, Allegheny County, Harry J. Elder, Tarentum, and Norman W. Franke, Penn Hills, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed July 1, 1958, Ser. No. 745,804

3 Claims. (Cl. 260-485)

1. A process for purifying a compound selected from the group consisting of alkanedioic acids and the methyl and ethyl alkanedioic acid esters derived therefrom contaminated with nitrogen-containing compounds, said acids having been obtained as a result of the nitric acid oxidation of a saturated aliphatic hydrocarbon, which comprises mildly hydrogenating said compound in the presence of about one-tenth to 50 percent by weight, based on the charge, of a hydrogenation catalyst selected from the group consisting of cobalt, nickel, platinum and palladium and about 1/2 to 20 standard cubic feet per hour of hydrogen per pound of charge being treated per hour at a pressure of about atmospheric to 2000 pounds per square inch gauge and a temperature of about 50° to 300° C. for about 1/10 hour to 20 hours, washing said hydrogenated ester with an acidic solution at a temperature of about 0° to 50° C. and thereafter contacting a member of the group consisting of the hydrogenated acid and the washed material with carbon, whereby substantially all of said nitrogen-containing contaminants are removed from the charge being treated.

3,006,950

PROCESS OF MAKING METHYL METHACRYLATE

Francis Weiss and Jacques Modiano, Pierre-Benite, and Jacques Marlon, Lyon, France, assignors to Societe d'Electro-Chimie, d'Electrometallurgie et des Aciéries Electriques d'Ugine, Paris, France, a corporation of France

No Drawing. Filed July 20, 1960, Ser. No. 43,993

Claims priority, application France July 31, 1959

2 Claims. (Cl. 260-486)

1. A process of making methyl methacrylate by esterification in the liquid phase of a methacrylamide sulphuric solution obtained from acetone cyanhydrine and sulphuric acid, which comprises adding water and methanol to said methacrylamide sulphuric solution, the water added amounting to 1 to 6 moles per mole of acetone cyanhydrine, and reacting the resulting mixture under super-atmospheric pressure and entirely in the liquid phase at a temperature between 90 and 150° C. to produce methyl methacrylate and methacrylic acid, decanting the organic phase and separating directly, by fractional distillation, the pure methyl methacrylate contained in it from the attending methacrylic acid.

3,006,951

PHARMACOLOGICAL COMPOUNDS

Emilio Testa, Milan, Italy, assignor to

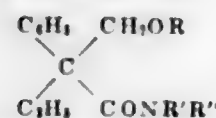
Lepetit, S.p.A., Milan, Italy

No Drawing. Filed July 14, 1958, Ser. No. 748,149

Claims priority, application Great Britain July 23, 1957

7 Claims. (Cl. 260-488)

1. A compound of the formula



wherein R is a member of the group consisting of hy-

drogen and lower aliphatic carboxylic acid acyls, R' and R'' are members of the group consisting of hydrogen, lower alkyl groups, aralkyl groups and groups in which R' and R'' are joined to each other to form a monocyclic heterocyclic group with the nitrogen in the ring, of the group consisting of piperidino, piperazino and morpholino.

3,006,952

FILTRATION PROCESS

Richard S. Logan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 25, 1957, Ser. No. 698,605

9 Claims. (Cl. 260-504)

1. The method of filtering a metal petroleum sulfonate selected from the group consisting of alkaline earth metal petroleum sulfonates, sodium petroleum sulfonates, lithium petroleum sulfonates, chromium petroleum sulfonates, zinc petroleum sulfonates, nickel petroleum sulfonates and lead petroleum sulfonates, said petroleum sulfonate containing inorganic salts which comprises forming a slurry containing said salts, said sulfonate and a hydrocarbon solvent containing 10 to 50 percent by weight of a dialkyl ketone having 4 to 10 carbon atoms, passing said slurry through a filter medium having a layer of solids thereon, and recovering a filtrate of high ash content, the cation of said inorganic salts being the same as that of said sulfonate.

3,006,953

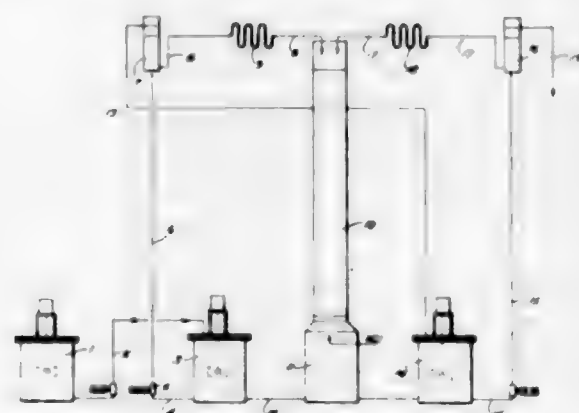
CHLOROALKYLATION OF ORGANIC COMPOUNDS

Otto Grosskinsky, Dortmund-Kirchhorde, Anton Benning, Dortmund-Eving, and Winfried Glass, Dortmund-Lindenhorst, all in Germany, assignors to Bergwerksverband G.m.b.H., Essen, Germany

Filed May 1, 1958, Ser. No. 732,215

Claims priority, application Germany May 2, 1957

8 Claims. (Cl. 260-521)



1. A method of chloroalkylating organic compounds, comprising the steps of heating a reaction mixture consisting essentially of an aromatic organic compound adapted to be chloroalkylated and being selected from the group consisting of benzene, toluene, or o-, m- and p-xylene, ethylbenzene, propylbenzene, cumene, pseudocumene, mesitylene, durene, isodurene, prehnitene, p-cumene, n-butylbenzene, tert-amylbenzene, p-tert-butyltoluene, 1,3-dimethyl-5-tert-butylbenzene, 1,3,5-triethylbenzene, 1,3,5-triisopropylbenzene, cyclohexylbenzene, biphenyl, hydrindene, naphthalene, α-methylnaphthalene, β-methylnaphthalene, Tetralin, acenaphthene, anthracene, phenanthrene, 1,2-benz-anthracene, benzylchloride, benzylbromide, phenol, o-cresol, p-cresol, o-, p- and m-nitrophenols, salicylic acid, m- and p-hydroxybenzoic acid, n-butylphenylether, methylmesitylether, hydroquinonedimethylether, anisole, phenylether, methylphenylthioether, methyl-p-tolyl-thioether, salicaldehyde, anisaldehyde, 2,4-dimethylacetophenone, acetomesitylene,

benzylmesitylene, and 2,4,6-triethylacetophenone, an aqueous hydrogen chloride solution and an aldehyde selected from the group consisting of formaldehyde, acetaldehyde and polymers thereof at a temperature of about 50-90° C. so as to cause conversion of said aromatic organic compound to the corresponding chloroalkylated derivative thereof; cooling said reaction mixture to a temperature which is at most room temperature; introducing gaseous hydrogen chloride into the thus-cooled reaction mixture until said reaction mixture contains at least 30% hydrogen chloride; reheating said reaction mixture to a temperature above about 50° C.; and repeating the cooling, saturating and reheating steps until substantially complete conversion of said aromatic organic compound to the corresponding chloroalkylated derivative thereof.

3,006,954

UREA AND THIOUREA COMPOUNDS

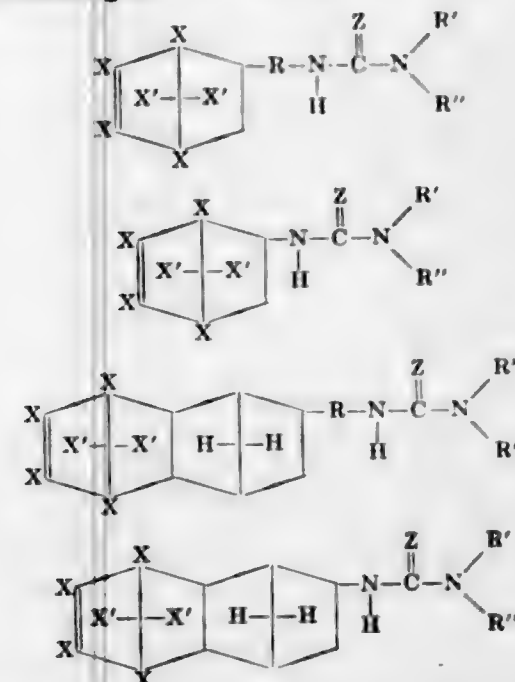
David E. Ramey and Milton Silverman, Modesto, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,786

10 Claims. (Cl. 260-552)

1. 1 - (1,4,5,6,7,7-hexachlorobicyclo(2.2.1)hept-5-en-2-ylmethyl)-2-thiourea.

10. A compound of the formula selected from the group consisting of



wherein X is halogen, X' is selected from the group consisting of hydrogen, halogen and lower alkoxy, R is alkylene of from 1 to 10 carbon atoms, Z is selected from the group consisting of oxygen and sulfur, and R' and R'' are individually selected from the group consisting of hydrogen, alkyl of from 1 to 10 carbon atoms, alkenyl of from 1 to 10 carbon atoms and hydroxyethyl.

3,006,955

N'-CYCLOHEXYL OR OCTYL, N'-β-HYDROXYETHYL OR PROPYL, N,N'-DIMETHYL OR DIETHYL-UREA

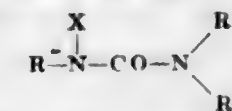
Gustav Steinbrunn, Schwegenheim-Speyer, Adolf Fischer, Mutterstadt, and Herbert Stammeyer, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,568

Claims priority, application Germany Dec. 5, 1957

5 Claims. (Cl. 260-553)

1. Urea derivatives of the formula



wherein R is a member selected from the group con-

771 O.G.—92

3,006,956

PROCESS FOR THE PRODUCTION AND PURIFICATION OF DIMETHYLACYLAMIDES

Arthur W. Campbell, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,796

7 Claims. (Cl. 260-561)

1. In a process for preparing substantially pure lower dimethylacylamides, the steps which comprise reacting dimethylamine with a lower alkanolic acid at a molar ratio of dimethylamine to lower alkanolic acid of about 1.2:1 to about 1.6:1 at temperatures ranging from 190° to 400° C., and pressures ranging from 900 p.s.i. to 1200 p.s.i. and recovering the desired dimethylacylamide in substantially pure form by distilling the resulting reaction mixture.

3,006,957

PROCESS FOR PREPARATION OF BIS(TRINITROETHYL)AMINE

Wallace J. Murray and Charles W. Sauer, Cambridge, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Filed Mar. 11, 1957, Ser. No. 644,990

7 Claims. (Cl. 260-583)

1. A process for making bis(trinitroethyl)amine which comprises preparing an aqueous suspension of a nitroform compound having the formula $\text{M}-\text{C}(\text{NO}_2)_3$, wherein M is a member of the group consisting of H, Li, Na, K, and NH_4 , mixing said nitroform compound suspension with hexamethylenetetramine in a ratio of six moles of nitroform compound to at least one mole of hexamethylenetetramine in the presence of sufficient acid to maintain the pH of the mixture not greater than 2, cooling the resulting reaction mixture to precipitate bis(trinitroethyl)amine, and recovering said bis(trinitroethyl)amine.

3,006,958

PRODUCTION OF CYCLOHEXANONE

Guenter Poehler, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,603

4 Claims. (Cl. 260-586)

1. A process for the production of cyclohexanone which comprises reacting a compound selected from the group consisting of aniline and nitrobenzene with water and hydrogen in the presence of a hydrogenation catalyst at a temperature of from about 150° C. to about 300° C., condensing the reaction product which contains cyclohexanol, stripping off gaseous constituents and ammoniacal water, dehydrogenating the reaction product with water in the presence of a dehydrogenation catalyst at elevated temperatures using a multi-stage dehydrogenation procedure wherein the temperature in the first stage is between 150° and 300° C., wherein the temperature is higher in each successive stage, and wherein the temperature in the second and following stages is between about 240° and 380° C., the said reaction product being condensed between each successive dehydrogenation stage in order to strip it of gaseous constituents and ammoniacal water.

3,006,959

2-HYDROXY-4-N-DODECYLOXYBENZOPHENONE
John Brian Armitage, Rolf Dessauer, and Archibald Miller Hyson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,274
1 Claim. (Cl. 260-591)
A new composition of matter, 2-hydroxy-4-n-dodecyl-oxybenzophenone.

3,006,960

PREPARATION OF ALKOXYALDEHYDES
Daniel B. Luten, Jr., Berkeley, and Jan O. Konecny, Oakland, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Aug. 19, 1959, Ser. No. 834,659
8 Claims. (Cl. 260-602)

1. A process for the preparation of beta-ether-substituted propionaldehydes, which process comprises bringing together in the liquid phase, in which the amount of water is less than about 15% of the weight of the reaction mixture, acrolein and an unsubstituted aliphatic alcohol containing from 1 to 25 carbon atoms and only carbon, oxygen and hydrogen atoms and free from acetylenic unsaturation, at a temperature of from about 10° to about 60° C. in the presence of, as catalyst, a mixture of at least one beta-alkoxymonocarboxylic acid containing not more than 20 carbon atoms and not more than about 6 carbon atoms in said alkoxy group and at least one alkali metal salt of such an acid, the said mixture of acid and salt containing not more than one mole of said salt per mole of said acid therein.

3,006,961

BORINE CARBONYLS AND THEIR PRODUCTION

Walter Reppe, Heidelberg, and August Magin, Mutterstadt-Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen am Rhine, Rheinland-Pfalz, Bundesrepublik Deutschland
No Drawing. Filed Aug. 11, 1959, Ser. No. 832,901
Claims priority, application Germany Aug. 13, 1958
12 Claims. (Cl. 260-606.5)

1. A compound of the general formula



wherein n is an integer between 1 and 4, R_1 represents a radical selected from the group consisting of hydrogen, an alkyl radical with 2 to 18 carbon atoms, a cycloalkyl radical with 5 to 12 carbon atoms and an aralkyl radical, R_2 represents a radical selected from the group consisting of hydrogen, an alkyl radical with 2 to 18 carbon atoms, a cycloalkyl radical with 5 to 12 carbon atoms and an aralkyl radical and R_3 represents a radical selected from the group consisting of an alkyl radical with 2 to 18 carbon atoms, a cycloalkyl radical with 5 to 12 carbon atoms and an aralkyl radical.

3,006,962

PRODUCTION OF SULFOXIDES AND SULFONES

Herman S. Schultz, Saul R. Buc, and Harlan B. Freyermuth, all of Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 22, 1959, Ser. No. 861,215
16 Claims. (Cl. 260-607)

1. In a process for producing sulfoxide- and sulfone-containing compounds comprising reacting one mole of a compound containing at least one divalent sulfur atom bonded to two carbon atoms with from 1 to 2 moles of hydrogen peroxide for each such sulfur atom in said compound the improvement comprising carrying out the

reaction at a pH of about 0.5 to 6 in the presence of a catalytic amount of a member of the group consisting of the vanadic, polyvanadic and peroxyvanadic acids and their alkali metal, alkaline earth metal, ammonium and amine salts.

3,006,963

PRODUCTION OF SULFOXIDES AND SULFONES

Saul R. Buc, Harlan B. Freyermuth, and Herman S. Schultz, all of Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 22, 1959, Ser. No. 861,217
20 Claims. (Cl. 260-607)

1. In a process for producing sulfoxide- and sulfone-containing compounds comprising reacting one mole of a compound containing at least one divalent sulfur atom bonded to two carbon atoms with from 1 to 2 moles of hydrogen peroxide for each such sulfur atom in said compound, the improvement comprising carrying out the reaction in the presence of a catalytic amount of a member of the group consisting of the tungstic acids and their alkali metal, alkaline earth metal, ammonium and amine salts.

3,006,964

PROCESS FOR FLUOROALKYL SULFIDES

Robert E. Oesterling, Flourtown, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 24, 1959, Ser. No. 841,949
10 Claims. (Cl. 260-608)

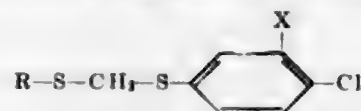
1. A process for the preparation of a compound of structure $R_fCH_2S-CH_2-R_f$ where R_f is a perfluoroalkyl group containing from one to seventeen carbon atom which comprises reacting in dimethylsulfoxide a 1,1-dihydroperfluoroalkyl tosylate containing from one to eighteen carbon atoms in said dihydroperfluoroalkyl group with an alkali metal sulfide.

3,006,965

THIOMETHYLAIS AND PREPARATION THEREOF

Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Feb. 12, 1958, Ser. No. 714,696
Claims priority, application Germany Mar. 1, 1957
5 Claims. (Cl. 260-609)

5. A thiomethylal of the general formula



wherein R stands for a member selected from the group consisting of cycloalkyl radicals containing 5 to 6 carbon atoms, chloro-substituted lower alkyl radicals and chloro-substituted phenylmercaptomethyl radicals; and X stands for a member selected from the group consisting of hydrogen and chlorine.

3,006,966

PREPARATION OF MERCAPTANS

Thomas F. Doumani, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Original application Apr. 20, 1953, Ser. No. 349,957. Divided and this application June 16, 1958, Ser. No. 742,059
22 Claims. (Cl. 260-609)

1. A process for preparing methyl mercaptan which comprises passing a feed mixture consisting essentially of methanol and hydrogen sulfide over a strongly alkaline catalyst at a temperature between about 400° and 1200°

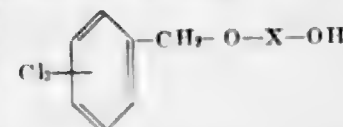
F. and at a contact time between about 0.005 and 10 seconds, and recovering methyl mercaptan from the reaction products, said catalyst being selected from the class consisting of sodium hydroxide, potassium hydroxide and the oxides, sulfides, carbonates and phosphates of the alkali metals.

3,006,967

TRICHLORINATED BENZYLALCOHOLS

Jack S. Newcomer, Wilson, Edward D. Weil, Lewiston, Edwin Dorfman, Grand Island, and Jerome Linder, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Feb. 4, 1959, Ser. No. 791,015
2 Claims. (Cl. 260-611)

1. Compounds having the general formula:



wherein X is a member selected from the group consisting of alkylene, alkylene-oxy-alkylene, and hydroxyalkylene radicals, said radicals containing a total of from two to six carbon atoms inclusive.

3,006,968

PRODUCTION OF ETHINYL IONOL

Heinrich Pasedach, Ludwigshafen (Rhine), and Matthias Seefelder, Ludwigshafen (Rhine), Gartenstadt, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Feb. 19, 1959, Ser. No. 749,268
Claims priority, application Germany Feb. 22, 1958
5 Claims. (Cl. 260-617)

1. A process for the production of ethinyl ionol which comprises reacting ionone with acetylene at a temperature of between 0° C. and 40° C. in the presence of monosodium acetylide in an inert solvent which dissolves in each part by volume at least 10 parts by volume of acetylene as determined at normal pressure and at 20° C.

3,006,969

ALKYLATED PHENOLS

Kenneth F. Koeltz, Concord, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Nov. 13, 1956, Ser. No. 621,523
7 Claims. (Cl. 260-624)

1. A process for preparing a 2,6-dialkyl-para-alkylphenol from a 2,6-dialkyl-para-alkoxyalkylphenol, which comprises hydrogenolyzing the 2,6-dialkyl-para-alkoxyalkylphenol in the presence of a hydrogenation catalyst at a temperature in excess of about 110° C. but below about 250° C. and a pressure from about 100 p.s.i.g. to about 3000 p.s.i.g.

3,006,970

CATALYTIC HYDRATION OF ALCOHOLS

Harold Beuther, Pen Hills, Raymond C. Odioso, Glenshaw, Bruce K. Schmid, McCandless Township, Allegheny County, and Robert C. Zabor, Glenshaw, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed July 7, 1958, Ser. No. 746,671
6 Claims. (Cl. 260-641)

1. A process for the hydration of olefin to alcohol comprising contacting a catalyst comprising a sulfur containing composition having at least one metal selected from the group consisting of group VI and group VIII

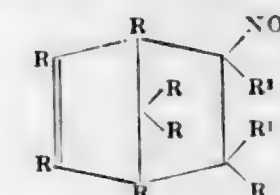
metals with olefin and water at a temperature of 300° F. to 700° F., a pressure of 500 to 20,000 pounds per square inch gauge and a water to olefin molal ratio of 0.5 to 50, said catalyst prepared by contacting the oxide of at least one metal from the group consisting of group VI and group VIII metals with a compound from the group consisting of hydrogen sulfide, methyl sulfide, propyl sulfide, ammonium sulfide and propyl mercaptan.

3,006,971

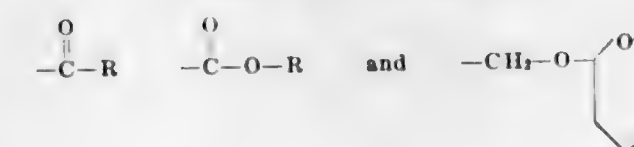
PREPARATION OF BICYCLIC NITRO COMPOUNDS

Henry Feuer and Robert Miller, West Lafayette, Ind., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation of Indiana
No Drawing. Filed June 19, 1958, Ser. No. 744,630
10 Claims. (Cl. 260-644)

1. The process for the production of bicyclo nitro compounds having the following structural formula:



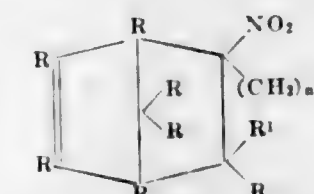
where R is selected from the group consisting of hydrogen, alkyl and aryl; R^1 is selected from the group consisting of hydrogen, alkyl, aryl, perhalo alkyl,



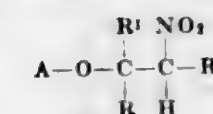
R^2 is selected from the group consisting of hydrogen, alkyl, aryl, halo, perhalo alkyl, $-\text{NO}_2$, nitro alkyl, $-\text{CH}_2-\text{O}-\text{X}$, $-\text{CH}(\text{OR})_2$, $-\text{CN}$,



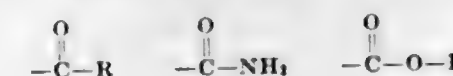
and the radical:



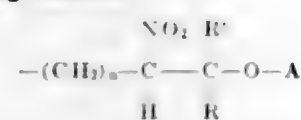
where n is an integer having a value ranging from 1 to 10, where X is selected from the group consisting of alkyl having from 1 to 10 carbon atoms and tetrahydropyran, and where R^3 is selected from the group consisting of alkyl having from 1 to 10 carbons, which comprises reacting in the presence of a weak base, a nitro-ester having the following structural formula:



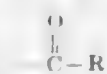
where R^4 is selected from the group consisting of hydrogen, alkyl, aryl, halo, perhalo alkyl, nitro, nitro alkyl, $-\text{CH}_2\text{OX}$, $-\text{CH}(\text{OR})_2$, $-\text{CN}$,



and the following radical:



where A is selected from the group consisting of



—SO₂R, —SO₃H, —NO₂, and phosphoric acid radicals; with a cyclopentadiene having the following structural formula:



3,006,972

COUPLING OF AROMATIC RINGS

Ellis K. Fields, Chicago, Ill., and Carl Serres, Jr., Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Aug. 21, 1959, Ser. No. 835,195
12 Claims. (Cl. 260—649)

1. A process for the preparation of a diarylmethane by reacting an aromatic compound with a benzyl halide wherein the aryl groups of the diarylmethane are the same and are derived from the aromatic reactant by the removal of one hydrogen therefrom which comprises: reacting under anhydrous conditions at a temperature above 0° C. in the presence of a catalyst comprising an aluminum-heavy metal couple wherein the heavy metal component is a metal below hydrogen in the electromotive series, more than two moles of an aromatic compound having at least one hydrogen attached to an aromatic ring carbon and is selected from the aromatic compound class consisting of aromatic hydrocarbons and nuclear substituted derivatives thereof free from meta-oriented nuclear substituents, for each mole of a benzyl halide containing one to three halomethyl groups, and recovering a diarylmethane whose aryl groups are the same and are derived from the aromatic compound reactant wherein said process the aromatic compound is chosen with respect to said benzyl halide so that, when the benzyl halide contains only one halomethyl group and the benzene ring is otherwise free from nuclear substituents, said aromatic compound contains at least one nuclear substituent, and when the benzyl halide contains at least one nuclear substituent on the benzene ring in addition to the halomethyl group, said aromatic compound is any member of said defined class thereof.

3,006,973

HALOGENATED ORGANIC COMPOUNDS

Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed May 1, 1959, Ser. No. 810,211
20 Claims. (Cl. 260—653.8)

1. A method for preparing halogenated iodides which comprises the step of reacting an olefin having a double bond with at least two fluorine atoms on the carbon atoms connected by said double bond with a mixture of iodine and iodine pentafluoride in which the molar ratio of iodine:iodine pentafluoride is at least 1:1.

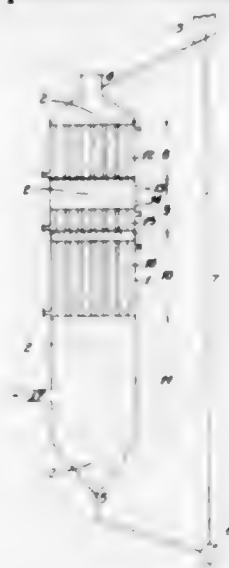
3,006,974

PROCESS OF HALOGENATION

Charles De Prez, Uccle-Brussels, Belgium, assignor to Solvay & Cie, Brussels, Belgium, a Belgian company
Filed Dec. 30, 1958, Ser. No. 783,973
Claims priority, application Belgium Jan. 8, 1958
6 Claims. (Cl. 260—656)

1. A process for the preparation by addition chlorination of chlorinated olefinic hydrocarbons selected from the

group consisting of monochloroethylene and 3-chloropropene, which comprises providing a movable bed of an adsorbent which has been impregnated with a catalyst favorably affecting the rate of reaction between chlorine and an olefin selected from the group consisting of ethylene and propylene, said movable bed comprising from the top to the bottom, a cooling zone for the adsorbent, an adsorption and reaction zone, a pyrolysis zone maintained at a temperature between 350 and 500° C., and a separation zone for separating the formed products from the moving bed, feeding gaseous chlorine at the top of the adsorption and reaction zone, feeding said olefin into the middle of the adsorption and reaction zone, wherein the two gases are interacted in a molecular ratio of substantially 1:1 to produce a saturated chlorinated hydro-



carbon selected from the group consisting of 1,2-dichloroethane and dichloropropane, submitting said saturated chlorinated hydrocarbon to pyrolysis in the pyrolysis zone, separating the produced mixture of chlorinated compounds and hydrogen chloride from the movable bed in the separation zone, rectifying said mixture of chlorinated products to separate said product selected from the group consisting of monochloroethylene and 3-chloropropene in a pure state from the remainder of said mixture, recycling into the pyrolysis zone the remainder of said mixture for cracking the same into chlorinated olefinic hydrocarbons selected from the group consisting of monochloroethylene and 3-chloropropene, and recycling the adsorbent into the cooling zone by means of an ascending stream of hydrogen chloride.

3,006,975

DEHYDROGENATION PROCESS

Lloyd B. Ryland, El Cerrito, and Carroll Z. Morgan, Alameda, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Dec. 17, 1959, Ser. No. 860,085
7 Claims. (Cl. 260—669)

6. Process for the catalytic dehydrogenation of a reactant selected from the group consisting of olefinic hydrocarbons and alkyl aromatic hydrocarbons to the corresponding diolefin and vinyl derivatives, respectively, which comprises passing said reactant together with steam at a temperature between about 560 and 690° C. and a gaseous hourly space velocity between about 150 and 1500 and a pressure between about 1/4 to 3 atmospheres absolute for a period of time over a catalyst consisting essentially of iron oxide and from about 2 to 20% of a material selected from the group consisting of phosphate and arsenate and mixtures thereof, said phosphate and arsenate being chemisorbed in water-insoluble form amorphous to X-rays, and intermittently passing over said catalyst at essentially the same reaction temperature in the absence of said reactant a mixture of steam and air containing about 1 to 10% oxygen.

3,006,976

CONDENSATIONS OF ALKYL AROMATICS AND OLEFINS

Alfred W. Shaw, Moraga, and George Holzman and Warren V. Bush, Walnut Creek, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,948
12 Claims. (Cl. 260—671)

1. A process for producing n-propylbenzenes and 3-phenylpentane which comprises condensing ethylene and toluene at a condensation temperature of from about 100° to about 350° C. and at a condensation pressure of from about 5 to about 250 atmospheres in the presence of a catalyst selected from the group consisting of the alkali metal pairs potassium and cesium, lithium and cesium, and lithium and potassium.

3,006,977

DISPROPORTIONATION OF TOLUENE

David A. McCaulay, Homewood, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Aug. 22, 1960, Ser. No. 51,223
10 Claims. (Cl. 260—672)

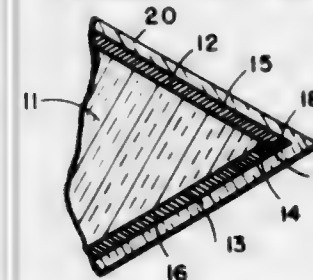
1. A process for the disproportionation of toluene to produce a polymethyl benzene selected from the class consisting of xylene and mesitylene which process comprises contacting toluene, at a temperature in the range of from about 80° C. to about 125° C. at a pressure sufficient to maintain HF in the liquid state, with at least about 0.3 part by weight of BF₃ and at least about 0.2 part by weight of liquid HF per part by weight of toluene desired to be converted for a period of time sufficient to disproportionate toluene into said polymethyl benzene, and separating said polymethyl benzene as a disproportionation product.

ELECTRICAL

3,006,978

HIGH TEMPERATURE THIN FILM THERMOCOUPLE

Thomas F. McGrath and John Charles Sessler, Canoga Park, Calif., assignors to North American Aviation, Inc.
Filed Nov. 14, 1958, Ser. No. 773,934
7 Claims. (Cl. 136—4)

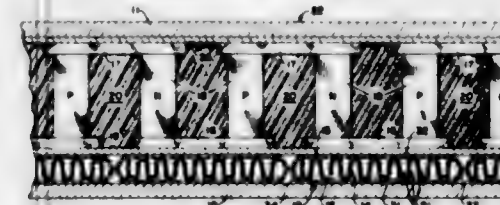


1. A high temperature thermocouple comprising an insulative solid core member, said core member being tapered at its forward end forming a first and a second planar surface portion which meet at a common edge, a first and a second thin film of different thermo-electric materials located on said first and second surface portions respectively, said first and second thermo-electric materials each having an outer forward edge lying in a plane which substantially bisects the angle between said first and second surface portions, said forward edges connected to each other at said common edge forming a hot junction; whereby extremely brittle thermo-electric materials may be used and will expand and contract with said core over wide ranges of temperature changes.

3,006,979

HEAT EXCHANGER FOR THERMOELECTRIC APPARATUS

Donald G. Rich, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 9, 1959, Ser. No. 805,220
4 Claims. (Cl. 136—4)



1. In a thermoelectric apparatus, a unitary thermoelectric panel assembly comprising a plurality of thermoelectric elements disposed in parallel spaced relation, a plurality of jumpers, pairs of said thermoelectric elements being joined at one end by contact with a face of the

jumpers, a sheet of electrical insulation in facewise contact with the opposite face of the jumpers, a plurality of heat exchange members forming a fluid circuit for a heat exchange fluid, each of said heat exchange members having a pair of substantially flat spaced parallel relatively thin metal sides and a pair of ends forming a metal tube adapted to carry a heat exchange fluid, one of said sides of each of said heat exchange members contacting and being in facewise engagement with a side of said sheet of electrical insulation on the side thereof opposite that in contact with said jumpers, a pressure plate contacting the other flat side of said heat exchange members, each said heat exchange member comprising a thin wall metal tube and having disposed therein a sinusoidally corrugated sheet metal partition forming an internal fin, the corrugations of said internal fin contacting both said flat sides of said heat exchange members internally thereof forming a heat conducting path to enhance heat transfer with a fluid medium passed through the interior of said member, said contact extending along a plurality of lines extending axially of said heat exchange members and forming a plurality of axial flow paths within each said member adapted to pass a fluid in heat exchange relation with said jumpers and said pressure plate, said sinusoidal sheet metal partition serving to reinforce said heat exchange members so that the heat exchange members comprise a rigid fluid passage and the sides thereof may be relatively thin walled to improve the heat transfer characteristics of said thermoelectric apparatus.

3,006,980

PRINTED BATTERY

Joseph B. Story, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 21, 1959, Ser. No. 835,307
4 Claims. (Cl. 136—6)



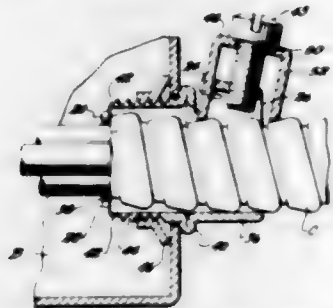
1. An electrochemical cell for the production of an electric current comprising an electrode unit immersed within an electrolyte, said electrode unit being a flexible electrically nonconductive sheet upon one side of which are printed a plurality of substantially parallel, laterally spaced linear anodes, and upon the other side of which are printed a plurality of substantially parallel, laterally spaced linear cathodes, said anodes and cathodes being disposed in substantially parallel, alternating lateral relationship, said anodes being connected together by a printed linear electrically conductive transverse trunk line and said cathodes being connected together by a printed

linear electrically conductive transverse trunk line which is disposed in substantially parallel relationship with respect to said first-named trunk line and spaced laterally therefrom for connection with an external circuit.

3,006,981

SQUARE THROAT CABLE CONNECTOR

Walter H. Weber, Metuchen, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Continuation of application Ser. No. 696,434, Nov. 14, 1957. This application May 22, 1959, Ser. No. 815,073
2 Claims. (Cl. 174-65)

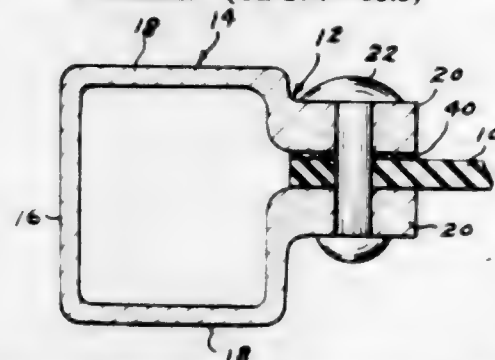


1. A tubular connector for armored electric cable adapted to snugly enclose four insulated conductors each having a substantially common outer diameter comprising a flat blank cut out along an axial marginal edge thereof to define four equidistant T-shaped projections extending from said marginal edge, said blank being axially tubular formed to define said connector for receiving an end portion of said cable therein, said T-shaped projections being bent inwardly at right angles toward each other and normal to the axial center of the connector and adapted to be abutted by said cable end portion, and being so proportioned that, when so bent inwardly, the outer ends of said projections will be in abutment and will define one end of said connector and the full outline of the sides and corners of an equilateral rectangular opening at said end of the connector with each side of said opening being equal to twice said insulated conductor diameter, and means for securing said cable end portion fixedly within said connector whereby said connector may receive and similarly cooperate with said four insulated conductors or a cable with a lesser number of larger size insulated conductors.

3,006,982

MOUNTING SYSTEM FOR PRINTED CIRCUITS

Frank M. Krantz, Ellicott City, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 10, 1958, Ser. No. 766,632
2 Claims. (Cl. 174-68.5)



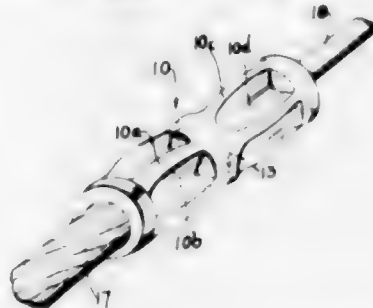
2. A printed circuit system comprising a board, an extended surface on said board for receiving elements of a printed circuit, a metal boundary strip having high heat and electrical conducting properties secured to the area of said surface and constituting the boundary edge thereof, a frame for said board comprising hollow channel elements, clamping arms on said channel elements for engaging the edge area of said board, flat areas on said arms, said flat areas contacting said metal boundary

strip in heat conducting and electrical conducting relationship and holding said board spaced from the hollow interior of said channel elements.

3,006,983

UNIVERSAL COMPRESSION CONNECTOR AND METHOD OF CRIMPING SAME

Walter R. McDermont, Birmingham, Ala., assignor to Anderson Electric Corporation, Birmingham, Ala., a corporation of Alabama
Filed Feb. 11, 1959, Ser. No. 792,600
4 Claims. (Cl. 174-94)

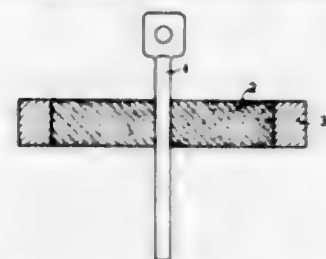


2. In combination a pair of conductors and a ductile metal joining member having a bore portion extending therethrough, end portions of said conductors disposed in said bore portion, said member being crimped about the respective lengths of said conductors in its bore portion in four radially opposed continuous longitudinally directed ribs and internal beam-like sectioned folds in intimate resiliently compressive holding contact with longitudinally extending portions of the surface of said conductor end portions along a substantial portion of the lengths of said bore portion.

3,006,984

CURRENT INLET MEMBER

Arie Bol, Peter Jan Martin Tacken, Cornelis Jacobus Marie van der Laan, and Gerardus Baas, all of Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 10, 1959, Ser. No. 852,071
Claims priority, application Netherlands Nov. 29, 1958
6 Claims. (Cl. 174-151)



1. A current lead-in member comprising at least one conductor, a metal ring surrounding and spaced from the conductor, and a glass-like insulating material filling the space between the conductor and the ring, said glass-like material consisting essentially of a mixture of glass and between about 0.2 and 5% by weight of particles of ceramic material having a particle size smaller than 5 μ .

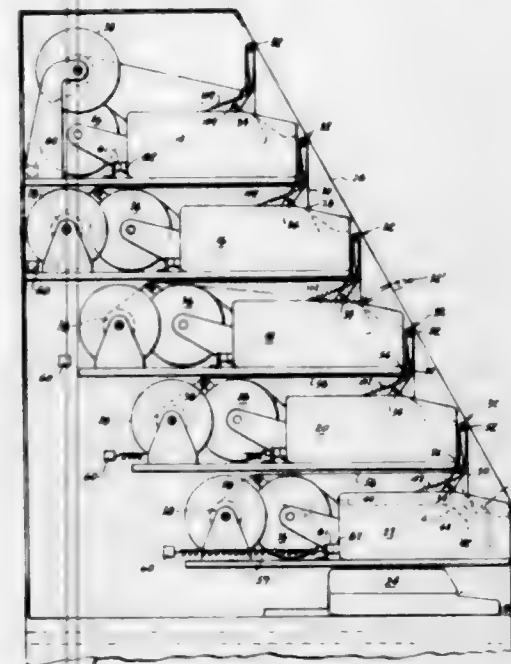
3,006,985

CONSOLE WITH PAPER SUPPORT FOR MULTIPLE COMMUNICATIONS PRINTERS

Bernard Howard, Ramsey, and Ralph M. Hirsch, Westwood, N.J., assignors, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware
Filed July 30, 1959, Ser. No. 830,485
13 Claims. (Cl. 178-1)

1. A monitoring console carrying a plurality of printers receiving communications, said printers being located compactly one above the other, and a generally upright paper support above each printer at the forward end thereof, said support serving to guide the paper upward

and then rearwardly reversely downward toward the top of the printer, said support serving to display the printed copy in front of the next higher printer, whereby the



printed copy from all of the printers is simultaneously separately displayed over a total height approximating the total height used for the printers themselves.

3,006,986

TELEGRAPH SWITCHING SYSTEM

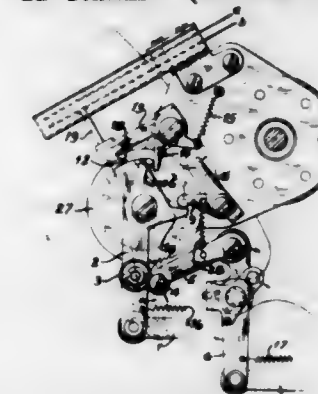
Gilbert S. Vernam, Hackensack, N.J., and Myron D. Adams, New York, Edward J. Chojnowski, Valley Stream, William B. Blanton, Rockville Center, and Henry A. Jansson, New York, N.Y., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed Feb. 5, 1959, Ser. No. 791,404
25 Claims. (Cl. 178-2)



1. In a telegraph switching system, a plurality of incoming lines and a plurality of outgoing lines, each of said incoming lines and said outgoing lines having respective individual message signal storage means and transmitting means for the storage and transmission of message groups of signals with each such group including destination indicating signal, switching means for selectively establishing paths of transmission from any one of said incoming line transmitting means to any one of said outgoing line storage means, means responsive to destination indicating signals stored in said incoming line storage means for automatically controlling said switching means in accordance therewith, manually operable means for controlling said switching means and other means individual to each of said incoming lines for shifting the control of said switching means with respect to any incoming line from either one of said switching control means to the other.

3,006,987

ARRANGEMENT FOR THE AUTOMATIC ADJUSTMENT OF FORMS AND THE TABULATING IN BOTH THE VERTICAL AND HORIZONTAL DIRECTION FOR TELEPRINTERS AND THE LIKE
Johann Augustin, Pforzheim, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 18, 1958, Ser. No. 722,298
Claims priority, application Germany Mar. 22, 1957
12 Claims. (Cl. 178-4.1)

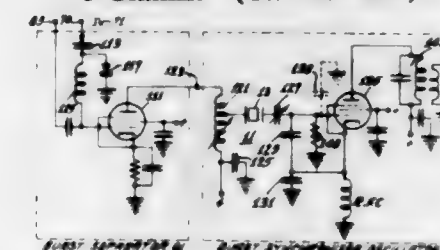


1. Apparatus for automatically bringing into positional registration and for tabulating purposes, forms to be printed upon by respective transmitting and receiving printing telegraph machines of the kind having automatic line feed mechanisms and letter space feed mechanisms, electrical contact sensing means in cooperative engagement with the transmitting and receiving forms for rendering the line feed mechanism at the transmitting machine ineffective on the transmitting form until the transmitting and receiving forms are in the proper positional registration, and means for causing the line feed mechanism at the receiving machine to operate in response to line feed signals from the transmitting machine until the receiving form is in the proper positional registration with the transmitting form.

3,006,988

PIEZO-ELECTRIC FILTER FOR COLOR OSCILLATOR SYNCHRONIZATION

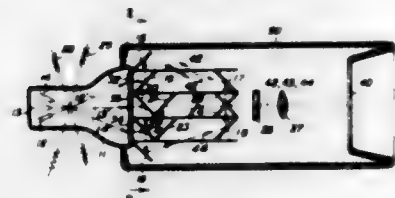
Joseph O. Preisig, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 26, 1956, Ser. No. 580,747
6 Claims. (Cl. 178-5.4)



1. In a color television receiver including a source of periodically recurring color synchronizing bursts, a burst synchronized oscillator comprising in combination a piezo-electric crystal tuned for series resonance at a frequency substantially equal to the frequency of said bursts, said crystal having an input terminal and an output terminal, first impedance means coupled between said input terminal and a point of reference potential, second impedance means coupled between said output terminal and said point of reference potential, said first impedance means presenting a reactance of one sign at the frequency of said bursts and said second impedance means presenting a reactance of the opposite sign at a frequency of said bursts, said first and second impedance means having reactance values such as to provide resonance at the frequency of said bursts, an amplifier device having an input electrode and an output electrode, means for coupling said crystal input terminal to said source of bursts, and means for coupling said crystal

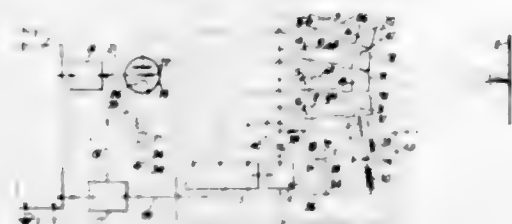
output terminal to said amplifier device input electrode whereby said crystal provides a low impedance, narrow band path for the passage of said bursts from said source to said input electrode, and a feedback path coupling said amplifier device output electrode to an intermediate point on said second impedance means.

3,006,989
COLOR TELEVISION PICTURE REPRODUCER
Fritz Schröter, Neu-Ulm, Danube, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Feb. 7, 1958, Ser. No. 713,918
Claims priority, application Germany Feb. 16, 1957
3 Claims. (Cl. 178-5.4)



1. A color television picture reproducer, said reproducer having an axis and comprising at least two image screens each luminescing with a different component color and said screens being arranged side-by-side in a plane perpendicular to said axis; cathode ray guns in said reproducer axially spaced from said screens and each directed to an associated image screen to emit a beam impinging on the associated screen; sweep means moving said beams for simultaneously sweeping said screens in distorted vertical-to-horizontal line ratio, whereby the images are vertically compressed on the adjacent image screens; mirror means translating the light beams from the screens from parallel mutual relation to superimposed relation, the light ray paths from the respective image screens through the mirror means being of substantially the same lengths; and an anamorphic projection system for restoring to the composite image the original vertical-to-horizontal line ratios and casting the composite picture on a projection screen.

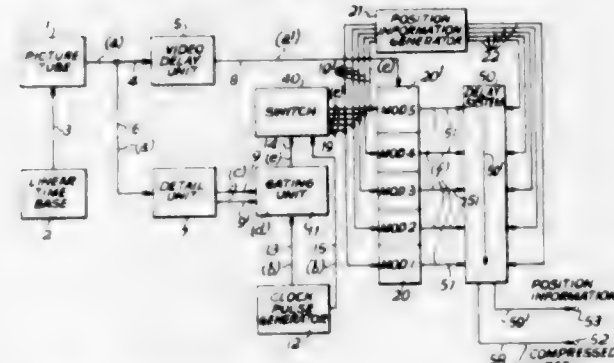
3,006,990
RADIO RECEIVERS EMPLOYING VISUAL DISPLAY SYSTEMS
John Henry Owen Harries, Warwick, Bermuda, assignor to Harries Television Research Limited
Filed May 19, 1959, Ser. No. 814,208
Claims priority, application Great Britain May 30, 1958
9 Claims. (Cl. 178-5.4)



1. Apparatus for the reception of electric signals representing colour and monochrome visual displays, comprising at least two display devices, at least one of which is adapted to produce a substantially black-and-white display, the remainder being adapted to produce a colour display having all the colour components, a colour filter associated with the said black-and-white display device, a common viewing screen, optical projection systems for projecting the displays produced by said devices in response to incoming monochrome and colour display signals on to said viewing screen to form either monochrome or colour images, and circuit means responsive to said signals for providing a central signal representing the presence or absence of a predetermined characteristic in an incoming display signal, and filter control means controlled by said circuit means whereby during reception of a colour signal said colour filter is located in the light

path between said display device for producing the black-and-white display and said viewing screen and that during the reception of a monochrome signal said colour filter is absent from the light path, whereby the latter display device provides a black-and-white image on a screen when a monochrome signal is received and reinforces one of the component colour images at said viewing screen when a colour signal is received.

3,006,991
SIGNAL TRANSMISSION SYSTEMS
Edward Colin Cherry, Shere, Dennis Godson Holloway, Maidenhead, and Brendra Prasada, London, England, assignors to National Research Development Corporation, London, England
Filed Oct. 2, 1959, Ser. No. 844,106
Claims priority, application Great Britain Oct. 10, 1958
7 Claims. (Cl. 178-6)

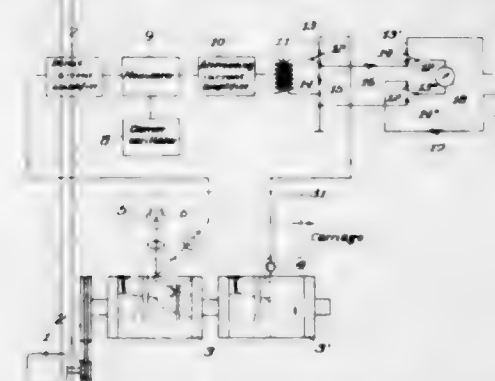


1. A signal transmission system for transmitting a signal having periods of high information content, and periods of low information content by a transmitting channel of insufficient information capacity to accommodate the signal during the periods of high information content, having a transmitter comprising signal generating means for generating a variable-amplitude signal, a transmitter output terminal, sampling means for sampling the variable-amplitude signal at controlled intervals and deriving an amplitude modulated pulse signal therefrom, a clock pulse generator for generating clock pulses corresponding to the shortest signal sampling intervals, a detail unit having the variable-amplitude signal supplied thereto and providing a quantized output signal according to the information content level thereof, pulse division means supplied with clock pulses from said clock pulse generator and controlled by said quantized output signal to provide sampling control pulses at short intervals when said quantized output signal corresponds to a higher information content level and longer intervals when said quantized output signal corresponds to a lower information content level, said sampling control pulses being supplied to the sampling means to determine said controlled intervals, a delay system connected intermediately of said signal sampling means and said transmitter output terminal and having step-wise variable delay adjustment, delay system adjusting means supplied with said sampling control pulses and operative in the sense to progressively increase the delay for successive amplitude modulated signal pulses when said sampling control pulses follow at short intervals and to progressively decrease the delay for successive amplitude modulated signal pulses when said sampling control pulses follow at long intervals and a position information generator for generating a signal representative of said delay system adjustment.

3,006,992
ELECTRONIC STENCIL CUTTER
Osamu Nakagawa and Makoto Saito, Setagaya-ku, Tokyo, Japan, assignors to Tokyo Kokukai Kabushiki Kaisha, Tokyo, Japan
Filed May 9, 1960, Ser. No. 27,960
1 Claim. (Cl. 178-6.6)

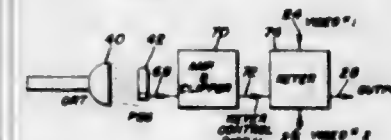
An electronic stencil cutter, comprising in combination; motor means; a transmitting-receiving drum as-

sembly driven by said motor means, the transmitting portion of said drum assembly being adapted to receive thereon an original script, the receiving portion of said drum assembly being adapted to receive a stencil upon which said original script is to be reproduced; exciter lamp means for projecting a light beam onto said original script; a photoelectric tube disposed so as to receive a light beam reflected from said original script; a photoelectric tube load across the output of said photoelectric tube, said reflected light beam thus furnishing a direct current signal through said photoelectric tube across said load, the signal intensity varying with the intensity of said reflected light beam; a direct current amplifying tube, including a cathode, anode and grid, said grid being connected to said photoelectric tube to amplify the direct current signal generated across said photoelectric tube load; a plate excitation source for said direct current amplifying tube including a plate load; a Zener diode including a diode load connected between the plate and plate load



of said direct current amplifying tube; a carrier signal oscillator; a modulator connected to the output circuit of said diode impressing upon the carrier signal provided by said oscillator said amplified varying reflected signal; an alternating current amplifier connected to the output circuit of said modulator amplifying said modulated alternating current signal; an output transformer having a primary connected to the output circuit of said alternating current amplifier; a recording stylus connectable to said transformer secondary; a dummy load connectable across said transformer secondary; alternating current power source terminals; an alternating current voltmeter; and gang switching means having decks, switching in the one position a first deck to connect said transformer secondary and said stylus and a second deck placing said voltmeter across said alternating current power source terminals, and switching in the second position said first deck to connect said dummy load across said transformer secondary output, and said second deck placing said voltmeter across said dummy load.

3,006,993
VIDEO EFFECTS GENERATOR
Charles F. Barndt, 1109 Madison Lane, Alexandria, Va.
Filed Sept. 20, 1957, Ser. No. 685,271
1 Claim. (Cl. 178-7.2)

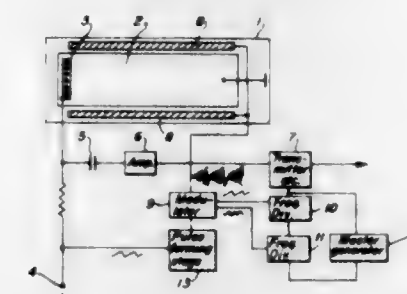


A video effects generator for controlling a montage between video pictures from two separate video sources and providing a selection from a plurality of different shapes by course positioning of a raster, comprising a cathode ray tube, means for forming a raster on the phosphor of said cathode ray tube, a photoelectric cell in alignment with said cathode ray tube, a mask and a number of shapes with a selected shape between said photoelectric cell and said cathode ray tube for limiting light passing from said raster to said photo-electric tube, an

771 O.G.—93

amplifier for amplifying the signal emitted by said photoelectric tube connected thereto, the amplified signal passing from said amplifier serving as a control signal, a clipper connected to said amplifier to receive said control signal, an electronic switch to receive a clipped signal from the clipper, said electronic switch including two cathode follower tubes, each adapted to receive the respective input of a video signal produced by video means from different sources, two space discharge means, the cathode of one adapted to receive a signal from one cathode follower tube, and the anode of the other adapted to receive the signal from the other cathode follower tube, the other anode and cathode, respectively, of the two space discharge means having a common junction with the clipped signal from the clipper whereby to render only one of the space discharge means conductive at a time; whereby one space discharge means will pass a signal from one video source when a positive pulse is present and the other space discharge means will pass a signal from another video source when a negative pulse is present, resulting in a montage output signal.

3,006,994
TELEVISION PICKUP CAMERA WITH SPIRAL SCANNING AND BEAM INTENSITY MODULATION PROPORTIONAL TO DEFLECTION VELOCITY
Eitel-Fritz Spiegel, Furth, Bavaria, Germany, assignor to Max Grundig, Furth, Germany
Filed Jan. 6, 1958, Ser. No. 707,181
Claims priority, application Germany Jan. 26, 1957
3 Claims. (Cl. 178-7.2)



3. A television transmission system comprising a picture pickup tube having a photosensitive target electrode to which the image to be scanned is applied, said target electrode being of the type which changes in sensitivity with changes in bias voltage applied thereto, means for applying a bias voltage to said target electrode through an impedance, means for producing a beam of electrons for scanning the target electrode to provide an output voltage across the impedance, the value of said output voltage for a predetermined brightness of a scanned elemental area being a function of the bias voltage on the target electrode and the scanning speed of the beam, deflecting means for moving said beam to trace a spiral path over the target electrode at a substantially constant angular velocity and means acting in timed relation with the scanning of the beam to vary the bias voltage on the target electrode in accordance with the distance of the beam from the center of the spiral.

3,006,995
TELEVISION SYNCHRONIZING PULSE GENERATOR
George H. Fathauer, Decatur, Ill., assignor to Thompson Ramo Wooldridge, Inc., a corporation of Ohio
Filed July 10, 1958, Ser. No. 747,645
28 Claims. (Cl. 178-7.2)

1. In a system for producing a composite synchronizing signal including horizontal and vertical pulses of different durations, a triggering signal source, a monostable multivibrator having an input circuit connected to

said signal source and an output circuit in which a pulse is developed in response to each triggering signal, said multivibrator including a timing circuit the time constant of which controls the duration of the generated pulses, and switch means associated with said timing circuit to con-

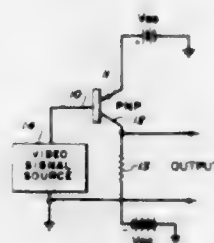


trol the time constant thereof and to cause said multivibrator to produce pulses of one duration during the vertical pulse intervals of a different duration during the horizontal pulse intervals.

3,006,996

PULSE-DISCRIMINATING CIRCUITS

Jean G. V. Isabeau, Lombard, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,376
13 Claims. (Cl. 178-7.3)



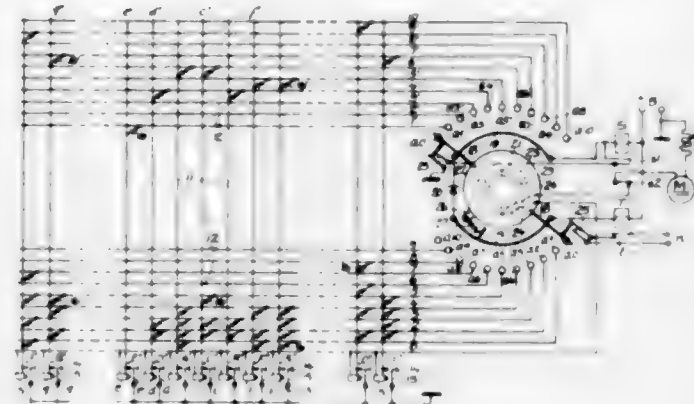
1. A pulse-discriminating circuit comprising: a semi-conductor body having a charge-carrier storage characteristic related to operating bias and having signal electrodes; means for applying a forward bias potential to said electrodes to determine the charge-storage time of said semi-conductor and to establish a charge-storage condition therein; means coupled to said electrodes for applying thereto pulse-modulated signals with a polarity and amplitude to bias said semi-conductor to a non-conductive condition; and means connected to said electrodes for deriving an output pulse from said semi-conductor in response to an applied pulse having a duration exceeding said storage time.

3,006,997

KEYBOARD TRANSMITTER FOR TELEGRAPH SIGNS OF THE MORSE TYPE
Leif Evensen, Goteborg, Sweden, assignor to International Automorse, Goteborg, Sweden
Filed Oct. 21, 1958, Ser. No. 768,602
15 Claims. (Cl. 178-17)

1. A keyboard transmitter for telegraph signals of the Morse type, comprising a contact arm adapted for producing current pulses forming dashes and dots of which the signals consist, a combination of potential-carrying and neutral contacts constituting a contact-arc, means for sweeping said arm across said contact-arc, a voltage source adapted for being coupled to said contacts, keys constituting a keyboard and adapted to connect the contacts selectively to said source, an auxiliary contact-arm, an auxiliary contact-arc operatively associated with said

auxiliary contact-arm and including contacts one of which, when the keys of the keyboard are operated, is selectively adapted for connection with the voltage source with the auxiliary contact arm in contact therewith, and a stop relay responsive with said auxiliary contact arm

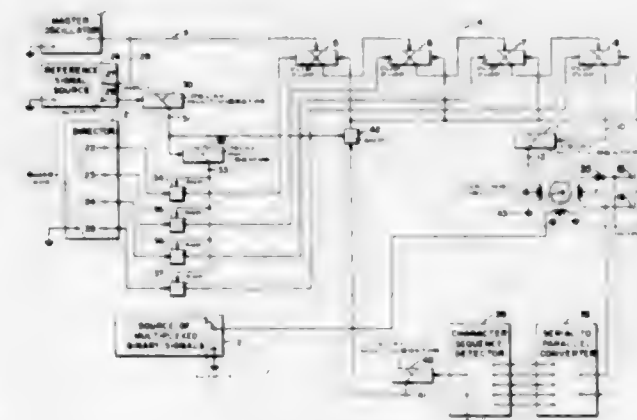


positioned on said one contact for completing a telegraph signal and stopping movement of the first said contact-arm.

3,006,998

BINARY SIGNAL DEMULTIPLEXING DEVICE

Neil L. Wiseman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed July 17, 1959, Ser. No. 827,788
5 Claims. (Cl. 178-52)



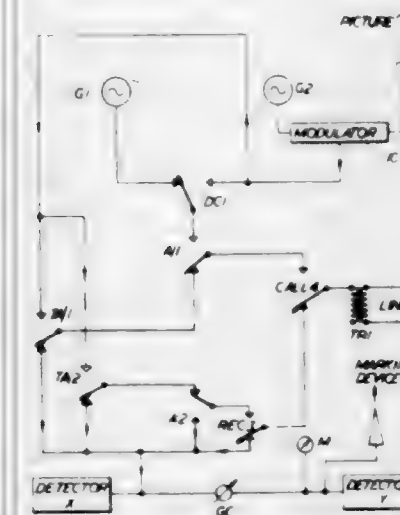
1. A demultiplexing device for demultiplexing time position multiplexed binary signals appearing only in a single selected time position within a frame consisting of a predetermined number of successive time positions, said device comprising first means including a pulse counter for producing an enabling signal in response to said counter registering a count manifesting said predetermined number, a clock pulse source for applying a pulse to be counted to said counter in each time position, second means coupled to said clock pulse source for priming said counter to register a count equal to the difference between said predetermined number and a selected number time position at the beginning of a frame, whereby said counter registers said predetermined number in response to said selected number of clock pulses being applied to said counter following the beginning of a frame, a source of time position multiplexed binary signals wherein each significant bit is characterized by a pulse of given characteristics, and coincidence means coupled to said source of time position multiplexed binary signals and to said first means for producing an output only in response to the coincident application of a pulse of said given characteristics and said enabling signal.

3,006,999

FACSIMILE PHASING, CALL, AND ANSWER BACK APPARATUS

Frederick Percival Mason, Croydon, England, assignor to Creed & Company Limited, Croydon, England, a British company

Filed Mar. 3, 1959, Ser. No. 796,790
Claims priority, application Great Britain Mar. 14, 1958
8 Claims. (Cl. 178-69.5)



1. Facsimile transceiver apparatus comprising switching means for conditioning the apparatus to act as either a transmitter or a receiver, a scanning system, means for transmitting either of two frequencies, two detector means each capable of detecting a different one of the said two frequencies, first timer means operative when the apparatus is conditioned as a transmitter for sending out a series of calling pulses of one of the said frequencies having a certain repetition rate, second timer means operative when the apparatus is conditioned as a receiver for sending out a series of receiver-ready pulses of the said one frequency having a repetition rate substantially faster than that of the said calling pulses, third timer means operative when the apparatus is conditioned as a transmitter for terminating the transmission of a phasing signal of the other of the said frequencies at an instant indicative of the phase relationship between the scanning system and a message to be scanned, and means operative when the apparatus is conditioned as a receiver for causing relative movement between the scanning system and a message to be scanned to commence from a datum position upon termination of a received phasing signal.

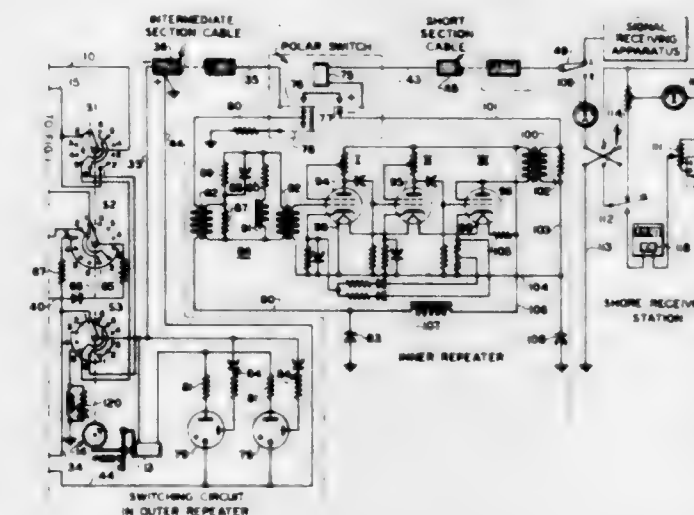
3,007,000

SUBMERGED REPEATER SWITCHING SYSTEM

Earl L. Newell, Chatham, N.J., assignor to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed Feb. 28, 1957, Ser. No. 643,077
3 Claims. (Cl. 178-70)

1. A submarine cable signaling system having two repeaters connected in circuit in a cable conductor in the receiving end of the cable and comprising an inner repeater located at an appreciable distance from the shore and an outer repeater located at a considerably greater distance from the shore, the outer repeater embodying an amplifier for increasing the level of the relatively weak received signals and retransmitting them to the inner repeater for further amplification to enable the signals to override the electrical disturbances encountered as the cable approaches the shore, said inner repeater having a first switching means embodied therein and said outer repeater having a second switching means embodied therein, said first switching means comprising a polarized switch responsive to polar signals and having at least two switching positions one of which connects the inner repeater in the cable circuit and the other of which con-

nects the cable conductor directly across the inner repeater in a manner to short-circuit the repeater thereby to cut out and bypass the inner repeater, said second switching means in the outer repeater having a plurality of testing, amplifying and operating positions in said cable circuit, means for transmitting switching signals respectively of positive and negative polarity over said cable conductor, said polarized switch being settable

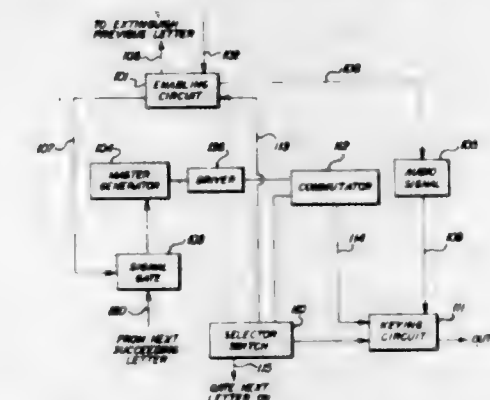


in response to a switching signal of one polarity to a position connecting the inner repeater in the cable circuit and settable in response to a switching signal of the opposite polarity to a position connecting the cable conductor directly across the inner repeater in a manner to short-circuit the repeater thereby to cut out and bypass the inner repeater and complete a switching circuit to the outer repeater.

3,007,001

CALL LETTER KEYS

Albert E. Schierhorst, Beltsville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 26, 1958, Ser. No. 776,596
12 Claims. (Cl. 178-79)

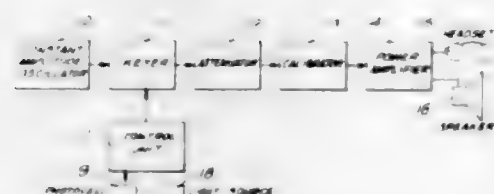


1. A system to produce coded call letters in the form of signals having a predetermined timed spacing comprising a series of coded letter generators connected in cascade to automatically originate in seriation a selected group of coded alphabetic characters, each generator comprising a commutating discharge device having a plurality of elements each adapted to generate an output pulse upon receipt of current translated between elements, programmed switching means to select a letter and connected to disable predetermined output pulses, a circuit connected to said commutating device to control the current translation between elements, a circuit including a source of signal energy connected to the commutating device to derive a series of system output signals each having a time spacing in accordance with the programming of the said switching means, and a circuit connected to the said

switching means and to the last recited circuit to disable the same upon completion of the respective selected letter, the said commutating device and said switching means connected to generate a gating pulse to initiate the next succeeding letter at the following generator.

3,007,002 AUDIOMETER

Wilbur E. Du Vall, Gardena, Calif., assignor to Ambco, Inc., Los Angeles, Calif., a corporation of California
Filed Mar. 6, 1959, Ser. No. 797,752
16 Claims. (Cl. 179-1)



1. In an audiometer, the combination of: a continuously running audio oscillator having substantially constant amplitude output; an audio output circuit including a calibrator unit, a power amplifier and an audio transducer; a keyer unit and a variable attenuator unit connected in series between said oscillator and output circuit for controlling signal transmission therebetween, said keyer unit having a high impedance condition for blocking signal transmission and a low impedance condition permitting signal transmission, said keyer unit including a first variable impedance photocell for controlling the impedance of said unit, said attenuator unit including a second variable impedance photocell for varying the impedance of said unit; a first light source directed to said first photocell; a second light source directed to said second photocell; a keyer control unit coupled to said first light source for energizing same, said control unit including a third photocell having an impedance which varies as a function of the light directed thereon to vary the output of said control unit; a third source of light directed to said third photocell along a manually interruptible path to vary the impedance of said third photocell for varying the output of said control unit and changing the impedance of said keyer unit between said high and low impedance conditions; and means for varying the intensity of light from said second source impinging upon said second photocell to vary the magnitude of signal transmitted between said oscillator and output circuit.

3,007,003

DISCRIMINATORY CLR TRUNK

Clarence E. Lomax, Hastings, Nebr., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Filed Apr. 3, 1957, Ser. No. 650,347
6 Claims. (Cl. 179-6.3)

4. In a telephone system wherein a prepay-postpay paystation having coin disposal means and normally in said prepay condition operates switching apparatus in response to the initiation of a call thereby over a paystation line for seizing an operator trunk circuit over a connection comprising a pair of line conductors and a control conductor and wherein a discriminating tone signal indicative of only a calling paystation line is applied to said control conductor of said connection by said switching apparatus for transmission to said operator trunk, the combination therewith of tone responding means in said trunk circuit, relay means in said trunk circuit operated in response to said seizure for connecting said control conductor to said tone responding means, said tone responding means operated in re-

sponse to receipt of said discriminating tone signal over said control conductor, a source of special potential in said trunk circuit, and control means operated in response to said operation of said tone responding means



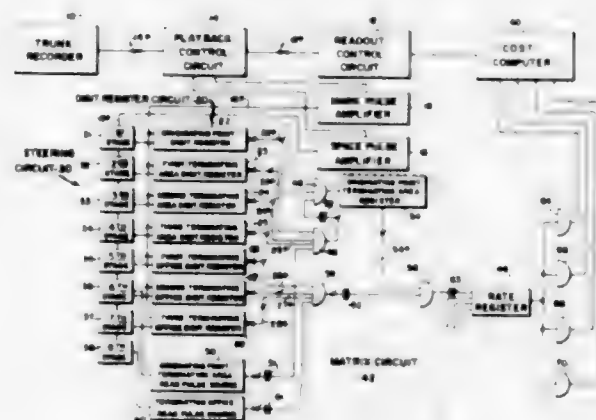
for applying said special potential to said line conductors of said connection for operating certain of said coin disposal means to initiate a coin refund operation at said calling paystation.

3,007,004

ELECTRONIC RATE MARKER

Carl G. Shook, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

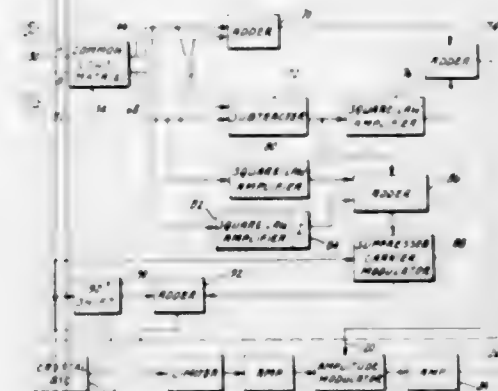
Filed Oct. 29, 1957, Ser. No. 693,089
19 Claims. (Cl. 179-9)



1. An electronic rate translator for use with a computer requiring rate information consisting of one or more rate items, comprising a first group of registers for storing digits representing the area in which a telephone call is terminated, a second group of registers for storing digits representing the office in which a telephone call is terminated, a pair of matrices each connected to and controlled by one of said groups of registers, each of said matrices including a plurality of coordinately arranged conduction devices each having a control electrode adapted to receive a control signal from one of the registers, a gate circuit connected to and controlled by one of said matrices to be conditioned to pass a signal when a particular combination of digits is stored in the related group of registers, means for operating said gate circuit by transmitting a signal through the group of conduction devices in said one matrix which represents the digits stored in the related group of registers, a rate storage device controlled by said gate circuit, means coupling the other of said matrices to said gate circuit, and means for transmitting a signal through a selected number of the conduction devices in said other of the matrices to said gate circuit when a particular combination of digits is stored in the related group of registers, said signal passing from said other of the matrices through said gate circuit to operate said rate storage device in accordance with the values of the digits stored in said first and second groups of registers.

3,007,005 TRANSMITTER FOR STEREOPHONIC INFORMATION SIGNALS

Robert C. Moore, Huntingdon Valley, Edgar M. Creamer, Jr., Melrose Park, and Harold B. Collins, Jr., Wayne, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1959, Ser. No. 792,750
13 Claims. (Cl. 179-15)



1. In a stereophonic signal transmission system, apparatus for modulating two different stereophonic information signals on a single carrier wave, said apparatus comprising a source of first and second stereophonic information signals, first means for deriving from said first and second information signals a signal having a component representative of the sum of said information signals, second means for deriving from said first and second information signals a signal having a component representative of the difference of said two information signals and a second component which is an exponential function of at least one of said information signals, a source of a carrier wave, said source including signal responsive phase modulating means for controlling the phase of the carrier wave supplied by said source, means coupling said second means to said source thereby to cause said carrier wave supplied by said source to be modulated in phase in accordance with variations in the amplitude of the signal supplied by said second means, and amplitude modulation means coupled to said first means and to said source for modulating in amplitude in accordance with the amplitude of the signal supplied by said first means the phase modulated carrier wave supplied by said source.

3,007,006

AUTOMATIC TELEPHONE SYSTEM

Jack E. Callender, Robert H. Slemmer, and Kare K. Spjeldnes, Gallion, Ohio, assignors to North Electric Company, Gallion, Ohio, a corporation of Ohio
Filed Jan. 27, 1956, Ser. No. 561,975
32 Claims. (Cl. 179-17)



26. In an automatic telephone system comprising a plurality of switching stages for extending calls between lines, a plurality of groups of lines, certain of which line groups include a PBX line group, said switching stages including at least a group of subscriber line switches for terminating said plurality of groups of lines and having a

set of identification devices associated therewith, a marker circuit for controlling said stages in the extension of connections, means in said identification groups for identifying the calling line group and the calling line of the group to said marker to assist same in controlling the extension of the call, means in said subsequent switching stages for detecting calls directed to said PBX group in one of said certain line groups, and means responsive to detection of a call to a PBX line group to engage the identification set associated with the group of said subscriber line switches which includes the calling line, and means for controlling said identification set to effect selection of a subscriber line switch having at least one idle PBX line in the selected PBX group.

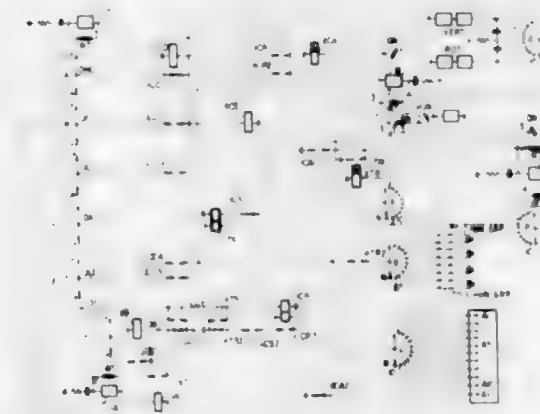
32. In an automatic telephone system comprising crossbar switching stage means for extending calls between lines, said lines including subscriber multiparty lines, subscriber coin box lines and groups of subscriber PBX lines; means for establishing by-path connections to control said switching stage means in the establishment of main path connections including at least marker circuit means; detection means in said marker circuit means operative to test calling lines to detect the ones of the calling lines which are coin lines, including means operative responsive to detection of a coin line to selectively engage coin box trunk means for use with the call; identification means operative responsive to receipt of the called party number for providing signals of a first code over the main path connection to said marker circuit means which identify calls directed to lines other than PBX lines, and signals of a second code different than said first code which identify calls directed to PBX lines; means in said marker circuit means operative responsive to receipt of said second signal code to control the establishment of a connection to an idle one of the PBX lines, and operative responsive to the receipt of said first signal code to control establishment of a connection to a line other than a PBX line; and means in said marker circuit means including said detection means for detecting a reverting call, including means operative in response to detection of a reverting call to control the switching stages to establish a reverting call connection between the called and calling parties.

3,007,007

TOLL TICKETING TELEPHONE SYSTEM

James M. Blackhall, La Grange, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Filed Mar. 27, 1958, Ser. No. 724,355
11 Claims. (Cl. 179-18)



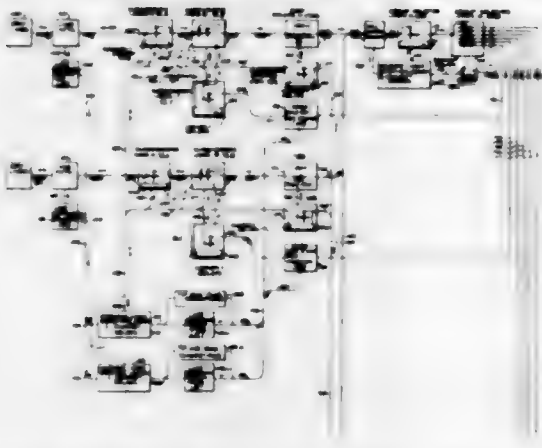
1. In an automatic telephone system comprising, a first exchange provided with first switching apparatus and a first subscriber station identified by a first plural digit directory number, a second exchange provided with second switching apparatus and a second subscriber station identified by a second plural digit directory number, a calling device at said first station, a first repeater in said first exchange provided with a first register and a second

register, a calling number verifier, and a called number discriminator, means controlled by said first station calling device for operating said first switching apparatus to extend a first connection to said first repeater, means in said first repeater controlled thereafter by said first station calling device for operating said first register to register therein for recording purposes said digits of said first station directory number, a second means in said repeater for repeating said digits to said verifier simultaneously with their registry for verifying their conformity with said calling station number, fourth means in said first repeater controlled thereafter by said first station calling device for operating said second register to register therein for recording purposes said digits of said second station directory number, for repeating impulses corresponding to said digits of said second station directory number to said second switching apparatus and to said discriminator in order to complete said first telephone connection from said first station to said second station and to determine if said called number is restricted to said calling subscriber, a fifth means in said repeater responsive to said discriminator forwarding a signal indicating the called number to be a restricted number to release said second switching apparatus and to give the calling subscriber a busy signal.

3,007,008

AUTOMATIC TELEPHONE SYSTEM

Kare K. Spjeldnes, Jack E. Callender, Robert H. Slemmer, and William H. Blashfield, Galion, Ohio, assignors to North Electric Company, a corporation of Ohio
Filed July 15, 1955, Ser. No. 522,233
43 Claims. (Cl. 179-22)



1. In an automatic telephone system comprising a plurality of switching stages, each of which stages includes switching means for extending connections between calling and called lines, a first marker means connected for use by a first one of said stages, and a second marker means connected for use by a second one of said stages, each of said marker means being operative to extend a two wire connection through its associated stage to the next succeeding stage, and sender means operative to transmit a signal simultaneously over both of said wires to the seized one of the marker means of at least one of the marking stages to control the switching means associated therewith in the further extension of the connection toward the desired line.

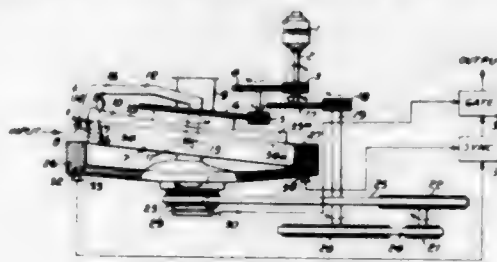
3,007,009

MAGNETIC RECORDING AND REPRODUCING APPARATUS

Carlos C. Miller, Jr., Northridge, Calif., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 24, 1957, Ser. No. 654,965
16 Claims. (Cl. 179-100.2)

1. An apparatus for magnetically recording and reproducing signals comprising rotatable means carrying a magnetizable surface, a reproducing head, means to rotate

said reproducing head along a circular path of given radius, a recording head and means moving said recording head relative to said surface to magnetize said surface along a track having at least two curved portions

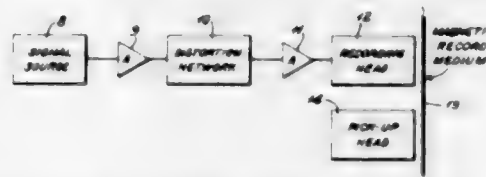


each comprising an arc of said given radius, the circles of said arcs being differently located so that each of said arcs coincides with a portion of said path at different instances of time during the rotation of said surface, said arcs being joined together to constitute a closed loop track.

3,007,010

COMPENSATION FOR DISTORTION IN MAGNETIC RECORDING

Louis W. Erath and Louis B. McManis, Houston, Tex., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Nov. 1, 1957, Ser. No. 693,909
7 Claims. (Cl. 179-100.2)



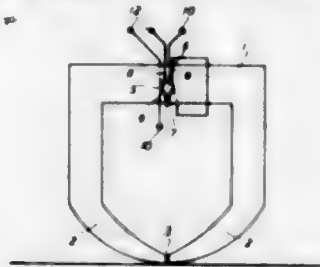
1. A magnetic recording system including a magnetic recording medium having known waveform distortion characteristics, a magnetic recording head, a recording channel for connecting a signal source to the recording head, and means connected between the signal source and the recording head operable to distort the waveform of the signal in sense and in magnitude opposite to that caused by the characteristics of the recording medium so as to compensate therefor, said distorting means including a pair of vacuum tube diodes having the cathode of one diode connected to the plate of the other diode, a pair of capacitors connected in series between the plate of said one diode and the cathode of said other diode, and a resistor connected across the series-connected capacitors.

3,007,011

MAGNETIC TRANSDUCING HEADS

Peter George Briggs, Cambridgeshire, England, assignor to International Computers and Tabulators Limited, London, England

Filed June 4, 1958, Ser. No. 739,798
Claims priority, application Great Britain July 26, 1957
12 Claims. (Cl. 179-100.2)



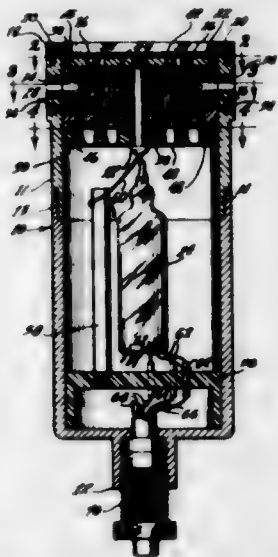
1. A magnetic transducing head comprising a magnetic core providing a magnetic circuit including a transducing gap, a portion of the magnetic circuit being divided into two separate flux paths of predetermined unequal mag-

netic reluctance, a signal winding coupled to each said flux path, the windings being connected in series opposition, and means for applying a unidirectional control magnetic flux to said portion of the magnetic circuit to control the effective coupling of one of said windings to the associated flux path.

snap-ring, means to secure said snap-ring to said supporting member to secure said transducer element between said supporting member and said snap-ring, said transducer having electrode means, terminal pin means contacting said electrode means, a diaphragm, and means interconnecting said diaphragm and said transducer element.

3,007,012

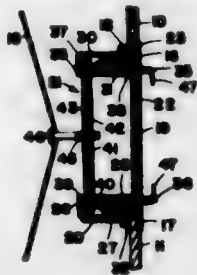
DIRECTIONAL ELECTROSTATIC MICROPHONE
Harry F. Olson, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 14, 1958, Ser. No. 721,447
17 Claims. (Cl. 179-111)



1. An electrostatic microphone comprising a diaphragm having one surface thereof exposed to the ambient, an electrode cooperative with said diaphragm having a surface thereof opposed to the other surface of said diaphragm and spaced therefrom to define a gap therebetween, a structure for supporting said diaphragm and said electrode, one end of said structure being disposed adjacent the surface of said electrode opposite from said gap defining surface thereof, said structure having an opening therein in said end thereof, said surface of said electrode opposite said gap defining surface thereof being adjacent said opening to define a cavity at said end of said structure, a plurality of sheets of acoustical resistance material disposed in said cavity and spaced from each other and said surface of said element opposite to said gap defining surface thereof, and said structure having an aperture therein communicating with said cavity for introducing sound waves into said gap through said cavity and said acoustical resistance elements.

3,007,013

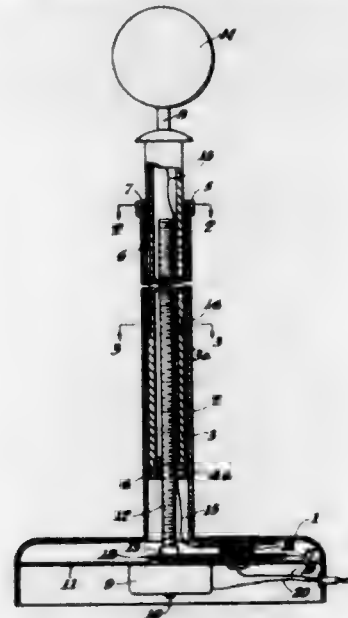
MICROPHONE CONSTRUCTION
Charles F. Paull and Robert H. Chorpennig, Conneaut, Ohio, assignors to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Apr. 22, 1959, Ser. No. 808,244
13 Claims. (Cl. 179-121)



1. An improved microphone construction comprising a cup-like housing, a resilient and generally annular supporting member mounted in said housing, a transducer element supported by said supporting member, a resilient

3,007,014

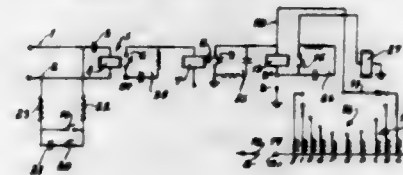
MICROPHONE STAND
Henry Bentman, 47-04 188th St., Flushing, N.Y.
Filed May 15, 1959, Ser. No. 813,448
4 Claims. (Cl. 179-148)



1. A portable microphone stand comprising: a hollow base; an upright tubular member supported by said base; a tubular microphone support arranged in telescoping relation within said upright member; a reversible electric drive motor in said base and having its rotor in co-axial alignment with said upright member; and a threaded drive shaft extending longitudinally into the interior of said microphone support, said shaft being mechanically coupled at its lower end to said rotor for rotation therewith and being in threaded drive relationship with said microphone support for raising or lowering said microphone support incident to energization of said motor.

3,007,015

MONITORING EQUIPMENT
George S. White, 453 Mount Prospect Ave., Newark, N.J.
Filed July 25, 1956, Ser. No. 600,145
3 Claims. (Cl. 179-175.2)



1. In combination, a pair of input terminals adapted to be connected to at least one audio-communication line which is connected to the subscriber line of a dial telephone, recording means, means for storing the number dialed preparatory to recording including relatively fast, biased polarized relay means having a very large impedance connected through a blocking condenser across the communication line, stepping relay means connected to said input terminals for operating said storing means in accordance with the dial pulses received from said audio-communication line, timing means under control of said relay means defining a predetermined timing interval substantially exceeding a normal dial pulse interval and means under control of said timing means

for energizing said recording means to record the dial pulses under control of said storing means; said energizing means including delayed relay means operating under control of said fast relay means to control, after a time interval of more than normal dial pulse interval length and less than a predetermined number of seconds, several successive relay operations including said stepping relay means controlling the storing means.

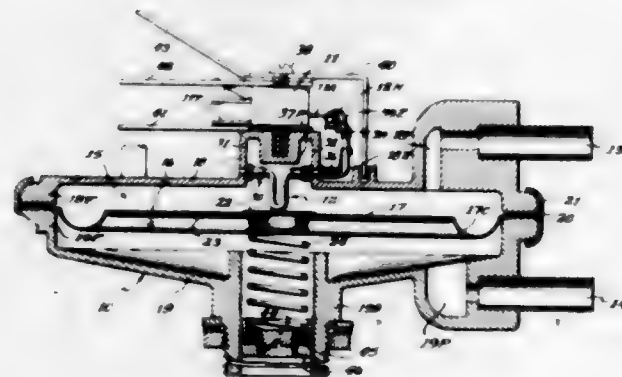
3,007,016
INTERLOCKING MECHANISM FOR ELECTRIC POWER TAP-OFF UNITS IN A PLUG-IN TYPE BUSWAY SYSTEM

Myron A. Cutler, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Filed Nov. 26, 1958, Ser. No. 776,555
14 Claims. (Cl. 200—50)



5. In an electric power distribution system: a relatively stationary unit housing a source of electric power; a removable unit adapted to house a power tap-off device and having an openable access cover disposed in a closed position, said removable unit being adapted for mounting and dismounting with respect to the relatively stationary unit; a pair of cooperating disconnect contacts associated with the removable and stationary units, respectively, for establishing electrical connection between the tap-off device and the source of power with the removable unit mounted on the stationary unit; and locking means mounted in the removable unit in releasably holding relationship to the access cover, said locking means being disposed for actuation in response to the mounting of the removable unit on the stationary unit to hold said cover in its closed position until the removable unit is dismounted.

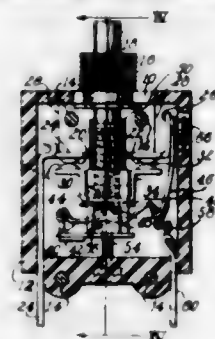
3,007,017
PRESSURE SWITCH
Frank W. Dwyer, Oak Park, Ill., and Phillip W. Dwyer, Michigan City, Ind., assignors to F. W. Dwyer Mfg. Co., a corporation of Illinois
Filed Apr. 12, 1960, Ser. No. 21,818
10 Claims. (Cl. 200—83)



1. A pressure switch comprising a differential pressure capsule having a flexibly distortable partitioning diaphragm

phragm providing separate pressure chambers in said capsule, each of said chambers opening through said capsule for applying fluid pressure to opposite sides of said diaphragm, a switch device mounted externally on said capsule, an actuating arm mounted internally on said capsule and including a rotatable portion projecting through said capsule in substantially frictionless gas tight sealed relation therewith to engage and actuate said switch device upon a predetermined movement of said arm, and means for causing said actuating arm to follow the movements of said diaphragm to transmit motion from said internal diaphragm to said external switch device and wherein said capsule has an internal pocket defined by spaced apart wall portions that extend generally normal to the plane of said diaphragm, said pocket being in open communication with one of said chambers, each of said wall portions having a bearing socket, with one of said sockets opening through its wall portion and wherein said actuating arm comprises a U-shaped body portion including opposed sides and a closed end connecting the sides, said sides being provided at their free ends with lateral projections extending outwardly beyond the sides to rotate in said bearing sockets, with the projection that is in said one bearing socket constituting the said rotatable portion and having a further extension externally of said capsule operatively connected to said switch device.

3,007,018
TRIP FREE ELECTRICAL CUTOUT
Morris B. Wood, 49 High St., Newburyport, Mass.
Filed Jan. 21, 1960, Ser. No. 3,809
10 Claims. (Cl. 200—116)

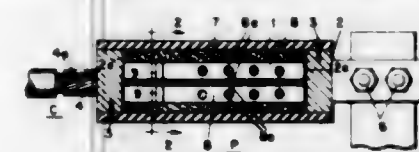


1. A trip free electrical overload cutout, having a box-like frame, a guideway in the frame, a manually actuable button mounted for lengthwise movement in the guideway, a carrier movable along the button, contacts in the frame, one of which contacts is fixed to the frame and another of which is movable and mounted on the carrier to be engaged and separated from the fixed contact when the carrier is actuated, a thermostatic latch connected electrically with the fixed contact, an elongated detent pivoted to the carrier at one point along the length of the detent and engageable at another point along its length with the latch to retain the contacts in engagement, and a single spring only acting between the button and the carrier to open the contacts and to close them yielding in combination with a fixed fulcrum on the frame for engagement with the detent at a position between its pivot point and its point of engagement with the latch to cause the latch engaging point on the detent to move toward latched position in a direction opposite to that of the contact carrier.

3,007,019
CABLE PROTECTION
Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Feb. 2, 1960, Ser. No. 6,293
13 Claims. (Cl. 200—120)

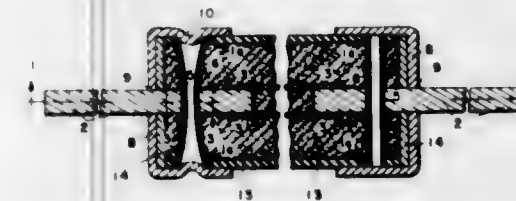
1. In combination a tubular casing of insulating material; a pair of terminal elements each closing one of the

ends of said casing; tubular cable connecting means arranged on the outside of one of said pair of terminal elements and forming an integral part thereof; a pulverulent filler inside said casing; a ribbon fuse link of a metal having a relatively high conductivity and a relatively high fusing point arranged inside said casing, immersed in said filler and conductively interconnecting said pair of terminal elements, said link defining a plurality of serially related points of reduced cross-sectional area and having a predetermined current carrying capacity;



and an alloy-forming overlay of a metal having a relatively low fusing point on said link, said overlay being arranged at a point of said link immediately adjacent said one of said pair of terminal elements and sufficiently close to said one of said pair of terminal elements to substantially preclude a reduction of said current-carrying capacity by virtue of the presence of said overlay.

3,007,020
FUSE STRUCTURES
Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Jan. 25, 1960, Ser. No. 4,417
3 Claims. (Cl. 200—132)

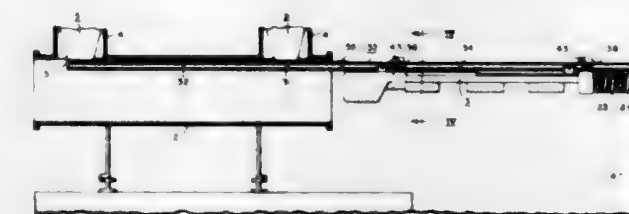


1. An electric fuse comprising a tubular casing of insulating material having a pair of diametrically arranged transverse perforations on each end thereof; a pair of blade contacts arranged in a direction longitudinally of said casing and projecting from the outside of said casing to the inside thereof, each of said pair of blade contacts having a transverse perforation of predetermined diameter and being arranged in alignment with a pair of said perforations in said casing; ribbon fuse link means conductively interconnecting the axially inner ends of said pair of blade contacts; a pulverulent arc-quenching filler inside said casing closely surrounding said fuse link means; a pair of pin-shaped springs formed by substantially spirally wound lengths of resilient sheet metal, each of said pair of springs having when uncompressed a diameter exceeding the diameter of said perforation in each of said pair of blade contacts, each of said pair of springs being inserted into a pair of said perforations in said casing and threaded through said perforation in one of said pair of blade contacts and thereby compressed in the center region thereof; and wedge means driven into the outer ends of each of said pair of springs and expanding said ends beyond the outer diameter of each of said pair of springs when unexpanded.

3,007,021
SERVICING DEVICE FOR HANDLING A CIRCUIT-INTERRUPTING ASSEMBLY
Thomas O. Frunty, Monroeville, and Robert G. Colclaser, Jr., Pittsford, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1959, Ser. No. 845,547
9 Claims. (Cl. 200—144)

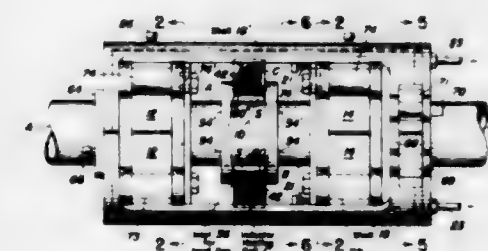
1. In combination, a circuit-interrupter tank structure having a pair of terminal bushings extending therein, the

interior end of each terminal bushing having a foot support, a circuit-interrupting assemblage having rollers bridging the two feet support and clamped thereto for normal operation, a removable mono-rail I-beam handling device bolted to the terminal-bushing feet support to



accommodate said rollers for rolling the circuit-interrupting assemblage as a unit externally of the tank structure for maintenance operation, and said mono-rail I-beam handling device being removed for normal circuit-interrupter operation.

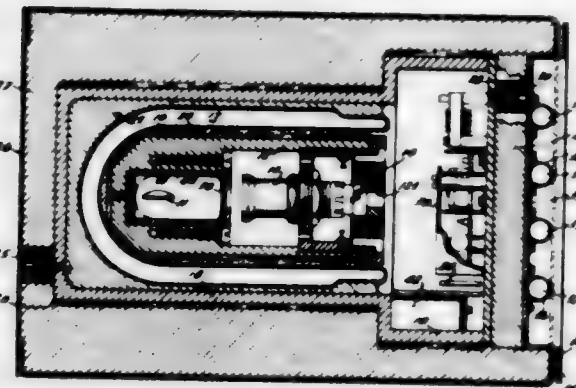
3,007,022
COMPACT PRESSURE INDUCTION WELDING APPARATUS FOR PORTABLE AND OTHER USE
Alonzo C. Jackson, Chattanooga, Tenn., John H. Hunt, Massapequa Park, N.Y., and Leo A. Maier, Jr., Chattanooga, Tenn., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,544
8 Claims. (Cl. 219—9.5)



1. In apparatus for butt welding the ends of metal tubes, first and second sets of clamp blocks for engaging the two tubes and holding the ends thereof aligned and abutted, tie structure carrying said two clamp block sets in axially spaced disposition and serving to mount one set in a way that restrains it against axial movement while mounting the other set in a way that permits it to move axially towards and away from the restrained block set, an expansible envelope member also carried by said tie structure and flanking said movable clamp block set on the side thereof away from the restrained block set, an inductor heating coil located between the two clamp block sets where it is adapted to encircle the edge portions of said abutting tube ends and functioning when energized to set up in those ends a field of high frequency alternating magnetic flux that imparts inductive heating thereto, and means for admitting into said expansible envelope member a pressure fluid which by urging said moveable clamp block set towards the restrained clamp block set forces the heated ends of said abutted tubes together with the pressure needed to effect welding of those ends, said expansible envelope member and the said two clamp block sets being divided along a generally common central plane into cooperable upper and lower parts, and all of those upper parts being arranged to be openable away from said lower parts so as to permit abutted tube lengths that have been welded together to be taken out of the apparatus upon completion of the welding cycle.

3,007,023

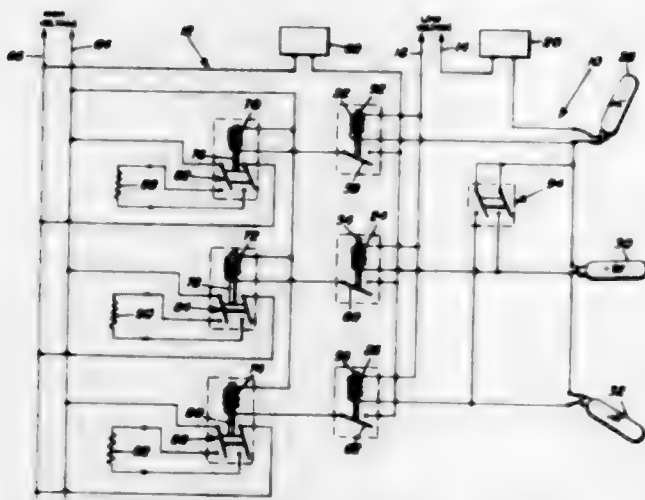
TEMPERATURE CONTROL DEVICE FOR A FREQUENCY STANDARD GENERATOR
Samuel A. Johnston, Fontana, and Carl A. Berg, Janesville, Wis., assignors, by mesne assignments, to Amphemol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Mar. 5, 1958, Ser. No. 719,369
8 Claims. (Cl. 219—19)



1. A temperature control device for a frequency standard generator having an oscillator, said device comprising an oven having an inner compartment adapted to house temperature sensitive components of the oscillator, resistance heating element for said inner oven compartment, and an outer oven compartment about said inner oven compartment and having a resistance heating element, a first control circuit for the resistance heating element of the inner oven compartment and a second control circuit for the resistance heating element of the outer oven compartment, a temperature responsive element for said first control circuit being disposed in the inner oven and a temperature sensitive element of said first control circuit being disposed within said outer oven compartment.

3,007,024

ELECTRIC HEATING SYSTEM
Ray M. Hensen, Adrian, Minn., assignor to Food Saver, Inc., a corporation of Minnesota
Filed July 6, 1959, Ser. No. 825,346
4 Claims. (Cl. 219—20)

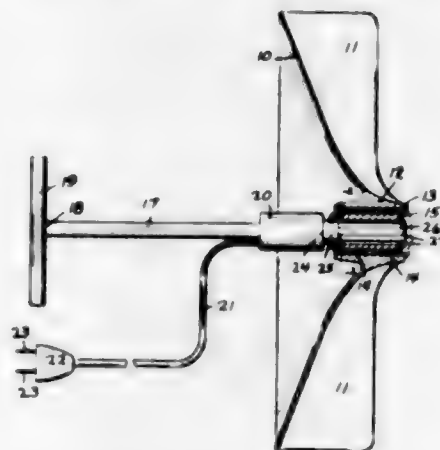


1. In combination with a building, an electric heating system therefor including indoor and outdoor temperature responsive means comprising a low voltage control circuit and a high voltage heating circuit, said low voltage control circuit including an indoor thermostat, said indoor thermostat serially connected to each of a plurality of parallel connected outdoor temperature responsive switches, means mounting said temperature responsive switches for closing at different outdoor temperature levels, and a low voltage relay coil serially connected to each of said temperature responsive switches, said high

voltage circuit including a first switch responsive to the energization of each low voltage relay coil, each of said first switches electrically in series with a separate high voltage relay coil, a separate double-pole single-throw switch responsive to each of the high voltage relay coils, a plurality of heating elements, each of said heating elements electrically serially connected with one of said double-pole single-throw switches across a high voltage source.

3,007,025

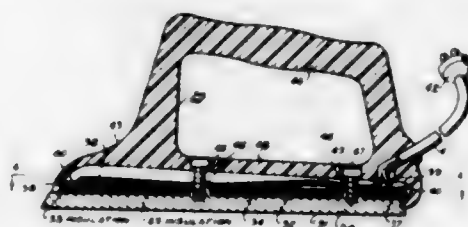
SPLINE PULLER FOR WASH MACHINE AGITATORS
Arthur J. Holman, 2220 Wall St., Sioux City, Iowa
Filed July 17, 1958, Ser. No. 749,168
2 Claims. (Cl. 219—21)



1. A device for removing a female spline attachment of the type having an annular rubber insert attached thereto, from a wash machine agitator, comprising a lengthened bar, an electric heating resistance coil enclosing the end of said bar, a male spline portion attached at the end of said bar adapted to engage said female spline attachment, said male spline portion being adapted to receive heat from said resistance coil to devulcanize said rubber annular insert.

3,007,026

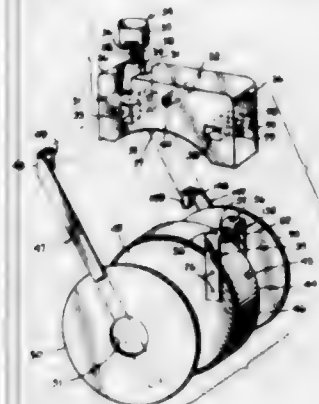
ELECTRICAL HEATING DEVICES
George V. Woodling, 960 Union Commerce Bldg., Cleveland, Ohio
Original application Oct. 21, 1948, Ser. No. 55,791, now Patent No. 2,673,917, dated Mar. 30, 1954. Divided and this application Sept. 21, 1953, Ser. No. 381,310
2 Claims. (Cl. 219—25)



1. A household electric flatiron comprising a metal soleplate having a work surface and an opposite surface and having head and toe portions, a layer of insulation substantially covering one of said surfaces, a metallic film disposed adjacent said layer of insulation and having an area substantially the same as said soleplate, insulation means comprising vitreous enamel bonded to said metal plate and covering said metallic film and excluding said metallic film from external exposure, and means for providing electrical connection to said metallic film at said heel and toe portions.

3,007,027

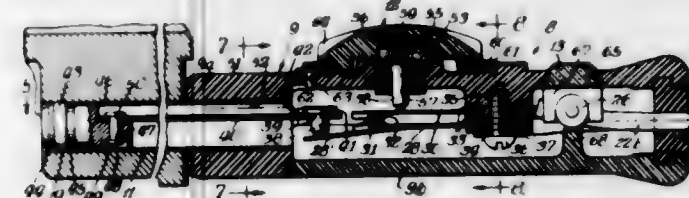
BATTERY-POWERED ELECTRIC CIGARETTE LIGHTER
Raymond E. Hall, Berkeley Heights, N.J., assignor to Louis J. Robbins, New York, N.Y.
Filed Jan. 15, 1960, Ser. No. 2,712
9 Claims. (Cl. 219—32)



1. A battery-powered cigarette lighter comprising, in combination; a casing having opposed, manually movable side walls, an end wall and a chamber therein defined in part by said walls; an electrical battery housed by said casing in the chamber and having a pair of circuit terminals; an electrical heating element supported by said end wall exposed to external access for lighting a cigarette when held thereagainst while said element is energized by said battery, said heating element having a pair of circuit terminals; a pair of electrical circuit means in said casing for connecting each of said battery terminals to one of said heating element terminals; a pair of normally-open circuit switches in said casing with each mounted in one of said electrical circuit means for closing the same; and a pair of switch operators each associated with one of said switches for closure thereof with said switch operators being located in the vicinity of said opposed side walls, said switch operators simultaneously effecting temporary closure of said switches when manipulated by simultaneous movement of said side walls.

3,007,028

ELECTRICALLY HEATED DEVICE WITH PLUG-IN THERMOSTAT
Grant E. Sorenson, Eau Claire, Wis., assignor to National Presto Industries, Inc., Eau Claire, Wis., a corporation of Wisconsin
Filed June 28, 1955, Ser. No. 518,511
15 Claims. (Cl. 219—44)



2. A thermostatic control device for use with a separable electric heater comprising a housing containing a pair of spaced electrical terminals engageable through one end thereof, a temperature sensing probe having an end part within said housing, a switch comprising a pair of spaced contact bearing arms mounted at one end on said end part of the probe and in electrically insulated relation to each other and to said end part, said arms having portions adapted for movement into and out of contact with each other to regulate electrical energy flow through said terminals, said temperature sensing probe including a solid portion of high heat conductive material extending forwardly of said end of the housing in spaced parallel

relation to said terminals, bi-metallic means fixed at one end to said high heat conductive portion so as to be directly influenced thereby, said bi-metallic means having insulating means remote from said connected end acting on one of said contact bearing arms to open and close said switch in response to variations of temperature sensed by said probe, and control means externally of said housing and including a part acting on the other contact bearing arm, said control means being manually adjustable to vary the spacing of said contact bearing arms.

3,007,029

TEMPERATURE RESPONSIVE CONTROL FOR ELECTRICALLY HEATED DEVICES
Harvey Levine, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Filed Feb. 17, 1958, Ser. No. 715,544
12 Claims. (Cl. 219—44)

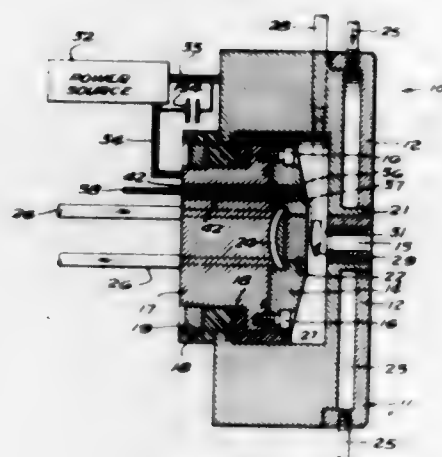


1. In an automatically controlled electrically heated device having a wall portion to be heated, electrical heating means for heating said wall portion, terminal means for detachably connecting said heating means in an electric power and control circuit, and thermally conductive wall means forming a substantially enclosed temperature sensing zone in the immediate vicinity of said wall portion, a detachable control unit arranged to be selectively attached to the device for supplying power to said heating means in an automatic controlled manner comprising: a casing of electrical and thermal insulating material; electric switch means mounted in said casing and arranged to be selectively placed in said circuit for controlling energization of said heating means; means on said casing arranged to be detachably connected to said terminal means for connecting said electric switch means in said circuit; a temperature sensing elongated tubular member of thermally conductive material supported by and projecting from said casing and arranged to be selectively detachably inserted into and substantially completely fill said temperature sensing zone; the end of said elongated tubular member remote from said casing being closed; a charge of thermal responsive medium having a high coefficient of thermal expansion disposed within said elongated tubular member so as to completely fill and be confined entirely to a longitudinal portion thereof that is adjacent the closed end thereof and arranged to be positioned wholly within said temperature sensing zone when said control unit is attached to the device, whereby all of said thermal responsive medium is in direct thermal conducting contact with said wall portion through said portion of said elongated tubular member and substantially limited to the immediate and direct thermal influence of said wall portion, thereby being free of extraneous heat influences and being capable of quickly and accurately sensing changes in the temperature of said temperature sensing zone; and movable actuating means made of a material that is not significantly affected by heat and rigid relative to the thermal responsive medium partially in said casing and partially in said elongated tubular member for confining said thermal responsive medium in said portion of said elongated tubular member and actuating said electric switch means in response to the volumetric expansion and contraction of said medium.

3,007,030

APPARATUS AND METHOD FOR INITIATING AN ELECTRICAL DISCHARGE

Adriano C. Ducati, Corona del Mar, Calif., assignor to Plasmadyne Corporation, Santa Ana, Calif., a corporation of California

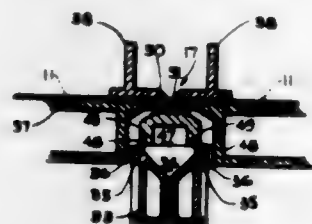
Filed Feb. 2, 1959, Ser. No. 790,692
20 Claims. (Cl. 219—121)

1. An electrical torch, which comprises a nozzle member having a nozzle opening therein, a back electrode, means to define a chamber between said nozzle and said back electrode and communicating with said nozzle opening, means to introduce gas into said chamber for outflow through said nozzle opening, means to maintain an electric arc to said back electrode in said chamber and in the region of said nozzle opening, means to define a relatively small chamber adjacent said first-mentioned chamber and communicating therewith, and means to generate an electrical discharge in said last-mentioned chamber to cause heating and ionization of the gas therein for flow into said first-mentioned chamber to initiate said arc.

3,007,031

STRIP WELDING APPARATUS

Joseph H. Cooper, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio

Filed Aug. 27, 1957, Ser. No. 680,584
8 Claims. (Cl. 219—125)

1. In a welder wherein the adjacent ends of strips to be welded are positioned and traversed by welding means; the combination comprising shearing means, said shearing means comprising a carriage member mounting a pair of spaced shear blades, means to vertically move said carriage member, said welding means comprising a weld back-up plate, means to move said weld back-up plate transversely into and from a position adjacent said ends of strips to be welded, said weld back-up plate having ways therein, and said shear blades defining guides for slidably receiving and supporting said weld back-up plate upon actuation of said means for transversely moving said weld back-up plate.

3,007,032

UNIVERSAL ARC WELDING TORCH

Lyle C. Whiteman, Fruitport, Mich., assignor to Whiteman Manufacturing Company, a corporation of Michigan

Filed May 6, 1959, Ser. No. 811,323
14 Claims. (Cl. 219—130)

1. An electric arc welding torch which comprises: a torch body assembly for positioning a welding electrode relative to work to be welded and for transmitting electrical current to said electrode, said torch body assembly comprising a lateral support member between the ends thereof with a face having an electrically conductive portion and coolant delivery and discharge openings, means for conducting electric current from said portion to said electrode, cooling jacket means at the arc end region of said torch body assembly and coolant delivery and discharge conduit means between said openings in said lateral support member and said cooling jacket means; means for holding said torch body assembly and for supplying service thereto, said means comprising a lateral mounting member with a face abutting said face of said lateral support member, said face having a corresponding aligned, electrically conductive, portion and coolant delivery and discharge openings, means for conducting electric current from a cable to said portion, and coolant delivery and discharge conduit means between said openings and coolant inlet and outlet means; and means for attaching said lateral support member to said lateral mounting member, said last-named means including holding means connecting said support member and said mounting member for lateral linear assembly and disassembly.

3,007,033

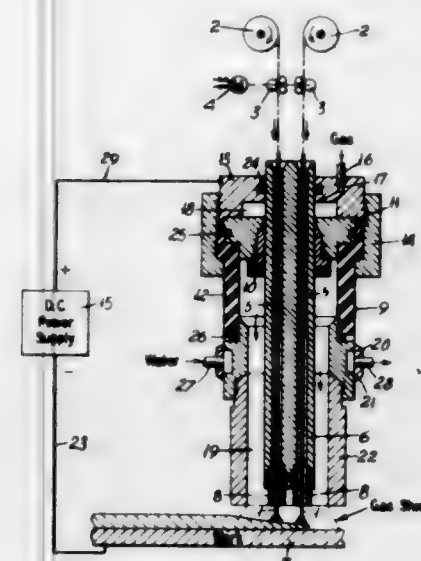
INERT GAS SHIELDED METAL ARC WELDING

Arthur J. Newman, North Plainfield, N.J., and Gustav Reinhardt, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York

Filed Apr. 15, 1959, Ser. No. 806,713
2 Claims. (Cl. 219—137)

1. Inert monatomic gas shielded multiple electrode metal arc welding of aluminum and magnesium, which comprises simultaneously feeding a plurality of fusible metal wire anodes in closely spaced parallel relation toward a common pool of weld metal on a metal work cathode to be welded, shielding such electrodes with a common stream of inert monatomic gas selected from the class consisting of commercially pure argon and helium, and energizing parallel welding arcs between such work cathode and wire anodes from a common source of direct

current, creating such common pool of weld metal in such work cathode with welding current having a value that is substantially more than the sum of the maximum

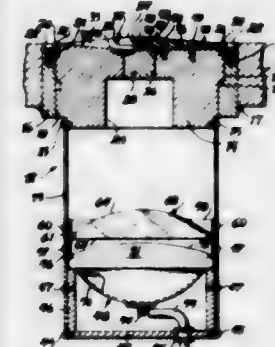


welding currents of such wire anodes with which it is possible to obtain satisfactory welds when used separately.

3,007,034

RUNWAY LIGHT

George A. Reed, Williamsville, and James A. Mott, Buffalo, N.Y., assignors to The Oxford Corporation, Williamsville, N.Y., a corporation of New York

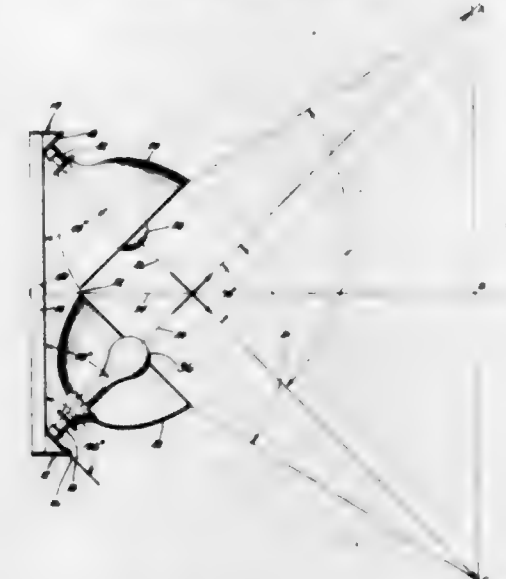
Filed Sept. 23, 1959, Ser. No. 841,823
4 Claims. (Cl. 240—1.2)

1. A runway light, comprising a hollow cylindrical housing having at one end a shallow conical outer surface tapering slightly outwardly from its outer periphery and a transverse channel formed in and extending diametrically through said outer end surface, a right triangular prism arranged in and extending transversely across the center of said channel below said outer end surface and having one face facing toward the other end of said housing and a perpendicular face facing laterally outwardly through one radial portion of said channel, said one radial channel portion including an outwardly inclined inner wall and outwardly diverging side walls, the other radial channel portion including a level inner wall and parallel side walls, a back-up plate arranged in said other radial channel portion and having an inclined inner end surface recessed below said outer end surface of said housing and protectively overlying the inclined face of said prism, a light source arranged in said other end of said housing for directing a beam of parallel light rays toward said one end of said housing, and a condensing lens arranged between said light source and prism for intensifying said beam by causing said light rays to converge and focus upon said prism, whereby said prism turns and transmits substantially the entire intensified beam laterally outwardly through said one radial channel portion.

3,007,035

PHOTOGRAPHIC LIGHT SOURCE

Kenneth C. De Groff, 1920 S. Michigan St., South Bend, Ind.

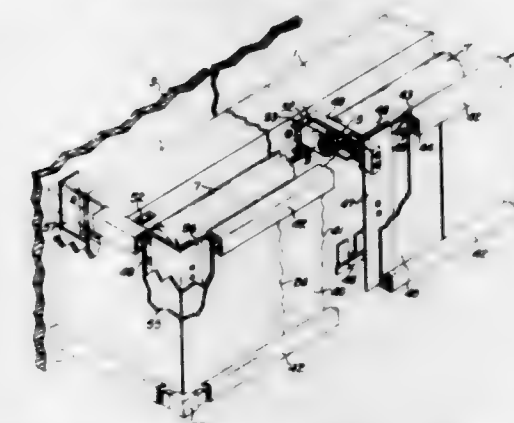
Filed Oct. 24, 1958, Ser. No. 769,448
4 Claims. (Cl. 240—1.3)

4. A photographic light source comprising two identical light sources fixedly positioned with respect to each other, said sources each including a bowl-shaped reflector, said reflectors being angled inwardly toward each other such that the axes thereof intersect at an angle of ninety degrees, said reflectors being symmetrical about the respective axes, the perimeters of said reflectors defining respectively two planes which intersect at right angles, each plane being perpendicular to the axis of the respective reflector, the proximal portions of the two perimeters being contiguous with each other whereby said reflectors are mutually exposed to receive and reflect light from the other toward the area to be illuminated, the profiles of the respective reflectors being such as to illuminate uniformly a plane normal to a line bisecting said angle in an area extending between the points of intersection of this last-mentioned plane by said axes.

3,007,036

WALL LIGHTING UNIT

Samuel M. Mills, Jr., Willoughby, Ohio, assignor to General Electric Company, a corporation of New York

Filed Aug. 28, 1957, Ser. No. 680,770
2 Claims. (Cl. 240—2)

1. A wall lighting unit comprising a pair of spaced tombstone lamp holders for accommodating a horizontally extending tubular electric lamp, each lamp holder including a laterally projecting body portion, a horizontally extending shielding member located in front thereof, said shielding member comprising a relatively thin lightweight elongated faceboard of at least semi-rigid material, said faceboard being uniform in cross section throughout its length and provided with integral

beads along its margins serving to rigidify the unit, brackets for supporting said faceboard having portions engaging said integral beads on the rear side of said faceboard whereby to present a smooth unbroken front, and lamp holder clips engaging the laterally projecting body portions of said lamp holders and supporting said brackets.

3,007,037

LAMP FOR KEYBOARD INSTRUMENTS

Roland M. Klemme, deceased, late of Salinas, Calif., by Virginia K. Klemme, executrix, Salinas, Calif.
Filed Aug. 25, 1958, Ser. No. 756,965
3 Claims. (Cl. 240—4)



1. A detachable lamp for pianos and other similar keyboard instruments comprising in combination a tubular housing consisting of two longitudinally divided semicircular sections one having upstanding flanges frictionally engaging and holding the other, each having the central portions of their marginal edges cut away to register with each other and form continuous longitudinal slots in the tubular housing on opposite sides thereof, one for illuminating the keyboard and the other for illuminating the music rack, removable end caps frictionally engaging the ends of said semicircular sections securing the tubular housing in assembled position, an electrical circuit mounted and secured within one of said semicircular sections, said circuit including lead-in wires, sockets for a lamp bulb, a lamp bulb mounted in said sockets and being substantially coextensive in length with said slots, and a switch operable from the outside of said tubular housing for completing and breaking the circuit to said bulb, and shield means movably secured within the other of said semicircular sections operable to adjust the width of said slots throughout their entire length to regulate the amount of light passing there-through.

3,007,038

HOSPITAL TYPE WALL LAMPS

Richard C. Anisfield, 95 Yantacaw Brook Road, Upper Montclair, N.J.
Filed Sept. 4, 1959, Ser. No. 838,174
4 Claims. (Cl. 240—73)



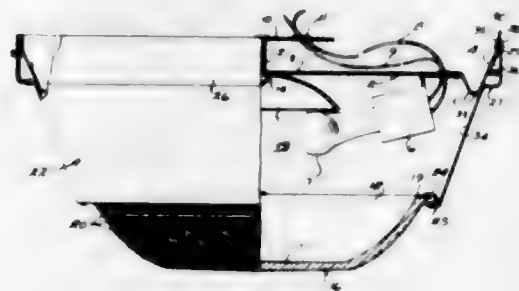
1. In a hospital room type wall lamp, an open indirect illumination bowl, means for mounting a bulb in said bowl, a generally closed casing having a part of

said bowl as at least a portion of its upper closure, said casing being secured below and to one side of said bowl to form the wall mounting bracket for said bowl, the part of said bowl forming part of said casing closure being apertured to facilitate cooling of said casing, and directional illumination means mounted in said casing for directing light downwardly and outwardly from said wall lamp.

3,007,039

LIGHTING FIXTURE

Lester I. Dvorak, Westlake, Ohio, assignor, by mesne assignments, to Wakefield Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 17, 1958, Ser. No. 715,756
1 Claim. (Cl. 240—78)



A lighting fixture comprising a base mounting an illuminating device, a bowl-shaped lens-refractor for diffusing the light emanating from said device, a conical-shaped support having a circular flange formed on its lower open end, a circular channel member on said flange facing toward the axis of said support, said lens-refractor having an outwardly projecting annular flange formed on its open end and disposed in said channel member, an annular wall integrally formed on the opposite open end of said support and enveloping said base, hinge means connected between one end of said annular wall and base to provide for swingably attaching said support to said base, latch means comprising a latch member attached at its one end to said annular support wall and disposed adjacent the inside surface of the same, a latch provided on the opposite end of said latch member, a tongue on said base, operator means movably disposed in said annular support wall and actuatable to swing said latch member so as to bring said latch into latching engagement with said tongue effective to releasably suspend said support downwardly from said base so as to locate said lens-refractor in spaced relation to said base and in a light diffusing position relative to said illuminating device, and an annular shoulder formed on said base engageable with said support intermediate said annular wall and circular flange being effective to centrally position said support and lens-refractor below said base.

3,007,040

REMOVABLE RECESSED LIGHTING FIXTURE

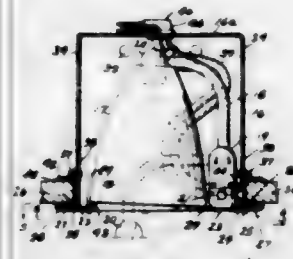
Nathan R. Schwartz, Yonkers, N.Y., assignor to Naras Research Inc., New York, N.Y., a corporation of New York

Filed June 24, 1958, Ser. No. 744,261

4 Claims. (Cl. 240—78)

2. A recessed lighting fixture comprising a hollow cylindrical housing having a roof at one end thereof and at the open end thereof an eccentric circumferential ring; said fixture having mounted therein an adjustably-positionable lighting unit; said lighting unit comprising a swivel mounted shade and being supported by an arm terminating in a swivel unit, the said swivel unit being removably secured to the said eccentric circumferential ring; the means for securing said swivel unit to said ring comprising an arm adapter member secured to the said ring; said arm adapter being in the shape of a sleeve-

like body, an arm support member rigidly secured to the said swivel unit, having two parallel projections extending axially therefrom and adapted to nest within the inner sur-

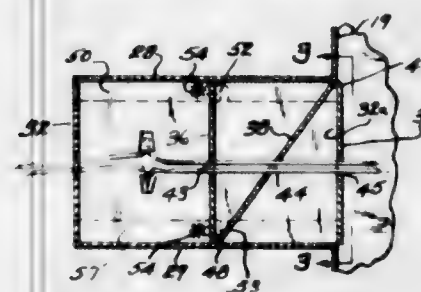


face of the said arm adapter, and a single threaded bolt passing through aligned holes in said nesting arm adapter and arm support member for removably interconnecting said nesting arm support and arm adapter members.

3,007,041

CLOSURE BAFFLE FOR JUNCTION BOXES

Arthur W. Matteson, Lakewood, Ohio, assignor, by mesne assignments, to Wakefield Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 16, 1959, Ser. No. 860,039
2 Claims. (Cl. 240—78)



1. In a junction box for use with a lighting fixture having a wall formed with an opening therein, said junction box being mounted on said wall wherein said opening communicates with the interior of said box, said junction box containing connections from a source of electrical power to electrical conductors which extend through said opening into said lighting fixture to thus supply electric current to the same, a heat baffle disposed in said junction box of generally Z-shaped cross section having two substantially parallel spaced end plates and a diagonal plate connecting with opposite edges of said end plates and extending angularly through said junction box, thus defining a pair of heat baffling zones in the same on opposite sides of said diagonal plate, one of said end plates being disposed in said junction box between said connections and said fixture wall and the other of said end plates being substantially closing said wall opening, said end plates being substantially perpendicular to the path of travel of heat from said lighting fixture to said junction box.

3,007,042

COMMUNICATION SYSTEM

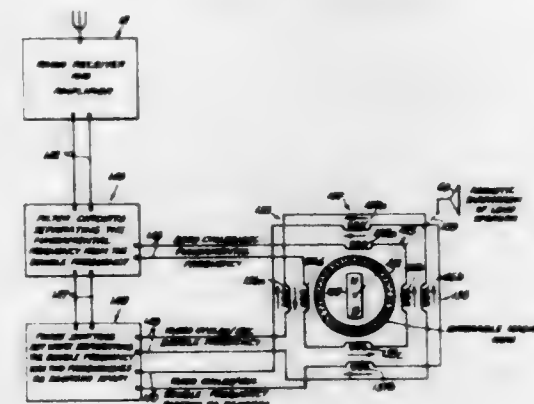
Edmund O. Schweitzer, Jr., 1002 Dundee Road, Northbrook, Ill.

Original application Apr. 6, 1956, Ser. No. 576,564.
Divided and this application Aug. 13, 1959, Ser. No. 833,624

23 Claims. (Cl. 250—6)

8. A wave transmitting system comprising, in combination, radio transmitting and receiving means, means for modulating said transmitting means with a first alter-

nating current and with a second alternating current having double the frequency of said first alternating current, means for shifting the phase relationship between said first and second alternating currents as a function of the amplitude and frequency of waves to be transmitted, filter circuit means at said receiving means for separating said alternating currents, phase shifting means for splitting the double frequency alternating current into two alternating currents in quadrature with respect to each other, a magnetic core structure, a first winding means on said core structure connected to be energized by the first

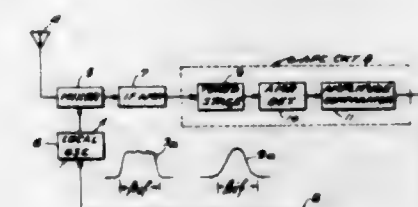


alternating current from said filter means to induce an alternating magnetic flux in said core structure, a second winding means on said core structure connected to be energized by said two alternating currents in quadrature to induce a shifting alternating magnetic flux in said core structure having a frequency double that of the first mentioned alternating flux, the resultant of said fluxes being a unidirectional field the position of which shifts in accordance with the degree of shift between said first and second alternating currents, and magnetic means responsive to said field for reproducing said transmitted waves.

3,007,043

AUTOMATIC FREQUENCY CONTROL SYSTEM

Leonard J. Rennkampff, Cedar Grove, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 9, 1954, Ser. No. 442,254
13 Claims. (Cl. 250—20)



1. In a heterodyne receiver having a local oscillator and a mixer circuit; an automatic frequency control circuit to control the heterodyning of the frequencies of a received signal which signal includes repetitive pairs of spaced pulses, the first pulse of said pairs of pulses being at a first carrier frequency and the second pulse of said pairs of pulses being at a second carrier frequency spaced a small increment from said first carrier frequency comprising means to receive said pairs of spaced pulses coupled to said mixer circuit, a tuned circuit coupled to receive the output of said mixer circuit, detection means responsive to the output of said tuned circuit to detect the amplitude of each of the pulses of said pairs of spaced pulses, comparison means responsive to the relative amplitudes of the pulses of each of said pairs of spaced pulses to produce a control voltage, means coupled to said detection means for simultaneously applying the de-

tested amplitudes of each of the pulses of each of said pairs of spaced pulses to said comparison means, and means coupling said control voltage to said local oscillator to maintain the output frequency of said mixer circuit centered in the bandwidth of said tuned circuit.

3,007,044

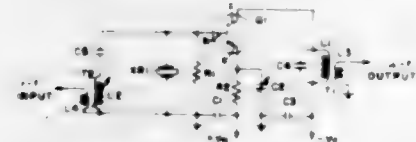
FREQUENCY SEARCH AND TRACK SYSTEM
Albert E. Cookson, Cedar Grove, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 14, 1957, Ser. No. 696,555
3 Claims. (Cl. 250-20)



3. A frequency search and track system comprising the combination of signal detection means tunable over a band of frequencies, means to continuously tune said detection means over said band of frequencies during frequency search, means to control said continuously tuning means comprising autocorrelating means for autocorrelating the output derived from said detection means with a delay replica thereof, said delay being such that the autocorrelation function of a desired signal of known waveshape is considerably greater than the autocorrelation function of the noise accompanying said desired signal, said autocorrelating means having an input and an output, means coupling the input of said autocorrelating means to the output of said detection means, switching means, responsive to an applied voltage having a given threshold level, coupled to said continuously tuning means to halt operation thereof, and means coupling the output of said autocorrelating means to said switching means to halt operation of the continuously tuning means when the output of said detection means contains a signal of said known waveshape.

3,007,045
CONVERTER

Donald A. Paynter, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 1, 1958, Ser. No. 752,576
9 Claims. (Cl. 250-20)



1. A single stage combined converter and oscillator, said stage comprising a junction transistor including an input diode, means to couple radio frequency energy into said input diode, means to transmit radio frequency energy into said coupling means, crystal controlled circuit means disposed in shunt with said input diode, means to operate said transistor to cause oscillations, said oscillations being combined with said radio frequency input in said input diode to cause output at an intermediate frequency, said crystal controlled circuit means causing oscillations within close tolerances, said means to couple in radio frequency energy comprising a first inductor and a

capacitor in series, said series inductor and capacitor being resonant to said radio frequency to form minimum impedance at radio frequency whereby maximum impedance to radio frequency energy and hence maximum radio frequency signal development takes place in said input diode to thus insure that maximum radio frequency energy is mixed with the oscillator frequency energy.

3,007,046

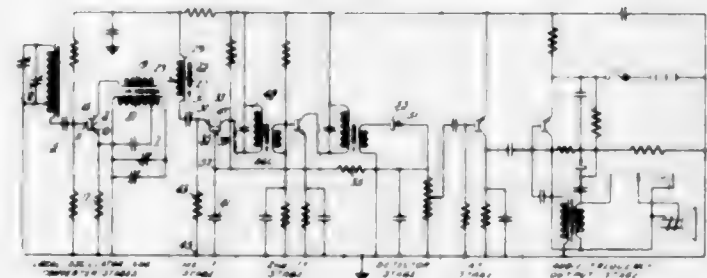
TRANSISTOR RADIO RECEIVERS
John B. Schultz, Folcroft, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 16, 1958, Ser. No. 761,342
11 Claims. (Cl. 250-20)



4. In a radio receiver, the combination comprising, an intermediate frequency amplifier transistor, a diode detector, an audio frequency amplifier transistor, and means providing volume control of said receiver by simultaneously varying the amount of signal applied to said audio frequency amplifier and the bias voltage and gain of said intermediate frequency amplifier transistor, said means including a variable volume control resistor direct-current conductively connected between said diode detector and said audio frequency amplifier transistor.

3,007,047

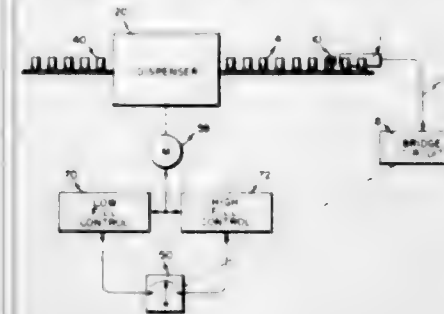
AUTOMATIC GAIN CONTROL FOR TRANSISTOR AMPLIFIERS
Joseph A. Worcester, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 23, 1959, Ser. No. 788,637
8 Claims. (Cl. 250-20)



1. An automatic gain control circuit for a transistor amplifier, comprising a body of semiconductive material having a pair of outer zones of one conductivity type disclosed on opposite sides of an intermediate zone of the other conductivity type, one of said outer zones having a forward bias and the other outer zone having a reverse bias, a series-resonant tuned driving circuit connected in series with the outer zone having a forward bias, an output circuit connected in series with the outer zone having the reverse bias, said intermediate zone being connected to ground for alternating signals, means for providing an alternating signal to said tuned driving circuit, said tuned driving circuit being tuned to have series resonance at the frequency of said alternating signal, and an automatic control means connected to apply a varying control voltage to the intermediate zone, said control means simultaneously varying the amplifier gain and the impedance of the tuned driving circuit.

3,007,048

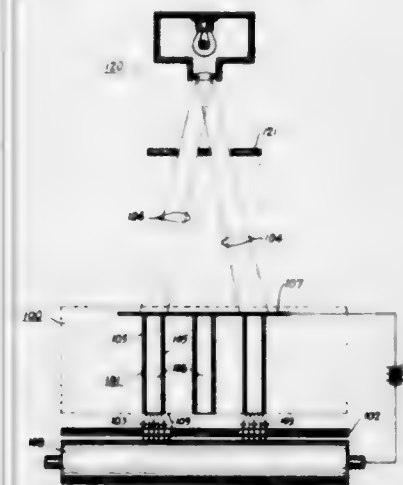
MEASURING AND CONTROLLING SYSTEM
Robert A. Knapp and Jack G. Crump, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 23, 1958, Ser. No. 730,472
8 Claims. (Cl. 250-43.5)



1. An automatic dispensing machine for filling successive unit containers with a volume of material said machine including means for varying said volume, comprising: a nuclear energy source and detector means for diagonally positioning said detectors with respect to said source on the opposite side of said containers at an angle determined by the size of said containers and the spacing therebetween to maintain a continuous absorber between said source and said detector, circuit means connected to said detector to continuously provide an electrical signal translatable to the average fill height of said material in successive containers being filled, a comparator including voltage generating means for producing a voltage identifiable as a predetermined fill height and means for comparing said generated voltage with said translatable signal to derive a difference voltage, means connecting said difference voltage to said varying means to vary said volume in accordance with said difference signal.

3,007,049

APPARATUS FOR GENERATING ELECTROSTATIC IMAGES
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,016
20 Claims. (Cl. 250-49.5)



16. A light guide having a longitudinal surface; a photoconductive coating positioned on said surface whereby light escaping from said guide illuminates said coating, and reduces the electrical resistance thereof; a first conductive electrode connected to a point of said coating; a second conductive electrode spaced from another point of said coating to provide a gap, said gap containing an ionizable gas; a source of potential connected between said first and second conductive electrodes; and a recording medium capable of accepting and retaining an electrostatic charge upon its surface, said recording

medium being located within said gap and spaced from said other point of said coating, said potential being of sufficient magnitude to create an ionic discharge across said gap whereby said potential when applied across said gap causes an ionic discharge to said recording medium through said gas.

3,007,050

THERMO-RESPONSIVE DETECTOR SYSTEM
Charles F. Green, Laurens A. Taylor, and August J. Kling, Schenectady, and George F. Metcalf, Glenville, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of War
Filed Nov. 29, 1939, Ser. No. 306,756
11 Claims. (Cl. 250-83.3)



1. In a long range thermo-responsive detector system, means for collecting and focusing the thermal energy radiated by a thermal radiator, a thermo-couple vacuum tube located within the focal region of the collected energy and an amplifier-indicator system in electrical relation with the output of the thermo-couple tube, said amplifier-indicator system including means in connection with the output of said thermo-couple tube for periodically developing a transient induced voltage across the input of said amplifier-indicator system for producing amplified variations thereof in said system.

3,007,051

OPTICAL INFRARED SIGHT SYSTEM
Dominic Amara, Sherman Oaks, and Henry F. Rempt, Van Nuys, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Apr. 24, 1956, Ser. No. 580,390
3 Claims. (Cl. 250-83.3)



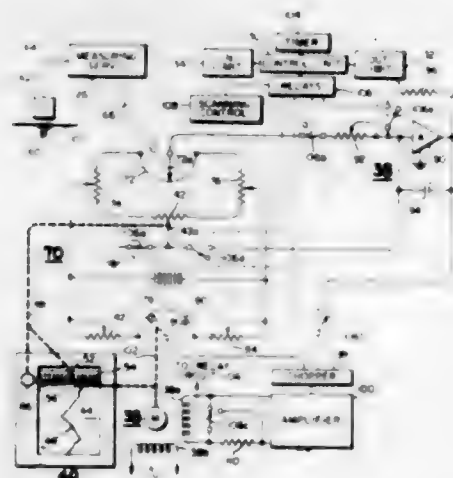
1. In an aircraft fire control system having a combining screen and an optical gunsight computer for projecting thereon a reticle image giving the correct line of sight lead angle for a target, an infrared image converter comprising, means receiving infrared energy emitted by a target, lens means collecting said energy in the form of a beam, rotatable slotted scanning disc means arranged to allow said energy collected by said lens means to pass freely therethrough only at the slots, a second light source, photoelectric cell means behind the disc means exposed to said energy passing through the slots to trigger said second light source and thereby produce light, slotted scanning disc means rotatable with the first mentioned scanning disc and converting the light from said second light source first into a visible light beam representing the target and its actual line of sight relative position, said slotted disc means comprising discs having corresponding

sets of correspondingly shaped and arranged generally radial arcuate slots, means for rotating the discs, and means directing the last named light beam onto the screen for comparison with the reticle image.

3,007,052

MEASURING APPARATUS

Richard W. Hickman, Leo G. Mamas, and Frank M. Alexander, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Dec. 3, 1958, Ser. No. 777,928
6 Claims. (Cl. 250-83.3)



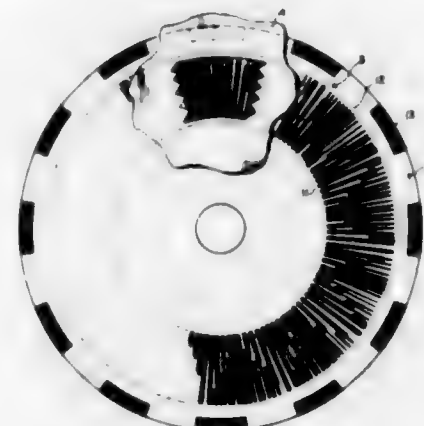
5. Apparatus for recording average values of a cross-sectional dimension of traveling sheet, comprising a recorder having a continuously moving display chart subdivided in units of said dimension and a marking indicator movable with respect to said chart, a source of penetrative radiation and a radiation detector located at one edge of said sheet, means supporting said source to provide a beam of radiation directed toward one side of said traveling sheet and for supporting said detector in position to receive radiation from said sheet, a track extending laterally across the width of said sheet, a carriage including said source and detector supporting means, bearing means for movably supporting said carriage on said track, reversible motor means for actuating movement of said carriage, control means including means responsive to the position of said carriage on said track to periodically start, stop and reverse said motor means when said carriage has traversed said sheet, delay means connected to said control means for stopping said gauge for a predetermined period, a movable target indicator, means for positioning said target indicator on said chart at a desired value of said dimension, means responsive to said positioning means for generating a first voltage analog of said desired value, means including said detector for generating a second voltage analog of said dimension at the traversing point of measurement, circuit means for comparing said first and said second voltage analogs to provide a signal indicative of the difference therebetween, an integrator having an input adapted for connection to said circuit means and an output adapted for connection to said recorder, said integrator being operative to provide a signal indicative of an average value of said difference, means responsive to said control means for connecting said integrator output to said recorder when said motor means is deenergized for displacing said marking indicator on said chart from said target indicator a distance in accordance with said average difference, means for deenergizing said recorder to clamp said marking indicator on said chart at said displaced position, and means for automatically resetting said integrator, said control means adapted to actuate said reversible motor means when said integrator is reset.

3,007,053

INFRARED TRACKER

Monty M. Merlen, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed Mar. 21, 1960, Ser. No. 16,290
7 Claims. (Cl. 250-203)



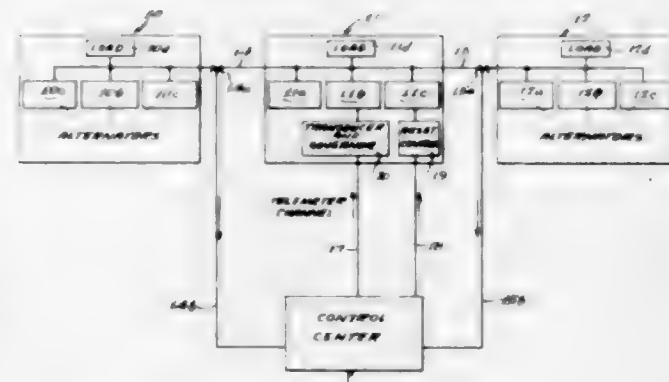
1. A tracker comprising in combination and optical alignment, a rotatable reticle and associated aperture mask, said aperture being located between the center and the periphery of the reticle means for collecting optical radiations from a predetermined field of view and imaging them on the plane of the reticle in the aperture mask, the reticle in the zone occupied by the aperture mask being provided with triangles of at least one interrupting bar arranged with one set of triangles having apices directed toward the center of the reticle and a second set with apices directed toward the periphery, the width of the triangle bars being the same, the bars being symmetrically arranged on either side of a line from the apex of the triangle to the center of the base means for rotating the reticle at a predetermined speed whereby the triangles chop radiation in pulses, the respective pulse widths depending on the peripheral location of the target image at the aperture, a reference signal generator generating a signal in synchronism with the reticle, a detector receiving the chopped light beam after passing through the reticle and electronic circuits, one of which produces an error signal proportional to pulse width and one proportional to pulse position or phase with respect to the reference signal.

3,007,054

APPARATUS FOR CONTROLLING PRIME MOVERS

George Forrest Drake, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois

Filed Mar. 12, 1959, Ser. No. 799,004
14 Claims. (Cl. 290-40)



14. In a governor for controlling the rate of energy supplied to a prime mover, such governor including a movable speed-setting member and a movable speed-re-

sponsive member positioned in accordance with the speed of the prime mover, and a control member which by its position determines the rate of energy input to the prime mover together with means for moving said control member in accordance with the movements of said speed-setting and speed-responsive members, the combination comprising an electromagnetic transducer having a movable output member and means to position the same according to the magnitude of an electric control signal, means for combining the movements of said speed-setting and output members so that the two jointly effect the position of said control member, means for locking said output member against movement, and condition responsive means for releasing and actuating said locking means.

3,007,055

TEST SIGNAL GENERATOR WITH CIRCUIT MEANS TO SEPARATELY ADJUST RISE AND FALL TIME OF THE OUTPUT PULSES

Fred Herzfeld, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,322
9 Claims. (Cl. 307-88.5)



9. In combination, means for producing a square wave including means for varying independently the duration of the positive-going and negative-going excursions of said square wave, a linear ramp generator circuit, means connecting said square-wave producing means to said linear ramp generator circuit, said generator circuit comprising means for generating a first voltage waveform having a leading edge, a plateau and a trailing edge, said generator circuit being gated "on" and "off" in response to said excursions of opposite polarities, said generator circuit also comprising means to adjust the slope of said leading edge and means to cause said trailing edge to decay substantially instantaneously, a second circuit, and means to apply said first voltage waveform to said second circuit, said second circuit comprising means to translate said first voltage waveform monotonically, said second circuit also comprising control means to vary linearly the decay-time of said trailing edge and to provide at the output of said second circuit a second voltage waveform whose leading and trailing edges are linear and whose slopes are independently variable, said square-wave producing means comprising means to adjust the duration of said plateau and means to control the frequency of repetition of said second voltage waveform.

3,007,056

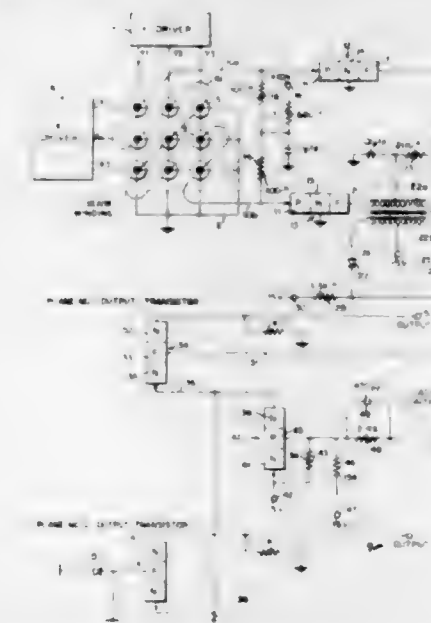
TRANSISTOR GATING CIRCUIT

Joseph C. Logue, Poughkeepsie, N.Y., and Harold C. Goodman, Rosemont, Pa., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 5, 1956, Ser. No. 626,380
1 Claim. (Cl. 307-88.5)

Apparatus for simultaneously transferring signals from each of a plurality of distinct unipolar signal sources to

a related distinct receiving circuit for each such source comprising, in combination, a plurality of unipolar signal sources, a plurality of receiving circuits, one for each said source, a plurality of first transistors, one for each said separate signal sources, each said transistor having junction emitter, base, and collector electrodes, a load impedance for each said transistor and connected from the collector electrode thereof to ground, a conductor connecting each of said collector electrodes to the related receiving circuit, signal input means for transmitting the unipolar signals from each said source to said base electrode of the associated transistor, constant potential biasing means for each of said transistors and linked to each said base electrodes thereof to normally bias said related transistor unresponsive to the related applied unipolar signals, common means for applying a two level control signal to the emitter electrode of each of said transistors, one level of said signal overcoming said biasing means and conditioning said transistors for response to any unipolar signal applied thereto from said related



source during the duration of said one level, said common means comprising a second transistor having junction emitter base and collector electrodes, means electrically coupling the collector electrode of said second transistor to the emitter electrodes of said first transistor, constant potential means linked to said emitter electrode of said second transistor, biasing potential means linked to said base electrode of said second transistor and normally biasing said electrode to a potential relative to said related emitter electrode to render the transistor inoperative, and signal input means for transmitting to said second transistor emitter an input potential of polarity and magnitude sufficient to overcome the bias thereof and render said second transistor conductive, said latter transistor when conductive generating on the associated collector electrode, said one level of the two level control signal, wherein all of said first transistors receiving a unipolar signal from their related signal sources simultaneously transfer said unipolar signal to their related receiving circuit.

3,007,057

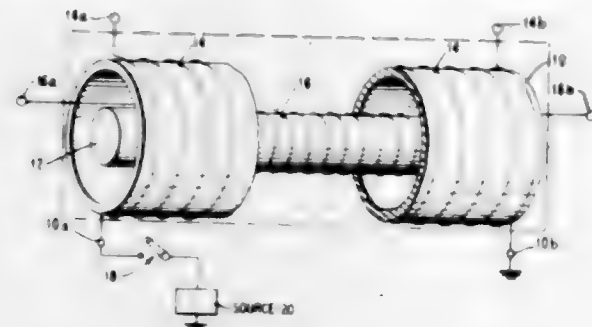
SUPERCONDUCTOR GATING CIRCUITS

Andrew E. Brennemann and Howard L. Funk, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 27, 1957, Ser. No. 705,598
20 Claims. (Cl. 307-88.5)

1. In a circuit for controlling the transmission of signals between first and second coil conductors, a cylindrical shield of superconductor material maintained at a temperature at which the material is superconductive in the

absence of a magnetic field, both said coil conductors being arranged to extend longitudinally in the same direction as said cylinder with said first coil conductor being arranged around said cylindrical shield and said second

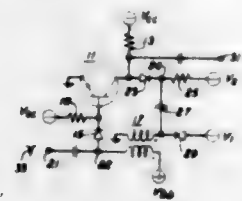


coil conductor being arranged within said cylindrical shield, and conductor means connected directly to said shield for applying thereto a current signal effective to cause at least a portion thereof to be driven from a superconductive to a resistive state.

3,007,058

TRANSISTOR PULSE GENERATOR

Larrabee M. Smith, Morris Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,504
13 Claims. (Cl. 307-88.5)



13. A pulse duration stabilized monostable multivibrator comprising a transistor having an emitter, a collector and a base electrode, said transistor being adapted to change from the "off" to the "on" state in response to a trigger pulse applied to one of said electrodes, a transformer having a primary winding and a secondary winding, a diode for connecting said secondary winding to said base electrode, and a capacitor for connecting said primary winding to said collector electrode, whereby when said transistor changes from the "off" to the "on" state a surge voltage is produced in said primary winding which reverses after a definite interval, said primary and secondary windings being so arranged that the surge voltage renders said diode nonconducting until that voltage reverses, at which time a current is induced by said primary winding into said secondary winding to cause said transistor to change from the "on" to the "off" state.

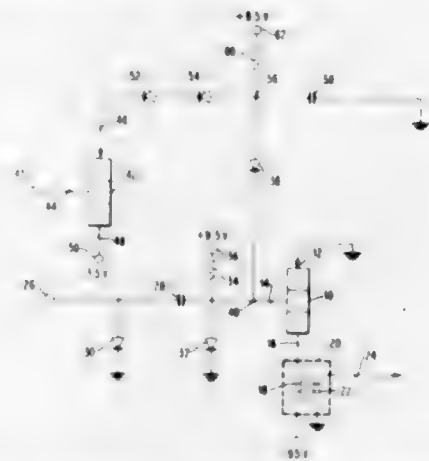
3,007,059

PULSE AMPLIFIER GATING MEANS CONTROLLED BY COINCIDENT OR SHORTLY PRIOR PULSE

John W. Skerritt, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 26, 1958, Ser. No. 776,471
3 Claims. (Cl. 307-88.5)

1. A pulse gating circuit including a pulse amplifier circuit comprising a first transistor having an input circuit and an output circuit, means to apply a pulse to said input circuit adapted to turn on said transistor to produce an amplified pulse of current in said output circuit in response to said pulse, and a control circuit responsive to gating pulse signals adapted to apply a conditioning level to said pulse amplifier circuit, said condition-

ing level being of a duration substantially longer than the duration of said gating pulse signal, comprising a second transistor having emitter, base and collector electrodes, said second transistor being connected in common collector configuration, means to apply a gating pulse signal to said base electrode adapted to turn on said second transistor, a capacitor connected to said emitter electrode adapted to be charged in response to the turn on of said second transistor, a unidirectionally conduc-



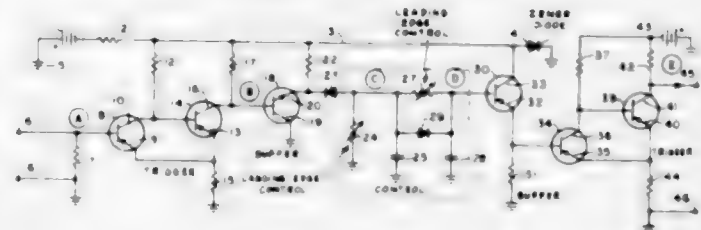
tive device connected between said capacitor and the input circuit of said pulse amplifier transistor, and means to normally maintain said unidirectionally conductive device in forward biased condition, said capacitor, when charged by said second transistor, producing reverse biased condition of said unidirectionally conductive device such that a pulse applied to said pulse amplified circuit produces a voltage transition at said input circuit sufficient to turn on said first transistor, thereby generating a pulse in its output circuit.

3,007,060

CIRCUITRY FOR INDEPENDENTLY DELAYING THE LEADING AND TRAILING EDGES OF AN INPUT PULSE

John H. Guenther, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Mar. 23, 1959, Ser. No. 801,156
3 Claims. (Cl. 307-88.5)



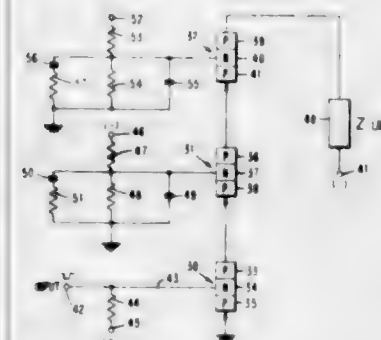
1. A time delay circuit comprising, a control circuit having input and output terminals, a first resistance element and a first reactance element both connected across said pair of input terminals, a second reactance element connected across said pair of output terminals, a second resistance element connected between one of said input terminals and one of said output terminals, means for connecting the other of said input terminals and the other of said output terminals together, and a non-linear impedance device connected in parallel with said second resistance element, means for coupling the input pulse to be delayed to the input terminals of said control circuit, a trigger circuit having input and output terminals for producing across its output terminals an output pulse whose leading edge is initiated when the amplitude of an input pulse applied thereto rises above a predetermined value and whose trailing edge is initiated when the amplitude of an input pulse applied thereto falls below a predetermined value, and coupling means for applying the

control pulse in the output terminals of said control circuit as an input pulse to the input terminal of said trigger circuit.

3,007,061

TRANSISTOR SWITCHING CIRCUIT

Abe M. Gindl, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 8, 1959, Ser. No. 811,844
3 Claims. (Cl. 307-88.5)



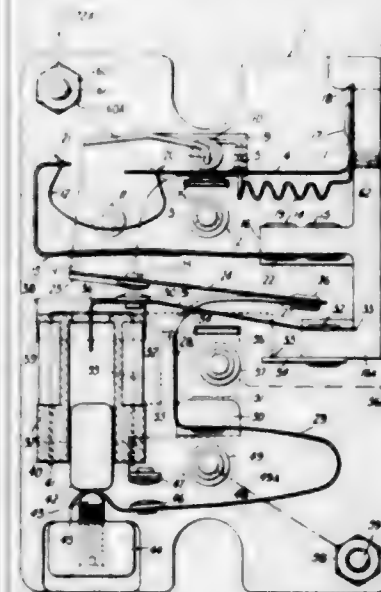
1. A circuit for connecting a voltage source to a load comprising, a plurality of transistors, each having an emitter, a collector and a base and capable of withstanding a maximum potential less than that of said voltage source, means connecting said transistors in cascode relationship between said load and said voltage source, a source of switching signals coupled to the base of one of said transistors, and a plurality of delay networks, one coupled to the base of each of the remaining transistors of said plurality, each of said delay networks comprising a fixed potential source having the same magnitude and polarity as said voltage source, a pair of resistive impedances connected in series across said potential source, and a capacitor connected in parallel across one of said resistive impedances, the junction of said capacitor and said pair of impedances being coupled to the base of the respective transistor.

3,007,062

CONTROLLERS FOR SPLIT-PHASE ELECTRIC MOTORS

Ronald Harold Teasell, North Wembley, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 5, 1957, Ser. No. 670,278
Claims priority, application Great Britain July 10, 1956
12 Claims. (Cl. 307-112)



1. A starting controller for an electric motor, including in the combination, an electrically energizable sole-

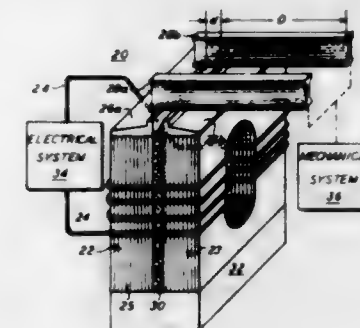
noid, an armature attracted to the solenoid by energization of the solenoid, a switch for controlling an electric circuit including spring means urging the switch toward closed position, said switch being normally held open by the gravity applied weight of the armature as unattracted to the unenergized solenoid and closed by the spring means when the armature is attracted to the solenoid when energized, and an armature return spring means normally disengaged from the armature when the solenoid is unenergized but engaged by said armature in solenoid attracted position with the solenoid energized thereby to partially oppose the attracting force of the solenoid by the force of said spring means to spring aid thereby gravity release of the armature from the solenoid on decay of electric current in said solenoid.

3,007,063

MAGNETOSTRICTIVE ACTUATOR

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut

Filed Jan. 10, 1958, Ser. No. 708,292
17 Claims. (Cl. 310-26)



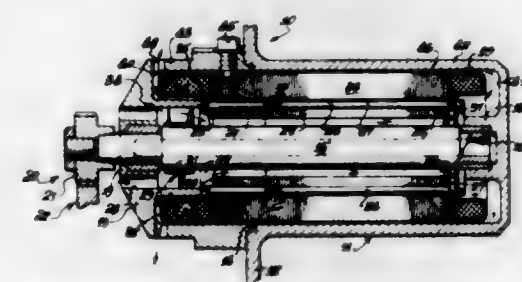
1. A transducer for coupling between an electrical network and a mechanical system, comprising a first magnetostrictive element having a first magnetostrictive coefficient, a second magnetostrictive element having a second and different magnetostrictive coefficient, said first and second magnetostrictive elements being spaced from each other, winding means developed about portions of said first and second magnetostrictive elements and coupled to the electrical network, a first lever-supporting means connected to an end of said first magnetostrictive element, a second lever-supporting means connected to a corresponding end of said second magnetostrictive element, and lever means connected to said first and second lever-supporting means for coupling to the mechanical system.

3,007,064

LIQUID COOLED ROTOR AND STATOR

Elmer F. Ward, Orange, Calif., assignor to The Task Corporation, Anaheim, Calif., a corporation of California

Filed Apr. 4, 1958, Ser. No. 726,415
10 Claims. (Cl. 310-54)



1. A liquid cooled electrical machine, comprising means including a housing and rotor and stator assemblies within the housing, said means containing an inlet and an outlet and passages for circulating a coolant received

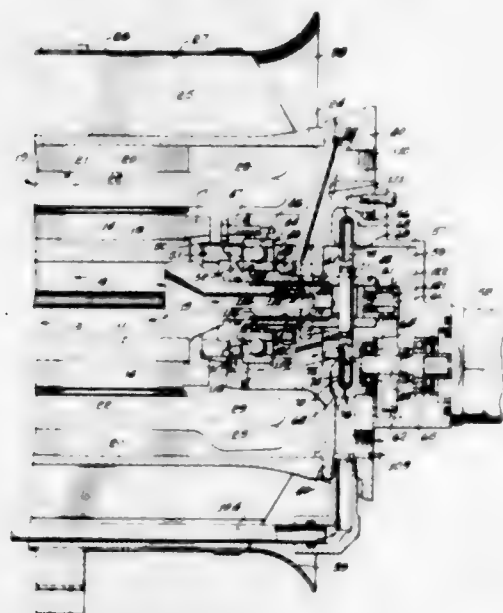
through said inlet along said rotor and stator assemblies to discharge from said outlet, said coolant circulation passages including gaps between the rotor and stator and between the stator and housing, said rotor assembly including a shaft projecting outside the housing for driving mechanism operable to froth the coolant prior to circulation thereof through said inlet, and a rotary impeller in the path of said circulation for delivering received coolant to said passages in response to rotor assembly rotation, whereby coolant froth received through said inlet is collapsed by said impeller prior to coolant circulation through said passages.

3,007,065

FLUID COOLED MOTOR

Richard N. Rigney, Anaheim, Calif., assignor to The Task Corporation, Anaheim, Calif., a corporation of California

Filed Mar. 23, 1959, Ser. No. 801,085
11 Claims. (Cl. 310-54)



1. A fluid cooled electrical machine, comprising apparatus including a housing and rotor and stator assemblies within the housing, said rotor assembly including a rotor shaft, bearings at opposite ends of the rotor and stator assemblies supporting the shaft for rotation, said apparatus containing passages communicating with the interior of the rotor assembly and extending over the stator assembly for circulating a first fluid coolant in cooling relation with the rotor and to lubricate the bearings and for separately circulating a second fluid coolant over said stator assembly in cooling relation therewith during operation of said machine, and pump means having outlets out of direct communication with the bearings and having intakes in the path of first fluid coolant access to the bearings for drawing first fluid coolant away from the bearings to keep the bearings operating locally in first fluid coolant mist during machine operation, the passages providing relatively restricted access for coolant flow to the bearings and relatively unrestricted access for coolant flow from the bearings to said intakes.

3,007,066

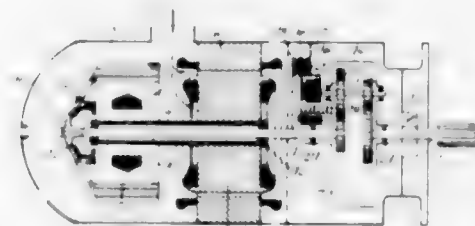
TRANSMISSION UNITS COMPRISING EDDY CURRENT COUPLINGS

Louis Emile Ponsy, Montmorency, France, assignor to Precision Mecanique Labinal, Saint-Ouen (Seine), France, a French society

Filed June 19, 1958, Ser. No. 743,103
Claims priority, application France June 19, 1957
4 Claims. (Cl. 310-96)

1. An alternating current generator unit comprising an input shaft adapted to be rotated at a variable speed; a

two-speed gear driven by said input shaft, said two-speed gear embodying a spring-pressed two-way clutch and an electromagnet to actuate said clutch, said clutch ensuring the higher transmission ratio when said electromagnet is unenergized and the lower transmission ratio when said electromagnet is energized; an intermediate shaft driven by said two-speed gear; an eddy current coupling embodying an armature member carried by said intermediate shaft and an inductor member electromagnetically driven by said armature member, said inductor member



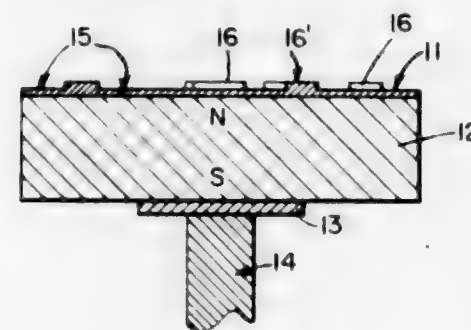
having exciting coil means; a driven shaft to carry said inductor member; an alternator embodying a stator and a rotor, said rotor being carried by said driven shaft; means responsive to the load on the driven shaft and to the frequency of said alternator to control current supply to the coil means of said inductor member to maintain said frequency substantially constant; and static means responsive to the speed of said input shaft to supply exciting current to the actuating electromagnet of said two-way clutch when the speed of said input shaft exceeds a predetermined value.

3,007,067

PULSE CODE GENERATOR ASSEMBLY

Christopher L. Snyder, Plainfield, N.J., assignor to Steatite Research Corporation, Keasbey, N.J., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,659
2 Claims. (Cl. 310-111)



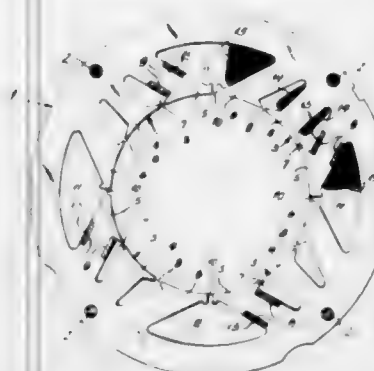
1. In a pulse generating device of the rotating-disk ferromagnetic type adapted to generate pulses on rotation due to a changing in air gap between relatively high and low patterned surface portions of the disk and pick-up means positioned adjacent the surface of said disk, the improvement comprising a composite rotatable disk formed of two disk-shaped parts, a first of said disk-shaped parts being formed of magnetically soft iron, said first disk shaped part containing high and low patterned portions on the outer surface thereof and comprising a flat, inner surface, said second disk-shaped part comprising one flat surface united to the flat surface of the first disk shaped part, said first disk-shaped part being formed of a magnetically soft ferromagnetic iron, said second disk shaped part being formed of a magnetically hard ferromagnetic material and being magnetized.

3,007,068

SHADED POLE MOTOR

Harold D. Arnold, Bellefontaine Neighbors, and John W. Hammann, St. Louis, Mo., assignors to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri

Filed Oct. 20, 1958, Ser. No. 768,473
8 Claims. (Cl. 310-172)

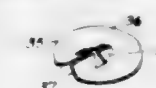


1. In a shaded pole motor, the improvement comprising a stator having a plurality of poles with shading coils, each of said poles having a main running winding embracing said pole and supplemental running winding encompassed by the said main running winding, said supplemental winding being physically separated from said main running winding by a part of said pole.

3,007,069

HEAT DEFLECTORS FOR ELECTRIC LAMPS OR SIMILAR DEVICES

George J. Edwards, Painesville, Ohio, assignor to General Electric Company, a corporation of New York
Filed May 2, 1958, Ser. No. 732,640
2 Claims. (Cl. 313-42)



1. A heat deflecting disc of the class described for attachment to the stem press of an electric lamp mount structure, said disc having an elongated slot at the interior thereof centered transversely of its length about a given diameter of the disc, a radial slit having a first portion extending along said diameter normal to the length of said slot and from the periphery of the disc to said slot and a second portion extending along said diameter beyond said slot, the portions of said disc at either side of the first said portion of the radial slit being bent up at acute angles to the surface of the disc along lines extending from the ends of said slot substantially parallel to said first portion of the radial slit, and a short transverse slit extending across the end of said second portion of the radial slit, portions of said disc at either side of the said second portion of said radial slit being bent up at acute angles to the surface of the disc along lines joining the respective ends of said transverse slit with the proximate ends of said slot.

3,007,070

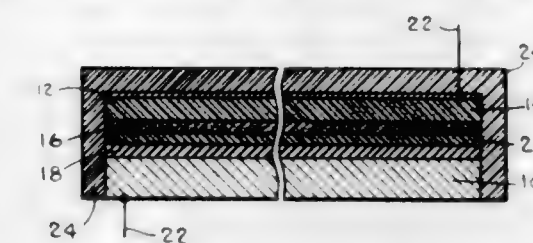
ELECTROLUMINESCENT DEVICE

William W. Cargill, Jr., Los Angeles, Calif., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

Filed Feb. 1, 1960, Ser. No. 5,969
3 Claims. (Cl. 313-108)

1. An electroluminescent device comprising, a layer of aluminum forming a first electrode, a thin transparent layer of conductive material forming a second electrode, a layer of electroluminescent phosphor-impregnated dielectric material between said first and second electrode

layers forming an electroluminescent layer, and a layer of aluminum oxide tightly adhered to said aluminum layer and disposed between said aluminum layer and said



electroluminescent layer, said layer of aluminum oxide being of a thickness greater than the thickness of the natural skin of aluminum oxide which forms on aluminum when exposed to the atmosphere.

3,007,071

LOW-PRESSURE MERCURY VAPOR DISCHARGE LAMP

Arved Lompe, Berlin-Zehlendorf, and Herbert Dziargwa, Berlin-Nikolassee, Germany, assignors to Patent-Treuhand-Gesellschaft für elektrische Glühlampen m.b.H.

Filed Apr. 23, 1959, Ser. No. 808,334
Claims priority, application Germany Apr. 29, 1958
10 Claims. (Cl. 313-178)



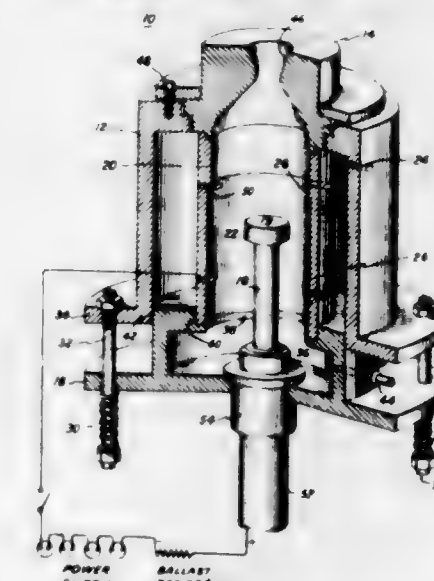
1. A low pressure mercury vapor electric discharge lamp wherein the operating voltage does not exceed two thirds of the supply voltage, comprising an elongated envelope having a pair of electrodes sealed into opposite ends and containing a filling of mercury vapor, and an amalgam of mercury with a metal located at places within said envelope exposed to temperatures not substantially higher than those of the discharge therethrough, the metal of said amalgam being selected to shift upward the optimum temperature for generation of mercury resonance radiation within said lamp, the loading of said lamp being sufficiently low that substantially only the mercury is excited to radiation.

3,007,072

RADIAL TYPE ARC PLASMA GENERATOR

John H. McGinn, Philadelphia, and John W. Prout, King of Prussia, Pa., assignors to General Electric Company, a corporation of New York

Filed Jan. 29, 1959, Ser. No. 789,944
4 Claims. (Cl. 313-231)



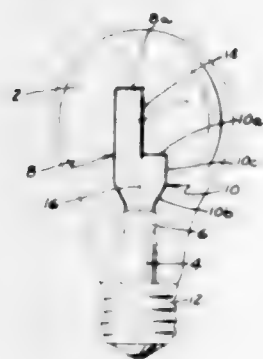
1. An arc plasma generator comprising a high pressure cylindrical housing, a hollow cylindrical wall elec-

trode within said housing, a rod electrode mounted within the cylindrical wall electrode, the longitudinal axes of said wall electrode and said rod electrode being substantially coincident, a nozzle assembly secured to said housing, inlet means for introducing a pressurized fluid medium within said wall electrode, means for connecting said wall electrode and said rod electrode to a source of unidirectional electrical current, the distance between the wall electrode and the rod electrode being such that arcs between said electrodes are substantially transverse to the longitudinal axes of the rod and wall electrodes.

3,007,073

ELECTRIC LAMP MOUNT

Samuel E. Swasey, Edgemere, and Kenton R. Bagley, Beverly, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,380
2 Claims. (Cl. 313-277)



1. A mount structure disposed within an electric lamp envelope having a longitudinal axis, said mount structure comprising: a filament, the longitudinal axis of which is substantially coincident with the longitudinal axis of said envelope; a stem press; and a pair of lead-in wires of unequal length anchored in said stem press and extending generally longitudinally within said envelope and along opposite sides of the longitudinal axis of said envelope, each of said lead-in wires terminating in an inwardly extending segment to which the ends of said filament are attached, a segment of the longer lead-in wire adjoining the stem press being relatively stiff and the remainder of said longer lead-in wire and the shorter lead-in wire being substantially more flexible than said segment of said longer lead-in wire adjoining the stem press, the said remainder of said longer lead-in wire and the said shorter lead-in wire having substantially the same elasticity.

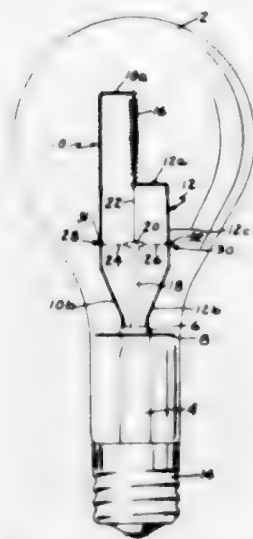
3,007,074

ELECTRIC LAMP MOUNT

Samuel E. Swasey, Edgemere, and Kenton R. Bagley, Beverly, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,796
3 Claims. (Cl. 313-279)

1. A mount structure disposed within an electric lamp envelope having a longitudinal axis, said mount structure comprising: a filament, the longitudinal axis of which is substantially coincident with the longitudinal axis of said envelope; a stem press; and a pair of lead-in wires of unequal length anchored in said stem press and extending generally longitudinally within said envelope and along opposite sides of the longitudinal axis of said envelope, each of said lead-in wires terminating in an inwardly extending segment to which the ends of said filament are attached, said lead-in wires diverging as they emerge from said stem press and then extending in part

substantially parallel to the longitudinal axis of said envelope, said substantially parallel segment of the longer



of said pair of lead-in wires being flattened whereby greater stiffness is imparted to said longer lead-in wire.

3,007,075

CATHODE

Leonard D. Schwender, Emporium, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Apr. 29, 1960, Ser. No. 25,601
7 Claims. (Cl. 313-346)



1. In an electron tube cathode of the wrap-around coated type the combination comprising a cathode base sleeve and an attached rhomboidal shaped coating sheet having opposite edges forming a spiral seam, said spiral seam being no longer than one turn around the cathode base sleeve.

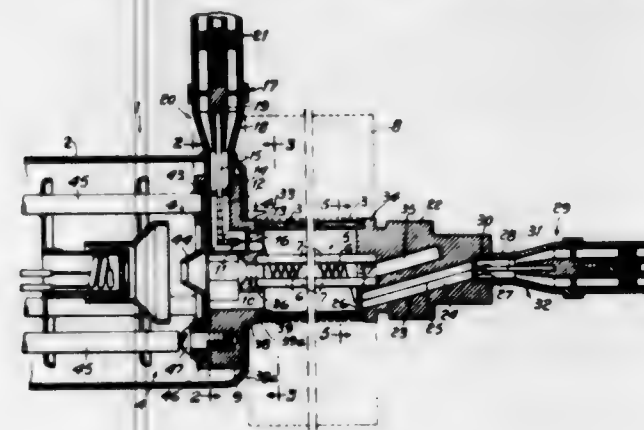
3,007,076

TRAVELING WAVE ELECTRON DISCHARGE DEVICE

Charles E. Anderson, Bloomfield, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 3, 1957, Ser. No. 656,988
20 Claims. (Cl. 315-3.5)

1. A traveling wave electron discharge device comprising a metallic vacuum housing having a large portion and a slender, elongated tubular portion, an electron gun unit disposed in said large portion to project an electron beam along a path axially of said elongated portion, a helical propagating structure disposed in said elongated portion for propagation of a wave in interacting relation with the electrons of said beam, a first magnetic pole piece having a first aperture therethrough coaxially of said beam path disposed transverse of said large portion adjacent one end of said elongated portion, a second magnetic pole piece disposed crosswise the other end of said elongated

portion in hermetically sealing relation therewith, a continuous magnetic field producing means slidably engaging a portion of each of said pole pieces for positioning said magnetic field producing means closely adjacent the outer surface of said elongated portion and abutting said large portion, a radio frequency input means for said propagating structure including a first coaxial terminal extending at right angles to said large portion from said first pole piece and a coaxial transmission line section including a second aperture in said first magnetic pole piece parallel to said beam path, a third aperture in said first magnetic pole piece at right angles to said second aperture and continuous therewith, the walls of said second and third aperture forming a continuation of the outer conductor of said first terminal, and a conductor extending from the input end of said propagating structure coaxially of said second and third apertures form-

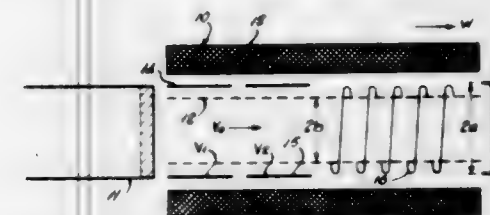


ing a continuation of the center conductor of said first terminal, a radio frequency output means for said propagating structure including a second coaxial terminal extending axially of said slender portion from said second magnetic pole piece and a coaxial transmission line section including a fourth aperture in said second magnetic pole piece extending angularly therethrough from a point removed from the axis of said slender portion to said second terminal, the wall of said fourth aperture forming a continuation of the outer conductor of said second terminal, and a conductor extending from the output end of said propagating structure axially of said fourth aperture forming a continuation of the center conductor of said second terminal and a collector electrode including a fifth aperture in said second pole piece disposed relative to said beam path to collect the electrons of said beam.

3,007,077

ELECTRONIC PHASE SHIFTER FOR VHF-UHF FREQUENCIES

Richard H. Gelger, Emerson, N.J., assignor to Roger White Electron Devices, Inc., Haskell, N.J., a corporation of New Jersey
Filed Mar. 25, 1958, Ser. No. 723,832
2 Claims. (Cl. 315-3.5)



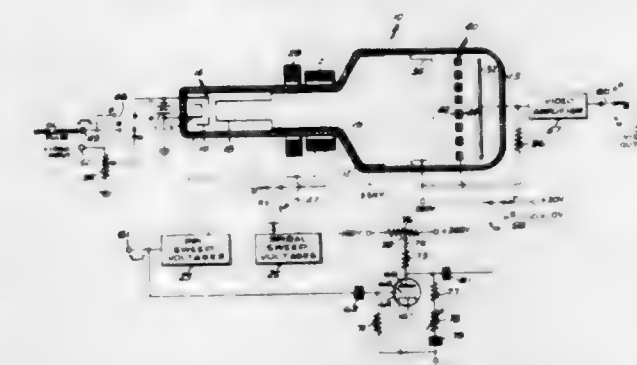
1. In apparatus for shifting in phase an electromagnetic wave, an electron discharge device comprising: a cathode electrode for generating an electron beam within the discharge device; a collector electrode for receiving the electron beam; a helically wound coil interposed between the cathode electrode and collector electrode for receiving

and propagating along the surface thereof an electromagnetic wave; electron accelerating means positioned adjacent said cathode for accelerating the electron beam toward said slow wave structure; electron decelerating means interposed between said accelerating means and said helically wound coil; means for applying a relatively low D.C. voltage to said decelerating means to reduce the axial velocity of said electron beam to a speed which is relatively low compared to the axial speed of propagation of the electromagnetic wave along said helically wound coil; and magnetic field generating means for developing an axial magnetic field to confine the electron beam in proximity to the helically wound coil, said beam functioning to vary the dielectric constant adjacent the coil to thereby provide a shift in the phase of the electromagnetic wave propagated along said coil.

3,007,078

STORAGE TUBE COMPENSATION MEANS

Alvin S. Luftman, Natick, Frank E. Taylor, Newton, and John A. Buckbee, Wellesley, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,287
10 Claims. (Cl. 315-12)

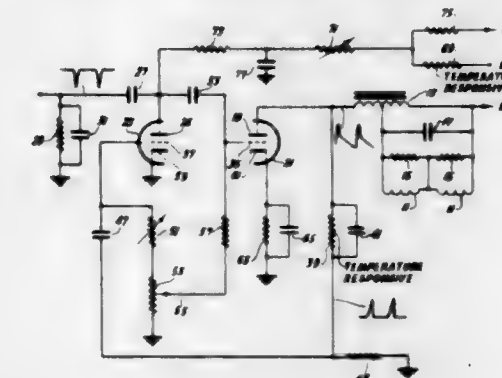


1. In combination, a storage device having a storage screen adapted to be scanned in such a manner that the degree of overlap of successive scans tends to vary along the length of each scan to produce intensity variations along said scan, means for writing information into said storage device for a predetermined period, and means for varying the sensitivity of said storage device during the writing period to compensate for variations of intensity of each of said scans.

3,007,079

DEFLECTION CIRCUITRY

William D. Schuster, Oakfield, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 710,056
6 Claims. (Cl. 315-29)



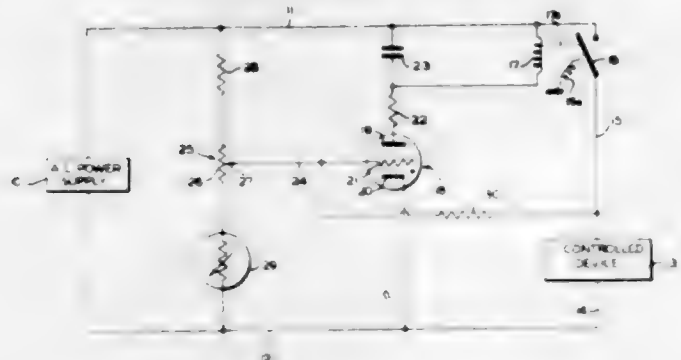
1. In a television receiver vertical deflection circuit the combination comprising a vertical deflection winding, a capacitor charging circuit, a signal controlled capacitor discharge path having a control element, a source of

vertical sync signals coupled to said control element, feed back signal controlled bias means coupled between said winding and said control element to provide timing control of said discharge path in conjunction with the sync signals, a first temperature responsive device coupled to increase the charging rate through said capacitor charging circuit with increases in temperature and a second temperature responsive device coupled in said feed back signal controlled bias means to maintain timing control of said discharge path with increases in temperature.

3,007,080

CONTROL APPARATUS INCLUDING CONDITION SENSING MEANS

Norman E. Benson, Southport, Conn., assignor to The Acme Wire Company, a corporation of Connecticut
Filed Mar. 31, 1959, Ser. No. 803,227
7 Claims. (Cl. 315-159)

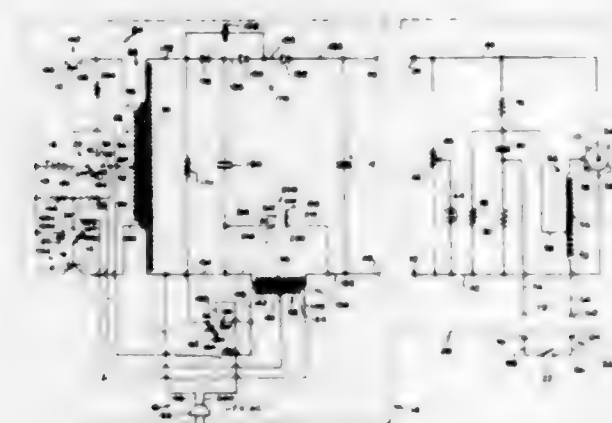


1. A condition sensing apparatus comprising a discharge device having a cathode, an anode, and a control element, power supply means for the discharge device, a control element circuit including bias means to establish a predetermined state of the discharge device, means for supplying a signal to the control element in response to a condition to change the state of the discharge device, an impedance connected to the control element, and means responsive to the change in state of the discharge device to connect the impedance in a circuit with the anode of the discharge device.

3,007,081

ELECTRONIC FLASH UNIT

Robert W. Sebastian, Lombard, Ill., assignor, by mesne assignments, to American Gage & Machine Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 14, 1959, Ser. No. 859,458
2 Claims. (Cl. 315-205)



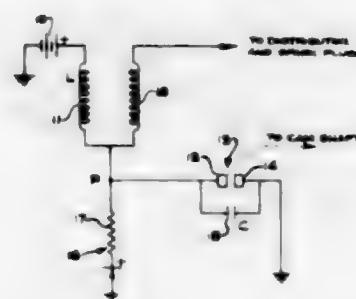
1. In an electronic flash unit, the combination comprising a gaseous flash lamp, a capacitor connected across said flash lamp and adapted to be discharged there-through, a means for charging said capacitor and including a battery, a step-up power transformer having a secondary winding and a primary winding, said primary winding having a center tap dividing said primary wind-

ing into two halves, rectifier means connected between said secondary winding and said capacitor, a pair of transistors connected between said battery and said primary winding for connecting said battery alternately across the halves of said primary winding, a feed-back transformer having a primary winding connected in series with said capacitor for carrying the charging current therethrough, said transistors having control electrodes for regulating conduction in said transistors, and a center tapped secondary winding on said feed-back transformer having opposite halves connected to said control electrodes of said transistors for producing conduction in said transistors alternately, said feed-back transformer being effective to reduce the feed-back as the capacitor charging current decreases with the charging of said capacitor, so as to reduce the current drain on said battery.

3,007,082

HIGH EFFICIENCY IGNITION SYSTEM

William R. Kappele, 5615 Ave. A, Torrance, Calif.
Filed June 11, 1959, Ser. No. 819,598
2 Claims. (Cl. 315-214)



1. In combination with an internal combustion engine ignition system including a battery source of low voltage direct current, a circuit interrupter, a primary coil connected in series circuit relation between said interrupter and current source, said coil having an end terminal connected in series with a terminal of the battery, and a secondary coil inductively coupled with said primary coil and from which high voltage current is intermittently supplied to an engine spark plug, said interrupter having contacts alternately closed to pass current flow from the battery source acting to increase the flux density in said primary coil and opened to interrupt said current flow, unidirectional conductive means including a current rectifier electrically connected in series relation with said battery and electrically connected with said primary coil and interrupter, the connection with one of said primary coil and interrupter elements being in series and with the other in parallel, said means having its direction of electrical conductivity in opposition to the direction of said current flow from the battery so that when said contacts are opened current tends to flow through said means instead of arcing across said contacts, said contacts being closed substantially in excess of half the time during operation of said interrupter, said interrupter including a spring acting to effect closing of said contacts and a rotary cam operable to effect opening of said contacts, said contacts having a maximum gap opening therebetween which is less than the opening required to extinguish arcing there-across in the absence of said rectifier.

3,007,083

PERFORATED CONDUCTIVE INSOLE

Craig MacQuaid, Jr., Clayton, Mo., and Richard Henry Koehrmann, Alton, Ill., assignors to International Shoe Company, St. Louis, Mo., a corporation of Delaware
Filed Aug. 28, 1957, Ser. No. 680,703
7 Claims. (Cl. 317-2)

1. A conductive shoe comprising in combination, an upper, an electrically non-conductive insole and an out-

sole, all secured together, the outsole being electrically conductive from its upper surface to its lower surface and having engagement both physically and electrically with the lower surface of said insole, the insole having perforation means through it, said insole having a continuous thin surface, the surface of the perforation means being

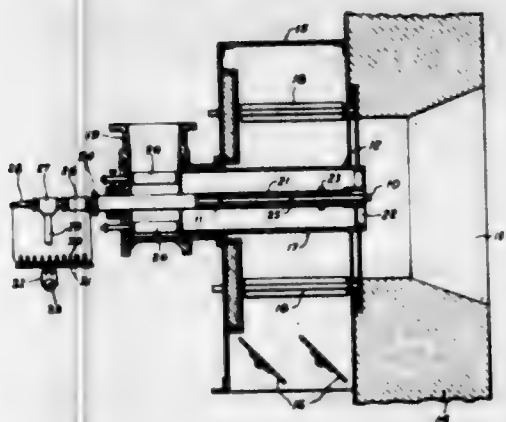


coated with the material in an unbroken film from the top thin surface to the bottom thin surface, to render it electrically conductive from its upper surface to its lower surface, the two soles thereby providing electrical conduction from the upper surface of the insole to the lower surface of the outsole.

3,007,084

IGNITION MEANS

Harvey A. Thomasian, Northboro, Mass. (% Riley Stoker Corp., Worcester, Mass.), and Roy E. Baharian, Norwalk, Conn. (Chipmunk Lane, Darwin, Conn.)
Continuation of application Ser. No. 435,142, June 8, 1954. This application Dec. 24, 1958, Ser. No. 783,650
4 Claims. (Cl. 317-83)



1. An ignition means for use with an ignitable gas comprising a tubular portion, a first electrode having an elongated, thin edge, a second electrode having a broad surface coextensive with the edge of the first electrode, the edge of the first electrode being fixed in a position parallel to the surface of the second electrode, the two electrodes being situated so that the ignitable gas passes therebetween, the electrodes being connected across a high-voltage, alternating electrical source, one of the electrodes consisting at least partly of a long rod, mounting disks formed of insulating material arranged along the tubular portion and holding the said rod coaxially thereof, each disk having apertures passing therethrough.

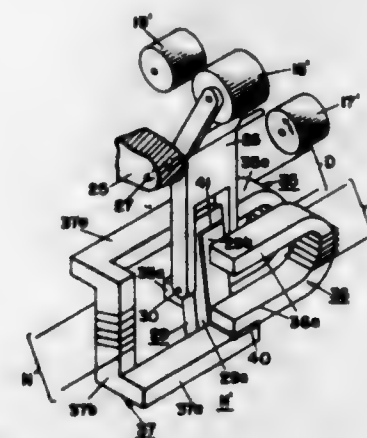
3,007,085

THREE-POSITION ELECTROMAGNETIC ACTUATOR

Ernest G. Newman, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 17, 1959, Ser. No. 807,171
11 Claims. (Cl. 317-188)

1. A three-position electromagnetic actuator comprising a support, an arm pivoted intermediate the ends thereof to said support, an armature pivoted intermediate the ends thereof to said arm at a location spaced from the pivotal connection of said arm to said support, two pairs of magnetic poles, one pair on either side of said armature, means for maintaining said armature in a diagonal position with one end thereof in engagement with one of said poles of each said pair of said magnetic poles to maintain said arm in a central position, and electrical means effective on said pairs of poles and selectively energized to move said armature into engagement with either pair of said pairs of poles to move said arm about its pivot in opposite directions to positions on either side of said central position.

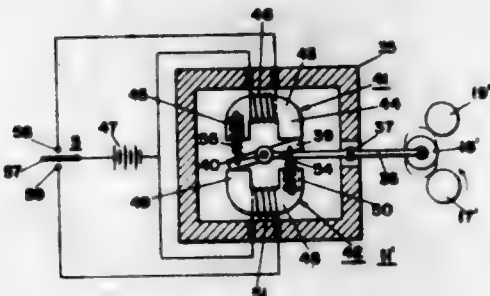
of magnetic poles with one pair disposed on either side of said armature providing two separate magnetic circuits, means for maintaining said armature in a diagonal position comprising an additional pair of magnetic poles, one pole of said additional pair being disposed adjacent each of said first-named pairs of magnetic poles and providing a third separate magnetic circuit, said addi-



3,007,086

MULTI-POSITION ELECTROMAGNETIC ACTUATOR

Heard K. Baumelster, Verbank, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 17, 1959, Ser. No. 807,172
18 Claims. (Cl. 317-188)



1. A multi-position electromagnetic actuator comprising a support, an arm pivoted intermediate the ends thereof to said support, an armature pivoted intermediate the ends thereof to said arm at a location spaced from the pivotal connection of said arm to said support, two pairs of magnetic poles, one pair on either side of said armature, means for maintaining said armature in a diagonal position with one end thereof in engagement with one of said poles of each said pair of said magnetic poles to maintain said arm in a central position, and electrical means effective on said pairs of poles and selectively energized to move said armature into engagement with either pair of said pairs of poles to move said arm about its pivot in opposite directions to positions on either side of said central position.

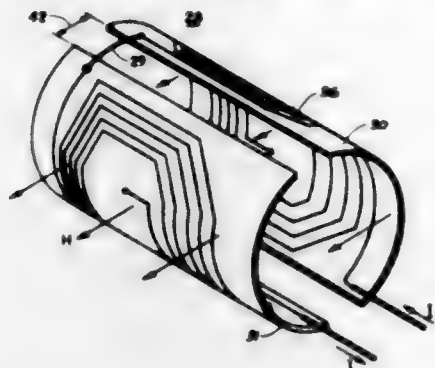
3,007,087

ELECTROMAGNETIC DEFLECTION COIL

Charles R. Corpew, San Diego, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed June 4, 1958, Ser. No. 739,713

6 Claims. (Cl. 317-200)



3. In an electromagnetic deflection coil having series aiding windings, winding units being disposed in complementary disposition and in spaced relation to each other for creating a uniform flux field within said coil, each of said units having a conductor octagonally arranged in spiral concentric turns, said windings being capable of providing a predetermined field distortion in response to varying said spaced relation.

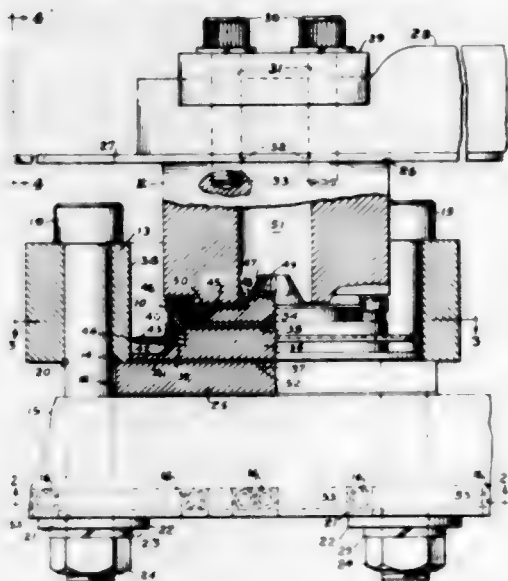
3,007,088

RECTIFIER AND MEANS FOR MOUNTING THE SAME

Edward J. Diebold, Palos Verdes Estates, Calif., assignor to International Rectifier Corporation, El Segundo, Calif., a corporation of California

Filed Sept. 26, 1957, Ser. No. 686,331

12 Claims. (Cl. 317-234)



1. Means for mounting a current rectifier having a pair of terminal contacts to a structure, comprising an electrical terminal means in electrically conductive communication with one of said terminal contacts of said current rectifier; a second electrical terminal means in electrically conductive communication with the other of said terminal contacts of said current rectifier; a flange, said flange overlapping at least part of said second electrical terminal means; so as to bear against said second electrical terminal means; means for attaching said flange to said structure; and electrically-conductive grease disposed between said second electrical terminal means and said structure; whereby said flange by said means for attaching may be brought to bear against said overlapped portion of the second electrical terminal means against said structure in such a manner as to provide compression on said grease and provide substantially uniform electrically

conductive and heat conductive communication between said second electrical terminal means and said structure.

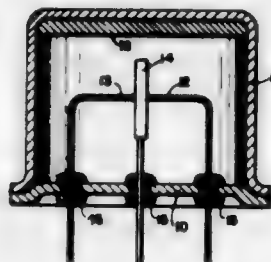
3,007,089

SEMI-CONDUCTOR

Aden J. King, 2202 E. Colvin St., Syracuse, N.Y.

Filed Dec. 22, 1958, Ser. No. 782,014

2 Claims. (Cl. 317-234)



1. A semi-conductor comprising a hermetically sealed casing containing a plurality of electrode elements, a quantity of metallic desiccants in said casing, said desiccants being a composition consisting of two metals selected from the group potassium, sodium, lithium, barium, strontium and calcium.

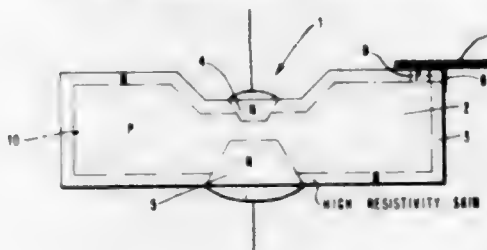
3,007,090

BACK RESISTANCE CONTROL FOR JUNCTION SEMICONDUCTOR DEVICES

Richard F. Rutz, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 4, 1957, Ser. No. 681,986

18 Claims. (Cl. 317-235)



1. An asymmetric conducting device comprising a semiconductor body of a particular conductivity type, at least, input and output electrodes operatively associated therewith, said body being provided with a high resistivity surface region of a conductivity type opposite to that of the conductivity type of said body surrounding and forming a current path between each of said input and output electrodes.

3,007,091

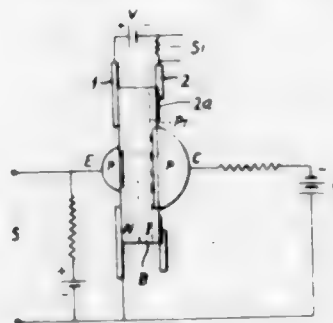
HIGH FREQUENCY TRANSISTOR

Dennis Q. Fuller, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company

Filed Sept. 5, 1958, Ser. No. 759,195

Claims priority, application Great Britain Sept. 10, 1957

4 Claims. (Cl. 317-235)



1. A transistor comprising a base wafer of semiconductor material whose conductivity characteristic varies from one face to the other face and including an intrinsic

region adjacent the other face, an emitter on said one face of the wafer, a collector on the opposite face of the wafer in the intrinsic region, a first annular base electrode attached to said one face of the wafer and surrounding the emitter, a second annular base electrode attached to the other face of the wafer and surrounding the collector, and a metal film extending over the other face from the second base electrode to closely adjacent the collector without coming into direct electrical contact therewith.

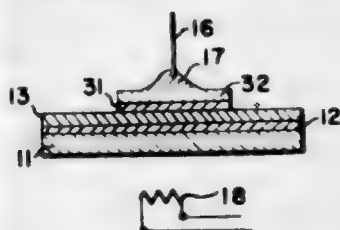
3,007,092

SEMICONDUCTOR DEVICES

Theodore W. Cooper, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Dec. 23, 1957, Ser. No. 704,616

13 Claims. (Cl. 317-240)



1. A semiconductor device comprising: a semiconductor body, a layer of metallic material on at least a portion of one surface of said body and having electrical connection with said body, an electrode of the same material as that of said layer, a metallic bonding material mechanically and electrically connecting said electrode to said metallic layer and being alloyed with said layer, said metallic layer being substantially insoluble in said metallic bonding material and being wet thereby, preventing penetration of said metallic layer by said metallic bonding material.

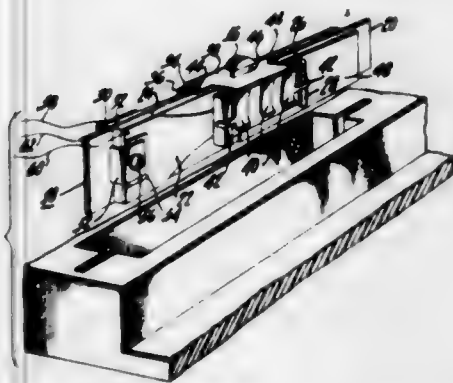
3,007,093

VARIABLE CAPACITOR

Louis E. Potter, Pennsauken, and Edward A. Bennett, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Mar. 27, 1959, Ser. No. 802,447

1 Claim. (Cl. 317-249)



A multi-section variable capacitor comprising an assembly including a ground plane member, a first insulating panel affixed to one side of said ground plane member, a first elongated conductive capacitor plate supported on the side of said panel facing away from said ground plane member, said first capacitor plate being tapered from a maximum width near one end thereof to a minimum width near the other end thereof, a second conductive capacitor plate supported for longitudinal movement closely adjacent said first capacitor plate to provide variable areas of registration between said first and second plates, first dielectric means interposed between said first and second plates, a second insulating panel affixed to the opposite side of said ground plane member, a third elongated

gated conductive capacitor plate supported on the side of said second panel facing away from said ground plane member and substantially coextensive with said first capacitor plate, a fourth conductive capacitor plate supported for longitudinal movement closely adjacent said third capacitor plate to provide variable areas of registration between said third and fourth capacitor plates, second dielectric means interposed between said third and fourth capacitor plates, said third capacitor plate being tapered from a maximum width at the end thereof confronting the wide end of said first capacitor plate to a minimum thickness at the other end thereof, means for moving said second and fourth capacitor plates longitudinally with respect to said first and third capacitor plates including an operating member spanning said assembly and mechanically and electrically interconnecting said second and fourth capacitor plates, said operating member including a contact which conductively engages said ground plane member and thereby conductively connects said second and fourth capacitor plates to said ground plane member, said ground plane member extending beyond said panels adjacent the wide ends of said first and third conductive members, a conductive trimmer capacitor plate conductively engaging the portion of said ground plane extending beyond said panels, and overlying at least a portion of said first capacitor plate near the wide end thereof, means for insulating said trimmer capacitor plate from said first capacitor plate, and means for adjusting the capacitance between said trimmer capacitor plate and said first capacitor plate.

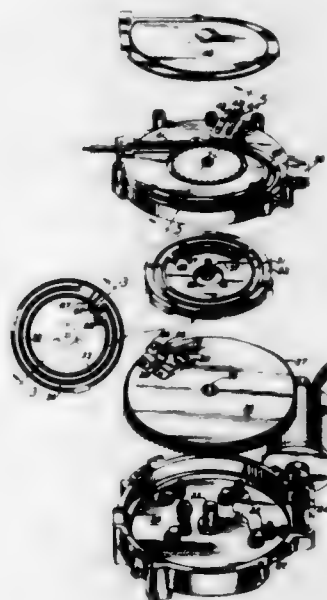
3,007,094

HEATER CONTROL SERVO

Lawrence J. Vanderberg, Ann Arbor, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Oct. 22, 1957, Ser. No. 691,631

2 Claims. (Cl. 318-31)

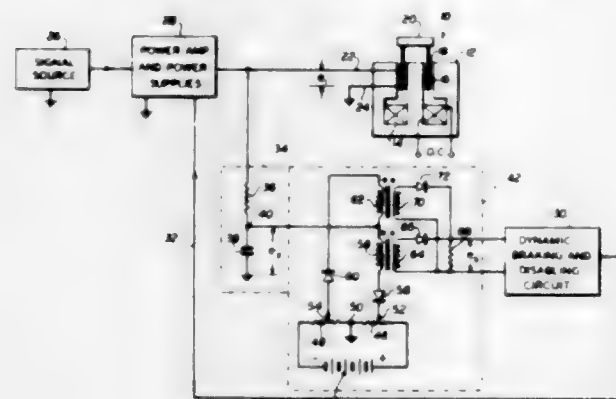


1. An electrical control mechanism comprising a commutator having two conducting tracks separated by a non-conducting portion, a rotatable output member, means for angularly positioning said commutator, a slidable brush carried by said output member engaging one of said conducting tracks at one time, a shifting means mounted on said commutator to slide said brush radially from one conducting track to the other conducting track upon the angular positioning of said commutator, a prime mover in driving relationship to said output member, and means energizing said prime mover in one direction by engagement of said brush with one of said tracks and in the other direction by engagement of said brush with the other of said tracks.

3,007,095

VIBRATION EXCITER AMPLITUDE PROTECTOR SENSING CIRCUIT

Theron Usber, Jr., North Guilford, Conn., assignor, by mesne assignments, to Textron Electronics, Inc., a corporation of Delaware

Filed Dec. 30, 1958, Ser. No. 783,768
8 Claims. (Cl. 318-132)

1. A fault sensing circuit for a vibration exciter system, where the system is provided with means for arresting movement of the exciter armature, comprising an electrical network having an input for coupling in parallel with the driving coil of the exciter to receive the coil exciting signals independent of coil motion, an output, and a frequency response output characteristic closely conforming at least at low frequencies to the displacement/input voltage response with respect to frequency of the exciter; and an adjustable voltage amplitude discriminator having an input coupled to said output of the electrical network, and an output for coupling to said means for arresting movement of the exciter armature.

3,007,096

TWO OR THREE DIMENSIONAL DIGITAL MACHINE TOOL CONTROL

Robert W. Tripp, Bronxville, N.Y., assignor to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada

Filed Sept. 11, 1957, Ser. No. 683,404
38 Claims. (Cl. 318-162)

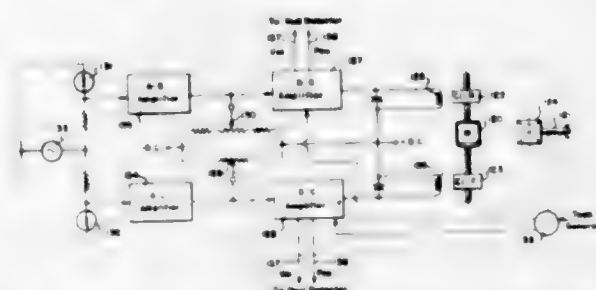
1. A control system for a machine tool having a plurality of parts movable relative to axes X, Y and Z, the relative positions of said parts defining a path with reference to said axes, said control system comprising separate means providing three dimensional slope data of a desired path for said parts in the plane of two of said axes and out of said plane, a feed rate drive, separate means

having inputs from said data supplying means respectively for translating said slope data in the plane of two of said axes and out of the plane thereof into co-function values and means for integrating said feed rate drive with the co-function values of said translating means to thereby provide shaft drives, said shaft drives representing actual values x , y and z of the parts on said X, Y and Z axes respectively, means providing linear data of the ordinates, with respect to said X, Y and Z axes, of an ideal position on the desired path, means for translating said linear data into electrical signals having values x_0 , y_0 and z_0 , means having inputs of said shaft drives translating means and linear data translating means for translating the slope data of said shaft drives and said linear data signals into coordinate correction signals proportional to the algebraic sum of x and x_0 , and y and y_0 , and z and z_0 respectively, and means controlled by said last translating means for modifying each of said shaft drives in accordance with the corresponding said correction signal.

3,007,097

AUTOMATIC HANDLING AND ASSEMBLY SERVOSYSTEM

Edwin F. Shelley, New Rochelle, N.Y., and George A. Jonas, Bethesda, and Sidney Weiser, Silver Spring, Md., assignors to U. S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed July 2, 1959, Ser. No. 824,611
11 Claims. (Cl. 318-162)

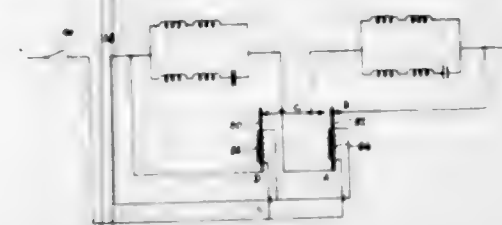
1. In an electrical servo-motor control system for automatically positioning a controlled element, the combination which comprises, a balanced input electrical servo-amplifier, a balanced output electrical servo-amplifier, said input amplifier being connected in cascade relation with said output amplifier, a controlled element, electric motor driving means, reverse-drive and forward-drive magnetic clutches, said motor driving means being differentially coupled mechanically to said controlled element by said magnetic clutches respectively, circuit means electrically coupling the separate outputs of said output servo-amplifier to said reverse-drive and to said forward-drive magnetic clutches respectively, an electro-mechanical signal transducer adapted to provide coarse position feedback between said controlled element and one input to said output servo-amplifier, means mounted on said controlled element adapted to produce a narrowly restricted light beam of symmetrical cross section with respect to the motion axis of said controlled element, a pair of light sensitive devices adapted to detect the respective opposite edges of said light beam along said motion axis to provide fine-position signal information, means electrically energizing said light sensitive devices, and means to connect the separate outputs of said devices to the separate inputs of said input servo-amplifier.

3,007,098

HYSTERESIS TYPE SYNCHRONOUS MOTOR
Alfred Skrobisch, Huntington Station, N.Y. (% Allard Instrument Corp., 146 E. 2nd St., Mineola, N.Y.)
Filed Jan. 8, 1960, Ser. No. 1,225
6 Claims. (Cl. 318-266)

1. A hysteresis type synchronous motor with starting circuitry, said motor comprising a stator with one or

more pairs of poles, a first set of field coils on said poles, a second set of field coils on the same poles, a rotor having a cylinder made of a magnetic material of high residual flux density and high coercive force, thermostatically operated switch means to connect the first and

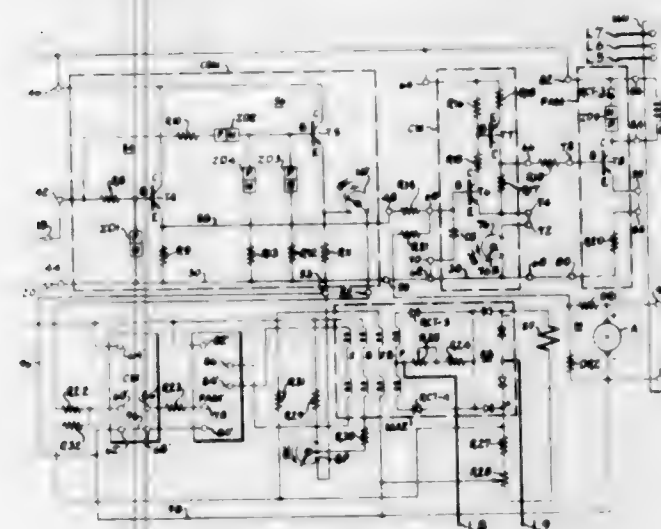
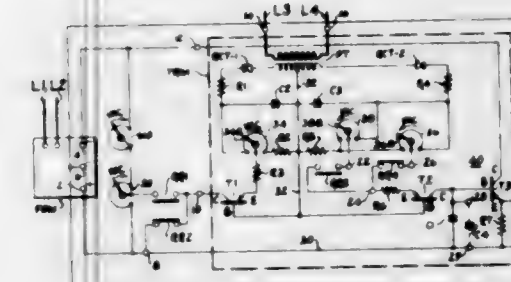


second sets of field coils in parallel when the motor is being started, and in series after the motor has come up to speed, said switch means including a heater, and a main power supply switch to close the circuit to said heater and said motor.

3,007,099

MOTOR CONTROL SYSTEMS

Donald J. Greening, Thiensville, Norman L. Peterson, Wauwatosa, and Charles E. Smith, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,302
14 Claims. (Cl. 318-317)

1. In an adjustable voltage drive, the combination with a direct current motor having an armature winding and a shunt field winding, of first means for energizing said field winding to full value and controllable to decrease said field winding energization, second means controllable to supply adjustable voltage to said armature winding, means providing a source of constant but adjustable first control voltage, means for providing a second control voltage which changes in magnitude linearly at a timed rate in response to change in magnitude of said first control voltage, and a cross-over network comprising first semi-conductor control means responsive through a first range of magnitude of said second control voltage for providing an armature control voltage for controlling said second means to supply adjust-

able voltage to said armature winding thereby to effect operation of and acceleration of the motor, and second semi-conductor control means responsive through a second range of magnitude of said second control voltage for maintaining said armature voltage at full value and for providing a field control voltage which varies non-linearly substantially in accordance with the inherent field current-speed characteristic for controlling said first means to decrease the energization of said field winding non-linearly thereby to further accelerate the motor.

3,007,100

MOTOR BRAKING CIRCUITBruce H. Bettcher, Portland, Oreg., assignor to The Pam Company, Portland, Oreg., a corporation of Oregon
Filed Nov. 25, 1958, Ser. No. 776,371
6 Claims. (Cl. 318-373)

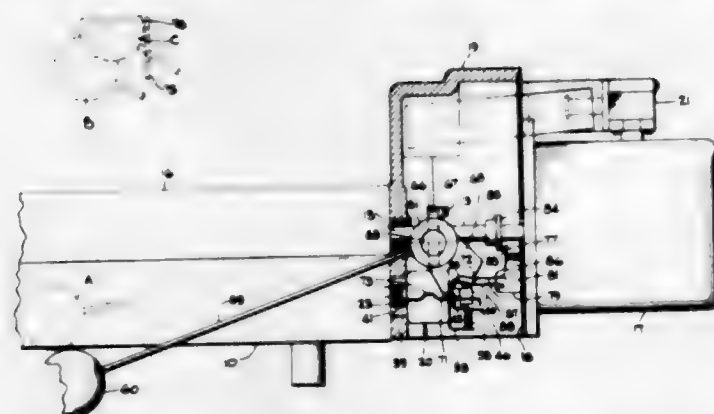
1. A motor control for causing a motor to drive a roller sign and stop said sign rapidly and accurately at any one of a plurality of predetermined positions, said control comprising a direct current motor having an armature winding and a field winding, a plurality of control switches each corresponding to one of said positions, a plurality of cams driven by said motor and each corresponding to one of said positions, a plurality of cam controlled switches each controlled by one of said cams, means controlled by any selected one of said control switches to connect said motor to a source of direct current power to energize said windings and cause said motor to run and drive said sign and said cams, stopping means controlled by the cam controlled switch corresponding to said selected control switch for bringing said motor to a stop when said sign reaches a selected position corresponding to said one control switch, said stopping means including, a capacitor, means to charge said capacitor, means to disconnect said motor from said source and immediately thereafter to reverse one of said windings and discharge said capacitor through said motor to rapidly stop said motor.

3,007,101

THERMOSTAT MOTOR CONTROLMullapudi M. Reddi, Chicago, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 25, 1956, Ser. No. 618,257
6 Claims. (Cl. 318-473)

1. In a thermostat, an electrically energizable motor, a shaft driven thereby, a thermal element adapted to sense the temperature of frozen water and having a casing containing a fusible thermally expansible material, a power member extensible with respect to said casing upon predetermined increases in temperature, a switch having a

casing having a depressible switch button slidably mounted therein for extension from either side thereof, said switch having electrical connection with said motor to energize said motor in one position of said push button and deenergize said motor in another position of said push button, a pivoted actuator for said switch having engagement with said power member, spring means for returning said power member, other spring means engaging said actuator and biasing said actuator to follow said power member on retractable movement thereof to depress said switch button to complete an energizing circuit to said motor, a cam on said motor shaft having a

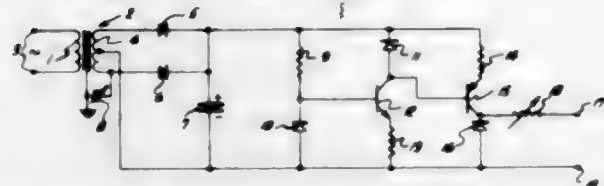


slot in the face thereof indicating a starting position of said motor, a pivoted lever, spring means engaging said lever with the face of said cam and moving the same into said slot upon registry of said slot with said pivoted lever, a reset lever operated by pivotal movement of said pivoted lever into said slot for moving said push button to a reset position by operation of the biasing spring for said pivoted lever, to deenergize said motor and hold said motor in position to initiate a next succeeding operation, and means for heating said casing to effect extensible movement of said power member to move said actuator into a resetting position.

3,007,102

SOURCE OF REGULATED VOLTAGE

Charles J. Kennedy, Pasadena, Calif., assignor to F. L. Moseley Co., a corporation of California
Filed Feb. 14, 1958, Ser. No. 715,423
7 Claims. (Cl. 321-16)



5. In a voltage regulator for deriving a regulated unidirectional voltage from a source of alternating current the combination of a rectifier for deriving an unregulated unidirectional voltage from an alternating current wave, a first transistor and a second transistor, each of said transistors having a base, an emitter and a collector, a first resistor coupled between one potential of said unregulated unidirectional voltage and said base of said first transistor, a first diode coupled between the other potential of said unregulated unidirectional voltage and said base of said first transistor, a second resistor connected between said other potential of said unregulated unidirectional voltage and said emitter of said first transistor, a second diode connected between said one potential of said unregulated unidirectional voltage and said collector of said first transistor, coupling means between said collector of said first transistor and said base of said second transistor, a third resistor connected between said one potential of said unregulated unidirectional

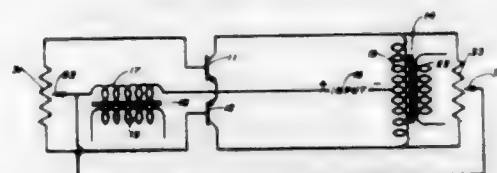
tional voltage and said emitter of said second transistor, a third diode coupled between said other potential of said unregulated unidirectional voltage and said collector of said second transistor, a variable resistor coupled to said collector of said second transistor, and a pair of output terminals connected across said third diode through said variable resistor whereby the value of the voltage appearing at said output terminals may be adjusted.

3,007,103

CONVERTER

Robert J. Ehret, Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Jan. 30, 1959, Ser. No. 790,185
2 Claims. (Cl. 321-45)



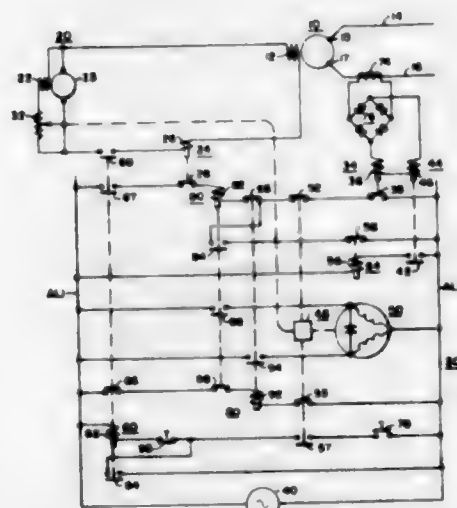
1. A converter comprising: a pair of transistors of opposite conductivity type, each having a base, emitter, and collector with the respective emitters connected together; a first potentiometer connected between the respective bases; an output transformer having a center tapped winding connected between the respective collectors; a second potentiometer connected in parallel with the center tapped winding with the adjustable arm connected to the adjustable arm of said first potentiometer; means for applying an input signal to be converted between the center tap of said winding and the respective emitters; and means for applying a control signal between the respective emitters and the adjustable arm of said first potentiometer.

2. A converter as set forth in claim 1, wherein said input signal to be converted is a direct current signal, and said control signal is an alternating current signal for alternately rendering said pair of transistors conductive and nonconductive.

3,007,104

ELECTRICAL CONTROL APPARATUS

John N. Easterbrook, Birmingham, Mich., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 30, 1957, Ser. No. 706,037
9 Claims. (Cl. 322-27)



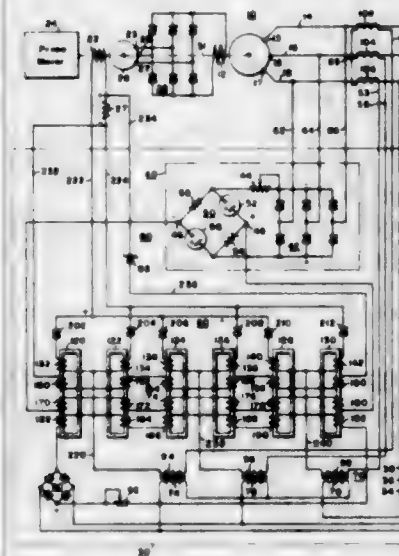
9. In a regulator system for maintaining the output load current of a generator having an excitation field winding and output terminals between a minimum value

and a maximum value, the combination comprising, first means connected in circuit relation with said field winding for supplying the excitation current thereto, variable resistance means including a motor drive connected in circuit relation with said first means and said field winding for controlling the excitation current supplied thereto by said first means, a source of electrical power, a raise relay connected in circuit relation with said source and said motor drive for energizing said motor drive when actuated to increase the excitation current supplied to said field winding, a lower relay connected in circuit relation with said source and said motor drive for energizing said motor drive when actuated to decrease the excitation current supplied to said field winding, a first current relay connected in circuit relation with said output terminals to be responsive to a predetermined minimum value of the load current of said machine, a second current relay connected in circuit relation with said output terminals to be responsive to a predetermined maximum value of the load current of said machine to actuate said raise relay and deenergize said motor drive to prevent any further increase in the excitation current supplied to said field winding, said first current relay being adapted to actuate said raise relay and energize said motor drive and increase said excitation current, a contactor connected in circuit relation with said source and raise relay to actuate said raise relay when initially energized and increase said excitation current, and a third current relay connected in circuit relation with said field winding to be responsive to a predetermined maximum value of excitation current supplied to said field winding to actuate said raise relay to prevent any further increase in said excitation current.

3,007,105

ELECTRICAL CONTROL APPARATUS

Richard E. Klokow and Robert L. Gasperetti, Lima, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 13, 1959, Ser. No. 805,862
11 Claims. (Cl. 322-36)



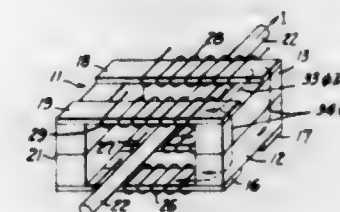
11. In control apparatus for a dynamoelectric machine having an excitation field winding and output terminals, the combination comprising, a prime mover for applying a torque to said machine, first means for supplying the excitation current to said field winding, the torque applied to said machine by said prime mover varying with said excitation current, and second means connected in circuit relation with said field winding and said first means to be responsive to said excitation current for limiting the excitation current supplied to said field winding and the corresponding torque applied to said machine by said prime mover to substantially a predetermined value,

771 O.G.—95

3,007,106

CURRENT METER AND PROBE THEREFOR

Arndt B. Bergh and George S. Kan, Palo Alto, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed July 25, 1958, Ser. No. 751,017
5 Claims. (Cl. 323-75)

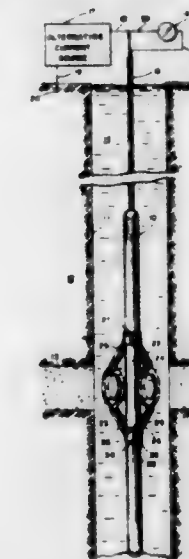


1. In a current meter for measuring current flowing through a conductor, a probe head having a magnetic core adapted to encircle said conductor, said core comprising left and right end portions, each end portion being split into upper and lower sections so as to allow the introduction of said conductor between said end portions, a pair of legs connecting said upper sections and forming together with said upper sections a closed upper magnetic path, a pair of legs connecting said lower sections and forming together with said lower sections a closed lower magnetic path, a winding on each of said legs, the windings on said upper magnetic path being connected whereby the fluxes through said upper magnetic path due to the current through said windings are aiding, the windings on said lower magnetic path being connected whereby the fluxes through said lower magnetic path due to current through said windings are aiding, and means connecting the windings of said upper and lower magnetic paths in a bridge circuit.

3,007,107

WELL LOGGING APPARATUS

Michel Gondouin, Ridgefield, Conn., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Continuation of application Ser. No. 583,977, May 10, 1956. This application Jan. 8, 1959, Ser. No. 785,994
20 Claims. (Cl. 324-1)



1. In apparatus for investigating earth formations traversed by a borehole containing a conductive fluid, the combination comprising an elongated electrode movable through a borehole and having a length greater than the diameter of the borehole, electric source means coupled

to said electrode and to a current return point for emitting a time-varying current from said electrode into adjacent earth formations, a toroidal coil having a current flow passage through the central region thereof, this entire central region being spaced apart from a central portion of said electrode for intercepting a selected portion of the current emitted from said electrode, and means coupled to said toroidal coil and responsive to the voltage induced therein by said electrode-emitted current for deriving a signal which is a function of the amount of electrode-emitted current flowing through said passage.

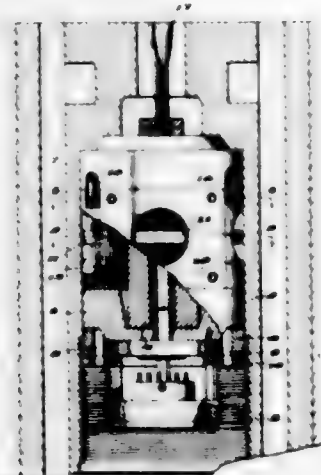
3,007,108
CONTROL PANEL SYSTEM

William C. Sealey, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 4, 1957, Ser. No. 694,238
4 Claims. (Cl. 324-28)



1. In an electrical regulating apparatus: a linear reactance circuit having a voltage sensitive device, a reactance of opposite phase displacement from said linear reactance circuit, a variable resistor connected to said opposite phase reactance, and a switching means for selectively switching said variable resistor and reactance in and out of said reactance circuit for raising the voltage across said circuit to a first value and lowering the voltage across said circuit to a second value to test the response of said voltage sensitive device to voltages between said first and second values.

3,007,109
APPARATUS FOR DETECTING CASING JOINTS
Gilbert Swift, Tulsa, Okla., assignor to Well Surveys, Incorporated, a corporation of Delaware
Continuation of application Ser. No. 433,656, June 1, 1954. This application Dec. 15, 1958, Ser. No. 780,620
13 Claims. (Cl. 324-34)



1. A casing joint detector which comprises in combination magnet means equipped with a pair of poles of opposite polarity spaced apart longitudinally of the casing and adapted to form with the casing a magnetic circuit,

additional pole means magnetically coupled to said magnet means intermediate said pair of poles disposed between said magnet means and said casing and having substantially neutral polarity when in a uniform casing, and detecting means responsive to changes of the lateral component of magnetic flux entering and leaving said intermediate pole means occasioned by a difference between the reluctance of the two portions of the casing lying respectively between the additional pole and each of the said pair of poles.

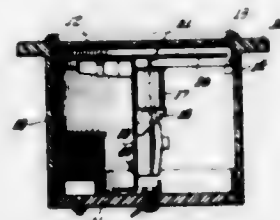
3,007,110
FLASHLIGHT ELECTRIC UTILITY TESTERS
Hyman Rosenstrach, 1667 Washington Ave.,
New York 57, N.Y.

Filed Feb. 12, 1958, Ser. No. 714,849
3 Claims. (Cl. 324-53)



1. The combination with a flashlight having a control switch, a casing, a flashlight light bulb and flashlight batteries within said casing, of contact terminals being insulated from and independent of said switch and being in spaced relation to, and insulated from each other and having cup-shaped main portions as well as rim portions provided with open slots and being mounted with their main portions on the outer side of said flash light casing and adapted for being connected to terminals of an electrical circuit, so that an electrical current may pass from a first one of said contact terminals, over a conductive object to be tested and conductively connected to said contact terminals to a second one of said contact terminals, through said casing, said batteries, said light bulb to said first contact terminal.

3,007,111
VIBRATING REED COMB ASSEMBLY
Louis J. Umile, New Haven, and William J. Fitzgerald, West Haven, Conn., assignors to J. B. T. Instruments, Inc., New Haven, Conn., a corporation of Connecticut
Filed Oct. 21, 1957, Ser. No. 691,413
4 Claims. (Cl. 324-80)



1. In a frequency-responsive device, a reed comb assembly comprising a comb structure constituted of a strip of thin sheet metal, said comb structure having an expansive flat base portion and a plurality of integral reeds extending in parallel directions from one edge of said base portion, said reeds being co-extensive with each

other, and a pair of mounting blocks disposed broadside to and on opposite sides of the said expansive base portion of the comb structure and engaged with the latter, said blocks having pairs of corresponding opposed edges respectively engaging and clamping the comb structure along a pair of spaced elongated narrow and straight lines extending along and at opposite marginal areas of the said base portion, one pair of edges clamping a marginal area of said base portion remote from the said reeds and said edges constituting the sole clamping means of the blocks for holding the comb assembly, said blocks having a pair of opposed faces one of which is hollow, disposed closely adjacent the said base portion, the other of said faces of the blocks engaging one side of the base portion and the remaining side of the base portion being free of any engagement with the blocks except at the said opposed edges of the blocks; and draft means disposed between the clamping edges of the blocks, passing through and securing the said blocks and base portion of the reed comb structure together in clamped relation.

3,007,112

ELECTRICAL INDICATING OR MEASURING INSTRUMENTS

Graham R. Taylor, Southgate, London, England, assignor to Electronic Instruments Limited, Richmond, Surrey, England

Filed Oct. 16, 1959, Ser. No. 846,836

Claims priority, application Great Britain Oct. 24, 1958
10 Claims. (Cl. 324—1)



1. Electrical measuring equipment, comprising a direct current amplifier having a pair of input terminals and a pair of output terminals, first and second capacitive elements connected in series between said input terminals, the second capacitive element having a value larger than the first capacitive element, measuring means, connections from the output terminals of said amplifier to said measuring means such that said measuring means and said second capacitive element are in series across the output terminals of said amplifier, whereby said second capacitive element acts as an output-input feedback coupling, and connections for applying a small unidirectional current to be measured to said first capacitive element and hence to the input of said amplifier, such current causing said amplifier to produce an output current in said measuring means and in said second capacitive element, said output current being larger than and proportional to the value of said input current to be measured, the ratio of said proportionality being substantially the same as the ratio of the value of said second capacitive element to that of said first capacitive element.

3,007,113

SYSTEM FOR TESTING SEMICONDUCTOR DEVICES

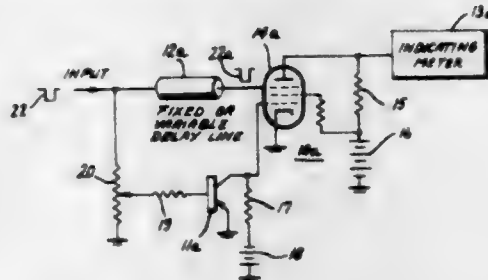
Earl R. Kreinberg, Graterford, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 4, 1959, Ser. No. 810,700

15 Claims. (Cl. 324—158)

10. In a system for determining the rapidity with which a semiconductor device proceeds from one condition to another, a device controllable by said semiconductor device for producing an output signal whose amplitude at any instant is determined by the rapidity with which the semiconductor device proceeds as aforesaid, means for supplying a pulse to said semiconductor device to effect

controlled operation of said signal-producing device, means for supplying a delayed pulse to said signal-producing device to effect change of its operation after a predetermined fixed time interval, whereby at the instant of said change the amplitude of said signal is representative



of the rapidity with which said semiconductor device proceeds as aforesaid, a signal-indicating meter, and means for supplying said signal to said meter to enable observation of the signal amplitude at the instant of said change.

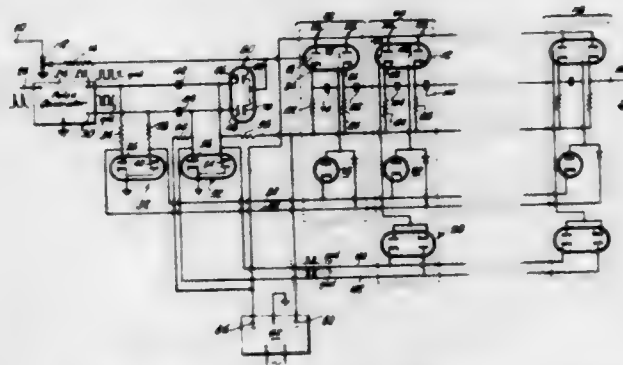
3,007,114

DELAY LINE HAVING SIGNAL SAMPLER WHICH FEEDS SHIFT REGISTER AND SIGNAL SYNTHESIZER, INTEGRATOR USING SAME

James J. Pastorzyn, 14 Hillside Ave., Cambridge, Mass.

Filed July 1, 1957, Ser. No. 669,032

18 Claims. (Cl. 328—14)



15. A delay-line synthesizer comprising signal-sampling means adapted to receive an input signal and to produce spaced sample pulses in accordance with the signal amplitude, a plurality of cascaded delay sections coupled to said sampling means, each of said sections including capacitive storage means interconnected with corresponding synchronized signal-transferring devices for shifting the sample signals between said sections, a plurality of auxiliary output terminals each coupled to the output of a corresponding one of said sections, circuit means for combining the individual outputs of said terminals, and feedback means coupling the output of the final one of said sections to the input of the first one of said sections, whereby to effectively lengthen the delay time provided by said sections.

3,007,115

TRANSFER CIRCUIT

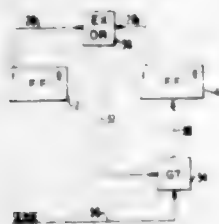
James V. Batley, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 26, 1957, Ser. No. 705,289

6 Claims. (Cl. 328—42)

6. A signal transfer circuit comprising a pair of bistable devices, each being capable of assuming two mutually exclusive remanent states, gating means in series with a first of said bistable devices and adapted when primed to permit the passage of complementing signals therethrough so as to complement said first bistable device, an "exclusive-OR" circuit having two input circuits and a single output circuit, means for connecting

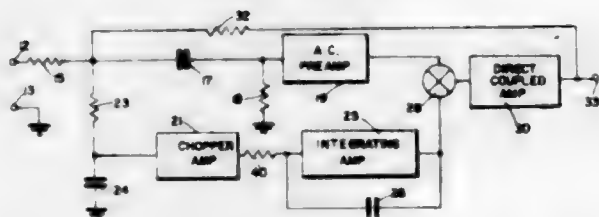
one of said bistable devices, when the latter are each in the same remanent state, as one of said two input



circuits to said "exclusive-OR" circuit, said single output circuit being connected to said gating means to provide priming signals thereto.

3,007,116 CHOPPER STABILIZED DIRECT CURRENT AMPLIFIER

Francis H. Gerhard, Lakewood, Calif., assignor to North American Aviation, Inc.
Filed Apr. 30, 1959, Ser. No. 810,105
4 Claims. (Cl. 330-10)



1. In a stabilized direct current amplifier, a first channel for amplifying substantially only alternating current signals above a predetermined crossover frequency to a predetermined cutoff frequency, a second channel for amplifying substantially only signals to direct current below said predetermined crossover frequency, an input terminal connected to the inputs of said first and second channel, said second channel comprising a chopper amplifier comprising means for converting a direct current signal to an alternating current signal, means for amplifying said alternating current signal, means for rectifying said amplified alternating current signal, and an integrating amplifier adapted to function as a low pass filter connected in cascade with said chopper amplifier, means for summing the outputs of said first and second channels, a direct coupled amplifier, the output of said summing means being connected to said direct coupled amplifier, said direct coupled amplifier comprising a transistorized output stage and means for alternatively connecting said output stage in common emitter configuration with negative output signals or emitter follower configuration with positive output signals, and means for providing negative feedback from the output of said direct coupled amplifier to the inputs of said first and second channels, whereby the output of said direct coupled amplifier is stabilized and has a drift free direct current component.

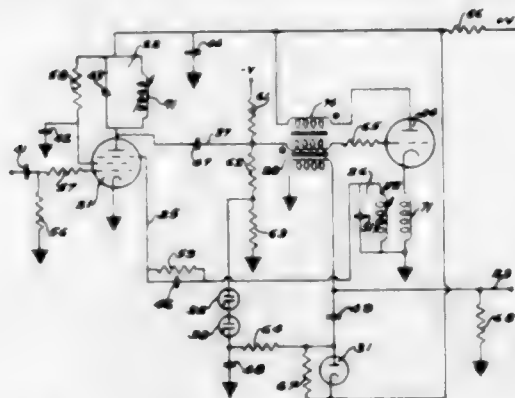
3,007,117 BLOCKING OSCILLATOR REGENERATIVE FREQUENCY DIVIDER WITH AUXILIARY EXCITING CIRCUIT

Leonard S. Cutler, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Filed Aug. 15, 1958, Ser. No. 755,191
2 Claims. (Cl. 331-51)

1. A regenerative frequency divider comprising a modulator connected to receive an input signal of frequency f , an output circuit tuned to the frequency f/n , where n is an integer greater than one, connected to receive the output of the modulator, a blocking oscillator operating at the frequency f/n connected to be triggered by the

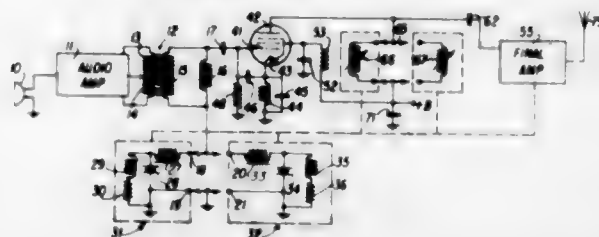
output of the modulator, a circuit tuned to the frequency $(n \pm 1)f/n$ connected to be excited by the blocking oscillator, means for supplying the frequency $(n \pm 1)f/n$ to the modulator from the tuned circuit, output means con-



nected to the output of the blocking oscillator, and an exciting circuit connected to said blocking oscillator and adapted to excite the same in the absence of output signals.

3,007,118 MODULATED OSCILLATOR

Francis R. Steel, Wilmette, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 11, 1957, Ser. No. 652,257
3 Claims. (Cl. 332-29)



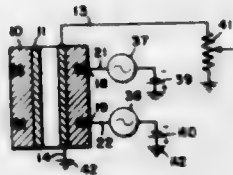
1. An oscillator including in combination, an oscillator control circuit including a crystal and a series-resonant circuit portion connected in series with said crystal, said series-resonant circuit portion including reactance means providing resonance in said portion substantially at the series-resonant frequency of said crystal, said reactance means including a saturable reactor having a variable inductance coil on a toroidal core, a U-shaped core having a signal winding thereon for controlling the inductance of said coil, said U-shaped core engaging diametrically opposite points on said toroidal core on one side thereof, said coil having leads for connection to a push-pull signal source and a U-shaped permanent magnet engaging diametrically opposite points on said toroidal core on the side thereof opposite said one side for providing a fixed field therein, and means including an electron device connected to said oscillator control circuit to form a circuit in which oscillations are produced, with the frequency of said oscillations being controlled by the signals applied to said saturable reactor.

3,007,119 MODULATING CIRCUIT AND FIELD EFFECT SEMICONDUCTOR STRUCTURE FOR USE THEREIN

Irving F. Barditch, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 4, 1959, Ser. No. 850,823
9 Claims. (Cl. 332-31)

1. A field effect semiconductor device requiring no P-N junction consisting of a first hollow cylindrical portion composed of an intrinsic undoped substantially pure semiconductor material, the region adjacent the inner surface of said cylindrical portion being doped to form

an impure cylindrical-shaped semiconductor core of one conductivity type inside said first cylindrical portion, said first cylindrical portion having a plurality of doped ring portions of the other conductivity type on the outside thereof at spaced intervals along the length thereof, each of the ring portions being isolated from any adjacent ring

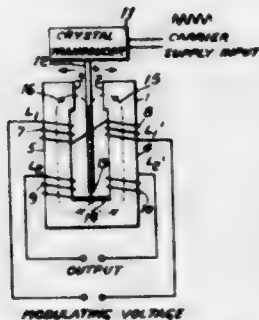


portion by a portion of undoped intrinsic semiconductor material therebetween, said ring portions extending into the hollow cylindrical portion of intrinsic semiconductor material to a depth such that pure intrinsic semiconductor material of predetermined thickness separates the ring portions from said core.

3,007,120

MODULATION SYSTEM

Robert C. Ferrar, Highlands, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 7, 1958, Ser. No. 772,480
7 Claims. (Cl. 332-51)



1. A modulating system comprising a magnetically permeable structure having pole pieces disposed on both sides of an air gap, modulating signal energy means for producing simultaneously similar and substantially equal magnetic fields in said pole pieces varying in intensity in accordance with said modulating signal energy, means disposed within said air gap for varying the reluctance of the magnetic circuit of each said magnetic field sinusoidally at a constant rate and means disposed within the magnetic fields to derive therefrom a signal voltage varying in accordance with the intensity of said magnetic fields and with the frequency of said sinusoid.

3,007,121

DERESONATED CAPACITOR

Heinz M. Schlicke, Fox Point, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 5, 1959, Ser. No. 791,422
15 Claims. (Cl. 333-79)



2. In a capacitor for use at radio frequencies the combination for maintaining a low transfer impedance through the capacitor at such radio frequencies comprising a dielectric; an electrode along one side of the dielectric adapted for connection into a circuit; and a second elec-

trode along the opposite side of the dielectric which is divided into two portions that each have a transmission line characteristic with the other electrode at the frequencies of intended use, said electrode portions being joined to one another by a narrow inductive connecting bridge of a length that is equal to a minor part of the length of either of said electrode portions, whereby one of said portions is adapted for connection into a circuit and the other portion is solely joined to such circuit through said inductive bridge and the portion directly connected to such circuit.

3,007,122

SELF REALIGNING WAVEGUIDE SUPPORT SYSTEM

Franz T. Geyling, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 861,126
1 Claim. (Cl. 333-95)

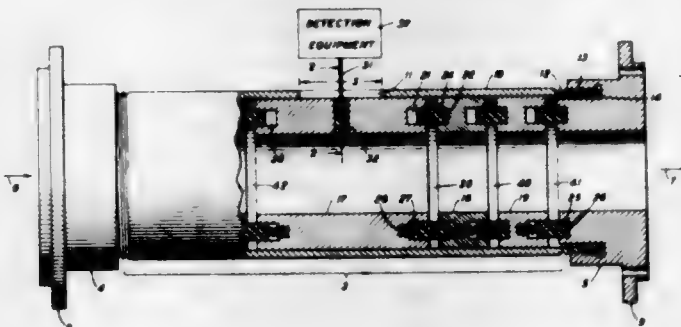


In combination, a long distance waveguide transmission line comprising a first cylindrical tube of highly conductive material adapted to transmit a very broad microwave frequency band of communication signals, a second cylindrical tube of strong resilient material having a diameter several times the diameter of the first tube and first and second supporting systems for the line, each supporting system comprising a plurality of flexible gas-filled members placed at intervals along the line to support the first tube coaxially within the second tube, and conduit means interconnecting all of the supporting members of the system, the first system providing support in the vertical plane, the second system providing support in the horizontal plane whereby the first tube will be isolated from mechanical shocks and vibration and displacement of the first tube as a result of terrain faulting at localized areas along the line will be minimized.

3,007,123

TRAVELING FIELD SAMPLER

Howard W. Andrews, Berkeley Heights, and Earl T. Harkless, Morristown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 28, 1960, Ser. No. 17,891
1 Claim. (Cl. 333-98)



A device for sampling the electromagnetic field in a round wave guide comprising two rigid end sections of round wave guide and an intermediate section connected

therebetween, the intermediate section comprising a rigid, metallic outer cylinder interconnecting the end sections, at least three rigid, conductive rings slidably fitted into the cylinder and concentrically positioned with respect to the end sections, resilient means between the rings and between each end ring and the adjacent end section, means for absorbing the energy entering between the rings or between the end rings and the end sections, and field-sampling means associated with the central ring, the rings having the same inner diameter as that of the end sections and the resilient means being adapted to maintain the spacings between adjacent pairs of rings on each side of the central ring substantially constant when the central ring is moved along the cylinder.

3,007,124

LAMINATED MAGNETIC CORES FOR STATIC ELECTRICAL APPARATUS

James Edwin Lydstone Robinson, Lyndhurst, England, assignor to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland

Filed Mar. 17, 1958, Ser. No. 721,806

Claims priority, application Great Britain Mar. 21, 1957 10 Claims. (Cl. 336—100)



1. A laminated magnetic core structure for static electrical apparatus comprising a supporting framework, vertical leg members and associated horizontal yoke members, said members being constructed from laminations of magnetic material, means for supporting the laminations of each leg member from said framework at substantially the nodal points of lengthwise magnetostrictive vibration of those laminations, means for supporting the laminations of the yoke members from the leg members, and non-short-circuiting bands lightly clamping the laminations of the leg members together and to said framework at points other than said nodal points.

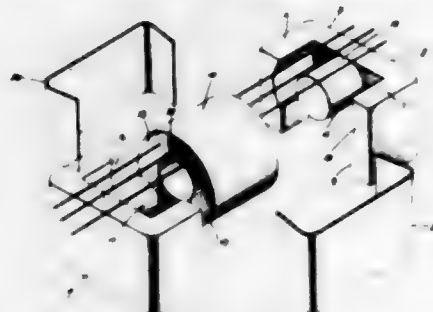
3,007,125

INDUCTIVE DEVICE

Avery D. Furbes, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Filed Feb. 20, 1958, Ser. No. 716,307

7 Claims. (Cl. 336—221)



1. A core and coil assembly for an inductive device comprising: a core member formed of magnetic mate-

rial having a central winding leg portion, and a pair of yoke portions joining opposite end of said winding leg portion and respectively defining coil receiving windows with opposite sides thereof; and a coil positioned on said winding leg portion with opposite sides thereof respectively in said windows and embraced by said yoke portions; said winding leg portion being offset from the horizontal median plane of said core so that one side of said coil projects substantially farther beyond the adjacent surface of said core than does the opposite coil side from the respective core surface and so that the opposite coil side is substantially encased by said yoke portions.

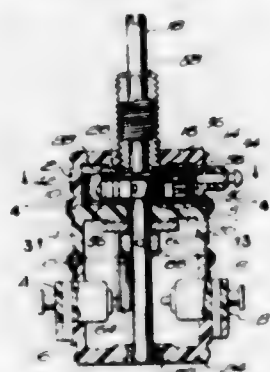
3,007,126

ROTARY POTENTIOMETERS

Alton W. Fraser, Van Nuys, Joseph M. Looney, Jr., Tarzana, and Robert M. Martin, Van Nuys, Calif., assignors to Technology Instrument Corporation of Acton, a corporation of Massachusetts

Filed Jan. 13, 1959, Ser. No. 786,480

14 Claims. (Cl. 338—172)



1. In a rotary potentiometer comprising a rotatable shaft, a resistance element arranged in concentric spaced relation to said shaft, a contact element slidably engaging said resistance element, and means connecting said shaft and contact element whereby said contact element will rotate with said shaft, a movable member movably mounted in a plane extending transversely of said shaft, a radially extending arm attached to said shaft, first means on said movable member positioned to be engaged by said arm when said arm is rotated clockwise, whereby said movable member will be moved in a first direction by said arm, second means on said movable member positioned to be engaged by said arm when said arm is rotated a predetermined amount counterclockwise away from said first means, whereby said movable means will be moved in a second direction by said arm, third means limiting movement of said movable member in said first direction, and fourth means limiting movement of said movable member in said second direction.

3,007,127

POTENTIOMETER

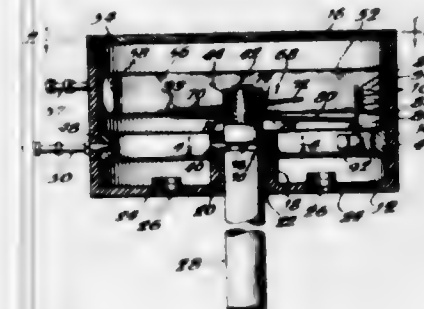
John Clayton, Jr., Maynard, Mass., assignor to Waters Manufacturing, Inc., Wayland, Mass., a corporation of Massachusetts

Filed Oct. 17, 1958, Ser. No. 767,825

14 Claims. (Cl. 338—174)

1. A potentiometer having a housing including an end wall and a cylindrical wall integral therewith, a shaft rotatably mounted in said end wall and coaxial with said cylindrical wall, a slip ring snugly fitted into said cylindrical wall, a single fastener terminal extending through the cylindrical wall, said fastener terminal being threadedly attached to said slip ring to simultaneously hold said ring in position and provide an electrical terminal for the ring, a resistance element positioned adjacent to an interior surface of said cylindrical wall, a pair of end fastener terminals extending through the cylindrical

wall and attached to said resistance element, each of said end fastener terminals being attached to one end of the resistance element and simultaneously holding said resistance element in position and providing electrical terminals for the respective end of the resistance element, a brush arm frictionally mounted on the shaft, said brush arm including a pair of resilient mounting plates integral with each other and a support arm integral with one of



said mounting plates, each of said mounting plates having an opening therein, said shaft extending through said mounting plates and the resilience of said plates frictionally holding the plates on the shaft, a contact slideably contacting said resistance element, said contact being fixed to the support arm, and a second contact slideably contacting said slip ring and fixed to said support arm and electrically connected to the first mentioned contact.

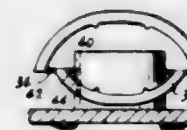
3,007,128

HOLDER FOR RADIO TUBE

Walter Gibbs, Dover Hills, N.J., and George Mollin, Far Rockaway, N.Y., assignors, by mesne assignments, to Johnson & Hoffman Manufacturing Corporation, Mineola, N.Y., a corporation of New York

Filed Feb. 8, 1960, Ser. No. 7,472

10 Claims. (Cl. 339—75)



1. A tube holder comprising two resilient rings connected at the opposite ends of a diameter, the halves of one ring being bent downward from said diameter, the halves of the other ring being bent upward from said diameter, the downwardly bent ring being adapted to slide over a socket and to resist upward movement therefrom, the upwardly bent ring being adapted to receive the base of a radio tube and to resist upward movement of the tube.

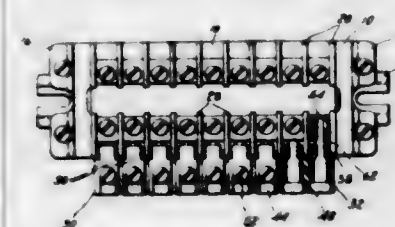
3,007,129

GANG CONNECTOR FOR TERMINAL BOARDS

Erik J. Nielsen, Thiensville, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan

Filed Mar. 21, 1958, Ser. No. 723,048

7 Claims. (Cl. 339—151)



7. A gang connector of the character described comprising: a unitary substantially rectangularly shaped block of insulating material, a plurality of spaced cavities extending between a top and one side wall surface of the

block, said cavities being individually spaced by vertically extending barriers of block material, grooves in said barriers circumscribing the block providing a reference line for dividing the block into sections of a predetermined length, a plurality of projections extending from the other side wall surface of the block, an opening extending through each of the projections into the cavities, a unitary connector having a wire securing portion disposed in the cavity and a spade-like portion extending through the openings external to the projections on the other side wall surface of the block, and means on the spade-like portion externally engaging the projections for maintaining the connector in the opening.

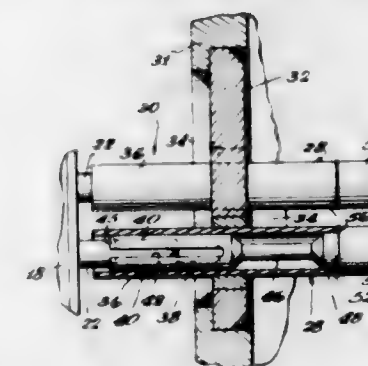
3,007,130

HERMETICALLY SEALED ELECTRICAL CONNECTOR

Robert Wesley Martin, Reseda, Calif., assignor to Technology Instrument Corporation of Acton, a corporation of Massachusetts

Filed Aug. 13, 1956, Ser. No. 603,625

2 Claims. (Cl. 339—192)



1. An insulated hermetically sealed female electrical connector comprising a body of glass, a tube of high-nickel alloy of substantially the same temperature coefficient of expansion as the glass extending through the glass and sealed thereto, and an elongated contact member of beryllium copper having a first end portion comprising a plurality of fingers, a neck portion of substantially reduced transverse dimensions adjacent to the end portion, a shank portion of substantially the same transverse dimension as the first end portion adjacent to the neck portion, and a second end portion of enlarged transverse dimensions adjacent to the shank portion and forming a shoulder therewith, said first end, neck and shank portions being seated within the tube and said shoulder being seated against the end of the tube and sealed thereto.

3,007,131

ELECTRICAL CONNECTOR FOR FLEXIBLE LAYER CABLE

Victor F. Dahlgren, West Windham, and Sidney K. Tally, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Aug. 29, 1957, Ser. No. 681,050

3 Claims. (Cl. 339—198)

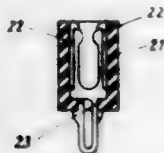


3. A cable and connector assembly comprising a connector body of non-conductive material having rows of progressively deeper recessed surfaces stepped downwardly in the direction of the cable attached thereto, pins extending from said body for connection with a mating connector, said pins communicating with terminals extending upwardly in rows from said recessed surfaces, said pins being secured in position by a resinous material.

cable having conductor terminations in a plurality of planes to mate with said surfaces, said terminations being exposed and electrically and mechanically connected to said terminals.

3,007,132
ELECTRICAL SPRING CONTACT WITH SOLDERING EAR

Sven Gustav Anderson, Stockholm, Sweden, assignor to Telefonaktiebolaget L. M. Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Feb. 27, 1958, Ser. No. 717,986
3 Claims. (Cl. 339-217)



1. An electric connector comprising, in combination, an insulation block having a wide slot portion constricted at one end defining a narrow slot portion, a contact spring having a middle part with a pair of spring arms extending in the same direction from one side thereof in spaced apart parallel relationship, a U-shaped soldering ear constructed of springy conductive material extending from the opposite side of said middle part in a direction opposite to said springy arms, one end of said ear being secured to said middle part, the other end being free and terminating adjacent to said respective side of said middle part, said free end of said ear having a locking tooth on its outwardly facing side, said reduced slot portion having a width greater than the width defined by said ear and less than the sum of the widths defined by said ear and said tooth, said middle part and said springy arms being received within the wider slot portion, said ear protruding through said narrow slot portion from said block with said tooth engaging an outside wall portion of said block, whereby the contact spring is releasably secured within said block.

3,007,133
UNI-DIRECTIONAL HIGH LEVEL LOW FREQUENCY SOUND SOURCE

Louis R. Padberg, Jr., 4126 Middlesex Drive, San Diego, Calif.
Filed Jan. 12, 1956, Ser. No. 558,812
12 Claims. (Cl. 340-12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A uni-directional high level low frequency sound source adapted to project acoustical energy through an electrically conductive aqueous fluid while being submerged therein comprising in combination a plurality of reflecting rings, said reflecting rings each having successively increasing diameters and centers disposed along a longitudinal axis of revolution for defining a conical configuration, reflector means spacially disposed from the

outer diameter of said conical reflecting ring configuration having an inner surface substantially parallel thereto and means disposed on said longitudinal axis of revolution for generating an electric spark within the confines of said conical configuration.

3,007,134
REMOTE TELEMETERING AND RECORDING SYSTEM

Robert H. Kolb, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware
Filed Feb. 18, 1958, Ser. No. 715,893
6 Claims. (Cl. 340-18)



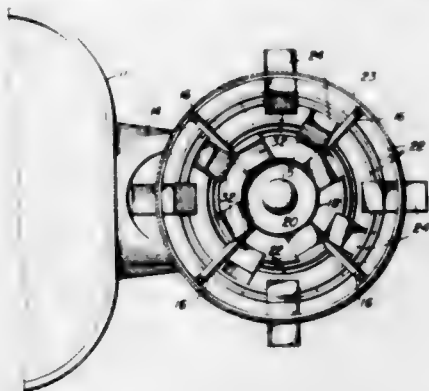
1. A system for measuring at a convenient location the value of a variable physical condition at a remote location comprising a remote instrument having a rotatable indicator contact, a reference contact fixed with respect to said indicator contact, means responsive to the value of the condition for angularly displacing the indicator contact with respect to the reference contact, a rotatable sweep contact, means for rotating the sweep contact whereby said contact cyclically closes with the reference and indicator contacts once for each revolution of the sweep contact, a convenient instrument having pulse generating means producing pulses having substantially the same periodic recurrence frequency for each revolution of the sweep means said remote and convenient instruments being coupled together by a cable, pulse counting means, a control circuit including said cable, said cable being short circuited when said sweep contact closes with one of the other contacts to produce a first unbalanced condition in said control circuit and open circuited when the sweep contact closes with the second of the other contacts to produce a second unbalanced condition in said control circuit, gating means connected between said pulse counting means and the pulse generating means and adapted to open only in response to one of the unbalanced conditions and adapted to close only in response to the other of the unbalanced conditions, and means connecting the output of said control circuit to said gating means.

3,007,135
COMBINATION AUDIBLE AND VISIBLE SIGNAL FOR SHIPS

George M. Marr, 170-40 Highland Ave., Jamaica 32, N.Y.
Filed July 17, 1958, Ser. No. 749,141
4 Claims. (Cl. 340-84)

4. A signal device for ships, comprising a tubular housing having a vertical axis, said housing having a lower portion which at least in part tapers upwardly and outwardly and an upper portion tapering upwardly and inwardly, a light projector mounted at the bottom of said

housing to project a light beam along said housing axis, a transparent closure at the upper end of the housing to permit passage of said axial light beam, a plurality of openings in said lower portion of said housing disposed in spaced relation completely about the periphery of the housing, a lens mounted in each of said openings, and a plurality of spaced reflectors supported within the housing for intercepting and projecting portions of the



light beam horizontally toward the lenses in said lower portion of the housing, whereby a distinctive light signal may be projected from the device having as components a vertical beam issuing from said closure, and a plurality of horizontal beams from the lower portion of the housing, said horizontal beams being directed in many directions so as to be visible at a distance from any point throughout a 360° horizontal angle centered at the signal device.

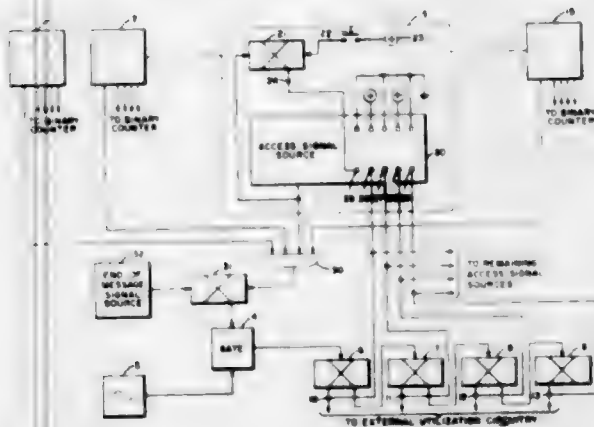
3,007,136

NON-RESETTING ALLOTTER DEVICE

William V. Tyrlick, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Apr. 13, 1959, Ser. No. 805,967

6 Claims. (Cl. 340-147)



1. A non-resetting allotter device for use in sequentially indicating individually selected ones of a predetermined number of separate signal sources to be individually coupled with common utilization means, said device comprising separate first means individually forming part of each of said signal sources, each of said first means including first and second groups of corresponding marking conductors and a separate enable marking conductor, selection means for applying a distinctive enable signal marking to said enable marking conductor only in response to the selection of the signal source of which that first means, is part prewired means coupled to said first group of marking conductors to provide thereon a unique code marking identifying that individual first means and the signal source of which it is part, and coincidence means coupled to said enable marking conductor and said first and second groups of marking conductors for deriving a control signal only in response to the simultaneous presence of an enable

signal marking and the coincidence of a code marking applied to the corresponding conductors of said second group of marking conductors with said unique code marking applied to said first group of marking conductors, said device further comprising second means including cyclically-operated means coupled in multiple to said second group of marking conductors of all said first means for sequentially applying to said second group of marking conductors each of the respective unique code markings identifying each individual first means and the signal source of which it is part, and switching means coupled to the coincidence means of each first means and to said cyclically-operated means for causing the stoppage of further cyclical operation of said cyclically-operated means in response to said control signal being applied thereto, whereby the unique code marking present on said second group of marking conductors when said cyclically-operated means has been stopped indicates that one particular signal source to be individually coupled to said common utilization means.

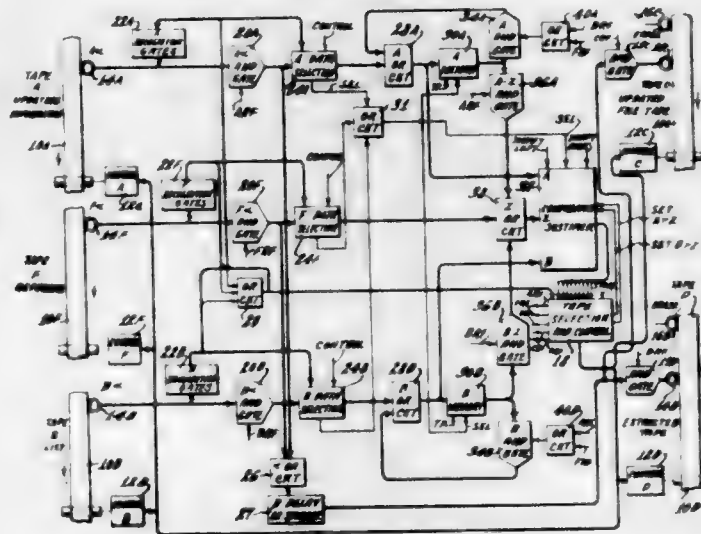
3,007,137

INFORMATION HANDLING SYSTEM

John F. Page and Arnold M. Spielberg, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Dec. 14, 1956, Ser. No. 628,456

9 Claims. (Cl. 340-172.5)



1. In an information handling system in which information is arranged in messages each having a criterion, said system comprising first and second input storage devices containing messages arranged in sequential order of criterion, a third input storage device containing a sequentially ordered list of criteria, apparatus for (1) merging the messages contained in said first and second input devices and for transferring the merged messages to a first output storage device, and (2) extracting messages from one of said first and second input storage devices according to said list and transferring the extracted messages to a second output storage device comprising, in combination: said first, second and third input storage devices, said first output storage device and said second output storage device; control devices respectively for all of said storage devices; first and second gate means connected to the inputs of said first output storage device and said second output storage device, respectively; means connecting the outputs of said first and second input storage devices to both of said gate means; a comparator connected to receive and compare the criteria of the output messages of all said input storage devices and providing signals indicating the comparison results; and logic control means responsive to said signals for enabling selected combinations of said control devices and said gates in accordance with the desired said transferring of messages.

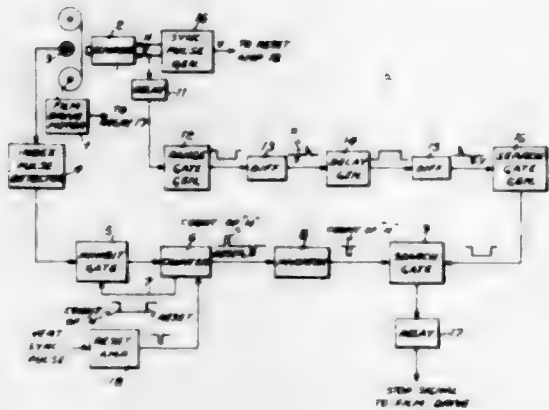
3,007,138

CODE RECOGNITION CIRCUIT

Vladimir P. Honeiser, Paramus, and Howard S. Margetts, Lincoln Park, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Aug. 21, 1958, Ser. No. 756,321

7 Claims. (Cl. 340-172.5)



1. A system for reading out coded information bits stored on a record having index bits arranged to designate different areas of said record comprising means for continuously transporting said record in a given direction through a given area; means, independent of said transporting means and operating regardless of the movement or lack of movement of said record, for continuously scanning said given area in sequential frames, each scanning frame consisting of a series of sequential parallel lines transverse to said given direction with the scanning starting from an end of each line and going to the other end to produce an output train of interleaved index and information signals; means for separating the index signals from said information signals; means coupled to said separating means for counting the separated index signals; and means coupled to said counting means for halting said transporting means at a predetermined count to position a selected area of said record in said given area for readout of the information bits therein.

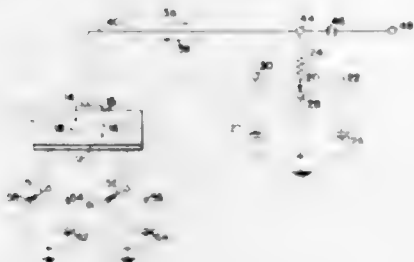
3,007,139

CIRCUIT ELEMENT FOR USE IN LOGICAL AND MEMORY CIRCUITS

Donald R. Young, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 22, 1956, Ser. No. 586,403

18 Claims. (Cl. 340-173.2)



17. A circuit comprising a body of ferroelectric material having pyroelectric properties, a pair of electrodes connected to opposite faces of said body and forming therewith a capacitor capable of being caused to assume two different stable states of remanent polarization, means coupled to said capacitor for applying thereto signals of sufficient magnitude and proper polarity to switch said capacitor between said stable states, first and second interrogation input means coupled to said capacitor for applying interrogation signals to said capacitor, said first and second interrogation input means being effective only when either applies a signal exclusively

to cause a heating current to flow through at least one of said electrodes effective to produce a pyroelectric current in said capacitor, said interrogation signals being of insufficient magnitude to switch said capacitor from either of said stable states to the other, and means coupled to said capacitor and responsive to said pyroelectric current for producing an output indicative of the state of said capacitor in accordance with the direction of said pyroelectric current.

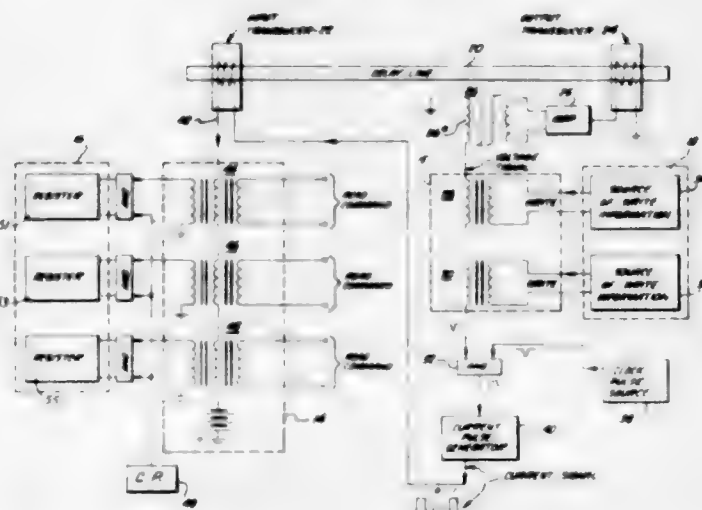
3,007,140

STORAGE APPARATUS

Robert C. Minnick, Menlo Park, and Edwin S. Lee III, San Gabriel, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed July 8, 1960, Ser. No. 41,550

16 Claims. (Cl. 340-174)



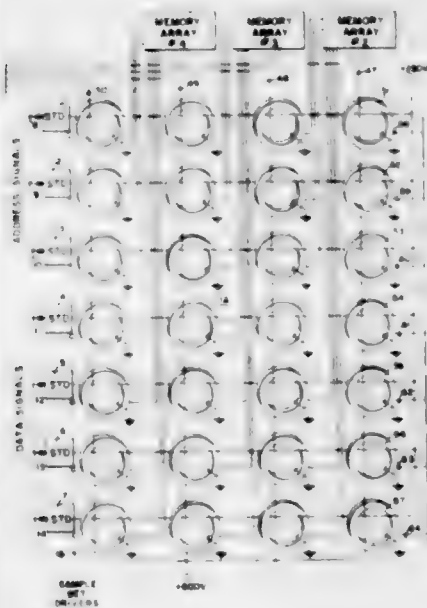
1. In a computer including a dynamic storage device having spaced apart input and output transducers interconnected in a loop to continually recirculate information in the form of a train of pulses received at the output transducer for re-entry into said input transducer, switching means coupled to said recirculation loop intermediate said output and input transducers for selectively reading out and selectively writing information into said train of pulses, said switching means including at least a single magnetic core for selectively reading out the recirculating train of pulses and at least a single magnetic core for selectively writing information into said train of pulses, each of said magnetic cores having a substantially rectangular hysteresis characteristic and a plurality of apertures for defining first, second, and third legs in said cores to establish a pair of controllable flux paths of substantially different lengths linking said legs, individual input windings separately magnetically coupled to the first leg of the read and write magnetic core to selectively place each of the cores in a blocked and unblocked magnetic condition corresponding to a non-read and non-write and read and write state respectively, means for selectively energizing the input windings to block and unblock the magnetic cores, winding means for coupling the train of pulses derived from said output transducer to said third leg of the writing core and for responding to the flux changes produced in said third leg when the core is in an unblocked condition, winding means coupled to said third leg of said writing core for changing the flux in said third leg during the unblocked magnetic condition thereof for writing in new information in combination with said train of recirculating pulses, means for energizing said last-mentioned winding means, means serially connected with said winding having the train of pulses thereon and responsive thereto for converting said train of pulses including the pulses provided by said write core to a

corresponding train of signals, means for coupling the train of signals derived from said last-mentioned means to said input transducer, means for coupling the train of signals to said third leg of said read core for changing the flux therein during the unblocked magnetic condition thereof, and winding means coupled to said third leg of said read core for responding to the flux changes in said third leg during the unblocked condition thereof to read out the received train of pulses.

3,007,141

MAGNETIC MEMORY

Hawley K. Rising, Lexington, Mass., and Richard G. Counihan, Poughkeepsie, N.Y., assignors, by direct and mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Apr. 9, 1956, Ser. No. 576,976
10 Claims. (Cl. 340-174)



6. An information switching device comprising an array of magnetic elements having two stable states arranged in groups of elements of corresponding order, first and second energizing means associated with the elements of each group, said first energizing means of each group of elements connected in series, said second energizing means of elements of corresponding order in said groups connected in series, means for selecting any of said element groups including a control circuit for applying substantially zero current to said first energizing means of a selected group and for applying to said first energizing means of unselected groups current for producing therein a magnetomotive force in a given direction greater than the coercive force of said elements, writing means associated with said second energizing means for providing to any selected second energizing means current for producing therein a magnetomotive force of like magnitude but in a direction opposite said given direction and to the unselected second energizing means substantially zero current, so that said elements of the selected group are set in states according to information to be switched, and an output circuit associated with each magnetic element for translating a change in magnetic state of the associated element into output current.

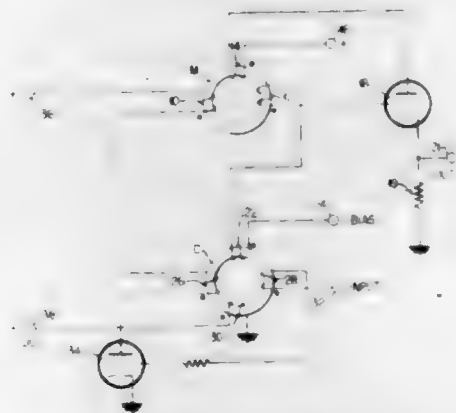
3,007,142

MAGNETIC FLUX STORAGE SYSTEM

An Wang, Lincoln, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 6, 1957, Ser. No. 664,128
3 Claims. (Cl. 340-174)

1. A magnetic circuit including a first core of magnetic material capable of assuming first and second limiting

remanent states of flux orientation in opposite directions and a plurality of remanent states intermediate said limiting states; means for switching said first core in step by step fashion from said first limiting state to said second limiting state and thereafter restoring said first core to said first limiting state comprising, a second core of magnetic material normally in a state with the flux therein orientated in a first direction but capable of being caused to assume a state with the flux therein orientated in a second direction, first winding means linking said first and second cores effective each time it is energized for a predetermined time interval to completely reverse the flux in said second core and to partially reverse the flux in said first core so that said first core assumes the next intermediate state in the direction of said second limiting state, second

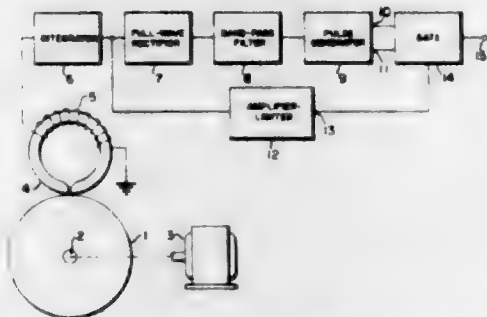


winding means on said second core regeneratively coupled to said first winding means on said second core, said regeneratively coupled windings being effective in response to the application of an input signal to maintain said first winding means energized for said predetermined time interval, third winding means linking said first and second cores with turns of opposite sense on which opposing voltages are induced in response to said complete flux reversals in said second core and partial flux reversals in said first core, fourth winding means linking said first core, and means regeneratively coupling said third and fourth winding means on said first core for restoring said first core to said first limiting state when said first winding is energized after said first core has been stepped to said second limiting state.

3,007,143

APPARATUS FOR READING STORED INFORMATION FROM OVERLAPPING RECORDED PULSES

Jacob J. Hagopian, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 17, 1955, Ser. No. 540,753
24 Claims. (Cl. 340-174.1)



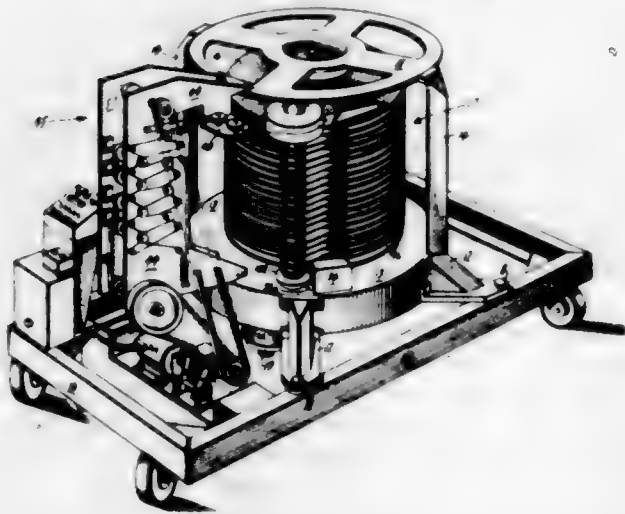
11. Apparatus for reading stored binary information from a recorded magnetic waveform of overlapping positive and negative magnetic pulses in an irregular sequence of polarities such that some adjacent ones of said pulses have like polarities while other adjacent ones of said pulses have unlike polarities, the adjacent overlapping pulses of like polarity producing a ripple section of said waveform

having one ripple cycle per pulse, comprising a transducer for producing an electric signal having a waveform similar to the first differential of said magnetic waveform, an integrator for integrating said signal to produce an integrated signal having portions of opposite polarity produced from said positive and negative magnetic pulses, respectively, a full-wave rectifier for inverting portions of said integrated signal produced from negative magnetic pulses relative to portions of said integrated signal produced from positive magnetic pulses, thereby producing a ripple component having successive cycles occurring at the same rate as said magnetic pulses, a filter for transmitting only said ripple component, a pulse generator triggered by each cycle of the filtered ripple component to produce a train of electric pulses, and a gate controlled by the polarity of said integrated signal to transmit only selected ones of said electric pulses.

3,007,144

DATA STORAGE APPARATUS

Jacob J. Hagopian, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 14, 1956, Ser. No. 584,705
10 Claims. (Cl. 340-174.1)



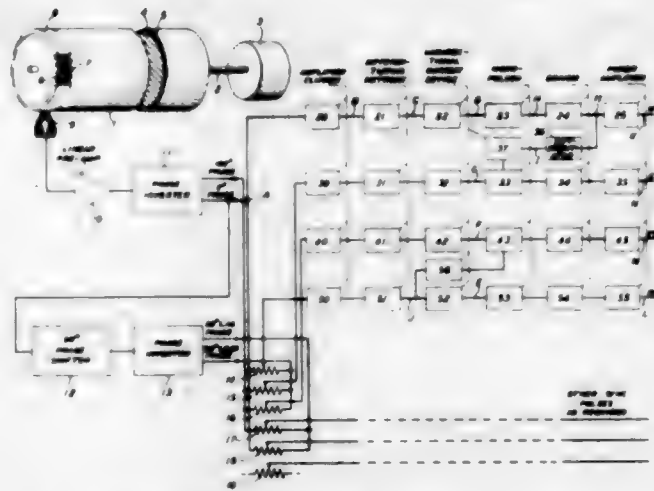
5. A data storage apparatus comprising in combination an index member including a plurality of spaced index tracks having a predetermined center to center spacing, a binary signal magnetically recorded centrally on each said track, said signals on adjacent tracks being recorded out of phase, a magnetic index transducer for scanning said index tracks to provide a signal whose amplitude varies in accordance with the transverse displacement of the transducer from the center line of an associated index track, a data record member, means for rotating said members on a common axis, a data transducer operatively associated with said data record member for magnetically recording and reproducing data signals therefrom, means for moving said transducers relative to said respective members conjointly along a path transverse to said tracks, first means for actuating said moving means in response to an address signal to roughly position said data transducer at a selected location along said path, second means for actuating said moving means in response to control signals, after said data transducer is roughly positioned, circuit means for generating said control signals from the index signals provided by said index transducer and a timing signal which is in phase with one of said binary signals, means for generating said timing signal, means connecting said circuit means to said index transducer, means connecting said timing signal generating means to said circuit means, and means connecting said circuit means to said second actuating means whereby the ultimate position of said data transducer relative to said data record is under the supervision of the con-

trol signal provided by said circuit means, and corresponds positionwise to a reference line intermediate two of said index tracks.

3,007,145

SYNCHRONIZING CIRCUIT FOR MAGNETIC DRUM

Orlando J. Murphy, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 22, 1956, Ser. No. 586,544
7 Claims. (Cl. 340-174.1)

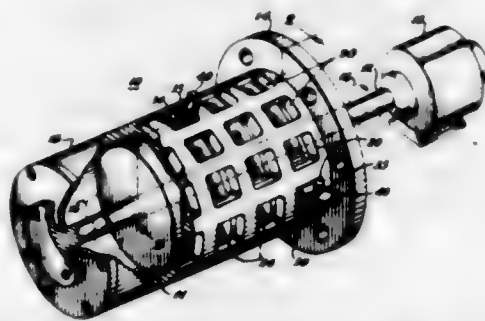


1. A synchronizing pulse signal generator for producing a plurality of trains of synchronizing pulse signals comprising in combination, a rotating magnetic drum; means responsive to signals recorded on said drum for producing a first sinusoidal signal, means responsive to said first sinusoidal signal for producing a plurality of sinusoidal signals each having a predetermined phase relationship with said first sinusoidal signal, a plurality of output leads, a plurality of pulse forming means each operative to produce a train of synchronizing pulse signals on a corresponding one of said output leads and means connected to each of said pulse forming means and responsive to a selected pair of said plurality of sinusoidal signals for controlling the phase with respect to said first sinusoidal signal of the pulse signals of said train of synchronizing pulse signals produced thereby.

3,007,146

MAGNETIC HEAD LOCKING DEVICE FOR A MAGNETIC DRUM

Arthur J. Fletcher, Torrance, and Edward Dillingham, Los Angeles, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 15, 1957, Ser. No. 634,372
3 Claims. (Cl. 340-174.1)



1. A magnetic drum assembly comprising: a housing spaced a finite distance from the magnetic surface of a drum and including at least one opening therein in communication with said drum surface and extending substantially perpendicular thereto, a bearing surface in said opening; a magnetic head disposed in said opening en-

gaged with and freely slidable along said bearing surface; a locking bar movably supported on said housing adjacent to said opening and movable toward and away from said opening; a resilient locking screw engaging said housing and having a head with a tapered undersurface engaging said locking bar for forcing said locking bar toward said opening and against said magnetic head such that the reaction force on said locking bar causes said screw to bend perpendicularly to its axis and in the direction away from the magnetic head to thereby provide continuous spring pressure against said locking bar.

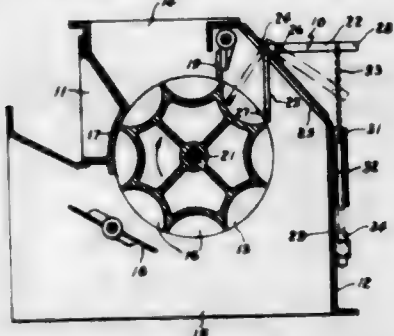
3,007,147

ALARM FOR DRUM-TYPE FEEDER

Oscar A. Johnson, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts

Filed Aug. 23, 1957, Ser. No. 679,865

2 Claims. (Cl. 340-236)



1. A feeder for particulate material, comprising a rotatable drum formed with a series of arcuate pockets, a housing, a finger pivoted on the housing and extending therein to swing from a first position which is located externally of one of the said pockets to a second position which is located within the pocket when the pocket is in an upwardly-facing condition and would normally be filled with the said material, the outer end of the finger moving through an arc that approximates the shape of the individual pockets, a lever arm connected to the finger externally of the housing to pivot with it, a weight joined to and movable with the arm, a switch mounted on the housing and actuable by the weight, the weight contacting the switch when the finger is in the said second position, and signal means actuated by the contact of the weight with the switch.

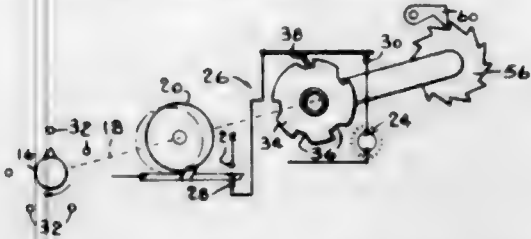
3,007,148

TIMER

John W. Morgan, Elmhurst, Ill., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

Filed June 5, 1959, Ser. No. 818,463

8 Claims. (Cl. 340-271)



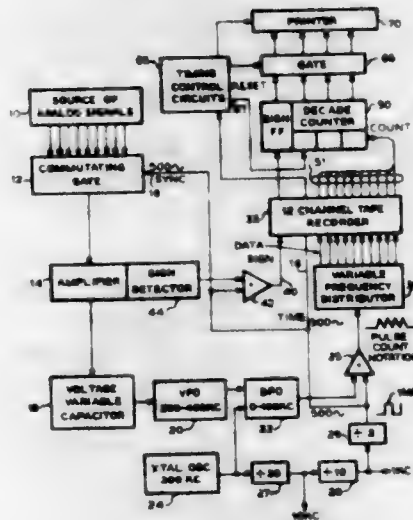
7. A starting point indicator for a timer comprising a shaft, a cam bank rotatable with the shaft, said shaft being moveable axially with respect to the cam bank, fixed indicia a pointer on the shaft cooperating with the fixed indicia, circuit means for indicating a starting point having a first and a second switch, means axially moveable with respect to the shaft actuating the first switch, and means on the cam bank for actuating the second switch, said circuit indicating means responding only when both switches have been actuated.

3,007,149
ANALOG TO DIGITAL CONVERTER AND RECORDER

Lawrence R. Brown, Berwyn, Pa., assignor, by mesne assignments, to Drexel Dynamics Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 9, 1959, Ser. No. 798,236

4 Claims. (Cl. 340-347)



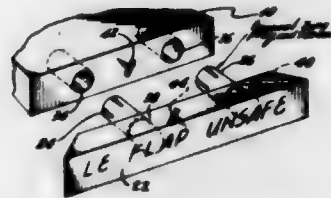
1. An analog to digital conversion system comprising in combination, a source of analog signal of varying potential, a voltage responsive reactive element coupled to change reactance as a function of the analog signal level, a variable frequency oscillator including said reactive element as a frequency determining component, a further stabilized oscillator circuit, a beat frequency circuit comprising both said oscillators and providing an output signal frequency equal to the difference of the frequencies of the two oscillators, a timing interval circuit, and gating means coupled to the timing interval circuit for passing signals from the beat frequency circuit for a precise sampling time interval thereby producing in pulse count notation an indication of the amplitude of the analog signal at the sampling time.

3,007,150

ELECTRIC LAMP ANNUNCIATOR INDICATING ASSEMBLY

William C. Arrasmith, Los Angeles, Calif., assignor to Radar Relay, Inc., Los Angeles, Calif., a corporation
Original application Oct. 22, 1956, Ser. No. 617,618, now Patent No. 2,934,752, dated Apr. 26, 1960. Divided and this application Jan. 6, 1958, Ser. No. 707,311

10 Claims. (Cl. 340-381)



1. An electric lamp annunciator indicating assembly including: a capsule member containing electrical components and circuitry for producing an energizing current in response to the happening of a monitored condition, a removable lamp housing member having an indicating face, releasable plug and socket means respectively mounted on said capsule member and on said removable lamp housing member and having a configuration to removably support said removable lamp housing member on said capsule member, an electric socket means mounted in one of said members and adapted to be connected to circuitry in said capsule member for holding at least one electric annunciator lamp in position to glow

through the indicating face of said removable lamp housing member when said removable lamp housing member is held in place on the capsule member by said plug and socket means and upon the happening of the monitored condition.

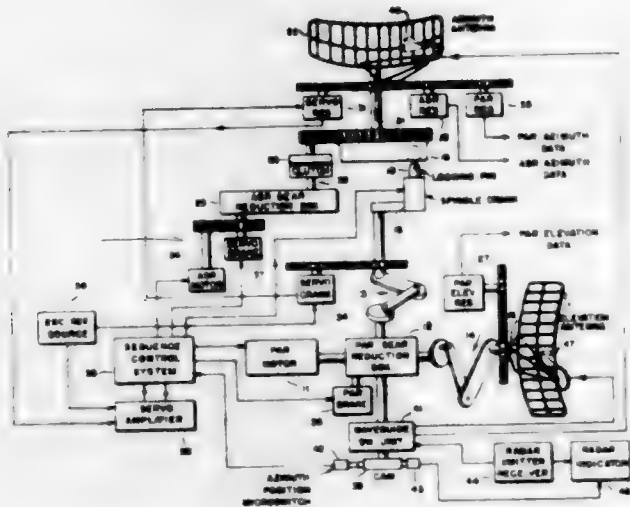
3,007,151

RADAR AIRCRAFT GUIDANCE SYSTEM

Addison D. Cole, Natick, John B. Levin, Boston, Leon G. Wilde, Andover, and Victor T. Takata, Cambridge, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Feb. 6, 1956, Ser. No. 563,588

9 Claims. (Cl. 343-5)



1. In a combined precision approach and air surveillance radar system having elevation and azimuth antennas rotatable in mutually perpendicular planes, apparatus comprising precision approach and air surveillance motors, elevation and azimuth spindles secured to the respective antennas, spindle servo, air surveillance, and precision approach resolvers mechanically coupled to said azimuth spindle, a gear box connected to said precision approach motor, a spindle crank connectible to said azimuth spindle by means including a slidable locking pin, a crank servo resolver mechanically coupled to said crank, a pair of rotary-to-oscillatory linkages for respectively connecting said spindle crank and said elevation spindle to said gear box, a waveguide switch mechanically coupled to said gear box, a clutch which effects mechanical coupling between said air surveillance motor and said azimuth spindle when engaged, a linkage between said locking pin and said clutch whereby said pin in a first position effects mechanical coupling between said crank and said azimuth spindle and said clutch is disengaged, and in a second position disconnects mechanical coupling between said crank and azimuth spindle and said clutch is engaged, a servo amplifier, means for coupling said spindle servo resolver to said crank servo resolver and said crank servo resolver to said servo amplifier, and a sequence control system having an input coupled to said servo amplifier and outputs coupled to said air surveillance and precision approach motors.

3,007,152

RADAR DISPLAY APPARATUS

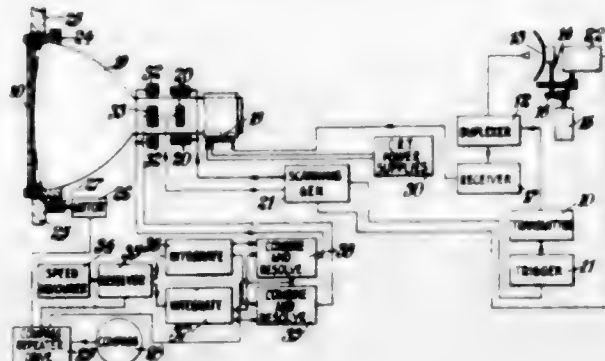
Ronald Eric George Simmons, Hubert Louis Arnold Foy, Jack Denny Shepherd, and Maurice Henry Easy, London, England, assignors to The Decca Record Company Limited, London, England, a British company

Filed July 9, 1956, Ser. No. 596,665

20 Claims. (Cl. 343-5)

1. In radar apparatus for use on a vehicle and having a cathode ray display tube with means for providing

a relative plan position display, the combination of compass-controlled means for rotating the tube in accordance with changes in the heading of the vehicle to stabilize in azimuth the screen of the tube so that echoes of targets tend to remain in the same angular position on the actual



screen of the tube and off-centering means controlled in accordance with the rate and direction of movement of the vehicle for off-centering the display on the screen of the tube at a rate and in a direction corresponding to the movement of the vehicle.

3,007,153

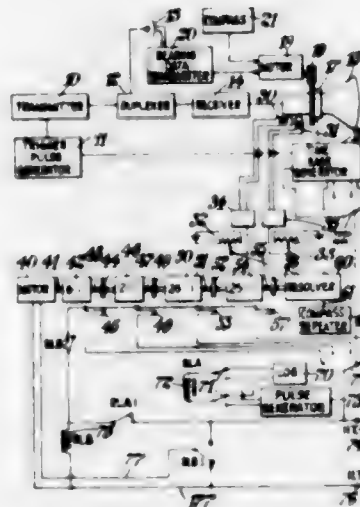
RADAR DISPLAY APPARATUS

Douglas Arthur Aylett, London, England, assignor to The Decca Record Company Limited, London, England, a British company

Filed Dec. 5, 1956, Ser. No. 626,495

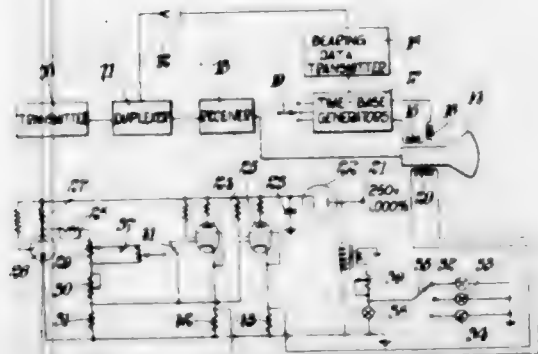
Claims priority, application Great Britain Dec. 6, 1955

11 Claims. (Cl. 343-5)



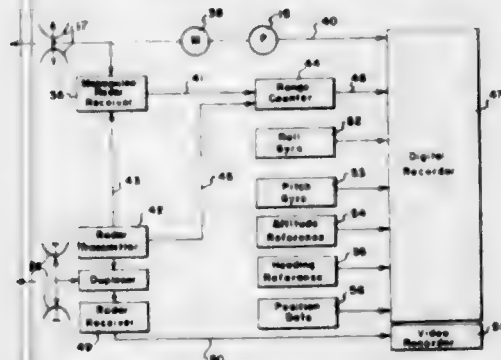
1. In radar display apparatus for use on a mobile craft and having a plan position display on a display screen with a range control switch operative to change the scale of the display; controllable deflection means for effecting displacement of the display on the screen, mechanically-adjustable control means for said deflection means, an electro-mechanical drive arranged to drive said mechanically-adjustable control means in accordance with the rate of change of position of the craft, which electro-mechanical drive is adjustable to alter the relationship between displacement of the display and change of position of the craft, and means coupling said range control switch to said electro-mechanical drive to alter the amount of adjustment of said deflection control means with respect to change of position of the craft in accordance with the scale of the display whereby the display is stabilized on all the display scales.

3,007,154
RADAR APPARATUS
Maurice Henry Easy, Philip David Lane Williams, and
Kenneth Alexander Cook, London, England, assignors
to The Decca Record Company Limited, London, Eng-
land, a British company
Filed July 11, 1958, Ser. No. 747,957
9 Claims. (Cl. 343-5)



1. In radar display apparatus carried on a vehicle and having a plan position display on a cathode ray tube display screen, the combination of off-centering deflection means, which on application of a deflection signal, will off-centre the display on the screen in a direction corresponding to the direction of movement of the vehicle, off-centering signal generating means comprising a first signal generator for producing a signal proportional to the speed of the vehicle, a second signal generator for producing a signal proportional to a selectable time period and means for multiplicatively combining the outputs of the first and second signal generators, and switch means effective when operated to apply the combined output signal to said off-centering deflection means.

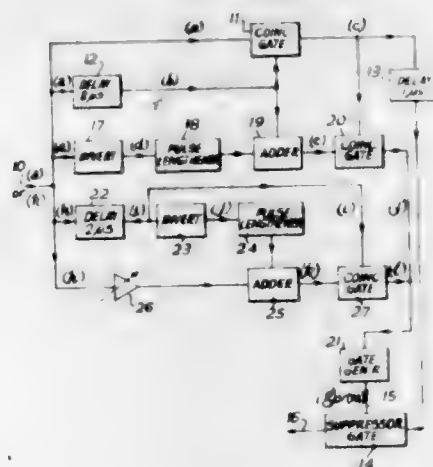
3,007,155
GROUND CONTOUR MAPPING SYSTEM
Thracy Petrides and Leverett S. Tuckerman, Jr., New
York, and Aaron M. Winzemer, Forest Hills, N.Y.,
assignors to U.S. Industries, Inc., New York, N.Y., a
corporation of Delaware
Filed Apr. 17, 1959, Ser. No. 807,102
8 Claims. (Cl. 343-6)



1. A semi-active ground contour mapping radar system adapted to be operated on aircraft while airborne to produce a plurality of correlated signals for storage and ultimate display, comprising an active side-looking radar system including a transmitter for radiating a narrow horizontal beam of pulsed energy from the aircraft towards the earth's surface in a substantially vertical plane transverse the ground track of said aircraft, and a companion radar receiver for receiving pulsed energy reflected from the earth's surface to provide planimetric terrain mapping information signals; a passive radar system for receiving pulsed energy reflected from the earth's surface to provide ground height and range information, said system including a receiver scanning antenna mounted on said aircraft for rotation about the aircraft roll-axis and having a high degree of angular discrimination in the said ver-

tical plane, and means for rotating said antenna; means coupled to said scanning antenna for producing an angle signal indicating the angle of reception of said pulsed energy, means for producing a range signal corresponding to the transit time of reflected pulsed energy transmitted by said active radar system and received by the said passive radar system, means for producing an altitude signal corresponding to the absolute altitude of said aircraft with respect to a predetermined reference plane, and means for storing each one of the said plurality of correlated signals.

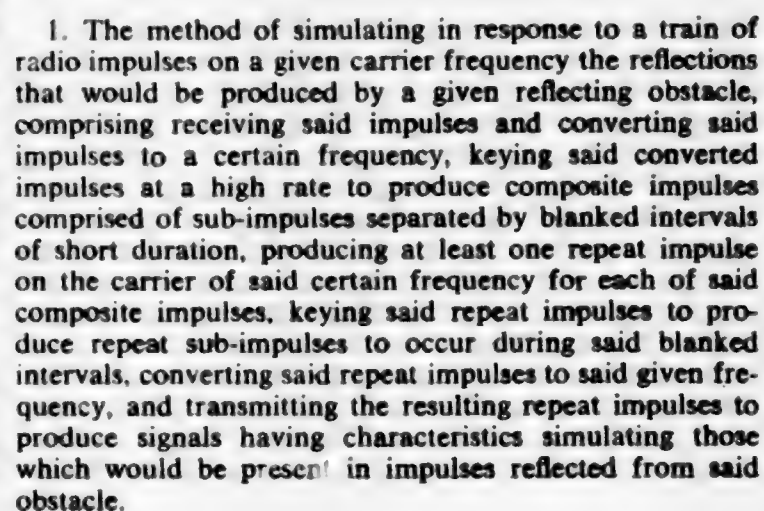
3,007,156
SECONDARY RADAR SYSTEMS
Peter Francis Barber, London, England, assignor to A. C.
Cossor Limited, London, England, a British company
Filed Jan. 25, 1960, Ser. No. 4,409
Claims priority, application Great Britain Oct. 1, 1959
4 Claims. (Cl. 343-6.8)



1. A transponder suitable for use with a secondary radar system employing recurrent groups of pulses, each group comprising either a control pulse A radiated from an antenna of relatively low directivity followed by an interrogating pulse B radiated by an antenna of relatively high directivity, or two interrogating pulses A₁ and B₁ separated by the same time interval as pulses A and B and radiated from an antenna of relatively high directivity and in the interval between these pulses a control pulse C₁ radiated from an antenna of relatively low directivity, the recurrence period of the groups being much greater than the duration of a group, said transponder comprising a transmitter, a receiver having a terminal at which said recurrent pulse groups are received, first, second and third coincidence gates each having two input and one output terminal and generating an output at said output terminal in response to pulses applied simultaneously to its two input terminals, means coupling said receiver terminal to one input terminal of said first coincidence gate, a first delay means introducing a time delay substantially equal to the time interval between pulses A and B, means coupling said receiver terminal through said first delay means to the other input terminal of said first coincidence gate, a trigger terminal, pulses applied to said trigger terminal actuating said transmitter, a suppressor gate coupled between said output terminal of said first coincidence gate and said trigger terminal, said suppressor gate having a gating terminal and when closed by a signal applied to said gating terminal preventing the passage of pulses to said trigger terminal, a first adder having two input terminals and an output terminal at which the sum of signals applied to the adder input terminals appears, means coupling one adder input terminal to said receiver terminal, means coupling the other adder input terminal through said first delay means to said receiver terminal, phase inverting means included in one of the last two said coupling means, means coupling the output terminal of said first

1. In a Doppler radar system a first source of radiant energy, means for propagating and receiving such energy, a pair of modulators comprising ferrite microwave gyrotors adapted to normally produce a 45° rotation in the polarization of energy passing through them, means to apply the output energy from said first source to said modulators in like polarity and in phases differing by 45 electrical degrees, means to apply received energy to said modulators in a polarity shifted 45° from that of the energy from the first source and in phases differing by 45 electrical degrees in the opposite sense to that in which the energy from the first source is applied, means to extract radiant energy from said modulators differing in polarity by 90° from that of the received energy, and in phase by 45 electrical degrees, a second source of radiant energy at a second frequency, means to apply the output of said second radiant energy source to the modulator, means to compare the phase of the output of said second source with that of the output of the modulators at a frequency differing from that of the second source by the same amount that the received energy differs from that of the transmitted energy, means to compare the phase of the output of the modulators at such frequency with that of the output of the second source shifted 90° in phase, and means to apply the output of each phase comparison means to a respective modulator to obtain a signal determined by the difference in frequency of the transmitted and received signals without excessive energy at the transmitted frequency.

The combination with a pulse type radar system having a transmitter including an antenna adapted both for transmitting and receiving energy and a cavity resonator connected to said antenna, of an apparatus for increasing the useful range of said radar system comprising, a loading loop coupled to said resonator, said loading loop including a high vacuum diode, and means including a damping pulse for causing said diode to become conductive thereby for dissipating the residual energy of the cavity resonator, said diode being capable of returning immediately to a non-conductive state in order that said resonator will be restored to resonant condition immediately after cessation of a transmitted pulse, whereby a decaying portion of said pulse will not mask the echo pulse at short ranges.

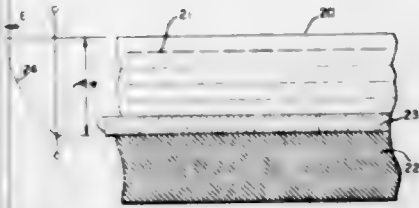


3,007,160

METHOD OF REDUCING REFLECTION OF INCIDENT ELECTROMAGNETIC WAVES

Otto Halpern, Pacific Palisades, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Continuation of application Ser. No. 641,828, Jan. 17, 1946. This application Nov. 29, 1957, Ser. No. 699,872
2 Claims. (Cl. 343-18)



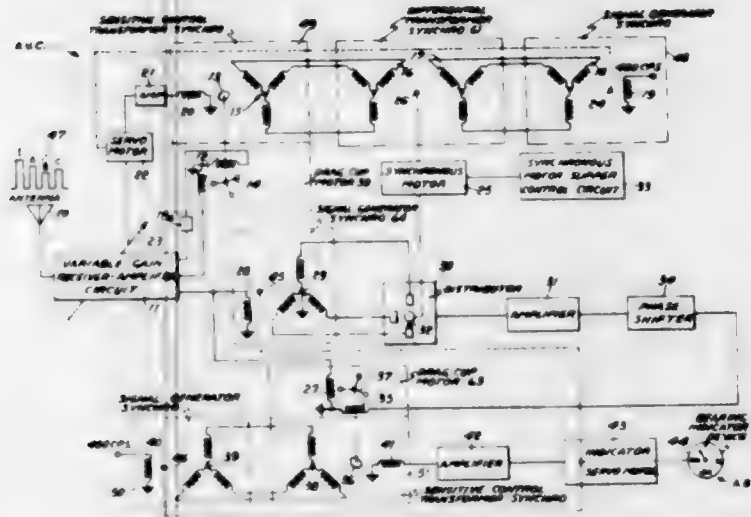
1. The method of reducing the amount of incident wave energy of a selected frequency which is reradiated toward space from a reflecting surface, which comprises bonding thereto with a thin dielectric adhesive layer, a preformed film of dielectric material having electrically conducting flakes dispersed therethrough, the total thickness of said film and said thin dielectric adhesive layer being equal to one quarter-wavelength of said wave energy in said film and layer.

3,007,161

RADIO NAVIGATIONAL AID RECEIVER

Mortimer Rogoff, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Dec. 10, 1956, Ser. No. 627,156
8 Claims. (Cl. 343-106)



1. An automatic gain control system comprising a variable gain amplifier, a first motor which rotates at a predetermined speed, a second motor coupled to the output of said amplifier, said amplifier output controlling the rotational speed thereof, comparison means coupled to said first motor and said second motor for comparing the respective rotational speeds of said motors and for transmitting an error signal representative of a speed difference therebetween, and means coupled to said comparison means and said variable gain amplifier for receiving said error signal and adjusting said variable amplifier in accordance therewith.

4. An automatic bearing indicator device for use with a radio navigational aid receiver which receives from a transmitter bearing information signals whose relative amplitudes are dependent on the bearing angle of said receiver station from said transmitting station comprising a receiver antenna, a receiver-amplifier circuit coupled to said antenna, a motor means whose shaft displacement is proportional to the square of an input signal applied thereto, a signal generator synchro having a rotor, a

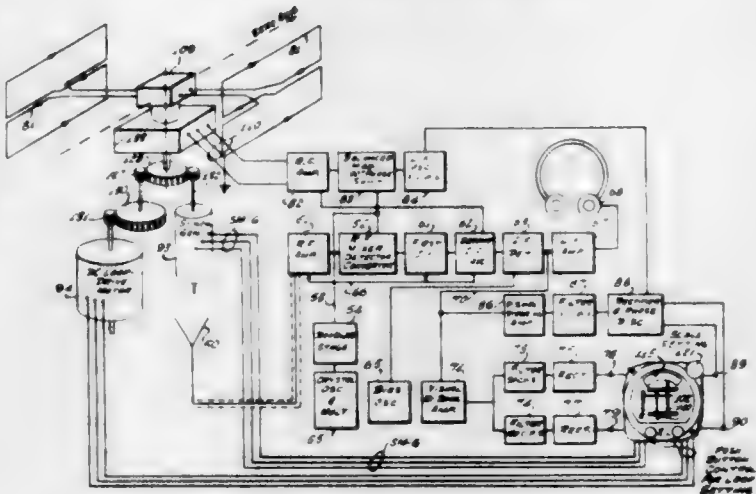
distributor means, circuitry means coupling in series said synchro generator, said distributor means and said motor means to cause a discrete movement of the shaft of said motor means in accordance with the reception of each of said bearing information signals, an indicating device, servo means coupled between said indicating device and said signal generator synchro to cause said rotor to be positioned according to said indicating device, and comparison means coupled to said motor means shaft and said rotor positioning means for comparing the positions of said shaft with said rotor positioning means and transmitting an error signal in accordance with the difference thereof to cause said servo means to adjust said indicating means therewith.

3,007,162

AIRPLANE INSTRUMENT APPROACH AND LANDING SYSTEM

Geoffrey Gottlieb Kruesi, 850A Union St., San Francisco, Calif., assignor of ten percent to Albert C. Nolte, Sr., New York, N.Y.

Filed July 23, 1957, Ser. No. 673,671
2 Claims. (Cl. 343-107)



1. In an airplane guidance system having a transmitter for producing a radiated field having two zones which are disposed substantially symmetrically with respect to a runway, the fields in the two zones being modulated predominately at two different audio frequencies respectively; the combination comprising a non-directional antenna, a radio frequency mixer and detector circuit having its input connected to said non-directional antenna, a local oscillator circuit connected to said mixer and detector circuit, a directional antenna, a balanced modulator having two input circuits one of which is connected to said directional antenna, a second local oscillator connected to the other input circuit for supplying modulating oscillations to said balanced modulator, means for supplying the output of said balanced modulator to said mixer and detector circuit, a second detector circuit connected to the output of said mixer and detector circuit, a first amplifier connected to the output of said second detector circuit, a first output means connected to said amplifier for selecting and rectifying the modulating oscillations for producing a first direct current corresponding to the amplitude of the directionally received signals, a second amplifier connected to the output of said detector, a first filter connected to the output of said second amplifier for selecting one of said audio frequencies, a second filter connected to the output of said second amplifier for selecting the other of said audio frequencies, a rectifier connected to each filter, a second output means for producing a second direct current corresponding to the difference between the outputs of said rectifiers, an indicator connected to said first and second output means having a meter movement responsive to the difference between said first and second direct currents, a motor, means connected to the motor for caus-

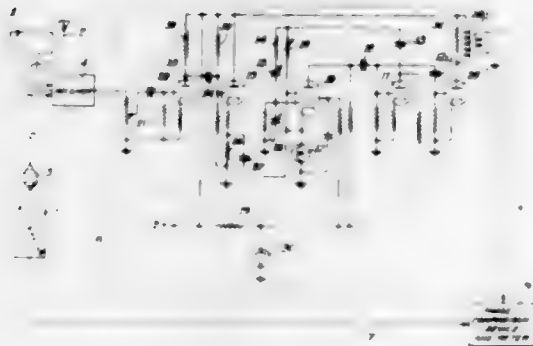
ing it to rotate in either direction, means for connecting said motor to said directional antenna for positioning the same, said indicator including means responsive to the position of the motor for indicating the position of said directional antenna relative to the longitudinal axis of the airplane.

3,007,163

RADIO DIRECTION FINDER

Louis A. De Rosa, Bloomfield, and Laurin G. Fischer, North Arlington, N.J., assignors to International Telephone and Telegraph Corporation, a corporation of Maryland

Filed Jan. 23, 1950, Ser. No. 140,160
12 Claims. (Cl. 343—118)

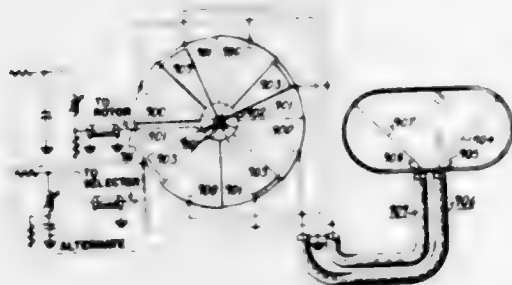


1. In a radio direction finder of the type having a comparison device for producing direction indications and a receiver to produce a wave component of the received radio energy envelope for comparison in said comparison device with a locally generated wave of the same frequency to derive the direction indication, means for mitigating the effect of noise on the direction indications comprising, a local oscillator adapted to operate at substantially the frequency of said wave component coupled to deliver energy to said comparison device and connections from said receiver for synchronizing said oscillator in response to said received radio energy envelope.

3,007,164

SLOT ANTENNA WHICH IS FED AT TWO POINTS

Ross A. Davis, Los Angeles, Calif.
(235 Sunridge St., Playa Del Rey, Calif.)
Filed Apr. 22, 1955, Ser. No. 503,190
11 Claims. (Cl. 343—712)



11. An antenna system including a three-dimensional electrically conductive body having a discontinuity therein; first and second exciter conductors each having one end directly coupled to said body at spaced first and second exciter points, respectively, adjacent said discontinuity, said exciter conductors being positioned in angular relationship with respect to each other; and first and second leads each having one end coupled directly to said body at spaced first and second lead points, respec-

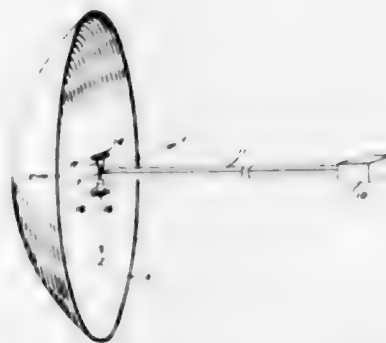
tively, adjacent said discontinuity, said first and second exciter points and said first and second lead points being so disposed with respect to each other that voltages appearing between said first exciter point and said first lead point are space phase displaced with respect to voltages appearing between said second exciter point and said second lead point, thereby obtaining omnidirectionality, and the remaining ends of said exciter conductors and leads being adapted for coupling to external circuits.

3,007,165

ANTENNA WITH ELECTRICAL LOBING

Rudolf S. Engelbrecht, Washington, D.C., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 18, 1955, Ser. No. 529,260
13 Claims. (Cl. 343—754)



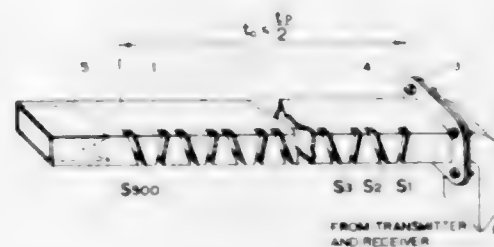
1. A directional microwave antenna system comprising means for converging an incident plane electromagnetic signal wave at a focus, a body of gyromagnetic material positioned at said focus, means for subjecting said body to a biasing magnetic field which is parallel to the electric field of said wave and has a magnitude in the region of that required to produce gyromagnetic resonance in said body, and means for changing said magnetic field.

3,007,166

SLOT AERIAL

Trevor Gordon Hame, Columbus, Ohio, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed May 27, 1958, Ser. No. 738,204
Claims priority, application Great Britain May 31, 1957
3 Claims. (Cl. 343—771)



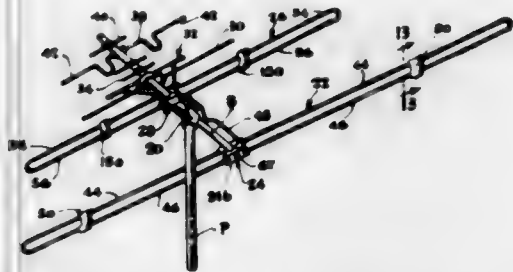
1. Transmission apparatus comprising a waveguide provided with a plurality of slots, arranged to operate as an aerial to transmit micro-wave energy, an energy source operative intermittently to emit energy during predetermined intervals, said energy source being connected to said waveguide, the effective aperture of said aerial being predetermined according to the duration of said intervals and the velocity of propagation thereof along said waveguide to cause energy emitted at the beginning of an interval to traverse the whole of said aperture prior to energy emitted at the end of the interval arriving at said aperture.

3,007,167

UNIVERSAL TV AND FM ANTENNA

John R. Winegard, Burlington, Iowa, assignor to Winegard Company, Burlington, Iowa, a corporation of Iowa

Filed Feb. 5, 1958, Ser. No. 713,426
6 Claims. (Cl. 343-803)



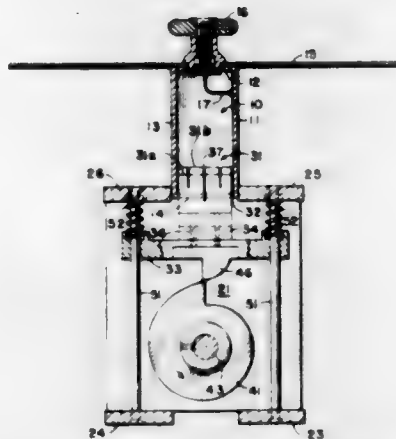
1. A planar in-line antenna for reception in both the very-high and ultra-high frequency television bands, comprising in combination: a dipole driven element suitable for very-high frequency reception; a first director tuned to the high frequency end of the very-high frequency band and located adjacent to and in line with the driven element; a second director located forwardly of the first director and comprising three colinear sections, each approximately one half wave in length in the ultra-high frequency band and joined by coupling units resonant in the ultra-high frequency band, whereby in the ultra-high frequency band the three sections operate as if insulated and the center section serves as a director; a dipole driven element having a pair of arms and adapted for ultra-high frequency reception located between said first and second directors in in-line coplanar relation thereto; a converging transmission line extending from approximately the midpoints of the arms of the last driven element to the inboard ends of the first driven element; said transmission line being about a quarter wave in length at the low frequency end of the ultra high frequency band; a resonant impedance element connected to the inboard ends of the first driven element and reflecting a low impedance at the low frequency end of the ultra high frequency band; and a transmission line connected to the inboard ends of the last driven element.

3,007,168

PHASE SHIFT SCANNING ANTENNA

John A. Kuecken, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Apr. 30, 1959, Ser. No. 810,136
6 Claims. (Cl. 343-854)

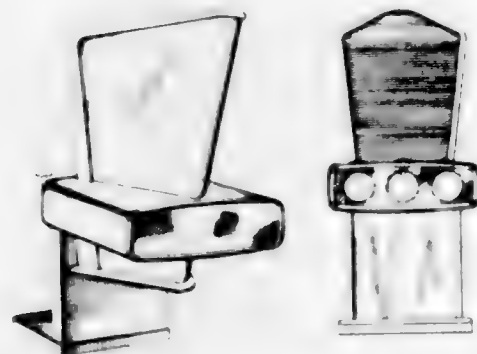


1. In a broadside antenna array having a plurality of dipole radiators supplied with electromagnetic energy from a rectangular waveguide, apparatus for producing a high-speed, non-linear scan including means for progressively shifting the phase of said electromagnetic energy at each of said radiators, the combination comprising: means mounting said plurality of dipoles along a narrow wall of said rectangular waveguide; pairs of non-radiating transverse slots in said other narrow wall opposite each of said dipoles and slightly ahead of said dipoles in the path of said electromagnetic energy through said waveguide, the slots in each of said pairs being spaced apart approximately one-quarter wavelength; a phase-shifting element for each of said dipoles, said phase-shifting elements each comprising a pair of high dielectric plates having cross-sectional dimensions approximately equal to said slots; means positioning each of said plates in registry with said slots; and means for inserting and withdrawing said plates into and out of said waveguide through said slots at a predetermined rate whereby the phase of said electromagnetic energy at each of said radiators is altered in a predetermined pattern.

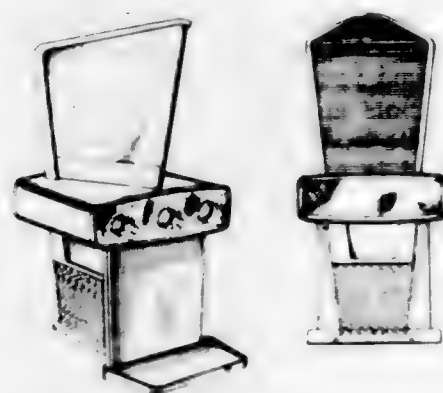
DESIGNS

OCTOBER 31, 1961

191,654
BEVERAGE DISPENSER
Clare E. Hodgman, 715 Shores Acres Drive,
Mamaroneck, N.Y.
Filed Oct. 23, 1959, Ser. No. 58,036
Term of patent 14 years
(Cl. D2—3)



191,655
BEVERAGE DISPENSER
Clare E. Hodgman, Mamaroneck, N.Y., assignor to The
Coca-Cola Company, Atlanta, Ga., a corporation of
Delaware
Filed Oct. 23, 1959, Ser. No. 58,037
Term of patent 14 years
(Cl. D2—3)



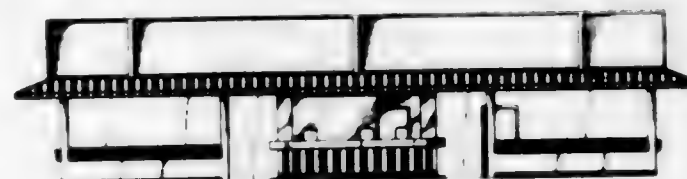
191,656
NECK TAB FOR UNIFORM COLLAR
Maxine F. Spengler, Framingham, Mass., assignor to
the United States of America as represented by the
Secretary of the Army
Filed July 20, 1960, Ser. No. 61,514
Term of patent 14 years
(Cl. D3—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



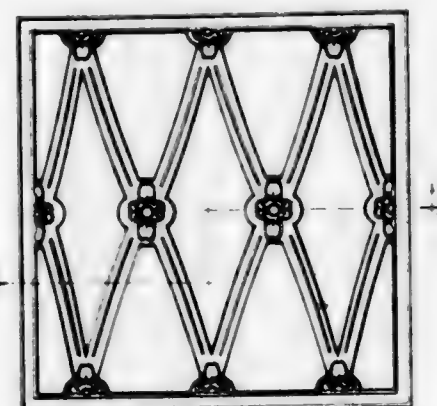
191,657
HEADBOARD
Ernest L. Swarts and Orville B. Solle, Rockford, Ill., as-
signors to The Lane Company, Inc., Altavista, Va., a
corporation of Virginia
Filed Nov. 2, 1959, Ser. No. 58,172
Term of patent 14 years
(Cl. D5—4)



191,658
OPEN AIR CAFETERIA
Albert Ross, Oakland, Calif., assignor to Doggie Diner
No. 4, Inc., San Francisco, Calif., a corporation of
California
Filed Apr. 28, 1961, Ser. No. 64,941
Term of patent 14 years
(Cl. D13—1)



191,659
**PANEL UNIT FOR A ROOM DIVIDER
OR SIMILAR ARTICLE**
Jerome S. Smith, 3750 N. Lake Shore Drive, Chicago, Ill.
Filed Feb. 23, 1961, Ser. No. 64,034
Term of patent 14 years
(Cl. D13—1)

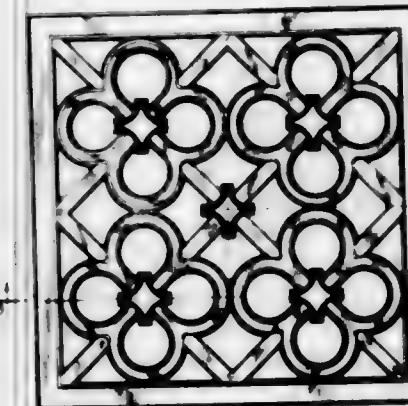


OCTOBER 31, 1961

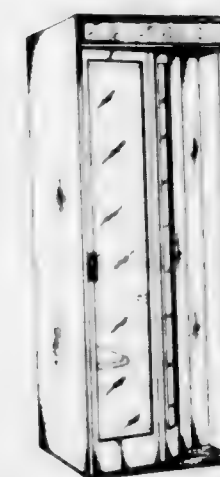
U. S. PATENT OFFICE

1479

191,660
**PANEL UNIT FOR A ROOM DIVIDER
OR SIMILAR ARTICLE**
Jerome S. Smith, 3750 N. Lake Shore Drive, Chicago, Ill.
Filed Mar. 2, 1961, Ser. No. 64,121
Term of patent 14 years
(Cl. D13—1)



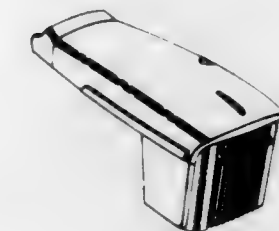
191,661
TELEPHONE BOOTH
Douglas H. King, Short Hills, N.J., assignor to Bell Tele-
phone Laboratories, Incorporated, New York, N.Y., a
corporation of New York
Filed Feb. 10, 1960, Ser. No. 59,331
Term of patent 14 years
(Cl. D13—1)



191,662
COMBINED RAILING AND WALL BRACKET
Louis Blum, Pittsburgh, Pa., assignor to Blumcraft of
Pittsburgh, Pittsburgh, Pa., a firm
Filed Feb. 8, 1960, Ser. No. 59,294
Term of patent 14 years
(Cl. D13—7)



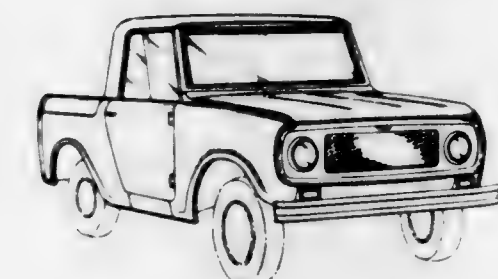
191,663
**COMBINED HOOD AND GRILLE FOR A
TRACTOR AND THE LIKE**
Henry Dreyfuss, South Pasadena, William F. H. Purcell,
Pasadena, and James M. Conner, Glendale, Calif.,
assignors to Deere & Company, Moline, Ill., a corpora-
tion of Delaware
Filed Nov. 9, 1960, Ser. No. 63,093
Term of patent 14 years
(Cl. D14—3)



191,664
TRUCK
Wallace M. Brown, Seattle, Wash., assignor to Pacific
Car and Foundry Company, Seattle, Wash., a corpora-
tion of Washington
Filed Nov. 16, 1960, Ser. No. 62,866
Term of patent 14 years
(Cl. D14—3)



191,665
MOTOR TRUCK
Theodore Ornas, Jr., and Charles B. McGrew, Jr., Fort
Wayne, Ind., assignors to International Harvester Com-
pany, Chicago, Ill., a corporation of New Jersey
Filed Feb. 9, 1961, Ser. No. 63,878
Term of patent 7 years
(Cl. D14—3)



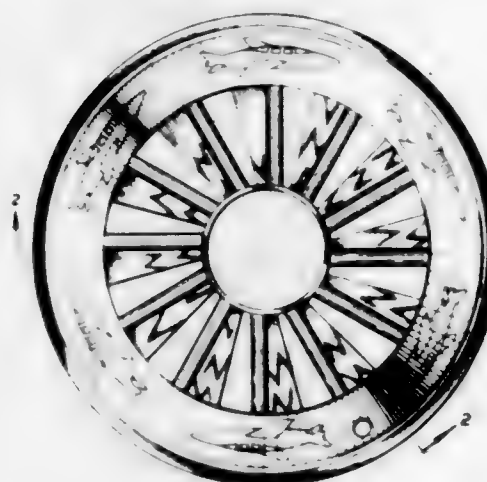
191,666
WHEEL COVER

John J. Palotsee, 330 E. Front St., Youngstown, Ohio
Filed Sept. 28, 1960, Ser. No. 62,294
Term of patent $3\frac{1}{2}$ years
(Cl. D14—30)



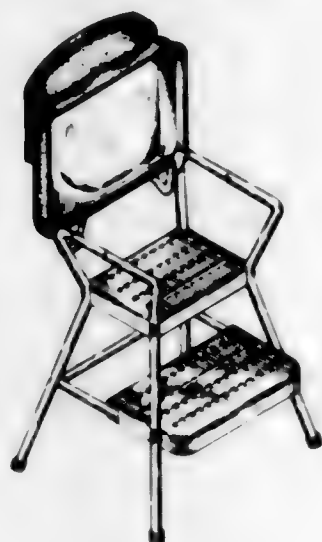
191,667
HUB CAP

John J. Palotsee, 330 E. Front St., Youngstown, Ohio
Filed Sept. 28, 1960, Ser. No. 62,295
Term of patent $3\frac{1}{2}$ years
(Cl. D14—30)



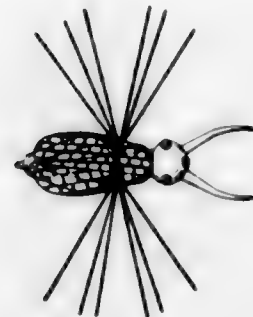
191,668
STEP STOOL

Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Mar. 30, 1959, Ser. No. 55,230
Term of patent 14 years
(Cl. D15—9)



191,669
FISH LURE

James F. Gondeck, 21 N. Barrett, Niles, Mich.
Filed Mar. 11, 1960, Ser. No. 59,700
Term of patent 14 years
(Cl. D31—4)



191,670
FISH HOOK DISGORGER

Percy W. Archer, 5 Thirsk Road, Northallerton, England
Filed Dec. 8, 1960, Ser. No. 63,188
Term of patent 7 years
(Cl. D31—4)



191,671
CABINET DOOR RACK FOR PAPER BAGS OR THE LIKE

Louis M. Kaplan, 1462 Stanley Ave., Los Angeles, Calif.
Filed Mar. 4, 1960, Ser. No. 59,611
Term of patent 7 years
(Cl. D33—3)



191,672
PLAYGROUND UNIT

Wayne Haubert, Mifflintown, Pa., assignor to The Mexico Forge, Inc., Mexico, Pa., a corporation of Pennsylvania
Filed July 27, 1961, Ser. No. 66,088
Term of patent 14 years
(Cl. D34—5)



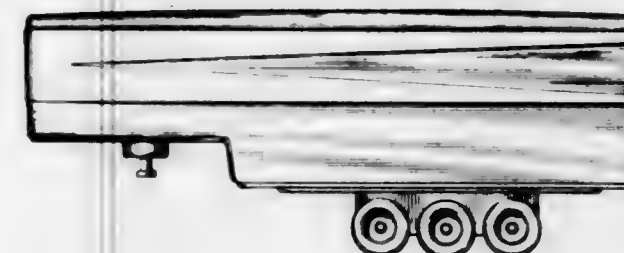
191,673
CHILD'S PLAYHOUSE

Ursel Gabriel, Dayton, Ohio, assignor to Waltz Manufacturing Company, Dayton, Ohio, a corporation of Ohio
Filed May 8, 1961, Ser. No. 65,053
Term of patent 14 years
(Cl. D34—15)



191,674
TOY FREIGHT TRAILER

Allan J. Alvane, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Aug. 29, 1960, Ser. No. 61,929
Term of patent 7 years
(Cl. D34—15)

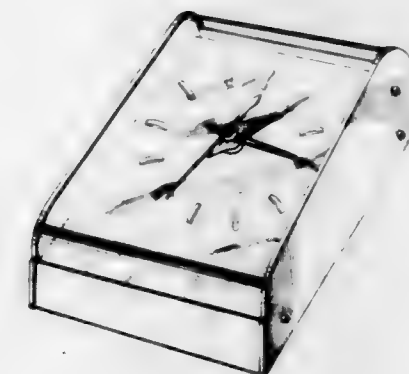


191,675
POWER LAWN MOWER

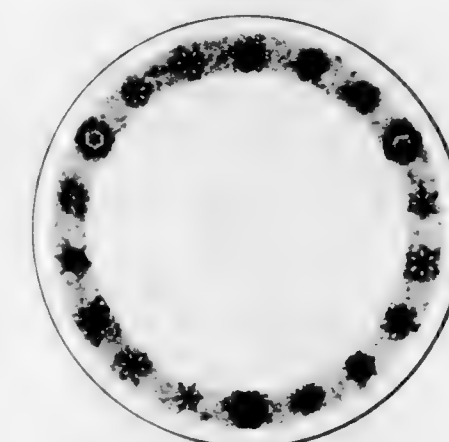
Robert O. Ernest, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed May 8, 1961, Ser. No. 65,049
Term of patent 14 years
(Cl. D40—1)



191,676
DESK CLOCK OR THE LIKE
Chaim Diamond, 333 E. 36th St., New York, N.Y.
Filed Oct. 29, 1959, Ser. No. 58,125
Term of patent 14 years
(Cl. D42—7)



191,677
PLATE OR SIMILAR ARTICLE
Elliott M. House, Princeton Junction, N.J., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Jan. 30, 1961, Ser. No. 63,746
Term of patent 14 years
(Cl. D44—15)

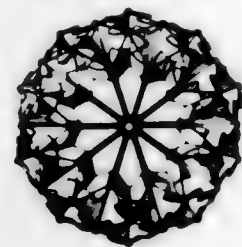


191,678

LAMP SHADE

Joel W. Kaufmann, San Francisco, Calif., assignor to Damron-Kaufmann, Inc., San Francisco, Calif., a corporation of California

Filed Sept. 28, 1960, Ser. No. 62,290
Term of patent 14 years
(Cl. D48-16)



191,679

LUMINAIRE

George P. Wakefield, Vermillion, Ohio, assignor, by mesne assignments, to The Wakefield Corporation, Detroit, Mich., a corporation of Michigan

Filed Nov. 8, 1960, Ser. No. 62,762
Term of patent 14 years
(Cl. D48-23)

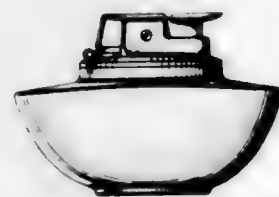


191,680

TABLE LIGHTER

Victor Skellern, Barlaston, Stoke-on-Trent, England, assignor to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey, and Josiah Wedgwood & Sons Limited, Barlaston, Stoke-on-Trent, England, a British company

Filed Oct. 5, 1960, Ser. No. 62,384
Claims priority, application Great Britain Apr. 22, 1960
Term of patent 14 years
(Cl. D48-27)



191,681

EMERGENCY WARNING LIGHT FOR AUTOMOTIVE VEHICLES

David O. Chase, Camillus, N.Y., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York

Filed June 16, 1959, Ser. No. 56,370
Term of patent 14 years
(Cl. D48-32)

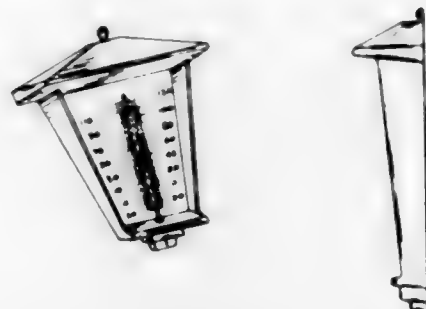


191,682

THERMOMETER

Ralph C. Wappner, Springfield, Ohio, assignor to The Ohio Thermometer Co., Springfield, Ohio, a corporation of Ohio

Filed Aug. 8, 1960, Ser. No. 61,654
Term of patent 14 years
(Cl. D52-7)



191,683

FORK OR SIMILAR ARTICLE OF FLATWARE

Jens H. Quistgaard, Copenhagen, Denmark, assignor to Dansk Designs, Inc., Great Neck, N.Y., a corporation of New York

Filed Mar. 30, 1960, Ser. No. 59,939
Term of patent 14 years
(Cl. D54-12)

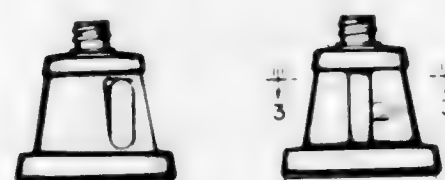


191,684

BOTTLE

Clarence A. Price, Ann Arbor, and Donald P. Denhoff, Saline, Mich., assignors to Plas-Tainer Inc., Saline, Mich., a corporation of Michigan

Filed Nov. 25, 1960, Ser. No. 62,982
Term of patent 14 years
(Cl. D58-8)



191,685

BOTTLE

Clarence A. Price and Donald P. Denhoff, Ann Arbor, Mich., assignors to Plas-Tainer Inc., Saline, Mich., a corporation of Michigan

Filed Nov. 25, 1960, Ser. No. 62,983
Term of patent 14 years
(Cl. D58-8)



191,686

PORTABLE GAS-HEATED FOG GENERATOR FOR DISPENSING INSECTICIDES OR THE LIKE

Harold D. Johnson and Robert W. Johnson, Clearwater, Fla., assignors to General Implement Corporation, Clearwater, Fla., a corporation of Florida

Filed Sept. 16, 1960, Ser. No. 62,167
Term of patent 14 years
(Cl. D62-2)

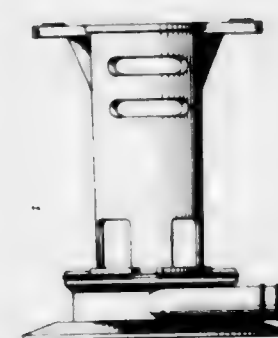


191,687

PUMP AND SHAFT HOUSING

John G. Wessels, Dallas, Tex., assignor, by mesne assignments, to Champion Cooler Corporation, Denison, Tex., a corporation of Texas

Filed Feb. 10, 1959, Ser. No. 54,547
Term of patent 14 years
(Cl. D65-1)

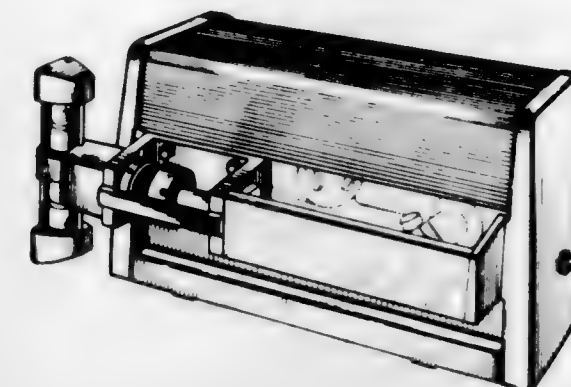


191,688

PUMP

Dennis L. Eldson, 517 Shady Lane (Biltmore), Barrington, Ill.

Filed Feb. 18, 1960, Ser. No. 59,439
Term of patent 14 years
(Cl. D65-1)

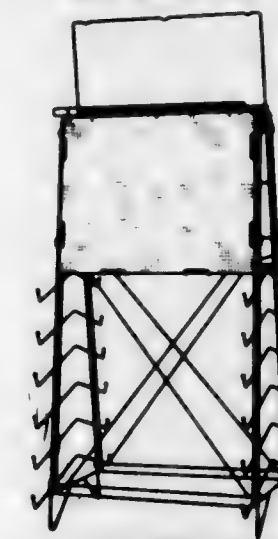


191,689

COMBINED DISPLAY AND MERCHANDISING STAND FOR WATER SKIS AND ACCESSORIES OR THE LIKE

Daniel W. Burch, Jr., Louisville, Ky., assignor to Puritan Cordage Mills, Louisville, Ky., a corporation of Kentucky

Filed June 9, 1960, Ser. No. 60,897
Term of patent 7 years
(Cl. D80-10)

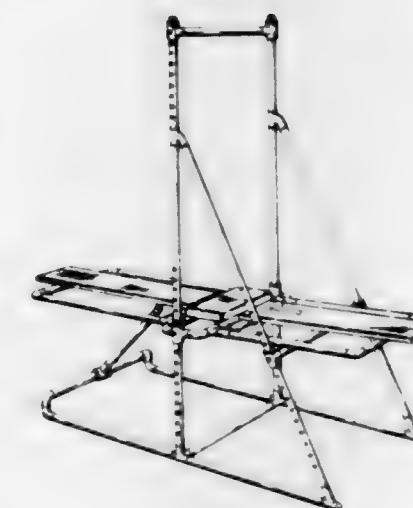


191,690

COMBINED ADJUSTABLE HORIZONTAL BAR AND INCLINE TABLE FOR EXERCISING

Edgar F. Ryan, Beachwood, Ohio (653 Broadway, Bedford, Ohio)

Filed Mar. 30, 1960, Ser. No. 59,960
Term of patent 14 years
(Cl. D83-1)



191,691

AERATOR FOR FAUCETS OR THE LIKE

Harold Shames, 5 Agnes Circle, and Sidney J. Shames, 19 Agnes Circle, both of Ardsley, N.Y.

Filed Aug. 1, 1960, Ser. No. 61,588

Term of patent 14 years

(Cl. D91—3)



191,692

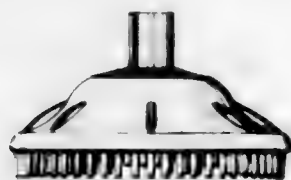
WATER SPRAY HEAD

Orloff W. Holden, Chicago, Ill., assignor to Knickerbocker Rubber Company, Chicago, Ill., a partnership

Filed May 18, 1961, Ser. No. 65,230

Term of patent 14 years

(Cl. D91—3)



191,693

WHEEL COVER TOOL

Everett L. Forstrom and Henry J. Schumacher, Winona, Minn., assignors to Vulcan Manufacturing Co., Inc., Minneapolis, Minn., a corporation of Minnesota

Filed July 7, 1958, Ser. No. 51,665

Term of patent 14 years

(Cl. D93—4)

**LIST OF REISSUE PATENTEEES**

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PATENTS WERE ISSUED ON THE 31ST DAY OF OCTOBER, 1961

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- Aerogrip Corp.: See—
 Elaner, Edwin C. Re. 25,069.
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 Daley, Henry F., and Kaechele. Re. 25,065.
 Beck, Arnold H. W., to International Standard Electric Corp. Electron discharge devices. Re. 25,070, 10-31-61, Cl. 315—35.
 Boeing Airplane Co.: See—
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 Hesseberg, Wilfrid C. F. Re. 25,075.
 Bucher, Edwin E. Snow plow. Re. 25,071, 10-31-61, Cl. 37—43.
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 Beck, Arnold H. W. Re. 25,070.
 James, Varnell L. R.: See—
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 Kaechele, William H.: See—
 Daley, Henry F., and Kaechele. Re. 25,065.
 Mahn, George R.: See—
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 Monaco, George C. Apparatus for applying paste to a comestible wafer. Re. 25,072, 10-31-61, Cl. 107—1.
 Phillips, Lawrence H., to Container Corp. of America. Compartmented carton. Re. 25,073, 10-31-61, Cl. 229—28.
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 Deere & Co.: See—
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 Denhoff, Donald P.: See—
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 Shames, Harold and S. J. Aerator for faucets or the like.
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 Smith, Jerome S. Panel unit for a room divider or similar
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TO WHOM

PATENTS WERE ISSUED ON THE 31ST DAY OF OCTOBER, 1961

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Arrasmith, William C., to Radar Relay, Inc. Electric lamp annunciator indicating assembly. 3,007,150, 10-31-61, Cl. 310-381.

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- Dow Corning Corp.: See—
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- Drake, George F., to Woodward Governor Co. Apparatus for controlling prime movers. 3,007,054, 10-31-61, Cl. 290-40.
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- Babayan, Vigen K. 3,006,771.
- Drexel Dynamics Corp.: See—
- Brown, Laurence R. 3,007,149.
- Drivdale, James L., to The Bell Telephone Co. of Canada. Holding device. 3,006,589, 10-31-61, Cl. 248-74.
- Dubin, Anthony J., to General Dynamics Corp. Disconnect hinge apparatus. 3,006,025, 10-31-61, Cl. 16-176.
- Du Bois, Paul F., III. Window ventilator. 3,006,268, 10-31-61, Cl. 98-99.4.
- Ducati, Adriano C., to Plasmadyne Corp. Apparatus and method for initiating an electrical discharge. 3,007,030, 10-31-61, Cl. 219-121.
- Duckworth, William C., S. L. Norwood, and T. W. Sauls, to Tennessee Corp. New resin compositions and curing agent therefor. 3,006,890, 10-31-61, Cl. 260-47.
- Dudnick, Boris. Cup holder. 3,006,455, 10-31-61, Cl. 198-162.
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- Dumm, Howard C., to Pacific Valves, Inc. Replaceable threaded sleeve for gate type valves. 3,006,210, 10-31-61, Cl. 74-424.8.
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- Du Pont de Nemours, E. I., and Co.: See—
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- Dwyer, Frank W., and P. W., to F. W. Dwyer Mfg. Co. Pressure switch. 3,007,017, 10-31-61, Cl. 200-83.
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- Dwyer, Frank W., and P. W. 3,007,017.
- Dye, George A. Multiple chambered tool handle. 3,006,395, 10-31-61, Cl. 145-63.
- Dye, Robert F., to Phillips Petroleum Co. Heat transfer in exothermic reactions. 3,006,908, 10-31-61, Cl. 260-94.9.
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- Lompe, Arved, and Dziergwa. 3,007,071.
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- Ellis, Richard T., to United States of America, Navy. Apparatus for extending the range of radar. 3,007,158, 10-31-61, Cl. 343-13.
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- Ferla, John, deceased; I. Ferla, executrix. Apparatus for forming glass reinforced plastic pipe. 3,006,402, 10-31-61, Cl. 154—18.
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- Geiger, Richard H., to Roger White Electron Devices, Inc.: Electronic phase shifter for VHF-UHF frequencies. 3,007,077, 10-31-61, Cl. 315—3.5.
- Gelmer, Elmer J., Jr., to Miller Printing Machinery Co.: Film support control mechanism. 3,006,638, 10-31-61, Cl. 271—62.
- Gelser, Edward M., to Universal Oil Products Co.: Preparation of copolymers. 3,006,905, 10-31-61, Cl. 260—94.2.
- Gelser, Edward M., to Universal Oil Products Co.: Preparation of polymers of isobutylene and an alkylene diamine. 3,006,906, 10-31-61, Cl. 260—94.8.
- Geller, Seymour, to Bell Telephone Laboratories, Inc.: Ferrimagnetic garnet. 3,006,854, 10-31-61, Cl. 252—62.5.
- Geller, Seymour, to Bell Telephone Laboratories, Inc.: Ferrimagnetic garnets. 3,006,855, 10-31-61, Cl. 252—62.5.
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- Geisick, Edward J., W. L. Mynatt, and J. W. McCoy, to South-west Research Institute. Animal immobilizer. 3,006,649. 10-31-61, Cl. 273-106.5.
- Geyling, Franz T., to Bell Telephone Laboratories, Inc. Self-aligning waveguide support system. 3,007,122, 10-31-61, Cl. 333-95.
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- Green, Charles F., L. A. Taylor, A. J. Kling, and G. F. Metcalf, to United States of America, War. Thermo-responsive detector system. 3,007,050, 10-31-61, Cl. 250-83.3.
- Green, Frank T., and W. I. Smith, to Noble Mfg. Co., Inc. Safety mechanism for slide action repeating firearms. 3,006,096, 10-31-61, Cl. 42-70.
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- Green, Robert E. L., and F. D. Ammen; said Ammen assor. to said Green. Combined accelerator and brake control mechanism. 3,006,445, 10-31-61, Cl. 192-3.
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- Greene, Robert A. Apparatus for carburetion. 3,006,619, 10-31-61, Cl. 261-41.
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- Guyer, Henry, to Nova-Werke Junker & Ferber. Piston ring. 3,006,704, 10-31-61, Cl. 309-29.
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- Hadden, George H., and R. H. Campbell, Jr., to Kinsman Mfg. Co., Inc. Electronic organ. 3,006,229, 10-31-61, Cl. 84-124.
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- Haensel, Vladimir, to Universal Oil Products Co. Hydrocarbon conversion process. 3,006,841, 10-31-61, Cl. 208-139.
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- Halpern, Otto, to United States of America, Navy. Method of reducing reflection of incident electromagnetic waves. 3,007,160, 10-31-61, Cl. 343-18.
- Halpert, Abby, to Halvin Products Co. Aquarium filter. 3,006,476, 10-31-61, Cl. 210-169.
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- Hambleton, Bertram H. C., deceased, by B. H. V. Hambleton, executrix, to V. K. Smith, d.b.a. Electric Motor Development Co. Coil winding apparatus. 3,006,564, 10-31-61, Cl. 242-13.
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- Hamrick, James C., to Jet Line Products, Inc. Method and apparatus for introducing lines through conduits. 3,006,607, 10-31-61, Cl. 254-134.4.
- Handel, Nell E., and S. S. Sturgeon, to The Foxboro Co. Magnetic flowmeter system. 3,006,188, 10-31-61, Cl. 73-194.
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- Haring, Horace E., to Bell Telephone Laboratories, Inc. Manufacture of silver chloride electrodes. 3,006,821, 10-31-61, Cl. 204-38.
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- Harris, Paul R. Telescopic pipe joint with means to assure rectilinear movement. 3,006,665, 10-31-61, Cl. 285-302.
- Harris, Wilbur T., to The Harris Transducer Corp. Magnetostrictive actuator. 3,007,063, 10-31-61, Cl. 310-26.
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- Hasselquist, Victor H., to The B. F. Goodrich Co. Self-aligning stock wind-up. 3,006,569, 10-31-61, Cl. 242-67.3.
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- Haughton, Ernest, 1/2 to The Lord Mayor, Aldermen and Citizens of the City of Liverpool. Load carrying vehicle. 3,006,492, 10-31-61, Cl. 214-510.
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- Hensen, Ray M., to Food Saver, Inc. Electric heating system. 3,007,024, 10-31-61, Cl. 219-20.
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- Murray, Wallace J., and C. W. Sauer.: to Arthur D. Little, Inc. Process for preparation of bis (trinitroethyl) amine. 3,006,957, 10-31-61, Cl. 260-583.
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Pommer, Horst, and W. Sarnecki, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of compounds of the beta-cyclohexanone series. 3,006,939, 10-31-61, Cl. 260-413.

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- Watson, Ralph O. Method of repairing worn surfaces in shafts. 3,006,065, 10-31-61, Cl. 29-401.
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17: 3,007,006	117: 3,006,481	211—	117: 3,006,481	7: 3,006,563	45: 3,006,884	45: 3,006,884	45: 3,006,884	264—	19: 3,006,626	178: 3,007,071	
18: 3,007,007	212—	81: 3,006,482	212—	81: 3,006,482	13: 3,006,564	45: 3,006,885	45: 3,006,885	267—	57: 1: 3,006,627	231: 3,007,072	
22: 3,007,008	213—	8: 3,006,483	213—	8: 3,006,483	46: 3,006,565	3,006,886	3,006,886	268—	64: 3,006,628	277: 3,007,073	
100: 2: 3,007,009	214—	220: 3,006,484	214—	220: 3,006,484	55: 12: 3,006,566	45: 95: 3,006,887	45: 95: 3,006,887	269—	99: 3,006,629	279: 3,007,074	
3,007,010	83: 24: 3,006,485	75: 3,006,485	83: 24: 3,006,485	55: 53: 3,006,567	58: 5: 3,006,568	3,006,888	3,006,888	270—	124: 3,006,631	346: 3,007,075	
3,007,011	91: 3,006,486	3,006,486	91: 3,006,486	67: 3: 3,006,569	68: 7: 3,006,570	47: 3,006,890	47: 3,006,890	271—	115: 3,006,632	3,007,076	
111: 3,007,012	147: 3,006,489	3,006,489	147: 3,006,489	75: 42: 3,006,571	78: 5: 3,006,572	3,006,891	3,006,891	272—	32: 3,006,633	3,007,077	
121: 3,007,013	317: 3,006,490	3,006,490	317: 3,006,490	78: 5: 3,006,572	84: 2: 3,006,573	3,006,892	3,006,892	273—	73: 3,006,634	12: 3,007,078	
148: 3,007,014	3,006,491	3,006,491	3,006,491	84: 2: 3,006,573	96: 3,006,574	3,006,893	3,006,893	274—	30: 3,006,635	29: 3,007,079	
175: 2: 3,007,015	510: 3,006,492	3,006,492	510: 3,006,492	96: 3,006,574	35: 3,006,575	3,006,894	3,006,894	275—	51: 3,006,636	159: 3,007,080	
1: 3,006,425	44: 3,006,493	3,006,493	44: 3,006,493	35: 3,006,575	2: 3,006,576	3,006,895	3,006,895	276—	60: 3,006,637	205: 3,007,081	
22: 3,006,426	47: 3,006,494	3,006,494	47: 3,006,494	2: 3,006,576	30: 3,006,577	3,006,896	3,006,896	277—	62: 3,006,638	214: 3,007,082	
27: 3,006,427	12: 3,006,495	3,006,495	12: 3,006,495	30: 3,006,577	31: 3,006,578	3,006,897	3,006,897	278—	68: 3,006,639	2: 3,007,083	
34: 3,006,428	9: 5: 3,007,022	3,007,022	9: 5: 3,007,022	31: 3,006,578	50: 3,006,579	3,006,898	3,006,898	279—	87: 3,006,640	83: 3,007,084	
73: 3,006,429	19: 3,007,023	3,007,023	19: 3,007,023	50: 3,006,579	78: 3,006,580	3,006,899	3,006,899	280—	88: 3,006,641	188: 3,007,085	
31: 3,006,430	20: 3,007,024	3,007,024	20: 3,007,024	78: 3,006,580	79: 3,006,581	3,006,900	3,006,900	281—	34: 3,006,642	200: 3,007,086	
181—	21: 3,007,025	3,007,025	21: 3,007,025	79: 3,006,581	82: 3,006,582	3,006,901	3,006,901	282—	58: 3,006,643	234: 3,007,088	
182—	25: 3,007,026	3,007,026	25: 3,007,026	82: 3,006,582	121: 3,006,583	3,006,902	3,006,902	283—	59: 3,006,644	3,007,089	
5: 3,006,431	32: 3,007,027	3,007,027	32: 3,007,027	121: 3,006,583	127: 3,006,584	3,006,903	3,006,903	284—	60: 3,006,645	235: 3,007,090	
23: 3,006,432	44: 3,007,029	3,007,029	44: 3,007,029	127: 3,006,584	140: 3,006,585	3,006,904	3,006,904	285—	102: 2: 3,006,646	240: 3,007,091	
187: 3,006,433	121: 3,007,030	3,007,030	121: 3,007,030	140: 3,006,585	155: 3,006,586	3,006,905	3,006,905	286—	106: 5: 3,006,649	249: 3,007,093	
206: 3,006,434	125: 3,007,031	3,007,031	125: 3,007,031	155: 3,006,586	5: 3,006,587	3,006,906	3,006,906	287—	23: 3,006,651	318—	
2: 3,006,435	130: 3,007,032	3,007,032	130: 3,007,032	5: 3,006,587	39: 3,006,588	3,006,907	3,006,907	288—	23: 3,006,652	132: 3,007,095	
22: 3,006,436	137: 3,007,033	3,007,033	137: 3,007,033	39: 3,006,588	74: 3,006,589	3,006,908	3,006,908	289—	4: 3,006,653	162: 3,007,096	
34: 3,006,437	18: 3,006,497	3,006,497	18: 3,006,497	74: 3,006,589	120: 3,006,590	3,006,909	3,006,909	290—	23: 3,006,654	3,007,097	
37: Re.25,068	36: 3,006,498	3,006,498	36: 3,006,498	120: 3,006,590	317: 3,006,591	3,006,910	3,006,910	291—	23: 3,006,655	266: 3,007,098	
114: 2: 3,006,438	40: 3,006,499	3,006,499	40: 3,006,499	317: 3,006,591	354: 3,006,592	3,006,911	3,006,911	292—	112: 3,006,656	317: 3,007,099	
6: 3,006,439	46: 3,006,500	3,006,500	46: 3,006,500	354: 3,006,592	376: 3,006,593	3,006,912	3,006,912	293—	124: 3,006,657	373: 3,007,100	
184—	85: 3,006,501	3,006,501	85: 3,006,501	376: 3,006,593	424: 3,006,594	3,006,913	3,006,913	294—	154: 5: 3,006,658	473: 3,007,101	
96: 3,006,440	73: 3,006,502	3,006,502	73: 3,006,502	424: 3,006,594	6: 3,007,042	3,006,914	3,006,914	295—	221: 3,006,659	16: 3,007,102	
100: 3,006,441	307: 3,006,503	3,006,503	307: 3,006,503	6: 3,007,042	20: 3,007,043	3,006,915	3,006,915	296—	406: 3,006,660	45: 3,007,103	
264: 3,006,442	15: 3,006,504	3,006,504	15: 3,006,504	20: 3,007,043	3,007,044	3,006,916	3,006,916	297—	12: 3,006,661	27: 3,007,104	
36: 3,006,443	26: 3,006,505	3,006,505	26: 3,006,505	3,007,044	3,007,045	3,006,917	3,006,917	298—	114: 3,006,662	36: 3,007,105	
88: 3,006,444	49: 3,006,506	3,006,506	49: 3,006,506	3,007,045	3,007,046	3,006,918	3,006,918	299—	233: 3,006,663	75: 3,007,106	
3: 3,006,445	54: 3,006,507	3,006,507	54: 3,006,507	3,007,046	3,007,047	3,006,919	3,006,919	300—	248: 3,006,664	1: 3,007,107	
30: 5: 3,006,446	98: 3,006,508	3,006,508	98: 3,006,508	3,007,047	43: 5: 3,007,048	3,006,920	3,006,920	301—	302: 3,006,665	28: 3,007,108	
45: 1: 3,006,447	133: 3,006,509	3,006,509	133: 3,006,509	43: 5: 3,007,048	49: 5: 3,007,049	3,006,921	3,006,921	302—	320: 3,006,666	34: 3,007,109	
81: 3,006,448	182: 3,006,510	3,006,510	182: 3,006,510	49: 5: 3,007,049	83: 3: 3,007,050	3,006,922	3,006,922	303—	330: 3,006,667	53: 3,007,110	
105: 3,006,449	250: 3,006,511	3,006,511	250: 3,006,511	83: 3: 3,007,050	3,007,051	3,006,923	3,006,923	304—	34: 3,006,668	80: 3,007,111	
127: 3,006,450	333: 3,006,512	3,006,512	333: 3,006,512	3,007,051	3,007,052	3,006,924	3,006,924	305—	54: 3,006,669	111: 3,007,112	
68: 3,006,451	396: 3,006,515	3,006,515	396: 3,006,515	3,007,052	203: 3,007,053	3,006,925	3,006,925	306—	3,006,670	158: 3,007,113	
197—	542: 3,006,513	3,006,513	542: 3,006,513	203: 3,007,053	3: 3,006,595	3,006,926	3,006,926	307—	3,006,671	14: 3,007,114	
198—	553: 3,006,514	3,006,514	553: 3,006,514	3: 3,006,595	33: 3,006,596	3,006,927	3,006,927	308—	85: 3,006,672	42: 3,007,115	
6: 7: 3,006,451	70: 3,006,516	3,006,516	70: 3,006,516	33: 3,006,596	88: 3,006,597	3,006,928	3,006,928	309—	87: 3,006,673	330—	
19: 3,006,452	91: 3,006,517	3,006,517	91: 3,006,517	88: 3,006,597	171: 3,006,598	3,006,929	3,006,929	310—	92: 3,006,674	51: 3,007,116	
25: 3,006,453	99: 3,006,518	3,006,518	99: 3,006,518	171: 3,006,598	172: 3,006,599	3,006,930	3,006,930	311—	40: 3,007,054	29: 3,007,118	
89: 3,006,454	42: 1: 3,006,519	3,006,519	42: 1: 3,006,519	172: 3,006,599	175: 3,006,600	3,006,931	3,006,931	312—	337: 3,006,675	31: 3,007,119	
162: 3,006,455	75: 3,006,520	3,006,520	75: 3,006,520	175: 3,006,600	196: 3,006,601	3,006,932	3,006,932	313—	338: 3,006,676	51: 3,007,120	
177: 3,006,456	174: 3,006,521	3,006,521	174: 3,006,521	196: 3,006,601	315: 3,006,602	3,006,933	3,006,933	314—	341: 18: 3,006,677	79: 3,007,121	
188: 3,006,457	5: 5: 3,006,522	3,006,522	5: 5: 3,006,522	315: 3,006,602	8: 5: 3,006,603	3,006,934	3,006,934	315—	26: 3,006,678	95: 3,007,122	
221: 3,006,458	15: 3,006,523	3,006,523	15: 3,006,523	8: 5: 3,006,603	18: 3,006,604	3,006,935	3,006,935	316—	92: 3,006,679	98: 3,007,123	
199—	16: 3,006,524	3,006,524	16: 3,006,524	18: 3,006,604	28: 3,006,605	3,006,936	3,006,936	317—	93: 3,006,680	100: 3,007,124	
200—	17: 3,006,525	3,006,525	17: 3,006,525	28: 3,006,605	34: 7: 3,006,606	3,006,937	3,006,937	318—	46: 3,006,681	221: 3,007,125	
83: 3,007,017	22: 3,006,526	3,006,526	22: 3,006,526	34: 7: 3,006,606	46: 6: 3,006,607	3,006,938	3,006,938	319—	46: 3,006,682	338—	
116: 3,007,018	28: 3,006,527	3,006,527	28: 3,006,527	46: 6: 3,006,607	51: 5: 3,006,608	3,006,939	3,006,939	320—	51: 3,006,683	172: 3,007,126	
120: 3,007,019	28: Re.25,073	3,006,528	28: Re.25,073	51: 5: 3,006,608	62: 5: 3,006,609	3,006,940	3,006,940	321—	51: 3,006,684	174: 3,007,127	
132: 3,007,020	3,006,528	3,006,528	3,006,528	62: 5: 3,006,609	62: 5: 3,006,610	3,006,941	3,006,941	322—	30: 3,006,685	75: 3,007,128	
144: 3,007,021	40: 3,006,530	3,006,530	40: 3,006,530	62: 5: 3,006,610	62: 5: 3,006,611	3,006,942	3,006,942	323—	84: 3,006,686	151: 3,007,129	
7: 3,006,816	52: 3,006,531	3,006,531	52: 3,006,531	62: 5: 3,006,611	62: 5: 3,006,612	3,006,943	3,006,943	324—	153: 3,006,687	192: 3,007,130	
42: 3,006,817	54: 3,006,532	3,006,532	54: 3,006,532	62: 5: 3,006,612	62: 5: 3,006,613	3,006,944	3,006,944	325—	457: 3,006,688	198: 3,007,131	
234: 3,006,818	79: 3,006,533	3,006,533	79: 3,006,533	62: 5: 3,006,613	62: 5: 3,006,614	3,006,945	3,006,945	326—	3,006,689	217: 3,007,132	
15: 3,006,819	134: 3,006,534	3,006,534	134: 3,006,534	62: 5: 3,006,614	62: 5: 3,006,615	3,006,946	3,006,946	327—	3,006,690	12: 3,007,133	
23: 3,006,820	170: 3,006,535	3,006,535	170: 3,006,535	62: 5: 3,006,615	62: 5: 3,006,616	3,006,947	3,006,947	328—	3,006,691	18: 3,007,134	
38: 3,006,821	172: 3,006,536	3,006,53									

TRADEMARKS

NOTICES

Selected Non-Proprietary Names	
The Public Health Service has informed the Patent Office that the names listed below have been selected by WHO as recommended international non-proprietary names for pharmaceutical preparations. The procedure for selection of these names, by WHO, including earlier publication in accordance with procedures published in the Chronicle of the World Health Organization, June-July 1955 issue, has been completed. WHO requests that these recommended names be recognized as the non-proprietary names for the substances concerned and that the necessary steps be taken to prevent acquisition of proprietary rights in the same.	
Recommended International Non-Proprietary Names (Latin, English)	Chemical Name or Description
acediasulfonum natrium	4-carboxymethylamino-4'-aminodiphenylsulfone sodium
acediasulfone sodium	a-acetyldigitoxin
acetyldigitoxinum	3-[4-(4-hydroxy-3-iodophenoxy)-3,5-diiodophenyl]propionic acid
acetyldigitoxin	3-hydroxy-3,7,11-trimethyldodecanoic acid
acidum thyropropicum	monomorpholinylethylrutoside
thyropropic acid	10-(2-methyl-3-dimethylaminopropyl)phenothiazine
acidum trethocanicum	17a-allylestr-4-en-17-ol
trethocanic acid	3-allyl-1-methyl-4-phenyl-4-propionyloxy piperidine
aethoxasorutosidum	2-amino-4-anilino-s-triazine
ethoxasorutoside	1,4-benzoquinone amidinohydrazone thiosemicarbazone hydrate
alimemazinum	9-aminoacridine
alimemazine	
allylestrenolum	
allylestrenol	
allylprodinum	
allylprodine	
amanosinum	
amanosine	
ambazonum	
ambazone	
aminoacridinum	
aminoacridine	

CONDITION OF TRADEMARK APPLICATIONS AS OF AUGUST 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	13,451
Date of oldest new application	February 13, 1961
Date of oldest amended application	February 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	2-13-61	2-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	3-13-61	3-20-61
Renewals (All Classes)	8-14-61	8-24-61
Sec. 12 (c) Publications (All Classes)	7-17-61	7-17-61

Applications filed during the month of August 1961—1947

Registrations Issued	219—No. 723,211 to No. 723,429
Renewals Issued	50

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Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

aminoglutethimide	2-(p-aminophenyl)-2-ethylglutarimide
aminoglutethimide	10-(2,3-bisdimethylaminopropyl) phenothiazine
aminopromazine	3-dimethylamino,1,1,2-tris (4-methoxyphenyl)prop-1-ene
aminopromazine	7-chloro-4-(4-hydroxy-3-pyrrolidin-1'-ylmethylamino)quinoline
aminoxytriphenyl	1-(m-aminophenyl)-1H-pyrid-2-one
aminoxytriphenyl	a polyene antibiotic substance obtained from cultures of <i>Streptomyces nodosus</i> , or the same substance produced by any other means
amoproquinum	2-p-methoxyphenylindane-1,3-dione
amoproquinum	1-(2-benzyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
amphenidone	N-(2,3-di-p-chlorophenyl-1-methylpropyl)maleamic acid (a-form)
amphenidone	3-benzylthiomethyl-6-chloro-7-sulfamoylbenzo-1,2,4 (2H)-thiadiazine 1,1-dioxide
amphotericin B	4-benzylaminophenylsulfonamide
amphotericin B	3,3'-diallyl-5,5'-bisdiethylaminomethyl-4,4'-dihydroxydiphenyl
anisindione	1-(bicyclo[2.2.1]hept-5-en-2-yl)-1-phenyl-3-piperidinopropan-1-ol
anisindione	N-o-bromobenzyl-N-ethyl-N,N-dimethylammonium tosylate (tosylic acid is p-toluene-sulfonic acid)
benzethidine	(3-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
benzethidine	1-bromo-2-p-ethylphenyl-1,2-diphenylethylene
benzmaecene	3-(3-butyramido-2,4,6-trilodophenyl)-2-ethylacrylic acid
benzmaecene	1-(p-hydroxyphenyl)-2-(1-methyl-3-phenylpropylamino)propan-1-ol
benzthiazide	N-(5-butyl-1,3,4-thiadiazol-2-yl)-p-chlorobenzenesulfonamide
benzthiazide	a mixture of 100 parts by weight of the monosodium derivative of 5-allyl-5-isobutyl-2-thiobarbituric acid and 6 parts by weight of exsiccated sodium carbonate
benzylsulfamidum	butyldimethyl(2,3-dimethyl-5-oxo-1-phenyl-3-pyrazolin-4-yl)ammonium iodide
benzylsulfamidum	calcium 4-benzamido-2-hydroxybenzoate
blalamicol	calcium cyanamide
blalamicol	2-carbamoyloxymethyl-2-isopropylcarbamoyloxymethylpentane
biperidenum	dl(p-(13-cyclopentyltridecanamido)phenyl)sulfone
biperidenum	2-amino-4-p-chloroanilino-s-triazine
bretyllil tosylas	1-(o-chlorodiphenylmethoxyethyl)-4-o-methylbenzylpiperazine
bretyllil tosylate	dl-(2-chloroethyl)methylamine
brompheniraminum	2-(4-chlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
brompheniraminum	1,1-di(4-chlorophenyl)-2,2,2-trichloroethane with a proportion of 1-(2-chlorophenyl)-1-(4-chlorophenyl)-2,2,2-trichloroethane
broparocetrol	N-p-chlorobenzyl-N',N'-dimethyl-N-pyrid-2-ylethylenediamine
bunamiodylum	6-chloro-7-sulfamoylbenzo-1,2,4 (4H)-thiadiazine 1,1-dioxide
bunamiodylum	2,4-dichlorophenoxydimethyl-N-octylammonium amsonate (amsonic acid is 4,4'-diaminostilbene-2,2'-disulfonic acid)
buphenium	3-(p-chlorophenyl)sulfonyl-1-propylurea
buphenium	2-(1-p-chlorophenyl-1-phenylethoxy) ethyldimethylamine
butadiazamidum	N ² ,3,4-dichlorophenyl-N ² -isopropylidguanide
butadiazamidum	trans-2-chloro-10-(3-dimethylaminopropylidene) thiazanthene
buthallitalum natrium	2-(2-chloroethyl)-2,3-dihydro-4-oxobenz-1,3-oxazine
buthallitalum sodium	an enzyme, α-chymotrypsin, obtained in crystalline form from mammalian pancreas by aqueous acid extraction of its proenzyme, chymotrypsinogen, and subsequent conversion with trypsin to chymotrypsin
butyrammonium iodide	2-diethylaminoethyl 2-phenylcinnamate
butyrammonium iodide	1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole
calcil benzamidosalicylas	benzylpenicillin combined with 1-p-chlorobenzyl-2-pyrrolidin-1'-ylmethylbenzimidazole
calcil benzamidosalicylate	5-chloro-3H-benzoxazol-2-one
calcil carbimide	2-hydroxyethyltrimethylammonium D-glucuronate
calcil carbimide	2-hydroxyethyltrimethylammonium 1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
carisoprodolum	
carisoprodolum	
chaumosulfonum	
chaumosulfone	
chlorazanium	
chlorazanium	
chlorbenzoxaminum	
chlorbenzoxaminum	
chlormethinum	
chlormethinum	
chlormezanonum	
chlormezanone	
chlorphenothanum technicum	
technical chlorphenothane	
chlorpyraminum	
chlorpyramine	
chlorothiazidum	
chlorothiazide	
chlorphenocitl amsonas	
chlorphenocitl amsonate	
chlorpropamidum	
chlorpropamide	
chlorphenoxaminum	
chlorphenoxamine	
chlorproguanilum	
chlorproguanil	
chlorprothixenum	
chlorprothixene	
chlorthenoxazinum	
chlorthenoxazine	
chymotrypsinum	
chymotrypsin	
cinnamaverinum	
cinnamaverine	
clemizolum	
clemizole	
clemizolum penicillinum	
clemizole penicillin	
chloroxazonum	
chloroxazone	
cholinit gluconas	
cholinit gluconate	
cholinit theophyllinas	
cholinit theophyllinate	

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

cyclandelatum	3,5,5-trimethylcyclohexyl α-phenyl-α-hydroxyacetate
cyclandelate	5-(3-dimethylaminopropylidene)dibenzo(a,e)cycloheptatriene
cyclobenzaprinum	N,N-bis(2-chloroethyl)-N'-(3-hydroxypropyl) phosphordiamidic acid cyclic ester
cyclobenzaprine	6β-hydroxy-3,5-cyclopregnan-20-one
cyclophosphamidum	4-(5-dibenzo[a-e]cycloheptatrienylidene)-1-methylpiperidine
cyclophosphamide	N,N'-decamethylenebis-(trimethyl(3 - N - methylcarbamoyloxyphenyl)ammonium bromide)
cyclopregnolum	7-chloro-4-dimethylamino-1,4,4a,5,5a,6,11,12a - octahydro - 3,6,10,12,12a-pentahydroxy-1,11-dioxo-2-naphthacene-carboxamide
cyclopregnol	decamethylenebis(4-amino-2-methylquinolinium) bischloride
cyproheptadinum	9a-fluoro-11β,17a,21-trihydroxy-16a-methylpregna-1,4-diene-3,20-dione
cyproheptadine	(+)-(3-p-bromophenyl-3-pyrid-2'-ylpropyl)dimethylamine
demecarium bromidum	(+)-(3-p-chlorophenyl-3-pyrid-2'-ylpropyl)dimethylamine
demecarium bromide	N-(2-[(methyl)phenethylamino]propyl)propionanilide
demethylchlorotetracyclinum	dl[4-(4-hydroxy-2-methyl-5-isopropylphenylazo)phenyl]sulfone
demethylchlorotetracycline	N,N-dibenzylmethylamine
dequalinil chloridum	9a-11β-dichloro-17a-21-dihydroxypregna-1,4-diene-3,20-dione
dequalinil chloride	2-(3,4-dichlorophenyl)-3-methyl-4-metathiazanone 1,1-dioxide
dexamethasonum	7,8-dihydrocodeine or 4,5-epoxy-6-hydroxy-3-methoxy-N-methylmorphinan
dexamethasone	N-dichloroacetyl-p-hydroxy-N-methylaniline
dexbrompheniraminum	dimethylaminoethyl 1-ethoxy-1,1-diphenylacetate
dexbrompheniramine	6-dimethylamino-4,4-diphenyl-3-heptanol
dexchlorpheniraminum	9-(3-dimethylaminopropylidene)-2-methoxyxanthene
dexchlorpheniramine	1,3-dimethyl-7-(2-dimethylaminoethyl)-2,6-dioxo-1,2,3,6-tetrahydropurine
diampromidum	17a-ethynyl-17-hydroxy-6a,21-dimethylandrosta-4-en-3-one
diampromide	1-(2-methoxyphenyl)-4-(3-methoxypropyl)piperazine
diathymosulfonum	ethyl-4-morpholino-2,2-diphenylbutyrate or ethyl-γ-morpholino-α,α-diphenylbutyrate
diathymosulfone	1-(3-cyano-3,3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
dibemethinum	N ² -acetyl-N ² -(β-hydroxy-β,β-diphenylpropionyl)hydrazine
dibemethine	2-piperidinoethyl α-phenyl-α-piperidinoacetate
dichlorisoumum	3-ethyl-2-[5-(3-ethyl-2-benzothiazolidinylidene)-1,3-pentadienyl]benzothiazolium iodide
dichlorisone	1-ethyl-1-methylpropyl carbamate
dichlormezanonum	2-ethylpyridine-4-carbothionamide
dichlormezanone	10-(2-dimethylaminoethyl)phenothiazine
dihydrocodeinum	a chelate prepared by reacting equimolar quantities of freshly precipitated ferric hydroxide with choline dihydrogen citrate
dihydrocodeine	6-trifluoromethyl-7-sulfamoylbenzo-1,2,4 (4H)-thiadiazine 1,1-dioxide
dioxanidum	9a-fluoro-11β,17a-dihydroxy-6a-methyl-1,4-pregna-1,4-diene-3,20-dione
dioxanide	10-(3-[4-(2-hydroxyethyl)piperazin-1-yl]propyl)-2-trifluoromethylphenothiazine
dimenoxadolum	ethyl 1-(2-tetrahydrofurfuryloxyethyl)-4-phenylpiperidine-4-carboxylate
dimenoxadol	5-morpholinomethyl-3-(5-nitrofurfurylideneamino)-2-oxazolidin-2-one
dimepheptanolum	5-methyl-3-(5-nitrofurfurylideneamino)-2-oxazolidin-2-one
dimepheptanol	trans-3,4-bis-[4-(2-furoyloxy)phenyl]hex-3-ene
dimeprozanum	2-sulfanilamido-5-tert-butyl-1,3,4-thiadiazole
dimepropane	2-sulfanilamido-5-isopropyl-1,3,4-thiadiazole
dimethazanum	7-chloro-4,6-dimethoxy-2,3-dihydrobenzofuran-3-one-2-spiro-1'-(2'-methoxy-6'-methyl-cyclohex-2'-en-4'-one)
dimethazan	4-bromobenzyl-3-(4-chloro-5-methyl-2-isopropylphenoxy)propyldimethylammonium chloride
dimethisteronum	4-(p-chlorophenyl)-1-[3-(p-fluorobenzoyl)propyl]piperidin-4-ol
dimethisterone	hexadecamethylenebis-(2-isouquinolinium)dichloride
dimetholizinium	
dimetholizine	
dioxaphetyl butyras	
dioxaphetyl butyrate	
diphenoxylatum	
diphenoxylate	
diphoxazidum	
diphoxazide	
dipproverinum	
dipproverine	
dithiazanil iodidum	
dithiazanil iodide	
emylcamatum	
emylcamate	
ethionamidum	
ethionamide	
fenethazinum	
fenethazine	
ferrocholinalum	
ferrocholinate	
flumethlazidum	
flumethlazide	
fluoromethololum	
fluorometholone	
fluphenazolum	
fluphenazine	
furethidinum	
furethidine	
furmethonolum	
furmethonol	
furmethoxadonum	
furmethoxadone	
furostilboestrolum	
furostilboestrol	
glybutthiazolum	
glybutthiazol	
glyprothiazolum	
glyprothiazol	
griseofulvinum	
griseofulvin	
halopenil chloridum	
halopenil chloride	
haloperidolum	
haloperidol	
hedaquinil chloridum	
hedaquinil chloride	

Recommended International
Non-Proprietary Names
(Latin, English)

hexadimethrin bromidum
hexadimethrine bromide
hexapropymatum
hexapropymate
hexcarbachioli bromidum
hexcarbachioline bromide
homochlorcyclizinum
homochlorcyclizine
hydrargaphenum
hydrargaphen
hydrochlorothiazidum
hydrochlorothiazide
hydroflumethiazidum
hydroflumethiazide
hydroindasatum
hydroindasate
hydroindasolum
hydroindasol
hydroxychloroquinum
hydroxychloroquine
hydroxydioni natrii succinas
hydroxydione sodium succinate
hydroxyprogesteroni acetat
hydroxyprogesterone acetate
hydroxyprogesteroni caproas
hydroxyprogesterone caproate
hydroxystenozolum
hydroxystenozole
imipraminum
imipramine
inproquonum
inproquone
intermedinum
intermedine
isopropamidi iodidum
isopropamide iodide
isoxsuprinum
isoxsuprine
kanamycinum
kanamycin

khellosidum
khelloside
levisorenallinum
levisorenalline
levomepromazinum
levomepromazine
levophenacylmorphanum
levophenacylmorphan
levopropoxyphenum
levopropoxyphene
lysergidum
lysergide
mannomustinum
mannomustine
mehydrolium
mehydroliin
medroxyprogesteroni acetat
medroxyprogesterone acetate
melphalanum
melphalan
menadioli natrii sulfas
menadiol sodium sulfate
menadioli natrii bisulfis
menadione sodium bisulfite
mepenzolate bromidum
mepenzolate bromide
mephenoalolum
mephenoalone
mephentolium
mephentolin
mestanololum
mestanolone
methahexamidum
methahexamide
methaqualolum
methaqualone
methazolamidum
methazolamide
methdilazinum
methdilazine
methocarbamololum
methocarbamol
methohexitalum
methohexital
methotrexatum
methotrexate
methylchromonum
methylchromone
methylprednisolonum
methylprednisolone

Chemical Name or Description

N,N,N',N'-tetramethylhexamethylenediamine trimethylene bromide polymer
1-prop-2'-ylcyclohex-1-yl carbamate
N,N'-hexamethylenebis[(2-carbamoyloxyethyl)trimethylammonium bromide]
1-(*p*-chlorodiphenylmethyl)-4-methyl-1,4-diazacycloheptane
phenylmercuric methylenebis (2-naphthyl-3-sulfonate)
6-chloro-3,4-dihydro-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
3,4-dihydro-6-trifluoromethyl-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1-dioxide
5-acetoxy-3-(2-aminoethyl)-1-(*p*-methoxybenzyl)-2-methylindole
5-hydroxy-1-(*p*-methoxybenzyl)-2-methyl-3-(2-aminoethyl)indole
7-chloro-4-[4-(*N*-ethyl-*N*-2-hydroxyethylamino)-1-methylbutylamino]quinoline
sodium 21-(3-carboxypropionyloxy)pregnane-3,20-dione
17 α -acetoxypregn-4-ene-3,20-dione
17 α -hexanoyloxypregn-4-ene-3,20-dione
17 β -hydroxy-17 α -methylandroster-4-ene-[3,2-*c*]pyrazole
5-(3-dimethylaminopropyl)-10,11-dihydro-5*H*-dibenz[*b,f*]azepine
2,5-bisethylenelmino-3,6-dipropoxy-1,4-benzoquinone
active principle of the *pars intermedia* of the pituitary
(3-carbamoyl-3,3-diphenylpropyl)diisopropylmethylammonium iodide
1-(*p*-hydroxyphenyl)-2-(1-methyl-2-phenoxyethylamino)propan-1-ol
an antibiotic substance obtained from cultures of *Streptomyces kanamyceticus* or the same substance produced by any other means.
4,6-diamino-2-hydroxy-1-(4-amino-3,5-dihydroxy-6-hydroxymethyltetrahydropyran-2-yloxy)-3-(*N*-methylamino-3,4,5-trihydroxytetrahydropyran-2-yloxy)cyclohexane
4-methoxy-7-hydroxymethyl-5*H*-furo[3,2-*g*]benzopyran-5-one glycoside
1-(3,4-dihydroxyphenyl)-2-isopropylaminoethanol
(-)-2-methoxy-10-(3-dimethylamino-2-methylpropyl)phenothiazine
(-)-3-hydroxy-*N*-phenacylmorphinan
(-)-4-dimethylamino-3-methyl-1,2-diphenyl-2-propionoxybutane
7-methyl-4,6,8a,7,8,9-hexahydroindolo[4,3-*f,g*]quinoline-9-carboxydiethylamide
1,6-di-(2-chloroethylamino)-1,6-dideoxy-D-mannitol
5-benzyl-1,2,3,4-tetrahydro-2-methylpyrid[4,3-*b*]indole
17 α -acetoxy-6 α -methylpregn-4-ene-3,20-dione
p-di(2-chloroethyl)amino-*L*-phenylalanine
2-methyl-1,4-naphthoquinol disodium sulfate
2-methyl-1,4-naphthoquinone sodium bisulfite
1-methyl-3-piperid-3-yl benzilate methylbromide
5-(*o*-methoxyphenoxy)methyl)oxazolidin-2-one
5-ethyl-3-methyl-5-phenylimidazolidin-2,4-dione
17 β -hydroxy-17-methyl-5 α -androstane-3-one
N-(*m*-amino-*p*-methylbenzenesulfonyl)-*N'*-cyclohexylurea
2-methyl-3-*o*-tolyl-3*H*-quinazolin-4-one
5-acetylmino-4-methyl-1,3,4-thiadiazoline-2-sulfonamide
10-(1-methyl-3-pyrrolidinylmethyl)phenothiazine
(2-hydroxy-3-*o*-methoxyphenoxypropyl) carbamate
 α -(+)-5-allyl-1-methyl-5-(1-methyl-2-pentynyl)barbituric acid
N-(4-[(2,4-diaminopteridin-6-ylmethyl)-*N*-methylamino]benzoyl)-*L*-(+)-glutamic acid
3-methyl-4*H*-chromen-4-one
11 β ,17 α ,21-trihydroxy-6 α -methylpregna-1,4-diene-3,20 dione or 6 methylprednisolone

Recommended International
Non-Proprietary Names
(Latin, English)

monophosphothiaminum
monophosphothiamine
natrii carbazochromi sulfonas
carbazochrome sodium sulfonate
natrii hexacyclonas
sodium hexacyclonate
nialamidum
nialamide
nicomorphinum
nicomorphine
nicotilazonum
nicotilazone
nifurethazonum
nifurethazone
nithydrizonum
nithydrizone
norcodeinum
norcodeine
norlevorphanolum
norlevorphanol
normorphinum
normorphine
norvinisteronum
norvinisterone
octatropini methylbromidum
octatropine methylbromide
orphenadrinum
orphenadrine
oxadimedinum
oxadimedine
oxanamidum
oxanamide
oxybuprocainum
oxybuprocaine
oxyphenbutazonum
oxyphenbutazone
oxyphenacyliminum
oxyphenacylimine
oxyphenisatium
oxyphenisatide
palmidrolum
palmidrol
paracetamololum
paracetamol
paridocainum
paridocaine
paromomycinum
paromomycin
pempidinum
pempidine
penicillininum
penicillinase
pentapiperidum
pentapiperide
perphenazinum
perphenazine
phanquinonum
phanquinone
phenactropinili chloridum
phenactropinium chloride
phenamprolidum
phenamprolide
phenazocinum
phenazocine
phenglutarimidum
phenglutarimide
pheniraminum
pheniramine
phenprobamatolum
phenprobamate
phenpromethaminum
phenpromethamine
phenyracillinum
phenyracillin
phetharbitalum
phetharbitol
phytomenadolum
phytomenadone
phytonadioli natrii diphosphate
phytonadiol sodium diphosphate
piminodinum
piminodine
pipamazinium
pipamazine
pipethanatum
pipethanate
piprinhydrinatolum
piprinhydrinate
poloxalkolum
poloxalkol

Chemical Name or Description

monophosphoric ester of thiamine
sodium 2,3,5,6-tetrahydro-1-methyl-6-oxo-5-semicarbazonoindole-3-sulfonate
sodium 1-hydroxymethylcyclohexylacetate
N-isonicotinoyl-*N'*-(β -*N*-benzylcarboxamidoethyl) hydrazine
di-nicotinic acid ester of morphine
nicotinaldehyde thiosemicarbazone
5-nitrofuraldehyde 2-(2-dimethylaminoethyl) semicarbazone
5-nitro-2-furaldehyde acetylhydrazone
N-demethylated codeine or 4,5-epoxy-6-hydroxy-3-methoxymorphin-7-ene
(-)-3-hydroxymorphinan
N-demethylated morphine or 4,5-epoxy-3,6-dihydroxymorphin-7-ene
17 β -hydroxy-17 α -vinylestr-4-en-3-one
N-methyl-0-(2-propylpentanoyl) tropinilium bromide
N,N-dimethyl-2-(α -*o*-tolylbenzoyloxy)ethylamine
N-(2-benzoxazolyl)-*N*-benzyl-*N'*,*N'*-dimethylethylenediamine
1,2-epoxy-1-ethylpentane-1-carboxamide
2-diethylaminoethyl 4-amino-3-butoxybenzoate
1-(*p*-hydroxyphenyl)-2-phenyl-4-butylpyrazolidine-3,5-dione
(1,4,5,6-tetrahydro-1-methyl-2-pyrimidinyl)methyl α -cyclohexyl- α -phenylglycolate
3,3-bis(4-hydroxyphenyl)oxindole
N-(2-hydroxyethyl)palmitamide
p-acetamidophenol (acetaminophen)
1-methylpiperid-4-yl *p*-butylaminobenzoate
an antibiotic substance obtained from cultures of certain *Streptomyces* species, one of which is *Streptomyces rimosus*, or the same substance produced by any other means
1,2,2,6,6-pentamethylpiperidine
an enzyme obtained by fermentation from cultures of *B. cereus*
1-methylpiperid-4-yl 3-methyl-2-phenylvalerate
2-chloro-10-[3-(4-(2-hydroxyethyl)piperazin-1-yl)propyl]phenothiazine
4,7-phenanthroline-5,6-quinone
N-phenacylhomatropinium chloride
N-(2-(1-methylpiperid-2-yl)ethyl)propionanilide
1,2,3,4,5,6-hexahydro-8-hydroxy-6,11-dimethyl-3-phenethyl-2,6-methano-3-benzazocine
 α -2-diethylaminoethyl- α -phenylglutarimide
dimethyl(3-phenyl-3-pyrid-2'-ylpropyl)amine
3-phenylpropyl carbamate
1-methylamino-2-phenylpropane
2,5-diphenylpiperazine di[6-(phenylacetamido)penicillinate]
5,5-diethyl-1-phenylbarbituric acid
2-methyl-3-phytyl-1,4-naphthoquinone (vitamin K₁)
2-methyl-3-phytyl-1,4-naphthalene disodium hydrogen phosphate
1-(3-phenylaminopropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
10-[3-(4-carbamoylpiperidino)propyl]-2-chlorophenothiazine
2-piperidinoethyl benzilate
4-diphenylmethoxy-1-methylpiperidine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
polymer of ethylene oxide, propylene oxide and propylene glycol

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

polybenzarsolum
polybenzarsol
polycarbophilum
polycarbophil
poskinum
poskine
pralidoximi methiodidum
pralidoxime methiodide
profenamini hydrochloridum
profenamine hydrochloride
promethazini theoclas
promethazine theoclate
propiomazinum
propiomazine
propyll docettrizoas
propyl docettrizoate
protamini sulfas
protamine sulfate
prothixenum
prothixene
protokylolium
protokylol
pyrazinamidum
pyrazinamide
ristocetinum
ristocetin
sulfazidum
sulfazid
styramatum
styramate
sulfachlorpyridazinum
sulfachlorpyridazine
sulfachrysoidinum
sulfachrysoidine
sulfadiazulfonum natrium
sulfadiazulfone sodium
sulfadimethoxinum
sulfadimethoxine
sulfathidolum
sulfathidole
sulfamethoxy-pyridazinum
sulfamethoxy-pyridazine
sulfaphenazolum
sulfaphenazol
sulfasomizolum
sulfasomizol
sulfathiourea
sulfathiourea
sulfatolamidum
sulfatolamide
sulfonpyrazonum
sulfonpyrazone
sulfogalacolum
sulfogalacol
sulocarbilatium
sulocarbilate
syrosingopinum
syrosingopine
taerinum
taerine
tetrylammonii bromidum
tetrylammonium bromide
thalidomidum
thalidomide
thiamazolum
thiamazole
thiambutosinum
thiambutosine
thiamphenicolum
thiamphenicol
thibexinoli methylbromidum
thibexinol methylbromide
thiopropazatum
thiopropazate
thiopropazinum
thiopropazine
thiotepa
thiotepa
toloxychlorinolium
toloxychlorinol
triacetinum
triacetin
triacetyloleandomycinum
triacetyloleandomycin
triamcinolonum
triamcinolone
triazatum
triazate
trichobionii chloridum
trichobionium chloride
trifluoperazinum
trifluoperazine

a mixture of polymers formed from the reaction of formaldehyde and 4-hydroxybenzenearsonic acid
a synthetic, loosely crosslinked, hydrophilic resin of the polycarboxylic type.
3-[2-phenyl-2-propionyloxymethyl]acetyloxy]-6,7-epoxytropene
2-hydroxyiminomethyl-1-methylpyridinium iodide
10-(2-diethylaminopropyl)phenothiazine hydrochloride
10-(2-dimethylaminopropyl)phenothiazine salt of 8-chloro-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydropurine
10-(2-dimethylaminopropyl)-2-propionylphenothiazine
propyl 3-diacetylamino-2,4,6-trihydrobenzoate
sulfate of the strongly basic protein, protamine
10-(3-dimethylaminopropylidene)thiazanthene
1-(3,4-dihydroxyphenyl)-2-(α -methyl-3,4-methylenedioxyphenethylamino)ethanol
pyrazine-2-carboxamide
an antibiotic substance obtained from cultures of *Nocardia lurida*, or the same substance produced by any other means
N-isonicotinoyl-N'-salicylidenehydrazine
2-hydroxyphenethyl carbamate
6-chloro-3-sulfanilamido pyridazine
2-carboxy-4,6-diamino-4'-sulfamoylazobenzene
sodium 2-(N-acetylsulfamoyl)-4,4'-diaminodiphenylsulfone
2,4-dimethoxy-6-sulfanilamido pyrimidine
5-ethyl-2-sulfanilamido-1,3,4-thiadiazole
6-methoxy-3-sulfanilamidopyridazine
1-phenyl-5-sulfanilamidopyrazole
3-methyl-5-sulfanilamidolsothiazole
1-sulfanilylthiourea
1-sulfanilylthiourea salt of p-sulfamoylbenzylamine
1,2-diphenyl-4-(2-phenylsulfinyloxyethyl)-3,5-pyrazolidinedione
potassium 4-hydroxy-3-methoxyphenylsulfonate
2-hydroxyethyl p-sulfonamidophenylcarbamate
4-ethoxycarbonyl-3,5-dimethoxybenzoic acid ester of methyl reserpate
9-amino-1,2,3,4-tetrahydroacridine
tetraethylammonium bromide
 α -phthalimidoglutarimide
1-methyl-2-mercaptoimidazole
1-(p-butoxyphenyl)-3-(p-dimethylaminophenyl)thiourea
D(+)-threo-2-dichloroacetamido-1-(p-methylsulfonylphenyl)propane-1,3-diol
trans- α,α -(dithien-2-yl)-(4-dimethylaminocyclohexyl) carbinol methylbromide
10-[3-(4-(2-acetoxyethyl)piperazin-1-yl)propyl]-2-chlorophenothiazine
N,N-dimethyl-10-[3-(4-methylpiperazin-1-yl)propyl]-phenothiazine-2-sulfonamide
triaziridin-1-ylphosphine sulfide
1,1'-(3-o-tolyloxypropylene)dioxy bis (2,2,2-trichloroethanol)
glyceryl triacetate
the triacetyl ester of oleandomycin, an antibiotic substance obtained from cultures of *Streptomyces antibioticus*, or the same substance produced by any other means
9 α -fluoro-16 α -hydroxyprednisolone
1-methylpyrrolidin-3-ylmethyl benzilate
hexamethylenebis[4-dimethyl(1-methyl-3-(2,2,6-trimethylcyclohexyl)propyl)ammonium chloride]hemihydrate
2-trifluoromethyl-10-[3-(1-methylpiperazin-4-yl)propyl]phenothiazine

Recommended International
Non-Proprietary Names
(Latin, English)

Chemical Name or Description

trifluopromazinum
trifluopromazine
trimethidini methosulfas
trimethidinium methosulfate
trimethobenzamidum
trimethobenzamide
trolnitratum
trolnitate
tropiglinum
tropigline
xylometazolum
xylometazoline

2-trifluoromethyl-10-(3-dimethylaminopropyl) phenothiazine
(+)-3-(3-dimethylaminopropyl)-1,8,8-trimethyl-3-azabicyclo[3,2,1]octaine di(methyl-methosulfate)
N-(p-2-dimethylaminoethoxybenzyl)-3,4,5-trimethoxybenzamide
triethanolamine trinitrate
tropyl 2,3-dimethylacrylate
2-(4-tert-butyl-2,6-dimethylbenzyl)imidazoline

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 89,518 (H. UPMANN AND DESIGN), H. Upmann & Co., Republished by Menendez Garcia y Compania Limitada, Cigars, filed Sept. 22, 1961, D.C., S.D.N.Y., Doc. 61/3336, *Alonso Menendez et al. v. Saks & Company*. Same, filed Aug. 31, 1961, same, Doc. 61/3117, *Alonso Menendez et al., doing business as Menendez Garcia y Compania, Ltd., etc. v. Gimbel Brothers, Inc.* Consent decree and order of discontinuance Sept. 28, 1961.

Reg. No. 361,634 (BAGPAK), Capem Machinery Corporation, Bag filling and sealing machinery; Reg. No. 307,034, same, Paper bags; Reg. No. 656,771 (THE BAGPAKER), International Paper Company, Bag filling and sealing machinery, filed July 21, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 934/61-WM, *International Paper Company v. Bag Pak, Inc. et al.* Consent decree; trademarks held infringed; defendants enjoined (notice Aug. 29, 1961).

Reg. No. 397,034. (See Reg. No. 261,624.)

Reg. No. 502,325 (FRITOS), The Frito Company, Corn chips; Reg. No. 519,950, same, Candy, shelled salted peanuts and corn chips, filed Feb. 17, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61-C-129, *The Frito Company v. Gusto Food Products Corporation*. Consent judgment Sept. 21, 1961.

Reg. No. 519,950. (See Reg. No. 502,325.)

Reg. No. 520,917 (HOT SHOPPES), Hot Shoppes, Inc., Serving of foods and beverages in restaurants; Reg. No. 537,095, same; Reg. No. 538,103, same, Salads, cole slaws, dressings, cheese, pickles, sliced tomatoes, etc., filed Aug. 23, 1961, D.C., S.D. Ga. (Augusta), Doc. 1022, *Hot Shoppes, Inc. (Delaware Corporation) v. Hot Shoppe, Inc. (Georgia Corporation) et al.*

Reg. No. 537,095. (See Reg. No. 520,917.)

Reg. No. 538,103. (See Reg. No. 520,917.)

Reg. No. 568,635 (LITTLE LEAGUE BASEBALL), Little League Baseball, Inc., Services in connection with the development of sportsmanship, clean play and athletic ability in young boys thru planned baseball program; Reg. No. 642,433, same; Reg. No. 599,251 (LITTLE LEAGUE BASEBALL AND DESIGN), Little League Baseball, Inc., T-shirts and sweatshirts, filed Sept. 6, 1961, D.C., S.D.N.Y., Doc. 61/3154,

Little League Baseball, Inc. v. Pickett Headwear Co., Inc. et al.

Reg. No. 571,798 (THE COMMUNITY OF ROQUEFORT), The Community of Roquefort, Cheese, filed Sept. 20, 1961, D.C. Colo. (Denver), Doc. 7262, *The Community of Roquefort, Societe Anonyme des Caves et des Producteurs Reunis de Roquefort et al. v. Rose, Inc., doing business as LaFite, Inc.*

Reg. No. 578,820 (QUALITY COURTS AND DESIGN), Quality Courts United, Inc., Periodical published from time to time; Reg. No. 591,776, same, Tourist court services, filed Sept. 15, 1961, D.C., S.D. Fla. (Tampa), Doc. 4224, *Quality Courts United, Inc. v. Finnigan Construction Company, Inc.*

Reg. No. 588,786 (PERLOFILL), United States Gypsum Company, Gypsum plaster, filed Aug. 28, 1959, D.C., S.D.N.Y., Doc. 150/51, *Spiraling Products Co., Inc. v. Inter-Ocean Commerce Corporation*. Order dismissing action for lack of prosecution Sept. 26, 1961.

Reg. No. 590,251. (See Reg. No. 568,635.)

Reg. No. 591,776. (See Reg. No. 578,820.)

Reg. No. 617,228 (SCOTSMAN), Queen Stove Works, Inc., Machines for making ice cubes and ice chips, filed Sept. 11, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/192, *King-Seely Thermos Company v. Scotsman Ice, Inc.*

Reg. No. 624,842 (GRUNDIG), Grundig Radio-Werke G.m.b.H., Radio and television receivers and parts thereof, television cameras, apparatus for recording by wire and tape, magnetic and static loudspeakers, filed Sept. 1, 1959, D.C., S.D.N.Y., Doc. 150/83, *Majestic International Corporation v. Lumal Sales Co., Inc.*

Reg. No. 641,366 (SESCO ETC. AND DESIGN), SESCO, Inc., Machinery, filed Mar. 20, 1959, D.C., E.D. Mich. (Detroit), Doc. 18/929, *SESCO, Inc. v. Special Engineering Service, Inc.*

Reg. No. 642,433. (See Reg. No. 568,635.)

Reg. No. 656,771. (See Reg. No. 261,624.)

Reg. No. 712,636 (MISS TEEN AGE AMERICA), Teen America Associates, Promotion of education thru the granting of scholarships, the recipients being girls of high school age and determined by local, State and national contests involving beauty, talent and charm, filed Sept. 12, 1961, D.C.N.J. (Trenton), Doc. 708/61, *Teen America Associates, Inc. v. Delaware Valley Broadcasting Company*.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105. As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 117,997. Raritan Plastics Corporation, Oakland, N.J. Filed Apr. 17, 1961.

HYPAC

For Plastic in Sheet Form.
First use Mar. 6, 1958.

Class 2—Receptacles

SN 95,810. Celanese Corporation of America, New York, N.Y. Filed Apr. 26, 1960.



Applicant makes no claim to the representation of a bottle per se.
For Plastic Containers—Namely, Bottles and Jars.
First use on or before Apr. 19, 1960.

SN 99,023. Gilbert Plastics, Inc., Kenilworth, N.J. Filed Sept. 11, 1959.

SHOW CUP

Without waiving common law rights, the word "Cup" is disclaimed apart from the mark as shown.
For Plastic Containers for Display of Merchandise.
First use July 8, 1959.

SN 107,261. Hoerner Boxes, Inc., Keokuk, Iowa. Filed Oct. 27, 1960.

POLYFFIN

For Coatings Forming an Element of Corrugated Boxes.
First use Aug. 30, 1960.

SN 109,362. St. Regis Paper Company, New York, N.Y. Filed Nov. 30, 1960.



For Containers—Namely, Coated Paper Bags.
First use Oct. 29, 1960.

TM 154

SN 109,369. S.a.r.l. Manover, Paris, France. Filed Nov. 21, 1960.

MANOVER

Owner of French Reg. No. 485,447, dated Jan. 15, 1960 (Seine); Natl. Inst. No. 137,448.
For Trays, Plates and Dishes Made of Plastic Material.

SN 110,600. The Coleman Company, Inc., Wichita, Kans. Filed Dec. 21, 1960.



Owner of Reg. Nos. 541,687 and 705,752.
For Cooler Chests and Insulated Jugs.
First use December 1954.

SN 112,224. The Coleman Company, Inc., Wichita, Kans. Filed Jan. 23, 1961.



Owner of Reg. No. 705,752.
For Cooler Chests and Insulated Jugs.
First use December 1960.

SN 112,845. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Jan. 31, 1961.

Spiffy DOT

For Closable Insulated Containers for Consumer Use.
First use Nov. 17, 1960.

SN 114,146. The Steril-Sil Company, Boston, Mass. Filed Feb. 21, 1961.



For Containers, Cylinders and Dispensers for Eating Utensils, Condiments and Seasonings and Racks, Baskets and Accessories Therefor.
First use in or about April 1946.

OCTOBER 31, 1961

U. S. PATENT OFFICE

TM 155

SN 115,892. The Cal-Dak Company, Los Angeles, Calif. Filed Mar. 17, 1961.

CAL-DAK

For Housewares Made of Plastic Comprising Bread Boxes, Canister Sets, Cookie Jars, Step-On Cans, Ice Buckets, Pitchers, Mixing Bowl Sets, Laundry Baskets, Diaper Pails, Silverware Trays, Gadget Trays, Waste Baskets, and Baby Bathtubs.
First use Jan. 5, 1961.

SN 116,639. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Mar. 28, 1961.

HI-TIDE

For Insulated Jugs, Boxes, Baskets, Chests and Other Portable Food and Beverage Containers.
First use Apr. 7, 1960.

SN 117,002. Guild Plastics, Inc., Cambridge, Mass. Filed Apr. 3, 1961.

SANI-PAC

For Sealed Plastic Covers Containing Disposable Dishes and Cups.
First use Oct. 1, 1960.

SN 118,242. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Apr. 20, 1961.

SUNTIDE

For Insulated Jugs, Boxes, Chests, Baskets and Other Portable Food and Beverage Containers.
First use Jan. 10, 1961.

SN 118,427. Fox Specialty Co., Inc., Lowell, Mass. Filed Apr. 24, 1961.



The drawing is lined for blue but color is not claimed as a feature of the mark.
For Plastic Receptacles—Namely, Tumblers, Salad Bowls, Cereal Bowls, Serving Bowls, and Dust Pans.
First use Jan. 1, 1961.

SN 118,428. Fox Specialty Co., Inc., Lowell, Mass. Filed Apr. 24, 1961.

FALCON

For Plastic Receptacles—Namely, Tumblers, Salad Bowls, Cereal Bowls, Serving Bowls, and Dust Pans.
First use Jan. 1, 1961.

SN 120,184. Container Corporation of America, Chicago, Ill. Filed May 17, 1961.

RIGI-TRAY

For Paperboard Boxes, Folding Cartons, and Shipping Containers.
First use Jan. 1, 1956.

TM 771 O.G.—14

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 97,189. Hugo Bosca Company, Inc., Springfield, Ohio. Filed May 16, 1960.

MAGNA-TITE

For Pocket-Type Currency/Card Carriers.
First use Apr. 13, 1960.

SN 108,077. Samuel Orenstein, d.b.a. Amelia Earhart Travel Ware, Maplewood, N.J. Filed Nov. 8, 1960.

AMELIA EARHART

Amelia Earhart Putnam, also known as Amelia Earhart, is deceased.
For Hand Luggage, Suitcases, Trunks, Hat Boxes, Wardrobe Cases, Hand Bags, Wallets and Travel Ware—Namely, Passport Cases, Attaché Cases, Portfolios, Key Containers, Kit Bags, Shopping Bags, and Pocketbooks and Purses.
First use Mar. 14, 1946.

SN 115,851. Fran Stef Corporation, New York, N.Y. Filed Mar. 16, 1961.

CAMBRIDGE

Owner of Reg. No. 593,405.
For Billfolds and Wallets.
First use on or about July 1, 1952.

SN 117,112. Marjorie Kammerer, d.b.a. Marjorie Kammerer Associates, New York, N.Y. Filed Apr. 4, 1961.

MAR-KAM

For Ladies' Hand-Bags, Purses, Pocketbooks and the Like.
First use Aug. 24, 1959.

Class 4—Abrasives and Polishing Materials

SN 106,660. Super-Cut, Inc., Chicago, Ill. Filed Oct. 18, 1960.

EZE-CUT

Owner of Reg. No. 620,619.
For Abrasive Wheels and Disks of the Resin-Bonded Type.
First use on or about Jan. 19, 1954.

Class 5—Adhesives

SN 87,072. Penick & Ford, Ltd., Incorporated, New York, N.Y. Filed Dec. 10, 1959.

PENFORD

For Adhesives Consisting of Starch Derivatives Used in the Manufacture of Paper Products and in the Bizing of Textile Products.
First use Mar. 2, 1950.

SN 117,744. United Mineral & Chemical Corp., New York, N.Y. Filed Apr. 12, 1961.

STICK-A-SEAL

Owner of Reg. No. 695,082.
For Pressure-Sensitive Tape.
First use Feb. 3, 1961.

Class 6—Chemicals and Chemical Compositions

SN 80,473. Jacques Wolf & Co., Newark, N.J. Filed Aug. 28, 1959.

LUXAPOLE

For Compositions for Treating Textile Fibers—Namely, Softening Agents, Lubricating Agents and Dye Penetrants. First use September 1944.

SN 87,896. National Dairy Products Corporation, New York, N.Y. Filed Dec. 23, 1959.

HUMKEM

For Derivatives of Fatty Acids and Fatty Glycerides for Use as a Raw Material in Chemical Manufacture. First use Oct. 9, 1959.

SN 87,897. National Dairy Products Corporation, New York, N.Y. Filed Dec. 23, 1959.

KEMSTRENE

Owner of Reg. No. 658,413.
For Derivatives of Fatty Acids and Fatty Glycerides for Use as a Raw Material in Chemical Manufacture. First use Nov. 18, 1959.

SN 93,059. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 17, 1960.

SULFACEL

For Thickening, Dispersing, Suspending, Emulsifying and Film-Forming Compound Comprising Sulfur-Containing, Water-Soluble Cellulose Derivatives. First use Jan. 14, 1960.

SN 97,956. Radiant Wash Solution Corp., Buffalo, N.Y., assignee, by mesne assignment, of Radiant Wash Solution Co., Olean, N.Y. Filed May 26, 1960.

RADIANT

For Aqueous Solution of Sodium Hypochlorite Having Bleaching, Deodorizing and Disinfecting Properties, and Aqueous Solution of Ammonia. First use on or about July 31, 1933.

SN 99,511. General Chemical Corporation, Washington, D.C. Filed June 22, 1960.

Staph 12

For Bactericide.
First use May 26, 1960.

SN 99,873. Rockland Chemical Co., Inc., West Caldwell, N.J. Filed June 28, 1960.

ROCKLAND

For Liquid Fly and Lice Application for External Use on Animals and Poultry, Insecticide for Home Use, and for Gardens, Insecticide and Disinfectant-Deodorant for External Use on Animals and Poultry, Fungicides for Plants, and Ice Dissolver in Chemical Form. First use June 1, 1922.

SN 107,529. Walnut Grove Products Company, Inc., Atlantic, Iowa. Filed Oct. 31, 1960.

WALNUT GROVE

Owner of Reg. No. 391,155.
For Chemical Preparations Used as Insecticides, Germicides and Disinfectants. First use May 28, 1920.

Class 7—Cordage

SN 116,776. Frank W. Winne & Son Incorporated, Philadelphia, Pa. Filed Mar. 29, 1961.



The drawing is lined for the colors pink and green.
For Baler Twine and Binder Twine. First use Mar. 1, 1951.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 103,356. Remington Arms Company, Inc., Bridgeport, Conn. Filed Aug. 24, 1960.

STUN SAFE

For Ammunition—Namely, Humane Stunning Cartridges. First use May 6, 1960.

SN 116,929. Vernon D. Speer, d.b.a. Speer Products Company, Lewiston, Idaho. Filed Mar. 31, 1961.

PLINKERS

For Bullets.
First use Mar. 2, 1961.

Class 10—Fertilizers

SN 104,974. Hercules Powder Company, Wilmington, Del. Filed Sept. 21, 1960.

BLUE CHIP

For Fertilizer Compound.
First use Feb. 18, 1960.

Class 11—Inks and Inking Materials

SN 115,837. Standard Ultramarine & Color Co., Huntington, W. Va. Filed Mar. 14, 1961.

ULTRAFast

For Pigments Used in the Manufacture of Printing Inks. First use Oct. 4, 1960.

Class 12—Construction Materials

SN 112,325. Spee Dee Sales Company, Walnut Creek, Calif. Filed Jan. 23, 1961.



The representation of the goods is disclaimed apart from the mark as shown.
For Clamps or Brackets for Installing Door-Jamb Assemblies. First use Dec. 15, 1960.

SN 114,456. Theodore Efron Mfg. Co., Chicago, Ill. Filed Feb. 27, 1961.

TRYTON

For Glass Shower and Bathtub Enclosures.
First use Jan. 24, 1961.

SN 117,745. United Mineral & Chemical Corp., New York, N.Y. Filed Apr. 12, 1961.

STICK-A-SEAL

Owner of Reg. No. 695,086.
For Weather-Stripping Material. First use Feb. 3, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 53,448. Wisconsin Wire Works, Appleton, Wis. Filed June 12, 1958.

USE ME NEXT—I'M READY FOR SERVICE

For Fourdrinier Wire Cloth.
First use May 28, 1953.

SN 94,813. John Henry George Charbonneau, Calimesa, Calif. Filed Apr. 11, 1960.

RAINBO

For Valve and Measurement Device for Dispensing Food Syrups.
First use Nov. 1, 1958.

SN 101,313. Elkay Manufacturing Company, Chicago, Ill. Filed July 22, 1960.

CUISINE CENTRE

For Sinks and Water Fountains.
First use Jan. 22, 1960.

SN 101,314. Elkay Manufacturing Company, Chicago, Ill. Filed July 22, 1960.



For Sinks and Water Fountains.
First use Jan. 22, 1960.

SN 103,060. Sperzel Company, d.b.a. Shamrock Plastics Company and Shamrock Plastics, Division of Sperzel Company, Minneapolis, Minn. Filed Aug. 19, 1960.

SHAMROCK

For Toilet Seats and Tank Float Balls.
First use Apr. 19, 1960.

SN 109,861. Elkay Manufacturing Company, Chicago, Ill. Filed Dec. 8, 1960.

SINKRONIZE

For Sinks and Water Fountains.
First use Jan. 22, 1960.

SN 116,492. Flat Metal Manufacturing Co., Inc., Plainview, N.Y. Filed Mar. 27, 1961.

GIBRALTAR

For Prefabricated Shower Receptors.
First use July 14, 1960.

SN 116,493. Flat Metal Manufacturing Co., Inc., Plainview, N.Y. Filed Mar. 27, 1961.

MONTEREY

For Prefabricated Shower Receptors.
First use July 14, 1960.

SN 117,367. Industrial Corporation of America, Quakertown, Pa. Filed Apr. 7, 1961.

DYNASEAL

For Parts of Doors of the Overhead Type, Either Manually or Automatically Operated—to wit, the Combination of Off-set Tracks and Hinges Which Render the Door Snugfitting Against the Jamb or Stops When Closed and Which Cause the Door To Move Away From the Jamb or Stops for Easier Opening and Closing.
First use Mar. 15, 1945.

Class 14—Metals and Metal Castings and Forgings

SN 106,191. Dr. Eugen Dürrwächter Doduco, Pforzheim, Germany. Filed Oct. 11, 1960.

TALARON

Owner of German Reg. No. 663,668, dated Oct. 2, 1954. For Raw and Partly Worked Base Metals and Their Alloys.

SN 113,485. National Distillers and Chemical Corporation, New York, N.Y., by merger from Bridgeport Brass Company, Bridgeport, Conn. Filed Feb. 13, 1961.

FLEX-KOLOR

For Aluminum Sheets.
First use Oct. 21, 1960.

SN 113,486. National Distillers and Chemical Corporation, New York, N.Y., by merger from Bridgeport Brass Company, Bridgeport, Conn. Filed Feb. 13, 1961.

FLEX-COLOR

For Aluminum Sheets.
First use Oct. 20, 1960.

Class 15—Oils and Greases

SN 117,987. Manlius W. Noble, d.b.a. Noble Oil Products Co., Jacksonville, Fla. Filed Apr. 17, 1961.

TYPO/SEAL

For Additive for Automobile Automatic Transmission Oil.
First use Mar. 1, 1961.

SN 117,988. Manlius W. Noble, d.b.a. Noble Oil Products Co., Jacksonville, Fla. Filed Apr. 17, 1961.

TYPO

For Additive for Internal Combustion Engine Crankcase Oil.
First use Feb. 15, 1961.

Class 16—Protective and Decorative Coatings

SN 87,730. Shawinigan Resins Corporation, Springfield, Mass. Filed Dec. 21, 1959.

REDWOOD MAGIC

The word "Redwood" is disclaimed apart from the mark as shown.
For Paint Bases and Paints Compounded From Aqueous Emulsions of Polyvinyl Acetate and Thinners Therefor, Used on Unpainted Wood.
First use Feb. 5, 1954.

SN 90,342. Master-Krete, Inc., Kansas City, Mo. Filed Feb. 8, 1960.

COLOR FLEX

For Asphaltic Product for Surface Coating Tennis Courts, Patios, Play Grounds, and Industrial Floors.
First use January 1951.

SN 117,578. West Paint & Varnish Company, Everett, Mass. Filed Apr. 11, 1961.

HERITAGE

For Varnish.
First use Feb. 15, 1961.

SN 117,579. West Paint & Varnish Company, Everett, Mass. Filed Apr. 11, 1961.

SUBURBAN SPAR

Applicant disclaims any right to the exclusive use of the word "Spar" except in the association shown.
For Varnish.
First use Feb. 15, 1961.

Class 17—Tobacco Products

SN 109,083. Louis Dobbmann N.V., Dordrecht, Netherlands. Filed Nov. 25, 1960.



Priority claimed under Sec. 44(d) on Dutch application filed July 15, 1960; Reg. No. 138,275, dated Aug. 17, 1960. For Pipe and Cigarette Tobacco.

Class 18—Medicines and Pharmaceutical Preparations

SN 69,632. William B. Fitzgerald, d.b.a. Fitzgerald Associates, Chicago, Ill. Filed Mar. 10, 1959.



The words "One Day Pac Aid" are disclaimed apart from the mark as shown.
For Tablets for Breath Sweetener, Nerve Tension Relief, Stay Awake Aid, Cold Sinus Aid, and Headache Relief.
First use Sept. 5, 1958.

SN 100,263. Knoll Pharmaceutical Company, Orange, N.J. Filed July 5, 1960.

NICO-METRAZOL

Owner of Reg. Nos. 249,687 and 695,544.
For Pharmaceutical Preparation—Namely, an Ergogenic Agent.
First use June 3, 1960.

Class 19—Vehicles

SN 106,839. Razorback Fiberglass Corporation, Malvern, Ark. Filed Oct. 20, 1960.

RAZORBACK

For Boats.
First use Aug. 29, 1957.

SN 117,316. Vogel-Peterson Co., Elmhurst, Ill. Filed Apr. 6, 1961.

TABLE HOP

For Dollies for Moving Furniture and Temporary Platforms.
First use Feb. 20, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 96,056. Wincharger Corporation, Minneapolis, Minn. Filed Apr. 28, 1960.

MAXI-WATT

For Electric Generator Power Control.
First use Mar. 25, 1960.

SN 104,476. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Sept. 14, 1960.

SPEEDBUS

For Electrical Busway Distribution Systems.
First use June 1, 1960.

SN 105,171. Ken-Tron Corporation, Lynn, Mass. Filed Sept. 28, 1960.

KEN-TRON

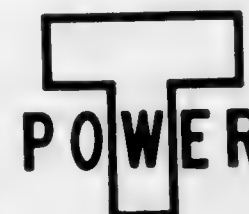
For RF Coaxial Type Telephone Plugs and Telephone Jacks, Phone Plugs and Jacks.
First use July 6, 1960.

SN 105,172. Ken-Tron Corporation, Lynn, Mass. Filed Sept. 28, 1960.



For RF Coaxial Type Telephone Plugs and Telephone Jacks, Phone Plugs and Jacks.
First use July 6, 1960.

SN 105,659. Motorola Inc., Chicago, Ill. Filed Oct. 3, 1960.



For Two-Way Radio Communications Transmitters and Receivers, Power Supplies and Converters.
First use as early as June 1957.

SN 108,249. Amphenol-Borg Electronics Corporation, Chicago, Ill. Filed Nov. 14, 1960.



For Electrical, Radio, and Radio Frequency Connectors; Connector Hoods; Male and Female Contacts; Electrical and Radio Sockets, Plugs, Receptacles, and Caps; Tube Socket and Plug Adapters; Terminal Blocks; Tip Jacks; Socket Retainer Rings; Tube Shields; Plug and Receptacle Inserts; and Insulators and Dielectrics.
First use Mar. 1, 1960.

SN 110,359. Raygram Corporation, Mount Vernon, N.Y. Filed Dec. 16, 1960.

GRAMERCY

For High Fidelity Amplifier and Speaker Unit.
First use Oct. 24, 1960.

SN 111,643. Lucien Blanchet, Colombes, Seine, France. Filed Jan. 11, 1961.

AIRELBÉ

Priority claimed under Sec. 44(d) on French Reg. No. 492,021, dated Nov. 23, 1960 (Seine); Natl. Inst. No. 154,122. For Electrical Connectors, Conduits and Panel Boards.

SN 112,912. Northeast Scientific Corporation, Acton, Mass. Filed Feb. 1, 1961.



For Voltage Supplies, Current Supplies, Wave Generators, Oscillator Supplies, and Klystron Modulators.
First use Apr. 28, 1954.

SN 115,689. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Mar. 15, 1961.



For Storage Batteries.
First use Feb. 15, 1961.

SN 118,737. Technology Instrument Corporation, Acton, Mass. Filed Apr. 26, 1961.



Owner of Reg. No. 529,494.
For Variable Resistors, Fixed Resistors, Magnetic Clutches, and Pressure Transducers.
First use in or about October 1957 on variable resistors.

Class 22—Games, Toys, and Sporting Goods

SN 67,718. West Coast Chemicals and Solvents Corporation, d.b.a. Swimaster, Los Angeles, Calif. Filed Feb. 13, 1959.

LIFEGARD

For Life Preservers Inflatable From CO₂ Gas Cartridge by User Essentially Designed for Use by Skin Divers.
First use July 1937.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 96,228. Kalamazoo Industrial Services, Inc., Kalamazoo, Mich. Filed May 2, 1960.

KISI

For Mechanical Beater, Including a Rotor in a Tank, for Processing Fibers, Such as the Fibers Used in Manufacturing Paper.
First use Apr. 24, 1958.

SN 98,483. Houdaille Industries, Inc., Buffalo, N.Y. Filed June 6, 1960.

STRIPPIT FABRICATOR

Applicant disclaims any rights in the term "Fabricator" apart from the mark as shown. Owner of Reg. Nos. 599,017 and 637,118.
For Press Type Machine Tool.
First use 1948.

SN 99,715. Borg-Warner Corporation, Chicago, Ill. Filed June 27, 1960.

INGERSOLL

Owner of Reg. Nos. 680,741, 681,668, and others.
For Earth Cutting and Pulverizing Discs for Plows, Harrows, and Like Agriculture Implements and Machines and Parts Thereof for Replacement and Repair.
First use at least as early as February 1947.

SN 105,319. Volkmann & Co., Krefeld, Germany. Filed Sept. 27, 1960.



Owner of German Reg. No. 731,242, dated Nov. 23, 1959.
For Textile Machinery and Parts Thereof, Including Spinning Machines, Twisting Frames, Bobbin Frames, Winding Machines, Weaver's Looms, Knitting Machines, Hasps, Spools, Spindles, Thread Brakes, Thread Cleaners, and Thread Guides.

SN 111,672. L & R Manufacturing Company, Kearny, N.J. Filed Jan. 11, 1961.

MAXSON

For Ultrasonic Watch Part Cleaning Device.
First use Nov. 1, 1960.

SN 114,604. Dale Marking Equipment Co., Inc., Brooklyn, N.Y. Filed Feb. 28, 1961.

DURALAST

For Roller Used To Distribute Ink on Type Wheel of Ink Marking Machine.
First use Jan. 9, 1956.

SN 115,066. Cornelius R. Lipka, Kennett Square, Pa. Filed Mar. 7, 1961.

LIP-GRIP

For Hand Tools, Including Hammers, Pliers, Screwdrivers, and Wrench Sets.
First use Sept. 14, 1959.

SN 117,742. Tel-Go Manufacturing Corporation, Houston, Tex. Filed Apr. 12, 1961.

TEL-GO

For Earth Tampers.
First use Nov. 1, 1959.

SN 118,523. Benjamin A. Williamson, d.b.a. Woodson Nut Machinery Co., St. Louis, Mo. Filed Apr. 24, 1961.

TWISTO

For Nut Crackers.
First use Mar. 13, 1961.

Class 25—Locks and Safes

SN 117,491. Hartmann L. sage Company, Racine, Wis. Filed Apr. 10, 1961.

TOUCH-O-MATIC

For Locks for Luggage, Cases, and Boxes.
First use Mar. 1, 1961.

Class 26—Measuring and Scientific Appliances

SN 103,010. The Budd Company, Philadelphia, Pa. Filed Aug. 19, 1960.

GAMMASCAN

For Remote Exposure and Handling Equipment for Radioactive Isotopes.
First use November 1958.

SN 105,077. Roland W. Gubisch, Chicago, Ill. Filed Sept. 23, 1960.



For Voltage Calibrators.
First use Aug. 29, 1960.

SN 107,494. Metropolitan Telecommunications Corp., Plainview, N.Y. Filed Oct. 31, 1960.



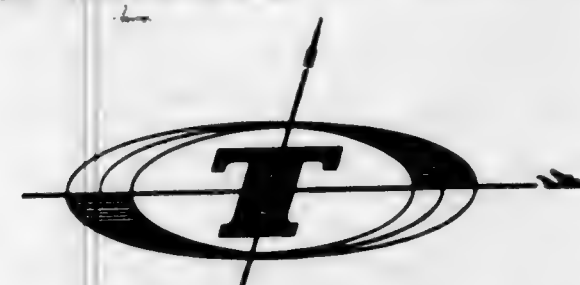
Owner of Reg. Nos. 683,953 and 684,011.
For Test Equipment for Telephone, Telegraph, and Teletype Apparatus, Monitoring Sets, Polar Relay Test Sets, Transmission Test and Measuring Sets.
First use during January 1958.

SN 109,904. Siemens Feinmechanische Werke G.m.b.H., Elserfeld/Sieg., Germany. Filed Dec. 8, 1960.

DATAQUICK

Owner of German Reg. No. 723,980, dated Apr. 14, 1959.
For Bookkeeping Machines, Accounting Machines, Billing Machines, Registering Machines, Calculating Machines, Cash Registers, Punched Card Machines, Tape Perforators, Perforated Tape-Controlled Bookkeeping and Calculating Machines, Duplicating Machines.

SN 112,418. Tasker Instruments Corporation, Van Nuys, Calif. Filed Jan. 24, 1961.



The portions of the drawing lined for blue are claimed as integral portions of the mark.

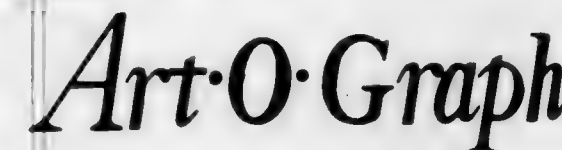
For Video Trackers, Converter Assemblies, Precision Sweep Generators, Synchronizers, Approach Display Processors, Programmers, Control Panels, Signal Generators, Sweep Processors, and Multipurpose Decision Modules, Power Supplies and Other Associated Equipment for Air Traffic Control.
First use Aug. 23, 1960, on a multipurpose decision module.

SN 114,646. Supply Service, Inc., Hutchinson, Kans. Filed Feb. 28, 1961.



For Electrically Operated Grain Sampling Tool.
First use Jan. 9, 1961.

SN 118,640. Art-O-Graph Inc., Minneapolis, Minn. Filed Apr. 26, 1961.



For Opaque Projection Equipment.
First use summer of 1949.

SN 119,927. Butler Bin Company, Waukesha, Wis. Filed May 15, 1961.

PHOTRONIC INDICATOR

The word "Indicator" is disclaimed except in association with the other features of the mark.
For Balance Indicator Scales Forming Part of Concrete Batching Plants.
First use Mar. 5, 1958.

SN 120,408. Bailey Meter Company, Cleveland, Ohio. Filed May 25, 1961.

FLAMON

For Flame Detectors.
First use Jan. 6, 1961.

SN 121,014. Melpar, Inc., Falls Church, Va. Filed May 29, 1961.

MELPAR

For Photoelectric Reader.
First use June 17, 1960.

SN 121,016. Melpar, Inc., Falls Church, Va. Filed May 29, 1961.

MELPAR

For Photoelectric Reader.
First use June 17, 1960.

Class 27—Horological Instruments

SN 117,870. The Ideal Watch Company, Inc., New York, N.Y. Filed Apr. 14, 1961.

IDEAL

For Horological Instruments Specifically Watches and Clocks.
First use Mar. 16, 1961.

SN 118,149. Hamilton Watch Company, Lancaster, Pa. Filed Apr. 19, 1961.

MEDALLION

Owner of Reg. No. 380,409.
For Watches of All Types—i.e., Pocket Watches, Wrist Watches, Brooch Watches, Chatelaine Watches, Watch Cases, Watch Dials, Watch Parts, and Watch Attachments of All Types Sold With Watches as a Unit—i.e., Strap Attachments, Bracelet Attachments, Chain Attachments, and Pin Attachments.
First use in 1920.

Class 28—Jewelry and Precious-Metal Ware

SN 104,096. Perkel & Klein, Inc., New York, N.Y. Filed Sept. 8, 1960.

DIAMOND RINGS OF ECSTASY

The words "Diamond Rings" are disclaimed apart from the mark as shown.
For Men's and Women's Diamond Finger Rings.
First use June 29, 1960.

SN 105,170. George R. Kenney, d.b.a. The Jewel Box, Sioux Falls, S. Dak. Filed Sept. 26, 1960.

THE JEWEL BOX

Applicant disclaims the word "Jewel" apart from the mark as shown. The drawing is lined for gold but color is not claimed as a feature of the mark.
For Costume Jewelry.
First use Dec. 1, 1958.

SN 106,609. Albert Koehler, Foley, Ala. Filed Oct. 18, 1960.

LUSTRA-GEMS

For Baroque Type Jewelry for Personal Wear.
First use Feb. 6, 1960.

SN 110,223. Nina Ricci S.a.r.l., Paris, France. Filed Dec. 14, 1960.

NINA RICCI

The words "Nina Ricci" identify a particular living individual, and consent to the use and registration of her name is of record.

For Jewelry of Gold, Silver, and Other Metals for Personal Use, and Costume Jewelry.

First use Sept. 1, 1960; in commerce Sept. 1, 1960.

Class 29—Brooms, Brushes, and Dusters

SN 102,762. Hamilton & Co. (London) Limited, Wealdstone, England. Filed Aug. 16, 1960.

HAMILTONS

For Painters' Brushes.

First use in 1906; in commerce in 1930.

SN 115,087. Star Brush Manufacturing Co., Inc., Boston, Mass. Filed Mar. 7, 1961.

SOFT STROKE

For Paint and Varnish Brushes.

First use Dec. 23, 1960.

SN 115,286. All-American Brush Mfg. Co., New York, N.Y. Filed Mar. 10, 1961.

"BEAUT-TEASE"

For Hair Brushes.

First use Feb. 1, 1960.

Class 31—Filters and Refrigerators

SN 102,774. Arthur D. Little, Inc., Cambridge, Mass. Filed Aug. 16, 1960.

CRYODYNE

For Refrigerators Operating at Liquid Helium Temperatures.

First use June 2, 1960.

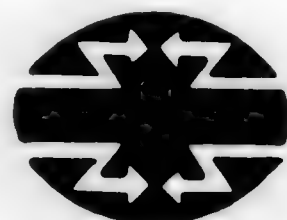
SN 103,948. Needco of America Incorporated, Princeton, N.J. Filed Sept. 6, 1960.

FRIGISTOR

For Thermoelectric Cooling Assemblies Consisting of One or More Couples of P and N Type.

First use Mar. 31, 1960.

SN 108,922. Tornado-France, Paris, France. Filed Nov. 22, 1960.



Owner of French Reg. No. 413,358, dated July 6, 1951 (Paris); Natl. Inst. No. 496,972.
For Filters and Refrigerators.

Class 32—Furniture and Upholstery

SN 106,335. Mark Manufacturing Company, Salem, Oreg. Filed Oct. 13, 1960.



For Adjustable Headrests in the Nature of a Pillow and Metal Support Adapted To Be Attached to the Back of an Automobile Seat or Chair.
First use May 17, 1960.

SN 106,977. Earl B. Barnawell, d.b.a. Barney Industries, Berkeley, Calif. Filed Oct. 24, 1960.



For Furniture—Namely, Contemporary Shelving and Component Parts.
First use Jan. 15, 1960.

SN 114,824. American Seating Company, Grand Rapids, Mich. Filed Mar. 3, 1961.

ARTISAN

For Church Pews.
First use Feb. 23, 1961.

SN 114,825. American Seating Company, Grand Rapids, Mich. Filed Mar. 3, 1961.

DUROCRAFT

For Church Pews.
First use Feb. 23, 1961.

SN 116,819. Hall-Marck Sales, Bay Village, Ohio. Filed Mar. 30, 1961.

HALL-MARCK

For Upholstered Furniture.
First use Aug. 1, 1960.
Subj. to Intf. with Reg. No. 721,006.

SN 117,540. Sealy, Incorporated, Chicago, Ill. Filed Apr. 10, 1961. SN 117,596. Alegre Recording Corp., New York, N.Y. Filed Apr. 11, 1961.

PRINCESS POSTUREPEDIC

Owner of Reg. No. 619,058.
For Mattresses and Box Springs.
First use Mar. 7, 1961.



SN 117,597. The Allen Iron & Steel Company, Norristown, Pa. Filed Apr. 11, 1961.

ALISCO

For Storage Racks and Parts for Storage Racks.
First use Mar. 21, 1961.

For Phonograph Records.
First use on or about Aug. 25, 1956.

SN 118,085. Kenlon Productions, Inc., New York, N.Y. Filed Apr. 18, 1961.

TUNE-RITE

For Phonograph Records.
First use Mar. 14, 1961.

SN 118,447. Interstate Metal Products Co., Chicago, Ill. Filed Apr. 24, 1961.

PLASTI-QUEEN

For Kitchen Cabinets.
First use Jan. 3, 1961.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 104,648. The Steam-O-Matic Corporation, Sedalia, Mo. Filed Sept. 16, 1960.

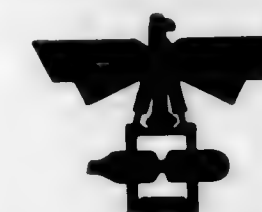
Chill Air

For Self-Contained, Cabinet Type Air Conditioning Units.
First use March 1946.

SN 106,504. Komo Corporation, Kokomo, Ind. Filed Oct. 17, 1960.

KOMO

For Steam Bun Warmer, Consisting of a Boiler and a Steamhead.
First use Aug. 1, 1960.



SOENNECKEN

Owner of German Reg. No. 705,181, dated Aug. 7, 1957; and U.S. Reg. No. 616,861.
For Looseleaf Paper, Paperboard File Covers, Pen Nibs, Ring Notebooks, Transparent Pockets, Index Signals, and Calendar Bases.

SN 100,685. Biro Swan Limited, London, England. Filed July 12, 1960.



Owner of British Reg. No. 678,222, dated Mar. 26, 1949.
For Ball Point Pens and Refills Therefor.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 114,236. MacGregor-Comarain, Paris, France. Filed Feb. 23, 1961.

MAGROTITE

Priority claimed under Sec. 44(d) on French Reg. No. 490,872, dated Oct. 3, 1960 (Seine); Natl. Inst. No. 151,711.
For Packings, Sealing Joints and Material for the Same, Water-Tight Joints and Packings for Any Kind of Closures on Board Ships, on Railway Wagons and on Lorries.

Class 36—Musical Instruments and Supplies

SN 115,194. Sued-Atlas Werke G.m.b.H., Mulheim (Ruhr), Germany. Filed Mar. 8, 1961.

EXPLORER

For Dictating Machines.
First use Sept. 19, 1960; in commerce Sept. 19, 1960.

Class 38—Prints and Publications

SN 98,525. Programs for Achievement in Reading, Inc., Providence, R.I. Filed June 6, 1960.



For Books and Brochures Pertaining to Improvement in Reading Ability.
First use on or about May 24, 1960.

Class 39—Clothing

SN 101,653. The Warren Featherbone Company, Gainesville, Ga. Filed July 28, 1960.

HANDI-PANTI

Owner of Reg. Nos. 531,918 and 664,107.
For Baby Panties for Use as a Diaper Cover.
First use July 12, 1948.

SN 101,959. Lissak & Company, New Bedford, Mass. Filed Aug. 3, 1960.



For Women's Shoes.
First use July 15, 1960.

SN 103,708. Double-Wear Shoe Co., Minneapolis, Minn. Filed Aug. 31, 1960.

DOUBLEWEAR SHOES

The term "Shoes" is disclaimed apart from the mark as shown. Owner of Reg. No. 687,274.
For Men's, Women's, and Children's Shoes.
First use June 1, 1918.

SN 104,849. New York Pants Co., Inc., New York, N.Y. Filed Sept. 20, 1960.



HI-FALUTIN SLACKS FOR MEN

Applicant states that the mark is fanciful, and not the name of any individual. Applicant disclaims, apart from the mark, the wording "Hi-Falutin Slacks for Men."
For Men's and Women's Slacks, Trousers, Coats, Shirts, Blouses, Jackets, Hose, Gloves, Belts, Robes, Raincoats, and Undergarments.
First use August 1960.

SN 107,451. M. Hoffman & Co., Inc., Boston, Mass. Filed Oct. 31, 1960.

DOUBLEWEAR

Owner of Reg. No. 547,696.
For Overalls, Dungarees, Jumpers, Pants, Shirts, Long Coats, Jackets, and Aprons for Men, Women, and Children.
First use 1950.

SN 111,793. Frayne Sportswear Mfgs., Inc., Tampa, Fla. Filed Jan. 13, 1961.



Applicant disclaims the word "Sportswear" separately from the mark as shown.
For Women's, Misses' and Children's Skirts, Blouses, Jackets, Caps, Slacks, Shorts; Infants' Skirts, Blouses, Jackets, Caps, Shorts and Dresses.
First use March 1953.

SN 112,136. Donnis of Dallas, Dallas, Tex. Filed Jan. 19, 1961.



Applicant hereby disclaims "of Dallas" apart from the mark as shown.
For Ladies' Dresses, Skirts, Blouses, Sweaters, Slacks, Jackets, Shorts, Halters, Bathing Suits, Coats and Suits.
First use Jan. 1, 1953.

SN 112,148. Paul Hughes, d.b.a. USA Mills, Hickory, N.C. Filed Jan. 19, 1961.



No claim is made to the letters "U.S.A." apart from the mark shown. The lining shown is merely to reproduce lines shown on the specimens, rather than to indicate color.
For Men's, Boys' and Children's Polo Shirts; Men's and Boys' Athletic Shirts; Men's and Boys' T-Shirts; Men's and Boys' Briefs; Men's and Boys' Boxer Shorts; Children's Training Panties; Men's, Women's and Children's Anklelets and Socks; Men's, Women's and Children's Aprons; Women's and Misses' Brassieres and Panties.
First use Dec. 1, 1960.

SN 112,223. Richard J. Cole, Inc., New York, N.Y. Filed Jan. 23, 1961.



Owner of Reg. Nos. 701,040 and 703,285.
For Ladies' and Misses' Dresses, Coats, Suits, Skirts, Blouses and Shirts.
First use Oct. 20, 1960.

SN 112,303. Paperlynen Company, Columbus, Ohio. Filed Jan. 23, 1961.

PALCO-PEAK

Owner of Reg. Nos. 384,311 and 710,951.
For Disposable-Type Caps Used Primarily by Restaurant Personnel.
First use October 1959.

SN 112,458. Herter's Inc., Waseca, Minn. Filed Jan. 25, 1961.

ALASKAN TUXEDO

For Outdoor Clothing Consisting in Jackets and Pants Sold Individually and in Combination.
First use Jan. 1, 1961.

SN 112,625. The Lincoln Electric Company, Cleveland, Ohio. Filed Jan. 27, 1961.

COOLSHIELD

For Welding Helmet.
First use Sept. 14, 1960.

SN 112,699. Do-All Bra, Inc., Brooklyn, N.Y. Filed Jan. 30, 1961. SN 114,774. The Kendall Company, Walpole, Mass. Filed Mar. 2, 1961.



For Brassieres.
First use May 1, 1947.

SN 112,829. Cluett, Peabody & Co., Inc., New York, N.Y. Filed Jan. 31, 1961.

TU-WAY-TEE

For T-Shirts for Men's and Boys' Outer and Under Wear.
First use Mar. 10, 1953.

SN 112,962. Genesco Inc., Nashville, Tenn. Filed Feb. 2, 1961.

OLE SAFETY SAM

For Boots, Shoes and Slippers of Leather, Rubber, Fabric, or a Combination of Those Materials, for Men, Women, and Children.
First use Dec. 6, 1958.

SN 113,237. Neiman-Marcus Company, Dallas, Tex. Filed Feb. 7, 1961.



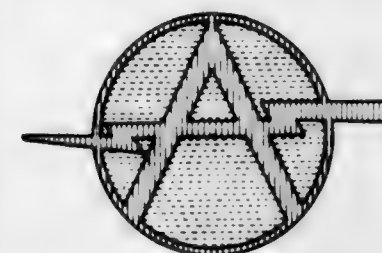
Owner of Reg. No. 620,436.
For Women's Shoes.
First use Dec. 16, 1960.

SN 113,394. Robert Bruce, Inc., Philadelphia, Pa. Filed Feb. 10, 1961.



For Men's, Boys' and Children's Sport Shirts and Sweaters.
First use Apr. 4, 1938.

SN 113,589. White Sewing Machine Corporation, Lakewood, Ohio. Filed Feb. 13, 1961.

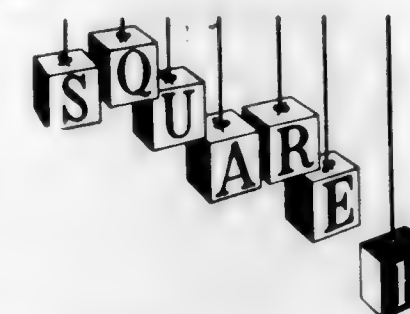


The drawing is lined for the colors red and gray.
For Protective Hats, Caps, and Helmets.
First use on or about Dec. 15, 1960.

SN 113,965. Max Ulman, Inc., New York, N.Y. Filed Feb. 17, 1961.

YUM YUM

For Women's Smocks.
First use on or about Jan. 26, 1961.
Subj. to Intf. with SN 121,918.



For Diapers.
First use July 21, 1960.

SN 116,020. The H. W. Gossard Co., Chicago, Ill. Filed Mar. 20, 1961.

PROM-DEB

For Girdles and Pantie Girdles.
First use Jan. 26, 1961.

SN 121,918. Glensder Textile Corporation, New York, N.Y. Filed June 13, 1961.

YUM YUM

For Ladies' and Misses' Outerwear—Namely, Sweaters, Scarfs, Hats, Caps, Stoles, Ponchos, Bandanas, and Hat and Scarf Combinations.
First use Apr. 4, 1960.
Subj. to Intf. with SN 113,965.

Class 40—Fancy Goods, Furnishings, and Notions

SN 112,822. American Velcro, Inc., Manchester, N.H. Filed Jan. 31, 1961.

"HI-MEG"

For Fastener Sold in Ribbon Form by the Yard and Less Consisting of Two Strips of Nylon or Other Man-Made Fibre Tape, One Covered With Hooks and the Other With Loops, Which Adhere Together When Pressed Together, Used for Fasteners and Closures of All Kinds.
First use Jan. 23, 1961.

SN 116,080. S. & S. Industries, Inc., New York, N.Y. Filed Mar. 20, 1961.

AIRLON

For Plastic Stiffening Used in Brassieres in the Form of Stays.
First use Mar. 9, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 109,226. AB Limhamns Textil, Malmo, Sweden. Filed Nov. 29, 1960.

SWEDENMARK

For Rugs, Draperies and Curtains, All of Said Goods Made of Textile Fabrics, and Textile Fabrics in the Piece Composed of Wool, Cotton, Silk and Synthetic Fibers and Mixtures Thereof.
First use September 1959; in commerce September 1959.

SN 112,823. American Velcro, Inc., Manchester, N.H. Filed Jan. 31, 1961.

"HI-MEG"

For Wide Goods, Fabrics Sold by the Yard and Otherwise. First use Jan. 17, 1961.

SN 114,625. Mission Valley Mills, Inc., New Braunfels, Tex. Filed Feb. 28, 1961.

CAYO

For Dress, Blouse, Jacket, and Skirt Fabrics. First use June 1960.

SN 114,626. Mission Valley Mills, Inc., New Braunfels, Tex. Filed Feb. 28, 1961.

JURADO

For Dress, Blouse, Jacket, and Skirt Fabrics. First use June 1960.

SN 114,657. United States Rubber Company, New York, N.Y. Filed Feb. 28, 1961.

CAPTIVEX

Owner of Reg. No. 659,428. For Cellular Elastomer Rug Underlay. First use Nov. 22, 1960.

SN 114,786. Pepperell Manufacturing Company, Boston, Mass. Filed Mar. 2, 1961.

NAP GUARD

For Blankets Which Have Been Treated To Improve Retention of Loft. First use January 1961.

SN 114,999. Pyramid Knit Sales Corp., New York, N.Y. Filed Mar. 6, 1961.

Pyra-Knit

For Knitted Fabrics and Knitted Fabrics Laminated to Foam, To Be Used in the Manufacture of Men's, Women's, and Children's Outerwear—Namely, Coats, Jackets, Raincoats, Snow Suits, and the Like. First use Jan. 20, 1961.

SN 115,056. Hess, Goldsmith & Co., Inc., New York, N.Y. Filed Mar. 7, 1961.

HESS, GOLDSMITH

Owner of Reg. Nos. 399,958 and 511,844. For Textile Fabrics in the Piece Made of Glass Fibers and Yarns. First use Dec. 12, 1945.

SN 116,944. John Wolf Textiles, Inc., New York, N.Y. Filed Mar. 31, 1961.

BALTONE

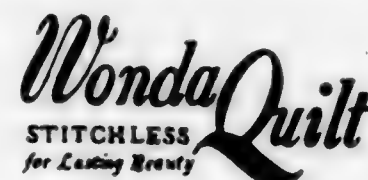
For Cotton Fabrics in the Piece. First use February 1961.

SN 119,058. Shirley Fabrics Corporation, New York, N.Y. Filed May 1, 1961.

SANPAN

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof. First use Jan. 4, 1961.

SN 119,101. Carlee Corporation, Rockleigh, N.J. Filed May 2, 1961.



No claim is made to the words "Quilt," "Stitchless for Lasting Beauty," and "of Plastic" apart from the mark as shown.

For Padded Plastic Piece Goods or Film Sold as Yard Goods To Be Used in the Making of Sleeping Bags, Seat Covers, Covering Closet Accessories and Other Goods. First use June 26, 1951.

SN 119,264. E. T. Barwick Mills, Inc., Chamblee, Ga. Filed May 4, 1961.

SURESTEP

For Fine Textured Carpets. First use Mar. 3, 1961.

SN 119,440. Turner Halsey Company Incorporated, New York, N.Y. Filed May 5, 1961.

SKYBURY

For Cotton Piece Goods. First use Apr. 11, 1961.

SN 119,645. Shirley Fabrics Corporation, New York, N.Y. Filed May 9, 1961.

PARLAY

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof. First use Nov. 1, 1960.

SN 119,646. Shirley Fabrics Corporation, New York, N.Y. Filed May 9, 1961.

VISTA

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof. First use Dec. 14, 1960.

SN 119,649. Shirley Fabrics Corporation, New York, N.Y. Filed May 9, 1961.

JIGGER

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof. First use Dec. 5, 1960.

Class 43—Thread and Yarn

SN 100,428. Coats & Clark Inc., New York, N.Y. Filed July 7, 1960.

EVERSHEEN

For Thread. First use on or about May 6, 1960.

SN 115,267. Spinnerin Yarn Co., Inc., South Hackensack, N.J. Filed Mar. 9, 1961.

QUICK-KNIT

Owner of Reg. No. 420,346. For Yarns of Natural and Synthetic Fibers. First use Aug. 20, 1940.

SN 116,166. Snaia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. Filed Mar. 21, 1961.

VELICREN

Owner of Italian Reg. No. 151,110, dated Sept. 29, 1960. For Synthetic Fibers in the Form of Yarns, Threads or Staple.

SN 116,467. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Mar. 27, 1961.

BOB-O-GERMANTOWN

Owner of Reg. No. 529,448. For Hand Knitting Yarn. First use August 1956.

SN 116,468. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Mar. 27, 1961.

BOB-O-MEADOWSPUN

Owner of Reg. No. 529,448. For Hand Knitting Yarn. First use March 1953.

SN 119,900. Edward P. Stabel & Co., Inc., New York, N.Y. Filed May 12, 1961.

CENTIPED

For Threads and Yarns Made of Cotton, Linen, Rayon, Silk, and Satin and Mixtures Thereof. First use Oct. 15, 1940.

Class 44—Dental, Medical, and Surgical Appliances

SN 96,765. The Texal Company, Inc., Minneapolis, Minn. Filed May 9, 1960.

MULLER

For Surgical Binders Including Male and Female Abdominal Binders, Chest Binders, Rib Splints and Replacement Buckles for Use Thereon. First use at least as early as June 1951.

SN 114,984. Midwest Dental Mfg. Co., Melrose Park, Ill. Filed Mar. 6, 1961.



Owner of Reg. Nos. 349,338, 682,609, and others. For Dental Supplies Comprising Air Driven and Gear Driven Dental Handpieces, Cotton Roll Holders, Control Units for Air Driven Handpieces, Parts for Control Units and Handpieces, Lubricators, Air Compressors, Foot Controllers, and Attachments for Handpieces. First use Sept. 30, 1935.

Class 46—Foods and Ingredients of Foods

SN 72,816. Elaboraciones Pesqueras del Cantabrico, S.A., Bilbao, Spain. Filed May 4, 1959.

MARMITTA CASERA

The English translation of the mark is "house kettle." Owner of Spanish Reg. No. 324,205, dated Oct. 31, 1958. For Fish, Vegetable and Legume Preserves in General.

SN 72,817. Elaboraciones Pesqueras del Cantabrico, S.A., Bilbao, Spain. Filed May 4, 1959.

"MARMITTA MARINERA"

An English translation of the mark is "boat kettle." Owner of Spanish Reg. No. 323,805, dated Dec. 12, 1957. For Fish Preserves in General, Specially One of Striped Tunny With Potatoes and Tomato Sauce.

SN 80,355. John Joseph G. Randazzo, Clayton, Mo. Filed Aug. 27, 1959.

TASTER'S OWN

For Teas. First use Aug. 10, 1959.

SN 84,306. Gulf South Advertising Specialties, Inc., Baton Rouge, La. Filed Oct. 30, 1959.



No claim is made to the word "Package" apart from the mark as shown. For Food Gift Packages Containing Preserves, Candy, Coffee, and Meat and Fish Sauce. First use May 18, 1959.

SN 88,810. Sterling Industries Inc., Sacramento, Calif., by change of name from Sacramento Freezers Inc., Sacramento, Calif. Filed Jan. 11, 1960.

SPECIAL OCCASION

For Frozen Mixed Fruits and Frozen Fried Onion Rings. First use Sept. 12, 1959, on frozen mixed fruits.

SN 93,303. J. A. Folger & Company, Kansas City, Mo. Filed Mar. 21, 1960.

LANCER

For Coffee.
First use Mar. 7, 1960.

SN 93,580. Burns-Alton Corporation, Alton, N.Y., by change of name from Alton Canning Co., Inc., Alton, N.Y. Filed Mar. 24, 1960.

BETTY BURNS

The name "Betty Burns" does not refer to any living individual.

For Canned Apple Sauce.
First use at least as early as Feb. 29, 1960.

SN 93,769. Dad's Root Beer Company, Chicago, Ill. Filed Mar. 28, 1960.

DAD'S

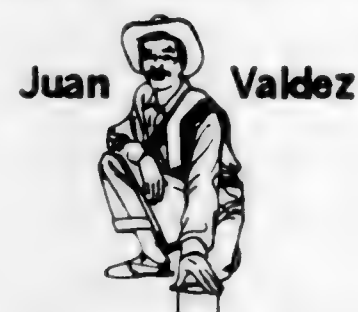
Owner of Reg. Nos. 364,823, 659,585, and others.
For Ice Cream.
First use Dec. 8, 1959.

SN 97,487. Frieda A. Harris, d.b.a. The Ketchard Kitchens, Southampton, N.Y. Filed May 19, 1960.

KETCHARD

For Food Condiment in the Nature of a Piquant Sauce Containing Tomatoes, Mustard, and Other Seasoning.
First use Apr. 20, 1960.

SN 97,511. National Federation of Coffee Growers of Colombia, New York, N.Y. Filed May 19, 1960.



The person shown is Jose Duval and his consent is of record. "Juan Valdez" is a fictitious name.
For Coffee.
First use Mar. 6, 1960.

SN 98,666. Miller's Pre-Prepared Potato Company, Inc., Blue Island, Ill. Filed June 8, 1960.

THRIFTIES

For Frozen or Refrigerated Potatoes Blanched in Oil Cut for French Frying, Sold in Bulk Packages to the Institutional Trade Only.
First use Feb. 26, 1958.

SN 99,684. Hunt Foods and Industries, Inc., Wilmington, Del., by merger from Wesson Oil & Snowdrift Company, Inc., New Orleans, La. Filed June 24, 1960.

VELTEX

For Shortening Made of Vegetable Oil Sold to the Institutional Trade.
First use at least as early as 1910.

SN 100,653. The Signet Corporation, Chicago, Ill. Filed July 11, 1960.

PRO-CAL

For Low Calorie Concentrated Vitamin, Mineral, and Protein Food in Powder Form for Use as a Weight Reducing Diet.

First use June 21, 1960.
Subj. to Intf. with SN 102,988.

SN 102,988. Sterling Pharmacal Co., Newark, N.J., assignee of William Wolf, d.b.a. Sterling Pharmacal Co., Newark, N.J. Filed Aug. 18, 1960.

PRO CAL

For Low Calorie Food Concentrate in Powder Form, Containing Non-Fat and Whole Milk Solids, Soya Flour, Corn Oil, Cottonseed Oil, Chondrus-Extract, Molasses, Sucrose, Yeast, Imitation Vanilla, Cocoa, for Use as a Weight Reducing Diet.

First use May 10, 1960.
Subj. to Intf. with SN 100,653.

SN 103,104. Forest E. Conder, d.b.a. Vita Vet Labs., Marion, Ind. Filed Aug. 22, 1960.



Applicant disclaims the number "900" apart from the mark as shown.

For Food Concentrate in Powder Form Consisting Principally of Milks, Flour, Sucrose, Starch, Oils, Yeast and Added Vitamins and Minerals for Use as a Weight Reducing Diet.
First use on or about July 14, 1960.
Subj. to Intf. with SN 102,988.

SN 107,531. Walnut Grove Products Company, Inc., Atlantic, Iowa. Filed Oct. 31, 1960.

WALNUT GROVE

Owner of Reg. No. 394,537.
For Animal and Poultry Feeds.
First use May 28, 1920.

SN 107,533. Walnut Grove Products Company, Inc., Atlantic, Iowa. Filed Oct. 31, 1960.

FARRO-LAC

For Feed for Sows.
First use Sept. 17, 1960.

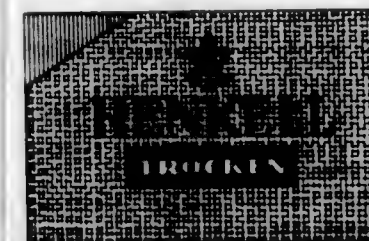
SN 107,534. Walnut Grove Products Company, Inc., Atlantic, Iowa. Filed Oct. 31, 1960.



Owner of Reg. No. 647,175.
For Animal and Poultry Feeds.
First use Oct. 1, 1951.

Class 47 — Wines

SN 79,062. Henkell & Co., Wiesbaden-Blebrich, Germany. Filed Aug. 5, 1959.



Applicant makes no claim to exclusive right to use of the word "Trocken" apart from the mark as shown. The meaning of the German word "Trocken" is "dry." The drawing is lined for red and gold. Owner of U.S. Reg. Nos. 343,258, 343,259, and 641,124.

For Sparkling Wines.
First use Dec. 15, 1953; in commerce March 1955.

SN 81,939. Eduardo Reynales, Bogota, Colombia. Filed Dec. 9, 1960.

Z

Owner of Colombian Reg. No. 45,008, dated Dec. 15, 1959.
For Wine.

SN 88,977. De La Salle Institute, Napa, Calif. Filed Jan. 14, 1960.



Owner of Reg. Nos. 562,912 and 562,913.
For Wines.
First use Dec. 14, 1959.

Class 48 — Malt Beverages and Liquors

SN 96,212. The Globe Brewing Co., Baltimore, Md. Filed May 2, 1960.



Owner of Reg. Nos. 100,633, 671,934, and others.
For Beer.
First use Dec. 10, 1959.

Class 50 — Merchandise Not Otherwise Classified

SN 94,320. Loroco Industries, Inc., Reading, Ohio. Filed Apr. 4, 1960.



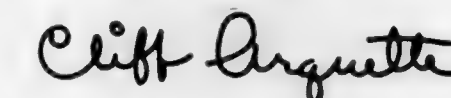
For Kit Containing Pre-Cut Pattern Pieces To Be Assembled by User Into Third Dimensional Article.
First use Mar. 4, 1960.

SN 95,908. Matherson-Selig Co., Harwood Heights, Ill. Filed Apr. 27, 1960.

MATHERSON-SELIG

For Color Cards, Cards and Brochures Having Color Chip Specimens Affixed Thereon for Use in Matching or Contrasting Colors in Paint, Furniture, Textiles, Plastics, Leather, and Similar Materials.
First use Mar. 28, 1922.

SN 105,610. Cliff Arquette, Gettysburg, Pa. Filed Oct. 3, 1960.



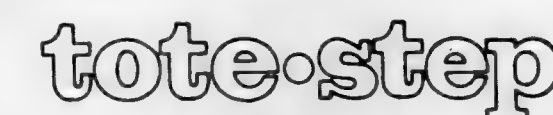
For Statuettes of Civil War Soldiers.
First use on or about Dec. 1, 1959.

SN 107,528. Walnut Grove Products Company, Inc., Atlantic, Iowa. Filed Oct. 31, 1960.

WALNUT GROVE

Owner of Reg. Nos. 391,155 and 394,537.
For Animal Feeders and Waterers and Animal and Poultry Fountains; Brooders and Farrowing Crates.
First use May 28, 1920.

SN 118,302. Tote-Step Corporation, Milwaukee, Wis. Filed Apr. 20, 1961.



For Ladder Platforms.
First use September 1958.

SN 118,338. Eugene G. Danner Manufacturing, Inc., Brooklyn, N.Y. Filed Apr. 21, 1961.



For Aquarium Supplies—Namely, Air Pumps With Replacement Parts, Water Filters With Replacement Parts, Aquarium Heaters With Replacement Parts, Thermostats With Replacement Parts, Diptubes With Replacement Parts, Airline Valves, Air Gauges With Jars, and Adjustable Strainers.
First use Sept. 14, 1953; Jan. 2, 1931, as to the word "Supreme."

SN 119,395. Lyon Rural Electric Company, San Diego, Calif. Filed May 5, 1961.

TRANS PARENT HEN

For Plastic Display Poultry Incubator for Educational Use.
First use Feb. 8, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 80,988. Gray Ban Corp., Wilkes-Barre, Pa. Filed Sept. 8, 1959.

GRAY BAN

For Temporary Hair Colorings for Men.
First use Mar. 25, 1959.

SN 100,250. Harper Method, Incorporated, Rochester, N.Y. Filed July 5, 1960.

HARPERGLEAM

Owner of Reg. Nos. 550,950, 686,044, and others.
For Finishing Rinse for the Hair.
First use May 14, 1947.

Class 52 — Detergents and Soaps

SN 84,637. Beam Chemical Company, Oconto Falls, Wis. Filed Nov. 5, 1959.

BEAM

For Cleaning Compounds and Preparations for Farm and Dairy Equipment, Kitchen Utensils and Dishes, Glassware and Windows, Floors and Walls, Clothing and Fabrics, Auto-

mobiles and Other Vehicles, Tile and Porcelain, Industrial Equipment, Road Machinery, Vehicle Tires, Kitchen Equipment, Appliances and Furniture; and Drainpipe Cleaners. First use on or about June 1, 1946, on cleaners for farm and dairy equipment.

SN 88,466. S. C. Johnson & Son, Inc., Racine, Wis. Filed Jan. 5, 1960.

JOHNSON'S

Owner of Reg. Nos. 106,108, 649,929, and others.
For Cleaners for Use on Hard, Resilient and Soft Surfaces in and Around the Home and in Commercial, Institutional and Industrial Establishments.
First use on or about 1915 on preparations for use by household consumers in cleaning hard surfaces.

SN 100,308. Lyla H. Snella, d.b.a. Wypit Company, Burbank, Calif. Filed July 5, 1960.



For General All Purpose Cleaner.
First use July 1959.

SERVICE MARKS**Class 100 — Miscellaneous**

SN 96,994. LeBaron E. Stockford, Westboro, Mass. Filed May 12, 1960.

SN 93,566. United States Testing Company, Inc., Hoboken, N.J. Filed Mar. 23, 1960.



The lining constitutes lining forming part of the mark and does not represent color. The words "Science" and "Industry" are disclaimed separate and apart from their use as shown.

For Testing, Research, Design, Development, Inspection of Materials, Components, Systems and Products in the Field of Chemistry, Electronics, Engineering Inspection, Psychometrics, Microbiology, Textiles, Leather, Foods, Minerals, Microscopy and Other Areas.

First use at least as early as 1927.

SN 94,922. Service Activities of Volunteer Engineers, Chicago, Ill. Filed Apr. 12, 1960.

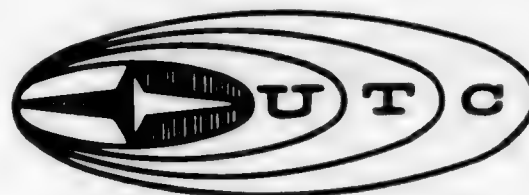
SAVE

For Providing Technical and Engineering Assistance to the Medical Research Field as a Service to Humanity.
First use on or about Jan. 2, 1959.

DIPPSY DOGGIE

No claim of exclusive right is made to the word "Doggie" as the name of the goods herein.
For Mobile Restaurant Services.
First use Mar. 28, 1960.

SN 100,319. United Technology Corporation, Sunnyvale, Calif. Filed July 5, 1960.



The drawing is lined for red.
For Consulting Services in the Field of Rocket Engine Development and Manufacture.
First use Mar. 15, 1960.

OCTOBER 31, 1961

U. S. PATENT OFFICE

TM 171

Class 101 — Advertising and Business

SN 90,842. Janney, Semple, Hill & Company, Hopkins, Minn.
Filed Feb. 12, 1960.



No particular color is claimed in connection with the mark, and the words "Service," "Quality," and "Hardware Stores" are disclaimed apart from the mark as shown.
For Retail Hardware Store Services.
First use Nov. 1, 1955.

SN 91,585. Barry Process Co., Inc., Brooklyn, N.Y. Filed Feb. 25, 1960.

BARRY PROCESS

The word "Process" is disclaimed separate and apart from the mark.

For Printing of Advertising Material for Others and More Particularly the Depositing of Colors on said Advertising Material.

First use in or about February 1950.

Class 102 — Insurance and Financial

SN 90,863. Seaboard Finance Company, Los Angeles, Calif.
Filed Feb. 12, 1960.

EVER-READY-CHEKS

Owner of Reg. No. 685,307.

For Consumer Loans.

First use on or about Sept. 1, 1958.

SN 101,003. Insurance Budget, Incorporated, Toledo, Ohio.
Filed July 18, 1960.



No claim is made to the words "Sure," "Safe," or "Systematic" apart from the mark.

For Collection of Insurance Premiums From Insured Persons and Forwarding Such Premiums to Underwriters.

First use Jan. 2, 1959.

Class 103 — Construction and Repair

SN 99,648. Ordont Orthodontic Laboratories, Inc., d.b.a. Ordont Laboratories, Inc., St. Louis, Mo. Filed June 24, 1960.



"as the twig is bent the tree is inclined"

The drawing is lined to indicate the color red.
For Orthodontic Laboratory Services Rendered to Members of the Dental Profession—Namely, the Filling of Prescriptions for Custom-Made Orthodontic Appliances Pursuant to Designs and Molds Furnished by Prescribing Dentists.
First use May 5, 1960.

Class 105 — Transportation and Storage

SN 93,616. Hal Linker Travel Service, Inc., d.b.a. Wonders of the World Tours, Los Angeles, Calif. Filed Mar. 24, 1960.

WONDERS OF THE WORLD TOURS

For the purpose of this registration and without prejudice to common law rights, no claim is made to the word "Tours" apart from the mark as shown.

For Conducting Travel Tours.

First use Apr. 15, 1959.

Class 106 — Material Treatment

SN 100,316. Thombert Incorporated, Newton, Iowa. Filed July 5, 1960.

DYALON

Owner of Reg. Nos. 704,256 and 717,033.

For Manufacture and Fabrication of Molded Plastic Parts and Articles on a Custom Basis.

First use Oct. 8, 1957.

Class 107 — Education and Entertainment

SN 93,783. Florists' Telegraph Delivery Association, Detroit, Mich. Filed Mar. 28, 1960.

SN 38,964. La Playa Sextet, Brooklyn, N.Y. Filed Oct. 16, 1957.

LA PLAYA SEXTET

The words "Florists' Telegraph Delivery" and "Worldwide" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 407,189, 695,460, and others.

For Entertainment Services—Namely, the Rendition of Dance Music and Acting.
First use Feb. 27, 1947.

For Aiding the Florist Industry by Awarding Scholarships in Floriculture and Floristry to Deserving Students.
First use Nov. 4, 1959.

CERTIFICATION MARKS**Class A — Goods**

SN 96,062. Secrétariat d'Etat aux Finances et au Commerce, Tunis, Tunisia. Filed Apr. 15, 1960.



The mark certifies that the goods conform to standards established by applicant and that said goods originate in Tunisia. Owner of Tunisian Reg. No. 91, case 18, dated Jan. 14, 1935.

For Wines; Sponges; Olive Oils Either Alone or in Mixture With Other Oils for Lubricating Purposes; Cups, Saucers, Jugs, Plates, Vases, Bowls, Pots, Trays, Dishes, Mugs, Platters, Crocks, Jars, Bottles, Decanters, and Pitchers, All of Earthenware; Knitted and Netted Piece Goods—Namely, Wool or Cotton Carpets, Woolen and Silk Piece Goods; and Olive Oil, Honey, Eggs, Barley, and Fresh, Dried, and Preserved Fruits, Vegetables, and Berries.

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TRADEMARK REGISTRATIONS ISSUED PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

723,211. QBX. Borg-Warner Corporation. SN 91,507.
Pub. 8-15-61. Filed 2-24-60.

723,212. PRESFOAM. Leewood Corporation. SN 101,111.
Pub. 8-15-61. Filed 7-19-60.

723,213. MELAGLAZE. Allied Chemical Corporation. SN 103,383. Pub. 8-15-61. Filed 8-25-60.

723,214. MIRROPHANE AND DESIGN. Gomar Manufacturing Co., Inc. SN 105,513. Pub. 8-15-61. Filed 9-30-60.

723,215. ULTRA-GLAS. Fortin Plastics, Inc. SN 107,191.
Pub. 8-15-61. Filed 10-26-60.

723,216. FRANK AND DESIGN. J. P. Frank Chemical & Plastic Corp. SN 108,621. Pub. 8-15-61. Filed 11-17-60.

723,217. UTILAMID. General Mills, Inc. SN 109,313.
Pub. 8-15-61. Filed 11-30-60.

723,218. DN/100. H. Wenzel Tent & Duck Co. SN 110,637.
Pub. 8-15-61. Filed 12-21-60.

723,219. TRONA. American Potash & Chemical Corporation. SN 111,141. Pub. 8-15-61. Filed 1-3-61.

723,220. WAGON ROD DESIGN. Kern County Land Company. SN 111,409. Pub. 8-15-61. Filed 1-6-61.

723,221. IDEAL H-3-W AND DESIGN. Leo L. Fuchs, d.b.a. Ideal Hatchery and Poultry Farm. SN 112,451.
Pub. 8-15-61. Filed 1-25-61.

723,222. CALIFOAM. Urethane Corporation of California. SN 113,040. Pub. 8-15-61. Filed 2-3-61.

723,223. UCC AND DESIGN. Urethane Corporation of California. SN 113,579. Pub. 8-15-61. Filed 2-13-61.

723,224. PARACRIL OZO. United States Rubber Company. SN 114,559. Pub. 8-15-61. Filed 2-27-61.

723,225. VINCEL. Courtaulds, Limited. SN 114,840.
Pub. 8-15-61. Filed 3-3-61.

723,226. UGIKRAL. Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine. SN 115,634. Pub. 8-15-61. Filed 3-14-61.

723,227. RUBYLITH. Ulano Graphic Arts Supplies, Inc. SN 116,767. Pub. 8-15-61. Filed 3-29-61.

723,228. PARAGON. J. M. Huber Corporation. SN 117,010. Pub. 8-15-61. Filed 4-3-61.

723,229. HI-WHITE. J. M. Huber Corporation. SN 117,018.
Pub. 8-15-61. Filed 4-3-61.

723,230. INDIGOL AND DESIGN. Gollger Leather Co., Inc. SN 117,101. Pub. 8-15-61. Filed 4-4-61.

723,231. CHEM-JEL. Benton Clay Co. SN 117,256. Pub. 8-15-61. Filed 4-6-61.

723,232. FLOSBRENE. American Synthetic Rubber Corporation. SN 117,431. Pub. 8-15-61. Filed 4-10-61.

723,233. STARLETTS. Herbert A. Hyman, d.b.a. Black Creek Charcoal Company. SN 117,635. Pub. 8-15-61. Filed 4-11-61.

723,234. BLACK DIAMOND AND DESIGN. Herbert A. Hyman, d.b.a. Black Creek Charcoal Company. SN 117,636. Pub. 8-15-61. Filed 4-11-61.

723,235. KING O' CLUBS. Larus & Brother Company. SN 117,716. Pub. 8-15-61. Filed 4-12-61.

723,236. SILSKIN. Armour and Company. SN 118,126.
Pub. 8-15-61. Filed 4-19-61.

Class 2—Receptades

723,237. ALUDECK. Laroche Bouvier & Cie. SN 98,959.
Pub. 8-15-61. Filed 5-26-60.

723,238. PAYMASTER. King Leathers Incorporated. SN 110,998. Pub. 8-15-61. Filed 12-29-60.

Class 6—Chemicals and Chemical Compositions

723,239. INDO-PHAX. Applied Research Institute Inc. SN 101,920. Pub. 8-15-61. Filed 8-3-60.

723,240. PHOS-PHAX. Applied Research Institute Inc. SN 101,921. Pub. 8-15-61. Filed 8-3-60.

723,241. PUREX AND DESIGN. Purex Corporation, Ltd. SN 104,047. Pub. 8-15-61. Filed 9-7-60.

723,242. REVERSIZE. Revertex Limited. SN 106,140.
Pub. 8-15-61. Filed 10-10-60.

723,243. TELODRIN. Shell Oil Company. SN 107,232.
Pub. 8-15-61. Filed 10-24-60.

723,244. WEST. West Chemical Products, Inc. SN 110,387.
Pub. 8-15-61. Filed 12-16-60.

723,245. SUPER FILMEEN. Dearborn Chemical Company. SN 112,694. Pub. 8-15-61. Filed 1-30-61.

723,246. POLY-G. Olin Mathieson Chemical Corporation. SN 113,356. Pub. 8-15-61. Filed 2-9-61.

723,247. POLY-TONER. Eastman Kodak Company. SN 113,410. Pub. 8-15-61. Filed 2-10-61.

723,248. CITRUS BELT. Florasynth Laboratories, Incorporated. SN 117,475. Pub. 8-15-61. Filed 4-10-61.

Class 7—Cordage

723,249. SUPRA-PUTH. Heintz Puth Kom. Ges. SN 48,093. Pub. 8-15-61. Filed 3-20-58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

723,250. YAMA WOOD. Richard Emanuel Longarini. SN 106,816. Pub. 8-15-61. Filed 10-20-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

723,251. SMITH-BLAIR REDI-CLAMP. Smith-Blair, Inc. SN 98,545. Pub. 8-15-61. Filed 6-6-60.

723,252. REPRESENTATION OF A HAND POURING COFFEE. Chemex Corporation. SN 99,129. Pub. 6-6-61. Filed 6-16-60.

Class 18—Medicines and Pharmaceutical Preparations

723,253. BITE-A-MINS. Sears, Roebuck and Co. SN 105,677. Pub. 8-15-61. Filed 10-3-60.

- 723,254. EUGIENE. Colgate-Palmolive Company, assignee of Unexcelled Chemical Corporation. SN 105,837. Pub. 8-15-61. Filed 10-5-60.
- 723,255. NO-BLINK. Grove Laboratories Incorporated. SN 108,172. Pub. 8-15-61. Filed 11-10-60.
- 723,256. NO-WINK. Grove Laboratories Incorporated. SN 108,173. Pub. 8-15-61. Filed 11-10-60.
- 723,257. ENDAC. Helene Curtis Industries, Inc., d.b.a. Helene Curtis Laboratories. SN 108,277. Pub. 8-15-61. Filed 11-14-60.
- 723,258. BEACON. Dartmouth Marketing Co. Inc. SN 109,675. Pub. 8-15-61. Filed 12-6-60.
- 723,259. DIADUST. Ortho Pharmaceutical Corporation. SN 109,729. Pub. 8-15-61. Filed 12-6-60.
- 723,260. AYERST. American Home Products Corporation, d.b.a. Ayerst Laboratories. SN 115,290. Pub. 8-15-61. Filed 3-10-61.
- 723,261. PORCULIN. Sterling Drug Inc. SN 115,638. Pub. 8-15-61. Filed 3-14-61.
- 723,262. BOVOLON. Sterling Drug Inc. SN 115,639. Pub. 8-15-61. Filed 3-14-61.
- 723,263. TEMPACINE. Corn States Laboratories, Inc. SN 115,666. Pub. 8-15-61. Filed 3-15-61.
- 723,264. VER-VAR. Pharmaceutical Specialties, Inc., d.b.a. Dermatological Prescription Laboratories. SN 115,720. Pub. 8-15-61. Filed 3-15-61.
- 723,265. CALIPO. The Wander Company, d.b.a. Dorsey Laboratories. SN 115,743. Pub. 8-15-61. Filed 3-15-61.
- 723,266. GASTROLAX. Great Southern Drug Co. SN 116,021. Pub. 8-15-61. Filed 3-20-61.
- 723,267. X-P-L. Whitehurst Distributing Company. SN 116,098. Pub. 8-15-61. Filed 3-20-61.
- 723,268. STIMSEN. American Cyanamid Company. SN 116,185. Pub. 8-15-61. Filed 3-22-61.
- 723,269. ZORANE. American Cyanamid Company. SN 116,186. Pub. 8-15-61. Filed 3-22-61.
- 723,270. GEOBIOTIC. Chas. Pfizer & Co., Inc. SN 116,253. Pub. 8-15-61. Filed 3-22-61.
- 723,271. GEVRASE. American Cyanamid Company. SN 116,370. Pub. 8-15-61. Filed 3-24-61.
- 723,272. GEVRITE. American Cyanamid Company. SN 116,371. Pub. 8-15-61. Filed 3-24-61.
- 723,273. FERIBIOT. Ciba Limited. SN 117,341. Pub. 8-15-61. Filed 4-7-61.
- 723,274. E-R-O. First Texas Pharmaceuticals, Inc. SN 117,353. Pub. 8-15-61. Filed 4-7-61.

Class 19—Vehicles

- 723,275. NO BORT AND DESIGN. The Sierracin Corporation. SN 96,754. Pub. 8-15-61. Filed 5-9-60.
- 723,276. PORTOBOND. H. K. Porter Company, Inc. SN 115,160. Pub. 8-15-61. Filed 3-8-61.

Class 21—Electrical Apparatus, Machines, and Supplies

- 723,277. ROBERT E. LEE. Sunbeam Corporation. SN 113,248. Pub. 8-13-61. Filed 2-7-61.
- 723,278. DUO-TRON. El-Tronics, Inc., assignee of Nu-Lite Corporation. SN 113,292. Pub. 8-15-61. Filed 2-8-61.

Class 22—Games, Toys, and Sporting Goods

- 723,279. SURE-BITE. Don McIntyre, assignee of Ray Wiseman, d.b.a. Sure-Bite Live Bait Co. SN 84,108. Pub. 8-15-61. Filed 10-27-59.
- 723,280. YACHTSMAN. Magnetic Cards of California, Inc. SN 98,375. Pub. 8-15-61. Filed 6-3-60.

- 723,281. ARISTOCRAT. Kroydon Company, Inc. SN 102,669. Pub. 8-15-61. Filed 8-15-60.
- 723,282. ACE BOMBER. Amerace Corporation. SN 104,976. Pub. 8-15-61. Filed 9-22-60.
- 723,283. BOUND-FUL. Erickson & Frederick. SN 108,164. Pub. 8-15-61. Filed 11-10-60.
- 723,284. TURF MATE. Vornado, Inc. SN 109,014. Pub. 8-15-61. Filed 11-23-60.
- 723,285. BARNSTORMER. Louis Johnson Company. SN 113,422. Pub. 8-15-61. Filed 2-10-61.
- 723,286. FROSTY JOHN. Louis Johnson Company. SN 113,423. Pub. 8-15-61. Filed 2-10-61.
- 723,287. BEAT THE TAXES AND DESIGN. Gloria Game Company, Inc. SN 113,638. Pub. 8-15-61. Filed 2-14-61.
- 723,288. BEAT THE TAXES. Gloria Game Company, Inc. SN 113,639. Pub. 8-15-61. Filed 2-14-61.
- 723,289. BLACK MAGIC. Paul R. B. Dixon. SN 113,700. Pub. 8-15-61. Filed 2-15-61.
- 723,290. TOT ROD. The Murray Ohio Manufacturing Company. SN 113,754. Pub. 8-15-61. Filed 2-15-61.
- 723,291. CAPRI. The Seamless Rubber Company. SN 114,352. Pub. 8-15-61. Filed 2-24-61.
- 723,292. MADRID. The Seamless Rubber Company. SN 114,354. Pub. 8-15-61. Filed 2-24-61.
- 723,293. BERMUDA. The Seamless Rubber Company. SN 114,355. Pub. 8-15-61. Filed 2-24-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

- 723,294. HI-DENSITY. Albert Air Conveyor, Corp. SN 97,911. Pub. 8-15-61. Filed 5-26-60.
- 723,295. CAPRI. J. Wiss & Sons Co. SN 108,852. Pub. 8-8-61. Filed 11-21-60.
- 723,296. ARBURG. Karl Hehl, d.b.a. Arburg Feingeraete-fabrik ohg. Hehl & Sohne. SN 111,740. Pub. 8-15-61. Filed 1-12-61.
- 723,297. MOHAWK. Motec Industries, Inc., by change of name from Minneapolis-Moline Company. SN 112,291. Pub. 8-8-61. Filed 1-23-61.
- 723,298. 8 AND DESIGN. Koninklijke Machinefabriek Gebr. Stork & Co. N.V. SN 113,117. Pub. 8-15-61. Filed 2-6-61.
- 723,299. FLYING DUTCHMAN. Motec Industries, Inc., by change of name from Minneapolis-Moline Company. SN 114,738. Pub. 7-25-61. Filed 2-27-61.
- 723,300. HYDROLATOR. Bell & Gossett Company. SN 115,419. Pub. 8-15-61. Filed 3-13-61.
- 723,301. DOUBLE DEMON HIGH-SPEED STEEL AND DESIGN. The DoAll Company. SN 115,450. Pub. 8-15-61. Filed 3-13-61.
- 723,302. DOUBLE DEMON HIGH-SPEED STEEL AND DESIGN. The DoAll Company. SN 115,451. Pub. 8-15-61. Filed 3-13-61.

Class 24—Laundry Appliances and Machines

- 723,303. CO-MA-CO THRIFTY FIFTY. Cook Machinery Co., Inc. SN 109,476. Pub. 8-15-61. Filed 12-2-60.

Class 28—Jewelry and Precious-Metal Ware

- 723,304. CAMPUSCREST CREATIONS AND DESIGN. Loren Murchison & Co., Inc. SN 97,903. Pub. 8-15-61. Filed 5-25-60.
- 723,305. MAC-LADY. Elsie J. Boucher. SN 100,882. Pub. 8-15-61. Filed 7-15-60.
- 723,306. ARISTO-FLEX. Forstner, Inc. SN 113,108. Pub. 8-15-61. Filed 2-6-61.

Class 30 — Crockery, Earthenware, and Porcelain

723,307. RICHARD GINORI. Societa Ceramica Richard Ginori. SN 101,985. Pub. 8-15-61. Filed 8-4-60.

Class 31 — Filters and Refrigerators

723,308. STOR-MOR. Amana Refrigeration, Inc. SN 112,515. Pub. 8-15-61. Filed 1-26-61.

723,309. ROLLING-COLD. Tyler Refrigeration Corporation. SN 112,657. Pub. 8-15-61. Filed 1-27-61.

Class 32 — Furniture and Upholstery

723,310. DYNASTY. The Stearns & Foster Company. SN 111,238. Pub. 8-15-61. Filed 1-3-61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

723,311. REBOUND. The Goodyear Tire & Rubber Company. SN 115,334. Pub. 8-15-61. Filed 3-10-61.

723,312. HOLFAST. Dayco Corporation. SN 115,587. Pub. 8-15-61. Filed 3-14-61.

Class 37 — Paper and Stationery

723,313. TOMBOW AND DESIGN. Tombow Pencil Manufacturing Co. Ltd. SN 108,095. Pub. 8-15-61. Filed 11-8-60.

723,314. POISE. Kimberly-Clark Corporation. SN 112,964. Pub. 8-15-61. Filed 2-2-61.

723,315. GROTESQUE REPRESENTATION OF HUMAN FIGURE. Marcel Louis Michel Antoine Bich. SN 113,679. Pub. 8-15-61. Filed 2-15-61.

723,316. COLART. Columbian Art Works, Inc. SN 113,690. Pub. 8-15-61. Filed 2-15-61.

723,317. SOFTCOTE. Scott Paper Company. SN 114,540. Pub. 8-15-61. Filed 2-27-61.

723,318. GIFT BOOKARD. Gallery of Gifts, Inc. SN 114,950. Pub. 8-15-61. Filed 3-6-61.

723,319. SOFTEES. Hoffmaster Company, Inc. SN 115,057. Pub. 8-15-61. Filed 3-7-61.

Class 38 — Prints and Publications

723,320. AUTOMOTIVE DISTRIBUTION. The Irving-Cloud Publishing Company. SN 84,664. Pub. 8-15-61. Filed 11-5-59.

723,321. GREEN GUIDE ETC. AND DESIGN. Pacific Appraisal Co., assignee of Harry V. Givens, d.b.a. Pacific Appraisal Co. SN 87,672. Pub. 8-15-61. Filed 12-21-59.

723,322. DRIVE-IN MANAGEMENT. Davidson Publishing Company. SN 91,076. Pub. 8-15-61. Filed 2-17-60.

723,323. LOVE ROSE. Norcross, Inc. SN 100,149. Pub. 8-15-61. Filed 7-1-60.

723,324. ACTALYZER AND DESIGN. George L. Glossbrenner, d.b.a. Actalyzer Investment Service. SN 101,678. Pub. 8-15-61. Filed 7-29-60.

723,325. WRITTEN AND EDITED TO MERIT YOUR CONFIDENCE. The Houston Post Company. SN 102,484. Pub. 8-15-61. Filed 8-11-60.

723,326. TOURIST COURT JOURNAL ETC. Tourist Court Journal Company. SN 103,623. Pub. 7-25-61. Filed 8-29-60.

723,327. JEWELERAMA. Khen Classics Advertising, Inc. SN 109,802. Pub. 8-15-61. Filed 12-7-60.

Class 39 — Clothing

723,328. SOUTHERN AND DESIGN. Air Products and Chemicals, Inc., assignee of Southern Oxygen Company. SN 102,429. Pub. 8-1-61. Filed 8-10-60.

723,329. WM. Welsh Manufacturing Company. SN 108,725. Pub. 8-15-61. Filed 11-18-60.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

723,330. LEACRIL. A.C.S.A.—Applicazioni Chimiche S.p.A. SN 107,719. Pub. 8-15-61. Filed 11-3-60.

Class 43 — Thread and Yarn

723,331. LEACRIL. A.C.S.A.—Applicazioni Chimiche S.p.A. SN 107,720. Pub. 8-15-61. Filed 11-3-60.

723,332. UNIROVING. Ferro Corporation. SN 109,687. Pub. 8-15-61. Filed 12-6-60.

Class 44 — Dental, Medical, and Surgical Appliances

723,333. CROUPAIRE. Air-Shields, Inc. SN 110,724. Pub. 8-15-61. Filed 12-23-60.

723,334. REJUVENTE. Rejuvene Inc. SN 111,013. Pub. 8-15-61. Filed 12-29-60.

723,335. BAYTEX. Parke, Davis & Company. SN 112,304. Pub. 8-15-61. Filed 1-23-61.

723,336. NATURALAMB AND DESIGN. Youngs Rubber Corporation. SN 112,928. Pub. 8-15-61. Filed 2-1-61.

Class 46 — Foods and Ingredients of Foods

723,337. CAFE SALVADOR AND DESIGN. Cafe Salvador, Inc. SN 71,456. Pub. 8-15-61. Filed 4-13-59.

723,338. CHEESIES. Filler Products, Inc. SN 94,478. Pub. 8-15-61. Filed 4-6-60.

723,339. PIC-N-SAV. Norristown Wholesale, Inc. SN 99,595. Pub. 8-15-61. Filed 6-23-60.

723,340. SILVER LABEL. Northville Laboratories, Incorporated. SN 100,629. Pub. 8-15-61. Filed 7-11-60.

723,341. ROOSTER HEAD AND DESIGN. Kellogg Company. SN 101,788. Pub. 8-15-61. Filed 8-1-60.

723,342. ARABASAN. Tetroid Company, Inc. SN 103,892. Pub. 8-15-61. Filed 8-30-60.

723,343. COUGHLETS. American Chicle Company. SN 103,754. Pub. 8-15-61. Filed 9-1-60.

723,344. BARNARD'S CRUNCHY DIP. L. M. Barnard. SN 104,135. Pub. 8-15-61. Filed 9-9-60.

723,345. WRIGHTS. Wright Popcorn & Nut Co. SN 106,019. Pub. 8-15-61. Filed 10-7-60.

723,346. VAN HOUTEN COCO. C. J. Van Houten & Zoon, N.V. SN 106,291. Pub. 8-15-61. Filed 10-12-60.

723,347. CACAO VAN HOUTEN AND DESIGN. C. J. Van Houten & Zoon, N.V. SN 106,553. Pub. 8-15-61. Filed 10-17-60.

723,348. NEW & READY YOUNGURT AND DESIGN. U.S. Nutrition Products Company, Inc. SN 107,988. Pub. 8-15-61. Filed 11-7-60.

723,349. SUPREME PARCHED. Palazzo, Horvilleur & Co. Ltd. SN 108,660. Pub. 8-15-61. Filed 11-17-60.

- 723,350. **QUALITA AND DESIGN.** E. Planetta & Company. SN 109,096. Pub. 8-15-61. Filed 11-25-60.
- 723,351. **BRUNCH LOAF.** Thee-Kay Corporation, d.b.a. Kathee's Sunlight Kitchens. SN 109,211. Pub. 8-15-61. Filed 11-28-60.
- 723,352. **BECEL.** Van Den Berghs and Jurgens Limited. SN 109,534. Pub. 8-15-61. Filed 12-2-60.
- 723,353. **OVERLAND VINEYARDS.** John Dulcich, d.b.a. John Dulcich & Sons. SN 109,571. Pub. 8-15-61. Filed 12-5-60.
- 723,354. **KIDDIE KUTS.** Tater State Frozen Foods. SN 109,746. Pub. 8-15-61. Filed 12-6-60.
- 723,355. **MRS. FILBERT'S TRIUMPH.** J. H. Filbert, Inc. SN 110,148. Pub. 8-15-61. Filed 12-13-60.
- 723,356. **RENSIE.** B. Eisner Produce Corp. SN 110,535. Pub. 8-15-61. Filed 12-20-60.
- 723,357. **CLINITHIN.** Vitamin Council Incorporated. SN 110,634. Pub. 8-15-61. Filed 12-21-60.
- 723,358. **SNACKEEZ.** Snack Products, Inc. SN 110,895. Pub. 8-15-61. Filed 12-27-60.
- 723,359. **CITROFLASH.** General Foods Corporation. SN 111,662. Pub. 8-15-61. Filed 1-11-61.
- 723,360. **ALL STAR.** All Star Mills, Inc. SN 111,840. Pub. 8-15-61. Filed 1-16-61.

Class 49 — Distilled Alcoholic Liquors

- 723,361. **KENTUCKY PRIDE.** Esbeco Distilling Corp. SN 93,778. Pub. 8-15-61. Filed 3-28-60.
- 723,362. **RIO GRANDE.** Jules Berman & Associates, Inc. SN 102,181. Pub. 8-15-61. Filed 8-8-60.
- 723,363. **VOODOO AND DESIGN.** Jack Sher, d.b.a. Voodoo Rum Co. SN 105,217. Pub. 8-15-61. Filed 9-26-60.
- 723,364. **ROYAL ASSENT.** Mackies (B & L) Ltd. SN 109,714. Pub. 8-15-61. Filed 12-6-60.

Class 50 — Merchandise Not Otherwise Classified

- 723,365. **BUTCH.** W. Goebel Porzellanfabrik. SN 114,219. Pub. 8-15-61. Filed 2-23-61.

Class 51 — Cosmetics and Toilet Preparations

- 723,366. **'PERSU.'** Drake Laboratories, Inc. SN 102,748. Pub. 8-15-61. Filed 8-16-60.
- 723,367. **ZESTENE.** George H. Weyer, Inc., d.b.a. George H. Weyer Co. SN 102,971. Pub. 8-15-61. Filed 8-18-60.
- 723,368. **BABY CHANGE.** The Mennen Company. SN 107,476. Pub. 8-15-61. Filed 10-31-60.
- 723,369. **SWIZZ.** The Mennen Company. SN 107,479. Pub. 8-15-61. Filed 10-31-60.
- 723,370. **HIGH SIERRA.** The Mennen Company. SN 107,480. Pub. 8-15-61. Filed 10-31-60.
- 723,371. **AIR DE FRANCE.** Helene Curtis Industries, Inc., d.b.a. Lenthic. SN 108,278. Pub. 8-15-61. Filed 11-14-60.
- 723,372. **FACE SAVER.** John H. Breck, Inc. SN 109,029. Pub. 8-15-61. Filed 11-25-60.
- 723,373. **IMAGIQUE.** Nethercutt Laboratories, d.b.a. Jac Robaire Cosmetics and as Jac Robaire. SN 109,613. Pub. 8-15-61. Filed 12-5-60.
- 723,374. **JR.** Nethercutt Laboratories, d.b.a. Jac Robaire Cosmetics and as Jac Robaire. SN 109,614. Pub. 8-15-61. Filed 12-5-60.
- 723,375. **JAC ROBAIRE.** Nethercutt Laboratories, d.b.a. Jac Robaire Cosmetics. SN 109,615. Pub. 8-15-61. Filed 12-5-60.
- 723,376. **MIRESE.** Alexandra de Markoff Sales Corporation. SN 111,573. Pub. 8-15-61. Filed 1-10-61.

- 723,377. **FREEZE 'N TWEEZE.** Dellene, Inc. SN 111,868. Pub. 8-15-61. Filed 1-16-61.
- 723,378. **KIWI (KEE WEE) FOOT AND SHOE FRESH-UP AND DESIGN.** The Kiwi Polish Company Proprietary Limited. SN 111,980. Pub. 8-15-61. Filed 1-17-61.
- 723,379. **TISSURAL.** Associated Laboratories, Inc., d.b.a. Vitamin-Quota. SN 112,017. Pub. 8-15-61. Filed 1-18-61.
- 723,380. **MONA LISA.** Rittornelle, Inc. SN 112,922. Pub. 8-15-61. Filed 2-1-61.
- 723,381. **COAT OF ARMS.** Morton Manufacturing Corporation, d.b.a. Blair. SN 113,433. Pub. 8-15-61. Filed 2-10-61.

Class 52 — Detergents and Soaps

- 723,382. **MON-O-SAN.** Monarch Chemicals, Inc. SN 82,009. Pub. 5-2-61. Filed 9-24-59.
- 723,383. **TREND-X BEADS.** Purex Corporation, Ltd. SN 95,761. Pub. 8-15-61. Filed 4-25-60.
- 723,384. **CHROMERGE.** Manostat Corporation. SN 113,229. Pub. 8-15-61. Filed 2-7-61.
- 723,385. **RECALL.** Chesebrough-Pond's Inc. SN 114,084. Pub. 8-15-61. Filed 2-21-61.
- 723,386. **FLOURISH.** Chesebrough-Pond's Inc. SN 114,085. Pub. 8-15-61. Filed 2-21-61.

Service Marks

Class 100 — Miscellaneous

- 723,387. **AMY JOY.** Amy Joy Donuts, Inc. SN 81,072. Pub. 8-15-61. Filed 9-9-59.
- 723,388. **A & W ROOT BEER AND DESIGN.** A & W Root Beer Co. SN 89,980. Pub. 8-15-61. Filed 2-1-60.
- 723,389. **WERNER TEX.** Werner Textile Consultants. SN 94,119. Pub. 8-15-61. Filed 3-31-60.
- 723,390. **AMERICAN VISION INSTITUTE AND DESIGN.** American Vision Institute. SN 97,914. Pub. 8-15-61. Filed 5-26-60.
- 723,391. **NEW BAGDAD.** Ruby Misch. SN 101,563. Pub. 8-15-61. Filed 7-27-60.
- 723,392. **THE DIVERSEY SANI-CARE PLAN ETC. AND DESIGN.** The Diversey Corporation. SN 102,834. Pub. 8-15-61. Filed 8-17-60.
- 723,393. **RENTCENTER AND DESIGN.** Robert W. Franklin. SN 107,252. Pub. 8-15-61. Filed 10-27-60.
- 723,394. **AMALOG.** Tuboscope Company. SN 111,249. Pub. 8-15-61. Filed 1-3-61.
- 723,395. **MINIMAX.** Tuboscope Company. SN 111,250. Pub. 8-15-61. Filed 1-3-61.

Class 101 — Advertising and Business

- 723,396. **"RED" SCISSORS AND DESIGN.** Premium Associates, Inc. SN 84,166. Pub. 8-15-61. Filed 10-28-59.
- 723,397. **CRAIG PERSONNEL SYSTEM.** Charles M. O'Shea, d.b.a. Craig Personnel System. SN 92,289. Pub. 8-15-61. Filed 3-7-60.
- 723,398. **FLOW CHART DESIGN.** Spencer Stuart and Associates, Inc. SN 108,226. Pub. 8-15-61. Filed 11-10-60.
- 723,399. **AP AND DESIGN.** Admaster Prints, Inc. SN 110,519. Pub. 8-15-61. Filed 12-20-60.

Class 103 — Construction and Repair

- 723,400. **DUTCH MAID AND DESIGN.** L.I.C. Corp. SN 80,995. Pub. 8-15-61. Filed 9-8-59.

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723,401. ALLEN'S. Allen Carpet Cleaning and Rug Weaving Company. SN 91,984. Pub. 8-15-61. Filed 3-2-60.

723,402. ONE HOUR VALETONE AND DESIGN. One-Hour Valet, Incorporated. SN 105,194. Pub. 8-15-61. Filed 9-26-60.

723,403. SYSTEM X AND DESIGN. Display Sales. SN 105,345. Pub. 8-15-61. Filed 9-28-60.

Class 105 — Transportation and Storage

723,404. STO-PAK AND DESIGN. Dean Van Lines, Inc., assignee of Alfred E. Dean, d.b.a. Dean Van Lines. SN 677,304. Pub. 8-15-61. Filed 11-26-64.

723,405. FAMILY-PAK. National Van Lines, Inc. SN 99,078. Pub. 8-15-61. Filed 6-15-60.

723,406. FLYING FISH. Calderone Enterprises Corporation. SN 106,182. Pub. 8-15-61. Filed 10-11-60.

723,407. ME ETC. AND DESIGN. Machise Express Co., Inc. SN 109,333. Pub. 8-15-61. Filed 11-30-60.

723,408. WARDMEX. Wardmex Line, Inc. SN 110,636. Pub. 8-15-61. Filed 12-21-60.

Class 106 — Material Treatment

723,409. CANADIZING AND DESIGN. General Magna-plate Corp. SN 90,422. Pub. 8-15-61. Filed 2-5-60.

Class 107 — Education and Entertainment

723,410. ROCHESTER RED WINGS AND DESIGN. Rochester Community Baseball, Inc. SN 29,955. Pub. 8-15-61. Filed 5-13-57.

723,411. REPRESENTATION OF FOOTPRINT. Herald Tribune Fresh Air Fund. SN 70,656. Pub. 8-15-61. Filed 4-1-59.

723,412. FOR A NATION OF NEIGHBORS AND DESIGN. National Federation of Settlements and Neighborhood Centers. SN 76,240. Pub. 8-15-61. Filed 6-22-59.

723,413. TEEN-O-RAMA. Charlotte Samuels Associates. SN 94,695. Pub. 8-15-61. Filed 4-8-60.

Collective Membership Marks

Class 200

723,414. INTERNATIONAL Y'S MEN'S CLUB AND DESIGN. International Association of Y's Men's Clubs. SN 95,825. Pub. 8-15-61. Filed 4-26-60.

723,415. THE U.S.S. ARIZONA MEMORIAL FOUNDATION AND DESIGN. The U.S.S. Arizona Memorial Foundation, Inc. SN 97,801. Pub. 8-15-61. Filed 5-24-60.

723,416. HVI ETC. AND DESIGN. Home Ventilating Institute. SN 110,337. Pub. 8-15-61. Filed 12-16-60.

723,417. WALLPAPER COUNCIL MEMBER AND DESIGN. Wallpaper Council Incorporated. SN 114,151. Pub. 8-15-61. Filed 2-21-61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

723,418. Mitchell Metal Products, Inc., Cleveland, Ohio. SN 98,718. Filed P.R. 6-9-60; Am. S.R. 8-23-61.

BOATANK

For Auxillary Fuel Tanks for Inboard and Outboard Marine Motors.
First use May 26, 1960.

723,419. Consolidated Paper Company, Monroe, Mich. SN 108,946. Filed P.R. 11-23-60; Am. S.R. 8-18-61.

STA-TITE

For Stapled Bottom Fiberboard Containers for Asphalt and Other Chemicals.
First use July 27, 1960.

Class 12 — Construction Materials

723,420. Hartman Metal Fabricators, Inc., Waterloo, N.Y. SN 114,768. Filed P.R. 3-2-61; Am. S.R. 8-14-61.

Hartman

For Prefabricated Loading Docks and for Adjustable Shelving.
First use in March 1956.

Class 15 — Oils and Greases

723,421. Whiting Brothers Oil Company, Holbrook, Ariz. SN 67,416. Filed P.R. 2-9-59; Am. S.R. 8-28-61.

DESERT-MOUNTAIN

For Oil, Motor Oil, and Lubricating Oil.
First use Dec. 15, 1958.

Class 19 — Vehides

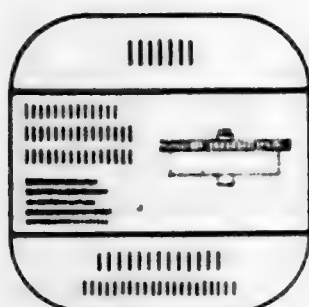
723,422. Saks & Company, New York, N.Y. SN 120,016. Filed 5-15-61.

Baby Boutique

For Baby Carriages and Perambulators, Go-Carts, Strollers, Carts, Sleds, Sleighs, and Bassinets Equipped With Wheels.
First use Jan. 18, 1957.

Class 27 — Horological Instruments

723,423. Ebauches S.A., Neuchatel, Switzerland. SN 86,384.
Filed P.R. 11-12-59; Am. S.R. 5-10-61.



Priority claimed under Sec. 44(d) on Swiss Reg. No. 175,452, dated May 13, 1959.
For Spare Parts for Watches.

Class 28 — Jewelry and Precious-Metal Ware

723,424. Saks & Company, New York, N.Y. SN 120,019.
Filed 5-15-61.

Baby Boutique

For Silver Spoons and Other Table Silverware.
First use Jan. 18, 1957.

Class 29 — Brooms, Brushes, and Dusters

723,425. American Associated Companies Incorporated, Atlanta, Ga., assignee of Georgia Klip-On Products, Inc., Atlanta, Ga. SN 94,872. Filed P.R. 4-8-60; Am. S.R. 6-1-61.

KLIP-ON

For Cleaning Devices—Namely, Mops and Wax Applicators.
First use Apr. 20, 1959.

Class 34 — Heating, Lighting, and Ventilating Apparatus

723,426. James Victor Hamar, d.b.a. Equipco Sales Company, Portland, Oreg. SN 96,698. Filed P.R. 5-9-60; Am. S.R. 8-7-61.

SWIM TEMP

For Swimming Pool Heaters.
First use Mar. 7, 1960.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

723,427. Allen Knitting Mills, Inc., New York, N.Y. SN 108,531. Filed P.R. 11-16-60; Am. S.R. 8-8-61.

FASHION FOAM

For Foam-Backed Knitted Fabrics for Making Into Coats, Dresses, Skirts, and the Like.
First use July 2, 1959.

723,428. Saks & Company, New York, N.Y. SN 120,018.
Filed 5-15-61.

Baby Boutique

For Sheets, Pillowcases, Waterproof Sheets and Pads, Towels, Wash Cloths, Blankets, Coverlets, Quilts, Crib Comforters, Baby Carriage Sets and Perambulator Robes, and Robes in the Nature of Coverlets and Afghans.
First use Jan. 18, 1957.

Class 44 — Dental, Medical, and Surgical Appliances

723,429. Saks & Company, New York, N.Y. SN 120,020.
Filed 5-15-61.

Baby Boutique

For Nursing Bottles, Nursing Bottle Sets, Consisting of Container Rack and Several Bottles, Nursing Bottle Nipples, and Teething Rings and Teething Comforters.
First use Jan. 18, 1957.

TRADEMARK REGISTRATIONS RENEWED

- | | |
|--------------------------------------------------------------------------|---------------------------------------------------|
| 141,017. WASHINGTON AND REPRESENTATION OF CAPITOL DOME. Cl. 46. 3-29-21. | 388,203. DERMOTT AND DESIGN. Cl. 51. 6-17-41. |
| 143,554. B & D IN DESIGN. Cl. 23. 6-7-21. | 388,307. SAILONAIRE. Cl. 42. 6-17-41. |
| 146,291. REPRESENTATION OF A TOWER ETC. Cl. 13. 9-6-21. | 389,975. GOOD HUMOR. Cl. 46. 9-2-41. |
| 146,807. VITRIFUSED. Cl. 34. 9-20-21. | 389,976. USITE. Cl. 1. 9-2-41. |
| 147,146. FORMET ETC. AND DESIGN. Cl. 6. 10-4-21. | 389,988. SOLAR AND DESIGN. Cl. 21. 9-2-41. |
| 148,343. ALBEMARLE. Cl. 37. 11-15-21. | 390,077. BARIUM XA. Cl. 6. 9-9-41. |
| 149,423. PURE FRESH PAINT BELIEVE ME AND DESIGN. Cl. 16. 12-13-21. | 390,414. MM—MINNEAPOLIS-MOLINE. Cl. 23. 9-23-41. |
| 150,483. COMET AND DESIGN. Cl. 46. 1-3-22. | 390,503. GAMBADE AND DESIGN. Cl. 6. 9-23-41. |
| 150,484. EUREKA AND DESIGN. Cl. 46. 1-3-22. | 390,572. CHANTRELL AND DESIGN. Cl. 13. 9-30-41. |
| 151,552. MUN-KEE AND DESIGN. Cl. 11. 2-7-22. | 390,613. LIQUOTYPE. Cl. 37. 9-30-41. |
| 151,700. SUNSWEET AND DESIGN. Cl. 46. 2-14-22. | 390,639. THE WYANDOTTE WIGWAM. Cl. 38. 9-30-41. |
| 151,880. SNOW CAP AND DESIGN. Cl. 46. 2-14-22. | 390,731. TRIUMPH. Cl. 42. 9-30-41. |
| 152,550. OH HENRY. Cl. 46. 2-28-22. | 390,882. WA IN FANCIFUL DESIGN. Cl. 21. 10-7-41. |
| 387,171. CIROCO AND DESIGN. Cl. 23. 5-6-41. | 390,980. AMERISPORT AND DESIGN. Cl. 39. 10-14-41. |
| 388,085. SECURITY AND DESIGN. Cl. 45. 6-10-41. | 391,184. VITAZYM. Cl. 18. 10-28-41. |
| | 391,206. PLAZA. Cl. 37. 10-28-41. |
| | 391,363. ATLAS ETC. AND DESIGN. Cl. 13. 11-4-41. |

- 391,594. BIG CHIEF AND DESIGN. Cl. 1. 11-18-41.
391,714. STRIKE AND DESIGN. Cl. 18. 11-18-41.
392,227. CLOZ-IT. Cl. 23. 12-16-41.
392,391. AMOCO PERMA DIESEL. Cl. 15. 12-23-41.
392,776. CABILDO FRENCH GRILLS AND DESIGN. Cl. 39. 4-13-42.
392,813. GOLD-RIDGE. Cl. 46. 1-13-42.
392,958. NESCO. Cl. 21. 1-20-42.
393,020. THOMPSON. Cl. 19. 1-20-42.
393,027. OMALASS. Cl. 46. 1-27-42.
393,128. VIOPLEX. Cl. 18. 1-27-42.
393,136. REJOICER'S AND DESIGN. Cl. 39. 1-27-42.
393,174. BOY WITH BOWL DESIGN. Cl. 46. 1-27-42.
393,184. EMPIRE AND DESIGN. Cl. 34. 1-27-42.
393,240. DURID. Cl. 51. 1-27-42.
393,425. DURAQUA. Cl. 2. 2-10-42.
393,479. THE TUCO WORK SHOPS AND DESIGN. Cl. 22. 2-17-42.
393,518. WIN-YOU. Cl. 45. 2-17-42.
393,680. YOLECTRO. Cl. 14. 2-24-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

- 420,167. NORTHERN SUPPLY. Cl. 21. 3-26-46.

Section 8

- 327,136. POS O TIV AND DESIGN. Cl. 18. 8-20-35.
327,730. FLEUR DE JOUR. Cl. 39. 9-3-35.
414,994. UNIVERSAL AND DESIGN. Cl. 12. 7-10-45.
607,276. LADY HAMILTON. Cl. 28. 6-14-55.

The following registrations issued Sept. 13, 1955

- 611,949. KELHEIMER ETC. AND DESIGN. Cl. 1.
611,953. CH AND DRAGON DESIGN. Cl. 1.
611,958. KEMITE. Cl. 1.
611,960. S AND P. Cl. 2.
611,961. NU-PLAID. Cl. 2.
611,962. NU-PASTEL. Cl. 2.
611,963. SCRABBLE SACK ETC. AND DESIGN. Cl. 2.
611,965. SUNEX. Cl. 2.
611,967. UNI-SERV. Cl. 2.
611,972. POR-O-BOR. Cl. 4.
611,974. LAZI-GLAZE. Cl. 4.
611,979. TEXEMENT C. G. PARDEE CO. INC. AND DESIGN. Cl. 6.
611,985. BEECH-NUT. Cl. 6.
611,993. JONSOL. Cl. 6.
611,995. GRIN. Cl. 6.
611,996. CHEMFORM. Cl. 6.
612,002. OAK LEAF. Cl. 7.
612,003. GREAT DANE AND DESIGN. Cl. 7.
612,005. DUNK A LITE AND DESIGN. Cl. 8.
612,006. PINCHERETTE. Cl. 8.
612,007. KWIKSET AND DESIGN. Cl. 8.
612,009. PROPELLETS. Cl. 9.
612,011. WARNSTINGUISHER. Cl. 9.
612,012. HOTEL MOTEL FIRETELL. Cl. 9.
612,013. DIME-SAVER. Cl. 9.
612,014. FIREPORTER. Cl. 9.
612,015. FLAMECHO. Cl. 9.
612,018. GRIFEX. Cl. 9.
612,020. FERRALKINE. Cl. 10.
612,023. AEROPOST. Cl. 10.
612,024. "ADJUSTOMATIC." Cl. 11.
612,036. ALUMITEE. Cl. 12.
612,039. BUDGET KING AND DESIGN. Cl. 12.
612,042. FLUSHLOK. Cl. 12.
612,054. DANDY AND DESIGN. Cl. 13.
612,055. FOREVER BRIGHT. Cl. 13.
612,059. NEOLAST. Cl. 13.
612,062. BOK. Cl. 15.
612,064. SP AND DESIGN. Cl. 16.
612,073. ERICKSON'S VIKING ETC. AND DESIGN. Cl. 17.
612,074. LOVE AT FIRST LIGHT. Cl. 17.
612,075. OLD GIBRALTAR AND DESIGN. Cl. 18.
612,076. ADD-LIFE. Cl. 18.
612,078. POUNDEX. Cl. 18.
612,085. TROPHENE SIN. Cl. 18.
612,093. TALANTON. Cl. 18.
612,094. BENATONE. Cl. 18.
602,096. MONIKER. Cl. 19.
612,097. HYDRO MARINE. Cl. 19.
612,100. ECA AND DESIGN. Cl. 21.
612,101. —JINGLES—, —THE FLYING REINDEER—, Cl. 21.
612,105. 757. Cl. 21.
612,106. CONNOISSEUR. Cl. 21.
612,110. TETRON. Cl. 21.
612,112. VENTISEL. Cl. 21.
612,114. LINE DRIVE. Cl. 22.
612,115. "TAMA." Cl. 22.
612,116. CRAZE. Cl. 22.
612,118. FLYING JENNY. Cl. 22.
612,119. HOP-HO. Cl. 22.
612,120. SNATCH. Cl. 22.
612,122. KING OF CHECKERS. Cl. 22.
612,124. CASCADE. Cl. 22.
612,133. TUBE-TULE. Cl. 23.
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| 652,346. DESIGN OF SKI WITH RED STRIPE. Cl. 22. Anton Kästle, d.b.a. Vorarlberger Skifabrik Anton Kästle. 10-1-57. New Cert. Sec. 7(c) to Dartmouth Skis, Inc., Hanover, N.H. | 697,073. THREE STRIPES FORMING A V DESIGN. Cl. 22. Anton Kästle, d.b.a. Vorarlberger Skifabrik Anton Kästle. 5-3-60. New Cert. Sec. 7(c) to Dartmouth Skis, Inc., Hanover, N.H. |
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TM v

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